

GENERAL NOTES:

- G-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.
- G-2. DESIGN OF THE REHABILITATED STRUCTURE IS FOR AN AASHTO H6 LIVE LOAD.
- G-3. THE CONTRACTOR SHALL TAKE SPECIAL CARE AND PRECAUTION TO INSURE THAT NO DEBRIS FALLS INTO THE BLACK CREEK DURING CONSTRUCTION. ALL MATERIAL FALLING IN THE AREA BELOW AND ADJACENT TO THE BRIDGE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO COST TO THE STATE.
- G-4. ALL WORK SHALL BE COMPLETED WITHIN THE EXISTING R.O.W.
- G-5. THESE CONTRACT DOCUMENTS HAVE BEEN PREPARED BASED ON FIELD INSPECTIONS AND OTHER INFORMATION AVAILABLE AT THE TIME OF BIDDING. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE CHECKED BY THE CONTRACTOR IN THE FIELD PRIOR TO COMMENCING THE WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THE DIMENSIONS AND DETAILS OF EXISTING BRIDGE FEATURES AND COMPONENTS PRIOR TO THE FABRICATION OF NEW BRIDGE COMPONENTS. ACTUAL WORK SHALL MATCH FIELD CONDITIONS.
- G-6. BRIDGE NO.50 SHALL REMAIN CLOSED TO VEHICULAR AND PEDESTRIAN TRAFFIC FOR THE DURATION OF CONSTRUCTION.
- G-7. EXCEPT AS NOTED OTHERWISE, ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE SHALL INCLUDE ANY WORK NECESSARY TO FACILITATE AND ACCOMPLISH THE SCOPE OF PROJECT WORK AS INDICATED BY THE CONTRACT DOCUMENTS AND DIRECTED BY THE ENGINEER: REMOVING AND DISPOSING SUPERSTRUCTURE MEMBERS AND PORTIONS OF MEMBERS; AS WELL AS REMOVING AND STOCKPILING MEMBERS AND PORTIONS OF MEMBERS FOR RE-USE, INCLUDING REMOVING AND STOCKPILING MEMBERS AND PORTIONS OF MEMBERS FOR THE CONTRACTOR'S METHODS OF REHABILITATION. NO BURNING OF REMOVED MATERIALS AT THE PROJECT SITE WILL BE ALLOWED. THE EXISTING COVERED BRIDGE TIMBERS AND LUMBER MAY CONTAIN HAZARDOUS WOOD PRESERVATIVES. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS AND EMPLOYEES HARMLESS REGARDING THE CONTRACTOR'S HANDLING OF THESE MATERIALS AND SUBSEQUENT USE, RE-USE, OR DISPOSAL OF THESE MATERIALS.
- G-8. THE STEEL I-BEAMS THAT SUPPORT THE EXISTING COVERED BRIDGE SHALL BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE TOWN OF FAIRFIELD GARAGE, 12 GILBERT RD, FAIRFIELD VT. THE CONTRACTOR SHALL UNLOAD THE I-BEAMS FROM THE TRUCK AND PLACE THEM AT A LOCATION AS DIRECTED BY THE TOWN. CONTACT ROAD FOREMAN RODNEY JUDD AT (802) 827-3290 AND PROVIDE A MINIMUM OF ONE (1) WEEK NOTICE PRIOR TO DELIVERY. THESE STEEL BEAMS ARE COATED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S MOVING OF THESE STEEL BEAMS. ALL COSTS ASSOCIATED WITH THE REMOVAL, HANDLING AND DELIVERY OF STEEL BEAMS ARE PAID UNDER ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE.
- G-9. THE COST OF INSTALLING, MAINTAINING AND REMOVING ALL TEMPORARY CONSTRUCTION SIGNS WILL BE PAID FOR UNDER ITEM 641.10, TRAFFIC CONTROL.
- G-10. SPECIAL CARE SHALL BE TAKEN TO AVOID DAMAGE TO MEMBERS THAT ARE TO REMAIN AND TO AVOID MOVEMENT OF THE TRUSS THAT COULD RESULT IN DISTORTION OR MISALIGNMENT OF THE TRUSS AND ITS JOINTS. MEMBERS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AS DIRECTED BY THE ENGINEER AT CONTRACTOR'S EXPENSE.
- G-11. ALL JOINTS IN MEMBERS TO BE REPLACED SHALL MATCH THE EXISTING JOINT, INCLUDING ALL NAILS, BOLTS OR SCREWS REQUIRED UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL NOTES:

- S-1. EXCEPT AS NOTED OTHERWISE IN THE CONTRACT PLANS, ITEM 506.75, STRUCTURAL STEEL SHALL INCLUDE THE NEW UPPER AND LOWER LATERAL BRACING TIE RODS (INCLUDING NUTS, PLATES, WASHERS AND TURNBUCKLES), REPLACED VERTICAL STEEL RODS AT EACH TRUSS, STRAIGHTENING OF VERTICAL ROD AT NODE 3N, ALL NEW STEEL STRAP ANCHORS, STEEL CONNECTION PLATES USED AT BOTTOM CHORDS AND RAFTER SUPPORT BEAMS TO TRUSS VERTICAL CONNECTIONS (INCLUDING THROUGH BOLTS, NUTS AND LAG SCREWS), NEW Ogee WASHERS AS SHOWN ON THE PLANS AND NEW LAG SCREWS TO CONNECT EXISTING WOOD MEMBERS. FABRICATION DRAWINGS AND ERECTION PLAN SUBMITTALS ARE NOT REQUIRED FOR STRUCTURAL STEEL.
- S-2. ALL NEW STRUCTURAL STEEL SHOWN IN THE PLANS INCLUDING PLATES, BOLTS, LAG BOLTS, TURNBUCKLES, NUTS, WASHERS, RODS, ANGLES AND MISCELLANEOUS STEEL, SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232 EXCEPT FOR PLATES WHICH SHALL BE GALVANIZED PER AASHTO M 111M/ M 111. ALL STEEL PLATES AND RODS SHALL BE ASTM A36.

RECOMMENDED SEQUENCE OF WORK:

- RS-1. REMOVE EXISTING METAL ROOF.
- RS-2. REMOVE EXISTING FLOOR DECKING, STRINGERS AND SIDING. PROVIDE TEMPORARY SUPPORT OF THE BOTTOM CHORDS AS REQUIRED.

- RS-3. DEPENDING ON WHICH ALTERNATE WAS CHOSEN, INSTALL TEMPORARY SHORING TO SUPPORT EXISTING BRIDGE OR MOVE THE EXISTING BRIDGE TO A STAGING AREA TO COMPLETE REPAIRS. THE CONTRACTOR SHALL SUBMIT PLANS AND DESIGN CALCULATIONS FOR THE PROPOSED WORK, TO THE STRUCTURES ENGINEER IN ACCORDANCE WITH SECTION 105 OF STANDARD SPECIFICATIONS, 2 WEEKS PRIOR TO THE INSTALLATION OF THE SUPPORT STRUCTURE OR RELOCATION.
- RS-4. THE EXISTING BRIDGE SHALL BE JACKED AND BRACED AS REQUIRED TO STRAIGHTEN, RELEASE STRESSES, PLUMB AND RE-ALIGN THE TRUSSES. SHIMMING OF THE EXISTING TRUSSES WITH HARDWOOD SHIMS MAY BE REQUIRED. THE CONTRACTOR SHALL SUBMIT THE PROPOSED METHOD OF WORK TO THE RESIDENT ENGINEER PRIOR TO THE START OF REALIGNMENT OPERATIONS. (SEE ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE)).
- RS-5. REPLACE BRIDGE MEMBERS AS DETAILED IN CONTRACT DRAWINGS AND COMPLETE SUBSTRUCTURE WORK.
- RS-6. DEPENDING ON WHICH ALTERNATE WAS CHOSEN, REMOVE TEMPORARY SHORING TO SUPPORT STRUCTURE, OR RE-INSTALL THE BRIDGE SUPERSTRUCTURE, COMPLETE REMAINING WORK ITEMS AS DETAILED ON DRAWINGS AND REOPEN BRIDGE TO TRAFFIC.

