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**VAOT STANDARDS FOR CONSTRUCTION**

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**GENERAL NOTES**

- 1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17<sup>TH</sup> EDITION, DATED 2002, AND ITS LATEST REVISIONS.
- 2. DIMENSIONS, ANGLES, BEARINGS, AND ELEVATIONS OF THE EXISTING BRIDGE SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND LIMITED FIELD INVESTIGATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING STRUCTURE COMPONENTS TO ASSURE CONSISTENCY WITH THE PROPOSED MODIFICATIONS. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF THE EXISTING FEATURE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER, BEFORE ADVANCING THE WORK. ALL REFERENCE SHEETS WERE SCANNED IN, AND ARE NO LONGER TO SCALE.
- 3. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MATERIALS ARE ON SITE AT A TIME TO MEET THE CONSTRUCTION SCHEDULE. TO FACILITATE THIS THE AGENCY COMMITS ITSELF TO RETURNING ANY FABRICATION DRAWINGS WITHIN THREE (3) WORKING DAYS OF RECEIPT.
- 4. ALL WORK WILL BE LIMITED TO THE ROADWAY AND BRIDGE DECK SURFACES, THEREFORE THERE WILL BE NO EARTH DISTURBANCE ON THIS PROJECT. IF THE CONTRACTOR PROPOSES ANY WORK THAT RESULTS IN EARTH DISTURBANCE, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL REQUIRED PERMITS.
- 5. FOLLOWING COMPLETION OF ALL OTHER CONSTRUCTION ACTIVITIES, ANY FABRIC DRAIN TROUGHS, DOWNSPOUTS, AND BRIDGE SCUPPERS SHALL BE THOROUGHLY FLUSHED BY THE CONTRACTOR WITH THE COST TO BE INCIDENTAL TO ALL OTHER ITEMS IN THE CONTRACT.
- 6. AFTER THE PAVEMENT AND MEMBRANE HAVE BEEN REMOVED, VAOT'S MATERIALS AND RESEARCH PERSONNEL WILL BE PERFORMING A HALF-CELL AND CHAIN DRAG TEST. THE CONTRACTOR SHALL ALLOW VAOT PERSONNEL ACCESS TO THE BRIDGE FOR THIS TESTING. IT IS NOT VAOT'S INTENTION TO HOLD UP THE CONTRACTOR AND TESTING SHALL BE DONE AROUND THE CONTRACTOR'S SCHEDULE. CONTACT JASON TREMBLAY AT 828-6945 TO MAKE ARRANGEMENTS.

- 7. UNLESS OTHERWISE PROVIDED, ALL REMOVED MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF/RECYCLED AS AUTHORIZED BY THE ENGINEER.

**PAVEMENT REMOVAL NOTES**

- 1. ITEM 529.10 "REMOVAL OF BRIDGE PAVEMENT" SHALL INCLUDE THE REMOVAL OF PAVEMENT ON THE BRIDGE DECK AND APPROACH SLABS. THE FINAL ONE HALF INCH OF PAVEMENT ON THE APPROACH SLABS SHALL BE REMOVED BY LOADER, GRADER, OR EQUIPMENT APPROVED BY THE ENGINEER.
- 2. DURING BRIDGE AND APPROACH SLAB PAVEMENT REMOVAL, THE CONTRACTOR SHALL EXERCISE CARE TO INSURE THAT NO DAMAGE OCCURS TO THE EXISTING APPROACH SLABS. IF THE CONTRACTOR DAMAGES AREAS OF THE APPROACH SLABS, THEN THE REQUIRED REPAIRS SHALL BE AS PER SECTION 580 OF THE SPECIFICATION AND WILL BE AT THE CONTRACTORS EXPENSE.
- 3. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY DROP INLETS, CATCH BASINS, BRIDGE SCUPPERS, BRIDGE RAIL, OR GRANITE CURB AT ANY STAGE DURING THE CONSTRUCTION. DAMAGE TO THESE STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER. THE COST FOR SUCH WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

