

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002 AND ITS LATEST REVISIONS.
2. DESIGN OF THE REHABILITATED STRUCTURE IS FOR H20-44 LIVE LOADING.
3. BRIDGE 8 WILL BE CLOSED TO ALL PEDESTRIANS AND VEHICULAR TRAFFIC DURING CONSTRUCTION. THE TOWN CLERKS OF SALISBURY AND CORNWALL SHALL BE NOTIFIED TWO WEEKS PRIOR TO THE CLOSING OF THE BRIDGE.
4. ALTHOUGH THIS PROJECT INVOLVES MAJOR REHABILITATION OF THE EXISTING COVERED BRIDGE, INCLUDING REPLACEMENT OF MANY MEMBERS, THE INTENT OF THE PROJECT IS TO MAINTAIN THE DIMENSIONAL GEOMETRY OF THE BRIDGE ALONG WITH MOST OF THE CONNECTION TYPES AND DETAILS. ALL EXISTING DIMENSIONS, SHOWN ON THE PLANS SHALL BE CHECKED IN THE FIELD PRIOR TO COMMENCING THE WORK. ACTUAL WORK WILL MATCH FIELD CONDITIONS. SIDING AND ROOF LINES SHALL MATCH EXISTING CONDITIONS.
5. ALL ON-PROJECT SIGNS AND BARRICADES AS REQUIRED BY THE RESIDENT ENGINEER WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE INCIDENTAL TO THE ITEM 641.10, "TRAFFIC CONTROL".
6. ALL OFF-PROJECT SIGNING SHALL BE THE RESPONSIBILITY OF THE TOWN EXCEPT FOR THE "BRIDGE OUT" SIGNS PLACED AT INTERSECTIONS OF TH 3/VT 30 IN CORNWALL AND TH 1/TH 14 IN SALISBURY WHICH WILL BE PAID FOR UNDER ITEM 675.20. THOSE TWO SIGNS SHALL REMAIN IN PLACE WHILE THE BRIDGE IS CLOSED AND BE MAINTAINED IN ACCORDANCE WITH ITEM 641 WITH THE COSTS OF MAINTENANCE AND THEIR REMOVAL, WHEN NO LONGER NEEDED, INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".
7. THE REMOVAL AND/OR RESETTING OF EXISTING TRAFFIC SIGNS OR CONSTRUCTION TRAFFIC SIGNS, AS DEEMED NECESSARY BY THE RESIDENT ENGINEER WILL BE PAID FOR UNDER THE ITEM 641.10, "TRAFFIC CONTROL".
8. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES F OR AS NOTED OTHERWISE.
9. THIS COVERED BRIDGE IS HOME TO A MATERNITY COLONY OF BROWN BATS. THE CONTRACTOR SHALL BE CONSIDERATE OF THE BATS AND TAKE NECESSARY PRECAUTIONS SO AS NOT TO KILL OR INJURE THE BATS.

EARTHWORK AND RELATED ITEMS

10. ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURE" SHALL INCLUDE:
- REMOVAL OF PORTIONS OF THE EXISTING SUBSTRUCTURE AS SHOWN ON SHEET 35.
 - DISMANTLING OF EXISTING SUPERSTRUCTURE NECESSARY FOR THE ADDITION OR REPLACEMENT OF MEMBERS.
 - REMOVAL OF END POSTS, SIDING, DECK, CURBS, FLOOR BEAMS, LOWER CROSS BRACING, LOWER AND UPPER BOTTOM CHORDS REQUIRED TO BE REMOVED, LATTICE MEMBERS THAT NEED TO BE REPLACED, BOLSTER BEAMS AT ABUTMENTS, RAFTERS AND NAILERS.
 - SALVAGE AND REUSE OF CROSS TIE BEAMS, UPPER LATERAL BRACING, PORTAL FRAMEWORK, UPPER AND LOWER CHORDS, KNEE BRACES AND LATTICES.
 - REMOVAL AND DISPOSAL OF THE EXISTING STANDING SEAM ROOFING, ROOF BOARDS AND ROOFING NAILERS
11. N/A
12. ALL MATERIAL NOT REUSED SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THIS MATERIAL SHALL BE DISPOSED OF PROPERLY OR RETAINED FOR FUTURE USE.
13. ACCESS TO DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED. WHEN THE CONTRACTOR MUST TEMPORARILY RESTRICT ACCESS TO THE DRIVES, NOTICE TO THE PROPERTY OWNERS SHALL BE GIVEN IN ADVANCE BY THE CONTRACTOR. THIS WORK WILL BE CONSIDERED TO BE INCIDENTAL TO ITEM 641.10 " TRAFFIC CONTROL".

