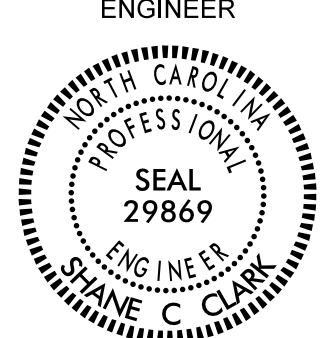


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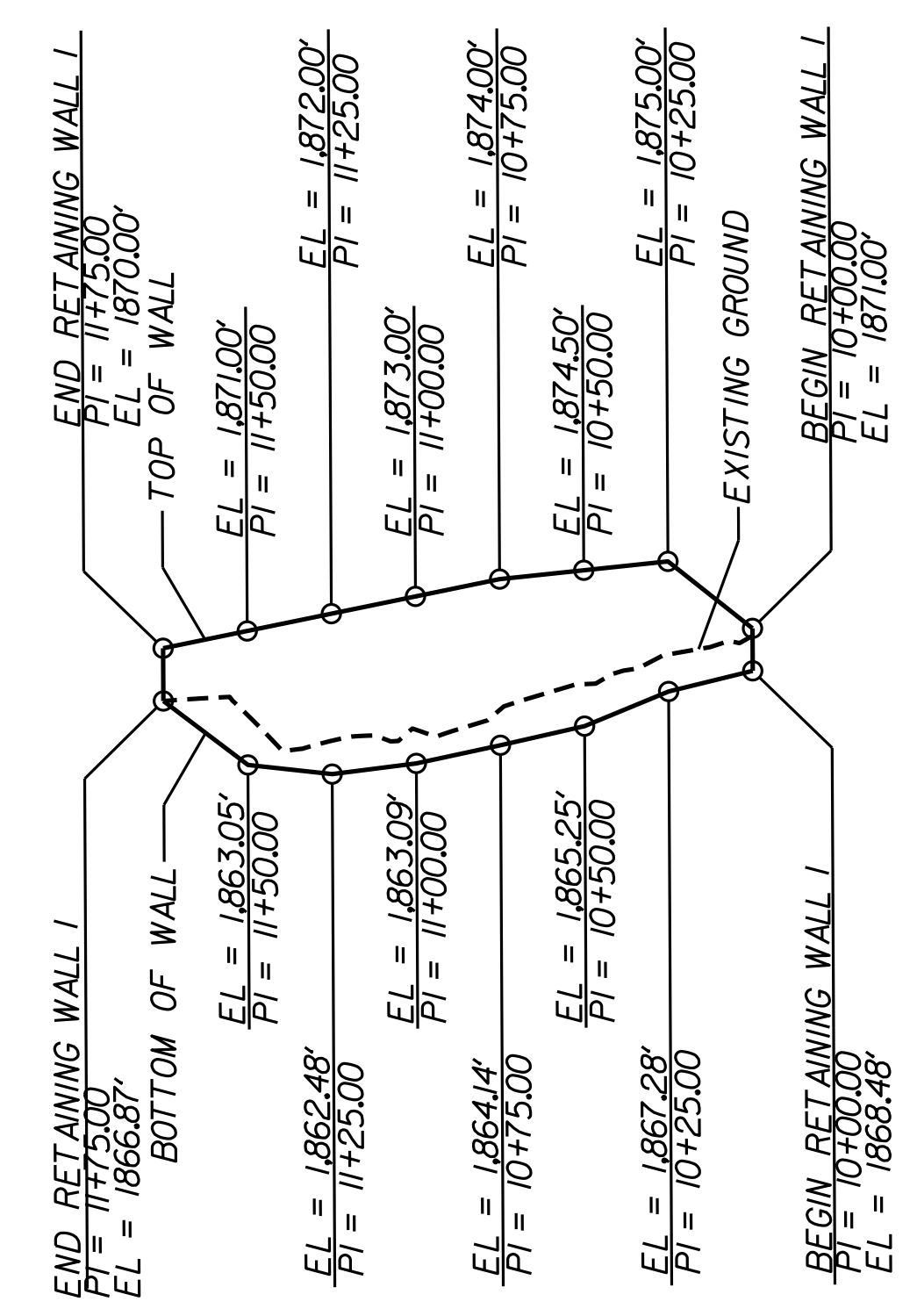
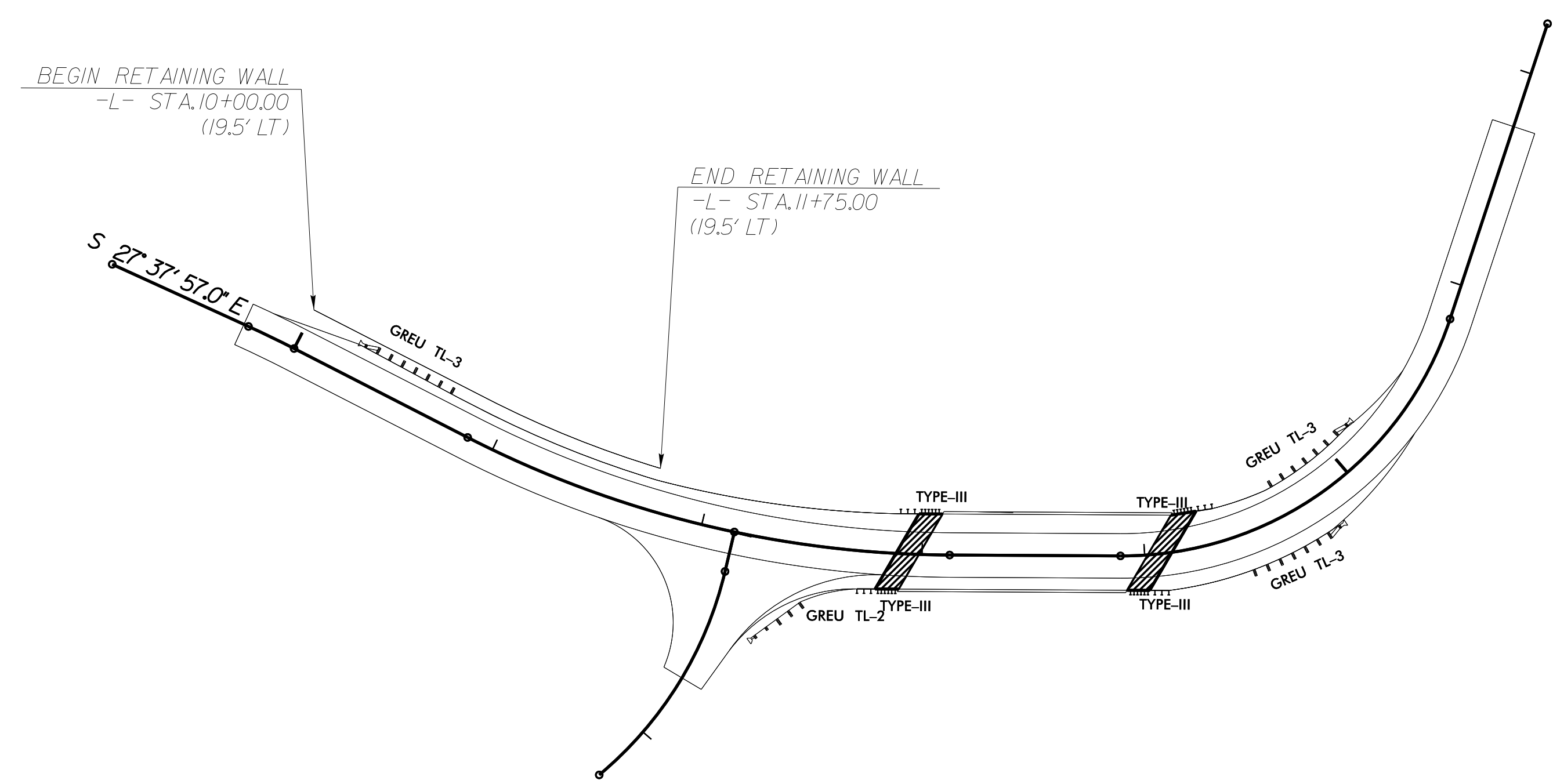
GEOTECHNICAL ENGINEER



