

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 1996, AND ITS LATEST REVISIONS.
2. DURING CONSTRUCTION, TRAFFIC SHALL BE MAINTAINED ON A TWO-WAY, ONE-LANE TEMPORARY BRIDGE. THE CONTRACTOR SHALL NOTIFY THE TOWNS OF BROOKLINE AND NEWFANE A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF DIVERTING TRAFFIC TO THE TEMPORARY BRIDGE. THE BROOKLINE AND NEWFANE TOWN OFFICES MAY BE REACHED BY TELEPHONE AT (802) 365-4648 AND (802) 365-7772, RESPECTIVELY.
3. THE CONTRACTOR SHALL ERECT AND MAINTAIN ALL TEMPORARY ON AND OFF-PROJECT SIGNS, BARRICADES AND STREET LIGHTING AS SHOWN IN THE PLANS AND AS DIRECTED BY THE RESIDENT ENGINEER. PAYMENT FOR THIS WORK, EXCLUDING CONCRETE BARRIER, SHALL BE MADE SUBSIDIARY TO ITEM 641.10, "TRAFFIC CONTROL". CONCRETE BARRIER SHALL BE PAID FOR UNDER ITEM 621.90, TEMPORARY TRAFFIC BARRIER".
4. ALL EXISTING SIGNS NOT RE-USED SHALL REMAIN THE PROPERTY OF EITHER THE TOWN OF BROOKLINE OR NEWFANE. THE CONTRACTOR SHALL STOCKPILE THESE ITEMS AT THE PROJECT SITE FOR REMOVAL BY TOWN FORCES. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE TOWN OFFICE WHEN THESE ITEMS ARE READY FOR REMOVAL FROM THE PROJECT SITE.
5. REFERENCE SHEETS FROM THE RECORD PLANS AND FABRICATION DRAWINGS FOR THE EXISTING BRIDGE ARE INCLUDED IN THE PLANS FOR THE CONTRACTOR'S USE (SHEETS 68 - 78). WHERE NEEDED, THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING IN THE FIELD ANY DIMENSIONS OF EXISTING MATERIAL INCLUDED IN THESE REFERENCE SHEETS.
6. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION OR POLLUTION, IN PARTICULAR THE DISCHARGE OF RAW CONCRETE INTO THE WEST RIVER, AS DIRECTED BY THE RESIDENT ENGINEER AND STANDARD SPECIFICATION SECTION 105.
7. THE CONTRACTOR IS DIRECTED TO PAY PARTICULAR ATTENTION TO SECTION SIX OF THE "ENDANGERED AND THREATENED SPECIES PERMIT" ISSUED FEBRUARY 28, 2003. COSTS OF ANY WORK NECESSARY TO ADHERE TO THE CONDITIONS AND AUTHORIZATIONS OUTLINED IN THAT SECTION OF THE PERMIT OR FUTURE AMENDMENT TO THE PERMIT AND NOT COVERED BY ITEMS ALREADY INCLUDED IN THE CONTRACT SHALL BE PAID FOR AS EXTRA WORK AS SPECIFIED IN SUBSECTION 109.06 OF THE STANDARD SPECIFICATIONS.
8. FOR INFORMATION REGARDING UTILITIES, SEE THE SPECIAL PROVISIONS.
9. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 20 DEGREES CELSIUS.

