

QA CLOSE-OUT MEETING CLARIFICATIONS

Active	
<u>Topic</u>	<u>Date</u>
(SCBI) coding 5 vs. 7	6/4/2020
Deck rating of Prestressed Non-Composite Adjacent Box Beam	6/4/2020
Superstructure condition rating for rehabilitated NCABB	2/17/2021
Assigned Load Rating FAQ	5/6/2021
Inventory coding for structures without an independent deck	7/15/2021
Approach Alignment and intersections	3/23/2022
Concrete Encased I-beam Paint Rating	3/23/2022
Concrete Encased I-beam Span Interaction (6A28)	3/23/2022

Inactive		
<u>Topic</u>	<u>Superseded by?</u>	<u>Date</u>

(SCBI) coding 5 vs. 7

Status: [Active](#)

- There is a common misconception that an SCBI = 7 (Countermeasures) is “better” than an SCBI = 5 (Stable w/in footing). SCBI “7” is defined as countermeasures installed to correct a previous scour problem. SCBI “5” is defined as foundations in stable condition, which did not have a previous scour problem. A bridge with SCBI = 7 is considered an SCBI Category D and requires a POA while a bridge with SCBI = 5 is not assigned an SCBI Category. For example, in the case of a bridge with an IU27 (SCBI Code) code of “7” for one substructure unit and “5” for another, the value returned for IU04 (Overall SCBI) will be “7”, since a “7” is more critical than a “5”.

Deck rating of Prestressed Non-Composite Adjacent Box Beam

Status: *Active*

- The top flange of adjacent box beams is treated as the deck and establishes the deck condition rating when no independent concrete deck is present. In some cases, the tops of the beams are covered by a wearing surface. The condition of the wearing surface gives an indication of the deck condition which typically should not be higher than the wearing surface condition rating unless there is strong evidence to support otherwise.
- The deck rating for a NCABB bridge does not have to be the same as the superstructure rating when no independent concrete deck is present. For example:
 - Cracks in fascia of exterior beams control the superstructure.
 - No signs of leakage along the underside and top of deck/wearing surface is in good condition.
 - Deck could be rated a “6” and superstructure rated a “4”.
 - Do not assume the deck is in poor condition unless the deterioration along the underside proves there is a problem with the deck.
 - Or if past photographs show the top flange to be in bad condition before a wearing surface was applied.

Superstructure condition rating for rehabilitated NCABB

Status: *Active*

- When a P/S NCABB bridge has open parapet joints with cracking exhibited on the beams below the joints, the superstructure condition rating should be no higher than a 3.
- If the P/S NCABB bridge was rehabilitated by just making the parapet continuous (elimination of the open joints), the superstructure rating should not be increased higher than a 5.
- If the P/S NCABB bridge was rehabilitated with a composite deck and continuous parapet, use the standard condition rating table to evaluate and rate the superstructure. The special rating table for NCABB does not apply once the deck is composite action.

