Title: REVISED BRIDGE DETAIL SHEETS FOR BRIDGE RAILINGS AND BARRIERS

Target Audience:
- Manufacturers (18)
- Local Govt. (31)
- Agencies (32)
- Surveyors (33)
- Consultants (34)
- Contractors (39)

ADMINISTRATIVE INFORMATION:
- This Engineering Bulletin (EB) is effective beginning with projects submitted for the letting of May 7, 2015.
- This EB does not supersede any other issuance.

PURPOSE: To announce revisions to the Bridge Detail (BD) Sheets - US Customary for Bridge Steel Railings and Bridge Concrete Barriers.

TECHNICAL INFORMATION:
General: This Engineering Bulletin issues detail revisions and corrections to Bridge Detail (BD) Sheets. It announces the availability of sheets to which minor corrections to spelling errors, drafting errors, conversion errors, and other minor discrepancies which do not affect the current design configurations of the FHWA approved railings and barriers and should not affect ongoing design or construction work. The layout of the details on these sheets has been improved to allow the details on these sheets to be used directly in contract plans. In addition, the drawings for the concrete barriers have been reorganized numerically by BD sheet number so that details that relate to a specific type of barrier occur in order. The numbering of the BD-RC series has been changed to the BD-RCB series to clarify references to the new and old sheets. A list of the changed sheets and the nature of the changes is attached to this Engineering Bulletin.

IMPLEMENTATION: Since the configurations of the existing railings and barriers have not changed, these details may be incorporated into plans sooner than the effective date at the discretion of the designer.

TRANSMITTED MATERIALS:
Attached is a list of the changed sheets, with the nature of the changes. The changed Bridge Detail (BD) Sheets are available online at: https://www.dot.ny.gov/main/business-center/engineering/cadd-info/drawings/bridge-detail-sheets-usc

CONTACT: Direct questions regarding this issuance to Peter McCowan of the Standards and Policies Unit of the Office of Structures at (518) 485-1148 or via e-mail at peter.mccowan@dot.ny.gov.
Bridge Detail (BD) Sheet revisions - December 2014

For all sheets RCB1E thru RCB20E:

- These concrete barrier BD’s replace the RC series BD’s. The BD -RCB series sheets are organized in such a way that each set of details for a particular barrier or parapet follow on sequential sheets and so common details are now together.
- Any reference to NOT TO SCALE has been removed from these sheets.
- All sheets were redrawn to an appropriate USC Scale.
- Corrected errors due to conversion to new font for symbols.
- Corrected occasional round off errors due to conversion from SI Units.
- The Optional Mowing Strip will be changed to Optional (Hot-Mix Asphalt) Vegetation Control Strip to agree with the current standards and will extend to two feet from face of rail.

BD-RCB1E

- The STEEL BEAM WITH PRESTRESSED FORM UNIT OPTION AND SMALL OVERHANG has been eliminated as it is no longer in use.
- The slab reinforcement Designer Note has been moved to the appropriate detail.
- The bar bending diagram notes referencing the bar list program has been added to the Designer Notes.
- The lap length note has been added to the Designer Notes.

BD-RCB3E

- In the Plan View the Optional (Hot-Mix Asphalt) Vegetation Control Strip was properly dimensioned.
- Shelf Angle Note "D" reference has been changed to refer to Note "B". There is no Note "D" on this drawing.
- The 9" dimension at the end of flared tube in the Elevation View has been changed to be shown from the top of tube.
- In Section B-B, top of pavement to top of rail has been changed to 2'-8½".

BD-RCB4E

- The Heavy Post and the Transition Post lengths were adjusted. The posts should be 7" long and the Soil Plates should be an even inch number with no fractions. The errors that were corrected were due to round off from metric conversion.
- On the Heavy Post Elevation - the blockout tube has been redrawn correctly and the note stating that the top of the tube should be flush now states that it is flush with the top of the post.
- Changed outdated weld designation B-U1 VB to B-U2a-GF to conform to AWS and SCM designations.

BD-RCB5E

- REFER TO BRIDGE MANUAL, SECTION 6 FOR BRIDGE RAILING SELECTION CRITERIA has been added to the Designer Notes.
BD-RCB8E
- A note has been added to the precast section that requires the anchor bar to be cast into the beam.

BD-RCB9E
- The title of Section A-A for prestressed box beams has been changed to refer to slab units and not Bulb Tees nor Concrete I-Beams.
- In the Prestressed Box Beam Section the embedment length for the bottom hairpin has been changed from 5" to 6".

BD-RCB11E
- The 2% cross slope Designer Note for Bar Types has been edited.

BD-RCB12E
- In the Elevation of End Connection detail, (TYP.) has been added to the ¾" bolts call out.
- In the same view the 1” thick steel plate is now called out.
- In the Plan View, the Optional (Hot-Mix Asphalt) Vegetation Control Strip has been properly drawn and dimensioned.

BD-RCB13E
- In the Plan View, the Optional (Hot-Mix Asphalt) Vegetation Control Strip has been properly drawn and dimensioned.

BD-RCB15E
- The 2" of cover between the 1st bar and window on both elevation views is now shown.
- The radius for Preferred Panel Detail "A" has been added. The Match Line for this detail has been added.

BD-RCB16E
- The 2' long anchor bars that are welded to the steel plate have been changed to plain bars from epoxy.
- The weld symbol now points to the joint between the steel plate and 2' plain bars.

For all sheets RS1E thru RS8E:
- All sheets were redrawn to an appropriate USC Scale.
- Any reference to NOT TO SCALE has been removed from these sheets.
- Corrected errors due to conversion to new font for symbols.
- Corrected occasional round off errors due to conversion from SI Units.
- Corrected occasional typographical and spelling errors.
- The Optional Mowing Strip will be changed to Optional (Hot-Mix Asphalt) Vegetation Control Strip to agree with the current standards and will extend to two feet from face of rail.
BD-RS3E
- A new STEEL BRIDGE RAIL (THREE-RAIL) WITH CURB detail has been added and approved for use by the FHWA.

BD-RS4E
- In the Plan View, call out the centerline of Expansion Splice Assembly in the proper locations.
- Any reference to VEGETATION CONTROL STRIP has been changed to OPTIONAL (HOT MIX ASPHALT) VEGETATION CONTROL STRIP.
- Note C had been modified to match nomenclature in the current Highway Standard Sheets and similar notes in the rest of the BD's.
- The Designer Notes were changed to reflect the above nomenclature and to correct the reference to the Highway Design Manual.

BD-RS5E
- In the Plan View, at the Second Heavy Post, call out this note: NO BOLT BETWEEN THE SECOND AND THIRD BOX BEAMS AND THE BLOCKOUTS ON THIS POST.
- In the Elevation View, call out the centerline of Expansion Splice Assembly in the proper locations.

BD-RS6E
- In the U-WINGWALL WITH BRUSH CURB SECTION, The wall width was changed from 1’-4” to 1’-8”.

BD-RS7E
- The special post detail was modified to include the edge distance requirement. A Designer Note was added to provide guidance for this modification.
- Corrected FLARE SPICE ASSEMBLY. It should be SPLICE.

BD-RS8E
- Change call out in 4 places: 4-¾” DIA. FULLY THREADED BOLTS, to 4-¾” Ø BOLTS.
- The Expansion Splice Assembly details now show the assemblies as they actually are. The splice tubes are shorter and the expansion width is shown set to the appropriate width. Previously the expansion width was not shown correctly allowing for too much bridge expansion and not enough bridge contraction.
- The Designer Notes were changed to clarify that the expansion and contraction refer to the bridge and not the rail joint.