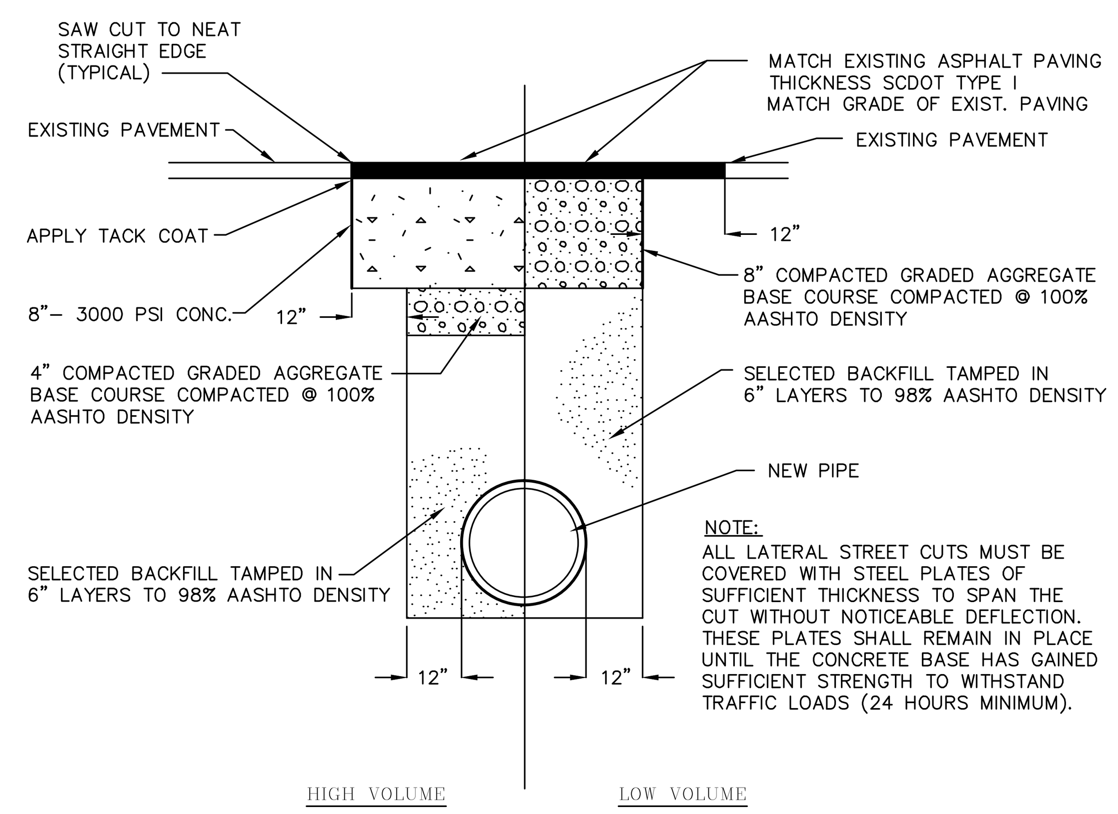
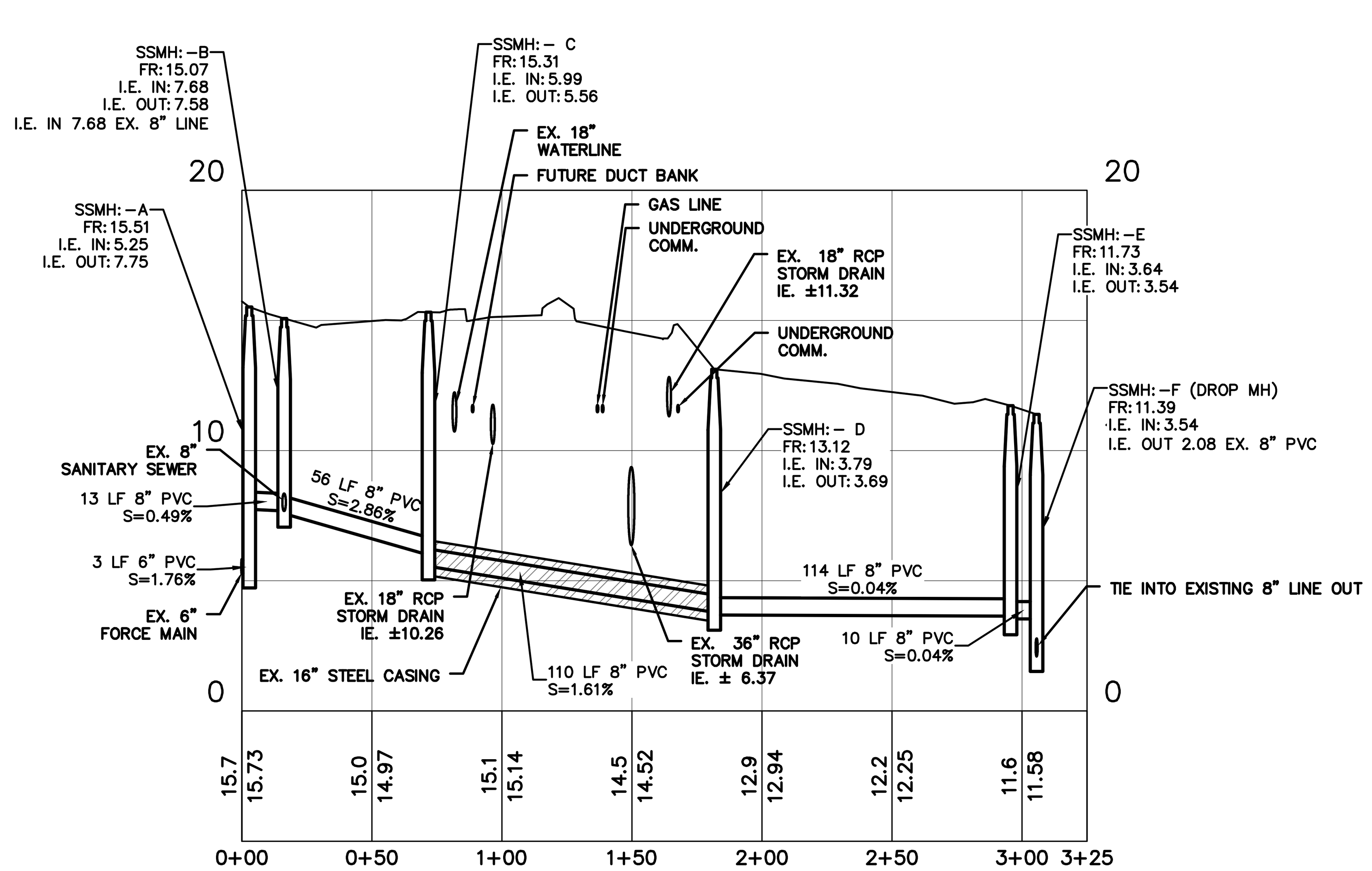
THIS DOCUMENT AND ALL REPRODUCIBLE COPIES OF THIS DOCUMENT ARE THE PROPERTY OF WARD EDWARDS, INC. REPRODUCTION OR ALTERATIONS OF THIS DRAWING WITHOUT THE WRITTEN CONSENT OF WARD EDWARDS, INC. IS NOT PERMITTED.