Assigned Load Rating FAQ

Status: **Active**

1	Question:	We have a bridge built on or after 2011 and it was a locally owned bridge designed with ASD or LFD. How do we code the NBI vehicle?
	Response:	HS20 shall be the NBI vehicle and reported in tons. 4B01 Design Load shall be set to the design vehicle (not PHL-93). IR06 shall be set to A or D if designed with LFD or 1 if designed with ASD (e.g. timber beams with deck). Note, for future projects with PennDOT oversight, we should require the bridge to be designed LRFD with PHL-93 as the design vehicle.
2	Question:	Our District prefers to provide load ratings with FWS included. Is that acceptable?
	Response:	Yes, each District can choose to provide ratings with or without FWS.
3	Question:	We have a bridge built on or after 2011 which was designed with the PHL-93 vehicle but we don't have PHL-93 ratings (For example, a Conspan Arch) and there is not enough information on the plans and field measurements alone are not enough to rate the bridge. How do we code the NBI vehicle?
	Response:	The best solution would be to contact the manufacturer or designer and have them provide the load rating. If this is not possible, the PHL-93 RF's will need to be coded based on engineering judgement assuming the IR=1.0 and OR=1.50. IR06 shall be set to 7. The NBI vehicle must be the PHL-93 with rating factors. 4B01 Design Load shall be set to PHL-93. Note, for future projects, we should have the manufacturer provide ratings on the sealed design plans.
4	Question:	Pub 100A, Example 5, gives three methods to code the load rating set in BMS2. Is there a preferred method?
	Response:	Example 5 is a case with the substructure designed by LFD and a superstructure replacement in 2014 designed LRFD with the PHL-93 vehicle. FHWA allows the NBI vehicle to be HS20 or PHL-93 for this case. All three methods are acceptable; therefore, the Districts may choose the method that works best for them.
5	Question:	We have a bridge built in 1976 which had a deck replacement in 2019. We have stamped LRFD ratings based on the deck replacement. Should we utilize LFD ratings?
	Response:	The NBI vehicle should be HS20 reported with tonnage. The design load would be set equal to the original design load of the beams. IR06 shall be set to 2 since this will not be an assigned load rating. Consider using the LRFD method with PHL-93 as the NBI vehicle only if it is a complete superstructure replacement. For the superstructure replacement, the load rating can be assigned if all 5 criteria are met and IR06 would be C or F.
6	Question:	Our rating set has the IR20/21 rating factors. Why is the bridge still getting flagged by the validations as an error?
	Response:	The PHL-93 rating vehicle needs to be assigned as the NBI rating vehicle in order for the rating factor data to be included on the NBI submission to FHWA.
7	Question:	We have a bridge built on or after 2011 and it was a locally owned bridge with no plans and we don't know the Design Load. How do we code the 4B01 Design Load and the NBI vehicle?
	Response:	HS20 shall be the NBI vehicle and reported in tons. If possible, perform a bridge load rating with field measurements. The 4B01 design vehicle may be determined based on the results of the rating. If the bridge can't be rated, set 4B01 Design Load to HS20 and use engineering judgement to determine the rating values. Note, for future projects with PennDOT oversight, we should require the bridge to be designed LRFD with PHL-93 as the design vehicle.
8	Question:	We have a bridge built on or after 2011 and it was a locally owned bridge with plans indicating the bridge was designed with LRFD methodology with PHL-93 as the design load. A rating set is not available on the plans. How do we determine the load ratings?
	Response:	The NBI vehicle must be the PHL-93 with rating factors. 4B01 Design Load shall be set to PHL-93. If there is sufficient information on the plans to analyze the bridge or if field measurements are sufficient to analyze the bridge; then utilize PennDOT's LRFD programs to determine the ratings and code IR06 equal to 6. If there is not enough information to perform an analysis; see Question 3.
9	Question:	Bridge was built on or after 2011 and superstructure was designed LRFD and the timber deck was designed LFD. How should we code 4B01 Design Load and the NBI vehicle?
	Response:	The NBI vehicle should be HS20 with tonnage. The 4B01 Design load should be taken from the design calculations/plans. If portions of the structure are designed for different vehicles, take the lesser of the two.
10	Question:	Bridge was originally built in 1972 and had a superstructure replacement in 2015. Do we need to assign PHL-93 as the NBI vehicle?
	Response:	No, see Example 5 from SOL 495-20-01 for 3 possible methods to code. The NBI vehicle can be HS20 or PHL-93.
11	Question:	We have a bridge built on or after 2011 and it was designed LRFD with HS20/25 as the design load. How do we code the NBI vehicle?
	Response:	HS20 shall be the NBI vehicle and reported in tons. 4B01 Design Load shall be set to the design vehicle (not PHL-93). IR06 shall be set to C if the rating set is from the original design/plans.

Inventory coding for structures without an independent deck

Status: [Active](#)

- In instances when there is not an independent deck (ie., traffic drives directly on the superstructure beams or slab)
 - If the beams or slab were cast with a sacrificial wearing surface, you should:
 - Code 6A33 with the thickness
 - Code 6B40 with a deck wearing surface condition rating
 - Code 6A38 as “00 - Not Applicable”
 - Code 1A01 with a deck condition rating
 - 1A01 should match 6B40
 - If there is not a record that the beam or slab have wearing surface included:
 - Code 6A33 as 0
 - Code 6B40 as N
 - Code 6A38 as “00 - Not Applicable”
 - Code 1A01 with a deck condition rating

*Note: It is not expected for changes to be made for historically coded items. If there is proof, plans, etc., the appropriate changes can be made following the guidance above.

Approach Alignment and intersections

Status: *Active*

- Condition & Appraisal Item 4A02, Approach Alignment, is based on speed reduction and limited sight distance due to the vertical and horizontal alignment of the roadway approaches to the bridge. It is not intended to take into account intersections adjacent to the bridge when determining speed reduction or limited sight distance.

Concrete Encased I-beam Paint Rating

Status: [Active](#)

- Encased I-beams with non-intentionally exposed steel (i.e. only exposed due to encasement spalling) should not have 6B36, Paint Condition Rating, or 6B37, Extent of Paint Condition, coded. The appropriate coding for 6B36 & 6B37 would be "N".
- If the encased I-beam steel becomes exposed due to concrete spalling:
 - If the exposed steel is painted as a preventative maintenance item, items 6B36 & 6B37 should remain as "N". The intent is that 6B36 & 6B37 should remain "N" for the life of the bridge.

Concrete Encased I-beam Span Interaction (6A28)

Status: [Active](#)

- Per Pub 238 Part IE, 6B.6.1, when a concrete encased I-beam deck (1A01) or superstructure (1A04) condition rating is in poor condition, then the section is considered non-composite for load rating purposes. In tandem with this assumption, item 6A28 (span interaction) should be updated to “1 - Simple, non-composite” to reflect the update to non-composite action when 1A01 or 1A04 becomes poor (< 5).
 - This change can be documented in BMS2 note fields.