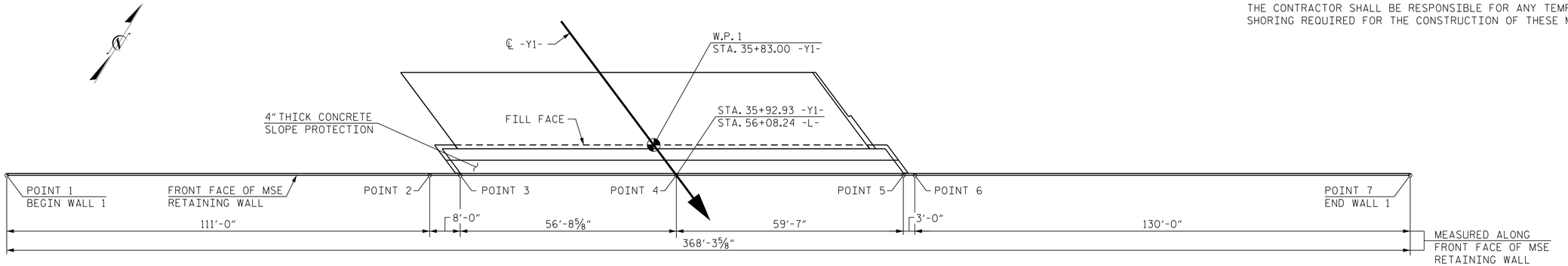
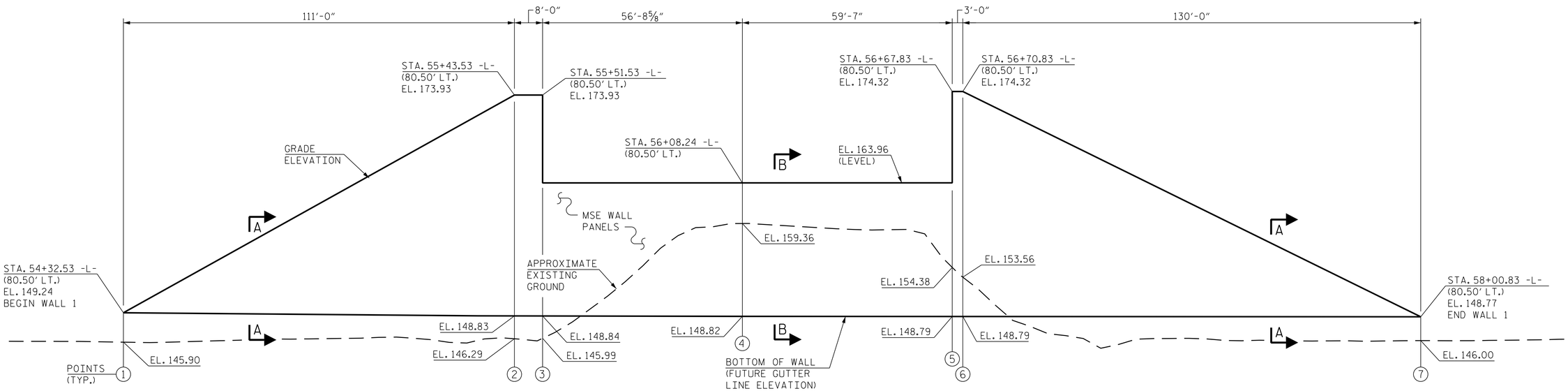
NOTES:

FOR SECTIONS AND NOTES, SEE SHEETS 3 THRU 5.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TEMPORARY SHORING REQUIRED FOR THE CONSTRUCTION OF THESE MSE WALLS.



