

DelDOT Manuals, Guides, and Other Documents

2021 Update

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Manuals, Guides, and Other Documents

- Standard Specifications – **COMPLETED**
 - Standard Construction Details – **COMPLETED**
 - Pipe Inspection and Remediation Guide – **COMPLETED**
 - Road Design Manual – **UPDATING**
 - PAS Manual – **UPDATING**
 - Team Support Manual – **NEW**
 - Materials Manual – **UPDATING**
 - Development Coordination - **UPDATING**
 - Survey Guidebook – **UPDATING**
 - Traffic Design Manual – **UPDATING**
 - Lighting Policy – **COMPLETED**
 - Project Delivery Selection Process Manual - **COMPLETED/NEW**
 - Quality Manual – **UPDATING**
 - Bridge Design Manual - **UPDATING**
 - Bridge Inspection Manual - **COMPLETED**
 - Bridge Element Inspection Manual (BEIM) - **COMPLETED**
 - Bridge Load Rating Manual (BLRM) – **NEW**
 - Bridge Modeling & Forecasting Manual – **NEW**
 - New Wiki Pages – **NEW/UPDATING**
 - CADD
 - ProjectWise
 - ES2M Design Guide
-



2020 Standard Specifications

- September 2020
- Major effort to remove the passive voice and replace it with the active voice in the imperative mood.
- Make document more clear and concise.
- Projects not at or beyond SF Plans by November 1, 2020 will use the 2020 Standard Specifications.

Standard Specifications

for
Road and Bridge Construction

AUGUST 2020



Prepared by

The State of Delaware

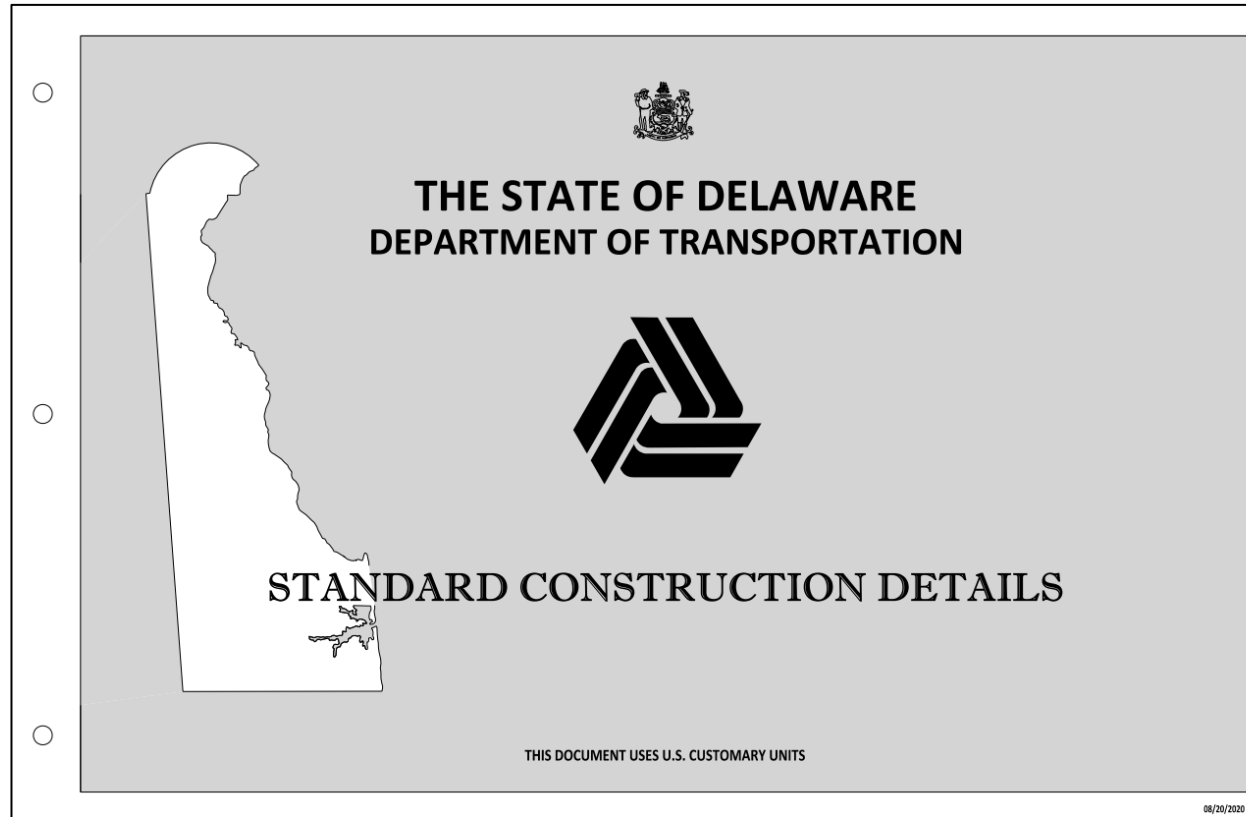
DEPARTMENT OF TRANSPORTATION
Excellence in Transportation • Every Trip • Every Mode • Every Dollar • Everyone