STRUCTURAL AND NON-STRUCTURAL LUMBER AND TIMBER

14. THE CONTRACTOR SHALL SUBMIT JACKING AND SHORING PLANS TO THE STRUCTURES ENGINEER FOR REVIEW AND COMMENT. APPROVAL OF THE INFORMATION IS REQUIRED PRIOR TO COMMENCEMENT OF THE WORK.
15. THE PLANS ARE BASED ON THE REPLACEMENT OF STRUCTURAL COMPONENTS WITH THE STRUCTURE SUPPORTED BY A TEMPORARY FALSEWORK SYSTEM IN ITS CURRENT LOCATION.
16. THE INTENDED ERECTION SEQUENCE FOR THE NEW FLOOR BEAMS ASSUMES NEW "SISTER" LATTICE MEMBERS AND REPLACEMENT LATTICES, PORTIONS OF UPPER AND LOWER BOTTOM CHORDS, AND THE TIE RODS BENEATH FLOOR BEAMS WILL BE INSTALLED PRIOR TO THE FLOOR BEAM INSTALLATION. THIS WOULD BE FOLLOWED BY THE INSTALLATION OF FLOOR BEAM BRACING.
17. IF THE CONTRACTOR CHOOSES TO REMOVE THE BRIDGE FROM ITS PRESENT LOCATION TO DO THE REHABILITATION WORK, ALL COSTS INVOLVED IN MOVING AND SHORING IN A NEW LOCATION AND REINSTALLING IN ITS FINAL LOCATION WILL BE INCLUDED IN ITEM 502.10, "SHORING SUPERSTRUCTURE". DETAILS, PROCEDURES AND CALCULATIONS ASSOCIATED WITH ALL PHASES OF THE MOVEMENTS SHALL BE SUBMITTED IN ACCORDANCE WITH SECTIONS 502.02 AND 502.03. THE CONTRACTOR WILL BE LIABLE FOR ANY DAMAGE DONE TO THE STRUCTURE IN PERFORMING THIS WORK.
18. WHEN COMPLETED, THE BRIDGE SHALL BE STRAIGHT ALONG A HORIZONTAL LINE BETWEEN THE ABUTMENTS AND NOT BE RACKED. DURING CONSTRUCTION, ALL WORK SHALL BE PLANNED AND PERFORMED SO THAT A POSITIVE OVERALL CAMBER IS MAINTAINED IN THE BRIDGE.
19. ALL STRUCTURAL MEMBERS AND CONNECTORS INDICATED TO BE RETAINED AND/OR REUSED, SHALL BE CHECKED IN THE FIELD FOR DAMAGE AND DECAY AND SHALL BE REMOVED AND REPLACED AS DEEMED NECESSARY BY THE RESIDENT ENGINEER. PAYMENT SHALL BE UNDER THE APPROPRIATE LUMBER PAY ITEM.

