**CITY ADMINISTRATOR**MIKE COCHRAN



CITY COUNCIL
JEFF C. CHANDLER, MAYOR PRO-TEM
MIKE DYSON
KEVIN HEDGPETH
JOEL E. HODGES
DAN OWENS
MICHAEL SALLY

## Staff Report

To: The Hanahan Planning Commission

Cc: Larry Sturdivant, Building Official, Cawood South (Anchor Consulting

Engineers), Marc Copeland (Century Development, LLC) From: Jeff Hajek, Planner/Economic Development Director

Date: March 3, 2020

Re: Rezoning for "Tanner Hall, Phase 7D"

#### **General Information**

Applicant/Owner: Marc Copeland, Century Development, LLC

**Location**: Southwest of intersection of Tanner Ford Blvd. and Tanner Hall Blvd. **Tax Map Number(s)**: TMS #259-00-00-130; 259-00-00-183; 259-00-00-182;

Approval Requested: Rezoning

Existing Zoning: General Commercial (CG) and Residential/Office (RO)

Requested Zoning: Single-Family Residential (RS)

### **Background and General Application Overview**

The proposed site is located adjacent to the Tanner Hall subdivision and within the overall Tanner Plantation Master development, southwest of the intersection of Tanner Ford Boulevard and Tanner Hall Boulevard. Originally, the proposed development consisted of three (3) separate parcels totaling 20.9 acres, but these internal property lines have been abandoned and now there are five (5) individual parcels with varying acreage. These five new parcels were given subdivision plat approval by the Planning Commission at the February 4, 2020 meeting and have been recorded with Berkeley County. These parcels include:

- TMS# 259-00-00-130 (16.8 acres)
  - Site of the proposed 55 lot subdivision ("Phase 7D") will be developed
- TMS# 259-00-00-184 (2.8 acres)
  - Site to remain RO zoning (Residential/Office)
- TMS# 259-00-00-183 (0.31 acres)
  - Residual tract for future single-family detached use
- TMS# 259-00-00-182 (0.60 acres)
  - Residual tract for future single-family detached use
- TMS# 259-00-00-181 (0.33 acres)

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### Residual tract for future single-family detached use

The property lines of the formerly platted three parcels were requested by the Planning Commission and Staff to be abandoned in order to address the issue of split zoning (one property containing two separate zoning districts). One of the original parcels (formerly TMS#259-00-00-028) was zoned RS, while the other two parcels (259-00-00-122 and 259-00-00-130) had both CG and RO designations—another reason why the rezoning was requested by Planning Commission and Staff.

As a reminder, the applicant is proposing to create a subdivision of 55 single-family lots, ranging from 8,001 SF to 12,456 SF (average lot size: 8,772 SF) in an area on approximately 16.8 acres of land. Proposed access to the site will be located off Tanner Hall Boulevard at the private roundabout of the Tanner Hall Subdivision entrance, opposite the amenity center. Currently, there is already a stub out built for the proposed entrance road.

## **Analysis**

Overview of Existing Zoning Districts: General Commercial (CG), and Residential/Office (RO)

#### General Commercial (CG)

The CG district's intent is to:

(Section 4.1.1(H)) This zone intends to foster and advance opportunities for economic development, employment, and sales of goods and services in Hanahan in locations with good access to infrastructure on arterial roads or commercial parks where impacts to lower-intensity uses can be successfully mitigated.

The CG zone (Section 4.5.9) is one of three zoning districts in the City that allow a wide variety of commercial and business-focused uses. In total, there are twenty-five (25) properties with this zoning designation. Section 4.3 (Land Use Table) shows all of the allowed uses within this district. Outside of the commercial uses permitted, single-family detached, housing services for the elderly, hotels, and bed and breakfasts are allowed. Lastly, the minimum lot area (6,000 SF) and width (50') are smaller than that of Single-Family Residential (RS) and there is higher density (7 units per acre) allowed.

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### Residential/Office (RO)

The RO district's intent is to:

(Section 4.1.1(G)) This zone intends to accommodate office, institutional, and residential uses in areas along collector or arterial roads that will not sustain more intense uses or to transition between more intense zoning districts and residential areas.

The RO zone (Section 4.5.8) is another one of three zoning districts in the City that allow a wide variety of commercial and business-focused uses. However, as stated in the Intent, this district aims to provide commercial uses that do not have more intensive uses. In total, this is a much smaller district and composes of only four (4) properties with this zoning designation. Section 4.3 (Land Use Table) shows all of the allowed uses within this district. Outside of the lighter commercial uses permitted (banking, real estate services, professional services, etc.), single-family detached, housing services for the elderly, hotels, and bed and breakfasts are allowed. Lastly, the minimum lot area is 6,000 SF and minimum width is 60, and the density (7 units per acre) is the same as CG.

As stated in the Background section of this report, TMS# 259-00-00-184 (the parcel to the west of subject property where the residences will be built) will remain RO. This zoning district exists to provide a harmonious existence with RS in order to allow for uses with low intensity.

Overview of Proposed Zoning District: Single-Family Residential (RS)

The proposed (and existing) zoning district for the subject development is RS (Section 4.5.4). The intent of this district seeks to:

(Section 4.1.2(B))"...foster, preserve, and promote neighborhoods in which the principal uses of land are detached, single-family dwellings and related accessory and support facilities. The zone also provides opportunities for diverse housing choices in planned developments, which shall be held to high standards necessary for compatibility with the surrounding community. The zone should be mapped to encompass those areas of Hanahan that constitute suburban, bedroom communities within the city as well as existing traditional neighborhoods."

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The RS zone (Section 4.5.4), the largest zoning district in the City, is composed of uses that are strictly residential with a few exceptions allowed. These exceptions include institutions both religious and governmental, and neighborhood amenities such as a clubhouse, pool, etc. The minimum lot area is 8,000 SF and the minimum width is 60, with a density of 5 units per acre.

Given the proposed use of a 55-lot subdivision, Tanner Hall Phase 7D meets the specific requirements laid out in the RS ordinance. Furthermore, since this development is an extension of the existing Tanner Hall subdivision, it is fitting that the zoning matches the existing character of the neighborhood.

Consistency with the Comprehensive Plan and Other Considerations

As with any rezoning, the requested designation must align with the goals, policies and future land uses of the municipality's guiding comprehensive plan. According to the City of Hanahan 2012 Comprehensive Plan (the most current to date), this proposed rezoning is within compliance of this guiding document. In Section I: Issues, Goals and Policies of the comprehensive plan, this rezoning would be compliant with a list of goals set forth in the document. These include:

#### Population Goals and Policies

GOAL 3: Hanahan will guide population growth to areas where supporting infrastructure exists or can efficiently be expanded without sacrificing the environment or quality of life which currently characterize Hanahan.

2. The City will encourage new growth to locate where public services already exist and are adequate to handle needs so the City can continue to provide the highest quality of essential services

#### Land Use Goals and Policies

GOAL 1: Hanahan will continue to protect and enhance the character of the City's existing neighborhoods as well as encourage the preservation of its wetlands and natural resources

3. The City will ensure that new development in residential districts is compatible in scale and character with existing residences and that it preserves important neighborhood characteristics.

Lastly, the 2012 Comprehensive Plan Future Land Use Map (Appendix: Figure 1) identifies the future land use of the subject properties as "Neighborhood Mixed Use." The intent of this future land use district, is "to promote the integration of appropriately scaled and pedestrian-friendly commercial and residential uses." Principal residential uses of land include townhomes, row houses, *single-family* 

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housing, duplexes and accessory dwelling units. Although this proposed development is not seeking the denser potential of the future intent, it is certainly within its right to develop single-family detached as prescribed in the principal residential uses.

Per Section III: Future Land Use Districts, the future land use plan does allow flexibility as it states that "While the future land use plan neither dictates a precise requirement nor eliminates room for flexibility, it does articulate a vision and guide for future development in the City." It is the City's opinion that this rezoning would indeed "articulate a vision and guide for future development," as well as ensure that the surrounding character of the neighborhood is preserved.

#### Recommendations

Based upon staff's review, it is recommended that the Planning Commission *approve* the amendment to the 2010 Zoning Map for the rezoning of TMS numbers 259-00-00-130, 259-00-00-183 and 259-00-00-182 to Single-Family Residential (RS) for the following reasons:

- 1. The proposed development is in line with the 2012 Comprehensive Plan Goals, Policies and Future Land Uses
- 2. The proposed development is in line with the 2008 Zoning Ordinance and its surrounding zoning districts
- 3. The rezoning will benefit the economic well-being of the City and its residents.

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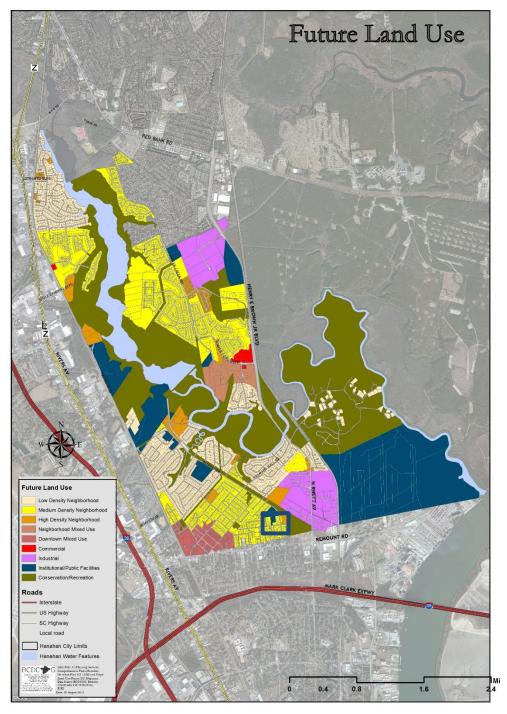
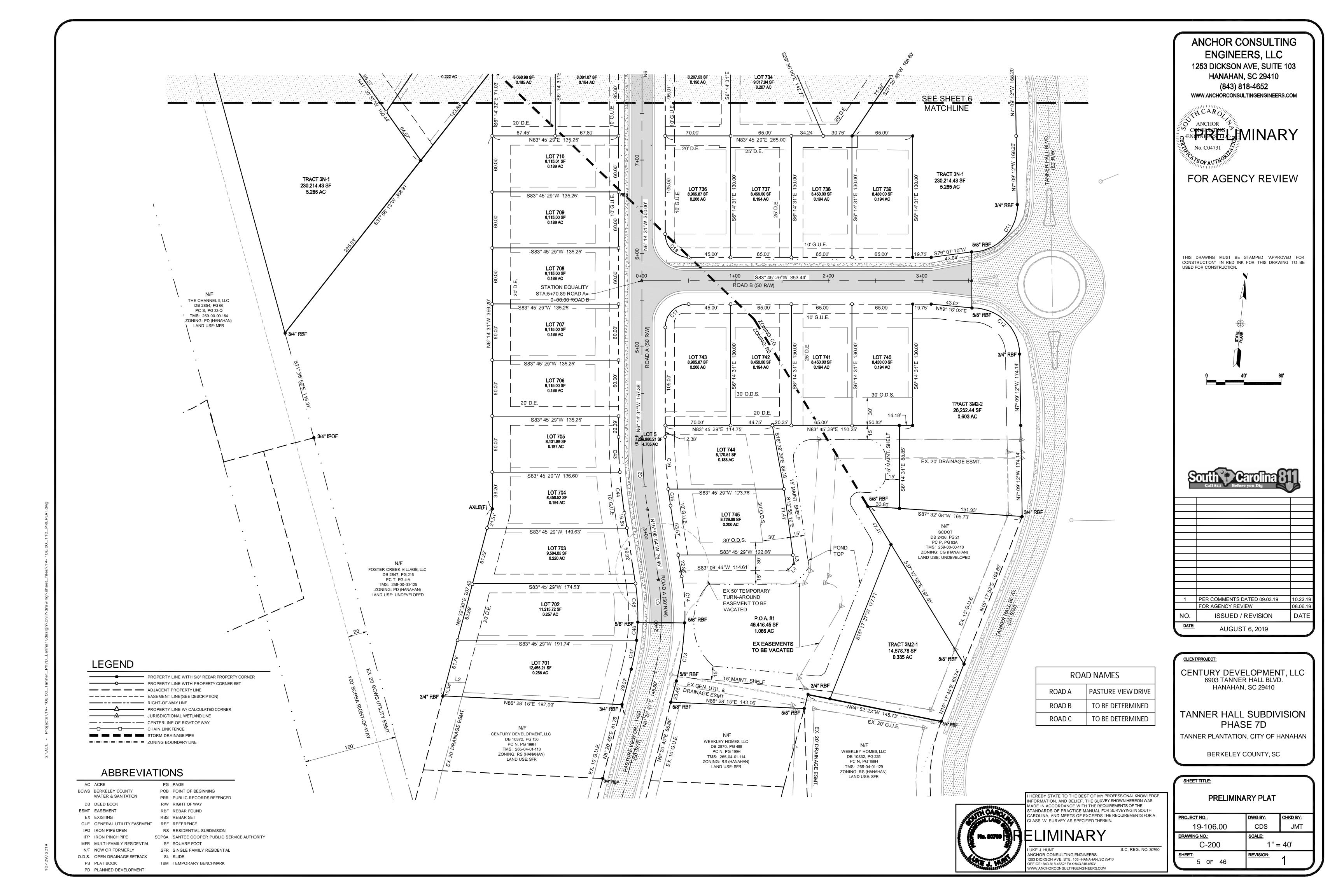


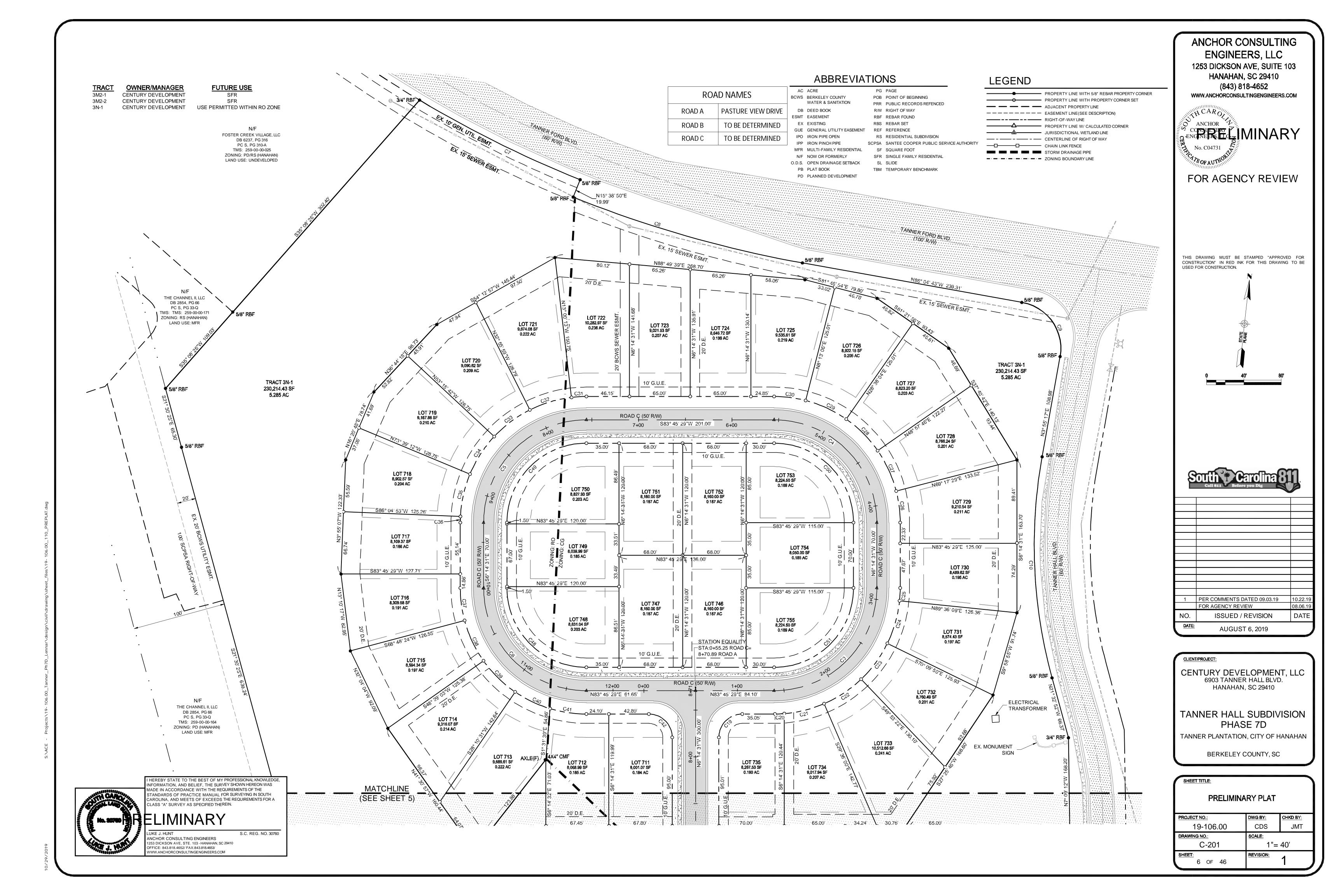
Figure 1: 2012 Future Land Use Map

# CITY OF HANAHAN, SOUTH CAROLINA REZONING REQUEST APPLICATION

DATE: January 22, 2020

PROJECT NAME: Tanner Hall Phase 7D
ENGINEERING FIRM: Anchor Consulting Engineers, LLC
APPLICANT'S NAME: Cawood South
OWNER OF PROPERTY: Century Development LLC; Marc Copeland
ADDRESS: 6903 Tanner Hall Blvd., Hanahan, SC 29410
LOCATION OF PROPERTY TO BE REZONED:  SW corner of Tanner Ford Blvd. and Tanner Hall Blvd.; Future Tract 3N-1, 3M2-1, 3M2-2 and 3M2-3
TAX MAP NUMBER: Portion of TMS: 259-00-00-028, 259-00-00-122 & 259-00-00-130.
Properties will be referred to as Tracts 3N-1 (16.866 Ac.), 3M2-1 (0.335 Ac.), 3M2-2 (0.603 Ac.) and 3M2-3 (0.311 Ac.)
SIZE OF LOT OR PARCEL X AREA: see above
PRESENT ZONING CLASSIFICATION: CG
REQUESTED ZONING CLASSIFICATION CHANGED TO: RS
PROPOSED USE OF SITE:single family detatched residential
This is to certify that Cawood South is my authorized representative for my zoning change request and that I request a change in land classification for my property from CG to RS
Signature of Owner:
Signature of Applicant:
<ul> <li>NOTE: This application should be typed, or printed in blue ink. This application allows the City of Hanahan to post notices on your property concerning this request.</li> </ul>
There is a charge for this application. See attached fee schedule.

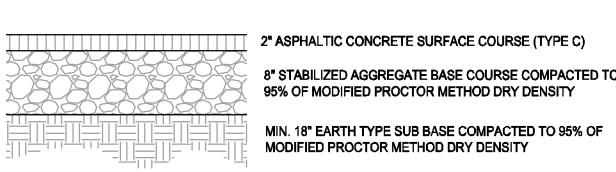




PARCEL LINE TABLE				
LINE#	LENGTH	DIRECTION		
L1	15.68'	N8° 20' 44"E		
L2	20.45'	N86° 28' 16"E		
L3	9.18'	S13° 59' 10"E		
L4	9.54'	S37° 31' 29"W		

LOT CURVE TABLE					
CURVE#	ARC LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C7	192.14'	1230.00'	8°57'00"	N69° 52' 41"W	191.94'
C8	255.82'	1250.00'	11°43'34"	N80° 12' 57"W	255.38'
C9	78.54'	50.00'	90°00'06"	N41° 04' 42"W	70.71'
C10	238.88'	537.39'	25°28'10"	N8° 48' 48"W	236.92'
C11	78.24'	50.00'	89°39'40"	N37° 40' 35"E	70.50'
C12	78.84'	50.00'	90°20'23"	N52° 19' 22"W	70.92'
C13	62.96'	275.00'	13°07'01"	S1° 47' 13"W	62.82'
C14	50.20'	188.61'	15°14'56"	N9° 50' 55"W	50.05'
C15	18.01'	475.00'	2°10'19"	S14° 03' 45"E	18.00'
C16	55.83'	475.00'	6°44'04"	N9° 36' 34"W	55.80'
C17	39.27'	25.00'	90°00'00"	N38° 45' 29"E	35.36'
C18	39.27'	25.00'	90°00'00"	N51° 14' 31"W	35.36'
C19	39.26'	25.00'	89°58'13"	N38° 46' 22"E	35.35'
C20	9.96'	135.00'	4°13'34"	N81° 14' 24"E	9.96'
C21	44.13'	135.00'	18°43'49"	N69° 45' 43"E	43.94'
C22	47.81'	135.00'	20°17'25"	N50° 15' 06"E	47.56'
C23	47.77'	135.00'	20°16'28"	N29° 58' 10"E	47.52'
C24	47.67'	135.00'	20°13'55"	N9° 42' 58"E	47.42'
C25	13.77'	135.00'	5°50'44"	N3° 19' 22"W	13.77'
C26	34.09'	135.00'	14°27'59"	N13° 28' 51"W	34.00'
C27	47.90'	135.00'	20°19'40"	N30° 52' 40"W	47.65'
C28	47.89'	135.00'	20°19'37"	N51° 12' 19"W	47.64'
C29	48.07'	135.00'	20°23'58"	N71° 34' 07"W	47.81'

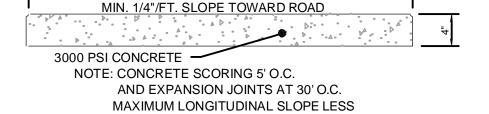
		LOT CU	IRVE TA	BLE	
CURVE#	ARC LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C30	34.10'	135.00'	14°28'25"	N89° 00' 19"W	34.01'
C31	15.95'	135.00'	6°46'05"	S80° 22' 26"W	15.94'
C32	46.94'	135.00'	19°55'14"	S67° 01' 47"W	46.70'
C33	47.89'	135.00'	20°19'37"	S46° 54' 21"W	47.64'
C34	48.04'	135.00'	20°23'26"	S26° 32' 50"W	47.79'
C35	46.75'	135.00'	19°50'26"	S6° 25' 54"W	46.51'
C36	6.47'	135.00'	2°44'52"	S4° 51' 45"E	6.47'
C37	35.23'	135.01'	14°57'02"	S13° 42' 53"E	35.13'
C38	47.89'	135.01'	20°19'20"	S31° 21' 04"E	47.63'
C39	47.85'	135.01'	20°18'32"	S51° 40' 00"E	47.60'
C40	41.70'	135.01'	17°41'44"	S70° 40' 08"E	41.53'
C41	39.40'	135.01'	16°43'22"	S87° 52' 41"E	39.26'
C42	39.26'	24.99'	90°00'00"	S51° 15' 25"E	35.35'
C43	37.64'	525.00'	4°06'29"	S8° 17' 46"E	37.63'
C44	43.97'	525.00'	4°47'54"	S12° 44' 58"E	43.95'
C45	41.50'	248.00'	9°35'16"	S9° 46' 20"E	41.45'
C46	19.49'	225.00'	4°57'45"	N2° 10' 24"W	19.48'
C47	31.58'	225.00'	8°02'26"	N4° 19' 42"E	31.55'
C48	133.53'	85.00'	90°00'31"	N51° 14' 16"W	120.22'
C49	133.50'	85.00'	89°59'29"	N38° 45' 44"E	120.20'
C50	133.52'	85.00'	90°00'00"	S51° 14' 31"E	120.21'
C51	133.52'	85.00'	90°00'00"	S38° 45' 29"W	120.21'



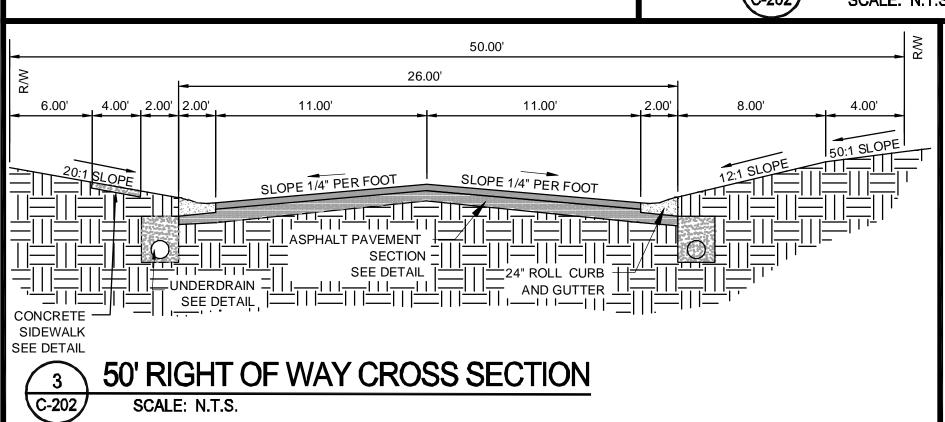
. PAVEMENT SECTION SHALL BE THE MORE SUBSTANTIAL OF EITHER THE GEOTECHNICAL RECOMMENDATION OR THE MINIMUM REQUIREMENT OF THE JURISDICTION HAVING AUTHORITY (BERKELEY COUNTY).

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPACTION TESTS FOR THE SUBGRADE SOILS PRIOR TO THE PROOFROLL. COMPACTION TESTS SHALL BE EVERY 250' ALONG THE ALIGNMENT OF THE CURB AS WELL AS EVERY 250' IN THE CENTER OF EACH DRIVE ISLE AND STAGGERED LOCATIONS. TESTS SHALL ALSO BE REQUIRED IN EACH CUL-DE-SAC AND AT EACH INTERSECTION TESTS TO BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW.





CONCRETE SIDEWALK SECTION C-202 SCALE: N.T.S.



# **GENERAL NOTES:**

OWNER/DEVELOPER: CENTURY DEVELOPMENT, LLC MARC COPELAND 6903 TANNER HALL BLVD. HANAHAN, SC 29410 ENGINEER: ANCHOR CONSULTING ENGINEERS, LLC

JEFFREY M. TANNER, PE 1253 DICKSON AVE., SUITE 03 HANAHAN, SC 29410

TEL.: 843-818-4652 TMS 259-00-00-028, 259-00-00-122, AND 259-00-00-130

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES IN FLOOD ZONE "X" PER F.E.M.A. MAP-COMMUNITY PANEL NUMBER 45015C 0695 D,

REVISED OCTOBER 16, 2003. AREA INFORMATION:

> A. SITE BOUNDARY = 910,953.96 SQ FT (20.912 AC) B. TOTAL LOTS AREA = 482,470.96 SQ FT (11.076 AC)

C. P.O.A. AREA = 46,416.46 SQ FT (1.066 AC)

D. RIGHT OF WAY AREA = 110,964.24 SQ FT (2.547 AC)

E. RESIDUAL AREA = 271,102.30 SQ FT (6.223 AC) TOTAL NUMBER OF LOTS = 55

A. AVG LOT SIZE = 8,772.20 SQ FT (0.201 AC)

REAR-RESIDENTIAL

B. LARGEST (LOT 701) = 12,456.06 SQ FT (0.286 AC)

C. SMALLEST (LOT 711) = 8,001.07 SQ FT (0.184 AC)

ZONING CHART:

	RS	RO	C
MINIMUM LOT AREA (SF):	8,000	6,000	6
MINIMUM LOT WIDTH (FT):	60	60	5
SETBACKS:			
FRONT, STREET FRONTAGE	25'	25'	2
SIDE-RESIDENTIAL	В	5'	5

(B) RESIDENTIAL SIDE YARDS SHALL OCCUPY AT LEAST TWENTY-FIVE (25) PERCENT OF THE WIDTH OF THE LOT IN SUM. NO SIDE SETBACK SHALL BE LESS THAN FIVE (5) FEET.

THIS IS NOT A TRUE AND VALID COPY UNLESS IT BEARS THE EMBOSSED SEAL AND ORIGINAL SIGNATURE OF THE PROFESSIONAL LAND

DISTANCES SHOWN HEREON ARE HORIZONTAL GROUND DISTANCES, AND REPRESENT FIELD LOCATION OF MONUMENTS.

ANYTHING SHOWN OUTSIDE THE DEFINED BOUNDARY IS FOR DESCRIPTIVE PURPOSES ONLY. THE BEARINGS SHOWN HEREON ARE BASED UPON GRID NORTH AND DERIVED FROM THE SOUTH CAROLINA REAL-TIME KINEMATICS

NETWORK USING GPS. THE PUBLIC RECORDS REFERENCED ON THIS PLAT ARE ONLY USED AND/OR NECESSARY TO THE ESTABLISHMENT OF THE BOUNDARY OF

THIS PROPERTY. THE SURVEYOR HAS MADE NO OTHER INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD ENCUMBRANCES,

RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER FACTS DEALING WITH THE TITLE OF THE PROPERTY.

ALL PROPERTY CORNERS ARE 5/8" REBAR UNLESS OTHERWISE NOTED.

CURRENT PROPERTY OWNER: CENTURY DEVELOPMENT LLC.

NUMERICAL ADDRESSES IF APPLICABLE.

17, 2002 IN THE BERKELEY COUNTY ROD IN PLAT CABINET P PG 225-E.

CURRENT PROPERTY DEED OF OWNERSHIP: BERKELEY COUNTY REGISTER OF DEEDS BOOK 3918, PAGE 0150.

ADJACENT OWNERSHIP LISTED HEREON ARE BASED UPON BERKELEY COUNTY GIS SYSTEM AT THE TIME OF THE SURVEY. THIS PROPERTY MAY BE SUBJECT TO VARIOUS UTILITY EASEMENTS (IE POWER, GAS, TELEPHONE, SANITARY AND/OR STORM SEWER ETC.)

THAT WERE NOT NOTED EITHER IN THE REFERENCE DEED OR REFERENCE PLATS ASSOCIATED WITH THIS PROPERTY. DRAINAGE EASEMENTS HAVE PRIORITY IN AREAS WHERE MORE THAN ONE EASEMENT OCCUPY THE SAME SPACE.

ANY EASEMENTS FOR UTILITIES OR OTHER ENCROACHMENTS IN THE AREA TO BE DEDICATED FOR STREETS, HIGHWAYS, DRAINAGE OR OTHER PUBLIC OR PRIVATE USE ARE SUBJECT TO BINDING PROVISIONS THAT THE COSTS OF FUTURE RELOCATION OF ANY SUCH ENCROACHMENTS DUE TO THE CONSTRUCTION OR MAINTENANCE OF PUBLIC IMPORVEMENTS SHALL BE BORNE BY THE HOLDER OF THE

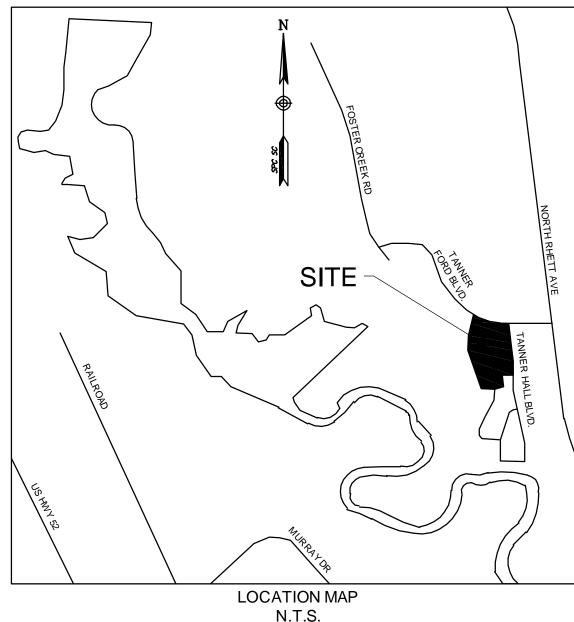
EASEMENT AND/OR UTILITY COMPANY. ALL OPEN SPACES, PONDS, WETLAND, STREET TREES, AND BUFFERS NO LOCATED ON A LOT SHALL BE DEDICATED TO TANNER HALL PLANTATION PROPERTY OWNERS ASSOCIATION. NOTHING IN THIS DEDICATION SHALL BE CONSTRUCTED TO IMPLY CREATING ANY DUTY

BY BERKELEY COUNTY TO MAINTAIN ANY OPEN SPACES, PONDS, WETLANDS, STREET TREES, AND BUFFERS SHOWN HEREON. OWNER/DEVELOPER IS RESPONSIBLE FOR COORDINATING WITH ALL SERVICE PROVIDERS FOR ESTABLISHING NECESSARY EASEMENTS AS WELL AS WITH THE COUNTY'S E-911 ADDRESSING DEPARTMENT FOR THE ASSIGNMENT AND APPROVAL OF STREET NAMES AND

- **PUBLIC RECORDS REFERENCED:** PLAT TITLED "CONVEYANCE PLAT SHOWING THE SUBDIVISION OF A PORTION OF TRACT 3, A 159.915 ACRE TRACT OF LAND INTO TRACT 3M, A 18.854 ACRE TRACT OF LAND, PROPERTY OF RGT/CHARLESTON PARTNERS, LTD, LOCATED AT TANNER PLANTATION, IN THE CITY OF HANAHAN, BERKELEY COUNTY, SOUTH CAROLINA", BY TRICO ENGINEERING CONSULTANTS, DATED MAY 24, 2002, AND RECORDED ON JULY
- PLAT TITLED "CONVEYANCE PLAT SHOWING THE SUBDIVISION OF A PORTION OF TRACT 3, A 88.997 ACRE TRACT OF LAND INTO TRACT 3N, A 12.021 ACRE TRACT OF LAND, PROPERTY OF RGT/CHARLESTON PARTNERS, LTD, LOCATED AT TANNER PLANTATION, IN THE CITY OF HANAHAN, BERKELEY COUNTY, SOUTH CAROLINA," BY TRICO ENGINEERING CONSULTANTS, DATED JULY 15, 2002, AND RECORDED ON
- AUGUST 26, 2002 IN THE BERKELEY COUNTY ROD IN PLAT CABINET P PG 262-A. PLAT TITLED "PLAT SHOWING THE SUBDIVISON OF TRACT 3M, A 17.184 ACRE TRACT OF LAND, PROPERTY OF CENTURY DEVELOPMENT, LLC, LOCATED AT TANNER PLANTATION, IN THE CITY OF HANAHAN, BERKELEY COUNTY, SOUTH CAROLINA," BY TRICO ENGINEERING

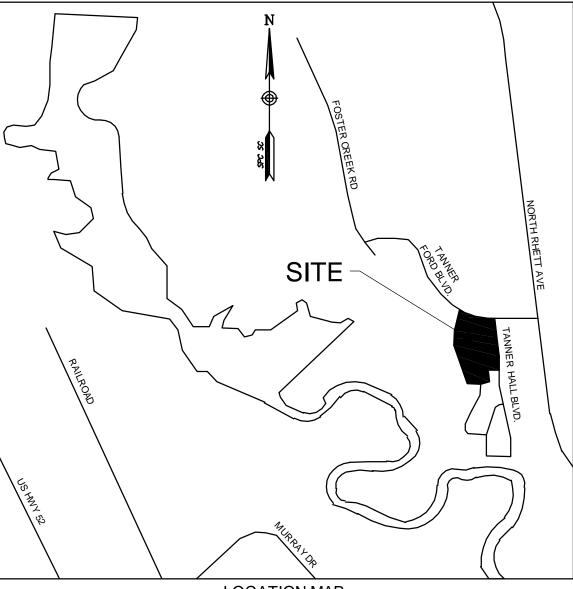
CONSULTANTS, DATED JANUARY 9, 2006, AND RECORDED ON APRIL 7, 2006 IN THE BERKELEY COUNTY ROD IN PLAT CABINET R, PAGE 10-C.

