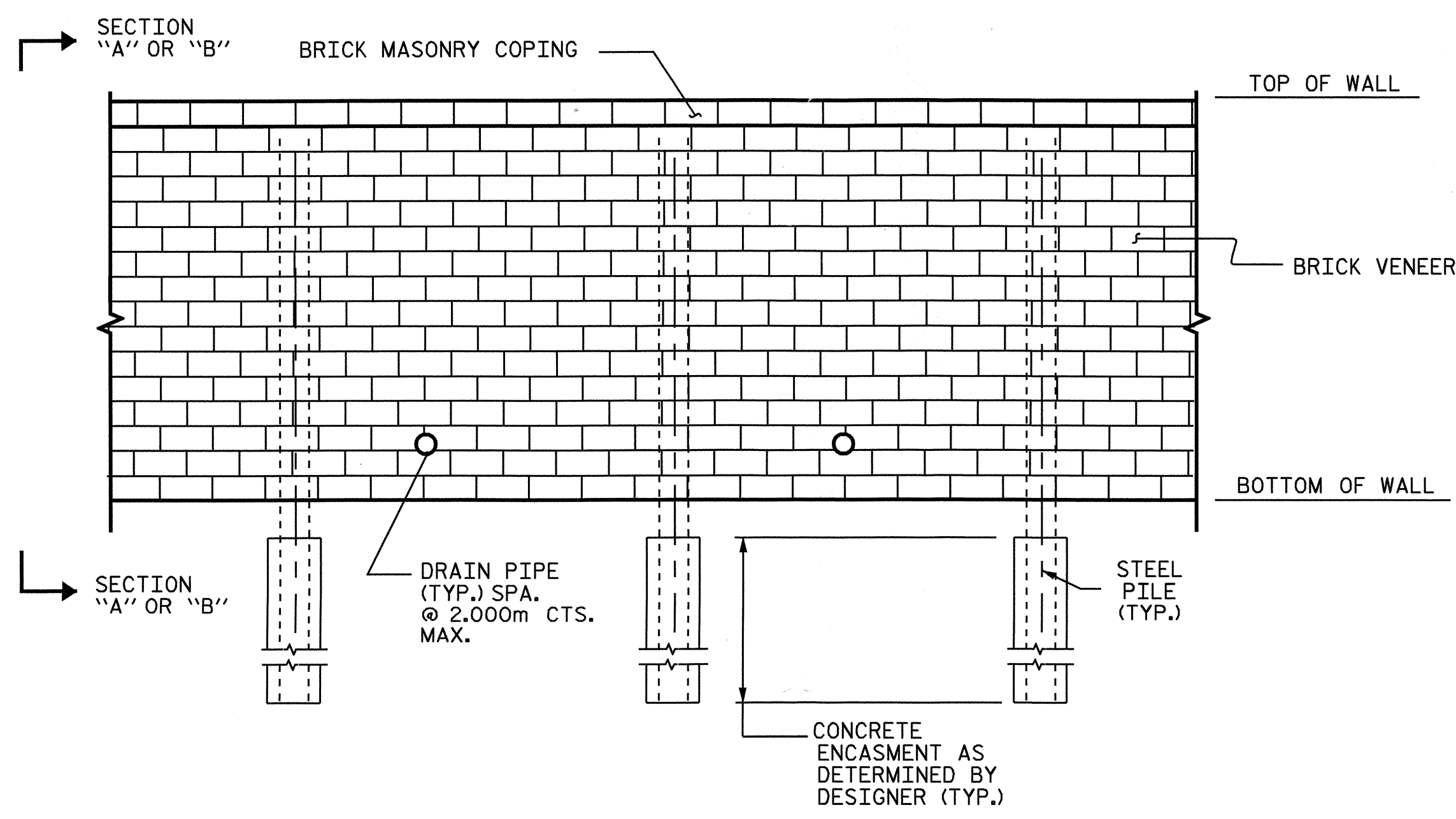
