I-04.01 Description of State Highway System

The State Highway System consists of the following streets and highways:

1. National Highway System (Interstate) (NHSI)

2. National Highway System (Non-Interstate) (NHS) (selected segments of both federal and state highways, US & ND)

3. Other federal and state highways (US & ND)

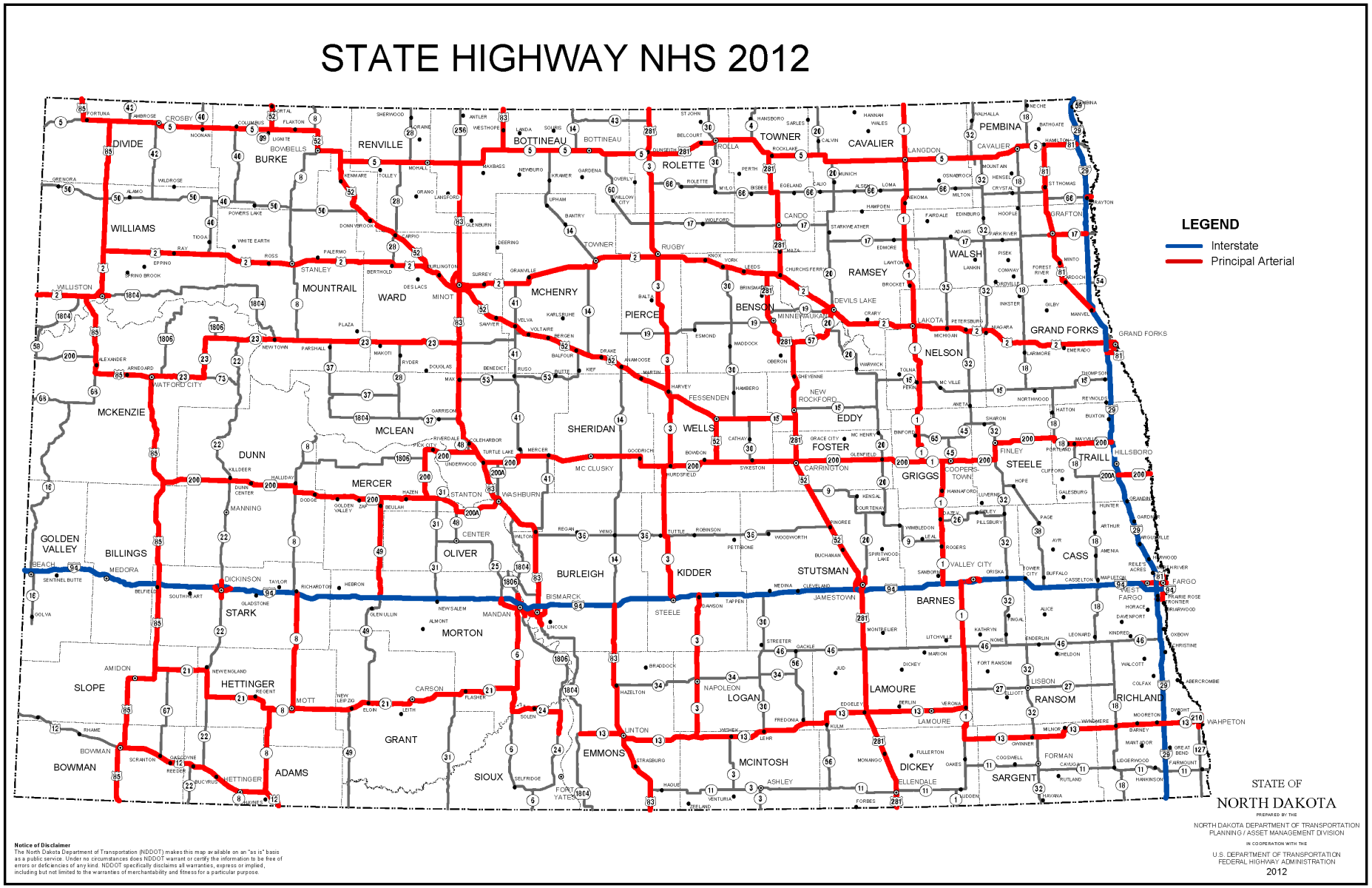
4. Regional highways - portions of federal and state highways located within corporate limits of the state's 13 major cities, Primary and Secondary.