**DECK REPAIR NOTES**

- 1. FOLLOWING REMOVAL OF THE PAVEMENT, THE EXISTING CONCRETE WITHIN 16" OF THE EXISTING FINGER JOINTS SHALL BE REMOVED FULL DEPTH. THIS SHALL BE PAID FOR UNDER PAY ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURE". THIS SHALL INCLUDE THE REMOVAL OF CONCRETE TO THE LIMITS SHOWN ON THE PLANS, INCLUDING ANY CONCRETE REMOVAL UNDER THE EXISTING GRANITE CURB AND PLATES NEEDED TO REMOVE THE EXISTING JOINT. THE EXISTING FINGER JOINTS AND RELATED TROUGH SHALL ALSO BE REMOVED UNDER ITEM 529.20.
- 2. ALL CONCRETE THAT IS NOT REMOVED UNDER "PARTIAL REMOVAL OF STRUCTURE" OR "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS III" SHALL BE REMOVED UNDER PAY ITEM 580.11 "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS II" FOR THE ENTIRE DECK FROM CURB TO CURB.
- 3. AN ESTIMATED QUANTITY OF 3 CY HAS BEEN INCLUDED AS ITEM 580.12 "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS III" FOR ANY AREAS THAT REQUIRE FULL DEPTH REPAIR. THIS SHALL INCLUDE ANY AREAS INDICATED BY POP OUTS ON THE SOFFIT, FASCIA, AND CURBS; THE AREAS AROUND THE SCUPPERS THAT NEED REPAIR; OR ANY SECTION OF THE DECK THAT THE ENGINEER DETERMINES TO REQUIRE FULL DEPTH REPAIR AFTER CLASS II REMOVAL.
- 4. AN ESTIMATED QUANTITY FOR ITEMS 502.11 "SHORING SUPERSTRUCTURE BEARINGS (ABUTMENT)" AND "SHORING SUPERSTRUCTURE BEARINGS (PIER)" HAS BEEN INCLUDED IN THIS PROJECT BASED ON THE ASSUMPTION THAT ONE BEARING MAY NEED TO BE RESET AT EACH BRIDGE FOUNDATION LOCATION. AFTER THE REMOVAL OF THE CONCRETE FOR "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE" AND "PARTIAL REMOVAL OF STRUCTURE" HAS BEEN COMPLETED, AND BEFORE THE NEW CONCRETE HAS BEEN PLACED, THE CONTRACTOR SHALL PROVIDE ACCESS FOR THE ENGINEER TO INSPECT THE BEARINGS. THE ENGINEER WILL DECIDE WHICH, IF ANY, OF THE BEARINGS WILL BE SHORED AND RESET. IF EXISTING ANCHOR BOLTS CANNOT BE REUSED THEN NEW ANCHOR BOLTS SHALL BE PROVIDED ACCORDING TO SECTION 531. PAYMENT FOR DRILLING AND GROUTING NEW ANCHOR BOLTS SHALL BE INCIDENTAL TO ITEM 502.11. PAYMENT FOR PROVIDING ACCESS WILL BE INCIDENTAL TO ITEM 635.11.
- 5. AFTER CLASS II AND CLASS III REMOVAL THE TOP MAT OF REINFORCING STEEL SHALL BE INSPECTED, ANY REMAINING RUST SHALL BE CLEANED OFF OF THE BARS BEFORE ANY CONCRETE SHALL BE PLACED. ANY SECTIONS ORDERED REMOVED BY THE ENGINEER SHALL BE REMOVED AND REPLACED WITH #5 BARS, CUT TO FIT. AN ESTIMATED QUANTITY OF 6450 LBS OF ITEM 507.15 "REINFORCING STEEL" HAS BEEN ADDED FOR THIS PURPOSE: THIS IS ANTICIPATED TO BE THREE HUNDRED (300) 20'-0" #5 BARS AND FOR THE TWENTY (20) 3'-1" #8 THREADED RODS IN ABUTMENT #1. IF THERE IS INSUFFICIENT COMPETENT EXISTING STEEL FOR LAPPING WITH THE NEW STEEL, THE TWO BARS SHALL BE CONNECTED USING MECHANICAL BAR CONNECTORS UNDER ITEM 507.19 "MECHANICAL BAR CONNECTORS", AN ESTIMATED QUANTITY OF 73 MECHANICAL BAR CONNECTORS HAVE BEEN ADDED FOR THIS PURPOSE, INCLUDING 3 CONNECTORS FOR TESTING UNDER 713.02.
- 6. THE DECK SHALL BE SANDBLASTED A MAXIMUM OF 12 HOURS PRIOR TO FLOODING THE SURFACE. THE AREA SHALL BE VACUUMED OR FLUSHED, USING HIGH PRESSURE AIR OR WATER, TO REMOVE ALL LOOSE PARTICLES, DUST AND DEBRIS. AFTER SANDBLASTING, THE PREPARED CONCRETE SURFACE SHALL BE FLOODED WITH WATER FOR AT LEAST 12 HOURS. ONCE THE CONCRETE IS WET, EITHER FROM FLOODING OR RAIN, IT MUST BE KEPT WET UNTIL THE PLACEMENT OF NEAT CEMENT PASTE AND CONCRETE. IF THE CONCRETE IS ALLOWED TO DRY OUT, THE AREA MUST BE SANDBLASTED AGAIN AND THE ENTIRE AREA VACUUMED OR FLUSHED AGAIN. THIS SHALL BE INCLUDED IN THE BID PRICE FOR ITEMS 580.11 OR 580.12; "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS II OR III". ALL SURFACES OF METAL DECK JOINTS AND THE SURFACES OF GRANITE CURBING, WHICH ARE TO HAVE CONCRETE PLACED AGAINST THEM, WILL BE COATED WITH EPOXY BONDING COMPOUND, INCIDENTAL TO ITEM 516.11 "BRIDGE EXPANSION JOINT, VERMONT".