Jennifer Cohan, Secretary
Shanté A. Hastings, Chief Engineer



2020 Standard Construction Details

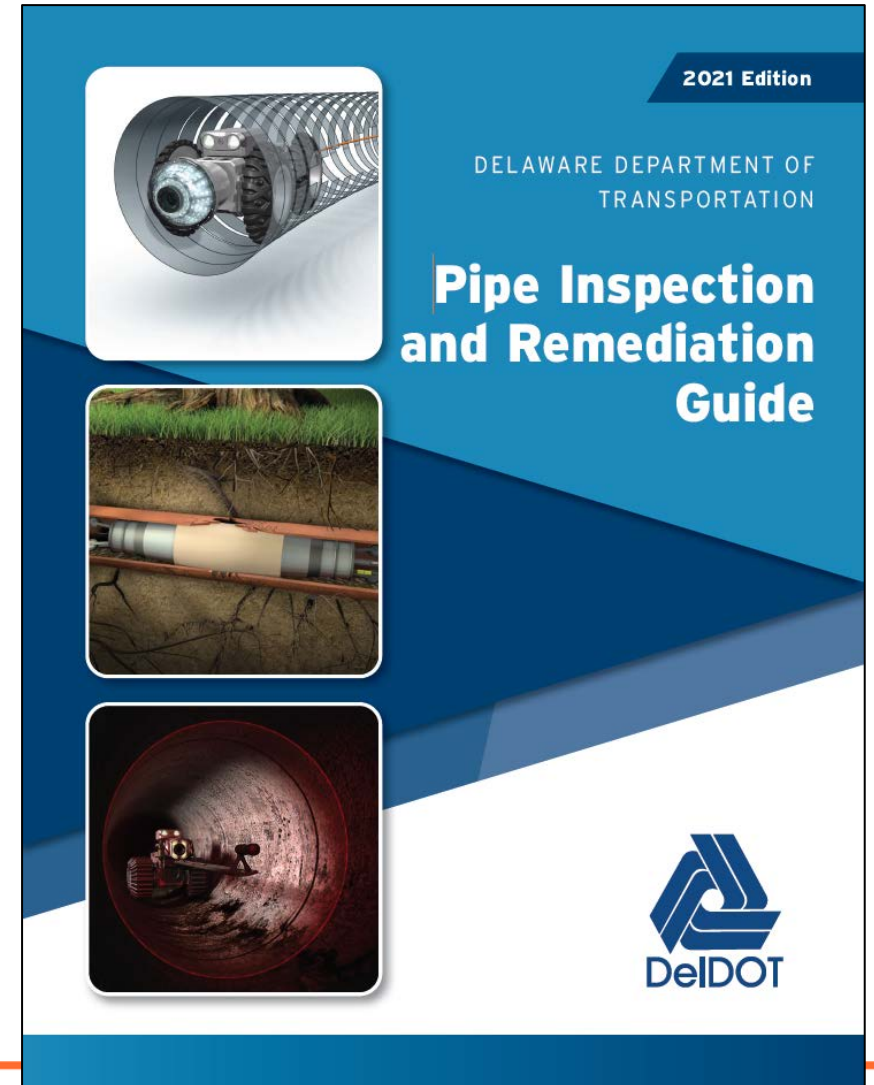
- September 2020
- Guardrail and Barrier MASH Compliance
- Clean up dimensions and notes to be consistent with specifications
- Projects not at or beyond SF Plans by November 1, 2020 will use the 2020 Standard Details.





