LOCAL GOVERNMENT MANUAL

May 2008

Prepared by

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
BISMARCK, NORTH DAKOTA

http://www.dot.nd.gov/

DIRECTOR
Francis G. Ziegler, P.E.

LOCAL GOVERNMENT ENGINEER
Dave Leftwich, P.E.

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NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
LOCAL GOVERNMENT MANUAL

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MISSION STATEMENT

"Providing a transportation system
that safely moves people and goods."

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MANUAL OBJECTIVE

(May 2008)

The objective of this manual is to provide a reference source explaining the process of developing urban projects, county projects, transportation enhancement projects, and public transit projects.

This manual is intended for use by the state, cities, metropolitan organizations (MPOs), counties, local organizations, and consultants to help in developing highway and related transportation projects. The manual presents guidelines, policies, and procedures for planning, programming, funding, developing, designing, constructing, and maintaining urban and county roads.

This manual will be updated on an as needed basis such as when data becomes obsolete, outdated, or the information in this manual needs clarification.

For questions pertaining to this manual,
call the NDDOT Local Government Division at (701)328-2540

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PREFACE
(May 2008)

In 1997, the North Dakota Department of Transportation (NDDOT) implemented its new Strategic Business Plan (SBP). The SBP gave the Department renewed direction and focus to accomplish our agency purpose. One of the various changes that resulted from the SBP was the formation of the Local Government Division (LGD), which manages the following five key functions: county road projects, MPO planning activities, urban roads projects, transportation enhancement projects, and transit grant administration. This manual was developed to address the issues involved in these Local Government functions.

The new SBP gives local units of government greater flexibility and authority in decision-making, especially on projects off the national highway system (NHS) and off North Dakota's state highway system. To accomplish this, NDDOT developed a certification program for these highway systems. Local units of government certify to NDDOT, when they submit a project for federal funding, that all appropriate federal and state requirements will be met. This manual provides guidance to the local agencies in certifying their activities.

URBAN PROGRAM

Federal legislation (Highway Bill) authorizes spending federal funds for highway-related improvements on routes within approved city, urban and urbanized boundaries. "Urban areas" and "urbanized areas" are designated by the Bureau of the Census, but for transportation purposes must also be approved by the Federal Highway Administration (FHWA). For funding purposes, non-urban areas, urban areas, and urbanized areas will be defined as follows:

- **A "Non-Urban Area" has a population of less than 5,000 (e.g., Hettinger)**
- **An "Urban Area" has a population of 5,000 or more (e.g., Minot)**
- **An "Urbanized Area" has a population over 50,000 and includes at least one urban area and the surrounding cities and rural area. There are three urbanized areas in North Dakota: the Bismarck-Mandan, Fargo/West Fargo-Moorhead/Dilworth, and Grand Forks-East Grand Forks metropolitan areas.**

In order to keep this manual simple, we will use "city" to mean "urban area"

Local governments are responsible for planning, designing, building, and maintaining improvements to urban roads. The only exceptions are projects on the Regional and Interstate systems, where NDDOT is responsible. NDDOT will work with local governments and the FHWA to develop urban projects. This manual defines state-city relationships and other details and procedures for implementing the urban program.

COUNTY PROGRAM

In the county program, the projects which are on the County Major Collectors (CMC) are referred to as “on system,” and projects not on major collectors are “off system” projects.

The CMC system is a network of county roads which has been identified by the county, and approved by the North Dakota Department of Transportation (Department), and the Federal Highway Administration (FHWA). Any route designated to be on the CMC system must be functionally classified as a major collector. Reasonable changes can be made to this system if a route is a major collector and the proposed change fits logically into the existing county network. Roadway designation changes are initiated by a request from the county board to the LGD with necessary supporting information.

The urban and county programs will adhere to current federal-aid procedures.

A vast amount of material is referenced in this manual. To avoid rapid obsolescence of the manual, few publication dates have been given for the reference material. ***It is the manual holder’s responsibility to obtain and use the MOST CURRENT VERSION, AS AMENDED, of all necessary reference sources. LGD will also try to keep local agencies informed whenever possible.***

REOCCURRING ANNUAL CALENDAR OF EVENTS
Based on Federal Fiscal Year

October

- Start of the Federal fiscal year
- Meet with Counties at annual convention to discuss funding for the current year and funding of future projects
- Confirm in writing to each county, project(s) for the upcoming year and following years
- Conduct Project Management Reviews (PMR's) with FHWA of completed projects (Urban and County Projects)
- Local Road Coordinators workshop in Rapid City
- Meet with cities at annual American Public Works Association Conference to discuss current and future project related issues

November

- NDSTREET applications mailed out
- TE project applications due
- SRTS project applications due
- SRF project applications are due

December

- Cities must submit project lists for the next 4-years

February

- NDDOT develops safety and bridge programs
- NDDOT sends a list of programmed urban, bridge, and safety projects to cities
- NDDOT accepts annual transit grant applications from local transit provides
- NDSTREET applications due

March

- NDDOT reminds MPO's of draft TIPs due in May
- Coordinate dates for MPO's mid-year reviews

April

- Bridge inspection data sent out to applicable counties and cities based on a two year inspection cycle

May

- MPO's must submit draft TIP's
- NDDOT sends cities list of high-crash locations for determining eligibility for safety programs
- Mid-year MPO reviews

June

- Distribute draft federal-aid program sheets to counties for review

July

- July 1 marks the start of the State's fiscal year
- Draft STIP goes to FHWA

August

- MPO's must have submitted transit-funded activities
- TE applications sent out
- SRTS applications are sent out
- SRF applications are sent out
- Review and approve Annual Unified Planning Work Programs (UPWP)

September

- NDDOT submits Final STIP to FHWA approval
- NDDOT letter to cities asking for the next 4-year project lists (send form)
- October 1 marks the start of the federal fiscal year

GLOSSARY
(May 2008)

AADT. Average annual daily traffic.

AASHTO. American Association of State Highway and Transportation Officials, 444 N. Capitol St. NW, Suite 249, Washington, D.C. 20001. This is a nonprofit, nonpartisan corporation, whose members are mostly state government transportation officials. AASHTO is concerned with the five main modes of transportation. Its aim is to "foster the development, operation, and maintenance of an integrated national transportation system."

ADA. Americans with Disabilities Act.

APPORTIONMENT. The percentage of the federal-aid **appropriation** assigned to each state by the federal government. Also, the federal funds assigned to cities by NDDOT. (See also **appropriation** and **obligational limits**.)

APPROPRIATION. The amount of money that Congress votes to give the states for transportation. Regardless of a state's **apportionment**, its **obligational limits** are determined by the federal **appropriation.**

ASTM. American Society of Testing and Materials.

CE. Construction engineering.

CFR. Code of Federal Regulations.

CM/AQ. Congestion Mitigation and Air Quality Program.

CMC. County Major Collector.

CONTRACT MANUAL. Contract Administration Manual for Non-construction Contracts.

DBE. Disadvantaged Business Enterprise.

DESIGN SPEED. The maximum safe speed that can be maintained over a specified segment of highway when conditions are as favorable as possible.

DESIGNING AGENCY. For the purposes of this manual, this term means "city, county, or NDDOT." It does not include consultants.

DISTRIBUTION FORMULA. The ratio NDDOT uses to divide federal transportation funds between various programs.

DTF. Directors Task Force.

EA. Environmental Assessment.

EEO. Equal Employment Opportunity.

EIS. Environmental Impact Statement.

EO. Executive Order.

EPA. Federal Environmental Protection Agency.

ER. Emergency Relief.

EXECUTION. A contract is "executed" on the date when the contractor and the city sign the agreement.

FEIS. Final Environmental Impact Statement.

FEMA. Federal Emergency Management Agency.

FONSI. Finding of No Significant Impact.

FTA. Federal Transit Administration.

FHWA. Federal Highway Administration. This branch of the U.S. Department of Transportation monitors the use of federal aid for transportation in the states.

"GREEN BOOK." A Policy of Geometric Design of Highways and Streets, AASHTO.

ITE. Institute of Traffic Engineering.

LA. Local Agency.

LRP. Long Range Plan.

LTAP. Local Technical Assistance Program.

MOA. Memorandum of Agreement.

MPO. Metropolitan Planning Organization.

MUTCD. Manual on Uniform Traffic Control Devices.

NAAQS. National Ambient Air Quality Standards.

NBI. National Bridge Inventory.

NDDOT. North Dakota Department of Transportation.

NDSTREET. North Dakota Small Town Revitalization Endeavor for Enhancing Transportation.

NEPA. National Environment Policy Act.

NHI. National Highway Institute.

NHS. National Highway System. A system of routes designated by Congress.

OBLIGATIONAL LIMITS. The part of their **apportionment** of federal funds which the federal government allows NDDOT and other states to actually **spend.** Limits are established each year by Congress, and are always less than the **apportionment**.

PCN. Project Control Number.

PE. Preliminary engineering; also Professional Engineer.

PL. Public Law.

PMR. Project Management Review.

PS&E. Plans, Specifications, & Estimates.

ROD. Record of Decision.

R/R. Railroad.

R/W. Right of Way.

SAFETEA-LU. Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy of Users. It is the federal statute granting federal aid to states for transportation purposes.

SHPO. State Historical Preservation Office.

SOV. Single Occupancy Vehicle; also Solicitation of View.

SRF. Special Road Fund

SRTS. Safe Routes To School.

STIP. Statewide Transportation Improvement Program.

STP. State Transportation Plan (state plan). All projects receiving federal aid must come from a transportation planning process and be consistent with the state transportation plan. Any local transportation plans that will eventually receive federal aid must also be consistent with the state plan.

TE. Transportation Enhancement

TIP. Transportation Improvement Program.

TRB. Transportation Research Board.

TS&L. Type, Size, & Location.

T^2. Technology Transfer.

USACE. U.S. Army Corps of Engineers.

USC. United States Code.

USCGS. U.S. Coast and Geologic Survey.

USDA. U.S. Department of Agriculture.

USGS. U.S. Geologic Survey.

UZA. Urbanized Area.

WARRANTS. The criteria used to determine the need for a safety treatment or improvement. A treatment or improvement which meets the criteria is said to be **warranted**.

SECTION 1.1 – LOCAL GOVERNMENT DIVISION
(May 2008)

1.1.1 GENERAL

The current federal legislation covers highway, transit, intermodal, and other transportation activities. The NDDOT's Local Government Division (LGD) is responsible for administrating funds under the following programs.

The NDDOT administers Federal aid for transportation related projects to local governments throughout the state. To be a recipient of Federal aid, a local government must be a City with a population greater than 5,000 or a County. Other units of government may seek Federal aid by working through the associated City or County level of government. In addition, all sub-recipients of Federal aid must have complied with the Single Audit Act prior to signing an agreement with the Local Government Division. All audit findings must be corrected prior to future agreements being signed.

1.1.2 URBAN PROGRAM

The urban program consists of three categories: Interstate, regional highway, and urban road programs.

Interstate system. This system consists of all Interstate highways through urban areas.

Regional highway system. This system consists of all state highways (NDDOT-and U.S.-originated) in urban areas, and is divided into the primary regional and secondary regional systems. Both primary and secondary regional routes may be designated as national highway system (NHS) routes. The NHS is a system of routes designated by Congress.

Primary regional system. This system consists of state routes that serve through-traffic most efficiently in urban areas. Truck routes are given preference. In the case of parallel routes, only one is on the primary regional system. State routes near and parallel to the Interstate system are not designated primary regional routes.

Secondary regional system. All urban state highways not on the primary regional system are on the secondary regional system.

Urban roads system. This system consists of all urban roads not on the Interstate or regional system but classified as collectors and above.

Please refer to Chapter 11, which contains maps showing all these systems by city.

1.1.3 COUNTY ROADS PROGRAM

County Major Collectors (CMC) serve as a network of county roads in the collector network typically connecting with state highways. This network is some times called the farm-to-market system.

County "off-system" routes are typically lower volume county and township roads.

1.1.4 NDDOT, CITY, AND COUNTY RESPONSIBILITIES

The NDDOT will complete the preliminary engineering (PE) and construction engineering (CE) for projects on the Interstate and regional system. There may be situations where the NDDOT will use consultants or ask city staffs to complete the engineering on the regional system. **For all other urban projects, the city will complete the PE and CE. For all county projects, the county will complete the PE and CE.**

The following are the general responsibilities of the NDDOT and the local agencies.

1.1.4.1 NDDOT responsibilities.

a. Provide federal funds for project development if asked to do so by the city or county, according to the guidelines established in Section 2.2 of this manual. The federal funds used for project development will come from the city's or county's federal-aid apportionment. (The federal government "apportions" federal funds to the NDDOT and other states' transportation agencies. The states, in turn, "apportion" funds to the cities and counties.) Federal funds will be provided for project development only if the project results in a construction contract. Federal funds used for project development will be reimbursed after the start of construction.

b. Approve the project at various stages for the purpose of obtaining federal funds.

c. Approve the local agency's or consultant's preliminary engineering and construction engineering services agreement, for the purpose of obtaining federal funds.

d. Hold the bid openings for all federal-aid projects unless the local agency requests to hold a bid opening and the request is approved by the NDDOT and FHWA. The NDDOT will provide the local agencies with technical assistance if their request to hold a bid opening is approved.

e. Concur in the local agency's award of the contract.

f. Audit the local agency's records to ensure that federal requirements have been met through Project Management Reviews (PMRs).

g. Reimburse the local agency for all costs eligible for federal aid, up to the amount available for the project. If asked to by the local agency, the NDDOT will act as an agent for the purpose of making payment to the contractor. The NDDOT will require repayment for the local share within 30 days of the NDDOT's request for reimbursement. When anticipated federal aid is less than 50 percent of final engineer's estimate, local agencies will be required to make contractor payments, and request federal reimbursement for eligible costs from the NDDOT.

1.1.4.2 City and County responsibilities.

a. Complete all PE and CE for projects on the federal-aid roads system, by using city and county staffs or hiring a consultant. This includes all phases of project development on the federal-aid roads system, including traffic studies, project concept reports, environmental clearances, public hearings, design, and right-of-way acquisition.

b. Pay for all project development activities, if a consultant is used. (In other words, pay the consultant directly, rather than paying through the NDDOT.) By agreement, federal reimbursement may be available for some of the development activities. Federal funds are not normally used for preliminary engineering on city or county projects.

c. Follow federal guidelines when selecting any consultant, if federal-aid is used for any part of the project. If federal-aid is not used for any portion of the project, the LPA should follow the procedures established by North Dakota state law. Refer to Section 3.2 of this manual.

d. Certify that all applicable state and federal standards have been adhered to.

e. Award the contract.

f. Enter into any agreements with the contractor, unless the NDDOT has agreed to act as an agent on behalf of the local agency.

g. Make payments to the contractor when the NDDOT is not acting as the agent.

h. Comply with all Disadvantaged Business Enterprise (DBE) requirements (as discussed in Section 7.3).

i. Accept responsibility for any claims made against the contract. If the local agency has federal funds available for that particular project, those funds

may be used to pay the claim, if it is an item eligible for federal aid and the federal aid is not limited.

j. Accept responsibility for any cost overruns. If the local agency has federal funds available for that particular project, those funds may be used to pay the cost overrun, if it is an item eligible for federal aid.

k. Audits must be conducted for each budgeted planning year in accordance with the Federal Office of Management and Budget Circular No. A-133. These audits are submitted to the NDDOT to be reviewed. If the NDDOT reviews and finds no problems in the audit, the project is closed out and any unexpended funds are de-obligated and placed in that city's or county's account. Unexpended funds are made available pending obligational authority for the next fiscal. If the NDDOT reviews and finds problems with the audit, the city or county must take sufficient corrective action within six months. Audits must be kept on file for three years after they have been reviewed.

1.1.5 IMPLEMENTATION

City apportionment and planning project list. Each year, the NDDOT will inform the cities what their anticipated apportionment for the next four years will be. For the purpose of planning and developing projects, the cities will be asked to submit a five-year plan describing how they intend to spend their anticipated apportionment.

County allotment and planning schedule. Each year, the NDDOT will advise the counties of their accumulated allotment, and the allotment for the next two fiscal years. For the purpose of planning and developing projects, the counties will be asked to submit a five-year plan describing how they intend to spend their anticipated apportionment.

SECTION 2.1 – GENERAL FUNDING INFORMATION
(May 2008)

2.1.1 GENERAL

This chapter describes the distribution of federal funds administered by the NDDOT and presents the basic procedures for city and county participation. (In addition to the federal programs, cities and counties receive a percentage of the state motor fuel tax. These state funds, however, are not part of the federal-aid program.)

The federal government allows the use of federal funds to pay project costs for Preliminary Engineering (PE) and Construction Engineering (CE), right-of-way acquisition, construction, utility adjustments /relocation, and audits. Expenditures for facilities, general administration, supervision, and other overhead of the cities (and counties) are not eligible for federal funds. The NDDOT policies limit participation depending on the program area, as discussed in Section 2.3 of this manual.

Federal funds may **not** be used to pay project costs performed prior to the execution of appropriate agreements and/or authorized by FHWA, whichever date is later. ("Execution" is when all parties have signed the project agreement.)

All federal highway funds are subject to changes in apportionments, matching ratios, appropriations, and obligation authority as established periodically by Congress. (See glossary entries on "apportionment," "appropriation," and "obligational limits.")

No federal highway funds may be spent until authorized by FHWA.

2.1.2 AUTHORIZATIONS, APPORTIONMENTS, AND APPROVALS

The authorization of project funds is subject to local, state, and federal regulations. Authorizations are required at several points during project development. In many cases, particularly on more complex projects, authorizations are required for each distinct phase of work; e.g., preliminary engineering, right-of-way acquisition, and construction.

2.1.2.1 Apportionment of federal funds. Federal legislation defines how federal funding is apportioned, by category, to individual states each year. These authorization bills are usually enacted for multiple-year periods. The NDDOT administers all local highway and public transit transportation federal-aid apportionments for the state of North Dakota.

2.1.2.2 Federal obligational limits. Each year, Congress limits the expenditures states can make of funds apportioned to them. These limits are called "obligational limits." The NDDOT will apply obligational limits equally to the cities, counties, and state. Federal transit funds are exempt from obligational limits.

2.1.2.3 FHWA program approval. 23 USC 105, sections 134 and 135, require that FHWA review the state's program of federal-aid projects to determine consistency of the program with certain federal policies. This approval process, known as the Statewide Transportation Improvement Program, or "STIP," is carried out in conjunction with NDDOT programming. (See Section 3.4 for details on the STIP.)

The interaction between the NDDOT and FHWA and the amount of FHWA involvement depends on the type of project and the estimated cost of the project.

SECTION 2.2 – FUNDING PROGRAMS
(May 2008)

2.2.1 GENERAL

North Dakota's road system is aging, and all systems--the state highway, county highway, and urban street systems--need additional funding. The NDDOT will distribute federal funding to local units of government by the same percentage of the total as had been allocated historically. (Assuming the federal funds are available)

2.2.2 INTERSTATE PROGRAM

The NDDOT will fund mainline Interstate improvements using Interstate funds. The cities will be required to fund grade-separated non-interchange roads and interchange projects which are a result of cross-road traffic. There may be some exceptions if the project is built in conjunction with an Interstate mainline project. To obtain funding, a city may request regional highway funds if the project is part of that system, or may use part of their urban roads program apportionment.

The NDDOT will fund new interchanges needed to alleviate congestion at existing interchanges, if the new interchanges meet FHWA access requirements.

The NDDOT will maintain the Interstate system, with the exception of grade-separated non-interchange facilities.

2.2.3 URBAN REGIONAL, URBAN ROAD, AND COUNTY ROAD PROGRAMS

Funding for the regional and urban road systems will be based on 16.57 percent of the total funding for interstate, national highway system, surface transportation program, congestion relief, and minimum guarantee sources. The resulting dollar amount is subject to obligational authority spending limits and availability annually.

Funding for county roads is based on 8.44 percent of the same categories as the urban program. It is also subject to obligational authority spending limits and availability annually.

Urban funds will be distributed 50-50 between the regional and urban road programs. Because of prior commitments to various roadway projects, not all of this amount is available each year. To determine the actual funding available to cities each fiscal year, the funding for committed projects is subtracted from the available roadway construction dollars.

Regional system funds will go to specific projects, based on needs. See Section 3.1 for details.

The urban program funds will be distributed according to the city's percentage of population compared with the entire state's urban population. The cities' percentage of population will be based on the most recent official census. Urban road funds will be distributed using a base amount per city, with the balance distributed according to population. (Example 2.2.b)

The above funding is for eligible activities associated with approved projects.

2.2.4 SECONDARY COUNTY PROGRAM

One of the primary federal funding categories for "on system" projects is the Secondary County (SC) category of funds. This category of funds can only be spent on the CMC system. The total funds made available to the counties are allotted and available to each county on a formula basis, based on rural population, land area, major collector mileage, and the county's farm-to-market mill levy collections. The counties are collectively allocated 8.44 percent of the funds received by North Dakota. This percentage is the amount historically granted to county roads.

A county may accumulate funds for several years if arrangements are made with Local Government and a project is being developed.

The items which can be funded with SC funds include construction and construction engineering (CE). Quite often, the amount of SC dollars that the county has accumulated is not sufficient to fully fund the project at the prevailing federal matching rate. In these cases, the SC funds set aside for the project will be limited to the amount the county has accumulated. The remainder of the project costs, including CE, is the responsibility of the county.

2.2.5 BRIDGE PROGRAM

The funding for bridge replacement is obtained from the NDDOT's bridge apportionment. The counties receive half of the bridge replacement funds. The cities receive funding from the state’s half of the bridge funds for bridge replacement. To receive bridge replacement funds, a structure must qualify in terms of condition rating (see Section 2.2.14.4). Funding for new bridges, widening existing bridges to increase capacity, or rehabilitating bridges not eligible for rehabilitation could come from other system programs.

Projects under the county program are funded for "on system" (BRC) or "off system" (BRO) bridges. Projects under the city program are funded for “on system” (BRU) bridges. In order to be eligible for the bridge replacement program, the structure must have a sufficiency rating of less than or equal to 50 (ratings result from bridge inspections), plus they must be structurally deficient or functionally obsolete. Additionally, the bridge must be located on an important link in the county's or city’s road network. The matching ratio in this program is 80 percent federal and 20 percent

local. These funds are made available based on the detour length, amount of traffic, and other local access.

2.2.6 SAFETY PROGRAM

The funding for the safety program will be obtained from the NDDOT's Highway Safety Improvement Program (HSIP). Safety projects include rail crossing improvement projects, intersection improvements at high-crash locations, intersection realignment, etc. The NDDOT will select the projects using information from the cities/counties and from the high-crash location analysis prepared annually by the NDDOT Planning and Programming Division (P&PD). Rail crossing projects will be initiated by P&PD, as determined from an annual assessment of needs and improvement priorities. Projects can also be initiated by a local agency.

2.2.7 TRANSPORTATION ENHANCEMENT (TE) PROGRAM

The NDDOT has set aside part of the state's transportation enhancement (TE) funding; 23.63% of the TE funds will go to the cities and 12.08% of the TE funds will go to the counties.

The NDDOT will distribute TE funds through the Director's task force. The funds available above will be set aside and the local agencies will be asked to submit a list of projects annually. The Director's task force will recommend which projects to fund. TE funds can be used only for projects eligible for TE funding.

These funds are available for projects which increase the value, beauty, or reputation of the transportation network. These funds are available only for construction on an 80.93 percent federal, 19.07 percent local match ratio. Projects which may be eligible can include: pedestrian or bicycle facilities, scenic beautification, historic preservation, rehabilitation of historic transportation buildings, etc. Projects developed in this category are selected annually on a competitive basis by the NDDOT director's task force. Applications must be sponsored either by a city or county commission.

2.2.8 NORTH DAKOTA SMALL TOWN REVITALIZATION ENDEAVOR FOR ENHANCING TRANSPORTATION (NDSTREET) PROGRAM

The intent of the program is to provide assistance to small communities in upgrading the existing pavement infrastructure and enhance the appearance of streets and sidewalks.

The NDDOT sets aside a portion of its' annual apportionment that is received from the federal government for the NDSTREET program.

Communities with less than 5,000 in population and have a state highway through their community are eligible to apply for funds.

Funding participation is split at 80:10:10 (federal:state:local) with the federal and state portion is capped at project selection based on the cost estimate submitted in the application. All cost overruns or ineligible costs will be the responsibility of the local agency.

2.2.9 SAFE ROUTES TO SCHOOL (SRTS) PROGRAM

SRTS is a new federal program that encourages youth and their families to choose walking, bicycling, and other active ways to get to and from school. This program is intended for K-8 schools.

The NDDOT is allocated funds annually through the current highway bill.

Applications will be accepted from Board of County Commissioners, Cities, Bureau of Indian Affairs, and school districts.

The SRTS program will fund 100% of the eligible items. Maintenance of the completed projects are the responsibility of the program applicant.

2.2.10 FOREST HIGHWAY FUND PROGRAM

Each year the NDDOT receives federal aid for roads categorized as Forest Highway roads. The funding level varies each year. There are only four counties in ND that have Forest Highway roads and they are:

- Billings
- Golden Valley
- McKenzie
- Slope

Due to the limited funding received each year, the counties are on a schedule to receive funding once every four years. The Forest Highway program will fund 100% of the eligible costs up to the amount received each year. Maintenance of the completed projects are the responsibility of the local agency.

2.2.11 SPECIAL ROAD FUND (SRF) PROGRAM

Each year, the NDDOT receives a portion of the investment income earned on money in the state highway fund.

This investment income the NDDOT receives is used for the SRF program as required by ND Century Code 24-02-37 and 24-02-37.2.

Projects are selected on a competitive basis. Applications will be accepted from a political subdivision or a state agency.

The SRF program will fund 60% of the construction costs. Areas within state-owned recreational, tourist, or historical areas may be funded at a higher level at the discretion of the SRF advisory committee.

The routine maintenance of the completed projects will be the responsibility of the project applicant.

2.2.12 NORTH DAKOTA RURAL OFF-SYSTEM ACCESS DEVELOPMENT (NDROAD) PROGRAM

The intent of the program is to provide assistance in upgrading the existing roadway and pavement infrastructure to new businesses. The program will allocate funding on an annual basis to Counties to provide opportunities to improve roadways to new businesses through a solicitation process.

Projects are selected on a competitive basis. Applications for projects will be solicited from counties on an annual basis. Funding participation is at 80:20 (federal:county).

2.2.13 SCENIC BYWAYS

The NDDOT's Local Government Division is responsible for the development and operation of the State Scenic Byway program. The NDDOT has contracted with the North Dakota Parks and Recreation Department (NDP&RD) for them to administer this program. The day to day operations of the Scenic Byway program are the responsibilities of the Byway Coordinator at NDP&RD.

NDP&RD accepts applications for Scenic Byway status on a biennial basis. Applications are due about the 1st of July in even numbered years. Currently North Dakota has seven State and two National byways.

For projects along byways, the byways are eligible to apply for Transportation Enhancement funds or Scenic Byway Discretionary Grant funds.

2.2.14 ELIGIBILITY

General. Federal funds are set aside for construction, rehabilitation, and reconstruction of roadways and transportation facilities, and for incidentals. Federal funds are not available for maintenance activities.

For any project to be eligible for federal funds, it must have a minimum design life of 20 years. The design life must adequately address the transportation needs along the corridor, including safety aspects, design standards, and capacity.

2.2.14.1 Interstate funds.

To be eligible for Interstate funds, a project must be located on the Interstate system. Using federal aid, NDDOT will participate in all federal-aid-eligible activities. (See Section 3.1.2)

2.2.14.2 Regional funds.

To be eligible for regional funds, a project must be located on either the regional (primary or secondary) or Interstate system. Using federal aid, NDDOT will participate in all federal-aid-eligible activities. (See Section 3.1.3)

2.2.14.3 Urban Roads Program (URP) funds.

To be eligible for urban roads program funds, a project must be associated with either the urban roads or regional (primary or secondary) system. URP funds can be spent on any of these systems, for any federal-aid-eligible item, such as bridges, TE, road work, etc., or any combination. Using federal funds, NDDOT will participate in any federal-aid-eligible activities. (See Section 3.1.4.1)

The use of URP funds on a project is the city's decision. The participation for these activities will be limited for each project, depending on the city's available apportionment. This limit will be established based on the city's estimate, submitted when the project is requested. Normally, limits will be established each year for the first two years of the city's five-year program.

2.2.14.4 Bridge funds.

Bridge funds may be used on the Interstate, regional (primary or secondary), urban roads system, or county roads system. Off-system bridge funds are also available for bridges on rural minor collectors and local roads. NDDOT participation is limited to federal aid eligible CE and construction costs of the project.

Each year, the NDDOT will send a list to the cities and counties of all bridges in the state eligible for bridge funds. Annually, cities will submit to the NDDOT a list of the bridges for which they are requesting funds. The NDDOT will evaluate all requested urban bridge projects and develop an urban bridge program each year, based on eligibility criteria and available federal funds.

If the structure is functionally obsolete or structurally deficient and has a sufficiency rating equal to or less than 50, it is eligible for replacement. If it has a sufficiency rating greater than 50 but less than or equal to 80, it is

eligible for rehabilitation. If it has a sufficiency rating greater than 80, it is not eligible for bridge funds. Bridge funds may be used for the structure and approaches only as necessary to provide an adequate connection to the existing roadway. (See Section 3.1.5)

2.2.14.5 Safety funds.

Safety funds may be used on the Interstate, regional (primary or secondary), urban roads systems, and county roads systems. Safety funds must be used to correct an existing safety hazard or to eliminate a potential safety hazard. The local agency must provide documentation to justify using safety funds on a project. NDDOT will participate, using federal aid, in any federal-aid-eligible activity. NDDOT participation is limited to eligible CE and construction costs of the project. (See Section 3.1.6)

2.2.14.6 Transportation Enhancement (TE) funds.

Ten activities are eligible for TE funding, in three general categories: pedestrian or bicycle facilities, scenic and environmental, and historic (See Section 3.1.7). TE projects must fall under one of these activities. The 10 activities are:

a. Pedestrian or bicycle facilities
b. Acquisition of scenic easements and scenic or historic sites
c. Scenic or historic highway programs
d. Landscaping and other scenic beautification
e. Historic preservation
f. Rehabilitation and operation of historic transportation buildings, facilities
g. Preservation of abandoned railway corridors, including conversion for use as bicycle or pedestrian trails
h. Control and removal of outdoor advertising
i. Archeological planning and research
j. Mitigation of water pollution due to highway runoff

2.2.14.7 North Dakota Small Town Revitalization Endeavor for Enhancing Transportation (NDSTREET) funds

NDSTREET funds are limited to expenditures on the state highway system. Funds can not be used outside of state highway right of way. Funds are eligible for reimbursement of preliminary engineering, construction, construction engineering, and utilities.

Underground work such as water and sanitary sewer will not be eligible for federal aid. A portion of the storm sewer costs will be eligible based on the contributing runoff within the right-of-way.

2.2.14.8 Safe Routes To School (SRTS) funds

SRTS funds are eligible for infrastructure projects such as:

- Sidewalk improvements
- Traffic calming and speed reduction improvements
- Pedestrian and bicycle crossing improvements
- On-street bicycle facilities
- Off-street bicycle and pedestrian facilities
- Traffic diversion improvements within two miles of the school

SRTS funds are eligible for non-infrastructure projects such as:

- Public awareness campaigns and educational material
- Traffic education & enforcement in the vicinity of schools
- Student sessions on bicycle and pedestrian safety, health, and environment

2.2.14.9 Forest Highway (FH) funds

To be eligible for Forest Funds, a roadway must be designated as a Forest Highway Road. Forest Highway roads can be part of the CMC system or they can be part of the off-system.

2.2.14.10 Special Road Fund (SRF) funds

SRF funds may be used for the constructing and maintenance of access roads to and within recreational, tourist, and historical areas.

2.2.14.11 North Dakota Rural Off-system Access Development (NDROAD) funds

NDROAD funds are to be used on county roads. The funds can be used for new pavement, grading, widening, rehabilitation, or upgrading of the existing road.

2.2.14.12 Scenic Byways

A Scenic Byway highway designation will fund the installation of signs along the route and will also receive recognition on the ND State Highway Map and ND Tourism Travel Guide.

FEDERAL AID PARTICIPATION BY TYPE OF PROJECT (LIMITED TO ACTUAL CONSTRUCTION OF PROJECT)											
	INTER	**RHS**	**URP**	**BR**	**SAFT**	**TE**	**SC/FH**	**NDSTREET**	**SRTS**	**SRF**	**NDROAD**
PE	Yes	Yes	Yes	No	No	No	Maybe	Yes	No	No	No
CAPPED	No*	No*	Yes	No*	No*	Yes	Maybe	Yes	Yes	Yes	Yes
CE.	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
UTILITIES	Yes	Yes	Yes	No	No	No	Maybe	Yes	No	No	No
ROW	Yes	Yes	Yes	No	No	No	Maybe	Maybe	No	No	No

*Federal funding is capped for overall program but not for individual projects.

Example 2.2.a

DISTRIBUTION OF FEDERAL FUNDS IN URBAN ROADS PROGRAM

Formula: (% pop x funding amount) + base amount

CITY	2000 CENSUS	% OF URBAN POPULATION
Fargo	90,599	27.05
Bismarck	55,532	16.58
Grand Forks	49,321	14.73
Minot	36,567	10.92
Mandan	16,718	4.99
Dickinson	16,010	4.78
Jamestown	15,527	4.64
West Fargo	14,940	4.46
Williston	12,512	3.74
Wahpeton	8,586	2.56
Devils Lake	7,222	2.16
Valley City	6,826	2.04
*Grafton	4,516	1.35

*Grafton fell below 5,000 in the 2000 census and were given a probationary period until 2010. The probationary period allows them to receive federal funds.

Please note: the funding example illustrated above does not include an adjustment for federal obligational limits. The federal government normally applies federal obligational limits prior to the start of the new federal fiscal year (October 1). Any federal obligational limits applied by the federal government will be applied, by NDDOT, to state, county, and city funding in the same proportion.

DISTRIBUTION OF FEDERAL FUNDS IN COUNTY ROAD PROGRAM

Total funds received$ x 8.44% x Obligation Limit = $ Available

$ Available x .75 = Funds Distributed with Basic Allotment

$ Available x .25 = Funds Distributed Based on Local Effort

Formula: % of County Major Collector + % of Land Area + % of Rural Population [excludes towns ≥5000] ÷ 3 x .75 of Funds Available = Basic Allotment Amount

Local Mill Levy Collections ÷ All Mill Levy Collections Statewide x .25 of Funds Available = Local Effort Amount

Basic Allotment + Local Effort = Individual County Yearly Allotment

Example 2.2.b

SECTION 2.3 – PROJECT PARTICIPATION
(May 2008)

2.3.1 INTERSTATE PROGRAM

The NDDOT will match the federal funds for the Interstate projects. The current match rate is 10% for improvements which do not add capacity and 20% for improvements which add capacity.

There are two exceptions to this match. Grade-separated non-interchange facilities and interchange projects, which are a result of crossroad traffic and are not built as part of an Interstate mainline project, are the city's responsibility. There may be some exceptions if the project is built in conjunction with an Interstate mainline project. To obtain funding, the city may request regional highway funds if the project is part of that system, or may use part of their urban roads program apportionment.

The NDDOT will match the federal funds (10%-20%) for new interchanges which are needed to alleviate congestion at existing interchanges and meet the FHWA access requirements.

2.3.2 REGIONAL PROGRAM

On the regional system, federal funds may be used for PE (including project development and design), CE, right-of-way, utilities relocation, and actual construction.

2.3.2.1 **Primary regional program**.

The NDDOT will match the federal funds (current match ratio is 19.07%) for projects on the primary regional system, except for the following items:

a. The city will be required to match federal funds (19.07%) for service road improvements.

b. The city will be required to fund items not eligible for federal aid, such as waterlines, sanitary sewer, local storm sewer, and items exceeding reasonable design specifications as determined by NDDOT.

2.3.2.2 **Secondary Regional program**.

The NDDOT will provide half the match of federal funds (the current match ratio is 19.07%, so the NDDOT will provide 9.07% and the city will provide 10%), except for the following items:

a. The city will be required to provide the 19.07% match for service road improvements.

b. The city will be required to fund items not eligible for federal aid, such as waterlines, sanitary sewer, local storm sewer, and items exceeding reasonable design specifications as determined by NDDOT.

2.3.3 URBAN ROAD PROGRAM

In the urban roads program, federal funds may be used for PE, CE, right-of-way, utility relocation, and construction. On the urban road system, use of federal-aid for any of these programs is a city decision. When the project is programmed, NDDOT will establish a cap for the project based on the city's submitted cost estimate. This cap will establish the maximum federal funds available for the project. Urban roads program projects will be limited. (See Section 2.2.14.3)

The cities will be responsible for providing the match for all urban road program projects. The current match ratio is 19.07%. They will also be responsible for providing funds if their federal aid apportionment has been spent. In some cases the cities will be allowed to spend their urban road funds from future years, if the overall urban obligational limit is available.

The cities will be responsible for funding all items not eligible for federal aid.

A city may accumulate its apportionment to use on future projects requiring funding greater than one year's apportionment.

2.3.4 BRIDGE PROGRAM

Cost participation in the bridge program depends on the system on which the project is located. Federal funds are available only for construction engineering and actual construction. Bridge program funding will be limited (see Section 2.2.14.4)

Primary regional	80:20:00 (Federal:State:City/County)
Secondary regional	80:10:10
Urban roads	80:00:20
County On-system	80:00:20
Off-system	80:00:20

2.3.5 SAFETY PROGRAM

Cost participation in the safety program depends on the system on which the project is located. Federal funds are available only for construction engineering and actual construction. Safety program funding will be limited (see Section 2.2.14.5)

Primary regional	90:10:00 (Federal:State:City/County)
Secondary regional	90:05:05
Urban roads	90:00:10
County roads	90:00:10

2.3.6 TRANSPORTATION ENHANCEMENT PROGRAM

NDDOT will fund 80.93% of eligible construction costs; the local agency will fund 19.07%. A maximum limit will be set for each project. If the costs exceed that amount, the agency sponsoring the transportation enhancement project is responsible for the remainder of the costs.

Transportation enhancement 80.93:0:19.07 (Federal:State:City/County)

2.3.7 COUNTY FEDERAL AID PROGRAM

Cost participation in the county federal aid program is for Construction and CE. Funds will be available to the extent that the county has accumulated funds annually allotted to them. Funding advances are considered individually.

County Federal Aid Program 80.93:0:19.07 (Federal:State:County)

FUNDING SOURCES			
SYSTEM	**FEDERAL %**	**STATE %**	**Local Agency%**
Interstate	90	10	0
Primary Regional	80.93	19.07	0
Secondary Regional	80.93	9.07	10
Urban Roads	80.93	0	19.07
Bridge			
Primary Regional	80	20	0
Secondary Regional	80	10	10
Urban Roads	80	0	20
County On & Off-system	80	0	20
Safety			
Primary Regional	90	10	0
Secondary Regional	90	5	5
Urban Roads	90	0	10
County On & Off-system	90	0	10
Trans. Enhancement	80.93	0	19.07
County Roads	80.93	0	19.07

Table 2.3.1

SECTION 2.4 – REIMBURSEMENT ON LOCAL AGENCY-DEVELOPED PROJECTS

(May 2008)

2.4.1 GENERAL

This section applies only to local-agency developed projects. On NDDOT-developed projects, the reimbursement will be negotiated on a project-by-project basis.

Before a local agency can obtain federal reimbursement for a project activity, the NDDOT must authorize that the activity is eligible for federal aid. The process for obtaining NDDOT authorization is outlined in Section 4.2 of this manual.

The local agency must maintain the records of all expenditures for which it is requesting reimbursement. It must also make them available to the NDDOT and the federal government for inspection and audit during the agreement term and for three years after the date of the final payment, unless litigation, claim, or audit is started before the expiration of the three years. In that case, the records must be retained until the action is satisfied or for three years, whichever is longer, in accordance with the "Single Audit Act of 1984," Public Law 98-502 and “Single Audit Act Amendments of 1996,” Public Law 104-156.

The federal funds used to reimburse the local agency for project activities are subtracted from their apportionment set aside for the project.

2.4.2 PRELIMINARY ENGINEERING

Preliminary engineering costs are eligible for federal aid reimbursement only when specifically authorized for that particular project. Generally, this is only for special federal aid projects. Project advancement must proceed in accordance with the guidelines established for federal-aid projects as described in other sections of this manual.

With rare exceptions, payment for preliminary engineering is made on either a lump sum basis or accrual cost. If payment is made on a lump sum basis, the lump sum amount must be supported by a breakdown of anticipated costs. This basis generally applies to structural work. Preliminary engineering for grading projects is generally accrual costs supported by a breakdown of anticipated costs. Bituminous surfacing plans are generally based on a lump sum amount.

If the local agency requests to use its federal funds for preliminary engineering, it will be reimbursed for eligible engineering costs after the construction contract is executed. (A contract's "execution" is the date on which the local agency and contractor sign the agreement.) If no construction contract is executed, there will be no federal reimbursement.

To obtain reimbursement, the local agency must submit a request in writing to the NDDOT LGD. The request must include:

- The time period for which charges are being made
- The estimated total cost for engineering
- The estimated amount of federal-aid reimbursement being requested

When the bill is submitted for payment for PE activities, a letter must accompany the bill which certifies that the costs are eligible for federal-aid.

Upon receiving the local agency's request, the LGD will verify that the costs being charged are within the time frames of the agreement, and will process a claim for payment (Example 2.4.a). After making the payment, Local Government may request an audit.