20. ALL LUMBER AND TIMBER SHALL BE FULL SAWN TO THE DIMENSIONS GIVEN IN THE PLANS AS DESCRIBED IN SECTION 709.01(D) (1). WHERE DIMENSIONS ARE NOT GIVEN, MEMBERS WILL BE SAWN TO THE DIMENSIONS OF THE MEMBER BEING REPLACED.
21. FULL SAWN STRUCTURAL LUMBER AND TIMBER SHALL INCLUDE THE FOLLOWING MEMBERS:
- A. ITEM 522.20, STRUCTURAL LUMBER AND TIMBER, UNTREATED.
- NEW RIDGE BEAM (SPRUCE-PINE-FIR, NO.1 GRADE)
 - NEW ROOF RAFTERS (SPRUCE-PINE-FIR, NO.1 GRADE)
 - NEW ROOF BOARDS (SPRUCE-PINE-FIR, NO.1 GRADE)
 - NEW BRACING FOR LATTICE (SPRUCE-PINE-FIR, NO.1 GRADE)
 - CROSS TIE BEAMS (ASSUMED 20% REPLACEMENT)(SPRUCE-PINE-FIR, NO.1 GRADE)
 - UPPER LATERAL CROSS BRACING COMPONENTS (ASSUMED 20% REPLACEMENT) (SPRUCE-PINE-FIR, NO.1 GRADE)
 - UPPER TOP CHORDS (ASSUMED 20% REPLACEMENT) (SPRUCE-PINE-FIR, NO.1 GRADE)
 - LOWER TOP CHORDS (ASSUMED 20% REPLACEMENT) (SPRUCE-PINE-FIR, NO.1 GRADE)
 - PORTAL FRAMING (ASSUMED 10% REPLACEMENT) (SPRUCE-PINE-FIR, NO.1 GRADE)
 - LATTICE MEMBERS (ASSUMED 15% REPLACEMENT) (SPRUCE-PINE-FIR, NO.1 GRADE)
 - KNEE BRACES (ASSUMED 50% REPLACEMENT) (SPRUCE-PINE-FIR, NO.1 GRADE)
 - NEW 3" X 8" RUNNING BOARDS (WHITE OAK, STRUCTURAL GRADE NO. 3 OR BETTER)
 - NEW TRUNNELS (WHITE OAK OR WHITE ASH, NO. 1 GRADE)
- B. ITEM 522.25, STRUCTURAL LUMBER AND TIMBER, TREATED.
- NEW VERTICAL END POSTS (SOUTHERN PINE, NO.1 GRADE)
 - NEW VERTICAL POSTS AT PIER (SOUTHERN PINE NO. 1 GRADE)
 - NEW BOLSTER BEAMS AT PIER (SOUTHERN PINE NO. 1 GRADE)
 - NEW LOWER LATERAL CROSS BRACING, CONNECTION BLOCKING AND DOWELS (SOUTHERN PINE, NO.1 GRADE)
 - UPPER BOTTOM CHORDS (ASSUMED 25% REPLACEMENT) (SOUTHERN PINE, NO.1 GRADE)
 - LOWER BOTTOM CHORDS (ASSUMED 40% REPLACEMENT) (SOUTHERN PINE, NO.1 GRADE)
 - NEW BOLSTER BEAMS AND BLOCKING, BEARING BLOCKS, BEDDING TIMBERS (SOUTHERN PINE, NO.1 GRADE)
 - SHIMS, IF REQUIRED (WHITE OAK OR WHITE ASH)
22. FULL SAWN NON-STRUCTURAL LUMBER SHALL INCLUDE THE FOLLOWING MEMBERS:
- A. ITEM 522.30, NON-STRUCTURAL LUMBER, UNTREATED.
- NEW SHIPLAPPED SIDING (WHITE PINE OR EASTERN SPRUCE, NO.1 GRADE)
 - NAILING STRIPS (SPRUCE-PINE-FIR, STANDARD GRADE)
 - NEW ROOF FASCIA AND SOFFIT BOARD NAILERS (SPRUCE-PINE-FIR, NO.1 GRADE)
 - NEW ROOF RETURNS AND CORNICES (SPRUCE-PINE-FIR, NO.1 GRADE)
- B. ITEM 522.35, NON-STRUCTURAL LUMBER, TREATED.
- CURBS AND BLOCKING (SOUTHERN PINE, STANDARD GRADE)
 - TIE ROD BLOCKING (SOUTHERN PINE, STANDARD GRADE)
23. ITEM 522.40, STRUCTURAL GLUED LAMINATED TIMBER