Pipe Inspection and Remediation Guide

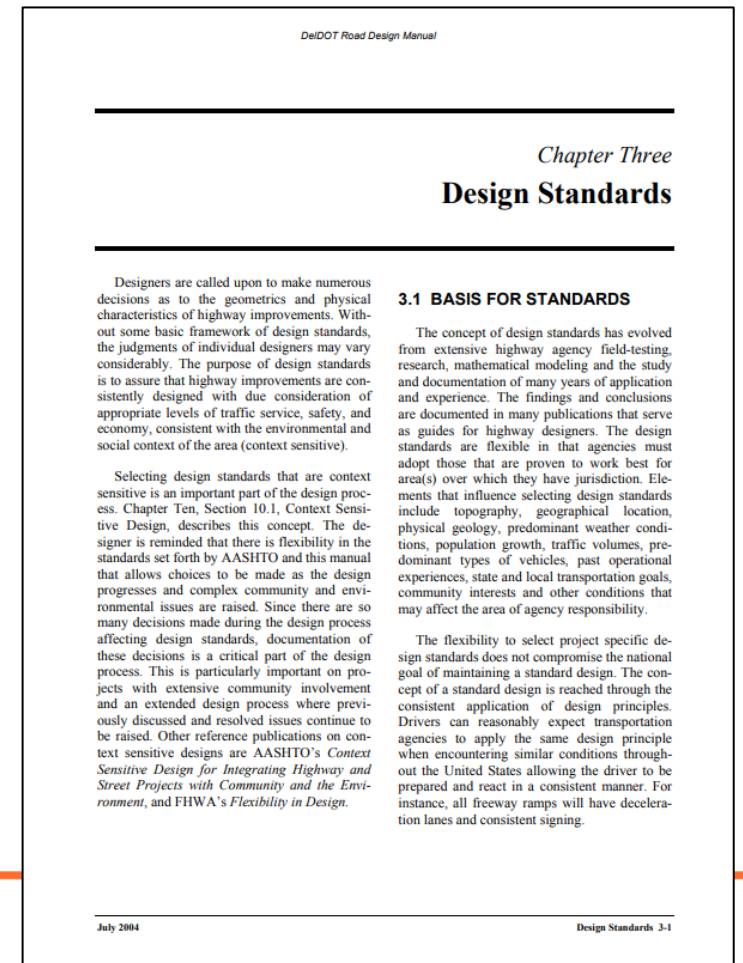
- Developed to provide pipe video inspection, acceptance, and remediation guidance
- Compiles industry best practices and does not have contract governance unless specifically cited.
- Inspection procedures, equipment, deliverables
- Inspection and evaluation of defects in RCP, Thermoplastic, and CMP
- Available on DeIDOT Publications Page and linked from the Construction Manual Wiki





Road Design Manual

- Re-write Manual, last revision to the Manual was in 2011
- Surveyed RDM users
 - Outdated references to other documents
 - Delaware specific design criteria
 - Adopt national manuals, standards, and publications
 - Streamline the document
 - Relocate some other guidance/examples to DRC
- Goal: Completion by end of 2021





Pedestrian Accessibility Standards (PAS)

- Re-write PAS Manual to remove ambiguity, improve clarity, and ease of understanding for users.
- Establish minimum standards compliant with federal requirements.
- Provide design guidance to exceed minimum requirements.
- Refine, develop, and memorialize RPE (Design, Construction, Administrative) and ADA Inspection and Acceptance Processes
- Goal: Completion by Summer 2021

Pedestrian Accessibility Standards for Facilities in the Public Right of Way

February 2018



**Prepared by
Delaware Department of Transportation**

Jennifer Cohan, Secretary



Materials Manual

- Early stages of re-write
- Provide guidelines for material sampling, testing, and analysis for M&R staff and suppliers.
- Design and Construction can use it as a reference to understand the tests and procedures
- First effort has been precast, nearing final draft
- Updating all of the inspection forms

- Goal: Completion 2022

DIVISION C400 –BITUMINOUS PAVEMENTS

SECTION C400 – ASPHALT, BITUMINOUS MATERIALS, AND HOT-MIX ASPHALT PAVEMENTS

C400.01 Summary. Bituminous materials are used in many aspects of roadway construction. Hot-mix asphalt pavement sections are used for both new construction and overlaying existing roadway and bridge facilities while other bituminous materials are used as maintenance tools for pavement preservation. The widespread use of bituminous materials in DelDOT projects results in the need to properly monitor production and placement of materials.