NOTE:
ALL LATERAL STREET CUTS MUST BE COVERED WITH STEEL PLATES OF SUFFICIENT THICKNESS TO SPAN THE CUT WITHOUT NOTICEABLE DEFLECTION. THESE PLATES SHALL REMAIN IN PLACE UNTIL THE CONCRETE BASE HAS GAINED SUFFICIENT STRENGTH TO WITHSTAND TRAFFIC LOADS (24 HOURS MINIMUM).

ASPHALT CUT AND PATCH

DETAIL 02740-003



SANITARY SEWER PROFILE

SCALE: l" = 50' HORIZ
l" = 5' VERT

PERMANENT SEEDING – COASTAL

(█ = planting period shown by bar)

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

(PS) PERMANENT SEEDING - COASTAL

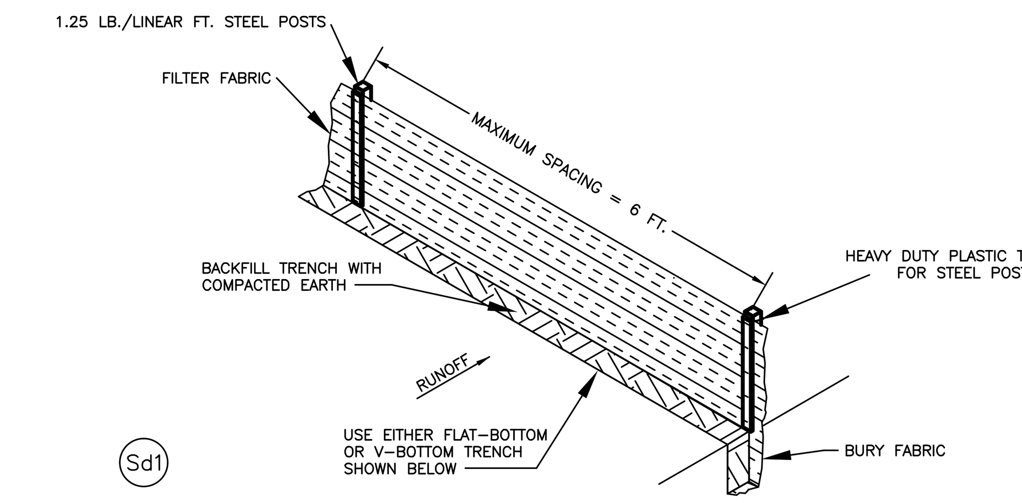
DETAIL 02370-010

TEMPORARY SEEDING – COASTAL

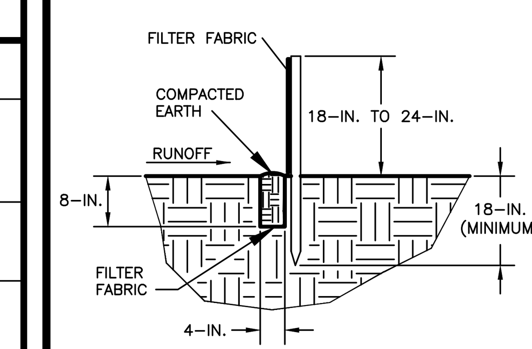
SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET	40 LBS/AC			█	█	█	█	█	█				
RYE, GRAIN	56 LBS/AC	█	█	█						█	█	█	█
RYEGRASS	50 LBS/AC	█	█	█	█					█	█	█	█
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET OR JAPANESE MILLET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

(TS) TEMPORARY SEEDING - COASTAL

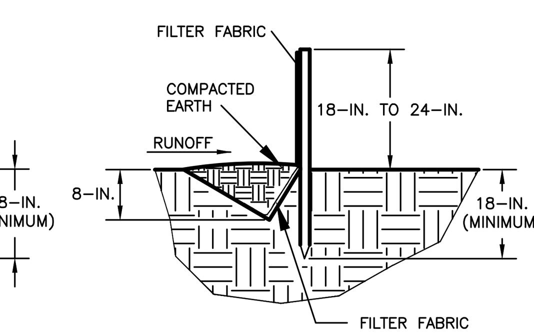
DETAIL 02370-011



SILT FENCE INSTALLATION



FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL

South Carolina Department of Health and Environmental Control
SILT FENCE
STANDARD DRAWING NO. SC–03 Page 1 of 3
APPROVED BY: SCDHEC AUGUST, 2005 DATE

SILT FENCE DETAIL

When and Where to Use it
Silt fence is applicable in areas:

Where the maximum sheet or overland flow path length to the fence is 100–feet.
Where the maximum slope steepness (normal [perpendicular] to fence line) is 2H:1V.
That do not receive concentrated flows greater than 0.5 cfs.

Do not place silt fence across channels or use it as a velocity control BMP.

Materials

Steel Posts
Use 48–inch long steel posts that meet the following minimum physical requirements:
Composed of high strength steel with minimum yield strength of 50,000 psi.
Have a standard "T" section with a nominal face width of 1.38–inches and nominal "T" length of 1.48–inches.
Weigh 1.25 pounds per foot (± 8%).
Have a soil stabilization plate with a minimum cross section area of 17–square inches attached to the steel posts.
Painted with a water based baked enamel paint.

Use steel posts with a minimum length of 4–feet, weighing 1.25 pounds per linear foot (± 8%) with projections to aid in fastening the fabric. Except when heavy clay soils are present on site, steel posts will have a metal soil stabilization plate welded near the bottom such that when the post is driven to the proper depth, the plate will be below the ground level for added stability.
The soil plates should have the following characteristics:
Be composed of minimum 15 gauge steel.
Have a minimum cross section area of 17–square inches.