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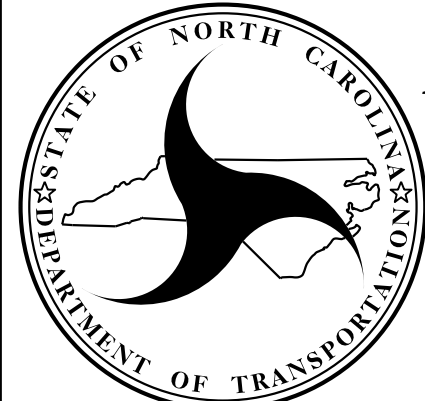
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ESTIMATED WALL QUANTITIES	
RETAINING WALL NO.	SOLDIER PILE RETAINING WALLS (SQ. FEET)
1	1950

PROJECT NO.: BR-0032
MADISON COUNTY
STATION: 10+00.00 - 11+75.00 -L-
SHEET 1 OF 2



**NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**GEOTECHNICAL
ENGINEERING UNIT**

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			W-1
2			4			

PREPARED BY: DJP	DATE: 12/1/21
REVIEWED BY: SCC	DATE: 12/2/21

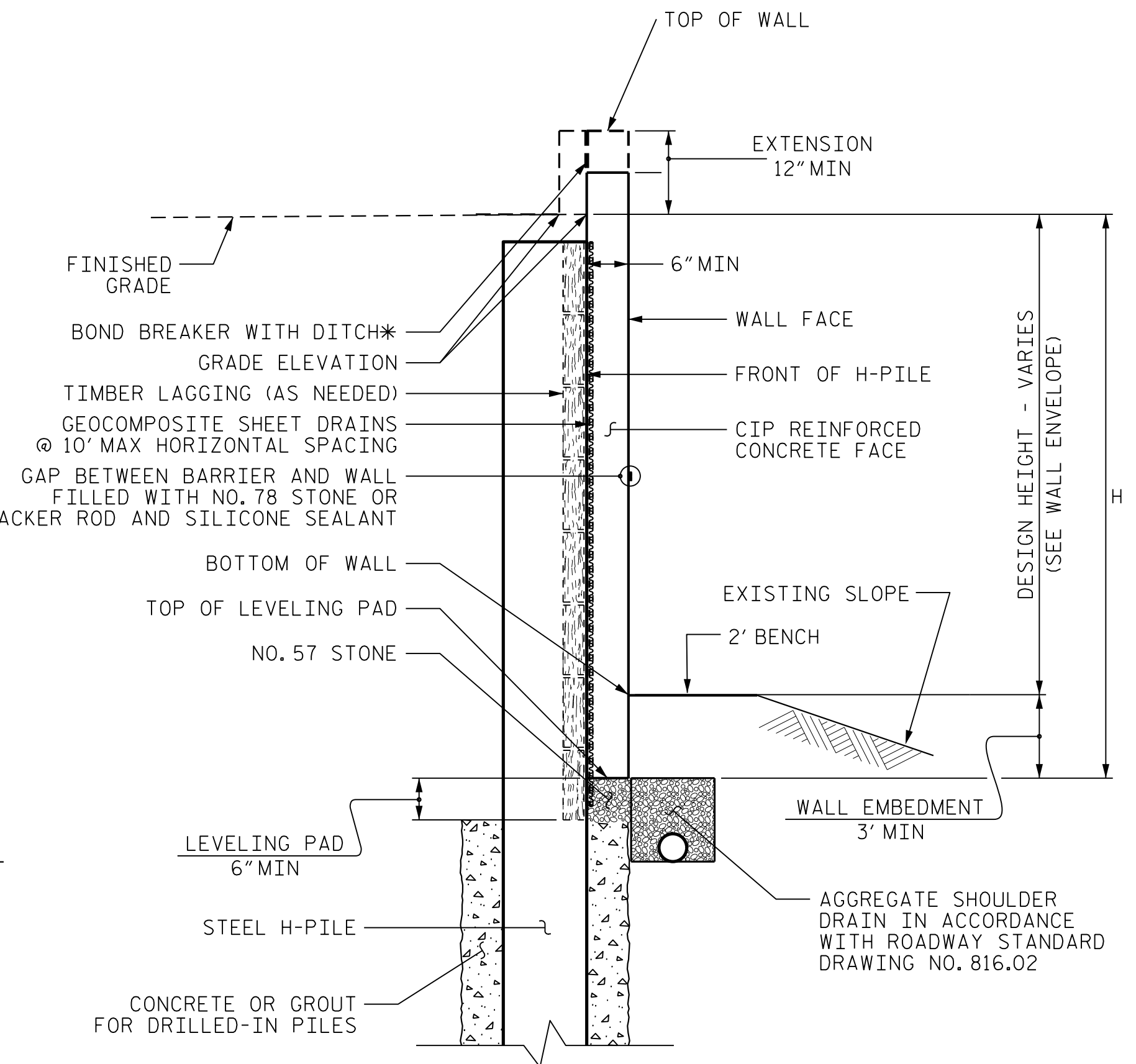
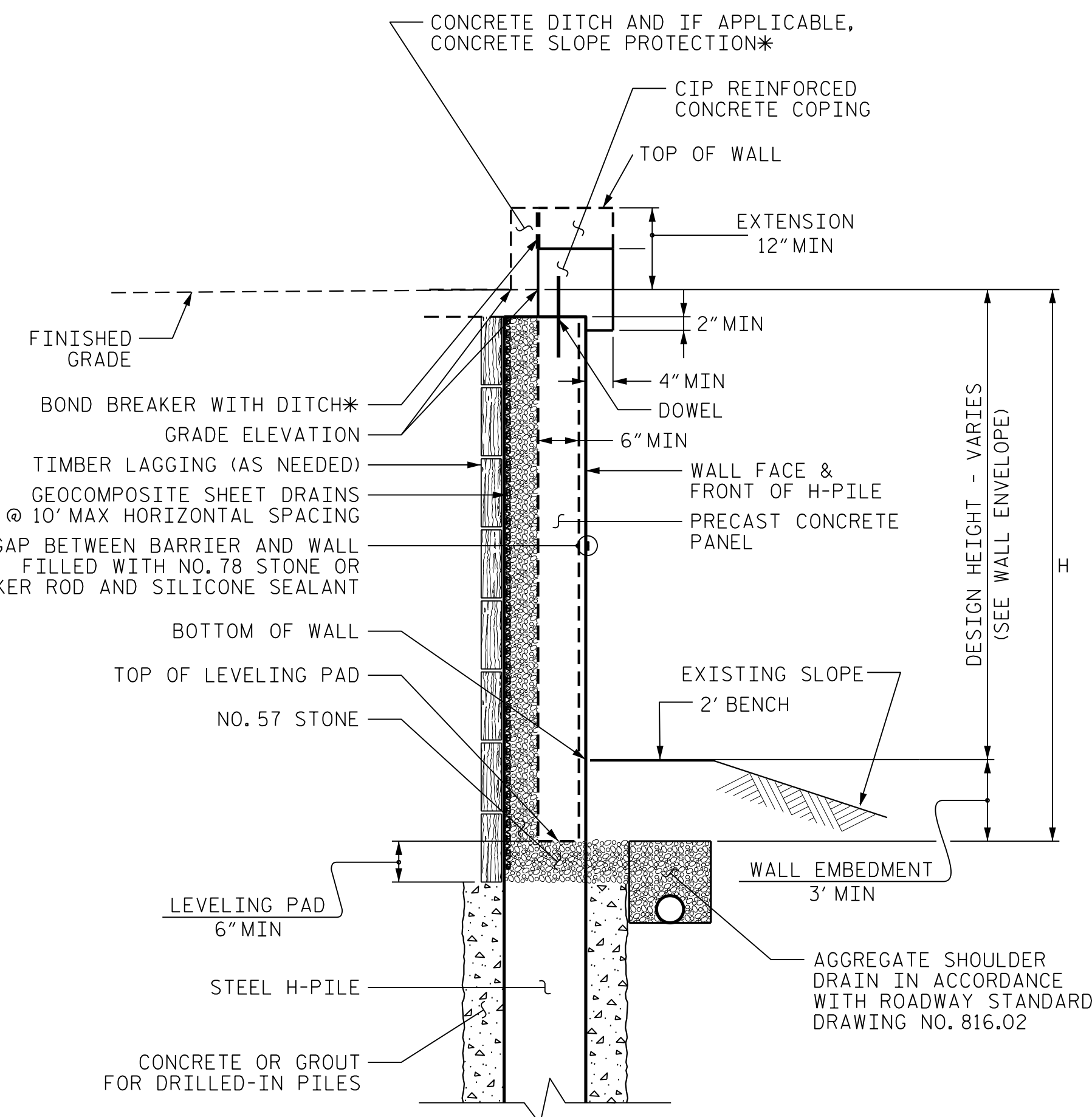
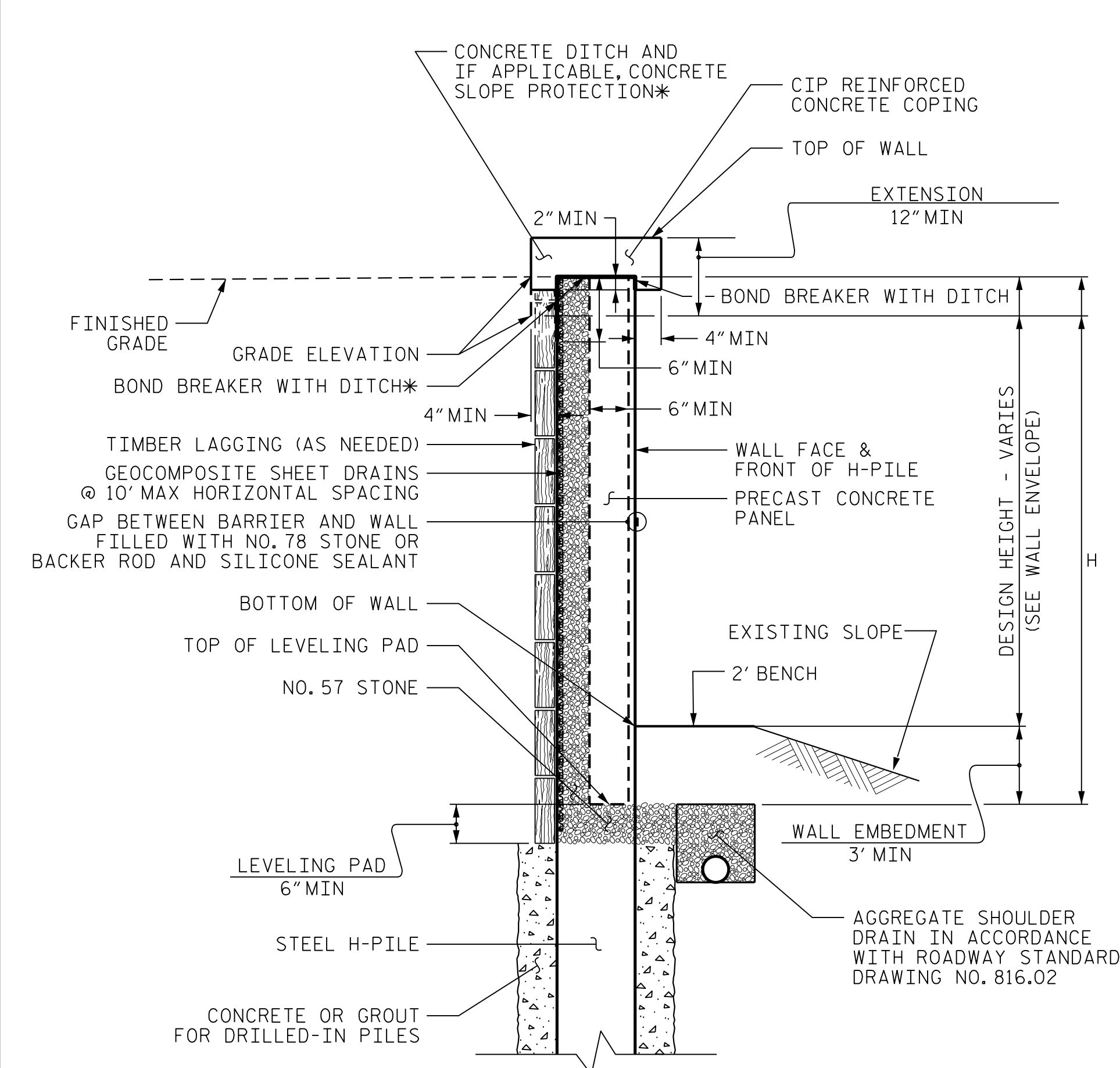
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Shane C. Clark Dec 2, 2021

