

QUALITY CONTROL PROCEDURES—PORTABLE BRIDGE UNITS.

ALL PROCEDURES, MATERIALS AND METHODS TO BE IN COMPLIANCE WITH PAGE 26 – SPECIAL PROVISIONS – PREFABRICATED BRIDGE UNIT SUPERSTRUCTURE.

1. S.D. IRELAND WILL BE SUPPLYING THE CONCRETE FROM ITS MONTPELIER PLANT AND WILL BE RESPONSIBLE FOR THE CONTRACTOR/SUPPLIER QC TESTING DURING CONCRETE PLACEMENT. S.D. IRELAND WILL SUPPLY AN ON SITE TECHNICIAN TO MONITOR AND DOCUMENT AIR CONTENT, WATER CEMENT RATIO AND SLUMP OF EACH TRUCK. S. D. IRELAND WILL ALSO PRODUCE CONCRETE TEST CYLINDERS FOR 7, 14, 28 DAY STRENGTHS. S.D. IRELAND WILL BE RESPONSIBLE FOR ANY ADJUSTMENTS TO THE CONCRETE AT THE PLANT AND OR IN THE FIELD TO MEET THE REQUIRED SPECIFICATIONS.
2. A PRE-PRODUCTION MEETING SHALL BE HELD BETWEEN THE CONTRACTOR AND RESIDENT ENGINEER BEFORE CONCRETE PLACEMENT.
3. VTRANS WILL RETAIN THEIR RESPONSIBILITIES FOR QUALITY ACCEPTANCE TESTING.
4. FOUR EXTRA CYLINDER SETS PER CONCRETE PLACEMENT SHALL BE TAKEN FOR EARLY STRENGTH BREAKS.
5. ALL INSIDE FORM DIMENSION AND R-BAR SPACING AND CLEARANCES SHALL BE REVIEWED AND DOCUMENTED BY THE CONTRACTOR AND RESIDENT ENGINEER BEFORE CASTING IS COMMENCED. ANY DEFICIENCIES SHALL BE CORRECTED TO MEET THE TOLERANCES BELOW.
6. BEFORE FORMS ARE ERECTED THE CONTRACTOR WILL PROFILE THE GIRDERS AT THE CASTING SITE THIS INFORMATION WILL BE USED TO DETERMINE BLOCKING DISTANCES AS DIRECTED BY THE ENGINEER.
7. FORMS SHALL HAVE A GENEROUS COATING OF FORM OIL APPLIED. CAUTION WILL BE TAKEN NOT TO HAVE PONDING OF FORM OIL IN THE BASE OF THE FORM OR ON ANY R-BAR.
8. ALL PRE-CAST WILL BE INSPECTED BY BOTH THE CONTRACTOR AND THE RESIDENT ENGINEER AND DOCUMENTED.
9. CURE WILL MEET THE REQUIREMENTS OF SECTION 501.17, AND WILL BE CONTINUOUSLY COVERED WITH WET BURLAP FOR THE SPECIFIED CURE PERIOD.

PORTABLE BRIDGE UNIT DIMENSIONAL TOLERANCES

- +/- 1/4" – REINFORCING PLACEMENT, +/- 1/4" COVER AND CLEARANCE, 1" BAR SPACING.
- LENGTH (EACH UNIT) +/- 3/4" (LENGTH OF ADJACENT UNITS SHOULDN'T VARY BY MORE THAN 3/4")
- WIDTH +/- 3/8"
- DEVIATION FROM DIAGONALS +/- 3/4" (HORIZONTAL)
- DEVIATION SQUARENESS OR SKEW +/- 3/4"
- HORIZONTAL ALIGNMENT +/- 3/8"

10. FIELD INSTALLATION TOLERANCES:

VERTICAL DEVIATION BETWEEN UNITS PRIOR TO GROUTING— +/- 1/4" (VERTICAL DEVIATIONS EXCEEDING 1/4" SHALL BE GROUND WITH DIAMOND CUP WHEELS OR OTHER MECHANICAL METHODS). THE CASTING OF ALL PBU UNITS WILL HAPPEN SIMULTANEOUSLY WITH A SINGLE SCREED MACHINE SPANNING THE ENTIRE WIDTH OF PBU 1-4. THIS SHOULD MINIMIZE ANY IRREGULARITIES IN THE JOINTS DEVIATION IN JOINT WITH— +/- 3/8".

11. EACH PIECE OF PRE-CAST SHALL BE MARKED WITH ITS UNIT NUMBER AND CASTING DATE AND ORIENTATION (MARKINGS PLACED ON THE SOUTH END OF THE UNIT.
12. CURING WILL MEET THE REQUIREMENTS OF SUBSECTION 501.17 (2) BURLAP CURE. PLACEMENT OF BURLAP WILL FOLLOW THE PROGRESS OF THE SCREED MACHINE FROM A WORK-PLATFORM WITH A LAG TIME NOT TO EXCEED 10 MINUTES. CRB WILL HAVE A POWER WASHER ON SITE FOR THE PURPOSE OF FOGGING AS NECESSARY. THE PROJECT SUPERINTENDENT WILL BE RESPONSIBLE FOR MONITORING THE CURE. ANY ADJUSTMENTS REQUIRED OR REQUESTED BY THE RESIDENT ENGINEER WILL BE MADE TO MAINTAIN THE PROPER CURING OF THE PBU UNITS. CRB WILL CHECK THE CURE DAILY INCLUDING WEEKENDS AND OTHER NON-WORKING DAYS. ALL CURING ACTIVITIES WILL BE DOCUMENTED ON THE CONTRACTORS DAILY REPORT. SILANE SEALER TO BE APPLIED TO THE UNITS AFTER CURING AND PRIOR TO SHIPPING.