PLAN



ELEVATION

MSE WALL QUANTITY	
MSE WALL NO. 1	5,933 SF
ARCHITECTURAL CONCRETE SURFACE TREATMENT	5,933 SF

PROJECT NO. I-5972

JOHNSTON COUNTY

STATION: 36+93.50 -Y1-

SHEET 1 OF 5

STATE OF NORTH CAROLINA
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MSE RETAINING WALL

PLAN AND WALL ENVELOPE AT END BENT 1

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2			4			5

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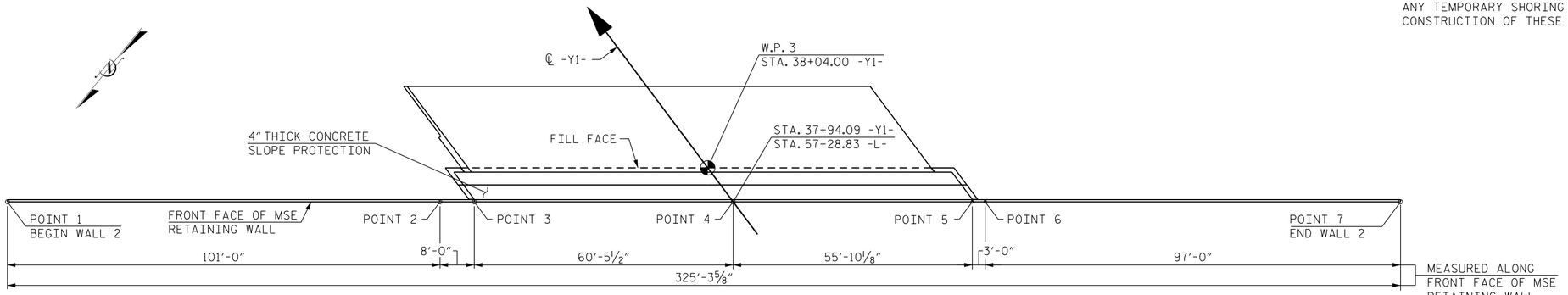

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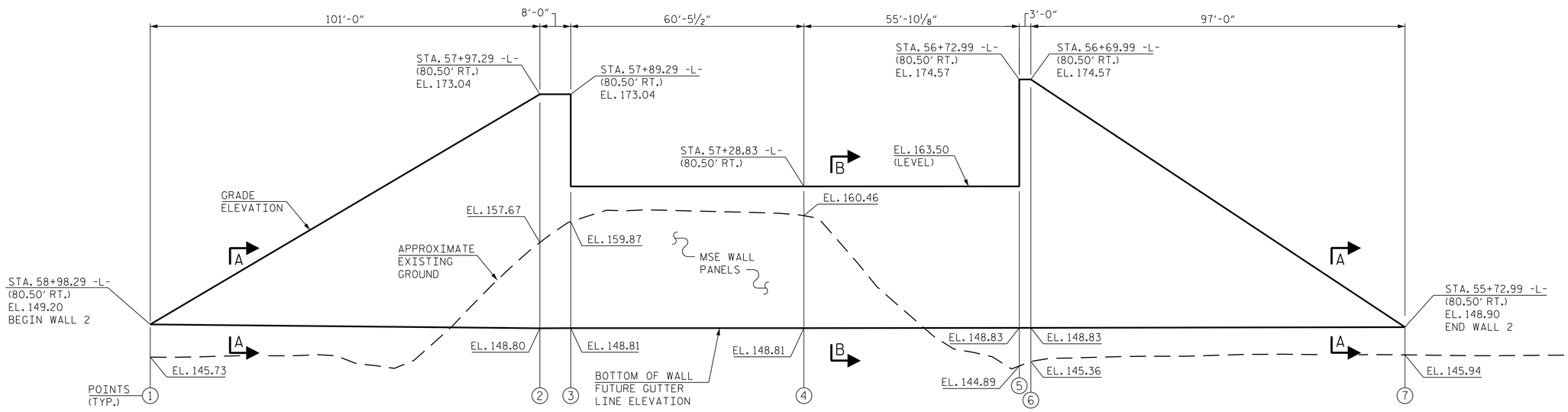