EARTHWORK AND RELATED ITEMS

10. THE TEMPORARY BRIDGE AND ITS APPROACHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 528 OF THE STANDARD SPECIFICATIONS. THE APPROACHES TO THE TEMPORARY BRIDGE SHALL BE PAVED WITH 50 MILLIMETERS OF PAVEMENT. ALL TEMPORARY PAVEMENT SHALL BE PAID FOR UNDER ITEM 406.25, "BITUMINOUS CONCRETE PAVEMENT (PG 58-28)".
11. 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.
12. THE FOLLOWING SHALL BE PAID FOR UNDER ITEM 529.10, "REMOVAL OF BRIDGE PAVEMENT": THE COMPLETE REMOVAL AND DISPOSAL OF ALL EXISTING PAVEMENT ON THE TRUSS AND APPROACH SPANS, BOTH ABOVE AND BELOW THE EXISTING TIMBER DECKING.
13. THE FOLLOWING SHALL BE PAID FOR UNDER ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE":
 - COMPLETE REMOVAL AND DISPOSAL OF THE FOLLOWING:
 - EXISTING TRUSS AND APPROACH SPAN TIMBER DECKING;
 - EXISTING TRUSS AND APPROACH SPAN CONCRETE DECKING;
 - EXISTING TRUSS SPAN STRINGERS AND FLOORBEAMS, INCLUDING ALL STEEL AND RIVETS FOR CONNECTIONS;
 - EXISTING APPROACH SPAN STRINGERS AND DIAPHRAGMS, INCLUDING ALL STEEL AND RIVETS FOR CONNECTIONS AND
 - EXISTING TRUSS MEMBERS DESIGNATED FOR REPLACEMENT IN THE PLANS.
 - ALSO INCLUDED SHALL BE WORK AT EXISTING ABUTMENT NO. 2 AS DESCRIBED IN NOTES 15-16 BELOW.
14. THE EXISTING TIMBER DECKING ON THE TRUSS SHALL REMAIN THE PROPERTY OF THE TOWN OF BROOKLINE. THE DECKING WAS INSTALLED IN PANELS. THE CONTRACTOR SHALL CAREFULLY REMOVE THE PANELS INTACT. THE PANELS SHALL BE DELIVERED TO AND UNLOADED AT THE TOWN STORAGE AREA. THE CONTRACTOR SHALL NOTIFY THE TOWN WHEN THE DECKING IS READY FOR REMOVAL FROM THE PROJECT SITE. THIS WORK SHALL BE PAID FOR UNDER ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE".
15. ABUTMENT NO.2 SHALL BE REMOVED IN ITS ENTIRETY, INCLUDING THE REMOVAL AND DISPOSAL OF ALL EXISTING FOUNDATION CONCRETE AND TIMBER PILES. THIS WORK SHALL BE PAID FOR UNDER ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE". IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY IN THE FIELD THE LOCATION, MEASUREMENTS AND ELEVATIONS OF EXISTING BRIDGE COMPONENTS OR MATERIALS PRIOR TO THE BEGINNING OF WORK.
16. PRIOR TO BEGINNING WORK FOR THE NEW ABUTMENT NO.2 FOUNDATION, THE HOLE CREATED BY THE REMOVAL OF THE EXISTING ABUTMENT NO.2 FOUNDATION SHALL BE BACKFILLED TO ELEVATION 121.500 WITH MATERIAL EXCAVATED ON SITE AS DIRECTED BY THE RESIDENT ENGINEER. THIS WORK SHALL BE PAID FOR UNDER ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE".

17. ANY DAMAGE DONE TO EXISTING SUBSTRUCTURE CONCRETE TO BE RETAINED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE STATE OF VERMONT.
18. IN THE CONSTRUCTION OF ABUTMENT NO. 2, NO NEW CONCRETE SHALL BE PLACED ABOVE BRIDGE SEAT ELEVATION PRIOR TO SETTING OF THE NEW STRUCTURAL STEEL. PRIOR TO SETTING THE BEARINGS AND STRUCTURAL STEEL, THE CONCRETE ABUTMENT CAP SHALL BE BACKFILLED TO BRIDGE SEAT ELEVATION.
19. "STONE FILL, TYPE 1" SHALL BE USED AS SHOWN IN THE PLANS AND AT THE DISCRETION OF THE RESIDENT ENGINEER TO PREVENT EROSION BEHIND THE WINGWALLS. PAYMENT SHALL BE MADE UNDER ITEM 613.10, "STONE FILL, TYPE 1".