2.4.3 RIGHT-OF-WAY

If the local agency chooses to use its federal funds for right-of-way, it will receive reimbursement under the following timetable:

Acquisition by negotiation: Reimbursement within 60 days of construction contract execution

Acquisition by condemnation: Reimbursement within 60 days of NDDOT receipt of a copy of the judgment from the city

Costs eligible for federal-aid are specified in 23 CFR Part 710. If no construction contract is executed, there will be no federal reimbursement.

To obtain reimbursement, the local agency must submit a request in writing to the NDDOT LGD. The request must include:

- The property acquired by parcel number or owner
- The time period for which charges are being made
- The estimated total cost for right-of-way
- The estimated amount of federal-aid reimbursement being requested

When the bill is submitted for payment for right-of-way activities, a letter must accompany the bill which certifies that the costs are eligible for federal aid.

Upon receiving the local agencies request, Local Government will verify that the costs being charged are within the time frames of the agreement, ensure that federal funds are still available for the project, and process the request for reimbursement. These funds are taken from the local agency’s annual allotment of federal-aid.

"Right of way" is a general term denoting land, property, or interest in land or property acquired for or devoted to transportation purposes. This includes temporary easements and borrow areas.

The process and procedures to be followed in the acquisition of right of way and easements is outlined in "Local Public Agency Right of Way Acquisition". This manual is available online at (http://www.dot.nd.gov/manuals.html). This document is published by the right of way section of the Department. Guidance on right of way matters can be obtained from the Environmental and Transportation Services Division right of way section.

A critical item in the right of way process is timing. In developing a project, the engineer and city commission/county board must be aware of the time relationship between the various project activities. The guide booklet requires that all right of way items be resolved 10 weeks prior to bid opening. Special consideration must be given to situations which will require more time than usual. Some of these situations would include right of way acquisition from the state, federal agencies, railroad companies, etc. In these instances, the entire process must begin earlier to accommodate these "longer than normal" right of way acquisition time frames.

No right of way acquisition should occur before you receive location and design approval including environmental clearance. The preparation of the plats can and should begin before final plan preparation, especially where the limits are obvious and not subject to change.

The right of way procedures set out in state and federal law as described in the right of way acquisition manual must be followed on any project if there is to be eligibility for federal-aid in the future.

When the right of way activities have been finished, advise LGD so the needed review can be arranged.

2.4.4 UTILITY ACCOMMODATION AND RELOCATION

If the local agency chooses to use its federal funds to accommodate or relocate utilities, it will be reimbursed for eligible engineering costs after the execution of the construction contract. If no construction contract is executed, there will be no federal reimbursement.

To obtain reimbursement, the local agency must submit a request in writing to the NDDOT LGD. The request must include:

- A description of each utility which was accommodated or relocated
- The time period for which charges are being made
- The estimated total cost for utility adjustment or relocation
- The estimated amount of federal-aid reimbursement being requested

- A copy of the agreement between the utility company and LPA to relocate or adjust the affected utilities. This agreement needs to be signed before the work is done.

When the bill is submitted for payment for utility accommodation and relocation activities, a letter must accompany the bill which certifies that the costs are all eligible for federal aid.

Upon receiving the local agency's request, the Local Government Division will verify that the costs being charged are within the time frames of the agreement, ensure that federal funds are still available for the project, and process the request for reimbursement. These funds are taken from the local agency's annual allotment of federal-aid.

2.4.5 CONSTRUCTION ENGINEERING

Construction engineering includes immediate project supervision, testing and acceptance of materials, documentation of quantities, and making sure that the project is constructed according to the plans and specifications. General contract supervision is provided by the District Engineer.

Unless there is a limit of federal funds in the project, federal-aid reimbursement can be provided for eligible engineering costs. Engineering charges are eligible only after an engineering agreement has been approved by the local agency and the Department, and funding is authorized by FHWA.

Payment is based on actual salaries paid for engineering work on that project, plus an allowance for overhead costs, payroll additives, and a lump sum amount for profit. Mileage rates are allowed for vehicles used. Staking and supplies are eligible at actual cost.

The overhead and payroll additive rates are determined by the consultant and audited by the Department. The consultant or his accountant must submit a breakdown of overhead costs and their relationship to total yearly salaries. The payroll additives must be submitted in a similar manner. These costs must be submitted after the end of the consultant's fiscal year and the appropriate rates are determined for the year. The lump sum amount for profit is limited to a maximum of 15% of salaries plus overhead and payroll additives exclusive of that profit amount.

Construction Engineering hours need to be reviewed and approved by the appropriate district prior to submitting contract documents to the Local Government Division for signatures. The District approval of the hours needs to be sent to Local Government. The maximum amount of total engineering hours shown in the agreement should be determined from the consultant's time and cost history on similar projects.

Construction engineering charges are billed to the local agency as stipulated in the engineering agreement. When the construction engineering is completed, the Engineer

shall arrange with the local agency for the submission of an Engineering Statement and certified copies of the paid vouchers to LGD.

If the local agency chooses to use its federal funds for construction engineering, it must send monthly vouchers to the NDDOT. Reimbursement will be made to the local agency, after the NDDOT receives these vouchers. The total reimbursement will not exceed the amount of federal funds set aside for the city's or county's portion of the project.

To obtain reimbursement, the local agency must submit a request in writing to the NDDOT LGD. The request must include:

- Project number that the request is for
- The time period for which charges are being made
- The estimated total cost for engineering
- The estimated amount of federal-aid reimbursement being requested

When the bill is submitted for payment for CE activities, a letter must accompany the bill which certifies that the costs are all eligible for federal-aid.

Upon receiving the request, LGD will verify that the costs being charged are within the time frames of the agreement, ensure that federal funds are still available for the project, and process a claim for payment (Example 2.4.b). After making the payment, LGD may request an audit.

2.4.6 CONTRACTOR PAYMENTS

The NDDOT has agreed to make payments on behalf of the local agency to the contractor. The payments will be made based upon receipt of the progressive estimate, prepared and signed by the local agency or its authorized representative.

The local agency should submit the progressive estimate to the appropriate NDDOT district office. After reviewing the estimate, the district will forward the estimate to the NDDOT Construction division. That office will work with the NDDOT Finance division to make the payment to the contractor. The city/county will reimburse the NDDOT for any payments made that are greater than the amount paid by FHWA.

2.4.7 FUNDING-LIMITED (CAPPED) PROJECTS

A city or county should not request, and will not receive, reimbursement greater than the limited dollar amount set aside for a specific project. The limited dollar amount may include PE, CE, construction costs, right of way, and utilities.

CLAIM FOR PAYMENT

North Dakota Department of Transportation, Financial Management

SFN 2198 (Rev. 10-2004)

Description of Item or Service	Payment Amount
Partial payment for Preliminary Engineering For: SU-6-985(040)037 Progress Estimate #6 Partial 80.93% Federal	$1,227.98
Payment Total	$1,227.98

Local Match

Project I.D.	Activity	Amount
SU6985040037	0102	$289.36
Local Match Total		$289.36

Accounting Date: _____ Voucher ID: _____

Vendor ID: XXXX		(If blank, name and address required)
Vendor Name: City of Grafton		
Address:		
City: Grafton	State: ND	Zip:
Invoice Number(s): SU6985040037 P.E. KLJ 81040	Invoice Date: 4-20-07	

I hereby approve payment of this claim and certify that the expenditure is according to the laws of the state of North Dakota.

By: Signed by Local Government Date: 6/13/07

Or in lieu of: For intermediate estimates.

DEPARTMENT APPROVAL AND ESTIMATE CERTIFICATE (Sec. 24-02-13 NDCC)

I hereby certify that the within estimate or claim is just and true, that the contractor herein named has rendered services and furnished the material herein charged, that they are of the value claimed, that no part thereof has been paid, and that the foregoing estimate or claim is supported by a proper contract and bond on file in the department or that the purpose of the payment to a clerk of district court is pursuant to law and for the taking of property by condemnation.

_____ Date: _____

Director N.D. Department of Transportation

				Projects		Resource						
Ref. Line	Dept.	Account	State Fund	Project I.D.	Activity	Type	Catg.	Contract/PO ID	Mod.	Qty.	Transaction Amount
01	9360	712105	Fed.	SU6985040037	0102			LG040037-1	P		$1,227.98
02											
03											
04											
05											
06											
07											
08											
09											
10											
										TOTAL	$1,227.98

COPY TO:
White - Dept. of Transportation, Finance
Canary - Transmittal
Pink - Dept. of Transportation, Div./Dist.

APPROVALS

DIV./DIST.	FINANCE

Example 2.4.a

CLAIM FOR PAYMENT

North Dakota Department of Transportation, Financial Management

SFN 2198 (Rev. 10-2004)

Description of Item or Service	Payment Amount
Final Payment for Construction Engineering For: BRC-4015(055) Progress Estimate #1 Final 80.93% Federal	$8,417.77
Payment Total	$8,417.77

Local Match

Project I.D.	Activity	Amount
SC4015054	0302	$1,983.53
Local Match Total		$1,983.53

Accounting Date: _____ Voucher ID: _____

Vendor ID: XXXX	(If blank, name and address required)
Vendor Name: Rolette County	
Address	
City	State Zip
Invoice Number(s): BRC4015055 C.E. #1	Invoice Date: 4-13-07

I hereby approve payment of this claim and certify that the expenditure is according to the laws of the state of North Dakota.

By: signed by Local Goverment Date: 6/14/07

Or in lieu of: For intermediate estimates.

DEPARTMENT APPROVAL AND ESTIMATE CERTIFICATE (Sec. 24-02-13 NDCC)

I hereby certify that the within estimate or claim is just and true, that the contractor herein named has rendered services and furnished the material herein charged, that they are of the value claimed, that no part thereof has been paid, and that the foregoing estimate or claim is supported by a proper contract and bond on file in the department or that the purpose of the payment to a clerk of district court is pursuant to law and for the taking of property by condemnation.

_____ Date: _____

Director N.D. Department of Transportation

				Projects		Resource					
Ref. Line	Dept.	Account	State Fund	Project I.D.	Activity	Type	Catg.	Contract/PO ID	Mod.	Qty.	Transaction Amount
01	9360	712115	Fed.	BRC4015055	0302			SR40155502	F		$8,417.77
02											
03											
04											
05											
06											
07											
08											
09											
10											
										TOTAL	$8,417.77

COPY TO:
White - Dept. of Transportation, Finance
Canary - Transmittal
Pink - Dept. of Transportation, Div./Dist.

APPROVALS

DIV./DIST.	FINANCE

Example 2.4.b

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SECTION 3.1 – PROJECT SELECTION
(May 2008)

3.1.1 GENERAL

All projects receiving federal-aid should come from a transportation planning process and be consistent with the State Transportation Plan (state plan; see Glossary, "STP," and Section 3.4). Any local transportation plans used for the identification and eventual programming of federally funded projects should be consistent with the state plan.

3.1.2 INTERSTATE PROGRAM

The NDDOT will select and program all projects on the Interstate system, except for city-initiated interchange and non-interchange grade-separated projects. When a project on the Interstate is initiated by the city, the city is responsible for funding the non-federal share of that project. (See Section 2.2) The NDDOT must approve all city-initiated Interstate projects.

3.1.3 REGIONAL PROGRAM

The cities, in cooperation with the NDDOT district offices, will be asked to submit a list of projects to the NDDOT's LGD each year.

The NDDOT will select projects on the primary and secondary regional system based on traffic engineering and roadway needs. This process will be used as one criterion in project selection. Other criteria include the estimated cost of the project, the project development time, and the amount of coordination.

The NDDOT will establish a five-year list of projects for the regional system. In that five-year program, the first two years will be considered firm.

City concurrence in the project selection will be obtained when the city is requested to provide the match or when maintenance responsibility is being transferred. In metropolitan areas, the city must coordinate its project list submission with the District and MPO. (Sections 3.3)

3.1.4 LOCAL ROADS PROGRAM

3.1.4.1 Urban Roads

Each city will choose the project it wishes to be completed under the urban roads program. The city's project list should be consistent with section 3.1.1 of this manual. Annually, each city will submit a list of projects to the NDDOT describing the city's federal-aid program for five years.

The first two years of an urban area's five-year program must be firm. If there are changes, funding may be lost. If federal funds are lost because an urban area did not have a project ready for obligation in the appropriate fiscal year, the urban area may lose an amount of its apportionment equal to the amount of the obligational authority the state has lost.

To demonstrate city sponsorship, the city must submit a city council or city commission resolution supporting the project.

3.1.4.2 County Roads

Normally, the County Boards will be consulted on an annual basis as to what their County is planning for construction projects in the next four years. The Counties are provided with information such as federal funds available, eligible projects, etc. each year. The project requests received from meetings and other contacts are considered a formal commitment by the County once these are approved by the County boards and concurred in by LGD.

As the Counties' needs change during the year, LGD should be consulted and advised of proposed changes in the County program. When approved by LGD, changes can then be made a part of the County program.

3.1.5 BRIDGE PROGRAM

Each year, the NDDOT will send a list to the cities and counties of all bridges in the state eligible for bridge funds. Annually, cities will submit to the NDDOT a list of the bridges for which they are requesting funds. The NDDOT will evaluate all requested urban bridge projects and develop an urban bridge program each year, based on eligibility criteria and available federal funds.

For county bridges, funding limitations require justification of importance to replace eligible bridges. Most counties will be eligible for a bridge to be replaced every two to three years. Elements that aid replacement justification are traffic volume, safety factors, vehicle use (i.e. bus, milk truck, mail service, school routes, etc.)

3.1.6 SAFETY PROGRAM

Each year, the NDDOT will send the cities a list of high-crash locations. Using this list and any additional information on safety needs in the community, the city will submit to the NDDOT annually a list of the safety projects for which they are requesting funds. Based on the city's list, eligibility criteria, and available federal funds, the NDDOT will develop a safety program each year.

3.1.7 TRANSPORTATION ENHANCEMENT PROGRAM

The Director's Task Force (DTF) was created by the NDDOT director to prioritize TE projects submitted under the urban and secondary roads categories.

Ten entities are represented by the DTF and they are as follows:

- ND Department of Tourism
- ND Parks & Recreation Department
- State Historical Society
- ND Indian Affairs Commission
- counties (2) (one from a county greater than 5,000 and one less than 5,000 in population)
- cities (2) (one from a city greater than 5,000 and one less than 5,000 in population)
- a representative from an MPO
- NDDOT

DTF projects must be sponsored by an urban area, city government or county commission.

To ensure city or county sponsorship, the city or county must submit a resolution supporting the project.

3.1.8 NORTH DAKOTA SMALL TOWN REVITALIZATION ENDEAVOR FOR ENHANCING TRANSPORTATION (NDSTREET) PROGRAM

The NDDOT will distribute these funds through an advisory committee comprised of five members. The five member advisory committee members are as follows:

- One member from a city with less than 750 in population (coordinated through the ND League of Cities)
- One member from a city between 750 and 1500 in population (coordinated through the ND League of Cities)
- One member from a city greater than 1500 in population but less than 5,000 (coordinated through the ND League of Cities)
- One member from the Local Government Division of the NDDOT
- One member from the Planning and Programming Division of the NDDOT (chairman)

Projects are selected on a competitive basis. The advisory committee will review the applications submitted and prioritize the projects to be submitted to the Director for funding.

3.1.9 SAFE ROUTES TO SCHOOL (SRTS) PROGRAM

The NDDOT will distribute these funds through a committee comprised of seven members. The members of committee are as follows:

- North Dakota Association of School Administrators (NDASA)

- North Dakota Association of Secondary School Principals (NDASSP)
- North Dakota Department of Health
- North Dakota Public Instruction
- One member from a city over 5,000 in population
- One member from a city under 5,000 in population
- Director – Office of Transportation Programs, NDDOT (chairman)

Projects are selected on a competitive basis. The committee will review the applications submitted and prioritize the projects to be submitted to the Director for funding.

3.1.10 SPECIAL ROAD FUND (SRF) PROGRAM

The NDDOT will distribute these funds through the Special Road Fund advisory committee comprised of five members. The members on the committee are as follows:

- Director – ND Department of Parks and Recreation
- Director – ND Game and Fish Department
- One member of the State Senate (appointed by Chairman of Legislative Council)
- One member of the State House of Representatives (appointed by Chairman of Legislative Council)
- Director – ND Department of Transportation (chairman)

Projects are selected on a competitive basis. The advisory committee will review the applications submitted and prioritize the projects to be submitted to the Director for funding.

3.1.11 NORTH DAKOTA RURAL OFF-SYSTEM ACCESS DEVELOPMENT (NDROAD) PROGRAM

The NDDOT will distribute these funds through an advisory board comprised of five members. The five members on the committee are as follows:

- One member from a county with less than 5,000 in population (coordinated through the ND Association of Counties)
- One member from a county with greater than 5,000 and less than 15,000 in population (coordinated through the ND Association of Counties)
- One member from a county with greater than 15,000 in population (coordinated through the ND Association of Counties)
- One member from the Commerce Department
- One member from the Local Government Division of the NDDOT

Projects are selected on a competitive basis. The advisory board will review the applications submitted and prioritize the projects to be submitted to the Director for funding.

3.1.12 PROCEDURE AND FORMS FOR PROJECT SUBMITTAL

Each project should appear on a separate **project scoping worksheet** (Example 3.1.a). The local agency should also include a statement certifying that the five-year program is consistent with local and state transportation plans, and that public input was solicited during the development of the five-year program.

The NDDOT will make sure that each project qualifies for federal funding. The local agency will submit the **project data worksheets** with the **project submittal list** (Example 3.1.b).

This procedure and these forms should be used for all programs except the Interstate program and county roads. (See 3.1.3 through 3.1.7)

PROJECT SCOPING WORKSHEET

DATE:_____

PRIORITY#_____

City:_____ Street:_____

County:_____ Length:_____

Proposed Improvement: _____

_____

_____

Cost Estimates Breakdown (in $1,000)							
Alternate	PE	R/W	Utility	Construction	Bridges	Misc.	Total

Present Road: Surface Width? _____ Surface Type?_____

On Street Parking Allowed? _____ Present: (No) One Side Both Sides Angle Parallel
Proposed: (No) One Side Both Sides Angle Parallel

Proposed Improvements

ADT Present: _____ Yr: _____ Travel Way Width:_____
ADT Design: _____ Design year: _____ No. of Lanes: _____
Design Speed: _____ Roadway Width:_____
Maximum Curve: _____ Min. R/W Width:_____
Maximum Grade: _____

Right of Way

Will Additional ROW or easement be acquired? _____ ROW acquisition by: City DOT
Has any ROW easements been acquired since 7-1-72: _____ ROW Condemnation by: City DOT
Est. No. of occupied family dwelling to be displaced?_____
Est. No. business to be displaced? _____

Example 3.1.a

Impacts

Will there be any additional Impacts (Cultural and Environmental Resources): _____

_____

Will there be any taking of any right-of-way from any public parkland, schools, etc., which may be subject to 4(f) or 6(f):

_____

Airports: _____Public Hearings:_____

Environmental Classification (Cat-Ex, EA, EIS):_____

_____

Transportation Enhancements: _____

Intermodal: _____

Pedestrian Needs: _____

Railroads Crossings						
RR Name	No. Xings	No. Tracks and Type of Crossing	Daily Train Movements	Train Speed	Present Protection	Proposed Protection

Purpose and Need Statement For Regional Projects

For regional projects the cities, *in cooperation with the NDDOT district offices*, will be asked to submit a Purpose and Need Statement for each regional project proposed.

The Purpose and Need Statement should be approximately two pages in length which address the following issues:

1. When was the current street section built. Has there been any additional maintenance to the street section.

2. How many driving lanes and turning lanes does the street section currently have and what is the widths of the driving and turning lanes.

3. What is the condition of the pavement section.

    A. If the pavement section is asphalt, is there any alligator cracking, longitudinal cracking, transverse cracking, raveling, bituminous patching or rutting.
    B. If the pavement section is concrete, is there any broken slabs, faulting, bituminous patching, joint spalling, transverse cracking, or longitudinal cracking.

4. How are the existing geometrics of the roadway?
5. Are there any access points to adjoining properties that present a special concern?

Example 3.1.a

6. Are there any existing sidewalks or shared use path in place?

7. What is the condition of the existing storm sewer? Will any additional storm sewer work need to be done along with this project?

8. What is the condition of the city's water and sewer line? Will any work have to be done to the city's water and sewer lines along with this project?

9. Describe the existing lighting system currently in place? What type of standards and luminaries are currently being used?

10. What intersections currently have traffic signals. Are there any locations that have a high crash rate? Are additional turning lanes needed?

Remarks:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

City Engineer: _____ Date: _____

District Engineer: _____ Date: _____

Note: Please attach a map showing location and extent of the project.

Example 3.1.a

CITY PROJECT SUBMITTAL LIST

The NDDOT would like you to use the following form to submit your upcoming projects. This will enable us to understand better when and what you are requesting.

Contact Person:

Date: **City:** **Phone Number:**

Year	*Category	Location	Total Cost	Federal Share	City Share

*Categories: Regional, Urban Roads Program (URP), Transportation Enhancement (T.E.), Safety, Bridge, & Interstate

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SECTION 3.2 – CONSULTANT SELECTION
(May 2008)

3.2.1 INTERSTATE AND REGIONAL PROGRAM

The NDDOT may complete the preliminary engineering (PE) and construction engineering (CE) for projects on the Interstate and regional (primary and secondary) systems. There may be situations where the NDDOT, because of staff constraints, will use consultants or request city staffs to complete the engineering on the regional system.

The NDDOT, when securing engineering services, will adhere to the Contract Administration Manual for Non-construction Contracts (contract manual). The NDDOT adheres to NDCC Chapter 54-44.7 as amended.

3.2.2 URBAN ROADS PROGRAM

The cities are responsible for completing all phases of PE and CE for projects on the urban roads systems. The cities may complete this work by using their staff or by contracting for services. If outside services are used, the following requirements must be adhered to:

- If federal aid is being used for engineering purposes on the roads projects, the cities may secure engineering services using the procedures in the NDDOT Contract Administration Manual for Non-construction Contracts. If the city does not wish to use the NDDOT Contract Administration Manual, it must follow federal requirements as outlined in 23 CFR, Part 172 as amended and 40 USC 1101, also known as the "Brooks Act" as amended. In both cases, a full-time employee must be assigned to be responsible for the project when federal aid is being used.

- Whether a city determines that city staff will be used or a consultant is to be selected, the experience of personnel needs to be assessed relative to the complexity of the project by both the city and NDDOT.

- If **no** federal aid is being used for engineering purposes, the cities need only follow North Dakota state law.

The selection of the engineering consultant will be left up to the cities. The city's selection process is subject to outside audits, to ensure that the appropriate federal and state requirements were adhered to. The city must send a letter, preferably signed by the mayor or president of the city commission, certifying that the appropriate federal and state requirements were adhered to. For the purpose of receiving federal aid, the NDDOT must concur in consultant selection.

Engineering services agreement. The city must enter into an engineering services agreement with the selected consultant. This agreement must be reviewed and signed by the NDDOT for approval for federal-aid participation.

3.2.3 COUNTY MAJOR COLLECTORS, BRIDGE, SAFETY, TE, NDSTREET, SRTS, SRF, AND NDROAD PROGRAMS

All scheduled county major collector, bridge, safety, TE, NDSTREET, SRTS, SRF, and NDROAD programs must conform to either 3.2.1 or 3.2.2, based on the highway system classification.

3.2.4 MPO CONSULTANT SELECTION

All MPO procurement on consultant services must be in accordance with the NDDOT contract manual. The NDDOT must concur with any consultant selected for federal-aid activity by an MPO. The MPO must submit a statement to the NDDOT certifying that all procedures of the contract manual were followed, and ask for the NDDOT concurrence in the selected consultant.

The NDDOT must also approve the contract between the MPO and the consultant as being eligible for federal funding. **No activity is eligible for federal reimbursement until**:

- The NDDOT has approved the contract as eligible for federal funds
- The NDDOT has concurred in the consultant selection
- The contract between the MPO and the consultant is executed
- The federal funds have been programmed with FHWA

SECTION 3.3 – MPO PROGRAM
(May 2008)

3.3.1 INTRODUCTION

There are three Metropolitan Planning Organizations (MPOs) in North Dakota.

a. The Grand Forks-East Grand Forks MPO, consisting of the city of Grand Forks and Grand Forks County in North Dakota, and the city of East Grand Forks and Polk County in Minnesota.

b. The Fargo-Moorhead Council of Governments, consisting of the cities of Fargo and West Fargo, and Cass County, in North Dakota, and the cities of Moorhead and Dilworth, and Clay County, in Minnesota.

c. The Bismarck-Mandan MPO, consisting of the cities of Bismarck, Mandan, and Lincoln, and Burleigh and Morton counties.

The purpose of the MPOs is to provide a forum for public officials, citizens, and other interested groups to establish policies and plans for effectively addressing various metropolitan transportation issues. A policy board representing the member cities and counties, and a transportation technical committee, are the MPOs' policy and technical authorities.

3.3.2 AUTHORITY

The MPOs are mandated by 23 U.S.C. 134 for cities and metropolitan areas with populations over 50,000 and authorized under 5303 of the Federal Transit Act, as amended. These sections state that for member jurisdictions to receive federal funds, there must be an MPO and an approved planning process in place. The Federal Register of October 28, 1993 states, "These regulations require that an MPO be designated for each urbanized area (population 50,000+) and that the metropolitan area have a continuing, cooperative, and comprehensive "3C" transportation planning process that results in plans and programs that consider all transportation modes and supports metropolitan community development and social goals. These plans and programs shall lead to the development of an integrated, intermodal metropolitan transportation system that facilitates the efficient, economic movement of people and goods." Through this process, each state governor must, with the elected officials of the local governments, designate an MPO.

3.3.3 FUNDING

Through NDDOT administration, the MPOs receive FHWA federal metropolitan planning (PL) funds and Federal Transit Administration (FTA) 5303 and 5304 funds through a percentage of transportation funds apportioned by Congress. In the fall of each year, the NDDOT will notify the MPOs of anticipated funding availability for the coming

year. The NDDOT will prepare the fiscal paper for receipt of these funds, with input from the MPOs annual Unified Planning Work Program (UPWP).

Additionally, MPOs will be allowed to submit annual requests for FTA Section 5311 Rural and Statewide Transit Planning funds. Non-metropolitan areas and statewide transit planning will have Section 5311 funding priority.

The funding distribution of the three North Dakota MPOs is established by the MPO directors, and approved by state and federal agencies. These federal funds have a matching ratio of 80 percent federal, 20 percent local, and are subject to obligational limits established by Congress. The NDDOT will establish obligational limits for PL funds in a manner consistent with other FHWA-funded programs.

PL and FTA funds lapse after three years. The NDDOT will attempt to obligate and expend the oldest remaining funds first. Any funds in immediate danger of lapsing as a result of an MPOs inability to expend them will be transferred between MPOs by mutual consent of affected MPOs, NDDOT, FTA, and FHWA. MPOs may enter into agreements between affected MPOs, NDDOT, FTA, and FHWA at any time it is advantageous to transfer federal funds and is mutually agreed upon.

FTA funds are provided for specific UPWP activities, but are available for MPO expenditure for the full three-year life of the funds.

3.3.4 BYLAWS

The bylaws must establish:

a. the structure of the MPO
b. the rules and regulations with respect to funding, accountability, and authorization to execute documents
c. the rules of order and meeting schedules
d. a policy board of elected officials and other appropriate officials
e. a technical advisory committee of technical staff

3.3.5 MPO BOUNDARY

These criteria are used in setting MPO boundaries:

a. The boundary must include at least the urbanized area(s) and the contiguous area(s) likely to become urbanized within 20 years. The boundary may include the entire metropolitan statistical area (MSA), as defined by the Bureau of Census.
b. All modes of transportation must be considered in establishing the metropolitan planning boundary, to ensure continuity between modes.
c. The metropolitan area boundaries must be submitted to the FHWA and FTA for their use, although their approval is not necessary. FHWA signs the document for concurrence purposes only.

d. Boundaries may be amended by the MPO at any time. The MPO must notify the NDDOT of any boundary changes.

3.3.6 MEMORANDUM OF UNDERSTANDING (MOU)

The MPO program policies in this Local Government manual, along with the Unified Planning Work Program (UPWP) contract (see Section 3.3.8), constitute an MOU between the NDDOT and the MPO.

There must also be an agreement between the MPO and the operators of publicly owned transit services which specifies cooperative transportation planning procedures (including corridor and subarea studies) and programming as required by the federal regulations.

3.3.7 ADMINISTRATION

a. **Requests for reimbursement**. The NDDOT reimburses monthly or quarterly through requests for reimbursement submitted to the local MPOs. These requests should be in the form of a cover letter specifying the funding source and amount requested, and the local match. They must include an itemized billing in the UPWP form of a spreadsheet to identify billings by work tasks, as shown in the work program. The spreadsheet should show expenditures by date and remaining budget by task. The NDDOT processing time for reimbursement is typically 2-3 weeks.

b. **Monthly or quarterly reporting**. The MPO may choose to make quarterly progress reports if the MPO has regularly scheduled monthly meetings. If the MPO does not have regularly scheduled meetings, a separate report must be submitted for each work task with each month's billing.

c. **Accounting**. The MPOs must follow standing acceptable accounting practices as indicated in 49 CFR 18 (the "Common Rule"). Records substantiating the expenditure of federal funds must be held for three years after the closure of the project.

d. **Audits**. Each MPO must conduct an audit for each budgeted planning year in accordance with the Federal Office of Management and Budget Circular No. A-133. These audits are submitted to the NDDOT to be reviewed. If the NDDOT reviews and finds no problems in the MPO audit, the project is closed out and any unexpended funds are de-obligated and placed in that MPO's account. Unexpended funds are made available pending obligational authority for the next UPWP. If the NDDOT reviews and finds problems with the audit, the MPO must take sufficient corrective action within six months. Audits must be kept on file for three years after they have been reviewed.

e. **Indirect cost allocation**. MPOs receiving planning funds from more than one source must have a state- and federal-approved cost allocation plan for indirect operation and planning costs. Indirect costs (as opposed to direct costs such as salaries and payroll

additives) include office rent, utilities, insurance and telephone costs, and must be fairly distributed among the various tasks and funding sources of the MPO. Guidance in developing a cost allocation plan is set forth in the Office of Management and Budget Circular A-87.

f. **Equal Employment Opportunity (EEO)**. Each MPO must establish, adopt, and adhere to an acceptable EEO policy as required by the Equal Employment Opportunity Commission. These requirements are spelled out under Title VI of the Civil Rights Act of 1964 and the Title VI assurance executed by each state under 23 U.S.C. 324 and 29 U.S.C. 794. No person may be discriminated against in any way on the grounds of race, color, sex, national origin, or physical handicap, if the program receives federal aid from the U.S. Department of Transportation (USDOT).

g. **Americans with Disabilities Act (ADA)**. Each MPO must comply with the ADA rules and regulations as stated in the Americans with Disabilities Act of 1990 (Public Law 101-336, 104 Stat. 327 as amended) and USDOT regulations "Transportation for Individuals with Disabilities," 49 CFR Parts 27, 37, and 38.

h. **Disadvantaged Business Enterprises (DBEs)**. The MPOs need not establish specific DBE goals for FHWA planning activities. However, DBE goals must be established for FTA planning funds as required by FTA regulations. MPOs are encouraged to maximize opportunities for DBEs as much as possible. The MPOs will report annually the results of their opportunities and use of DBEs to the NDDOT. Any MPO-reported use will be included in the NDDOT's overall DBE participation report.

   All firms must follow the certification procedures listed in the DBE certification section of the NDDOT's DBE program manual.

i. **MPO budget authority.** The MPOs establish their own budgets, with the emphasis on meeting the mandated requirements of the latest federal highway bill. Additional funds can be allocated to other work and tasks, such as travel and training, equipment, subcontracts and conduct studies, etc. Each MPO may amend its budget within its dollar allocation. A task may overrun the budget by 10 percent if the MPOs overall UPWP budget is not exceeded; any amount more than 10 percent over budget will not be reimbursed. The budget year is a calendar year.

   Amendments requiring state and federal approval include significant changes in the scope of work of any planning of a FTA funded task; task substitution or addition on any PL or FTA funded task; and requests for additional planning or FTA funds.

   Amendments requiring only state approval include time extensions and deletion of tasks, although FHWA must be notified of any action taken.

j. **Procurements.** All procurements using federal funds must be in accordance with the NDDOT Contract Administration Manual for Non-construction Contracts. The

NDDOT must approve all federally funded contracts for services as "eligible" for receiving federal funds.

All purchases exceeding $10,000 for a specific line item must have NDDOT and FHWA approval, whether included in an approved UPWP or not. This approval should be coordinated through the NDDOT. The purchase approval request must include a minimum of three price quotes. The MPO has budget authority for purchases under $10,000 and does not require NDDOT or FHWA approval. All procurements made with federal funding become property of the MPO, and are to be made available to PL-eligible activities by MPO member jurisdictions when practical. Federally funded procurements are subject to federal regulations regarding sale and disposal.

k. **Travel and training expenses.** The MPO has approval authority for travel and training, although it must be for applicable UPWP activities, generally or specifically, in order to be eligible for federal funding. Specific travel or training identified in an approved UPWP is considered eligible for federal funding. For travel and training not identified in an approved UPWP, policy board approval records should be maintained for justification in case of an audit.

MPO travel expenses, either in-state or out-of-state, are federally reimbursable at the federal GSA (IRS) rates for a particular city. The quarters and status requirements for out-of-state travel are the same as for in-state travel.

Meals. The GSA current rate for in-state meals is a per day rate. (Out-of state rates follow the published schedule). The meal rate by quarter is:

Breakfast:	= 20% x GSA daily current rate =	**$X.XX (in-state)**
Lunch	= 30% x GSA daily current rate =	**$XX.XX (in-state)**
Dinner	= 50% x GSA daily current rate =	**$XX.XX (in-state)**

Lodging rates. Hotel and motel rates are reimbursable at a "reasonable rate" established by the MPO policy board.

Mileage. Mileage is reimbursed up to the IRS maximum.

l. **Mid-year reviews.** The NDDOT will conduct an annual mid-year review of each MPO to ensure that the "3C" planning process, the MOU, and all applicable federal rules and regulations are being adhered to. Technical assistance and any necessary corrective actions will be discussed at these reviews.

m. **Coordination.** The NDDOT will communicate with all MPOs regarding available state and federal funding changes, regulations, policies, and technical assistance opportunities for transportation activities.

3.3.8 UNIFIED PLANNING WORK PROGRAM (UPWP)

An MPO must develop a UPWP for each calendar year.

3.3.8.1 Transit-funded activities.

The MPO will submit to the NDDOT a final UPWP for transit-funded activities no later than **August 15** of each year. The NDDOT will then prepare the annual FTA grant applications, which must be reviewed by FTA in complete form by October 1 of each year.

3.3.8.2 PL-funded activities.

The MPO will submit to the NDDOT a final UPWP for the PL-funded activities no later than **December 1** of each year. The NDDOT will then prepare appropriate contracts which must be executed by the MPO and the NDDOT director before any federally reimbursable UPWP activity can begin.

It may be advantageous for the MPO to develop a draft PL UPWP at the same time as the FTA UPWP portion. Final PL funding is not usually known until mid-October or November, so a draft PL UPWP that has been prioritized will be easiest to finalize once the final funding levels are known.

The UPWP must include the items required to meet the "3C" process. North Dakota MPOs are not included in designated Transportation Management Areas (TMAs), so they must, with the state and private transit operators, cooperatively describe what will be done using federal funds and who will do it. This process is described in the FHWA/FTA joint federal regulations under 23 CFR 450.314. To support the "3C" planning effort, the urbanized areas are eligible to receive PL and FTA planning funds through the NDDOT at a matching ratio of 80% federal and 20% local. The 16 following items must be considered in the UPWP. They are explained in detail in 23 CFR 450.316.

a. Preservation of existing systems
b. Consistency of transportation planning
c. The need to relieve congestion
d. Effects of transportation on land use
e. Programming of transportation enhancement activities
f. The effects of all transportation activities in the metro area
g. International border crossings, intermodal transportation facilities, and interconnected transportation facilities
h. Continuity of roads outside the MPO area
i. Transportation needs as identified in the management systems
j. Preservation of rights-of-way
k. Enhancement of efficient movement of freight
l. The use of life-cycle costs in design and engineering

m. The overall social, economic, energy, and environmental effects of transportation decisions
n. Increased use of transit services
o. Capital investments resulting in increased security in transit
p. Recreational travel and tourism

3.3.8.3 General administration.

This section should include various tasks relating to the local MPO's management of staff and resources to carry out the annual work program and conduct the overall "3C" planning process. This should also include such costs as record keeping, billings for planning and FTA funds, development of an annual work program for the following year, and auditing costs. Training of personnel and purchases of office support equipment should also be included.

3.3.8.4 Transportation plan development.

The various tasks contained in this section should relate to developing and keeping up-to-date an overall transportation plan. This section should also contain any corridor studies, spot location studies, and development of the Annual Transportation Improvement Program (TIP) (see 3.3.11).

3.3.8.5 Transportation plan implementation.

This section should contain tasks relating to the implementation of major and minor improvements to enhance the traffic capacity and operation of the arterial street and highway system. Planning Transportation System Management (TSM) improvements and safety improvements are also included in this section.

3.3.8.6 Transportation monitoring and evaluation.

This section should contain activities for monitoring and evaluating the operation of the existing urban street and highway system. Specific work tasks could include: traffic counting; inventories of the existing network; traffic signs and signals; traffic data review and analysis; post construction reviews; and other related tasks.

3.3.8.7 Planning Task Format

A sample format of a typical work task is:

a. Task objective
b. Present status
c. Proposed work status
d. Resulting task product(s)
e. Completion date

f. Estimated person-hours
g. Estimated expenditures
h. Proposed source of funds

3.3.8.8 A Sample Task:

200.xxx XXXXXXXXX TITLE XXXXXXXXXXXXXXXXXXXXXX

Task Objective	Develop a program for upgrading traffic signs in the city to provide more consistent use and conformity with the Manual of Uniform Traffic Control Devices (MUTCD).	
Present Status	This project has been carried over from 20XX. Detailed explanation.	
Proposed Work	An inventory for all existing traffic signs will be made and a record system set up. Concise explanation.	
Completion Date	Month X, 20XX	
Estimated work-hrs	XXX hours	
Estimated cost	Salaries and Additions	$XXX.XX
	Other direct costs	$XXX.XX
	Total	$XXX.XX
Proposed Source of Funds	PL/FTA/Other Federal	$XXX.XX
	Local	$XXX.XX
	Total	$XXX.XX

3.3.8.9 Summary Sheet

A summary sheet showing each task and funding should be included. For example:

Task XXX.01	Description	PL $	Local $	Total
Task XXX.02	Description	FTA $	Local $	Total

The remaining tasks should be presented with totals at the bottom.

3.3.8.10 Timeline

A bar chart or other appropriate style that would show task and time allowed.

3.3.9 PUBLIC INVOLVEMENT PROCESS

The MPO must ensure early and continuing public involvement in developing plans and TIPs, so that:

a. Public involvement reflects consultation with interested parties
b. All interested parties have full access to plans and programs, their supporting materials, and an opportunity to participate in all stages of the planning process

c. The programs are consistent with Title VI of the Civil Rights Act of 1964 and the Title VI assurance executed by each state under 23 U.S.C. 324 and 29 U.S.C. 794, which deals with discrimination
d. Programs comply with ADA
e. Programs provide for involvement of representatives in all modes of transportation
f. Programs provide for involvement of interested environmental agencies

These items can all be found in 23 CFR 450.212.

3.3.10 TRANSPORTATION PLAN

The MPO planning process must include developing a transportation plan at least 20 years into the future. The plan must include both short- and long-range strategies and actions leading to the development of an integrated intermodal metropolitan transportation system. The plan must be reviewed and updated every five years to confirm its validity and its consistency with current and forecasted transportation and land use conditions and trends, and to extend the forecast period. The plan must be approved by the MPO and prepared in cooperation with the NDDOT, and must:

a. Describe the near-term transportation demand of persons and goods in the metro area
b. Show how adopted congestion management strategies systematically address current and future transportation demand
c. Identify pedestrian walkway and bicycle facilities in accordance with 23 U.S.C. 217(g)
d. Reflect the results of the management systems
e. Demonstrate multimodal evaluation of the transportation, socioeconomic, environmental, and financial aspects, including all major transportation investments in accordance with the Federal Register 23 CFR 450.318
f. Explain where major transportation investments have not been fully analyzed and require further work
g. Show consideration of any of the area's local, state or federal plans
h. Describe proposed transportation enhancement plans
i. Include a financial plan that shows the consistency of proposed transportation investments with known and projected sources of revenue. All costs and revenue projections must be based on the best available data and trends.
j. Provide for adequate public input
k. Be sent to FHWA and FTA, although copies of any new or revised plans need not be authorized by FHWA or FTA

All of these items are fully explained in 23 CFR 450.322.

