

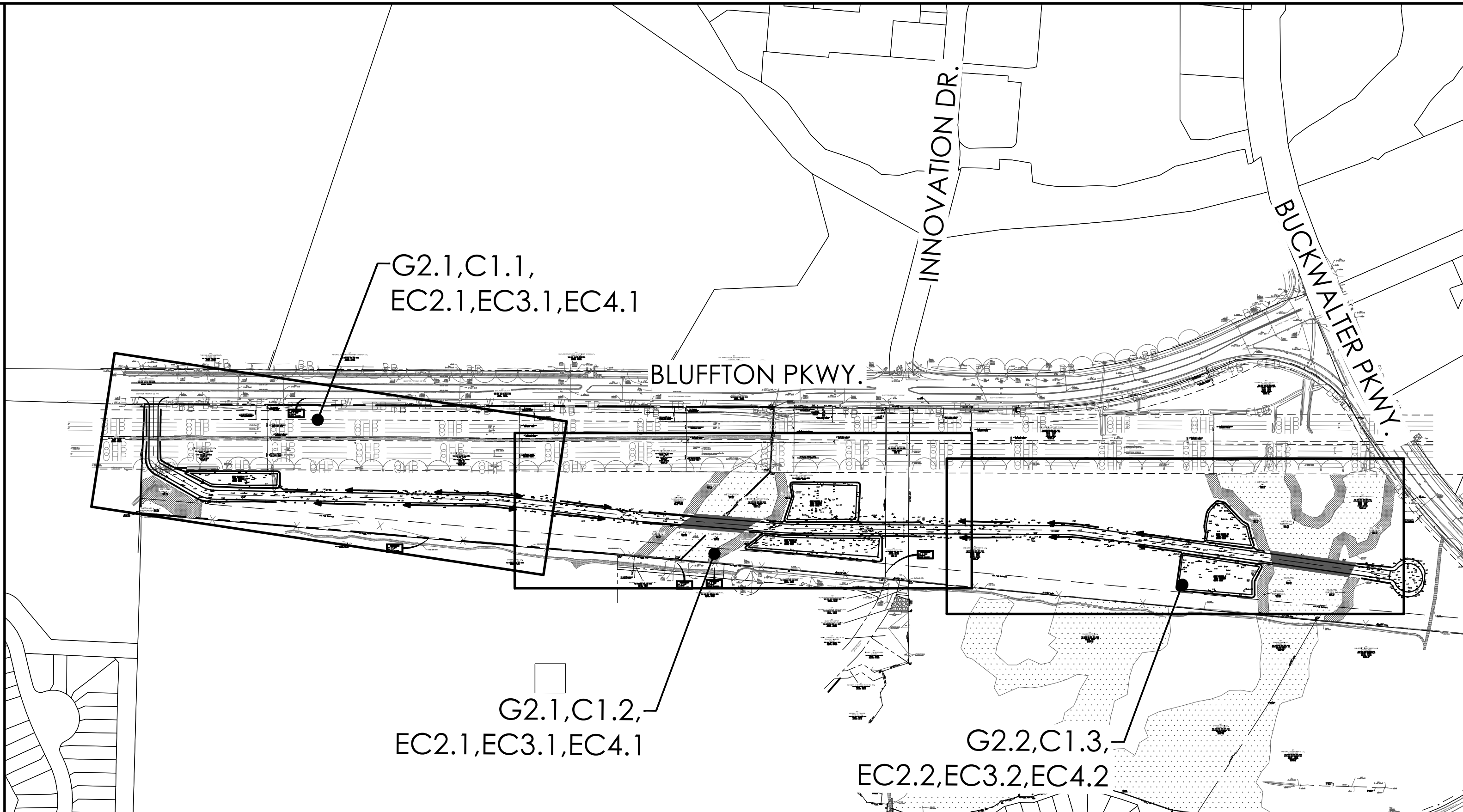
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Savannah, GA 31405
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ABBREVIATIONS					
HDPE	HIGH DENSITY POLYETHELENE	LF	LINEAR FEET	SF	SQUARE FEET
BOT	BOTTOM	MAX	MAXIMUM	SS	SANITARY SEWER
CI	CURB INLET	MIN	MINIMUM	TC	TOP OF CURB
CP	CORRUGATED PLASTIC PIPE	MH	MANHOLE	TG	TOP OF GRAVEL
DIP	DUCTILE IRON PIPE	OC	ON CENTER	TP	TOP OF PAVEMENT
EL	ELEVATION	PC	POINT OF CURVE	TW	TOP OF WALK
FG	FINISH GRADE	PH	POST HYDRANT	TYP	TYPICAL
FH	FIRE HYDRANT	PT	POINT OF TANGENT	W	WATER
FM	FORCE MAIN (SANITARY SEWER)	PVC	POLYVINYL CHLORIDE	W/	WITH
FR	FRAME	RCP	REINFORCED CONCRETE PIPE	WV	WATER VALVE
GI	GRATE INLET	RJP	RESTRAINED JOINT PIPE	YI	YARD INLET
GV	GATE VALVE	R/W	RIGHT-OF-WAY	FFE	FINISH FLOOR
INV	INVERT ELEVATION	SD	STORM DRAINAGE		
JB	JUNCTION BOX	SDMH	STORM DRAINAGE MANHOLE		

WATER LEGEND		
DESCRIPTION	EXISTING	PROPOSED
WATER MAIN	————— 10" W —————	————— 10" W —————
SINGLE SERVICE LATERAL	- - - - -	- - - - -
DOUBLE SERVICE LATERAL		
VALVE AND BOX		
FIRE HYDRANT W/ VALVE & BOX		
POST HYDRANT		
REDUCER		
BACKFLOW PREVENTOR		
CROSS		
TEE		
90° BEND - HORIZONTAL		
45° BEND - HORIZONTAL		
22-1/2° BEND - HORIZONTAL		
11-3/4° BEND - HORIZONTAL		
BEND - VERTICAL		
CAP		

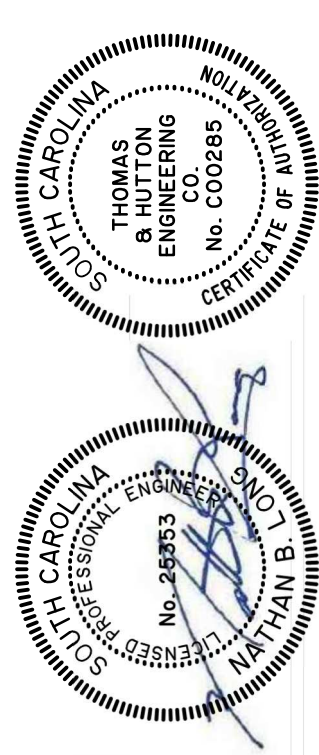
SEWER LEGEND		
DESCRIPTION	EXISTING	PROPOSED
GRAVITY PIPE		
SINGLE SERVICE LATERAL		
DOUBLE SERVICE LATERAL		
MANHOLE		
CLEANOUT		
FORCEMAIN		
VALVE AND BOX		
FLUSH HYDRANT		
REDUCER		
BACKFLOW PREVENTOR		
CROSS		
TEE		
90° BEND - HORIZONTAL		
45° BEND - HORIZONTAL		
22-1/2° BEND - HORIZONTAL		
11-3/4° BEND - HORIZONTAL		
BEND - VERTICAL		
PLUG		

DRAINAGE LEGEND		
DESCRIPTION	EXISTING	PROPOSED
PIPE		
DITCH		
CURB INLET		
GRATE INLET		
JUNCTION BOX		
OUTLET STRUCTURE		