- PLAT TITLED "CONVEYANCE PLAT SHOWING THE SUBDIVISION OF TRACT 3M, A 18.854 ACRE TRACT OF LAND INTO TRACT 3M RESIDUAL, (17.691 AC.), AND TRACT 3M1, (1.163 AC.), PROPERTY OF CENTURY DEVELOPMENT, LLC, LOCATED AT TANNER PLANTATION, IN THE CITY OF HANAHAN, BERKELEY COUNTY, SOUTH CAROLINA," BY TRICO ENGINEERING CONSULTANTS, DATED AUGUST 15, 2005, AND RECORDED ON AUGUST 18, 2005 IN THE BERKELEY COUNTY ROD IN PLAT CABINET M PG 56-I.
- PLAT TITLED "PLAT SHOWING A PROPERTY LINE ADJUSTMENT BETWEEN TRACTS 3N AND T, PROPERTY OF CENTURY DEVELOPMENT, LLC LOCATED AT TANNER PLANTATION, IN THE CITY OF HANAHAN, BERKELEY COUNTY, SOUTH CAROLINA," BY TRICO ENGINEERING CONSULTANTS, DATED APRIL 27, 2006 AND RECORDED ON JUNE 22, 2006 IN THE BERKELEY COUNTY ROD IN PLAT CABINET R, PAGE 79-B.
- PLAT TITLED "PLAT SHOWING THE SUBDIVISION OF TRACT 3M, A 17.184 ACRE TRACT OF LAND, PROPERTY OF CENTURY DEVELOPMENT, LLC, LOCATED AT TANNER PLANTATION, IN THE CITY OF HANAHAN, BERKELEY COUNTY, SC" BY TRICO ENGINEERING CONSULTANTS, DATED APRIL 27, 2006 AND RECORDED ON JUNE 26, 2006 IN THE BERKELEY COUNTY ROD IN PLAT CABINET R, PAGE 88-B.
- 7. PLAT TITLED "EASEMENT PLAT SHOWING TANNER HALL PHASE 7C, A 21.903 AC. TRACT OF LAND, PROPERTY OF CENTURY DEVELOPMENT, LLC, LOCATED IN THE CITY OF HANAHAN, BERKELEY COUNTY, SOUTH CAROLINA" BY TRICO ENGINEERING CONSULTANTS, DATED JULY 31 2007 AND RECORDED ON OCTOBER 29, 2007 IN THE BERKELEY COUNTY ROD IN PLAT CABINET N, PAGES 199 & 200-H.
- PLAT TITLED "PLAT SHOWING A PROPERTY LINE ADJUSTMENT BETWEEN LOT 16 TANNER HALL PHASE 7C TMS 265-04-01-113 AND TMS 259-00-00-028, BOTH PARCELS PROPERTY OF CENTURY DEVELOPMENT LLC., LOCATED IN THE CITY OF HANAHAN, BERKELEY COUNTY SOUTH CAROLINA" BY TRICO ENGINEERING CONSULTANTS, DATED JULY 18, 2012 AND RECORDED ON AUGUST 28, 2012 IN THE BERKELEY COUNTY ROD IN PLAT CABINET P, PAGE 201-R.
- PLAT TITLED "PLAT SHOWING BOUNDARY LINE ADJUSTMENT OF TRACT "3N" (9.028 AC), TRACT "3M" (7.180) AC.) AND TMS 259-00-00-028 (4.705 AC.) CREATING TRACT "3M2-1", TRACT "3N-1" AND TRACT "3N-2", PROPERTY OF CENTURY DEVELOPMENT LLC, LOCATED AT TANNER PLANTATION, IN THE CITY OF HANAHAN, BERKELEY COUNTY, SOUTH CAROLINA, BY ANCHOR CONSULTING ENGINEERS, LLC DATED JUNE 9, 2019, UNRECORDED.



# AREA CHART

TOTAL BOUNDARY AREA = 20.912 AC RIGHT-OF-WAY AREA = 2.547 AC 55 LOTS AREA = 11.076 AC P.O.A. AREA = 1.066 AC TRACT 3M2-1 = 0.335 AC TRACT 3M2-2 = 0.603 AC TRACT 3N-1 = 5.285 AC



CLIENT/PROJECT: PASTURE VIEW DRIVE TO BE DETERMINED

HEREBY STATE TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, NFORMATION, AND BELIEF, THE SURVEY SHOWN HEREON WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TANDARDS OF PRACTICE MANUAL FOR SURVEYING IN SOUTH CAROLINA, AND MEETS OF EXCEEDS THE REQUIREMENTS FOR A LASS "A" SURVEY AS SPECIFIED THEREIN.

TO BE DETERMINED

**ROAD NAMES** 

ROAD B

VWW.ANCHORCONSULTINGENGINEERS.COM

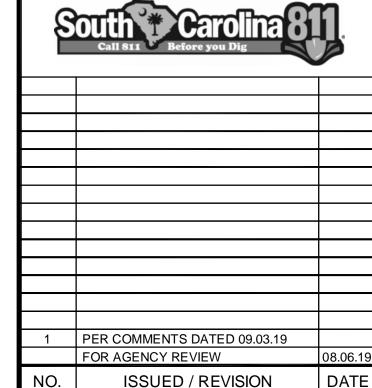
NCHOR CONSULTING ENGINEERS 53 DICKSON AVE, STE. 103 - HANAHAN, SC 29410 PFFICE: 843.818.4652/ FAX:843.818.4653/

ANCHOR CONSULTING ENGINEERS, LLC 1253 DICKSON AVE, SUITE 103 HANAHAN, SC 29410 (843) 818-4652 WWW.ANCHORCONSULTINGENGINEERS.COM



FOR AGENCY REVIEW

THIS DRAWING MUST BE STAMPED "APPROVED FOR CONSTRUCTION" IN RED INK FOR THIS DRAWING TO BE USED FOR CONSTRUCTION.



**AUGUST 6, 2019** 

CENTURY DEVELOPMENT, LLC 6903 TANNER HALL BLVD. HANAHAN, SC 29410

TANNER HALL SUBDIVISION PHASE 7D

TANNER PLANTATION, CITY OF HANAHAN

BERKELEY COUNTY, SC

SHEET TITLE:

PRELIMINARY PLAT CDS 19-106.00

PROJECT NO.: CHKD BY: JMT DRAWING NO.: C-202 NOT TO SCALE SHEET: 7 OF 46

#### **RESOLUTION NO. 2-2020**

## A RESOLUTION FOR THE CITY OF HANAHAN PLANNING COMMISSION TO RECOMMEND TO CITY COUNCIL CONSIDERATION AND ADOPTION OF AMENDING THE CITY OF HANAHAN'S ZONING MAP

**WHEREAS,** the City of Hanahan City Council adopted a comprehensive plan for the City of Hanahan in 2012 and a zoning code in 2008; and

**WHEREAS,** Section 2.4 (Amendments) of the City of Hanahan Zoning Ordinance provides a procedure for amending the ordinance; and,

**WHEREAS,** the City of Hanahan Planning Commission, along with the City Planner, has recommended changes to the City's Zoning Map and has made its findings to City Council; and,

**WHEREAS**, a public hearing on these proposed changes was held by the Planning Commission on March 3<sup>th</sup>, 2020 after due publication of notice of said public hearing as required by law; and,

**WHEREAS,** after hearing all who wished to be heard on this matter and upon review of the findings and recommendations of the Planning Commission, City Council now wishes to act on this matter;

**NOW, THEREFORE, BE IT RESOLVED** by the City of Hanahan Planning Commission that the following parcels be recommended for said rezoning:

TMS#: 259-00-00-182; 259-00-00-183; 259-00-00-130.

**BE IT FURTHER RESOLVED** to rezone the above referenced parcels from CG (General Commercial) and RO (Residential Office) to RS (Single-Family Residential) for consistency with the existing land use and the City of Hanahan's Comprehensive Plan future land use map.

DONE IN COMMISSION ASSEMBLED THIS 3rd DAY OF MARCH, 2020

Pat Eckstine, Chair

ATTEST:

Jeff Haiek, Planner/Economic Development Director

CITY ADMINISTRATOR MIKE COCHRAN



CITY COUNCIL
JEFF C. CHANDLER, MAYOR PRO-TEM
MIKE DYSON
KEVIN HEDGPETH
JOEL E. HODGES
DAN OWENS
MICHAEL SALLY

## Staff Report

To: The Hanahan Planning Commission

Cc: Larry Sturdivant, Building Official, Cawood South (Anchor Consulting

Engineers), Marc Copeland (Century Development, LLC) From: Jeff Hajek, Planner/Economic Development Director

Date: March 3, 2020

Re: Rezoning for TMS# 259-00-00-110

### **General Information**

Applicant/Owner: Marc Copeland, Century Development, LLC

Location: Tanner Hall Blvd., south of the private roundabout adjacent to the Amenity

Center

Tax Map Number(s): TMS #259-00-00-110

Approval Requested: Rezoning

Existing Zoning: General Commercial (CG)

Requested Zoning: Single-Family Residential (RS)

#### **Background and General Application Overview**

The undeveloped, property proposed to be rezoned Single-Family Residential (RS) is located adjacent to the Tanner Hall subdivision and within the overall Tanner Plantation Master development, southwest of the intersection of Tanner Ford Boulevard and Tanner Hall Boulevard. Specifically, the subject parcel is located south of the Tanner Hall roundabout on Tanner Hall Boulevard, just east of the recently proposed "Tanner Hall, Phase 7D,"

The triangular, subject parcel was previously owned by SCDOT and is originally part of a larger triangular shaped parcel east of Tanner Hall Boulevard that extends all the way to Henry E. Brown, Jr. Boulevard. In the early 2000s, this large tract (approximately 12 acres) was proposed to be a flyover on-ramp that would have eventually connected to Ashley Phosphate Road. Following the installation of Tanner Ford Boulevard, the "tip" of the subject parcel was thus created.

As of December 2019, the applicant has acquired the site and intends to abandon the property lines to ultimately create a rectangular parcel consisting of four (4) to five (5) lots, at a minimum of 8,000 SF, for single-family detached homes that will front

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Tanner Hall Boulevard. The existing parcels that will create the unified parcel consist of TMS numbers: 259-00-00-182, 259-00-00-110 (subject property), and 259-00-00-181. This tract will begin with TMS # 259-00-00-182 as the northern most portion and TMS # 259-00-00-181 as the southern most portion of the parcel.

### **Analysis**

Overview of Existing Zoning District: General Commercial (CG)

The CG district's intent is to:

(Section 4.1.1(H)) This zone intends to foster and advance opportunities for economic development, employment, and sales of goods and services in Hanahan in locations with good access to infrastructure on arterial roads or commercial parks where impacts to lower-intensity uses can be successfully mitigated.

The CG zone (Section 4.5.9) is one of three zoning districts in the City that allow a wide variety of commercial and business-focused uses. In total, there are twenty-five (25) properties with this zoning designation. Section 4.3 (Land Use Table) shows all the allowed uses within this district. Outside of the commercial uses permitted, single-family detached, housing services for the elderly, hotels, and bed and breakfasts are allowed. Lastly, the minimum lot area (6,000 SF) and width (50') are smaller than that of Single-Family Residential (RS) and there is higher density (7 units per acre) allowed.

Overview of Proposed Zoning District: Single-Family Residential (RS)

The proposed (and existing) zoning district for the subject development is RS (Section 4.5.4). The intent of this district seeks to:

(Section 4.1.2(B))"...foster, preserve, and promote neighborhoods in which the principal uses of land are detached, single-family dwellings and related accessory and support facilities. The zone also provides opportunities for diverse housing choices in planned developments, which shall be held to high standards necessary for compatibility with the surrounding community. The zone should be mapped to encompass those areas of Hanahan that constitute suburban, bedroom communities within the city as well as existing traditional neighborhoods."

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The RS zone (Section 4.5.4), the largest zoning district in the City, is composed of uses that are strictly residential with a few exceptions allowed. These exceptions include institutions both religious and governmental, and neighborhood amenities such as a clubhouse, pool, etc. The minimum lot area is 8,000 SF and the minimum width is 60, with a density of 5 units per acre.

As previously described in the Background section, since this development is an extension of the existing Tanner Hall subdivision, it is fitting that the zoning match the existing neighborhood and promote and preserve the intended character of the community. Furthermore, the proposed RS designation will provide zoning continuity, as the flanking parcels to the north and south of the subject site are also currently proposed for rezoning to the RS designation.

### Consistency with the Comprehensive Plan and Other Considerations

As with any rezoning, the requested designation must align with the goals, policies and future land uses of the municipality's guiding comprehensive plan. According to the City of Hanahan 2012 Comprehensive Plan (the most current to date), this proposed rezoning is within compliance of this guiding document. In Section I: Issues, Goals and Policies of the comprehensive plan, this rezoning would be compliant with a list of goals set forth in the document. These include:

### **Population Goals and Policies**

- GOAL 3: Hanahan will guide population growth to areas where supporting infrastructure exists or can efficiently be expanded without sacrificing the environment or quality of life which currently characterize Hanahan.
  - 2. The City will encourage new growth to locate where public services already exist and are adequate to handle needs so the City can continue to provide the highest quality of essential services

#### Land Use Goals and Policies

GOAL 1: Hanahan will continue to protect and enhance the character of the City's existing neighborhoods as well as encourage the preservation of its wetlands and natural resources

3. The City will ensure that new development in residential districts is compatible in scale and character with existing residences and that it preserves important neighborhood characteristics.

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Lastly, the 2012 Comprehensive Plan Future Land Use Map (Appendix: Figure 1) identifies the future land use of the subject properties as "Neighborhood Mixed Use." The intent of this future land use district, is "to promote the integration of appropriately scaled and pedestrian-friendly commercial and residential uses." Principal residential uses of land include townhomes, row houses, single-family housing, duplexes and accessory dwelling units. Although this proposed development is not seeking the denser potential of the future intent, it is certainly within its right to develop single-family detached as prescribed in the principal residential uses.

Per Section III: Future Land Use Districts, the future land use plan does allow flexibility as it states that "While the future land use plan neither dictates a precise requirement nor eliminates room for flexibility, it does articulate a vision and guide for future development in the City." It is the City's opinion that this rezoning would indeed "articulate a vision and guide for future development," as well as ensure that the surrounding character of the neighborhood is preserved.

#### Recommendations

Based upon staff's review, it is recommended that the Planning Commission *approve* the amendment to the 2010 Zoning Map for the rezoning of TMS number 259-00-00-110 to Single-Family Residential (RS) for the following reasons:

- 1. The proposed development is in line with the 2012 Comprehensive Plan Goals, Policies and Future Land Uses
- 2. The proposed development is in line with the 2008 Zoning Ordinance and its surrounding zoning districts
- 3. The rezoning will benefit the economic well-being of the City and its residents.

**CITY ADMINISTRATOR**MIKE COCHRAN



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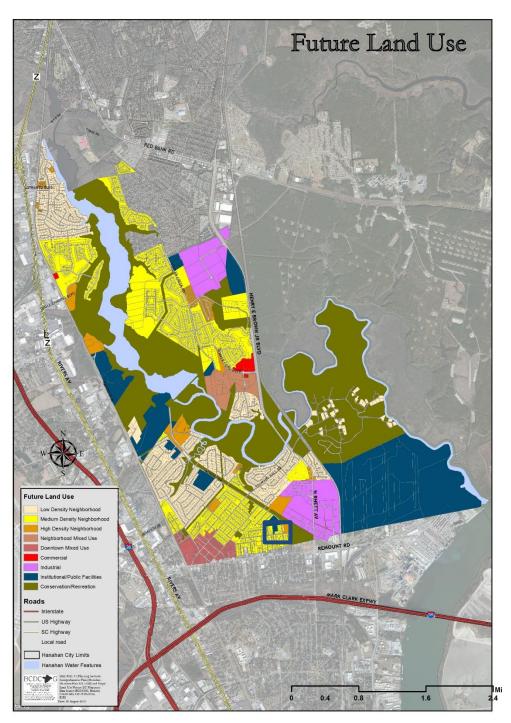


Figure 1: 2012 Future Land Use Map

#### **RESOLUTION NO. 3-2020**

## A RESOLUTION FOR THE CITY OF HANAHAN PLANNING COMMISSION TO RECOMMEND TO CITY COUNCIL CONSIDERATION AND ADOPTION OF AMENDING THE CITY OF HANAHAN'S ZONING MAP

**WHEREAS,** the City of Hanahan City Council adopted a comprehensive plan for the City of Hanahan in 2012 and a zoning code in 2008; and

**WHEREAS,** Section 2.4 (Amendments) of the City of Hanahan Zoning Ordinance provides a procedure for amending the ordinance; and,

**WHEREAS,** the City of Hanahan Planning Commission, along with the City Planner, has recommended changes to the City's Zoning Map and has made its findings to City Council; and,

**WHEREAS**, a public hearing on these proposed changes was held by the Planning Commission on March 3<sup>th</sup>, 2020 after due publication of notice of said public hearing as required by law; and,

**WHEREAS,** after hearing all who wished to be heard on this matter and upon review of the findings and recommendations of the Planning Commission, City Council now wishes to act on this matter;

**NOW, THEREFORE, BE IT RESOLVED** by the City of Hanahan Planning Commission that the following parcel(s) be recommended for said rezoning:

TMS#: 259-00-00-110

**BE IT FURTHER RESOLVED** to rezone the above referenced parcels from CG (General Commercial) to RS (Single-Family Residential) for consistency with the existing land use and the City of Hanahan's Comprehensive Plan future land use map.

DONE IN COMMISSION ASSEMBLED THIS 3rd DAY OF MARCH, 2020

Pat Eckstine, Chair

ATTEST:

Jeff Majek, Planner/Economic Development Director

# CITY OF HANAHAN, SOUTH CAROLINA REZONING REQUEST APPLICATION

DATE: January 22, 2020

PROJECT NAME: Tanner Hall Phase 7D
ENGINEERING FIRM: Anchor Consulting Engineers, LLC
APPLICANT'S NAME: Cawood South
OWNER OF PROPERTY: Century Development LLC; Marc Copeland
ADDRESS: 6903 Tanner Hall Blvd., Hanahan, SC 29410
LOCATION OF PROPERTY TO BE REZONED: Tract 3B. Along Tanner Hall Blvd.
A =
TAX MAP NUMBER: 259-00-00-110
SIZE OF LOT OR PARCEL X AREA: 0.309 ac.
PRESENT ZONING CLASSIFICATION: CG
REQUESTED ZONING CLASSIFICATION CHANGED TO: RS
PROPOSED USE OF SITE:single family detatched residential
This is to certify thatCawood South is my authorized representative for my zoning change request and that I request a change in land classification for my property from to RS
Signature of Owner:
Signature of Applicant:
<ul> <li>NOTE: This application should be typed, or printed in blue ink. This application allows the City of Hanahan to post notices on your property concerning this request.</li> </ul>

There is a charge for this application. See attached fee schedule.

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DAN OWENS
MICHAEL SALLY

## Staff Report

To: The Hanahan Planning Commission

Cc: Larry Sturdivant, Building Official; Warren Pruitt, ADC Engineering; Matt

Prosser, ADC Engineering; Dennis Avery, The Avery Company From: Jeff Hajek, Planner/Economic Development Director

Date: March 3, 2020

Re: Preliminary Land Development Plan Approval for Maple Street

Subdivision

Applicant/Owner: ADC Engineering

Location: Northwest Corner of Yeamans Hall Road and Maple Street

Tax Map Number(s): 265-12-03-018

Approval Requested: Preliminary Development Plan Approval

Existing Zoning/Land Use: Single-Family Residential (RS)/No current use

(undeveloped)

## **General Application Overview and Background**

The proposed site is located in the northwestern area of the intersection of Yeamans Hall Road and Maple Street. The existing site remains undeveloped and has a retention pond in the front, central portion of the parcel. Implied by the presence of the retention pond, the entire parcel and portions of the immediate surrounding area is within a flood zone (Zone AE), with a base flood elevation of 9 feet.

The applicant is proposing to create a subdivision of 8 single-family lots, ranging from 8,060 SF to 11,830 SF (average lot size: 8,772 SF) on the existing 3.01-acre parcel. The pond and immediate land that surrounds it, will be designated as "common space." Because the development is entirely within a flood zone, the homes will more than likely have to be elevated in order to meet the required building codes.

Proposed access will be primarily off Maple Street for six (6) of the eight (8) residences, but the development will also install a 25' ingress/egress/utility easement on the western side of the site for the remaining two (2) homes and emergency and utility access. Utilities for Charleston Water System (CWS), Berkeley County Water and Sanitation Authority (BCWS) and Dominion Power are existing and little infrastructure enhancements, other than connections made will be needed.

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## **General Conformance Analysis**

The following report utilized the 2008 City of Hanahan Zoning Ordinance in order to analyze the submitted preliminary land development plan for the Maple Street Subdivision. Per the Zoning Ordinance, staff finds the following general conformance standards for the proposed site:

- 1. Lot size—The proposed minimum lot sizes conforms to the 2008 Zoning Ordinance required minimum of the RS district, which is 8,000 SF,
- 2. Lot Width—All proposed lots conform to the RS zoning district's minimum lot width requirement of 60.
- 3. **Density**—Density for the development meets the RS zoning district's requirements of five (5) units per acre.
- 4. **Setbacks**—All proposed building sites meet the required setbacks as dictated by the RS Standards By Zone:
  - Front: 25'
  - Side: Residential side yards shall occupy at least twenty-five (25) percent of the width of the lot in sum. No side setback shall be less than five (5) feet.
  - Rear: 15'

Additionally, the proposed development is surrounded by Single-Family Residential (RS) zoning and land uses. The lot sizes and homes sites will complement the existing character of the neighborhood.

## Preliminary Plan Requested Corrections (Section 3.2(B))

Given that the submitted preliminary land development plan meets general zoning conformance, there are other pertinent and required elements needed in order to have a complete submittal. These documentation requirements may be found in Section 3.2(B) of the Land Development Ordinance. The following will be needed for approval;

### Proposed Land Development Information

 Section 3.2(B)(4)(b): The proposed 25' ingress/egress/utility easement will need to be pre-approved by Berkeley County E-911 once the roads have received their respective names.

## **CITY ADMINISTRATOR**MIKE COCHRAN



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#### **Subdivision Plat**

As stated in the General Conformance Analysis section, the eight (8) proposed single-family lots, one (1) common space lot and one (1) ingress/egress/utility easement meet all the "Standards by Zone" for the Single-Family Residential (RS) zoning district. Furthermore, the provided subdivision plat meets the documentation requirements laid out in Section 3.5 (Final Plat/Minor Land Development Plat) and is ready to be stamped by City Staff for recordation at the County, pending Planning Commission approval.

#### Other

#### Submittal to Respective Utilities

The applicant will need to ensure that the preliminary plan has been submitted to Charleston Water System (CWS), Berkeley County Water and Sanitation (BCWS) and Berkeley County Engineering for general review and review for stormwater management. Given the location of the development is within in a flood zone, County review and approval for stormwater will be paramount in the progression of this project.

Copies of the eventual construction plans will also need to be submitted to Berkeley County Engineering. Comments received by said agencies may affect changes to the preliminary plan.

#### Recommendations

This plan constitutes a preliminary land development plan. Approval of this plan does not imply approval of permits to begin construction. Approval of this application will enable the developer to seek permits for land disturbance and installation of necessary infrastructure to serve this phase of the project. Subsequent to approval to install infrastructure, the applicant must submit a final plat that depicts all easements provided for its maintenance, whether by a public agency or property owners association. Such plat must be approved and recorded prior to transfer of individual lots depicted on this plan.

**CITY ADMINISTRATOR**MIKE COCHRAN

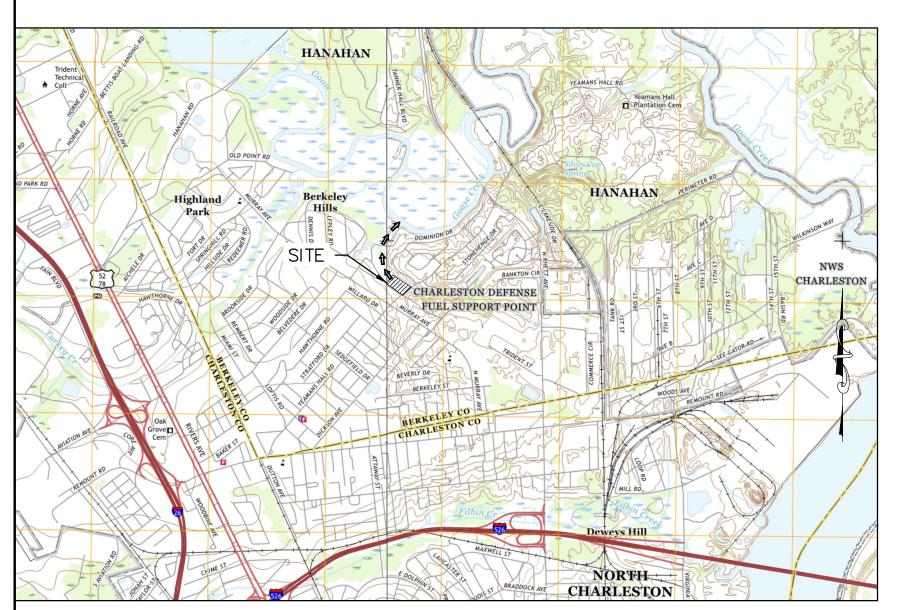


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Based upon staff's review, the City recommends that the Planning Commission *approve* the submitted preliminary land development plan and subdivision plat for the "Maple Street Subdivision" with strict conditions. Said conditions include:

- 1. Addressing all requested information in the "Preliminary Plan Requested Corrections (Section 3.2(B))" section of this staff report.
- 2. Recordation of the provided subdivision plat creating eight (8) single-family parcels, one (1) common space lot and one (1) ingress/egress/utility easement.
- 3. Receipt of recommendation letters from CWS, BCWS and Berkeley County Engineering.

## LOCATION MAP SCALE: 1" = 2000'



## QUAD MAP SCALE: 1" = 2.000'

FORCE MAIN

GRATE INLET

JUNCTION BOX

NOT IN CONTRACT

NOTICE OF INTENT

NOT TO SCALE ON CENTER

POWER POLE

PAVEMENT

NOTICE OF TERMINATION

POINT OF CURVATURE

POINT OF TANGENT POLYVINYL CHLORIDE

PORTLAND CEMENT CONCRETE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

OPERATOR OF DAY TO DAY SITE ACTIVITIES

LINEAR FEET

LIGHT POLE MATERIAL

MAXIMUM

MANHOLE

MINIMUM

IAW

MAX

МН

MIN

NOI

NPDES

NTS

ODSA

PVMT

HIGH DENSITY POLYETHYLENE

IN ACCORDANCE WITH INVERT ELEVATION

CIVIL ABBREVIATIONS BENCHMARK EROSION CONTROL BEST MANAGEMENT PRACTICES BTTM BOTTOM  $\mathsf{BW}$ BOTH WAYS CATCH BASIN CGP NPDES CONSTRUCTION GENERAL PERMIT SCR 100000 CURB INLET CAST IRON CIP CAST IRON PIPE CENTERLINE CORRUGATED METAL PIPE **CLEANOUT** CONC CONCRETE DOUBLE CHECK VALVE ASSEMBLY DROP INLET DIA DIAMETER DUCTILE IRON PIPE DOWNSPOUT ELEVATION EACH WAY **EXST** EXISTING FINISHED FLOOR ELEVATION FINISHED GRADE FIRE HYDRANT FINISHED

**CIVIL ABBREVIATIONS** 

WATER

WATER SERVICE

WATER VALVE

WITH

RCP REINFORCED CONCRETE PIPE ROOF DRAIN REQUIRED REDUCED PRESSURE BACKFLOW PREVENTER RIGHT OF WAY STABILIZED AGGREGATE BASE COURSE SILT BARRIER SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION STORM DRAINAGE SQUARE FEET SANITARY SEWER SERVICE STORM WATER POLLUTION PREVENTION PLAN TEMPORARY BENCH MARK TBM TOP OF CURB TOP OF GUTTER TOP OF PAVEMENT TYPICAL VITRIFIED CLAY

# MAPLE STREET SUBDIVISION

# HANAHAN, SOUTH CAROLINA

## GENERAL NOTES

. THE EROSION CONTROL PLANS CONTAINED HERE—IN ARE PART OF A LARGER COMPREHENSIVE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). ALL CONTRACTORS/SUBCONTRACTORS/PERSONS THAT WILL BE ENGAGED IN LAND DISTURBING ACTIVITIES SHALL BÉCOME FAMILIAR WITH AND COMPLY WITH ALL EROSION AND SEDIMENT CONTROL AND STORMWATER POLLUTION PREVENTION REQUIREMENTS CONTAINED THROUGHOUT THE SWPPP, DRAWINGS, SPECIFICATIONS AND PERMITS.

- 2. ALL CONTRACTORS SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTENT OF THE PROJECT
- 3. TOPOGRAPHIC AND BOUNDARY INFORMATION BY PARKER LAND SURVEYING, NOT VERIFIED BY ADC ENGINEERING, INC.
- 4. HORIZONTAL COORDINATES ARE BASED ON SC STATE PLANE COORDINATES NAD '83. VERTICAL DATUM IS BASED ON NGVD 29.
- 5. ALL PROJECT STAKEOUT, INCLUDING RELOCATION OF PROJECT BENCHMARKS AS NECESSARY, SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR TO BE PAID FOR BY THE CONTRACTOR. FOR STAKEOUT, DO NOT RELY SOLELY ON THE PHYSICAL SCALE AS SHOWN IN DRAWINGS. REFER TO THE GIVEN DIMENSIONS, SYMBOL LEGEND, KEYNOTES, AND REFERENCED DETAILS FOR CORRECT STAKEOUT.
- 3. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES PRIOR TO BEGINNING ANY WORK. IF UTILITIES OTHER THAN THOSE SHOWN HEREON ARE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND TAKE APPROPRIATE MEASURES TO PROTECT THE LINE(S) AND ENSURE CONTINUED SERVICE. DAMAGE CAUSED TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL VERIFY THE CONNECTION POINTS OF NEW UTILITIES TO EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- 7. THE CONTRACTOR SHALL INSTALL TREE PROTECTION BARRICADES PRIOR TO BEGINNING EARTHWORK OPERATIONS.
- 8. OFFSITE BORROW NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE PROVIDED BY THE CONTRACTOR FROM SOURCES DEVELOPED BY THE CONTRACTOR.
- 9. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF UNSUITABLE MATERIAL IS DISCOVERED PRIOR TO BEGINNING ANY REMOVAL OPERATION.
- 10. THE CONTRACTOR SHALL PLACE 4" OF TOPSOIL IN ALL DISTURBED AREAS NOT TO BE PAVED. THE CONTRACTOR SHALL ALSO PROVIDE TEMPORARY AND PERMANENT SEEDING IN ALL AREAS INSIDE OR OUTSIDE THE LIMITS OF CONSTRUCTION THAT ARE DISTURBED BY THE CONTRACTOR'S OPERATIONS.
- 11. ALL TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND THE SOUTH CAROLINA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, BOTH CURRENT EDITIONS.
- 12. CONTRACTOR SHALL GRADE ALL AREAS TO DRAIN FOR POSITIVE FLOW PRIOR TO FINAL APPROVAL
- 13. THE DESIGN ADEQUACY AND SAFETY OF ALL BRACING, SHORING AND TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR
- 14. THE GENERAL CONTRACTOR SHALL REVIEW AND STAMP APPROVED ANY AND ALL SHOP DRAWINGS AND SUBMITTALS PRIOR TO SUBMITTING TO THE ENGINEER FOR REVIEW.
- 15. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THE SERVICES OF A QUALIFIED GEOTECHNICAL ENGINEER WHO SHALL PERFORM INVESTIGATIONS TO VERIFY THAT THE SOIL CONDITIONS AND MATERIALS ARE AT LEAST THAT WHICH ARE STATED HEREIN AN IN SPECIFICATIONS.
- 16. ALL UTILITY WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF CWS & BCWS. WHERE ANY DISCREPANCIES EXIST BETWEEN THESE DOCUMENTS AND CWS & BCWS REQUIREMENTS, THE REQUIREMENTS OF CWS & BCWS SHALL BE ADHERED TO.
- 17. IN PERFORMING CONSTRUCTION OBSERVATION VISITS TO THE JOB SITE, THE ENGINEER SHALL HAVE NO CONTROL OVER NOR RESPONSIBILITY FOR THE CONTRACTOR'S MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES IN PERFORMING THE WORK.
- 18. THE CONTRACTOR'S MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES IN PERFORMING THE WORK IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR, WHO IS ALSO RESPONSIBLE FOR COMPLYING WITH ALL HEALTH AND SAFETY PRECAUTIONS AS REQUIRED BY ANY REGULATORY AGENCY.
- 19. IT IS THE CONTRACTORS RESPONSIBILITY FOR DESIGN, ADEQUACY AND IMPLEMENTATION OF ALL DEWATERING. ALL DEWATERING ACTIVITIES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STORMWATER POLLUTION PREVENTION PLAN.
- 20. CONTRACTOR SHALL MAINTAIN SIGHT DISTANCE VISIBILITY AT ALL EXITS AND/OR INTERSECTIONS IN ACCORDANCE WITH SCDOT'S "ACCESS AND ROADSIDE MANAGEMENT STANDARDS" MANUAL, DURING AND AFTER CONSTRUCTION.
- 21. ANY FIELD CHANGES WITHIN SCDOT RIGHT-OF-WAY OR CHANGES THAT WOULD IMPACT SCDOT RIGHT-OF-WAY WILL REQUIRE WRITTEN SCDOT APPROVAL PRIOR TO CHANGES BEING IMPLEMENTED IN THE FIELD.
- 22. AT THE CONCLUSION OF CONSTRUCTION, THE OWNER IS RESPONSIBLE FOR MAKING SURE A SITE IS PERMANENTLY STABILIZED WITH VEGETATION ESTABLISHED, PAVED AREAS AND STORMWATER CONVEYANCES CLEAN OF DEBRIS AND SEDIMENT/STORMWATER CONTROLS WORKING PROPERLY. PROOF OF THESE WILL BE DETERMINED BY A COUNTY INSPECTOR AND ANY PROBLEMS FOUND MUST BE CORRECTED BY THE OWNER PRIOR TO CLOSING OUT A CONSTRUCTION ACTIVITY. ASBUILT/RECORD DRAWINGS MUST BE SUBMITTED PRIOR TO THE INSPECTION. UPON CONFIRMING ANY SUCH CORRECTIONS ARE COMPLETED AND THE SITE IS READY, THE COUNTY ENGINEER WILL RELEASE ANY REMAINING BONDS. THE COUNTY ENGINEER MAY REQUIRE ADDITIONAL ITEMS ON A CASE BY CASE BASIS IN ORDER TO CLOSEOUT A CONSTRUCTION ACTIVITY.

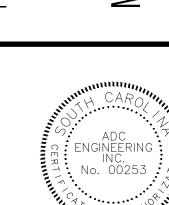
## TRAFFIC CONTROL NOTES

- 1. CONTRACTOR SHALL PERFORM ALL NECESSARY COORDINATION WITH SCDOT AND THE MUNICIPALITY FOR WORK INSIDE THE RIGHT OF WAY, INCLUDING BUT NOT LIMITED TO PREPARATION OF AND OBTAINING APPROVAL OF ALL NECESSARY TRAFFIC CONTROL PLANS AS WELL AS PLANNING AND EXECUTION OF ALL NECESSARY COORDINATION MEETINGS.
- 2. CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE APPROVED ENCROACHMENT PERMIT(S).
- 3. CONTRACTOR SHALL MAINTAIN SCDOT SITE VISIBILITY TRIANGLES AT ALL ACCESS POINTS FOR THE DURATION OF CONSTRUCTION.
- 4. ALL TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD), CURRENT EDITION.

