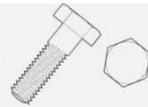




## SPECIFICATION UPDATES

### ASP-6 High Strength Bolts 506.3.12.31

- bolt tension on 7/8" bolt corrected



### ASP-6 Welding Inspection 506.3.19.4

- previously applicable for shop welding only, updated to apply to ALL welding

### ASP-6 Epoxy Coating System STD 517.3.1.3.3.2

- section added for painting galvanized surfaces

### ASP-6 Cleaning of Surfaces STD 517.3.1.3.5

- subsection added for cleaning of steel to be galvanized

### ASP-6 Concrete Overlay and Structure Repair STD 509.2

- material section updated to clarify material to be used for different applications
- pre-packaged non-shrink grout from APL may be used instead of site mixed or ready mixed grout
- for vertical and overhead surface repairs, use a pre-packaged vertical or overhead repair material from the APL

### ASP-6 Temporary Structures STD 526

- inspection requirements for temporary bridges open to traffic >24months (must have inspection entered into HSI)
- payment section includes staking of temporary structure

## REMINDERS

### Field Welding Inspection Report DT2320

- inspection record; quality control and quality assurance check by the Contractor and the Department respectively
  - Part A: Pile Splices Part B: Welded Components
- filled out daily by contractor's designated inspector
- filled out at the time of welding
- field engineer to verify the form is filled out correctly then sign form and submit to Field Welding Library
- unacceptable welds must be corrected before pile driving can continue and before the DT2320 can be signed

### Field Welding

- DO NOT ALLOW unauthorized field welding without review by BOS and approval of the Engineer
- field welds to the structure not noted on the plans or standard drawings are considered unauthorized welds
- examples: safety rails welded to flanges, studs without stud gun, form attachments in tension flanges



### Approved Products Lists

- must be on list at time of letting
- ensure Steel Fabricators are qualified for their work
- if there is any doubt/questions about the level of qualification contact BOS

### Adhesive Anchors

- concrete must cure 21 days prior to installation
- clean and prep drill hole prior to install
- confirm length and project above concrete

### Curing Concrete Floors

- bridges <100ft: polyethylene-coated burlap (or 12hr soaked wetted burlap), apply as soon as concrete sets sufficiently
- bridges >100ft: fogging within 25min of finishing/tining followed by burlap on wet surface
- continuously wet throughout cure period, prevent deck cracks

## CONTACT BOS!



Please reach out to BOS with any questions during your structures project. Get BOS involved before changes are made in the field.

## GET BOS INVOLVED EARLY!

### Lesson's Learned



We can be more help before the contractor tries to "fix" their issue.

Contractor drove pile out of spec for plumbness. They cut off the pile just above ground and spliced on a new crooked section of pile. If BOS been contacted before the pile was cut, we may have allowed it with a deduct. Instead they had to drive a whole new pile.

### Pile Driving

- if piles are driving much shorter or longer than plan contact the designer and BOS

### Girder Flange/Rebar Damage During Deck Removals

- CMM 528 covers deck removals, overlays and structure repairs
- contractors should not be allowed to damage/remove girder flanges, shear stirrups projecting out of girder or shear studs
- submit Damaged Girder Report to BOS if damage occurs, this report is to be filled out by the contractor

### Steel Girder Modifications - Safety Stands/Deck Forming



- ask contractor to submit RFI if they are drilling holes into steel girders that are not explicitly noted on the plans
- include location, size/spacing of drilled holes, filler bolt length/dia. and how it will be tightened

## CONTACT SHOP FABRICATION UNIT (SFU)

### Field Welding

- SFU contacts for field welding listed on DT2320
- the procedures (WPS) required to complete the work are not listed in the field welding plan DT2337
- the personnel present at the site are not listed in the field welding plan
- the contractor does not have an accepted field welding plan for the current construction year
- visually unacceptable welds are made and not corrected
- unauthorized welding has occurred

## COMPLETION NOTICE

- as your structure project nears completion, notify the BOS Bridge Maintenance staff for them to set up an initial inspection Scott Reay 262-548-6715 Scott.Reay@dot.wi.gov
- ideally initial inspection should be completed before opening to live traffic



## UPDATES

### Anchor Rod Tensioning DT2321

procedure language updated → PLEASE TELL THE CONTRACTORS →

- Turn of Nut is the only approved installation method
- clarified INSTALLATION vs INSPECTION  
*contractors should NOT be using the inspection or verification torque to tension anchors*
- rotation values updated based on the size and strength of the anchor rods
- Structure Inspector signature now required on form

6.	Mark the reference position of each anchor, top nut, and base plate with a permanent mark. Turn the top nuts using a star pattern to the required nut rotation specified in Table 2.
7.	Inspection - Using a torque wrench, the inspection torque, shown in Table 3 should be applied to the top nuts.

Table 3—Inspector Torque - Only to be used by structure inspector.

Diameter (in)	1/2"	3/4"	1"	1 1/8"	1 1/4"
**Inspection Torque (ft-lb)	32	113	273	386	545

### Ancillary Structure Pre-Installation Verific

- Table 3 updated to show tension value needed for pre-installation testing with DTI's
- use Table 6 if DTI washers are close to crushing all dimples during pre-installation test

Table 2—Top Nut Rotation for Turn-of-Nut Method

Anchor Bolt Diameter (in.)	Top Nut Rotation beyond Snug-Tight <sup>a,b</sup>	
	F1554 Grade 36 (blue) or Grade 55 (yellow)	F1554 Grade 105 (red)
< 1"	105°	120°
≥ 1" and < 1 1/2"	75°	90°
≥ 1 1/2"	60°	90°

### Large Diameter Culvert Inventory Pantry Form

- standard for steel and concrete pipes 7ft dia. and greater
- will help BOS and BHM inventory these large diameter pipes and determine where they belong, HSIS or CAMPS
- send completed form to Region Bridge PM

Old Table 3: Minimum Tension/Maximum Torque Reference Table. Circle the applicable value.