1. ALL TOPOGRAPHIC INFORMATION IS BASED ON SURVEY FIELD DATA PROVIDED BY ATLAS SURVEYING, INC. ELEVATIONS ARE BASED UPON NAVD 88 VERTICAL DATUM. THE HORIZONTAL DATUM IS SOUTH CAROLINA STATE PLANE COORDINATE SYSTEM, EAST ZONE. NAD 83. CONTRACT ENGINEER IMMEDIATELY IF FIELD ELEVATIONS VARY FROM EXISTING GROUND ELEVATIONS DISPLAYED. VERIFY CHANGES IN ELEVATIONS RESULTING FROM CONTRACTOR CLEARING AND STRIPPING.
2. BOUNDARY INFORMATION FOR THIS PROJECT IS BASED UPON AN AS-BUILT, TREE & TOPOGRAPHIC SURVEY OF #655 OLD MILLER ROAD, AND INTERSECTION OF BLUFFTON PARKWAY AND BUCKWATER PARKWAY, PREPARED BY THOMAS & HUTTON, DATED 07-01-05, REVISED 03-27-06, RECORDED IN PB109 PAGE 193.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ESTABLISH SUPPLEMENTAL CONTROL WITHIN THE PROJECT AS NEEDED. SEE SURVEY CONTROL PLAN FOR BENCHMARKS ASSOCIATED WITH THIS PROJECT.
4. PIPE, FITTINGS, VALVES AND OTHER ACCESSORIES SHALL, UNLESS OTHERWISE DIRECTED, BE UNLOADED AT THE POINT OF DELIVERY, AND STORED WHERE THEY WILL BE PROTECTED AND WILL NOT BE HAZARDOUS TO TRAFFIC AT ALL TIMES BE HANDLED WITH CARE TO AVOID DAMAGE. THE INTERIOR OF ALL PIPE, FITTINGS AND OTHER ACCESSORIES SHALL BE KEPT DRY FROM DIRT AND FOREIGN MATTER AT ALL TIMES.
5. ANY DEFECTIVE, DAMAGED OR UNSOUND PIPE SHALL BE REJECTED. ALL FOREIGN MATTER OR DIRT SHALL BE REMOVED FROM THE INSIDE OF THE PIPE BEFORE IT IS LOWERED INTO ITS POSITION IN THE TRENCH AND SHALL BE KEPT CLEAN BY ACCEPTABLE MEANS DURING AND AFTER LAYING. CARE SHALL BE TAKEN TO PREVENT JOINT SPACING AT TIMES WHEN PIPE LAYING IS NOT IN PROGRESS, THE OPEN ENDS OF THE PIPE SHALL BE CLOSED BY ACCEPTABLE MEANS AND NO TRENCH WATER SHALL BE PERMITTED TO ENTER THE PIPE.
6. CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS AND INVERTS BEFORE STARTING WORK, THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY WITH DISCREPANCIES AND AWAIT WRITTEN RESPONSE FROM ENGINEER PRIOR TO ENGINEER PRIOR TO PROCEEDING WITH INSTALLATION.
7. CONTRACTOR SHALL COORDINATE TIE IN OF NEW WATER & SEWER FACILITIES WITH BEAUFORT JASPER WATER AND SEWER AUTHORITY. ALL WATER AND SEWER MATERIALS AND INSTALLATION SHALL COMPLY WITH LATEST VERSION OF BEAUFORT JASPER WATER AND SEWER AUTHORITY TECHNICAL SPECIFICATIONS. BWSA SPECIFICATIONS SHALL GOVERN AND TAKE PRECEDENCE OVER CONFLICTS WITH THOMAS AND HUTTON'S SPECIFICATIONS.
8. CONTRACTOR SHALL MAINTAIN MINIMUM COVER OVER THE WATER MAIN PIPE BARREL OF 3'-0" UNLESS OTHERWISE INDICATED.
9. DRAINAGE PIPE, FITTINGS AND OTHER MATERIALS BE NEEDED IN ADDITION TO THAT SHOWN ON THE DRAWING BECAUSE PIPELINE WAS NOT INSTALLED TO THE ALIGNMENT SHOWN, THEN THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THOSE NECESSARY MATERIALS AND PROVIDING THE EQUIPMENT AND LABOR TO INSTALL THEM TO MEET THE DESIGN INTENT OF WATER MAIN AT NO COST TO THE OWNER.
10. ALL WATER USED FOR CONSTRUCTION SHALL BE KEPT THROUGH AN ACCEPTABLE BACK FLOW PREVENTION DEVICE AND FIRE HYDRANT METER.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNDERGROUND UTILITIES AND SHALL COORDINATE ALL WORK WITH THE OWNER AND UTILITY COMPANIES.
12. THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS OR IN ANY WAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND DO NOT BIND THOMAS & HUTTON.
13. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND DETAILS.
14. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER 48 HOURS IN ADVANCE OF ALL REQUIRED TESTS AND INSPECTIONS.
15. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES OTHER THAN THOSE SHOWN ARE ENCOUNTERED DURING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND TAKE STEPS TO PROTECT THE LINE(S) AND ENSURE CONTINUED SERVICE. DAMAGE CAUSED TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR. ADDITIONALLY, THE CONTRACTOR SHALL CONFIRM THE CONNECTION POINTS OF NEW UTILITIES TO EXISTING UTILITIES PRIOR TO BEGINNING NEW CONSTRUCTION.
16. IF WORK IS SUSPENDED OR DELAYED FOR 14 DAYS, THE CONTRACTOR SHALL TEMPORARILY STABILIZE THE DISTURBED AREA AT NO ADDITIONAL COST TO THE OWNER.
17. ANY DAMAGE TO EXISTING PAVEMENT, SIDEWALKS, LANDSCAPING, ACCESS ROADS AND/OR DRIVEWAYS MUST BE REPAIRED AT CONTRACTORS EXPENSE. REPAIRS MADE SHALL BE TO THE SATISFACTION OF THE PROPERTY OWNER(S) EFFECTED BY DAMAGE OR THE TOWN OF BLUFFTON ENGINEER AS APPLICABLE.
18. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL AND PREVENTION STRUCTURES SHOWN ON THE PLANS. BOTH MUST BE ACCEPTABLE TO THE ENGINEER AND THE TOWN OF BLUFFTON PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES.
19. A COMPLETE SET OF PERMITTED DRAWINGS AND SPECIFICATIONS MUST BE MAINTAINED ON SITE AT ALL TIMES THAT THE CONTRACTOR IS PERFORMING WORK. THESE DRAWINGS SHALL BE MADE AVAILABLE UPON REQUEST.
20. THE CONTRACTOR SHALL NOT BEGIN CONSTRUCTION UNTIL THE PROPER PERMITS HAVE BEEN OBTAINED.
21. CONTRACTOR WILL BE REQUIRED TO ADJUST MANHOLE FRAMES, VALVE COVERS AND OTHER ACCESSIBLE STRUCTURES TO MATCH FINAL GRADE AT NO ADDITIONAL COST.
22. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CONSTRUCTED SIMULTANEOUSLY WITH THE DISTURBANCE OF THE SITE AND SHALL REMAIN IN PLACE UNTIL THE CONTRACTING DISTURBED AREAS ARE STABILIZED. SILT BARRIERS WILL BE INSTALLED AS NECESSARY TO PREVENT EXCESSIVE SEDIMENTATION OF DOWNSTREAM AREAS.
23. CONTRACTOR SHALL GRADE AREAS TO DRAIN FOR POSITIVE FLOW PRIOR TO FINAL ACCEPTANCE.
24. ALL DRAINAGE WILL BE MADE FUNCTIONAL DAILY AS WORK PROGRESSES.
25. EACH EXISTING ROAD WILL BE CLEANED UP AND RESTORED DAILY.
26. CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES BEFORE WORK COMMENCES, EVEN IF UTILITY IS NOT SHOWN ON THE PLANS. CONTRACTOR SHALL VERIFY UTILITY WITHIN THE PROJECT LIMITS AND NOTIFY THE ENGINEER OF CONFLICTS OR VARIANCES TO THE PLANS PRIOR TO BEGINNING WORK OR
27. IT IS THE OBLIGATION OF THE CONTRACTOR TO MAKE THEIR OWN INTERPRETATION OF ALL SURFACE AND SUBSURFACE DATA AVAILABLE AS TO THE NATURE AND EXTENT OF THE MATERIALS TO BE EXCAVATED, WASTED, GRADED AND COMPACTED. THE INFORMATION SHOWN ON THESE PLANS IN NO WAY GUARANTEES THE AMOUNT OR NATURE OF THE MATERIAL TO BE ENCOUNTERED.
28. CONTROL OF THE WATER FLOWING THROUGH THE EXISTING DRAINAGE PATTERNS DURING THE CONSTRUCTION PERIOD SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE EXISTING DRAINAGE CONVEYANCE SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL PROVIDE NECESSARY FILL AND OR GRADING TO MEET THE FINISHED PLAN GRADES AND ELIMINATE ANY AND ALL AREAS WHICH ARE LOW AND DO NOT DRAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING PROPER DRAINAGE FOR ANY AREAS WHICH ARE CHANGED AS A RESULT OF GRADE ADJUSTMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PENALTIES, CLAIMS AND FEES IMPOSED ON OWNER AS A RESULT OF DAMAGES CAUSED BY ACTIONS OF THE CONTRACTOR, IT'S EMPLOYEES OR SUBCONTRACTORS SHALL BE BORNE IN FULL BY THE CONTRACTOR.
29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PHASING OF CONSTRUCTION AND THE COORDINATION, SEQUENCING AND SUPERVISION OF CONSTRUCTION ACTIVITIES. ANY AND ALL COST ASSOCIATED WITH PROJECT PHASING WILL BE BORNE IN FULL BY THE CONTRACTOR.
30. THE CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS WITHIN THE DISTURBED LIMITS WHICH ARE NECESSARY TO COMPLETE THE WORK. AREAS OUTSIDE OF THESE LIMITS SHALL BE LEFT IN THEIR NATURAL STATE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
31. ALL CLEARING DEBRIS AND EXCESS SOIL MATERIALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL PAYMENT. CLEARING DEBRIS MAY BE BURNED ON SITE IF ALLOWED BY STATE AND LOCAL REGULATIONS.
32. ALL VEHICLES MUST TRAVERSE CONSTRUCTION EXITS TO REMOVE MUD FROM TIRES BEFORE ENTERING ANY PAVED PUBLIC RIGHT-OF-WAYS.
33. WETLAND IMPACTS, PRESERVED WETLANDS AND WETLAND BUFFERINGS DISPLAYED WITHIN THESE PLANS ARE BASED UPON THE DEPARTMENT OF THE ARMY PERMIT #200110-120. CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THIS PERMIT. A COPY OF THE PERMIT IS AVAILABLE UPON REQUEST.
34. THE TOWN OF BLUFFTON STORMWATER DIVISION SHALL BE NOTIFIED 24 HOURS PRIOR TO ANY DETERIORATING ACTIVITIES.

UTILITIES:	WATER/SEWER:	SURVEYOR:
	BEAUFORT JASPER WATER AND SEWER AUTHORITY 6 SNAKE ROAD OKATIE, SC. 29909-3937 (843) 987-9250	ATLAS SURVEYING, INC. 168 BOARDWALK DRIVE, SUITE A RIDGELAND, S.C. 29936 (843) 645-9277
COUNTY	BEAUFORT	ENGINEER: THOMAS & HUTTON 50 PARK OF COMMERCE WAY SAVANNAH, GA 31405 (912) 234-5300
TOWN	BLUFFTON	
ZONING	BUCKWALTER PUD	OWNER: UNIVERSITY INVESTMENTS, LLC CONTACT: JAKE REED PO BOX 23767 HILTON HEAD ISLAND, SC 29925 (949) 945-4959

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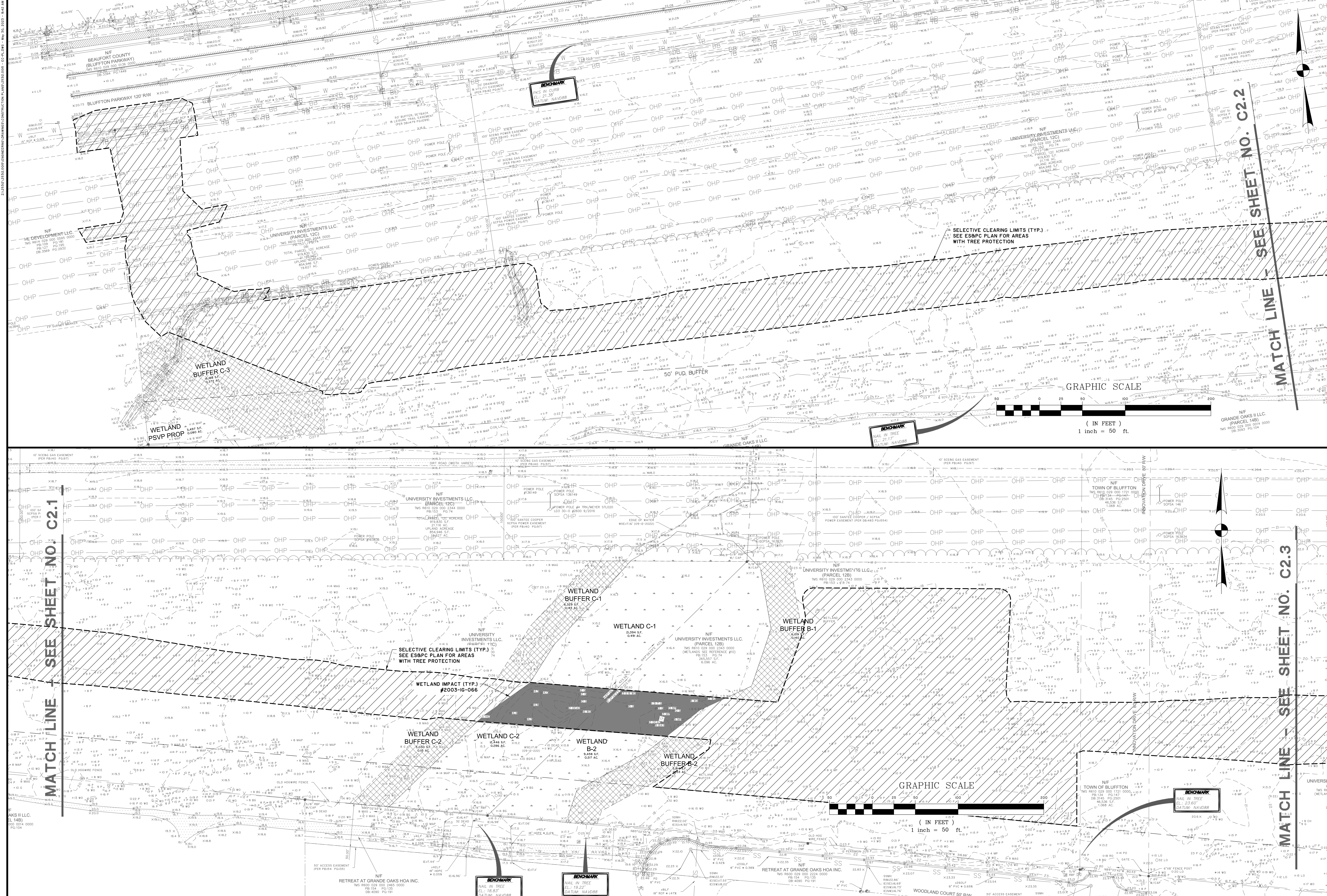
UNIVERSITY INVESTMENTS, LLC
BLUFFTON, SOUTH CAROLINA

