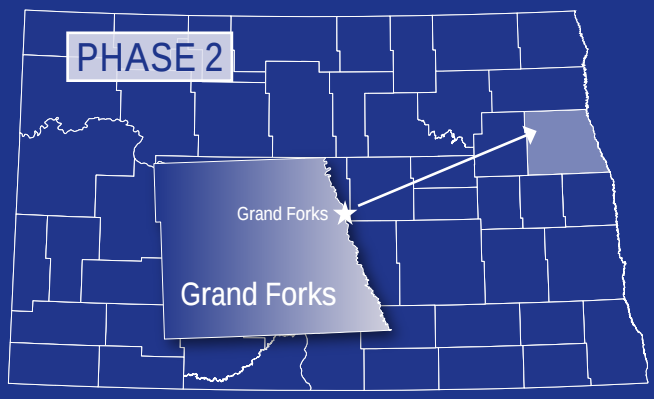
NDDOT
North Dakota
Department of Transportation

INFRASTRUCTURE & DRIVER BEHAVIOR






June 2014

# North Dakota
# Local Road Safety Program


TBG032714131858SEA

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# Local Road Safety Program

**Prepared by**

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**On behalf of**

North Dakota Department of Transportation

Grant Levi, P.E., Director

June 2014



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# Contents

# Acronyms and Abbreviations

| | |
|---|---|
| 4Es | education, enforcement, engineering, and emergency medical services |
| 100MVMT | 100 million vehicle miles traveled |
| AASHTO | American Association of State Highway and Transportation Officials |
| ADT | average daily traffic |
| CMC | county major collector |
| CMF | crash modification factor |
| CRS | Crash Reporting System (North Dakota Department of Transportation) |
| DUI | driving under the influence |
| EMS | emergency medical services |
| ERA | edge risk assessment |
| FHWA | Federal Highway Administration |
| GDL | graduated drivers license |
| GHSA | Governors Highway Safety Association |
| HSIP | Highway Safety Improvement Program |
| *LEAD* | Listen, Educate, Ask, Discuss |
| LRSP | Local Road Safety Program |
| MUTCD | *Manual on Uniform Traffic Control Devices* |
| NCHRP | National Cooperative Highway Research Program |
| NDDOT | North Dakota Department of Transportation |
| NHTSA | National Highway Traffic Safety Administration |
| Plan | LRSP Safety Plan |
| PSA | public service announcement |
| SHSP | Strategic Highway Safety Plan |
| TSO | Traffic Safety Office |

# Executive Summary

This Local Road Safety Program (LRSP) was prepared for Grand Forks County and the City of Grand Forks (referred to collectively as the Grand Forks region). The LRSP was prepared as part of North Dakota's statewide highway safety planning process. The contents are the result of a data-driven process, with a goal to reduce serious crashes (defined as those crashes resulting in at least one fatality or incapacitating injury) by documenting at-risk locations, identify effective low-cost safety improvement strategies, and better position the Grand Forks region to compete for available safety funds. The LRSP includes a description of the connection to safety planning efforts at the national, state (through North Dakota's *Strategic Highway Safety Plan* and the Highway Safety Improvement Program), and regional levels.

This LRSP was commissioned by the North Dakota Department of Transportation (NDDOT) to provide a tool to assist counties in submitting proactive low-cost systemic safety projects for the NDDOT to fund as part of the Highway Safety Improvement Program (HSIP). The LRSP is not intended to be a complete safety plan for the Grand Forks region, because there may be other safety improvement strategies that are considered high-cost or low-cost that are also effective, but cannot be systematically applied across a county or local road system. While this LRSP addresses many of the safety concerns at high-risk locations within the region, other equally important projects may be identified after this safety planning effort is complete.

Specifically, this LRSP includes the following:

- Description of the safety emphasis areas.
- Identification of a short list of high-priority, low-cost safety strategies.
- Documentation of at-risk locations along the county/local road systems that are considered candidates for safety investment. At-risk locations include roadway segments, horizontal curves, and intersections with multiple serious crashes or with roadway geometry and traffic characteristics similar to other locations in North Dakota where serious crashes have occurred.
- Development of approximately $4.1 million of suggested safety projects across the Grand Forks region (Table ES-1), including the filled out forms suitable for submittal to the NDDOT for their consideration for HSIP funding. These projects represent the application of high-priority safety strategies at the at-risk locations.
- Discussion of behavioral crash statistics, potential safety strategies, and current statewide resources available for implementation of behavioral safety strategies.

TABLE ES-1
Grand Forks Region Total Safety Project Costs

| Rural Projects | Roadway Segments | Intersections | Curves | Total |
|---|---|---|---|---|
| Grand Forks County | $375,457 | $2,586,180 | $302,820 | $3,264,457 |
| **Urban Projects** | **Roadway Segments** | **Intersections – Right-Angle** | **Intersections – Pedestrians and Bicyclists** | **Total** |
| City of Grand Forks | $60,000 | $57,600 | $772,800 | $890,400 |

The information in this LRSP is consistent with best practices in safety planning as presented in guidance prepared by the Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO), and the National Cooperative Highway Research Program (NCHRP). This information is provided to Grand Forks County and the City of Grand Forks in an effort to reduce the number of serious crashes on the county/local road systems. It is understood that the final decision to implement any of the suggested projects resides with the respective county or city officials.

It should also be noted that the rankings of county/local roadway facilities are based on a comparison with documented risk factors. There is no expectation or requirement that the Grand Forks region pursue safety projects in the exact ranking order. The ranking suggests a general priority, and it is understood that actual project development decisions will be made by county or city staff based on consideration of economic, social, and political issues, as well as in coordination with other projects already in each agency's Capital Improvement Program.

It should also be noted that some of the at-risk locations and suggested safety projects involve the intersection of a county roadway and a state route. It is acknowledged that the county does not have the authority to implement projects on the state's right-of-way. The county is encouraged to coordinate with the NDDOT to pursue a partnership that identifies a path toward implementation. This LRSP (1) does **not** set requirements or mandates; (2) is **not** a standard; and (3) is neither intended to be nor does it establish a legal standard of care.

In addition, some of the locations are within the Metropolitan Planning Organization (MPO) boundaries and the following should be taken into account:

- Projects or improvements within an MPO boundary must be coordinated with that MPO prior to submittal to NDDOT
- Projects or improvements must be consistent with the MPO's Long Range Transportation Plan (LRTP)
- Projects or improvements selected for funding must be incorporated in the MPO's Transportation Improvement Program (TIP)

To help reduce the potential exposure to claims of negligence associated with motor vehicle crashes on the county/local road system, the following key point should be considered:

- Federal law (23 USC Section 409) established that information generated as part of the statewide safety planning process is considered privileged and unavailable to the public. The privileged status includes crash data where value/detail has been added by analysts

during the safety planning process (for example, computation of crash rates, disaggregation of crashes by type or severity, and documentation of contributing factors), the lists of at-risk locations, and information supporting the development and evaluation of potential safety projects. The federal law and the privileged status of the safety information was upheld by the U.S. Supreme Court in the case of Pierce County (Washington) v. Guillen. North Dakota interprets Section 409 to mean that basic crash data are available to the public on request, but that the data cannot be used in legal proceedings associated with claims of negligence.

Regarding the expected life of this LRSP, the shelf life of this document is limited (as with any transportation plan). This is because the distribution of crashes can change over time, just as roadway and traffic conditions change, contributing to the occurrence of crashes. This LRSP contains $4.1 million of potential safety projects, which could provide the Grand Forks region with a sufficient backlog of projects for up to 5 years. As a result, Grand Forks County and the City of Grand Forks are encouraged to periodically update this LRSP.

The City of Grand Forks and Grand Forks County are encouraged to apply for these projects through the NDDOT's HSIP process. The anticipated annual HSIP process is shown in Table ES-2.

TABLE ES-2
HSIP Solicitation Schedule

| Month | Task Description |
|---|---|
| October/November | Solicitation for HSIP is sent out to all counties, districts, MPOs, cities, and tribes. The counties, districts, MPOs, cities, and tribes will have about **6 weeks to respond**. |
| January through March | NDDOT reviews the requests and conducts additional studies if required. |
| Following Fall | HSIP approval notices are sent after program concurrence from the FHWA. Funding for an approved project will be provided as funding is available. |

# 1.0 Introduction

## 1.1 Background

To fulfill a commitment in the 2013 North Dakota Strategic Highway Safety Plan (SHSP), the North Dakota Department of Transportation (NDDOT) began the Local Road Safety Program (LRSP). The purpose of the LRSP is to better engage local roadway agencies in the statewide safety planning process. The NDDOT's commitment is based on two pieces of information:

- Based on 2007-to-2011 crash records, the SHSP identified that 56 percent of serious crashes (those crashes resulting in at least one fatality or incapacitating injury) in North Dakota occurred on roads operated by local agencies.
- The NDDOT had historically focused federal safety funds on interstates, U.S. highways, and state highways, even though approximately half of serious crashes occurred on those facilities.

The NDDOT set out to increase the level of participation of local agencies in safety planning and the amount of safety funds directed toward projects on local systems. To do this, the NDDOT first partnered with local agencies (including all 53 counties and 12 major cities in the state) to prepare safety plans for every region of North Dakota.

> *The Strategic Highway Safety Plan (SHSP) development process was key in helping us identify the importance of local roads to achieve our long-term safety goals. This data-driven process helped us to transition to a systemic identification of crash types on all roads in addition to our traditional crash location (or hot spot) approach on the state system. As a result, the NDDOT has partnered with local stakeholder to prepare road safety plans that will identify potential safety projects consistent with the SHSP.*
>
> — Grant Levi, P.E., Director
> North Dakota Department of Transportation

Representatives from the NDDOT, Grand Forks County, and the City of Grand Forks prepared this LRSP Safety Plan (Plan) as Phase 2 of a comprehensive effort to reduce the number of fatal and incapacitating injury crashes (referred collectively as serious crashes) that occur on North Dakota's local road system in the Grand Forks region (a collective term for Grand Forks County and the City of Grand Forks). The area covered by the Plan covers a portion of NDDOT District 6 – Grand Forks (Figure 1-1). Additionally, Cass, Barnes, Eddy, Foster, Griggs, Ransom, Richland, Sargent, Steele, and Traill counties and the cities of Fargo, West Fargo, Valley City, and Wahpeton participated in Phase 2 of the study; however, their information is provided in separate reports.

The purpose of this LRSP is to identify and implement specific safety strategies at specific locations and to link these projects directly with the contributing factors associated with the majority of serious crashes on the local roads. These safety projects are intended to be comprehensive by addressing both infrastructure- and driver-behavior-related crashes by including proactive projects developed through a system-wide risk assessment process. These projects are intended to compliment reactive projects developed through a site analysis approach focused on high-crash locations.

The traffic safety priorities identified in this Plan are the result of a data-driven analysis of nearly 88,450 crashes (including 2,231 serious crashes) on all roads in North Dakota. Of these crashes, 7,486 total crashes and 131 serious crashes occurred in the Grand Forks region over the 5-year period from 2008 to 2012, with 5,754 of the total crashes and 81 serious crashes occurring in the City of Grand Forks.

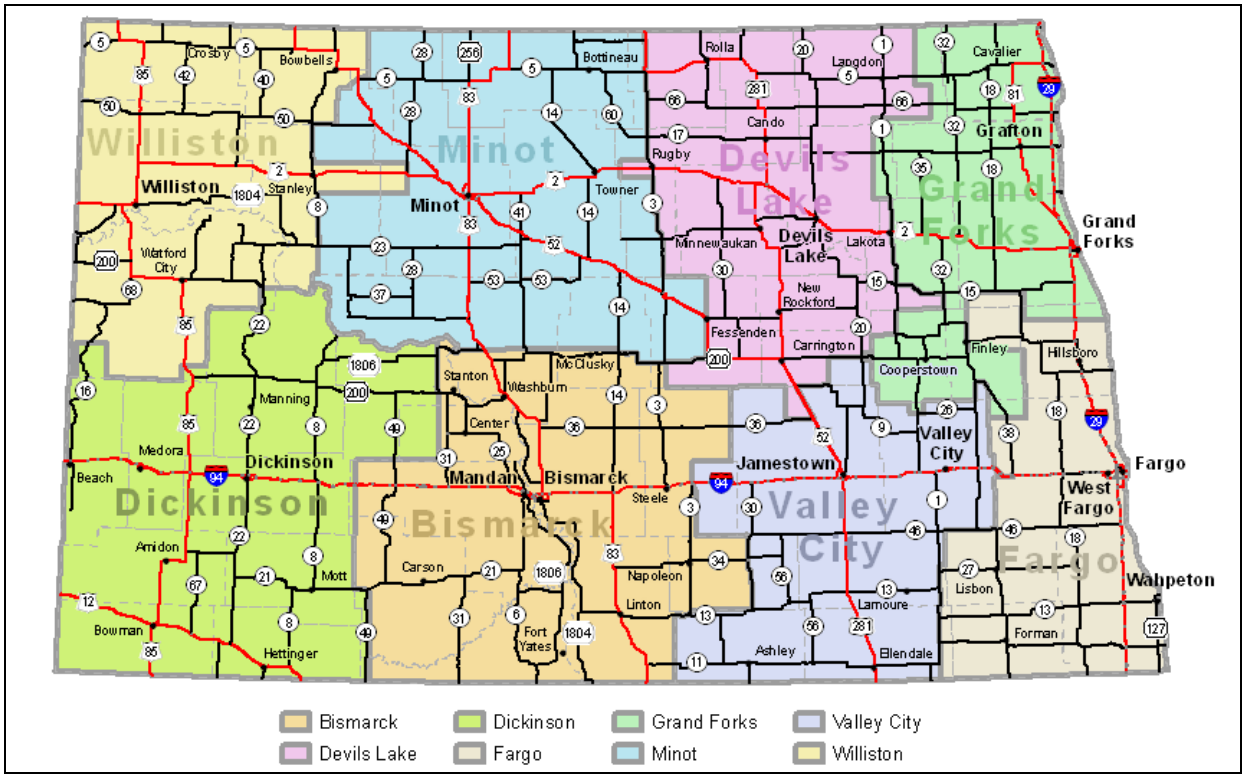



FIGURE 1-1
North Dakota Department of Transportation's Eight Districts

## 1.2 Traffic Safety – A National Perspective

According to the National Highway Traffic Safety Administration (NHTSA), 32,310 people were killed in traffic crashes in 2011—an average of 89 people killed every day—and an additional 2.2 million people were injured. The number of fatalities nationally decreased significantly and steadily in the 1970s and 1980s. Beginning in the early 1990s and continuing through the early 2000s, traffic fatalities began to increase. However, since 2005, traffic fatalities have decreased dramatically to the lowest number of fatalities in recent history—32,310 fatalities in 2011.

Like the national trend, the North Dakota traffic fatality rate also decreased in the 1970s and 1980s. Likewise, North Dakota's traffic fatalities slowly increased through the 1990s and early 2000s, and began to decrease again in 2005. However, unlike the national trend, North Dakota's traffic fatality rate has increased since 2008. The 2013 North Dakota Strategic Highway Safety Plan recognizes the following issues likely account for much of the increase:

- Shifts in the age of the driving population.

- Steady increase in the number of vehicle miles traveled in North Dakota, which is counter to the flat or decreasing national trend in travel.
- Other states have a longer history using a systemic investment approach to focus on locations with risk factors for serious crashes.
- The growing challenges of providing emergency medical response and quick access to advanced health care in rural areas.

### 1.2.1 AASHTO's *Strategic Highway Safety Plan* and Safety Emphasis Areas

In the late 1990s, the American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA) supported a comprehensive and data-driven approach to reduce the number of traffic-related fatalities. Both AASHTO and the FHWA concluded that up to that point, states' efforts had not been effective in lowering the number of serious crashes because: (1) efforts were not focused on serious crashes nor the primary factors resulting in serious crashes; and (2) safety project selection was not part of a data-driven process that implemented effective strategies at locations most at risk for a serious crash.

AASHTO and the FHWA recommended a safety program development process that included 22 categories (or safety emphasis areas) in the areas of drivers, special users, vehicles, highways, emergency services, and management. The objective of this first step is to help agencies consider the 4Es of safety—education, enforcement, engineering, and emergency medical services (EMS)—when identifying safety priorities for their roads. In addition, selecting safety emphasis areas focuses agencies on safety strategies linked to the issue.

In 2007, AASHTO set a goal to reduce the number of traffic fatalities nationally by 1,000 each year for the next 20 years, which is an integral first step in a national *Toward Zero Deaths* safety vision. The FHWA has determined that this goal will be reached only by partnering with individual states. This partnering will lead to more successful project implementation and will result in programs that target the factors contributing to the greatest number of fatal and serious injury crashes.

## 1.3 North Dakota's Statewide Safety Planning Efforts

Through 2004, North Dakota had a fatality rate (1.34 fatalities per 100 million vehicle miles traveled [100MVMT] in 2004) that was less than the national average (1.44 fatalities per 100MVMT). However, in recent years, the North Dakota fatality rate (1.61 fatalities per 100MVMT in 2011) has risen to above the national average (1.10 fatalities per 100MVMT) and the overall number of traffic fatalities has crept upward (see Figure 1-2). In 2011, there were 148 fatalities on North Dakota roads: the most traffic fatalities reported in the state since 1982.

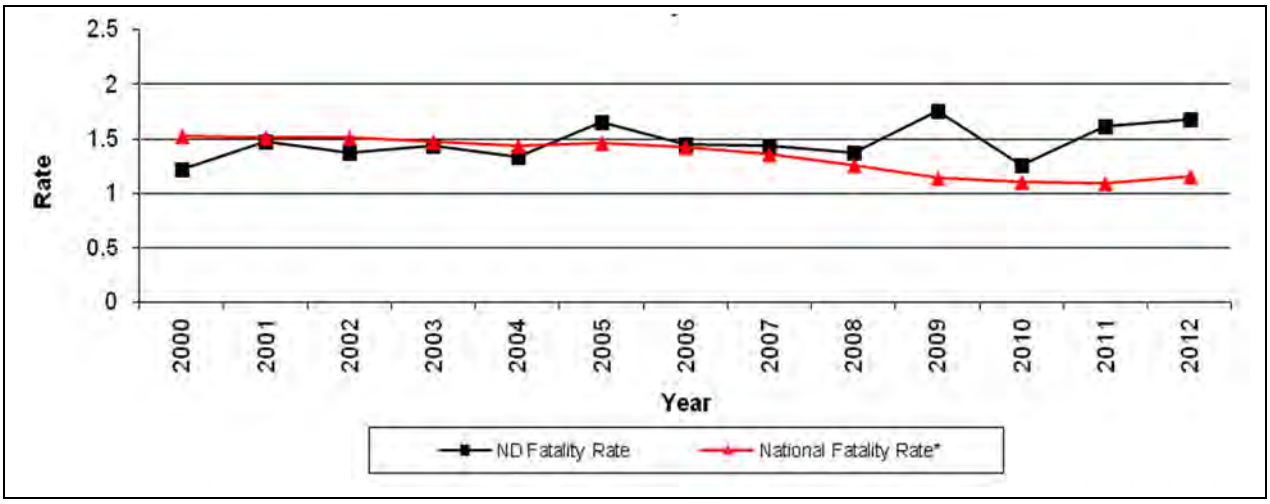



FIGURE 1-2
Fatality Rate – National and North Dakota (2000 to 2012)

In 2013, the NDDOT updated the state's SHSP. Based on serious crashes (Table 1-1), the 2013 SHSP identified the following safety emphasis areas, as well as priority safety strategies in each area:

- Young drivers (under age 21)
- Speeding or aggressive driving
- Alcohol-related
- Unbelted vehicle occupants
- Lane departure
- Intersections

North Dakota also adopted a long-term vision of zero fatalities on its roadways. Achieving this vision will require many years and dramatic shifts in the safety culture for North Dakota residents. An aggressive intermediate goal was set to reduce the 3-year average of traffic fatalities to 100 or fewer by 2020.

TABLE 1-1
North Dakota Fatal and Serious Injury Crashes by AASHTO Safety Emphasis Area

| Safety Emphasis Area | | Statewide Crashes (All Roads) | |
|---|---|---|---|
| | | Percent | Number |
| **Drivers** | **Involving Driver under Age 21** | **22%** | **501** |
| | Involving drivers over the age of 64 | 13% | 280 |
| | **Speeding or Aggressive Driving** | **26%** | **576** |
| | **Alcohol-Related** | **30%** | **667** |
| | Distracted, asleep, or fatigued drivers | 9% | 206 |
| | **Unbelted Vehicle Occupants** | **48%** | **1,067** |

TABLE 1-1
North Dakota Fatal and Serious Injury Crashes by AASHTO Safety Emphasis Area

| Safety Emphasis Area | | Statewide Crashes (All Roads) | |
|---|---|---|---|
| | | Percent | Number |
| **Special Users** | Pedestrians crashes | 5% | 117 |
| | Bicycle crashes | 2% | 46 |
| **Vehicles** | Motorcycles crashes | 12% | 265 |
| | Heavy vehicle crashes | 15% | 342 |
| **Highways** | Train-vehicle collisions | 1% | 13 |
| | **Lane-Departure**<br>**Including both lane-departure (898 serious crashes) and head-on/ sideswipe-opposing crashes (150 serious crashes)** | **47%** | **1,048** |
| | **Intersections** | **23%** | **513** |
| | Work zone crashes | 2% | 36 |
| **Total Serious (Fatal and Incapacitating Injury) Crashes** | | **2,231** | |

Notes:
Information is from the 2008-to-2012 North Dakota crash data records, which is an update to the information in the 2013 North Dakota SHSP that used 2007-to-2011 crash records.
Numbers in this table do not add up to the statewide crash numbers because one crash may be categorized into multiple emphasis areas. For example, one crash may involve a young driver at an intersection and, therefore, be included in both of these emphasis areas.

## 1.4 Local Road Safety Program Overview

North Dakota's local road system encompasses more than 97,500 miles of roadway out of approximately 106,000 miles statewide. Although, historically, more than 50 percent of serious crashes in North Dakota occurred on local roads, the density of these crashes was very low (approximately 0.002 serious crash per mile per year). As a result, local agencies were unable to identify high-crash locations to nominate for funding through the Highway Safety Improvement Program (HSIP). Therefore, using stand-in data for the serious crashes, safety projects were identified using a systemic process to evaluate at-risk locations. The use of the systemic process was necessary due to the low crash density. Based on revised FHWA policy, the NDDOT expanded the HSIP to include projects identified through the systemic analysis of local roads.

For the Grand Forks region, the Grand Forks Metropolitan Planning Organization (MPO) coordinates project development throughout the region. Based on this, the following should be considered when reviewing suggested project locations:

- Projects or improvements within an MPO boundary must be coordinated with that MPO before submittal to NDDOT
- Projects or improvements must be consistent with the MPO's Long Range Transportation Plan (LRTP)
- Projects or improvements selected for funding must be incorporated in the MPO's Transportation Improvement Program (TIP)

The focus areas of the systemic risk assessment are rural, paved county and tribal highways[1], and urban arterials and collectors in North Dakota's larger cities (cities with a population greater than 5,000). Paved, rural county highways were selected based on an analysis of statewide crash data that indicated that approximately 61 percent of serious local road crashes occurred on rural county roads. Of these crashes, approximately half occurred on paved roads, which account for less than 10 percent of county roads (approximately 6,200 miles). Further analysis indicated that on these rural highways, the most at-risk elements were roadway segments (60 percent of serious crashes), horizontal curves (32 percent of serious crashes), and intersections (32 percent of serious crashes).

Major cities were selected as a focus because approximately 90 percent of the serious local-road crashes occurred within the city boundaries of the 12 cities in this category. Furthermore, 40 percent of the serious crashes occurred on urban arterials and collectors. In addition, because these 12 cities are responsible for operation and maintenance of U.S. highway and state highway routes within the municipal limits (not including fully access-managed facilities, such as freeways), the U.S. and state highways were included in the review.

Figure 1-3 shows the approach used to develop this Plan for the Grand Forks region. The process began with the crash analysis and concluded with this LRSP Safety Plan, the culmination of the NDDOT and concerned local agencies working together for nearly half a year.

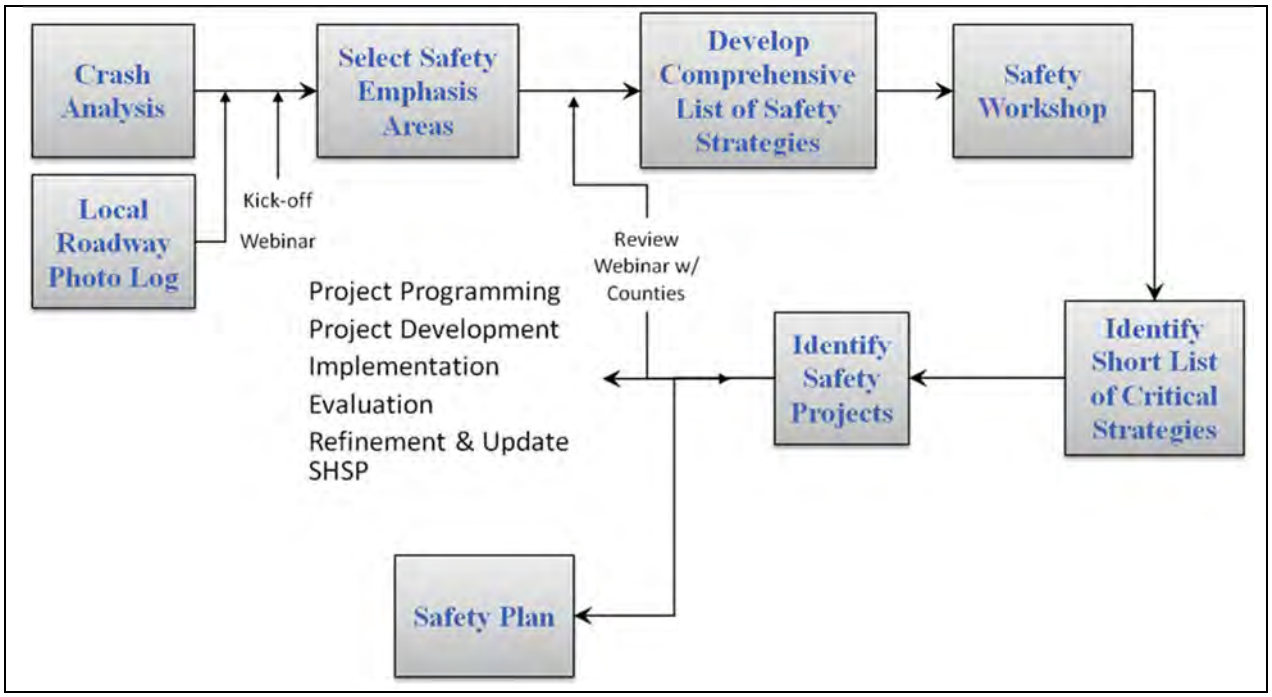



FIGURE 1-3
Local Road Safety Program Safety Plan Approach

[1] Does not include all paved roads outside municipal limits, but focuses on routes that serve regional travel. For example, a loop road that is paved and yet only provides access to a residential neighborhood was considered to be a local road given the type of traffic served by the facility.

# 2.0 Grand Forks Region Safety Emphasis Areas and Crash Overview

The first step in the process to prepare Safety Plans for Grand Forks County and the City of Grand Forks (referred to collectively as the Grand Forks region) was to conduct a crash analysis overview statewide for North Dakota and then for the Grand Forks region as a whole.

## 2.1 Grand Forks Region Crash Overview

### 2.1.1 North Dakota Crash Mapping

Crash data was taken from the NDDOT's Crash Reporting System (CRS) and placed into ArcGIS for data exportation based on specific locations relative to local roads. The most recent 5-year period of crash data (from 2008 to 2012) was analyzed and used to determine risk factors specific to Grand Forks region local roads. Consistent with the NDDOT's SHSP, the analysis focused on serious (fatal and incapacitating injury) crashes.

### 2.1.2 Facilities Analyzed

The crash analysis was broken into three main facility types: roadway segments, curves, and intersections:

- Paved rural local roadway segments were analyzed and local county major collector (CMC) gravel roads were analyzed for multiple crash locations. Other local gravel roads were removed from the analysis because of the relatively low percentage of serious crashes and due to the lack of infrastructure-based strategies that can be applied to this roadway type.
- Local rural road intersections with state highways or other local roads were included in the analysis. Local non-CMC gravel roads intersecting with other local roads were removed from the analysis due to the very low number of crashes at these intersections.
- Horizontal curves on paved rural local roads were included in analysis.
- Urban roadway segments and intersections were analyzed in the City of Grand Forks. Urban roadway types analyzed within the city limits included:
  - State routes
  - Urban principal arterials
  - Urban minor arterials
  - Urban collector roads
- All other local roadway segments and intersections, including gravel roads, were reviewed for locations with multiple serious crashes or "hot spots."

### 2.1.3 Crash Data Sets

Crash data for the 5 years from 2008 to 2012 was used for the Grand Forks region crash analysis. In safety analysis, it is recommended that more than 1 year of data be studied to reduce the possibility of examining an unusual year. It is also important to include as many years as necessary to produce a data set that will provide statistically reliable results but not too long so that changed conditions are a concern (for example, reconstructed roads, addition of STOP signs, and changed speed limits). For the Grand Forks region, there were not enough crashes to be statistically reliable; therefore, decisions were based on the crashes for all Phase 2 cities and city-containing counties combined (Figure 2-1), statewide data (Figure 2-2), or national research.

The Grand Forks region data set includes 5,041 crashes on local roads; of these, 85 were fatal or incapacitating injury crashes. Disaggregating the serious crashes by road type (paved, gravel, or local), area (urban versus rural), and crash type category (intersection versus roadway segment crashes) resulted in the distribution shown in Table 2-1, Figure 2-1, and Figure 2-2.

TABLE 2-1
Crash Distribution (2008 to 2012)

| Location | Grand Forks Region (Percent/Number) | Statewide (Percent/Number) |
|---|---|---|
| Rural Roads | 31% (26 crashes) | 71% (789 crashes) |
| Paved Rural Roads | 35% (9 crashes) | 50% (394 crashes) |
| CMC Gravel Roads | 8% (2 crashes) | 9% (73 crashes) |
| Paved Rural Road Segments | 75% (6 crashes) | 59% (225 crashes) |
| Single Vehicle, Lane-Departure Crashes on Paved Rural Road Segments | 83% (5 crashes) | 76% (170 crashes) |
| Paved Rural Road Intersections | 12% (1 crash) | 36% (137 crashes) |
| Paved Rural Road Thru-STOP Intersections | 100% (1 crash) | 44% (60 crashes) |

This review shows that, on the local system, serious lane-departure crashes on paved roads and angle crashes at Thru-STOP intersections were overrepresented. Based on statewide traffic safety data, serious lane-departure crashes along curves were also overrepresented.

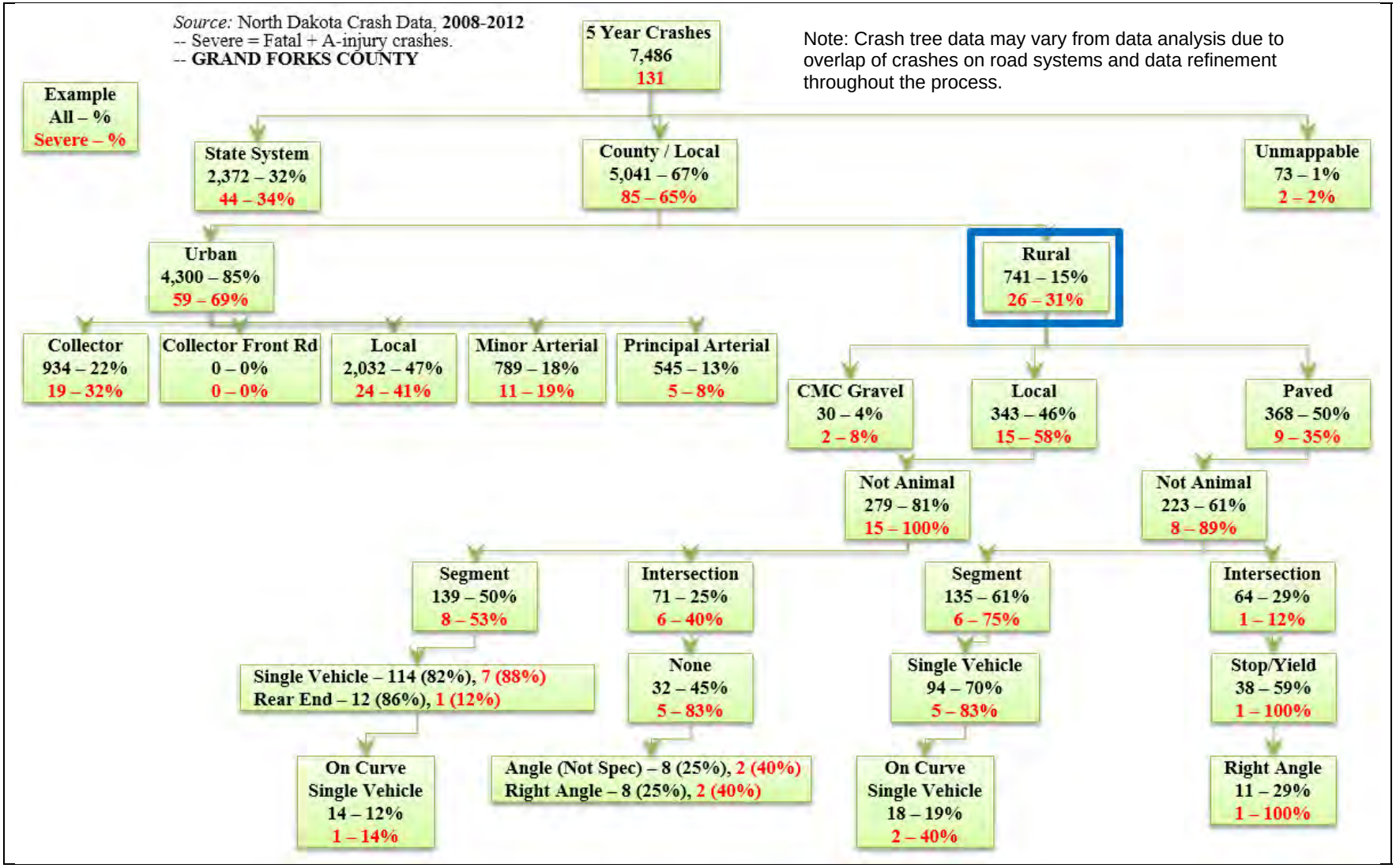



FIGURE 2-1
Grand Forks Region Crash Data Overview – Rural and Urban Local Road Systems (2008 to 2012)

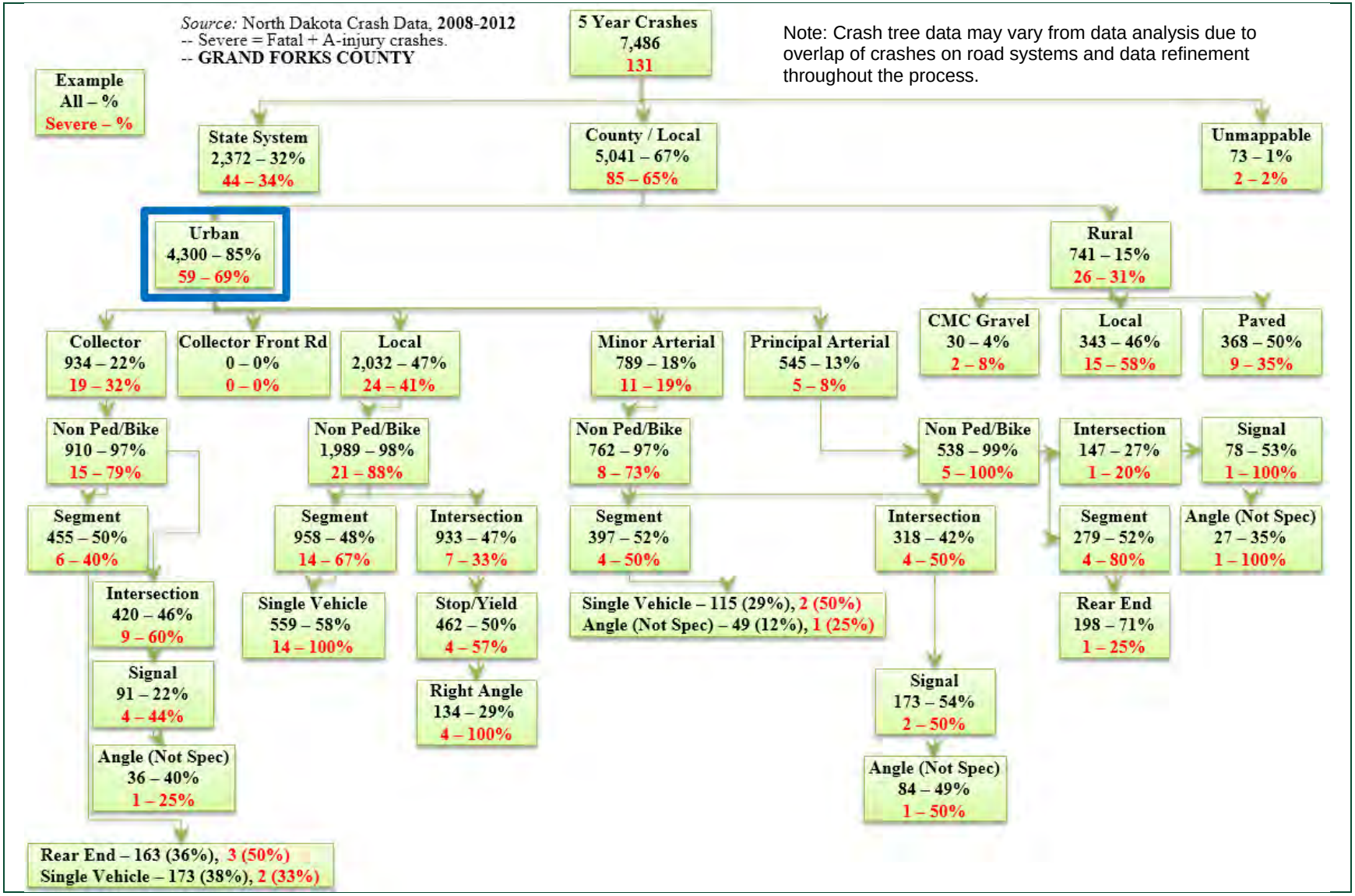



FIGURE 2-1 (Continued)
Grand Forks Region Crash Data Overview – Rural and Urban Local Road Systems (2008 to 2012)

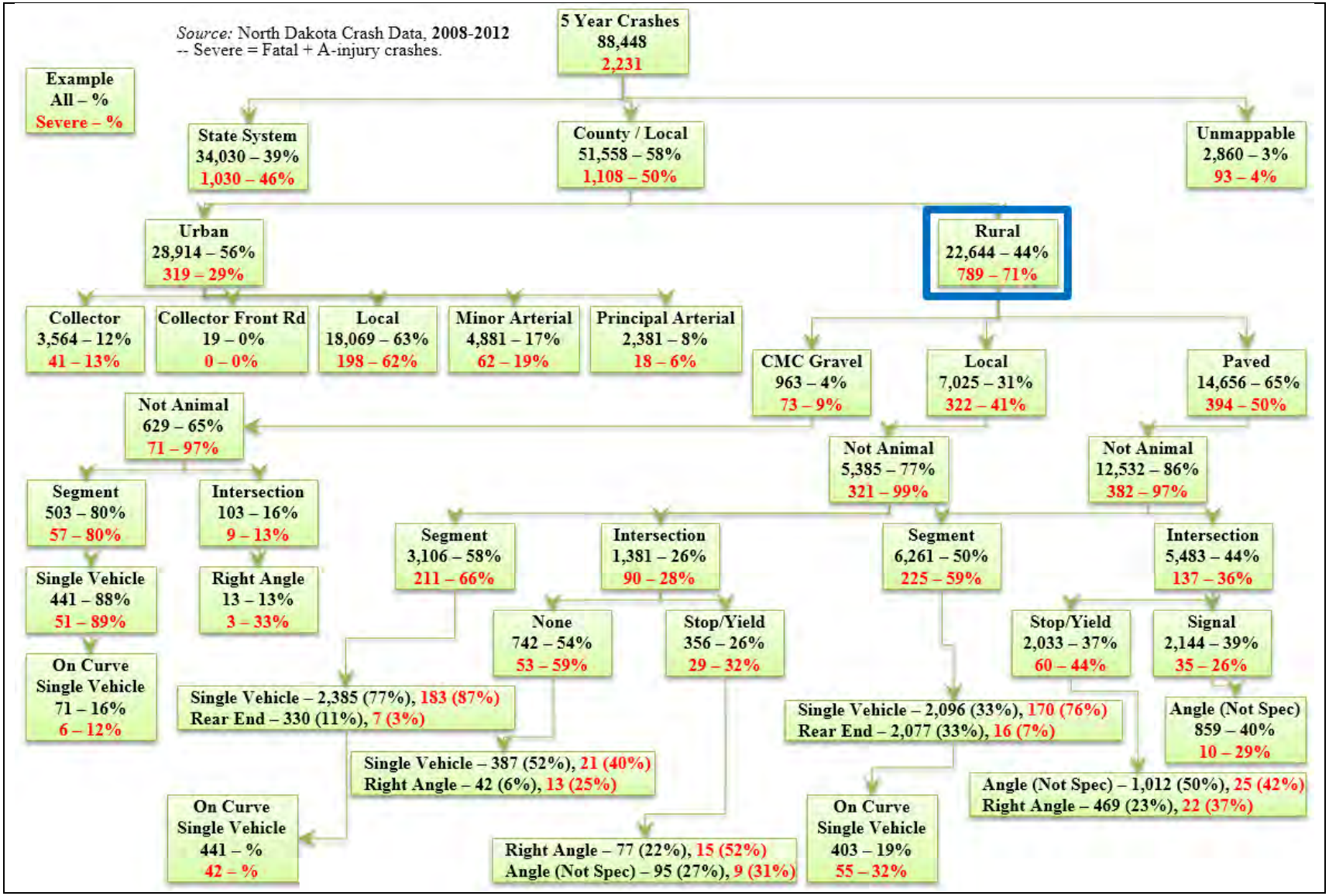



FIGURE 2-2
North Dakota Crash Data Overview – Rural and Urban Local Road Systems (2008 to 2012)

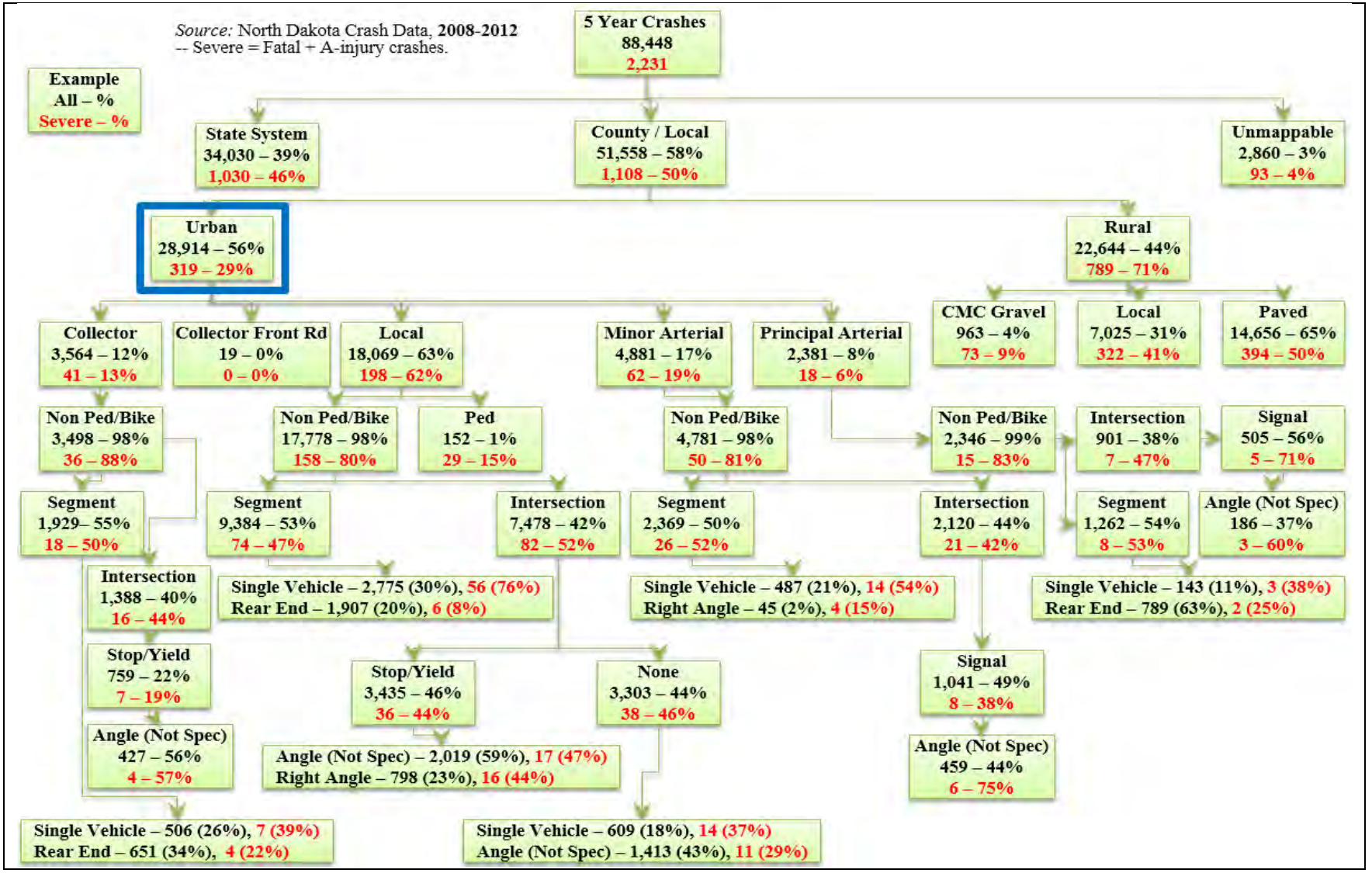



FIGURE 2-2 (Continued)
North Dakota Crash Data Overview – Rural and Urban Local Road Systems (2008 to 2012)

## 2.2 Grand Forks Region Safety Emphasis Areas

The total number of serious crashes (those crashes resulting in a fatality or incapacitating injury) in each county over the 5-year period from 2008 to 2012 was so few that the crash data was analyzed at regional, statewide, and national levels for various risk factors.

Section 1.2 described the development of AASHTO's emphasis areas, and how this process was applied to the State of North Dakota to identify statewide safety emphasis areas (Table 1-1). An identical process was followed for the Grand Forks region, resulting in the distribution of serious crashes among AASHTO's 22 emphasis areas (Table 2-2). The safety emphasis areas for the Grand Forks region are consistent with the state's emphasis areas. This process revealed where crashes were overrepresented based on a comparison to statewide averages or where a large enough number of crashes represented an opportunity to substantially reduce crashes. As a result, the following safety emphasis areas were identified as priorities for safety investments:

- Driver Behavior – Young drivers, aggressive drivers, alcohol-related, and unbelted vehicle occupants
- Highways – Lane-departure and intersection crashes

TABLE 2-2
Grand Forks Region Serious Crashes by Safety Emphasis Areas (2008 to 2012)

| Safety Emphasis Areas | Statewide (% of Total) | 2008 to 2012 Serious Crashes | | | | | |
|---|---|---|---|---|---|---|---|
| | | Grand Forks Region | | State Roads | | Local System | |
| | | % | # | % | # | % | # |
| **Total Serious Crashes** | **2,231** | **131** | | **44** | | **87** | |
| Involving Drivers Under Age 21 | 22% | 31% | 41 | 32% | 14 | 31% | 27 |
| Involving Drivers Over Age 64 | 13% | 18% | 23 | 27% | 12 | 13% | 11 |
| Excessive Speed or Aggressive Driving | 26% | 25% | 37 | 25% | 11 | 25% | 22 |
| Alcohol-Related | 30% | 22% | 46 | 18% | 8 | 24% | 21 |
| Distracted, Asleep, or Fatigued Drivers | 9% | 5% | 19 | 7% | 3 | 5% | 4 |
| Unbelted Vehicle Occupants | 48% | 41% | 63 | 25% | 11 | 49% | 43 |
| Pedestrian Crashes | 5% | 5% | 4 | 5% | 2 | 5% | 4 |
| Bicycle Crashes | 2% | 5% | 3 | 0% | 0 | 7% | 6 |
| Motorcycle Crashes | 12% | 18% | 18 | 11% | 5 | 21% | 18 |
| Heavy Vehicle Crashes | 15% | 5% | 18 | 11% | 5 | 2% | 2 |
| Train-Vehicle Collisions | 1% | 2% | 1 | 0% | 0 | 2% | 2 |
| Lane-Departure (Run-Off-the-Road and Head-On) Crashes | 47% | 37% | 65 | 34% | 15 | 39% | 34 |
| *Head-On* | *7%* | *5%* | *8* | *7%* | *3* | *5%* | *4* |
| *Run-off-the-Road Crashes* | *40%* | *32%* | *57* | *27%* | *12* | *34%* | *30* |
| Intersection Crashes | 23% | 30% | 34 | 25% | 11 | 32% | 28 |

TABLE 2-2
Grand Forks Region Serious Crashes by Safety Emphasis Areas (2008 to 2012)

| Safety Emphasis Areas | Statewide (% of Total) | 2008 to 2012 Serious Crashes | | | | | |
|---|---|---|---|---|---|---|---|
| | | Grand Forks Region | | State Roads | | Local System | |
| | | % | # | % | # | % | # |
| Work Zone Crashes | 2% | 2% | 2 | 5% | 2 | 0% | 0 |
| Deer Collisions | 1% | 1% | 1 | 0% | 0 | 1% | 1 |
| Adverse (Winter) Weather Related | 16% | 10% | 13 | 11% | 5 | 9% | 8 |

Note:
Serious crashes are those crashes that result in at least one fatality or incapacitating injury.

Strategies to reduce crashes depend on whether a safety emphasis area is infrastructure-based or driver-behavior-based. Infrastructure-based emphasis areas refer to characteristics of the location (for example, a roadway segment, curve, or intersection) where crashes occurred. Driver-behavior-based emphasis areas refer to motorist characteristics or actions that contribute to crashes. Because driver behavior is tied to laws made at the national and state levels, roadway agencies generally have less ability to address driver-behavior-based emphasis areas. The most effective approach for road authorities to addressing driver-behavior-based emphasis areas is to focus on public education and law enforcement through cooperation and collaboration with other county departments, agencies, and schools. Generally, more opportunities exist for county and city road authorities to address infrastructure-based emphasis areas, because many of the associated strategies can be implemented as separate roadway improvement projects, or along with other planned improvements. Specific infrastructure- and driver-behavior-based strategies presented to the participants of the safety workshop held for the Grand Forks region are provided in Section 3.2.

## 2.3 Crash Risk Factors

The objective of the analytical process is to identify candidates for safety investment based on two criteria: high-crash locations and at-risk locations. A more detailed crash analysis was performed for each priority crash type to identify (1) locations where these priority crash types occur at a rate of one or more serious crashes per year, and (2) basic roadway and traffic characteristics of locations with serious crashes. These characteristics are not considered to be the cause of crashes, but instead are used to determine the risk that a future serious crash would occur at a particular location. Information from historic crashes was used to evaluate the remainder of the Grand Forks region's local road system and prioritize locations for safety investment based on similar characteristics.

Ten counties were studied as a part of Phase 2 in the LRSP: Cass, Barnes, Eddy, Foster, Griggs, Ransom, Richland, Sargent, Steele, and Traill counties. Urban-rural counties are designated as those containing a city with a population greater than 5,000, while rural-rural counties are those without cities exceeding this population. Since Grand Forks County contains the City of Grand Forks (which has a population greater than 5,000), the focus of this chapter is on the risk analysis for urban-rural county roads. The City of Grand Forks is the subject of the urban

portion of this Plan, but for analysis purposes, the data were combined for all of Phase 2 urban areas (the cities of Fargo, West Fargo, Wahpeton, and Valley City).

### 2.3.1 Rural Roadway Segments – Crashes on Paved Roads

Of the more than 97,500 miles of local road system in North Dakota, only 7 percent of the roads are paved. However, 50 percent of crashes occured on paved roads. Therefore, the focus of the LRSP is on rural paved roadway segments.

There are 274 miles of rural paved county roads in Grand Forks County. From 2008 to 2012, 10 serious crashes were reported on these roads. The predominant crash type on these roads was single-vehicle lane-departure (Figure 2-3). The following five risk factors were identified for rural lane-departure crashes on paved roads in the county:

1. **Average Daily Traffic (ADT) –** Of the urban-rural paved roads, 29 percent have an ADT greater than 525 vehicles per day. However, 53 percent of the serious lane-departure crashes occurred above this ADT (Figure 2-4). Therefore, any segment with an ADT greater than 525 vehicles per day received a star[1].
2. **Access Density –** Nationally, research has shown that an access density of eight or more access points per mile (including field entrances, commercial entrances, roadway access, etc.) increased the likelihood of a serious crash occurring. North Dakota's review of serious crashes on their urban-rural county roads (shown in Figure 2-5) confirms this relationship with the serious crash density increasing as the access density increases. Any roadway segment with an access density greater than or equal to eight access points per mile received a star.
3. **Lane-Departure Crash Density –** The average lane-departure crash density for urban-rural counties was 0.064 crash per mile per year. Due to limited number of crashes in each county, any roadway segment where the lane-departure crash density was greater than the average for the county received a star.
4. **Critical Radius Curve Crash Density –** Nationally, lane-departure crashes frequently occur within curves. Curves with radii between 500 and 1,200 feet (that is, critical radius curves) have a higher serious crash rate than other curves, and roadway segments with more curves in this radius range are considered to have greater risk. The risk factor is determined by the number of critical radius curves divided by the length of the segment. The urban-rural county average critical curve radius crash density for these types of curves along roadway segments was 0.095 crash per mile. Any segment with a curve critical radius crash density greater than or equal to 0.095 received a star.
5. **Edge Risk Assessment (ERA) –** A rating system was developed to categorize the risk level of vehicles leaving the travel lane. Roads with a usable shoulder and reasonable clear zone received a rating of 1. Roads with little or no usable shoulder but with a reasonable clear zone received a rating of 2, as did roads with a usable shoulder but with fixed objects in the clear zone. Roads with no usable shoulder and fixed objects in the clear zone received a rating of 3. Examples of these edge risks are shown in Figure 2-6. Roads were evaluated using photos taken in the autumn of 2013 to determine the rating. Roads with a rating of 2 or 3 received a star.

[1] When a risk factor is present, the segment, curve or intersection is given a star. The more risk factors present (that is, more stars) indicates greater potential for a severe crash to occur.

Detailed segment analysis and results for Grand Forks County is provided in Chapter 4. A prioritization process for each roadway segment was put into place using the five risk factors by giving stars to each risk factor present. The highest-priority roadway segments received the most stars. In cases where roadway segments received the same number of stars, the ERA, and ADT were used to break the tie.

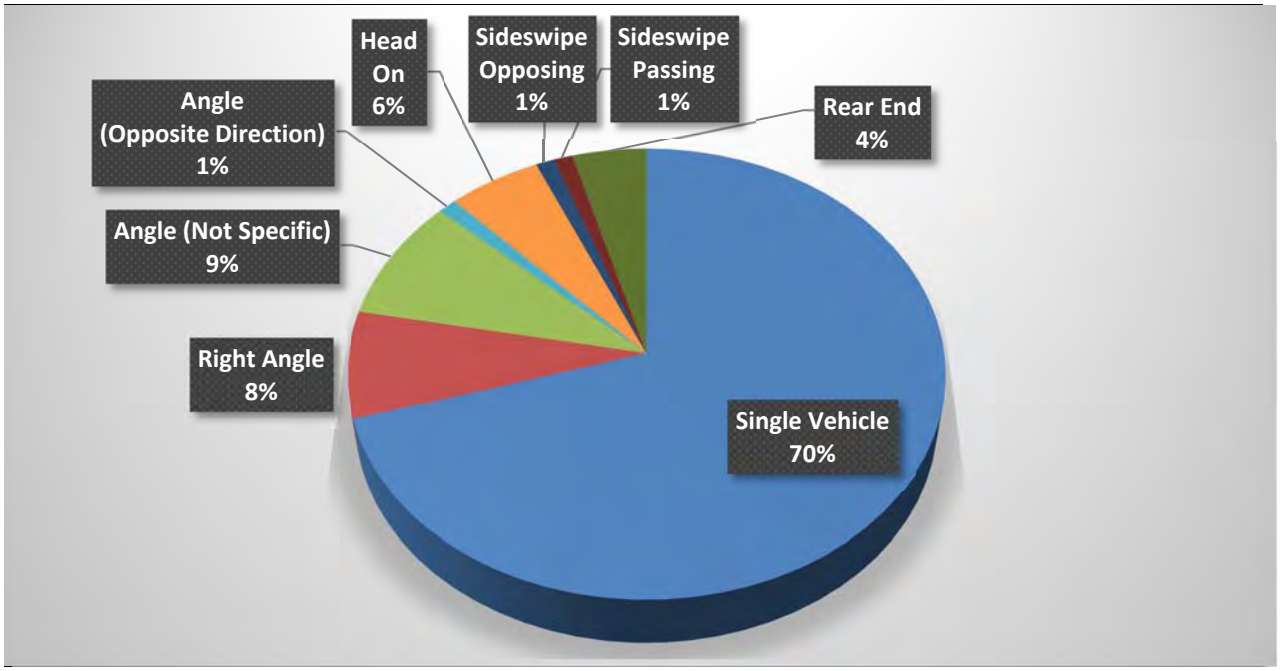



FIGURE 2-3
Urban-Rural Counties Serious Crash Types on Rural Paved Roads (2008 to 2012)

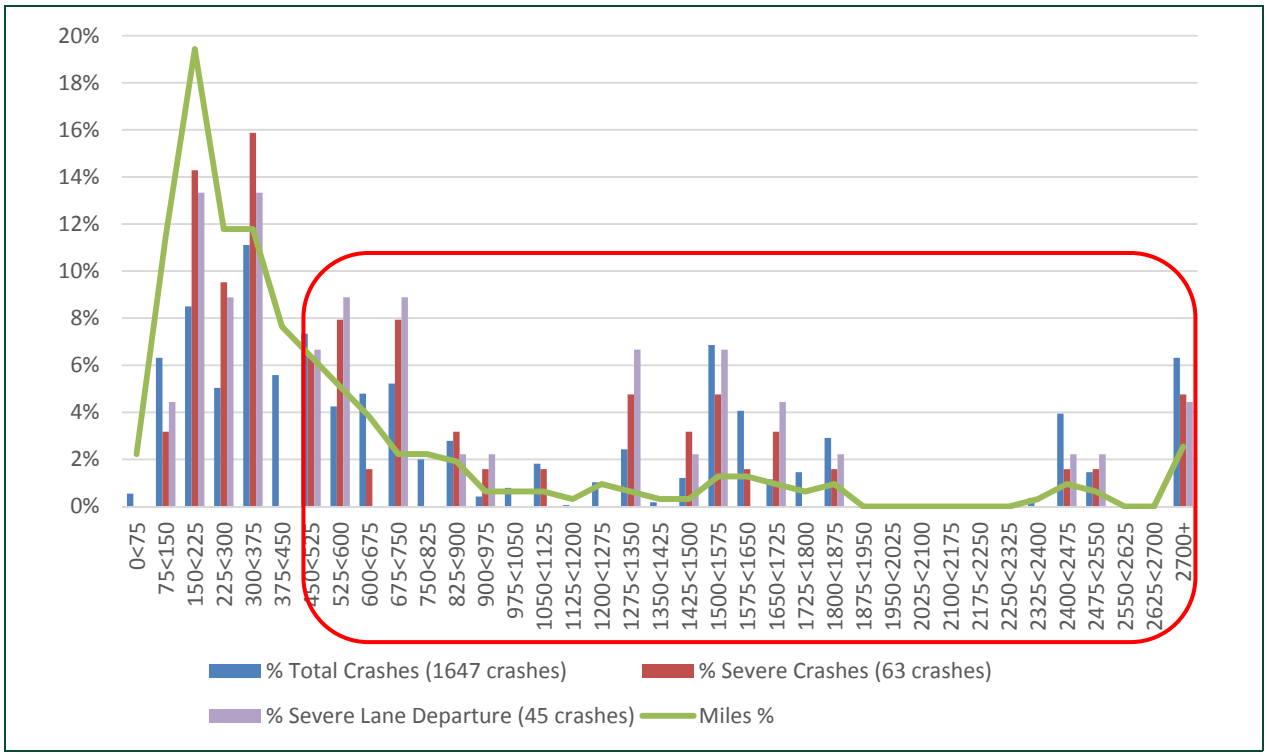



FIGURE 2-4
Urban-Rural Counties Roadway Segment Average Daily Traffic (ADT) Crash Data (2008 to 2012)

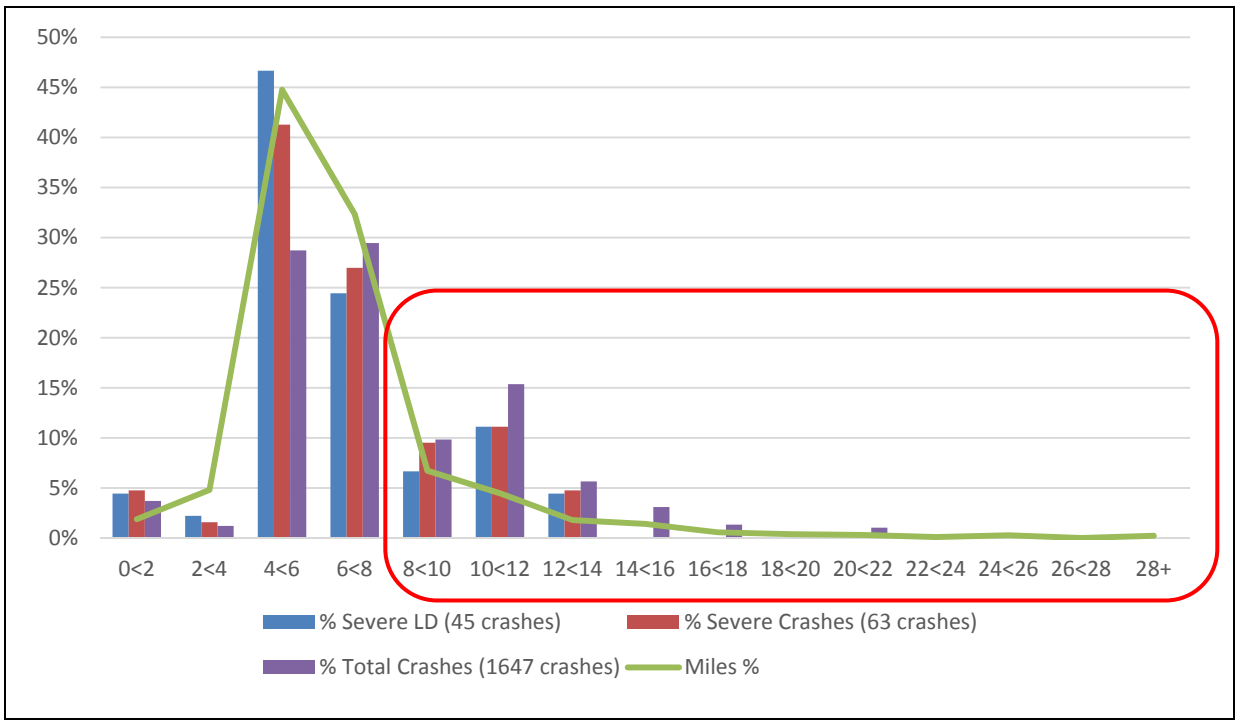



FIGURE 2-5
Urban-Rural Counties Serious Crashes by Access Density on North Dakota (2008 to 2012)

**1** – Usable Shoulder, Reasonable Clear Zone

**2** – No Usable Shoulder, Reasonable Clear Zone

**2** – Usable Shoulder, Roadside with Fixed Obstacles

**3** – No Usable Shoulder, Roadside with Fixed Obstacles

FIGURE 2-6
Sample Edge Risk Assessment Ratings and Descriptions

### 2.3.2 Rural Curves – Crashes on Paved Roads in Curves

Detailed crash analysis included horizontal curves on rural paved local roads. Research indicates horizontal curves with certain characteristics contribute to the overall frequency of lane-departure crashes. The 274 miles of rural paved roads in the Grand Forks region contain 58 curves totaling almost 7 miles in length (2 percent of the road system mileage).

