

# 2016 SPLOST NORTH MAINLAND PH-II PUMP STATION IMPROVEMENTS BRUNSWICK, GA

CHAIRMAN VICE CHAIRMAN MR. BEN TURNIPSEED, PE MR. BOB DUNCAN

MR. CHARLES S. "CHUCK" COOK MR. CORNELL L. HARVEY

> EXECUTIVE DIRECTOR MR. ANDREW BURROUGHS, PE

DIRECTOR OF ENGINEERING MR. TODD KLINE, PE

PREPARED FOR: BRUNSWICK-GLYNN JOINT WATER AND SEWER COMMISSION 1703 GLOUCESTER ST, BRUNSWICK, GA 31520

## COMMISSION MEMBERS

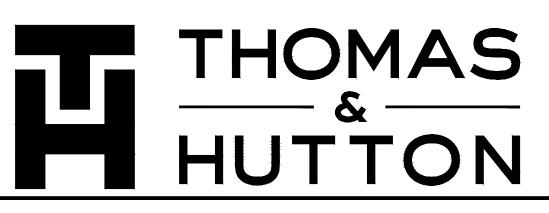
MR. TRIPP STEPHENS

MR. DONALD M. ELLIOT MR. WAYNE NEAL

DECEMBER 2020

J-27784.0000

PREPARED BY:

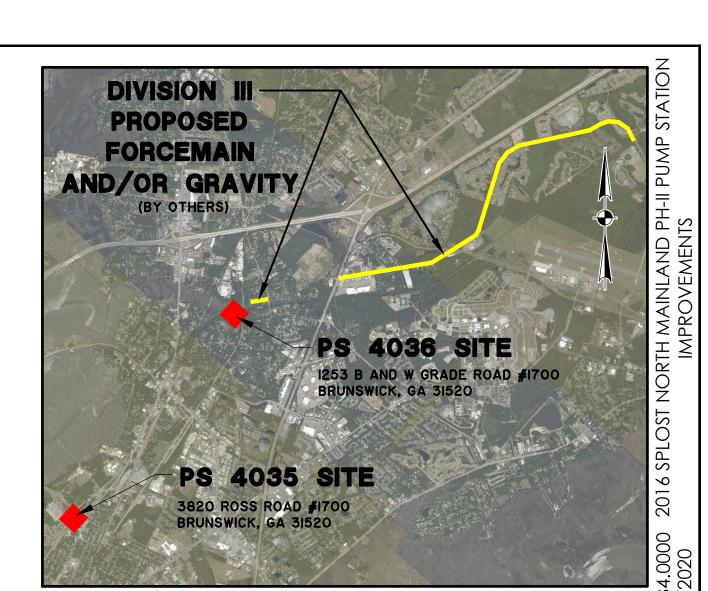




## **BID SET - NOT FOR CONSTRUCTION**

SUBMITTAL HISTORY	
SUBMITTED TO	DATE





VICINITY MAP SCALE: 1" = 5000'

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## **REVISION HISTORY** ISSUED FOR BID CDR 10-19-202 0 REV. NO. BY DATE REVISION





p.912.234.5300 www.thomasandhutton.con

### **GENERAL NOTES:**

26. TREE PROTECTIO 1. TOPOGRAPHIC INFORMATION FOR NORTH MAINLAND PHASE II AND III IMPROVEMENTS IS BASED ACTIVITY AND ON SURVEY DATA PREPARED BY THOMAS & HUTTON. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND OTHER SALIENT FEATURES PRIOR TO BEGINNING CONSTRUCTION. 27. DURING INSTALLATION, WHEN PIPE LAYING IS NOT IN PROGRESS, A MECHANICAL JOINT PLUG OR CAP, OR ACCEPTED EQUIVALENT WILL BE USED TO FORM A WATERTIGHT SEAL AT BOTH ENDS OF THE LINE 2. CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING BEING LAID. CONSTRUCTION. CONTACT ENGINEER IMMEDIATELY WITH ANY DISCREPANCIES. 28. A #12 GAUGE INSULATED SINGLE STRAND COPPER WIRE SHALL BE STRAPPED TO ALL WATER 3. ALL ELEVATIONS REFER TO NAVD 88. AND SEWER PIPES. FOR RECLAIMED WATER PIPE USE #12 GAUGE INSULATED SINGLE STRAND COPPER WIRE, PURPLE IN COLOR. 4. THE CONTRACTOR SHALL GRASS ALL AREAS DISTURBED BY CONSTRUCTION IMMEDIATELY AFTER THE DISTURBANCE. 29. DISCHARGE OF HIGHLY CHLORINATED WATER INTO SURROUNDING AREAS OR STORM DRAINAGE 5. THE CONTRACTOR SHALL PROTECT AND SAVE ALL SPECIMEN TREES AND/OR ANY TREE SYSTEM IS PROHIBITED. DISPOSAL OF HIGHLY CHLORINATED WATER SHALL COMPLY WITH THE DESIGNATED ON THE PLANS OR BY THE OWNER. CONTRACTOR TO PROTECT AND SAVE REQUIREMENTS OF GEORGIA E.P.D. AND AWWA STANDARD C651, LATEST REVISION. IF REQUIRED TREES BY INSTALLING 4 FOOT HIGH TEMPORARY ORANGE CONSTRUCTION FENCE AROUND THE TREE. BY THE ENGINEER, A REDUCING AGENT SHALL BE USED TO NEUTRALIZE THE CHLORINE. 6. CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH LOCAL UTILITY COMPANIES. CONTRACTOR 30. ALL SIGNS, MAIL BOXES, SHRUBBERY, FENCES, LANDSCAPING OR EXISTING STRUCTURES SHALL BE RESPONSIBLE FOR PROTECTION AND ANY NECESSARY REPAIRS TO EXISTING UTILITY LINES AT NO COST INTERFERING WITH CONSTRUCTING SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR TO THE UTILITY OWNER. AT THE CONTRACTOR'S EXPENSE. 7. THE CONTRACTOR WILL NOTIFY THE ENGINEER IF UNSUITABLE MATERIAL IS DISCOVERED 31. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY EXISTING WATER AND SEWER UTILITIES DAMAGED PRIOR TO BEGINNING ANY REMOVAL OPERATION. DURING CONSTRUCTION AT THE CONTRACTOR'S EXPENSE. 8. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY BRACING, SHEETING AND DEWATERING 32. "AS-BUILT" DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR BASED ON A "RECORD SURVEY" OF CONSTRUCTED TO COMPLETE THE PROJECT, PROTECT THE CONSTRUCTION WORKERS AND ALL ADJACENT UTILITIES AND APPURTENANCES. THE RECORD SURVEY MUST BE COMPLETED AND SIGNED BY A REGISTERED LAND STRUCTURES, TREES, LANDSCAPING, AND IS RESPONSIBLE FOR ALL REPAIR AND COST TO RETURN AREA TO ORIGINAL CONDITION. SURVEYOR. THE CONTRACTOR SHALL PROVIDE A SET OF "MARKED UP" AS BUILT DRAWINGS AS WELL AS A CD ROM CONTAINING THE AS BUILT INFORMATION IN ELECTRONIC FORM. AT A MINIMUM THE AS BUILT INFORMATION AND RECORD SURVEY SHALL INCLUDE VALVE AND BOX LOCATIONS, FRAME AND INVERT ELEVATIONS. THE LOCATIONS OF 9. CONTRACTOR TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES BEFORE WATER PIPE, FITTINGS, RIP-RAP, SLEEVES, PAVING AND GRAVEL REPLACEMENT, STORM SEWER REPLACEMENT AND BEGINNING ANY CONSTRUCTION (1-800-282-7411 OR 811). ALL OTHER CONSTRUCTION INSTALLATIONS. 10. ALL UTILITY POLES ADJACENT TO PROPOSED CONSTRUCTION MUST BE SECURED PRIOR TO ANY ADJACENT DISTURBANCE AND THE CONSTRUCTION PROCEDURE MUST BE ACCEPTABLE TO 33. ALL MATERIALS USED AND COME INTO CONTACT WITH DRINKING WATER DURING ITS DISTRIBUTION SHALL NOT THE UTILITY COMPANY. ADVERSELY AFFECT DRINKING WATER QUALITY AND PUBLIC HEALTH AND MUST BE CERTIFIED FOR CONFORMANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE/NATIONAL SANITATION FOUNDATION STANDARD 61 (ANSI/NSF 11. CONTROL OF STORMWATER THROUGHOUT THE CONSTRUCTION PERIOD, SHALL BE THE STANDARD 61). RESPONSIBILITY OF THE CONTRACTOR. THE EXISTING DRAINAGE CONVEYANCES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. ALL PENALTIES, CLAIMS AND FEES 34. UNDERGROUND UTILITIES ARE SHOWN ON PLANS ONLY WHERE THEY MAY BE CLOSE TO CONSTRUCTION ACTIVITY. THE CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION IMPOSED ON THE OWNER AS A RESULT OF DAMAGE CAUSED BY ACTIONS OF THE CONTRACTOR, THEIR EMPLOYEES OR SUBCONTRACTORS SHALL BE BORNE IN FULL BY THE CONTRACTOR. ACTIVITIES. 35. ALL CONSTRUCTION WATER SHALL BE METERED THROUGH AN ACCEPTABLE HYDRANT METER AND BACKFLOW DEVICE 12. ALL SUITABLE MATERIAL EXCAVATED DURING UTILITY CONSTRUCTION SHALL BE USED ON SITE. ANY EXCESS OBTAINED FROM THE BGJWSC. MATERIAL SUITABLE OR UNSUITABLE SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTOR'S EXPENSE. 36. THE PROPERTY LINES AND RIGHT-OF-WAY LINES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND ARE FOR INFORMATION ONLY. THEY HAVE NOT BEEN VERIFIED BY A PROPERTY SURVEY OR THOMAS & HUTTON. 13. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES BEFORE WORK COMMENCES, VERIFY UTILITIES WITHIN THE PROJECT LIMITS AND NOTIFY THE ENGINEER OF CONFLICTS OR VARIANCES TO 37. ALL DISTURBED AREAS SHALL BE GRASSED WITH TEMPORARY SEEDING AND MULCHED IMMEDIATELY AFTER GRADING IS THE PLANS PRIOR TO BEGINNING WORK OR PURCHASE OF MATERIALS. COMPLETE. THESE AREAS SHALL BE REGRASSED WITH PERMANENT SEEDING AFTER CONSTRUCTION IS COMPLETE. 38. ALL EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE CONSTRUCTED SIMULTANEOUSLY WITH THE 14. IT IS THE OBLIGATION OF THE CONTRACTOR TO MAKE THEIR OWN INTERPRETATION OF ALL SURFACE AND DISTURBANCE OF THE LAND AND SHALL REMAIN FUNCTIONAL UNTIL THE CONTRIBUTING DISTURBED AREAS ARE SUBSURFACE DATA AVAILABLE AS TO THE NATURE AND EXTENT OF THE MATERIALS TO BE EXCAVATED, WASTED, GRADED, AND COMPACTED. THE INFORMATION SHOWN ON THESE PLANS IN NO WAY STABILIZED. GUARANTEES THE AMOUNT OR NATURE OF THE MATERIAL TO BE ENCOUNTERED. 39. THE CONTRACTOR SHALL IMMEDIATELY REPAIR EXISTING WATER & SEWER SERVICES DAMAGED DURING CONSTRUCTION 15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL DEVICES AND MEASURES AS AT THE CONTRACTORS EXPENSE. NECESSARY TO MEET THE REQUIREMENTS OF THE GEORGIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (GA MUTCD). CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO OWNER 40. ALL CONNECTIONS TO THE EXISTING WATER AND SEWER SYSTEMS SHALL BE COORDINATED WITH THE FOR REVIEW AND ACCEPTANCE PRIOR TO STARTING CONSTRUCTION. BRUNSWICK-GLYNN COUNTY JOINT WATER & SEWER COMMISSION (BGJWSC). THE CONTRACTOR SHALL CONTACT BGJWSC AT (912) 261-7122 A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION ACTIVITIES. 16. ALL WORK SHALL CONFORM TO APPLICABLE STATE, COUNTY AND MUNICIPAL REQUIREMENTS AND CODES. 41. BYPASS PUMPING UNIT SHALL BE PRESENT AND READY TO OPERATE ON-SITE AT ALL TIMES WHILE IMPROVEMENT WORK IS IN PROGRESS. ALL TEMPORARY BYPASS PUMPING REQUIRED FOR REHAB WORK SHALL BE THE RESPONSIBILITY OF THE 17. THE CONTRACTOR SHALL COORDINATE DEMOLITION AND IMPROVEMENTS TO MINIMIZE TRAFFIC CONTRACTOR. NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR THESE PUMPING REQUIREMENTS. ALL INTERFERENCE AND OPERATIONS OF FACILITIES. LABOR, DESIGN, EQUIPMENT, MATERIALS, RENTAL FEES, TEMPORARY PIPING AND INCIDENTALS SHALL BE CONSIDERED A SUBSIDIARY OBLIGATION TO THE CONTRACT. 18. ALL CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN AN ACCEPTABLE WASTE DISPOSAL AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL CONSTRUCTION DEBRIS. 42. THE BGJWSC RESERVES FIRST RIGHT OF SALVAGE FOR ALL EQUIPMENT REMOVAL AT EACH SITE. 19. ALL STORM DRAIN JOINTS ARE TO BE WRAPPED IN FILTER FABRIC. 43. THE BGJWSC WILL RETAIN SALVAGE RIGHTS TO ALL MATERIALS AND EQUIPMENT RETAINED BY THE BGJWSC SHALL BE DELIVERED TO A PLACE DESIGNATED BY THE BGJWSC REPRESENTATIVE. ANY MATERIALS OR EQUIPMENT NOT RETAINED 20. THE CONTRACTOR SHALL NOT BEGIN CONSTRUCTION UNTIL THE PROPER PERMITS HAVE BEEN ISSUED. BY THE BGJWSC SHALL BE REMOVED FROM SITE AND DISPOSED OFF SITE BY THE CONTRACTOR IN ACCORDANCE WITH APPLICABLE REGULATION. 21. ALL WATER MAINS, FORCE MAINS AND GRAVITY SEWER SHALL HAVE A MINIMUM OF 3 FEET OF COVER MEASURED FROM FINISHED GRADE EXCEPT WHERE OTHERWISE NOTED ON THE 44. CONTRACTOR MUST PROVIDE ASSET INFORMATION IN A SPREADHSEET FOR ASSESTS PURCHASED ON A SINGLE LINE ITEM COSTING \$500 OR MORE. THE SPREADSHEET WILL BE USED TO UPDATE THE RECORDS IN THE BGJWSC ASSET PLANS. MANAGEMENT DATABSE TO REFLECT EQUIPMENT IN THE PUMP STATION. 22. MAINTAIN A 10' HORIZONTAL SEPARATION BETWEEN ALL SANITARY SEWERS AND ALL WATER MAINS. WHERE THIS 45. CONTRACTOR SHALL NOTIFY THE RESPONSIBLE BGJWSC, PLANNING AND CONSTRUCTION DIVISION, 48 HOURS PRIOR TO SEPARATION CANNOT BE MAINTAINED, OR WHERE LINES CROSS, PROVIDE A 18" MINIMUM VERTICAL SEPARATION BEGINNING CONSTRUCTION ON PROJECT. BETWEEN THE OUTSIDE OF THE PIPES. IF THESE REQUIREMENTS CANNOT BE MET, PROPOSED WATERLINE WILL BE INSTALLED IN CASING PER JWSC SPECIFICATIONS. 23. ALL MANHOLE TOPS ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE AND SET MANHOLE TOPS RELATIVE TO FINISHED GRADES AS SHOWN ON THE PLANS. 24. ANY DEFECTIVE, DAMAGED, OR UNSOUND PIPE SHALL BE REJECTED. ALL FOREIGN MATTER OR DIRT SHALL BE REMOVED FROM INSIDE OF PIPE BEFORE IT IS LOWERED INTO ITS POSITION IN THE TRENCH AND SHALL BE KEPT CLEAN BY ACCEPTED MEANS DURING AND AFTER LAYING. CARE SHALL BE TAKEN TO PREVENT DIRT FROM ENTERING THE JOINT SPACE. AT TIMES WHEN PIPE LAYING IS NOT IN PROGRESS THE ENDS OF THE PIPE SHALL BE CLOSED BY ACCEPTED MEANS AND NO TRENCH WATER SHALL BE PERMITTED IN THE PIPE. 25. ALL PVC SANITARY SEWER PIPE AND PVC FORCE MAIN PIPE SHALL BE GREEN IN COLOR. ALL PVC WATER MAIN PIPE SHALL BE BLUE IN COLOR. ALL PVC RELAIMED WATER PIPE SHALL BE PURPLE IN COLOR. 24-HOUR CONTACT: JASON VO, PE CAPITAL PROJECTS MANAGER PHONE: 912-324-9905

