

GENERAL NOTES

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, THIRD EDITION, AND ITS LATEST REVISIONS.
2. IN-STREAM CONSTRUCTION SHALL BE RESTRICTED TO JUNE 1 TO OCTOBER 1, UNLESS THE CONTRACTOR OBTAINS WRITTEN PERMISSION FROM THE AGENCY OF NATURAL RESOURCES TO DO WORK OUTSIDE OF THAT TIME FRAME.
3. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 20 DEGREES C UNLESS OTHERWISE NOTED.
4. FULL ACCESS TO ALL DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES.

CONCRETE AND REINFORCING STEEL

5. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT; ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.
6. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25 mm BY 25 mm.
7. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
8. ALL CAST-IN-PLACE CONCRETE, UNLESS NOTED OTHERWISE, SHALL BE HIGH PERFORMANCE CLASS B. PAYMENT FOR THE HEADWALLS, WINGWALLS, CUTOFF WALLS AND APRONS SHALL MADE WITH THE CORRESPONDING AMOUNTS OF ITEM 501.34 CONCRETE, HIGH PERFORMANCE CLASS B, ITEM 507.15 REINFORCING STEEL AND ITEM 507.17 EPOXY COATED REINFORCING STEEL.
9. ITEM 514.10 WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES OF WINGWALLS AND CURBS/HEADWALLS. WATER REPELLENT, SILANE SHALL ALSO BE APPLIED TO THE EXPOSED INSIDE SURFACE OF THE BOX STARTING AT THE OPENING AT EACH END AND EXTENDING 1 METER INTO THE BOX, INCLUDING THE BOTTOM SURFACE OF THE TOP SLAB. DEPENDING ON THE MANUFACTURER'S RECOMMENDATION AND THE CONSTRUCTION SEQUENCE, THIS MAY REQUIRE THAT THE WATER REPELLENT, SILANE BE APPLIED TO PRECAST CONCRETE PIECES BEFORE THE PIECES REACH THE JOBSITE.
10. THE HEADWALLS, WINGWALLS AND APRONS SHALL BE CONNECTED TO THE BOX UNITS USING MECHANICAL CONNECTORS. THESE CONNECTORS WILL BE ANCHORED INTO THE BOX UNITS USING #19 BARS. THE ANCHORS WILL HAVE A MINIMUM LENGTH OF 450 mm PLUS ADDITIONAL LENGTH THAT IS NEEDED TO FIT INTO MECHANICAL CONNECTORS. THE MECHANICAL CONNECTORS WILL BE SUPPLIED AND TESTED IN ACCORDANCE WITH SECTION 713.02 OF THE VERMONT STANDARD SPECIFICATION. THE ANCHORS ON BOTH SIDES OF THE CONNECTORS AND THE MATCHING MECHANICAL CONNECTORS WILL BE SUPPLIED BY THE PRECAST FABRICATOR. THE COST OF THE MECHANICAL CONNECTORS AND ANCHORS WILL BE INCIDENTAL TO ITEM 540.10 "PRECAST CONCRETE STRUCTURE (3050 X 2450 X 10560 BOX)".
11. REINFORCING STEEL IN THE HEADWALLS WILL BE EPOXY COATED.
12. THE EXTERIOR (TOP & SIDES) AND INTERIOR (SIDES & BOTTOM) OF ALL CONCRETE BOX JOINTS ALONG WITH ALL LIFTING HOLES SHALL BE FILLED WITH MORTAR, TYPE IV AFTER BEING SET IN THEIR FINAL POSITION. THE WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 540.10 "PRECAST CONCRETE STRUCTURE (3050 X 2450 X 10560 BOX)". ALL MORTAR SHALL BE WET CURED A MINIMUM OF 24 HOURS PRIOR TO ANY WATERPROOFING.

