

SIGNATURE DATE

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

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.

A SEPARATION GEOTEXTILE IS REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALLS NO.1 AND 2.

A DRAIN IS NOT REQUIRED FOR RETAINING WALLS NO.1 AND 2.

BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALLS NO.1 AND 2, 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 WALLS NO.1 AND 2 FOR THE FOLLOWING:

- 1) H = DESIGN HEIGHT + EMBEDMENT
- 2) DESIGN LIFE = 100 YEARS
- 3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL = 8,250 LB/SF
- 4) MINIMUM REINFORCEMENT LENGTH (L) = 0.7H OR 6 FT, WHICHEVER IS LONGER
- 5) EMBEDMENT ELEVATION FOR WALL FACES PARALLEL TO NORFOLK SOUTHERN RAILROAD = 285.3 FT
- 6) EMBEDMENT DEPTH FOR WALL FACES PERPENDICULAR TO NORFOLK SOUTHERN RAILROAD = H/7 OR 2 FT, BUT NOT DEEPER THAN TOP OF REINFORCED AGGREGATE PLATFORM
- 7) REINFORCED ZONE AGGREGATE PARAMETERS:

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

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

8) IN-SITU ASSUMED MATERIAL PARAMETERS:

| MATERIAL TYPE | UNIT WEIGHT (γ) LB/CF | FRICTION ANGLE (φ) DEGREES | COHESION (c) LB/SF |
|---------------|--------------------------|-------------------------------|-----------------------|
| BACKFILL | 125 | 34 | 0 |
| FOUNDATION | N/A | N/A | N/A |

THE MINIMUM EMBEDMENT ELEVATION FOR THE WALL FACES PARALLEL TO THE NORFOLK SOUTHERN RAILROAD AT RETAINING WALLS NO.1 AND 2 INCLUDES EMBEDMENT FOR FUTURE CONSTRUCTION IN THE RAILROAD RIGHT-OF-WAY PER NORFOLK SOUTHERN RAILROAD.

DESIGN RETAINING WALLS NO.1 AND 2 FOR A LIVE LOAD (TRAFFIC) SURCHARGE.

