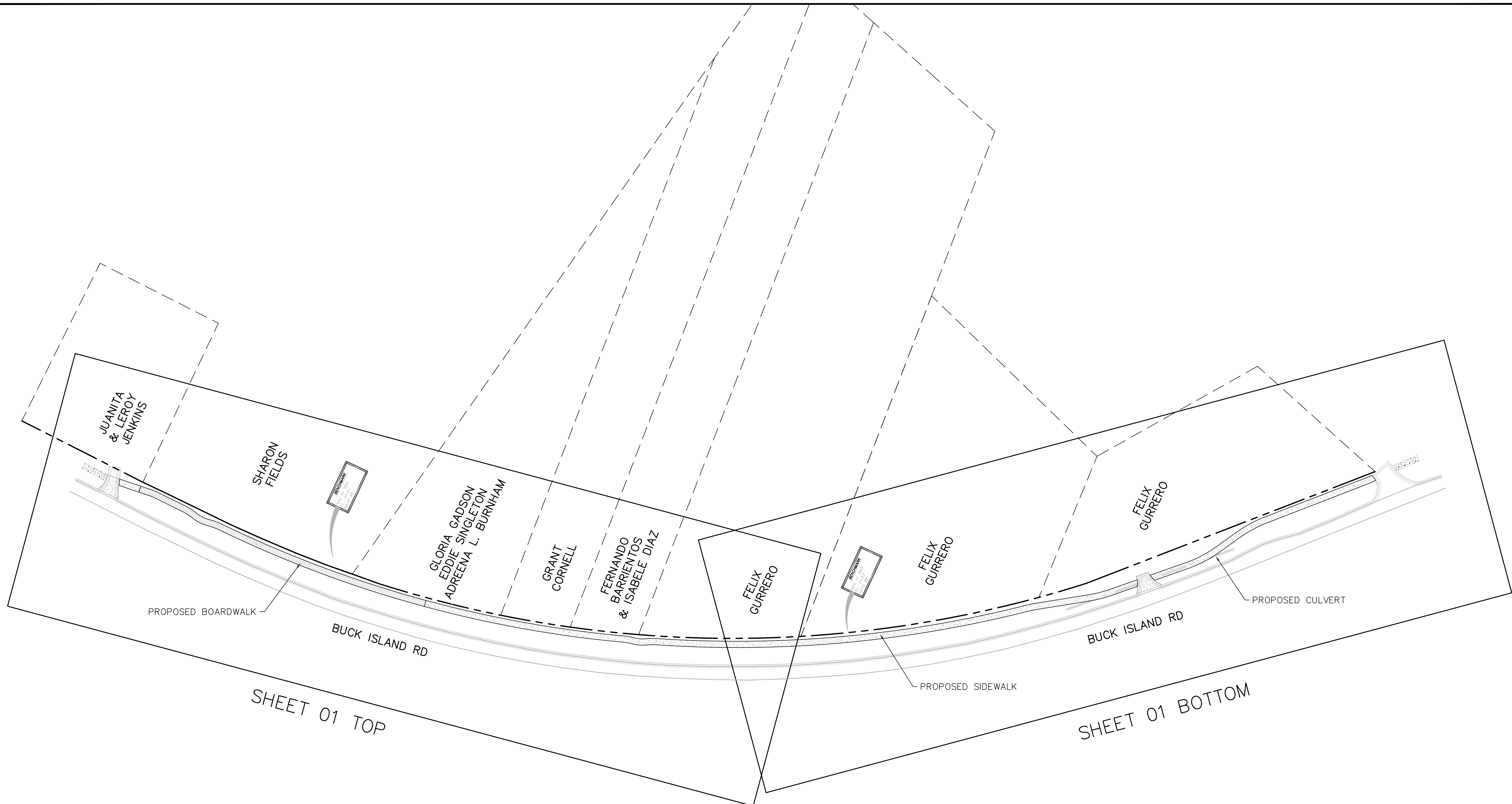
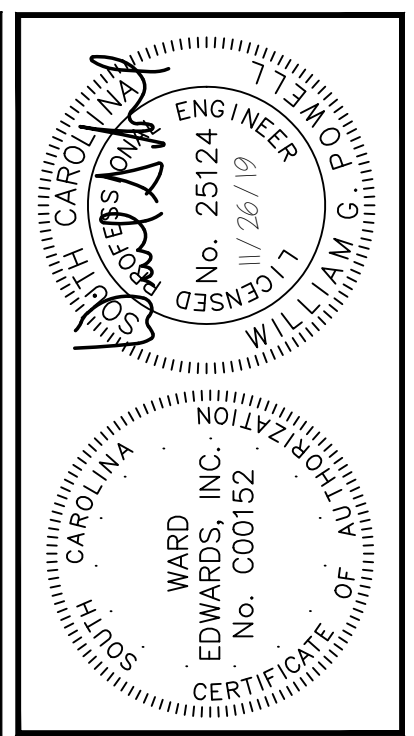
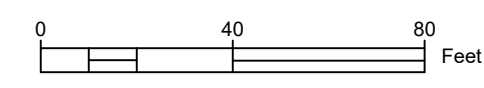
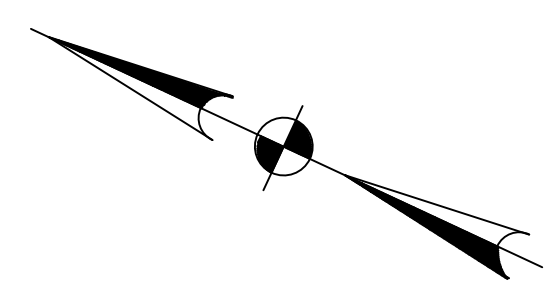


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SHEET 01 TOP

SHEET 01 BOTTOM



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Ward Edwards
ENGINEERING

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BUCK ISLAND - SIMMONSVILLE NEIGHBORHOOD SIDEWALKS, PHASE 5
BEAUFORT COUNTY, SOUTH CAROLINA
TOWN OF BLUFFTON
BLUFFTON, SOUTH CAROLINA
OVERALL SITE PLAN

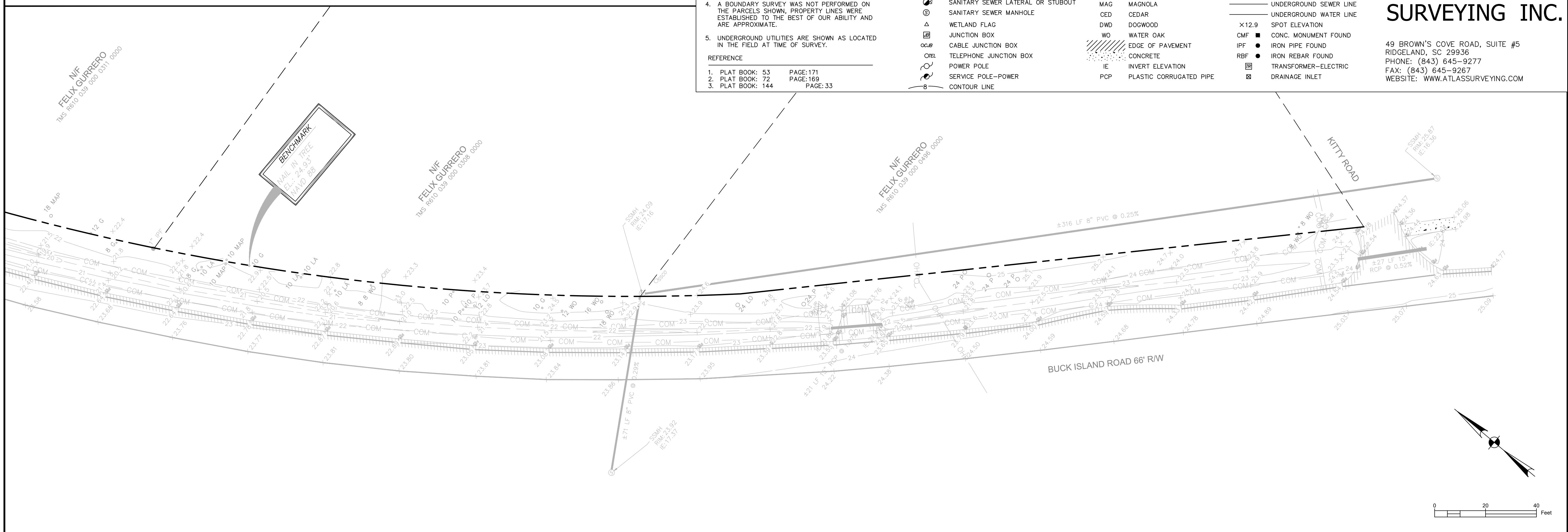
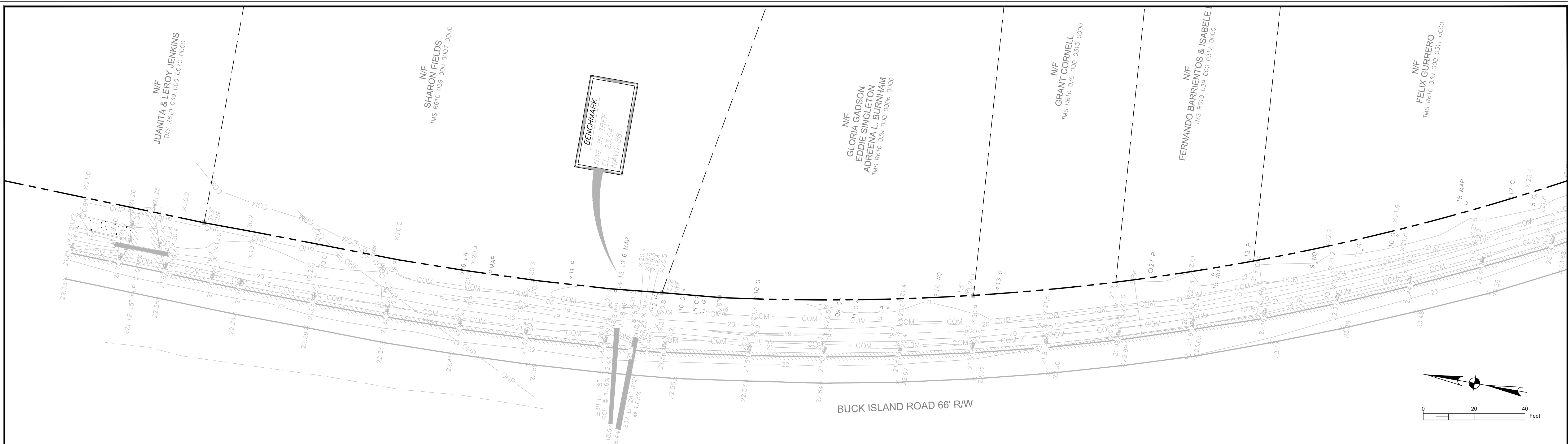
VERTICAL DATUM:
NAVD88

NOT FOR CONSTRUCTION
 RELEASED FOR CONSTRUCTION

PROJECT #: 150610
DATE: 11/26/19
DESIGNED BY: WGP
CHECKED BY: HED
SCALE: 1"=40'

SHEET C002

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NOTES

1. CONTOURS ARE IN ONE FOOT INTERVALS. TREES SIZES SHOWN ARE IN INCHES OF DIAMETER.
2. ELEVATIONS ARE ON NAVD 88.
3. COORDINATES ARE BASED ON SOUTH CAROLINA STATE PLANE GRID (NAD 83).
4. A BOUNDARY SURVEY WAS NOT PERFORMED ON THE PARCELS SHOWN. PROPERTY LINES WERE ESTABLISHED TO THE BEST OF OUR ABILITY AND ARE APPROXIMATE.
5. UNDERGROUND UTILITIES ARE SHOWN AS LOCATED IN THE FIELD AT TIME OF SURVEY.

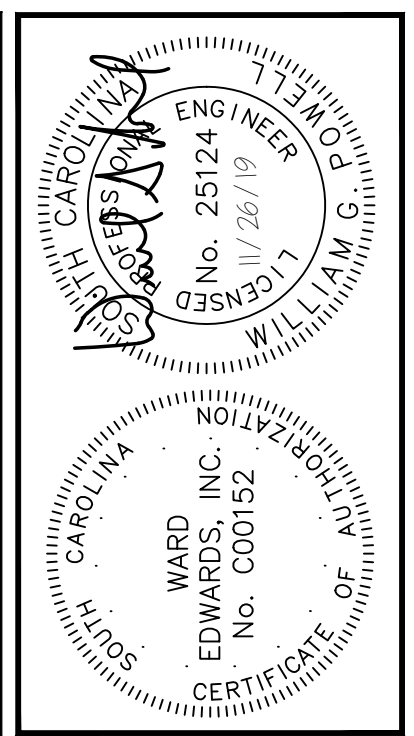
REFERENCE

1. PLAT BOOK: 53	PAGE: 171
2. PLAT BOOK: 72	PAGE: 169
3. PLAT BOOK: 144	PAGE: 33

LEGEND	
	WATER VALVE
	FIRE HYDRANT
	WATER LATERAL OR STUBOUT
	WATER METER
	WATER VALVE MARKER
	SANITARY SEWER CLEAN OUT
	SANITARY SEWER LATERAL OR STUBOUT
	SANITARY SEWER MANHOLE
	WETLAND FLAG
	JUNCTION BOX
	CABLE JUNCTION BOX
	TELEPHONE JUNCTION BOX
	POWER POLE
	SERVICE POLE-POWER
	CONTOUR LINE
	LO LIVE OAK
	WO WATER OAK
	P PINE
	LA LAUREL OAK
	G SWEET GUM
	MAP RED MAPLE
	MAG MAGNOLA
	CED CEDAR
	DWD DOGWOOD
	WO WATER OAK
	EDGE OF PAVEMENT
	CONCRETE
	IE INVERT ELEVATION
	PCP PLASTIC CORRUGATED PIPE
	PD PIPE DIRECTION
	PVC POLYVINYL CHLORIDE PIPE
	RCP REINFORCED CONCRETE PIPE
	WETLAND LINE
	OVERHEAD POWER LINE
	UNDERGROUND DRAINAGE LINE
	UNDERGROUND SEWER LINE
	UNDERGROUND WATER LINE
	X12.9 SPOT ELEVATION
	CMF CONC. MONUMENT FOUND
	IPF IRON PIPE FOUND
	RBF IRON REBAR FOUND
	TRANSFORMER-ELECTRIC
	DRAINAGE INLET

ATLAS
SURVEYING INC.

49 BROWN'S COVE ROAD, SUITE #5
RIDGELAND, SC 29936
PHONE: (843) 645-9277
FAX: (843) 645-9267
WEBSITE: WWW.ATLASSURVEYING.COM



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Ward Edwards
ENGINEERING

49 BROWN'S COVE ROAD, SUITE #5
RIDGELAND, SOUTH CAROLINA 29936
P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910
PH: (843) 837-5555 FAX: (843) 837-2536
WWW.WARDEDWARDS.COM

BUCK ISLAND - SIMMONSVILLE NEIGHBORHOOD SIDEWALKS, PHASE 5
BEAUFORT COUNTY, SOUTH CAROLINA

TOWN OF BLUFFTON
BLUFFTON, SOUTH CAROLINA

EXISTING CONDITIONS PLAN

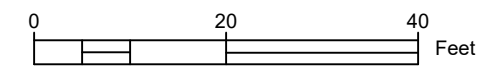
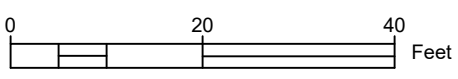
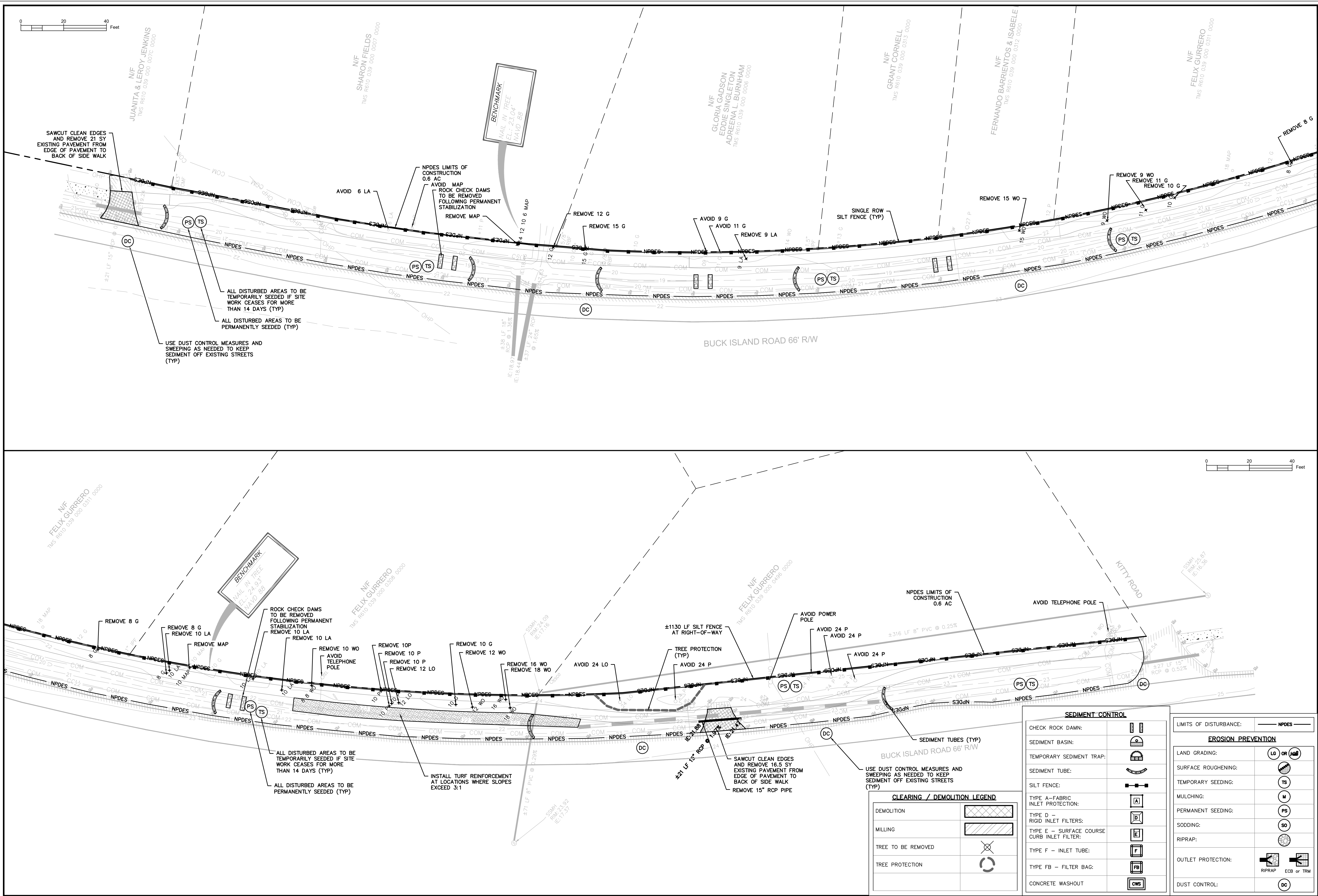
VERTICAL DATUM:
NAVD88

NOT FOR CONSTRUCTION
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PROJECT #: 150610
DATE: 11/26/19
DESIGNED BY: WGP
CHECKED BY: HED
SCALE: 1"=20'

SHEET
C101

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SAWCUT CLEAN EDGES AND REMOVE 21 SY EXISTING PAVEMENT FROM EDGE OF PAVEMENT TO BACK OF SIDE WALK

ALL DISTURBED AREAS TO BE TEMPORARILY SEEDED IF SITE WORK CEASES FOR MORE THAN 14 DAYS (TYP)

ALL DISTURBED AREAS TO BE PERMANENTLY SEEDED (TYP)

USE DUST CONTROL MEASURES AND SWEEPING AS NEEDED TO KEEP SEDIMENT OFF EXISTING STREETS (TYP)

ALL DISTURBED AREAS TO BE TEMPORARILY SEEDED IF SITE WORK CEASES FOR MORE THAN 14 DAYS (TYP)

INSTALL TURF REINFORCEMENT AT LOCATIONS WHERE SLOPES EXCEED 3:1

CLEARING / DEMOLITION LEGEND

DEMOLITION	
MILLING	
TREE TO BE REMOVED	
TREE PROTECTION	

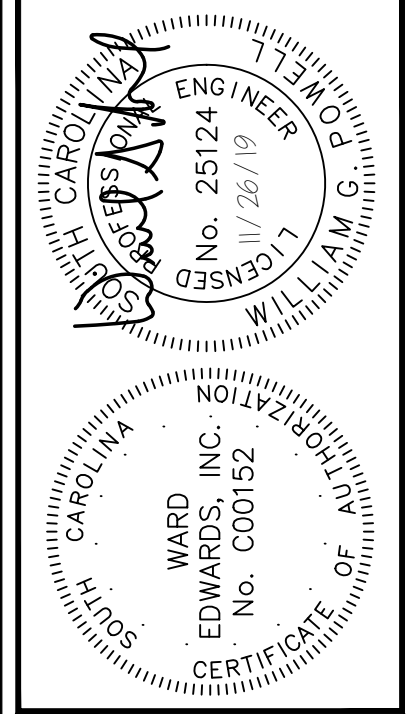
SEDIMENT CONTROL

CHECK ROCK DAM:	
SEDIMENT BASIN:	
TEMPORARY SEDIMENT TRAP:	
SEDIMENT TUBE:	
SILT FENCE:	
TYPE A - FABRIC INLET PROTECTION:	
TYPE D - RIGID INLET FILTERS:	
TYPE E - SURFACE COURSE CURB INLET FILTER:	
TYPE F - INLET TUBE:	
TYPE FB - FILTER BAG:	
CONCRETE WASHOUT	

LIMITS OF DISTURBANCE: NPDES

EROSION PREVENTION

LAND GRADING:	
SURFACE ROUGHENING:	
TEMPORARY SEEDING:	
MULCHING:	
PERMANENT SEEDING:	
SODDING:	
RIPRAP:	
OUTLET PROTECTION:	
DUST CONTROL:	



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BUCK ISLAND - SIMMONSVILLE NEIGHBORHOOD SIDEWALKS, PHASE 5
 BEAUFORT COUNTY, SOUTH CAROLINA

