

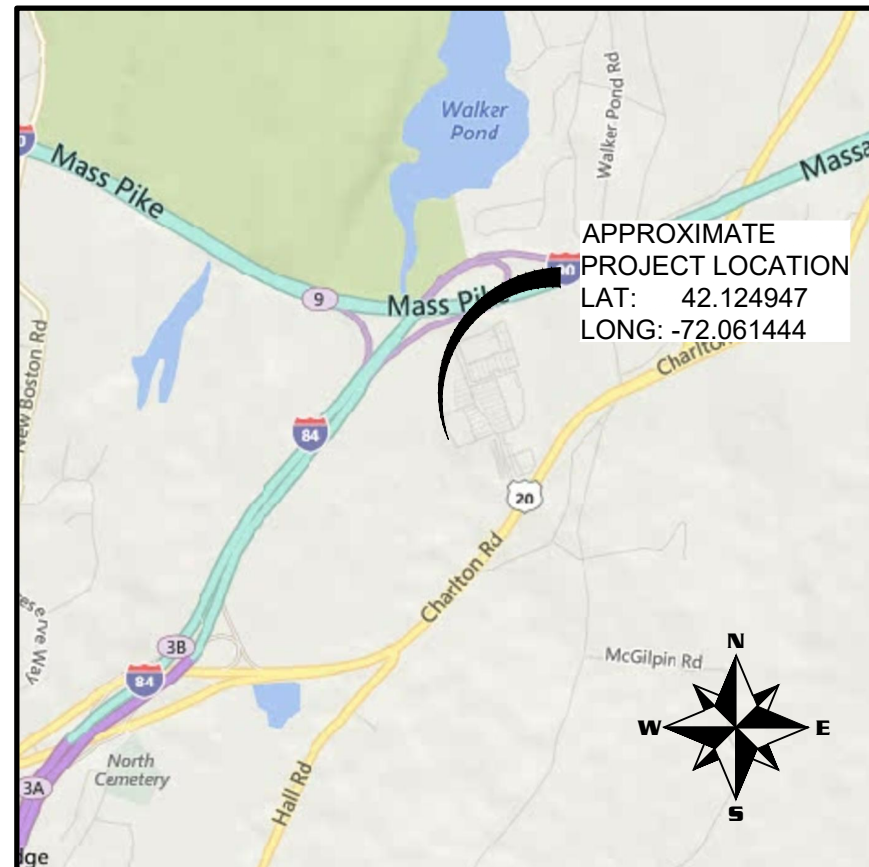
RETAINING WALL REPAIR PLANS

CENTER AT HOBBS BROOK WALL

STURBRIDGE, WORCESTER COUNTY, MA
CIM GROUP

SHEET INDEX

NO.	DESCRIPTION
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VICINITY MAP

(NOT TO SCALE)

SHEET REVISIONS

DATE	DESCRIPTION	NO
10/26/20	ISSUED FOR REVIEW	IFR

PROJECT NAME:

CENTER AT HOBBS BROOK WALL

SHEET TITLE:

COVER SHEET

DRAWN BY:

SSE

CHECKED BY:

SDH

DATE:

10/26/2020

PROJECT NUMBER:

200XXXMA01

SHEET

C-01



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CONSTRUCTION SEQUENCE/WORK SCHEDULE:

THE CONTRACTOR WILL PROVIDE AND INSTALL THE SPECIFIED SOIL NAILS AND SLOPE SURFACE TREATMENT PER THE CONSTRUCTION DOCUMENTS. THE ANTICIPATED CONSTRUCTION SEQUENCE IS AS FOLLOWS:

1. PERMITTING WORK BY OTHERS
2. DELINEATE LIMITS OF STABILIZATION. NOTIFY LOCAL UTILITIES PROVIDERS TO LOCATE AND MARK POTENTIAL UNDERGROUND FACILITIES. DAYLIGHTING OF UTILITIES IN POTENTIAL CONFLICT, AS NECESSARY.
3. PREPARE THE WORK AREA FOR STABILIZATION CONSTRUCTION.
 - 3.1. ESTABLISH TRAFFIC CONTROL.
 - 3.2. PREPARE SITE ACCESS.
4. PREPARE FACE OF THE PROPOSED WALL AND REMOVE AND DISPOSE OF SPOILS MATERIAL GENERATED DURING PREPARATION.
5. MARK THE LOCATIONS OF THE PROPOSED SOIL NAILS WITH SURVEY MARKING PAINT.
6. INSTALLATION OF SOIL NAILS. NAILS WILL BE GROUTED DURING DRILLING UNLESS APPROVED OTHERWISE BY GSI ENGINEER.
7. INSTALL SURFACE TREATMENT PER THE CONSTRUCTION DOCUMENTS.
8. REPEAT STEPS 3 TO 6 UNTIL THE FINAL CONFIGURATION OF THE WALL HAS BEEN REACHED

HOUSE KEEPING:

- THE SITE WILL BE ORGANIZED AND CLEAR OF ANY TRASH OR DEBRIS. ALL TRASH WILL BE PLACED IN A PROPER CONTAINER AND REMOVED AT THE END OF EACH WORK DAY.

SAFETY:

- ALL SAFETY PLANS FOR LIFTING, HEARING, DUST CONTROL, PPE ETC. WILL BE IN PLACE AND FOLLOWED ACCORDINGLY. PPE INCLUDES SAFETY VEST, STEEL TOED SHOES, HARD HAT, SAFETY GLASSES, RESPIRATOR DURING DUST PRODUCING ACTIVITIES, AND GLOVES.
- ALL FIELD PERSONNEL SHALL ATTEND SITE SPECIFIC ORIENTATION PRIOR TO BEING ON SITE, AS REQUIRED.
- DAILY PRE/POST JOB BRIEFINGS WILL BE HELD AND DOCUMENTED; ALL ON SITE PERSONNEL WILL BE REQUIRED TO REVIEW AND SIGN

SIZE AND TYPE OF NAILS:

- THE SOIL NAIL ELEMENTS SHALL CONSIST OF 38mm NOMINAL DIAMETER, SELF-DRILLING SOIL NAILS OF DOMESTIC MANUFACTURE.
- SACRIFICIAL DRILL BITS WILL BE ATTACHED TO THE SOIL NAIL PRIOR TO INSTALLING THE NAIL IN THE GROUND.
- SACRIFICIAL DRILL BITS ARE NOT PERMANENTLY INCORPORATED INTO THE PROJECT AND MAY BE REMOVED AFTER DRILLING OR LEFT AT THE PROJECT FOR THE CONTRACTOR'S CONVENIENCE. SACRIFICIAL DRILL BITS ARE NOT END PRODUCTS. SACRIFICIAL DRILL BITS ARE NOT PRODUCED IN THE UNITED STATES.
- SOIL NAILS WILL BE CONSTRUCTED USING DOMESTIC HOLLOW BAR.
- GSI ENGINEER MAY ELECT TO MODIFY THE NAIL TYPE OR LENGTH, DEPENDING ON ACTUAL DRILLING CONDITIONS.

BEARING PLATE PLACEMENT:

- 8" X 8" X 3/8" GALVANIZED STEEL BEARING PLATES WILL BE PLACED OVER THE NAILS AND ATTACHED WITH A HEX NUT. IF THE SOIL NAILS EXTEND BEYOND THE HEX NUTS OR WELDED PLATES, THEY WILL BE TRIMMED.

