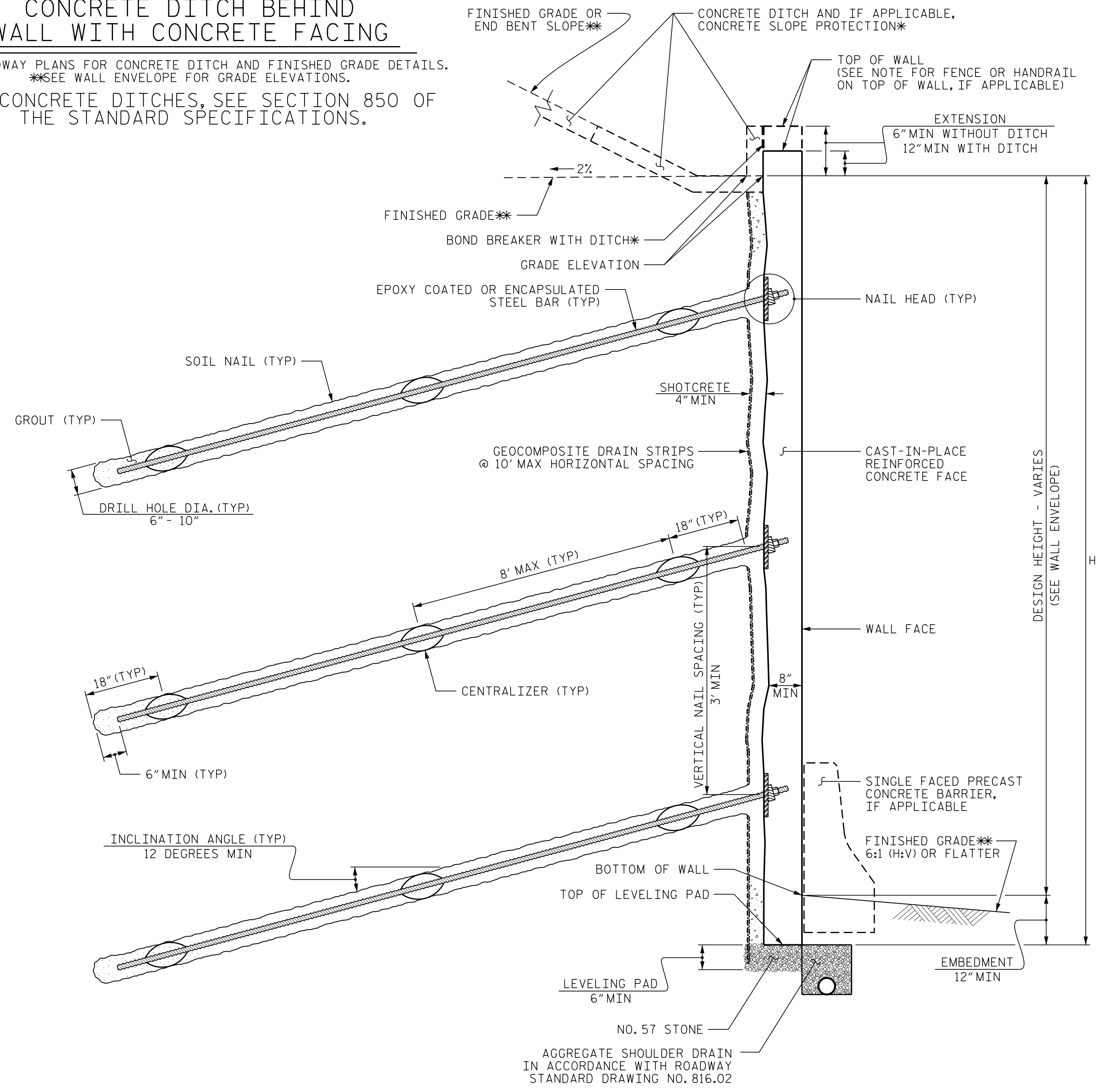


CONCRETE DITCH BEHIND WALL WITH CONCRETE FACING

*SEE ROADWAY PLANS FOR CONCRETE DITCH AND FINISHED GRADE DETAILS.
 **SEE WALL ENVELOPE FOR GRADE ELEVATIONS.
 FOR CONCRETE DITCHES, SEE SECTION 850 OF THE STANDARD SPECIFICATIONS.



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 NO. 4, NO. 5, NO. 6 & NO. 11:

FOR SOIL NAIL RETAINING WALLS, SEE SOIL NAIL RETAINING WALLS PROVISION.
 FOR SINGLE FACED PRECAST CONCRETE BARRIER FOR RETAINING WALL NO. 11, SEE ROADWAY PLANS AND SECTION 857 OF THE STANDARD SPECIFICATIONS.
 BEFORE BEGINNING SOIL NAIL WALL DESIGN FOR RETAINING WALL NO. 4, NO. 5, NO. 6 & NO. 11, SURVEY WALL LOCATION AND SUBMIT A REVISED WALL PROFILE VIEW (WALL ENVELOPE) FOR REVIEW. DO NOT START WALL DESIGN OR CONSTRUCTION UNTIL THE REVISED WALL ENVELOPE IS ACCEPTED.
 FOUNDATIONS FOR NOISE WALLS WILL BE LOCATED BEHIND RETAINING WALL NO. 4 AND MAY INTERFERE WITH SOIL NAILS. SUBMIT PROPOSED CONSTRUCTION METHODS FOR THESE FOUNDATIONS WITH THE SOIL NAIL WALL CONSTRUCTION PLAN.

EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, GUARDRAIL, FENCE OR HANDRAIL POSTS, PAVEMENTS, PIPES, INLETS OR UTILITIES MAY INTERFERE WITH SOIL NAILS FOR RETAINING WALL NO. 4, NO. 5, NO. 6 & NO. 11.

DESIGN RETAINING WALL NO. 4, NO. 5, NO. 6 & NO. 11 FOR THE FOLLOWING:
 1) H = DESIGN HEIGHT + EMBEDMENT
 2) DESIGN LIFE = 100 YEARS

3) IN-SITU ASSUMED MATERIAL PARAMETERS FOR RETAINING WALL NO. 4
 FROM STA. 10+00 -RWL4- TO 11+50 -RWL4-:
 UNIT WEIGHT, $\gamma = 120$ LB/CF
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ LB/SF

FROM STA. 11+50 -RWL4- TO 13+75 -RWL4- (ABOVE ELEVATION 805 FT):
 UNIT WEIGHT, $\gamma = 120$ LB/CF
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ LB/SF

FROM STA. 11+50 -RWL4- TO 13+75 -RWL4- (BELOW ELEVATION 805 FT):
 UNIT WEIGHT, $\gamma = 140$ LB/CF
 FRICTION ANGLE, $\phi = 40$ DEGREES
 COHESION, $c = 0$ LB/SF

FROM STA. 13+50 -RWL4- TO 26+83.28 -RWL4-:
 UNIT WEIGHT, $\gamma = 120$ LB/CF
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ LB/SF

4) IN-SITU ASSUMED MATERIAL PARAMETERS FOR RETAINING WALL NO. 5
 FROM STA. 10+00 -RWL5- TO 11+50 -RWL5-:
 UNIT WEIGHT, $\gamma = 120$ LB/CF
 FRICTION ANGLE, $\phi = 0$ DEGREES
 COHESION, $c = 1,500$ LB/SF

FROM STA. 11+50 -RWL5- TO 13+10.19 -RWL5-:
 UNIT WEIGHT, $\gamma = 120$ LB/CF
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ LB/SF

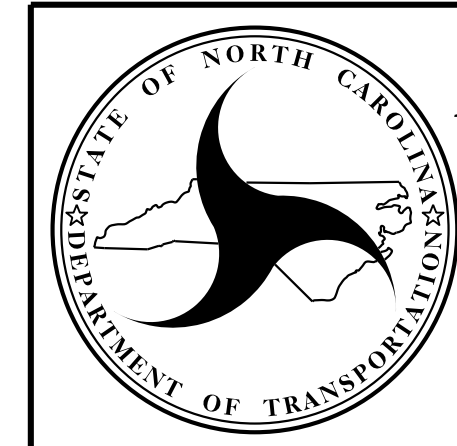
5) IN-SITU ASSUMED MATERIAL PARAMETERS FOR RETAINING WALL NO. 6:
 UNIT WEIGHT, $\gamma = 120$ LB/CF
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ LB/SF

6) IN-SITU ASSUMED MATERIAL PARAMETERS FOR RETAINING WALL NO. 11:
 UNIT WEIGHT, $\gamma = 120$ LB/CF
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ LB/SF

EXCAVATION FOR SOIL NAIL RETAINING WALL NO. 4 FROM -L- STA. 11+50± TO STA. 13+75± WILL INCLUDE EXCAVATION IN WEATHERED ROCK AND/OR CRYSTALLINE ROCK.

BLASTING OF ROCK FOR EXCAVATION MAY BE REQUIRED TO CONSTRUCT RETAINING WALL NO. 4 FROM -L- STA. 11+50± TO STA. 13+75±. THE ENGINEER WILL REVIEW AND DETERMINE THE NEED FOR ADDITIONAL PROOF TESTING OF NAILS INSTALLED PRIOR TO BLASTING. ALL MATERIALS AND WORK NECESSARY TO ACCESS NAILS TO PERFORM PROOF TESTS IS INCIDENTAL TO THE COST OF SOIL NAIL PROOF TESTING.

PROJECT NO.: U-2524D
 GUILFORD COUNTY
 STATION: RETAINING WALL NO. 4, 5, 6 & 11
 SHEET 5 OF 12



**RETAINING WALL NO. 4, 5, 6 & 11
SOIL NAIL RETAINING WALLS
TYPICAL SECTION & NOTES**

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			W-13
2			4			