3.3.11 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

The metropolitan transportation planning process must include development of a TIP for the metro area in cooperation with the state and public transit operators. (See Section 3.1 for information on project programming submittals to the NDDOT.)

a. The TIP must be updated and approved every four years by the MPO and the governor or designate. Copies must be provided to the FHWA or FTA, but they do not need to approve the TIP.
b. There must be reasonable opportunity for public comment on the proposed TIP prior to approval.
c. The TIP must cover a period of four years, but may at local discretion cover a longer period if it identifies priorities and financial information for the time frame past four years. The TIP must include a priority list of projects to be carried out in the first four years.
d. The TIP must be financially constrained and include a financial plan showing how the projects can be implemented while the existing transportation system is adequately operated and maintained.
e. The TIP must include all federal-aid and any other significant transportation projects, or identified phases of projects for all modes of transportation, that affect transportation in the 20-year planning boundary (UZA + 20).
f. Only projects consistent with a transportation plan may be included in a TIP, including TE projects.
g. All projects for which FHWA or FTA approval is required must be included in the TIP.
h. The TIP must provide descriptive material for each project, estimated costs, amounts of federal funds proposed to be obligated, proposed source of funds (federal and other), and identification of agencies responsible for carrying out projects. If there are other small projects of an inappropriate scale, these must be grouped according to function, type, etc.
i. All projects funded by FTA up to limit of the Section 5307 appropriation must be included.
j. As a management tool, the TIP must list criteria used in prioritization, major projects from prior TIPs, and any significant delays in planned implementation of major projects.
k. The TIP may be **amended** at any time consistent with the procedures established in the Federal Register, including providing an opportunity for public comment. A TIP may be **revised** for projects listed under 23 CFR 450.324(i). These are small scale projects grouped by location, function, type, etc. TIP revisions do not require the opportunity for public comment, but do require approval of all affected agencies.
l. The TIP must be submitted to the NDDOT by May 15 for checklist review and then approval, to ensure incorporation into the Statewide Transportation Improvement Plan (STIP). (See Example 3.3.a) After the TIP is approved by the MPO and the governor, it must be incorporated into the STIP. The state will provide the MPO with draft and final copies of the STIP.
m. The FHWA and FTA must jointly find that each MPO TIP is based on the "3C" process, based on the self-certification submitted by the state and the MPO under 23 CFR 450.334 and upon other reviews as deemed necessary by the FHWA or FTA.

3.3.12 PROJECT SELECTION FOR IMPLEMENTATION

Projects to be implemented must be selected by the state and transit operators in cooperation with the MPO from the approved TIP.

Once a TIP meets the requirements of 23 CFR 450.324, the first year of the TIP must constitute an "agreed-to" list of projects for project selection purposes. No further project selection action is required for the state or transit operators to proceed with the project.

If the state or the transit operators wish to proceed with a project not in the first year of the TIP, the specific project selection procedure stated in the first paragraph must be used.

The MPO, state, and transit operator may jointly develop expedited project selection procedures to advance projects from the second or third or fourth year of the TIP. MPOs may suggest projects to the NDDOT (the Governor's designee) for any FTA Section 5307 transit funds returned to the state by an MPO.

Projects not included in the approved TIP and STIP will not be eligible for federal funding.

3.3.13 METROPOLITAN TRANSPORTATION PLANNING PROCESS CERTIFICATION

3.3.13.1 Requirements and Regulations

At the time the TIP is submitted to the FHWA and FTA, the state and the MPO must certify that the planning process addressing the major issues facing the area is being conducted according to all applicable requirements of 23 CFR 450.334, Section 5303 of the Federal Transit Act (49 U.S.C. app., 1607) and the following regulations:

a. 23 U.S.C. 134 and 49 U.S.C. 5303
b. In nonattainment and maintenance areas, sections 174 and 176 (c) and (d) of the Clean Air Act, as amended (42 U.S.C. 7504, 7506 (c) and (d)) and 40 CFR part 93
c. Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d–1) and 49 CFR part 21;
d. 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;
e. Section 1101(b) of the SAFETEA–LU (Pub. L. 109–59) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in USDOT funded projects;
f. 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;

g. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) and 49 CFR parts 27, 37, and 38;
h. The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
i. Section 324 of title 23 U.S.C. regarding the prohibition of discrimination based on gender; and
j. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.

3.3.13.2 Planning Process Meets Requirements

This certification process will be reviewed jointly by FHWA and FTA as appropriate, but at least every three years. If FHWA and FTA find that the transportation planning process in a metro area meets or substantially meets the requirements of this part, they may take one of the following actions:

a. Jointly certify the transportation planning process
b. Jointly certify the transportation planning process, subject to certain specified corrective actions being taken
c. Jointly certify the planning process as the basis for approving only specified categories of programs or projects that may also be subject to certain corrective actions

3.3.13.3 Planning Process Does Not Meet Requirements

A certification action under this section will remain in effect for three years unless a new certification determination is made sooner. If the FHWA and FTA Administrators jointly determine that the transportation planning process in a metro area does not substantially meet the requirements, they may withhold:

a. All or part of the apportionment under 23 U.S.C. 133(d)(3)
b. All or part of the capital funds apportioned under Section 5307 of the FTA, and Section 5309 funds under the FTA

If a transportation planning process remains uncertified for more than two consecutive years after September 30, 1994, 20 percent of the apportionment attributed to each area must be withheld.

3.3.13.4 State and MPO notification

The state and the MPO must be notified of the actions taken. Upon full certification by the administrators of the FHWA and FTA, all funds withheld will be restored to the metro area, unless they have lapsed.

3.3.14 TRANSPORTATION STUDIES

3.3.14.1 MPO's Role

The MPOs will undertake transportation studies proposed by the transportation plan, and within their proposed work programs. The MPO may either perform the study in-house or contract it out to a consultant. In either case, a scope of work will be outlined for the state's use in determining eligibility. Corridor studies and related activities up to and including the obtaining of environmental clearances are PL-eligible, if a federal-aid project number has not yet been assigned for the preliminary engineering, design, and construction for a project.

3.3.14.2 NDDOT's Role

The NDDOT will determine if the study is eligible under federal guidelines, and will accept the MPO's certification that guidelines have been followed. If a project will not affect the regional highway system, the NDDOT will not involve itself in the review process unless the proposed project impacts the state highway system, and will reply on the MPO to certify that the contract administration guidelines in the NDDOT contract administration manual were followed. If a project will affect the regional highway system, the NDDOT should be part of the complete review process. For the purpose of securing federal aid, the NDDOT must approve any subcontract the MPO enters into. If an audit determines the federal guidelines have not been followed, the MPO will be required to reimburse the NDDOT.

3.3.15 FUNCTIONAL CLASSIFICATION OF ROADWAYS WITHIN THE URBAN AREA

The MPO, in cooperation with local, state, and federal agencies, must establish the functional classification of the roadways within their respective urban areas. The guidelines are provided in a booklet provided by FHWA, entitled "Highway Functional Classification." These classifications are generally updated every ten years census, or as the need arises.

3.3.16 COORDINATION

The MPOs and the NDDOT will inform each other of program changes within their agencies. The MPOs will use the NDDOT to coordinate their activities with federal agencies. The NDDOT will inform the MPOs of contacts they have with the MPO member cities regarding transportation planning.

In cooperation with the MPO directors, the NDDOT will discuss and establish policy changes as needed.

TIP CHECKLIST: NORTH DAKOTA

MPO_____ TIP Period_____

GENERAL

A ___ Prepare in cooperation with the NDDOT and transit operator?
B ___ Approved by MPO Policy Board?
C ___ Approved by Governor or designee? (Designee:_____)
D ___ Public involvement process carried out?

E ___ 3-year TIP?
___ Priority list of projects?
___ TCM(s) given priority (if any in SIP)?

F ___ Financially constrained by year?
___ Financial plan:
___ Shows projects using current funds?
___ Shows projects using projected funds?
___ Shows maintenance and operations funds?
___ Shows strategies for assuring projected funds?

G ___ Includes all Title 23 projects?
___ Includes all Transit Act projects?
___ All projects are consistent with the transportation improvement plan?
___ Are there any regionally significant projects with federal aid?
___ Are there any regionally significant projects with non-federal aid?

EACH PROJECT

H ___ Is there sufficient description of the project scope?
___ Is the total cost estimated?
___ Is the amount of federal funds to be obligated each year included?
___ Are the sources of federal and non-federal funds identified?
___ Is the recipient or responsible agency identified?
___ Are projects from the ADA implementation plan identified?

I ___ Are small projects grouped by:
___ function?
___ geographical area?
___ work type?

J ___ Are STP projects funded as per 23 USC 133 (d) (3) (E) identified (allocation not based on population)?

Example 3.3.a

FUNDING

K ___ Are total Section 5307 funds less than or equal to the amount available?
L ___ Are STP or Section 5307 funds not suballocated by formula?
M ___ Is Section 5309 in the first year less than or equal to the amount committed to by the FTA?
N ___ Is Section 5309 in other years reasonably expected?

MANAGEMENT

O ___ Are the criteria and process for prioritizing TIP projects, including intermodal trade-offs, identified?
___ Are changes in priority from the previous TIP identified?
___ Is the status of major projects in previous TIP(s) discussed?

COMMENTS:

Example 3.3.a

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SECTION 3.4 – STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM (STIP)

(May 2008)

3.4.1 GENERAL

All projects receiving federal funding through Title 23 U.S.C. must be included in a Statewide Transportation Improvement Program (STIP). All projects included in the STIP must be consistent with the state transportation plan and any other applicable plans. In addition to federal-aid projects, all regionally significant, non-federally funded transportation projects must also be in the STIP, as described in Title 23, U.S.C. 135(f).

All projects will be programmed following the procedures in Section 3.1 of this manual. Lists of projects programmed to receive federal funds are sent to the cities in mid-February each year.

The NDDOT will compile the local program projects into a draft STIP, solicit public input on the draft STIP, develop a final STIP, and submit the final STIP to FHWA for their approval by October 1 of each year. Any projects not included in the approved STIP may be ineligible for federal funding. The STIP may be amended; however, federal funding may not be available due to current obligations.

Projects in the STIP must also be consistent with the State Implementation Plan (SIP) for air quality. The North Dakota Department of Health (NDDH) prepares the SIP, which is approved by the Environmental Protection Agency (EPA). NDDH will review the STIP for compliance with the SIP, and forward a letter of their findings to the NDDOT.

Copies of the STIP are available from the NDDOT or can be downloaded at http://www.dot.nd.gov/manuals/STIP/STIP.pdf.

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SECTION 4.1 – PREDESIGN OVERVIEW
(May 2008)

4.1.1 GENERAL

The predesign process for a transportation project involves many participants within and outside the NDDOT. The process begins with the formal programming of the project and concludes with the NDDOT approval of the project concepts and environmental documents, and FHWA acceptance of those documents. The predesign process clearly identifies project responsibility and requires an efficient management system.

4.1.2 PROJECT DEVELOPMENT

After the projects have been scheduled by the selection process, the next step is to assign them project numbers and place them in a particular bid opening. The LGD coordinates with the Planning & Programming Division to prepare and distribute a tentative multi-year bid opening schedule. When this schedule is approved, Local Government notifies the local agencies of their scheduled projects. The NDDOT developed projects listed within the first three to four years are placed on the Department's project advancement scheduling program, known as Milestone.

4.1.2.1 Milestone program. The Milestone program provides a means for sequencing, scheduling, and monitoring the many activities required to advance a project through a bid opening. The Planning & Programming Division is responsible for maintaining the Milestone program. County projects are not tracked in milestone.

Projected dates for the various activities are established by the Milestone Committee, made up of representatives from Design, Environmental and Transportation Services, Bridge, Materials and Research, Local Government, and Planning and Programming Divisions. Regularly scheduled meetings are held where the time frame for a project activity can be adjusted if required. Projected dates for the various activities are set after considering workloads, available personnel, and the already established bid opening date.

4.1.2.2 Project activity checklist. Concerning city/county-developed projects, the NDDOT needs to be informed of local agency activities. To help the NDDOT monitor city/county-developed projects, the city/county should complete the project activity checklist (refer to Chapter 3, Section 1, Appendix B of the NDDOT Design Manual) and submit it to the NDDOT at the start of each project and adjusted as needed.

4.1.3 PROJECT FILE

A project file must be developed for all federal aid projects. **The responsibility for the file lies with the agency developing the project. All pertinent information is retained in the project file.** The most significant items and a brief description of each are listed below. The references to divisions are for NDDOT developed projects. On city/county-developed projects, the local agency is responsible for producing this information.

4.1.3.1 Materials and Research Division's asphalt pavement rehabilitation analysis and thickness design report, or the Portland Cement Concrete pavement thickness design report. The reports outline the recommended pavement thickness values and alternatives for hot bituminous pavement, PCC pavement, subcut repairs (located in soils report), and other pavement related items.

4.1.3.2 Design Division's safety review. An analysis of the roadside features within the clear zone of the roadway is performed. All features that do not meet safety standards are analyzed from an economic standpoint and an improvement is proposed.

4.1.3.3 Bridge Division's preliminary concept report. All bridges, box culverts, and large centerline pipes are structurally and hydraulically analyzed, and if required, the proposed improvement is also analyzed.

4.1.3.4 Planning and Programming Division's crash analysis. All recorded crashes within the project limits are analyzed to determine if roadway geometrics were a factor.

4.1.3.5 Planning and Programming Division's current and future traffic volume, ESALS (equivalent single axle loadings), ride score (International Roughness Index (IRI)), pavement rutting and distress values. P&PD gathers all existing pavement performance, traffic, and distress data.

4.1.3.6 Planning and Programming Division's roadway lighting study. The traffic operations section prepares this study in which existing lighting conditions are explained and any necessary roadway lighting improvements are proposed.

4.1.3.7 Planning and Programming Division's traffic operations report. The traffic operations section prepares this report in which traffic volumes, highway capacity, turning movements, signal control, and intersection design recommendations are addressed in order to establish levels of service.

4.1.3.8 Right of Way. All records relating the acquiring of all necessary easements and/or right of way (ROW) to construct the project need to be retained. If no ROW is required, the appropriate documentation shall be in the file showing this information. Right of way certifications shall be retained in the file as well.

4.1.3.9 Environmental, Cultural Resource Documents, and Permits. All documents relating to environmental and cultural resource issues, and all permits required or not required should be retained in the project file.

4.1.3.10 All correspondence related to the project, should be retained in the project file.

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SECTION 4.2 – AGREEMENTS
(May 2008)

4.2.1 GENERAL RESPONSIBILITIES

Agreements are an essential part of the local roads program. They allow the NDDOT and the local agency to work together to improve the local road network.

The NDDOT has the overall responsibility for all projects built with federal funds. The NDDOT Local Government Engineer has the general responsibility for all preconstruction activities on the local roads system, and the NDDOT District Engineer has the general responsibility for project construction with federal aid on the local road system. These two people will provide guidance for developing and constructing the project.

4.2.2 URBAN PROGRAM ROAD SYSTEMS

The road systems in the urban program are divided into three groups: Interstate, regional, and urban. Each system requires different agreements. The urban area or city may initiate an agreement by contacting the NDDOT Local Government Engineer. The roadway systems and the agreements needed are as follows:

4.2.2.1 Interstate system.

This system consists of all Interstate highways through the urban areas. Construction and maintenance are the NDDOT's responsibility. Agreements for Interstate projects in urban areas are not necessary, unless the urban area is requested to participate in funding or maintenance. (See Section 2.2 for guidelines concerning funding and maintenance participation.)

4.2.2.2 Regional highway system.

This system consists of the state highways in urban areas. The NDDOT will select projects in cooperation with the urban area, and will perform all of the engineering. Two types of agreements are needed for projects on this highway system:

a. Preliminary Engineering Agreement. This agreement is normally signed when the project concept report is approved, 12 to 18 months before the bid opening. It ensures concurrence on design concepts, cost participation, and general maintenance. There are two types of preliminary engineering agreements used which are dependent on whether the NDDOT or a consultant does the preliminary engineering.

b. Cost Participation and Maintenance Agreement. This agreement is normally signed eight to ten weeks before the bid opening. It is designed to

give a more accurate estimate of the urban area's share of the project costs, and a more detailed description of maintenance responsibilities, than those in the preliminary engineering agreement.

4.2.2.3 Urban roads system.

This system consists of all roads not on the Interstate or regional system that are classified as collectors and above in an urban area. The engineering on an urban project is performed by the city engineer or a consulting engineer selected by the city. The city is responsible for advancing the project through final NDDOT acceptance.

If the city uses federal funds for the project, it must enter into an agreement with the NDDOT. The agreement must be signed by all parties before federal aid reimbursable work begins.

If the city does not have an engineer available to staff the project and uses a consultant engineer for which it expects reimbursement with federal funds, the consultant must be chosen in accordance with Section 3.2 of this manual. That section explains the requirements of 23 CFR 172 which must be followed.

There are various agreements used between the NDDOT, a City, and/or the Consulting Engineering firm. The agreement used is dependent on the designer and/or phase of the project. Provided below is a brief description of each phase that may require an agreement.

Environmental Assessment, Environmental Impact Statement, Project Concept Report, or Preliminary Engineering. These phases of a project are done prior to the bid opening. Depending on the type or nature of the project, the environmental phase of the project is done first and under a separate agreement. The project concept report is the next document that is written. If the projects scope is limited, the project concept report can be used to obtain environmental clearance. Preliminary engineering involves preparing a project for a bid opening and designing a set of plans. Three different agreements can be used during these phases of the project depending on want work is to be completed and who is doing the engineering work. Agreement numbers DOT 19856, DOT 50590, or DOT 51567 can be used.

Right-of-way. Public and state laws protect the rights of property owners when property is acquired for public use. The legal procedures for acquiring right-of-way must be followed even if federal funds are not used to acquire right-of-way. Failure to follow these laws may jeopardize the use of federal aid for other parts of the project. If federal funds are utilized to obtain right-of-way, agreement number DOT 19896 is utilized. (See Section 6.1 for additional information on right-of-way.)

Adjustment and relocation of utilities. Construction projects often require relocation or adjustment of utilities. If federal funds are utilized to adjust and/or relocate utilities, agreement number DOT 1026 is utilized. (See Section 6.2 for more information on utility relocation and adjustment.)

Construction engineering services. When construction begins, the engineer must follow definite accounting procedures and provide surveying, materials testing, and inspection. If the city hires a consultant engineer to do the construction engineering, a construction engineering services agreement is necessary. This agreement is between the city and the consultant, but must be approved by the NDDOT if federal funds will be used. Agreement numbers DOT 19289 or DOT 50590 can be used depending on the work performed.

Construction and maintenance. The contract must be awarded by competitive bidding and that the project be constructed and maintained according to the construction and maintenance requirements of 23 CFR 635. It also describes the city's maintenance responsibilities. Agreement numbers DOT 19256 or DOT 17058 can be used depending on the work performed.

4.2.2.4 County road systems.

The county road system consists of the roads that are maintained by the county road department. The county major collector network (CMC) is the portion of the county system functionally classified as collector roadways or higher. The CMC network is defined by the county, and concurred in by the NDDOT and the FHWA.

a. Preliminary Engineering Agreement – PE is rarely participated in due to limited funds available. Exceptions can include projects funded with ER or on demonstration projects. These agreements must be executed and approved by the NDDOT prior to proceeding with the PE work.

b. Construction and Maintenance Agreement – This agreement is sent to the county by the NDDOT. It outlines the maintenance requirements the county must comply with, and also defines project financing arrangements.

c. Maintenance and Non-Encroachment Agreement – On county projects going through incorporated cities, the county usually does not have jurisdiction over the roadway within the incorporated city.

This agreement is signed by the city agreeing to do certain maintenance items, and also to maintain the right of way for highway uses and to prevent encroachments.

d. Construction Engineering Agreement – Construction engineering is a normal participation item for bridges replaced with bridge replacement funds. Construction engineering is allowed on the county road system if requested. This agreement is between the county and the engineer and approved by the NDDOT.

4.2.3 ADDITIONAL AGREEMENTS

The NDDOT will also help the urban area or county to obtain federal aid for upgrading rail highway crossings and traffic signal systems. The NDDOT will identify these locations in cooperation with the local agency to assure a safe roadway for the traveling public. A separate agreement is used for each of these functions:

4.2.3.1 Rail Highway Crossing Cost Participation Agreement.

This agreement gives an estimate of the project cost and the urban area or county's share of the project cost.

4.2.3.2 Agreement to Install and Maintain.

This is a general agreement used for installing and maintaining signal heads and traffic signal systems. The agreement outlines the responsibilities of each party and defines the cost participation.

4.2.4 AGREEMENT PROCEDURES

The NDDOT will prepare the agreements in cooperation with the local agency. The agreement is sent to the city/county engineer, who obtains the concurrence of the city or county commission. The process is as follows:

- One original is sent to the local agency with a request to return it signed.
- The LGD signs the agreement recommending approval
- The local agency-signed original is then sent to the NDDOT Legal Division, Deputy Director for Engineering, and/or director for review and signature.
- The NDDOT keeps the original and returns a copy to the local agency for its records.
- The NDDOT distribution list for executed agreements includes:
  1. Financial Management
  2. Construction Services Division (They get the original and one copy. The original goes into the project file.)
  3. LGD
  4. Affected district

4.2.5 FEDERAL AUTHORIZATION PROCESS

If a city/county wants federal aid for a phase of work, it must submit a written request for federal aid to the NDDOT, detailing the estimated cost of the phase. The estimated cost

must include the anticipated total cost and the amount of federal aid to be used for that phase. Federal funds requested cannot exceed the federal matching ratio, and cannot be expended by the city/county before it receives written authorization from the NDDOT. (See Section 2.2, "Funding Programs.")

The NDDOT needs two to four weeks after receiving the request to obtain authorization for the use of federal funds. Upon receiving federal authorization, the NDDOT will authorize the city/county in writing, specifying the date on which the federal funds will become available for the work activity.

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SECTION 4.3 – TRAFFIC PROJECTIONS AND ESALS

(May 2008)

4.3.1 GENERAL

Projected growth in traffic can be very difficult to estimate in urban areas with substantial growth. Projected growth in traffic for rural areas is more predictable; however, changes in freight movement due to railroad activities for example can shift the traffic pattern substantial. Either way, this may waste resources by encouraging a project design which won't be adequate or it may be over designed for the normal 20 year design life. Local agencies should make sure traffic projections are as accurate as possible using available methods.

One of the first steps in project development is to obtain the necessary traffic information. The following is a list of information which may be useful in preparing traffic projections.

- Current traffic counts and AADT (average annual daily traffic): use the latest traffic counts
- 8 to 16-hour turning-movement traffic counts are collected and then converted to 24-hour counts at all signalized and major non-signalized intersections
- Pedestrian counts
- Pedestrian/auto gap studies
- Speed studies
- Historical traffic growth trend or transportation planning model

All traffic projections within an urbanized area must be coordinated with the MPO.

The traffic projection period should be at least 20 years. Under certain circumstances, the city may want to design beyond 20 years.

The two methods used to project traffic and ESALs depend on whether a computer model of the local transportation plan is available. The responsibility for doing traffic and ESAL projections rests with the entity that developed the project.

4.3.2 TRAFFIC MODEL AVAILABLE

In metropolitan planning areas, traffic projections must be coordinated with the local MPOs and must be consistent with the locally adopted transportation plan and the model procedures used to develop that plan.

4.3.3 NO TRAFFIC MODEL AVAILABLE

Before proceeding with traffic projections, the termini of the study area must be determined. This decision is based on the type of improvement, the impacts of the improvement, and the future role of the corridor, and should be made jointly between the

city/county and the NDDOT. The actual study area may exceed the project limits that have been identified for funding.

4.3.3.1 Necessary information.

To project future traffic when there is no computer model of the local transportation plan available, the following information is needed:

a. **New traffic counts.** The counts should include one that represents turning-movement counts factored to represent a 24 hour period for all signalized and major non signalized intersections.

b. **Land use study.** Determine potential development density for the corridor, while giving consideration to future traffic generated beyond the corridor limits. Use the Institute of Transportation Engineers (ITE) trip generation manual to establish the amount of traffic that will be generated by development. If an ITE manual is unavailable and a similar study in ITE cannot be found, cities/counties should use their knowledge of the local area.

c. **Historical growth rate.** Using the historical data of the location, determine the historical growth rate of the area. If the projected growth of the area is more or less than the historical growth, cities/counties should use their own knowledge or local input to forecast traffic.

4.3.3.2 Creating projections.

To factor raw count data to represent the AADT (equivalent to a 24-hour count), use the Traffic Data Editing and Analysis (TDEA) software.

a. Using the actual traffic counts, determine the percentages of turns for each intersection leg and attempt to equalize the traffic.

b. In general, there is a balance of traffic entering and leaving an intersection. However, if it is justifiable to have an imbalance in traffic entering and leaving an intersection, use Form 2 or a manual operation.

c. In general, most intersections have balanced turns: traffic entering the north leg from the west will equal traffic entering the west leg from the north.

4.3.4 THE 30TH HIGHEST HOUR

Capacity and other traffic analyses focus on traffic volume, which varies greatly from hour-to-hour and day-to-day. It is not economical to set standards high enough that they provide for extreme hourly volumes of traffic that occur only a few times a year. On the other hand, it is not efficient to set standards so low that the highway is nearly always

running at full capacity.

Using the **30th highest hour** traffic volume count produces roadways that achieve the highest benefit to expenditure ratio. The NDDOT collects Automatic Traffic Recorder (ATR) data at sites for one year, and then uses the 30th highest hour traffic volume as the standard in designing the roadway improvement.

Highway capacity design is based on two factors: average daily traffic (ADT) and the probable life of the roadway. Design hourly volume (DHV) is expressed as a percentage (K) of the ADT. The K value in urban areas ranges from 7 to 18%; however, the NDDOT generally uses 10% for a value of K.

4.3.5 PAVEMENT DESIGN

Use ESALS to design pavement thickness and new roadway subbase thickness and type. Obtain vehicle classification data from the project site or a site that is similar regarding functional class and traffic volume (available from the NDDOT Planning & Programming Division).

4.3.6 ESAL CALCULATION

Multiply the number of trucks in each class by the average ESALs-per-vehicle as shown on the **Average ESAL Equivalencies Per Vehicle Type** table (Example 4.3.7).

The NDDOT uses a national table for averaging ESALS-per-vehicle.

Average ESAL values are used when no weight data is available. *Actual* ESAL values can be calculated using the AASHTO manual when exact vehicle type and weight data are available.

Obtain the average daily ESAL value by summing up the ESALS for all the vehicle classes.

4.3.7 EXAMPLE

On this example, the truck AADT on a project is 500, and vehicle classification data from a similar roadway show that 24% of the trucks are class 5 vehicles. 24% of 500 is 120 class 5 trucks. Using the multiplier of 0.1500 from the table results in a value of 18 Average Flexible ESALs for the class 5 vehicles. Applying the remaining truck percentages to the table results in 306.95 Average Flexible ESALs per day, which can be rounded to 310 Average Flexible ESALS per day. Follow the same steps to determine the projected Average Flexible ESALs, or use the Average Rigid ESAL factors to calculate Average Rigid ESAL values.

Average Flexible ESAL Equivalencies Per Vehicle Type

Class Type	% Type	Truck Volume	# Trucks	Average Flexible ESALs Rate	Average Flexible ESALs Per Type
Class 5	24 %	X 500 =	120	X 0.1500 =	**18.00 ESALs**
Class 6	27 %	X 500 =	135	X 0.4500 =	**60.75 ESALs**
Class 7	16 %	X 500 =	80	X 1.000 =	**80.00 ESALs**
Class 8	14 %	X 500 =	70	X 0.4000 =	**28.00 ESALs**
Class 9	7 %	X 500 =	35	X 1.100 =	**38.50 ESALs**
Class 10	3 %	X 500 =	15	X 0.7800 =	**11.70 ESALs**
Class 11	1 %	X 500 =	5	X 1.600 =	**8.00 ESALs**
Class 12	1 %	X 500 =	5	X 1.200 =	**6.00 ESALs**
Class 13	1 %	X 500 =	35	X 1.600 =	**56.00 ESALs**
					TOTAL = 306.95 ESALS

Average Rigid ESAL Equivalencies Per Vehicle Type

Class Type	% Type	Truck Volume	# Trucks	Average Rigid ESALs Rate	Average Rigid ESALs Per Type
Class 5	24 %	X 500 =	120	X 0.2000 =	**24.00 ESALs**
Class 6	27 %	X 500 =	135	X 0.6800 =	**91.80 ESALs**
Class 7	16 %	X 500 =	80	X 1.900 =	**152.00 ESALs**
Class 8	14 %	X 500 =	70	X 0.4500 =	**31.50 ESALs**
Class 9	7 %	X 500 =	35	X 1.900 =	**66.50 ESALs**
Class 10	3 %	X 500 =	15	X 1.400 =	**21.00 ESALs**
Class 11	1 %	X 500 =	5	X 1.800 =	**9.00 ESALs**
Class 12	1 %	X 500 =	5	X 1.400 =	**7.00 ESALs**
Class 13	1 %	X 500 =	35	X 2.200 =	**77.00 ESALs**
					TOTAL = 479.80 ESALS

SECTION 4.4 TRAFFIC OPERATIONS
(May 2008)

4.4.1 GENERAL

The goal of traffic operation design is to provide a safe, efficient, cost-effective transportation system for all transportation modes. To accomplish this, the following factors must be analyzed:

- Roadway capacity and traffic operations
- Traffic control needs
- Crash history and crash potential
- Lighting needs

Each of the following areas should be addressed in a traffic operations report.

4.4.2 HIGHWAY CAPACITY ANALYSIS

Using the Highway Capacity Manual, current edition, (Transportation Research Board) and the Highway Capacity Software (McTRANS), the designing agency must complete a traffic operations analysis for all major intersections along the corridor. The analysis must:

- Determine the number of traffic lanes needed, including the need for any turning lanes
- Establish signal phasing, timing, and coordination needs
- Identify any operational problems; and
- Establish the "Level Of Service," or LOS, of each major intersection and, when appropriate, the entire arterial

"LOS" is a general term describing the operating conditions drivers will experience. A roadway's LOS is determined by evaluating delays, safety problems, and driver inconvenience. Six levels of service, from "A" (best) through "F" (worst), are established and explained in the Highway Capacity Manual, current edition, for both intersections and roadways.

If federal funds are used for the project, the designing agency must design all intersections to an overall LOS of "C" or better, if feasible, for existing and 20 year projected traffic. All major movements within the intersections should also have an LOS of at least "C", if feasible. Minor movements may be allowed a lower level of service.

4.4.3 TRAFFIC CONTROL ANALYSIS

A traffic control analysis helps the designing agency to determine whether traffic control devices are needed along the project. Traffic control devices include traffic signs, pavement marking and striping, flashing beacons, and traffic signals. Information required for traffic control analysis includes:

- **Crash history** (a minimum of three years of crash history along the project corridor)
- **Corridor speed information**, including posted speed and vehicle speed.
- **Traffic information**, including vehicle classification, vehicle turning movements, vehicle and pedestrian hourly volumes, a traffic flow map, and 20 year projected traffic
- **City population**
- **Roadway classification**
- **Adjacent intersection traffic control**

The designing agency must adhere to the Manual on Uniform Traffic Control Devices (MUTCD) when deciding which traffic-control devices to place along the project.

4.4.3.1 Traffic signal warrant analysis.

The designing agency should compare the intersection information with minimum MUTCD warrant requirements, using both actual current and predicted future traffic to determine if a signal may be warranted. The analysis is also used to help the designing agency determine whether pre-timed, semi-actuated, or actuated signals should be installed, and if pedestrian signals should be included.

When there is a separate right-turn lane, normally the right turning traffic is not included in the warrant analysis.

4.4.3.2 Flashing beacon analysis.

This analysis is used at intersections where traffic or physical conditions do not justify a conventional traffic signal but high crash rates may indicate an operational problem.

4.4.3.3 Pedestrian and school crossing analysis.

This analysis helps the designing agency determine whether traffic control devices are needed for pedestrian crossings. These devices may include signing, pavement markings, beacons, traffic signals, and grade separations.

The following information is needed to complete the analysis.

a. Pedestrian counts (for school crossing studies, only children K thru 8 should be included)
b. Vehicle traffic counts (including vehicle classification, turning movements, and hourly volumes)
c. Pedestrian gap study (see Manual of Traffic Engineering Studies, Institute of Traffic Engineers ITE)
d. Peak hour delay study (see Manual of Traffic Engineering Studies, ITE
e. Vehicle speed (see Manual of Traffic Engineering Studies, ITE. It is customary to use the "85th percentile" when determining vehicle speeds. That is, use the speed at which or below which 85% of all vehicles drive.)
f. Street width
g. Existing traffic control
h. Existence, location, and use of sidewalks
i. Adjacent intersection and roadway traffic control

MUTCD, Ref. 1, contains a complete description of the warrants for, and proper use of, traffic control devices in school zones.

4.4.4 CRASH ANALYSIS

The crash analysis helps the designing agency to:

- Identify crash locations within the study area
- Determine whether corrective measures are necessary
- Evaluate various design features and corrective measures
- Improve overall geometric design
- Provide data for education or enforcement programs

The designing agency should analyze all reported crashes for a minimum of a three year period. A concentration of crashes at a specific location may indicate the need for an in-depth investigation to determine contributing factors and possible corrective actions.

The analysis should include a calculation of the crash rate for each location, as well as a collision diagram plotting each crash to show direction of approach, type of crash, severity, date, weather, and time.

The designing agency then develops corrective measures, if necessary, which may be permanent, temporary, or staged to accommodate budget constraints.

4.4.5 HIGHWAY LIGHTING ANALYSIS

This analysis helps the designing agency to determine whether lighting is new, improved, or additional is warranted. Necessary information includes:

- The level of corridor development, including land use, sidewalks, nighttime pedestrian, and parking activity

- Roadway classification, refer to the NDDOT Design Manual, Chapter 3 - Section 11.
- Crash analysis
- Roadway information, including pavement type and width
- Speed limits along corridor
- Existing lighting
- Manufacturer's lighting photometrics

Using this information and Roadway Lighting Design Guide (AASHTO), the designing agency recommends a level of lighting, compares it to the existing lighting level, and determines whether the existing lighting is adequate, substandard, or obsolete.

Substandard light levels alone do not warrant an improvement in the lighting system. **For lighting system improvements to be warranted, they must meet the conditions as outlined in the NDDOT Design Manual, Chapter 3 - Section 11**. Another reference document for use in determining light source, mounting height, and approximate cost is the Roadway Lighting Handbook (FHWA).

SECTION 4.5 – FIELD REVIEW AND TS&L INSPECTION
(May 2008)

4.5.1 GENERAL

A field review is not mandatory, but is recommended. Field reviews verify office information and determine whether any additional materials testing or traffic analysis is necessary. The information needed includes engineering data on existing pavement condition, geometrics, structures, and traffic operations. The field review is conducted with the following participants, as appropriate. Additional participants may be invite depending on the scope of the project, refer to the following web address for additional invitees, http://www.dot.nd.gov/manuals/designmanual/chapter2/dm-2-03c.pdf.

- LGD or project manager
- City or county personnel
- District Engineer
- Design Division
- Environmental and Transportation Services Division
- Materials Division
- Bridge Division
- MPO representative
- Right-of-Way section
- Traffic Operations section
- FHWA representative
- Consultant

The main reason for a field review is to provide all participants of the project a chance to get an on-site look at the proposed project to discuss any possible problem areas. Again, the field review is not mandatory.

4.5.2 COMPONENTS OF A FIELD REVIEW

A field review should generally include, at a minimum, the following. Refer to section II-03.07.01 for additional information.

- Visual evaluation of roadway conditions
- Scope of project, possible alternatives, and compatibility of the proposal with adjacent segments of the roadway
- Verification of beginning and ending points of the project
- Project additions, if any
- Visual evaluation of structures, drainage, railroad crossings, guardrail, signs, alignment, right-of-way encroachments, intersections, traffic signals, and parking alternatives
- Scope of additional surveys needed
- Extent of possible city/county involvement and participation

- Potential environmental and social issues

After the field review is completed, a memo discussing the above items is placed in the project file. This memo should be circulated to the participants for review.

4.5.3 TS& L INSPECTIONS

The initials TS&L stand for Type, Size, and Location. TS&L inspections are on site inspections that are required for each proposed structure. The TS&L is initiated by the District office when a request and information is received along with a copy of the Structural Project Concept Report received from the City/County/Consultant engineer. The Bridge Division will review complicated or major projects.

A checklist of items to be reviewed by the TS&L party is shown at the end of this section. This list is not all-inclusive for all projects, but serves as a guide. The City/County/Consultant engineer makes the necessary arrangements with the City/County representatives or others necessary for the inspection. Basic design criteria are established in the "Stream Crossing Standards" and the "Manual for Development of Highway Crossings at Streams." The Bridge Division is available for assistance on complex projects.

The District sends the TS&L inspection report with recommendations to the Bridge Division. The Bridge Division then reviews and forwards comments, concurrence, and recommendations to LGD.

LGD requests a safety review from the Design Division, if the traffic is more than 250 ADT. Experience has demonstrated that for sites under 250 ADT, it is not cost effective to install guardrail or safety improvements unless there are unusual conditions in project area.

On the basis of the District and Bridge Division reviews, the LGD Engineer then grants Location and Design Approval. The City/County/Consultant Engineer can then prepare plans for bid opening.

TS&L CHECKLIST

____ Is the design flood frequency suitable considering traffic volumes, road importance, possible flood damage, overflows, etc.
____ Review alternatives for design and location presented.
____ Is detour adequate? Temporary bypass or on existing roads?
____ Does the proposed structure fit the existing stream alignment?
____ Proposed channel work and effects have been carefully reviewed.
____ Any possible effects on property up or downstream should be reviewed.
____ Design standards should be reviewed in regard to present road use or projected future improvements.
____ Is berm to channel relationship compatible with the proposed slope?
____ Is existing right of way adequate or will additional right of way or easements be necessary? Be specific about amount, lengths, width, etc.
____ Disposal location of any materials removed from the existing structure should be determined.
____ Any utility adjustments necessary?

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SECTION 4.6 – MATERIALS DESIGN AND PAVEMENT RECOMMENDATIONS

(May 2008)

4.6.1 GENERAL

The following material provides guidance for processing and developing materials reports on needed subcuts, pavement thickness design, foundations, etc. The two main sources of information used as guidelines for preparing these reports are:

- 1993 Guide for Design of Pavement Structures, AASHTO
- Standard Specifications for Road and Bridge Construction, NDDOT

The NDDOT adheres to the guidelines in these two sources. The following reports may need to be completed for each project.

4.6.2 SOIL SURVEY REPORT AND DESIGN RECOMMENDATIONS

The soil survey report is divided into two parts: general soil information throughout the project, and detailed design recommendations.

4.6.2.1 Soil information.

This portion of the report includes information on terrain topography, land forms, general soil conditions, and any special soil conditions.

4.6.2.2 Design recommendations.

This is one of the most important parts of the soil survey report. An engineering analysis should be completed which makes recommendations in the following areas, as appropriate. (This list is not inclusive; there may be other areas needing recommendations, depending on the nature of the project.)

a. Gravel subbase and installation of fabrics
b. Subcut and scarification
c. Soil selection
d. Soil stabilization
e. Foundation excavation
f. Muck excavation and backfill
g. Borrow areas
h. Slope design
i. Erosion control
j. Drainage problems
k. Landscaping
l. Frost susceptibility

4.6.3 BRIDGE FOUNDATION AND CONSOLIDATION REPORT

This report should document the engineering analysis that was completed to determine piling design needs and whether any consolidation or slope stability problems exist that will affect bridge construction.

4.6.4 PAVEMENT THICKNESS DESIGN REPORT

This report should present asphalt and concrete thickness alternatives for the pavement system, as well as recommendations for the class of HBP, base thickness and alternatives if any. It should also document the engineering analysis used to reach those alternatives.

The selection of the class of asphalt pavement depends on the average daily level of **equivalent single-axle loads** (ESALs). The Materials Division uses the following chart to determine the recommended pavement classification.

Design ESALs (including growth rate)	Two-way daily ESALs (0% Growth rate)	Class of Aggregate for HBP
<500,000	<137	Class 27
500,000 to 1,000,000	137 to 274	Class 29
1,000,000 to 3,000,000	274 to 822	Class 31
>3,000,000 or urban	>822 or urban	Class 33

(General rule: Class 33 for all urban streets.)
Class 27 for most county roads with low truck traffic, otherwise Class 29 or 31 may be needed.

Because of North Dakota's climate, the NDDOT's minimum acceptable concrete pavement design thickness is 8 inches.

4.6.5 HBP MATERIALS RECOMMENDATIONS REPORT

This report identifies the asphalt binder grade, estimates the percentage of binder required, class of aggregate for HBP, and the HBP specification (i.e., QC/QA, superpave, etc.).

For the purpose of plan quantities, it is necessary to estimate the asphalt content and specify the class of pavement. **This is only an estimate**. Actual aggregate gradation within the specifications is determined by the contractor.

SECTION 4.7 – SOLICITATION OF VIEWS
(May 2008)

4.7.1 GENERAL

The solicitation of views process ensures that the scope of the project is made known to other jurisdictions and government agencies. It ensures that they have an opportunity to comment on the project's impacts on the environment and adjacent property. The requirements for adequate planning and coordination exist in both state and federal regulations.

4.7.2 PROCEDURE

4.7.2.1 Form letters

The project manager should prepare a letter describing the proposed project. An attached map should delineate the project area and any expected area of disturbance. These letters are used to request comments on the proposed project from federal, state, local, and private agencies. If an agency is responsible by law for granting or approving a necessary permit, license, or other concurrence on a project, it is considered a cooperating agency. Project managers are required to give all agencies a 30 day response period for solicitation of views letters. Refer to the NDDOT Design Manual, Chapter 2 – Section 3 for additional information regarding solicitation of view letters. Example letters can be found at http://www.dot.nd.gov/designmanual_wp_docfiles.html.