Although not a part of the State Highway System, there also are the following streets and highways that are constructed with federal aid highway funds:

Urban system streets and highways (U)
County federal aid system (C)

The proposed rural National Highway System for North Dakota is shown in Figure I-04.01.01. All other highways on the above mentioned systems are available on the NDDOT website at: http://www.dot.nd.gov/ under the "NDDOT Maps" link. These figures are available in hard copy from the Mapping Section in the Planning Division.

Figure I-04.01 NHS for North Dakota



I-04.02 State Highway Performance Classification

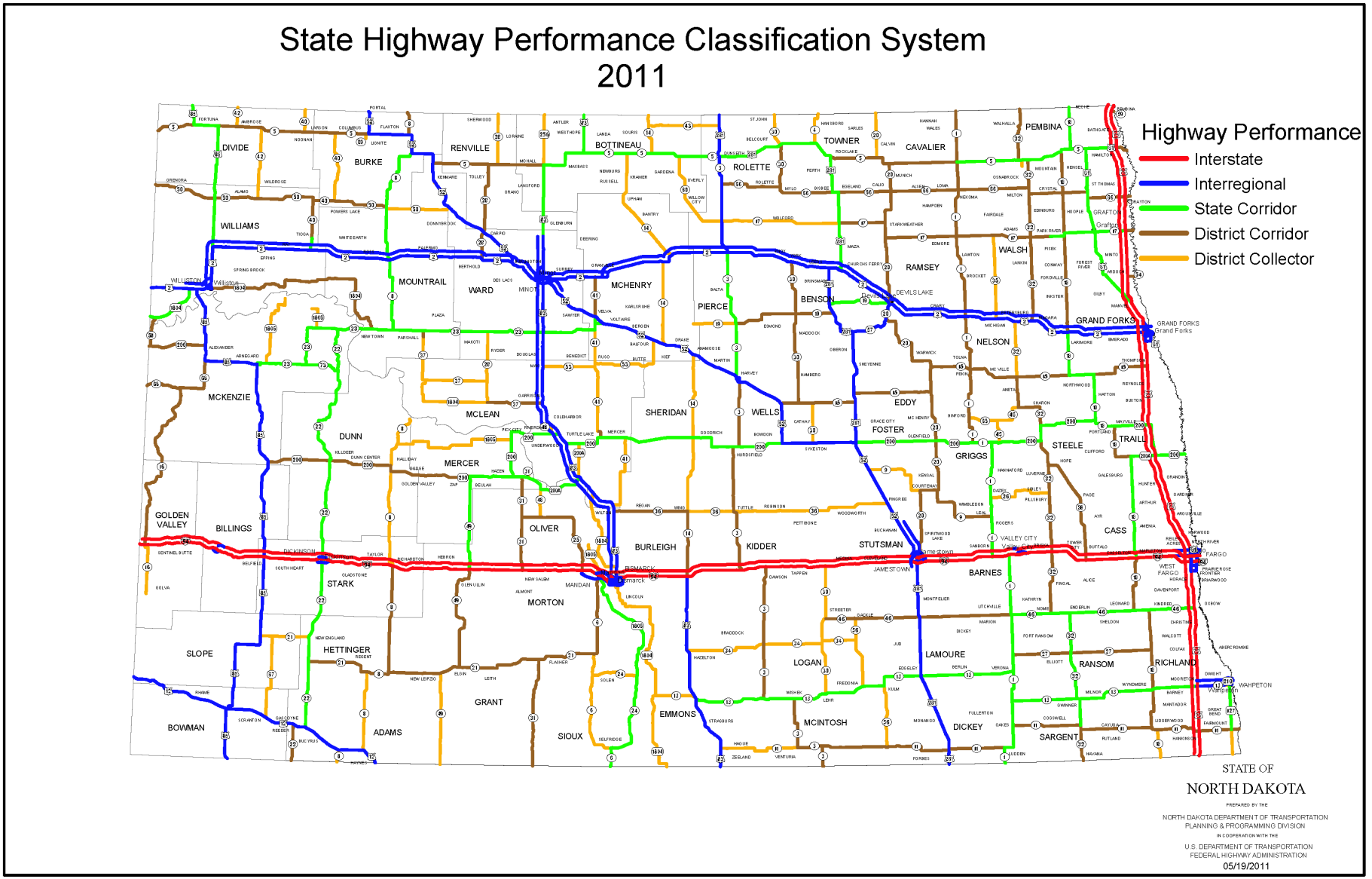
NDDOT has also classified all of the rural state highways into the following performance classifications:

Rural Interstate
Interregional
State Corridor
District Corridor
District Collector

The highways in the above classifications are shown on the map of the State Highway Performance Classification in Figure I-04.02, also available in hard copy from the Mapping Section in Planning Division or on the web at: http://www.dot.nd.gov/ under the "NDDOT Maps" link. The performance classifications are defined in more detail in this section on the following pages.

Functional classifications of roadways county maps are located on the web at: http://www.dot.nd.gov/ under the "NDDOT Maps" link, or available as hard copies from the Mapping Section in Planning Division.

Figure I-04.02 State Highway Performance Classification



I-04.02.01 Rural Interstate System

DESCRIPTION – The Rural Interstate System consists of highways that function as Principal Arterials and do not provide direct land access. Maintaining a high degree of reliability and mobility on these highways is critical since they support and promote international, national, regional and statewide trade and economic activity. The state's Rural Interstate highways also comprise portions of other national and regional priority highway systems. Commodity, freight, and passenger movements on these highways are primarily long-distance, interstate and intrastate traffic.

Rural Interstate highways are multiple-lane (usually four) facilities and have fully controlled access. The Rural Interstate System goal is to be free of height restrictions and load limits are restricted by legal weights. Bridges and overhead structures provide for the unrestricted movement of legal loads. Accommodating all forms of traffic is a priority. Ride and distress scores are generally in the good to excellent categories. Only intermittent stretches of road are in the poor category.

High volumes of passenger vehicles and trucks, as well as a high percentage of trucks, are relatively consistent year round. Travel speeds average 65 to 70 miles per hour. Rural Interstates demonstrate a high degree of safety with crash rates below the statewide average.

PERFORMANCE GUIDELINES

Load Restrictions - Year round load limits are restricted by legal weights loads (80,000 lbs.)

Design Characteristics - Refer to the NDDOT Design Manual Section I-06.03 *Design Guidelines* for design criteria. Multi-lane divided, grade-separated, no height or width restrictions. Median and outside shoulders are paved, structurally sound.

Ride/Distress - Strive to maintain an excellent Ride on all segments. A segment with Ride scores in the lower range of the fair category should be considered for a project.

Bridge Sufficiency - Bridges and overhead structures provide for the unrestricted movement of legal loads.

Access Control - Full access control

Safety – New or reconstruction projects will include all necessary safety improvements. The Rural Interstate System has truck pullouts, rest areas, and separated rail crossings. Crash rates are below the statewide average**.**

Operational Reliability - The Rural Interstate System is highly reliable with only isolated or limited closures due to seasonal occurrences such as blizzards, spring flooding, excessive rainfall, construction, or surface blowups. These highways are the first priority to receive weather-related maintenance.

SUPPLEMENTAL COMMENTS – Potential projects will be identified when ride or distress scores fall below the fair category, a segment has a load restriction, or vertical clearance is less than 16'6". Potential bridge projects will be identified when a structure has an operating rating less than HS 20, less than 16' vertical clearance, or is eligible for BRR funding clearance.

Projects will not be initiated solely on the basis of a segment having poor ride or distress scores, inadequate horizontal clearance, or load restrictions. Bridge projects will not be initiated solely on the basis of a bridge having inadequate vertical clearance or less than an operating rating of HS 20.

