

**GENERAL NOTES:**

- ALL CONTRACTOR DESIGN, CONSTRUCTION AND FABRICATION SHALL CONFORM TO THE "AMERICAN RAILWAY ENGINEERING AND MAINTENANCE OF WAY ASSOCIATION (AREMA) MANUAL FOR RAILWAY ENGINEERING, 2013" AND THE "STATE OF VERMONT AGENCY OF TRANSPORTATION (VTRANS) STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2011" AND ITS LATEST REVISIONS.
- THE DESIGN LIVE LOAD FOR THE BRIDGE IS BASED ON A 4 AXLE 315 KIP VEHICLE (SEE DETAIL ON PRELIMINARY INFORMATION SHEET).
- THE GENERAL SCOPE OF WORK INCLUDES BUT IS NOT LIMITED TO:
  - PREPARING AND IMPLEMENTING AN EROSION CONTROL AND ENVIRONMENTAL CONTAINMENT PLAN
  - REMOVING AND STORING TRACK FROM BRIDGE AND APPROACHES.
  - REMOVING EXISTING CONCRETE SLAB STRUCTURE.
  - DRIVING STEEL PILES
  - INSTALLING NEW PRECAST CONCRETE STRUCTURES (ABUTMENTS AND APPROACH SLABS).
  - INSTALLING NEW BEARING DEVICE ASSEMBLIES ON BOTH ABUTMENTS.
  - INSTALLING NEW STEEL SUPERSTRUCTURE WITH TIMBER DECK.
  - RE-INSTALL TRACK ON BRIDGE AND APPROACHES.
- THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT CONTINUOUS COORDINATION WITH THE RAILROAD OPERATOR, VERMONT RAILWAY (VTR), WILL BE REQUIRED THROUGHOUT CONSTRUCTION. VTR WILL PROVIDE THE CONTRACTOR WITH FLAGGERS FOR PROTECTION OF RAILROAD TRAFFIC WHILE WORK IS BEING PERFORMED ON THE RAILROAD RIGHT OF WAY (R.O.W.). THE CONTRACTOR SHALL NOT ENTER THE R.O.W. AT ANY TIME WITHOUT VTR AUTHORIZATION. ALL COSTS FOR RAILROAD FLAGGER PROTECTION AND RAILROAD COORDINATION SHALL BE INCLUDED UNDER ITEM 900.650, SPECIAL PROVISION (MAINTENANCE OF RAILROAD TRAFFIC)(N.A.B.I.). SEE THE RAILROAD SPECIAL PROVISION FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- SEE PROJECT SPECIAL PROVISIONS FOR EXCLUSIVE AND NON-EXCLUSIVE TRACK TIMES DEFINED FOR THIS PROJECT.
- THE RAILROAD/HIGHWAY RIGHT-OF-WAY IS SHOWN ON THE LAYOUT SHEET. CONSTRUCTION AND ACCESS SHALL BE WITHIN THE R.O.W. UNLESS OTHERWISE APPROVED BY THE PROPERTY OWNER(S) AND VTRANS ENVIRONMENTAL PERMITTING. THE CONTRACTOR SHALL COORDINATE DIRECTLY WITH THE PROPERTY OWNER(S) TO OBTAIN WRITTEN APPROVAL OF LAND USE OUTSIDE THE R.O.W. THE CONTRACTOR SHALL SUBMIT COPIES OF WRITTEN PROPERTY AGREEMENTS TO THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL PERMITTING REQUIRED FOR OUTSIDE THE R.O.W. LAND USE.
- EXISTING AERIAL FACILITIES WITHIN AND/OR NEAR THE PROJECT AREA WILL NOT BE AFFECTED BY THE PROJECT, THE CONTRACTOR SHALL PROTECT THESE FACILITIES FROM DAMAGE. ALL CONTRACTORS, SUBCONTRACTORS OR MATERIAL SUPPLIERS INVOLVED IN ANY PROJECT-RELATED ACTIVITY SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS RELATED TO WORKING AROUND LIVE ELECTRICAL LINES; INCLUDING, BUT NOT LIMITED TO MAINTAINING THE REQUIRED MINIMUM CLEAR DISTANCE FROM AN ELECTRICAL UTILITY FACILITY.
- AN UNDERGROUND CABLE IS ATTACHED TO THE EXISTING BRIDGE AND IS ASSUMED TO BE ABANDONED AND SHALL BE REMOVED; NO OTHER UNDERGROUND FACILITIES HAVE BEEN IDENTIFIED IN THE PROJECT AREA. HOWEVER, THE CONTRACTOR IS ADVISED THAT EXPLORATORY EXCAVATION TO LOCATE AND/OR TRACE THIS LINE AND ANY OTHER UNDERGROUND FACILITY NOT IDENTIFIED MAY BE NECESSARY AND ANY FACILITY FOUND TO BE ACTIVE WILL NEED TO BE PROTECTED FROM DAMAGE AS REFERENCED IN THE PROJECT UTILITY SPECIAL PROVISIONS. THE CONTRACTOR SHALL CONTACT DIG SAFE BEFORE STARTING EXCAVATION ACTIVITIES. THE CONTRACTOR MUST TELEPHONE DIG SAFE AT 811 AT LEAST 48 HOURS (EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS) BEFORE, BUT NOT MORE THEN 30 DAYS BEFORE, STARTING EXCAVATION ACTIVITIES AT ANY LOCATION. SEE UTILITY SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- ALL PRECAST CONCRETE PLACEMENT AND BACKFILLING SHALL BE DONE IN THE DRY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PREVENT CONSTRUCTION DEBRIS FROM ENTERING WATERWAYS, PUBLIC OR PRIVATE PROPERTY, OR TRAVELED WAYS DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH THE CLEANUP OF DEBRIS OR CONTAMINATION RESULTING FROM THE WORK.
- DIMENSIONS AND ELEVATIONS SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM LIMITED FIELD INVESTIGATION AND 2008 AND 2010 FIELD SURVEYS. CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SURVEY AND FIELD MEASUREMENTS OF ALL EXISTING COMPONENTS IMPACTED BY THE NEW WORK TO ENSURE CONSISTENCY WITH THE PROPOSED MODIFICATIONS TO THE SITE. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT ITEMS.
- EXISTING COMPONENTS DAMAGED AS A RESULT OF THE WORK, BUT INTENDED TO REMAIN IN USE, SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AS DIRECTED AND APPROVED BY THE ENGINEER, AT NO ADDITIONAL EXPENSE TO THE BRIDGE OWNER (VTRANS) OR THE RAILROAD OPERATOR (VTR).
- THE CONTRACTOR SHALL PROVIDE SAFE ACCESS TO ALL AREAS OF WORK ON THE BRIDGE FOR THE ENGINEER'S INSPECTIONS. COST SHALL BE INCIDENTAL TO THE CONTRACT ITEMS.

**GENERAL NOTES CONTINUED:**

- THE CONTRACTOR SHALL FIELD VERIFY EXISTING TOP OF RAIL ELEVATIONS AT CENTERLINE OF BEARING AND SHALL VERIFY DESIRED FINAL TOP OF RAIL ELEVATIONS WITH VTR BEFORE STARTING THE WORK. TEMPORARY CHANGES TO TOP OF RAIL ELEVATIONS DURING THE WORK MUST BE APPROVED BY THE ENGINEER AND VTR BEFORE ADVANCING THE WORK.
- THE CONTRACTOR SHALL SUBMIT A PROPOSED CONSTRUCTION SEQUENCE AND SCHEDULE TO THE VTRANS RAIL SECTION FOR REVIEW BEFORE STARTING WORK. COST SHALL BE INCIDENTAL TO THE CONTRACT ITEMS.

**REMOVAL AND REPAIR NOTES:**

- ITEM 529.15, REMOVAL OF STRUCTURE SHALL INCLUDE REMOVAL OF THE EXISTING CONCRETE SUPERSTRUCTURE, EXISTING CROSS TIES, AND EXISTING BALLAST ABOVE THE STRUCTURE.
- THE CONTRACTOR'S METHODS FOR REMOVAL OF THE EXISTING STRUCTURE SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY REMOVAL WORK. PAYMENT SHALL BE INCLUDED IN PAY ITEM 529.15.
- ALL COSTS FOR CROSS TIE REMOVAL OUTSIDE OF THE EXISTING STRUCTURE LIMITS SHALL BE INCLUDED IN PAY ITEM 900.620, "SPECIAL PROVISION, (REMOVAL AND REPLACEMENT OF CROSS TIES)".
- ALL COSTS FOR NEW BRIDGE TIES SHALL BE INCLUDED IN PAY ITEM 900.645, "SPECIAL PROVISION, (TIMBER DECK, RAILROAD BRIDGE)".
- ALL COSTS FOR NEW CROSS TIES SHALL BE INCLUDED IN PAY ITEM 900.620, "SPECIAL PROVISION, (REMOVAL AND REPLACEMENT OF CROSS TIES)".

**ENVIRONMENTAL CONTAINMENT NOTES:**

- ALL EXISTING MATERIALS REMOVED AND NOT REUSED OR RESET AS PART OF THIS PROJECT AND ALL WASTE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF ONLY AT AN APPROVED FACILITY.
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATUTES AND REGULATIONS RELATING TO THE PREVENTION AND ABATEMENT OF ALL POLLUTION.

**REINFORCING STEEL NOTES:**

- REINFORCING STEEL SHALL HAVE 3" COVER UNLESS OTHERWISE NOTED IN THE PLANS.
- REINFORCING STEEL IN PRECAST CONCRETE AND ALL DOWELS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE 540.10, "PRECAST CONCRETE STRUCTURE" ITEM.
- REINFORCING STEEL IN PRECAST CONCRETE AND ALL DOWELS SHALL MEET THE REQUIREMENTS OF SECTION 507 LEVEL I PLAIN REINFORCING STEEL.
- REINFORCING STEEL PLACEMENT TOLERANCE SHALL BE:  
SPACING: +/- 1"  
CLEARANCE: +/- 3/16"

**PRECAST CONCRETE NOTES**

- NEW BRIDGE ABUTMENTS AND APPROACH SLABS SHALL BE CONSTRUCTED OF PRECAST CONCRETE. ALL COSTS FOR PRECAST CONCRETE BRIDGE ABUTMENTS AND APPROACH SLABS SHALL BE INCLUDED IN THE APPROPRIATE 540.10, "PRECAST CONCRETE STRUCTURE" ITEM.
- PVC GROUT SLEEVES IN PRECAST STRUCTURES SHALL BE REMOVED PRIOR TO GROUTING AND SHALL BE INCIDENTAL TO THE APPROPRIATE 540.10, "PRECAST CONCRETE STRUCTURE" ITEM.
- ALL PRECAST CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI.
- ABUTMENTS SHALL BE PLUMB AND LEVEL PRIOR TO GROUTING PILE BLOCK-OUTS IN PRECAST ABUTMENTS. BLOCK-OUTS SHALL BE GROUTED WITH ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)".  
  
LIFTING LOOPS SHALL BE DETAILED AND DESIGNED BY THE PRECAST CONCRETE FABRICATOR. LIFTING LOOPS SHALL BE REMOVED A MINIMUM OF 1" BELOW THE TOP OF THE CONCRETE SURFACE. ONCE THE PRECAST CONCRETE UNITS ARE IN PLACE, RECESSES SHALL BE FILLED WITH AN APPROVED MORTAR. FABRICATION DRAWINGS FOR THE PRECAST CONCRETE SHALL BE SUBMITTED FOR APPROVAL ACCORDING TO THE VTRANS STANDARD SPECIFICATIONS AND SHALL IDENTIFY ALL MATERIALS AND DETAILS INCLUDING THE PROPOSED LIFTING LOOPS, LIFTING LOOP REMOVAL, AND MORTAR PROPOSED TO FILL RECESSES. ALL COSTS SHALL BE PAID FOR UNDER THE APPROPRIATE 540.10, "PRECAST CONCRETE STRUCTURE" ITEM.
- THE CONTRACTOR SHALL ENSURE THAT ALL LIFTING DEVICES ARE PLACED SO AS NOT TO CONFLICT WITH APPROACH SLAB DOWEL LOCATIONS.
- EXTREME CARE SHALL BE TAKEN DURING THE TRANSPORTATION, ERECTION AND FINAL PLACEMENT OF ALL PRECAST CONCRETE TO PREVENT DAMAGE. DAMAGED COMPONENTS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST.