EMPLOYEE CERTIFICATIONS:

- ACI SHOTCRETE NOZZLEMEN CERTIFICATION
- 10-HOUR OCCUPATIONAL SAFETY AND HEALTH TRAINING COURSE IN CONSTRUCTION SAFETY & HEALTH
- AMERICAN RED CROSS STANDARD FIRST AID TRAINING
- AMERICAN RED CROSS BLOODBORNE PATHOGENS TRAINING: PDT

GROUT MIX DESIGN:

- DESIGN 28 DAY COMPRESSIVE STRENGTH = 3,000 PSI
- THE GROUT WILL BE A TYPE I/II/IV PORTLAND CEMENT. THE WATER/CEMENT RATIO WILL BE 0.5 TO 0.6. NO ADDITIONAL AGGREGATE OR ADMIXTURES WILL BE ADDED TO THE GROUT.

TYPICAL GROUT MIX DESIGN (PER CUBIC YARD)			
MATERIAL	WEIGHT	VOLUME	QUANTITY
CEMENT	1837 TO 2063 LB	9.3 TO 10.4 FT ³	19.5 TO 22 BAGS (94 LB)
WATER	1031.5 TO 1102 LB	16.6 TO 17.7 FT ³	123.5 TO 132 GALLONS
TOTAL	---	1 YD ³	---

TYPICAL GROUT MIX DESIGN (PER 94 LB BAG OF CEMENT)			
MATERIAL	WEIGHT	VOLUME	QUANTITY
CEMENT	94 LB	0.48 FT ³	1 BAG (94 LB)
WATER	47 TO 56.4 LB	0.8 TO 0.9 FT ³	5.6 TO 6.8 GALLONS

WIRE MESH SPECIFICATIONS AND PLACEMENT:

GEOMETRY:

- MESH SIZE: 50mm X 50mm (1.96" X 1.96")
- DIAMETER OF WIRE: 3.5mm (0.13")
- APPROX. OPEN AREA DIAMETER: 45mm (1.77")

MATERIAL:

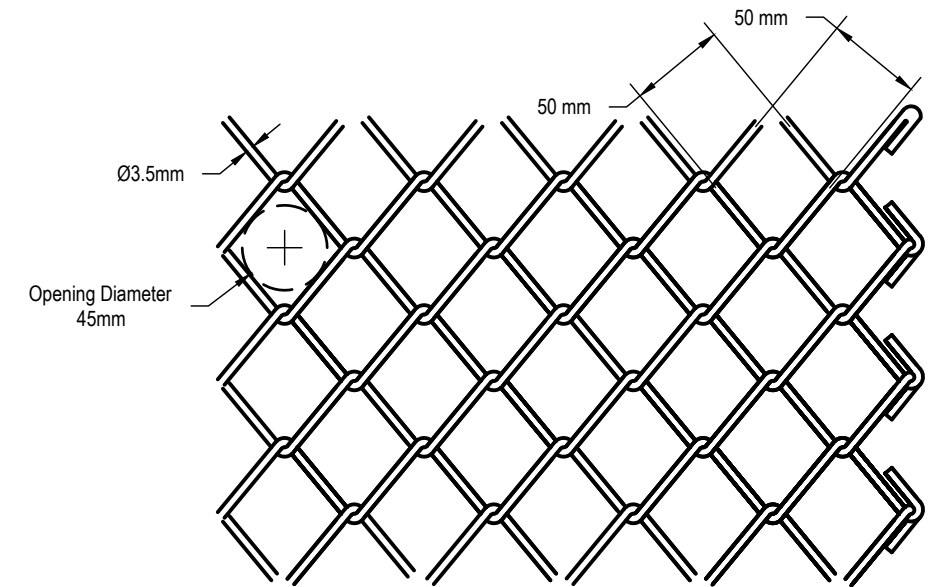
- TENSILE STRENGTH OF WIRE: MIN. 600 N/mm² (12,530 KSF)
- MESH SHALL BE UNDERLAIN WITH A BIODEGRADABLE ROLLED EROSION CONTROL BLANKET (ECB) ECS-18TM/ OR EQUIVALENT
- CORROSION PROTECTION: GALFAN (ZINC AND 5% ALUMINUM ALLOYS) GALVANIZED 250 g/m²

DIMENSIONS:

- WIDTH OF NET: 3.05m to 3.66m (10' TO 12')
- WIDTH OF NET: 3.5m

PLACEMENT:

- AN AREA SHALL BE PREPARED AROUND THE SOIL NAILS TO ALLOW SUFFICIENT SEATING OF BEARING PLATES.
- THE WIRE MESH WILL BE PLACED ALONG THE FACE OF THE SLOPE WITH THE SOIL NAILS EXTENDING THROUGH THE MESH.
- 8" X 8" X 3/8" GALVANIZED STEEL BEARING PLATES WILL BE PLACED ON THE SOIL NAILS AND SECURED WITH GALVANIZED OR EPOXY-COATED HEX NUTS.
- THE HEX NUTS WILL THEN BE TIGHTENED USING AN IMPACT OR TORQUE WRENCH TO SUFFICIENTLY SEAT THE PLATES.



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SHEET TITLE:

GENERAL NOTES

DRAWN BY:

SSE

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DATE:

10/26/2020

PROJECT NUMBER:

200XXXMA01

SHEET

C-02



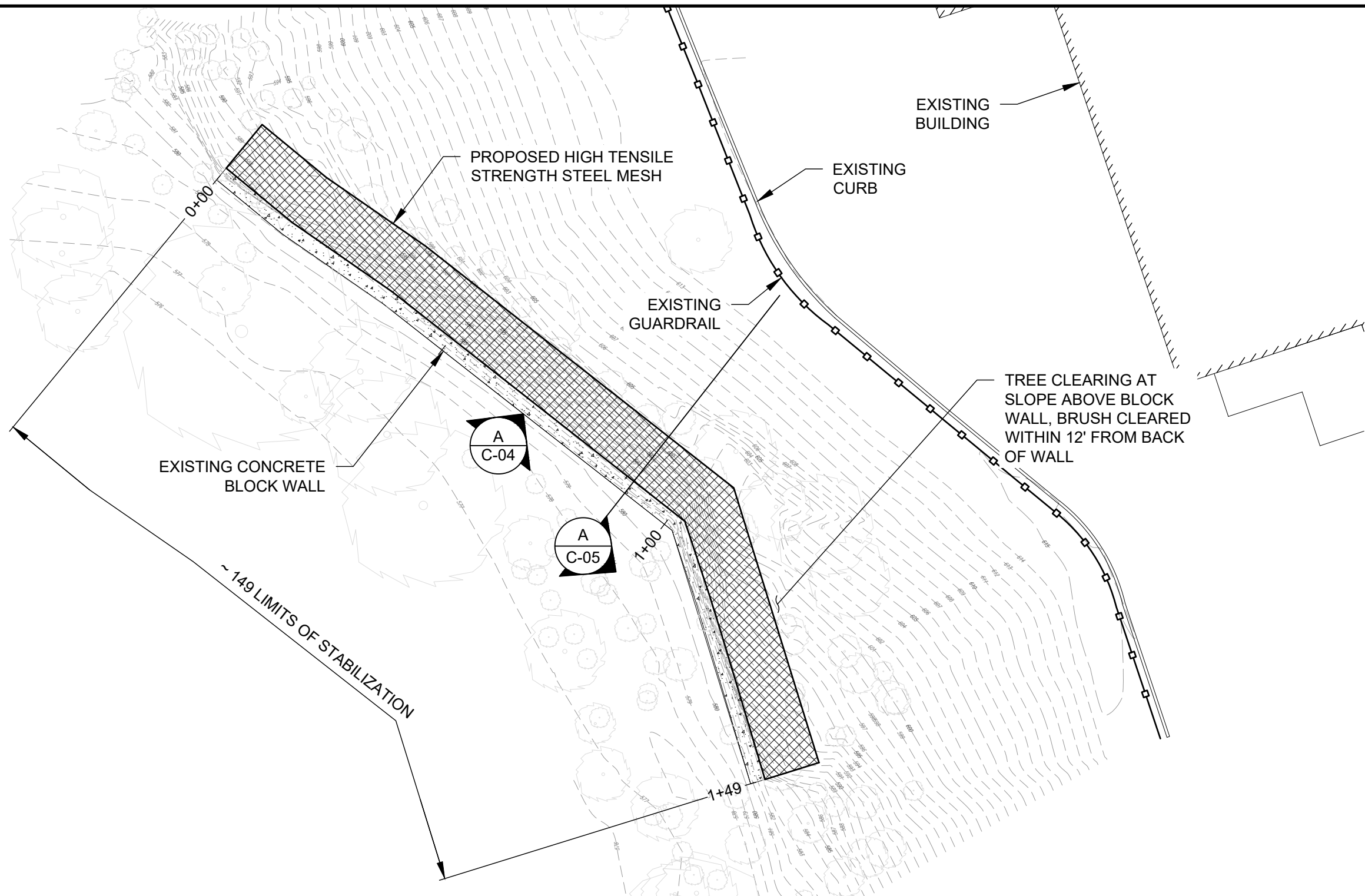
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NOTES:
 EXISTING SITE PLAN BASED ON THE
 "03-190160 TOPO R2 ISSUED.DWG" FILE
 AND WAS PROVIDED TO GSI BY THE
 CLIENT.

