

CAST-IN PLACE CONCRETE HEADWALL, AND FOOTING NOTES

GENERAL:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, DATED 2014, AND ITS LATEST REVISIONS.
2. DESIGN VEHICLE: HL-93
3. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.
4. WHERE LEDGE IS ABOVE THE MINIMUM BOTTOM OF FOOTING ELEVATION, THE LEDGE SHALL BE EXCAVATED DOWN TO 2'-6" MINIMUM BELOW THE TOP OF THE HEADWALL FOOTING ELEVATION. ALL OVER BREAKAGE BELOW THIS ELEVATION SHALL BE REPLACED WITH ITEM 501.34 CONCRETE, HIGH PERFORMANCE CLASS B. A MAXIMUM OF SIX INCHES AVERAGE DEPTH WILL BE PAID FOR AS ITEM 501.34 CONCRETE, HIGH PERFORMANCE CLASS B. ANY ADDITIONAL CONCRETE OR EXCAVATION WILL BE AT THE CONTRACTOR'S EXPENSE.

CONCRETE:

1. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
2. THE KEY IN CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT.
3. WATER REPELLENT, SILANE SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 514. WATER REPELLENT, SILANE AND SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON THE STRUCTURE AND SUBSTRUCTURE.
4. ALL EXPOSED EDGES ON CONCRETE SHALL BE CHAMFERED 1" X 1".
5. MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
ALONG BACK FACES OF WALLS AGAINST EARTH - 2 INCH
ELSEWHERE UNLESS OTHERWISE INDICATED - 3 INCH
6. DESIGN VALUES
a. CONCRETE, HIGH PERFORMANCE CLASS B COMPRESSIVE STRENGTH: $f_c = 3500$ PSI.

REINFORCING STEEL:

1. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE".
2. REINFORCING PLACEMENT TOLERANCES SHALL BE:
SPACING: +/- 1 INCH
CLEARANCES: +/- 1/4 INCH
3. REINFORCING STEEL IN THE SUBSTRUCTURE SHALL MEET THE REQUIREMENTS OF SECTION 507 FOR UNCOATED LEVEL 1 REINFORCING STEEL AND WILL BE PAID FOR UNDER CONTRACT PAY ITEM 507.11.

UTILITIES:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL UTILITIES HAVE BEEN PLOTTED TO QUALITY LEVEL "C"; SEE BELOW.

UTILITY QUALITY LEVEL INFORMATION INDEX (SEE ASCE/CI 38-02):

UTILITY QUALITY LEVEL (QL-A):
PRECISE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES OBTAINED BY THE ACTUAL EXPOSURE (OR VERIFICATION OF PREVIOUSLY EXPOSED AND SURVEYED UTILITIES) AND SUBSEQUENT MEASUREMENT OF SUBSURFACE UTILITIES, USUALLY AT A SPECIFIC POINT. MINIMALLY INTRUSIVE EXCAVATION EQUIPMENT IS TYPICALLY USED TO MINIMIZE THE POTENTIAL FOR UTILITY DAMAGE. A PRECISE HORIZONTAL AND VERTICAL LOCATION, AS WELL AS OTHER UTILITY ATTRIBUTES, IS SHOWN ON PLAN DOCUMENTS. ACCURACY IS TYPICALLY SET TO 0.05 FEET (15-MM) VERTICAL AND TO APPLICABLE HORIZONTAL SURVEY AND MAPPING ACCURACY AS DEFINED OR EXPECTED BY THE PROJECT OWNER. INFORMATION IS ONLY VALID WITHIN THE VISIBLE LIMITS OF THE TEST HOLE.

UTILITY QUALITY LEVEL (QL-B):
INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES. QUALITY LEVEL B DATA SHOULD BE REPRODUCIBLE BY SURFACE GEOPHYSICS AT ANY POINT OF THEIR DEPICTION. THIS INFORMATION IS SURVEYED TO APPLICABLE TOLERANCES DEFINED BY THE PROJECT AND REDUCED ONTO PLAN DOCUMENTS.

UTILITY QUALITY LEVEL (QL-C):
INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGEMENT IN CORRELATING THIS INFORMATION TO QUALITY LEVEL D INFORMATION.

UTILITY QUALITY LEVEL (QL-D):
INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS.

