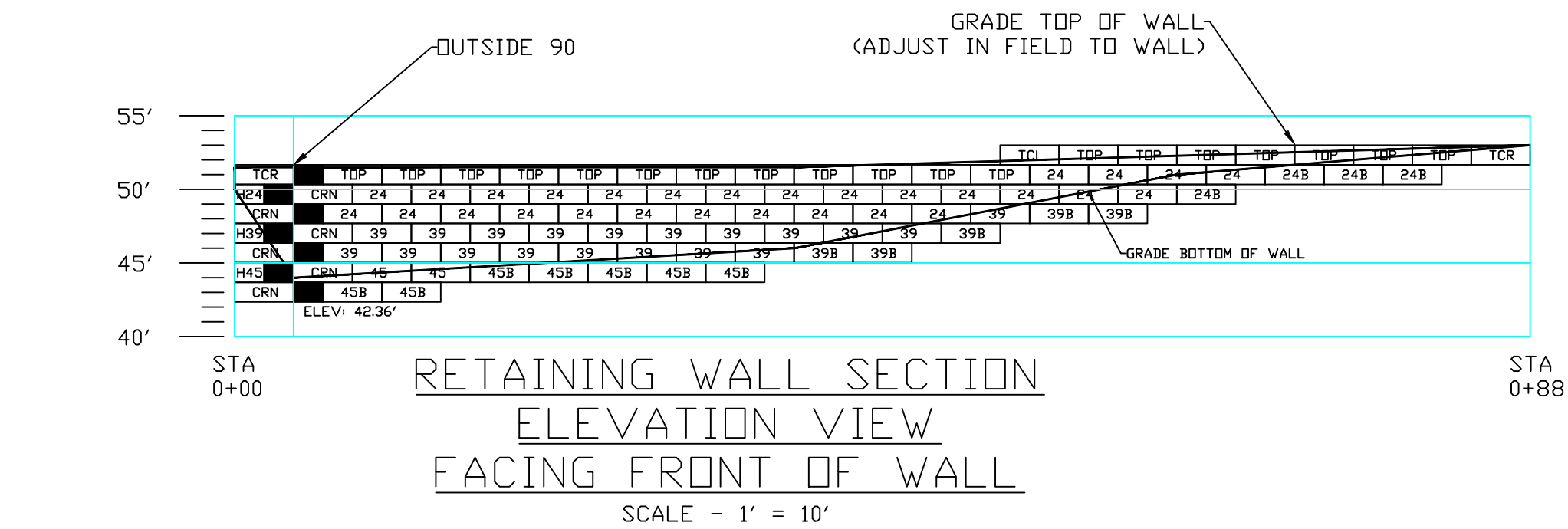
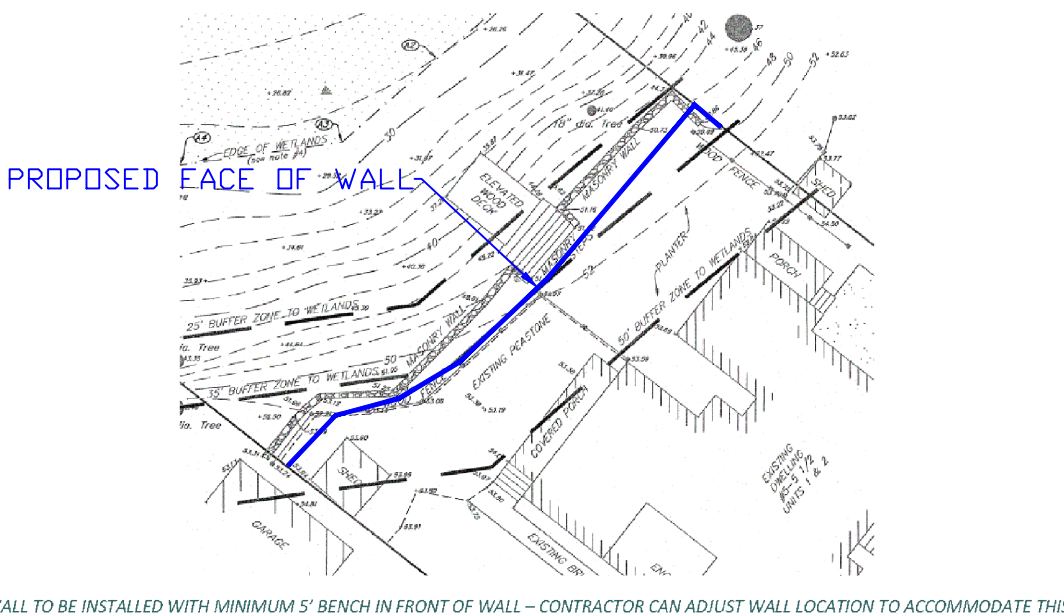