ESTIMATED QUANTITIES			
PAY ITEM	QTY	QTY (AB)	UNIT
UP TO 20' SOIL NAILS	52	-	EA
UP TO 30' SOIL NAILS	62	-	EA
UP TO 40' SOIL NAILS	9	-	EA
GALVANIZED STEEL PLATES	123	-	EA
HIGH TENSION MESH	1490	-	SF
HORIZONTAL DRAIN	16	-	EA

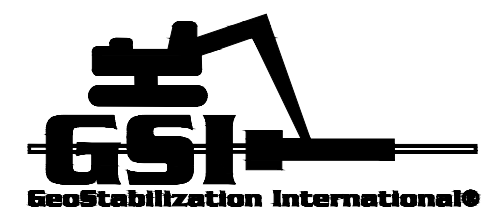


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SITE PLAN



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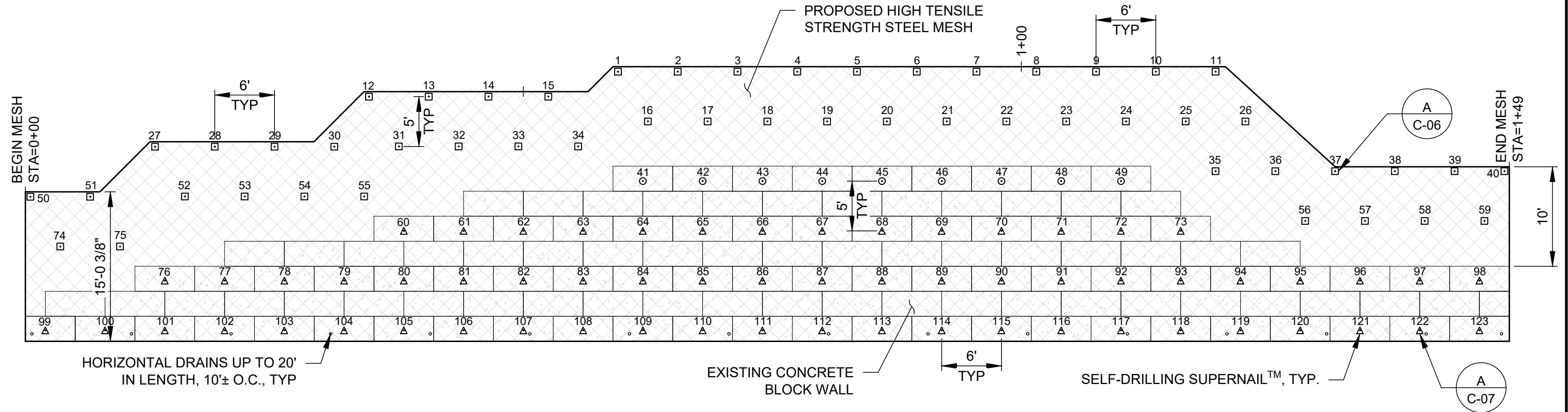
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NOTES:
ALL DISTANCES ARE SLOPE DISTANCE
UNLESS NOTED OTHERWISE.