PARCELS 12A, 12B, & 12C

GENERAL NOTES AND LEGEND

JOB NO:	J-25312.0015
DATE:	05/30/23
DRAWN:	CGC
DESIGNED:	JDF
REVIEWED:	HAC
APPROVED:	NBL
SCALE:	1" = 300'

G1.1



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ENGINEERING
No. 00085
CERTIFICATE

THOMAS & HUTTON
ENGINEERING
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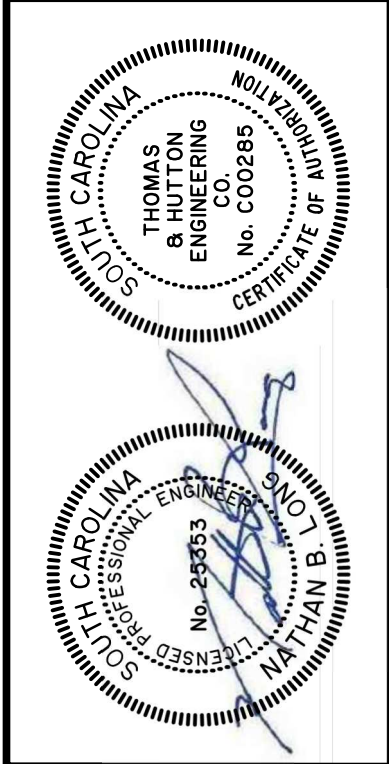
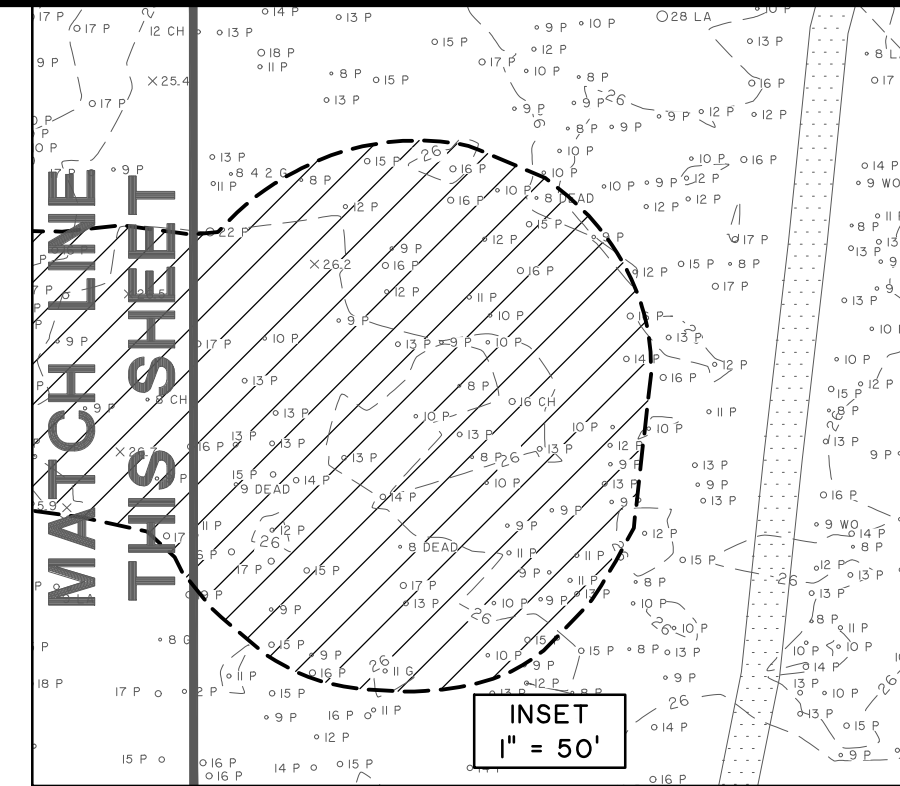
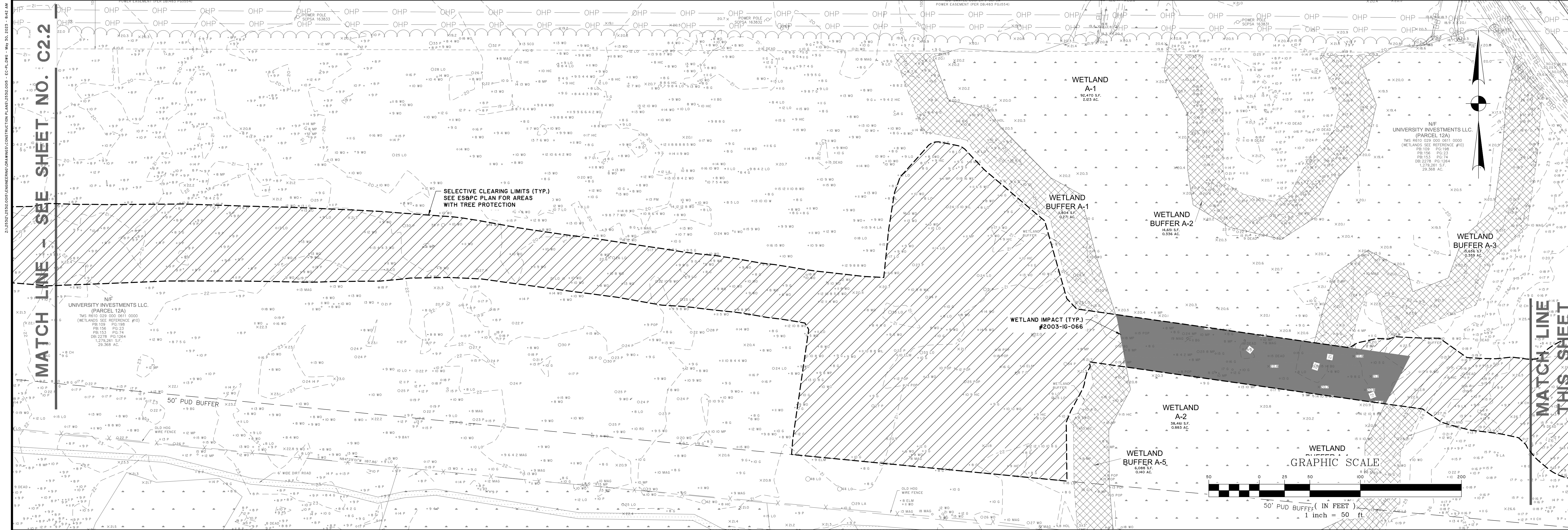
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BLUFFTON, SOUTH CAROLINA

PARCELS 12A, 12B, & 12C

EXISTING CONDITIONS PLAN

JOB NO: J-2532.0015
DATE: 05/30/23
DRAWN: CGC
DESIGNED: JDF
REVIEWED: HAC
APPROVED: NBL
SCALE: AS NOTED

G2.1

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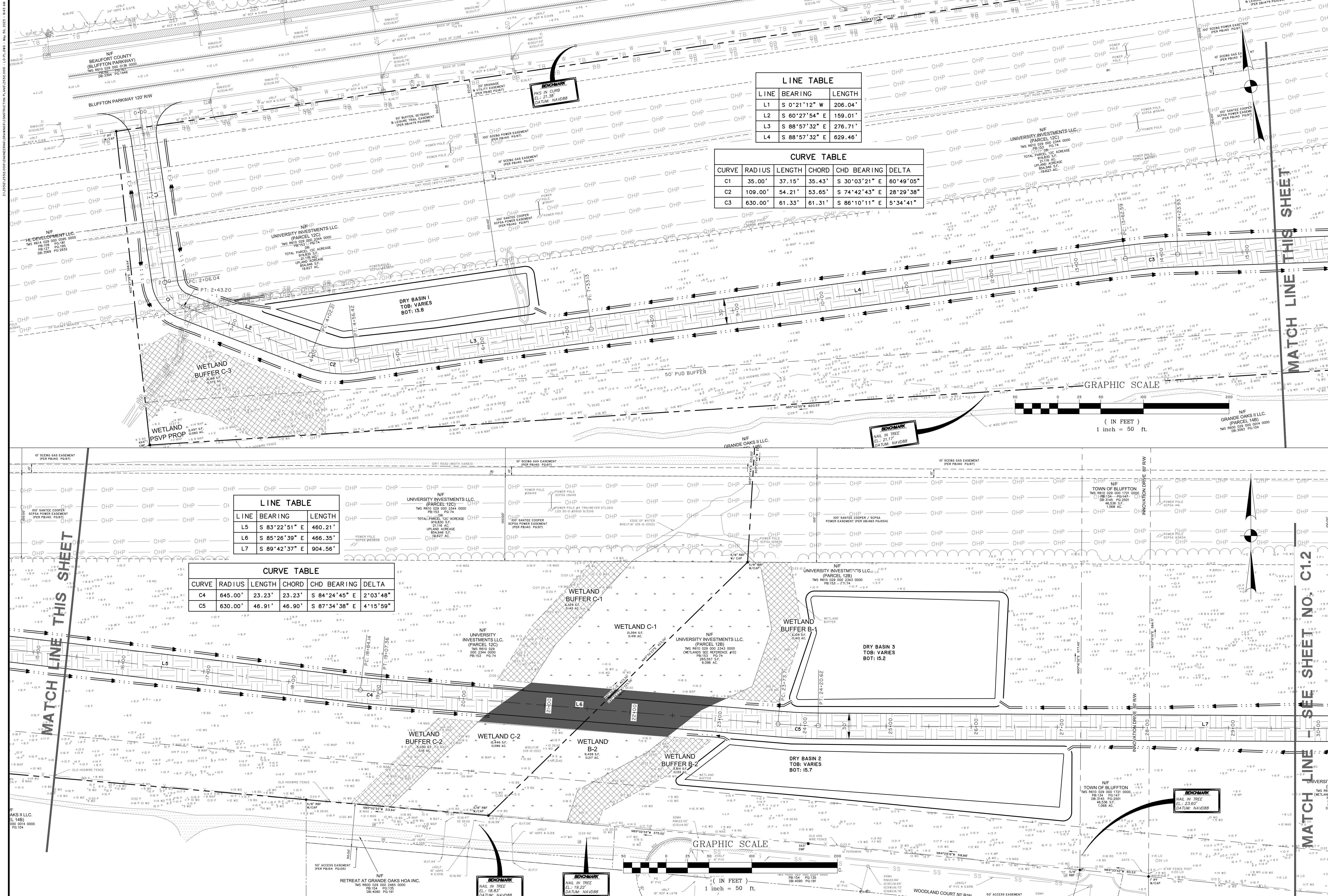
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PARCELS I2A, I2B, & I2C
EXISTING CONDITIONS PLAN

JOB NO:	J-25312.0015
DATE:	05/30/23
DRAWN:	CGC
DESIGNED:	JDF
REVIEWED:	HAC
APPROVED:	NBL
SCALE:	AS NOTED

G2.2

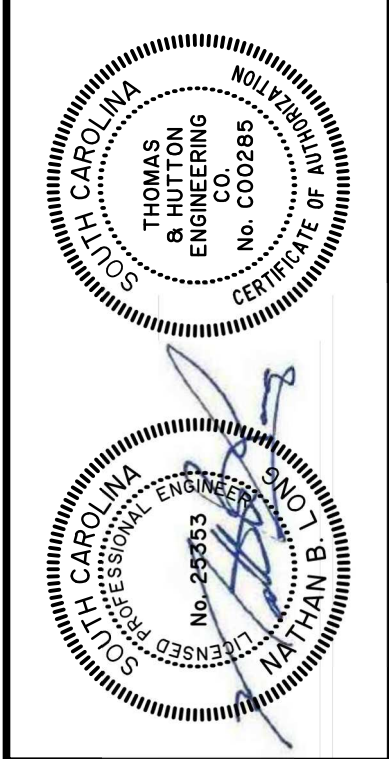


LINE TABLE		
LINE	BEARING	LENGTH
L1	S 0°21'12" W	206.04'
L2	S 60°27'54" E	159.01'
L3	S 88°57'32" E	276.71'
L4	S 88°57'32" E	629.46'