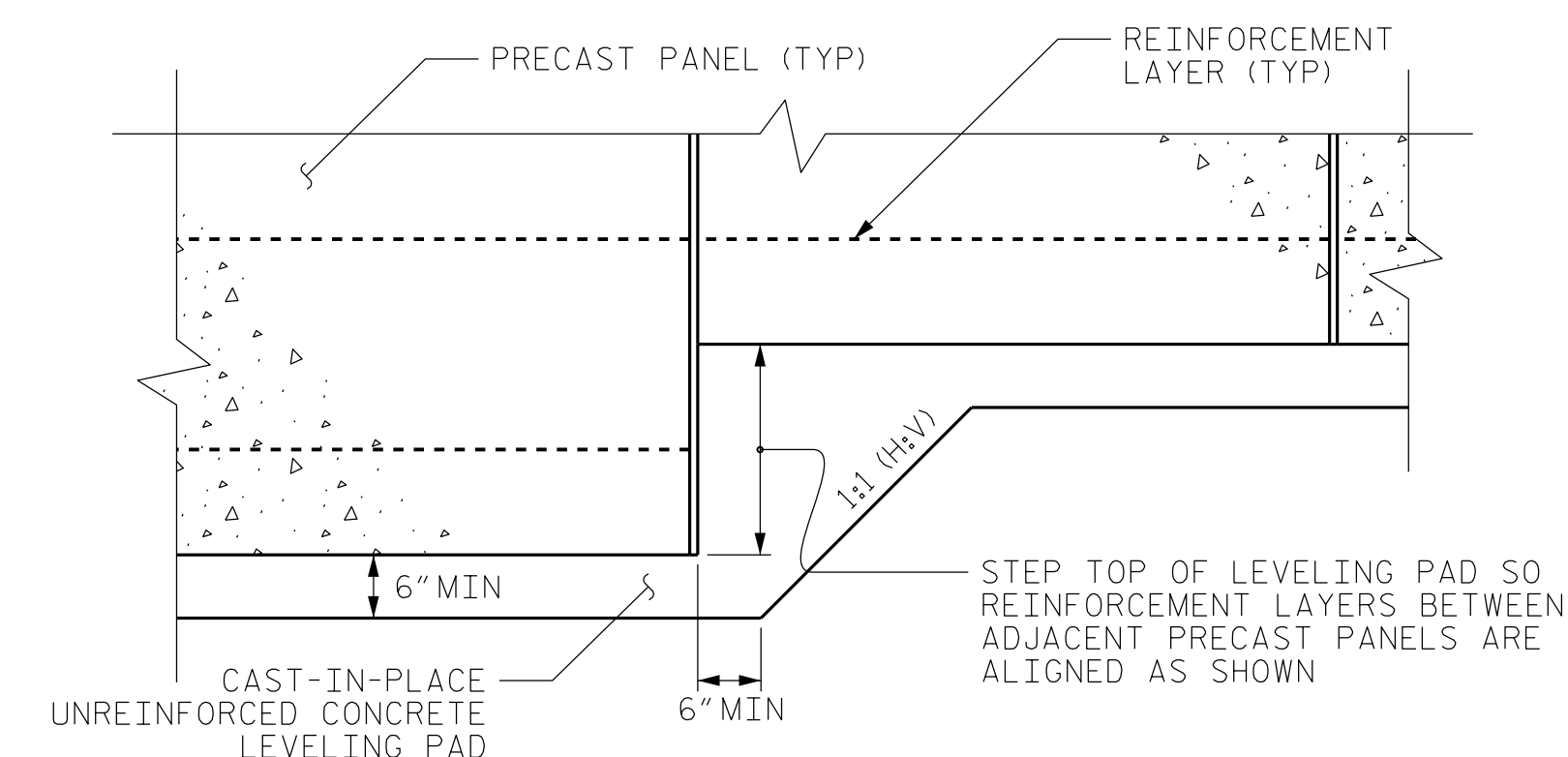
EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, GUARDRAIL, FENCE OR HANDRAIL POSTS, PAVEMENTS, PIPES, INLETS OR UTILITIES WILL INTERFERE WITH REINFORCEMENT FOR RETAINING WALLS NO.1 AND 2.

FOUNDATIONS FOR END BENT NO.1 LOCATED AT STATION 32+61.98 -L- WILL INTERFERE WITH REINFORCEMENT FOR RETAINING WALL NO.1. SEE "FOUNDATION LAYOUT" SHEET FOR FOUNDATION LOCATIONS.

FOUNDATIONS FOR END BENT NO.2 LOCATED AT STATION 33+75.48 -L- WILL INTERFERE WITH REINFORCEMENT FOR RETAINING WALL NO.2. SEE "FOUNDATION LAYOUT" SHEET FOR FOUNDATION LOCATIONS.

"TEMPORARY SHORING" IS REQUIRED FOR MSE RETAINING WALLS NO.1 AND 2 IN ACCORDANCE WITH THE MSE WALL AND TEMPORARY SHORING FOR WALL CONSTRUCTION SPECIAL PROVISIONS.

EXPOSED SURFACES OF MSE WALLS ARE TO RECEIVE A CONCRETE STAIN. FOR CONCRETE PENETRATING STAIN, SEE STRUCTURE SPECIAL PROVISIONS.



**PRECAST CONCRETE PANELS
LEVELING PAD STEP DETAIL**

1 REVISED TEMPORARY SHORING REFERENCE TO MSE WALL SPECIAL PROVISION AND TEMPORARY SHORING FOR WALL CONSTRUCTION SPECIAL PROVISION.

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|------------------------------|---------------|
| PREPARED BY: M. J. ALEXANDER | DATE: 06/2016 |
| REVIEWED BY: A. A. NASH | DATE: 06/2016 |

PROJECT NO.: R-5769
JOHNSTON COUNTY
STATION: 33+26.33 -L-

SHEET 4 OF 6

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**MSE RETAINING WALL
NOTES**

REVISIONS

| NO. | BY | DATE | NO. | BY | DATE |
|-----|-----|---------|-----|----|------|
| 1 | MJA | 10/2016 | 3 | | |
| 2 | | | 4 | | |

SHEET NO.
W-4