

Changes to the NDDOT Standard Specifications: 2015 and Beyond



Mythbusters

- 1986 Sandstone and Orange
- 1992 Black and Silver
- 1997 Red and Gold
- 2002 Red, White, & Blue
- 2008 Green and Yellow



So then what will it look like?

Standard Specifications For Road and Bridge Construction



2014

Standard Specifications for Road and Bridge Construction



2014



Long Time Coming

- 2010-Decision made hire outside consultation to review and up
 - NDDOT hired Trauner Consulting
 - Trauner recommends using the “Active Voice-Imperative Mood”
- May 15th 2011-I start working in Technical Services
- May [DATE] 2011-Decision is made to utilize the recommended
 - Utilize NDDOT staff for this project

Section 101

- Covers the new voice and mood
- Defines that the directions are being given by the Department/Engineer to the Contractor
- Details why the phrase “by the Engineer” won’t show up in the text

101.01 WORDING OF THE SPECIFICATIONS

The North Dakota Department of Transportation has written the *Standard Specifications for Road and Bridge Construction* (Standard Specifications) with an emphasis on the active voice. In a sentence written in the active voice, someone acts on something. For example: “The Engineer will take a sample.” A similar sentence in the passive voice—“A sample will be taken”—would be unclear about who was responsible for taking the sample.

The Standard Specifications also make use of the imperative mood. The imperative mood is used when the party issuing an instruction and the party receiving it are already understood. In the Standard Specifications, the Department is stating its requirements or directions for work to the Contractor; such statements have the same force as if they contained the word “shall.” In an imperative sentence such as, “Place the concrete,” the Department is indicating that it requires the Contractor to place the concrete. Before award of the contract, imperative statements are directed to the Bidder. Between award and execution of the contract, imperatives are directed to the lowest responsible Bidder, and after execution, to the Contractor. The Department will identify parties other than the Bidder or Contractor to whom it gives a responsibility in the Standard Specifications. In phrasings where the responsible party has already been clearly identified or in factual statements when it is not important to do so, the Department may use the passive voice.

When these specifications indicate that work shall be “required, requested, directed, authorized, ordered, permitted, suspended, approved, accepted, or rejected,” it shall be understood that these expressions and others similar to them are followed by the phrase, “by the Engineer.”

Section 101.02

- With the exception of Section 100, "General Provisions," and Section 800, "Materials," the sections of the Standard Specifications are written in a six-part format. Each section contains the following primary subsections:
 - XXX.01 Description
 - XXX.02 Equipment
 - XXX.03 Materials
 - XXX.04 Construction Requirements
 - XXX.05 Method of Measurement
 - XXX.06 Basis of Payment
- The subsections contain varying numbers of titled subordinate subsections composed of higher and lower levels, as in an outline.

Section 101.02

- **References.**
- The specifications rely on many cross references, both to internal sources in the specifications and external sources in other contract documents, Department manuals, and other industry resources. If the contract documents reference an external publication, the Department intends that the reference be to the most recent issue, including interim publications before the date of the advertisement, unless the contract specifies otherwise.

Sections 101.03 and 101.04

- Abbreviations (101.03) & Definitions (101.04)
 - Both updated to be current
 - Some definitions were deleted
 - Those that are identical to the standard dictionary definition
 - Others were removed due to redundancy
 - ~~Shop drawings~~/Work drawings
 - Some definitions were added
 - Plan Drawings
 - Standard Drawings

Section 102

- **102.06 SUPPLEMENTAL INFORMATION**
 - **This section doesn't exist in this format in the current book**
 - **Incorporates some of existing 102.06 (Examination of Plans...)**
 - **Also includes new material based on how the Department has been handling non-contract material in the past**
 - **Old bridge plans**
 - **Permit applications**
 - **Machine guidance information**

Section 103

- Largely unchanged
 - Incorporates the subcontractor escrow note that has been used over the past year

Section 104

- No substantive changes
- The section was written to better acknowledge how changes are handled in relation to sections 108 and 109

Section 105.05

- Coordination of the Contract Documents
- A. Addenda,
-
- B. Special provisions (for the purpose of this list, any other provisions in the request for proposals that are not part of the other contract documents in this list are considered special provisions),
-
- C. Project plans,
-
- D. Supplemental specifications,
-
- E. Standard drawings,
-
- F. Standard specifications.

