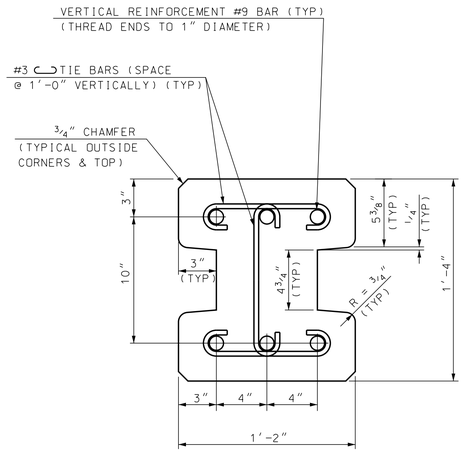
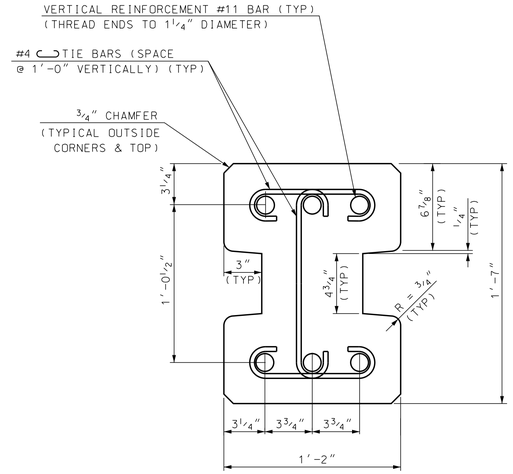


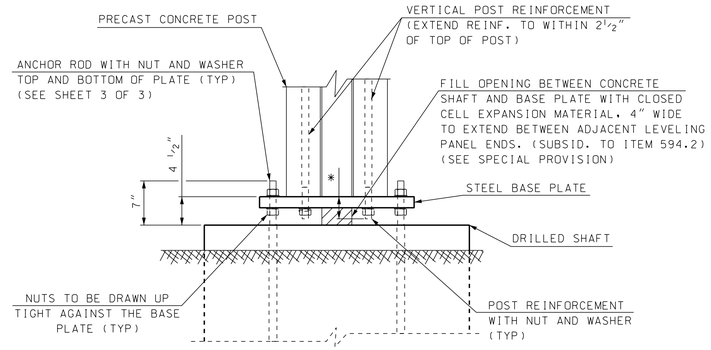
POST SECTION DETAIL for POST LENGTH UP to 15'

SCALE: 2" = 1'-0"



POST SECTION DETAIL for POST LENGTH >15' to 25'

SCALE: 2" = 1'-0"



* THE LAST 4 1/2" OF THE VERTICAL POST REINFORCEMENT SHALL BE THREADED. 3" OF THE THREADS SHALL EXTEND BEYOND THE BOTTOM OF THE POST FOR WALLS ≤ 15'. 4" OF THE THREADS SHALL EXTEND BEYOND THE BOTTOM OF THE POST FOR WALLS > 15' TO 25'.

THE THREADED DIAMETERS SHALL BE : 1" FOR #9 BAR
1 1/4" FOR #11 BAR

POST CONNECTION DETAIL

SCALE: 1"=1'-0"

