#### **GEOTECHNICAL GENERAL NOTE:**

1. GEOTECHNICAL INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. THEREFORE, ASSUMPTIONS WERE MADE BASED ON SOIL CHARACTERISTICS IN THE AREA (REFER TO SHEET C-1). IF SOILS ARE DIFFERENT IN THE FIELD THAN LISTED IN THE GEOTECHNICAL REPORT, VENTURE ENGINEERING, P.A. MUST BE NOTIFIED IMMEDIATELY BEFORE WORK CAN CONTINUE.

2. A GLOBAL STABILITY ANALYSIS HAS NOT BEEN DONE FOR THIS PROJECT. WE RECOMMEND THAT A GLOBAL STABILITY ANALYSIS BE PERFORMED BY A 3RD PARTY GEOTECHNICAL ENGINEER FOR RETAINING WALLS THAT HAVE SLOPES ABOVE, BELOW, BOTH (SLOPES ABOVE & BELOW THE RETAINING WALL) & MULTI-TIERED RETAINING WALLS.

#### GENERAL DESIGN NOTE:

1. WALL PROFILES WERE CREATED & DESIGNED BY VENTURE ENGINEERING, P.A. PER EXISTING & PROPOSED GRADES AS SHOWN IN PLAN VIEW ON SHEET C-2 THRU C-2B AS PROVIDED BY WITHERS & RAVENEL SEALED 08/30/21.

2. ALL GRADES SHOWN ON RETAINING WALL SITEPLAN IN THIS SET OF DRAWINGS ARE NOT KNOWN TO BE ORIGINAL DESIGN GRADES OR AS-BUILT GRADES. ALL GRADES TO BE SURVEY STAKED PRIOR TO CONSTRUCTION.

DESCRIPTIONS	DATE
REVISIONS	
REVISIONS	

RETAINING WALL PLANS FOR

# SERENITY SUBDVISION - PHASES 6A & 6C **RETAINING WALLS**

# PINEY GROVE RAWLS ROAD HARNETT COUNTY, NC

Retaining Wall Profile #5 Not To Scale Piney Grove Rawls Road Serenity Subdivision Phases 6A & 6C - Harnett County, NC

Retaining Wall Profile #9 Not To Scale Piney Grove Rawls Road Serenity Subdivision Phases 6A & 6C - Harnett County, NC



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UBDVISION	DATE: JULY 25, 2022	SCALE	DRAWING NUMBER
RETAINING WALLS	DES: TLH	HORIZONTAL:	
RAWLS ROAD	DRAWN: TLH	N/A	
COUNTY, NC	APPROVED: MJM	VERTICAL:	
SHEET - HARNETT COUNTY, NC 5A & 6C		N/A	

#### 1.1 GENERAL

RIDGEROCK RETAINING WALL SYSTEMS ARE DESIGNED AS A GRAVITY RETAINING WALL UTILIZING A HIGH DENSITY POLYESTER GEOGRID TO REINFORCE THE SOIL ZONE BEHIND THE WALL. THE GEOGRID IS POSITIVELY CONNECTED TO THE MODULAR CONCRETE BLOCK CREATING A REINFORCED SOIL MASS CAPABLE OF RESISTING LATERAL EARTH PRESSURES AND SURCHARGED LOADS. ALL REFERENCES TO THE ENGINEER REFER TO VENTURE ENGINEERING, P.A.

#### **1.2 QUALITY ASSURANCE**

CONTRACTOR SHALL BE QUALIFIED TO BUILD RETAINING WALL AND SHALL SUBMIT CERTIFICATION, PRIOR TO START OF WORK THAT THEY HAVE SUCCESSFULLY INSTALLED ON A MINIMUM OF 5 SIMILAR PROJECTS, I.E., HEIGHT, SOIL FILL TYPES, ERECTION TOLERANCES, ETC.

#### **1.3 BACK FILL MATERIALS**

THE SOIL MATERIAL ASSOCIATED WITH THE RETAINING WALL IN THE REINFORCED ZONE, THE RETAINED ZONE, OR THE FOUNDATION BEDDING SHALL HAVE THE FOLLOWING PROPERTIES:

A.) FOUNDATION SOILS  $\emptyset$  = 28 DEGREES, COHESION = 0 PSF, UNIT WEIGHT = 120 LBS/CU.F.T.

B.) RETAINED SOILS  $\emptyset = 28$  DEGREES, COHESION = 0 PSF, UNIT WEIGHT = 120 LBS/CU.F.T.

C.) REINFORCED SOILS  $\emptyset$  = 28 DEGREES, COHESION = 0 PSF, UNIT WEIGHT = 120 LBS/CU.F.T.

D.) UNIT FILL SHALL CONSIST OF CLEAN 1" MINUS CRUSHED STONE OR CRUSHED GRAVEL MEETING THE FOLLOWING:

THE SOILS CHARACTERISTICS ABOVE WERE ASSUMED BASED ON SOILS CONDITIONS ON SIMILAR PROJECTS IN THAT AREA. IF THIS INFORMATION DOES NOT REPRESENT THE ACTUAL SOIL TO BE USED, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY AND THE WALL SHALL BE REDESIGNED.

SIEVE SIZE	% PASSING
2"	100
3/4"	75-100
No. #4	0-10
No. #50	0-5

E.) REINFORCED BACKFILL SOILS SHALL BE FREE OF DEBRIS OR ORGANIC MATERIAL MEETING THE FOLLOWING GRADATION:

SIEVE SIZE	% PASSING
2"	100
3/4"	100-75
No. #40	< 0-60
No. #200	< 25-30

## **1.4 FOUNDATION LOADS**

RETAINING WALL UNDER 20 FEET IN HEIGHT SHALL HAVE A MINIMUM BEARING OF 3,000 PSF. RETAINING WALL OVER 20 FEET IN HEIGHT SHALL HAVE A MINIMUM BEARING OF 4,000 PSF.

#### **1.5 CONCRETE MASONRY WALL UNITS**

CONCRETE WALL UNITS SHALL BE RIDGEROCK UNITS MANUFACTURED IN ACCORDANCE WITH ASTM-C1372 AND ASTM C140 AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. UNITS SHALL BE INTERLOCKED WITH NON-CORROSIVE FIBERGLASS PINS.

#### **1.6 GEOGRID REINFORCEMENT**

THE GEOGRID REINFORCING MATERIAL SHALL BE HIGH TENACITY POLYESTER MANUFACTURED BY SYNTEEN AND SHALL MEET THE SPECIFICATION REQUIREMENTS PUBLISHED BY STRATAGRID FOR:

GRIDLOCK 370 **GRIDLOCK 540** 

#### 1.7 WALL BATTER

BATTER FOR THE ENTIRE WALL SHALL BE MAINTAINED AT A 4.4° SETBACK.

#### 2.0 FOUNDATION REQUIREMENTS

THE FOUNDATION BEARING CAPACITY THAT WAS ASSUMED FOR DESIGN SHALL BE VERIFIED IN THE FIELD, AND COPIES OF THE TEST DATA FILED WITH THE ENGINEER. THE FOOTING SHALL BE CLEARED OF LOOSE SOIL. A MINIMUM OF 12" OF WASHED STONE SHALL BE PLACED AT THE BACK OF EACH BLOCK AS INDICATED ON THE DETAILS.

#### GEOTECHNICAL GENERAL NOTE:

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2. A GLOBAL STABILITY ANALYSIS HAS NOT BEEN DONE FOR THIS PROJECT. WE RECOMMEND THAT A GLOBAL STABILITY ANALYSIS BE PERFORMED BY A 3RD PARTY GEOTECHNICAL ENGINEER FOR RETAINING WALLS THAT HAVE SLOPES ABOVE, BELOW, BOTH (SLOPES ABOVE & BELOW THE RETAINING WALL) & MULTI-TIERED RETAINING WALLS.

#### GENERAL DESIGN NOTE:

1. WALL PROFILES WERE CREATED & DESIGNED BY VENTURE ENGINEERING, P.A. PER EXISTING & PROPOSED GRADES AS SHOWN IN PLAN VIEW ON SHEET C-2 THRU C-2B AS PROVIDED BY WITHERS & RAVENEL SEALED 08/30/21.

2. ALL GRADES SHOWN ON RETAINING WALL SITEPLAN IN THIS SET OF DRAWINGS ARE NOT KNOWN TO BE ORIGINAL DESIGN GRADES OR AS-BUILT GRADES. ALL GRADES TO BE SURVEY STAKED PRIOR TO CONSTRUCTION.

DESCRIPTIONS	DATE
REVISIONS	

## 2.1 LEVELING PAD

MATERIAL SHALL CONSIST OF COMPACTED SAND, GRAVEL, CRUSHED ROCK, OR UNREINFORCED CONCRETE. THE PAD SHALL BE 4"- 6" THICK . SAND OR GRAVEL MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR. AGGREGATE MATERIAL SHALL RECEIVE A MINIMUM OF ONE PASS OF THE COMPACTION EQUIPMENT.