105.09 Authority of the Engineer

- No more reference to “Field Engineer”
- The Engineer is defined as the NDDOT Deputy Director for Engineering or an authorized representative
 - This is the only definition needed
 - A single point of reference/contact for the contractor

Section 105.09 Authority of the Engineer

- Section 105.11 Duties of the Inspector has been deleted
 - This section was based on internal NDDOT hierarchy and levels of responsibility afforded to individuals
 - It was eliminated as part of the move to utilizing a single point of contact between the Department and the Contractor
 - We require the Contractor to utilize a superintendent for communication purposes and to eliminate confusion
 - Now, we do the same thing

Section 106

- Revision to the Buy America provision will require a more detailed certification process than we have used in the past

Section 107

- The existing sections were broken up into more appropriate subdivisions
 - Currently 10 sections
 - Divided into 17 in the new book
- Broken into more logical subsections where there was a clear change in topic
 - Particularly exiting 107.05 which was divided into 5 separate sections

107.04 Material Source Approval

- Existing Section 107.04 was broken up into two sections based on the appropriate topic
 - Material Source Approval
 - Discoveries
- Heavily overhauled
 - This went through a process review
 - Discussions with those involved in the approval process
 - Boiled down to the essential parts
 - Subdivided into appropriate sections, based on the type of material source (Department controlled, Privately owned, out of state)

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Section 107.05 Discoveries

- This section deals with the content found in old Section 107.04 C Discoveries
- Boiled down to the Contractor's responsibilities only
- Responsibilities of the Department in coordinating with outside agencies were eliminated

Section 107.06 Responsibility to the Public

- Section B, “Maintenance of Traffic During Suspension of Work”
 - This was heavily updated
 - Incorporates “anticipated” and “unanticipated” suspensions
- Anticipated suspensions are those that the Department expects and accounts for at the time of bid
 - Multi-year projects where there are provisions in the plans for the first year expectations

Section 107.06 Responsibility to the Public - Continued

- Unanticipated suspensions are divided into 2 types
 - **Department convenience**
 - Unplanned prior to bid
 - Basically a change order to suspend the project for a particular reason
 - NOT used when the Contractor fails to complete work
 - **Suspensions due to Contractor's actions**
 - Takes effect when the project can no longer be effectively prosecuted due to weather or other circumstances
 - Contractor failed to adequately perform the required duties
 - Detailed specifications regarding what is expected

107.07 Haul Roads

- Place holder for Haul Road updates

107.10 Responsibility for Damage Claims

- Rewritten to reflect a more practical application of this concept and the existing ways the Department was actually handling these issues

107.16 Removed Material

- Replaces the existing 107.10 “Inert Waste Disposal”
- Now applies to all material designated for removal
- Better reflects the Department of Health’s requirements for disposal
 - Acknowledges specific items the DoH has regarding NDDOT project

Section 108 Prosecution and Progress

- Requirements for Subletting of the Contract were moved here from Section 104
 - AASHTO Guide Specification
- New Preconstruction Conference section
- The updated Scheduling provisions should be reviewed.
 - No major content changes, but the layout was heavily revised

Section 109 Measurement and Payment

- Includes new General Statement regarding measurement
- Scales specification was moved here (from Section 151) as it dealt with measurement of quantities more than equipment
- Added new content regarding direct and indirect payment
- New “Compensation for Contract Revisions” section

Section 109.01 Measurement of Quantities

- **A. General**
- The bid item list specifies the unit of measure for each contract item. The Engineer will measure accepted quantities of work for each contract item in accordance with the “Method of Measurement” subsection in the relevant specifications and Section 109.01, “Measurement of Quantities.” In the case of a conflict, the method of measurement in the relevant specifications supersedes the method of measurement in Section 109.01, “Measurement of Quantities.” Unless the contract specifies payment by plan quantity, the Engineer will measure the actual quantity of accepted work for each contract item.