**TOWN OF BLUFFTON
 BLUFFTON, SOUTH CAROLINA**

**CLEARING, DEMOLITION
 & EROSION CONTROL PLAN**

VERTICAL DATUM:
NAVD88

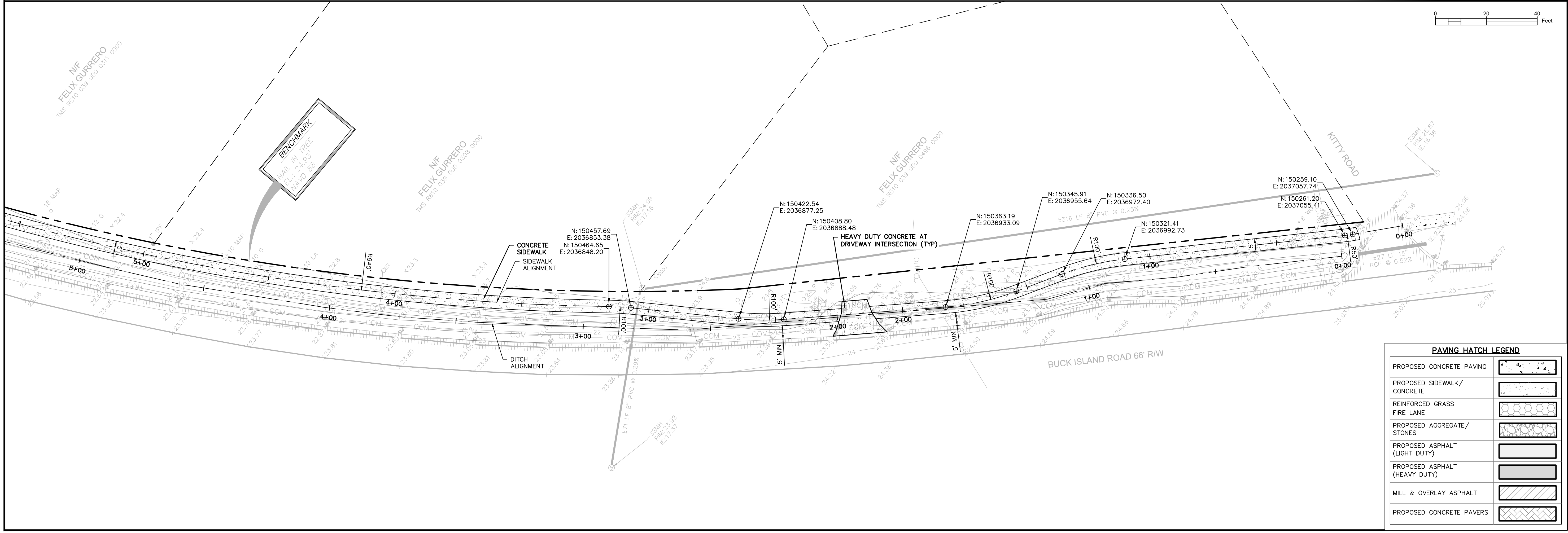
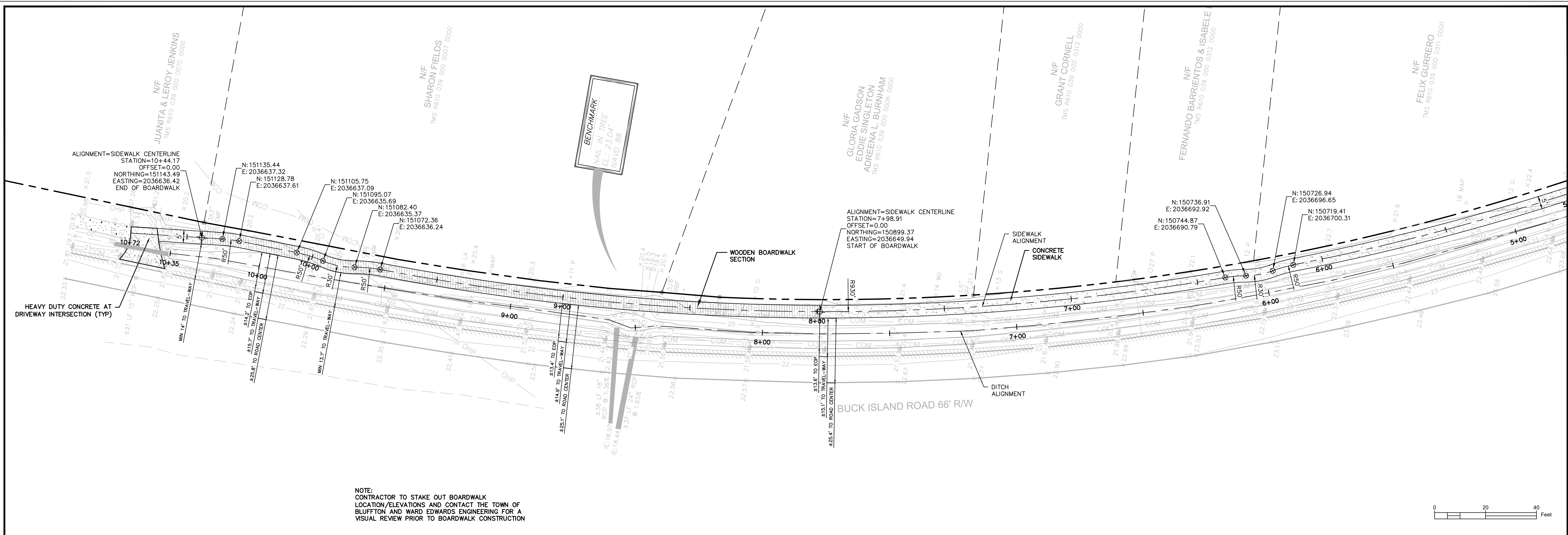
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**SHEET
 C201**

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Professional Engineer Seal for Felix Gurrero, License No. 25124, State of North Carolina. Also includes a seal for Ward Edwards, Inc. License No. 000152, State of North Carolina.

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BUCK ISLAND - SIMMONSVILLE NEIGHBORHOOD SIDEWALKS, PHASE 5
BEAUFORT COUNTY, SOUTH CAROLINA
TOWN OF BLUFTON
BLUFTON, SOUTH CAROLINA
SITE LAYOUT, PAVING & STRIPING PLAN

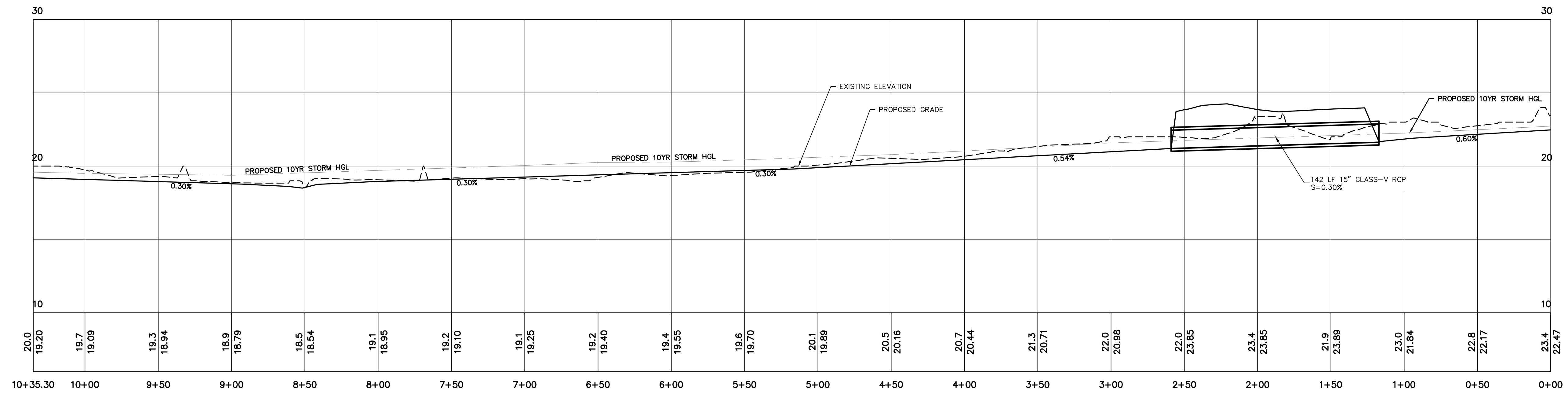
VERTICAL DATUM:
NAVD88

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 RELEASED FOR CONSTRUCTION

PROJECT #: 150610
DATE: 11/26/19
DESIGNED BY: WGP
CHECKED BY: HED
SCALE: 1"=20'

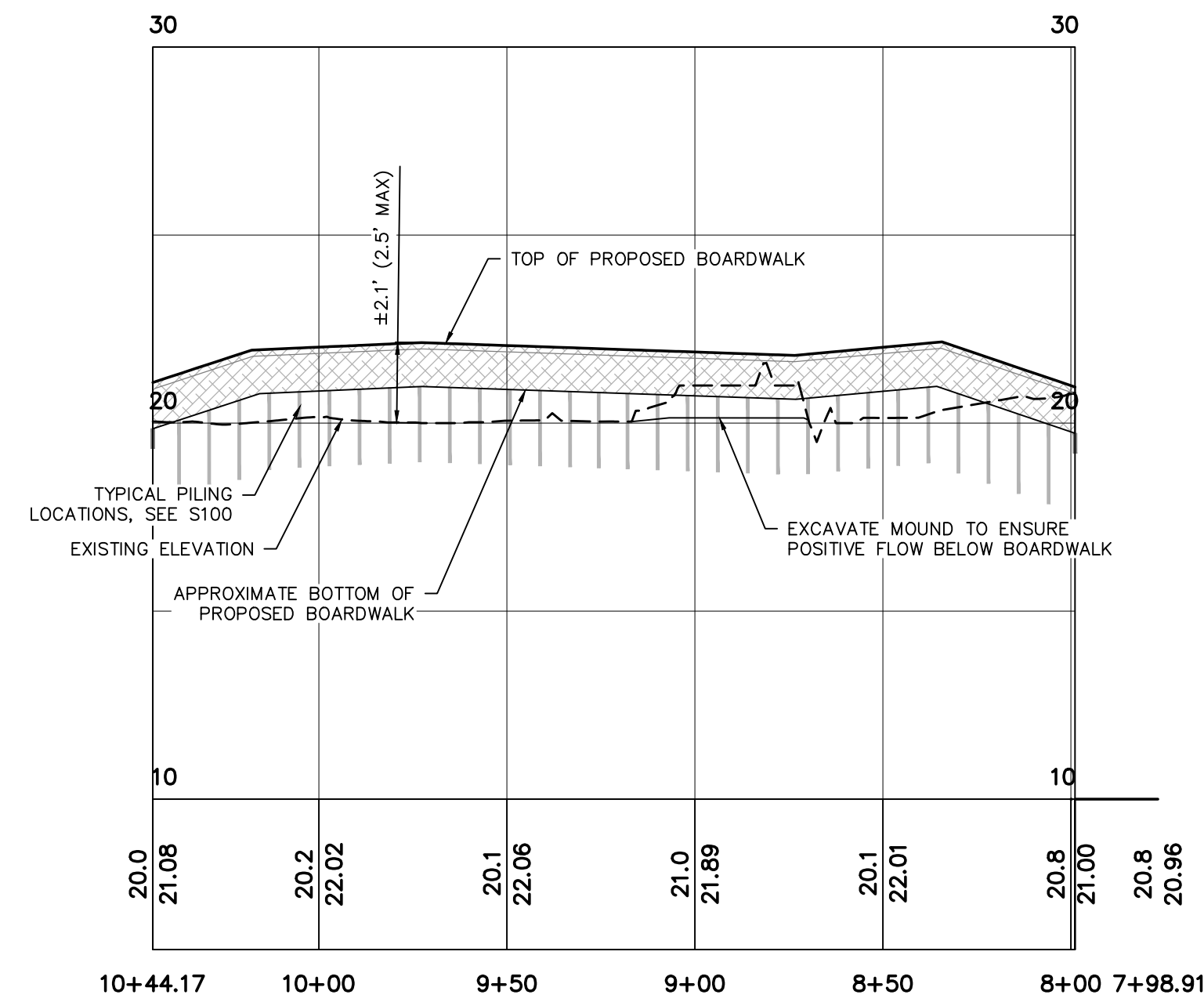
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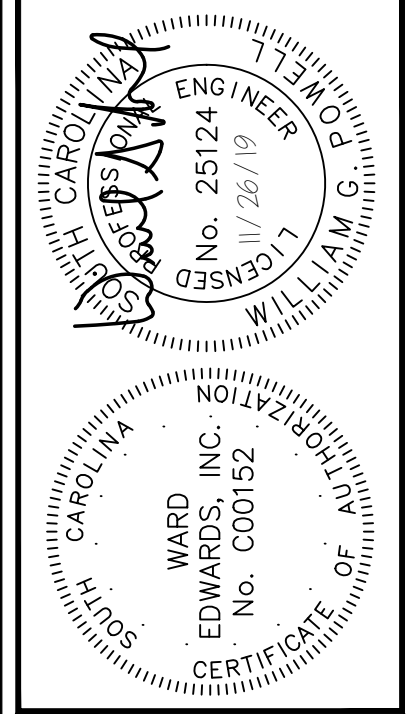
DITCH PROFILE

SCALE: 1" = 40' HORIZ
1" = 4' VERT



BOARDWALK PROFILE

SCALE: 1" = 40' HORIZ
1" = 4' VERT



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BUCK ISLAND - SIMMONSVILLE NEIGHBORHOOD SIDEWALKS, PHASE 5
BEAUFORT COUNTY, SOUTH CAROLINA
TOWN OF BLUFFTON
BLUFFTON, SOUTH CAROLINA
DITCH PROFILE