PILING AND STRUCTURAL STEEL

20. THE EXISTING STRUCTURAL STEEL IS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE REGULATIONS WHEN HANDLING AND WORKING WITH THIS STEEL. THE REMOVED STRUCTURAL STEEL IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE REMOVED EXISTING STRUCTURAL STEEL.
21. ABUTMENT NO.2 SHALL BE CONSTRUCTED ON A PILE FOUNDATION. PILES SHALL BE HP310X79 MEETING ASTM A572/A572M GRADE 345. THE ESTIMATED PILE LENGTH IS 15.9 METERS, INCLUDING 600 MILLIMETER EMBEDMENT IN THE ABUTMENT PILE CAP.
22. NO SUBSTITUTIONS FOR THE TYPE, NUMBER, SIZE AND GRADE OF THE PILES WILL BE ALLOWED.
23. THE DRIVING POINT OF ALL PILES SHALL BE REINFORCED. POINT REINFORCEMENT SHALL BE CAST STEEL AND SHALL MEET THE REQUIREMENTS OF SUBSECTIONS 505.04 (E) AND 730.01 OF THE STANDARD SPECIFICATIONS, AS MODIFIED BY THE SPECIAL PROVISIONS.
24. ALL PILES SHALL BE DRIVEN TO A MINIMUM ULTIMATE AXIAL CAPACITY OF 690 KILONETONS AND THE PILE TIP ELEVATION SHOWN IN THE PLANS AS DETERMINED BY THE RESIDENT ENGINEER. NO PILE TESTS ARE SPECIFIED FOR THIS PROJECT. CAPACITY SHALL BE DETERMINED IN ACCORDANCE WITH SUBSECTION 505.04 (C) - (3) OF THE STANDARD SPECIFICATIONS.
25. ANY NECESSARY SHORING OF THE TRUSS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 502 OF THE STANDARD SPECIFICATIONS AND SHALL BE PAID FOR UNDER ITEM 502.10, "SHORING SUPERSTRUCTURE". THE CONTRACTOR SHALL TAKE CARE SUCH THAT THE TRUSS REMAINS STABLE DURING DISMANTLING OF THE EXISTING FLOOR SYSTEM AND DURING REPAIR WORK TO TRUSS MEMBERS, SUBSTRUCTURES AND BEARINGS. THE CONTRACTOR SHALL SUBMIT A PLAN FOR DISMANTLING AND SHORING, INCLUDING ASSOCIATED DESIGN CALCULATIONS, TO THE RESIDENT ENGINEER FOR REVIEW PRIOR TO BEGINNING WORK.
26. ALL NEW STRUCTURAL STEEL SHALL BE AASHTO M270M/M270 GRADE 345 PAINTED. NEW STEEL BEAMS FOR TRUSS FLOOR AND APPROACH SPAN REPLACEMENT SHALL BE PAID FOR UNDER ITEM 506.50, "STRUCTURAL STEEL (ROLLED BEAM)". ALL OTHER NEW STEEL SHALL BE PAID FOR UNDER ITEM 506.60, "STRUCTURAL STEEL".
27. PAINTING OF NEW STEEL SHALL BE PAID FOR UNDER ITEM 513.25, "STRUCTURAL PAINTING, SHOP APPLIED". ALL EXISTING STEEL RETAINED IN THE REHABILITATED STRUCTURE SHALL BE BLAST CLEANED AND REPAINTED. PAINTING OF EXISTING STEEL SHALL BE PAID FOR UNDER ITEM 513.30, "STRUCTURAL PAINTING, FIELD APPLIED". THE COLOR OF THE FINAL COAT OF PAINT SHALL BE GREEN AND SHALL CONFORM WITH FEDERAL STANDARD NO. 595, COLOR CHIP NO. 14062. THE CONTRACTOR SHALL ENSURE COMPATIBILITY BETWEEN THE SHOP AND FIELD PAINT SYSTEMS. SEE SECTION 513 OF THE SUPPLEMENTAL SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
28. THE REPAIRS TO TRUSS MEMBERS INDICATED ON SHEET 29 OF THE PLANS ARE A MINIMUM REQUIREMENT. THESE MEMBERS SHALL BE REPLACED IN-KIND TO THE EXTENT FEASIBLE WITH MEMBERS HAVING GEOMETRIES AND STRUCTURAL SECTION PROPERTIES SIMILAR TO THOSE DETAILED ON SHEET 29 OF THE PLANS AND ON THE REFERENCE SHEETS INCLUDED AT THE END OF THE PLANS. FOR THOSE MEMBERS NOT DESIGNATED FOR REPAIR AND IN THE OPINION OF THE RESIDENT ENGINEER HAVE INCURRED GREATER THAN 15 PERCENT SECTION LOSS, THE RESIDENT ENGINEER SHALL CONTACT THE PROJECT MANAGER FOR FURTHER REPAIR RECOMMENDATIONS. ANY ADDITIONAL WORK REQUIRED SHALL BE PAID FOR AT THE BID PRICE FOR THE APPROPRIATE BID ITEMS.
29. THE CONTRACTOR AND CONTRACTOR'S FABRICATOR SHALL BE RESPONSIBLE FOR DETAILING AND FIT-UP OF ALL NEW STRUCTURAL STEEL FOR FLOORING AND TRUSS MEMBER REPLACEMENT. SHOP PLANS FOR ALL NEW STRUCTURAL STEEL SHALL BE SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL AS PER SECTION 506 OF THE STANDARD SPECIFICATIONS.
30. ALL FIELD CONNECTIONS SHALL BE MADE USING HIGH-STRENGTH BOLTS MEETING AASHTO M164M, TYPE 1 GALVANIZED. THE BOLTS SHALL RECEIVE AN INTERMEDIATE COAT OF PAINT, AS WELL AS A FINAL COAT AFTER INSTALLATION. BOLT AND HOLE DIAMETERS SHALL BE AS SHOWN ON THE PLANS. ANY CONNECTIONS NOT DESIGNATED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
31. FOR ALL BOLTED CONNECTIONS, SURFACE CONDITIONS OF BOLTED PARTS SHALL MEET AASHTO CLASS B CONDITIONS.
32. ANY BOLT HOLES IN THE WEBS OF FASCIA GIRDERS NOT OTHERWISE FILLED SHALL BE FILLED WITH HIGH-STRENGTH BOLTS MEETING AASHTO M164M, TYPE 1 GALVANIZED. THE BOLTS SHALL RECEIVE AN INTERMEDIATE COAT OF PAINT, AS WELL AS A FINAL COAT AFTER INSTALLATION. THE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.19 OF THE STANDARD SPECIFICATIONS.