Section 109.02 Scope of Payment

- Direct Payment: The Contract specifically includes a bid item for the work
- Indirect Payment: The Contract does not specifically include a bid item for the work, but the work is essential in the proper construction of an item that is specifically included in the contract

109.02 SCOPE OF PAYMENT.

A. General

The Department will pay the Contractor for accepted quantities of the contract items at the contract unit prices, as required by the contract, except as otherwise specified in Section 104.02, "Contract Revisions."

The Department's payment to the Contractor for the contract items is full compensation for performing all work as required by the contract, including all risk, loss, damage, or expense arising from the nature or performance of the work, subject to Section 105.16, "No Waiver of Legal Rights."

The Department provides either direct or indirect payment for the work, under the contract items shown in the bid item list.

B. Direct Payment

Direct payment is made under a contract item shown in the bid item list when one of the following applies:

1. The work is measured in the "Method of Measurement" subsection of the relevant specification, and the bid item list contains a contract item for the work with the same three-digit number as the section of the specifications ordering the work.
2. The "Method of Measurement" subsection of the specification ordering the work references another section for measuring the work, and the bid item list contains a contract item for the work from the referenced section.

C. Indirect Payment

Work required to safely and satisfactorily provide or complete a contract item in accordance with the "Construction Requirements" subsection and Section 100, "General Provisions," but which is not directly measured and paid for, or which is not included in the bid item list, is an incidental obligation of the Contractor. The Department does not directly pay for such work and payment is included under the associated contract items in the bid item list. This includes instances when the "Construction Requirements" subsection references another specification for performing the work and does not reference another specification for direct payment of the work.

Section 109.02 Scope of Payment

Direct Payment

Direct payment is made under a contract item shown in the bid item list when one of the following applies:

1. The work is measured in the “Method of Measurement” subsection of the relevant specification, and the bid item list contains a contract item for the work with the same three-digit number as the section of the specifications ordering the work.
2. The “Method of Measurement” subsection of the specification ordering the work references another section for measuring the work, and the bid item list contains a contract item for the work from the referenced section.

Section 109.02 Scope of Payment

Indirect Payment

Work required to safely and satisfactorily provide or complete a contract item in accordance with the “Construction Requirements” subsection and Section 100, “General Provisions,” but which is not directly measured and paid for, or which is not included in the bid item list, is an incidental obligation of the Contractor. The Department does not directly pay for such work and payment is included under the associated contract items in the bid item list. This includes instances when the “Construction Requirements” subsection references another specification for performing the work and does not reference another specification for direct payment of the work.

109.03 Compensation for Contract Revisions

- Consolidated changes clause
- Incorporates all of the potential methods that could be utilized for payments arising from contract revisions
 - Contract Unit Prices
 - PS-1
 - Negotiated Price
 - Force Account

Section 110 Environmental Protection

- Section 110 was deleted and its content was distributed among other appropriate sections
- The mile limitations contained in Section 110.06 were basically deleted. The limitation of the extent of earthwork is now exclusively specified in Section 203
 - This will be discussed on a subsequent slide

150's Equipment

- Existing Section 151 was subdivided into more logical, individual sections
 - 151 – Rollers
 - 152 – Trucks
 - 153 – Earthwork and Aggregate Equipment
 - 154 – Bituminous Equipment
 - 155 – Concrete Equipment
- As noted earlier, the scale requirements are no longer in this section

Section 200 Earthwork

- 201 – No major changes
- 202 – Plugging pipe deleted, will be project specific
- 203 – Will be covered in upcoming slides
- 210 -
- 216 – No major changes
- 230 – Simplified the types of Subgrade prep (A, B, & C) so that the differences were more clearly defined
- 234 – Deleted. This type of work has been handled by Special Provision lately and no standard has been established

Section 203 Excavation and Embankment

- Added Wetland and Imported topsoil sections
- Simplified the Subcut section due to the development of a Standard Drawing
- Implemented a surface tolerance to embankment construction (0.08 feet)
- Changed guardrail embankment construction to Type A compaction
- Added references to topsoil requirements and seeding requirements to approach and guardrail embankment construction