C400.02 Production and Operations. Bituminous materials, including asphalt cement, emulsions, and cutbacks, are typically accepted on the basis of producer certification. However, some occasions require that testing be performed on a sample of the bituminous material for verification. Check samples, which are used to verify accuracy of the producer's test results and to check on contamination and other problems, are taken on a regular basis from production facilities.

Prior to use on a project, all sources of materials and Job Mix Formulas (JMF) used for the production of hot-mix asphalt at a production plant must be approved. A record of the approval is maintained in both the Materials & Research Laboratory files and at the plant laboratory file. Approval for material sources may be either a blanket approval for the construction season or a single project approval.

In addition to approval of material sources, an inspection of the production plant including the equipment used, the on-site laboratory, and other items must occur. A report documenting the findings of the inspection is typically completed at the beginning of the construction season. An example of this type of report, Form LB-21, is provided in Part E.

Before hot-mix asphalt can be sent to a project, the project inspector must authorize the shipment. When authorization is given, the plant inspector documents this in the Plant Diary. An example of a plant activity report is provided in Part E (Form LB-24).

To ensure that production of hot-mix asphalt conforms to the specifications, all plant scales must be checked and approved prior to use. Documentation of this must be done in accordance with the hot mix asphalt Quality Assurance/Quality Control specifications. A scale check is performed at the beginning of the construction season by the producer and verified by the Engineer. Truck platform scales are certified by the Delaware Department of Agriculture, Weights & Measures Section at the beginning of each construction season as well. Truck scales can also be tested at the discretion of the Engineer.

It is imperative, when working with bituminous materials, that all safety precautions are taken to prevent bodily injury. Many bituminous materials are placed at extremely high temperatures that can cause extensive burns when contact with exposed skin is made. Plant personnel and those working with bituminous materials should wear protective clothing to prevent accidental injury.



Development Coordination Manual

- Updating Chapter 2, Traffic Analysis & Improvements
- Re-structure to reflect the PDCA and follow the current process:
 - Traffic Impact Studies (TIS)
 - Traffic Operational Analysis (TOA)
 - Transportation Improvement Districts (TID)
 - Area Wide Study (AWS)
 - Agreements: Signal, Off-Site Improvements...
- Regulatory Update and subject to public review/comment
- Goal: Fall 2021

CHAPTER 2 TRAFFIC ANALYSIS AND IMPROVEMENTS

2.1 PURPOSE

The purpose of this Chapter is to provide a clear process for determining transportation impacts associated with new development so that the impacts can be mitigated and system capacity can be preserved.

In order to accommodate a proposed development access, traffic must operate safely and at satisfactory Levels of Service (LOS).

2.2 TRAFFIC IMPACT STUDIES

A Traffic Impact Study (TIS) can be required by DelDOT, by a local government, or by both. As state and local governments have different responsibilities, their specific reasons for requiring a TIS and the things they need from it differ. DelDOT has responsibility for most of the state's transportation system and therefore utilizes the TIS to identify impacts to that system and to determine appropriate mitigation for those impacts. DelDOT then seeks to obtain that mitigation through its advisory role in the local government's land use approval process, including the issuance of a Letter of No Objection to Recordation. Direct requirements by DelDOT, meaning conditions for the issuance of a permit or for acceptance of a street, as opposed to conditions for a Letter of No Objection or No Contention, typically are limited to the location and design of the development access.

While some local governments have responsibility for municipal streets and in that regard have interests parallel to DelDOT's, most local governments that require a TIS do so in the context of regulating land use. They require that area transportation facilities be demonstrated to operate adequately as a condition for land use approvals.

A TIS may be initiated by DelDOT, the applicable land use agency, or by the Applicant in anticipation of submission of a subdivision or land development proposal for review.