Geotextile Filter Fabric
Filter fabric is:
Composed of fibers consisting of long chain synthetic polymers composed of at least 85% by weight of polyolefins, polyesters, or polyamides. Formed into a network such that the filaments or yarns retain dimensional stability relative to each other. Free of any treatment or coating which might adversely alter its physical properties after installation. Free of defects or flaws that significantly affect its physical and/or filtering properties. Cut to a minimum width of 36 inches.

Use only fabric appearing on SCDOT Approval Sheet #34 meeting the requirements of the most current edition of the SCDOT Standard Specifications for Highway Construction.

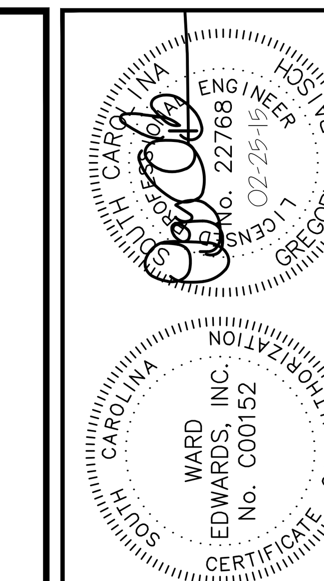
South Carolina Department of Health and Environmental Control
SILT FENCE
STANDARD DRAWING NO. SC–03 Page 2 of 3
APPROVED BY: SCDHEC AUGUST, 2005 DATE

SILT FENCE DETAIL

Installation
Excavate a trench approximately 6–inches wide and 6–inches deep when placing fabric by hand. Place 12–inches of geotextile fabric into the 6–inch deep trench, extending the remaining 6–inches towards the upslope side of the trench. Backfill the trench with soil or gravel and compact.Bury 12–inches of fabric into the ground when pneumatically installing silt fence with a slicing method. Purchase fabric in continuous rolls and cut to the length of the barrier to avoid joints. When joints are necessary, wrapped the fabric together at a support post with both ends fastened to the post, with a 6–inch minimum overlap. Install posts to a minimum depth of 24–inches. Install posts a minimum of 1– to 2– inches above the fabric, with no more than 3–feet of the post above the ground. Space posts to maximum 6–feet centers. Attach fabric to wood posts using staples made of heavy–duty wire at least 1½–inch long, spaced a maximum of 6–inches apart. Staple a 2–inch wide lathe over the filter fabric to securely fasten it to the upslope side of wooden posts. Attach fabric to the steel posts using heavy–duty plastic ties that are evenly spaced and placed in a manner to prevent sagging or tearing of the fabric. In call cases, ties should be affixed in no less than 4 places. Install the fabric a minimum of 24–inches above the ground. When necessary, the height of the fence above ground may be greater than 24–inches. In tidal areas, extra silt fence height may be required. The post height will be twice the exposed post height. Post spacing willremain the same and extra height fabric will be 4–, 5–, or 6–feet tall. Locate silt fence checks every 100 feet maximum and at low points. Install the fence perpendicular to the direction of flow and place the fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.

Inspection and Maintenance
Inspect every seven calendar days and within 24–hours after each rainfall event that produces ½–inches or more of precipitation. Check for sediment buildup and fence integrity. Check where runoff has eroded a channel beneath the fence, or where the fence has sagged or collapsed by fence overtopping.
If the fence fabric tears, begins to decompose, or in any way becomes ineffective, replace the section of fence immediately.
Remove sediment accumulated along the fence when it reaches 1/3 the height of the fence, especially if heavy rains are expected.
Remove trapped sediment from the site or stabilize it on site.
Remove silt fence within 30 days after final stabilization is achieved or after temporary best management practices (BMPs) are no longer needed.
Permanently stabilize disturbed areas resulting from fence removal.

South Carolina Department of Health and Environmental Control
SILT FENCE
STANDARD DRAWING NO. SC–03 Page 3 of 3
APPROVED BY: SCDHEC AUGUST, 2005 DATE



NO.	DESCRIPTION	DATE
7		
6		
5		
4		
3		
2	MOVED PRO. SAN. SEWER - JACK & BORE BOUNDARY	02/16/15
1	MOVED PRO. SAN. SEWER TO CENTER OF EASEMENT	12/31/14

PLAN REVISIONS

Ward Edwards
ENGINEERING
P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910
PH (843) 837-5250 / FAX (843) 837-2558
WWW.WARDEDWARDS.COM