CURVE TABLE					
CURVE	RADIUS	LENGTH	CHORD	CHD BEARING	DELTA
C1	35.00'	37.15'	35.43'	S 30°03'21" E	60°49'05"
C2	109.00'	54.21'	53.65'	S 74°42'43" E	28°29'38"
C3	630.00'	61.33'	61.31'	S 86°10'11" E	5°34'41"

LINE TABLE		
LINE	BEARING	LENGTH
L5	S 83°22'51" E	460.21'
L6	S 85°26'39" E	466.35'
L7	S 89°42'37" E	904.56'

CURVE TABLE					
CURVE	RADIUS	LENGTH	CHORD	CHD BEARING	DELTA
C4	645.00'	23.23'	23.23'	S 84°24'45" E	2°03'48"
C5	630.00'	46.91'	46.90'	S 87°34'38" E	4°15'59"



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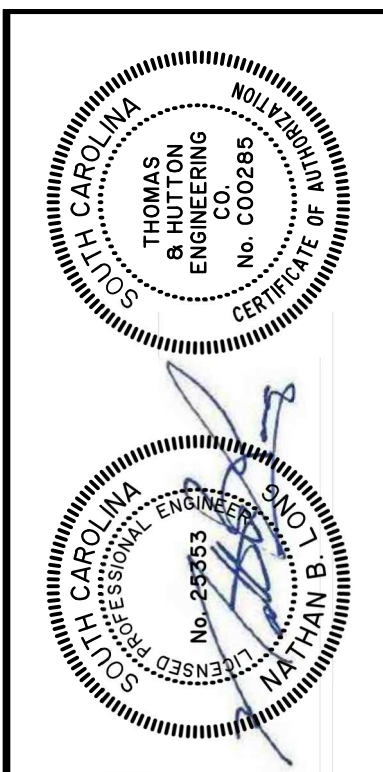
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BLUFFTON, SOUTH CAROLINA

PARCELS 12A, 12B, & 12C

STRIPING, SIGNAGE, AND LAYOUT PLAN

JOB NO: J-2532.0015
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APPROVED: NBL
SCALE: AS NOTED

C1.1

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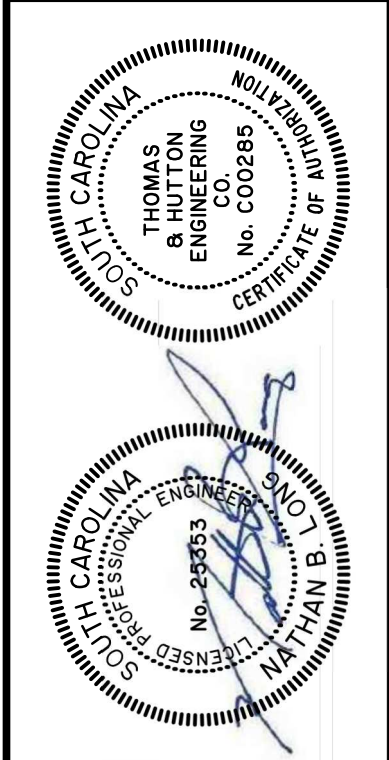
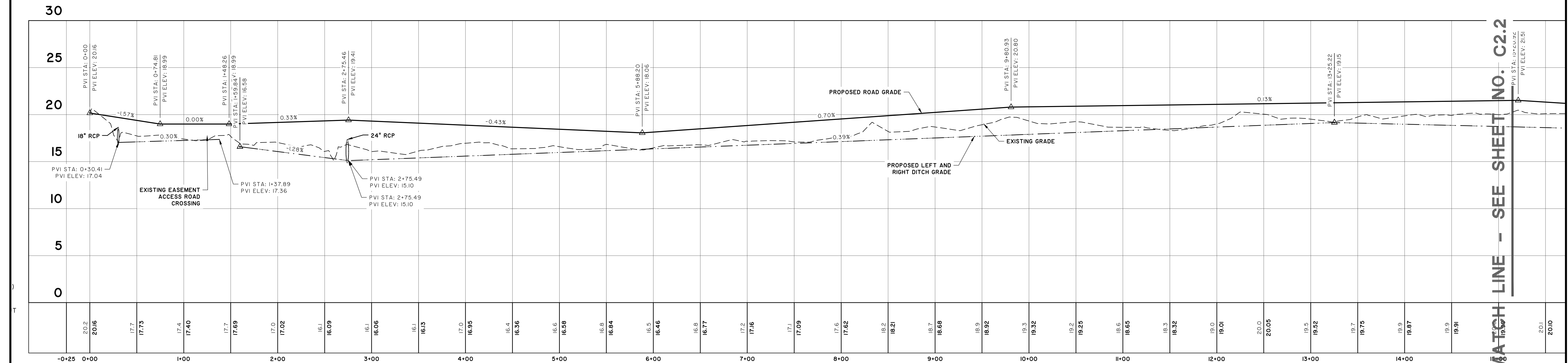
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C1.2



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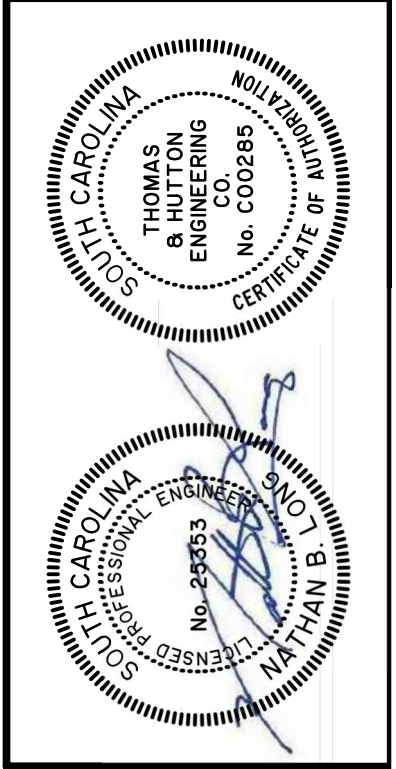
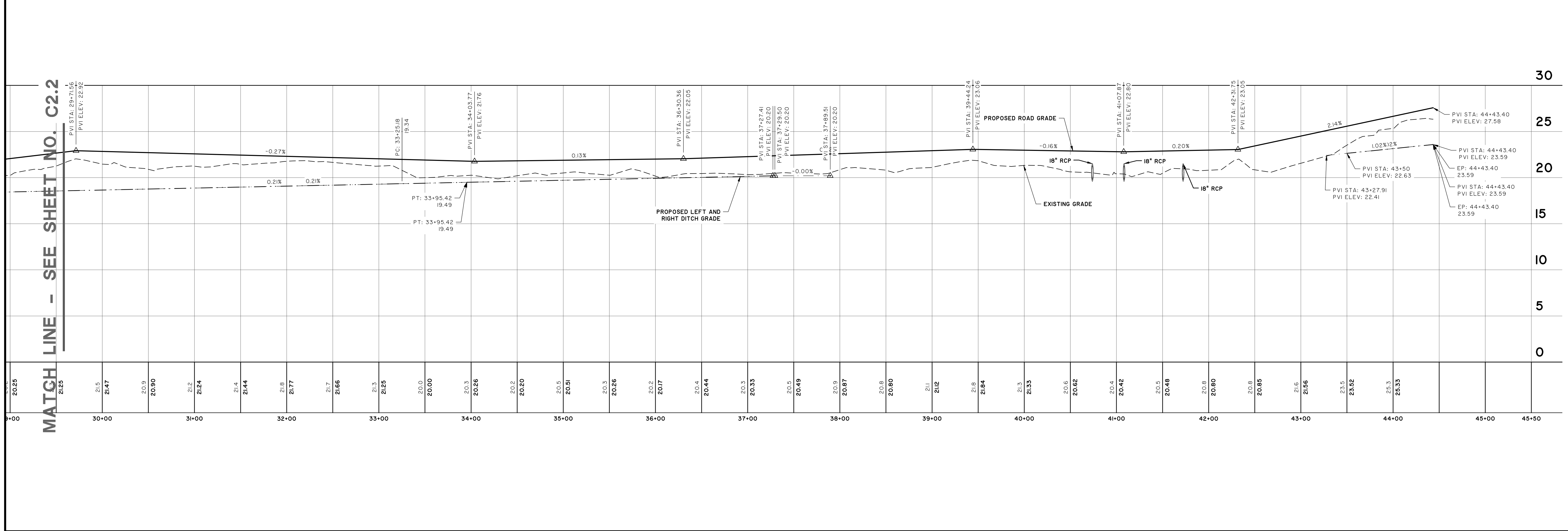
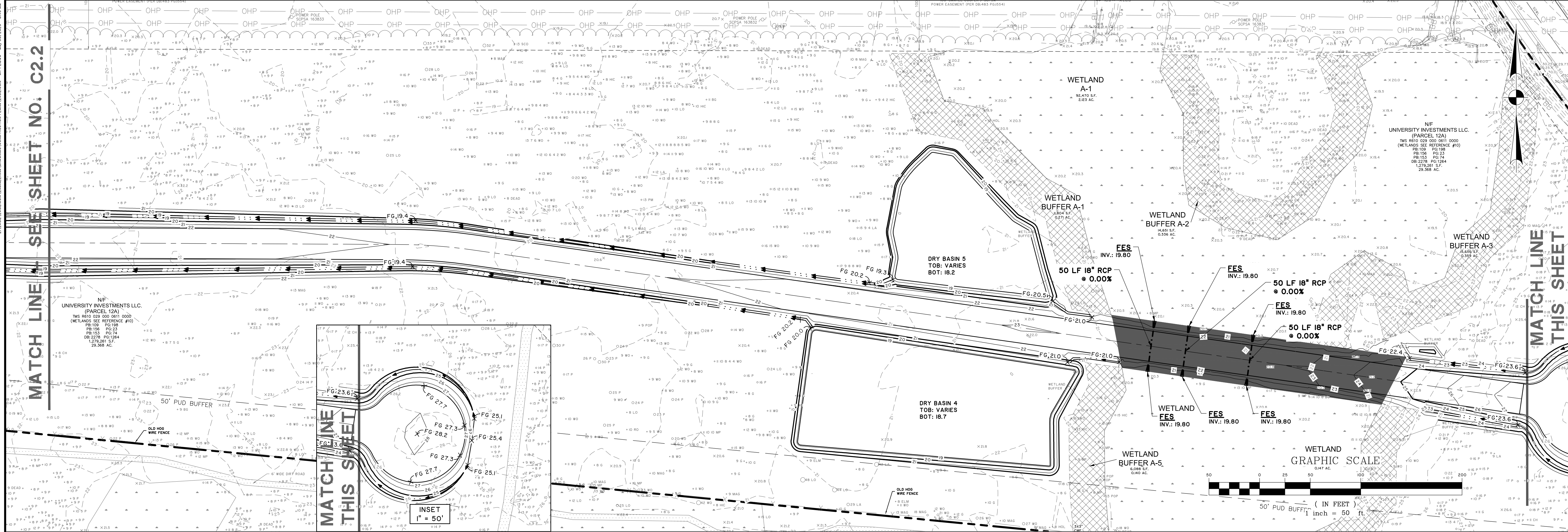
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PARCELS 12A, 12B, & 12C