For the purposes of Chapter 2, an intersection shall be defined as a place where two publicly maintained roads or streets intersect; an access drive shall mean where a privately maintained road, street, driveway or other entrance intersects a publicly maintained road or street, and a "major" intersection shall be



Survey Guidebook

- Evaluate content and update for current processes
- Goal: Completion July 2021

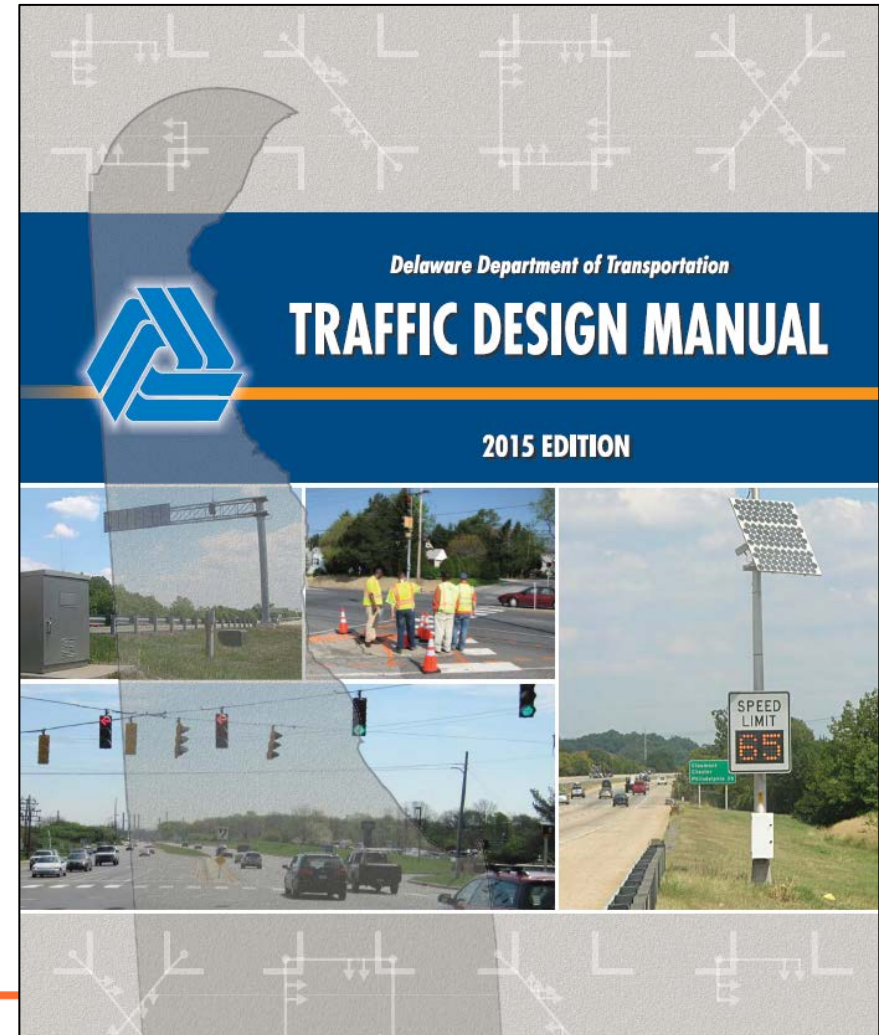
Survey Guidebook





Traffic Design Manual

- Outlines processes and procedures for design of signals, ITMS devices, etc.
- Review of the proposed updates for a few pertinent Departmental groups in the Spring
- Goal: Completion Summer 2021





Lighting Policy

- Updated July 2020
- Prior version (2012) Lighting Design Guidelines
- Modeled similar to Traffic Design Manual
- Includes process (flowchart) to determine when lighting is warranted.
- Lighting analysis guidelines and factors to consider for photometric calculations.