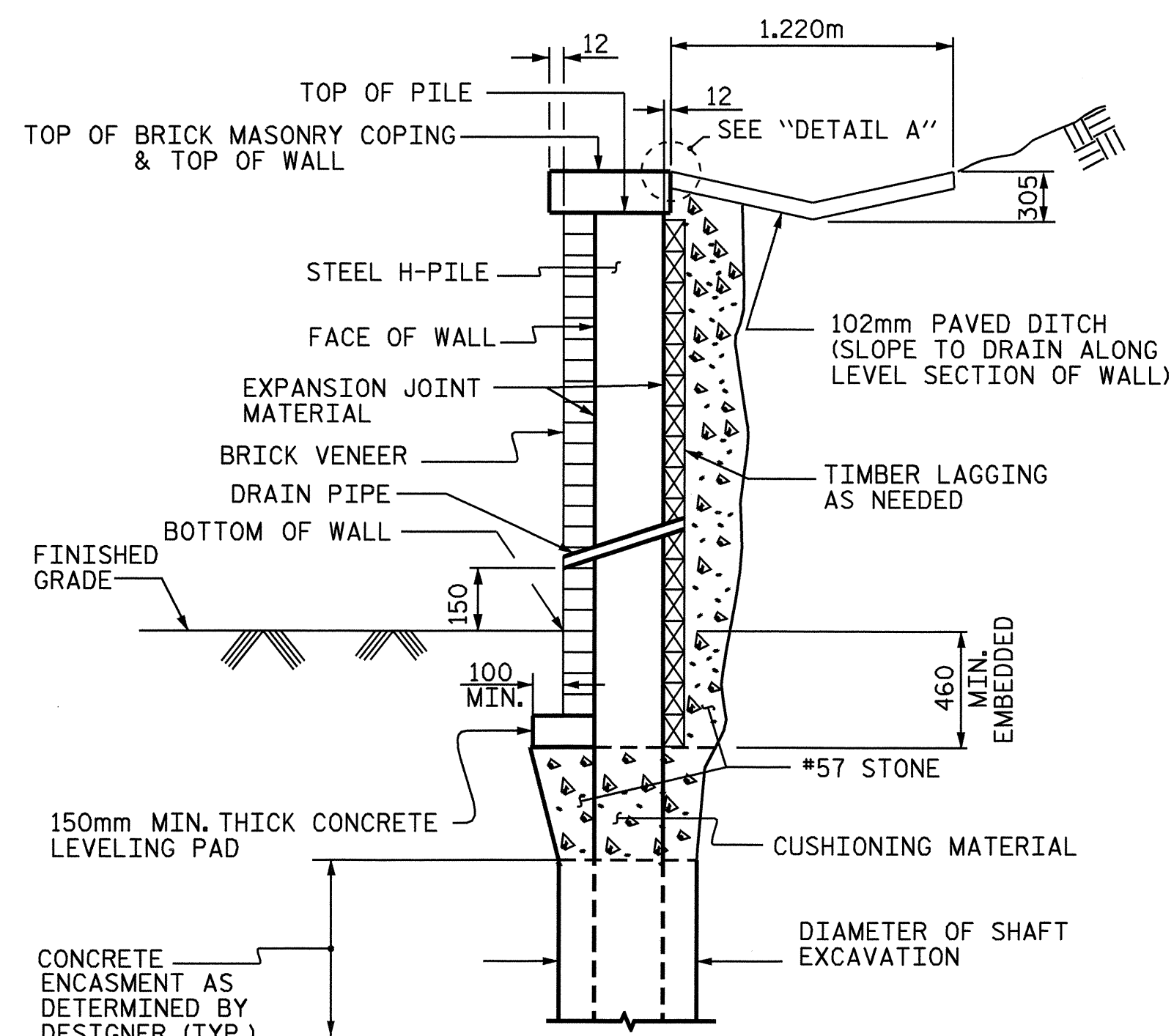