With only three serious crashes along curves reported from 2008 to 2012, too few crashes occurred on these curves to serve as a reliable indicator of the relative degree of risk. However, statewide data show the importance of safety improvements on curves to reduce serious crashes since 32 percent of serious lane-departure crashes occurred in curves. As a result, the LRSP team used characteristics of curves in the county where crashes had occurred, as well as available information from similar analysis of national and statewide data. Results from *Cost-Benefit Analysis of In-Vehicle Technologies and Infrastructure Changes to Avoid Crashes Along Curves and Shoulders* (compiled by the University of Minnesota and CH2M HILL in June 2009) were also used in curve analysis and prioritization.

Based on a review of these sources, the following five risk factors were identified for crashes within curves in the county:

1. **Curve Radius –** Grand Forks County and all counties in Phase 1 and Phase 2 did not have enough serious curve crashes to provide insight into North Dakota's characteristics (Figure 2-7). National data show that curves with mid-range radii had higher crash densities. An upper limit of 1,200 feet was used for at-risk curves, because 1,200 feet is a 60-mile-per-hour design speed based on AASHTO's *A Policy on Geometric Design of Highways and Streets* (commonly referred to as the "Green Book;" 6th edition, 2011). A lower limit of 500 feet was used to represent the serious lane-departure crashes that were reported in Grand Forks County from 2008 to 2012. Any curve with a radius between 500 and 1,200 feet received a star.
2. **Average Daily Traffic (ADT) –** Traffic volumes over 500 vehicles per day present a risk factor in urban-rural counties and represent a higher risk for crashes (Figure 2-8). Sixty-four percent of serious lane-departure crashes occurred along curves with this ADT, while only 31 percent of curves are represented in this range. Therefore, curves with an ADT over 500 vehicles per day received a star.
3. **Intersection within the Curve –** In Grand Forks County, the presence of an intersection within a curve increased the risk for a serious crash. Curves with at least one intersection within the curve received a star.
4. **Visual Trap –** A visual trap exists when the crest of a vertical curve is located before a horizontal curve or where a minor road, tree line, or line of utility poles continues on a tangent to the curve, thereby creating the illusion that the road continues straight ahead (Figure 2-9). The presence of a visual trap increased the risk of crashes in Grand Forks County and, therefore, received a star.
5. **Serious Crashes –** If a serious crash occurred on a curve between 2008 and 2012, the curve received a star.

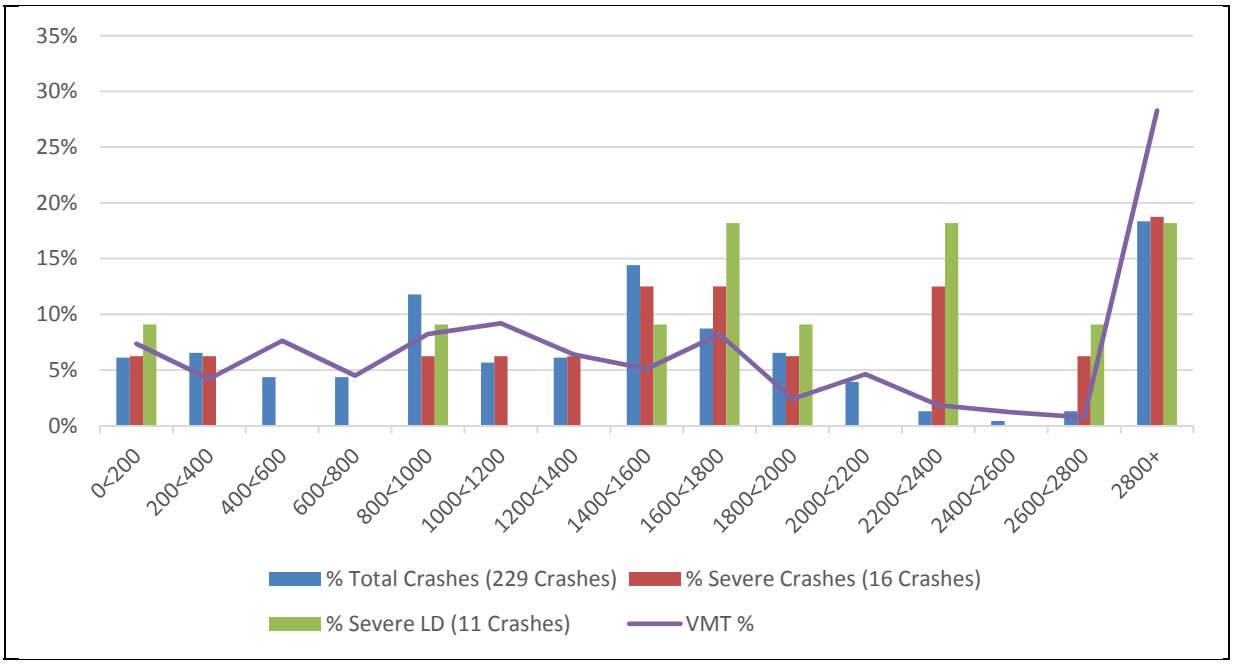



FIGURE 2-7
Phase 1 and Phase 2 Urban-Rural Curve Crashes by Radii – 500 to 1,200 feet (2008 to 2012)

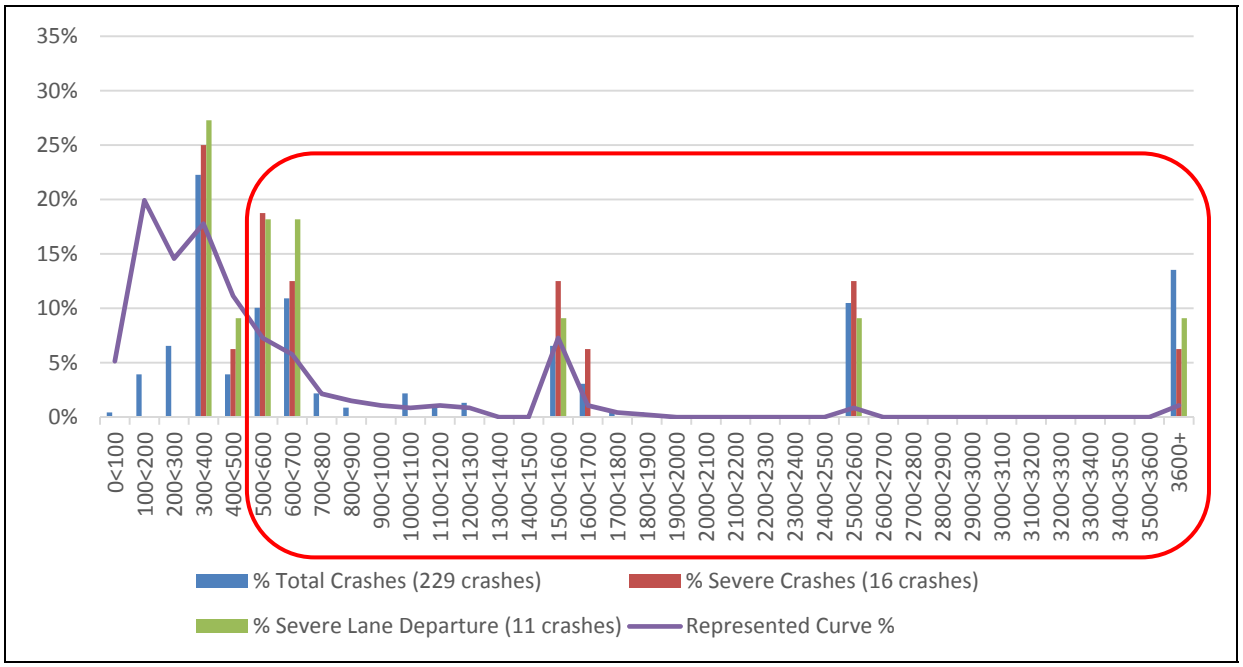



FIGURE 2-8
Urban-Rural Curve Crashes by Average Daily Traffic (ADT) – Greater than 500 Vehicles per Day (2008 to 2012)

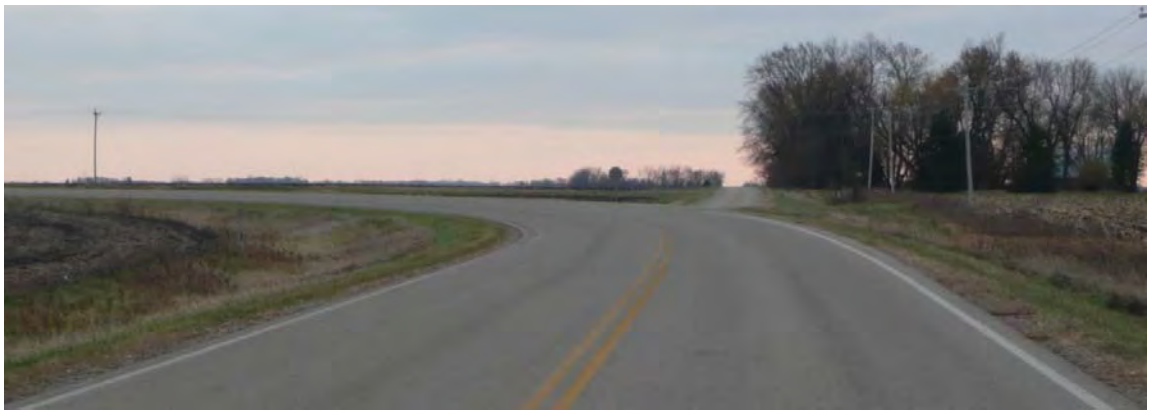


FIGURE 2-9
Example of a Visual Trap – Minor Road Intersects Roadway on a Curve

Based on 229 total crashes and 16 serious lane-departure crashes along the urban-rural county roads, curves with intersections and visual traps have a higher crash density (are more at risk) than those without such features. These risk factors have also been observed nationally.

Detailed curve analysis and results for Grand Forks County is provided in Chapter 4. The five risk factors were used to prioritize curves in the county, with the highest-priority curves receiving the most stars. Curves were reviewed for proximity to high-priority curves and existing conditions as well.

Curves in the Grand Forks region were screened for compliance with the *Manual on Uniform Traffic Control Devices* (MUTCD; 2009) requirement regarding traffic signs at horizontal curves. Under this requirement, a curve must have an advance horizontal alignment warning sign if the daily traffic is greater than 1,000 vehicles per day and if speed differentials (the difference between the speed limit and the advisory speed) meet certain thresholds. A horizontal alignment sign and advisory speed plaque are recommended when the speed differential is 5 mph, and they are required if the speed differential is 10 mph or greater. Curve radius was used to estimate whether individual curves meet the speed differential requirements for advance warning signs and advisory speed plaques. The estimated advisory speeds (assuming a 55-mph speed limit, 6-percent superelevation, and friction factor that are consistent with the AASHTO Green Book) based on the curve radius are as follows:

- 900 to 1,100 feet – 50 mph
- 700 to 900 feet – 45 mph
- 500 to 700 feet – 40 mph
- 300 to 500 feet – 35 mph
- Under 300 feet – 30 mph or slower

For this analysis, no suggested advisory speed is provided for curves with a radius under 300 feet; these curves should be investigated further by the county to determine the appropriate advisory speed. Additionally, it is recommended that the county complete its own ball-bank indicator assessment of all curves to determine whether the curves on their road system meet the MUTCD requirement and to verify suggested advisory speeds.

If a curve was not selected as a project candidate through the LRSP risk assessment process (although the curve has an ADT greater than 1,000 vehicles per day and a radius under 1,100 feet), the curve was flagged for the county to determine the need for additional signs based on MUTCD guidance.

### 2.3.3 Rural Intersections – Crashes at Thru-STOP Intersections

On all Phase 2 rural local roads, serious crashes are most common at Thru-STOP intersection,[2] where 95 percent of serious intersection crashes (18 crashes) occurred from 2008 to 2012 (Figure 2-10). Serious right-angle and angle crashes are the most common types of crashes at these intersections (Figure 2-11).

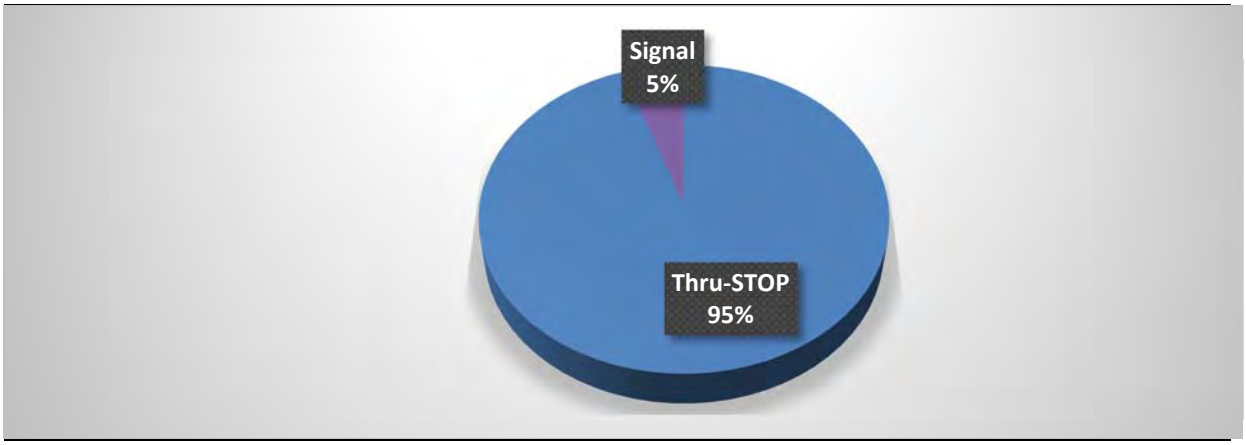



FIGURE 2-10
Phase 2 Rural Serious Crashes by Traffic Control Device (2008 to 2012)

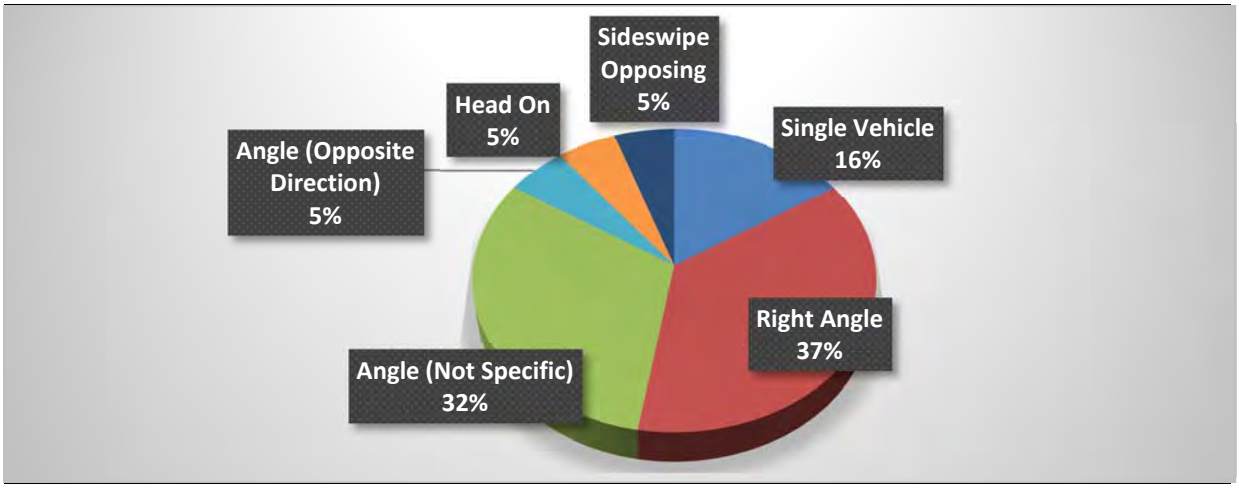



FIGURE 2-11
Phase 2 Rural Serious Crashes by Crash Type (2008 to 2012)

[2] Those intersections where traffic on the more heavily used road may proceed through the intersection without stopping, while traffic on the less-used crossroad must stop at the STOP sign before proceeding through the intersection.

In Grand Forks County, 83 rural intersections with 80 Thru-STOP locations were reviewed. The average serious crash density at rural Thru-STOP locations is 0.01 serious crash per intersection per year. This low density supports assessing an intersection risk based on the characteristics of the locations where serious crashes occurred. The following seven rural Thru-STOP risk factors were identified for serious right-angle crashes in the county:

1. **ADT Cross Product –** 94 percent of the serious right angle crashes at rural Thru-STOP intersections occurred at intersections with an ADT Cross Product[3] of major and minor entering vehicles greater than 60,000 (Figure 2-12). An intersection was considered to have a higher risk of serious right angle crashes if the ADT Cross Product was greater than 60,000. These intersections received a star.
2. **Skew –** As the intersection skew (the angle at which one road intersects another) increases, the crash risk also increases (Figure 2-13). At a 20-degree skew, the crash risk compared to that of a 90-degree intersection is increased by approximately 10 percent. While the county's serious right-angle crash data set was too small to determine if skew plays a role in crashes, it has been proven nationally that the greater the skew, the greater the likelihood for a crash (Figure 2-14). Intersections with a skew greater than 20 degrees received a star.
3. **Within or Near a Curve –**Research has shown that intersections located within or near a horizontal curve are subject to a higher level of risk (Figure 2-14). In this analysis, intersections located within or near a horizontal curve received a star.
4. **Development Present –** Research has shown that intersections with commercial development in one or more quadrants have a higher level of risk, possibly due to vehicles entering or exiting the development. Private residences or farms were not included as development. Grand Forks County intersections with development present had more serious crash rates (Figure 2-14) and therefore received a star.
5. **Railroad Crossing –** Intersections at or near a railroad crossing are subject to increased risk because drivers must navigate the railroad tracks while approaching the intersection. National data were used for this risk factor due to the small number of serious crashes in the county. An intersection with a railroad crossing on one of the approaches received a star.
6. **Previous STOP More than 5 Miles before the Intersection –** When traveling longer distances without encountering a STOP sign, drivers lose attention, and research has shown those intersections to be at higher risk (Figure 2-14). National data were used to confirm this risk factor. Intersections at which either of the stopped approaches do not enocounter a STOP sign within 5 miles received a star.
7. **Total Crashes –** If an intersection had any type of crash from 2008 to 2012, the intersection received a star.

[3] The ADT Cross Product is the major-street entering volume multiplied by the minor-street entering volume.

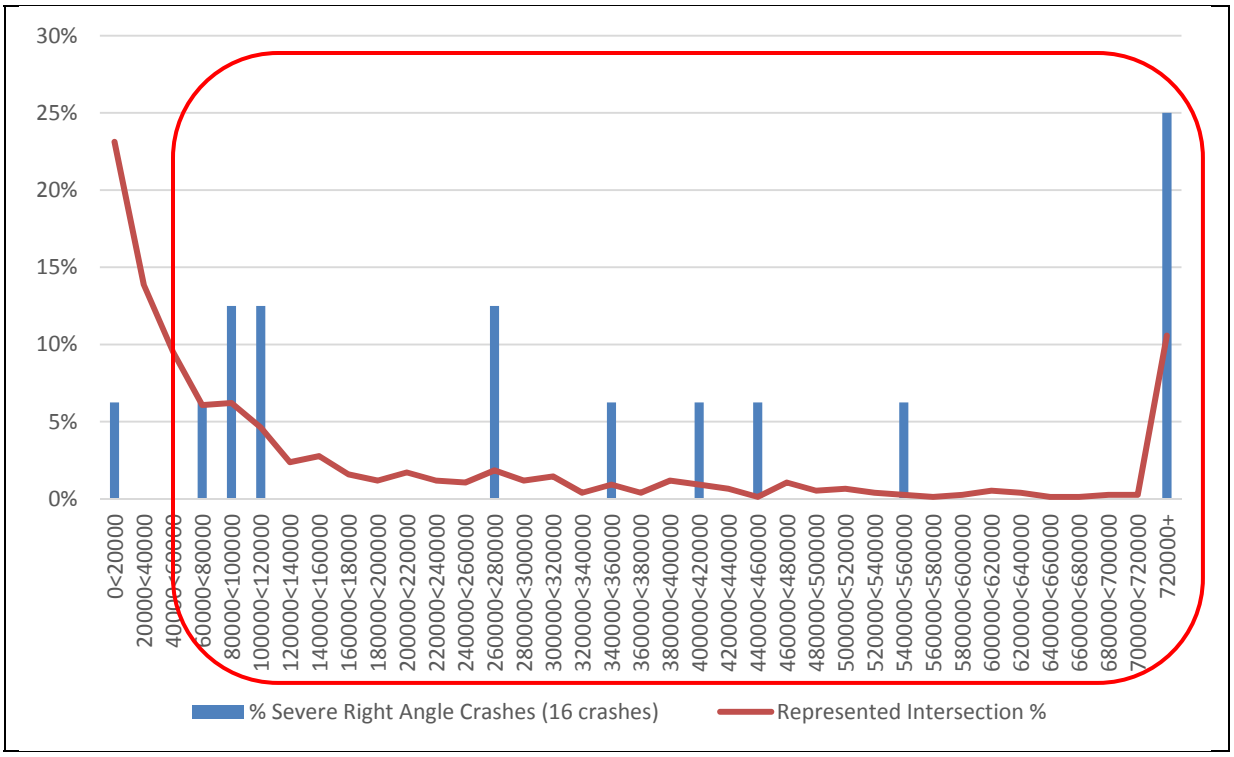
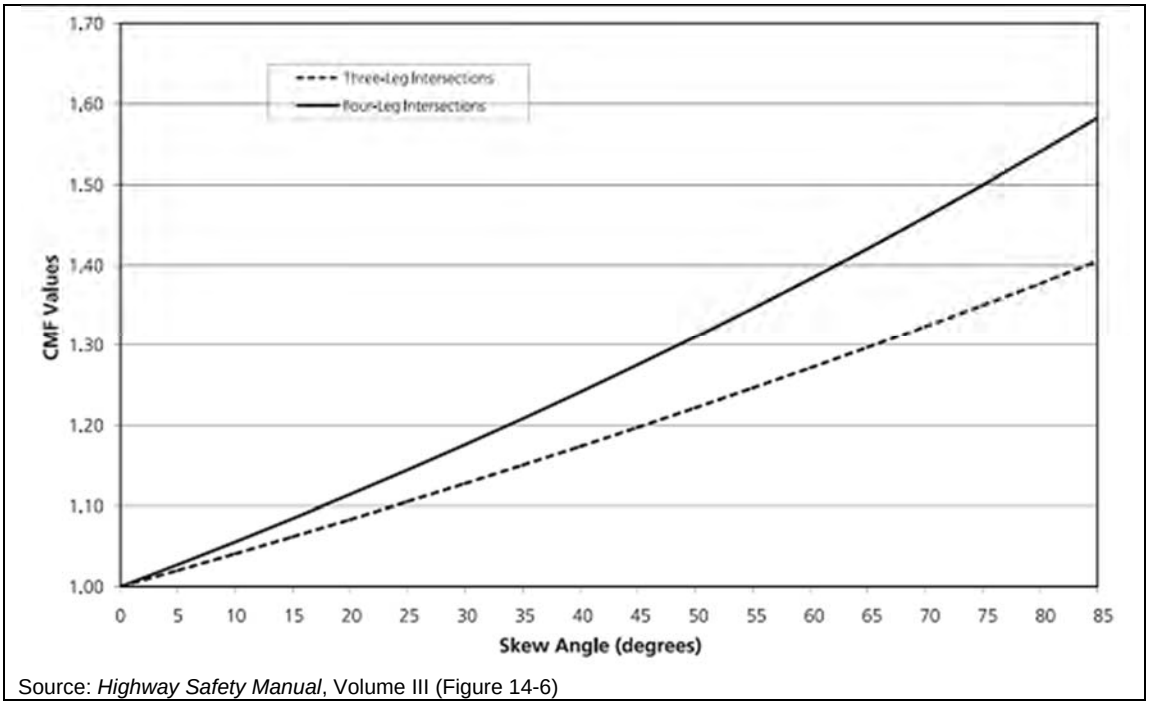



FIGURE 2-12
Phase 1 and Phase 2 Rural ADT Cross Product (2008 to 2012)




Source: *Highway Safety Manual*, Volume III (Figure 14-6)

FIGURE 2-13
Intersection Skew Risk

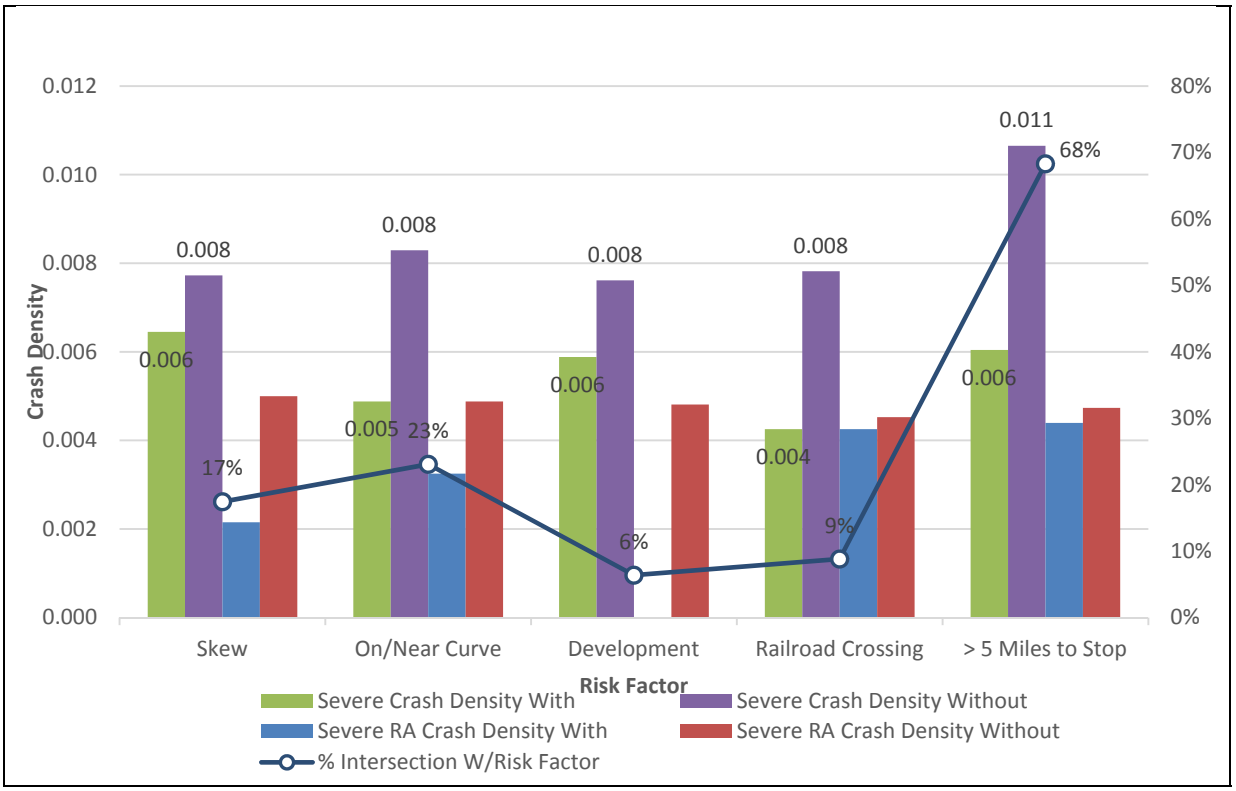



FIGURE 2-14
Rural Intersection Risk Factors for the Phase I & Phase II Urban-Rural Counties (2008 to 2012)

Grand Forks County had 76 total rural intersection crashes from 2008 to 2012, and only 5 of those crashes are serious. Due to the small number of serious crashes, some of the data and risk factors may be misleading based on the county data alone. National data were used to confirm intersection risk factors .

Detailed intersection analysis and results for the county is provided in Chapter 4. Due to the large number of intersections, each intersection was prioritized using the seven risk factors by giving stars to each risk factor present. The highest-priority intersections received the most stars. In cases where two or more intersections received the same number of stars, crash costs were used to break the tie and determine priority.

### 2.3.4 Urban Roadway Segments – Cities with Populations Greater than 5,000 (City of Grand Forks)

Approximately 500 miles of urban local roads were reviewed in Phases 1 and 2, where 23,603 total and 281 serious crashes occurred from 2008 to 2012. Nationally, research has shown that rear-end and head-on crashes are most common on urban local roads. In the City of Grand Forks, 1,374 rear-end crashes and 105 head-on and sideswipe-opposing crashes occurred from 2008 to 2012.

Although a variety of data was collected for each local roadway segment, only the following four risk factors were identified for the City of Grand Forks:

1. **Average Daily Traffic (ADT) –** Both rear-end and head-on crashes were overrepresented in road corridors with ADT volumes greater than 6,000 vehicles per day (Figure 2-15). (Note: This ADT volume includes data from the cities of Fargo, West Fargo, Valley City, Wahpeton, Devils Lake, Bismarck, and Minot.) Corridors with an ADT greater than 6,000 vehicles per day received a star.
2. **Access Density –** Rear-end and head-on crashes are overrepresented in Phases 1 and 2 along corridors with access densities greater than or equal to 30 access points per mile (Figure 2-16), and therefore received a star.
3. **Road Geometry –** Crashes are overrepresented per corridor mile on roadways with four or more lanes (Figure 2-17), and therefore multilane roadways were given a star.
4. **Speed Limit –**Serious rear-end and head-on crashes were overrepresented in low-speed corridors (40 mph or less) (Figure 2-18), and therefore received a star.
5. **Serious Rear-End, Sideswipe, or Head-On Crash –** If an intersection had any serious rear-end, sideswipe (opposing or passing), or head-on crash from 2008 to 2012, the intersection received a star.

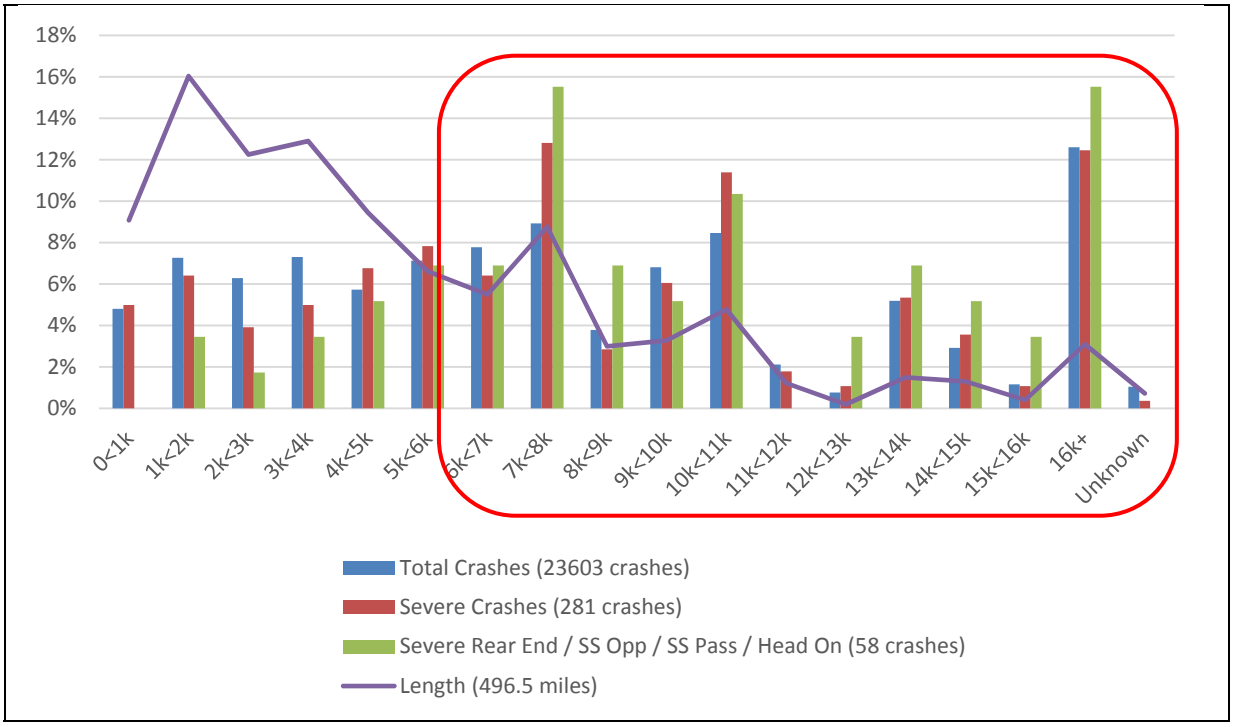



FIGURE 2-15
Phase 1 and Phase 2 Urban Roadway Segment Average Daily Traffic (ADT) (2008 to 2012)

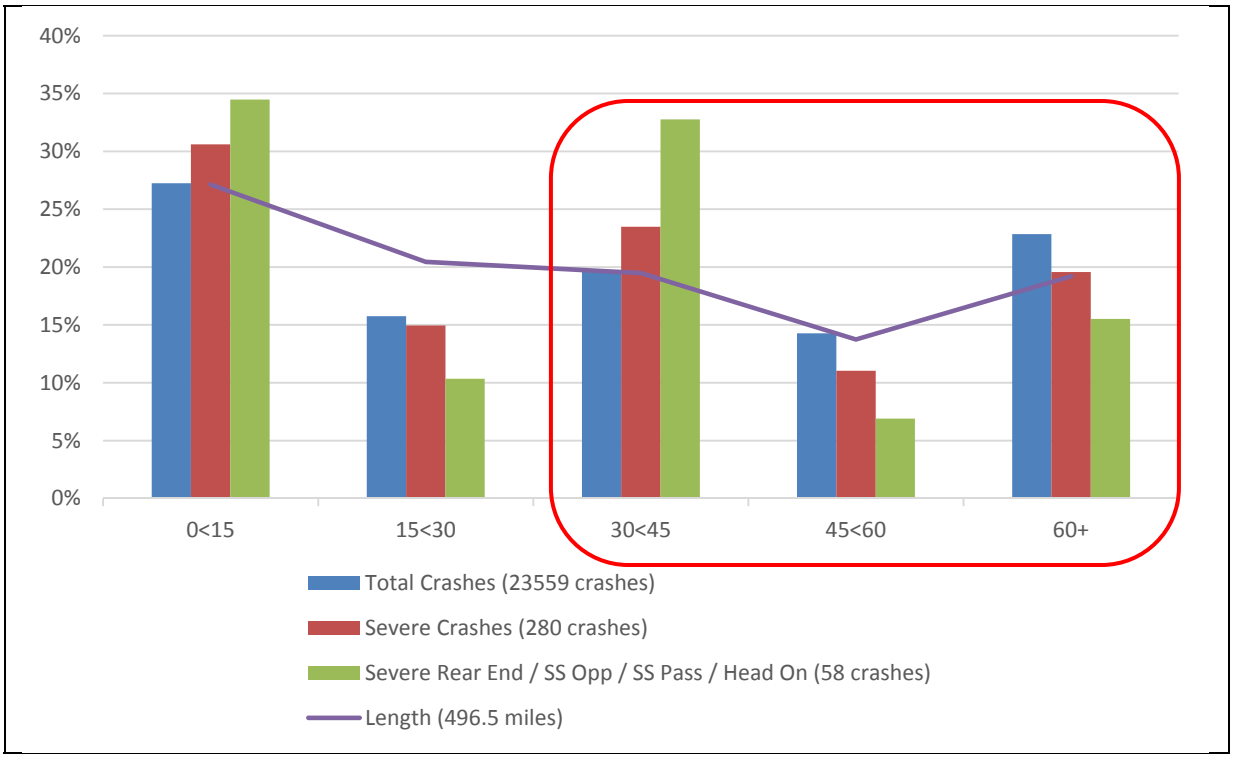



FIGURE 2-16
Phase 1 and Phase 2 Urban Roadway Segment Access Density (2008 to 2012)

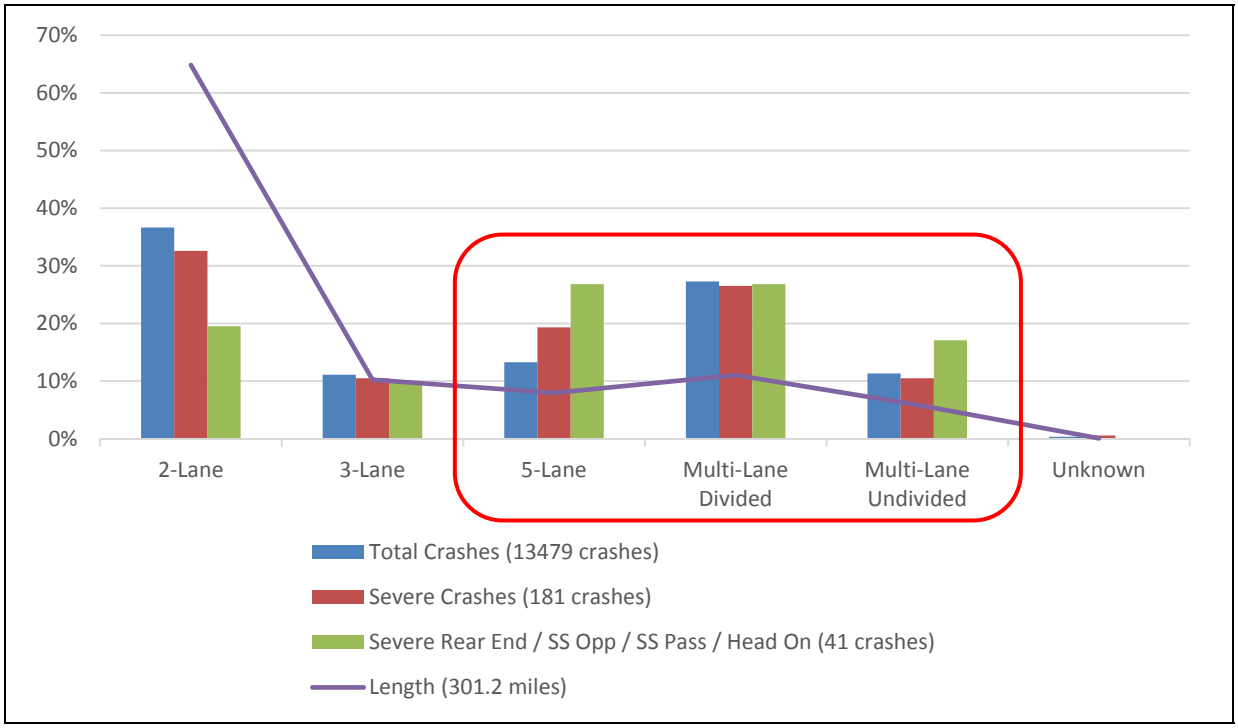



FIGURE 2-17
Phase I & Phase II Urban Road Geometry (2008 to 2012)


FIGURE 2-18
Phase I & Phase II Urban Roadway Segment Crashes by Speed (2008 to 2012)

Detailed urban segment analysis and results for the City of Grand Forks are provided in Chapter 4. The five risk factors were used to prioritize roadway segments, with the highest priority segments receiving the most stars. High-priority roadway segments were also reviewed from a corridor perspective so that suggested safety improvement projects create a consistent corridor throughout the urban area.

### 2.3.5 Urban Intersections – Right-Angle Crashes, Cities with Populations Greater than 5,000 (City of Grand Forks)

In the City of Grand Forks, 137 intersections including 47 signalized intersections were analyzed. Of the 1,147 total crashes in Phases 1 and 2, only 27 serious crashes occurred at the City of Grand Forks urban intersections analyzed. These data support assessing an intersection's risk based on the characteristics of locations with serious crashes. A variety of information was collected on each intersection and from that, the following six risk factors for right angle crashes were chosen:

1. **Traffic Control Device –** Serious crashes are overrepresented at signalized intersections versus other intersection control types in urban areas (Figure 2-19). Therefore, signalized intersections received a star.
2. **Entering ADT –** Higher volumes of vehicles entering intersections was considered a risk factor. Approximately 40 percent of right-angle crashes at signalized intersections in Phase 1 and Phase 2 urban areas occurred at intersections with an entering vehicles ADT greater than 18,000 vehicles per day (Figure 2-20). Therefore, any intersection with an entering vehicles ADT greater than 18,000 vehicles per day received a star.

3. **Road Geometry** – Serious angle crashes were overrepresented on divided roadways with signalized intersections (Figure 2-21). Therefore, intersections on divided roadways received a star.
4. **Major Corridor Speeds**—Low-speed corridors were found to act as a surrogate for serious angle crashes (Figure 2-22). Therefore, intersections with low speed limits (40 mph or less) received a star.
5. **Total Lanes on Major Approach –** Serious angle crashes were overrepresented at intersections containing six or more approach lanes (Figure 2-23). Therefore, intersections with six or more approach lanes received a star.
6. **Serious Crashes –** Any intersection where one or more serious crashes had occurred received a star.

Detailed urban intersection right angle analysis and results for the City of Grand Forks is in Chapter 4. The risk factors previously listed were used to help prioritize intersections with the highest-priority intersections receiving the most stars. Intersections where right angle crashes occurred were reviewed as urban corridors to create a consistent corridor throughout the urban area and to discourage implementing strategies at just one or two high-priority intersections along a corridor if the remaining intersections have the same characteristics.

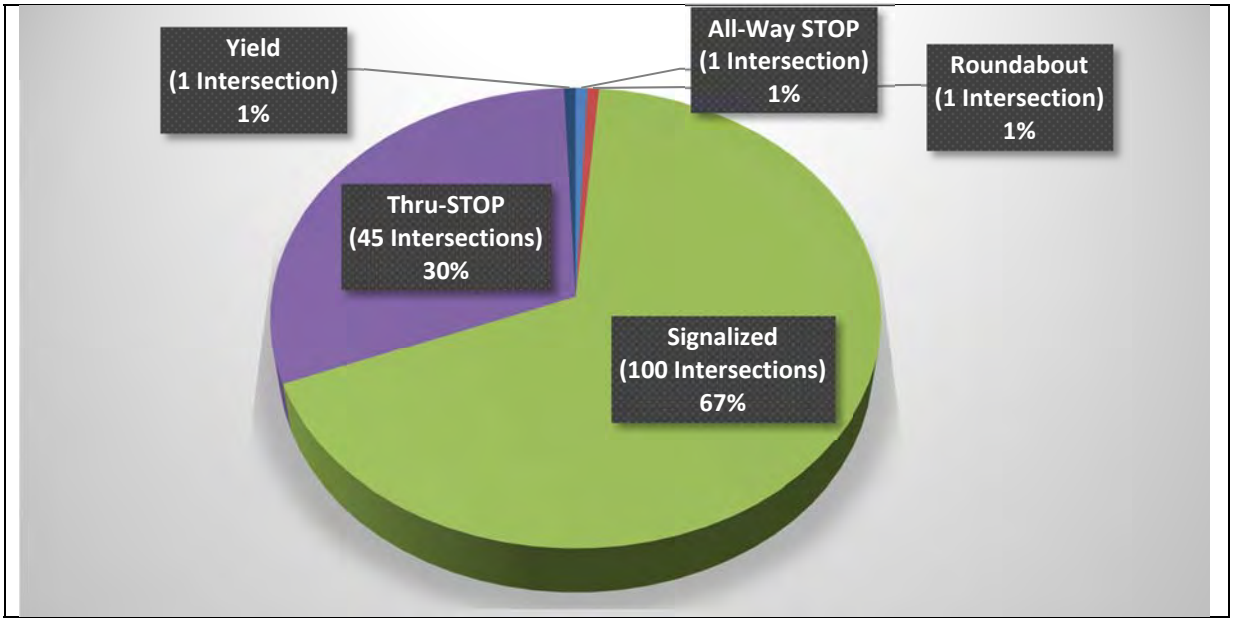



FIGURE 2-19
Phase 1 and Phase 2 Urban Serious Crashes by Intersection Traffic Control Device (2008 to 2012)

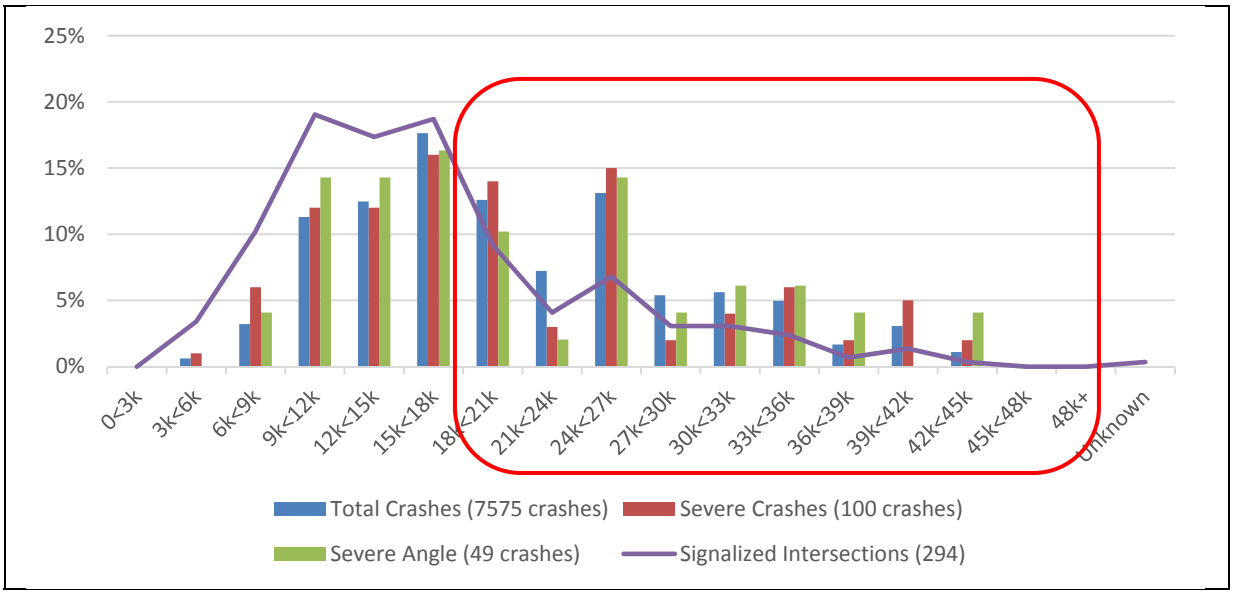



FIGURE 2-20
Phase 1 and Phase 2 Urban Crashes by Intersection Entering Vehicles Average Daily Traffic (ADT)

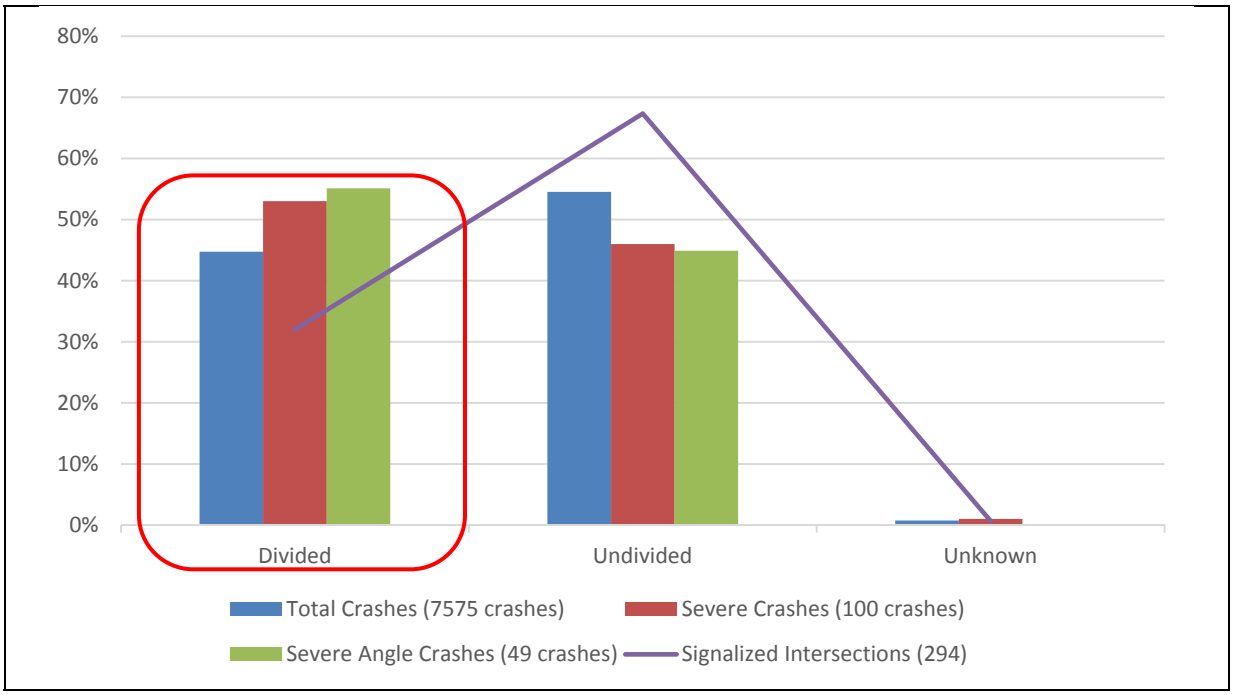



FIGURE 2-21
Phase 1 and Phase 2 Urban Crashes by Road Geometry

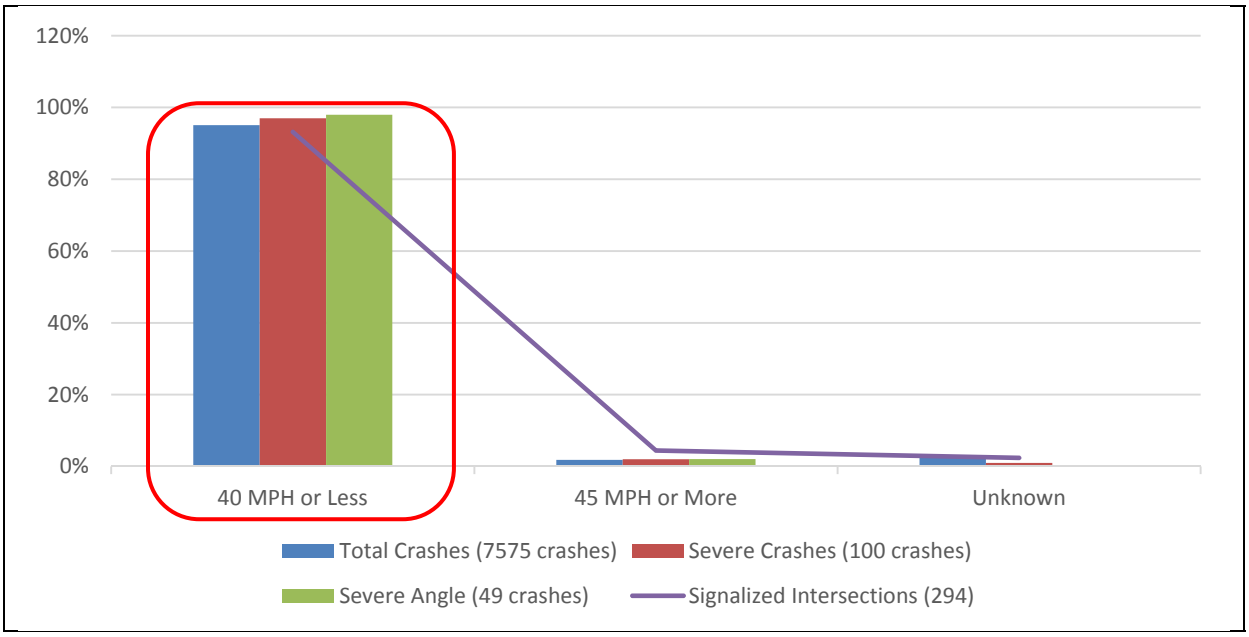



FIGURE 2-22
Phase 1 and Phase 2 Urban Crashes by Intersection Configuration

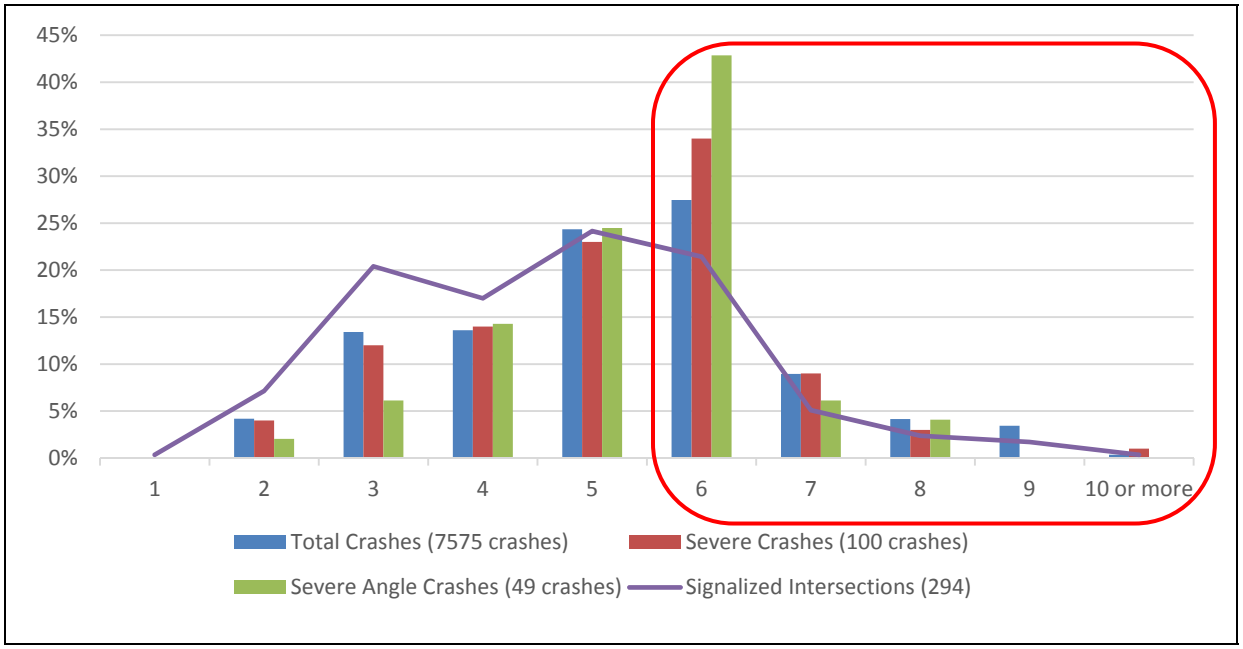



FIGURE 2-23
Phase 1 and Phase 2 Urban Signalized Intersection Crashes by Major Lanes Distribution (ADT)

### 2.3.6 Urban Intersections – Pedestrian/Bicycle Crashes, Cities with Populations Greater than 5,000 (City of Grand Forks)

Similar analysis was completed for pedestrian and bicycle crashes at intersections. Only 3 serious pedestrian and bicycle crashes occurred at City of Grand Forks intersections from 2008 to 2012; therefore, the data were combined with all of the Phase 1 and Phase 2 urban intersection analysis. The following seven risk factors were identified based on the analysis:

1. **Traffic Control Device -** Serious pedestrian and bicycle crashes are overrepresented at signalized intersections versus other intersection control types in urban areas (Figure 2-24). Therefore, signalized intersections received a star.
2. **Entering Vehicles ADT –** A high volume of vehicles entering an intersection was considered a risk factor. A majority of the serious pedestrian and bicycle crashes occurred at intersections with an entering vehicles ADT greater than 18,000 vehicles per day (Figure 2-25). Therefore, any intersection with an entering vehicles ADT greater than 18,000 vehicles per day or greater received a star.
3. **Pedestrian Generator –** Intersections with adjacent land uses likely to generate pedestrian traffic (such as a school, playground, bar or gas station) had a higher pedestrian and bicycle crash risk than other intersections (Figure 2-26). Therefore, an intersection with a pedestrian generator present received a star.
4. **Major Corridor Speeds –** Low-speed corridors were found to act as a surrogate for serious pedestrian and bicyclist crashes (Figure 2-27). Therefore, intersections with low speed limits (40 mph or less) received a star.
5. **Marked Crosswalk –** The presence of marked crosswalks was found to be a surrogate for serious pedestrian and bicyclist crashes (Figure 2-28). Therefore, intersections with a marked crosswalk received a star.
6. **Bus Stop –** The presence of a bus stop was associated with increased rate of pedestrian and bicyclist crashes (Figure 2-29). Therefore, intersections with a bus stop received a star.
7. **Pedestrian and Bicycle Crashes –** Any intersections that had any bicycle or pedestrian crash from 2008 to 2012 received a star.

Detailed urban intersection pedestrian and bicycle analysis and results for the City of Grand Forks are provided in Chapter 4. The seven risk factors were used to prioritize intersections with the highest-priority intersections receiving the most stars. Pedestrian and bicycle crash intersections were reviewed as urban corridors to create a consistent corridor throughout the urban area.