IN BARRICADES, IF REQUIRED, SHALL BE INSTALLED PRIOR TO ANY CLEARING	
MAINTAINED UNTIL INSTRUCTED BY THE OWNER OR ENGINEER TO REMOVE THEM.	

BRUNSWICK-GLYNN JOINT WATER & SEWER COMMISSION **PLANNING & CONSTRUCTION DIVISION** PHONE: 912-261-7126

$\bullet$	BENCHMARK
$\bigcirc$	BUSH
0	COMPUTED POINT (NO MONUMENT)
	CONC. MONUMENT FOUND
$\bigcirc$	CURB INLET MANHOLE
	EVERGREEN TREE
	ELECTRIC METER
	FIRE HYDRANT
	FLOOD LIGHT
	GRATE INLET
(	GUY WIRE
•	IRON REBAR FOUND
۲	IRON PIPE FOUND
$\bigcirc$	IRON REBAR SET 5/8"
$\dot{\mathbf{x}}$	LIGHT POLE
	MAIL BOX
2 K	POST Oak tree
	PALM TREE
Ø	POWER POLE
	STORM DRAINAGE MANHOLE
	SIGN
$\bullet$	SANITARY MANHOLE
$\bigcirc$	TELEPHONE BOX
$\oslash$	TRAFFIC SWITCH BOX
$\bigcirc$	WATER MANHOLE
	WATER METER
	WATER VALVE
LAO	laurel oak (size as noted)
LO	live oak (size as noted)
PM	PALM (SIZE AS NOTED)
PN	PINE (SIZE AS NOTED)
· · · · · · · · · · · · · · · · · · ·	WETLANDS

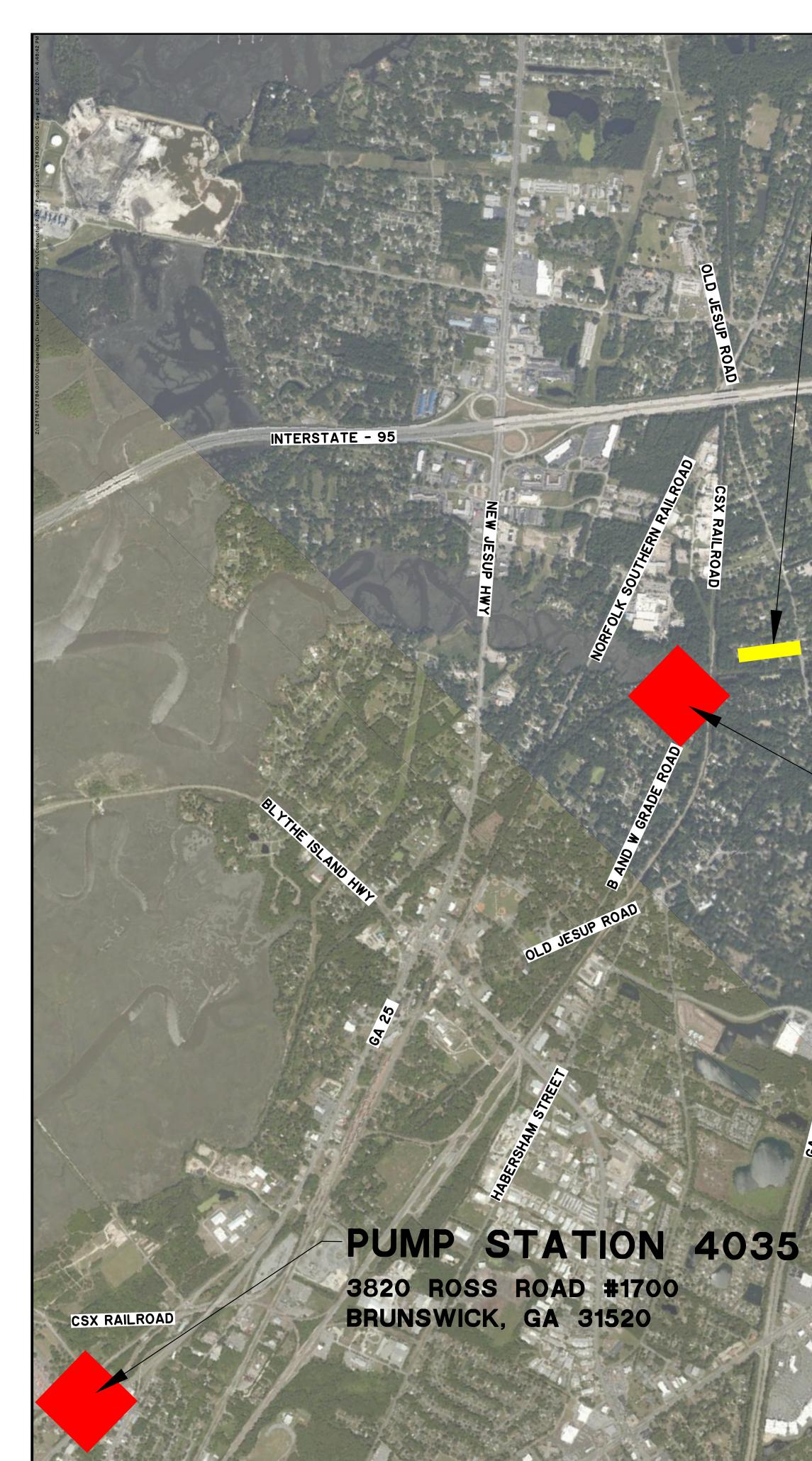
LEGEND:



STATE LAW REQUIRES 72 HRS. NOTICE 1-800-282-7411

Know what's below. Call before you dig.

