STV 100 Years
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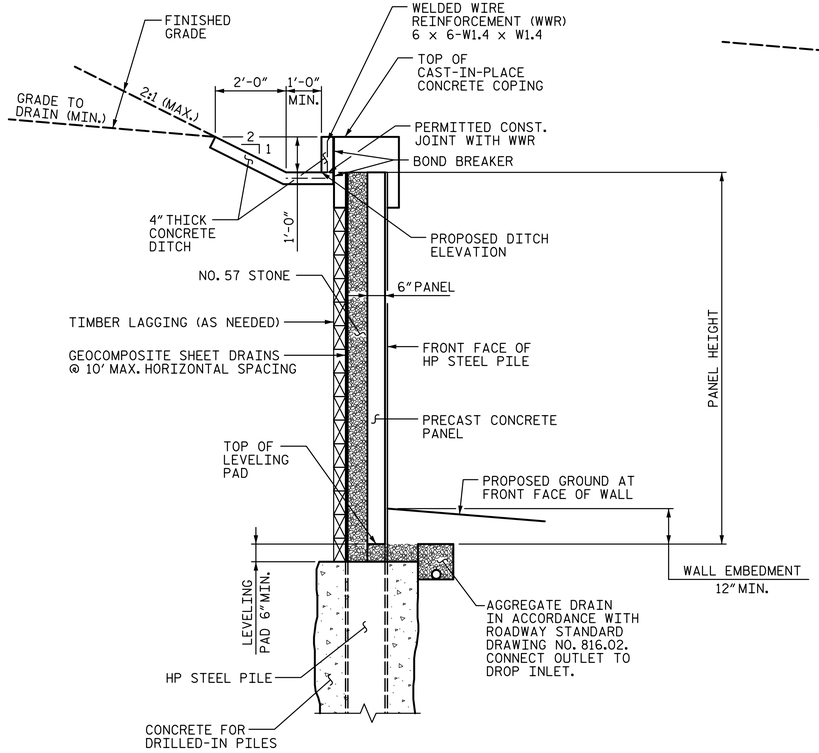
PROJECT REFERENCE NO.	SHEET NO.
U-5114	W-9

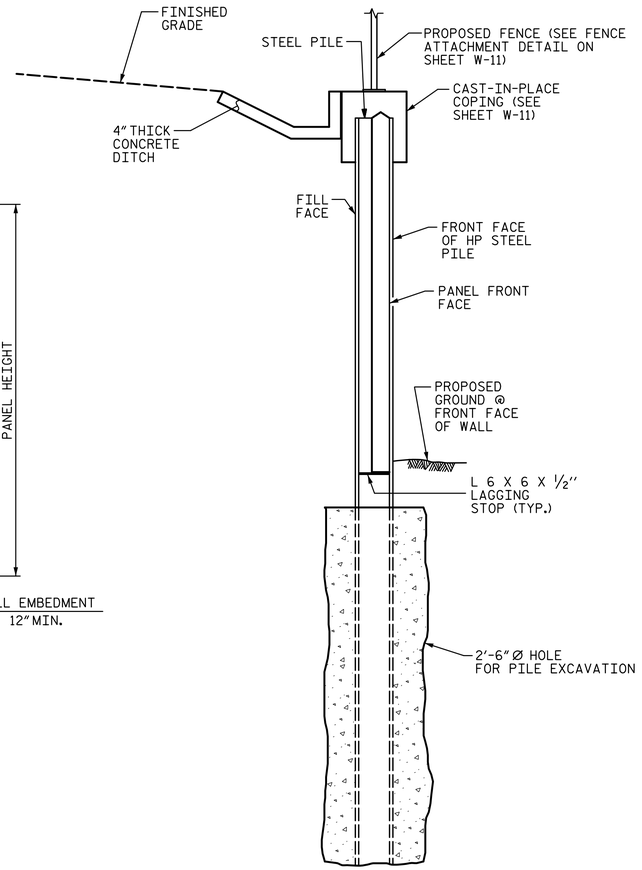
STRUCTURAL DESIGN ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