#### 2.2 UNIT FILL

THE VOID WITHIN EACH UNIT SHALL BE FILLED WITH A WASHED STONE HAVING 100% OF THE AGGREGATE PASSING THE 2" SIEVE. A MINIMUM OF 3/8" WASHED STONE SIZE IS REQUIRED (NO MORE THAN 5% PASSING THE #200 SIEVE.) PLACE THIS MATERIAL BEHIND THE BLOCK AS WELL. ALL EXCESS MATERIAL SHALL BE SWEPT CLEAN FROM THE TOP OF THE BLOCK PRIOR TO INSTALLING THE NEXT COURSE. EACH COURSE OF BLOCK SHALL BE COMPLETELY FILLED BEFORE PROCEEDING TO THE NEXT COURSE.

#### 2.3 FIRST BLOCK COURSE

THE FIRST COURSE OF BLOCK SHALL BE PLACED ON TOP OF AND IN FULL CONTACT WITH THE LEVELING PAD. THE UNITS SHALL MAINTAIN A DISTANCE OF MINIMUM 6" FROM THE FRONT AND BACK OF THE LEVELING PAD. PROPER ALIGNMENT MAY BE ACHIEVED WITH THE AID OF A STRING LINE. AFTER PLACING PINS IN EACH OF THE APPROPRIATE HOLES PROCEED TO THE NEXT COURSE OF BLOCK. EACH UNIT SHALL CONTACT THE UNITS ON BOTH SIDES AS WELL AS ABOVE AND BELOW. SOME ADJUSTMENTS MAY BE REQUIRED FOR WALLS WITH CURVES AND A BATTER.

#### 2.4 CAPS

APPLY A CONSTRUCTION ADHESIVE TO THE UNITS TO PREVENT THEIR REMOVAL.

#### **3.0 GEOGRID INSTALLATION**

THE GEOGRID REINFORCEMENT SHALL BE LAID HORIZONTALLY ON COMPACTED BACK FILL AND CONNECTED TO THE CONCRETE WALL UNITS (RIDGEROCK UNITS SHALL BE USED FOR THIS PROJECT). GEOGRID SHALL BE PULLED TAUT REMOVING ALL SLACK FROM THE MATERIAL AND ANCHORED BEFORE ADDING FILL. GEOGRID SHALL BE INSTALLED AT THE ELEVATIONS AND LENGTHS REQUIRED AS SHOWN ON THE PLANS. (REFER TO DETAILS FOR THE APPROPRIATE ORIENTATION) SOIL SURFACE SHALL BE SMOOTH AND LEVEL AND HAVE COMPACTED TO 95% STANDARD PROCTOR BEFORE INSTALLING THE GRID.

#### **3.1 FILL PLACEMENT**

BACK FILL MATERIAL SHALL BE AND COMPACTED 95% STANDARD PROCTOR ON EVERY GEOGRID LIFT LAYER INTERVAL. ONLY HAND OPERATED EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET OF THE KEYSTONE UNITS. BACK FILL SHALL BE PLACED FROM THE WALL REARWARD TO INSURE TAUTNESS OF THE GEOGRID. CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOGRID.

#### **3.2 UNSUITABLE MATERIAL**

SOILS CONTAINING ROOTS, BRUSH, SOD, OR THE OTHER ORGANIC MATERIAL SHALL NOT BE ALLOWED. FROZEN SOILS, SNOW, ICE, HEAVY CLAYS, OR WET SOILS SHALL NOT BE ALLOWED. MATERIAL PASSING THE #40 SIEVE SHALL HAVE A LIQUID LIMIT OF LESS THAN 30 AND A PLASTIC LIMIT OF LESS THAN 15, UNLESS WRITTEN CONSENT IS OBTAINED FROM THE ENGINEER PRIOR TO PLACEMENT.

#### **3.3 SOIL PROPERTIES**

MINIMUM INTERNAL ANGLE OF FRICTION SHALL EQUAL OR BE GREATER THAN REFERENCE IN SECTION 1.3 VERIFICATION SHALL BE FILED WITH THE ENGINEER THAT THE SOIL WILL MEET THIS CRITERIA.

#### 4.0 SOIL TESTING

COMPACTION TESTING SHALL BE PERFORMED FOR EVERY LIFT ELEVATION REQUIRING GEOGRID OR EVERY 3RD LIFT AS A MINIMUM TEST SHALL BE FILED WITH THE ENGINEER'S OFFICE.

#### **5.0 HYDROSTATIC PRESSURE POTENTIAL**

THE ENGINEER SHALL BE NOTIFIED IF ANY OF THE FOLLOWING SHOULD BECOME EVIDENT:

- WATER OR WETNESS FROM OR IN A CUT BANK. - LOCAL SPRINGS, LOCAL STORM DRAINS, SEWER, WATER LINES UNDER OR BEHIND THE WALL

#### **6.0 ACCEPTABLE BLOCK**

TAN RIDGEROCK UNITS SHALL BE USED & KEPT FREE OF DEFECTS THAT WOULD INTERFERE WITH THW PLACING OR POSITIONING OF THE UNIT OR IMPAIR ITS STRENGTH. MINOR CRACKS INCIDENTAL TO THEIR USUAL METHOD OF MANUFACTURING OR MINOR CHIPPING RESULTING FROM SHIPMENT & DELIVERY ARE NOT GROUNDS FOR REJECTION.



(APPLIES TO CUT WALL APPLICATIONS ONLY), WHERE SITE CONDITIONS WARRANT, DRAINAGE COMPOSITE SHALL BE INSTALLED TO COVER 30% OF THE CUT BEHIND THE GEOGRID LAYERS. STRATA-DRAIN (6 FT. WIDE SECTIONS) PROVIDE 30% COVERAGE WHEN INSTALLED ON 15 FT. CENTERS AND 2/3 THE WALL HEIGHT.

A. STABILITY OF ANY TEMPORARY SLOPES REQUIRED BY THE INSTALLATION OF A SEGMENTAL RETAINING WALL SHALL BE ADDRESSED BY A QUALIFIED GEOTECHNICAL ENGINEER. RESPONSIBILITY OF THESE TEMPORARY SLOPES RESTS WITH THE OWNER AND/OR ARCHITECT OF THIS PROJECT AND THE SLOPES SHALL MEET ALL OSHA STANDARDS. SLOPES STEEPNESS = 1.5H:1V.

B. HANDRAIL/GUARDRAIL REQUIREMENTS SHALL BE DETERMINED BY THE CIVIL SITE ENGINEER OF RECORD, NOT VENTURE ENGINEERING, P.A.

C. NOTIFY VENTURE ENGINEERING, P.A. PRIOR TO MODIFYING IF EXISTING SITE TOPOGRAPHY DOES NOT MATCH CONDITIONS OUTLINED ON RETAINING WALL PROFILE.

## 7.0 ACCEPTABLE GEOGRID

GEOGRID SHALL BE REJECTED IF 20% OR MORE OF A STRUCTURAL RIB HAS BEEN CUT OR RIPPED THE CONTRACTOR SHALL INSPECT ALL GEOGRID DELIVERED TO THE SITE AND REJECT MATERIALS THAT MEET THIS CRITERIA. IF THE GEOGRID IS DAMAGED ON THE CONSTRUCTION SITE, IT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

#### **8.0 DRAINAGE COMPOSITE**

#### **9.0 SPECIAL PROVISIONS**

A. GENERAL CONTRACTOR SHALL COORDINATE UPPER GEOGRID LAYERS INSTALLATION WITH PAVING INSTALLATION.

B. MAINTAIN THE DIRECTION OF DRAINAGE AWAY FROM THE WALL FACE AT TIMES DURING CONSTRUCTION OF THE WALL AND FINISH GRADING AS SHOWN ON PLANS.

