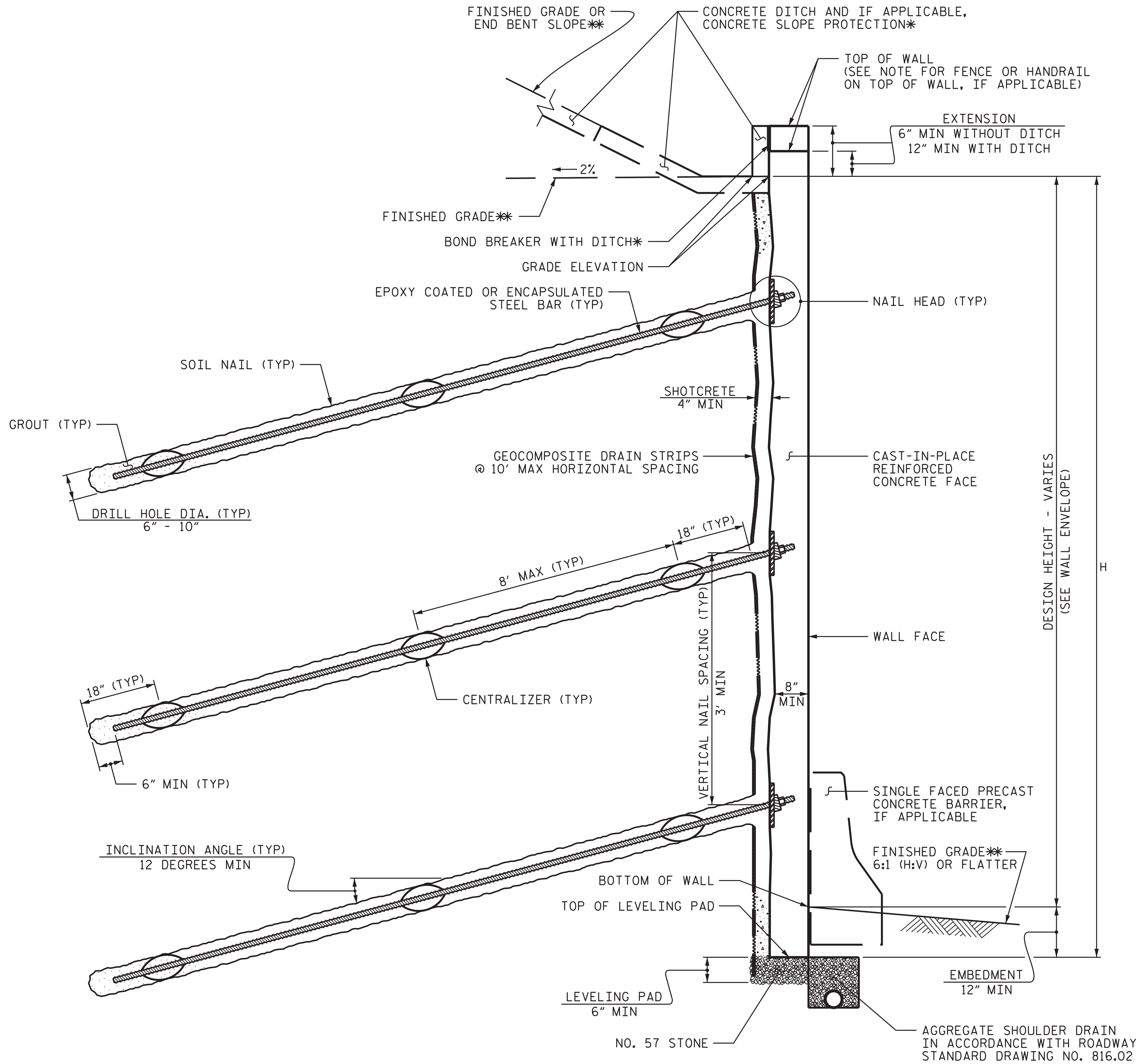

SOIL NAIL WALL - TYPICAL SECTION

*SEE CONCRETE DITCH BEHIND WALL DETAILS.
**SEE PLANS FOR FINISHED GRADE OR END BENT SLOPE DETAILS.

