

General Items

1. All materials and construction shall conform to the State of Vermont Agency of Transportation's Standard Specifications for Construction, dated 1995, and its latest revisions, and the AASHTO Standard Specifications for Highway Bridges, Sixteenth Edition, and its latest revisions.
2. Bridge #10 is designed for the MS 22.5 live load with no allowance for future pavement.
3. In-stream construction shall be restricted to June 1 to October 1, unless the Contractor obtains written permission from the Agency of Natural Resources to do work outside of that time frame.
4. The Contractor shall take all precautions necessary to prevent siltation or pollution, especially the discharge of raw concrete, into any brook, stream or river.
5. The cost of on-project signs and barricades required shall be subsidiary to the item "Mobilization".
6. All dimensions are horizontal or vertical and are given at 20° C unless otherwise noted.
7. All deliveries to the New Haven District Office shall be announced 24 hours prior to the delivery. The telephone number to the office is 655-1580.

Demolition

8. The house at station 1+350.000 Left was tested for lead content, using the TCLP test. The result was negative.
9. The Contractor must receive all necessary permits for the demolition of the house at Station 1+350.000 Left. The contractor may contact the State Hazardous Materials and Waste Coordinator for assistance with the permits.
10. Prior removing the remains of Bridge 10, the Contractor shall remove the signs, the chain link fence and the poles from the existing Bridge 10 and return them to the New Haven District Office.
11. Existing pier shall be removed to streambed.
12. Removal of both abutments, the remaining pier, the remains of the deck and the removal and transportation of the items in note 10, shall be paid for under item 529.15 "Removal of Structure."

Stone fill

13. The Stone Fill; Type IV shall be placed in front of the abutments before the girders are erected.

Concrete

14. No traffic shall be allowed on the new deck until the cure period is up and the 28-day design strength is attained, as evidenced by test cylinders cured under field conditions.
15. The key in concrete construction joints shall be monolithic and continuous for the full length of the joint; any upward key shall be placed integrally with the concrete below the joint.
16. All exposed edges of concrete shall be chamfered 25 mm by 25 mm or as otherwise indicated on the plans.
17. Joints and score marks in concrete shall be constructed as indicated on the plans or as directed by the engineer.
18. All reinforcing steel shall be detailed and fabricated using procedures and tolerances in accordance with applicable publications of the Concrete Reinforcing Steel Institute (CRSI).
19. Reinforcing placement tolerances shall be:

Spacing	±20 mm
Clearance	±5 mm
20. Minimum cover for reinforcing steel shall be 50 mm along the back faces of walls against earth, 65 mm along the top surface of the deck, 40 mm along the bottom surface of the deck and 75 mm elsewhere, unless otherwise noted.

21. Water repellent shall be applied to all exposed concrete surfaces except the underside of the deck between the drip beads.
22. The entire retaining wall and the sleeper slabs shall be constructed with Concrete, Class B, unless otherwise noted.
23. The deck, abutments and wingwalls shall be constructed with Concrete, Class A.
24. All roadway and bridge curbs shall be constructed with Silica Fume Concrete.

Structural Steel

25. All structural steel shall be detailed and fabricated using procedures and tolerances in accordance with applicable publications of the American Institute of Steel Construction (AISC).
26. Any connections that are not detailed on the plans shall be detailed by the Fabricator and submitted to the Structures Engineer for approval.
27. All welding shall conform to the provisions of Vermont Specification 506.10.
28. Any holes in the webs of the fascia beams/girders that are not otherwise filled, shall be filled with either button head or hex head bolts. These bolts shall be tightened in accordance with Vermont Specification 506.19.
29. All field connections shall be made with 22 mm diameter AASHTO designation M 164M Type III bolts in 24 mm diameter holes.
30. The Contractor is required to determine the necessary Fleming brackets or similar false work. Fleming brackets shall not be placed at a spacing greater than 1.2 m.
31. After the superstructure has been erected, elevations shall be taken along the top of the beams/girders, as directed by the Resident Engineer, for use in determining the finished grade.