GRADING AND DRAINAGE PLAN

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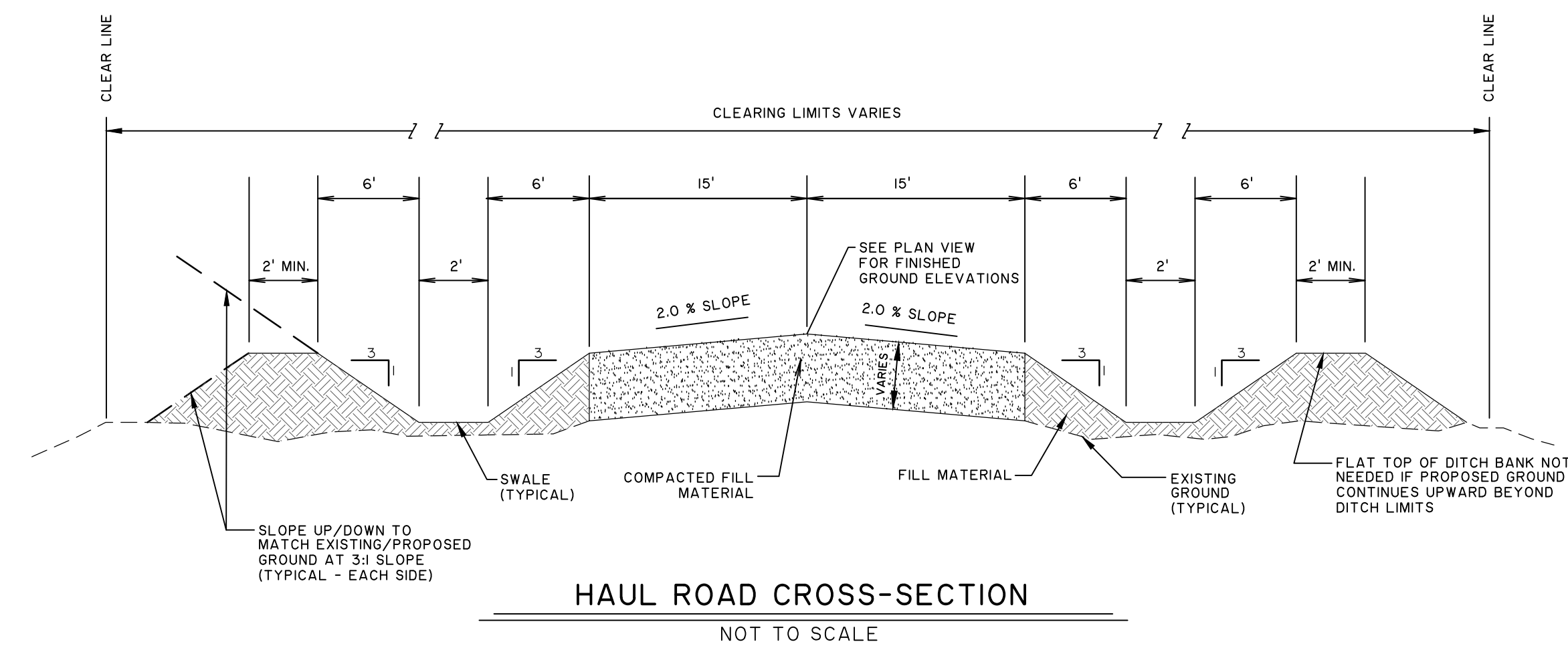
PARCELS 12A, 12B, & 12C

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C2.3

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PARCELS 12A, 12B, & 12C

GRADING AND DRAINAGE DETAILS

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APPROVED:	NBL
SCALE:	1" = 1'

C2.1

EROSION CONTROL LEGEND

EROSION CONTROL LEGEND

EROSION CONTROL LEGEND

The image shows two circular professional engineer stamps from the State of North Carolina. The top stamp is for Thomas B. Hudson, No. 000898, and the bottom stamp is for Nathan B. Hudson, No. 25353. Both stamps are crossed out with a large blue 'X'.

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PARCELS 12A, 12B, & 12C

ES & PC NOTES

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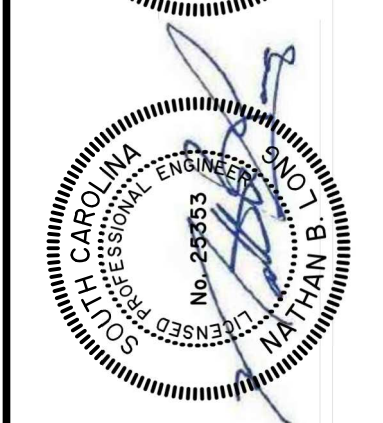
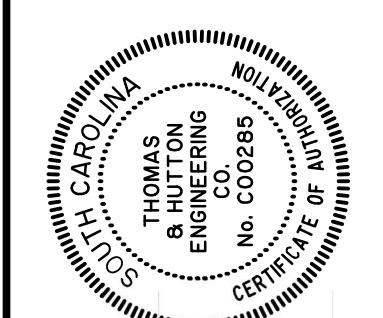
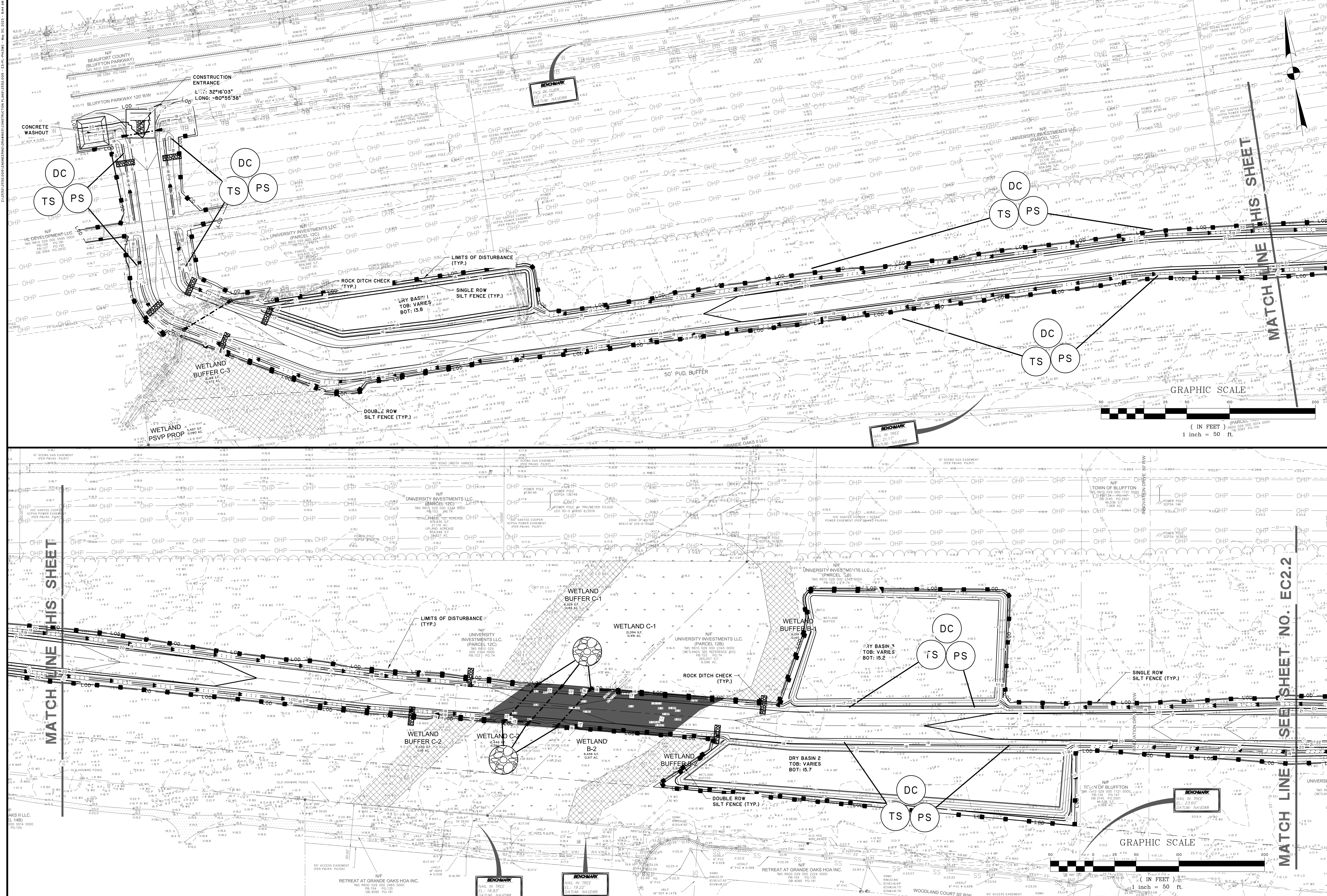
EC1.2

LIST OF ACRONYMS FOR SEDIMENT AND EROSION CONTROL

ASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AMD	ACRYLAMIDE POLYMER
BFM	BONDED FIBER MATRIX
BMP(S)	BEST MANAGEMENT PRACTICE(S)
CFS	CUBIC FEET PER SECOND
CMP	CORRUGATED METAL PIPE
DHEC	DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
ECB	EROSION CONTROL BLANKET
EPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
EPSC	EROSION PREVENTION AND SEDIMENTATION CONTROL
FDA	UNITED STATES FOOD AND DRUG ADMINISTRATION
FGM	FLEXIBLE GROWTH MATRIX
HDPE	HIGH DENSITY POLYETHYLENE
MS4	MUNICIPAL SEPARATE STORM SEWER SYSTEM
MSDS	MATERIAL SAFETY DATA SHEETS
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PAM	POLYACRYLAMIDE OR POLYMER
RCP	REINFORCED CONCRETE PIPE
SCS	SOIL CONSERVATION SERVICE
SWPPP	STORMWATER POLLUTION PREVENTION PROGRAM
TRM	TURF REINFORCEMENT MAT
VFS	VEGETATED FILTER STRIP

CONSTRUCTION SEQUENCE

CONSTRUCTION ACTIVITY	SCHEDULE CONSIDERATION
INITIAL PHASE	
1 OBTAIN COPIES OF ALL PLAN APPROVALS AND OTHER APPLICABLE PERMITS.	CONTRACTOR TO HAVE ONSITE AT ALL TIMES DURING CONSTRUCTION.
2 FLAG THE WORK LIMITS AND BARRICADE TREES AND MAINT BUFFER AREAS FOR PROTECTION.	HAVE LOCAL REGULATORY AGENCY INSPECT TREE BARRICADES.
3 HOLD PRE CONSTRUCTION CONFERENCE AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION.	REVIEW TREE PROTECTION (BARRICADE) WITH OWNER AND LOCAL REGULATORY AGENCY. TAKE PICTURES OF ALL PROTECTED TREES AND LOCATIONS WHERE SITE WORK TIES INTO EXISTING TO DOCUMENT PREDEVELOPMENT PROCEDURES.
4 INSTALL CONSTRUCTION ACCESS AND LAY DOWN AREAS	STABILIZE BARE AREAS IMMEDIATELY AND INSTALL CONSTRUCTION EXITS / ENTRANCES.
5 CONSTRUCT SEDIMENT FENCES	INSTALL SEDIMENT FENCES AFTER CONSTRUCTION SITE IS ACCESSED.
6 CONSTRUCT OUTLET PROTECTION. INSTALL SKIMMER.	INSTALL PRINCIPAL BASINS AFTER SEDIMENT FENCES IS INSTALLED.
7 ESTABLISH RUNOFF CONTROL - DIVERSIONS, PERIMETER DIKES, WATER BARS, AND OUTLET PROTECTION.	INSTALL PRINCIPAL SEDIMENT TRAPS AND BEFORE LAND GRADING. INSTALL ADDITIONAL RUNOFF-CONTROL MEASURES DURING GRADING.
8 LAND CLEARING AND GRADING-SITE PREPARATION CUTTING, FILLING AND GRADING, SEDIMENTATION TRAPS, BARRIERS, DIVERSIONS, DRAINS, SURFACE ROUGHENING.	BEGIN MAJOR LAND CLEARING AND GRADING AFTER PRINCIPAL SEDIMENT AND KEY RUNOFF-CONTROL MEASURES ARE INSTALLED. CLEAR BORROW AND DISPOSAL AREAS ONLY AS NEEDED. INSTALL ADDITIONAL CONTROL MEASURES AS GRADING PROGRESSES. MAINT TREES AND BUFFER AREAS FOR PRESERVATION.
CONSTRUCTION PHASE	
1 RUNOFF CONVEYANCE SYSTEM-INSTALL STORM DRAINS, STABILIZE BANKS, CHANNELS, INSTALL INLET AND OUTLET PROTECTION, SLOPE DRAINS.	WHERE NECESSARY, STABILIZE BANKS AS EARLY AS POSSIBLE. INSTALL PRINCIPAL RUNOFF CONVEYANCE SYSTEM WITH RUNOFF-CONTROL MEASURES. INSTALL REMAINDER OF SYSTEM AFTER GRADING.
2 INSTALL WASTEWATER COLLECTION, WATER DISTRIBUTION, AND STORM DRAINAGE SYSTEMS	APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS DELAYED OR COMPLETE.



