# Cape Fear Community College Lineman Facility New Hanover County, NC

OWNER: Cape Fear Community College 411 Front St. Wilmington, NC 28401

# ENGINEER:

# Coastal Land Design,

PLLC

Civil Engineering / Landscape Architecture Land Planning / Construction Management NCBELS Firm License No: P-0369

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REVIEW AGENCY	APPROVAL DATE	PERMIT NUMBER



<u>SHEET</u>	NAME
COVER C1.0 C1.1 C1.2	CAPE FEAR COMMUNITY GENERAL NOTES GENERAL NOTES GENERAL NOTES
C2.0 C3.0 C4.0 C5.0	EXISTING CONDITIONS & SITE PLAN GRADING & DRAINAGE UTILITY PLAN
C6.0 C7.0 C8.0 C8.1	LANDSCAPE PLAN SITE DETAILS UTILITY DETAILS UTILITY DETAILS
C9.0	ARCHITECTURAL ELEVAT

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## CONSTRUCTION SEQUENCE

PRE-CONSTRUCTION

- 1) OBTAIN ALL NECESSARY PERMITS PRIOR TO ANY CONSTRUCTION ACTIVITIES.
- 2) FIELD VERIFY SITE FOR EXISTING UTILITY ABOVE AND BELOW GROUND AND EXISTING CONDITIONS PRIOR TO COMMENCING THE INSTALLATION OF THE SEDIMENT CONTROL PRACTICES.
- 3) COORDINATE THE TIMING OF ANY IMPACTS TO EXISTING UTILITIES WITHIN THE SITE AND ADJOINING PROPERTIES WITH THE APPROPRIATE REGULATORY AUTHORITIES PRIOR TO COMMENCING WORK.
- 4) THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SEDIMENT-LADEN RUNOFF IS TREATED PRIOR TO BEING DISCHARGED FROM THE SITE AND MAY BE REQUIRED TO PROVIDE ADDITIONAL MEASURES OF SEDIMENT CONTROL BASED UPON THE PERFORMANCE OF EROSION CONTROL MEASURES PROVIDED ON SITE.
- 5) THE CONTRACTOR MAY ALTER THE TIMING OF THE CONSTRUCTION ACTIVITIES PROVIDED IN THIS CONSTRUCTION SEQUENCE ONLY IF ADEQUATE EROSION AND SEDIMENT CONTROL PRACTICES ARE ALWAYS PROVIDED. SHOULD ANY SUBSTANTIAL DEVIATION NEED TO OCCUR THAT WILL SIGNIFICANTLY ALTER THE DESIGN CONDITIONS OF A SEDIMENT CONTROL MEASURE PROVIDED IN THIS PLAN, THE CONTRACTOR MUST CONTACT THE ENGINEER OF RECORD PRIOR TO COMMENCING WITH THE MODIFICATION.

### CONSTRUCTION ACTIVITIES 6) INSTALL ONE CONSTRUCTION ENTRANCE OFF OF EDUCATION LOOP RD.

- 7) LOCATE AND MARK THE LIMIT OF DISTURBANCE. IN SOME LOCATION, THE LIMIT OF DISTURBANCE WILL BE DEFINEED BY SILT FENCE (DOWNSTREAM LIMITS AND AREAS ADJACENT TO SENSITIVE AREAS). IN OTHER AREAS, THE LIMIT OF DISTURBANCE WILL BE AN UPSTREAM LIMIT OF DISTURBANCE OR A GRADING DAYLIGHT.
- 8) INSTALL TREE PROTECTION FENCING AS SHOWN ON THE TREE PROTECTION PLANS.
- 9) INSTALL SEDIMENT FENCING AS SHOWN ON THE PLANS. NOTE THAT SILT FENCE IS NOT TO BE INSTALLED ACROSS ANY POINT OF PROPOSED OR EXISTING CONCENTRATED FLOW (DITCH, PIPE, OR SPILLWAY OUTLETS).
- 10) CLEAR THE PROJECT AREA WITHIN THE LIMIT OF DISTURBANCE.
- 11) ROUGH GRADE THE SITE BASED UPON THE SITE PLANS AND ENSURE THAT DRAINAGE IS DIRECTED TO THE SEDIMENT TREATMENT DEVICE.
- 12) FINE GRADE THE SITE AS NECESSARY TO PROVIDE FINISH GRADE ELEVATIONS AND TO ENSURE PROPER DRAINAGE TO THE STORMWATER COLLECTION SYSTEM AND ESTABLISH APPROPRIATE VEGETATED COVER.

13) AFTER THE SITE IS ADEQUATELY STABILIZED, REMOVE THE SEDIMENT AND EROSION CONTROL DEVICES.

## THROUGHOUT CONSTRUCTION

- 14) SELF-MONITORING AND APPROPRIATE RECORD KEEPING, AND DOCUMENTATION IS REQUIRED AT LEAST ONCE PER 7 CALENDAR DAYS AND WITHIN 24-HOURS OF A ONE-INCH RAINFALL EVENT IN 24 HOURS. THESE REPORTS, A RAIN GAUGE, AND COPIES OF THE APPROVED PLAN AND PERMIT SHALL REMAIN ON SITE FOR THE DURATION OF CONSTRUCTION.
- 15) DENUDED AREAS MUST BE STABILIZED BASED UPON THE GROUND STABILIZATION REQUIREMENTS PROVIDED IN THE PLANS. THESE STABILIZATION TIMELINES VARY FOR THE TYPE AND SIZE OF AREA DISTURBED.
- 16) INSPECT AND MAINTAIN ALL EROSION CONTROL DEVICES EVERY 7 DAYS AND AFTER EACH RAINFALL EVENT. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY. TOP DRESS TEMPORARY SEEDING WITH 50 POUNDS PER ACRE NITROGEN IN MARCH. IF COVER IS NEEDED THROUGH THE FOLLOWING SUMMER, OVERSEED WITH 50 POUNDS PER ACRE OF KOBE LESPEDEZA. MOWING OF GRASSED AREAS SHALL BE ACCOMPLISHED ACCORDING TO THE SEASON. MAXIMUM UNMOWN HEIGHT OF GRASS AT ANY TIME WILL BE 6-INCHES.
- 17) PERMANENT GRASS SHALL BE INSTALLED FOR AREAS AT FINAL GRADE AND IN SEASON. FERTILIZE, WATER AND RESEED TO ESTABLISH A VIGOROUS STAND OF GRASS.
- 18) AFTER COMPLETION OF CONSTRUCTION WITHIN ANY PHASE, AND THE PHASE IS PROPERLY STABILIZED, REMOVE ALL ACCUMULATED SEDIMENT FROM THE SEDIMENTATION CONTROL DEVICES AND SPREAD IT EVENLY ACROSS THE SITE. THE SPREADINGS SHALL BE SEEDED AND STABILIZED BASED UPON THE GROUND STABILIZATION SCHEDULE, AND THE TEMPORARY AND PERMANENT SEEDING SCHEDULES.

## **GENERAL NOTES:**

- 1. THE PROPERTY BOUNDARY, TOPOGRAPHIC, AND UTILITY SURVEY SHOWN ON THESE PLANS WERE PROVIDED BY ESP ASSOCIATES, P.A. LOCATED AT 211 RACINE DRIVE, WILMINGTON, NORTH CAROLINA 28402.
- THE TOTAL DISTURBANCE FOR THIS PROJECT IS APPROXIMATELY 1.36 ACRES.
- THE SITE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES ABOVE AND BELOW GROUND BEFORE COMMENCING CONSTRUCTION.
- 4. THE SITE CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL WASTE MATERIALS GENERATED THROUGH DEMOLITION AND GRUBBING ACTIVITIES SHOWN ON THESE PLANS.
- 5. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SEDIMENT-LADEN RUNOFF IS TREATED PRIOR TO BEING DISCHARGED MEASURES OF SEDIMENT CONTROL BASED UPON THE PERFORMANCE OF EROSION CONTROL MEASURES PROVIDED ON SITE.
- DENUDED AREAS MUST BE STABILIZED BASED UPON THE GROUND STABILIZATION REQUIREMENTS PROVIDED ON THE APPROVED EROSION CONTROL DRAWINGS. THIS INCLUDES SLOPES, SWALES, CHANNELS, AND STOCKPILES.
- MATERIAL AND SOIL STAGING/STOCKPILING AREAS SHALL BE LOCATED WITHIN THE LIMIT OF DISTURBANCE. SURROUNDED BY SILT FENCE, AND STABILIZED AS REQUIRED BY THE STABILIZATION REQUIREMENTS AND SEEDING SCHEDULES.
- EXCELSIOR MATTING AND SEEDING SHALL BE USED ON SLOPES STEEPER THAN 2:1 AND IN ANY REGRADED DITCHES AS PART OF THE APPROVED EROSION CONTROL PLAN. EXCELSIOR MATTING SHALL BE USED TO STABILIZE ANY NEW OR DISTURBED PERMANENT DITCH SECTIONS.
- ALL TREES THAT ARE TO BE PROTECTED WITHIN DISTURBED AREAS SHALL BE WRAPPED IN TREE-PROTECTION FENCING PER THE NEW HANOVER COUNTY DEVELOPMENT ORDINANCES.
- 10. ALL STORM DRAIN SYSTEM COMPONENTS ARE DESIGNED TO PROVIDE POSITIVE DRAINAGE.
- 11. ALL DRAINAGE FROM IMPERVIOUS SURFACES SHALL BE DIRECTED TO THE STORMWATER COLLECTION SYSTEMS FOR THE STORMWATER CONTROL MEASURE (SCM). 12. STORMWATER PUMPS ARE TO BE PROVIDED OR TO BE READILY AVAILABLE IN CASE OF EMERGENCY DRAINING OF THE
- 13. RUNOFF FROM PROJECT DRAINS TO POND #1 UNDER NCDEQ PERMIT #SW8990923 AND DRAINS TO THE PRINCE GEORGE CREEK (ID:18-74-53) CLASSIFIED AS "C; JW".
- 14. EVERY SCM IMPACTED BY SEDIMENTATION AND EROSION CONTROL DURING THE CONSTRUCTION PHASE SHALL BE CLEANED OUT AND CONVERTED TO ITS APPROPRIATE DESIGN STATE.

## UTILITY MATERIAL SPECIFICATIONS

STORMWATER POND.

WATER AND SEWER UTILITIES MATERIALS AND INSTALLATION SHALL BE PER THE CURRENT CAPE FEAR PUBLIC UTILITY AUTHORITY DESIGN MANUAL AND STANDARD SPECIFICATIONS PROVIDED ONLINE ON THEIR WEB PAGE.

GRASS TYPE	AMOUNT/ 1000 SF.	TIME OF SEEDING	INITIAL	FERTILIZATION/1000 SF. MAINTENANCE		ANCE
RYE GRAIN	1-2 LBS.	NOV. THRU JAN.	25 LBS. 10-10-10	NA NA		NA
BROWNTOP MILLET	1-2 LBS.	JUNE THRU AUG.	25 LBS. 10-10-10	NA	NA	NA

TEMPORARY SEEDING SCHEDULE

GRASS TYPE	AMOUNT/ 1000 SF.	TIME OF SEEDING	INITIAL	FERTILIZATION/1000 SF. MAINTENANCE		
BERMUDA, COMMON	1-2 LBS.	APR. THRU JUNE	25 LBS. 10-10-10	MARCH – APRIL 12 LBS. 10–10–10 EACH 4–8 WEEKS 1–2 LBS. N.		AUG. – SEPT. 12 LBS. 10–10–10
FESCUE, TALL (KENTUCKY 31)	5–7 LBS.	SEPT. THRU OCT. FEB. THRU OCT.	25 LBS. 10-10-10			SEPT. – OCT. 12 LBS. 10–10–10
SERICEA LESPEDEZA (SLOPES)	1-2 LBS.	MARCH THRU APR.	25 LBS. 10-10-10	FEB. – MARCH 1/2 TO 1 LB. N.		NA

PERMANENT SEEDING SCHEDULE

## **GROUND STABILIZATION NOTES**

# LANDSCAPE NOTES

- 1. ALL LANDSCAPE MATERIAL MUST BE INSTALLED PRIOR TO FINAL BUILDING INSPECTION.
- STOCK (ANSI Z60.1).
- 3. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE.
- 4. ALL PLANTS TO BE CONTAINER GROWN OR BALLED AND BURLAPPED AS SPECIFIED IN THE PROVIDED PLANT LIST.
- 5. ALL TREES MUST HAVE A STRAIGHT TRUNK, BE FULL-HEADED, AND MEET ALL REQUIREMENTS SPECIFIED. 6. ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND FOLLOWING INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND/OR RELOCATION OF EXISTING UTILITIES IN COORDINATION WITH THE APPROPRIATE UTILITY AGENCY OR COMPANY.
- 7. THE CONTRACTOR SHALL COMPLETELY WARRANTY ALL PLANTED MATERIAL FOR A PERIOD OF (1) YEAR BEGINNING ON THE DATE OF SUBSTANTIAL COMPLETION. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE WARRANTY PERIOD.

- 11. MULCH UNDER ALL PROPOSED TREES AND SHRUBS WITH SHREDDED HARDWOOD AT A 3"-4" DEPTH OR APPROVED EQUAL.
- REQUIREMENTS MUST BE MET.
- NOT USED.
- BUT NOT BE LIMITED TO:

### A. FERTILIZATION

- TREES SHRUBS AND GRASSED AREAS MID-SEPTEMBER. THOROUGH WATERING IS REQUIRED UPON COMPLETION. B. PRUNING WITHIN LIMITS
- SHALL BE NO TOPPING OF TREES.
- C. PEST CONTROL (OPTIONAL)
- SHALL BE TREATED WHEN NECESSARY TO PREVENT DAMAGE TO VEGETATION. MULCHING
- MOWING
- F. PROTECTION OF ROOT ZONES
- COMPACTION TO THE ROOT AREAS. G. WATERING SCHEDULE FOR IRRIGATION SYSTEM
- ON AN AS NEEDED SCHEDULE PER LOCAL CONDITIONS. H. STAKE AT WIRE REMOVAL
- I. PROTECTED TREE REGULATION



2. TREES AND SHRUBS SHALL MEET THE QUALITY AND SIZE STANDARDS AS DESCRIBED IN THE MOST RECENT EDITION OF THE AMERICAN STANDARD FOR NURSERY

- 8. ANY PLANT MATERIAL WHICH DIES, TURNS BROWN, OR DEFOLIATES PRIOR TO SUBSTANTIAL COMPLETION OF THE WORK, SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE MEETING ALL PLANT SCHEDULE SPECIFICATIONS.
- 9. CONTRACTOR SHALL NOT SUBSTITUTE FOR ANY OF THE PLANT MATERIAL THAT IS SPECIFIED WITHOUT PRIOR APPROVAL OF THE LANDSCAPE ARCHITECT.
- 10. VERIFICATION OF TOTAL QUANTITIES AS SHOWN IN THE PLANT LIST SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 12. PLANT SIZES INDICATED SPECIFY MINIMUM ALLOWABLE SIZES AT PLANTING. WHERE CONTAINER AND HT. SIZES ARE INDICATED FOR A SINGLE SPECIES, BOTH SIZE

13. THERE SHALL BE AT LEAST A 3 FT. SEPARATION BETWEEN LANDSCAPED AREAS AND PARKING AREAS TO ALLOW VEHICLE OVERHANG WHEN PARKING BLOCKS ARE

14. ALL PLANTINGS USED TO SCREEN THE DRIVES AND PARKING AREAS FROM ADJOINING ROADWAYS WILL NEED TO BE A MINIMUM OF 24" HIGH AT TIME OF PLANTING. 15. ALL OTHER AREAS NOT BEING MULCHED TO BE SEEDED PER SEEDING SCHEDULE INCLUDED AS PART OF THE S&E PLANS

16. THE OWNERS OF THE PROPERTY AND THEIR AGENTS, HEIRS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE INSTALLATION, PRESERVATION AND MAINTENANCE OF ALL PLANTING AND PHYSICAL FEATURES SHOWN ON THIS PLAN. THE OWNERS SHALL BE RESPONSIBLE FOR ANNUAL MAINTENANCE OF THE VEGETATION TO INCLUDE

BROADCAST A SLOW RELEASE FERTILIZER OVER THE MULCHED BEDS AT THE RECOMMENDED RATES AS SHOWN ON THE BAGS, ONCE MID-FEBRUARY AND ONCE

PRUNING WHEN NECESSARY, WILL BE DONE TO MAINTAIN THEIR NORMAL GROWTH PATTERN AND TO REMOVE DEAD OR DISEASED PLANT MATERIAL. THERE

WEED CONTROL TO BE PROVIDED EARLY FEBRUARY, APRIL, JUNE, AUGUST AND OCTOBER IN THE SHRUB/TREE BEDS AND IN THE LAWN AREAS. INSECT DAMAGE

ALL AREAS AROUND THE BUILDING FOUNDATION AND SHRUB/TREE BEDS SHALL BE RE-MULCHED SO THAT THEY CONTAIN A MIN. DEPTH OF TWO INCHES AND A MAXIMUM DEPTH OF THREE INCHES. MULCH USED SHALL EQUAL WHICH WAS SUPPLIED DURING THE INSTALLATION OF THE PLANTS.

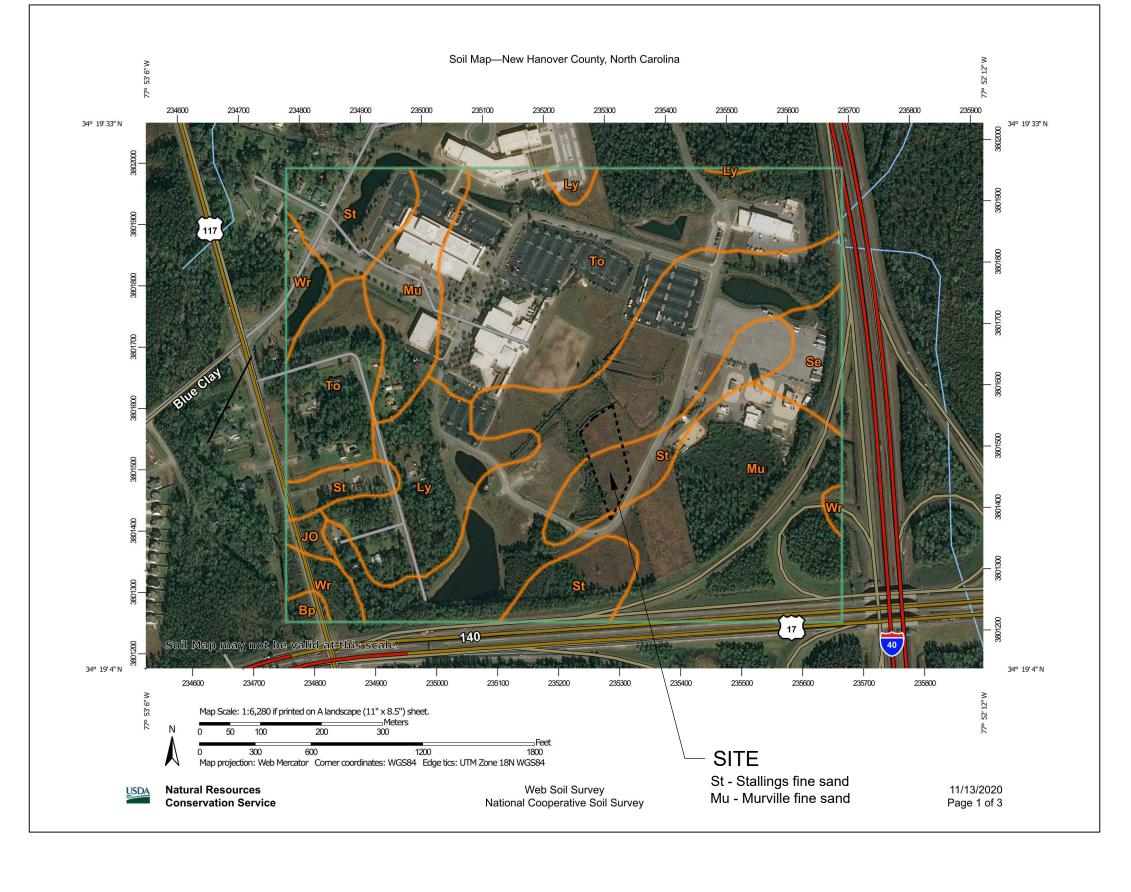
MOWING SHALL BE DONE AS NECESSARY TO KEEP GRASS AT THE APPROPRIATE HEIGHT TO INSURE A HEALTHY GROWTH PATTERN.

TREE/SHRUB ROOT ZONES SHOULD BE PROTECTED FROM FUTURE CONSTRUCTION AND EQUIPMENT AS MUCH AS POSSIBLE TO AVOID DAMAGE OR

MAINTENANCE SHALL INCLUDE A THOROUGH INITIAL WATERING WITH WEEKLY WATERINGS THEREAFTER FOR THE FIRST 30 DAYS. WATERINGS THEREAFTER BE

AT THE END OF THE FIRST YEAR ALL PLANT STAKING AND GUYING SYSTEMS SHALL BE REMOVED.

PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES AND NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.



# NRCS SOILS MAP

## UTILITY SEPARATION NOTES:

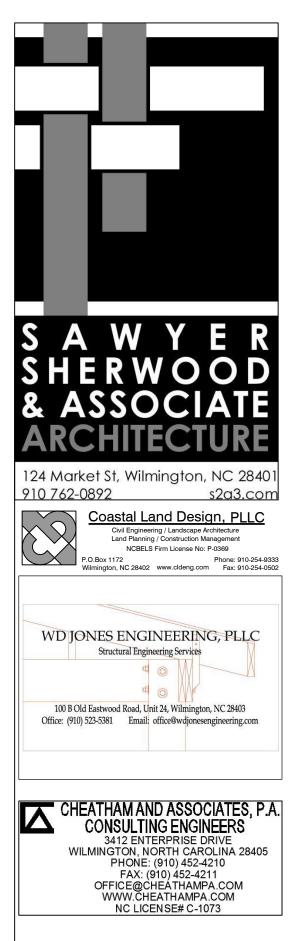
1) THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS FROM THE UTILITY COMPANY AND, WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UTILITIES. ANY CONFLICTS SHALL BE BROUGHT TO THE OWNER'S AND ENGINEER'S ATTENTION IMMEDIATELY.

15A NCAC 18C .0904: PIPE LAYING

- (AMENDED EFFECTIVE JULY 1, 2019) (A) TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE ACCOMPLISHED IN A MANNER TO PREVENT DAMAGE TO AND MISALIGNMENT OF THE PIPE. WATER MAINS SHALL BE BURIED TO A DEPTH BELOW THE FROST LINE OR TO A DEPTH SUFFICIENT TO PROVIDE A MINIMUM OF 30 INCHES COVER, WHICHEVER IS GREATER. IN CASES WHERE IT IS IMPRACTICABLE TO PROVIDE 30 INCHES OF COVER TAKING INTO CONSIDERATION FEASIBILITY AND COST, A DEVIATION MAY BE APPROVED ON A CASE-BY-CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER INCLUDING CONSIDERATION OF PIPE MATERIAL, COVER MATERIAL, LAND COVER, LAND USE, LAND SLOPE, THE DEPTH OF THE FROST LINE, AND THE LOCATION OF OTHER UTILITIES.
- (B) TO ALLOW FOR CONSTRUCTION AND REPAIR, A MINIMUM DISTANCE OF 12 INCHES SHALL BE MAINTAINED BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF OTHER UTILITIES

15A NCAC 18C .0906: RELATION OF WATER MAINS TO NON-POTABLE WATER LINES (AMENDED EFFECTIVE JULY 1, 2019)

- (A) FOR THE PURPOSES OF THIS RULE, SEWER SHALL MEAN ANY EXISTING OR PROPOSED GRAVITY OR FORCE MAIN USED TO CONVEY SANITARY OR INDUSTRIAL PROCESS WASTE. (B) LATERAL SEPARATION OF SEWERS AND WATER MAINS. WATER MAINS SHALL BE LAID AT LEAST 10 FEET
- LATERALLY FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10-FOOT LATERAL SEPARATION, IN WHICH CASE: (1) THE WATER MAIN SHALL BE LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE
- WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER; OR (2) THE WATER MAIN SHALL BE LAID IN THE SAME TRENCH AS THE SEWER. WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH AND WITH THE ELEVATION OF THE BOTTOM OF THE
- WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER. (C) CROSSINGS. A WATER MAIN THAT CROSSES A SEWER SHALL BE LAID A MINIMUM VERTICAL DISTANCE OF 18 INCHES FROM THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. EITHER ABOVE OR BELOW
- THE SEWER, WITH PREFERENCE TO THE WATER MAIN LOCATED ABOVE THE SEWER. ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. (D) WATER MAINS AND STORM SEWER PIPES. PIPES CARRYING STORM DRAINAGE SHALL BE SEPARATED FROM
- WATER LINES IN ACCORDANCE WITH RULE .0904 OF THIS SECTION. (E) WATER MAINS AND RECLAIMED WATER DISTRIBUTION LINES. WATER LINES SHALL BE LOCATED AT LEAST10
- FEET HORIZONTALLY FROM OR AT LEAST 18 INCHES ABOVE WATER PIPES CARRYING TREATED AND DISINFECTED WASTEWATER IN RECLAIMED WATER DISTRIBUTION LINES. CROSSINGS SHALL BE MADE IN ACCORDANCE WITH PARAGRAPH (C) OF THIS RULE.



# Cape Fear Community College Lineman Facility

4500 Blue Clay Road Castle Hayne, NC 28429

Project No: 20-21668-01

Schematic Design/ Design Development 20 November, 2020

Revisions:

NPDES-SPECIFIC PLAN SHEET NOTES

1. THIS PAGE IS SUBMITTED TO COMPLY WITH NPDES GENERAL STORMWATER PERMIT NCG010000.

\ C1.0

- 2. THIS PAGE CAN BE APPROVED BY THE COUNTY PURSUANT TO NPDES GENERAL STORMWATER PERMIT NCG010000 ONLY.
- 3. THIS PAGE OF THE APPROVED PLAN IS ENFORCEABLE EXCLUSIVELY PURSANT TO NPDES GENERAL STORMWATER PERMIT NCG010000.
- 4. THE COUNTY IS NOT AUTHORIZED TO ENFORCE THIS PAGE OF THE PLANS AND IT IS NOT A PART OF THE APPROVED PLANS FOR THE PURPOSES OF ENFORCEMENT ACTION UNDER THE COUNTY CODE.

ISSUED FOR AGENCY REVIEW ONLY

NOT RELEASED FOR CONSTRUCTION



# General Notes

## Of ##

# **GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01** CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

Required Ground Stabilization Timeframes					
Si	te Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations		
(a)	Perimeter dikes, swales, ditches, and perimeter slopes	7	None		
(b)	High Quality Water (HQW) Zones	7	None		
(c)	Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed		
(d)	Slopes 3:1 to 4:1	14	<ul> <li>-7 days for slopes greater than 50' in length and with slopes steeper than 4:1</li> <li>-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones</li> <li>-10 days for Falls Lake Watershed</li> </ul>		
(e) <b>lote</b>	Areas with slopes flatter than 4:1	14	<ul> <li>-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones</li> <li>-10 days for Falls Lake Watershed unless there zero slope</li> </ul>		

**Die:** After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

# **GROUND STABILIZATION SPECIFICATION**

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

<ul> <li>Temporary grass seed covered with straw or</li> </ul>	
other mulches and tackifiers	<ul> <li>Permanent grass seed covered with straw or other mulches and tackifiers</li> </ul>
<ul> <li>Hydroseeding</li> </ul>	<ul> <li>Geotextile fabrics such as permanent soil</li> </ul>
<ul> <li>Rolled erosion control products with or</li> </ul>	reinforcement matting
without temporary grass seed	Hydroseeding
<ul> <li>Appropriately applied straw or other mulch</li> <li>Plastic sheeting</li> </ul>	<ul> <li>Shrubs or other permanent plantings covered with mulch</li> </ul>
	<ul> <li>Uniform and evenly distributed ground cover sufficient to restrain erosion</li> </ul>
	<ul> <li>Structural methods such as concrete, asphalt or retaining walls</li> </ul>
	<ul> <li>Rolled erosion control products with grass seed</li> </ul>

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants.
- 2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- 3. Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.

4. Provide ponding area for containment of treated Stormwater before discharging offsite.

5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

# EQUIPMENT AND VEHICLE MAINTENANCE

- 2. Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste
- (recycle when possible).
- corrected.

- Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- overflow.

# PAINT AND OTHER LIQUID WASTE

- 1. Do not dump paint and other liquid waste into storm drains, streams or wetlands. 2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available. Contain liquid wastes in a controlled area.
- 4. Containment must be labeled, sized and placed appropriately for the needs of site. 5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

# PORTABLE TOILETS

- areas

# **EARTHEN STOCKPILE MANAGEMENT**

- can be shown no other alternatives are reasonably available.
- 1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from
- the toe of stockpile.
- Provide stable stone access point when feasible.
- 4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

# NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

Maintain vehicles and equipment to prevent discharge of fluids.

Remove leaking vehicles and construction equipment from service until the problem has been

Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

## LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

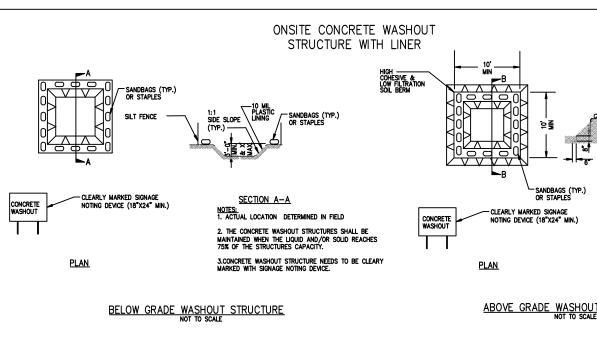
- 1. Never bury or burn waste. Place litter and debris in approved waste containers.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers

## Dispose waste off-site at an approved disposal facility.

On business days, clean up and dispose of waste in designated waste containers.

Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic

Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.



## **CONCRETE WASHOUTS**

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- 10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

# HERBICIDES, PESTICIDES AND RODENTICIDES

- 1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions. 2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists
- directions for use, ingredients and first aid steps in case of accidental poisoning. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- 4. Do not stockpile these materials onsite.

## HAZARDOUS AND TOXIC WASTE

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

EFFECTIVE: 04/01/19

NOTES: NOTES: 1. ACTUAL LOCATION DETERMINED IN FIELD 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLD REACHES 75% OF THE STRUCTURES CAPACITY OF MOTORED ADDCUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD. 3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.
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1.

S A W Y E R SHERWOOD & ASSOCIATE ARCHITECTUR 124 Market St, Wilmington, NC 2840 910 762-0892 Civil Engineering / Landscape Architecture Land Planning / Construction Management NCBELS Firm License No: P-0369 3ox 1172 Phone: 910-254 ington, NC 28402 www.cldeng.com Fax: 910-254 WD JONES ENGINEERING, PLLC Structural Engineering Services 100 B Old Eastwood Road, Unit 24, Wilmington, NC 28403 Office: (910) 523-5381 Email: office@wdjonesengineering.com CHEATHAM AND ASSOCIATES, P.A. **CONSULTING ENGINEERS** WILMINGTON, NORTH CAROLINA 28405 PHONE: (910) 452-4210 FAX: (910) 452-4211 OFFICE@CHEATHAMPA.COM WWW.CHEATHAMPA.COM NC LICENSE# C-1073

# Cape Fear Community College Lineman Facility

4500 Blue Clay Road Castle Hayne, NC 28429

Project No: 20-21668-01

Schematic Design/ Design Development 20 November, 2020

Revisions:

ISSUED FOR AGENCY REVIEW ONLY

NOT RELEASED FOR CONSTRUCTION



General Notes

C1.1 ## of ##

## PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

## **SECTION A: SELF-INSPECTION**

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when

Inspect	Frequency (during normal business hours)	Inspection records must include:		
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un- attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.		
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event $\geq$ 1.0 inch in 24 hours	<ol> <li>Identification of the measures inspected,</li> <li>Date and time of the inspection,</li> <li>Name of the person performing the inspection,</li> <li>Indication of whether the measures were operating properly,</li> <li>Description of maintenance needs for the measure,</li> <li>Description, evidence, and date of corrective actions taken.</li> </ol>		
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event $\geq$ 1.0 inch in 24 hours	<ol> <li>Identification of the discharge outfalls inspected,</li> <li>Date and time of the inspection,</li> <li>Name of the person performing the inspection,</li> <li>Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration,</li> <li>Indication of visible sediment leaving the site,</li> <li>Description, evidence, and date of corrective actions taken.</li> </ol>		
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event $\geq$ 1.0 inch in 24 hours	<ul> <li>If visible sedimentation is found outside site limits, then a record of the following shall be made:</li> <li>1. Actions taken to clean up or stabilize the sediment that has left the site limits,</li> <li>2. Description, evidence, and date of corrective actions taken, and</li> <li>3. An explanation as to the actions taken to control future releases.</li> </ul>		
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event $\geq$ 1.0 inch in 24 hours	<ul> <li>If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made:</li> <li>1. Description, evidence and date of corrective actions taken, and</li> <li>2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit of this permit.</li> </ul>		
(6) Ground stabilization measures	After each phase of grading	<ol> <li>The phase of grading (installation of perimeter E&amp;SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover).</li> <li>Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.</li> </ol>		

# NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

	PART III			
SELF-INSPECTION, RE	ECORDKEEPING AND REPORTING			
	d deviation shall be kept on the site. The approved E&SC			PART III
nian must be kent un-to-date throughout the co	verage under this nermit. The following items nertaining to			SELF-INSPECTION, RECORDKEEPING AND REPORTING
Item to Document	Documentation Requirements	SECTION O	C: REPORTING	
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan.	E&SC Measure shown on the approved E&SC Plan. This documentation is required upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial	Permitt (a) Vi (b) Oi	-	the following occurrences: deposition in a stream or wetland.
(b) A phase of grading has been completed.	installation. Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.	•	They are less the They cause she	an 25 gallons but cannot be cleaned up within 24 hours, en on surface waters (regardless of volume), or 100 feet of surface waters (regardless of volume).
(c) Ground cover is located and installed in accordance with the approved E&SC Plan.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.	W		dous substances in excess of reportable quantities under Sect D CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref:
<ul> <li>(d) The maintenance and repair requirements for all E&amp;SC Measures have been performed.</li> </ul>	Complete, date and sign an inspection report.	(b) Ar	nticipated bypas	ses and unanticipated bypasses.
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.			rith the conditions of this permit that may endanger health or
2. Additional Documentation In addition to the E&SC Plan documents above, t and available for agency inspectors at all times d Division provides a site-specific exemption based requirement not practical:	he following items shall be kept on the site uring normal business hours, unless the	depositistream	ble sediment tion in a or wetland spills and	<ul> <li>Reporting Timeframes (After Discovery) and Other Req</li> <li>Within 24 hours, an oral or electronic notification.</li> <li>Within 7 calendar days, a report that contains a desc sediment and actions taken to address the cause of the Division staff may waive the requirement for a written case-by-case basis.</li> <li>If the stream is named on the NC 303(d) list as impair related causes, the permittee may be required to per monitoring, inspections or apply more stringent pract determine that additional requirements are needed to with the federal or state impaired-waters conditions.</li> <li>Within 24 hours, an oral or electronic notification. The shall include information about the date time, nature</li> </ul>
(a) This general permit as well as the certificate	e of coverage, after it is received.	hazard		shall include information about the date, time, nature location of the spill or release.
observations on the Inspection Record Forr that includes all the required elements. Use paper copies will be allowed if shown to pre	evious 30 days. The permittee shall record the required m provided by the Division or a similar inspection form e of electronically-available records in lieu of the required ovide equal access and utility as the hard-copy records.	1(b)-(c) (c) Anti bypass 122.41 (d) Una	) above icipated es [40 CFR (m)(3)] anticipated es [40 CFR	<ul> <li>A report at least ten days before the date of the byper The report shall include an evaluation of the anticipate effect of the bypass.</li> <li>Within 24 hours, an oral or electronic notification.</li> <li>Within 7 calendar days, a report that includes an evaluation of the statement of the</li></ul>
	ent and older inspection records shall be maintained for a ion and made available upon request. [40 CFR 122.41]	(e) Nor with th of this may er health enviror	(m)(3)] ncompliance he conditions permit that ndanger or the nment[40 2.41(l)(7)]	<ul> <li>quality and effect of the bypass.</li> <li>Within 24 hours, an oral or electronic notification.</li> <li>Within 7 calendar days, a report that contains a desc noncompliance, and its causes; the period of noncom including exact dates and times, and if the noncompliance continue; and steps taken or planned to reduce, elimi prevent reoccurrence of the noncompliance. [40 CFR</li> <li>Division staff may waive the requirement for a writte case-by-case basis.</li> </ul>

EFFECTIVE: 04/01/19

ection 311 of the Clean Ref: 40 CFR 302.4) or G.S.

or the environment.

equirements

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The notification ure, volume and

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escription of the ompliance, pliance has not ce is expected to iminate, and FR 122.41(I)(6). ten report on a

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SHERWOOD & ASSOCIATE ARCHITECTURE
124 Market St, Wilmington, NC 28401         910 762-0892       s2a3.com         Constal Land Design, PLLC         Civil Engineering / Landscape Architecture Land Planning / Construction Management NCBELS Firm License No: P-0369         P.O.Box 1172       Phone: 910-254-9333 Pitmington, NC 28402         Wilmington, NC 28402       www.cldeng.com
WD JONES ENGINEERING, PLLC Structural Engineering Services
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# Cape Fear Community College Lineman Facility

4500 Blue Clay Road Castle Hayne, NC 28429

Project No: 20-21668-01

Schematic Design/ Design Development 20 November, 2020

Revisions:

General Notes

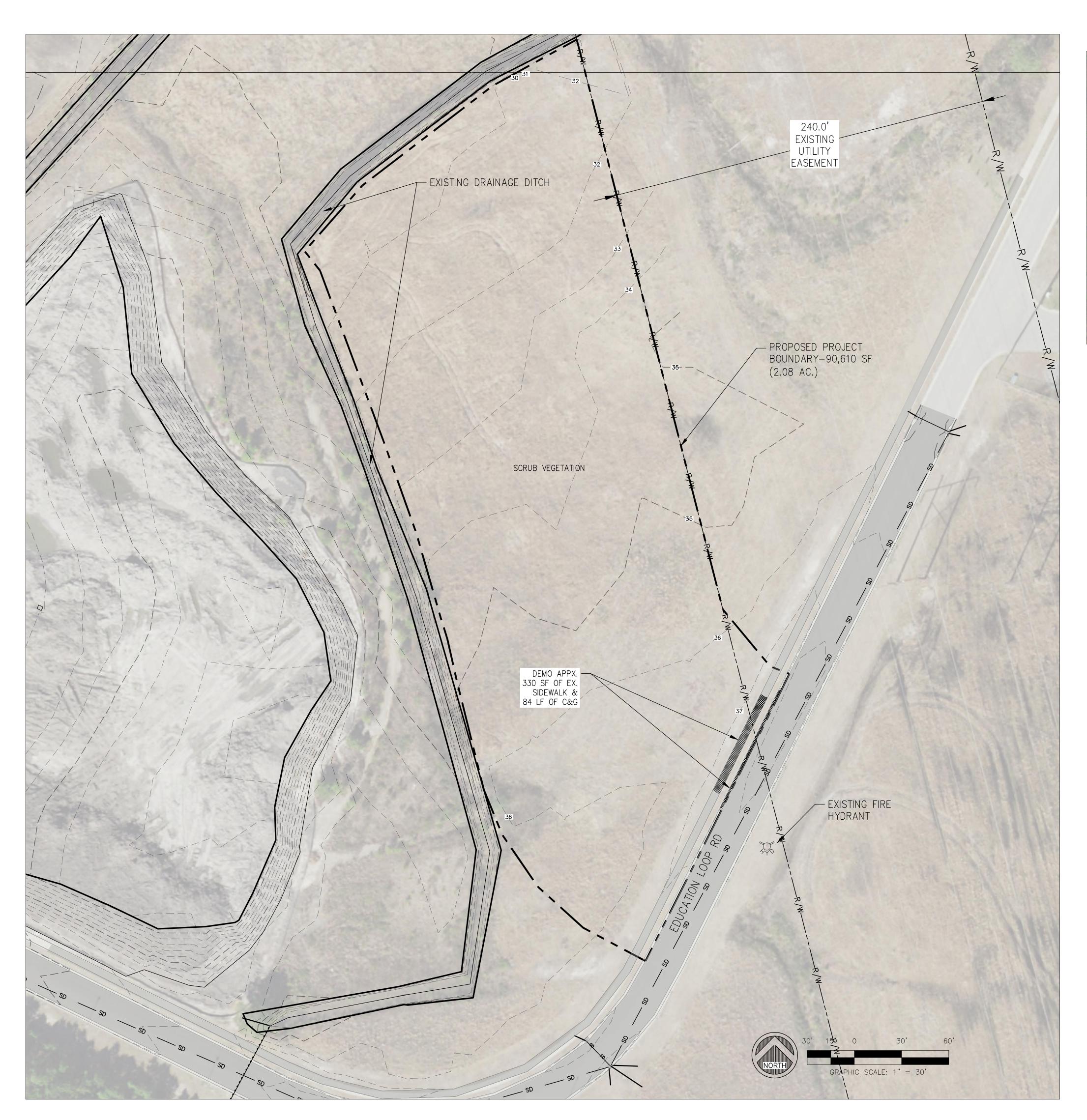
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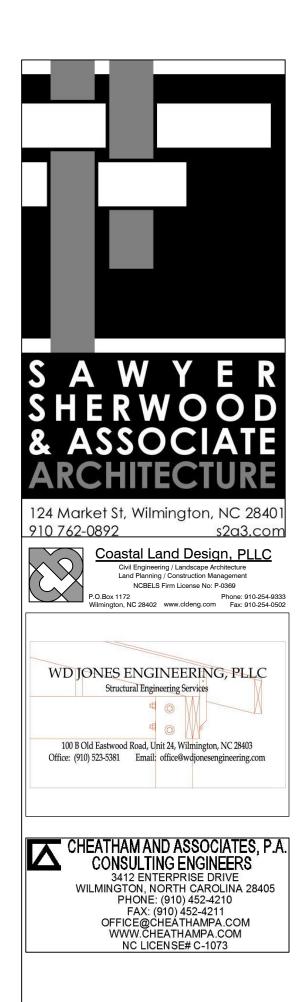
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CFCC CAMPUS MAP-N.T.S.



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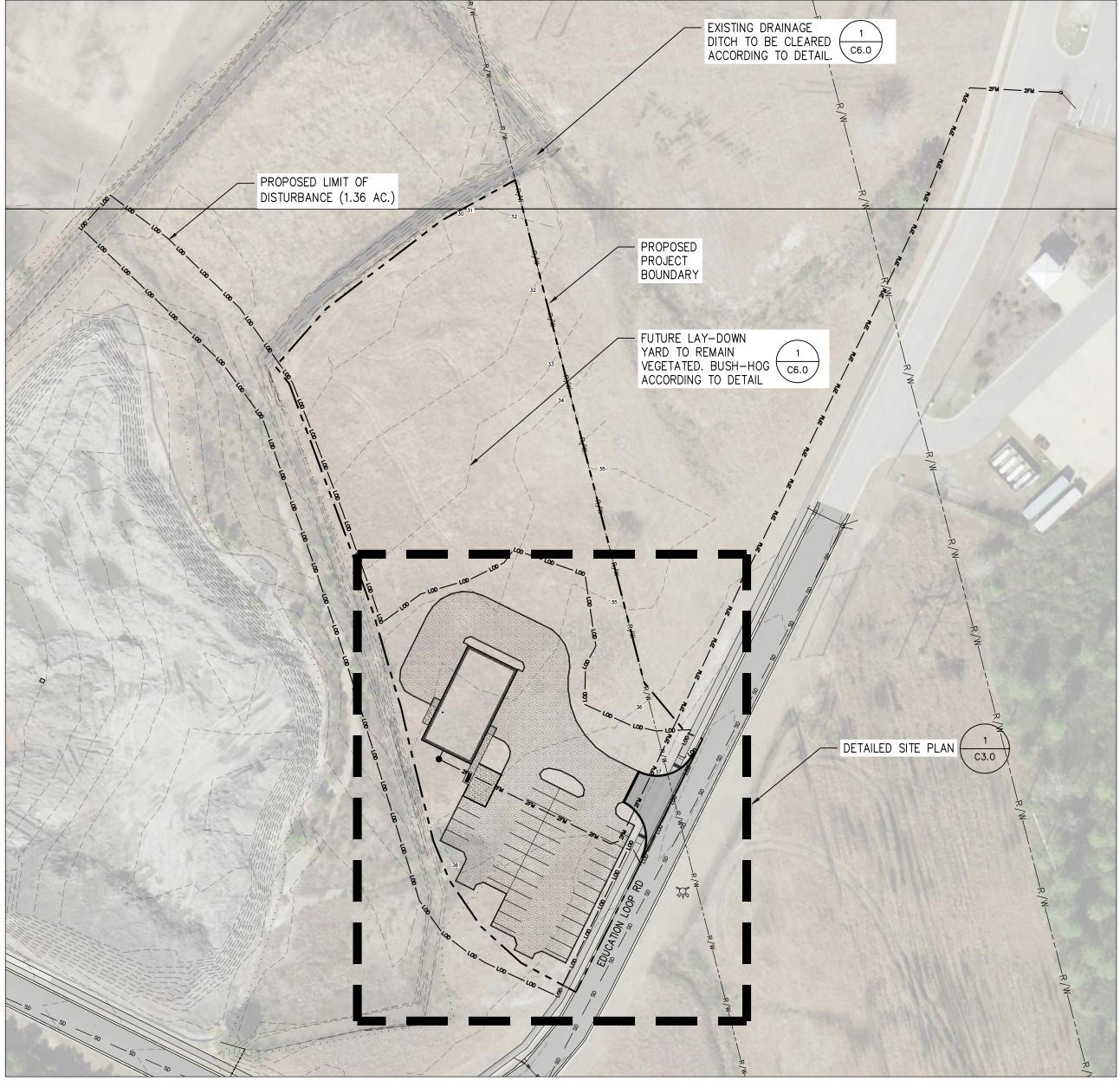
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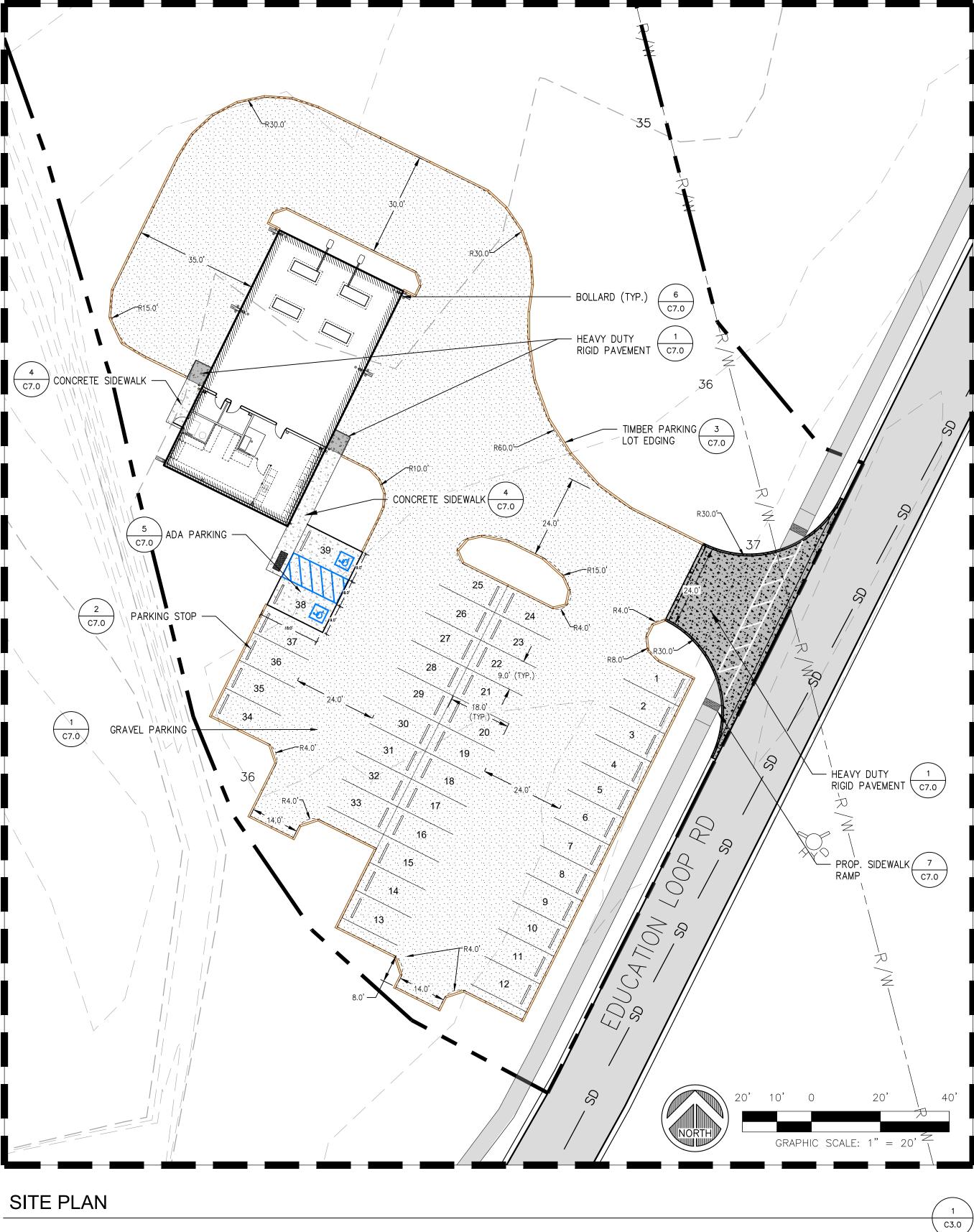
Existing Conditions & Demo Plan





SITE CONTEXT MAP

	DEVELOPMENT DATA
SITE DATA PARCEL ID: DEED BOOK/PAGE: ADDRESS: CURRENT OWNER: CURRENT OWNER: CAPE FEAR COMMUNITY COLLEGE 411 N. FRONT ST. WILMINGTON, NC 28401	O&I SETBACKS:FRONT SETBACK:25'SIDE SETBACK:NOT REQ'D SEE BELOWREAR SETBACK:NOT REQ'D SEE BELOW3.1.3 C. NO INTERIOR SIDE OR REAR SETBACKS ARE REQ'D FOR NON-RESIDENTIAL STRUCTURES FROM LOT LINES SHARED WITH ABUTTING NON-RESIDENTIAL USES WHERE THE STRUCTURE AND THE ABUTTING USE ARE LOCATED WITHIN THE B-1, B-2, O&I, AC, I-1, and I-2 DISTRICTS.MIN. LOT AREA15,000 SF MIN. 90 LF MAX COVERAGEMIN. LOT WIDTH90 LF 50%MAX HEIGHT52'20'
MUNICIPALITY: NHC ZONING: O&I CURRENT USE: UNUSED PROPOSED USE: 821-SCHOOL LINEMAN TRAINING TOTAL AREA: 2.08 ACRES WETLANDS: NONE SOILS: Stallings fine Murville fine (SEE MAP SHEET G-01) FLOOD DATA: ZONE X-PANEL # 3720323000K eff. 8/28/2018	BUILDING TYPE: REQUIRED PARKING: VOCATIONAL / TRADE SCHOOL 3 SPACES/1,000 SF GFA PROPOSED PARKING: 39 SPACES (INCL 2 HC) PROP. WATER & SEWER NEEDS:



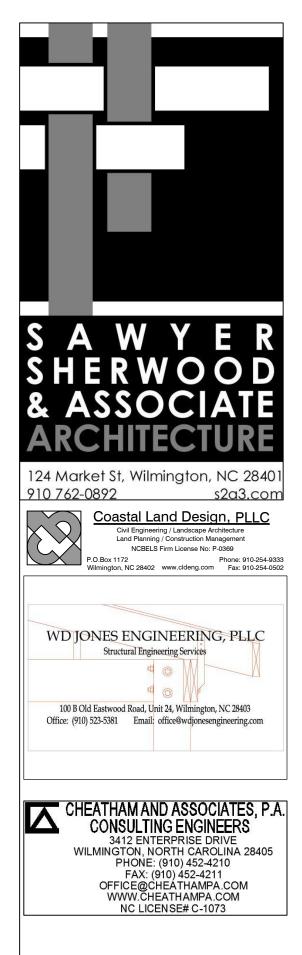
IMPERVIOUS	DATA	
IMPERVIOUS AREA	EXISTING	PROPOSED
ON-SITE BUILDINGS	= NONE	= 3,040 SF
ON-SITE STREETS	= NONE	= NONE
ON-SITE PARKING (GRAVEL)	= NONE	= 20,964 SF
ON-SITE PARKING (PAVED)	= NONE	= 441 SF
ON-SITE SIDEWALK (CONCRETE)	= NONE	= 335 SF
ON-SITE D/W APRON	= NONE	= 1,244 SF
ON-SITE C&G	= 130 SF	= 71 SF
ON-SITE SIDEWALK (REMOVED)	= 215 SF	-
ON-SITE C&G (REMOVED)	= 130 SF	-
FUTURE ON-SITE	= NONE	= NONE
OFF-SITE	= NONE	= NONE
EXISTING BUA TO REMAIN	N/A	N/A
TOTAL	= 345 SF 0.003%	= 26,095 SF 28.8%

## STORMWATER NOTE:

CAPE FEAR COMMUNITY COLLEGE IS UNDER AN EXISTING NCDEQ PERMIT (SW8 990923). THE EXISTING PERMIT DELINEATES THE PROPOSED PROJECT SITE TO POND #1 WITH A FUTURE IMPERVIOUS ALLOCATION OF 1,103,083 SF.

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www.nc811.org



# Cape Fear Community College Lineman Facility

4500 Blue Clay Road Castle Hayne, NC 28429

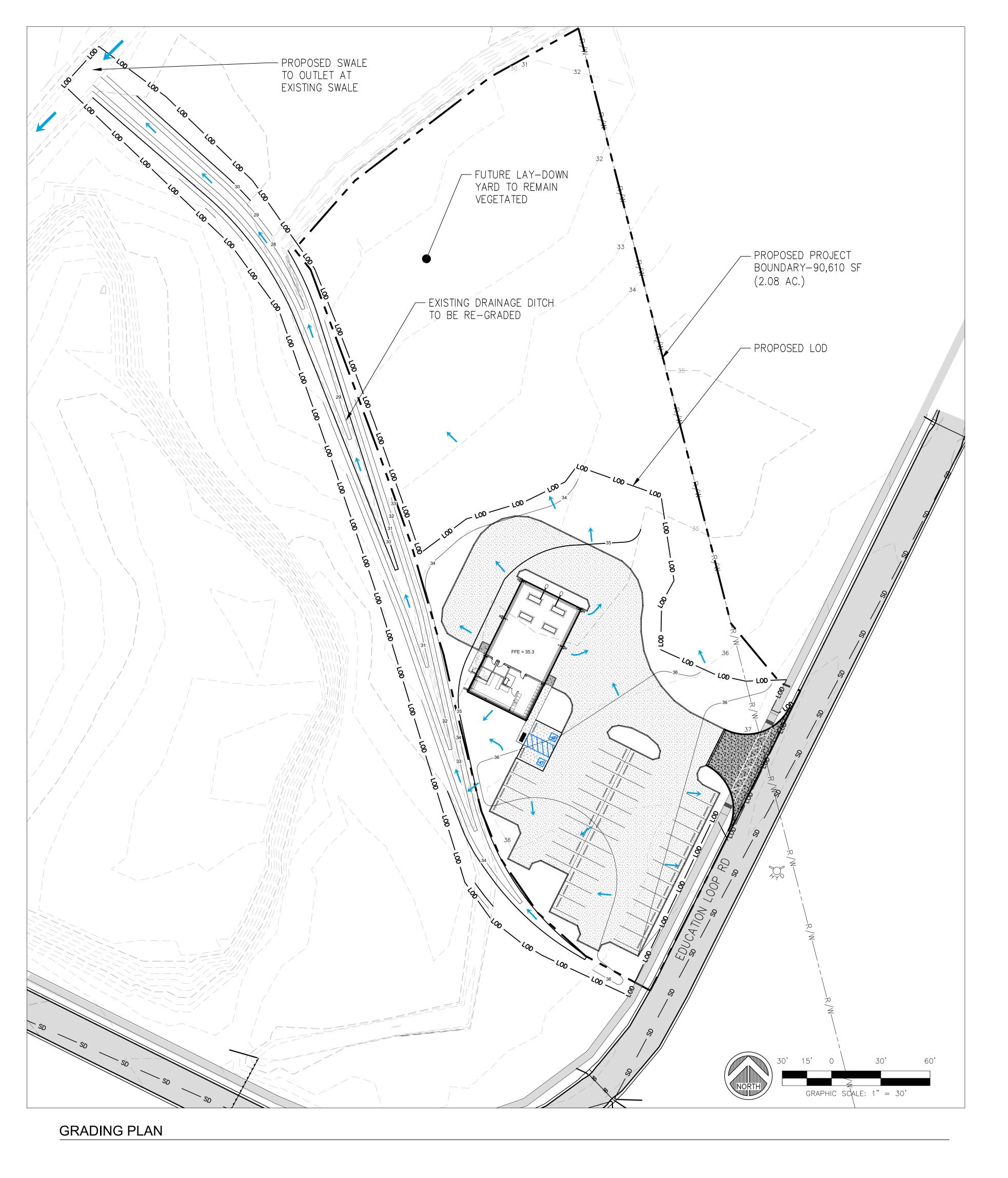
Project No: 20-21668-01

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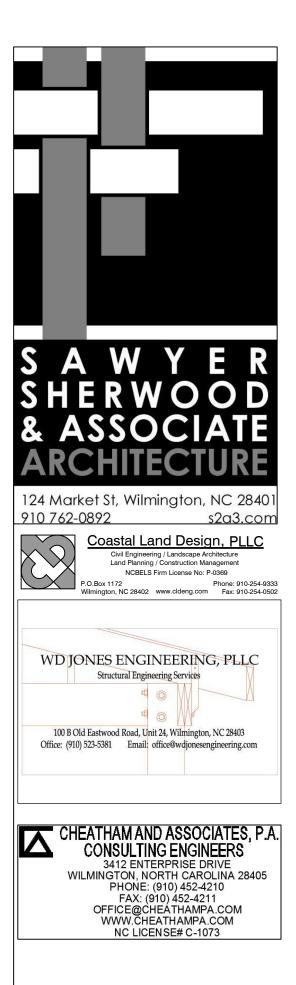
# Site Plan

C3.0 | <sub>##</sub>of ## © 2020 Sawyer Sherwood & Associate - All Rights Reserved



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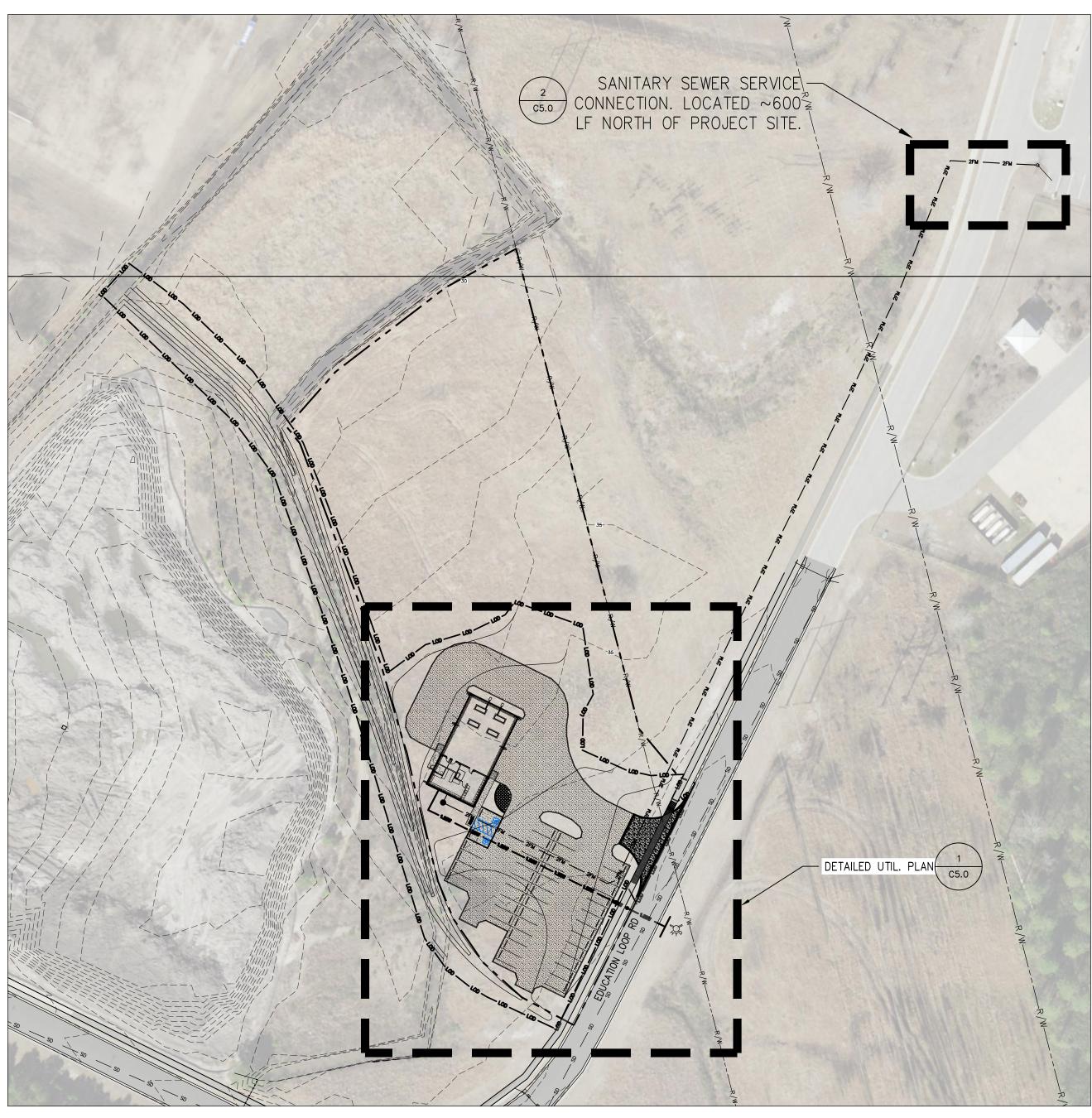
# Grading & Drainage Plan

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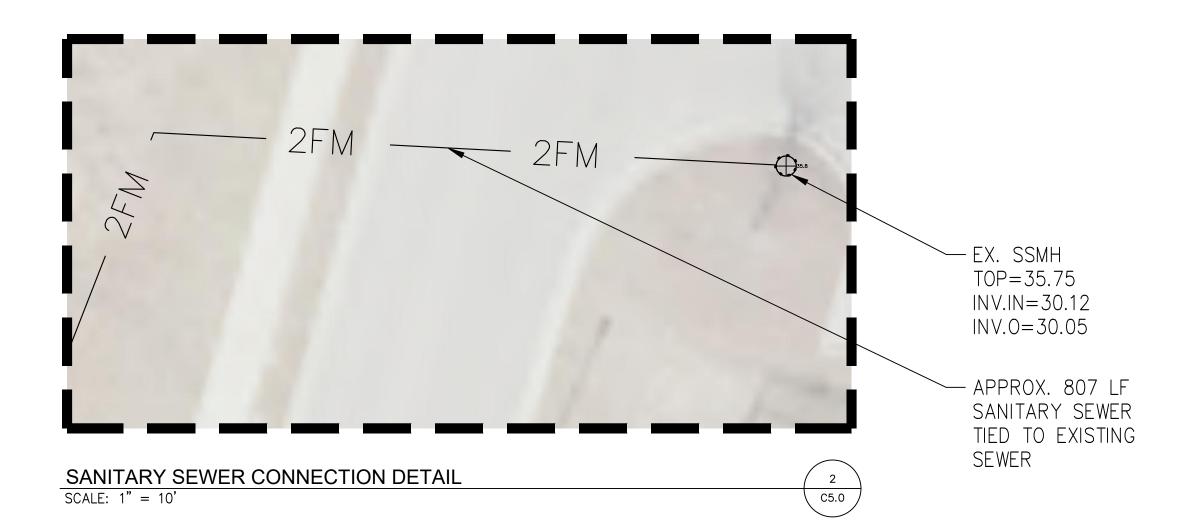
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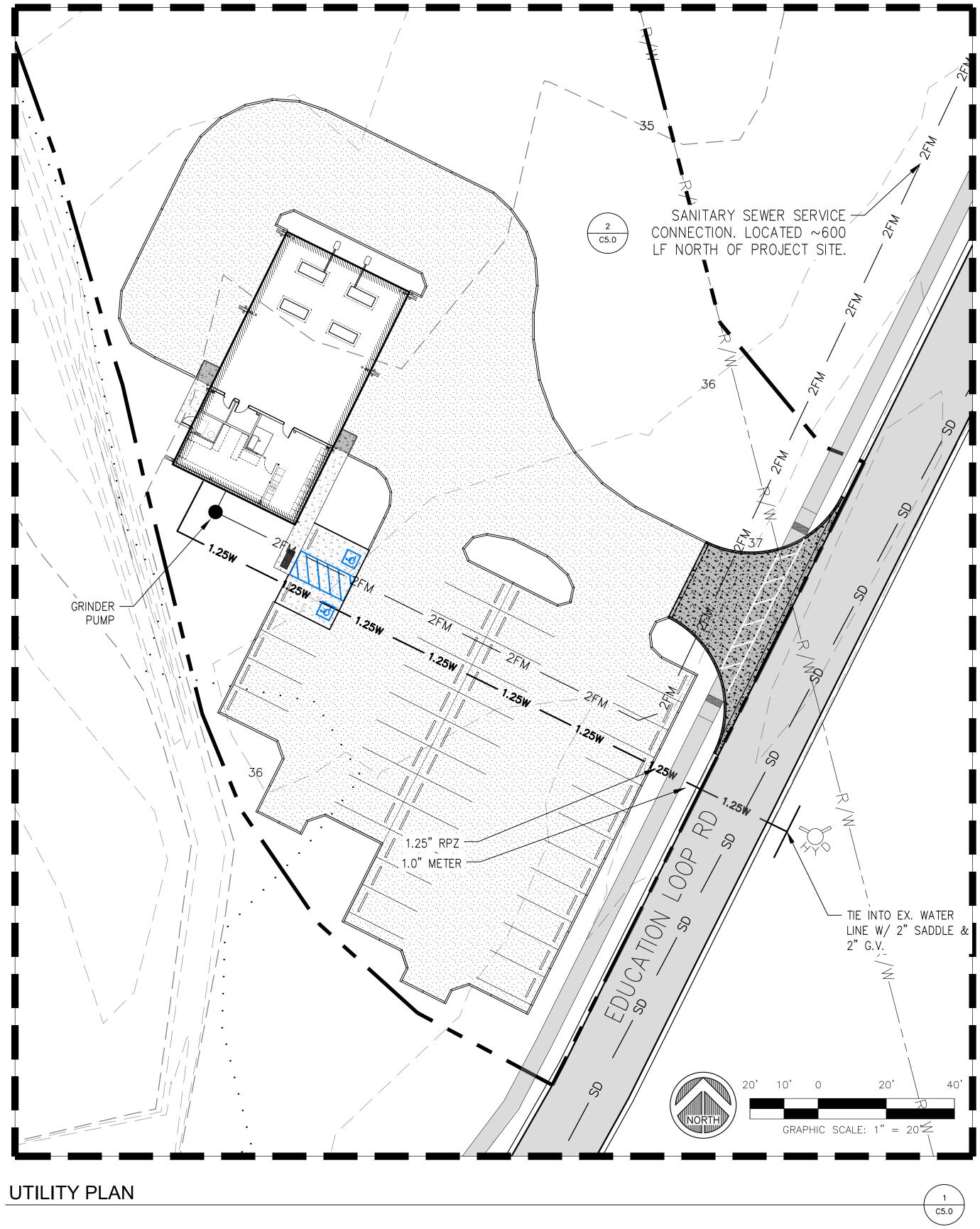


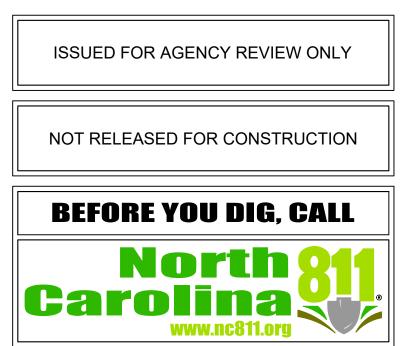
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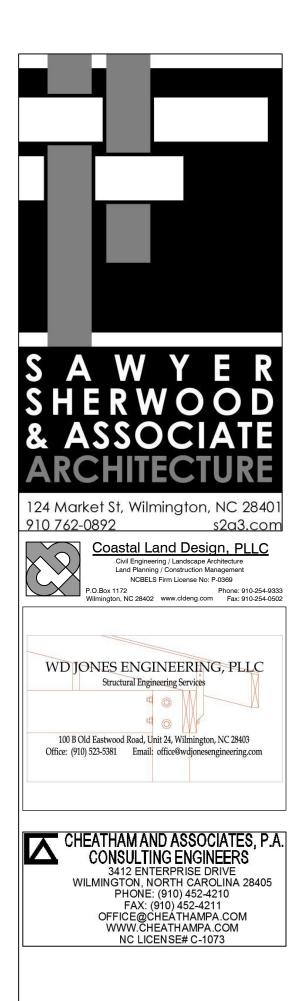


SITE CONTEXT MAP SCALE: 1" = 60'









# Cape Fear Community College Lineman Facility

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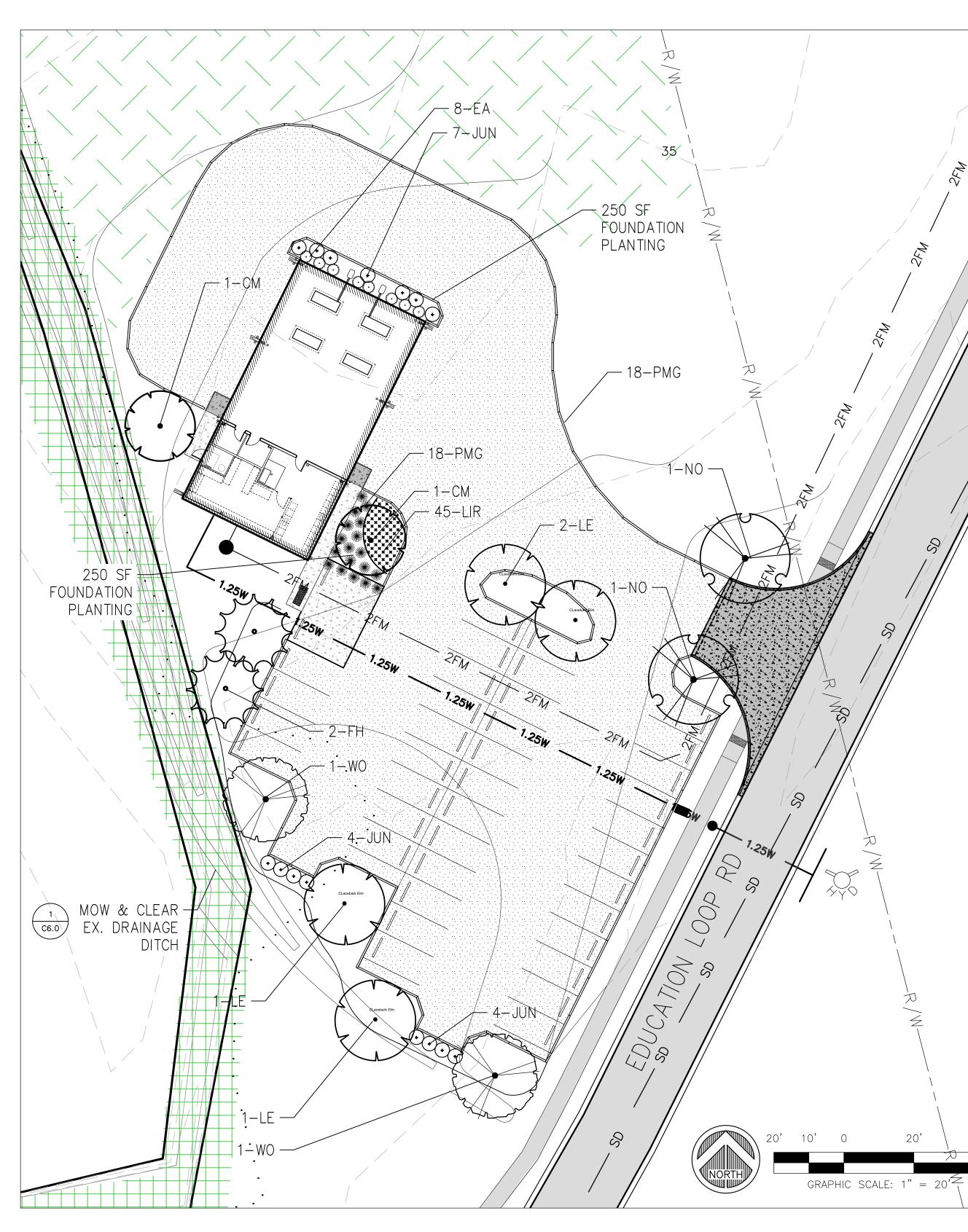
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# Utility Plan

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# LANDSCAPE PLAN

# LANDSCAPE SCHEDULE

CODE	QUAN.	COMMON NAME	BOTANICAL NAME	CAL.	HT.	ROOT	REMARKS
			LARGE SHADE TREES				
LE	4	Lacebark Elm	Ulmus parvifolia	3"		B&B	
FH	2	Fosters Holly	llex x attenuata 'Fosteri'	3"		B&B	
WO	2	Hightower Willow Oak	Quercus phellos 'QPSTA' P.P.#13,677	3"		B&B	
NO	2	Nuttall Oak	Quercus nuttallii	3"		B&B	
СМ	2	Natchez Crape Myrtle	SMALL SHADE TREES Lagerstroemia indica x fauriei 'Natchez'		8–10'		
	15	Crow Out, Jupper	SHRUBS			3 Gal.	
JUN	15	Grey Owl Junper	Juniperus virginiana 'Grey Owl'			3 Gal.	
PMG	18	Pink Muhly Grass Emerald Arborvitae	Muhlenbergia capillaris			10 Gal.	
EA	8		Thuja occidentalis 'Smaragd'				
LIR	45	Super Blue Liriope	Liriope muscari 'Super Blue'			1 Gal.	

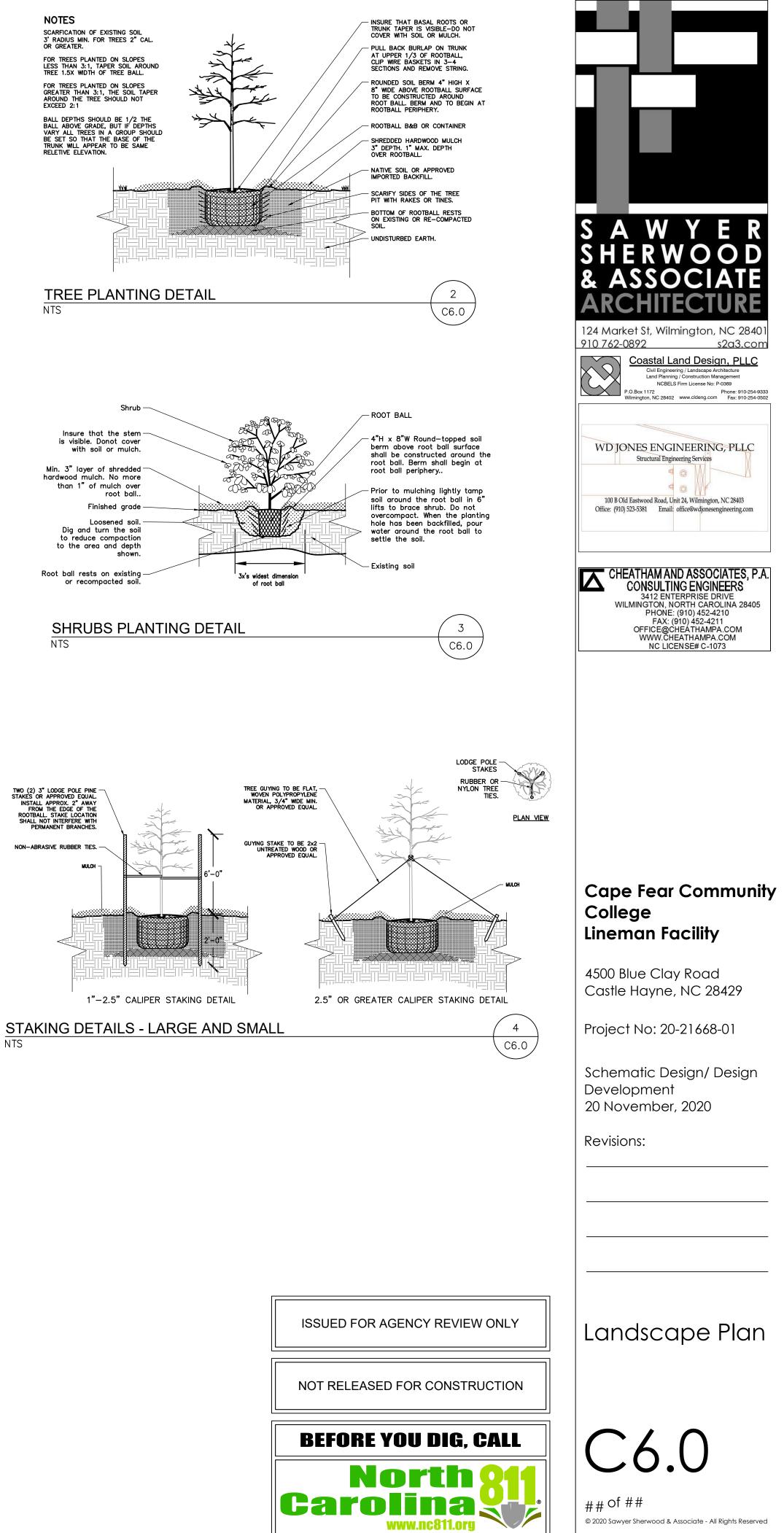
LANDSCAP	E CALCULATIONS		
LANDSCAPED AREA	CODE CITED	REQUIRED QUAN.	PROV.QUAN
PARKING LOT LANDSCAPING	P.LOT INTERIOR LANDSCAPING SHALL BE EQUAL TO 8% OF TOTAL AREA USED FOR PARKING.	21,052 sf x 0.08 = 1,684 SF INTERIOR LANDSCAPE REQ'D	1,684 SF INTERIOR LANDSCAPING
	1 PLANTED OR EX. TREE SHALL BE REQ'D FOR EVERY 144 SF OF TOTAL INTERIOR LANDSCAPED AREA, MIN. 1/ISLAND. 75% OF TREES REQ'D SHALL BE CANOPY, MIN 3" CAL.	1,684/144 = 12 TREES	10 CANOPY TREES 2 - UNDERSTORY TREE
STREETYARD	P.LOT IS INTERIOR TO THE CAMPUS PARCEL, NO R/W AND NO STREETYARD REQUIRED	N/A	N/A
FOUNDATION PLANTINGS	FOUNDATION PLANTING AREA SHALL BE A MIN. OF 12% OF THE AREA OF THE BLDG. FACE ADJ. TO THE PARKING AREA & INTERNAL DRIVE. PORTIONS OF BLDGS. WITH DRIVE-UP SERVICES ARE EXEMPT FROM THESE REQ.	520 sf x 0.12 = 63 SF OF REQUIRED FOUNDATION LANDSCAPING	500 SF FOUNDATION LANDSCAPING PROVIDED

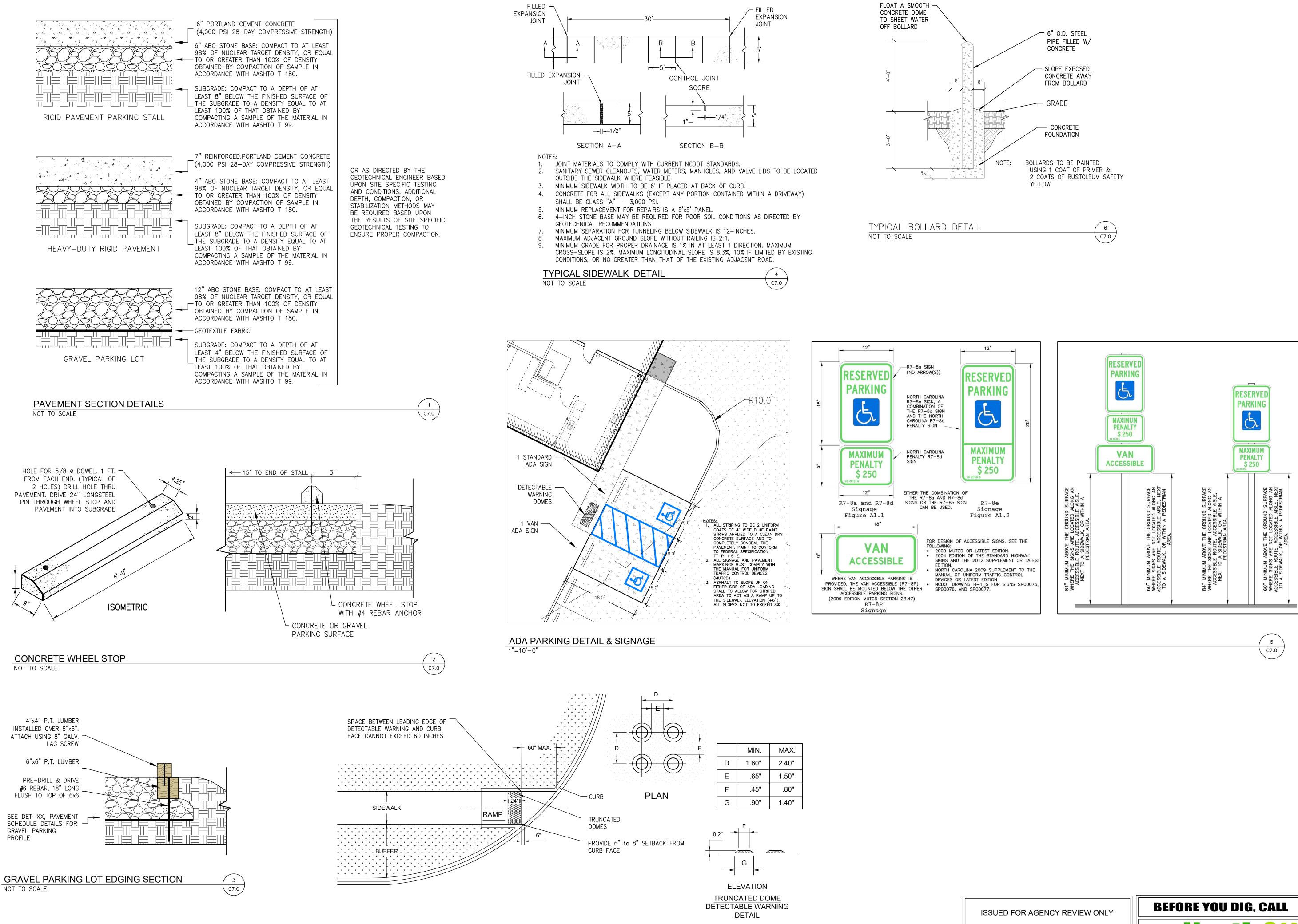
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40'

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# Cape Fear Community College **Lineman Facility**

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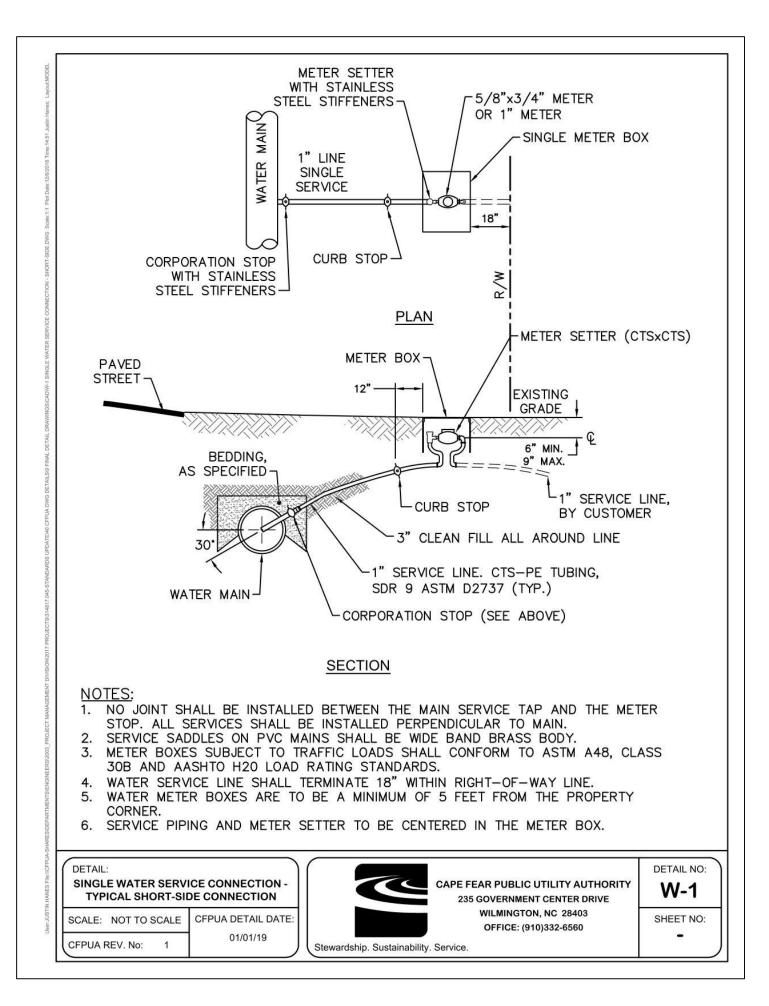
Revisions:

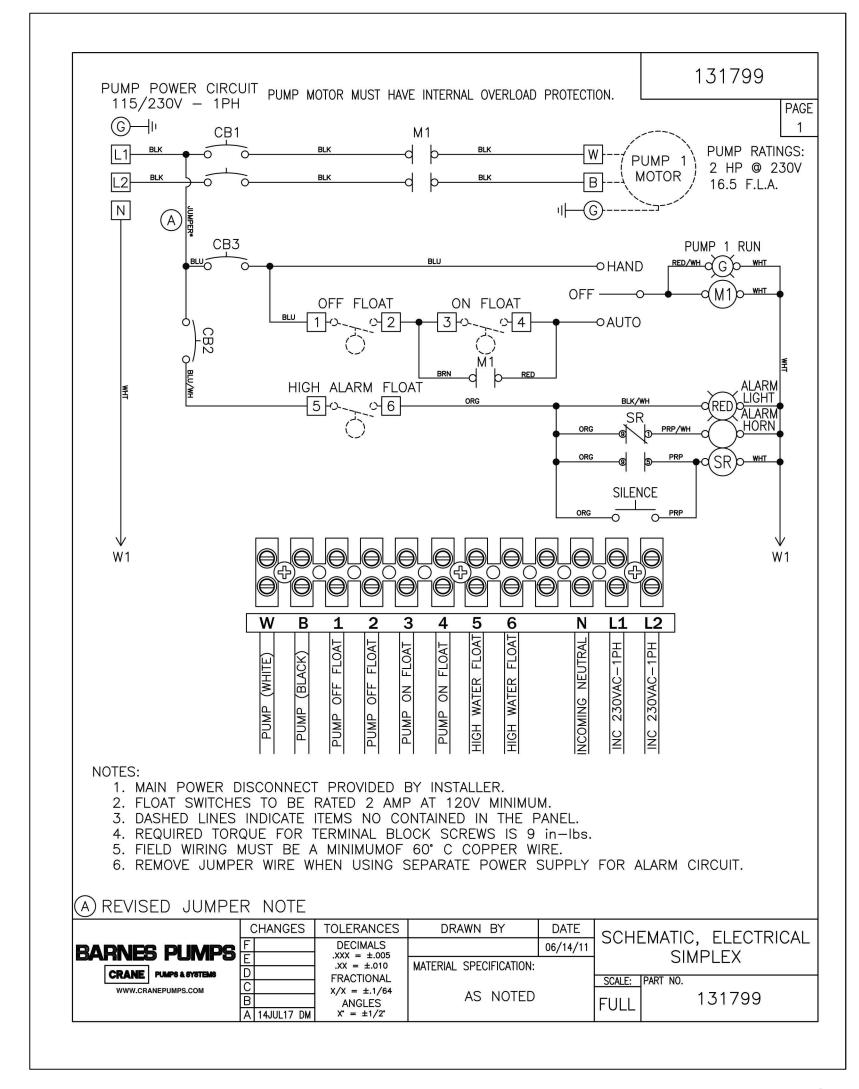
Site Details

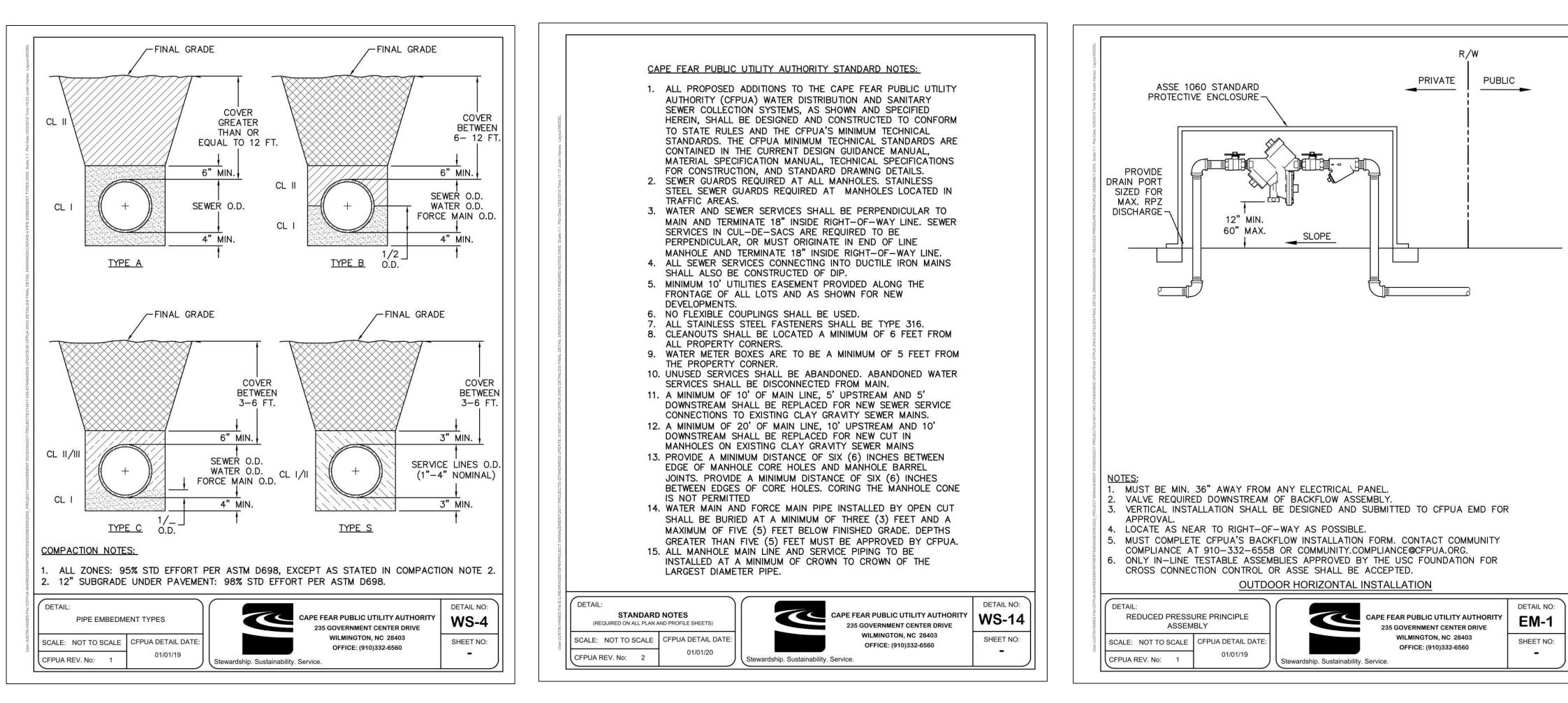
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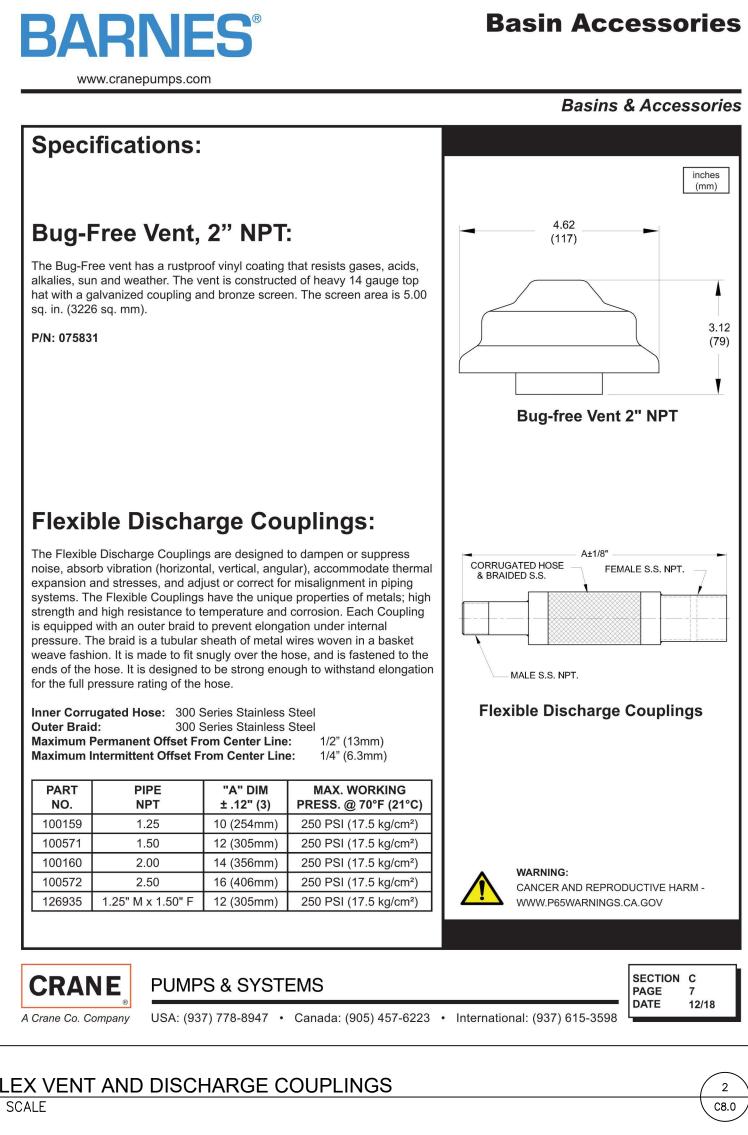






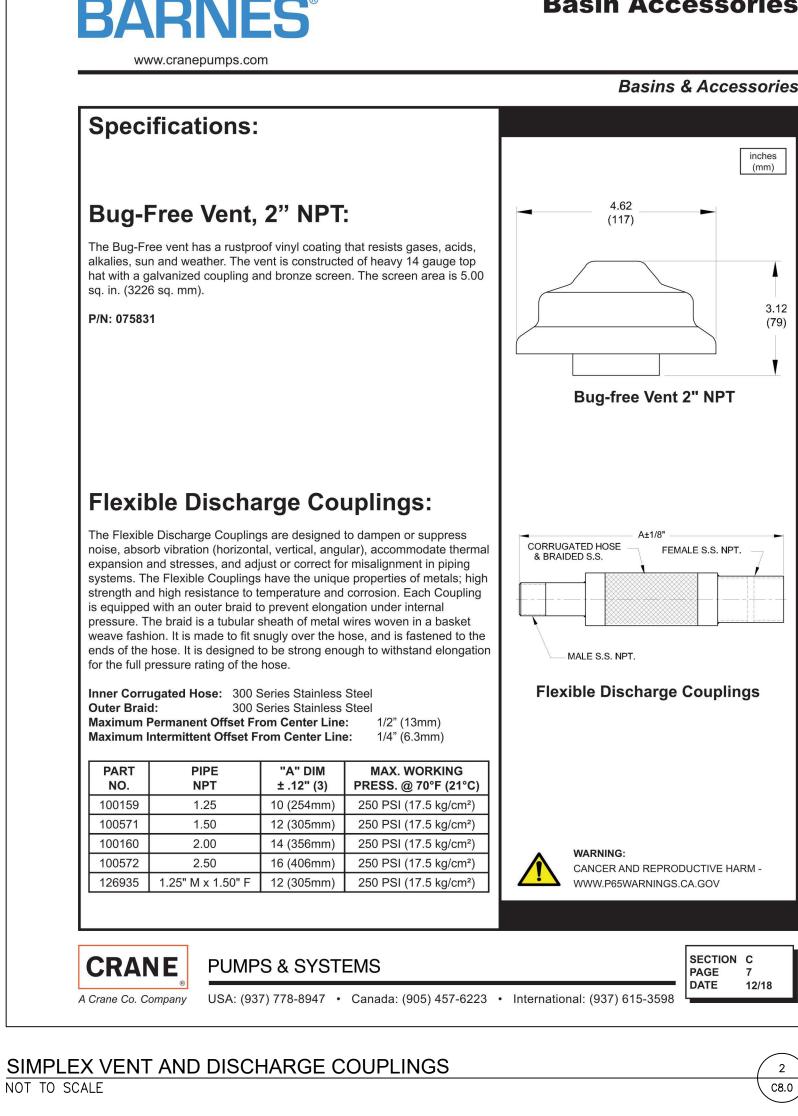






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A Crane Co. Company	USA: (9

C8.0



WIRING DIAGRAM NOTES:

- THE WIRING DIAGRAMS SHOWN ON THIS SHEET WERE PROVIDED BY BARNES PUMPS AND ARE FOR ILLUSTRATIVE PURPOSES ONLY. 2. COASTAL LAND DESIGN, PLLC ASSUMES NO RESPONSIBILITY FOR THE ACCURACY
- OF THESE ELECTRICAL WIRING DIAGRAMS OR FOR ANY ERRORS OR OMISSIONS THAT MAY HAVE BEEN INCORPORATED AS A RESULT OF INCORRECT INFORMATION PROVIDED TO COASTAL LAND DESIGN, PLLC.
- 3. THE WIRING DIAGRAMS SHALL NOT BE USED FOR CONSTRUCTION.
- 4. CONTRACTOR SHALL REFER TO THE LATEST MANUFACTURER'S RECOMMENDATION AND INSTALLATION GUIDELINES FOR THE APPROPRIATE WIRING DIAGRAM.
- 5. THIS DIAGRAM SHALL NOT BE USED FOR PUMP SYSTEMS OTHER THAN BARNES PUMPS.

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Revisions:

# Utility Details

.8.( ## of ##

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PRE-APPROVED SUBMITTAL OVERVIEW OF EQUIPMENT FOR BARNES<sup>™</sup> GRINDER

TANK SHALL BE CONSTRUCTED OF HIGH DENSITY POLYETHYLENE OR

2. TANK CAPACITY SHALL HAVE RESERVE STORAGE OF 360 GALLONS ABOVE

REQUIRED ANTI-FLOATATION BALLAST. THIS AMY BE CONSTRUCTED SO

ALLOW FOR INSPECTION AND MAINTENANCE, ALSO THE ABILITY TO LOCK

FLOATS AND PUMP POWER CORD AND A 2-INCH NPT FEMALE ELECTRICAL

SEPARATE CONTROL AND ALARM CIRCUITS. ONE TWO POLE BREAKER SIZED

3. PANEL TO HAVE A VISUAL ALARM MOUNTED TO THE TOP OF PANEL, WIRED

AN AUDIO ALARM EXTERNALLY MOUNTED WITH A PUSH-TO-SILENCE

4. MOTOR STARTER SHALL BE DESIGNED FOR CONTINUOUS OPERATION AND

EQUIPPED WITH THERM OVERLOADS SIZED FOR NORMAL LOAD RANGE.