ELEVATION

MSE WALL QUANTITY	
MSE WALL NO. 2	5,209 SF
ARCHITECTURAL CONCRETE SURFACE TREATMENT	5,209 SF

PROJECT NO. I-5972

JOHNSTON COUNTY

STATION: 36+93.50 -Y1-

SHEET 2 OF 5

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MSE RETAINING WALL
PLAN AND WALL ENVELOPE AT END BENT 2

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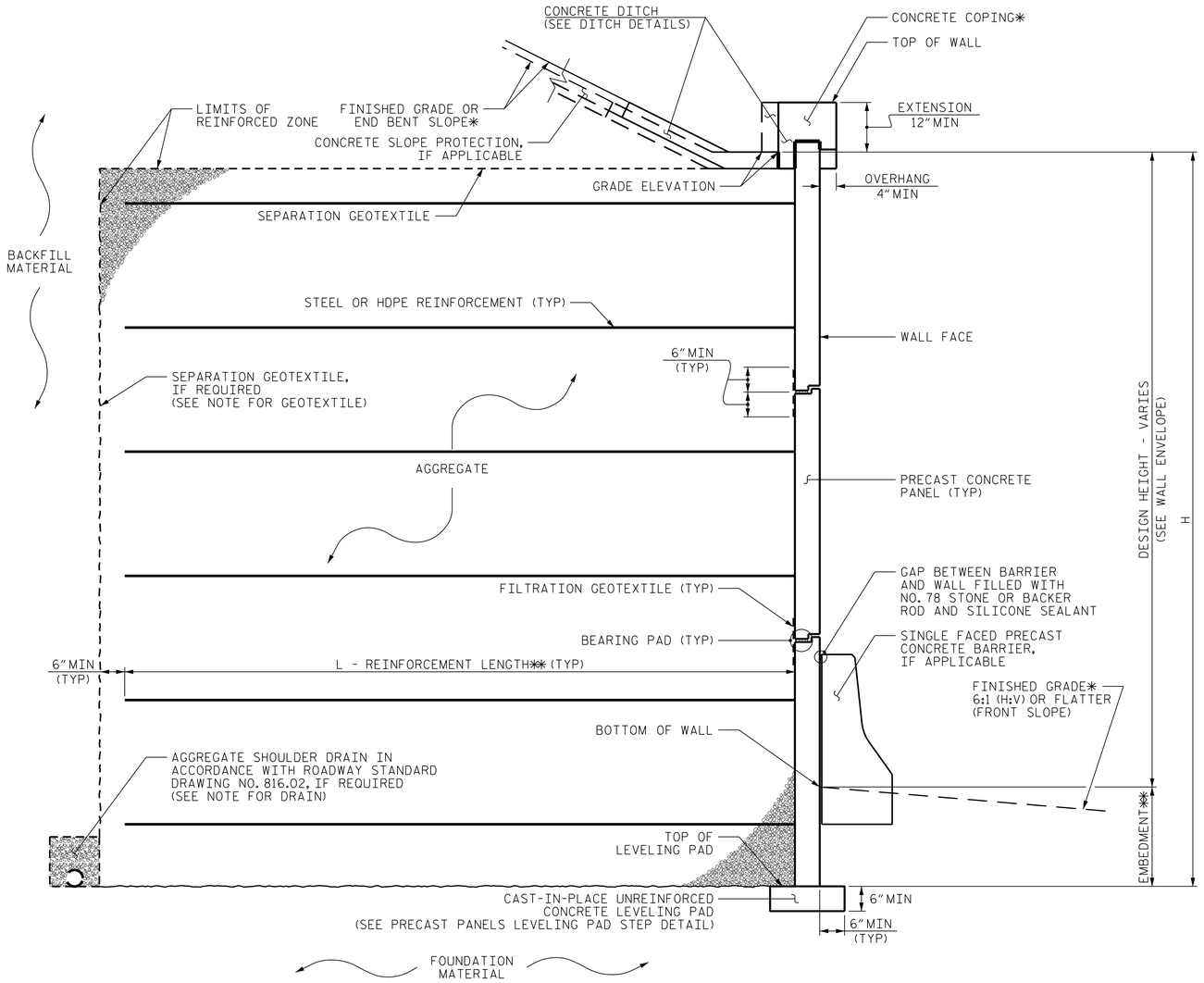
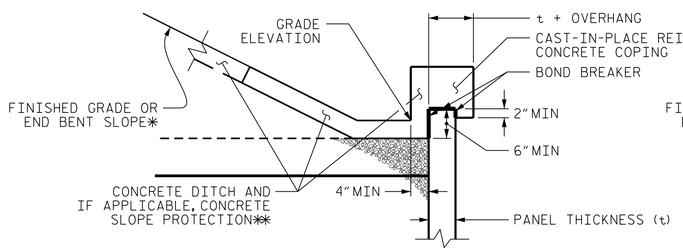
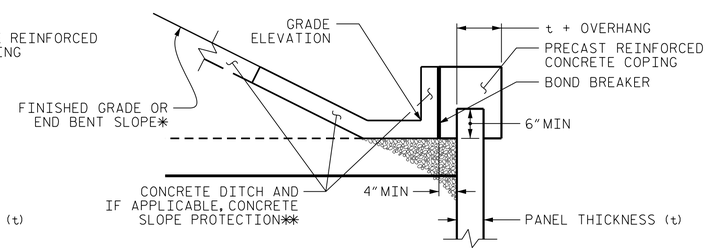