NO.	REVISIONS	BY	DATE

THOMAS & HUTTON

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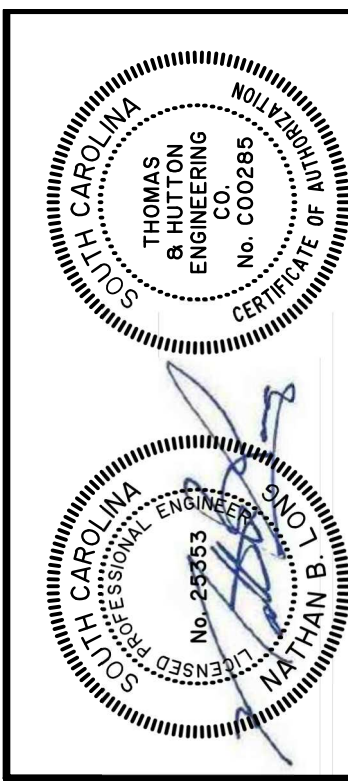
UNIVERSITY INVESTMENTS, LLC
BLUFFTON, SOUTH CAROLINA

PARCELS 12A, 12B, & 12C

ES & PC PLAN

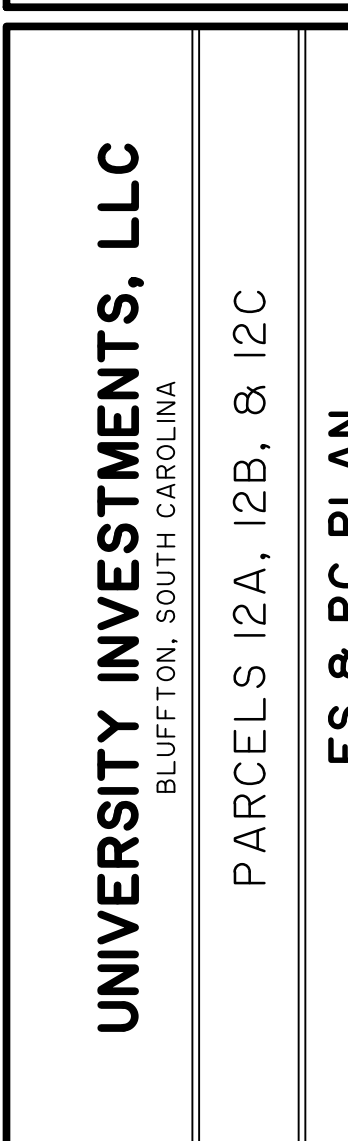
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DATE: 05/30/23
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DESIGNED: JDF
REVIEWED: HAC
APPROVED: NBL
SCALE: AS NOTED

EC2.1



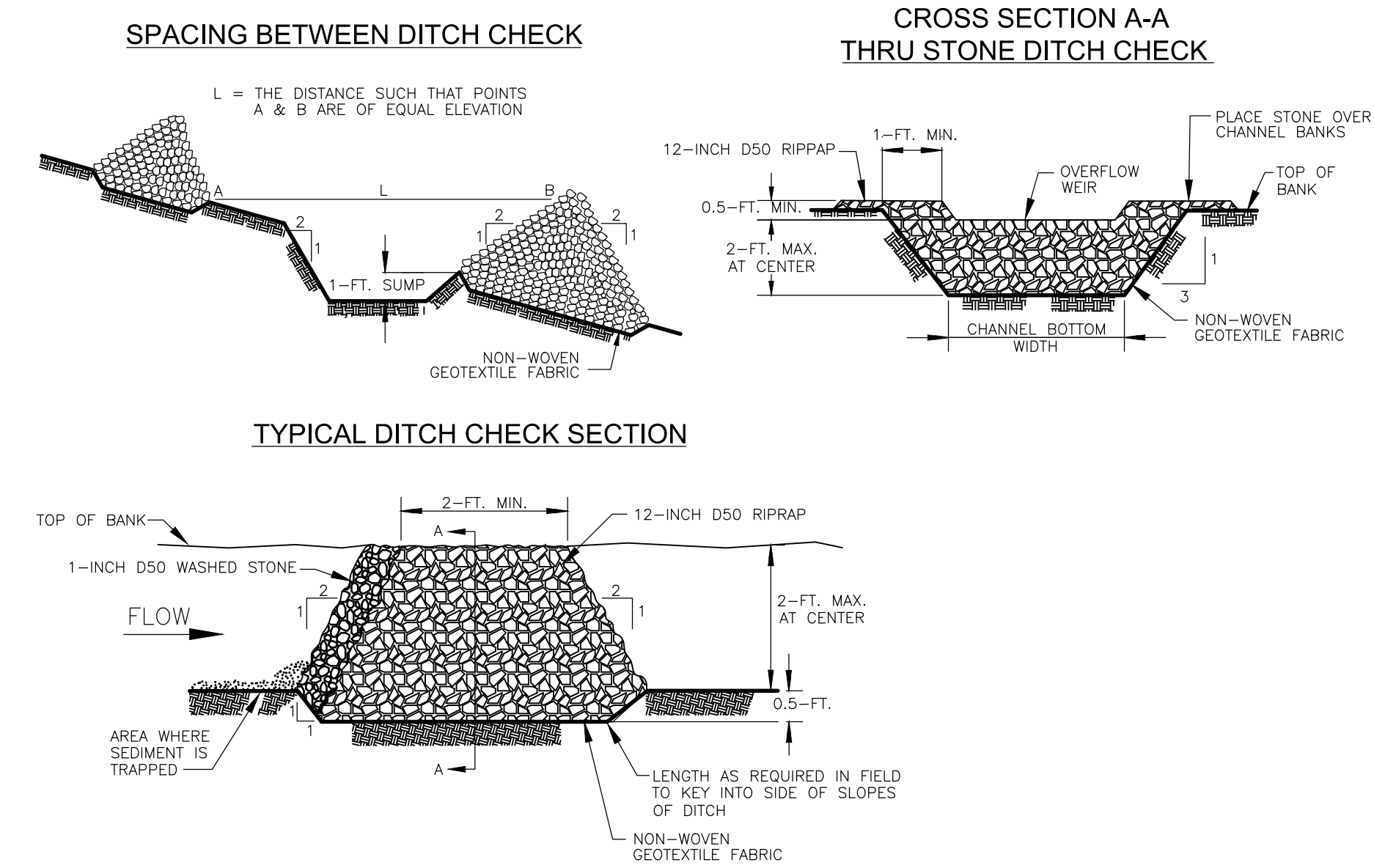
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EC2.2

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ROCK DITCH CHECK - GENERAL NOTES

