<table>
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<tr>
<th>Date of Revision</th>
<th>Name of Detail Sheet</th>
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<tbody>
<tr>
<td>6/25/2019</td>
<td>T2 Steel Bridge Rail</td>
<td>Revised Post Assembly: Added deck reinf. Deleted Detail A &amp; Section A-A Changed Detail B &amp; Sec B-B to Section A &amp; Sec A-A Removed Stud Weld Detail Revised Rail Notes: #(8) Removed Detail B reference Revised Material Notes: #(14) Removed 1st sentence referencing threaded studs Deleted #(16) referencing threaded studs Renumbered (17) &amp; (18)</td>
<td>Clarified posted assembly showing deck reinforcing required to meet the crash testing. Removed Detail A, Section A-A and Stud Weld Detail and notes referencing the threaded stud weld option. Spoke with Contractor who installs the railing and the threaded stud welded connection has never been used nor was it crash tested. Now, only the bolt detail shall be shown for installation.</td>
</tr>
<tr>
<td>6/25/2019</td>
<td>T2 Steel Bridge Approach Rail (Steel Posts) T3 Steel Bridge Approach Rail (Steel Posts) T4 Steel Bridge Approach Rail (Steel Posts)</td>
<td>Revised Section A-A (Post Rail Assembly) note: To: 5/8&quot; Ø x 9 1/2&quot; button head bolt (Typ) From: 5/8&quot; x 1 1/2&quot; hex head bolt (Typ) Revised showing bolt attaching to the front flange instead of the rear flange.</td>
<td>Spoke with Contractor who installs the units. The approach units have been installed with bolt attached to the front flange and not the rear flange.</td>
</tr>
<tr>
<td>5/23/2018</td>
<td>Precast Concrete Deck Panel - Steel Girder</td>
<td>Added note to Steel Girder Overhang Detail: &quot;Detail shown for deck overhang less than 2'-6&quot;. Curb hoop bar shall be tied to the bottom longitudinal deck bars when possible.&quot;</td>
<td>Clarified hoop bar shall be tied to bottom longitudinal deck bars when possible to meet bridge railing crash test requirement.</td>
</tr>
<tr>
<td>5/15/2018</td>
<td>Texas Restrained Barrier (X-Bolt) Portable Concrete Barrier - Braced</td>
<td>Added the portable concrete barrier sheets to the website per Design Memorandum 2018-03.</td>
<td></td>
</tr>
<tr>
<td>3/20/2018</td>
<td>T2 Steel Bridge Approach Rail (Steel Posts) T3 Steel Bridge Approach Rail (Steel Posts) T4 Steel Bridge Approach Rail (Steel Posts)</td>
<td>Added note to Elevation - Approach Rail: &quot;DO NOT BEND&quot; Removed 5'-0&quot; dimension from sidewalk note on plan view of T4 Steel Bridge Approach Rail sheet.</td>
<td>Two sections of the bridge approach rail cannot be bent to a radius: connection plate (2'-5 1/8&quot; section) and thrie-beam to w-beam transition section (6'-3&quot;). These sections must be shown laid out on a tangent. Sidewalk width may vary depending on project.</td>
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| 12/12/2017      | Precast Concrete Deck Panel - Steel Girder  
                 Precast Concrete Deck Panel - Concrete Girder | Made separate sheet for steel and concrete girder.  
Table A redesigned using new PCI design example.  
Notes updated.  
Overhang detail added.  
Staggered stud detail added.  
Skewed deck panel detail added.  
Grout bed width set at 1.5".  
Top plain reinforcing bars increased from #3 bar to #4 bar | The standard sheet was redesigned with the new PCI design example. A maximum skew of 15 degrees was set for a precast panel. Deck overhang reinforcing detail was added to clarify reinforcing required. Shear stud detail added to clarify how to space studs when flange is narrow. Additional notes added for guidance. Top plan bar reinforcing designed for a cip deck. Typical min. reinforcing for cip is #5 bars at 12". #5 bar is too large for 3.5" panel, so decided to use #4 @ 6" (As=0.44 in²/ft which is greater than #5 at 12"). |
| 3/17/2017       | Wood Panel Soundwall (2 of 3) | Sheet 1 of 3: Wood Wall Panel Detail:  
Revised dimension From: 6 1/2" To: 6 1/4"  
Sheet 1 of 3: Precast Concrete Leveling Panel Detail:  
Revised description of welded wire fabric:  
From: 4x4 (W6xW6), To: 4x4 - W4.0xW4.0  
Sheet 2 of 3: Design Criteria Notes:  
Revised Note #4: From: Welded wire fabric for the leveling panels shall conform to section 544.  