NOTES:

FOR SOIL NAIL RETAINING WALLS, SEE SOIL NAIL RETAINING WALLS PROVISION.

FOR STEEL BEAM GUARDRAIL, SEE ROADWAY PLANS AND SECTION 862 OF THE STANDARD SPECIFICATIONS.

FOR SINGLE FACED PRECAST CONCRETE BARRIER, SEE ROADWAY PLANS AND SECTION 857 OF THE STANDARD SPECIFICATIONS.

A FENCE OR HANDRAIL IS REQUIRED ON TOP OF RETAINING WALLS NO. 14 AND NO. 15. SEE ROADWAY PLANS FOR FENCE OR HANDRAIL ATTACHMENT DETAILS.

BEFORE BEGINNING SOIL NAIL WALL DESIGN FOR RETAINING WALLS NO. 14 AND NO. 15, SURVEY WALL LOCATIONS AND SUBMIT REVISED WALL PROFILE VIEWS (WALL ENVELOPES) FOR REVIEW. DO NOT START WALL DESIGN OR CONSTRUCTION UNTIL THE REVISED WALL ENVELOPES ARE ACCEPTED.

DESIGN RETAINING WALL NO. 14 & NO. 15 FOR THE FOLLOWING:

1) H = DESIGN HEIGHT + EMBEDMENT = 18.0 FT.
2) DESIGN LIFE = 100 YEARS
3) MINIMUM EMBEDMENT DEPTH = 1.0 FT
4) IN-SITU ASSUMED MATERIAL PARAMETERS ABOVE ELEVATION 849.0 FT:
   UNIT WEIGHT, γ = 110 LB/CF
   FRICTION ANGLE, ϕ = 10 DEGREES
   COHESION, c = 1000 LB/SF
5) IN-SITU ASSUMED MATERIAL PARAMETERS BETWEEN ELEVATION 849.0 FT AND ELEVATION 841.0 FT:
   UNIT WEIGHT, γ = 120 LB/CF
   FRICTION ANGLE ϕ = 25 DEGREES
   COHESION, c = 200 LB/SF
6) IN-SITU ASSUMED MATERIAL PARAMETERS BELOW ELEVATION 841.0 FT:
   UNIT WEIGHT, γ = 120 LB/CF
   FRICTION ANGLE ϕ = 30 DEGREES
   COHESION, c = 100 LB/SF

DESIGN RETAINING WALLS NO. 14 AND NO. 15 FOR A 100 PSF LIVE LOAD SURCHARGE.

FOUNDATIONS FOR END BENT NO. 1 LOCATED AT STATION 12+77.84 -PED- MAY INTERFERE WITH SOIL NAILS FOR RETAINING WALL NO. 14. SEE "FOUNDATION LAYOUT" SHEET FOR FOUNDATION LOCATIONS.

FOUNDATIONS FOR END BENT NO. 2 LOCATED AT STATION 14+47.84 -PED- MAY INTERFERE WITH SOIL NAILS FOR RETAINING WALL NO. 15. SEE "FOUNDATION LAYOUT" SHEET FOR FOUNDATION LOCATIONS.

GEOTECHNICAL ENGINEER

SEAL 09551 NORTH CAROLINA PROFESSIONAL ENGINEER HAROLD D. PRUITT

DocuSigned by: Harold Pruitt 4/29/2016

SIGNATURE DATE

ENGINEER

SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO.: U-2524D

GUILFORD COUNTY

STATION: 13+62.84 -PED-

SHEET 3 OF 3

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

SOIL NAIL WALL
WITH OR WITHOUT BACK SLOPE -
TYPICAL & NOTES

REVISIONS

NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

SHEET NO. W-3

PREPARED BY: HDP	DATE: 3/17/16
REVIEWED BY: DCD	DATE: 3/17/16