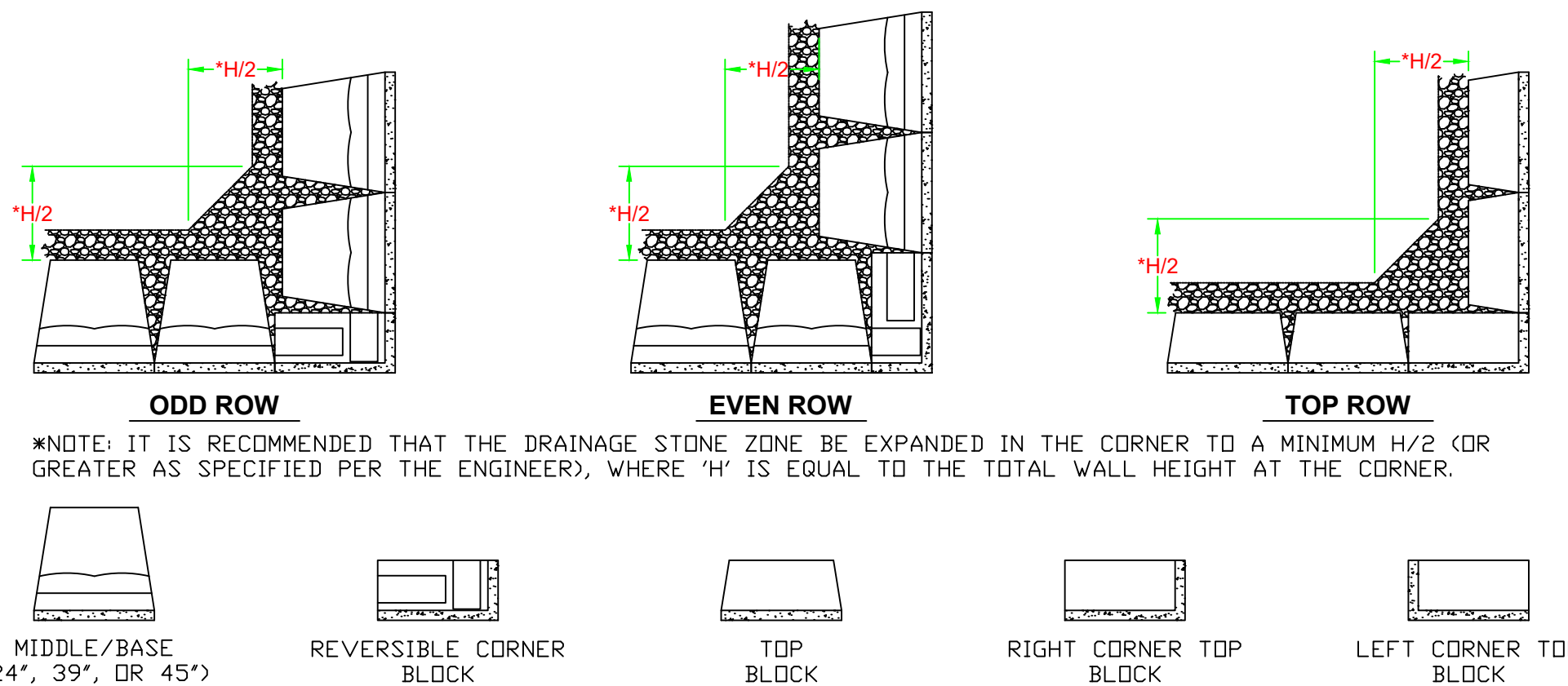
WALL SUMMARY

TCR BLOCK - 2 blks
TCL BLOCK - 1 blk
TOP BLOCK - 19 blks
1/2 24 BLOCK - 1 blk
24 FULL BLOCK - 29 blks
24 BASE BLOCK - 4 blks
1/2 39 BLOCK - 1 blks
39 FULL BLOCK - 19 blks
39 BASE BLOCK - 5 blks
1/2 45 BLOCK - 1 blk
45 FULL BLOCK - 2 blks
45 BASE BLOCK - 7 blks
CRN BLOCK - 6 blks