A TYPICAL PROFILE
SCALE: 1" = 10'

- LEGEND:
- UP TO 20' SOIL NAIL
 - △ UP TO 30' SOIL NAIL
 - UP TO 40' SOIL NAIL

SHEET REVISIONS

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PROFILE VIEWS

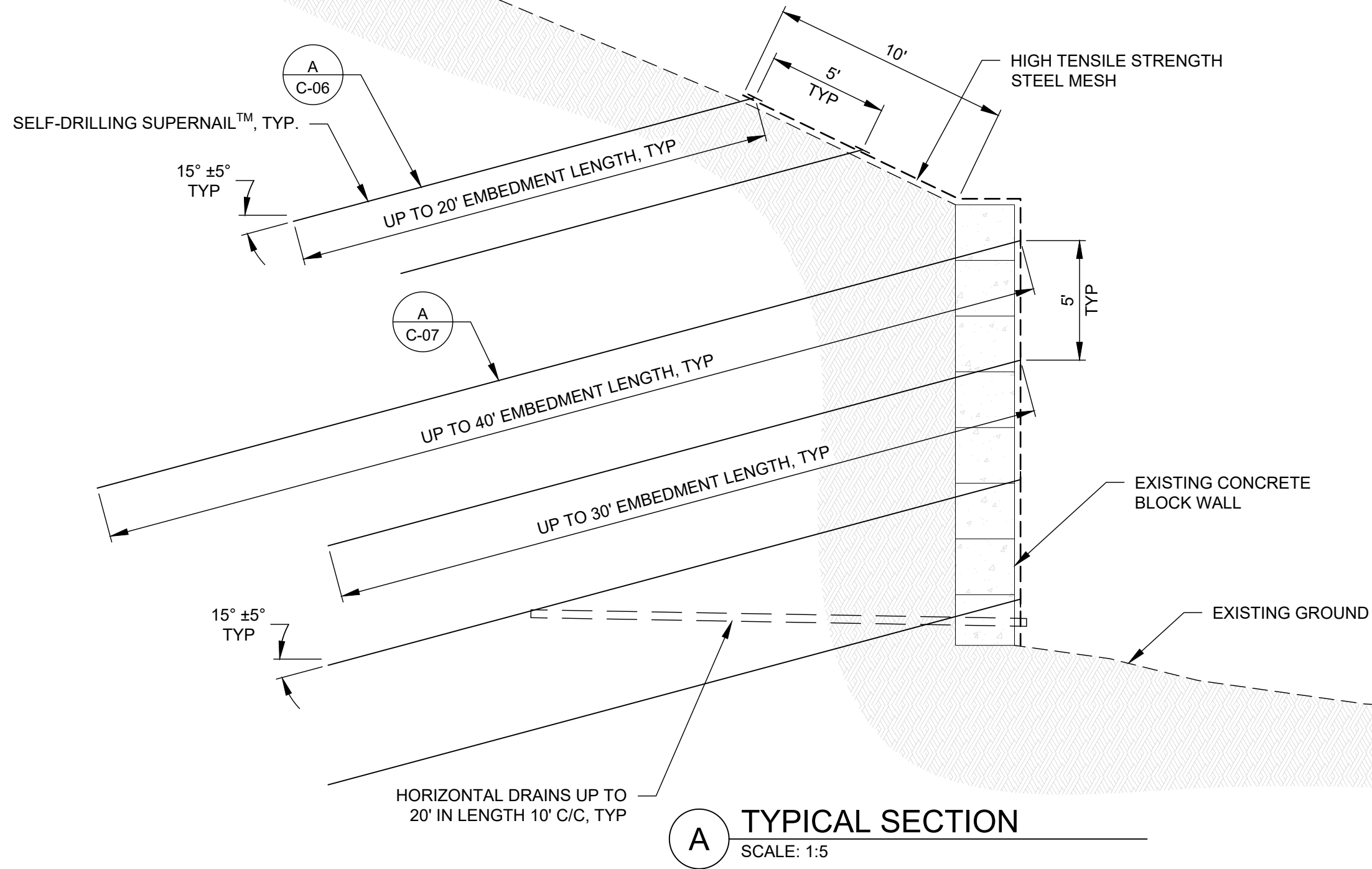
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CENTER AT HOBBS BROOK WALL

