Contech Engineered Solutions LLC
9025 Centre Pointe Drive, Suite 400
West Chester, OH 45069
Phone: (513) 645-7000
Fax: (513) 645-7993
www.ContechES.com

April 13, 2016

Re: US Route 2, Bridge No. 126 (CONTECH project 468920-010) review comments

This letter is to respond to the review comments presented to CONTECH on April 4, 2016.

DESIGN PACKET

1. Page 14 – Load factors. The 1.3 load factor here refers to the dead load of the vertical earth pressure for a rigid buried structure per Table 3.4.1-2 of the current AASHTO code.
2. Page 93 – Headwall Design. Backfill weight updated and new calculation attached.
3. Page 114 – WW2 Design. New WW calcs attached due to change in backfill weight.

LOAD RATING

1. Page 9 – Inventory stress updated to previous value. With the value replaced in the calculation, there is not such a substantial difference anymore with the values. See updated sheets attached.

SHOP DRAWINGS

Sheet S2

1. Curing method is at the choice of the precaster. Procedure will be submitted separately from this submittal. Stripping strength is called out in the specification on sheet S21, and is 2500psi minimum per 4.5.1
2. Thickness of the leg is per the geometry shown. The leg thickness is shown as to correctly set up the form. From the reinforcing drawing, the bottom of the leg is 7” and a 3” flat. Diagonal dim shown.

Sheet S3

1. 2” Clearance is typical for all reinforcing in the headwall, unless noted otherwise.
2. Blockout note: - There is no figure for the blockout. The size is dependent on the leg of the arch, and is made to fit to the form so no modification is made to the form.
3. Label note: - Our drafting standards label the view as an elevation view, not reinforcing view.
4. Same Note: - Note copied over so it’s the same.

Sheet S4

1. Blockouts – The square is the blockout, as it would be seen from a top view. Blockout is dimensioned on sheet S7

Sheet S7

1. Galvanized washer will be stainless steel.
2. Hole is formed as per the precasters means and methods. If PVC, it is left in, and then the hole is grouted.

Contech Engineered Solutions LLC
9025 Centre Pointe Drive, Suite 400
West Chester, OH 45069
Phone: (513) 645-7000
Fax: (513) 645-7993
www.ContechES.com

Sheet S7

3. Shear key dimensioned in section 9, added another dimension in section 11
4. Tapered plug is steel. It's an aid to help set the headwall, and we are not worried about it rusting.
5. The void is dimensioned, 2.5" min from top of insert, and diameter of coil rod.

Sheet S9

1. Expansion board labeled.
2. Dimension tolerance fixed

Sheet S17

1. Fillet material is concrete, it's just formed up when wall is poured. No separate pour
2. Embedment changed to provide 2" clear. See updated wingwall 2 calculation

Sheet 18

1. Embedment changed to provide 2" clear. See updated wingwall 3 calculation

Sheet19

1. Wingwall joints are not watertight. Filter fabric will be provide to cover wingwall joints. If joints need to be watertight please provide specification.

Sheet 21

1. 4.4.3 – Curing. Once cured, curing compound can be removed.
2. Timber supports are a means and methods for the precaster. Precaster will be asked to provide.
3. Our spec allows PCI or NPCA certification
4. We will change back to ½"
5. If the max variation is ½" and the min cover is 1" per VTDOT, then the variation and the covers we call out would never violate the 1" cover minimum.

Regards,

Jim Riseborough

Senior Structural Engineer