- 7. THE FINAL DECK THICKNESS OF CONCRETE SHALL BE 9" WITH A CLEARANCE TO THE TOP MAT OF REBAR OF 3". THE NEW DECK CONCRETE SHALL MEET THE REQUIREMENTS OF ITEM 900.608 "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS AA LOW CEMENT)". THE CONCRETE FOR EACH DECK SPAN SHALL BE DONE IN A SINGLE POUR. THE TOP SURFACE SHALL BE SCREED TO FINISH GRADE AND RECEIVE A TURF DRAG FINISH. THE DECK SHALL BE GROOVED ACCORDING TO ITEM 900.675 "SPECIAL PROVISION (LONGITUDINAL DECK GROOVING)". THE CONTRACTOR WILL TAKE APPROPRIATE MEASURES TO ENSURE THAT THE FINISHED GRADE AND CROSS-SLOPE OF THE NEW DECK WILL MATCH THE EXISTING GRADE AND CROSS-SLOPE.
- 8. THE GRANITE CURB JOINTS SHALL BE CLEANED AND REPOINTED AS DEEMED NECESSARY BY THE RESIDENT ENGINEER UNDER ITEM 602.30.
- 9. WATER REPELLENT, SILANE, SHALL BE APPLIED TO ALL EXPOSED CONCRETE, EXCEPT FOR THE PIER AND THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES. THE DECK SURFACE WILL BE PRESSURE WASHED AFTER GROOVING OPERATIONS, PRIOR TO TREATMENT. THIS WORK SHALL BE INCIDENTAL TO ITEM 514.10 "WATER REPELLENT, SILANE".
- 10. A VIBRATORY SCREED MACHINE WILL BE ALLOWED FOR THIS DECK POUR. IF THE SCREED RAIL SUPPORTS CREATE POINT LOADS OUTSIDE THE TOP FLANGE OF THE FASCIA GIRDERS, A SUPPORT SYSTEM FOR THESE AREAS SHALL BE DESIGNED AND SUBMITTED FOR DOCUMENTATION. ANY DAMAGE TO THE PROTECTIVE COATING ON THE EXISTING STRUCTURAL STEEL SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.