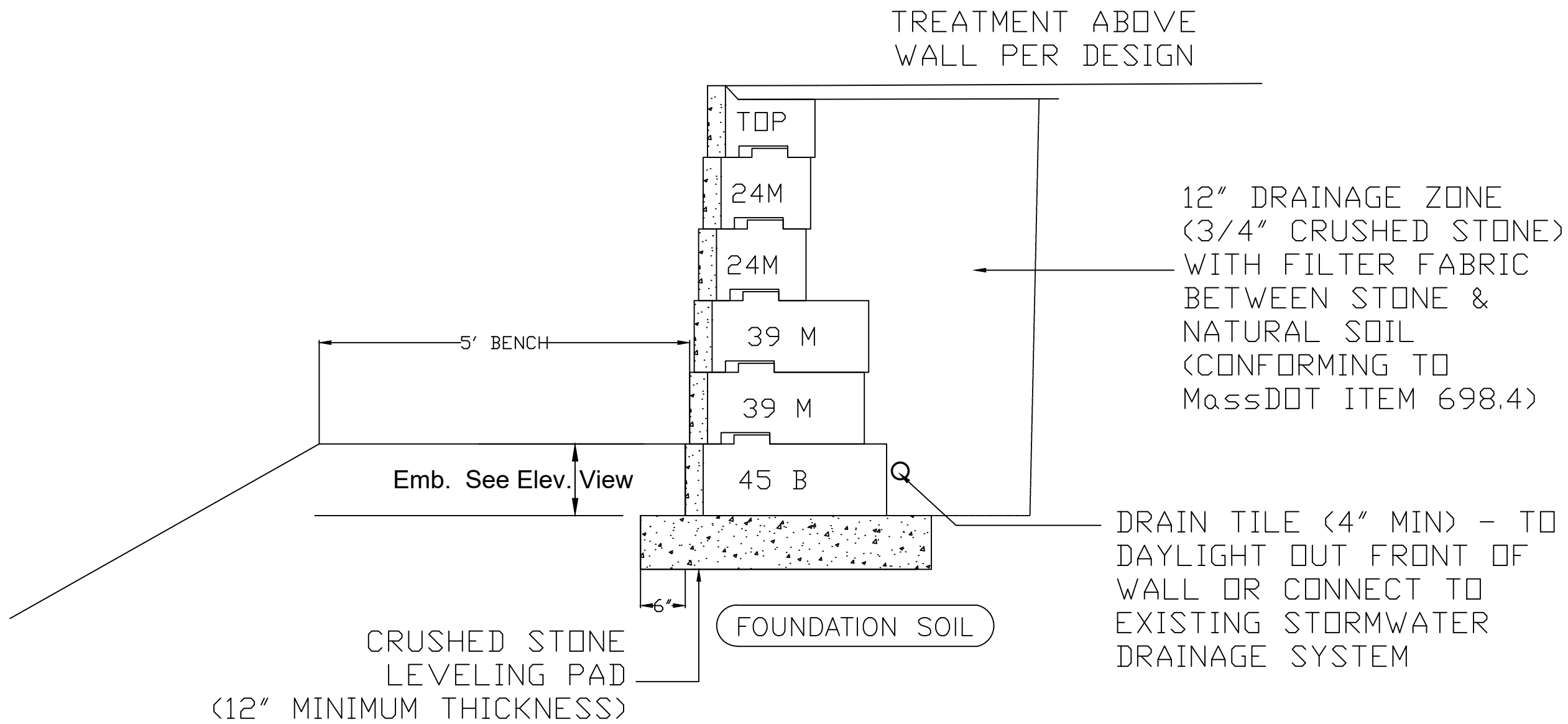
TOTAL SQ FT - 533 SQ FT



WALL TO BE INSTALLED WITH MINIMUM 5' BENCH IN FRONT OF WALL - CONTRACTOR CAN ADJUST WALL LOCATION TO ACCOMMODATE THIS



NOTE: WHEN BUILDING A WALL WITH AN OUTSIDE 90° CORNER, IT IS RECOMMENDED THAT CONSTRUCTION START AT THE CORNER AND EXTEND OUTWARD FROM THIS POINT IN BOTH DIRECTIONS. THIS ALLOWS FOR PLACEMENT OF THE CORNER BLOCKS SO THAT 1" OF SET BACK CAN BE MAINTAINED IN THE WALL IN BOTH DIRECTIONS. NO BLOCK CUTTING IS REQUIRED TO MAINTAIN THE 1" OF SET BACK PER ROW OF BLOCK ASSUMING THAT BOTH ENDS OF THE WALL, RUNNING AWAY FROM THE 90° CORNER RUN OUT INTO GRADE. IN LIEU OF MAINTAINING THE 1" SET BACK AFTER TURNING A 90° CORNER, YOU CAN BUILD ONE SIDE OF THE CORNER (SAY "SIDE B") VERTICALLY WITHOUT THE 1" SET BACK PER