GENERAL NOTES

1. ITEM 594.2, WOOD PANEL SOUND ABATEMENT WALL SHALL INCLUDE ALL LUMBER, PRECAST CONCRETE OR STEEL POSTS, LEVELING PANELS, STEEL BASE PLATES, ANCHOR RODS, CLOSED CELL EXPANSION MATERIAL AND ALL HARDWARE NECESSARY FOR CONSTRUCTION OF THE SOUNDWALL AS DETAILED ON THE PLANS.
2. SEE SECTION 594 SPECIAL PROVISION FOR ADDITIONAL SOUNDWALL INFORMATION.
3. THE ANGLE BETWEEN THE PRECAST CONCRETE POST AND WALL PANEL SHALL NOT EXCEED 10 DEGREES. POSTS SHALL BE HORIZONTALLY ALIGNED TO ACHIEVE THE PROPOSED WALL ALIGNMENT WITH ANGLE POINTS NOT TO EXCEED 20 DEGREES.
4. TRANSITIONS IN TOP OF WALL ELEVATION SHALL BE AS DETAILED ON THE PLANS. IN THE CASE WHERE THE TOP OF WALL ELEVATION IS THE SAME ON BOTH SIDES OF A POST, THE MAXIMUM ALLOWABLE DISTANCE FROM THE TOP OF WALL TO TOP OF POST SHALL BE 4". IN THE CASE WHERE THE TOP OF WALL ELEVATION VARIES ON BOTH SIDES OF A POST THE MAXIMUM ALLOWABLE DISTANCE FROM THE TOP OF WALL TO TOP OF POST SHALL BE 8".
5. FOR DRILLED SHAFT NOTES AND DETAILS SEE SOUNDWALL SHEET 3 OF 3.
6. FOR SUMMARY OF SOUNDWALL QUANTITIES SEE SOUNDWALL SHEET 3 OF 3.
7. FOR LAYOUT OF SOUNDWALL (INCLUDING POST/SHAFT NUMBERS, COORDINATES AND WALL ELEVATIONS), SEE PLAN SHEETS INCLUDED ELSEWHERE IN THIS CONTRACT.
8. VERTICAL REINFORCING STEEL FOR THE POSTS SHALL HAVE THE LAST 4 1/2" THREADED TO THE SIZE SPECIFIED ON THE PLANS IN ACCORDANCE WITH SECTION 550.
9. COAT ALL PRECAST SURFACES (POSTS AND LEVELING PANELS) WITH WATER REPELLENT (SILANE-SILOXANE) IN ACCORDANCE WITH SECTION 534. ALL COSTS SUBSIDIARY TO ITEM 594.2.
10. CLEAR COVER FOR REINFORCEMENT SHALL BE A MINIMUM OF 2".

DESIGN CRITERIA

(1) SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7TH ED., 2014 W/ 2015 & 2016 INTERIMS, SECTION 15
NHDOT 2016 STANDARD SPECIFICATIONS AS AMENDED.
SPECIAL PROVISION SECTION 594 - SOUND ABATEMENT WALL

(2) DESIGN LOADING: WIND PRESSURE = 45 PSF (FACTORED)
WHERE:
V = 123 MPH (AASHTO FIG. 3.8.1.1.2-1)
Kz(c) = 1.13 (TOP OF POST MEASURED 56 FT. ABOVE LOW GROUND SURFACE)
GROUND SURFACE ROUGHNESS CATEGORY C, OPEN TERRIAN
G = 0.85
C_D = 1.2

(3) DESIGN DIMENSIONS: MAXIMUM POST HEIGHT = 25'-0"
MAXIMUM POST SPACING = 12'-9"

(4) MATERIALS:

CONCRETE FOR THE POSTS AND LEVELING PANELS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI AND SHALL CONFORM TO SECTION 520 FOR CLASS AA CONCRETE UNLESS NOTED OTHERWISE.

ALL REINFORCING STEEL SHALL CONFORM TO AASHTO M 31, GRADE 60. VERTICAL REINFORCING STEEL FOR THE POSTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH SECTION 594. TIE BARS FOR THE POST MAY BE GALVANIZED OR EPOXY COATED IN ACCORDANCE WITH SECTION 544.

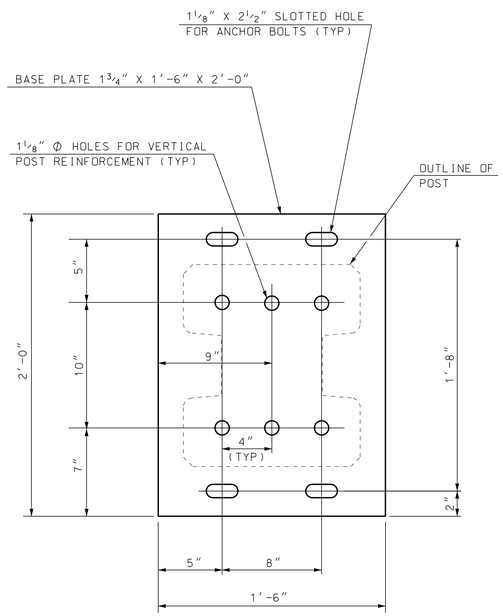
WELDED WIRE FABRIC FOR THE LEVELING PANELS SHALL BE BLACK STEEL AND CONFORM TO SECTION 544.

STRUCTURAL STEEL FOR BASE PLATES SHALL CONFORM TO AASHTO M 223, GRADE 50 AND BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH SPECIAL PROVISION SECTION 594.

ANCHOR RODS SHALL BE GALVANIZED AND CONFORM TO AASHTO M 31, GRADE 60, AND SHALL BE FABRICTAED IN ACCORDANCE WITH SECTION 550, OR CONFORM TO ASTM F1554, GRADE 55.