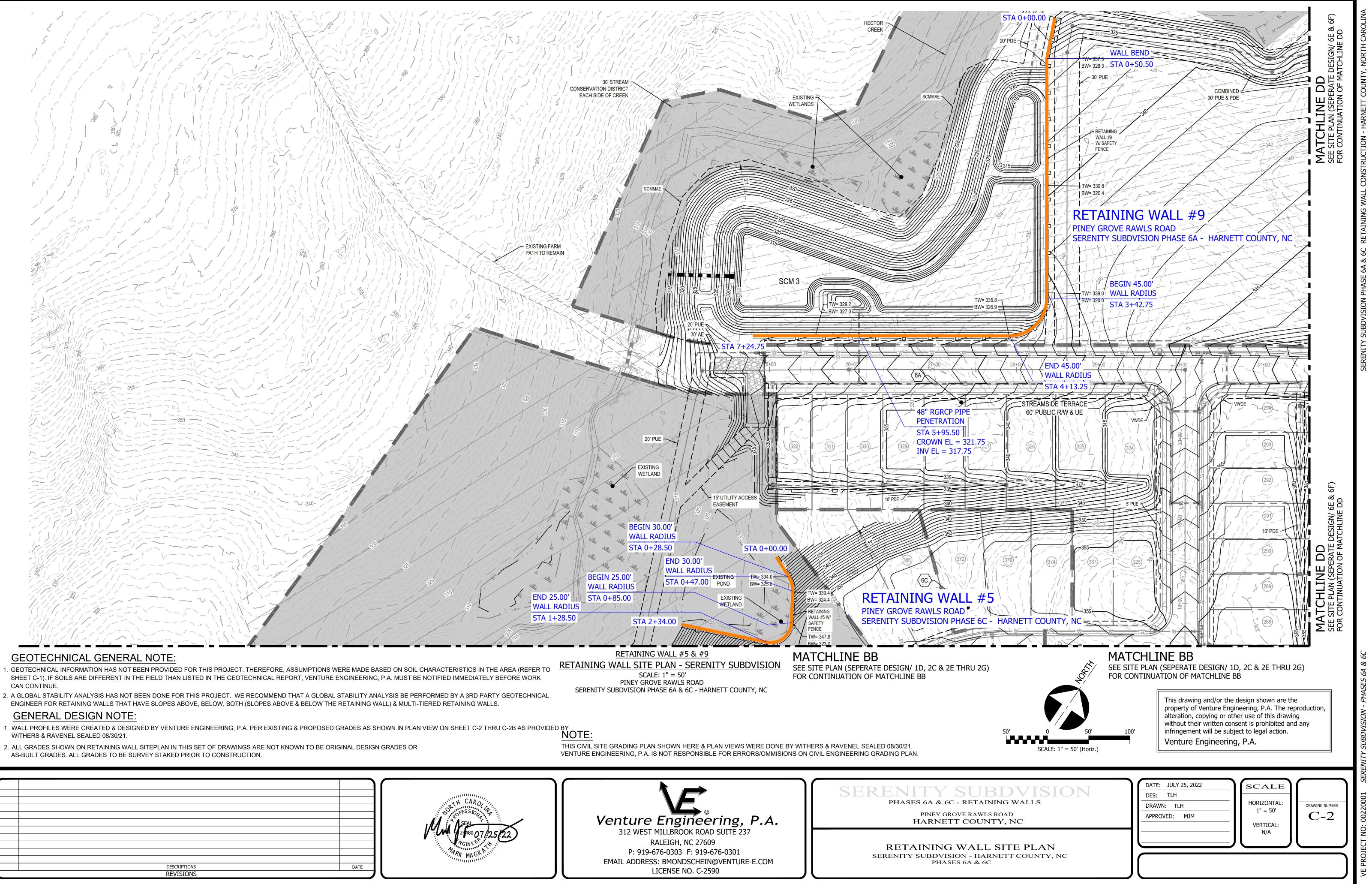
C. PLACEMENT OF GEOGRID SHALL BE AS PER PLANS REFERENCE TO LENGTH AND ELEVATIONS.

D. THE ENGINEER SHALL BE NOTIFIED BY THE INSTALLING CONTRACTOR SHOULD THE EMBEDMENT DEPTH OF THE BLOCK BE LESS THAN 8" FOR WALLS UNDER OR EQUAL TO 7 FT., 12" FOR WALLS GREATER THAN 7 FT. AND 2'-0" FOR WALLS GREATER THAN OR EQUAL TO 14 FT.

