

NJDOT Comments for Sign Structure Inspection
Based on Publication No. FHWA NHI 05-036 - dated March 2005
(Guidelines for the Installation, Inspection, Maintenance and Repair of Structural Supports for
Highway Signs, Luminaires, and Traffic Signals)

The comments in the following table reflect various thoughts about the referenced guideline document. Specifically, these comments relate to our inspection effort, and in many cases represent specific areas where previous inspection efforts have not adequately noted results. Other times the comments state our overall opinion of the section. This informal document is for general guidance only, and should be considered to be a draft.

Spec,	Topic	Comment	jbe note
3.1	Material Types	Follow these guidelines for specifying Material in SS DB (Sign Structure DataBase). These numbers are what we are looking for.	
3.2	Corrosion Protection	Comment about any deficiencies in S.4, S.6 & S.7 as appropriate.	
4.0	Load Effects	Any visual evidence of significant Galloping or structural distress should be noted.	
5.0	Erection	Any alignment errors, significant lack of contact between bearing surfaces, or other erection errors should be noted.	
6.0	Bolted Connections	Loose or missing bolts are to be noted. Fully tighten loose nuts unless size requires specialized tools (then just snug to best of your ability). For missing connection hardware, either replace with provided hardware, or else measure so maintenance can come to field with correct hardware for replacement. Include nut and bolt sizes and material, and thread spacing.	
6.2	Stainless Steel	For combined aluminum/steel structures - note any missing stainless steel separation materials (shim plates, etc.).	
6.3	Aluminum Fasteners	If aluminum bolts or u-bolts are present anywhere in the structure, they are to be specifically referenced.	
6.4	Installation	Any alignment errors, significant lack of contact between bearing surfaces, or other errors should be noted.	
6.5	Anchor Rods	Specific anchor bolt location references should be included for significant corrosion, visibly deformed anchor rods and lack of proper nut placement. Again, for missing hardware, measure so maintenance can come to field with correct hardware for replacement. Include nut and bolt sizes and material,	

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		and thread spacing.	
6.7	Anchor Rod Joints	A photo shall clearly show a standard connection for the structure. If not possible, the connection type shall either be conveyed by the CAD drawing or text description in S.02 or S03. Cantilever structures with only 4 anchor bolts shall be flagged in S.02.	
7.0	Management of Inventory	Already reflects NJ.	
7.4	Inventory Numbering	Stencils shall be placed on a tower at a location visible to traffic, but high enough to be reasonably protected from salt spray and snowplow activities. The surface shall be cleaned prior to applying the stencils.	
8.0	Inspection Variables	Already reflects NJ.	
9.0	Inspection Frequency	Already reflects NJ.	
10.0	Inspection Priorities and Planning	Already reflects NJ.	
11.1	Suggested Personnel Requirements	Complies with NJ except: 1. We refer to the Program Manager as a Project Manager. 2. We prefer the Team Leader have a P.E., and do not allow acknowledge NICET as a substitution for years of experience.	
11.2	Tools & Equipment	Loose or missing bolts are to be noted. Fully tighten loose nuts unless size requires specialized tools (then just snug to best of your ability). For missing hardware, either replace with provided hardware (if available), or else measure so maintenance can come to field with correct hardware for replacement. Include nut and bolt sizes and material, and thread spacing.	
11.3	Traffic Control	Already reflects NJ, except that the heavy traffic in NJ results in a higher reliance on Mobile Lane Closures.	
11.4	Safety	We expect the professional consulting firm to have a comprehensive Safety Plan in place for their firm. We do not typically audit this plan.	
12.0	Inspection Procedure		
12.2	Nomenclature		
12.2.1	Sign Bridge	NJ uses the term Span Sign Structure in it's sign structure inspection effort rather than Sign Bridge (Note: Overhead Sign Structure is a general term referring to any type of sign structure over a road).	
12.2.3	Mast Arm Structure	With rare exception, and only when explicitly approved, Mast Arm Structures are not included in this	

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		inspection effort.	
12.2.6	Detailed Nomenclature	Already reflects NJ (Figure 20 & 21 are NJ details), EXCEPT that we define Left and Right Lateral Clearance as the distance between the traveled lanes, including ramps, and the first obstacle encountered (in the detail, Right = Guide Rail, and Left = Left Foundation – typically a NJ barrier shape if above ground and not otherwise protected).	
12.2.7	Orientation of Members	Figure 24 essentially represents NJ method, EXCEPT: 1. NJ standard for referencing structures is Near Face and Far Face (not front and back). 2. Where sign panels are on both faces, the Near Face (Front) of the Sign structure is based on a vehicle traveling from low mile-point towards a higher mile-point.	
12.3.1	Sign Structures	See our sheet describing our standards for sign panel reflectivity.	
13.0	Element Inspection	Already reflects NJ.	
14.0	Element Condition Rating	Already reflects NJ.	
14.1	PONTIS Element Definitions and Ratings	Ignore this section.	
15.0	Inspection Report		
16.0	Maintenance and Repair		
16.1	Prioritization of Work	Ignore Table 11. Use table in NJ database.	
16.2	Routine Maintenance	NJ expects some routine maintenance to be performed by inspectors. The most important of which are easily performed tasks that would otherwise require a separate lane closure to perform the work.	
16.2.1	Foundations	If a foundation is buried, a recommendation should be made to uncover it if such a recommendation is reasonable.	
Appendix A	Example Element Ratings	Already reflects NJ.	
Appendix B	Example Inspection Report Forms	Ignore this section.	
Appendix C	Sample Inspection Report	Already reflects NJ.	