WOOD NOTES:

- W-1. ALL WOOD CONSTRUCTION SHALL COMPLY WITH THE LATEST AASHTO SPECIFICATIONS, THE NATIONAL DESIGN SPECIFICATION (NDS) AND SUPPLEMENT FOR WOOD CONSTRUCTION, AND THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) SPECIFICATION, 5TH EDITION.
- W-2. THE MAXIMUM IN PLACE MOISTURE CONTENT OF THE WOOD USED SHALL BE AS FOLLOWS:
MEMBERS LESS THAN 5" THICK 16%
MEMBERS GREATER THAN 5" THICK 19%
ALL HARDWOOD THICKER THAN 2.5" MAY BE GREEN
- W-3. THE REPAIR OF TWO (2) SPLITS IN EXISTING NORTH TRUSS SHALL BE MADE WITH AN APPROVED WOOD EPOXY, TO ACHIEVE FULL STRENGTH OF THE REPAIRED MEMBER (PAY ITEM 900.620, SPECIAL PROVISION (WOOD EPOXY REPAIRS)). AN ADDITIONAL 5 ROTTED MEMBER REPAIRS (AS SHOWN ON "EPOXY REPAIR DETAIL" ON SHEET 30) ARE INCLUDED FOR BIDDING PURPOSES. SEE THE RECOMMENDED REPAIR SEQUENCE NOTES ON SHEET 30 FOR MORE INFORMATION.
- W-4. EACH PIECE OF NEW LUMBER AND TIMBER SHALL BE GRADED BY A RECOGNIZED LUMBER GRADING AGENCY. INDIVIDUAL PIECES SHOULD NOT BE STAMPED WITH A GRADE STAMP. MATERIAL CERTIFICATIONS SHALL BE SUBMITTED FOR ALL WOOD IN ACCORDANCE WITH SECTION 709.
- W-5. ALL NUTS, BOLTS, WASHERS, AND SCREWS SHALL CONFORM TO ASTM A307, ALL NAILS AND SPIKES SHALL CONFORM TO ASTM F1667 AND BE DOUBLE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232. THE USE OF ELECTRO GALVANIZED NAILS WILL NOT BE ALLOWED.
- W-6. ALL STRUCTURAL LUMBER AND TIMBER NOT SHOWN ON THE WOOD MATERIAL LIST TABLE SHALL BE DOUGLAS FIR NO.1 OR BETTER UNLESS NOTED OTHERWISE. LIKewise, ALL HARDWOOD SHALL BE WHITE OAK NO.1 OR BLACK LOCUST NO.1 OR BETTER. SEE NOTE 8 ON SHEET 26 FOR ADDITIONAL INFORMATION.
- W-7. ALL FIELD CUTS AND BORINGS OF TREATED WOOD SHALL BE TREATED WITH TWO COATS OF COPPER NAPHTHENATE LIBERALLY APPLIED PER SPECIFICATION SECTION 522.
- W-8. EXISTING TRUSS, ROOF RAFTER, KNEE BRACING, CROSSBEAM AND UPPER LATERAL BRACING JOINTS SHALL BE REPLICATED ON ALL STRUCTURE MEMBERS TO BE REPLACED UNLESS NOTED OTHERWISE IN THE CONTRACT DRAWINGS.
- W-9. THE WOOD CURB BLOCKING, CURB, DECKING, STRINGER SUPPORT CROSS BEAMS, PORTAL TRIM LUMBER TREATMENT, WEDGE BLOCKS, BLOCKS AT VERTICAL STEEL RODS, TRUSS BOTTOM CHORDS AND NEW DIAGONALS SHALL COMPLY WITH STANDARD SPECIFICATION 726.01 TYPE III PENTACHLOROPHENOL TYPE C.
- W-10. ALL LAG BOLTS AND NUTS FOR THROUGH BOLTS SHALL BE TIGHTENED SNUGLY BUT NOT SO TIGHTLY AS TO CAUSE CRUSHING OF THE WOOD UNDER THE WASHER OR PLATE.
- W-11. DECKING SHALL BE SURFACED FOUR SIDES (S4S). NEW BOTTOM CHORD MEMBERS SHALL BE SURFACED ONE SIDE (S1S) (WIDE FACE). ALL OTHER NEW LUMBER AND TIMBER SHALL BE ROUGH SURFACED.
- W-12. DIMENSIONS OF ALL LUMBER AND TIMBER MEMBERS SHOWN IN THESE PLANS ARE THE ACTUAL SIZES AFTER SEASONING UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS. THE DIMENSIONS OF NARROW FACES OF NEW BOTTOM CHORD MEMBERS SHALL BE THE ACTUAL DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS. FOR ALL NEW BOTTOM CHORD MEMBERS' WIDE FACES AND ALL OTHER MEMBERS THAT ARE NOT SURFACED S4S, CROSS-SECTIONAL DIMENSION VARIATIONS OF UP TO 1/8" WILL BE ALLOWED.