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**SOLDIER PILE WALL WITH
PRECAST PANEL - TYPICAL SECTIONS**

AT THE CONTRACTOR'S OPTION, CONNECT COPING TO PANELS WITH
DOWELS OR EXTEND COPING DOWN BACK OF PANELS AND PILES.
*SEE CONCRETE DITCH BEHIND WALL DETAILS.

NOTES:

- FOR SOLDIER PILE RETAINING WALLS, SEE SOLDIER PILE RETAINING WALLS PROVISION.
- FOR STEEL BEAM GUARDRAIL, SEE ROADWAY PLANS AND SECTION 862 OF THE STANDARD SPECIFICATIONS.
- DRILLED-IN H-PILES ARE REQUIRED FOR RETAINING WALL NO. 1.
- USE A SOLDIER PILE RETAINING WALL WITH PRECAST CONCRETE PANELS THAT MEET SECTION 1077 OF THE STANDARD SPECIFICATIONS FOR RETAINING WALL NO. 1.
- USE A SOLDIER PILE RETAINING WALL WITH A CIP REINFORCED CONCRETE FACE FOR RETAINING WALL NO. 1.
- BEFORE BEGINNING SOLDIER PILE WALL DESIGN FOR RETAINING WALL NO. 1, 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. 1 FOR THE FOLLOWING:
 - 1) H = DESIGN HEIGHT + WALL EMBEDMENT
 - 2) DESIGN LIFE = 75 YEARS
 - 3) MINIMUM WALL EMBEDMENT ELEVATION = 3 FT
 - 4) MINIMUM PILE PENETRATION INTO ROCK = N/A FT
 - 5) IN-SITU ASSUMED MATERIAL PARAMETERS:
 - UNIT WEIGHT, $\gamma = 120$ PCF
 - FRICTION ANGLE, $\phi = 28$ DEGREES
 - COHESION, $c = 0$ PSF
- DESIGN RETAINING WALL NO. 1 FOR A LIVE LOAD (TRAFFIC) SURCHARGE.
- *TEMPORARY SHORING* MAY BE REQUIRED FOR RETAINING WALL NO. 1 IN ACCORDANCE WITH THE TEMPORARY SHORING PROVISION. SEE ROADWAY PLANS.

**SOLDIER PILE WALL WITH
CIP FACE - TYPICAL SECTION**

PROJECT NO.: BR-0032

MADISON COUNTY

STATION: 10+00.00 - 11+75.00 -L-

SHEET 2 OF 2

PREPARED BY: DJP	DATE: 12/1/21
REVIEWED BY: SCC	DATE: 12/2/21

**NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**GEOTECHNICAL
ENGINEERING UNIT**

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			W-2
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