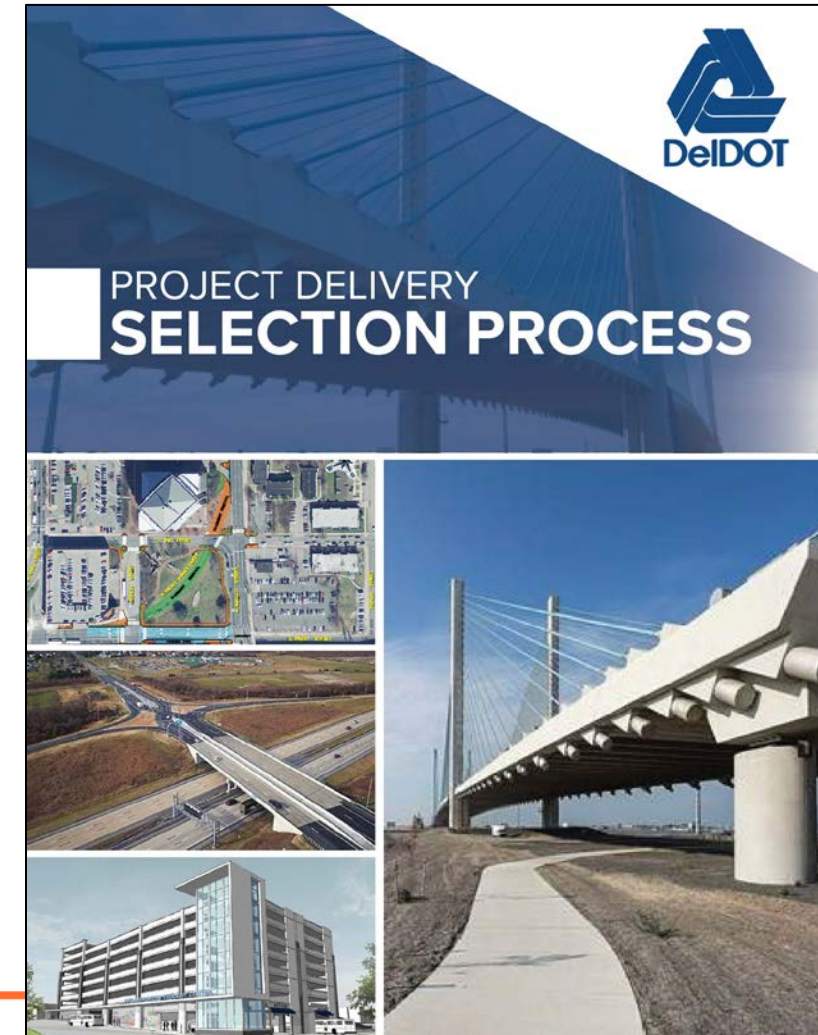
DELAWARE DEPARTMENT OF TRANSPORTATION'S
TRAFFIC LIGHTING POLICY

2020 Edition



Project Delivery Selection Process

- Formal structured approach for selecting project delivery methods for highway projects.
- Outlines project delivery methods (Design-bid-build, Design-Build, CM/GC), process, instructions, and evaluation worksheets.
- Provide documentation of the selection decision.
 - Forms/worksheets assist with generating Project Delivery Selection Report for each individual project considered.
- Goal: Completed/Updating March 2021





Quality Manual/Plan

- Last update January 2009
- Updating/replace this plan to capture current practices for quality assurance and quality control
- Revise outdated links and references
- Goal: Completion Early 2022