CONCRETE AND REINFORCING STEEL NOTES:

- C-1. REINFORCING STEEL SHALL CONFORM TO SECTION 507 AND BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE" (CRSI).
- C-2. REINFORCING PLACEMENT TOLERANCES SHALL BE +/- 1" FOR SPACING AND +/- 1/4" FOR CLEARANCES.
- C-3. MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE 2 1/2" UNLESS NOTED OTHERWISE.
- C-4. THE CONCRETE IN APPROACH BACKWALLS AND BEARING SEATS SHALL BE PAID FOR UNDER ITEM 501.33, CONCRETE, HIGH PERFORMANCE CLASS A. ALL OTHER CONCRETE SHALL BE PAID FOR

UNDER ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B.

- C-5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1" UNLESS NOTED OTHERWISE.
- C-6. ALL NEW AND EXISTING EXPOSED CONCRETE SURFACES SHALL BE SEALED AND STAINED. PAYMENT WILL BE MADE UNDER ITEM 900.625, SPECIAL PROVISION (CONCRETE STAINING AND SEALING).

LEDGE NOTES:

- L-1. BORINGS WERE TAKEN ON THIS PROJECT, SUBSURFACE CONDITIONS MAY VARY FROM THE CONDITIONS ASSUMED FOR DESIGN.
- L-2. IF LEDGE IS ENCOUNTERED HIGHER THAN BOTTOM OF FOOTING OR MORE THAN (2) FEET BELOW THE INDICATED BOTTOM OF FOOTING ELEVATIONS AS SHOWN ON THE PLANS, THE STRUCTURES SECTION SHALL BE CONTACTED. PROFILES OF THE LEDGE MAY BE REQUIRED TO ADJUST THE FOOTING ELEVATIONS AND SIZE. NO FURTHER WORK SHALL BE DONE ON THE FOOTINGS UNTIL A REPLY IS RECEIVED FROM THE STRUCTURES SECTION.
- L-3. FOOTINGS SHALL BE PLACED ON SOUND AND COMPETENT LEDGE. LEDGE SHALL NOT BE EXCAVATED FOR STONE FILL PLACEMENT. LEDGE IN THE AREA OF THE PROPOSED FOOTING OF WINGWALL NO.3 IS NOT EXPECTED TO BE REMOVED, HOWEVER IT SHALL BE CLEANED OF ALL LOOSE ROCK AND DEBRIS.
- L-4. A MAXIMUM OF 6" OVERBREAKAGE WILL BE REPLACED WITH ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B. OVERBREAKAGE BEYOND 6" SHALL BE REPLACED WITH HIGH PERFORMANCE CLASS B CONCRETE AT THE EXPENSE OF THE CONTRACTOR.
- L-5. #8 DOWELS SHALL BE DRILLED AND GROUTED INTO THE LEDGE AS SHOWN ON THE PLANS. THE DOWELS SHALL HAVE A MINIMUM 2'-0" EMBEDMENT INTO THE LEDGE AND SHALL EXTEND INTO THE FOOTING A MINIMUM OF 1'-6". THE DRILLING AND GROUTING SHALL BE PAID FOR UNDER ITEM 507.16, DRILLING AND GROUTING DOWELS, WHILE THE DOWELS SHALL BE PAID FOR UNDER ITEM 507.15, REINFORCING STEEL.

ENVIRONMENTAL PROTECTION NOTES:

- E-1. DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL CONDUCT OPERATIONS IN SUCH A MANNER AS TO PREVENT OR REDUCE TO A MINIMUM ANY DAMAGE TO ANY STREAM FROM POLLUTION BY DEBRIS, SEDIMENT, OR OTHER FOREIGN MATERIAL OR FROM MANIPULATION OF EQUIPMENT AND/OR MATERIALS IN OR NEAR SUCH STREAMS. THE CONTRACTOR SHALL NOT RETURN DIRECTLY TO A STREAM ANY WATER WHICH HAS BEEN USED FOR WASH PURPOSES OR OTHER SIMILAR OPERATIONS WHICH CAUSE THIS WATER TO BECOME POLLUTED WITH SAND, SILT, CEMENT, OIL, OR OTHER IMPURITIES. IF THE CONTRACTOR USES WATER FROM A STREAM, THE CONTRACTOR SHALL CONSTRUCT AN INTAKE OR TEMPORARY DAM REQUIRED TO PROTECT AND SUSTAIN AQUATIC LIFE.
- E-2. CONSTRUCTION ACTIVITIES SHALL ADHERE TO THE PERMIT REQUIREMENTS ISSUED FROM THE AGENCY OF NATURAL RESOURCES. IN STREAM EXCAVATION AND OTHER EARTHWORK SHALL BE RESTRICTED FROM JUNE 1 TO OCTOBER 1, UNLESS THE CONTRACTOR OBTAINS PERMISSION FROM AGENCY OF NATURAL RESOURCES TO DO WORK OUTSIDE OF THAT TIME FRAME.