- NEW DECK PANELS: SOUTHERN PINE, #16F-V3 SP/SP
 - NEW FLOOR BEAMS: SOUTHERN PINE, #26F-V2 SP/SP, 2600 PSI BENDING STRESS PRIOR TO TREATMENT.
 - STRUCTURAL GLUED LAMINATED DECK PANELS SHALL BE TREATED PRIOR TO GLUING AND SHALL COMPLY WITH STANDARD SPECIFICATION 726.01 PRESERVATION TREATMENT TYPE II OR TYPE III.
 - STRUCTURAL GLUED LAMINATED FLOOR BEAMS SHALL COMPLY WITH STANDARD SPECIFICATION 726.01 PRESERVATION TREATMENT TYPE II.
24. THE DECK SHALL CONSIST OF 4 PANELS OF EQUAL WIDTHS. THE END JOINTS OVER THE FLOOR BEAMS WILL BE STAGGERED.
25. PLAN QUANTITIES FOR "UNTREATED LUMBER AND TIMBER" AND "TREATED LUMBER AND TIMBER" ARE FOR ESTIMATING PURPOSES ONLY. PLAN QUANTITIES INCLUDE THE ASSUMED PERCENTAGES OF REPLACEMENT SHOWN ABOVE. ACTUAL QUANTITIES MAY VARY DEPENDING ON CONDITION OF LUMBER SCHEDULED TO BE RETAINED.
26. ALL EXISTING WOOD TRUNNELS THAT ARE REMOVED IN THE REHABILITATION PROCESS ARE TO BE REPLACED WITH NEW WOOD TRUNNELS. EXISTING TRUNNELS THAT ARE NOT REMOVED BUT HAVE DAMAGE OR DECAY WILL ALSO BE REPLACED WITH NEW WOOD TRUNNELS AS DEEMED NECESSARY BY THE RESIDENT ENGINEER.
27. ALL NEW WOOD TRUNNELS SHALL BE UNTREATED, DRIED (MAXIMUM MOISTURE CONTENT OF 19%), WHITE OAK OR WHITE ASH, AND SHALL BE DRIVEN IN A MANNER WHICH AVOIDS SPLITTING OF THE TRUNNELS OR THE PIECES CONNECTED BY THEM. TRUNNELS SHALL BE 1-7/8 INCHES IN DIAMETER. FOR PAY MEASUREMENT PURPOSES THEY SHALL BE TAKEN AS 2 INCHES X 2 INCHES X ACTUAL IN-PLACE LENGTH. TRUNNELS MAY BE DIPPED IN BOILED LINSEED OIL PRIOR TO DRIVING. TRUNNEL MATERIAL AND INSTALLATION WILL BE PAID FOR UNDER ITEM 522.20.
28. IF DEEMED NECESSARY BY THE RESIDENT ENGINEER, TRUNNEL HOLES IN EXISTING MEMBERS THAT ARE TO BE RETAINED AND ARE OVERSIZED DUE TO WEAR OR WILL NOT ACHIEVE SATISFACTORY ALIGNMENT SHALL BE PLUGGED WITH A COMPATIBLE WOODEN PLUG GLUED IN PLACE AND REDRILLED. THE COST OF THIS WORK WILL BE PAID UNDER ITEM 522.20.
29. THE EXISTING COVERED BRIDGE TRUSSES ARE NOT PERFECTLY SYMMETRICAL AND THE FLOOR BEAM SPACING MAY VARY SLIGHTLY. TO HELP FACILITATE CONNECTING THE GLUED LAMINATED DECK PANELS TO THE FLOOR BEAMS, THE LEAD HOLES FOR THE LAG SCREWS WILL BE DRILLED IN THE FIELD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT THE END PANEL CONNECTION JOINTS WILL OCCUR AT THE CENTERLINE OF THE FLOOR BEAMS.
30. ALL SIDING AND NAILERS SHALL BE FASTENED WITH NO.8 GALVANIZED SCREWS, COST INCIDENTAL TO SIDING.

