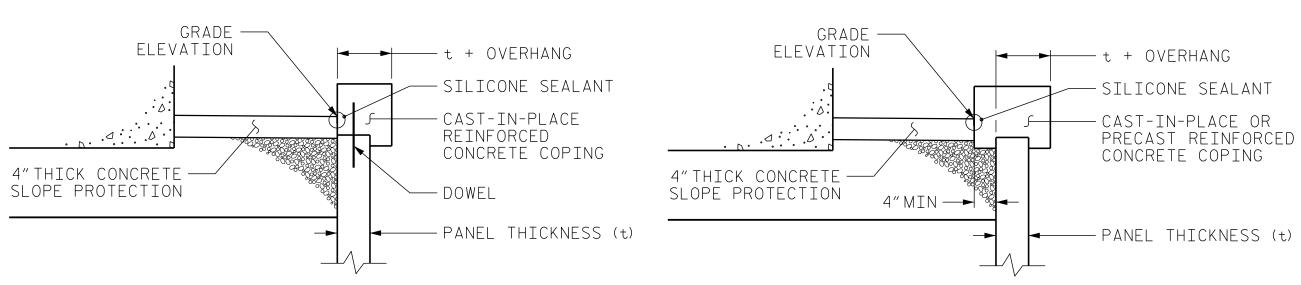


## MSE ABUTMENT WALL WITH PRECAST PANELS - TYPICAL SECTION

#SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.

##SEE MSE RETAINING WALLS PROVISION AND IF APPLICABLE,

MSE WALL NOTES FOR EMBEDMENT AND REINFORCEMENT LENGTH REQUIREMENTS.



AT THE CONTRACTOR'S OPTION, CONNECT COPING TO PANELS WITH DOWELS OR EXTEND COPING DOWN BACK OF PANELS.

PREPARED BY: J. NORRIS

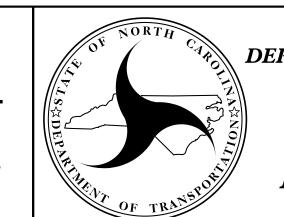
REVIEWED BY: B. LACKEY

DATE: 02/25/19

DATE: 02/25/19

COPING DETAILS





NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT GEOTECHNICAL
ENGINEER

ENGINEER

ENGINEER

SEAL
45898

SEAL
45898

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2/28/2019
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DOCUMENT NOT CONSIDERED FINAL

UNLESS ALL SIGNATURES COMPLETED

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

FOR TYPE III REINFORCED BRIDGE APPROACH FILL, SEE BRIDGE APPROACH FILLS PROVISION AND ROADWAY DETAIL DRAWING NO. 422D10.

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 FINE AGGREGATE IN THE REINFORCED ZONE OF RETAINING WALL NO.8, 9, 10 & 11.

A SEPARATION GEOTEXTILE IS REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALL NO.8,9,10 & 11.

A DRAIN IS NOT REQUIRED FOR RETAINING WALL NO. 8, 9, 10 & 11

PILE SLEEVES ARE REQUIRED AROUND PILES FOR END BENT NO.1 LOCATED AT STATION 38+95.97 -Y14A-, AND FOR END BENT NO.2 LOCATED AT STATION 40+16.47 -Y14A-.

BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALL NO.8,9,10 & 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.

DESIGN RETAINING WALL NO. FOR THE FOLLOWING:

1) H = DESIGN HEIGHT + EMBEDMENT

NOTES:

2) DESIGN LIFE = 100 YEARS

3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL = 6,800 PSF 4) MINIMUM REINFORCEMENT LENGTH (L) = 0.8H

5) REINFORCED ZONE AGGREGATE PARAMETERS:

AGGREGATE TYPE*	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (ф) Degrees	COHESION (c) PSF				
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) PCF	FRICTION ANGLE (φ) Degrees	COHESION (c) PSF	
BACKFILL	120	30	0	
FOUNDATION	120	29	0	

DESIGN RETAINING WALL NO. 8, 9, 10 & 11 FOR A LIVE LOAD (TRAFFIC) SURCHARGE.

FOUNDATIONS FOR SIGNS, LIGHTING OR SIGNALS WILL BE LOCATED BEHIND RETAINING WALL NO. 8, 9, 10 & 11 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 MAY INTERFERE WITH REINFORCEMENT FOR RETAINING WALL NO. 8, 9, 10 & 11.

FOUNDATIONS FOR END BENT NO.1 LOCATED AT STATION 38+95.97 -Y14A- AND END BENT NO.2 LOCATED AT STATION 40+16.47 -Y14A- WILL INTERFERE WITH REINFORCEMENT FOR RETAINING WALL NO.8,9,10 & 11. SEE "FOUNDATION LAYOUT" SHEET FOR FOUNDATION LOCATIONS.

DESIGN RETAINING WALL NO.8,9,10 & 11 FOR A LATERAL LOAD FROM FOUNDATIONS LOCATED BEHIND THE MSE WALL APPLIED AS A FACTORED UNIFORM PRESSURE OF 500 PSF TO THE BACK OF PANELS.

INSTALL PILE SLEEVES FOR END BENT NO.1 LOCATED AT STATION 38+95.97 -Y14A- AND END BENT NO.2 LOCATED AT STATION 40+16.47 -Y14A- WHILE CONSTRUCTING RETAINING WALL NO.8,9,10 & 11. OBSERVE A 1 MONTH WAITING PERIOD AFTER CONSTRUCTING THE MSE ABUTMENT WALL TO WITHIN 1 FT OF THE BOTTOM OF CAP ELEVATION. THEN, INSTALL PILES THROUGH THE CORRUGATED STEEL PIPES AND FILL PIPES WITH LOOSE UNCOMPACTED SAND BEFORE CONSTRUCTING END BENT CAPS.

DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALL NO.8,9,10 & 11 UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

PROJECT NO.: R-5021

BRUNSWICK COUNTY

STATION: 39+52.37 -Y14A-

SHEET 6 OF 6

MSE RETAINING WALLS NO. 8-11 MSE WALL WITH PRECAST PANELS TYPICAL END SECTION & NOTES

REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	SHEET NO.
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