To: Welded wire fabric for the leveling panels shall be black steel and conform to Section 544.  
Revised Note #4: Added "galvanized" to read:  
Anchor rods shall be galvanized and conform to AASHTO M31 Grade 60, and fabricated in accordance with Section 550 or conform to ASTM F1554, Grade 55. | After speaking with Reeds Ferry Lumber in Merrimack, it was found that the 2x8 pressure treated boards lose 1" in the mill process. The dimension for the tongue and groove stays at 3/4" but the remaining board is 6 1/4".  
A Fabricator contacted Bridge Design stating the WWF for the precast panel called for on the plans (4"x4" (W6xW6)) is not an in-stock item with the suppliers and requires a special order with large quantities. Bridge Design should call for a commonly stocked WWF for future projects or the price will be very high. Bridge Design looked into this and agree the WWF called for was not a commonly stocked item and changed the plans to a commonly stocked WWF that is close to the area steel of the W6xW6. |
### BRIDGE DETAIL SHEETS - REVISION HISTORY

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</table>
| 11/1/2016        | Snow Screen with Steel Bridge Rail Protective Screen with Steel Bridge Rail | Revised all descriptions of vertical pipe size:  
From: 2\text{-pipe} To: 2 3/8" O.D. pipe  
Revised all descriptions of horizontal pipe size:  
From: 1 1/4\text{-pipe} To: 1 5/8" O.D. pipe  
Revised all description of clamp:  
From: Boulevard Clamp To: In-Line Clamp  
Removed note:  
"12 gauge galvanized steel or 3/16" aluminum (min. thickness)"  
Revised General Notes:  
(1) Removed: "Zinc-coated conforming to AASHTO M181, Type I, Class D (ASTM A 392)" and "or 6 gauge aluminum alloy conforming to AASHTO M181, Type III (ASTM F 1183)"  
(2) Removed: "Zinc-coated or"  
(3) Removed: "or aluminum alloy conforming to AASHTO M181 (ASTM B429, alloy 6063-T6)" and "Nominal pipe sizes are shown in the drawings."  
(4) Removed: "Boulevard" and "or aluminum alloy conforming to AASHTO M181 (ASTM F626)"  
Added:  "All bar bands shall have a beveled edge."
 | Speaking with bridge railing installers, aluminium has not been used for bridge railing since 1980's. Only steel is used except for wire ties (both aluminium and steel can be used). Zinc coating was also removed because galvanizing is the best coating and widely provided by suppliers. The pipe sizes were revised to reflect supplier's description. The In-Line clamps have different dimensions depending on fabricator. As long as we note to use 3/8" carriage bolts, we will get the heavier clamp. |
| 11/1/2016        | T2 Steel Bridge Rail  
T3 Steel Bridge Rail  
T4 Steel Bridge Rail | Revised note in cloud:  
To: No modifications permitted to this sheet, except as noted below:  
From: Modifications permitted for this sheet: |
| 11/1/2016        | Wood Panel Soundwall (1 of 3)  
Wood Panel Soundwall (2 of 3)  
Wood Panel Soundwall (3 of 3)  
Soundwall Location Chart | Sheet 1 of 3:  
Section A-A:  
Added "Post Length"  
Sheet 2 of 3:  
Replaced "Wall Height" to "Post Length" on Post Section and Post Base Plate Details.  
Design Criteria: Revised note (2) Design Loading:  
Wind pressure = 44 psf (factored) to 45 psf (factored), \(K_z(c) = 1.12\) (Top of post measured 55 ft. above low ground surface) to \(K_z(c) = 1.13\) (Top of wall measured 56 ft. above low ground surface)  
Sheet 3 of 3:  
Replaced "Wall Height" to "Post Length" on Anchor Rod Details.  
