


PILES

- 55. THE PILES SHALL BE HP 14X89 ORIENTED WITH THE STRONG AXIS NORMAL TO THE CENTERLINES OF GIRDERS. PILES SHALL HAVE THE FOLLOWING STRUCTURAL AND PILE DRIVING PROPERTIES:
A. PILE AXIAL PILE RESISTANCE = 1184 KIPS
B. PILE MONITORING METHOD = DYNAMIC PILE LOADING TEST
C. PILE TEST RESISTANCE FACTOR = $\phi=0.65$
D. NOMINAL PILE DRIVING RESISTANCE (RNDR) = 375 KIPS
E. PILE DEFLECTION = 0.5 INCH
- 56. PILE SHOES ARE REQUIRED AND SHALL CONFORM TO SUBSECTION 505.04(F).
- 57. TO ENSURE THAT THE NOMINAL RESISTANCE HAS BEEN OBTAINED AND TO PREVENT OVERSTRESSING OF THE PILES DURING DRIVING OPERATIONS, DYNAMIC TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 505.04(d)-2 PAYMENT FOR PILE TESTING WILL BE MADE UNDER ITEM 505.45 "DYNAMIC PILE LOADING TEST". A MINIMUM OF ONE DYNAMIC PILE TEST SHALL BE CONDUCTED ON THE FIRST PILE DRIVEN. MORE TESTS MAY BE ORDERED BY THE ENGINEER. ADDITIONAL TEST(S) ORDERED BY THE ENGINEER WILL BE PAID AT THE UNIT BID PRICE FOR CONTRACT ITEM 505.45.
-  58. **RESTRIKING OF THE TEST PILE IS NOT REQUIRED.**
- 59. THE TOPS OF THE PILES AFTER DRIVING SHALL NOT VARY FROM THE LOCATION SHOWN ON THE PLANS BY MORE THAN 3 INCHES. THE PILE ORIENTATION SHALL NOT VARY BY MORE THAN 5 DEGREES. THE CONTRACTOR SHALL DEMONSTRATE HOW TOLERANCE WILL BE MET TO THE SATISFACTION OF THE ENGINEER REGARDLESS OF INSTALLATION METHOD.
- 60. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AS SHOWN ON THE BORING LOGS. THE ACTUAL LENGTHS MAY VARY.
- 61. THE PILES SHALL BE DRIVEN TO BEDROCK AND SHALL BE EMBEDDED IN THE GROUND A MINIMUM OF 46 FEET BELOW THE BOTTOM OF THE PILE CAP.


PRECAST APPROACH SLABS

- 62. PRECAST CONCRETE STRENGTH: $f'_c = 5,000$ PSI.
- 63. SLAB EDGES IN CONTACT WITH **ULTRA HIGH PERFORMANCE HPC RAPID SET** CONCRETE SHALL BE SANDBLASTED PRIOR TO DELIVERY AND POWER WASHED WITH WATER PRIOR TO INSTALLATION.
- 64. FILL APPROACH SLAB CLOSURE POURS WITH **ULTRA HIGH PERFORMANCE HPC RAPID SET** CONCRETE IN ACCORDANCE WITH ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET) (FPQ)". **CONCRETE SHALL HAVE A 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.**
- 65. THE FABRICATOR MAY ALTER THE DESIGN DETAILED WITHIN THESE PLANS TO ACCOMMODATE THEIR SPECIFIC OPERATION. THIS ALTERATION SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT.

DOWNSPOUT NOTES

- 66. PAYMENT FOR ALL MATERIALS AND LABOR RELATED TO THE HOPPER AND DOWNSPOUT ASSEMBLY WILL BE INCLUDED IN ITEM 506.60, STRUCTURAL STEEL AND WILL CONFORM TO AASHTO M270M, GRADE 250.
- 67. BOLTS AND RELATED HARDWARE SHALL CONFORM TO ASTM A 307 GRADE A.
- 68. THE HOPPER AND DOWNSPOUT ASSEMBLY SHALL BE INSTALLED AFTER THE BRIDGE EXPANSION JOINT IS IN PLACE.
- 69. ALL HOPPER AND DOWNSPOUT COMPONENTS AND HARDWARE SHALL BE GALVANIZED UNLESS OTHERWISE NOTED.



RETAINING WALL NOTES

- 70. RETAINING WALLS SHALL BE SELECTED FROM THE LIST OF WALLS ON THE APPROVED VAOT EARTH RETAINING SYSTEM SELECTION CHART. SEE SPECIAL PROVISION. THE RETAINING WALL SHALL HAVE CONCRETE FACING.
- 71. THE WALL WILL BE PAID UNDER ITEM 900.670 SPECIAL PROVISION (RETAINING WALL).
-  72. THE BOTTOM OF WALL SHALL BE A MINIMUM OF 4 FEET BELOW THE FINISHED GRADE IN FRONT OF THE WALL, SEE SHEET 49.
- 73. THE RETAINING WALL SHALL BE DESIGNED IN ACCORDANCE WITH THE 2014 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND ITS LATEST REVISIONS. THE DESIGN SHALL INCLUDE THE EFFECTS OF ALL LOADS INCLUDING, BUT NOT LIMITED TO EARTH SURCHARGE AND HYDROSTATIC PRESSURE.

- 74. THE FOLLOWING SOIL PROPERTIES SHALL BE USED IN THE DESIGN OF THE RETAINING WALL:
a. FOUNDATION SOIL DESIGN VALUES
THE NOMINAL (UNFACTORED) BEARING RESISTANCE IS A FUNCTION OF THE EFFECTIVE FOOTING WIDTH AND VARIES LINEARLY FROM 7.5 KSF (EFFECTIVE WIDTH = 4') TO 17.5 KSF (EFFECTIVE WIDTH = 10')
b. FOUNDATION SOIL PARAMETERS
UNIT WEIGHT: 130 PCF
FRICTION ANGLE: 38 DEG
c. RETAINED SOIL PARAMETERS
UNIT WEIGHT: 140 PCF
FRICTION ANGLE: 34 DEG
d. RESISTANCE FACTORS (LRFD)
BEARING RESISTANCE: 0.45
SLIDING RESISTANCE: 0.80
SETTLEMENT RESISTANCE: 1.0
SCOUR RESISTANCE: 1.0
- 75. THE INTERFACE BETWEEN THE RETAINING WALL AND THE ABUTMENT STEM SHALL BE DESIGNED TO ALLOW 0.5 INCHES OF MOVEMENT. A JOINT DETAIL SHALL BE SUBMITTED TO THE PROJECT MANAGER FOR REVIEW AND APPROVAL. ALL COMPONENTS WILL BE INCLUDED IN THE UNIT PRICE FOR ITEM 900.670 SPECIAL PROVISION (RETAINING WALL).



REV	DATE	DESCRIPTION
	02/03/16	NOTE REVISIONS

REV	DATE	DESCRIPTION
	10/13/2015	NOTE REVISIONS
	10/13/2015	NOTE ADDED



PROJECT NAME: WAITSFIELD	PLOT DATE: 10/13/2015
PROJECT NUMBER: BRF 013-4(39)	DRAWN BY: S.MERKWAN
FILE NAME: z12b136frm.dgn	CHECKED BY: T.KENDRICK
PROJECT LEADER: R.YOUNG	SHEET 4 OF 69
DESIGNED BY: D.KULL	
PROJECT NOTES (2 OF 2)	