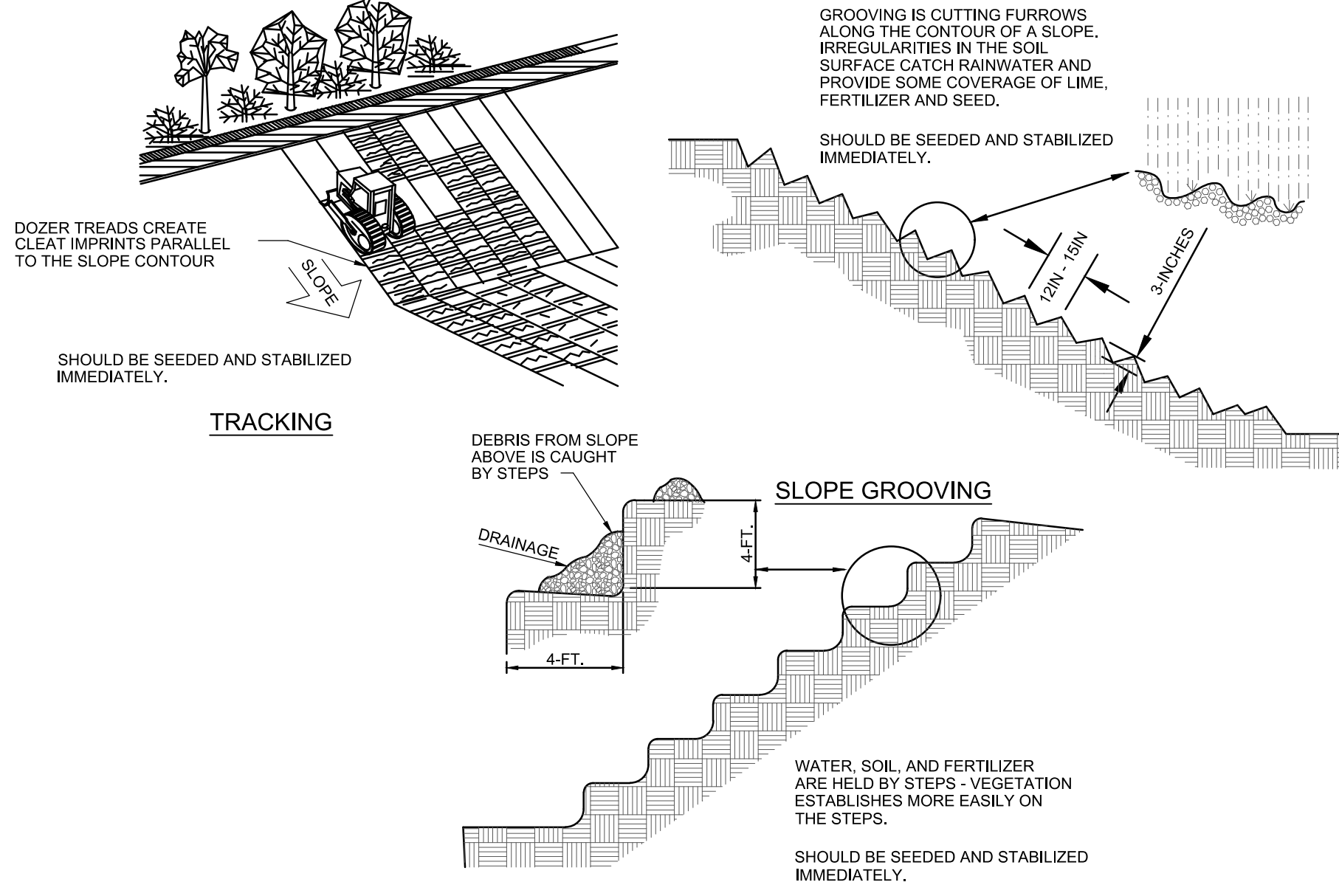
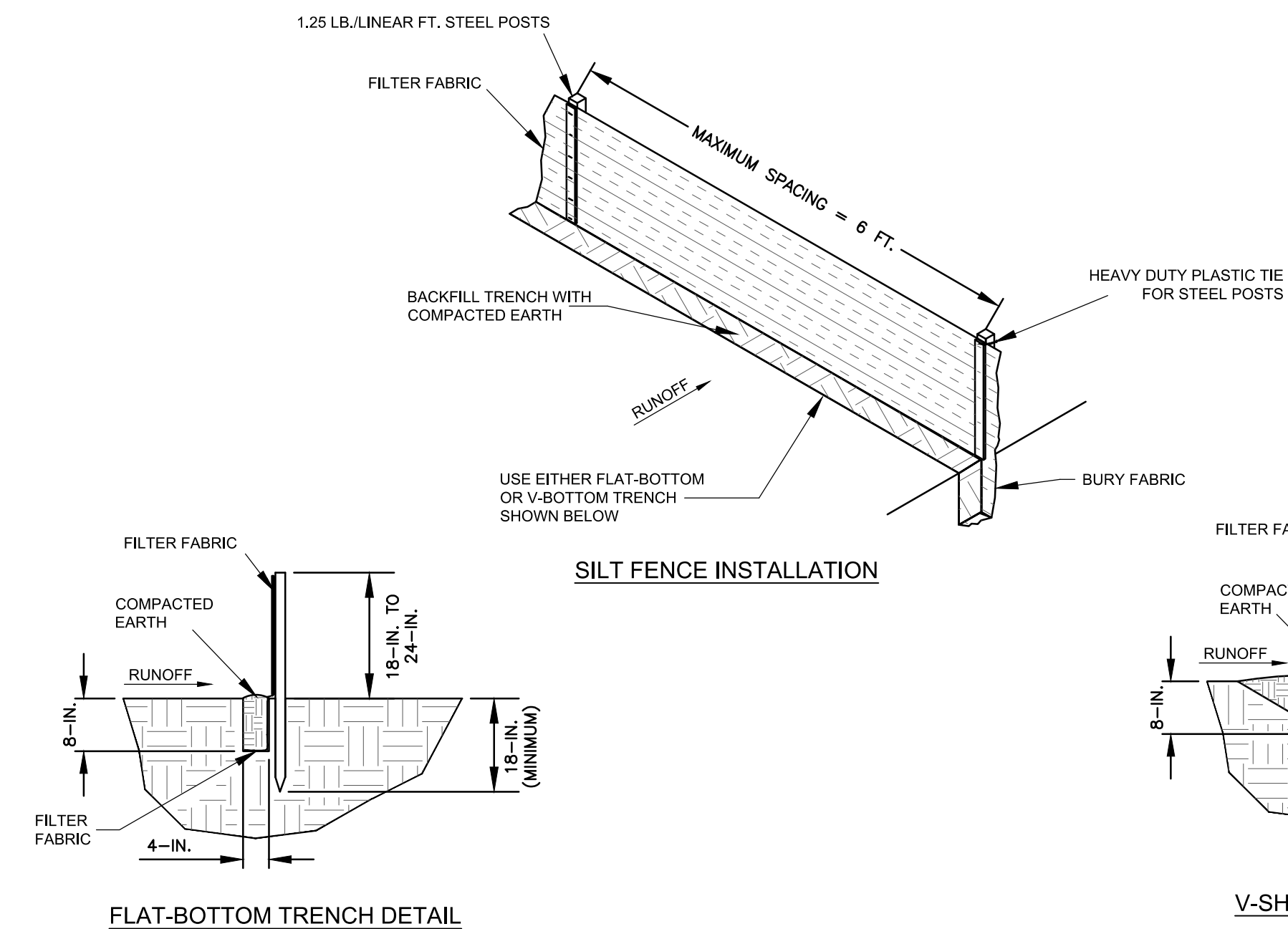
- ROCK DITCH CHECKS SHOULD NOT BE PLACED IN WATERS OF THE STATE OR USGS BLUE-LINE STREAMS (UNLESS APPROVED BY FEDERAL AUTHORITIES).
- ROCK DITCH CHECKS SHOULD BE INSTALLED IN STEEPLY SLOPED CHANNELS WHERE ADEQUATE CHANNEL CANNOT BE ESTABLISHED. THIS BMP MEASURE SHOULD ONLY BE USED IN SMALL OPEN CHANNELS.
- A NON-WOVEN GEOTEXTILE FABRIC SHALL BE INSTALLED OVER THE SOIL SURFACE WHERE THE ROCK DITCH CHECK IS TO BE PLACED.
- THE BODY OF THE ROCK DITCH CHECK SHALL BE COMPOSED OF 12-INCH D50 RIPRAP. THE UPSTREAM FACE MAY BE COMPOSED OF 1-INCH D50 WASHED STONE.
- ROCK DITCH CHECKS SHOULD NOT EXCEED A HEIGHT OF 2- FEET AT THE CENTERLINE OF THE CHANNEL.
- ROCK DITCH CHECKS SHOULD HAVE A MINIMUM TOP FLOW LENGTH OF 2- FEET.
- RIPRAP SHOULD BE PLACED OVER CHANNEL BANKS TO PREVENT WATER FROM CUTTING AROUND THE DITCH CHECK.
- THE RIPRAP SHOULD BE PLACED BY HAND OR MECHANICAL PLACEMENT (NO DUMPING OF ROCK TO FORM DAM) TO ACHIEVE COMPLETE COVERAGE OF THE CHANNEL. DOING SO WILL ALSO ENSURE THAT THE CENTER OF THE CHECK IS LOWER THAN THE EDGES.
- THE MAXIMUM SPACING BETWEEN THE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM CHECK IS AT THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM CHECK.

ROCK DITCH CHECK - INSPECTION & MAINTENANCE

- THE KEY TO FUNCTIONAL ROCK DITCH CHECK IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
- REGULAR INSPECTIONS OF ROCK DITCH CHECKS SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
- ATTENTION TO SEDIMENT ACCUMULATIONS IN FRONT OF THE ROCK DITCH CHECK IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE ROCK DITCH CHECK.
- REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
- INSPECT ROCK DITCH CHECKS' EDGES FOR EROSION AND EVIDENCE OF RUNOFF BYPASSING THE INSTALLED CHECK. IF EVIDENT REPAIR PROMPTLY AS NECESSARY TO PREVENT EROSION AND BYPASSING.
- IN THE CASE OF GRASS-LINED DITCHES, CHANNELS, AND SWALES, ROCK DITCH CHECKS SHOULD BE REMOVED WHEN THE GRASS HAS MATURED SUFFICIENTLY TO PROTECT THE DITCH OR SWALE UNLESS THE SLOPE OF THE SWALE IS GREATER THAN 4%.
- AFTER CONSTRUCTION IS COMPLETED AND FINAL STABILIZATION IS REACHED, THE ENTIRETY OF THE ROCK DITCH CHECK SHOULD BE REMOVED IF VEGETATION WILL BE USED FOR PERMANENT EROSION CONTROL MEASURES. THE AREA BENEATH THE REMOVED ROCK DITCH CHECK MUST BE ADDRESSED WITH PERMANENT STABILIZATION MEASURES.

ROCK DITCH CHECK

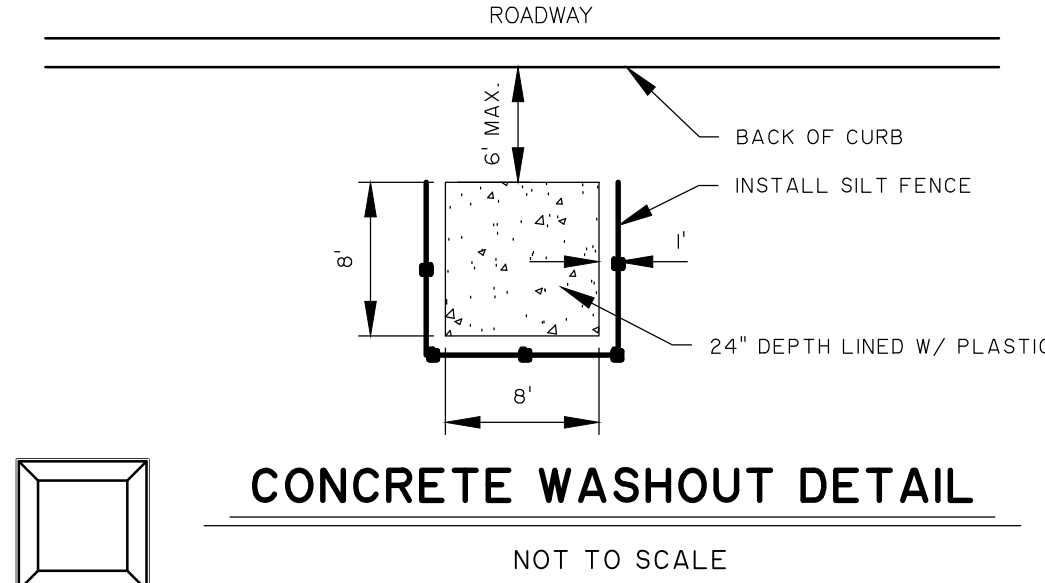
NOT TO SCALE



STAIR-STEP GRADING

LAND GRADING TECHNIQUES

NOT TO SCALE



WHEN AND WHERE TO USE IT:
SILT FENCE IS APPLICABLE IN AREAS:

WHERE THE MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE FENCE IS 100- FEET. WHERE THE MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO FENCE LINE) IS 2H:1V. THAT DO NOT RECEIVE CONCENTRATED FLOWS GREATER THAN 0.5 CFS.

DO NOT PLACE SILT FENCE ACROSS CHANNELS OR USE IT AS A VELOCITY CONTROL BMP.

MATERIALS:
STEEL POSTS
USE 48-INCH LONG STEEL POSTS THAT MEET THE FOLLOWING MINIMUM PHYSICAL REQUIREMENTS:
COMPOSED OF HIGH STRENGTH STEEL WITH MINIMUM YIELD STRENGTH OF 50,000 PSI.
HAVE A STANDARD "I" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-INCHES AND NOMINAL "I" LENGTH OF 1.48-INCHES.
WEIGH 1.25 POUNDS PER FOOT (± 8%).
HAVE A SOIL STABILIZATION PLATE WITH A MINIMUM CROSS SECTION AREA OF 17-SQUARE INCHES ATTACHED TO THE STEEL POSTS.
PAINTED WITH A WATER BASED BAKED ENAMEL PAINT.

USE STEEL POSTS WITH A MINIMUM LENGTH OF 4- FEET, WEIGHING 1.25 POUNDS PER LINEAR FOOT (± 8%) WITH PROJECTIONS TO AID IN FASTENING THE FABRIC. EXCEPT WHEN HEAVY CLAY SOILS ARE PRESENT ON SITE, STEEL POSTS WILL HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM SUCH THAT WHEN THE POST IS DRIVEN TO THE PROPER DEPTH, THE PLATE WILL BE BELOW THE GROUND LEVEL FOR ADDED STABILITY.
THE SOIL PLATES SHOULD HAVE THE FOLLOWING CHARACTERISTICS:
BE COMPOSED OF MINIMUM 16 GAUGE STEEL.
HAVE A MINIMUM CROSS SECTION AREA OF 17-SQUARE INCHES.

