

NOTES:

FOR MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALLS, SEE MECHANICALLY STABILIZED EARTH 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.

AT THE CONTRACTOR'S OPTION, USE AN MSE WALL SYSTEM WITH SEGMENTAL RETAINING WALL (SRW) UNITS THAT MEET ARTICLE 1040-4 OF THE STANDARD SPECIFICATIONS FOR RETAINING WALL NO. 9

AT THE CONTRACTOR'S OPTION, USE FINE AGGREGATE IN THE REINFORCED ZONE OF RETAINING WALL NO.9.

AN ASHLAR STONE PATTERN ARCHITECTURAL FINISH AND ANTI-GRAFFITI COATING IS REQUIRED FOR PRECAST CONCRETE PANELS OR SRW UNITS. FOR ARCHITECTURAL FINISH, SEE THE ARCHITECTURAL CONCRETE SURFACE TREATMENT SPECIAL PROVISION.

A SEPARATION GEOTEXTILE IS REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALL NO.9.

A DRAIN IS NOT REQUIRED FOR RETAINING WALL NO.9.

BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALL NO.9, 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.9 FOR THE FOLLOWING:
 1) H = DESIGN HEIGHT + EMBEDMENT
 2) DESIGN LIFE = 100 YEARS
 3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL = 2,500 LB/SF
 4) MINIMUM REINFORCEMENT LENGTH (L) = 0.7H OR 6 FT, WHICHEVER IS LONGER
 5) REINFORCED ZONE AGGREGATE PARAMETERS:

| AGGREGATE TYPE* | UNIT WEIGHT (γ) LB/CF | FRICTION ANGLE (φ) DEGREES | COHESION (c) LB/SF |
|-----------------|-----------------------|----------------------------|--------------------|
| COARSE | 110 | 38 | 0 |
| FINE | 115 | 34 | 0 |

*SEE MSE RETAINING WALLS PROVISION FOR COARSE AND FINE AGGREGATE MATERIAL REQUIREMENTS.

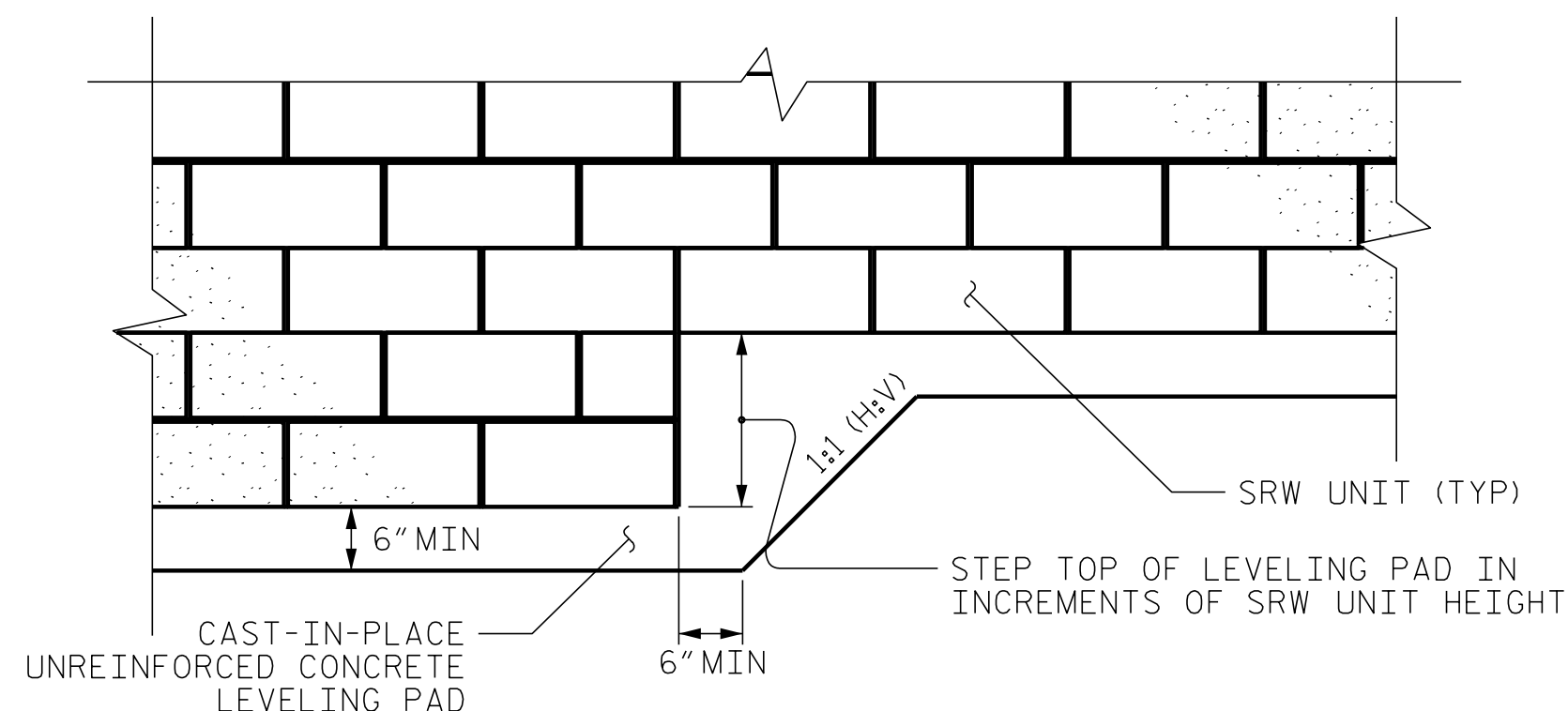
7) IN-SITU ASSUMED MATERIAL PARAMETERS:

| MATERIAL TYPE | UNIT WEIGHT (γ) LB/CF | FRICTION ANGLE (φ) DEGREES | COHESION (c) LB/SF |
|---------------|-----------------------|----------------------------|--------------------|
| BACKFILL | 120 | 30 | 0 |
| FOUNDATION | 120 | 30 | 0 |

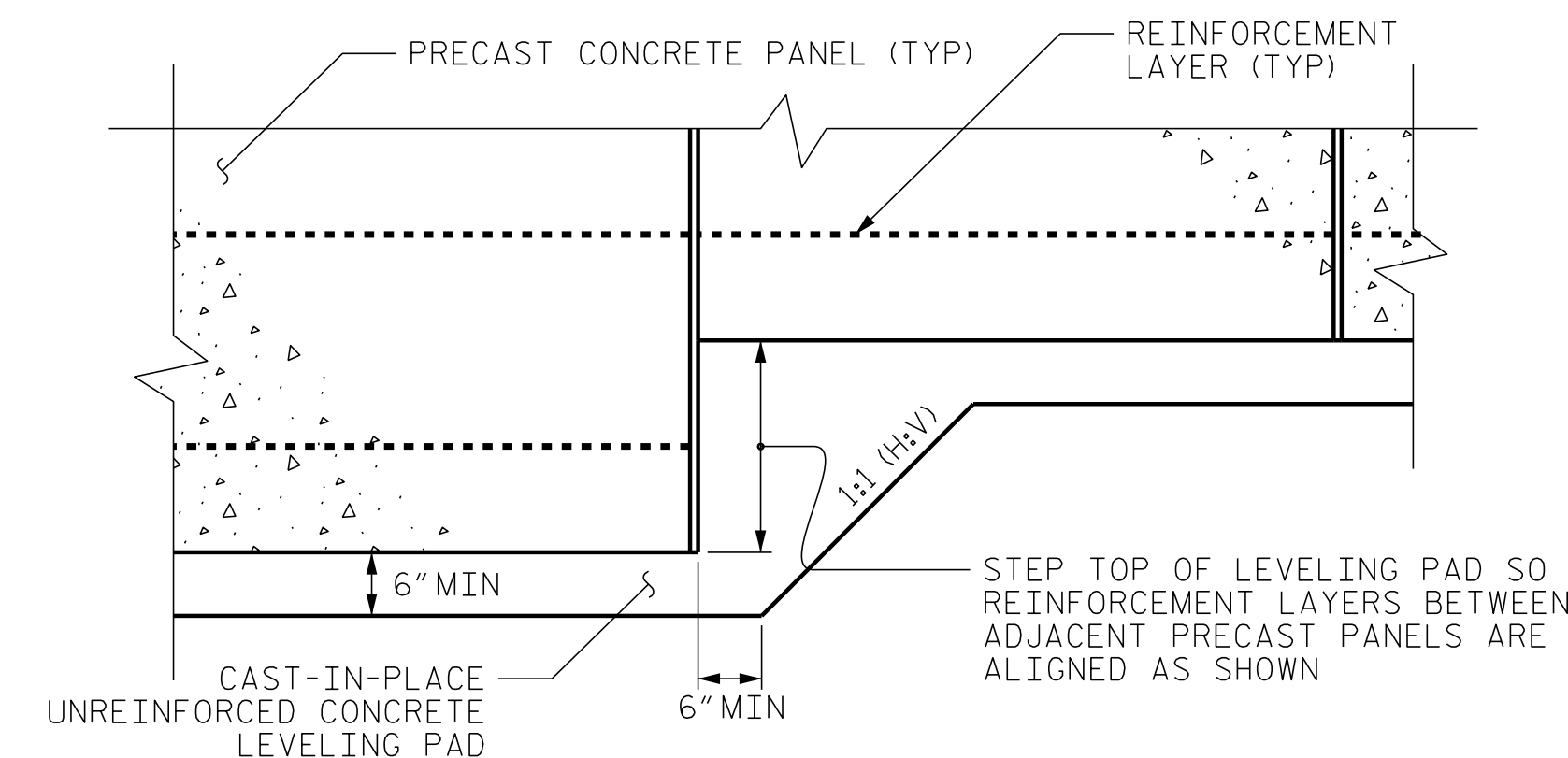
FOUNDATIONS FOR SIGNS, LIGHTING, MAY BE LOCATED BEHIND RETAINING WALLS AND MAY INTERFERE WITH REINFORCEMENT. BEFORE BEGINNING MSE WALL CONSTRUCTION, SUBMIT PROPOSED CONSTRUCTION METHODS FOR THESE FOUNDATIONS FOR APPROVAL.

EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, GUARDRAIL, FENCE OR HANDRAIL POSTS, PAVEMENTS, PIPES, INLETS OR UTILITIES WILL INTERFERE WITH REINFORCEMENT FOR RETAINING WALLS.

DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALLS UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.