Soundwall Location Chart:  
Removed "Post Length (ft)" column  
The wind pressure is designed using the wall height. A precast fabricator requested the post section, base plate and anchor rod sizes be determined using the post length instead of the wall height. This change is easier for the fabricator to determine what sizes to use for a certain post length. The design loading wind surface (wall height) was increased 1-ft. to maintain the 15-ft and 25-ft. dimension for the post length. The wind pressure increased along with the \(K_z(c)\) factor. There was no change in member sizes with the increase.  
It was decided that the post length should be determined by the Fabricator and it was removed from the Soundwall Location Chart. | |

Clarified note.
# BRIDGE DETAIL SHEETS - REVISION HISTORY

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<tr>
<td>10/10/2016</td>
<td>Pier Protection Type I (54” SS Concrete Barrier)</td>
<td>Post Connection Detail:</td>
<td>Items numbers included for use when attaching to beam guardrail.</td>
</tr>
<tr>
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<td>Pier Protection Type II (54” SS Concrete Barrier)</td>
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<td>Pier Protection Type II (54” SF Concrete Barrier)</td>
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<tr>
<td>3/12/2016</td>
<td>T2 Steel Bridge Approach Rail</td>
<td>Notes: Added note #2 and renumbered notes: W6x25 posts shall be the same material as the bridge rail posts. W6x8.5 posts shall be the same material as the w-beam guardrail posts. Revised old note #3 to new note #4: To: Weld bars adjusted for slope &amp; bend. Use complete joint penetration butt weld (B-U2). From: T2: Weld bottom splice bar to fit bend. Use complete joint penetration butt weld (B-U2). T3: Weld splice bar to fit bend. Use complete joint penetration butt weld (B-U2). T4: Weld splice bar and rail tubes to fit bend. Use complete joint penetration butt weld (B-U2). End Cap Details: Revised &quot;TS&quot; reference to &quot;HSS&quot; reference. Section A-A (Post Rail Assembly): Revised dimension to break-in-slope: To: 2'-6&quot; From: 2'-8&quot; Minimum Revised location of break-in-slope and measured to face of rail. Added note: 5/8&quot; x 1 1/2&quot; φ hex head bolt (typ) Rail Post (W6x25): Added note: Install two bolts (4 slots in posts flange optional) Elevation - Approach Rail: Revised note To: Splice bars (Paid under approach rail unit) (See note #4) From: Splice Bar (Bent) see note #3 (End splice to be paid under bridge approach rail) (typ) Elevation - Approach Rail T4: Changed reference T5 to HSS, revised view of bottom rail (added a line).</td>
<td>Clarified post material. Updated tube call out to HSS. Revised break-in-slope location. Minor revisions.</td>
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| 3/12/2016        | T2 Steel Bridge Rail | **Section B-B (Connection Plate):**  
Revised note To: Outline of terminal connector  
From: Outline of terminal connector rail slots  
**Section B-B (Connection Plate) T4:**  
Added carriage bolt to bottom rail | Contractor requested to drill additional holes for when the rail doesn't line up with the hole during installation.  
Bending requirements are now noted in the specification. |
|                  | T3 Steel Bridge Rail | Back Elevation View:  
Added note: *Install two bolts (4 slots in post flange optional)*  
Revised location of call out for slotted holes in post.  