4.7.2.2 Final mailing list

The next step is to identify a final list from the master list of agencies from which views will be solicited. The master list is updated annually and can be downloaded at http://www.dot.nd.gov/designmanual_wp_docfiles.html. The final list will be developed from the master list by the city/county or its consultant.

4.7.2.3 Printing and signing

Once the final mailing list is established, the letters are distributed.

The NDDOT developed projects, they are signed by the Design Engineer or Consultant Engineer. For city or county developed projects, the solicitation of views should be signed by the local agency's project engineer or consultant engineer.

4.7.2.4 Distribution

After the letters are signed, the NDDOT's process is to make one copy for the

file and place an electronic copy in Filenet. The original is then mailed to the addressee.

The local agencies must keep a copy of the letter on file whether the project is local designed or NDDOT-designed.

4.7.2.5 Comments

Comments received in response to these letters, and comments noted from public input meetings, will be summarized and considered in the project concept report.

SECTION 4.8 – PROJECT CONCEPT REPORT
(May 2008)

4.8.1 GENERAL

The Project Concept Report (PCR) is used as a tool for environmental classification and determining eligibility for federal funding. Depending which system the project is on, the roles of the city, county, state, and federal government vary. Refer to the NDDOT Design Manual Chapter 2 – Section 5 for detailed information on what is needed in the PCR.

4.8.1.1 Application.

A project concept report will be required on the following types of County projects:

a. Grading with federal aid.
b. Surfacing with federal aid.
c. Grading being done with County funds, but with a subsequent paving project which will be financed with federal aid.
d. Structures with federal aid.
e. Projects with state aid.

4.8.2 REVIEW AND COMMENT

When a city or county develops a PCR, they are required to submit ten copies for urban projects and one copy for county projects and one electronic copy (urban and county) of the draft report to the NDDOT's LGD. Three types of action on the draft are possible.

a. Local Government can approve the PCR and send it on to FHWA, recommending the project as a categorical exclusion. If FHWA concurs, no more work on the report is necessary.

b. Local Government can provide comments and ask for additional information, which would ultimately appear in the executive summary.

c. Local Government can inform the local agency that the project is not eligible for federal aid.

Local Government coordinates the distribution, review, and comments within the NDDOT. For projects on the NHS, the local agency submits three additional copies: two to Local Government, and one to the appropriate District Engineer. The NDDOT coordinates with FHWA on NHS projects.

The local agencies should allow four weeks for the NDDOT to review and comment of all draft PCRs.

4.8.3 FHWA APPROVAL OF THE PROJECT CONCEPT FOR NHS PROJECTS

One electronic copy of the NDDOT approved PCR is submitted to the Federal Highway Administration by the NDDOT for approval and final environmental clearance. These two copies should contain all reports generated to produce the document. A review period of two weeks is normally requested by FHWA. FHWA must approve the PCR, which typically is viewed as the environmental documentation, before design is authorized.

4.8.4 DISTRIBUTION OF THE FINAL PCR

The final step in the process is distributing the approved concept report to the engineering divisions and the appropriate district, city, and MPO personnel. For PCRs developed by the NDDOT, Design Division makes final distribution. The original is retained in the division project file and the electronic copy will be stored in FileNet.

For PCR's developed by the local agencies or their consultant, eight copies (for urban projects) and one copy (for county projects) along with one electronic copy (urban and county projects) of the final PCR are submitted to the NDDOT's LGD. Local Government will make final distribution.

SECTION 4.9 – PUBLIC INVOLVEMENT IN PROJECTS
(May 2008)

4.9.1 GENERAL

The NDDOT policy for public involvement procedures are found in the NDDOT Design Manual, chapter 2 – Section 4.

Public involvement is continual within the NDDOT and involves both formal and informal processes. It is intended to help all interested persons understand proposed facility improvements and their social, economic, and environmental effects. It is also a tool to allow the public to express their views early in project development. Public involvement gives the decision makers valuable information to be used throughout the development phase.

Public involvement should be encouraged throughout the project at various stages, including citizen advisory group meetings, public input meetings, public hearings, and post project meetings.

The NDDOT strongly encourages early and proactive public participation in all projects.

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SECTION 4.10 – ENVIRONMENTAL PROCESS

(May 2008)

4.10.1 GUIDANCE MATERIAL

The Environmental Process is a vital step in securing federal-aid on a project. Refer to the NDDOT Design Manual, Chapter 2 – Section 5 for guidance on fulfilling the environmental requirements. The following material provides additional guidance for processing and developing environmental studies and documents:

- Title 23 Code of Federal Regulations (23 CFR) 771 and 772
- 33 CFR 330 (for Section 404 permits)
- FHWA Technical Advisory T 6640.8A
- FHWA Environmental Guidebook Volumes 1, 2, and 3
- FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108)
- 36 CFR 800 (Historical Preservation)

4.10.2 LOCAL AGENCY RESPONSIBILITIES

For every federal-aid project the local agency develops, it must evaluate all environmental consequences.

4.10.3 ENVIRONMENTAL COMMITMENTS

All projects must receive environmental clearance prior to authorization of federal funds from FHWA. FHWA authorizations projects based on statements or "commitments" in the environmental document. These "commitments" must be carried forward through and implemented during the construction phase of the project. In order to ensure compliance, a plan sheet shall be added behind the note(s) pages listing the environmental commitments that need to be adhered to. The project engineer is responsible to ensure that the environmental commitments listed in the plans are completed.

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SECTION 5.1 – DESIGN OVERVIEW

(May 2008)

5.1.1 GENERAL

As a condition of receiving federal funds, all states must adopt design standards approved by the Federal Highway Administration (FHWA). These standards ensure that federal funds are used only for safe, economical, fully functional transportation facilities. Local Agencies planning to use federal funds on any part of a project must adhere to the standards adopted by the NDDOT for proper design of roads, streets, bridges, intersections, bikeways, and pedestrian walkways.

This chapter describes modern design practices, but design engineers must also consider social and environmental impacts, the needs and expectations of drivers, the cost of the improvement, and other variables. The responsibility of making these engineering decisions, and the accompanying liability, rest with the designing agency.

5.1.2 URBAN PROGRAM DESIGN STANDARDS POLICY

The NDDOT policy is that the standards in the reference documents listed in 5.1.3 should be used. **The NDDOT uses "desirable" standards rather than "minimum" standards on NDDOT-developed projects whenever possible, and strongly encourages the local agencies to adopt the same philosophy**. However, on locally-developed projects not affecting the regional system, including approaches to, intersections with or involving over/under passes of the regional system, the local agency and the NDDOT must agree on the design standard to be used. (There are certain instances when, as a result of physical or economic limitations, exceptions to design standards are allowed. See Section 5.9)

When a locally-developed project affects the regional system, the local agency and NDDOT must agree on the design standards to be used.

5.1.3 DESIGN STANDARDS REFERENCE DOCUMENTS

On locally-developed projects, the local agency must design the project according to:

- 23 CFR 625, "Design Standards for Highways"
- A Policy of Geometric Design of Highways and Streets ("green book"), AASHTO
- Design Manual, NDDOT (to include all design memo's and new guidelines)
- Standard Specifications for Road and Bridge Construction, NDDOT

23 CFR 625 gives policy, applications, and a reference list of publications providing design standards.

Further guidance is provided in the remaining sections of this chapter.

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SECTION 5.2 – ROADWAY DESIGN

(May 2008)

5.2.1 GENERAL

Two aspects of highway engineering-geometric design and structural design are distinct but interdependent.

Geometric design concerns the visible dimensions of a roadway. Its objective is to shape the roadway to conform with the behavior of drivers, individual vehicles, and traffic. Geometric design deals with location, alignment, profile, cross section, intersections and highway types, design speed, sight distance, and control of access and systems.

Structural design concerns the physical characteristics and engineering properties of the roadbed. It deals with pavement type, base materials, subgrade strength, drainage, and pavement management.

5.2.2 REFERENCE DOCUMENTS

On locally-developed projects, the entity must design the project according to:

- 23 CFR 625, "Design Standards for Highways"
- A Policy of Geometric Design of Highways and Streets ("green book"), AASHTO
- Design Manual, NDDOT (to include all design memo's and new guidelines)
- Standard Specifications for Road and Bridge Construction, NDDOT

23 CFR 625 gives policy, applications, and a reference list of publications providing design standards.

The guidelines in the following publications are from various sources and have been adopted by the NDDOT and FHWA. Local agencies should adhere to them when designing a roadway, and should request needed copies from the listed source agency.

- Roadside Design Guide, AASHTO
- Guide for Design of Pavement Structures, AASHTO
- Design Manual, NDDOT (to include all design memo's and new guidelines)
- Pavement Design, Principles and Practice, FHWA

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SECTION 5.3 – INTERSECTION DESIGN
(May 2008)

5.3.1 GENERAL

The successful operation of most streets and highways depends largely upon intersection design. All traffic movements must be accommodated to avoid critical problems of traffic operation, capacity, and safety. (See Section 4.4., "Traffic Operations.")

The most important aspect of intersection design is meeting driver expectations of the approaching roadways and intersection. These are some of the most common expectations, which must be considered during intersection design:

- That the number of through-lanes approaching and leaving an intersection will be the same
- That the most important route passing through the intersection will have the most direct alignment
- That speed reduction is required to safely negotiate a turn
- That left turns onto an intersecting roadway from an arterial street will be made from the left-hand lane
- That a through-lane will be continuous through the intersection and for at least a short distance beyond

5.3.2 REFERENCE DOCUMENTS

On locally-developed projects, the local government must design the project according to:

- 23 CFR 625, "Design Standards for Highways"
- A Policy of Geometric Design of Highways and Streets ("green book"), AASHTO
- Design Manual, NDDOT (to include all design memo's and new guidelines)
- Standard Specifications for Road and Bridge Construction, NDDOT

23 CFR 625 gives policy, applications, and a reference list of publications providing design standards.

The guidelines in the following publications are from various sources and have been adopted by the NDDOT and FHWA. Cities should adhere to them when designing a roadway, and should request needed copies from the listed source agency.

- Highway Capacity Manual (current edition), Transportation Research Board
- Intersection Channelization Design Guide, NCHRP Report 279, Transportation Research Board

All traffic control devices-signing, lighting, pavement marking, etc-must conform to the standards in the Manual on Uniform Traffic Control Devices, USDOT, FHWA. (See Section 5.8.)

SECTION 5.4 – BRIDGE DESIGN
(May 2008)

5.4.1 GENERAL

The two main aspects of bridge design are hydraulic design and structural design. Many variables influence bridge design decisions, such as the structure's location, railroad involvement in the project, hydraulics, and the necessary design of decks, girders, abutments, piers, and foundations.

Good bridge design is crucial because a bridge failure is potentially catastrophic in a way that a roadway failure is not. For this reason, each bridge should be uniquely designed to address the variables pertinent to that project.

5.4.2 REFERENCE DOCUMENTS

On locally developed projects, the local agency must design the project according to:

- 23 CFR 625, "Design Standards for Highways"
- A Policy of Geometric Design of Highways and Streets ("green book"), AASHTO
- Design Manual, NDDOT (to include all design memo's and new guidelines)
- Standard Specifications for Road and Bridge Construction, NDDOT

23 CFR 625 gives policy, applications, and a reference list of publications providing design standards.

The guidelines in the following publications are from various sources and have been adopted by the NDDOT and FHWA. Local agencies should adhere to them when designing a roadway, and should request needed copies from the listed source agency.

- Standard Specifications for Highway Bridges, AASHTO
- Applicable sections of federal-aid policy guide 23 CFR 650
- North Dakota Prestressed Girder Design and Checking Guide, NDDOT Bridge Division
- LRFD Bridge Design Manual, NDDOT Bridge Division (not yet available)
- Highway Structures Design Handbook, Vol. I and II, American Institute of Steel Construction

The NDDOT's Bridge Division has prepared a manual showing circumstances under which these and other reference sources should be used. Local agencies should use the NDDOT Design Manual, as a guide. Structures built over or under a railroad must follow standards established by that railroad. Structure design should, as a minimum, meet the standards of the American Railway Engineering and Maintenance of Way Association, and AASHTO.

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SECTION 5.5 – DRAINAGE
(May 2008)

5.5.1 GENERAL

The local agency should complete a drainage review for each project. It should include, where appropriate, a watershed study; hydrologic analysis; type, size, and location study; cost analysis; hydraulic design; and sediment and scour analysis. All work items are considered equally important during drainage design.

In addition, the local agency should complete a hydraulic design for all facilities (culverts, storm drains, etc.). Hydraulic design of highway drainage structures should be based on hydrologic analysis of local site conditions and the facilities being constructed. Where highways cross or encroach upon established or proposed regulatory flood plains, the flood frequency curve approved by the Federal Emergency Management Agency (FEMA) and administering agencies should be used for design. The local agency should determine the 100-year and 500-year discharges for each crossing.

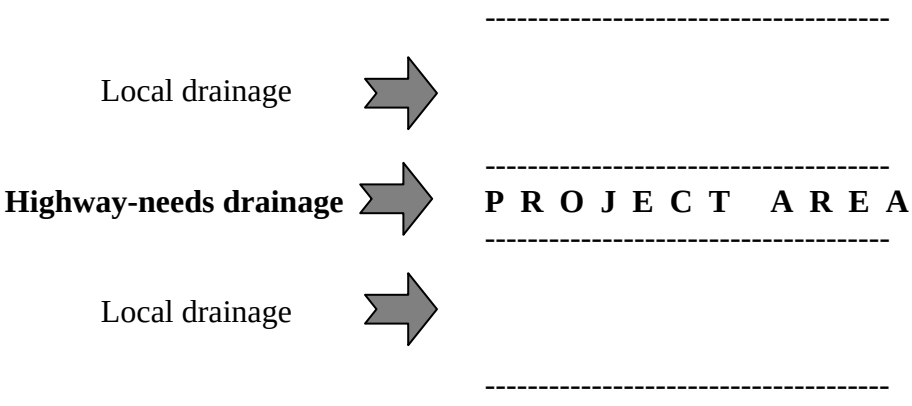
The following criteria must be used to design drainage facilities on the local roadway system.

Type of Crossing	State Highway System						County	
	Urban System		Rural System				Rural System	
	Regional	Urban Roads	Principal Arterial		Minor Arterial	Major Collector	Major Collector	Off System
			Interstate	Other				
Bridges & Reinforced Concrete Boxes	25-yrs(2)	25-yrs(2)	50-yrs(2)	50-yrs(2)	50-yrs(2)	25-yrs(2)	25-yrs(2,3)	15-yrs(2,3)
Roadway Culverts	25-yrs(2)	25-yrs2	50-yrs(2)	25-yrs(2)	25-yrs(2)	25-yrs(2)	25-yrs(2,3)	15-yrs(2,3,5)
Storm Drains	10-yrs(1)	5-yrs(1)	10-yrs(2)	10-yrs(2)	10-yrs(2)	10-yrs(2)	--	--
Underpass Storm Drains	25-yrs(1)	25-yrs(1)	50-yrs(2)	25-yrs(2)	25-yrs(2)	25-yrs(2)	--	--

(1)-Discharges shall be computed using the rational method or other recognized hydrologic methods.
(2)-Discharges shall be computed using United States geological survey report 92-4020 or other recognized hydrologic methods.
(3)-If an overflow section is provided, the pipes and the overflow section, in combination, must pass the appropriate design event within the headwater limitations provided in this chapter.
(4)-Off system roads include all township roads.
(5)-For township roads, the recurrence interval is 10 years.

Roadway system maps are contained in Chapter 10.

Federal funds may be used to construct drainage features only for the portion of the facility that serves the needs of the project. The following example will show the methods to use when determining participation ratios for the drainage facilities.



Highway needs drainage = surface runoff within r/w plus 1 block outside r/w
Local drainage = surface runoff or drainage by facility outside of highway needs drainage area

FEDERAL PARTICIPATION = $\frac{\textbf{(Highway needs drainage)}}{\textbf{(Highway needs drainage) + (local drainage)}}$

FHWA and NDDOT are committed to ensuring that all highway construction projects are located, designed, built, and maintained in a way that will minimize erosion and control sedimentation.

A recent revision to 23 CFR 650, Subpart B, "Erosion and Sediment Control of Highway Construction Projects," formally adopts Volume III of the AASHTO Highway Drainage Guidelines of 1992. This volume provides excellent guidance on erosion and sediment control.

5.5.2 REFERENCE DOCUMENTS

5.5.2.1 Procedural Guide for Computing Runoff by the Rational Method, NDDOT Design Division
5.5.2.2 Techniques for Estimating Peak-Flow Frequency Relations for North Dakota Streams, U.S. Geological Survey Water Resources Investigations report 92-4020
5.5.2.3 Hydrology Manual for North Dakota, Soil Conservation Service of North Dakota
5.5.2.4 Hydrology for Transportation Engineers, FHWA-IP-80-1, USDOT Research and Development Implementation (HDV-21)
5.5.2.5 Hydrology, Hydraulic Engineering Circular 19 FHWA-IP-84-15
5.5.2.6 Highway Drainage Guidelines, AASHTO

5.5.2.7 FHWA manuals

HDS 1: Hydraulics of Bridge Waterways
HDS 2: Highway Hydrology
HDS 3: Design Charts for Open- Channel Flow
HDS 4: Introduction to Highway Hydraulics
HDS 5: Hydraulic Design of Highway Culverts
HEC 9: Debris–Control Structures
HEC 11: Design of Riprap Revetment
HEC 14: Hydraulic Design of Energy Dissipaters for Culverts & Channels
HEC 15: Design of Roadside Channels with Flexible Linings
HEC 18: Evaluating Scour at Bridges
HEC 20: Stream Stability at Highway Structures
HEC 21: Design of Bridge Deck Drainage
HEC 22: Urban Drainage Design Manual
HEC 23: Bridge Scour and Stream Instability Countermeasures
HY-7: User's Manual for WSPRO – A Computer Model for Water Surface Profile Computations

5.5.2.8 USGS Manuals

WRI Report 92-4020: Techniques for Estimating Peak Flow Frequency Relations for ND Streams
Computations of Water Surface Profiles in Open Channels: Book 3, Chapter A15.

5.5.2.9 Computer Programs

HY 8:	Hydraulic Design of Highway Culverts
HY 9:	Scour at Bridges
HYDRAIN:	Drainage Design System (includes WSPRO & HY–8)
HEC 2:	Water Surface Profiles
HEC-HMS	Hydrologic Modeling System
HEC–RAS	River Analysis System

5.5.2.10 NDDOT Manuals

Manual for Development of Highway Crossings at Streams (hydraulic manual)

Guidelines for Structural Design & Hydraulic Reference

Stream Crossing Standards

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SECTION 5.6 – BICYCLE AND PEDESTRIAN FACILITIES
(May 2008)

5.6.1 GENERAL

Planning and designing of transportation corridors should consider all modes of travel. Bicycle and pedestrian facilities are often overlooked as transportation modes. The NDDOT considers all modes of travel when designing projects, and encourages the local agency to adopt the same practice.

5.6.2 REFERENCE DOCUMENTS

The local agency must design the project according to:

- 23 CFR 625, "Design Standards for Highways"
- A Policy of Geometric Design of Highways and Streets ("green book"), AASHTO
- Design Manual, NDDOT (to include all design memo's and new guidelines)
- Standard Specifications for Road and Bridge Construction, NDDOT

23 CFR 625 gives policy, applications, and a reference list of publications providing design standards.

The guidelines in the following publications are from various sources and have been adopted by the NDDOT and FHWA. Local agencies should adhere to them when designing a roadway, and should request needed copies from the listed source agency.

- Guide for the Development of Bicycle Facilities, AASHTO GBF-3 (Note: The NDDOT's standard for multi-use paths on bridges is 10'.)
- Manual on Uniform Traffic Control Devices, USDOT, FHWA
- Uniform Federal Accessibility Standards (UFAS), FED-STD-795
- Selecting Roadway Design Treatments to Accommodate Bicycles, FHWA-RD-92-073
- Pedestrians and Traffic-Control Measures, Research Program 139, Transportation Research Board
- Designing Sidewalks and Trails for Access Part I of II – Review of Existing Guidelines and Practices, FHWA-HEP-99-006
- Designing Sidewalks and Trails for Access Part II of II – Best Practices Design Guide, FHWA-EP-01-027
- Guide for the Planning, Design, and Operation of Pedestrian Facilities, AASHTO GPF-1
- Highway Design Handbook for Older Drivers and Pedestrians, FHWA-RD-01-103

These documents describe the assumptions, principles, and approaches most successfully used to design bicycle and pedestrian facilities. **When federal transportation funds are used in the design and construction of the facility, local agency must conform to the first three reference documents listed above. The other sources are to be used as guidelines.**

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SECTION 5.7 – ACCESS MANAGEMENT
(May 2008)

5.7.1 GENERAL

Access management helps to keep traffic movement safe and efficient by controlling the number and location of intersecting streets and driveways along a roadway. It is of concern to the public as well as to transportation authorities. The location and design of access is critical to the safety and capacity of our roadway system.

A well-conceived, comprehensive access management program can improve safety, reduce delays, and provide ease of travel, while limiting capital investments for reconstruction. The four main categories of access management include limiting the number of traffic conflict points; separating traffic conflict areas; limiting deceleration requirements; and removing turning vehicles or queues from sections of the through-lanes.

On locally-developed projects:

- The local agency must control the length and location of curb openings for access. The length, width, and location of the access opening must be designed as per the requirements of the reference documents below.
- If the traffic corridor intersects a state highway, the local agency must justify to the NDDOT that any new access allowed will not be detrimental to the state highway.

5.7.2 REFERENCE DOCUMENTS

On city or county-developed projects, the local agency must design the project according to:

- 23 CFR 625, "Design Standards for Highways"
- A Policy of Geometric Design of Highways and Streets ("green book"), AASHTO
- Design Manual, NDDOT (to include all design memo's and new guidelines)
- Standard Specifications for Road and Bridge Construction, NDDOT

23 CFR 625 gives policy, applications, and a reference list of publications providing design standards.

The guidelines in the following publications are from various sources and have been adopted by the NDDOT and FHWA. Local agencies should adhere to them when designing a roadway, and should request needed copies from the listed source agency.

- Access Management, Location, and Design, FHWA, National Highway Institute Course No. 133078
- Design Standard Drawings, NDDOT

It is the NDDOT's philosophy to limit the number of access points on arterial and collector streets to improve the safety of the traveling public and protect the design integrity of the roadway. At the same time, the NDDOT strives to consider the access needs of businesses. The local agency makes access decisions off the regional highway system, but **any access the local agency allows must meet the requirements of the above reference documents**.

SECTION 5.8 – TRAFFIC CONTROL AND LIGHTING
(May 2008)

5.8.1 GENERAL

Traffic control includes traffic signs, signals, pavement markings, and lighting. **NDCC 39-13-06 requires that all traffic control devices conform to the USDOT Manual on Uniform Traffic Control Devices (MUTCD).**

Conformation to the MUTCD is essential for safe and efficient travel. The jurisdiction responsible for a decision to deviate from the MUTCD is liable for any consequences of that decision. The NDDOT will ask the local agencies to certify that they have met design standards and complied with the MUTCD.

5.8.2 TRAFFIC SIGNS

A good signing program should be consistent in giving the motorist guidance, restrictions, and warnings. Signs should be an integral part of highway and street design, and should never be used as an attempt to compensation for a substandard design.

The general standards for signs are found in the MUTCD. The signs are classified into regulatory, warning, and guide signs, as specified in Parts II-B, C, D, E, and F. These sections of the MUTCD must be used to determine sign applications and specify the size, shape, color, location, and position of signs. The Standard Signs Supplement (NDDOT Design Division, Traffic Section), Standard Highway Signs Book (FHWA), and Traffic Control Devices Handbook (ITE) are an additional reference source.

5.8.3 TRAFFIC SIGNALS

Traffic signals must meet the requirements in Part IV of the MUTCD. Additional references are:

- Transportation and Traffic Engineering Handbook, Institute of Traffic Engineers (ITE)
- Traffic Signal Book, Prentice-Hall
- Traffic Control Systems Handbook, FHWA-SA-95-032
- Manual of Traffic Signal Design, ITE
- Highway Capacity Manual (current edition), Transportation Research Board
- Detector Locations, ITE (used to locate detectors at traffic-actuated signals)
- Design Manual, NDDOT (to include all design memo's and new guidelines)
- Traffic Control Devices Handbook, ITE

5.8.4 PAVEMENT MARKINGS

Pavement markings supplement some traffic signs. They channel traffic into the proper positions; separate opposing lanes of traffic; delineate no-passing zones and turn lanes at

intersections; and outline pedestrian crossings. Markings should be uniform in design and function.

Because of competition among suppliers and the search for durable and quick-drying materials, there are many pavement marking materials available. The most common types include paint (normal or reflective), epoxy paint, thermoplastic striping, prefabricated tape, and raised markings. Refer to Appendix III-10 A of the NDDOT Design Manual for guidance.

See the MUTCD for the following:

- General pavement marking principles (III-A)
- Pavement and curb marking (III-B)
- Object marking (III-C)
- Delineation (III-D)
- Colored pavement (III-E)
- Barricades and channeling devices (III-F)
- School area pavement marking (VII-C)
- Railroad/highway grade crossings (VIII-B)
- Bicycle facilities (IX-C)

5.8.5 LIGHTING

Street lighting must be designed using the Roadway Lighting Design Guide (AASHTO).

Roadway and interchange lighting must be designed using the Lighting Handbook (Illuminating Engineering Society of North America, 9th Edition) and the Roadway Lighting Handbook (FHWA).

The NDDOT's participation using federal funds is outlined in the NDDOT Design Manual.

SECTION 5.9 – DESIGN EXCEPTIONS

(May 2008)

5.9.1 GENERAL

In certain instances, where the minimum standards are not achievable, it may be necessary to make an exception to the standards discussed in this chapter. If a design exception is proposed, it must be properly documented, justified, supported by engineering analysis, and submitted to the NDDOT.

The NDDOT then reviews the exception and may forward it to FHWA. FHWA approval is necessary for all exceptions to minimum design standards of Interstate features. FHWA approval is also necessary on NHS related projects over $5 million and for other full involvement projects. Minimum design standards can be found in the NDDOT Design Manual.

Refer to the NDDOT Design Manual, Chapter 1 – Section 6 for additional information regarding design exceptions.

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SECTION 5.10 – ADA REQUIREMENTS
(May 2008)

5.10.1 GENERAL

The Americans with Disabilities Act (ADA) promotes the full participation of people with disabilities in the mainstream of society. It extends civil rights protection to the nation's citizens with physical or mental disabilities, along with previous protection for all citizens against discrimination on the basis of race, color, sex, age, or national origin. The ADA guarantees equal opportunity for individuals with disabilities in employment, public accommodations, transportation, state and local government services, and telecommunications. President Bush signed the ADA into law July 26, 1990.

All projects designed or constructed using ANY federal funds must conform to ADA standards.

5.10.2 REFERENCE DOCUMENTS

- Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities, U.S. Architectural & Transportation Barriers
- Uniform Federal Accessibility Standards (UFAS), FED-STD-795
- NDCC 39-01-15, subsections 9 and 10, describing standards to be used in marking and signing parking spaces for mobility-impaired persons
- Clarification of FHWA's Oversight Role in Accessibility
- Desk Reference, Access for Individuals with Disabilities Under Section 504 of the Rehabilitation Act and Title II of the ADA, FHWA
- Handbook, Access for Individuals with Disabilities Under Section 504 of the Rehabilitation Act and Title II of the ADA, FHWA
- Designing Sidewalks and Trails for Access Part II of II – Best Practices Design Guide, FHWA-EP-01-027
- Regulatory Negotiation Committee on Accessibility for Outdoor Developed Areas Final Report, Access Board
- Design Manual, NDDOT (to include all design memo's and new guidelines)

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SECTION 5.11 – ENGINEER'S ESTIMATES, SPECIFICATIONS, AND CODE ITEMS

(May 2008)

5.11.1 GENERAL

The engineer's estimate of the cost of the proposed project must include the specifications and code items, item description, units, quantity, unit price, and the total unit cost for each proposed work item. The total estimated project cost must be tabulated and shown at the bottom of the page. The total cost must be broken out by federal, state, and local participation.

Cost information on each project must be kept confidential until bids have been received and opened. No cost information is to be released publicly, except the cost estimate that was included in the environmental document.

Specification and code numbers for each item must be used. These numbers are found on the NDDOT's Historical Fact Sheet. The traffic engineering section of the Design Division is responsible for this file. The local agency should make every effort to use existing specifications, codes, and nomenclature. In the rare event that a new specification, code, or nomenclature is needed, the local agency should contact the LGD.

5.11.2 REFERENCE DOCUMENTS

- Historical Fact Sheet, NDDOT HW9-840-AA, Spec & Code, Item Description
- Average Annual Bid Prices (http://www.dot.nd.gov/pacer/bidopenrptindex.html)

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SECTION 5.12 – PLAN REVIEW AND SUBMITTAL
(May 2008)

5.12.1 GENERAL

At least 12-16 weeks before the bid opening, the designing agency should review the **p**lans, **s**pecifications, and construction cost **e**stimates. This is known as the "PS&E."

In addition, the designing agency should ensure that all necessary permits have been obtained, all utility or other agreements have been negotiated, and all right-of-way plats and acquisition are complete.

After the designing agency has conducted the PS&E and addressed all comments made at that stage, they should review the plans one final time. **On locally-designed projects, local agencies should submit final plans to the NDDOT in final form no less than 10 weeks before the bid opening**. (See Section 5.12.3)

5.12.2 PS&E REVIEW

All projects must have a PS&E review. **The PS&E should be conducted when the plans are substantially complete (90-100%), and should include a review of the notes, quantities, special provisions (including new special provisions), plan and profile sheets, cross-sections, cost estimates, traffic control plans, and contract completion dates.**

5.12.2.1 Methods of review.

a. **Review meeting**. In general, grading projects, county projects, TE, SRTS, urban projects, and major resurfacing projects should have an actual review meeting in the project entity, at a site determined by the designing agency.

b. **Review by mail or fax**. Minor resurfacing projects, small safety projects, and seal coat projects may not require an actual meeting; parts of their review may be handled by mail. For instance, on a locally-designed project, the local agency may request the NDDOT to inspect and verify the plans. The NDDOT would do so and then respond, by mail or fax, to the local agency's request. A project consultant might respond to a different part of the review, also by mail or fax.

   On a locally-designed project, if the local agency has any doubt whether to conduct a PS&E review meeting or review the project by mail, the designer should contact the NDDOT district engineer for his recommendation.

5.12.2.2 Sample checklist.

On locally-designed projects, the NDDOT recommends local agencies use the sample PS&E checklist created by the NDDOT Design Division (Chapter 3-Section 1 of the NDDOT Design Manual, use the third checklist).

The designing agency should distribute copies of the project plans at least 10 working days before the PS&E review meeting, or before asking participants to respond by mail or fax. The title sheet of the plans should include the information as listed in Chapter 3-Section 1 of the NDDOT Design Manual. The city or county must also address all items listed on the plan review checklist (Chapter 3-Section 1 of the NDDOT Design Manual).

5.12.2.3 Participants.

a. On NDDOT-designed projects, the NDDOT will distribute plans to all appropriate participants.

b. **On locally-designed projects, the local agency responsibility** is to send copies of the plan to any local personnel who should comment; to any consultants working on the project; to the NDDOT District Engineer (three copies, or more if they request it); and to the NDDOT Local Government Division (three copies or more if requested). **Local Government** will notify any other appropriate participants, which may include the NDDOT Construction Services, Design (Traffic Safety), Environmental and Transportation Services (Environmental and Right of Way sections), Planning and Programming (Traffic Operations section), Bridge Division, and FHWA staff.

5.12.2.4 Final PS&E report.

The designer assigned to the project is responsible for coordinating the meeting, resolving comments, and preparing the final PS&E report.

On locally-designed projects, the city or county should send one copy of the final PS&E report to the NDDOT district office and one copy to the LGD, for their project file. An electronic file must also be submitted.

The NDDOT will then prepare the Plan Review Checklist (Chapter 3-Section 1 of the NDDOT Design Manual).

5.12.3 FINAL DESIGNING AGENCY REVIEW

In order to avoid the need for and added cost and confusion of addendums, the designing agency should conduct a **final review** for all urban or county projects **after it completes the PS&E.** The review should ensure that plans, specifications, cost estimates, utilities,

and right-of-way are in final form to submit to the NDDOT.

On locally-designed projects, it is the city or county engineer's responsibility to certify that the project meets the design standards discussed in Section 5.1.3. The final review should assure the city or county engineer that these standards have been met.

The NDDOT must receive the final office review 10 weeks before the bid opening.

See Chapter 7, "Bid and Award Process," for the list of information needed before the bid opening.

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SECTION 6.1 – PROJECT RIGHT-OF-WAY
(May 2008)

6.1.1 GENERAL

For any locally-developed project, the local agency is required to obtain all right-of-way and/or easements following state and federal regulations. Ten weeks before the bid opening, the local agency must certify to NDDOT, without exception, that the right-of-way was acquired in compliance with these regulations.

The NDDOT will accept the local agency's right-of-way certification for city/urban projects. If right-of-way is required on regional or county projects, the local agency must submit their documentation to the NDDOT for review. The local agency's certification process is subject to outside audits, to ensure that the appropriate state and federal requirements were met. The NDDOT's Right of Way section will periodically review the right-of-way acquisition process of the local agency to ensure compliance.

This section is intended to guide the local agencies through the right-of-way process.

6.1.2 STARTING THE RIGHT-OF-WAY PROCESS

Whether or not federal funding is used for right-of-way acquisition, the local agency must conform to all applicable state and federal regulations.

6.1.2.1 Federal funding.

If federal funds are used for right-of-way acquisition, before beginning acquisition the local agency must have NDDOT approval and NDDOT notification that FHWA has approved the NEPA (National Environmental Protection Act) process.

With state and FHWA approval, projects may begin before NEPA approval on projects using Facilitate Acceleration through Special Techniques (FAST), Hardship and Protective Buying, and Corridor Preservation.

6.1.2.2 No federal funding.

If no federal funds are used for right-of-way acquisition, NDDOT encourages the local agency to wait until NDDOT notifies them that FHWA has approved the NEPA process. The local agency **may**, at its own risk, proceed with the right-of-way acquisition before the NEPA approval, with the understanding that the acquisition will in no way influence the NEPA decision.

6.1.3 RIGHT-OF-WAY PLATS

6.1.3.1 A right-of-way plat should show:

a. Right-of-way lines
b. Widths to be acquired
c. Centerline and stationing with appropriate ties to intersecting property lines
d. Changes in right-of-way widths
e. The area of any additional easements, either temporary or permanent, required to accommodate intersecting roads and streets, land, access and temporary roads, drainage areas, material storage areas, utilities, railroads, or any other special uses

6.1.3.2 For each parcel to be acquired, the plats should show:

a. The project identification number
b. A parcel identification number
c. The name of the property owners
d. The area in square feet or acres of the right-of-way taken and not taken
e. All other pertinent data on items that will affect the cost of the right-of-way, such as structures, land service or access roads, improvements, and fence

6.1.3.3 Access control lines.

On projects where the access rights have been or must be acquired, the access control lines and all approved points of entry to or exit from the traffic lanes should also be shown, even where the right-of-way lines and access control line are coincident.

6.1.3.4 Conformation to plans.

The right-of-way plats should conform to the highway plans and contain enough data to permit easy identification and correlation with the legal descriptions of all parcels and easement areas required by the project.

6.1.3.5 Scale.

Right-of-way plats will be drawn to a scale of 1:40 for urban areas and 1:200 for rural areas, unless another scale would better depict the properties.

6.1.4 RIGHT-OF-WAY AUTHORIZATION

6.1.4.1 Federal funds.

If federal funds are used for right-of-way, a project must be programmed and **authorized by FHWA** before any project activity takes place. Any project

activity taking place before programming and **FHWA authorization** is ineligible for federal-aid reimbursement.

The local agency will prepare and submit to the NDDOT LGD a detailed cost estimate for right-of-way, along with the request to acquire right-of-way. NDDOT must formally authorize the local agency to proceed with right-of-way acquisition.

6.1.4.2 No federal funds.

If no federal funds are used for right-of-way, the local agency need not formally request authorization to proceed, but the **caveat** in 6.1.2 applies.

6.1.5 APPRAISAL

The local agency must adhere to the appraisal requirements for federal aid contained in the following sources:

- 49 CFR 24, Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended (aka Public Law 91-646)
- Sections 301 and 302 (U.S.C. s4651 and s4652), as amended by Public Law 100-17
- NDDOT Right of Way Manual
- NDDOT Local Public Agency Right of Way Acquisition Manual

The city or county must use appraisers approved by NDDOT. The NDDOT Right of Way section has a list of approved appraisers.

6.1.6 APPRAISAL REVIEW

The local agency must have an appraisal review process, so that the amount believed to be just compensation can be established before negotiations or eminent domain proceedings begin. A qualified city or urban area review appraiser must examine all appraisals and seek correction or revision of any that do not meet agency appraisal requirements. The local agency must adhere to the requirements for appraisal review contained in 49 CFR 24, Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970 as amended (aka Public Law 91-646) and NDDOT's Right of Way Manual.

6.1.7 ACQUISITION

The local agency's goal during the acquisition process should be to acquire the required property by negotiations conducted by a qualified member of their staff.

6.1.8 RELOCATION ASSISTANCE

The local agency must adhere to the following procedures, and must have or contract for

qualified staff to complete the requirements. The local agency may contact the NDDOT for assistance.

- The rights of families and businesses displaced by federal-aid projects are mandated by Title II of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended (P.L. 91-646)
- North Dakota Century Code Chapter 54-01.1

6.1.9 RIGHT-OF-WAY CERTIFICATION

By ten weeks before the bid opening, the local agency must certify, without exception, that the permanent and temporary right-of-way has been acquired and is free of encroachments. They must also certify that all individuals and families have been relocated to decent, safe, and sanitary housing, or have been offered adequate replacement housing in accordance with current FHWA directives covering the administration of the Highway Relocation Assistance Program.

6.1.10 RECORDS

The local agency must keep all records available for inspection by NDDOT and FHWA.

SECTION 6.2 – UTILITY RELOCATION AND ACCOMMODATION
(May 2008)

6.2.1 GENERAL

It is in the public interest for utilities to use the right-of-way (ROW) on public roads and streets when such use does not interfere with the primary purpose of the highway. Joint use of ROW eliminates the need to purchase additional ROW for utilities. The FHWA authorizes use and occupancy of the ROW on federal-aid and direct federal highway projects under federal statute, including 23 CFR 1.23.

For the purposes of this manual, **utility relocation** means moving, replacing, or adjusting a utility and **utility accommodation** means adding one or more utilities within highway ROW.

Unless otherwise specified, the location and design of all utilities within highway rights of way must conform to the provisions of Federal-aid Policy Guide (FAPG). To be eligible for federal-aid reimbursement, utility relocation and accommodation must be approved prior to any work starting.

6.2.2 GUIDELINES

The following utility guidelines are to be used in the predesign, design, and construction phases. These guidelines apply to NDDOT-designed and local agency-designed projects.

6.2.2.1 Predesign phase

a. All known entities involved with utilities should be contacted, with contacts and responses documented. All available data relating to underground utilities should be documented in the survey.

b. It is not necessary to make a special effort to locate individual service lines, but locations available from local sources will be noted.

c. Letters should be sent to cities or utilities stressing the importance of providing complete and accurate data for forthcoming plans.

6.2.2.2 Design phase

a. All pertinent information available should be documented on the plans (type of utility, size, location, ownership, etc.)

b. Any needed adjustments should be documented on the plans. The designer will not recommend what adjustments are to be made, only identify that a utility will need to be adjusted.

c. Adjustments with utility companies with the city or NDDOT should be made as outlined in the utilities adjustment agreement. Adjustments to utilities not in the agreement can not be reimbursed; the LPA will be responsible for the costs.

d. NDDOT will obtain written certification from the local agency that the local agency and utility is satisfied with the handling of utilities, as shown on the PS&E plans. The local agency shall submit a written certification to NDDOT that utility work has been completed or that all necessary arrangements have been made as required for proper coordination with physical construction schedules.

6.2.2.3 Construction phase

a. Engineers in the field will monitor and document all required adjustments.

b. Utilities adjustments which, because of a lack of information, were not shown on the plans but were discovered during the construction phase are eligible for federal aid if all proper contracts and documentation were followed as outlined in the predesign and design phases.

c. With the exception of individual service lines, if required adjustments are omitted from the specifications or plans for any reason, the adjustments must be discussed with FHWA before work proceeds. Individual service lines should be treated as routine, with guidance from the plans.

6.2.3 PROCEDURES

Utility installation within project limits, regardless of utility ownership, must conform to state policies and the NDDOT's Utilities Accommodation Manual.

On all future federal-aid highway projects on the regional and urban roads system, a special provision regulating the use of highway right-of-way to accommodate utilities must be part of the project agreement or a separate agreement between NDDOT and the local agency.

The local agency must prepare, or have prepared, maps and records showing the size, type, location, and ownership of all underground utilities within the right-of-way, and must retain the maps and records for reference.

Relocation or accommodation of underground utilities must be done before the start of highway construction or, when necessary, as part of highway construction, as coordinated by the project manager.

After a utility company removes a lighting system which it installed on state highway right-of-way, it must inform the NDDOT LGD of the date and reason for removal. This

requirement does not apply when NDDOT is involved in installing a replacement system.

