



Sign Structure - Inspection and Rating

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# Sign Structure Inspection and Rating

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## Introduction

- Signing for Interchanges
- Naming Convention
  - Site file number 75760
  - Visual identifiers
    - Z = sign structure
    - N,S,etc = direction of approach
  - Structure number
    - 2= 2nd structure (travelling north)
  - Example 75760-ZN-2
- Rating and Recording same as for other structures

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## Inventory Data

- Verify and update

## Utilities

- Note and record
- Most structures have lights

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## Approach Road / Safety Features

- Horizontal and vertical alignment
  - rate same as Chapter 6 of BIM
- Traffic Safety Features
  - refers to all flashing lights, barriers, signs, etc. (not guardrail)
  - rate function and condition
- Guardrail
  - rate according to Chapter 6 of BIM
  - record length
  - meets standard Yes / No
    - W-Beam 550mm above road, 1950 post space & turn down end
  - guardrail termination type

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## Substructure


Bridge Component	Substructure		Explanation of Condition
	Last	Now	
Pedestal			
(Total number : )			
(Type : )			
(Offset from Shoulder (m) : )			
Column			
(Type : )			
Connections			
Coating			
Substructure General Rating			

- Substructure accommodates
  - DL of sign structure
  - LL such as wind etc.



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## Substructure (Cont' d)

- Pedestal
  - base for column attachment (usually concrete)
  - check for scaling, spalling or corrosion (light scaling not serious)
  - record number and type (concrete or steel)
  - measure and record offset
- Column
  - carries bridge loads to pedestal
  - generally steel; susceptible to deicing salts and vehicle damage
  - check surface condition, welds, connections, etc.



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## Substructure (Cont' d)

- Connection / Bearings
  - refers to column-to-pedestal connection
  - loss of section , missing or loose nuts, rate 4 or less
  - check all welds for cracks
- Coating
  - refers to coating on column and pedestal
  - top coat deteriorated, primer intact rate 5
  - pitting and / or loss of section rate 4 or less



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## Superstructure


Bridge Component	Superstructure		Explanation of Condition
	Last	Now	
(Sign Type : )			
Special Features			
Special Feature			
(Type : )			
Special Feature			
(Type : )			
Truss Members			
Bottom Chord			
Diagonals			
Verticals			
Connections			
Access Platform			
Coating			
(Type : )			
Touch-Up (Y/N)			
Span Alignment Problems			
Vertical (Y/N)			
Horizontal (Y/N)			
Superstructure General Rating			

- Refers to portion spanning the road



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## Superstructure (Cont' d)

- Special Features
  - refers to high load indicators, special lighting, hazard signs, flashers, etc.
- Truss Members
  - rating details Chapter 7 of BIM
    - bottom chord
    - diagonals
    - verticals
    - connections
  - check lower members for collision damage
  - tension members fatigue cracks
  - rate section loss 4 or less

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## Superstructure (Cont' d)

- Access platform
  - refers to platform and rail (servicing)
  - Level I from ground with binoculars
  - Check connections
  - high load damage
- Coating
  - rating same as 15.6.5 Substructure
- Span alignment problems
  - check for bows, sags, buckles, twists, etc.
  - alignment of columns

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## Signs

Bridge Component	Sign		Explanation of Condition
	Last	Now	
Sign Board			
(Type : )			
Connections			
Coating			
Readable (Y/N)			
Illumination			
Sign General Rating			

- Refers to signs on the superstructure
- Should be clear, clean and readable

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## Sign (Cont' d)

- Record type of sign
- Sign Board
  - damage from wind, high load, etc.
  - fasteners, and connections
  - coating damage or deterioration
  - lighting
- Coating
  - damage, difficult to read
  - rate 4 or less
- Connections
  - loose or missing bolts
  - rate 4 or less

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## General Ratings

- App Road / Safety Features
  - Hor. And Vert. align
  - Safety concerns
- Substructure
  - Pedestal, Column and Connection ratings
- Superstructure
  - Load carrying elements
  - Safety concerns
- Sign
  - Sign board, Connections, Coating, Illumination



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