RETAINING WALL DRAWINGS
FOR
7 BREW COFFEE
O'FALLON, MISSOURI

INDEX OF SHEETS

ESTIMATED PROJECT QUANTITIES

WALL	WALL LENGTH	WALL AREA	VERSA-GRID 3.0	VERSA-GRID 10.0	SQUARE FOOT BLOCK UNITS*
WALL A	50 L.F.	140 SQ. FT.	-	20 SQ. YDS.	135
WALL B	145 L.F.	600 SQ.FT.	185 SQ. YDS.	-	600

*ACTUAL QUANTITIES MAY VARY. BLOCK QUANTITY DOES NOT INCLUDE CAP UNITS.

TYPICAL ANGLES OF INTERNAL FRICTION & UNIT WEIGHTS OF SOILS*

TYPE OF SOIL	FRICTION ANGLE (DEGREES)	UNIT WEIGHT (PCF)
COARSE TO MEDIUM SAND	37 - 42	140
FINE / SILTY SAND	33 - 40	130
CLAYEY SAND	28 - 35	130
SILT / CLAY	25 - 32	120

*REFER TO THE UNIFIED SOIL CLASSIFICATION SYSTEM FOR ADDITIONAL INFORMATION.

SOIL VALUES USED IN THE DESIGN OF WALL A*

TYPE OF SOIL	FRICTION ANGLE (DEGREES)	UNIT WEIGHT (PCF)
REINFORCED BACKFILL	32	125
RETAINED BACKFILL	32	125
FOUNDATION SOIL	32	125

*BACKFILL TO CONSIST OF CLEAN GRANULAR MATERIAL, SUCH AS SAND AND/OR GRAVEL, WITH LESS THAN TEN PERCENT (10%) BY WEIGHT PASSING THE NO. 200 SIEVE.

SOIL VALUES USED IN THE DESIGN OF WALL B*

TYPE OF SOIL	FRICTION ANGLE (DEGREES)	UNIT WEIGHT (PCF)
REINFORCED BACKFILL	24	120
RETAINED BACKFILL	24	120
FOUNDATION SOIL	24	120

*BACKFILL TO CONSIST OF COMPACTED ON-SITE COHESIVE SOILS.

DESIGN PARAMETERS AND PROVISIONS

DESIGN PROVISIONS:

1. REFER TO VERSA-LOK RETAINING WALL STANDARD SPECIFICATIONS AND DETAILS AS THEY ARE INTEGRAL TO THIS PLAN..
2. THE DESIGN OF THIS RETAINING WALL SYSTEM WAS BASED UPON THE EFFECTIVE STRENGTH PARAMETERS SHOWN ON THE "SOIL VALUES" TABLE. IF SOIL CONDITIONS VARY AT TIME OF CONSTRUCTION, WALL ENGINEER MUST BE CONTACTED TO DETERMINE IF A REVISED DESIGN IS NEEDED.
3. THE WALL DESIGN WAS BASED ON THE INFORMATION NOTED IN THE KEY PLAN..
4. REFER TO WALL CALCULATIONS FOR BEARING CAPACITY REQUIREMENTS..
5. NO PRODUCT/MATERIAL SUBSTITUTIONS WILL BE ALLOWED WITHOUT PRIOR WRITTEN PERMISSION OF TOTH & ASSOCIATES ..
6. THE WALL DESIGN WAS PERFORMED USING DESIGN GUIDELINES PRESENTED IN THE THIRD EDITION OF THE "DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS" PUBLISHED BY THE NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA).
7. SEE PRODUCT MANUFACTURER'S INSTALLATION RECOMMENDATIONS FOR CONSTRUCTION SEQUENCE AND INSTALLATION NOTES.
8. TOTH & ASSOCIATES ASSUMES NO LIABILITY FOR INTERPRETATION OF SUBSURFACE CONDITIONS, SUITABILITY OF SOIL DESIGN PARAMETERS, AND INTERPRETATIONS OF SUBSURFACE GROUNDWATER CONDITIONS.

DESIGN LIMITATIONS:

1. INTERNAL COMPOUND STABILITY (ICS) HAS BEEN CALCULATED FOR THIS PROJECT BY TOTH & ASSOCIATES. HOWEVER, ICS IS NOT A SUBSTITUTE FOR A GLOBAL STABILITY ANALYSIS WHICH SHOULD BE PERFORMED BY A GEOTECHNICAL ENGINEER.

SUGGESTED QUALITY ASSURANCE REQUIREMENTS:

1. A QUALIFIED ENGINEER OR TECHNICIAN SHALL SUPERVISE THE WALL CONSTRUCTION TO VERIFY SITE SOIL CONDITIONS. IF THE PROJECT GEOTECHNICAL ENGINEER DOES NOT PERFORM THIS WORK, A QUALIFIED GEOTECHNICAL ENGINEER/TECHNICIAN SHALL BE HIRED TO ASSURE THE RETAINING WALL IS CONSTRUCTED WITH PROPER SOIL PARAMETERS.
2. WALL EXCAVATION AND SOILS SHALL BE INSPECTED FOR GROUNDWATER CONDITIONS. THE GEOTECHNICAL ENGINEER SHALL DETERMINE ADDITIONAL DRAINAGE PROVISIONS TO BE INCORPORATED INTO THE WALL DESIGN.
3. THE WALL CONTRACTOR IS RESPONSIBLE FOR MAINTAINING QUALITY CONTROL FOR THE CONSTRUCTION OF THE WALL IN ACCORDANCE WITH CONTRACT REQUIREMENTS. SEE PROJECT CONTRACT DOCUMENTS FOR SPECIFIC DETAILS ON THE SCOPE OF WORK THAT WILL BE PROVIDED BY ALL PARTIES.