OVERLOADS ARE CONTAINED WITHIN THE MOTOR ASSEMBLY FOR THE

6. DUPLEX PANEL SHALL CONTAIN A MANUAL EMERGENCY POWER TRANSFER

PROGRAMMABLE PHONE DIALER TO INCLUDE ALARM POINTS FOR HIGH

1. THE GRINDER PUMP SHALL BE DESIGNED TO BE SUITABLE FOR DOMESTIC

2. PUMP MOTOR SHALL NOT EXCEED 2 HP AND OPERATE AT 230-240 VOLTS

MATERIALS AND CAPABLE OF REDUCING ALL COMPONENTS IN NORMAL

4. PUMP/CORE SHALL BE PROVIDED WITH A MECHANICAL SHAFT SEAL TO

5. CONTROL SYSTEM DESIGN SHALL BE EQUIPPED TO OPERATE FROM MINI

SWITCH AND GENERATOR RECEPTACLE, AND AN AUTOMATIC

3. GRINDER ASSEMBLY SHALL BE CONSTRUCTED OF STAINLESS STEEL

LEVEL, POWER LOSS, AND CONTROL SYSTEM FAILURE.

PREVENT LEAKAGE BETWEEN THE MOTOR AND PUMP.

TO STAY ON UNTIL WET WELL DROPS BELOW HIGH LEVEL FLOAT SETTING.

THAT THE COLLAR CAN EASILY BE INSTALLED DURING INSTALLATION.

4. TANK TOP SHALL CONTAIN AN ALUMINUM HATCH WITH ACCESS DOOR TO

5. TANK INTERNAL DISCHARGE PIPING SHALL INCLUDED SHUT-OFF VALVE,

6. TANK SHALL INCLUDE A STAINLESS STEEL 4/WAY BRACKET TO HANG 3

1. THE CONTROL PANEL SHALL BE A NEMA WATERTIGHT ENCLOSURE WITH

2. THE PANEL SHALL HAVE TWO 15 AMP SINGLE POLE BREAKERS FOR

DISCHARGE COUPLING LOCATED AT THE TOP SIDE OF TANK.

3. TANK BASE SHALL CONTAIN A SUFFICIENT COLLAR TO ALLOW THE

TOP WITH A STANDARD PADLOCK FOR SAFETY.

CHECK VALVE, AND 1 1/4-INCH DISCHARGE PIPE.

TO PUMP FULL LOAD AMPS FOR EACH PUMP

BARNES MODEL OGP AND OGV SERIES GRINDERS.

FIBERGLASS POLYESTER RESIN TO WITHSTAND NORMAL EXPOSURE TO 150

PERCENT OF THE MAXIMUM EXTERNAL SOIL AND HYDROSTATIC PRESSURE

PUMP STATIONS:

CONTROL PANEL

BUTTON.

GRINDER PUMP

1 PHASE.

THE PUMP ON LEVEL.

HINGED LOCKABLE COVER.

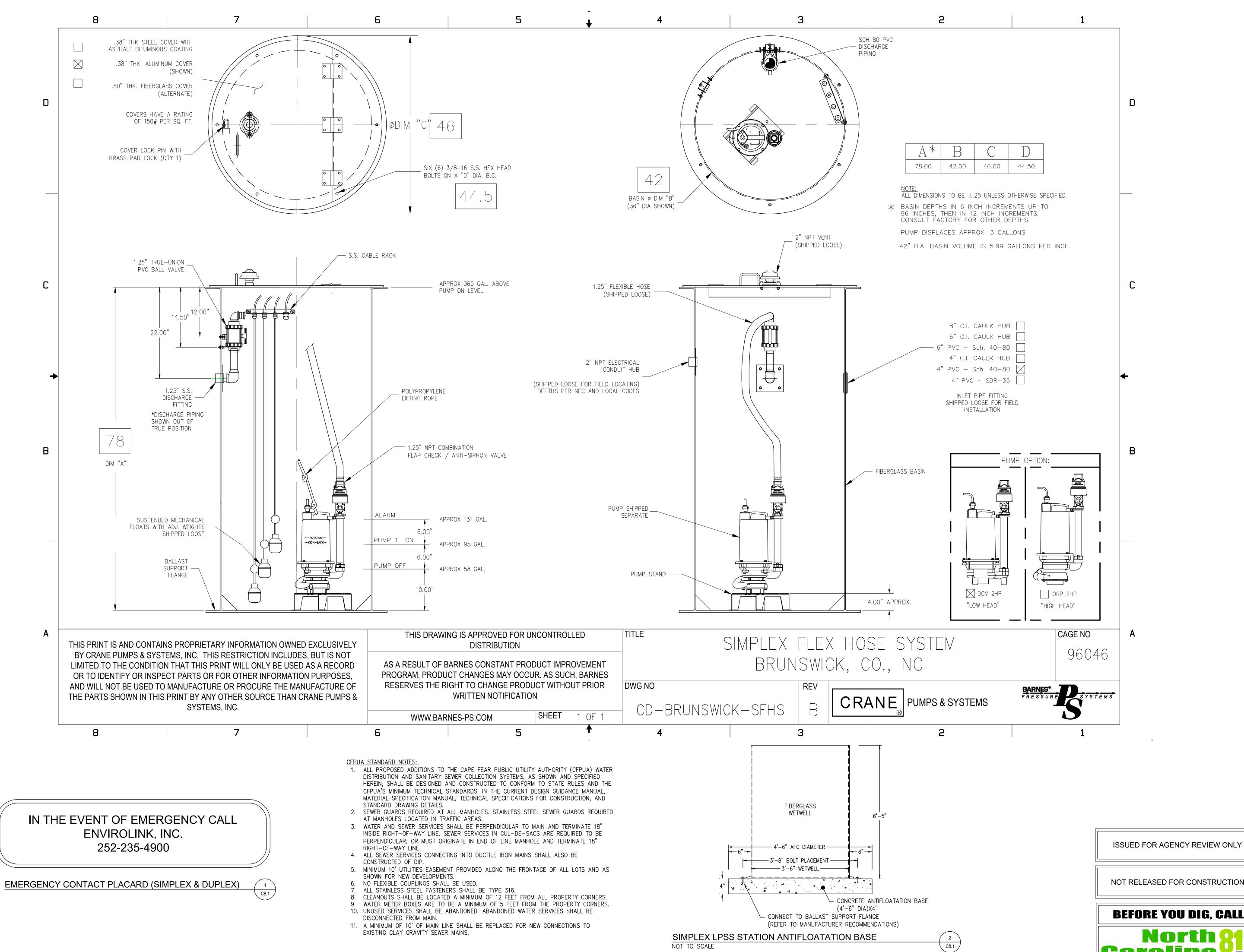
FLOAT LEVEL SENSORS.

WASTEWATER SERVICE.

DOMESTIC SEWAGE.

TANK

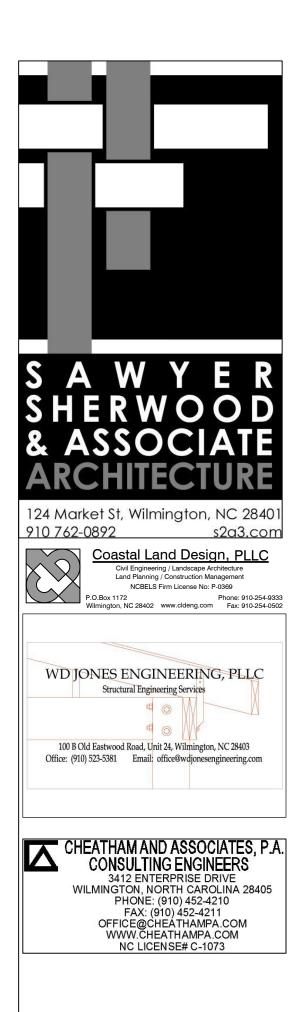
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# Cape Fear Community College **Lineman Facility**

4500 Blue Clay Road Castle Hayne, NC 28429

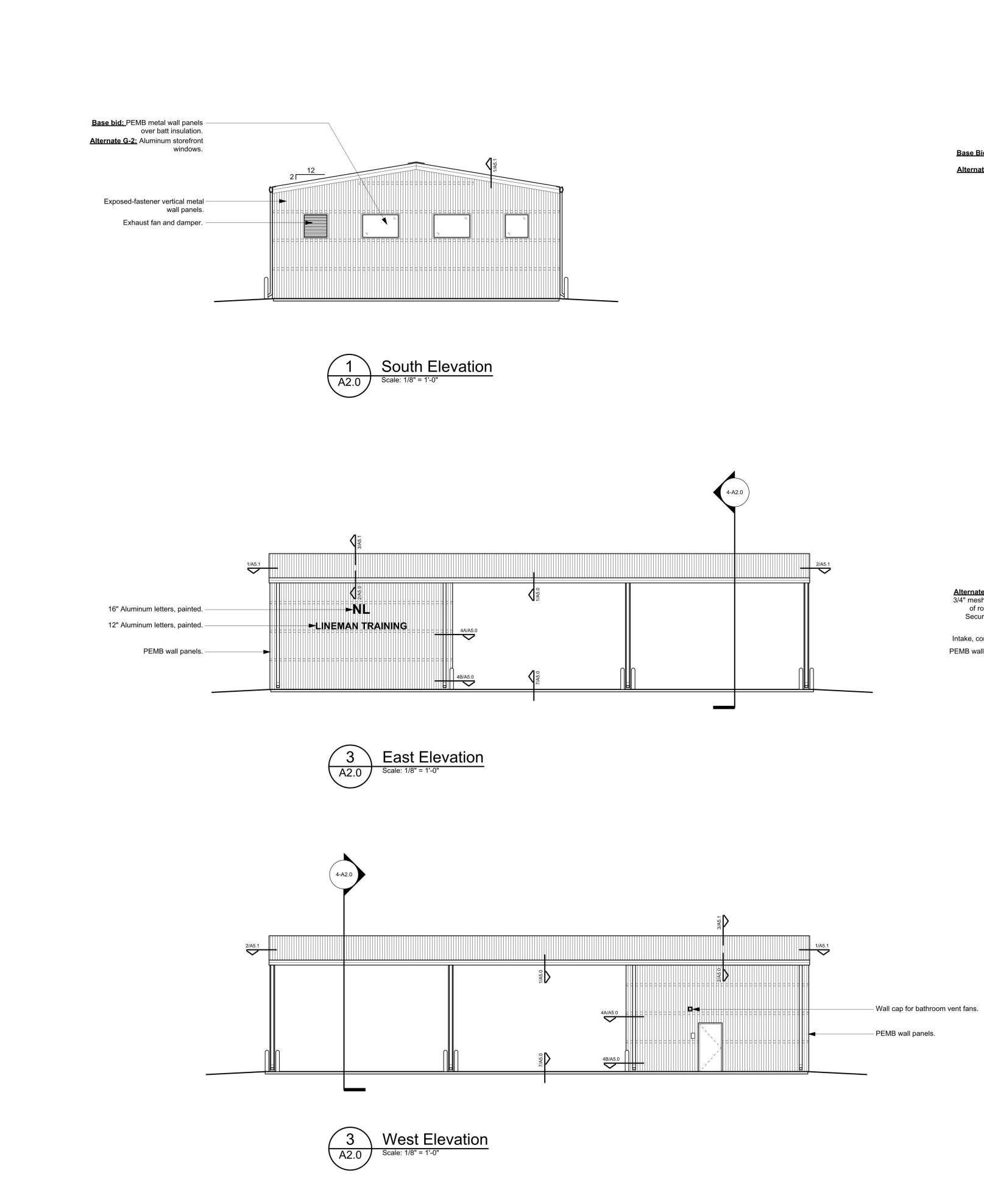
Project No: 20-21668-01

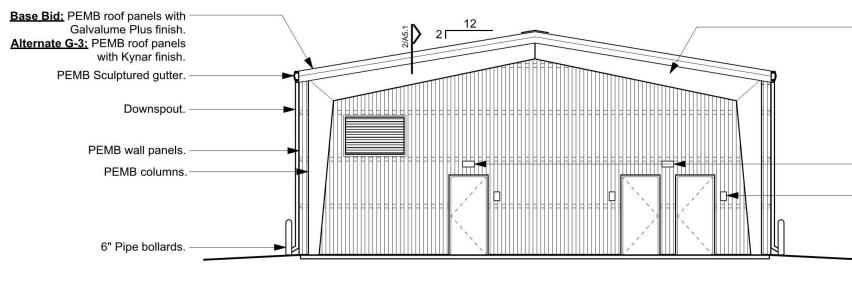
Schematic Design/ Design Development 20 November, 2020

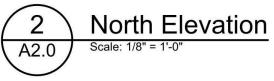
Revisions:

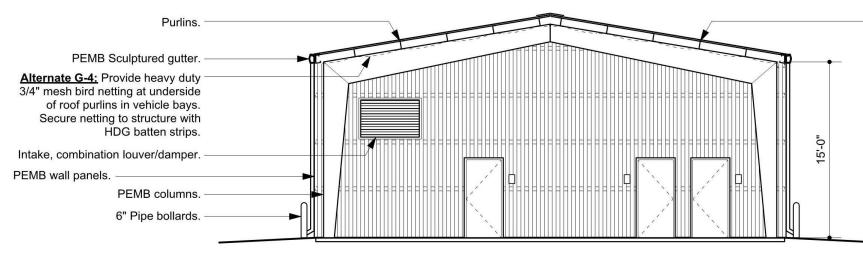
# Utility Details

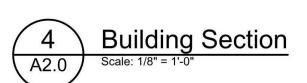
 $\mathbf{28.}$ ##0f##











 Base Bid: Shop primed steel in all areas. Alternate G-1: Paint all exposed steel columns, main frames, and purlins in the vehicle bay area.

 Wall-mounted light fixtures at locations indicated. - 6x9" Room identification sign, typical at each exterior door.

 Base Bid: Shop primed steel in all areas. Alternate G-1: Paint all exposed steel columns, main frames, and purlins in the vehicle bay area.

ISSUED FOR AGENCY REVIEW ONLY

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# Cape Fear Community College Lineman Facility

4500 Blue Clay Road Castle Hayne, NC 28429

Project No: 20-21668-01

Schematic Design/ Design Development 20 November, 2020

Revisions:

# Arch. Elevations

C9.0