**Rail Notes:**  
Note #7: Added "(See Section 563.3.2.1)"  
Note #8: Revised % zinc by weight from "94%" to "92%". Added "Section 550.2.9.1". | |
<p>|                  | T4 Steel Bridge Rail |                      | |</p>
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<tbody>
<tr>
<td>2/8/2016</td>
<td>Wood Panel Soundwall (1 of 3) Wood Panel Soundwall (2 of 3) Wood Panel Soundwall (3 of 3) Soundwall Location Chart</td>
<td>Sheet 2 of 3: Post Connection Detail: Revised note to: The Last 4.5&quot; of vertical post reinforcement shall be threaded. 3&quot; of the threads shall extend beyond the bottom of the post for walls ≤ 15'. 4&quot; of the threads shall extend beyond the bottom of the post for walls &gt; 15' to 25'. From: The Last 4&quot; of vertical post reinforcement shall be threaded. 3&quot; of the threads shall extend beyond the bottom of the post for walls ≤ 15'. 3 3/4&quot; of the threads shall extend beyond the bottom of the post for walls &gt; 15' to 25'.</td>
<td>Updated sheets for AASHTO LRFD 2014 Specification with 2015 &amp; 2016 Interims. The wind velocity changed from 90 mph to 123 mph. The load factor changed from 1.4 to 1.0 for wind load. The exposure categories changed. Designed with category C (Open Terrian) - conservative. No member sizes changed. Increased the threaded length to provide extra length to work with.</td>
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**General Notes:**
Revised #8 to: Vertical reinforcing steel for the posts shall have the last 4 1/2" threaded to the size specified on the plans in accordance with Section 550.

From: Vertical reinforcing steel for the posts shall have the last 4" threaded to the size specified on the plans in accordance with Section 550. 3 1/2" of the threads shall extend beyond the bottom of the post.

**Design Criteria:**
Revised to:
(2) Design Loading: Wind pressure = 44 psf (factored), Wind velocity = 123 mph (AASHTO Fig. 3.8.1.1.2-1), Ground Surface Roughness Category C: Open Terrain.
(3) Design Dimensions: Maximum wall height = 25' wall on a 30' retaining wall. Maximum post spacing = 12'-9" From:
(2) Design Loading: Wind pressure = 40 psf (factored), Wind velocity = 90 mph (AASHTO Fig. 15.8.2-1). Adjusted for 75 yr design life Vz = 96.3 mph.
(3) Design Dimensions: Maximum wall height = 25'- wall. Maximum post spacing = 12'-9"
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| 11/2/2015        | Bridge-Mounted Sign Supports | **Plan View Detail:** Added rail posts and note "Space to avoid Rail Posts".  
**Top View (2 Support System) Detail:** Added field weld symbol and "(TYP)" to anchor plate reference.  
**Top View (3 Support System) Detail:** Added "See Anchor Plate Detail (TYP)".  
**Section C-C Detail:** Re-drew gusset plate and structural tee on a skew.  
**Section B-B Detail:** Added splice plate and note 6" Min.  
**View A-A Detail:** Added reference to 1/8" pad and 1/2" Ø bolt. Drew panel extrusion planks for sign face. Added wording to note: "(using WT as a template)" and "or field splice plates".  
**Weld Termination Detail:** Drew gusset plate and structural tee on a skew.  
**Concrete Girder Attachment Detail:** Renamed title to "Concrete NEBT Girder Attachment Detail", added weld sizes, added dimensions to 1/2" plates, added "Seal with Silicone Joint Sealant (TYP) (Subsidiary)". | Clarification. The NEBT have the same dimensions so the 1/2" plates would be the same for all girders. |
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</table>
| 11/2/2015        | Bridge-Mounted Sign Supports | **Anchor Plate Notes:**  
Revised sentence in note (1):  
To: The hole shall be filled with high strength non-shrink grout after the anchor bolt is installed (typical).  
From: The hole shall be filled with high strength non-shrink grout after the anchor bolt is anchored (typical).  
Revised note (2):  
To: For a C.I.P concrete coping, the 1/2” Ø high strength galvanized bolts shall be set in place before placement of the concrete.  
From: (Alternate) 1/2” Ø high strength galvanized bolts set in place before placement of concrete.  
Deleted note (3)  
**General Notes:**  
Revised note (3): “Type 1”  
From: “Type 3”  
Revised note (7): Removed “and” from 2nd sentence - made paragraph into 3 sentences. |
|                  |                      |                      | Anchor Plate Notes:  
(1): The word “anchored” was left from when the anchors were expansion anchors and created confusion on whether still using them. No longer using expansion anchors because they leave a gap under the bolt that can fill in with salt water and corrode the bolt.  
(3): Deleted note because not needed. Can’t have less than 2 anchor plates and the anchor plates will always fall between rail posts.  