31. LEAD HOLES FOR THE LAG SCREWS WILL BE DOUBLE DRILLED. THE DIAMETER OF THE LEAD HOLE FOR THE THREADED PORTION OF THE LAG SCREW WILL BE 1/4 INCH FOR THE 1/2 INCH DIAMETER LAG SCREW AND 7/16 INCH FOR THE 3/4 INCH LAG SCREW. THE LEAD HOLE FOR THE UNTHREADED SHANK MUST BE THE SAME DIAMETER AS THE SHANK AND EXTEND TO THE SAME DEPTH AS THE UNTHREADED PORTION.

STRUCTURAL STEEL AND BEARINGS

32. ITEM 506.60, "STRUCTURAL STEEL" SHALL INCLUDE ALL TIE RODS BETWEEN TRUSSES AND CORRESPONDING TURNBUCKLES, NUTS AND OGEE WASHERS. TIE RODS SHALL MEET ASTM A 307. ALL OTHER HARDWARE SHALL BE INCIDENTAL TO THE ITEM TO WHICH IT IS ATTACHED. ALL NEW BOLTS, LAG SCREWS, NUTS AND WASHERS SHALL BE ASTM A 307. ALL STRUCTURAL STEEL, HARDWARE AND STEEL IN THE BEARING DEVICE ASSEMBLIES SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO SPECIFICATION M 232.
33. ITEM 900.620, "SPECIAL PROVISION (BEARING DEVICE ASSEMBLY, COVERED BRIDGE)" SHALL INCLUDE MATERIAL COSTS AND PLACEMENT OF ANCHOR BOLTS, NUTS, WASHERS, STEEL PLATES, STEEL ANGLES, CUTTING EXISTING ANCHOR BOLTS, AND DRILLING AND GROUTING OF NEW ANCHOR BOLTS.
34. THE PLANING OF TIMBER BLOCKS IN ORDER TO MATCH GRADES SHALL BE INCIDENTAL TO ITEM 522.25, "STRUCTURAL LUMBER AND TIMBER, TREATED".

CONCRETE AND REINFORCING STEEL

35. 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.
36. JOINTS IN THE CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
37. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH X 1 INCH.
38. ITEM 900.625, "SPECIAL PROVISION (WATER REPELLENT, SILANE)" SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES, INCLUDING THE EXISTING EXPOSED CONCRETE SURFACES AT THE PIERS AND ABUTMENTS.
39. THE MINIMUM COVER FOR REINFORCING STEEL IN THE SUBSTRUCTURES SHALL BE THREE INCHES UNLESS DETAILED OTHERWISE.
40. REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE AS FOLLOWS:
- SPACING +/- 1 INCH
 - CLEARANCE +/- 1/4 INCH

MISCELLANEOUS

41. AFTER THE COVERED BRIDGE HAS BEEN FULLY REPAIRED AND DECK REPLACED, THE BRIDGE SHALL BE COATED WITH A FIRE RETARDANT COATING AND AN INSECTICIDE/FUNGICIDE COATING. (SEE SPECIAL PROVISIONS FOR APPLICATION DATE RESTRICTIONS) ALL NEW WOOD AND WOOD TO BE RETAINED WILL BE COATED. THE FIRE RETARDANT COATING AND INSECTICIDE/FUNGICIDE COATING SHALL BE PAID UNDER ITEM 900.645, "SPECIAL PROVISION (FIRE RETARDANT COATING)" AND ITEM 900.645, SPECIAL PROVISION (INSECTICIDE/FUNGICIDE COATING)".
42. THE NEW STANDING SEAM METAL ROOF SHALL BE PAID FOR UNDER ITEM 900.670, "SPECIAL PROVISION (METAL ROOFING)".
43. THE CONTRACTOR SHALL REMOVE ALL WOOD AND OTHER DEBRIS THAT EXISTS AROUND THE PIER. THIS WORK SHALL BE PAID FOR UNDER ITEM 608.20, "DRAGLINE RENTAL, TYPE I". THE DEBRIS SHALL BE REMOVED FROM AN AREA OF APPROXIMATELY 4000 SQUARE FEET. THE QUANTITY IS DERIVED FROM AN AREA WITHIN A PERIMETER LINE 25 FEET PARALLEL TO THE PIER PERIMETER. THE ENGINEER MAY MOVE THE OUTSIDE PERIMETER TO BETTER ENCOMPASS THE DEBRIS FIELD BUT THE AREA WILL REMAIN AT OR NEAR THE 4000 SQUARE FEET. THE DEBRIS SHALL BE REMOVED TO THE DEPTH OF EXISTING STREAM BOTTOM BUT SHALL ONLY INCLUDE WOOD AND OTHER MATERIALS THAT DO NOT BELONG IN THE RIVER. DEPOSITS OF SAND, SILT OR OTHER RIVER BOTTOM MATERIALS DO NOT HAVE TO BE REMOVED. THIS ITEM SHALL INCLUDE THE REMOVAL AND PROPER DISPOSAL OF THE DEBRIS.

PROJECT NAME: SALISBURY - CORNWALL
PROJECT NUMBER: BHO 1445 (27)

FILE NAME: 96j268\Structures\sj268gn.i
PROJECT MANAGER: R.R. WHITCOMB
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SHEET 20 OF 60



ADDENDUM #1: REVISED APRIL 25, 2007