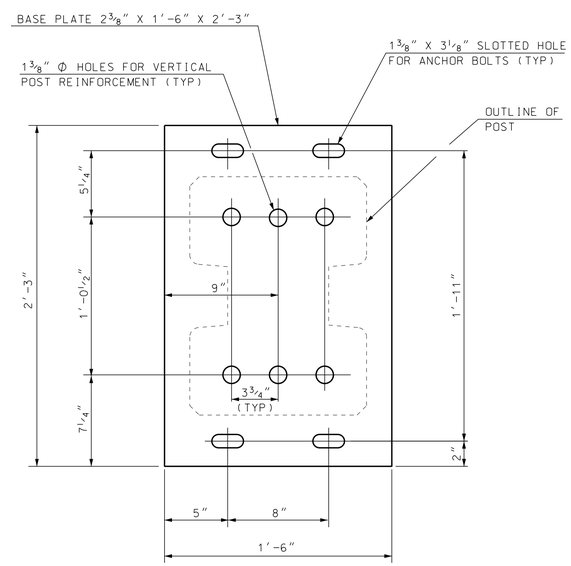
HARDWARE: NAILS SHALL BE STAINLESS STEEL COMMON NAILS CONFORMING TO ASTM F1667. CARRIAGE BOLTS SHALL CONFORM TO ASTM A307. NUTS SHALL CONFORM TO AASHTO M 291 (ASTM A563), GRADE DH. WASHERS SHALL BE HARDENED STEEL AND CONFORM TO AASHTO M 293 (ASTM F436), TYPE 1. ALL HARDWARE, EXCEPT FOR NAILS, SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIAL PROVISION 594.

LUMBER SHALL BE SOUTHERN YELLOW PINE, GRADE NO. 1 AS SPECIFIED IN THE SPIB GRADE RULE BOOK. SEE SPECIAL PROVISION FOR TREATMENT.



POST BASE PLATE DETAIL for POST LENGTH UP to 15'

SCALE: 2" = 1'-0"



POST BASE PLATE DETAIL for POST LENGTH >15' to 25'

SCALE: 2" = 1'-0"

NOTE TO DESIGNER:

1. THE SOUND ABATEMENT WALL DETAILED ON THESE PLANS HAS BEEN DESIGNED IN ACCORDANCE WITH THE DESIGN CRITERIA NOTED ON THIS SHEET. IT IS THE DESIGNER'S RESPONSIBILITY TO DETERMINE THE SUITABILITY OF THESE DETAILS FOR EACH PROJECT BASED ON PROJECT SPECIFIC INFORMATION. IF A REDESIGN IS REQUIRED, NEW DETAILS SHALL BE DEVELOPED AND THE DESIGNER'S INITIALS NOTED IN THE TITLE BOX.
2. THE SOUND ABATEMENT WALL FOUNDATION SHALL BE DESIGNED (DRILLED SHAFT LENGTH) FOR EACH PROJECT BASED ON PROJECT SPECIFIC INFORMATION. THE DESIGNER SHALL WORK CLOSELY WITH THE GEOTECHNICAL ENGINEER FOR THE DESIGN OF THE THE DRILLED SHAFT FOUNDATIONS.
3. THE DESIGNER SHALL COMPLETE PLAN SHEETS THAT INCLUDE A SOUNDWALL LOCATION CHART AND WALL LAYOUT DETAILS SUCH AS ELEVATION, SECTION, AND PLAN VIEWS.
4. THE TOP OF WALL ELEVATIONS NOTED IN THE SOUNDWALL NOISE STUDY MAY REQUIRE ADJUSTMENT TO MAINTAIN THE 8" MAX. ELEVATION CHANGE FROM THE POST TO THE NEXT PANEL AS SHOWN ON SHEET 1.

NO MODIFICATIONS SHALL BE MADE TO THIS SHEET

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
English/SNDWALL	SOUND2	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN | BRIDGE NO. | STATE PROJECT
LOCATION

WOOD PANEL SOUNDWALL (2 of 3)

BRIDGE SHEET OF FILE NUMBER

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
DESIGNED	NHDOT	9/05	CHECKED	PAB/ABH	1/2016
DRAWN	SMG/RAJ	2/03	CHECKED	PAB/ABH	1/2016
QUANTITIES			CHECKED		
ISSUE DATE	9/05	FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
REV. DATE	6/2020				