13.
 - A. CONCRETE BAFFLES CAN BE PRECAST OR CAST IN PLACE. PAYMENT FOR THIS IS INCIDENTAL TO ITEM "540.10 PRECAST CONCRETE STRUCTURE (3050 X 2450 X 10560 BOX)".
 - B. A CONNECTION DETAIL IS GIVEN ON SHEET 42 FOR CONNECTING THE CONCRETE BAFFLES TO THE CONCRETE BOX AND APRONS. ALL OF THE CONNECTING HARDWARE WILL BE SUPPLIED BY THE FABRICATOR OF THE CONCRETE BOX AND PAID FOR UNDER THE ITEM "540.10 PRECAST CONCRETE STRUCTURE (3050 X 2450 X 10560 BOX)".
 - C. ALTERNATIVE CONNECTING DETAILS MAY BE APPROVED BY THE PROJECT MANAGER. HOWEVER, FIELD DRILLING ANCHORS INTO THE BOX SECTION WILL NOT BE ALLOWED.
 - D. ALL PRECAST ELEMENTS MAY UTILIZE THE SAME CONCRETE MIX DESIGN AS THAT APPROVED FOR THE PRECAST CONCRETE STRUCTURE.

PRECAST CONCRETE BOX

14. DESIGN CRITERIA:
 - A. SOIL UNIT WEIGHT = 22 KN/M³
 - B. DESIGN LIVE LOAD = HL-93
 - C. DESIGN FILL OVER BOX = 1 M
15. ALL DESIGNS SHALL CONFORM TO ALL APPROPRIATE SECTIONS OF THE LRFD BRIDGE SPECIFICATIONS, THIRD EDITION, AND ITS LATEST REVISIONS. THE ENDS OF THE TOP SLAB OF THE PRECAST BOX WILL BE DESIGNED TO RESIST A MINIMUM DISTRIBUTED MOMENT OF 54.95 KN-M/M TRANSFERRED FROM THE HEADWALL.
16. THE PRECAST BOX SECTIONS ARE SHOWN FOR REFERENCE ONLY. THE ACTUAL DIMENSIONS AND SHAPE WILL BE DEPENDENT ON THE FABRICATOR. THE MINIMUM CLEAR INSIDE DIMENSIONS WILL BE 2450 mm HIGH AND 3050 mm WIDE. THE OVERALL LENGTH OF THE BOX WILL BE 10560 mm HORIZONTALLY. THE ENDS OF THE BOX WILL BE SKEWED 7 DEGREES. ALL EXTERNAL FACES OF THE CONCRETE BOX SHALL BE VERTICAL IN THE FINAL POSITION.
17. THE CONNECTION DETAIL BETWEEN PRECAST BOX SEGMENTS SHALL BE DETAILED BY THE FABRICATOR AND APPROVED BY THE PROJECT MANAGER. THIS WORK SHALL BE INCIDENTAL TO ITEM "540.10 PRECAST CONCRETE STRUCTURE (3050 X 2450 X 10560 BOX)".
18. A 600 mm WIDE STRIP OF ITEM 519.20 SHEET MEMBRANE WATERPROOFING, TORCH APPLIED SHALL BE APPLIED AT EACH SIDE JOINT. THE MEMBRANE SHALL BE CENTERED ON THE JOINT AND COVER THE FULL HEIGHT OF SIDE JOINTS. THE ENTIRE TOP SHALL THAN BE COVERED WITH MEMBRANE. THE SHEETS SHALL OVERLAP THE EDGES BY 300 mm ON EACH SIDE.