AUREL OAK (SIZE AS NOTED) IVE OAK (SIZE AS NOTED) PALM (SIZE AS NOTED) PINE (SIZE AS NOTED)



## DIVISION III-PROPOSED FORCEMAIN AND/OR GRAVITY (BY OTHERS)

33.22

GA-

PUMP STATION 4036 1253 B AND W GRADE ROAD # 1700 BRUNSWICK, GA 31520

CANAL ROAD

DARIEN HW

GLYNCO PKWY

INTERSTATE



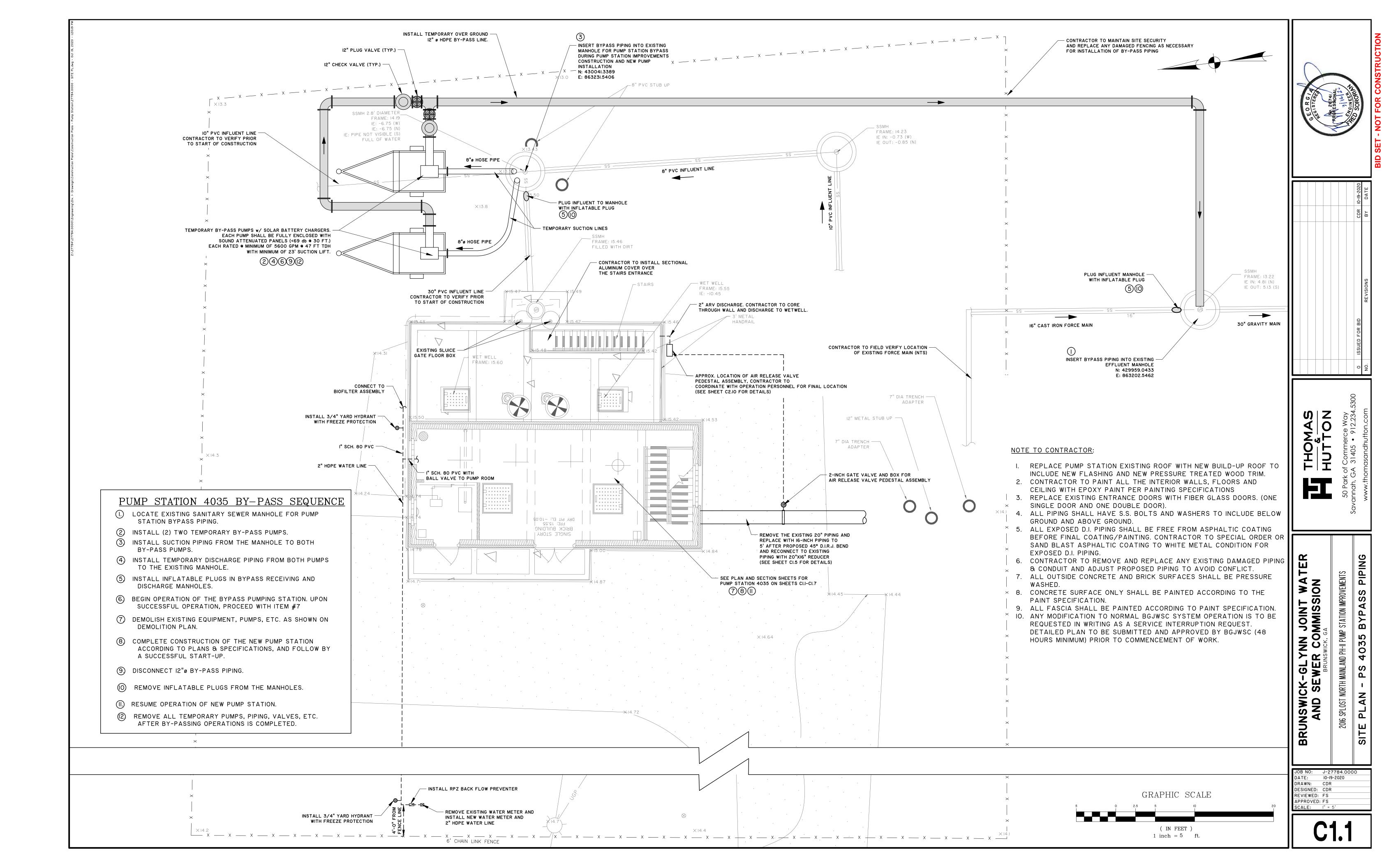


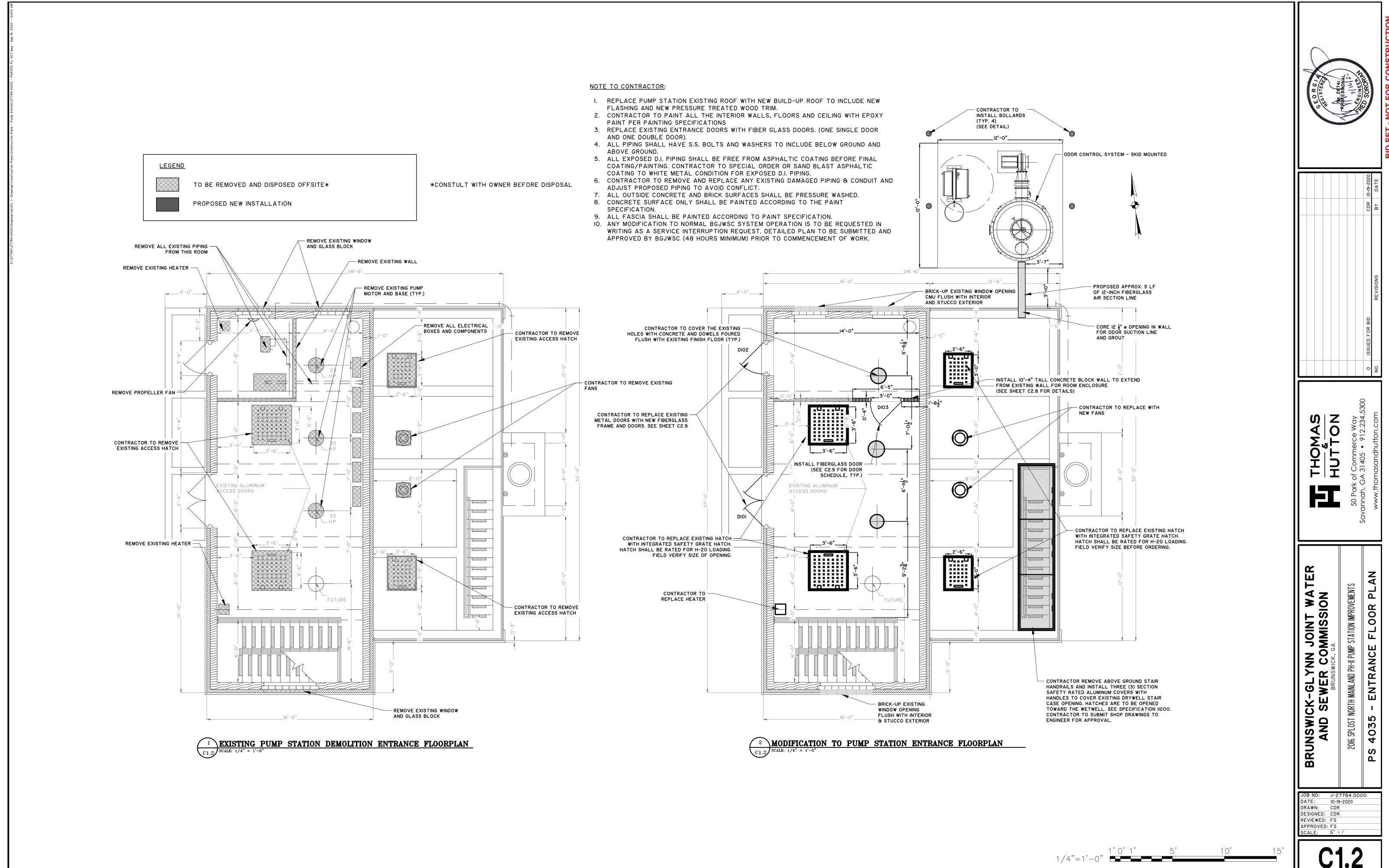
HARRY DRIGGERS BLVD

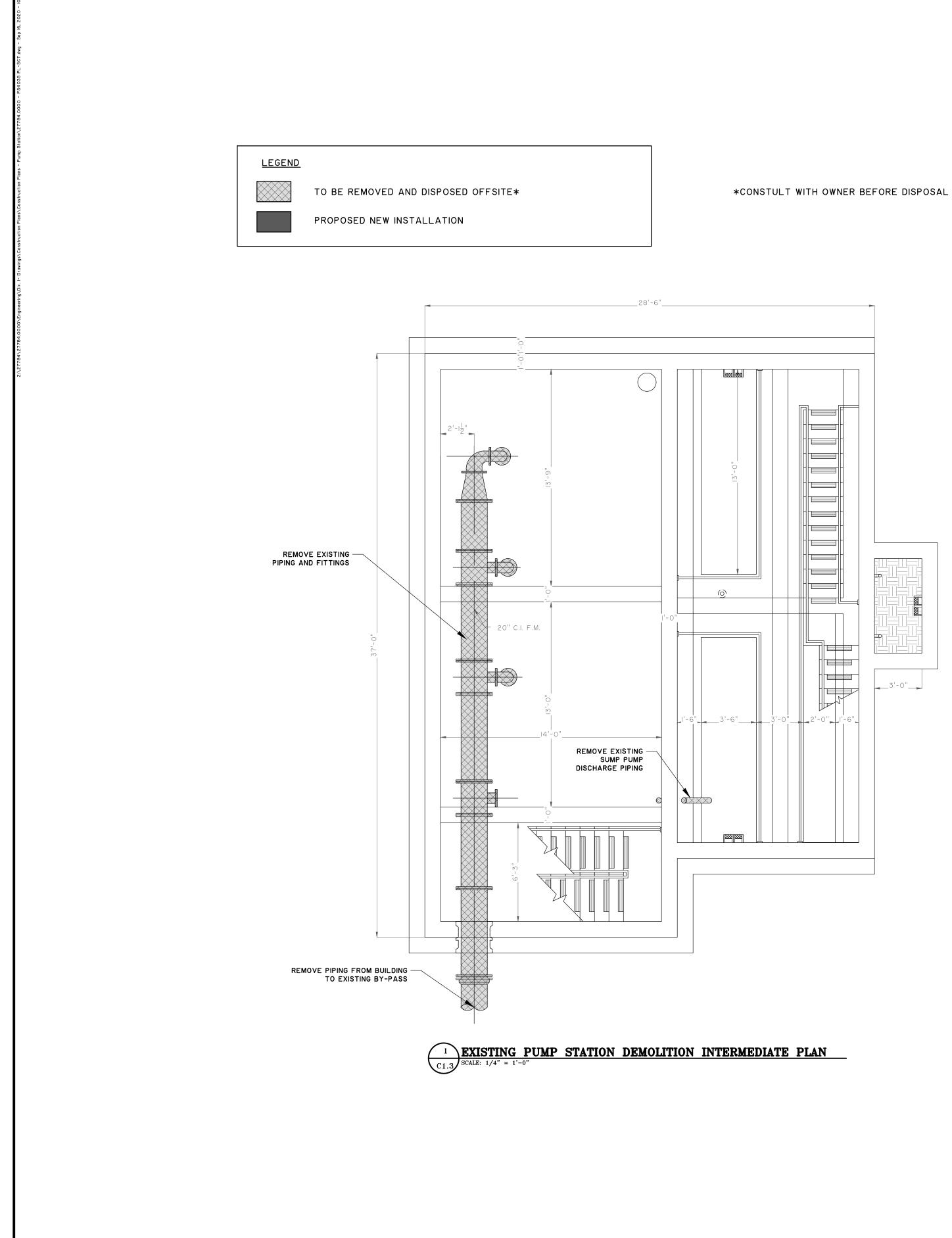
MEMORIAL DRIVE

GRAPHIC SCALE

( IN FEET ) 1 inch = 1000 ft.

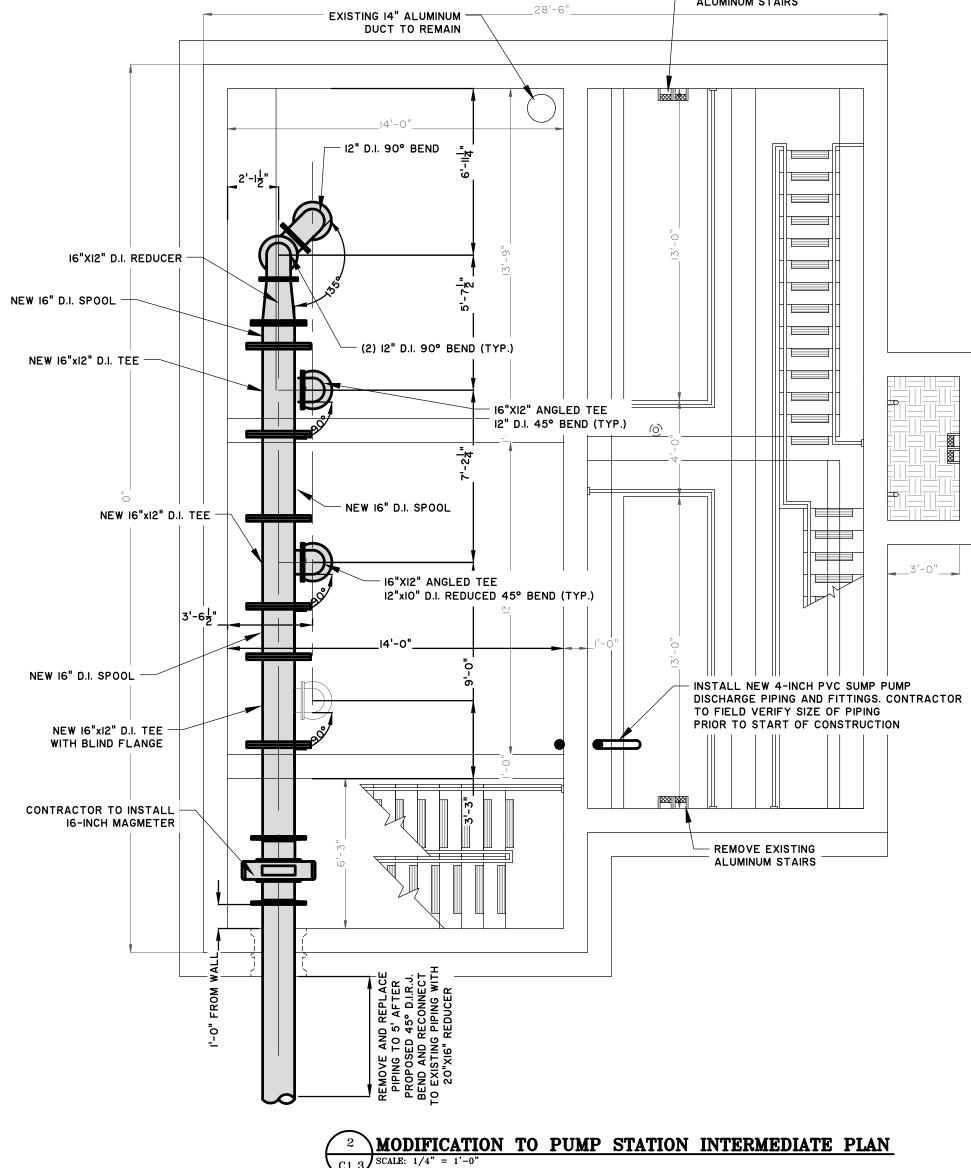






NOTE TO CONTRACTOR:

- I. REPLACE PUMP STATION EXISTING ROOF WITH NEW BUILD-UP ROOF TO INCLUDE NEW FLASHING AND NEW PRESSURE TREATED WOOD TRIM.
- 2. CONTRACTOR TO PAINT ALL THE INTERIOR WALLS, FLOORS AND CEILING WITH EPOXY PAINT PER PAINTING SPECIFICATIONS 3. REPLACE EXISTING ENTRANCE DOORS WITH FIBER GLASS DOORS. (ONE SINGLE DOOR AND ONE DOUBLE DOOR).