**HYDRO-DEMOLITION NOTES**

- 1. HYDRO-DEMOLITION WILL BE THE PREFERRED METHOD OF REMOVING CONCRETE FOR THE WORK REQUIRED UNDER THESE GENERAL NOTES. THE SLURRY FROM THIS OPERATION SHALL BE DISPOSED OF IN ACCORDANCE WITH SUBSECTIONS 105.23, 105.24, AND 105.25.
- 2. HYDRO-DEMOLITION EQUIPMENT SHALL BE CAPABLE OF REMOVING ALL CONCRETE TO THE MINIMUM DEPTH REQUIRED FOR CLASS II REMOVAL, AND REMOVE ONLY UNSOUND CONCRETE BELOW THAT DEPTH. THE DECK SHALL BE INSPECTED TO INSURE REMOVAL OF ALL UNSOUND CONCRETE.
- 3. IN ALL CASES, IF ITEM 580.12 "REPAIR OF CONCRETE SUPERSTRUCTURE, CLASS III" IS REQUIRED AFTER CLASS II REMOVAL BY HYDRO-DEMOLITION, THEN AIR HAMMERS WILL BE USED FOR THIS ADDITIONAL PURPOSE.

**AIR HAMMER REMOVAL NOTES**

- 1. THE ANGLE BETWEEN THE DECK AND AIR HAMMER AXIS SHALL BE FROM ZERO (0) DEGREES AND FORTY-FIVE (45) DEGREES. AIR HAMMERS USED FOR THE REMOVAL OF UNSOUND AND DETERIORATED CONCRETE, SHALL HAVE A MAXIMUM RATING OF THIRTY (30) POUNDS AND SHALL USE CHISEL POINTS ONLY. IF REINFORCING STEEL IS DAMAGED, OR IF CONCRETE IS DEBONDED, DELAMINATED, OR OTHERWISE DAMAGED BEYOND THE DEFINED LIMITS OF REMOVAL BECAUSE OF THE IMPROPER USE OF THE AIR HAMMER, THEN THE CONTRACTOR SHALL REPAIR THE DAMAGED AREAS BY REMOVING AND REPLACING THE CONCRETE AND/OR REINFORCING STEEL AT THEIR OWN EXPENSE.

**JOINT NOTES**

- 1. WE HAVE SHOWN ONE METHOD OF ATTACHING THE JOINT BRACKETS TO THE OUTERMOST BEAMS. IT WILL BE UP TO THE CONTRACTOR TO SUBMIT FABRICATION DRAWING SHOWING ATTACHMENT OF THESE BRACKETS FOR APPROVAL.
- 2. A NEW ASPHALTIC PLUG JOINT SHALL BE INSTALLED BETWEEN DECK SPAN #2 AND APPROACH SLAB #2. THIS SHALL BE PAID UNDER PAY ITEM 516.10 "BRIDGE EXPANSION JOINT, ASPHALTIC PLUG"
- 3. AT THE BEGINNING AND END OF EACH APPROACH SLAB, NOT ADJACENT TO THE BRIDGE DECK, A SAWCUT PAVEMENT JOINT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAIL SHOWN ON SHEET 10. PAYMENT FOR THE SAWCUT JOINT SHALL BE MADE UNDER ITEM 524.11 "JOINT SEALER, HOT POURED" OR 524.13 "JOINT SEALER, COLD POURED", AT THE OPTION OF THE CONTRACTOR.

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PROJECT NUMBER:	STP DECK (37)
FILE NAME:	08c2l8notes.dgn
PROJECT LEADER:	C.P.WILLIAMS
DESIGNED BY:	H.I.SALLS
INDEX & PROJECT NOTES SHEET I	PLOT DATE: 16-APR-2009 DRAWN BY: D.D.BEARD CHECKED BY: H.I. SALLS SHEET 2 OF 25