NOTES:

FOR NON-STANDARD CIP GRAVITY RETAINING WALLS, SEE NON-STANDARD CIP GRAVITY RETAINING WALLS SPECIAL PROVISION.

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

FOR HANDRAILS ON TOP OF WALLS, SEE ROADWAY PLANS FOR HANDRAIL ATTACHMENT DETAILS.

FOR SUBSURFACE DRAINAGE AT WEEP HOLES, SEE ARTICLE 414-8 OF THE STANDARD SPECIFICATIONS.

NON-STANDARD CIP GRAVITY WALLS ARE BASED ON THE FOLLOWING:

IN-SITU ASSUMED RETAINED SOIL PARAMETERS:
UNIT WEIGHT, γ = 125 PCF
FRICTION ANGLE, ϕ = 37 DEGREES
COHESION, c = 0 PSF

IN-SITU ASSUMED FOUNDATION SOIL PARAMETERS:
UNIT WEIGHT, γ = 120 PCF
FRICTION ANGLE, ϕ = 30 DEGREES
COHESION, c = 0 PSF

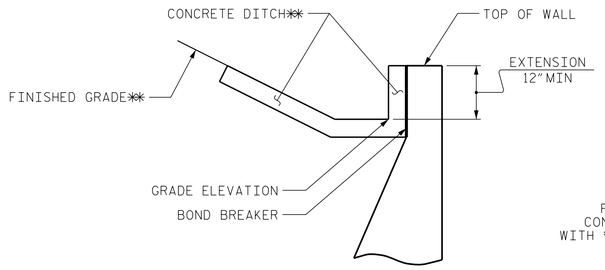
A MINIMUM BEARING RESISTANCE OF 1.0 TSF IS REQUIRED FOR RETAINING WALL #34.

UNDERCUTTING SOFT AND/OR WET SOILS IN THE VICINITY OF THE WALL FOUNDATION MAY BE REQUIRED TO IMPROVE BEARING RESISTANCE. THE ENGINEER WILL DETERMINE THE SOILS BEARING RESISTANCE AFTER THE WALL FOOTING IS EXCAVATED TO BEARING GRADE. IF REQUIRED BY THE ENGINEER, USE UNDERCUT EXCAVATION TO REMOVE SOFT AND/OR WET SOILS. UNDERCUT TO SUITABLE FOUNDATION SOILS OR TO A DEPTH NO GREATER THAN 3 FEET BELOW THE BOTTOM OF FOOTING ELEVATION, WHICHEVER OCCURS FIRST. PLACE GEOTEXTILE FOR SOIL STABILIZATION IN THE BOTTOM OF THE EXCAVATION AND BACKFILL WITH SELECT GRANULAR MATERIAL. FOR UNDERCUT EXCAVATION AND SELECT GRANULAR MATERIAL SEE STANDARD SPECIFICATIONS. UNDERCUT EXCAVATION, SELECT GRANULAR MATERIAL, AND GEOTEXTILE FOR SOIL STABILIZATION WILL BE PAID AS SEPARATE ADDITIONAL QUANTITIES.

BEFORE BEGINNING NON-STANDARD CIP GRAVITY WALL CONSTRUCTION, SURVEY WALL LOCATIONS AND SUBMIT WALL PROFILE VIEWS (WALL ENVELOPES) FOR REVIEW. FOR WALL ENVELOPES, INCLUDE BOTTOM OF WALL, EXISTING GROUND AND GRADE ELEVATIONS, AND SLOPE ELEVATIONS BEHIND THE WALL AT INTERVALS OF 25' OR LESS ALONG WALLS. DO NOT START WALL CONSTRUCTION UNTIL WALL ENVELOPES ARE ACCEPTED.