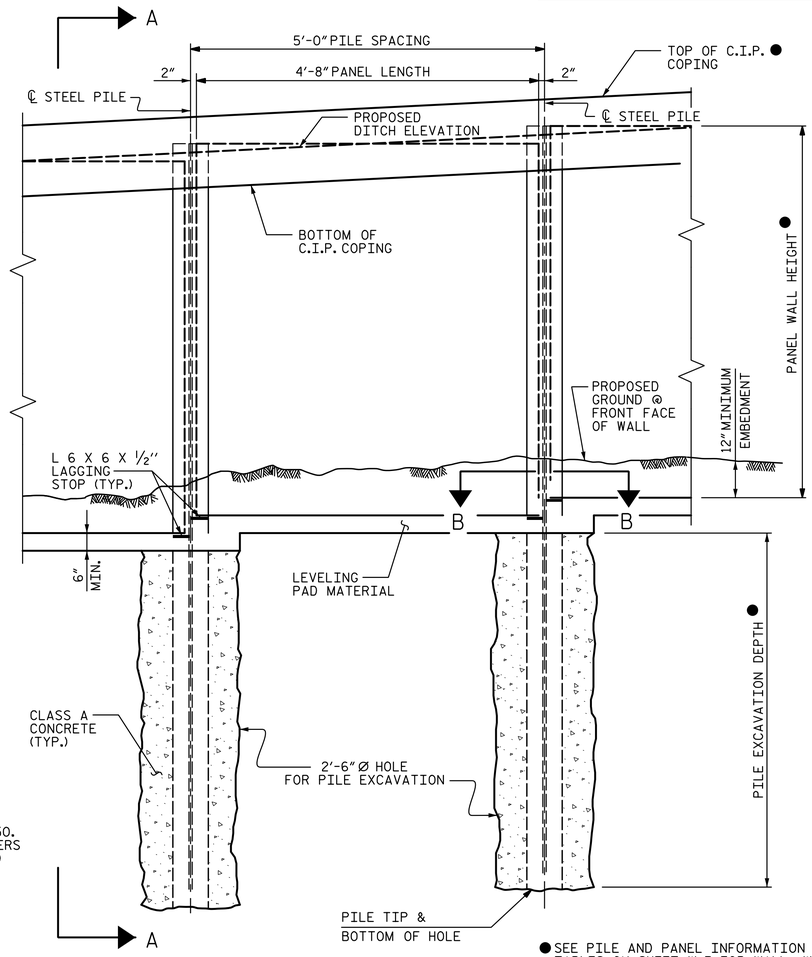


SOLDIER PILE WALL WITH PRECAST PANEL - TYPICAL SECTION

PROPOSED FENCE AND CONNECTION DETAILS NOT SHOWN FOR CLARITY



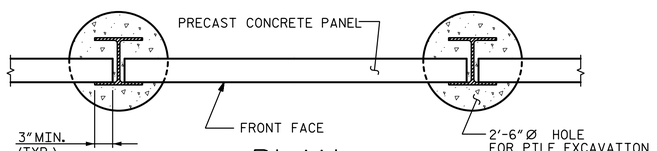
SECTION A-A



ELEVATION

FOR SECTION B-B, SEE SHEET W-10.
PROPOSED FENCE AND CONNECTION DETAILS NOT SHOWN FOR CLARITY.

● SEE PILE AND PANEL INFORMATION TABLES ON SHEET W-3 FOR WALL -W1- AND SHEET W-8 FOR WALL -W2-.



PLAN

NOTES:

FOR SOLDIER PILE RETAINING WALLS, SEE SOLDIER PILE RETAINING WALLS PROVISION.

BEFORE BEGINNING MOBILIZATION AND CONSTRUCTION, CONTRACTOR SHALL SUBMIT PROPOSED EQUIPMENT AND INSTALLATION PROCEDURE FOR REVIEW. PROCEDURE SHALL INCLUDE METHODS DURING PILE INSTALLATION TO PREVENT DAMAGE TO ADJACENT INSTALLED PILES.

WEATHERED ROCK AND CRYSTALLINE ROCK MAY BE ENCOUNTERED AT WALL NO. 2. CONTRACTOR SHALL EXCAVATE THROUGH THESE MATERIALS AS NEEDED TO MEET MINIMUM PILE TIP ELEVATIONS.

DRILLED IN H-PILES ARE REQUIRED FOR RETAINING WALL NOS. 1 AND 2.

USE A SOLDIER PILE RETAINING WALL WITH PRECAST CONCRETE PANELS THAT MEET SECTION 1077 OF THE NCDOT STANDARD SPECIFICATIONS FOR RETAINING WALL NOS. 1 AND 2.

AN EXPOSED AGGREGATE FINISH THAT MEETS ARTICLE 1077-12 OF THE NCDOT STANDARD SPECIFICATIONS IS REQUIRED FOR PRECAST CONCRETE PANELS FOR RETAINING WALL NOS. 1 AND 2.