ROW OF BLOCK. THIS WILL REQUIRE YOU TO CUT 1" OFF THE BACK OF THE TONGUE OF THE FIRST REGULAR BLOCK ADJACENT TO THE CORNER BLOCK IN EACH ROW ON SIDE B OF THE WALL. YOU CAN RE-ESTABLISH THE 1" SET BACK ON SIDE B GRADUALLY AS YOU MOVE OUT FROM THE CORNER. HOWEVER, THE ELIMINATION OF THE SET BACK MUST BE TAKEN INTO ACCOUNT IN THE DESIGN OF THE WALL BY THE REGISTERED PROFESSIONAL ENGINEER. **IN EITHER CASE, DURING INSTALLATION, IT IS RECOMMENDED THAT PL PREMIUM ADHESIVE BE APPLIED TO THE TOPS OF ALL REGULAR CORNER BLOCKS PRIOR TO INSTALLING THE NEXT ROW OF BLOCK.** IF ONE END OF THE WALL MUST END VERTICALLY BECAUSE IT ABUTS TO AN EXISTING VERTICAL STRUCTURE OR THE WALL HAS TWO OUTSIDE 90° CORNERS, THEN BLOCKS WILL NEED TO BE CUT TO MAINTAIN THE 1" SET BACK - IN THIS CASE REFER TO DRAWING # 116.