E. THE REINFORCED SOIL IS ASSUMED TO BE SANDY TYPE MATERIAL.

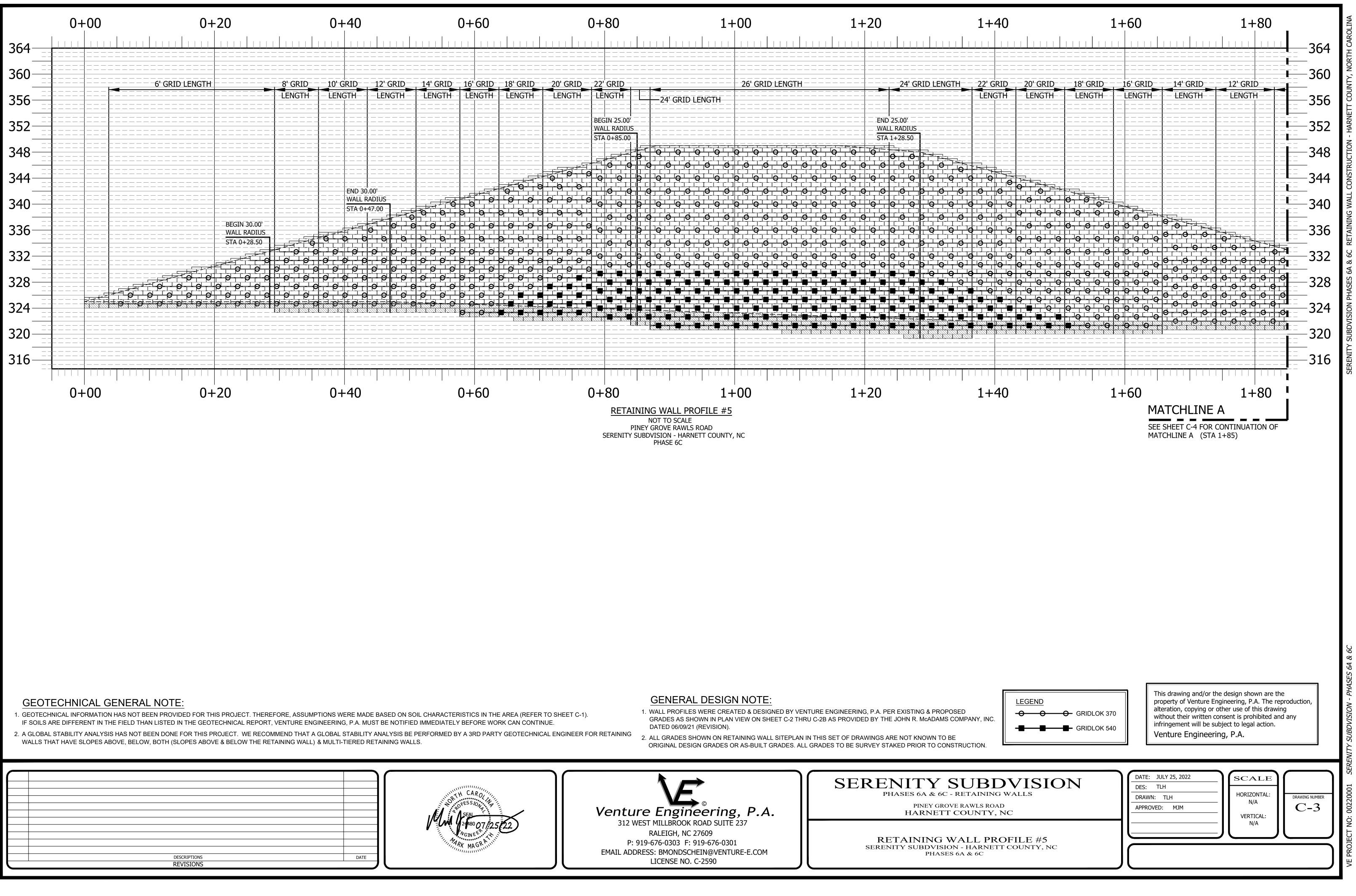
#### **10.0 QUALIFICATION OF DESIGN**

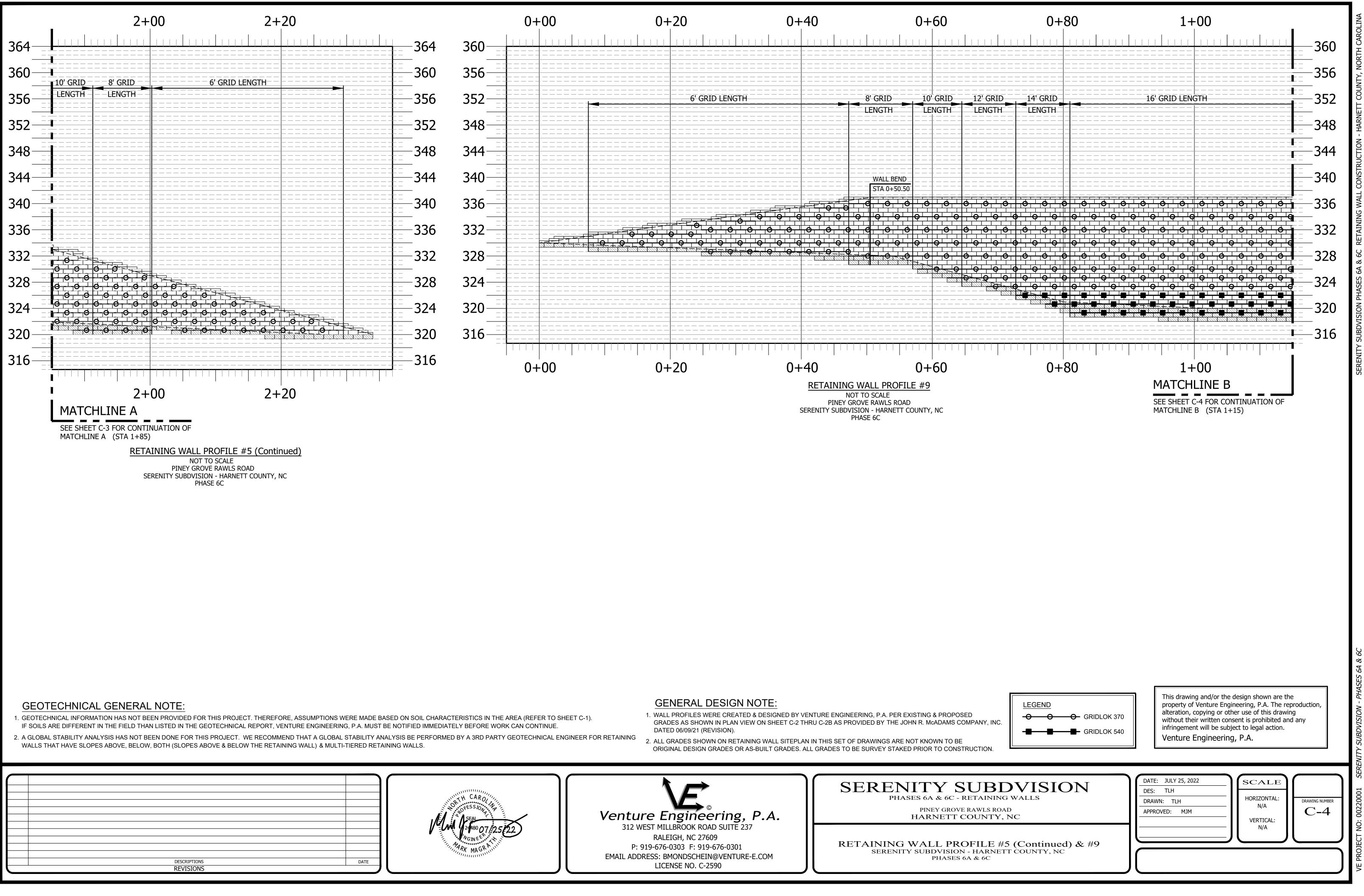
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ISION	DATE: JULY 25, 2022 DES: TLH DRAWN: TLH APPROVED: MJM	HORIZONTAL: N/A	R

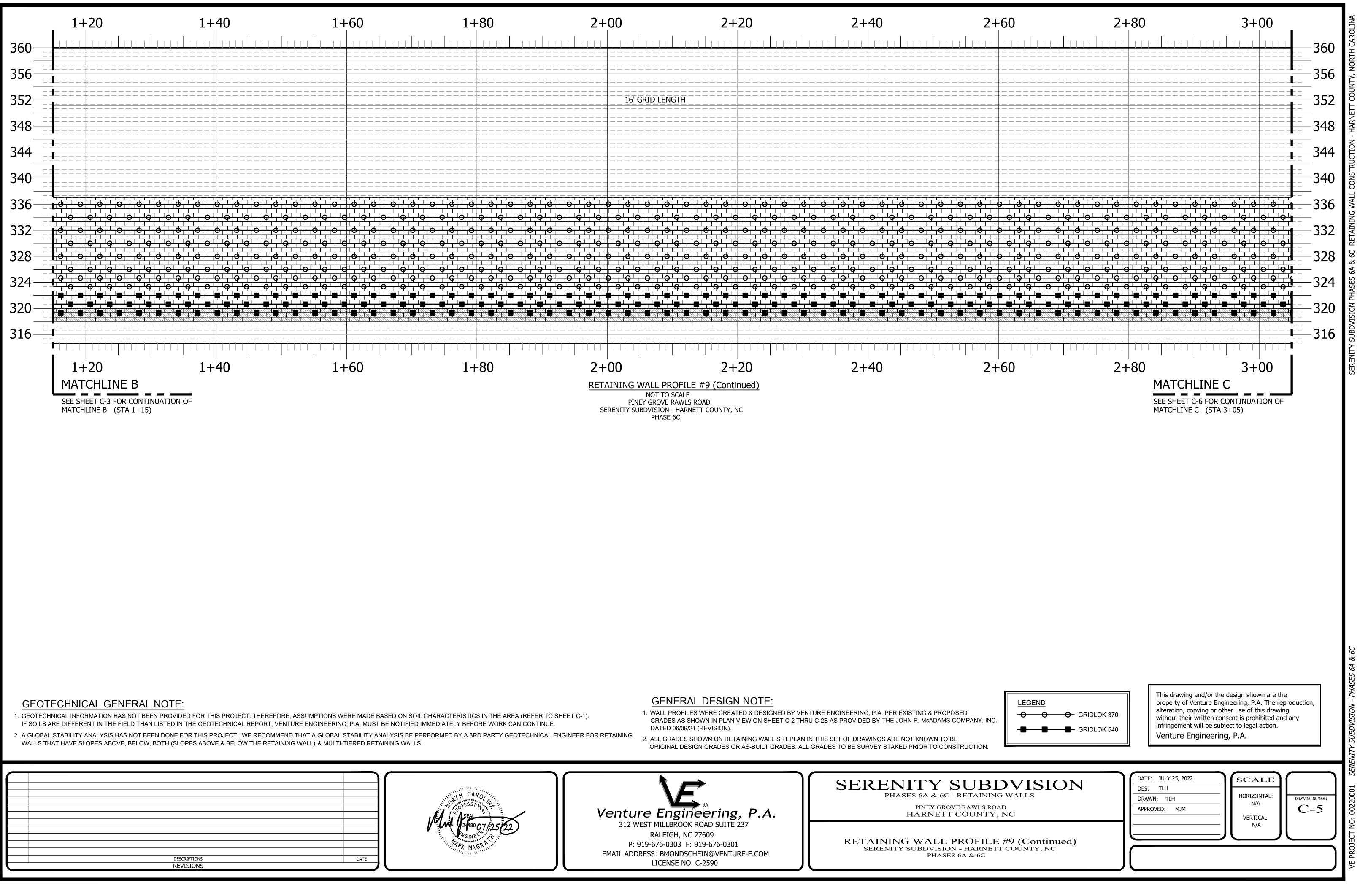


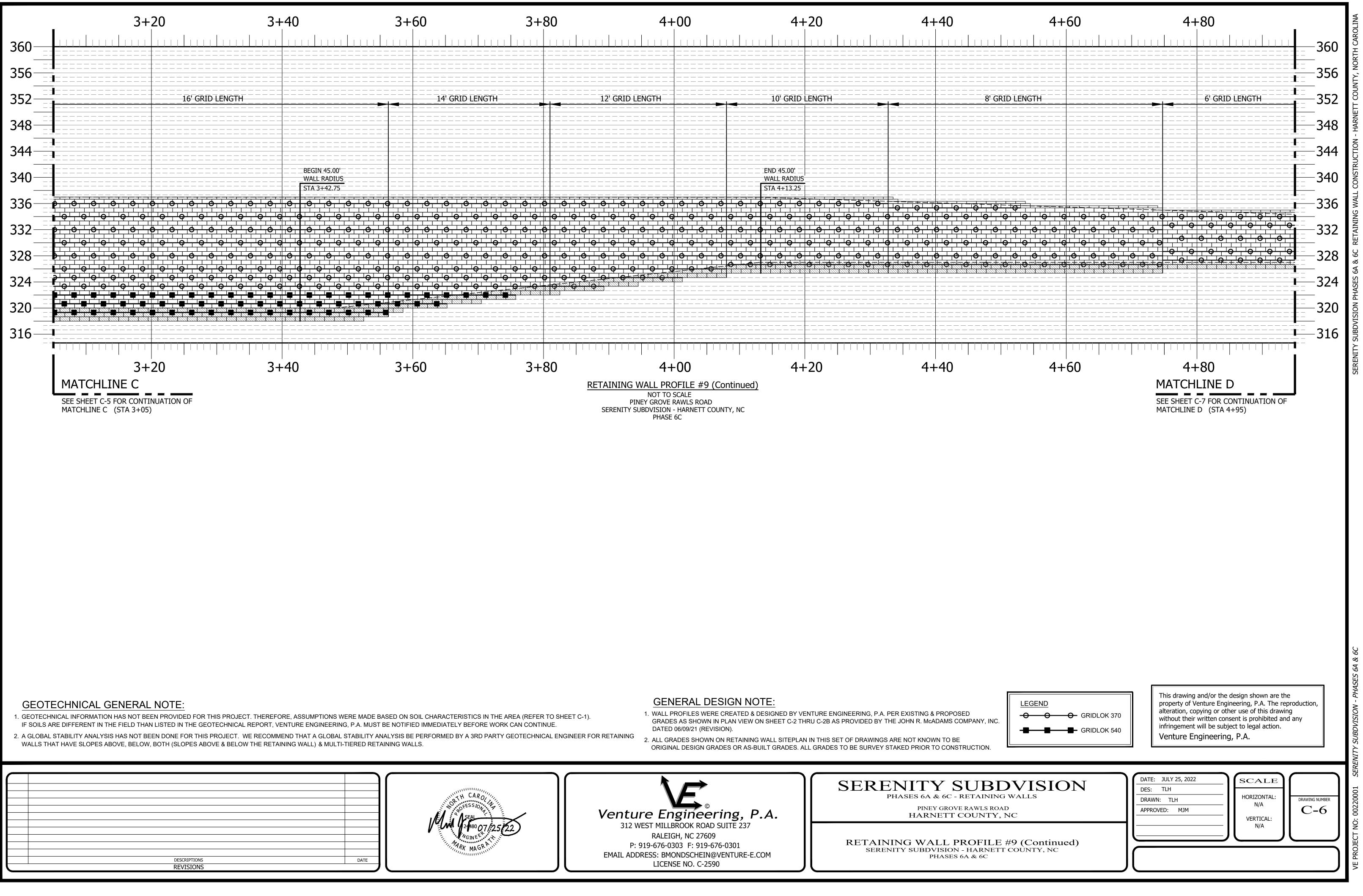
- WITHERS & RAVENEL SEALED 08/30/21.
- 2. ALL GRADES SHOWN ON RETAINING WALL SITEPLAN IN THIS SET OF DRAWINGS ARE NOT KNOWN TO BE ORIGINAL DESIGN GRADES OR AS-BUILT GRADES. ALL GRADES TO BE SURVEY STAKED PRIOR TO CONSTRUCTION.

