

2024-03-14 DRG,LLC ©

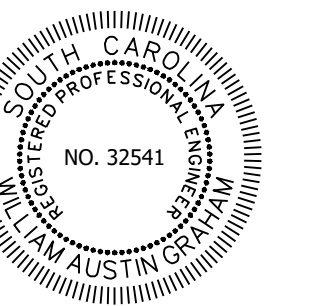
CCU - SCIENCE COMPLEX SIDEWALK

FOR

COASTAL CAROLINA UNIVERSITY



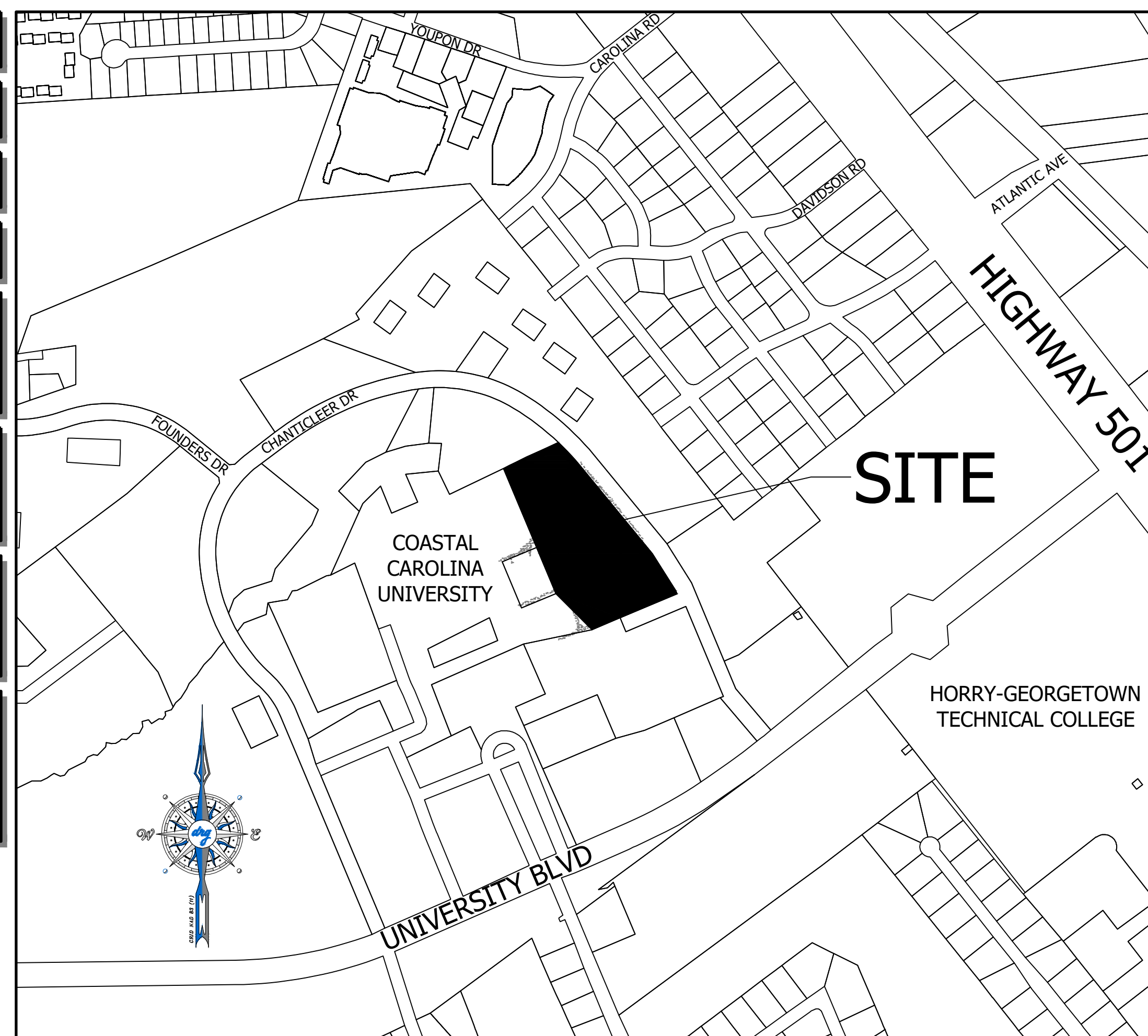
DEVELOPMENT RESOURCE GROUP, LLC
4703 OLEANDER DRIVE
MYRTLE BEACH, SC 29577
843-839-3350 | DRGPLLC.COM



PROJECT SUMMARY

| | |
|---|----------------|
| HORIZONTAL DATUM : NAD 83 | |
| VERTICAL DATUM : NAVD 88 | |
| BENCHMARK : XX | |
| NPDES PERMIT : XX | |
| PARCEL PIN #(S) : | 383-08-03-0019 |
| TOTAL PROJECT AREA = | 0.52 ACRES |
| THIS PROPERTY IS LOCATED IN FLOOD ZONE "X" AS SCALED FROM F.I.R.M. No. 45051C0702 H, DATED AUGUST 23, 1999, THIS PLAT IS NOT THE BASIS FOR FLOOD ZONE DETERMINATION OR FLOOD ZONE RELATED ISSUES. | |
| CONTRACTOR SHALL BE KNOWLEDGEABLE WITH LOCAL, CITY, COUNTY, STATE, AND FEDERAL REGULATIONS AS THEY MAY PERTAIN TO THIS PROJECT AND SHALL ADHERE TO THESE REGULATIONS. | |
| INFORMATION REGARDING THE PRESENCE, SIZE, CHARACTER, AND LOCATION OF ANY UNDERGROUND UTILITY AND/OR STRUCTURE SHOWN ON THIS PLAN IS APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE ALL UNDERGROUND UTILITIES LOCATED. | |

SITE LOCATION
COASTAL CAROLINA
UNIVERSITY
CONWAY, SC



LOCATION MAP / VICINITY MAP
SCALE 1" = 400'

SHEET TABLE

| SHEET NUMBER | SHEET TITLE |
|--------------|----------------------|
| C1.0 | COVER SHEET |
| C2.0 | GENERAL NOTES |
| C3.0 | EXISTING CONDITIONS |
| C4.0 | SITE PLAN |
| C5.0 | EROSION CONTROL PLAN |
| C6.0 | DETAILS |

COVER SHEET
CCU - SCIENCE COMPLEX SIDEWALK

PREPARED FOR:
COASTAL CAROLINA UNIVERSITY
PO BOX 281954
CONWAY, SC 29628
PHONE NUMBER

PLANS FOR CONSTRUCTION

| | |
|--------------|-----------|
| JOB NO: | 23.185 |
| SCALE: | 1" = 400' |
| DRAFTED BY: | WLB |
| DESIGNED BY: | WAG |
| APPROVED BY: | WAG |
| DATE: | 3/14/2024 |

SHEET NUMBER:

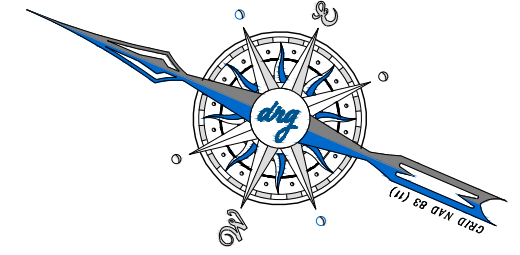
C1.0



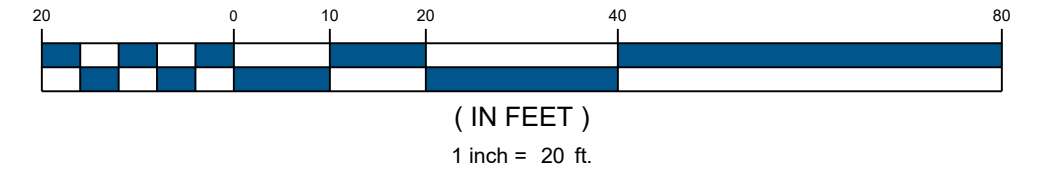
Know what's below.
Call before you dig.

P:23185 - CCU - SCIENCE COMPLEX SIDEWALK DESIGN DRAWINGS 23185 MASTER.DWG

P:23185 - CCU - SCIENCE COMPLEX SIDEWALKS DRAWINGS 23185 BASE DWG



GRAPHIC SCALE



NOTE:
1. CONTRACTOR SHALL BE AWARE OF UTILITIES (DOMESTIC WATER, CHILLED WATER-SUPPLY/RETURN, GAS, FIBER, PRIVATE TELECOMMUNICATIONS) THAT RUN UNDER EXISTING PERVIOUS CONCRETE DRIVE. DEPTH OF EACH UTILITY VARIES. CONTRACTOR SHALL TAKE SPECIAL CARE WHEN REMOVING EXISTING PAVEMENT TO NOT DAMAGE EXISTING UTILITIES.

CHANTICLEER DRIVE EAST
(PRIVATE R/W, WIDTH VARIES)

ARMY ROTC

UNNAMED DITCH

SCIENCE CENTER
ANNEX II

CENTRAL
ENERGY
PLANT

SWAIN SCIENCE
ANNEX



DEVELOPMENT RESOURCE GROUP, LLC
4703 OLEANDER DRIVE
MYRTLE BEACH, SC 29577
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EXISTING CONDITIONS

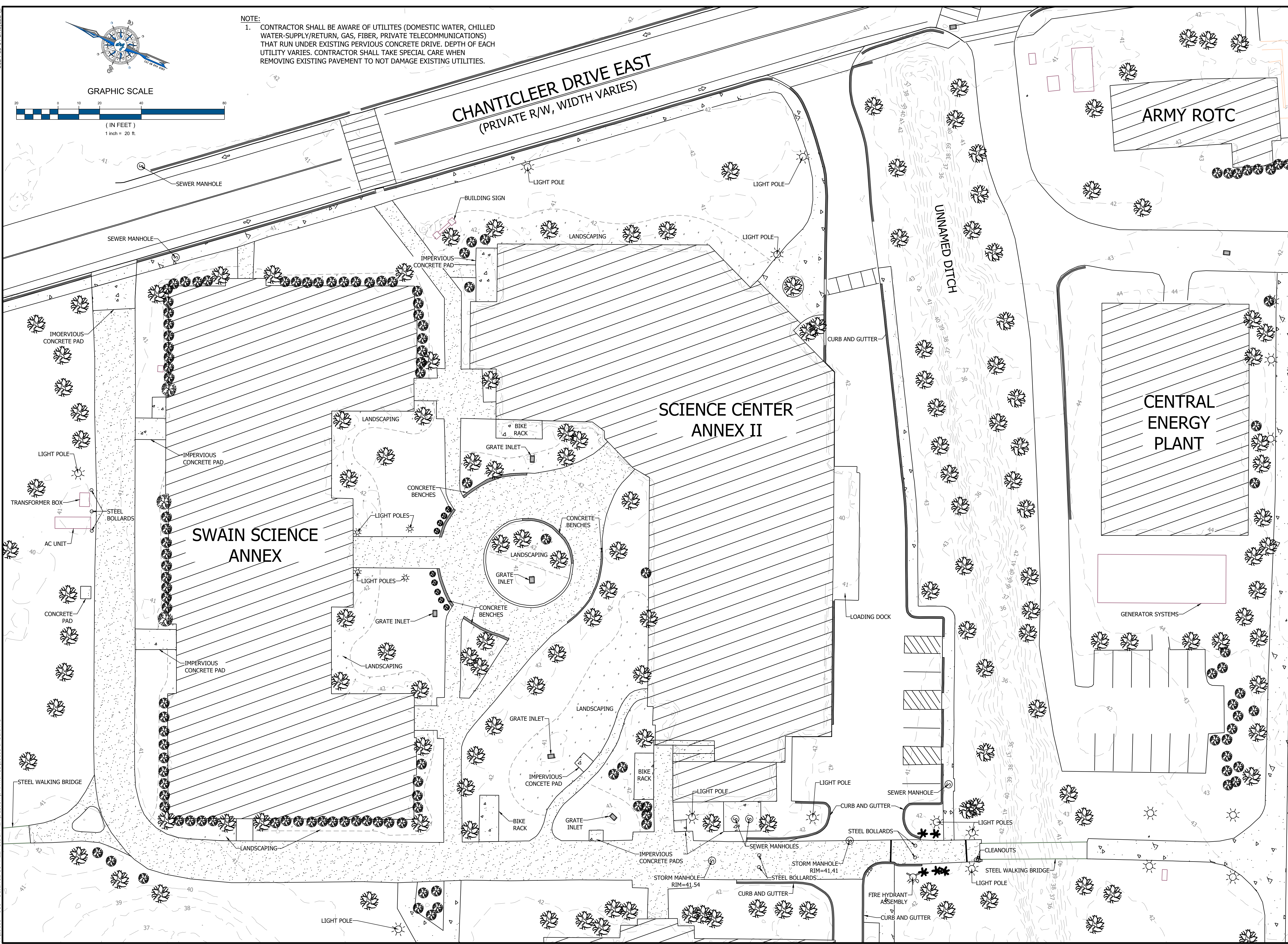
CCU - SCIENCE COMPLEX SIDEWALK

PREPARED FOR:
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PO BOX 261954
CONWAY, SC 29628
PHONE NUMBER

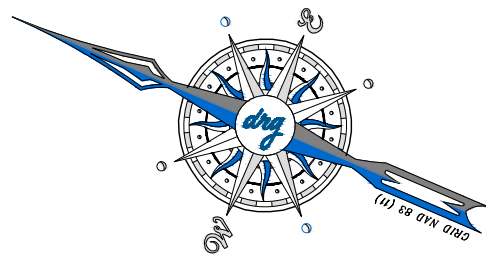
PLANS FOR CONSTRUCTION

| | |
|---------------|-----------|
| JOB NO: | 23.185 |
| SCALE: | 1" = 20' |
| DRAFTED BY: | WLB |
| DESIGNED BY: | WAG |
| APPROVED BY: | WAG |
| DATE: | 3/14/2024 |
| SHEET NUMBER: | |

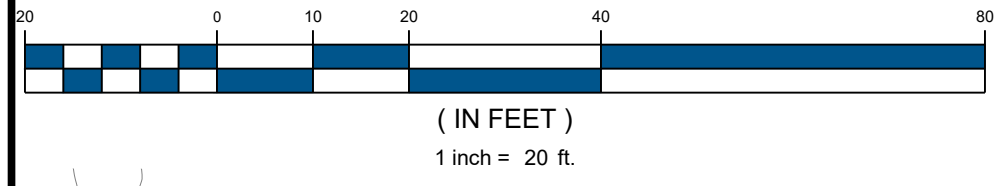
C3.0



P: 23185 - CCU - SCIENCE COMPLEX SIDEWALKS 23185 MASTER.DWG



GRAPHIC SCALE



NOTE:

1. CONTRACTOR SHALL BE AWARE OF UTILITIES (DOMESTIC WATER, CHILLED WATER-SUPPLY/RETURN, GAS, FIBER, PRIVATE TELECOMMUNICATIONS) THAT RUN UNDER EXISTING PERVIOUS CONCRETE DRIVE. DEPTH OF EACH UTILITY VARIES. CONTRACTOR SHALL TAKE SPECIAL CARE WHEN REMOVING EXISTING PAVEMENT TO NOT DAMAGE EXISTING UTILITIES. CURBING DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT CONTRACTORS EXPENSE. DETAIL PROVIDED FOR INFORMATIONAL PURPOSES ONLY.
- 2.

CHANTICLEER DRIVE EAST
(PRIVATE R/W, WIDTH VARIES)

ARMY ROTC

SCIENCE CENTER ANNEX II

CENTRAL ENERGY PLANT

SWAIN SCIENCE ANNEX

TIE INTO EXISTING IMPERVIOUS CONCRETE PAD
PROTECT EXISTING PAD DURING CONSTRUCTION

PROTECT EXISTING RIBBON CURB AT OUTER BORDER

DEMO EXISTING PERVIOUS CONCRETE
REPLACE WITH IMPERVIOUS CONCRETE
(SEE DETAIL)

TIE INTO EXISTING IMPERVIOUS CONCRETE SIDEWALK
PROTECT EXISTING SIDEWALK DURING CONSTRUCTION

PROTECT EXISTING LIGHTPOLE DURING CONSTRUCTION

PROTECT EXISTING BOLLARDS, AC UNIT, & TRANSFORMER

PROTECT EXISTING IMPERVIOUS CONCRETE PAD DURING CONSTRUCTION

INSTALL 5' RADIUS FILET AT EACH WALK CONNECTION (TYP)

TIE INTO EXISTING IMPERVIOUS CONCRETE SIDEWALK
PROTECT EXISTING SIDEWALK DURING CONSTRUCTION

PROTECT EXISTING RIBBON CURB AT OUTER BORDER

TIE INTO EXISTING BUILDING

REMOVE EXISTING RING AND COVER
REPLACE WITH NEW RING AND EAST JORDAN 1480M1 GRATE
EX. RIM=41.41
PROPOSED RIM=41.20
GRADE ±20' ALL DIRECTIONS

TIE INTO EXISTING IMPERVIOUS CONCRETE ROADWAY
PROTECT EXISTING ROADWAY DURING CONSTRUCTION

REMOVE AND REPLACE EXISTING BOLLARDS

TIE INTO EXISTING SIDEWALK
PROTECT EXISTING SIDEWALK DURING CONSTRUCTION

TIE INTO EXISTING BRIDGE LANDING
PROTECT BRIDGE DURING CONSTRUCTION

TIE INTO EXISTING BRIDGE LANDING
PROTECT BRIDGE DURING CONSTRUCTION

DEMO EXISTING PERVIOUS CONCRETE
REPLACE WITH IMPERVIOUS CONCRETE
(SEE DETAIL)

PROTECT EXISTING CONCRETE PADS DURING CONSTRUCTION

REMOVE AND REPLACE EXISTING BOLLARDS

PROTECT EXISTING HYDRANT DURING CONSTRUCTION

PROTECT EXISTING LIGHTPOLE DURING CONSTRUCTION

TIE INTO EXISTING BUILDING

PROTECT EXISTING RIBBON CURB AT OUTER BORDER

TIE INTO EXISTING SIDEWALK
PROTECT EXISTING SIDEWALK DURING CONSTRUCTION

TIE INTO EXISTING SIDEWALK
PROTECT EXISTING SIDEWALK DURING CONSTRUCTION

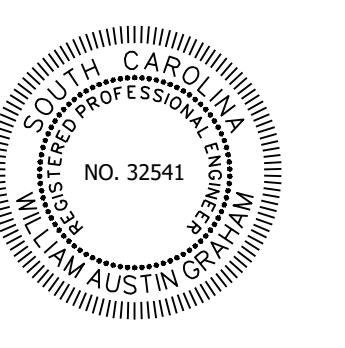
TIE INTO EXISTING BUILDING

CONSTRUCT SIDEWALK FLUSH WITH MANHOLE
PROTECT EXISTING MANHOLE DURING CONSTRUCTION

TIE INTO EXISTING CURB
PROTECT EXISTING CURB DURING CONSTRUCTION



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843-839-3350 | DRGPLLC.COM



SITE PLAN
CCU - SCIENCE COMPLEX SIDEWALK

PREPARED FOR:
COASTAL CAROLINA UNIVERSITY
PO BOX 261954
CONWAY, SC 29628
PHONE NUMBER

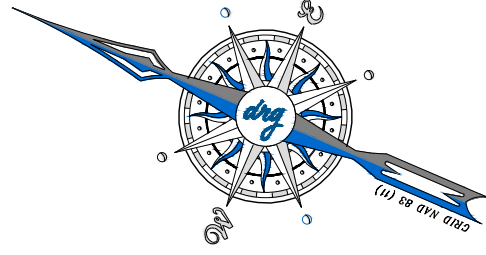
PLANS FOR CONSTRUCTION

| | |
|--------------|-----------|
| JOB NO: | 23.185 |
| SCALE: | 1" = 20' |
| DRAFTED BY: | WLB |
| DESIGNED BY: | WAG |
| APPROVED BY: | WAG |
| DATE: | 3/14/2024 |

SHEET NUMBER:

C4.0

2024-03-14 DRG, LLC



GRAPHIC SCALE



(IN FEET)

1 inch = 20 ft.

NOTE:

- CONTRACTOR SHALL BE AWARE OF UTILITIES (DOMESTIC WATER, CHILLED WATER-SUPPLY/RETURN, GAS, FIBER, PRIVATE TELECOMMUNICATIONS) THAT RUN UNDER EXISTING PERVIOUS CONCRETE DRIVE. DEPTH OF EACH UTILITY VARIES. CONTRACTOR SHALL TAKE SPECIAL CARE WHEN REMOVING EXISTING PAVEMENT TO NOT DAMAGE EXISTING UTILITIES.

CHANTICLEER DRIVE EAST
(PRIVATE R/W, WIDTH VARIES)

ARMY ROTC

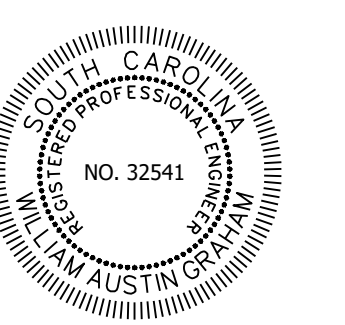
SCIENCE CENTER ANNEX II

SWAIN SCIENCE ANNEX

CENTRAL ENERGY PLANT



DEVELOPMENT RESOURCE GROUP, LLC
4703 OLEANDER DRIVE
MYRTLE BEACH, SC 29577
843-839-3350 | DRGPLLC.COM



EROSION CONTROL PLAN

CCU - SCIENCE COMPLEX SIDEWALK

PREPARED FOR:
COASTAL CAROLINA UNIVERSITY
PO BOX 261954
CONWAY, SC 29528
PHONE NUMBER

PLANS FOR CONSTRUCTION

JOB NO: 23.185
SCALE: 1" = 20'
DRAFTED BY: WLB
DESIGNED BY: WAG
APPROVED BY: WAG
DATE: 3/14/2024

SHEET NUMBER:

C5.0

| PLAN LEGEND | |
|-------------|--|
| — SF — | SILT FENCE (SEE DETAIL) |
| [Symbol] | CONCRETE WASHOUT (SEE DETAIL) |
| [Symbol A] | TYPE A INLET PROTECTION (FABRIC & STAKES - SEE DETAIL) |
| [Symbol B] | TYPE B INLET PROTECTION (BLOCKSOM - SEE DETAIL) |
| [Symbol FF] | TYPE FF INLET PROTECTION (FILTER FABRIC - SEE DETAIL) |
| [Symbol] | EQUIPMENT FUELING AND MAINTENANCE AREA (SEE DETAIL) |
| [Symbol] | CLEARING & GRUBBING |
| [Symbol SW] | STREET SWEEPING |
| [Symbol TS] | TEMPORARY SEEDING |
| [Symbol PS] | PERMANENT SEEDING |

P:23185 - CCU - SCIENCE COMPLEX SIDEWALKS DRAWINGS/23185 MASTER.DWG

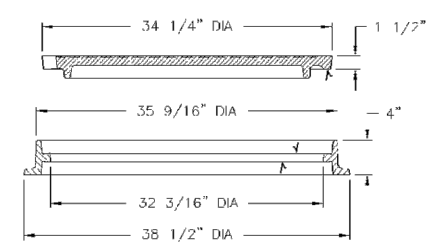
2024-03-14 DRG, LLC © P: 23185 - CCU - SCIENCE COMPLEX SIDEWALKS/23185 MASTER.DWG

Access Covers, Grates, and Frames

Manhole Frames and Covers

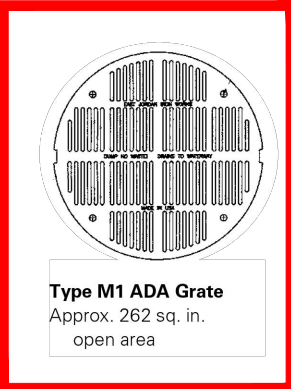
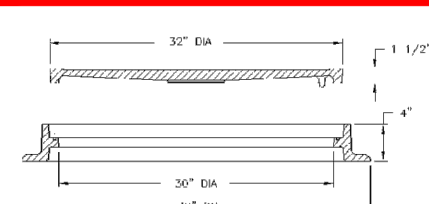
1475 FRAME & COVER

Heavy duty
Machined bearing surfaces
Reversible frame



1480 FRAME & COVER

Heavy duty
Machined bearing surfaces
Reversible frame



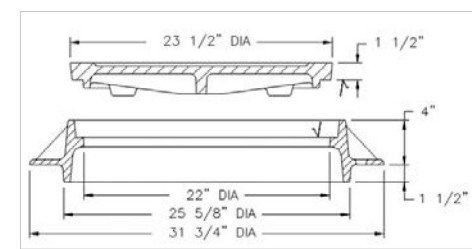
| Catalog Number | Base Flange Diameter | Frame Height |
|----------------|----------------------|--------------|
| T480* | 38 | 4 |
| V-1420 | 4 3/4 | 4 1/2 |
| V-1432 | 40 1/4 | 4 7/8 |
| 1322 | 40 | 6 1/2 |
| 1320 | 46 | 6 1/2 |
| 1324 | 45 1/2 | 7 |
| V-1419 | 42 | 8 1/2 |
| V-1816** | 40 3/4 | 4 1/2 TF |
| 2810** | 38 | 4 TF |

Note: All dimensions are in inches.
*Reversible frame
**Top flange only



V-1480 FRAME & COVER

Heavy duty
Machined bearing surfaces



Supplied By:
TRENCH SUPPLY
877-903-7246
www.trenchdrainsupply.com

76

SPECIFICATIONS

MATERIAL
The B-1, 6" bollard shall be fabricated with 5" sch. 10 steel pipe (5.56" OD), 2 ea. 2 inch and 1 ea. 3" wide decorative collars (6.62" OD) and a schedule 40 weld cap all fully welded. Steel shall conform to ASTM A53.

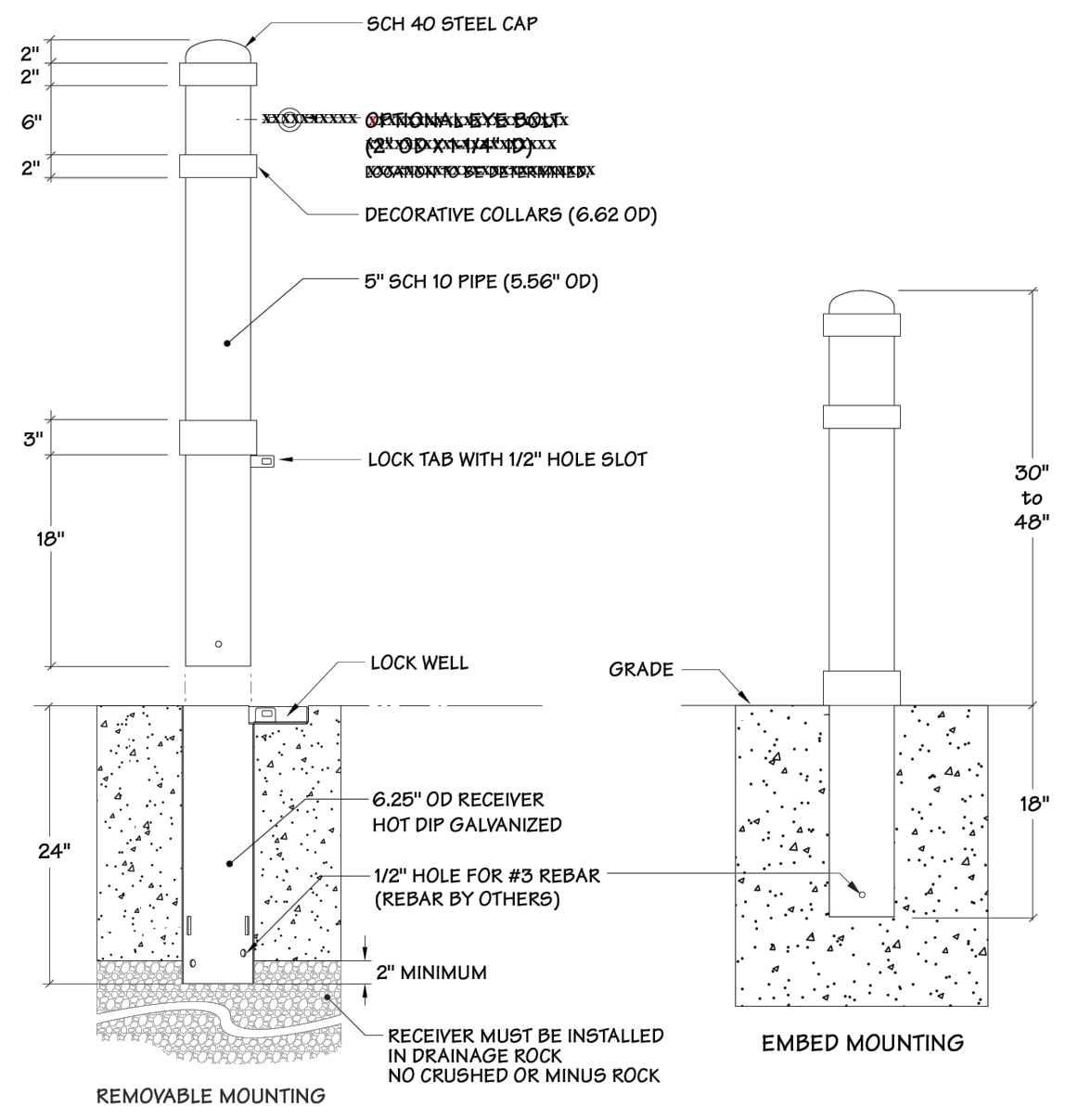
PROTECTIVE COATINGS
Powder Coating: Following fabrication bollards shall be cleaned and treated with an iron phosphate process prior to the coating application. The protective coatings shall be either polyester or polyester TGIC powder. Following application the parts shall be baked until properly cured. The coating shall be a minimum of 4 mils thick on all surfaces.
Options for finish: Corrosion resistant; undercoat, strongly recommended.

Hot Dip Galvanizing on Receivers: Following fabrication, the receivers shall be hot dip galvanized to standard ASTM A123, 3 to 4 mils thick.

NOTE: Unless otherwise specified, bollards shall be powder coated a standard FairWeather color.

Options: Sch 40 or Sch 80 pipe, eye bolts, rivets on removable bollards; receiver cover; lock well cover and padlock.
Mounting: Surface, removable or embed

NOTE: 1. Depth and diameter of installation hole may vary with soil conditions. Consult project engineer for correct dimensions.
REMOVABLE BOLLARDS ONLY: Receiver must be installed in drainage rock. No crushed or minus rock. Due to soil conditions the amount of drainage needed could vary from as little as 8 inches to 2 feet or more. Improper installation will void the warranty



REV 9-11-12

Model B-1, 6" Bollards with Collars

FairWeather Site Furnishings

360-895-2626 or Toll Free 800-323-1798
Port Orchard, Washington

©1999-2011 Leader International Corporation, FairWeather Site Furnishings division
Notes: These products are proprietary. Numerous designs are patented or patent pending under Leader Manufacturing, Inc.

SPECIFICATIONS

MATERIAL
The 4" in ground receiver, shall be fabricated with 4-1/2" OD steel sleeve welded to a 3" x 5" lockwell.
The 6" in ground receiver, shall be fabricated with 6-1/4" OD steel sleeve welded to a 3" x 5" lockwell.
The 8" in ground receiver, shall be fabricated with 8-1/8" OD steel sleeve welded to a 3" x 5" lockwell.

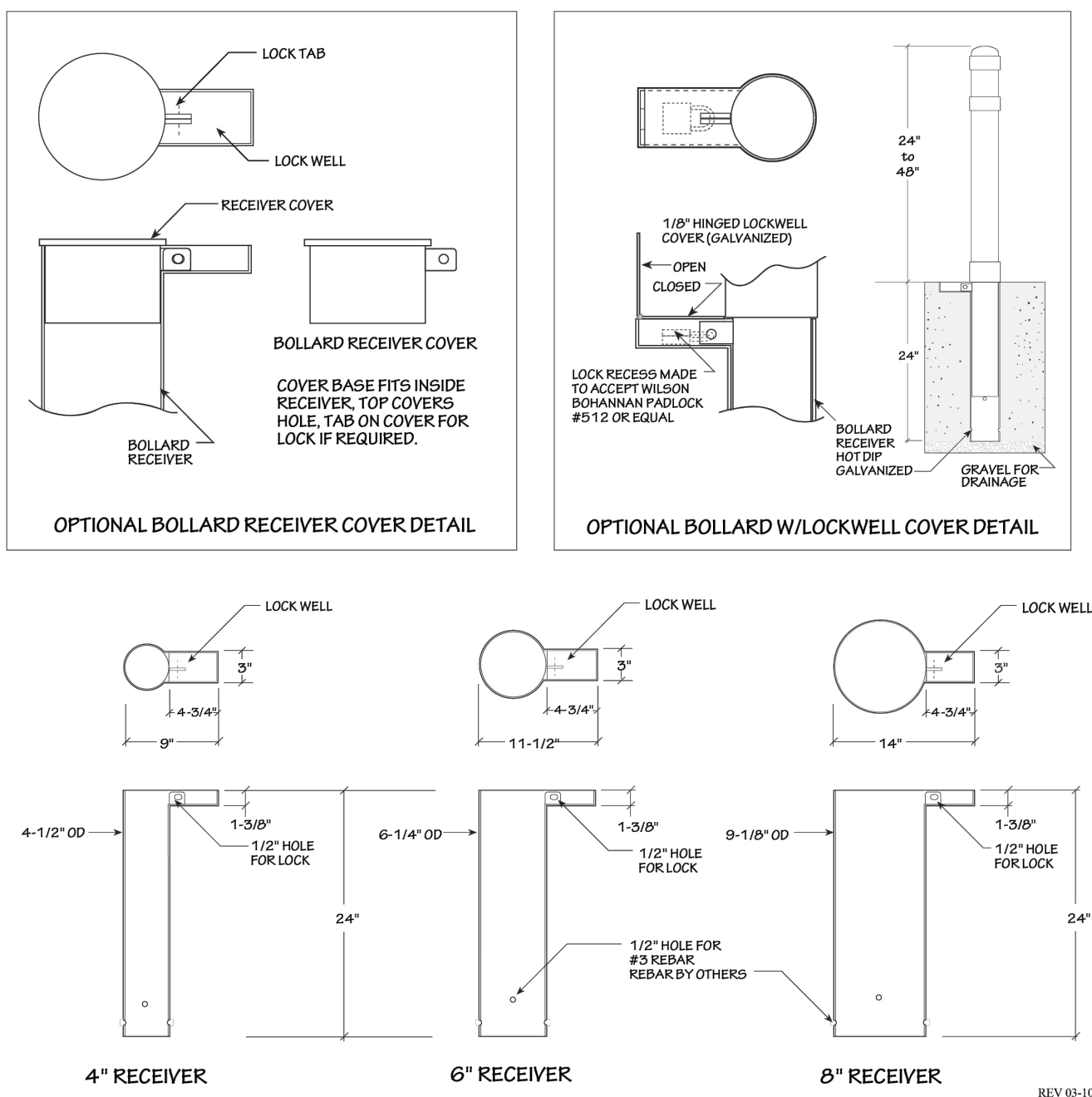
The lock recess is made to accept Wilson Bohannon solid brass padlock #512 or equal. A 1/2" hole will be provided for the lock. The receiver will have a 1/2" hole for #3 rebar if required. The rebar will be supplied by others. The receiver should be installed with the top of the receiver and lock recess flush with the finish grade.

PROTECTIVE COATINGS
Hot Dip Galvanizing: Following fabrication the receiver, covers and lockwell covers shall be hot dip galvanized to standard ASTM A123, 3 to 4 mils thick.

Options:
Bollard receiver cover, lockwell cover

NOTE: 1. Depth and diameter of installation hole may vary with soil conditions. Consult project engineer for correct dimensions.

2. Receiver must be installed over rock pocket for drainage. Due to soil conditions the amount of drainage needed could vary from as little as 4 inches to 2 feet or more. Failure to use adequate drainage can allow the receiver to fill with water making the bollard hard to remove and replace. Inadequate drainage can also cause the bollard to freeze in place and possibly bow out the base which can cause the powder coating to pop off at the base. Improper installation will void the warranty



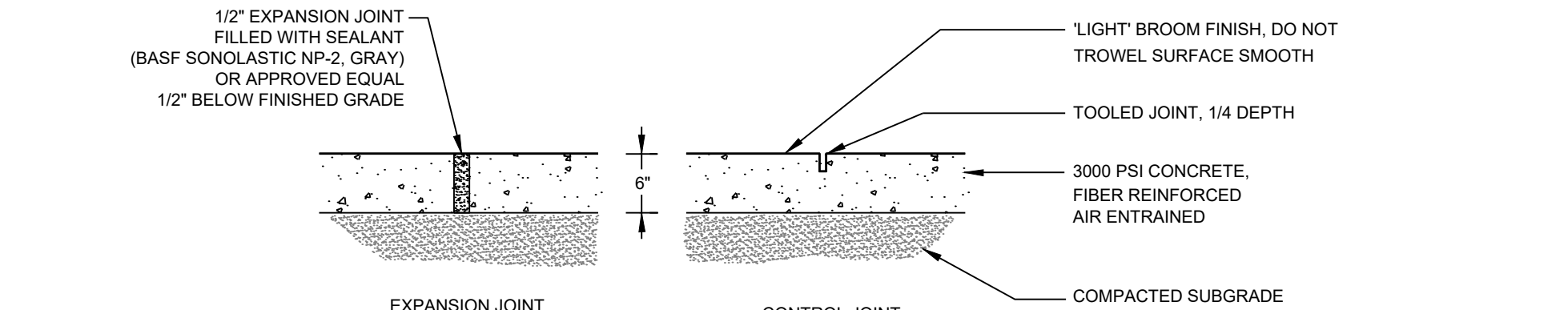
REV 09-10-15

Receivers for 4", 6" and 8" Bollards

FairWeather Site Furnishings

360-895-2626 or Toll Free 800-323-1798
Port Orchard, Washington

©1999-2011 Leader International Corporation, FairWeather Site Furnishings division
Notes: These products are proprietary. Numerous designs are patented or patent pending under Leader Manufacturing, Inc.

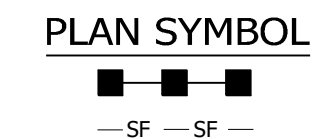
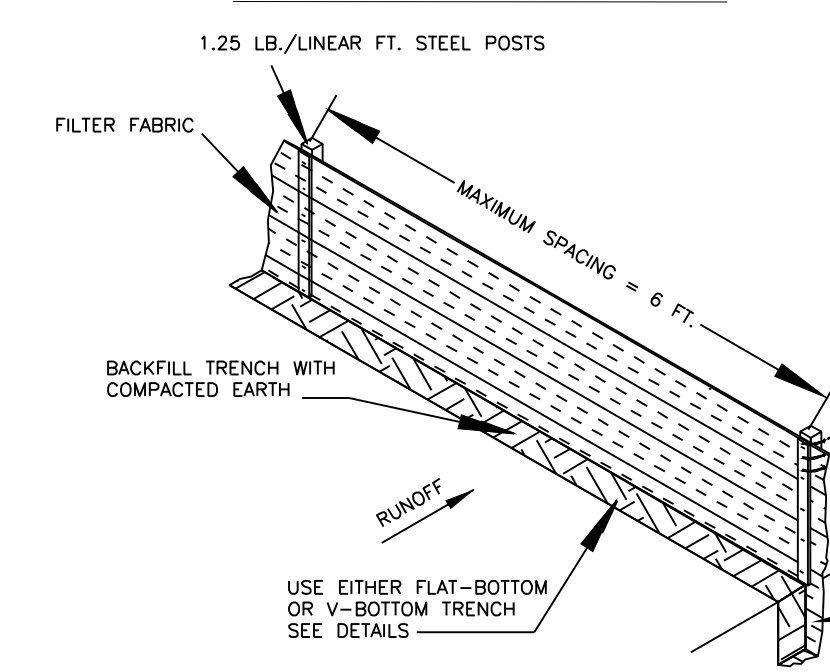


NOTES

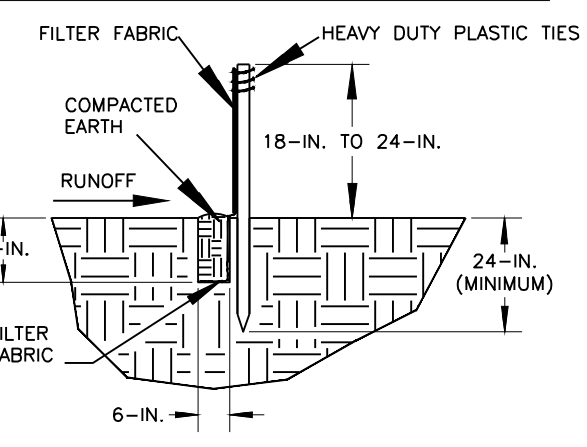
- CONCRETE SHALL BE FIBER REINFORCED, AIR ENTRAINED, AND SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. MAXIMUM AGGREGATION SIZE SHALL BE 1/2" DIAMETER.
- CONTROL JOINTS SHALL BE PLACED AT 5' O.C. MAX. EXPANSION JOINTS SHALL BE PLACED AT 30' O.C. MAX.
- ALL SIDEWALK'S CROSS SLOPE TO BE MIN 1.0% AND 2.0% MAXIMUM.
- ALL SIDEWALK SHALL BE 5' WIDE, UNLESS NOTED OTHERWISE

| | |
|---------------------------------|----------|
| CONCRETE SIDEWALK | DRG |
| C.R.B. | N.T.S. |
| | 08/27/23 |
| DEVELOPMENT RESOURCE GROUP, LLC | |

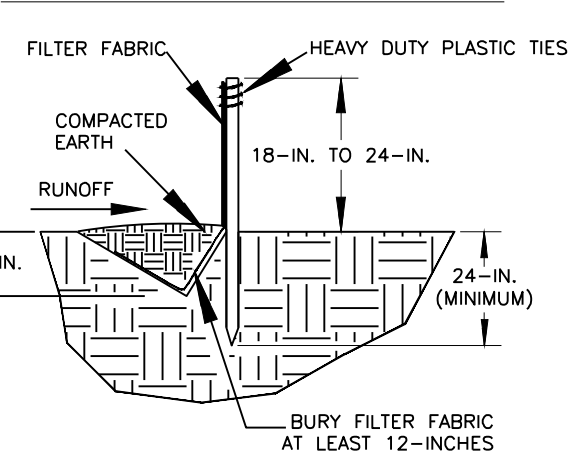
SILT FENCE INSTALLATION



FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL



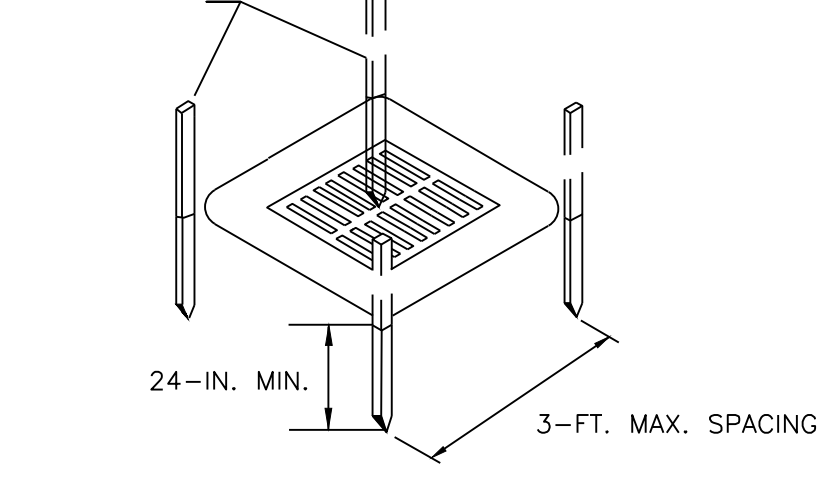
SILT FENCE - GENERAL NOTES

- 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 overland 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.

South Carolina Department of Health and Environmental Control

| | |
|----------------------|-------------------|
| SILT FENCE | |
| STANDARD DRAWING NO. | SC-03 Page 1 of 2 |
| NOT TO SCALE | |
| FEBRUARY 2014 | DATE |

2-IN. X 2-IN. WOOD POSTS OR 1.25 LB./LINEAR FT. STEEL POSTS

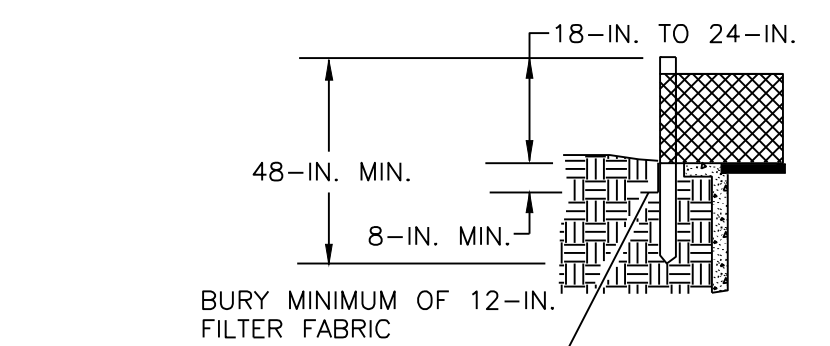


POST INSTALLATION DETAIL

ATTACH FILTER FABRIC TO POSTS WITH STAPLES OR TIES SPACED 6-IN. APART MAX.

FOLD FABRIC TO OVERLAP 6 INCHES AND SECURE TO POSTS WITH STAPLES OR WIRE TIES

FILTER FABRIC INSTALLATION DETAIL



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 |
| APPROVED BY: | DATE |

| | |
|---------------------------------|----------|
| RIBBON CURB | |
| C.R.B. | N.T.S. |
| | 08/25/23 |
| DEVELOPMENT RESOURCE GROUP, LLC | |



DEVELOPMENT RESOURCE GROUP, LLC
4703 OLEANDER DRIVE
MYRTLE BEACH, SC 29577
843-839-3350 | DRGLP.LLC.COM



DETAILS
CCU - SCIENCE COMPLEX SIDEWALK

PREPARED FOR:
COASTAL CAROLINA UNIVERSITY
PO BOX 261954
CONWAY, SC 29628
PHONE NUMBER

PLANS FOR CONSTRUCTION

| | |
|--------------|-----------|
| JOB NO: | 23.185 |
| SCALE: | NTS |
| DRAFTED BY: | WLB |
| DESIGNED BY: | WAG |
| APPROVED BY: | WAG |
| DATE: | 3/14/2024 |

SHEET NUMBER:

C6.0