6.2.4 REFERENCE DOCUMENTS

- Federal-aid Policy Guide (FAPG)
- Highway/Utility Guide, FHWA-SA-93-049, FHWA
- Utility Relocation and Accommodation on Federal-Aid Highway Projects, FHWA-IF-03-014, FHWA
- Utilities Accommodation Manual, NDDOT
- 23 CFR 645: Utilities (Subpart A: Utility Relocations, Adjustments, and Reimbursement; Subpart B: Accommodation of Utilities)

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SECTION 7.1 – INFORMATION NEEDED BEFORE BID OPENING
(May 2008)

7.1.1 INFORMATION PREPARED BY CITY, COUNTY, OR CONSULTANT

7.1.1.1 Plans and special provisions. The local agency shall submit the original final plans (State and Urban/City projects only) and an electronic copy for all projects (refer to Section 2.9 of the CADD Standards Manual) of the signed plans in PDF format, and any special provisions necessary for the project to the NDDOT LGD at least 10 weeks before the bid opening. County plans only need to submit an electronic copy.

7.1.1.2 Preliminary detail estimate. The local agency prepares an engineering estimate for the project and submits the estimate to LGD at least 10 weeks before the bid opening. The Local Government Division (LGD) reviews the estimated prices by comparing them to the average bid price on all the most recent projects where the bid item was used. NDDOT then formats the estimate based on funding splits and construction codes.

7.1.1.3 Right-of-way certification. The local agency submits this to LGD at least 10 weeks before the bid opening. NDDOT will accept the local agency's certificate and approve it for federal aid. The LGD will maintain one copy for the final record.

7.1.1.4 Utility adjustment certification. The local agency submits this to LGD at least 10 weeks before the bid opening. The NDDOT will accept the local agency's certificate and approve it for federal aid. Typically on county projects, costs for utility adjustments are the responsibility of the local agency. If the utilities are currently within the ROW, it is the utility companies' responsibility. The LGD will maintain one copy for the final record.

7.1.1.5 Unexecuted contract and contract bond. At least 10 weeks before the bid opening, the local agency send a contract form and contract bond form to the LGD. The LPA may choose to use their form. The NDDOT has forms available for the Local Public Agencies to use. This form should contain blanks that have not been filled out; it should be an unused example of what the local agency will use for the project. An electronic version must also be submitted for use by the Planning and Programming Division.

7.1.1.6 Design certification letter. The local agency submits this to LGD at least 10 weeks before the bid opening. The NDDOT will accept the local agency's certificate and approve it for federal aid. The LGD will maintain one copy for the final record.

7.1.1.7 Contact person. When the above information is sent to LGD, the local agency should also identify a city, county, or consultant contact person who will respond to pre-bid contract questions and concerns. This person will also be notified when addendums are necessary.

7.1.1.8 Contract completion date. The local agency should set the contract completion date. The NDDOT will review the proposed completion date, and indicate the approved date in the project proposal.

7.1.1.9 Cost Participation & Maintenance (CPM) Agreement. Urban projects are required to submit a CPM agreement prior to bid opening.

7.1.1.10 Disturbed acres for stormwater permit. All projects are required to submit the number of acres that are disturbed as a result of the project. The amount of acres disturbed will help determine if the stormwater special provision is required on the project.

7.1.1.11 Copy of 404 permit and floodplain permit. A copy of the 404 permit and floodplain permit needs to be submitted 10 weeks prior to bid opening. If either or both of these permits are not required, then documentation illustrating this must be submitted.

7.1.1.12 PS&E comments. Comments from the PS&E need to be sent in addressing those comments received.

7.1.2 INFORMATION PREPARED BY NDDOT

7.1.2.1 Unexecuted Proposal Form (Bidder's Proposal). NDDOT prepares these proposals, which include computerized bid items, required federal provisions, NDDOT supplemental specifications, special provisions, completion dates, and the unexecuted contract form.

7.1.2.2 Programming Form FMISD06A. FHWA requires this report when requesting construction authorization for any federal-aid project. NDDOT prepares the form.

7.1.3 ADDENDUMS TO PLANS

- Routine addendums will be issued no later than the second Wednesday before the bid opening.
- Additional addendums may be issued on the two following days, **but only in emergencies.**
- Additional addendums may also be issued by FAX on the Monday and Tuesday before a Friday bid opening, but only in extreme emergencies.

- NDDOT districts will be issued copies of all addendums so that they have the information before bidders do.

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SECTION 7.2 – NDDOT BID PROCESS

(May 2008)

7.2.1 PROCESS BEFORE BID OPENING

Using information from the LGD, NDDOT completes the following items. More detailed information on the procedures is contained in the DBE program manual and the construction procedures manual.

PROCEDURAL ITEM	TIME	EXPLANATION
Disadvantaged Business Enterprise	8 weeks before bid opening	NDDOT sets DBE goals, which are federally required for receiving federal aid. The goals are established by a review committee.
Mailing of Advertising to Newspaper	Approximately 4-5 weeks before bid opening	North Dakota Century Code, Section 24-02-19, requires that bids for construction work in excess of $20,000 be published once, at least 3 weeks before the bid opening. The advertisement should be sent to the newspaper approximately 4 to 5 weeks prior to the intended bid opening date. Many publications only publish once a week. The ad must state where the bidder may inspect the plans and specifications, where the bids must be filed, and when and where they will be opened.
Notice to Bidders mailed	3 weeks before bid opening	Provides additional information to contractors, subcontractors, suppliers, and other interested parties. Prepared by NDDOT and mailed to qualified contractors, individuals, and firms who have asked to be on the Notice to Bidders mailing list. Describes each project and its bid items; the information is obtained from completed plans. Contains an order blank to use in ordering plans and proposals from NDDOT Construction division.
Plans and proposals mailed	Until 1 day before bid opening	All bidders who request plans and proposals for a particular project receive them.
Bidder certification conducted	10 working days before bid opening	DBE bidders are interviewed in Bismarck to determine whether they can be certified as DBEs.
Addendums mailed	Until 1 week before bid opening	If problems, questions, or errors arise after contractors, subcontractors, manufacturers, suppliers, etc., receive the bidding documents, NDDOT will issue addendums. The addendums will be issued no later than 2 days, but preferably 1 week, before the bid opening. Addendums are sent by registered mail up to a week before the bid opening, and by FAX or email the week of the bid opening.

7.2.2 PREQUALIFICATION

Contractors must be pre-qualified to bid on NDDOT projects. The authority to pre-qualify contractors is given to the NDDOT Director under Section 43-07-06 of the North Dakota Century Code. Bidding requirements and conditions are outlined in Section 102 of the Standard Specifications. Under the NDDOT policy memorandum 3-1, the NDDOT Director has established a committee to pre-qualify contractors. The committee is comprised of the Construction Services Engineer, General Counsel, and Controller. The committee determines the type and dollar amount of work that a contractor is qualified and financially able to perform.

To help in determining a contractor's capabilities, NDDOT has prepared a "Contractors Prequalification Statement." Contractors who wish to qualify to bid on NDDOT contracts must complete this statement and submit it to the Construction division. In the document, the contractor indicates the type of highway construction work he or she desires to do, furnishes information regarding his or her experience, and supplies a detailed financial statement as to the assets and liabilities of his or her company.

The contractor is notified by letter of the type of work on which his or her firm is qualified to bid, along with their financial rating.

No fee is charged for prequalification.

7.2.3 NDDOT CONDUCTS BID OPENING

Bid openings are usually held in Bismarck, North Dakota, and all bids received are read publicly.

Bidding procedures for federally assisted highway construction projects allow participation by all qualified participating bidders regardless of state or national boundaries, and without regard to race, color, sex, national origin, age, handicap, or disability.

A contractor is not required to be licensed by the state of North Dakota to submit a bid. Contractors must, however, acquire a license in North Dakota before the contract is awarded. Licenses may be obtained from the Secretary of State's office.

A proposal guarantee of five percent of the bid amount in the form of cash, cashier's check, bank money order, or bank draft, must accompany the contractor's bid proposal. A bid bond of 10% of the bid amount executed by a surety authorized to conduct business in North Dakota is also acceptable.

7.2.4 LOCAL AGENCY CONDUCTS BID OPENING

Typically, the NDDOT holds bid openings that are outside of the construction season so multiple contractors are able to prepare bids on projects thus achieving a competitive bid process.

However, occasionally the local agency may want to conduct the bid opening. The occasions that may dictate a local bid opening are emergency relief and specially funded projects. These types of projects may be bid locally due to the timeframe in which they need to be constructed, scale of the project, or funding approval for certain projects is such that would warrant a local bid.

If a local agency wants to conduct the opening, the local agency must get approval from the NDDOT Local Government Division. The local agency must submit a formal request stating the reasons why a local bid is justified and how it would be beneficial to the project to have a local bid.

If the local agency is approved to conduct the bid opening, FHWA needs to approve funding for the project prior to advertising for bids and 3 weeks is required for advertising. The local agency will need to provide or do, at a minimum, the following information:

- All environmental clearances, SHPO clearance, ROW, and all necessary permits
- Special provisions required on the project
- Final plans
- Final cost estimate
- DBE requirements will be set by the NDDOT
- Bid date
- Bid opening time
- Bid opening room
- Bid opening building
- Bid opening city
- Completion date
- Print the plans and proposals and send a copy to the NDDOT
- Retain documentation of the advertisement including dates and where it was published
- Get approval from the NDDOT on addenda to plans and proposals
- Share all relative project information equally among prospective bidders
- Show no favoritism to local or in-state contractors

A NDDOT representative needs to be present at the bid opening. The original bid tabs need to be sent to the Local Government Division of the NDDOT for abstract preparation. The NDDOT will check for math errors, if DBE requirements are met, and will need to concur in the award of the project.

7.2.5 NDDOT REVIEWS BID TABULATIONS

After the bids have been publicly opened and read, they are reviewed to see if they meet the requirements of the Standard Specifications, and are specifically checked to make sure of the following:

- A unit price is provided for each bid item.
- The bid total is correct.
- The proposal is signed (signatures are checked before the bid is read.)
- Each bid bond is for the correct amount.

After the above check has been completed on all of the projects in the bid opening, an abstract of the bids is compiled. Within five working days after the bid opening, the NDDOT Construction Services Division reviews all abstracts and sends the bid tabulations to the local agency.

7.2.6 REJECTING BIDS

Both the NDDOT and local agency have the right to reject any proposal, waive technicalities, or accept what is determined to be in the best interests of the state.

SECTION 7.3 – CONTRACT AWARD
(May 2008)

7.3.1 LOCAL AGENCY ACCEPTS LOW BID

The local agency reviews the bid tabulations. By resolution, the local agency accepts the lowest responsive bid submitted by a responsible bidder. The local agency then sends the resolution to the NDDOT Local Government Division.

7.3.2 NDDOT CONCURS IN AWARD

7.3.2.1 How DBE goals are set for projects.

Recommended DBE project goals are established by the DBE project goal-setting committee. This committee is comprised of representatives of the NDDOT Design, Local Government, and Civil Rights Divisions; the NDDOT DBE liaison officer (Civil Rights Division Director); a representative. The Design and Local Government Division representatives supply the Civil Rights Division with information for each project in an upcoming bid opening. This information is used by Civil Rights to determine the DBE goal for a project.

The committee meets eight weeks before each bid opening to review all federal-aid projects and set goals based on the following criteria:

a. Size, type, location, and estimated duration of the project
b. Specific opportunities within the project for DBE prime contractors, subcontractors, manufacturers, and regular dealers
c. Existing DBE goals being used in the project area by other state, federal, or local jurisdictions (to the extent that they are known), or on other NDDOT projects
d. Availability of certified DBE firms
e. Experience on similar projects

These goals are not quotas, but if they are attained they establish that the contractor has made a good-faith effort (GFE) to use DBE participants in the project. The good faith effort steps are outlined in the DBE contract special provision included in the bidders' proposal.

7.3.2.2 If a DBE goal has been set for the project.

The NDDOT Construction and Civil Rights Divisions review the bidder's proposal to show that contractors have met or exceeded assigned DBE participation goals or that they made certain Good Faith Efforts (GFEs) in an attempt to meet the goals.

Contractors' intended DBE participation must be listed on Form A of the DBE contract special provision when the contractor submits the bid to NDDOT. The most current version can be obtained from the NDDOT DBE program website. (http://www.dot.nd.gov/dbebidinfo.html)

A contractor not able to meet or exceed the contract goal has five working days in which to submit the GFE documentation and Form B of the DBE contract special provision. The GFE documentation will be evaluated before NDDOT concurs in the local agency's award of the contract.

The prime contractor and any subcontractors who listed DBE Participation on Form A **must** complete Form C for; each of their respective, intended DBEs. The prime contractor is responsible for the completion and submission of; Form C for each DBE commitment made by any lower-tier subcontractor.

NDDOT's GFE review committee will meet after each bid opening to review the low bidders' compliance with the DBE contract special provision. The committee consists of three voting members.

The GFE review committee will review the findings, or documentation, and then vote on whether to recommend to the DOT Director to concur with the local agency's award of the contract. The committee members must date, sign and enter their vote on the GFE Review form.

If the GFE committee recommends not awarding a contract and the NDDOT Director agrees with the recommendation, NDDOT will ask the local agency to award to the second-lowest bidder (if certain criteria are met, including GFE results) or re-advertise for bid at a later date.

The Construction division then:

a. Prepares all correspondence to the first and second lowest bidders concerning the decision to not award to the low bidder
b. Procures a tax clearance from the contractors
c. Procures a proposed progress chart, SFN 7721 from the contractors
d. Sends a letter to the local agency telling them that the DBE provisions have been met, and authorizing the award of the contract for the purpose of receiving federal aid

7.3.2.3 If no DBE goals were set for the project.

The contractor’s intended DBE participation must be listed on Form A of the DBE contract special provision as required. The most current version can be obtained from the NDDOT DBE program website. (http://www.dot.nd.gov/dbebidinfo.html)

The contractor has five working days in which to submit Form B, of the DBE contract special provision, or quote copies.

A prime contractor and any subcontractors who listed DBE participation on Form A must complete Form C for each intended DBE company. The prime contractor is responsible for the completion and submission of; Form C for each DBE commitment made by any lower-tier subcontractor.

The Construction Division:

a. Reviews the low bidder's abstract
b. Procures a tax clearance from the contractor
c. Procures a proposed progress chart from the contractors
d. Sends a letter to the local agency authorizing the award of the contract for the purpose of receiving federal aid

7.3.3 AWARD OF CONTRACT

If there are DBE goals for the project, and upon receiving NDDOT's notification that the DBE provisions have been met, the local agency executes the contract and contract bond with the contractor. **These documents must be executed and sent to the NDDOT LGD within 30 days of the bid opening.** Construction will place them in the final proposal and then print and distribute the final proposal.

NDDOT, for the purpose of receiving federal aid, concurs in the local agency's award of the contract. The award sheet must be signed by the NDDOT Director and Deputy Director for Engineering. For Interstate and regional system projects requiring city cost participation or the transfer of maintenance responsibilities, the city's only involvement will be to concur in the award.

7.3.4 SUBCONTRACTORS

If a prime contractor wants to sublet any part of the work, he or she must submit the request to the local agency in writing, for approval. When submitting a "Prime Contractor's Request to Sublet," the prime contractor must certify that the subcontract agreements contain the provisions found in the U.S. Department of Transportation's form FHWA-1273, implementing Title VI of the Civil Rights Act of 1964.

Upon receiving a request from the local agency, the district engineer in the district where the work will be done must approve the "Prime Contractor's Request to Sublet."

NDDOT, through its districts, assures that there will be no discrimination in the approval of subcontract requests. The Equal Employment Opportunity and Title VI responsibilities contained in the contract are also attached and made a part of all subcontracts. These attachments are designed to ensure equal employment opportunity

and nondiscrimination to all persons without regard to their race, color, religion, sex, national origin, age, handicap, or disability, and to promote equal opportunity through a positive, continuous program.

Contractors participating in NDDOT construction contracts may not discriminate in their selection and retention of subcontractors. Required Title VI contract provisions are incorporated in all federal-aid contracts by the insertion of form FHWA-1273.

The contractor may not subcontract more than 70% of the work on any project, and may not transfer, convey, or otherwise dispose of his or her right, title, or interest therein to any other person, firm, or corporation without the written consent of his or her surety and NDDOT.

7.3.5 CARS (CONSTRUCTION AUTOMATION RECORDS SYSTEM)

The Construction Automated Records System or CARS is the NDDOT's computer based construction records system. The system uses the internet for data entry and stores project records on a central database. Reports generated in CARS can be viewed online at any time so copies do not have to be printed and filed. Pay estimates are prepared and approved online allowing for more timely payments to the contractor.

Before being able to enter or view data, CARS users are assigned a user ID and user's rights by the Information Technology Division. The user ID and a password allow you to login to the CARS system. The user rights assigned determines what access you have to view and edit data. Consultants, counties and cities must fill out and submit SFN 53085 LDAP Account Information to Construction Services in order to get a user ID and be assigned user rights. DOT employees will be required to fill out the LDAP Account Information form and submit it along with SFN 14272 Request for Computer Software/Equipment & Computer System Changes. The request must be signed by their division director and submitted to the Information Technology Division.

SECTION 8.1 – CONTRACT ADMINISTRATION
(May 2008)

8.1.1 CONSTRUCTION ENGINEERING SERVICE AGREEMENT

If federal aid is used for construction engineering for a project on the local roads system, the responsible local agency must enter into a construction engineering service agreement before proceeding with construction. Urban projects shall use SFN 19289 and county projects shall use SFN 17053.

8.1.2 NDDOT REFERENCE MANUALS

The four NDDOT manuals listed below provide in-depth guidelines and procedures which must be followed in the various stages of engineering and monitoring. These manuals were written from the NDDOT perspective.

In the spirit of the Local Government program, all NDDOT duties in these four manuals now belong to the local agencies unless THIS manual specifically states otherwise.

- NDDOT Construction Records Manual
- NDDOT Field Sampling and Testing Manual
- NDDOT Field Office Procedures Manual
- NDDOT External Civil Rights Manual

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SECTION 8.2 – PROJECT INSPECTION AND DOCUMENTATION
(May 2008)

8.2.1 PRECONSTRUCTION CONFERENCE

The contractor will notify the local agency of its intent to start construction. A preconstruction conference will be held for each contract before any contract work begins, at a time and place mutually established by the contractor and city or county engineer. The purpose of the preconstruction conference is to have all interested parties review the construction details and proposed schedules, and plan their actions before project start-up.

The contractor invites all appropriate representatives from the following organizations to the preconstruction conference:

- NDDOT District Engineer
- Prime contractor and subcontractors
- City and/or county representatives
- Utility companies and railroads
- Federal Highway Administration (only if there is full involvement)
- Worker's Compensation Bureau

The city or county engineer is responsible for the agenda and for providing a written record of the conference discussion. The written record will be sent in letter form to the NDDOT construction engineer, with copies to each participant and to the project file.

The city or county engineer will moderate the meeting and set the tone for good contractor/city/county communication. See the NDDOT Construction Records Manual for more complete guidelines and procedures on the preconstruction conference.

8.2.2 FIELD CONSTRUCTION ENGINEERING AND MONITORING

The NDDOT Standard Specifications, Supplemental Specifications, plans, special provisions, and all supplementary documents are essential parts of the contract, and a requirement occurring in one is as binding as though it occurs in all. They are intended to complement each other. In case of discrepancy:

- Calculated dimensions take precedence over scaled dimensions
- Supplemental specifications take precedence over standard specifications
- Plans take precedence over standard and supplemental specifications
- Special provisions take precedence over standard specifications, supplemental specifications, and plans
- Contract provisions included in the proposal form will be treated as special provisions and will take precedence over standard specifications, supplemental specifications, and plans

8.2.3 DOCUMENTATION OF QUANTITIES

Quantities should **not** be based on plan quantity minus a determined quantity. For example, the quantity for seeding a project would demand measuring all areas seeded, rather than measuring all areas not seeded and then deducting that figure from plan quantity. The pay quantity should be measured as instructed by the standard specifications, supplemental specifications, or plans. Following is a listing of the minimum documentation required for various pay quantities.

BID ITEM	MINIMUM DOCUMENTATION REQUIRED
Miscellaneous Items	All items which are paid for on a lump sum basis or as an individual unit must be documented as such. Date of installation or removal and stations or location must be recorded.
Aggregates	Tickets must be issued for all aggregates used on the project and paid for by the ton. Haul sheets will be prepared for each of these items.
Asphalt for Prime & Seal	The requirement for verification of oil used for this work is the submission of a field record showing the actual distributor shots as documented by the prime or seal inspector. This, however, will not be used for final payment but rather to certify that this material was used on the project. Final payment will be based on total manifest gallons minus waste, private work, etc. Check the math on the manifests.
Asphalt for Mixes	Asphalt used for mix and paid for by the ton must be documented on a plant cut-off report from the oil manifests delivered on a daily basis. Cut-off entries must include oil delivered, waste, storage, and net mix gallons. Final payment will be based on manifest gallons less any waste, private work, etc. Check the math on all manifests.
Asphalt for Tack	Asphalt used for tack may be documented on the plant cut-off report, the haul sheets, the inspector's pay quantity reports, or by issuing tickets. This documented quantity must be the final pay amount. Again, pay quantity will be based on total manifest gallons minus any waste.
Reinforcing Steel	A record of all reinforcement bars installed in a structure must be kept and signed by the inspector present at the time of placement. A separate field book or diary listing the number, size, and length of each type of bar for each portion of the structure is recommended.

EXAMPLE

Mark	# of bars	Size	Length	Weight (lbs)	Installed	Signature
A-1	8	6	14' 0"	168.22	6/12/76	Doe
A-2	16	4	15' 0"	160.32	6/12/76	Doe
A-3	4	6	7' 6"	45.06	6/13/76	Doe

Subgrade Prep

A note in the inspector's diary must state the subgrade location and the date it was completed.

Water

Water trucks shall be weighed and the gallons shall be calculated. The truck stamp number is no longer allowed.

Excavation and Borrow

Areas must be cross-sectioned, plotted, and computed. Turns, bench elevation checks, and computations must be certified as correct by the city/county. Cross sections and computations must be submitted before final payment is made. Common excavation areas must include topsoil. The topsoil quantity must be subtracted from the common excavation quantity because topsoil is a separate bid item.

If borrow topsoil is paid for separately, it must be included in the final borrow excavation quantity. Any rock excavation should also be subtracted from the common excavation quantity, unless otherwise noted.

If structural excavation is bid by the cubic yard, excavation quantities must be determined by original cross sections and excavation limits as shown on the plans and defined in the Standard Specifications. A layout sheet defining the structural excavation limits must accompany the cross sections.

Roadway Obliteration

Survey data must be recorded showing the stations and dates completed.

Loose Rock Riprap

Either tickets or load count may be used. The load count should show an actual tally of loads hauled. Measurements of the hauling vehicle must be recorded.

Seeding	All seeded areas must be measured and documented. Documentation must include all measurements necessary to compute the seeded portion of the project. It is not sufficient to measure areas not seeded and deduct this from the plan quantity; it does not substantiate the plan quantity amount. Transverse measurements must be taken according to the slope. Longitudinal measurements must be taken from the stations except in extreme cases.
Sodding	Sodded areas must be measured and drawings showing the actual dimensions must be submitted with computations.
Pipe (RCP, CMP, & Relay)	At the time of installation, all necessary information-such as date, length, diameter, class, and station-must be recorded.
Concrete Curb Gutter, Sidewalks, Driveways, Etc.	All concrete construction paid for by the linear foot or square yard and must be measured and drawings submitted with computations.
Adjustment of Manholes, Catch Basins, Inlets, Utils., etc.	Documentation is required showing the stations and date installed.
Concrete (Struct.)	A record of all concrete pours must be kept. Total yardage used in the structure for each pour must be listed in the inspector's pay quantity report or a separate field book. Tickets must be issued. Pay quantity is "plan quantity" unless plan is in error or a change in design is made.
Signing	Location, number installed, and unit per signing item should be documented.
Posts	Actual lengths and weights per foot of post, plus the extension should be documented.

The above outline for documentation of pay quantities is considered minimal. Additional information may be needed for the satisfactory completion of the project, in order that NDDOT may process payment.

8.2.4 CERT (CONTRACT AND ENGINEERING REVIEW TEAM)

The NDDOT's contract and engineering review team (CERT) will conduct inspections of construction contracts on the state highway system, and on the urban and county system for federal-aid projects. The purposes of the inspections are to make sure specifications, established construction practices, and field office procedures are complied with uniformly; help train inspection and engineering personnel; and improve the quality of the construction work.

8.2.4.1 Contract inspection reference sources.

A number of sources will be used when inspecting construction contracts, including:

a. Standard specifications
b. Supplemental specifications
c. Special provisions
d. Contract proposals
e. Plans and plan notes
f. Design standards
g. Field sampling and testing manual
h. Field office procedures manual
i. Construction manual
j. Construction memos
k. Inspectors training aids
l. Work zone traffic control manual
m. Rental rates for force account work
n. Inspectors' manuals
o. External Civil Rights Manual

CERT will schedule individual inspections. The district in which the inspection is to be held will be contacted prior to the inspection.

CERT will review contract documents. During the inspection, the applicable checklist will be used. The checklist is only a guide, because requirements, problems, and procedures differ on individual projects.

8.2.4.2 Construction activities to be inspected.

Areas of construction activity to be inspected for compliance to specification requirements and established procedures include the following:

a. General field office procedures
b. Documentation of project and inspection diaries
c. Measurement and documentation of pay items
d. Materials sampling and testing procedures

e. Project signing and traffic control
f. Construction operations
g. Environmental compliance
h. Specification requirements in regard to the contractor's equipment
i. Construction staffing
j. Compliance with DBE contract provisions
k. Identification of construction personnel training needs that become known as a result of project inspections
l. All procedures or requirements necessary to complete the work satisfactorily

All findings, proposed recommendations and corrective actions will be reported to the city, county or consulting engineer, district office, central construction office, and other affected central office divisions. Corrective actions must be completed as soon as possible.

8.2.4.3 Entities receiving inspection findings report.

NDDOT will distribute a report of each inspection, consisting of a summary of the inspection findings, recommendations, and results, to the following entities:

a. City Engineer/County Engineer
b. Deputy Director for Engineering
c. Construction Services Engineer
d. Planning and Programming Engineer
e. Federal Highway Administration
f. District Engineer
g. Project Engineer
h. Design Engineer
i. Maintenance and Engineering Services Engineer
j. Materials and Research Engineer
k. Bridge Engineer
l. Local Government Engineer
m. Environmental and Transportation Services Engineer

8.2.5 PROJECT ACCEPTANCE PROCEDURE

The contractor is responsible for protecting the work against damage until final written acceptance of the project by the engineer. The contractor will rebuild, repair, restore, or replace all work damaged before final acceptance, at no additional cost to the city/county. The exception is damage due to unforeseen causes beyond the control of the contractor; such damage will be restored at the local agency's expense.

After the contract is completed, the local agency will make a final inspection and write a letter of acceptance to the NDDOT district engineer.

The district engineer will write the final acceptance letter. It should have no stipulations

or conditions on the acceptance and is to be written immediately upon completion of the work. Refer to the NDDOT Standard Specifications and the Field Office Procedures Manual for more complete information.

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SECTION 8.3 – MINIMUM PAYMENT DOCUMENTATION PROCEDURES
(May 2008)

8.3.1 CONTRACTOR PAYMENTS

The quantities listed in project plans and proposal are approximate. The breakdown of quantities and the various funds are listed in detail on the detail estimate. The city/county must keep an accurate account of all the pay quantities on pay quantity reports, field books, etc. The pay quantities are entered into the quantity book and are used by the project engineer to make the payment to the contractor.

8.3.1.1 Progressive estimates.

Intermediate payments to the contractor are called "progressive estimates." The city/county may prepare progressive estimates twice a month or weekly if the amount of work requires more frequent payment. Payments are based on estimates of the work completed and on stockpiled materials.

The progressive estimate consists of three forms:

a. The Claim for Payment, State Form Number SFN 2198 (Example 8.3.a)
b. The cover sheet, SFN 2251 (Example 8.3.b)
c. The estimate-two sheet, SFN 6786 (Example 8.3.c)

There may be more than one estimate two sheet on a project, but only one cover sheet. If the contract has tied projects, a separate cover sheet is used for each project even though there is only one contract.

The city/county submits the progressive estimate to the district engineer, requesting payment. The district engineer approves the progressive estimate and sends it to the Construction division for processing.

The progressive estimate is produced using the Construction Automation Records System (CARS). Refer to the Field Office Procedures Manual for complete guidelines and procedures.

8.3.2 CHANGE ORDERS

Changes in design due to unforeseen or changed conditions may make it necessary to add new items to the contract. The provisions of section 104 of the standard specifications give NDDOT the right to alter the plans and terms of the contract by changes, additions, or omissions necessary to properly complete the work on the contract. This is referred to as the "change order" process. Change orders are paid for using progressive estimates.

NDDOT must approve any change order over $10,000 in value. The federal dollars requested may not exceed the terms of the agreement without prior NDDOT approval. If

the district engineer concurs with the city's/county's finding that a change in the scope of the work is necessary, he will notify the Construction Services Engineer. The Construction Services Division coordinates its approval with the Planning and Programming Division.

8.3.3 PROJECT RECORDS

When the NDDOT district engineer accepts the project, the city/county engineer will confirm the quantities of work performed and notify the contractor in writing of any missing documents (invoices, PR47, pit releases, receipts of payments, etc.)

When all physical work on the project is completed, and all the records and quantities substantiating the work have been organized, the city/county engineer will prepare the forms needed to complete the final records for the contract. The final record is a summary of quantities, costs and other data on the performance of the work on the project.

The city/county engineer prepares the final estimate in the same manner as with a progressive estimate, except that an explanation must be listed for all final quantities that deviate more than 5 percent from the plan quantity and are more than $5,000 over the total dollar value of that bid item. All change order items and special provision items must also be explained. The "Explanation of Change in Plan" follows the estimate-two sheets. Refer to the Field Office Procedures Manual for more information regarding the procedures, various forms, documents, etc. needed to complete the records.

8.3.4 FINAL PAY QUANTITIES

Based on an independent audit arranged by the city/county, the city/county certifies that final pay quantities are properly documented to meet state and federal requirements. NDDOT will accept this final certification and process the final estimate.

Without exception, quantities must be substantiated by actual field measurements.

All project records become the property of the city/county and are stored for three years after NDDOT makes the final payment.

CLAIM FOR PAYMENT

North Dakota Department of Transportation, Financial Management

SFN 2198 (Rev. 10-2004)

Description of Item or Service	Payment Amount
Payment Total	

Local Match

Project I.D.	Activity	Amount
Local Match Total		

Accounting Date: _____ Voucher ID: _____

Vendor ID (If blank, name and address required)		
Vendor Name		
Address		
City	State	Zip
Invoice Number(s)	Invoice Date	

I hereby approve payment of this claim and certify that the expenditure is according to the laws of the state of North Dakota.

By: _____ Date: _____

Or in lieu of: For intermediate estimates.

DEPARTMENT APPROVAL AND ESTIMATE CERTIFICATE (Sec. 24-02-13 NDCC)

I hereby certify that the within estimate or claim is just and true, that the contractor herein named has rendered services and furnished the material herein charged, that they are of the value claimed, that no part thereof has been paid, and that the foregoing estimate or claim is supported by a proper contract and bond on file in the department or that the purpose of the payment to a clerk of district court is pursuant to law and for the taking of property by condemnation.

_____ Date: _____

Director N.D. Department of Transportation

				Projects		Resource					
Ref. Line	Dept.	Account	State Fund	Project I.D.	Activity	Type	Catg.	Contract/PO ID	Mod.	Qty.	Transaction Amount
01											
02											
03											
04											
05											
06											
07											
08											
09											
10											
										TOTAL	

COPY TO:
White - Dept. of Transportation, Finance
Canary - Transmittal
Pink - Dept. of Transportation, Div./Dist.

APPROVALS

DIV./DIST.	FINANCE

Example 8.3.a

PROGRESS ESTIMATE
North Dakota Department of Transportation, Construction
SFN 2251 (Rev. 05-2007)

Number

FHWA Authorization Date	Contract Date	Covering Period	Project
		From	
Contractor		To	County
Address		Type	
Address		Contract Cost	Length

1. TOTAL WORK DONE TO DATE	$
2. RETAINAGE % TO DATE	
3. PREVIOUS RETAINAGE (Line 2, previous estimate)	
4. RETAINAGE THIS ESTIMATE (Line 2 minus line 3)	

LIQUIDATED DAMAGES:

5. DAYS L. DAM. TO DATE @ $ /DAY	
6. DAYS L. DAM. ON PREV. EST. (Line 5, previous estimate)	
7. DAYS L. DAM. THIS PERIOD (Line 5 minus line 6)	
8. TOTAL DUE TO DATE (Line 1 minus line 2 minus line 5)	
9. PREVIOUS PAYMENTS (Line 8, previous estimate)	
10. PAYMENT THIS ESTIMATE (Line 8 minus line 9)	

DISTRIBUTION

Funding Source				
a. Total Work Done to Date (distribution of line 1 above)				
b. Retainage (distribution of line 2 above)				
c. Total Due to Date (distribution of line 1 minus 2 above)				
d. Less Previous Payments (line C previous estimate)				
e. Less L. Dam. (line 7 above)				
f. Payment this Estimate (distribution of line 10 above)				

ASSIGNMENTS:

CENTRAL OFFICE NOTATIONS:

	Checked by
Quantities & Prices	
Extensions	
Assignments	
Distributions	

REMARKS

CERTIFIED AS TO FORM, QUANTITIES OF WORK, PRICE, AND EXTENSIONS

Resident-County Engineer	Date
Employer	

District-Engineer	Date

ESTIMATE APPROVED

Construction-Bridge-Local Government Engineer	Date

Example 8.3.b

ESTIMATE 2 SHEET
North Dakota Department of Transportation, Construction
SFN 6786 (Rev. 04-2000)

SHEET 2

Project

STATEMENT

Sec. No.	Code No	Est. Or C.O. No.	Description	Original Quantity	Unit	Unit Price	Bid Amount	Quantities		Total Amt. to Date	Projected Final Quantity
								Current	Total to Date		

TOTAL AMOUNT OF WORK DONE TO DATE

Example 8.3.c

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SECTION 9.1 – MAINTENANCE
(May 2008)

9.1.1 GENERAL

The local agency is responsible for maintaining all projects on the local roads system and some projects on the regional system and county-sponsored projects, as described in Section 9.1.2. NDDOT will enter into an agreement with the agency which will specify the maintenance responsibility. (See Section 4.2)

"Maintenance" is defined as "the performance of normal operations for preserving the entire project, as needed to ensure safe and efficient use."

9.1.2 MAINTENANCE RESPONSIBILITIES

See Policy II 8-1, "Urban Area Program (cities over 5,000 pop)" (Example 9.1.a) and Policy II 8-1.1, "Non-Urban Area Program (state highways through cities under 5,000 population) (Example 9.1.b)."

All prior maintenance agreements will remain in effect unless they are superseded by a new agreement. New agreements will be established as part of a major rehabilitation project.

9.1.2.1 Interstate system.

NDDOT will maintain the system, including the interchanges, except for grade-separated facilities.

9.1.2.2 Regional system

a. Primary regional system. NDDOT will maintain the project after completing a rehabilitation project on it (defined as restoring the road to a 20-year design life) when one of the following conditions is met:

   - the road functions as a freeway (access limited to interchanges); or
   - drainage is provided by a ditch section without any accompanying inlets and storm sewer.

   If neither of these requirements is met, and the drainage is provided by inlets and storm sewer, the city maintains the project. The general intent is that when a primary regional pavement section is rebuilt, the city will assume the maintenance of the facility.

b. Secondary regional system. The urban areas will maintain the system after completing a rehabilitation project.

NDDOT will do structural maintenance on regional system bridges. State participation in maintenance is limited to ensuring the structural integrity of the bridge. Any cosmetic or aesthetic maintenance will be a local responsibility. Snow removal and routine bridge roadway maintenance will depend on whether the bridge is on the primary or secondary system.

9.1.2.3 Urban roads system

The urban areas are responsible for maintaining the urban roads system.

9.1.2.4 County roads system

The counties are responsible for maintaining the county roads system.

9.1.3 MAINTENANCE GUIDELINES

All replacements and repairs should conform to currently approved design standards (see Chapter 5, "Design"). All repairs and maintenance should be performed without unreasonable delay. FHWA and NDDOT expect a high level of maintenance. The following provides guidance to local agencies for each area of maintenance responsibility. (See Example 9.1.c)

9.1.3.1 Roadway surface

Preserve the structural integrity of the roadway, and the safety and comfort of the user. This includes a safe, smooth, skid-resistant surface, in a condition as close as practical to the original (or improved) grade and cross-section.

9.1.3.2 Shoulders

Preserve a safe, smooth, surface, free of obstruction, level (refer to the NDDOT Design Manual for guidelines on drop offs between the driving lanes and shoulder) with the adjacent roadway surface, and in a condition as close as practical to the original (or improved) grade and cross-section.

9.1.3.3 Roadside

Preserve the safety and beauty of the roadside through vegetation management, erosion control, and litter pick-up.

9.1.3.4 Drainage

Preserve the hydraulic capacity for which the system was originally designed. (See Section 5.5, "Drainage.")

9.1.3.5 Bridges and pedestrian underpasses

Preserve the structural and operational characteristics for which the system was originally designed. These include safe, smooth, skid-resistant surfaces; proper surface drainage; and adequately functioning bearing devices and sub-structural elements. Replacement or repair of structural railing and approach guardrail should be done without unreasonable delay. Pedestrian underpasses should be cleaned, properly lighted, and adequately ventilated.

A "bridge" is defined as "a structure, including supports, over a waterway, roadway, railway, or other obstruction, which has a clear opening of at least 20 feet measured along the centerline of the roadway, from inside of abutment to inside of abutment."

9.1.3.6 Snow and ice control

Preserve the roadway safety, efficiency, and environment during the winter.

9.1.3.7 Traffic safety in maintenance work zones

Use procedures that will aid the safety of motorists and maintenance workers. These procedures should be consistent with the provisions of Part VI of the Manual on Uniform Traffic Control Devices, Federal-Aid Policy Guide (FAPG), Traffic Safety in Highway and Street Work Zones, and NDDOT Policy, Work Zone Safety and Mobility.

9.1.3.8 Traffic control devices

Preserve clean, legible, visible, and properly functioning traffic control devices. This includes pavement marking, signing, delineators, signals, etc.

9.1.3.9 Safety devices

Replace damaged, defective, or inoperable devices without unreasonable delay. This includes guardrails, impact attenuators, breakaway supports, barriers, etc.

9.1.3.10 Access control

Preserve the originally designed access control, eliminate unauthorized traffic movement, and prevent improper or unauthorized use of highway rights-of-way.

The city/county should monitor traffic control devices, safety devices, and access control to ensure safe and efficient use of the roadway. Changes to these items may be made as per the terms of the cost participation and maintenance agreement (see Section 4.2).

9.1.4 MAINTENANCE REVIEW INSPECTIONS

The NDDOT District Engineer, Local Government Engineer, Federal Highway Administration representative along with the local agency representative responsible for maintaining the local agency system, will perform maintenance inspections on a sampling of selected segments of the local government system which have had a construction project involving federal aid. (See NDDOT Policy II 2-2, "Certifying the Maintenance of County & City Federal Aid Highway Projects" Example 9.1.c) Four counties will be inspected annually. In addition, the cities will annually complete and submit a "Maintenance Certification Urban Federal Aid Project" form to the LGD – SFN 51027 (Example 9.1.d) and the counties will annually complete and submit "Maintenance Certification County Federal Aid Project" form to the LGD – SFN 51026 (Example 9.1.e)

Maintenance on public bridges is governed by the provisions of 23 CFR 650, subpart C, which establishes National Bridge Inspection Standards (NBIS). This law requires that each bridge be inspected every two years. NDDOT will provide this service. To offset the cost, NDDOT bills the cities or counties for any cost for which NDDOT does not receive federal funds.

After each bridge inspection, NDDOT issues a Structural Inventory and Appraisal sheet and sends a copy to the local agency, along with a city or county map showing the location of the bridge. (See Section 2.2.7)

9.1.5 NONCOMPLIANCE WITH MAINTENANCE RESPONSIBILITY

If during the maintenance review inspections major deficiencies are found, the local agency shall take immediate steps towards correcting those items identified. Major deficiencies will be identified in the maintenance review report. The NDDOT's Local Government Division will schedule another maintenance review within one year to review the steps that are being taken to correct the major deficiencies previously identified or the corrective action that has been completed.

If a local agency continually fails to perform routine maintenance, as outlined in project agreements between the local agency and NDDOT, the NDDOT may withhold further funding of local roadway improvement projects in that city or county until maintenance concerns are resolved.

Agency:	North Dakota Department of Transportation
Author:	Local Government Division
Contact Person:	Local Gov.
Group:	Executive Policy Manual
Category:	II-Mngmnt Projct & Prgrm Dvlpmnt
Policy Number:	II 8-1
Title: ☑	Urban Area Program (cities over 5,000 population)
Original Date:	03/29/1974
Revised Date:	02/20/2001

PURPOSE: The North Dakota Department of Transportation (NDDOT) may provide various services for the urban areas at their request, depending on available NDDOT resources.

POLICY: **1. General**

The Local Government Division, if requested by an urban area and if staff is available, may help with transportation plans, preliminary engineering data, project development documents, consultant selection, and contract and agreement administration.