1. HANAHAN PLANNING COMMISSION CONCEPT PLAN APPROVAL - 09/24/2019

DEVELOPMENT DATA	
PROJECT NAME	MAPLE STREET SUBDIVISION
DEVELOPMENT DISCRIPTION	
	-SUBDIVISION OF AN EXISTING PARCEL INTO EIGHT RESIDENTIAL
DDOLECT OWNED	WITH A SHARED ACCESS DRIVE AND ALL ASSOCIATED UTILITIES.
PROJECT OWNER	O.L. THOMPSON CONSTRUCTION CO., INC.
PROJECT CIVIL ENGINEER	
	ADC ENGINEERING, INC.
	1226 YEAMANS HALL ROAD HANAHAN, SC 29406
	POINT OF CONTACT: JEFF WEBB
PROPERTY INFORMATION	265 42 02 040
TMS ADDRESS	265-12-03-018
	171 ASHLEY AVE, CHARLESTON, SC
PARCEL SIZE	2.67.46
DISTURBED AREA	3.67 AC. 3.3 AC.
FLOOD ZONE STATEMENT	3.3 AC.
	FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE MAP (45015C0715E) INDICATES THAT THIS PROPERTY IS IN FLOOR
	AE (EL 9 NGVD 28). NOTE THAT SURVEY AND PLAN ELEVATIONS A
	NAVD 88 DATUM. SEE DATUM NOTE ON SHEET C300 FOR MORE INFORMATION.
WETLAND STATUS	
	WETLANDS DELENIATED
ZONING INFORMATION	
MUNICIPALITY	CITY OF HANAHAN
MAX HEIGHT	35
EXISTING ZONING	RS
PROPOSED ZONING	RS
ADJACENT ZONING  NORTH	I CP
	N/A (MAPLE STREET)
EAST	
WEST	
ZONING CONTACT	
SETBACKS/BUFFERS	
SETBACKS	
FRONT	25 FT
SIDE	25% OF THE WIDTH OF THE LOT IN SUM. NOT LESS THAN 5 FT.
REAR	15
UTILITY INFORMATION	
ELECTRIC AVAILABILITY	DOMINION ENERGY
SEWER AVAILIBILITY	BERKELEY COUNTY WATER AND SANITATION
WATER AVAILABILITY	CHARLESTON WATER SYSTEM

	SHEET LIST TABLE
SHEET NUMBER	R SHEET TITLE
C001	CIVIL NOTES & ABBREVIATIONS
C100	<b>EXISTING CONDITIONS &amp; DEMOLITION PLAN</b>
C200	SITE PLAN
C300	GRADING AND STORM DRAINAGE PLAN
C400	UTILITY PLAN
C410	SEWER PROFILE
C620	CIVIL DETAILS-SITE
C630	CIVIL DETAILS-STORM DRAINAGE
C640	CIVIL DETAILS-WATER
C641	CIVIL DETAILS-SEWER
C700	EROSION CONTROL PLAN
C710	CIVIL DETAILS-EROSION CONTROL
C711	CIVIL DETAILS-EROSION CONTROL
P001	PRELIMINARY PLAT



HANAHAN SOUTH CAROLINA







DATE:	8/13/2019
ADC PROJECT #:	19148.00
DESIGNED:	JW
CHECKED:	JW
DRAWN:	MP
REVISION:	

CIVIL NOTES



## **GENERAL NOTES:**

- 1. SEE SHEET COO1 FOR CIVIL ABBREVIATIONS AND GENERAL NOTES.
- 2. SEE SHEET C700 FOR EROSION CONTROL/SWPPP.
- 3. CONTRACTOR IS RESPONSIBLE FOR ALL WORK SHOWN, UNLESS SPECIFICALLY INDICATED OTHERWISE.
- 4. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTENT OF THE PROJECT.
- 5. ALL PROJECT STAKEOUT SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR TO BE PAID FOR BY THE CONTRACTOR. FOR STAKEOUT, DO NOT RELY SOLELY ON THE PHYSICAL SCALE AS SHOWN IN DRAWINGS. REFER TO THE GIVEN DIMENSIONS, SYMBOL LEGEND, KEYNOTES, AND REFERENCED DETAILS FOR CORRECT STAKEOUT.
- 6. ALL CONTRACTORS/SUBCONTRACTORS/PERSON THAT WILL BE ENGAGED IN LAND DISTURBING ACTIVITIES SHALL COMPLY WITH ALL EROSION CONTROL AND STORMWATER POLLUTION PREVENTION REQUIREMENTS CONTAINED THROUGHOUT THE DRAWINGS, SPECIFICATIONS AND PERMITS.

## KEYNOTES: $\Diamond$

- 1. REMOVE EXISTING 21" RCP AND EXISTING OUTFALL STRUCTURE BETWEEN DOGHOUSE JUNCTION BOX AND EXISTING POND AFTER NEW OUTFALL SYSTEM IS COMPLETE. SEE SHEET C300.. BACKFILL IN ACCORDANCE WITH SPECIFICATIONS TO MATCH EXISTING GRADES.
- 2. REMOVE EXISTING PICKET FENCE.
- 3. REMOVE TREE & BACKFILL IAW SPECS.
- 4. REMOVED EXISTING PIPE AND GRADE DITCH TO INSURE POSITIVE FLOW.

## EXISTING SITE LEGEND

--- w  $-\otimes \stackrel{\mathsf{WV}}{-}$  -WATER LINE W/ VALVE WATER SERVICE — — — WS - — — -SANITARY SEWER PIPE \_\_\_ s -\_ --SANITARY SEWER SERVICE — — — SS — — — — — — — FM — — — — FORCE MAIN STORM DRAIN PERFORATED STORM DRAIN --- SD ---POWER LINE (OVERHEAD) ——— P ———  $--- - \mathsf{UP} ----$ POWER LINE (UNDERGROUND) \_\_\_\_\_ TELEPHONE LINE (OVERHEAD) TELEPHONE LINE (UNDERGROUND) --- UT ---COMMUNICATIONS LINE (UNDERGROUND) --- COM---FIBER OPTIC LINE --- FO ---

GAS LINE

STEAM LINE

POWER POLE, GUY WIRE

SIZE/TYPE EXISTING TREE

--- G ---

--- ST ---

 $O \xrightarrow{PP}$ 

ELECTRICAL BOX, HAND HOLE

LIGHT POLE, CAMERA POLE

SANITARY MANHOLE

SEWER CLEANOUT

CATCH BASIN

FIRE HYDRANT

FIRE HYDRANT

FIRE DEPARTMENT CONNECTION

PIV 
POST INDICATOR VALVE

IRRIGATION VALVE

WWW WATER VAULT, MANHOLE

TELEPHONE VAULT, PEDESTAL

AIR CONDITION UNIT

G GAS METER

----X---- FENCE

SIGN
CONTOUR

×23.45
SPOT ELEVATION
PROPERTY LINE

LIMITS OF CONSTRUCTION/DISTURBANCE

TREE BARRICADE INSTALL IAW DETAIL B/C710

EXISTING DEMO LEGEND



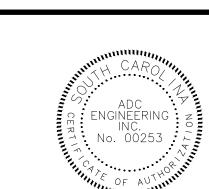
TREE TO BE DEMOLISHED

ITEMS TO BE DEMOLISHED

Maple Street Subdivision

Avery ( Royal,

The / Port HANAHAN SOUTH CAROLINA









DATE: 8/13/2019

ADC PROJECT #: 19148.00

DESIGNED: JW

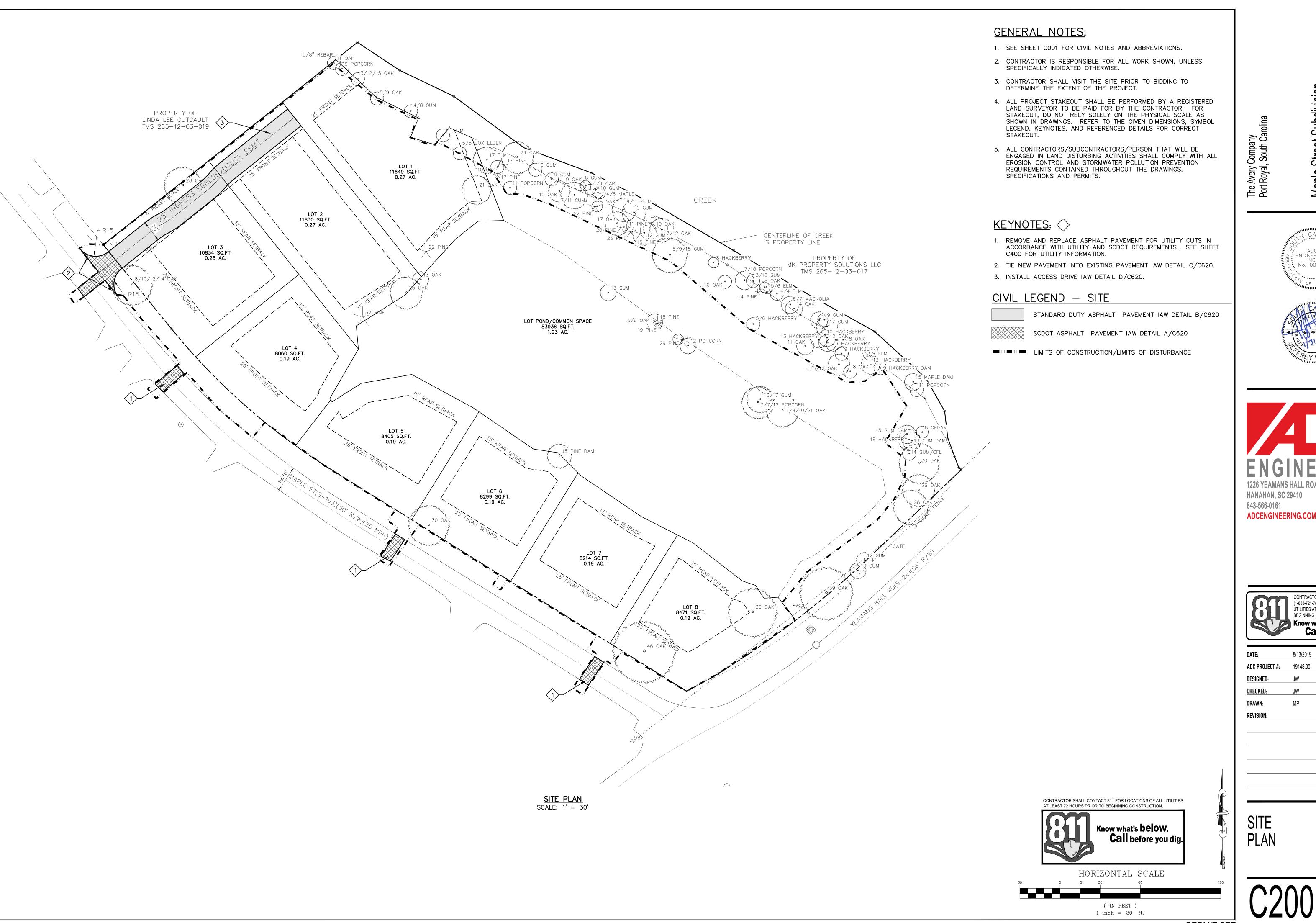
CHECKED: JW

DRAWN: MP

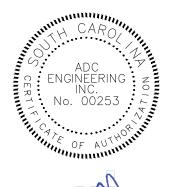
REVISION:

EXISTING
CONDITIONS &
DEMOLITION PLAN





Maple Street Subdivision









8/13/2019 **ADC PROJECT #**: 19148.00

PERMIT SET

## **GENERAL NOTES:**

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- 6. EROSION CONTROL MEASURES NOT DESIGNED OR SHOWN AT THIS TIME. PRACTICES LIKELY TO BE REQUIRED ARE:
- B. TEMPORARY CONSTRUCTION ENTRANCE
- C. TEMPORARY AND PERMANENT STABILIZATION

## GRADING AND DRAINAGE NOTES:

- ALL SPOTS GIVEN ARE TO BOTTOM OF CURB OR TOP OF ASPHALT UNLESS NOTED OTHERWISE.
- 2. GENERAL CONTRACTOR SHALL COORDINATE ALL SITE UTILITIES AND STORM DRAINAGE INSTALLATION SCHEDULES TO AVOID POTENTIAL UTILITY CONFLICTS.

## KEYNOTES: $\Diamond$

- 1. INSTALL JUNCTION BOX ON EXISTING PIPE IAW DETAIL A/C630.
- 2. REMOVE SEDIMENT IN SHALLOW AREAS OF POND TO PROVIDE BOTTOM ELEVATION OF -0.5' MINIMUM.
- 3. GRADE THE PERIMETER OF THE POND TO ELEVATION INDICATED-TOP OF POND BERM = 5.00'.

## CIVIL LEGEND — GRADING AND DRAINAGE

JUNCTION BOX - INSTALL IAW DETAIL A/C630.

CONTROL STRUCTURE - INSTALL IAW DETAIL D/C630.

STORM DRAINAGE PIPE - INSTALL IAW DETAIL B/C630.

NEW FINISHED GRADE SPOT ELEVATION

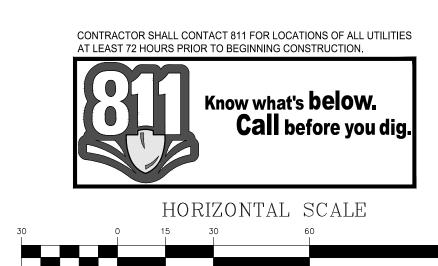
NEW FINISHED CONTOUR

EXISTING GRADE CONTOUR

DRAINAGE FLOW ARROW

SLOPE AND SLOPE DIRECTION

EMERGENCY SPILLWAY - INSTALL IAW DETAIL C/C630.



( IN FEET ) 1 inch = 30 ft.

HANAHAN SOUTH CAROLINA





843-566-0161

ADCENGINEERING.COM

CONTRACTOR SHALL CONTACT 811 (1-888-721-7877) FOR LOCATIONS OF ALL UTILITIES AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION.

Know what's below. Call before you dig.

**ADC PROJECT #:** 19148.00 DESIGNED: CHECKED: DRAWN: REVISION:

GRADING AND STORM DRAINAGE PLAN

PERMIT SET

## **GENERAL NOTES:**

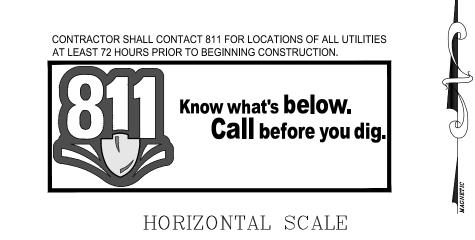
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- 6. ALL SANITARY SEWER WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF BCWSA AND SCDHEC. SEE DETAIL E/C641. CONTACT BCWSA INSPECTOR TO SCHEDULE PRE—CONSTRUCTION MEETING. PROVIDE PRODUCT SUBMITTALS AND COORDINATE TESTING AND INSPECTION WITH THE ENGINEER AND BCWSA INSPECTOR.
- 7. ALL WATER SUPPLY WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF CWS AND SCDHEC. SEE DETAIL C/C640. CONTACT CWS INSPECTOR TO SCHEDULE PRE—CONSTRUCTION MEETING. PROVIDE PRODUCT SUBMITTALS AND COORDINATE TESTING AND INSPECTION WITH THE ENGINEER AND BCWSA INSPECTOR.
- 8. THIS PROJECT WILL REQUIRE PERMITS TO OPERATE FROM SCDHEC FROM THE NEW WATER AND SEWER MAINS (NOT SERVICE LATERALS). CLOSEOUT REQUIREMENT FOR THOSE PERMITS INCLUDE AS—BUILT SERVEY, EASEMENTS, ENGINEER CERTIFICATIONS, BACTERIOLIGAL, ETC. CONTRACTOR SHALL PROVIDE AS—BUILT SURVEYS AND EASEMENT PLATS WITH LEGAL DESCRIPTIONS FOR ENGINEER AND UTILITY AGENCY REVIEW.

## KEYNOTES: $\Diamond$

- 1. TAP EXISTING SEWER LINE WITH SERVICE TEE/WYE PER BCWSA REQUIREMENTS AND DETAIL B/C641.
- 2. INSTALL NEW MANHOLE OVER EXISTING SEWER LINE. CONTRACTOR SHALL VERIFY INVERT OF EXISTING SEWER IS NOT DEEPER THAN
- 3. INSTALL NEW 4" WATER MAIN PARALLEL TO EXISTING 2.5" WATER MAIN. EXISTING WATER MAIN SHALL REMAIN ACTIVE UNTIL NEW MAIN IS COMMISSIONED AND RECEIVED PERMIT TO OPERATE (PTO). ONCE THAT IS COMPLETE, CONNECT NEW WATER MAIN TO EXISTING WATER MAIN AND ABANDON THE EXISTING PORTION OF THE 2.5" MAIN.

## <u>CIVIL LEGEND — WATER AND SEWER</u>

- METER AND METER VAULT INSTALL IAW DETAIL A/C640.
- S SEWER MANHOLE INSTALL IAW DETAIL A/C641 & C/C641.
- ---- W---- WATER MAIN INSTALL IAW DETAIL D/C640.
- -----ws----- WATER SERVICE.
- \_\_\_\_s \_\_\_ SEWER MAIN INSTALL IAW DETAIL D/C641.
- \_\_\_ss\_\_\_\_ SEWER SERVICE INSTALL IAW ASTM D 3034 & DETAIL B/C641 ALL WORK SHALL MEET ASTM D 2321, SCDHEC REQUIREMENTS.
  - REDUCER
- BLOW-OFF HYDRANT INSTALL IAW DETAIL B/C640.
- LIMITS OF CONSTRUCTION/LIMITS OF DISTURBANCE
- TAPPING SLEEVE AND VALVE INSTALL IAW DETAIL E/C640.
- FIRE HYDRANT ASSEMBLY INSTALL IAW DETAIL F/C640.
- GATE VALVE INSTALL IAW DETAIL G/C640.



HURIZUNIAL SCALE

( IN FEET ) 1 inch = 30 ft.

e Avery Company rt Royal, South Carolina

ADC ENGINEERING INC.
No. 00253

HANAHAN SOUTH CAROLINA





ADCENGINEERING.COM



DATE: 8/13/2019

ADC PROJECT #: 19148.00

DESIGNED: JW

CHECKED: JW

DRAWN: MP

REVISION:

UTILITY PLAN

C400
SHEET OF

# STA: STA: PIM: O <sup>-3</sup>⁄<sub>4</sub>" WATER─ ∕-4" WATER 213 LF 8" PVC @ 0.47% -0+500+000 + 501+001 + 502+00 2+50

SSMH #1 TO SSMH #2 PROFILE

SEWER PROFILE HORIZONTAL SCALE: 1" = 30' VERTICAL SCALE: 1" = 3'

## **GENERAL NOTES:**

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- 7. ALL WATER SUPPLY WORK SHALL BE IN ACCORDANCE WITH THE

Company , South Ca The Avery ( Port Royal,



Subdivision

HANAHAN SOUTH CAROLINA



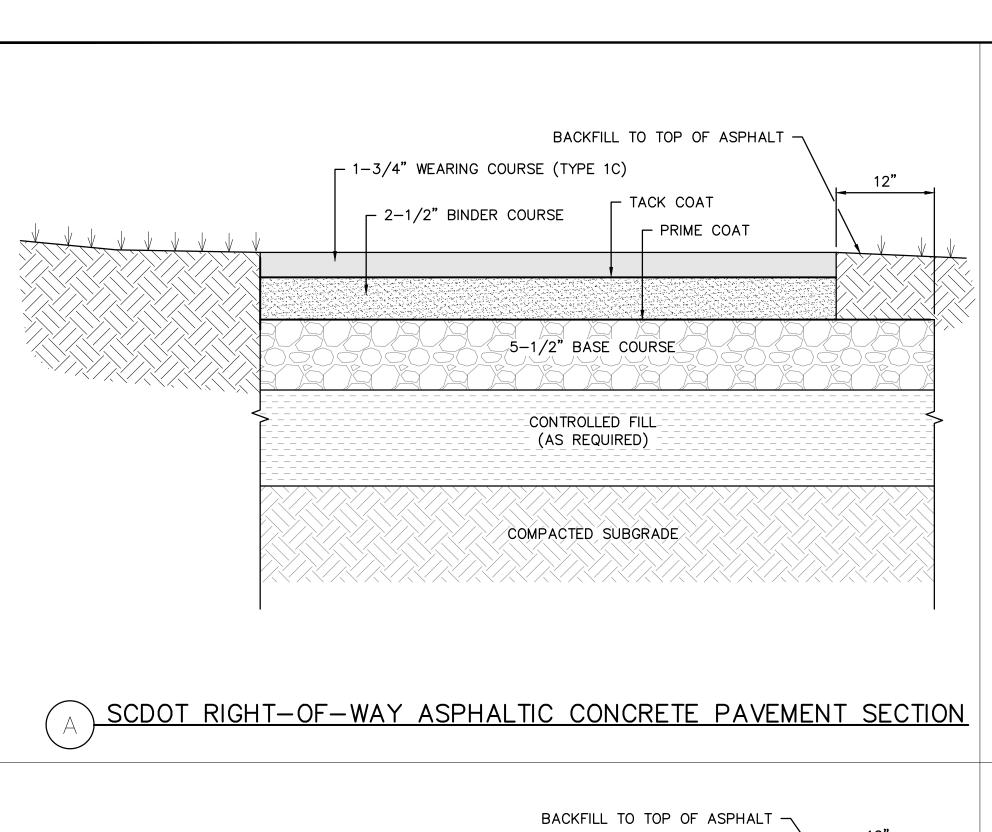


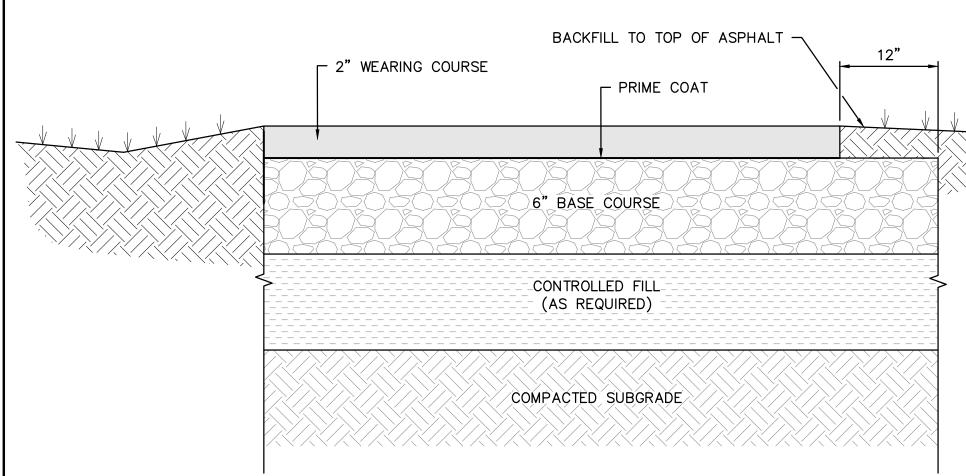
ADCENGINEERING.COM



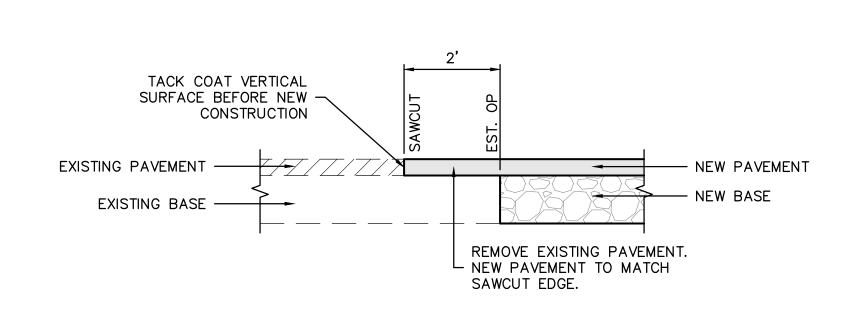
**ADC PROJECT #**: 19148.00 DESIGNED: DRAWN: REVISION:

CONTRACTOR SHALL CONTACT 811 FOR LOCATIONS OF ALL UTILITIES AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION. Know what's **below.** Call before you dig. HORIZONTAL SCALE ( IN FEET ) 1 inch = 30 ft.

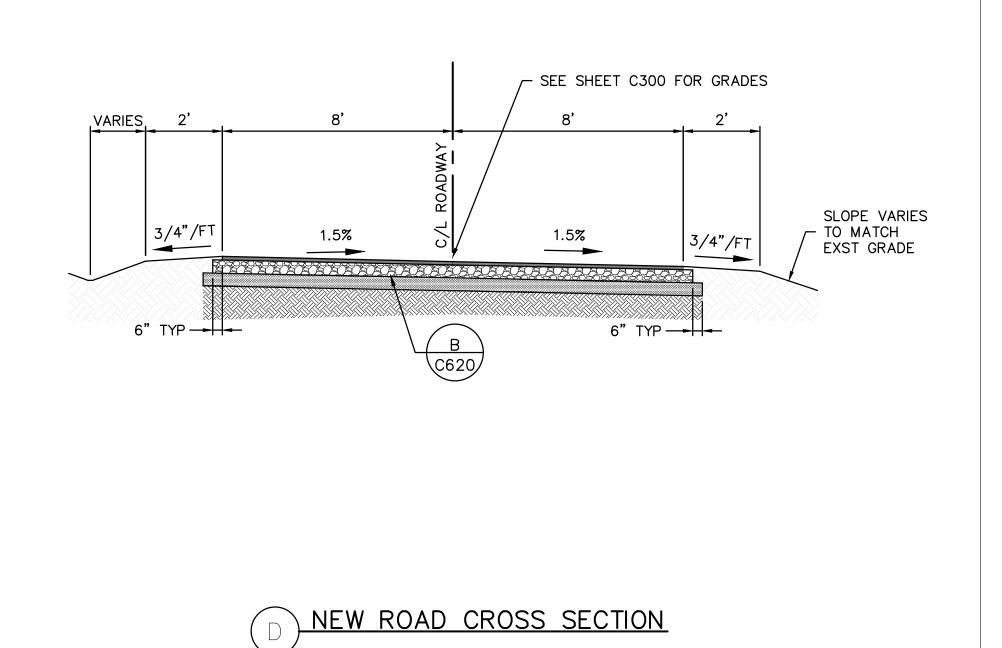


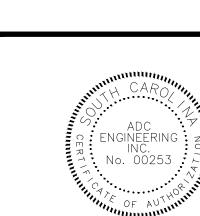


TYPICAL ASPHALTIC CONCRETE PAVEMENT SECTION



PAVEMENT TIE-IN TO EXISTING PAVEMENT





Maple Street Subdivision

HANAHAN SOUTH CAROLINA

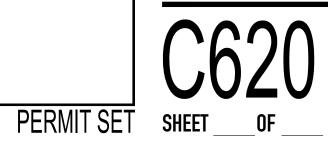


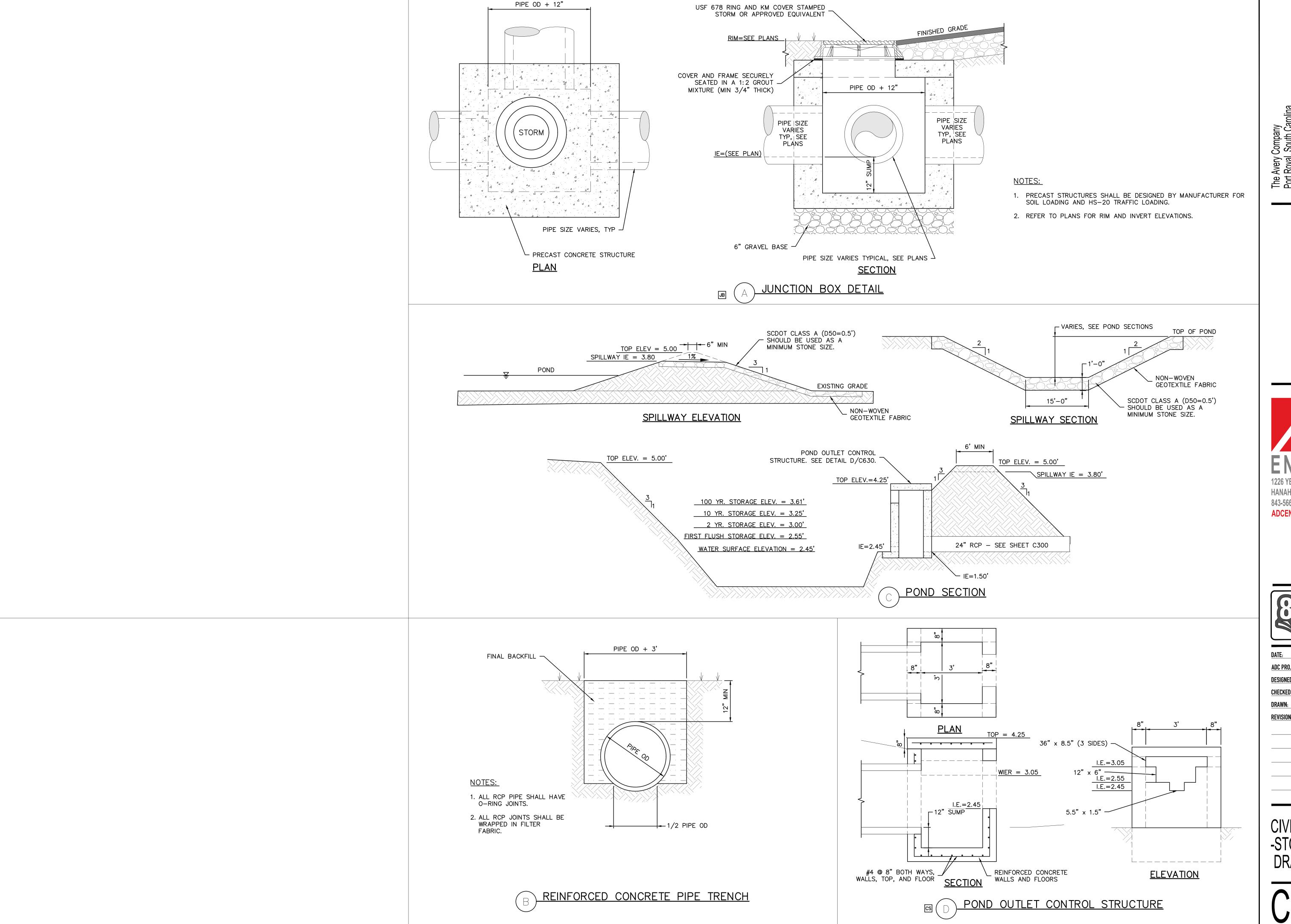




DATE:	8/13/2019	
ADC PROJECT #:	19148.00	
DESIGNED:	JW	
CHECKED:	JW	
DRAWN:	MP	
REVISION:		

CIVIL DETAILS -SITE





Maple Street Subdivision

HANAHAN SOUTH CAROLINA

ADC
ENGINEERING
INC.
No. 00253







DATE: 8/13/2019

ADC PROJECT #: 19148.00

DESIGNED: JW

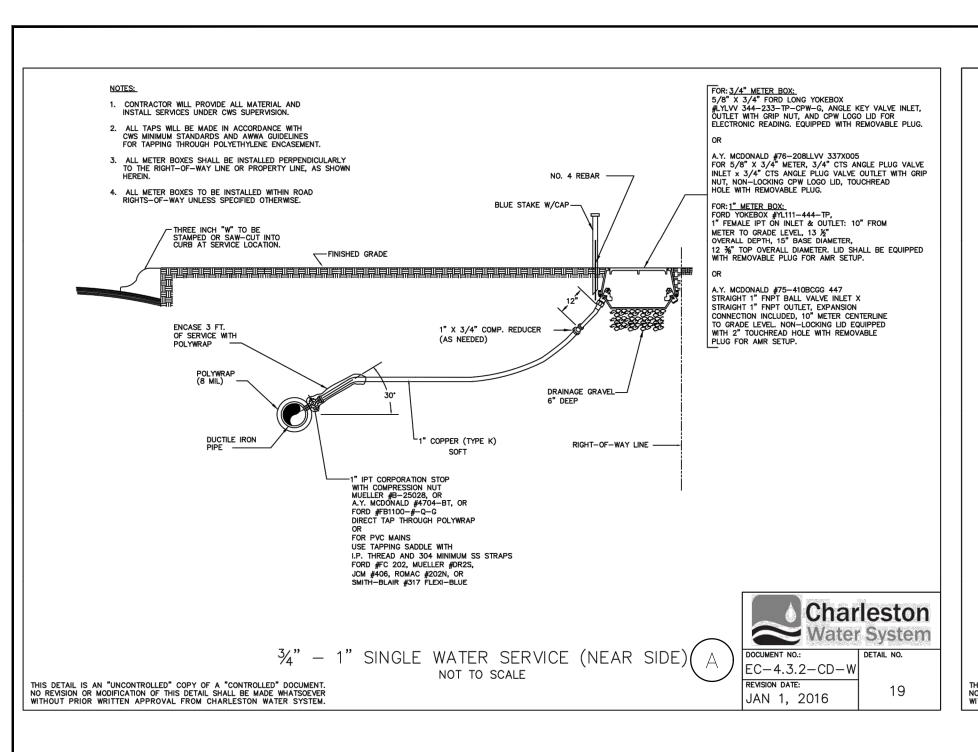
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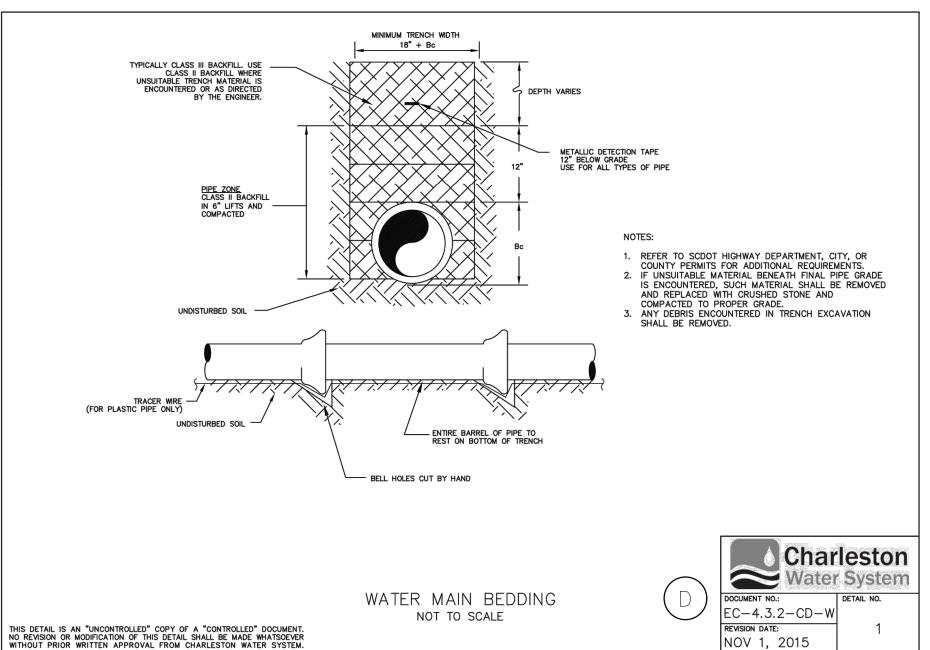
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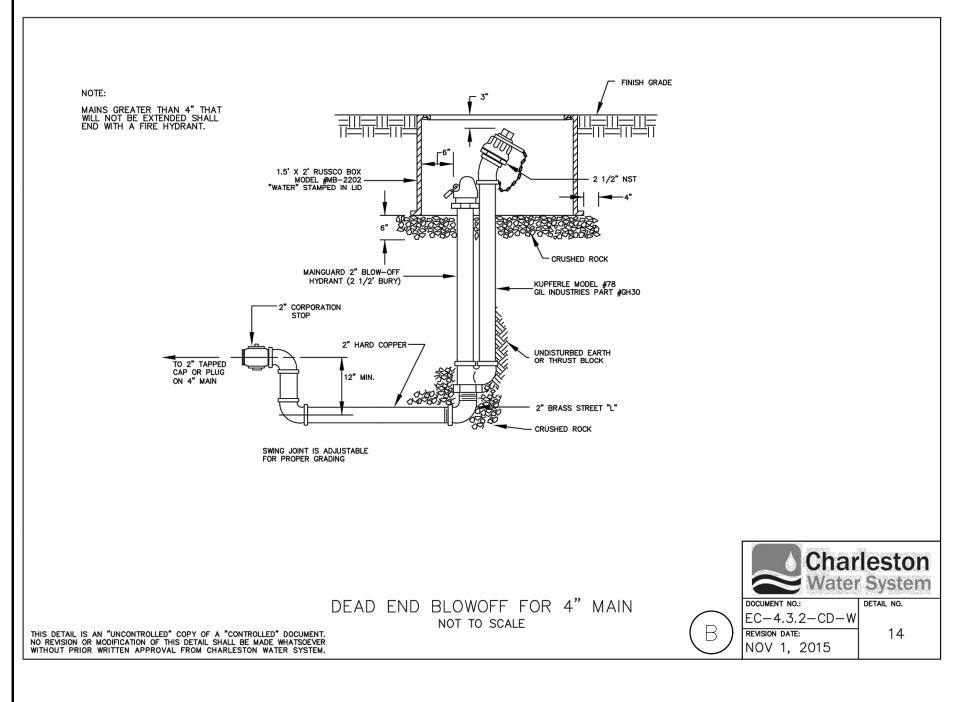
REVISION:

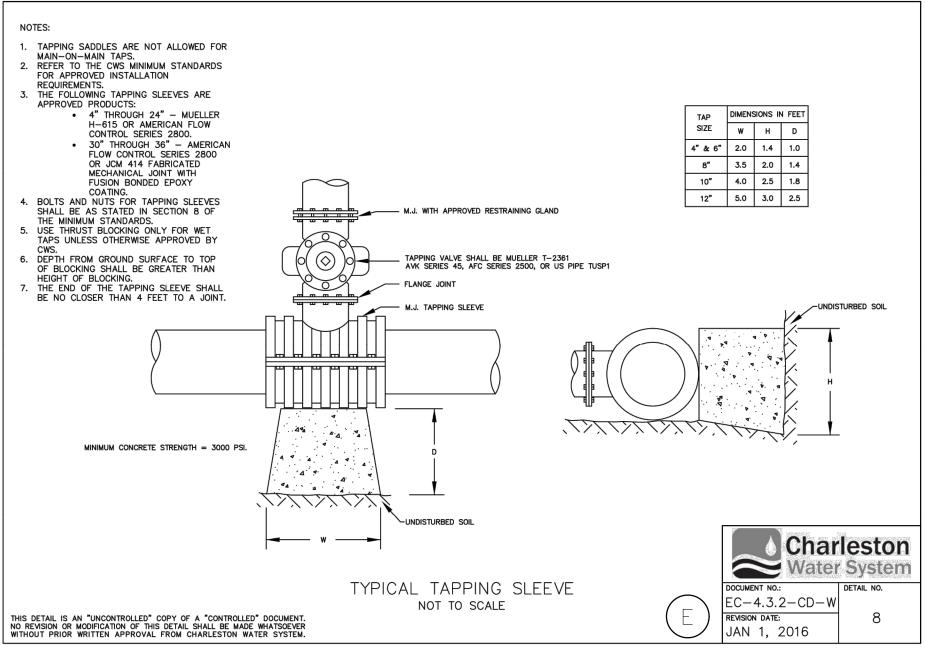
CIVIL DETAILS -STORM DRAINAGE

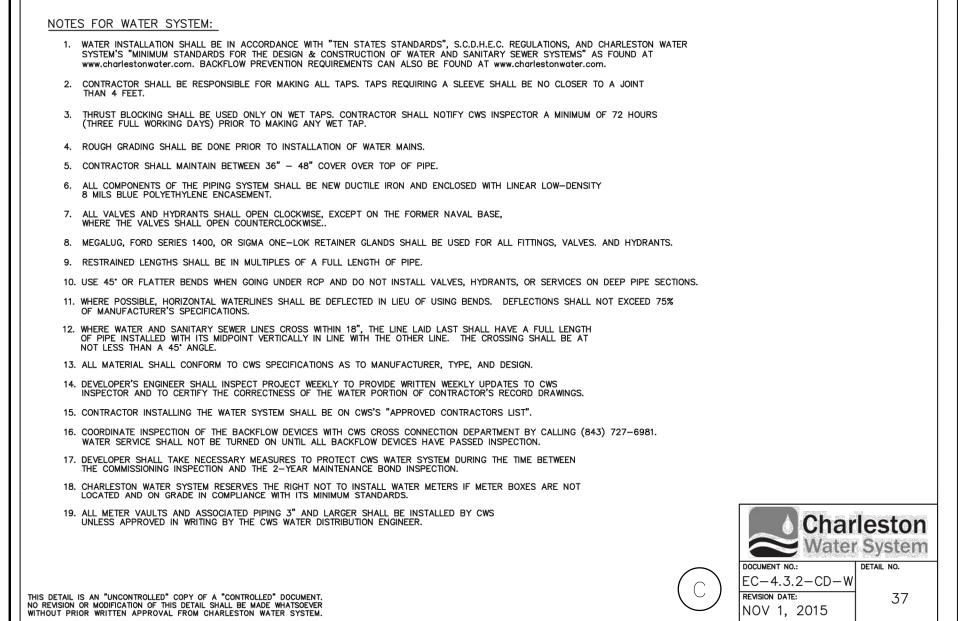
C630



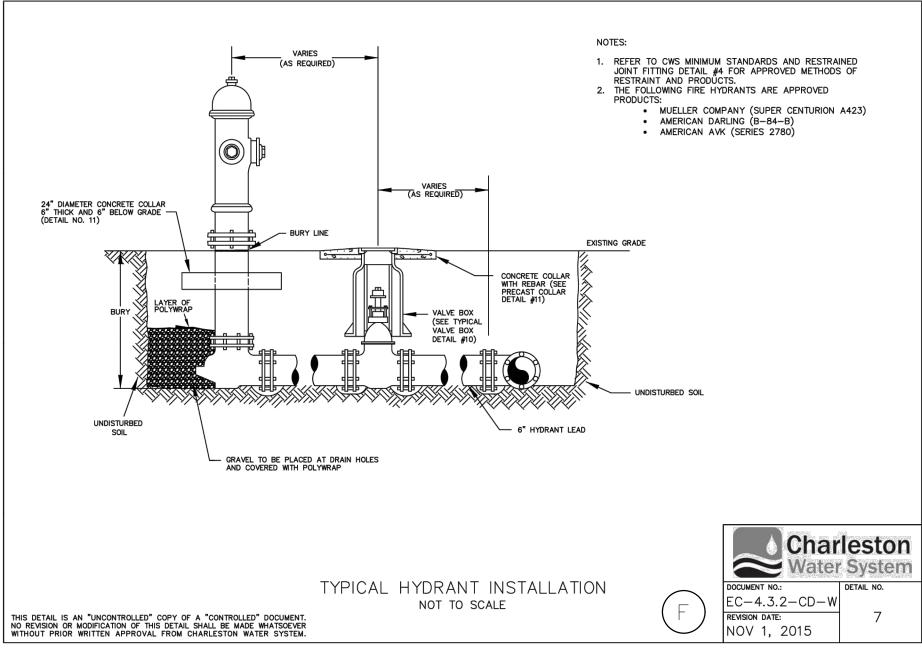


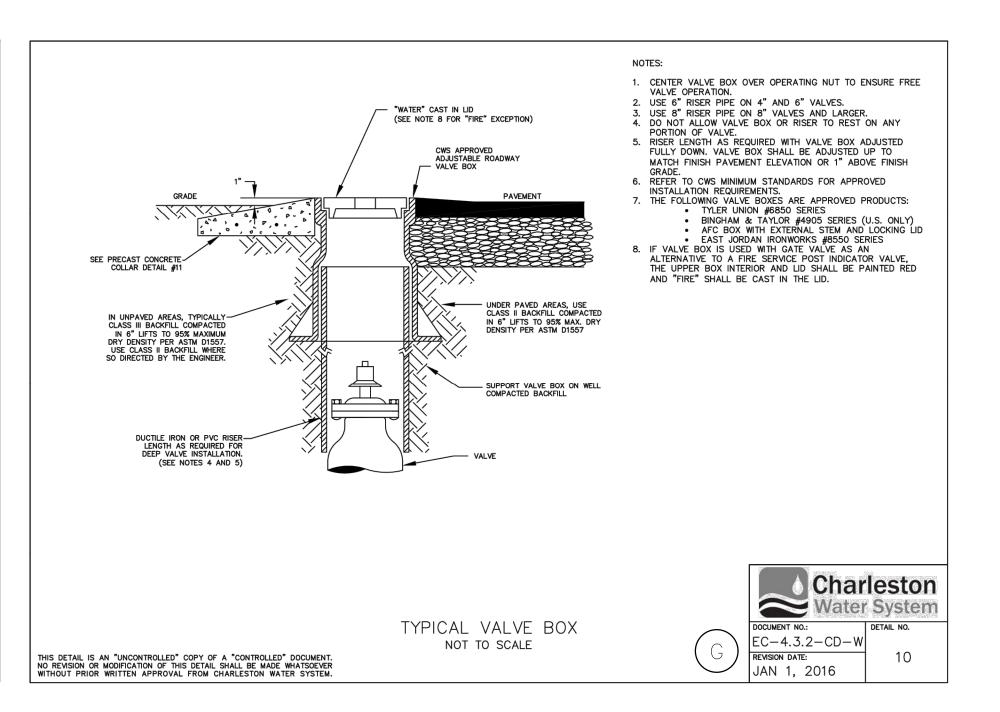




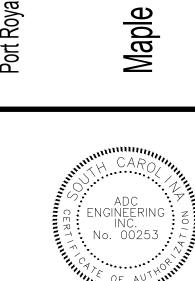


NOV 1, 2015





Company I, South Ca The Avery ( Port Royal,



Subdivision

Street

HANAHAN SOUTH CAROLINA



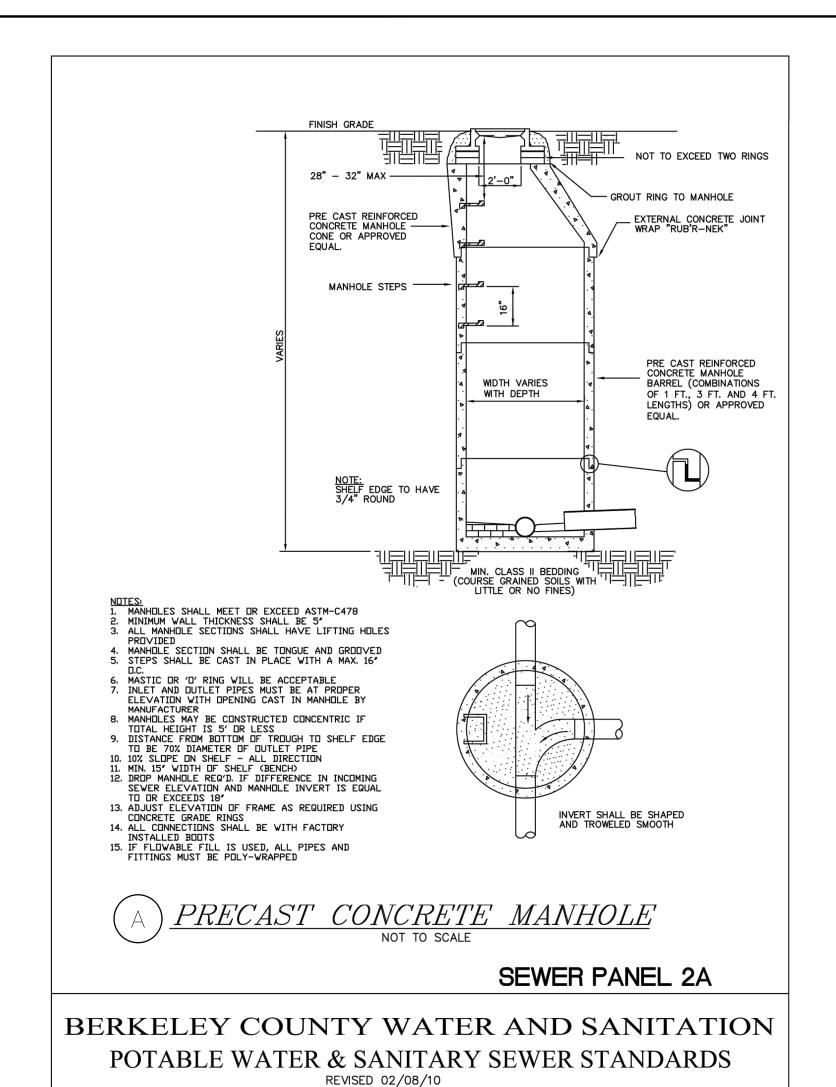


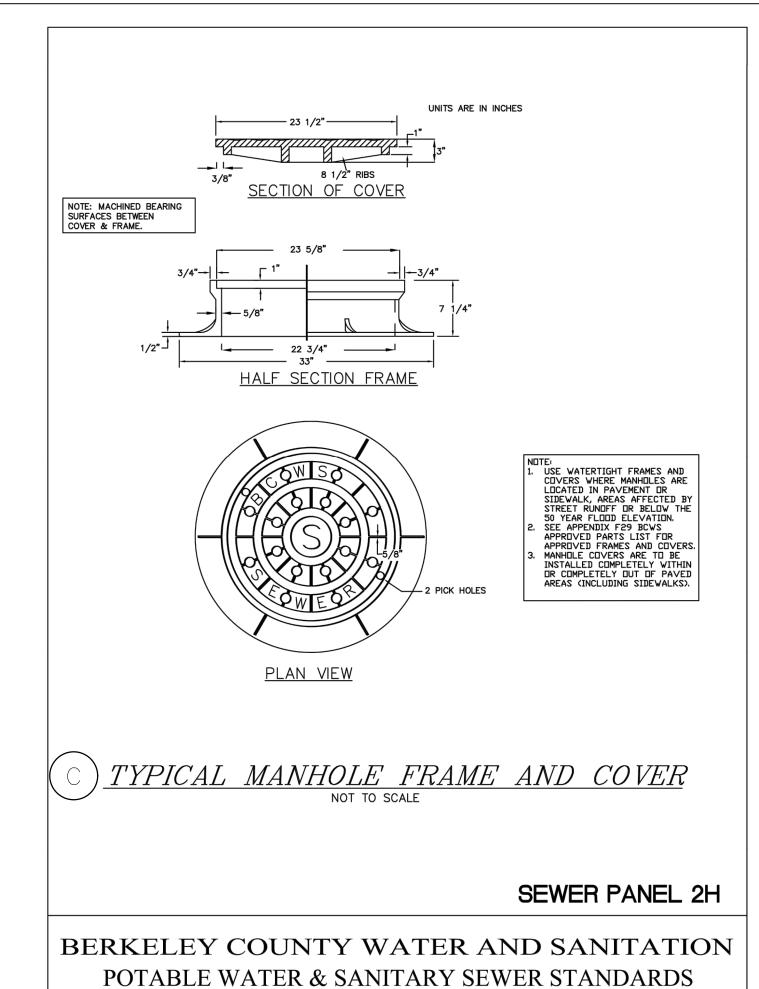


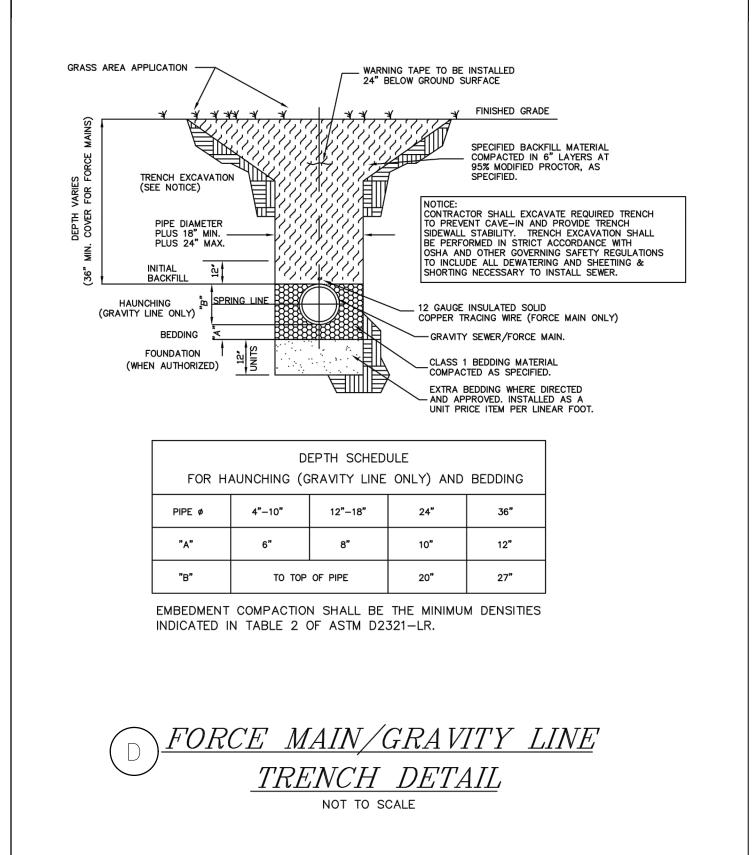
ADC PROJECT #: DESIGNED: DRAWN: REVISION

CIVIL DETAILS





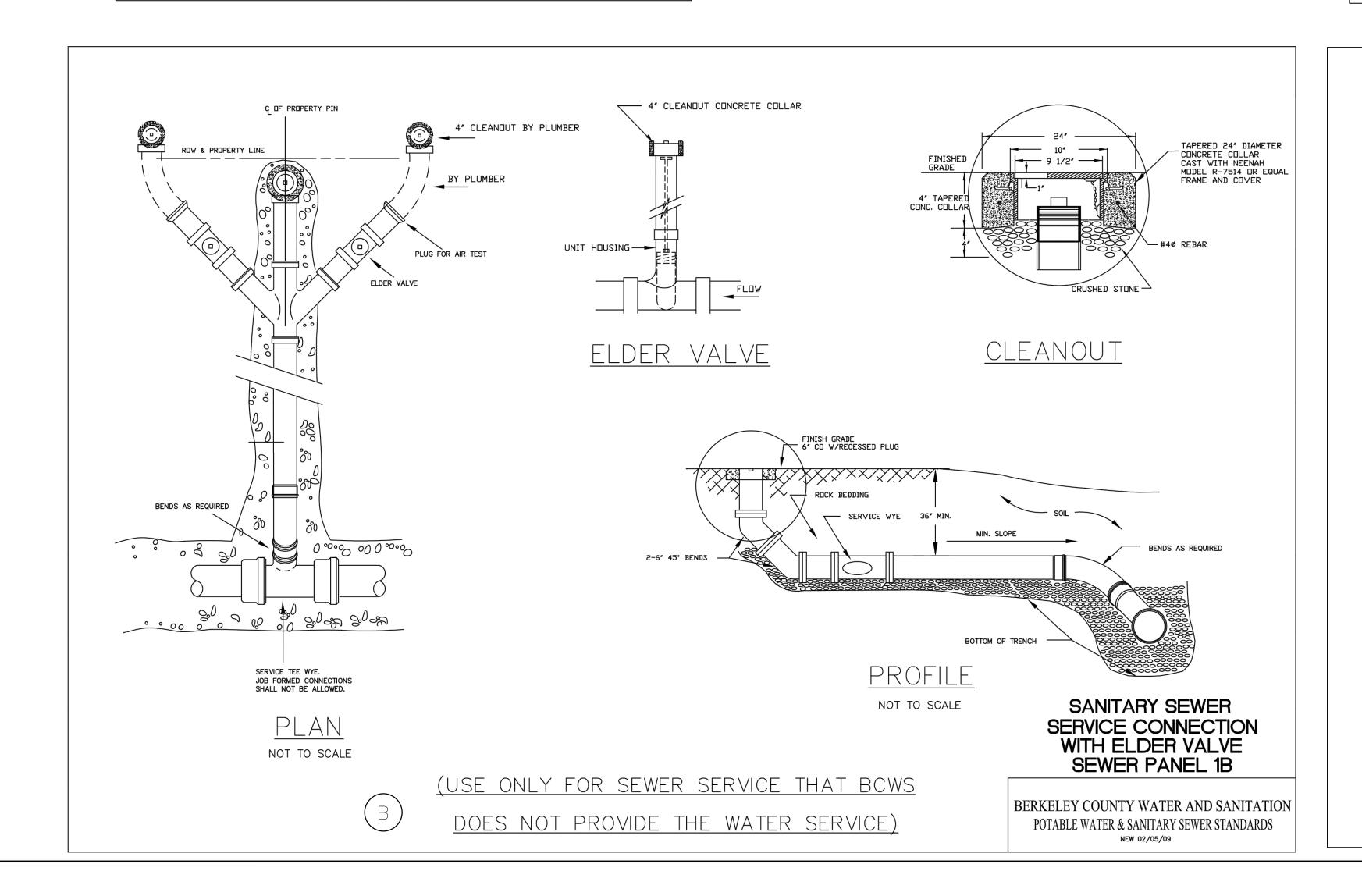


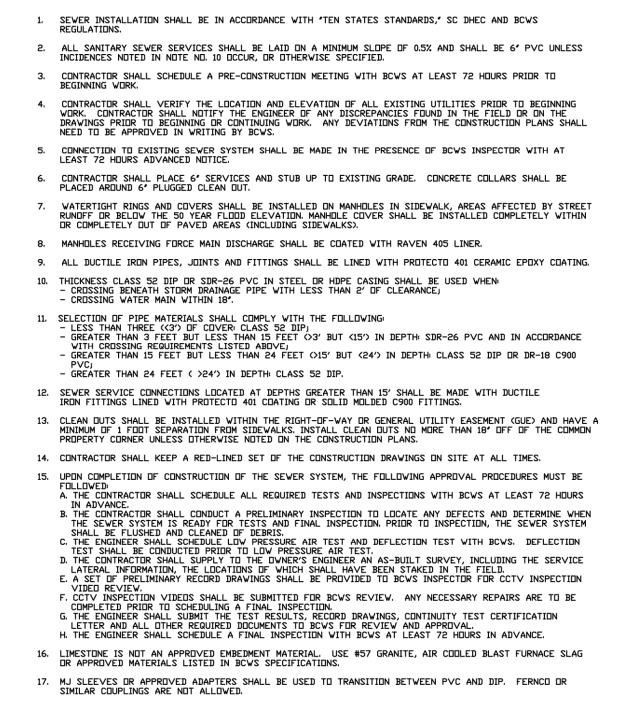


**SEWER PANEL 4** 

BERKELEY COUNTY WATER AND SANITATION POTABLE WATER & SANITARY SEWER STANDARDS

**SEWER NOTES:** 





POTABLE WATER & SANITARY SEWER STANDARDS

REVISION: -SEWER **SEWER PANEL 8** BERKELEY COUNTY WATER AND SANITATION

Maple Street ENGINEERING HANAHAN SOUTH CAROLINA

Subdivision

The Avery ( Port Royal,





CONTRACTOR SHALL CONTACT 811 (1-888-721-7877) FOR LOCATIONS OF AL UTILITIES AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION. Know what's below. Call before you dig.

CIVIL DETAILS

TEMPORARY SEEDING - INSTALL IAW DETAIL A/C711.

PERMANENT SEEDING - INSTALL IAW DETAIL B/C711.

SILT FENCE - INSTALL IAW DETAIL A/C710.

TREE BARRICADE - INSTALL IAW DETAIL B/C710.

INLET PROTECTION - INSTALL IAW DETAIL C/710.

LANDSCAPING - INSTALL IAW LANDSCAPING DRAWINGS.

HANAHAN SOUTH CAROLINA

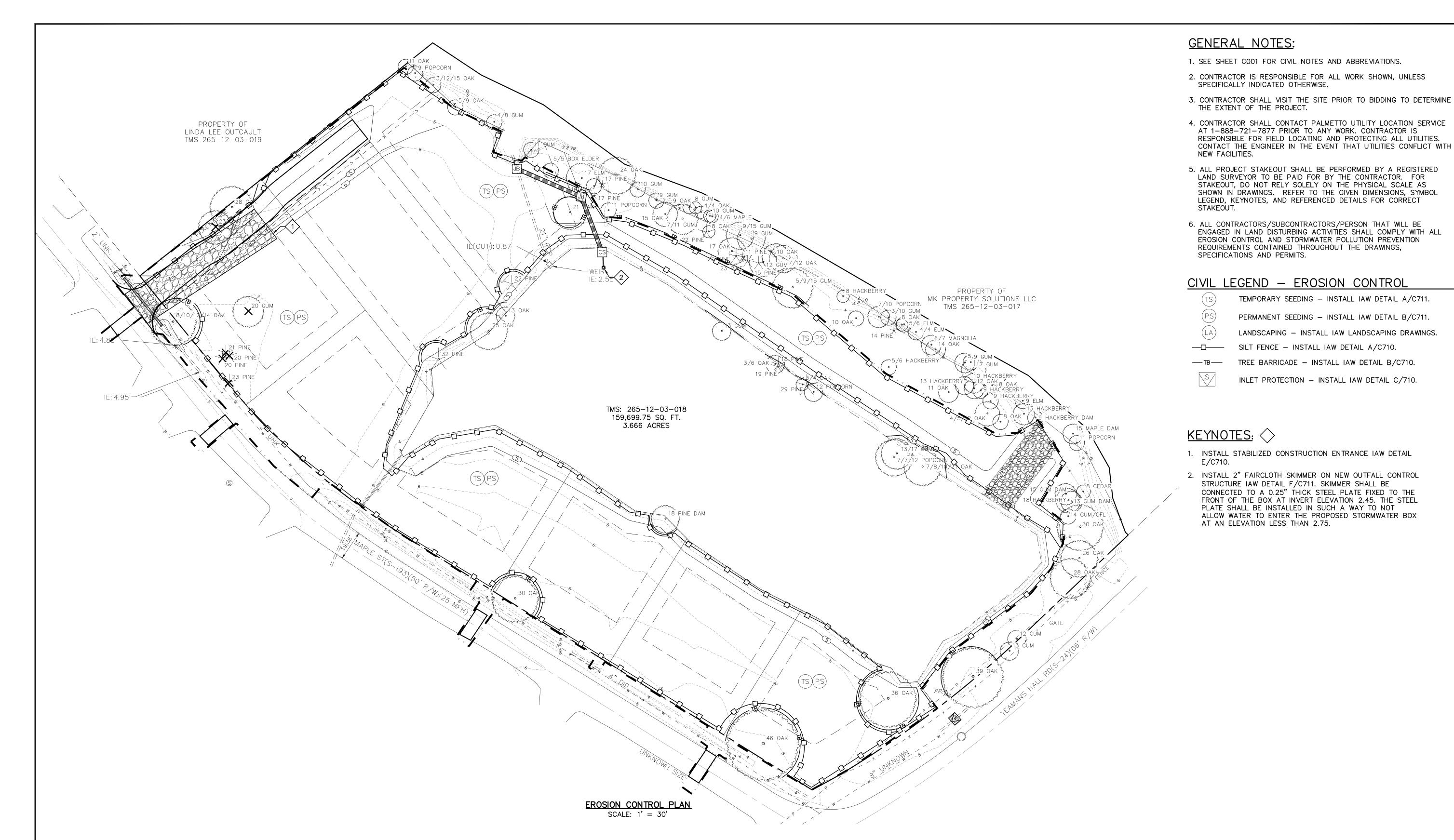






8/13/2019 **ADC PROJECT #**: 19148.00 DESIGNED: CHECKED:

**EROSION** 



## SWPPP SEQUENCE OF CONSTRUCTION NOTES (INITIAL/INTERMEADIATE/FINAL PHASE):

- 1. PRIOR TO ANY LAND DISTURBANCE ACTIVITY CONDUCT A SWPPP PRE-CONSTRUCTION CONFERENCE. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT SWPPP PRE-CONSTRUCTION MEETING WITH SWPPP PREPARING ENGINEER, CONTRACTING OFFICER, THE CITY OF HANAHA SCDHEC, OWNER AND ALL LAND DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.
- 2. INSTALL SWPPP SIGN, TREE BARRICADES, SILT FENCE, SILT FENCE OUTLETS, INLET PROTECTION AND CONSTRUCTION ENTRANCE AS SHOWN ON THE PLANS.
- 3. STOP AND GET SITE INSPECTED/CERTIFIED.
- 4. TEMPORARILY SEED DISTURBED AREAS IAW THE PLANS AND THE CONSTRUCTION GENERAL PERMIT.
- 5. COORDINATE ANY UTILITIES TO BE DEMOLISHED.
- 6. GRADE SITE TO ELEVATIONS SHOWN ON PLAN. SEE GRADING PLANS FOR SPOT ELEVATIONS.
- 7. PREPARE SITE FOR PAVING.
- 8. INSTALL ACCESS DRIVEWAY.

- 9. COMPLETE REMAINING GRADING.
- 10. PERMANENTLY STABILIZE DISTURBED AREAS IAW LANDSCAPE PLAN AND DETAILS.
- 11. MAINTAIN BEST MANAGEMENT PRACTICES THROUGHOUT CONSTRUCTION.
- 15. PREPARE THE STORMWATER AS-BUILTS AS INDICATED ON SHEET C300. SCHEDULE AN ONSITE INSPECTION WITH THE CITY OF HANAHAN, THE ENGINEER AND THE CONTRACTING OFFICER AFTER THE SITE IS FULLY STABILIZED.
- 16. REMOVE ALL REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL AFTER APPROVAL OF THE ENGINEER AND THE CONTRACTING OFFICER AND STABILIZE ANY AREAS DISTURBED BY THE REMOVAL OF THE BEST MANAGEMENT PRACTICES.
- GENERAL PERMIT UNTIL THE SITE IS FULLY STABILIZED AND THE PERMIT MAY BE TERMINATED.

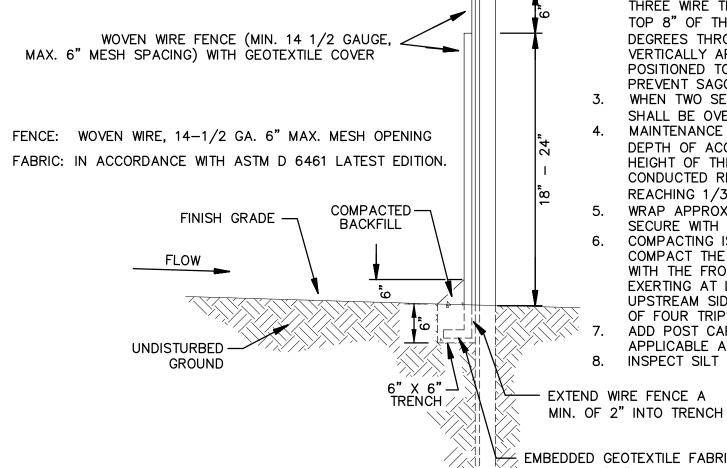


( IN FEET )

1 inch = 30 ft.

17. CONTINUE INSPECTION REPORTS IAW CONSTRUCTION

PERMIT SET



A-A-SECTION

INSTALLATION SHALL COMPLY WITH ASTM D 6462 LATEST EDITION. ATTACH THE WOVEN WIRE FENCE TO EACH POST AND THE GEOTEXTILE TO THE WOVEN WIRE FENCE (SPACED EVERY 30") WITH THREE WIRE TIES OR OTHER FASTENERS, ALL SPACED WITHIN THE TOP 8" OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1" VERTICALLY APART. ALSO, EACH TIE PLACED ON A POST SHOULD BE POSITIONED TO HANG ON A POST NIPPLE WHEN TIGHTENED TO

WHEN TWO SECTIONS OF GEOTEXTILE ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED ACROSS TWO POSTS, 60" MIN. AS SHOWN. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE SWPPP. DEPTH OF ACCUMULATED SEDIMENTS MAY NOT EXCEED 1/3 THE HEIGHT OF THE FENCE. MAINTENANCE CLEANOUT MUST BE CONDUCTED REGULARLY TO PREVENT ACCUMULATED SEDIMENTS FROM

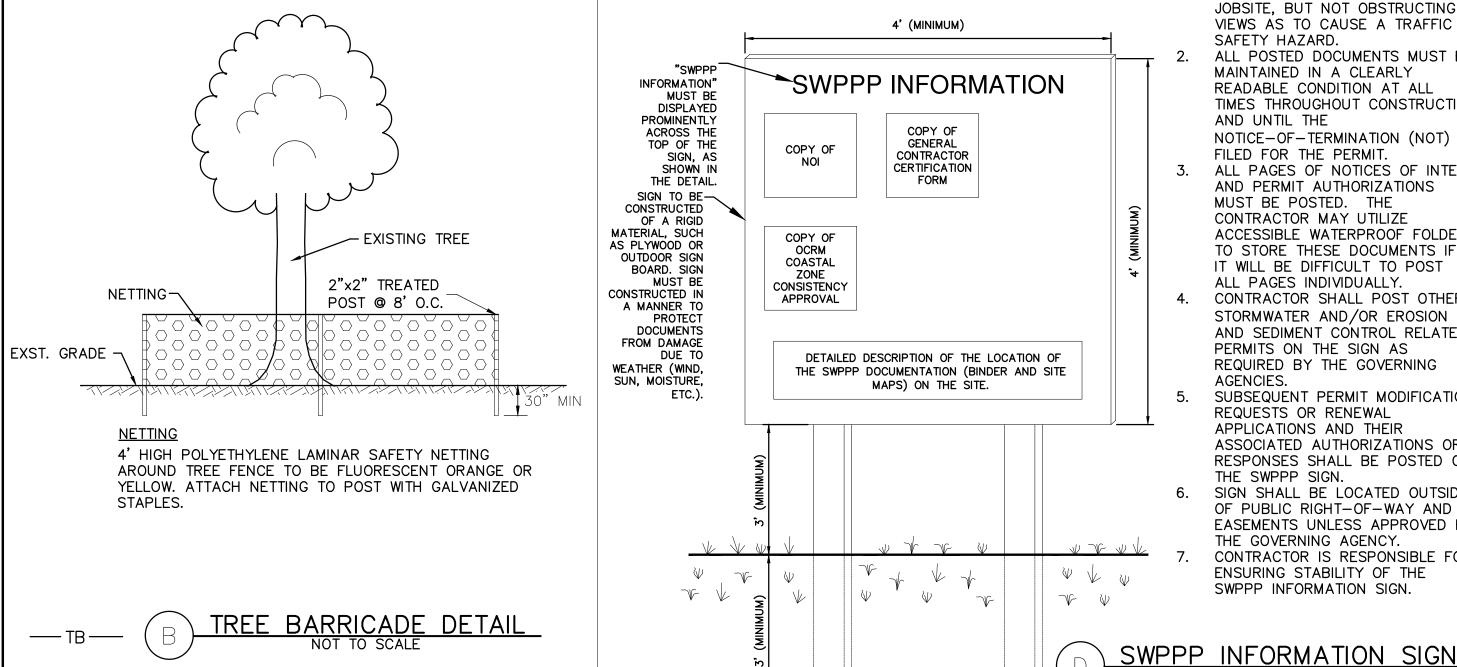
REACHING 1/3 THE HEIGHT OF THE FENCE FABRIC ABOVE GRADE.

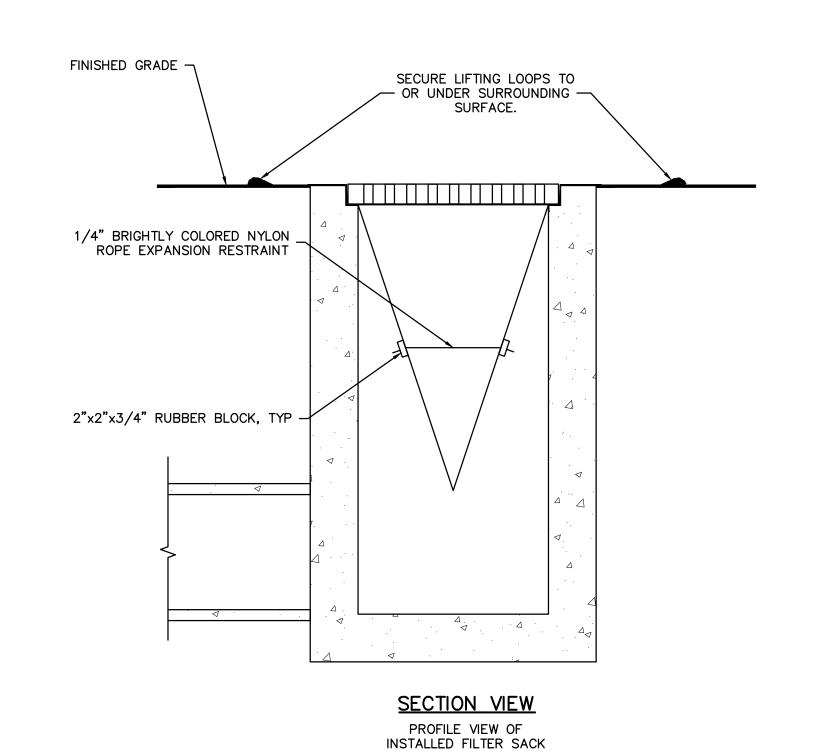
WRAP APPROXIMATELY 6" OF FABRIC AROUND THE END POSTS AND SECURE WITH 3 TIES. COMPACTING IS VITALLY IMPORTANT FOR EFFECTIVE RESULTS. COMPACT THE SOIL IMMEDIATELY NEXT TO THE SILT FENCE FABRIC WITH THE FRONT WHEEL OF THE TRACTOR, SKID STEER, OR ROLLER EXERTING AT LEAST 60 POUNDS PER SQ. INCH. COMPACT THE UPSTREAM SIDE FIRST, AND THEN EACH SIDE TWICE FOR A TOTAL OF FOUR TRIPS.

ADD POST CAPS AS NEEDED BASED ON SITE CONDITIONS AND APPLICABLE AGENCY REQUIREMENTS. 8. INSPECT SILT FENCE EVERY 7 DAYS AND AFTER EVERY RAIN EVENT.

 $\leftarrow$  EMBEDDED GEOTEXTILE FABRIC MIN. 6" INTO GROUND W/ 6" LAID ALONG BOTTOM OF TRENCH. SOIL SLICING IN ACCORDANCE WITH ASTM D 6462 8.2.2 IS ALSO ACCEPTABLE.