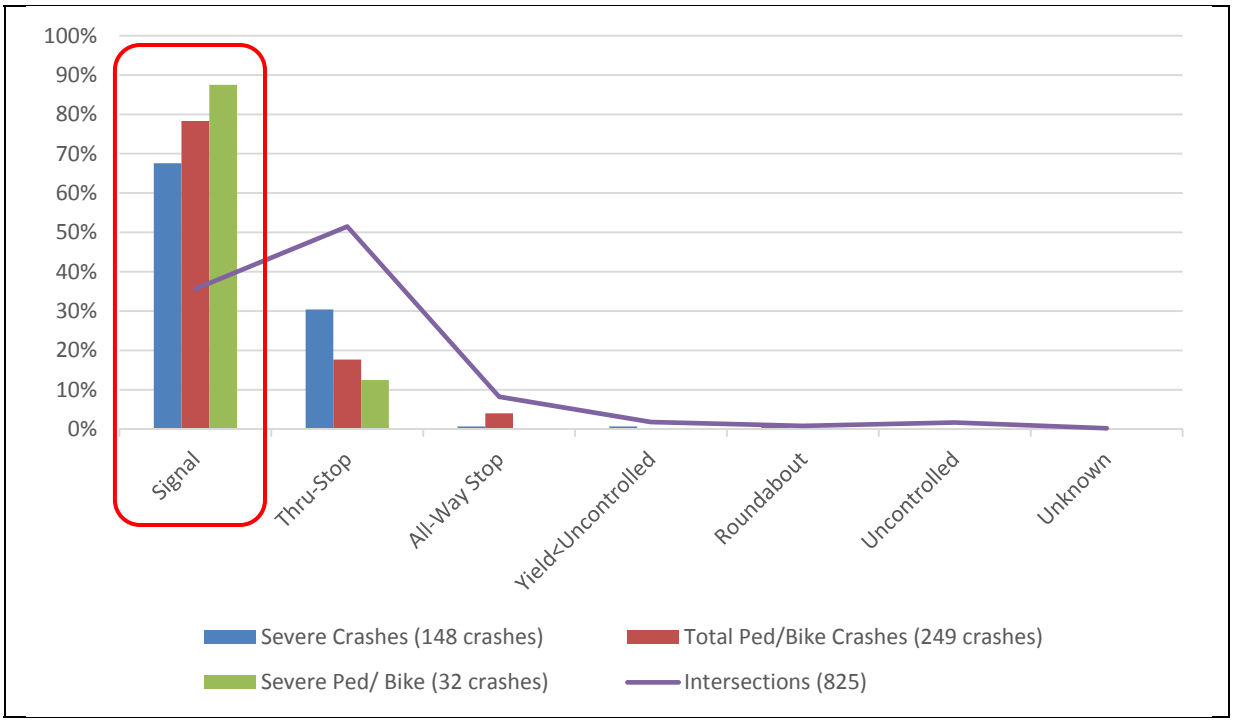



FIGURE 2-24
Phase 1 and Phase 2 Urban Pedestrian/Bike Crashes by Intersection Traffic Control Devices

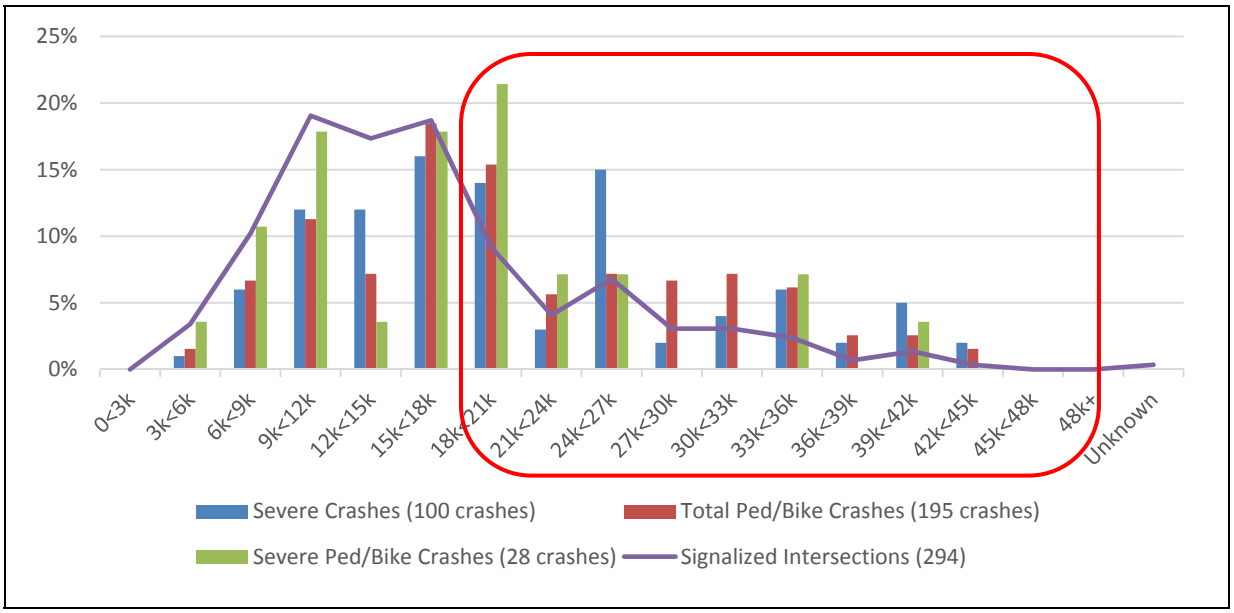



FIGURE 2-25
Phase 1 and Phase 2 Urban Pedestrian and Bicycle Crashes by ADT

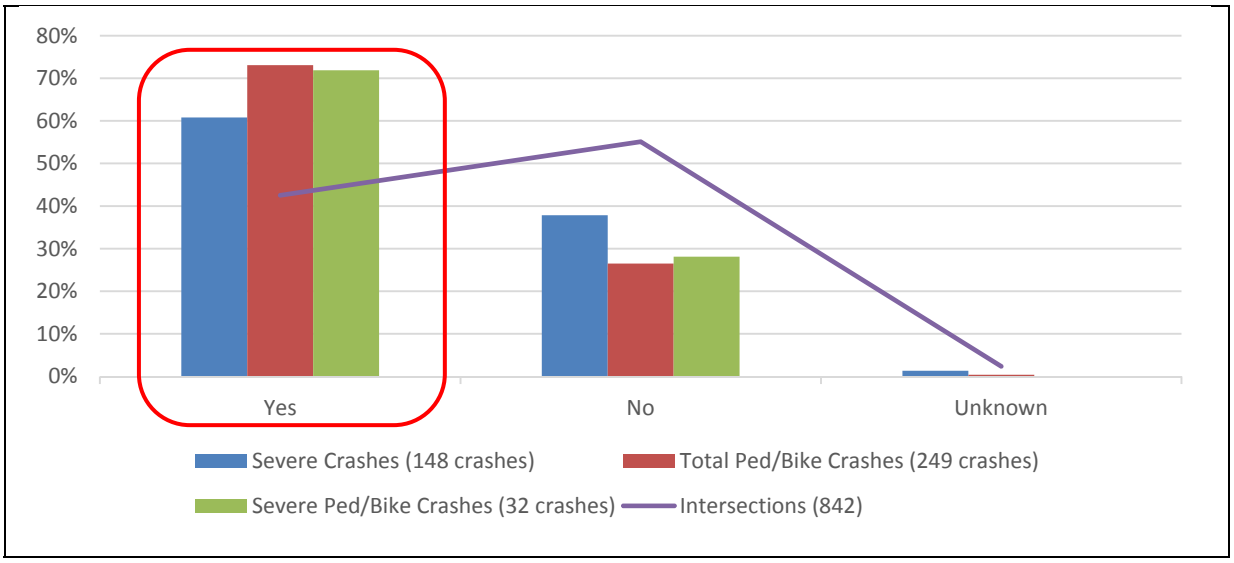



FIGURE 2-26
Phase 1 and Phase 2 Pedestrian and Bicycle Crashes at Urban Intersection with a Pedestrian Generator

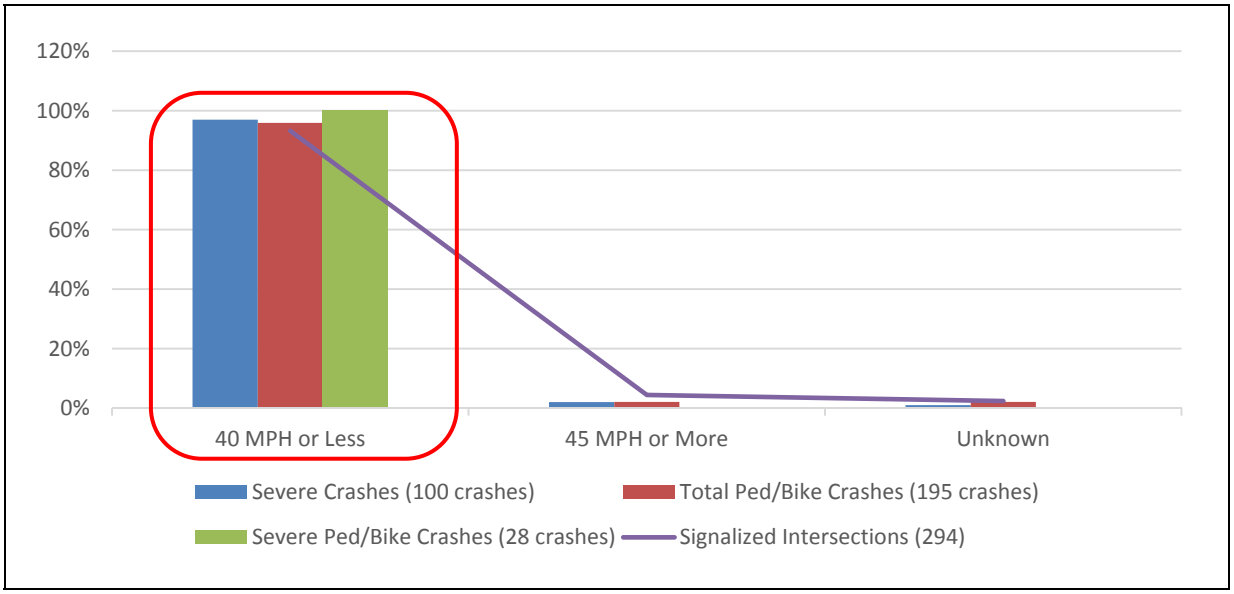



FIGURE 2-27
Phase 1 and Phase 2 Urban Pedestrian and Bicycle Crashes by Speed Limit

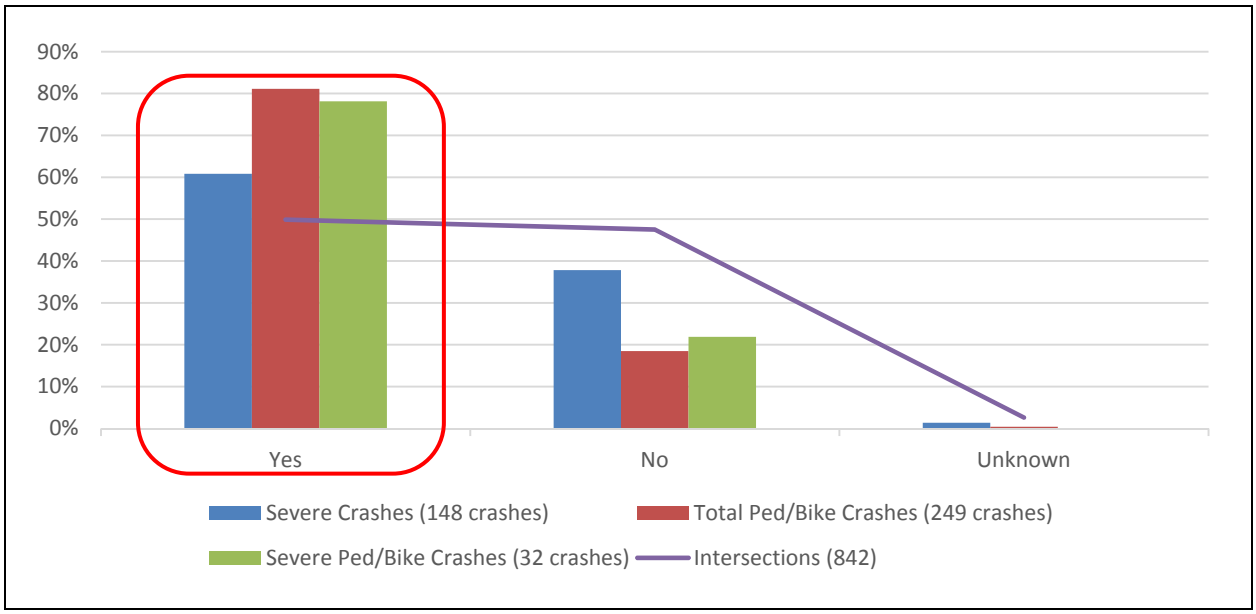



FIGURE 2-28
Phase 1 and Phase 2 Urban Pedestrian and Bicycle Crashes by Crosswalk Presence

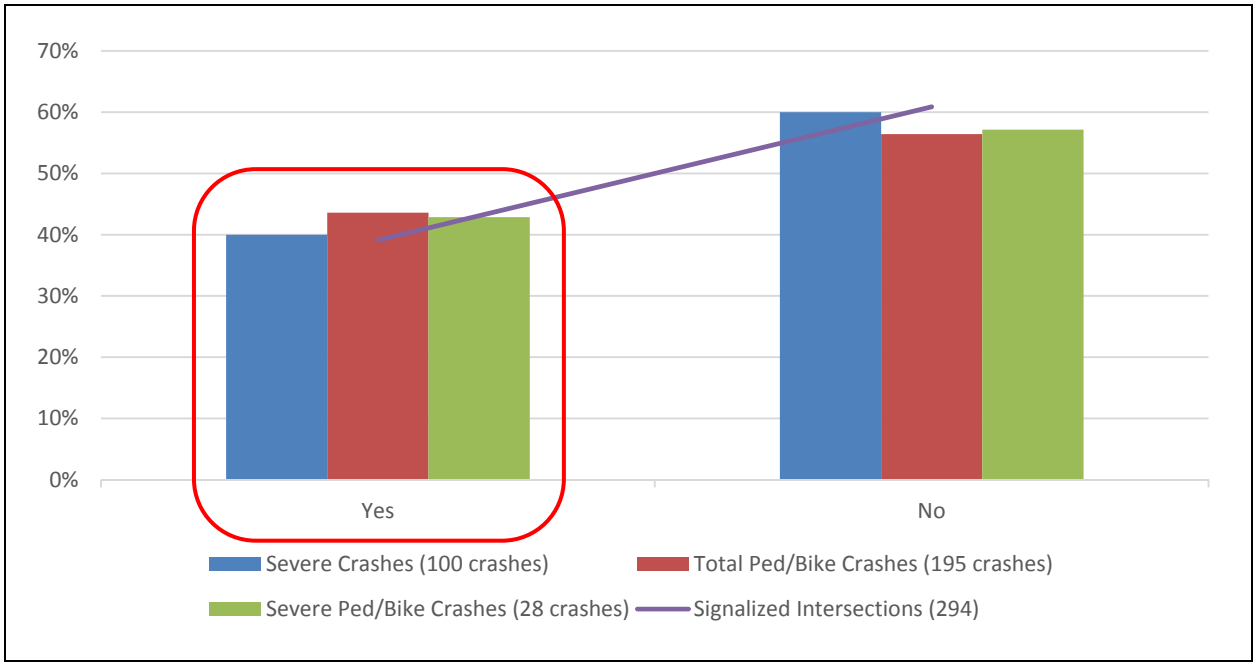



FIGURE 2-29
Phase 1 and Phase 2 Urban Pedestrian and Bicycle Crashes by Bus Stop Presence

## 2.4 Grand Forks Region Risk Summary

Table 2-3 summarizes the risk factors, ranges, and sources used in the Grand Forks region's systemic analysis.

TABLE 2-3
Grand Forks Region Risk Summary

| Risk Factors | Grand Forks Region | | |
|---|---|---|---|
| | Minimum | Maximum | Source |
| **Rural Roadway Segments** | | | |
| ADT Range | 525 | Unlimited | Urban-Rural Phases 1 and 2 |
| Lane Departure Density | 0.064 | Unlimited | Urban-Rural Phases 1 and 2 |
| Access Density | 8 | Unlimited | Urban-Rural Phases 1 and 2 |
| Curve Critical Radius Density | 0.095 | Unlimited | Urban-Rural Phases 1 and 2 |
| ERA | 2 | 3 | All Rural Phases 1 and 2 |
| **Rural Curves** | | | |
| Radius | 500 | 1,200 | National |
| ADT Range | 500 | Unlimited | Urban-Rural Phases 1 and 2 |
| Intersection on Curve | Present | | All Rural Phases 1 and 2 |
| Visual Trap | Present | | All Rural Phases 1 and 2 |
| Serious Crashes | 1 | Unlimited | All Rural Phases 1 and 2 |
| **Rural Intersections** | | | |
| ADT Cross Product | 60,000 | Unlimited | All Rural Phases 1 and 2 |
| Skew | Present | | National |
| On/Near Curve | Present | | National |
| Development | Present | | National |
| Railroad Crossing | Present | | National |
| Previous STOP >5 Miles | Present | | National |
| Total Crashes | 1 | Unlimited | Urban-Rural Phases 1 and 2 |
| **Urban Roadway Segments** | | | |
| ADT | 6,000 | Unlimited | All Urban Phases 1 and 2 |
| Road Geometry | Multilane | | All Urban Phases 1 and 2 |
| Access Density | 30 | Unlimited | All Urban Phases 1 and 2 |
| Corridor Speeds | Low (≤40 mph) | | All Urban Phases 1 and 2 |
| Serious Rear-End, Sideswipe, or Head-On Crash | 1 | Unlimited | All Urban Phases 1 and 2 |
| **Urban Right-Angle Crash Corridors** | | | |
| Entering ADT | 18,000 | Unlimited | All Urban Phases 1 and 2 |
| Traffic Control | Signal | | All Urban Phases 1 and 2 |
| Major Corridor Speeds | Low (≤40 mph) | | All Urban Phases 1 and 2 |
| Road Geometry | Divided | | All Urban Phases 1 and 2 |
| Total Lanes on Major Approach | ≤6 Approach Lanes | | All Urban Phases 1 and 2 |
| Serious Crashes | 1 | Unlimited | All Urban Phases 1 and 2 |

TABLE 2-3
Grand Forks Region Risk Summary

| Risk Factors | Grand Forks Region | | |
|---|---|---|---|
| | Minimum | Maximum | Source |
| **Urban Pedestrian and Bicycle Crash Corridors** | | | |
| Traffic Control | Signal | | All Urban Phases 1 and 2 |
| Entering ADT | 18,000 | Unlimited | All Urban Phases 1 and 2 |
| Major Corridor Speeds | Low (≤40 mph) | | All Urban Phases 1 and 2 |
| Pedestrian Generator | Yes | | All Urban Phases 1 and 2 |
| Marked Crosswalk | Yes | | All Urban Phases 1 and 2 |
| Pedestrian/Bicycle Crashes | 1 | Unlimited | All Urban Phases 1 and 2 |
| Bus Stop | Yes | | Cities of Grand Forks, Fargo, and West Fargo only |

# 3.0 Grand Forks Region Priority Safety Strategies

## 3.1 Background

A variety of strategies are available to address each safety emphasis area. The implementation of high-priority strategies will assist state and local agencies in reducing traffic-related fatalities and incapacitating injuries. The primary sources for these strategies are the National Cooperative Highway Research Program (NCHRP) *Report 500* series and the National Highway Traffic Safety Administration (NHTSA) *Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices*, (Seventh Edition, 2013). Each guide includes a description of the problem, strategies, and model implementation processes. In addition, to assist practitioners in assessing the safety strategies, the guides document the expected effectiveness of each strategy. NCHRP *Report 500* series assigns strategies to one of the following categories:

- **Proven:** These strategies have been used in multiple locations with multiple studies, and have been demonstrated to be effective.
- **Tried:** These strategies have been implemented in many locations; however, no rigorous evaluations have been completed to determine their effectiveness.
- **Experimental:** These strategies represent ideas that are considered to be effective; however, the ideas have not been widely implemented or evaluated.

## 3.2 Initial/Comprehensive List of Potential Strategies

NCHRP and NHTSA safety strategies were the basis for identifying safety strategies for the LRSP. For the LRSP process, NDDOT team members sought to identify viable safety strategies for the top safety emphasis areas (see Tables 3-1 through 3-10). The LRSP team reviewed the full range of safety strategies, and did an initial screening based on cost and effectiveness. For example, the NCHRP report lists over 70 potential strategies to address intersection safety. The screening conducted by the LRSP team narrowed the list of strategies for all safety emphasis areas down to strategies considered to be the most applicable in North Dakota.

Behavioral strategies include information on the expected effectiveness of the strategy to influence driver behavior based on current best practice and evaluation research results when available.

Each infrastructure strategy includes information on the relative cost to implement or operate, along with the typical timeframe for implementation. Relative costs were separated into three categories:

- Low = less than $10,000 per mile or location
- Medium = between $10,000 and $100,000 per mile or location
- High = more than $100,000 per mile or location

The typical timeframe to implement the strategy was also separated into three categories:

- Short = less than 1 year to implement
- Medium = between 1 and 2 years to implement
- Long = more than 2 years to implement

TABLE 3-1
Impaired Driving Strategies (Behavioral Strategies)

| Objectives | Strategies | Effectiveness | Programs and Tactics |
|---|---|---|---|
| **A – Eliminate Drinking and Driving** | **A1 –** Promote Responsible Beverage Service Policies for Alcohol Servers and Retailers | Moderate | Advocate for responsible alcohol server and retailer training and compliance checks. |
| | **A2 –** Employ Alcohol Screening and Brief Interventions | Proven | Implement health care provider interventions with crash victim after an alcohol-related crash (traumatic event) to screen for alcohol use problems, educate on risks of impaired driving, and treatment referral. Develop fact sheets and materials to be used. |
| | **A3 –** Support Community Programs for Alternative Transportation | Moderate | Employ “Safe Cab” initiatives via partnership among beer distributors, bar owners and/or county/city community programs. Conduct public outreach on accessible safe-ride alternatives. |
| | **A4 –** Promote ND “No Refusal” Law | Moderate | Educate high-risk populations/communities on North Dakota’s new “No Refusal” law where consequences of DUI test refusal are greater than test failure. |
| | **A5 –** Promote Sobriety Initiatives for DUI offenders | Proven | Promote 24/7, DUI courts, and ignition interlock programs through educating local judicial and legal counsel members, probation officers, counseling and treatment providers as well as the general public. |
| **B – Enforce DWI Laws** | **B1 –** Conduct Regular High-Visibility DUI Enforcement Saturations | Proven | Conduct a multi-agency, multi-squad car enforcement effort. Agencies work in collaboration to provide data-driven, high-visibility education/media outreach and enforcement for high-risk roadways. |
| | **B2 –** Expand Use of DUI Sobriety Checkpoints | Proven | Local law enforcement to expand the use of multi-jurisdictional sobriety checkpoints that include public outreach/media campaigns about the checkpoints. |
| | **B3 –** Educate and Enforce Zero Tolerance Laws for Drivers Under Age 21 | Tried | Conduct education and high-visibility enforcement through community events including local media and public outreach about underage drinking and driving. |
| | **B4 –** Monitor Prosecution and Sentencing of DUI Offenders | Moderate | Monitor prosecution and judicial sentencing of DUI cases Courts or Intensive Supervision Programs |
| | **B5 –** Strengthen Alcohol Compliance | Tried | Promote judicial monitoring of “last place of drink” for bar-related DUI offenders and notify establishments of their over-serving. |

TABLE 3-2
Seat Belt Use Strategies (Behavioral Strategies)

| Objectives | Strategies | Effectiveness | Programs and Tactics |
|---|---|---|---|
| **A – Enforce Seat Belt use laws** | **A1 –** Conduct High-Visibility Enforcement to Maximize Restraint Use | Proven | Conduct a multi-agency, multi-squad car enforcement effort. Agencies work in collaboration to provide data-driven, saturated, high-visibility enforcement coupled with media outreach targeted toward high-risk populations. Conduct enhanced enforcement on North Dakota's secondary roads.<br>Incorporate enhanced nighttime enforcement including multi-agency (when possible) and multiple squad cars in well-lit areas where slow-moving vehicles are passing and conducting seat belt observations for a limited time. |
| | **A2 –** Enforce Secondary Belt Use Law | Proven | Reinforce officers issuing second belt use ticket during traffic stops. |
| | **A3 –** Pursue Tribal Ordinances for Primary Enforcement of Seat Belt Laws. | Proven | Under tribal ordinance, pursue primary seat belt enforcement for occupants in all seating positions. |
| **B – Maximize use of occupant restraints by all vehicle occupants** | **B1 –** Encourage Employer Traffic Safety Programs and Policies | Tried | Encourage employers to offer traffic safety education programs to employees and to enact traffic safety policies with clear consequences for failure to comply.<br>Utilize materials and policy statements designed for employers by Network of Employers for Traffic Safety. |
| | **B2 –** Brief intervention regarding unbelted risks | Experimental | Health care provider conducts brief intervention with crash victim after an unbelted crash (traumatic event) on unbelted risks and consequences. Develop fact sheets and materials to be used. |
| | **B3 –** Provide Insurance Incentives | Experimental | Promote local insurance provider incentives (for example, reduced premium rates) for safe driving practices including belt use at the time of traffic crash. |

TABLE 3-3
Speed and Aggressive Driving Strategies (Behavioral Strategies)

| Objectives | Strategies | Effectiveness | Programs and Tactics |
|---|---|---|---|
| **A – Deter aggressive driving for high-risk populations and locations** | **A1 –** Identify High-Risk Speed Locations/Corridors for Enforcement. | Proven | Analyze crash data to define high-risk speed locations for enhanced enforcement and public outreach efforts. |
| | **A2 –** Conduct High-Visibility Enforcement of Speeding and Aggressive Driving | Proven | Conduct a multi-agency, multi-squad car enforcement effort. Agencies work in collaboration to provide data-driven, saturated, high-visibility enforcement at high-risk speed corridors/roadways coupled with media outreach to high-risk populations. |
| | **A3 –** Pursue Local/Tribal Use of Automated Enforcement in High-Risk Areas | Proven | Pursue the use of automated enforcement in high-risk highway work zones and school crossing zones through the use of local/tribal safety ordinances. |
| | **A4 –** Conduct Enhanced Enforcement of Red Light Running | Proven | Provide enhanced enforcement for red-light-running violators using officer enforcement support for intersection RLR confirmation lights. |
| **B – Maximize driver compliance and awareness** | **B1 –** Conduct Brief Interventions for Speed-Related Injuries | Tried | Implement health care provider brief intervention with crash victim after crash (traumatic event) due to excessive speed on speed risks and consequences. Develop fact sheets and materials to be used. |
| | **B2 –** Increase Driver Awareness of Speed Using Speed Reader Boards | Proven | Expand use of speed reader boards providing feedback to drivers on their actual speed (for example, flash warnings when speeds exceeds limit). Most effective in slowing traffic on residential streets, near school zones and around playgrounds. |

TABLE 3-4
Young Driver Strategies (Behavioral Strategies)

| Objectives | Strategies | Effectiveness | Programs and Tactics |
|---|---|---|---|
| **A – Publicize, enforce, and adjudicate laws pertaining to young drivers** | **A1 –** Conduct high visibility enforcement of GDL, no cell and texting laws, underage drinking and driving, and seatbelt use laws | Proven | Conduct enhanced enforcement and public outreach for young driver safety. Publicizing is best done through community events to attract local media and a community public education campaign about young driver laws, enhanced enforcement, and the necessary parental involvement. |
| **B – Actively engage parents in managing teen driving skill development** | **B1 –** Encourage driver education providers (local schools and private providers) to require parent education component | Tried | Promote required parent education component of local driver education programs (private and public school providers) to educate parents about teen driving risks, Graduated Driving License (GDL) provisions and their protections, parental role in supervising teen driving skill development, encourage selection of safer vehicles for teen driver, and to facilitate parent/teen driving agreements. |
| | **B2 –** Promote use of in-vehicle teen safety technology | Experimental | To help reduce and eliminate teen driving distractions and high-risk driving maneuvers (excessive speed, hard acceleration, deceleration, and swerves) promote the use of in-vehicle monitoring devices for parental monitoring and coaching. |
| | **B3 –** Promote Safe Teen Driving Outreach | Tried | Encourage driver education, local insurance, and public health organizations to provide teens and their parents with brochures, guides, and web resources to help parents understand risks, GDL provisions, their role, and how to develop a Parent/Teen Driving Agreement, and on-line driving logs. |
| | **B4 –** Provide information on insurance provider parent-teen safe driving programs | Tried | Inform parents of local insurance programs providing policy discounts for parents and their teen enrolling in parent-teen safe driving programs. |
| **C – Educate Young Drivers** | **C1 –** Brief interventions regarding driving risks and consequences | Experimental | When teen driver receives a moving violation or is involved in a crash, health care provider conducts brief intervention with crash victim after crash (traumatic event) on driving risks and consequences |
| | **C2 –** Conduct Peer-to-Peer safety outreach | Moderate | Promote peer education of traffic safety through peer-to-peer outreach campaigns and contests to engage teens on teen driving risks and socially reinforced safe driving behaviors. |

TABLE 3-5
Cross-Cutting Safety Strategy (Behavioral Strategy)

| Objectives | Strategies | Effectiveness | Programs and Tactics |
|---|---|---|---|
| **A – Improved Quality and Timeliness of Crash Data** | **A1 –** Local and Tribal Enforcement use of Traffic and Criminal Software (TraCS) | Proven | Promote local and tribal enforcement full deployment of TraCS for in-the-field incident reporting and electronic submission of crash reports to the NDDOT. |

TABLE 3-6
Speeding Strategies (Infrastructure Strategies)

| Objectives | Strategies | Effectiveness | Cost to Implement and Operate[1] | Timeframe for Implementation[2] |
|---|---|---|---|---|
| **A – Set appropriate speed limits** | **A1 –** Install speed signage using **variable message signs** in school zones | Tried | Low | Medium |
| **B – Communicate appropriate speeds through use of traffic control devices** | **B1 –** Implement **dynamic speed feedback signs**, including dynamic message boards at rural to urban transitions | Tried | Low | Medium |
| | **B2 –** Use **in-pavement** measures to communicate the need to reduce speeds | Tried | Moderate | Short |
| **C – Ensure that roadway supports appropriate and safe speeds** | **C1 –** Effect **safe speed transitions** through design elements and on approaches to lower-speed areas | Tried | High | Long |

Notes:
[1] Cost: Low = <$100,000 per intersection; Moderate = $100,000 to $500,000 per intersection; High = >$500,000 per intersection
[2] Implementation: Short = <1 year; Medium = 1 to 2 years; Long = >2 years
Source: NCHRP *Report 500* Series, 2004

TABLE 3-7
Lane Departure Strategies (Infrastructure Strategies)

| Objectives | Strategies | Effectiveness | Cost to Implement and Operate[1] | Timeframe for Implementation[2] |
|---|---|---|---|---|
| **A – Keep vehicles from encroaching on the roadside** | **A1 –** Install **edge rumble strips** (shoulder or edge line) | Proven | Low | Short |
| | **A2 –** Install **enhanced pavement markings**, 6-inch edge line, or embedded wet-reflective pavement markings on section with narrow or no paved shoulders | Experimental/ Tried | Low | Short |
| | **A3 –** Provide enhanced shoulders, lighting, delineation (for example, **Chevrons**), or pavement markings for sharp horizontal curves | Tried / Proven | Low | Short |
| | **A4 –** Provide **skid-resistance** pavement surfaces | Proven | Moderate | Medium |
| | **A5 –** Apply shoulder treatments<br>***Eliminate shoulder drop-offs** ***Safety edge**<br>***Widen and/or pave shoulders** | Experimental/ Proven | Moderate | Medium |
| **B – Minimize the likelihood of crashing into an object or overturning if the vehicle travels off the shoulder** | **B1 – Design safer slopes and ditches** to prevent rollovers | Proven | Moderate to High | Medium |
| | **B2 – Remove/relocate objects** in hazardous locations | Proven | Moderate to High | Medium |
| **C – Reduce the severity of the crash** | **C1 –** Improve design and application of **barrier and attenuation systems** | Tried | Moderate to High | Medium |
| **D – Keep vehicles from encroaching into opposite lane** | **D1 –** Install **centerline rumble strips** for two-lane roads | Tried | Low | Short |
| | **D2 –** Reallocate total two-lane roadway width (lane and shoulder) to include a **"buffer median"** | Tried | Low | Medium |
| **E – Minimize the likelihood of crashing into an oncoming vehicle** | **E1 –** Use alternating passing lanes or four-lane sections at key locations (**Swedish "2+1")** | Tried | Moderate to High | Medium |

Notes:
[1] Cost: Low = <$10,000 per mile; Moderate = $10,000 to $100,000 per mile; High = >$100,000 per mile
[2] Implementation: Short = <1 year; Medium = 1 to 2 years; Long = >2 years
Source: NCHRP *Report 500* Series, 2003

TABLE 3-8
Signalized Intersection Strategies (Infrastructure Strategies)

| Objectives | Strategies | Effectiveness | Cost to Implement and Operate[1] | Timeframe for Implementation[2] |
|---|---|---|---|---|
| **A – Reduce frequency and severity of intersection conflicts through traffic control and operational improvements** | **A1 – Optimize signal operation** (phasing/timing, etc.) | Tried / Proven | Low | Short |
| | **A2 – Optimize clearance intervals** | Proven | Low | Short |
| | **A3 –** Employ **signal coordination** along a corridor or route | Proven | Low | Medium |
| | **A4 –** Employ **emergency vehicle preemption** | Proven | Moderate | Medium |
| **B – Reduce intersection conflicts through geometrics** | **B1 –** Provide/improve **left-turn channelization** | Proven | Moderate | Long |
| **C – Improve pedestrian safety with signal improvements** | **C1 –** Install **countdown timers** | Tried | Low | Short |
| | **C2 –** Re-time signals to provide a leading pedestrian interval (**advanced walk**) | Tried | Low | Short |
| **D – Improve driver awareness of intersections and signal control** | **D2 – Improve visibility of signals** (overhead indications, 12-inch lenses, background shields, LED's) and signs (mast arm mounted street names) and signs (mast arm mounted street names) at intersections | Tried | Low | Short |
| **E – Improve driver compliance with traffic control devices** | **E1 –** Supplement conventional enforcement of red-light running with **confirmation lights**; include a public information campaign to increase awareness and compliance | Tried | Low | Short |
| **F – Improve safety through other infrastructure treatments** | **F1 – Restrict or eliminate parking** on intersection approaches | Proven | Low | Short |

Notes:
[1] Cost: Low = <$100,000 per intersection; Moderate = $100,000 to $500,000 per intersection; High = >$500,000 per intersection
[2] Implementation: Short = <1 year; Medium = 1 to 2 years; Long = >2 years
Source: NCHRP *Report 500* Series, 2004

TABLE 3-9
Unsignalized Intersection Strategies (Infrastructure Strategies)

| Objectives | Strategies | Effectiveness | Cost to Implement and Operate[1] | Timeframe for Implementation[2] |
|---|---|---|---|---|
| **A – Reduce the frequency and severity of intersection conflicts through geometric design improvements** | **A1 –** Provide **left-turn lanes** at intersections | Tried | Moderate | Medium |
| | **A2 –** Provide **offset turn lanes** at intersections | Proven | Moderate | Medium |
| | **A3 –** Realign intersection approaches to reduce or **eliminate intersection skew** | Tried | Moderate to High | Medium |
| | **A4 – Improve pedestrian and bicycle facilities** to reduce conflicts between motorists and nonmotorists | Proven | High | Medium |
| | **A5 –** Use **indirect left-turn treatments** to minimize conflicts at divided highway intersections | Varies | Moderate | Medium |
| **B – Improve sight distance at unsignalized intersections** | **B1 – Clear sight triangle** on approaches and in medians by clearing grub, eliminating parking, etc | Tried | Moderate | Medium |
| **C – Improve driver awareness of intersections as viewed from the intersection approach** | **C1 –** Improve visibility of intersections by providing **enhanced signing, delineation or pavement markings/messages** (stop bar, larger regulatory signs, LED stop signs, etc) | Tried | Low | Short |
| | **C2 –** Improve visibility of intersections by providing appropriate **street lighting** | Tried | Low | Short |
| | **C3 – Install larger regulatory and warning signs** at intersections, including the use of **dynamic warning signs** at appropriate intersections | Proven | Low to Moderate | Medium |
| | **C4 –** Call attention to the intersection by installing **rumble strips or splitter islands** on intersection approaches | Tried | Low | Short |
| **D – Appropriate intersection traffic control to minimize crash frequency and severity** | **D1 –** Construct **roundabouts** at appropriate locations | Tried | Low to Moderate | Medium |

Notes:
[1] Cost: Low = <$50,000 per intersection; Moderate = $50,000 to $500,000 per intersection; High = >$500,000 per intersection
[2] Implementation: Short = <1 year; Medium = 1 to 2 years; Long = >2 years
Source: NCHRP *Report 500* Series, 2003

TABLE 3-10
Urban Segment Strategies (Infrastructure Strategies)

| Objectives | Strategies | Effectiveness | Cost to Implement and Operate[1] | Timeframe for Implementation[2] |
|---|---|---|---|---|
| **A – Include pedestrian and bicycle accommodations** | **A1 –** Install **sidewalks** in appropriate locations | Proven | Moderate to High | Medium |
| | **A2 –** Minimize pedestrian crossing distances using **curb extensions or median islands** | Proven | Low | Medium |
| **B – Improve roadway configuration to accommodate left turns** | **B1 –** Restripe roadway to a **three-lane (road diet) or five-lane** cross-section**.** | Proven | Low | Medium |
| **C – Improve access management near intersections** | **C1 – Restrict or eliminate turning maneuvers** by providing channelization or closing median openings | Tried | Low | Short |
| | **C2 –** Restrict access to properties using **driveway closures or turn restrictions** | Tried | Low | Medium |
| | **C3 – Restrict cross-median access** near intersections | Tried | Low | Medium |

Notes:
[1] Cost: Low = <$50,000 per intersection; Moderate = $50,000 to $500,000 per intersection; High = >$500,000 per intersection
[2] Implementation: Short = <1 year; Medium = 1 to 2 years; Long = >2 years
Source: NCHRP *Report 500* Series, 2003

## 3.3 Safety Strategies Workshop

A Safety Planning Workshop was held with representatives from Grand Forks County and the City of Grand Forks on December 6, 2013. Two additional workshops were held in Valley City and Fargo as part of the LRSP Phase 2 analysis. The primary focus of the safety workshop was to discuss and prioritize the safety strategies.

The basic workshop structure included introductions and an overview of the current NDDOT safety program. This was followed by local speakers Bill Vasicek (Altru Health System), Lt. David Wolf (North Dakota Highway Patrol), Sgt. Macki and Lt. Ferguson (Grand Forks Police), Lt. BJ Maxson (Grand Forks County Sheriff's Department), and Jane Williams (City of Grand Forks) who shared information on local safety initiatives and programs. The morning was concluded with a review of the latest crash data on the local roadway system. In the afternoon, the workshop participants discussed potential safety strategies and began the process of prioritizing the strategies. The group reviewed and discussed driver-behavior and roadway infrastructure strategies. The final agenda item was a voting exercise where each participant voted for their preferred strategies to focus efforts on in the future local roadway program in their regions.

Workshop participants included county and city representatives, county commissioners, enforcement representatives, and NDDOT staff in order to include a variety of backgrounds and experiences to enable valuable interaction and discussions during the workshop.

## 3.4 Prioritizing Safety Strategies

Through the group (infrastructure and driver behavior) discussion and voting exercise, the top safety strategies for the Grand Forks region are:

- **Behavioral strategies**
  - Court monitoring of prosecution and sentencing of DUI offenders
  - Conduct high-visibility targeted enforcement of speeding and aggressive driving
  - Conduct enhanced enforcement of red light running
  - Encourage driver education providers to require parent education component
  - Conduct high-visibility targeted enforcement to maximize restraint use
  - Pursue local support for primary seat belt law
- **Infrastructure strategies**
  - Install edge rumble strips
  - Implement dynamic speed feedback signs, including dynamic message boards at rural to urban transitions
  - Supplement conventional enforcement of red-light running with confirmation lights; include a public information campaign to increase awareness and compliance
  - Improve visibility of intersections by providing appropriate street lighting
  - Restrict or eliminate turning maneuvers by providing channelization or closing median openings

Infrastructure safety projects that are developed as part of this LRSP are considered eligible for funding through the state's Highway Safety Improvement Program (HSIP). The managers of this program have identified implementation cost and effectiveness as priorities in their evaluation process of selecting projects for funding. Low-cost projects allow the limited funding to support a wider deployment and the use of proven-effective strategies provides the highest level of confidence that a given project will result in an overall crash reduction.

The ability of the selected strategies to reduce crashes is based on information in the FHWA's CMF [Crash Modification Factors] Clearinghouse and other published research. Table 3-11 provides a summary for driver behavior strategies reviewed in Chapter 5 of this report. In addition, Table 3-11 provides a summary of the crash reduction factors that were found in the CMF Clearinghouse for infrastructure safety strategies considered and/or suggested for Grand Forks, along with an estimated unit cost for each strategy. Most factors reported are based on research that was assigned with higher-quality ratings.

TABLE 3-11
Proposed Strategies, Crash Reduction Factors, and Typical Installation Costs

| Strategy | Crash Reduction Factor [a] | Typical Installation Costs |
|---|---|---|
| **Impaired Driving** | | |
| Court monitoring of prosecution and sentencing of DUI offenders | Higher conviction rates; and stronger penalties | Low cost for a volunteer program |
| **Speeding and Aggressive Driving** | | |
| Conduct high-visibility targeted enforcement of speeding and aggressive driving | 3% | Up to $50 per hour of officer overtime plus media costs |
| Conduct enhanced enforcement of red light running | 25% to 84% reduction in violations | Up to $50 per hour of officer overtime |
| **Young Drivers** | | |
| Encourage driver education providers to require parent education component | 2% | $1,500 per school district |
| **Seat Belt Use** | | |
| Conduct high-visibility targeted enforcement to maximize restraint use | 3% | Up to $50 per hour of officer overtime |
| Pursue local support for primary seat belt law | 9% increase in observed belt use when a state law is passed | Low to Moderate |
| **Rural Segments** | | |
| 4-inch latex edge line | | $1,320 per mile |
| 4-inch latex centerline | | $660 per mile |
| 6-inch latex edge line | 10% to 45% all rural serious crashes | $1,980 per mile |
| Shoulder or edge line rumble strips | 20% run off road crashes | $4,200 per mile |
| Ground in wet-reflective markings | | $36,000 per mile |
| Centerline rumble strips | 40% head-on/sideswipe-crashes | $3,600 per mile |
| 6-inch centerline | | $1,020 per mile |
| **Rural Curves** | | |
| Chevrons | 20% to 30% | $3,960 per curve |
| Arrow board only | | $1,200 per curve |

TABLE 3-11
Proposed Strategies, Crash Reduction Factors, and Typical Installation Costs

| Strategy | Crash Reduction Factor [a] | Typical Installation Costs |
|---|---|---|
| Advance warning sign and advisory speed plaque | | $1,440 per curve |
| 2-foot paved shoulder and shoulder rumble strips | 20% to 30% run-off-the-road crashes | $44,400 per mile<br>+$3,600 per mile |
| **Rural Intersections** | | |
| Roundabout | 20% to 50% all crashes/<br>60% to 90% right-angle crashes | $3,000,000 per intersection |
| Directional median (RCI or J-Turn) | 17% all crashes/<br>100% angle crashes | $900,000 per intersection |
| Mainline dynamic warning sign | 50% all crashes/<br>75% serious right-angle crashes | $60,000 per intersection |
| Close median | | $30,000 per intersection |
| Intersection lighting | 25% to 40% nighttime crashes | $10,200 per streetlight |
| Upgrade signs and pavement markings | 40% upgrade of all signs and pavement markings/<br>15% for STOP AHEAD pavement marking | $2,640 per approach [b] |
| Clear sight triangle | 37% serious injury crashes [c] | $2,940 per intersection [d] |
| **Urban** | | |
| Conversions (three-lane/five-lane) | 30% to 50% | $30,000 per mile [three-lane]<br>$42,000 per mile [five-lane]<br>+$30,000 per signalized intersection for updates (for example, loop and signal head placement) |
| Access management | 5% to 31% | $360,000 per mile [e] |
| Signal – confirmation lights | 25% to 84% reduction in violations | $1,200 per two approaches |
| Pedestrian/bicycle – advanced walk | Up to 60% pedestrian/ vehicle crashes | $0 per intersection |
| Pedestrian/bicycle – countdown timers | 25% vehicle/pedestrian crashes | $12,000 per intersection |
| Pedestrian/bicycle – curb extensions | Increase in vehicles yielding to pedestrians | $36,000 per corner |
| Pedestrian/bicycle – median refuge island | 46% in vehicle/pedestrian crashes | $24,000 per approach |

Notes:
[a] Crash reduction factors based on review of CMF Clearinghouse and other published research
[b] Includes $540 per STOP sign, $540 per junction sign assembly, $600 per STOP AHEAD sign, $600 per STOP AHEAD pavement marking message, and $360 per stop bar
[c] Reduction based on increasing sight distance triangle
[d] Inclusive of sign upgrades identified and materials and labor for clearing of sight triangle.
[e] For management of unsignalized intersection movements within a corridor that has a divided median. Typical project may include minor street diverters, signed turn restrictions, and median closings.
N/A = not applicable

# 4.0 Grand Forks Region Infrastructure Safety Projects

## 4.1 Grand Forks Region Proactive Project Decision Process

The primary objectives of the LRSP effort are to identify low-cost, safety-related infrastructure projects focused on each county's or city's documented safety emphasis areas and target crash types. These emphasis areas account for the greatest number of serious crashes occurring on the local road system. Mitigating the factors that contribute to these crashes will assist each county in reducing serious crashes on the local road system.

Projects were developed that include identifying a specific improvement at a specific location based on risk factors described in Chapter 2 and the high-priority safety strategies described in Chapter 3. Improvement strategies are consistent with the NDDOT's SHSP with a focus on proven effectiveness at reducing the target crash type and low cost of implementation. Proven-effective strategies give safety program managers the highest level of confidence that the deployment will result in a reduction of crashes. Low-cost strategies allow improvements to be widely deployed across a system to address the low density of crashes and are less expensive than complete reconstruction of high-risk locations. Project development and mitigation focused on the following improvements:

- **Rural**
  - Lane-departure crashes along roadway segments and in curves
  - Intersection-related crashes
- **Urban**
  - Rear-end and head-on crashes on roadway segments
  - Angle crashes and pedestrian and bicycle crashes at intersections

For consistency across the Grand Forks region, project decision trees were created so that locations with similar characteristics across the county received the same suggested mitigation treatment. Projects were chosen based on the identification of at-risk locations and the availability of proven strategies for crash reduction. This resulted in a systemic focus on rural paved roadway segments, horizontal paved curves, and rural intersections. In cities with populations over 5,000, the focus was on arterial and collector roadway segments and intersections along these segments. Projects were originally suggested based on the technical analysis and then revised in accordance with input from the local agencies and NDDOT.

High-priority rural roadway segment projects focused on addressing the most common type of serious segment-related crash—a single-vehicle, lane-departure crash—by implementing road edge improvements to alert drivers when they are drifting too far to the edge of the road (Figure 4-1).

High-priority rural curve projects focused on enhancing the curve delineation to improve driver's ability to successfully navigate the curves (Figure 4-2). As shown in the figure, a curve is eligible for a safety improvement project in three ways.

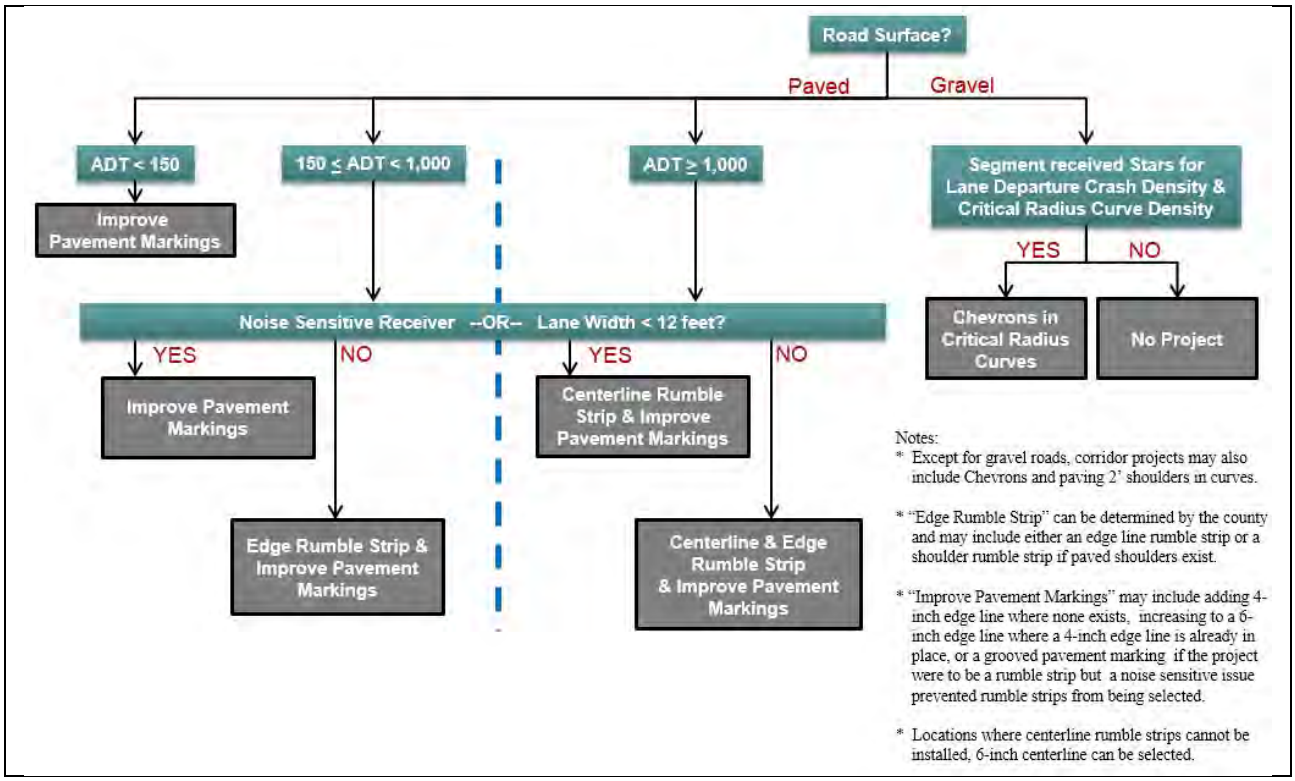



FIGURE 4-1
High-Priority Rural Roadway Segment Project Decision Tree

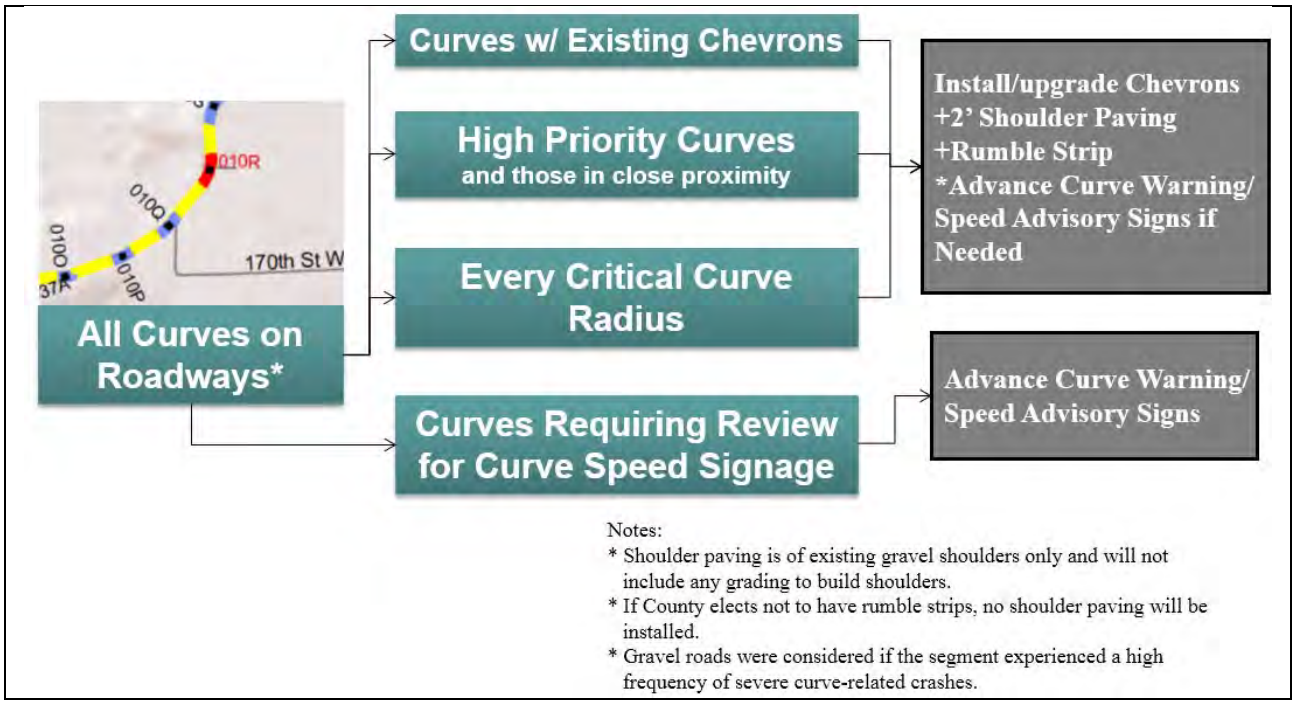



FIGURE 4-2
High-Priority Rural Curve Project Decision Tree

High-priority rural intersection projects (Figure 4-3) focused on addressing the most common type of serious intersection crash—a right-angle collision—by making the intersection more visible to drivers and by reducing the number of intersection conflicts. Examples of suggested projects are shown in Figure 4-4.

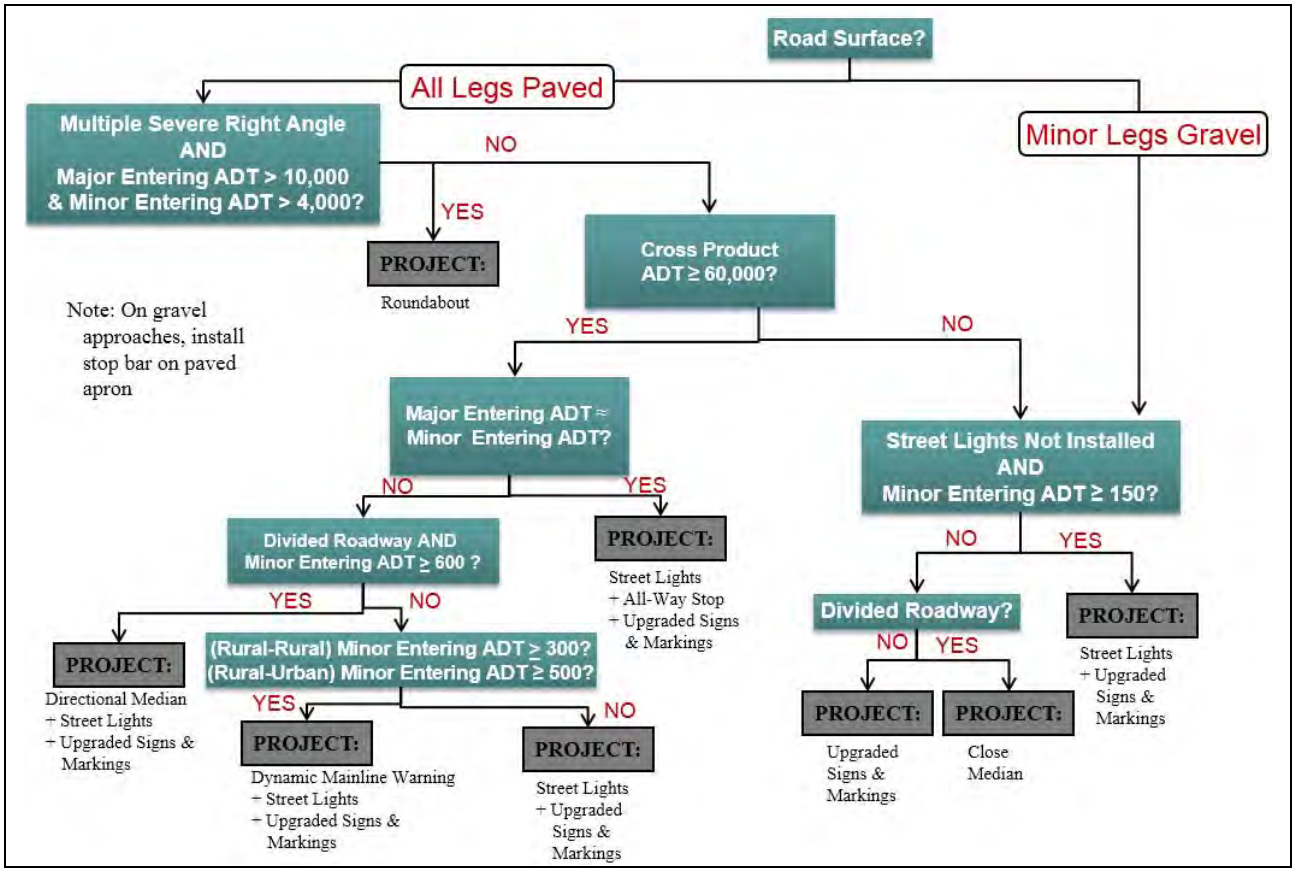
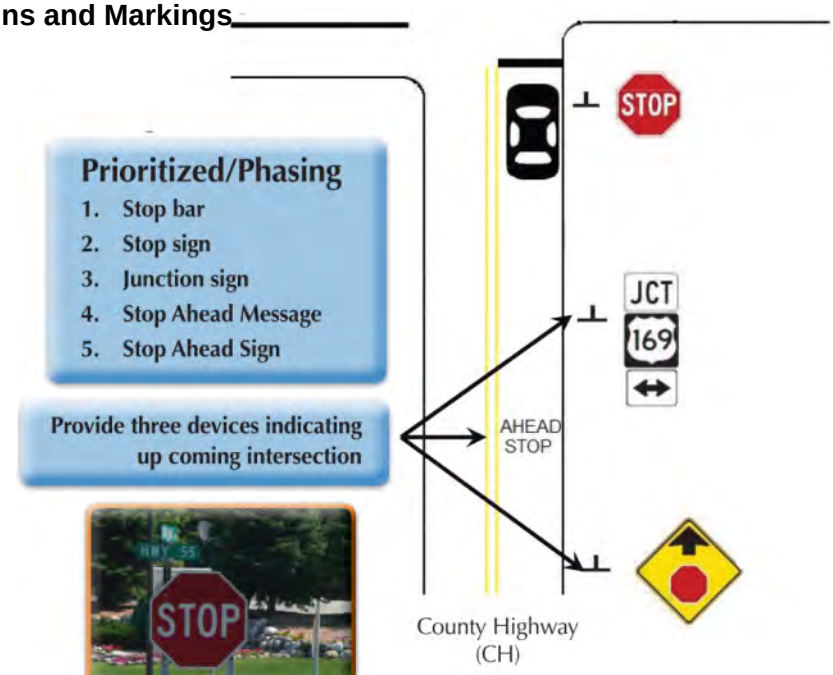



FIGURE 4-3
High-Priority Rural Intersection Project Decision Tree

**Directional Median**


**Upgraded Signs and Markings**





Project may include some or all of the items based on detailed field assessment.

Source: *Minnesota DOT District 3-13 County RSA,* CH2M HILL, 2006

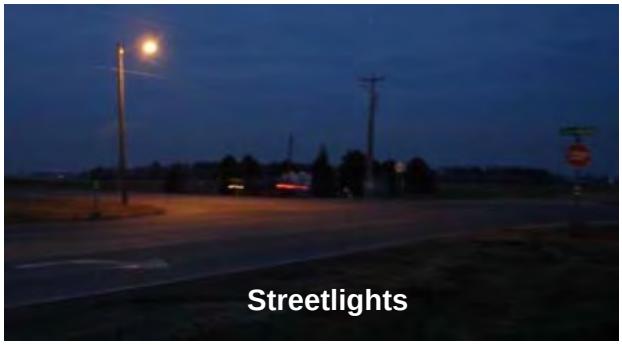



FIGURE 4-4
Intersection Safety Strategies Considered for Deployment

High-priority urban roadway segment projects focused on reducing rear-end and head-on crashes by creating buffer space in the middle of the roadway. This buffer space would be created by converting to a three-lane or five-lane roadway and by better managing access along divided arterials (Figure 4-5).

High-priority urban right-angle intersection projects focused on reducing right-angle crashes by reducing red-light running and managing access to reduce the number of conflict points along a corridor, particularly at signalized intersections (Figure 4-6).

High-priority urban pedestrian and bicycle intersection projects focused on reducing pedestrian and bicycle crashes by providing shorter crossing distances or median refuge islands, as well as advanced walk intervals and countdown timers at signalized intersections (Figure 4-7).

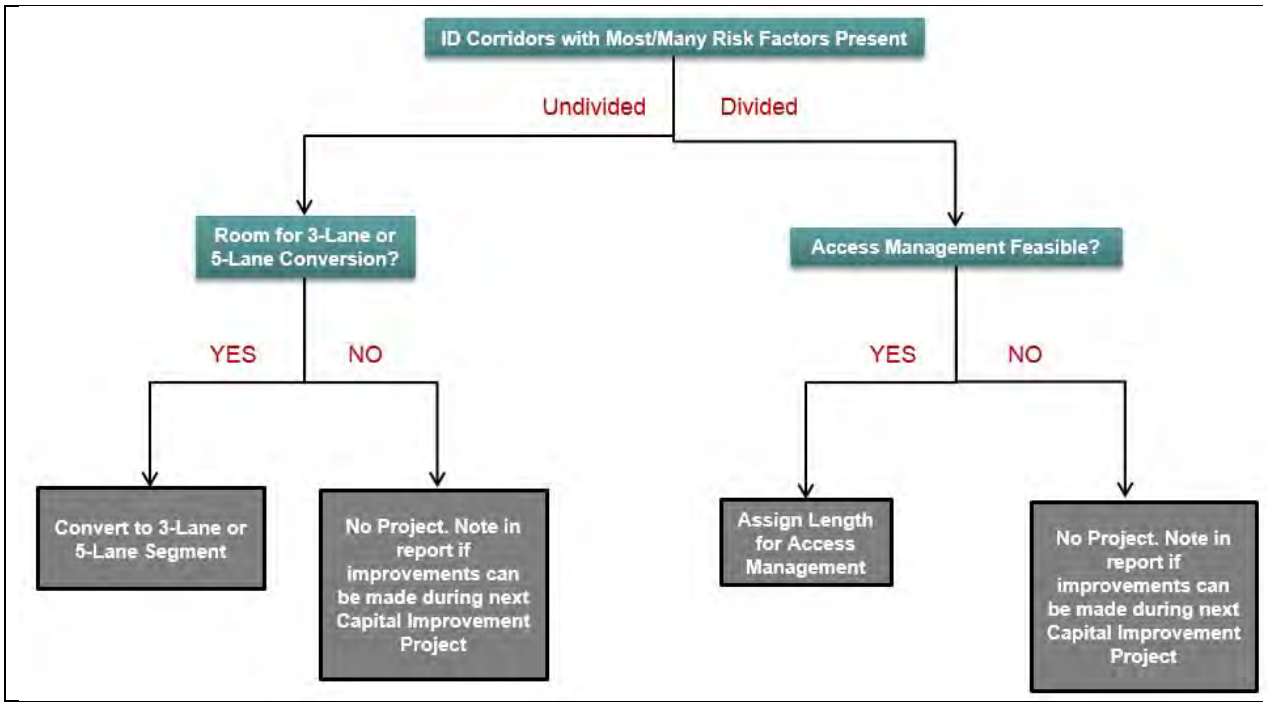



FIGURE 4-5
High-Priority Urban Roadway Segment (Turning) Project Decision Tree

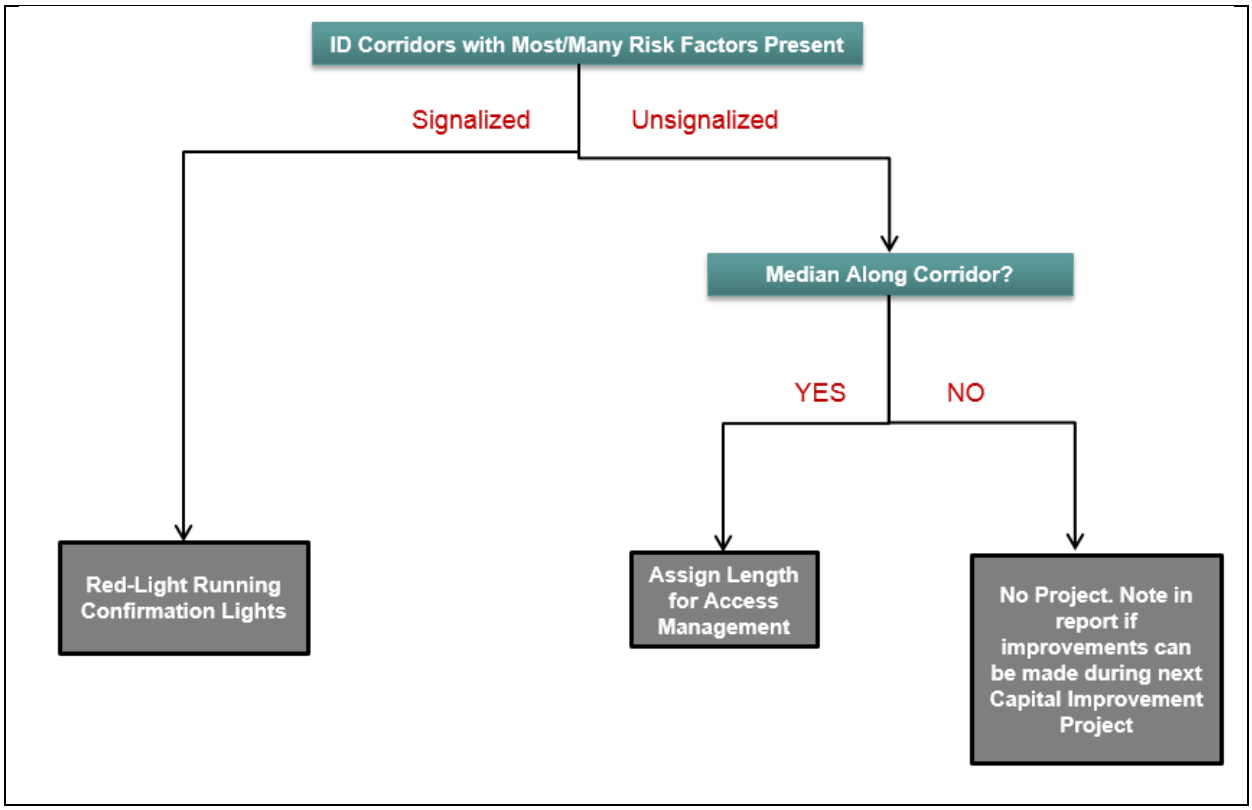



FIGURE 4-6
High-Priority Urban Right-Angle Intersection (Signalized) Project Decision Tree

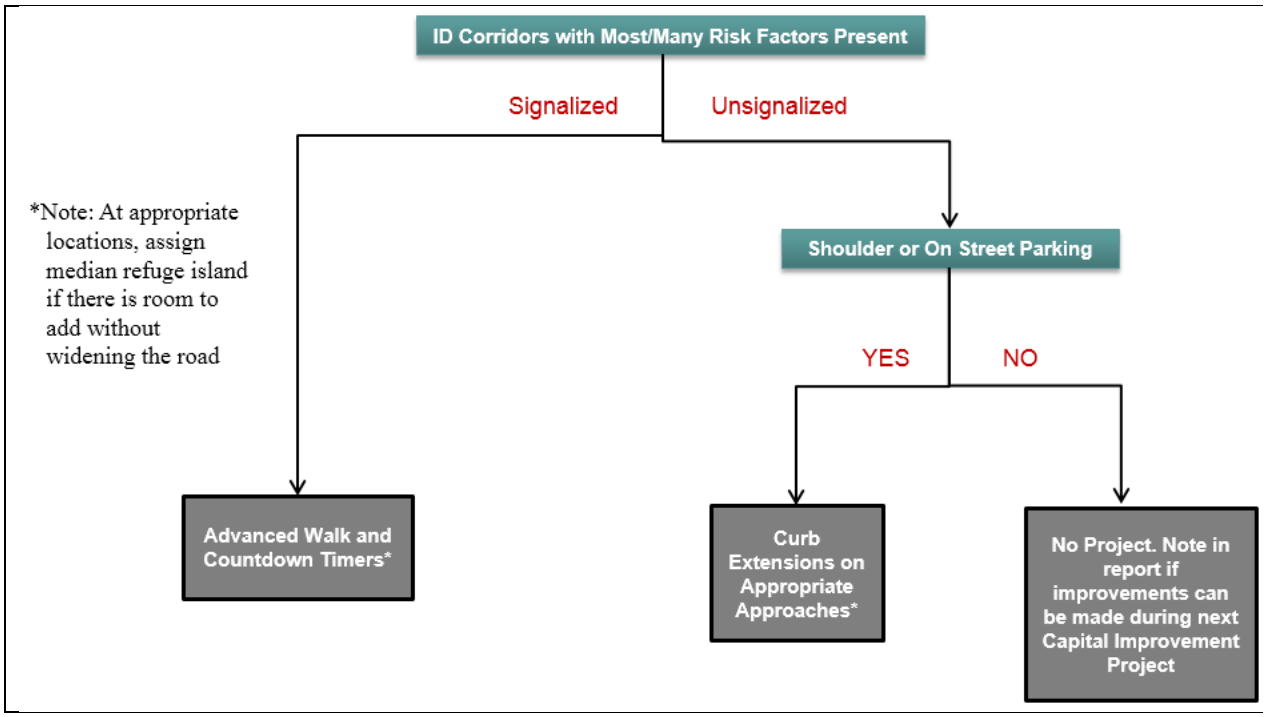



FIGURE 4-7
High-Priority Urban Pedestrian and Bicyclist Intersection Project Decision Tree

Project forms were completed for each high-priority intersection, curve, and roadway segment, including a description of the location, brief crash history, ranking factors, a picture of the location from the LRSP process (if needed), and the identified safety strategy. These forms were formatted so they could be submitted directly through the HSIP process, but may require supplemental information for the evaluation and scoring process.

The suggested low-cost safety projects for the Grand Forks region are described in the following sections. The costs assigned to each project are planning level estimates and do not include right-of-way. Because of funding limitations, all potential projects would not be completed in 1 year. The actual schedule for implementing individual projects will necessitate securing funding from the state's HSIP. The safety planning process followed for the Grand Forks region is consistent with the North Dakota SHSP. In addition, several of the high-priority safety strategies are among those recommended for the state road system in the state's SHSP.

It is not expected or required that the county or city pursue safety projects in the suggested ranking order. The ranking suggests general priorities, given that actual project development decisions will be made by county or city staff based on economic, social, and political issues and in coordination with other pavement and reconstruction projects that are part of the county's Capital Improvement Program.

Many project details are still undetermined, including general project termini. The county or city will determine specific project details (such as termini and exceptions) as decisions regarding implementation of specific projects are made. These decisions may require that the county coordinate with various municipal departments, the public, and other county transportation departments.

The total cost of projects suggested for the Grand Forks region is $4,154,857. A cost breakout by project type and county/city is provided in Table 4-1.

TABLE 4-1
Grand Forks Region Total Safety Project Costs

| Rural Projects | Roadway Segments | Intersections | Curves | Total |
|---|---|---|---|---|
| Grand Forks County | $375,457 | $2,586,180 | $302,820 | $3,264,457 |
| **Urban Projects** | **Roadway Segments** | **Intersections – Right-Angle** | **Intersections – Pedestrians and Bicyclists** | **Total** |
| City of Grand Forks | $60,000 | $57,600 | $772,800 | $890,400 |

# Grand Forks County

The total project cost suggested for Grand Forks County is $3,264,457. The project cost breakout for intersection, roadway segment, and curve projects are listed in Table 4-2. High-priority locations that received a project are shown in Figure 4-8 and Figure 4-9. These locations are described in further detail in Appendix: Grand Forks County, along with priority rankings and suggested project sheets.

TABLE 4-2
Grand Forks County Project Costs

| Project Type | Cost |
|---|---|
| Intersections | $2,586,180 |
| Roadway Segments | $375,457 |
| Curves | $302,820 |
| Total | $3,264,457 |

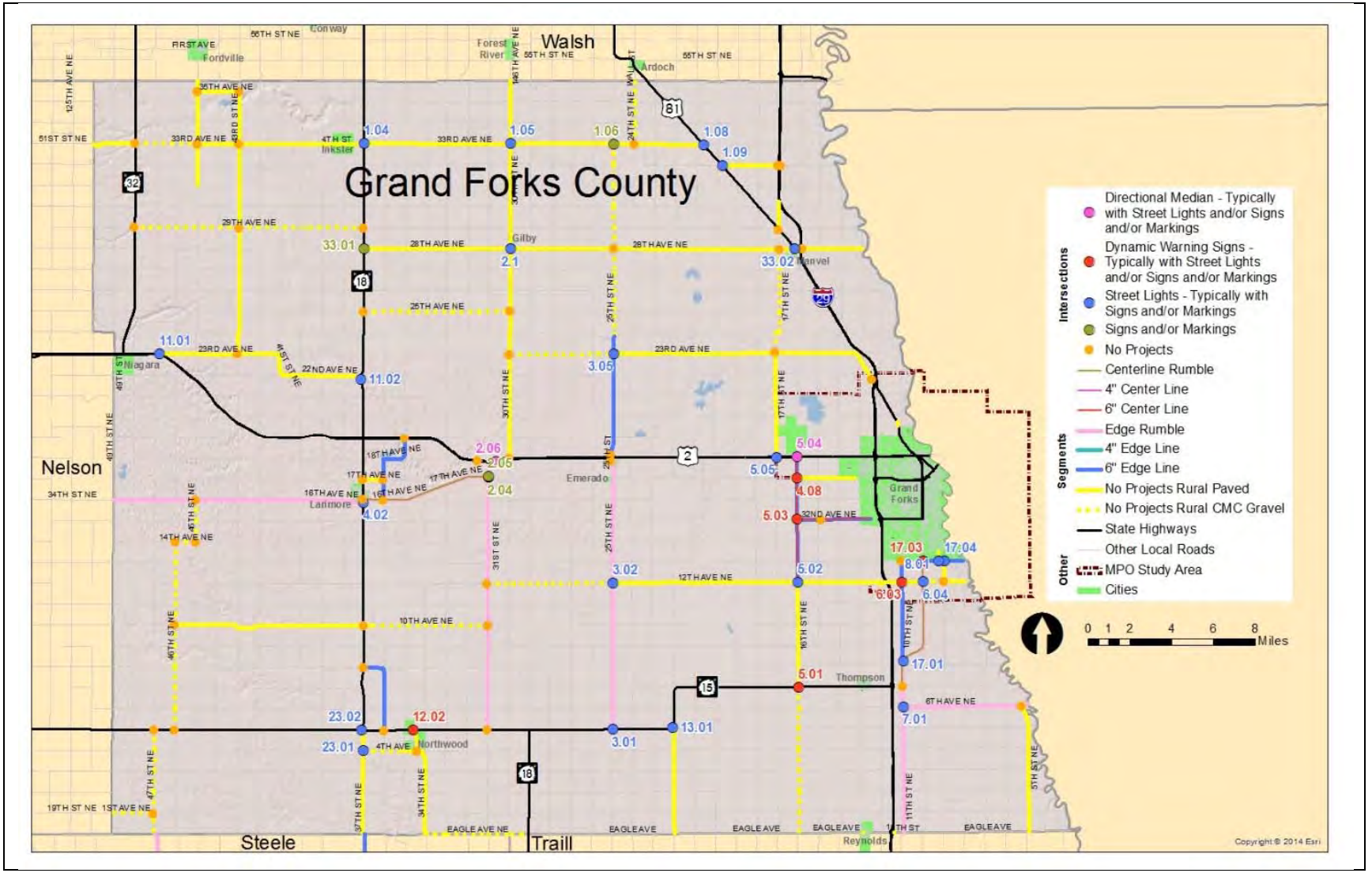



FIGURE 4-8
Grand Forks County Projects Location Map—Roadway Segments and Intersection Projects

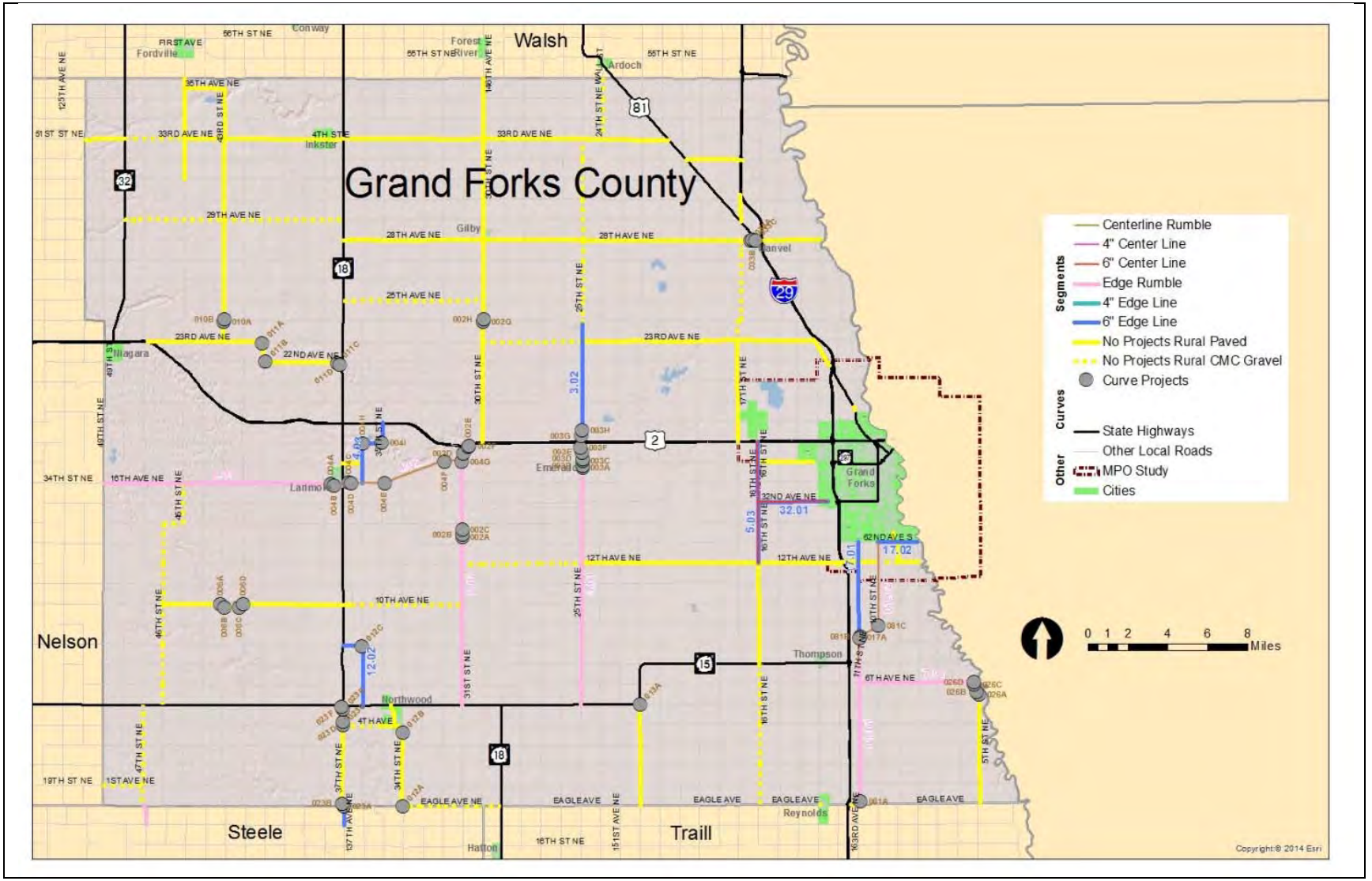



FIGURE 4-9
Grand Forks County Projects Location Map—Roadway Segments and Curve Projects

# City of Grand Forks

The total project cost suggested for the City of Grand Forks is $890,400. The project cost breakout for roadway segment, right-angle intersection, and pedestrian/bicyclist intersection projects are listed in Table 4-3. High-priority locations that received a project are shown in Figure 4-10 and Figure 4-11. These locations are described in further detail in Appendix: City of Grand Forks, along with priority rankings and suggested project sheets.

TABLE 4-3
City of Grand Forks Project Costs

| Project Type | Cost |
|---|---|
| Roadway Segments | $60,000 |
| Right-Angle Intersections | $57,600 |
| Pedestrian and Bicyclist Intersections | $772,800 |
| Total | $890,400 |

Twelve roadway segments identified as high-priority locations did not receive projects. These roadway segments are already three-lane, five-lane, or divided sections, therefore no projects were suggested since these existing treatments reduce rear-end and head-on crashes (Table 4-4).

TABLE 4-4
City of Grand Forks Urban Roadway Segment Locations with Existing Treatments

| Segment ID | Local Name | Segment Start | Segment End | Treatment In Place |
|---|---|---|---|---|
| 830.02 | DeMers Ave/ ND 297 | I-29 Western Ramps | ND/MN Border | Existing Divided/Five-Lane |
| 807.02 | Columbia Rd S | 36th Ave S | 9th Ave S | Existing Divided/Five-Lane |
| 838.01 | US 2/Gateway Dr | 55th St N | Columbia Rd | Existing Divided |
| 807.03 | Overpass – Columbia Rd | 9th Ave S | University Ave | Existing Access Managed/Narrow Overpass |
| 825.02 | 17th Ave S | 16th St S | 12th St S | Existing Five-Lane |
| 810.04 | S Washington St | Hammerling Ave | DeMers Ave/ND 297 | Existing Five-Lane |
| 835.01 | 6th Ave N | 42nd St N | Columbia Rd | Existing Three-Lane |
| 822.02 | 32nd Ave S | I-29 Western Ramps | S Washington St | Existing Divided/Access Managed |
| 803.03 | 42nd St N/S | 17th Ave S | 6th Ave N | Existing Five-Lane |
| 832.02 | University Ave | 42nd St N | 20th St N | Existing Divided/Five-Lane |
| 807.04 | Columbia Rd N | University Ave | US 2/Gateway Dr | Existing Divided |
| 810.03 | S Washington St | 32nd Ave S | Hammerling Ave | Existing Divided |

All intersection corridors identified as high-priority intersections received projects.

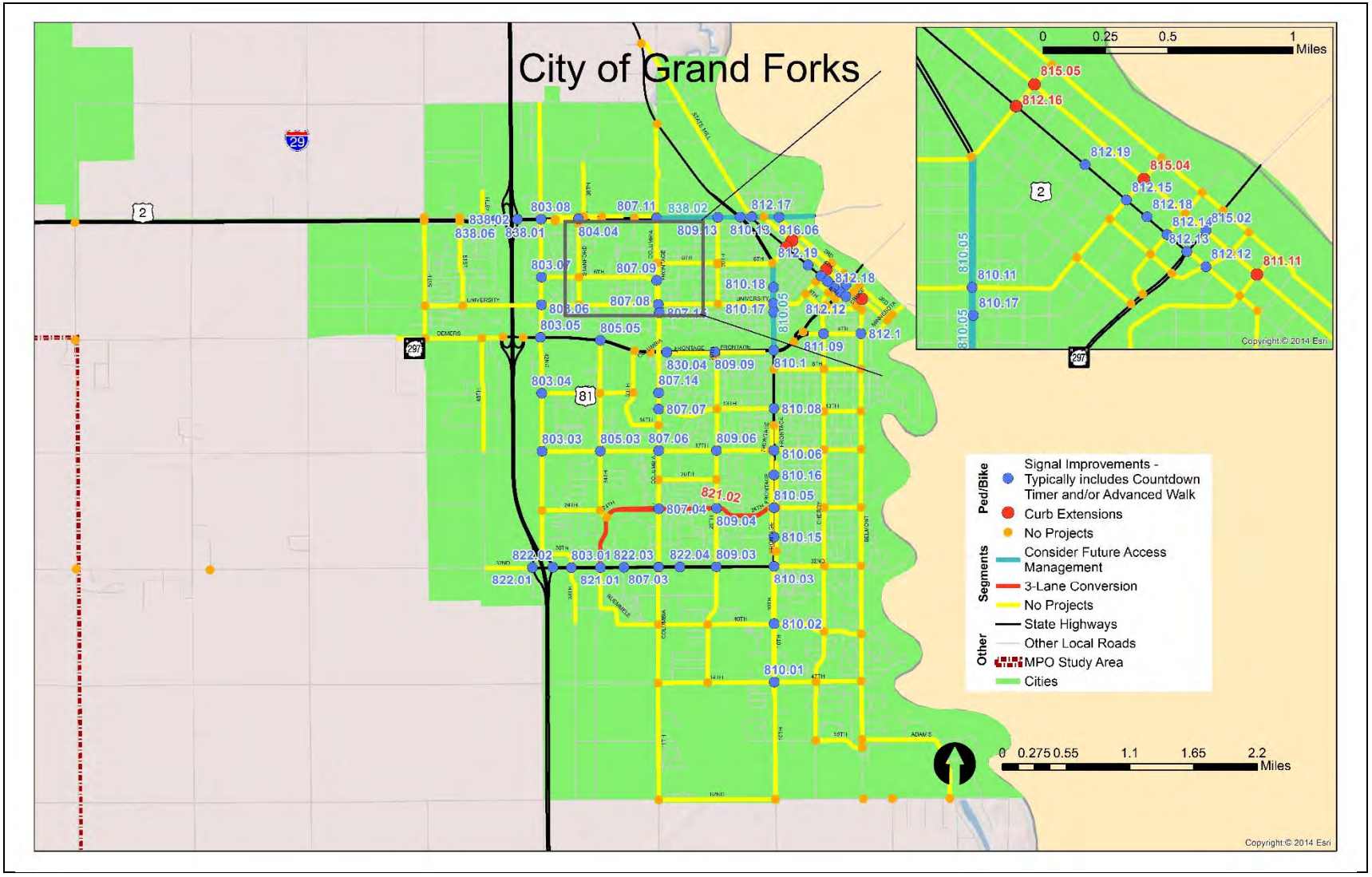



FIGURE 4-10
City of Grand Forks Projects Location Map—Roadway Segments and Pedestrian and Bicycle Projects

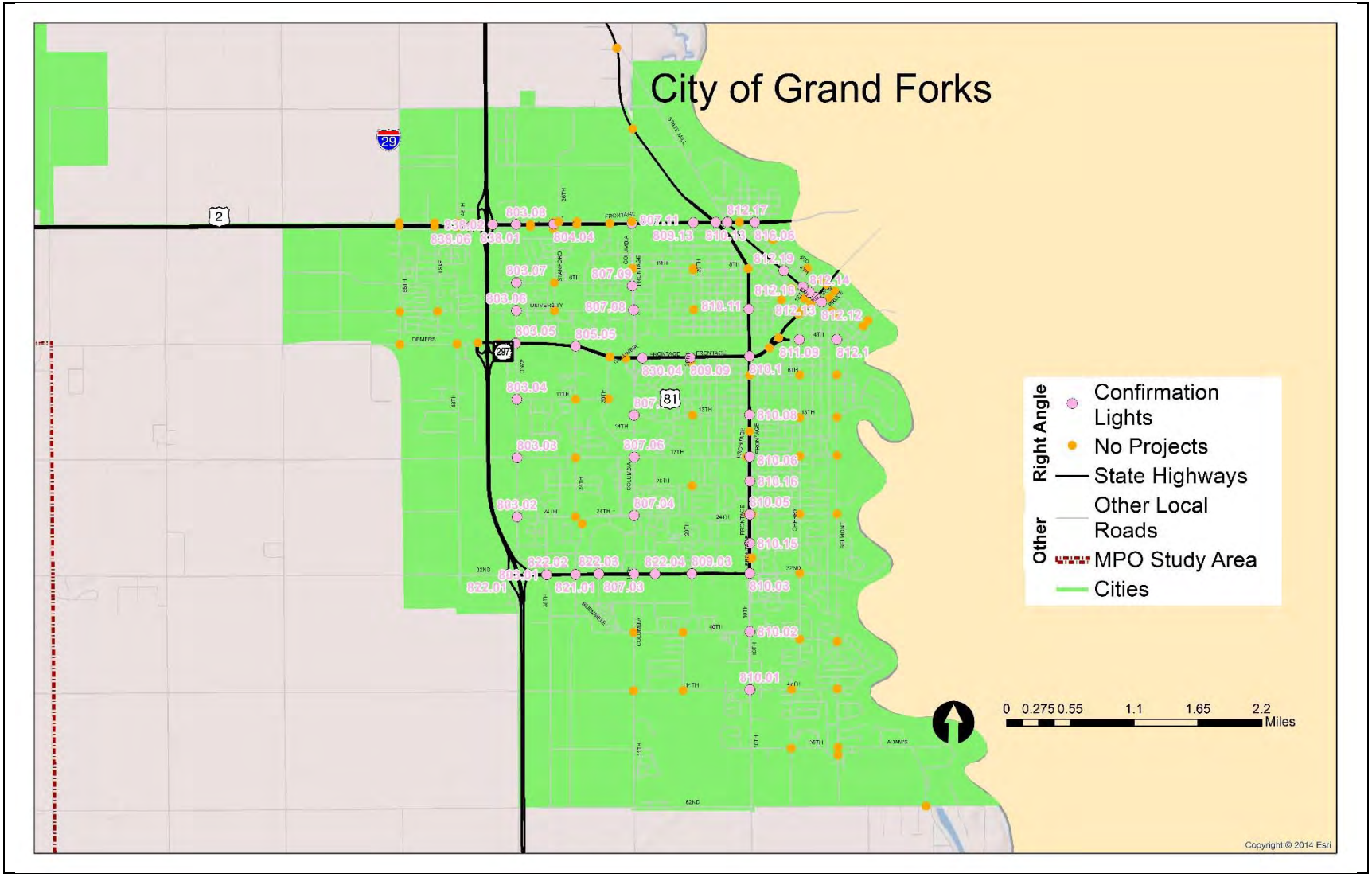



FIGURE 4-11
City of Grand Forks Projects Location Map—Right Angle Intersection Projects

**APPENDIX**

# Grand Forks County

**Grand Forks County**
**Summary of Suggested Rural Segment Projects**

| Page | Corridor ID | Route # | Start | End | Length | Risk Ranking | 4" Edge Line | 6" Edge Lines | Edge Rumble Strip | Center Line Rumble | 6" Center Line | Project Cost ($) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17.02 | Grand Forks 17 | Intersection with 11th St NE | Intersection with 16th St SE | 2.9 | ★★★★ | 0.0 | 2.9 | 0.0 | 0.0 | 0.0 | $5,742.00 |
| 2 | 17.01 | Grand Forks 17 | Intersection with Grand Forks 81/11th St NE | Intersection with 62nd Ave S | 4.8 | ★★★★ | 0.0 | 4.8 | 0.0 | 0.0 | 0.0 | $9,504.00 |
| 3 | 3.02 | Grand Forks 3 | Intersection with US 2/18th Ave | Intersection with 24th Ave NE (Mekinock) | 5.9 | ★★★ | 0.0 | 5.9 | 0.0 | 0.0 | 0.0 | $11,682.00 |
| 4 | 3.01 | Grand Forks 3 | Intersection with ND 15/5th Ave NE | Intersection with US 2/18th Ave | 13.0 | ★★★ | 0.0 | 2.0 | 11.1 | 0.0 | 0.0 | $50,271.00 |
| 5 | 32.01 | Grand Forks 32 | Intersection with Grand Forks 5/16th St NE | Grand Forks western city limits | 3.5 | ★★★ | 0.0 | 3.5 | 0.0 | 0.0 | 3.5 | $10,500.00 |
| 6 | 5.03 | Grand Forks 5 | Intersection with Grand Forks 6/12th Ave NE | Intersection with US 2/18th Ave/Gateway Dr | 6.0 | ★★★ | 0.0 | 6.0 | 0.0 | 0.0 | 6.0 | $18,000.00 |
| 7 | 81.02 | Grand Forks 81 | 7th Ave NE | Intersection with Grand Forks 17/62nd Ave S | 6.5 | ★★★ | 0.0 | 0.0 | 6.5 | 6.5 | 0.0 | $50,700.00 |
| 8 | 4.02 | Grand Forks 4 | Intersection with ND 18/37th St NE | Intersection with Grand Forks 2/17th Ave (Arvilla)/31st St NE | 6.3 | ★★★ | 0.0 | 1.3 | 5.0 | 5.0 | 1.3 | $43,092.00 |
| 9 | 7.01 | Grand Forks 7 | Intersection with Grand Forks 81/11th St NE | North Dakota/Minnesota State Line | 7.0 | ★★★ | 0.0 | 0.0 | 7.0 | 0.0 | 0.0 | $29,400.00 |
| 10 | 81.01 | Grand Forks 81 | Grand Forks/Traill County Line | 7th Ave NE | 7.1 | ★★★ | 0.0 | 0.0 | 7.1 | 0.0 | 0.0 | $29,820.00 |
| 11 | 4.03 | Grand Forks 4 | Intersection with Grand Forks 4/16th Ave NE | Intersection with US 2/19th Ave NE | 3.9 | ★★★ | 0.0 | 3.9 | 0.0 | 0.0 | 0.0 | $7,722.00 |
| 12 | 2.01 | Grand Forks 2 | Intersection with ND 18/5th Ave NE | Intersection with US 2/18th Ave | 13.1 | ★★ | 0.0 | 0.7 | 12.4 | 0.0 | 0.0 | $53,565.90 |
| 13 | 4.01 | Grand Forks 4 | Grand Forks/Nelson County Line | Intersection with ND 18/37th St NE | 12.0 | ★★ | 0.0 | 1.2 | 10.8 | 0.0 | 0.0 | $47,736.00 |
| 14 | 12.02 | Grand Forks 12 | Intersection with ND 18/5th Ave NE (Northwood) | Intersection with ND 18/37th St NE | 3.9 | ★★ | 0.0 | 3.9 | 0.0 | 0.0 | 0.0 | $7,722.00 |
| 23 USC 409<br>NDDOT Reserves All Objections | | | | | | | **0.0** | **36.0** | **59.9** | **11.5** | **10.8** | **$375,456.90** |

**Grand Forks County**
**Rural Segment Listing**

23 USC 409
NDDOT Reserves All Objections

*High Priority Segments Project Sheet Page Number

| Project Sheet Page* | Corridor | Route | # | Start | End | Length (miles) | Lane Departure Crashes | ADT | Lane Departure Density | Access Density | Curves w/ Critical Radius / Mile | Edge Risk Assesment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.01 | Grand Forks | 1 | Grand Forks/Nelson County Line | Intersection with ND 32/48th St NE | 2.0 | 1 | 90 | 0.10 | 5.9 | 0.00 | 1 |
| | 1.03 | Grand Forks | 1 | Intersection with Grand Forks 19/45th St NE | Intersection with ND 18/37th St NE | 8.0 | 2 | 224 | 0.05 | 7.3 | 0.00 | 1 |
| | 1.04 | Grand Forks | 1 | Intersection with ND 18/37th St NE | Intersection with Grand Forks 2/30th St NE | 7.0 | 1 | 483 | 0.03 | 8.1 | 0.00 | 1 |
| | 1.05 | Grand Forks | 1 | Intersection with Grand Forks 2/30th St NE | Intersection with US 81 | 9.3 | 0 | 376 | 0.00 | 5.6 | 0.00 | 1 |
| | 1.06 | Grand Forks | 1 | Intersection with US 81 | Intersection with I-29 | 2.8 | 0 | 85 | 0.00 | 6.4 | 0.00 | 1 |
| 12 | 2.01 | Grand Forks | 2 | Intersection with ND 18/5th Ave NE | Intersection with US 2/18th Ave | 13.1 | 3 | 398 | 0.05 | 5.4 | 0.46 | 2 |
| | 2.02 | Grand Forks | 2 | Intersection with US 2/18th Ave | Intersection with Grand Forks 33/28th Ave NE | 10.1 | 2 | 318 | 0.04 | 5.5 | 0.20 | 1 |
| | 2.03 | Grand Forks | 2 | Intersection with Grand Forks 33/28th Ave NE | Grand Forks/Walsh County Line | 8.0 | 2 | 333 | 0.05 | 4.9 | 0.00 | 1 |
| 4 | 3.01 | Grand Forks | 3 | Intersection with ND 15/5th Ave NE | Intersection with US 2/18th Ave | 13.0 | 4 | 552 | 0.06 | 7.8 | 0.46 | 2 |
| 3 | 3.02 | Grand Forks | 3 | Intersection with US 2/18th Ave | Intersection with 24th Ave NE (Mekinock) | 5.9 | 1 | 872 | 0.03 | 5.8 | 0.34 | 2 |
| 13 | 4.01 | Grand Forks | 4 | Grand Forks/Nelson County Line | Intersection with ND 18/37th St NE | 12.0 | 3 | 207 | 0.05 | 7.7 | 0.17 | 2 |
| 8 | 4.02 | Grand Forks | 4 | Intersection with ND 18/37th St NE | Intersection with Grand Forks 2/17th Ave (Arvilla)/31st St NE | 6.3 | 7 | 1,103 | 0.22 | 5.7 | 0.80 | 1 |
| 11 | 4.03 | Grand Forks | 4 | Intersection with Grand Forks 4/16th Ave NE | Intersection with US 2/19th Ave NE | 3.9 | 2 | 150 | 0.10 | 12.5 | 0.51 | 1 |
| | 4.04 | Grand Forks | 4 | Intersection with ND 18/37th St NE | Intersection with Grand Forks 4A/36th St NE | 1.0 | 0 | 290 | 0.00 | 13.2 | 0.00 | 1 |
| | 4.05 | Grand Forks | 4 | Intersection with Grand Forks 5/16th St NE | Intersection with 58th St N (Grand Forks) | 2.8 | 2 | 3,544 | 0.14 | 6.5 | 0.00 | 1 |
| | 5.02 | Grand Forks | 5 | Intersection with ND 15/7th Ave NE | Intersection with Grand Forks 6/12th Ave NE | 5.0 | 0 | 658 | 0.00 | 6.4 | 0.00 | 1 |
| 6 | 5.03 | Grand Forks | 5 | Intersection with Grand Forks 6/12th Ave NE | Intersection with US 2/18th Ave/Gateway Dr | 6.0 | 5 | 1,860 | 0.17 | 9.0 | 0.00 | 1 |
| | 5.04 | Grand Forks | 5 | Intersection with US 2/18th Ave/Gateway Dr | Intersection with Grand Forks 11/23rd Ave NE | 5.0 | 0 | 330 | 0.00 | 10.7 | 0.00 | 1 |
| | 5.06 | Grand Forks | 5 | Intersection with US 81 | Intersection with I-29 | 1.3 | 0 | 190 | 0.00 | 10.6 | 0.00 | 1 |
| | 6.01 | Grand Forks | 6 | Intersection with Grand Forks 16/46th St NE | Intersection with 35/5 St NE (Kempton) | 9.6 | 0 | 140 | 0.00 | 6.3 | 0.42 | 1 |
| | 6.04 | Grand Forks | 6 | Intersection with Grand Forks 3/25th St NE | Intersection with I-29/US 81 | 13.1 | 3 | 489 | 0.05 | 7.6 | 0.00 | 1 |
| | 6.05 | Grand Forks | 6 | Intersection with I-29/US 81 | Intersection with Grand Forks 81/10th St NE/S Washington St (Grand Forks) | 1.8 | 7 | 852 | 0.79 | 4.5 | 0.00 | 1 |
| 9 | 7.01 | Grand Forks | 7 | Intersection with Grand Forks 81/11th St NE | North Dakota/Minnesota State Line | 7.0 | 1 | 879 | 0.03 | 8.0 | 0.14 | 1 |
| | 10.01 | Grand Forks | 10 | Intersection with Grand Forks 11/23rd Ave NE | Intersection with Grand Forks 1/33rd Ave NE | 10.1 | 0 | 140 | 0.00 | 7.0 | 0.20 | 1 |
| | 10.02 | Grand Forks | 10 | Intersection with Grand Forks 1/33rd Ave NE | Intersection with Grand Forks 19/45th St NE | 4.5 | 0 | 55 | 0.00 | 5.8 | 0.00 | 1 |
| | 11.01 | Grand Forks | 11 | Intersection with US 2/23rd Ave | Intersection with ND 18/37th St NE | 10.5 | 0 | 214 | 0.00 | 6.1 | 0.38 | 1 |
| | 11.03 | Grand Forks | 11 | Intersection with Grand Forks 3/25th St NE | Intersection with I-29/US 81 | 13.1 | 8 | 375 | 0.12 | 7.9 | 0.08 | 1 |
| | 12.01 | Grand Forks | 12 | Grand Forks/Steele County Line | Intersection with ND 18/5th Ave NE (Northwood) | 5.3 | 0 | 418 | 0.00 | 5.4 | 0.37 | 1 |
| 14 | 12.02 | Grand Forks | 12 | Intersection with ND 18/5th Ave NE (Northwood) | Intersection with ND 18/37th St NE | 3.9 | 1 | 110 | 0.05 | 4.4 | 0.26 | 2 |
| | 13.01 | Grand Forks | 13 | Grand Forks/Traill County Line | Intersection with ND 15/5th Ave NE | 5.1 | 1 | 195 | 0.04 | 7.6 | 0.20 | 1 |
| 2 | 17.01 | Grand Forks | 17 | Intersection with Grand Forks 81/11th St NE | Intersection with 62nd Ave S | 4.8 | 5 | 340 | 0.21 | 11.3 | 0.21 | 2 |
| 1 | 17.02 | Grand Forks | 17 | Intersection with 11th St NE | Intersection with 16th St SE | 2.9 | 3 | 868 | 0.21 | 11.3 | 0.00 | 2 |
| | 17.03 | Grand Forks | 17 | Intersection with Grand Forks 6/12th Ave NE | Intersection with Grand Forks 17/62nd Ave S | 1.0 | 0 | 550 | 0.00 | 8.0 | 0.00 | 1 |
| | 19.01 | Grand Forks | 19 | Intersection with 31st Ave NE | Grand Forks/Walsh County Line | 5.0 | 0 | 330 | 0.00 | 5.0 | 0.00 | 1 |
| | 23.01 | Grand Forks | 23 | Grand Forks/Steele County Line | Intersection with ND 15/5th Ave NE | 5.1 | 4 | 326 | 0.16 | 4.7 | 1.19 | 1 |
| | 26.01 | Grand Forks | 26 | Grand Forks/Traill County Line | Intersection with Grand Forks 7/6th Ave NE | 6.1 | 0 | 175 | 0.00 | 6.6 | 0.66 | 1 |
| 5 | 32.01 | Grand Forks | 32 | Intersection with Grand Forks 5/16th St NE | Grand Forks western city limits | 3.5 | 4 | 2,400 | 0.23 | 12.7 | 0.00 | 1 |
| | 33.01 | Grand Forks | 33 | Intersection with ND 18/37th St NE | Intersection with Grand Forks 2/30th St NE | 7.0 | 0 | 260 | 0.00 | 6.0 | 0.00 | 1 |
| | 33.02 | Grand Forks | 33 | Intersection with Grand Forks 2/30th St NE | Intersection with US 81 | 13.7 | 5 | 516 | 0.07 | 5.9 | 0.22 | 1 |
| | 33.03 | Grand Forks | 33 | Intersection with I-29 | North Dakota/Minnesota State Line | 2.9 | 1 | 340 | 0.07 | 8.7 | 0.00 | 1 |
| 10 | 81.01 | Grand Forks | 81 | Grand Forks/Traill County Line | 7th Ave NE | 7.1 | 3 | 758 | 0.08 | 7.9 | 0.14 | 1 |
| 7 | 81.02 | Grand Forks | 81 | 7th Ave NE | Intersection with Grand Forks 17/62nd Ave S | 6.5 | 6 | 1,655 | 0.18 | 6.6 | 0.31 | 1 |
| | | | | | | 272.1 | 87 | | | | | |

Edge Risk Legend

| | | |
|---|---|---|
| 1 | 3 -- | Risky' - NEITHER shoulder or good clear zone |
| 2 | 2 -- | Either a shoulder OR good clear zone |
| 3 | 1 -- | BOTH shoulder and a good clear zone |

Critical ADT Range - Lane Departure

| | |
|---|---|
| Min | 525 |
| Max | 100,000 |

| | Access | Lane Departure | Critical Radius Curves |
|---|---|---|---|
| Total | 0 | 87 | 29 |
| Total Mileage | 272.1 | 272.1 | 272.1 |
| Years | | 5 | |
| **Average Density (Total/Mile)** | **0.0** | **0.06** | **0.11** |

**Grand Forks County**
**Rural Segment Prioritization - Lane Departure Priority**

23 USC 409
NDDOT Reserves All Objections

| # | Corridor | Route | # | Start | End | Length | ADT | ADT Range | Lane Departure Density | Access Density | Curve Critical Radius Density | Edge Risk | Totals | Tiebreakers | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | Edge Risk | ADT |
| 1 | 17.02 | Grand Forks | 17 | Intersection with 11th St NE | Intersection with 16th St SE | 2.9 | 868 | ★ | ★ | ★ | | ★ | ★★★★ | 2 | 868 |
| 2 | 17.01 | Grand Forks | 17 | Intersection with Grand Forks 81/11th St NE | Intersection with 62nd Ave S | 4.8 | 340 | | ★ | ★ | ★ | ★ | ★★★★ | 2 | 340 |
| 3 | 3.02 | Grand Forks | 3 | Intersection with US 2/18th Ave | Intersection with 24th Ave NE (Mekinock) | 5.9 | 872 | ★ | | | ★ | ★ | ★★★ | 2 | 872 |
| 4 | 3.01 | Grand Forks | 3 | Intersection with ND 15/5th Ave NE | Intersection with US 2/18th Ave | 13.0 | 552 | ★ | | | ★ | ★ | ★★★ | 2 | 552 |
| 5 | 32.01 | Grand Forks | 32 | Intersection with Grand Forks 5/16th St NE | Grand Forks western city limits | 3.5 | 2,400 | ★ | ★ | ★ | | | ★★★ | 1 | 2,400 |
| 6 | 5.03 | Grand Forks | 5 | Intersection with Grand Forks 6/12th Ave NE | Intersection with US 2/18th Ave/Gateway Dr | 6.0 | 1,860 | ★ | ★ | ★ | | | ★★★ | 1 | 1,860 |
| 7 | 81.02 | Grand Forks | 81 | 7th Ave NE | Intersection with Grand Forks 17/62nd Ave S | 6.5 | 1,655 | ★ | ★ | | ★ | | ★★★ | 1 | 1,655 |
| 8 | 4.02 | Grand Forks | 4 | Intersection with ND 18/37th St NE | Intersection with Grand Forks 2/17th Ave (Arvilla)/31st St NE | 6.3 | 1,103 | ★ | ★ | | ★ | | ★★★ | 1 | 1,103 |
| 9 | 7.01 | Grand Forks | 7 | Intersection with Grand Forks 81/11th St NE | North Dakota/Minnesota State Line | 7.0 | 879 | ★ | | ★ | ★ | | ★★★ | 1 | 879 |
| 10 | 81.01 | Grand Forks | 81 | Grand Forks/Traill County Line | 7th Ave NE | 7.1 | 758 | ★ | ★ | | ★ | | ★★★ | 1 | 758 |
| 11 | 4.03 | Grand Forks | 4 | Intersection with Grand Forks 4/16th Ave NE | Intersection with US 2/19th Ave NE | 3.9 | 150 | | ★ | ★ | ★ | | ★★★ | 1 | 150 |
| 12 | 2.01 | Grand Forks | 2 | Intersection with ND 18/5th Ave NE | Intersection with US 2/18th Ave | 13.1 | 398 | | | | ★ | ★ | ★★ | 2 | 398 |
| 13 | 4.01 | Grand Forks | 4 | Grand Forks/Nelson County Line | Intersection with ND 18/37th St NE | 12.0 | 207 | | | | ★ | ★ | ★★ | 2 | 207 |
| 14 | 12.02 | Grand Forks | 12 | Intersection with ND 18/5th Ave NE (Northwood) | Intersection with ND 18/37th St NE | 3.9 | 110 | | | | ★ | ★ | ★★ | 2 | 110 |
| 15 | 4.05 | Grand Forks | 4 | Intersection with Grand Forks 5/16th St NE | Intersection with 58th St N (Grand Forks) | 2.8 | 3,544 | ★ | ★ | | | | ★★ | 1 | 3,544 |
| 16 | 6.05 | Grand Forks | 6 | Intersection with I-29/US 81 | Intersection with Grand Forks 81/10th St NE/S Washington St (Grand Forks) | 1.8 | 852 | ★ | ★ | | | | ★★ | 1 | 852 |
| 17 | 17.03 | Grand Forks | 17 | Intersection with Grand Forks 6/12th Ave NE | Intersection with Grand Forks 17/62nd Ave S | 1.0 | 550 | ★ | | ★ | | | ★★ | 1 | 550 |
| 18 | 33.02 | Grand Forks | 33 | Intersection with Grand Forks 2/30th St NE | Intersection with US 81 | 13.7 | 516 | | ★ | | ★ | | ★★ | 1 | 516 |
| 19 | 33.03 | Grand Forks | 33 | Intersection with I-29 | North Dakota/Minnesota State Line | 2.9 | 340 | | ★ | ★ | | | ★★ | 1 | 340 |
| 20 | 23.01 | Grand Forks | 23 | Grand Forks/Steele County Line | Intersection with ND 15/5th Ave NE | 5.1 | 326 | | ★ | | ★ | | ★★ | 1 | 326 |
| 21 | 5.02 | Grand Forks | 5 | Intersection with ND 15/7th Ave NE | Intersection with Grand Forks 6/12th Ave NE | 5.0 | 658 | ★ | | | | | ★ | 1 | 658 |
| 22 | 1.04 | Grand Forks | 1 | Intersection with ND 18/37th St NE | Intersection with Grand Forks 2/30th St NE | 7.0 | 483 | | | ★ | | | ★ | 1 | 483 |
| 23 | 12.01 | Grand Forks | 12 | Grand Forks/Steele County Line | Intersection with ND 18/5th Ave NE (Northwood) | 5.3 | 418 | | | | ★ | | ★ | 1 | 418 |
| 24 | 11.03 | Grand Forks | 11 | Intersection with Grand Forks 3/25th St NE | Intersection with I-29/US 81 | 13.1 | 375 | | ★ | | | | ★ | 1 | 375 |
| 25 | 5.04 | Grand Forks | 5 | Intersection with US 2/18th Ave/Gateway Dr | Intersection with Grand Forks 11/23rd Ave NE | 5.0 | 330 | | | ★ | | | ★ | 1 | 330 |
| 26 | 2.02 | Grand Forks | 2 | Intersection with US 2/18th Ave | Intersection with Grand Forks 33/28th Ave NE | 10.1 | 318 | | | | ★ | | ★ | 1 | 318 |
| 27 | 4.04 | Grand Forks | 4 | Intersection with ND 18/37th St NE | Intersection with Grand Forks 4A/36th St NE | 1.0 | 290 | | | ★ | | | ★ | 1 | 290 |
| 28 | 11.01 | Grand Forks | 11 | Intersection with US 2/23rd Ave | Intersection with ND 18/37th St NE | 10.5 | 214 | | | | ★ | | ★ | 1 | 214 |
| 29 | 13.01 | Grand Forks | 13 | Grand Forks/Traill County Line | Intersection with ND 15/5th Ave NE | 5.1 | 195 | | | | ★ | | ★ | 1 | 195 |
| 30 | 5.06 | Grand Forks | 5 | Intersection with US 81 | Intersection with I-29 | 1.3 | 190 | | | ★ | | | ★ | 1 | 190 |
| 31 | 26.01 | Grand Forks | 26 | Grand Forks/Traill County Line | Intersection with Grand Forks 7/6th Ave NE | 6.1 | 175 | | | | ★ | | ★ | 1 | 175 |
| 32 | 6.01 | Grand Forks | 6 | Intersection with Grand Forks 16/46th St NE | Intersection with 35/5 St NE (Kempton) | 9.6 | 140 | | | | ★ | | ★ | 1 | 140 |
| 33 | 10.01 | Grand Forks | 10 | Intersection with Grand Forks 11/23rd Ave NE | Intersection with Grand Forks 1/33rd Ave NE | 10.1 | 140 | | | | ★ | | ★ | 1 | 140 |
| 34 | 1.01 | Grand Forks | 1 | Grand Forks/Nelson County Line | Intersection with ND 32/48th St NE | 2.0 | 90 | | ★ | | | | ★ | 1 | 90 |
| 35 | 6.04 | Grand Forks | 6 | Intersection with Grand Forks 3/25th St NE | Intersection with I-29/US 81 | 13.1 | 489 | | | | | | | 1 | 489 |
| 36 | 1.05 | Grand Forks | 1 | Intersection with Grand Forks 2/30th St NE | Intersection with US 81 | 9.3 | 376 | | | | | | | 1 | 376 |
| 37 | 2.03 | Grand Forks | 2 | Intersection with Grand Forks 33/28th Ave NE | Grand Forks/Walsh County Line | 8.0 | 333 | | | | | | | 1 | 333 |
| 38 | 19.01 | Grand Forks | 19 | Intersection with 31st Ave NE | Grand Forks/Walsh County Line | 5.0 | 330 | | | | | | | 1 | 330 |
| 39 | 33.01 | Grand Forks | 33 | Intersection with ND 18/37th St NE | Intersection with Grand Forks 2/30th St NE | 7.0 | 260 | | | | | | | 1 | 260 |
| 40 | 1.03 | Grand Forks | 1 | Intersection with Grand Forks 19/45th St NE | Intersection with ND 18/37th St NE | 8.0 | 224 | | | | | | | 1 | 224 |
| 41 | 1.06 | Grand Forks | 1 | Intersection with US 81 | Intersection with I-29 | 2.8 | 85 | | | | | | | 1 | 85 |
| 42 | 10.02 | Grand Forks | 10 | Intersection with Grand Forks 1/33rd Ave NE | Intersection with Grand Forks 19/45th St NE | 4.5 | 55 | | | | | | | 1 | 55 |
| | | | | | | | Total Stars -- | 13 | 15 | 12 | 20 | 7 | | | |
| | | | | | | | % That Gets Star -- | 31% | 36% | 29% | 48% | 17% | | | |

| | # | % | Mileage | % |
|---|---|---|---|---|
| ★★★★★ | 0 | 0% | 0.0 | 0% |
| ★★★★ | 2 | 5% | 7.7 | 3% |
| ★★★ | 9 | 21% | 59.2 | 22% |
| ★★ | 9 | 21% | 56.3 | 21% |
| ★ | 14 | 33% | 91.2 | 34% |
| | 8 | 19% | 57.7 | 21% |
| | 42 | 100% | 272.1 | 100% |

| Stars | |
|---|---|
| ADT Range - | If segment has an ADT in the range of most at risk ADT based on North Dakota totals. (525 < ADT < 100000) |
| Lane Departure Density - | If segment has higher lane departure density than the North Dakota average (0.064). |
| Access Density | If segment has access density than the North Dakota average (8). |
| Curve Critical Radius Density - | If segment has higher density of curves with critical radius than the North Dakota average (0.095). |
| Edge Risk Assessment - | Edge risk of 2 or 3, based on assessment of roadway edge and clear zone. |

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Grand Forks 17 from Intersection with 11th St NE to Intersection with 16th St SE


**Agency Name:** Grand Forks County
**Contact Name:** Nick West
**Email Address:** nick.west@gfcounty.org
**ND DOT District:** 6
**Telephone Number:** 701-780-8248


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Start: | Intersection with 11th St NE | Lane Width: | 12' |
| End: | Intersection with 16th St SE | Speed Limit: | High |
| Facility Type: | 2-Lane | Shoulder Width: | 0' |
| ADT: | 868 | Shoulder Type: | None |
| Road Type | Rural Paved | Length (miles): | 2.9 |
| County Road | Grand Forks 17 | Rumble Installed: | None |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Road Dept | K+A |
|---|---|---|---|
| Crashes | 8 | 3 | 0 |
| Density (per mile per year) | 0.55 | 0.21 | 0.00 |
| Rate (per MVM) | 1.74 | 0.65 | 0.00 |

| | Value | Critical | Road |
|---|---|---|---|
| ADT Range | 868 | 525≤ADT≤100000 | ★ |
| RD Density | 0.206 | 0.064 | ★ |
| Access Density | 11.3 | 8.0 | ★ |
| Curve Critical Radius Density | 0.000 | 0.095 | |
| Edge Risk | 2 | 2 or 3 | ★ |
| | | | ★★★★ |

### *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi | Mileage | Cost |
|---|---|---|---|---|
| 4" Edge Lines | Proactive | $1,320 | 0.0 | $0 |
| 6" Edge Lines | Proactive | $1,980 | 2.9 | $5,742 |
| Edge Rumble Strip | Proactive | $4,200 | 0.0 | $0 |
| Center Line Rumble Strip | Proactive | $3,600 | 0.0 | $0 |
| 6" Center Line | Proactive | $1,020 | 0.0 | $0 |

Notes - Noise sensitive. Intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $5,168 |
| Local Match (10% of Total project cost) | $574 |
| *Total Project Cost | **$5,742** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 1
*Segment ID:* 17.02
*Date:* 6/11/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Grand Forks 17 from Intersection with Grand Forks 81/11th St NE to Intersection with 62nd Ave S


**Agency Name:** Grand Forks County
**Contact Name:** Nick West
**Email Address:** nick.west@gfcounty.org
**ND DOT District:** 6
**Telephone Number:** 701-780-8248


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Start: | Intersection with Grand Forks 81/11th St NE | Lane Width: | 12' |
| End: | Intersection with 62nd Ave S | Speed Limit: | High |
| Facility Type: | 2-Lane | Shoulder Width: | 0' |
| ADT: | 340 | Shoulder Type: | None |
| Road Type | Rural Paved | Length (miles): | 4.8 |
| County Road | Grand Forks 17 | Rumble Installed: | None |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Road Dept | K+A |
|---|---|---|---|
| Crashes | 6 | 5 | 0 |
| Density (per mile per year) | 0.25 | 0.21 | 0.00 |
| Rate (per MVM) | 2.01 | 1.68 | 0.00 |

| | Value | Critical | Road |
|---|---|---|---|
| ADT Range | 340 | 525≤ADT≤100000 | |
| RD Density | 0.209 | 0.064 | ★ |
| Access Density | 11.3 | 8.0 | ★ |
| Curve Critical Radius Density | 0.209 | 0.095 | ★ |
| Edge Risk | 2 | 2 or 3 | ★ |
| | | | ★★★★ |

### *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi | Mileage | Cost |
|---|---|---|---|---|
| 4" Edge Lines | Proactive | $1,320 | 0.0 | $0 |
| 6" Edge Lines | Proactive | $1,980 | 4.8 | $9,504 |
| Edge Rumble Strip | Proactive | $4,200 | 0.0 | $0 |
| Center Line Rumble Strip | Proactive | $3,600 | 0.0 | $0 |
| 6" Center Line | Proactive | $1,020 | 0.0 | $0 |

Notes - Noise sensitive. Curve and intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $8,554 |
| Local Match (10% of Total project cost) | $950 |
| *Total Project Cost | **$9,504** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes



23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Grand Forks 3 from Intersection with US 2/18th Ave to Intersection with 24th Ave NE (Mekinock)


**Agency Name:** Grand Forks County
**Contact Name:** Nick West
**Email Address:** nick.west@gfcounty.org
**ND DOT District:** 6
**Telephone Number:** 701-780-8248


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Start: | Intersection with US 2/18th Ave | Lane Width: | 12' |
| End: | Intersection with 24th Ave NE (Mekinock) | Speed Limit: | Low |
| Facility Type: | 2-Lane | Shoulder Width: | 0' |
| ADT: | 872 | Shoulder Type: | None |
| Road Type | Rural Paved | Length (miles): | 5.9 |
| County Road | Grand Forks 3 | Rumble Installed: | None |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Road Dept | K+A |
|---|---|---|---|
| Crashes | 4 | 1 | 0 |
| Density (per mile per year) | 0.14 | 0.03 | 0.00 |
| Rate (per MVM) | 0.43 | 0.11 | 0.00 |

| | Value | Critical | Road |
|---|---|---|---|
| ADT Range | 872 | 525≤ADT≤100000 | ★ |
| RD Density | 0.034 | 0.064 | |
| Access Density | 5.8 | 8.0 | |
| Curve Critical Radius Density | 0.341 | 0.095 | ★ |
| Edge Risk | 2 | 2 or 3 | ★ |
| | | | ★★★ |


### *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi | Mileage | Cost |
|---|---|---|---|---|
| 4" Edge Lines | Proactive | $1,320 | 0.0 | $0 |
| 6" Edge Lines | Proactive | $1,980 | 5.9 | $11,682 |
| Edge Rumble Strip | Proactive | $4,200 | 0.0 | $0 |
| Center Line Rumble Strip | Proactive | $3,600 | 0.0 | $0 |
| 6" Center Line | Proactive | $1,020 | 0.0 | $0 |

Notes - Noise sensitive. Curve and intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $10,514 |
| Local Match (10% of Total project cost) | $1,168 |
| *Total Project Cost | **$11,682** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 3
*Segment ID:* 3.02
*Date:* 6/11/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Grand Forks 3 from Intersection with ND 15/5th Ave NE to Intersection with US 2/18th Ave


**Agency Name:** Grand Forks County
**Contact Name:** Nick West
**Email Address:** nick.west@gfcounty.org
**ND DOT District:** 6
**Telephone Number:** 701-780-8248


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Start: | Intersection with ND 15/5th Ave NE | Lane Width: | 12' |
| End: | Intersection with US 2/18th Ave | Speed Limit: | High |
| Facility Type: | 2-Lane | Shoulder Width: | 0' |
| ADT: | 552 | Shoulder Type: | None |
| Road Type | Rural Paved | Length (miles): | 13.0 |
| County Road | Grand Forks 3 | Rumble Installed: | None |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Road Dept | K+A |
|---|---|---|---|
| Crashes | 14 | 4 | 0 |
| Density (per mile per year) | 0.22 | 0.06 | 0.00 |
| Rate (per MVM) | 1.07 | 0.31 | 0.00 |

| | Value | Critical | Road |
|---|---|---|---|
| ADT Range | 552 | 525≤ADT≤100000 | ★ |
| RD Density | 0.061 | 0.064 | |
| Access Density | 7.8 | 8.0 | |
| Curve Critical Radius Density | 0.460 | 0.095 | ★ |
| Edge Risk | 2 | 2 or 3 | ★ |
| | | | ★★★ |

### *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi | Mileage | Cost |
|---|---|---|---|---|
| 4" Edge Lines | Proactive | $1,320 | 0.0 | $0 |
| 6" Edge Lines | Proactive | $1,980 | 2.0 | $3,861 |
| Edge Rumble Strip | Proactive | $4,200 | 11.1 | $46,410 |
| Center Line Rumble Strip | Proactive | $3,600 | 0.0 | $0 |
| 6" Center Line | Proactive | $1,020 | 0.0 | $0 |

Notes - No Edge Rumbles on north end residential area. Curve and intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $45,244 |
| Local Match (10% of Total project cost) | $5,027 |
| *Total Project Cost | **$50,271** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 4
*Segment ID:* 3.01
*Date:* 6/11/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Grand Forks 32 from Intersection with Grand Forks 5/16th St NE to Grand Forks western city limits


**Agency Name:** Grand Forks County
**Contact Name:** Nick West
**Email Address:** nick.west@gfcounty.org
**ND DOT District:** 6
**Telephone Number:** 701-780-8248


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Start: | Intersection with Grand Forks 5/16th St NE | Lane Width: | 12' |
| End: | Grand Forks western city limits | Speed Limit: | High |
| Facility Type: | 2-Lane | Shoulder Width: | 3' |
| ADT: | 2400 | Shoulder Type: | Paved |
| Road Type | Rural Paved | Length (miles): | 3.5 |
| County Road | Grand Forks 32 | Rumble Installed: | None |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Road Dept | K+A |
|---|---|---|---|
| Crashes | 16 | 4 | 0 |
| Density (per mile per year) | 0.91 | 0.23 | 0.00 |
| Rate (per MVM) | 1.04 | 0.26 | 0.00 |

| | Value | Critical | Road |
|---|---|---|---|
| ADT Range | 2,400 | 525≤ADT≤100000 | ★ |
| RD Density | 0.226 | 0.064 | ★ |
| Access Density | 12.7 | 8.0 | ★ |
| Curve Critical Radius Density | 0.000 | 0.095 | |
| Edge Risk | 1 | 2 or 3 | |
| | | | ★★★ |


### *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi | Mileage | Cost |
|---|---|---|---|---|
| 4" Edge Lines | Proactive | $1,320 | 0.0 | $0 |
| 6" Edge Lines | Proactive | $1,980 | 3.5 | $6,930 |
| Edge Rumble Strip | Proactive | $4,200 | 0.0 | $0 |
| Center Line Rumble Strip | Proactive | $3,600 | 0.0 | $0 |
| 6" Center Line | Proactive | $1,020 | 3.5 | $3,570 |

Notes - Noise sensitive. Intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $9,450 |
| Local Match (10% of Total project cost) | $1,050 |
| *Total Project Cost | **$10,500** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 5
*Segment ID:* 32.01
*Date:* 6/11/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Grand Forks 5 from Intersection with Grand Forks 6/12th Ave NE to Intersection with US 2/18th Ave/Gateway Dr


**Agency Name:** Grand Forks County
**Contact Name:** Nick West
**Email Address:** nick.west@gfcounty.org
**ND DOT District:** 6
**Telephone Number:** 701-780-8248


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Start: | Intersection with Grand Forks 6/12th Ave NE | Lane Width: | 12' |
| End: | Intersection with US 2/18th Ave/Gateway Dr | Speed Limit: | High |
| Facility Type: | 2-Lane | Shoulder Width: | 2' |
| ADT: | 1860 | Shoulder Type: | Composite |
| Road Type | Rural Paved | Length (miles): | 6.0 |
| County Road | Grand Forks 5 | Rumble Installed: | None |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Road Dept | K+A |
|---|---|---|---|
| Crashes | 15 | 5 | 0 |
| Density (per mile per year) | 0.50 | 0.17 | 0.00 |
| Rate (per MVM) | 0.74 | 0.25 | 0.00 |

| | Value | Critical | Road |
|---|---|---|---|
| ADT Range | 1,860 | 525≤ADT≤100000 | ★ |
| RD Density | 0.167 | 0.064 | ★ |
| Access Density | 9.0 | 8.0 | ★ |
| Curve Critical Radius Density | 0.000 | 0.095 | |
| Edge Risk | 1 | 2 or 3 | |
| | | | ★★★ |


### *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi | Mileage | Cost |
|---|---|---|---|---|
| 4" Edge Lines | Proactive | $1,320 | 0.0 | $0 |
| 6" Edge Lines | Proactive | $1,980 | 6.0 | $11,880 |
| Edge Rumble Strip | Proactive | $4,200 | 0.0 | $0 |
| Center Line Rumble Strip | Proactive | $3,600 | 0.0 | $0 |
| 6" Center Line | Proactive | $1,020 | 6.0 | $6,120 |

Notes - No Edge Rumbles or Centerline Rumbles on north end residential area. Intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $16,200 |
| Local Match (10% of Total project cost) | $1,800 |
| *Total Project Cost | **$18,000** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 6
*Segment ID:* 5.03
*Date:* 6/11/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Grand Forks 81 from 7th Ave NE to Intersection with Grand Forks 17/62nd Ave S


**Agency Name:** Grand Forks County
**Contact Name:** Nick West
**Email Address:** nick.west@gfcounty.org
**ND DOT District:** 6
**Telephone Number:** 701-780-8248


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Start: | 7th Ave NE | Lane Width: | 12' |
| End: | Intersection with Grand Forks 17/62nd Ave S | Speed Limit: | High |
| Facility Type: | 2-Lane | Shoulder Width: | 8' |
| ADT: | 1655 | Shoulder Type: | Gravel |
| Road Type | Rural Paved | Length (miles): | 6.5 |
| County Road | Grand Forks 81 | Rumble Installed: | None |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Road Dept | K+A |
|---|---|---|---|
| Crashes | 12 | 6 | 2 |
| Density (per mile per year) | 0.37 | 0.18 | 0.06 |
| Rate (per MVM) | 0.61 | 0.31 | 0.10 |

| | Value | Critical | Road |
|---|---|---|---|
| ADT Range | 1,655 | 525≤ADT≤100000 | ★ |
| RD Density | 0.185 | 0.064 | ★ |
| Access Density | 6.6 | 8.0 | |
| Curve Critical Radius Density | 0.308 | 0.095 | ★ |
| Edge Risk | 1 | 2 or 3 | |
| | | | ★★★ |


### *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi | Mileage | Cost |
|---|---|---|---|---|
| 4" Edge Lines | Proactive | $1,320 | 0.0 | $0 |
| 6" Edge Lines | Proactive | $1,980 | 0.0 | $0 |
| Edge Rumble Strip | Proactive | $4,200 | 6.5 | $27,300 |
| Center Line Rumble Strip | Proactive | $3,600 | 6.5 | $23,400 |
| 6" Center Line | Proactive | $1,020 | 0.0 | $0 |

Notes - Curve and intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $45,630 |
| Local Match (10% of Total project cost) | $5,070 |
| *Total Project Cost | **$50,700** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes



23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Grand Forks 4 from Intersection with ND 18/37th St NE to Intersection with Grand Forks 2/17th Ave (Arvilla)/31st St NE


**Agency Name:** Grand Forks County
**Contact Name:** Nick West
**Email Address:** nick.west@gfcounty.org
**ND DOT District:** 6
**Telephone Number:** 701-780-8248


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Start: | Intersection with ND 18/37th St NE | Lane Width: | 12' |
| End: | Intersection with Grand Forks 2/17th Ave (Arvilla)/31st St NE | Speed Limit: | High |
| Facility Type: | 2-Lane | Shoulder Width: | 2' |
| ADT: | 1103 | Shoulder Type: | Paved |
| Road Type | Rural Paved | Length (miles): | 6.3 |
| County Road | Grand Forks 4 | Rumble Installed: | None |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Road Dept | K+A |
|---|---|---|---|
| Crashes | 25 | 7 | 0 |
| Density (per mile per year) | 0.79 | 0.22 | 0.00 |
| Rate (per MVM) | 1.97 | 0.55 | 0.00 |

| | Value | Critical | Road |
|---|---|---|---|
| ADT Range | 1,103 | 525≤ADT≤100000 | ★ |
| RD Density | 0.223 | 0.064 | ★ |
| Access Density | 5.7 | 8.0 | |
| Curve Critical Radius Density | 0.797 | 0.095 | ★ |
| Edge Risk | 1 | 2 or 3 | |
| | | | ★★★ |

### *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi | Mileage | Cost |
|---|---|---|---|---|
| 4" Edge Lines | Proactive | $1,320 | 0.0 | $0 |
| 6" Edge Lines | Proactive | $1,980 | 1.3 | $2,495 |
| Edge Rumble Strip | Proactive | $4,200 | 5.0 | $21,168 |
| Center Line Rumble Strip | Proactive | $3,600 | 5.0 | $18,144 |
| 6" Center Line | Proactive | $1,020 | 1.3 | $1,285 |

Notes - No Edge Rumbles or Centerline Rumbles on west and east end residential areas. Curve and intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $38,783 |
| Local Match (10% of Total project cost) | $4,309 |
| *Total Project Cost | **$43,092** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 8
*Segment ID:* 4.02
*Date:* 6/11/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Grand Forks 7 from Intersection with Grand Forks 81/11th St NE to North Dakota/Minnesota State Line


**Agency Name:** Grand Forks County
**Contact Name:** Nick West
**Email Address:** nick.west@gfcounty.org
**ND DOT District:** 6
**Telephone Number:** 701-780-8248


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Start: | Intersection with Grand Forks 81/11th St NE | Lane Width: | 12' |
| End: | North Dakota/Minnesota State Line | Speed Limit: | High |
| Facility Type: | 2-Lane | Shoulder Width: | 1' |
| ADT: | 879 | Shoulder Type: | Paved |
| Road Type | Rural Paved | Length (miles): | 7.0 |
| County Road | Grand Forks 7 | Rumble Installed: | None |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Road Dept | K+A |
|---|---|---|---|
| Crashes | 12 | 1 | 0 |
| Density (per mile per year) | 0.34 | 0.03 | 0.00 |
| Rate (per MVM) | 1.07 | 0.09 | 0.00 |

| | Value | Critical | Road |
|---|---|---|---|
| ADT Range | 879 | 525≤ADT≤100000 | ★ |
| RD Density | 0.029 | 0.064 | |
| Access Density | 8.0 | 8.0 | ★ |
| Curve Critical Radius Density | 0.144 | 0.095 | ★ |
| Edge Risk | 1 | 2 or 3 | |
| | | | ★★★ |


### *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi | Mileage | Cost |
|---|---|---|---|---|
| 4" Edge Lines | Proactive | $1,320 | 0.0 | $0 |
| 6" Edge Lines | Proactive | $1,980 | 0.0 | $0 |
| Edge Rumble Strip | Proactive | $4,200 | 7.0 | $29,400 |
| Center Line Rumble Strip | Proactive | $3,600 | 0.0 | $0 |
| 6" Center Line | Proactive | $1,020 | 0.0 | $0 |

Notes - Intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $26,460 |
| Local Match (10% of Total project cost) | $2,940 |
| *Total Project Cost | **$29,400** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes





Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Grand Forks 81 from Grand Forks/Traill County Line to 7th Ave NE

**Agency Name:** Grand Forks County
**Contact Name:** Nick West
**Email Address:** nick.west@gfcounty.org
**ND DOT District:** 6
**Telephone Number:** 701-780-8248

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Start: | Grand Forks/Traill County Line | Lane Width: | 12' |
| End: | 7th Ave NE | Speed Limit: | High |
| Facility Type: | 2-Lane | Shoulder Width: | 1' |
| ADT: | 758 | Shoulder Type: | Paved |
| Road Type | Rural Paved | Length (miles): | 7.1 |
| County Road | Grand Forks 81 | Rumble Installed: | None |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Road Dept | K+A |
|---|---|---|---|
| Crashes | 4 | 3 | 0 |
| Density (per mile per year) | 0.11 | 0.08 | 0.00 |
| Rate (per MVM) | 0.41 | 0.31 | 0.00 |

| | Value | Critical | Road |
|---|---|---|---|
| ADT Range | 758 | 525≤ADT≤100000 | ★ |
| RD Density | 0.085 | 0.064 | ★ |
| Access Density | 7.9 | 8.0 | |
| Curve Critical Radius Density | 0.142 | 0.095 | ★ |
| Edge Risk | 1 | 2 or 3 | |
| | | | ★★★ |


### *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi | Mileage | Cost | Notes - |
|---|---|---|---|---|---|
| 4" Edge Lines | Proactive | $1,320 | 0.0 | $0 | |
| 6" Edge Lines | Proactive | $1,980 | 0.0 | $0 | |
| Edge Rumble Strip | Proactive | $4,200 | 7.1 | $29,820 | |
| Center Line Rumble Strip | Proactive | $3,600 | 0.0 | $0 | |
| 6" Center Line | Proactive | $1,020 | 0.0 | $0 | |

