

Ancillary Structures

Ancillary structures include sign structures and signal monotubes (S), noise barriers (N), retaining walls (R), high mast lighting structures (L), and small bridges (C). This document includes general guidance regarding design, construction and inspection contacts and procedures.

Design: These structures require a unique structure ID. A unique structure ID can be acquired by submitting a Request for Structure Number Form to the Regional Ancillary PM. The Structure Number Request Forms can be found at the following address: <https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/strct/inv-forms-struct.aspx>.

Construction: All pertinent documentation (structural inventory form, design computations, plans, as-builts, shop drawings, etc.) needs to be submitted to the Bureau of Structures (BOS) either by the e-submittal process for C-R-N-L and sign structures. Signal monotube documents are to be sent to the State Ancillary PM. This documentation will be stored in the Highway Structures Information System (HSIS). For C-R-N-L and sign structures, inventory forms will need to be filled out by the designer or local program managers of the project. For signal monotubes, the inventory form is to be filled out by the construction PM. Training/assistance is available from the Bureau of Structures on filling out these forms. These forms can be found at this address: <https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/strct/inv-forms.aspx>. **Carolyn Brugman should be cc'd on all structure construction correspondence.**

Inspection: Initial and routine inspections for C-R-N structures are typically performed by the Region Ancillary PM's, notify them upon completion of the structure. Initial sign and high mast inspections are to be scheduled by the contractor as required in 532.3.8 of the Standard Specifications. Initial signal inspections are performed by Master Contract work orders and require construction staff to send the inventory form, DT forms and intersection plan sheets with structure ID and SB# tables sent to the state or region ancillary PM's. This includes structures built for local agencies using one of our improvement projects. For signals, inspection is required prior to turning on the signal and traffic control should still be present to facilitate the inspection to prevent delays. Please coordinate with your Regional Ancillary PM to schedule inspections.

Damaged Structures: Region Ancillary PM's should be contacted when structures damaged during construction, vehicle impacts or natural causes. Region Ancillary PM's will coordinate required inspections and provide condition information to State Ancillary PM and/or BOS Design/Development to analyze the structure. For signs and signals, if the structure needs to be removed due to safety concerns, contact the Region and State Ancillary PM's to coordinate use of the Emergency Removal/Repair Contract.

Sign/Signal Structures (S-xx-xxxx):

Definition: Overhead sign structures are used to support placement of highway directional signs, informational signs, or traffic signals with accompanying small traffic control signs. Signal monotubes include Type 9/10, Type 9/10 Special, and Type 12/13 structures. Strain poles are also considered S-structures. Camera poles, trombone arm and luminaire structures (light poles <=50 ft) are generally not considered S-structures.

Reminder: For new signal installations, the contractor shall submit the following applicable forms within 24 hours after installation to the State and Regional Ancillary PM prior to initial inspection. Signals are not to be turned on prior to an initial inspection.

[Signal Inventory Form](#)

Plan of intersection with SB# and Structure ID table

[DT2113](#) – Rotational Capacity Test (if not provided by bolt supplier)

[DT2321](#) – High Strength Steel Anchor Rod Installation Tensioning Record

[DT2322](#) – Ancillary Structures Pre-Installation Verification Test of High Strength Bolts

For new sign and HML structure installations, the contractor is responsible for conducting the initial inspection using BOS certified inspectors. See Standard Spec 532.3.8.

BOS Structure Expert Contact(s):	Steve Doocy (Signs)	608-261-6063
	Alex Crabtree (Signals)	608-266-3686

Noise barriers (N-xx-xxxx):

Definition: A structure constructed to alter the normal noise travel at a site. Structures are typically ground mounted but may be mounted to bridge or retaining walls.

BOS Structure Expert Contact(s):	Jon Resheske	608-266-8491
	Max Kulick	608 261-6108

Retaining Walls (R-xx-xxxx):

Definition: A structure used to provide lateral resistance for a mass of earth or other material to accommodate a transportation facility. Retaining walls are defined in the [Bridge Manual Chapter 2.5](#).

BOS Structure Expert Contact(s):	James Luebke	608-266-5098
	Emily Kuehne	608-266-5089

High Mast Lighting (L-xx-xxxx):

Definition: A tall lighting structure used to increase visibility at night. Structure heights range from 100 to 150 ft. Foundations are designed as part of the LET process by the department or a consultant and the poles are designed by the contractor.

BOS Structure Expert Contact(s):	Steve Doocy	608-261-6063
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Small Bridges (C-xx-xxxx):

Definition: A small bridge is defined in the [Bridge Manual Chapter 2.5](#).

BOS Structure Expert Contact(s):	Danielle DeTennis	608-266-8689
	Micah Brooks	608 266-5080

Other useful contact information:

Bureau of Structures

	Jason Lahm – Supervisor Inspection & Repair Unit	920-360-2374
	Steve Doocy – Statewide Ancillary PM	608-261-6063
	Ryan Bowers – (HSI, Document Storage, Forms)	608-267-3577
	Kristen Revello – (Fabrication & Shop Drawings)	608-266-5090
	Matt Coupar – (Bridge Inspections)	608-266-5083
	Carolyn Brugman – BOS Construction PM	715 420-6414
NE Region	Shane McCarty – Ancillary PM	920-492-4152
NC Region	Philip Saeger – Ancillary PM	715-697-3727
NW Region	Lee Balsiger – Ancillary PM	715-225-2231
SE Region	Jason Zemke – Ancillary PM	262-548-8734
	Karen Martens – (Signs)	262-548-6892
	Joyce Murphy – (Signals)	262-548-5933
	Eric Perea – (HML)	262-574-5422
SW Region	Hunter Waldschmidt – Ancillary PM (Madison)	608-243-5983
	Craig Fisher – (La Crosse)	608-785-9946

Bureau of Traffic Operations

	Ahmet Demirbilek – (Signals)	414 220-6801
	Matt Rauch – (Signs)	608-246-5305
	Jay Hille – (Signs)	608-243-5981