

GENERAL NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.
- THE FOLLOWING MATERIAL CRITERIA, DESIGNATIONS AND UNIT WEIGHTS APPLY TO THESE PLANS FOR DESIGN PURPOSES:
 CONCRETE: HIGH PERFORMANCE CLASS "A" $f_c = 30 \text{ MPa}$
 HIGH PERFORMANCE CLASS "B" $f_c = 25 \text{ MPa}$
 STRUCTURAL STEEL: AASHTO M 270M GRADE 345W
 REINFORCING STEEL: AASHTO M 31M GRADE 420
 UNIT WEIGHT OF SOIL: 2243 kg/m³
- ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 20 DEGREES CELSIUS, UNLESS NOTED OTHERWISE.
- SEE SHEET 32 FOR REMOVAL NOTES.
- A ROADWAY PAVING AND GUARDRAIL PROJECT WAS CONSTRUCTED IN THIS AREA IN NOVEMBER 1997. THE ROADWAY TYPICAL WAS WIDENED TO 900-3600-3600-900. ADDITIONAL SURVEY WAS NOT TAKEN TO INCORPORATE THESE CHANGES. THIS PROJECT ACCOMMODATES THIS CHANGE IN EXISTING CONDITIONS HORIZONTALLY BY INDICATING MATCHING TO AN EXISTING 900 SHOULDER. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND ANY CHANGES REQUIRED AS A RESULT SHALL BE APPROVED BY THE ENGINEER.

CONCRETE NOTES:

- CONCRETE PAYMENT AND CLASSIFICATION SHALL BE AS FOLLOWS:
 ITEM 501.31, CONCRETE, CLASS D (MOD. - FLOWABLE FILL)
 ITEM 501.33, CONCRETE, HIGH PERFORMANCE CLASS A: DECK, CURBS, INTEGRAL BACKWALL, AND WINGWALLS ABOVE THE CONSTRUCTION JOINT
 ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B: APPROACH SLABS, PILE CAPS, PORTIONS OF THE WINGWALLS BELOW THE CONSTRUCTION JOINT, AND ALL OTHER COMPONENTS
- ITEM 514.10, WATER REPELLENT (MOD. - SILANE), SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON BRIDGE SUPERSTRUCTURE EXCEPT THE BOTTOM OF THE DECK BETWEEN THE DRIP NOTCHES. WATER REPELLENT SHALL ALSO BE APPLIED TO THE EXPOSED CONCRETE ON THE NEW SUBSTRUCTURES.
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25 MILLIMETERS BY 25 MILLIMETERS, UNLESS OTHERWISE NOTED. A 15 MILLIMETER RADIUS SHALL BE USED ON THE TOP INSIDE CORNER OF CURBS.
- JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.
- THE KEY ON CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT UNLESS OTHERWISE INDICATED. ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT. KEYS SHALL TERMINATE 150 FROM ENDS OF JOINTS.
- FOR EACH POUR SEQUENCE PHASE, THE CONCRETE DECK SHALL BE PLACED CONTINUOUSLY WITHIN ONE EIGHT HOUR WORKING DAY. IF CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A CONSTRUCTION JOINT SHALL BE USED AS SHOWN ON SHEET 26. THERE SHALL BE A MINIMUM DELAY PERIOD OF 96 HOURS BETWEEN POURS.

STRUCTURAL STEEL AND PILE NOTES:

- ALL NEW STRUCTURAL STEEL SHALL BE AASHTO M 270M, GRADE 345W UNLESS OTHERWISE NOTED.
- ITEM 506.50, STRUCTURAL STEEL (ROLLED BEAM), SHALL INCLUDE ROLLED BEAMS, BEARING STIFFENERS, CONNECTION PLATES, DIAPHRAGMS, AND ALL REQUIRED FASTENERS.
- ALL BOLTED FIELD CONNECTIONS SHALL BE MADE WITH 22 MILLIMETER DIAMETER HIGH STRENGTH BOLTS IN 24 MILLIMETER DIAMETER HOLES UNLESS OTHERWISE NOTED.
- CONNECTIONS NOT DESIGNATED SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL.
- SHEAR CONNECTORS SHALL BE FIELD WELDED USING AUTOMATICALLY TIMED STUD WELDING EQUIPMENT AND SHALL BE PAID AS ITEM 508.15, SHEAR CONNECTORS.
- PILES SHALL BE HP 310x125 AASHTO M223/M223M GRADE 345. THE ESTIMATED LENGTH OF EACH PILE AT BOTH ABUTMENTS IS 21.0 METERS, INCLUDING THE 1000 MILLIMETER EMBEDMENT IN THE CONCRETE PILE CAP. NO SUBSTITUTIONS FOR THE NUMBER, SIZE AND GRADE OF THE PILES WILL BE ALLOWED.
- THE DRIVING POINT OF ALL PILES SHALL BE REINFORCED. POINT REINFORCEMENT SHALL BE CAST STEEL AND SHALL CONFORM TO SUBSECTIONS 505.04(E) AND 730.01 OF THE STANDARD SPECIFICATIONS.
- TO ENSURE THAT THE ULTIMATE AXIAL CAPACITY HAS BEEN ATTAINED AND TO PREVENT THE OVERSTRESSING OF THE PILES DURING DRIVING OPERATIONS, DYNAMIC MONITORING SHALL BE PERFORMED FOR THE FIRST PILE DRIVEN AT EACH ABUTMENT. THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 505.04(C)-2 OF THE STANDARD SPECIFICATIONS. PAYMENT FOR PILE TESTING SHALL BE MADE UNDER ITEM 505.45, "DYNAMIC PILE LOADING TEST".
- PILE HEAD CUT-OFF ELEVATION SHALL BE WITHIN 25 MILLIMETERS OF THE ELEVATION DETAILED IN THE PLANS. AT THE CUT-OFF ELEVATION, THE PILE SHALL BE FREE FROM DRIVING DAMAGE AS DETERMINED BY THE RESIDENT ENGINEER. IN ITS FINAL POSITION, THE PILE TOP SHALL BE WITHIN 75 MILLIMETERS OF PLAN LOCATION. THE RESIDENT ENGINEER MAY REQUIRE THAT THE DRIVING BE STOPPED TO CHECK THE PILE ALIGNMENT. PULLING LATERALLY ON THE PILE SECTION TO CORRECT MISALIGNMENT OR SPlicing A PROPERLY ALIGNED SECTION TO A MISALIGNED SECTION SHALL NOT BE PERMITTED. ONLY CORRECTIVE ACTION NO. 1 AS DESCRIBED IN THE LAST PARAGRAPH OF SUBSECTION 505.04(A) OF THE STANDARD SPECIFICATIONS WILL BE ALLOWED. ALL COSTS, INCLUDING DELAYS, ASSOCIATED WITH NECESSARY CORRECTIVE ACTION TO PLACE PILES WITHIN THE INDICATED TOLERANCES SHALL BE AT THE CONTRACTOR'S EXPENSE.
- TO AID IN PROPER PILE PLACEMENT/ALIGNMENT, EACH PILE SHALL BE PLACED IN PRE-EXCAVATED HOLE. THE BOTTOM OF THE HOLE SHALL BE AT ELEVATION 212.600 AT ABUTMENT 1 AND 213.200 AT ABUTMENT 2. THE HOLE SHALL BE OF SUFFICIENT WIDTH TO INSTALL A 600 MILLIMETER DIAMETER RIGID PIPE SLEEVE CENTERED AT EACH PILE LOCATION. AFTER THE PILE IS PLACED, THE SLEEVE SHALL BE BACKFILLED WITH MATERIAL MEETING THE REQUIREMENTS FOR GRANULAR BACKFILL FOR STRUCTURES AS INDICATED IN SUBSECTION 704.08 OF THE STANDARD SPECIFICATIONS. THE HOLE AREA AROUND THE SLEEVE SHALL BE BACKFILLED WITH GRANULAR BACKFILL FOR STRUCTURES. BACKFILLING OF BOTH THE SLEEVE AND THE HOLE AROUND THE SLEEVE SHALL OCCUR SIMULTANEOUSLY AND SHALL PROCEED TO THE BOTTOM OF THE PILE CAP ELEVATION. UPON COMPLETION OF DRIVING OPERATIONS AS DETERMINED BY THE RESIDENT ENGINEER, THE PILE HEAD SHALL BE CUT-OFF TO THE ELEVATION INDICATED IN THE PLANS AND THE SLEEVE REMOVED. THE CONTRACTOR MAY SUBMIT AN ALTERNATIVE METHOD OF DRIVING FOR APPROVAL BY THE RESIDENT ENGINEER.
- AFTER SUPERSTRUCTURE STEEL HAS BEEN SET ON THE ANCHOR BOLTS, ELEVATIONS ALONG THE TOP OF THE GIRDERS SHALL BE TAKEN AS DIRECTED BY THE RESIDENT ENGINEER FOR USE IN DETERMINING HAUNCH DEPTHS.
- FLEMING BRACKETS OR SIMILAR FALSEWORK SHALL BE SPACED AS REQUIRED BY DESIGN, BUT SHALL BE LIMITED TO A MAXIMUM SPACING OF 1220 MILLIMETERS. THE DESIGN OF FALSEWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ANY BOLT HOLES IN THE WEBS OF FASCIA GIRDERS NOT OTHERWISE FILLED SHALL BE FILLED WITH BUTTON HEAD OR HEX HEAD BOLTS MEETING AASHTO M164M TYPE 3. THE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.19 OF THE STANDARD SPECIFICATIONS.