MSE WALL WITH PRECAST PANELS - SECTION A-A

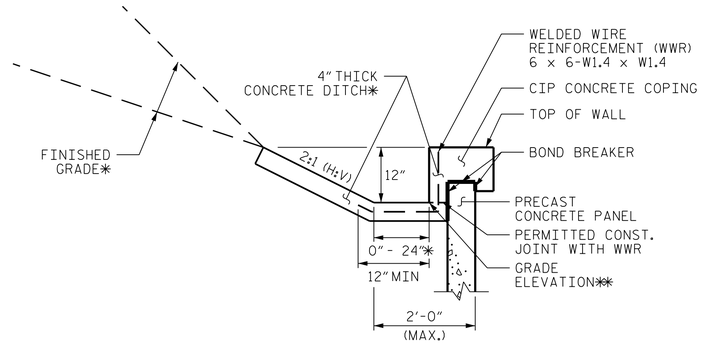
* SEE COPING DETAILS AND PLANS FOR FINISHED GRADE OR END BENT SLOPE DETAILS.
** SEE MSE RETAINING WALLS PROVISION AND IF APPLICABLE, MSE WALL NOTES FOR EMBEDMENT AND REINFORCEMENT LENGTH REQUIREMENTS.

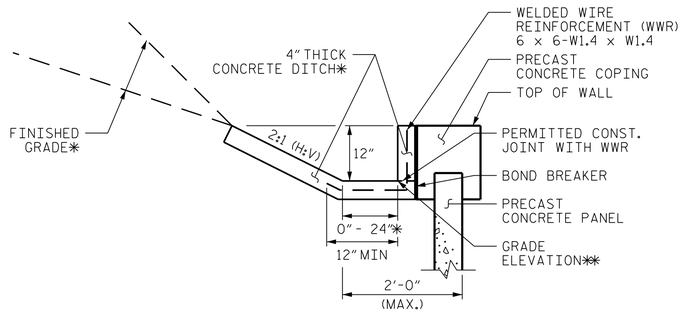




COPING DETAILS

* SEE PLANS FOR FINISHED GRADE OR END BENT SLOPE DETAILS.
** SEE CONCRETE DITCH BEHIND WALL DETAILS.