LOCATION SKETCH



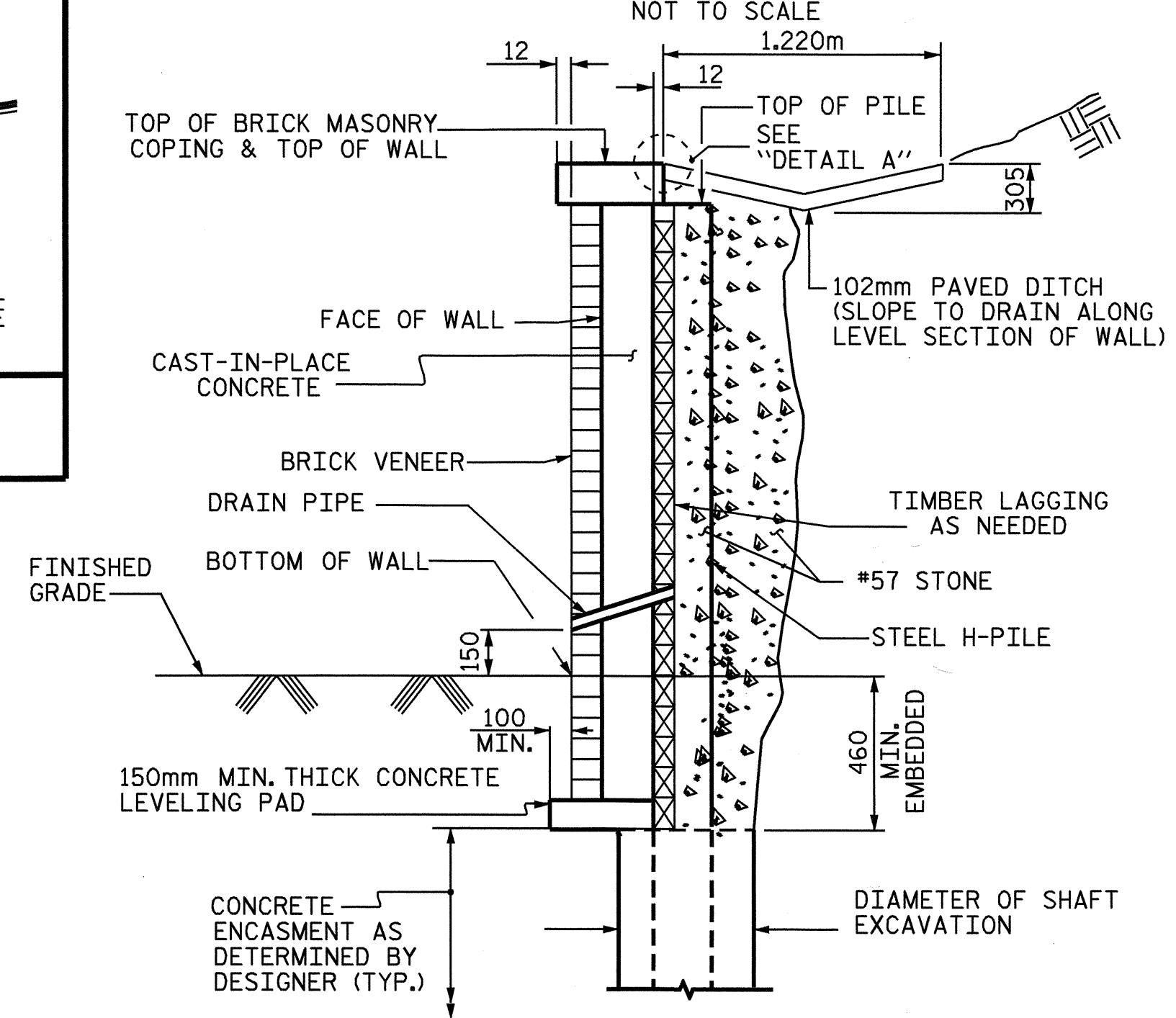
TYPICAL ELEVATION VIEW OF WALL

NOTE TO SCALE



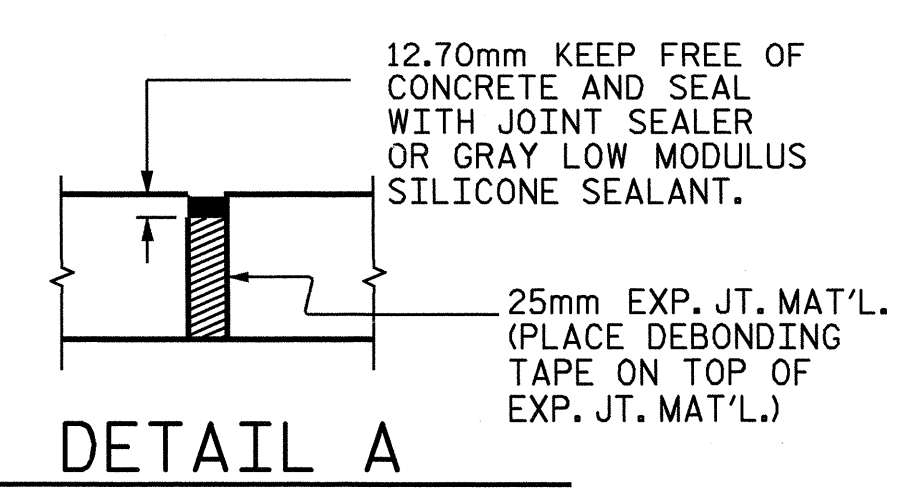
TYPICAL SECTION "A" - PRECAST CONCRETE PANELS OPTION

(PRECAST PANELS BEHIND PILE NOT SHOWN FOR CLARITY) NOT TO SCALE



TYPICAL SECTION "B" - CAST-IN-PLACE CONCRETE FACE OPTION

NOT TO SCALE



DETAIL A

NOTES

THE CONTRACTOR SHALL CHOOSE EITHER THE PRECAST PANELS OR CAST-IN-PLACE FACE OPTION FOR THE SOLDIER PILE RETAINING WALL.

PILES SHALL BE INSTALLED BY PRE-AUGERING OR DRILLING. THE EXCAVATED HOLE SHALL BE 24 INCH MINIMUM DIAMETER AND BACKFILLED WITH CONCRETE. SEE SOLDIER PILE RETAINING WALL SPECIAL PROVISION FOR SPECIFIED CONCRETE DETAILS.

PILES SHALL BE ASTM A36 GRADE WITH THE ADDITION OF 0.2 % MINIMUM COPPER. FIELD WELDING SHALL BE DONE IN ACCORDANCE WITH ARTICLE 440-9 OF THE STANDARD SPECIFICATIONS.

THE TOP OF THE INSTALLED PILES SHALL BE WITHIN 50mm OF THEIR PLAN LOCATION IN ANY DIRECTION.