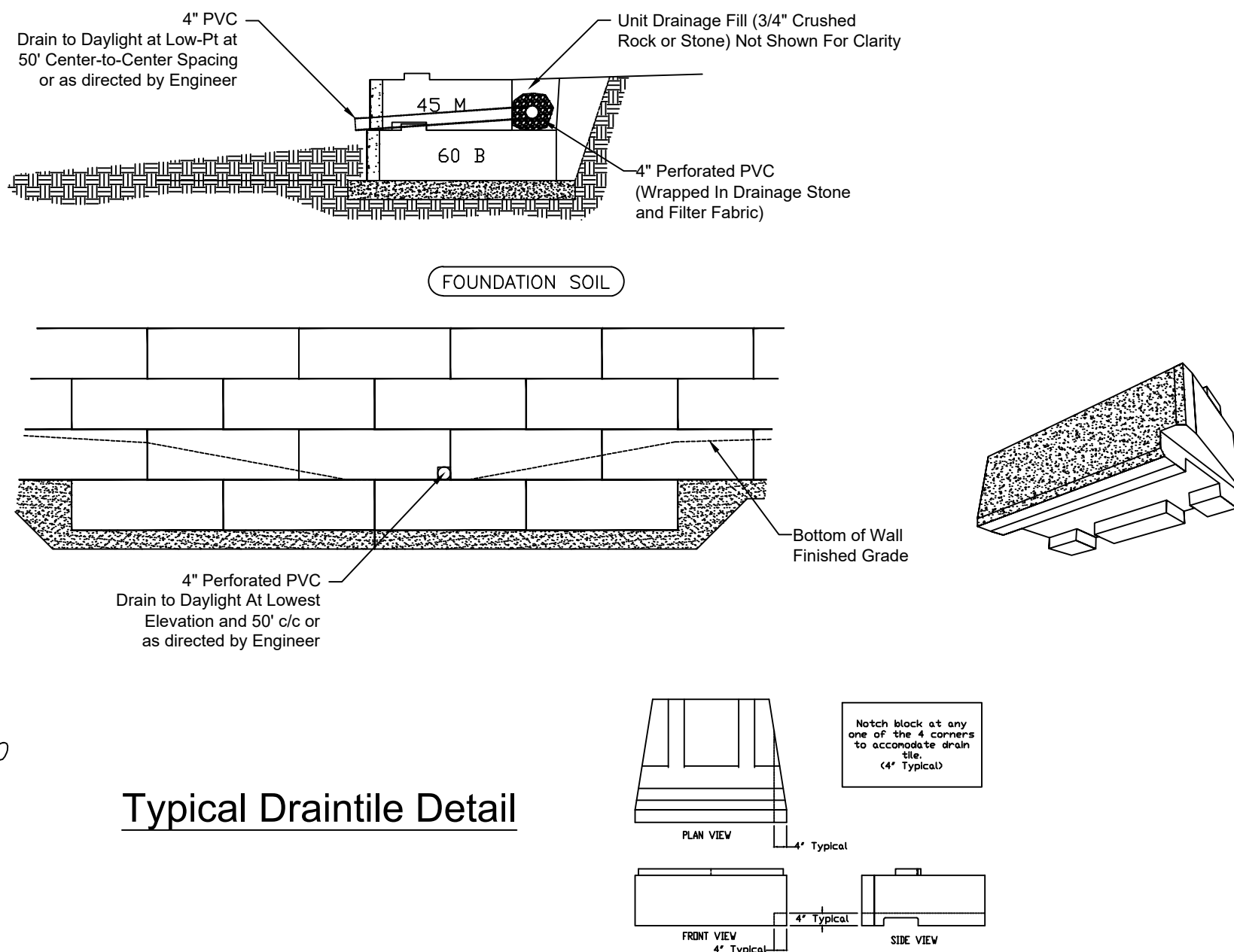


TYPICAL GRAVITY WALL SECTION

NTS

NOTES:

- RETAINING WALL TO BE CONSTRUCTED TO GENERAL LINE AND GRADE OF THE EXISTING WALL TO BE REPLACED. WALL TO BE SHIFTED TOWARDS RESIDENCE TO ALLOW FOR 5 FOOT LEVEL BENCH IN FRONT OF WALL.
- EXCAVATION LIMITS FOR INSTALLATION OF THE RETAINING WALL SHALL CONFORM TO OSHA STANDARDS. CONTRACTOR IS RESPONSIBLE FOR CLASSIFICATION OF SOIL IN ACCORDANCE WITH OSHA STANDARDS AND MAINTAINING APPROPRIATE SLOPE LAYBACK REQUIREMENTS. ADDITIONALLY, CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF PROPERTY LINE BOUNDARIES AND OBTAINING APPROPRIATE PERMITS OR EASEMENTS AS NECESSARY TO COMPLETE INSTALLATION OF THE RETAINING WALL. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE BEARING AREA FOR THE EXISTING STRUCTURE AND PROVIDING ANY SUPPORT REQUIRED.
- BACKFILL BEHIND WALL TO BE FREE-DRAINING BACKFILL SHALL BE WELL-GRADED, COMPACTIBLE AGGREGATE MEETING THE FOLLOWING GRADATION 3-INCH MAXIMUM PARTICLE SIZE, 50-85% PASSING #4 SIEVE, 0-12% PASSING #200 SIEVE COMPACTED TO 95% OF STANDARD PROCTOR.
- UNIT DRAINAGE FILL TO CONSIST OF 3/4" CRUSHED STONE, PLACE GEOTEXTILE FABRIC, SUCH AS MIRAFI 140N OR EQUAL, BETWEEN BACKFILL AND NATURAL SOIL.
- SUBGRADE UNDERLYING LEVELING PAD SHALL CONSIST OF FIRM, DRY, UNDISTURBED NATURAL SOILS OR IMPROVED SUBGRADE OR COMPACTED STRUCTURAL FILL PER PROJECT SPECIFICATIONS. SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT OR PROJECT SPECIFICATIONS.
- RETAINING WALL SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- FOUNDATION DRAIN TO DAYLIGHT AT LOW-POINT OF WALL OR CONNECT TO A CLOSED DRAINAGE SYSTEM. WALL BLOCK TO BE CUT OR CORED IN FIELD TO ALLOW FOR DRAIN PIPE TO EXTEND THROUGH FACE OF WALL. SEE DETAIL PROVIDED HEREON.
- FENCE IS TO BE INSTALLED WHERE REQUIRED BY CODE OR PROJECT PLANS. FENCE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ACTUAL DESIGN OF FENCE BY OTHERS.
- IF SITE CONDITIONS ARE DIFFERENT THAN THOSE ASSUMED FOR DESIGN, CIVIL CONNECTION SHOULD BE NOTIFIED AND THE VALIDITY OF THE DESIGN VERIFIED.
- CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL EROSION CONTROL MEASURES REQUIRED BY CODE - CC IS NOT RESPONSIBLE FOR EROSION CONTROL MEASURES OR APPLICATION OF FINISH SLOPE TREATMENT.
- WALL INSPECTION AND CERTIFICATION ARE NOT PART OF THE CC SCOPE OF SERVICES. IT IS THE OWNERS RESPONSIBILITY TO CONFIRM WITH THE JURISDICTIONAL AUTHORITY PRIOR TO CONSTRUCTION OF THE WALL WHETHER A CONSTRUCTION CERTIFICATION IS REQUIRED. A CONSTRUCTION CERTIFICATION WILL REQUIRE ON-SITE INSPECTIONS, MATERIAL TESTING, PHOTOGRAPHIC DOCUMENTATION AND OTHER QUALITY CONTROL MEASURES AND AS-BUILT DOCUMENTATION. CC CAN PROVIDE CERTIFICATION, IF REQUIRED, UNDER SEPARATE CONTRACT.



RETAINING WALL CONSTRUCTION PLAN RECON RETAINING WALL 5 ALBION STREET AMESBURY, MASSACHUSETTS

DATE:	REVISIONS	DATE:	DRAWN BY
		7/11/24	M. ELLSWORTH
		PROJ. NUMBER	CHECKED BY
		24-515	R. BUSHNELL, P.E.

SHEET 1 OF 1	PREPARED FOR: E.F. SHEA CONCRETE AMESBURY, MASSACHUSETTS	PREPARED BY: CIVIL CONNECTION, LLC. 38 EDWARDS DRIVE, GILMANTON NH, 03837 TEL: (603) 393-9842
-----------------	--	--



