

**GENERAL**

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011 AND ITS LATEST REVISIONS, THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FIFTH EDITION, DATED 2010 AND ITS LATEST REVISIONS AND THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS THIRD EDITION, DATED 2010 AND ITS LATEST REVISIONS.
2. THE BRIDGE WAS DESIGNED FOR THE HL-93 LIVE LOADS.
3. ITEM 529.15 "REMOVAL OF STRUCTURE" SHALL BE USED FOR THE REMOVAL OF THE EXISTING STRUCTURE INCLUDING THE SUPERSTRUCTURE, ALONG WITH THE ABUTMENTS AND WINGWALLS OUTSIDE THE LIMITS OF STRUCTURE EXCAVATION OR UNCLASSIFIED CHANNEL EXCAVATION. THE ABUTMENTS SHALL BE REMOVED TO STREAM BED ELEVATION.
4. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS OTHERWISE NOTED.

**EARTHWORK AND RELATED ITEMS**

5. THE TEMPORARY BRIDGE AND ITS APPROACHES SHALL BE CONSTRUCTED AND PAID FOR IN ACCORDANCE WITH ITEM 528.11 "TWO-WAY TEMPORARY BRIDGE". THE APPROACHES TO THE TEMPORARY BRIDGE SHALL BE PAVED WITH 2 INCHES OF PAVEMENT.
6. TEMPORARY CONSTRUCTION FILLS WITHIN THE WATERCOURSE FOR ANY PURPOSE SHALL CONSIST OF CLEAN STONE FILL ONLY. NO OTHER FILLING IN THE STREAM SHALL OCCUR WITHOUT THE APPROVAL OF THE STREAM ALTERATION ENGINEER.
7. THE BACKFILL BEHIND THE ABUTMENTS SHALL NOT BE PLACED HIGHER THAN THE BRIDGE SEATS UNTIL THE ABUTMENTS AND DECK CONSTRUCTION IS COMPLETED. THE DIFFERENCE IN ELEVATION OF FILL BEHIND THE TWO ABUTMENTS AT ANY TIME DURING BACKFILLING OPERATIONS SHALL NOT EXCEED 2 FEET.
8. THE "STONE FILL, TYPE IV" UNDER THE BRIDGE AS SHOWN IN THE PLANS SHALL BE PLACED BEFORE THE NEXT BEAMS ARE SET.

**PILES**

9. TO PREVENT DAMAGE TO THE PILES, PILE SHOES ARE REQUIRED AND SHALL CONFORM TO SUBSECTION 505.04(f).
10. THE PILES SHALL BE DRIVEN TO A NOMINAL PILE DRIVING RESISTANCE OF 525 KIPS.
11. TO ENSURE THAT THE NOMINAL CAPACITY HAS BEEN ATTAINED AND TO PREVENT THE OVERSTRESSING OF THE PILE DURING OPERATIONS, DYNAMIC PILE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 505.04 OF THE STANDARD SPECIFICATIONS. PAYMENT FOR PILE TESTING SHALL BE MADE UNDER ITEM 505.45 "DYNAMIC PILE LOADING TEST". A MINIMUM OF ONE DYNAMIC PILE TEST SHALL BE CONDUCTED ON THE FIRST PILE AT EACH ABUTMENT FOR A TOTAL OF 2 TESTS. MORE TESTS MAY BE REQUIRED BY THE ENGINEER.
12. THE TOP OF THE PILES AFTER DRIVING SHALL NOT VARY FROM THE POSITION SHOWN ON THE PLANS BY MORE THAN 3 INCHES. THE PILE ORIENTATION SHALL NOT VARY BY MORE THAN 5 DEGREES. THE CONTRACTOR SHALL DEMONSTRATE HOW THE TOLERANCE WILL BE MET TO THE SATISFACTION OF THE ENGINEER.
13. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AS SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTHS MAY VARY.
14. THE PILES SHALL BE HP 12 X 74.
15. ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY FOR PLACING THE PILES IN THEIR ACCEPTED FINAL POSITION SHALL BE CONSIDERED INCIDENTAL TO ITEM 505.16 "STEEL PILING, HP 12 X 74". THE CONTRACTOR MAY SUBMIT AN ALTERNATIVE METHOD OF DRIVING FOR APPROVAL BY THE ENGINEER.

**CONCRETE**

16. SUBSTRUCTURE CONCRETE AND APPROACH SLABS SHALL BE HIGH PERFORMANCE CLASS B AND SHALL BE PAID FOR UNDER ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B". ALL CURB, OVERLAY AND ALL CONCRETE PLACED INTEGRALLY WITH THE SUPERSTRUCTURE SHALL BE ITEM 501.33 "CONCRETE, HIGH PERFORMANCE CLASS A".
17. THE ABUTMENT AND WINGWALL CONCRETE ABOVE THE HORIZONTAL CONSTRUCTION JOINTS SHALL BE PLACED MONOLITHICALLY WITH THE DECK POUR.