Functional Classification: Projects considered for federal aid under the urban program must be on the **Interstate, Regional Highway,** or **Urban Road** system, except for off-system bridge and off-system safety projects.

a. The **Interstate** system consists of all interstate highways through urban areas.

b. The **Regional Highway** system is all state highways in urban areas, and consists of the **Primary Regional** and **Secondary Regional** systems.

   The **Primary Regional** system consists of state routes that serve through-traffic most efficiently in urban areas. Truck routes are given preference. In the case of parallel routes, only one will be on the primary regional system. State routes near and parallel to the interstate system will not be designated primary regional routes.

   All urban state highways not on the primary regional system are on the **Secondary Regional** system.

c. The **Urban Road** system consists of all urban roads not on the

Example 9.1.a

interstate or regional system but classified as collectors and above.

The NDDOT Planning Division will maintain maps and route descriptions of urban area streets and highways.

2. Project Submission

By December 15 of each year, urban areas must give the Local Government Division a list of federal-aid projects they wish to build in the next five years in priority order. The list should also indicate the desired year of construction for each project.

Projects must fall into one of the following four categories: **Urban Roads**, **Regional Highways, Safety, and Bridge.** Transportation Enhancement (TE) projects must also be submitted by October 31 (see "Transportation Enhancement" Policy Memorandum II, 2-1).

The submissions must be developed with the appropriate NDDOT district office, and urban areas must use and document a public input process. Political jurisdictions within the organized boundaries of a metropolitan planning organization (MPO) must coordinate the project submission and public input with the MPO.

The Local Government Division will notify the urban areas and MPO's about the urban area program by February 15 of each year.

The first two years of an urban area's five-year program must be firm. If there are changes, funding may be lost. If federal funds are lost because an urban area did not have a project ready for obligation in the appropriate fiscal year, the urban area may lose an amount of its apportionment equal to the amount of the obligational authority the state has lost.

3. Funding for Interstate, Regional Highway, Urban Road, Bridge, Safety, and Transportation Enhancement Projects

Federal funds may be used for preliminary engineering, construction engineering, right-of-way, utilities relocation, and construction. On the urban road system, use of federal aid for any of these activities is an urban area decision.

Example 9.1.a

a. **Interstate** system: NDDOT will provide the required match for federal funds for most improvements. It will also provide the required match for the federal funds on new interchanges which meet Federal Highway Administration requirements, are not detrimental to the interstate mainline, and are needed to decrease traffic congestion at existing interchanges.

   The urban area will be required to fund grade-separated non-interchange roads and interchange projects which are a result of cross-road traffic. There may be some exceptions if the project is built in conjunction with an **Interstate** mainline project. To obtain funding, the urban area may request **Regional Highway** funds if the project is part of that system, or may use part of their **Urban Roads** program apportionment.

b. **Regional** system: With the following exceptions, NDDOT will match federal funds for projects on the **Primary Regional** system and half the match for projects on the **Secondary Regional** system (with the urban area providing the rest of the match on the **Secondary Regional** system).

   The urban area will be required to match federal funds for service road improvements.

   The urban area will be required to provide 100% funding for items not eligible for federal aid, such as water lines, sanitary sewer, local storm sewer, and items that exceed reasonable design specifications as determined by NDDOT.

c. **Urban Roads** system: An urban area may accumulate its apportionment for future projects which require funding greater than one year's apportionment. The urban area will be required to provide the match, funding for all items not eligible for federal aid, and all funding above and beyond its federal-aid apportionment.

   Federal funds may be used for preliminary engineering, construction engineering, right-of-way, utilities relocation, and construction. On the urban road system, use of federal aid for any of these eligible activities is an urban area decision.

d. **Bridge** and **Safety** projects: Cost participation is based on the system on which the project is located. Federal funds are available only for construction engineering and actual construction.

e. **Transportation Enhancement (TE)** projects: See "Transportation Enhancement" Policy Memorandum (II, 2-1).

Example 9.1.a

4. Maintenance

All prior maintenance agreements will remain in effect unless they are superseded by a new agreement. New agreements will be established as part of a major rehabilitation project.

a. **Interstate** system: NDDOT will maintain the system, including the interchanges, except for grade-separated facilities.

b. **Primary Regional** system: NDDOT will maintain the project after completing a rehabilitation project on it (defined as restoring the road to a 20-year design life) when one of the following conditions is met:

the road functions as a freeway (access limited to interchanges); or

drainage is provided by a ditch section without any accompanying inlets and storm sewer.

If neither of these requirements is met and the drainage is provided by inlets and storm sewer, the city will maintain the project. The general intent is that when a primary regional pavement section is rebuilt, the city will assume the maintenance of the facility.

c. **Secondary Regional** system: The urban areas will maintain the system after completing a rehabilitation project.

NDDOT will do structural maintenance on **Regional System** bridges. State participation in maintenance is limited to ensuring the structural integrity of the bridge. Any cosmetic or aesthetic maintenance will be a local responsibility. Snow removal and routine bridge roadway maintenance will depend on whether the bridge is on the primary or secondary system.

d. **Urban Roads** system: The urban areas are responsible for maintaining the **Urban Roads** system.

5. Responsibilities

Before any preliminary engineering or bid opening of a construction project, NDDOT and the urban area must agree about the responsibilities, including but not limited to the following: preconstruction, construction, maintenance, right-of-way, access, encroachments, final project plans, and financial arrangements for

Example 9.1.a

reimbursing NDDOT.

A. Urban Area Responsibilities

The urban area must design and build all projects on the urban roads system to NDDOT standards.

On the **Urban Roads** system, the urban area will complete all preliminary engineering and construction engineering for projects. The urban areas are responsible for all phases of project development, including but not limited to:

a. consultant selection
b. conducting traffic studies
c. producing project concept reports
d. obtaining environmental clearances
e. public input process
f. designing projects
g. acquiring right-of-way
h. right-of-way certification
i. awarding and signing the contract
j. meeting all DBE requirements
k. doing construction engineering
l. funding payment for claims made against the contract
m. taking care of cost overruns (for items "k" and "l," it may be possible to use federal funds if the project has enough available apportionment)

The Local Government Division, if requested by an urban area and if staff is available, may help with transportation plans, preliminary engineering data, project development documents, consultant selection, and contract and agreement administration.

B. NDDOT Responsibilities

On the **Interstate** and **Regional** systems, NDDOT will be responsible for the preliminary engineering and construction engineering. There may be situations where NDDOT will use consultants or ask urban area or MPO staffs to complete the engineering on the **Regional** system.

On **Urban Roads** system projects that meet NDDOT and federal requirements, NDDOT will:

a. provide federal funds from the urban area's urban roads apportionment, if requested to do so by the urban area (federal

Example 9.1.a

funds will be provided for project development only if the project results in a construction contract)

b. review the project at various stages in order to receive federal funds

c. accept, for the purpose of receiving federal funds, an urban area's self-certification in consultant selection

d. accept, for the purpose of receiving federal funds, an urban area's right-of-way certification, certification of meeting applicable design standards, DBE requirements, utilities certification, etc.

e. conduct the bid opening

f. concur in the urban area's award of the contract

g. audit the urban area's records to make sure that federal requirements have been met

h. reimburse the urban area from their apportionment for construction costs eligible for federal aid

i. at the request of the urban area, act as its agent in making payments to the contractor

Note: See also the following policy memorandums:

* Category II, Subject 8-1.1: "Non-Urban Area Program (state highways through cities under 5,000 population)"
* Category II, Subject 2-1: "Transportation Enhancement Program"
* Category II, Subject 8-1.2 "State Aid to Political Subdivisions on Highway Facilities"

_____

David A. Sprynczynatyk, P.E.
Director

Example 9.1.a

Agency:	North Dakota Department of Transportation
Author:	Planning & Programming Division
Contact Person:	Planning & Programming Division
Group:	Executive Policy Manual
Category:	II-Mngmnt Projct & Prgrm Dvlpmnt
Policy Number:	II 8-1.1
Title: ☑	Non-Urban Area Program (state highways through cities under 5,000 population)
Original Date:	05/05/1994
Revised Date:	09/02/2005

PURPOSE: When the North Dakota Department of Transportation (NDDOT) proposes highway improvements in or near a city, it will notify the city. If the city requests, NDDOT may provide various services for the city. These services and funding will depend on available NDDOT resources.

POLICY: **1. General**

Planning & Programming Division is responsible for transportation planning and traffic operation studies on the state highway system. Planning & Programming Division is responsible for preparing the agreements and monitoring project development.

To be considered for federal aid, projects must be functionally classified as major collectors or above, except for off-system bridge and off-system safety projects.

In most cases, preliminary engineering, lighting, design, right-of-way processes, utility adjustments, grading, surfacing, drainage, traffic-control equipment, and initial maintenance seals are eligible for federal cost participation.

Before any preliminary engineering and bid opening of a construction project, NDDOT and the city must agree in writing on preconstruction and construction responsibilities, maintenance, right-of-way access, encroachments, final project plans, and financial arrangements for reimbursing NDDOT.

All prior maintenance agreements will remain in effect unless they are superseded by a new agreement. New agreements will be established

Example 9.1.b

as part of a major rehabilitation project.

2. Non-urban Areas 750 to 5,000 Population

Incorporated cities from 750 to 5,000 population may submit requests for financial assistance from the District Engineer for projects on the state highway system. The request must include the project location and justification.

Cost Participation: For projects built with federal aid, the city's cost participation for the level of improvement NDDOT finds adequate for state highway purposes will be as follows:

a. In projects requiring a 20 percent match, city participation will be 10 percent, and NDDOT will provide the remaining 10 percent.

b. In projects requiring less than 20 percent local match, NDDOT will provide up to half of the local match.

c. Any project items requested by the city, in addition to the level of improvement NDDOT finds adequate for highway purposes, will be at the city's expense. The city will be required to provide 100 percent of the funding for items not eligible for federal aid, such as water lines, sanitary sewer, local storm sewer, and items that exceed reasonable design specifications as determined by NDDOT.

d. When a surface rehabilitation or reconstruction project is located on a state highway system maintained by NDDOT, and the roadway is a rural design section, the city will not be required to participate in the cost of the improvement.

e. The city will be required to match federal funds for service road construction or improvements.

If the state highway is reconstructed to a curb-and-gutter section, the city must sign an agreement accepting maintenance responsibility for the area of the roadway within city limits. The city must maintain the roadway according to NDDOT policies.

The initial maintenance seal following a surface rehabilitation or reconstruction project will be funded with federal aid and the state and city match will be according to the Cost Participation policy above.

NDDOT Maintenance Responsibilities: NDDOT will furnish route-marker signs, maintain center-line striping, and do snow plowing but

Example 9.1.b

not snow removal. NDDOT will also provide future state-funded maintenance seals on road surfaces to a maximum width of 40 feet.

City Maintenance Responsibilities: The city is responsible for all maintenance except that described in "NDDOT Maintenance Responsibilities" above. The city is also responsible for restoring to the original condition any cuts in the surface initiated by the city for utilities, etc. The city is responsible for all maintenance on service roads to include maintenance seals, signing, striping, snow plowing, and snow removal.

3. Non-urban Areas Under 750 Population

Cities with populations under 750 may submit requests for financial assistance from the District Engineer for projects on the state highway system. The request must include the project location and justification.

Cost Participation: For projects built with federal aid, there will be no city participation for the level of improvement NDDOT finds adequate for state highway purposes. Any project items requested by the city in addition to the level of improvement NDDOT finds adequate will be at the city's expense. The city will be required to provide 100 percent of the funding for items not eligible for federal aid, such as water lines, sanitary sewer, local storm sewer, and items that exceed reasonable design specifications as determined by NDDOT. The city will be required to match federal funds for service road construction or improvements.

NDDOT Maintenance Responsibilities: NDDOT will maintain the roadway surface, route marker signs, regulatory signs (STOP, YIELD, and SPEED LIMIT signs but not parking signs), and centerline striping, and will do snow plowing but not snow removal. NDDOT will also provide future state-funded maintenance seals on road surfaces to a maximum width of 40 feet.

City Maintenance Responsibilities: The city will maintain the drainage system, street lights, and signals. The city is also responsible for restoring to original condition any cuts in the road surface initiated by the city for utilities, etc. The city is responsible for all maintenance on service roads to include maintenance seals, signing, striping, snow plowing, and snow removal.

Example 9.1.b

4. City Projects Off The State Highway System

City projects off the state highway system must proceed according to the Local Government manual.

Note: See also the following policy memorandums:

* Category II, Subject 8-1: "Urban Area Program (cities over 5,000 population)"
* Category II, Subject 2-1: "Transportation Enhancement Program"
* Category II, Subject 8-1.2 "State Aid to Political Subdivisions on Highway Facilities"

David A. Sprynczynatyk, P.E.
Director

Example 9.1.b

Agency:	North Dakota Department of Transportation
Author:	Local Government Division
Contact Person:	Local Government
Group:	Executive Policy Manual
Category:	II-Mngmnt Projct & Prgrm Dvlpmnt
Policy Number:	II 2-2
Title: ☑	Certifying the Maintenance of County & City Federal Aid Highway Projects
Original Date:	04/16/1986
Revised Date:	02/20/2001

PURPOSE: NDDOT is, according to Title 23 United States Code and 23 CFR 1.27, required to maintain, or cause to maintain, all federally funded highway projects. Title 23, United States Code 101, defines maintenance as: "...the preservation of the entire highway including surface shoulders, roadsides, structures and such traffic control devices as are necessary for its safe and efficient utilization."

POLICY: It is the policy of NDDOT to require all county and city projects receiving federal dollars to enter into an agreement with the Department to ensure that as recipients of federal money the cities and counties agree to abide by the terms and conditions required.

The agreement will require the cities, with a population over 5000, or counties receiving the federal funds to provide an annual certification that all federally funded highway projects constructed are being maintained as required.

1. **Certification Scope:**

   Required maintenance will include, but not be limited to, roadway surfacing, shoulders, traffic control devices, safety devices, structures, drainage, and right of way. The highways will be maintained in a good and safe condition for general public use. The rights of way will be maintained and encroachments removed.

   Maintenance will be in accordance with NDDOT "Construction and Maintenance Agreement" or "Cost Participation and Maintenance Agreement" in a manner satisfactory to NDDOT and the Federal Highway Administration.

Example 9.1.c

2. Certification Format:

Each year, the county or city will complete and submit a Maintenance Certification for Federal Aid Projects, state form numbers (SFNs) 51026, and 51027, respectively.

County and city certifications will be submitted to the NDDOT Local Government Division.

3. Certification Schedule

Certifications will be submitted at the annual program review or no later than December 31 of each year.

4. Certification Follow-up:

A review team will inspect a sampling of the federal-aid county and urban projects on a periodic cycle not to exceed four years. The team will review the maintenance efforts of the sampled counties and cities. The team will be coordinated by the Local Government Engineer and will consist of the following representation:

Number of Persons	Representing
1	Local Government
2	District (construction or maintenance)
3	Federal Highway Administration

Other representation may be included as deemed necessary by the Local Government Engineer.

_____

David A. Sprynczynatyk, P.E.
Director

Example 9.1.c

MAINTENANCE CERTIFICATION
URBAN FEDERAL AID PROJECT
North Dakota Department of Transportation, Local Government
SFN 51027 Rev. (06-2007)

All federal aid street projects have been inspected and are being maintained in a good and safe condition for general public use. Maintenance is in accordance with the North Dakota Department of Transportation "Cost Participation and Maintenance Agreements."

Approved as to form:

City Attorney (Type or print)	City of
Signature	Date

City Auditor (Type or print)	Mayor or President City Commission (Type or print)
Signature	Signature
	Title

Recommended for approval:

City Engineer (Type or print)
Signature

Example 9.1.d

MAINTENANCE CERTIFICATION
COUNTY FEDERAL AID PROJECT
North Dakota Department of Transportation, Local Government
SFN 51026 (Rev. 06-2007)

All federal aid highway projects have been inspected and are being maintained in a good and safe condition for general public use. Maintenance is in accordance with the North Dakota Department of Transportation "Construction and Maintenance Agreements."

Approved as to form:

States Attorney (Type or print)	County of
Signature	Date

County Auditor (Type or print)	Chairman, Board of County Commissioners (Type or print)
Signature	Signature

Recommended for approval:

County Engineer/Highway Supervisor (Type or print)
Signature

Example 9.1.e

SECTION 10.1 – PROJECT MANAGEMENT REVIEW
(May 2008)

10.1.1 GENERAL

As stated in the Local Government Manual, Section 1.1.4.1.f NDDOT RESPONSIBILITIES, the department is required to: "Audit the local agency's records to ensure that federal requirements have been met." Therefore, the NDDOT will schedule and conduct project management reviews (PMR) annually on selected Urban and County Roads, Urban and County Bridge, Safety, and Transportation Enhancement projects. These reviews will cover:

- General procedural compliance with 23 CFR requirements
- Procedures in the Local Government Manual
- Items of special interest that occurred during project development

10.1.2 PREPARATION

The Urban and County Sections of the LGD will schedule the PMR with the selected local agency and will request that the city/county engineer participate when the review is conducted. The city/county engineer should have all pertinent documentation ready for the scheduled review. Typical procedural review questions and documents to be examined will be listed on a review Check sheet, which will be provided to the local agency prior to the review date (Example 10.1.a).

10.1.3 PROCEDURE

This review will be concentrating on the following areas:

<u>PRE-DESIGN</u>

- Eligibility for Funding
- Project Selection Process
- Consultant Selection Process
- Public Involvement / Solicitation of Views
- Environmental Concerns
- PCR Development & Approval
- Cost Estimates & Life-cycle Analysis (when applicable)

<u>DESIGN</u>

- Design Standards
- Right of Way
- Utilities
- PS & E
- Final Plans

Each year the review team will select a number of local roads/streets, bridges, safety, and Transportation Enhancement projects to be reviewed during that year. The review will center on projects that have already been bid. It is estimated that the reviews will be scheduled near the start of each fiscal year, depending upon the availability of staff time.

10.1.4 CONSTRUCTION CONTRACT INSPECTIONS

The NDDOT Contract and Engineering Review Team (CERT) will conduct inspections of construction contracts on the state highway system, and the urban/county system for federal-aid projects. The purpose of these inspections are to make sure specifications, established construction practices, and field office procedures are complied with uniformly; help train inspection and engineering personnel; and improve the quality of the construction work.

10.1.5 PERSONNEL

The Project Management Review (PMR) will be conducted by a "cooperative team" made up of four or five members of NDDOT personnel and one FHWA member. The nucleus of the review team will be comprised of the Urban or County section. The presence of the FHWA is desirable for concurrence in our PMR program. The NDDOT welcomes this presence to the "review team".

10.1.6 PRODUCT

If no major deficiencies are found in the local agency's project management methods, the city or county will be informed in writing of the review team's findings and recommendations.

All deficiencies will be identified for the city or county at the PMR. Copies of documentation not available at the time of review shall be submitted to the LGD within 21 days of the review. After the 21-day period, the final PMR letter will be sent to the city or county.

If major deficiencies exist, the local agency will be asked to take corrective action within 60 days. If the deficiencies include ineligible work, NDDOT will issue a citation letter.

If deficiencies exist in the local agency's procedures, management practices, or systems, or if specific project errors are found, the NDDOT's administrative response will be to document the deficiencies, inform the city or county and then await their response. Based on this response, the NDDOT options are as follows:

- To accept their response as corrective measures to the deficiencies.
- To hold a joint conference with the city/county engineer, the Urban or County section, and the Local Government Engineer to resolve any issues.
- To limit or withhold the city's or county's future funding allocation to the extent

deemed necessary.

- To establish a repayment plan when violations to procedures make certain expenditures ineligible for federal reimbursement. The NDDOT will be required to pay back all ineligible expenditures immediately to FHWA, a repayment plan can then be worked out with the local agency.

10.1.7 PURPOSE

The primary goal of PMR is to ensure that non-NHS projects developed by the cities and counties meet all applicable Federal requirements. The LGD hopes that this review will make the project development process easier.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

POST PROJECT MANAGEMENT REVIEW CHECKLIST		
Project No:	PCN:	Date of Review:
Project Title:		
Location:		
City:		
Type of Work:	Bid Date:	
City Engineer:	Phone No.:	
NDDOT/FHWA Review Team:	City Representatives: Consultant:	
Notes:		

Example 10.1.a

NDDOT PROJECT MANAGEMENT REVIEW

A. FUNDING PROCESS:

1. **Under what funding program was this project?**

2. **Was this project included in the STIP?** ☐ Yes ☐ No

3. **What elements of this project were federal funds approved for:**

☐	**Preliminary Engineering?**	**$**	**Date:**
☐	**Construction Engineering?**	**$**	**Date:**
☐	**Right of Way Acquisition?**	**$**	**Date:**
☐	**Construction?**	**$**	**Date:**

4. **Was this project capped?** ☐ Yes ☐ No $

5. **Were all eligible claims for payments made on this project by NDDOT?** ☐ Yes ☐ No

B. PROJECT SELECTION PROCESS:

1. **Was this project included in the TIP?** ☐ Yes ☐ No

2. **Was the public given an opportunity to comment on the TIP?** ☐ Yes ☐ No

3. **Was this project selected in a cooperative effort with the NDDOT District Engineer?** ☐ Yes ☐ No

4. **Was this project submitted to the NDDOT Local Government Division by Dec. 15?** ☐ Yes ☐ No

5. **Was this project submitted on a Project Data Worksheet?** ☐ Yes ☐ No

C. CONSULTANT SELECTION PROCESS:

1. **Did the city hire an engineering consultant firm for this project?** ☐ Yes ☐ No

   a. **If "Yes," what services were used?**

	Surveying		**RIGHT OF WAY Appraisal**
	Sampling & Testing		**RIGHT OF WAY Negotiation**
	Environmental Document		**RIGHT OF WAY Relocation**
	Design		**Cultural Resources**
			Wetland Delineation

   b. **Were interviews held as part of the consultant selection process?**

2. **Does the city have written procedures for the selection of a consultant?** ☐ Yes ☐ No

3. **Was federal aid used for engineering purposes?** ☐ Yes ☐ No

Example 10.1.a

4. If Yes to #3,

   a. What procedures were followed?

   ☐ 23 CFR, Part 172 & 40 USC 541
   ☐ Other accepted procedures

   b. Was a letter sent to NDDOT from the city certifying that federal & state requirements were adhered to in the selection process? ☐ Yes ☐ No

   c. Did NDDOT concur with the consultant selection process used? ☐ Yes ☐ No

5. Was a full-time employee of the city assigned to be responsible for the project?
   Person Assigned: ☐ Yes ☐ No

6. Was an Engineering Services Agreement prepared and was it signed by all parties? ☐ Yes ☐ No

   Date signed:

D. SOLICITATION OF VIEWS/PUBLIC INVOLVEMENT

1. Were appropriate agencies solicited for their comment on this project? ☐ Yes ☐ No

   Date of letter:

2. Were all solicitation of views (SOV) responses included in the PCR? ☐ Yes ☐ No

3. Were specific questions or concerns addressed in the PCR? ☐ Yes ☐ No

4. Was public participation encouraged early in this project? ☐ Yes ☐ No

   a. If yes, what form was used?

   ☐ News Release
   ☐ Direct Mail
   ☐ Other
   ☐ Commission Meeting
   ☐ Citizen Advisory Groups

5. Was a public input meeting(s) held for this project? ☐ Yes ☐ No

   Date held:

6. Did the project meet the criteria in Section 4.9.4.1 of the Local Government Manual requiring an opportunity for a hearing? ☐ Yes ☐ No

a. If yes, what criteria were met?

	Acquisition of significant additional right of way.
	Significant adverse effects upon abutting real property.
	Substantially changes the geometrics or function of roads or streets connecting the improved facility.
	Significant social, economic, environmental, or other impact.
	Environmentally controversial.
	Involves a bypass or significant change in traffic patterns.
	Significant temporary effect on traffic (including detours).

7. Was a public hearing conducted for this project? If no, skip to Section E. ☐ Yes ☐ No

   a. Date held:
   b. Place held:
   c. Format used? ☐ Open House ☐ Formal

8. Were all hearing comments resolved? ☐ Yes ☐ No

9. Was the ten-working-day response period provided for public comments? ☐ Yes ☐ No

10. Was a public hearing transcript prepared? ☐ Yes ☐ No

11. Was a "Summation of Public Hearing and Project Decisions" document prepared? ☐ Yes ☐ No

    a. If yes, was it signed by the proper officials? ☐ Yes ☐ No

E. ENVIRONMENTAL PROCESS:

1. What level of documentation was identified for this project?

	Class I	(EIS/ROD)	Date:
	Class II	(CAT EX)	Date:
	Class III	(EA / FONSI)	Date:

2. Were section 4(f) lands, such as historic sites, parks, recreation areas, wildlife, and waterfowl refuges involved? ☐ Yes ☐ No

3. Were section 6(f) lands, property purchased with Land and Water Conservation Act funds, involved? ☐ Yes ☐ No

4. Was a Cultural Resource determination issued by SHPO? ☐ Yes ☐ No

   Date:

5. If no, was a Report of Findings from an inventory submitted for review by

SHPO? ☐ Yes ☐ No

6. What determination was made?

	No Historic Properties Affected
	Adverse Effect
	No Adverse Effect

7. Was a 404 Permit required for this project? ☐ Yes ☐ No

   a. If yes, date of permit:

8. Was a flood plain permit required? ☐ Yes ☐ No

   a. If yes, date of permit:

9. Was a Sovereign Lands Permit required? ☐ Yes ☐ No

   a. If yes, date of permit:

10. Was a Coast Guard Permit required? ☐ Yes ☐ No

    a. If yes, date of permit:

11. Were natural environment concerns, such as air quality, noise, water quality, visual, addressed? ☐ Yes ☐ No ☐ N/A

12. Were hazardous waste concerns addressed? ☐ Yes ☐ No ☐ N/A

13. Were construction concerns addressed, such as work zone traffic control, detours, restrictions, adjacent projects, incentives/disincentives? ☐ Yes ☐ No ☐ N/A

14. Were Minority & Low-income communities an issue? ☐ Yes ☐ No ☐ N/A

15. Were land use concerns addressed? ☐ Yes ☐ No ☐ N/A

16. Were prime and unique agricultural lands an issue? ☐ Yes ☐ No ☐ N/A

17. Were social and economic concerns addressed? ☐ Yes ☐ No ☐ N/A

18. Were energy concerns addressed? ☐ Yes ☐ No ☐ N/A

19. Were pedestrian/bicyclist concerns addressed? ☐ Yes ☐ No ☐ N/A

20. Were threatened and endangered species an issue? ☐ Yes ☐ No

21. Were wild and scenic rivers an issue? ☐ Yes ☐ No

22. Were water body modification, wildlife, and invasive plant species a concern? ☐ Yes ☐ No

Example 10.1.a

F. PCR DEVELOPMENT & APPROVAL

1. Does the Project File include the following significant information:

a.	Pavement Thickness Report?	☐ Yes	☐ No	☐ N/A
b.	Safety Review? (i.e., Geometrics, sight distance)	☐ Yes	☐ No	☐ N/A
c.	Hydraulic Drainage Report?	☐ Yes	☐ No	☐ N/A
d.	Crash Analysis?	☐ Yes	☐ No	☐ N/A
e.	Traffic Volumes and/or ESAL's?	☐ Yes	☐ No	☐ N/A
f.	Lighting Study?	☐ Yes	☐ No	☐ N/A
g.	Traffic Operations Report? (i.e., lane assignments, signals)	☐ Yes	☐ No	☐ N/A

2. Was a draft PCR written for this project? ☐ Yes ☐ No

3. Were the following issues addressed in the PCR?

a.	Purpose & Need		☐ Yes	☐ No
b.	Existing Conditions		☐ Yes	☐ No
c.	Proposed Improvements		☐ Yes	☐ No
d.	Alternatives		☐ Yes	☐ No
e.	Cost Estimates		☐ Yes	☐ No
f.	Value Engineering (projects >$25 million)	☐ Yes	☐ No	☐ N/A
g.	Impacts		☐ Yes	☐ No
h.	Comments & Coordination		☐ Yes	☐ No
i	Executive Summary		☐ Yes	☐ No

4. Was the draft PCR submitted to the NDDOT Local Government Division for two-week review period? ☐ Yes ☐ No

5. Were NDDOT comments addressed in the Executive Summary? ☐ Yes ☐ No

6. Was the PCR/Executive Summary/Decision Document signed by the Mayor or the chairman of the city council? ☐ Yes ☐ No

7. Was the final PCR document submitted to NDDOT? ☐ Yes ☐ No

G. COST ESTIMATES & LIFE-CYCLE ANALYSIS

1. Was a detailed preliminary estimate included in the PCR? ☐ Yes ☐ No

2. Was a summary of the local, state, and federal participating amounts included in the PCR? ☐ Yes ☐ No

3. Was a surfacing life-cycle cost determined for PCC vs HBP alternates included in the PCR? ☐ Yes ☐ No ☐ N/A

4. Was the pavement design analysis period based on 30 years (PCC surfacing) or 20 years (HBP surfacing)? ☐ Yes ☐ No

5. What discount rate was used? %

H. DESIGN STANDARDS
(Underlined items require an exception to standard if minimum standard is not met.)

Example 10.1.a

NDDOT PROJECT MANAGEMENT REVIEW

1. Roadway:

a. What is the functional classification of the road?

b. Was the project designed using a 20-year design life? ☐ **Yes** ☐ **No**

c. What is the design speed?

d. What is the posted speed?

e. What is the road width?

f. What are the lane widths?

	right
	center
	left

g. What is the shoulder width?

h. Were the following geometric criteria designed according to the AASHTO "Green Book?"

1)	**Horizontal Alignment**	☐ **Yes**	☐ **No**	☐ **N/A**
2)	**Vertical Alignment**	☐ **Yes**	☐ **No**	☐ **N/A**
3)	**Grades**	☐ **Yes**	☐ **No**	☐ **N/A**
4)	**Stopping Sight Distance**	☐ **Yes**	☐ **No**	☐ **N/A**
5)	**Cross Slopes**	☐ **Yes**	☐ **No**	☐ **N/A**
6)	**Super-elevation**	☐ **Yes**	☐ **No**	☐ **N/A**

i. Is parking permitted? ☐ **Yes** ☐ **No**

j. If yes, what is the parking lane width?

k. What was the current ADT?

l. What was the 20-year projected ADT?

m. What ADT was used in the design?

n. What was the current ESAL value?

o. What was the 20 year projected ESAL value?

p. What ESAL value was used in the design?

q. What type of pavement was used?

☐ **PCC** ☐ **HBP** ☐ **M&O**

Example 10.1.a

2. Intersections:

a. Were all intersections designed to a Level of Service (LOS) "C" or better? ☐ Yes ☐ No ☐ N/A

b. How many at-grade intersections are there on the project?

c. How many grade-separated intersections are there on the project?

d. What truck size was used for design standard?

e. Were all intersections checked for sight distance? ☐ Yes ☐ No ☐ N/A

f. How many unsignalized intersections are there on the project?

g. How many signalized intersections are there on this project?

h. Are the signals on this project coordinated with other signals off the project? ☐ Yes ☐ No ☐ N/A

3. Bridge:

a. Was there a bridge/structure as part of this project? ☐ Yes ☐ No

b. If yes, what was the sufficiency rating?

c. Was the bridge replaced or rehabilitated?

d. Was there a hydraulic report written for this project? Date: ☐ Yes ☐ No ☐ N/A

e. Was there a structural report written for this project? Date: ☐ Yes ☐ No ☐ N/A

f. Were the following geometric criteria designed according to the AASHTO "Green Book? "

1) Horizontal Clearance ☐ Yes ☐ No
2) Structural Capacity ☐ Yes ☐ No

3) Vertical Clearance ☐ Yes ☐ No
4) Bridge Width ☐ Yes ☐ No

4. Drainage:

a. Was an estimation of runoff water made for the project drainage basin? ☐ Yes ☐ No

b. What frequency was used for the design event?

c. Was any oversizing prorated according to contributing Q's? ☐ Yes ☐ No

d. Was a Storm Water Permit obtained for this project?

Date: ☐ Yes ☐ No Who obtained the permit?

Has the permit been closed out with the ND Health Dept? ☐ Yes ☐ No

5. Bicycle & Pedestrian Facilities:

a. Was a sidewalk included as part of the project? ☐ Yes ☐ No

b. Was a shared use path part of the project? ☐ Yes ☐ No

c. If "Yes", does it comply with ADA requirements? ☐ Yes ☐ No

d. Were the following AASHTO Shared Use Path standards part of the design?

1)Curve Radius (R>95 ft) ☐ Yes ☐ No

2)Path Width (10 ft min) ☐ Yes ☐ No

3)Lateral Clearance (2 ft min) ☐ Yes ☐ No

4)Vertical Clearance (8 ft min) ☐ Yes ☐ No

5)Grades (5% max) ☐ Yes ☐ No

6. Access Management:

a. Does the city have a policy concerning access control? ☐ Yes ☐ No ☐ N/A

b. Whose policy was used for this project?

☐ City ☐ NDDOT

7. Traffic Control Devices & Lighting:

a. Does all signing comply with the current MUTCD? ☐ Yes ☐ No ☐ N/A

b. What vertical clearance was used?

c. Were sign supports designed using AASHTO design requirements? ☐ Yes ☐ No ☐ N/A

d. Does pavement marking comply with the current MUTCD? ☐ Yes ☐ No ☐ N/A

e. What type of material was used for pavement marking?

☐ plastic ☐ paint

f. Is lighting warranted? ☐ Yes ☐ No

g. What foot candle value was used for lighting?

h. What uniformity ratio was used?

8. Cost Estimates:

a. What was the STIP estimated cost? $

b. What was the cost estimate in the PCR? $

c. Were unit prices and estimates comparable to other similar projects? ☐ Yes ☐ No

d. What was the engineer's estimate? $

e. What was the lowest bid amount? $

I. RIGHT OF WAY

1. What is the right of way width? ft.

2. Was additional right of way acquired? ☐ Yes ☐ No

3. Who was responsible for right of way acquisition?

☐ city ☐ state ☐ consultant

4. Were appraisals completed? ☐ Yes ☐ No ☐ N/A

By whom?

a. If no, were Appraisal Notification & Waiver forms signed? ☐ Yes ☐ No

5. Were appraisals reviewed? ☐ Yes ☐ No ☐ N/A

By whom?

Example 10.1.a

6. Were negotiations completed? ☐ Yes ☐ No ☐ N/A

   By whom?

7. Were property owner(s) afforded an opportunity to accompany the appraiser on an inspection of the property? ☐ Yes ☐ No ☐ N/A

8. Did the acquiring agency make a prompt offer to acquire the property for the full amount established? ☐ Yes ☐ No ☐ N/A

9. Was the proper owner or the designated representative given a written statement of, and summary of the basis for, the amount established as compensation? ☐ Yes ☐ No ☐ N/A

10. Did acquiring agency pay agreed purchase price, or deposit at least that amount with the court before taking possession of the property? ☐ Yes ☐ No ☐ N/A

11. Were there any encroachments on the project? ☐ Yes ☐ No

12. If yes, how many?_____ Were they removed? ☐ Yes ☐ No

    By whom?

13. Were there any family or business relocations involved with the project? ☐ Yes ☐ No

14. If yes, how many?

    Is relocation complete? ☐ Yes ☐ No

15. Did occupant have at least 90 days written notice before they were required to move? ☐ Yes ☐ No ☐ N/A

16. Was a Right of Way Certification letter written and sent to the NDDOT? Date: ☐ Yes ☐ No

J. UTILITIES

1. Were there any utility relocations on the project? ☐ Yes ☐ No

2. Are the utility agreements on file? ☐ Yes ☐ No

3. Were any railroad crossings involved? ☐ Yes ☐ No

4. Are railroad agreements on file? ☐ Yes ☐ No

5. Was a Utility Certification letter written and sent to NDDOT? ☐ Yes ☐ No

   Date:

Example 10.1.a

K. PS&E

1.	Who designed/developed the project?			
2.	Was a PS&E review held?		☐ Yes	☐ No
	Date held:			
3.	Are review comments on file?		☐ Yes	☐ No
4.	Were plans revised to address or incorporate review comments?		☐ Yes	☐ No
	Date:			

L. FINAL PLANS

1.	Were NDDOT's current specifications/codes used?		☐ Yes	☐ No
2.	Were Special Provisions complete and Okay?	☐ Yes	☐ No	☐ N/A
3.	Were federal wage rates included in the packet?		☐ Yes	☐ No
4.	Were EEO requirements included in the packet?		☐ Yes	☐ No
5.	Were erosion control requirements included?		☐ Yes	☐ No
6.	Were environmental commitments listed?		☐ Yes	☐ No

COMMENTS:

Example 10.1.a

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SECTION 10.2 – EMERGENCY RELIEF PROGRAM
(May 2008)

10.2.1 GENERAL

This section provides information and instructions on procedures applicable to the Emergency Relief (ER) program on the federal highway system. Local agencies should notify the Local Government Engineer of damages to roadway systems caused by an emergency/disaster (Any damage that occurs off the federal aid system should be submitted to the Federal Emergency Management Agency (FEMA).)

Provided below in Example 10.2.a are pages directly out of the NDDOT ER Manual. This document provides guidance in administering federal emergency relief funds. This document was written in accordance with Title 23 CFR, Chapter 1, Part 668.

INTRODUCTION

1. PURPOSE OF MANUAL: This manual serves as a supplement to information and instructions on procedures applicable to emergency projects funded by the following programs:

- Federal Highway Administration (FHWA) Emergency Relief (ER) program for projects **on** Federal-aid highways and Federal roads
  - The North Dakota Department of Transportation (NDDOT) is responsible for assessing and reporting to FHWA all damage to Federal-aid highways caused by an emergency/disaster.
- Federal Emergency Management Agency (FEMA) disaster assistance program for projects **not on** Federal-aid highways
  - The North Dakota Division of Emergency Management (NDDEM) is responsible for assessing and reporting to FEMA all damage to non-Federal-aid highways caused by an emergency/disaster.

Example 10.2.a

2. ELIGIBLE ITEMS FOR ER FUNDING – TRADITIONAL DAMAGE

- The emergency conditions most frequently experienced in North Dakota are those resulting from damage to highways caused by storms and spring snowmelt, which create flooding conditions.

- ER funds may participate in the emergency repair or reconstruction of the following highway elements:

  - PAVEMENTS OR OTHER SURFACE COURSES
  - SHOULDERS
  - EMBANKMENTS - Which affect only the roadway
  - CUT SLOPES - Which affect only the roadway
  - NATURAL AND CONSTRUCTED DRAINAGE CHANNELS, INCLUDING RIPRAP, CRIBBING, OR OTHER BANK CONTROL FEATURES WITHIN HIGHWAY RIGHT-OF-WAY
  - GUARDRAIL
  - BRIDGES
  - RETAINING WALLS
  - SIGNS AND TRAFFIC CONTROL DEVICES
  - CULVERTS AND SIMILAR STRUCTURES

- The ER program will only fund those activities that are:

  - BEYOND HEAVY MAINTENANCE > $5,000 OF DAMAGE PER SITE
  - REQUIRED TO RESTORE ESSENTIAL TRAVEL
  - PREVENTING ADDITIONAL DAMAGE TO THE ROADWAY
  - REQUIRED TO RESTORE THE ROADWAY TO ITS PRE-DISASTER CONDITION
  - NOT A PRE-EXISTING CONDITION
  - NOT ALREADY PROGRAMMED FOR FEDERAL-AID FUNDING. WORK IS CONSIDERED ALREADY PROGRAMMED IF CONSTRUCTION FUNDING FOR IT IS INCLUDED IN THE STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM (STIP)

Example 10.2.a

3. PROJECT BETTERMENTS

- Betterments can only be incorporated into ER projects if they can be justified to show an economical savings to future ER programs.
  - Providing additional protection by installing riprap, scour protection at bridges, spur dikes, and stabilization of slopes/slide areas
  - Relocating facility to a higher elevation or raising roadway grades
  - Providing additional hydraulic capacity by lengthening or raising bridges, adding additional culverts, replacing culverts with bridges, and/or deepening channels
  - Providing additional lanes where large structures need to be replaced may be eligible for ER funds if 20-year traffic projections warrant such
  - Providing additional lanes to roadways in anticipation of future traffic needs is not eligible for ER funds

4. BASIN FLOODING[1] ELIGIBILITY – NON TRADITIONAL DAMAGE

- This type of disaster will be administered separately from the TRADITIONAL ER Program. Eligibility will be determined only if it can be shown that:
  - The rise in the water level is unprecedented as supported by the magnitude of the rise and the short time frame in which this increase occurred as compared to historical water elevation records.
  - The damage is severe and results in long-term loss of use of critical Federal-aid routes that provide essential community services. This usually is defined as inundation to the point of closure to traffic. The duration that constitutes long-term is not defined but is considered to vary with the functional classification of the affected road. A few weeks of closure is considered tolerable on a major collector, but a few days of closure may be intolerable on the Interstate System.
  - There are no acceptable alternative routes.
  - The determination of the lost facility as being "CRITICAL" will be mutually agreed upon by NDDOT and the FHWA Division Office.
  - The Non-Traditional (basin flood-related) damage within each established basin exceeds $700,000 during each disaster event.
  - An individual non-traditional site also exceeds $5,000; however, these sites within the established basin can be accumulated to meet the minimum of $700,000 in ER funds for the entire basin.
  - If a Traditional (non-basin flood-type damage) Site within an established Basin also meets a minimum of $5,000, then such a site is eligible for ER funding if the disaster damage exceeds $700,000 in ER funds.