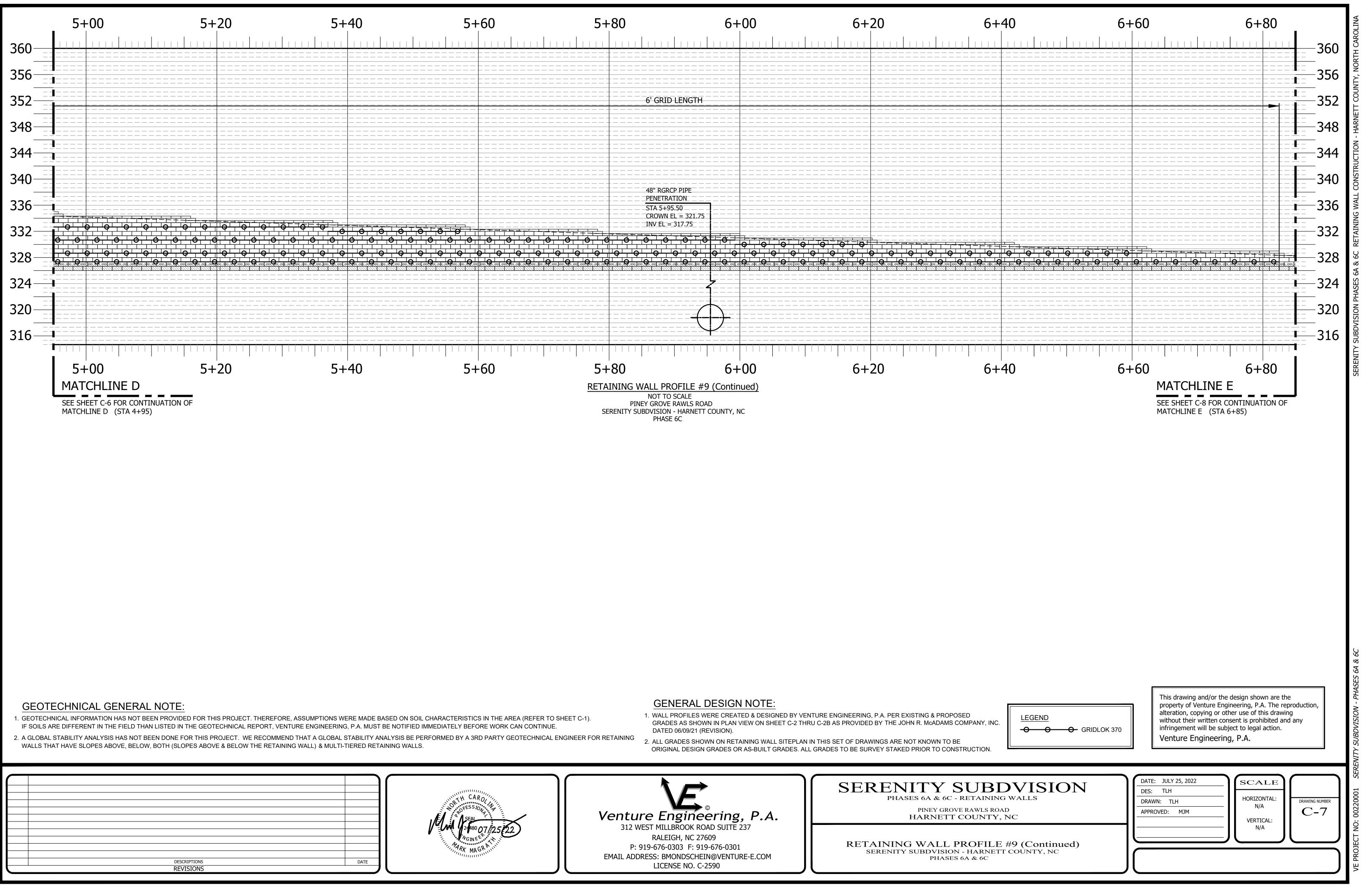
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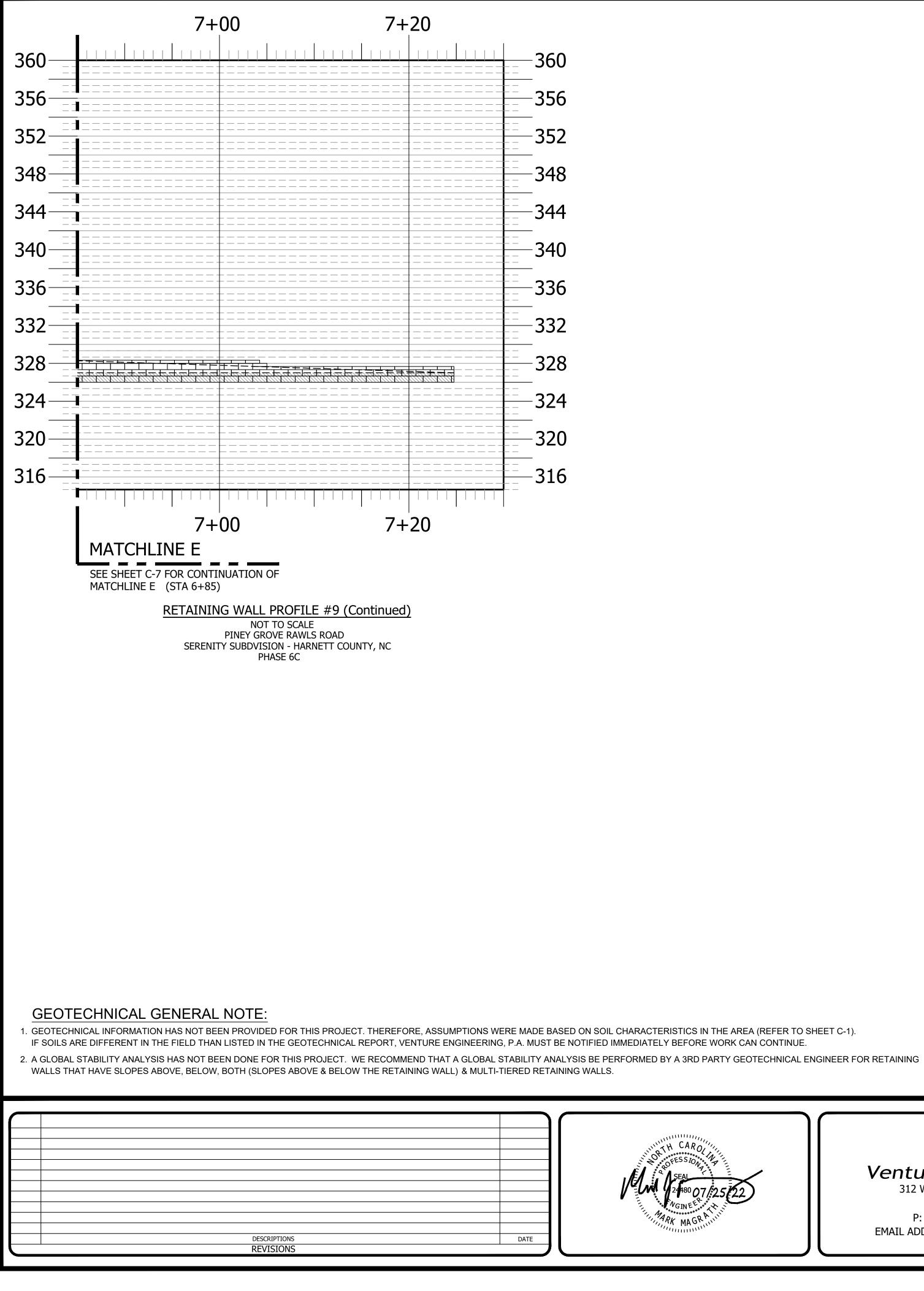












GENERAL DESIGN NOTE:

1. WALL PROFILES WERE CREATED & DESIGNED BY VENTURE ENGINEERING, P.A. PER EXISTING & PROPOSED GRADES AS SHOWN IN PLAN VIEW ON SHEET C-2 THRU C-2B AS PROVIDED BY THE JOHN R. MCADAMS COMPANY, INC. DATED 06/09/21 (REVISION).