EXCAVATION, EARTHWORK AND RELATED ITEMS

19. THE EXISTING ABUTMENTS AND WINGWALLS SHALL BE REMOVED TO THE LIMITS SHOWN ON THE PLANS UNDER ITEM 204.25 "STRUCTURE EXCAVATION."
20. REMOVAL OF EXISTING DECK, PAVEMENT, BRIDGE RAIL AND ANY SUBSTRUCTURE NOT REMOVED UNDER ITEM 204.25 "STRUCTURE EXCAVATION" OR ITEM 203.16 "SOLID ROCK EXCAVATION" WILL BE PAID FOR AS ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURE (EXISTING BRIDGE)".
21. ITEM 900.608, "SPECIAL PROVISION (STONE FILL, CULVERT LINING)" IS TO BE PLACED ON THE APRONS AND IN THE BOX. IT SHALL BE CLEAN, WASHED, BANK RUN STONE, WITH 100% SMALLER THAN 200 mm AND 100% RETAINED ON THE 100 mm SIEVE, AND HAVE 0% FRACTURES. THE BED MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER AND THE AGENCY OF NATURAL RESOURCES STREAM ALTERATION ENGINEER.
22. REPLACE THE MATERIAL EXCAVATION FROM THE BOTTOM OF THE EXISTING CONCRETE SLAB (SEE SHEET 51) TO THE BOTTOM OF THE BITUMINOUS CONCRETE PAVEMENT WITH SUBBASE OF DENSE GRADED CRUSHED STONE.
23. REPLACE THE MATERIAL EXCAVATED FOR THE EXISTING GRASS ISLAND (SEE SHEET 61) DOWN TO 735 mm BELOW FINISH GRADE AND REPLACE THE MATERIAL UP TO THE BOTTOM OF THE BITUMINOUS CONCRETE PAVEMENT WITH SUBBASE OF DENSE GRADED CRUSHED STONE.

DETOUR

24. VT ROUTE 346 SHALL REMAIN CLOSED TO THROUGH TRAFFIC DURING THE CONSTRUCTION PERIOD. TRAFFIC SHALL BE DETOURED ALONG TH1.
25. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING GROUPS OR INDIVIDUALS AT LEAST 2 WEEKS PRIOR TO THE BEGINNING OF CONSTRUCTION: TOWN, LOCAL AND STATE LAW ENFORCEMENT, EMERGENCY SERVICES, HIGHWAY MAINTENANCE OFFICIALS. THE CONTRACTOR SHALL NOTIFY LOCAL NEWSPAPERS SO AS TO GIVE THE PUBLIC SOME ADVANCE WARNING WHICH MAY RESULT IN THE DIVERSION OF TRAFFIC AWAY FROM THE CONSTRUCTION ZONE.
26. FIELD CONDITIONS SHALL CONTROL THE ACTUAL PLACEMENT OF SIGNS SHOWN ON THE TEMPORARY DETOUR TRAFFIC CONTROL PLAN, SHEET 19. PLACEMENTS SHOWN MAY BE ADJUSTED AT THE RESIDENT ENGINEER'S DISCRETION.
27. ADDITIONAL SIGNING MAY BE REQUIRED AT THE RESIDENT ENGINEER'S DISCRETION.
28. ALL COSTS ASSOCIATED WITH THE FABRICATION, ERECTION, MAINTENANCE, AND REMOVAL OF ALL TEMPORARY DETOUR SIGNS, INCLUDING NECESSARY HARDWARE AND POSTS SHALL BE INCIDENTAL TO ITEM 641.10 "TRAFFIC CONTROL".
29. ALL COSTS ASSOCIATED WITH THE TEMPORARY TRAFFIC SIGNAL SYSTEM AND TEMPORARY DETECTOR SHALL BE INCIDENTAL TO ITEM 641.10 "TRAFFIC CONTROL".
30. THE COST OF ON-PROJECT SIGNS, BARRICADES, TEMPORARY TRAFFIC BARRIER AND REMOVING AND RESETTING TEMPORARY TRAFFIC BARRIER SHALL BE INCIDENTAL TO ITEM 641.10 "TRAFFIC CONTROL".
31. THE REMOVAL AND/OR RESETTING OF TEMPORARY TRAFFIC SIGNS, AS DEEMED NECESSARY BY THE RESIDENT ENGINEER, SHALL BE INCIDENTAL TO ITEM 641.10 "TRAFFIC CONTROL".
32. ALL SIGN ASSEMBLES SHALL BE INSTALLED AT A HEIGHT OF 7' ABOVE ROADWAY SURFACE.
33. ALL SIGNS WIDER THEN 30 INCHES SHALL BE INSTALLED WITH TWO POSTS.
34. ALL COSTS ASSOCIATED WITH UNIFORMED TRAFFIC OFFICERS AND FLAGGERS SHALL BE INCIDENTAL TO 641.10 "TRAFFIC CONTROL".

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GENERAL NOTES		SHEET	40 OF 65