VERTICAL DATUM:
NAVD88

NOT FOR CONSTRUCTION
 RELEASED FOR CONSTRUCTION

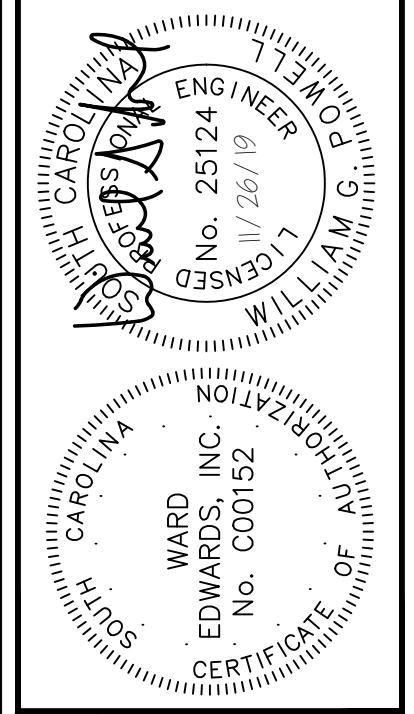
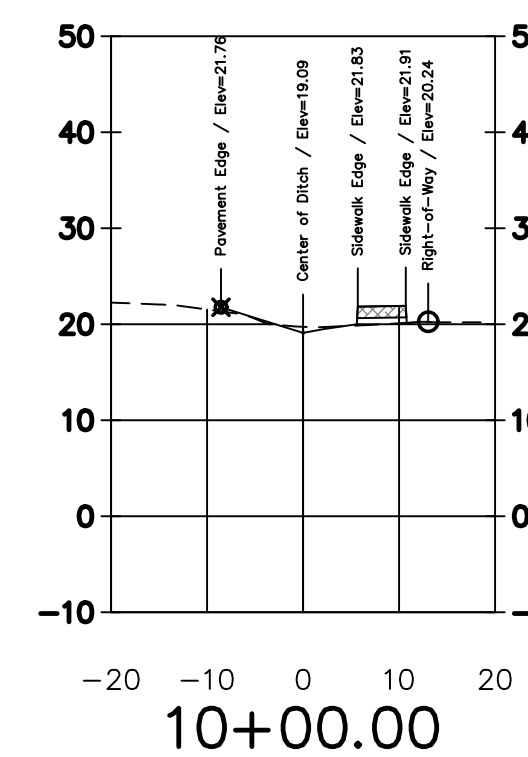
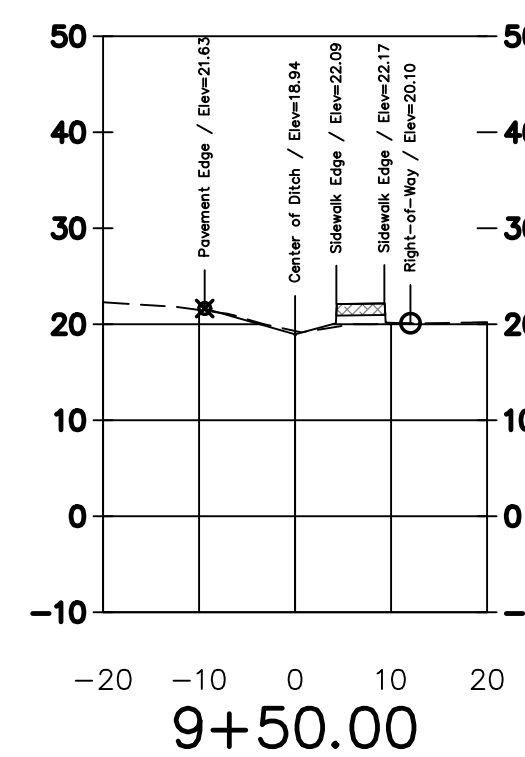
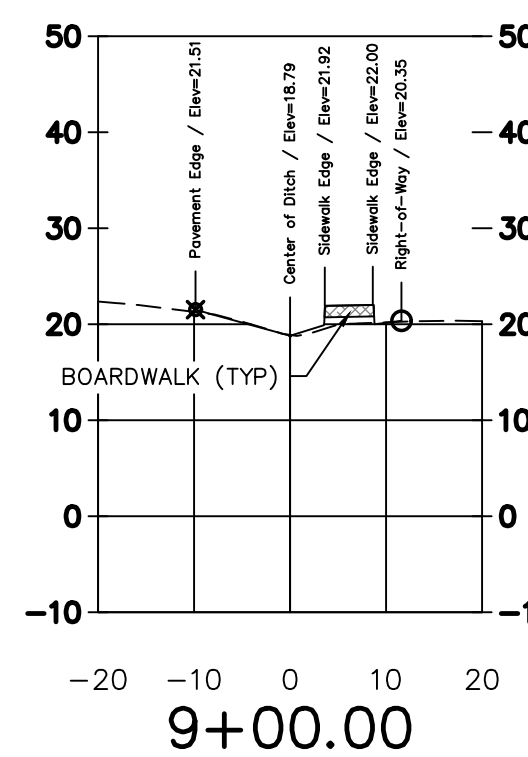
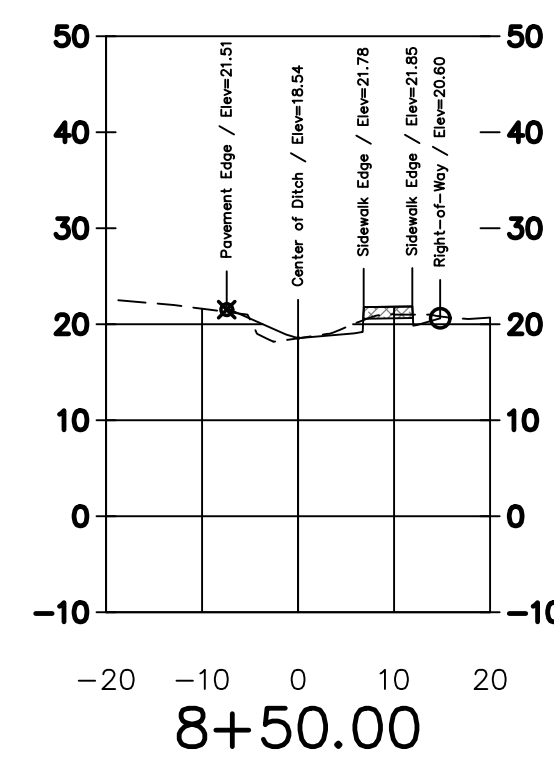
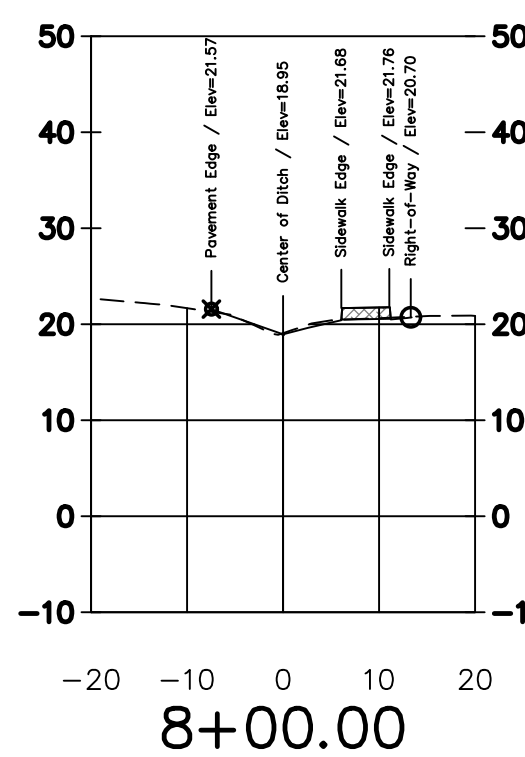
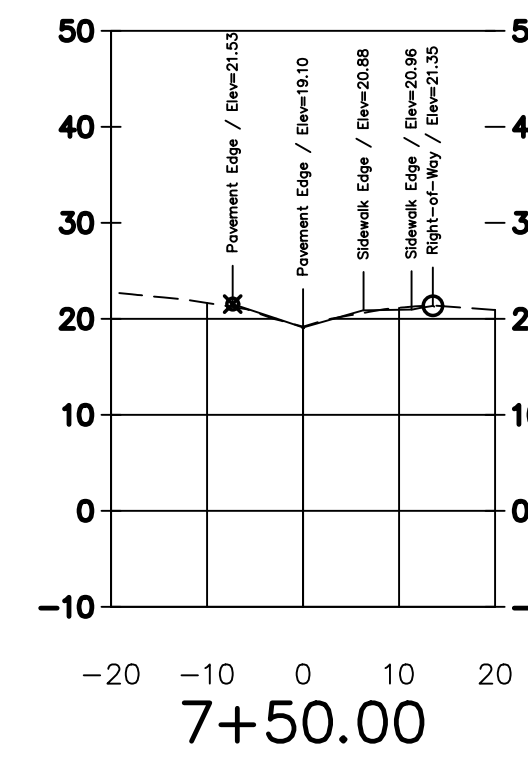
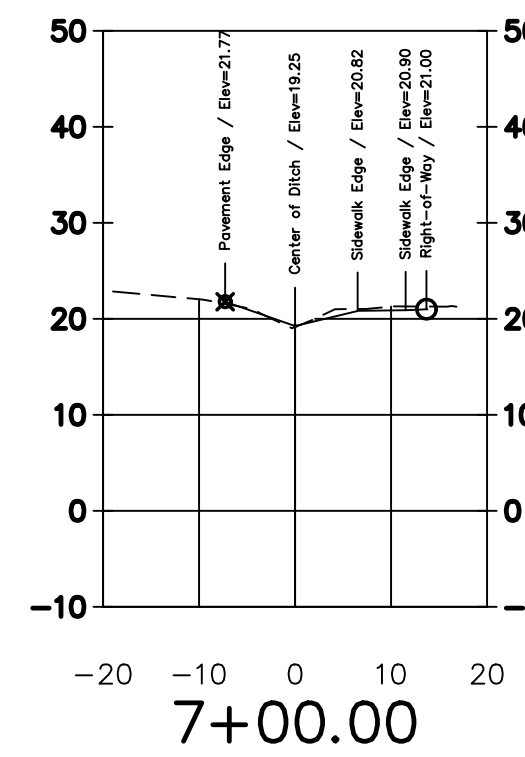
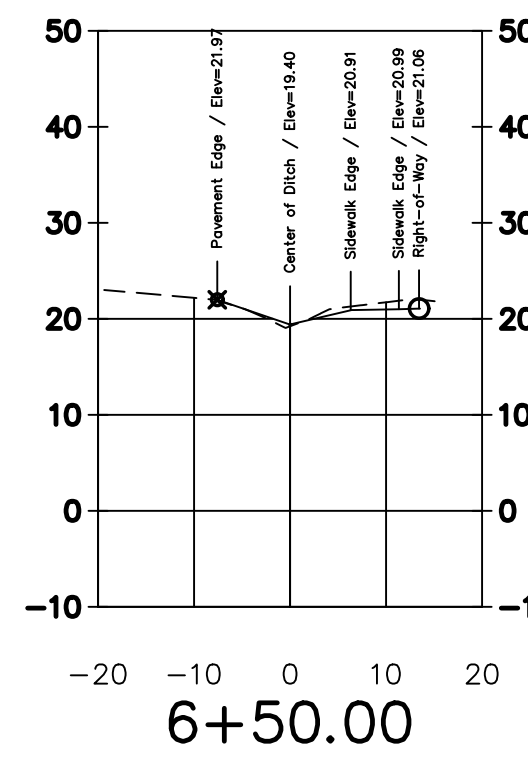
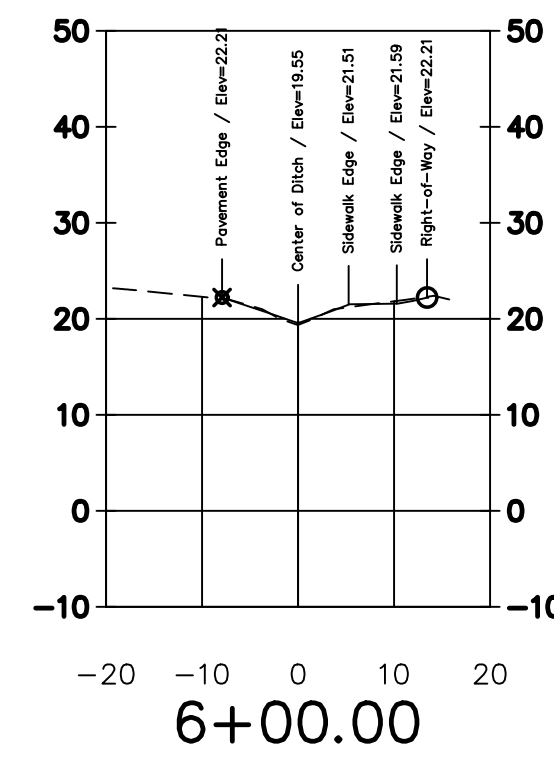
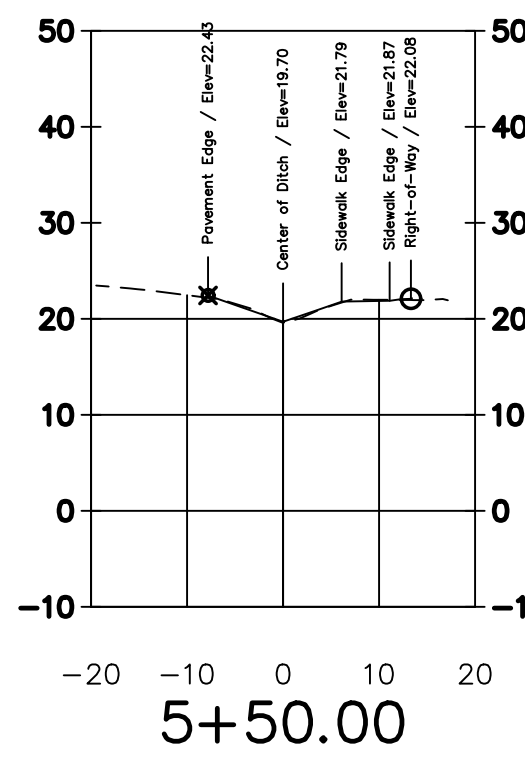
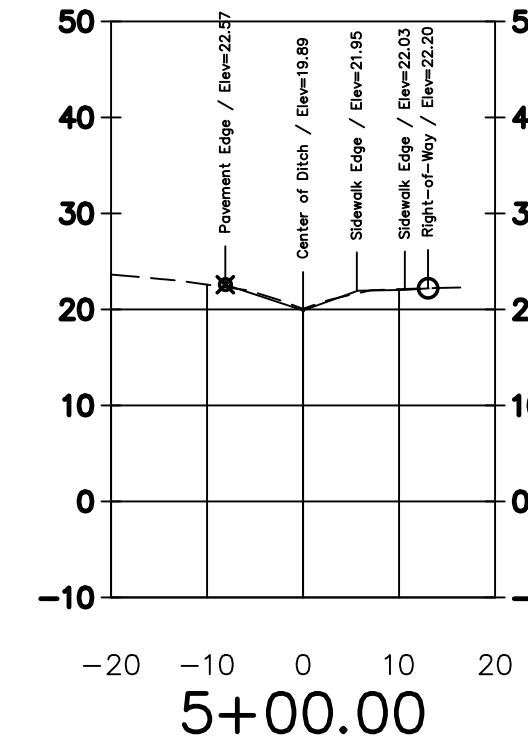
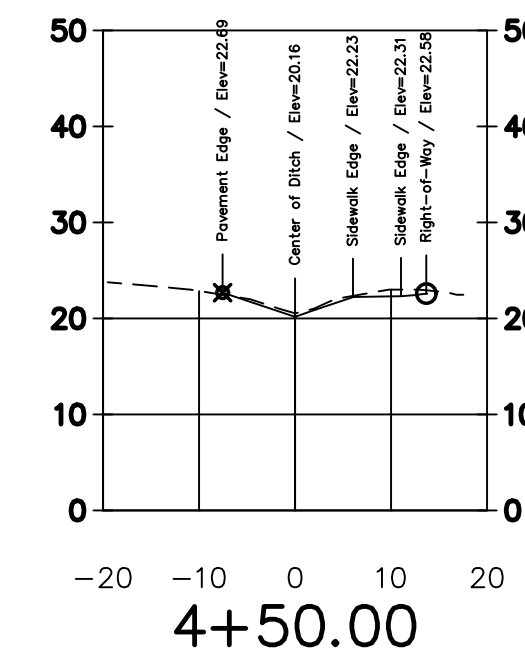
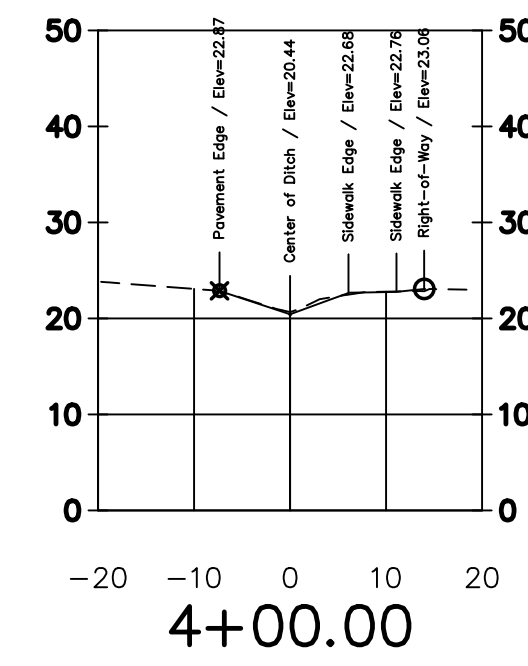
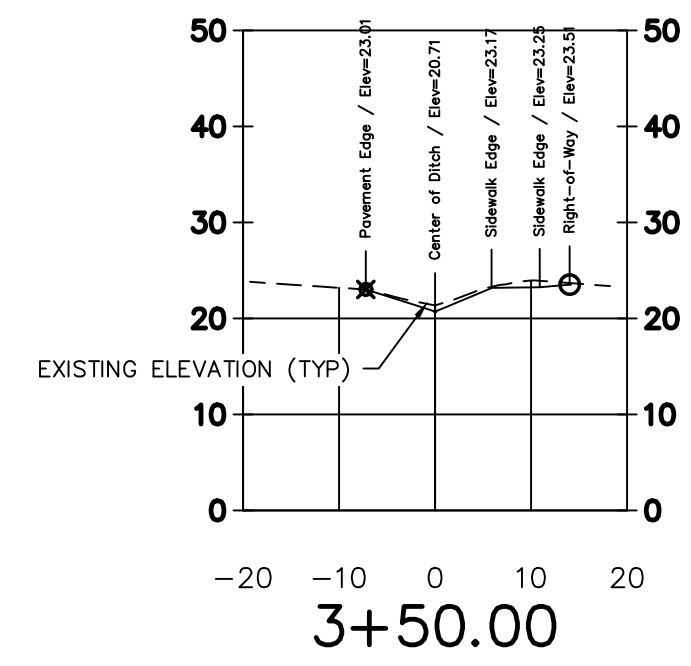
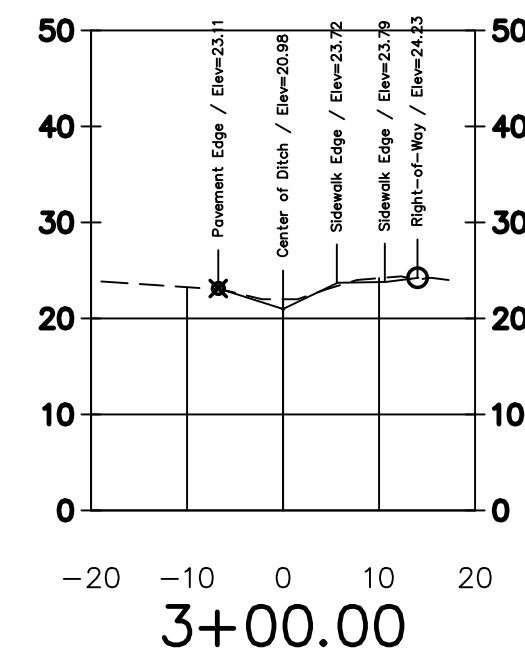
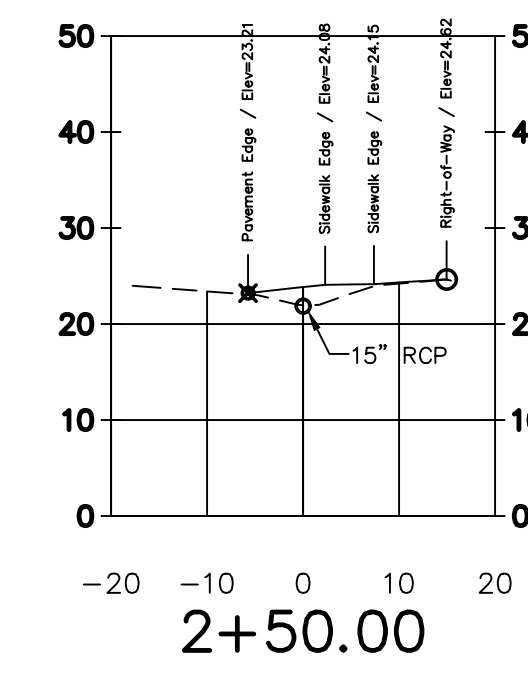
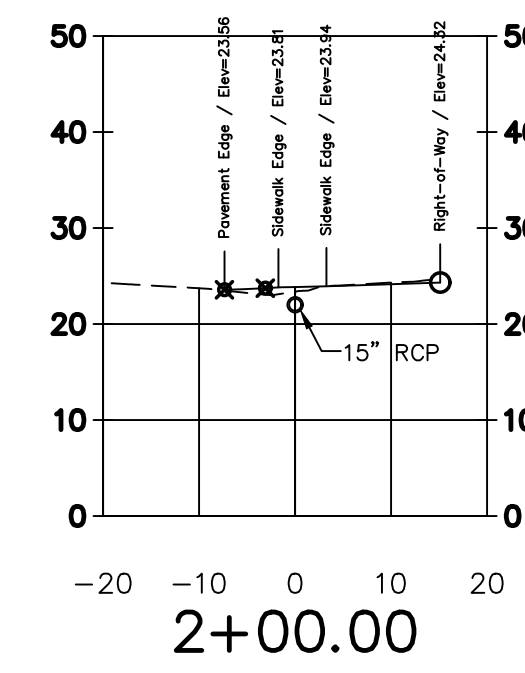
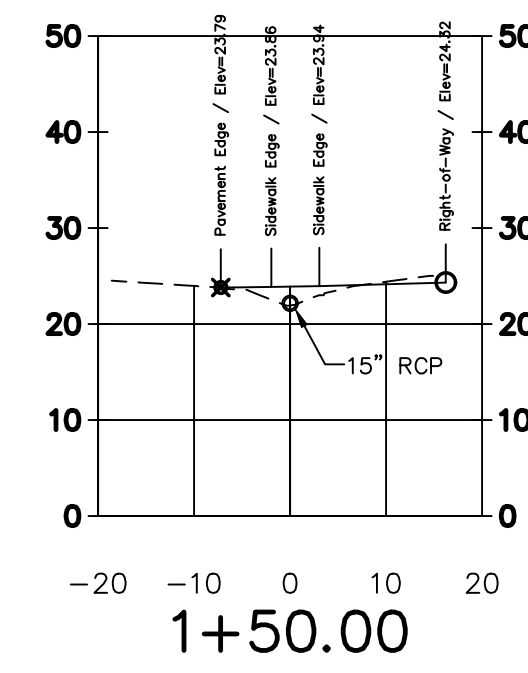
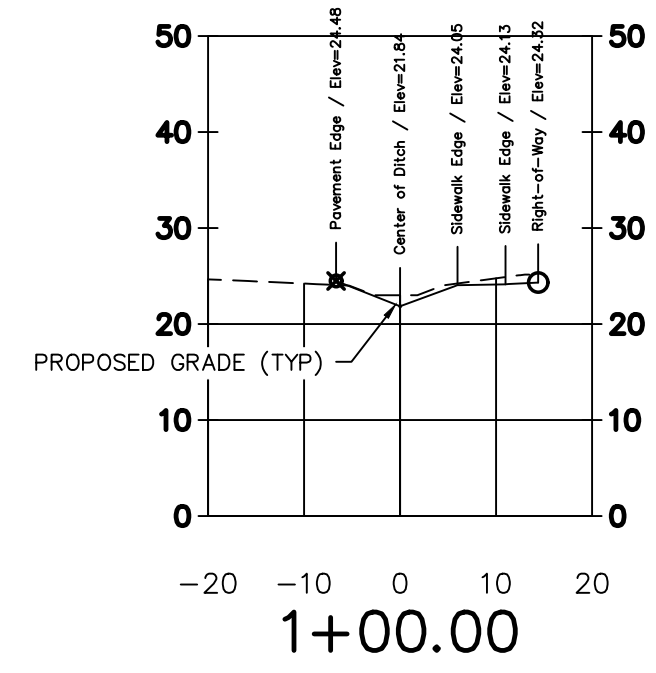
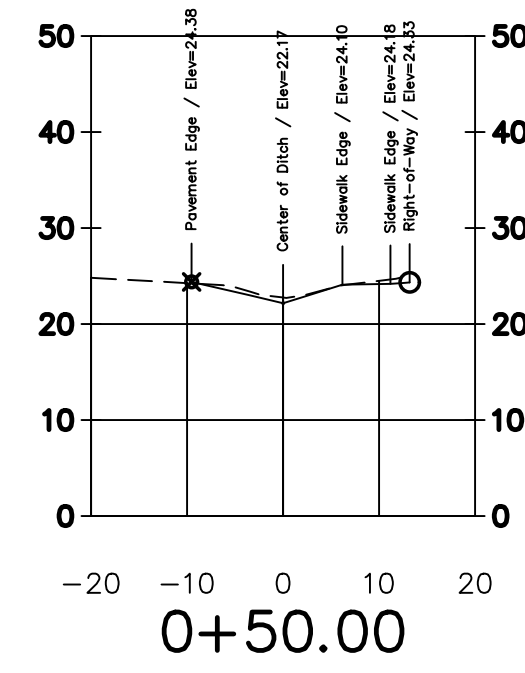
PROJECT #: 150610
DATE: 11/26/19
DESIGNED BY: WGP
CHECKED BY: HED
SCALE: AS NOTED

SHEET C401

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DITCH CROSS SECTIONS

SCALE: 1" = 20' HORIZ
1" = 20' VERT



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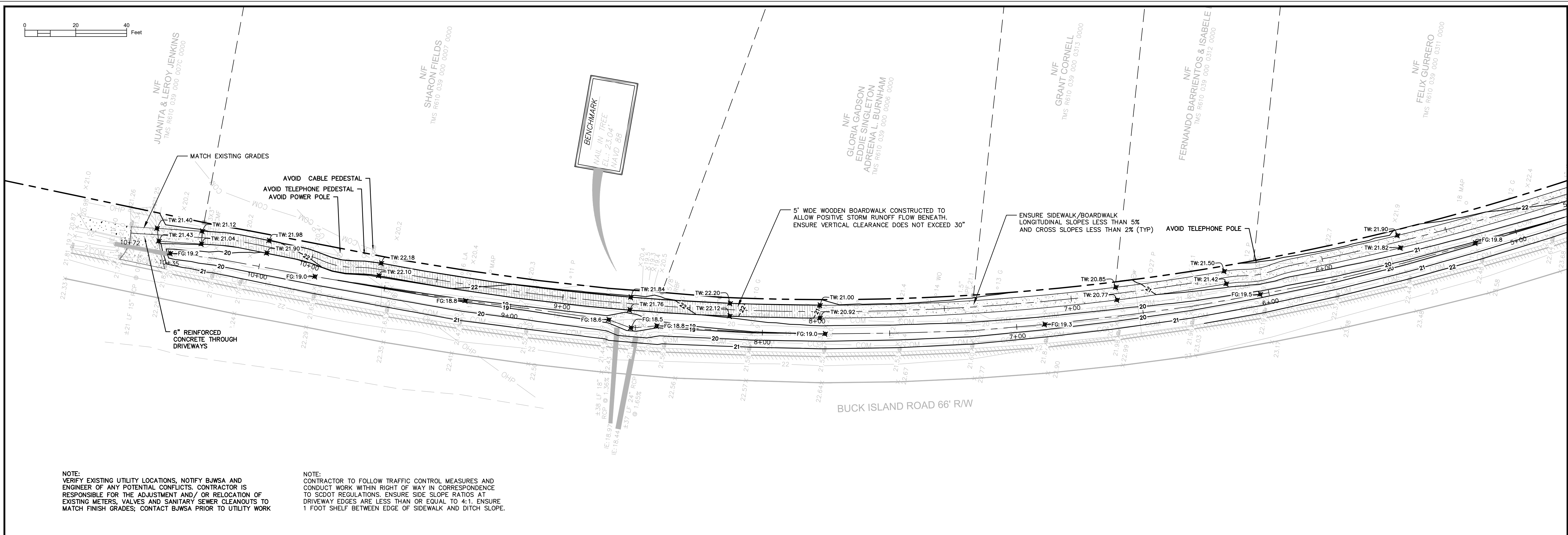
Ward Edwards
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P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910
PH (803) 837-5355 FAX (843) 837-2536
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BUCK ISLAND - SIMMONSVILLE NEIGHBORHOOD SIDEWALKS, PHASE 5
BEAUFORT COUNTY, SOUTH CAROLINA
TOWN OF BLUFFTON
BLUFFTON, SOUTH CAROLINA
DITCH CROSS SECTIONS

VERTICAL DATUM:
NAVD88
 NOT FOR CONSTRUCTION
 RELEASED FOR CONSTRUCTION
PROJECT #: 150610
DATE: 11/26/19
DESIGNED BY: WGP
CHECKED BY: HED
SCALE: AS NOTED

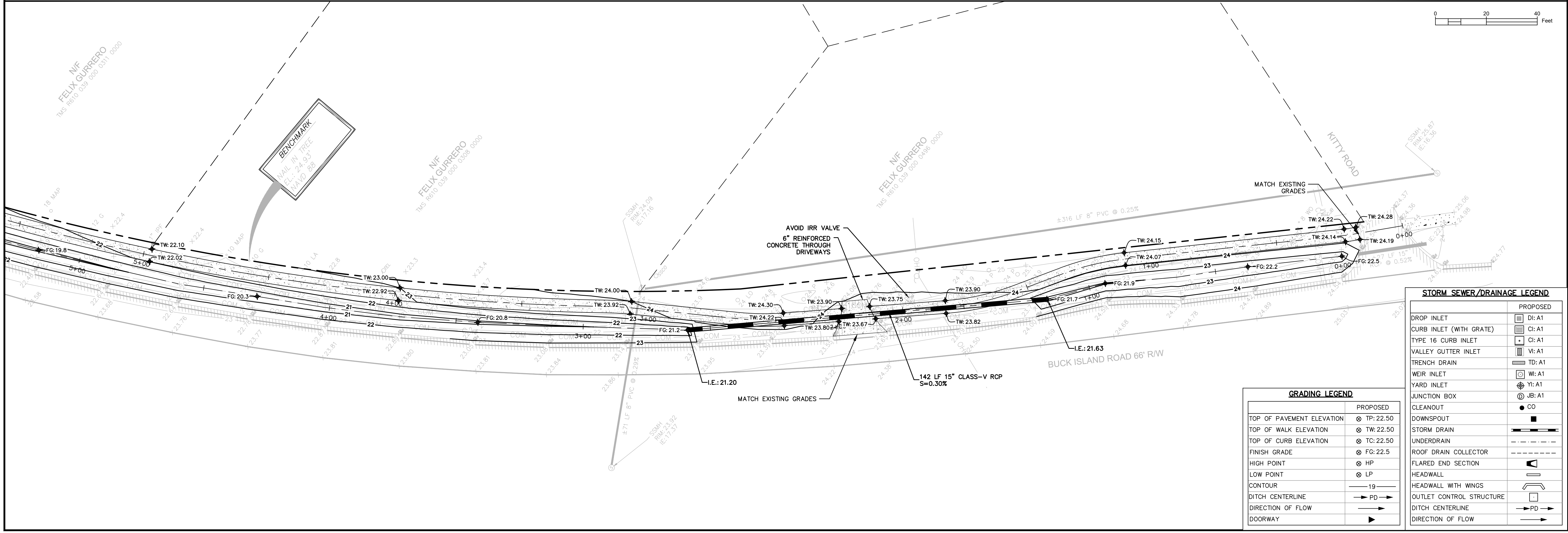
SHEET
C402

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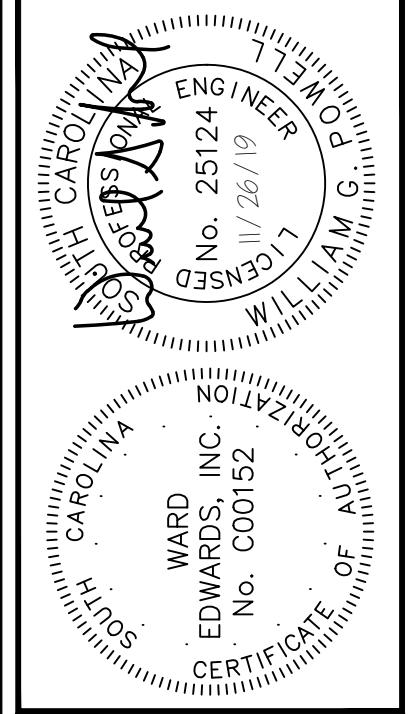
NOTE:
VERIFY EXISTING UTILITY LOCATIONS, NOTIFY BJWSA AND ENGINEER OF ANY POTENTIAL CONFLICTS. CONTRACTOR IS RESPONSIBLE FOR THE ADJUSTMENT AND/OR RELOCATION OF EXISTING METERS, VALVES AND SANITARY SEWER CLEANOUTS TO MATCH FINISH GRADES; CONTACT BJWSA PRIOR TO UTILITY WORK

NOTE:
CONTRACTOR TO FOLLOW TRAFFIC CONTROL MEASURES AND CONDUCT WORK WITHIN RIGHT OF WAY IN CORRESPONDENCE TO SCDOT REGULATIONS. ENSURE SIDE SLOPE RATIOS AT DRIVEWAY EDGES ARE LESS THAN OR EQUAL TO 4:1. ENSURE 1 FOOT SHELF BETWEEN EDGE OF SIDEWALK AND DITCH SLOPE.