I-04.02.02 Interregional System

DESCRIPTION - The Interregional System consists of highways that function as Principal Arterials and provide a low degree of land access. Maintaining a high degree of reliability and mobility on these highways is critical since they support and promote international, national, regional and state trade and economic activity. Some segments of the state's interregional system comprise portions of other national and regional priority systems. Passenger, commodity and freight movements on these highways are primarily long-distance, interstate and intrastate traffic.

Interregional System highways are either two-lane or multiple lane facilities. Segments or specific locations may have partially controlled access. Not more than five access points (including section line accesses) per mile per side are desirable. The Interregional System goal is to be free of height restrictions, load limits are restricted by legal weights, and have limited passing restrictions. Bridges and overhead structures provide for the unrestricted movement of legal loads. Accommodating truck traffic is a priority. Ride and distress scores are generally in the good to excellent categories. A normal percentage of mileage is in the fair category and only limited or intermittent stretches of road are in the poor category.

Moderate to high volumes of passenger vehicles and trucks, as well as a high percentage of trucks, are relatively consistent year round. Daytime travel speeds average 60 to 65 miles per hour. The Interregional System demonstrates a high degree of safety with crash rates below the statewide average.

PERFORMANCE GUIDELINES

Load Restrictions - Year round load limits are restricted by legal weights (105,500 lbs.)

Design Characteristics - Refer to the NDDOT Design Manual Section I-06.03 *Design Guidelines* for design criteria. Two-lane or multiple-lane, no height or width restrictions.

The shoulders of an Interregional segment that has more than 2,000 ADT should be paved. For Interregional segments with less than 2,000 ADT, use a 28' paved roadway width and gravel shoulders. On four-lane facilities, the paved roadway width would include the inside shoulder.

If the guideline for shoulder type results in short segments of an Interregional Corridor having gravel shoulders and the remaining portions of the corridor within the logical termini (major roadway to a city or another major roadway) are paved, the PCR should present shoulder treatment options and not rely solely on the traffic guidelines.

The shoulders on the Interregional system roadways that are designated as Congressional High Priority Corridors should be paved. The corridors with this designation in North Dakota are: US Highway 85 from the South Dakota border to Williston, US Highway 2 from Williston to the Montana border; US Highway 83 from the South Dakota border to the Canadian border, and I-29 from the South Dakota Border to the Canadian Border.

Ride/Distress - Strive to maintain an excellent Ride on all segments. A segment with Ride scores below the fair category should be considered for a project.

Bridge Sufficiency - Bridges and overhead structures provide for the unrestricted movement of legal loads.

Access Control - Partial access control may be acquired near urban areas, some rural communities or major intersections. Not more than five approaches per mile per side (with opposite side alignment preferred) are desirable. Access control should be presented as a decision item in the Project Concept Report.

Safety – New or reconstruction projects will include all necessary safety improvements. The Interregional System has truck pullouts, rest areas, and separated or signalized at-grade rail crossings. Crash rates are below the statewide average.

Operational Reliability - The Interregional System is highly reliable with only isolated or limited closures due to seasonal occurrences such as blizzards, spring flooding, excessive rainfall, construction or surface blowups. After the Interstate System, these highways are the first priority to receive weather-related maintenance.

SUPPLEMENTAL COMMENTS

Potential projects will be identified when ride or distress scores fall below the fair category or a segment has a load restriction. Potential bridge projects will be identified when a structure has an operating rating less than HS 20, less than 16' vertical clearance, or is eligible for BRR funding.

Projects will not be initiated solely on the basis of a segment having poor ride or distress scores, inadequate horizontal clearance, or load restrictions. Bridge projects will not be initiated solely on the basis of a bridge having inadequate vertical clearance or less than an operating rating of HS 20.

I-04.02.03 State Corridor

DESCRIPTION – State Corridors are highways that function as Principal Arterials and provide a low or moderate degree of land access. Maintaining a moderately high degree of reliability and mobility on these highways is critical since they support the movement of agricultural commodities, freight, and manufactured products within the state. State Corridors provide connectivity between District Collectors and District Corridors, and the Rural Interstate and Interregional Systems. Passenger, commodity and freight movements on these highways are primarily medium-distance intrastate traffic.