SHEET TITLE:
SECTION VIEWS

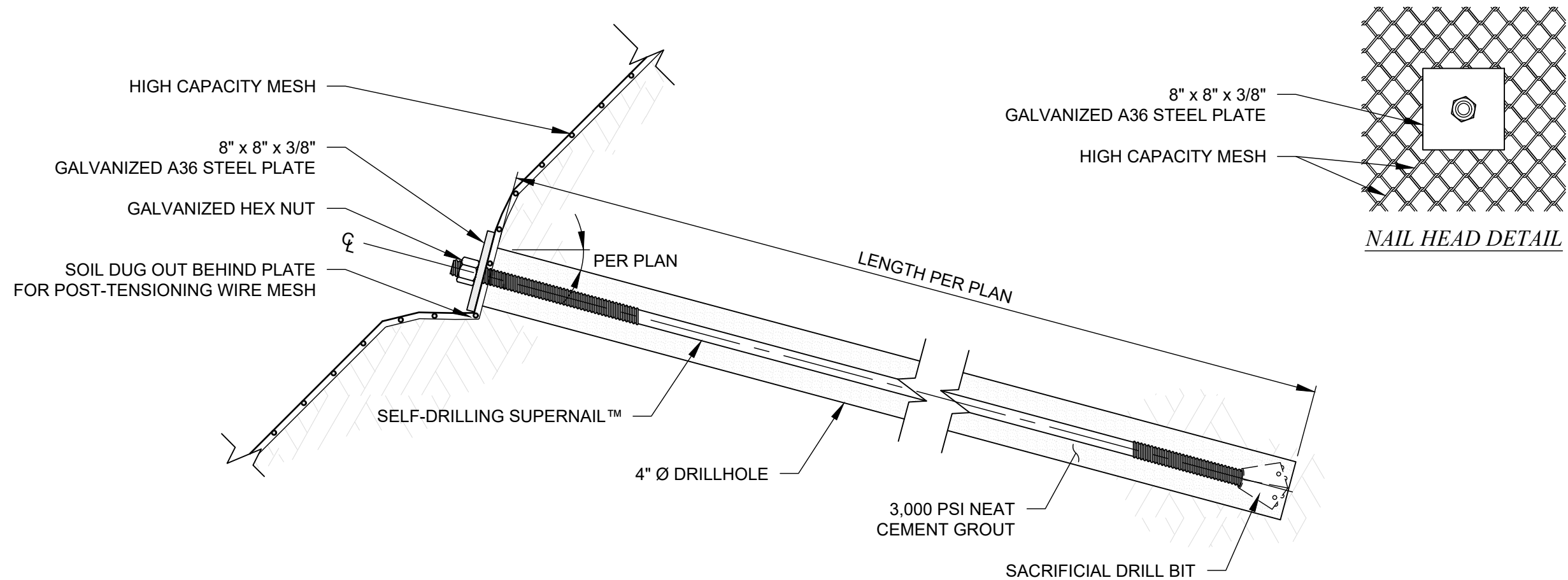
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A TYPICAL SELF-DRILLING SUPERNAIL™ DETAIL
N.T.S.

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