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $26,838 |
| Local Match (10% of Total project cost) | $2,982 |
| *Total Project Cost | **$29,820** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 10
*Segment ID:* 81.01
*Date:* 6/11/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Grand Forks 4 from Intersection with Grand Forks 4/16th Ave NE to Intersection with US 2/19th Ave NE


**Agency Name:** Grand Forks County
**Contact Name:** Nick West
**Email Address:** nick.west@gfcounty.org
**ND DOT District:** 6
**Telephone Number:** 701-780-8248


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

Start: Intersection with Grand Forks 4/16th Ave NE
End: Intersection with US 2/19th Ave NE
Facility Type: 2-Lane
ADT: 150
Road Type Rural Paved
County Road Grand Forks 4

Lane Width: 12'
Speed Limit: High
Shoulder Width: 2'
Shoulder Type: Paved
Length (miles): 3.9
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Road Dept | K+A |
|---|---|---|---|
| Crashes | 4 | 2 | 0 |
| Density (per mile per year) | 0.21 | 0.10 | 0.00 |
| Rate (per MVM) | 3.75 | 1.88 | 0.00 |

| | Value | Critical | Road |
|---|---|---|---|
| ADT Range | 150 | 525≤ADT≤100000 | |
| RD Density | 0.102 | 0.064 | ★ |
| Access Density | 12.5 | 8.0 | ★ |
| Curve Critical Radius Density | 0.512 | 0.095 | ★ |
| Edge Risk | 1 | 2 or 3 | |
| | | | ★★★ |


### *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi | Mileage | Cost |
|---|---|---|---|---|
| 4" Edge Lines | Proactive | $1,320 | 0.0 | $0 |
| 6" Edge Lines | Proactive | $1,980 | 3.9 | $7,722 |
| Edge Rumble Strip | Proactive | $4,200 | 0.0 | $0 |
| Center Line Rumble Strip | Proactive | $3,600 | 0.0 | $0 |
| 6" Center Line | Proactive | $1,020 | 0.0 | $0 |

Notes - Noise sensitive. Curve projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $6,950 |
| Local Match (10% of Total project cost) | $772 |
| *Total Project Cost | **$7,722** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 11
*Segment ID:* 4.03
*Date:* 6/11/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Grand Forks 2 from Intersection with ND 18/5th Ave NE to Intersection with US 2/18th Ave


**Agency Name:** Grand Forks County
**Contact Name:** Nick West
**Email Address:** nick.west@gfcounty.org
**ND DOT District:** 6
**Telephone Number:** 701-780-8248


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Start: | Intersection with ND 18/5th Ave NE | Lane Width: | 12' |
| End: | Intersection with US 2/18th Ave | Speed Limit: | High |
| Facility Type: | 2-Lane | Shoulder Width: | 1' |
| ADT: | 398 | Shoulder Type: | Paved |
| Road Type | Rural Paved | Length (miles): | 13.1 |
| County Road | Grand Forks 2 | Rumble Installed: | None |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Road Dept | K+A |
|---|---|---|---|
| Crashes | 14 | 3 | 0 |
| Density (per mile per year) | 0.21 | 0.05 | 0.00 |
| Rate (per MVM) | 1.47 | 0.32 | 0.00 |

| | Value | Critical | Road |
|---|---|---|---|
| ADT Range | 398 | 525≤ADT≤100000 | |
| RD Density | 0.046 | 0.064 | |
| Access Density | 5.4 | 8.0 | |
| Curve Critical Radius Density | 0.460 | 0.095 | ★ |
| Edge Risk | 2 | 2 or 3 | ★ |
| | | | ★★ |


### *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi | Mileage | Cost |
|---|---|---|---|---|
| 4" Edge Lines | Proactive | $1,320 | 0.0 | $0 |
| 6" Edge Lines | Proactive | $1,980 | 0.7 | $1,297 |
| Edge Rumble Strip | Proactive | $4,200 | 12.4 | $52,269 |
| Center Line Rumble Strip | Proactive | $3,600 | 0.0 | $0 |
| 6" Center Line | Proactive | $1,020 | 0.0 | $0 |

Notes - No Edge Rumbles on north end residential area. Curve and intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $48,209 |
| Local Match (10% of Total project cost) | $5,357 |
| *Total Project Cost | **$53,566** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 12
*Segment ID:* 2.01
*Date:* 6/11/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Grand Forks 4 from Grand Forks/Nelson County Line to Intersection with ND 18/37th St NE


**Agency Name:** Grand Forks County
**Contact Name:** Nick West
**Email Address:** nick.west@gfcounty.org
**ND DOT District:** 6
**Telephone Number:** 701-780-8248


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Start: | Grand Forks/Nelson County Line | Lane Width: | 12' |
| End: | Intersection with ND 18/37th St NE | Speed Limit: | High |
| Facility Type: | 2-Lane | Shoulder Width: | 1' |
| ADT: | 207 | Shoulder Type: | Paved |
| Road Type | Rural Paved | Length (miles): | 12.0 |
| County Road | Grand Forks 4 | Rumble Installed: | None |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Road Dept | K+A |
|---|---|---|---|
| Crashes | 7 | 3 | 1 |
| Density (per mile per year) | 0.12 | 0.05 | 0.02 |
| Rate (per MVM) | 1.55 | 0.66 | 0.22 |

| | Value | Critical | Road |
|---|---|---|---|
| ADT Range | 207 | 525≤ADT≤100000 | |
| RD Density | 0.050 | 0.064 | |
| Access Density | 7.7 | 8.0 | |
| Curve Critical Radius Density | 0.167 | 0.095 | ★ |
| Edge Risk | 2 | 2 or 3 | ★ |
| | | | ★★ |


### *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi | Mileage | Cost |
|---|---|---|---|---|
| 4" Edge Lines | Proactive | $1,320 | 0.0 | $0 |
| 6" Edge Lines | Proactive | $1,980 | 1.2 | $2,376 |
| Edge Rumble Strip | Proactive | $4,200 | 10.8 | $45,360 |
| Center Line Rumble Strip | Proactive | $3,600 | 0.0 | $0 |
| 6" Center Line | Proactive | $1,020 | 0.0 | $0 |

Notes - No Edge Rumbles on east end residential area. Curve and intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $42,962 |
| Local Match (10% of Total project cost) | $4,774 |
| *Total Project Cost | **$47,736** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes





Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Grand Forks 12 from Intersection with ND 18/5th Ave NE (Northwood) to Intersection with ND 18/37th St NE

**Agency Name:** Grand Forks County
**Contact Name:** Nick West
**Email Address:** nick.west@gfcounty.org
**ND DOT District:** 6
**Telephone Number:** 701-780-8248

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Start: | Intersection with ND 18/5th Ave NE (Northwood) | Lane Width: | 12' |
| End: | Intersection with ND 18/37th St NE | Speed Limit: | High |
| Facility Type: | 2-Lane | Shoulder Width: | 0' |
| ADT: | 110 | Shoulder Type: | None |
| Road Type | Rural Paved | Length (miles): | 3.9 |
| County Road | Grand Forks 12 | Rumble Installed: | None |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Road Dept | K+A |
|---|---|---|---|
| Crashes | 1 | 1 | 0 |
| Density (per mile per year) | 0.05 | 0.05 | 0.00 |
| Rate (per MVM) | 1.28 | 1.28 | 0.00 |

| | Value | Critical | Road |
|---|---|---|---|
| ADT Range | 110 | 525≤ADT≤100000 | |
| RD Density | 0.051 | 0.064 | |
| Access Density | 4.4 | 8.0 | |
| Curve Critical Radius Density | 0.257 | 0.095 | ★ |
| Edge Risk | 2 | 2 or 3 | ★ |
| | | | ★★ |


### *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi | Mileage | Cost |
|---|---|---|---|---|
| 4" Edge Lines | Proactive | $1,320 | 0.0 | $0 |
| 6" Edge Lines | Proactive | $1,980 | 3.9 | $7,722 |
| Edge Rumble Strip | Proactive | $4,200 | 0.0 | $0 |
| Center Line Rumble Strip | Proactive | $3,600 | 0.0 | $0 |
| 6" Center Line | Proactive | $1,020 | 0.0 | $0 |

Notes - Curve projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $6,950 |
| Local Match (10% of Total project cost) | $772 |
| *Total Project Cost | **$7,722** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## Grand Forks County Curves

| Curve Count | ID | Corridor | Segment | Start | End | Inside Shoulder Type | Outside Shoulder Type | Curve Advisory Sign | Speed Advisory Sign | Chevrons | Crashes Total | Crashes Total Severe | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Speed Limit | Risk Ranking | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 002A | 2.01 | Grand Forks | Intersection with ND 18/5th Ave NE | Intersection with US 2/18th Ave | Paved | Paved | Yes | Yes | No | - | - | 2,756 | 398 | No | No | High | | S-Curve, Unreadable MPH, Delineators |
| 2 | 002B | 2.01 | Grand Forks | Intersection with ND 18/5th Ave NE | Intersection with US 2/18th Ave | Paved | Paved | Yes | Yes | No | - | - | 869 | 398 | No | No | High | ★ | S-Curve, Unreadable MPH, Delineators |
| 3 | 002C | 2.01 | Grand Forks | Intersection with ND 18/5th Ave NE | Intersection with US 2/18th Ave | Paved | Paved | Yes | Yes | No | 2 | - | 1,979 | 398 | No | No | High | | S-Curve, 40 MPH, Arrow Board w/2Chevrons |
| 4 | 002D | 2.01 | Grand Forks | Intersection with ND 18/5th Ave NE | Intersection with US 2/18th Ave | Paved | Paved | Yes | No | No | - | - | 1,534 | 398 | No | Yes | High | ★ | Curve Warning |
| 5 | 002E | 2.01 | Grand Forks | Intersection with ND 18/5th Ave NE | Intersection with US 2/18th Ave | Paved | Paved | Yes | No | No | 2 | - | 230 | 398 | Yes | Yes | High | ★★ | Sharp Curve |
| 6 | 002F | 2.01 | Grand Forks | Intersection with ND 18/5th Ave NE | Intersection with US 2/18th Ave | Paved | Paved | No | No | No | 8 | - | 1,592 | 398 | Yes | Yes | High | ★★ | |
| 7 | 002G | 2.02 | Grand Forks | Intersection with US 2/18th Ave | Intersection with Grand Forks 33/28th Ave NE | Paved | Paved | Yes | No | No | - | - | 956 | 318 | Yes | No | High | ★★ | S-Curve, Arrow Board w/2 Chevrons |
| 8 | 002H | 2.02 | Grand Forks | Intersection with US 2/18th Ave | Intersection with Grand Forks 33/28th Ave NE | Paved | Paved | Yes | No | No | - | - | 1,435 | 318 | Yes | No | High | ★ | S-Curve, Arrow Board w/2 Chevrons |
| 9 | 003A | 3.01 | Grand Forks | Intersection with ND 15/5th Ave NE | Intersection with US 2/18th Ave | None | None | Yes | No | No | - | - | 1,687 | 552 | No | No | High | ★ | S-Curve |
| 10 | 003B | 3.01 | Grand Forks | Intersection with ND 15/5th Ave NE | Intersection with US 2/18th Ave | None | None | Yes | No | No | - | - | 1,894 | 552 | No | No | High | ★ | S-Curve |
| 11 | 003C | 3.01 | Grand Forks | Intersection with ND 15/5th Ave NE | Intersection with US 2/18th Ave | None | None | Yes | No | No | - | - | 1,010 | 552 | Yes | No | High | ★★★ | S-Curve |
| 12 | 003D | 3.01 | Grand Forks | Intersection with ND 15/5th Ave NE | Intersection with US 2/18th Ave | None | None | Yes | No | No | - | - | 1,030 | 552 | No | No | High | ★★ | S-Curve |
| 13 | 003E | 3.01 | Grand Forks | Intersection with ND 15/5th Ave NE | Intersection with US 2/18th Ave | None | None | Yes | No | No | - | - | 2,037 | 552 | Yes | Yes | High | ★★★ | S-Curve |
| 14 | 003F | 3.01 | Grand Forks | Intersection with ND 15/5th Ave NE | Intersection with US 2/18th Ave | None | None | Yes | No | No | - | - | 2,111 | 552 | Yes | No | High | ★★ | S-Curve |
| 15 | 003G | 3.02 | Grand Forks | Intersection with US 2/18th Ave | Intersection with 24th Ave NE (Mekinock) | None | None | No | No | No | - | - | 5,390 | 872 | Yes | No | Low | ★★ | |
| 16 | 003H | 3.02 | Grand Forks | Intersection with US 2/18th Ave | Intersection with 24th Ave NE (Mekinock) | None | None | No | No | No | 1 | - | 3,218 | 872 | Yes | Yes | Low | ★★★ | |
| 17 | 004A | 4.01 | Grand Forks | Grand Forks/Nelson County Line | Intersection with ND 18/37th St NE | Paved | Paved | Yes | No | No | - | - | 611 | 207 | No | Yes | High | ★★ | S-Curve |
| 18 | 004B | 4.01 | Grand Forks | Grand Forks/Nelson County Line | Intersection with ND 18/37th St NE | Paved | Paved | Yes | No | No | - | - | 591 | 207 | No | Yes | High | ★★ | S-Curve |
| 19 | 004C | 4.02 | Grand Forks | Intersection with ND 18/37th St NE | Intersection with Grand Forks 2/17th Ave (Arvilla)/31st St NE | Paved | Paved | Yes | No | No | - | - | 1,129 | 1103 | Yes | No | High | ★★★ | S-Curve, Border of City |
| 20 | 004D | 4.02 | Grand Forks | Intersection with ND 18/37th St NE | Intersection with Grand Forks 2/17th Ave (Arvilla)/31st St NE | Paved | Paved | Yes | No | No | - | - | 1,193 | 1103 | No | No | High | ★★ | S-Curve |
| 21 | 004E | 4.02 | Grand Forks | Intersection with ND 18/37th St NE | Intersection with Grand Forks 2/17th Ave (Arvilla)/31st St NE | Paved | Paved | Yes | No | No | 1 | - | 2,924 | 1103 | Yes | No | High | ★★ | Curve Warning |
| 22 | 004F | 4.02 | Grand Forks | Intersection with ND 18/37th St NE | Intersection with Grand Forks 2/17th Ave (Arvilla)/31st St NE | Paved | Paved | Yes | No | No | - | - | 1,830 | 1103 | Yes | No | High | ★★ | Curve Warning |
| 23 | 004G | 4.02 | Grand Forks | Intersection with ND 18/37th St NE | Intersection with Grand Forks 2/17th Ave (Arvilla)/31st St NE | Paved | Paved | Yes | No | No | 1 | - | 348 | 1103 | Yes | Yes | High | ★★★ | Curve Warning |
| 24 | 004H | 4.03 | Grand Forks | Intersection with Grand Forks 4/16th Ave NE | Intersection with US 2/19th Ave NE | Paved | Paved | Yes | No | No | - | - | 82 | 150 | Yes | Yes | High | ★★ | Sharp Curve, Arrow Board w/2 Chevrons, Unfinished Streets |
| 25 | 004I | 4.03 | Grand Forks | Intersection with Grand Forks 4/16th Ave NE | Intersection with US 2/19th Ave NE | Paved | Paved | Yes | No | No | 1 | - | 975 | 150 | Yes | Yes | High | ★★★ | Curve Warning |
| 26 | 006A | 6.01 | Grand Forks | Intersection with Grand Forks 16/46th St NE | Intersection with 35/5 St NE (Kempton) | Paved | Paved | Yes | No | No | - | - | 949 | 140 | No | No | High | ★ | S-Curve, Delineators |
| 27 | 006B | 6.01 | Grand Forks | Intersection with Grand Forks 16/46th St NE | Intersection with 35/5 St NE (Kempton) | Paved | Paved | Yes | No | No | - | - | 946 | 140 | Yes | No | High | ★★ | S-Curve, Delineators |
| 28 | 006C | 6.01 | Grand Forks | Intersection with Grand Forks 16/46th St NE | Intersection with 35/5 St NE (Kempton) | Paved | Paved | Yes | No | No | - | - | 990 | 140 | No | No | High | ★ | S-Curve, Delineators |
| 29 | 006D | 6.01 | Grand Forks | Intersection with Grand Forks 16/46th St NE | Intersection with 35/5 St NE (Kempton) | Paved | Paved | Yes | No | No | 1 | - | 950 | 140 | Yes | No | High | ★★ | S-Curve, Delineators |
| 30 | 007A | 7.01 | Grand Forks | Intersection with Grand Forks 81/11th St NE | North Dakota/Minnesota State Line | Paved | Paved | Yes | No | No | - | - | 2,783 | 879 | Yes | No | High | ★★ | Curve Warning, Edge Line Rumbles in Curve Shldr |
| 31 | 010A | 10.01 | Grand Forks | Intersection with Grand Forks 11/23rd Ave NE | Intersection with Grand Forks 1/33rd Ave NE | Paved | Paved | Yes | No | No | - | - | 992 | 140 | Yes | No | High | ★★ | S-Curve, Arrow Board w/2 Chevrons |
| 32 | 010B | 10.01 | Grand Forks | Intersection with Grand Forks 11/23rd Ave NE | Intersection with Grand Forks 1/33rd Ave NE | Paved | Paved | Yes | No | No | - | - | 1,232 | 140 | Yes | No | High | ★ | S-Curve, Arrow Board w/2 Chevrons |
| 33 | 011A | 11.01 | Grand Forks | Intersection with US 2/23rd Ave | Intersection with ND 18/37th St NE | None | None | Yes | No | No | - | - | 1,162 | 214 | Yes | Yes | High | ★★★ | Curve Warning |
| 34 | 011B | 11.01 | Grand Forks | Intersection with US 2/23rd Ave | Intersection with ND 18/37th St NE | None | None | Yes | No | No | - | - | 1,162 | 214 | Yes | Yes | High | ★★★ | Curve Warning |
| 35 | 011C | 11.01 | Grand Forks | Intersection with US 2/23rd Ave | Intersection with ND 18/37th St NE | None | None | Yes | No | No | - | - | 1,260 | 214 | No | No | High | | Curve Warning, Arrow Board w/2 Chevrons |
| 36 | 011D | 11.01 | Grand Forks | Intersection with US 2/23rd Ave | Intersection with ND 18/37th St NE | None | None | No | No | No | - | - | 594 | 214 | Yes | No | High | ★★ | |
| 37 | 011E | 11.03 | Grand Forks | Intersection with Grand Forks 3/25th St NE | Intersection with I-29/US 81 | Paved | Paved | Yes | Yes | No | 2 | - | 145 | 375 | Yes | Yes | High | ★★ | Sharp Curve, 15 MPH, Arrow Board w/2 Chevrons, Railroad Crossing |
| 38 | 012A | 12.01 | Grand Forks | Grand Forks/Steele County Line | Intersection with ND 18/5th Ave NE (Northwood) | Gravel | Gravel | Yes | No | Yes | - | - | 522 | 418 | Yes | Yes | High | ★★★ | Curve Warning |
| 39 | 012B | 12.01 | Grand Forks | Grand Forks/Steele County Line | Intersection with ND 18/5th Ave NE (Northwood) | Gravel | Gravel | Yes | No | Yes | - | - | 1,314 | 418 | No | Yes | High | ★ | Curve Warning |
| 40 | 012C | 12.02 | Grand Forks | Intersection with ND 18/5th Ave NE (Northwood) | Intersection with ND 18/37th St NE | None | None | Yes | No | No | - | - | 793 | 110 | Yes | Yes | High | ★★★ | Curve Warning |
| 41 | 013A | 13.01 | Grand Forks | Grand Forks/Traill County Line | Intersection with ND 15/5th Ave NE | Composite | Composite | Yes | Yes | Yes | 3 | - | 739 | 195 | Yes | Yes | High | ★★★ | Curve Warning, 30 MPH |
| 42 | 017A | 17.01 | Grand Forks | Intersection with Grand Forks 81/11th St NE | Intersection with 62nd Ave S | None | None | Yes | Yes | Yes | - | - | 262 | 340 | Yes | Yes | High | ★★ | Sharp Curve, 25 MPH |
| 43 | 023A | 23.01 | Grand Forks | Grand Forks/Steele County Line | Intersection with ND 15/5th Ave NE | Paved | Paved | Yes | Yes | No | - | - | 1,233 | 326 | No | No | High | | S-Curve, 30 MPH |
| 44 | 023B | 23.01 | Grand Forks | Grand Forks/Steele County Line | Intersection with ND 15/5th Ave NE | Paved | Paved | Yes | Yes | Yes | - | - | 1,092 | 326 | No | No | High | ★ | S-Curve, 30 MPH, Arrow Board w/2 Chevrons |
| 45 | 023C | 23.01 | Grand Forks | Grand Forks/Steele County Line | Intersection with ND 15/5th Ave NE | Paved | Paved | Yes | No | No | 1 | - | 853 | 326 | No | No | High | ★ | Winding Road, Nonconventional |
| 46 | 023D | 23.01 | Grand Forks | Grand Forks/Steele County Line | Intersection with ND 15/5th Ave NE | Paved | Paved | Yes | No | No | - | - | 590 | 326 | No | No | High | ★ | Winding Road, Nonconventional |
| 47 | 023E | 23.01 | Grand Forks | Grand Forks/Steele County Line | Intersection with ND 15/5th Ave NE | Paved | Paved | Yes | No | No | 1 | 1 | 1,105 | 326 | No | No | High | ★★ | S-Curve |
| 48 | 023F | 23.01 | Grand Forks | Grand Forks/Steele County Line | Intersection with ND 15/5th Ave NE | Paved | Paved | Yes | No | No | - | - | 660 | 326 | Yes | No | High | ★★ | S-Curve |
| 49 | 026A | 26.01 | Grand Forks | Grand Forks/Traill County Line | Intersection with Grand Forks 7/6th Ave NE | Paved | Paved | Yes | No | Yes | - | - | 981 | 175 | No | No | High | ★ | S-Curve, Arrow Board w/2 Chevrons |
| 50 | 026B | 26.01 | Grand Forks | Grand Forks/Traill County Line | Intersection with Grand Forks 7/6th Ave NE | Paved | Paved | Yes | No | Yes | - | - | 784 | 175 | No | No | High | ★ | S-Curve, Arrow Board w/2 Chevrons |
| 51 | 026C | 26.01 | Grand Forks | Grand Forks/Traill County Line | Intersection with Grand Forks 7/6th Ave NE | Paved | Paved | Yes | No | No | - | - | 2,287 | 175 | No | No | High | | Curve Warning |
| 52 | 026D | 26.01 | Grand Forks | Grand Forks/Traill County Line | Intersection with Grand Forks 7/6th Ave NE | Paved | Paved | No | No | No | - | - | 433 | 175 | Yes | No | High | ★ | |
| 53 | 033A | 33.02 | Grand Forks | Intersection with Grand Forks 2/30th St NE | Intersection with US 81 | Composite | Composite | Yes | No | Yes | - | - | 887 | 516 | No | No | High | ★★ | S-Curve |
| 54 | 033B | 33.02 | Grand Forks | Intersection with Grand Forks 2/30th St NE | Intersection with US 81 | Composite | Composite | Yes | No | Yes | - | - | 516 | 516 | No | No | High | ★★ | S-Curve |
| 55 | 033C | 33.02 | Grand Forks | Intersection with Grand Forks 2/30th St NE | Intersection with US 81 | Composite | Composite | No | No | No | 1 | 1 | 1,272 | 516 | Yes | Yes | High | ★★★★ | Railroad Crossing |
| 56 | 081A | 81.01 | Grand Forks | Grand Forks/Traill County Line | 7th Ave NE | Paved | Paved | Yes | No | Yes | 1 | - | 1,994 | 758 | Yes | No | High | ★★ | S-Curve |
| 57 | 081B | 81.02 | Grand Forks | 7th Ave NE | Intersection with Grand Forks 17/62nd Ave S | Gravel | Gravel | Yes | No | Yes | - | - | 1,456 | 1655 | Yes | Yes | High | ★★★ | Curve Warning |
| 58 | 081C | 81.02 | Grand Forks | 7th Ave NE | Intersection with Grand Forks 17/62nd Ave S | Gravel | Gravel | Yes | No | Yes | 1 | 1 | 1,429 | 1655 | Yes | Yes | High | ★★★★ | Curve Warning |
| | | | | | | | | | | | 27 | 3 | | | | | | | |

| Critical Ranges | Min | Max |
|---|---|---|
| Radius | 500 | 1,200 |
| ADT | 500 | 100,000 |

| Stars | Total # | Total % |
|---|---|---|
| ★★★★★ | 0 | 0% |
| ★★★★ | 2 | 3% |
| ★★★ | 12 | 21% |
| ★★ | 24 | 41% |
| ★ | 15 | 26% |
| 23 USC 409 | 5 | 9% |
| NDDOT Reserves All Objections | 58 | 100% |

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

## Curves on Grand Forks from Intersection with ND 18/5th Ave NE to Intersection with US 2/18th Ave

**Agency Name: Grand Forks County** | **ND DOT District: 6**

**Contact Name: Nick West** | **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Intersection with ND 18/5th Ave NE
End: Intersection with US 2/18th Ave
Facility Type: 2-Lane
ADT: 398
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 1'
Shoulder Type: Paved
Length (miles): 13.1
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 002A | 0 | 0 | 2,756 | 398 | No | No | | x | - | Chevron | - | Inside/Outside | - | - |
| 002B | 0 | 0 | 869 | 398 | No | No | ★ | - | x | Chevron | - | Inside/Outside | x | 45 |
| 002C | 0 | 0 | 1,979 | 398 | No | No | | x | - | Chevron | - | Inside/Outside | - | - |
| 002D | 0 | 0 | 1,534 | 398 | No | Yes | ★ | x | - | Chevron | - | Inside/Outside | - | - |
| 002E | 0 | 0 | 230 | 398 | Yes | Yes | ★★ | x | - | Arrow | - | Inside/Outside | x | Inspect Curve |
| 002F | 0 | 0 | 1,592 | 398 | Yes | Yes | ★★ | x | - | Chevron | - | Inside/Outside | - | - |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost |
|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 5 | $19,800 |
| Arrow Board Only | Proactive | $1,200 per curve | 1 | $1,200 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 2 | $2,880 |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .6 miles | $2,196 |
| Shoulder Paving | Proactive | $44,400 per mile | .0 miles | $0 |
| | | | | $26,076 |

Notes - Segment and intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $23,468 |
| Local Match (10% of Total project cost) | $2,608 |
| *Total Project Cost | **$26,076** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 1
*Segment ID:* 2.01
*Date:* 6/11/2014

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

## Curves on Grand Forks from Intersection with US 2/18th Ave to Intersection with Grand Forks 33/28th Ave NE


**Agency Name:** Grand Forks County
**ND DOT District:** 6
**Contact Name:** Nick West
**Telephone Number:** 701-780-8248
**Email Address:** nick.west@gfcounty.org


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Intersection with US 2/18th Ave
End: Intersection with Grand Forks 33/28th Ave NE
Facility Type: 2-Lane
ADT: 318
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 2'
Shoulder Type: Paved
Length (miles): 10.1
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 002G | 0 | 0 | 956 | 318 | Yes | No | ★★ | - | x | Chevron | - | Inside/Outside | x | 50 |
| 002H | 0 | 0 | 1,435 | 318 | Yes | No | ★ | x | - | Chevron | - | Inside/Outside | - | - |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost |
|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 2 | $7,920 |
| Arrow Board Only | Proactive | $1,200 per curve | 0 | $0 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 1 | $1,440 |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .1 miles | $465 |
| Shoulder Paving | Proactive | $44,400 per mile | .0 miles | $0 |
| | | | | $9,825 |

Notes - Intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $8,842 |
| Local Match (10% of Total project cost) | $982 |
| *Total Project Cost | **$9,825** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 2
*Segment ID:* 2.02
*Date:* 6/11/2014

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

## Curves on Grand Forks from Intersection with ND 15/5th Ave NE to Intersection with US 2/18th Ave

**Agency Name: Grand Forks County** | **ND DOT District: 6**

**Contact Name: Nick West** | **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Intersection with ND 15/5th Ave NE
End: Intersection with US 2/18th Ave
Facility Type: 2-Lane
ADT: 552
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 0'
Shoulder Type: None
Length (miles): 13.0
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 003A | 0 | 0 | 1,687 | 552 | No | No | ★ | x | - | Chevron | - | Inside/Outside | - | - |
| 003B | 0 | 0 | 1,894 | 552 | No | No | ★ | x | - | Chevron | - | Inside/Outside | - | - |
| 003C | 0 | 0 | 1,010 | 552 | Yes | No | ★★★ | - | x | Chevron | - | Inside/Outside | x | 50 |
| 003D | 0 | 0 | 1,030 | 552 | No | No | ★★ | - | x | Chevron | - | Inside/Outside | x | 50 |
| 003E | 0 | 0 | 2,037 | 552 | Yes | Yes | ★★★ | - | - | Chevron | - | Inside/Outside | - | - |
| 003F | 0 | 0 | 2,111 | 552 | Yes | No | ★★ | x | - | Chevron | - | Inside/Outside | - | - |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost |
|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 6 | $23,760 |
| Arrow Board Only | Proactive | $1,200 per curve | 0 | $0 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 2 | $2,880 |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .5 miles | $1,799 |
| Shoulder Paving | Proactive | $44,400 per mile | .0 miles | $0 |
| | | | | $28,439 |

Notes - Segment and intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $25,595 |
| Local Match (10% of Total project cost) | $2,844 |
| *Total Project Cost | **$28,439** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 3
*Segment ID:* 3.01
*Date:* 6/11/2014

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

## Curves on Grand Forks from Intersection with US 2/18th Ave to Intersection with 24th Ave NE (Mekinock)


**Agency Name: Grand Forks County** **ND DOT District: 6**

**Contact Name: Nick West** **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Intersection with US 2/18th Ave
End: Intersection with 24th Ave NE (Mekinock)
Facility Type: 2-Lane
ADT: 872
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: Low
Shoulder Width: 0'
Shoulder Type: None
Length (miles): 5.9
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 003G | 0 | 0 | 5,390 | 872 | Yes | No | ★★ | x | - | Chevron | - | Inside/Outside | - | - |
| 003H | 0 | 0 | 3,218 | 872 | Yes | Yes | ★★★ | - | - | Chevron | - | Inside/Outside | - | - |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost |
|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 2 | $7,920 |
| Arrow Board Only | Proactive | $1,200 per curve | 0 | $0 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 0 | $0 |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .5 miles | $1,637 |
| Shoulder Paving | Proactive | $44,400 per mile | .0 miles | $0 |
| | | | | $9,557 |

Notes - Segment and intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $8,601 |
| Local Match (10% of Total project cost) | $956 |
| *Total Project Cost | **$9,557** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 4
*Segment ID:* 3.02
*Date:* 6/11/2014

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

## Curves on Grand Forks from Grand Forks/Nelson County Line to Intersection with ND 18/37th St NE


**Agency Name: Grand Forks County** **ND DOT District: 6**

**Contact Name: Nick West** **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Grand Forks/Nelson County Line
End: Intersection with ND 18/37th St NE
Facility Type: 2-Lane
ADT: 207
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 1'
Shoulder Type: Paved
Length (miles): 12.0
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 004A | 0 | 0 | 611 | 207 | No | Yes | ★★ | - | x | Chevron | - | Inside/Outside | x | 40 |
| 004B | 0 | 0 | 591 | 207 | No | Yes | ★★ | - | x | Chevron | - | Inside/Outside | x | 40 |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost |
|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 2 | $7,920 |
| Arrow Board Only | Proactive | $1,200 per curve | 0 | $0 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 2 | $2,880 |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .1 miles | $462 |
| Shoulder Paving | Proactive | $44,400 per mile | .0 miles | $0 |
| | | | | $11,262 |

Notes - Segment and intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $10,136 |
| Local Match (10% of Total project cost) | $1,126 |
| *Total Project Cost | **$11,262** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 5
*Segment ID:* 4.01
*Date:* 6/11/2014

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

## Curves on Grand Forks from Intersection with ND 18/37th St NE to Intersection with Grand Forks 2/17th Ave (Arvilla)/31st St NE


**Agency Name: Grand Forks County** **ND DOT District: 6**

**Contact Name: Nick West** **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Intersection with ND 18/37th St NE
End: Intersection with Grand Forks 2/17th Ave (Arvilla)/31st St NE
Facility Type: 2-Lane
ADT: 1103
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 2'
Shoulder Type: Paved
Length (miles): 6.3
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 004C | 0 | 0 | 1,129 | 1,103 | Yes | No | ★★★ | - | x | Chevron | - | Inside/Outside | - | - |
| 004D | 0 | 0 | 1,193 | 1,103 | No | No | ★★ | - | x | Chevron | - | Inside/Outside | - | - |
| 004E | 0 | 0 | 2,924 | 1,103 | Yes | No | ★★ | x | - | Chevron | - | Inside/Outside | - | - |
| 004F | 0 | 0 | 1,830 | 1,103 | Yes | No | ★★ | x | - | Chevron | - | Inside/Outside | - | - |
| 004G | 0 | 0 | 348 | 1,103 | Yes | Yes | ★★★ | - | - | Chevron | - | Inside/Outside | x | 35 |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost |
|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 5 | $19,800 |
| Arrow Board Only | Proactive | $1,200 per curve | 0 | $0 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 1 | $1,440 |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .5 miles | $1,943 |
| Shoulder Paving | Proactive | $44,400 per mile | .0 miles | $0 |
| | | | | $23,183 |

Notes - Segment and intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $20,865 |
| Local Match (10% of Total project cost) | $2,318 |
| *Total Project Cost | **$23,183** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 6
*Segment ID:* 4.02
*Date:* 6/11/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

# Curves on Grand Forks from Intersection with Grand Forks 4/16th Ave NE to Intersection with US 2/19th Ave NE


**Agency Name:** Grand Forks County **ND DOT District:** 6

**Contact Name:** Nick West **Telephone Number:** 701-780-8248

**Email Address:** nick.west@gfcounty.org


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Intersection with Grand Forks 4/16th Ave NE
End: Intersection with US 2/19th Ave NE
Facility Type: 2-Lane
ADT: 150
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 2'
Shoulder Type: Paved
Length (miles): 3.9
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 004H | 0 | 0 | 82 | 150 | Yes | Yes | ★★ | x | - | Arrow | - | Inside/Outside | x | Inspect Curve |
| 004I | 0 | 0 | 975 | 150 | Yes | Yes | ★★★ | - | x | Chevron | - | Inside/Outside | x | 50 |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | | Quantity | Total cost |
|---|---|---|---|---|---|
| Chevrons | Proactive | $3,960 | per curve | 1 | $3,960 |
| Arrow Board Only | Proactive | $1,200 | per curve | 1 | $1,200 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 | per curve | 2 | $2,880 |
| Shoulder Rumble Strip | Proactive | $3,600 | per mile | .3 miles | $1,109 |
| Shoulder Paving | Proactive | $44,400 | per mile | .0 miles | $0 |
| | | | | | $9,149 |

Notes - Segment projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $8,234 |
| Local Match (10% of Total project cost) | $915 |
| *Total Project Cost | **$9,149** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

## Curves on Grand Forks from Intersection with Grand Forks 16/46th St NE to Intersection with 35/5 St NE (Kempton)


**Agency Name: Grand Forks County** **ND DOT District: 6**

**Contact Name: Nick West** **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Intersection with Grand Forks 16/46th St NE
End: Intersection with 35/5 St NE (Kempton)
Facility Type: 2-Lane
ADT: 140
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 1'
Shoulder Type: Paved
Length (miles): 9.6
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 006A | 0 | 0 | 949 | 140 | No | No | ★ | - | x | Chevron | - | Inside/Outside | x | 50 |
| 006B | 0 | 0 | 946 | 140 | Yes | No | ★★ | - | x | Chevron | - | Inside/Outside | x | 50 |
| 006C | 0 | 0 | 990 | 140 | No | No | ★ | - | x | Chevron | - | Inside/Outside | x | 50 |
| 006D | 0 | 0 | 950 | 140 | Yes | No | ★★ | - | x | Chevron | - | Inside/Outside | x | 50 |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost |
|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 4 | $15,840 |
| Arrow Board Only | Proactive | $1,200 per curve | 0 | $0 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 4 | $5,760 |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .5 miles | $1,913 |
| Shoulder Paving | Proactive | $44,400 per mile | .0 miles | $0 |
| | | | | $23,513 |

Notes -

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $21,162 |
| Local Match (10% of Total project cost) | $2,351 |
| *Total Project Cost | **$23,513** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

## Curves on Grand Forks from Intersection with Grand Forks 11/23rd Ave NE to Intersection with Grand Forks 1/33rd Ave NE


**Agency Name: Grand Forks County** **ND DOT District: 6**

**Contact Name: Nick West** **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Intersection with Grand Forks 11/23rd Ave NE
End: Intersection with Grand Forks 1/33rd Ave NE
Facility Type: 2-Lane
ADT: 140
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 2'
Shoulder Type: Paved
Length (miles): 10.1
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 010A | 0 | 0 | 992 | 140 | Yes | No | ★★ | - | x | Chevron | - | Inside/Outside | x | 50 |
| 010B | 0 | 0 | 1,232 | 140 | Yes | No | ★ | x | - | Chevron | - | Inside/Outside | - | - |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost |
|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 2 | $7,920 |
| Arrow Board Only | Proactive | $1,200 per curve | 0 | $0 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 1 | $1,440 |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .2 miles | $613 |
| Shoulder Paving | Proactive | $44,400 per mile | .0 miles | $0 |
| | | | | $9,973 |

Notes -

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $8,975 |
| Local Match (10% of Total project cost) | $997 |
| *Total Project Cost | **$9,973** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

## Curves on Grand Forks from Intersection with US 2/23rd Ave to Intersection with ND 18/37th St NE


**Agency Name: Grand Forks County** **ND DOT District: 6**

**Contact Name: Nick West** **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Intersection with US 2/23rd Ave
End: Intersection with ND 18/37th St NE
Facility Type: 2-Lane
ADT: 214
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 0'
Shoulder Type: None
Length (miles): 10.5
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 011A | 0 | 0 | 1,162 | 214 | Yes | Yes | ★★★ | - | x | Chevron | - | Inside/Outside | - | - |
| 011B | 0 | 0 | 1,162 | 214 | Yes | Yes | ★★★ | - | x | Chevron | - | Inside/Outside | - | - |
| 011C | 0 | 0 | 1,260 | 214 | No | No | | x | - | Chevron | - | Inside/Outside | - | - |
| 011D | 0 | 0 | 594 | 214 | Yes | No | ★★ | - | x | Chevron | - | Inside/Outside | x | 40 |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost |
|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 4 | $15,840 |
| Arrow Board Only | Proactive | $1,200 per curve | 0 | $0 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 1 | $1,440 |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .9 miles | $3,222 |
| Shoulder Paving | Proactive | $44,400 per mile | .0 miles | $0 |
| | | | | $20,502 |

Notes - Intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $18,452 |
| Local Match (10% of Total project cost) | $2,050 |
| *Total Project Cost | **$20,502** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

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*Segment ID:* 11.01
*Date:* 6/11/2014

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

## Curves on Grand Forks from Grand Forks/Steele County Line to Intersection with ND 18/5th Ave NE (Northwood)


**Agency Name: Grand Forks County** **ND DOT District: 6**

**Contact Name: Nick West** **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Grand Forks/Steele County Line
End: Intersection with ND 18/5th Ave NE (Northwood)
Facility Type: 2-Lane
ADT: 418
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 2'
Shoulder Type: Gravel
Length (miles): 5.3
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 012A | 0 | 0 | 522 | 418 | Yes | Yes | ★★★ | x | x | Chevron | Inside/Outside | Inside/Outside | x | 40 |
| 012B | 0 | 0 | 1,314 | 418 | No | Yes | ★ | x | - | Chevron | Inside/Outside | Inside/Outside | - | - |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost |
|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 2 | $7,920 |
| Arrow Board Only | Proactive | $1,200 per curve | 0 | $0 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 1 | $1,440 |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .2 miles | $861 |
| Shoulder Paving | Proactive | $44,400 per mile | .2 miles | $10,622 |
| | | | | $20,844 |

Notes - Intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $18,759 |
| Local Match (10% of Total project cost) | $2,084 |
| *Total Project Cost | **$20,844** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 11
*Segment ID:* 12.01
*Date:* 6/11/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

# Curves on Grand Forks from Intersection with ND 18/5th Ave NE (Northwood) to Intersection with ND 18/37th St NE

**Agency Name: Grand Forks County** | **ND DOT District: 6**

**Contact Name: Nick West** | **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Intersection with ND 18/5th Ave NE (Northwood)
End: Intersection with ND 18/37th St NE
Facility Type: 2-Lane
ADT: 110
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 0'
Shoulder Type: None
Length (miles): 3.9
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 012C | 0 | 0 | 793 | 110 | Yes | Yes | ★★★ | - | x | Chevron | - | Inside/Outside | x | 45 |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | | Quantity | Total cost |
|---|---|---|---|---|---|
| Chevrons | Proactive | $3,960 | per curve | 1 | $3,960 |
| Arrow Board Only | Proactive | $1,200 | per curve | 0 | $0 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 | per curve | 1 | $1,440 |
| Shoulder Rumble Strip | Proactive | $3,600 | per mile | .2 miles | $828 |
| Shoulder Paving | Proactive | $44,400 | per mile | .0 miles | $0 |
| | | | | | $6,228 |

Notes - Segment projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $5,605 |
| Local Match (10% of Total project cost) | $623 |
| *Total Project Cost | **$6,228** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 12
*Segment ID:* 12.02
*Date:* 6/11/2014

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

## Curves on Grand Forks from Grand Forks/Traill County Line to Intersection with ND 15/5th Ave NE

**Agency Name: Grand Forks County** | **ND DOT District: 6**

**Contact Name: Nick West** | **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Grand Forks/Traill County Line
End: Intersection with ND 15/5th Ave NE
Facility Type: 2-Lane
ADT: 195
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 2'
Shoulder Type: Composite
Length (miles): 5.1
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 013A | 0 | 0 | 739 | 195 | Yes | Yes | ★★★ | x | x | Chevron | Inside/Outside | Inside/Outside | x | 45 |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost |
|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 1 | $3,960 |
| Arrow Board Only | Proactive | $1,200 per curve | 0 | $0 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 1 | $1,440 |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .1 miles | $404 |
| Shoulder Paving | Proactive | $44,400 per mile | .1 miles | $4,981 |
| | | | | $10,785 |

Notes - Intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $9,707 |
| Local Match (10% of Total project cost) | $1,079 |
| *Total Project Cost | **$10,785** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

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*Segment ID:* 13.01
*Date:* 6/11/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

# Curves on Grand Forks from Intersection with Grand Forks 81/11th St NE to Intersection with 62nd Ave S

**Agency Name: Grand Forks County** | **ND DOT District: 6**

**Contact Name: Nick West** | **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Intersection with Grand Forks 81/11th St NE
End: Intersection with 62nd Ave S
Facility Type: 2-Lane
ADT: 340
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 0'
Shoulder Type: None
Length (miles): 4.8
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 017A | 0 | 0 | 262 | 340 | Yes | Yes | ★★ | x | - | Arrow | - | Inside/Outside | x | Inspect Curve |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | | Quantity | Total cost |
|---|---|---|---|---|---|
| Chevrons | Proactive | $3,960 | per curve | 0 | $0 |
| Arrow Board Only | Proactive | $1,200 | per curve | 1 | $1,200 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 | per curve | 1 | $1,440 |
| Shoulder Rumble Strip | Proactive | $3,600 | per mile | .0 miles | $132 |
| Shoulder Paving | Proactive | $44,400 | per mile | .0 miles | $0 |
| | | | | | $2,772 |

Notes - Segment and intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $2,495 |
| Local Match (10% of Total project cost) | $277 |
| *Total Project Cost | **$2,772** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

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*Segment ID:* 17.01
*Date:* 6/11/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

# Curves on Grand Forks from Grand Forks/Steele County Line to Intersection with ND 15/5th Ave NE

**Agency Name: Grand Forks County** | **ND DOT District: 6**

**Contact Name: Nick West** | **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Grand Forks/Steele County Line
End: Intersection with ND 15/5th Ave NE
Facility Type: 2-Lane
ADT: 326
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 2'
Shoulder Type: Paved
Length (miles): 5.1
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 023A | 0 | 0 | 1,233 | 326 | No | No | | x | - | Chevron | - | Inside/Outside | - | - |
| 023B | 0 | 0 | 1,092 | 326 | No | No | ★ | x | x | Chevron | - | Inside/Outside | x | 50 |
| 023C | 0 | 0 | 853 | 326 | No | No | ★ | - | x | Chevron | - | Inside/Outside | x | 45 |
| 023D | 0 | 0 | 590 | 326 | No | No | ★ | - | x | Chevron | - | Inside/Outside | x | 40 |
| 023E | 0 | 1 | 1,105 | 326 | No | No | ★★ | - | x | Chevron | - | Inside/Outside | - | - |
| 023F | 0 | 0 | 660 | 326 | Yes | No | ★★ | - | x | Chevron | - | Inside/Outside | x | 40 |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost |
|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 6 | $23,760 |
| Arrow Board Only | Proactive | $1,200 per curve | 0 | $0 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 4 | $5,760 |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .5 miles | $1,932 |
| Shoulder Paving | Proactive | $44,400 per mile | .0 miles | $0 |
| | | | | $31,452 |

Notes - Intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $28,306 |
| Local Match (10% of Total project cost) | $3,145 |
| *Total Project Cost | **$31,452** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 15
*Segment ID:* 23.01
*Date:* 6/11/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Curves on Grand Forks from Grand Forks/Traill County Line to Intersection with Grand Forks 7/6th Ave NE

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Grand Forks/Traill County Line
End: Intersection with Grand Forks 7/6th Ave NE
Facility Type: 2-Lane
ADT: 175
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 2'
Shoulder Type: Paved
Length (miles): 6.1
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 026A | 0 | 0 | 981 | 175 | No | No | ★ | x | x | Chevron | - | Inside/Outside | x | 50 |
| 026B | 0 | 0 | 784 | 175 | No | No | ★ | x | x | Chevron | - | Inside/Outside | x | 45 |
| 026C | 0 | 0 | 2,287 | 175 | No | No | | x | - | Chevron | - | Inside/Outside | - | - |
| 026D | 0 | 0 | 433 | 175 | Yes | No | ★ | x | - | Chevron | - | Inside/Outside | x | 35 |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost | Notes - |
|---|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 4 | $15,840 | |
| Arrow Board Only | Proactive | $1,200 per curve | 0 | $0 | |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 3 | $4,320 | |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .4 miles | $1,338 | |
| Shoulder Paving | Proactive | $44,400 per mile | .0 miles | $0 | |
| | | | | $21,498 | |

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $19,348 |
| Local Match (10% of Total project cost) | $2,150 |
| *Total Project Cost | **$21,498** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 16
*Segment ID:* 26.01
*Date:* 6/11/2014

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

## Curves on Grand Forks from Intersection with Grand Forks 2/30th St NE to Intersection with US 81


**Agency Name: Grand Forks County** **ND DOT District: 6**

**Contact Name: Nick West** **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Intersection with Grand Forks 2/30th St NE
End: Intersection with US 81
Facility Type: 2-Lane
ADT: 516
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 2'
Shoulder Type: Composite
Length (miles): 13.7
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 033A | 0 | 0 | 887 | 516 | No | No | ★★ | x | x | Chevron | Inside/Outside | Inside/Outside | x | 45 |
| 033B | 0 | 0 | 516 | 516 | No | No | ★★ | x | x | Chevron | Inside/Outside | Inside/Outside | x | 40 |
| 033C | 0 | 1 | 1,272 | 516 | Yes | Yes | ★★★★ | - | - | Chevron | Inside/Outside | Inside/Outside | - | - |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost |
|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 3 | $11,880 |
| Arrow Board Only | Proactive | $1,200 per curve | 0 | $0 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 2 | $2,880 |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .2 miles | $633 |
| Shoulder Paving | Proactive | $44,400 per mile | .2 miles | $7,802 |
| | | | | $23,195 |

Notes - Intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $20,875 |
| Local Match (10% of Total project cost) | $2,319 |
| *Total Project Cost | **$23,195** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 17
*Segment ID:* 33.02
*Date:* 6/11/2014

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

## Curves on Grand Forks from Grand Forks/Traill County Line to 7th Ave NE

**Agency Name: Grand Forks County** | **ND DOT District: 6**

**Contact Name: Nick West** | **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: Grand Forks/Traill County Line
End: 7th Ave NE
Facility Type: 2-Lane
ADT: 758
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 1'
Shoulder Type: Paved
Length (miles): 7.1
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 081A | 0 | 0 | 1,994 | 758 | Yes | No | ★★ | x | - | Chevron | - | Inside/Outside | - | - |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost |
|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 1 | $3,960 |
| Arrow Board Only | Proactive | $1,200 per curve | 0 | $0 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 0 | $0 |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .2 miles | $570 |
| Shoulder Paving | Proactive | $44,400 per mile | .0 miles | $0 |
| | | | | $4,530 |

Notes - Intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $4,077 |
| Local Match (10% of Total project cost) | $453 |
| *Total Project Cost | **$4,530** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 18
*Segment ID:* 81.01
*Date:* 6/11/2014

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

## Curves on Grand Forks from 7th Ave NE to Intersection with Grand Forks 17/62nd Ave S


**Agency Name: Grand Forks County** **ND DOT District: 6**

**Contact Name: Nick West** **Telephone Number: 701-780-8248**

**Email Address: nick.west@gfcounty.org**


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description (Corridor Containing Curves)*

Start: 7th Ave NE
End: Intersection with Grand Forks 17/62nd Ave S
Facility Type: 2-Lane
ADT: 1655
Road Type Rural Paved
County Road Grand Forks

Lane Width: 12'
Speed Limit: High
Shoulder Width: 8'
Shoulder Type: Gravel
Length (miles): 6.5
Rumble Installed: None

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☑ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☐ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| Curve ID | K | A | Radius (ft) | ADT | Intersection on Curve | Visual Trap | Risk Ranking | Proximity or Existing Chevrons | High Priority Segment + Critical Radius | Sign Improvement Project | Shoulder Paving Project | Shoulder Rumble Strip Project | Advance Horizontal Alignment Warning Sign | Advisory Speed Plaque |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 081B | 0 | 0 | 1,456 | 1,655 | Yes | Yes | ★★★ | x | - | Chevron | - | Inside/Outside | - | - |
| 081C | 1 | 0 | 1,429 | 1,655 | Yes | Yes | ★★★★ | x | - | Chevron | - | Inside/Outside | - | - |

*Curve numbering not consecutive, as some curves may have been removed from further analysis because a large radius, located on a gravel road, etc

### *Ranking Criteria*

| | Criteria |
|---|---|
| Severe Crashes | > 0 |
| Radius | 500 to 1200 |
| ADT | 00 to 100000 |
| Intersection on Curve | Yes |
| Visual Trap | Yes |

Curves are selected for project if:
- 3 or more ★s
- x in Proximity or Existing Chevron column
- within Critical Radius

### *Describe Proposed Safety Improvements*

| Description | Type | Unit Cost | Quantity | Total cost |
|---|---|---|---|---|
| Chevrons | Proactive | $3,960 per curve | 2 | $7,920 |
| Arrow Board Only | Proactive | $1,200 per curve | 0 | $0 |
| Advance Warning Sign/Speed Advisory Plaque | Proactive | $1,440 per curve | 0 | $0 |
| Shoulder Rumble Strip | Proactive | $3,600 per mile | .6 miles | $2,119 |
| Shoulder Paving | Proactive | $44,400 per mile | .0 miles | $0 |
| | | | | $10,039 |

Notes - Segment and intersection projects suggested on other sheets.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $9,035 |
| Local Match (10% of Total project cost) | $1,004 |
| *Total Project Cost | **$10,039** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

*Page:* 19
*Segment ID:* 81.02
*Date:* 6/11/2014

**Grand Forks County**
**Summary of Suggested Rural Intersection Projects**

| Page | Intersection ID | Description | Risk Ranking | Directional Median | Mainline Dynamic Warning Sign | Close Median | Install Street Lights | Signs & Markings | Project Cost ($) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 33.02 | US 81 & 3rd St (Grand Forks 33) | ★★★★★★ | - | - | - | x | x | $22,380 |
| 2 | 23.02 | 5th Ave NE (ND 15) & 37th St NE (Grand Forks 23) | ★★★★★ | - | - | - | x | x | $15,480 |
| 3 | 2.1 | 30th St NE (Grand Forks 2) & 28th Ave NE (Grand Forks 33) | ★★★★★ | - | - | - | x | x | $20,760 |
| 4 | 4.02 | 37th St NE (ND 18) & 16th Ave (Grand Forks 4) (S) | ★★★★★ | - | - | - | x | x | $12,840 |
| 5 | 2.05 | 31st St NE (Grand Forks 2) & 17th Ave NE (Grand Forks 4) (N) | ★★★★★ | - | - | - | - | x | $2,640 |
| 6 | 5.04 | 18th Ave/Gateway Dr (US 2) & 16th St NE (Grand Forks 5) (E) | ★★★★ | x | - | - | - | x | $905,280 |
| 7 | 4.08 | Demers Ave (Grand Forks 4) & 16th St NE (Grand Forks 5) | ★★★★ | - | x | - | x | x | $74,520 |
| 8 | 2.06 | 18th Ave (US 2) & 17th Ave (Grand Forks 2) (W) | ★★★★ | x | - | - | x | x | $912,840 |
| 9 | 3.05 | 25th St NE (Grand Forks 3) & 23rd Ave NE (Grand Forks 11) | ★★★★ | - | - | - | x | x | $14,880 |
| 10 | 11.01 | 23rd Ave (US 2) & 23rd Ave NE (Grand Forks 11) | ★★★★ | - | - | - | x | x | $12,840 |
| 11 | 12.02 | 5th Ave NE (ND 15) & Greatnorth Road (Grand Forks 12) (E) | ★★★★ | - | x | - | - | x | $62,640 |
| 12 | 1.05 | 33rd Ave NE (Grand Forks 1) & 30th St NE (Grand Forks 2) | ★★★★ | - | - | - | x | x | $15,480 |
| 13 | 1.08 | US 81 & 33rd Ave NE (Grand Forks 1) (N) | ★★★★ | - | - | - | x | x | $14,520 |
| 14 | 1.09 | US 81 & 32nd Ave NE (Grand Forks 1) (S) | ★★★★ | - | - | - | x | x | $14,520 |
| 15 | 2.04 | 31st St NE (Grand Forks 2) & 17th Ave NE (Grand Forks 4) (S) | ★★★★ | - | - | - | - | x | $2,640 |
| 16 | 5.01 | 7th Ave NE (ND 15) & 16th St NE (Grand Forks 5) | ★★★ | - | x | - | x | x | $74,880 |
| 17 | 6.04 | 12th Ave (Grand Forks 6) & 10th St NE (Grand Forks 81) | ★★★ | - | - | - | x | x | $15,480 |
| 18 | 5.05 | 18th Ave (US 2) & 17th St NE (Grand Forks 5) (W) | ★★★ | - | - | - | x | x | $14,880 |
| 19 | 5.02 | 16th St NE (Grand Forks 5) & 12th Ave NE (Grand Forks 6) | ★★★ | - | - | - | x | x | $15,480 |
| 20 | 7.01 | 6th Ave NE (Grand Forks 7) & S Columbia Rd (Grand Forks 81) | ★★★ | - | - | - | x | x | $14,520 |
| 21 | 1.04 | 37th St NE (ND 18) & 33rd Ave NE (Grand Forks 1) | ★★★ | - | - | - | x | x | $15,480 |
| 22 | 3.01 | 5th Ave NE (ND 15) & 25th St NE (Grand Forks 3) | ★★★ | - | - | - | x | x | $14,520 |
| 23 | 3.02 | Veitch St (Grand Forks 3) & 12th Ave NE (Grand Forks 6) | ★★★ | - | - | - | x | x | $14,880 |
| 24 | 23.01 | 37th St NE (Grand Forks 23) & 4th Ave NE (Grand Forks 500) | ★★★ | - | - | - | x | x | $13,560 |
| 25 | 11.02 | 37th St NE (ND 18) & 22nd Ave NE (Grand Forks 11) | ★★★ | - | - | - | x | x | $12,840 |
| 26 | 13.01 | 5th Ave NE (ND 15) & 22nd St NE (Grand Forks 13) | ★★★ | - | - | - | x | x | $12,840 |
| 27 | 17.01 | 11th St NE (Grand Forks 17) & S Columbia Rd (Grand Forks 81) (S) | ★★★ | - | - | - | x | x | $12,840 |
| 28 | 6.03 | 12th Ave (Grand Forks 6) & S Columbia Rd (Grand Forks 17) (W) | ★★ | - | x | - | - | x | $65,280 |
| 29 | 5.03 | 16th St NE (Grand Forks 5) & 15th Ave NE (Grand Forks 32) | ★★ | - | x | - | x | x | $74,520 |
| 30 | 17.03 | 62nd Ave (Grand Forks 17) & S Washington St (Grand Forks 81) (N) | ★★ | - | x | - | x | x | $75,480 |
| 31 | 33.01 | 7th St NE (ND 18) & 28th Ave NE (Grand Forks 33) | ★★ | - | - | - | - | x | $4,680 |
| 32 | 8.01 | Belmont Rd (Grand Forks 8) & 62nd Ave [Western] (Grand Forks 17) | ★★ | - | - | - | x | x | $12,840 |
| 33 | 1.06 | 33rd Ave NE (Grand Forks 1) & 25th St NE (Grand Forks 3) (W) | ★★ | - | - | - | - | x | $4,080 |
| 34 | 17.04 | 62nd Ave (Grand Forks 17) & Belmont Rd [Eastern] (Grand Forks 17) | ★★ | - | - | - | x | x | $12,840 |
| 23 USC 409<br>NDDOT Reserves All Objections | | | | **2** | **6** | **0** | **27** | **34** | **$2,586,180** |