18. INDIVIDUAL POURED SEGMENTS ARE TO BE PLACED IN ONE CONTINUOUS POUR WITH A MAXIMUM DURATION OF EIGHT HOURS. IF CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A CONSTRUCTION JOINT SHALL BE USED BETWEEN ADJACENT POURS. A MINIMUM 96 HOUR DELAY BETWEEN ADJACENT POURS SHALL BE OBSERVED.
19. WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES, EXCEPT THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES.
20. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.
21. EXCLUDING REINFORCING STEEL IN WINGWALLS, ALL REINFORCING STEEL ABOVE THE CONSTRUCTION JOINT WILL BE CORROSION PROTECTION LEVEL II AND ALL REINFORCING STEEL BELOW THE CONSTRUCTION JOINT AND IN THE APPROACH SLABS WILL BE CORROSION PROTECTION LEVEL I. PAYMENT WILL BE MADE UNDER THE APPROPRIATE SECTION 507 CONTRACT ITEM.
22. LEVEL I REINFORCING STEEL SHALL BE EPOXY COATED.

**TRAFFIC CONTROL**

23. FULL ACCESS TO ALL SIDE ROADS AND DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 900.645 "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".
24. ANY TEMPORARY MEANS OF SUPPORTING FILL SHALL BE INCIDENTAL TO THE ITEM 528.11 "TWO-WAY TEMPORARY BRIDGE". CONSTRUCTION DRAWINGS SHALL BE INCIDENTAL TO THE ITEM 528.11 "TWO-WAY TEMPORARY BRIDGE". CONSTRUCTION DRAWINGS SHALL BE REQUIRED AS PER SUBSECTION 105.03.
25. THE CONTRACTOR SHALL ADD SIGN G20-5AP TO THE TOP OF ALL TEMPORARY SPEED LIMIT SIGNS AS DETAILED IN THE MUTCD.
26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF A SITE SPECIFIC TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL A DETAILED TRAFFIC CONTROL PLAN TO THE ENGINEER FOR ALL STAGES OF CONSTRUCTION. NO WORK SHALL BEGIN UNTIL THE TRAFFIC CONTROL PLAN HAS BEEN APPROVED. SEE SPECIAL PROVISIONS FOR DETAILS. ALL COST SHALL BE INCLUDED IN ITEM 900.645 "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".
27. PAYMENT FOR ALL ON AND OFF-PROJECT CONSTRUCTION SIGNING AND TRAFFIC CONTROL DEVICES, INCLUDING DRUMS AND BARRICADES, WILL BE PAID FOR UNDER ITEM 900.645 "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)".

**NEXT F BEAMS**

28. THE NEXT F BEAMS ARE A NON-PROPRIETARY SHAPE DEVELOPED BY PCI NORTHEAST (PCINE). STANDARDIZED SECTION PROPERTIES AND DETAILS MAY BE FOUND AT [HTTP://WWW.PCINE.ORG](http://www.pcine.org).

**DESIGN VALUES**

- a. CONCRETE COMPRESSIVE STRENGTH:  $f'c = 8,000$  PSI
- b. CONCRETE COMPRESSIVE STRENGTH AT RELEASE:  $f'c = 6,000$  PSI
- c. PRESTRESSING STRANDS: 0.6 INCH DIAMETER, 270 KSI, LOW-RELAXATION 7-WIRE STRANDS
- d. ASSUMED MODULUS OF ELASTIC = 28,500 KSI
- e. JACKING FORCE PER STRAND = 47 KIPS
- f. SERVICE LOADS:

MEMBER MOMENT:	995 K-FT
SUPERIMPOSED DEAD LOAD MOMENT:	80 K-FT
LIVE LOAD AND IMPACT MOMENT:	1838 K-FT
DEAD LOAD REACTION:	59 K-FT
LIVE LOAD AND IMPACT REACTION:	108 K-FT
TOTAL REACTION:	167 K-FT
FINAL CAMBER:	1 11/16 INCHES

PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 029-1(17)
FILE NAME: s85e037notes.dgn	PLOT DATE: 17-JUN-2013
PROJECT LEADER: C. CARLSON	DRAWN BY: G. ROY
DESIGNED BY: H. I. SALLS	CHECKED BY: H. I. SALLS
PROJECT NOTES	SHEET 3 OF 70