State Corridors are typically 2-lane facilities and have segments or locations with partially controlled access. Not more than five access points (including section line accesses) per mile per side are desirable. These highways have either paved or aggregate shoulders, some segments may have limited passing zone restrictions, and load limits are restricted by legal weights. Bridges and overhead structures provide for the unrestricted movement of legal loads. Ride and distress scores are generally in the good category.

Moderately high volumes of passenger vehicles and trucks are relatively consistent year round. Daytime travel speeds average 60 to 65 miles per hour. State Corridors demonstrate a moderately high degree of safety with crash rates less than the statewide average.

PERFORMANCE GUIDELINES

Load Restrictions - Load limits are restricted by legal weights.

Design Characteristics - Refer to the NDDOT Design Manual Section I-06.03 *Design Guidelines* for design criteria. Two-lane highways, no height or width restrictions. The shoulders of a State Corridor segment that is on the National Highway System (NHS) and has more than 2000 AADT will typically be paved. The shoulders on non-NHS State

Corridor segments, or NHS segments with less that 2000 AADT will typically be aggregate.

Ride/Distress - Strive to maintain a good to excellent Ride on all segments.

Bridge Sufficiency - Bridge structures provide for the unrestricted movement of legal loads.

Access Control - Partial access control may be acquired near urban areas, some rural communities or major intersections. Not more than five approaches per mile per side (with opposite side alignment preferred) are desirable. Access control should be presented as a decision item in the Project Concept Report.

Safety – New or reconstruction projects will include all necessary safety improvements. State Corridors have signalized at-grade rail crossings. Crash rates that are less than the statewide average**.**

Operational Reliability - State Corridors are very reliable, with only occasional closures due to seasonal occurrences such as blizzards, spring flooding, excessive rainfall, construction or surface failures. Weather related maintenance on these highways is a priority after the Rural Interstate and Interregional Systems.

SUPPLEMENTAL GEOMETRIC/CONDITION COMMENTS
Potential projects will be identified when ride or distress scores fall into the poor category, geometric features fall below current design guidelines or a segment has less than a 8-ton load restriction. Potential bridge projects will be identified when a structure has an operating rating less than HS 20, less than 16' vertical clearance, or is eligible for BRR funding.

Projects will not be initiated solely on the basis of a segment having poor ride or distress scores, or inadequate geometric design features. Bridge projects will not be initiated solely on the basis of a bridge having inadequate vertical clearance or less than an operating rating of HS 20.

I-04.02.04 District Corridor

DESCRIPTION – District Corridors are highways that function primarily as Major Collectors. A few select segments may function as Minor Arterials. State Corridors provide a balance between land access and mobility. Maintaining a moderate degree of reliability and mobility on these highways is desirable. These highways provide connectivity between District Collectors and the remainder of the highway system. Passenger, commodity, and freight movements on these highways are primarily short to

medium distance intrastate traffic.

District Corridors are two lane facilities. Generally, access control is not purchased. Not more than five approaches (including section line accesses) per mile per side are desirable. These highways have narrow paved or gravel shoulders, segments with restricted passing zones, and 8-ton, or 7-ton seasonal load limits. Bridge structures provide for the unrestricted movement of legal loads. Ride and distress scores are generally in the fair and good categories. A slightly higher percentage of Ride and Distress mileage in the poor category is acceptable.

Moderate volumes of traffic are relatively consistent year round. Occasional increases in seasonal traffic volumes and truck movements occur. Daytime travel speeds average 55 to 65 miles per hour. District Corridors are safe highways with crash rates at or near the statewide average.

PERFORMANCE GUIDELINES

Load Restrictions - 8-Ton load restrictions for District Corridors part of the NHS, and 7-Ton load restrictions (spring only) for non-NHS highway segments.

Design Characteristics - Refer to the NDDOT Design Manual Section I-06.03 *Design Guidelines* for design criteria. Two-lane highways, some height or width restrictions may exist. The shoulders of a District Corridor segment that is on the National Highway System (NHS) and has more than 2000 ADT will typically be paved. The shoulders on District Corridor segments off the NHS, or NHS segments with less than 2000 ADT will typically be aggregate.