GEOTEXTILE FILTER FABRIC:
FILTER FABRIC IS COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS COMPOSED OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES.
FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER.
FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION.
FREE OF DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES.
CUT TO A MINIMUM WIDTH OF 36 INCHES.

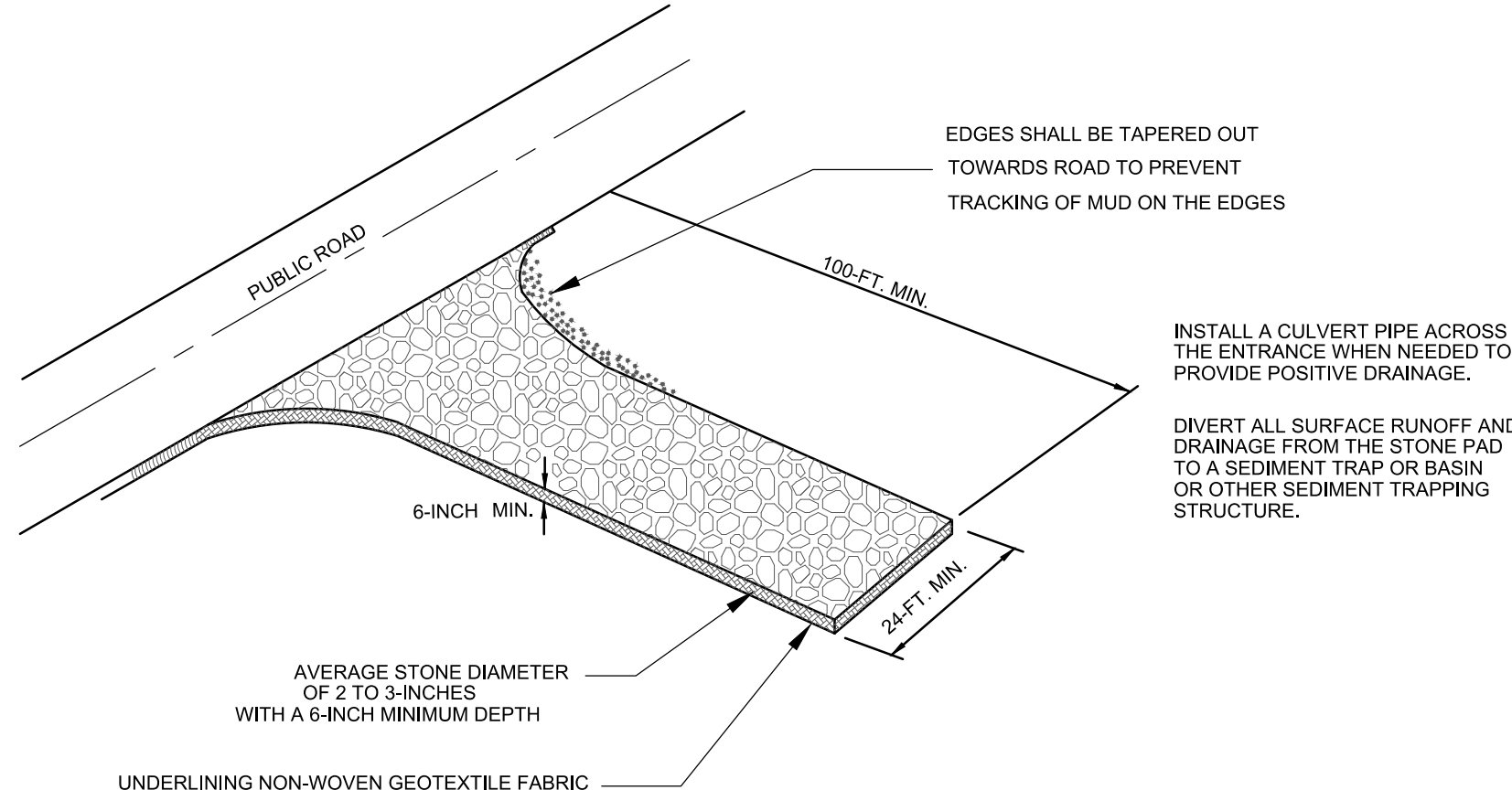
USE ONLY FABRIC APPEARING ON SCDOT APPROVAL SHEET #34 MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

INSTALLATION:
EXCAVATE A TRENCH APPROXIMATELY 6-INCHES WIDE AND 6-INCHES DEEP WHEN PLACING FABRIC BY HAND. PLACE 12-INCHES OF GEOTEXTILE FABRIC INTO THE 6-INCH DEEP TRENCH, EXTENDING THE REMAINING 6-INCHES TOWARDS THE UPSLOPE SIDE OF THE TRENCH. BACKFILL THE TRENCH WITH SOIL OR GRAVEL AND COMPACT. BURY 12-INCHES OF FABRIC INTO THE GROUND WHEN PNEUMATICALLY INSTALLING SILT FENCE WITH A SLICING METHOD. PURCHASE FABRIC IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, WRAPPED THE FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 6-INCH MINIMUM OVERLAP. INSTALL POSTS TO A MINIMUM DEPTH OF 24-INCHES. INSTALL POSTS A MINIMUM OF 1- TO 2- INCHES ABOVE THE FABRIC, WITH NO MORE THAN 3- FEET OF THE POST ABOVE THE GROUND. SPACE POSTS TO MAXIMUM 6- FEET CENTERS. ATTACH FABRIC TO WOOD POSTS USING STAPLES MADE OF HEAVY-DUTY WIRE AT LEAST 1-1/2-INCH LONG. SPACE A MAXIMUM OF 6-INCHES APART. STAPLE A 2-INCH WIDE LATHE OVER THE FILTER FABRIC TO SECURELY FASTEN IT TO THE UPSLOPE SIDE OF WOODEN POSTS. ATTACH FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED AND PLACED IN A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC. IN CALL CASES, TIES SHOULD BE AFFIXED IN NO LESS THAN 4 PLACES. INSTALL THE FABRIC A MINIMUM OF 24-INCHES ABOVE THE GROUND. WHEN NECESSARY, THE HEIGHT OF THE FENCE ABOVE GROUND MAY BE GREATER THAN 24-INCHES. IN TIDAL AREAS, EXTRA SILT FENCE HEIGHT MAY BE REQUIRED. THE POST HEIGHT WILL BE TWICE THE EXPOSED POST HEIGHT. POST SPACING WILL REMAIN THE SAME AND EXTRA HEIGHT FABRIC WILL BE 4-, 5-, OR 6- FEET TALL. LOCATE SILT FENCE CHECKS EVERY 100 FEET MAXIMUM AND AT LOW POINTS. INSTALL THE FENCE PERPENDICULAR TO THE DIRECTION OF FLOW AND PLACE THE FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.

INSPECTION AND MAINTENANCE:
CHECK FOR SEDIMENT BUILDUP AND FENCE INTEGRITY. CHECK WHERE RUNOFF HAS ERODED A CHANNEL BENEATH THE FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED BY FENCE OVERTOPPING. IF THE FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE SECTION OF FENCE IMMEDIATELY. REMOVE SEDIMENT ACCUMULATED ALONG THE FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED. REMOVE TRAPPED SEDIMENT FROM THE SITE OR STABILIZE IT ON SITE. REMOVE SILT FENCE WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED OR AFTER TEMPORARY BEST MANAGEMENT PRACTICES (BMPs) ARE NO LONGER NEEDED. PERMANENTLY STABILIZE DISTURBED AREAS RESULTING FROM FENCE REMOVAL.

SILT FENCE

NOT TO SCALE



WHEN AND WHERE TO USE IT:

STABILIZED CONSTRUCTION ENTRANCES SHOULD BE USED AT ALL POINTS WHERE TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVING DIRECTLY ONTO A PUBLIC ROAD.

IMPORTANT CONSIDERATIONS:

IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFFSITE. WASHDOWN FACILITIES SHALL BE REQUIRED AS DIRECTED BY SCDHEC AS NEEDED. WASHDOWN AREAS IN GENERAL MUST BE ESTABLISHED WITH CRUSHED GRAVEL AND DRAIN INTO A SEDIMENT TRAP OR SEDIMENT BASIN.

CONSTRUCTION ENTRANCES SHOULD BE USED IN CONJUNCTION WITH THE STABILIZATION OF CONSTRUCTION ROADS TO REDUCE THE AMOUNT OF MUD PICKED UP BY VEHICLES.

INSTALLATION:

REMOVE ALL VEGETATION AND ANY OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA.

DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM STONES TO A SEDIMENT TRAP OR BASIN.

INSTALL A NON-WOVEN GEOTEXTILE FABRIC PRIOR TO PLACING ANY STONE.

INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE POSITIVE DRAINAGE.

THE ENTRANCE SHALL CONSIST OF 1-INCH TO 3-INCH D50 STONE PLACED AT A MINIMUM DEPTH OF 6-INCHES.

MINIMUM DIMENSIONS OF THE ENTRANCE SHALL BE 24- FEET WIDE BY 100- FEET LONG, AND MAY BE MODIFIED AS NECESSARY TO ACCOMMODATE SITE CONSTRAINTS.

THE EDGES OF THE ENTRANCE SHALL BE TAPERED OUT TOWARDS THE ROAD TO PREVENT TRACKING OF MUD AT THE EDGE OF THE ENTRANCE.

INSPECTION AND MAINTENANCE:

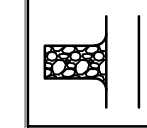
CHECK FOR MUD AND SEDIMENT BUILDUP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING PERIODS OF WET WEATHER. MAINTENANCE IS REQUIRED MORE FREQUENTLY IN WET WEATHER CONDITIONS. RESHAPE THE STONE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.

WASH OR REPLACE STONES AS NEEDED. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF-SITE BY VEHICLES.

FREQUENT WASHING WILL EXTEND THE USEFUL LIFE OF STONE.

IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED WHEN THE WATER CAN BE DISCHARGED TO A SEDIMENT TRAP OR BASIN.

REPAIR ANY BROKEN PAVEMENT IMMEDIATELY.



STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

DC

DUST CONTROL ON DISTURBED AREAS

DEFINITION

Controlling surface and air movement of dust on land-disturbing activities.



PURPOSE

- Prevent the movement of dust from exposed soil surfaces.
- Prevent the movement of airborne substances that may be harmful to health.

INSTALLATION

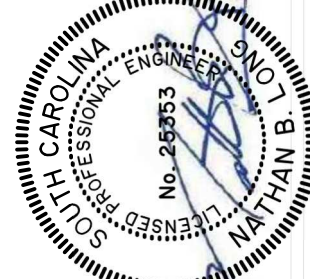
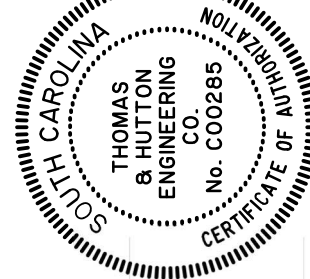
- Apply according to approved plan, if shown.
- Mulch disturbed areas and tackify with resins such as asphalt, Curasol or Terratack according to manufacturer's recommendations.
- Stabilize disturbed areas with temporary or permanent vegetation.
- Irrigate disturbed areas until surface is wet.
- Cover surfaces with crushed stone or gravel.

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DUST CONTROL MEASURES

NOT TO SCALE

DC



PERMIT SET - FOR REVIEW PURPOSES ONLY

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UNIVERSITY INVESTMENTS, LLC
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PARCELS 12A, 12B, & 12C

ES & PC DETAILS

JOB NO: J-25312.0015
DATE: 05/30/23
DRAWN: CGC
DESIGNED: JDF
REVIEWED: HAC
APPROVED: NBL
SCALE: 1" = 1'

EC5.1