33. FINISHED GRADES FOR THE TRUSS SPAN PROVIDED IN THE PLANS ARE THEORETICAL AND ARE BASED ON ASSUMPTIONS REGARDING TRUSS DEFLECTION AND CAMBER. THE CONTRACTOR SHALL CONSTRUCT THE TRUSS CONFIGURATION AS SHOWN IN THE PLANS, INCLUDING CONCRETE HAUNCHES FOR STRINGERS AS SHOWN ON SHEET 26 OF THE PLANS. BEAM PROFILES ARE NOT REQUIRED FOR DETERMINING FINISHED GRADES FOR THE TRUSS SPAN.
34. FOR THE APPROACH SPAN, AFTER SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF THE BEAMS SHALL BE TAKEN AS DIRECTED BY THE RESIDENT ENGINEER FOR USE IN DETERMINING FINISHED GRADES.
35. FOR BOTH ABUTMENT NOS.1 AND 2, CONCRETE PORTIONS OF THE ABUTMENTS AND WINGWALLS ABOVE ADJACENT BRIDGE SEAT ELEVATIONS SHALL NOT BE PLACED UNTIL THE STRUCTURAL STEEL HAS BEEN SET AND FINISHED GRADES HAVE BEEN DETERMINED BY THE RESIDENT ENGINEER.
36. FLEMING BRACKETS OR SIMILAR FALSEWORK SHALL BE SPACED AS REQUIRED BY DESIGN, BUT SHALL BE LIMITED TO A MAXIMUM SPACING OF 1200 MILLIMETERS. THE DESIGN OF FALSEWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

CONCRETE AND REINFORCING STEEL

37. SUBSTRUCTURE CONCRETE SHALL BE HIGH PERFORMANCE CLASS B AND SHALL BE PAID FOR UNDER ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B". DECK AND CURB CONCRETE, AND PORTIONS OF SUBSTRUCTURE BACKWALL AND CURTAIN WALL CONCRETE AS SHOWN IN THE PLANS, SHALL BE HIGH PERFORMANCE CLASS A AND SHALL BE PAID FOR UNDER ITEM 501.33, "CONCRETE, HIGH PERFORMANCE CLASS A".
38. WHEN CONSTRUCTING THE DECK, THE CONCRETE SHALL BE POURED PARALLEL TO THE CENTERLINE OF BEARING SO AS TO LOAD THE SUPERSTRUCTURE STEEL EQUALLY.
39. WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE TOP SURFACE OF THE DECK AND THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES.
40. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25 MILLIMETERS X 25 MILLIMETERS.
41. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.
42. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. UPWARD KEYS SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.
43. ALL SUPERSTRUCTURE REINFORCING STEEL, AND ANY SUBSTRUCTURE REINFORCING STEEL SO DESIGNATED ON THE PLANS, SHALL BE EPOXY COATED AND PAID FOR UNDER ITEM 507.17, "EPOXY COATED REINFORCING STEEL". WHEN EPOXY COATED REINFORCING STEEL IS TO BE CUT, THE UNCOATED ENDS SHALL BE REPAIRED WITH MATERIALS AND PROCEDURES APPROVED BY THE COATING MANUFACTURER. FLAME CUTTING OF EPOXY COATED REINFORCING STEEL WILL NOT BE PERMITTED.
44. MINIMUM COVER FOR REINFORCING STEEL SHALL BE AS INDICATED IN THE PLANS.
45. REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE:
 - SPACING: +/- 25 MILLIMETERS
 - CLEARANCE: +/- 6 MILLIMETERS

PROJECT NOTES

PROJECT NAME:	BROOKLINE NEWFANE
PROJECT NUMBER:	BHO 1442 (25)
FILE NAME:	951278\Structures\sj278pn.i
PROJECT MANAGER:	R. WHITCOMB
DESIGNED BY:	M. LOZIER
PLOT DATE:	26-JUN-2003
DRAWN BY:	G. ROY
CHECKED BY:	M. LOZIER
SHEET	25 OF 78