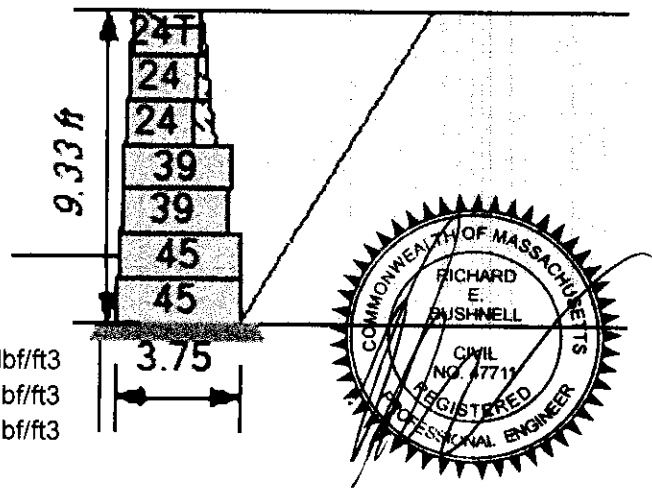
Retaining Walls

ReCon Wall

Project: 5 Albion Street - #24-515
Location: Amesbury, MA
Designer: Civil Connection, LLC.
Date: 7/11/2024
Section: Section 1
Design Method: NCMA_09_3rd_Ed
Design Unit: ReCon

Seismic Acc: 0.223

SOIL PARAMETERS	ϕ	coh	γ
Retained Soil:	30 deg	0 lbf/ft ²	120 lbf/ft ³
Foundation Soil:	32 deg	0 lbf/ft ²	120 lbf/ft ³
Leveling Pad:	40 deg	0 lbf/ft ²	135 lbf/ft ³
Crushed Stone Lvlng Pad			



GEOMETRY

Design Height:	9.33 ft	Live Load:	0.00 lbf/ft ²
Wall Batter/Tilt:	3.60/ 0.00 deg	Live Load Offset:	0.00 ft
Embedment:	2.00 ft*	Live Load Width:	0.00 ft
Leveling Pad Depth:	0.50 ft	Dead Load:	0.0 lbf/ft ²
Slope Angle:	0.0 deg	Dead Load Offset:	0.0 ft
Slope Length:	0.0 ft	Dead Load Width:	0.00 ft
Slope Toe Offset:	0.0 ft	D.L. Embedment:	0.00 ft
Leveling Pad Width:	4.75 ft		
Vert δ on Single Dpth		Toe Slope Angle:	26.50
		Toe Slope Length:	40.00
		Toe Slope Bench:	5.00

* Note: For all designs the passive resistance in front of the wall units is ignored for sliding, overturning (eccentricity) and bearing calculations.

FACTORS OF SAFETY (Static / Seismic)

Sliding:	1.50 / 1.125	Overturning:	1.50 / 1.125
Bearing:	2.00 / 1.5		

RESULTS (Static / Seismic)

FoS Sliding: 1.97 (lvlpd) / 1.48 FoS Overturning: 2.01 / 1.30
 Bearing: 1992.84 / 1240.23 FoS Bearing: 5.62 / 6.45

Name	Elev.	ka	kae	Pa	Pae	Pir	PaT	PaTs	FSsl	siesFSsl	FoS OT	FoS SeisOT
24T	8.00	0.297	0.362	32	38	34	32	73	238.15	99.87	26.94	8.96
24	6.67	0.272	0.336	116	143	71	116	214	66.24	35.08	7.75	3.45
24	5.33	0.272	0.336	261	322	107	261	429	30.64	18.17	3.62	1.88
39	4.00	0.383	0.457	653	779	166	653	945	15.77	10.27	4.08	2.46
39	2.67	0.358	0.430	954	1145	225	954	1370	11.15	7.34	2.93	1.80
45	1.33	0.372	0.446	1429	1710	292	1429	2002	8.25	5.53	2.50	1.60
45	0.00	0.356	0.428	1861	2235	360	1861	2595	1.97	1.48	2.01	1.30

Column Descriptions:

ka: active earth pressure coefficient
 kae: active seismic earth pressure coefficient
 Pa: active earth pressure
 Pae: dynamic earth pressure
 Pir: inertia force
 Paq: live surcharge earth pressure
 Paq2: live load 2 surcharge earth pressure
 Paqd: dead surcharge earth pressure
 (PaC): reduction in load due to cohesion
 PaT: sum of all earth pressures
 FSsl(lvl Pad): factor of safety for sliding at each layer. (FS sliding below the leveling pad)
 FSot: factor of safety of overturning about the toe.