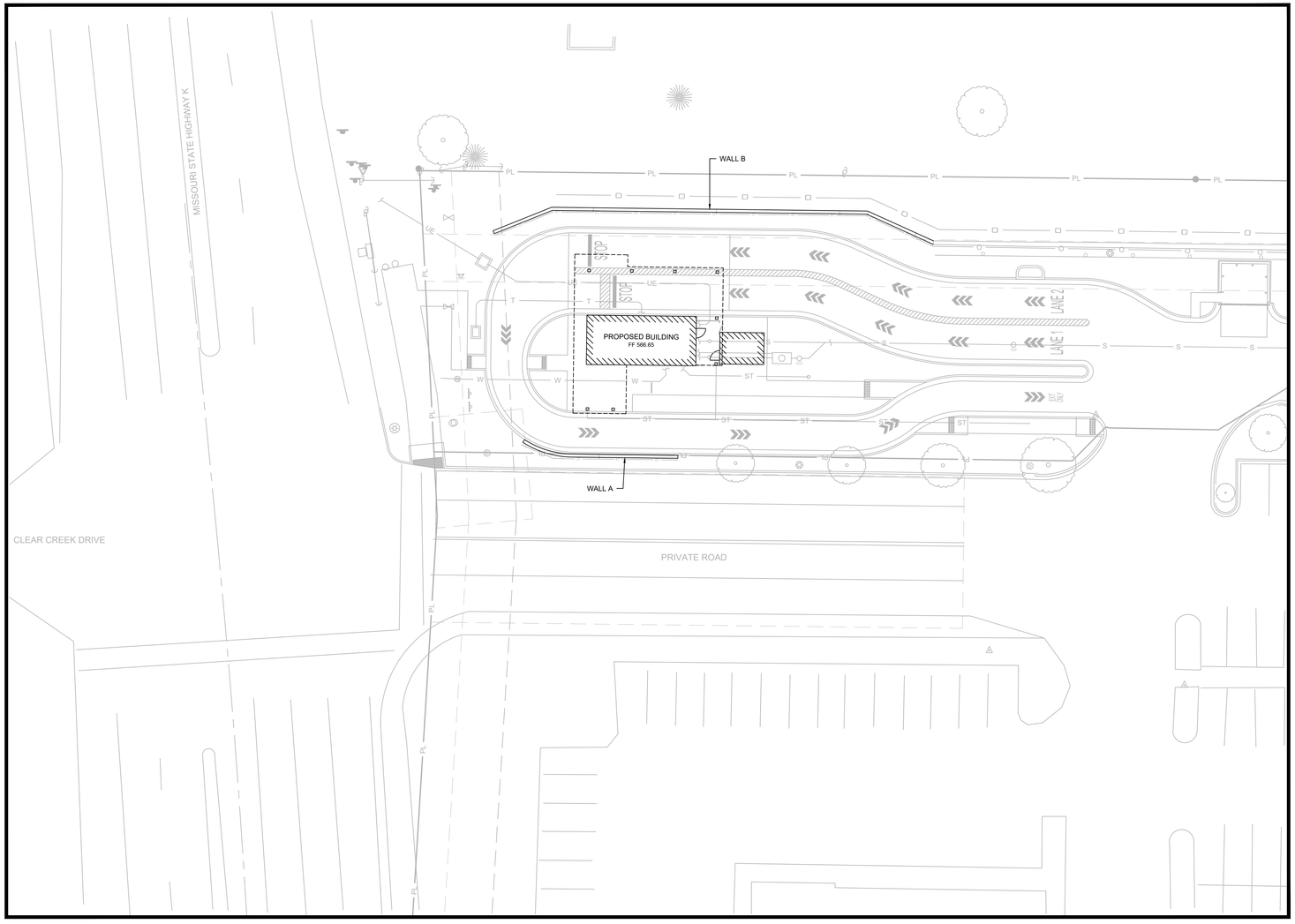
RETAINING WALL LAYOUT KEY PLAN

SCALE SHOWN FOR REFERENCE -
REFER TO PROJECT PLANS FOR ACTUAL LOCATION

N

0 10 20

H. SCALE: 1" = 20'



KEY PLAN BASED ON PROJECT PLANS PREPARED BY TOTH & ASSOCIATES, DATED JULY 22, 2022

#	DESCRIPTION	DATE
1	CONSTRUCTION DOCUMENTS ISSUED FOR REVIEW	10-21-2022

STATE OF MISSOURI
SHAWN W. BARRY
NUMBER PE-2009001053
PROFESSIONAL ENGINEER
10-21-22

SHAWN W. BARRY - ENGINEER
MO# PE-2009001053

DWN. BY: JDEB
CHK. BY: SWB
APP'D BY: SWB
DATE: 10/21/2022
SCALE: AS SHOWN

TOTH & ASSOCIATES
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www.tothassociates.com
CERTIFICATE OF AUTHORITY:
MO# E-2004004242-D

PROJECT: 7 BREW COFFEE - ON SITE RETAINING WALL
LOCATION: CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI 63366
CLIENT: CITY OF O'FALLON
TITLE: COVER SHEET / DESIGN INFORMATION

SHT NO: W1 OF 4