Bolt Dia.	1/2"	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"
120/A325 (k)	12	19	28	39	51	64	81	97	118
**Max. Torque (ft-lb)	125	247	437	711	1062	1500	2109	2779	3687

NEW Table 3: Minimum Tension/Maximum Torque Reference Table. Circle the applicable value.

Bolt Dia.	1/2"	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"
120/A325 (k)	13	20	29	41	54	67	85	102	124
**Max. Torque (ft-lb)	135	260	453	747	1124	1570	2213	2921	3874

## INSPECTION REMINDERS

### Signals

- Signal monotube inspections are scheduled through our master contracts. To ensure timely inspection **1-2 weeks prior to install** send inventory forms, plans, and summary of available project traffic control so the inspector can begin scheduling staff.
- once structure is erected and DT Forms complete send those to the Ancillary PM's (CC Sarah Wright) for inclusion in HSIS
- Construction PM will coordinate directly with EFU to schedule 'turn on' after structure inspection and punch list items are complete
  - *signals should not be turned on prior to completing inspection*
- Inventory Forms found on BOS Maintenance website

### Overhead Sign Structures and High Mast Light Towers

Standard Specification 532.3.8

- contractor responsible for scheduling and paying of the initial structure inspection for OSS and HML
  - *contact BOS if you have concerns about the inspection or it has not occurred*
- inspection and punch list items should be completed prior to removing traffic control

## COMMON ISSUES

### High Mast Light Towers - Structure Design

- FOUNDATION
  - **department designs** foundation and should be included in the LET plans along with location and luminaire layout
- POLE/ARM
  - **contractor designs** pole and arms according to Standard Specification 532.3.2.2
  - should be designed for 6 luminaires and 5% deflection under ultimate loads regardless of final configuration
  - calculations and shop drawings are to be submitted to Fabrication Library
- luminaire ring and luminaires are currently included in the QPL Lists in section 659.0400
- BOS is working to get pole designs to be placed on the QPL Lists as well as standard foundations for HML structures

### Tensioning Anchor Rods

- updated DT2321
- install using turn of nut method for final tensioning
- turn of nut will require 1.5-2.5 times the inspection torque to complete rotation depending on conditions
- contractor personnel must have taken Bolting Course on Learn Center



## STRUCTURES CONSTRUCTION QUESTIONS

WisDOT Plans		
<b>1. Structure Design Contacts</b> (as stated on structure plans)	Structure Designer	SEE PLANS
	Design Unit Supervisor	SEE PLANS
<b>2. Region Liaison</b>	(SE) Emily Kuehne	608-266-5089
	(SW) Jon Resheske	608-266-8491
	(NE) Ryan Harris	608-266-2963
	(NC) Max Kulick	608-261-6108
	(NW) Dan Monroe	608-266-8490
<b>3. Structures Construction Program Manager</b>	TBD	
<b>4. Supervisor</b>	Kyle Busch	608-267-0465
	Dominique Bechle	608-261-8205
<b>5. Design Chief</b>	Aaron Bonk	608-261-0261

Consultant Plans		
<b>1. Structure Design Contacts</b> (as stated on structure plans)	Consultant	SEE PLANS
	Aaron Bonk	608-261-0261
<b>2. Region Liaison</b>	(SE) Emily Kuehne	608-266-5089
	(SW) Jon Resheske	608-266-8491
	(NE) Ryan Harris	608-266-2963
	(NC) Max Kulick	608-261-6108
	(NW) Dan Monroe	608-266-8490
<b>3. Structures Construction Program Manager</b>	TBD	
<b>4. Supervisor</b>	Kyle Busch	608-267-0465
	Dominique Bechle	608-261-8205

## FABRICATION QUESTIONS

### Steel Structures, Railing, Expansion Joints, Sign Structures, Bolting Questions:

Kristin Revello 608-266-5090 [kristin.revello@dot.wi.gov](mailto:kristin.revello@dot.wi.gov)  
 Carla Principe 608-261-6110 [carla.principe@dot.wi.gov](mailto:carla.principe@dot.wi.gov)

### Design/Build Retaining Walls, Noise Walls, Prefabricated Bridges & Box Culverts:

John Rublein 608-246-7953 [john.rublein@dot.wi.gov](mailto:john.rublein@dot.wi.gov)  
 Kristin Revello 608-266-5090 [kristin.revello@dot.wi.gov](mailto:kristin.revello@dot.wi.gov)

## HIGHWAY STRUCTURE INFORMATION (HSI)

### Pile Driving Records:

[DOTDTSDDStructuresPiling@dot.wi.gov](mailto:DOTDTSDDStructuresPiling@dot.wi.gov)  
[DOTDTSDDGeotechnicalPiling@dot.wi.gov](mailto:DOTDTSDDGeotechnicalPiling@dot.wi.gov)

### As-Built Mailbox:

[DOTDTSDDStructuresRecords@dot.wi.gov](mailto:DOTDTSDDStructuresRecords@dot.wi.gov)



**BUREAU OF STRUCTURES ORGANIZATIONAL CHART**