GRADING LEGEND	
TOP OF PAVEMENT ELEVATION	PROPOSED TP: 22.50
TOP OF WALK ELEVATION	PROPOSED TW: 22.50
TOP OF CURB ELEVATION	PROPOSED TC: 22.50
FINISH GRADE	PROPOSED FG: 22.5
HIGH POINT	HP
LOW POINT	LP
CONTOUR	19
DITCH CENTERLINE	PD
DIRECTION OF FLOW	PD
DOORWAY	▶

STORM SEWER/DRAINAGE LEGEND	
DROP INLET	DI: A1
CURB INLET (WITH GRATE)	CI: A1
TYPE 16 CURB INLET	CI: A1
VALLEY GUTTER INLET	VI: A1
TRENCH DRAIN	TD: A1
WEIR INLET	WI: A1
YARD INLET	YI: A1
JUNCTION BOX	JB: A1
CLEANOUT	CO
DOWNSPOUT	TP: 22.50
STORM DRAIN	---
UNDERDRAIN	---
ROOF DRAIN COLLECTOR	---
FLARED END SECTION	---
HEADWALL	---
HEADWALL WITH WINGS	---
OUTLET CONTROL STRUCTURE	---
DITCH CENTERLINE	PD
DIRECTION OF FLOW	---



PLAN REVISIONS	
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 P.O. BOX 381, BLUFFTON, SOUTH CAROLINA 29910
 PH: (803) 837-5555 FAX: (843) 837-2536
 WWW.WARDEDWARDS.COM

BUCK ISLAND - SIMMONSVILLE NEIGHBORHOOD SIDEWALKS, PHASE 5
 BEAUFORT COUNTY, SOUTH CAROLINA
TOWN OF BLUFFTON
BLUFFTON, SOUTH CAROLINA
GRADING & DRAINAGE PLAN

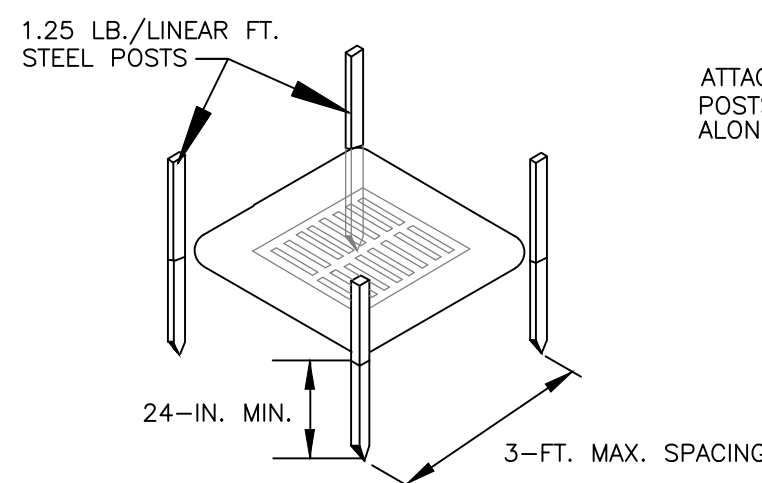
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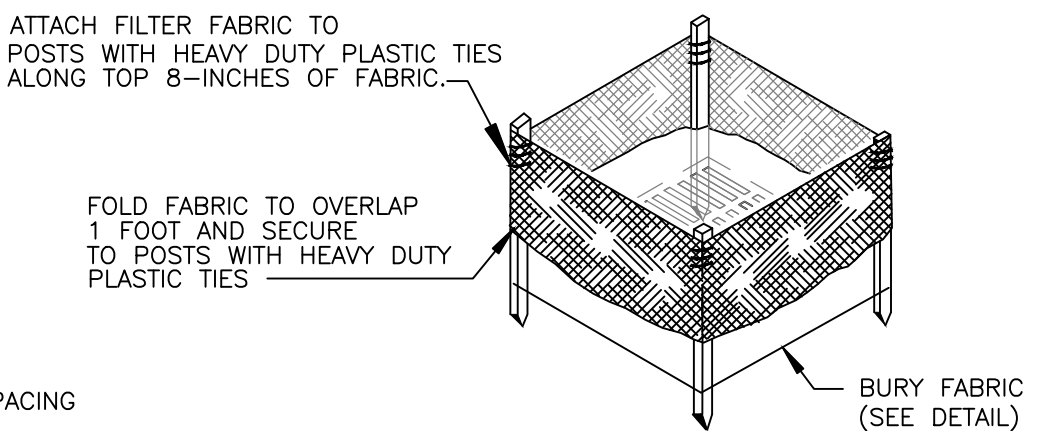
PROJECT #: 150610
 DATE: 11/26/19
 DESIGNED BY: WGP
 CHECKED BY: HED
 SCALE: 1"=20'

SHEET C501

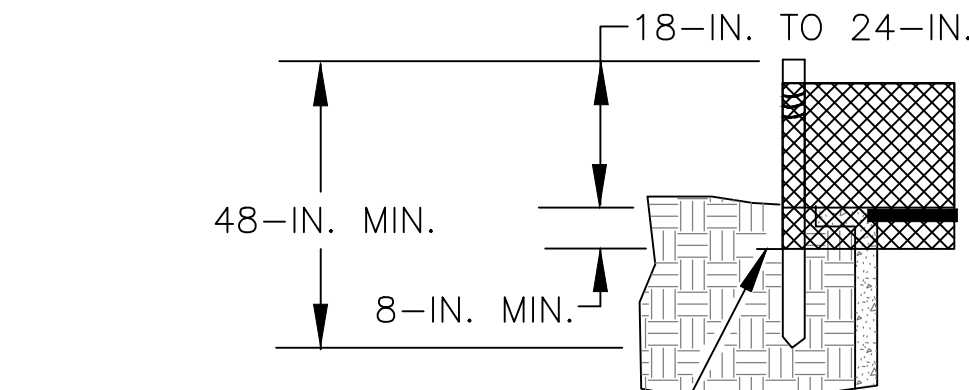
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POST INSTALLATION DETAIL



FILTER FABRIC INSTALLATION DETAIL



BURY & TRENCH MINIMUM OF 12-INCHES OF FILTER FABRIC
FILTER FABRIC BURIAL DETAIL

South Carolina Department of Health and Environmental Control
Type A
FILTER FABRIC INLET PROTECTION
STANDARD DRAWING NO. SC-07 PAGE 1 of 2
FEBRUARY 2014
NOT TO SCALE DATE

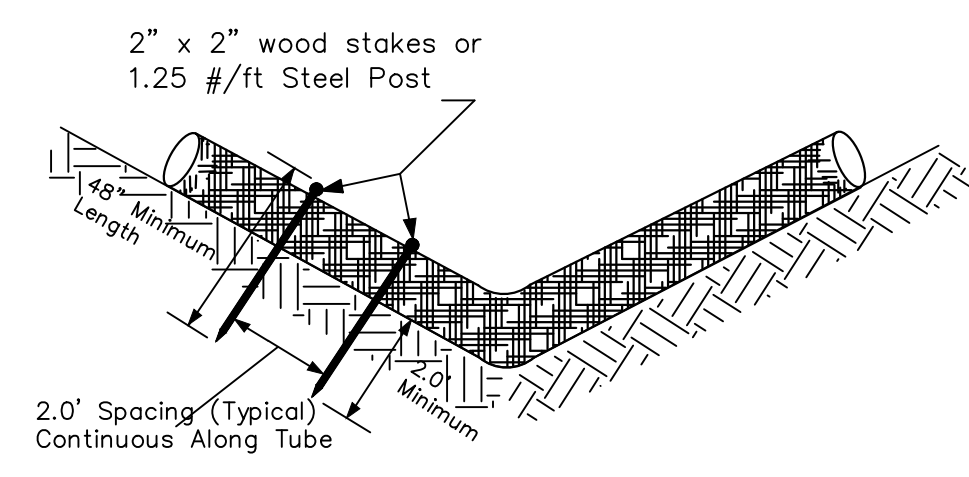
- TYPE A - FILTER FABRIC REQUIREMENTS**
- Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
 - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polypropylenes, polyesters, or polyamides that are formed 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 any defects or flaws that significantly affect its physical and/or filtering properties; and;
 - Have a minimum width of 36-inches.
 - Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
 - 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
 - Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
 - Filter Fabric shall be installed at a minimum of 24-inches above the ground.

- TYPE A - POST REQUIREMENTS**
- Silt Fence posts must be 48-inch long steel posts that meet, at a minimum, the following physical characteristics:
 - Composed of a high strength steel with a minimum yield strength of 50,000 psi.
 - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches.
 - Weight 1.25 pounds per foot (± 8%)
 - Posts shall be equipped with projections to aid in fastening of filter fabric.
 - Install posts to a minimum of 24-inches. A minimum height of 1- to 2-inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
 - Post spacing shall be at a maximum of 3-feet on center.

- TYPE A - INSPECTION & MAINTENANCE**
- The key to functional inlet protection is weekly inspections, routine maintenance, and regular sediment removal.
 - Regular inspections of inlet protection shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall event that produces 1/2-inch or more of precipitation.
 - Attention to sediment accumulations along the filter fabric is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
 - Remove accumulated sediment when it reaches 1/3 the height of the filter fabric. When a sump is installed in front of the fabric, sediment should be removed when it fills approximately 1/3 the depth of the sump.
 - Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
 - Check for areas where stormwater runoff has eroded a channel beneath the filter fabric, or where the fabric has sagged or collapsed due to runoff overtopping the inlet protection.
 - Check for tears within the filter fabric, areas where fabric has begun to decompose, and for any other circumstance that may render the inlet protection ineffective. Removed damaged fabric and reinstall new filter fabric immediately.
 - Inlet protection structures should be removed after all the disturbed areas are permanently stabilized. Remove all construction material and sediment, and dispose of them properly. Grade the disturbed area to the elevation of the drop inlet structure crest. Stabilize all bare areas immediately.

South Carolina Department of Health and Environmental Control
Type A
FILTER FABRIC INLET PROTECTION
STANDARD DRAWING NO. SC-07 PAGE 2 of 2
FEBRUARY 2014
GENERAL NOTES DATE

SEDIMENT TUBE INSTALLATION



SEDIMENT TUBE SPACING

SLOPE	MAX. SEDIMENT TUBE SPACING
LESS THAN 2%	150-FEET
2%	100-FEET
3%	75-FEET
4%	50-FEET
5%	40-FEET
6%	30-FEET
GREATER THAN 6%	25-FEET

South Carolina Department of Health and Environmental Control
SEDIMENT TUBES
STANDARD DRAWING NO. SC-05 PAGE 1 of 2
FEBRUARY 2014
NOT TO SCALE DATE

- SEDIMENT TUBES - GENERAL NOTES**
- Sediment tubes may be installed along contours, in drainage conveyance channels, and around inlets to help prevent off-site discharge of sediment-laden stormwater runoff.
 - Sediment tubes are elongated tubes of compacted geotextiles, curled excelsior wood, natural coconut fiber, or hardwood mulch. Straw, pine needle, and leaf mulch-filled sediment tubes are not permitted.
 - The outer netting of the sediment tube should consist of seamless, high-density polyethylene photodegradable materials treated with ultraviolet stabilizers or a seamless, high-density polyethylene non-degradable material.
 - Sediment tubes, when used as checks within channels, should range between 18-inches and 24-inches depending on channel dimensions. Diameters outside this range may be allowed where necessary when approved.
 - Curled excelsior wood, or natural coconut products that are rolled up to create a sediment tube are not allowed.
 - Sediment tubes should be staked using wooden stakes (2-inch X 2-inch) or steel posts (standard "T" or "T" sections with a minimum weight of 1.25 pounds per foot) at a minimum of 48-inches in length placed on 2-foot centers.
 - Install all sediment tubes to ensure that no gaps exist between the soil and the bottom of the tube. Manufacturer's recommendations should always be consulted before installation.
 - The ends of adjacent sediment tubes should be overlapped 6-inches to prevent flow and sediment from passing through the field joint.
 - Sediment tubes should not be stacked on top of one another, unless recommended by manufacturer.
 - Each sediment tube should be installed in a trench with a depth equal to 1/5 the diameter of the sediment tube.
 - Sediment tubes should continue up the side slopes a minimum of 1-foot above the design flow depth of the channel.
 - Install stakes at a diagonal facing incoming runoff.

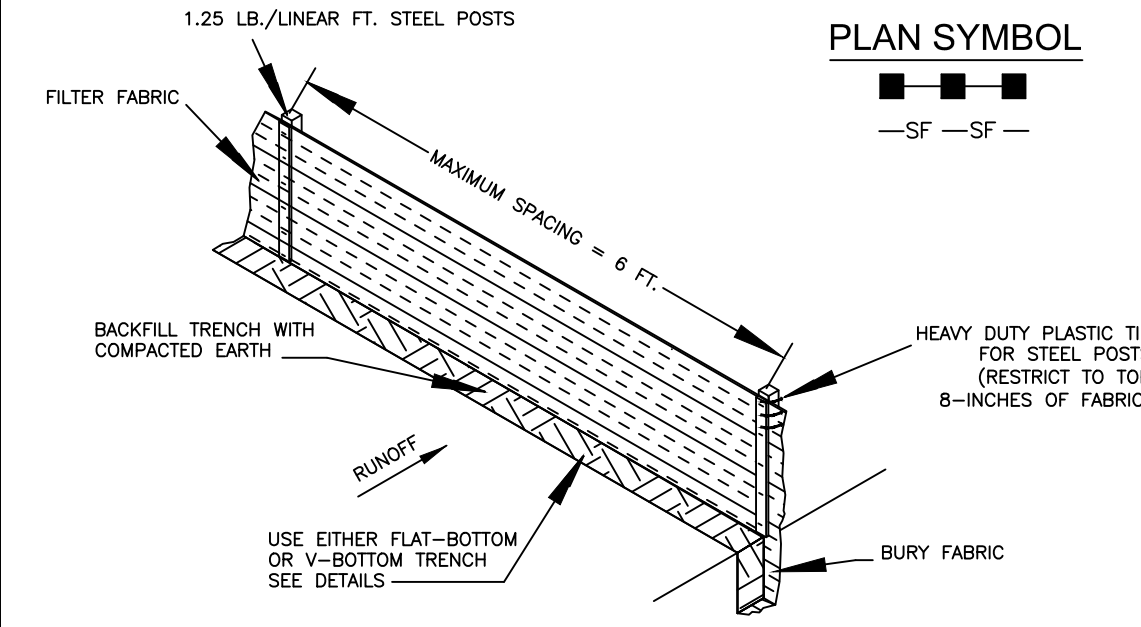
- SEDIMENT TUBES - INSPECTION & MAINTENANCE**
- The key to functional sediment tubes is weekly inspections, routine maintenance, and regular sediment removal.
 - Regular inspections of sediment tubes shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall event that produces 1/2-inch or more of precipitation.
 - Attention to sediment accumulations in front of the sediment tube is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
 - Remove accumulated sediment when it reaches 1/3 the height of the sediment tube.
 - Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
 - Large debris, trash, and leaves should be removed from in front of tubes when found.
 - If erosion causes the edges to fall to a height equal to or below the height of the sediment tube, repairs should be made immediately to prevent runoff from bypassing tube.
 - Sediment tubes should be removed after the contributing drainage area has been completely stabilized. Permanent vegetation should replace areas from which sediment tubes have been removed.

South Carolina Department of Health and Environmental Control
ROCK DITCH CHECK
STANDARD DRAWING NO. SC-04 PAGE 2 of 2
FEBRUARY 2014
GENERAL NOTES DATE

- ROCK DITCH CHECK - GENERAL NOTES**
- Rock Ditch Checks should not be placed in Waters of the State or USGS blue-line streams (unless approved by Federal Authorities).
 - Rock Ditch Checks should be installed in steeply sloped channels where adequate vegetation cannot be established. This BMP measure should only be used in small open channels.
 - A non-woven geotextile fabric shall be installed over the soil surface where the rock ditch check is to be placed.
 - The body of the rock ditch check shall be composed of 12-inch D50 Riprap. The upstream face may be composed of 1-inch D50 washed stone.
 - Rock Ditch Checks should not exceed a height of 2-feet at the centerline of the channel.
 - Rock Ditch Checks should have a minimum top flow length of 2-feet.
 - Riprap should be placed over channel banks to prevent water from cutting around the ditch check.
 - The riprap should be placed by hand or mechanical placement (no dumping of rock to form dam) to achieve complete coverage of the channel. Doing so will also ensure that the center of the check is lower than the edges.
 - The maximum spacing between the dams should be such that the toe of the upstream check is at the same elevation as the top of the downstream check.

South Carolina Department of Health and Environmental Control
ROCK DITCH CHECK
STANDARD DRAWING NO. SC-04 PAGE 2 of 2
FEBRUARY 2014
GENERAL NOTES DATE

SILT FENCE INSTALLATION

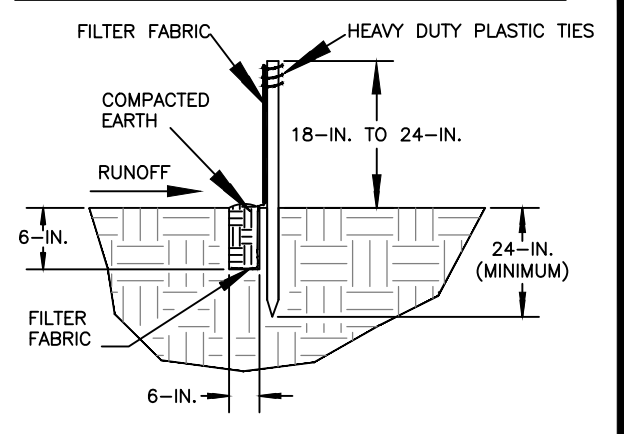


- SILT FENCE - GENERAL NOTES**
- Do not place silt fence across channels or in other areas subject to concentrated flows. Silt fence should not be used as a velocity control BMP. Concentrated flows are any flows greater than 0.5 cfs.
 - Maximum sheet or overlaid flow path length to the silt fence shall be 100-feet.
 - Maximum slope steepness (normal [perpendicular] to the fence line) shall be 2:1.
 - Silt fence joints, when necessary, shall be completed by one of the following options:
 - Wrap each fabric together at a support post with both ends fastened to the post, with a 1-foot minimum overlap;
 - Overlap silt fence by installing 3-feet passed the support post to which the new silt fence roll is attached. Attach old roll to new roll with heavy-duty plastic ties; or,
 - Overlap entire width of each silt fence roll from one support post to the next support post.
 - Attach filter fabric to the steel posts using heavy-duty plastic ties that are evenly spaced within the top 8-inches of the fabric.
 - Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.
 - Install Silt Fence Checks (Tie-Backs) every 50-100 feet, dependent on slope, along silt fence that is installed with slope and where concentrated flows are expected or are documented along the proposed/installed silt fence.

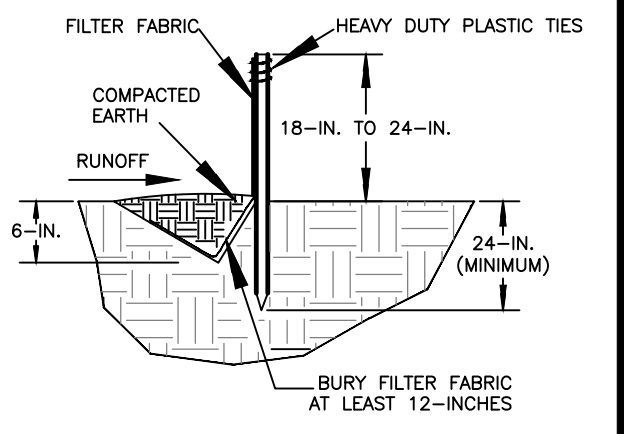
- SILT FENCE - POST REQUIREMENTS**
- Silt Fence posts must be 48-inch long steel posts that meet, at a minimum, the following physical characteristics:
 - Composed of a high strength steel with a minimum yield strength of 50,000 psi.
 - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches.
 - Weight 1.25 pounds per foot (± 8%)
 - Posts shall be equipped with projections to aid in fastening of filter fabric.
 - Steel posts may need to have a metal soil stabilization plate welded near the bottom when installed along steep slopes or installed in loose soils. The plate should have a minimum cross section of 17-square inches and be composed of 15 gauge steel, at a minimum. The metal soil stabilization plate should be completely buried.
 - Install posts to a minimum of 24-inches. A minimum height of 1- to 2-inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
 - Post spacing shall be at a maximum of 6-feet on center.

- SILT FENCE - FABRIC REQUIREMENTS**
- Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
 - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polypropylenes, polyesters, or polyamides that are 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 any defects or flaws that significantly affect its physical and/or filtering properties; and;
 - Have a minimum width of 36-inches.
 - Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
 - 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
 - Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
 - Filter Fabric shall be installed at a minimum of 24-inches above the ground.

FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL

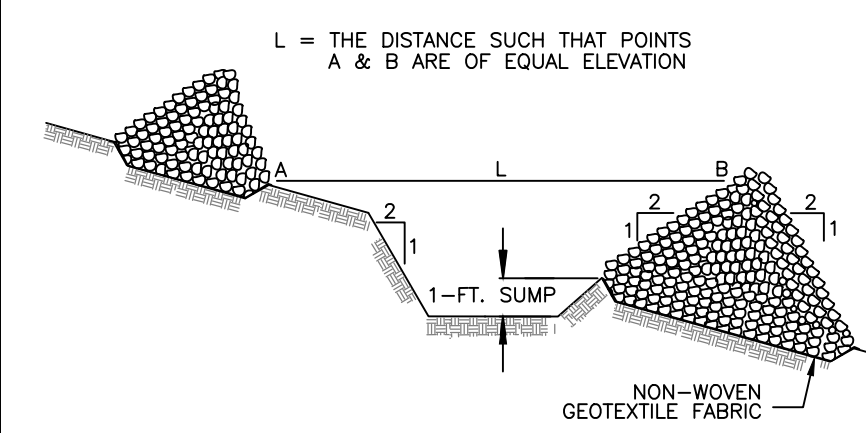


South Carolina Department of Health and Environmental Control
SILT FENCE
STANDARD DRAWING NO. SC-03 Page 1 of 2
FEBRUARY 2014
NOT TO SCALE DATE

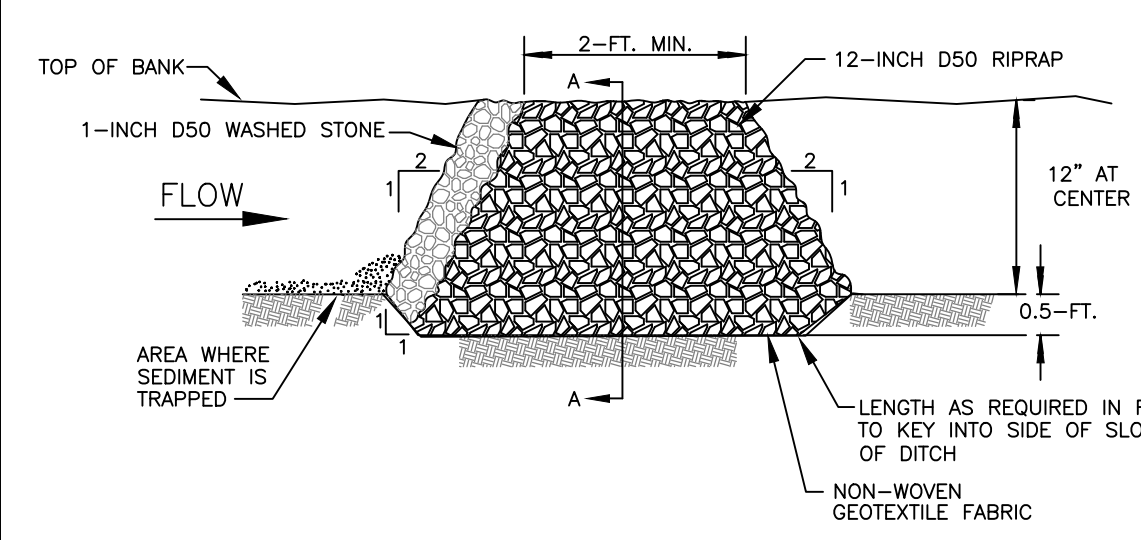
- SILT FENCE - INSPECTION & MAINTENANCE**
- The key to functional silt fence is weekly inspections, routine maintenance, and regular sediment removal.
 - Regular inspections of silt fence shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall event that produces 1/2-inch or more of precipitation.
 - Attention to sediment accumulations along the silt fence is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
 - Remove accumulated sediment when it reaches 1/3 the height of the silt fence.
 - Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
 - Check for areas where stormwater runoff has eroded a channel beneath the silt fence, or where the fence has sagged or collapsed due to runoff overtopping the silt fence. Install checks/tie-backs and/or reinstall silt fence, as necessary.
 - Check for tears within the silt fence, areas where silt fence has begun to decompose, and for any other circumstance that may render the silt fence ineffective. Removed damaged silt fence and reinstall new silt fence immediately.
 - Silt fence should be removed within 30 days after final stabilization is achieved and once it is removed, the resulting disturbed area should be permanently stabilized.