Quality Assurance/Quality Control Plan



**Delaware Department
of Transportation**

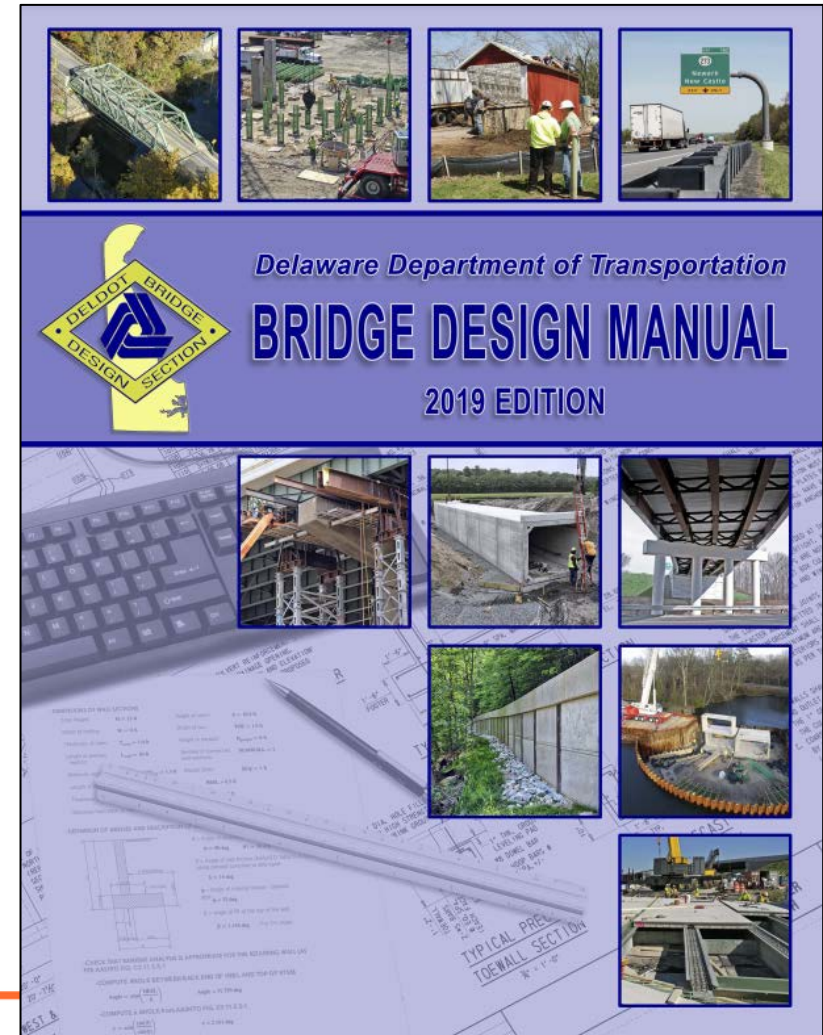
Division of Transportation Solutions

January 2009



Bridge Design Manual

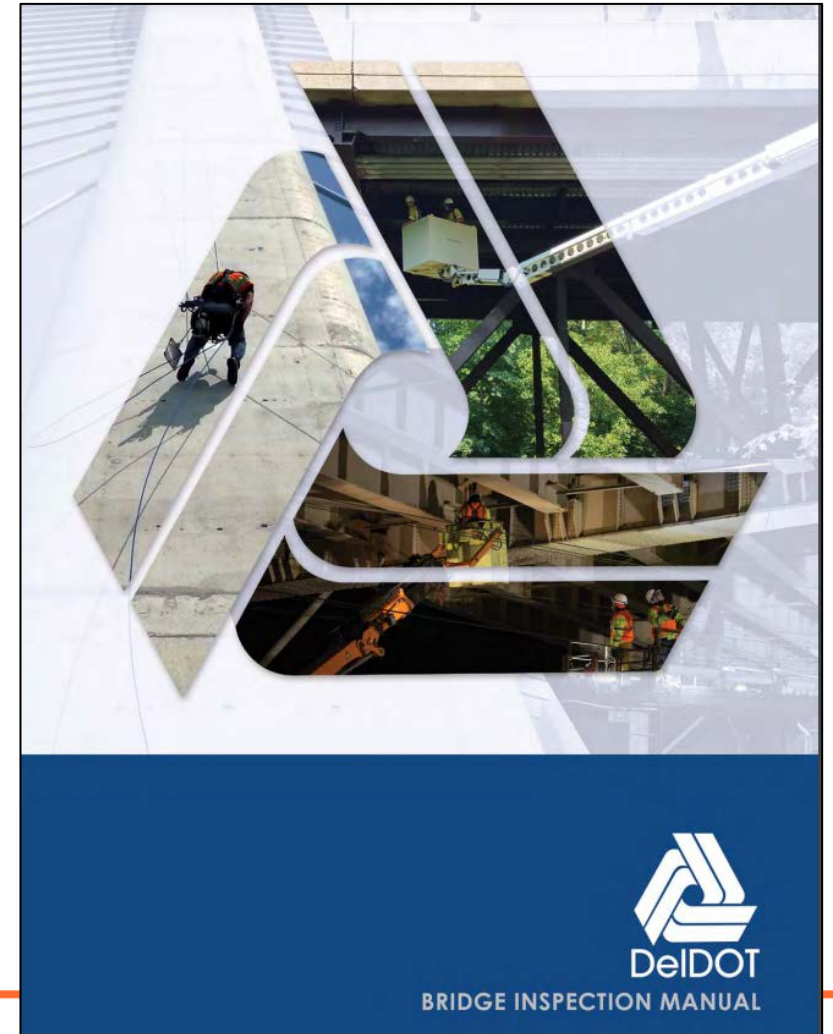
- MASH details and other minor miscellaneous updates
 - Goal: 2021 update by early March 2021
- Finish typical details in Section 300 and adopt 9th edition of AASHTO LRFD Design Specs
 - Goal: 2022 update by early 2022





Bridge Inspection Manual (BIM)