**General Notes:**  
(3) The Detail Sheet shows only bolts in the attachment to the girder in which Type 3 (weathering steel) would be appropriate. However, the shop plans have been showing the angles bolted together temp. before welding and these bolts stay in place and should be Type 1 (galvanized). Decided to make all the bolts Type 1 (galvanized). |
| 10/16/2015       | Wood Panel Soundwall (1 of 3)  
Wood Panel Soundwall (2 of 3) | Added “4” MIN. on Soundwall Elevation.  
Post Connection Detail: Revised the dimension from top of shaft to top of base plate  
From: 3 3/4” for walls < 15’, 4 1/2” for walls 15’ to 25’.  
To: 4 1/2”  
Post Connection Detail: Revised note from “… the post for walls 15’ to 25’. “ to “… the post for walls > 15’ to 25’. “ | Clarification. The distance from the top of the shaft to the top of the base plate was originally 3 3/4” for the 1” anchor rod and 4 1/2” for the 1 1/4” rod. This revision in distance was made so the unsupported height of the rod from the shaft to the bottom of the nut did not exceed 1” as required for sign structures. However, this left a gap between the leveling pad and the top of shaft (4 1/2”) when the 3 3/4” distance is used for the smaller walls. It was decided to allow the additional 3/4” unsupported length to the 1” anchor rod so there is no gap in the leveling pad or question in the field if things are fitting correctly. The 3 3/4” distance was removed and 4 1/2” distance is used for both rod sizes. |
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<tr>
<td>8/5/2015</td>
<td>Wood Panel Soundwall (1 of 3)</td>
<td>Added the word &quot;(TYP)&quot; to descriptions on Soundwall Elevation and Soundwall Plan regarding the drilled shaft, closed cell material, wood panels and precast concrete post.</td>
<td>Clarified descriptions.</td>
</tr>
<tr>
<td>8/4/2015</td>
<td>54&quot; Single Slope Concrete Barrier, Precast</td>
<td>Revised Concrete Barrier Reinforcing Schedule: Loop bar unbent length: From 8'-2&quot; to 7'-11&quot; #4 stirrup: From 3 1/8&quot; R to 2 5/8&quot; R, 8.83&quot; to 8 7/8&quot;, 4.37&quot; to 5 1/4&quot;, unbent length 11'-2&quot; to 11'-3 5/8&quot;</td>
<td>Corrected reinforcing dimensions.</td>
</tr>
<tr>
<td>8/4/2015</td>
<td>54&quot; Single Slope Concrete Barrier Single Faced, Precast</td>
<td>Revised Concrete Barrier Reinforcing Schedule: Loop bar unbent length: From 7'-7 1/4&quot; to 7'-3 1/2&quot; #4 stirrup: From 2 3/4&quot; R to 2 1/4&quot; R, 8&quot; to 8 1/4&quot;, 10 1/2&quot; to 9 1/2&quot;, 4&quot; to 5 1/4&quot;, unbent length 10'-9&quot; to 10'-9 3/8&quot;</td>
<td>Corrected reinforcing dimensions.</td>
</tr>
<tr>
<td>5/10/2015</td>
<td>T2 Steel Bridge Rail T3 Steel Bridge Rail T4 Steel Bridge Rail</td>
<td>Added: &quot;Face of Rail&quot; note to Anchor Plate Detail</td>
<td>Clarification on what direction the anchor plate shall be placed in the curb. The reduced plate section due to the hole is to be on the side with the back anchor rods.</td>
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| 4/23/2015        | Bridge-Mounted Sign Supports | Revised note #1 Anchor Plate Notes to: 1/2" ⌀ high strength galvanized anchor bolts 8" long (1 1/2" above top of concrete) with standard galvanized nut and washer in drilled hole. The hole shall be filled with high strength non-shrink grout after the anchor bolt is anchored (typical). The anchor bolts shall conform to the requirements of ASTM A449. 