WOOD MATERIALS LIST			
COMPONENT	EXISTING (AVERAGE SIZE IN INCHES)	PROPOSED (ACTUAL SIZE IN INCHES)	PROPOSED SPECIES & GRADE
BEARING BLOCK	---	4" THICK	WHITE OAK NO. 1
CROSS BEAMS	8x8 & 5x6	8x8 & 5x6	DOUGLAS FIR NO. 1
FLOOR DECKING	3" THICK	3 1/2" THICK	P. T. DOUGLAS FIR NO. 1
KNEE BRACING	3x5 3/4	3x5 3/4 & 4 1/2 x4 1/2	DOUGLAS FIR NO. 1
LOWER LATERAL BRACING	3 1/4 x6	4 1/2 x4 1/2	DOUGLAS FIR NO. 1
ROOF BOARDS	1/8 x8 1/2	1 x8 1/2	SPRUCE FIR NO. 1 COMMON
RAFTERS	3x5	3x5	SPRUCE FIR NO. 1
RAFTER SUPPORT BEAMS	6x7	6x7	DOUGLAS FIR NO. 1
SIDING	1" THICK	1" THICK	EASTERN WHITE PINE COMMON PREMIUM
STRINGERS	7 1/2 x7 1/2	8x8	DOUGLAS FIR SEL. STR.
STRINGER SUPPORT CROSS BEAMS	---	10x10	P. T. DOUGLAS FIR NO. 1
TRUSS BOTTOM CHORDS	VARIABLES	3-5x10	P. T. DOUGLAS FIR DENSE SEL. STR.
TRUSS DIAGONALS	VARIABLES	5X12 & 5x15	P. T. DOUGLAS FIR SEL. STR.
UPPER LATERAL BRACING	---	4 1/2 x4 1/2	DOUGLAS FIR NO. 1
WOOD CURB	---	5 1/2 x11 1/2	P. T. DOUGLAS FIR NO. 1
WOOD CURB BLOCKING	---	5 1/2 x11 1/2	P. T. DOUGLAS FIR NO. 1
MINIMUM ALLOWABLE WOOD STRESSES			
SPECIES	SIZE	GRADE	F _D (PSI) F _T (PSI) F _V (PSI) F _C (PSI) F _{C+L} (PSI) E (10*6 PSI)
DOUGLAS FIR	2"-4" THICK	NO. 1	1200 800 180 1550 625 1.8
DOUGLAS FIR	BEAMS & STRINGERS*	NO. 1	1350 675 170 925 625 1.6
DOUGLAS FIR	BEAMS & STRINGERS*	SEL. STR.	1600 950 170 1100 625 1.6
DOUGLAS FIR	BEAMS & STRINGERS*	DENSE SEL. STR.	1900 1100 170 1300 730 1.7
DOUGLAS FIR	POST & TIMBERS**	NO. 1	1200 825 170 1000 625 1.6
SPRUCE FIR	2"-4" THICK	NO. 1	875 450 135 1150 425 1.4
WHITE OAK	2"-4" THICK	NO. 1	875 500 220 900 800 1.0

* 5" & THICKER AND MORE THAN 2 IN. GREATER THAN THICKNESS (E.G. 4 1/2 x8 7/8)
** 5" & THICKER AND NOT MORE THAN 2 IN. GREATER THAN THICKNESS (E.G. 8 3/4 x8)

LEGEND:

P. T. PRESSURE TREATED

MODEL	
Default	
HTA PROJECT NO.	
904213	

Hoyle, Tanner & Associates, Inc.

PROJECT NAME:	FAIRFIELD	PLOT DATE:	5/16/2008
PROJECT NUMBER:	BHO 1448(32)	DRAWN BY:	J.B.McQUAID
FILE NAME:	Z04J144notes.dgn	CHECKED BY:	S.T.JAMES
PROJECT LEADER:	J.H.WEAVER	SHEET	21 OF 36
DESIGNED BY:	J.BICJA		
GENERAL NOTES			