Direct vs Indirect Costs Interlude

G. Guardrail Embankment.

Compact embankment material as specified in Section 203.04 E.2, “Compaction Control, Type A”. Perform topsoil work as specified in Section 203.04 B, “Topsoil”. Seed with Class II seed mixture as specified in Section 251.02 “Equipment”; 251.03, “Materials”; and 251.04, “Construction Requirements”. Place mulch as specified in Section 253.02 “Equipment”; 253.03; “Materials”; and 253.04, “Construction Requirements”. Maintain existing drainage.

203.04 H Finishing

Finishing.

Conduct operations so the distance does not exceed 3 miles between the point where the existing road surface is disturbed and to where the roadbed is finished to grade and aggregate is placed.

Finish backslopes and ditches as construction progresses.

Section 220 Stockpile Site

- In the past, this was scattered over various sections within the specifications
 - 405
 - 407
 - 411
- Also bid items in 410 and 560
- Creates a consolidated place for all stockpile site specifications
- Still needs a bid item for use

250 Series – Erosion Control

- Brand new break out of the existing 708 specification
- Changing 708 to the six part format would have broken that section
 - Each subsection, especially the Construction section, would have had to include an area for each individual item
- Ease of use – all of the info for a particular type of item is in one place, with the proper title
- Easier to make revisions or to add new items in the future

250 Series – Erosion Control

- 251 – Seeding
- 252 – Sodding
- 253 – Mulching
- 255 – Erosion Control Blanket and Turf Reinforcement Mat
- 256 – Riprap
- 258 – Concrete Slope Protection
- 260 – Silt Fence
- 261 – Fiber Rolls
- 262 – Flotation Silt Curtain
- 265 – Stabilized Construction Access

Section 251 Seeding

- Major Revisions to this specification
- Revised Class I and II mixes
- Created split Class II mix
 - Early Season and Late Season
 - Application depends upon the Contractor's operations and schedule
- Class III is now "As Specified in the Plans"
- Class IV replaced by "Temporary Cover Crop"
- Class V was eliminated
- Wetland seed mixes were added

Section 251 Seeding

- Seasonal Limitations were revised
 - If seeding is needed before April 20th or between July 16th and August 9th, a Temporary Cover Crop is applied
 - Normal seeding can take place outside of these dates
- Class II Seasonal mixes
 - Early Season mix is applied between April 20 and July 15
 - Late Season mix is applied after August 10 and before the ground freezes

Section 252 Sodding

- No major changes to the Sodding specifications

Section 253 Mulching

- Contains specifications for both hydraulic and straw mulch and bonded fiber matrix
- Includes references to Section 251 regarding hydraulic mulch and seeding requirements
 - Combining seed into mulch is not mandatory, but at the Contractor's option
 - Will need bid items for both hydraulic mulch and the appropriate seed class

Section 255 Erosion Control Blanket and Turf Reinforcement Mat

- No major changes to the blanket or mat specifications

Section 256 Riprap

- Added 2 new riprap gradations
 - The existing gradation is now Grade II
 - Grade I is smaller than the existing gradation
 - Grade III is larger than the existing gradation
- When using grouted riprap, the riprap and grout are separate bid items

Section 260 Silt Fence

- No major changes to the silt fence specifications

Section 261 Fiber Rolls

- No major changes to the fiber roll specifications

Section 262 Flotation Silt Curtain

- Only one type of material now
 - No more Type I and Type II
 - To be used in all types of applications

Section 265 Stabilized Construction Access

- Added removal requirements

Section 302 Aggregate Base

- Changed the 72 hour windrow limitation to 48 hours
- Added a “Traffic Service Aggregate” spec
 - Material requirement is Class 5 or Salvaged Base
 - Intent was to apply this uniformly through all projects
 - Used the existing notes to assemble a full specification

Section 306 Blended Base Course

- No major changes to the blended base spec
- Includes multiple references to Section 302 for construction requirements