LOVEJOY SANITARY SEWER REALIGNMENT
BEAUFORT COUNTY, SOUTH CAROLINA

CITY OF BEAUFORT PUBLIC WORKS
BEAUFORT, SOUTH CAROLINA

CONSTRUCTION DETAILS

☑ NOT FOR CONSTRUCTION
☐ RELEASED FOR CONSTRUCTION

PROJECT #:	130215H
DATE:	02/25/15
DESIGNED BY:	RB
CHECKED BY:	GAB
SCALE:	AS NOTED

SHEET
C105

IF THIS SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT, SCALE ACCORDINGLY

THIS DOCUMENT AND ALL REPRODUCIBLE COPIES OF THIS DOCUMENT ARE THE PROPERTY OF WARD EDWARDS, INC. REPRODUCTION OR ALTERATIONS OF THIS DRAWING WITHOUT THE WRITTEN CONSENT OF WARD EDWARDS, INC., IS NOT PERMITTED.

NOTES:

1. CONTRACTOR TO NOTIFY ******* 48-HOURS PRIOR TO OFFSITE SEWER CONSTRUCTION INITIATION.

2. ALL EXISTING DISTURBED LANDSCAPING TO BE REPLANTED.

3. EXISTING UTILITIES SHOWN ARE BASED ON BEST AVAILABLE INFORMATION PROVIDED BY SURVEYOR AND BJWSA. CONTRACTOR TO VERIFY LOCATION AND ELEVATIONS OF ALL UTILITIES WITHIN LIMITS OF DISTURBANCE PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER IF CONFLICT EXISTS.

4. CAP EXISTING 6" FORCE MAIN AT MARSH ROAD AND BACKFILL WITH FLOWABLE FILL THROUGH ENTIRE ABANDON SECTION

5. NO SCDOT LANE CLOSURE PERMITTED, ALL WORK TO BE PERFORMED FROM BEHIND BACK OF CURB AND NOT DISTURB CURBING OR STREET PAVING

6. CONTRACTOR TO COORDINATE NEW AND EXISTING SYSTEM CONNECTIONS AND TEMPORARY SHUTDOWN/BYPASS REQUIREMENTS WITH BJWSA.

SSMH: -A
SURGE MH. - SEE DETAIL (COAT AS PER BJWSA SPECS)
N=221119.69 E=2096762.84
FR:15.51
I.E. IN:5.25
I.E. OUT: 7.75

CUT INTO EXISTING 6" FORCE MAIN INSTALL 90° BEND AND 6-LF 6" FM TO CONNECT INTO SSMH-A

13 LF 8" PVC
S=0.49%

EX. SSMH: -SS10-071
FR:15.51
I.E.: 8.04

CONNECT EXISTING 8" PVC SANITARY SEWER LINE TO NEW SSMH: -B
COAT AS PER BJWSA SPECS

SSMH: -B
N=221107.24 E=2096764.91
FR:15.07
I.E.:7.68
I.E.: 7.58

56 LF 8" PVC
S=2.86%

183 LF SILT FENCE AS PER SCDHEC DETAILS

LIMITS OF DISTURBANCE SAME AS SILT FENCE LOCATION
NPDES AREA = 0.05 AC.

SSMH: - C
FR:15.31
I.E. IN: 5.99
I.E. OUT: 5.56

FUTURE BOUNDARY STREET DRY UTILITY DUCT BANK, LOCATION SHOWN AS APPROXIMATE

PVC SANITARY SEWER UNDER EX. 18 WATER LINE CONTRACTOR TO FIELD VERIFY ELEVATION BEFORE CONSTRUCTION AND NOTIFY ENGINEER

110 LF 8" PVC
S=1.61%
JACK AND BORE, COMPLETE WITH 16" STEEL CASING UNDER ROADWAY

APPROXIMATE LOCATION OF FUTURE DUCT BANK FOR "US 21 BUSINESS (BOUNDARY STREET) IMPROVEMENTS" PROJECT PER THOMAS & HUTTON PLANS

UTILITY CONSTRUCTION TO AVOID IMPACT TO EXISTING SCE&G POWER POLE. CONTRACTOR TO COORDINATE CONSTRUCTION EFFORTS AND POLE HOLD WITH SCE&G AS APPLICABLE.