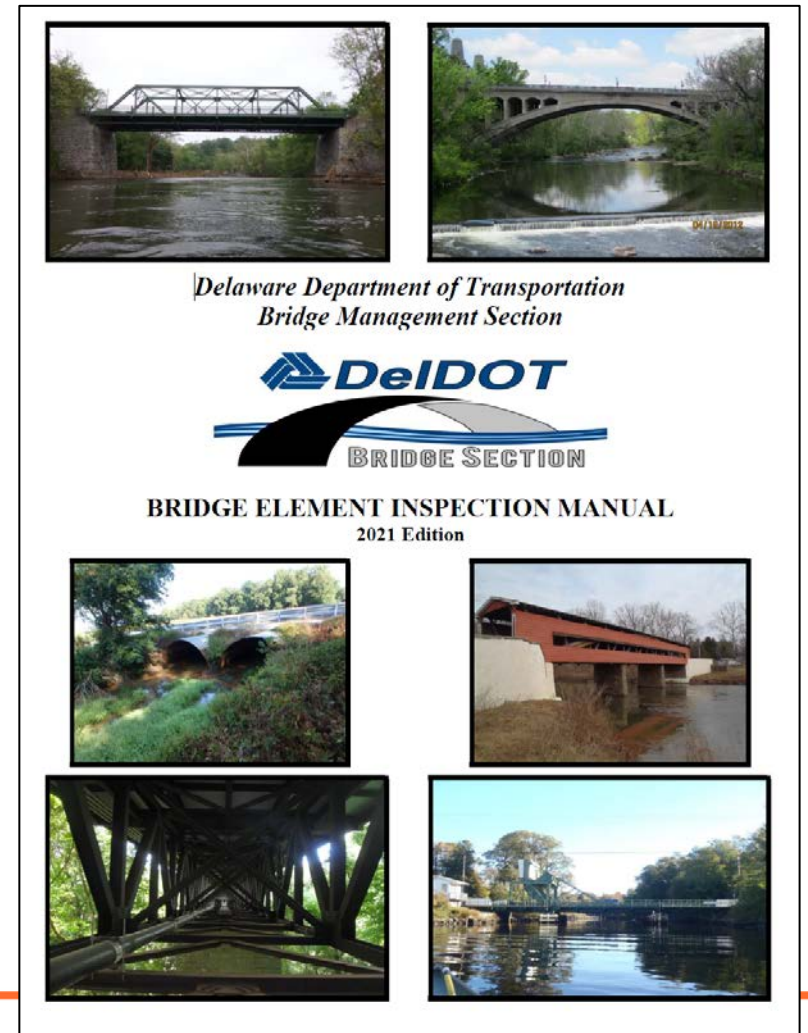
- Minor updates to Chapter 4 related to QC procedures
- Recently Updated





Bridge Element Inspection Manual (BEIM)

- Added a new bridge element and incorporated changes to the NBI Condition Rating guidance tables
- Recently Updated





New Bridge Manuals

- **Bridge Load Rating Manual (BLRM)**
 - New manual outlining bridge load rating, posting restrictions, and hauling permit review procedures.
 - Goal: Completion Spring 2021
- **Bridge Modeling and Forecasting Manual**
 - New manual describing the development of bridge deterioration models and bridge condition & budget forecasting process.
 - Goal: Completion Spring 2021





New DeIDOT Wiki Pages

- CADD Wiki
 - <https://caddwiki.deldot.gov/>
- Projectwise (PW) Wiki
 - <https://projectwisewiki.deldot.gov/>
- Erosion, Sediment & Stormwater (ES2M) Wiki
 - <https://es2mdesignguide.deldot.gov/>

The screenshot shows the main page of the CADD Wiki. It features the DeIDOT logo, navigation links for 'Main page' and 'Discussion', and a search bar. The main content area includes a welcome message, a brief description of the wiki's purpose, and contact information for CADD Support.

The screenshot shows the main page of the Projectwise Wiki. It features the DeIDOT logo, navigation links for 'Main page' and 'Discussion', and a search bar. The main content area includes a section titled 'What is ProjectWise?' and 'Why use ProjectWise?' with detailed text and bullet points.

The screenshot shows the main page of the Erosion, Sediment, & Stormwater Section Wiki. It features the DeIDOT logo, navigation links for 'Main page' and 'Discussion', and a search bar. The main content area includes the Delaware Department of Transportation logo, the title 'Erosion, Sediment, & Stormwater Section Wiki', and a 'DeIDOT Mission Statement'.



Questions/Comments

Thank you!

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