**PRECAST CONCRETE NOTES CONTINUED:**

- ITEM 514.10, WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL SURFACES OF THE PRECAST CONCRETE STRUCTURES INCLUDING FRONT, BACK, TOP, AND ENDS. BOTTOM SURFACES DO NOT REQUIRE WATERPROOFING.
- PRECAST CONCRETE SHALL HAVE ALL EXPOSED TOP EDGES CHAMFERED 1" UNLESS OTHERWISE NOTED. BOTTOM EDGES OF ALL PRECAST CONCRETE SHALL NOT BE CHAMFERED.

**STRUCTURAL STEEL NOTES:**

- ALL STRUCTURAL STEEL SHALL BE PAID FOR UNDER ITEMS 506.55, "STRUCTURAL STEEL, PLATE GIRDER" AND 506.60, "STRUCTURAL STEEL".
- FIELD AND SHOP CONNECTIONS SHALL BE MADE WITH 1" DIAMETER A325 TYPE I GALVANIZED BOLTS IN 1 1/16" DIAMETER HOLES. NUTS AND WASHERS SHALL CONFORM TO ASTM A563DH AND ASTM F436-1. ALL BOLTS, NUTS, AND WASHERS SHALL CONFORM TO SUBSECTION 714.05.
- ALL BOLT HOLES SHALL BE SHOP REAMED AFTER GALVANIZING TO ENSURE 1 1/16" DIAMETER. NO FIELD REAMING SHALL BE ALLOWED.
- ALL BOLTED CONNECTIONS SHALL BE TIGHTENED BY THE TURN OF THE NUT METHOD. ALL SHOP BOLTING SHALL CONFORM TO SUBSECTION 506.19.
- GIRDERS TO BE ASSEMBLED WITH ANY MILL CAMBER UPWARD.
- THE ENDS OF THE GIRDERS SHALL BE VERTICAL UNDER DEAD LOAD.
- ANY CONNECTIONS THAT ARE NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO VTRANS RAIL SECTION FOR APPROVAL.
- THE STEEL GIRDERS, DIAPHRAGMS, CONNECTION PLATES, BEARING STIFFENERS, ETC. SHALL BE GALVANIZED IN ACCORDANCE WITH SUB SECTION 726.08.

**PILE NOTES:**

- TO PREVENT DAMAGE PILE SHOES SHALL BE REQUIRED AND SHALL CONFORM TO SUBSECTION 505.04(f)
- ABUTMENT PILES
  - THE PILES SHALL BE HP 14 X 89
  - THE PILES SHALL BE DRIVEN TO REFUSAL IN BEDROCK. A NOMINAL PILE DRIVING RESISTANCE (RNDR) OF 183.1 KIPS IS REQUIRED BY DESIGN, PROVIDED A MINIMUM PENETRATION OF 15 FEET BELOW THE BOTTOM OF THE PILE CAP HAS BEEN ACHIEVED.
- A MINIMUM OF THREE DYNAMIC PILE LOADING TESTS ARE REQUIRED DURING PILE INSTALLATION. NO LESS THAN ONE DYNAMIC PILE TEST SHALL BE CONDUCTED AT EACH ABUTMENT. DYNAMIC LOADING TESTS SHALL BE PAID UNDER ITEM 505.45, "DYNAMIC PILE LOADING TESTING".
- THE TOPS OF THE PILES AFTER DRIVING SHALL NOT VARY FROM THE POSITION SHOWN ON THE PLANS BY MORE THAN 3 INCHES. THE PILE ORIENTATION SHALL NOT VARY BY MORE THAN 5 DEGREES. AS PART OF THE PILE CONSTRUCTION DRAWINGS SUBMITTAL, THE CONTRACTOR SHALL DEMONSTRATE HOW THE TOLERANCES WILL BE MET.
- FOR ESTIMATING PURPOSES THE PILE TIP ELEVATIONS WERE ASSUMED AS SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTHS MAY VARY.



PROJECT NAME:	DORSET	PLOT DATE:	5/2/2014
PROJECT NUMBER:	WCRS(8)	DRAWN BY:	J.W. GOLEK
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PROJECT NOTES			