**Grand Forks County**
**Rural Intersection Listing**

23 US 409
NDDOT Reserves All Objections

| Int # | Sys | Num | Intersection Description | Skew | On/Near Curve | Development | RR Xing | ADT | Previous STOP (>5mi) | Total Crashes | ADT Cross Product > 60000 | Crash Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.01 | Grand Forks | 1 | 48th St NE (ND 32) & 33rd Ave NE (Grand Forks 1) | No | No | No | No | 565 | Yes | 0 | No | $ - |
| 1.02 | Grand Forks | 1 | 33rd Ave NE (Grand Forks 1) & 45th St NE (Grand Forks 19) | No | No | No | No | 475 | Yes | 0 | No | $ - |
| 1.03 | Grand Forks | 1 | 33rd Ave NE (Grand Forks 1) & 43rd St NE (Grand Forks 10) | No | No | No | No | 263 | Yes | 0 | No | $ - |
| 1.04 | Grand Forks | 1 | 37th St NE (ND 18) & 33rd Ave NE (Grand Forks 1) | No | No | No | No | 875 | Yes | 1 | Yes | $ 12,000 |
| 1.05 | Grand Forks | 1 | 33rd Ave NE (Grand Forks 1) & 30th St NE (Grand Forks 2) | No | No | Yes | Yes | 700 | Yes | 0 | Yes | $ - |
| 1.06 | Grand Forks | 1 | 33rd Ave NE (Grand Forks 1) & 25th St NE (Grand Forks 3) (W) | No | No | No | No | 510 | Yes | 1 | No | $ 12,000 |
| 1.07 | Grand Forks | 1 | 33rd Ave NE (Grand Forks 1) & 24th St (Grand Forks 3) (E) | No | No | No | No | 462 | Yes | 0 | No | $ - |
| 1.08 | Grand Forks | 1 | US 81 & 33rd Ave NE (Grand Forks 1) (N) | Yes | No | No | Yes | 2035 | Yes | 0 | Yes | $ - |
| 1.09 | Grand Forks | 1 | US 81 & 32nd Ave NE (Grand Forks 1) (S) | Yes | No | No | Yes | 1955 | Yes | 0 | Yes | $ - |
| 2.01 | Grand Forks | 2 | 5th Ave NE (ND 18) & 31st St (Grand Forks 2) | No | No | No | No | 1835 | Yes | 0 | Yes | $ - |
| 2.02 | Grand Forks | 2 | 31st St (Grand Forks 2) & 10th Ave NE (Grand Forks 6) (S) | No | No | No | No | 382 | Yes | 0 | No | $ - |
| 2.03 | Grand Forks | 2 | 31st St NE (Grand Forks 2) & 12th Ave NE (Grand Forks 6) (N) | No | No | No | No | 297 | Yes | 0 | No | $ - |
| 2.04 | Grand Forks | 2 | 31st St NE (Grand Forks 2) & 17th Ave NE (Grand Forks 4) (S) | No | Yes | No | Yes | 1368 | Yes | 0 | Yes | $ - |
| 2.05 | Grand Forks | 2 | 31st St NE (Grand Forks 2) & 17th Ave NE (Grand Forks 4) (N) | Yes | Yes | No | Yes | 1368 | Yes | 0 | Yes | $ - |
| 2.06 | Grand Forks | 2 | 18th Ave (US 2) & 17th Ave (Grand Forks 2) (W) | No | Yes | No | No | 3093 | Yes | 4 | Yes | $ 127,000 |
| 2.07 | Grand Forks | 2 | 18th Ave (US 2) & 30th St NE (Grand Forks 2) (E) | No | No | No | No | 3352 | Yes | 0 | Yes | $ - |
| 2.08 | Grand Forks | 2 | 30th St NE (Grand Forks 2) & 23rd Ave NE (Grand Forks 11) | No | No | No | No | 460 | Yes | 0 | No | $ - |
| 2.09 | Grand Forks | 2 | 30th St NE (Grand Forks 2) & 25th Ave NE (Grand Forks 14) | No | No | Yes | Ye | 362 | Yes | 0 | No | $ - |
| 2.10 | Grand Forks | 2 | 30th St NE (Grand Forks 2) & 28th Ave NE (Grand Forks 33) | No | No | Yes | Yes | 793 | Yes | 1 | Yes | $ 91,000 |
| 3.01 | Grand Forks | 3 | 5th Ave NE (ND 15) & 25th St NE (Grand Forks 3) | No | No | No | No | 1482 | Yes | 1 | Yes | $ 12,000 |
| 3.02 | Grand Forks | 3 | Veitch St (Grand Forks 3) & 12th Ave NE (Grand Forks 6) | No | No | No | No | 928 | Yes | 1 | Yes | $ 12,000 |
| 3.05 | Grand Forks | 3 | 25th St NE (Grand Forks 3) & 23rd Ave NE (Grand Forks 11) | No | No | Yes | No | 705 | Yes | 1 | Yes | $ 12,000 |
| 3.06 | Grand Forks | 3 | 25th St NE (Grand Forks 3) & 28th Ave NE (Grand Forks 33) | No | No | No | No | 705 | Yes | 0 | Yes | $ - |
| 4.01 | Grand Forks | 4 | 16th Ave NE (Grand Forks 4) & 45th St NE (Grand Forks 16) | No | No | No | No | 200 | Yes | 0 | No | $ - |
| 4.02 | Grand Forks | 4 | 37th St NE (ND 18) & 16th Ave (Grand Forks 4) (S) | No | No | Yes | Yes | 1065 | Yes | 1 | Yes | $ 12,000 |
| 4.04 | Grand Forks | 4 | 37th St NE (ND 18) & 17th Ave (Grand Forks 4) (N) | No | No | No | No | 1558 | No | 0 | Yes | $ - |
| 4.05 | Grand Forks | 4 | 17th Ave (Grand Forks 4) & Co Rd 4A (Grand Forks 4) | No | No | No | No | 320 | No | 1 | No | $ 91,000 |
| 4.06 | Grand Forks | 4 | 19th Ave NE (US 2) & Co Rd 4A (Grand Forks 4) | No | No | No | No | 2087 | Yes | 0 | Yes | $ - |
| 4.07 | Grand Forks | 4 | 16th Ave (Grand Forks 4) & Co Rd 4A (Grand Forks 4) | No | No | No | No | 1190 | No | 0 | Yes | $ - |
| 4.08 | Grand Forks | 4 | Demers Ave (Grand Forks 4) & 16th St NE (Grand Forks 5) | No | No | No | Yes | 4153 | Yes | 6 | Yes | $ 309,000 |
| 5.01 | Grand Forks | 5 | 7th Ave NE (ND 15) & 16th St NE (Grand Forks 5) | No | No | No | No | 1620 | Yes | 3 | Yes | $ 848,000 |
| 5.02 | Grand Forks | 5 | 16th St NE (Grand Forks 5) & 12th Ave NE (Grand Forks 6) | No | No | No | No | 1323 | Yes | 1 | Yes | $ 91,000 |
| 5.03 | Grand Forks | 5 | 16th St NE (Grand Forks 5) & 15th Ave NE (Grand Forks 32) | No | No | No | No | 2910 | No | 2 | Yes | $ 148,000 |
| 5.04 | Grand Forks | 5 | 18th Ave/Gateway Dr (US 2) & 16th St NE (Grand Forks 5) (E) | No | No | Yes | No | 8105 | Yes | 25 | Yes | $ 2,003,000 |
| 5.05 | Grand Forks | 5 | 18th Ave (US 2) & 17th St NE (Grand Forks 5) (W) | No | No | No | No | 7503 | Yes | 1 | Yes | $ 136,000 |
| 5.06 | Grand Forks | 5 | 17th St NE (Grand Forks 5) & 23rd Ave NE (Grand Forks 11) | No | No | No | No | 655 | Yes | 0 | Yes | $ - |
| 5.07 | Grand Forks | 5 | 17th St NE (Grand Forks 5) & 28th Ave NE (Grand Forks 33) | No | No | No | No | 445 | Yes | 0 | No | $ - |
| 5.08 | Grand Forks | 5 | US 81 & 17th St NE (Grand Forks 5) | Yes | No | No | No | 1970 | No | 0 | No | $ - |
| 6.01 | Grand Forks | 6 | 10th Ave NE (Grand Forks 6) & 46th St NE (Grand Forks 16) | No | No | No | No | 115 | Yes | 0 | No | $ - |
| 6.02 | Grand Forks | 6 | 37th St NE (ND 18) & 10th Ave NE (Grand Forks 6) | No | No | No | No | 788 | Yes | 0 | Yes | $ - |
| 6.03 | Grand Forks | 6 | 12th Ave (Grand Forks 6) & S Columbia Rd (Grand Forks 17) (W) | No | No | No | No | 1995 | No | 1 | Yes | $ 412,000 |
| 6.04 | Grand Forks | 6 | 12th Ave (Grand Forks 6) & 10th St NE (Grand Forks 81) | No | No | No | No | 2220 | Yes | 2 | Yes | $ 227,000 |
| 6.05 | Grand Forks | 6 | 12th Ave (Grand Forks 6) & 9th St NE/Belmont Rd (Grand Forks 17) (E) | No | No | No | No | 713 | Yes | 0 | Yes | $ - |
| 7.01 | Grand Forks | 7 | 6th Ave NE (Grand Forks 7) & S Columbia Rd (Grand Forks 81) | No | No | No | No | 1292 | Yes | 2 | Yes | $ 24,000 |
| 7.02 | Grand Forks | 7 | 6th Ave NE (Grand Forks 7) & 5th St NE (Grand Forks 26) | No | Yes | No | No | 983 | Yes | 0 | No | $ - |
| 8.01 | Grand Forks | 8 | Belmont Rd (Grand Forks 8) & 62nd Ave [Western] (Grand Forks 17) | No | No | No | No | 1528 | No | 3 | Yes | $ 36,000 |
| 10.01 | Grand Forks | 10 | 43rd St NE (Grand Forks 10) & 23rd Ave NE (Grand Forks 11) | No | No | No | No | 300 | Yes | 0 | No | $ - |
| 10.02 | Grand Forks | 10 | 43rd St NE (Grand Forks 10) & 29th Ave NE (Grand Forks 15) | No | No | No | No | 183 | Yes | 0 | No | $ - |
| 10.04 | Grand Forks | 10 | 35th Ave NE (Grand Forks 10) & 45th St NE (Grand Forks 19) | No | No | No | No | 322 | Yes | 0 | No | $ - |
| 11.01 | Grand Forks | 11 | 23rd Ave (US 2) & 23rd Ave NE (Grand Forks 11) | No | Yes | No | No | 2110 | Yes | 1 | Yes | $ 12,000 |
| 11.02 | Grand Forks | 11 | 37th St NE (ND 18) & 22nd Ave NE (Grand Forks 11) | No | Yes | No | No | 1000 | Yes | 0 | Yes | $ - |
| 12.02 | Grand Forks | 12 | 5th Ave NE (ND 15) & Greatnorth Road (Grand Forks 12) (E) | Yes | No | Yes | Ye | 2418 | No | 1 | Yes | $ 12,000 |
| 12.03 | Grand Forks | 12 | 5th Ave NE (ND 15) & 36th St NE (Grand Forks 12) (W) | No | No | No | No | 1550 | No | 0 | Yes | $ - |
| 12.04 | Grand Forks | 12 | 37th St NE (ND 18) & 8th Ave (Grand Forks 12) | No | No | No | No | 710 | Yes | 0 | No | $ - |
| 13.01 | Grand Forks | 13 | 5th Ave NE (ND 15) & 22nd St NE (Grand Forks 13) | No | Yes | No | No | 1228 | Yes | 0 | Yes | $ - |
| 14.01 | Grand Forks | 14 | 37th St NE (ND 18) & 25th Ave NE (Grand Forks 14) | No | No | No | No | 680 | Yes | 0 | No | $ - |
| 15.01 | Grand Forks | 15 | 148th St NE (ND 32) & 29th Ave NE (Grand Forks 15) | No | No | No | No | 467 | Yes | 0 | No | $ - |
| 15.02 | Grand Forks | 15 | 37th St NE (ND 18) & 29th Ave NE (Grand Forks 15) | No | No | No | No | 635 | Yes | 0 | No | $ - |
| 16.01 | Grand Forks | 16 | 47th St NE (Grand Forks 16) & 1st Ave NE (Grand Forks 24) | No | No | No | No | 110 | Yes | 0 | No | $ - |
| 16.02 | Grand Forks | 16 | 5th Ave NE (ND 15) & 47th St NE (Grand Forks 16) (W) | No | No | No | No | 603 | Yes | 0 | No | $ - |
| 16.03 | Grand Forks | 16 | 5th Ave NE (ND 16) & 46th St NE (Grand Forks 16) (E) | No | No | No | No | 655 | Yes | 0 | No | $ - |
| 16.04 | Grand Forks | 16 | 46th St NE (Grand Forks 16) & 14th Ave NE (Grand Forks 16) | No | No | No | No | 65 | Yes | 0 | No | $ - |
| 16.05 | Grand Forks | 16 | 14th Ave NE (Grand Forks 16) & 45th St NE (Grand Forks 16) | No | No | No | No | 79 | Yes | 0 | No | $ - |
| 17.01 | Grand Forks | 17 | 11th St NE (Grand Forks 17) & S Columbia Rd (Grand Forks 81) (S) | Yes | Yes | No | No | 1523 | No | 0 | Yes | $ - |
| 17.02 | Grand Forks | 17 | S Columbia Rd (Grand Forks 17) & 62nd Ave (Grand Forks 17) | No | No | No | No | 2075 | No | 0 | Yes | $ - |
| 17.03 | Grand Forks | 17 | 62nd Ave (Grand Forks 17) & S Washington St (Grand Forks 81) (N) | No | No | No | No | 3390 | No | 3 | Yes | $ 115,000 |
| 17.04 | Grand Forks | 17 | 62nd Ave (Grand Forks 17) & Belmont Rd [Eastern] (Grand Forks 17) | No | No | No | No | 1190 | No | 1 | Yes | $ 12,000 |
| 23.01 | Grand Forks | 23 | 37th St NE (Grand Forks 23) & 4th Ave NE (Grand Forks 500) | No | Yes | No | No | 492 | Yes | 1 | No | $ 12,000 |
| 23.02 | Grand Forks | 23 | 5th Ave NE (ND 15) & 37th St NE (Grand Forks 23) | Yes | Yes | No | No | 1598 | Yes | 1 | Yes | $ 136,000 |
| 32.01 | Grand Forks | 32 | 32nd Ave S (Grand Forks 32) & Prairie Rd | No | No | No | No | 2822 | No | 0 | No | $ - |
| 33.01 | Grand Forks | 33 | 7th St NE (ND 18) & 28th Ave NE (Grand Forks 33) | No | No | No | No | 662 | Yes | 1 | No | $ 91,000 |
| 33.02 | Grand Forks | 33 | US 81 & 3rd St (Grand Forks 33) | Yes | Yes | Yes | Ye | 1935 | Yes | 1 | Yes | $ 12,000 |
| 81.01 | Grand Forks | 81 | S Columbia Rd (Grand Forks 81) & 7th Ave NE | No | No | No | No | 1698 | Yes | 0 | Yes | $ - |
| 501.01 | Grand Forks | N/A | 18th Ave (US 2) & Park St NE | Yes | Yes | No | No | 2123 | No | 0 | No | $ - |

**Grand Forks County**
**Rural Intersection Prioritization**

23 US 409
NDDOT Reserves All Objections

| Rank | Int # | Intersection Description | Skew | On/Near Curve | Development | RR Xing | Previous STOP (>5mi) | Total Crashes | ADT Cross Product > 60000 | Priority | Crash Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 33.02 | US 81 & 3rd St (Grand Forks 33) | ★ | ★ | ★ | | ★ | ★ | ★ | ★★★★★★ | $ 12,000 |
| 2 | 23.02 | 5th Ave NE (ND 15) & 37th St NE (Grand Forks 23) | ★ | ★ | | | ★ | ★ | ★ | ★★★★★ | $ 136,000 |
| 3 | 2.1 | 30th St NE (Grand Forks 2) & 28th Ave NE (Grand Forks 33) | | | ★ | ★ | ★ | ★ | ★ | ★★★★★ | $ 91,000 |
| 4 | 4.02 | 37th St NE (ND 18) & 16th Ave (Grand Forks 4) (S) | | | ★ | ★ | ★ | ★ | ★ | ★★★★★ | $ 12,000 |
| 5 | 2.05 | 31st St NE (Grand Forks 2) & 17th Ave NE (Grand Forks 4) (N) | ★ | ★ | | ★ | ★ | | ★ | ★★★★★ | $ - |
| 6 | 5.04 | 18th Ave/Gateway Dr (US 2) & 16th St NE (Grand Forks 5) (E) | | | ★ | | ★ | ★ | ★ | ★★★★ | $ 2,003,000 |
| 7 | 4.08 | Demers Ave (Grand Forks 4) & 16th St NE (Grand Forks 5) | | | | ★ | ★ | ★ | ★ | ★★★★ | $ 309,000 |
| 8 | 2.06 | 18th Ave (US 2) & 17th Ave (Grand Forks 2) (W) | | ★ | | | ★ | ★ | ★ | ★★★★ | $ 127,000 |
| 9 | 3.05 | 25th St NE (Grand Forks 3) & 23rd Ave NE (Grand Forks 11) | | | ★ | | ★ | ★ | ★ | ★★★★ | $ 12,000 |
| 10 | 11.01 | 23rd Ave (US 2) & 23rd Ave NE (Grand Forks 11) | | ★ | | | ★ | ★ | ★ | ★★★★ | $ 12,000 |
| 11 | 12.02 | 5th Ave NE (ND 15) & Greatnorth Road (Grand Forks 12) (E) | ★ | | ★ | | | ★ | ★ | ★★★★ | $ 12,000 |
| 12 | 1.05 | 33rd Ave NE (Grand Forks 1) & 30th St NE (Grand Forks 2) | | | ★ | ★ | ★ | | ★ | ★★★★ | $ - |
| 13 | 1.08 | US 81 & 33rd Ave NE (Grand Forks 1) (N) | ★ | | | ★ | ★ | | ★ | ★★★★ | $ - |
| 14 | 1.09 | US 81 & 32nd Ave NE (Grand Forks 1) (S) | ★ | | | ★ | ★ | | ★ | ★★★★ | $ - |
| 15 | 2.04 | 31st St NE (Grand Forks 2) & 17th Ave NE (Grand Forks 4) (S) | | ★ | | ★ | ★ | | ★ | ★★★★ | $ - |
| 16 | 5.01 | 7th Ave NE (ND 15) & 16th St NE (Grand Forks 5) | | | | | ★ | ★ | ★ | ★★★ | $ 848,000 |
| 17 | 6.04 | 12th Ave (Grand Forks 6) & 10th St NE (Grand Forks 81) | | | | | ★ | ★ | ★ | ★★★ | $ 227,000 |
| 18 | 5.05 | 18th Ave (US 2) & 17th St NE (Grand Forks 5) (W) | | | | | ★ | ★ | ★ | ★★★ | $ 136,000 |
| 19 | 5.02 | 16th St NE (Grand Forks 5) & 12th Ave NE (Grand Forks 6) | | | | | ★ | ★ | ★ | ★★★ | $ 91,000 |
| 20 | 7.01 | 6th Ave NE (Grand Forks 7) & S Columbia Rd (Grand Forks 81) | | | | | ★ | ★ | ★ | ★★★ | $ 24,000 |
| 21 | 1.04 | 37th St NE (ND 18) & 33rd Ave NE (Grand Forks 1) | | | | | ★ | ★ | ★ | ★★★ | $ 12,000 |
| 22 | 3.01 | 5th Ave NE (ND 15) & 25th St NE (Grand Forks 3) | | | | | ★ | ★ | ★ | ★★★ | $ 12,000 |
| 23 | 3.02 | Veitch St (Grand Forks 3) & 12th Ave NE (Grand Forks 6) | | | | | ★ | ★ | ★ | ★★★ | $ 12,000 |
| 24 | 23.01 | 37th St NE (Grand Forks 23) & 4th Ave NE (Grand Forks 500) | | ★ | | | ★ | ★ | | ★★★ | $ 12,000 |
| 25 | 11.02 | 37th St NE (ND 18) & 22nd Ave NE (Grand Forks 11) | | ★ | | | ★ | | ★ | ★★★ | $ - |
| 26 | 13.01 | 5th Ave NE (ND 15) & 22nd St NE (Grand Forks 13) | | ★ | | | ★ | | ★ | ★★★ | $ - |
| 27 | 17.01 | 11th St NE (Grand Forks 17) & S Columbia Rd (Grand Forks 81) (S) | ★ | ★ | | | | | ★ | ★★★ | $ - |
| 28 | 6.03 | 12th Ave (Grand Forks 6) & S Columbia Rd (Grand Forks 17) (W) | | | | | | ★ | ★ | ★★ | $ 412,000 |
| 29 | 5.03 | 16th St NE (Grand Forks 5) & 15th Ave NE (Grand Forks 32) | | | | | | ★ | ★ | ★★ | $ 148,000 |
| 30 | 17.03 | 62nd Ave (Grand Forks 17) & S Washington St (Grand Forks 81) (N) | | | | | | ★ | ★ | ★★ | $ 115,000 |
| 31 | 33.01 | 7th St NE (ND 18) & 28th Ave NE (Grand Forks 33) | | | | | ★ | ★ | | ★★ | $ 91,000 |
| 32 | 8.01 | Belmont Rd (Grand Forks 8) & 62nd Ave [Western] (Grand Forks 17) | | | | | | ★ | ★ | ★★ | $ 36,000 |
| 33 | 1.06 | 33rd Ave NE (Grand Forks 1) & 25th St NE (Grand Forks 3) (W) | | | | | ★ | ★ | | ★★ | $ 12,000 |
| 34 | 17.04 | 62nd Ave (Grand Forks 17) & Belmont Rd [Eastern] (Grand Forks 17) | | | | | | ★ | ★ | ★★ | $ 12,000 |
| 35 | 2.01 | 5th Ave NE (ND 18) & 31st St (Grand Forks 2) | | | | | ★ | | ★ | ★★ | $ - |
| 36 | 2.07 | 18th Ave (US 2) & 30th St NE (Grand Forks 2) (E) | | | | | ★ | | ★ | ★★ | $ - |
| 37 | 2.09 | 30th St NE (Grand Forks 2) & 25th Ave NE (Grand Forks 14) | | | ★ | | ★ | | | ★★ | $ - |
| 38 | 3.06 | 25th St NE (Grand Forks 3) & 28th Ave NE (Grand Forks 33) | | | | | ★ | | ★ | ★★ | $ - |
| 39 | 4.06 | 19th Ave NE (US 2) & Co Rd 4A (Grand Forks 4) | | | | | ★ | | ★ | ★★ | $ - |
| 40 | 5.06 | 17th St NE (Grand Forks 5) & 23rd Ave NE (Grand Forks 11) | | | | | ★ | | ★ | ★★ | $ - |
| 41 | 6.02 | 37th St NE (ND 18) & 10th Ave NE (Grand Forks 6) | | | | | ★ | | ★ | ★★ | $ - |
| 42 | 6.05 | 12th Ave (Grand Forks 6) & 9th St NE/Belmont Rd (Grand Forks 17) (E) | | | | | ★ | | ★ | ★★ | $ - |
| 43 | 7.02 | 6th Ave NE (Grand Forks 7) & 5th St NE (Grand Forks 26) | | ★ | | | ★ | | | ★★ | $ - |
| 44 | 81.01 | S Columbia Rd (Grand Forks 81) & 7th Ave NE | | | | | ★ | | ★ | ★★ | $ - |
| 45 | 501.01 | 18th Ave (US 2) & Park St NE | ★ | ★ | | | | | | ★★ | $ - |
| 46 | 4.05 | 17th Ave (Grand Forks 4) & Co Rd 4A (Grand Forks 4) | | | | | | ★ | | ★ | $ 91,000 |
| 47 | 1.01 | 48th St NE (ND 32) & 33rd Ave NE (Grand Forks 1) | | | | | ★ | | | ★ | $ - |
| 48 | 1.02 | 33rd Ave NE (Grand Forks 1) & 45th St NE (Grand Forks 19) | | | | | ★ | | | ★ | $ - |
| 49 | 1.03 | 33rd Ave NE (Grand Forks 1) & 43rd St NE (Grand Forks 10) | | | | | ★ | | | ★ | $ - |
| 50 | 1.07 | 33rd Ave NE (Grand Forks 1) & 24th St (Grand Forks 3) (E) | | | | | ★ | | | ★ | $ - |
| 51 | 2.02 | 31st St (Grand Forks 2) & 10th Ave NE (Grand Forks 6) (S) | | | | | ★ | | | ★ | $ - |
| 52 | 2.03 | 31st St NE (Grand Forks 2) & 12th Ave NE (Grand Forks 6) (N) | | | | | ★ | | | ★ | $ - |
| 53 | 2.08 | 30th St NE (Grand Forks 2) & 23rd Ave NE (Grand Forks 11) | | | | | ★ | | | ★ | $ - |
| 54 | 4.01 | 16th Ave NE (Grand Forks 4) & 45th St NE (Grand Forks 16) | | | | | ★ | | | ★ | $ - |
| 55 | 4.04 | 37th St NE (ND 18) & 17th Ave (Grand Forks 4) (N) | | | | | | | ★ | ★ | $ - |
| 56 | 4.07 | 16th Ave (Grand Forks 4) & Co Rd 4A (Grand Forks 4) | | | | | | | ★ | ★ | $ - |
| 57 | 5.07 | 17th St NE (Grand Forks 5) & 28th Ave NE (Grand Forks 33) | | | | | ★ | | | ★ | $ - |
| 58 | 5.08 | US 81 & 17th St NE (Grand Forks 5) | ★ | | | | | | | ★ | $ - |
| 59 | 6.01 | 10th Ave NE (Grand Forks 6) & 46th St NE (Grand Forks 16) | | | | | ★ | | | ★ | $ - |
| 60 | 10.01 | 43rd St NE (Grand Forks 10) & 23rd Ave NE (Grand Forks 11) | | | | | ★ | | | ★ | $ - |
| 61 | 10.02 | 43rd St NE (Grand Forks 10) & 29th Ave NE (Grand Forks 15) | | | | | ★ | | | ★ | $ - |
| 62 | 10.04 | 35th Ave NE (Grand Forks 10) & 45th St NE (Grand Forks 19) | | | | | ★ | | | ★ | $ - |
| 63 | 12.03 | 5th Ave NE (ND 15) & 36th St NE (Grand Forks 12) (W) | | | | | | | ★ | ★ | $ - |
| 64 | 12.04 | 37th St NE (ND 18) & 8th Ave (Grand Forks 12) | | | | | ★ | | | ★ | $ - |
| 65 | 14.01 | 37th St NE (ND 18) & 25th Ave NE (Grand Forks 14) | | | | | ★ | | | ★ | $ - |
| 66 | 15.01 | 148th St NE (ND 32) & 29th Ave NE (Grand Forks 15) | | | | | ★ | | | ★ | $ - |
| 67 | 15.02 | 37th St NE (ND 18) & 29th Ave NE (Grand Forks 15) | | | | | ★ | | | ★ | $ - |
| 68 | 16.01 | 47th St NE (Grand Forks 16) & 1st Ave NE (Grand Forks 24) | | | | | ★ | | | ★ | $ - |
| 69 | 16.02 | 5th Ave NE (ND 15) & 47th St NE (Grand Forks 16) (W) | | | | | ★ | | | ★ | $ - |
| 70 | 16.03 | 5th Ave NE (ND 16) & 46th St NE (Grand Forks 16) (E) | | | | | ★ | | | ★ | $ - |
| 71 | 16.04 | 46th St NE (Grand Forks 16) & 14th Ave NE (Grand Forks 16) | | | | | ★ | | | ★ | $ - |
| 72 | 16.05 | 14th Ave NE (Grand Forks 16) & 45th St NE (Grand Forks 16) | | | | | ★ | | | ★ | $ - |
| 73 | 17.02 | S Columbia Rd (Grand Forks 17) & 62nd Ave (Grand Forks 17) | | | | | | | ★ | ★ | $ - |
| 74 | 32.01 | 32nd Ave S (Grand Forks 32) & Prairie Rd | | | | | | | | | $ - |
| | | Total Stars -- | 9 | 12 | 8 | 8 | 59 | 27 | 43 | | |
| | Totals | % That Gets Star -- | 12% | 16% | 11% | 11% | 80% | 36% | 58% | | |

| | # | % |
|---|---|---|
| ★★★★★★★ | 0 | 0% |
| ★★★★★★ | 1 | 1% |
| ★★★★★ | 4 | 5% |
| ★★★★ | 10 | 14% |
| ★★★ | 12 | 16% |
| ★★ | 18 | 24% |
| ★ | 28 | 38% |
| - | 1 | 1% |
| | 74 | 100% |

| Stars | |
|---|---|
| Skew - | If intersection is skewed at an angle of 20 degrees or greater. |
| On/Near Curve - | If intersection is on or within 1,000 feet of curve. |
| Development - | If intersection aerial shows a commercial development with access near intersection. |
| RR Xing - | If intersection has a railroad crossing on any approach within 500 feet. |
| Previous STOP (>5 mi) - | If vehicles approaching the stop control have not had a previous stop along the roadway within 5 miles |
| Total Crashes - | If intersection has at least 1 crash. |
| ADT Cross Product - | If intersection has an ADT cross product > 60000 |

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

## US 81 & 3rd St (Grand Forks 33)

**Agency Name: Grand Forks County** **ND DOT District: 6**
**Contact Name: Nick West** **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 940 |
| Entering ADT: | 1935 | Minor Entering ADT: | 995 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 1 | 0.00 |
| Rate (per MVM) | 0.3 | 0.3 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | Yes | Yes | ★ |
| On/Near Curve | Yes | Yes | ★ |
| Development | Yes | Yes | ★ |
| Near RR Crossing | Ye | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★★★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 5 | $2,700.00 |
| Upgrade Junction Sign | $540 | per sign | 4 | $2,160.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 4 | $2,400.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 4 | $2,400.00 |
| Upgrade Stop Bar | $360 | per marking | 7 | $2,520.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $22,380.00 |

Notes - All-Way STOP. Quantities for painted right turn island with yield sign for the westbound to northbound movement. Curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $20,142 |
| Local Match (10% of Total project cost) | $2,238 |
| *Total Project Cost | **$22,380** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes



23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

## 5th Ave NE (ND 15) & 37th St NE (Grand Forks 23)

**Agency Name: Grand Forks County** **ND DOT District: 6**
**Contact Name: Nick West** **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 1155 |
| Entering ADT: | 1598 | Minor Entering ADT: | 443 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 0 | 0.00 |
| Rate (per MVM) | 0.3 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | Yes | Yes | ★ |
| On/Near Curve | Yes | Yes | ★ |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 2 | $1,200.00 |
| Upgrade Stop Bar | $360 | per marking | 2 | $720.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $15,480.00 |

Notes - Curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $13,932 |
| Local Match (10% of Total project cost) | $1,548 |
| *Total Project Cost | **$15,480** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes



23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 30th St NE (Grand Forks 2) & 28th Ave NE (Grand Forks 33)

**Agency Name: Grand Forks County** **ND DOT District: 6**
**Contact Name: Nick West** **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 393 |
| Entering ADT: | 793 | Minor Entering ADT: | 400 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 1 | 0.00 |
| Rate (per MVM) | 0.7 | 0.7 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | Yes | Yes | ★ |
| Near RR Crossing | Yes | Yes | ★ |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★★★★ |

**Photo Not Available**

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 4 | $2,160.00 |
| Upgrade Junction Sign | $540 | per sign | 4 | $2,160.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 4 | $2,400.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 4 | $2,400.00 |
| Upgrade Stop Bar | $360 | per marking | 4 | $1,440.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $20,760.00 |

Notes - All-Way STOP. Curve projects suggested on other sheets..

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $18,684 |
| Local Match (10% of Total project cost) | $2,076 |
| *Total Project Cost | **$20,760** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

## 37th St NE (ND 18) & 16th Ave (Grand Forks 4) (S)

**Agency Name: Grand Forks County** **ND DOT District: 6**
**Contact Name: Nick West** **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | T | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 875 |
| Entering ADT: | 1065 | Minor Entering ADT: | 190 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 0 | 0.00 |
| Rate (per MVM) | 0.5 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | Yes | Yes | ★ |
| Near RR Crossing | Yes | Yes | ★ |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Junction Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 1 | $600.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $12,840.00 |

Notes - Segment and curve projects suggested on other sheets..

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $11,556 |
| Local Match (10% of Total project cost) | $1,284 |
| *Total Project Cost | **$12,840** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes



23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 31st St NE (Grand Forks 2) & 17th Ave NE (Grand Forks 4) (N)

**Agency Name: Grand Forks County** **ND DOT District: 6**
**Contact Name: Nick West** **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | T | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | Yes |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 1243 |
| Entering ADT: | 1368 | Minor Entering ADT: | 125 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 0 | 0 | 0.00 |
| Rate (per MVM) | 0.0 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | Yes | Yes | ★ |
| On/Near Curve | Yes | Yes | ★ |
| Development | No | Yes | |
| Near RR Crossing | Yes | Yes | ★ |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 0 | >0 | |
| | | | ★★★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | Installed | $0.00 |
| Upgrade Stop Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Junction Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 1 | $600.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $2,640.00 |

Notes - Segment and curve projects suggested on other sheets..

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $2,376 |
| Local Match (10% of Total project cost) | $264 |
| *Total Project Cost | **$2,640** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

## 18th Ave/Gateway Dr (US 2) & 16th St NE (Grand Forks 5) (E)

**Agency Name: Grand Forks County** **ND DOT District: 6**
**Contact Name: Nick West** **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Signalized |
| Configuration (2): | Divided | Street Lights: | Yes |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 4960 |
| Entering ADT: | 8105 | Minor Entering ADT: | 3145 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 25 | 7 | 1.00 |
| Rate (per MVM) | 1.7 | 0.5 | 0.1 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | Yes | Yes | ★ |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 25 | >0 | ★ |
| | | | ★★★★ |


### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 1 | $900,000.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | Installed | $0.00 |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 2 | $1,200.00 |
| Upgrade Stop Bar | $360 | per marking | 2 | $720.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $905,280.00 |

Notes - Segment projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $814,752 |
| Local Match (10% of Total project cost) | $90,528 |
| *Total Project Cost | **$905,280** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Date:* 6/11/2014

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Demers Ave (Grand Forks 4) & 16th St NE (Grand Forks 5)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 2645 |
| Entering ADT: | 4153 | Minor Entering ADT: | 1508 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 6 | 4 | 0.00 |
| Rate (per MVM) | 0.8 | 0.5 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | Yes | Yes | ★ |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 6 | >0 | ★ |
| | | | ★★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 1 | $60,000.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $74,520.00 |

Notes - Segment projects suggested on other sheets..

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $67,068 |
| Local Match (10% of Total project cost) | $7,452 |
| *Total Project Cost | **$74,520** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Date:* 6/11/2014

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 18th Ave (US 2) & 17th Ave (Grand Forks 2) (W)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | T | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Divided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 2500 |
| Entering ADT: | 3093 | Minor Entering ADT: | 593 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 4 | 5 | 0.00 |
| Rate (per MVM) | 0.7 | 0.9 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | Yes | Yes | ★ |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 4 | >0 | ★ |
| | | | ★★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 1 | $900,000.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Junction Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 1 | $600.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $912,840.00 |

Notes - The proposed solution should consider access management at the intersection of US 2 and the Turtle River State Park entrance (Park Ave NE) and other nearby intersections due to proximity. Segment and curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $821,556 |
| Local Match (10% of Total project cost) | $91,284 |
| *Total Project Cost | **$912,840** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Intersection ID:* 2.06
*Date:* 6/11/2014

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 25th St NE (Grand Forks 3) & 23rd Ave NE (Grand Forks 11)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 448 |
| Entering ADT: | 705 | Minor Entering ADT: | 258 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 0 | 0.00 |
| Rate (per MVM) | 0.8 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | Yes | Yes | ★ |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 2 | $720.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $14,880.00 |

Notes - Segment and curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $13,392 |
| Local Match (10% of Total project cost) | $1,488 |
| *Total Project Cost | **$14,880** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Intersection ID:* 3.05
*Date:* 6/11/2014

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 23rd Ave (US 2) & 23rd Ave NE (Grand Forks 11)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | T | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Divided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 2078 |
| Entering ADT: | 2110 | Minor Entering ADT: | 33 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 0 | 0.00 |
| Rate (per MVM) | 0.3 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | Yes | Yes | ★ |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Junction Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 1 | $600.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $12,840.00 |

Notes - Curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $11,556 |
| Local Match (10% of Total project cost) | $1,284 |
| *Total Project Cost | **$12,840** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Date:* 6/11/2014

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 5th Ave NE (ND 15) & Greatnorth Road (Grand Forks 12) (E)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | T | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | Yes |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 1655 |
| Entering ADT: | 2418 | Minor Entering ADT: | 763 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 1 | 0.00 |
| Rate (per MVM) | 0.2 | 0.2 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | Yes | Yes | ★ |
| On/Near Curve | No | Yes | |
| Development | Yes | Yes | ★ |
| Near RR Crossing | Ye | Yes | |
| Distance from previous STOP | No | Yes | |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 1 | $60,000.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | Installed | $0.00 |
| Upgrade Stop Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Junction Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 1 | $600.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $62,640.00 |

Notes - Curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $56,376 |
| Local Match (10% of Total project cost) | $6,264 |
| *Total Project Cost | **$62,640** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

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## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 33rd Ave NE (Grand Forks 1) & 30th St NE (Grand Forks 2)

**Agency Name: Grand Forks County** **ND DOT District: 6**
**Contact Name: Nick West** **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 395 |
| Entering ADT: | 700 | Minor Entering ADT: | 305 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 0 | 0 | 0.00 |
| Rate (per MVM) | 0.0 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | Yes | Yes | ★ |
| Near RR Crossing | Yes | Yes | ★ |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 0 | >0 | |
| | | | ★★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost | Notes - . |
|---|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 | |
| Directional Median | $900,000 | per intersection | 0 | $0.00 | |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 | |
| Close Median | $30,000 | per intersection | 0 | $0.00 | |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 | |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 | |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 | |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 | |
| Upgrade Stop Ahead Marking | $600 | per marking | 2 | $1,200.00 | |
| Upgrade Stop Bar | $360 | per marking | 2 | $720.00 | |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 | |
| | | | | $15,480.00 | |

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $13,932 |
| Local Match (10% of Total project cost) | $1,548 |
| *Total Project Cost | **$15,480** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| | | | | | |
|---|---|---|---|---|---|
| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |

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23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# US 81 & 33rd Ave NE (Grand Forks 1) (N)

**Agency Name: Grand Forks County** **ND DOT District: 6**
**Contact Name: Nick West** **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 1895 |
| Entering ADT: | 2035 | Minor Entering ADT: | 140 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 0 | 0 | 0.00 |
| Rate (per MVM) | 0.0 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | Yes | Yes | ★ |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | Yes | Yes | ★ |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 0 | >0 | |
| | | | ★★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $14,520.00 |

Notes - .

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $13,068 |
| Local Match (10% of Total project cost) | $1,452 |
| *Total Project Cost | **$14,520** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

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## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# US 81 & 32nd Ave NE (Grand Forks 1) (S)

**Agency Name: Grand Forks County** **ND DOT District: 6**
**Contact Name: Nick West** **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 1900 |
| Entering ADT: | 1955 | Minor Entering ADT: | 55 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 0 | 0 | 0.00 |
| Rate (per MVM) | 0.0 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | Yes | Yes | ★ |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | Yes | Yes | ★ |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 0 | >0 | |
| | | | ★★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost | Notes - . |
|---|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 | |
| Directional Median | $900,000 | per intersection | 0 | $0.00 | |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 | |
| Close Median | $30,000 | per intersection | 0 | $0.00 | |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 | |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 | |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 | |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 | |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 | |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 | |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 | |
| | | | | $14,520.00 | |

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $13,068 |
| Local Match (10% of Total project cost) | $1,452 |
| *Total Project Cost | **$14,520** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Date:* 6/11/2014

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 31st St NE (Grand Forks 2) & 17th Ave NE (Grand Forks 4) (S)

**Agency Name: Grand Forks County** **ND DOT District: 6**
**Contact Name: Nick West** **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | T | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | Yes |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 1243 |
| Entering ADT: | 1368 | Minor Entering ADT: | 125 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 0 | 0 | 0.00 |
| Rate (per MVM) | 0.0 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | Yes | Yes | ★ |
| Development | No | Yes | |
| Near RR Crossing | Yes | Yes | ★ |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 0 | >0 | |
| | | | ★★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | Installed | $0.00 |
| Upgrade Stop Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Junction Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 1 | $600.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $2,640.00 |

Notes - Segment and curve projects suggested on other sheets..

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $2,376 |
| Local Match (10% of Total project cost) | $264 |
| *Total Project Cost | **$2,640** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

## 7th Ave NE (ND 15) & 16th St NE (Grand Forks 5)

**Agency Name: Grand Forks County** **ND DOT District: 6**
**Contact Name: Nick West** **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 320 |
| Entering ADT: | 1620 | Minor Entering ADT: | 1300 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 3 | 1 | 1.00 |
| Rate (per MVM) | 1.0 | 0.3 | 0.3 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 3 | >0 | ★ |
| | | | ★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost | Notes - |
|---|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 | |
| Directional Median | $900,000 | per intersection | 0 | $0.00 | |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 1 | $60,000.00 | |
| Close Median | $30,000 | per intersection | 0 | $0.00 | |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 | |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 | |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 | |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 | |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 | |
| Upgrade Stop Bar | $360 | per marking | 2 | $720.00 | |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 | |
| | | | | $74,880.00 | |

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $67,392 |
| Local Match (10% of Total project cost) | $7,488 |
| *Total Project Cost | **$74,880** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

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*Intersection ID:* 5.01
*Date:* 6/11/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 12th Ave (Grand Forks 6) & 10th St NE (Grand Forks 81)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 1828 |
| Entering ADT: | 2220 | Minor Entering ADT: | 393 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 2 | 2 | 0.00 |
| Rate (per MVM) | 0.5 | 0.5 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 2 | >0 | ★ |
| | | | ★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 2 | $1,200.00 |
| Upgrade Stop Bar | $360 | per marking | 2 | $720.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $15,480.00 |

Notes - Segment and curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $13,932 |
| Local Match (10% of Total project cost) | $1,548 |
| *Total Project Cost | **$15,480** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Intersection ID:* 6.04
*Date:* 6/11/2014

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 18th Ave (US 2) & 17th St NE (Grand Forks 5) (W)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Divided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 7278 |
| Entering ADT: | 7503 | Minor Entering ADT: | 225 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 0 | 0.00 |
| Rate (per MVM) | 0.1 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost | Notes - |
|---|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 | |
| Directional Median | $900,000 | per intersection | 0 | $0.00 | |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 | |
| Close Median | $30,000 | per intersection | 0 | $0.00 | |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 | |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 | |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 | |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 | |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 | |
| Upgrade Stop Bar | $360 | per marking | 2 | $720.00 | |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 | |
| | | | | $14,880.00 | |

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $13,392 |
| Local Match (10% of Total project cost) | $1,488 |
| *Total Project Cost | **$14,880** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Intersection ID:* 5.05
*Date:* 6/11/2014

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 16th St NE (Grand Forks 5) & 12th Ave NE (Grand Forks 6)

**Agency Name: Grand Forks County** **ND DOT District: 6**
**Contact Name: Nick West** **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 885 |
| Entering ADT: | 1323 | Minor Entering ADT: | 438 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 1 | 0.00 |
| Rate (per MVM) | 0.4 | 0.4 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 2 | $1,200.00 |
| Upgrade Stop Bar | $360 | per marking | 2 | $720.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $15,480.00 |

Notes - Segment projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $13,932 |
| Local Match (10% of Total project cost) | $1,548 |
| *Total Project Cost | **$15,480** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Date:* 6/11/2014

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 6th Ave NE (Grand Forks 7) & S Columbia Rd (Grand Forks 81)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 988 |
| Entering ADT: | 1292 | Minor Entering ADT: | 305 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 2 | 0 | 0.00 |
| Rate (per MVM) | 0.8 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 2 | >0 | ★ |
| | | | ★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $14,520.00 |

Notes - Segment and curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $13,068 |
| Local Match (10% of Total project cost) | $1,452 |
| *Total Project Cost | **$14,520** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Intersection ID:* 7.01
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23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

## 37th St NE (ND 18) & 33rd Ave NE (Grand Forks 1)

**Agency Name: Grand Forks County** **ND DOT District: 6**
**Contact Name: Nick West** **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 593 |
| Entering ADT: | 875 | Minor Entering ADT: | 283 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 0 | 0.00 |
| Rate (per MVM) | 0.6 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost | Notes - |
|---|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 | |
| Directional Median | $900,000 | per intersection | 0 | $0.00 | |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 | |
| Close Median | $30,000 | per intersection | 0 | $0.00 | |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 | |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 | |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 | |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 | |
| Upgrade Stop Ahead Marking | $600 | per marking | 2 | $1,200.00 | |
| Upgrade Stop Bar | $360 | per marking | 2 | $720.00 | |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 | |
| | | | | $15,480.00 | |

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $13,932 |
| Local Match (10% of Total project cost) | $1,548 |
| *Total Project Cost | **$15,480** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Intersection ID:* 1.04
*Date:* 6/11/2014

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 5th Ave NE (ND 15) & 25th St NE (Grand Forks 3)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 1308 |
| Entering ADT: | 1482 | Minor Entering ADT: | 175 |

SHSP Emphasis Area (check all that apply)

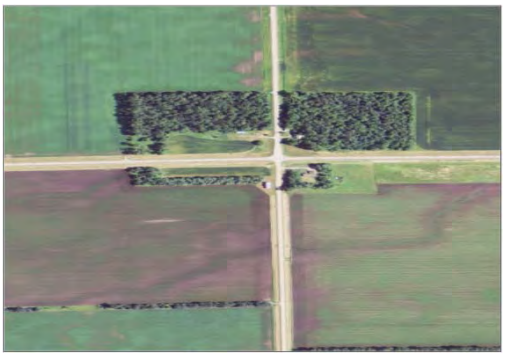
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 0 | 0.00 |
| Rate (per MVM) | 0.4 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★★ |



### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $14,520.00 |

Notes - Segment and curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $13,068 |
| Local Match (10% of Total project cost) | $1,452 |
| *Total Project Cost | **$14,520** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Intersection ID:* 3.01
*Date:* 6/11/2014

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Veitch St (Grand Forks 3) & 12th Ave NE (Grand Forks 6)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 613 |
| Entering ADT: | 928 | Minor Entering ADT: | 315 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 2 | 0.00 |
| Rate (per MVM) | 0.6 | 1.2 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 2 | $720.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $14,880.00 |

Notes - Segment and curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $13,392 |
| Local Match (10% of Total project cost) | $1,488 |
| *Total Project Cost | **$14,880** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Date:* 6/11/2014

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 37th St NE (Grand Forks 23) & 4th Ave NE (Grand Forks 500)

**Agency Name: Grand Forks County** **ND DOT District: 6**
**Contact Name: Nick West** **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 353 |
| Entering ADT: | 492 | Minor Entering ADT: | 140 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 2 | 0.00 |
| Rate (per MVM) | 1.1 | 2.2 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | Yes | Yes | ★ |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | No | ≥ 100,000 | |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 0 | $0.00 |
| Upgrade Stop Bar | $360 | per marking | 0 | $0.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $13,560.00 |

Notes - Curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $12,204 |
| Local Match (10% of Total project cost) | $1,356 |
| *Total Project Cost | **$13,560** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

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23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 37th St NE (ND 18) & 22nd Ave NE (Grand Forks 11)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | T | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 825 |
| Entering ADT: | 1000 | Minor Entering ADT: | 175 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 0 | 0 | 0.00 |
| Rate (per MVM) | 0.0 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | Yes | Yes | ★ |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 0 | >0 | |
| | | | ★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Junction Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 1 | $600.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $12,840.00 |

Notes - Curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $11,556 |
| Local Match (10% of Total project cost) | $1,284 |
| *Total Project Cost | **$12,840** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

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23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

## 5th Ave NE (ND 15) & 22nd St NE (Grand Forks 13)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | T | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 1113 |
| Entering ADT: | 1228 | Minor Entering ADT: | 115 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 0 | 0 | 0.00 |
| Rate (per MVM) | 0.0 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | Yes | Yes | ★ |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 0 | >0 | |
| | | | ★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Junction Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 1 | $600.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $12,840.00 |

Notes - Curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $11,556 |
| Local Match (10% of Total project cost) | $1,284 |
| *Total Project Cost | **$12,840** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

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## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 11th St NE (Grand Forks 17) & S Columbia Rd (Grand Forks 81) (S)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | T | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 1438 |
| Entering ADT: | 1523 | Minor Entering ADT: | 85 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 0 | 0 | 0.00 |
| Rate (per MVM) | 0.0 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | Yes | Yes | ★ |
| On/Near Curve | Yes | Yes | ★ |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | No | Yes | |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 0 | >0 | |
| | | | ★★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Junction Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 1 | $600.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $12,840.00 |

Notes - Segment and curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $11,556 |
| Local Match (10% of Total project cost) | $1,284 |
| *Total Project Cost | **$12,840** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

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23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 12th Ave (Grand Forks 6) & S Columbia Rd (Grand Forks 17) (W)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 1190 |
| Entering ADT: | 1995 | Minor Entering ADT: | 805 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 1 | 1.00 |
| Rate (per MVM) | 0.3 | 0.3 | 0.3 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | No | Yes | |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 1 | $60,000.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 0 | $0.00 |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 2 | $1,200.00 |
| Upgrade Stop Bar | $360 | per marking | 2 | $720.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $65,280.00 |

Notes - Southbound ramps connect with US Route. Twin projects should be coordinated. Segment and curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $58,752 |
| Local Match (10% of Total project cost) | $6,528 |
| *Total Project Cost | **$65,280** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

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23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 16th St NE (Grand Forks 5) & 15th Ave NE (Grand Forks 32)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 1600 |
| Entering ADT: | 2910 | Minor Entering ADT: | 1310 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 2 | 1 | 0.00 |
| Rate (per MVM) | 0.4 | 0.2 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | No | Yes | |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 2 | >0 | ★ |
| | | | ★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 1 | $60,000.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $74,520.00 |

Notes - Segment projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $67,068 |
| Local Match (10% of Total project cost) | $7,452 |
| *Total Project Cost | **$74,520** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

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23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 62nd Ave (Grand Forks 17) & S Washington St (Grand Forks 81) (N)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 2438 |
| Entering ADT: | 3390 | Minor Entering ADT: | 953 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 3 | 2 | 0.00 |
| Rate (per MVM) | 0.5 | 0.3 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | No | Yes | |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 3 | >0 | ★ |
| | | | ★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 1 | $60,000.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 2 | $1,200.00 |
| Upgrade Stop Bar | $360 | per marking | 2 | $720.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $75,480.00 |

Notes - Segment and curve projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $67,932 |
| Local Match (10% of Total project cost) | $7,548 |
| *Total Project Cost | **$75,480** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

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*Date:* 6/11/2014

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

## 7th St NE (ND 18) & 28th Ave NE (Grand Forks 33)

**Agency Name: Grand Forks County** **ND DOT District: 6**
**Contact Name: Nick West** **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 563 |
| Entering ADT: | 662 | Minor Entering ADT: | 100 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 1 | 0.00 |
| Rate (per MVM) | 0.8 | 0.8 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | No | ≥ 100,000 | |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost | Notes - |
|---|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 | |
| Directional Median | $900,000 | per intersection | 0 | $0.00 | |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 | |
| Close Median | $30,000 | per intersection | 0 | $0.00 | |
| Installing Street Lights | $10,200 | per street light | 0 | $0.00 | |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 | |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 | |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 | |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 | |
| Upgrade Stop Bar | $360 | per marking | 2 | $720.00 | |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 | |
| | | | | $4,680.00 | |

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $4,212 |
| Local Match (10% of Total project cost) | $468 |
| *Total Project Cost | **$4,680** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# Belmont Rd (Grand Forks 8) & 62nd Ave [Western] (Grand Forks 17)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | T | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 1125 |
| Entering ADT: | 1528 | Minor Entering ADT: | 403 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 3 | 1 | 0.00 |
| Rate (per MVM) | 1.1 | 0.4 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | No | Yes | |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 3 | >0 | ★ |
| | | | ★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Junction Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 1 | $600.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $12,840.00 |

Notes - Segment projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $11,556 |
| Local Match (10% of Total project cost) | $1,284 |
| *Total Project Cost | **$12,840** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Intersection ID:* 8.01
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23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

# 33rd Ave NE (Grand Forks 1) & 25th St NE (Grand Forks 3) (W)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | X | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 458 |
| Entering ADT: | 510 | Minor Entering ADT: | 52 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 1 | 0.00 |
| Rate (per MVM) | 1.1 | 1.1 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | Yes | Yes | ★ |
| Volume Cross Product | No | ≥ 100,000 | |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost | Notes - |
|---|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 | |
| Directional Median | $900,000 | per intersection | 0 | $0.00 | |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 | |
| Close Median | $30,000 | per intersection | 0 | $0.00 | |
| Installing Street Lights | $10,200 | per street light | 0 | $0.00 | |
| Upgrade Stop Sign | $540 | per sign | 2 | $1,080.00 | |
| Upgrade Junction Sign | $540 | per sign | 2 | $1,080.00 | |
| Upgrade Stop Ahead Sign | $600 | per sign | 2 | $1,200.00 | |
| Upgrade Stop Ahead Marking | $600 | per marking | 0 | $0.00 | |
| Upgrade Stop Bar | $360 | per marking | 2 | $720.00 | |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 | |
| | | | | $4,080.00 | |

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $3,672 |
| Local Match (10% of Total project cost) | $408 |
| *Total Project Cost | **$4,080** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Intersection ID:* 1.06
*Date:* 6/11/2014

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

# HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

## 62nd Ave (Grand Forks 17) & Belmont Rd [Eastern] (Grand Forks 17)

**Agency Name: Grand Forks County** | **ND DOT District: 6**
**Contact Name: Nick West** | **Telephone Number: 701-780-8248**
**Email Address: nick.west@gfcounty.org**

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

| | | | |
|---|---|---|---|
| Configuration: | T | Traffic Control Device: | Thru-STOP |
| Configuration (2): | Undivided | Street Lights: | No |
| Urban/Rural: | Rural | Flashers: | No |
| County: | Grand Forks | Major Entering ADT: | 915 |
| Entering ADT: | 1190 | Minor Entering ADT: | 275 |

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Total | Angle | K+A |
|---|---|---|---|
| Crashes | 1 | 0 | 0.00 |
| Rate (per MVM) | 0.5 | 0.0 | 0.0 |

| | Value | Critical | Risk Ranking |
|---|---|---|---|
| Skew | No | Yes | |
| On/Near Curve | No | Yes | |
| Development | No | Yes | |
| Near RR Crossing | No | Yes | |
| Distance from previous STOP | No | Yes | |
| Volume Cross Product | Yes | ≥ 100,000 | ★ |
| Total Crashes | 1 | >0 | ★ |
| | | | ★★ |

### *Describe Proposed Safety Improvements*

| Description | Unit Cost | | Units | Cost |
|---|---|---|---|---|
| Roundabout | $3,000,000 | per intersection | 0 | $0.00 |
| Directional Median | $900,000 | per intersection | 0 | $0.00 |
| Mainline Dynamic Warning Sign | $60,000 | per intersection | 0 | $0.00 |
| Close Median | $30,000 | per intersection | 0 | $0.00 |
| Installing Street Lights | $10,200 | per street light | 1 | $10,200.00 |
| Upgrade Stop Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Junction Sign | $540 | per sign | 1 | $540.00 |
| Upgrade Stop Ahead Sign | $600 | per sign | 1 | $600.00 |
| Upgrade Stop Ahead Marking | $600 | per marking | 1 | $600.00 |
| Upgrade Stop Bar | $360 | per marking | 1 | $360.00 |
| Review Signs and CST | $2,940 | per intersection | 0 | $0.00 |
| | | | | $12,840.00 |

Notes - Segment projects suggested on other sheets.

Signs and Markings and Street Light project costs vary by the number of minor legs associated with the intersection.

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $11,556 |
| Local Match (10% of Total project cost) | $1,284 |
| *Total Project Cost | **$12,840** |

* Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

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*Date:* 6/11/2014

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration.

**APPENDIX**

# City of Grand Forks

**City of Grand Forks**
**Urban Segment Listing**

23 USC 409
NDDOT Reserves All Objections

| Seg # | Sys | Local Name | Start | End | Length | ADT | Multi-Lane | Access Density | Major Speed Limit | Total Severe Rear End / Sideswipe / Head On Crash | Crash Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 800.01 | No designation | N 55th St | DeMers Ave | US 2/17th Ave | 1 | 2,256 | No | 23.00 | 35 | 0 | $ 369,000 |
| 801.01 | No designation | N 51st St | University Ave | US 2/Gateway Dr Frontage Road (North) | 0.7 | 1,695 | No | 57.14 | 25 | 0 | $ 84,000 |
| 802.01 | No designation | S 48th St | 17th Ave S | DeMers Ave | 1 | 2,458 | No | 38.00 | 35 | 0 | $ 345,000 |
| 802.02 | No designation | N 48th St | US 2 (northern) | Pavement ends | 0.3 | 990 | No | 23.33 | 0 | 0 | $ - |
| 803.01 | No designation | S 38th St | Pavement begins | 32nd Ave S | 0.5 | 8,015 | No | 20.00 | 30 | 0 | $ 1,317,000 |
| 803.02 | No designation | S 42nd St | 32nd Ave S | 17th Ave S | 1.2 | 7,753 | No | 12.50 | 40 | 0 | $ 798,000 |
| 803.03 | No designation | N/S 42nd St | 17th Ave S | 6th Ave N | 1.5 | 10,175 | Yes | 14.00 | 35 | 0 | $ 4,185,000 |
| 803.04 | No designation | N 42nd St | 6th Ave N | US 2/Gateway Dr | 0.5 | 4,450 | No | 30.00 | 35 | 0 | $ 36,000 |
| 803.05 | No designation | N 42nd St | US 2/Gateway Dr | 27th Ave N | 1 | 903 | No | 32.00 | 35 | 0 | $ 103,000 |
| 804.01 | No designation | Stanford Rd | University Ave | US 2/Gateway Dr Frontage Road (North) | 0.7 | 2,962 | No | 67.14 | 25 | 0 | $ 247,000 |
| 804.02 | No designation | N 36th St | US 2/Gateway Dr Frontage Road (North) | Pavement ends | 0.4 | 1,325 | No | 35.00 | 25 | 0 | $ 36,000 |
| 805.01 | No designation | S 34th St | S 34th St (South of 24th Ave S) | DeMers Ave/ND 297 (Road Ends) | 1.5 | 4,066 | No | 34.00 | 30 | 1 | $ 2,093,000 |
| 806.01 | No designation | S 30th St - 14th Ave S | S Columbia Rd | DeMers Ave/ND 297 | 0.9 | 2,993 | No | 33.33 | 25 | 0 | $ 1,547,000 |
| 807.01 | No designation | 11th St NE - Columbia Rd S | 62nd Ave S/Grand Forks 17 | 36th Ave S | 1.8 | 3,565 | No | 9.44 | 40 | 0 | $ 136,000 |
| 807.02 | No designation | S Columbia Rd | 36th Ave S | 9th Ave S | 1.9 | 21,456 | Yes | 13.68 | 40 | 1 | $ 10,964,000 |
| 807.03 | No designation | Overpass - Columbia Rd | 9th Ave S | University Ave | 0.6 | 23,039 | Yes | 6.67 | 35 | 1 | $ 4,317,000 |
| 807.04 | No designation | N Columbia Rd | University Ave | US 2/Gateway Dr | 0.7 | 11,525 | Yes | 18.57 | 40 | 0 | $ 2,497,000 |
| 807.05 | No designation | N Columbia Rd | US 2/Gateway Dr | N Washington St | 0.8 | 2,365 | No | 28.75 | 35 | 0 | $ 72,000 |
| 808.01 | No designation | Columbia Frontage Rd | Alley south of 4th Ave N | 10th Ave N | 0.4 | 218 | No | 57.50 | 20 | 0 | $ - |
| 809.01 | No designation | S 20th St | 14th Ave NE - 47th Ave S | 24th Ave S | 1.5 | 4,495 | No | 32.67 | 25 | 0 | $ 393,000 |
| 809.02 | No designation | S 20th St | 24th Ave S | DeMers Ave/ND 297 | 1.3 | 4,620 | No | 88.46 | 25 | 0 | $ 728,000 |
| 809.03 | No designation | N 20th St | University Ave | US 2/Gateway Dr | 0.7 | 3,142 | No | 85.71 | 25 | 0 | $ 726,000 |
| 810.01 | Gramd Forks 81 | S Washington St | 62nd Ave S/Grand Forks 17 | 48th Ave S | 0.9 | 3,045 | No | 16.67 | 40 | 1 | $ 424,000 |
| 810.02 | Gramd Forks 81 | 10th St - S Washington St | 48th Ave S | 32nd Ave S | 1.1 | 9,427 | Yes | 18.18 | 40 | 0 | $ 1,193,000 |
| 810.03 | Gramd Forks 81 | S Washington St | 32nd Ave S | Hammerling Ave | 1.2 | 11,421 | Yes | 16.67 | 35 | 0 | $ 2,378,000 |
| 810.04 | No designation | S Washington St | Hammerling Ave | DeMers Ave/ND 297 | 0.6 | 13,878 | Yes | 83.33 | 35 | 0 | $ 2,721,000 |
| 810.05 | No designation | N Washington St | DeMers Ave/ND 297 | 8th Ave N | 0.8 | 10,037 | Yes | 46.25 | 35 | 0 | $ 1,571,000 |
| 810.06 | No designation | N Washington St | 8th Ave N | Road becomes undivided (north of US 2/Gateway Dr) | 0.8 | 5,859 | Yes | 30.00 | 35 | 0 | $ 498,000 |
| 810.07 | No designation | N Washington St | Road becomes undivided (north of US 2/Gateway Dr) | Mill Rd | 1.5 | 4,565 | No | 23.33 | 45 | 0 | $ 163,000 |
| 811.01 | No designation | Cherry St | 55th Ave S/Chestnut St (Road Begins) | 32nd Ave S | 1.5 | 2,695 | No | 38.00 | 25 | 0 | $ 266,000 |
| 811.02 | No designation | Cherry St | 32nd Ave S | 4th Ave S | 2 | 2,374 | No | 78.00 | 25 | 0 | $ 204,000 |
| 811.03 | No designation | Cherry St - 1st Ave S - Bruce Ave | 4th Ave S | Road Ends (NE of S 4th St) | 0.6 | 1,796 | No | 41.67 | 25 | 0 | $ 623,000 |
| 812.01 | Grand Forks 8 | Belmont Rd | 55th Ave S/Chestnut St | 47th Ave S | 0.6 | 1,518 | No | 53.33 | 30 | 0 | $ 12,000 |
| 812.02 | No designation | Belmont Rd | 47th Ave S | Division Ave and S 5th St | 3.2 | 3,899 | No | 58.75 | 30 | 0 | $ 1,257,000 |
| 812.03 | No designation | S 5th St | Division Ave and Belmont Rd | DeMers Ave | 0.3 | 3,383 | No | 40.00 | 30 | 0 | $ 48,000 |
| 812.04 | US 2 | US 2 Bus | DeMers Ave | US 2/Gateway Dr | 1 | 4,383 | No | 38.00 | 30 | 0 | $ 278,000 |
| 812.05 | No designation | Mill Rd | US 2/Gateway Dr | N Washington St | 1.8 | 1,829 | No | 23.33 | 30 | 0 | $ 127,000 |
| 813.01 | No designation | N 8th St | University Ave | DeMers Ave | 0.2 | 1,930 | No | 75.00 | 25 | 0 | $ 12,000 |
| 814.01 | No designation | N 6th St - Kittson Ave | University Ave | S 3rd St | 0.5 | 1,204 | No | 44.00 | 25 | 0 | $ 453,000 |
| 815.01 | No designation | S 4th St | US 2/Gateway Dr | Minnesota Ave | 1.4 | 1,100 | No | 42.14 | 25 | 0 | $ 180,000 |
| 816.01 | No designation | S 3rd St | US 2/Gateway Dr | Minnesota Ave | 1.3 | 1,650 | No | 38.46 | 25 | 1 | $ 1,792,000 |
| 817.01 | No designation | Washington St Frontage Road (West) | Frontage Road (North of S 32nd Ave) | Shopping center parking lot (South of 16th Ave S) | 0.8 | 373 | No | 35.00 | 25 | 0 | $ 1,887,000 |
| 817.02 | No designation | Washington St Frontage Road (West) | 17th Ave S | Hammerling Ave | 0.2 | 250 | No | 65.00 | 25 | 0 | $ 472,000 |
| 817.03 | No designation | Washington St Frontage Road (East) | Road Begins (North of S 32nd Ave) | Parking lot (North of 19th Ave S) | 0.9 | 427 | No | 47.78 | 25 | 0 | $ 60,000 |
| 817.04 | No designation | Washington St Frontage Road (East) | Parking lot (North of 17th Ave S) | Hammerling Ave | 0.2 | 840 | No | 45.00 | 25 | 0 | $ - |
| 818.01 | No designation | 55th Ave S/Chestnut St | Cherry St | Belmont Rd | 0.4 | 153 | No | 30.00 | 25 | 0 | $ - |
| 819.01 | No designation | Adam's Dr | Belmont Rd | 62nd Ave S | 1.2 | 285 | No | 17.50 | 25 | 0 | $ 103,000 |
| 820.01 | No designation | 47th Ave S - 14th Ave NE | Columbia Rd/NE 11th St | Belmont Rd | 1.8 | 3,089 | No | 11.11 | 40 | 0 | $ 484,000 |
| 821.01 | No designation | S 34th St - Ruemmele Rd - 40th Ave S | 32nd Ave S | Belmont Rd | 2.7 | 4,239 | No | 33.33 | 30 | 0 | $ 3,507,000 |
| 821.02 | No designation | S 34th St - 24th Ave S | 32nd Ave S | S Washington St | 2 | 7,083 | No | 31.00 | 30 | 2 | $ 8,858,000 |
| 821.03 | No designation | 24th Ave S | S Washington St | Belmont Rd (Road Ends) | 0.8 | 1,379 | No | 83.75 | 25 | 0 | $ 831,000 |
| 822.01 | No designation | 32nd Ave S | 48th St | I-29 Western Ramps | 0.4 | 3,988 | Yes | 20.00 | 40 | 0 | $ 72,000 |
| 822.02 | No designation | 32nd Ave S | I-29 Western Ramps | S Washington St | 2.1 | 9,143 | Yes | 10.95 | 40 | 0 | $ 20,379,000 |
| 822.03 | No designation | 32nd Ave S | S Washington St | Belmont Rd | 0.8 | 4,849 | No | 46.25 | 25 | 0 | $ 508,000 |
| 823.01 | No designation | 24th Ave S | S 42nd St | S 34th St | 0.5 | 2,470 | No | 34.00 | 30 | 0 | $ 484,000 |
| 824.01 | No designation | 20th Ave S | Columbia Rd | S 20th St | 0.5 | 1,950 | No | 18.00 | 25 | 0 | $ 683,000 |
| 825.01 | No designation | 17th Ave S | S 42nd St | S 16th St | 1.8 | 5,416 | No | 25.00 | 25 | 0 | $ 5,138,000 |
| 825.02 | No designation | 17th Ave S | S 16th St | S 12th St | 0.3 | 7,375 | Yes | 60.00 | 25 | 0 | $ 3,293,000 |
| 825.03 | No designation | 17th Ave S | S 12th St | Belmont Rd | 0.7 | 2,906 | No | 58.57 | 25 | 0 | $ 501,000 |
| 826.01 | No designation | 11th Ave S | N 42nd St | S 30th St | 0.8 | 1,838 | No | 20.00 | 30 | 0 | $ 529,000 |
| 827.01 | No designation | 13th Ave S | Columbia Rd | Belmont Rd | 1.8 | 4,164 | No | 58.33 | 25 | 0 | $ 3,831,000 |

**City of Grand Forks**
**Urban Segment Listing**

23 USC 409
NDDOT Reserves All Objections

| Seg # | Sys | Local Name | Start | End | Length | ADT | Multi-Lane | Access Density | Major Speed Limit | Total Severe Rear End / Sideswipe / Head On Crash | Crash Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 828.01 | No designation | 8th Ave S | S Washington St | Belmont Rd | 0.7 | 1,794 | No | 71.43 | 25 | 0 | $ 410,000 |
| 829.01 | No designation | DeMers Ave Frontage Road | S 26th St | S 14th St | 0.8 | 355 | No | 55.00 | 25 | 0 | $ 1,385,000 |
| 830.01 | No designation | DeMers Ave/ND 297 | 58th St N (Dirt Road) | I-29 Western Ramps | 0.8 | 6,450 | No | 11.25 | 40 | 0 | $ 326,000 |
| 830.02 | No designation | DeMers Ave/ND 297 | I-29 Western Ramps | North Dakota/Minnesota Border | 3.4 | 9,348 | Yes | 14.41 | 40 | 3 | $ 16,913,000 |
| 831.01 | No designation | 4th Ave S - Minnesota Ave | Demers Ave Ramps | North Dakota/Minnesota Border | 0.9 | 4,109 | No | 45.56 | 25 | 0 | $ 2,134,000 |
| 832.01 | No designation | University Ave | N 55th St | N 42nd St | 1 | 4,709 | No | 17.00 | 30 | 0 | $ 2,238,000 |
| 832.02 | No designation | University Ave | N 42nd St | N 20th St | 1.5 | 8,830 | No | 30.67 | 30 | 0 | $ 3,133,000 |
| 832.03 | No designation | University Ave | N 20th St | S 3rd St (Road Ends) | 1.1 | 4,531 | No | 64.55 | 30 | 0 | $ 3,919,000 |
| 834.01 | No designation | 1st Ave N | DeMers Ave | S 3rd St | 1 | 1,321 | 0 | 46.00 | 30 | 0 | $ 1,402,000 |
| 835.01 | No designation | 6th Ave N | N 42nd St | Columbia Rd | 1 | 7,119 | No | 35.00 | 25 | 1 | $ 2,500,000 |
| 836.01 | No designation | 8th Ave N | Columbia Rd | S 3rd St (Road Ends) | 1.3 | 939 | No | 78.46 | 25 | 0 | $ 1,730,000 |
| 837.01 | No designation | US 2 Frontage Road (South) | Road Begins (East of N 42nd St) | Stanford Rd | 0.3 | 1,285 | No | 43.33 | 25 | 0 | $ 187,000 |
| 837.02 | No designation | US 2 Frontage Road (South) | Road Begins (East of Stanford Rd) | US 2 Frontage Road (North) | 0.1 | 55 | No | 70.00 | 25 | 0 | $ 1,166,000 |
| 837.03 | No designation | US 2 Frontage Road (North) | US 2 Frontage Road (southern) | Road Ends (West of Columbia Rd) | 0.6 | 785 | No | 25.00 | 25 | 0 | $ - |
| 837.04 | No designation | US 2 Frontage Road (North) | US 2 | Columbia Rd | 0.2 | 665 | No | 45.00 | 25 | 0 | $ - |
| 838.01 | US 2 | US 2/Gateway Dr | N 55th St | Columbia Rd | 2 | 8,829 | Yes | 12.00 | 40 | 3 | $ 6,923,000 |
| 838.02 | US 2 | US 2/Gateway Dr | Columbia Rd | North Dakota/Minnesota Border | 1.3 | 7,271 | Yes | 42.31 | 40 | 2 | $ 6,855,000 |
| 839.01 | US 2 | 62nd Ave | S Columbia Rd | S Washington St | 1 | 500 | Yes | 10.00 | 45 | 0 | $ 515,000 |
| | | | | | 81.9 | | | | | | |

| | Min | Max |
|---|---|---|
| **ADT** | 6000 | 5000000 |
| **Multi-Lane** | Yes | |
| **Access Density** | 30 | 5000 |
| **Major Speed Limit** | 0 | 40 |