From: 1/2" ⌀ high strength galvanized expansion bolt 8" long (1 1/2" above top of concrete) with standard galvanized nut and washer in drilled hole. The hole shall be filled with high strength non-shrink grout after the expansion bolt is anchored (typical). Revised note #3 General Notes to: All bolts and related hardware shall conform to the requirements of AASHTO M164 (ASTM A325) Type 3. All bolts shall be slip critical (class B), 7/8" ⌀ high strength in 15/16" ⌀ holes. From: All bolts and related hardware shall conform to the requirements of AASHTO M164 (ASTM A325) Type 1. Added hole dimension to Section B-B | Clarification what type of bolts to use in the anchor attachment and the girder attachment. The expansion bolt was removed because when it’s installed, a gap is left between the bottom of the bolt and the bottom of the drilled hole. This can fill with water and corrode the bolt overtime, unnoticed. A regular anchor bolt shall be installed in a drilled hole and grouted. |
<p>| 2/18/2015        | Wood Panel Soundwall 2 of 3 | Revised note #9 of General Notes to include wording: All costs subsidiary to Item 594.2. | Clarification that water repellent (silane-siloxane) will be subsidiary to the soundwall item, 594.2. |
| 2/3/2015         | T4 Steel Bridge Approach Rail (Steel Posts) | Revised note #3 to: Weld splice bars to fit bend. Use complete joint penetration butt weld (B-U2). From: Weld bottom splice bar to fit bend. Use complete joint penetration butt weld (B-U2). | Clarification that only the top two splice bars shall be welded. |</p>
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<tr>
<td>2/3/2015</td>
<td>T3 Steel Bridge Approach Rail (Steel Posts)</td>
<td>Revised note #3 to: Weld splice bars to fit bend. Use complete joint penetration butt weld (B-U2).&lt;br&gt;From: Weld bottom splice bar to fit bend. Use complete joint penetration butt weld (B-U2).</td>
<td>Clarification that all splice bars shall be welded.</td>
</tr>
<tr>
<td>2/3/2015</td>
<td>T2 Steel Bridge Approach Rail (Steel Posts)</td>
<td>Revised &quot;Elevation View&quot; note to: Splice bar (bent) See note #3 (End splice bar to be paid under bridge approach rail (Typ)&lt;br&gt;From: Splice bar (bottom bent) See note #3 (End splice bar to be paid under bridge approach rail (Typ)&lt;br&gt;Revised note #3 to: Weld splice bar to fit bend. Use complete joint penetration butt weld (B-U2).&lt;br&gt;From: Weld bottom splice bar to fit bend. Use complete joint penetration butt weld (B-U2).</td>
<td>Clarification on what splice bar shall be welded. The top splice bar does not need to be welded.</td>
</tr>
<tr>
<td>1/15/2015</td>
<td>Pier Protection Type I (54&quot; SS Concrete Barrier) Pier Protection Type II (54&quot; SS Concrete Barrier) Pier Protection Type II (54&quot; SF Concrete Barrier)</td>
<td>Added note: Modifications shall be made to sheet to fit project.</td>
<td>Clarification that changes can be made to sheet.</td>
</tr>
<tr>
<td>12/12/2014</td>
<td>Wood Panel Soundwall (1 of 3) Wood Panel Soundwall (2 of 3) Wood Panel Soundwall (3 of 3) Soundwall Location Chart</td>
<td>Added notes, removed one post design, increased plate thickness, removed grout, and increased anchor rod extended length above shaft.</td>
<td>Updated sheets for AASHTO LRFD 2014 Specification and higher exposure height.</td>
</tr>
<tr>
<td>12/12/2014</td>
<td>Bridge-Mounted Sign Supports</td>
<td>Updated sheet to include design criteria, note to designer, anchor plate detail, concrete girder attachment, and max. design dimensions.</td>
<td>Updated sheet.</td>
</tr>
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<tr>
<td>6/19/2014</td>
<td>Aluminum Bridge and Approach Rail</td>
<td>All plan sheets of aluminum bridge and approach rail have been removed from the website per memo dated 6/12/2014.</td>