- 4. ALL PIPING SHALL HAVE S.S. BOLTS AND WASHERS TO INCLUDE BELOW GROUND AND ABOVE GROUND. 5. ALL EXPOSED D.I. PIPING SHALL BE FREE FROM ASPHALTIC COATING BEFORE FINAL COATING/PAINTING. CONTRACTOR TO
- SPECIAL ORDER OR SAND BLAST ASPHALTIC COATING TO WHITE METAL CONDITION FOR EXPOSED D.I. PIPING. 6. CONTRACTOR TO REMOVE AND REPLACE ANY EXISTING DAMAGED PIPING & CONDUIT AND ADJUST PROPOSED PIPING TO AVOID
- CONFLICT.
- 7. ALL OUTSIDE CONCRETE AND BRICK SURFACES SHALL BE PRESSURE WASHED. 8. CONCRETE SURFACE ONLY SHALL BE PAINTED ACCORDING TO THE PAINT SPECIFICATION.
- 9. ALL FASCIA SHALL BE PAINTED ACCORDING TO PAINT SPECIFICATION. IO. ANY MODIFICATION TO NORMAL BGJWSC SYSTEM OPERATION IS TO BE REQUESTED IN WRITING AS A SERVICE INTERRUPTION
- REQUEST. DETAILED PLAN TO BE SUBMITTED AND APPROVED BY BGJWSC (48 HOURS MINIMUM) PRIOR TO COMMENCEMENT OF WORK.