REINFORCED SILT FENCE DETAIL NOT TO SCALE





LOW TO MODERATE FLOW GE	OTEXTILE FABRIC SP	ECIFICATION TABLE
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH GRAB TENSILE ELONGATION PUNCTURE MULLEN BURST TRAPEZOID TEAR UV RESISTANCE APPARENT OPENING SIZE FLOW RATE PERMITTIVITY	ASTM D-4632 ASTM D-4632 ASTM D-4833 ASTM D-3786 ASTM D-4533 ASTM D-4355 ASTM D-4751 ASTM D-4491 ASTM D-4491	300 LBS 20 % 120 LBS 800 PSI 120 LBS 80 % 40 US SIEVE 40 GAL/MIN/SQ FT 0.55 SEC -1
MODERATE TO HIGH FLOW (		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH GRAB TENSILE ELONGATION PUNCTURE MULLEN BURST TRAPEZOID TEAR UV RESISTANCE APPARENT OPENING SIZE FLOW RATE PERMITTIVITY	ASTM D-4632 ASTM D-4632 ASTM D-4833 ASTM D-3786 ASTM D-4533 ASTM D-4355 ASTM D-4751 ASTM D-4491 ASTM D-4491	265 LBS 20 % 135 LBS 420 PSI 45 LBS 90 % 20 US SIEVE 200 GAL/MIN/SQ FT 1.5 SEC -1

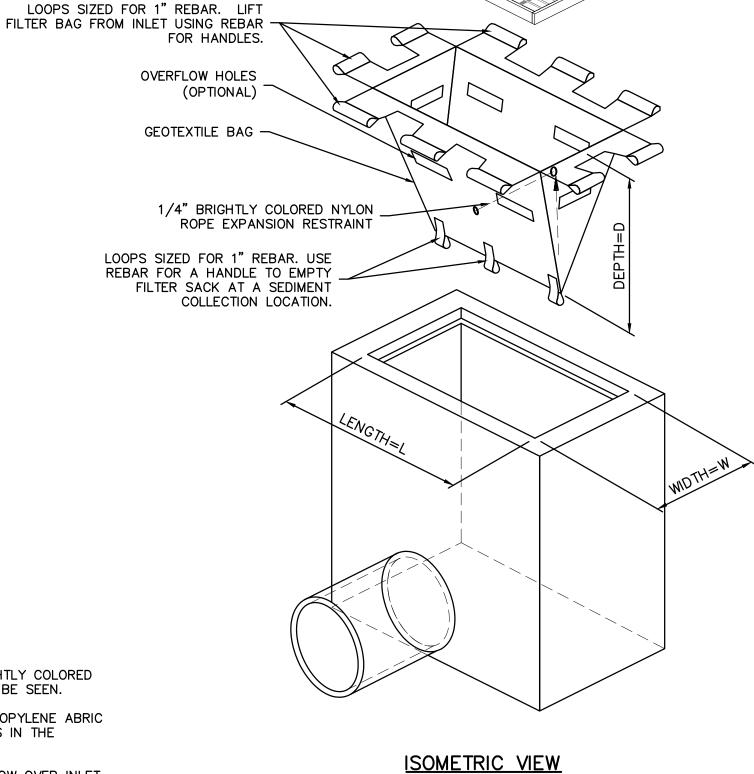
- 1. REMOVE TRAPPED SEDIMENT WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
- 2. GEOTEXTILE SHALL BE A WOVEN POLYPROPYLENE ABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
- 3. PLACE AN OIL ADSORBENT PAD OR PILLOW OVER INLET GRATE WHEN OIL SPILLS ARE A CONCERN.
- 4. INSPECT PER REGULATORY REQUIREMENTS.

BETWEEN 18 INCHES AND 36 INCHES.

- 5. THE WIDTH, "W", OF THE FILTER SACK SHALL MATCH THE
- INSIDE WIDTH OF THE GRATED INLET BOX. 6. THE DEPTH, "D", OF THE FILTER SACK SHALL BE
- 7. THE LENGTH, "L", OF THE FILTER SACK SHALL MATCH

THE INSIDE LENGTH OF THE GRATED INLET BOX.

EDGES SHALL BE TAPERED OUT



INLET GRATE

FILTER SACK INLET PROTECTION

## NOTES:

- 1. THE SWPPP INFORMATION SIGN MUST BE LOCATED IN A PROMINENT, PUBLICLY ACCESSIBLE LOCATION NEAR THE MAIN ENTRANCE OF THE SITE, SUCH THAT THE DOCUMENTATION CAN BE READ WITHOUT ACCESSING THE JOBSITE, BUT NOT OBSTRUCTING VIEWS AS TO CAUSE A TRAFFIC SAFETY HAZARD.
- ALL POSTED DOCUMENTS MUST BE MAINTAINED IN A CLEARLY READABLE CONDITION AT ALL TIMES THROUGHOUT CONSTRUCTION AND UNTIL THE NOTICE-OF-TERMINATION (NOT) IS FILED FOR THE PERMIT.
- 3. ALL PAGES OF NOTICES OF INTENT AND PERMIT AUTHORIZATIONS MUST BE POSTED. THE CONTRACTOR MAY UTILIZE ACCESSIBLE WATERPROOF FOLDERS TO STORE THESE DOCUMENTS IF IT WILL BE DIFFICULT TO POST
- ALL PAGES INDIVIDUALLY. CONTRACTOR SHALL POST OTHER STORMWATER AND/OR EROSION AND SEDIMENT CONTROL RELATED PERMITS ON THE SIGN AS REQUIRED BY THE GOVERNING
- AGENCIES. SUBSEQUENT PERMIT MODIFICATION REQUESTS OR RENEWAL APPLICATIONS AND THEIR ASSOCIATED AUTHORIZATIONS OR RESPONSES SHALL BE POSTED ON THE SWPPP SIGN.
- SIGN SHALL BE LOCATED OUTSIDE OF PUBLIC RIGHT-OF-WAY AND EASEMENTS UNLESS APPROVED BY THE GOVERNING AGENCY. CONTRACTOR IS RESPONSIBLE FOR ENSURING STABILITY OF THE SWPPP INFORMATION SIGN.

NOT TO SCALE

TOWARDS ROAD TO PREVENT TRACKING OF MUD ON THE EDGES AVERAGE STONE UNDERLINING DIAMETER OF 2 NON-WOVEN TO 3 INCHES -GEOTEXTILE WITH A 6 INCH FABRIC MINIMUM DEPTH

- INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE POSITIVE DRAINAGE.
- 2. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN OR OTHER SEDIMENT TRAPPING STRUCTURE.

## **GENERAL NOTES:**

- 1. STABILIZED CONSTRUCTION ENTRANCES SHOULD BE USED AT ALL POINTS WHERE TRAFFIC WILL EGRESS/INGRESS A CONSTRUCTION SITE ONTO A PUBLIC ROAD OR ANY IMPERVIOUS SURFACES, SUCH AS PARKING LOTS.
- 2. INSTALL A NON-WOVEN GEOTEXTILE FABRIC PRIOR TO PLACING ANY STONE.
- 3. INSTALL A CULVERT PIPE ACROSS THE ENTRANCE WHEN NEEDED TO PROVIDE POSITIVE DRAINAGE.
- 4. THE ENTRANCE SHALL CONSIST OF 2-INCH TO 3-INCH D50 STONE PLACED AT A MINIMUM DEPTH OF 6-INCHES.
- 5. MINIMUM DIMENSIONS OF THE ENTRANCE SHALL BE 24-FEET WIDE BY 100-FEET LONG, AND MAY BE MODIFIED AS NECESSARY TO ACCOMMODATE SITE CONSTRAINTS.
- 6. THE EDGES OF THE ENTRANCE SHALL BE TAPERED OUT TOWARDS THE ROAD TO PREVENT TRACKING AT THE EDGE OF THE ENTRANCE.
- 7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN OR OTHER SEDIMENT TRAPPING STRUCTURE.
- 8. LIMESTONE MAY NOT BE USED FOR THE STONE PAD.

## **INSPECTION AND MAINTENANCE:**

- 1. THE KEY TO FUNCTIONAL CONSTRUCTION ENTRANCES IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
- REGULAR INSPECTIONS OF CONSTRUCTION ENTRANCES SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS AFTER EACH RAINFALL EVEN THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
- . DURING REGULAR INSPECTIONS, CHECK FOR MUD AND SEDIMENT BUILDUP AND PAD INTEGRITY. INSPECTION FREQUENCIES MAY NEED TO BE MORE FREQUENT DURING LONG PERIODS OF WET WEATHER.
- 4. RESHAPE THE STONE PAD AS NECESSARY FOR
- 5. WASH OR REPLACE STONES AS NEEDED AND AS DIRECTED BY SITE INSPECTOR. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE THE AMOUNT OF MUD BEING CARRIED OFF-SITE BY VEHICLES. FREQUENT WASHING WILL EXTEND THE USEFUL LIFE OF STONE PAD.
- IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO ADJACENT IMPERVIOUS SURFACES BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED WHEN THE WATER CAN BE DISCHARGED TO A SEDIMENT TRAP OR BASIN.
- DURING MAINTENANCE ACTIVITIES, ANY BROKEN PAVEMENT SHOULD BE REPAIRED IMMEDIATELY.
- 8. CONSTRUCTION ENTRANCES SHOULD BE REMOVED AFTER THE SITE HAS REACHED FINAL STABILIZATION PERMANENT VEGETATION SHOULD REPLACE AREAS FROM WHICH CONSTRUCTION ENTRANCES HAVE BEEN REMOVED, UNLESS AREA WILL BE CONVERTED TO AN IMPERVIOUS SURFACE TO SERVE POST-CONSTRUCTION.

SCDHEC STABILIZED CONSTRUCTION ENTRANCE



1226 YEAMANS HALL ROAD

ADCENGINEERING.COM

HANAHAN, SC 29410

843-566-0161

**ENGINEERING** 

DATE:	8/13/2019
ADC PROJECT #:	19148.00
DESIGNED:	JW
CHECKED:	JW
DRAWN:	MP
REVISION:	

CIVIL DETAILS CONTROL

PERMIT SET

DRAINAGE AND RUNOFF CONTROL.

## NOTES:

- 1. THE GC IS REQUIRED TO, AT A MINIMUM, INITIATE SOIL STABILIZATION MEASURES IMMEDIATELY WHENEVER ANY CLEARING, GRADING EXCAVATING OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT LIKELY RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. DIVERSION CHANNELS/DITCHES SHALL BE STABILIZED WITHIN 7 DAYS OF INSTALLATION.
- 2. THE GC HAS 7 DAYS FROM INITIATION OF STABILIZATION TO COMPLETE SOIL PREPARATION, SEEDING, MULCHING, AND ANY OTHER REQUIRED ACTIVITIES RELATED TO THE PLANTING AND ESTABLISHMENT OF VEGETATION. THE GC ALSO HAS 7 DAYS FROM INITIATION OF STABILIZATION TO COMPLETELY INSTALL NON-VEGETATED MEASURES, IF UTILIZED.
- 3. ALL DISTURBED AREAS MUST BE STABILIZED TEMPORARILY WITH THE USE OF FAST-GERMINATING ANNUAL GRASS/GRAIN VARIETIES APPROPRIATE FOR SITE SOIL AND CLIMATE CONDITIONS. MULCH IS REQUIRED FOR ALL SEEDING APPLICATIONS, AND ALL MULCH APPLICATIONS MUST INCLUDE A SUITABLE FORM OF MULCH ANCHORING TO MINIMIZE MOVEMENT OF MULCH BY WIND OR WATER.

SCDHEC TEMPORARY SEEDING - COASTAL													
SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET	40												
RYE, GRAIN	56												
RYEGRASS	50												
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET OR JAPANESE MILLET	40												
RYE, GRAIN OR OATS	56 75												
RYEGRASS	50												

## **SEEDING PREPARATION:**

A. TILL AREA TO BE SEEDED TO A DEPTH OF 4". B. APPLY 10-10-10 FERTILIZER AT A RATE OF 11.5 POUNDS PER 1,000 SQUARE FEET.

FIBER MULCH, SPRAY-ON SOIL GLUES/BINDERS, AND ROLLED EROSION CONTROL PRODUCTS

C. THE FERTILIZER SHALL BE WORKED INTO THE TOP 4 INCHES OF SOIL PRIOR TO SEEDING.

## A. APPLY STRAW MULCH BY HAND OR MACHINE AT A RATE OF 1.5-2.0 TONS PER ACRE (90 POUNDS PER 1,000 SF) THEN

- 4. ALTERNATIVE STABILIZATION MEASURES TO SEEDING, SUCH AS ANCHORED MULCH APPLICATION (WITHOUT SEEDING), MAY BE UTILIZED DURING PERIODS WHEN VEGETATIVE GROWTH IS UNLIKELY (E.G. WINTER MONTHS).
- 5. IT IS NOT ACCEPTABLE TO ALLOW BARE SOIL TO REMAIN EXPOSED AT ANY TIME DURING THE YEAR, REGARDLESS OF WEATHER/TEMPERATURE/SITE CONDITIONS.
- 6. ALTERNATIVE STABILIZATION MEASURES INCLUDE, BUT ARE NOT LIMITED TO: ANCHORED STRAW/HAY MULCH, WOOD CELLULOSE
- 7. ALL ROLLED EROSION CONTROL PRODUCTS SHALL HAVE CURRENT QDOR(TM) STATUS ISSUED BY THE EROSION CONTROL TECHNOLOGY COUNCIL (ECTC) PLUS ANY STATE OR AGENCY-SPECIFIC REQUIREMENTS. EVIDENCE OF QDOR(TM) APPROVAL SHALL ACCOMPANY THE PRODUCT SHIPPED TO THE JOBSITE FOR READY IDENTIFICATION BY THE CONTRACTOR OR AGENCY INSPECTOR.
- 8. ROLLED EROSION CONTROL PRODUCTS (NETS, BLANKETS, TURF REINFORCED MATES) AND VEGETATED AREAS NOT MEETING REQUIRED VEGETATIVE DENSITIES FOR FINAL STABILIZATION MUST BE INSPECTED DAILY. RILLING, RUTTING AND OTHER SIGNS OF EROSION INDICATE THE SPECIFIED EROSION CONTROL DEVICE IS NOT FUNCTIONING OR INSTALLED PROPERLY AND/OR ADDITIONAL EROSION CONTROL DEVICES ARE WARRANTED.



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- THE GC HAS 7 DAYS FROM INITIATION OF STABILIZATION TO COMPLETE SOIL PREPARATION, SEEDING, MULCHING, AND ANY OTHER REQUIRED ACTIVITIES RELATED TO THE PLANTING AND ESTABLISHMENT OF VEGETATION. THE GC ALSO HAS 7 DAYS FROM INITIATION OF STABILIZATION TO COMPLETELY INSTALL NON-VEGETATED MEASURES, IF UTILIZED.
- ALL DISTURBED AREAS MUST BE STABILIZED TEMPORARILY WITH THE USE OF FAST-GERMINATING ANNUAL GRASS/GRAIN VARIETIES APPROPRIATE FOR SITE SOIL AND CLIMATE CONDITIONS. MULCH IS REQUIRED FOR ALL SEEDING APPLICATIONS, AND ALL MULCH APPLICATIONS MUST INCLUDE A SUITABLE FORM OF MULCH ANCHORING TO MINIMIZE MOVEMENT OF MULCH BY WIND OR WATER.

SCDHEC PERMANENT SEEDING — COASTAL													
SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET BAHIAGRASS	10 40			_									
BROWNTOP MILLET BAHIAGRASS SERICEA LESPEDEZA	10 30 40												
BROWNTOP MILLET ATLANTIC COASTAL PANIC GRASS	10 15 PLS												
BROWNTOP MILLET SWITCHGRASS (ALAMO) LITTLE BLUESTEM SERICEA LESPEDEZA	10 8 PLS 4 20												
BROWNTOP MILLET WEEPING LOVEGRASS	10 8			_									
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET BAHIAGRASS	10 40												
RYE, GRAIN BAHIAGRASS CLOVER,CRIMSON (ANNUAL)	10 40 5												
BROWNTOP MILLET BAHIAGRASS SERICEA LESPEDEZA	10 30 40												
BROWNTOP MILLET BERMUDA, COMMON SERICEA LESPEDEZA	10 10 40												
BROWNTOP MILLET BERMUDA, COMMON KOBE LESPEDEZA (ANNUAL)	10 12 10												
BROWNTOP MILLET BAHIAGRASS BERMUDA, COMMON SERICEA LESPEDEZA	10 20 6 40												
BROWNTOP MILLETSWITCHGRASS LITTLE BLUESTEM INDIANGRASS	10 8 PLS 3 PLS 3 PLS												

## **SEEDING PREPARATION:**

- A. TILL AREA TO BE SEEDED TO A DEPTH OF 4".
- B. APPLY 10-10-10 FERTILIZER AT A RATE OF 11.5 POUNDS PER 1,000 SQUARE FEET. THE FERTILIZER SHALL BE WORKED INTO THE TOP 4 INCHES OF SOIL PRIOR TO SEEDING.

# A. APPLY STRAW MULCH BY HAND OR MACHINE AT A RATE OF 1.5-2.0 TONS PER ACRE (90 POUNDS PER 1,000 SF) THEN TACKED WITH EMULSIFIED

- ALTERNATIVE STABILIZATION MEASURES TO SEEDING, SUCH AS ANCHORED MULCH APPLICATION (WITHOUT SEEDING), MAY BE UTILIZED DURING PERIODS WHEN VEGETATIVE GROWTH IS UNLIKELY (E.G. WINTER MONTHS).
- 5. IT IS NOT ACCEPTABLE TO ALLOW BARE SOIL TO REMAIN EXPOSED AT ANY TIME DURING THE YEAR, REGARDLESS OF WEATHER/TEMPERATURE/SITE
- ALTERNATIVE STABILIZATION MEASURES INCLUDE, BUT ARE NOT LIMITED TO: ANCHORED STRAW/HAY MULCH, WOOD CELLULOSE FIBER MULCH, SPRAY-ON SOIL GLUES/BINDERS, AND ROLLED EROSION CONTROL PRODUCTS.
- ALL ROLLED EROSION CONTROL PRODUCTS SHALL HAVE CURRENT QDOR(TM) STATUS ISSUED BY THE EROSION CONTROL TECHNOLOGY COUNCIL (ECTC) PLUS ANY STATE OR AGENCY-SPECIFIC REQUIREMENTS. EVIDENCE OF QDOR(TM) APPROVAL SHALL ACCOMPANY THE PRODUCT SHIPPED TO THE JOBSITE FOR READY IDENTIFICATION BY THE CONTRACTOR OR AGENCY INSPECTOR.
- ROLLED EROSION CONTROL PRODUCTS (NETS, BLANKETS, TURF REINFORCED MATES) AND VEGETATED AREAS NOT MEETING REQUIRED VEGETATIVE DENSITIES FOR FINAL STABILIZATION MUST BE INSPECTED DAILY. RILLING, RUTTING AND OTHER SIGNS OF EROSION INDICATE THE SPECIFIED EROSION CONTROL DEVICE IS NOT FUNCTIONING OR INSTALLED PROPERLY AND/OR ADDITIONAL EROSION CONTROL DEVICES ARE WARRANTED.

PERMANENT SEEDING/VEGETATION NOTES

## SCDHEC STANDARD NOTES:

- 1. IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
- 2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO
- CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW. WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
- WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
- 3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY OR INCORRECTLY INSTALLED, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
- 4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
- 5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- 6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
- RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C REG. 72-300 ET SEQ. AND SCR100000.
- 8. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
- 9. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.
- 10. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
- 11. A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.
- 12. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED. AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.
- 13. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL
- 14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING. WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
- 15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).
- 16. THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
- WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL; WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING
- COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
- FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND
- MAINTENANCE: AND - SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
- 17. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
- 18. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
- 19. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

## **DEWATERING NOTES:**

- 1. THE DESIGN, ADEQUACY AND OPERATION OF ANY AND ALL DEWATERING ACTIVITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 2. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTIES, RIGHTS OF WAYS, NATURAL AREAS AND EXISTING UTILITY SYSTEMS FROM EROSION AND SEDIMENTATION ASSOCIATED WITH DEWATERING ACTIVITIES.
- 3. DEWATERING OF EXISTING PONDS OR LARGE PONDING AREAS SHALL ALWAYS UTILIZE A FLOATING INTAKE.
- 4. DEWATERING DISCHARGES SHALL ALWAYS BE DIRECTED THROUGH SUITABLE BEST MANAGEMENT PRACTICE (BMP) SUCH AS A TEMPORARY SEDIMENT POND/TRAP OR SEDIMENT TRAPPING DEWATERING BAG.
- 5. ALL DEWATERING ACTIVITIES SHOULD BE IN ACCORDANCE WITH THE SCDHEC CGP.

<u>SCDHEC STANDARD NOTES</u>

## SCDHEC POST—CONSTRUCTION MAINTENANCE REQUIREMENTS

SYSTEM	MAINTENANCE REQUIREMENTS	MAINTENANCE FREQUENCY
B. STORM DRAINAGE SYSTEM	1. REMOVE ALL LITTER AND DEBRIS FROM PIPES 2. REMOVE SEDIMENT FROM DRAINAGE STRUCTURE SUMPS	1. ANNUALLY 2. ANNUALLY, OR WHEN SUMP VOLUME HAS BEEN REDUCED BY 50%

## SCDHEC POST-CONSTRUCTION MAINTENANCE REQUIREMENTS

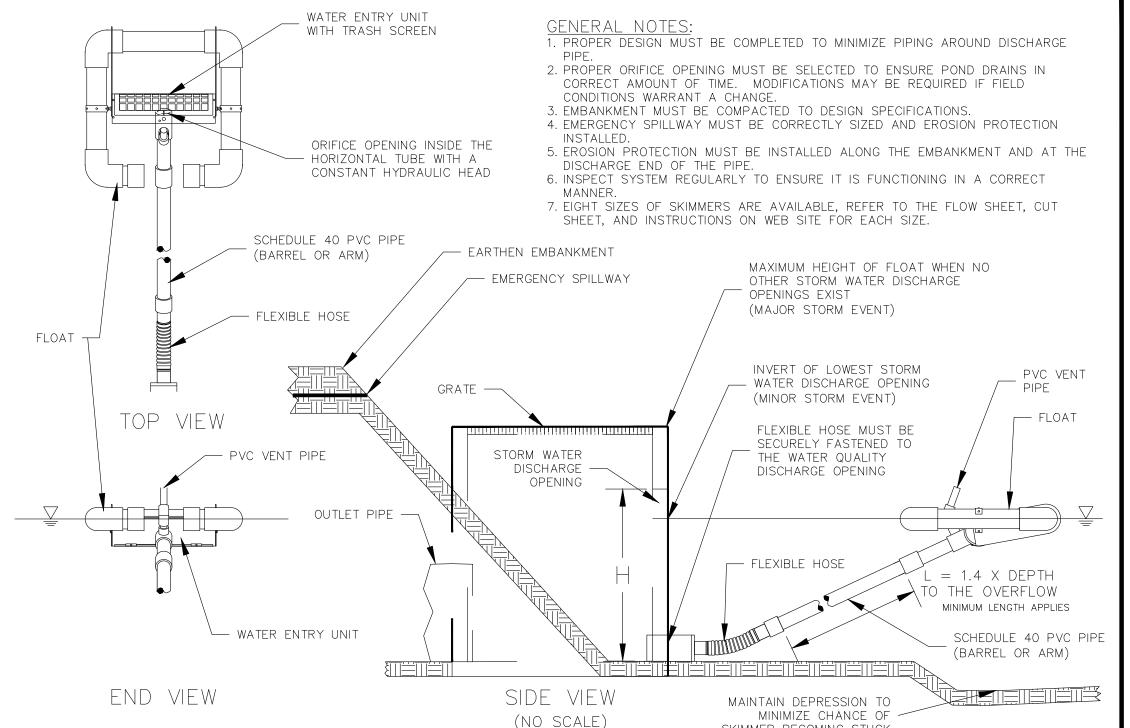
## <u>SCDHEC STORMWATER AS-BUILT/RECORD DRAWING REQUIREMENTS:</u>

- 1. PRIOR TO SUBSTANTIAL COMPLETION AND PRIOR TO REQUESTING FINAL SITE INSPECTION BY **SCDHEC** THE CONTRACTOR SHALL PROVIDE AND RECEIVE APPROVAL OF AS-BUILT/RECORD DRAWINGS CONSISTING OF SURVEY DRAWINGS MEETING THE FOLLOWING REQUIREMENTS:
  - FIELD SURVEYED DRAWINGS BASED ON AN AS-BUILT SURVEY OF NEWLY CONSTRUCTED STORM WATER MANAGEMENT FACILITIES WITH:
  - EXISTING GRADES/CONTOURS/DEPTHS OF THE FACILITY.
  - (ii) ELEVATIONS AND DIMENSIONS OF ALL INLET/OUTLET STRUCTURES, INCLUDING:
  - -PIPE AND ORIFICE INVERTS AND DIAMETERS. -WEIR ELEVATIONS AND DIMENSIONS.
  - -RISER DIMENSIONS AND ELEVATIONS.
  - -EMERGENCY SPILLWAY DIMENSIONS AND ELEVATIONS.
  - -LOCATIONS AND INVERTS FOR ALL PIPES DISCHARGING INTO THE FACILITY. -LOCATIONS AND INVERTS FOR ALL PIPES EXITING THE FACILITY.
  - -DETAILED SKETCHES OF THE STRUCTURES SHALL BE PROVIDED IF NECESSARY FOR CLARITY. (iii) SPOT ELEVATIONS ALONG THE TOP, BOTTOM AND SHELVES OF THE FACILITY'S EMBANKMENT.
  - (iv) CONTOURS, DIMENSION, AND LOCATIONS OF ALL STRUCTURAL COMPONENTS (E.G., FOREBAYS, LEVEL SPREADERS, RIP RAP APRONS, INLET STRUCTURES, LOW FLOW CHANNELS) OF THE FACILITY.
  - (v) TABLE OF ELEVATIONS AND ASSOCIATED CONTOUR AREA AT EACH ELEVATION FOR STAGE/STORAGE VERIFICATION. IF FACILITY IS SEPARATED INTO DIFFERENT BASINS OR FOREBAYS, THE TABLE SHALL PROVIDE AREA DATA FOR EACH SEPARATE BASIN.
  - (vi) WETLAND AREAS
  - B. AS-BUILT SURVEYS SHALL BE PREPARED IN STATE PLANE COORDINATES NAD 83 DATUM.
  - C. AS-BUILT SURVEYS SHALL BE PREPARED USING THE SAME VERTICAL DATUM AS USED ON THE APPROVED DESIGN PLANS.
  - D. ALL DRAWINGS SHALL BEAR THE FOLLOWING STATEMENTS SIGNED BY THE SURVEYOR:
  - "I HEREBY SIGN, DATE AND AFFIX MY SEAL TO CERTIFY THAT THE AS—BUILT/RECORD DRAWING SURVEY SHOWN IS CORRECT AND ACCURATE."

## S.C. REGISTERED PROFESSIONAL LAND SURVEYOR

- 2. THE CONTRACTOR SHALL SUBMIT PRELIMINARY VERSIONS OF THE AS-BUILT/RECORD DRAWINGS TO THE (CONTRACTING OFFICER)(ENGINEER) FOR REVIEW PRIOR TO SUBMITTING TO SCOHEC FOR REVIEW.
- 3. UPON RECEIPT OF ANY COMMENTS FROM THE (CONTRACTING OFFICER)(ENGINEER), THE CONTRACTOR SHALL MAKE ALL NECESSARY CORRECTIONS AND RESUBMIT FINAL VERSIONS OF THE AS-BUILT/RECORD DRAWINGS TO THE (CONTRACTING OFFICER)(ENGINEER) FOR FORWARDING TO SCOHEC FOR REVIEW AND/OR APPROVAL.
- 4. UPON RECEIPT OF ANY COMMENTS FROM **SCDHEC**, THE CONTRACTOR SHALL MAKE ALL NECESSARY CORRECTIONS AND RESUBMIT CORRECTED FINAL VERSIONS OF THE AS-BUILT/RECORD DRAWINGS TO THE (CONTRACTING OFFICER)(ENGINEER) FOR FORWARDING TO SCOHEC FOR REVIEW AND/OR APPROVAL

# SCDHEC STORMWATER AS-BUILT/RECORD DRAWING REQUIREMENTS

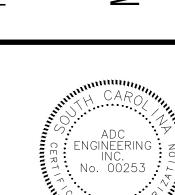


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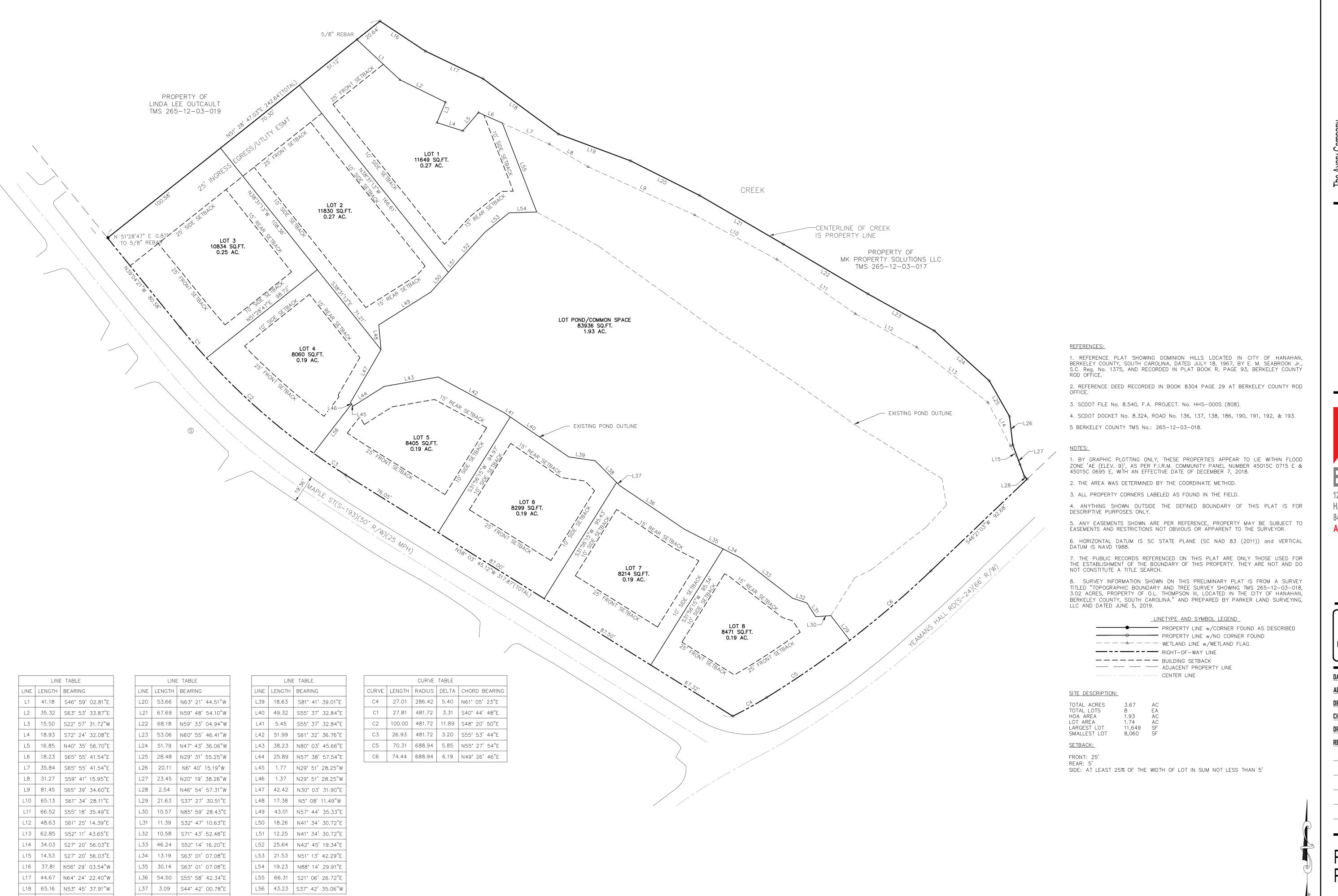


8/13/2019 ADC PROJECT #: 19148.00 DESIGNED: CHECKED:

CIVIL DETAILS

PERMIT SET

DRAWN BY T. R. EVANS 1



L19 | 53.52 | N69° 36' 18.77"W

L38 | 21.23 | S44° 42' 00.78"E

Maple Street Subdivision

ENGINEERI

1226 YEAMANS HALL ROAD

HANAHAN, SC 29410

843-566-0161

ADCENGINEERING.COM



 DATE:
 8/13/2019

 ADC PROJECT #:
 19148.00

 DESIGNED:
 JW

 CHECKED:
 JW

 DRAWN:
 MP

 REVISION:

PRELIMINARY PI AT

P001
SHEET OF

HORIZONTAL SCALE

( IN FEET ) 1 inch = 30 ft. **CITY ADMINISTRATOR**MIKE COCHRAN



CITY COUNCIL
JEFF C. CHANDLER, MAYOR PRO-TEM
MIKE DYSON
KEVIN HEDGPETH
JOEL E. HODGES
DAN OWENS
MICHAEL SALLY

## Staff Report

To: The Hanahan Planning Commission

Cc: Larry Sturdivant, Building Official; Kyle Taylor, Hoyt + Berenyi

From: Jeff Hajek, Planner/Economic Development Director

Date: March 3, 2020

Re: Preliminary Land Development Plan Approval for "Luken Road Industrial"

**Project** 

Applicant/Owner: Hoyt + Berenyi (Kyle Taylor, PE)

Location: North of the intersection of Henry E. Brown, Jr. Boulevard and North

Pointe Industrial Boulevard

Tax Map Number(s): 252-00-00-027

Approval Requested: Preliminary Land Development Plan Approval and Subdivision

Plat Approval

Existing Zoning/Land Use: Industrial (ID)/No current use (undeveloped)

#### **General Application Overview and Background**

The proposed site is located immediately north of the intersection of Henry E. Brown, Jr. Boulevard and North Pointe Industrial Boulevard. Currently, the undeveloped, 8.09-acre site is heavily wooded and has a significant amount of jurisdictional wetlands (approximately 3.3 acres) present on the northern portion of the property. This presence of jurisdictional wetlands is confirmed in a letter from the U.S. Army Corps of Engineers (USACE) dated August 25, 2015 (Reference: SAC 2015-00798-2JM).

Overall, the applicant is proposing to: construct a landscaping company office and warehouse with employee parking, a gated equipment yard, stormwater pond BMP (Best Management Practice for Water Pollution), watermain extension and subdivide the subject property to create an additional parcel for a new Berkeley County Convenience Center. The Convenience Center will exist to provide County services at a more convenient location for residents who live in the southern portion of Berkeley County.

The project, as shown on the plans, will be split into two (2) parcels. As described in the plans, Parcel "A" is to be approximately 6.1 acres serving the landscaping facility

#### MAYOR CHRISTIE RAINWATER

## **CITY ADMINISTRATOR**MIKE COCHRAN



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and Parcel "B" is to be approximately 2 acres servicing the County Convenience Center. The applicant has submitted a subdivision plat to be reviewed and approved by the Planning Commission.

This site will be served by roadway improvements, which include extending Luken Road with minor right-of-way adjustments terminating at a new cul-de-sac, which will be maintained by Berkeley County. Concurrently, Berkeley County Water and Sanitation Authority (BCWS) is designing a small pump station and force main to serve the two (2) subject parcels. The current proposal will require 4.3 acres of disturbance and proposes a total impervious surface area of 2.9 acres.

#### **General Conformance Analysis**

The following report utilized the 2008 City of Hanahan Zoning Ordinance in order to analyze the submitted preliminary land development plan for Tanner Hall, Phase 7D. Per the Zoning Ordinance, staff finds the following general conformance standards for the proposed site:

- 1. Lot size—The proposed lot sizes conform to the 2008 Zoning Ordinance required minimums for the Industrial (ID) zoning district, which is  $6,000\,\mathrm{SF}$ . Parcel "A" will be 6.2 acres (270,295 SF) and Parcel "B" will be 1.9 acres (85.334 SF)
- 2. **Lot Width**—Lots conform to the minimum lot width requirement of 100'. Each lot frontage is approximately 300.'
- 3. **Density**—Not applicable—there are no density requirements for the ID district.
- 4. **Setbacks**—All proposed building meet the required setbacks as dictated in the ID Standards By Zone:

Front: 25'Side: 20'Rear: 20'

5. **Impervious Surface Ratio**—The proposed site plan for both parcels is well under the required 85% maximum impervious surface ratio. Parcel "A" is 37.1% and Parcel "B" is 30.0%.