MSE WALL WITH PRECAST PANELS

DITCH DETAILS

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

PROJECT NO. I-5972
JOHNSTON COUNTY
STATION: 36+93.50 -Y1-

SHEET 3 OF 5

STATE OF NORTH CAROLINA
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MSE RETAINING WALL
SECTIONS AND DETAILS

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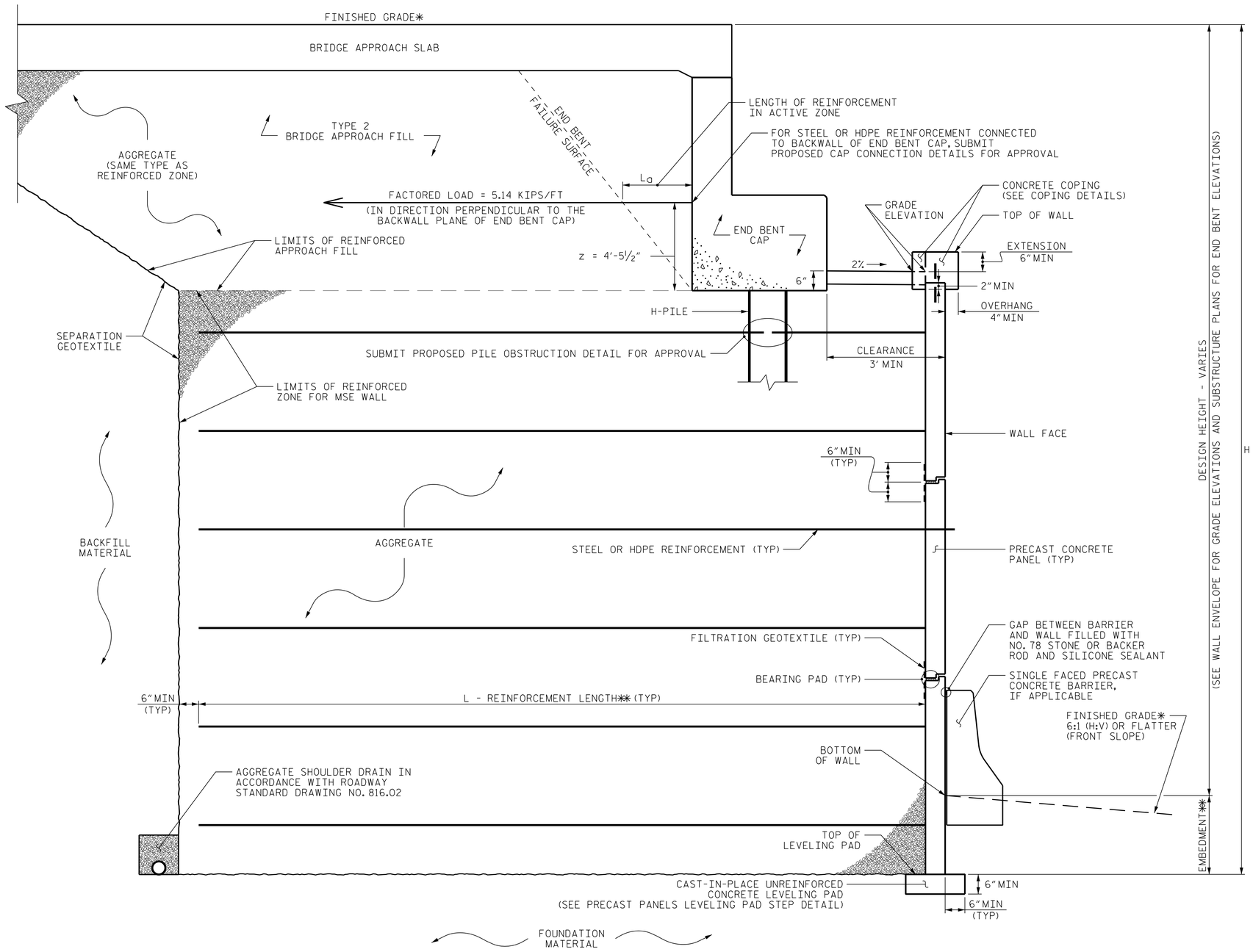
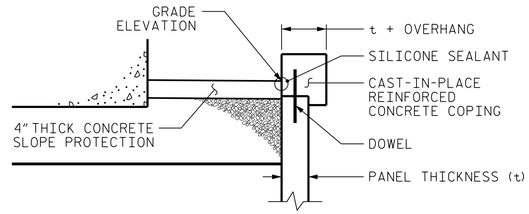
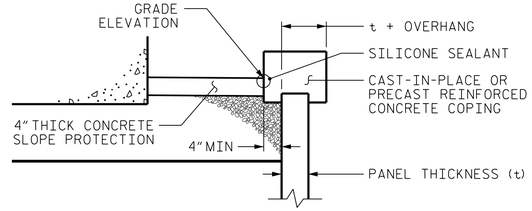


MSE ABUTMENT WALL WITH PRECAST PANELS - TYPICAL SECTION B-B

*SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.
**SEE MSE RETAINING WALLS PROVISION AND IF APPLICABLE,
MSE WALL NOTES FOR EMBEDMENT AND REINFORCEMENT LENGTH REQUIREMENTS.





COPING DETAILS

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

PROJECT NO. I-5972
JOHNSTON COUNTY
STATION: 36+93.50 -Y1-

SHEET 4 OF 5

STATE OF NORTH CAROLINA
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MSE RETAINING WALL
TYPICAL SECTION AND COPING DETAILS

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9/8/2023

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MSE WALL NOTES:

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

2. THIS NOTE INTENTIONALLY DELETED.

3. FOR SINGLE FACED PRECAST CONCRETE BARRIER, SEE ROADWAY PLANS AND SECTION 857 OF THE STANDARD SPECIFICATIONS.

4. USE AN MSE WALL SYSTEM WITH PRECAST CONCRETE PANELS THAT MEET SECTION 1077 OF THE STANDARD SPECIFICATIONS FOR RETAINING WALL NO. 1 AND NO. 2.

5. AN ASHLAR STONE ARCHITECTURAL FINISH IS REQUIRED FOR PRECAST CONCRETE PANELS FOR RETAINING WALL NO. 1 AND NO. 2. SEE ARCHITECTURAL CONCRETE SURFACE TREATMENT SPECIAL PROVISION.

6. AT THE CONTRACTOR'S OPTION, USE FINE AGGREGATE IN THE REINFORCED ZONE OF RETAINING WALL NO. 1 AND NO. 2.

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

8. A DRAIN IS REQUIRED FOR RETAINING WALL NO. 1 AND NO. 2.

9. BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALL NO. 1 AND NO. 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.