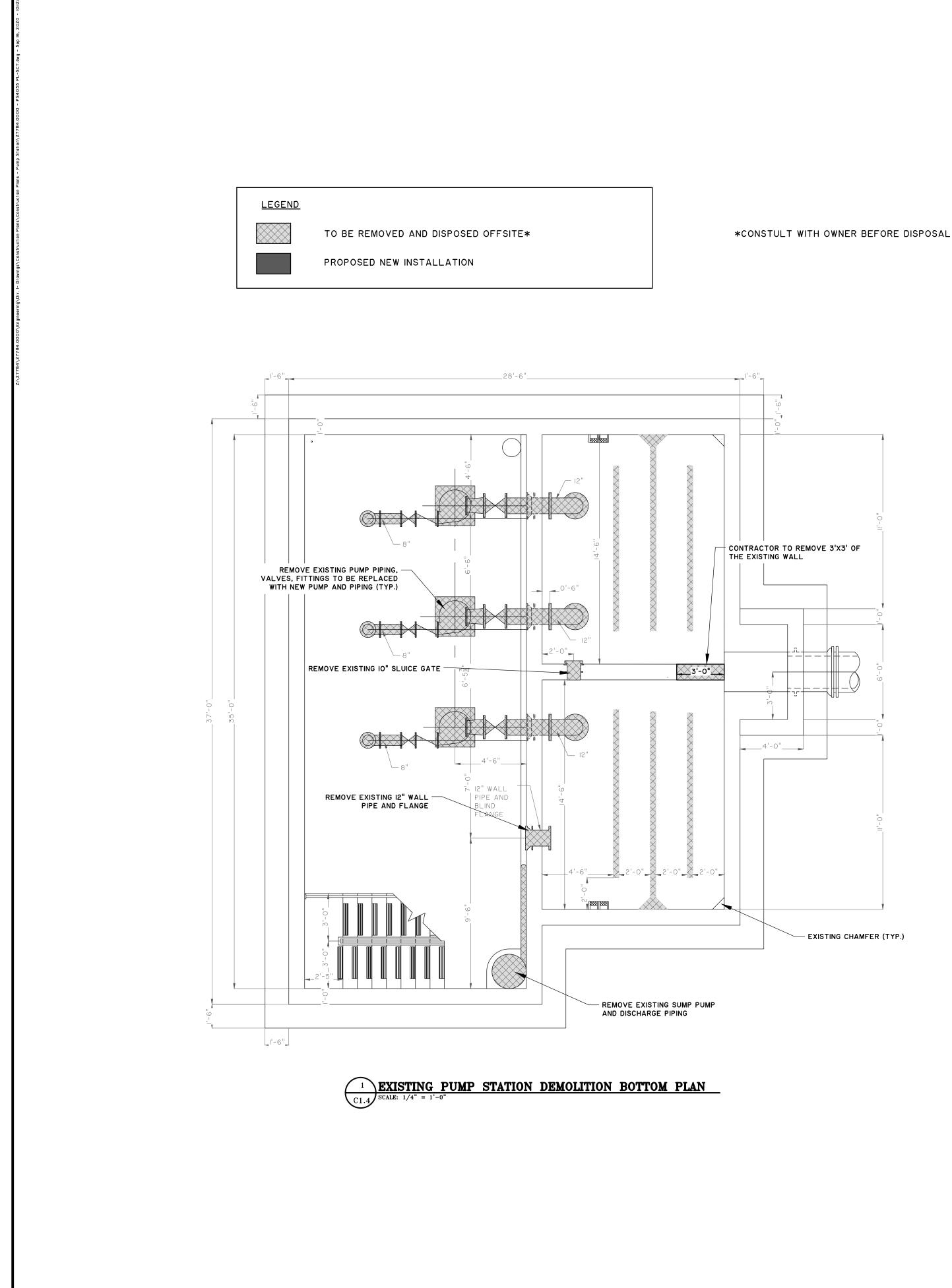


C1.3



## - REMOVE EXISTING ALUMINUM STAIRS

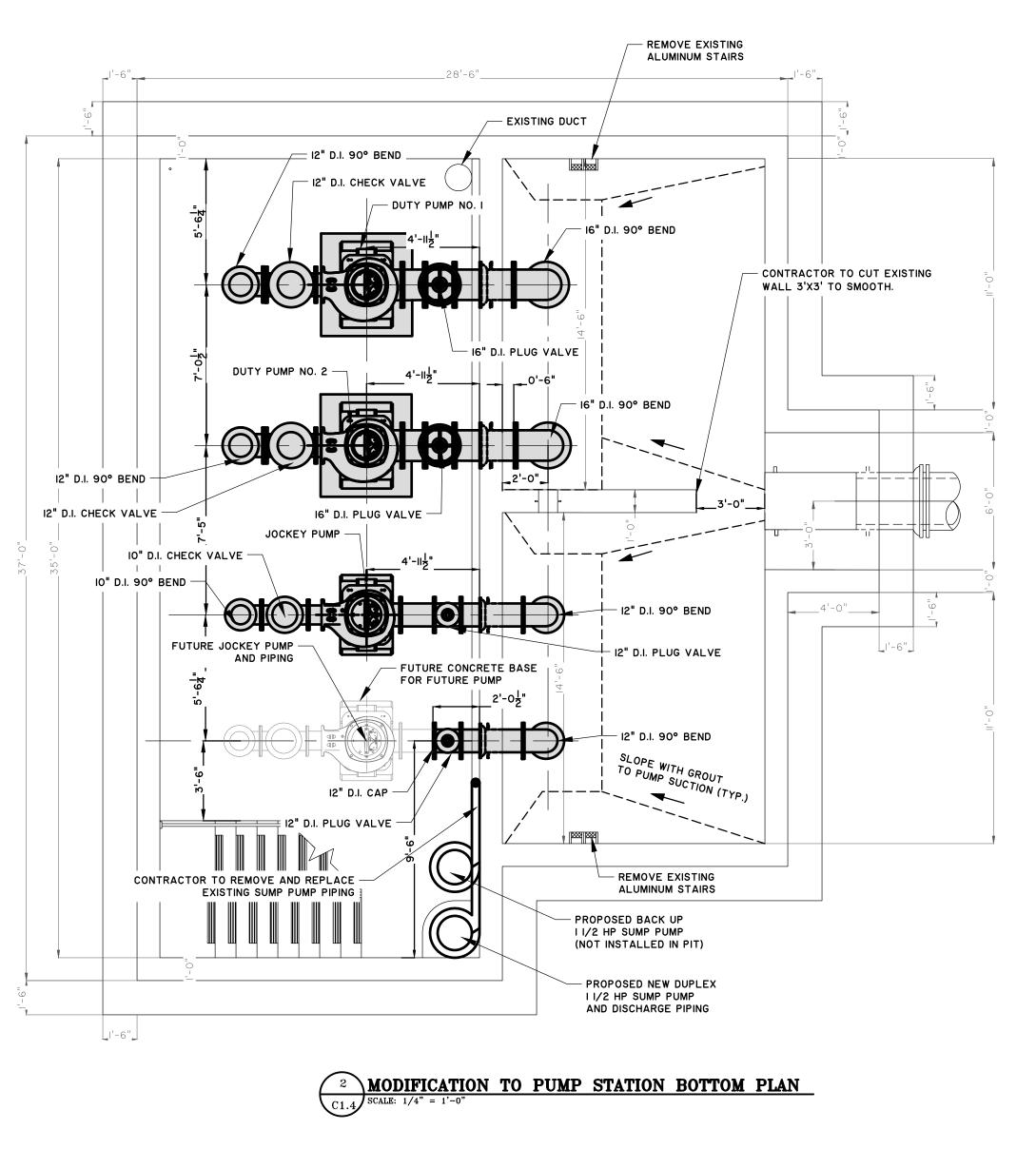
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1/4"=1'-0"			