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#### Preliminary Plat Requested Corrections (Section 3.2(B))

Given that the submitted preliminary land development plan meets general zoning conformance, there are other pertinent and required elements needed in order to have a complete submittal. These documentation requirements may be found in Section 3.2(B) of the Land Development Ordinance. The following will be needed for approval;

#### Existing Site Information

- 1. Section 3.2(B)(3)(d): Location, ownership, parcel identification number, zoning classification and land use of the adjoining property, including those across rights-of-way must be shown on the property to the west of the subject site on the existing conditions plan.
- 2. Section 3.2(B)(3)(g): A tree protection plan will be required. Tree survey and protection standards shall be those found in Chapter 7 of the Zoning Ordinance. "All trees required to be protected, including graphic indication as to whether landmark trees and protected trees are proposed to be preserved or removed.

Mitigation requirements are provided in Section 7.7. This will require the applicant to provide the total amount of DBH required to be mitigated. Furthermore, a planting schedule of the mitigation trees will need to be provided in the plan set if the owner wants to plant. If not, the owner may pay a fee in lieu of the tree mitigation to the Community Tree Planting Fund.

#### Proposed Land Development Information

- 1. **Section 3.2(B)(4)(b):** Luken Road Extended will need to be pre-approved by Berkeley County E-911 once the roads have received their respective names.
- Section 6.5 (Landscaping Provisions for Off-Street Parking, Loading and Vehicular Use Areas): There was no landscape plan included in the plan set for all off-street parking and loading zones throughout both proposed parcels.

#### Subdivision Plat

As stated in the General Conformance Analysis section, the two proposed lots meet all the "Standards by Zone" for the Industrial (ID) zoning district. Furthermore, the provided subdivision plat meets the documentation requirements laid out in Section 3.5 (Final Plat/Minor Land Development Plat). Only correction needed from Staff is

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the misspelling of "Jurisdictional," in relation to the phrase "Jurisdictional Freshwater Wetlands." which is identified on Parcel "A."

#### Other

#### Submittal to Respective Utilities

The applicant will need to ensure that the preliminary plan has been submitted to Charleston Water System (CWS) and Berkeley County Water and Sanitation (BCWS) for general review and review for stormwater management. Copies of the eventual construction plans will also need to be submitted to Berkeley County Engineering. Comments received by said agencies may affect changes to the preliminary plan.

#### Recommendations

This plan constitutes a preliminary land development plan. Approval of this plan does not imply approval of permits to begin construction. Approval of this application will enable the developer to seek permits for land disturbance and installation of necessary infrastructure to serve this phase of the project. Subsequent to approval to install infrastructure, the applicant must submit a final plat that depicts all easements provided for its maintenance, whether by a public agency or property owners association. Such plat must be approved and recorded prior to transfer of individual lots depicted on this plan.

Based upon staff's review, the City recommends that the Planning Commission *approve* the submitted preliminary land development plan for "Luken Road Industrial Project," with strict conditions. Said conditions include:

- 1. Addressing all requested information the "Preliminary Plat Requested Corrections (Section 3.2(B))" section of this staff report.
- 2. Addressing all requested information in the "Subdivision Plat" and the "Other" sections of this staff report.
- 3. Receipt of recommendation letters from CWS, BCWS and Berkeley County Engineering.

## GENERAL NOTES:

2. CONTRACTOR SHALL PROVIDE ALL BONDS AND INSURANCE REQUIRED BY PUBLIC AND/OR PRIVATE AGENCIES HAVING JURISDICTION.

3. CONTRACTOR SHALL PROCURE AN ENCROACHMENT PERMIT FROM FOR ALL WORK WITHIN THE STATE RIGHT-OF-WAY AND CONFORM TO ALL CONDITIONS OF THE PERMIT. 4. ALL MATERIALS AND WORKMANSHIP FOR FACILITIES IN STREET RIGHT-OF-WAY OR EASEMENTS SHALL CONFORM TO APPROVING AGENCIES' CONSTRUCTION SPECIFICATIONS WHEREIN EACH HAS JURISDICTION, INCLUDING BUT NOT LIMITED TO SCDHEC AND OCRM. 5. UNLESS OTHERWISE APPROVED BY THE PUBLIC WORKS DIRECTOR, CONSTRUCTION OF ALL PUBLIC FACILITIES SHALL BE DONE BETWEEN 7:00 A.M. AND 6:00 P.M., MONDAY THROUGH SATURDAY.

6. THE CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS INCLUDING SUCH INCIDENTALS AS MAY BE NECESSARY TO MEET APPLICABLE AGENCY REQUIREMENTS AND PROVIDE A COMPLETED PROJECT. 7. CONTRACTOR TO NOTIFY SCDOT, THE CITY OF HANAHAN, BERKELEY COUNTY, AND ALL UTILITY COMPANIES A MINIMUM OF 48 BUSINESS HOURS (2 BUSINESS

8. ANY INSPECTION BY THE CITY, COUNTY, CWS, BCWS OR OTHER AGENCIES SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN STRICT COMPLIANCE WITH THE APPLICABLE CODES AND AGENCY REQUIREMENTS. 9. CONTRACTOR SHALL ERECT AND MAINTAIN BARRICADES, WARNING SIGNS, TRAFFIC CONES PER SCDOT, CITY, COUNTY, CPW AND REQUIREMENTS IN ACCORDANCE WITH THE MUTCD (INCLUDING SOUTH CAROLINA AMENDMENTS). ACCESS TO DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES. ALL TRAFFIC CONTROL MEASURES SHALL BE APPROVED AND IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITY.

10. THE CONTRACTOR SHALL MAINTAIN ONE COMPLETE SET OF APPROVED DRAWINGS ON THE CONSTRUCTION SITE AT ALL TIMES WHEREON HE WILL RECORD ANY APPROVED DEVIATIONS IN CONSTRUCTION FROM THE APPROVED DRAWINGS, AS WELL AS THE STATION LOCATIONS AND DEPTHS OF ALL EXISTING UTILITIES ENCOUNTERED. THESE FIELD RECORD DRAWINGS SHALL BE KEPT UP TO DATE AT ALL TIMES AND SHALL BE AVAILABLE FOR INSPECTION BY GOVERNING AGENCIES UPON REQUEST.

12. CONTRACTOR SHALL HOLD ALL PERMITS IN HAND PRIOR TO COMMENCEMENT OF WORK.

13. ALL UTILITES OTHER THAN SANITARY SEWER, WATER AND STORM DRAINAGE BY OTHERS. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH POWER, TELEPHONE, AND CABLE TV COMPANY FOR LOCATION OR RELOCATION OF VAULTS, PEDESTALS, POWERPOLES, ETC. ALL ABOVE—GRADE FACILITIES SHALL BE PLACED IN A LOCATION OUTSIDE OF PROPOSED SIDEWALK LOCATIONS.

15. CONTRACT OBLIGATION SHALL BE SATISFIED AFTER PERMITTING OF THIS PROJECT. AS SUCH, HOYT+BERENYI, LLC. IS NOT RESPONSIBLE FOR CONSTRUCTION ADMINISTRATION UNLESS AUTHORIZED BY CONTRACT. 16. CONTRACTOR SHALL REQUEST TREE PROTECTION AND SILT FENCE INSPECTION FROM THE CITY OF HANAHAN PRIOR TO CONSTRUCTION ACTIVITIES

## GRADING PAYING & DRAINAGE:

2. GRADING WORK, MATERIALS AND EQUIPMENT, UNLESS SPECIFICALLY STATED OTHERWISE HEREIN, SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION. 5. IMMEDIATELY FOLLOWING FINE GRADING OPERATIONS, COMPACT SUBGRADE TO

95% OF MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD (MODIFIED PROCTOR). PROOF ROLLING WITH A LOADED DUMP TRUCK IS A SUITABLE ALTERNATIVE FOR THIS PROJECT. 6. ALL FILLS WITHIN PUBLIC RIGHT-OF-WAYS AND EASEMENTS SHALL BE ENGINEERED. ADDITIONALLY, ANY FILLS OUTSIDE OF PUBLIC RIGHT-OF-WAYS WHICH ARE OVER TWO (2) FEET IN DEPTH SHALL BE ENGINEERED. ENGINEERED FILLS SHALL BE CONSTRUCTED IN 6" LIFTS. EACH LIFT SHALL BE COMPACTED TO 95%

9. A. C. PAVEMENT SHALL CONFORM TO SCDOT STANDARD SPECIFICATIONS SECTION 401 (ASPHALT CONCRETE PAVEMENT) FOR STANDARD DUTY MIX. A. C. PAVEMENT SHALL BE COMPACTED TO A MINIMUM OF 91% OF MAXIMUM DENSITY AS DETERMINED BY THE RICE STANDARD METHOD.

10. ALL EXISTING AND CONSTRUCTED MANHOLES, CLEANOUTS, MONUMENTS, GAS VALVES, WATER VALVES, AND SIMILAR STRUCTURES SHALL BE ADJUSTED TO MATCH FINISH GRADE OF THE PAVEMENT, SIDEWALK, LANDSCAPED AREA OR MEDIAN STRIP WHEREIN THEY LIE. 11. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, NO CUT OR FILL SLOPES SHALL BE CONSTRUCTED STEEPER THAN 3H:1V.

- 12. CONTRACTOR SHALL HYDROSEED ALL EXPOSED SLOPES AND DISTURBED AREAS WHICH ARE NOT SCHEDULED TO BE LANDSCAPED.
- 13. PIPE LENGTHS ARE TO CENTER OF BOX AND ROUNDED TO THE NEAREST 1' INCREMEN'

## CWS WATER NOTES:

1. WATER INSTALLATION SHALL BE IN ACCORDANCE WITH "TEN STATES STANDARDS", S.C.D.H.E.C. REGULATIONS, AND CHARLESTON WATER SYSTEM'S "MINMUM

2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL TAPS. TAPS REQUIRING A SLEEVE SHALL BE NO CLOSER TO A JOINT THAN 4 FEET. 3. THRUST BLOCKING SHALL BE USED ONLY ON WET TAPS. CONTRACTOR SHALL NOTIFY CWS INSPECTOR 72 HOURS (THREE FULL WORKING DAYS) PRIOR TO

5. CONTRACTOR SHALL MAINTAIN BETWEEN 36" - 48" COVER OVER TOP OF PIPE

6. ALL COMPONENTS OF THE PIPING SYSTEM SHALL BE NEW DUCTILE IRON AND ENCLOSED WITH LINEAR LOW-DENSITY MILS BLUE POLYETHYLENE ENCASEMENT 7. ALL VALVES AND HYDRANTS SHALL OPEN CLOCKWISE, EXCEPT ON THE FORMER NAVAL BASE, WHERE THE VALVES SHALL OPEN COUNTERCLOCKWISE.

8. MEGALUG, FORD SERIES 1400, OR SIGMA ONE-LOK RETAINER GLANDS SHALL BE USED FOR ALL FITTINGS, VALVES. AND HYDRANTS. 9. RESTRAINED LENGTHS SHALL BE IN MULTIPLES OF A FULL LENGTH OF PIPE.

10. USE 45' OR FLATTER BENDS WHEN GOING UNDER RCP AND DO NOT INSTALL VALVES, HYDRANTS, OR SERVICES ON DEEP PIPE SECTIONS. 11. WHERE POSSIBLE, HORIZONTAL WATERLINES SHALL BE DEFLECTED IN LIEU OF USING BENDS. DEFLECTIONS SHALL NOT EXCEED 75% OF MANUFACTURER'S

12. WHERE WATER AND SANITARY SEWER LINES CROSS WITHIN 18", THE LINE LAID LAST SHALL HAVE A FULL LENGTH OF PIPE INSTALLED WITH ITS MIDPOINT VERTICALLY IN LINE WITH THE OTHER LINE. THE CROSSING SHALL BE AT NOT LESS THAN A 45° ANGLE. 13. ALL MATERIAL SHALL CONFORM TO CWS SPECIFICATIONS AS TO MANUFACTURER. TYPE, AND DESIGN

14. DEVELOPER'S ENGINEER SHALL INSPECT PROJECT WEEKLY TO PROVIDE WRITTEN WEEKLY UPDATES TO CWS INSPECTOR AND TO CERTIFY THE CORRECTNESS OF THE WATER PORTION OF CONTRACTOR'S RECORD DRAWINGS.

15. CONTRACTOR INSTALLING THE WATER SYSTEM SHALL BE ON CWS'S "APPROVED CONTRACTORS LIST".

16. COORDINATE INSPECTION AND TESTING OF THE BACKFLOW DEVICES WITH CWS CROSS CONNECTION DEPARTMENT. WATER SERVICE SHALL NOT BE TURNED ON UNTIL ALL BACKFLOW DEVICES HAVE PASSED INSPECTION AND TESTING. 17. DEVELOPER SHALL TAKE NECESSARY MEASURES TO PROTECT CWS WATER SYSTEM DURING THE TIME BETWEEN THE COMMISSIONING INSPECTION AND THE 2-YEAR MAINTENANCE BOND INSPECTION.

18. CHARLESTON WATER SYSTEM RESERVES THE RIGHT NOT TO INSTALL WATER METERS IF METER BOXES ARE NOT LOCATED AND ON GRADE IN COMPLIANCE WITH ITS MINIMUM STANDARDS. 19. ALL METER VAULTS AND ASSOCIATED PIPING 3" AND LARGER SHALL BE INSTALLED BY CWS UNLESS APPROVED IN WRITING BY THE WATER DISTRIBUTION

## BCWSA SEWER NOTES:

1. SEWER INSTALLATION SHALL BE IN ACCORDANCE WITH "TEN STATES STANDARDS," SC DHEC AND BCWS REGULATIONS.

2. ALL SANITARY SEWER SERVICES SHALL BE LAID ON A MINIMUM SLOPE OF 0.5% AND SHALL BE 6" PVC UNLESS INCIDENCES NOTED IN NOTE NO. 10 OCCUR, OR OTHERWISE SPECIFIED.

3. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH BCWS AT LEAST 72 HOURS PRIOR TO BEGINNING WORK.

4. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOUND IN THE FIELD OR ON THE DRAWINGS PRIOR TO BEGINNING OR CONTINUING WORK. ANY DEVIATIONS FROM THE CONSTRUCTION PLANS SHALL NEED TO BE APPROVED IN WRITING BY BCWS.

5. CONNECTION TO EXISTING SEWER SYSTEM SHALL BE MADE IN THE PRESENCE OF BCWS INSPECTOR WITH AT LEAST 72 HOURS ADVANCED NOTICE.

6. CONTRACTOR SHALL PLACE 6" SERVICES AND STUB UP TO EXISTING GRADE. CONCRETE COLLARS SHALL BE PLACED AROUND 6" PLUGGED CLEAN OUT. 7. WATERTIGHT RINGS AND COVERS SHALL BE INSTALLED ON MANHOLES IN SIDEWALK, AREAS AFFECTED BY STREET RUNOFF OR BELOW THE 50 YEAR FLOOD ELEVATION. MANHOLE COVER SHALL BE INSTALLED COMPLETELY WITHIN OR COMPLETELY OUT OF PAVED AREAS (INCLUDING SIDEWALKS).

8. MANHOLES RECEIVING FORCE MAIN DISCHARGE SHALL BE COATED WITH RAVEN 405 LINER.

9. ALL DUCTILE IRON PIPES, JOINTS AND FITTINGS SHALL BE LINED WITH PROTECTO 401 CERAMIC EPOXY COATING. 10. THICKNESS CLASS 52 DIP OR SDR-26 PVC IN STEEL OR HDPE CASING SHALL BE USED WHEN:

– Crossing beneath storm drainage pipe with less than 2' of clearance

- LESS THAN THREE (<3") OF COVER: CLASS 52 DIP;
- GREATER THAN 3 FEET BUT LESS THAN 15 FEET (>3" BUT <15") IN DEPTH: SDR-26 PVC AND IN ACCORDANCE WITH CROSSING REQUIREMENTS LISTED - GREATER THAN 15 FEET BUT LESS THAN 24 FEET (>15' BUT <24') IN DEPTH: CLASS 52 DIP OR DR-18 C900 PVC;

12. SEWER SERVICE CONNECTIONS LOCATED AT DEPTHS GREATER THAN 15' SHALL BE MADE WITH DUCTILE IRON FITTINGS LINED WITH PROTECTO 401 COATING OR SOLID MOLDED C900 FITTINGS. 13. CLEAN OUTS SHALL BE INSTALLED WITHIN THE RIGHT-OF-WAY OR GENERAL UTILITY EASEMENT (GUE) AND HAVE A MINIMUM OF 1 FOOT SEPARATION FROM SIDEWALKS. INSTALL CLEAN OUTS NO MORE THAN 18" OFF OF THE COMMON PROPERTY CORNER UNLESS OTHERWISE NOTED ON THE CONSTRUCTION PLANS.

14. CONTRACTOR SHALL KEEP A RED-LINED SET OF THE CONSTRUCTION DRAWINGS ON SITE AT ALL TIMES.

15. UPON COMPLETION OF CONSTRUCTION OF THE SEWER SYSTEM, THE FOLLOWING APPROVAL PROCEDURES MUST BE FOLLOWED:

A. THE CONTRACTOR SHALL SCHEDULE ALL REQUIRED TESTS AND INSPECTIONS WITH BCWS AT LEAST 72 HOURS IN ADVANCE.

B. THE CONTRACTOR SHALL CONDUCT A PRELIMINARY INSPECTION TO LOCATE ANY DEFECTS AND DETERMINE WHEN THE SEWER SYSTEM IS READY FOR TESTS AND FINAL INSPECTION. PRIOR TO INSPECTION, THE SEWER SYSTEM SHALL BE FLUSHED AND CLEANED OF DEBRIS.

C. THE ENGINEER SHALL SCHEDULE LOW PRESSURE AIR TEST AND DEFLECTION TEST WITH BCWS. DEFLECTION TEST SHALL BE CONDUCTED PRIOR TO LOW PRESSURE AIR TEST.

PRESSURE AIR 1851.

D. THE CONTRACTOR SHALL SUPPLY TO THE OWNER'S ENGINEER AN AS-BUILT SURVEY, INCLUDING THE SERVICE LATERAL INFORMATION, THE LOCATIONS OF WHICH SHALL HAVE BEEN STAKED IN THE FIELD.

E. A SET OF PRELIMINARY RECORD DRAWINGS SHALL BE PROVIDED TO BCWS INSPECTOR FOR CCTV INSPECTION VIDEO REVIEW.

F. CCTV INSPECTION VIDEOS SHALL BE SUBMITTED FOR BCWS REVIEW. ANY NECESSARY REPAIRS ARE TO BE COMPLETED PRIOR TO SCHEDULING A FINAL INSPECTOR. INSPECTION.

G. THE ENGINEER SHALL SUBMIT THE TEST RESULTS, RECORD DRAWINGS, CONTINUITY TEST CERTIFICATION LETTER AND ALL OTHER REQUIRED DOCUMENTS TO BOWS FOR REVIEW AND APPROVAL.

H. THE ENGINEER SHALL SCHEDULE A FINAL INSPECTION WITH BOWS AT LEAST 72 HOURS IN ADVANCE.

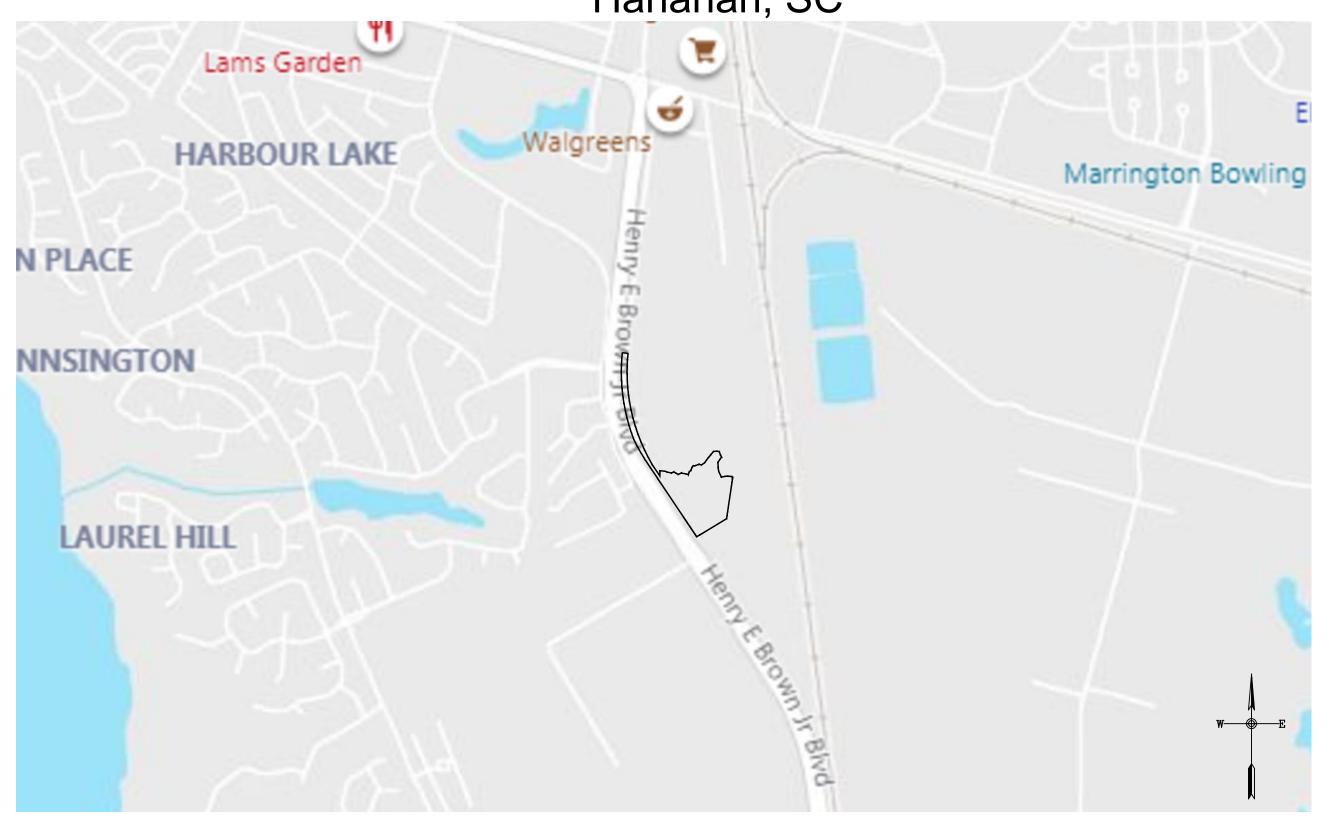
16. LIMESTONE IS NOT AN APPROVED EMBEDMENT MATERIAL. USE #57 GRANITE, AIR COOLED BLAST FURNACE SLAG OR APPROVED MATERIALS LISTED IN BCWS

17. MJ SLEEVES OR APPROVED ADAPTERS SHALL BE USED TO TRANSITION BETWEEN PVC AND DIP. FERNCO OR SIMILAR COUPLINGS ARE NOT ALLOWED

# Luken Road Industrial

TMS #252-00-00-027

Subdivision to create Tracts A and B Addresses to be Assigned Hanahan, SC



## **VICINITY MAP** 1" = 1,000'

## **Civil Drawing Index:**

C1.0 Civil Title Sheet C2.0 Existing Conditions C3.0 Demo, Tree Protection, and SWPPP C3.1 Demo, Tree Protection, and SWPPP C3.2 Demo, Tree Protection, and SWPPP C3.3 Demo, Tree Protection, and SWPPP C3.4 Demo. Tree Protection, and SWPPP

C4.0 Site Plan C5.0 Road Plan and Profile

C5.1 Paving, Grading, and Drainage C5.2 Stormwater Pond Detail

C5.3 Storm Drainage Profiles C6.0 Utility Plan

C6.1 Utility Plan C6.2 Watermain Profile

## Owner/Developer:

Perseverance III, LLC Attn: Chris Wallace 852 Lowcountry Blvd. Suite 100A Mount Pleasant, SC 29464 843-936-0086 cwallace@hunterquinnhomes.com

## **Civil Engineer:**

Kyle M. Hoyt, P.E. Hoyt+Berenyi, LLC P.O. BOX 1470 Ladson, SC 29456 843-408-3546 KHoyt@HoytBerenyi.com



## LEGEND

LINE TYPES AND SYMBOLS	
	- PROPERTY LINE WITH CORNER FOUND
<del></del>	- PROPERTY LINE WITH 5/8" REBAR SET
	- EASEMENT
	- RIGHT OF WAY
<del></del>	- ADJACENT PROPERTY LINE
	- CENTERLINE
<del></del>	<ul> <li>WETLAND AND WETLAND BUFFER</li> </ul>
SF SF	- SILT FENCE
ucuc	UNDERGROUND COMMUNICATION LINE
———— SD ———— SD ————	- STORM DRAIN LINE
——————————————————————————————————————	<ul> <li>SANITARY SEWER LINE</li> </ul>
— w — w — w — w —	— WATER LINE
——————————————————————————————————————	- OVERHEAD POWER
——————————————————————————————————————	UNDERGROUND POWER
——— GAS ——— GAS ———	- GAS LINE
☆ LP	LIGHT POLE
<del></del> ?	UTILITY TERMINI UNKNOWN
ABBREVIATIONS	
RBF	REBAR FOUND
Gl	GRATE INLET
FOR	FIDER ODTIO DOV

	OTILITE TERMINAL ONKIAOWIA
REVIATIONS	
RBF	REBAR FOUND
Gl	GRATE INLET
FOB	FIBER OPTIC BOX
WM	WATER METER
WV	WATER VALVE
SSMH	SANITARY SEWER MANHOLE
BS	BUILDING SETBACK
LB	LANDSCAPE BUFFER
G	GUM TREE
MAP	MAPLE TREE
WO	WATER OAK
(N)	NEW
TC	TOP OF CURB
TP	TOP OF PAVEMENT
TW	TOP OF WALL
BW	BOTTOM OF WALL
TR	TOP OF RAMP
BR	BOTTOM OF RAMP

TOP OF SIDEWALK

FINISHED GRADE

FG

1. UNLESS OTHERWISE NOTED, MATERIALS AND WORKMANSHIP FOR WATER, SANITARY SEWER AND STORM SEWER SHALL CONFORM TO SCDHEC AND APWA STANDARD SPECIFICATIONS.

2. ALL PIPED UTILITIES ABANDONED IN PLACE SHALL BE FILLED WITH FLOWABLE FILL.

3. CONTRACTOR SHALL PROVIDE ALL MATERIALS, EQUIPMENT AND FACILITIES REQUIRED FOR TESTING ALL UTILITY PIPING IN ACCORDANCE WITH CITY CONSTRUCTION SPECIFICATIONS.

5. WARNING TAPE. DETECTABLE OR NON-DETECTABLE ACID AND ALKALI RESISTANT SAFETY WARNING TAPE SHALL BE PROVIDED ALONG THE FULL LENGTH OF ALL SANITARY SEWER LATERALS AND ALONG ALL WATER AND SANITARY SEWER MAINLINE SEGMENTS NOT LOCATED UNDER SIDEWALKS OR PAVE PORTIONS OF PUBLIC STREETS. UNDERGROUND WARNING TAPE SHALL BE CONTINUOUS THE ENTIRE LENGTH OF SERVICE LATERALS. 6. NO TRENCHES IN ROADS OR DRIVEWAYS SHALL BE LEFT IN AN OPEN CONDITION OVERNIGHT. ALL SUCH TRENCHES SHALL BE CLOSED BEFORE THE END OF EACH WORK DAY AND NORMAL TRAFFIC FLOWS RESTORED.

. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY 2. STABILIZATION MEASURES STALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPOR OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.

• WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS

STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.

• WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH—DISTURBING

ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.

4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE. 5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.

6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.

8. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.

9. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS. 10. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.

11. A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS

13. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.

14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE; 15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.). 16. THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:

WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING
COMPOUNDS AND OTHER CONSTRUCTION MATERIALS; FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
AND SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING. 17. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE. 18. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.

19. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

## SPECIFICATIONS FOR SEQUENCE OF CONSTRUCTION OPERATIONS:

2. INSTALLATION OF CONSTRUCTION ENTRANCE.

3 INSTALLATION AND INSPECTION OF TREE PROTECTION AND PERIMETER CONTROLS

2. CLEARING AND GRUBBING THOSE AREAS NECESSARY FOR INSTALLATION OF ADDITIONAL PERIMETER CONTROLS

3. CONSTRUCTION OR REMAINING PERIMETER CONTROLS:

4. CLEARING AND GRUBBING IN AREAS OF SEDIMENT BASIN/TRAPS/PONDS.

5. INSTALLATION OF BASINS/TRAPS/PONDS 6. REMAINING CLEARING AND GRUBBING

8. DRAINAGE/CONDUITS/UTILITY INSTALLATIONS AND PLACEMENT OF INLET PROTECTION AS EACH INLET IS INSTALLED.

10. LANDSCAPING AND SITE STABILIZATION. CLEAN OUT DETENTION BASINS AND CONVERT TO PERMANENT POND BMP.

11. PERFORM AS-BUILT SURVEYS OF ALL DETENTION STRUCTURE AND DRAINAGE INFRASTRUCTURE 12. CONTACT PUBLIC WORKS FOR FINAL INSPECTION AND PROJECT CLOSEOUT

13. REMOVAL OF SEDIMENT CONTROLS.

CHANGES TO THE SEQUENCE OF CONSTRUCTION OPERATIONS MAY BE MODIFIED BY THE PERSON CONDUCTING THE LAND DISTURBING ACTIVITY OR THEIR REPRESENTATIVE AND DO NOT CONSTITUTE A VIOLATION UNLESS MEASURES TO CONTROL STORMWATER RUNOFF AND SEDIMENT ARE NOT UTILIZED.

## EXISTING UTILITIES & FACILITIES

1. THE LOCATION AND DESCRIPTIONS OF EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE COMPILED FROM AVAILABLE RECORDS AND/OR FIELD SURVEYS. THE ENGINEER OR UTILITY COMPANIES DO NOT GUARANTEE THE ACCURACY OR THE COMPLETENESS OF SUCH RECORDS. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. 2. THE CONTRACTOR SHALL LOCATE AND MARK ALL EXISTING PROPERTY AND STREET MONUMENTS PRIOR TO CONSTRUCTION. ANY MONUMENTS DISTURBED DURING CONSTRUCTION OF THE PROJECT SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.

3. CONTRACTOR SHALL FIELD VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES WHERE NEW FACILITIES CROSS. CONTRACTOR SHALL BE RESPONSIBLE FOR EXPOSING POTENTIAL UTILITY CONFLICTS FAR ENOUGH AHEAD OF CONSTRUCTION TO MAKE NECESSARY GRADE MODIFICATIONS WITHOUT DELAYING THE WORK. IF GRADE MODIFICATION IS NECESSARY, CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER, AND THE DESIGN ENGINEER SHALL OBTAIN APPROVAL FROM THE CITY ENGINEER PRIOR TO CONSTRUCTION. ALL UTILITY CROSSINGS SHALL BE POTHOLED AS NECESSARY PRIOR TO EXCAVATING OR BORING TO ALLOW THE CONTRACTOR TO PREVENT GRADE OR ALIGNMENT CONFLICTS.

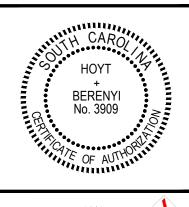
4. ALL EXISTING FACILITIES SHALL BE MAINTAINED IN-PLACE BY THE CONTRACTOR UNLESS OTHERWISE SHOWN OR DIRECTED. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO SUPPORT, MAINTAIN, OR OTHERWISE PROTECT EXISTING UTILITIES AND OTHER FACILITIES AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR TO LEAVE EXISTING FACILITIES IN AN EQUAL OR BETTER-THAN-ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CITY ENGINEER, COUNTY AND CPW.

5. UTILITIES, OR INTERFERING PORTIONS OF UTILITIES, THAT ARE ABANDONED IN PLACE SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL FILL ALL UTILITIES WITH FLOWABLE FILL THAT ARE TO BE ABANDONED IN PLACE 6. CONTRACTOR SHALL REMOVE ALL EXISTING SIGNS, MAILBOXES, FENCES, LANDSCAPING, ETC., AS REQUIRED TO AVOID DAMAGE DURING CONSTRUCTION AND REPLACE THEM TO EXISTING OR BETTER CONDITION. 7. ANY SEPTIC ENCOUNTERED DURING CONSTRUCTION SHALL BE PUMPED OUT. CONTRACTOR SHALL BREAK BOTTOM OF TANK OUT AND BACKFILL WITH PEA GRAVEL UNLESS OTHERWISE REQUIRED BY PUBLIC AGENCIES HAVING JURISDICTION. SEPTIC TANK REMOVAL TO BE IN ACCORDANCE WITH CITY, COUNTY, AND STATE SANITARIAN REQUIREMENTS.

