

# Proposed Bridge Improvement Project

## Bridport STP CULV(29)

### Bridge #2

Vermont Agency of Transportation

RECEIVED

ON: April 28, 2015

and Checked for  
CONFORMANCE

BY: Mark Sargent DATE: 04/29/2015

**Concrete:**

Mix Designation: P60TER

1. Specified Mix Design - 5000 PSI
2. Proposed Mix Design - 6000 PSI
3. Striping Strength - 3000 PSI
4. Handling Strength - 3000 PSI
5. Shipping Strength - 5000 PSI
6. Install Strength - 5000 PSI
7. Traffic Loading - 5000 PSI

Fabrication Tolerances:

1. Width ±1/4"
2. Height ±1/4"
3. Length ±1/2"
4. Rebar Cover 2" Min. (Unless Noted Otherwise)
5. Rebar Spacing ±1"
6. Rebar Clearance ±1/4"
7. Insert Placement ±1/4"

Design Notes:

1. Design is in accordance w/ ASTM C1577, PCI MNL135, VAOT540 & AASHTO 2012 LRFD bridge design specs fifth edition
2. Any conflict between tolerances listed above shall result in the usage of the stricter tolerance
3. Design live load = HL-93
4. Materials and manufacturing shall conform to ASTM C1433
5. Earth Cover: ± 15'-0"

**Installation:**

1. Sub Base for Box Culvert / Cut Off Walls to be Compacted and Level
2. Precast Cut Off Walls + Wing Walls to be installed
3. All Elevations are to be Checked and Verified they Match Those of Plan Set
4. Begin Sequence of Installing All Box Culvert Sections
5. Clean Granular Backfill for structures used for Backfill of Footers & of Box Culvert so water can reach weep holes if applicable
6. Fill all Lifting Holes, Bolt Pockets and Box Culvert grooves and seams w/ non-shrink grout. Applied by Site Contractor.
7. ASTM C1675-11 Box culvert installation guidelines shall be followed.

**Reinforcing:**

General Notes:

1. Reinforcing Steel -
  - a. Precast box sections, headwalls, wing walls, & cut off walls shall be level I uncoated bar ASTM A615
2. Materials and manufacturing shall conform to ASTM C1433

Tolerances:

1. Spacing ±1"
2. Clearance ±1/4"

Lap Lengths:

1. Per AASHTO 5.11.2.1.1 & 5.11.5.3.1

**Joint Treatment:**

Vertical Seams:

- Per VTrans approved product list 780.02  
Overhead & vertical concrete repair mortar  
Applied by site contractor

Horizontal Seams / Grout:

- Per VTrans approved product list 707.03  
Mortar, type IV  
Applied by site contractor

REVIEWED	X	
REVIEWED AS MODIFIED		
REVISE AND RESUBMIT		
NOT REVIEWED		
Date: 4/24/2015		
By: Nathan Tirk		
This review by Stantec Consulting Services Inc. is for the sole purpose of ascertaining conformance with the general design concept. This review shall not mean that Stantec Consulting Services Inc. approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor. Submitting same, and such review shall not relieve the Contractor of his responsibility for errors or omissions in the shop drawing or of his responsibility for meeting all requirements of the Contract Documents. The contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to the fabrication processes or to techniques of construction and installation and for coordination of the work of all subtrades.		

**Waterproofing:**

1. Silane sealer applied in precast yard on all exposed surfaces (headwalls and top of wingwalls.)

**Miscellaneous:**

1. All bolt pocket hardware & wingwall hardware to be uncoated, black steel & shall remain in place.
2. All exposed edges of concrete shall be chamfered.
3. Concrete leveling pad for the cutoff walls is to be poured on site by the site contractor.
4. All lift anchors and embedded items will be made in America.

**Legend:**

- (A) 3"Ø PVC Sleeve
- (B) 4"Ø PVC Sleeve
- (C) Mechanical Bolt Pocket (w/ 1"Ø Coil Rod)
- (D) Oxford A750-7 Lifting Device -Allow 6" movement to avoid rebar conflicts
- (E) 1"Ø x 5 1/2" F56 Coil Loop Insert
- (F) 1 1/2" x 3 1/2" Continuous Keyway
- (G) Solid Lines Indicate 3/4" Chamfer
- (H) 3/8" F64 Ferrule Loop Insert

STRUCTURAL DESIGN ONLY



CONTRACTORS VISPE:		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Rev.</th> <th>Date</th> <th>By</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>03/25/15</td> <td>IBA</td> <td>Changes per Stantec &amp; State Review</td> </tr> <tr> <td>2</td> <td>04/23/15</td> <td>IBA</td> <td>Changes for Production Purposes</td> </tr> </tbody> </table>	Rev.	Date	By	Description	1	03/25/15	IBA	Changes per Stantec & State Review	2	04/23/15	IBA	Changes for Production Purposes	PRECAST CONCRETE BOX CULVERT SHOP DRAWINGS (SDI JOB #15428) SUPERVISOR: E. Barendse DETAILER: I. ADAMS CHECKER: E. Barendse ENGINEER: G. K. Munkelt	PROJECT NAME: Bridport PROJECT #: CULV(29) Br.#2 LOCATION: Bridport, VT	Peckham Road Corp. 1557 St. Rt. 9, #3 Lake George, NY 12845 Ph: (518) 747-3353	FABRICATOR: 193 INDUSTRIAL AVE. WILLISTON, VT 05495 Ph: (802) 658-0201		02/12/15      COVER_PAGE      1_OF_8
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