South Carolina Department of Health and Environmental Control
SILT FENCE
STANDARD DRAWING NO. SC-03 PAGE 2 of 2
FEBRUARY 2014
GENERAL NOTES DATE

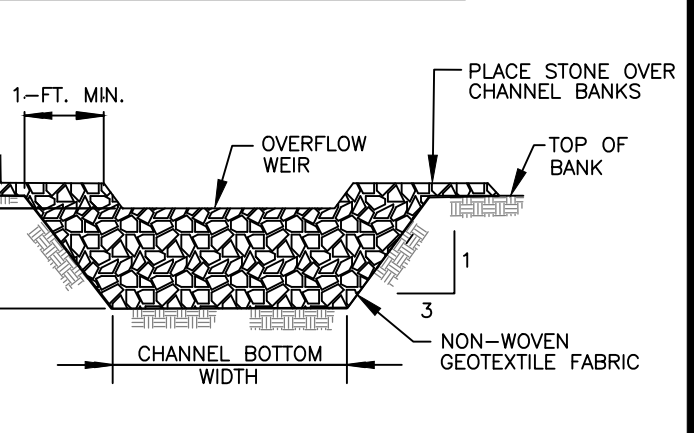
SPACING BETWEEN DITCH CHECK



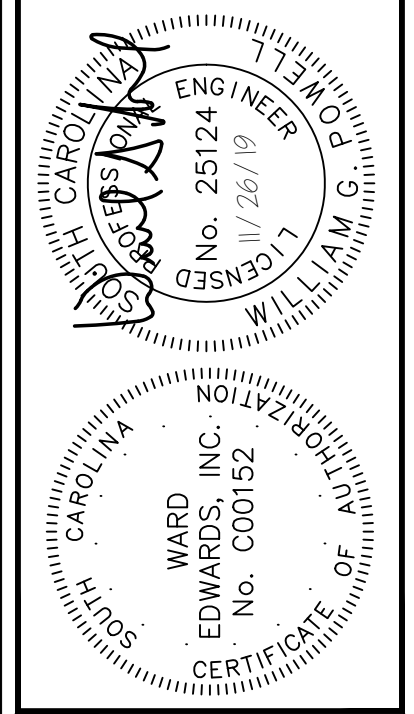
TYPICAL DITCH CHECK SECTION



CROSS SECTION A-A THRU STONE DITCH CHECK



South Carolina Department of Health and Environmental Control
ROCK DITCH CHECK
STANDARD DRAWING NO. SC-04 PAGE 1 of 2
FEBRUARY 2014
NOT TO SCALE DATE



NO.	DESCRIPTION	DATE
7		
6		
5		
4		
3		
2		
1		

Ward Edwards
ENGINEERING
P.O. BOX 381 BLUFFTON SOUTH CAROLINA 29910
PH (843) 837-5555 FAX (843) 837-2536
WWW.WARDEDWARDS.COM

BUCK ISLAND - SIMMONSVILLE NEIGHBORHOOD SIDEWALKS, PHASE 5
BEAUFORT COUNTY, SOUTH CAROLINA
TOWN OF BLUFFTON
BLUFFTON, SOUTH CAROLINA
CONSTRUCTION DETAILS

VERTICAL DATUM:
NAVD88
 NOT FOR CONSTRUCTION
 RELEASED FOR CONSTRUCTION
PROJECT #: 150610
DATE: 11/26/19
DESIGNED BY: WGP
CHECKED BY: HED
SCALE: AS NOTED
SHEET
C601

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WESTERN EXCELSIOR
Slope Installation
Instructions EXCEL PPS-8

Step 1 - Site Preparation
Prepare site to design profile and grade. Remove debris, rocks, clods, etc. Ground surface should be smooth prior to installation to ensure blanket remains in contact with slope.

Step 2 - Seeding
Seeding of site should be conducted to design requirements or to follow local or state seeding requirements as necessary.

Step 3 - Staple Selection
At a minimum, 6 in. long by 1 in. crown, 11 gauge staples are to be used to secure the blanket to the ground surface. Installation in rocky, sandy or other loose soil may require longer staples.

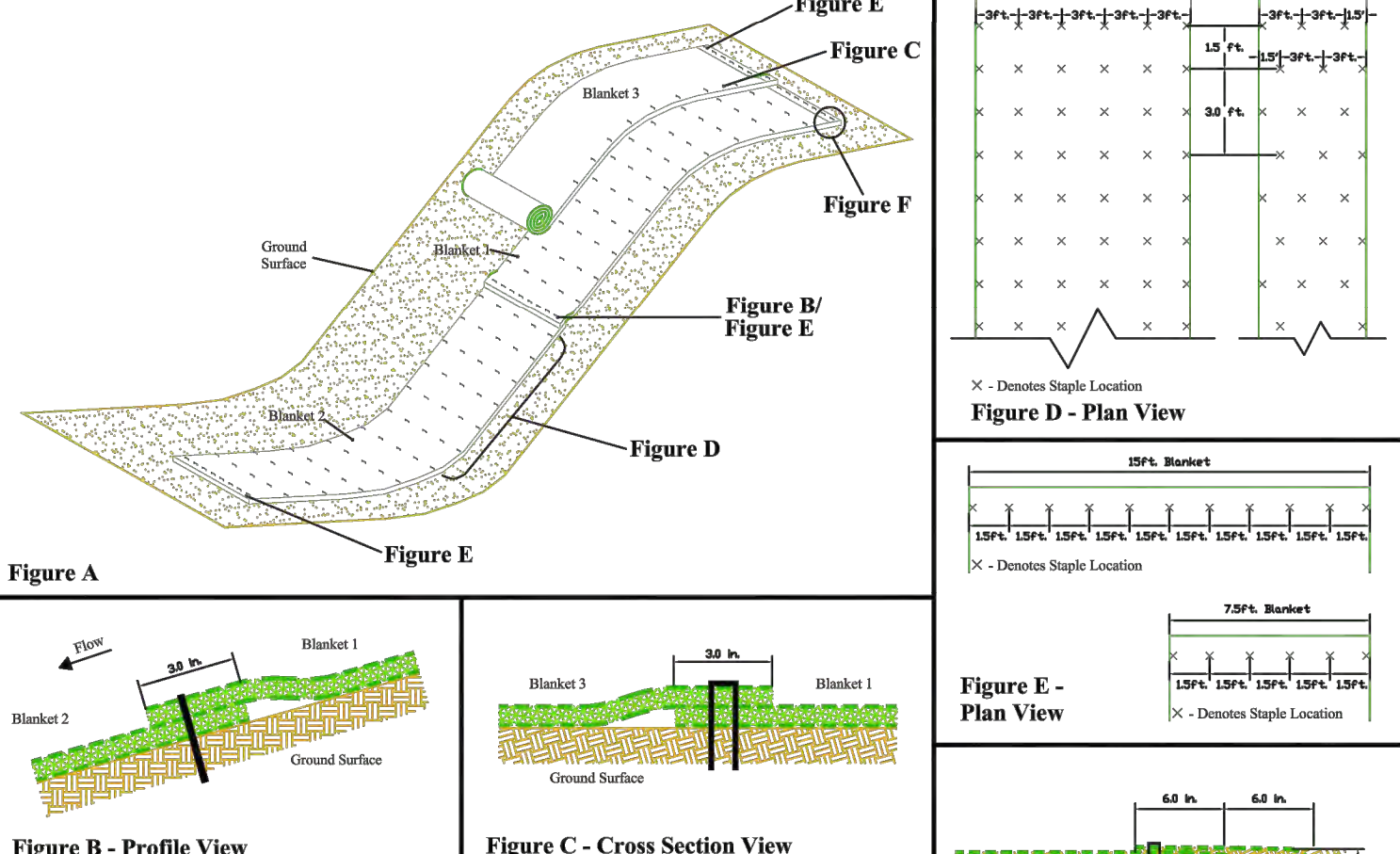
Step 4 - Excavate Anchor Trench and Secure Blanket
Excavate a trench along the top of the slope to secure the upstream end of the blanket. The trench should run along the length of the installation, be 6 in. wide and 6 in. deep. Staple blanket along bottom of trench, fill with compacted soil, overlap blanket towards toe of slope and secure with row of staples (shown in Figures A, E and F).

Step 5 - Secure Body of Blanket
Roll blanket down slope from anchor trench. Staple body of blanket following the pattern shown in Figure D. Leave end of blanket unstapled to allow for overlap shown in Figure B. Place downstream blanket underneath upstream blanket to form shingle pattern. Staple seam as shown in Figure E. Secure downstream blanket with stapling pattern shown in Figure D. Stapling pattern shown in Figure D reflects minimum staples to be used. More staples may be required to ensure blanket is sufficiently secured to resist mowers and foot traffic and to ensure blanket is in contact with soil surface over the entire area of blanket. Further, critical points require additional staples. Critical points are identified in Figure G.

Step 6 - Continue Along Slope - Complete Installation
Overlap adjacent blankets as shown in Figure C and repeat Step 5. Secure toe of slope using stapling pattern shown in Figure E. Secure edges of installation by stapling at 1.5' intervals along the terminal edge.

Document # WE_EXCEL_PPS8_SH

* Drawings Not to Scale



Product Application/Equivalency Specifications
Excel PPS-8 is produced by Western Excelsior and consists of a permanent Rolled Erosion Control Product (RECP) comprised of a synthetic fiber blend matrix mechanically (stitch) bound between two UV stable heavy duty synthetic nets (top and bottom). The expected longevity of Excel PPS-8 is greater than 36 months (actual longevity dependent on field and climatic conditions). Excel PPS-8 is designed and manufactured to provide immediate erosion control and permanent turf reinforcement and is comprised of physical properties sufficient to provide the intended longevity and performance. Product specifications may be found on document WE_EXCEL_PPS8_SPEC and performance information may be found on document WE_EXCEL_PPS8_PERF. All documents are available from Western Excelsior Technical Support or www.westernexcelsior.com. Additional to above, equivalent products to Excel PPS-8 must meet identical criteria as Excel PPS-8 as follows:

- Consist of synthetic fiber matrix confined between two UV stable, heavy duty synthetic nets.
- Sufficient tensile strength, thickness and coverage to maintain integrity during installation and ensure material performance. Provide permanent turf reinforcement with longevity greater than three years, immune from moisture damage or chemical conditions within the soil.
- Lining within AASHTO NTPPE database.
- Meet ECTC specification for category 5A product.

REFERENCES

NATIONAL DOCUMENTS
ASHTO M 278
ASHTO GENERIC DESIGN
ASHTO ROADSIDE DESIGN GUIDE

RELATED DRAWINGS & KEYWORDS
203-905-00

PRECONSTRUCTION
SUPPORT ENGINEER



SIGNATURE
MARCH 3, 2008
DATE

GENERAL REVISIONS
DATE DESCRIPTION

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING
EXCAVATION
ASSOCIATED WORK
(MAIL BOX
PLACEMENT)

203-905-00
EFFECTIVE DATING DATE: MAY 2008 (THIS DRAWING IS NOT TO SCALE)

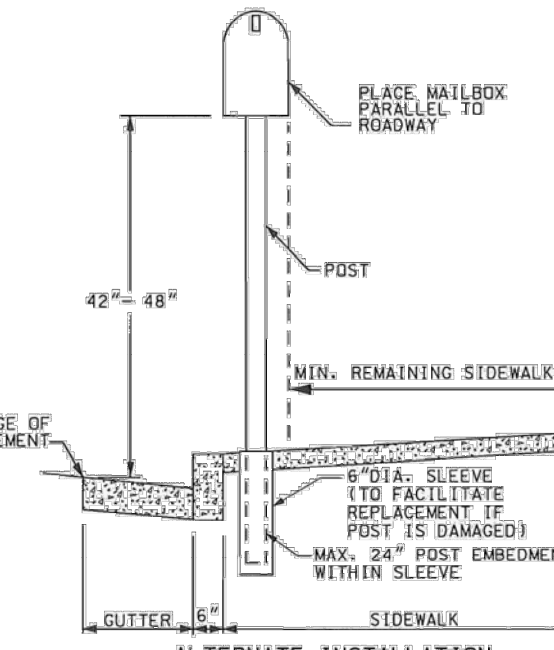
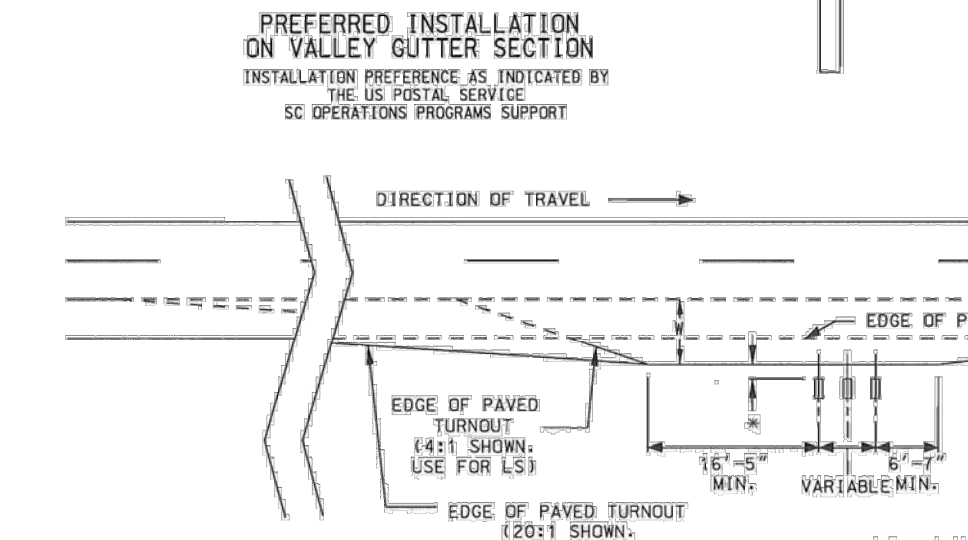
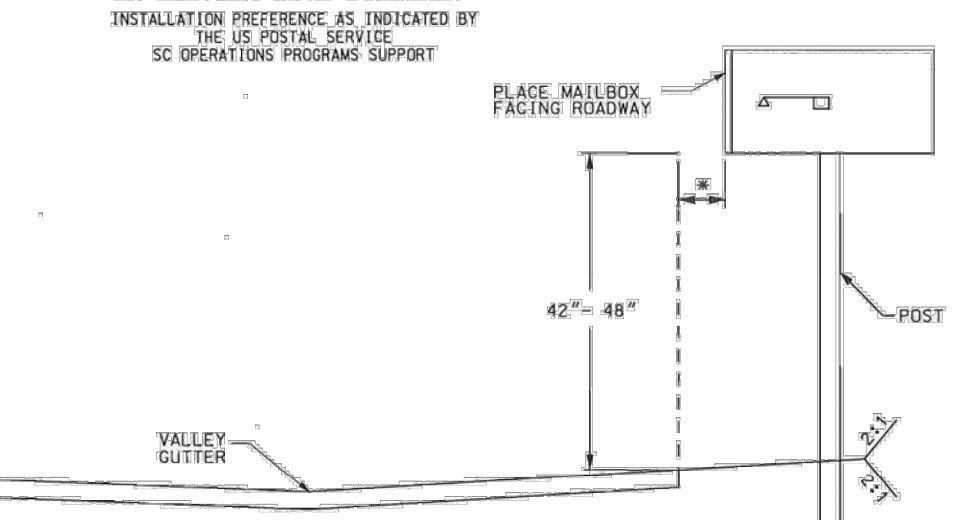
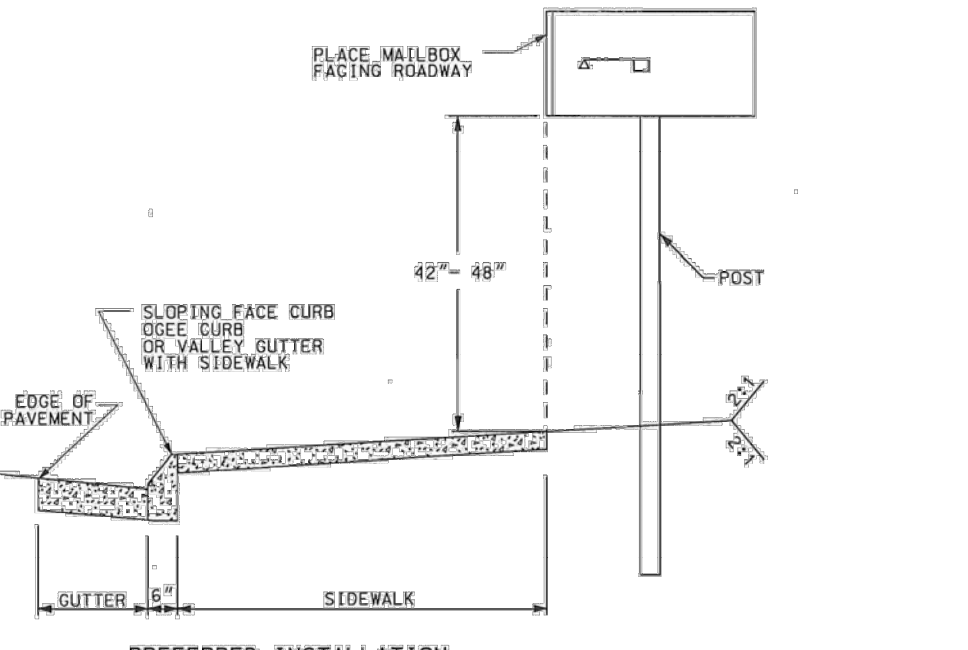


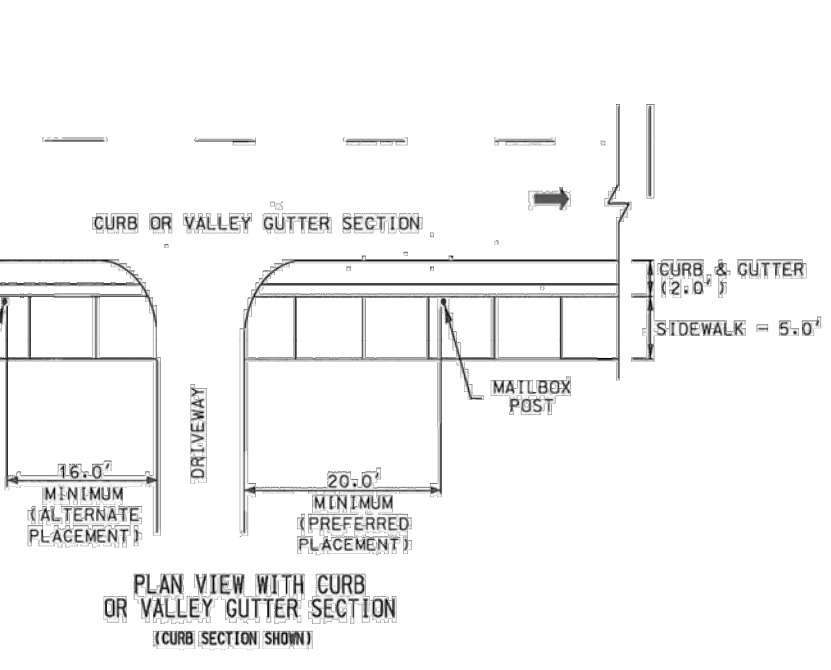
TABLE 203-905A GUIDELINES FOR LATERAL PLACEMENT OF MAILBOXES
TAKEN FROM TABLE 11.1 - ASHTO ROADSIDE DESIGN GUIDE (LATEST EDITION)

HIGHWAY TYPE AND ADT (VPD)	FT		LN	
	PREFERRED	MINIMUM	PREFERRED	MINIMUM
RURAL HIGHWAY OVER 10,000	12	8		
RURAL HIGHWAY 1,500 TO 10,000	12	8	8 TO 12	0
RURAL HIGHWAY 400 TO 1,500	10	8		
RURAL ROAD UNDER 400	8	6		
RESIDENTIAL STREET WITHOUT CURB OR ALL-WEATHER SHOULDER	6	0	10 TO 12	10
CURBED RESIDENTIAL STREET	NOT APPLICABLE		8 TO 12	6

NOTES:

- MAILBOXES SHOULD MEET THE US POSTAL SERVICE REQUIREMENTS OF 39 CFR PART 111 ESTABLISHING GOVERNING THE DESIGN OF CURBED MAILBOXES. EXISTING MAILBOXES MEETING THE US POSTAL SERVICE REQUIREMENTS ARE TO BE RESET IN ACCORDANCE WITH ASHTO ROAD DESIGN GUIDE (LATEST EDITION) AND THIS STANDARD DRAWING. IF EXISTING BOX DOES NOT MEET US POSTAL SERVICE REQUIREMENTS, OWNER SHALL PROVIDE THE OPPORTUNITY TO PURCHASE AND INSTALL A NEW MAILBOX TO MEET US POSTAL SERVICE REQUIREMENTS PRIOR TO INSTALLATION.
- IN GENERAL, THE PROPERTY OWNER IS RESPONSIBLE FOR ENSURING THAT THEIR MAILBOX IS IN COMPLIANCE WITH USPS REQUIREMENTS. ALL EXISTING MAILBOXES WILL BE RESET AS SHOWN EXCEPT IN THE MOST OBVIOUS NON-COMPLIANT CASES.
- IN ACCORDANCE WITH SECTION 203 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, MAILBOXES ARE TO BE RESET BY THE CONTRACTOR AS REQUIRED BY CONSTRUCTION ACTIVITIES IN ORDER TO MAINTAIN CURRENT MAIL DELIVERY.
- MAILBOXES WILL BE LOCATED ON THE RIGHT SIDE OF THE ROADWAY IN THE DISPOSITION OF THE DELIVERY ROUTE EXCEPT ON ONE-WAY STREETS WHERE THEY MAY BE PLACED ON THE LEFT SIDE.
- MAILBOXES SHOULD BE INSTALLED ON THE TRAILING SIDE OF THE DRIVEWAY A MINIMUM OF 20' FROM THE DRIVE. IF MAILBOXES CANNOT BE INSTALLED ON THE TRAILING SIDE OF THE DRIVEWAY, INSTALL ON THE LEADING SIDE OF THE DRIVEWAY. A MINIMUM OF 16' FROM THE DRIVE.
- IF MORE THAN ONE MAILBOX IS TO BE INSTALLED AT A DRIVEWAY, DISTANCE BETWEEN POSTS SHALL BE EQUAL TO THE HEIGHT OF THE MAILBOX.
- THE BOTTOM OF THE BOX SHALL BE SET AT AN ELEVATION BETWEEN 3.5' AND 4.0' ABOVE THE ROADWAY SURFACE.
- WHEN MAILBOX IS PLACED ON A SIDEWALK, THE ORIENTATION OF THE MAILBOX WILL BE PARALLEL TO CENTERLINE OF THE ROADWAY TO ENABLE ACCESS TO THE BOX. THE BOX SHALL BE ON THE APPROACH SIDE AND THE SIDE OF THE BOX WILL EQUAL TO THE BACK OF CURB OR BACK OF VALLEY GUTTER.
- WHEN A GRASS AREA IS BETWEEN THE BACK OF CURB OR VALLEY GUTTER AND THE SIDEWALK, THE MAILBOX WILL BE INSTALLED PERPENDICULAR TO THE ROADWAY. AS LONG AS THE MAILBOX DOES NOT OVERLAP THE SIDEWALK AND WHEN NO SIDEWALK IS PRESENT THE MAILBOX SHALL BE PLACED PERPENDICULAR TO THE ROADWAY.
- A 6" SOIL TUBE MEETING SCHEDULE 40 AND THE REQUIREMENTS OF ASHTO M 278 SHALL BE USED. THE INSTALLATION OF THE SOIL TUBE SHALL BE FROM THE TOP OF THE SIDEWALK TO THE BOTTOM OF THE POST. BACK FILL VOID BETWEEN SOIL TUBE AND MAILBOX POST WITH SAND WITHIN 2" OF FINISHED GRADE AND SEAL WITH SILICONE CAULK.
- WOOD POST SHOULD NOT BE SMALLER OR LARGER THAN RECOMMENDED. MAILBOX TO POST ATTACHMENT SHALL MEET THE REQUIREMENTS OF 1.5" AS LONG AS NO INTERFERENCE TO ACCEPTABLES ARE ALLOWED ON POST. BACK FILL VOID BETWEEN SOIL TUBE AND MAILBOX POST WITH SAND WITHIN 2" OF FINISHED GRADE AND SEAL WITH SILICONE CAULK.
- THERE ARE NO SEPARATE DAY LEGS TO RESET MAILBOXES. COST IS INCLUDED IN THE COST OF OTHER WORK WITHOUT ADDITIONAL COMPENSATION.

MAILBOX POST MATERIALS:
WOOD: 4" x 4" OR 4" DIA. NOMINAL DIMENSIONS
ALUMINUM: 1.5" x 2.0" DIA.
GALVANIZED STEEL: 1.5" x 2.0" DIA. (SCHEDULE 40 MAX.)

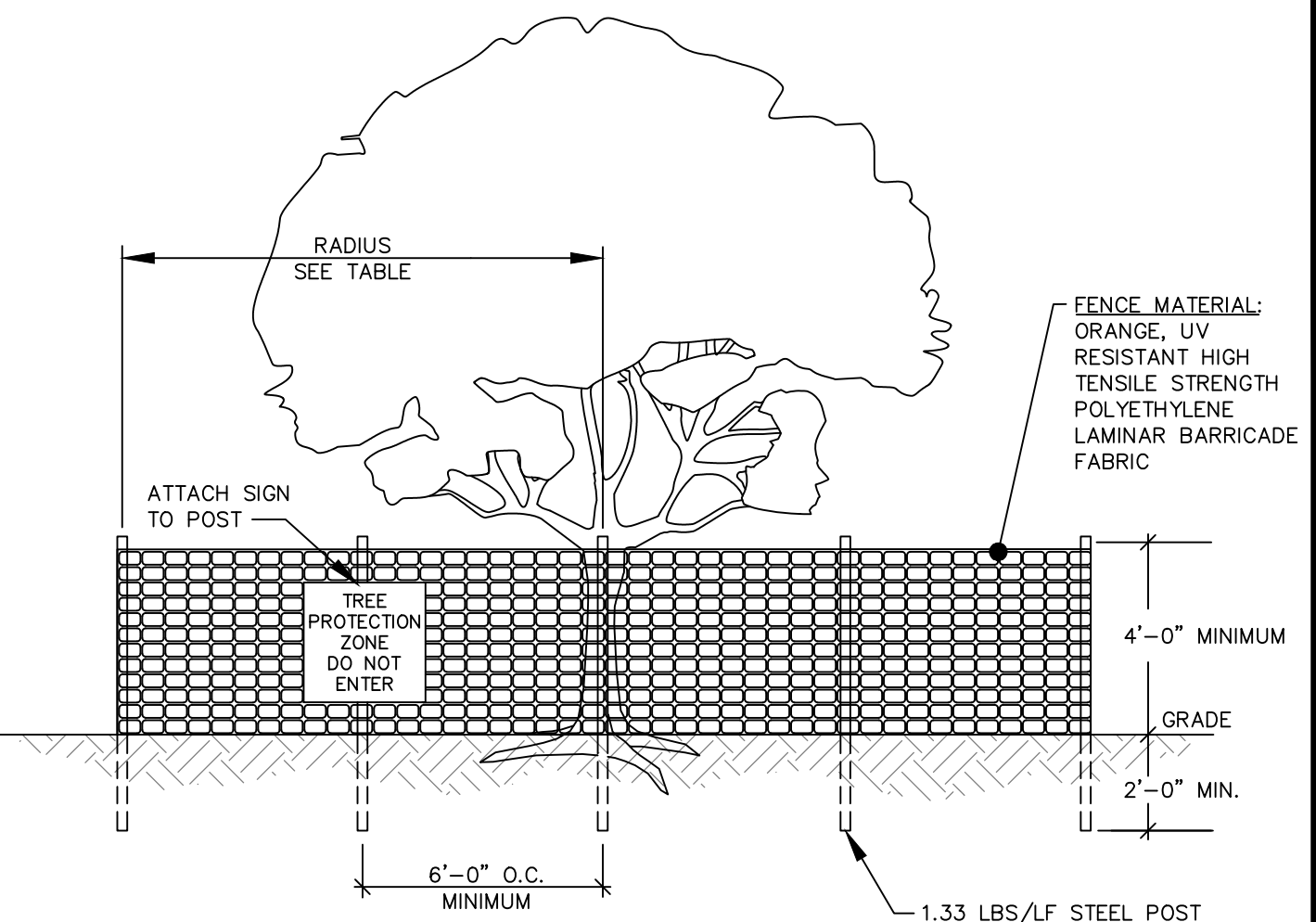


NOTES:

- ALL TREES DESIGNATED TO BE SAVED SHALL BE PROTECTED BY FENCING.
- INSTALL TREE PROTECTION FENCE TO RADIUS INDICATED IN TABLE UNLESS OTHERWISE INDICATED ON PLANS.
- WARNING SIGNS TO BE MADE OF DURABLE WATERPROOF MATERIAL.
- ALL WARNING SIGN LETTERS TO BE AT LEAST 3 INCHES HIGH, CLEARLY LEGIBLE AND SPACED A MINIMUM OF ONE EVERY 40 FT. FOR PROTECTION AREAS LESS THAN 40 FT IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER SIDE.
- THE SIZE OF EACH WARNING SIGN MUST BE A MINIMUM OF 2' x 2' AND BE VISIBLE FROM BOTH SIDES OF THE FENCE.
- ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.
- THERE SHALL BE NO STORAGE OF MATERIAL WITHIN THE BOUNDARIES OF THE TREE PROTECTION FENCING.
- TREE PROTECTION FENCING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. FENCING MUST REMAIN UPRIGHT AND SLACK FREE.

JURISDICTION	RADIUS OF CIRCULAR TPZ
BEAUFORT COUNTY DSO 106-1846(b)(2) OR TOWN OF BLUFFTON UDO 5.3.3, C(1)	1 FOOT PER INCH OF TRUNK DBH OR 5 FEET, WHICHEVER IS GREATER
TOWN OF HILTON HEAD LMO 16-6-104, J	1.5 FEET PER INCH OF TRUNK DBH
CITY OF BEAUFORT UDO 7.3, D(3)	FENCING AT DRIP LINE FOR ALL TREES PROPOSED TO BE RETAINED
JASPER COUNTY ZONING ORD. ART. 13	0.5 FOOT PER INCH OF TRUNK DBH OR 5 FEET, WHICHEVER IS GREATER
CITY OF HARDEEVILLE MZDO 4.8, F	FENCING AT DRIP LINE FOR "SIGNIFICANT" AND "LANDMARK" TREES

DBH = TRUNK DIAMETER AT BREAST HEIGHT



TREE PROTECTION FENCE

DETAIL #02915-008

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												
RYEGRASS	75 LBS/AC												

PERMANENT SEEDING - COASTAL

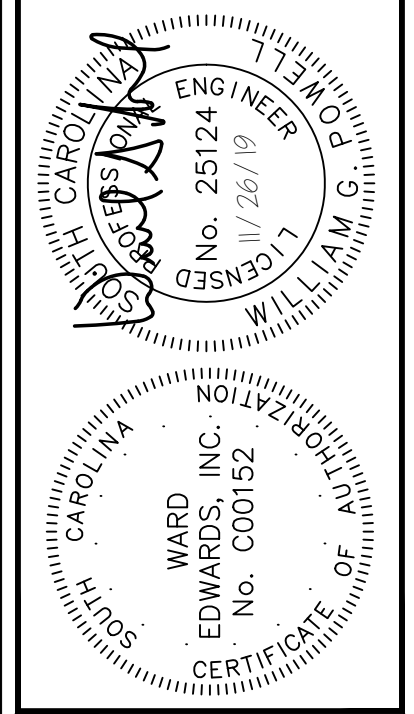
SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET	10 LBS/AC												
BAHIAGRASS	40 LBS/AC												
BROWNTOP MILLET	10 LBS/AC												
BAHIAGRASS	30 LBS/AC												
SERICEA LESPEDEZA	40 LBS/AC												
BROWNTOP MILLET	10 LBS/AC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

TS TEMPORARY SEEDING - COASTAL

DETAIL 02370-011

PS PERMANENT SEEDING - COASTAL

DETAIL 02370-010



NO.	DESCRIPTION	DATE
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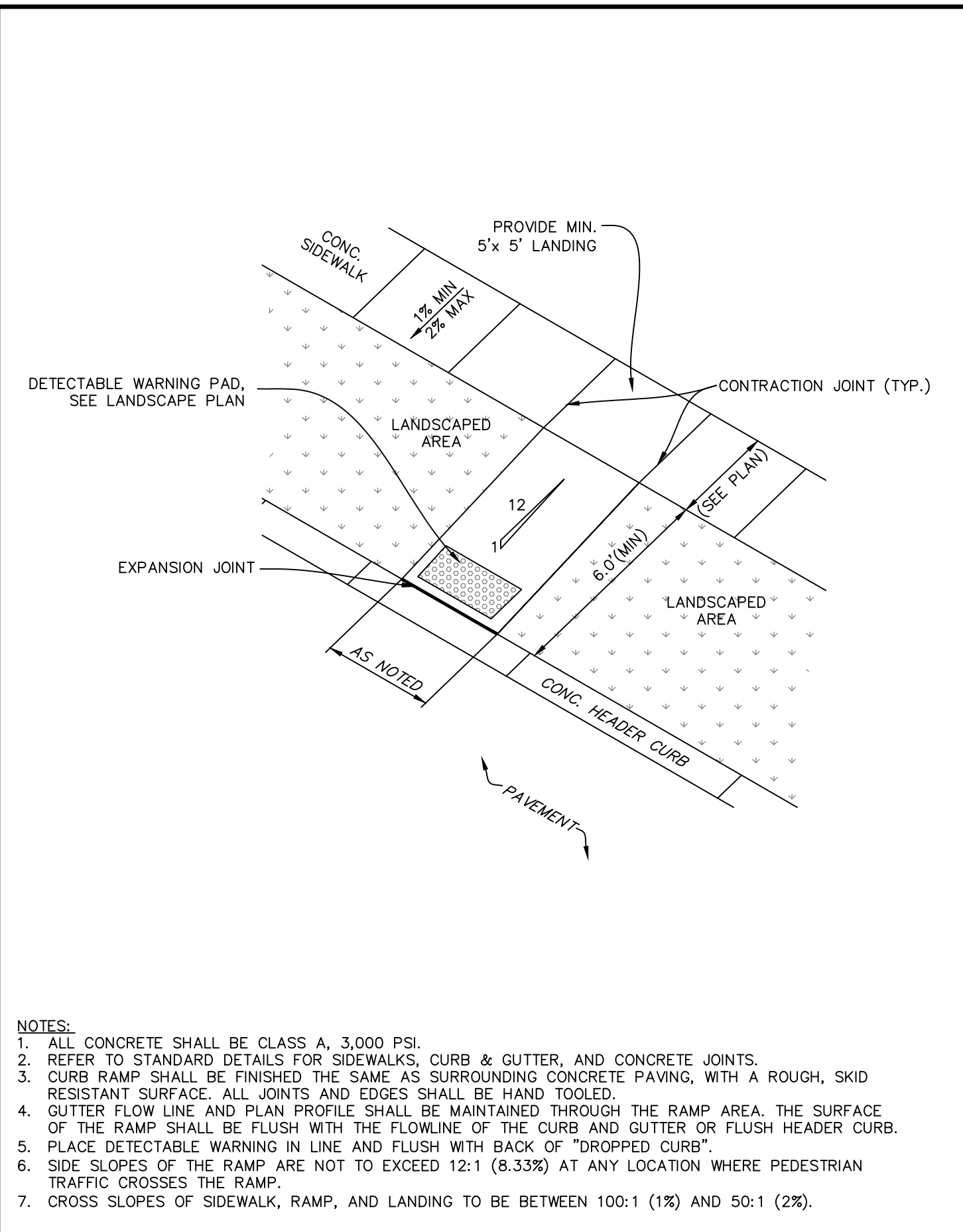
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BUCK ISLAND - SIMMONSVILLE NEIGHBORHOOD SIDEWALKS, PHASE 5
BEAUFORT COUNTY, SOUTH CAROLINA
TOWN OF BLUFFTON
BLUFFTON, SOUTH CAROLINA
CONSTRUCTION DETAILS

VERTICAL DATUM:
NAVD88
 NOT FOR CONSTRUCTION
 RELEASED FOR CONSTRUCTION
PROJECT #: 150610
DATE: 11/26/19
DESIGNED BY: WGP
CHECKED BY: HED
SCALE: AS NOTED

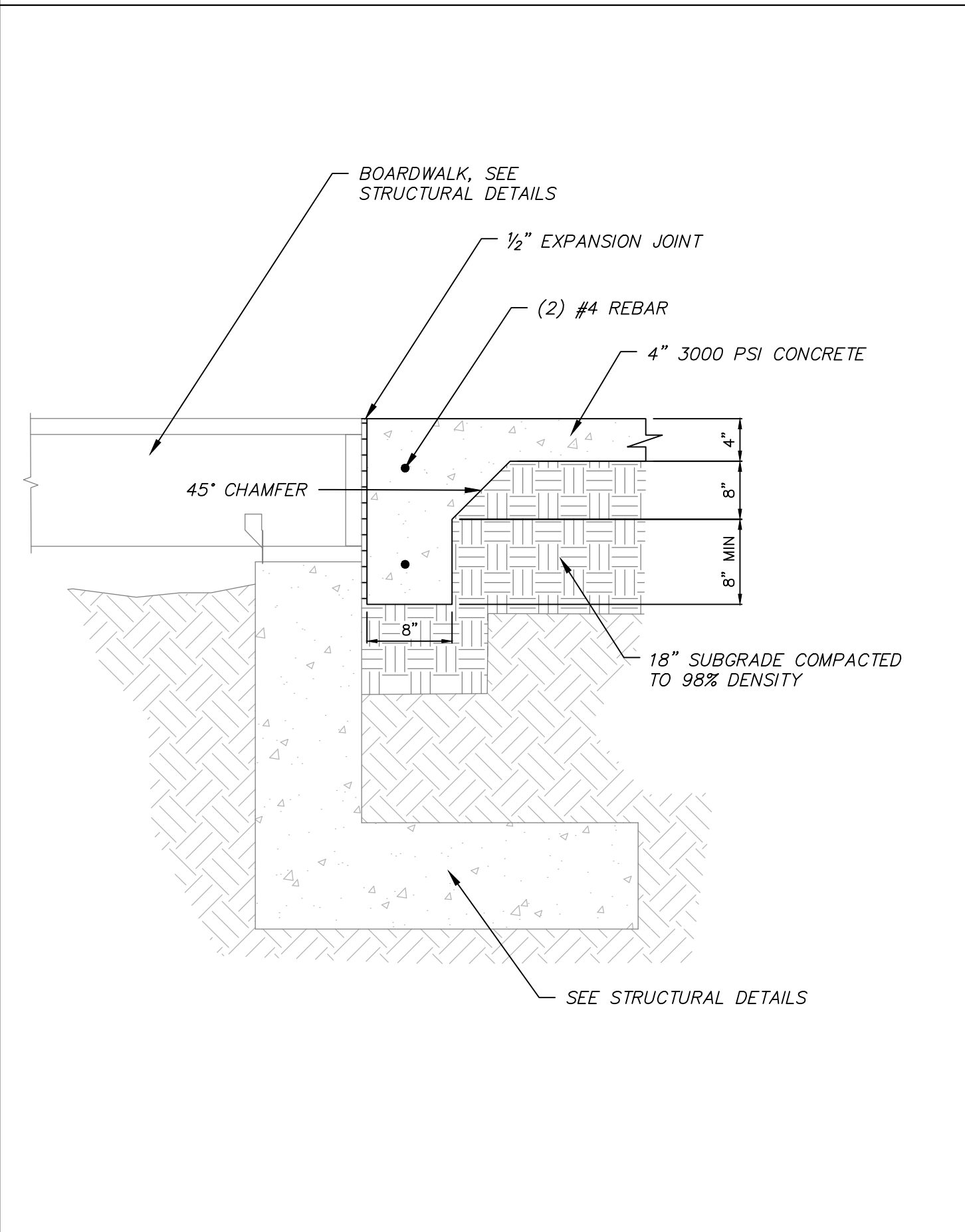
SHEET
C602

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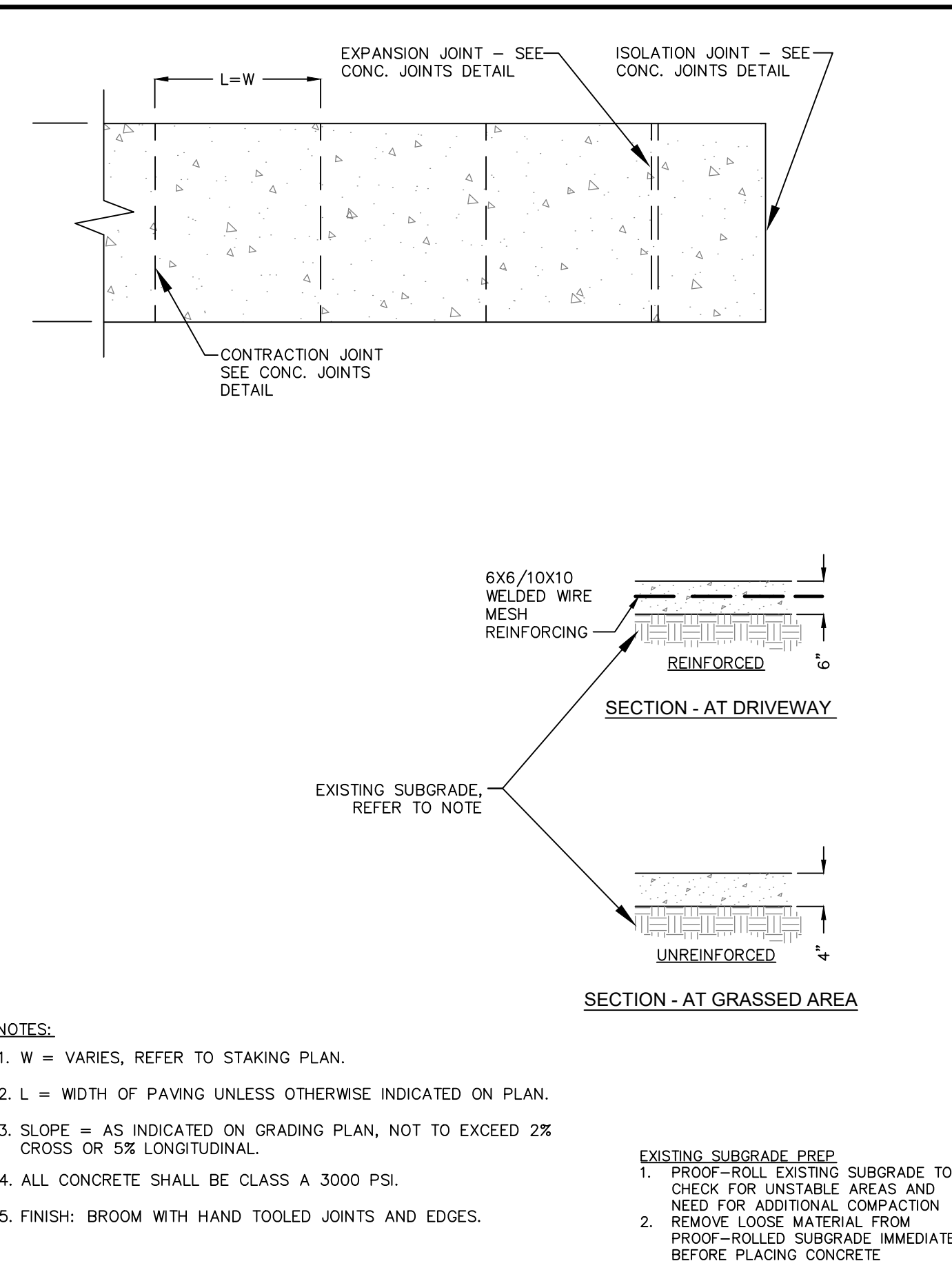
CONCRETE CURB RAMP- TYPE D

DETAIL 03300-033



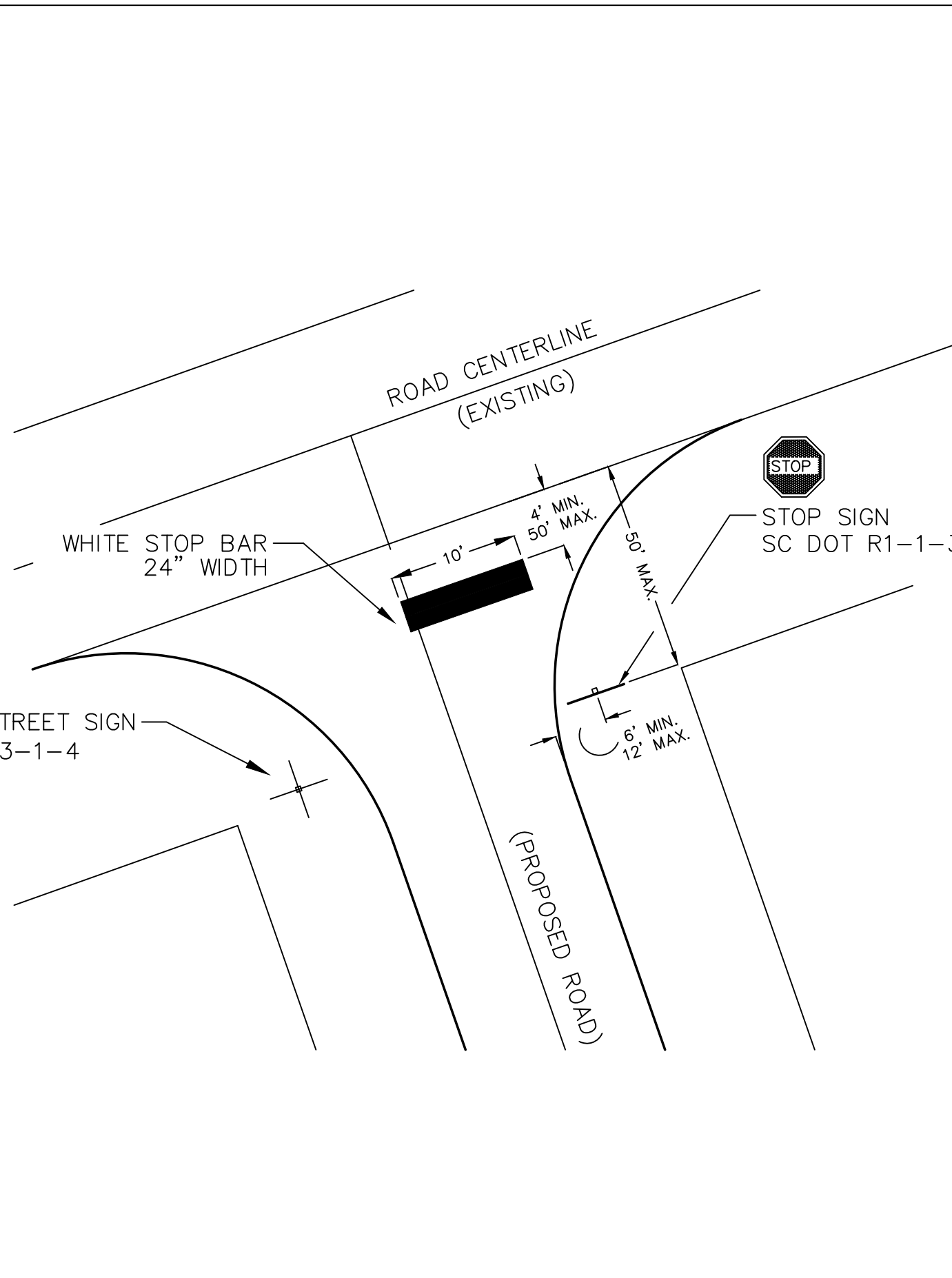
TURNED-DOWN CONCRETE

DETAIL 03300-003



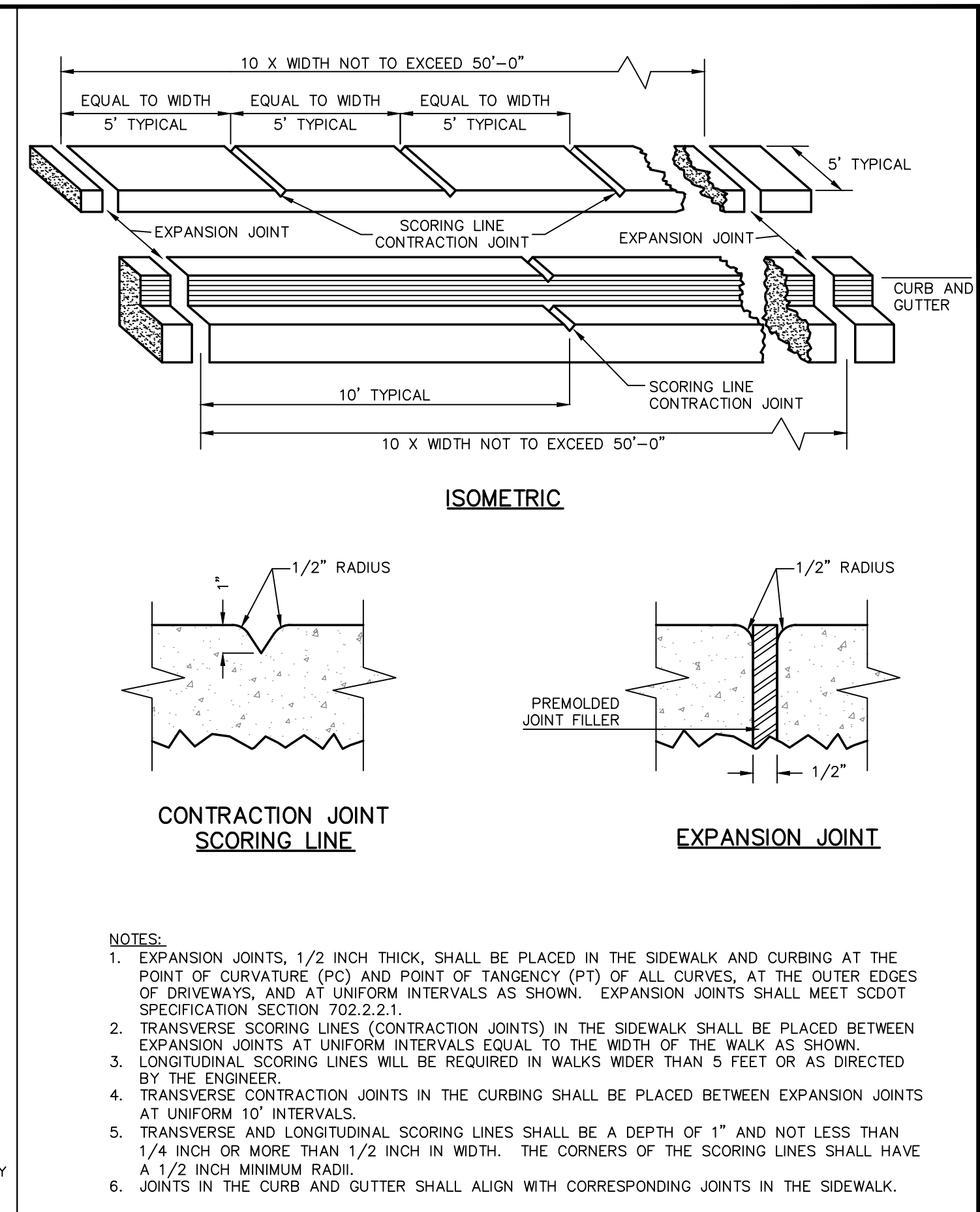
CONCRETE SIDEWALK

DETAIL 03300-022



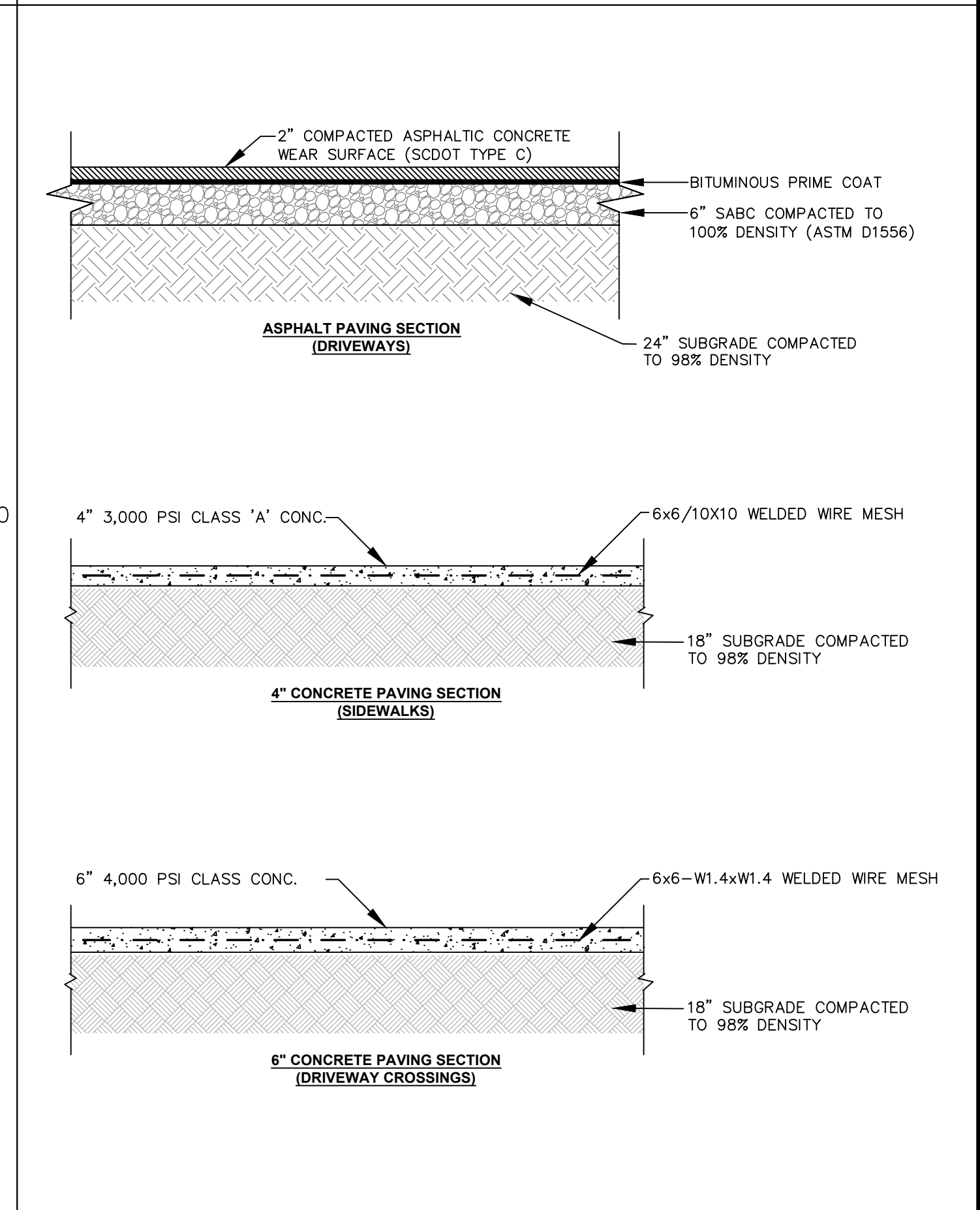
TYPICAL STOP SIGN & STOP BAR STRIPING AT INTERSECTION

DETAIL #02740-018



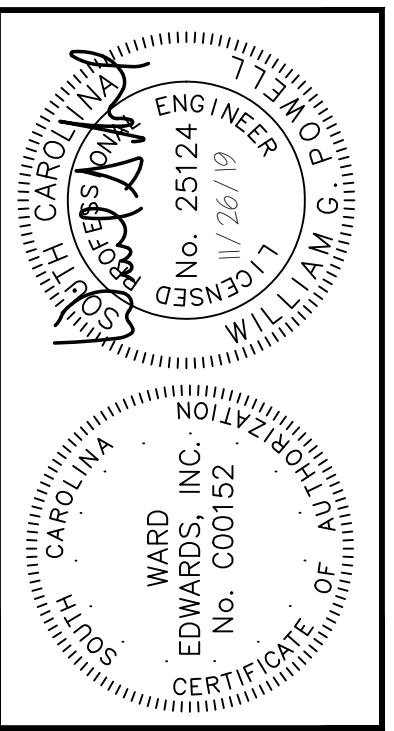
EXPANSION JOINTS AND SCORING LINES

DETAIL 03300-007A



TYPICAL PAVING SECTIONS

DETAIL 02740-016



NO.	DESCRIPTION	DATE
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 BEAUFORT COUNTY, SOUTH CAROLINA
TOWN OF BLUFFTON
BLUFFTON, SOUTH CAROLINA
CONSTRUCTION DETAILS

VERTICAL DATUM:
NAVD88

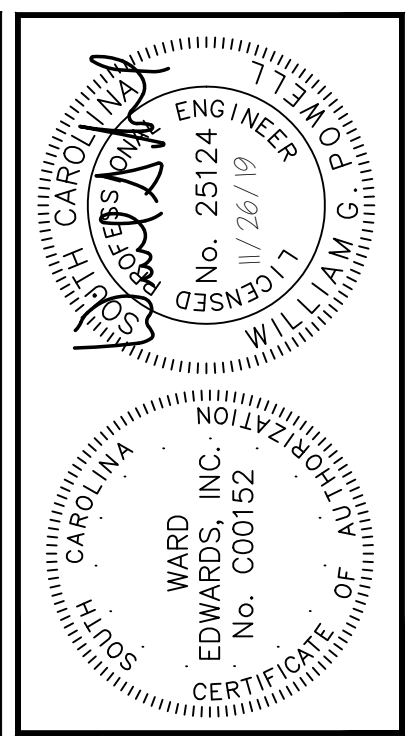
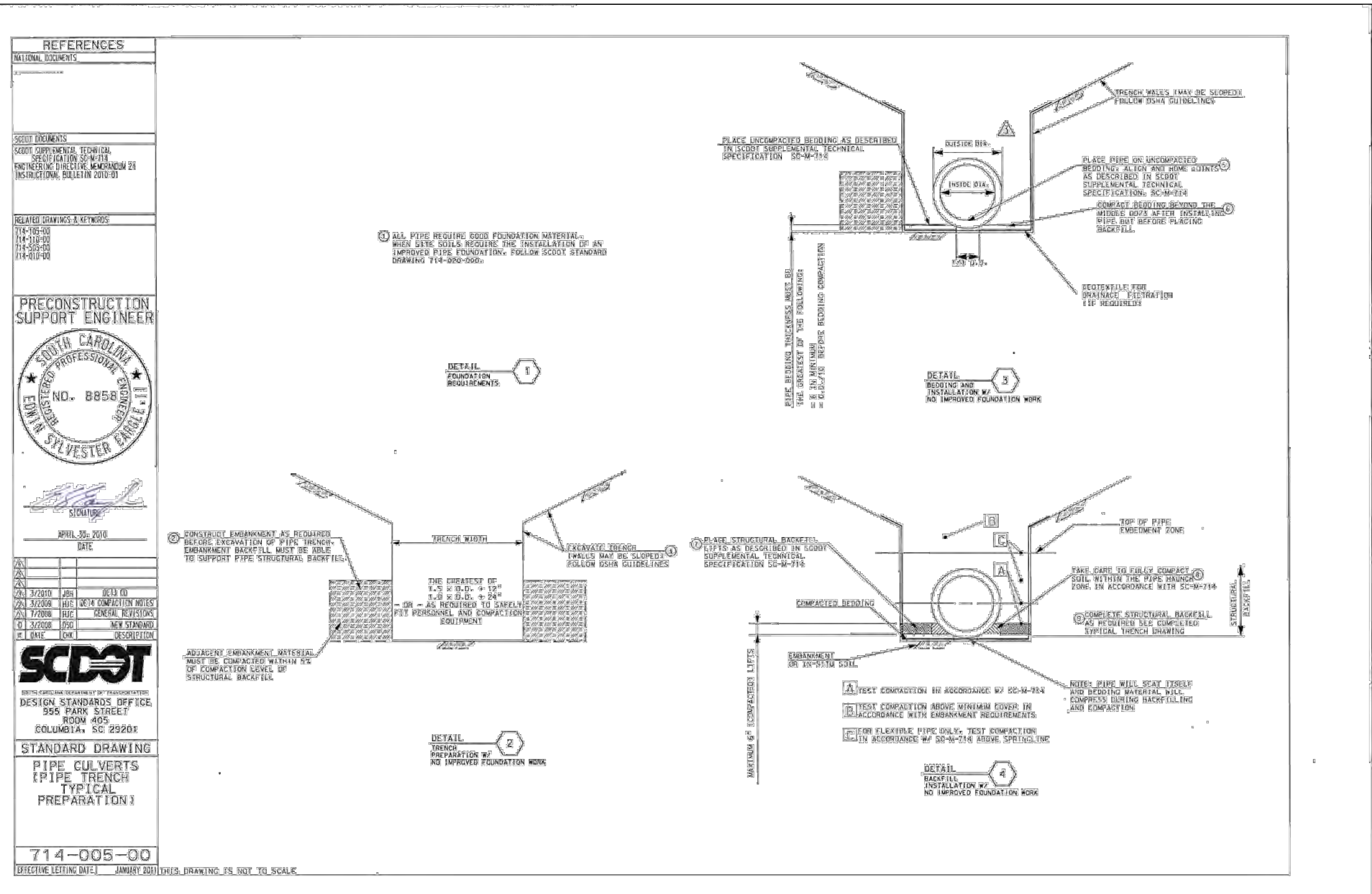
NOT FOR CONSTRUCTION
 RELEASED FOR CONSTRUCTION

PROJECT #: 150610
 DATE: 11/26/19
 DESIGNED BY: WGP
 CHECKED BY: HED
 SCALE: AS NOTED

SHEET C603

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- B/WSA UTILITY AS-BUILT SURVEY REQUIREMENTS**
- CONTRACTOR SHALL PROVIDE ENGINEER WITH ELECTRONIC FILE OF SURVEYED UTILITY AS-BUILT POINTS. POINT DESCRIPTIONS SHALL BE CLEAR AND UNDERSTANDABLE.
 - CONTRACTOR SHALL ALSO PROVIDE CORRESPONDING REDLINE DRAWING TO SUPPLEMENT OR CLARIFY ELECTRONIC FILE CONTENT.
 - CONTRACTOR SHALL SCHEDULE SURVEYOR TO BE PRESENT DURING INSTALLATION IN ORDER TO OBTAIN ACCURATE INFORMATION ON UNDERGROUND FITTINGS AND SANITARY/STORM CROSSING ELEVATIONS. MULTIPLE SURVEYOR MOBILIZATIONS MAY BE NEEDED. IF SURVEYOR IS NOT PRESENT DURING INSTALLATION, CONTRACTOR SHALL ENSURE SURVEYOR HAS ACCESS TO ALL UTILITY COMPONENTS LISTED IN THESE NOTES.
 - CONTRACTOR'S SURVEYOR SHALL BE A PROFESSIONAL LAND SURVEYOR LICENSED IN SOUTH CAROLINA. CONTRACTOR'S SURVEYOR WILL REVIEW AND SIGN THE B/WSA CERTIFICATION ON THE UTILITY AS-BUILT DRAWING PREPARED BY ENGINEER UPON COMPLETION.
 - UTILITY AS-BUILT POINTS SHALL BE BASED UPON THE NORTH AMERICAN DATUM OF 1983 (NAD83) AND THE USGS NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
 - AS BUILT SURVEY SHALL INCLUDE, BUT NOT NECESSARILY BE LIMITED TO, THE FOLLOWING:
 - GRAVITY SEWER**
 - MANHOLE LOCATIONS, FRAME ELEVATION, ALL INVERT ELEVATIONS
 - CLEANOUT LOCATIONS, GROUND ELEVATION, INVERT ELEVATION
 - POINTS FOR PERMANENT VISIBLE STRUCTURES NEARBY MANHOLES AND CLEANOUTS FOR REFERENCE (PAVEMENT, BUILDINGS, MANHOLES, CATCH BASINS, POWER POLES, OR PROPERTY CORNERS)
 - FORCE MAIN**
 - ELEVATION ON TOP OF FORCE MAIN CONNECTION TO MANHOLE OR FORCE MAIN MANIFOLD
 - AIR RELEASE VALVES
 - SIMPLE FORCE MAIN ALIGNMENTS ON 100 LF INCREMENTS
 - ARCS, BENDS ON 50 LF INCREMENTS
 - WATER**
 - HORIZONTAL AND VERTICAL LOCATION OF ALL VALVES, BENDS, TEES, AND STORM/SANITARY CROSSING POINTS (FOR AS-BUILT SEPARATION CALCULATIONS)
 - FIRE HYDRANTS
 - CONCRETE MARKERS, CONNECTIONS TO EXISTING LINES, BACKFLOW PREVENTORS, AIR RELEASE VALVES
 - POINTS FOR PERMANENT VISIBLE STRUCTURES NEAR WATER SYSTEM ELEMENTS DESCRIBED ABOVE FOR REFERENCE (PAVEMENT, BUILDINGS, MANHOLES, CATCH BASINS, POWER POLES, OR PROPERTY CORNERS). TWO SURVEYED REFERENCE POINT LOCATIONS ARE REQUIRED FOR EACH FITTING.
 - PUMP STATIONS**
 - COMPLETE LAYOUT OF PUMP STATION
 - MANHOLE LOCATIONS, FRAME ELEVATION, ALL INVERT ELEVATIONS
 - FENCING & GATES, CONTROL PANEL
 - TOP OF SLAB (INCL. BRASS BENCHMARK) & BOTTOM OF WETWELL
 - INFLUENT LINE INVERT
 - FLOAT LEVELS (PUMP OFF, PUMP ON, LEAD/LAG, BOHT PUMPS ON, HIGH WATER)
 - PROPERTY CORNERS, YARD HYDRANT, LIGHT POLE, DISCHARGE PIPING/VALVES



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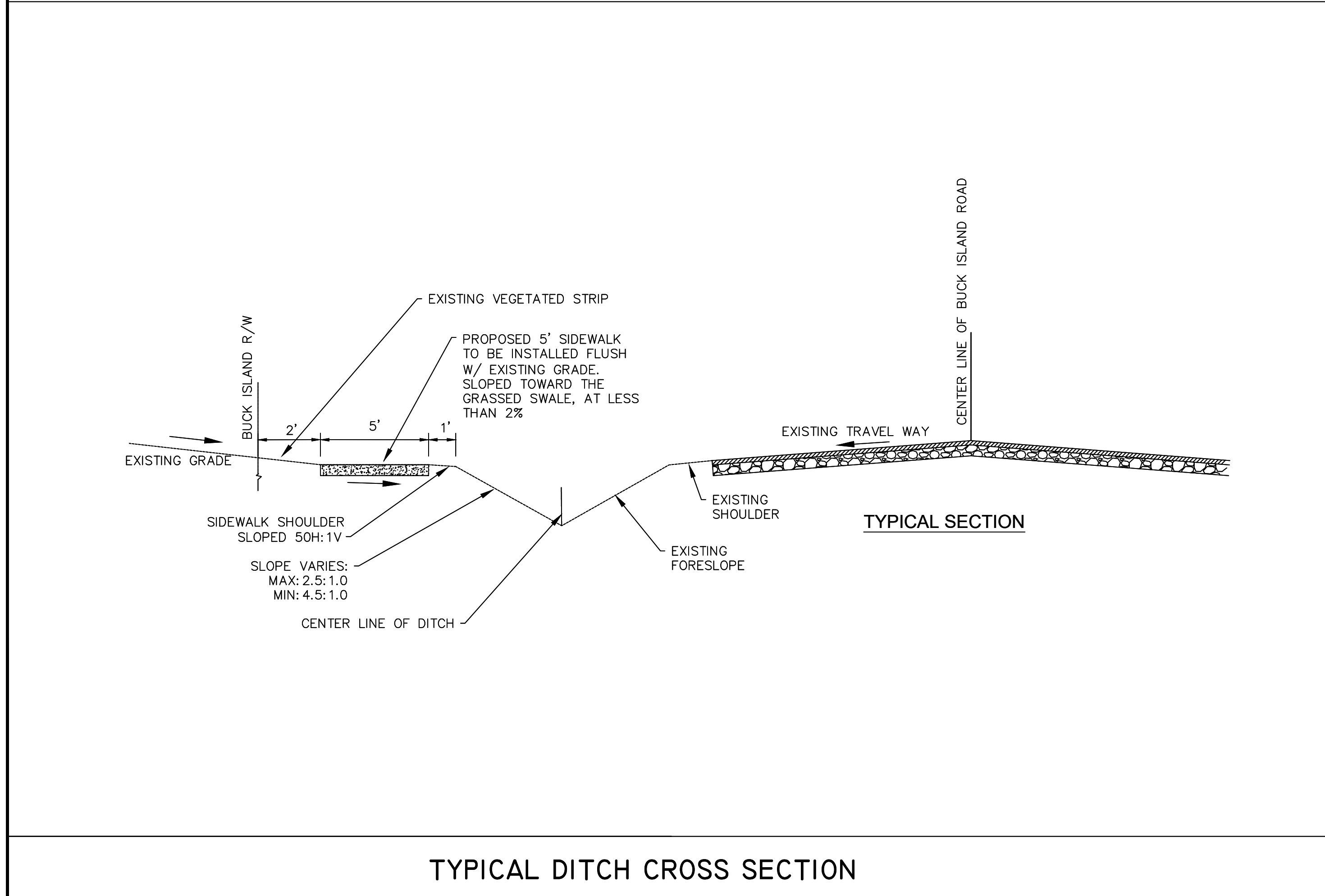
BUCK ISLAND - SIMMONSVILLE NEIGHBORHOOD SIDEWALKS, PHASE 5
 BEAUFORT COUNTY, SOUTH CAROLINA
 TOWN OF BLUFFTON
 BLUFFTON, SOUTH CAROLINA
CONSTRUCTION DETAILS

VERTICAL DATUM:
 NAVD88

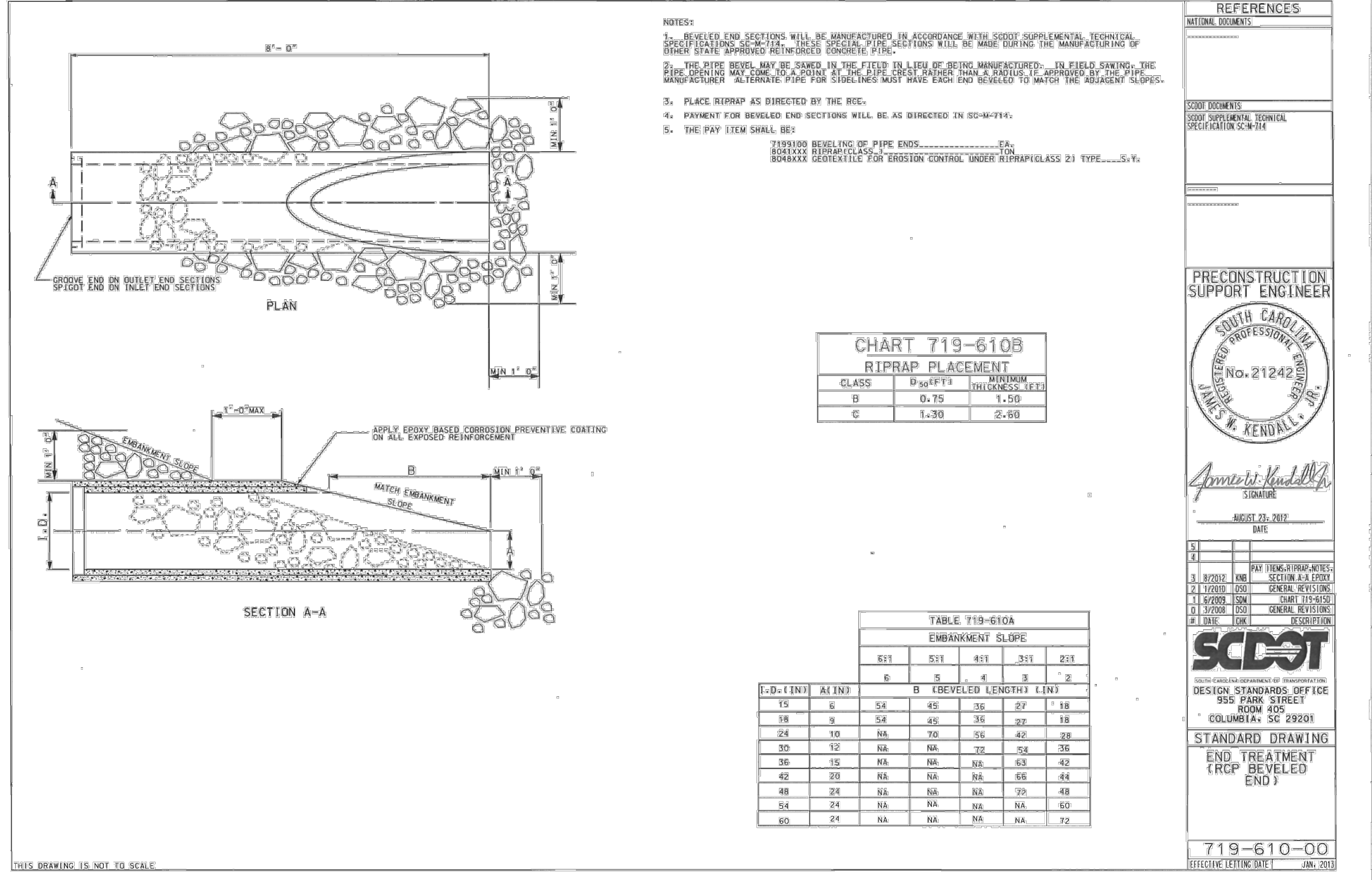
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PROJECT #:
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 DESIGNED BY:
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TYPICAL DITCH CROSS SECTION