PRECAST PANELS SHALL HAVE A MINIMUM BEARING DISTANCE OF 50mm ON THE PILE FLANGE. 12.5mm THICK EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN THE CONCRETE PANELS AND PILE FLANGES FOR THE WIDTH OF THE BEARING SURFACE.

EXCAVATION TO INSTALL PANELS AND/OR TIMBER LAGGING SHALL BE LIMITED TO 150mm BEHIND THE PILES. ANY OVEREXCAVATION SHALL BE BACKFILLED WITH NO. 57 STONE.

PRECAST PANELS, IF APPLICABLE, AND TIMBER LAGGING SHALL BE HELD SECURELY AGAINST PILES UNTIL BACKFILL IS PLACED.

THE LEVELING PAD SHALL BE CAST-IN-PLACE AND MADE CONTINUOUS AT STEPS.

BOTH CUSHIONING MATERIAL AND BACKFILL MATERIAL BEHIND THE TIMBER LAGGING AND BETWEEN THE PANELS AND TIMBER LAGGING SHALL BE NO. 57 STONE AND COMPACTED AS REQUIRED BY THE ENGINEER. THE STONE SHALL BE RODDED AND SPREAD IN ORDER TO FILL ALL VOIDS AND INSURE MAXIMUM DENSITY. FLUSHING THE STONE WITH WATER WILL NOT BE ALLOWED.

