



**SOIL NAIL WALL - TYPICAL SECTION**

\*SEE ROADWAY PLANS FOR FINISHED GRADE AND DITCH 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 CONCRETE BARRIER RAIL WITH MOMENT SLAB IS REQUIRED ABOVE RETAINING WALL NO. . SEE PLANS FOR CONCRETE BARRIER RAIL WITH MOMENT SLAB DETAILS.
- A FENCE OR HANDRAIL IS REQUIRED ON TOP OF RETAINING WALL NO. . SEE ROADWAY PLANS FOR FENCE OR HANDRAIL ATTACHMENT DETAILS.
- AN \_\_\_\_\_ ARCHITECTURAL FINISH IS REQUIRED FOR THE CAST-IN-PLACE REINFORCED CONCRETE FACE FOR RETAINING WALL NO. .
- A BRICK VENEER IS REQUIRED FOR RETAINING WALL NO. . AS SHOWN. SUBMIT BRICK SAMPLES FOR APPROVAL BEFORE BEGINNING SOIL NAIL WALL CONSTRUCTION.
- BEFORE BEGINNING SOIL NAIL WALL DESIGN FOR RETAINING WALL NO. . 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.
- DESIGN RETAINING WALL NO. . FOR WALL HEIGHTS EQUAL TO THE DESIGN HEIGHT (DIFFERENCE BETWEEN GRADE ELEVATION AND BOTTOM OF WALL ELEVATION) PLUS EMBEDMENT (DIFFERENCE BETWEEN BOTTOM OF WALL ELEVATION AND TOP OF LEVELING PAD ELEVATION).
- DESIGN RETAINING WALL NO. . FOR THE FOLLOWING:
  - 1) MINIMUM DESIGN LIFE = 75 OR 100 YEARS
  - 2) MINIMUM EMBEDMENT ELEVATION = \_\_\_\_\_ FT
  - 3) IN-SITU ASSUMED MATERIAL PARAMETERS ABOVE ELEVATION \_\_\_\_\_ FT:
    - UNIT WEIGHT,  $\gamma$  = \_\_\_\_\_ PCF
    - FRICTION ANGLE,  $\phi$  = \_\_\_\_\_ DEGREES
    - COHESION,  $c$  = \_\_\_\_\_ PSF
  - 4) IN-SITU ASSUMED MATERIAL PARAMETERS BELOW ELEVATION \_\_\_\_\_ FT:
    - UNIT WEIGHT,  $\gamma$  = \_\_\_\_\_ PCF
    - FRICTION ANGLE,  $\phi$  = \_\_\_\_\_ DEGREES
    - COHESION,  $c$  = \_\_\_\_\_ PSF
- THE MINIMUM EMBEDMENT ELEVATION FOR RETAINING WALL NO. . INCLUDES EMBEDMENT FOR SCOUR.
- DESIGN RETAINING WALL NO. . FOR A LIVE LOAD (TRAFFIC) SURCHARGE.
- DESIGN RETAINING WALL NO. . FOR THE POINT, LINE OR SURFACE SURCHARGE LOAD SHOWN.
- DESIGN RETAINING WALL NO. . FOR A PIPE EXTENDING THROUGH THE WALL AS SHOWN. VERIFY PIPE LOCATION AND ELEVATION BEFORE BEGINNING SOIL NAIL WALL DESIGN OR CONSTRUCTION.
- FOUNDATIONS FOR OVERHEAD SIGNS, HIGH MOUNT LUMINARIES OR SIGNAL POLES WILL BE LOCATED BEHIND RETAINING WALL NO. . AND WILL NOT 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 WILL NOT INTERFERE WITH SOIL NAILS FOR RETAINING WALL NO. .
- FOUNDATIONS FOR END BENT NO. . LOCATED AT STATION \_\_\_\_\_ WILL NOT INTERFERE WITH SOIL NAILS FOR RETAINING WALL NO. . SEE "FOUNDATION LAYOUT" SHEET FOR FOUNDATION LOCATIONS.
- "TEMPORARY SHORING" IS NOT REQUIRED FOR RETAINING WALL NO. . IN ACCORDANCE WITH THE TEMPORARY SHORING PROVISION. SEE ROADWAY STRUCTURE OR TRAFFIC CONTROL PLANS.

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

<p><b>GEOTECHNICAL ENGINEERING UNIT</b></p> <p>STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH</p>	<p>STD CELL Wall SoilNail</p>
	<p><b>SOIL NAIL WALL - TYPICAL &amp; NOTES</b></p> <p>DATE: 9-21-10</p>