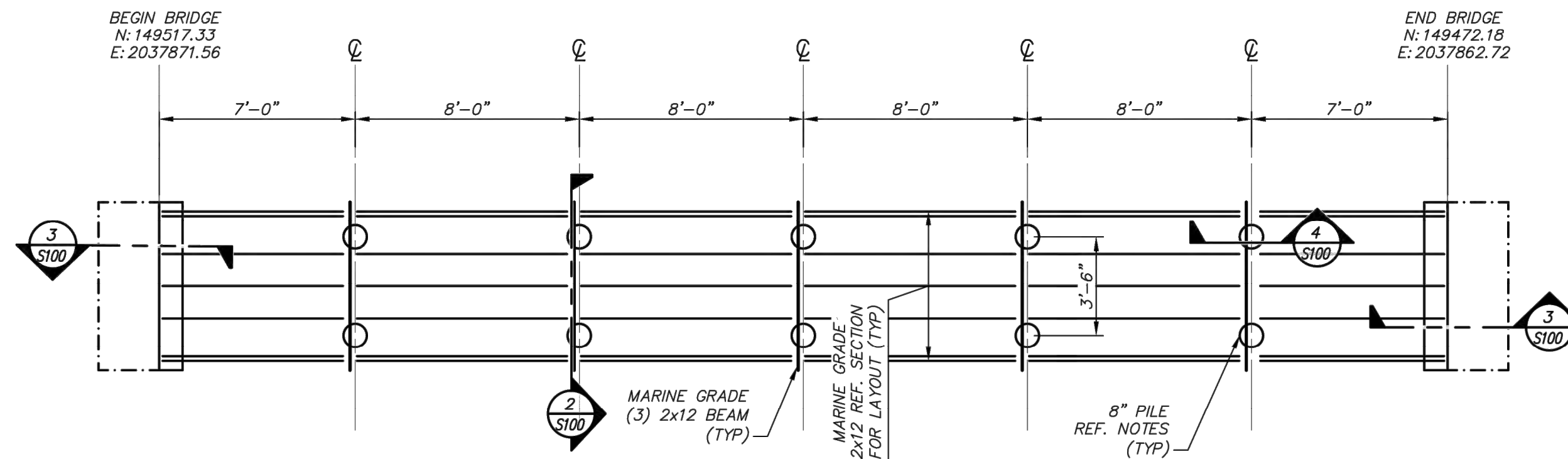
IF THIS SHEET IS LESS THAN 22" X 34" IT IS A REDUCED PRINT. SCALE ACCORDINGLY

STRUCTURAL DESIGN CRITERIA

- DESIGN CODE:
AASHTO 2012 LRFD GUIDE SPECIFICATION FOR BRIDGE DESIGN
- DESIGN LOAD: UTILITY (VEHICLE) LOAD 2500 LBS PER AXLE
LIVE LOAD: 90 PSF
DEAD LOAD: 10 PSF

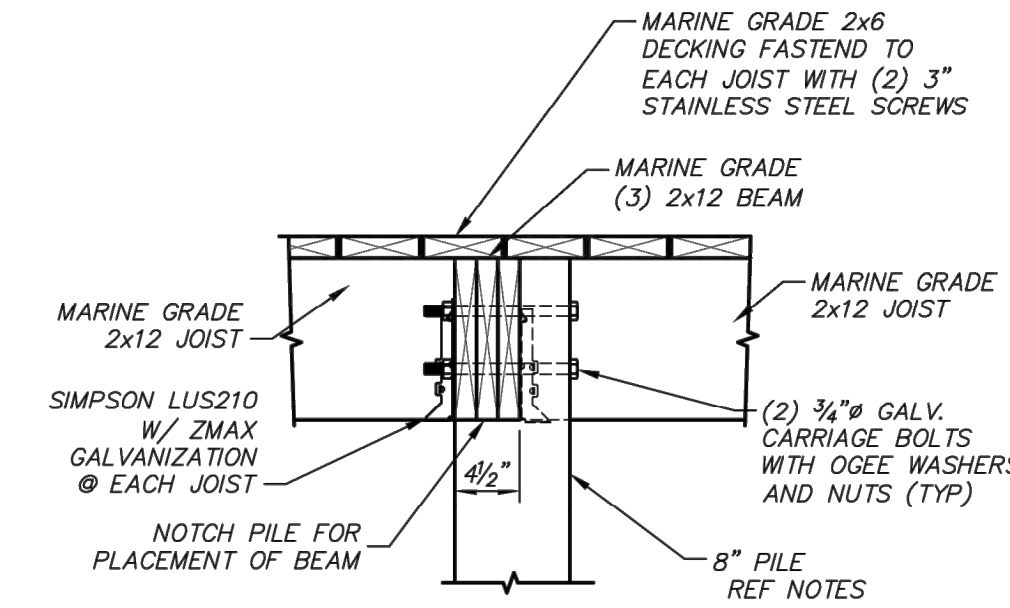
- GENERAL REQUIREMENTS**
- WHERE A SECTION OR DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL APPLY TO ALL SIMILAR CONDITIONS.
 - THE DESIGN ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
 - DO NOT SCALE DRAWINGS. FOLLOW DIMENSIONS SHOWN ON PLANS.
 - SPECIFIED ANCHOR SYSTEMS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. SPECIAL ATTENTION SHALL BE GIVEN TO THE DRILLING, CLEANING, AND PREPARATION OF HOLES. WHERE ADHESIVE ANCHORS ARE SHOWN, SPECIAL ATTENTION SHALL BE GIVEN TO THE REQUIRED MIXING, APPLICATION, AND CURING TIME OF ADHESIVE TYPE SPECIFIED.

- DRIVEN PILES**
- TIMBER PILE FOUNDATIONS HAVE BEEN DESIGNED AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH CRITERIA ESTABLISHED HEREIN.
 - PILES SHALL BE TREATED TIMBER PILES, 6" MIN. TIP. 8" MINIMUM BUTT AT CUTOFF.
 - ALL PILES ARE DESIGNED FOR A SAFE WORKING CAPACITY OF 2 TONS (4,000 LBS.) SUBJECT TO LOAD TESTS.
 - PILE TIP ELEVATION SHALL BE A MINIMUM OF 10' BELOW EXISTING GRADE AND AS REQUIRED TO DEVELOP ALL CAPACITIES SPECIFIED.
 - ALL PILING SHALL BE SOUTHERN PINE OR DOUGLAS FIR CONFORMING TO ASTM D25, PRESSURE TREATED IN ACCORDANCE WITH AWP STANDARD U1 (6" MINIMUM TIP).
 - DESIGN PILE CAPACITY IS AS FOLLOWS:
COMPRESSION = 2 TONS
TENSION = .5 TONS (TENSION PILES ONLY)
LATERAL LOAD = .25 TONS (AT TOP OF PILE)
 - PRIOR TO COMMENCING PILE OPERATION, THE CONTRACTOR SHALL SUBMIT A PILE LOCATION PLAN SHOWING THE LOCATION & DESIGNATION OF ALL PILES. ALL DETAIL RECORDS FOR INDIVIDUAL PILES SHALL BEAR IDENTIFICATION. PRIOR TO PILE DRIVING, SUBMIT DATA PERTAINING TO THE PILE DRIVING HAMMER AND RIG.
 - THE FHWA GATES FORMULA MAY BE USED DURING DRIVING TO DETERMINE NOMINAL PILE RESISTANCE.
 - THE BASIS FOR ACCEPTANCE OF THE PRODUCTION PILING SHALL BE:
A. THAT THE BLOW COUNT FOR THE LAST 10 FEET OF DRIVING SHALL BE NOT LESS THAN THE BLOW COUNT RECORDED FOR THE LAST 10 FEET OR DRIVING OF SUCCESSFULLY DRIVEN (LOADED) TEST PILE WITH THE LEAST DRIVING RESISTANCE.
B. THAT THE PILING MEETS THE MINIMUM PENETRATION AND ANY OTHER PRODUCTION PILE DRIVING CRITERIA.
 - ALL PILING SHALL BE DRIVEN TO A MAXIMUM TOLERANCE IN ANY DIRECTION OF TWO (2) INCHES PER PILE.
 - ALL PILE OPERATIONS, INCLUDING TEST PILES, (LOAD TEST) AND PRODUCTION PILES SHALL BE DONE UNDER THE SUPERVISION OF AN INDEPENDENT TESTING LABORATORY, DIRECTED BY A PROFESSIONAL ENGINEER.
 - BASED UPON THE DRIVING RESULTS OF THE TEST PILES THE ENGINEER WILL SELECT ONE (1) OF THE TEST PILES TO BE SUBJECTED TO A LOAD TEST. COMPRESSION LOAD TEST SHALL BE IN ACCORDANCE WITH ASTM D 1143. TENSION LOAD TEST SHALL BE IN ACCORDANCE WITH ASTM D 3689.
 - BASED UPON THE RESULT OF THE TEST PILE DRIVING AND IN CONJUNCTION WITH THE PILE LOAD TEST RESULTS, THE ENGINEER WILL ESTABLISH THE PRODUCTION PILE DRIVING AND ACCEPTANCE CRITERIA.
 - THE TESTING AGENCY SHALL RECORD RESULTS OF ALL PILES DRIVEN, GIVING PILE HAMMER USE, PILE SIZE, LENGTH AND DRIVING RESISTANCE FOR THE ENTIRE LENGTH OF PILE, RECORDED IN BLOWS PER FOOT. DRIVING RESULTS SHALL BE REPORTED TO THE ENGINEER ON A DAILY BASIS.
 - UPON COMPLETION OF ALL PILE DRIVING, THE CONTRACTOR SHALL FURNISH THE ENGINEER A SURVEY OF AS - DRIVEN PILE LOCATIONS. THE SURVEY SHALL INDICATE THE MISALIGNMENT OF EACH PILE IN TWO PERPENDICULAR DIRECTIONS, GIVEN IN INCHES, AND THE ACTUAL CUT-OFF ELEVATION OF EACH PILE.

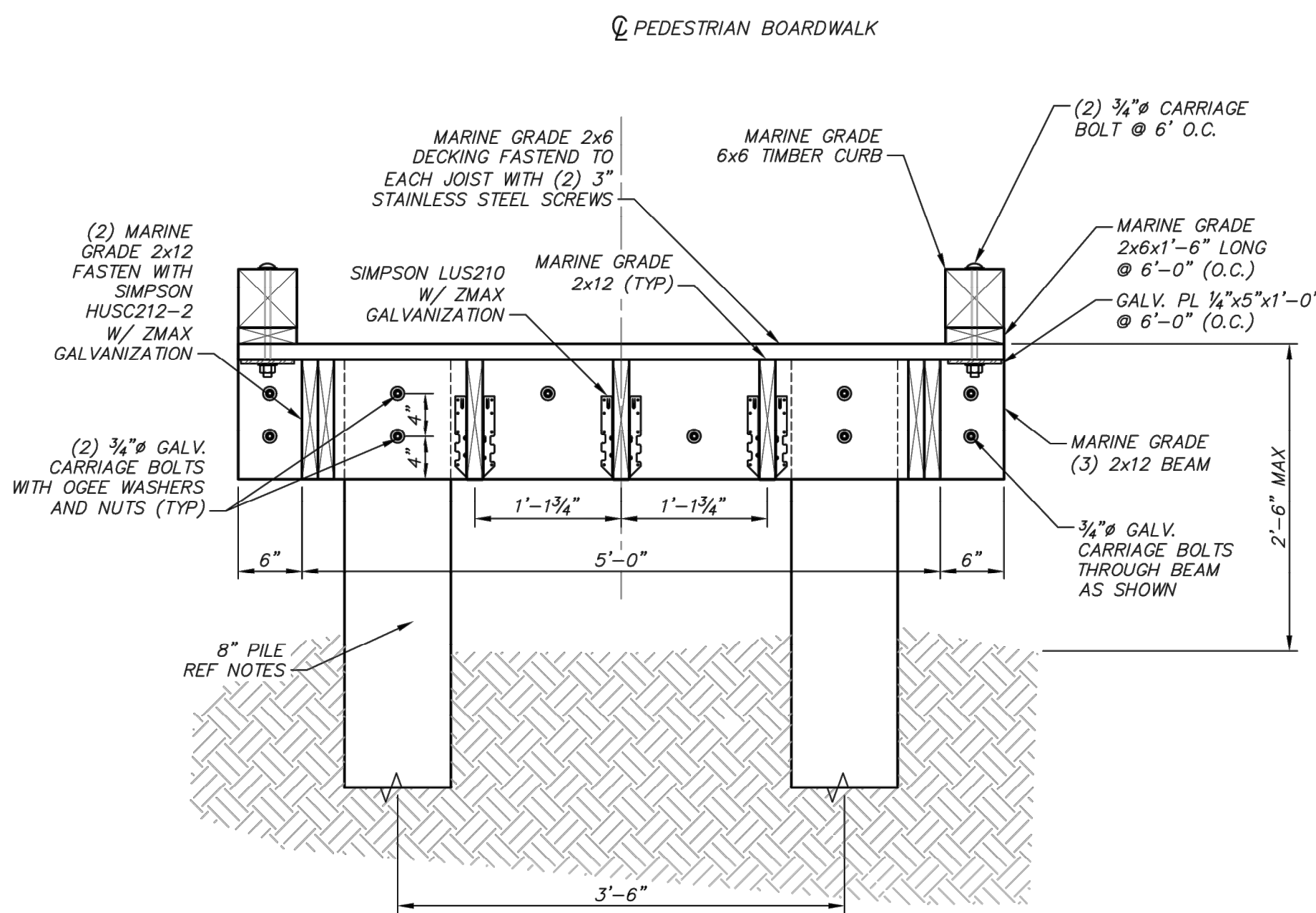


- FRAMING NOTES:**
- MAXIMUM PILE SPACING IS 8' O.C. AND NOT TO BE EXCEEDED. ADJUST BENT LAYOUT IN FIELD AS NEEDED TO MINIMIZE ROOT DISTURBANCE OF ADJACENT EXISTING TREES.
 - ALL BRIDGE MATERIAL SHALL BE MARINE GRADE SYP.
 - FASTENERS SHALL BE SIMPSON STRONG-TIE ZMAX GALVANIZED OR EQUAL.
 - HEIGHT FROM FINISH GRADE TO BRIDGE DECK SHALL NOT EXCEED 2'-6".

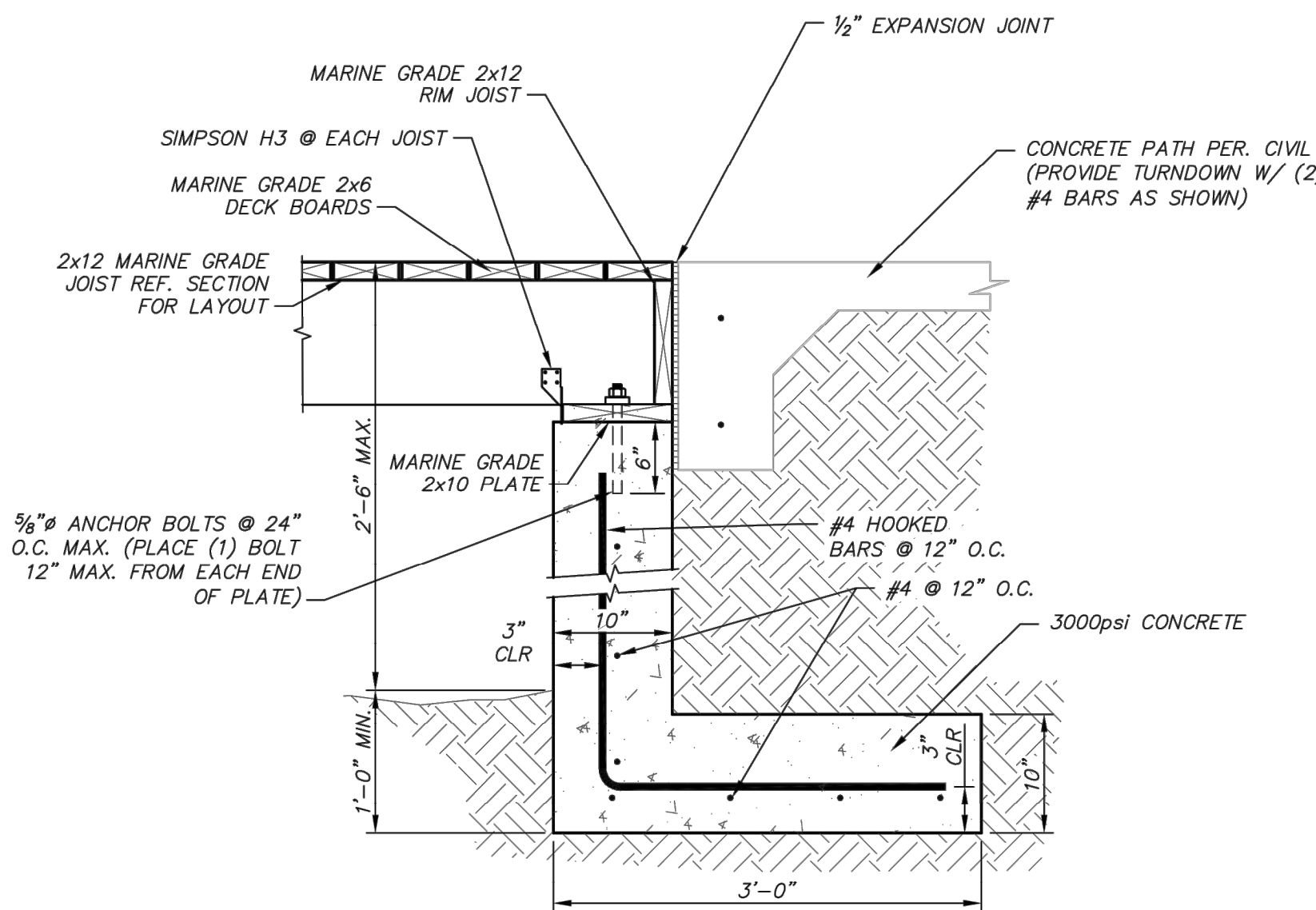
1 BRIDGE PLAN
SCALE: 1/4" = 1'-0"



4 SECTION THROUGH PILE
NOT TO SCALE



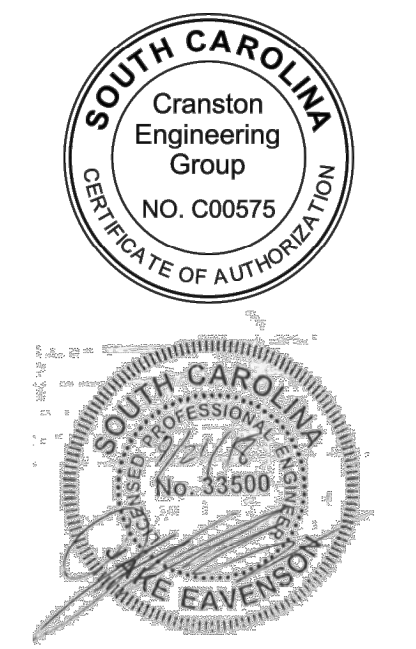
2 BOARDWALK SECTION
NOT TO SCALE



3 BRIDGE TO PATH ABUTMENT
NOT TO SCALE

- DIMENSIONAL LUMBER FRAMING**
- ALL STRUCTURAL LUMBER DESIGN SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS-2012).
 - 8" DIAMETER WOOD PILES ARE TO BE SOUTHERN YELLOW PINE MEETING ASTM D25, WITH PENTACHLOROPHENOL PRESERVATIVE TREATMENT IN ACCORDANCE WITH AWP STANDARDS P9 AND C3, 0.60 PCF MINIMUM RETENTION.
 - ALL SITE LUMBER TO BE SOUTHERN YELLOW PINE, GRADE #1, AWPB LP-22, MARINE GRADE PRESSURE TREATED.
 - CONNECTORS INDICATED ARE SIMPSON STRONG TIE INC. USE ONLY SIMPSON HARDWARE TO ATTACH SIMPSON CONNECTORS.
 - ALL FASTENERS ARE TO BE HOT DIPPED GALVANIZED.
 - SEAL ALL WOOD MEMBERS WITH SEMI-TRANSPARENT LATEX BASE STAIN AS MANUFACTURED BY BEHR, GLIDDEN OR EQUAL UPON COMPLETION OF CARPENTRY WORK.
 - DECK BOARDS TO BE PLACED "BARK SIDE UP".
 - THE CONTRACTOR SHALL CAREFULLY SELECT LUMBER TO BE USED IN LOAD BEARING APPLICATIONS. THE LENGTH OF SPLIT ON THE WIDE FACE OF 2" NOMINAL LOAD BEARING FRAMING SHALL BE LIMITED TO LESS THAN 1/2 OF THE WIDE FACE DIMENSION. THE LENGTH OF SPLIT ON THE WIDE FACE OF 3" (NOMINAL) AND THICKER LUMBER SHALL BE LIMITED TO 1/2 OF THE NARROW FACE DIMENSIONS.
 - NO CUTS, HOLES, OR COPES IN STRUCTURAL WOOD FRAMING SHALL BE PERMITTED WITHOUT PRIOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER.
 - STRUCTURAL STEEL PLATE CONNECTORS SHALL CONFORM TO ASTM A 36 SPECIFICATIONS AND BE 1/4" THICK UNLESS OTHERWISE INDICATED. BOLTS CONNECTING WOOD MEMBERS SHALL BE PER ASTM A 307 AND BE 3/4" DIAMETER UNLESS OTHERWISE INDICATED. PROVIDE WASHERS FOR ALL BOLT HEADS AND NUTS IN CONTACT WITH WOOD SURFACES.
 - BOLT HOLES SHALL BE CAREFULLY CENTERED AND DRILLED NOT MORE THAN 1/16" LARGER THAN THE BOLT DIAMETER. BOLTED CONNECTIONS SHALL BE SNUGGED TIGHT BUT NOT TO THE EXTENT OF CRUSHING WOOD UNDER WASHERS. HOLES AND NOTCHES DRILLED OR CUT INTO WOOD FRAMING SHALL NOT EXCEED THE REQUIREMENTS OF IBC, SECTION 23.
 - ALL PLATES, ANCHORS, NAILS, BOLTS, NUTS, WASHERS, AND OTHER MISCELLANEOUS HARDWARE SHALL BE HOT DIP GALVANIZED UNO.
 - ADEQUATE BRACING SHALL BE PROVIDED UNTIL PERMANENT BRACING ARE INSTALLED.
 - WOOD FRAMING MATERIALS:
A. ALL BOLTS SHALL BE ASTM A307 WITH WASHERS, GALVANIZED
B. NAILS IN ACCORDANCE WITH MINIMUM NAILING REQUIREMENTS OF IBC EXCEPT WHERE NOTED IN DETAILS OR SPECIFICATIONS. ALL NAILS TO BE GALVANIZED.
C. ALL DIMENSIONAL LUMBER SHALL BE #1 SYP KD OR BETTER AND PROVIDE NOT LESS THAN THE FOLLOWING ALLOWABLE STRESSES:

CRANSTON ENGINEERING
ENGINEERS - PLANNERS - SURVEYORS
14 Westburg Park Way, Suite 202
Bluffton, SC 29910
Telephone 843-815-3191
CranstonEngineering.com



REV.	DATE	ISSUED FOR PERMIT	DESCRIPTION
0	09-21-2018		

BUCK ISLAND- SIMMONSVILLE NEIGHBORHOOD PEDESTRIAN BRIDGE BLUFFTON, S.C.
FOUNDATION PLAN

DRAWN BY:	JTB
CHECKED BY:	JTB
APPROVED BY:	JRE
DATE:	09-21-2018
SCALE:	AS SHOWN
JOB No.	2018-0438
DRAWING No.	S100

G:\AA-ACTIVE JOB FILES\2018\2018-0438 - PEDESTRIAN BRIDGE - BLUFFTON\AC-DRAWINGS\STRUCTURAL\20180438_PEDESTRIAN_BRIDGE.DWG 9/21/2018 4:47 PM