Temporary Bridge and Detour

32. Traffic will be maintained on the existing two-way temporary bridge and approaches
33. The removal and/or resetting of existing temporary or permanent traffic signs, as deemed necessary by the Resident Engineer, will be considered subsidiary to Mobilization.
34. Removal of Temporary Detour:
 - 34.1. Remove all Detour signs that relate to the existing temporary and deliver them to the New Haven District Office. These signs include those located within the project limits as well as outside the limits.
 - 34.2. The Contractor shall comply with the Specifications when removing, handling and transporting the temporary bridge components.
 - 34.3. Remove the temporary detour approaches and return the ground to its original condition as deemed reasonable by the Engineer.
 - 34.4. Return all Concrete Traffic Barriers, Barricades, flashing beacons and steel beam guard rail to the New Haven District Office.

Bearing Notes

35. The bearings shall be paid for under the item 506.55 "Structural Steel." There will be a total of 10 bearing assemblies for this project. A bearing device assembly consists of 2 anchor bolts, a single steel leveling bearing plate, 2 sets of 2 steel plate washers and all corresponding nuts as shown in these plans.
36. The Contractor shall set the elevation of each leveling plate and ensure the plate is level, prior to tightening the supporting nuts and prior to placement of girders.

Project Construction Sequence

37. The Contractor shall follow the project sequence provided below or develop one that must be approved by

the Engineer. If the Contractor wishes to develop a construction sequence, an approved copy must be sent to the Structures Section for reference only.

- 37.1. Remove the existing remains of Bridge 10.
- 37.2. Excavate the ground for the abutments and wingwalls 300 mm below the respective elevation as shown in these plans.
- 37.3. **SEE NOTE BELOW** Pre-bore 500 mm (min) diameter holes to a depth of 2400 mm for each pile location as shown in these plans. Payment for the drilling activity shall be made part of item 505.19 "Steel Piling." Payment for the required equipment shall be made part of item 504.10 "Furnishing Equipment for Driving Piles."
- 37.4. **SEE NOTE BELOW** Insert, then drive the piling as shown in these plans. Place Sand Borrow in each of the pre-bore holes after the piles are driven to proper depth and compact to specifications. Place 300 mm of Granular Backfill for Structures as shown in these plans, then compact to specifications.
- 37.5. Form and place the concrete for the retaining wall footing and stem up to the construction joint as shown in these plans.
- 37.6. Form and place the concrete for the abutments, and wingwalls to the construction joint as shown in these plans. Install the anchoring bolts as indicated in these plans.
- 37.7. Excavate where the granular backfill for structures shall be placed under the sleeper slabs. Place the backfill in 150 mm layers and compact to proper specifications until 600 mm has been achieved.
- 37.8. Form and place the concrete for the sleeper slabs on the compacted backfill.
- 37.9. The work sequence to this point should be completed prior to winter. The anchor bolts shall be protected from the effects of winter weather.
- 37.10. Upon receiving the girders, place two nuts on each of the anchor bolts. Using the nuts set the leveling plate to the correct elevation as shown on these plans. Make sure the leveling plates are level.
- 37.11. Set the girders on the leveling plates and attach to the abutments with the anchor bolts. The bolts shall be tightened.
- 37.12. Prior to placing the concrete, the anchor bolts shall be loosened by 4 mm to allow for free play while the concrete cures.
- 37.13. Place the center of the bridge deck concrete. The dead load rotations will occur prior to lock-up without transferring dead load moments to the supporting piles.
- 37.14. Form the abutments. Backfill with Granular Backfill for Structures in 150 mm lifts to the subgrade elevation of the approach slab. Prior to placing any reinforcing steel, grade the surface of the backfill as specified on these plans.
- 37.15. Place the abutment concrete along with the remainder of the wingwalls, the remaining bridge deck and the approach slab to the construction joint shown in these plans. The abutments will move without having to overcome passive earth pressure in the backfill.
- 37.16. Form and place the concrete for the approach slabs. Begin at the roadway end of the approach slab and work towards the abutments. This placement shall take place in the morning while the superstructure is expanding, thus putting the approach slab in compression as it cures.

37.3 & 37.4 36" CPEP Were installed vertically for locating the vertical piling. The pipe was then filled with sand and piles driven. The Sand/CPEP vertical envelope was +/- 3M deep, and intended to ensure accurate pile location, which was difficult due to very rocky streambed condition.

PROJECT NAME: Bristol	
PROJECT NUMBER: BRF 021-1 (13)	
FILE NAME: sf188gen	LOT DATE: 5/21/99
PROJECT LEADER: A. Pomatoji	DRAWN BY: G. Colgrove
DESIGNED BY: G. Colgrove	CHECKED BY: G
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