EXISTING 95 LF 8" PVC
BURST / PIPE LINED FROM 8" TO 10"
S=0.97%

EX. SSMH: -SS10-093
FR:11.79
I.E.:5.12

SSMH: -F (DROP MH)
N=221085.00 E=2096624.46
FR:11.39
I.E.: 3.54
I.E.: 2.00±

10 LF 8" PVC
S=0.04%

SSMH: -E
FR:11.73
I.E. IN: 3.64
I.E. OUT: 3.54

114 LF 8" PVC
S=0.04%

INSTALL 114-LF 8" PVC AS CLOSE TO EXISTING BACK OF CURB AS POSSIBLE TO AVOID IMPACT TO EXISTING LIVE OAK TREES AND USE APPROPRIATE SHORING TO MINIMIZE TRENCH WIDTH TO EXTENT POSSIBLE

310 LF SILT FENCE AS PER SCDHEC DETAILS

SSMH: - D
FR:13.12
I.E. IN: 3.79
I.E. OUT: 3.69

PROPOSED 20-FT BJWSA UTILITY EASEMENT

GRAPHIC SCALE 20 10 0 20 40

NORTH GRID

NO.	DESCRIPTION	DATE
3	MOVED PRO. SAN. SEWER - JACK & BORE BOUNDARY	02/16/15
2	MOVED PRO. SAN. SEWER TO CENTER OF EASEMENT	12/31/14
1	PLAN REVISIONS	

Ward Edwards ENGINEERING
P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910
PH (843) 837-5250 / FAX (843) 837-2558
WWW.WARDEDWARDS.COM

LOVEJOY SANITARY SEWER REALIGNMENT
BEAUFORT COUNTY, SOUTH CAROLINA

CITY OF BEAUFORT PUBLIC WORKS
BEAUFORT, SOUTH CAROLINA

UTILITY PLAN

☑ NOT FOR CONSTRUCTION
☐ RELEASED FOR CONSTRUCTION

PROJECT #:	1302I5H
DATE:	02/25/15
DESIGNED BY:	RB
CHECKED BY:	GAB
SCALE:	1"=20'

SHEET
C104

IF THIS SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT, SCALE ACCORDINGLY

THIS DOCUMENT AND ALL REPRODUCIBLE COPIES OF THIS DOCUMENT ARE THE PROPERTY OF WARD EDWARDS, INC. REPRODUCTION OR ALTERATIONS OF THIS DRAWING WITHOUT THE WRITTEN CONSENT OF WARD EDWARDS, INC., IS NOT PERMITTED.

TREE & TOPO SURVEY

PREPARED FOR

303 ASSOCIATES, LLC

PORTION OF LOT 61 AND 52, SECTION 31, 1N-1W

BEAUFORT TAX MAP 1, PARCEL 12

BEAUFORT COUNTY SOUTH CAROLINA

3.960 ACRES
+0.021 ACRES
3.981 ACRES TOTAL

LEGEND:
IPS – IRON PIN SET
IPF – IRON PIN FOUND
CMF – CONCRETE MONUMENT FOUND
PP – POWER POLE
LP – LIGHT POLE
WV – WATER VALVE
WM – WATER METER
SSMH – SEWER MANHOLE
SDCB – STORM CATCH BASIN
VM – VALVE MARKER
PBOX – POWER BOX
TRAN – TRANSFORMER
PLM – PIPELINE MARKER

TREE LEGEND:
LO – LIVE OAK
G – GUM
CH – CHERRY
MB – MULBERRY
SB – SUGAR BERRY
PAL – PALMETTO
MAG – MAGNOLIA
LrO – LAUREL OAK

NO.	BEARING	DISTANCE
AA	N51°13'50"E	23.90'
AB	N89°11'40"E	7.55'
AC	S68°25'43"W	20.99'

NO.	DELTA	RADIUS	ARC	TANGENT	C.BEARING	CHORD
1	8°18'58"	1437.55'	208.65'	104.51'	N70°26'29"W	208.42'
2	0°43'42"	1462.70'	18.59'	9.30'	N76°20'10"W	18.59'

REFERENCE PLAT:
PLAT BY R.D. TROGDON, JR. DATED OCT. 19, 1978 AND REVISED NOV. 2, 1981 AND RECORDED IN THE OFFICE OF THE CLERK OF COURT FOR BEAUFORT COUNTY, SOUTH CAROLINA IN PLAT BOOK 30, PAGE 82.