10. DESIGN RETAINING WALL NO. 1 AND NO. 2 FOR THE FOLLOWING:

    1) DESIGN HEIGHT (H) = WALL HEIGHT + EMBEDMENT

    2) DESIGN LIFE = 100 YEARS

    3) MINIMUM EMBEDMENT DEPTH FOR ABUTMENT FRONT FACE = H/10 OR 2 FT BELOW PROPOSED GRADE, WHICHEVER IS GREATER.

    4) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL SHALL BE AS SHOWN BELOW.

    5) MINIMUM REINFORCEMENT LENGTH (L) SHALL BE AS SHOWN BELOW OR 6 FT, WHICHEVER IS LONGER.

RETAINING WALL	-L- STATION	REINFORCE-MENT LENGTH	MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL (KSF)
1	54+32.53 TO 55+02.53	0.8H	4.3
	55+02.53 TO 55+43.53	0.9H	7.2
	55+43.53 TO 56+70.83	0.7H	5.5
	56+70.83 TO 58+00.83	0.7H	6.0
2	55+72.99 TO 56+69.99	0.7H	6.0
	56+69.99 TO 57+97.29	0.7H	5.6
	57+97.29 TO 58+29.22	0.9H	7.0
	58+29.22 TO 58+98.29	0.8H	4.4

6) 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 PROPERTIES:

MATERIAL TYPE	UNIT WEIGHT (γ) LB/CF	FRICTION ANGLE (Φ) DEGREES	COHESION (c) LB/SF
RETAINED BACKFILL	120	30	0
FOUNDATION AT MSE WALL NO. 1	120	30	0
FOUNDATION AT MSE WALL NO. 2	120	30	0

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

12. FOUNDATIONS FOR SIGNS, LIGHTING OR SIGNALS MAY BE LOCATED BEHIND WALL NO. 1 AND NO. 2. AND MAY INTERFERE WITH REINFORCEMENT. BEFORE BEGINNING MSE WALL CONSTRUCTION, SUBMIT PROPOSED CONSTRUCTION METHODS FOR THESE FOUNDATIONS FOR APPROVAL.

13. 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. 1 AND NO. 2.

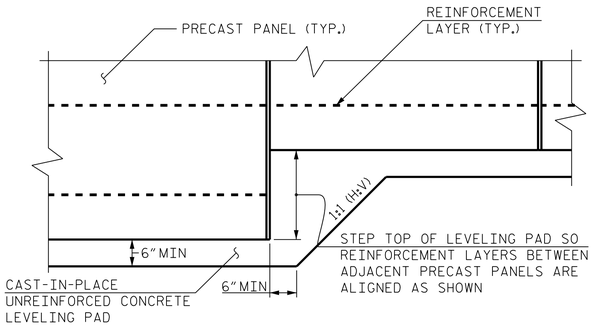
14. FOUNDATIONS FOR END BENTS 1 AND 2, LOCATED AT STATIONS 35+83.00 -Y1- AND 38+04.00 -Y1-, RESPECTIVELY, MAY INTERFERE WITH REINFORCEMENT FOR RETAINING WALL NO. 1 AND NO. 2. SEE "FOUNDATION LAYOUT" SHEET FOR FOUNDATION LOCATIONS.

15. INSTALL PILES AT END BENTS 1 AND 2 BEFORE CONSTRUCTING MSE RETAINING WALLS.

16. DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALL NO. 1 AND NO. 2. UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIALS ARE APPROVED.

17. DESIGN REINFORCEMENT CONNECTED TO END BENT CAPS FOR FACTORED LOAD AND LENGTH OF REINFORCEMENT IN ACTIVE ZONE (La) SHOWN. CAST REINFORCEMENT OR CONNECTORS INTO CAP BACKWALL FOR END BENTS 1 AND 2 LOCATED AT STATION 35+83.00 -Y1- AND 38+04.00 -Y1-, RESPECTIVELY. MAINTAIN A CLEARANCE OF AT LEAST 3" BETWEEN REINFORCEMENT OR CONNECTORS AND REINFORCING STEEL IN CAP.

18. TEMPORARY SHORING IS REQUIRED FOR RETAINING WALL NO. 1 AND NO. 2. IN ACCORDANCE WITH THE TEMPORARY SHORING PROVISION. SEE TRAFFIC CONTROL PLANS.



PRECAST CONCRETE PANELS

LEVELING PAD STEP DETAILS

PROJECT NO. I-5972

JOHNSTON COUNTY

STATION: 36+93.50 -Y1-

SHEET 5 OF 5

STATE OF NORTH CAROLINA
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MSE RETAINING WALL
NOTES AND LEVELING PAD DETAILS

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