**City of Grand Forks**
**Urban Segment Prioritization**

23 USC 409
NDDOT Reserves All Objections

| Rank | Seg # | Sys | # | Local Name | Start | End | Length | ADT | Multi-Lane | Access Density | Speed Limit | Severe Rear End Sideswipe or Head-on Crash | Priority | Tiebreakers: Crash Cost | Tiebreakers: Access Density |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 838.02 | US 2 | 0 | US 2/Gateway Dr | Columbia Rd | North Dakota/Minnesota Border | 1.3 | ★ | ★ | ★ | ★ | ★ | ★★★★★ | $6,855,000 | 42.3 |
| 2* | 830.02 | No designation | 0 | DeMers Ave/ND 297 | I-29 Western Ramps | North Dakota/Minnesota Border | 3.4 | ★ | ★ | | ★ | ★ | ★★★★ | $16,913,000 | 14.4 |
| 3* | 807.02 | No designation | 0 | S Columbia Rd | 36th Ave S | 9th Ave S | 1.9 | ★ | ★ | | ★ | ★ | ★★★★ | $10,964,000 | 13.7 |
| 4 | 821.02 | No designation | 0 | S 34th St - 24th Ave S | 32nd Ave S | S Washington St | 2.0 | ★ | | ★ | ★ | ★ | ★★★★ | $8,858,000 | 31.0 |
| 5* | 838.01 | US 2 | 0 | US 2/Gateway Dr | N 55th St | Columbia Rd | 2.0 | ★ | ★ | | ★ | ★ | ★★★★ | $6,923,000 | 12.0 |
| 6* | 807.03 | No designation | 0 | Overpass - Columbia Rd | 9th Ave S | University Ave | 0.6 | ★ | ★ | | ★ | ★ | ★★★★ | $4,317,000 | 6.7 |
| 7* | 825.02 | No designation | 0 | 17th Ave S | S 16th St | S 12th St | 0.3 | ★ | ★ | ★ | ★ | | ★★★★ | $3,293,000 | 60.0 |
| 8* | 810.04 | No designation | 0 | S Washington St | Hammerling Ave | DeMers Ave/ND 297 | 0.6 | ★ | ★ | ★ | ★ | | ★★★★ | $2,721,000 | 83.3 |
| 9* | 835.01 | No designation | 0 | 6th Ave N | N 42nd St | Columbia Rd | 1.0 | ★ | | ★ | ★ | ★ | ★★★★ | $2,500,000 | 35.0 |
| 10 | 810.05 | No designation | 0 | N Washington St | DeMers Ave/ND 297 | 8th Ave N | 0.8 | ★ | ★ | ★ | ★ | | ★★★★ | $1,571,000 | 46.3 |
| 11* | 822.02 | No designation | 0 | 32nd Ave S | I-29 Western Ramps | S Washington St | 2.1 | ★ | ★ | | ★ | | ★★★ | $20,379,000 | 11.0 |
| 12* | 803.03 | No designation | 0 | N/S 42nd St | 17th Ave S | 6th Ave N | 1.5 | ★ | ★ | | ★ | | ★★★ | $4,185,000 | 14.0 |
| 13* | 832.02 | No designation | 0 | University Ave | N 42nd St | N 20th St | 1.5 | ★ | | ★ | ★ | | ★★★ | $3,133,000 | 30.7 |
| 14* | 807.04 | No designation | 0 | N Columbia Rd | University Ave | US 2/Gateway Dr | 0.7 | ★ | ★ | | ★ | | ★★★ | $2,497,000 | 18.6 |
| 15* | 810.03 | Gramd Forks 81 | 0 | S Washington St | 32nd Ave S | Hammerling Ave | 1.2 | ★ | ★ | | ★ | | ★★★ | $2,378,000 | 16.7 |
| 16 | 805.01 | No designation | 0 | S 34th St | S 34th St (South of 24th Ave S) | DeMers Ave/ND 297 (Road Ends) | 1.5 | | | ★ | ★ | ★ | ★★★ | $2,093,000 | 34.0 |
| 17 | 816.01 | No designation | 0 | S 3rd St | US 2/Gateway Dr | Minnesota Ave | 1.3 | | | ★ | ★ | ★ | ★★★ | $1,792,000 | 38.5 |
| 18 | 810.02 | Gramd Forks 81 | 0 | 10th St - S Washington St | 48th Ave S | 32nd Ave S | 1.1 | ★ | ★ | | ★ | | ★★★ | $1,193,000 | 18.2 |
| 19 | 810.06 | No designation | 0 | N Washington St | 8th Ave N | Road becomes undivided (north of US 2/Gateway Dr) | 0.8 | | ★ | ★ | ★ | | ★★★ | $498,000 | 30.0 |
| 20 | 832.03 | No designation | 0 | University Ave | N 20th St | S 3rd St (Road Ends) | 1.1 | | | ★ | ★ | | ★★ | $3,919,000 | 64.5 |
| 21 | 827.01 | No designation | 0 | 13th Ave S | Columbia Rd | Belmont Rd | 1.8 | | | ★ | ★ | | ★★ | $3,831,000 | 58.3 |
| 22 | 821.01 | No designation | 0 | S 34th St - Ruemmele Rd - 40th Ave S | 32nd Ave S | Belmont Rd | 2.7 | | | ★ | ★ | | ★★ | $3,507,000 | 33.3 |
| 23 | 831.01 | No designation | 0 | 4th Ave S - Minnesota Ave | Demers Ave Ramps | North Dakota/Minnesota Border | 0.9 | | | ★ | ★ | | ★★ | $2,134,000 | 45.6 |
| 24 | 817.01 | No designation | 0 | Washington St Frontage Road (West) | Frontage Road (North of S 32nd Ave) | Shopping center parking lot (South of 16th Ave S) | 0.8 | | | ★ | ★ | | ★★ | $1,887,000 | 35.0 |
| 25 | 836.01 | No designation | 0 | 8th Ave N | Columbia Rd | S 3rd St (Road Ends) | 1.3 | | | ★ | ★ | | ★★ | $1,730,000 | 78.5 |
| 26 | 806.01 | No designation | 0 | S 30th St - 14th Ave S | S Columbia Rd | DeMers Ave/ND 297 | 0.9 | | | ★ | ★ | | ★★ | $1,547,000 | 33.3 |
| 27 | 834.01 | No designation | 0 | 1st Ave N | DeMers Ave | S 3rd St | 1.0 | | | ★ | ★ | | ★★ | $1,402,000 | 46.0 |
| 28 | 829.01 | No designation | 0 | DeMers Ave Frontage Road | S 26th St | S 14th St | 0.8 | | | ★ | ★ | | ★★ | $1,385,000 | 55.0 |
| 29 | 803.01 | No designation | 0 | S 38th St | Pavement begins | 32nd Ave S | 0.5 | ★ | | | ★ | | ★★ | $1,317,000 | 20.0 |
| 30 | 812.02 | No designation | 0 | Belmont Rd | 47th Ave S | Division Ave and S 5th St | 3.2 | | | ★ | ★ | | ★★ | $1,257,000 | 58.8 |
| 31 | 837.02 | No designation | 0 | US 2 Frontage Road (South) | Road Begins (East of Stanford Rd) | US 2 Frontage Road (North) | 0.1 | | | ★ | ★ | | ★★ | $1,166,000 | 70.0 |
| 32 | 821.03 | No designation | 0 | 24th Ave S | S Washington St | Belmont Rd (Road Ends) | 0.8 | | | ★ | ★ | | ★★ | $831,000 | 83.8 |
| 33 | 803.02 | No designation | 0 | S 42nd St | 32nd Ave S | 17th Ave S | 1.2 | ★ | | | ★ | | ★★ | $798,000 | 12.5 |
| 34 | 809.02 | No designation | 0 | S 20th St | 24th Ave S | DeMers Ave/ND 297 | 1.3 | | | ★ | ★ | | ★★ | $728,000 | 88.5 |
| 35 | 809.03 | No designation | 0 | N 20th St | University Ave | US 2/Gateway Dr | 0.7 | | | ★ | ★ | | ★★ | $726,000 | 85.7 |
| 36 | 811.03 | No designation | 0 | Cherry St - 1st Ave S - Bruce Ave | 4th Ave S | Road Ends (NE of S 4th St) | 0.6 | | | ★ | ★ | | ★★ | $623,000 | 41.7 |
| 37 | 822.03 | No designation | 0 | 32nd Ave S | S Washington St | Belmont Rd | 0.8 | | | ★ | ★ | | ★★ | $508,000 | 46.3 |
| 38 | 825.03 | No designation | 0 | 17th Ave S | S 12th St | Belmont Rd | 0.7 | | | ★ | ★ | | ★★ | $501,000 | 58.6 |
| 39 | 823.01 | No designation | 0 | 24th Ave S | S 42nd St | S 34th St | 0.5 | | | ★ | ★ | | ★★ | $484,000 | 34.0 |
| 40 | 817.02 | No designation | 0 | Washington St Frontage Road (West) | 17th Ave S | Hammerling Ave | 0.2 | | | ★ | ★ | | ★★ | $472,000 | 65.0 |
| 41 | 814.01 | No designation | 0 | N 6th St - Kittson Ave | University Ave | S 3rd St | 0.5 | | | ★ | ★ | | ★★ | $453,000 | 44.0 |
| 42 | 810.01 | Gramd Forks 81 | 0 | S Washington St | 62nd Ave S/Grand Forks 17 | 48th Ave S | 0.9 | | | | ★ | ★ | ★★ | $424,000 | 16.7 |
| 43 | 828.01 | No designation | 0 | 8th Ave S | S Washington St | Belmont Rd | 0.7 | | | ★ | ★ | | ★★ | $410,000 | 71.4 |
| 44 | 809.01 | No designation | 0 | S 20th St | 14th Ave NE - 47th Ave S | 24th Ave S | 1.5 | | | ★ | ★ | | ★★ | $393,000 | 32.7 |
| 45 | 802.01 | No designation | 0 | S 48th St | 17th Ave S | DeMers Ave | 1.0 | | | ★ | ★ | | ★★ | $345,000 | 38.0 |
| 46 | 830.01 | No designation | 0 | DeMers Ave/ND 297 | 58th St N (Dirt Road) | I-29 Western Ramps | 0.8 | ★ | | | ★ | | ★★ | $326,000 | 11.3 |
| 47 | 812.04 | US 2 | 0 | US 2 Bus | DeMers Ave | US 2/Gateway Dr | 1.0 | | | ★ | ★ | | ★★ | $278,000 | 38.0 |
| 48 | 811.01 | No designation | 0 | Cherry St | 55th Ave S/Chestnut St (Road Begins) | 32nd Ave S | 1.5 | | | ★ | ★ | | ★★ | $266,000 | 38.0 |
| 49 | 804.01 | No designation | 0 | Stanford Rd | University Ave | US 2/Gateway Dr Frontage Road (North) | 0.7 | | | ★ | ★ | | ★★ | $247,000 | 67.1 |
| 50 | 811.02 | No designation | 0 | Cherry St | 32nd Ave S | 4th Ave S | 2.0 | | | ★ | ★ | | ★★ | $204,000 | 78.0 |
| 51 | 837.01 | No designation | 0 | US 2 Frontage Road (South) | Road Begins (East of N 42nd St) | Stanford Rd | 0.3 | | | ★ | ★ | | ★★ | $187,000 | 43.3 |
| 52 | 815.01 | No designation | 0 | S 4th St | US 2/Gateway Dr | Minnesota Ave | 1.4 | | | ★ | ★ | | ★★ | $180,000 | 42.1 |
| 53 | 803.05 | No designation | 0 | N 42nd St | US 2/Gateway Dr | 27th Ave N | 1.0 | | | ★ | ★ | | ★★ | $103,000 | 32.0 |
| 54 | 801.01 | No designation | 0 | N 51st St | University Ave | US 2/Gateway Dr Frontage Road (North) | 0.7 | | | ★ | ★ | | ★★ | $84,000 | 57.1 |
| 55 | 822.01 | No designation | 0 | 32nd Ave S | 48th St | I-29 Western Ramps | 0.4 | | ★ | | ★ | | ★★ | $72,000 | 20.0 |
| 56 | 817.03 | No designation | 0 | Washington St Frontage Road (East) | Road Begins (North of S 32nd Ave) | Parking lot (North of 19th Ave S) | 0.9 | | | ★ | ★ | | ★★ | $60,000 | 47.8 |
| 57 | 812.03 | No designation | 0 | S 5th St | Division Ave and Belmont Rd | DeMers Ave | 0.3 | | | ★ | ★ | | ★★ | $48,000 | 40.0 |
| 58 | 804.02 | No designation | 0 | N 36th St | US 2/Gateway Dr Frontage Road (North) | Pavement ends | 0.4 | | | ★ | ★ | | ★★ | $36,000 | 35.0 |
| 59 | 803.04 | No designation | 0 | N 42nd St | 6th Ave N | US 2/Gateway Dr | 0.5 | | | ★ | ★ | | ★★ | $36,000 | 30.0 |
| 60 | 813.01 | No designation | 0 | N 8th St | University Ave | DeMers Ave | 0.2 | | | ★ | ★ | | ★★ | $12,000 | 75.0 |
| 61 | 812.01 | Grand Forks 8 | 0 | Belmont Rd | 55th Ave S/Chestnut St | 47th Ave S | 0.6 | | | ★ | ★ | | ★★ | $12,000 | 53.3 |

**City of Grand Forks**
**Urban Segment Prioritization**

23 USC 409
NDDOT Reserves All Objections

| Rank | Seg # | Sys | # | Local Name | Start | End | Length | ADT | Multi-Lane | Access Density | Speed Limit | Severe Rear End Sideswipe or Head-on Crash | Priority | Tiebreakers: Crash Cost | Tiebreakers: Access Density |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 62 | 808.01 | No designation | 0 | Columbia Frontage Rd | Alley south of 4th Ave N | 10th Ave N | 0.4 | | | ★ | ★ | | ★★ | $0 | 57.5 |
| 63 | 817.04 | No designation | 0 | Washington St Frontage Road (East) | Parking lot (North of 17th Ave S) | Hammerling Ave | 0.2 | | | ★ | ★ | | ★★ | $0 | 45.0 |
| 64 | 837.04 | No designation | 0 | US 2 Frontage Road (North) | US 2 | Columbia Rd | 0.2 | | | ★ | ★ | | ★★ | $0 | 45.0 |
| 65 | 818.01 | No designation | 0 | 55th Ave S/Chestnut St | Cherry St | Belmont Rd | 0.4 | | | ★ | ★ | | ★★ | $0 | 30.0 |
| 66 | 825.01 | No designation | 0 | 17th Ave S | S 42nd St | S 16th St | 1.8 | | | | ★ | | ★ | $5,138,000 | 25.0 |
| 67 | 832.01 | No designation | 0 | University Ave | N 55th St | N 42nd St | 1.0 | | | | ★ | | ★ | $2,238,000 | 17.0 |
| 68 | 824.01 | No designation | 0 | 20th Ave S | Columbia Rd | S 20th St | 0.5 | | | | ★ | | ★ | $683,000 | 18.0 |
| 69 | 826.01 | No designation | 0 | 11th Ave S | N 42nd St | S 30th St | 0.8 | | | | ★ | | ★ | $529,000 | 20.0 |
| 70 | 839.01 | US 2 | 0 | 62nd Ave | S Columbia Rd | S Washington St | 1.0 | | ★ | | | | ★ | $515,000 | 10.0 |
| 71 | 820.01 | No designation | 0 | 47th Ave S - 14th Ave NE | Columbia Rd/NE 11th St | Belmont Rd | 1.8 | | | | ★ | | ★ | $484,000 | 11.1 |
| 72 | 800.01 | No designation | 0 | N 55th St | DeMers Ave | US 2/17th Ave | 1.0 | | | | ★ | | ★ | $369,000 | 23.0 |
| 73 | 807.01 | No designation | 0 | 11th St NE - Columbia Rd S | 62nd Ave S/Grand Forks 17 | 36th Ave S | 1.8 | | | | ★ | | ★ | $136,000 | 9.4 |
| 74 | 812.05 | No designation | 0 | Mill Rd | US 2/Gateway Dr | N Washington St | 1.8 | | | | ★ | | ★ | $127,000 | 23.3 |
| 75 | 819.01 | No designation | 0 | Adam's Dr | Belmont Rd | 62nd Ave S | 1.2 | | | | ★ | | ★ | $103,000 | 17.5 |
| 76 | 807.05 | No designation | 0 | N Columbia Rd | US 2/Gateway Dr | N Washington St | 0.8 | | | | ★ | | ★ | $72,000 | 28.8 |
| 77 | 837.03 | No designation | 0 | US 2 Frontage Road (North) | US 2 Frontage Road (southern) | Road Ends (West of Columbia Rd) | 0.6 | | | | ★ | | ★ | $0 | 25.0 |
| 78 | 802.02 | No designation | 0 | N 48th St | US 2 (northern) | Pavement ends | 0.3 | | | | ★ | | ★ | $0 | 23.3 |
| 79 | 810.07 | No designation | 0 | N Washington St | Road becomes undivided (north of US 2/Gateway Dr) | Mill Rd | 1.5 | | | | | | | $163,000 | 23.3 |
| | | | | | | Total Stars -- | | 19 | 16 | 51 | 77 | 10 | | | |
| | | | | | | % That Gets Star -- | | 24% | 20% | 65% | 97% | 13% | | | |

* Existing treatment

Totals

| | # | % | Miles | % |
|---|---|---|---|---|
| ★★★★★★ | 0 | 0% | 0.0 | 0% |
| ★★★★★ | 1 | 1% | 1.3 | 2% |
| ★★★★ | 9 | 11% | 12.6 | 15% |
| ★★★ | 9 | 11% | 11.7 | 14% |
| ★★ | 46 | 58% | 40.4 | 49% |
| ★ | 13 | 16% | 14.4 | 18% |
| - | 1 | 1% | 1.5 | 2% |
| | 79 | 100% | 81.9 | 100% |

Stars

| |
|---|
| If segment has a major entering ADT greater than or equal to 6000 vpd. |
| If segment has lanes greater than or equal to Yes. |
| If segment has an access density > 30. |
| If segment has a speed less than or equal to 40 mph. |
| If segment has at least 1 severe rear end or sideswipe or head on crash. |

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

# US 2/Gateway Dr from Columbia Rd to North Dakota/Minnesota Border Project

**Agency Name: City of Grand Forks** **ND DOT District: 6**

**Contact Name: Jane Williams** **Telephone Number: 701-787-3720**

**Email Address: JWilliams@grandforksgov.com**

*Please attach a location map(s). You may use additional sheets to further describe your project.*

## *Location Description*

Number: 838.02
Local Road Name: US 2/Gateway Dr
Start: Columbia Rd
End: North Dakota/Minnesota Border
City/Rural: Urban
County: Grand Forks

ADT: 7,271
Lanes: Yes
Access Density 42
Speed Limit: 40
Length (miles): 1.3

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☑ Improve Intersection Safety

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| Crashes | K+A |
|---|---|
| Rear End | 2 |
| Sideswipe Passing | 0 |
| Head On | 0 |
| Sideswipe Opposing | 0 |
| | 2 |

| | Value | Critical | Star Ranking |
|---|---|---|---|
| ADT: | 7,271 | ≥ 6,000 | ★ |
| Major Approach Lanes: | Yes | ≥ 4 | ★ |
| Access Density: | 42 | ≥ 30 | ★ |
| Speed Limit: | 40 | ≤ 40 | ★ |
| Severe Rear End / Sideswipe / Head On Crashes: | 2 | ≥ 1 | ★ |
| | | | ★★★★★ |

## *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi / # | Mileage / # | Cost |
|---|---|---|---|---|
| 3-Lane Conversion | Proactive | $30,000 | 0.0 | $0 |
| 5-Lane Conversion | Proactive | $42,000 | 0.0 | $0 |
| Signal Revisions | Proactive | $30,000 | 0 | $0 |
| | | Consider Access Management in the Future | | Yes |
| | | | | $0 |

Notes - Consider access management as part of any future capital improvement project. Right angle and ped/bike projects suggested on other sheets.

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $0 |
| Local Match (10% of Total project cost) | $0 |
| *Total Project Cost | **$0** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes





Project suggested for agency's consideration

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

# S 34th St - 24th Ave S from 32nd Ave S to S Washington St Project

**Agency Name: City of Grand Forks** **ND DOT District: 6**

**Contact Name: Jane Williams** **Telephone Number: 701-787-3720**

**Email Address: JWilliams@grandforksgov.com**

*Please attach a location map(s). You may use additional sheets to further describe your project.*

## *Location Description*

Number: 821.02
Local Road Name: S 34th St - 24th Ave S
Start: 32nd Ave S
End: S Washington St
City/Rural: Urban
County: Grand Forks

ADT: 7,083
Lanes: No
Access Density 31
Speed Limit: 30
Length (miles): 2

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☑ Improve Intersection Safety

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| Crashes | K+A |
|---|---|
| Rear End | 1 |
| Sideswipe Passing | 0 |
| Head On | 1 |
| Sideswipe Opposing | 0 |
| | 2 |

| | Value | Critical | Star Ranking |
|---|---|---|---|
| ADT: | 7,083 | ≥ 6,000 | ★ |
| Major Approach Lanes: | No | ≥ 4 | |
| Access Density: | 31 | ≥ 30 | ★ |
| Speed Limit: | 30 | ≤ 40 | ★ |
| Severe Rear End / Sideswipe / Head On Crashes: | 2 | ≥ 1 | ★ |
| | | | ★★★★ |

## *Describe Proposed Safety Improvements*

| Description | Type | Cost per mi / # | Mileage / # | Cost |
|---|---|---|---|---|
| 3-Lane Conversion | Proactive | $30,000 | 2.0 | $60,000 |
| 5-Lane Conversion | Proactive | $42,000 | 0.0 | $0 |
| Signal Revisions | Proactive | $30,000 | 0 | $0 |
| | | Consider Access Management in the Future | | No |
| | | | | $60,000 |

Notes - Right angle and ped/bike projects suggested on other sheets.

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $54,000 |
| Local Match (10% of Total project cost) | $6,000 |
| *Total Project Cost | **$60,000** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes



23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**

North Dakota Department of Transportation Programming

SFN 59959 (06-2011)

# N Washington St from DeMers Ave/ND 297 to 8th Ave N Project

**Agency Name:** City of Grand Forks **ND DOT District:** 6

**Contact Name:** Jane Williams **Telephone Number:** 701-787-3720

**Email Address:** JWilliams@grandforksgov.com

*Please attach a location map(s). You may use additional sheets to further describe your project.*

## Location Description

Number: 810.05
Local Road Name: N Washington St
Start: DeMers Ave/ND 297
End: 8th Ave N
City/Rural: Urban
County: Grand Forks

ADT: 10,037
Lanes: Yes
Access Density 46
Speed Limit: 35
Length (miles): 0.8

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase Survivability
- ☑ Improve Intersection Safety

## Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

| Crashes | K+A |
|---|---|
| Rear End | 0 |
| Sideswipe Passing | 0 |
| Head On | 0 |
| Sideswipe Opposing | 0 |
| | 0 |

| | Value | Critical | Star Ranking |
|---|---|---|---|
| ADT: | 10,037 | ≥ 6,000 | ★ |
| Major Approach Lanes: | Yes | ≥ 4 | ★ |
| Access Density: | 46 | ≥ 30 | ★ |
| Speed Limit: | 35 | ≤ 40 | ★ |
| Severe Rear End / Sideswipe / Head On Crashes: | 0 | ≥ 1 | |
| . | | | ★★★★ |

## Describe Proposed Safety Improvements

| Description | Type | Cost per mi / # | Mileage / # | Cost |
|---|---|---|---|---|
| 3-Lane Conversion | Proactive | $30,000 | 0.0 | $0 |
| 5-Lane Conversion | Proactive | $42,000 | 0.0 | $0 |
| Signal Revisions | Proactive | $30,000 | 0 | $0 |
| | | Consider Access Management in the Future | | Yes |
| | | | | $0 |

Notes - Consider access management as part of any future capital improvement project. Right angle and ped/bike projects suggested on other sheets.

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $0 |
| Local Match (10% of Total project cost) | $0 |
| *Total Project Cost | **$0** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## Proposed Year of Construction

## NDDOT Central Office Only

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes



23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

## City of Grand Forks Right Angle Project Summary

| Intersection Count | Segment # | Local Name | Cross Street | Projects | | |
|---|---|---|---|---|---|---|
| | | | | Access Management | Confirmation Lights | Intersection Project Cost |
| 1 | 803.02 | S 42nd St | 24th Ave S | 0 | 0 | $0 |
| 2 | 803.02 | S 42nd St | 17th Ave S | 0 | 1 | $1,200 |
| 3 | 803.03 | S 42nd St | 11th Ave S | 0 | 1 | $1,200 |
| 4 | 803.03 | S 42nd St | DeMers Ave/ND 297 | 0 | 1 | $1,200 |
| 5 | 803.03 | N 42nd St | University Ave | 0 | 1 | $1,200 |
| 6 | 803.03 | N 42nd St | 6th Ave N | 0 | 1 | $1,200 |
| 7 | 803.04 | N 42nd St | US 2/Gateway Dr | 0 | 1 | $1,200 |
| 8 | 804.01 | Stanford Rd | US 2/Gateway Dr | 0 | 1 | $1,200 |
| 9 | 805.01 | S 34th St | DeMers Ave/ND 297 | 0 | 1 | $1,200 |
| 10 | 807.02 | Columbia Rd | 24th Ave S | 0 | 1 | $1,200 |
| 11 | 807.02 | Columbia Rd | 20th Ave S | 0 | 0 | $0 |
| 12 | 807.02 | Columbia Rd | 17th Ave S | 0 | 1 | $1,200 |
| 13 | 807.02 | 14th Ave S | Columbia Rd | 0 | 0 | $0 |
| 14 | 807.02 | Columbia Rd | 13th Ave S | 0 | 1 | $1,200 |
| 15 | 807.03 | Columbia Rd | University Ave | 0 | 1 | $1,200 |
| 16 | 807.04 | Columbia Rd | 6th Ave N | 0 | 1 | $1,200 |
| 17 | 807.04 | Columbia Rd | 8th Ave N | 0 | 0 | $0 |
| 18 | 807.04 | Columbia Rd | US 2/Gateway Dr | 0 | 1 | $1,200 |
| 19 | 809.02 | S 20th St | DeMers Ave/ND 297 | 0 | 1 | $1,200 |
| 20 | 809.03 | N 20th St | US 2/Gateway Dr | 0 | 1 | $1,200 |
| 21 | 810.02 | S Washington St | 47th Ave S | 0 | 1 | $1,200 |
| 22 | 810.02 | S Washington St | 40th Ave S | 0 | 1 | $1,200 |
| 23 | 810.02 | S Washington St | 32nd Ave S | 0 | 1 | $1,200 |
| 24 | 810.03 | S Washington St | 28th Ave S | 0 | 1 | $1,200 |
| 25 | 810.03 | S Washington St | Frontage Road | 0 | 0 | $0 |
| 26 | 810.03 | S Washington St | 24th Ave S | 0 | 1 | $1,200 |
| 27 | 810.03 | S Washington St | Campbell Dr | 0 | 1 | $1,200 |
| 28 | 810.03 | S Washington St | 17th Ave S | 0 | 1 | $1,200 |
| 29 | 810.03 | S Washington St | Hammerling Ave & Frontage Road | 0 | 0 | $0 |
| 30 | 810.04 | S Washington St | 13th Ave S | 0 | 1 | $1,200 |
| 31 | 810.04 | S Washington St | 8th Ave S | 0 | 0 | $0 |
| 32 | 810.04 | S Washington St | DeMers Ave/ND 297 | 0 | 1 | $1,200 |
| 33 | 810.05 | N Washington St | University Ave | 0 | 1 | $1,200 |
| 34 | 810.05 | N Washington St | 8th Ave N | 0 | 0 | $0 |
| 35 | 810.06 | N Washington St | US 2/Gateway Dr | 0 | 1 | $1,200 |
| 36 | 811.02 | Cherry St | 4th Ave S | 0 | 1 | $1,200 |
| 37 | 812.02 | Belmont Rd | 32nd Ave S | 0 | 0 | $0 |
| 38 | 812.02 | Belmont Rd | 4th Ave S | 0 | 1 | $1,200 |
| 39 | 812.03 | S 5th St | Kittson Ave | 0 | 1 | $1,200 |
| 40 | 812.04 | S 5th St | DeMers Ave | 0 | 1 | $1,200 |
| 41 | 812.04 | S 5th St | 1st Ave N | 0 | 1 | $1,200 |
| 42 | 812.04 | N 5th St | 2nd Ave N | 0 | 1 | $1,200 |
| 43 | 812.04 | N 5th St | 5th Ave N | 0 | 1 | $1,200 |
| 44 | 812.05 | N 5th St | US 2 / Gateway Dr | 0 | 1 | $1,200 |
| 45 | 816.01 | N 3rd St | US 2/Gateway Dr | 0 | 1 | $1,200 |
| 46 | 822.01 | 32nd Ave S | I-29 South Ramp | 0 | 1 | $1,200 |
| 47 | 822.02 | 32nd Ave S | I-29 North Ramp | 0 | 1 | $1,200 |
| 48 | 822.02 | 32nd Ave S | S 31st St | 0 | 1 | $1,200 |
| 49 | 822.02 | 32nd Ave S | S 25th St | 0 | 1 | $1,200 |
| 50 | 822.02 | S 38th St | 32nd Ave S | 0 | 1 | $1,200 |
| 51 | 822.02 | S 34th St | 32nd Ave S | 0 | 1 | $1,200 |
| 52 | 822.02 | Columbia Rd | 32nd Ave S | 0 | 1 | $1,200 |
| 53 | 822.02 | S 20th St | 32nd Ave S | 0 | 1 | $1,200 |
| 54 | 830.01 | DeMers Ave (ND 297) | Columbia Rd North Ramp | 0 | 1 | $1,200 |
| 55 | 838.01 | Gateway Dr (US 2) | N 47th St | 0 | 1 | $1,200 |
| 56 | 838.01 | Gateway Dr (US 2) | I-29 South Ramp | 0 | 1 | $1,200 |
| 57 | 838.01 | Gateway Dr (US 2) | I-29 North Ramp | 0 | 1 | $1,200 |

23 USC 409
NDDOT Reserves All Objections

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on S 42nd St from S 32nd Ave to S 17th Ave

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 803.02
Street Name S 42nd St
Urban/Rural: Urban
County: Grand Forks
Length 1.2

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 803.02 | S 42nd St | 24th Ave S | T | Thru-STOP | 8,943 | Undivided | 0 | 0 | 0 | Ped / bike projects suggested on other sheets. |
| 803.03 | S 42nd St | 17th Ave S | T | Signal | 10,138 | Undivided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

*Page:* 1
*Intersection ID:* 803.02
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on N/S 42nd St from S 17th Ave to N 6th Ave


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

## Location Description

Corridor 803.03
Street Name N/S 42nd St
Urban/Rural: Urban
County: Grand Forks
Length 1.5

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## Describe Proposed Safety Improvements

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 803.04 | S 42nd St | 11th Ave S | T | Signal | 10,908 | Undivided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 803.05 | S 42nd St | DeMers Ave/ND 297 | X | Signal | 19,188 | Undivided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 803.06 | N 42nd St | University Ave | X | Signal | 17,985 | Undivided | 1 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 803.07 | N 42nd St | 6th Ave N | X | Signal | 9,302 | Undivided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 — 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 4 | $4,800 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $4,800 |

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $4,320 |
| Local Match (10% of Total project cost) | $480 |
| *Total Project Cost | **$4,800** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## Proposed Year of Construction

## NDDOT Central Office Only

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 803.03
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on N 42nd St from N 6th Ave to US 2/Gateway Dr

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## Location Description

Corridor 803.04
Street Name N 42nd St
Urban/Rural: Urban
County: Grand Forks
Length 0.5

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## Describe Proposed Safety Improvements

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 803.08 | N 42nd St | US 2/Gateway Dr | X | Signal | 12,315 | Divided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 — 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## Proposed Year of Construction

## NDDOT Central Office Only

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on Stanford Rd from University Ave to US 2/Gateway Dr Frontage Road (North)


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 804.01
Street Name Stanford Rd
Urban/Rural: Urban
County: Grand Forks
Length 0.7

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 804.04 | Stanford Rd | US 2/Gateway Dr | X | Signal | 12,410 | Divided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

North Dakota Crashes, 2008 - 2012 — 5 years

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 804.01
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on S 34th St from S 34th St (South of S 24th Ave) to DeMers Ave/ND 297 (Road Ends)


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 805.01
Street Name S 34th St
Urban/Rural: Urban
County: Grand Forks
Length 1.5

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 805.05 | S 34th St | DeMers Ave/ND 297 | T | Signal | 9,553 | Divided | 1 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

North Dakota Crashes, 2008 - 2012 — 5 years

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

*Page:* 5
*Intersection ID:* 805.01
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on S Columbia Rd from S 36th Ave to S 9th Ave

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## Location Description

Corridor 807.02
Street Name S Columbia Rd
Urban/Rural: Urban
County: Grand Forks
Length 1.9

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## Describe Proposed Safety Improvements

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 807.04 | Columbia Rd | 24th Ave S | X | Signal | 27,505 | Divided | 1 | 1 | 1 | Ped / bike projects suggested on other sheets. |
| 807.05 | Columbia Rd | 20th Ave S | X | Thru-STOP | 23,825 | Undivided | 0 | 0 | 0 | Ped / bike projects suggested on other sheets. |
| 807.06 | Columbia Rd | 17th Ave S | X | Signal | 32,100 | Undivided | 1 | 1 | 1 | Ped / bike projects suggested on other sheets. |
| 806.01 | 14th Ave S | Columbia Rd | X | Thru-STOP | 27,490 | Undivided | 0 | 0 | 0 | Ped / bike projects suggested on other sheets. |
| 807.07 | Columbia Rd | 13th Ave S | X | Signal | 30,708 | Undivided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## Describe Current Safety Issues & Systemic Ranking Review

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

North Dakota Crashes, 2008 - 2012 — 5 years

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 3 | $3,600 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $3,600 |

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $3,240 |
| Local Match (10% of Total project cost) | $360 |
| *Total Project Cost | **$3,600** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## Proposed Year of Construction

## NDDOT Central Office Only

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

*Page:* 6
*Intersection ID:* 807.02
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on Overpass - Columbia Rd from S 9th Ave to University Ave

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 807.03
Street Name Overpass - Columbia Rd
Urban/Rural: Urban
County: Grand Forks
Length 0.6

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 807.08 | Columbia Rd | University Ave | X | Signal | 27,868 | Divided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

North Dakota Crashes, 2008 - 2012 — 5 years

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 807.03
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on N Columbia Rd from University Ave to US 2/Gateway Dr


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 807.04
Street Name N Columbia Rd
Urban/Rural: Urban
County: Grand Forks
Length 0.7

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 807.09 | Columbia Rd | 6th Ave N | X | Signal | 17,910 | Undivided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 807.1 | Columbia Rd | 8th Ave N | T | Thru-STOP | 10,203 | Divided | 0 | 0 | 0 | Ped / bike projects suggested on other sheets. |
| 807.11 | Columbia Rd | US 2/Gateway Dr | X | Signal | 15,740 | Divided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 2 | $2,400 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $2,400 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $2,160 |
| Local Match (10% of Total project cost) | $240 |
| *Total Project Cost | **$2,400** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on S 20th St from S 24th Ave to DeMers Ave/ND 297

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 809.02
Street Name S 20th St
Urban/Rural: Urban
County: Grand Forks
Length 1.3

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 809.09 | S 20th St | DeMers Ave/ND 297 | X | Signal | 11,285 | Divided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

North Dakota Crashes, 2008 - 2012 — 5 years

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on N 20th St from University Ave to US 2/Gateway Dr

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 809.03
Street Name N 20th St
Urban/Rural: Urban
County: Grand Forks
Length 0.7

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 809.13 | N 20th St | US 2/Gateway Dr | T | Signal | 11,813 | Undivided | 0 | 0 | 1 | Segment & ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on 10th St - S Washington St from S 48th Ave to S 32nd Ave

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## Location Description

Corridor 810.02
Street Name 10th St - S Washington St
Urban/Rural: Urban
County: Grand Forks
Length 1.1

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## Describe Proposed Safety Improvements

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 810.01 | S Washington St | 47th Ave S | X | Signal | 9,298 | Divided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 810.02 | S Washington St | 40th Ave S | X | Thru-STOP | 10,710 | Divided | 3 | 3 | 1 | Ped / bike projects suggested on other sheets. |
| 810.03 | S Washington St | 32nd Ave S | X | Signal | 18,653 | Divided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## Describe Current Safety Issues & Systemic Ranking Review

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

North Dakota Crashes, 2008 - 2012 — 5 years

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 3 | $3,600 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $3,600 |

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $3,240 |
| Local Match (10% of Total project cost) | $360 |
| *Total Project Cost | **$3,600** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## Proposed Year of Construction

## NDDOT Central Office Only

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on S Washington St from S 32nd Ave to Hammerling Ave


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 810.03
Street Name S Washington St
Urban/Rural: Urban
County: Grand Forks
Length 1.2

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 810.15 | S Washington St | 28th Ave S | 0 | 0 | 0 | 0 | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 810.04 | S Washington St | Frontage Road | X | Thru-STOP | 10,468 | Divided | 0 | 0 | 0 | Ped / bike projects suggested on other sheets. |
| 810.05 | S Washington St | 24th Ave S | X | Signal | 16,580 | Divided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 810.16 | S Washington St | Campbell Dr | 0 | 0 | 0 | 0 | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 810.06 | S Washington St | 17th Ave S | X | Signal | 20,128 | Divided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 810.07 | S Washington St | nerling Ave & Frontage | X | Thru-STOP | 13,713 | Divided | 0 | 0 | 0 | Ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

North Dakota Crashes, 2008 - 2012 — 5 years

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 4 | $4,800 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $4,800 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $4,320 |
| Local Match (10% of Total project cost) | $480 |
| *Total Project Cost | **$4,800** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on S Washington St from Hammerling Ave to DeMers Ave/ND 297

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 810.04
Street Name S Washington St
Urban/Rural: Urban
County: Grand Forks
Length 0.6

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 810.08 | S Washington St | 13th Ave S | X | Signal | 17,233 | Undivided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 810.09 | S Washington St | 8th Ave S | TT | Thru-STOP | 15,858 | Undivided | 0 | 0 | 0 | Ped / bike projects suggested on other sheets. |
| 810.1 | S Washington St | DeMers Ave/ND 297 | X | Signal | 24,068 | Divided | 1 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 2 | $2,400 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $2,400 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $2,160 |
| Local Match (10% of Total project cost) | $240 |
| *Total Project Cost | **$2,400** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on N Washington St from DeMers Ave/ND 297 to N 8th Ave

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## Location Description

Corridor 810.05
Street Name N Washington St
Urban/Rural: Urban
County: Grand Forks
Length 0.8

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## Describe Proposed Safety Improvements

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 810.11 | N Washington St | University Ave | X | Signal | 12,303 | Undivided | 0 | 0 | 1 | Segment & ped / bike projects suggested on other sheets. |
| 810.12 | N Washington St | 8th Ave N | X | Thru-STOP | 8,523 | Divided | 0 | 0 | 0 | Segment & ped / bike projects suggested on other sheets. |

## Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 — 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## Proposed Year of Construction

## NDDOT Central Office Only

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on N Washington St from N 8th Ave to Road becomes undivided (north of US 2/Gateway Dr)

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 810.06
Street Name N Washington St
Urban/Rural: Urban
County: Grand Forks
Length 0.8

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 810.13 | N Washington St | US 2/Gateway Dr | X | Signal | 16,445 | Divided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on Cherry St from S 32nd Ave to S 4th Ave

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 811.02
Street Name Cherry St
Urban/Rural: Urban
County: Grand Forks
Length 2.0

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 811.09 | Cherry St | 4th Ave S | X | Signal | 7,543 | Undivided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

North Dakota Crashes, 2008 - 2012 — 5 years

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on Belmont Rd from S 47th Ave to Division Ave and S 5th St

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 812.02
Street Name Belmont Rd
Urban/Rural: Urban
County: Grand Forks
Length 3.2

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 812.05 | Belmont Rd | 32nd Ave S | X | All Way STOP | 4,998 | Undivided | 0 | 0 | 0 | 0 |
| 812.1 | Belmont Rd | 4th Ave S | X | Signal | 7,545 | Undivided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

North Dakota Crashes, 2008 - 2012 — 5 years

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on S 5th St from Division Ave and Belmont Rd to DeMers Ave

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 812.03
Street Name S 5th St
Urban/Rural: Urban
County: Grand Forks
Length 0.3

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 812.12 | S 5th St | Kittson Ave | X | Signal | 4,498 | Undivided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

North Dakota Crashes, 2008 - 2012 — 5 years

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 812.03
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on US 2 Bus from DeMers Ave to US 2/Gateway Dr

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 812.04
Street Name US 2 Bus
Urban/Rural: Urban
County: Grand Forks
Length 1.0

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 812.13 | S 5th St | DeMers Ave | X | Signal | 15,075 | Undivided | 1 | 1 | 1 | Ped / bike projects suggested on other sheets. |
| 812.14 | S 5th St | 1st Ave N | T | Signal | 5,670 | Undivided | 1 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 812.18 | N 5th St | 2nd Ave N | 0 | 0 | 0 | 0 | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 812.19 | N 5th St | 5th Ave N | 0 | 0 | 0 | 0 | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

North Dakota Crashes, 2008 - 2012 — 5 years

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 4 | $4,800 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $4,800 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $4,320 |
| Local Match (10% of Total project cost) | $480 |
| *Total Project Cost | **$4,800** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 812.04
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on S 3rd St from US 2/Gateway Dr to Minnesota Ave

**Agency Name: City of Grand Forks** **ND DOT District: 6**
**Contact Name: Jane Williams** **Telephone Number: 701-787-3720**
**Email Address: JWilliams@grandforksgov.com**

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 816.01
Street Name S 3rd St
Urban/Rural: Urban
County: Grand Forks
Length 1.3

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 816.06 | N 3rd St | US 2/Gateway Dr | T | Thru-STOP | 9,603 | Undivided | 0 | 0 | 1 | Segment & ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

North Dakota Crashes, 2008 - 2012 5 years

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

| Project Accepted? | ☐ Yes ☐ No | Reference Number | | ID Number | |
|---|---|---|---|---|---|

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 816.01
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on S 32nd Ave from Grand Forks Western City Limits to I-29 Western Ramps

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## Location Description

Corridor 822.01
Street Name S 32nd Ave
Urban/Rural: Urban
County: Grand Forks
Length 0.4

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☑ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## Describe Proposed Safety Improvements

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 822.01 | 32nd Ave S | I-29 South Ramp | X | Signal | 9,463 | Divided | 1 | 1 | 1 | Ped / bike projects suggested on other sheets. |

## Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 — 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## Proposed Year of Construction

## NDDOT Central Office Only

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 822.01
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on S 32nd Ave from I-29 Western Ramps to S Washington St

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 822.02
Street Name S 32nd Ave
Urban/Rural: Urban
County: Grand Forks
Length 2.1

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 822.02 | 32nd Ave S | I-29 North Ramp | X | Signal | 9,938 | Divided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 822.03 | 32nd Ave S | S 31st St | 0 | 0 | 0 | 0 | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 822.04 | 32nd Ave S | S 25th St | 0 | 0 | 0 | 0 | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 803.01 | S 38th St | 32nd Ave S | X | Signal | 16,763 | Divided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 821.01 | S 34th St | 32nd Ave S | X | Signal | 18,820 | Divided | 0 | 0 | 1 | Segment & ped / bike projects suggested on other sheets. |
| 807.03 | Columbia Rd | 32nd Ave S | X | Signal | 25,300 | Divided | 1 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 809.03 | S 20th St | 32nd Ave S | X | Signal | 14,895 | Divided | 3 | 2 | 1 | Ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

North Dakota Crashes, 2008 - 2012 — 5 years

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 7 | $8,400 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $8,400 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $7,560 |
| Local Match (10% of Total project cost) | $840 |
| *Total Project Cost | **$8,400** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 822.02
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on DeMers Ave/ND 297 from 58th St N (Dirt Road) to I-29 Western Ramps

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## Location Description

Corridor 830.01
Street Name DeMers Ave/ND 297
Urban/Rural: Urban
County: Grand Forks
Length 0.8

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## Describe Proposed Safety Improvements

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 830.04 | DeMers Ave (ND 297) | olumbia Rd North Ram | T | Signal | 11,235 | Divided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## Describe Current Safety Issues & Systemic Ranking Review

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

North Dakota Crashes, 2008 - 2012 — 5 years

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## Proposed Year of Construction

## NDDOT Central Office Only

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on US 2/Gateway Dr from N 55th St to Columbia Rd

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 838.01
Street Name US 2/Gateway Dr
Urban/Rural: Urban
County: Grand Forks
Length 1.3

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 838.06 | Gateway Dr (US 2) | N 47th St | 0 | 0 | 0 | 0 | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 838.01 | Gateway Dr (US 2) | I-29 South Ramp | X | Signal | 12,875 | Divided | 1 | 0 | 1 | Ped / bike projects suggested on other sheets. |
| 838.02 | Gateway Dr (US 2) | I-29 North Ramp | X | Signal | 13,598 | Divided | 0 | 0 | 1 | Ped / bike projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 — 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 3 | $3,600 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $3,600 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $3,240 |
| Local Match (10% of Total project cost) | $360 |
| *Total Project Cost | **$3,600** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 838.01
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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Right Angle Crashes @ Signals Intersection Improvements

# Intersections on Mill Rd from US 2/Gateway Dr to N Washington St

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 812.05
Street Name Mill Rd
Urban/Rural: Urban
County: Grand Forks
Length 2.3

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Config | Traffic Control | Entering ADT | Major Config | Severe Crashes | Severe Angle Crashes | Confirmation Lights | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 812.17 | N 5th St | US 2 / Gateway Dr | X | Signal | 14,795 | Undivided | 1 | 1 | 1 | 0 |

## *Describe Current Safety Issues & Systemic Ranking Review*

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Road Geometry | Divided |
| Severe Crashes | > 1 |

North Dakota Crashes, 2008 - 2012 — 5 years

| Description | Unit Cost | Quanity | Total Cost |
|---|---|---|---|
| Confirmation Lights | $1,200 per intersection | 1 | $1,200 |
| Unsignalized and Divided Access Management | $360,000 per mile | 0.0 | $0 |
| *Corridor includes miles of divided roadway. | | | $1,200 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $1,080 |
| Local Match (10% of Total project cost) | $120 |
| *Total Project Cost | **$1,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 812.05
*Date:* 6/13/2014

## City of Grand Forks Ped/Bike Corridor Project Summary

| Intersection Count | Segment # | Local Name | Cross Street | Projects | | | | Intersection Project Cost |
|---|---|---|---|---|---|---|---|---|
| | | | | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge | |
| 1 | 803.01 | S 38th St | 32nd Ave S | 1 | 0 | 0 | 0 | $2,400 |
| 2 | 803.02 | S 42nd St | 24th Ave S | 0 | 0 | 0 | 0 | $0 |
| 3 | 803.02 | S 42nd St | 17th Ave S | 1 | 0 | 0 | 0 | $2,400 |
| 4 | 803.03 | S 42nd St | 11th Ave S | 1 | 0 | 0 | 0 | $2,400 |
| 5 | 803.03 | S 42nd St | DeMers Ave/ND 297 | 1 | 0 | 0 | 0 | $2,400 |
| 6 | 803.03 | N 42nd St | University Ave | 1 | 0 | 0 | 0 | $2,400 |
| 7 | 803.03 | N 42nd St | 6th Ave N | 1 | 0 | 0 | 0 | $2,400 |
| 8 | 803.04 | N 42nd St | US 2/Gateway Dr | 1 | 0 | 0 | 0 | $2,400 |
| 9 | 804.01 | Stanford Rd | University Ave | 0 | 0 | 0 | 0 | $0 |
| 10 | 804.01 | Stanford Rd | 6th Ave N | 0 | 0 | 0 | 0 | $0 |
| 11 | 805.01 | S 34th St | 17th Ave S | 1 | 1 | 0 | 0 | $14,400 |
| 12 | 807.02 | Columbia Rd | 32nd Ave S | 1 | 0 | 0 | 0 | $2,400 |
| 13 | 807.02 | Columbia Rd | 24th Ave S | 1 | 0 | 0 | 0 | $2,400 |
| 14 | 807.02 | Columbia Rd | 20th Ave S | 0 | 0 | 0 | 0 | $0 |
| 15 | 807.02 | Columbia Rd | 17th Ave S | 1 | 0 | 0 | 0 | $2,400 |
| 16 | 807.02 | 14th Ave S | Columbia Rd | 0 | 0 | 0 | 0 | $0 |
| 17 | 807.02 | Columbia Rd | 13th Ave S | 1 | 0 | 0 | 0 | $2,400 |
| 18 | 807.02 | Columbia Rd | 11th Ave S | 1 | 1 | 0 | 0 | $14,400 |
| 19 | 807.03 | Columbia Rd | University Ave | 1 | 0 | 0 | 0 | $2,400 |
| 20 | 807.03 | Columbia Rd | 2nd Ave N | 1 | 1 | 0 | 0 | $14,400 |
| 21 | 807.04 | Columbia Rd | 6th Ave N | 1 | 0 | 0 | 0 | $2,400 |
| 22 | 807.04 | Columbia Rd | 8th Ave N | 0 | 0 | 0 | 0 | $0 |
| 23 | 807.04 | Columbia Rd | US 2/Gateway Dr | 1 | 0 | 0 | 0 | $2,400 |
| 24 | 809.01 | S 20th St | 47th Ave S | 0 | 0 | 0 | 0 | $0 |
| 25 | 809.01 | S 20th St | 40th Ave S | 0 | 0 | 0 | 0 | $0 |
| 26 | 809.01 | S 20th St | 32nd Ave S | 1 | 0 | 0 | 0 | $2,400 |
| 27 | 809.02 | S 20th St | 24th Ave S | 1 | 0 | 0 | 0 | $2,400 |
| 28 | 809.02 | S 20th St | 20th Ave S | 0 | 0 | 0 | 0 | $0 |
| 29 | 809.02 | S 20th St | 17th Ave S | 1 | 0 | 0 | 0 | $2,400 |
| 30 | 809.02 | S 20th St | 13th Ave S | 0 | 0 | 0 | 0 | $0 |
| 31 | 809.02 | S 20th St | DeMers Ave Frontage Road (South) | 0 | 0 | 0 | 0 | $0 |
| 32 | 809.02 | S 20th St | DeMers Ave/ND 297 | 1 | 1 | 0 | 0 | $14,400 |
| 33 | 810.02 | S Washington St | 47th Ave S | 1 | 1 | 0 | 0 | $14,400 |
| 34 | 810.02 | S Washington St | 40th Ave S | 1 | 1 | 0 | 0 | $14,400 |
| 35 | 810.02 | S Washington St | 32nd Ave S | 1 | 0 | 0 | 0 | $2,400 |
| 36 | 810.03 | S Washington St | 28th Ave S | 1 | 1 | 0 | 0 | $14,400 |
| 37 | 810.03 | S Washington St | Frontage Road | 0 | 0 | 0 | 0 | $0 |
| 38 | 810.03 | S Washington St | 24th Ave S | 1 | 0 | 0 | 0 | $2,400 |
| 39 | 810.03 | S Washington St | Campbell Dr | 1 | 1 | 0 | 0 | $14,400 |
| 40 | 810.03 | S Washington St | 17th Ave S | 1 | 0 | 0 | 0 | $2,400 |
| 41 | 810.03 | S Washington St | Hammerling Ave & Frontage Road | 0 | 0 | 0 | 0 | $0 |
| 42 | 810.04 | S Washington St | 13th Ave S | 1 | 0 | 0 | 0 | $2,400 |
| 43 | 810.04 | S Washington St | 8th Ave S | 0 | 0 | 0 | 0 | $0 |
| 44 | 810.04 | S Washington St | DeMers Ave/ND 297 | 1 | 0 | 0 | 0 | $2,400 |
| 45 | 810.05 | N Washington St | 2nd Ave N | 1 | 1 | 0 | 0 | $14,400 |
| 46 | 810.05 | N Washington St | University Ave | 1 | 0 | 0 | 0 | $2,400 |
| 47 | 810.05 | N Washington St | 5th Ave N | 1 | 1 | 0 | 0 | $14,400 |
| 48 | 810.05 | N Washington St | 8th Ave N | 0 | 0 | 0 | 0 | $0 |
| 49 | 810.06 | N Washington St | US 2/Gateway Dr | 1 | 0 | 0 | 0 | $2,400 |
| 50 | 811.02 | Cherry St | 4th Ave S | 1 | 1 | 0 | 0 | $14,400 |
| 51 | 812.02 | Belmont Rd | 4th Ave S | 1 | 1 | 0 | 0 | $14,400 |
| 52 | 812.03 | S 5th St | Kittson Ave | 1 | 1 | 0 | 0 | $14,400 |
| 53 | 812.04 | S 5th St | DeMers Ave | 1 | 1 | 0 | 0 | $14,400 |
| 54 | 812.04 | S 5th St | 1st Ave N | 1 | 1 | 0 | 0 | $14,400 |
| 55 | 812.04 | N 5th St | 2nd Ave N | 1 | 1 | 0 | 0 | $14,400 |
| 56 | 812.04 | N 5th St | University Ave | 1 | 0 | 0 | 0 | $2,400 |
| 57 | 812.04 | N 5th St | 5th Ave N | 1 | 1 | 0 | 0 | $14,400 |
| 58 | 812.04 | N 5th St | 8th Ave N | 0 | 0 | 2 | 0 | $72,000 |
| 59 | 815.01 | S 4th St | Minnesota Ave | 0 | 0 | 0 | 0 | $0 |
| 60 | 815.01 | Bruce Ave | S 4th St | 0 | 0 | 2 | 0 | $72,000 |
| 61 | 815.01 | S 4th St | DeMers Ave | 1 | 0 | 0 | 0 | $2,400 |
| 62 | 815.01 | N 4th St | 1st Ave N | 1 | 0 | 0 | 0 | $2,400 |
| 63 | 815.01 | N 4th St | University Ave | 0 | 0 | 1 | 0 | $36,000 |
| 64 | 815.01 | N 4th St | 8th Ave N | 0 | 0 | 2 | 0 | $72,000 |
| 65 | 815.01 | N 4th St | 10th Ave N | 0 | 0 | 1 | 0 | $36,000 |
| 66 | 815.01 | N 4th St | US 2/Gateway Dr | 0 | 0 | 0 | 0 | $0 |
| 67 | 821.02 | S 34th St | 32nd Ave S | 1 | 0 | 0 | 0 | $2,400 |
| 68 | 822.01 | 32nd Ave S | I-29 South Ramp | 1 | 1 | 0 | 0 | $14,400 |
| 69 | 822.02 | 32nd Ave S | I-29 North Ramp | 1 | 1 | 0 | 0 | $14,400 |
| 70 | 822.02 | 32nd Ave S | S 31st St | 1 | 1 | 0 | 0 | $14,400 |
| 71 | 822.02 | 32nd Ave S | S 25th St | 1 | 1 | 0 | 0 | $14,400 |
| 72 | 830.02 | S 34th St | DeMers Ave/ND 297 | 1 | 1 | 0 | 0 | $14,400 |
| 73 | 830.02 | DeMers Ave (ND 297) | Columbia Rd North Ramp | 1 | 1 | 0 | 0 | $14,400 |
| 74 | 830.02 | S 20th St | DeMers Ave/ND 297 | 1 | 1 | 0 | 0 | $14,400 |
| 75 | 838.01 | Gateway Dr (US 2) | N 47th St | 1 | 1 | 0 | 0 | $14,400 |
| 76 | 838.01 | Gateway Dr (US 2) | I-29 South Ramp | 1 | 1 | 0 | 0 | $14,400 |
| 77 | 838.01 | Gateway Dr (US 2) | I-29 North Ramp | 1 | 1 | 0 | 0 | $14,400 |
| 78 | 838.01 | Gateway Dr (US 2) | Frontage Rd (East of 42nd St) | 0 | 0 | 0 | 0 | $0 |
| 79 | 838.01 | Stanford Rd | US 2/Gateway Dr | 1 | 1 | 0 | 0 | $14,400 |
| 80 | 838.01 | Gateway Dr (US 2) | Frontage Rd (East of Stanford Rd) | 0 | 0 | 0 | 0 | $0 |
| 81 | 838.01 | Gateway Dr (US 2) | Frontage Rd (West of Columbia Rd) | 0 | 0 | 0 | 0 | $0 |
| 82 | 838.02 | N 20th St | US 2/Gateway Dr | 1 | 1 | 0 | 0 | $14,400 |
| 83 | 838.02 | N 5th St | US 2 / Gateway Dr | 1 | 1 | 0 | 0 | $14,400 |
| 84 | 838.02 | N 3rd St | US 2/Gateway Dr | 1 | 1 | 0 | 0 | $14,400 |

23 USC 409
NDDOT Reserves All Objections

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on S 38th St from Pavement begins to 32nd Ave S


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

Corridor 803.01
Street Name S 38th St
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 8,015

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 803.01 | S 38th St | 32nd Ave S | Signal | 16,763 | Yes | 0 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 1 | $2,400 |
| Countdown Timers | $12,000 | per intersection | 0 | $0 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $2,400 |

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $2,160 |
| Local Match (10% of Total project cost) | $240 |
| *Total Project Cost | **$2,400** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

**Cost for traffic counts and signal timing plan development

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on S 42nd St from 32nd Ave S to 17th Ave S


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 803.02
Street Name S 42nd St
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 7,753

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 803.02 | S 42nd St | 24th Ave S | Thru-STOP | 8,943 | No | 0 | 0 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 803.03 | S 42nd St | 17th Ave S | Signal | 10,138 | No | 0 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 1 | $2,400 |
| Countdown Timers | $12,000 | per intersection | 0 | $0 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $2,400 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $2,160 |
| Local Match (10% of Total project cost) | $240 |
| *Total Project Cost | **$2,400** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Date:* 6/13/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on N/S 42nd St from 17th Ave S to 6th Ave N

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

Corridor 803.03
Street Name N/S 42nd St
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 10,175

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 803.04 | S 42nd St | 11th Ave S | Signal | 10,908 | Yes | 1 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 803.05 | S 42nd St | DeMers Ave/ND 297 | Signal | 19,188 | No | 0 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 803.06 | N 42nd St | University Ave | Signal | 17,985 | Yes | 1 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 803.07 | N 42nd St | 6th Ave N | Signal | 9,302 | No | 0 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 4 | $9,600 |
| Countdown Timers | $12,000 | per intersection | 0 | $0 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $9,600 |

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $8,640 |
| Local Match (10% of Total project cost) | $960 |
| *Total Project Cost | **$9,600** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

**Cost for traffic counts and signal timing plan development

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on N 42nd St from 6th Ave N to US 2/Gateway Dr

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## Location Description

Corridor 803.04
Street Name N 42nd St
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 4,450

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## Describe Proposed Safety Improvements

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 803.08 | N 42nd St | US 2/Gateway Dr | Signal | 12,315 | No | 0 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |

## Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 1 | $2,400 |
| Countdown Timers | $12,000 | per intersection | 0 | $0 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $2,400 |

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $2,160 |
| Local Match (10% of Total project cost) | $240 |
| *Total Project Cost | **$2,400** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## Proposed Year of Construction

## NDDOT Central Office Only

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on S 34th St from S 34th St (South of 24th Ave S) to DeMers Ave/ND 297 (Road Ends)

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 805.01
Street Name S 34th St
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 4,066

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 805.03 | S 34th St | 17th Ave S | Signal | 8,930 | No | 0 | 1 | 1 | 0 | 0 | 0 |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 1 | $2,400 |
| Countdown Timers | $12,000 | per intersection | 1 | $12,000 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $14,400 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $12,960 |
| Local Match (10% of Total project cost) | $1,440 |
| *Total Project Cost | **$14,400** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on S Columbia Rd from 36th Ave S to 9th Ave S

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## Location Description

Corridor 807.02
Street Name S Columbia Rd
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 21,456

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## Describe Proposed Safety Improvements

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 807.03 | Columbia Rd | 32nd Ave S | Signal | 25,300 | Yes | 0 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 807.04 | Columbia Rd | 24th Ave S | Signal | 27,505 | Yes | 0 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 807.05 | Columbia Rd | 20th Ave S | Thru-STOP | 23,825 | No | 0 | 0 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 807.06 | Columbia Rd | 17th Ave S | Signal | 32,100 | No | 2 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 806.01 | 14th Ave S | Columbia Rd | Thru-STOP | 27,490 | No | 0 | 0 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 807.07 | Columbia Rd | 13th Ave S | Signal | 30,708 | Yes | 0 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 807.14 | Columbia Rd | 11th Ave S | Signal | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |

## Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 — 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 5 | $12,000 |
| Countdown Timers | $12,000 | per intersection | 1 | $12,000 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $24,000 |

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $21,600 |
| Local Match (10% of Total project cost) | $2,400 |
| *Total Project Cost | **$24,000** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## Proposed Year of Construction

## NDDOT Central Office Only

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on Overpass - Columbia Rd from 9th Ave S to University Ave


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

***Location Description***

Corridor 807.03
Street Name Overpass - Columbia Rd
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 23,039

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

***Describe Proposed Safety Improvements***

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 807.08 | Columbia Rd | University Ave | Signal | 27,868 | Yes | 1 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 807.15 | Columbia Rd | 2nd Ave N | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |

***Describe Current Safety Issues & Systemic Ranking Review***

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 2 | $4,800 |
| Countdown Timers | $12,000 | per intersection | 1 | $12,000 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $16,800 |

***Project Cost Estimate (attach detailed copy)***

| | |
|---|---|
| Federal Funds | $15,120 |
| Local Match (10% of Total project cost) | $1,680 |
| *Total Project Cost | **$16,800** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

***Proposed Year of Construction***

***NDDOT Central Office Only***

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

*Page:* 7
*Intersection ID:* 807.03
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on N Columbia Rd from University Ave to US 2/Gateway Dr


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

## Location Description

Corridor 807.04
Street Name N Columbia Rd
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 11,525

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## Describe Proposed Safety Improvements

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 807.09 | Columbia Rd | 6th Ave N | Signal | 17,910 | Yes | 0 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 807.1 | Columbia Rd | 8th Ave N | Thru-STOP | 10,203 | No | 0 | 0 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 807.11 | Columbia Rd | US 2/Gateway Dr | Signal | 15,740 | No | 1 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |

## Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 2 | $4,800 |
| Countdown Timers | $12,000 | per intersection | 0 | $0 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $4,800 |

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $4,320 |
| Local Match (10% of Total project cost) | $480 |
| *Total Project Cost | **$4,800** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## Proposed Year of Construction

## NDDOT Central Office Only

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

*Page:* 8
*Intersection ID:* 807.04
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on S 20th St from 14th Ave NE - 47th Ave S to 24th Ave S

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## Location Description

Corridor 809.01
Street Name S 20th St
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 4,495

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## Describe Proposed Safety Improvements

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 809.01 | S 20th St | 47th Ave S | Thru-STOP | 2,990 | Yes | 0 | 0 | 0 | 0 | 0 | 0 |
| 809.02 | S 20th St | 40th Ave S | All Way STOP | 4,020 | No | 0 | 0 | 0 | 0 | 0 | 0 |
| 809.03 | S 20th St | 32nd Ave S | Signal | 14,895 | Yes | 0 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |

## Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 1 | $2,400 |
| Countdown Timers | $12,000 | per intersection | 0 | $0 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $2,400 |

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $2,160 |
| Local Match (10% of Total project cost) | $240 |
| *Total Project Cost | **$2,400** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## Proposed Year of Construction

## NDDOT Central Office Only

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 809.01
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on S 20th St from 24th Ave S to DeMers Ave/ND 297

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## Location Description

Corridor 809.02
Street Name S 20th St
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 4,620

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## Describe Proposed Safety Improvements

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 809.04 | S 20th St | 24th Ave S | Signal | 12,365 | No | 0 | 1 | 0 | 0 | 0 | 0 |
| 809.05 | S 20th St | 20th Ave S | All Way STOP | 7,458 | No | 0 | 0 | 0 | 0 | 0 | 0 |
| 809.06 | S 20th St | 17th Ave S | Signal | 11,198 | Yes | 1 | 1 | 0 | 0 | 0 | 0 |
| 809.07 | S 20th St | 13th Ave S | All Way STOP | 8,823 | No | 0 | 0 | 0 | 0 | 0 | 0 |
| 809.08 | S 20th St | DeMers Ave Frontage Road (South) | Thru-STOP | 3,970 | No | 0 | 0 | 0 | 0 | 0 | 0 |
| 809.09 | S 20th St | DeMers Ave/ND 297 | Signal | 11,285 | Yes | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |

## Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 — 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 3 | $7,200 |
| Countdown Timers | $12,000 | per intersection | 1 | $12,000 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $19,200 |

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $17,280 |
| Local Match (10% of Total project cost) | $1,920 |
| *Total Project Cost | **$19,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## Proposed Year of Construction

## NDDOT Central Office Only

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 809.02
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on 10th St - S Washington St from 48th Ave S to 32nd Ave S


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

## Location Description

Corridor 810.02
Street Name 10th St - S Washington St
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 9,427

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## Describe Proposed Safety Improvements

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 810.01 | S Washington St | 47th Ave S | Signal | 9,298 | Yes | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |
| 810.02 | S Washington St | 40th Ave S | Thru-STOP | 10,710 | No | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |
| 810.03 | S Washington St | 32nd Ave S | Signal | 18,653 | Yes | 0 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |

## Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 3 | $7,200 |
| Countdown Timers | $12,000 | per intersection | 2 | $24,000 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $31,200 |

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $28,080 |
| Local Match (10% of Total project cost) | $3,120 |
| *Total Project Cost | **$31,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## Proposed Year of Construction

## NDDOT Central Office Only

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 810.02
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on S Washington St from 32nd Ave S to Hammerling Ave

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## Location Description

Corridor 810.03
Street Name S Washington St
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 11,421

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## Describe Proposed Safety Improvements

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 810.15 | S Washington St | 28th Ave S | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |
| 810.04 | S Washington St | Frontage Road | Thru-STOP | 10,468 | No | 0 | 0 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 810.05 | S Washington St | 24th Ave S | Signal | 16,580 | Yes | 0 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 810.16 | S Washington St | Campbell Dr | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |
| 810.06 | S Washington St | 17th Ave S | Signal | 20,128 | Yes | 1 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 810.07 | S Washington St | Hammerling Ave & Frontage Road | Thru-STOP | 13,713 | Yes | 0 | 0 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |

## Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 4 | $9,600 |
| Countdown Timers | $12,000 | per intersection | 2 | $24,000 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $33,600 |

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $30,240 |
| Local Match (10% of Total project cost) | $3,360 |
| *Total Project Cost | **$33,600** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## Proposed Year of Construction

## NDDOT Central Office Only

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 810.03
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on S Washington St from Hammerling Ave to DeMers Ave/ND 297


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 810.04
Street Name S Washington St
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 13,878

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 810.08 | S Washington St | 13th Ave S | Signal | 17,233 | Yes | 1 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 810.09 | S Washington St | 8th Ave S | Thru-STOP | 15,858 | Yes | 0 | 0 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |
| 810.1 | S Washington St | DeMers Ave/ND 297 | Signal | 24,068 | Yes | 3 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 2 | $4,800 |
| Countdown Timers | $12,000 | per intersection | 0 | $0 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $4,800 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $4,320 |
| Local Match (10% of Total project cost) | $480 |
| *Total Project Cost | **$4,800** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

*Page:* 13
*Intersection ID:* 810.04
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on N Washington St from DeMers Ave/ND 297 to 8th Ave N

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 810.05
Street Name N Washington St
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 10,037

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 810.17 | N Washington St | 2nd Ave N | Signal | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 810.11 | N Washington St | University Ave | Signal | 12,303 | Yes | 0 | 1 | 0 | 0 | 0 | Segment & right angle projects suggested on other sheets. |
| 810.18 | N Washington St | 5th Ave N | Signal | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 810.12 | N Washington St | 8th Ave N | Thru-STOP | 8,523 | No | 0 | 0 | 0 | 0 | 0 | Segment & right angle projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 3 | $7,200 |
| Countdown Timers | $12,000 | per intersection | 2 | $24,000 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $31,200 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $28,080 |
| Local Match (10% of Total project cost) | $3,120 |
| *Total Project Cost | **$31,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

*Page:* 14
*Intersection ID:* 810.05
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on N Washington St from 8th Ave N to Road becomes undivided (north of US 2/Gateway Dr)


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 810.06
Street Name N Washington St
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 5,859

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 810.13 | N Washington St | US 2/Gateway Dr | Signal | 16,445 | No | 0 | 1 | 0 | 0 | 0 | Right angle projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 1 | $2,400 |
| Countdown Timers | $12,000 | per intersection | 0 | $0 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $2,400 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $2,160 |
| Local Match (10% of Total project cost) | $240 |
| *Total Project Cost | **$2,400** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 810.06
*Date:* 6/13/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on Cherry St from 32nd Ave S to 4th Ave S


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

Corridor 811.02
Street Name Cherry St
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 2,374

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 811.09 | Cherry St | 4th Ave S | Signal | 7,543 | No | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 1 | $2,400 |
| Countdown Timers | $12,000 | per intersection | 1 | $12,000 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $14,400 |

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $12,960 |
| Local Match (10% of Total project cost) | $1,440 |
| *Total Project Cost | **$14,400** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

**Cost for traffic counts and signal timing plan development

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 811.02
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on US 2 Bus from DeMers Ave to US 2/Gateway Dr

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 812.04
Street Name US 2 Bus
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 4,383

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 812.13 | S 5th St | DeMers Ave | Signal | 15,075 | Yes | 1 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |
| 812.14 | S 5th St | 1st Ave N | Signal | 5,670 | Yes | 1 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |
| 812.18 | N 5th St | 2nd Ave N | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |
| 812.15 | N 5th St | University Ave | Signal | 7,905 | No | 0 | 1 | 0 | 0 | 0 | 0 |
| 812.19 | N 5th St | 5th Ave N | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |
| 812.16 | N 5th St | 8th Ave N | Thru-STOP | 5,525 | No | 0 | 0 | 0 | 2 | 0 | 0 |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 5 | $12,000 |
| Countdown Timers | $12,000 | per intersection | 4 | $48,000 |
| Curb Extensions | $36,000 | per corner | 2 | $72,000 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $132,000 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $118,800 |
| Local Match (10% of Total project cost) | $13,200 |
| *Total Project Cost | **$132,000** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 812.04
*Date:* 6/13/2014

## HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION

North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on S 4th St from US 2/Gateway Dr to Minnesota Ave


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

### *Location Description*

Corridor 815.01
Street Name S 4th St
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 1,100

SHSP Emphasis Area (check all that apply)

- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

### *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 815.01 | S 4th St | Minnesota Ave | Thru-STOP | 5,403 | No | 0 | 0 | 0 | 0 | 0 | 0 |
| 811.11 | Bruce Ave | S 4th St | Thru-STOP | 4,123 | No | 0 | 0 | 0 | 2 | 0 | 0 |
| 815.02 | S 4th St | DeMers Ave | Signal | 16,223 | Yes | 0 | 1 | 0 | 0 | 0 | 0 |
| 815.03 | N 4th St | 1st Ave N | Thru-STOP | 3,550 | Yes | 0 | 1 | 0 | 0 | 0 | 0 |
| 815.04 | N 4th St | University Ave | All Way STOP | 3,810 | Yes | 0 | 0 | 0 | 1 | 0 | 0 |
| 815.05 | N 4th St | 8th Ave N | Thru-STOP | 1,520 | No | 0 | 0 | 0 | 2 | 0 | 0 |
| 815.1 | N 4th St | 10th Ave N | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 815.06 | N 4th St | US 2/Gateway Dr | Thru-STOP | 10,945 | Yes | 0 | 0 | 0 | 0 | 0 | 0 |

### *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 2 | $4,800 |
| Countdown Timers | $12,000 | per intersection | 0 | $0 |
| Curb Extensions | $36,000 | per corner | 6 | $216,000 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $220,800 |

### *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $198,720 |
| Local Match (10% of Total project cost) | $22,080 |
| *Total Project Cost | **$220,800** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency

**Cost for traffic counts and signal timing plan development

### *Proposed Year of Construction*

### *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on S 34th St - 24th Ave S from 32nd Ave S to Belmont Rd

**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720

Please attach a location map(s). You may use additional sheets to further describe your project.