8. ANY WELLS ENCOUNTERED SHALL BE ABANDONED PER SCDHEC REQUIREMENTS.

9. ANY FUEL TANKS ENCOUNTERED SHALL BE REMOVED AND DISPOSED OF PER SCDHEC REQUIREMENTS. BACKFILL WITH COMPACTED GRANULAR







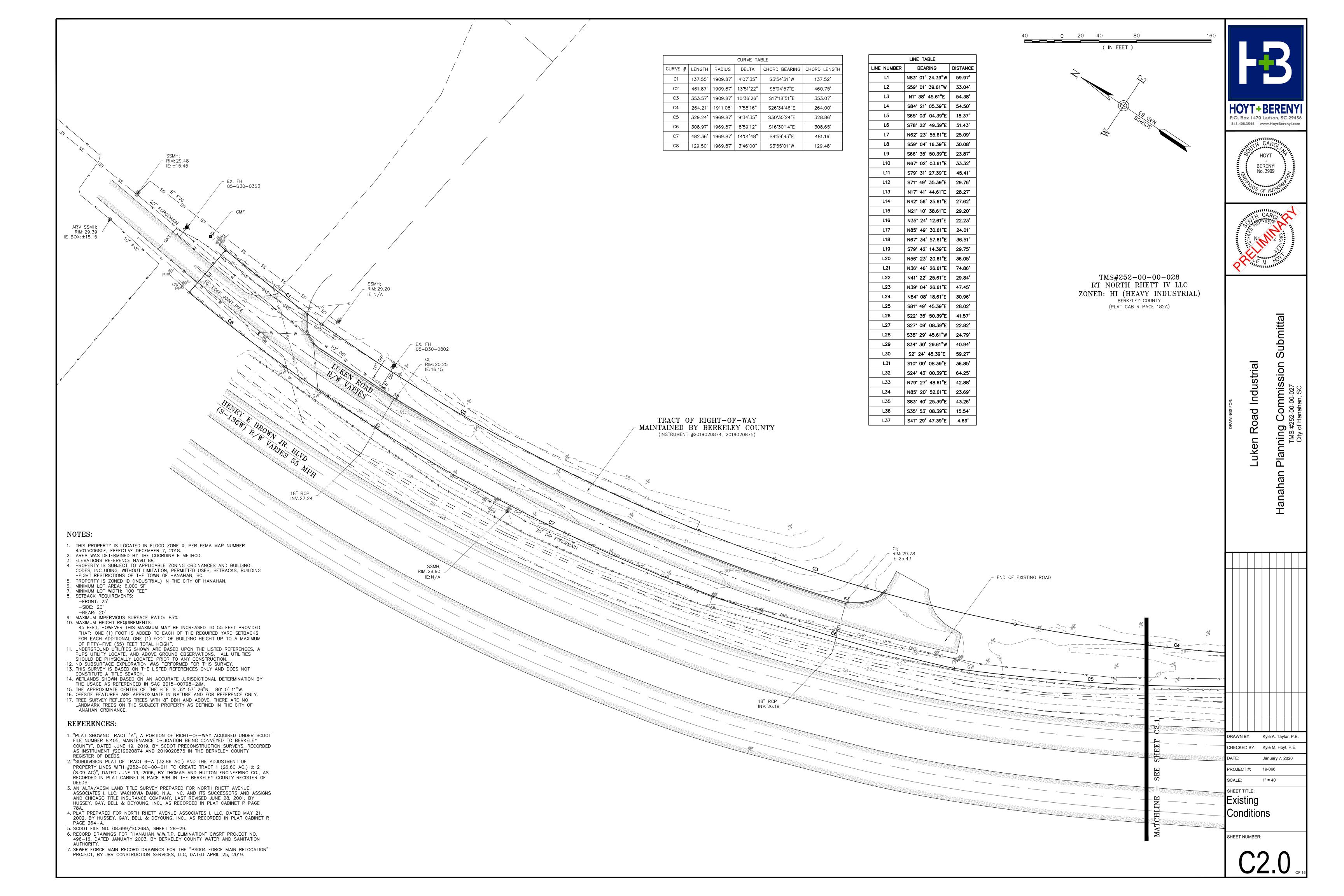
DRAWN BY:

Kyle A. Taylor, P.E CHECKED BY: Kyle M. Hoyt, P.E. January 7, 2020 PROJECT #:

SCALE: SHEET TITLE: Civil Title

SHEET NUMBER:

Sheet



			CURVE TA	BLE	
CURVE #	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH
C1	137.55	1909.87	4°07'35"	S3°54'31"W	137.52'
C2	461.87	1909.87	13°51'22"	S5°04'57"E	460.75
С3	353.57	1909.87	10°36'26"	S17°18'51"E	353.07'
C4	264.21	1911.08	7°55'16"	S26°34'46"E	264.00'
C5	329.24	1969.87	9°34'35"	S30°30'24"E	328.86'
C6	308.97	1969.87	8°59'12"	S16°30'14"E	308.65'
C7	482.36	1969.87	14°01'48"	S4°59'43"E	481.16'
C8	129.50'	1969.87	3°46'00"	S3°55'01"W	129.48'
TES:					
THIS PROF 45015C06 AREA WAS ELEVATION PROPERTY CODES, IN HEIGHT RE	85E, EFFE DETERMI S REFERE IS SUBJE CLUDING, ESTRICTION	CTIVE DEC NED BY TH NCE NAVD ECT TO AP WITHOUT L IS OF THE	EMBER 7, 2 HE COORDIN 88. PLICABLE Z IMITATION, TOWN OF	ATE METHOD. ONING ORDINANCE PERMITTED USES, HANAHAN, SC.	S AND BUILDING SETBACKS, BUIL
THIS PROF 45015C06 AREA WAS ELEVATION PROPERTY CODES, IN HEIGHT RE PROPERTY MINIMUM L MINIMUM L SETBACK -FRONT: -SIDE: 2	85E, EFFE DETERMI S REFERE IS SUBJE CLUDING, ESTRICTION IS ZONEI LOT AREA: LOT WIDTH REQUIREM 25'	CTIVE DEC NED BY THE NCE NAVD ECT TO AP WITHOUT L NS OF THE D ID (INDU 6,000 SF : 100 FEE	EMBER 7, 2 HE COORDIN 88. PLICABLE Z IMITATION, TOWN OF STRIAL) IN	2018. IATE METHOD. ONING ORDINANCE PERMITTED USES,	S AND BUILDING SETBACKS, BUIL
45015C06 AREA WAS ELEVATION PROPERTY CODES, IN HEIGHT RE PROPERTY MINIMUM L SETBACK -FRONT: -SIDE: 2 -REAR: MAXIMUM MAXIMUM 45 FEET, THAT: O FOR EAC	85E, EFFE DETERMI S REFERE IS SUBJE CLUDING, ESTRICTION IS ZONEI LOT AREA: LOT WIDTH REQUIREM 25' 20' IMPERVIOL HEIGHT RI HOWEVER NE (1) FOE	CTIVE DEC NED BY THE NCE NAVD ECT TO AP WITHOUT LES OF THE DECT TO FEE ENTS:  JS SURFACE EQUIREMENTS THIS MAD NAL ONE	EMBER 7, 2 HE COORDIN 88. PLICABLE Z IMITATION, TOWN OF STRIAL) IN T E RATIO: 8 TS: XIMUM MAY ED TO EAC	2018. IATE METHOD. CONING ORDINANCE PERMITTED USES, HANAHAN, SC. THE CITY OF HAN  BE INCREASED TO H OF THE REQUIRE F BUILDING HEIGH	S AND BUILDING SETBACKS, BUILDIN

- 1BER
- BUILDING
- PROVIDED SETBACKS MUMIXAM
- RENCES, A ILITIES
- 12. NO SUBSURFACE EXPLORATION WAS PERFORMED FOR THIS SURVEY. 13. THIS SURVEY IS BASED ON THE LISTED REFERENCES ONLY AND DOES NOT
- CONSTITUTE A TITLE SEARCH. 14. WETLANDS SHOWN BASED ON AN ACCURATE JURISDICTIONAL DETERMINATION BY THE USACE AS REFERENCED IN SAC 2015-00798-2JM.
- 15. THE APPROXIMATE CENTER OF THE SITE IS 32° 57' 26"N, 80° 0' 11"W. 16. OFFSITE FEATURES ARE APPROXIMATE IN NATURE AND FOR REFERENCE ONLY. 17. TREE SURVEY REFLECTS TREES WITH 8" DBH AND ABOVE. THERE ARE NO LANDMARK TREES ON THE SUBJECT PROPERTY AS DEFINED IN THE CITY OF

### REFERENCES:

HANAHAN ORDINANCE.

- "PLAT SHOWING TRACT "A", A PORTION OF RIGHT—OF—WAY ACQUIRED UNDER SCDOT FILE NUMBER 8.405, MAINTENANCE OBLIGATION BEING CONVEYED TO BERKELEY COUNTY", DATED JUNE 19, 2019, BY SCDOT PRECONSTRUCTION SURVEYS, RECORDED AS INSTRUMENT #2019020874 AND 2019020875 IN THE BERKELEY COUNTY
- 2. "SUBDIVISION PLAT OF TRACT 6-A (32.86 AC.) AND THE ADJUSTMENT OF PROPERTY LINES WITH #252-00-00-011 TO CREATE TRACT 1 (26.60 AC.) & 2 (8.09 AC)", DATED JUNE 19, 2006, BY THOMAS AND HUTTON ENGINEERING CO., AS RECORDED IN PLAT CABINET R PAGE 89B IN THE BERKELEY COUNTY REGISTER OF

3. AN ALTA/ACSM LAND TITLE SURVEY PREPARED FOR NORTH RHETT AVENUE

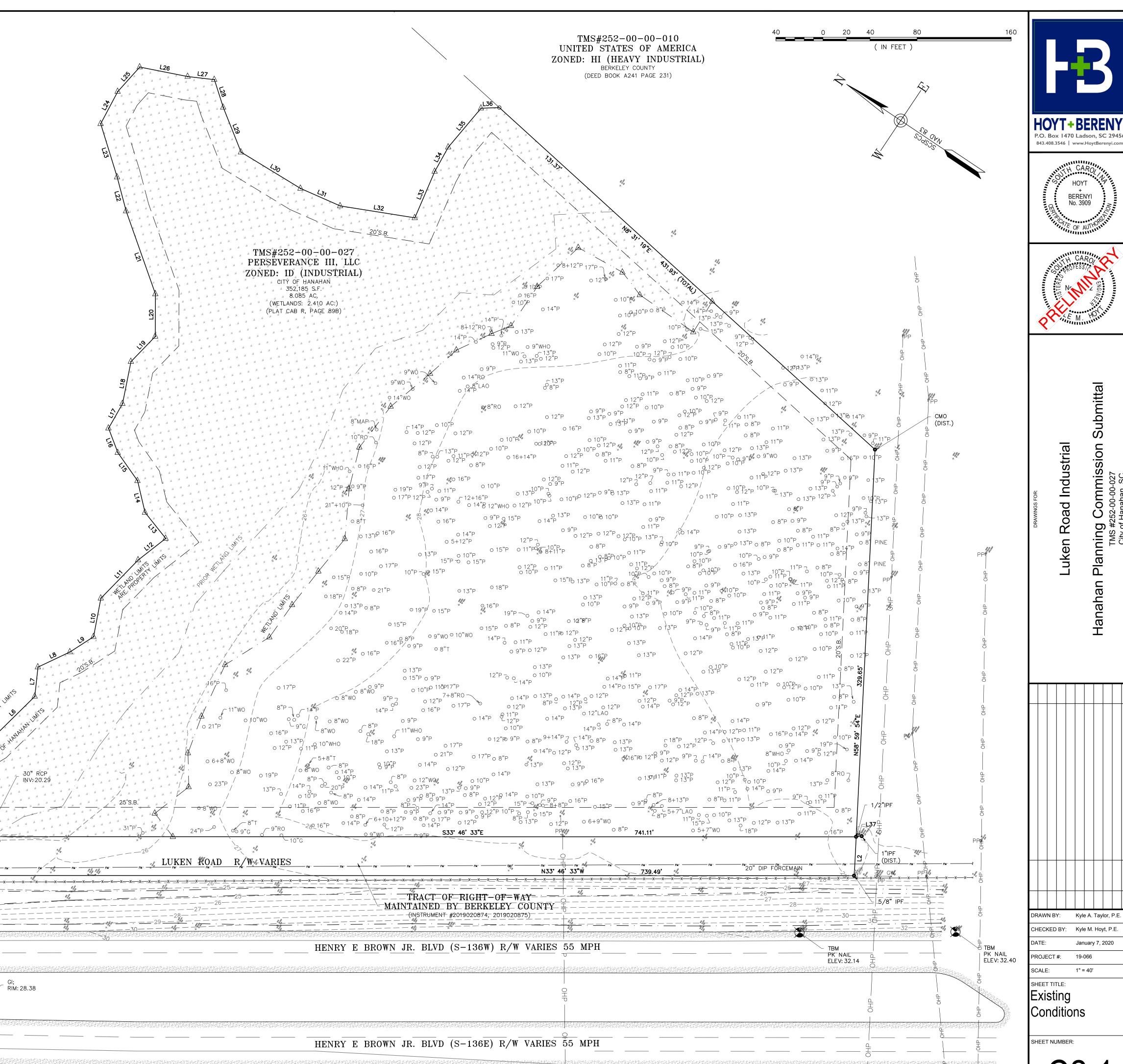
AND CHICAGO TITLE INSURANCE COMPANY, LAST REVISED JUNE 28, 2001, BY HUSSEY, GAY, BELL & DEYOUNG, INC., AS RECORDED IN PLAT CABINET P PAGE 4. PLAT PREPARED FOR NORTH RHETT AVENUE ASSOCIATES I, LLC, DATED MAY 21,

ASSOCIATES I, LLC, WACHOVIA BANK, N.A., INC. AND ITS SUCCESSORS AND ASSIGNS

- 2002, BY HUSSEY, GAY, BELL & DEYOUNG, INC., AS RECORDED IN PLAT CABINET R PAGE 264-A. 5. SCDOT FILE NO. 08.699/10.268A, SHEET 28-29.
- 6. RECORD DRAWINGS FOR "HANAHAN W.W.T.P. ELIMINATION" CWSRF PROJECT NO. 496-16, DATED JANUARY 2003, BY BERKELEY COUNTY WATER AND SANITATION AUTHORITY.
- 7. SEWER FORCE MAIN RECORD DRAWINGS FOR THE "PS004 FORCE MAIN RELOCATION" PROJECT, BY JBR CONSTRUCTION SERVICES, LLC, DATED APRIL 25, 2019.

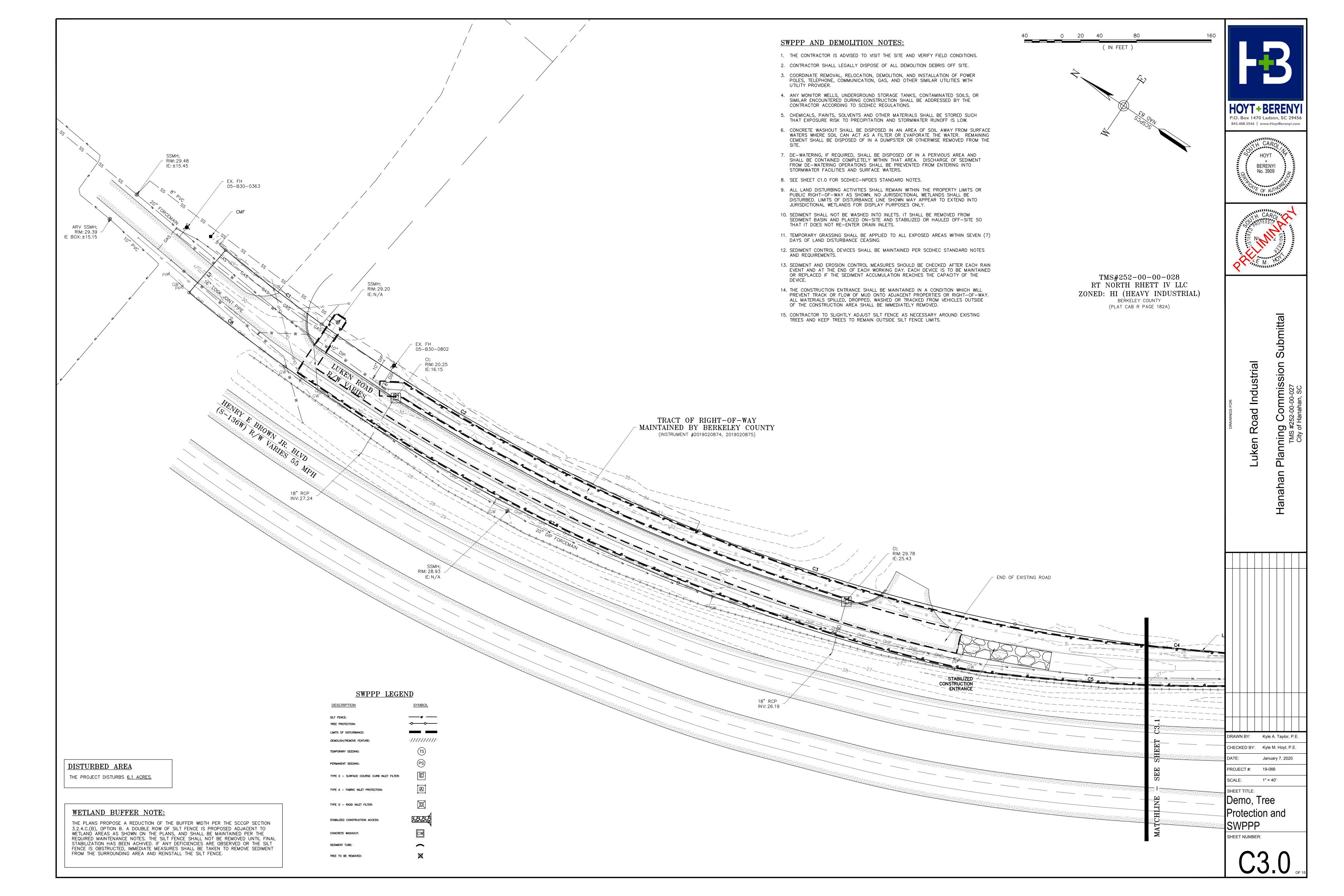
LINE TABLE					
LINE NUMBER	BEARING	DISTANCE			
L1	N83° 01' 24.39"W	59.97'			
L2	S59° 01' 39.61"W	33.04'			
L3	N1° 38' 45.61"E	54.38'			
L4	S84° 21' 05.39"E	54.50'			
L5	S65° 03' 04.39"E	18.37'			
L6	S78° 22' 49.39"E	51.43'			
L7	N62° 23' 55.61"E	25.09'			
L8	S59° 04' 16.39"E	30.08'			
L9	S66° 35' 50.39"E	23.87'			
L10	N67° 02' 03.61"E	33.32'			
L11	S79° 31′ 27.39″E	45.41'			
L12	S71° 49′ 35.39″E	29.76'			
L13	N17° 41' 44.61"E	28.27'			
L14	N42° 56' 25.61"E	27.62'			
L15	N21° 10' 38.61"E	29.20'			
L16	N35° 24' 12.61"E	22.23'			
L17	N85° 49' 30.61"E	24.01'			
L18	N67° 34' 57.61"E	36.51			
L19	S79° 42' 14.39"E	29.75'			
L20	N56° 23' 20.61"E	36.05			
L21 L22	N36° 46' 26.61"E	74.86'			
	N41° 22' 25.61"E	29.84'			
L23	N39° 04' 26.61"E	47.45'			
L24	N84° 08' 18.61"E	30.96'			
L25	S81° 49′ 45.39″E	28.02'			
L26	S22° 35′ 50.39″E	41.57'			
L27	S27° 09' 08.39"E	22.82'			
L28	S38° 29' 45.61"W	24.79'			
L29	S34° 30′ 29.61″W	40.94'			
L30	S2* 24' 45.39"E	59.27'			
L31	S10° 00' 08.39"E	36.85'			
L32	S24° 43' 00.39"E	64.25'			
L33	N79° 27' 48.61"E	42.88'			
L34	N85° 20' 52.61"E	23.69'			
L35	S83° 40' 25.39"E	43.26'			
L36	S35° 53' 08.39"E	15.54'			
L37	S41° 29' 47.39"E	4.69'			

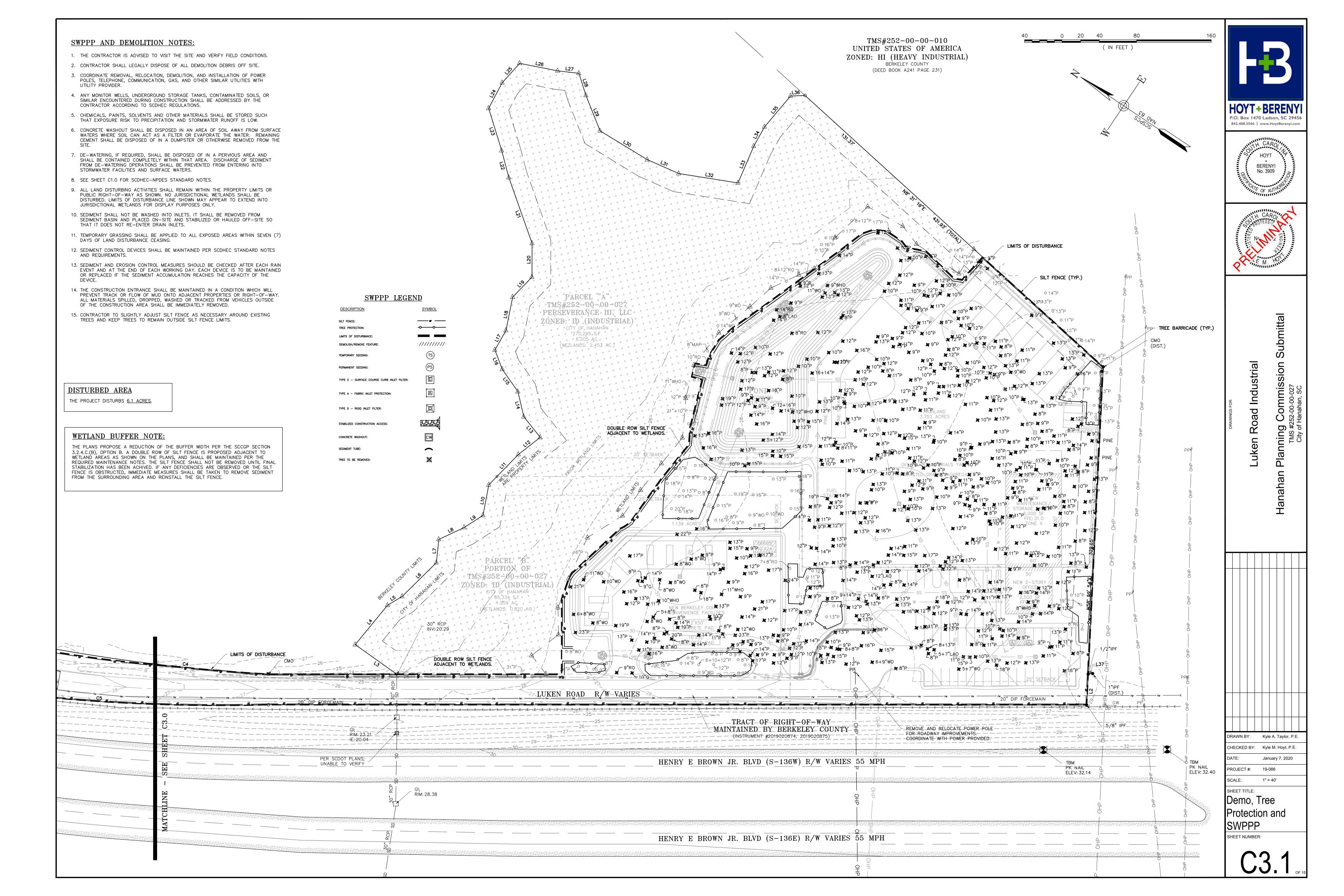
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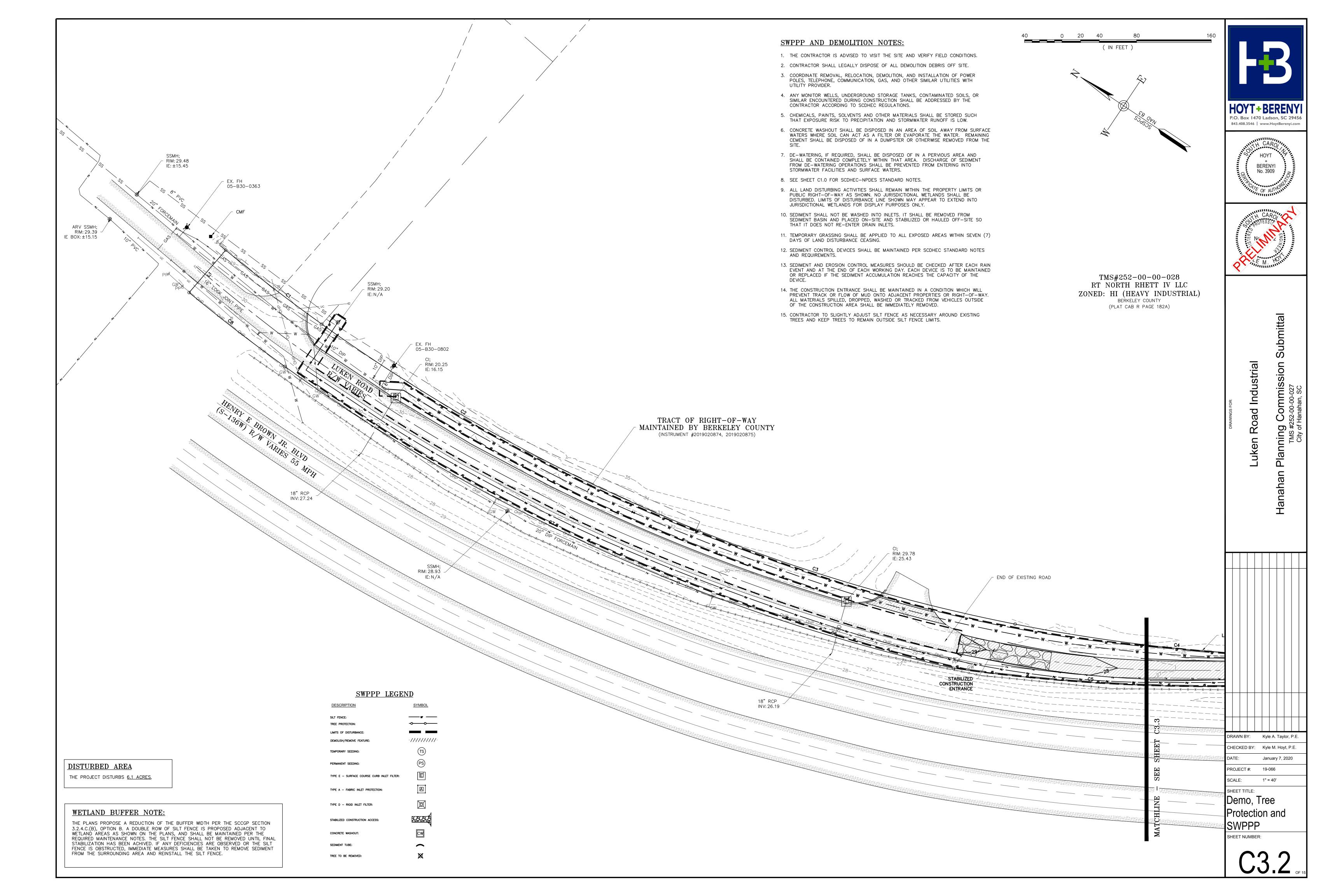


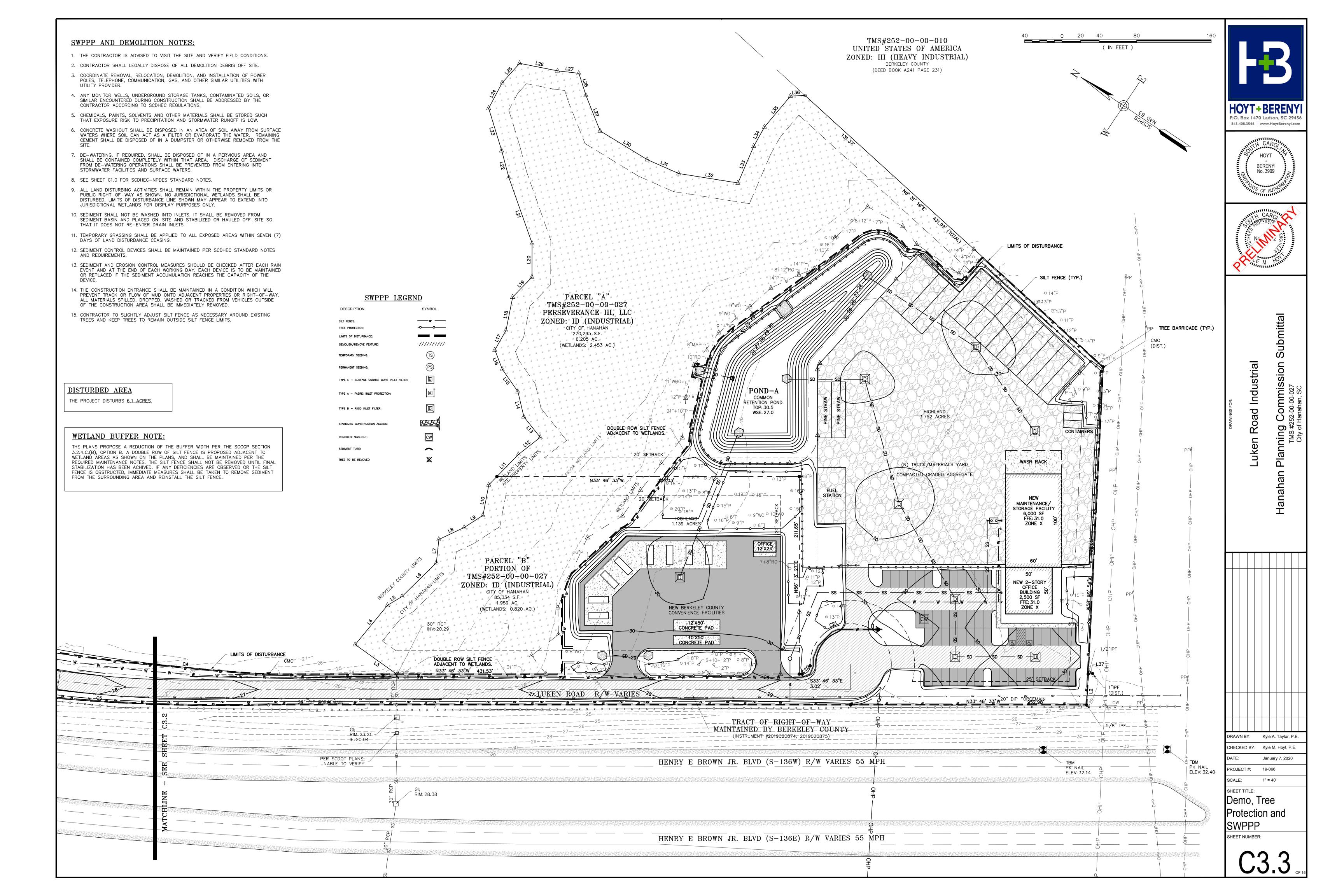
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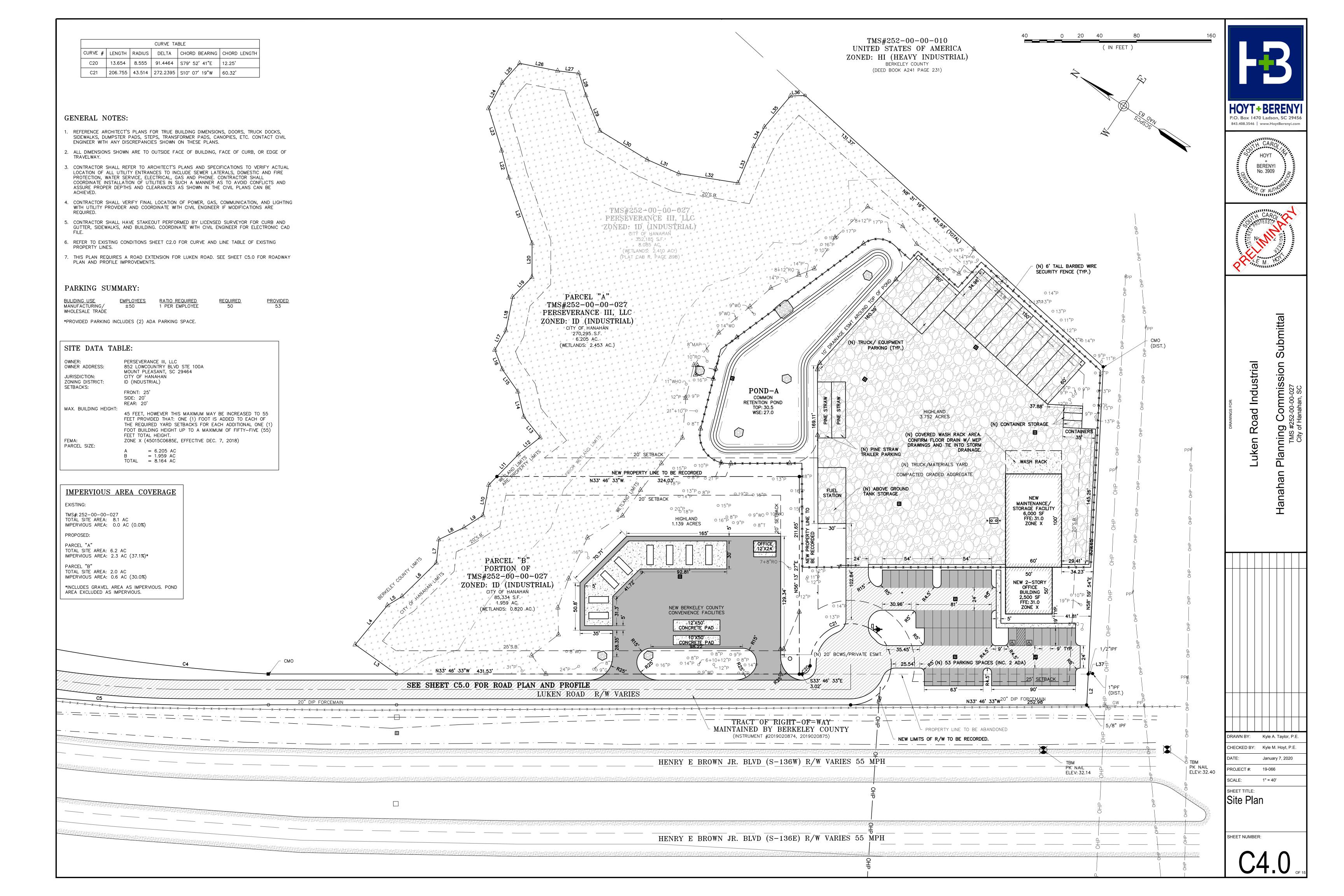
January 7, 2020