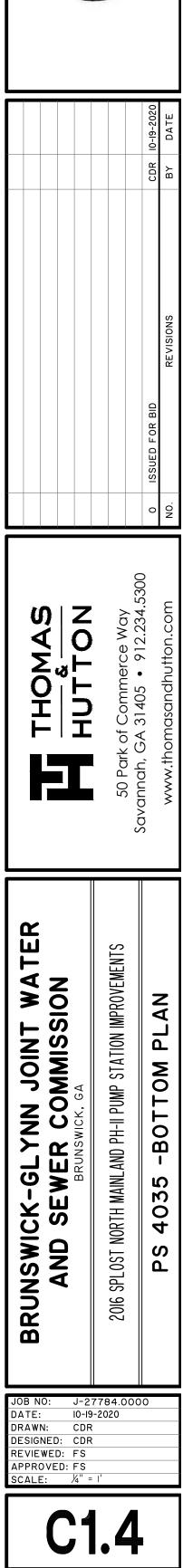


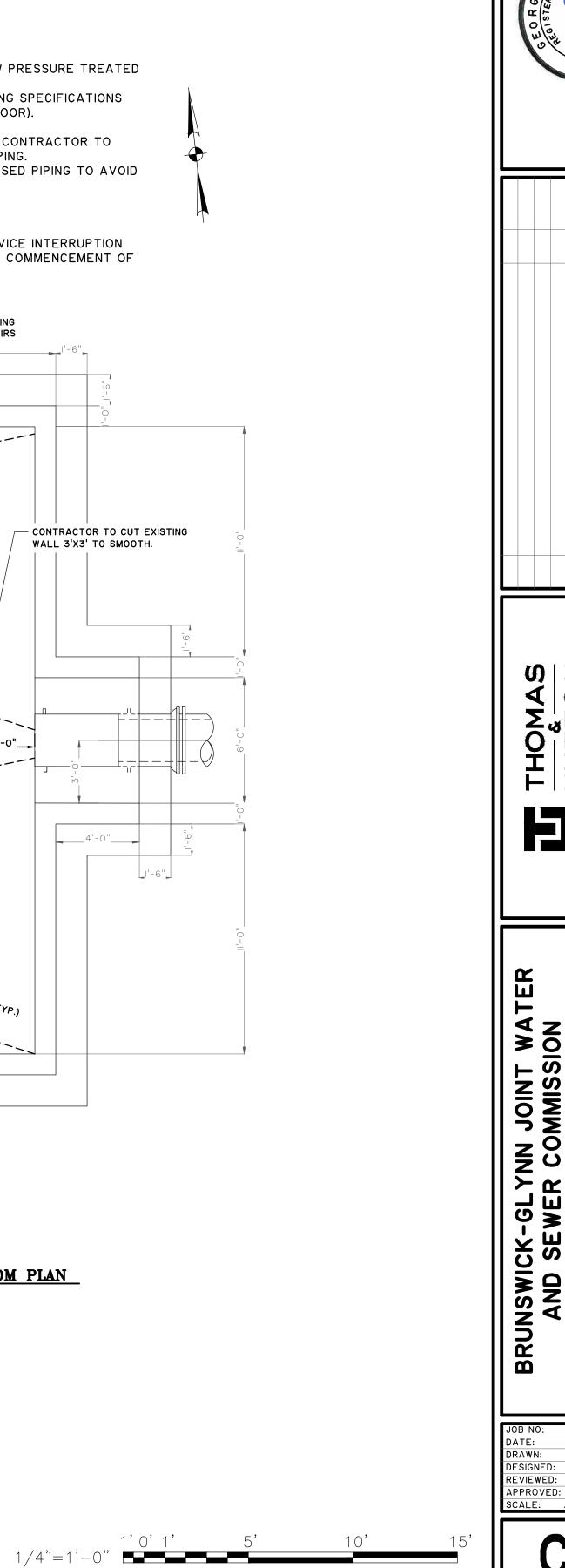
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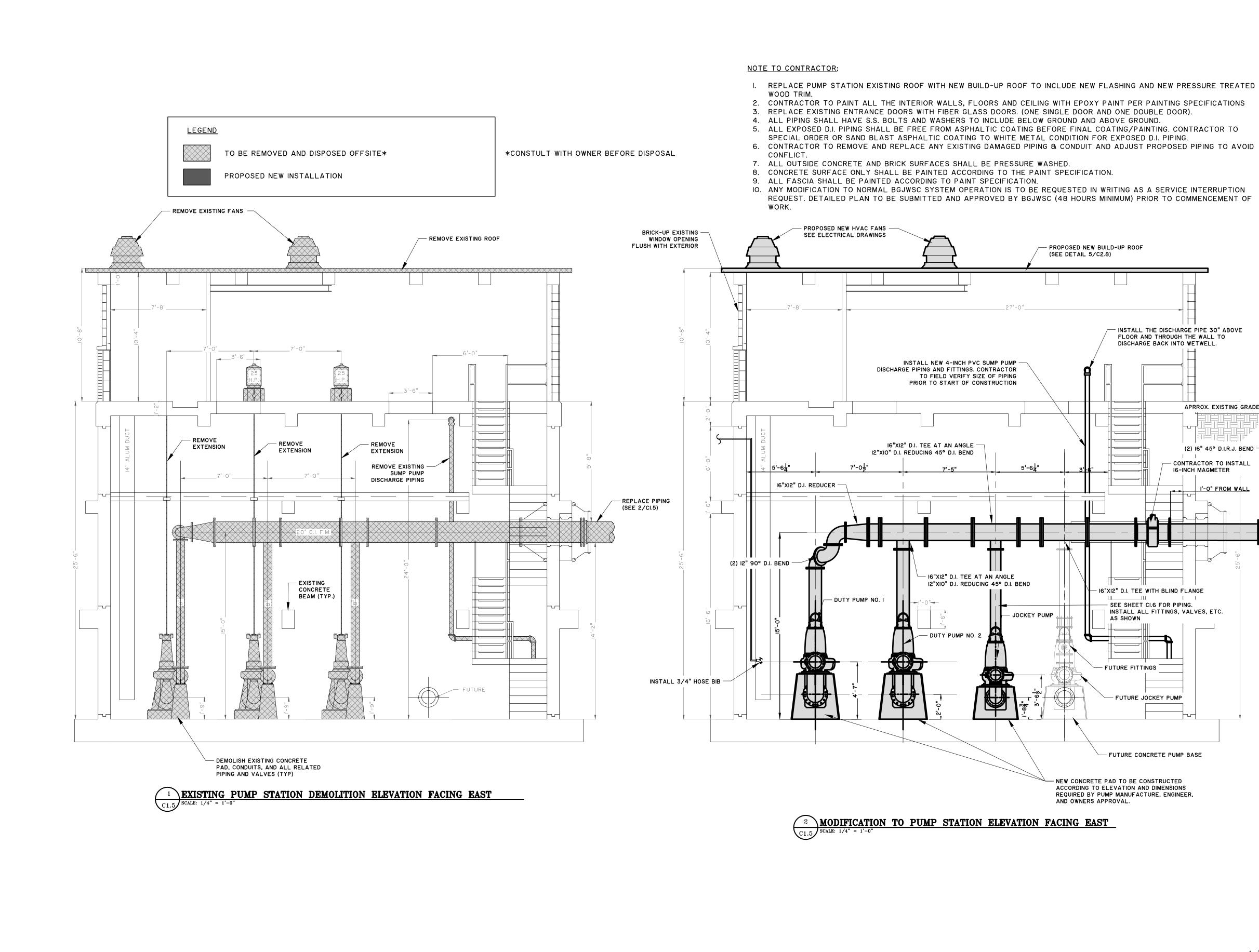
- 2. CONTRACTOR TO PAINT ALL THE INTERIOR WALLS, FLOORS AND CEILING WITH EPOXY PAINT PER PAINTING SPECIFICATIONS
- 3. REPLACE EXISTING ENTRANCE DOORS WITH FIBER GLASS DOORS. (ONE SINGLE DOOR AND ONE DOUBLE DOOR). 4. ALL PIPING SHALL HAVE S.S. BOLTS AND WASHERS TO INCLUDE BELOW GROUND AND ABOVE GROUND.
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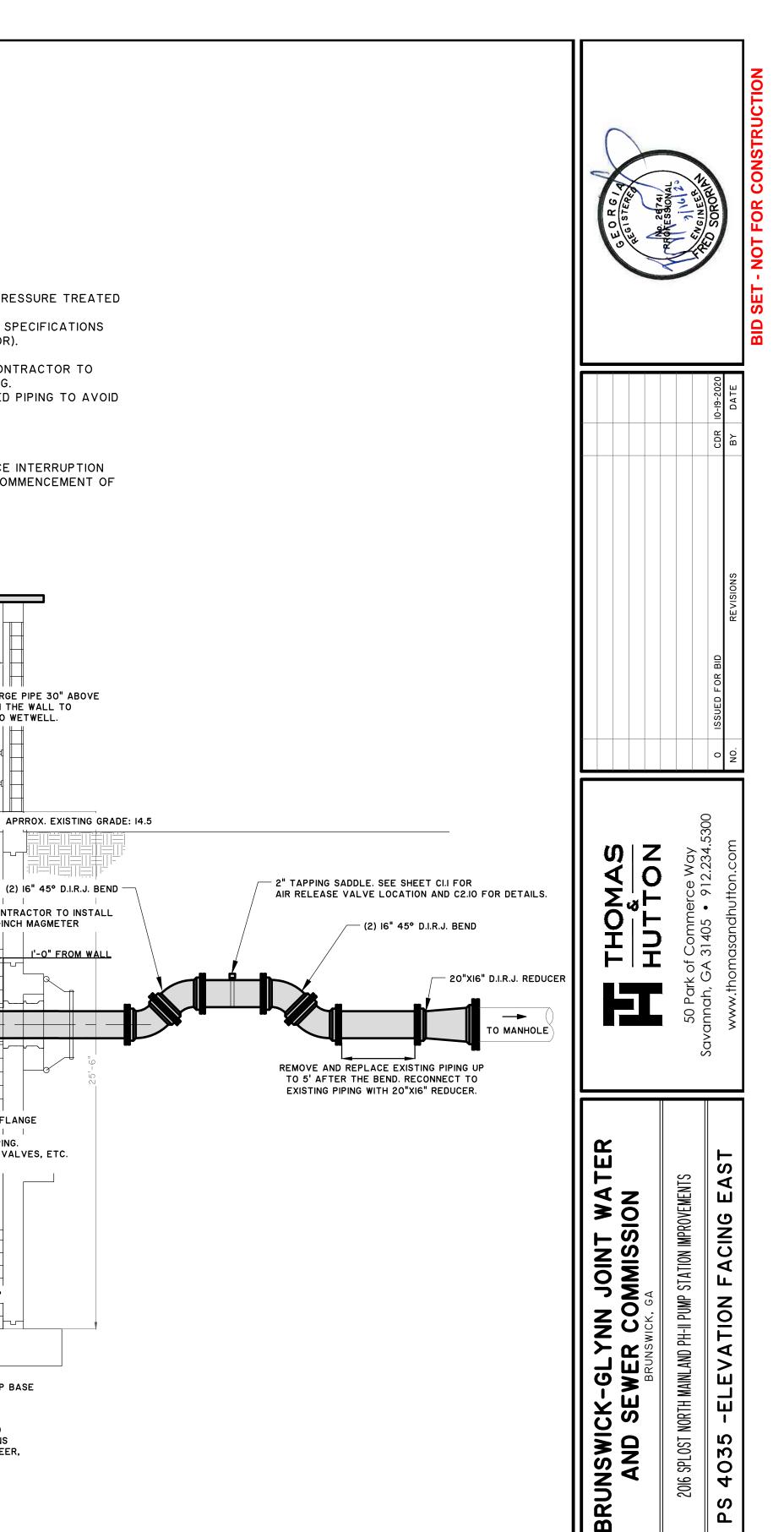












2016 SPLOST A

JOB NO: DATE:

DRAWN:

DESIGNED: CDR REVIEWED: FS APPROVED: FS SCALE: /4" = |'

10-19-2020

1.5

CDR

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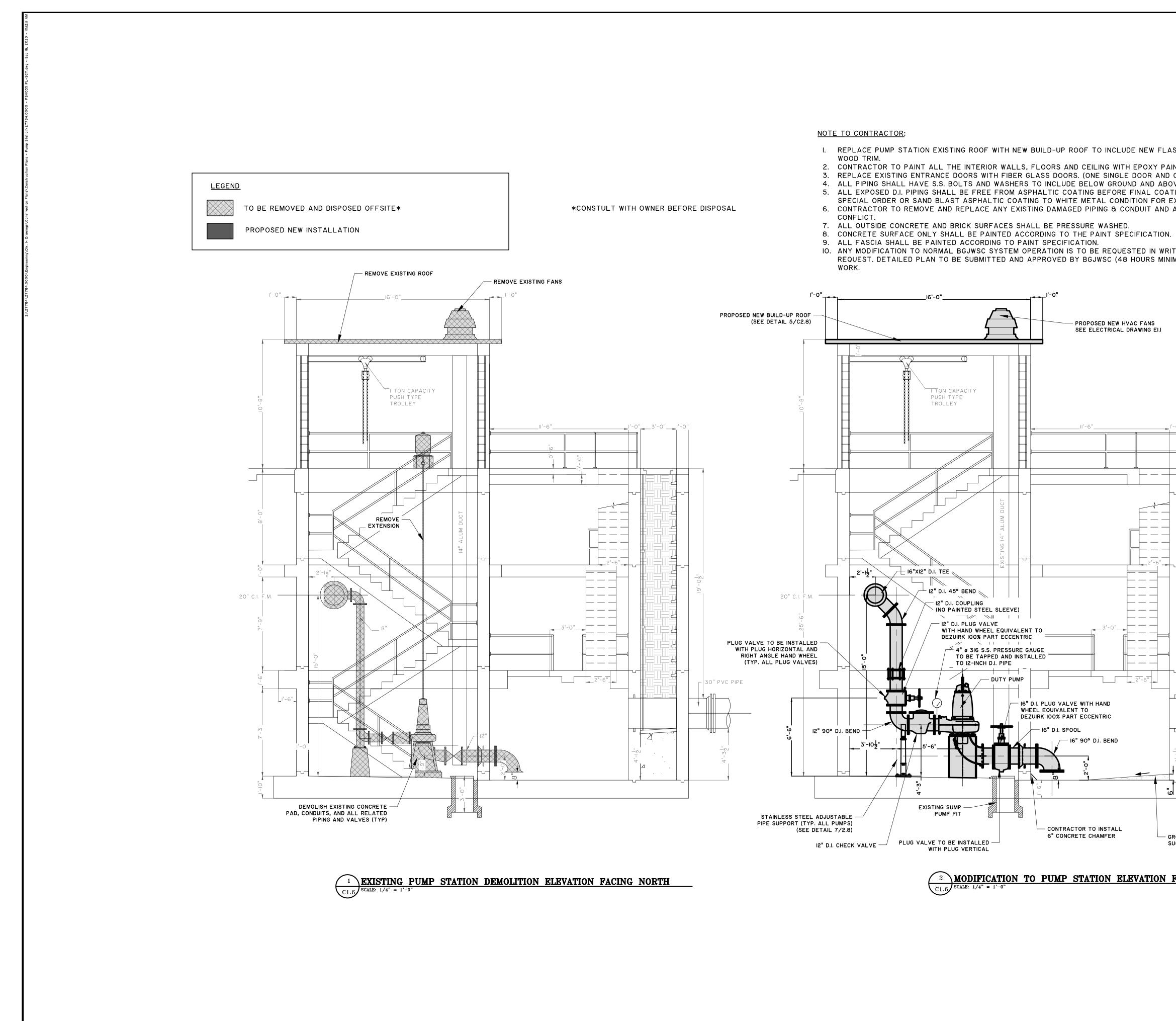
(2) 16" 45° D.I.R.J. BEND —

1/4"=1'-0"

- CONTRACTOR TO INSTALL

I'-O" FROM WALL

**I6-INCH MAGMETER** 

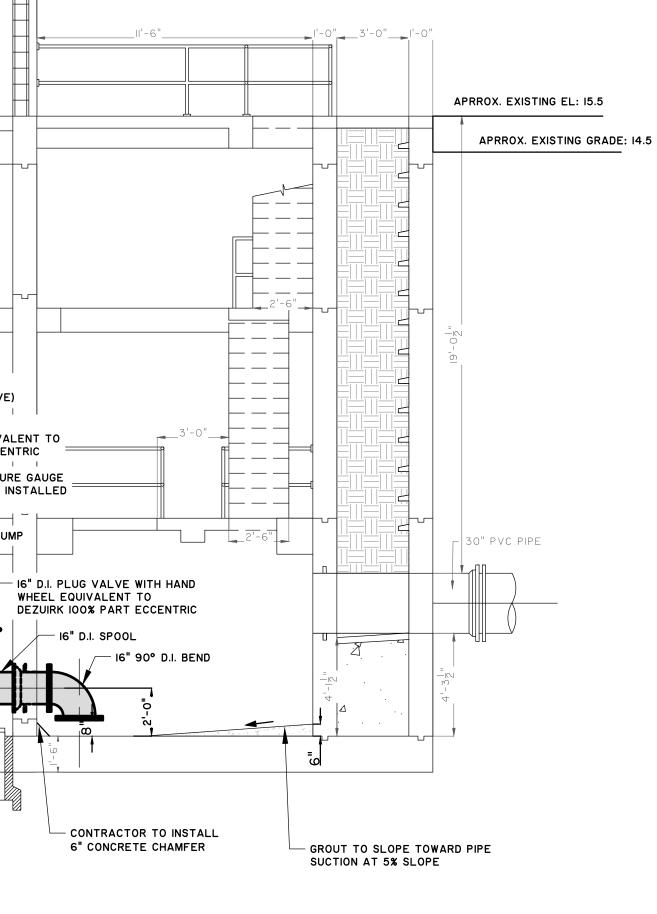


- I. REPLACE PUMP STATION EXISTING ROOF WITH NEW BUILD-UP ROOF TO INCLUDE NEW FLASHING AND NEW PRESSURE TREATED
- 2. CONTRACTOR TO PAINT ALL THE INTERIOR WALLS, FLOORS AND CEILING WITH EPOXY PAINT PER PAINTING SPECIFICATIONS 3. REPLACE EXISTING ENTRANCE DOORS WITH FIBER GLASS DOORS. (ONE SINGLE DOOR AND ONE DOUBLE DOOR).
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- 9. ALL FASCIA SHALL BE PAINTED ACCORDING TO PAINT SPECIFICATION.
- IO. ANY MODIFICATION TO NORMAL BGJWSC SYSTEM OPERATION IS TO BE REQUESTED IN WRITING AS A SERVICE INTERRUPTION REQUEST. DETAILED PLAN TO BE SUBMITTED AND APPROVED BY BGJWSC (48 HOURS MINIMUM) PRIOR TO COMMENCEMENT OF

2 MODIFICATION TO PUMP STATION ELEVATION FACING NORTH C1.6 SCALE: 1/4" = 1'-0"

– 16" D.I. SPOOL

- PROPOSED NEW HVAC FANS SEE ELECTRICAL DRAWING EI.I



GEORG/4	REPORTSONAL 1012	SOROFIL	
		10-19-2020	DATE
		CDR I	ВΥ
		O ISSUED FOR BID	REVISIONS
		0	NO.
	50 Park of Commerce Way		www.thomasandhutton.com
BRUNSWICK-GLYNN JOINT WATER AND SEWER COMMISSION BRUNSWICK, GA	2016 SPLOST NORTH MAINLAND PH-II PUMP STATION IMPROVEMENTS	DE ADZE -FLEVATION FACINE NOBTU	

1'0'1' 1/4"=1'-0"



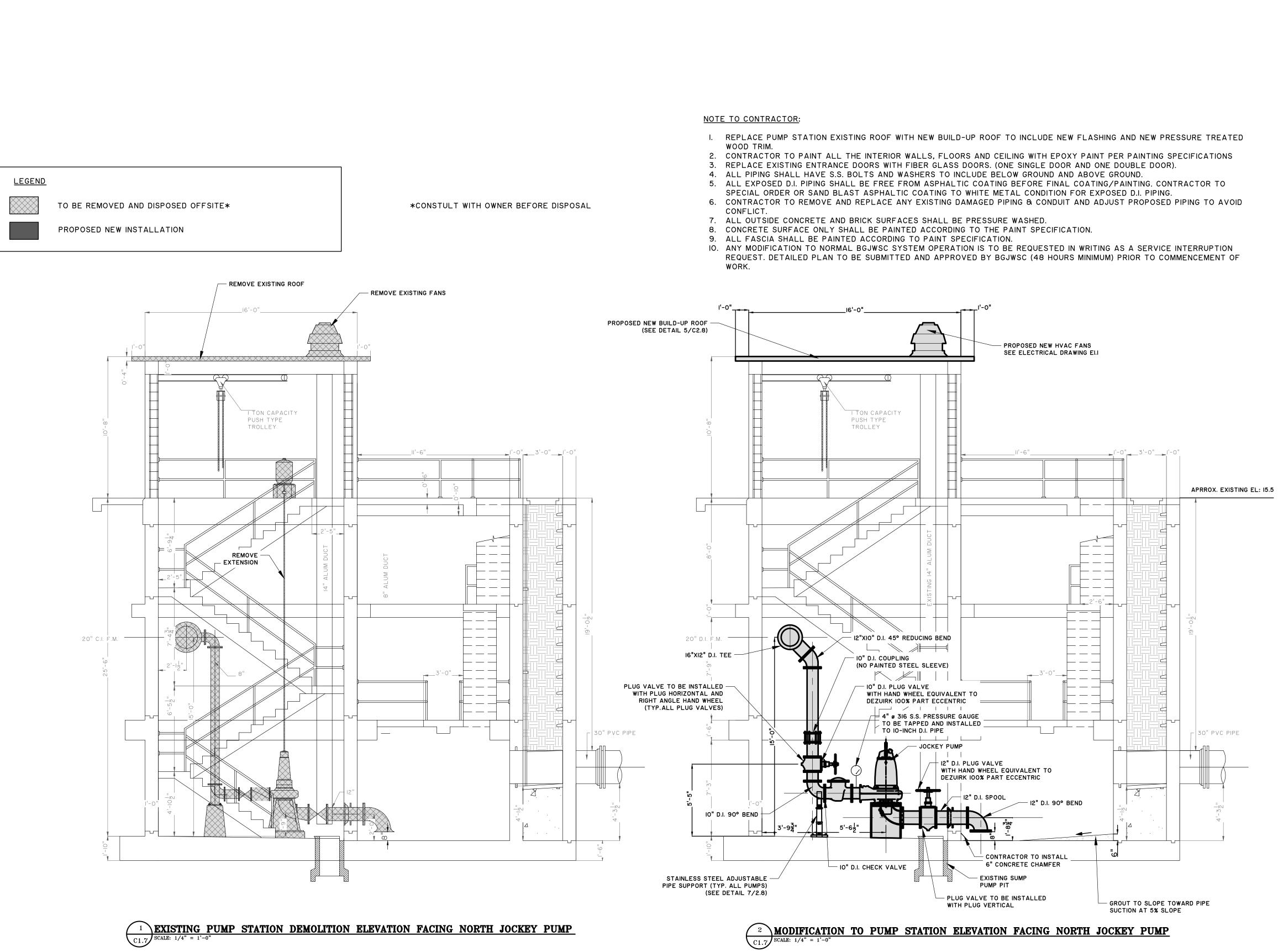




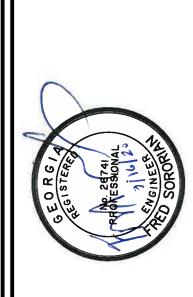
DRAWN:

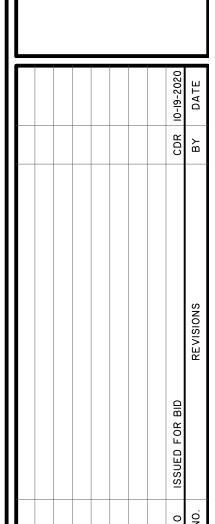
DESIGNED: CDR REVIEWED: FS APPROVED: FS SCALE: /4" = |'

CDR



1/4"=1'-0" **1**' 0' 1'