CONSTRUCTION NOTES:

- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION, POLLUTION, AND DISCHARGE OF RAW CONCRETE INTO THE PASSUMPSIC RIVER AS DIRECTED BY THE RESIDENT ENGINEER.
- IN-STREAM CONSTRUCTION SHALL BE CONDUCTED DURING THE PERIOD DESIGNATED IN THE PERMITS. THE AGENCY OF NATURAL RESOURCES MUST APPROVE ANY DEVIATION FROM THIS PERIOD IN WRITING.
- TRAFFIC WILL BE MAINTAINED DURING CONSTRUCTION BY UTILIZING A SINGLE TRAFFIC LANE TEMPORARY BRIDGE WITH ALTERNATING EASTBOUND AND WESTBOUND TRAFFIC CONTROLLED BY A TEMPORARY TRAFFIC SIGNAL. ALL WORK REQUIRED TO MAINTAIN TRAFFIC DURING CONSTRUCTION SHALL BE PAID AS ITEM 641.10, TRAFFIC CONTROL UNLESS OTHERWISE NOTED.
- TEMPORARY TRAFFIC SIGNAL SHALL BE PAID AS ITEM 678.40, TEMPORARY TRAFFIC SIGNAL SYSTEM.
- THE METHOD OF SEPARATING THE TRAVELING PUBLIC FROM THE NEW BRIDGE CONSTRUCTION SHALL BE DESIGNED AND DETAILED AS PART OF THE TEMPORARY BRIDGE SUBMITTAL. ALL COSTS ASSOCIATED WITH THE DESIGN, DETAILING, INSTALLATION, AND REMOVAL OF THE SYSTEM SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 528.10.
- THE BRIDGE PLAQUE SHALL BE FURNISHED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AS SHOWN ON THE PLANS. ALL COSTS SHALL BE INCLUDED IN ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B.
- THE CONTRACTOR SHALL ERECT, MAINTAIN, REMOVE, AND/OR RESET AS REQUIRED ALL ON-PROJECT SIGNS AND BARRICADES. THE COST OF ALL CONSTRUCTION SIGNS AND BARRICADES SHALL BE INCLUDED IN ITEM 641.10, TRAFFIC CONTROL.
- ANY EXISTING SIGNS NOT REUSED SHALL REMAIN THE PROPERTY OF THE STATE. THESE SIGNS SHALL BE REMOVED BY THE CONTRACTOR AND STOCKPILED AS DIRECTED BY THE RESIDENT ENGINEER FOR REMOVAL BY THE STATE AND SHALL BE PAID AS ITEM 675.50, REMOVING SIGNS.
- AN ESTIMATED QUANTITY FOR ITEM 613.10, STONE FILL, TYPE 1 (CHECK DAMS) HAS BEEN ADDED TO THE QUANTITY SUMMARY IN THE EVENT IT IS REQUIRED DURING CONSTRUCTION. THIS ITEM IS NOT CURRENTLY SHOWN ANYWHERE ON THE PLANS.

REINFORCING STEEL NOTES:

- ALL REINFORCING STEEL SHALL BE EPOXY COATED AND PAID AS ITEM 507.17, EPOXY COATED REINFORCING STEEL.
- MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
 ALONG BACK FACES OF WALLS AGAINST EARTH: FIFTY (50) MILLIMETERS
 ALONG TOP SURFACE OF DECK SLAB: SIXTY-FIVE (65) MILLIMETERS
 ALONG BOTTOM SURFACE OF DECK SLAB: FORTY (40) MILLIMETERS
 ELSEWHERE UNLESS OTHERWISE INDICATED: EIGHTY (80) MILLIMETERS
- REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE:
 SPACING: ± 25 MILLIMETERS
 CLEARANCE: ± 5 MILLIMETERS

STATE OF VERMONT			
AGENCY OF TRANSPORTATION			
Town Of	LYNDON	Bridge No.	2
		Log Sta.	
Highway No.	VT 114	Surv. Sta.	
VT 114 OVER PASSUMPSIC RIVER			
CONSTRUCTION NOTES			
Designed By	J.T. KLEIN	Drawn By	B.J. MASSE
Checked By	M.A. COLGAN	Date	3/06
		Bridge Design Supervisor	M.A. COLGAN
		Date	3/06
PROJECT	LYNDON	PROJECT NO.	BRF 0269(10)
I.G.C. Info.	Bridge Sheet No. 50544N0T	Sheet	25 of 72