<td>Bureau of Bridge Design has decided to discontinue use of aluminum bridge and approach rail for all new projects due to concerns with whether this rail system would perform as needed during a vehicular impact as it has not been crash tested in its current configuration. Until crash testing can be accomplished, it was felt prudent to no longer use this rail system. Bridge rehabilitation projects that currently have aluminum bridge railing will be reviewed on a case-by-case basis.</td>
</tr>
<tr>
<td>3/30/2014</td>
<td>54” Single Slope Concrete Barrier, Precast</td>
<td>Added: &quot;Optional End View (Masonry)&quot; detail.</td>
<td>A precast concrete fabricator requested the optional detail so the barrier could be cast with their current forms.</td>
</tr>
<tr>
<td>3/30/2014</td>
<td>T101 Bridge &amp; Approach Rail (Steel Posts, Brown) 3” curb reveal T101 Bridge &amp; Approach Rail (Steel Posts, Galvanized) 3” curb reveal T101 Bridge &amp; Approach Rail (Steel Posts, Brown) 7” curb reveal T101 Bridge &amp; Approach Rail (Steel Posts, Galvanized) 7” curb reveal</td>
<td>Revised all details dimensioning the bridge and approach rail height. The height was increased from 2’-6” to 2’-7”. Revised note (2) of General Notes to include: &quot;(@ HEIGHT of 2’-3&quot;)&quot;</td>
<td>Revised the bridge and approach rail height to match Highway Design’s change to 31”. The bridge railing was crash tested at a height of 2’-3”.</td>
</tr>
<tr>
<td>3/30/2014</td>
<td>Approach Rail (2-Bar Aluminum, Steel Posts) Approach Rail (3-Bar Aluminum, Steel Posts) Use with brush curb Approach Rail (3-Bar Aluminum, Steel Posts) Use with sidewalk Approach Rail (4-Bar Aluminum, Steel Posts)</td>
<td>Revised &quot;Elevation View Approach Rail&quot; guardrail height from 2’-6” to 2’-7”.</td>
<td>Revised the w-beam guardrail height to match Highway Design’s change to 31”. The bridge approach rail height is 34”. The transition section was not revised for the 1” change. A beam guardrail installer was contacted and said the 1” vertical difference can be adjusted in the field.</td>
</tr>
<tr>
<td>3/25/2014</td>
<td>T2 Steel Bridge Approach Rail T3 Steel Bridge Approach Rail T4 Steel Bridge Approach Rail</td>
<td>Revised &quot;Elevation View Approach Rail&quot; guardrail height from 2’-6” to 2’-7”.</td>
<td>Revised the w-beam guardrail height to match Highway Design’s change to 31”. The bridge approach rail height is 34”. The transition section was not revised for the 1” change. A beam guardrail installer was contacted and said the 1” vertical difference can be adjusted in the field.</td>
</tr>
<tr>
<td>Date of Revision</td>
<td>Name of Detail Sheet</td>
<td>Revision Description</td>
<td>Background</td>
</tr>
<tr>
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</tr>
</tbody>
</table>
| 3/25/2014        | T2 Steel Bridge Approach Rail  
T3 Steel Bridge Approach Rail  
T4 Steel Bridge Approach Rail | Revised "Plan View Approach Rail" note to: Synthetic Blockout for W-Beam Guardrail  
From: Synthetic Blockout for W-Beam Guardrail (3" Deep, Nominal) x 1'-2" Long) (Typ) (See Special Provisions) | Removed blockout description. |
| 3/25/2014        | Pier Protection Type I  
(54” Single Slope Concrete Barrier)  
Pier Protection Type II  
(54” Single Slope Concrete Barrier)  
Pier Protection Type II  
(54” Single Slope Concrete Barrier, Single Faced) | Revised "Elevation View" note to: Item 593.121, Geotextile: Subsurface Drainage, Class 2, Non-Woven (center 2'-0" wide section over barrier joints)(Typ)  
From: Item 593.121, Geotextile: Subsurface Drainage, Class 1, Non-Woven (center 2'-0" wide section over barrier joints)(Typ) | Item description incorrectly stated Class 1. Item number is correct. |
| 3/9/2014         | T2 Steel Bridge Rail  
T3 Steel Bridge Rail  
T4 Steel Bridge Rail  
Aluminum Bridge Rail (2-Bar)  
Aluminum Bridge Rail (3-Bar) | Added note to "Modifications Permitted for this Sheet":  
2. ITEM NUMBER AND DESCRIPTION IF SNOW SCREENING AND/OR PROTECTIVE SCREENING WILL BE USED | New note allows modification to the item number when using snow or protective screening. |