***Location Description***

Corridor 821.02
Street Name S 34th St - 24th Ave S
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 4,239

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

***Describe Proposed Safety Improvements***

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 821.01 | S 34th St | 32nd Ave S | Signal | 18,820 | Yes | 2 | 1 | 0 | 0 | 0 | Segment & right angle projects suggested on other sheets. |

***Describe Current Safety Issues & Systemic Ranking Review***

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 1 | $2,400 |
| Countdown Timers | $12,000 | per intersection | 0 | $0 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $2,400 |

***Project Cost Estimate (attach detailed copy)***

| | |
|---|---|
| Federal Funds | $2,160 |
| Local Match (10% of Total project cost) | $240 |
| *Total Project Cost | **$2,400** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

***Proposed Year of Construction***

***NDDOT Central Office Only***

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on 32nd Ave S from Grand Forks Western City Limits to I-29 Western Ramps


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 822.01
Street Name 32nd Ave S
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 3,988

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 822.01 | 32nd Ave S | I-29 South Ramp | Signal | 9,463 | No | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 1 | $2,400 |
| Countdown Timers | $12,000 | per intersection | 1 | $12,000 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $14,400 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $12,960 |
| Local Match (10% of Total project cost) | $1,440 |
| *Total Project Cost | **$14,400** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 822.01
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on 32nd Ave S from I-29 Western Ramps to S Washington St


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

## Location Description

Corridor 822.02
Street Name 32nd Ave S
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 9,143

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## Describe Proposed Safety Improvements

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 822.02 | 32nd Ave S | I-29 North Ramp | Signal | 9,938 | Yes | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |
| 822.03 | 32nd Ave S | S 31st St | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |
| 822.04 | 32nd Ave S | S 25th St | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |

## Describe Current Safety Issues & Systemic Ranking Review

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 3 | $7,200 |
| Countdown Timers | $12,000 | per intersection | 3 | $36,000 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $43,200 |

## Project Cost Estimate (attach detailed copy)

| | |
|---|---|
| Federal Funds | $38,880 |
| Local Match (10% of Total project cost) | $4,320 |
| *Total Project Cost | **$43,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## Proposed Year of Construction

## NDDOT Central Office Only

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on DeMers Ave/ND 297 from I-29 Western Ramps to North Dakota/Minnesota Border


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 830.02
Street Name DeMers Ave/ND 297
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 9,348

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 805.05 | S 34th St | DeMers Ave/ND 297 | Signal | 9,553 | No | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |
| 830.04 | DeMers Ave (ND 297) | Columbia Rd North Ramp | Signal | 11,235 | Yes | 1 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |
| 809.09 | S 20th St | DeMers Ave/ND 297 | Signal | 11,285 | Yes | 0 | 1 | 1 | 0 | 0 | 0 |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 3 | $7,200 |
| Countdown Timers | $12,000 | per intersection | 3 | $36,000 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $43,200 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $38,880 |
| Local Match (10% of Total project cost) | $4,320 |
| *Total Project Cost | **$43,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

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*Intersection ID:* 830.02
*Date:* 6/13/2014

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on US 2/Gateway Dr from Columbia Rd to North Dakota/Minnesota Border


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 838.01
Street Name US 2/Gateway Dr
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 8,829

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 838.06 | Gateway Dr (US 2) | N 47th St | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | Project could also be coordinated with a separate project to add ADA ramps and pedestrian push buttons & right angle projects suggested on other sheets. |
| 838.01 | Gateway Dr (US 2) | I-29 South Ramp | Signal | 12,875 | Yes | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |
| 838.02 | Gateway Dr (US 2) | I-29 North Ramp | Signal | 13,598 | Yes | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |
| 838.03 | Gateway Dr (US 2) | Frontage Rd (East of 42nd St) | Thru-STOP | 9,325 | Yes | 0 | 0 | 0 | 0 | 0 | 0 |
| 804.04 | Stanford Rd | US 2/Gateway Dr | Signal | 12,410 | Yes | 0 | 1 | 1 | 0 | 0 | Right angle projects suggested on other sheets. |
| 838.04 | Gateway Dr (US 2) | Frontage Rd (East of Stanford Rd) | Thru-STOP | 10,248 | No | 0 | 0 | 0 | 0 | 0 | 0 |
| 838.05 | Gateway Dr (US 2) | Frontage Rd (West of Columbia Rd) | Thru-STOP | 10,418 | Yes | 0 | 0 | 0 | 0 | 0 | 0 |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 4 | $9,600 |
| Countdown Timers | $12,000 | per intersection | 4 | $48,000 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $57,600 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $51,840 |
| Local Match (10% of Total project cost) | $5,760 |
| *Total Project Cost | **$57,600** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | | ID Number |

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

**HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PROJECT APPLICATION**
North Dakota Department of Transportation Programming
SFN 59959 (06-2011)

Pedestrian and Bicycle Intersection Improvements

# Intersections on US 2/Gateway Dr from Columbia Rd to North Dakota/Minnesota Border


**Agency Name:** City of Grand Forks
**Contact Name:** Jane Williams
**Email Address:** JWilliams@grandforksgov.com
**ND DOT District:** 6
**Telephone Number:** 701-787-3720


Please attach a location map(s). You may use additional sheets to further describe your project.

## *Location Description*

Corridor 838.02
Street Name US 2/Gateway Dr
Urban/Rural: Urban
County: Grand Forks
Corridor ADT: 7,271

SHSP Emphasis Area (check all that apply)
- ☐ Reduce Alcohol Impaired Driving
- ☐ Increase the Use of Safety Restraints for all Occupants
- ☐ Younger Driver/Older Driver Safety
- ☐ Curb Aggressive Driving
- ☐ Improvements to Address Lane Departure Crashes
- ☐ Enhancing Emergency Medical Capabilities to Increase
- ☑ Improve Intersection Safety

## *Describe Proposed Safety Improvements*

| Intersection ID | Street Name | Cross Street | Traffic Control | Entering ADT | Development / Ped Generator | Total Ped/Bike Crashes | Advanced Walk | Countdown Timers | Curb Extensions | Median Refuge Island | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 809.13 | N 20th St | US 2/Gateway Dr | Signal | 11,813 | No | 0 | 1 | 1 | 0 | 0 | Segment & right angle projects suggested on other sheets. |
| 812.17 | N 5th St | US 2 / Gateway Dr | Signal | 14,795 | Yes | 0 | 1 | 1 | 0 | 0 | Segment & right angle projects suggested on other sheets. |
| 816.06 | N 3rd St | US 2/Gateway Dr | Thru-STOP | 9,603 | No | 0 | 1 | 1 | 0 | 0 | Segment & right angle projects suggested on other sheets. |

## *Describe Current Safety Issues & Systemic Ranking Review*

North Dakota Crashes, 2008 - 2012 5 years

| | Intersection Criteria |
|---|---|
| Traffic Control Device | Signal |
| Entering ADT | > 18000 |
| Development / Ped Generator | Yes |
| Total Ped/Bike Crashes | > 1 |

| Description | Unit Cost | | Quanity | Total Cost |
|---|---|---|---|---|
| **Advanced Walk | $2,400 | per intersection | 3 | $7,200 |
| Countdown Timers | $12,000 | per intersection | 3 | $36,000 |
| Curb Extensions | $36,000 | per corner | 0 | $0 |
| Median Refuge Island | $24,000 | per side | 0 | $0 |
| | | | | $43,200 |

## *Project Cost Estimate (attach detailed copy)*

| | |
|---|---|
| Federal Funds | $38,880 |
| Local Match (10% of Total project cost) | $4,320 |
| *Total Project Cost | **$43,200** |

*Based on typical NDDOT costs (March 2014); includes engineering, construction and contingency
**Cost for traffic counts and signal timing plan development

## *Proposed Year of Construction*

## *NDDOT Central Office Only*

Project Accepted? ☐ Yes ☐ No | Reference Number | ID Number

Notes

23 USC 409
NDDOT Reserves All Objections

Project suggested for agency's consideration

*Page:* 24
*Intersection ID:* 838.02
*Date:* 6/13/2014

# 5.0 Behavioral Safety Strategies

## 5.1 Purpose of Driver Behavior Safety Strategies

North Dakota's Local Road Safety Program (LRSP) recognizes that driver behavior is a significant factor contributing to a majority of the serious crashes on North Dakota's local roads. Traffic crashes may result from any combination of overlapping crash factors, such as the roadway, the vehicle, and driver behavior. Research supports and experts agree that in most cases driver behavior—risky decisions, driver error, lapses of attention, and driver limitations—is a chief factor contributing to traffic crashes (Lerner et al., 2010). Serious traffic crashes in the Grand Forks region can be largely prevented and reduced if motorists, especially younger drivers, were persuaded to engage in key safe driving practices: to buckle up, drive at safe speeds, pay attention, and plan ahead to avoid impaired driving. For maximum safety benefit, these measures should be undertaken in addition to adopting infrastructure safety strategies to help ensure the safest and most forgiving roadway possible.

## 5.2 Overview of Behavioral Crash Data for Grand Forks Region

**Unbelted Vehicle Occupants:** Traffic safety research demonstrates that a motorist's seat belt is the most effective defense in the event of a crash. When lap and shoulder seat belts are used, the risk of fatal injury to front-seat passenger car occupants is reduced by 45 percent and the risk of moderate-to-critical injury is reduced by 50 percent (NHTSA, 2001). Safety benefits are even greater for light-truck occupants, with seat belts reducing fatalities by 60 percent and moderate-to-critical injury by 65 percent (NHTSA, 2009). North Dakota's 2013 statewide seat belt use is 77.7 percent; lower than the nationwide use of 86 percent. Unbelted serious crashes are the Grand Forks region's greatest opportunity to strengthen road safety through improving driver behavior. The trend of serious unbelted crashes is increasing statewide. The Grand Forks region is below the 48 percent statewide-unbelted serious crashes with 41 percent of the region's serious crashes involving unbelted motorists.

**Alcohol-Related Crashes:** Nationally, although impaired driving fatalities have decreased since 2007, the percentage of alcohol-impaired fatalities in the U.S. has remained essentially unchanged (NHTSA, 2012). Similarly, over the last decade, each year nearly half of motor vehicle fatalities statewide in North Dakota continue to be alcohol-related. In the Grand Forks region, 22 percent of the region's serious crashes are alcohol-related—lower than the statewide 30 percent. From statewide crash data, nearly half of these preventable serious crashes are on the local road system.

**Young Driver-Involved:** Young drivers have the highest involvement in fatal crashes of any age group. The fatal crash involvement of drivers age 16 to 20 is nearly twice that of drivers' age 21 and older (NHTSA, 2012a). Key underlying factors to their high crash risk are the developmental and behavioral issues of adolescence coupled with driving inexperience. Young drivers too often immaturely take risks while driving without thinking through the potential consequences of their life-threatening decisions (Keating, 2007). Such high-risk behaviors typically include lack of seat belt use, aggressive driving/speeding, and distractions while

driving. Although serious crashes involving young drivers have gradually declined statewide, drivers under the age of 21 continue to be overrepresented in crashes with 67 percent occurring on local roads. In the Grand Forks region, 31 percent of serious crashes involve young drivers, which is higher than the 22 percent of statewide serious crashes.

**Excessive Speed or Aggressive Driving:** Speeding is common and is a tough nut to crack nationally and in North Dakota. Although drivers generally acknowledge that speeding is an unsafe behavior, speeding remains common because the perceived risk of injury is low relative to the perceived benefits of driving fast such as saving time and driving pleasure (Lerner et al., 2010). Consequently, the percentage of speeding-related fatal crashes has remained essentially unchanged over the years and remains a contributing factor in 31 percent of traffic fatalities in the U.S. (NHTSA, 2012b). Speeding and aggressive driving continue to account for approximately 26 percent of all serious crashes in North Dakota with 62 percent of these crashes occurring on the local road system. In the Grand Forks region, 25 percent of the serious crashes involve speeding or aggressive driving, which is similar to the statewide percentage of 26 percent.

## 5.3 Importance of Traffic Safety Culture Change

### 5.3.1 Influence of Traffic Safety Culture

In adopting North Dakota's long-term vision of zero fatalities, the 2013 North Dakota SHSP establishes a statewide goal to reduce the 3-year average of traffic fatalities to 100 or fewer by 2020. To accomplish this interim goal, the Grand Forks region, together with its traffic safety partners, seeks to develop and implement its LRSP safety strategies within the broader societal context of motorists' behavior and North Dakota's traffic safety culture. Traffic safety culture can be defined as the implicit shared values, beliefs, and perceptions that shape motorists' behavior.

### 5.3.2 Social Norms Inhibiting a Strong Traffic Safety Culture

At the core of the nation's and North Dakota's traffic safety challenge is a complacency toward risk-taking by drivers and a tolerance for traffic crashes and the resulting deaths and incapacitating injuries. Contributing factors include a sense of individual driver invulnerability, perceived driving skills and vehicle control, and a sense of anonymity and entitlement on the road. The latest data from the *2012 Traffic Safety Culture Index Survey* reports that, as in previous years, the safety culture in the United States surrounding distracted driving can best be described as "do as I say, not as I do" — due to the high numbers of people who object to certain behaviors, yet will admit that they, themselves, engage in them (AAA, 2012). Real progress in traffic safety depends largely on addressing and changing this culture of indifference to effectively implement and see results of both SHSP and LRSP safety strategies.

### 5.3.3 Social Levels Influencing Safety Culture

Efforts to change individual driver and motorist behaviors should be planned and executed from an ecological viewpoint—one that examines the driving public and their interaction with their social environments. Traffic safety culture and its influence operate at different levels within society. Therefore, a broader definition of traffic safety culture includes the values, beliefs, and perceptions of not only the individual driver, but of those shared by the various communities of which the driver is a part (Figure 5-1). The individual driver exists within a

system that includes the following levels, each embodying factors that influence driving culture and crash risk (Ward et al., 2010; Dahlberg and Krug, 2002):

- Individual level – Factors such as driver age, driving experience, self-esteem, income, and substance abuse
- Relationship level – Factors such as relationships with peers, co-workers, supervisors, and family members
- Community level – Factors include the settings or environments in which relationships occur such as school, church, workplaces, and neighborhoods
- Societal level – Large-scale factors such as safety, health, economic, and educational policies, as well as government commitments and priorities

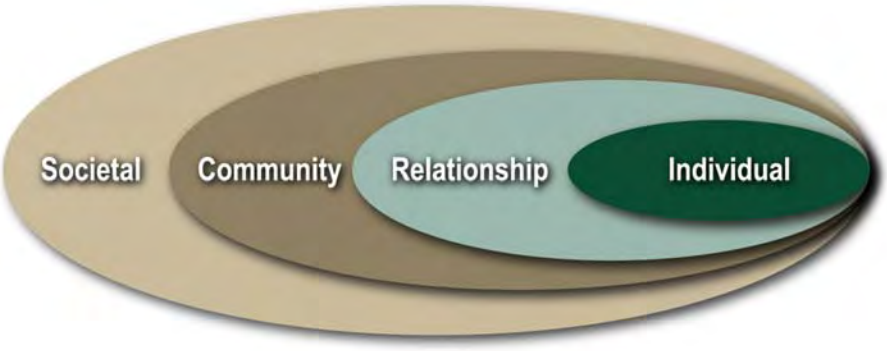


FIGURE 5-1
Social Ecological Perspective of Culture
Source: "Violence – A Global Public Health Problem" by L.L. Dahlberg and E.G. Krug, in *World Report on Violence and Health* (World Health Organization)

Social norms at each level and within each group point to what behaviors are perceived as important. Norms create conformity to expectations that allows people (that is, drivers) to successfully socialize to the subcultures in which they belong. These norms create a climate in which unsafe driving behavior is either encouraged or discouraged. Perceived social norms condoning high-risk driving behaviors provide the case for drivers to rationalize their own high-risk behaviors. To accomplish the culture change, traffic safety behavioral strategies seek to make safe-driving behaviors the accepted norm across all social ecological levels.

The implication of the social ecological model for LRSP efforts is that the implementation plans of LRSP strategies plans should attempt to:

- Increase perceived social pressure to comply with traffic safety laws and practices, thereby, producing safety behavioral norms (Ward et al., 2010)
- Shift the social acceptance of high-risk behaviors to one of perceived unacceptance by significant others and one's peers.

# 5.4 Behavioral Safety Strategies

## 5.4.1 Role of Policy, Education, and Enforcement

Techniques or strategies to change driver behavior essentially fall into one of three categories: (1) *policy change* or laws, local ordinances, regulations, sanctions and penalties; (2) *enforcement* of the laws; and (3) *education* or public information, media, and training. These three categories of behavioral safety strategies work together to have the greatest impact on changing risky driver behavior. The degree of effectiveness of any one strategy on behavioral change depends not only on how effectively the strategy is implemented, but also on how these three categories of policy, enforcement, and education are working together.

For example, a state or local agency that is seeking to increase motorists' seat belt use and decides to use a "buckle up" public information campaign (behavioral change strategy). The effectiveness of the campaign not only depends on the quality of the education or public information campaign (relevance to target group, duration, saturation of the messaging), but also the strength of the law in place (primary vs. secondary seat belt law, all passengers vs. front seat only, higher penalty/fee vs. low penalty/fee) and, most important, the degree of seat belt use enforcement (coverage, intensity, visible by the public).

Consequently, the strength of driver safety policy, enforcement, and education surrounding a behavioral strategy selected greatly impact its effectiveness. Therefore, when selecting and implementing a behavioral strategy, an agency must examine the policy, enforcement, and educational context of the strategy and explore ways to strengthen each, as appropriate, to gain the most from a selected strategy.

Finally, it is critically important that traffic safety enforcement is viewed as a priority within local law enforcement agencies and that agency leaders and administrators advocate for strong local enforcement of traffic laws. It is imperative that agency leaders actively address political and public resistance and provide a pathway to deploy the leading strategy to save lives on North Dakota roadways—effective traffic enforcement coupled with public outreach. By advocating for enforcement, educating local elected officials, and equipping officers to effectively enforce traffic safety laws, North Dakota will reap far greater life-saving outcomes from its local safety initiatives.

## 5.4.2 Effective Use of Public Information Strategies

Public information (education) strategies are often popular among communities seeking to change risky driving behaviors. Education or public information campaigns can range from brochures and mailings to peer-to-peer safety messaging. Brochures and mailings are a passive approach, while peer-to-peer messaging provides a more effective behavioral change approach. In general, a key challenge in influencing driver behavior is that most drivers know what they are supposed to do to drive safely, yet, due to successfully driving with risky patterns with no incidence of crashes, drivers underestimate the risk of their choices. For this reason, research supports that education, coupled with enforcement, will have the strongest impact in changing driver behavior (NHTSA, 2013).

Following are key characteristics of impactful public information/education campaigns (Williams, 2007):

- Implemented in support of a high-visibility enforcement program

- Focused messaging for a target group
- Longer-term programs delivering messages of sufficient intensity over time
- Messages communicating new information not previously well known
- Messages that are part of a broader-based, longer-term community program with similar messaging coming from multiple sources
- Using behavior change models including interactive methods teaching skills to resist social pressure (such as role playing, group discussion)

### 5.4.3 LRSP Phase 2 Priority Strategies

During the LRSP workshop, participants reviewed the Grand Forks region's behavioral crash data and discussed behavioral safety strategy alternatives that could be implemented at the local level. Out of the strategy review discussions, participants engaged in a prioritization process with six strategies emerging as the preferred local behavioral safety strategies for the four behavioral critical emphasis areas. Table 5-1 reflects the LRSP Phase 2 results of the strategy prioritization, as well as each strategy's alignment with the North Dakota SHSP (indicated by an "X" if included in the SHSP).

TABLE 5-1
North Dakota Phase 2 LRSP Workshop Priority Behavioral Strategies and Relationship with the North Dakota SHSP

| Phase 2 LRSP Workshop Priority Driver Behavior Strategies | Cass County Region | Eastern Region | Grand Forks Region | 2013 North Dakota SHSP |
|---|---|---|---|---|
| **Impaired Driving** | | | | |
| • Employ Alcohol Screening and Brief Interventions | X | | | X |
| • Support Community Program for Alternative Transportation | | X | | X |
| • Promote Sobriety Initiatives for DUI Offenders (24/7, Ignition Interlock, DUI Courts) | X | X | | X |
| • Educate and Enforce Zero Tolerance Laws for Drivers Under Age 21 | | X | | |
| • Court Monitoring of Prosecution and Sentencing of DUI Offenders | | | X | |
| **Speeding and Aggressive Driving** | | | | |
| • Conduct High-Visibility Targeted Enforcement of Speeding and Aggressive Driving<br>• *Note: Added following speed and aggressive driving enforcement strategy to support priority lane departure infrastructure safety strategy:*<br>• *Provide Enhanced Enforcement on Local, At-Risk Locations for Lane-Departure Crashes* | X | X | X | X |
| • Conduct Enhanced Enforcement of Red-Light Running | | | X | X |

| Phase 2 LRSP Workshop Priority Driver Behavior Strategies | Cass County Region | Eastern Region | Grand Forks Region | 2013 North Dakota SHSP |
|---|---|---|---|---|
| **Young Drivers** | | | | |
| • Publicize and conduct a high-visibility enforcement of GDL restrictions, cell phone use and texting laws, underage drinking and driving, and seatbelt laws | X | | | X |
| • Encourage driver education providers (local schools and private providers) to require parent education component | | X | X | X |
| **Unbelted Occupants** | | | | |
| • Conduct highly publicized enforcement campaigns to maximize restraint use. | | | X | X |
| • Enforce Secondary Belt Use Law | | X | | X |
| • Pursue Local Support for Primary Seat Belt | X | X | X | X |

Note:
DUI = driving under the influence
GDL = graduated driver's license

The following subsections provide a more complete description of each priority strategy, suggested steps to launch local agency efforts, recommended implementation resources, and potential future considerations for expanded local agency and community-based support for the SHSP safety strategies. It is important to note that multidisciplinary SHSP implementation teams will be formed to support the implementation of priority strategies for each of the six SHSP priority emphasis areas including lane departure, unbelted vehicle occupants, alcohol-related, speed or aggressive drivers, young drivers, and intersections. Therefore, local agencies seeking to leverage local-level safety initiatives described in the following subsections are encouraged to coordinate with and/or engage in the statewide SHSP implementation teams.

## 5.4.4 Impaired Driving

### Grand Forks Region Priority Strategy – Court Monitoring of Prosecution and Sentencing of DUI Offenders

**Description:** Court monitoring programs observe DUI cases within the criminal justice system and help to strengthen accountability and system improvement. In court monitoring programs, trained citizen volunteers observe, track, and report on DUI court or administrative hearing activities. Court monitoring involves gathering and analyzing data to assess patterns regarding DUI case dismissals or cases plead to a lesser offense, conviction rates, sanctions imposed, and how the analysis results compare across different judges and different courts. With consistent courtroom attendance, a review of court records and tracking of offender and probation records, volunteers can identify inconsistencies and potential issues in court proceedings of DUI cases. Court monitoring seeks to produce more DUI convictions, stronger sentencing, and a decrease in plea agreements. The presence of informed volunteer court monitors sends a clear message to judges, prosecutors, defense lawyers, and court staff of the community's interest regarding the outcome of DUI cases, which, in turn, fosters greater court system accountability and system improvement at the local level.

An effective alternative to court monitoring programs is a data-driven justice system evaluation of DUI offenders. Instead of volunteer monitoring presence in the courtroom, volunteers gather, review and analyze DUI case data from arrest through adjudication. Volunteers assess patterns regarding DUI arrests from law enforcement data as well as court proceedings of DUI cases based on available system data.

### *Getting Started:*

- Contact the Traffic Safety Office (TSO) to participate in the SHSP process as a stakeholder in the implementation of strategies identified for priority safety emphasis areas, such as impaired driving, in the SHSP.

*Court monitoring action steps -*

- Court monitoring programs usually are operated and funded by local citizen and advocacy organizations such as Mothers Against Drunk Driving (MADD) North Dakota.
- Working with MADD North Dakota, the county's local safe community coordinator, County attorney's office, and local law enforcement to develop the program framework and desired outcomes. For example, determine which DUI cases to be monitored (for example, felony-only DUIs vs. all DUIs), court data availability, etc.
- Identify available volunteers, determine existing knowledge of court process, and time availability.
- Utilize MADD court monitoring volunteer training program (to learn terminology, court process, sentencing, etc.) to observe courts and to compile information on DUI cases and resulting outcomes.
- Meet with each court judge to inform him/her about the county's court monitoring initiative. Present a positive approach such as the county is seeking to better understand how DUI cases are addressed in the local courts.

*Justice system evaluation action steps –*

- Begin with contacting the Traffic Safety Office (TSO) and North Dakota's Traffic Safety Resource Prosecutor to understand the necessary DUI data sources for review.
- Beginning with data available through the NDDOT, contact the court system and the local law enforcement and prosecution agencies to gather and consolidate available DUI arrest and court system data.
- Meet with local traffic safety stakeholders to review and analyze the data.
- Meet with those involved in the justice system (judges, prosecutors) where data indicates significant dismissal or plea bargain rates.
- Consider the development of a web-based resource to post the data.

### *Implementation Resources:*

- Contact MADD National for information on court monitoring training program information at 1-877-275-6233.
- Grand Forks Substance Abuse Prevention Coalition, Bill Vasicek, Community Safety Coordinator, Altru Health System at bvasicek@altru.org or 701-780-5939

- To explore example state and local implementation of a court monitoring training programs, contact:
  - MADD North Carolina Community Action Site Court Monitoring Program at 919-787-6599
  - Connecticut MADD: Johanna Krebs, Program Manager at 203-764-2566, ext. 6952.
- For information on DUI data sources, contact ND Traffic Safety Resource Prosecutors:
  - Aaron Birst at aaron.birst@ndaco.org, 701-328-7342
  - Kristi Pettit Venhuizen at 701/780-9276
- Information on North Dakota drunk driving penalties: https://www.dot.nd.gov/divisions/safety/penaltiesdrinkingdriving.htm
- For information on Judicial DUI Orientation Training, contact Sharon Gehrman-Driscoll with Minnesotans for Safe Driving at sgehrman@centurylink.net or 952-221-7393
- For North Dakota road safety information including facts sheets, issue briefs, and other education and outreach resources, visit the NDSU Rural Transportation Safety and Security Center (RTSSC) at: http://www.ugpti.org/rtssc/resources/

  And the NDSU Upper Great Plains Transportation Institute at: http://www.ugpti.org/resources/
- Other impaired-driving safety resources:

  National Highway Traffic Safety Administration: http://www.nhtsa.gov/Impaired

*For additional impaired driving safety strategies, see the following priority ND Local Road Safety Program strategies:*

- Employ alcohol screening and brief Interventions by health care providers following an impaired driving crash. (Further explanation can be found in the North Dakota Local Road Safety Program, Phase 2, Cass County Region Report located at: http://www.dot.nd.gov/divisions/safety/trafficsafety.htm)
- Support community programs for alternative transportation. (Further explanation can be found in the North Dakota Local Road Safety Program, Phase 2, Eastern Region Report located at: http://www.dot.nd.gov/divisions/safety/trafficsafety.htm)
- Promote sobriety initiatives for DUI offenders (24/7, Ignition Interlock, DUI Courts). (Further explanation can be found in the North Dakota Local Road Safety Program, Phase 2, Cass County Region and Eastern Region Reports located at: http://www.dot.nd.gov/divisions/safety/trafficsafety.htm)
- Educate and enforce zero tolerance laws for drivers under age 21. (Further explanation can be found in the North Dakota Local Road Safety Program, Phase 2, Eastern Region Report located at: http://www.dot.nd.gov/divisions/safety/trafficsafety.htm)

*Potential future considerations for expanded local agency and community-based support of SHSP impaired-driving safety strategies:*

- Engage local safety stakeholders (law enforcement, Mothers Against Drunk Driving [MADD], Students Against Drunk Driving [SADD], North Dakota Safety Council,

community health provider, emergency medical service providers) and facilitate coalition development to educate local elected officials on the importance of state agency impaired-driving legislative initiatives resulting from the state's comprehensive assessment of North Dakota impaired-driving laws.

- Consider offering Judge DUI Orientation Training involving victim advocates, a probation officer, and a treatment evaluation professional to proactively educate court personnel on current DUI sentencing and treatment practices to support consistent and informed decision-making.

### 5.4.5 Speeding and Aggressive Driving

#### Grand Forks Region Priority Strategy – Conduct highly publicized and targeted speeding and aggressive driving enforcement campaigns

**Description:** High-visibility enforcement is a high-priority, proven safety strategy to reduce serious crashes in North Dakota and across the nation. The most effective way to deter unsafe driving is through a highly visible enforcement effort to reinforce the driving public's perception that driving behavior, such as speeding, is at high risk of being stopped and ticketed. High-visibility enforcement consists of multiple jurisdictions and/or multiple squads patrolling a segment of roadway at the same time, often using brightly colored signage and vests. Planned high-visibility enforcement is publicized extensively through community kickoff events involving the local media and public education campaigns about the enforcement. High visibility also includes enforcement agencies reporting to news media the outcome of the campaign such as tickets issued and arrests made.

North Dakota law enforcement agencies (state, county, city and tribal) participate in the state's cooperative enforcement programs to reduce speed-related fatalities and incapacitating injuries through stepped up enforcement of aggressive cars and trucks primarily in oil-impacted counties. For aggressive driving enforcement, officers focus on drivers who commit a combination of moving traffic violations such speeding, following too closely, and running red lights endangering other persons or property.

*Getting Started:*

- Contact the Traffic Safety Office (TSO) to participate in the SHSP process as a stakeholder in the implementation of strategies identified for priority safety emphasis areas, such as speeding, in the SHSP.
- Assist local law enforcement agencies with identifying locations with high-speed and aggressive driving-related crash involvement for high-visibility enforcement.
- With local law enforcement, attend county board/city council meetings to speak on the importance of enforcing speed and aggressive driving.
- Collaborate with highway patrol, local law enforcement, community health officials, and local traffic safety stakeholders to use TSO speed campaign materials to conduct community outreach on the enforcement campaign.

*Implementation Resources:*

- For crash data and analysis to focus speed enforcement efforts, contact the NDDOT Traffic Safety Office (TSO) at (701) 328-4692.

- To learn about local traffic safety enforcement initiatives and enforcement grant opportunities, contact the TSO and the state's Law Enforcement Liaison at (701) 328-4692. Enforcement grant application information for overtime speed enforcement can be found at:
  https://www.dot.nd.gov/divisions/safety/trafficsafety.htm
- See Section 5.5, Traffic Safety Office Supporting Resources.
- For guidance for law enforcement on planning and publicizing local speed saturation patrols and successful case examples, see NHTSA's *Guidelines for Developing a Municipal Speed Enforcement Program* at:
  http://www.nhtsa.dot.gov/people/injury/enforce/program.htm
- For a summary of successful aggressive driving enforcement programs deployed at the local and state-level across the country, see NHTSA's (2001b) *Aggressive Driving Enforcement: Strategies for Implementing Best Practices* at:
  http://www.nhtsa.gov/people/injury/enforce/aggressdrivers/aggenforce/
- Other speed-related safety resources:

  Governor's Highway Safety Administration:
  http://www.ghsa.org/html/issues/speeding.html

  Insurance Institute for Highway Safety:
  http://www.iihs.org/iihs/topics/t/speed/topicoverview
- For North Dakota road safety information including facts sheets, issue briefs, and other education and outreach resources, visit the NDSU Rural Transportation Safety and Security Center (RTSSC) at:
  http://www.ugpti.org/rtssc/resources/

  The NDSU Upper Great Plains Transportation Institute at:
  http://www.ugpti.org/resources/

### Grand Forks Region's Priority Strategy – Provide enhanced enforcement to support local agency implementation of Red-Light-Running confirmation lights for at-risk intersection locations.

**Description:** To reduce the most common type of serious crashes at signalized intersections--right angle crashes—the Grand Forks region would like to deploy an innovative safety strategy using a downstream confirmation light system to reduce red-light running. A blue LED light mounted on the back of a traffic light is activated when an offender runs the red light. A single officer stationed across the intersection downstream from the traffic light safely observes and pursues the red light violator (instead of one officer to observe and an additional officer to pursue). To implement, red-light-running confirmation lights requires interdependent collaboration of both engineering and enforcement; even more effective would be added public outreach about the RLR confirmation lights.

*Getting Started:*

- Contact the Traffic Safety Office (TSO) to participate in the SHSP process as a stakeholder in the implementation of strategies identified for priority safety emphasis areas, such as speed and aggressive driving, in the SHSP.

- Work with NDDOT staff regarding specific design features of the system. Contact NDDOT Traffic Operations Section, Shawn Kuntz, 701-328-2673.
- Coordinate with local law enforcement:
  - Ask for their assistance in locating the enforcement lights on traffic signal poles/mast arms (optimum viewing locations)
  - Ask for an agreement regarding minimum levels of enforcement (i.e., one hour per day at any of the equipped locations)
  - Provide training to officers after installation – demonstrate that the "Blue/ Confirmation" Light does come on at the same instant as the red light of the signal.
- Encourage law enforcement to coordinate with the City/County attorney – make sure the attorney understands the technology and is willing to prosecute the violators.
- Encourage the City/County attorney to coordinate with the district court judge – make sure the judge understands the technology and will uphold charges and support the conviction of violators.
- Prior to issuing any tickets for violations using the Confirmation Lights, have the traffic signal operations engineer check all of the signals clearance intervals (Yellow + All Red) to make sure they are 100-percent consistent with the agencies adopted guidelines. Have a note confirming compliance signed by the engineer put in the signal controller cabinet. (This will help address the inevitable complaint by those issued tickets that the agency changed the clearance intervals to generate more violators – to increase revenue streams.)
- With local law enforcement, attend county board/city council meetings to speak on the community safety benefits of red-light-running confirmation lights.

*Implementation Resources:*

- For crash data and analysis to focus red-light-running enforcement efforts, contact the NDDOT Traffic Safety Office (TSO) at 701-328-4692.
- See Section 5.5, Traffic Safety Office Supporting Resources.
- Safety projects developed as part of the Local Road Safety Plans are eligible for funding through the state's Highway Safety Improvement Program (HSIP) including enhanced enforcement.
- Contact local agencies that have deployed red-light-running confirmation lights:
  - City of Burnsville Public Works, Minnesota
    Engineering Department
    100 Civic Center Parkway
    Burnsville, MN 55337
    Phone: 952-895-4534
  - Richardson Police Department, Texas
    140 North Greenville Ave.
    Richardson, TX 75081
    Phone: 972-744-4800

### Grand Forks Region's Priority Strategy – Provide enhanced enforcement on local, at-risk locations for lane-departure crashes.

**Description:** To reduce serious lane-departure crashes on rural paved roads, the Grand Forks region plans to deploy infrastructure safety improvements (for example, centerline rumble strips, edge line rumble strips, adding or widening edge lines, high visibility pavement markings) at select at-risk corridors. To maximize the expected safety benefit of the road improvements, integrating increased enforcement presence at targeted at-risk locations and timeframes will reduce risky driving behaviors through strengthening the public's perceived risk of being stopped.

*Getting Started:*

- Contact the Traffic Safety Office (TSO) to participate in the SHSP process as a stakeholder in the implementation of strategies identified for priority safety emphasis areas, such as lane departure, in the SHSP.
- Work with NDDOT staff regarding specific design features of the system. Contact NDDOT Traffic Operations Section, Shawn Kuntz, 701-328-2673.
- Coordinate with local law enforcement to provide enhanced enforcement at local, at-risk locations for lane departure.
    - Based on crash data, identify timeframes for high crash risk (such as Saturday evening hours)
    - Ask for an agreement regarding minimum levels of enforcement (such as 1 hour per day at any of the equipped locations, target contacts per hour, etc.)

*Implementation Resources:*

- For crash data and analysis to focus lane departure enforcement efforts, contact the NDDOT Traffic Safety Office (TSO) at 701-328-4692.
- See Section 5.5, Traffic Safety Office Supporting Resources.
- Safety projects developed as part of the Local Road Safety Plans are eligible for funding through the state's Highway Safety Improvement Program (HSIP) including enhanced enforcement.
- See Section 5.4.5 for speed and aggressive driving implementation resources.

*Potential future considerations for expanded local agency, tribal, and community-based support of SHSP safety strategies:*

- Engage local safety stakeholders (law enforcement, Mothers Against Drunk Driving [MADD], Students Against Drunk Driving [SADD], North Dakota Safety Council, community health provider, emergency medical service providers) and facilitate coalition development to educate local elected officials on the importance of state agency legislative initiatives to strengthen penalties such as increased fines for right-of-way and speed violations.

## 5.4.6 Young Drivers

### Grand Forks Region Priority Strategy – Encourage driver education providers (local schools and private providers) to require a parent education component

**Description:** Effective parental monitoring of teen driving can go a long way in helping to keep novice drivers safe on the roadway. Programs offering teen driver safety materials together with facilitated guidance help parents make the important connection between teen driving restrictions and teen driving risks. Without a required parent component for teen driver education, parents lack awareness of graduated drivers license (GDL) safety provisions, don't fully recognize teen driving risks, are often anxious to be relieved of shuttling their teens, may be reluctant to invest the necessary time to instruct and supervise their teen's driving, and often believe their teen is the exception and is a good and safe driver. To help overcome these parent challenges and more effectively engage parents, incorporating a parent education component into driver education programs is demonstrating promising results.

Key components of a good parent education program include:

- Discusses risks for novice teen drivers
- Explains how and why GDL works to address risks
- Reviews the critical role parents play in teaching, supporting and managing their novice drivers
- Explains the importance of and provides an opportunity to try out a parent/teen driving agreement
- Delivery by trained, educated facilitators
- Emphasizes parents and teens working together for safety

*Getting Started:*

- Contact the Traffic Safety Office (TSO) to participate in the SHSP process as a stakeholder in the implementation of strategies identified for priority safety emphasis areas, such as young drivers, in the SHSP.
- Learn about education providers in your local community by contacting the Traffic Safety Office at (701) 328-4692.
- Explore county-mandated parent training through examining the state of Virginia's Planning District 8 (includes four counties and four cities) 90-minute driving safety program for parents and teens as part of the in-classroom portion of the state's driver education curriculum. Contact Ben Swecker (703) 791-7328 or Tim TeWalt (703) 791-7353 at Prince William County Schools.
- With local law enforcement and driver educators, attend county board/city council meetings to inform them of the local initiative to incorporate parent education into driver's education programs to more fully engage parents and reduce teen driver serious crashes.
- Post information on teen driving laws on local school websites or request school resource officer to send information to parents highlighting driving risks for teens and existing North Dakota teen driver laws.

- Consider linking parent-teen participation in a teen-driving program to school parking privileges.

*Implementation Resources:*

- See Section 5.5, Traffic Safety Office Supporting Resources.
- For educational materials for parents of teen drivers including guidelines to ensure teen drivers are educated on safe driving practices as well as *The North Dakota Parent Guide to Teen Driving* and the *Parent Teen Driver Agreement*, see the Teen Drivers & Parents section of the NDDOT website:
  http://www.dot.nd.gov/divisions/safety/teens-parents.htm
- For an example parent-teen class outline and discussion guide, download the Minnesota Department of Public Safety, Office of Traffic Safety's *Teen Drivers: The Parent's Role* at:
  https://dps.mn.gov/divisions/ots/teen-driving/Documents/Parent-class-leaders-guide-july-2013.doc
- The Minnesota Office of Traffic Safety developed *Point of Impact: Teen Driver Safety Parent Awareness Program* as a community-based class for parents and their soon-to-be teen drivers. The *Point of Impact Leader's Guide* is a resource for implementing the class. The Point of Impact video is an important component of the program. A PowerPoint presentation and other information are available by contacting Gordy Pehrson at gordy.pehrson@state.mn.us.
- For information on the nationally recognized University of Michigan's *Checkpoints* program offering facilitated parent education:
  http://youngdriverparenting.org/ and http://www.saferdrivingforteens.org/
- For a comprehensive guide to strengthen parental roles in teen safe driving, see the Governors Highway Safety Association's (GHSA's) *Promoting Parent Involvement in Teen Driving: An In-Depth Look at the Importance and the Initiatives.*
  http://www.ghsa.org/html/publications/pdf/sfteens13.pdf
- For additional information on mandated and voluntary parent/teen education programs in Connecticut, Massachusetts, Georgia, and select Virginia counties, see GHSA's *Curbing Teen Driver Crashes: An In-Depth Look at State Initiatives.*
  http://www.ghsa.org/html/publications/pdf/sfteens12.pdf
- For age-specific information and resources for parents on how to start and continue the conversation about alcohol use with their children, see the North Dakota's *Parents LEAD* program (Listen, Educate, Ask, Discuss).
  http://www.parentslead.org/
- For PowerPoint presentations, parent/teen activities and other tools to be adopted for driver education providers, see *Teendriversource*: *Research Put into Action.*
  www.teendriversource.org
- For information on *Teen Driving Parents/Alive at 25* that includes a 1-hour parent, 4-hour teen driving program including a comprehensive publication, *Teen Driver; A Family Guide to Teen Safe Driving.*
  http://www.nsc.org/products_training/Products/MotorVehicleSafety/Pages/TeenDriving.aspx

- For information in Utah's award winning *Don't Drive Stupid* Parent Night Program.
  http://publicsafety.utah.gov/highwaysafety/documents/smart.pdf
  http://www.ghsa.org/html/meetings/awards/2013/13utah.html
- For information on *Parents are the Key* and free downloadable resources that can be customized.
  www.cdcgov/ParentsAreTheKey/
- For North Dakota road safety information including facts sheets, issue briefs, and other education and outreach resources, visit the NDSU Rural Transportation Safety and Security Center (RTSSC) at:
  http://www.ugpti.org/rtssc/resources/

  The NDSU Upper Great Plains Transportation Institute at:
  http://www.ugpti.org/resources/

***Other high-impact, proven strategies for local agency consideration:***

- Conduct locally facilitated peer-to-peer driver safety outreach campaigns designed for high school students to raise peer awareness of the common risk factors threatening novice drivers.

***Considerations for future expanded local agency/community support of North Dakota SHSP young-driver safety strategies:***

- Engage local traffic safety stakeholders (law enforcement, school administrators, driving schools, insurance companies, community health providers, emergency medical service providers) and facilitate coalition development to educate local elected officials on the importance of state agency GDL and teen driver safety policy initiatives.

### 5.4.7 Unbelted Occupants

Grand Forks Region Priority Strategy – **Conduct highly publicized enforcement campaigns to maximize restraint use.**

**Description:** See Section 5.4.5 for a description of high-visibility/highly publicized enforcement campaigns.

North Dakota law enforcement agencies (state, county, city, and tribal) participate in the state's *Click It or Ticket* mobilization program to boost seat belt use and reduce highway fatalities through stepped up enforcement of unrestrained occupants. The mobilization is supported by national and local paid advertising and earned media campaigns aimed at raising awareness before the enforcement saturation. North Dakota conducts four annual *Click It or Ticket* campaigns—including participation in the national campaign in May around the Memorial Day holiday. North Dakota has increased its focus on nighttime seat belt use because fewer motorists buckle up at night resulting in a greater number of nighttime serious crashes.

***Getting Started:***

- Contact the Traffic Safety Office (TSO) to participate in the SHSP process as a stakeholder in the implementation of strategies identified for priority safety emphasis areas, such as unbelted crashes, in the SHSP.
- Assist local law enforcement agencies with identifying locations with high unbelted crash involvement for high-visibility enforcement.

- With local law enforcement, attend county board/city council meetings to speak on the importance of enforcing belt use.
- Collaborate with highway patrol, local law enforcement, community health officials, and local traffic safety stakeholders to use TSO belt use campaign materials to conduct community outreach on the enforcement campaign.

*Implementation Resources:*

- For crash data and analysis to focus seat belt enforcement efforts, contact the NDDOT Traffic Safety Office (TSO) at 701-328-4692.
- To learn about local traffic safety enforcement initiatives, secondary enforcement strategies, and enforcement grant opportunities, contact the TSO and the state's Law Enforcement Liaison at (701) 328-4692. Enforcement grant application information for overtime belt enforcement can be found at: https://www.dot.nd.gov/divisions/safety/trafficsafety.htm
- See Section 5.5, Traffic Safety Office Supporting Resources.
- For statewide belt use mobilizations, the TSO distributes media outreach materials to local enforcement agencies which may include: press releases, talking points, camera-ready artwork and posters, belt-use fact sheets, a print public service announcement (PSA), and live-read radio PSAs. *(Note: TSO to assemble available information resources.)*
- For information on state strategies to achieving a high seat belt use rate. http://www-nrd.nhtsa.dot.gov/Pubs/810962.pdf
- For guidance on planning and publicizing belt-use saturation patrols:

  NHTSA 2014 national seat belt enforcement *Products for Enforcement Action Kit (PEAK)* to help enforcement rally officers and alert the public to prepare for maximum high-visibility seat belt enforcement during the day and also at night. http://www.trafficsafetymarketing.gov/CIOT-PEAK

  *Nighttime Enforcement of Seat Belt Laws: An Evaluation of Three Community Programs,* NHTSA, Report No. DOT HS 811 189, August 2009.

  *Innovative Seat Belt Demonstration Programs in Kentucky, Mississippi, North Dakota, and Wyoming,* NHTSA, Report No. DOT HS 811 080, March 2009.

  *Avoiding "Tween" Tragedies: Demonstration Project to Increase Seat Belt Use Among 8- to 15-year-old Motor Vehicle Occupants,* NHTSA, Report No. DOT HS 811 096, June 2012.

  For the above and other belt enforcement and information outreach resources: http://www.nhtsa.gov/Driving+Safety/Occupant+Protection
- Other seat-belt safety resources:

  Governor's Highway Safety Administration: http://www.ghsa.org/html/issues/occprotection/index.html

  Insurance Institute for Highway Safety: http://www.iihs.org/iihs/topics/t/safety-belts/topicoverview

*Potential future considerations for expanded local agency, tribal, and community-based support of SHSP safety strategies:*

- Pursue tribal ordinances for primary enforcement of seat belt laws.
- Conduct community-wide and sustained public information outreach to educate and create cultural awareness of the risks associated with unbelted motorists.

### Grand Forks Region Priority Strategy – Pursue local support for primary seat belt law.

**Description:** Seat belts save lives. Research supports that lap/shoulder seat belts reduce the risk of fatal injury to front-seat passenger car occupants by 45 percent and the risk of moderate-to-critical injury by 50 percent. For light-truck occupants, seat belts reduce the risk of fatal injury by 60 percent and moderate-to-critical injury by 65 percent. Seat belts are extremely effective in preventing occupant ejection from the vehicle, the most injurious of crash outcomes (NHTSA, 2014).

Primary enforcement of seat belt laws has a proven track record of getting more people to buckle up. A primary enforcement seat belt law enables a law officer to stop motorists if the driver or any occupant is unbelted. North Dakota's secondary enforcement law permits law enforcement to ticket unbelted motorists only if they are stopped for some other offense such as speeding.

Studies show that seat belt use in states with primary laws is 9 percentage points higher compared to states with secondary laws (Shults and Beck, 2012). Primary enforcement sends a clear message to the motoring public that the State views safety belt use (and the safety belt law) as essential for the safe operation of a motor vehicle. When States upgrade their laws from secondary to primary, the perceived public importance of safety belt use is strengthened leading to greater seat belt compliance. Increasing adult belt use also has a significant impact on child passenger safety, because drivers who wear safety belts are more likely to restrain their child passengers.

The foundation of enacting a primary seat belt law begins with developing grassroots, local-level support. Local community support, when thoughtfully and strategically applied, gets the attention of state elected officials. A community shift toward supporting primary seat belt occurs incrementally, one step at a time. Following are some initial steps and resources to launch the Grand Forks region's efforts.

*Getting Started:*

- Contact the Traffic Safety Office (TSO) to participate in the SHSP process as a stakeholder in the implementation of strategies identified for priority safety emphasis areas, such as unbelted crashes, in the SHSP.
- Establish a local seat belt coalition or advocacy group to strengthen grassroots support for upgrading North Dakota's secondary belt law to primary seat belt enforcement. Following the national model of engaging multiple disciplines for traffic safety, support for primary enforcement can be found and strengthened throughout the community, including:
  - Enforcement: District State Patrol, county sheriff, and city police enforcement personnel
  - Emergency Medical Response/Medical Community: EMS, fire, and rescue departments; local county health and injury prevention organizations; injury prevention advocacy groups; ER doctors and nurses, and other health care professionals

  - Education Outreach: DOT District, county, and city public affairs/media outreach professionals; local school boards, PTAs, school administrators, Mothers Against Drunk Driving [MADD], Students Against Destructive Decision (SADD), North Dakota Safety Council, AAA North Dakota
  - Engineering: NDDOT District, county, and city traffic safety and road maintenance personnel
  - Employers/Business Leaders: Chambers of commerce, leading local companies/major employers, insurance companies, auto dealers and manufacturers

- Suggested local contacts in the the Grand Forks region include:
  - Altru Health System
    Bill Vasicek, Community Safety Coordinator
    bvasicek@altru.org, 701-780-5939
  - North Dakota Emergency Nurses Association
    President: Mary Jagim MS, RN, CEN, FAEN mkjagim@gmail.com
    President-Elect: Jodi Sherve BSN, RN, CEN j.sherve@yahoo.com
    Secretary: Vicki Black BSN, RN, EM vblack@altru.org
  - Safe Kids Grand Forks
    Carma Hanson, Coordinator
    chanson@altru.org, 701-780-1489
- Engage advocacy group members to develop unified key messages for a consistent and clear message of support for primary seat belt (key unbelted crash facts, primary belt benefits, employer and societal costs of unbelted crashes, key community supporters of primary). Seek example outreach resources from neighboring "primary" states and states who've passed primary seat belt law.
- Create advocacy web portal of information in support of primary seat belt (key unbelted crash facts, primary seat belt benefits, employer and societal costs of unbelted crashes).
- Identify key local champions to help carry the message to local elected officials (city council, county board, mayoral offices) and key community influencers (for example, business leaders).
- Conduct legislative outreach in support of primary seat belt using interdisciplinary team from primary advocacy group (enforcement, engineering, health/injury prevention).

*Implementation Resources:*

- For crash data and analysis to focus seat belt enforcement efforts, contact the NDDOT Traffic Safety Office (TSO) at (701) 328-4692.
- Upgrading Minnesota's secondary seat belt law to a primary law resulted in an estimated 68 to 92 fewer deaths, between 320 and 550 fewer incapacitating injuries, and $45 million in avoided hospital charges in the 2 years since the primary law was enacted and enforced. See *Impacts of Minnesota's Primary Seat Belt Law* at: https://dps.mn.gov/divisions/ots/seat-belts-air-bags/Documents/dps-eval-primary-seat-belt-law.pdf

- For Minnesota Seat Belt Coalition's Primary Seat Belt legislative talking point booklet addressing key questions about Primary Seat Belt, facts sheets, and unbelted fatalities and serious injuries by legislative district, contact the Minnesota Safety Council at 651-291-9150 or msc@minnesotasafetycouncil.org.
- Florida's statewide belt usage leaped from 80.9 percent in May 2009 to 87.4 percent after the 2010 May seat belt enforcement campaign and the passage of the state's primary seat belt law. See *Impact of Implementing a Primary Enforcement Seat Belt Law in Florida: A Case Study* at: http://ntl.bts.gov/lib/45000/45800/45875/811656.pdf
- For seat belt key messages see NHTSA CIOTI web site: http://www.nhtsa.gov/nhtsa/2013ciot/stats.html
- Center for Disease Control and Prevention seat belt briefing: http://www.cdc.gov/motorvehiclesafety/seatbeltbrief/
- For example tribal council primary seat belt law: http://staging.dl-online.com/content/white-earth-council-passes-seat-belt-law
- For North Dakota road safety information including facts sheets, issue briefs, and other education and outreach resources, visit the NDSU Rural Transportation Safety and Security Center (RTSSC) at: http://www.ugpti.org/rtssc/resources/

  The NDSU Upper Great Plains Transportation Institute at: http://www.ugpti.org/resources/

## 5.5 Traffic Safety Office Supporting Resources

Unless otherwise indicated, for technical assistance and supporting resources contact the NDDOT Traffic Safety Office (TSO) at (701) 328-4692.

### 5.5.1 TSO Grant Program Application Process

The TSO solicits grant applications from eligible state and local agencies and for-profit and non-profit organizations that address North Dakota's problem solution plans or PSPs. PSPs reflect the state's greatest opportunities for behavioral safety improvement. Grant applications are due June 30 of each year and are evaluated based on: (1) response to identified problems; (2) proposed evidenced-based strategy; (3) clear objectives; (4) comprehensive evaluation plans; and (5) cost-effective budgets. Selected projects are included in TSO's Highway Safety Plan and once approved by NHTSA, grant contracts are generally effective October 1 through September 30.

### 5.5.2 Technical Assistance

#### County Outreach Program

The TSO, in cooperation with the North Dakota Association of Counties, offers a county-based Traffic Safety Outreach program to provide advocacy and community mobilization, media support, public outreach, and training to address seat belt use, impaired driving, speeding, and distracted driving at the county level. County participants include county employees, county

officials, law enforcement, transportation engineering, public health, schools, businesses, nonprofit agencies, media, and other entities.

## 5.5.3 Traffic Records/Crash Data

### Traffic and Criminal Software (TraCS)

The quality of traffic safety issue identification and decision-making regarding effective safety strategies and their implementation is based on the quality and timeliness of crash data. Data is collected from officer crash reports at the time of the incident when a crash involves fatalities, injuries, or at least $1,000 in property damage. NDDOT reviews the crash report and enters the data into a centralized database called the Crash Reporting System (CRS).

To assist law enforcement in providing timely, complete, and accurate crash reports, the NDDOT Traffic Safety Office (TSO) supports the installation of Traffic and Criminal Software or TraCS and provides technical assistance and training to local agency and tribal law enforcement to effectively deploy TraCS for in-the-field incident reporting. Local and tribal enforcement agencies are strongly encouraged to utilize the convenience of TraCS for the electronic submission of crash reports to the NDDOT. Key benefits to participating agencies and tribes are the reduced officer time and effort required for duplicate entry into local and state crash databases, reduced need for data entry resources and administrative support, as well as improving the overall quality and timeliness of the crash report.

### Local Agency Crash Data Support

The Upper Great Plains Transportation Institute develops crash data summaries for each law enforcement agency under contract with the TSO for overtime enforcement supporting impaired driving and seat belt enforcement campaigns. The crash data summaries demonstrate the priority crash factors and trends within each local agency's jurisdiction.

### Annual Crash Summary

The NDDOT annually publishes the Crash Summary to identify and describe the annual crash data and historical crash trends in North Dakota including the description of factors contributing to the occurrence of traffic crashes and the resulting injuries and fatalities. The Crash Summary is a valuable reference resource for local agencies and their safety partners for problem identification, safety strategy planning, targeted strategy implementation, program evaluation, and media inquiries, and is located at:
http://www.dot.nd.gov/divisions/safety/docs/crash-summary.pdf

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