THIS PROPERTY IS LOCATED IN ZONE C, B, AND A-11 (EL 13.0) AS DETERMINED BY FEMA, FIRM COMMUNITY-PANEL NUMBER 450026 0005 D, DATED 9-29-86.

R120-001-000-0012-0000

REVISED 5-24-07 – ADDED TREE & TOPO
REVISED 7-19-07 – UPDATED BOUNDARY
REVISED 11-9-07 – UPDATED TREE SURVEY
REVISED 3-31-08 – LOT LINE CORRECTION
REVISED 6-13-12 – ADDED MORE TOPO
REVISED 11-4-13 – ADDED LOVEJOY PROPERTY & UPDATED TREES IN THIS AREA

P13339T2/MMA

PLUG EXISTING SSMH: SS10-092 @ EAST 8" PVC LOCATION

CAP EXISTING 6" FORCE MAIN AND ABANDON 235 LF IN PLACE AND FILL WITH FLOWABLE FILL

CONTRACTOR TO MAINTAIN SEWER SERVICE TO ALL EXISTING SERVICES DURING CONSTRUCTION BY TEMPORARY RE-ROUTING, CONSTRUCTION SEQUENCE AND OR PUMP/HAUL, METHODS TO BE APPROVED BY BJWSA AND ENGINEER.

CAP EXISTING 6" FORCE MAIN AT MARSH ROAD AND FILL WITH FLOWABLE FILL (±85 LF)

FUTURE BOUNDARY STREET DRY UTILITY DUCT BANK, LOCATION SHOWN AS APPROXIMATE

CAP EXISTING 8" PVC GRAVITY SANITARY SEWER AND ABANDON 120 LF IN PLACE AND FILL WITH FLOWABLE FILL

SEED STABILIZE ALL DISTURBED AREAS, AS PER DETAILS (±3,000 SF) (TS)(PS)

DEMO 37 SY EXISTING CONCRETE SIDEWALK TO BACK OF CURB, SAWCUT IF MONOLITHIC

CONTRACTOR TO MAINTAIN EXISTING SIGNAGE DURING CONSTRUCTION (TYP. 3)

REMOVE AND REINSTALL EXISTING LIGHT POLE AS REQUIRED TO INSTALL PROPOSED SANITARY SEWER LINE, COORDINATE WITH SCE&G AS REQUIRED

(3 LIVE OAKS) CLEAN CUT EQUALLY ROOT TRIM WITH CONCRETE SAW PRIOR TO BACKFILL

GRAPHIC SCALE
20 10 0 20 40

NORTH
GRID

I HEREBY STATE THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE 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.
ALSO THERE ARE NO VISIBLE ENCROACHMENTS OR PROJECTIONS OTHER THAN SHOWN.

SOUTH CAROLINA BEAUFORT SURVEYING INC. No. 00189 CERTIFICATE OF AUTHORIZATION

DAVID S. YOUMANS RLS 9765
BEAUFORT SURVEYING, INC.
1613 PARIS AVENUE
PORT ROYAL, S.C. 29935
PHONE (803) 524-3261

SOUTH CAROLINA ENGINEERING No. 22708 GREGORY A. WARD 02/25/15

SOUTH CAROLINA NO. 00152 WARD EDWARDS, INC. CERTIFICATE OF AUTHORIZATION

NO.	DESCRIPTION	DATE
7		
6		
5		
4		
3	MOVED PRO. SAN. SEWER - JACK & BORE BOUNDARY	02/16/15
2	MOVED PRO. SAN. SEWER TO CENTER OF EASEMENT	12/31/14
1	PLAN REVISIONS	

Ward Edwards ENGINEERING
P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910
PH (843) 837-5250 / FAX (843) 837-2558
WWW.WARDEDWARDS.COM

LOVEJOY SANITARY SEWER REALIGNMENT
BEAUFORT COUNTY, SOUTH CAROLINA
CITY OF BEAUFORT PUBLIC WORKS
BEAUFORT, SOUTH CAROLINA

EXISTING CONDITIONS & DEMOLITION PLAN

☑ NOT FOR CONSTRUCTION
☐ RELEASED FOR CONSTRUCTION

PROJECT #:	13021SH
DATE:	02/25/15
DESIGNED BY:	RB
CHECKED BY:	GAB
SCALE:	1"=20'

SHEET
C103

IF THIS SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT, SCALE ACCORDINGLY