Example 10.2.a

- **GRADE RAISE ELIGIBILITY CRITERIA[2]**

  - The route affected must be critical. This usually means there is no acceptable alternate route. In addition, critical may mean the area accessed is highly significant to the region and/or State.
  - There must be loss of use, usually defined as inundation to the point of closure to traffic.
  - The loss of use must be long-term. The duration that constitutes long-term is not defined but is considered to vary with the functional classification of the affected road. A few weeks of closure is considered tolerable on a major collector, but a few days of closure may be intolerable on the Interstate System.
  - Where the road owner takes action to create a temporary or permanent grade raise to accommodate traffic, there must be documentation to show that the water did or would have inundated the road or otherwise led to closure of the road to establish ER eligibility. Eligibility for ER funds cannot be based on an anticipated rain or a similar future event. If a basin is continuing to elevate due to equalization of surrounding basins already charged by the disaster event recognized in FHWA's letter of acknowledgment, a case could conceivably be made for ER eligibility in advance of the inundation if it can be adequately documented that long-term inundation is inevitable.

    - Devils Lake
      - Raise Grade three feet above the 50 Percent Long-Range Probabilistic Outlook Elevation (rounded up to the nearest foot) as determined by the National Weather Advanced Hydrologic Prediction Service
    - Other Sloughs within the Devils Lake Basin
      - Raise Grade two feet above the current water elevation
    - Other Sloughs and Lakes outside the Devils Lake Basin
      - Raise Grade two feet above the current water elevation unless more can be justified like on the Interstate System where frequent replacement of pavement is very expensive
    - Eligibility for a Surfacing Layer and Wave Protection
      - If shallow water (not full inundation/road closure) is expected to remain on the traveled portion of the road surface for an extended period of time, then a layer of surfacing (such as 2 to 3 inches of asphalt on a paved road or 3 to 6 inches of gravel on an aggregate surfaced road) would be considered eligible to restore the roadway to full use without water in the driving lanes. **This is not intended to address a soft-subgrade situation, which is not eligible for ER funding.**
      - Where shallow water is only expected to remain on the traveled portion of the roadway for a few days, the eligibility for ER funds, subject to minimum site threshold criteria, would be limited to the special signing necessary to warn motorists of the hazard or to temporarily reroute traffic.
      - Standing water in the clear zone is not a criterion for ER eligibility.

Example 10.2.a

5. WAVE ACTION DAMAGE[3] - IN SLOPE REPAIR - EROSION

- **Eligibility for ER funding must meet the following conditions:**

  - Only for wave action damage that has occurred and not for any future anticipated damage
  - Minor erosion damage due primarily or wholly to rainfall and resulting from surface saturation of slopes and embankments, rather than from floodwaters, is not considered eligible. Even though the work may be a little more extensive than usual, it is considered heavy maintenance and not eligible for ER funding.
  - Wave scour damage to the in slope that does not threaten the driving surface is not a basis of eligibility for ER funds.
  - That the wave action damage is related to a disaster incident such as flowing flood waters or accumulation of high water beyond normally expected seasonal fluctuations
  - Damage must be beyond heavy maintenance > $5,000
  - Riprap to repair wave action damage may be eligible if flood waters continue to threaten the roadway; otherwise, riprap must be justified as a betterment
  - Where the traveling public is likely to experience large waves that would threaten smaller vehicles, a riprap wave attenuator may be considered eligible. Where the wave attenuator is warranted, costs to construct the attenuator at the edge of the clear zone (30' out where possible) may be included in the ER eligibility. The ER eligibility may be applied to a grade raise funded with other Federal or non-Federal funds. Where shallow water is only expected to remain on the traveled portion of the roadway for a few days, the eligibility for ER funds, subject to minimum site threshold criteria, would be limited to the special signing necessary to warn motorists of the hazard or to temporarily reroute traffic.

- **Heavy Maintenance**

  - When a disaster has caused damage requiring heavy maintenance or work frequently performed by the applicant's maintenance crews, repairs are not eligible. Heavy maintenance is usually performed by highway agencies in repairing damage normally expected from seasonal and occasional unusual natural conditions or occurrences. It includes work at a site required as a direct result of a disaster that can reasonably be accommodated by a State or local road authority's maintenance, emergency, or contingency program. Examples include work necessary to repair minor damage consisting primarily of eroded shoulders, filled ditches and culverts, pavement settlement, mud and debris deposits, slope sloughing, and slip-outs in cut or full slopes.

- **Mitigation/Preventive Work Prior to Disaster**

  - Preventive work to avoid damage to a highway facility in anticipation of a disaster is not eligible for ER funding. For example, work to prevent scour at bridge sites in anticipation of extremely high rainfall and potential flooding is not eligible for ER funding.

Example 10.2.a

6. REFERENCES:

- FHWA under Title 23, U.S.C. Section 125 provides ER funds for the restoration of damaged roads and bridges on Federal-aid routes, which include routes classified as Interstate, Principal Arterials, Minor Arterials, and rural Major/Urban Collectors. Routes classified as Rural Minor Collectors, Local Roads, and Streets are excluded.

- FHWA's Federal Lands Highway Division Office directly handles the ER Program (ERFO) for repairs to Federal roads (forest service roads, park service roads, Indian reservation roads, etc.) that were damaged by a disaster and determined to be eligible by the FHWA Administrator.

- FEMA provides Federal funds under Public Law 93-288, as amended, "Robert T. Stafford Disaster Relief and Emergency Assistance Act, Nov. 1988," for restoration of damaged roads and bridges on non-Federal-aid routes.

- Title 23, CFR Part 668--Emergency Relief Program.

- USDOT/FHWA Emergency Relief Manual, Publication No. FHWA-PD-98-054 - Refer to: www.fhwa.dot.gov/reports/erm/index.htm.

- FHWA Emergency Relief Program Training CD-ROM dated October 2000.

Example 10.2.a

EMERGENCY RELIEF SEQUENCE OF EVENTS

DISASTER OCCURS

1. COORDINATION BEGINS BETWEEN

(>< = INTERACTION):

- MAINTENANCE and ENGINEERING SERVICES >< NDDEM
- OFFICE OF TRANSPORTATION PROGRAM SERVICES >< FHWA DIVISION OFFICE
- MAINTENANCE and ENGINEERING SERVICES >< AFFLICTED STATE DISTRICTS
  - PLANNING and PROGRAMMING: ASSIGNS ER PROJECT NUMBERS FOR EACH SITE
  - FINANCIAL MANAGEMENT: STARTS COLLECTING MAINTENANCE EXPENDITURES FOR EACH ER SITE
- LOCAL GOVERNMENT DIVISION >< AFFLICTED COUNTIES AND URBAN AREAS
- NDDOT DIRECTOR >< GOVERNOR'S OFFICE
- NDDOT DIRECTOR >< NORTH DAKOTA CONGRESSIONAL DELEGATES – IF APPROPRIATE

Example 10.2.a

2. PRELIMINARY FIELD SURVEY

- SCHEDULE: WITHIN THREE DAYS OF DISASTER EVENT
- CRITERIA: MINIMUM DAMAGE PER SITE = $ 5,000

  MINIMUM DAMAGE PER DISASTER = $700,000 (in ER funds)
- GOAL: TO DETERMINE IF DISASTER MEETS ABOVE CRITERIA
- SURVEY TEAM: NDDOT – FHWA – OTHERS AS APPROPRIATE
- TRANSPORTATION: AERIAL BY NDDOT PLANE OR GUARD HELICOPTER

  GROUND BY NDDOT OR FHWA
- PRELIMINARY DAMAGE REPORT: PREPARED BY LOCAL GOVERNMENT

3. LETTER OF INTENT

- BASED ON PRELIMINARY FIELD SURVEY: DISASTER DECLARATION IS IMMINENT
- NDDOT SUBMITS TO FHWA DIVISION OFFICE: INTENDS TO APPLY FOR ER FUNDING
- FHWA WILL ISSUE AN ACKNOWLEDGMENT LETTER WITHIN 48 HOURS

Example 10.2.a

4. FIELD SURVEY OF ALL DAMAGED HIGHWAY SITES

- SURVEY TEAM: TEAM LEADER WILL BE DESIGNATED BY LOCAL GOVERNMENT DIVISION

  DISTRICT REPRESENTATIVE COVERING STATE SYSTEM

  COUNTY REPRESENTATIVE COVERING COUNTY SYSTEM

  URBAN REPRESENTATIVE COVERING URBAN SYSTEM

  FHWA MAY HAVE A REPRESENTATIVE ON SAMPLING BASIS

  NUMBER OF TEAMS WILL DEPEND ON SEVERITY AND WIDESPREAD AREA

- SCHEDULE: COMPLETE FIELD SURVEYS WITHIN FOUR TO SIX WEEKS OF DISASTER EVENT

- DDIR (Form FHWA-1547) FOR EACH SITE

  - NUMBERING SCHEME: STATE SYSTEM – ND + DISTRICT # + Route # + SITE # 1, 2, 3, ETC.

    COUNTY SYSTEM – COUNTY # + SITE # 1, 2, 3, ETC.

    URBAN SYSTEM – CITY # + SITE # 1, 2, 3, ETC.

  - CONTENTS: DETAILED DESCRIPTION OF LOCATION

    DETAILED DESCRIPTION OF DAMAGED FACILITY

    DIFFERENTIATION BETWEEN EMERGENCY WORK VERSUS PERMANENT WORK

    DETAILED DESCRIPTION OF PROPOSED CORRECTIVE WORK

    ESTIMATED COST OF CORRECTIVE MEASURES

    CONCURRENCE BY TEAM MEMBERS IN SCOPE OF WORK AND COST ESTIMATE

  - MAPS: COUNTY MAPS (PRODUCED BY NDDOT) TO TIE DOWN THE LOCATION

    SKETCH MAP SHOWING DETAILS OF FACILITY DAMAGE

  - PHOTOS: USE DIGITAL CAMERAS ONLY - THIS ALLOWS FOR COLOR REPRODUCTION AND ELECTRONIC TRANSMITTALS WITH NO LIMIT TO NUMBER OF COPIES

  - RECORDS: SUPPORTING FORCE ACCOUNT RECORDS FOR LABOR, EQUIPMENT, AND MATERIALS COVERING ALL COMPLETED WORK PRIOR TO INSPECTION

Example 10.2.a

5. DAMAGE SURVEY SUMMARY REPORT

- PREPARED BY LOCAL GOVERNMENT DIVISION

- CRITERIA: SEE PRELIMINARY FIELD SURVEY

- BREAKDOWN: BY STATE DISTRICTS, COUNTY, AND URBAN AREAS AS WELL AS BY FEDERAL- AID FUNCTIONAL SYSTEMS AND MATCHING PARTICIPATION RATIO

- CONTENTS: COPY OF FORM FHWA 1547, PHOTOS, SKETCH MAPS, SUPPORTING DOCUMENTS, ETC.

  ONE HUNDRED PERCENT COVERAGE OF ALL SITES IS PREFERRED

  MUST INCLUDE AT LEAST ONE ELIGIBLE SITE IN EACH COUNTY THAT IS ANTICIPATING ER FUNDS

- NUMBER OF COPIES: SINCE ALL DDIR'S (FHWA FORM 1547) WILL BE IN ELECTRONIC FORMAT, COPIES OF EITHER FHWA PENDING OR APPROVED REPORTS CAN BE MADE AS NEEDED

- DISTRIBUTION: ORIGINAL ELECTRONIC SET TO LOCAL GOVERNMENT: FILED IN PENDING FOLDER

  ONE ELECTRONIC SET TO FHWA DIVISION OFFICE

  ONE FHWA APPROVED ELECTRONIC SET TO LOCAL GOVERNMENT: FILED IN FHWA APPROVED FOLDER

  ONE FHWA APPROVED ELECTRONIC SET TO MAINTENANCE and ENGINEERING SERVICES - STATE SYSTEM ONLY

  ONE FHWA APPROVED ELECTRONIC SET TO STATE DISTRICT:

  STATE SYSTEM ONLY

  COUNTY SITES FOR INFORMATION

  ONE FHWA APPROVED ELECTRONIC SET TO COUNTY:

  COUNTY AND CITIES < 5,000 - MAJOR COLLECTORS ONLY

  ONE FHWA APPROVED ELECTRONIC SET TO URBAN AREAS:

  CITIES > 5,000 –

  PRINCIPAL ARTERIALS

  MINOR ARTERIALS

  COLLECTORS

Example 10.2.a

6. APPLICATION FOR ER FUNDS

- PREPARED BY LOCAL GOVERNMENT DIVISION

- CONTENTS: GOVERNOR'S PROCLAMATION AND/OR PRESIDENTIAL DECLARATION

  DAMAGE SURVEY SUMMARY REPORT

  NARRATIVE DATA AND SUPPORTIVE INFORMATION TO ILLUSTRATE THE SEVERITY

- SCHEDULE: SUBMIT ONE SET OF ELECTRONIC REPORTS TO FHWA DIVISION OFFICE WITHIN SIX WEEKS AFTER DISASTER EVENT OCCURS

Example 10.2.a

EMERGENCY CONSTRUCTION PROJECTS

FEDERAL REQUIREMENTS

1. NEPA CLEARANCE

- PREPARE A STANDARD PROJECT CONCEPT REPORT INCLUDING THE DETAILED ENVIRONMENTAL PROCESS FOR ALL PERMANENT REPAIR WORK
- FOR EMERGENCY WORK, IT HAS BEEN PREDETERMINED TO BE A CATEGORICAL EXCLUSION

2. PERMANENT REPAIR WORK

- PRIOR FHWA APPROVAL UNLESS COMPLETED IN CONJUNCTION WITH EMERGENCY WORK
- ADVANCE TO CONSTRUCTION BEFORE THE END OF THE SECOND FISCAL YEAR FROM THE EVENT DATE
  - TIME EXTENSIONS OF ONE YEAR MAY BE GRANTED
- CONSTRUCT BY COMPETITIVE BIDDING
- ENCOURAGE USE OF INNOVATIVE PROCEDURES
  - "COST- PLUS - TIME" - BIDDING
  - LANE RENTAL
  - DESIGN BUILD
  - ABBREVIATED PLANS AND SHORTENED ADVERTISEMENT PERIODS
  - A SHORT LIST OF QUALIFIED BIDDERS

Example 10.2.a

3. CONTRACT REQUIREMENTS FOR ER FUNDING

- DAVIS BACON ACT
- BUY AMERICA ACT
- AMERICANS WITH DISABILITY ACT
- STATEWIDE DISADVANTAGED BUSINESS ENTERPRISE GOAL
- CONVICT LABOR PROHIBITION IN TITLE 23, U.S.C. 114

4. ER PROJECT OVERSIGHT RESPONSIBILITY

- COMPLEX ER PROJECTS MAY BE SELECTED BY MUTUAL AGREEMENT BETWEEN FHWA AND NDDOT UNDER THE FEDERAL-AID PROGRAM STEWARDSHIP AGREEMENT. ER PROJECTS WILL NOT BE PLACED INTO ANY DOLLAR AMOUNT CATEGORY FOR ESTABLISHING THE OVERSIGHT RESPONSIBILITY
- ALL PROJECTS ARE SUBJECT TO A FINAL CONSTRUCTION INSPECTION; HOWEVER, FHWA MAY ELECT TO USE A SAMPLING PROCESS ON SELECTED PROJECTS REGARDING ANY FINAL INSPECTIONS

Example 10.2.a

5. ENGINEERING CHARGES

- PRELIMINARY AND CONSTRUCTION ENGINEERING (PE AND CE) CHARGES ARE ELIGIBLE FOR ER FUNDING DEPENDING ON THE COMPLEXITY OF EACH EMERGENCY REPAIR (100 PERCENT) AND PERMANENT RESTORATION (FEDERAL PRO-RATA SHARE) PROJECT

- THE FOLLOWING TABLE REFLECTS THE PERCENTAGE RATES FOR ENGINEERING THAT WILL BE USED IN ESTIMATING THE COST OF EACH PROJECT:

ESTIMATED CONSTRUCTION COST	PE %	CE %
0 - $100,000	10	20
$100,001 - $500,000	8	15
$500,0001 - $1,000,000	6	12
$1,000,001 - $10,000,000	5	10

- **EMERGENCY REPAIR**

  - GENERALLY IF THE RESPECTIVE AGENCY'S LOCAL FORCES ARE COMPLETING THE WORK, THEN THERE IS NO NEED TO ESTIMATE ANY PE AND/OR CE COSTS. HOWEVER, IF THE AGENCY RETAINS A CONSULTANT TO PROVIDE AN ESTIMATE OF DAMAGE AND PERHAPS A RECOMMENDATION AS TO THE REPAIR STRATEGY, THEN PE COSTS SHOULD BE PROVIDED. IN ADDITION, IF THE AGENCY SOLICITS A CONTRACTOR TO PERFORM THE REPAIR WORK, THEN CE COSTS SHOULD ALSO BE PROVIDED.

- **PERMANENT RESTORATION**

  - IN THIS SITUATION, PE AND CE COSTS SHOULD ALWAYS BE PROVIDED SINCE THIS SITUATION USUALLY REQUIRES A FORMAL CONTRACT.

Example 10.2.a

SECTION 10.3 – PUBLIC TRANSIT PROGRAMS
(May 2008)

10.3.1 GENERAL

In addition to the highway programs covered in the previous sections of this manual, the Local Government Division within the North Dakota Department of Transportation (NDDOT) is also responsible for administering and/or monitoring North Dakota's federal-aid and state-aid public transit programs.

Because of several social and economic factors, public transit systems and operations are not self-supporting and require government support or subsidies to stay in business. It has been long established at the federal and state levels that it is in the public interest to support transit services with public funds. This funding support provides the necessary transit services for transportation disadvantaged persons such as the elderly, disabled, low income, and others to carry on their normal day-to-day activities.

Each year, North Dakota (and all other states) receives several categories of federal transit funds to help support and improve public transit services in the state. These funds are appropriated by Congress and administered to the states by the Federal Transit Administration (FTA) in the form of transit grants. In this state, the Local Government Division, in turn, administers these grant funds from the federal level to the local projects.

In addition to the above federal funds, there are also state aid funds for public transit, which are provided by the North Dakota State Legislature. These state funds also help to support and improve public transit services in the state. The state funds supplement the federal funds and can also be used by the local entities (project recipients) to match the federal funds they receive. The Local Government Division administers these state aid funds as well.

The following is a description of the federal grant and state aid transit programs administered by Local Government.

10.3.2 FEDERAL TRANSIT PROGRAMS

North Dakota receives federal transit funds under seven different federal transit programs, as shown in Table 10-3-1. This table lists the seven transit programs and the specific purpose of each program.

All but the Section 5307 program (#1 in the table) are administered directly by the Local Government Division.

The Section 5307 program is for support of public transit in the state's urbanized areas, and is handled differently. Funds from this program flow directly from the FTA in Denver to the three urbanized areas in the state (Bismarck, Fargo, and Grand Forks). The

Local Government Division only monitors this program (as the Governor's representative, to whom the funds are initially assigned) to ensure the best distribution and utilization of the funds in the state's three urbanized areas.

10.3.3 SOURCE OF FEDERAL TRANSIT FUNDS

The federal transit funds are derived from the federal gas tax which goes into the national Highway Trust Fund. Of this tax amount, part is earmarked for public transit use and goes into the Mass Transit Account of the Highway Trust Fund. The U.S. Congress appropriates the federal transit assistance funds for the states from this Mass Transit Account.

10.3.4 STATE AID TRANSIT PROGRAM

Every two years, state aid is appropriated by the State Legislature to support and improve public transit services in North Dakota.

10.3.5 SOURCE OF STATE TRANSIT FUNDS

The State Aid for Public Transit funds in North Dakota are derived from a fee added to the annual motor vehicle registration fee (license plate fee). This amount goes into the state's Public Transportation Fund from which the State Legislature appropriates the State Aid for Public Transit funds.

SUMMARY OF FEDERAL AND STATE TRANSIT PROGRAMS IN NORTH DAKOTA

Item	Federal Funding Program	Program Description
1	5307	Used in Urbanized areas for transit capital and operating expenses and also for transit related planning
2	5309	Capital funds for transit projects in both urban and rural areas of the state
3	5310	Used for transit projects that meet the transportation needs of the elderly and persons with disabilities
4	5311	Supports public transportation in areas of less than 50,000 population
5	5311(c)	Provides funds to Indian Tribes to improve public transportation on Indian Reservations
6	5316	Job Access and Reserve Commute (JARC) Program – Used to improve access to employment
7	5317	New Freedoms Transit Program – Used to improve transit services for individuals with disabilities by addressing their unmet transportation needs
8	State Aid	State aid for state wide public transit projects

TABLE 10-3-1

10.3.6 PUBLIC TRANSIT PROJECTS AND FUNDING

Presently, there are many public transit projects operating throughout the state. The current projects are listed in example 10.3.a. Since transit services are not self-supporting, this list of projects remains relatively constant from year-to-year, as all of the same established and on-going transit projects apply for government funding each year.

LIST OF CURRENT RECIPIENTS OF
STATE AND FEDERAL FUNDS FOR PUBLIC TRANSIT
North Dakota Department of Transportation

PROJECT SUB	PROJECT NAME
1	Bismarck-Mandan Transit
2	Dickey County Senior Citizens, Ellendale, ND
*	Dickinson, City of
3	Dunn County Senior Citizens, Killdeer, ND
4	Elder Care (Stark County Council on Aging), Dickinson, ND
5	Emmons County Council on Aging, Braddock, ND
6	Fargo Metro Transit, Fargo, ND
7	Fargo Senior Commission (Fargo Park Dist./Fargo Senior Services)
8	Glen Ullin, City of, Glen Ullin, ND
9	Golden Valley/Billings Co. Council on Aging, Beach, ND
10	Grand Forks Public Transit (Cities Area Transit), Grand Forks, ND
12	Handi-Wheels Transportation, Fargo, ND
13	Hazen, City of, Hazen, ND
14	Jamestown City of, Jamestown, ND
15	James River Senior Citizens, Jamestown, ND
16	Kenmare Wheels & Meals, Kenmare, ND
17	Kidder/Emmons Senior Services, Steele, ND
18	Mercy Medical Center, Williston, ND
19	Minot, City of, Minot, ND
20	Minot Commission on Aging, Minot, ND
21	Nelson County Council on Aging, McVille, ND
22	North Central Planning Council, Devils Lake, ND
23	Pembina County Meals & Transportation, Drayton, ND
26	Sitting Bull College, Fort Yates, ND
27	Souris Basin Transportation, Minot, ND
28	South Central Adult Services Council, Valley City, ND
29	Southwest Transportation Services, Bowman, ND
30	Three Affiliated Tribes Aging Program, New Town, ND
31	Tioga Senior Citizen Club, Tioga, ND
32	Trenton Indian Service Area, Trenton, ND
33	Walsh County Transportation Program, Park River, ND
34	West River Transportation Council, Bismarck, ND
35	Wildrose Senior Transportation, Wildrose, ND
*	Williston, City of, Williston, ND
36	Williston Council for the Aging, Williston, ND
*	Jefferson Lines

*These projects receive Federal Aid, but no State Aid.

EXAMPLE 10.3.a

10.3.7 FEDERAL TRANSIT PROGRAM GUIDELINES AND REGULATIONS

The program guidelines and regulations used by the Local Government Division in administering the seven federal transit programs listed Table 10-3-1, are contained in the North Dakota State Transit Management Plan. This document is available as a separate booklet.

The ND State Transit Management Plan also sets forth the policies and procedures used to administer the federal transit programs. In addition, it also contains the various federal requirements that apply to these programs.

10.3.8 STATE TRANSIT PROGRAM GUIDELINES

The program guidelines and regulations used by the Local Government Division in administering the State Aid for Public Transit Program are contained in the North Dakota State Transit Management Plan. This document is available as a separate booklet.

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SECTION 11.1 – NDDOT'S RESPONSIBILITIES FOR LPA PROJECTS
(May 2008)

MEMO TO: Francis G. Ziegler, P.E.
Director

Grant Levi, P.E.
Deputy Director of Engineering

FROM: Bob Fode, P.E.
Office of Transportation Programs

DATE: May 14, 2008

SUBJECT: NDDOT's Responsibilities on Local Public Agency (LPA) Projects

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The Local Government Division is in the process of updating their manual. The existing manual contained a document outlining major responsibilities for the Districts and Divisions on LPA projects. This document has been updated and is attached for you review.

There may need to be changes to the structure of the Local Government Division in the future based on the federal funding picture. However; for the short term, the Local Government Division will continue to operate as it does currently. Once the federal funding is identified, the department will review the distribution of those funds.

Your concurrence in the responsibilities as outlined is requested.

38/dl/blf
Attachment

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
DIVISION AND DISTRICT RESPONSIBILITIES ON
LOCAL PUBLIC AGENCY (LPA) PROJECTS

DISTRICTS

Attend T.S.&L., P.S.&E., and underlying grade reviews for federal-aid projects. The LPA's engineer will write and distribute the reports.

Attend pre-construction conferences.

Ensure that all county and urban bridges are inspected per the National Bridge Inspection Standards.

Be a resource for questions on construction engineering on LPA federal-aid projects. Approve change orders according to the Field Office Procedures Manual. Administer progressive estimates pursuant to the Construction and Maintenance Agreement.

Attend the final inspection and acceptance of LPA federal-aid projects. LPA's engineer will write the Materials Acceptance Certification and the district will write the overall Acceptance.

Perform an independent staffing analysis for LPA's construction engineering agreements on projects done by consultants and send the information to the Local Government Division.

Perform consultant reviews on construction engineering.

Ensure Environmental Commitments in the plans are completed or adhered to.

CIVIL RIGHTS DIVISION

Provide guidance and information regarding civil rights and the NDDOT's Disadvantaged Business Enterprise (DBE) Affirmative Action Plan.

Maintain a list of minority contractors and consulting engineers and furnish to LPA's upon request by Local Government Division.

Assist Local Government Division in reviewing all projects to establish DBE participation.

Review LPA projects after the bid opening to determine if DBE goals were met.

BRIDGE DIVISION

Review and comment on Hydraulic Analysis Structure Selection Reports for LPA federal-aid projects for adequacy of design assumptions, when requested by Local Government Divison.

Provide review comments to the District and Local Government Engineer on T.S.&L. inspection reports.

Maintain and periodically update the inventory of LPA bridges.

Provide technical assistance, upon request by Local Government Division, to the LPA and consulting engineers in hydraulic or structural design.

Provide inventory data upon request from Local Government Division. This would include an annual listing of all LPA structures eligible for the Bridge replacement program, Code 3's, Posting, and Scour & Channel profiles.

Secure agreements with railroads on underpass and overhead structures, when requested by Local Government Division.

CONSTRUCTION SERVICES DIVISION

Administer the bid opening for LPA projects.

Review bids and estimates to check math and bond requirements.

Review LPA/consultants completion dates and/or maximum working days.

Maintain project construction records file.

Process all final project records for final payment and review a sampling of the records. Any incomplete records will be sent back to the LPA/consultant for resolution.

When requested by Local Government Division, provide technical assistance to the LPA or consulting engineer through the Construction Engineering Review Team (CERT).

Maintain average annual unit bid prices to assist in preparation of cost estimates.

PLANNING & PROGRAMMING DIVISION

Provide current and projected traffic volume and loading information.

Provide regional urban traffic counts with turning movements when requested by Local Government Division.

Secure agreements with railroads for at grade crossing improvements.

Review and maintain the LPA Functional Classification System maps, logs, and records.

Provide technical assistance to LPA or consulting engineers for traffic data collection when requested by Local Government Division.

Provide technical assistance for pavement management when requested by Local Government Division.

Provide guidance on traffic control devices and warranting when requested by Local Government Division.

Review level-of-service analysis performed by LPA and consultants when requested by Local Government Division.

Coordinate bid opening activities with FHWA and NDDOT divisions.

Prepare project agreements for approval by FHWA.

Provide base cost data (historical) for use in estimating project costs.

DESIGN DIVISION

Provide detailed review of any LPA plans that affect the National Highway System or State Highway System.

Provide technical assistance to LPA or consulting engineers on design criteria, standards, uniform signing and marking, or other details when requested by Local Government Division.

ENVIRONMENTAL AND TRANSPORTATION SERVICES DIVISION

Provide technical assistance on LPA projects which impact or may impact cultural or natural resources when requested by Local Government Division.

Review and approve the LPA's right of way processes, making recommendations where necessary.

Provide relocation assistance, if needed.

Provide special provisions or supplemental specifications.

Coordinate Tribal Employment Rights Ordinance (TERO) activities

INFORMATION TECHNOLOGY DIVISION

Provide information processing related to bid opening.

Assemble and distribute bid proposals and plans as requested by the Local Government Division.

Maintain plan files or originals, prints, or microfilm.

Provide aerial photos for special situations upon request.

MAINTENANCE & ENGINEERING SERVICES DIVISION

Provide information on sign layouts when requested by Local Government Division.

FINANCIAL MANAGEMENT DIVISION

Audit consulting engineers' overhead rates.

Audit project engineering costs on a random basis.

Voucher the Federal Highway Administration and LPA's for project costs.

Review LPA's and Metropolitan Planning Organizations (MPO's) audits, when requested by Local Government Division.

MATERIALS AND RESEARCH DIVISION

Do required independence assurance materials testing.

Provide technical assistance, upon request by Local Government, to LPA and consultant engineers.

Provide pavement thickness designs on the regional system.

LOCAL GOVERNMENT DIVISION

Point of contact for LPA's and Consultant's is Local Government Division.

County Projects

- Develop annual program of projects
- Review Concept Reports
- Process Environmental Clearances
- Provide Location & Design Approval
- Review plans for format
- Ensure PS&E and TS&L occur
- Prepare Engineers Estimate
- Prepare Bidders Proposal
- Submit completed plans, estimates & proposals to P&PD
- Get plans printed
- Prepare Maintenance and Construction agreements

- Prepare Maintenance and Non-encroachment agreements
- Submit LPA federal-aid functional classification revisions to FHWA for approval.
- Coordinate FEMA inspections
- Coordinate ER activities for the department
- Coordinate bridge inventory information
- Track status of County funds
- Coordinate County TE project development
- Coordinate County ER project development
- Coordinate County SRF project development

Urban Projects

- Coordinate Urban Planning studies for small cities
- Develop annual program of urban projects
- Review concept reports
- Process Environmental Clearance
- Provide Location & Design Approval
- Review plans for format
- Ensure PS&E and TS&L occur
- Prepare Engineers Estimate
- Prepare Bidders Proposal
- Submit completed plans, estimates & proposals to P&PD
- Get plans printed
- Prepare cost participation & maintenance agreement for regional projects
- Track status of urban funds
- Conduct joint Project Management Reviews (PMR's) with FHWA of completed projects
- Submit LPA federal-aid functional classification revisions to FHWA for approval.
- Coordinate Urban TE project development
- Coordinate Urban SRF project development
- Coordinate MPO involvement
    a. Review and approve annual unified planning work programs (UPWP).
    b. Write annual UPWP contracts for each MPO.
    c. Prepare FTA funding grants.
    d. Allocate FHWA and FTA planning funds to each MPO annually.

e. Attend TAC and TTC monthly meetings to monitor progress and ensure UPWP projects are technically sound
f. Approve changes to UPWP.
g. Monitor and coordinate MPO federal and state funding budgets.
h. Review and summarize quarterly progress for each MPO.
i. Assist in development of MPO transportation plans.
j. Assist in TIP development for each MPO and coordinate with STIP development.
k. Chair MPO mid-year reviews which involve MNDOT, FHWA, and FTA.

Transit Program

1. Administer and or oversee the following public transit programs:
   a. Oversee Fed. Section 5307, Urban Transit Support. Also review transit projects listed in local TIPs.
   b. Administer Fed. Section 5310, Elderly & Disabled Transit Grants
   c. Administer Fed. Section 5311, Rural Transit Support Grants
   d. Administer Fed. Section 5311 RTAP, Training & Technical Assistance Grants
   e. Administer State Aid for Public Transit Grant Program
   f. Coordinate flow of federal transit planning funds with our Urban Section.
2. Manage Contract Transit Studies
3. Handle all matters pertaining to DBE relative to public transit.
4. Include all annual transit projects/funding in department's annual STIP.

Small Scale Projects

- TE Projects
  - Coordinate the selection of county, urban, state projects
- ND Forest Service CTE Project
- Scenic Byways Nomination Process
- Coordinate TE Tourism Projects
- NDDOT Shared Use Path Coordinator
- Monitor TE Funds
- Coordinate NDDOT Landscaping Projects
- NDSTREET (North Dakota Small Town Revitalization Endeavor for Enhancing Transportation)
  - Coordinate the application and selection process of potential projects
- NDROAD (North Dakota Rural Off-state system Access Development)

- Coordinate the application and selection process of potential projects

- SRTS (Safe Routes To School)
  - Coordinate the application and selection process of potential projects

Decision

Do you agree with the responsibilities for the Division on LPA projects as written?

Yes X No _____

Comments:
As per our discussion we do need to review the process after we have more info on Sandy.

Grant Levi
Grant Levi, P.E., Deputy Director for Engineering

5/16/08
Date

Yes X No _____

Comments:

Francis G. Ziegler
Francis G. Ziegler, P.E., Director

5/20/08
Date

SECTION 11.2 – PROJECT DEVELOPMENT QUICK REFERENCE REMINDERS

(May 2008)

County Quick Reference Reminders

1. Critical dates to keep a bid opening on schedule:
    a. Project concept reports are due **18 weeks** prior to the bid opening date for review.
    b. Preliminary plans are due **14 weeks** prior to the bid opening date for format review.
    c. Blue lines with PS&E changes are due **12 weeks** prior to the bid opening date.
    d. R/W and Utility certifications, Utility agreements, 404 clearance, any other necessary permits, final plans, and final cost estimate are due **10 weeks** prior to the bid opening date.
2. The Tribes need to be consulted on your projects and documented.
3. Projects requiring grading and/or fill may need a Class III survey unless it is thoroughly explained (e.g., borrow sources for guardrail, etc.).
4. All material sources and storage areas must be cleared by DOT/SHPO for cultural resources, wetlands, etc.
5. Stipulations on ditch wetlands, see NDDOT Design memos; 05-2005, 06-2005, & 10-2005.
6. If over 5 acres of wetlands are to be impacted, a field delineation must be performed by a certified soil scientist or they may be an employee of a government entity.
7. Environmental clearance is required prior to plan submissions.
8. Chip seals and thin-lift overlay projects are now considered "Programmatic" CATEX and the "check list" may be submitted instead of a PCR.
9. Traffic counts are longer required on projects with less than 750 ADT.
10. Environmental commitments must be in the plan notes (last plan note sheet).
11. Crash data must be included in the PCR on all projects other than "programmatic" type. Request crash data from: NDDOT Planning and Programming Division, place 409 stamp on affected pages.
12. Include the Project Control Number (PCN) on all project correspondence if available.
13. All project documentation must be submitted to Local Government electronically as well as a paper copy. Send large electronic documents through the ftp site.
14. Solicitation of Views (SOV) letters should contain the reason for the project such as replacing, repairing, or improvement.
    a. New SOV list at www.dot.nd.gov/designmanual
15. Current traffic counts are available on the DOT webpage under: 1) Business 2) Traffic Information 3) Current Traffic Information
16. Sinking Reinforced Concrete Box Culverts and riprap 1 foot below streambed elevation has been allowed as wetland mitigation.
17. Visit with the Right-of-Way personnel in the NDDOT Design Division before the right-of-way process is started for the correct procedures to follow.
18. Wetland areas within the "plan" view should be placed on the plans.

Urban Quick Reference Reminders

1. Provide bi-weekly progress reports
2. Critical dates to keep a bid opening on schedule:
    a. R/W and Utility certifications, Utility agreements, 404 clearance, any other necessary permits, final plans, and final cost estimate are due **10 weeks** prior to the bid opening date.
3. The Tribes need to be consulted on your projects and documented.
4. Projects requiring grading and/or fill may need a Class III survey unless it is thoroughly explained (e.g., borrow sources for guardrail, etc.).
5. All material sources and storage areas must be cleared by DOT/SHPO for cultural resources, wetlands, etc.
6. Stipulations on ditch wetlands, see NDDOT Design memos; 05-2005, 06-2005, & 10-2005.
7. If over 5 acres of wetlands are to be impacted, a field delineation must be performed by a certified soil scientist or they may be an employee of a government entity.
8. Environmental clearance is required prior to plan submissions.
9. Chip seals and thin-lift overlay projects are now considered "Programmatic" CATEX and the "check list" may be submitted instead of a PCR.
10. Traffic counts are longer required on projects with less than 750 ADT.
11. Environmental commitments must be in the plan notes (last plan note sheet).
12. Crash data must be included in the PCR on all projects other than "programmatic" type. Request crash data from: NDDOT Planning and Programming Division, place 409 stamp on affected pages.
13. Include the Project Control Number (PCN) on all project correspondence if available.
14. All project documentation must be submitted to Local Government electronically as well as a paper copy. Send large electronic documents through the ftp site.
15. Solicitation of Views (SOV) letters should contain the reason for the project such as replacing, repairing, or improvement.
    b. New SOV list at www.dot.nd.gov/designmanual
16. Current traffic counts are available on the DOT webpage under: 1) Business 2) Traffic Information 3) Current Traffic Information
17. Sinking Reinforced Concrete Box Culverts and riprap 1 foot below streambed elevation has been allowed as wetland mitigation.
18. Visit with the Right-of-Way personnel in the NDDOT Design Division before the right-of-way process is started for the correct procedures to follow.
19. Wetland areas within the "plan" view should be placed on the plans.

SECTION 11.3 – URBAN PROGRAM MAPS

(May 2008)

Provided on the following pages are maps detailing the urban roads system and their functional classification within the 13 cities considered “Urban”. Maps of the following cities are provided.

1. Bismarck
2. Devils Lake
3. Dickinson
4. Fargo
5. Grafton
6. Grand Forks
7. Jamestown
8. Mandan
9. Minot
10. Valley City
11. Wahpeton
12. West Fargo
13. Williston

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2004 URBAN ROAD SYSTEM MAP

Legend	Existing	Proposed
Interstate		
Primary Regional System		
Secondary Regional System		
Urban Roads		
2002 Urban Area Limits		

GENERAL LEGEND

- SECTION LINE
- CORPORATE LINE
- OPEN STREETS & SECTION LINE ROADS
- NON-EXISTENT PLATTED STREETS
- 4 LANE DIVIDED HIGHWAY — 4 — 4
- DIVIDED HIGHWAY
- STATE NUMBERED HIGHWAY (17)
- U.S. NUMBERED HIGHWAY (83)
- INTERSTATE NUMBERED HIGHWAY (94)
- HIGHWAY GRADE SEPARATION
- INTERCHANGE
- RAILROAD (ANY NUMBER OF TRACKS USED BY A SINGLE OPERATING CO.)
- RAILROAD STATION
- RAILROAD ABOVE
- RAILROAD BELOW
- WIDE STREAM
- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

N W E S

POPULATION 55,532

BISMARCK

BURLEIGH COUNTY

NORTH DAKOTA

PREPARED BY

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
PLANNING AND PROGRAMMING DIVISION

IN COOPERATION WITH THE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE

1000 0 1000 2000 3000 4000 Feet

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

GENERAL LEGEND

- SECTION LINE
- CORPORATE LINE
- OPEN STREETS & SECTION LINE ROADS
- NON-EXISTENT PLATTED STREETS
- 4 LANE DIVIDED HIGHWAY
- DIVIDED HIGHWAY
- STATE NUMBERED HIGHWAY
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- RAILROAD ABOVE
- RAILROAD BELOW
- WIDE STREAM
- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

2000 POPULATION 55,532

2004
FUNCTIONAL CLASSIFICATION
BISMARCK
BURLEIGH COUNTY
NORTH DAKOTA

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FEDERAL HIGHWAY ADMINISTRATION

SCALE

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2004 URBAN ROAD SYSTEM MAP

Legend	Existing	Proposed
Interstate		
Primary Regional System		
Secondary Regional System		
Urban Roads		
2002 Urban Area Limits		

GENERAL LEGEND

- SECTION LINE
- CORPORATE LINE
- OPEN STREETS & SECTION LINE ROADS
- NON-EXISTENT PLATTED STREETS
- 4 LANE DIVIDED HIGHWAY
- DIVIDED HIGHWAY
- STATE NUMBERED HIGHWAY
- U.S. NUMBERED HIGHWAY
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- HIGHWAY GRADE SEPARATION
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- RAILROAD BELOW
- WIDE STREAM
- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

R.64 W. R.63 W.

T.154 N.

T.153 N.