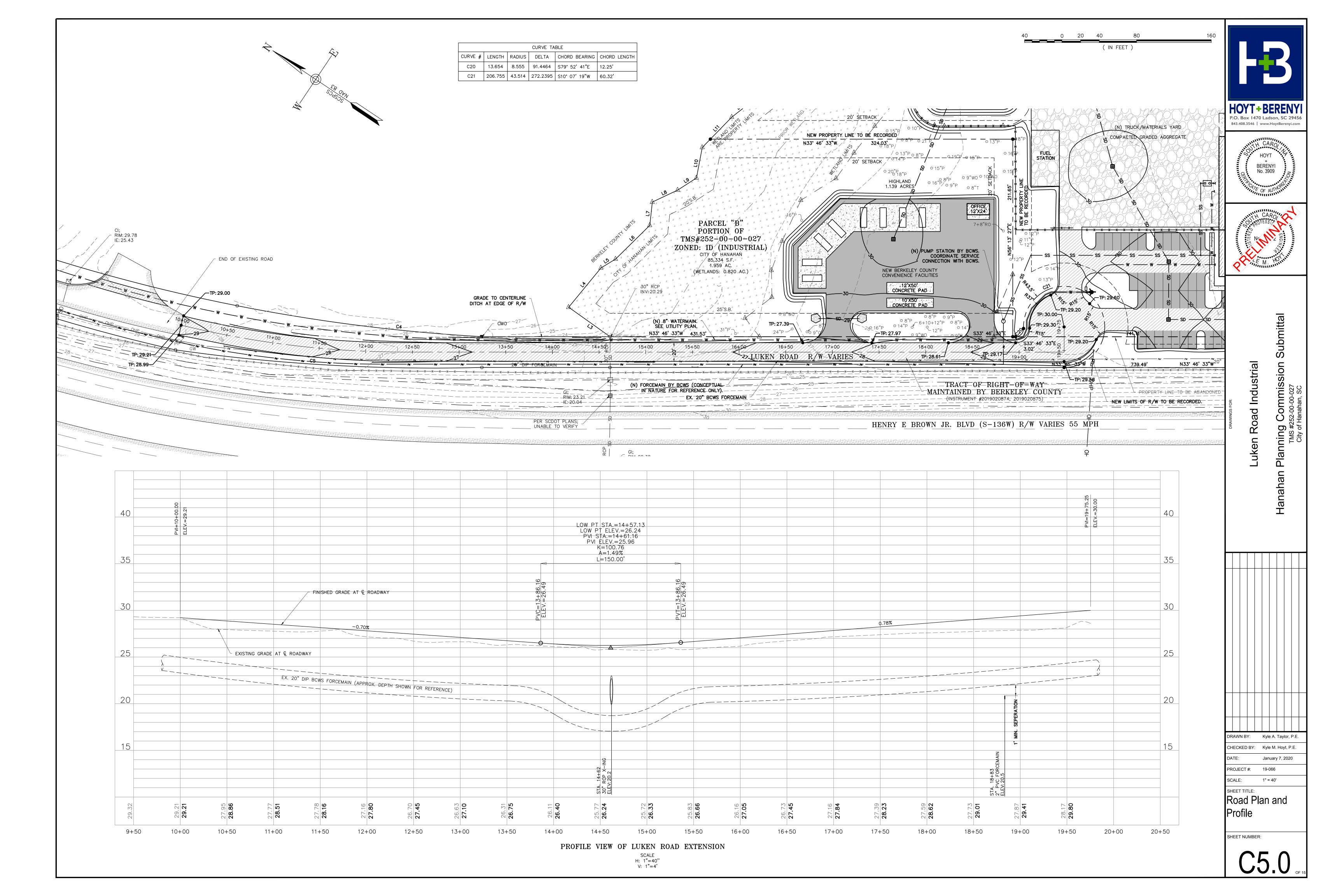


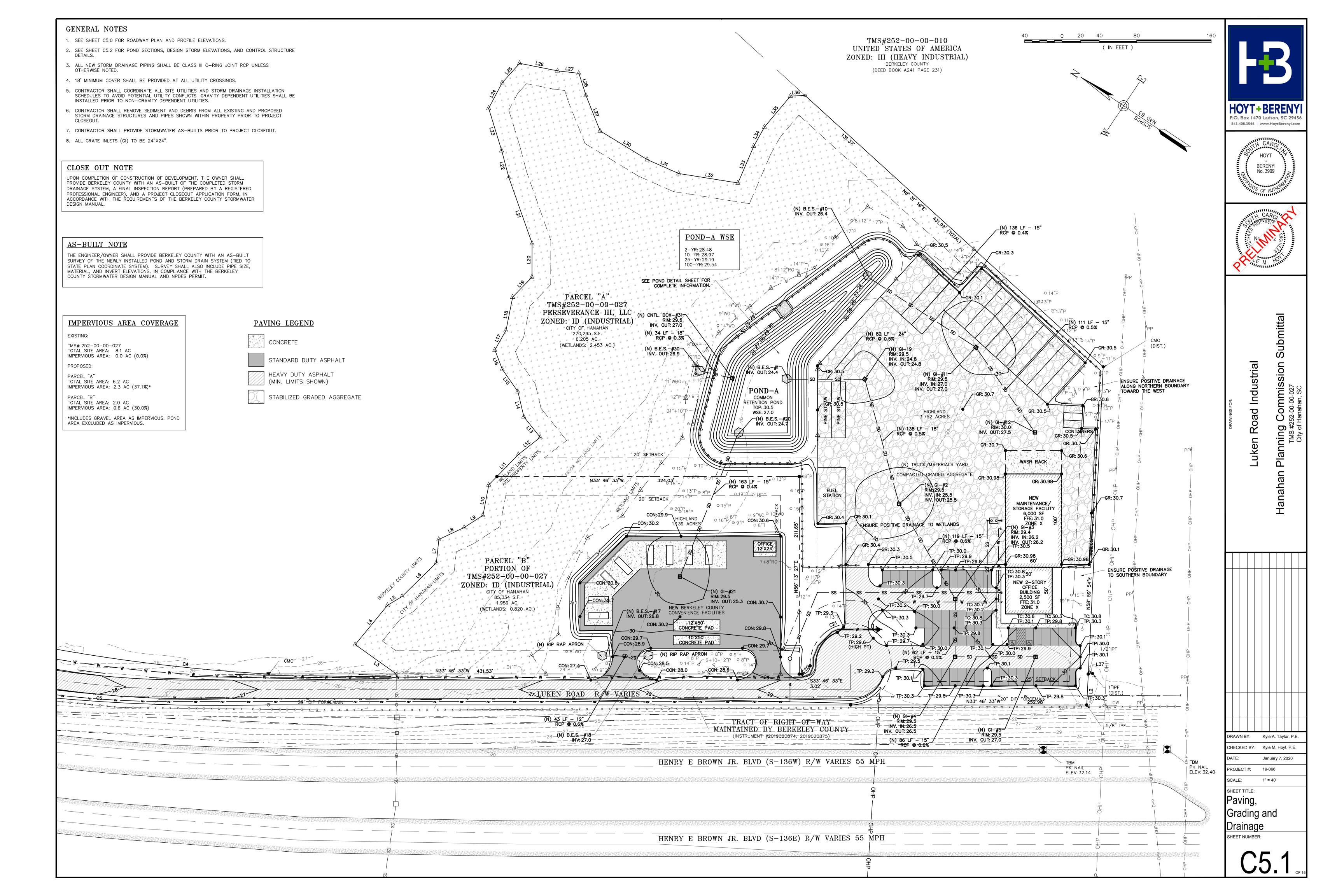


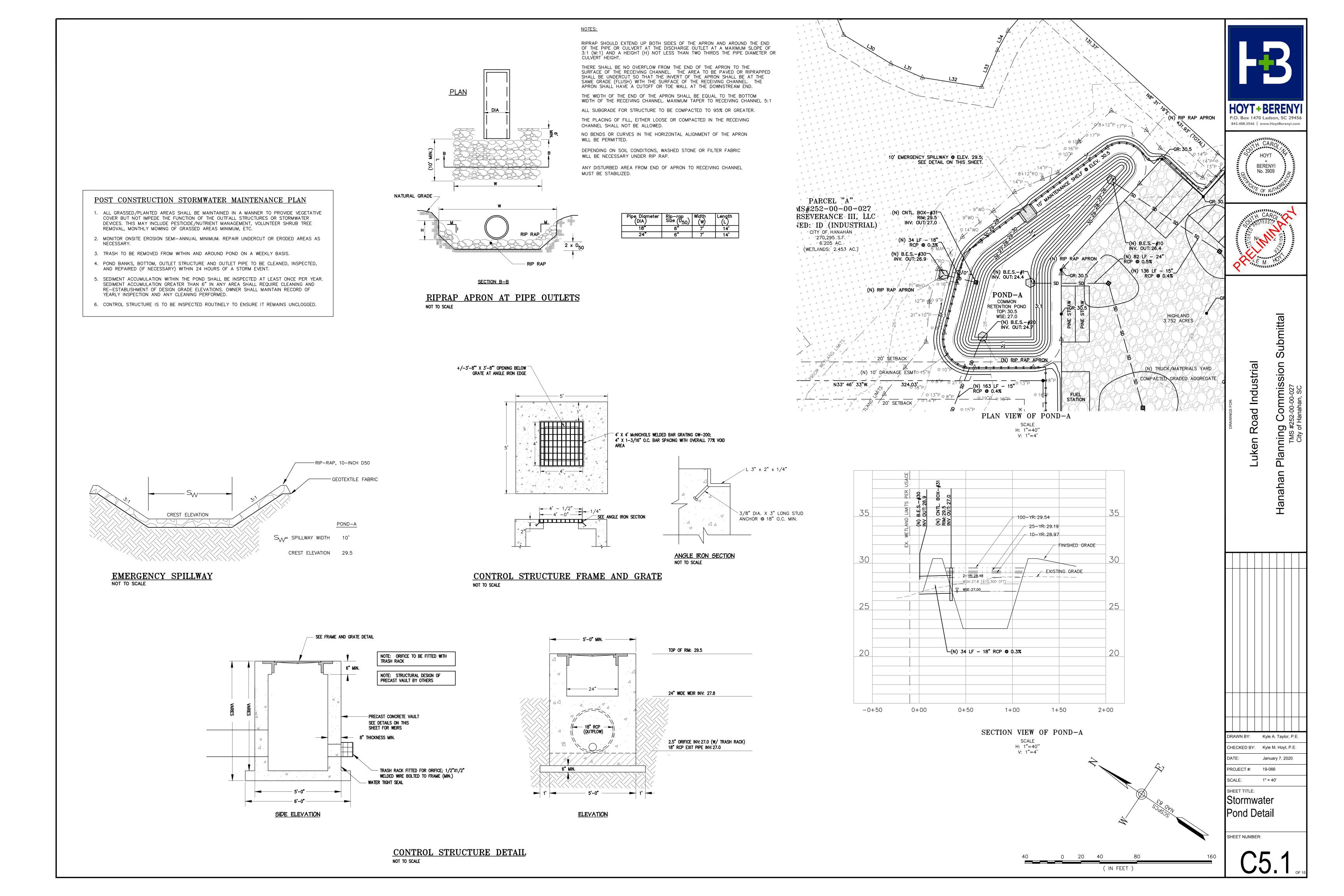


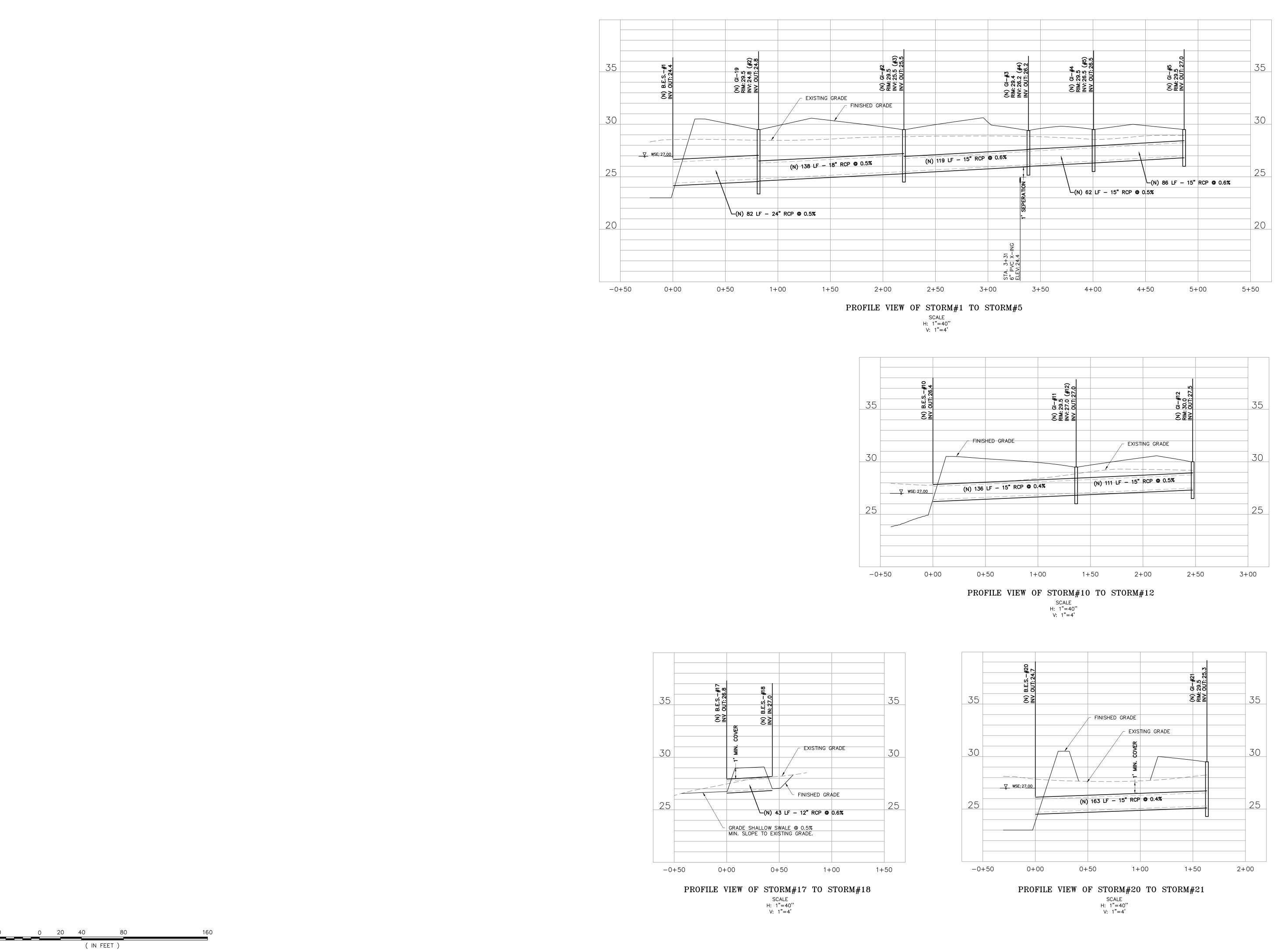




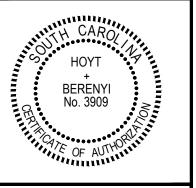


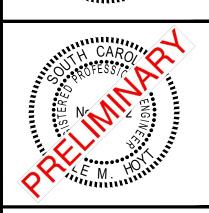






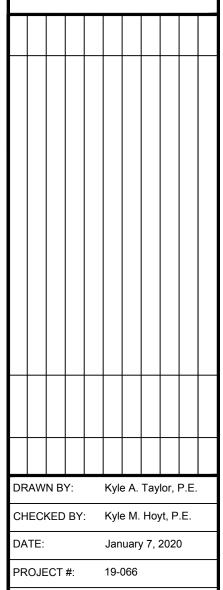
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P.O. Box 1470 Ladson, SC 29456
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Luken Road Industrial
Hanahan Planning Commission Submittal
TMS #252-00-0027
City of Hanahan, SC



SCALE: H: 1" = 40' V: 1" = 4'

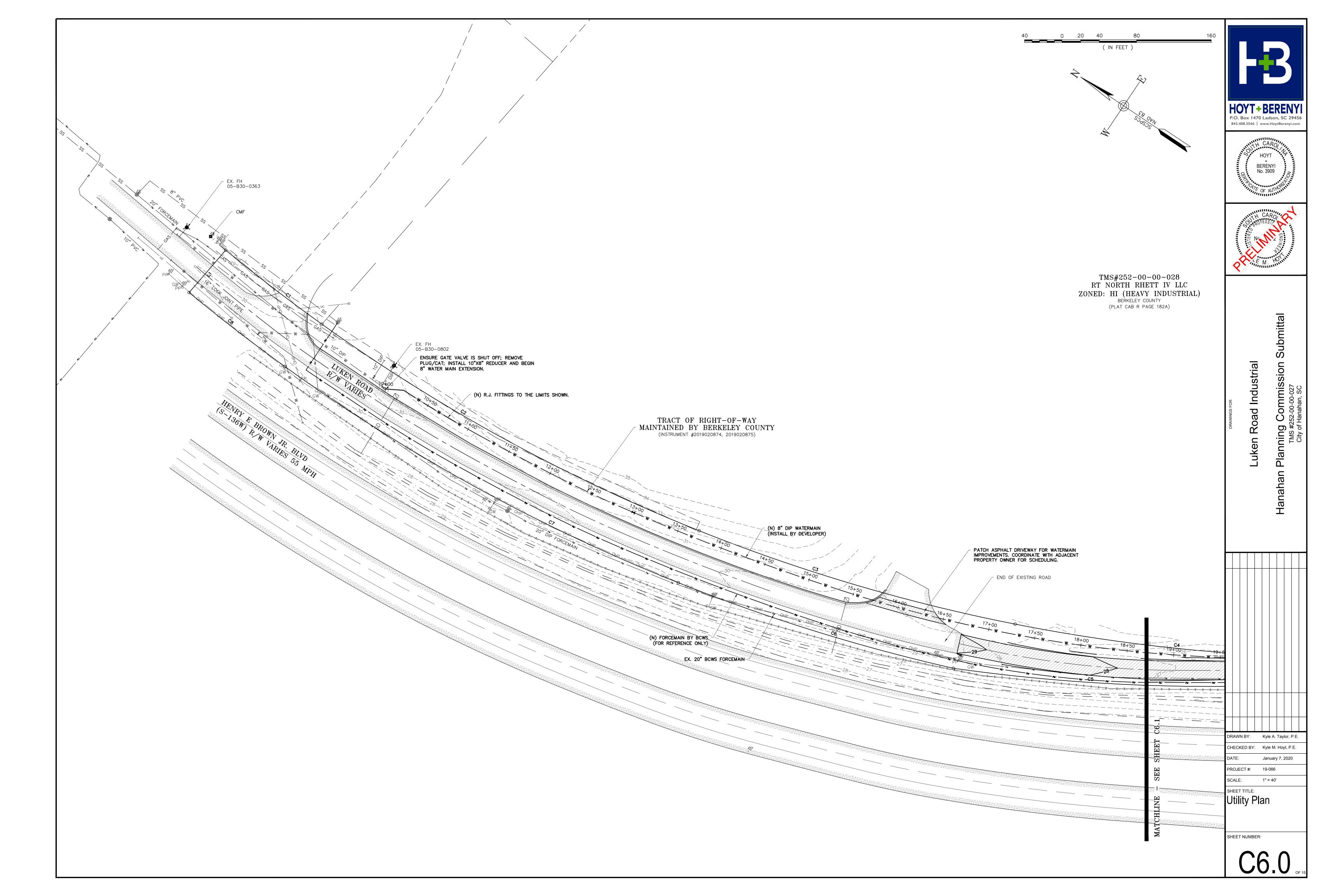
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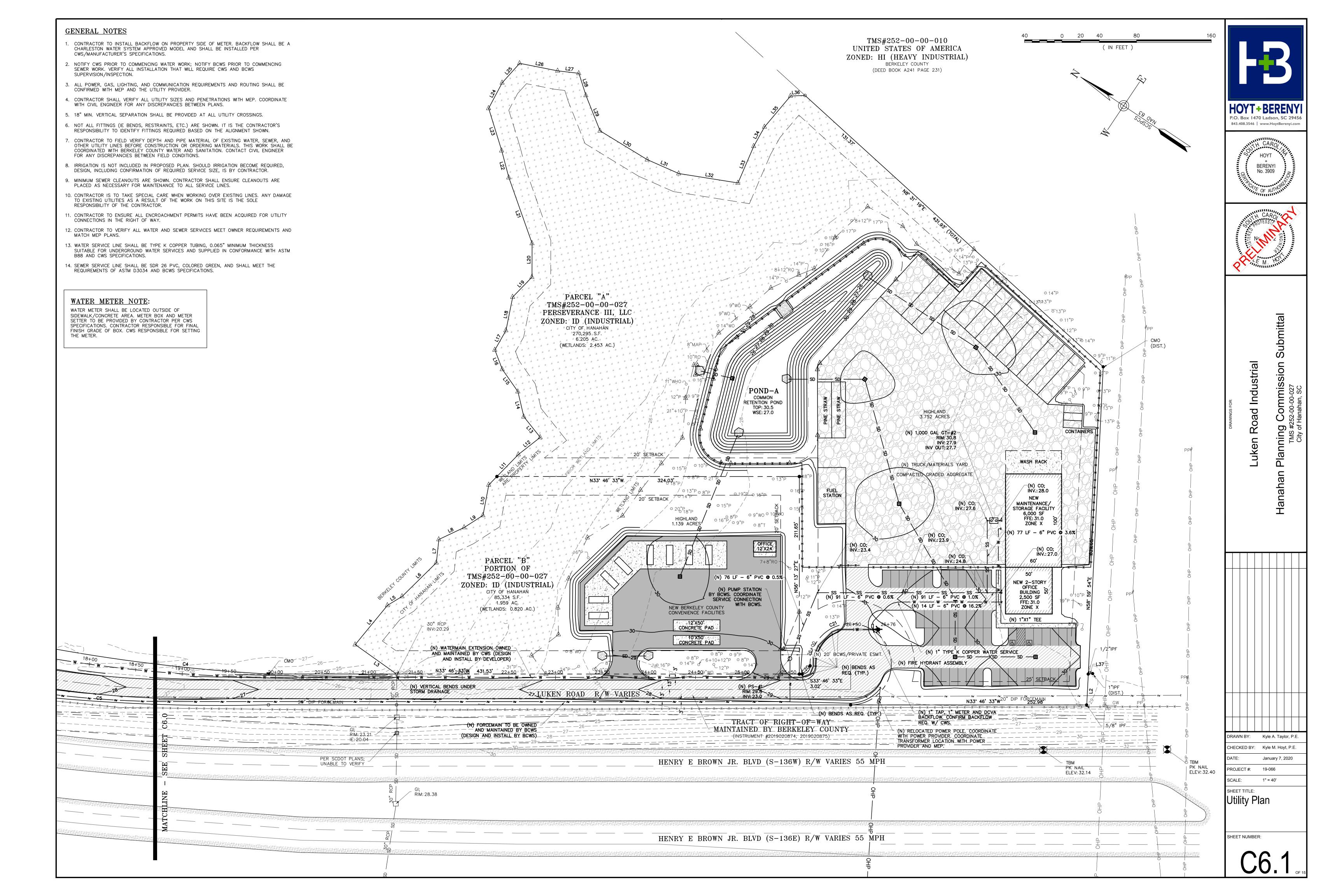
Storm Drainage

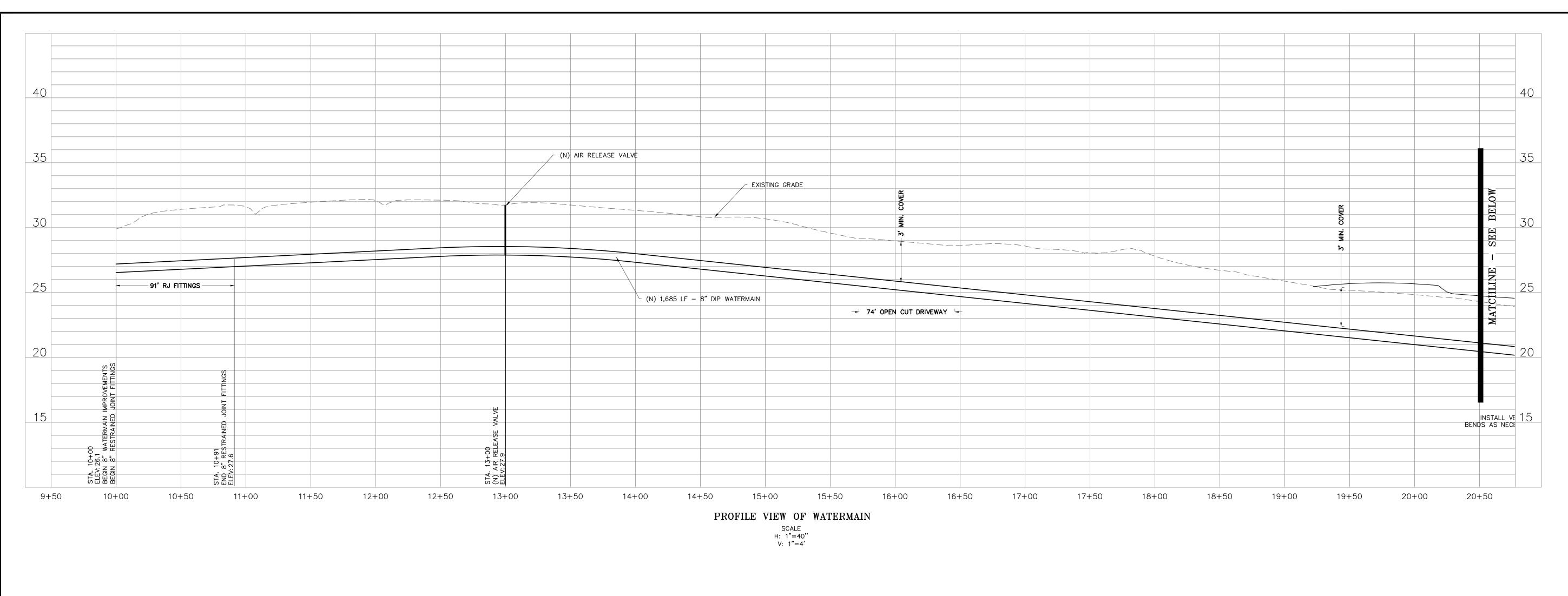
Profiles

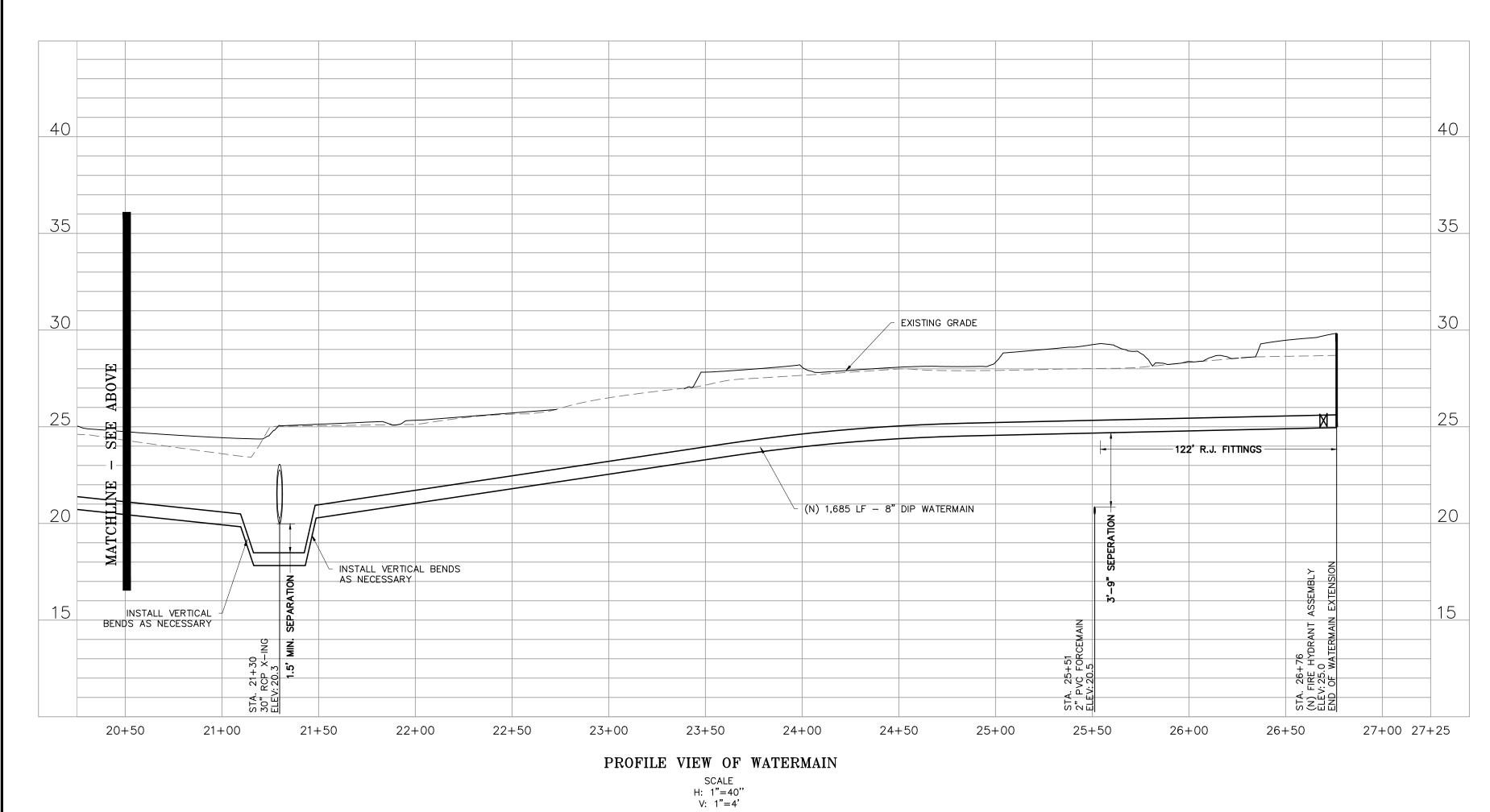
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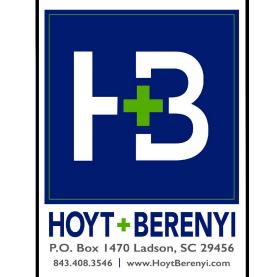
C5.3

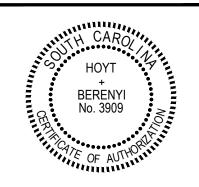


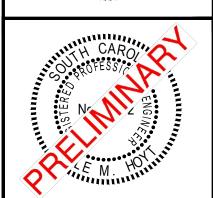




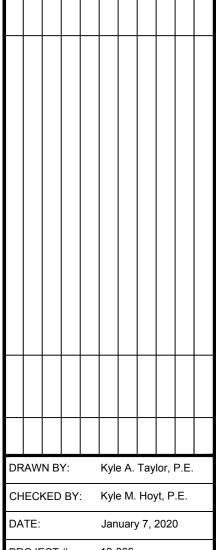








Road Industrial Planning (
TMS #2!
City of I-

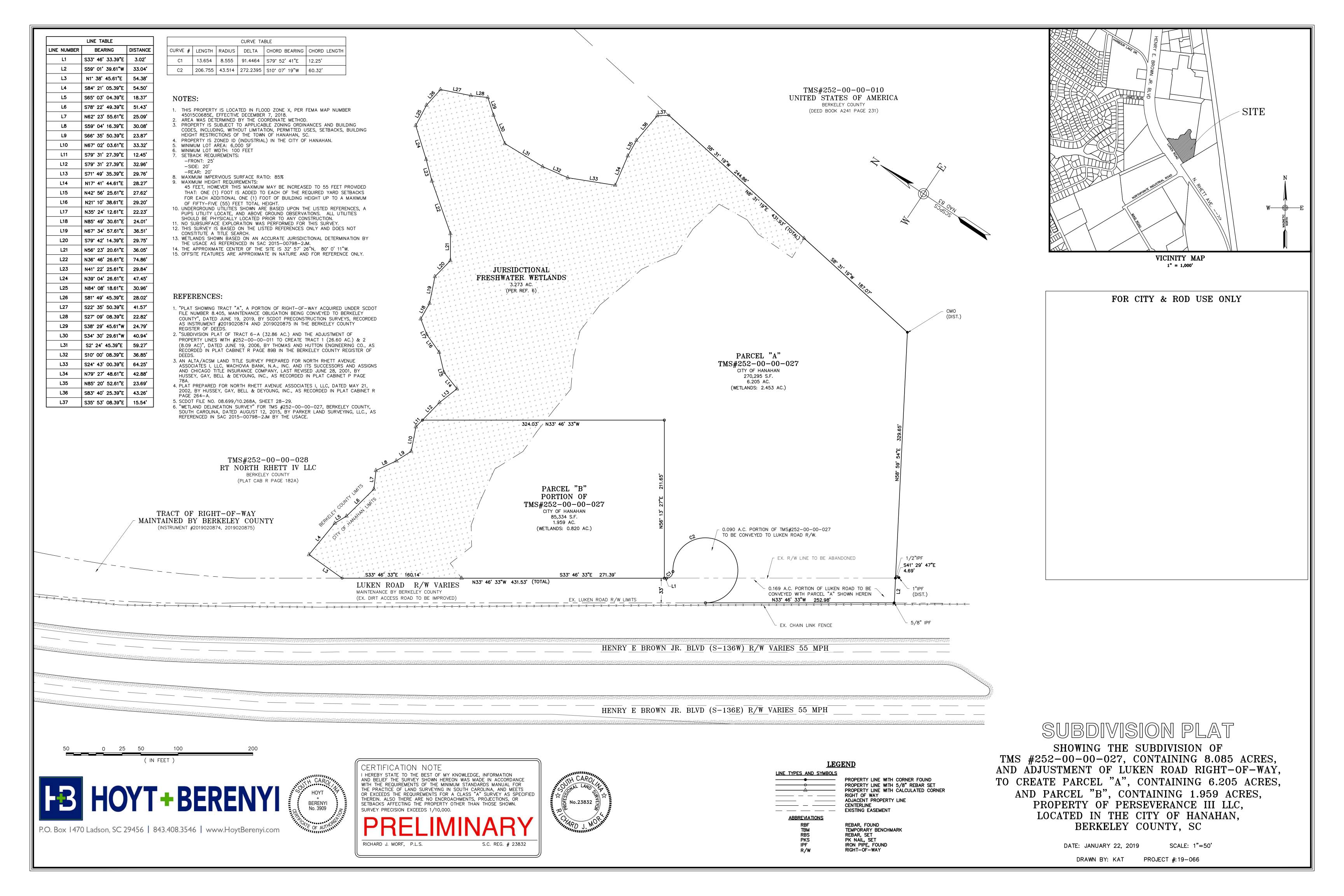


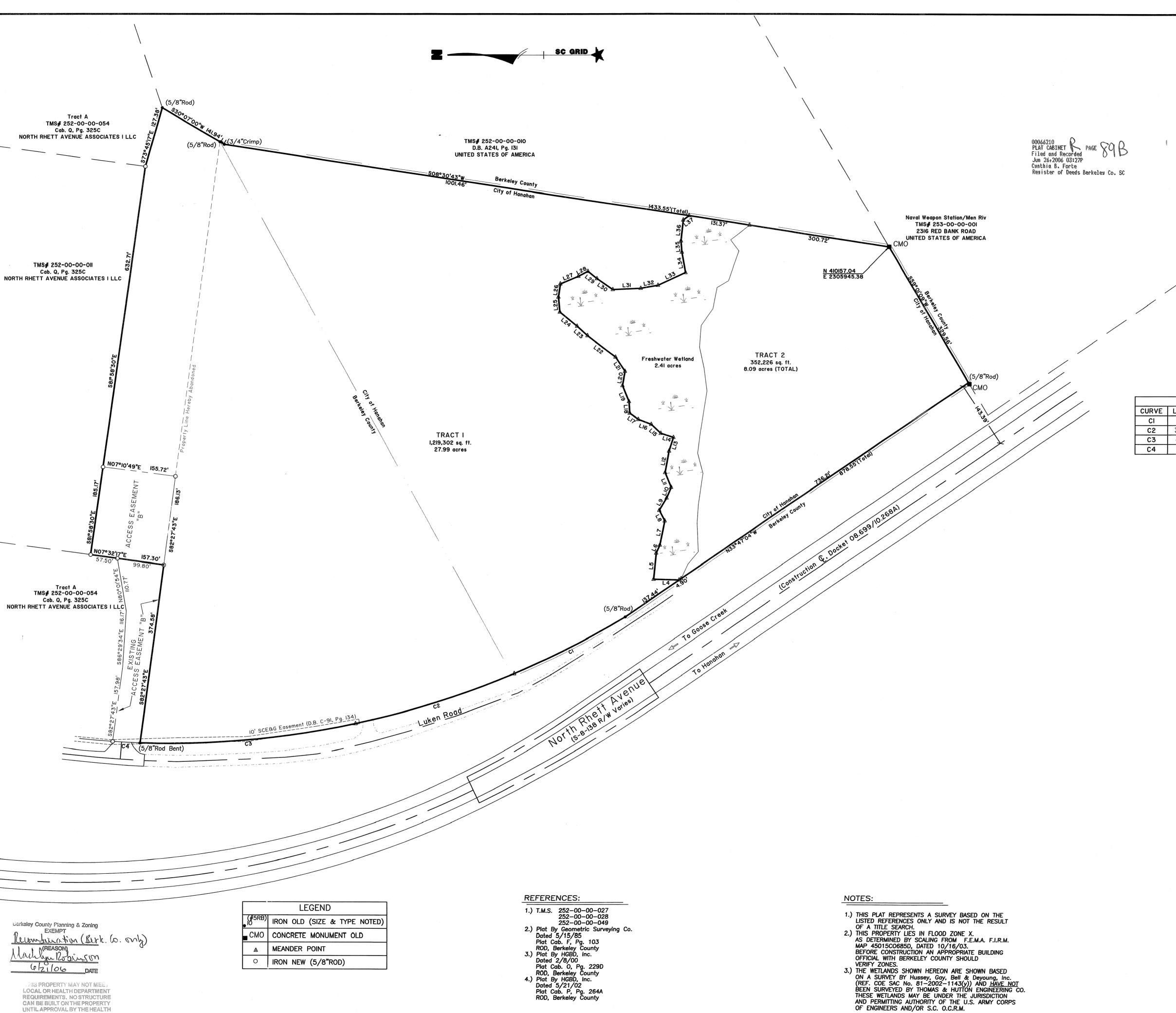
PROJECT #: 19-066 SCALE: H: 1" = 40' V: 1" = 4'

SHEET TITLE: Watermain

SHEET NUMBER:

( IN FEET )





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LOCATION MAP (N.T.S.)

CURVE TABLE CURVE LENGTH RADIUS DELTA TANGENT | CH. BEARING | CHORD 264.3I | 1909.87 | 7°55'45" | 132.37 N26°35'27"W 264.IO C2 353.57 1909.87 10°36'25" 177.29 NI7°19'22"W 353.07 C3 | 461.87 | 1909.87 | 13°51'22" | 232.07 NO5°05'28"W 460.75 58.52 1909.87 | 1º45'20" | 29.26 NO2°42'53"E 58.52

LINE TABLE					
LINE	LENGTH	BEARING			
LI	10.63	\$30°42'37"W			
L4	54.38	NOI°38'I5"E			
L5	54.50	N84°21'36"W			
L6	18.37	S65°03'35"E			
L7	51.43	S78°23'20"E			
L8	25.09	N62°23'25"E			
L9	30.08	S59°04'47"E			
LIO	23.87	\$66°36'21"E			
LII	33.32	N67°01'33"E			
LI2	45.41	\$79°31'58"E			
LI3	29.76	S71°50'06"E			
LI4	28.27	NI7°41'14"E			
LI5	27.62	N42°55'55"E			
LI6	29.20	N21°10'08"E			
LI7	22.23	N35°23'42"E			
LI8	24.01	N85°49'00"E			
LI9	36.51	N67°34'27"E			
L20	29.75	S79°42'45"E			
L2I	36.05	N56°22'50"E			
L22	74.86	N36°45'56"E			
L23	29.84	N4I°2I'55"E			
L24	47.45	N39°03'56"E			
L25	30.96	N84°07'48"E			
L26	28.02	S8I°50'16"E			
L27	41.57	\$22°36'21"E			
L28	22.82	S27°09'39"E			
L29	24.79	S38°29'15"W			
L30	40.94	S34°29'59"W			
L3I	59.27	S02°25'16"E			
L32	36.85	SI0°00'39"E			
L33	64.25	\$24°43'31"E			
L34	42.88	N79°27'18"E			
L35	23.69	N85°20'22"E			
L36	43.26	S83°40'56"E			
L37	15.57	\$35°53'39"E			

S.C. Minimum Standards Certification

I, F. Elliotte Quinn, III, a Registered Professional Land Surveyor in the State of South Carolina, certify to owner(s) shown hereon that this survey shown hereon was made in accordance with the requirements of the Minimum Standards Manual for the Practice of Land Surveying in South Carolina, and meets or exceeds the requirements for a Class A survey as specified therein.

F. Elliotte Quinn, III, R.L.S. S.C. Registration Number 10292

4/3/06 DRAWN: REVIEWED: CHECKED: SCALE: I" = 100'

AND THE -00-00-01 39 ac.)

SHEET DRAWING NO: D- 1866

Date: 6/19/09 This is not a true valid copy of this document unless bearing an original signature and a raised embossed seal of the surveyor.