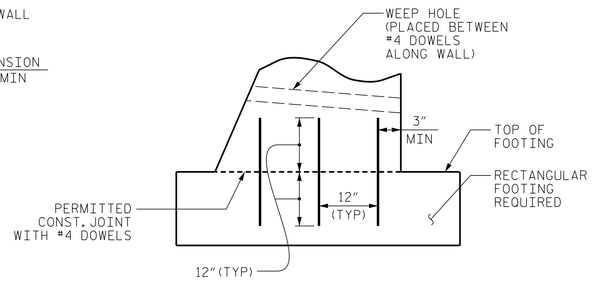
DO NOT PLACE CONCRETE FOR FOOTINGS UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

WHEN CONSTRUCTING NON-STANDARD CIP GRAVITY WALLS WITH A CONSTRUCTION JOINT AS SHOWN IN DETAIL "A", PROVIDE A MINIMUM OF 3 EQUALLY SPACED #4 DOWELS AT INTERVALS OF 1'-6" ALONG WALLS.

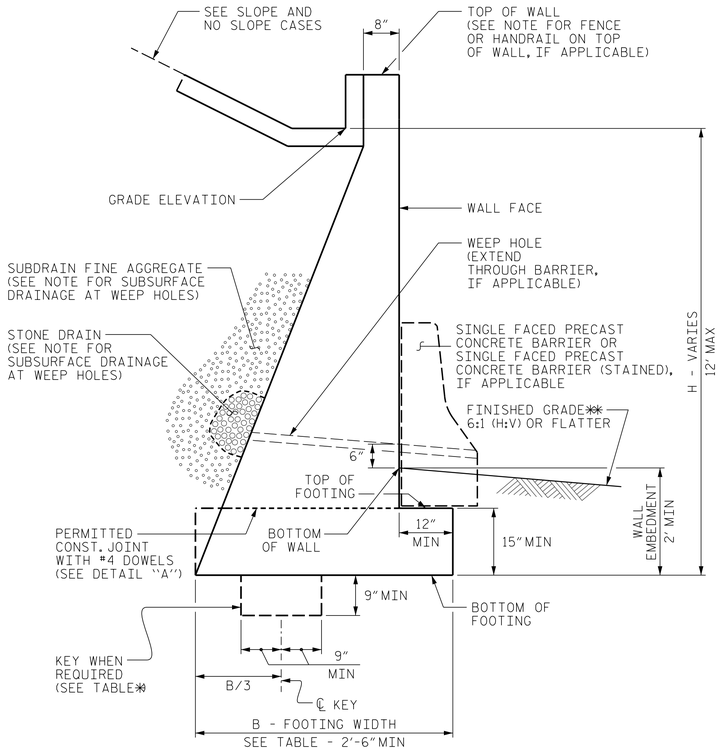


SLOPE CASE

**SEE ROADWAY PLANS FOR CONCRETE DITCH AND FINISHED GRADE DETAILS.

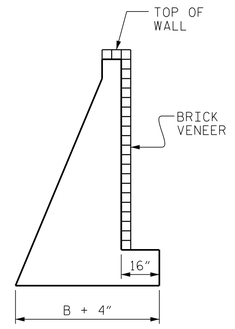


DETAIL "A"



NON-STANDARD CIP GRAVITY WALL

**SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.



BRICK VENEER DETAIL

(WHEN APPLICABLE)

H (FT)	3 - < 6	6 - 9	> 9 - 12
SLOPE CASE	.70	-	-
NO SLOPE CASE WITH TRAFFIC SURCHARGE	-	-	-
NO SLOPE CASE WITHOUT TRAFFIC SURCHARGE	-	-	-

B/H RATIO (B = 2'-6" MIN)

KEY IS REQUIRED FOR "SLOPE CASE" OR "NO SLOPE CASE WITH TRAFFIC SURCHARGE" WHEN H IS 6' OR GREATER.

GEOTECHNICAL ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 042642 ENGINEER ROBERT E. KRAL

DocuSigned by: 8AD7038264484F4... 08/01/2022
SIGNATURE DATE

ENGINEER

SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO.: A-0009CC

GRAHAM COUNTY

RETAINING WALL #38: -Y2- 71+25, 34' LT TO 72+75, 34' LT

SHEET 2 OF 2

PREPARED BY: R. KRAL	DATE: 7/9/2022
REVIEWED BY: M. BREWER	DATE: 7/9/2022

Prepared in the Office of:

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

RETAINING WALL #34
NON-STANDARD
CIP GRAVITY
RETAINING WALL

REVISIONS

NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

SHEET NO. W34-2