2. ALL GRADES SHOWN ON RETAINING WALL SITEPLAN IN THIS SET OF DRAWINGS ARE NOT KNOWN TO BE ORIGINAL DESIGN GRADES OR AS-BUILT GRADES. ALL GRADES TO BE SURVEY STAKED PRIOR TO CONSTRUCTION.

SERENITY SUE Venture Engineering, P.A. HARNETT COUNT 312 WEST MILLBROOK ROAD SUITE 237 RALEIGH, NC 27609 **RETAINING WALL PROFI** P: 919-676-0303 F: 919-676-0301 SERENITY SUBDVISION - HARN EMAIL ADDRESS: BMONDSCHEIN@VENTURE-E.COM PHASES 6A & 6C LICENSE NO. C-2590



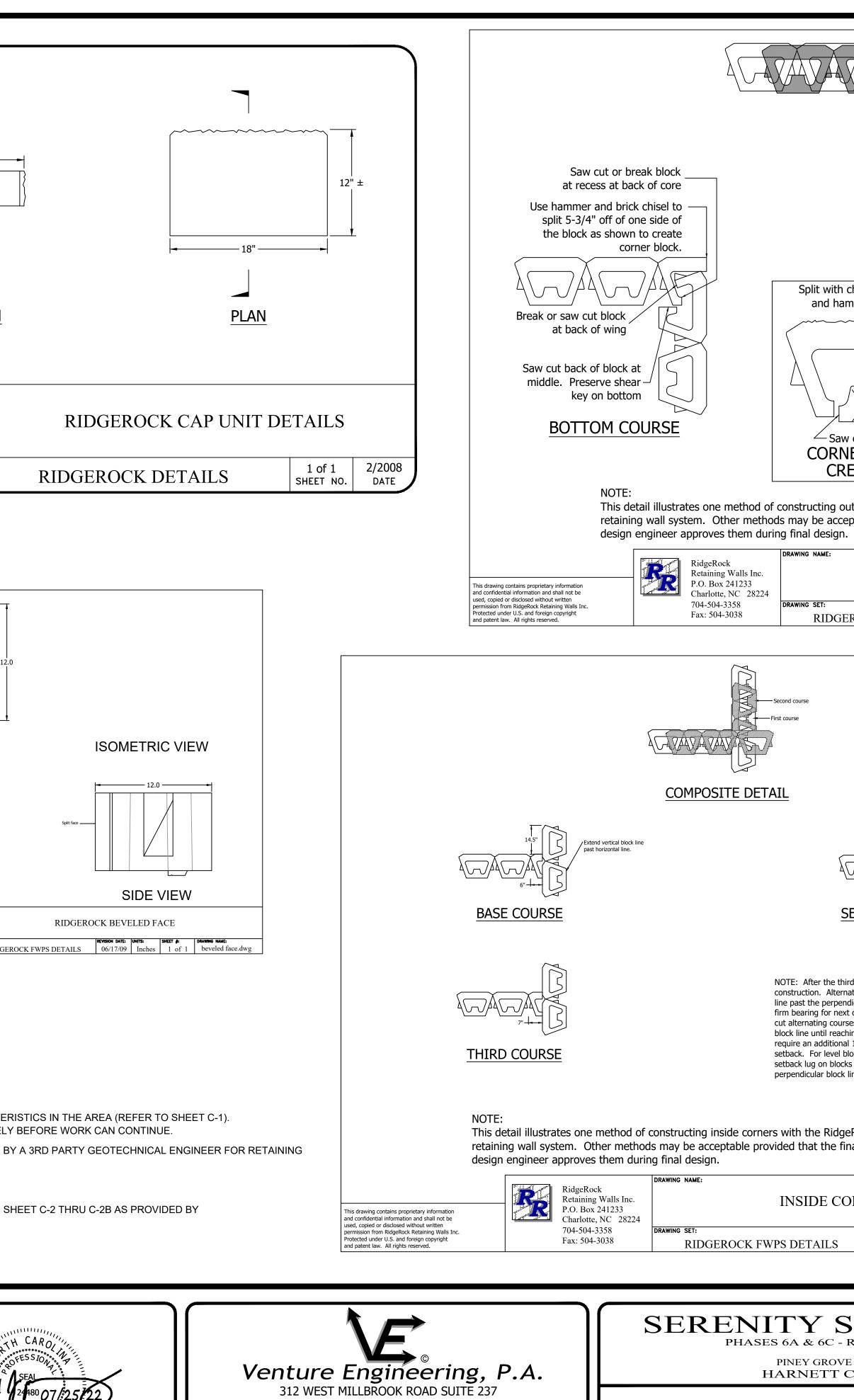
LEGEND

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BDVISION	DATE: JULY 25, 2022	SCALE	DRAWING NUMBER
NING WALLS	DES: TLH	HORIZONTAL:	
S ROAD	DRAWN: TLH	N/A	
TY, NC	APPROVED: MJM	VERTICAL:	
LE #9 (Continued) NETT COUNTY, NC		N/A	

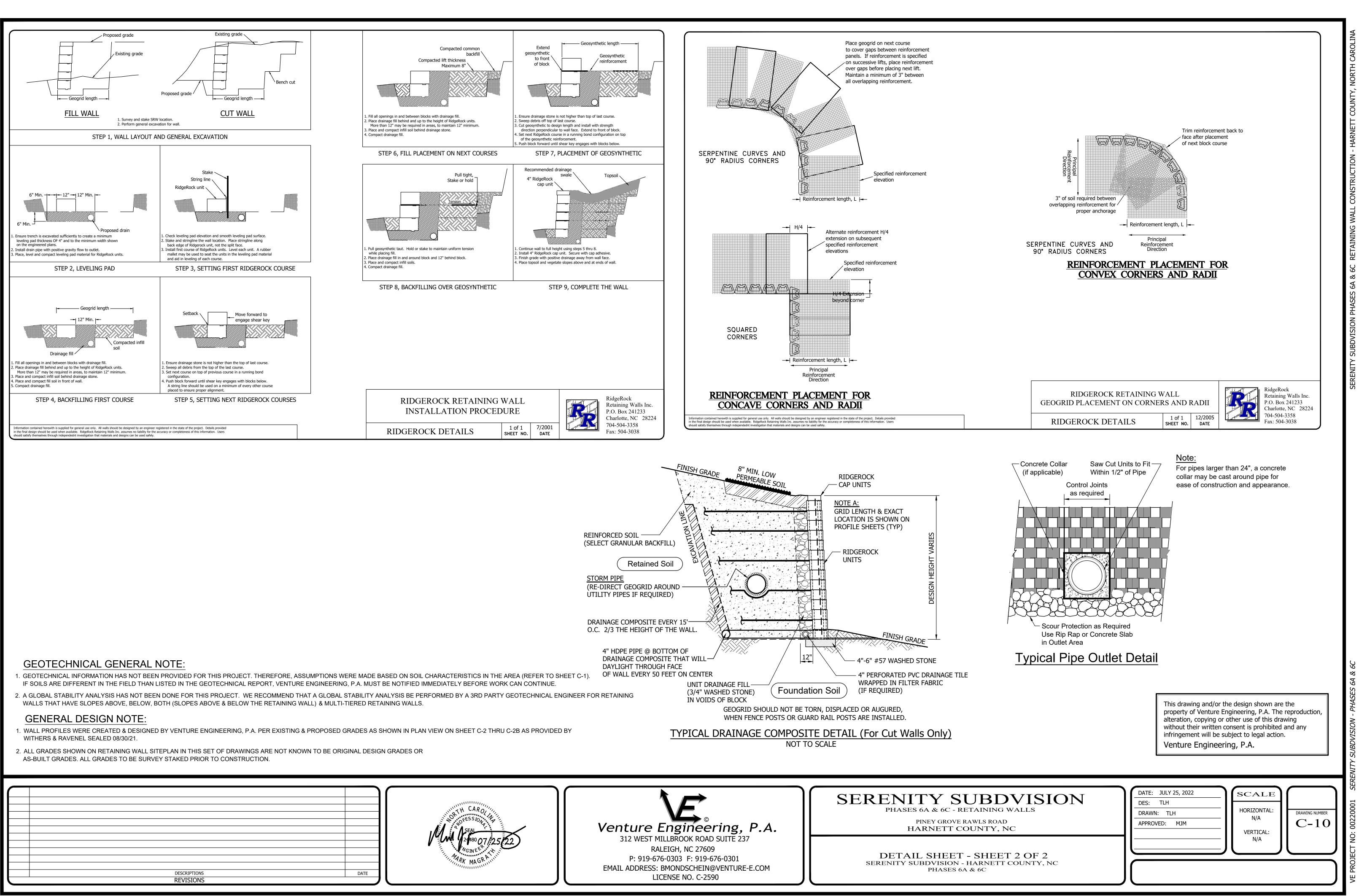
Railing as re (Not in wall co Geogrid (Typ.) Type, spacing and length to be determined by final design #57 stone behind block Low plasticity fill in geogrid reinforced area Geogrid length varies 4" Dia. perforated col Gravity flow to da into storm drain	4" RidgeRock cap unit 4" RidgeRock block s (12" Min.) Fill in front of wall before constructing wall more than 6 courses high.	Image: second system       Image: second system         Image: second
RidgeRock Retaining Walls Inc. P.O. Box 241233 Charlotte, NC 28224 704-504-3358 Fax: 504-3038	RIDGEROCK RETAINING WALL         TYPICAL CROSS SECTION         RIDGEROCK DETAIL         1 of 1         SHEET NO.	
IF SOILS ARE DIFFERENT IN T 2. A GLOBAL STABILITY ANALYS WALLS THAT HAVE SLOPES A GENERAL DESIG 1. WALL PROFILES WERE CREA WITHERS & RAVENEL SEALED 2. ALL GRADES SHOWN ON RET	N HAS NOT BEEN PROVIDED FOR THIS PROJECT. THEREFORE, HE FIELD THAN LISTED IN THE GEOTECHNICAL REPORT, VENT IS HAS NOT BEEN DONE FOR THIS PROJECT. WE RECOMMEND BOVE, BELOW, BOTH (SLOPES ABOVE & BELOW THE RETAININ NOTE: TED & DESIGNED BY VENTURE ENGINEERING, P.A. PER EXISTII	URE ENGINEERING, P.A. MUST BE NOTIFIED IMMEDIATEL O THAT A GLOBAL STABILITY ANALYSIS BE PERFORMED E G WALL) & MULTI-TIERED RETAINING WALLS.
	DESCRIPTIONS REVISIONS	DATE