SRW UNITS LEVELING PAD STEP DETAIL

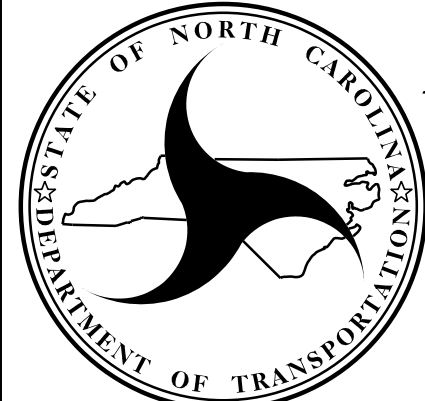


PRECAST PANELS LEVELING PAD STEP DETAIL

PROJECT NO.: I-5986B
 JOHNSTON COUNTY
 STATION: -Y18RPB- STATION 14+65.96 27.95' LT

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|---|----------------------------|
| GEOTECHNICAL ENGINEER  DocuSigned by: Kristen Hill 7/8/2021 SIGNATURE DATE | ENGINEER SIGNATURE DATE |
|---|----------------------------|

PREPARED BY: KHH DATE: 06/29/21
 REVIEWED BY: SEM DATE: 06/29/21


NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL
ENGINEERING UNIT

MSE RETAINING WALL 9
NOTES & DETAILS

| REVISIONS | | | | | |
|-----------|----|------|-----|----|------|
| NO. | BY | DATE | NO. | BY | DATE |
| 1 | | | 3 | | |
| 2 | | | 4 | | |

SHEET NO. W-9