PAINT GALVANIZED H-PILES GRAY IN ACCORDANCE WITH ARTICLE 442-12 OF THE NCDOT STANDARD SPECIFICATIONS FOR RETAINING WALL NOS. 1 AND 2.

BEFORE BEGINNING SOLDIER PILE WALL CONSTRUCTION FOR RETAINING WALL NOS. 1 AND 2, SURVEY WALL LOCATION AND SUBMIT A REVISED WALL PROFILE VIEW (WALL ENVELOPE) FOR REVIEW. DO NOT START WALL CONSTRUCTION UNTIL THE REVISED WALL ENVELOPE IS ACCEPTED.

IN 4" CONCRETE PAVED DITCHES, PLACE 1/2" EXPANSION JOINTS AT 30' INTERVALS AND AT ALL OTHER POINTS WHERE PROPOSED DITCHES ABUT RIGID OBJECTS. PLACE GROOVED JOINTS 1" DEEP AT 10' INTERVALS BETWEEN EXPANSION JOINTS.

IN CAST IN PLACE CONCRETE COPING 1/2" EXPANSION JOINT MATERIAL SHALL BE PLACED EVERY 30' MAX. DO NOT PLACE EXPANSION JOINT ABOVE A PILE. CONTRACTOR IS RESPONSIBLE FOR FITTING REINFORCING IN COPING SUCH THAT 2" CL. IS MAINTAINED FROM THE EXPANSION JOINT.

CONSTRUCT WIDTH AND SHAPE OF PROPOSED 4" CONCRETE PAVED DITCHES AS SHOWN OR AS DIRECTED ENGINEER.

FOR DITCH GRADES ABOVE 2%, INSTALL MATTING ON SIDE OF PAVING FOR MINIMUM WIDTH OF 36" OR AS DIRECTED BY THE ENGINEER.

PROVIDE PANELS WITH A FLAT BOTTOM.

CONTRACTOR SHALL CLEARLY MARK THE FILL FACE SIDE OF THE PRECAST PANEL TO ENSURE PROPER ORIENTATION DURING INSTALLATION.

USE STEEL PILES, ANGLES, AND LAGGING STOPS MEETING THE REQUIREMENTS OF AASHTO M270, GRADE 50. GALVANIZE ALL STEEL COMPONENTS INCLUDING PILES, ANGLES, LAGGING STOPS, BOLTS, NUTS, AND WASHERS IN ACCORDANCE WITH SECTION 1076 OF THE NCDOT STANDARD SPECIFICATIONS. REPAIR ANY DAMAGED GALVANIZATION IN ACCORDANCE WITH ARTICLE 1076-7 OF THE NCDOT STANDARD SPECIFICATIONS.

ALL WELDING SHALL BE IN ACCORDANCE WITH THE CURRENT AWS SPECIFICATIONS.

AT THE CONTRACTOR'S OPTION, USE AN APPROVED NON-SHRINK NON-METALLIC GROUT BETWEEN THE FLANGES OF THE STEEL PILES TO SUPPORT THE BOTTOM PANEL IN LIEU OF LAGGING STOPS.

ADJUST PILE EXCAVATION ELEVATIONS TO MAINTAIN 1'-0" MINIMUM EMBEDMENT OF THE BOTTOM PANEL.

USE CLASS AA FOR PANELS AND CLASS A CONCRETE FOR COPING, DITCH AND PILE EXCAVATION BACKFILL, IN ACCORDANCE WITH ARTICLE 1000-4 OF THE NCDOT STANDARD SPECIFICATIONS.

DO NOT SPLICE STEEL PILES.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR PROPOSED FENCE, SEE SPECIAL PROVISIONS.

INSTALL FENCE IN ACCORDANCE WITH SECTION 866 OF NCDOT STANDARD SPECIFICATIONS AND USE "FENCE ATTACHMENT DETAIL" ON SHEET W-11.

STEEL BASE PLATES, THREADED RODS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATIONS. AFTER INSTALLATION, GALVANIZED SURFACES SHALL BE REPAIRED IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATIONS.

THREADED RODS SHALL MEET THE REQUIREMENTS OF ASTM A307. NUTS SHALL MEET THE REQUIREMENTS OF ASTM A563 AND WASHERS SHALL MEET THE REQUIREMENTS OF ASTM F436.

CONTRACTOR MAY ELECT TO PROVIDE ALTERNATE FENCE ATTACHMENT DESIGN TO OWNER AND ENGINEER FOR APPROVAL. THIS ALTERNATE DESIGN SHALL MEET CURRENT AASHTO REQUIREMENTS FOR PEDESTRIAN RAILING.