THE FINAL APPEARANCE OF THE BRICK VENEER SHALL MATCH THE MASONRY BRICK RETAINING WALLS TO BE CONSTRUCTED AT OTHER LOCATIONS ALONG THE PROJECT AND BE APPROVED BY THE ENGINEER.

THE BRICK VENEER SHALL BE ATTACHED WITH APPROVED METAL TIES ACCORDING TO MANUFACTURER'S SPECIFICATIONS WITH A MINIMUM 405mm SPACING VERTICALLY AND 810mm SPACING HORIZONTALLY WITH EACH ROW STAGGERED 405mm FOR THE ROW ABOVE.

THE CONTRACTOR SHALL SUBMIT COMPLETE WORKING DRAWINGS/SHOP PLANS, ERECTION PLANS AND DESIGN CALCULATIONS FOR REVIEW AND APPROVAL PRIOR TO BEGINNING THE SOLDIER PILE RETAINING WALL CONSTRUCTION. SEE SOLDIER PILE RETAINING WALL SPECIAL PROVISIONS.

THE SERVICE LIFE FOR DESIGN IS 75 YEARS.

THE MINIMUM EMBEDMENT OF THE CAST-IN-PLACE FACE, BRICK VENEER AND PRECAST PANELS SHALL BE 460mm.

USE THE FOLLOWING VALUES FOR WALL DESIGN:  
ALL SOIL (INCLUDING FILL):  
 $\delta = 120 \text{ pc.f. } \phi = 30^\circ, c = 0$

THE TOP OF WALL ELEVATION IS THE TOP OF THE BRICK MASONRY COPING. THE BOTTOM OF WALL IS WHERE THE BERM EXTENDS TO THE BRICK VENEER IN FRONT OF THE WALL.

PLANS SUBMITTED FOR REVIEW SHALL INCLUDE THE FOLLOWING: PLAN VIEW, ELEVATION VIEWS, TYPICAL SECTIONS, CAST-IN-PLACE OR PRECAST PANEL DETAILS, AND OBSTRUCTION AVOIDANCE DETAILS.

THE SOLDIER PILE RETAINING WALL SHALL BE DESIGNED TO MEET ALL THE CRITERIA OF THE LATEST VERSION OF ASSHTO ALLOWABLE STRENGTH DESIGN STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES AND ITS INTERIMS, THE SPECIAL PROVISIONS AND THE PLANS.

FOR SOLDIER PILE RETAINING WALL, SEE SOLDIER PILE RETAINING WALL SPECIAL PROVISION.

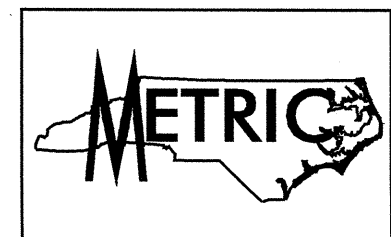
ALL STRUCTURE EXCAVATION NECESSARY FOR THE CONSTRUCTION OF THE SOLDIER PILE RETAINING WALL IS INCIDENTAL TO THE COST OF THE WALL.

TOP OF WALL ELEVATIONS AT NEAR BOTH ENDS ARE ESTIMATED VALUES THESE ELEVATIONS MAY BE ADJUSTED IN THE FIELD UPON APPROVAL BY THE ENGINEER TO ENSURE THAT BOTH ENDS OF THE WALL ARE TIED-IN/ZERO OUT WITH THE ADJACENT DRIVEWAYS.

THE CONTRACTOR SHOULD FIELD VERIFY THE TOP OF THE WALL ELEVATIONS PRIOR TO BEGINNING WALL DESIGN.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

PROJECT NO. R-2813C  
BUNCOMBE COUNTY  
 STATION: 54+57.00 -L-



SHEET 1 OF 2

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

SOLDIER PILE RETAINING WALL

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

DRAWN BY : M. POOLE DATE : 03-04  
 CHECKED BY : J.R. DUGGINS DATE : 04-04

06-MAY-2004 09:06  
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022122  
 5/7/2004

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15779  
 JON R. DUGGINS, P.E.