STONE FILL NOTES

1. PRIOR TO PLACING MATERIALS, PREPARE SLOPE AND SUBGRADE AS FOLLOWS:
A. CUT OFF TREES AND EXISTING STUMPS TO GROUND LEVEL.
LEAVE STUMPS & ROOTS BELOW GRADE IN PLACE.
B. EXCAVATE VEGETATION (EXCEPT STUMPS) AND ORGANIC SOILS FROM SURFACE OF SLOPE.
C. COMPACT SURFACE OF SLOPE (COMPACTION WITH EXCAVATOR BUCKET ACCEPTABLE).
D. PLACE MATERIALS AS SHOWN ON THE DETAILS.
2. PLACEMENT OF STONE SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
A. STONE FILL SHALL BE CAREFULLY PLACED ON SLOPES AND INTERLOCKED TO CREATE A STABLE AND WELL-GRADED MIXTURE OF LARGE STONES AND SMALLER STONES WITHOUT LARGE VOIDS IN BETWEEN. VOIDS SHALL BE CHOKED WITH SMALLER STONES TO CREATE A MASS FREE OF LARGE VOIDS.
B. DUMPING OF STONE FILL AT THE TOP OF THE SLOPES AND ROLLING OR PUSHING INTO PLACE SHALL NOT BE PERMITTED.
C. PLATE COMPACTORS SHALL NOT BE USED IN THE PLACEMENT OF ITEM 900.608 SPECIAL PROVISION (STONE FILL, CHANNEL ARMORING) OR THE NATIVE RIVERBED MATERIAL.
D. NATIVE RIVER BED MATERIAL SHALL BE EXISTING RIVERBED MATERIAL EXCAVATED DURING THE WORK UNDER THIS PROJECT AND SHALL BE PLACED TO MIMIC THE NATURAL COBBLE RIVER BOTTOM AND ROUGHNESS THROUGHOUT THE PROJECT TO THE SATISFACTION OF THE ENGINEER. THE MATERIAL SHALL BE STOCKPILED AND REUSED AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER.
E. THE COST OF THIS NATIVE RIVERBED MATERIAL WILL BE CONSIDERED INCIDENTAL TO ITEM 203.27 UNCLASSIFIED CHANNEL EXCAVATION.
3. ALL EXCAVATION WILL BE PAID FOR UNDER ITEM 203.15, COMMON EXCAVATION OR 203.27 UNCLASSIFIED CHANNEL EXCAVATION. IF ENCOUNTERED IN AREAS OF COMMON EXCAVATION, PAYMENT FOR THE REMOVAL OF ROCK MEETING THE REQUIREMENTS OF 203.01 (b) WILL BE MADE UNDER ITEM 203.16, SOLID ROCK EXCAVATION WHEN APPROVED BY THE ENGINEER.
4. COST FOR TEMPORARY SUPPORT OF EXCAVATION, WHEN REQUIRED, OR WHEN DIRECTED BY THE ENGINEER WILL BE CONSIDERED INCIDENTAL TO ITEM NUMBER 203.17 UNCLASSIFIED EXCAVATION. NO PAYMENT WILL BE MADE FOR EXCAVATION OUTSIDE THE LIMITS SHOWN.
5. ITEM 649.31 GEOTEXTILE FABRIC UNDER STONE FILL WILL EXTEND ALONG ANY VERTICAL CUT FACE AND CONTINUE AT LEAST 4 FEET ALONG THE UPSLOPE AND DOWNSLOPE, ADJACENT TO THE CUT FACE.

TRAFFIC NOTES:

1. THESE PLANS ARE NOT INTENDED TO LIMIT THE CONTRACTORS APPROACH TO SCHEDULE THE WORK BUT TO OUTLINE ONE WAY OF PROGRESSING. THE CONTRACTOR IS EXPECTED TO USE KNOWLEDGE AND EXPERIENCE TO PERFORM THE WORK IN THE MOST EFFICIENT AND SAFE MANNER IN COMPLIANCE WITH THE LATEST EDITION OF "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND VTRANS STANDARDS. THE CONTRACTOR SHALL PREPARE A SITE SPECIFIC TRAFFIC CONTROL PLAN AND SUBMIT THE PLAN FOR THE ENGINEER'S APPROVAL. THE COST OF PREPARING THE SITE SPECIFIC TRAFFIC CONTROL PLAN SHALL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE).
2. ALL ITEMS ASSOCIATED WITH INSTALLATION AND REMOVAL OF TEMPORARY WIDENING AND TRAFFIC DIVERSION, WITH THE EXCEPTION OF TEMPORARY TRAFFIC BARRIER, WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL ALL - INCLUSIVE), INCLUDING BUT NOT LIMITED TO: TRAFFIC SIGNS, COMMON EXCAVATION, SUBBASE OF DENSE GRADED CRUSHED STONE, TRAFFIC CONES, PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY 4 INCH WHITE LINE, TEMPORARY 4 INCH YELLOW LINE, PAVEMENT MARKING MASK, AND BITUMINOUS CONCRETE PAVEMENT.
3. CONTRACTOR SHALL RELOCATE OR COVER ALL EXISTING SIGNS WHERE THEY WOULD CONFLICT WITH CONSTRUCTION SIGNAGE. ALL EXISTING SIGNS THAT NEED TO BE RELOCATED OR COVERED SHALL BE RESTORED AFTER THE COMPLETION OF WORK. THE COST WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE).
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING CONSTRUCTION SIGNAGE SO AS NOT TO INTERFERE OR OBSTRUCT THE VIEW OF EXISTING TRAFFIC CONTROL DEVICES, STOPPING SIGHT DISTANCE AND CORNER SIGHT DISTANCE. THE COST WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE).
5. ALL TEMPORARY TRAFFIC BARRIERS SHALL BE DELINEATED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE LATEST EDITION OF "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).
6. PAYMENT FOR FURNISHING AND PLACING TEMPORARY TRAFFIC SIGNS AND REMOVING AND RELOCATING TEMPORARY TRAFFIC SIGNS WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE).
7. PAYMENT FOR REMOVING AND RESETTING TEMPORARY TRAFFIC BARRIER WILL BE MADE UNDER ITEM 621.95 REMOVE AND RESET TEMPORARY TRAFFIC BARRIER.
8. THE CONTRACTOR SHALL REMOVE THE EXISTING STEEL BEAM GUARDRAIL AND POSTS AS REQUIRED TO ALLOW THE INSTALLATION OF THE TEMPORARY TRAFFIC BARRIER. THE STEEL BEAM RAIL AND POSTS SHALL BE STORED ON THE PROJECT IN A LOCATION ACCEPTABLE TO THE ENGINEER. WHEN THE TEMPORARY TRAFFIC BARRIER IS REMOVED, THE CONTRACTOR SHALL REINSTALL THE EXISTING STEEL BEAM GUARDRAIL AND POSTS. ANY POSTS, BEAM RAIL OR OTHER PARTS THAT ARE NOT SALVAGED SHALL BE REPLACED WITH THE NEW PARTS. THE WORK REQUIRED TO REMOVE AND RESET THE GUARDRAIL WILL BE PAID UNDER ITEM 621.75 REMOVE AND RESET GUARDRAIL.
9. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN CORRUGATED REFLECTIVE METAL STRIPS (ALTERNATING ORANGE AND WHITE) ON TEMPORARY TRAFFIC BARRIER. STRIPS SHALL BE INSTALLED ON TRAFFIC SIDE FACE OF BARRIER PER MANUFACTURERS RECOMMENDATIONS AND AS APPROVED BY THE ENGINEER. THIS WORK WILL BE CONSIDERED INCIDENTAL TO ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE).
10. LOCATIONS OF SIGNS AND PCMS ARE APPROXIMATE AND MAY BE ADJUSTED BASE ON FIELD CONDITIONS WITH THE DIRECTION AND APPROVAL OF ENGINEER ON SITE. INSTALL PCMS IN THE MOST VISIBLE LOCATION POSSIBLE SO THAT APPROACHING DRIVERS CAN READ EACH MESSAGE A MINIMUM OF TWO TIMES BEFORE PASSING IT.
11. ANY CHANGES TO THE PCMS MESSAGE DISPLAYS SHALL BE APPROVED BY THE ENGINEER.

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PROJECT NUMBER: ER 020-2(39)

FILE NAME: z13bl88def.dgn PLOT DATE: 11/24/2015
PROJECT LEADER: E. ATKINS DRAWN BY: Y. WANG
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PROJECT NOTES SHEET SHEET 4 OF 72