Section 401 Prime, Tack, and Fog Coat

- No major changes to this section

Section 411 Milling Pavement Surface

- No major changes to the milling specifications

Section 420 Bituminous Seal Coat

- Cationic bitumen material is the only bituminous material utilized in this section
 - This was accomplished by reference to Section 818 in the Materials subsection of Section 420
 - All requirements reflect that type of material

Section 421 Micro Surfacing

- Updated to reflect current International Slurry Surfacing Association (ISSA) specifications

Section 422 Slurry Seal

- Updated to reflect current International Slurry Surfacing Association (ISSA) specifications

Section 430 Bituminous Pavement

- The only HBP section in the Standard Specifications
 - QC/QA spec
 - Also included coordination and rewrite of the Field Sampling and Testing Manual
- Will include Recycled Asphalt Pavement specifications
- Heavily reorganized

Section 430 Bituminous Pavement

- Quite a few minor changes
- Some mid-range changes
- Not many major revisions
- More detail on this section will be provided at the Asphalt Conference on March 31st and April 1st

Section 550 Concrete Pavement

- Incorporates 3 Special Provisions
 - Concrete Mix Design – Standard SP 1286 (08)
 - Uncontrolled Cracking – Standard SP 1287(08)
 - Concrete ride specifications – project specific SP
- All joints will now be hot poured
 - No wide sawing will be required
 - No backer rods will be necessary
 - Design is updating the joint details/standard drawings

Section 570 Concrete Pavement Repair

- Split Dowel Retrofit into a separate section (575)
 - Per comment received during rewrite review
 - Rewrite team agreed with this
 - Section 570 contains references to 575 for sequencing of work
- Added ride specification SP

Section 575 Dowel Bar Retrofit

- No major changes, other than the obvious one that this is now it's own section

Section 600 Structures

- No specific breakdown of the individual sections in this presentation
 - Comment period ended on 2/21 and there hasn't been an opportunity to review those comments yet
- There are major revisions in Section 600
 - Elimination of outdated practices
 - Section 616 was heavily reorganized to provide information in a more logical way

Section 702 Mobilization

- No major changes to mobilization specification

Section 704 Traffic Control

- Major outline changes
- New sign sheeting standards
 - Type XI for “rigid” items
 - Grandfather clause for previously manufactured items

Section 706 Field Laboratory

- Contains major revisions
 - Still working out many details
 - Type A is being eliminated
 - Class 1 – Formerly Type B
 - Class 2 – Formerly Type C

Section 709 Geotextiles

- Added Geogrid specifications

Section 710 Temporary Bypasses

- Won't be included in the printed book
- Design Division recently revised the process for the design of these items
 - Need to coordinate how this affects the specifications
 - Will utilize Special Provisions until the requirements are set enough to issue as a supplemental specification

Section 714 Culverts and Storm Drains

- Eliminated out dated methods and materials
 - Aluminum pipes were deleted
- Joints on concrete pipes will be wrapped, in all cases
 - Combination of revising specifications and standard drawings
- Added Section 638, “Structural Plate Culverts” to this section
 - 638 mostly contained references to 714

Section 720 Monuments and Right of Way Markers

- Standard SP 1285(08) will become this section

Section 722 Manholes

- Eliminated outdated practices
 - Brick masonry construction

Section 724 Water Mains, Waterlines, and Sewer Lines

- This section is going to cover coordination and continuation of service
 - All material specifications and most construction requirements will be eliminated
- NDDOT has no expertise in this area
 - Typically Consultant design specific to the city
- Will rely on state statues and codes
 - Will also rely on Consultants to properly design systems

Section 744 Insulation Board

- No major changes to the insulation board specifications

Section 748 Curb and Gutter

- Eliminated outdated materials and practices
 - Bituminous curbing
 - Precast concrete curbing

Section 750 Sidewalks and Driveways

- No major changes to sidewalk and driveway specifications

Section 752 Fencing

- No major revisions to the fencing specifications

Section 754 Highway Signs

- Cleaned up the section for more modern fabrication technologies and methods

Section 760 Rumble Strips

- Revised the exclusion areas for ITS items to be more consistent

Section 762 Pavement Marking