DETAIL SHEET SERENITY SUBDVISION PHASES 6

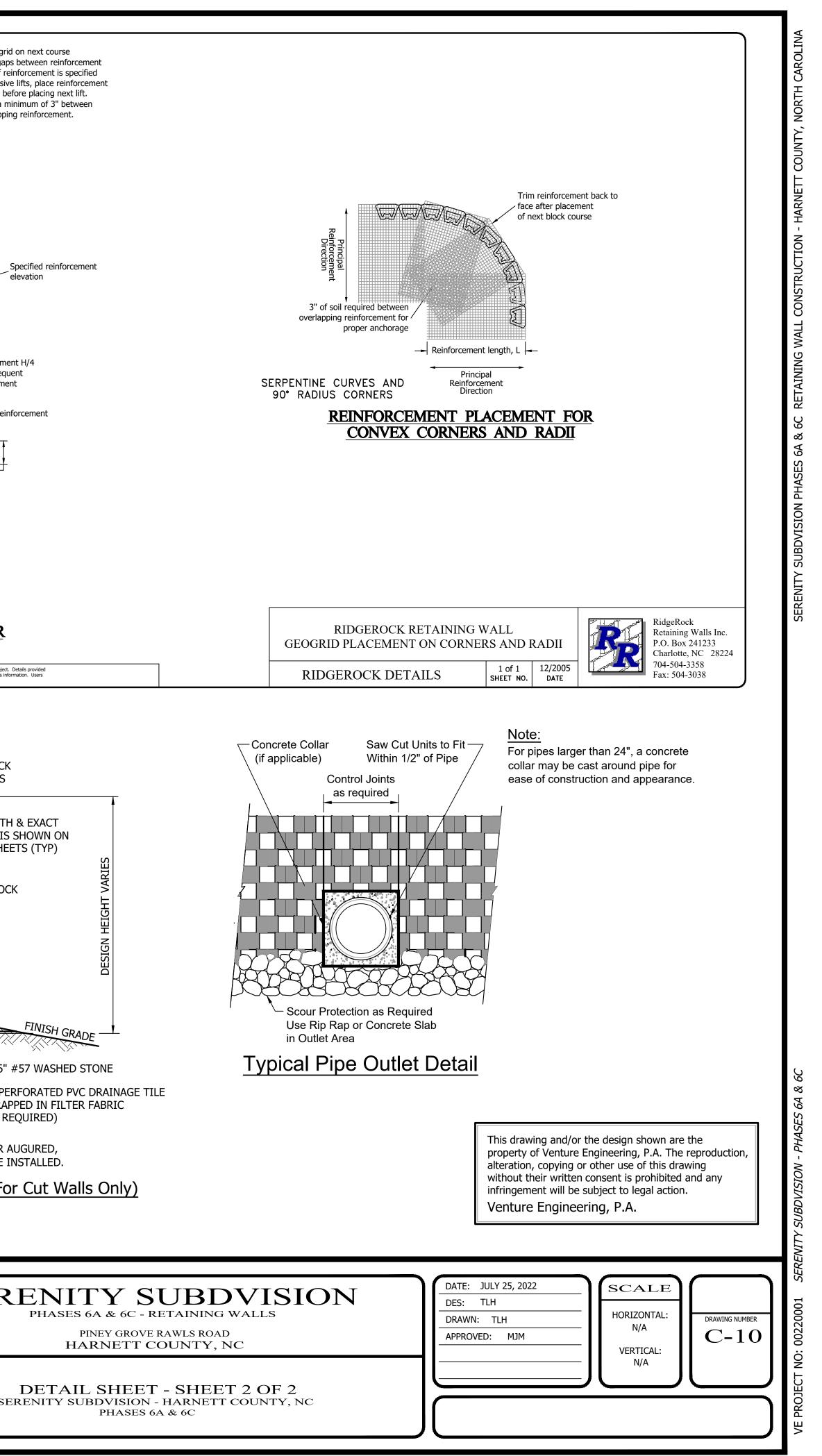
312 WEST MILLBROOK ROAD SUITE 237 RALEIGH, NC 27609 P: 919-676-0303 F: 919-676-0301 EMAIL ADDRESS: BMONDSCHEIN@VENTURE-E.COM LICENSE NO. C-2590

	Successive course Lower course			COUNTY, NORTH CAROLINA
	on every course. to increase the an end on each co Trim edge of bloc			
chisel mmer	for corner block p due to bloc SUCCESS			6A & 6C RETAINING WALL CONSTRUCTION - HARNETT
EATION utside corners with th eptable provided that				SUBDVISION PHASES (
OUTSII EROCK FWPS DETA	DE CORNER CONSTRUCTION REVISION DATE: UNITS: SHEET #: ILS 7/7/10 Feet 1 of	DRAWING NAME:		SERENITY SUBD
Extend horizontal line past vertical line				
ind course continue hate extending each block idicular block line to provide it course. Continue to ses to butt into perpendicula hing top of wall. Each cut wi al 1/2" to accomodate block block placement remove the ks that extend past the line.				
eRock nal wall			nd/or the design shown are t	the BHASES 64 & 6C
DRNER CONSTR	SHEET #: DRAWING NAME:	alteration, copy without their w infringement w	nture Engineering, P.A. The r ring or other use of this draw ritten consent is prohibited a ill be subject to legal action. <b>Jineering, P.A.</b>	ving and any VOISINGBINS AL
SUBD RETAINING WA E RAWLS ROAD COUNTY, NC		DATE: JULY 25, 2022 DES: TLH DRAWN: TLH APPROVED: MJM	BCALE HORIZONTAL: N/A VERTICAL:	DRAWING NUMBER C-9
T - SHEET 1 1 - harnett co 6a & 6c				DRAWING NUMBER C-9



DESCRIPTIONS	DATE
REVISIONS	





#### PROJECT:

#### PROPERTY LOCATION:

OWNSHIP PROPOSED USE OTAL TRACT AREA

#### PINEY GROVE RAWLS ROAD 0655-23-9685, 0655-13-8762, 0655-03-4488 0645-95-9146, 0645-82-8633, 0645-72-7454 RA-40, RA-30, CONSERVATION HECTORS CREEK RESIDENTIAL