Ride/Distress - Strive to maintain a good Ride on all segments.

Bridge Sufficiency - Bridge structures provide for the unrestricted movement of typical legal loads.

Access Control - Generally, access control is not purchased. Not more than five approaches per mile per side (with opposite side alignment preferred) are desirable.

Safety – New or reconstruction projects will include all necessary safety improvements. Crash rates are at or near the statewide average; signalized at-grade mainline crossings or passive signing at-grade branch line crossings.

Operational Reliability - District Corridors are reliable, however periodic closures due to seasonal occurrences such as blizzards, spring flooding, excessive rainfall, construction or surface failures may be experienced. Weather related maintenance on these highways is a

priority after the Rural Interstate System, Interregional System and State Corridors.

SUPPLEMENTAL COMMENTS
Potential projects will be identified when ride or distress scores fall into the poor category, or a segment on the NHS has less than an 8-ton load restriction or a non-NHS segment has less than a 7-ton load restriction. Potential bridge projects will be identified when a structure has an operating rating less than HS 20, less than 16' vertical clearance, or is eligible for BRR funding.

Projects will not be initiated solely on the basis of a segment having poor ride or distress scores, or inadequate load restrictions. Bridge projects will not be initiated solely on the basis of a bridge having inadequate vertical clearance or less than an operating rating of HS 20.

I-04.02.05 District Collector

DESCRIPTION – District Collectors are highways that function as major collectors and provide a moderate to high degree of land access. Maintaining reliability and mobility on these highways is a lower priority. These highways are generally short routes that provide connectivity to the higher road level systems. Passenger, commodity and freight movements on these highways are primarily short distance, local, farm to market traffic.

District Collectors are two lane facilities. Generally, access control is not purchased and is limited to not more than five approaches (with opposite side alignment preferred) per mile per side are desirable. These highways generally have no shoulders. Segments with restricted passing zones exist. Seven-ton or 6-ton seasonal load limits are normal although some segments may have year round load restrictions. Bridge structures provide for the movement of typical legal loads. Some structures have load, height, and width restrictions. Ride and distress scores are generally in the fair category. A higher percentage of mileage is in the poor category is acceptable.

Low volumes of traffic are normal year round. Small increases in truck movements may occur during spring planting and fall harvest periods. Daytime travel speeds average 50 to 55 miles per hour. District Collectors are moderately safe highways with crash rates near the statewide average.

PERFORMANCE GUIDELINES

Load Restrictions - 6-ton (spring only)

Design Characteristics - Refer to the NDDOT Design Manual Section I-06.03 *Design Guidelines* for design criteria. Two-lane highways, some height or width restrictions are

acceptable, shoulders are aggregate or no shoulders.

Ride/Distress - Strive to maintain a good Ride on all segments.

Bridge Sufficiency - Bridges provide adequate hydraulics and the movement of typical legal loads. Some structures may have load, height and/or width restrictions.

Access Control - Access control is not purchased. Not more than five approaches per mile per side (with opposite side alignment preferred) is desirable.

Safety – New or reconstruction projects will include all necessary safety improvements. Crashes rates near the statewide average, signalized at-grade rail mainline crossings, passive signing at branch line at-grade crossings.

Operational Reliability - District Collectors are moderately reliable, however periodic closures due to seasonal occurrences such as blizzards, spring flooding, excessive rainfall, construction or surface failures may be experienced. These highways are generally the lowest priority for weather related maintenance.

SUPPLEMENTAL GEOMETRIC/CONDITION COMMENTS
Potential projects will be identified when ride or distress scores fall into the poor category, or a segment has less than a 6-ton load restriction. Potential bridge projects will be identified when a structure has an operating rating less than HS 15, less than 16' vertical clearance, or is eligible for BRR funding.

Projects will not be initiated solely on the basis of a segment having poor ride or distress scores, inadequate load restrictions, or not meeting current AASHTO geometric design guidelines. Bridge projects will not be initiated solely on the basis of a bridge having inadequate vertical clearance or less than an operating rating of HS 20.