POPULATION 7,222

DEVILS LAKE

RAMSEY COUNTY
NORTH DAKOTA

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PLANNING AND PROGRAMMING DIVISION

IN COOPERATION WITH THE
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FEDERAL HIGHWAY ADMINISTRATION

SCALE
1000 0 1000 2000 Feet

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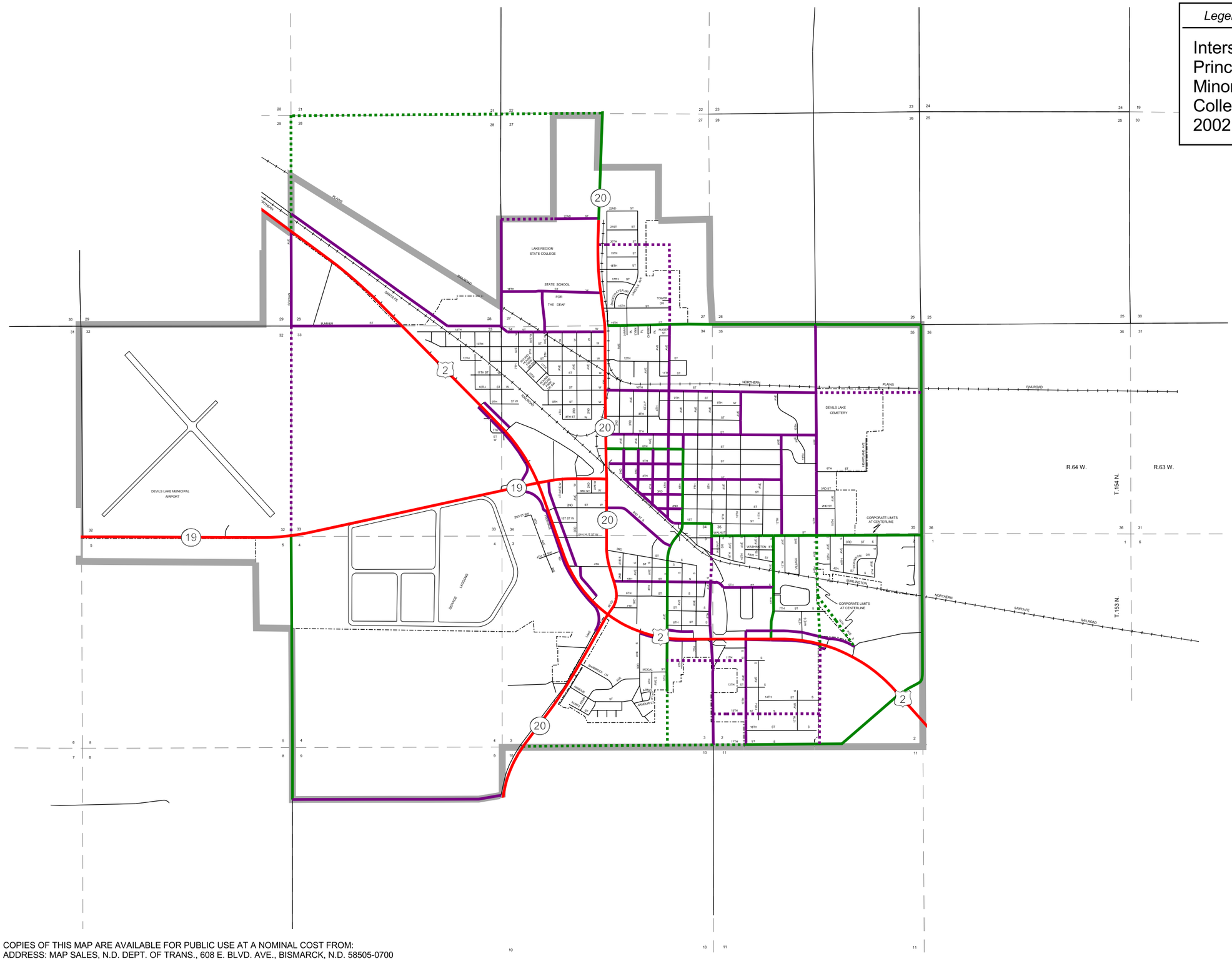

Legend	Existing	Proposed
Interstate		
Principal Arterials		
Minor Arterials		
Collectors		
2002 Urban Limits		

GENERAL LEGEND

- SECTION LINE
- CORPORATE LINE
- OPEN STREETS & SECTION LINE ROADS
- NON-EXISTENT PLATTED STREETS
- 4 LANE DIVIDED HIGHWAY
- DIVIDED HIGHWAY
- STATE NUMBERED HIGHWAY
- U.S. NUMBERED HIGHWAY
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- RAILROAD BELOW
- WIDE STREAM
- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

2000 POPULATION 7,222

2004
FUNCTIONAL CLASSIFICATION
DEVILS LAKE
RAMSEY COUNTY
NORTH DAKOTA

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PLANNING AND PROGRAMMING DIVISION

IN COOPERATION WITH THE
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FEDERAL HIGHWAY ADMINISTRATION

SCALE
1000 0 1000 2000 Feet

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2004 URBAN ROAD SYSTEM MAP

Legend	Existing	Proposed
Interstate		
Primary Regional System		
Secondary Regional System		
Urban Roads		
2002 Urban Area Limits		

GENERAL LEGEND

- SECTION LINE
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- OPEN STREETS & SECTION LINE ROADS
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- RAILROAD BELOW
- WIDE STREAM
- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

N W E S

POPULATION 16,010

DICKINSON

STARK COUNTY

NORTH DAKOTA

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FEDERAL HIGHWAY ADMINISTRATION

SCALE

1000 0 1000 2000 3000 Feet

Revised 10-12-2007

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

GENERAL LEGEND

- SECTION LINE
- COPORATE LINE
- OPEN STREETS &SECTION LINE ROADS
- NON-EXISTENT PLATTED STREETS
- 4 LANE DIVIDEDHIGHWAY
- DIVIDED HIGHWAY
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- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

N W E S

2004
FUNCTIONAL CLASSIFICATION

POPULATION 16,010

DICKINSON

STARK COUNTY

NORTH DAKOTA

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FEDERAL HIGHWAY ADMINISTRATION

SCALE

1000 0 1000 2000 3000 Feet

Revised 10-11-2007

URBAN ROAD SYSTEM MAP 2006

Legend	Existing	Proposed
Interstate		
Primary Regional System		
Secondary Regional System		
Urban Roads		
2006 Urban Area Limits		

GENERAL LEGEND

- SECTION LINE
- COPORATE LINE
- OPEN STREETS & SECTION LINE ROADS
- NON-EXISTENT PLATTED STREETS
- 4 LANE DIVIDEDHIGHWAY
- DIVIDED HIGHWAY
- STATE NUMBERED HIGHWAY
- U.S.NUMBERED HIGHWAY
- INTERSTATE NUMBERED HIGHWAY
- HIGHWAY GRADE SEPARATION
- INTERCHANGE
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- RAILROAD ABOVE
- RAILROAD BELOW
- WIDE STREAM
- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

POPULATION 90,599

FARGO

CASS COUNTY

NORTH DAKOTA

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FEDERAL HIGHWAY ADMINISTRATION

SCALE

1000 0 1000 2000 3000 Feet

REVISED 2006-7/07

GENERAL LEGEND

- SECTION LINE
- CORPORATE LINE
- OPEN STREETS & SECTION LINE ROADS
- NON-EXISTENT PLATTED STREETS
- 4 LANE DIVIDED HIGHWAY
- DIVIDED HIGHWAY
- STATE NUMBERED HIGHWAY
- U.S. NUMBERED HIGHWAY
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- RAILROAD STATION
- RAILROAD ABOVE
- RAILROAD BELOW
- WIDE STREAM
- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

Legend	Existing	Proposed
Interstate		
Principal Arterials		
Minor Arterials		
Collectors		
2006 Urban Limits		

2000 POPULATION 90,599

2006
FUNCTIONAL CLASSIFICATION
FARGO
CASS COUNTY
NORTH DAKOTA

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FEDERAL HIGHWAY ADMINISTRATION

SCALE

2000 0 2000 4000 Feet

FARGO, NORTH DAKOTA

REVISED 2006 7-07

2004 URBAN ROAD SYSTEM MAP

Legend	Existing	Proposed
Interstate		
Primary Regional System		
Secondary Regional System		
Urban Roads		
2002 Urban Area Limits		

NOTE:
SEE SEGMENT NO. 1
FOR CONTINUATION OF
CORPORATE LIMITS

SEGMENT NO. 1
MATCH POINT

T.152 N.
T.151 N.

RED RIVER

THE NORTH PARK

COLUMBIA MALL SHOPPING CENTER

GENERAL LEGEND

- SECTION LINE
- CORPORATE LINE
- OPEN STREETS & SECTION LINE ROADS
- NON-EXISTENT PLATTED STREETS
- 4 LANE DIVIDED HIGHWAY
- DIVIDED HIGHWAY
- STATE NUMBERED HIGHWAY
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- INTERSTATE NUMBERED HIGHWAY
- HIGHWAY GRADE SEPARATION
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- RAILROAD ABOVE
- RAILROAD BELOW
- WIDE STREAM
- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

SEGMENT NO. 1
SCALE
0.5 0 0.5 1 Miles

POPULATION 49,321

GRAND FORKS

GRAND FORKS COUNTY

NORTH DAKOTA

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PLANNING AND PROGRAMMING DIVISION
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FEDERAL HIGHWAY ADMINISTRATION

SCALE
600 0 600 1200 1800 2400 Feet
200 0 200 400 600 800 Meters

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GRAND FORKS, NORTH DAKOTA

REVISED 5/30/06

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

NOTE:
SEE SEGMENT NO. 1
FOR CONTINUATION OF
CORPORATE LIMITS

SEGMENT NO.1
MATCH POINT

T.152 N.

T.151 N.

RED

RIVER

THE

FORKS

NORTH

GENERAL LEGEND

- SECTION LINE
- CORPORATE LINE
- OPEN STREETS & SECTION LINE ROADS
- NON-EXISTENT PLATTED STREETS
- 4 LANE DIVIDED HIGHWAY
- DIVIDED HIGHWAY
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- RAILROAD ABOVE
- RAILROAD BELOW
- WIDE STREAM
- NARROW STREAM
- BRIDGE
- STATE LINE

SEGMENT NO. 1
MATCH POINT

SEGMENT NO. 1
SCALE
0.5 0 0.5 1 Miles

2004
FUNCTIONAL CLASSIFICATION

2000 POPULATION 49,321

GRAND FORKS
GRAND FORKS COUNTY
NORTH DAKOTA

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IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
600 0 600 1200 1800 2400 Feet
200 0 200 400 600 800 Meters

GRAND FORKS, NORTH DAKOTA

REVISED 5/30/06

2004 URBAN ROAD SYSTEM MAP

Legend	Existing	Proposed
Interstate		
Primary Regional System		
Secondary Regional System		
Urban Roads		
2002 Urban Area Limits		

GENERAL LEGEND

- SECTION LINE
- CORPORATE LINE
- OPEN STREETS & SECTION LINE ROADS
- NON-EXISTENT PLATTED STREETS
- 4 LANE DIVIDED HIGHWAY
- DIVIDED HIGHWAY
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- RAILROAD STATION
- RAILROAD ABOVE
- RAILROAD BELOW
- WIDE STREAM
- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

POPULATION 4,516

GRAFTON

WALSH COUNTY
NORTH DAKOTA

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IN COOPERATION WITH THE
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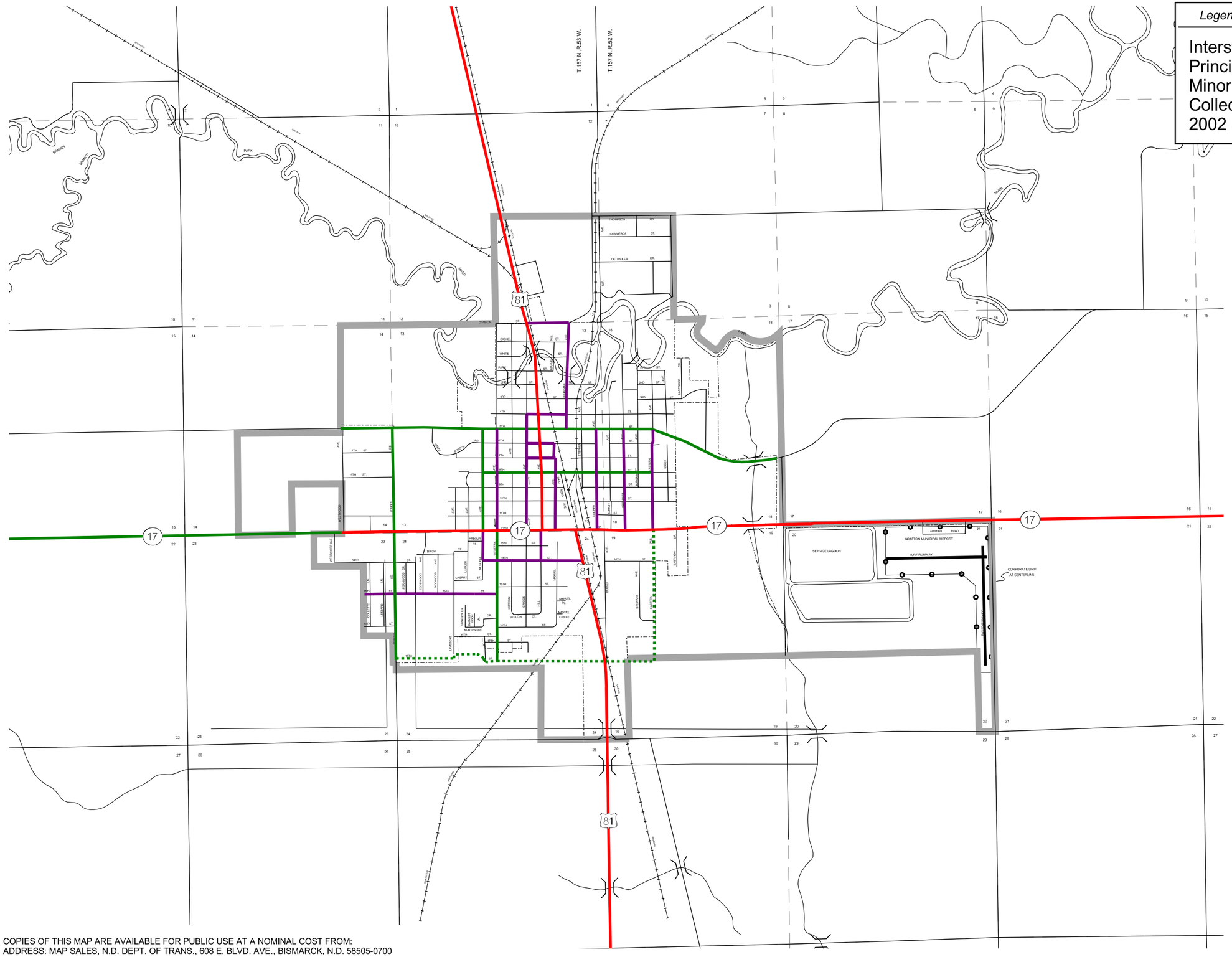
FEDERAL HIGHWAY ADMINISTRATION

SCALE

500 0 500 1000 1500 Feet

REVISED 3/37/2006



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

GENERAL LEGEND

- SECTION LINE
- CORPORATE LINE
- OPEN STREETS & SECTION LINE ROADS
- NON-EXISTENT PLATTED STREETS
- 4 LANE DIVIDED HIGHWAY
- DIVIDED HIGHWAY
- STATE NUMBERED HIGHWAY
- U.S. NUMBERED HIGHWAY
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- RAILROAD ABOVE
- RAILROAD BELOW
- WIDE STREAM
- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

N W E S

2000 POPULATION 4,516

2004
FUNCTIONAL CLASSIFICATION

GRAFTON

WALSH COUNTY
NORTH DAKOTA

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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
1000 0 1000 2000 Feet

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2004 URBAN ROAD SYSTEM MAP

Legend	Existing	Proposed
Interstate		
Primary Regional System		
Secondary Regional System		
Urban Roads		
2002 Urban Area Limits		

GENERAL LEGEND

- SECTION LINE
- CORPORATE LINE
- OPEN STREETS & SECTION LINE ROADS
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- 4 LANE DIVIDED HIGHWAY (4 — 4)
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- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

N W E S

POPULATION 15,527

JAMESTOWN

STUTSMAN COUNTY

NORTH DAKOTA

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IN COOPERATION WITH THE

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FEDERAL HIGHWAY ADMINISTRATION

SCALE

800 0 800 1600 2400 Feet

JAMESTOWN, NORTH DAKOTA

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

GENERAL LEGEND

- SECTION LINE
- CORPORATE LINE
- OPEN STREETS & SECTION LINE ROADS
- NON-EXISTENT PLATTED STREETS
- 4 LANE DIVIDED HIGHWAY
- DIVIDED HIGHWAY
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- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

N W E S

2004
FUNCTIONAL CLASSIFICATION

2000 POPULATION 15,527

JAMESTOWN

STUTSMAN COUNTY

NORTH DAKOTA

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PLANNING AND PROGRAMMING DIVISION

IN COOPERATION WITH THE

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FEDERAL HIGHWAY ADMINISTRATION

SCALE

800 0 800 1600 2400 Feet

JAMESTOWN, NORTH DAKOTA

2004 URBAN ROAD SYSTEM MAP

Legend	Existing	Proposed
Interstate		
Primary Regional System		
Secondary Regional System		
Urban Roads		
2002 Urban Area Limits		

GENERAL LEGEND

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- RAILROAD BELOW
- WIDE STREAM
- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

POPULATION 16,718

MANDAN

MORTON COUNTY
NORTH DAKOTA

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PLANNING AND PROGRAMMING DIVISION

IN COOPERATION WITH THE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE

1000 0 1000 2000 3000 4000 Feet

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

GENERAL LEGEND

- SECTION LINE
- CORPORATE LINE
- OPEN STREETS & SECTION LINE ROADS
- NON-EXISTENT PLATTED STREETS
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- DIVIDED HIGHWAY
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- STATE LINE
- DRAINAGE DITCH

N W E S

2004
FUNCTIONAL CLASSIFICATION

2000 POPULATION 16,718

MANDAN

MORTON COUNTY
NORTH DAKOTA

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FEDERAL HIGHWAY ADMINISTRATION

SCALE

1000 0 1000 2000 3000 4000 Feet

2004 URBAN ROAD SYSTEM MAP

Legend	Existing	Proposed
Interstate		
Primary Regional System		
Secondary Regional System		
Urban Roads		
2002 Urban Area Limits		

GENERAL LEGEND

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- CORPORATE LINE
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- 4 LANE DIVIDED HIGHWAY
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- RAILROAD ABOVE
- RAILROAD BELOW
- WIDE STREAM
- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

POPULATION 36,567

MINOT

WARD COUNTY
NORTH DAKOTA

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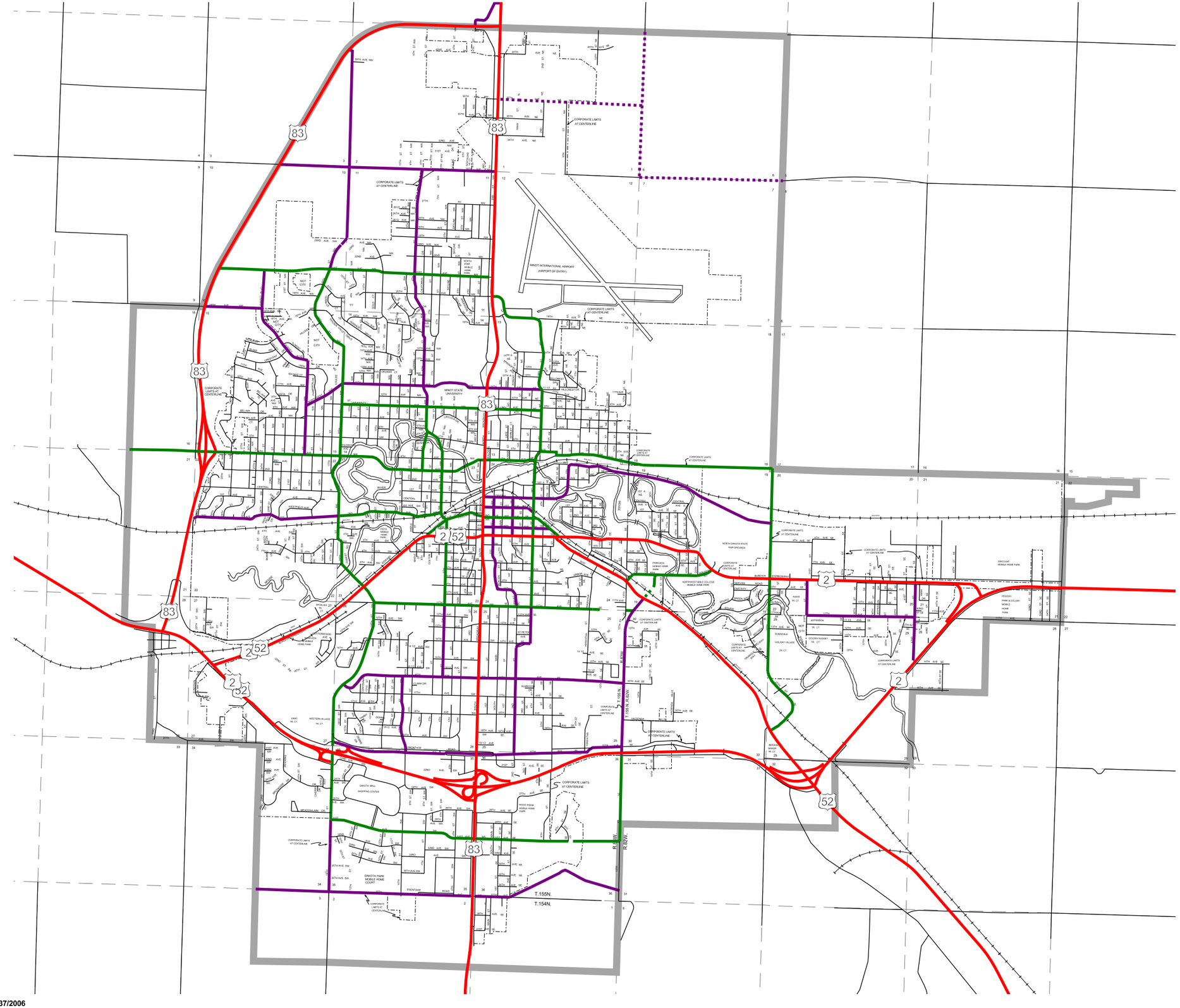
PLANNING AND PROGRAMMING DIVISION

IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE

1000 0 1000 2000 3000 Feet

REVISED 3/37/2006



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

GENERAL LEGEND

- SECTION LINE
- CORPORATE LINE
- OPEN STREETS & SECTION LINE ROADS
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- RAILROAD ABOVE
- RAILROAD BELOW
- WIDE STREAM
- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

N

W E

S

2004
FUNCTIONAL CLASSIFICATION

2000 POPULATION 36,567

MINOT

WARD COUNTY
NORTH DAKOTA

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PLANNING AND PROGRAMMING DIVISION

IN COOPERATION WITH THE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

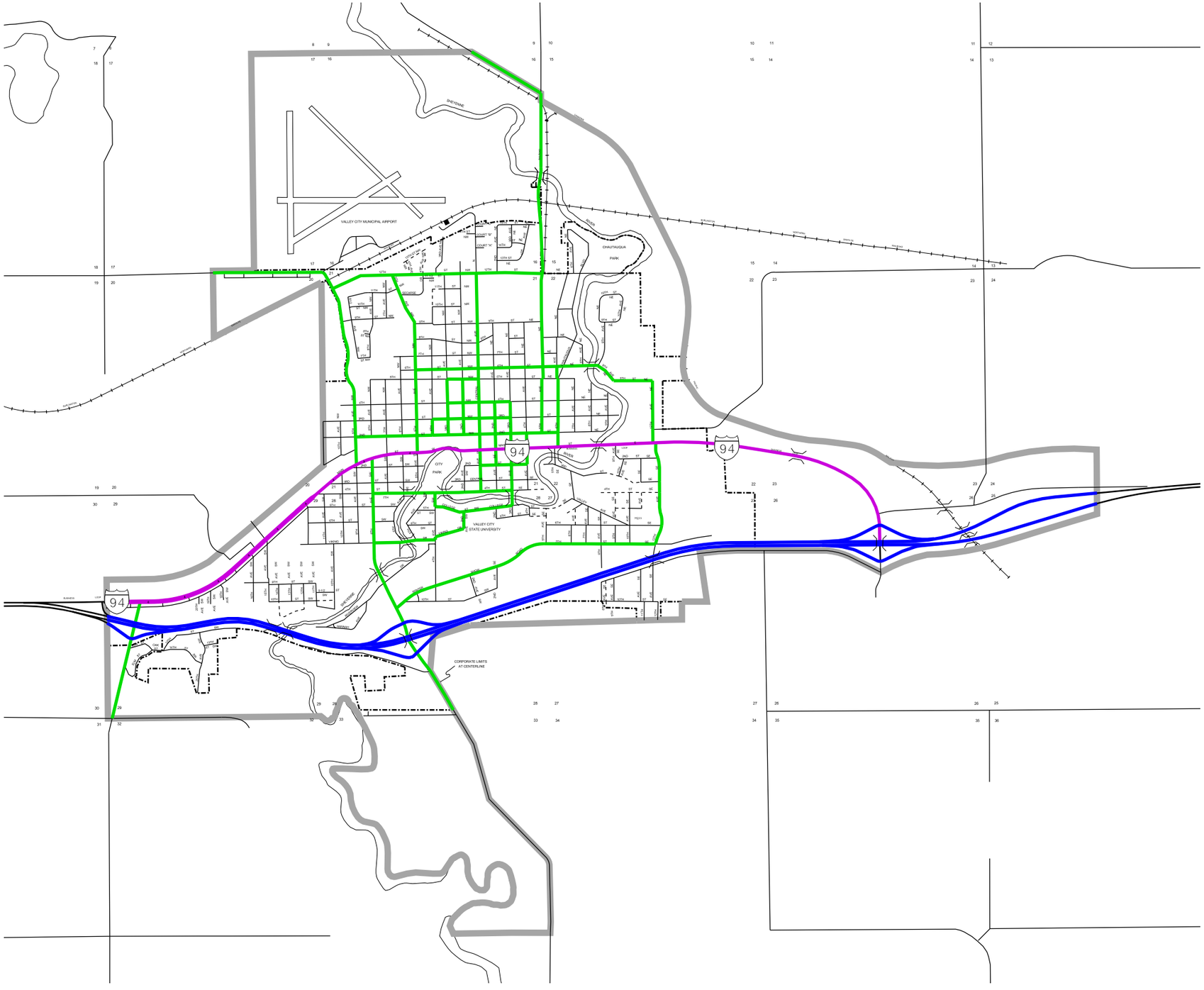
SCALE

1000 0 1000 2000 3000 Feet

REVISED 3/37/2006

2004 URBAN ROAD SYSTEM MAP

Legend	Existing	Proposed
Interstate		
Primary Regional System		
Secondary Regional System		
Urban Roads		
2002 Urban Area Limits		



GENERAL LEGEND

- SECTION LINE
- CORPORATE LINE
- OPEN STREETS & SECTION LINE ROADS
- NON-EXISTENT PLATTED STREETS
- 4 LANE DIVIDED HIGHWAY
- DIVIDED HIGHWAY
- STATE NUMBERED HIGHWAY
- U.S. NUMBERED HIGHWAY
- INTERSTATE NUMBERED HIGHWAY
- HIGHWAY GRADE SEPARATION
- INTERCHANGE
- RAILROAD (ANY NUMBER OF TRACKS USED BY A SINGLE OPERATING CO.)
- RAILROAD STATION
- RAILROAD ABOVE
- RAILROAD BELOW
- WIDE STREAM
- NARROW STREAM
- BRIDGE
- STATE LINE
- DRAINAGE DITCH

N W E S

POPULATION 6,826

VALLEY CITY

BARNES COUNTY

NORTH DAKOTA

PREPARED BY

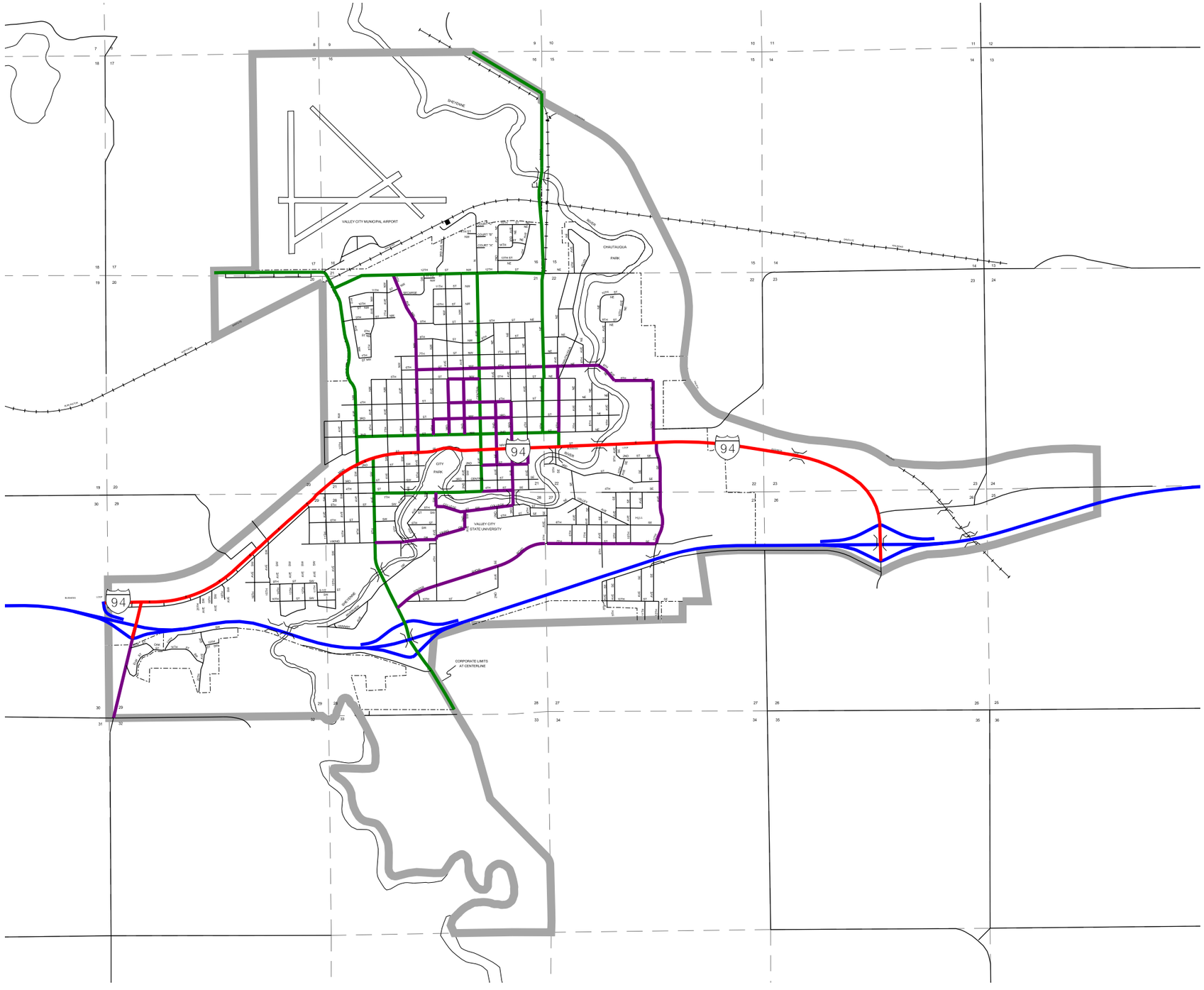
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
PLANNING AND PROGRAMMING DIVISION

IN COOPERATION WITH THE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE

1000 0 1000 2000 Feet



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

GENERAL LEGEND

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N W E S

2004
FUNCTIONAL CLASSIFICATION

2000 POPULATION 6,826

VALLEY CITY

BARNES COUNTY
NORTH DAKOTA

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FEDERAL HIGHWAY ADMINISTRATION

SCALE
1000 0 1000 2000 Feet

COPIES OF THIS MAP ARE AVAILABLE FOR PUBLIC USE AT A NOMINAL COST FROM:
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2004 URBAN ROAD SYSTEM MAP

Legend	Existing	Proposed
Interstate		
Primary Regional System		
Secondary Regional System		
Urban Roads		
2002 Urban Area Limits		

GENERAL LEGEND

- SECTION LINE
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- 4 LANE DIVIDED HIGHWAY
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- BRIDGE
- STATE LINE
- DRAINAGE DITCH

POPULATION 8,586

WAHPETON

RICHLAND COUNTY

NORTH DAKOTA

PREPARED BY

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
PLANNING AND PROGRAMMING DIVISION

IN COOPERATION WITH THE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE

500 0 500 1000 1500 Feet

WAHPETON, NORTH DAKOTA

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

GENERAL LEGEND

- SECTION LINE
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- BRIDGE
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2004 FUNCTIONAL CLASSIFICATION

2000 POPULATION 8,586

WAHPETON

RICHLAND COUNTY
NORTH DAKOTA

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SCALE
500 0 500 1000 1500 Feet

WAHPETON, NORTH DAKOTA

2004 URBAN ROAD SYSTEM MAP

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Interstate		
Primary Regional System		
Secondary Regional System		
Urban Roads		
2006 Urban Area Limits		

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- STATE LINE
- DRAINAGE DITCH

N W E S

POPULATION 14,940

WEST FARGO

CASS COUNTY

NORTH DAKOTA

PREPARED BY

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PLANNING AND PROGRAMMING DIVISION

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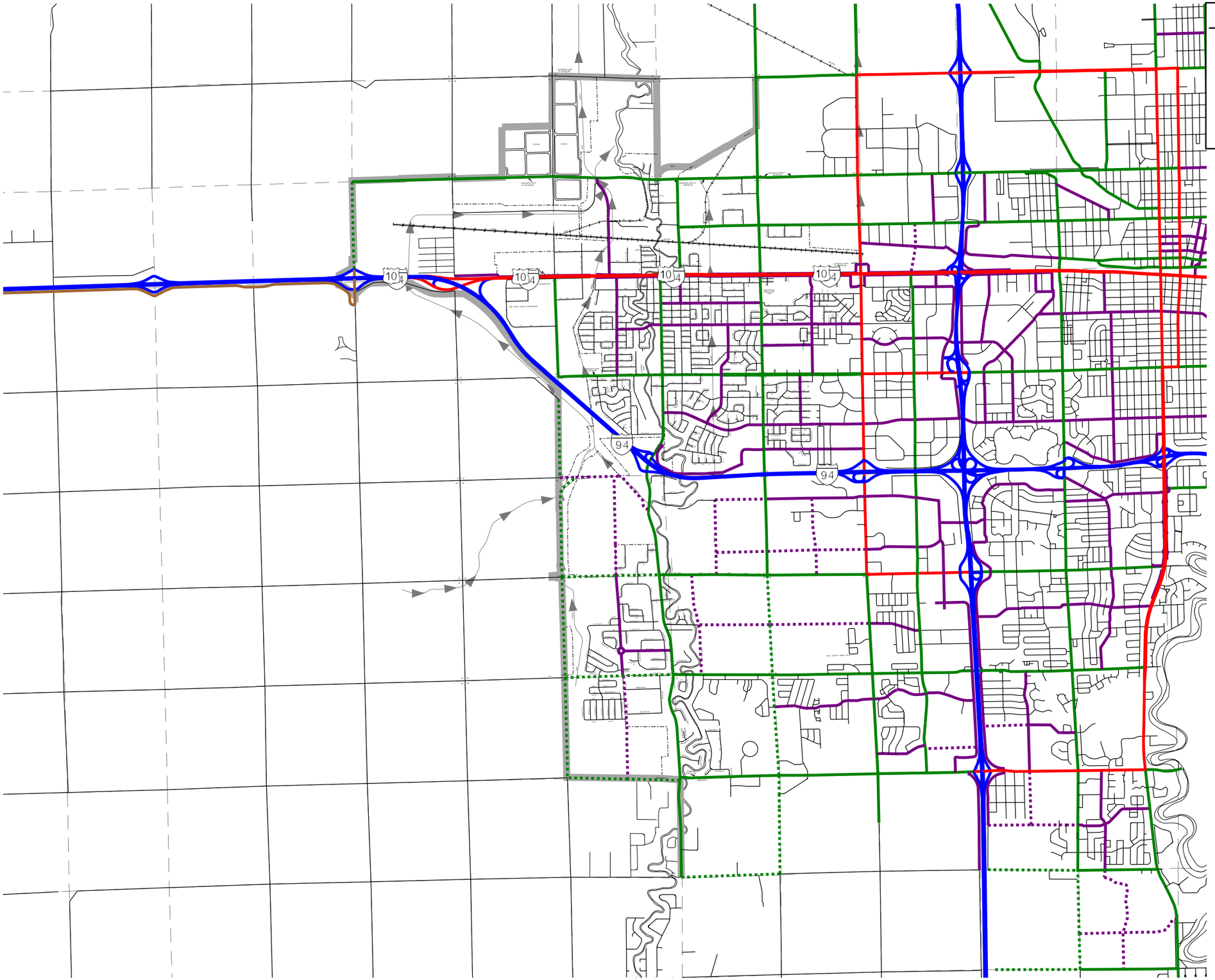
FEDERAL HIGHWAY ADMINISTRATION

SCALE

1000 0 1000 2000 3000 Feet



Legend	Existing	Proposed
Interstate		
Principal Arterials		
Minor Arterials		
Collectors		
2006 Urban Limits		

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N W E S

2000 POPULATION 14,940

2004
FUNCTIONAL CLASSIFICATION

WEST FARGO

CASS COUNTY
NORTH DAKOTA

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1000 0 1000 2000 3000 4000 5000 Feet

2004 URBAN ROAD SYSTEM MAP

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- DRAINAGE DITCH

POPULATION 12,512

WILLISTON

WILLIAMS COUNTY

NORTH DAKOTA

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PLANNING AND PROGRAMMING DIVISION

IN COOPERATION WITH THE

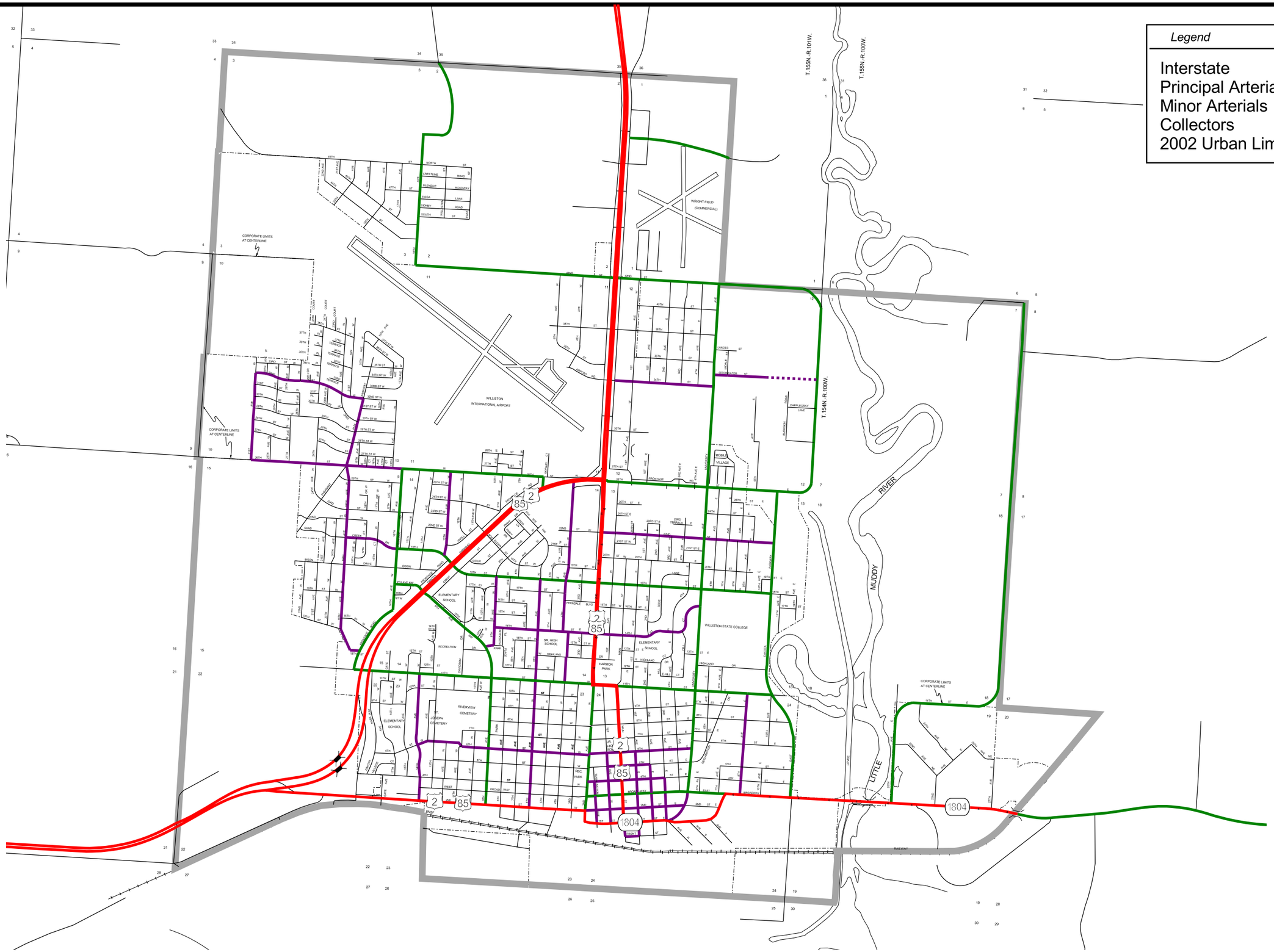
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE

700 0 700 1400 2100 Feet

REVISED 10/17/2007

WILLISTON, NORTH DAKOTA



Legend	Existing	Proposed
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Minor Arterials		
Collectors		
2002 Urban Limits		

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2004
FUNCTIONAL CLASSIFICATION

2000 POPULATION 12,512

WILLISTON

WILLIAMS COUNTY
NORTH DAKOTA

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REVISED 10/17/2007