SERENITY SUBDIVISION

579.43 ACRES

#### ELIMINARY SUBDIVISION NOTES

DEWALKS TO BE MAINTAINED BY THE HOME OWNERS ASSOCIATION (HOA), PROPER WNERS ASSOCIATION (POA), CONDOMINIUM OWNERS ASSOCIATION (COA), OR ANY OTHE SOCIATION RESPONSIBLE FOR THE MAINTENANCE AND/OR UPKEEP OF THE RESIDEN MMUNITY SIDEWALK OR STREET TREE INSTALLATIONS THAT ARE DAMAGED AND/OR EMOVED BY HARNETT COUNTY/ DEPARTMENT OF PUBLIC UTILITIES/ HARNETT REGIONA ATER OR ITS REPRESENTATIVES, AGENTS, OR CONTRACTORS AS A RESULT OF REP ITENANCE OF THE PUBLIC WATER AND/OR SEWER LINE WILL BE REPLACED OF AIRED BY THE HOME OWNERS ASSOCIATION (HOA), PROPERTY OWNERS ASSOC DA), CONDOMINIUM OWNERS ASSOCIATION (COA), OR ANY OTHER ASSOCIATION NANCE AND/OR UPKEEP OF THE RESIDENTIAL CON

PPROVAL OF THIS PLAT/PLAN DOES NOT GUARANTEE WATER CAPACITY OR WASTEWATI CAPACITY. CURRENT/FUTURE CAPACITY MAY NOT BE AVAILABLE. THIS DEVELOPMENT MA REQUIRE ADDITIONAL IMPROVEMENTS TO THE EXISTING WATER AND WASTEWATER YSTEM TO MEET FUTURE WATER AND WASTEWATER DEMANDS PRIOR TO A PRELIMINAR AT, CONSTRUCTION PLAN AND/OR FINAL PLAT APPROVAL

#### BOA APPROVAL: 07/09/2018 CONDITIONS:

- A. Garage: Each single-family house inside product families S2, S3 & S4 shall provide at least a standard two-car garage. All other single family houses shall provide at least a one-car garage. 3. Landscaping: Each house shall provide one of the following: A) minimum of one tree for S1 &
- 52 product, B) minimum of one tree and four shrubs for S3 & S4, or C) minimum of eight shrubs. Amenity: Amenity plan shall include a minimum of a cabana, a community pool with appropriate deck space, children's "tot" lot, lawn areas or ball fields, gazebos, appropriate
- parking, and pocket open space areas as outlined on the approved Concept Plan. Mail: Mail pick-up may be provided either by a centralized mail kiosk area, by kiosks placed in individual sections of the community, or a combination of both (as required by USPS). Setbacks: Lot setbacks should be as follows:
- a. S1 Product: minimum 20' front, 15' rear, 12' corner, and side yard options of 1) a zero-lot-line allowance with minimum 8' aggregate between units, or 2) 4" side setbacks.
- b. S2 Product: minimum 20' front, 5' side, 20' rear & 12' corner.
- c.S3 Product: minimum 20' front, 5' side, 20' rear & 12' corner. d. S4 Product: minimum 20' front, 5' side, 20' rear & 12' corner.
- Lot Ownership: All units will be sold as individual lots.

THIS DEVELOPMENT IS WITHIN ONE MILE OF A VOLUNTARY AGRICULTURAL DISTRICT. HOMEOWNER'S ASSOCIATION WILL BE RESPONSIBLE FOR MAINTENANCE OF PARKING AREAS, DRIVE AISLES, MAIL KIOSK, EASEMENTS/STORMWATER DEVICES, AND ALL LANDSCAPE BUFFERING.



## CONTACT LIST

**PROJECT ENGINEER** ZACHARY L. FULLER, P.E. WITHERSRAVENEL, INC. 115 MACKENAN DRIVE, CARY, NC 27511 TELEPHONE: (919) 469-3340 zfuller@withersravenel.com

LANDSCAPE ARCHITECT DANIEL WHATLEY WITHERSRAVENEL, INC. 137 S WILMINGTON STREET, RALEIGH, NC 27601 TELEPHONE: (919) 469-3340 dwhatley@withersravenel.com

## PERMITTING AGENCIES

WATER & SEWER: HARNETT REGIONAL WATER STORMWATER: NCDOT ROADS: NCDOT EROSION CONTROL: NCDENR

JAY MEYERS (jaymeyers@harnett.org) CRAIG LEE (cjlee@ncdot.gov) LEE HINES (Irhines@ncdot.gov) JODI PACE (jodi.pace@ncdenr.gov)

**GREENFIELD SERENITY LLC.** 8601 SIX FORKS ROAD, SUITE 270 RALEIGH, NC 27615 919-815-6469

ATTN: MATT BRUBAKER EMAIL: MBRUBAKER@GREENFIELDCOMMUNITIES.COM

# **CONSTRUCTION DRAWINGS FOR** SERENITY

## PHASES 1D, 1E, 2C, 2D, 2E, 2F, 2G, 6A, 6B, 6C, 6D, 6E, 6F & 6G HARNETT COUNTY, NORTH CAROLINA AUGUST 16, 2022

## DEVELOPER/OWNER

## PREPARED BY:

C8.2



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# APPROVED

OCT 2 0 2022 ARNETT REGIONAL WATER PO. BOX 1119 LILLINGTON, NC 27546

	Sheet List Table	C8.3	PLAN AND PROFILE SNEED LANE STA. 19+00 - 32+50
hor	Sheet Title	C8.4	PLAN AND PROFILE ASHBROOK COVE AND TRANQUILITY WAY 2
ber		C8.5	PLAN AND PROFILE TRANQIULITY WAY STA. 9+50 - 22+00
	COVER GENERAL NOTES	C8.6	PLAN AND PROFILE TURNING LEAF COURT STA. 9+50 - 18+50
		C8.7	PLAN AND PROFILE ELM GROVE AVENUE STA. 9+50 - 19+50
	MASTER EXISTING CONDITIONS	C8.8	PLAN AND PROFILE SERENE CROSSING STA. 9+50 - 22+00
	OVERALL EXISTING CONDITIONS	C8.9	PLAN AND PROFILE FIREFLY LANE STA. 9+50 - 17+50
	SUBDIVISION MASTER OPEN SPACE PLAN PHASING PLAN	C8.10	PLAN AND PROFILE SHADY CREEK WAY STA. 9+50 - 17+50
	SUBDIVISION MASTER SITE PLAN	C8.11	PLAN AND PROFILE STREAMSIDE TERRACE STA. 23+50 - 39+00
	OVERALL SITE PLAN	C8.12	PLAN AND PROFILE WINDCHIME COURT STA. 9+50 - 16+50
	SITE PLAN	C8.13	PLAN AND PROFILE DAYBREAK WAY AND CHARMING COURT
	SITE PLAN	C8.14	SEWER OUTFALL PLAN AND PROFILE
	SITE PLAN	C8.15	SEWER OUTFALL PLAN AND PROFILE
	SITE PLAN	C8.16	SEWER OUTFALL PLAN AND PROFILE
		C8.17	SEWER OUTFALL PLAN AND PROFILE
	SUBDIVISION MASTER UTILITY PLAN OVERALL UTILITY PLAN	C8.18	SEWER OUTFALL PLAN AND PROFILE STA. 10+00 - 24+00
	UTILITY PLAN	C8.19	SEWER OUTFALL PLAN AND PROFILE STA. 24+00 - 38+00
		C8.20	SEWER OUTFALL PLAN AND PROFILE STA. 38+00 - 52+00
		C8.21	SEWER OUTFALL PLAN AND PROFILE STA. 52+00 - 66+00
		C8.22	SEWER OUTFALL PLAN AND PROFILE STA. 66+00 - 73+00
		C9.0	WATER DETAILS
	OVERALL STORM DRAINAGE & GRADING PLAN	C9.1	WATER DETAILS
	STORM DRAINAGE PLAN	C9.2	SEWER DETAILS
	STORM DRAINAGE PLAN	C9.3	SEWER DETAILS
	STORM DRAINAGE PLAN	C9.4	SITE & STORM DETAILS
	STORM DRAINAGE PLAN	C9.5	EROSION CONTROL DETAILS
	STORM DRAINAGE TABLES	C9.6	EROSION CONTROL DETAILS
	GRADING PLAN	C9.7	EROSION CONTROL DETAILS
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	GRADING PLAN	C10.0	SCM 3 PLAN AND DETAILS
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	OVERALL EROSION CONTROL PLAN STAGE I	C10.2	SCM DETAILS
	STAGE I EROSION CONTROL PLAN	L1.0	OVERALL LANDSCAPE PLAN
	STAGE I EROSION CONTROL PLAN	L1.1	LANDSCAPE PLAN
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	OVERALL EROSION CONTROL PLAN STAGE II	SL1.0	OVERALL LIGHTING PLAN
	STAGE II EROSION CONTROL PLAN	S1.0	AERIAL SEWER CROSSING 1
	STAGE II EROSION CONTROL PLAN	S1.1	CROSSING 1 DETAILS AND NOTES
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	STAGE II EROSION CONTROL PLAN	S2.0	AERIAL SEWER CROSSING 2
	PLAN AND PROFILE SERENITY WALK PARKWAY STA. 23+50 - 43+50	S2.1	CROSSING 2 DETAILS AND NOTES
F	PLAN AND PROFILE SERENITY WALK PARKWAY STA. 43+50 - 59+00	S2.2	CROSSING 2 DETAILS AND QUANTITIES