13. CONCRETE FINISHING:

PBU FINISH WILL BE VIBRATORY SCREED FINISH. THE MORRISON SCREED WILL SPAN THE ENTIRE WIDTH OF THE PBU UNITS AND WILL RESIDE ON THE FASCIA PANELS. DRY RUNS WILL BE PERFORMED AND ADJUSTMENTS WILL BE MADE TO THE SCREED TO THE SATISFACTION OF THE ENGINEER. TOLERANCE FOR SCREED MACHINE +/- 1/4". HAND FINISHING WILL BE ALLOWED ONLY WERE IT IS NOT POSSIBLE TO USE THE SCREED MACHINE. MAGNESIUM BULL FLOATS IF NECESSARY WILL BE USED FROM A WORK BRIDGE POSITIONED BEHIND THE SCREED TO REMOVE ANY IRREGULARITIES IN THE CONCRETES SURFACE.

REPAIR OF UNITS

1. MINOR DEFECTS IN THE PBU UNITS AS DEFINED IN THE CONTRACT SPECIAL PROVISION PAGE 29, PARAGRAPH (m) SHALL BE FIXED USING AN OVERHEAD AND VERTICAL REPAIR MATERIAL FROM THE VERMONT AGENCY OF TRANSPORTATION APPROVED PRODUCTS LIST.
2. CRACKING .01" OR LESS SHALL BE SEALED WITH A PENETRATING SEALING FROM THE VERMONT AGENCY OF TRANSPORTATION APPROVED PRODUCTS LIST.
3. CRACK WIDTHS MEASURING .01"—.08" SHALL BE FILLED WITH AN EPOXY INJECTED CRACK FILLER FROM VERMONT AGENCY OF TRANSPORTATION APPROVED PRODUCT LIST.
4. PRODUCTION SITE HANDLING UNITS SHALL NOT BE LIFTED OR MOVED UNTIL DESIGN STRENGTH OF 4,000 PSI HAS BEEN MET.

PRE-ASSEMBLY:

LUCK BROTHERS, INC. WILL BE CASTING THE PBU UNITS OFF SITE. EACH UNIT WILL BE CONSTRUCTED IN A CASTING YARD APPROXIMATELY 2 MILES FROM THE SITE. PBU UNITS WILL BE CAST SIMULTANEOUSLY. THE UNIT WILL BE CAST AT THE SAME TIME WITH ONLY 9" BETWEEN BULK-HEADS. PRE-ASSEMBLY WILL NOT BE REQUIRED.

SHIPPING AND HANDLING:

PBU UNITS WILL BE CONSTRUCTED OFF SITE AND MOVED INTO PLACE ON TRAILERS AS PER ERECTION PLAN TO BE SUBMITTED UNDER SEPARATE COVER. THE PBU UNITS WILL BE INSTALLED WITH CRANES AS PER ERECTION PLAN UNDER SEPARATE COVER. DO TO TIME RESTRICTIONS DURING THE BCP ANY REPAIR WORK (IF NEEDED) WILL BE REPAIRED BEFORE THE PBU UNIT ARE IN FINAL PLACEMENT. REPAIRS PRIOR TO FINAL PLACEMENT OF PBU'S DOES NOT RELIEVE THE CONTRACTOR FROM REPAIRING DEFECTS OR DAMAGE (IF NECESSARY) TO THE PBU'S DURING PLACEMENT AND SUBSEQUENT CONSTRUCTION ACTIVITIES.

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Approved	<input checked="" type="checkbox"/>	Approved As Noted
Rejected	<input type="checkbox"/>	

This review is only for general conformance with the design concept and the information given in the Construction Documents. Corrections or comments made on the shop drawings during the review do not relieve the Contractor from compliance with the requirements of the Plans and Specifications. Review of a specific item shall not include review of an assembly of which an item is a component. The Contractor is responsible for dimensions to be confirmed and corrected at the job site; information that pertains solely to the fabrication process or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of other trades and performing all Work in a safe and satisfactory manner.

Date: 5/28/2014
By: D. Kull
McFarland Johnson

Vermont Agency of Transportation
RECEIVED
ON: May 23, 2014
and Checked for
CONFORMANCE
BY: Rob Young DATE: 05/30/2014

1	PER REVIEWER COMMENTS	05/22/14
REV	REVISION	DATE

REVISIONS

PROJECT

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013-4(32)
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WARREN, VT

CLIENT

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SHEET TITLE

QUALITY CONTROL
PROCEDURES/PLAN

DRAWN BY: KTW
CHECKED BY: TL
DATE: 04/28/14
SHEET NO: