





Contract Drawings For

Pump Station #10 Replacement

ISSUED FOR CONSTRUCTION

NC DWI Project No. E-SRP-W-17-0029

HDR Project No. 000000010075083

Wilmington, NC October 2018



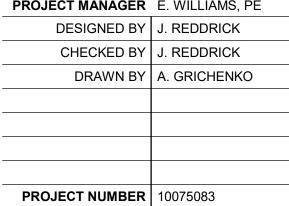
FJS

HDR Engineering, Inc. of the Carolinas N.C.B.E.L.S. License No. F-0116

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Image: Department of the set of th	Increase(2) Unlimited (3) Area (4) N/A 23000 SF 23000 SF N/A 23000 SF 23000 SF	(a)(b)(c)Use Group or Space DesignationArea ⁽¹⁾ (sq.ft.)Area ⁽¹⁾ Per OccupantCalculated OccupantEgress Width Per OccupantFIRST FLOOR1452 SF300 SF50.30.2BASEMENT1452 SF300 SF50.30.2Image: Stair1452 SF1452 SF1452 SF1452 SF1452 SFImage: Stair1452 SF1452 SF1452 SF1452 SF1452 SFImage: Stair1452 SF1452 SF1452	Exit Width (in.) Required Width (a/b) x c Actual Width el Stair Level N/A 32 N/A 32	provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design. If performance method, state the annual energy cost for the proposed design. Climate Zone: (North Carolina Energy Conservation Code NCECC 301.1) Image: Conservation Conservation Code NCECC 301.1) Image: Con
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Other Dia Dia Dia What type of work is being performed? Image: Completion of work required for tenant occupancy) Image: Completion of work required for tenant occupancy) Image: Completion of work required for tenant occupancy) The includes Shell building. Image: Completion of work required for tenant occupancy) Image: Completion of Completion of Work required for tenant occupancy) Image: Completion of Completion of Work required for tenant occupancy) Image: Completion of Completion of Completion of Work required for tenant occupancy) Image: Completion of Completion of Completion of Work required for tenant occupancy) Image: Completion of Completin of Completion of Completin of Completion of Completio	width_=(F)	FIRST FLOOR 1452 SF 300 SF 5 0.3 0.2 BASEMENT 1452 SF 300 SF 5 0.3 0.2 Image: Second structure Image: Second structure Image: Second structure Image: Second structure Image: Second structure Image: Second structure Image: Second structure Image: Seco	2 N/A 32 N/A 32	Prescriptive (ASHRAE 90.1-2010 with addenda 2013 supplement) NCECC Section 101.5.2 Exception Performance (ASHRAE 90.1-2010) NCECC Section 101.5.2 Exception THERMAL ENVELOPE: (NCECC Chapter 4 and or 5) NCECC Section 101.5.2 Exception of the building only utilizes unit heaters with capacity to heat space to 49 degrees; Description of assembly See comcheck report thus qualifying as "unconditioned space" per definition of "conditioned
New Construction: (A project from the site work through the completion of work required for tenant occupancy) The includes Shell building. Addition, Che Statut golding that is adding healed or unhealed space. This could be an addition to the footprint Upft: (First Time Interior Completion) A copy of the approved shell must be provided. Atterator: (Previously Occupied Space) This includes Change of Use. Upft: (First Time Interior Completion) A copy of the approved shell must be provided. Authrestory Euler with a statut of public way or pen space having 20 feat minimum. Building Code 2012 NC Planning Golde 2012 NC Planning Code Previous use New New construction NM Previous Use New construction NMA Previous Use Nonning accuratory use: On on thistor Property Net Code South Planning Score Accuration NMA Previous Use Net A 13 DNFPA 13 DNFPA 13 DNFPA 13 DNFPA 13	width <u>=</u> (F)	Image: Second state of the second s		Roof/ceiling Assembly (each assembly) Description of assembly See comcheck report capacity to heat space to 49 degrees; thus qualifying as "unconditioned space" per definition of "conditioned U-Value of total assembly N/A space" per definition of "conditioned
Addition: (An Existing Building that is adding heated or unheated space. This could be an addition to the footprint or a "varical expansion) Uptr: (First Time Interior Completion) A copy of the approved shell must be provided. Alteration: (Previous) Occupied Space) This includes Change of Use. Building Code: 2012 International Building Code 2012 INC Purchanced Code Purchanced Purchanced Code 2012 INC Purchanced Code 2012 INC Purchanced Code Purchanced				
□ Upfit: (First Time Interior Completion) A copy of the approved shell must be provided. □ Atteration: (Previously Occupied Space) This includes Change of Use. □ 2012 NC Building Code □ Data of Previous use □ Date of Preliminary Meeting: □ Date of Preliminary				R-Value of insulation N/A space" in 2012 NCECC. However the Electrical Room is conditioned space
¹ Alteration: (Previously Occupied Space) This includes Change of Use. ⁽⁴⁾ Maximum Building Area = total number of stories in the building XE, but norms Building Code: ⁽²⁾ 2012 NC Building Code ⁽²⁾ 2012 NC Puerbing Code New: ⁽²⁾ 2008 National Electric Code ⁽²⁾ 2012 NC Fuel and Case Code Building: ⁽²⁾ First true inferior completion (upfit) ⁽²⁾ Shall Building ⁽²⁾ Shall Building Existing Building: ⁽²⁾ Construction NM ⁽²⁾ Shall Building ⁽²⁾ Shall Building ⁽²⁾ Shall Building Existing Building: ⁽²⁾ Construction NM ⁽²⁾ Previous use ⁽³⁾ NA axinum Building Area = total number of stories in the building XE, but norm First true inferior completion (upfit) ⁽³⁾ Shall Building: ⁽⁴⁾ Addition Existing Building: ⁽³⁾ Dange of use/occupancy ⁽⁴⁾ Shall Building: ⁽⁴⁾ Shall Building: ⁽⁴⁾ Dia Code ⁽⁴⁾ Dia Code ⁽⁴⁾ Dia Code ⁽⁴⁾ Dia Code ⁽⁴⁾ Shall Building				U-Value of skylight <u>N/A</u> Total percentage of skylights in each assembly: <u>N/A</u> Exterior Walls (each assembly)
Building Code 2012 International Building Code 2012 NC Plumbing Code 2012 NC Mechanical Code 2012 NC Mechanical Code 2012 NC Energy Conservation Code Type of Construction Type of Construction <td></td> <td>PLUMBING FIXTURE REQUIRE THIS SECTION TO BE COMPLETED FOR ALL PRO</td> <td></td> <td>Description of assembly U-Value of total assembly R-Value of insulation</td>		PLUMBING FIXTURE REQUIRE THIS SECTION TO BE COMPLETED FOR ALL PRO		Description of assembly U-Value of total assembly R-Value of insulation
Image: Construction Service in the construction is not		Occupancy Waterclosets Lavato Use Group UNISEX UNISEX Urinals UNISEX and/or Space Req. / Prov. Req. / Prov. Provided Req. / Prov.	EX UNISEX Showers/ Drinking Tubs Fountains	Openings (windows or doors with glazing) <u>N/A</u> % of above grade walls U-Value of assembly <u>N/A</u> Solar heat gain coefficient: <u>N/A</u>
Building: Inst time inferior completion (upfit) Addition Peet = H × 20 - <u>Julk</u> Free Previous use Free Free Free Free Free Free Free Free Free Free Free Free Free Free Free	nown on Plans Code Reference e IIB 2012 NCBC	and/or Space Net. / Flot. Provided Designation F-2 1 / 1	Keq. / Prov.	Projection factor <u>N/A</u> Low E required, if applicable <u>N/A</u> Door U-Values <u>N/A</u>
This Section Recourse to inform completion (Alteration / Renovation) Year of construction NA Previous use NA REHAB Code (Existing Building Code)nformation: N/A Building/tenant space information: Scope of work / work area must be listed and delineated on the plans. Check all that apply: Depair D Renovation D Alteration D Change of use D Addition Building Code/Information: Scope of work / work area must be listed and delineated on the plans. Check all that apply: D Repair D Renovation D Alteration D Change of use D Addition Structural Frame, including columns, girders 0 0 Justifications for using the REHAB code: Historic Property: YesD No D Date of Preliminary Meeting: Structural Frame, including columns, girders 0 0 0 Reviewers notes for Field Inspector: Date of Preliminary Meeting: North >30 0 0 BUILDING DATA Construction: Type: A D II-A D II-A D II-A D II-A D II-A D II-B D III-B D III-B D II-B D II	t <u>22'-0"</u> 2012 NCBC ies <u>2</u> 2012 NCBC			Walls below grade (each assembly) Description of assembly See comcheck report U-Value of total assembly N/A
ReHAB Code (Existing Building Code)nformation: N/A ReHAB Code Information: Scope of work / work area must be listed and delineated on the plans. Check all that apply: Depair Renovation Change of use Addition Last known legal occupancy use: Original Building Construction Date: Itstoric Property: Yes No Date of Preliminary Meeting: Structural Frame, including columns, girders 0 0 Justifications for using the REHAB code:	_ PROJECTS Detail # Design # Design # Design #	TOTALS 1 / 1 NA/NA N/A 1 / 1 *A unisex toilet room is provided.	NA /NA N/A 1 / 1	R-Value of insulation <u>N/A</u> Floors over unconditioned space (each assembly)
□ 2012 NC REHAB Code Information: Scope of work / work area must be listed and delineated on the plans. Check all that apply: □ Repair □ Renovation □ Alteration □ Reconstruction □ Change of use □ Addition Last known legal occupancy use: 	and for for for Sheet # Rated Rated Rated			U-Value of total assembly N/A R-Value of insulation N/A
Last known legal occupancy use: Historic Property: Yes No D Original Building Construction Date: Date of Preliminary Meeting: Justifications for using the REHAB code: No D Reviewers notes for Field Inspector: South BUILDING DATA South Construction Type: IA D II-A D I.B D II-B D Mixed Construction: DNo D'Yes Types: Sprinklers: DNO D'Yes Standpipes: DNo D'Yes Class DI DII DII III DII Fire District: DNo D'Yes Flood Hazard Area: DNo D'Yes Building Lendth Feet: 22-0" Number of Stories: 2	Assembly Penetration Joints	SCHEDULE OF SPECIAL INSPECTION	tions required	Floors slab on grade See comcheck report Description of assembly See comcheck report U-Value of total assembly N/A D Value of total assembly N/A
Justifications for using the REHAB code. >30 0 0 Built attors for Field Inspector: South >30 0 0 BUILDING DATA South >30 0 0 0 Construction Type: LA II-A II-B		The following sheets comprise the required schedule of special inspe divisons which require special inspections for this project are as follow IT-1 Verification of Soils		R-Value of insulation <u>N/A</u> Horizontal/vertical requirement <u>N/A</u> Slab heated <u>N/A</u>
Building Height: Eest: 22:0" Building Height: Eest: 22:0"		☑ IT-2 Excavation and Fill ☑ IT-11 Structural □ IT-3 Piling and Drilling Piers ☑ IT-12 Welding □ IT-4 Modular Retaining Walls ☑ IT-13 High Street	ength Bolts & Steel Framing Inspection.	MECHANICAL SUMMARY (NCECC 503) (SEE MECHANICAL SHEET FOR INFO) Located on Mechanical Sheet Number: Yes No _X
BUILDING DATA Exterior Construction Type: I_A II-A III-A III-A III-A III-B IIII-B III-B III-B III-B III-B III-B III-B III-B		□ IT-5 Reinforced Concrete □ IT-14 Sprayed F □ IT-6 Post Tension Slab □ IT-15 Exterior Ir □ IT-7 Pre-Cast Concrete Erection □ IT-16 Seismic F	Fire-Resistance materials Insulation and Finish System Resistance	MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT Thermal Zone: 3A Mechanical Spacing Conditioning System Winter dry bulb 24.7° F (99.6%)
I-B II-B III-B III-B III-B >30 0 0 Mixed Construction: IN NO Yes Types:		□ IT-8 Pre-Stressed Concrete □ IT-17 Smoke Co □ IT-9 Inspection of Pre-Cast Fabricators □ IT-18 Wood □ IT-19 Special C	Control Cases	Summer dry bulb 93.5° F (0.4%) description of unit heating efficiency cooling efficiency SPLIT-SYTEM HEAT PUMP Interior Design Conditions cooling efficiency 10.2 SPF
Sprinklers: Image: Solution Imag		Check the above boxes for the special inspection required for this pro- under Chapter 17. For Pump Station(Masonry & Steel) and Water Ret	oject and list below specfic inspections required	Winter dry bulb 55° F Summer dry bulb 75° F Selative Humidity 50%
Building Height: Feet: 22'-0" Number of Stories: 2 DHigh Rise		ACCESSIBLE DWELLING UNITSN/A ACCESSIBL ACCESSIBL TYPE A TYPE A TOTAL E LINITS E LINITS LINITS LINITS	TYPE B TYPE B TOTAL	Building Heating Load <u>141.6 MBH</u> Chiller N/A Size category. If oversized, state reason.:
including support beams and joists		UNITS REQUIRED PROVIDED REQUIRED PROVIDED	D REQUIRED PROVIDED ONITS UNITS UNITS UNITS UNITS UNITS PROVIDED	Building Cooling Load 3.5 TONS HP01: 15.8 SEER / 10.2 HSPF List equipment efficiencies ELECTRICAL SUMMARY (NCECC 505) (SEE ELECTRICAL SHEET FOR INFO)
Mezzanine (Parts): I NoYes1 HR1 HRGross Building Area:Shafts - ExitsN/AI	PLAN U905 N/A HW-D-0155	<u>N/A</u>		Located on Electrical Sheet Number: Yes No ELECTRICAL SYSTEM AND EQUIPMENT
Floor Existing (sq ft) New (sq ft) Sub-Total Corridor Separation N/A		ACCESSIBLE PARKING Wilmington Code of Ordinace Article 9 Section 18-256		Method of Compliance: Additional Required Prescriptive Compliance Energy Code: Image: Prescriptive Image: Performance Image: Sold Sold Sold Sold Sold Sold Sold Sold
Smoke Barrier Separation N/A Tenant Separation N/A		LOT OR PARKING REQUIRED PROVIDED WITH 5'	AN SPACES TOTAL # ACCESSIBLE	Lighting schedule lamp type required in fixture number of lamps in fixture LED
FIRST FLOOR 1452 SF 1452 SF BASEMENT 1452 SF 1452 SF TOTAL 2904 SF 2904 SF		AREA ACCESS AISLE 132" VEHI SPACE		ballast type used in the fixture number of ballast in fixture total wattage per fixture SOLID STATE LED DRIVER 1 VARIES, SEE SHEET 98E-02 0 506.2.6 Automatic Daylighting Control Systems
TOTAL 2904 SF 2904 SF ** 0-4 hours or N/A - Not applicable.		TOTAL 1 1 NA		total wattage specified vs. allowed 0.73 / 0.95 W/SF total exterior wattage specified vs. allowed 1109 W / 1290 W
HDR Engineering, Inc. of the Carolinas N.C.B.E.L.S. License No. F-0116 Image: Comparison of the Carolinas N.C.B.E.L.S. License No. F-0116 Image: Comparison of the Carolinas N.C.B.E.L.S. License No. F-0116 Image: Comparison of the Carolinas DRAWN BY A. Comparison of the Carolinas N.C.B.E.L.S. License No. F-0116 Image: Comparison of the Carolinas DRAWN BY A. Comparison of the Carolinas DRAWN BY A. Comparison of the Carolinas DRAWN BY A. Comparison of the Carolinas N.C.B.E.L.S. License No. F-0116 Image: Comparison of the Carolinas DRAWN BY A. Comparison of the Carolinas <br< td=""><td></td><td>RCHITECT</td><td></td><td>BUILDING CODE SUMMARY</td></br<>		RCHITECT		BUILDING CODE SUMMARY



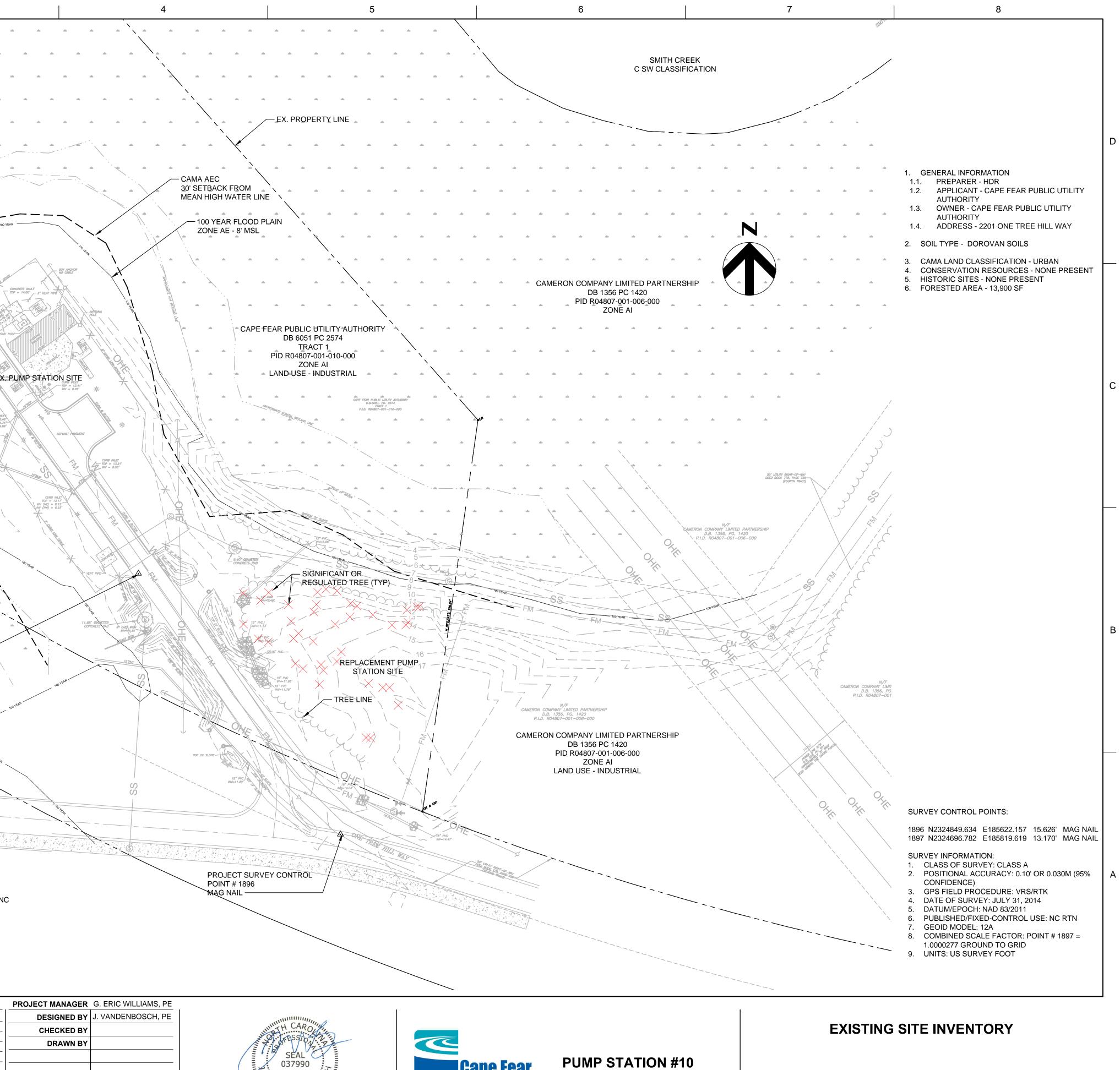


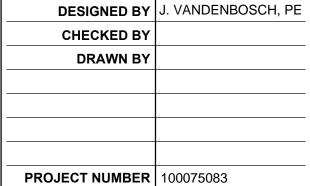






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ree # ID - Species	-		Ordinance Protection	-	asting		· · · · · · · · · · · · · · · · · · ·	10		
1 Pinus taeda (loblolly pine) 2 Quercus hemisphaerica (dar		8	Regulated Regulated	185733.357 185719.838	2324886.896 2324893.353		AINTE CORS	TOP = 15.24 TOP = 15.24 TOP = 15.24 TOP = 15.24 BETOM = -1.29	*	EX. P
4 Quercus hemisphaerica (da 6 Pinus taeda (loblolly pine)		15	Regulated Regulated	185735.565 185695.39	2324833.709 2324868.994	HGH WATER LINE AS SURM 2017.		100 - 115.2 201700	8' 8' -\\6.25' -\\31'	KN
8 Magnolia grandiflora (south 10 Quercus hemisphaerica (da			Significant Regulated	185695.166 185733.226	2324872.476 2324881.681	C M			-3,31 P = 15,28 CM = 2,54 STRUCTUI	CURB INLET
11 Carya glabra (pignut hickory 12 Pinus taeda (loblolly pine)	()		Regulated Regulated	185736.462 185760.221	2324870.971 2324850.324	SMITH C SW				V (NE) = 4.74 V (SW) = 4.66
13 Quercus hemisphaerica (da 14 Quercus hemisphaerica (da		9	Regulated Regulated	185753.037 185750.653	2324846.968 2324834.943	CLAS	*		STORM MAN	WHOLE 13.11
15 Quercus hemisphaerica (da	rlington oak)	8	Regulated	185746.311	2324836.735	SIFIC			RIM = 1 INV (SE) = 1 INV (NE) = 1	5.96° 3.81'
16 Quercus hemisphaerica (da 17 Pinus taeda (loblolly pine)		28	Regulated Regulated	185768.254 185747.595	2324829.038 2324821.257	CREEK CLASSIFICATION	aller /	$\langle \langle , \rangle \rangle \langle \langle \rangle \langle \rangle \rangle$		
18 Quercus hemisphaerica (da 19 Pinus taeda (loblolly pine)	rlington oak)	25	Regulated Regulated	185751.3 185774.26	2324815.561 2324817.981	ž			$\overline{}$	
20 Pinus taeda (loblolly pine) 21 Quercus hemisphaerica (dat	rlington oak)		Regulated Regulated	185796.153 185783.401	2324810.291 2324812.388	APPROXIMATE ON AUGUST .	HIGH WATER LINE AS SURVEYED		100-LEFE	
22 Quercus hemisphaerica (da 23 Quercus hemisphaerica (da			Regulated Regulated	185770.44 185767.753	2324814.138 2324794.96	011 1000031 .	,, 2017.			\backslash
24 Pinus taeda (loblolly pine) 25 Liquidambar styraciflua (sw	-	25	Regulated Regulated	185781.321 185770.138	2324776.328 2324787.505				· · · · · · · · · · · · · · · · · · ·	
26 Pinus taeda (loblolly pine) 27 Pinus taeda (loblolly pine)		23	Regulated Regulated	185804.729 185799.235	2324776.139 2324789.174					
28 Pinus taeda (loblolly pine)		18	Regulated	185805.198	2324795.347					- ''
29 Pinus taeda (loblolly pine) 30 Pinus taeda (loblolly pine)		15	Regulated Regulated	185790.508 185805.468	2324829.405 2324832.352		APPROXIMAT ON AUGUST	e high water line as surm 3, 2017.		\``v
31Pinus taeda (loblolly pine)32Pinus taeda (loblolly pine)			Regulated Regulated	185796.097 185806.344	2324831.416 2324846.958					
33 Liquidambar styraciflua (sw 34 Magnolia grandiflora (south			Regulated Regulated	185807.738 185796.998	2324838.637 2324857.422		PROJECT S POINT # 18	SURVEY CON 97	NTROL	
35 Prunus serotina (black cheri 36 Liquidambar styraciflua (sw			Significant Regulated	185794.968 185786.827	2324862.214 2324856.876		MAG NAIL -			, ,
37 Prunus serotina (black cheri 38 Pinus taeda (loblolly pine)		5	Regulated Regulated	185781.156 185780.509	2324845.643 2324888.589	`_				
39 Liquidambar styraciflua (sw 40 Quercus hemisphaerica (da		11	Regulated Regulated	185788.311 185782.646	2324874.101 2324900.889					
41 Pinus taeda (loblolly pine)	·	18	Regulated	185780.609	2324899.137					100
42 Liquidambar styraciflua (sw 43 Liriodendron tulipifera (tulip	otree)	14	Regulated Regulated	185792.131 185794.403	2324899.895 2324907.31		``.	`_		
44 Carya glabra (pignut hickory	/)	8	Regulated	185794.427	2324909.329					100 1.
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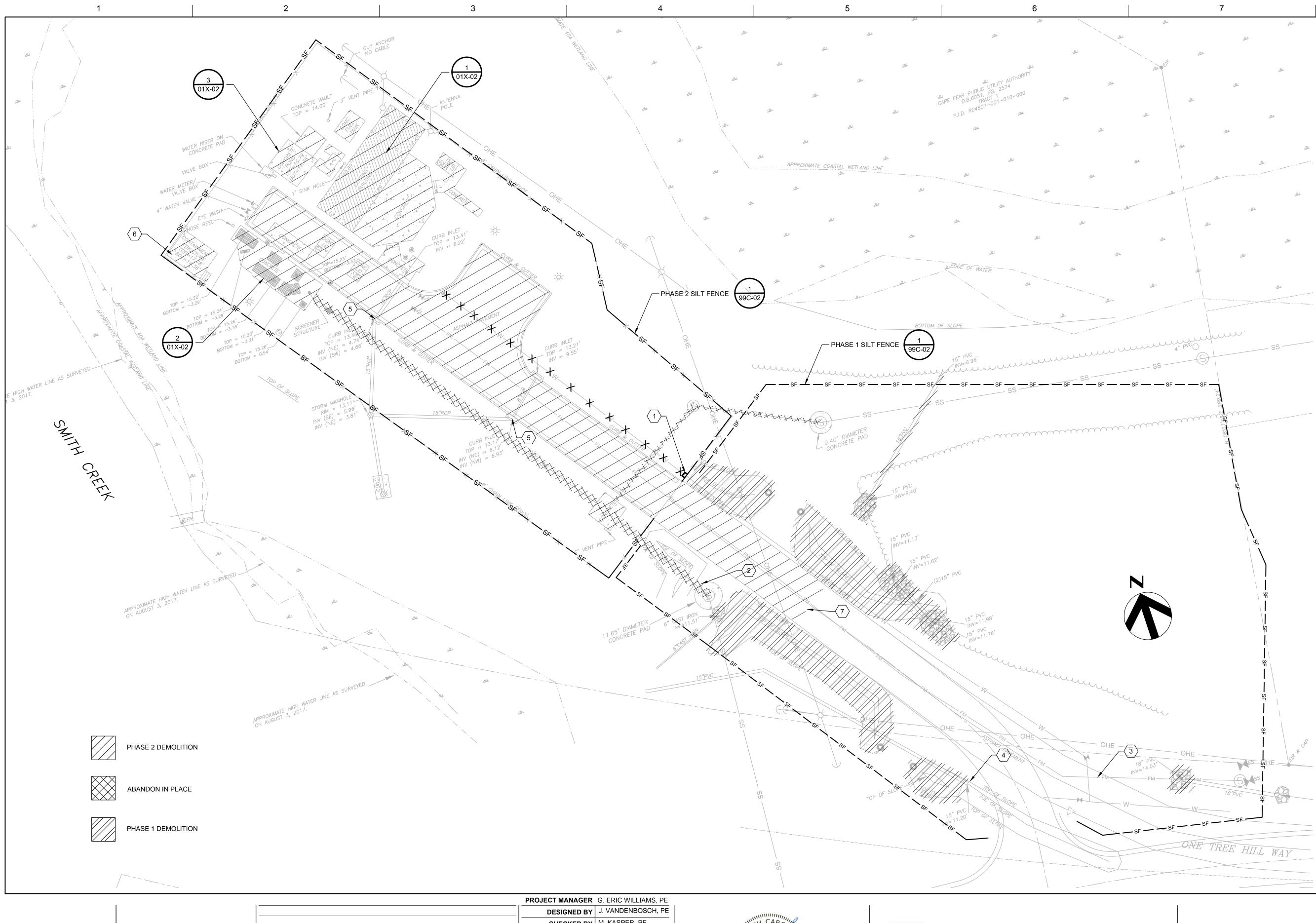




REPLACEMENT

FILENAME 00V-01B.dwg **SCALE** 1" = 40'

SHEET 01V-01



**FJS** 

HDR Engineering Inc. of the Carolinas NC BELS License # F-0116 101 N. Third Street Wilmington NC, 28401

910-398-9020

PROJECT MANAGER	G. ERIC WILLIAMS, PE
DESIGNED BY	J. VANDENBOSCH, PE
CHECKED BY	M. KASPER, PE
DRAWN BY	
PROJECT NUMBER	100075083





**PUMP STATION #10** REPLACEMENT

GENERAL NOTES:	
GENERAL NOTES.	

1. SEE DEMOLITION SPECIFICATION SECTION 01 73

- 29. 2. DEMOLISH STRUCTURES TO 4'-0" BELOW GRADE. ABANDON-IN-PLACE REMAINING PORTION OF STRUCTURES. PROVIDE STRUCTURAL FILL FROM STRUCTURE TO FINAL GRADE. ONLY CONCRETE MATERIALS ARE TO BE ABANDONED-IN-PLACE.
- 3. FILL ENTIRE EXTENTS OF ABANDONED STRUCTURES WITH STRUCTURAL FILL. EXTEND HEIGHT OF STRUCTURAL FILL FROM BOTTOM OF STRUCTURE TO EXISTING GRADE. 4. DEMOLISH ALL PIPING, FITTINGS, SUPPORTS,
- FASTENERS AND APPURTENANCES. 5. DEMOLISH ALL PLASTIC AND METALLIC MATERIALS UNLESS OTHERWISE NOTED.
- DEMOLISH ALL ASPHALT ROAD AND CONCRETE
- CURBING UNLESS OTHERWISE NOTED. 7. EQUIPMENT TO BE SALVAGED LISTED UNDER
- SPECIFICATION SECTION 01 73 29. 8. FILL AREAS IN LOCATIONS OF DEMOLISHED STRUCTURE, VAULTS, PIPING, SITE PADS, ETC. WITH STRUCTURAL FILL. PROVIDE 4 INCHES OF TOP SOIL TO MATCH EXISTING GRADE
- ELEVATION AND GRADE TO DRAIN. 9. COORDINATE TERMINATION OF WATER AND POWER UTILITY SERVICES WITH THE SERVICE PROVIDER.
- 10. ASPHALT, CURB, AND GUTTER DEMOLISHED BY THE CONTRACTOR BEYOND THE EXTENTS SHOWN TO FACILITATE WORK SHALL BE REPLACED IN KIND.

## KEY NOTES: $\langle \# \rangle$

- 1. CUT AND CAP EXISTING WATER MAIN AND ABANDON IN PLACE.
- DIVERT ALL SEWER TO REPLACEMENT PUMP STATION AFTER REPLACEMENT PUMP STATION IS CERTIFIED BY ENGINEER AND WRITTEN APPROVAL IS RECEIVED FROM THE OWNER. PLUG INVERT TO EXISTING PUMP STATION WITH WATERTIGHT MASONRY.
- 3. SEE SHEET 01D-01 FOR CONNECTION
- SEQUENCE TO EXISTING FORCE MAIN. 4. 15" PVC STORM DRAIN TO REMAIN IN SERVICE. PROTECT INLET WITH GRAVEL BERM.
- 5. DEMOLISH CATCH BASINS AND PLUG STORM
- DRAIN WITH WATERTIGHT MASONRY. 6. ODOR CONTROL EQUIPMENT TO BE SALVAGED AND TRANSFERRED TO THE REPLACEMENT PUMP STATION SITE. SEE PLAN SERIES 50. EXISTING CONCRETE TO BE DEMOLISHED PER SPECIFICATION AND AS NOTED.
- 7. SAW CUT EXISTING ASPHALT AT POINT OF DEMOLITION TERMINATION. PROVIDE A 2' APRON OF ABC STONE, 5" DEPTH, FOR TRANSITION OF ASPHALT TO EX. GRADE.

### CONSTRUCTION SEQUENCE:

### PHASE 1 CONSTRUCTION

- 1. INSTALL PHASE 1 SILT FENCE AND OTHER EROSION CONTROL DEVICES AS REQUIRED.
- 2. REMOVE PROTECTIVE BERMS, RIP RAP, STORM PIPE, AND BOLLARDS AS INDICATED ON THE PLANS FOR PHASE 1 DEMOLITION.
- 3. CLEAR AND GRUB EXISTING SITE VEGETATION FROM THE PROJECT SITE.
- 4. CONSTRUCT PUMP STATION AND ASSOCIATED STRUCTURES AND PIPING AS SHOWN BY THE PLANS AND SPECIFICATIONS.
- 5. PERFORM TESTING AND STARTUP FOR THE REPLACEMENT PUMP STATION.

### **INTERIM OPERATION**

- 1. UPON CERTIFICATION OF THE REPLACEMENT PUMP STATION BY THE ENGINEER, INTRODUCE SEWER TO THE REPLACEMENT PUMP STATION.
- 2. THE EXISTING PUMP STATION AND THE REPLACEMENT PUMP STATION WILL BE OPERATED SIMULTANEOUSLY FOR A TWO (2) WEEK PERIOD.

### PHASE 2 DEMOLITION

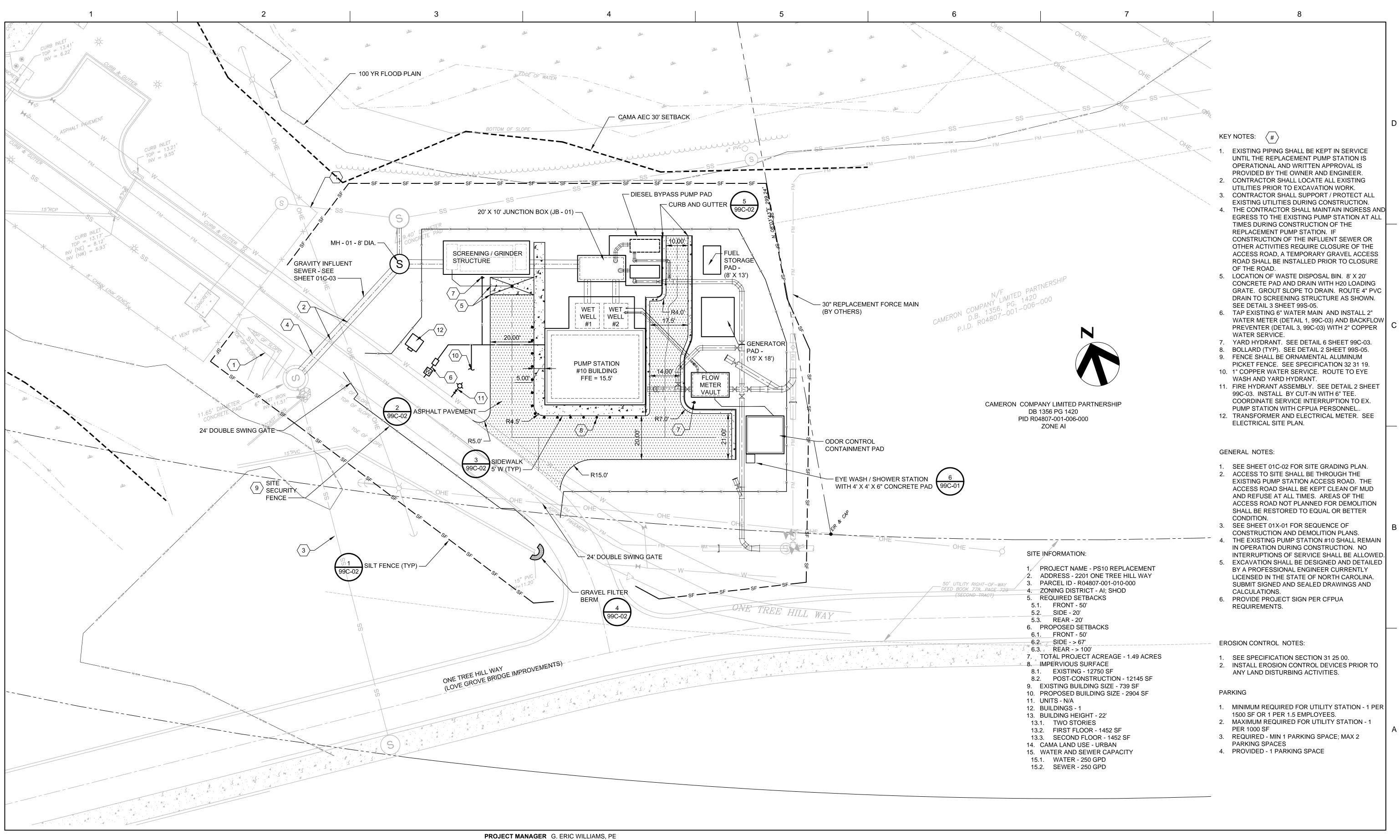
- 1. AFTER THE SUCCESSFUL COMPLETION OF THE TWO WEEK INTERIM PERIOD AND RECEIVING WRITTEN APPROVAL FROM THE OWNER, DIVER ALL SEWER FLOW TO THE REPLACEMENT PUMP STATION.
- 2. PERFORM PHASE 2 DEMOLITION OF THE EXISTING PUMP STATION AS SHOWN ON THE PLANS.
- 3. CLEAN AND RESTORE SITE AS SPECIFIED. PROVIDE SEED AND MULCH FOR ALL DISTURBED AREA AS SPECIFIED.
- 4. AFTER SITE HAS BEEN STABILIZED, REMOVE ALL EROSION CONTROL DEVICES.

## SITE DEMOLITION PLAN

FILENAME 00X-01.dwg **SCALE** 1" = 20'

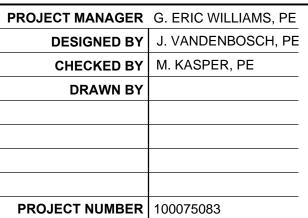
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0	10/2018	ISSUED FOR CONSTRUCTION	
ISSUE	DATE	DESCRIPTION	
1			





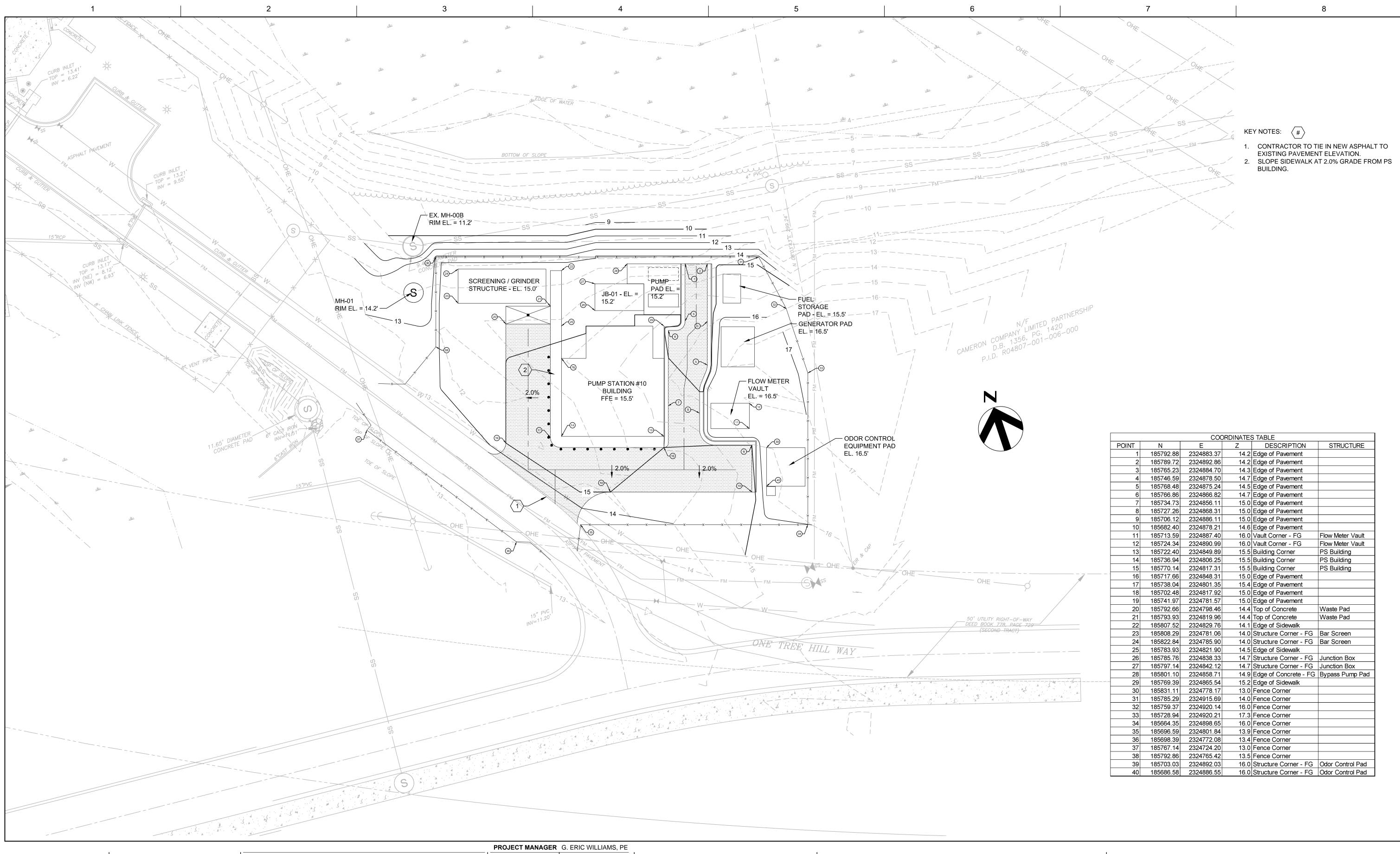


**PUMP STATION #10** REPLACEMENT

**CIVIL SITE PLAN** 

FILENAME 00C-01B.dwg **SCALE** 1" = 20'

SHEET 01C-01



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ISSUE	DATE	DESCRIPTION	

DESIGNED BY J. VANDENBOSCH, PE CHECKED BY M. KASPER, PE DRAWN BY PROJECT NUMBER 100075083





PUMP STATION #10 REPLACEMENT

			RDINATE		0
POINT	N	E	Z	DESCRIPTION	STRUCTURE
1	185792.88	2324883.37		Edge of Pavement	
2	185789.72	2324892.86		Edge of Pavement	
3	185765.23	2324884.70		Edge of Pavement	
4	185746.59	2324878.50	14.7	Edge of Pavement	
5	185768.48	2324875.24		Edge of Pavement	
6	185766.86	2324866.82	14.7	Edge of Pavement	
7	185734.73	2324856.11		Edge of Pavement	
8	185727.26	2324868.31	15.0	Edge of Pavement	
9	185706.12	2324886.11	15.0	Edge of Pavement	
10	185682.40	2324878.21	14.6	Edge of Pavement	
11	185713.59	2324887.40	16.0	Vault Corner - FG	Flow Meter Vault
12	185724.34	2324890.99	16.0	Vault Corner - FG	Flow Meter Vault
13	185722.40	2324849.89	15.5	Building Corner	PS Building
14	185736.94	2324806.25	15.5	Building Corner	PS Building
15	185770.14	2324817.31	15.5	Building Corner	PS Building
16	185717.66	2324848.31	15.0	Edge of Pavement	
17	185738.04	2324801.35		Edge of Pavement	
18	185702.48	2324817.92	15.0	Edge of Pavement	
19	185741.97	2324781.57		Edge of Pavement	
20	185792.66	2324798.46		Top of Concrete	Waste Pad
21	185793.93	2324819.96		Top of Concrete	Waste Pad
22	185807.52	2324829.76		Edge of Sidewalk	
23	185808.29	2324781.06		Structure Corner - FG	Bar Screen
24	185822.84	2324785.90	14.0	Structure Corner - FG	Bar Screen
25	185783.93	2324821.90		Edge of Sidewalk	
26	185785.76	2324838.33		Structure Corner - FG	Junction Box
27	185797.14	2324842.12		Structure Corner - FG	Junction Box
28	185801.10	2324858.71		Edge of Concrete - FG	
29	185769.39	2324865.54		Edge of Sidewalk	
30	185831.11	2324778.17		Fence Corner	
31	185785.29	2324915.69		Fence Corner	
32	185759.37	2324920.14		Fence Corner	
33	185728.94	2324920.21		Fence Corner	
34	185664.35	2324898.65		Fence Corner	
35	185696.59	2324801.84		Fence Corner	
36	185698.39	2324772.08		Fence Corner	
37	185767.14	23247724.20		Fence Corner	
38	185792.86	2324724.20		Fence Corner	
39	185703.03	2324703.42		Structure Corner - FG	Odor Control Pad
	185686.58	2324892.03		Structure Corner - FG	Odor Control Pad

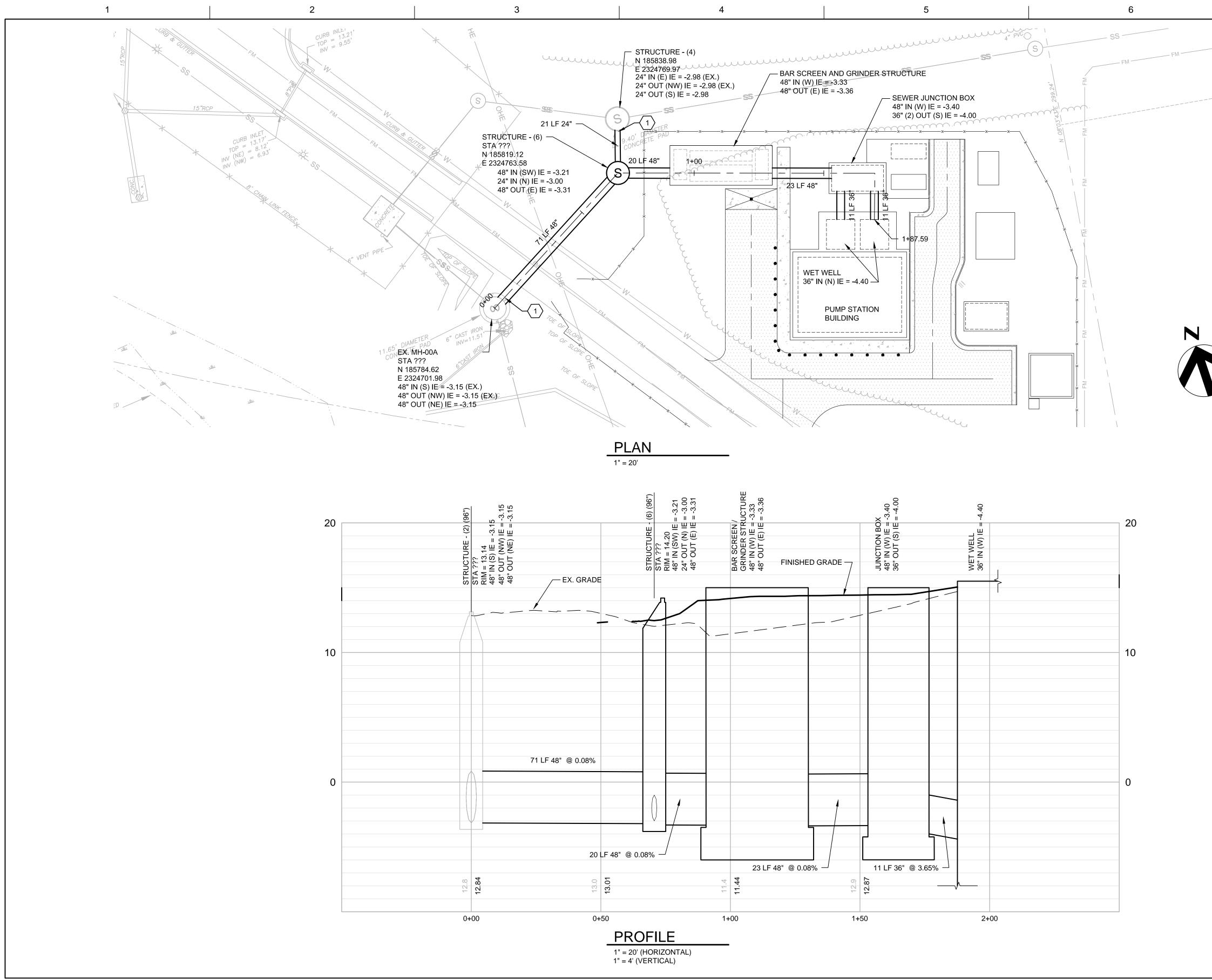
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# SITE GRADING PLAN

FILENAME 00C-02.dwg **SCALE** 1" = 20'

SHEET 01C-02



FJS

HDR Engineering Inc. of the Carolinas NC BELS License # F-0116

101 N. Third Street Wilmington NC, 28401 910-398-9020

SSUE	DATE	DESCRIPTION	
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PROJECT MANAGER G. ERIC WILLIAMS, PE **DESIGNED BY** J. VANDENBOSCH, PE CHECKED BY M. KASPER, PE DRAWN BY

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PROJECT NUMBER 100075083
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**PUMP STATION #10** REPLACEMENT

KEY NOTES: (#) 1. CORE DRILL EX. MANHOLE, INSTALL FLEXIBLE WATERTIGHT BOOT, BUILD INVERT AND CONNECT TO GRAVITY SEWER. DIVERT FLOW OF SEWAGE TO REPLACEMENT PUMP STATION AT COMPLETION OF ERON COMF 135 D.B. 135 P.I.D. R0480 PROJECT AS DIRECTED BY ENGINEER AND WITH WRITTEN APPROVAL OF OWNER. PLUG INVERT TO EXISTING PUMP STATION WITH WATERTIGHT MASONRY.

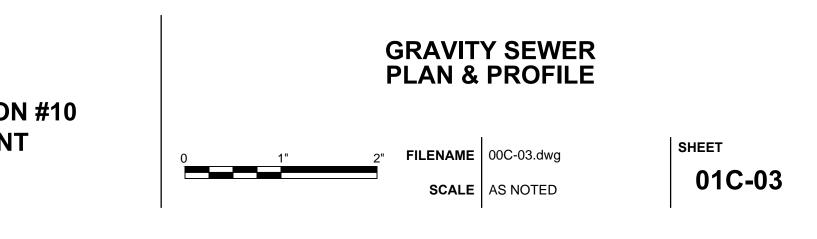
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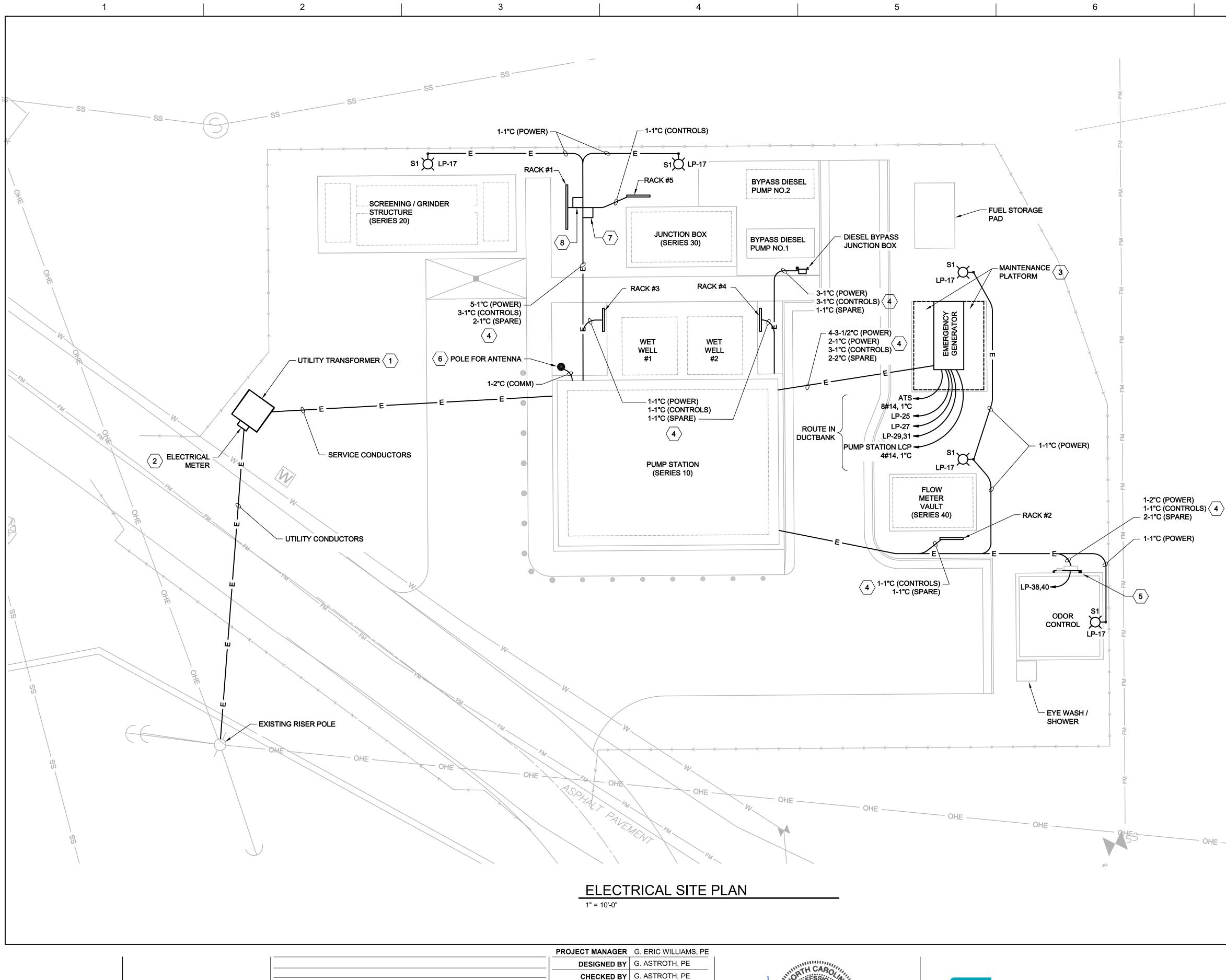
GENERAL NOTES:

1. GRAVITY SEWER PIPE 36" AND LARGER IS PRESSURE CLASS 250 DUCTILE IRON WITH CERAMIC EPOXY LINING. 30" AND SMALLER IS PRESSURE CLASS 350 DUCTILE IRON WITH CERAMIC EPOXY LINING.

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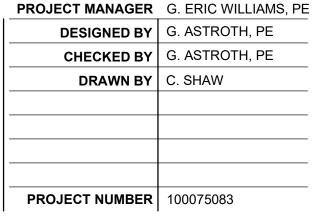
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ISSUE	DATE	DESCRIPTION
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**PUMP STATION #10** REPLACEMENT



GENERAL NOTES:

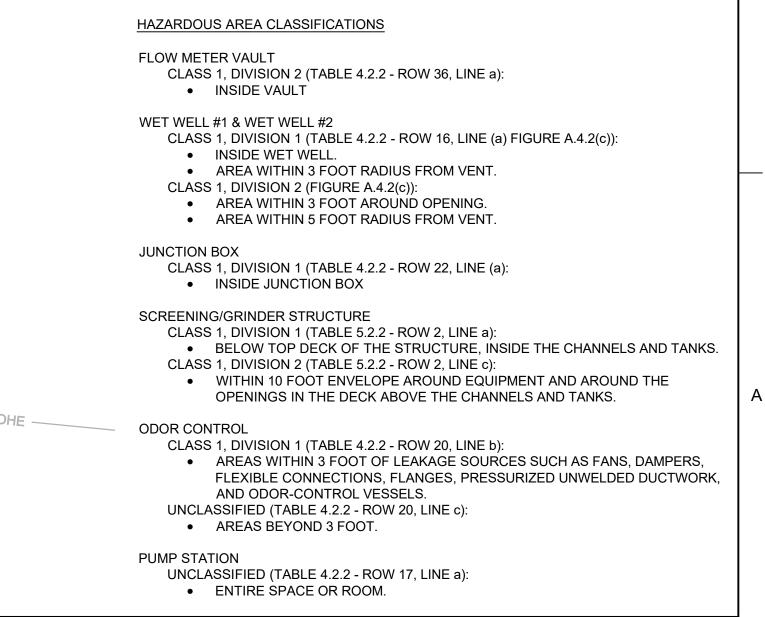
- A. PLAN SHOWS PROPOSED ROUTING FOR CONCRETE ENCASED DUCTBANKS. NOT ALL UNDERGROUND SITE UTILITIES ARE SHOWN ON THE PLAN. FIELD SURVEY AREAS ALONG THE DUCTBANK ROUTES AND COORDINATE FINAL LOCATIONS TO AVOID CONFLICTS.
- B. REFER TO POWER ONE-LINE DIAGRAMS, I&C ONE-LINE DIAGRAMS, ELECTRICAL CONTROL SCHEMATICS, AND APPLICABLE PLAN SHEETS. VERIFY CONDUIT COUNTS FOR ALL DUCTBANKS AND ADJUST QUANTITIES AS NEEDED. DO NOT REDUCE THE NUMBER OF SPARE CONDUITS FROM THAT INDICATED ON THE PLAN.

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- C. THE MINIMUM SIZE FOR CONDUIT INSTALLED IN THE EARTH OR IN CONCRETE DUCTBANK SHALL BE 1".
- D. PROVIDE A PULL CORD IN EACH SPARE CONDUIT.
- E. CONCRETE ENCASE ALL DUCTBANK RUNS UNLESS OTHERWISE NOTED.
- F. DIRECT BURY CONDUIT BETWEEN RACKS, AND BETWEEN RACKS AND WET WELL AND VALVE VAULT.
- G. SEE TYPICAL DUCTBANK DETAIL ON SHEET 99E-01.
- H. STUB UP ALL SPARES ABOVE GRADES/SLAB AND PROVIDE THREADED CAP.

KEY NOTES:  $\langle \# \rangle$ 

- 1. PROVIDE TRANSFORMER PAD PER PROGRESS ENERGY REQUIREMENTS.
- 2. PROVIDE METER BASE PER PROGRESS ENERGY REQUIREMENTS.
- 3. COORDINATE PLATFORM ARRANGEMENT WITH ACCESS REQUIREMENTS. PROVIDE CONCRETE STOOP UNDER PLATFORMS.
- 4. STUB UP SPARE CONDUIT AT PUMP STATION AND CAP.
- 5. PROVIDE EQUIPMENT RACK FOR EXISTING PANELBOARD AND ODOR CONTROL EQUIPMENT BEING RELOCATED BY OTHERS. CONNECT NEW FEEDER TO RELOCATED PANELBOARD.
- 6. PROVIDE NEW 40' SQUARE STEEL POLE FOR MOUNTING OF ANTENNA MAST. PROVIDE CONCRETE FOUNDATION AND GROUNDING FOR NEW SITE POLE. SEE 3/99E-02 FOR ANTENNA POLE BASE DETAIL.
- 7. 2'x2' HANDHOLE WITH H20 RATED LID FOR POWER WIRING.
- 8. 2'x2' HANDHOLE WITH H20 RATED LID FOR CONTROL WIRING.

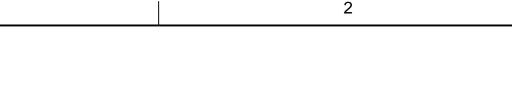


# **ELECTRICAL SITE PLAN**

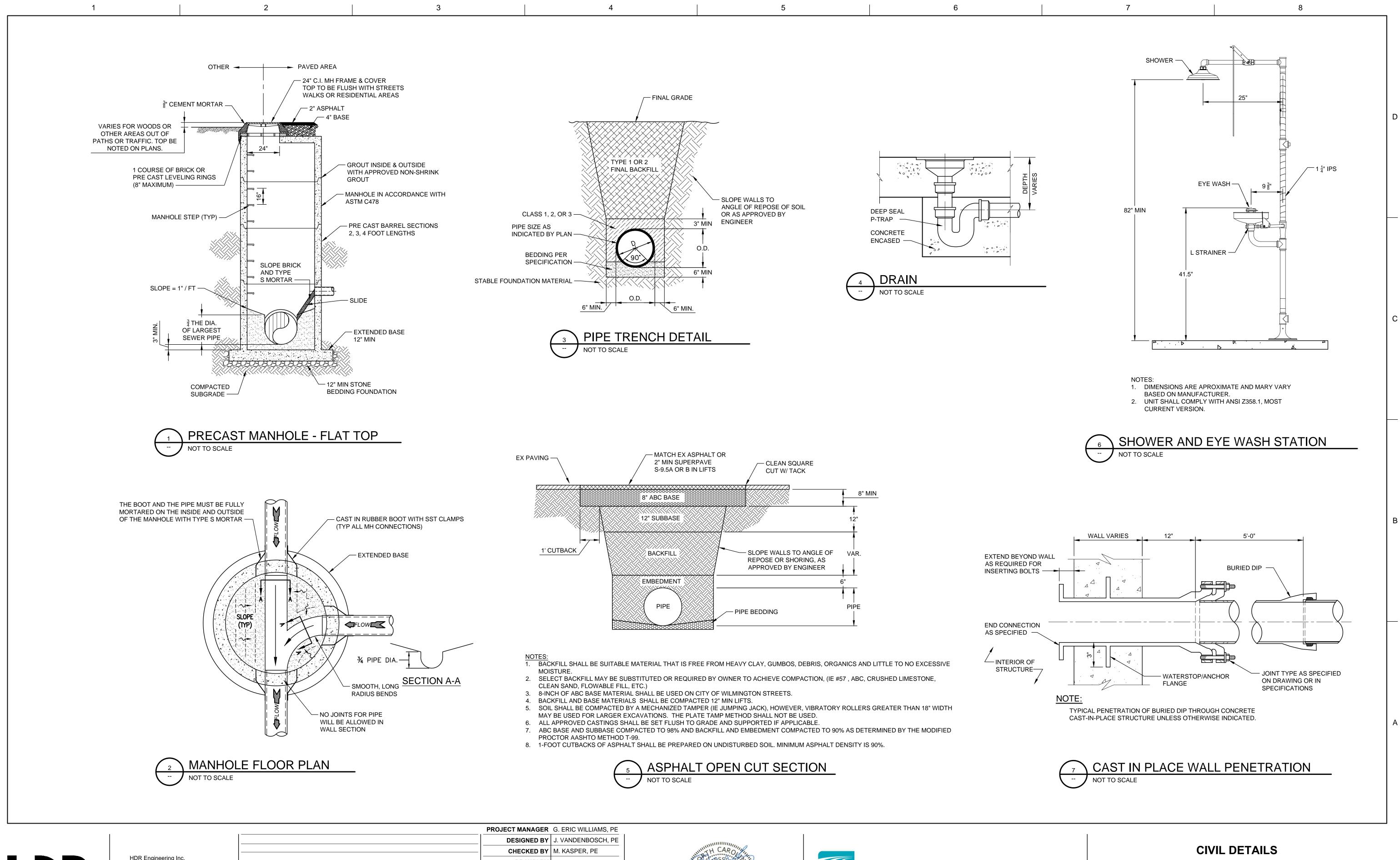
FILENAME 01E-01.dwg

**SCALE** 1" = 10'

SHEET 01E-01







HDR Engineering Inc. of the Carolinas NC BELS License # F-0116

101 N. Third Street Wilmington NC, 28401 910-398-9020

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DRAWN BY

PROJECT NUMBER 100075083

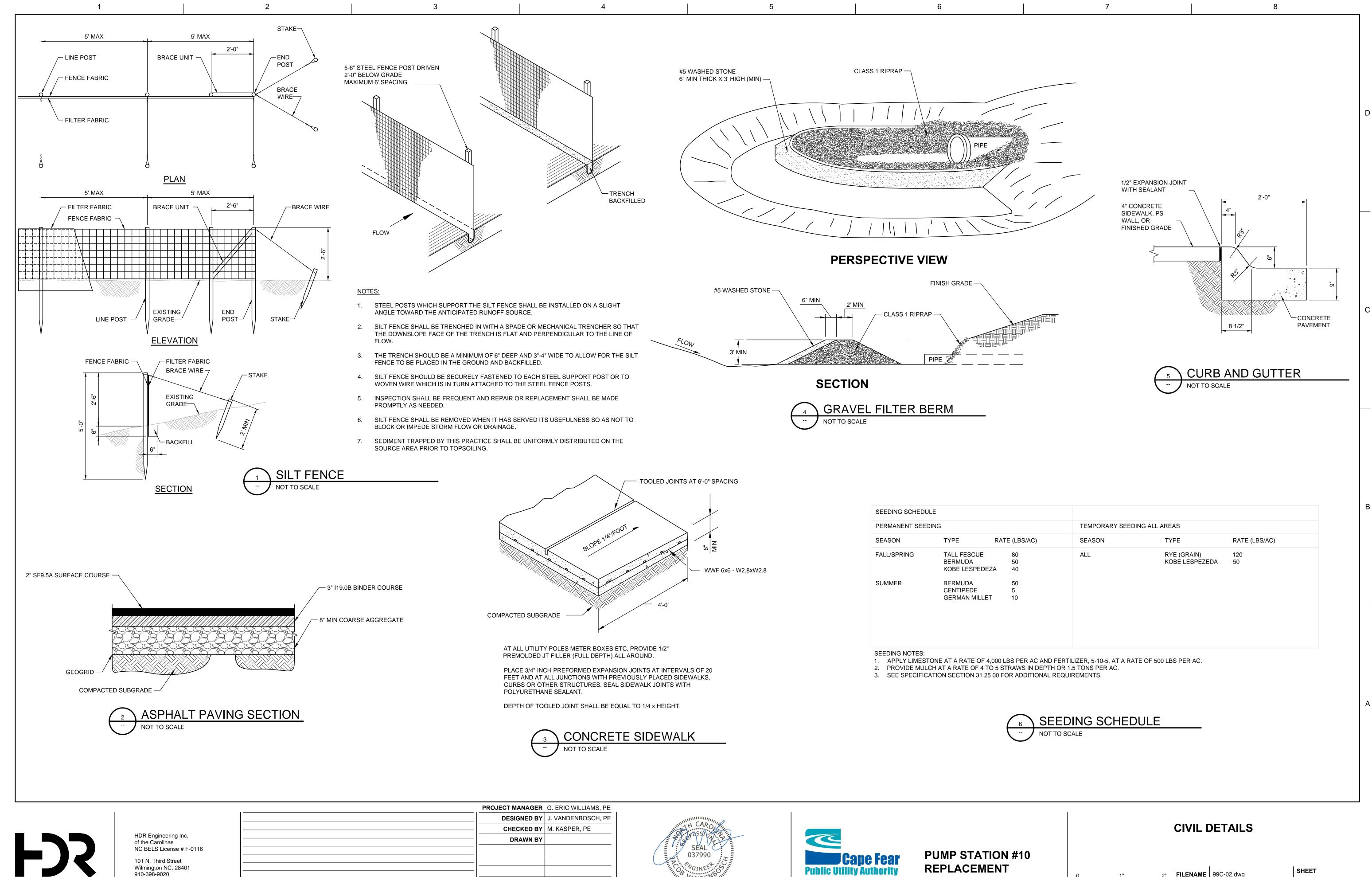




**PUMP STATION #10** REPLACEMENT

SHEET FILENAME 99C-01.dwg **SCALE** 1/4" = 1'0"

99C-01



of the Carolinas NC BELS License # F-011
101 N. Third Street Wilmington NC, 28401
910-398-9020

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ISSUE	DATE	DESCRIPTION	

DRAWN BY PROJECT NUMBER 100075083





**PUMP STATION #10** REPLACEMENT

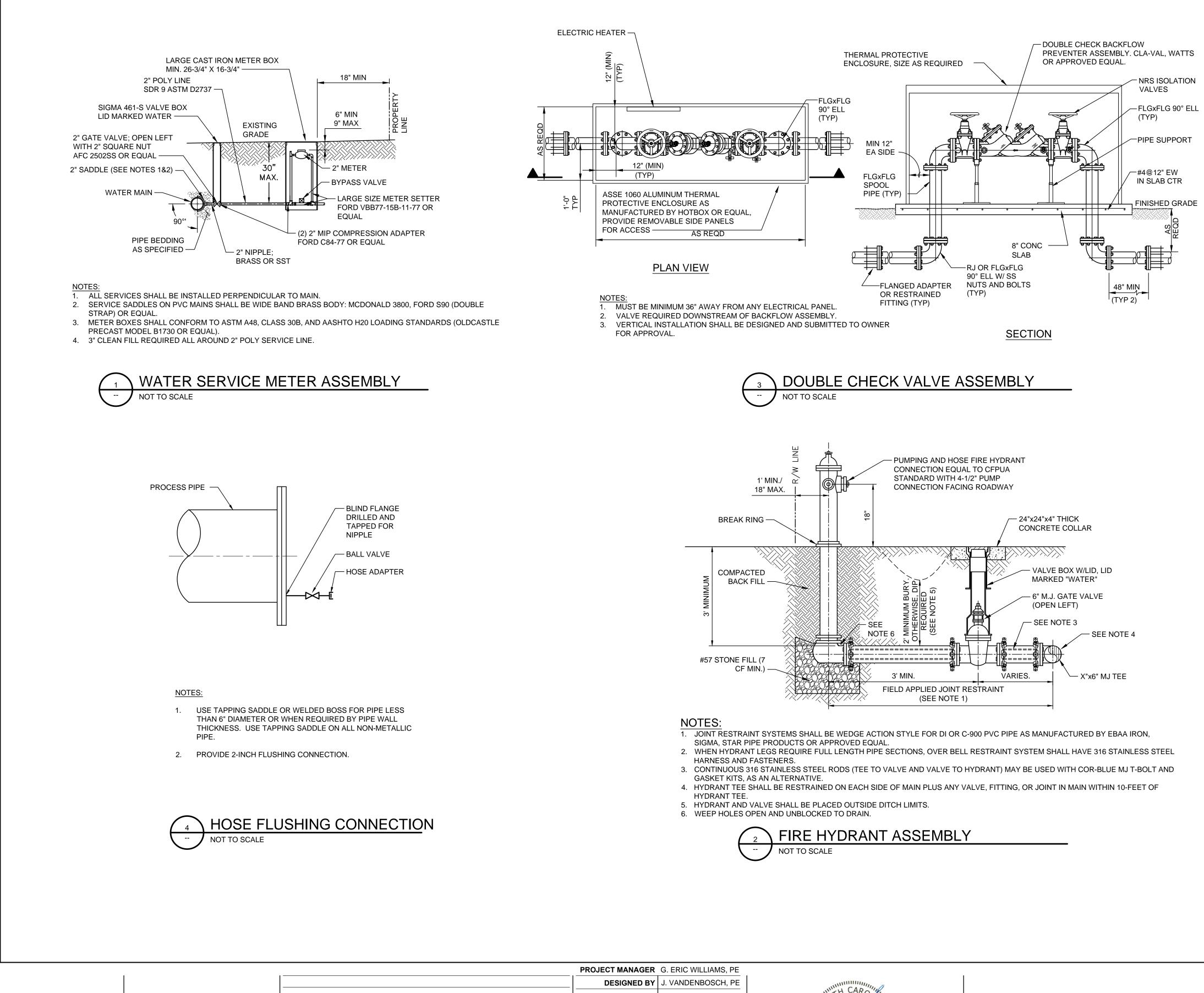
	TEMPORARY SEEDING AL	L AREAS	
FE (LBS/AC)	SEASON	TYPE	RATE (LBS/AC)
80 50 40 50 5 10	ALL	RYE (GRAIN) KOBE LESPEZEDA	120 50

FILENAME 99C-02.dwg **SCALE** 1/4" = 1'0"

SHEET 99C-02







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101 N. Third Street Wilmington NC, 28401 910-398-9020

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CHECKED BY M. KASPER, PE DRAWN BY PROJECT NUMBER 100075083





**PUMP STATION #10** REPLACEMENT

