

Pender County Planning and Community Development

Planning Division

805 S. Walker Street
PO Box 1519
Burgaw, NC 28425



Phone: 910-259-1202
Fax: 910-259-1295
www.pendercountync.gov

Application Information Major Site Development Plan

Case Number: SDP 2023-379

Application Type: Major Site Development Plan

Applicant: Renovation Church

Owners: Renovation Church

Location: Located approximately 700 feet south of the intersection of Country Club Dr and Transfer Station Rd

Property ID #(s): 4204-63-4576-0000, 4204-64-4115-0000, 4204-62-4957-0000, 4204-62-2745-0000

Description: Plans for a church campus with offices, daycare, and outdoor recreation area

Current Zoning: GB, General Business

Technical Review Committee Meeting: 04/04/2024

Board of County Commissioners/Planning Board Meeting: X

Application Materials

Application Package

Site Plan

APPLICATION PACKAGE

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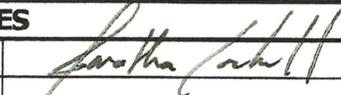
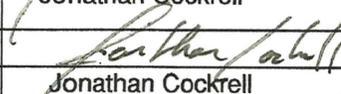
MAJOR AND MINOR SITE DEVELOPMENT APPLICATION

THIS SECTION FOR OFFICE USE			
Date: 2.29.24	Permit Number:	Permit Fee: 250	Invoice Number: 00038832
*Zoning Approval ONLY: YES / NO		Final Zoning Compliance Approved: YES / NO / N/A	
Type of Site Development Plan:	<input checked="" type="checkbox"/> Major	<input type="checkbox"/> Minor	SDP 2024-379
SECTION 1: GENERAL INFORMATION			
Applicant's Name:	Renovation Church	Property Owner's Name:	Renovation Church
Applicant's Address:	16579 HWY 17	Property Owner's Address:	16579 HWY 17
City, State, & Zip	P.O. Box 1129, Hampstead, NC 28443	City, State, & Zip	P.O. Box 1129, Hampstead, NC 28443
Phone Number:	910-787-1525	Phone Number:	910-787-1525
Email Address:	jonathan@renochurch.org	Email Address:	jonathan@renochurch.org
Legal relationship of applicant to landowner:	The applicant and land owner are the same		
SECTION 2: PROJECT INFORMATION			
PIN (Property Id #):	4204-63-4576-0000, 4204-64-4115-0000, 4204-62-4957-0000, 4204-62-2745-0000	Total property acreage:	24.79 ac
Zoning:	GB	Acreage to be disturbed:	21.0 ac
Water Provider:	Pender County	Wastewater Provider:	Pluris
Directions to Site:	Site is at the corner of HWY 17 & Sloop Point Road		
Lot Size:	17.69 ac	Sq Ft of Building:	36,540 sf
Building Height:	31 ft		
Setbacks	Front: 500 ft	Side: 128 ft	Rear: 180 ft
NAICS Code/Use:	813110		
Business Name:	Renovation Church		
Describe activities to be undertaken on project site:	The site will be cleared and graded for a new church, a pond will be constructed along with a driveway connection to HWY 17 and Sloop Point Road		
Ownership:	Number of Employees:	Number of Members:	Seating Capacity:
<input checked="" type="checkbox"/> Private <input type="checkbox"/> Public	10	1,300	832

**If the applicant is not the owner of the property, a notarized letter from the property owner may be required*

**Zoning approval is for the use being proposed ONLY, other department approvals may be required i.e. Fire Marshal, Environmental Health, Permitting, etc...*

SECTION 4: ADDITIONAL COMMENTS			

SECTION 5: SIGNATURES			
Applicant's Signature		Date:	2/14/24
Applicant's Name Printed	Jonathan Cockrell	Date:	
Owner's Signature		Date:	2/14/24
Owner's Name Printed	Jonathan Cockrell	Date:	
Planning Staff:		Date:	

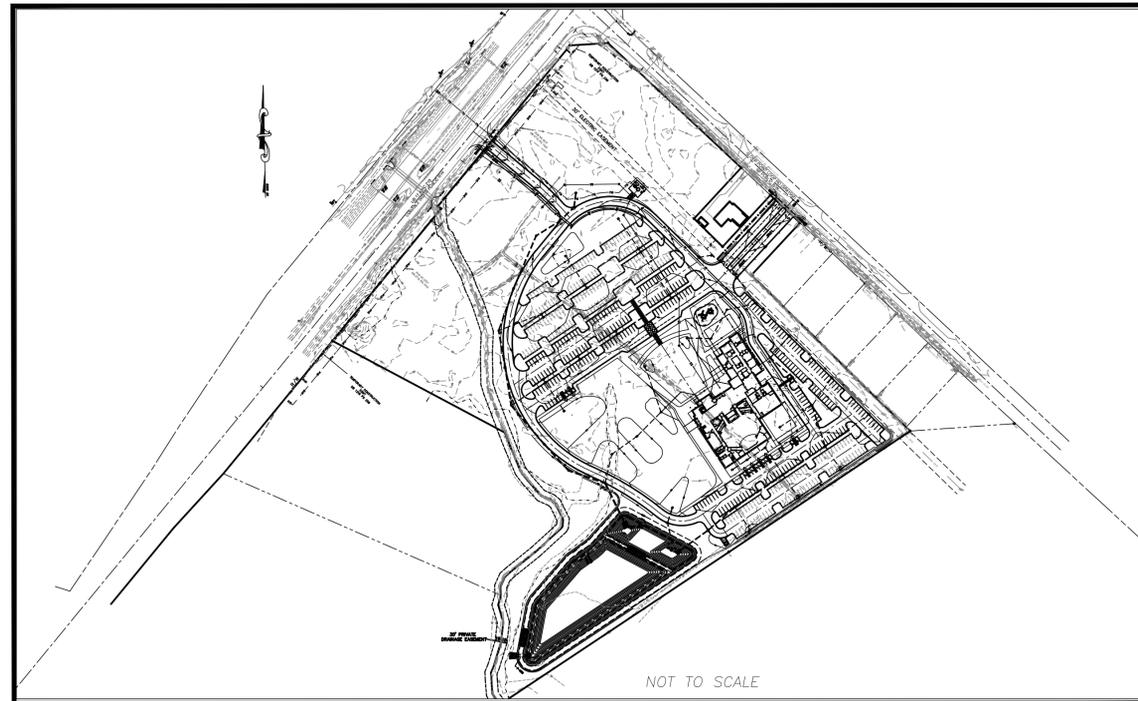
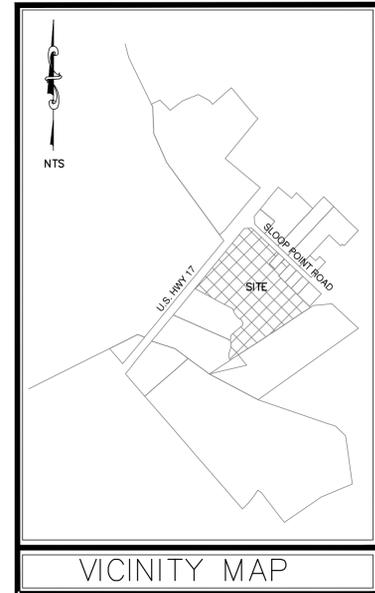
SITE PLAN(S)

Site Development For

RENOVATION CHURCH

JUNE, 2023

PENDER COUNTY, NORTH CAROLINA



INDEX OF SHEETS	
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SHT C-4.3	ROAD PLAN/PROFILE
SHT C-4.4	ENTRANCE ROAD PLAN/PROFILE
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SHT E-003	ELECTRICAL CONTROL PANEL AND DETAILS

LEGEND		
DESCRIPTION	EXISTING	PROPOSED
PROPERTY BOUNDARY	---	---
EASEMENT	---	---
STREAM	---	---
STRUCTURE	---	---
MINOR CONTOURS	---8---	---8---
MAJOR CONTOURS	---10---	---10---
GAS LINE	-G-G-	-G-G-
OVERHEAD POWER	-OHP-OHP-	-OHP-OHP-
WATER LINE	-W-W-	-W-W-
SANITARY SEWER LINE	-SS-SS-	-SS-SS-
SANITARY SEWER MANHOLE	⊙	⊙
STORM DRAINAGE PIPE	---	---
STORM DRAINAGE STRUCTURE	○ □	● ■
TREE	1 1" OAK ●	⊕ ⊗ ⊙
CONCRETE	[Pattern]	[Pattern]
SILT FENCE	-SF-SF-	-SF-SF-
TREE PROTECTION FENCE	-TP-TP-	-TP-TP-
FIRE HYDRANT ASSEMBLY	⊕	⊕
DISTURBED LIMITS LINE	-DL-DL-	-DL-DL-
PERVIOUS PAVEMENT	[Pattern]	[Pattern]

OWNER

RENOVATION CHURCH
 PO BOX 1189
 HAMPSTEAD, NC 28443
 TEL: 910-389-8600
 lenny@renochurch.com

PORT CITY CONSULTING
ENGINEERS, PLLC
 6216 STONEBRIDGE ROAD
 WILMINGTON, NC 28409
 910-599-1744 LICENSE No. P-1032
 mark@portcityeng.com



SITE DATA TABLE	
GENERAL NOTES:	
1. PENDER COUNTY PARCEL NO.:	PIN# 4204-63-4576-0000 4204-64-4115-0000 4204-62-4957-0000 4204-62-2745-0000
2. TOTAL AREA:	24.79 AC.±
3. EXISTING ZONING:	GB
4. PROPERTY OWNER:	RENOVATION CHURCH PO BOX 1129 HAMPSTEAD, NC 28443 (910-389-8600)
DEVELOPMENT DATA:	
Total Tract Area =	24.79 ac +/-
Totals Disturbed Area =	17.0 ac
Setbacks:	
Front Yard	25 ft
Side Yard	10 ft
Rear Yard	10 ft
Maximum Height:	40 ft
POWER: DUKE ENERGY - JON MARSTON (910) 602-4346 AT&T (BELLSOUTH): JAMES BATSON 910-452-5300 SPECTRUM: ROBERT JOHN 910-216-4494 PENDER COUNTY PUBLIC UTILITIES: (910) 259-0212 PLURIS: (910) 327-2880	
NOTE: ALL DESIGN AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH PENDER COUNTY, PLURIS & THE STATE OF NORTH CAROLINA	

COORDINATION NOTES

- THE CONTRACTOR IS REQUIRED TO OBTAIN ANY/ALL PERMITS REQUIRED FOR CONSTRUCTION OF THESE PLANS.
- ALL WORK IS TO BE IN ACCORDANCE WITH PENDER COUNTY AND THE STATE OF NORTH CAROLINA.
- THE CONTRACTOR IS TO ESTABLISH AND CHECK ALL HORIZONTAL AND VERTICAL CONTROLS TO BE USED WITH THE PROJECT. IN ADDITION, THE CONTRACTOR IS TO COMPUTE THE LAYOUT OF THE ENTIRE SITE PLAN IN ADVANCE OF BEGINNING ANY WORK ASSOCIATED WITH THE SUBJECT PLANS. CONTRACTOR SHALL EMPLOY A PROFESSIONAL SURVEYOR TO PERFORM SITE IMPROVEMENT STAKEOUT(S).
- ANYTIME WORK IS PERFORMED OFF-SITE OR WITHIN AN EXISTING EASEMENT, THE CONTRACTOR IS TO NOTIFY THE HOLDER OF SAID EASEMENT AS TO THE NATURE OF PROPOSED WORK, AND TO FOLLOW ANY GUIDELINES OR STANDARDS WHICH ARE ASSOCIATED WITH OR REFERENCED IN THE RECORDED EASEMENT.

GENERAL NOTES:

- EXISTING TOPOGRAPHY, BOUNDARY AND UTILITIES, HAVE BEEN PREPARED BY FIELD SURVEY BY MICHAEL UNDERWOOD AND ASSOCIATES, PA.
- REASONABLE CARE HAS BEEN EXERCISED IN SHOWING THE LOCATION OF EXISTING UTILITIES ON THE PLANS. THE EXACT LOCATION OF ALL EXISTING UTILITIES IS NOT KNOWN IN ALL CASES. THE CONTRACTOR SHALL EXPLORE THE AREA AHEAD OF DITCHING OPERATIONS BY OBSERVATIONS, ELECTRONIC DEVICES, HAND DIGGING AND BY PERSONAL CONTACT WITH THE UTILITY COMPANIES. IN ORDER TO LOCATE EXISTING UTILITIES IN ADVANCE OF TRENCHING OPERATIONS SO AS TO ELIMINATE OR MINIMIZE DAMAGE TO EXISTING UTILITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS RESULTING FROM ANY DAMAGE TO THE EXISTING UTILITY LINES INCLUDING LOSS OF UTILITY REVENUES. CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF EXISTING UTILITIES, SUCH AS POLES, CONDUITS, FIBER OPTIC CABLES, TELEPHONE CABLES, WATER LINES, ETC...
- CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS AND INTERPRETATIONS OF THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT.
- CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER AND THE PUBLIC. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, INCLUDING FLAGMEN AND WATCHMEN AS NECESSARY TO INSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK. CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BY THE DOT.
- ALL MATERIAL CLEARED OR DEMOLISHED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE.
- ALL WORK BY THE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR AFTER THE OWNER ACCEPTS THE WORK.
- CONTRACTOR SHALL CALL THE NORTH CAROLINA ONE-CALL CENTER AT 1 (800) 632-4949 AND ALLOW THE CENTER TO LOCATE EXISTING UTILITIES BEFORE DIGGING.
- CONTRACTOR SHALL REMOVE ASPHALT, AGGREGATE BASE COURSE, AND CONCRETE CURB & GUTTER WITHIN LIMITS OF DEMOLITION AS SHOWN ON PLAN.

DEMOLITION NOTES

- CONTRACTOR TO COORDINATE WITH THE OWNER TO PROPERLY MAINTAIN OR RELOCATE EXISTING SERVICE CONNECTIONS WHEN NECESSARY.
- CONTRACTOR IS TO WALK THE SITE AND BECOME FAMILIAR WITH THE SCOPE OF DEMOLITION REQUIRED. DEMOLITION WORK REQUIRED TO CONSTRUCT NEW SITE IMPROVEMENTS WILL BE PERFORMED BY THE CONTRACTOR AND WILL BE UNCLASSIFIED EXCAVATION.
- DEMOLITION SHALL INCLUDE BUT IS NOT LIMITED TO THE EXCAVATION, HAULING AND OFFSITE DISPOSAL OF CONCRETE PADS, CONCRETE DITCHES, FOUNDATIONS, SLABS, STEPS, AND STRUCTURES; ABANDONED UTILITIES, BUILDINGS, PAVEMENTS AND ALL MATERIALS CLEARED AND STRIPPED TO THE EXTENT NECESSARY AS DIRECTED BY THE SOILS ENGINEER FOR THE INSTALLATION OF THE NEW IMPROVEMENTS AND WITHIN THE LIMITS OF CLEARING AND GRADING AND AS SHOWN ON THESE PLANS.
- THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY, STRUCTURES AND UTILITIES ON THE PROPERTY NOT TO BE DEMOLISHED. DAMAGE TO PROPERTIES OF OTHERS DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO OWNER.
- ELECTRIC, TELEPHONE, SANITARY SEWER, WATER AND STORM SEWER UTILITIES THAT SERVICE OFF-SITE PROPERTIES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS BY THE CONTRACTOR.
- EXISTING UTILITIES NOT INTENDED FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED AND UNDISTURBED DURING DEMOLITION.
- ALL EXISTING IMPROVEMENTS INDICATED OR REQUIRED TO BE DEMOLISHED SHALL INCLUDE REMOVAL FROM THE PROPERTY AND PROPER DISPOSAL.
- CONTRACTOR SHALL COORDINATE RELOCATION OF ALL EXISTING OVER HEAD AND UNDERGROUND UTILITIES INCLUDING CABLE, GAS, TELEPHONE AND ELECTRIC AND ANY OTHER UTILITIES THROUGH THE SITE WITH THE RESPECTIVE COMPANIES.
- PROVIDE SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND GUTTERS AND SIDEWALKS TO BE DEMOLISHED.
- ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AS WELL AS OSHA REGULATIONS.
- INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS OF THE MAINS BY DIGGING TEST PITS BY HAND.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL NOTES:

- CLEAR AND REMOVE FROM SITE ALL TREES, ROOTS, ROOT MAT, ETC. FROM THE AREA WITHIN DESIGNATED CLEARING LIMITS.
- PLANT GRASS OVER ALL GRADED AREAS AS SHOWN IN THE TABLE ON THIS SHEET OF CEASE OF ANY GRADING ACTIVITY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND RESTORING TO PRE-CONSTRUCTION CONDITIONS ANY AREAS OUTSIDE THE PROJECT LIMITS THAT MAY INADVERTENTLY BE DAMAGED DUE TO THE FAILURE OF THE EROSION MEASURES.
- DURING GRADING AND AFTER GRADING HAS BEEN COMPLETED, CONTRACTOR SHALL CONTINUE TO MAINTAIN PERMANENT AND TEMPORARY EROSION CONTROL MEASURES UNTIL FINAL INSPECTION AND APPROVAL BY NEW HANOVER COUNTY.
- WATER, FERTILIZE, MOW AND MAINTAIN SPRIGGED, SODDED AND PLANTED AREAS UNTIL FINAL APPROVAL BY NEW HANOVER COUNTY.
- ANY BORROW MATERIAL BROUGHT ONTO SITE MUST BE FROM A LEGALLY OPERATED MINE OR OTHER APPROVED SOURCE.
- ANY EXCESS MATERIAL REMOVED FROM SITE MUST BE HAULED TO A LEGALLY OPERATED MINE OR OTHER APPROVED SOURCE.

MAINTENANCE PLAN

- ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
 - ALL CONSTRUCTION ENTRANCES WILL BE PERIODICALLY TOP DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH. ANY SEDIMENT THAT IS TRACKED INTO THE STREET WILL BE IMMEDIATELY REMOVED.
 - SEDIMENT WILL BE REMOVED BEHIND THE SEDIMENT FENCE WHEN IT BECOMES 0.5 FEET DEEP AT THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. SILT FENCE STAKES WILL BE SPACED 6 FEET APART UNLESS A WIRE BACKING IS USED WITH 8 FOOT STAKE SPACING.
 - INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.
 - INSPECT INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.
 - INSPECT SILT SACKS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE SILT SACK OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE THE SILT SACK DURING SEDIMENT REMOVAL. REPLACE AS NEEDED.
 - INSPECT SKIMMER SEDIMENT BASINS AS LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER. REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
- IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY KICKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLodge THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE OVER THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.
- IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER. CHECK FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND THERE DEBRIS FROM THE SKIMMER AND POOL AREAS. FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.
- ALL SEEDED AREAS WILL BE FERTILIZED, RESEED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ALL SLOPES WILL BE STABILIZED WITHIN 21 CALENDAR DAYS. ALL OTHER AREAS WILL BE STABILIZED WITHIN 15 WORKING DAYS.

PERMANENT SEEDING SCHEDULE

SPECIES	RATE (LB/ACRE)
CAROLINA COASTAL SEED MIX (BLEND)	200
20.35% GULF ANNUAL RYEGRASS	
30.30% BROWNTOP MILLET	
29.75% FAWN TALL FESCUE	
9.65% CREEPING RED FESCUE	
7.4% UNHULLED BERMUDDAGRASS	
0.55% CENTIPEDEGRASS	

Seeding Dates

MARCH - JUNE

Soil Amendments

APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 300 LB/ACRE 10-10-10 FERTILIZER.

CHECK WITH OWNER PRIOR TO APPLYING. ALL CHEMICALS MUST BE PREAPPROVED BY GE.

Mulch

DO NOT MULCH.

Maintenance By Owner

FERTILIZE VERY SPARINGLY LB/ACRE NITROGEN IN SPRING WITH NO PHOSPHORUS. CENTIPEDE GRASS CANNOT TOLERATE HIGH PH OR EXCESS FERTILIZER.

TEMPORARY SEEDING-LATE WINTER/EARLY SPRING

Seeding Mixture WINTER AND EARLY SPRING

SPECIES	RATE (LB/ACRE)
Rye (GRAIN)	
ANNUAL LESPEDEZA (KOBÉ IN PIEDMONT AND COASTAL PLAIN, KOREAN IN MOUNTAINS)	
OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE.	

SUMMER

SPECIES	RATE (LB/ACRE)
GERMAN MILLET	120
	50

FALL

SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	40

Seeding dates

COASTAL PLAIN - DEC.1-APR. 15 - LATE WINTER AND EARLY SPRING

APRIL 15 - AUG. 15 - SUMMER

AUG. 15 - DEC. 30 - FALL

Soil amendments

FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

Mulch

APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

Maintenance

REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

GENERAL GRADING NOTES

- REASONABLE CARE HAS BEEN EXERCISED IN SHOWING THE LOCATION OF EXISTING UTILITIES ON THE PLANS. THE EXACT LOCATION OF SUCH UTILITIES IS NOT KNOWN IN ALL CASES. THE CONTRACTOR SHALL EXPLORE THE AREA AHEAD OF THE DITCHING OPERATION BY OBSERVATIONS, ELECTRONIC DEVICES, HAND DIGGING AND BY PERSONAL CONTACT WITH THE UTILITY COMPANIES IN ORDER TO LOCATE EXISTING UTILITIES IN ADVANCE OF THE TRENCHING OPERATIONS SO AS TO AVOID AND PREVENT DAMAGE TO THE EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST RESULTING FROM ANY DAMAGE TO THE EXISTING UTILITY LINES INCLUDING BUT NOT LIMITED TO REPAIRS AND LOSS SERVICE REVENUE. CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF EXISTING UTILITIES, SUCH AS POLES, CONDUITS, FIBER OPTIC CABLES, TELEPHONE CABLES, WATER LINES, ETC...
- CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS AND INTERPRETATIONS OF THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT.
- CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER AND THE PUBLIC. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, INCLUDING FLAG MEN AND WATCHMEN AS NECESSARY TO INSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK. CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BY THE MCDOT.
- ALL MATERIAL CLEARED AND GRUBBED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK, SUCH AS TREES, VEGETATION, FENCING, ETC... SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE OR BURNED IF PROPER PERMITS ARE RECEIVED.

SITE NOTES

- ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO START OF CONSTRUCTION. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND R.O.W.'S PUBLIC OR PRIVATE, PRIOR TO WORKING IN THESE AREAS.
- CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
- ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS COORDINATED WITH THE RESPECTIVE UTILITY.
- DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
- THE GENERAL CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
- CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.
- IF DEPARTURES FROM THE SPECIFICATIONS OR DRAWINGS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREOF SHALL BE GIVEN TO THE OWNER FOR REVIEW. NO DEPARTURES FROM THE CONTRACT DOCUMENT SHALL BE MADE WITHOUT THE PERMISSION OF THE OWNER.
- CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES. THE LOCATION OF ALL EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON PLANS AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL ON HIS INITIATIVE AND AT NO EXTRA COST HAVE LOCATED ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY. NO CLAIMS FOR DAMAGES OR EXTRA COMPENSATION SHALL ACCRUE TO THE CONTRACTOR FROM THE PRESENCE OF SUCH PIPE OTHER OBSTRUCTIONS OR FROM DELAY DUE TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. CONTACT NORTH CAROLINA ONE CALL* TOLL FREE 1-800-632-4949 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL NONSUBSCRIBING UTILITIES.
- ALL PERMITS RELATIVE TO PROJECT MUST BE OBTAINED, PRIOR TO CONSTRUCTION
- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PERMITS ISSUED AND APPLICABLE STATE, COUNTY, AND LOCAL CODES.
- FOR BUILDING DIMENSIONS, SEE ARCHITECTURAL DRAWINGS.
- ALL DIMENSIONS AND RADII ARE TO OUTSIDE FACE OF BUILDING OR TO FACE OF CURB UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC., THAT MAY BE REQUIRED.
- THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.

GENERAL STORM SEWER NOTES

- ALL STORM SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH PENDER COUNTY AND THE STATE OF NORTH CAROLINA REQUIREMENTS AS SPECIFIED ON THE DRAWINGS AND IN THE PROJECT SPECIFICATIONS.
- BEDDING FOR ALL STORM SEWER PIPE SHALL BE AS SPECIFIED ON THE DRAWINGS, PROJECT SPECIFICATIONS, AND MANUFACTURER SPECIFICATIONS.
- ALL STORM SEWER PIPES TO BE HDPE ADS N-12 OR EQUIVALENT, UNLESS OTHERWISE SPECIFIED.
- ALL STORM SEWER PIPES SHOWN AS RCP ON THE PLANS SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76, UNLESS INDICATED OTHERWISE ON PLANS.

GENERAL FIRE MARSHALL NOTES:

- BUILDING WILL REQUIRE SPRINKLER AND FIRE ALARM PURSUANT TO NCSFC, NFPA 13 & 72.
- FIRE EXTINGUISHERS IN COMMON AREAS PURSUANT TO NCSFC CHAP. 9.
- PURSUANT TO 905.3.1, THE BUILDING IS ABOVE 30 FT AND WILL REQUIRE A STANDPIPE SYSTEM. POOL/CLUBHOUSE WILL BE REQUIRED TO HAVE SPRINKLER, ALARM AND EMERGENCY CALL BOX.
- BUILDING WILL REQUIRE A BDA DUE TO SIZE, CONSTRUCTION MATERIALS AND MULTIPLE FLOOR LEVELS PURSUANT TO NCSFC SECTION 510.
- A HYDRANT WILL BE NEED TO BE WITHIN 100 FT OF THE FDC FOR THE STANDPIPE SYSTEM AND THE STANDPIPE WILL NEED TO BE ACCESSIBLE ON ALL FOUR FLOORS PLUS THE INNER COURTYARD.
- A KNOX BOX WILL NEED TO BE PROVIDED FOR KEY ACCESS TO ALL COMMON AREAS.

EXISTING UTILITY NOTES

- IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY THE ACTUAL LOCATION AND AVAILABILITY OF ALL EXISTING AND PROPOSED UTILITIES IN THE FIELD PRIOR TO GROUND BREAKING.
- EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.

UTILITY CONTACTS:

- CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING AND DIGGING. 1-800-632-4949
- DUKE ENGERY: JOHN ELLIOT - john.elliott@pncmail.com

NOTICE REQUIRED

ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED BY CONTRACTOR PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF SAID UTILITIES. CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST THREE WORKING DAYS, BUT NOT MORE THAN TWELVE WORKING DAYS PRIOR TO ANY EXCAVATION OR DEMOLITION.

CONTACT "CAROLINA ONE CALL" AT 1-800-632-4949 or 811
EMERGENCY DIAL 911 POLICE - FIRE - RESCUE



11/20/2023

No.	Revision	Date	By

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JUNE, 2023
Checked By	MNH	Job No.	

RENOVATION CHURCH

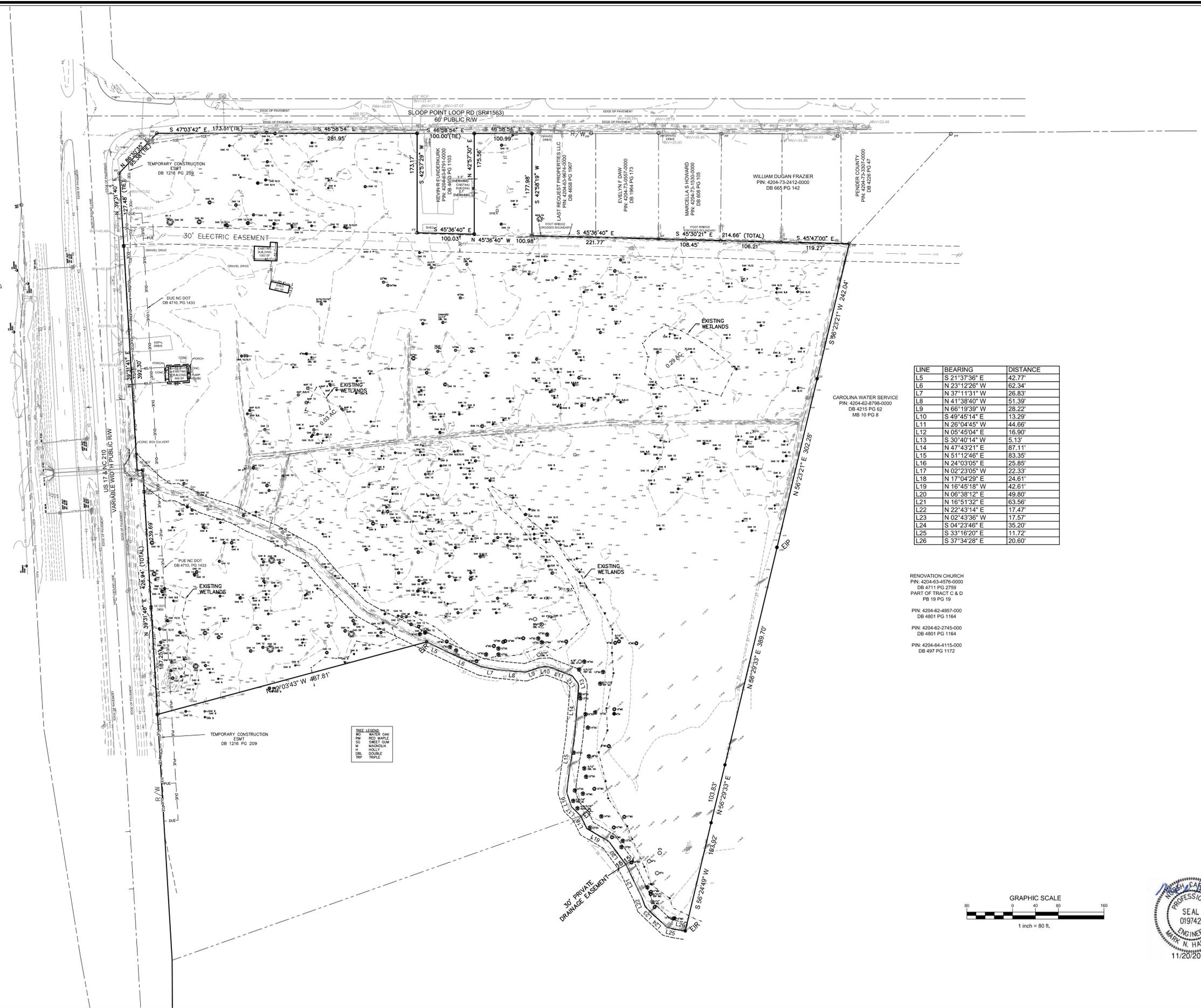
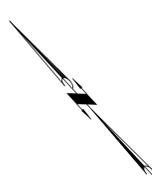
PENDER COUNTY NORTH CAROLINA

RENOVATION CHURCH
PO BOX 1189
HAMPSTEAD, NC 28443

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GENERAL NOTES

Sheet No.
C-1

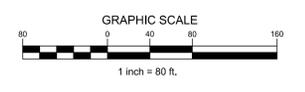


LINE	BEARING	DISTANCE
L5	S 21°37'36\"	42.77'
L6	N 23°12'26\"	62.34'
L7	N 37°11'31\"	26.83'
L8	N 41°38'40\"	51.39'
L9	N 66°19'39\"	28.22'
L10	S 49°45'14\"	13.29'
L11	N 26°04'45\"	44.66'
L12	N 05°45'04\"	16.90'
L13	S 30°40'14\"	5.13'
L14	N 47°43'21\"	87.11'
L15	N 51°12'46\"	83.35'
L16	N 24°03'05\"	25.85'
L17	N 02°23'05\"	22.33'
L18	N 17°04'29\"	24.61'
L19	N 16°45'18\"	42.61'
L20	N 06°38'12\"	49.80'
L21	N 16°51'32\"	63.56'
L22	N 22°43'14\"	17.47'
L23	N 02°43'36\"	17.57'
L24	S 04°23'46\"	35.20'
L25	S 33°16'20\"	11.72'
L26	S 37°34'28\"	20.60'

CAROLINA WATER SERVICE
 PIN: 4204-62-8798-0000
 DB 4215 PG 62
 MB 10 PG 8

RENOVATION CHURCH
 PIN: 4204-63-4576-0000
 DB 4711 PG 2759
 PART OF TRACT C & D
 FB 19 PG 19
 PIN: 4204-62-4957-0000
 DB 4801 PG 1164
 PIN: 4204-62-2745-0000
 DB 4801 PG 1164
 PIN: 4204-64-4115-0000
 DB 497 PG 1172

TREE LEGEND
 RW WATER OAK
 RM RED WATTLE
 W WILD WATTLE
 M MAGNOLIA
 H HOLLY
 DBL DOUBLE TRIFLE



No.	Revision	Date	By

Designer: MNH
 Drawn By: MNH
 Checked By: MNH
 Date: JUNE, 2023
 Scale: AS SHOWN
 Job No.

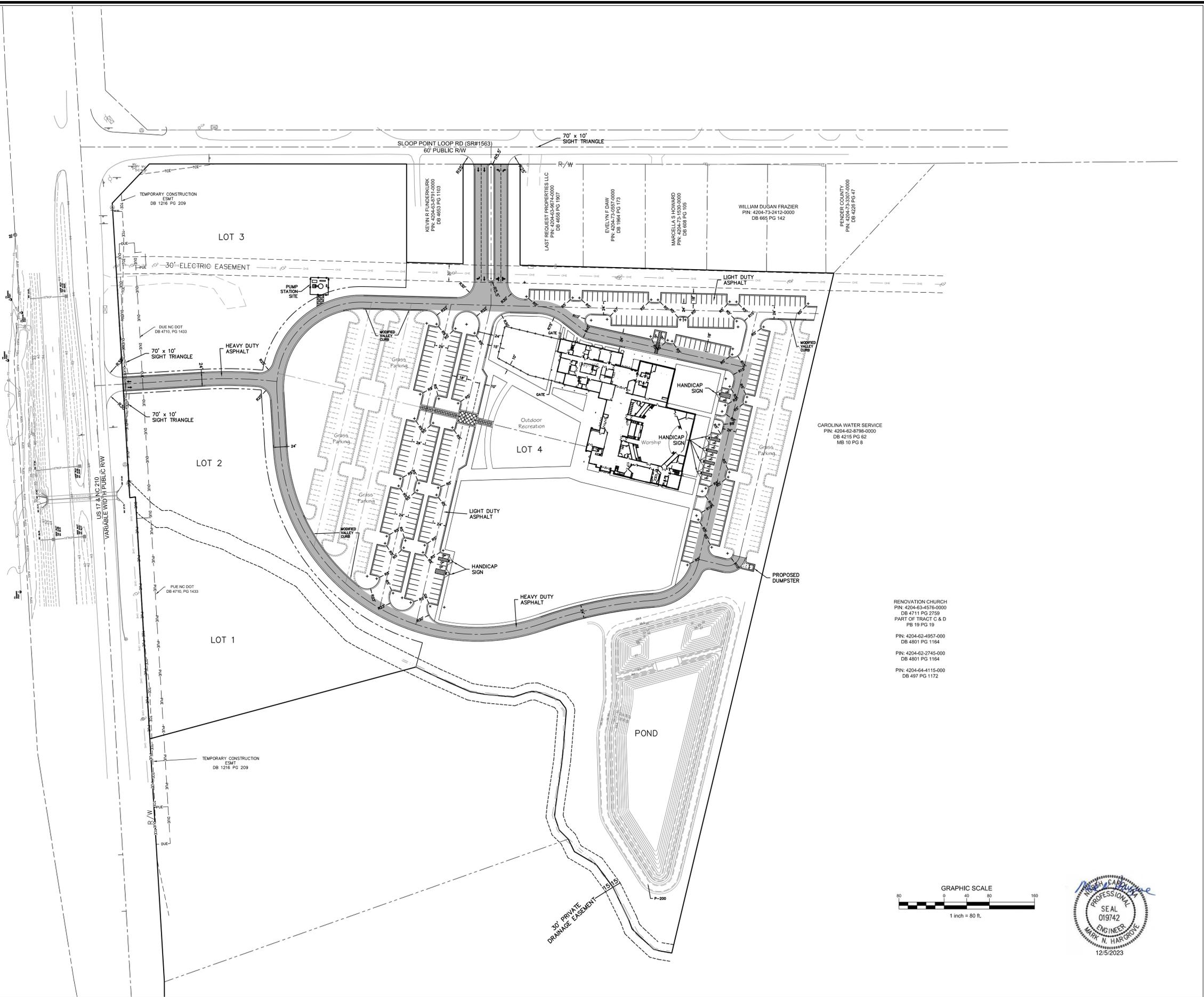
RENOVATION CHURCH
 HAMPSTEAD
 NORTH CAROLINA

RENOVATION CHURCH
 16579 HWY 17
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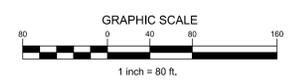
EXISTING CONDITIONS

Sheet No.
C-2



CAROLINA WATER SERVICE
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 DB 4215 PG 62
 MB 10 PG 8

RENOVATION CHURCH
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 DB 4711 PG 2759
 PART OF TRACT C & D
 PB 19 PG 19
 PIN: 4204-62-4957-0000
 DB 4801 PG 1164
 PIN: 4204-62-2745-0000
 DB 4801 PG 1164
 PIN: 4204-64-4115-0000
 DB 497 PG 1172



No.	Revision	Date	By
1	ADDED SIGHT TRIANGLES	12/5/23	MNH

Designer	MNH	Scale	AS SHOWN
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SITE PLAN

Sheet No.
C-3

STRUCTURE ID	Inv ElevUp (ft)	Grnd/RimUp (ft)
CI-50	30.80	37.83
MH-51	31.09	38.00
CI-52	31.36	37.79
MH-53	31.74	38.00
CI-54	32.03	38.20
MH-55	32.31	38.75
CI-56	32.64	38.05
MH-57	33.07	39.00
CI-58	33.27	38.90
CI-59	33.42	38.90
DI-60	33.53	39.00
CI-61	33.54	38.30
CI-62	33.80	38.30
CI-63	34.14	38.30
CI-64	34.64	38.30
CI-65	34.67	38.30
CI-65A	35.06	38.50
CI-66	35.09	38.50
DI-67	35.37	39.00
DI-68	33.97	38.50
CI-69	33.59	38.30
CI-70	33.85	38.30
CI-71	34.19	38.30
CI-72	34.12	38.30
CI-73	34.17	38.30
CI-74	34.78	38.30
CI-75	34.88	38.30
DI-76	35.09	38.50
DI-77	32.52	38.50
DI-78	32.75	38.50
DI-79	33.01	38.50
DI-80	33.94	38.50
NY-81	35.84	39.65

CI-CURB INLET
DI-DROP INLET
MH-MANHOLE
NY-NYLOPLAST STRUCTURE

NOTE:

1. THERE ARE WETLANDS ON SITE AND A PERMIT WILL BE OBTAINED FOR ANY WETLANDS IMPACTED. THERE ARE NO SURFACE WATERS WITHIN THE PROJECT LIMITS, A 50-FT PROTECTED VEGETATED SETBACK IS NOT REQUIRED AND A PROTECTED RIPARIAN BUFFER IS NOT REQUIRED. THE PROJECT SITE LIMITS ARE NOT LOCATED IN A REGULATORY FLOOD ZONE.

STRUCTURE ID	Inv Elev (ft)	Grnd/Rim (ft)
CI-100	34.35	38.27
DI-101	34.75	39.00

CI-CURB INLET
DI-DROP INLET

Line ID	LineLength (ft)	Veloc (ft/s)	PipeSize (in)	PipeSlope (%)	Inv ElevDn (ft)	Inv ElevUp (ft)	Grnd/RimDn (ft)	Grnd/RimUp (ft)
P-100	35	4.41	15	1.00	34.00	34.35	NA	38.27
P-101	40	2.97	15	0.99	34.35	34.75	38.27	39.00
P-200	30	2.24	2-30	0.47	34.35	34.50	NA	NA
P-201	94	4.93	24	0.59	36.19	36.74	NA	NA
P-202	55	4.24	18	0.51	39.96	40.24	NA	NA

NOTE: CULVERT P-100 TO BE RCP CL III PIPE WITH FLARED END SECTION. ALL OTHER PIPE (P-*) MAY BE HDPE DOUBLE WALLED PIPE.

STRUCTURE ID	Inv ElevUp (ft)	Grnd/RimUp (ft)
CI-1	31.71	38.30
CI-2	31.98	38.35
CI-3	32.42	38.50
CI-4	32.80	38.50
CI-5	33.12	39.20
CI-6	33.38	39.30
CI-7	33.60	39.30
CI-8	33.82	38.10
CI-9	34.17	38.49
CI-10	34.41	37.97
CI-11	34.59	37.97
DI-12	34.67	38.25
CI-14	34.43	37.80
CI-15	34.43	37.80
CI-16	34.43	37.80
CI-17	34.69	38.10
DI-18	35.73	39.00
CI-19	34.78	38.10
DI-20	34.55	39.00
DI-21	34.96	39.00
CI-22	35.40	38.95
CI-23	35.69	38.95
NY-24	35.61	39.25
NY-25	36.02	39.25
NY-26	36.36	39.50
NY-27	33.17	40.40
CI-28	34.76	38.28
DI-29	35.26	38.75
NY-30	35.78	39.85

CI-CURB INLET
DI-DROP INLET
MH-MANHOLE
NY-NYLOPLAST STRUCTURE

Line ID	LineLength (ft)	Veloc (ft/s)	PipeSize (in)	PipeSlope (%)	Inv ElevDn (ft)	Inv ElevUp (ft)	Grnd/RimDn (ft)	Grnd/RimUp (ft)
P-50	108	4.31	48	0.30	30.48	30.80	NA	37.83
P-51	97	3.84	48	0.30	30.80	31.09	37.83	38.00
P-52	89	5.06	42	0.30	31.09	31.36	38.00	37.79
P-53	127	5.02	42	0.30	31.36	31.74	37.79	38.00
P-54	96	4.08	42	0.30	31.74	32.03	38.00	38.20
P-55	94	4.01	42	0.30	32.03	32.31	38.20	38.75
P-56	111	3.75	42	0.30	32.31	32.64	38.75	38.05
P-57	143	5.03	36	0.30	32.64	33.07	38.05	39.00
P-58	68	3.72	36	0.29	33.07	33.27	39.00	38.90
P-59	51	3.59	36	0.30	33.27	33.42	38.90	38.90
P-60	37	3.42	36	0.30	33.42	33.53	38.90	39.00
P-61	99	4.22	24	1.31	32.24	33.54	38.00	38.30
P-62	86	3.29	24	0.30	33.54	33.80	38.30	38.30
P-63	113	2.78	24	0.30	33.80	34.14	38.30	38.30
P-64	168	2.02	24	0.30	34.14	34.64	38.30	38.30
P-65	10	2.71	18	0.31	34.64	34.67	38.30	38.30
P-65-A	128	1.93	18	0.30	34.67	35.06	38.30	38.50
P-66	10	1.09	18	0.31	35.06	35.09	38.50	38.50
P-67	94	0.43	15	0.30	35.09	35.37	38.50	39.00
P-68	86	0.89	18	0.50	33.54	33.97	38.30	38.50
P-69	10	0.82	15	0.52	33.54	33.59	38.30	38.30
P-70	10	0.97	15	0.52	33.80	33.85	38.30	38.30
P-71	10	1.33	15	0.52	34.14	34.19	38.30	38.30
P-72	102	3.56	18	1.28	32.81	34.12	38.75	38.30
P-73	10	1.1	18	0.52	34.12	34.17	38.30	38.30
P-74	122	2.01	18	0.50	34.17	34.78	38.30	38.30
P-75	10	1.32	15	1.05	34.78	34.88	38.30	38.30
P-76	87	0.58	15	0.30	34.83	35.09	38.30	38.50
P-77	74	2.63	24	1.65	31.30	32.52	37.83	38.50
P-78	77	3.67	18	0.30	32.52	32.75	38.50	38.50
P-79	85	2.78	18	0.30	32.75	33.01	38.50	38.50
P-80	121	1.26	15	0.77	33.01	33.94	38.50	38.50
P-81	71	2.04	10	4.00	33.01	35.84	38.50	39.65

NOTE: CULVERT P-50 TO BE RCP CL III PIPE WITH FLARED END SECTION. ALL OTHER PIPE (P-*) MAY BE HDPE DOUBLE WALLED PIPE. ROOF DRAIN HEADER PIPE (R-*) TO BE HDPE OR SCH 40 PVC. HDPE TO HAVE WATER TIGHT JOINTS

Line ID	LineLength (ft)	PipeSize (in)
R-7	28	8
R-8	45	8
R-9	43	6
R-10	49	6
R-11	51	6
R-12	25	4
R-13	88	4
R-14	30	4
R-15	30	4

MINIMUM SLOPE IS 1% FOR ROOF DRAIN PIPES

Line ID	LineLength (ft)	Veloc (ft/s)	PipeSize (in)	PipeSlope (%)	Inv ElevDn (ft)	Inv ElevUp (ft)	Grnd/RimDn (ft)	Grnd/RimUp (ft)
P-1	86	3.75	42	0.30	31.45	31.71	NA	38.30
P-2	89	3.83	42	0.30	31.71	31.98	38.30	38.35
P-3	145	4.01	36	0.30	31.98	32.42	38.35	38.50
P-4	127	2.91	36	0.30	32.42	32.80	38.50	38.50
P-5	107	2.48	36	0.30	32.80	33.12	38.50	39.20
P-6	86	3.00	30	0.30	33.12	33.38	39.20	39.30
P-7	74	2.77	30	0.30	33.38	33.60	39.30	39.30
P-8	72	2.54	30	0.31	33.60	33.82	39.30	38.10
P-9	116	2.33	30	0.30	33.82	34.17	38.10	38.49
P-10	80	1.80	24	0.30	34.17	34.41	38.49	37.97
P-11	58	2.32	18	0.31	34.41	34.59	37.97	37.97
P-12	27	1.76	18	0.30	34.59	34.67	37.97	38.25
P-13	97	2.95	15	1.05	34.00	35.02	38.35	38.35
P-17	135	1.21	15	1.25	33.00	34.69	38.50	38.10
P-18	96	0.88	15	0.50	35.25	35.73	39.20	39.00
P-20	75	3.28	18	0.51	34.17	34.55	38.49	39.00
P-22	105	0.82	15	0.75	34.61	35.40	37.97	38.95
P-23	58	0.45	15	0.50	35.40	35.69	38.95	38.95
P-19	85	1.35	15	0.50	34.35	34.78	39.20	38.10
P-14	68	1.56	15	1.00	33.75	34.43	38.35	37.80
P-15	68	1.35	15	1.00	33.75	34.43	38.50	37.80
P-16	68	1.31	15	1.00	33.75	34.43	38.50	37.80
P-21	82	2.97	18	0.50	34.55	34.96	39.00	39.00
P-24	81	4.94	18	0.75	35.00	35.61	38.50	39.25
P-25	54	5.15	15	0.75	35.61	36.02	39.25	39.25
P-26	45	2.95	12	0.76	36.02	36.36	39.25	39.50
P-27	32	2.07	8	1.01	32.85	33.17	39.30	40.40
P-28	31	1.43	15	0.29	34.67	34.76	38.25	38.28
P-29	60	2.64	18	0.50	34.96	35.26	39.00	38.75
P-30	104	3.56	12	0.50	35.26	35.78	38.75	39.85

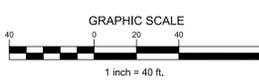
NOTE: CULVERT P-1 TO BE RCP CL III PIPE WITH FLARED END SECTION. ALL OTHER PIPE (P-*) MAY BE HDPE DOUBLE WALLED PIPE. ROOF DRAIN HEADER PIPE (R-*) TO BE HDPE OR SCH 40 PVC. HDPE TO HAVE WATER TIGHT JOINTS

Line ID	LineLength (ft)	PipeSize (in)
R-1	22	6
R-2	14	8
R-3	14	8
R-4	14	8
R-5	76	8
R-6	97	8

MINIMUM SLOPE IS 1% FOR ROOF DRAIN PIPES



11/22/2023



No.	Revision	Date	By

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JUNE, 2023
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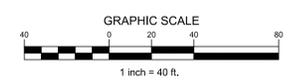
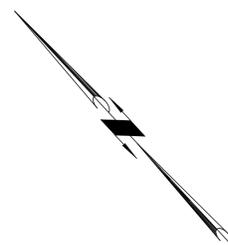
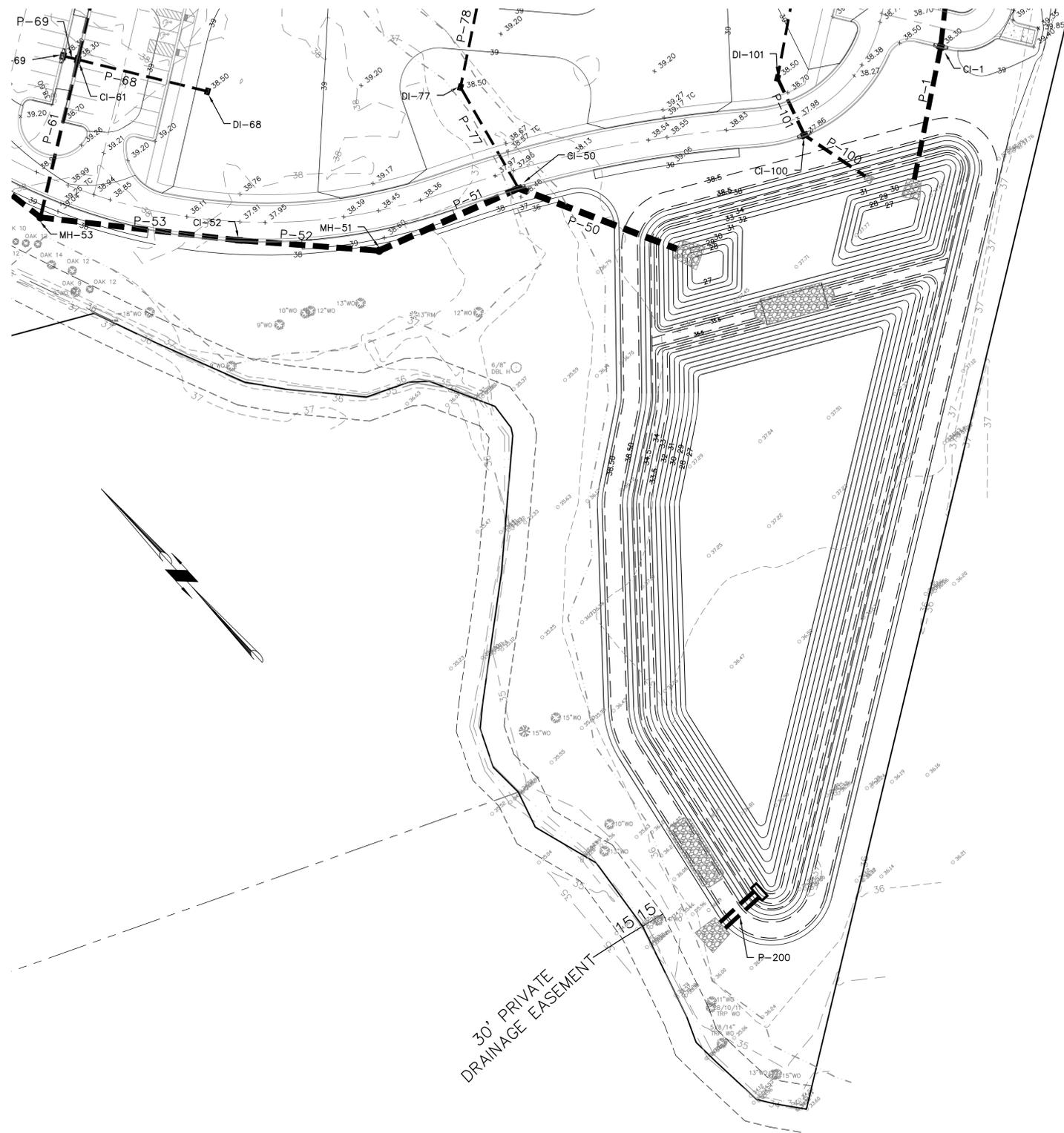
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GRADING & DRAINAGE PLAN

Sheet No.
C-4.1



No.	Revision	Date	By

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Drawn By	MNH	Date	JUNE, 2023
Checked By	MNH	Job No.	

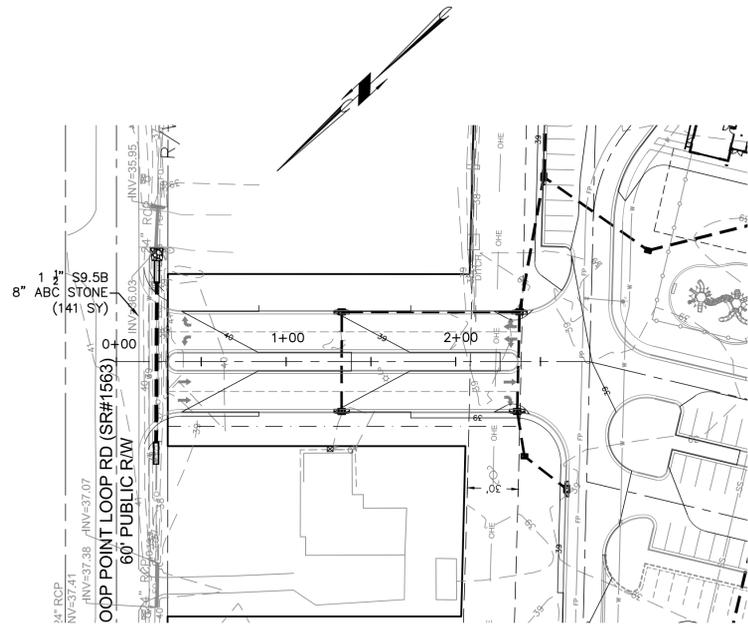
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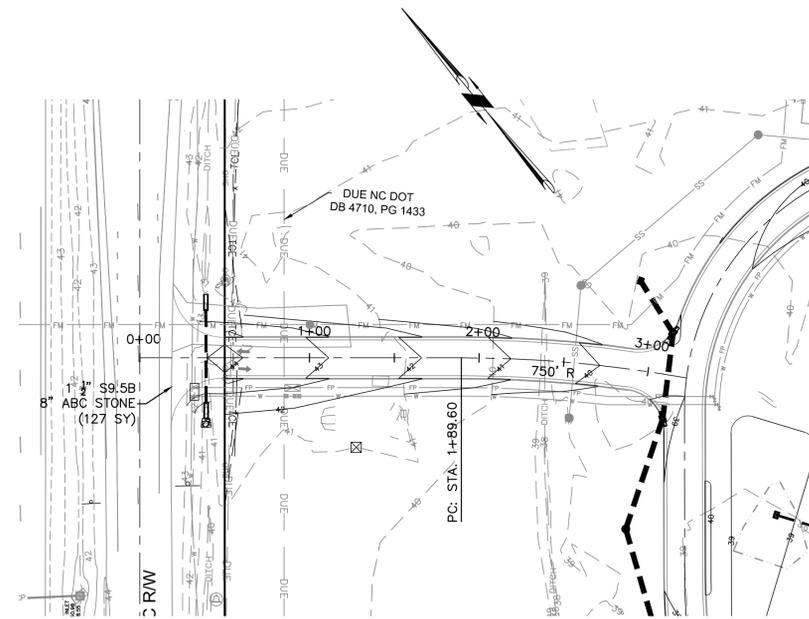
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GRADING & DRAINAGE PLAN

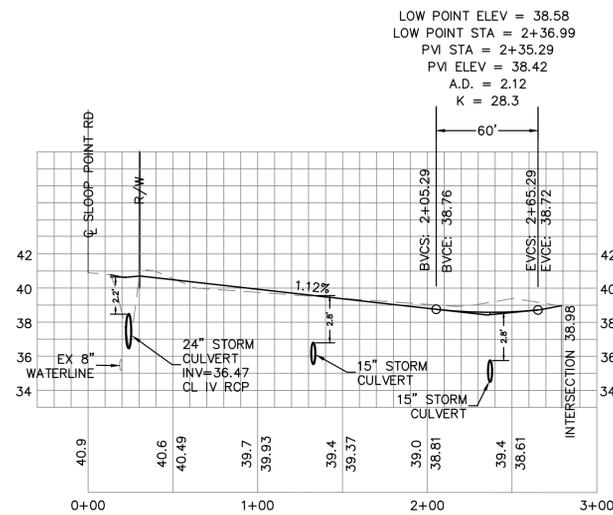
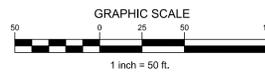
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C-4.2



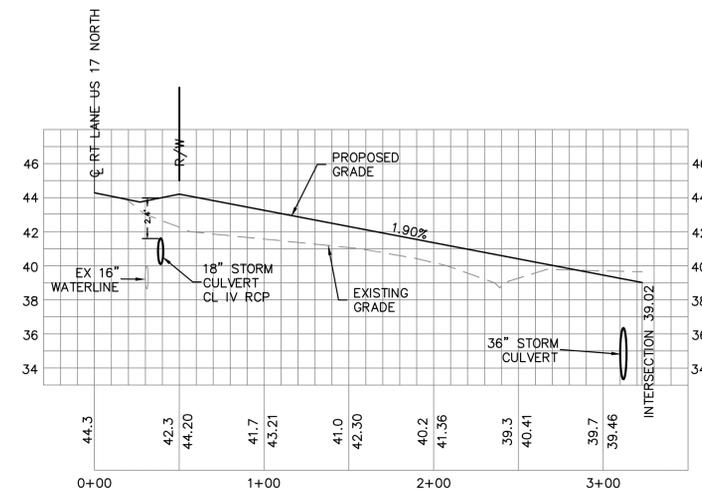
ENTRANCE OFF OF SLOOP POINT ROAD



ENTRANCE OFF OF HWY 17



PROFILE
 1"=50' (HORZ.)
 1"=5' (VERT.)



No.	Revision	Date	By
1	ADDED ASPHALT NOTE	11/27/23	MNH

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JUNE, 2023
Checked By	MNH	Job No.	

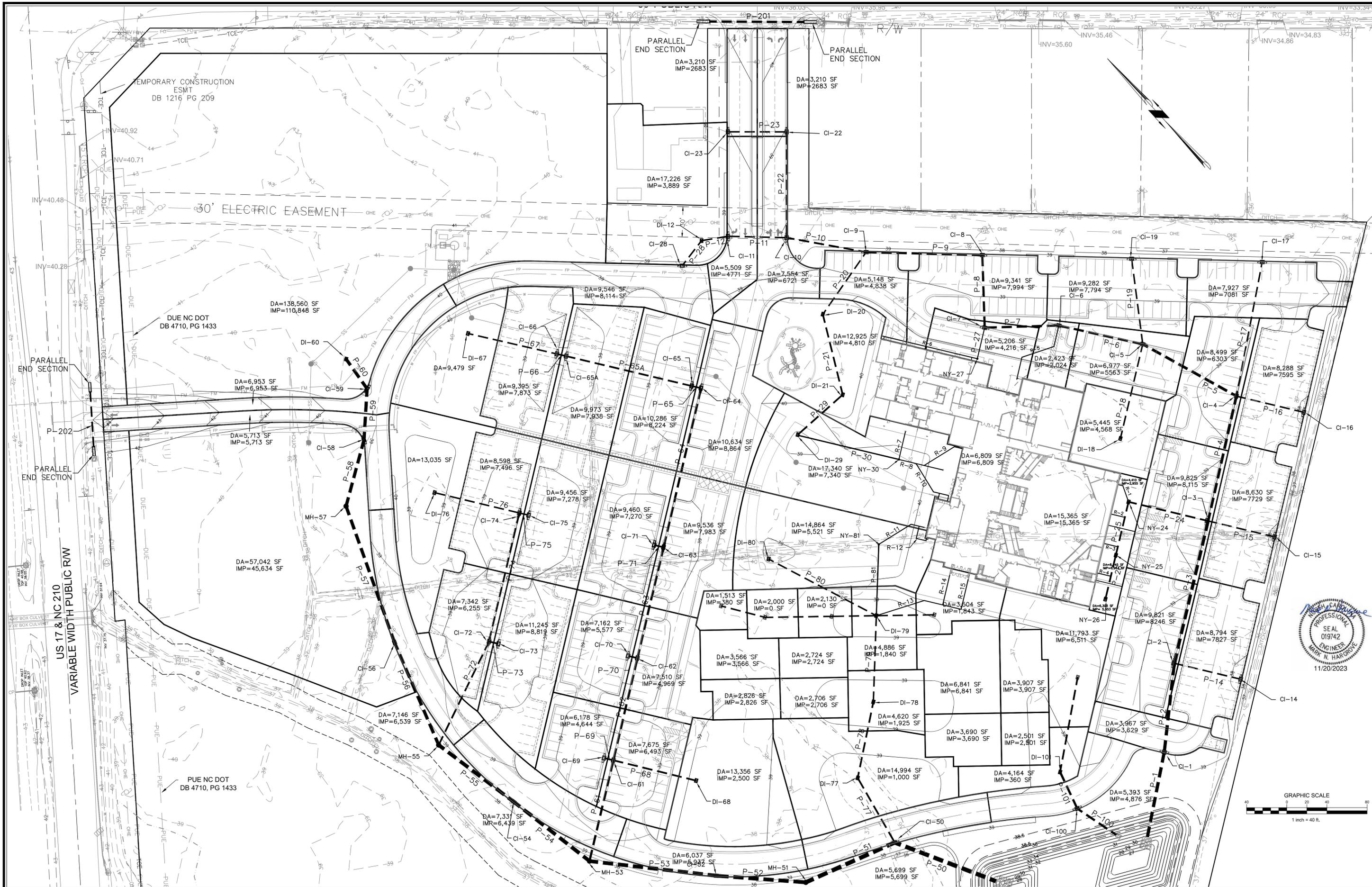
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ENTRANCE ROAD PLAN/PROFILE

Sheet No.
C-4.4



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Checked By	MNH	Job No.	

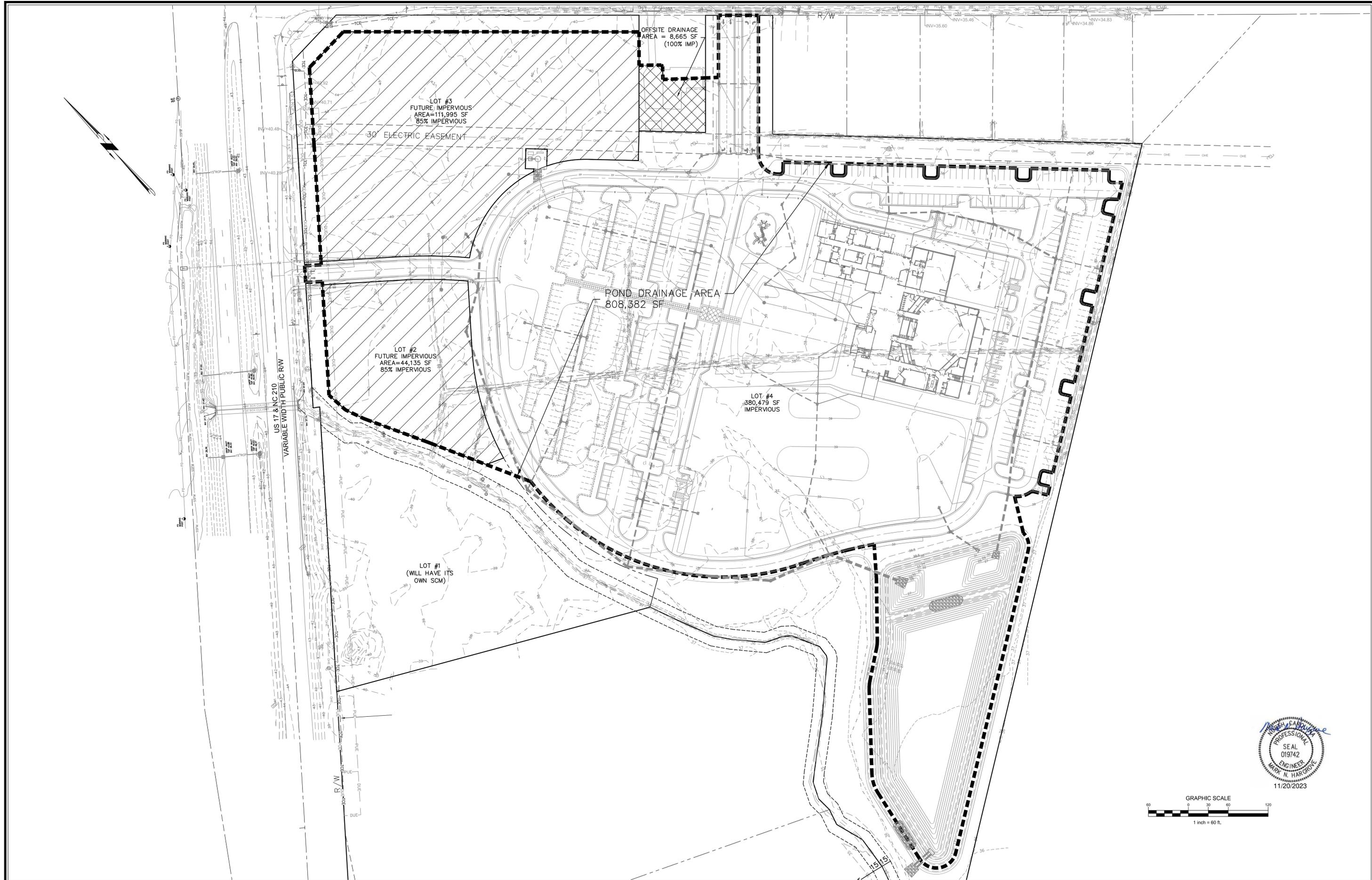
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INLET DRAINAGE AREA PLAN

Sheet No.
C-4.5



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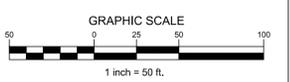
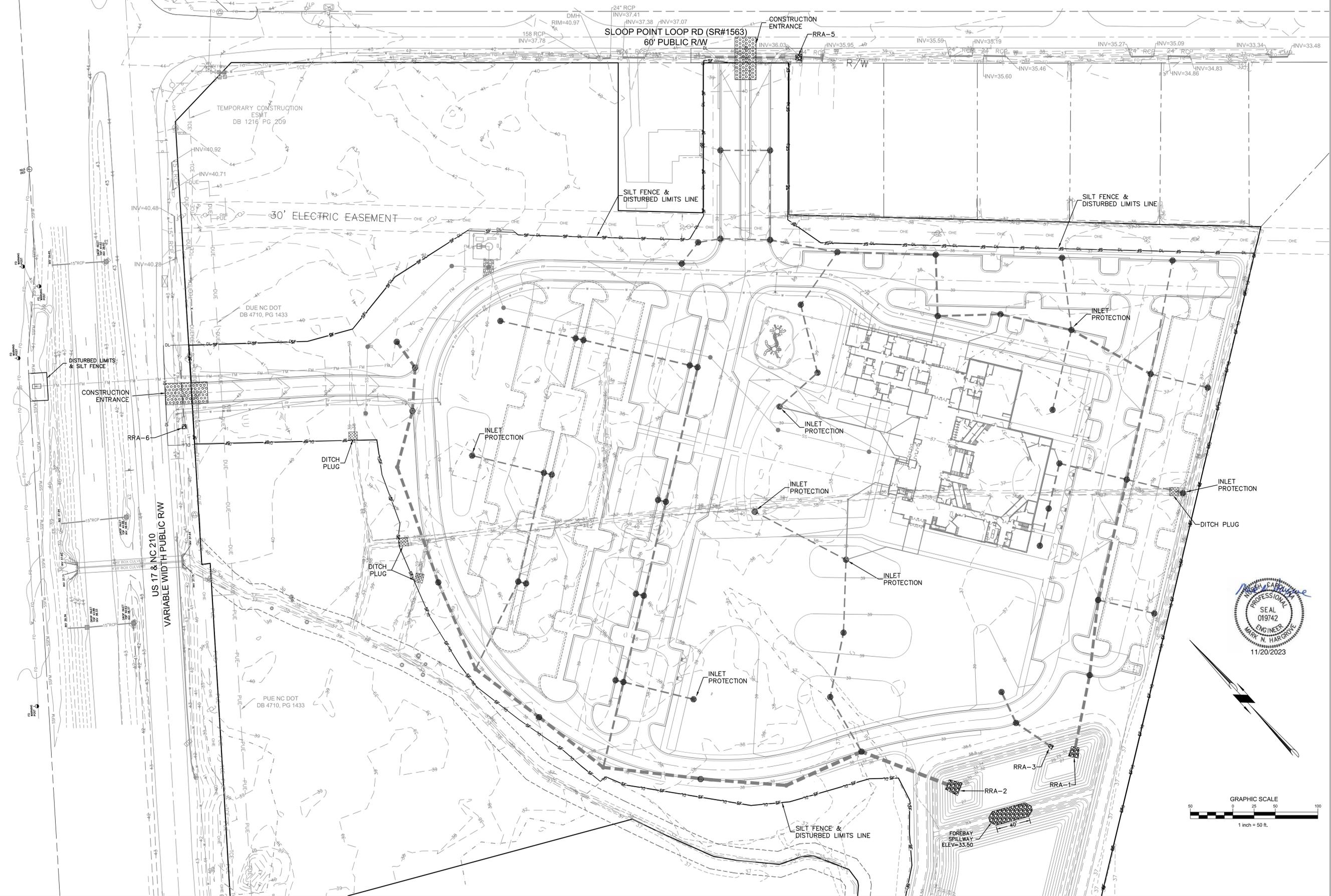
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POND DRAINAGE AREA PLAN

Sheet No.
C-4.6



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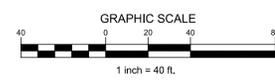
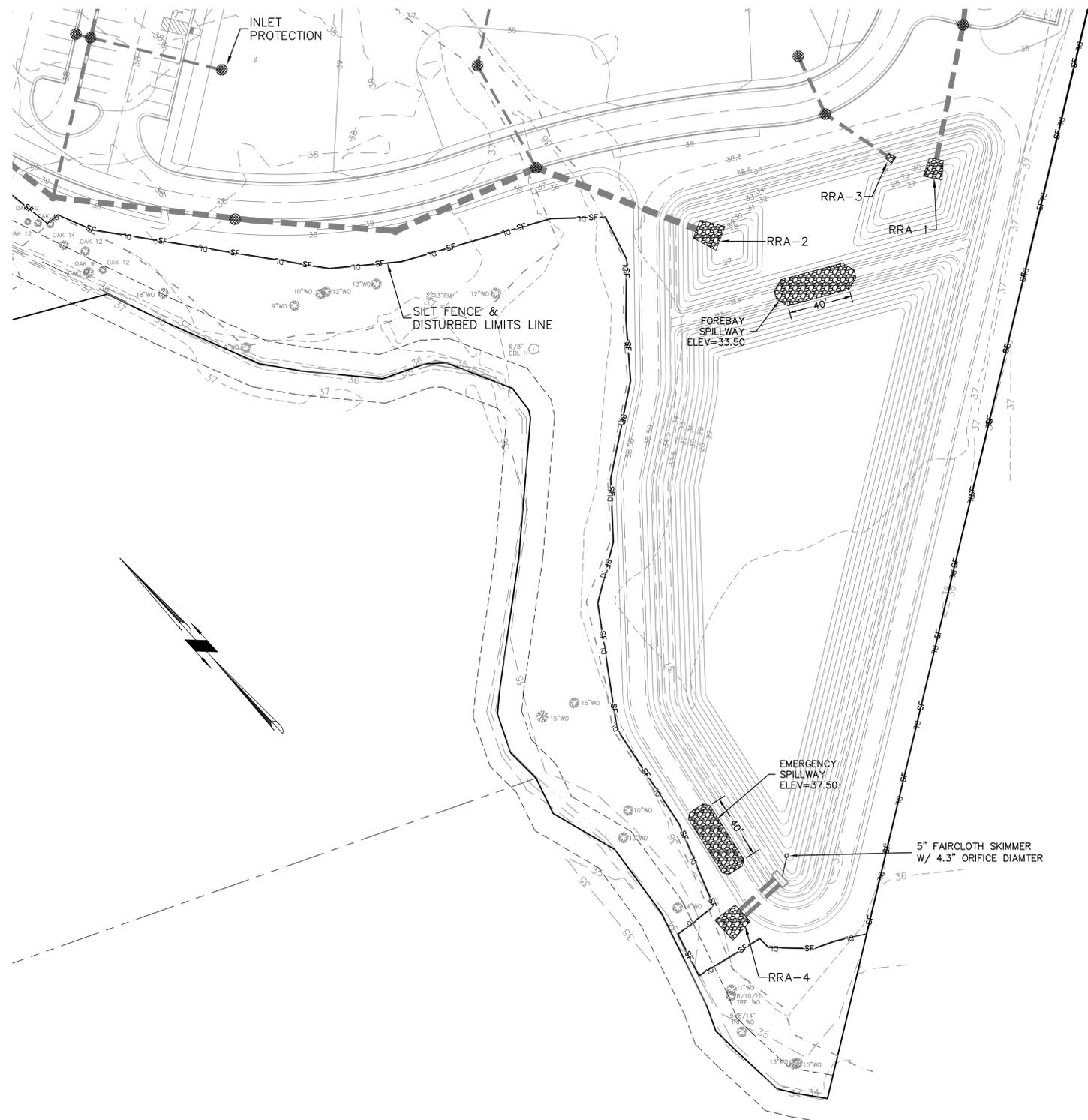
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EROSION CONTROL PLAN

Sheet No.
C-5.0



11/20/2023

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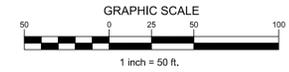
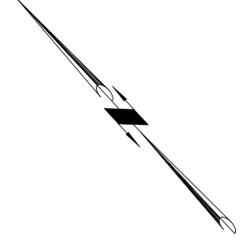
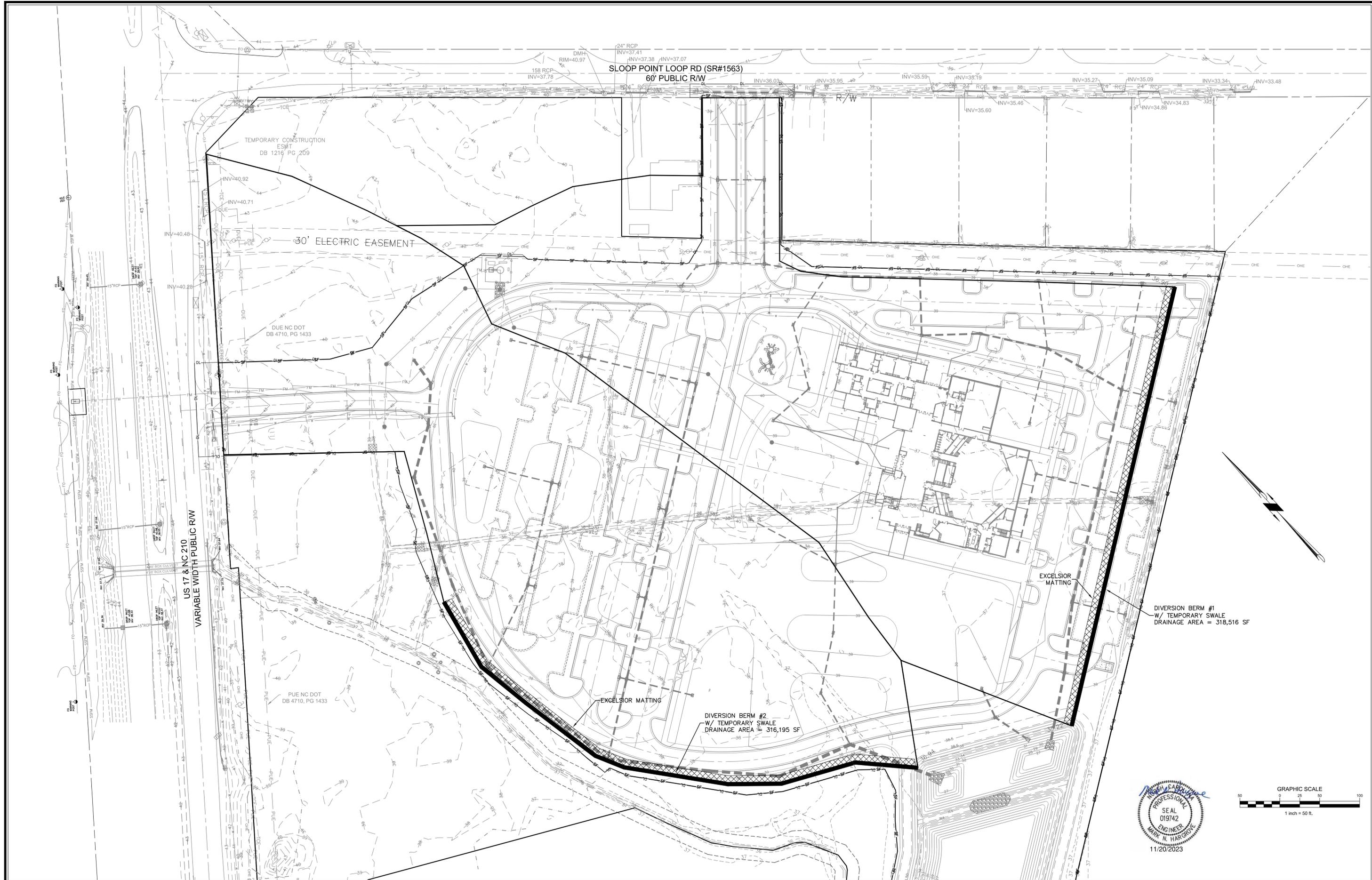
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EROSION CONTROL PLAN

Sheet No.
C-5.1



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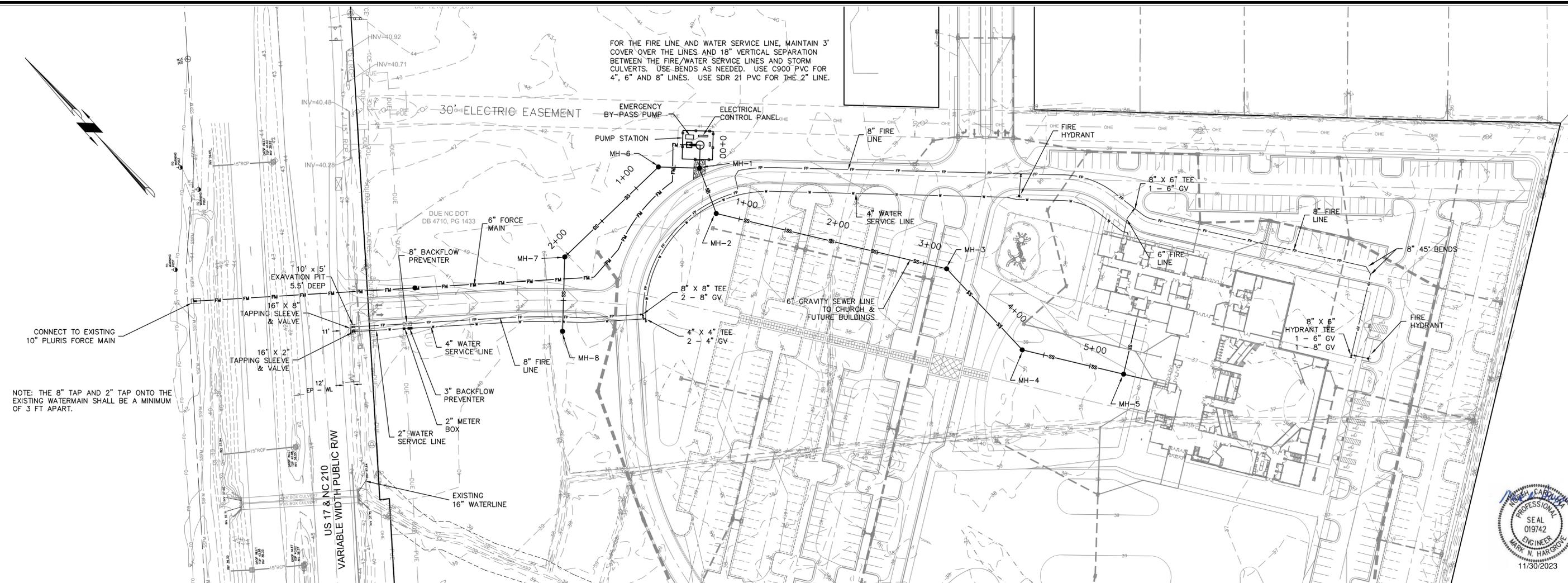
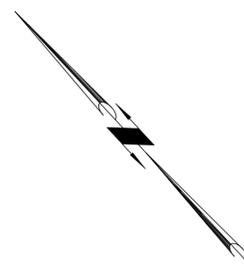
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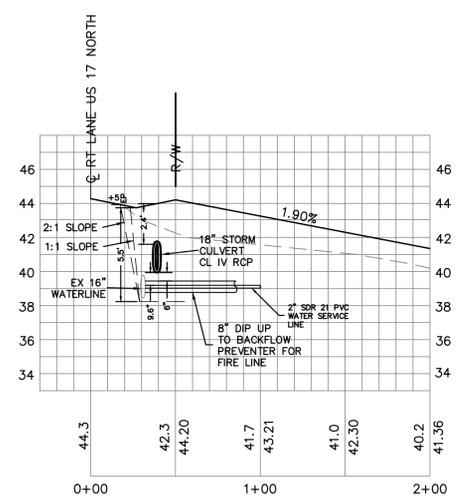
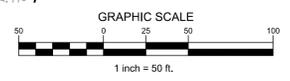
DIVERSION BERM SWALE PLAN

Sheet No.
C-5.2

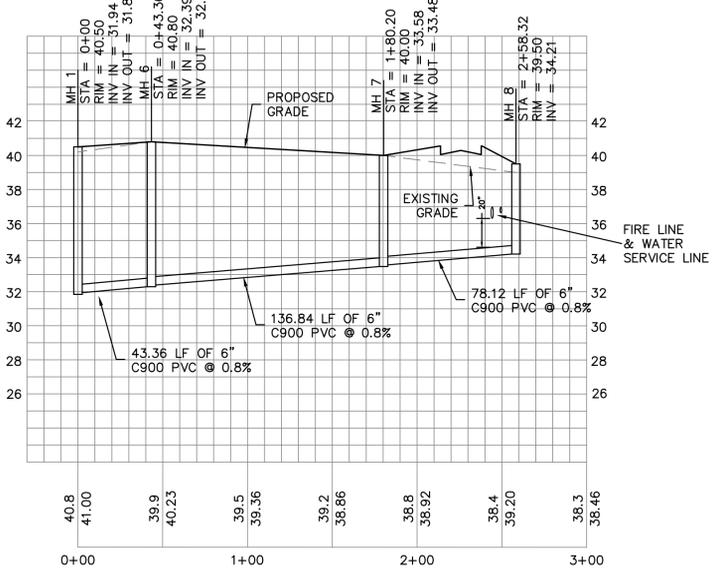
FOR THE FIRE LINE AND WATER SERVICE LINE, MAINTAIN 3' COVER OVER THE LINES AND 18" VERTICAL SEPARATION BETWEEN THE FIRE/WATER SERVICE LINES AND STORM CULVERTS. USE BENDS AS NEEDED. USE C900 PVC FOR 4", 6" AND 8" LINES. USE SDR 21 PVC FOR THE 2" LINE.



NOTE: THE 8" TAP AND 2" TAP ONTO THE EXISTING WATERMAIN SHALL BE A MINIMUM OF 3 FT APART.

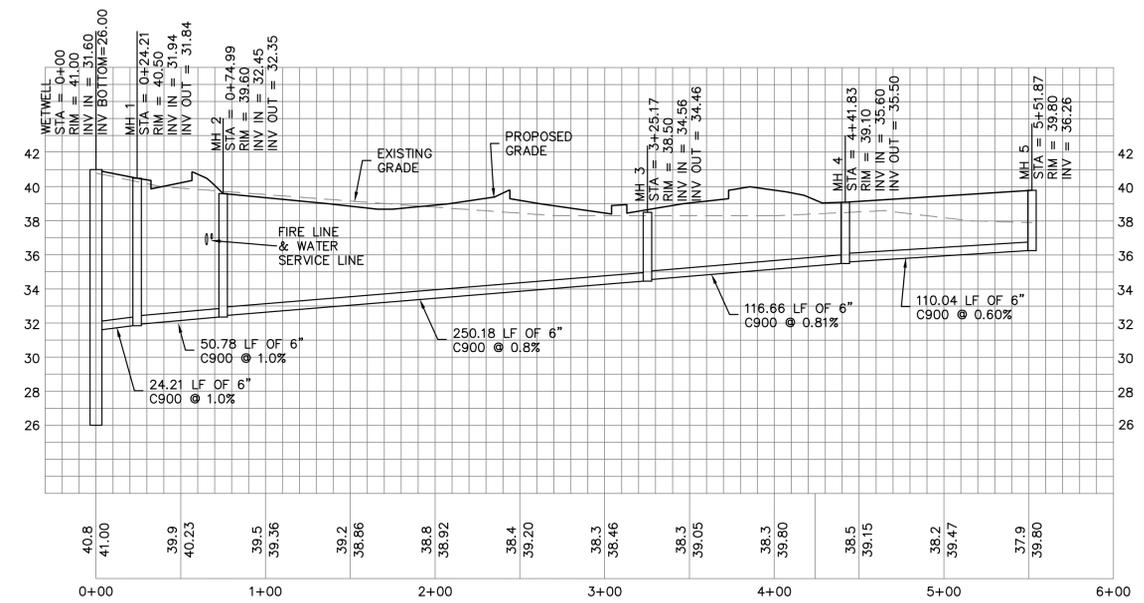


WATER & FIRE LINE CONNECTION
 1" = 50' - HORIZONTAL
 1" = 5' - VERTICAL



SEWER PROFILE: MH 1, 6, 7 & 8

1" = 50' - HORIZONTAL
 1" = 5' - VERTICAL



SEWER PROFILE: WETWELL - MH 5

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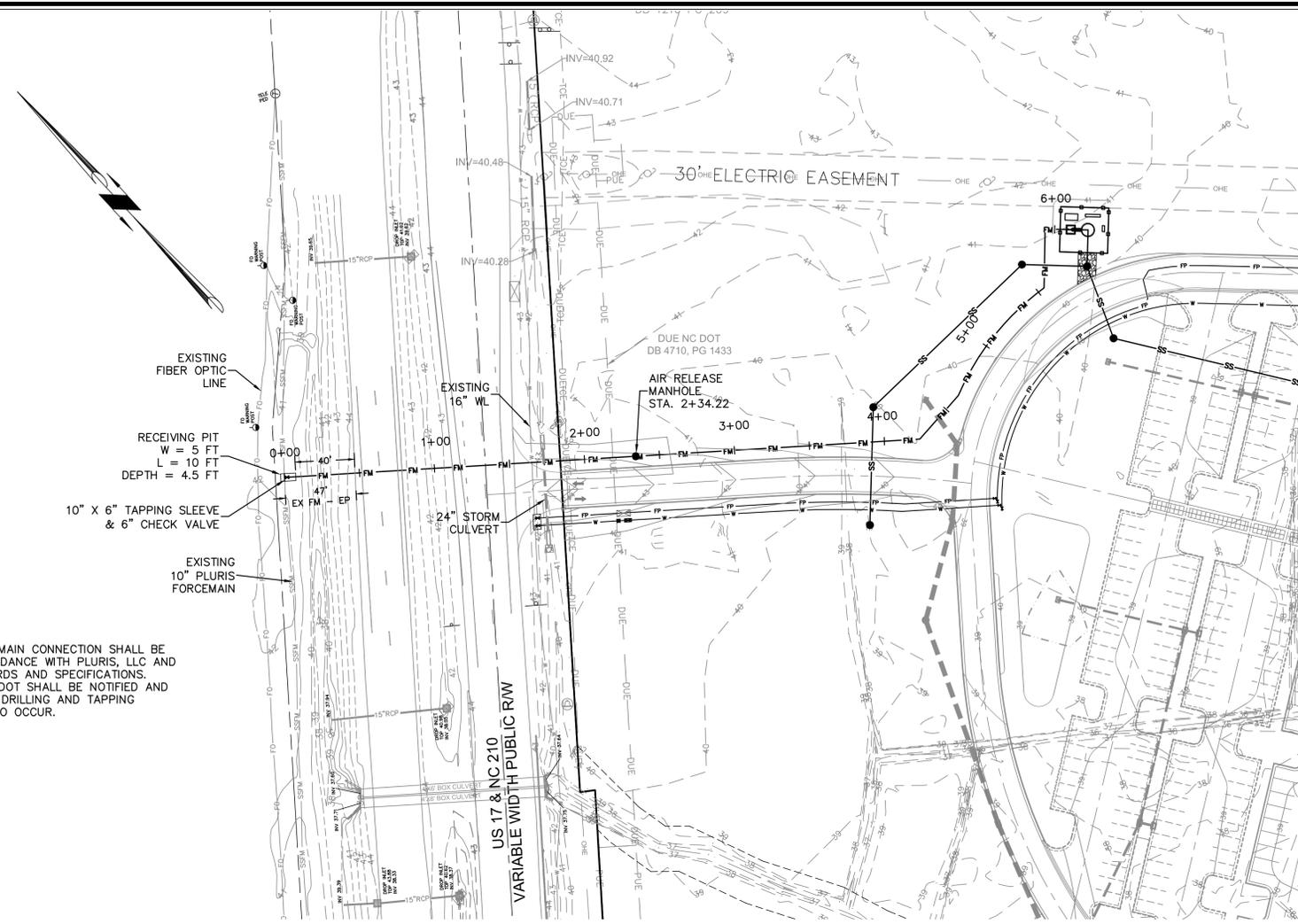
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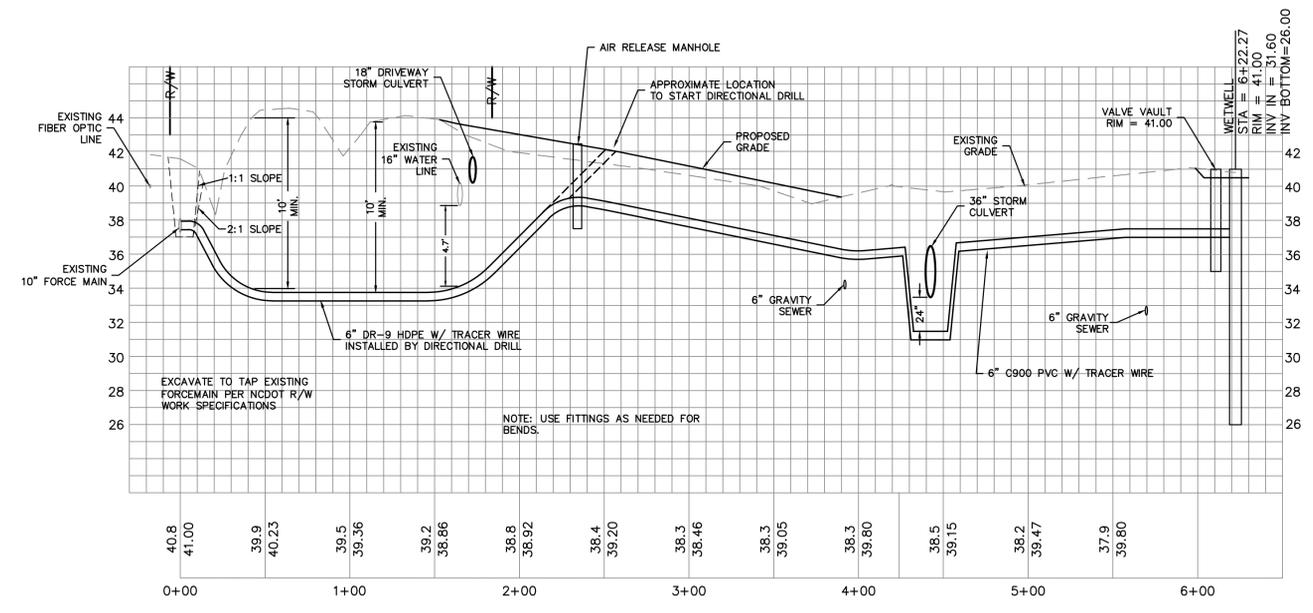
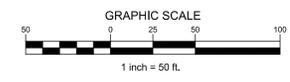
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UTILITY PLAN

Sheet No.
C-6.0



NOTE: FORCE MAIN CONNECTION SHALL BE MADE IN ACCORDANCE WITH PLURIS, LLC AND NCDOT STANDARDS AND SPECIFICATIONS. PLURIS AND NCDOT SHALL BE NOTIFIED AND PRESENT WHEN DRILLING AND TAPPING OPERATION IS TO OCCUR.



PROFILE
 1" = 50' - HORIZONTAL
 1" = 5' - VERTICAL



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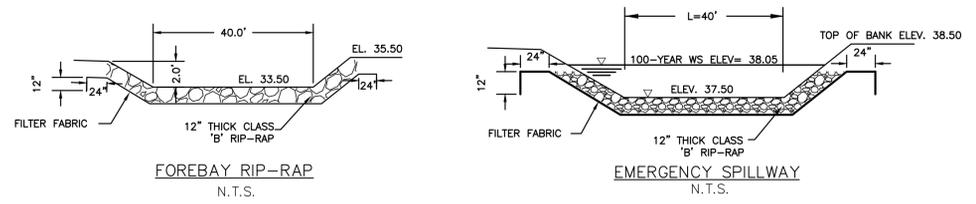
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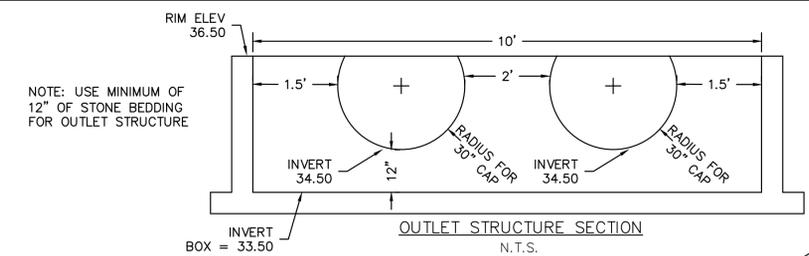
FORCE MAIN PLAN/PROFILE

Sheet No.
C-6.1

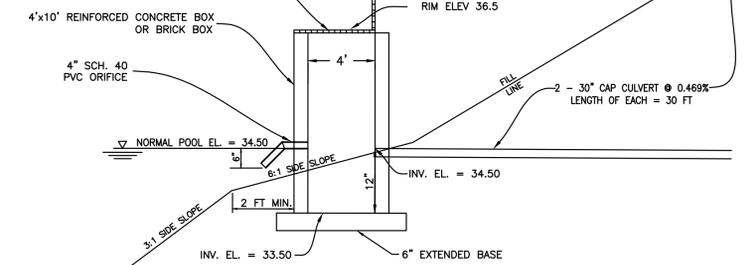


NOTES:

- DO NOT PLANT TREES WITHIN 10 FEET OF THE INLET OR OUTLET PIPES, SPILLWAYS OR FLOW SPREADERS. TREE SPECIES WITH WATER-SEEKING ROOTS SUCH AS WEEPING WILLOWS AND POPLARS, SHOULD BE AVOIDED WITHIN 50 FEET OF PIPES OR MANMADE STRUCTURES. EVERGREEN TREES WHICH PRODUCE RELATIVELY LITTLE LEAF-FALL ARE PREFERRED IN AREAS DRAINING TO DETENTION DEVICES. TREES SHOULD BE SET BACK SO THAT BRANCHES DO NOT EXTEND OVER THE PERMANENT POOL.

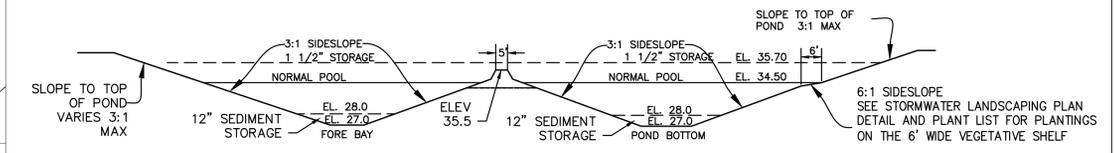


GALVANIZED BAR GRATING 1" x 1/8" BEARING BARS. FASTEN WITH J-CLIPS, ATTACH TO A 1 1/4" x 1 1/4" x 1/4" GALVANIZED ANGLE FRAME. MORTAR FRAME TO TOP OF OUTLET STRUCTURE - 4" MAX TRASH RACK OPENING



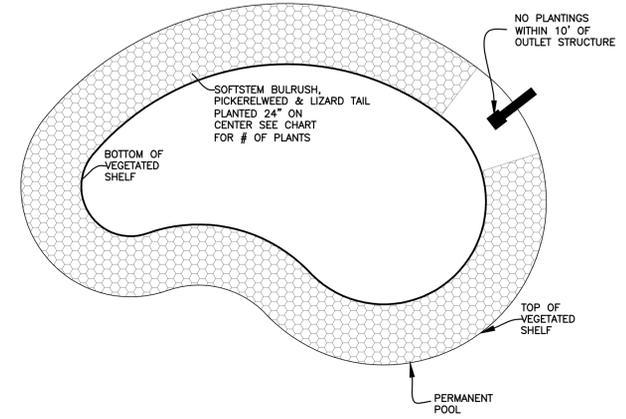
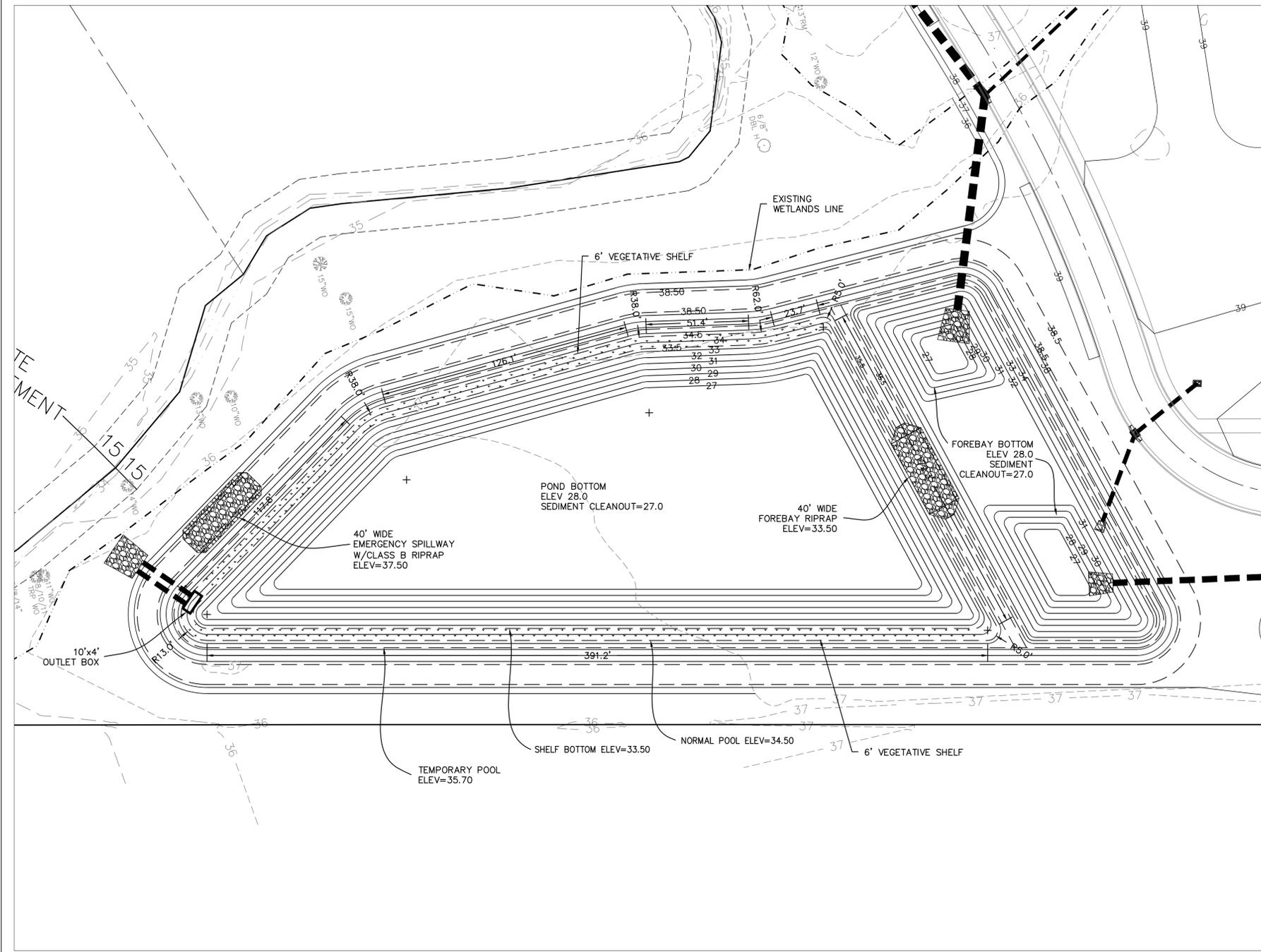
NOTES:

- DESIGN ELEVATIONS FOR WET DETENTION BASIN ARE TO AN ELEVATION OF 28.0 IN THE MAIN POND AND 28.0 IN THE FOREBAYS WITH SEDIMENT STORAGE DOWN TO 27.0 IN THE MAIN POND AND 27.0 IN THE FOREBAY.
- ALL IMPERVIOUS SITE AREA TO BE DRAINED TO PROPOSED STORM SEWER SYSTEM AND DISCHARGED TO THE WET DETENTION POND.
- POND WILL BE PUMPED DOWN BY MECHANICAL MEANS IN CASE OF EMERGENCY.
- PRIOR TO USE AS A WET DETENTION BASIN, SEDIMENT BASIN WILL BE MUCKED OUT.
- POND SIDE SLOPES TO BE SODDED WITH CENTIPEDE GRASS OR EQUIVALENT.
- ALL SLOPES ABOVE PERMANENT POOL TO BE 3:1 MAX.



NORMAL POOL ELEVATION	SHELF BOTTOM ELEVATION	POND DEPTH (FT)	VOLUME SHELF (CF)	POND BOTTOM SHELF AREA (SF)	SURFACE AREA PROVIDED (SF)	SURFACE AREA REQUIRED (SF)	PERIMETER PERMANENT POOL (LF)	AVERAGE POND DEPTH (FT)
34.50	33.50	6.5	2,919	40,826	46,054	22,116	973	5.5

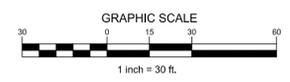
POND CROSS-SECTION
N.T.S.

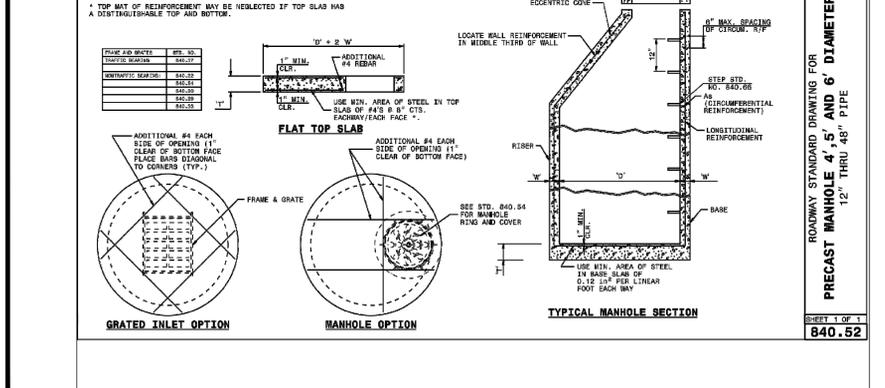
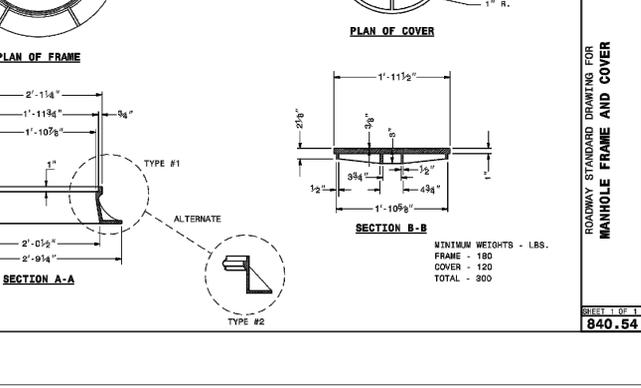
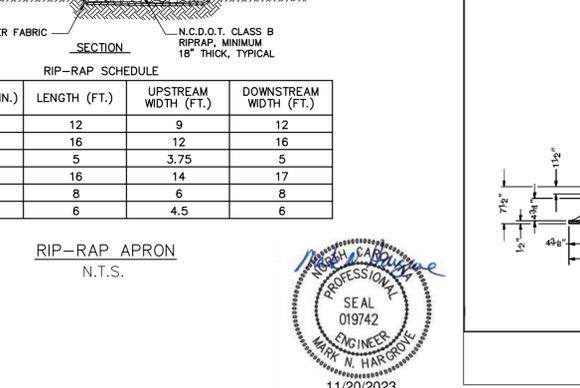
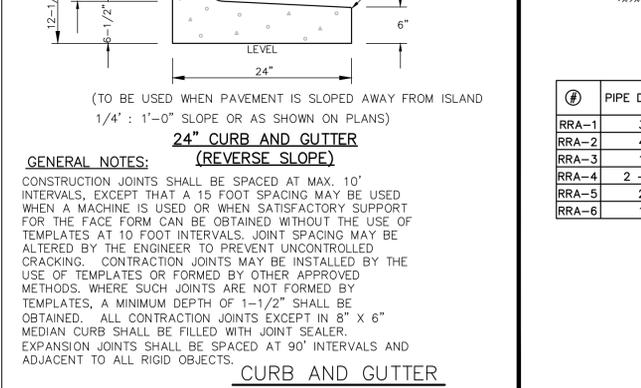
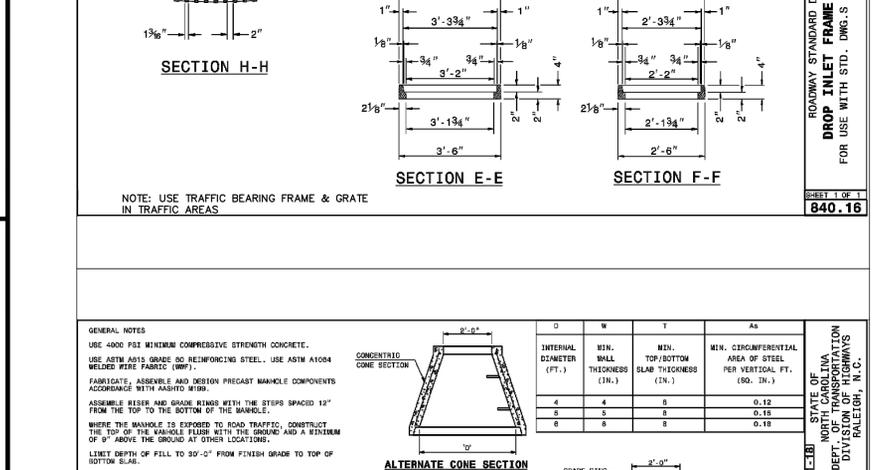
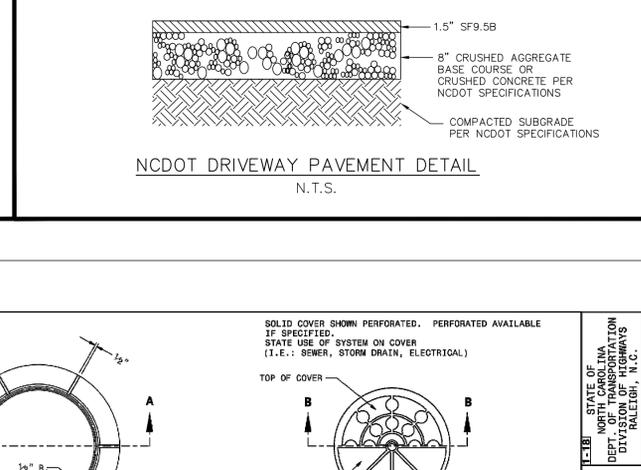
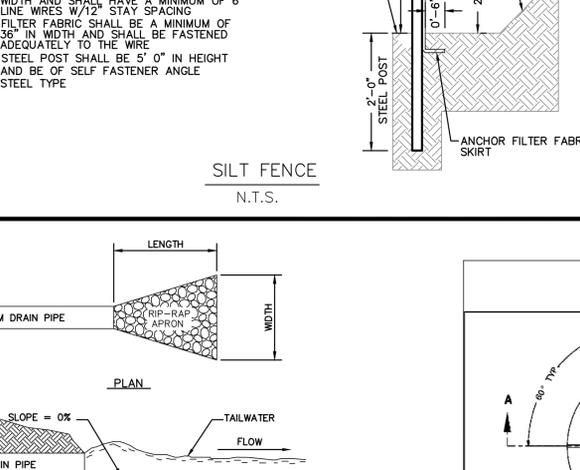
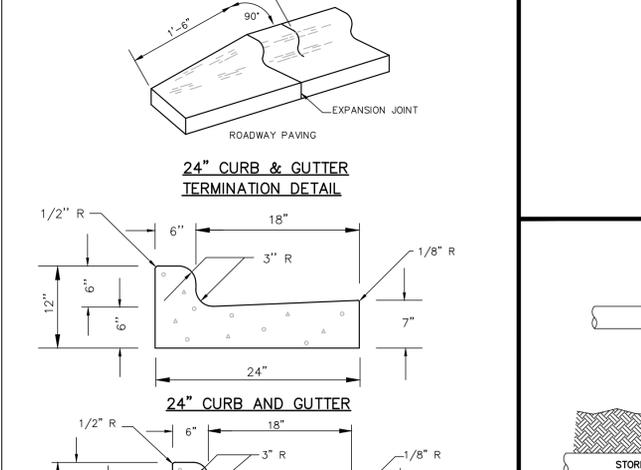
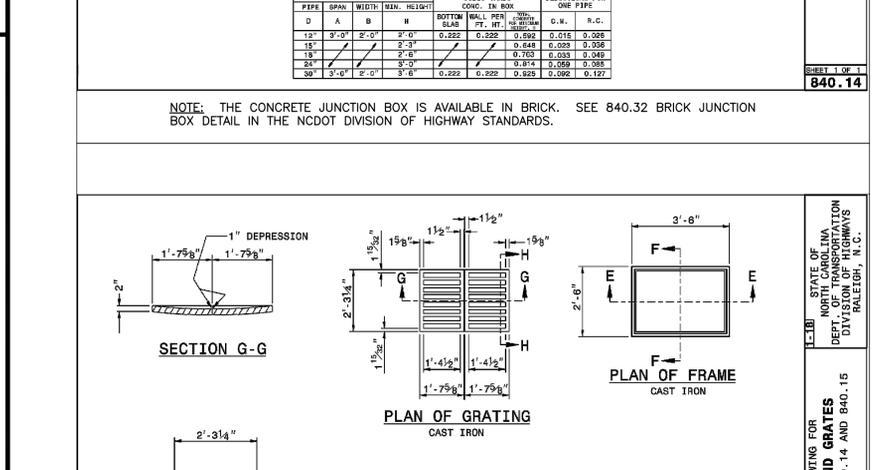
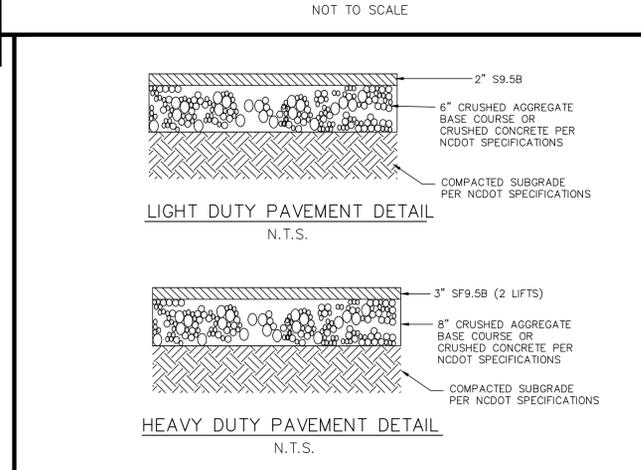
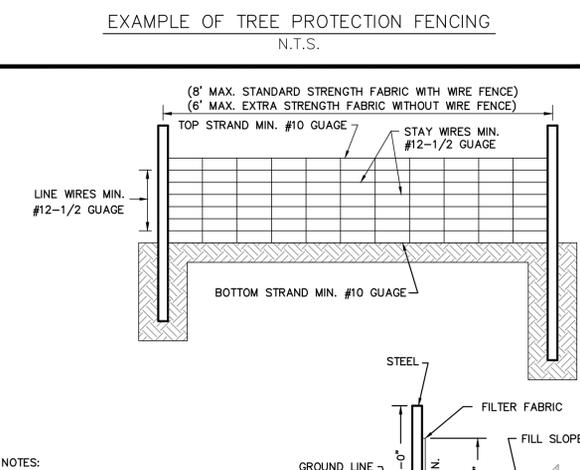
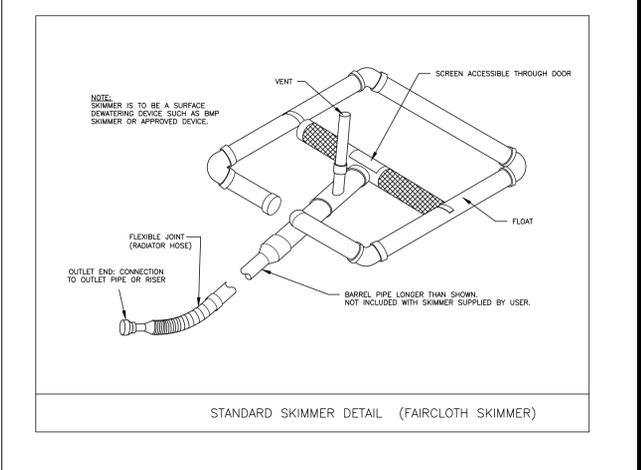
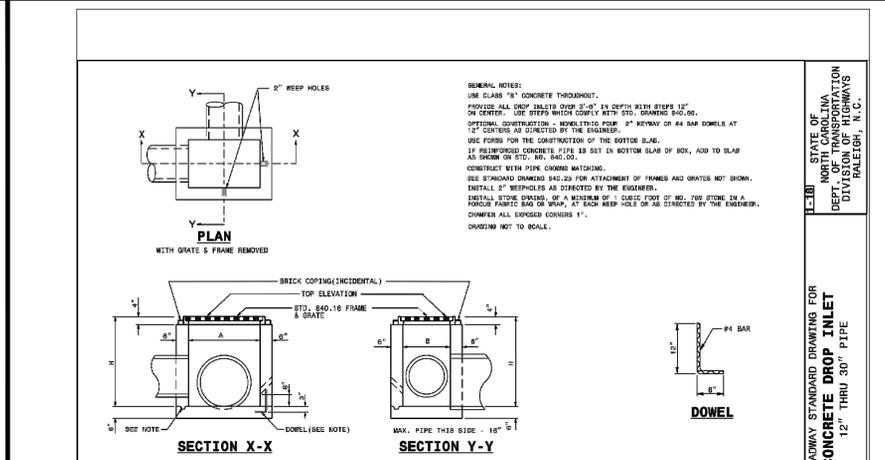
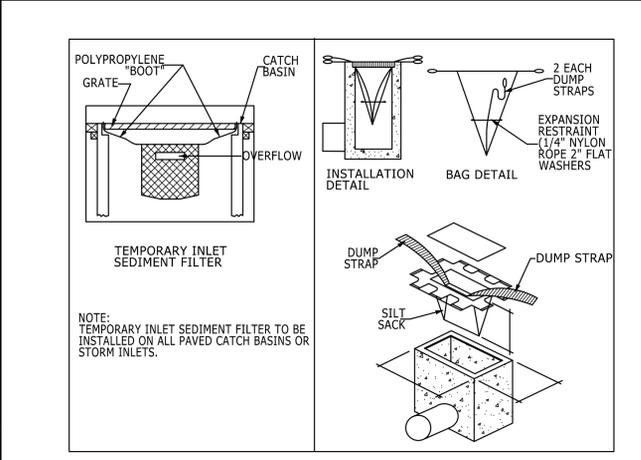
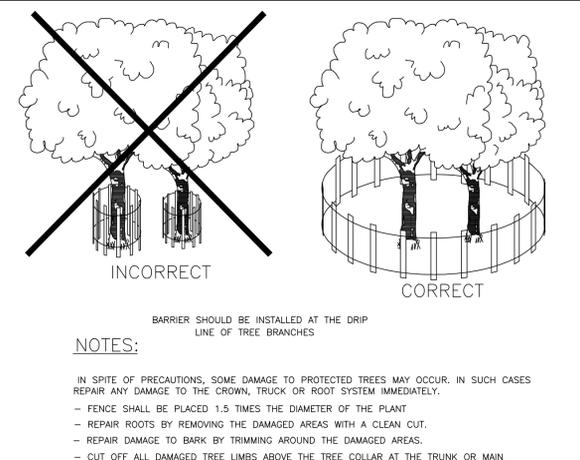
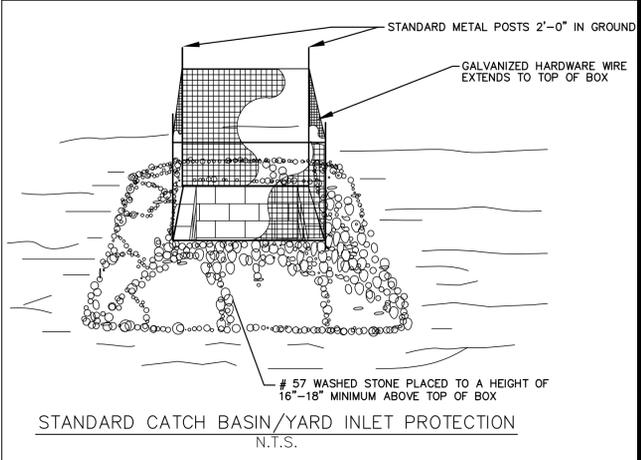


TYPICAL VEGETATED SHELF LANDSCAPING PLAN

VEGETATIVE SHELF = 4,475 S.F.
 @ 1 PLANT PER 4 SF (24" O.C.) = 1,119 PLANTS

PLANT TYPE	QTY	BOTANICAL NAME	COMMON NAME	ROOT	CALIPER	HEIGHT	NOTES
HERBACEOUS	373	Schoenoplectus tabernaemontani	Softstem Bulrush	CONT.	4" Pot	24" O.C.	
	373	Pontederia cordata	Pickerelweed	CONT.	4" Pot	24" O.C.	
	373	Saururus cernuus	Lizard Tail	CONT.	4" Pot	24" O.C.	





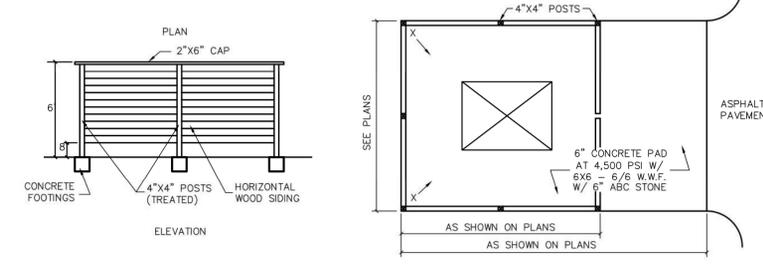
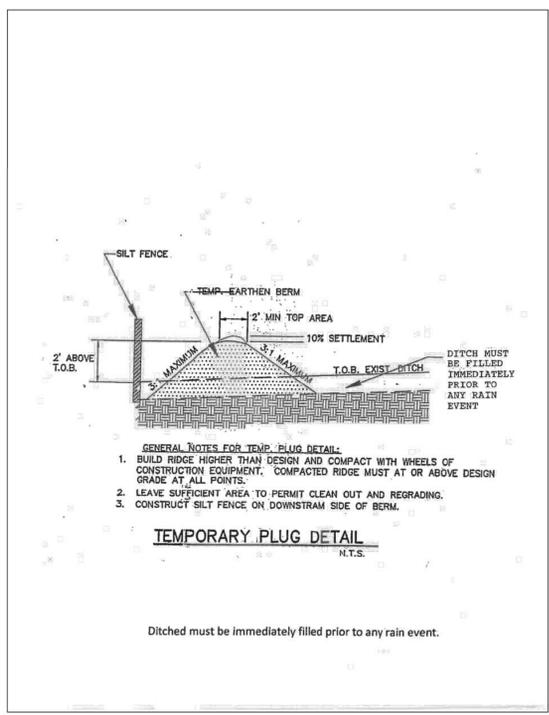
No.	Revision	Date	By

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Checked By: MNH
Scale: AS SHOWN
Date: JUNE, 2023
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C-7.1



DUMPSTER PAD & ENCLOSURE DETAIL
N.T.S.

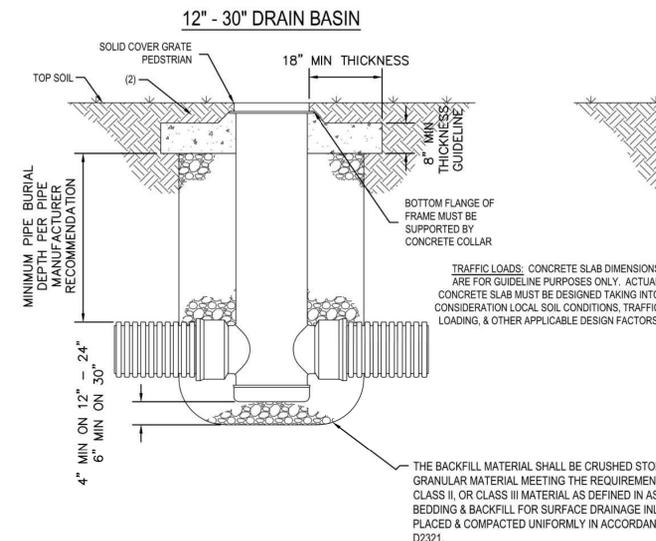
Section 2721
Engineered Surface Drainage Products

GENERAL
PVC surface drainage inlets shall include the drain basin type as indicated on the contract drawing and referenced within the contract specifications. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc., or prior approved equal.

MATERIALS
The drain basins required for this contract shall be manufactured from PVC pipe stock, utilizing a thermforming process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipes system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F477. The pipe bell spigot shall be joined to the main body of the drain basin or catch basin. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grates and frames furnished for all surface drainage inlets shall be ductile iron for sizes 8", 10", 12", 15", 18", 24" and 30" and shall be made specifically for each basin so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for drain basins shall be capable of supporting various wheel loads as specified by Nyloplast. 12" and 15" square grates will be hinged to the frame using pins. Ductile iron used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05. Grates and covers shall be provided painted black.

INSTALLATION
The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1, class 2, or class 3 material as defined in ASTM D2321. Bedding and backfill for surface drainage inlets shall be placed and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For load rated installations, a concrete slab shall be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.



- GRATES/SOLID COVERS SHALL MEET H-20 LOAD RATING FOR 30" PEDESTRIAN & 12" - 30" STANDARD & SOLID
- DESIGN SHOULD ACCOUNT FOR ROOT DEPTH TO ALLOW TURF TO GROW AND PREVENT EROSION AROUND GRATE SO THAT HAZARDS DO NOT FORM.

NYLOPLAST TURF/TRAFFIC INSTALLATION
N.T.S.

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.

SECTION E: GROUND STABILIZATION

Site Area Description	Required Ground Stabilization Timeframes	
	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. - 7 days for slopes greater than 50' in length and with slopes steeper than 4:1 - 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones - 10 days for Falls Lake Watershed
(d) Slopes 3:1 to 4:1	14	- 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones - 10 days for Falls Lake Watershed unless there is zero slope
(e) Areas with slopes flatter than 4:1	14	- 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones - 10 days for Falls Lake Watershed unless there is zero slope

Note: 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:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers Hydroseeding Roller erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to maintain erosion Structural methods such as concrete, asphalt or retaining walls Roller erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated Stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- 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).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- 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

- Never bury or burn waste. Place litter and debris in approved waste containers.
- 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.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

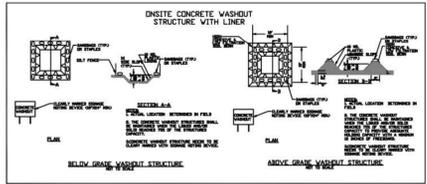
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled,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

PORTABLE TOILETS

- 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 areas.
- 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.

EARTHEN STOCKPILE MANAGEMENT

- 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 can be shown no other alternatives are reasonably available.
- 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.
- 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.



- CONCRETE WASHOUTS**
- Do not discharge concrete or cement slurry from the site.
 - Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid 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 washout 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.
 - 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**
- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
 - 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 soils, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
 - Do not stockpile these materials on-site.

- 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.



NCG01 GROUND STABILIZATION AND MATERIALS HANDLING EFFECTIVE: 04/01/19

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 inspections were delayed shall be noted in the Inspection Record.

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 unattended days (see how to determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero". The permittee may use another rain-measuring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. Identification of the measures inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Indication of whether the measures were operating properly. 5. Description of maintenance needs for the measure. 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge (SDC)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids, discoloration. 5. Indication of visible sediment leaving the site. 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits. 2. Description, evidence, and date of corrective actions taken, and 3. An evaluation as to the actions taken to control future releases. 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: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(g) of this permit.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. The phases of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. 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.
(6) Ground stabilization measures	After each phase of grading	

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation
The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(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.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each 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 installation.
(b) A phase of grading has been completed.	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.
(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.
(d) The maintenance and repair requirements for all E&SC measures	Complete, date and sign an inspection report.
(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.

2. Additional Documentation to be Kept on Site
In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- This General Permit as well as the Certificate of Coverage, after it is received.
- Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years
All data used to complete the E&SC and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported
Permittees shall report the following occurrences:
(a) Visible sediment deposition in a stream or wetland.
(b) Oil spills if:

- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements
After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release. A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass. Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass. Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue, and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(b)(6)] Division staff may waive the requirement for a written report on a case-by-case basis.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(m)(7)]	

PART III, SECTION G, ITEM (4) DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items.
- The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit.
- Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems.
- Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in item (c) above.
- Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- Sediment removed from the dewatering treatment devices described in item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.



NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING EFFECTIVE: 04/01/19

No.	Revision	Date	By

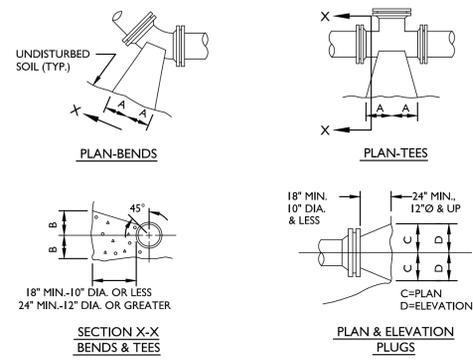
Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JUNE, 2023
Checked By	MNH	Job No.	

RENOVATION CHURCH
PENDER COUNTY
NORTH CAROLINA

RENOVATION CHURCH
PO BOX 1129
HAMPSTEAD, NC 28443

PORT CITY CONSULTING ENGINEERS, PLLC
6216 STONEBRIDGE ROAD
WILMINGTON, NC 28409
910-599-1744 LICENSE No. P-1032

MISCELLANEOUS DETAILS
Sheet No. C-7.4



PIPE SIZE	90° BEND		45° BEND		22-1/2° BEND		11-1/4° BEND		TEE		PLUG	
	A	B	A	B	A	B	A	B	A	B	C	D
4"	18"	12"	10"	13"	7"	10"	7"	10"	12"	14"	13"	6"
6"	18"	12"	10"	13"	7"	10"	7"	10"	12"	14"	19"	9"
8"	24"	18"	13"	18"	10"	12"	10"	12"	16"	18"	25"	11"
10"	28"	22"	15"	22"	12"	15"	12"	15"	20"	22"	31"	14"
12"	32"	28"	19"	28"	14"	18"	14"	18"	22"	28"	37"	17"
16"	54"	38"	30"	36"	18"	36"	18"	36"	42"	54"	54"	24"

- NOTES:**
- BASED ON 200 PSI STATIC PRESSURE PLUS AWWA WATER HAMMER ALLOWANCE.
 - ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.
 - THRUST BLOCKS TO BE USED AT ALL LINES OPERATING UNDER PRESSURE.
 - CONCRETE SHALL NOT CONTACT BOLTS OR MECHANICAL FITTINGS.
 - CONCRETE SHALL BE 3000 PSI.
 - TRENCHES SHALL CONFORM WITH STANDARD EMBEDMENT DETAIL.
 - ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.
 - SEE STD. THRUST BLOCK SHEET 2 OF 4 FOR OTHER SOILS.

PSD NO. 1 - THRUST BLOCKING DETAIL
NOT TO SCALE

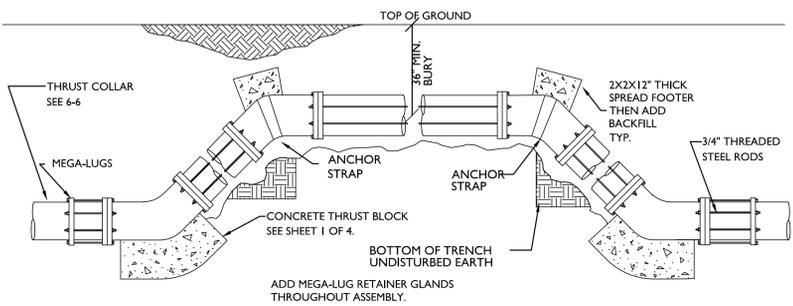
REACTION BEARING AREAS FOR HORIZONTAL WATER/SEWER PIPE BENDS
BASED ON TEST PRESSURE OF 200 P.S.I.
ALL AREAS GIVEN IN SQUARE FEET.

SIZE AND DEGREE OF BEND	STATIC THRUST IN POUNDS	MODERATELY DRY CLAY 1800 LBS/FT ²	SOFT CLAY 1200 LBS/FT ²	GRAVEL COARSE SAND 1600 LBS/FT ²	DRY CLAY - ALWAYS DRY 800 LBS/FT ²	SAND COMPACT FIRM 1600 LBS/FT ²	SAND CLEAN DRY 1000 LBS/FT ²	QUICKSAND VERY POOR SOIL 1000 LBS/FT ²	ROCKY POOR 10,000 LBS/FT ²
6"									
11 1/4 °	1,108	1	1	1	1	1	1	2	1
22 1/2 °	2,207	1	2	2	1	1	1	3	1
45 °	4,328	2	3	3	1	1	2	5	1
90 °	7,996	2	4	5	1	1	2	8	1
PLUG	5,655	2	3	4	1	1	2	6	1
8"									
11 1/4 °	1,970	1	1	2	1	1	1	2	1
22 1/2 °	3,922	1	2	3	1	1	1	4	1
45 °	7,694	2	4	5	1	1	2	8	1
90 °	14,215	4	8	9	2	2	4	15	2
PLUG	10,053	3	5	6	2	2	3	10	1
12"									
11 1/4 °	4,433	2	3	3	1	1	2	5	1
22 1/2 °	8,826	3	5	6	2	2	3	9	1
45 °	17,312	5	9	11	3	3	5	18	2
90 °	31,983	8	16	19	4	4	8	32	4
PLUG	22,619	6	12	14	3	3	6	23	3
16"									
11 1/4 °	7,881	2	4	5	1	1	2	8	1
22 1/2 °	15,691	4	8	10	2	2	4	16	2
45 °	30,779	8	16	19	4	4	8	31	4
90 °	56,861	15	29	35	8	8	15	57	6
PLUG	40,213	10	21	25	5	5	10	41	5

REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR.

USE 6° - 90° BEND VALUE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTOR.

PSD NO. 2 - THRUST BLOCKING DESIGN QUANTITY TABLE
NOT TO SCALE

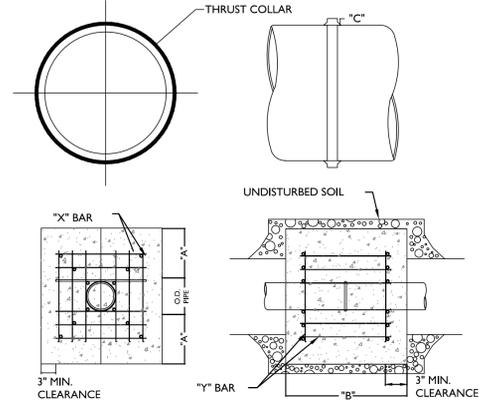


ROD REQUIREMENTS

SIZE OF 45° BEND	STATIC THRUST IN POUNDS	NO. OF RODS REQUIRED
6"	4,328	4
8"	7,694	4
12"	17,312	4
16"	30,779	8
24"	69,252	8

- GENERAL NOTES:**
- STEEL RODS AND BOLTS SHALL BE 3/4" HOT OR COLD DIPPED GALVANIZED.
 - CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.
 - MEGA-LUGS TO BE USED AT ALL FITTINGS.
 - MUST USE DUCTILE IRON EYE BOLTS WHERE NECESSARY.

PSD NO. 3 - VERTICAL BEND DETAIL
NOT TO SCALE



REINFORCING REQUIREMENTS

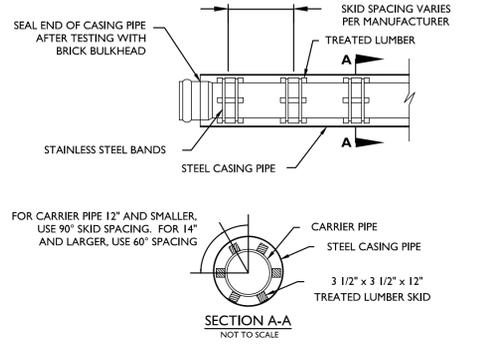
I.D. PIPE	REBAR SIZE	"X" BAR LENGTH	"X" BAR WEIGHT	"Y" BAR LENGTH	"Y" BAR WEIGHT	NO. REQUIRED
6" - 36"	#5	2'-2" O.D. PIPE	1.043 LBS/FT	1'-1"	1.1 LBS. EACH	X-24, Y-12
48" & greater	#6	3'-0" O.D. PIPE	1.502 LBS/FT	1'-3"	1.9 LBS. EACH	X-24, Y-12

THRUST COLLAR AND THRUST SCHEDULE

I.D. PIPE	"A"	"B"	"C-6"-16", 20"-24", 30"-36", 48"
6" - 36"	1'-4"	1'-7"	2" 3" 4"
48" & greater	1'-8"	1'-9"	6"

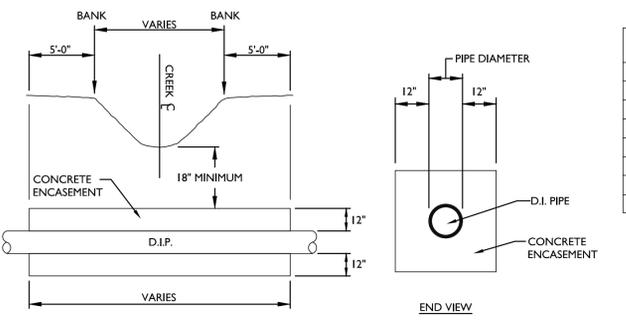
- NOTES:**
- CONCRETE SHALL BE 3000 PSI AND TRANSIT MIXED.
 - REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.
 - TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE MINIMUM WIDTH AS SHOWN ON STANDARD EMBEDMENT DETAIL.
 - BACKFILL TAMPED IN 6" LIFTS PER STANDARD EMBEDMENT DETAIL.
 - THRUST COLLAR MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.

PSD NO. 4 - THRUST COLLAR DETAIL
NOT TO SCALE



- NOTES:**
- SKID TO BE PLACED TO PROVIDE PROPER SUPPORT, ALIGNMENT, AND GRADE AS SPECIFIED. CONTINUOUS SKIDS MAY BE USED AS ALTERNATIVE. 2. OIL, GREASE, OR PETROLEUM PRODUCT MAY NOT BE USED AS LUBRICANT.
 - CASING PIPE TO BE OF FERROUS METAL AND HAVE A MINIMUM DIAMETER TWICE THAT OF THE CARRIER PIPE.
 - CASING PIPE TO HAVE A MINIMUM THICKNESS OF .25".
 - FOR ALL BORES UNDER NCDOT RIGHT OF WAYS FOLLOW ALL NCDOT GUIDELINES FOR PIPE SIZE AND THICKNESS.

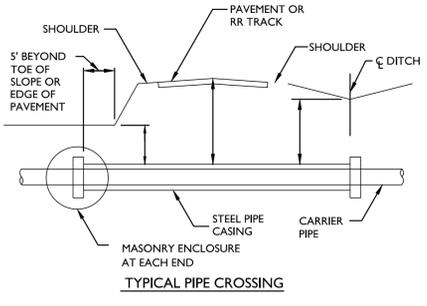
PSD NO. 5 - PIPE CASING DETAIL
NOT TO SCALE



- NOTES:**
- CONCRETE SHALL BE 3,000 P.S.I.
 - CONCRETE ENCASEMENT NOT REQUIRED WHEN PIPE IS AT LEAST THREE (3) FEET UNDER CENTERLINE OF CREEK BOTTOM.
 - ALL STREAM CROSSINGS TO BE PERMITTED BY NCDENR.
 - ALL WETLAND CROSSINGS AND COASTAL WETLAND CROSSINGS TO BE PERMITTED BY ALL APPROPRIATE AGENCIES.

PSD NO. 6 - STREAM/WETLAND CROSSING DETAIL
NOT TO SCALE

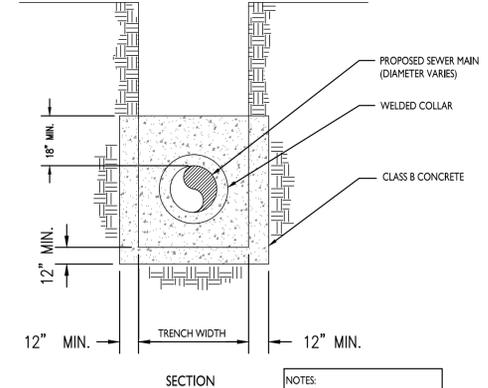
CASING PIPE SIZE (O.D.)	WALL THICKNESS
4" - 12 3/4"	0.250"
16"	0.250"
18"	0.250"
20"	0.250"
24"	0.250"
30"	0.312"
36"	0.375"
48"	0.500"



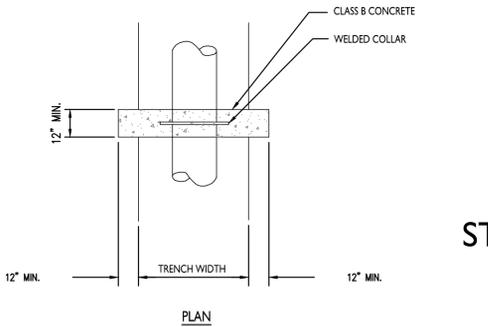
ENCASEMENTS SHALL EXTEND FROM DITCH LINE TO DITCH LINE IN CUT SECTIONS, FIVE (5) FEET BEYOND THE TOE OF SLOPES IN HILL SECTIONS, AND TEN (10) FEET BEYOND EDGE OF PAVEMENT IN SECTIONS WITH NO DITCH OR FILL AREA.

- NOTES:**
- STEEL ENCASEMENT PIPE SHALL CONFORM TO ASTM A-139 WITH ALL THICKNESS AND GRADE AS DEFINED IN THE SPECIFICATIONS. MINIMUM ALLOWABLE YIELD STRENGTH IS 35,000 PSI.
 - CARRIER PIPE SHALL BE ADEQUATELY SUPPORTED THE ENTIRE LENGTH WITHIN THE CASING BY USING "SPIDER" STEEL SUPPORTS AT A MAXIMUM OF 9 FOOT CENTERS (ONE AT EACH JOINT AND ONE INTERMEDIATE). OTHER METHODS MUST MEET APPROVAL OF THE ENGINEER.
 - NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE WAY.
 - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION.
 - THE CONTRACTOR IS RESPONSIBLE FOR ANY SEDIMENT AND EROSION CONTROL PRACTICES REQUIRED DURING CONSTRUCTION AND THE SUBSEQUENT STABILIZATION OF ALL DISTURBED AREAS AFTER CONSTRUCTION.
 - THE CONTRACTOR IS RESPONSIBLE FOR ALL LAY DOWN AND STOCKPILE AREAS.
 - FOR BORES ON THE NCDOT RIGHT OF WAY, NO WORK WILL BEGIN UNTIL THE CONTRACTOR HAS A COPY OF THE NCDOT ENCROACHMENT PERMIT FOR THE PROJECT.

PSD NO. 7 - BORE DETAIL DETAIL
NOT TO SCALE



NOTES:
1. DO NOT EXCEED 150 FEET BETWEEN COLLARS.



PSD NO. 8 - ANTI SEEP COLLAR DETAIL
NOT TO SCALE



STANDARD DETAILS SHEET A



No.	Revision	Date	By

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JUNE, 2023
Checked By	MNH	Job No.	

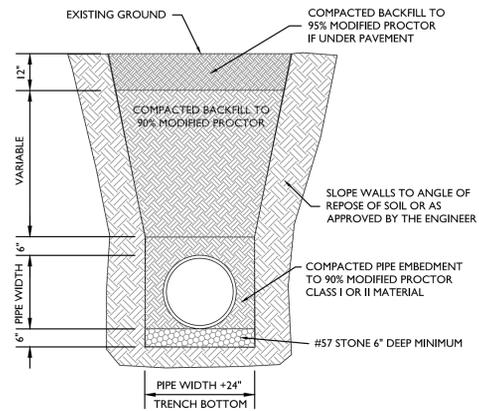
RENOVATION CHURCH
NORTH CAROLINA
PENER COUNTY

RENOVATION CHURCH
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HAMPSTEAD, NC 28443

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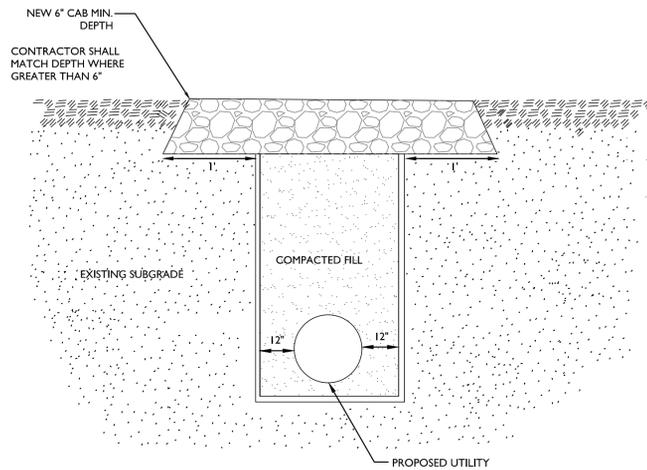
SEWER DETAILS

Sheet No. **C-8.0**



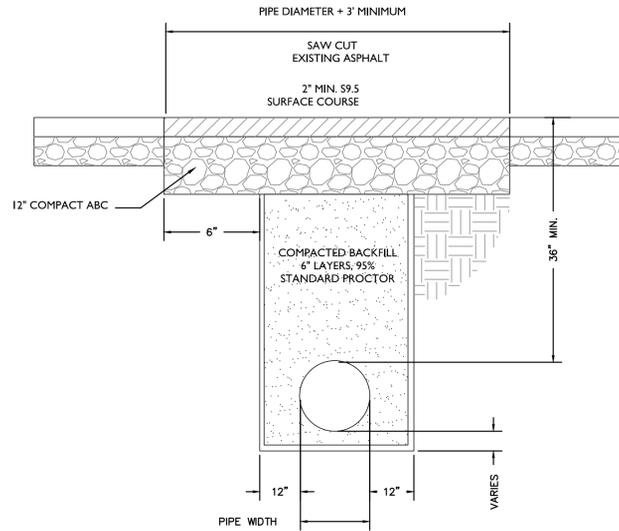
NOTES:
 1. MINIMUM BURY DEPTH FOR ALL FORCE MAINS AND GRAVITY LINES IS 36" UNLESS SPECIFICALLY ALLOWED BY THE ENGINEER. ALL LINES SHALLower THAN 36" MUST GIVE CONSIDERATION TO USING HIGHER PRESSURE AND THICKNESS CLASSES OF DIP.
 2. ALL LINES TO BE BEDDED IN 6" OF #57 STONE MINIMUM. FOR LINES INSTALLED BELOW THE WATER TABLE #57 STONE SHOULD EXTEND TO THE SPRING LINE OF THE PIPE AT A MINIMUM.
 3. THE USE OF #57 STONE BEDDING AND BACKFILL SHOULD BE COMMENSURATE WITH THE CONDITIONS IN THE TRENCH. THE CONTRACTOR IS RESPONSIBLE FOR PROPER BEDDING AND BACKFILLING TO INSURE PIPE STABILITY AND UNIFORM GRADE.

PSD NO. 9 - PIPE TRENCH AND BEDDING DETAIL
 NOT TO SCALE



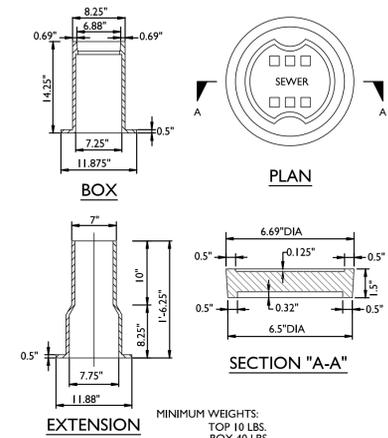
NOTES:
 1. THE REPLACED STONE SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH ASSHTO T-80 AS MODIFIED BY NCDOT.

PSD NO. 10 - GRAVEL DRIVEWAY REPAIR DETAIL
 NOT TO SCALE



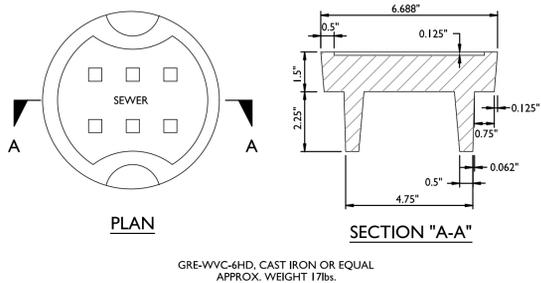
NOTES:
 1. THE PAVEMENT SHALL BE DEFINED BY A STRAIGHT EDGE, PREFERABLY A MACHINED SAW CUT.
 2. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH DRY SOIL OR ABC STONE USING MAXIMUM 6" LIFTS TO WITHIN 10" OF THE ROAD SURFACE. THE BACKFILL SHALL BE COMPACTED PER ASTM D698 TO A DENSITY OF 95% OF THE STANDARD PROCTOR DENSITY.
 3. WITHIN ROADS MAINTAINED BY NCDOT, THE TRENCH SHALL BE BACKFILLED AND COMPACTED USING FLOWABLE FILL OR ABC STONE TO WITHIN 12" OF THE ROAD SURFACE. WHERE ABC STONE IS USED, IT SHALL BE COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO-99 AS MODIFIED BY NCDOT.
 4. THE FINAL 1" OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH ASSHTO T-80 AS MODIFIED BY NCDOT. BITUMINOUS BASE OR BINDER MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.
 5. THE ENTIRE THICKNESS/VERTICAL EDGE OF THE CUT SHALL BE TACKED.
 6. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 2" THICK.
 7. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY TO ACHIEVE A SMOOTH LEVEL PATCH.

PSD NO. 11 - ASPHALT PAVING REPAIR DETAIL
 NOT TO SCALE

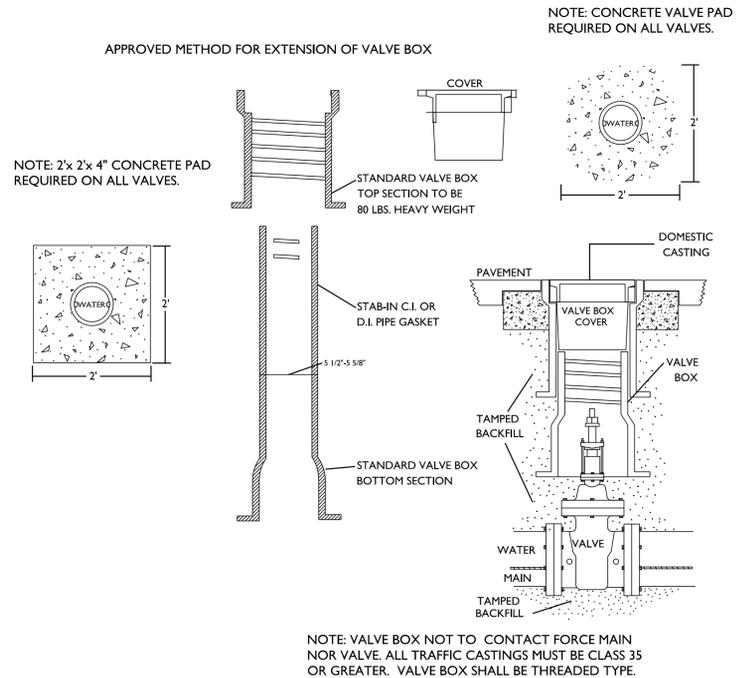


NOTE: VALVE BOX LID NOT FOR USE IN ROADWAY LOCATIONS. HEAVY DUTY LID REQUIRED. SEE SD 14-08.

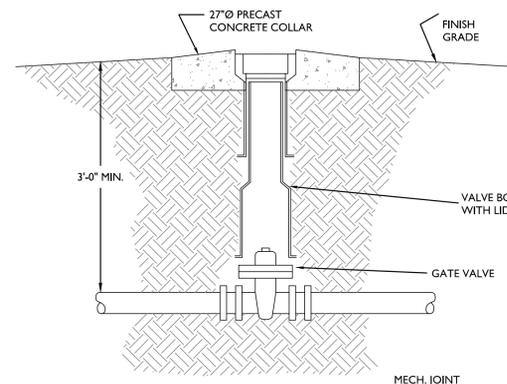
PSD NO. 12 - CAST IRON VALVE BOX DETAIL
 NOT TO SCALE



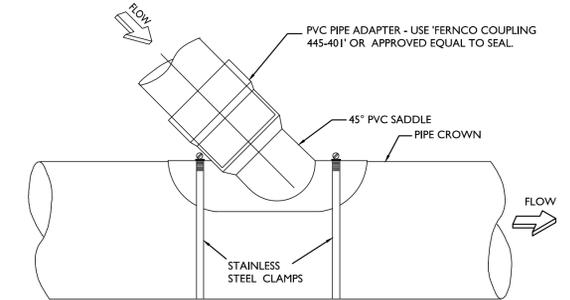
PSD NO. 13 - HEAVY DUTY CAST IRON VALVE BOX LID DETAIL
 NOT TO SCALE



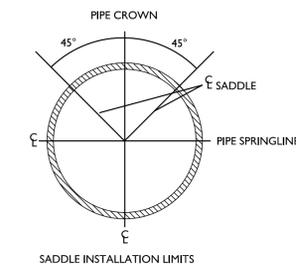
PSD NO. 14 - VALVE BOX INSTALLATION AND EXTENSION DETAIL
 NOT TO SCALE



PSD NO. 15 - GATE VALVE DETAIL
 NOT TO SCALE



BACKFILL UNDER PVC SADDLE ADAPTOR AND PIPE BEND WITH #57 STONE AS SHOWN ON PIPE EMBEDMENT DETAIL.



NOTE: USE AT DEPTHS FROM 3 TO 6 FEET

PSD NO. 16 - SADDLE INSTALLATION DETAIL
 NOT TO SCALE



STANDARD DETAILS SHEET B



No.	Revision	Date	By

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JUNE, 2023
Checked By	MNH	Job No.	

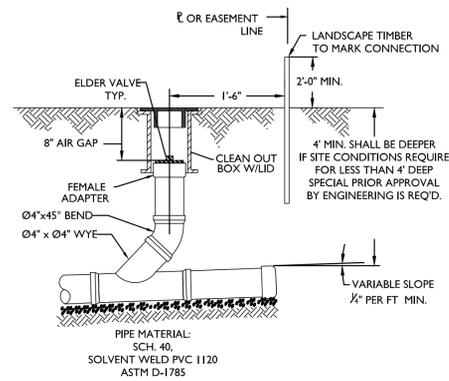
RENOVATION CHURCH
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 HAMPSTEAD, NC 28443

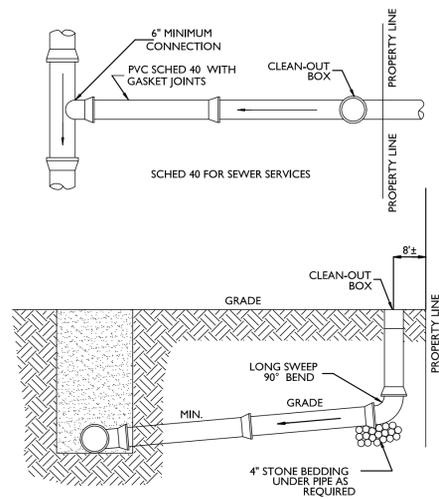
PORT CITY CONSULTING ENGINEERS, PLLC
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 WILMINGTON, NC 28409
 910-599-1744 LICENSE No. P-1032

SEWER DETAILS

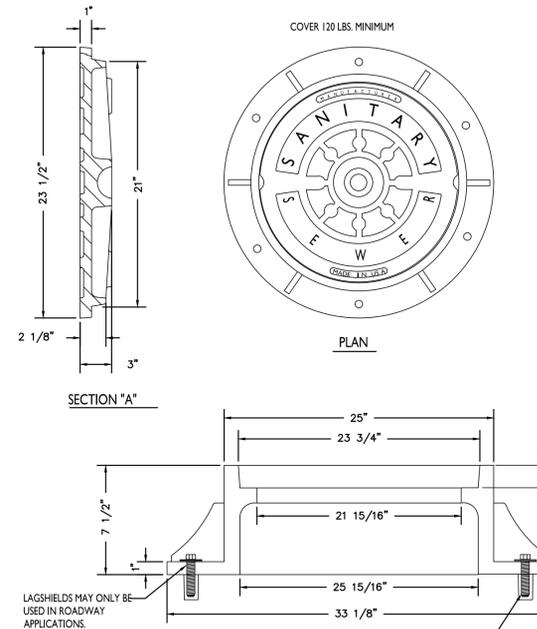
Sheet No. **C-8.1**



PSD NO. 17A - STANDARD SERVICE CLEAN OUT DETAIL
NOT TO SCALE



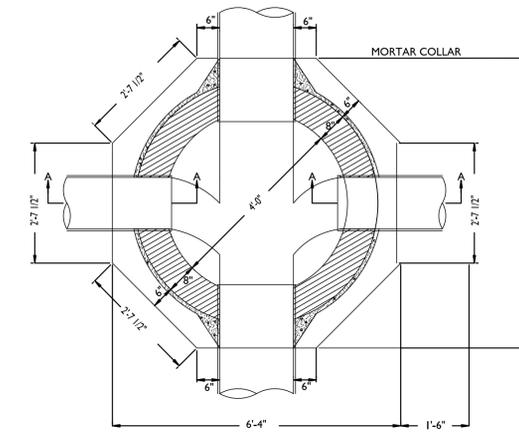
PSD NO. 17 - STANDARD SERVICE DETAIL
NOT TO SCALE



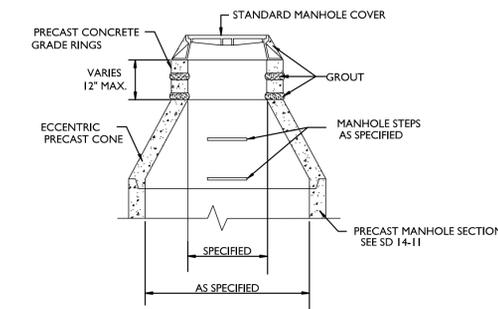
PSD NO. 18 - STANDARD MANHOLE RING AND COVER
DETAIL
NOT TO SCALE

NOTES:
1. ALL MANHOLE FRAMES SHALL BE GOOD QUALITY HEAVY DUTY CASTINGS
2. FRAME SHALL BE A MINIMUM WEIGHT OF 182 LBS
3. COVER SHALL WEIGH A MIN. OF 120 LBS
4. MANHOLES WITHIN PAVED SURFACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAIL
5. CONSEAL SHALL BE USED BETWEEN RING AND CONE

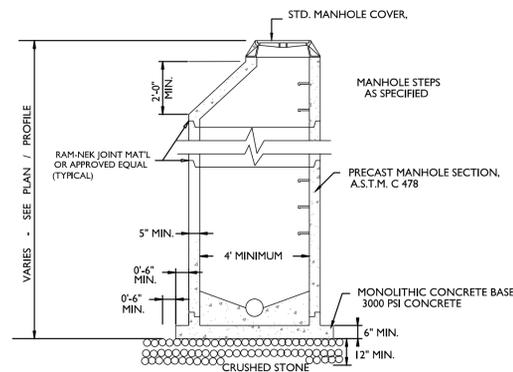
5/8" X 3" LAGSHELD IN HOLE DRILLED INTO CONE OR RING WITH ANCHOR SUNK TO DESIGN DEPTH, AND 5/8" X 3" HOT DIPPED GALVANIZED LAG BOLT AND WASHER.



PSD NO. 19 - SANITARY SEWER MANHOLE PLAN VIEW DETAIL
NOT TO SCALE

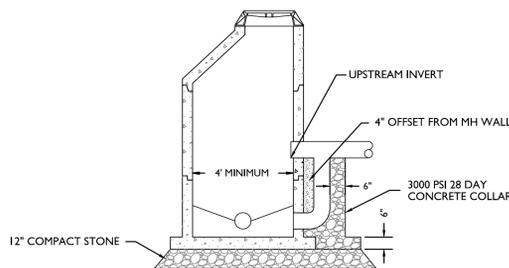


PSD NO. 20 - SANITARY SEWER PRECAST RING EXTENSION
DETAIL
NOT TO SCALE



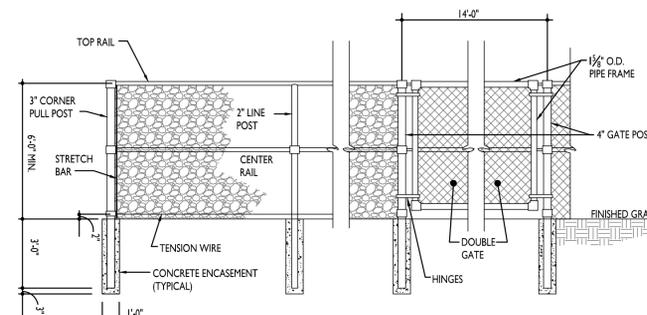
PSD NO. 21 - SANITARY SEWER PRECAST MANHOLE DETAIL
NOT TO SCALE

NOTE:
ADDITIONAL EXTENDED BASE MAY BE REQUIRED WHERE MANHOLES DEPENDING ON ANTI-FLOTATION CALCULATIONS



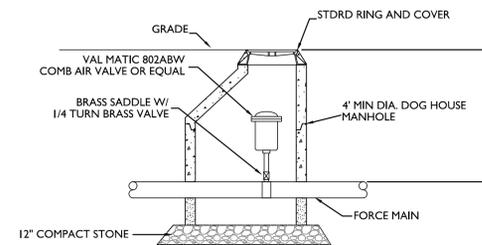
PSD NO. 22 - OUTSIDE DROP MANHOLE DETAIL
NOT TO SCALE

NOTE:
CONCRETE COLLAR TO EXTEND 6" ON EACH SIDE OF DROP PIPE. USE OUTSIDE DROP MANHOLE WHEN UPSTREAM INVERT IS OVER 24" HIGHER THAN DOWNSTREAM INVERT.



PSD NO. 23 - LIFT STATION FENCING DETAIL
NOT TO SCALE

NOTES:
1. DOUBLE GATE SHALL HAVE A LOCKING MECHANISM, DROP ROD, AND TRUSS ROD.
2. ALL FENCE COMPONENT MATERIALS SHALL BE EITHER HOT DIPPED GALVANIZED STEEL OR IRON. FENCE FABRIC SHALL BE ALUMINUM COATED.
3. PRIVACY SLATS WHEN INDICATED



PSD NO. 24 - AIR RELEASE MANHOLE DETAIL
NOT TO SCALE

NOTE:
AIR RELEASE VALVES TO BE LOCATED AT HIGH POINTS OF THE FORCE MAIN WHERE GRADE DIFFERENCES EXCEED 10' IN ELEVATION.



STANDARD DETAILS SHEET C



No.	Revision	Date	By

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JUNE, 2023
Checked By	MNH	Job No.	

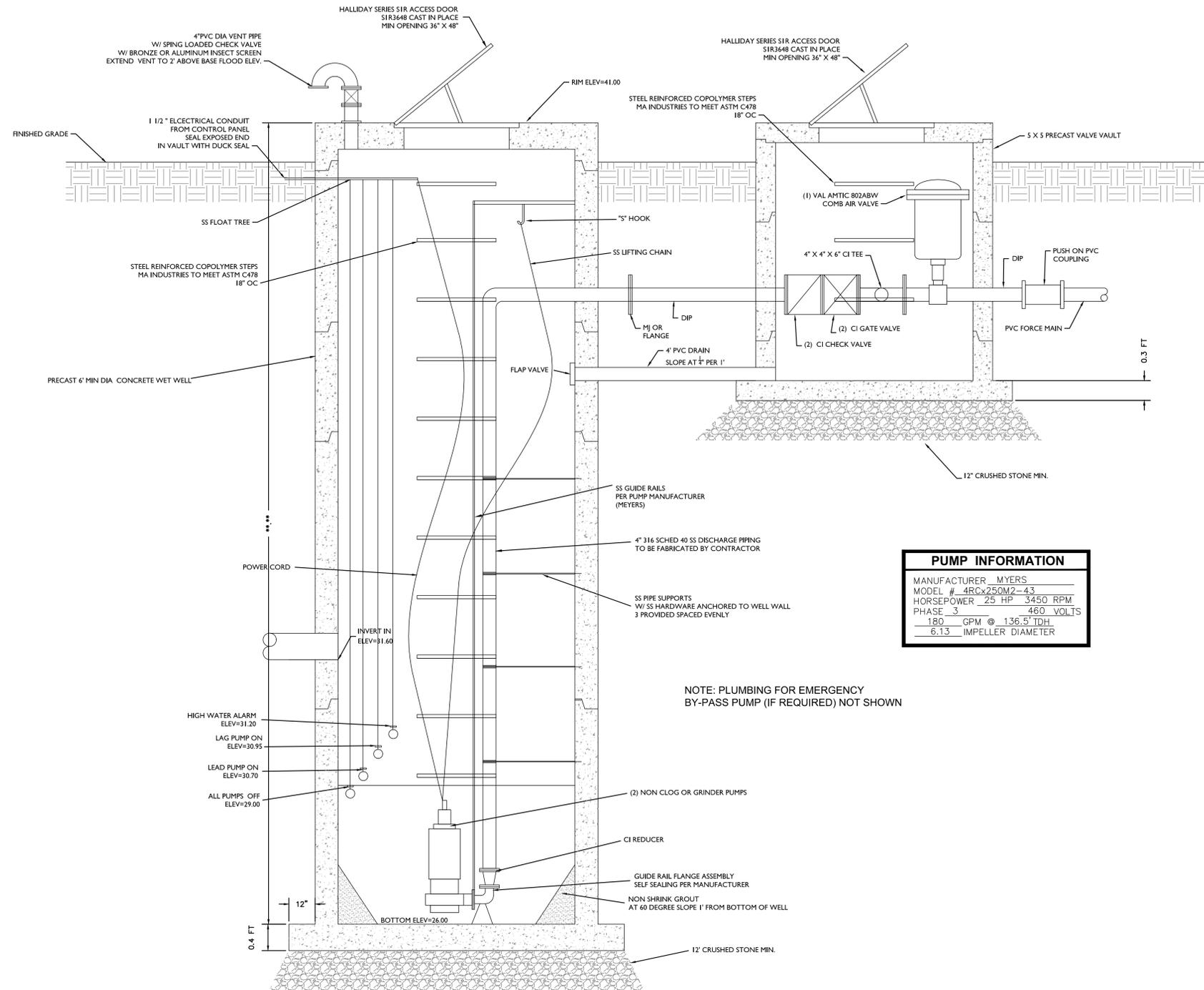
RENOVATION CHURCH
PENER COUNTY
NORTH CAROLINA

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HAMPSTEAD, NC 28443

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SEWER DETAILS

Sheet No.
C-8.2



PUMP INFORMATION	
MANUFACTURER	MYERS
MODEL #	4RCx250M2-4.3
HORSEPOWER	25 HP 3450 RPM
PHASE	3 460 VOLTS
	180 GPM @ 136.5 TDH
	6.13 IMPELLER DIAMETER

NOTE: PLUMBING FOR EMERGENCY BY-PASS PUMP (IF REQUIRED) NOT SHOWN

PSD NO. 25 - TYPICAL DUPLEX LIFT STATION SECTION
DETAIL
NOT TO SCALE



STANDARD DETAILS SHEET D



No.	Revision	Date	By

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JUNE, 2023
Checked By	MNH	Job No.	

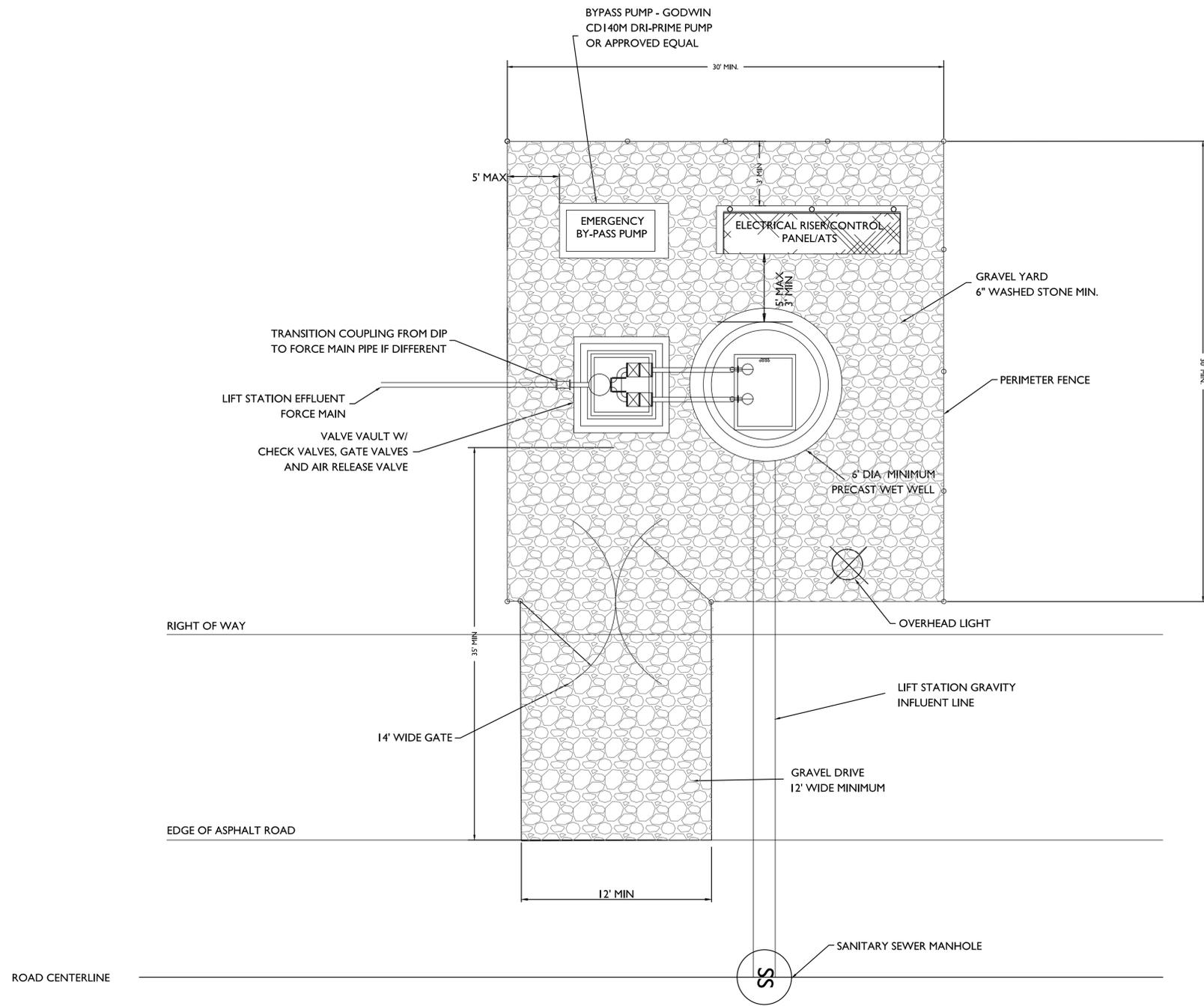
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SEWER DETAILS

Sheet No.
C-8.3



PSD NO. 26 - TYPICAL DUPLEX LIFT STATION PLAN DETAIL
NOT TO SCALE



STANDARD DETAILS SHEET E



No.	Revision	Date	By
1	REVISED PER PLURIS COMMENT	11/27/23	MNH

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JUNE, 2023
Checked By	MNH	Job No.	

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SEWER DETAILS

Sheet No.
C-8.4

Restrained Length in Feet Each Side of Fitting Joint

PIPE DIAMETER (INCHES)	D. I. P.				P. V. C.			
	90°	45°	22.5°	11.25°	90°	45°	22.5°	11.25°
3"	30'	15'	10'	5'	40'	20'	10'	5'
4"	30'	15'	10'	5'	50'	25'	15'	10'
6"	50'	25'	10'	5'	80'	30'	20'	10'
8"	60'	30'	15'	10'	90'	40'	20'	10'
10"	80'	30'	20'	10'	110'	50'	25'	15'
12"	90'	40'	20'	10'	130'	50'	30'	15'
16"	120'	50'	25'	15'	160'	70'	35'	20'
20"	150'	60'	30'	15'	200'	80'	40'	20'
24"	180'	70'	35'	20'	210'	90'	45'	25'
30"	190'	80'	40'	20'	250'	100'	50'	25'
36"	220'	90'	45'	25'	0	0	0	0
42"	240'	100'	50'	25'	0	0	0	0
48"	260'	120'	60'	30'	0	0	0	0

Restrained lengths for valves, dead ends and branches from less shall be the same as for 90° (degree) bends

Restrained Length in Feet For Reducer

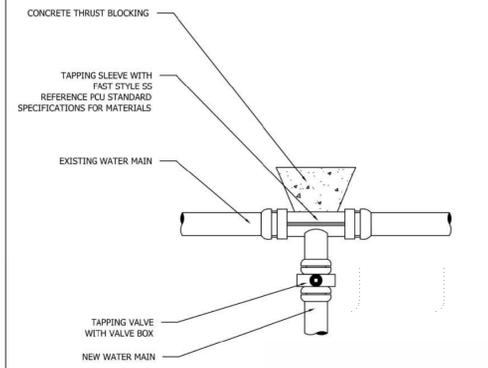
PIPE DIAMETER (INCHES)	3"	4"	6"	8"	10"	12"	16"	20"	24"	30"
3"	0	0	0	0	0	0	0	0	0	0
4"	0	0	0	0	0	0	0	0	0	0
6"	0	0	0	0	0	0	0	0	0	0
8"	0	0	0	0	0	0	0	0	0	0
10"	0	0	0	0	0	0	0	0	0	0
12"	0	0	0	0	0	0	0	0	0	0
16"	0	0	0	0	0	0	0	0	0	0
20"	0	0	0	0	0	0	0	0	0	0
24"	0	0	0	0	0	0	0	0	0	0
30"	0	0	0	0	0	0	0	0	0	0
36"	0	0	0	0	0	0	0	0	0	0
42"	0	0	0	0	0	0	0	0	0	0
48"	0	0	0	0	0	0	0	0	0	0

Length of restrained joint for larger diameter pipe

- NOTES:
- PENDER COUNTY STANDARD RESTRAINT METHOD IS MJ "GRIP RING" TYPE. ALL RJ TO BE MJ "GRIP RING" TYPE UNLESS SPECIFICALLY APPROVED BY PCU IN WRITING.
 - ALL FITTINGS AND JOINTS SHALL BE RESTRAINED JOINT.
 - "L" ABOVE IS GIVEN IN FEET FROM FITTING JOINT.

PENDER COUNTY UTILITIES
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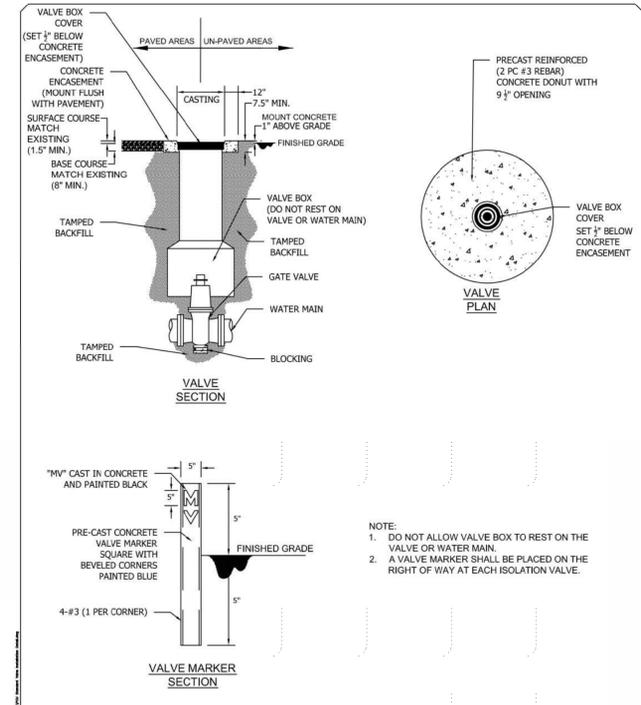
RESTRAINED JOINT TABLE
STANDARD DETAIL
VERSION #1 - OCTOBER 2015



TAPPING SLEEVE AND VALVE ASSEMBLY DETAIL
NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

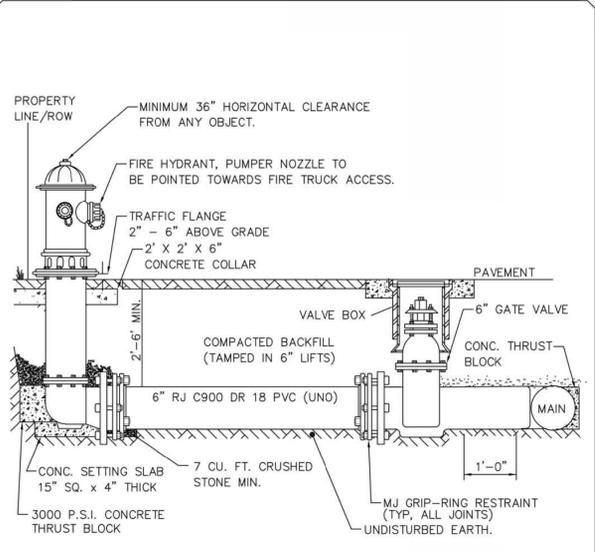
TAPPING SLEEVE AND VALVE ASSEMBLY
STANDARD DETAIL
VERSION #3 - FEB 2016



VALVE INSTALLATION DETAIL
NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

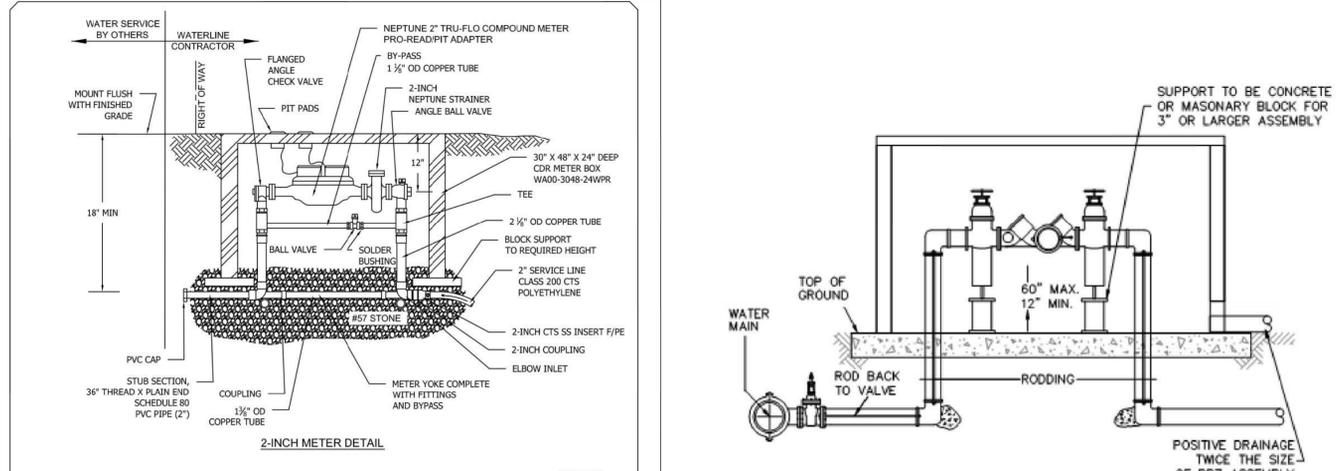
VALVE INSTALLATION
STANDARD DETAIL
VERSION #3 - JUNE 2016



FIRE HYDRANT ASSEMBLY DETAIL
NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

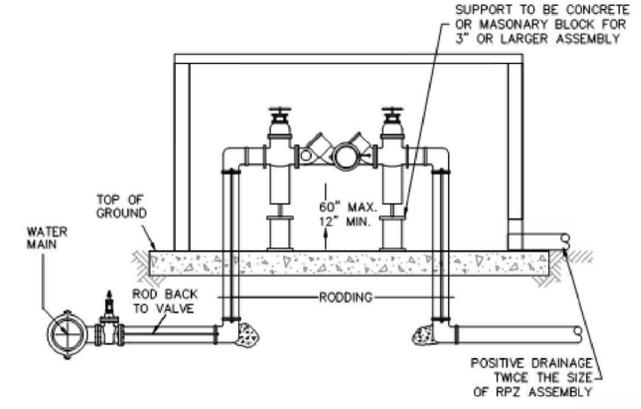
FIRE HYDRANT ASSEMBLY
STANDARD DETAIL
VERSION #2 - APRIL 2016



STANDARD 2-INCH WATER SERVICE DETAIL
NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

2-INCH WATER SERVICE
STANDARD DETAIL
VERSION #1 - AUGUST 2010



- ALL ABOVE GROUND VAULTS MUST HAVE ADEQUATE DRAINAGE (TWICE THE DIAMETER OF THE RPZ ASSEMBLY OR EQUIVALENT).
- REDUCED PRESSURE ZONE BACKFLOW PREVENTER MAY BE LOCATED IN A BUILDING PROVIDED THERE ARE NO OTHER UNPROTECTED TAPS BETWEEN THE MAIN AND THE BUILDING.
- ABOVE GROUND INSULATED VAULTS MUST BE ASSE. 106 APPROVED ABOVE GROUND ENCLOSURES.
- IRRIGATION RPZ ASSEMBLIES THAT ARE REMOVED TO PREVENT FREEZING IN THE WINTER MONTHS MUST BE CAPPED OFF.
- ALL STANDPIPES FOR IRRIGATION RPZ ASSEMBLIES ARE TO BE COPPER OR BRASS.
- STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
- REFER TO MANUFACTURER CUT SHEETS FOR MODEL AND ADDITIONAL DETAIL.

REDUCED PRESSURE ZONE BACKFLOW PREVENTER

N.T.S.

ZURN Model 375
Reduced Pressure Principle Assembly

Application
Designed for installation on potable water lines to protect against both backflow and backpressure of contaminated water into the potable water supply. The Model 375 provides protection where a potential health hazard exists. Ideal for use where lead-free valves are required.



- Standards Compliance (Unless Otherwise Noted, Sizes 2 1/2" Thru 10")
- ASSE® Listed 1013
 - APM09 Listed
 - CSA Certified B84.4 (2 1/2" thru 8")
 - AWWA Compliant C511, and C550
 - FMI Approved
 - UL® Classified
 - C-UL® Classified
 - NYC MEA 49-01-M Vol 2
 - Approved by the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California.
 - Meets the requirements of NSF/ANSI/CAN 61* (0.2% MAX. WEIGHTED AVERAGE LEAD CONTENT)

- Options (Suffices can be combined)
- FSC - with NRS shut-off valves (standard)
 - G - with epoxy coated wye type strainer (flanged only)
 - GF - with grooved inlet connection and flanged outlet connection
 - FG - with flanged inlet connection and grooved outlet connection
 - L - less shut-off valves (flanged body connections)
 - OSY - with OS&Y gate valves
 - PI - with Post Indicator gate valve
 - BG - with grooved and butterfly valves with integral supervisory switches

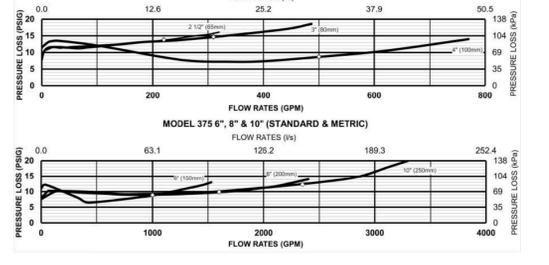
- Materials
- Main valve body: Ductile Iron ASTM A 536
 - Access covers: Ductile Iron ASTM A 536
 - Coatings: NSF Approved fusion epoxy finish
 - Internals: Stainless steel, 300 Series
 - Fasteners: NORPLY™
 - Seal rings: Stainless Steel, 300 Series
 - O-rings: EPDM (FDA approved)
 - Springs: Buna Nitrile (FDA approved)
 - Sensing line: Stainless Steel, 300 Series
 - Sensing line: Stainless Steel, braided hose

- Accessories
- Connected Pressure Monitor (Model ZC5M-PF)
 - Connected Flow Meter Option (Model ZC5M-BTM must be ordered with Model ZC5M-PF)
 - Air gap (Model AG)
 - QT-SET Quick Test Fitting Set
 - Repair kit (rubber only)
 - Thermal expansion tank (Model XT)
 - Wireless Monitor Retrofit Kit for conversion of existing Model 375 (212-6-RFK-375W1, 8-10-RFK-375W1)

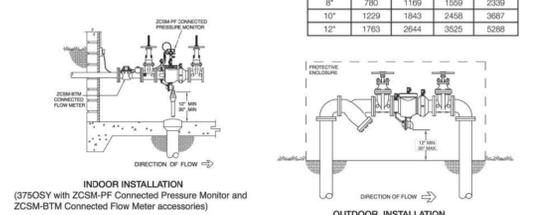
Dimensions & Weights (do not include pkg.)

MODEL	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GZ	HA	HB	HC	HD	HE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP	HQ	HR	HS	HT	HU	HV	HW	HX	HY	HZ	IA	IB	IC	ID	IE	IF	IG	IH	II	IJ	IK	IL	IM	IN	IO	IP	IQ	IR	IS	IT	IU	IV	IW	IX	IY	IZ	JA	JB	JC	JD	JE	JF	JG	JH	JI	IJ	JK	KL	LM	LN	LO	LP	LQ	LR	LS	LT	LU	LV	LW	LX	LY	LZ	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK	ML	MM	MN	MO	MP	MQ	MR	MS	MT	MU	MV	MW	MX	MY	MZ	NA	NB	NC	ND	NE	NF	NG	NH	NI	NJ	NK	NL	NM	NN	NO	NP	NQ	NR	NS	NT	NU	NV	NW	NX	NY	NZ	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL	OM	ON	OO	OP	OQ	OR	OS	OT	OU	OV	OW	OX	OY	OZ	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM	PN	PO	PP	PQ	PR	PS	PT	PU	PV	PW	PX	PY	PZ	QA	QB	QC	QD	QE	QF	QG	QH	QI	QJ	QK	QL	QM	QN	QO	QP	QQ	QR	QS	QT	QU	QV	QW	QX	QY	QZ	RA	RB	RC	RD	RE	RF	RG	RH	RI	RJ	RK	RL	RM	RN	RO	RP	RQ	RR	RS	RT	RU	RV	RW	RX	RY	RZ	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK	SL	SM	SN	SO	SP	SQ	SR	SS	ST	SU	SV	SW	SX	SY	SZ	TA	TB	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM	TN	TO	TP	TQ	TR	TS	TT	TU	TV	TW	TX	TY	TZ	UA	UB	UC	UD	UE	UF	UG	UH	UI	UJ	UK	UL	UM	UN	UO	UP	UQ	UR	US	UT	UU	UV	UW	UX	UY	UZ	VA	VB	VC	VD	VE	VF	VG	VH	VI	VJ	VK	VL	VM	VN	VO	VP	VQ	VR	VS	VT	VU	VV	VW	VX	VY	VZ	WA	WB	WC	WD	WE	WF	WG	WH	WI	WJ	WK	WL	WM	WN	WO	WP	WQ	WR	WS	WT	WU	WV	WW	WX	WY	WZ	XA	XB	XC	XD	XE	XF	XG	XH	XI	XJ	XK	XL	XM	XN	XO	XP	XQ	XR	XS	XT	XU	XV	XW	XX	XY	XZ	YA	YB	YC	YD	YE	YF	YG	YH	YI	YJ	YK	YL	YM	YN	YO	YP	YQ	YR	YS	YT	YU	YV	YW	YX	YY	YZ	ZA	ZB	ZC	ZD	ZE	ZF	ZG	ZH	ZI	ZJ	ZK	ZL	ZM	ZN	ZO	ZP	ZQ	ZR	ZS	ZT	ZU	ZV	ZW	ZX	ZY	ZZ
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Flow Characteristics



Typical Installation
Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted at a minimum of 12" (305mm) and a maximum of 30" (762mm) above adequate drains with sufficient side clearance for testing and maintenance. The installation shall be made so that no part of the unit can be submerged.



Specifications
The Reduced Pressure Principle Backflow Prevention Assembly shall be certified to NSF/ANSI/CAN 61, ASSE® Listed 1013, and supplied with full port gate valves. The main body and access cover shall be epoxy coated ductile iron (ASTM A 536), the seat ring and check valve shall be NORPLY™, the stem shall be stainless steel (ASTM A 276) and the seat disc elastomers shall be EPDM. The check and the resilient valve shall be accessible for maintenance without removing the device from the line. The Reduced Pressure Principle Backflow Prevention Assembly shall be a ZURN WILKINS Model 375.

Zurn Industries, LLC | Wilkins
1747 Commerce Way, Paso Robles, CA U.S.A. 93448 Ph. 855-663-9876, Fax 805-238-5766
In Canada | Zurn Industries Limited
7600 Gormley Drive, Unit 10, Brampton, Ontario L6T 5W6, 877-892-8216
www.zurn.com



11/20/2023

No.	Revision	Date	By

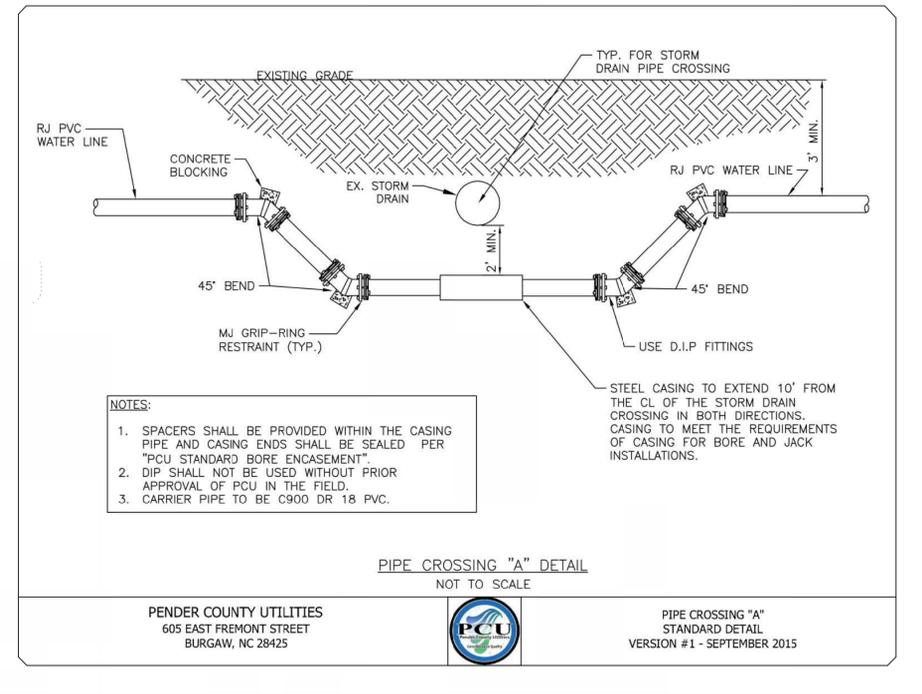
Designer: MNH
Scale: AS SHOWN
Drawn By: MNH
Date: JUNE, 2023
Checked By: MNH
Job No.:

RENOVATION CHURCH
NORTH CAROLINA
PENER COUNTY

RENOVATION CHURCH
PO BOX 1189
HAMPSTEAD, NC 28443

PORT CITY CONSULTING
ENGINEERS, PLLC
6216 STONEBRIDGE ROAD
WILMINGTON, NC 28409
910-599-1744 LICENSE No. P-1032

WATER DETAILS
Sheet No. C-9.0



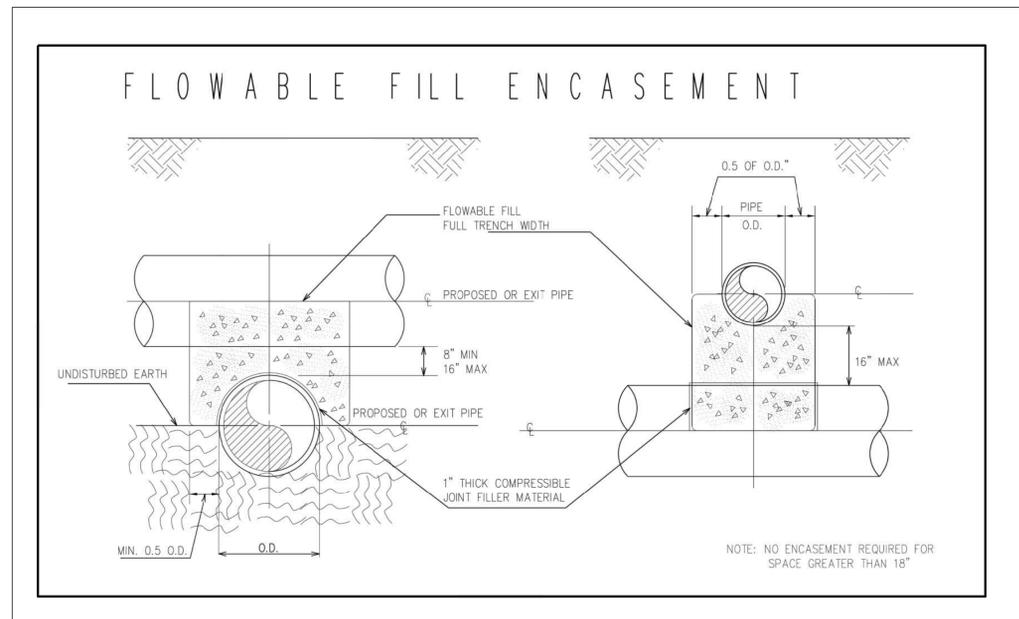
PCU STANDARD NOTES

1. A PRE-CONSTRUCTION MEETING IS REQUIRED BEFORE BEGINNING WORK. THE MEETING MUST BE SCHEDULED WITH PENDER COUNTY UTILITIES (PCU) AT LEAST ONE WEEK IN ADVANCE. ATTENDEES MUST INCLUDE PCU, THE UTILITY CONTRACTOR'S SUPERINTENDENT, THE SUPPLIER, AND THE CONSULTING ENGINEER.
2. ALL MATERIALS USED SHALL CONFORM TO PENDER COUNTY UTILITIES REQUIREMENTS. NON-CONFORMING MATERIAL WILL NOT BE ACCEPTED FOR FINAL CERTIFICATION.
3. ALL PIPE SHALL BE C900 DR18 PVC, UNLESS OTHERWISE NOTED (SEE PCU STANDARD DETAIL). PVC PIPE TO BE SDR 21 WHERE C900 IS UNAVAILABLE. THE USE OF DUCTILE IRON PIPE (DIP) IS REQUIRED UNDER PAVED AREAS. PCU MUST APPROVE THE USE OF DIP IN THE FIELD BEFORE INSTALLATION IN OTHER LOCATIONS.
4. PCU STANDARD WATERLINE PIPE RESTRAINING METHOD IS MJ GRIP RINGS. AT A MINIMUM ALL FITTINGS, VALVES, ETC. MUST BE RESTRAINED (SEE PCU STANDARD DETAIL).
5. PCU MUST INSPECT CASING INSTALLATIONS PRIOR TO BACKFILL. PCU MUST WITNESS PRESSURE TESTS, AND WITHDRAWAL OF BACTERIOLOGICAL SAMPLES. CONTACT PCU UTILITIES INSPECTOR TO SCHEDULE.
6. CLOSE-OUT DOCUMENTS WHICH MUST BE RECEIVED PRIOR TO PCU SIGNING THE NCDEQ PWSS APPLICANT CERTIFICATION INCLUDE: BACTERIOLOGICAL TESTS, PRESSURE TESTS, DEED OF DEDICATION, AFFIDAVIT/RELEASE OF LIENS, WARRANTY, AND RECORD DRAWINGS (PDF & CAD).
7. AN 18-MONTH WARRANTY PERIOD APPLIES TO ALL WATERLINE CONSTRUCTION. THIS WARRANTY PERIOD DOES NOT BEGIN UNTIL FINAL APPROVAL OF THE SYSTEM HAS BEEN RECEIVED FROM NCDEQ PWSS.

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
PO BOX 995, BURGAW, NC 28425



STANDARD NOTES
PCU WATER SYSTEMS
VERSION #3 - APRIL 2022



No.	Revision	Date	By

Designer	MNH	Scale	AS SHOWN
Drawn By	MNH	Date	JUNE, 2023
Checked By	MNH	Job No.	

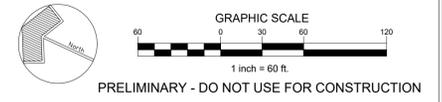
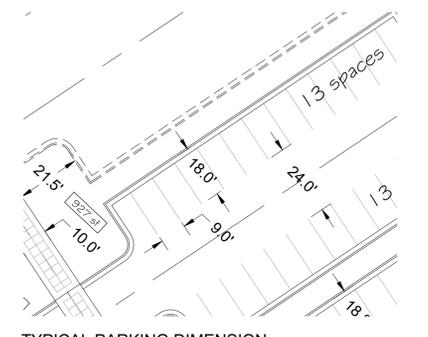
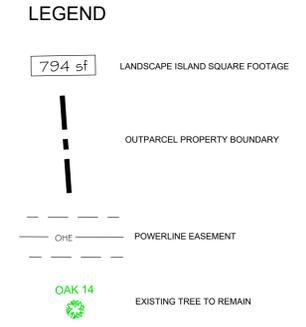
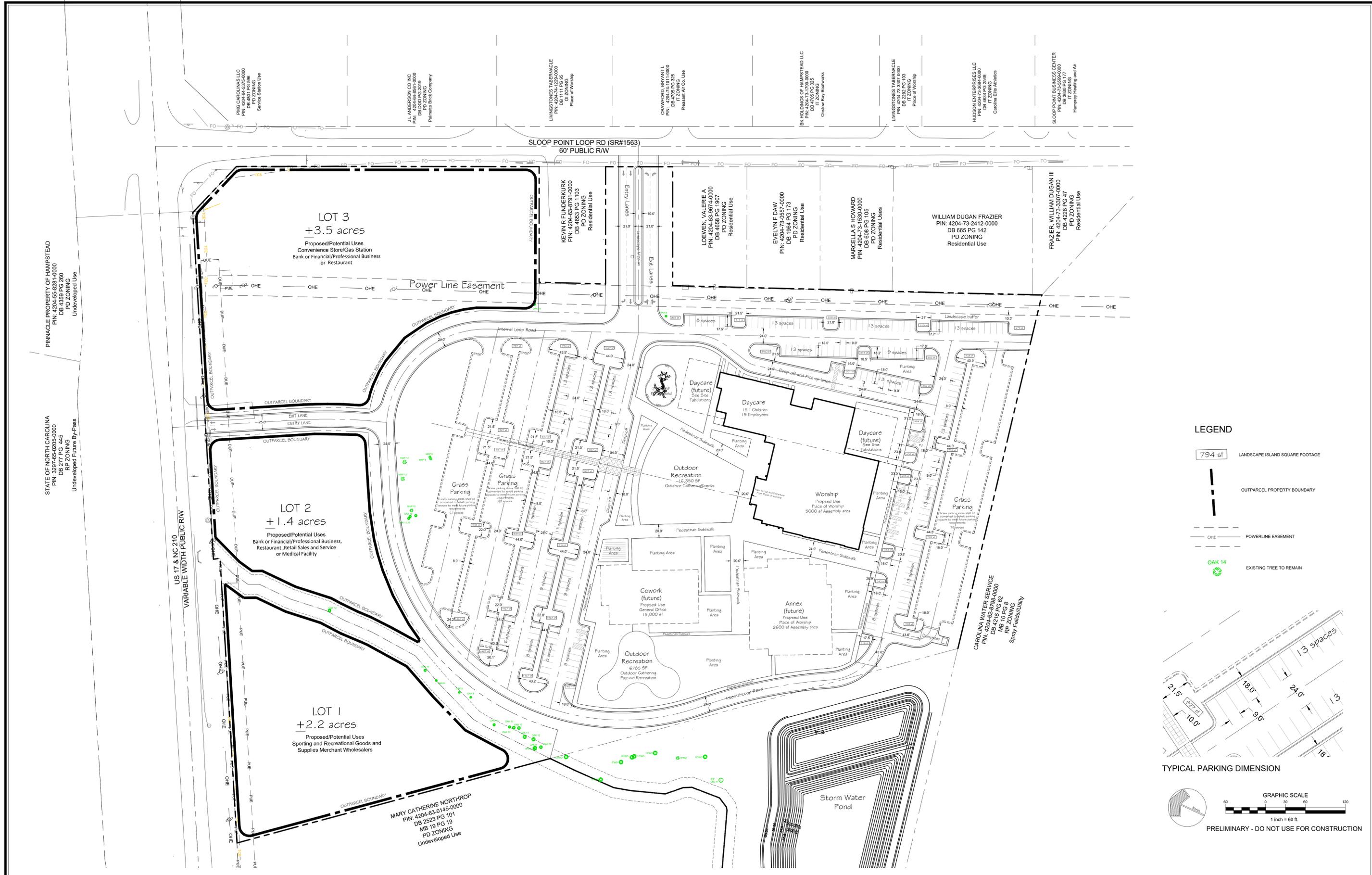
RENOVATION CHURCH
PENER COUNTY
NORTH CAROLINA

RENOVATION CHURCH
PO BOX 1189
HAMPSTEAD, NC 28443

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WATER DETAILS

Sheet No.
C-9.1



No.	Revision	Date	By
1	TRC COMMENTS 7-17-23	11-28-23	H+H
2	TRC COMMENTS 2-25-24	2-25-24	H+H

Designer	Scale
H+H	AS SHOWN
Drawn By	Date
H+H	JUNE, 2023
Checked By	Job No.
MNH	

RENOVATION CHURCH
NORTH CAROLINA

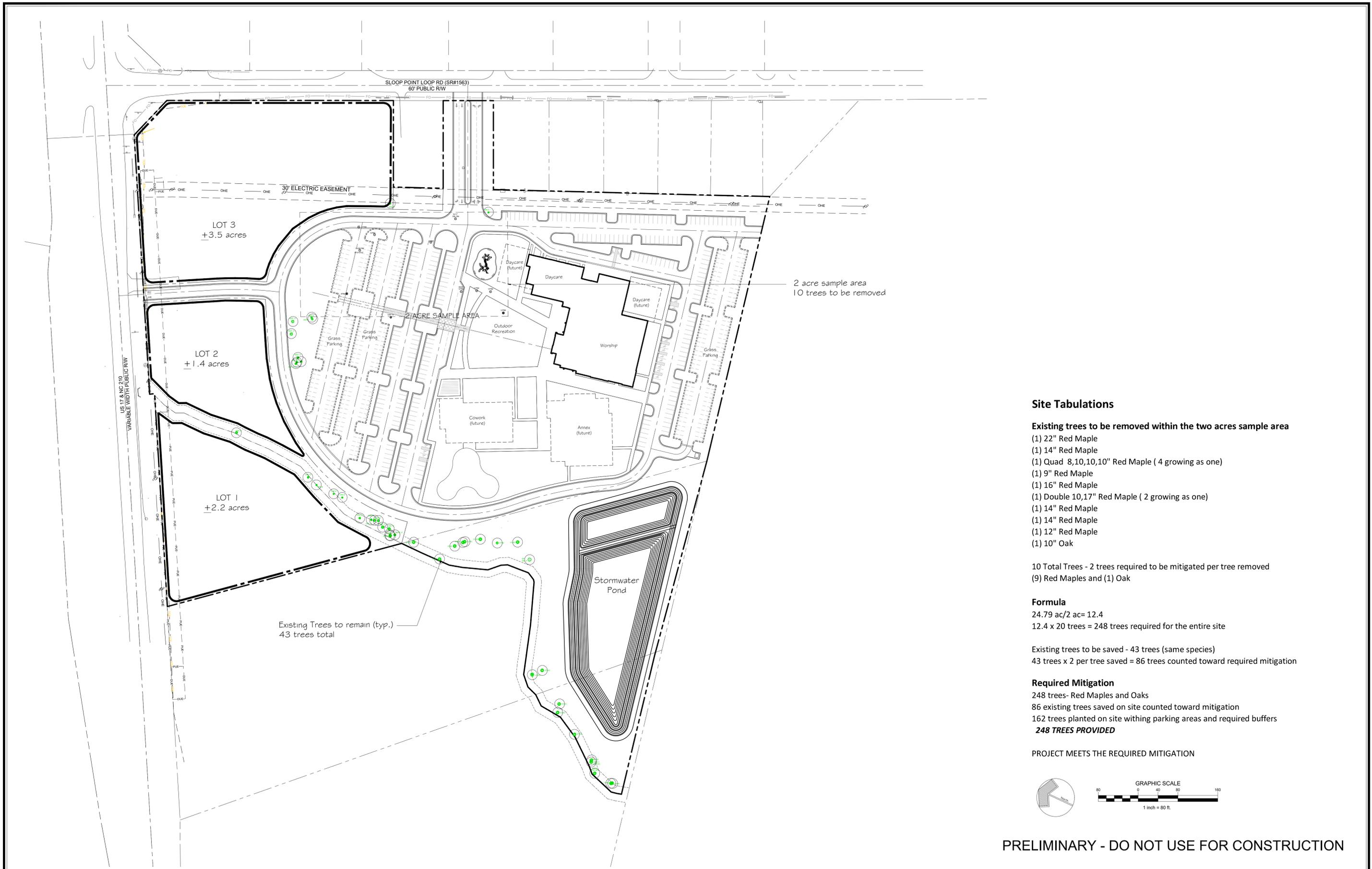
RENOVATION CHURCH
16579 HWY 17
HAMPSTEAD, NC 28443

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6216 STONEBRIDGE ROAD
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Zoning Conformance Plan

Sheet No.
L-1



Site Tabulations

Existing trees to be removed within the two acres sample area

- (1) 22" Red Maple
- (1) 14" Red Maple
- (1) Quad 8,10,10,10" Red Maple (4 growing as one)
- (1) 9" Red Maple
- (1) 16" Red Maple
- (1) Double 10,17" Red Maple (2 growing as one)
- (1) 14" Red Maple
- (1) 14" Red Maple
- (1) 12" Red Maple
- (1) 10" Oak

10 Total Trees - 2 trees required to be mitigated per tree removed
 (9) Red Maples and (1) Oak

Formula

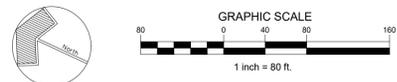
24.79 ac/2 ac= 12.4
 12.4 x 20 trees = 248 trees required for the entire site

Existing trees to be saved - 43 trees (same species)
 43 trees x 2 per tree saved = 86 trees counted toward required mitigation

Required Mitigation

248 trees- Red Maples and Oaks
 86 existing trees saved on site counted toward mitigation
 162 trees planted on site withing parking areas and required buffers
248 TREES PROVIDED

PROJECT MEETS THE REQUIRED MITIGATION



PRELIMINARY - DO NOT USE FOR CONSTRUCTION

No.	Revision	Date	By
1	TRC COMMENT 7-17-23	11-28-23	H+W
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Designer	Scale
H+W	AS SHOWN
Drawn By	Date
H+W	JUNE, 2023
Checked By	Job No.
MNH	

RENOVATION CHURCH
 HAMPSTEAD NORTH CAROLINA

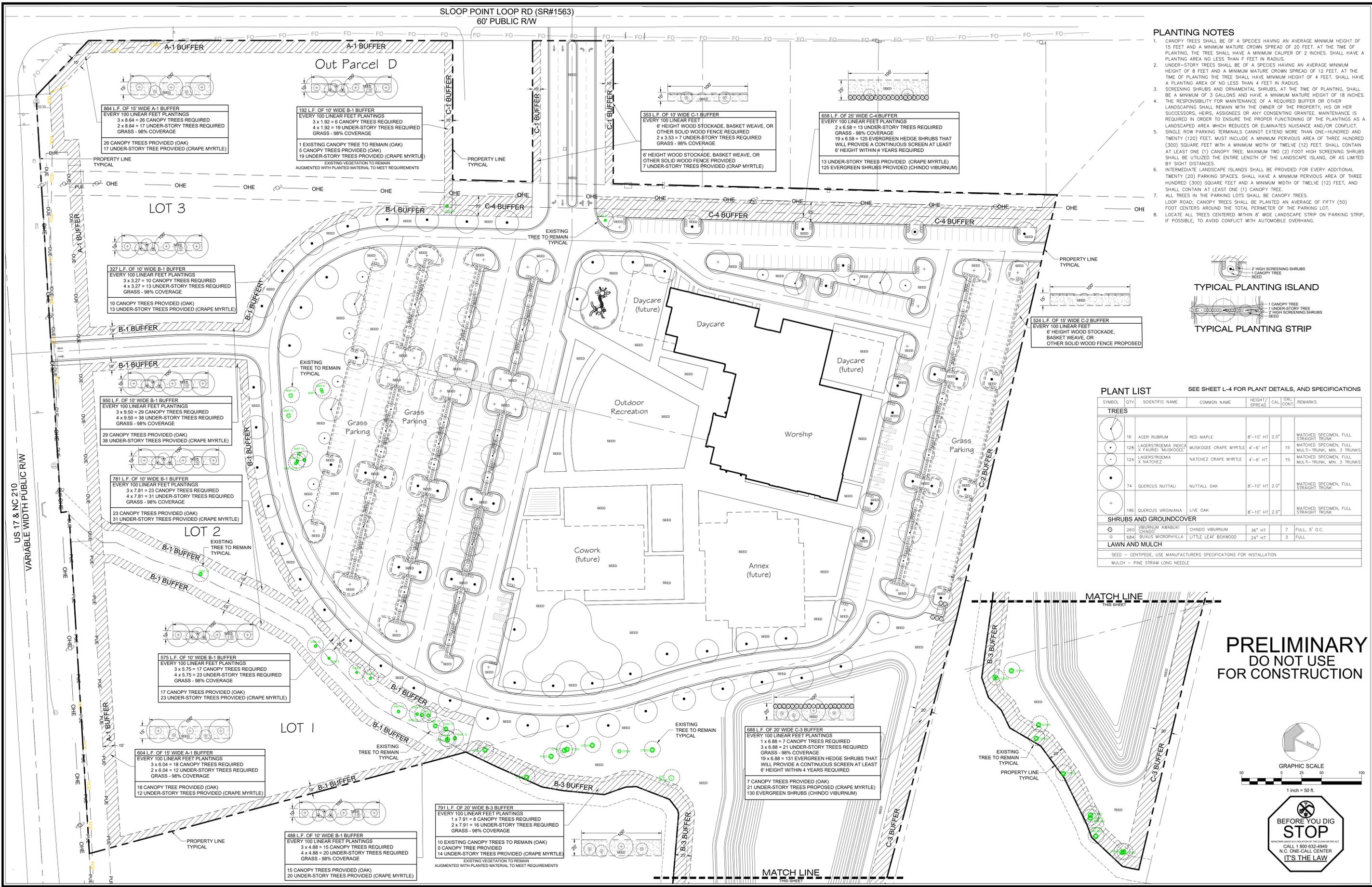
RENOVATION CHURCH
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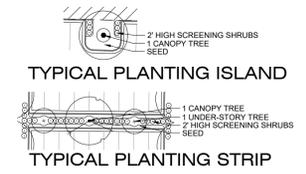


Tree Mitigation Plan

Sheet No.
L-2



- ### PLANTING NOTES
- CANOPY TREES SHALL BE OF A SPECIES HAVING AN AVERAGE MINIMUM HEIGHT OF 15 FEET AND A MINIMUM MATURE CROWN SPREAD OF 20 FEET. AT THE TIME OF PLANTING, THE TREE SHALL HAVE A MINIMUM CALIPER OF 2 INCHES. SHALL HAVE A PLANTING AREA NO LESS THAN 7 FEET IN RADIUS.
 - UNDER-STORY TREES SHALL BE OF A SPECIES HAVING AN AVERAGE MINIMUM HEIGHT OF 8 FEET AND A MINIMUM MATURE CROWN SPREAD OF 12 FEET. AT THE TIME OF PLANTING THE TREE SHALL HAVE MINIMUM HEIGHT OF 4 FEET. SHALL HAVE A PLANTING AREA OF NO LESS THAN 4 FEET IN RADIUS.
 - SCREENING SHRUBS AND ORNAMENTAL SHRUBS, AT THE TIME OF PLANTING, SHALL BE A MINIMUM OF 3 GALLONS AND HAVE A MINIMUM MATURE HEIGHT OF 18 INCHES.
 - THE RESPONSIBILITY FOR MAINTENANCE OF A REQUIRED BUFFER OR OTHER LANDSCAPING SHALL REMAIN WITH THE OWNER OF THE PROPERTY, HIS OR HER SUCCESSORS, HEIRS, ASSIGNEES OR ANY CONSENTING GRANTEE. MAINTENANCE IS REQUIRED IN ORDER TO ENSURE THE PROPER FUNCTIONING OF THE PLANTINGS AS A LANDSCAPED AREA WHICH REDUCES OR ELIMINATES NUISANCE AND/OR CONFLICT.
 - SINGLE ROW PARKING TERMINALS CANNOT EXTEND MORE THAN ONE-HUNDRED AND TWENTY (120) FEET. MUST INCLUDE A MINIMUM PERVIOUS AREA OF THREE HUNDRED (300) SQUARE FEET WITH A MINIMUM WIDTH OF TWELVE (12) FEET. SHALL CONTAIN AT LEAST ONE (1) CANOPY TREE. MAXIMUM TWO (2) FOOT HIGH SCREENING SHRUBS SHALL BE UTILIZED THE ENTIRE LENGTH OF THE LANDSCAPE ISLAND, OR AS LIMITED BY SIGHT DISTANCES.
 - INTERMEDIATE LANDSCAPE ISLANDS SHALL BE PROVIDED FOR EVERY ADDITIONAL TWENTY (20) PARKING SPACES. SHALL HAVE A MINIMUM PERVIOUS AREA OF THREE HUNDRED (300) SQUARE FEET AND A MINIMUM WIDTH OF TWELVE (12) FEET, AND SHALL CONTAIN AT LEAST ONE (1) CANOPY TREE.
 - ALL TREES IN THE PARKING LOTS SHALL BE CANOPY TREES.
 - LOOP ROAD: CANOPY TREES SHALL BE PLANTED AN AVERAGE OF FIFTY (50) FOOT CENTERS AROUND THE TOTAL PERIMETER OF THE PARKING LOT. LOCATE ALL TREES CENTERED WITHIN 8' WIDE LANDSCAPE STRIP ON PARKING STRIP, IF POSSIBLE, TO AVOID CONFLICT WITH AUTOMOBILE OVERHANG.

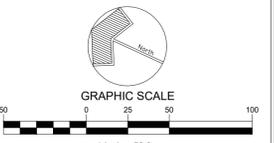


PLANT LIST

SEE SHEET L-4 FOR PLANT DETAILS, AND SPECIFICATIONS

SYMBOL	QTY	SCIENTIFIC NAME	COMMON NAME	HEIGHT / SPREAD	CAL	CAL CONT	REMARKS
TREES							
(Symbol)	16	ACER RUBRUM	RED MAPLE	8'-10" HT	2.0"		MATCHED SPECIMEN, FULL STRAIGHT TRUNK
(Symbol)	128	LAGERSTROMIA INDICA X FAUREI MUSKOGEE	MUSKOGEE CRAPE MYRTLE	4'-6" HT		15	MATCHED SPECIMEN, FULL MULTI-TRUNK, MIN. 3 TRUNKS
(Symbol)	124	LAGERSTROMIA X NATCHEZ	NATCHEZ CRAPE MYRTLE	4'-6" HT		15	MATCHED SPECIMEN, FULL MULTI-TRUNK, MIN. 3 TRUNKS
(Symbol)	74	QUERCUS NUTTALLI	NUTTALL OAK	8'-10" HT	2.0"		MATCHED SPECIMEN, FULL STRAIGHT TRUNK
(Symbol)	196	QUERCUS VIRGINIANA	LIVE OAK	8'-10" HT	2.0"		MATCHED SPECIMEN, FULL STRAIGHT TRUNK
SHRUBS AND GROUNDCOVER							
(Symbol)	260	VIBURNUM AWABUKI CHINDO	CHINDO VIBURNUM	36" HT		7	FULL, 5' O.C.
(Symbol)	684	BULBUS MICROPHYLLA	LITTLE LEAF BOXWOOD	24" HT		3	FULL
LAWN AND MULCH							
SEED - CENTIPEDE, USE MANUFACTURERS SPECIFICATIONS FOR INSTALLATION							
MULCH - PINE STRAW LONG NEEDLE							

**PRELIMINARY
DO NOT USE
FOR CONSTRUCTION**



No.	Revision	Date	By	Designer	Scale
1	TRC COMMENTS 7-17-23	11-28-23	H+H	H+H	AS SHOWN
2	TRC COMMENTS 2-25-24	2-25-24	H+H	H+H	JUNE, 2023

RENOVATION CHURCH
16579 HWY 17
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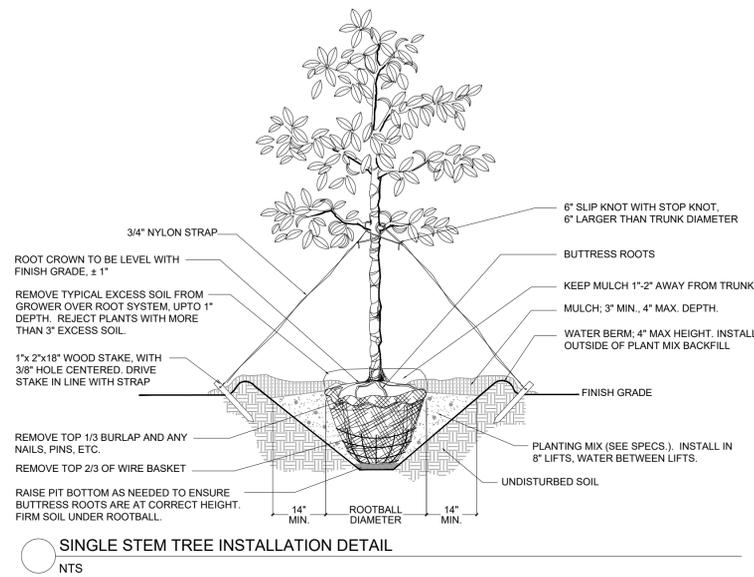
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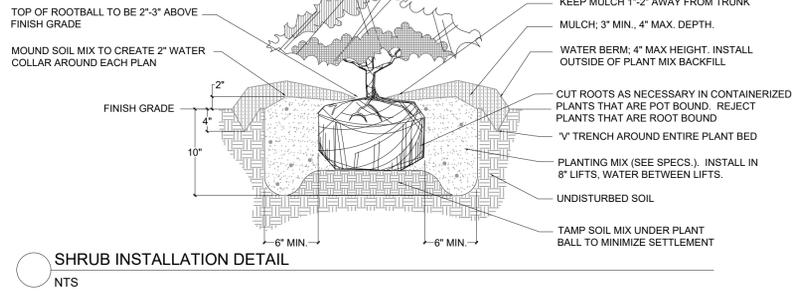
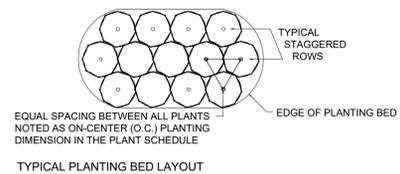
H+W DESIGN

Planting Plan

Sheet No. **L-3**



- NOTES:**
1. OMIT COLLAR AROUND EACH SHRUB WHEN IRRIGATION SYSTEM IS PRESENT.
 2. INSTALL TOP OF PLANT BALL 2" ABOVE ADJACENT GRADE
 3. TAMP PLANT SOIL MIX FIRMLY IN 8" LIFTS AROUND PLANT BALL
 4. SOAK PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.



GENERAL PLANTING NOTES

1. PRIOR TO EXCAVATIONS, CONTRACTOR SHALL NOTIFY ULOCO AT 1-800-632-4949 TO ASCERTAIN LOCATIONS OF ELECTRICAL CABLES, CONDUIT, UTILITY LINES, OIL TANKS, GAS LINES, TELEPHONE LINES, WATER LINES, CABLE LINES, SANITARY SEWER LINES, SUPPLY LINES, SUBSURFACE DRAINAGE, AND IRRIGATION LINES, ETC. NOTIFY THE CITY SHOULD THE ABOVE MENTIONED SUBSURFACE IMPROVEMENTS PRESENT AN OBSTRUCTION IN LOCATIONS DESIGNATED FOR PLANTING. IN SUCH SITUATIONS, PROCEED AFTER THE OWNERS REPRESENTATIVE HAS APPROVED AN ALTERNATE LOCATION. DAMAGE INCURRED BY THE CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR IN A TIMELY MANNER TO THE SATISFACTION OF THE OWNER.
2. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF QUANTITIES IN THE PLANT SCHEDULE. ANY DISCREPANCIES BETWEEN QUANTITIES ON THE PLANS AND THE PLANT SCHEDULE SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. ANY FIELD ADJUSTMENTS OR QUANTITY ADJUSTMENTS MUST BE AUTHORIZED PRIOR TO PLANTING.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL PLANTING PITS PERCOLATE PROPERLY PRIOR TO PLANTING INSTALLATION.
4. WHERE PROPOSED TREE LOCATIONS CONFLICT WITH EXISTING UTILITIES, TREES MAY BE FIELD ADJUSTED UNDER THE DIRECTION OF THE CITY INSPECTOR.

PLANT MATERIAL NOTES

1. ALL PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT STANDARDS ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMAN*
2. ALL PLANT MATERIAL SHALL BE GUARANTEED TO BE IN HEALTHY CONDITION FOR ONE YEAR AFTER ACCEPTANCE BY THE LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE.
3. TREES SUPPLIED MUST HAVE BEEN PROPERLY PLANTED AND GROWN IN THE NURSERY. THE ROOT CROWN (ALSO CALLED THE TRUNK FLARE) SHALL BE EVIDENT NEAR THE TOP OF THE GROUND. ANY EXCESS SOIL UP TO 3 INCHES COVERING THE CROWN WILL HAVE TO BE REMOVED CAREFULLY BY HAND, IN ORDER TO PREVENT ROOT SCRAPES. THE TREE IS THEN TO BE PLANTED WITH THE ROOT CROWN IN PROPER RELATION TO THE SURROUNDING GRADE. ANY TREES WITH MORE THAN 3 INCHES OF SOIL ON TOP OF THE ROOT CROWN WILL BE REJECTED.
4. BALL AND BURLAP (B&B) PLANTS MUST HAVE FIRM, NATURAL BALLS OF EARTH, OF DIAMETER NOT LESS THAN RECOMMENDED IN THE "TREE AND SHRUB TRANSPLANTING MANUAL", AND BE OF SUFFICIENT DEPTH TO INCLUDE THE FIBROUS AND FEEDING ROOTS. PLANTS MOVED WITH A BALL WILL NOT BE ACCEPTED IF THE BALL IS DRY, CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATIONS.
5. CONTAINERIZED PLANTS SHALL HAVE A ROOT SYSTEM SUFFICIENT ENOUGH IN DEVELOPMENT TO HOLD THE SOIL INTACT WHEN REMOVED FROM THE CONTAINER. THE ROOT SYSTEM SHALL NOT BE ROOT BOUND, A CONDITION WHERE THE ROOT SYSTEM IS DENSE IN MASS, EXCESSIVELY INTERTWINED, AND HAS ESTABLISHED A CIRCULAR GROWTH PATTERN.
6. ALL TREES SHALL MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI, 1990, PART 1, "SHADE AND FLOWERING TREES").

TREE PLANTING NOTES

1. REMOVE ALL TREATED OR PLASTIC-COATED BURLAP, STRAPPING, WIRE OR NYLON TWINE FROM ROOTBALL. AFTER SETTING IN HOLE, CUT AWAY 2/3 OF WIRE BASKET, IF ANY, AND TOP 1/3 OF BURLAP.
2. SOAK ROOTBALL AND PIT IMMEDIATELY AFTER INSTALLATION.
3. TOP OF ROOTBALL TO BE 2" ABOVE ADJACENT UPHILL GRADE. DO NOT PLACE ADDITIONAL SOIL ON TOP OF ROOTBALL.
4. CONSTRUCT 4" HIGH SAUCER (WATER BERM) OUTSIDE OF PLANT MIX BACKFILL.
5. STAKES FOR TREE SUPPORT (LESS THAN 3" CAL.) SHALL BE CONSTRUCTION GRADE PRESSURE TREATED PINE, NOMINAL SIZE OF 2in. x 2in. x 18in. LONG AND POINTED AT ONE END. GUYING FABRIC SHALL BE 'ARBORTAPE', AS MANUFACTURED BY NEPTCO, PAWTUCKET, RI. (401) 722-5500 (OR APPROVED EQUAL). COLOR SHALL BE OLIVE DRAB.
6. STAKE TREES 3" CAL. OR GREATER WITH 'DUCK BILL' ANCHORS DRIVEN INTO UNDISTURBED SOIL. GUYING FABRIC SHALL BE 3/4" NYLON STRAPPING.

PLANTING MIX NOTES

1. PLANTING MIX MAY BE DEVELOPED BY AMENDING THE EXISTING SOIL OR REMOVING THE EXISTING SOIL AND REPLACING WITH NEW PLANTING MIX. IT SHALL BE UNIFORM COMPOSITION THROUGHOUT, WITH A MIXTURE OF SUBSOIL. IT SHALL BE FREE OF STONES, LUMPS, LIVE PLANTS AND THEIR ROOTS, STICKS, AND OTHER EXTRANEIOUS MATTER.
2. PLANTING MIX SHALL NOT BE USED WHILE IN A FROZEN OR MUDDY CONDITION.
3. THE PLANTING MIX SHALL CONTAIN THE FOLLOWING SPECIFIED PERCENTAGES OF CONSTITUENTS:
CLAY - MINIMUM 10% - MAXIMUM 20% CLAY
SILT - MINIMUM 30% - MAXIMUM 50%
ORGANIC MATERIAL - MINIMUM 5% - MAXIMUM 8%
SAND - BALANCE OF MIX
4. THE PLANTING MIX SHALL HAVE THE FOLLOWING NUTRIENTS AT THE SPECIFIED PERCENT BASE SATURATION, TO BE DETERMINED BY SOIL TEST CONDUCTED BY THE CONTRACTOR.
CALCIUM - 55% TO 80%
MAGNESIUM - 10% TO 30%
POTASSIUM - 5% TO 8%
5. ORGANIC MATERIAL IS DEFINED AS COMPOST/HUMUS SUCH AS SAWDUST OR LEAF MOLD THAT HAS COMPLETED THE DECOMPRESSION PROCESS. PERCENTAGE OF ORGANIC MATTER SHALL BE DETERMINED BY LOSS OF IGNITION, OF MOISTURE FREE SAMPLES DRIED AT 65 DEGREES.
6. PLANTING MIX SHALL HAVE AN ACIDITY RANGE OF pH 5.5 TO 7.0.

FERTILIZER NOTES

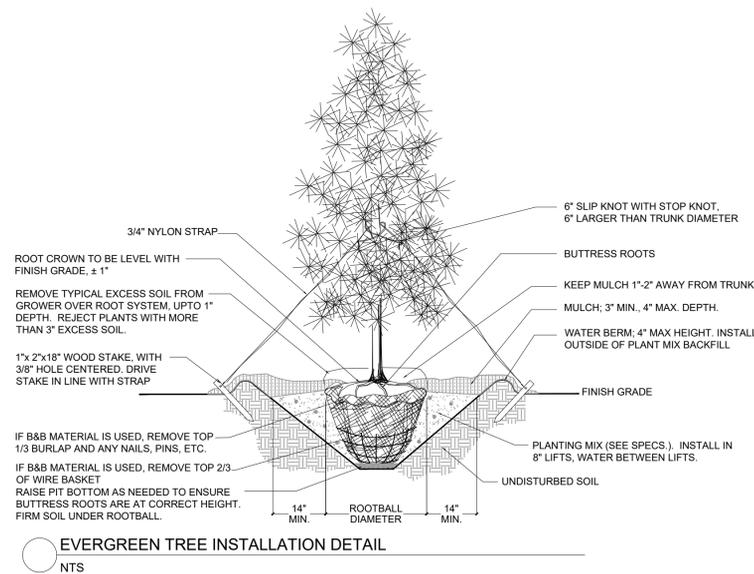
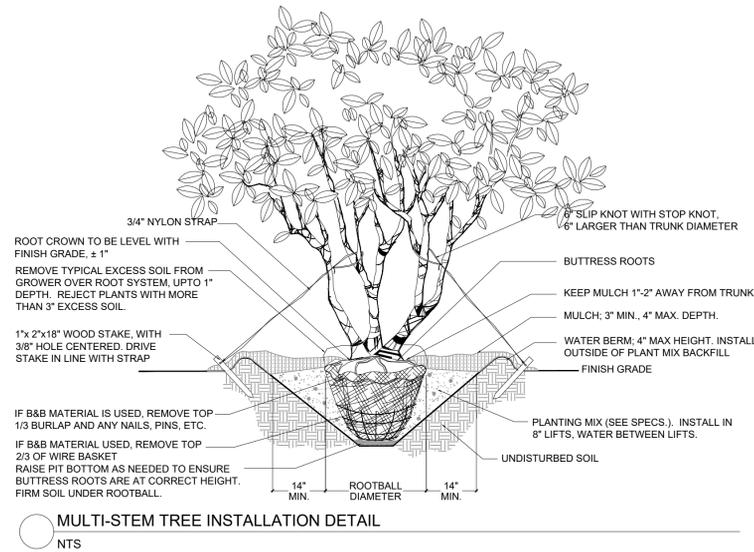
1. SHRUB AND GROUND COVER FERTILIZER, FROM THE FOLLOWING:
PRODUCT ANALYSIS APPL RATE
Ornamental plant fertilizer 12-6-6 2 lbs/100 Sq. Ft., or
Ornamental plant fertilizer 14-7-7 2 lbs/100 Sq. Ft.
2. SHRUB AND GROUND COVER FERTILIZER SHALL HAVE 50% WATER INSOLUBLE NITROGEN, THE CHLORINE CONTENT IS NOT TO EXCEED 5%.
3. NO TREE FERTILIZER IS TO BE APPLIED AT TIME OF PLANTING.
4. TREE FERTILIZER IS TO BE APPLIED AT THE 6 MONTH OR 12 MONTH WARRANTY INSPECTION TIME, WHICHEVER IS CLOSER TO EARLY SPRING BEGINNING GROWTH.
5. TREE FERTILIZER, FROM THE FOLLOWING:
PRODUCT ANALYSIS APPL RATE
Ornamental tree fertilizer 31-7-7 1cup/ inch caliper, or
Ornamental tree fertilizer 12-6-6 1 cup/ inch caliper
6. TREE FERTILIZER SHALL HAVE 50% WATER INSOLUBLE NITROGEN, THE CHLORINE CONTENT IS NOT TO EXCEED 5%.
7. SOURCE OF NITROGEN SHALL BE UREA FORMALDEHYDE OR A SIMILAR SLOW RELEASE SOURCE.

MULCH

1. MULCH SHALL BE FREE OF ANY FOREIGN MATERIALS, PIECES LARGER THAN 4 INCHES, AND/OR GREEN WOOD.

WATER

1. WATER SHALL BE FREE FROM OIL, ACIDS, ALKALIS, SALTS OR ANY OTHER SUBSTANCE THAT IS TOXIC OR OTHERWISE HARMFUL TO VEGETATION.
2. ALL LANDSCAPE AND TURF AREAS IRRIGATED (100% COVERAGE), LANDSCAPE CONTRACTOR TO PROVIDE COMPLETE IRRIGATION DESIGN TO BE APPROVED BY OWNER PRIOR TO CONSTRUCTION.



PRELIMINARY - DO NOT USE FOR CONSTRUCTION



No.	Revision	Date	By
1	TRC COMMENTS 7-17-23	11-28-23	H+H
2	TRC COMMENTS 2-25-24	2-25-24	H+H

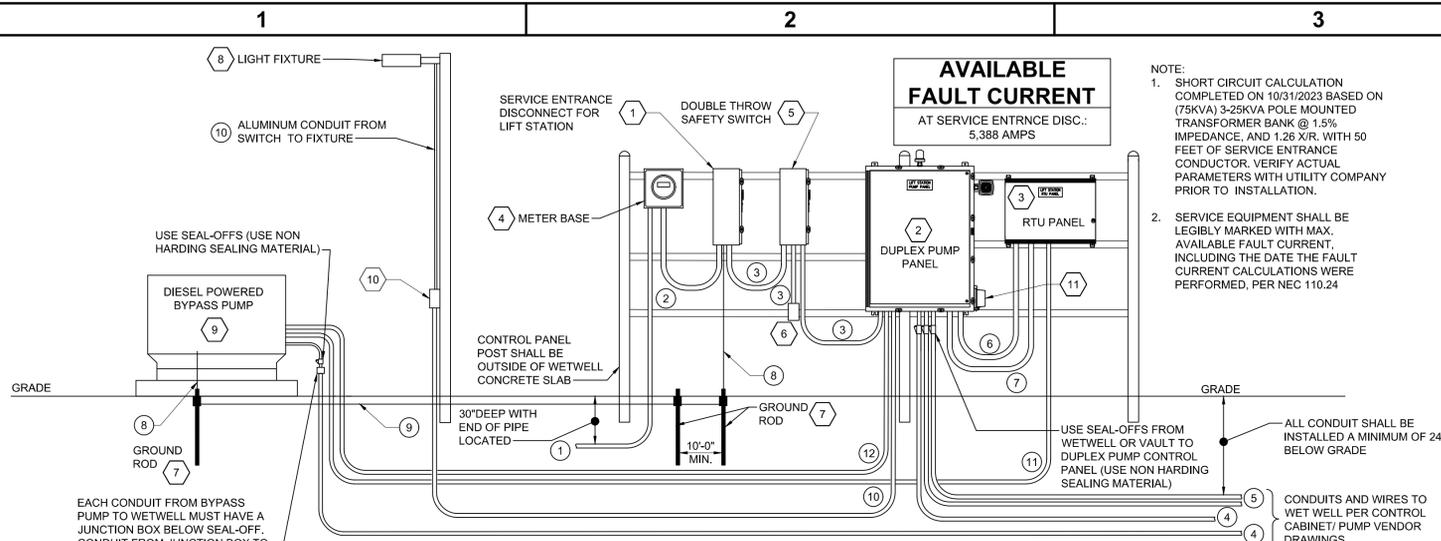
Designer	Scale
H+H	AS SHOWN
Drawn By	Date
H+H	JUNE, 2023
Checked By	Job No.
MNH	

RENOVATION CHURCH
HAMPSTEAD
NORTH CAROLINA

RENOVATION CHURCH
16579 HWY 17
HAMPSTEAD, NC 28443

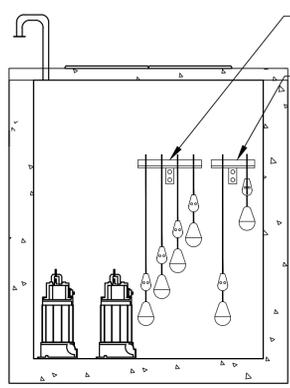
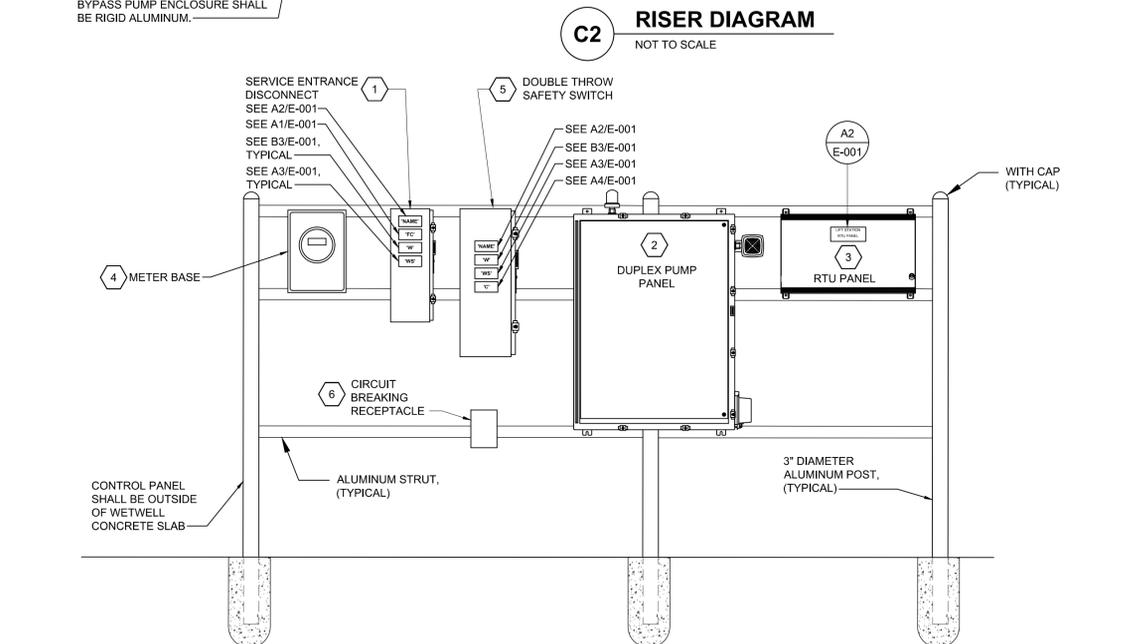
PORT CITY CONSULTING
ENGINEERS, PLLC
6216 STONEBRIDGE ROAD
WILMINGTON, NC 28409
910-599-1744 LICENSE No. P-1032

H+W DESIGN
Planting Details & Specifications



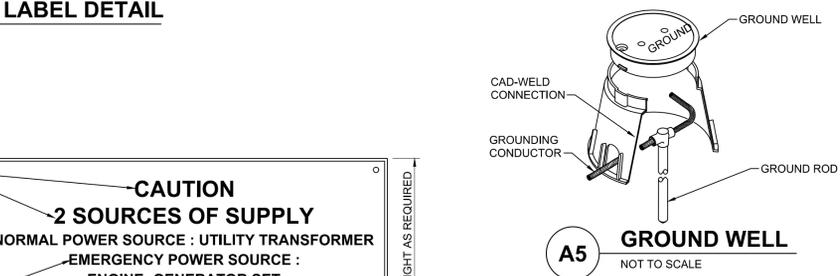
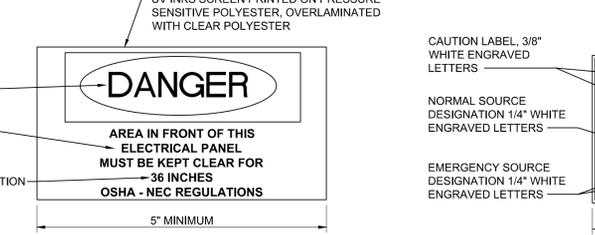
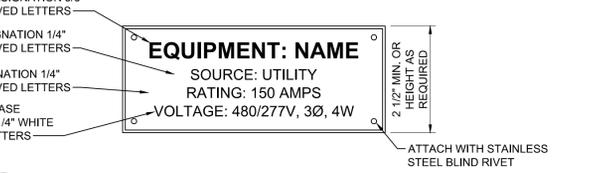
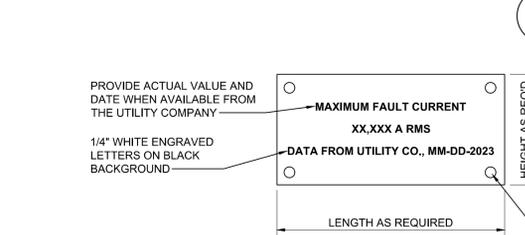
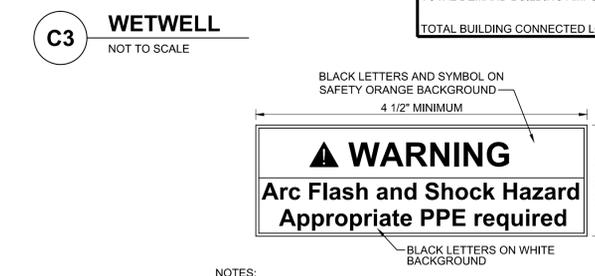
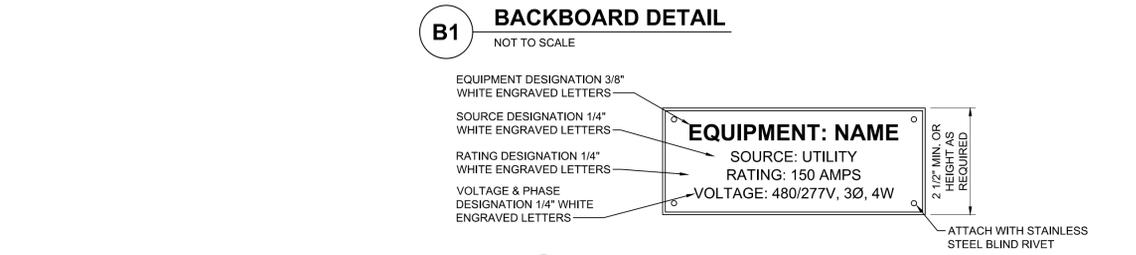
MARK	CKT. TYPE	WIRE	CONDUIT	REMARK
1	480V, 3Ø, 4W		3" MIN.	PROVIDE CND WITH PULL STRING, CND TO EXTEND PAST FENCE LINE, COORDINATE SERVICE ENTRY WITH LOCAL UTILITY
2	480V, 3Ø, 4W	4 #1/0	2 1/2"	
3	480V, 3Ø, 4W	4#1/0 & 1 #6GND	2 1/2"	
4	CONTROL	FLOAT CABLES	2"	CABLES BY FLOAT MANUFACTURER
5	POWER	MOTOR CABLES	2"	CABLES BY PUMP VENDOR
6	CONTROL	AS REQ'D	1"	
7	120V, 1Ø	2#12, 1#12 GND	3/4"	RTU POWER
8	EARTH GROUND	#2 BARE COPPER	N/A	EXOTHERMICALLY WELD DIRECTLY TO GROUND ROD
9	EARTH GROUND	#2 BARE COPPER	N/A	EXOTHERMICALLY WELD DIRECTLY TO GROUND ROD
10	120V, 1Ø	2#12, 1#12 GND	3/4"	SITE LIGHT
11	ALARMS	AS REQ'D	2"	DIESEL PUMP ALARMS
12	120V, 1Ø	4#12, 1#12 GND	1"	DIESEL BYPASS PUMP BATTERY CHARGER AND JACKET HEATER

MARK	DESCRIPTION	REMARK
1	SUITABLE FOR SERVICE ENTRANCE RATED, 200A 480V, 3P FUSED DISCONNECT WITH 150A FUSES	STAINLESS STEEL NEMA 4X RAIN PROOF SQUARE D
2	PUMP CONTROL PANEL	STAINLESS STEEL, NEMA 4X, PER PLURIS SPECIFICATIONS
3	SCADA / MONITOR	MISSION RTU, NEMA 4X, PER PLURIS SPECIFICATIONS
4	ELECTRICAL UTILITY METER	FURNISHED AND INSTALLED BY CONTRACTOR
5	200A HEAVY DUTY DOUBLE THROW, 480V, 3P SAFETY SWITCH WITH SOLID NEUTRAL	STAINLESS STEEL, NEMA 4X
6	150A CIRCUIT BREAKING 4 POLE 4 WIRE RECEPTACLE ASSEMBLY CROUSE HINDS OR APPROVED EQUAL	COORDINATE RECEPTACLE CONFIGURATION WITH PLURIS
7	3/4" X 10' COPPER CLAD GROUND ROD, SEE DETAIL A5E-001	EXOTHERMICALLY WELDED GROUNDS
8	LED AREA LIGHT UL LISTED WET LOCATION, PROVIDE WITH EXTERNAL PHOTOCELL, LITHONIA: KADLED60C700	POLE MOUNTED AT 30' ON CLASS V UTILITY POLE. POLE MUST BE RATED FOR 150MPH LOAD.
9	DIESEL BYPASS PUMP	PER PLURIS STANDARDS
10	MALLEABLE IRON FS BOX WITH WP LIGHT SWITCH AS TO BYPASS THE PHOTOCELL.	MOUNTED 42" ABOVE FINISHED GRADE ON LIGHT POLE.
11	WP GFI DUPLEX RECEPTACLE WITH IN-USE COVER	MOUNTED TO CONTROL PANEL OR PEDESTAL AT BY-PASS PUMP



LOAD SUMMARY	
VOLTAGE	PHASE
480	3
LARGEST MOTOR APPROX. AMPS	41.5 AMPS
LARGEST MOTOR APPROX. AMPS x .25	10 AMPS
EQUIPMENT	
PUMP #1 (25HP)	34,503 VA
PUMP #2 (25HP)	34,503 VA
MISC CONTROL LOAD	5,000 VA
SUB-TOTAL EQUIPMENT DEMAND	74,007 VA
SUB-TOTAL EQUIPMENT DEMAND	89 AMPS
ADD FOR LARGEST MOTOR	10 AMPS
TOTAL EQUIPMENT DEMAND	99 AMPS
LIGHTING	
LIGHTS (EXTERIOR)	103 VA
TOTAL LIGHTING LOAD	103 VA
LIGHTING LOAD x 1.25	129 VA
TOTAL DEMAND FOR LIGHTING	0.2 AMPS
RECEPTACLES	
RECEPTACLES	360 VA
REMAINDER @ 50%	360 VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	360 VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	0.4 AMPS
TOTAL DEMAND BUILDING AMPS	100 AMPS
TOTAL DEMAND BUILDING AMPS	83.121 VA
TOTAL BUILDING CONNECTED LOAD	74.470 VA

- ELECTRICAL NOTES:**
- UTILITY POWER TO BE 480V, 3 PHASE, 4 WIRE.
 - ALL CONDUIT ALUMINUM ABOVE GRADE, SCH 80 PVC BELOW GRADE UNLESS OTHERWISE NOTED.
 - ALL WIRE THIRTYTHREE STRANDED COPPER UNLESS OTHERWISE NOTED.
 - NO FLEXIBLE CONDUIT UNLESS SPECIFIED.
 - DISCONNECT, MOTOR STARTER, AND OVERLOAD DEVICES AND FUSES TO BE SIZED BY ENGINEER AND SHOWN IN SUBMITTAL DOCUMENTS.
 - ALL CORDS TO BE ONE-PIECE CONTINUOUS. NO JOINTS. SPLICES OR JUNCTION BOXES ALLOWED BETWEEN CONTROL PANEL AND WET WELL DEVICES.
 - PRINT POCKET MUST BE SECURED TO INSIDE PANEL DOOR WITH SILICONE ADHESIVE.
 - AS-BUILT ELECTRICAL SCHEMATIC (LADDER DIAGRAM) MUST BE CLEAR PLASTIC LAMINATED AND PLACED IN PRINT POCKET.
 - PROVIDE THERMAL OVERLOAD ELEMENT INFORMATION FOR MOTOR STARTERS, CLEAR PLASTIC LAMINATED, AND SECURE TO INSIDE PANEL DOOR.
 - ENCLOSURE BACK PANEL MUST BE DRILLED AND TAPPED 8-32, 8-32 AND 1/2-28 THD'S. NO SELF TAPPING SCREWS FOR MOUNTING COMPONENTS.
 - WIRE SPLICES IN WIRE DUCTS ARE NOT ACCEPTABLE. TERMINAL BLOCKS MUST BE PROVIDED FOR PRE-WIRED DEVICES.
 - SQUEEZE ON AND CRIMPED TYPE INSULATED WIRE TERMINALS MUST BE PERMITTED IF DEVICE DOES NOT HAVE MEANS FOR DIRECT WIRE TERMINATION.
 - OPERATOR CONTROL BOX MUST BE MOUNTED WITH HINGE SIDE DOWN WITH 1" DIA. GROMMET OPENING ON LEFT SIDE OF BOX. VERIFY ALL OPERATOR COMPONENT DIMENSIONS FOR SUITABLE CLEARANCES IN REGARDS TO LAYOUT.
 - GROUND WIRE JUMPER AROUND HINGE POINT OF OPERATOR CONTROL CAB DOOR IS REQUIRED.
 - MOTOR CABLE CONDUCTORS MUST BE COPPER, STRANDED, (SIZED AS REQUIRED).
 - ALL CONTROL WIRE MUST BE 14 AWG, TINNED COPPER, STRANDED, MTW OR AWM, RED, WHITE FOR NEUTRAL, AND GREEN FOR GROUND.
 - GFI CONVENIENCE RECEPTACLE MUST HAVE NON-METALLIC BOX (FD TYPE) ON INSIDE OF ENCLOSURE TO PREVENT ACCIDENTAL CONTACT OF TERMINALS. WIRE VIA WIRE DUCT TO RECEPTACLE TERMINALS ON MISC. TERMINAL STRIP.
 - SINGLE POLE CIRCUIT BREAKER MOUNTING BRACKET IS TO REMAIN IN ONE PIECE TO ALLOW FOR FUTURE USE.
 - LAMINATED PLASTIC COMPONENT LABELS MUST BE SECURED IN APPROXIMATE LOCATION AS SHOWN IN CONTROL PANEL LAYOUT WITH SUITABLE STAINLESS STEEL MACHINE SCREWS AND NUTS, STAINLESS STEEL RIVETS, OR ADHESIVE.
 - USE OF MOTOR STARTER AUXILIARY CONTACTS WILL NOT BE ACCEPTED.
 - AN AS-BUILT REPRODUCTION MYLAR OF PUMP CONTROL PANEL (ELEC. SCH. LADDER DIAGRAM) MUST BE PROVIDED AS AN OFFICE COPY TO PLURIS. (17"X22" MIN.)
 - WIRE MARKERS TO BE T&B SHUR-CODE SLEEVE MARKERS, NO EXCEPTIONS.
 - CONDUITS FROM WET WELL TO PUMP CONTROL PANEL FOR PUMP MOTOR CABLES MUST BE ALUMINUM ABOVE GRADE AND SCH 80 PVC BELOW.



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NCEP P-0506

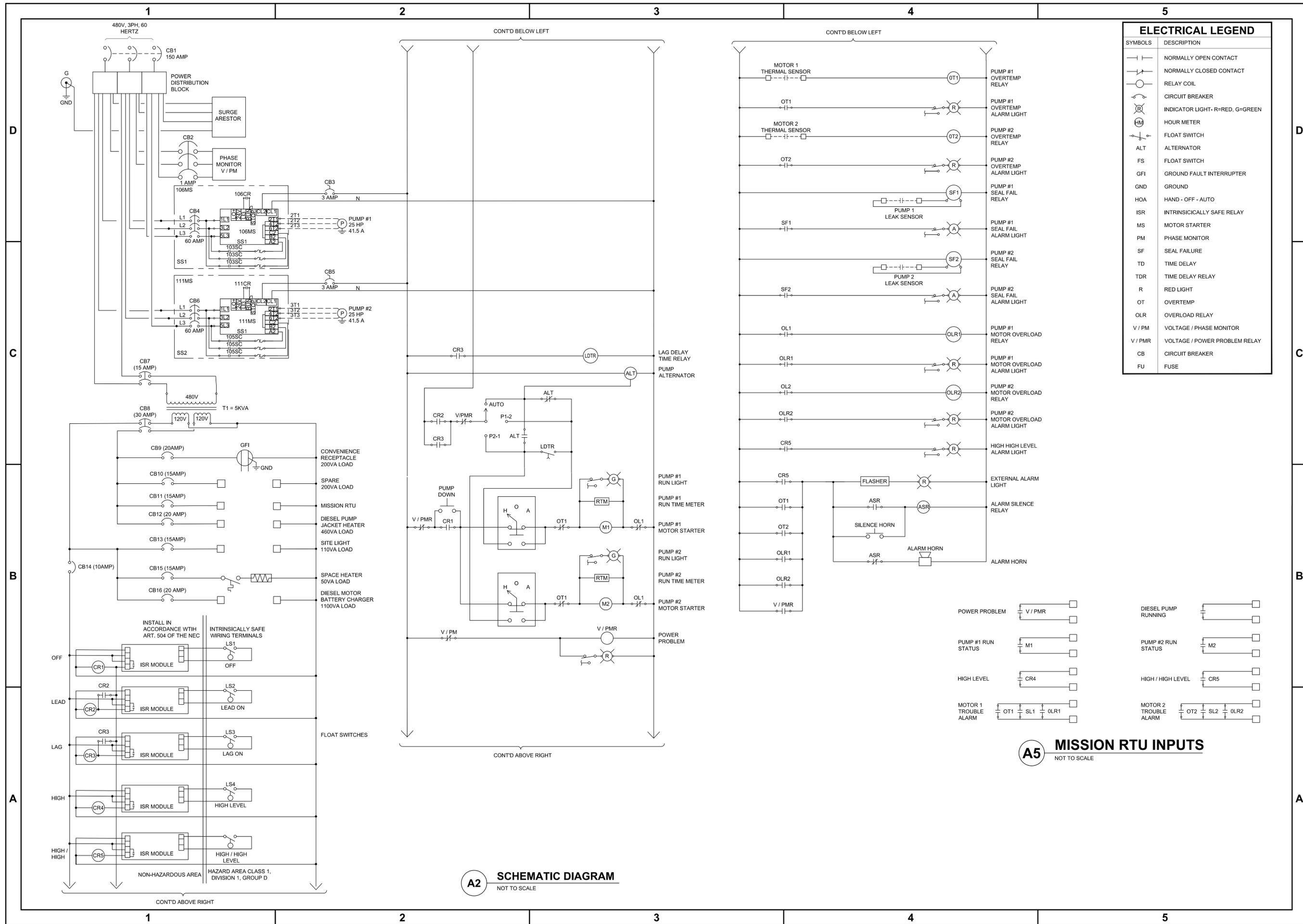
PORT CITY CHURCH PUMP STATION
HAMPSTEAD, NORTH CAROLINA

ELECTRICAL
LOAD SUMMARY, RISER, DETAILS,
SCHEDULES AND LOAD SUMMARY

JOB NO.: 23226
DRAWN: CCS
DESIGNED: CCS
CHECKED: WAC

DRAWING NO.: **E-001**

REVISION: 0



ELECTRICAL LEGEND	
SYMBOLS	DESCRIPTION
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	RELAY COIL
	CIRCUIT BREAKER
	INDICATOR LIGHT-R=RED, G=GREEN
	HOUR METER
	FLOAT SWITCH
	ALTERNATOR
	GFI
	GROUND
	HOA
	ISR
	MS
	PM
	SF
	TD
	TDR
	R
	OT
	OLR
	V / PM
	V / PMR
	CB
	FU

A2 SCHEMATIC DIAGRAM
NOT TO SCALE

A5 MISSION RTU INPUTS
NOT TO SCALE

CBHF
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REVISIONS

REVISION NO.	0	ISSUED FOR CONSTRUCTION
DESCRIPTION:		

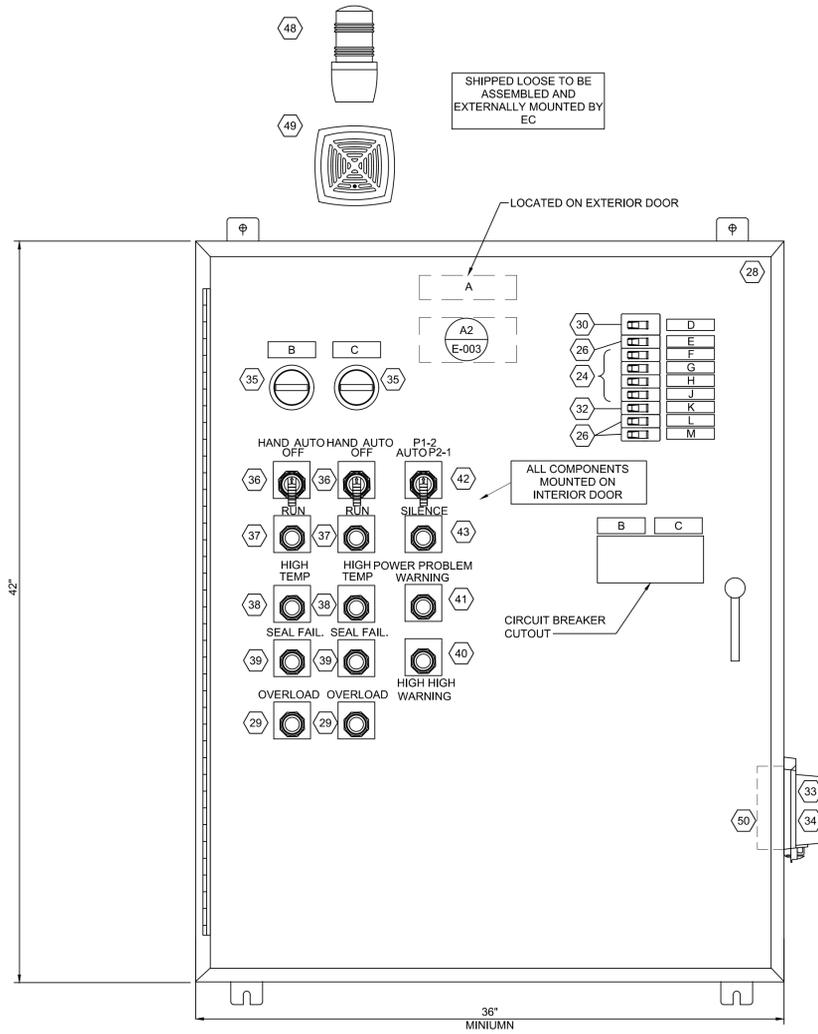
PORT CITY CHURCH PUMP STATION
HAMPSTEAD, NORTH CAROLINA

ELECTRICAL WIRING DIAGRAM

JOB NO.:	23226
DRAWN:	CCS
DESIGNED:	CCS
CHECKED:	WAC
DRAWING NO.:	E-002
REVISION:	0

BILL OF MATERIALS			
ITEM	QUAN	DESCRIPTION	MANUFACTURER
1	1	MOUNTING PANEL CAT# A42P36 **	HOFFMAN
2	2	COPPER GROUND BAR CAT# PK7GTA	SQUARE D
3	1	150 AMP CIRCUIT BREAKER CAT# KAL 36150	SQUARE D
4	2	60 AMP PUMP CIRCUIT BREAKER CAT# FAL 34060	SQUARE D
5	1	LIGHTNING ARRESTER CAT# SDSA3650	SQUARE D
6	1	POWER DISTRIBUTION BLOCK CAT# 1343570 WITH SHIELD	MARATHON
7	6	POWER DISTRIBUTION BLOCK CAT# EPBAD21	MARATHON
8	2	SOLID STATE REDUCED VOLTAGE STARTER, ATS480D75Y, 75AMP	SQUARE D
	2	SHORTING CONTACTOR, LC1D65AG7 65A, 480VAC	SQUARE D
9	1	PHASE LOSS/UNDERVOLTAGE/REVERSAL RELAY CAT# 460-14	SYMCOM
10		NOT USED	
11	1	CIRCUIT BREAKER, 15 AMP, 2 POLE, 480 VOLT, M9F42215	SQUARE D
12		NOT USED	
13	1	TRANSFORMER, 5000VA CAT# 9070 T5000D1	SQUARE D
14	1	CIRCUIT BREAKER, 3-POLE, 1 AMP, 480 VOLT, M9F42301	SQUARE D
15	10	120 VAC 4 POLE DT RELAY / BASE CAT# RXMA4B2F7 / RXZE2S114M	SQUARE D / SQUARE D
16		NOT USED	
17	2	PUMP PROTECTION RELAY / BASE CAT# MINICAS120 / RUZC3M	FLYGT / SQUARE D
18	1	ALTERNATOR / BASE CAT#	CROUZET / TELEMECANIQUE
19	1	TIMER, ON DELAY / 8 PIN OCTAL BASE CAT# RTE-P1AF20 / RUZC3M	IDEC / SQUARE D
20	40	TB1 TERMINAL BLOCKS CAT# 102010	WEIDMULLER
21	10	TB2 TERMINAL BLOCKS CAT# 102010	WEIDMULLER
22	1	50 WATT SPACE HEATER CAT# AHC-50	INGRAM
23	1	HEATER THERMOSTAT CAT# T1.81.0.000.240	FINDER
24	4	CIRCUIT BREAKER, 1 POLE, 15 AMP, 125 VOLT CAT# QOU 115VH	SQUARE D
25	5	INTRINSIC SAFE RELAY MODULE PART # ISS-100	LITTLEFUSE/SYMCOM
26	3	CIRCUIT BREAKER, 1 POLE, 20 AMP, 125 VOLT CAT# QOU 120VH	SQUARE D
27	2	CIRCUIT BREAKER, 1 POLE, 3 AMP, 120 VOLT, M9F42103	SQUARE D
28	1	NEMA 4X, 304 STAINLESS STEEL ENCLOSURE CAT# A-42H3612SSLP3PT **	HOFFMAN
29	2	"OVERLOAD" RED PILOT LIGHT CAT# 9001 SKP38LRR31	SQUARE D
30	1	CIRCUIT BREAKER, 2 POLE, 30 AMP, 240 VOLT, CAT# QOV230	SQUARE D
31		NOT USED	
32	1	CONTROL POWER BREAKER CAT# QDV110	SQUARE D
33	1	GROUND FAULT RECEPTACLE, DUPLEX, 20 AMP CAT# 8899I	LEVITON
34	1	DUPLEX RECEPTACLE COVER, NEMA 3R, CAST WHILE IN USE CAT# WIUCAST1	PASS & SEYMOUR
35	2	ELAPSED TIME METER CAT# 711-0160	REDDINGTON
36	2	"HAND - OFF - AUTO" SELECTOR SWITCH CAT# 9001 SKS43FBH13	SQUARE D
37	2	"RUN" GREEN PILOT LIGHT CAT# 9001 SKP38LGG31	SQUARE D
38	2	"HIGH TEMPERATURE" RED PILOT LIGHT CAT# 9001 SKP38LRR31	SQUARE D
39	2	"SEAL FAIL" AMBER PILOT LIGHT CAT# 9001 SKP38LRA31	SQUARE D
40	1	"HIGH HIGH LEVEL WARNING" RED PILOT LIGHT CAT# 9001 SKP38LRR31	SQUARE D
41	1	"POWER PROBLEM" RED PILOT LIGHT CAT# 9001 SKP38LRR31	SQUARE D
42	1	"AUTO - P1-2 - P2-1" SELECTOR SWITCH CAT# 9001 SKS48FBH13	SQUARE D
43	1	"SILENCE" PUSHBUTTON CAT# 9001 SKR1BH6	SQUARE D
44		NOT USED	
45		NOT USED	
46		NOT USED	
47		NOT USED	
48	1	EXTERNAL ALARM LIGHT CAT# CT015C R	INGRAM PRODUCTS
49	1	NEMA 4X ALARM HORN CAT# 876-N5	EDWARDS
50	1	NON-METALLIC TYPE FD BOX, E381D-CAR	CARLON

** PANEL FABRICATOR TO VERIFY AND ADJUST DIMENSIONS AS REQUIRED.

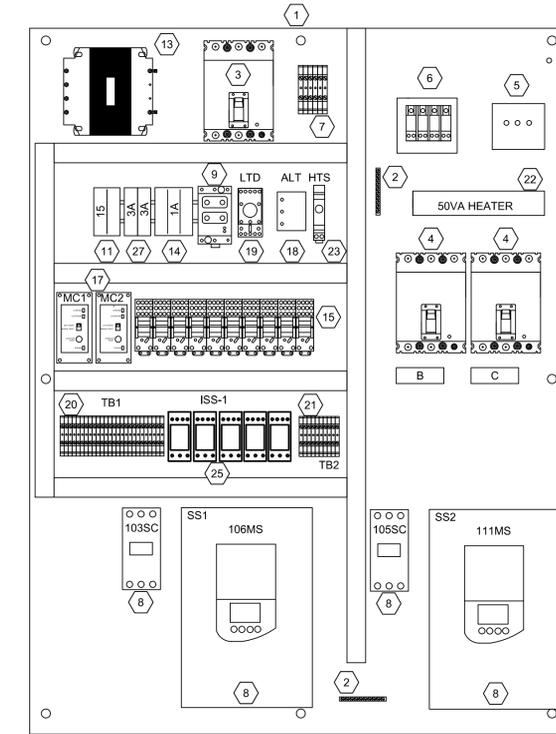


B3 HINGED INNER DOOR VIEW
NOT TO SCALE



A2 WARNING DETAIL
NOT TO SCALE

ENCLOSURE DOOR LABEL
RED BACKGROUND
WHITE LETTERS
BOLTED TO ENCLOSURE
WITH STAINLESS FASTENERS



B4 SUB PANEL LAYOUT
NOT TO SCALE

ENGRAVING SCHEDULE						
ID NO.	QTY.	TYPE	SIZE	PLATE COLOR	LETTER COLOR	FIRST LINE \ SECOND LINE, ETC.
A	1	N P	1-1/2" X 6"	WHITE	BLACK	PORT CITY CHURCH \ PUMP STATION \ DUPLEX CONTROL PANEL \ 480 VOLT, 25HP
B	3	N P	1" X 3"	WHITE	BLACK	PUMP 1
C	3	N P	1" X 3"	WHITE	BLACK	PUMP 2
D	1	N P	1" X 3"	WHITE	BLACK	5KVA CONTROL/ TRANSFORMER
E	1	N P	1" X 3"	WHITE	BLACK	CONVIENCE/ RECEPTACLE
F	1	N P	2-1/4" SQ.	WHITE	BLACK	SPARE
G	1	N P	2-1/4" SQ.	WHITE	BLACK	MISSION RTU
H	1	N P	2-1/4" SQ.	WHITE	BLACK	SITE LIGHT
J	1	N P	2-1/4" SQ.	WHITE	BLACK	SPACE HEATER
K	1	N P	2-1/4" SQ.	WHITE	BLACK	CONTROL POWER
L	1	N P	2-1/4" SQ.	WHITE	BLACK	DIESEL PUMP JACKET HEATER
M	1	N P	2-1/4" SQ.	WHITE	BLACK	DIESEL PUMP CHARGER

NOTE: NAMEPLATES ATTACHED WITH STAINLESS STEEL SCREWS

A4 NAMEPLATE LEGEND
NOT TO SCALE

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PORT CITY CHURCH PUMP STATION
HAMPSTEAD, NORTH CAROLINA
ELECTRICAL CONTROL PANEL AND DETAILS

JOB NO.: 23226
DRAWN: CCS
DESIGNED: CCS
CHECKED: WAC

DRAWING NO:

E-003

REVISION:
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