PUMP

JOCKEY

NORTH

FACING

-ELEVATION

4035

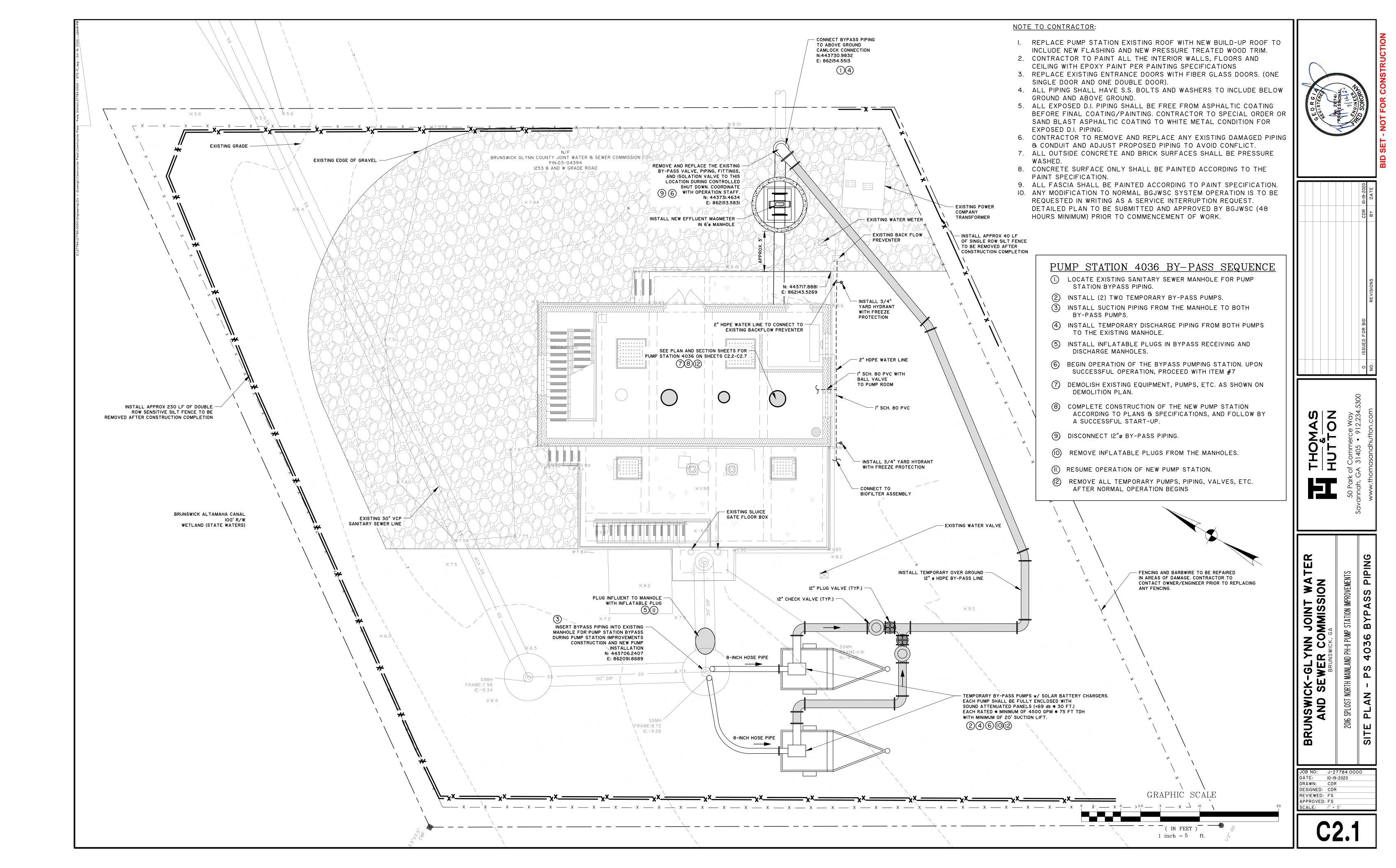
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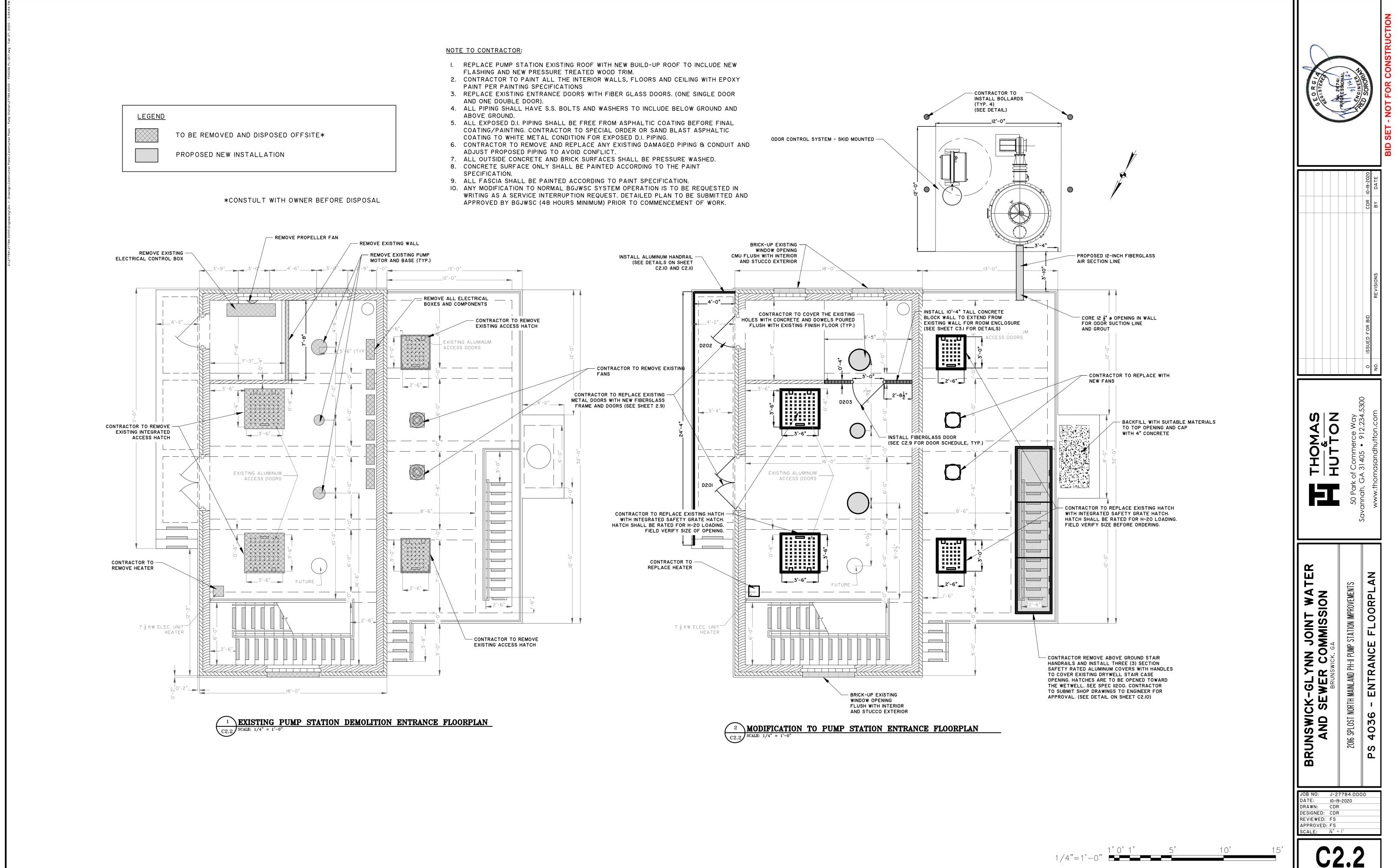


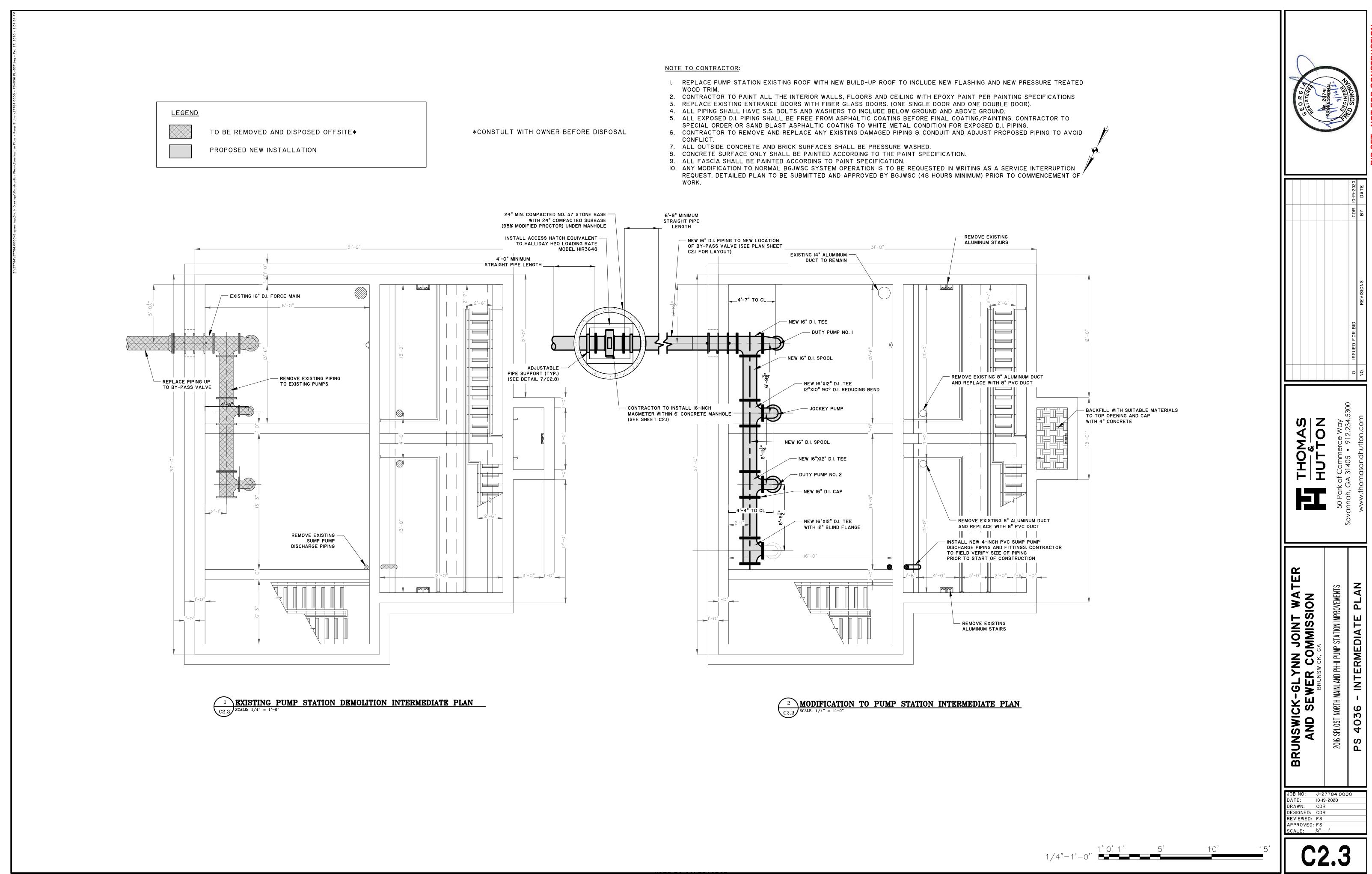
BRUNSWICK-GLYNN JOINT WATER AND SEWER COMMISSION STATION IMPROVEMENTS MN II-HJ NORTH MAINLAND SPLOST 2016

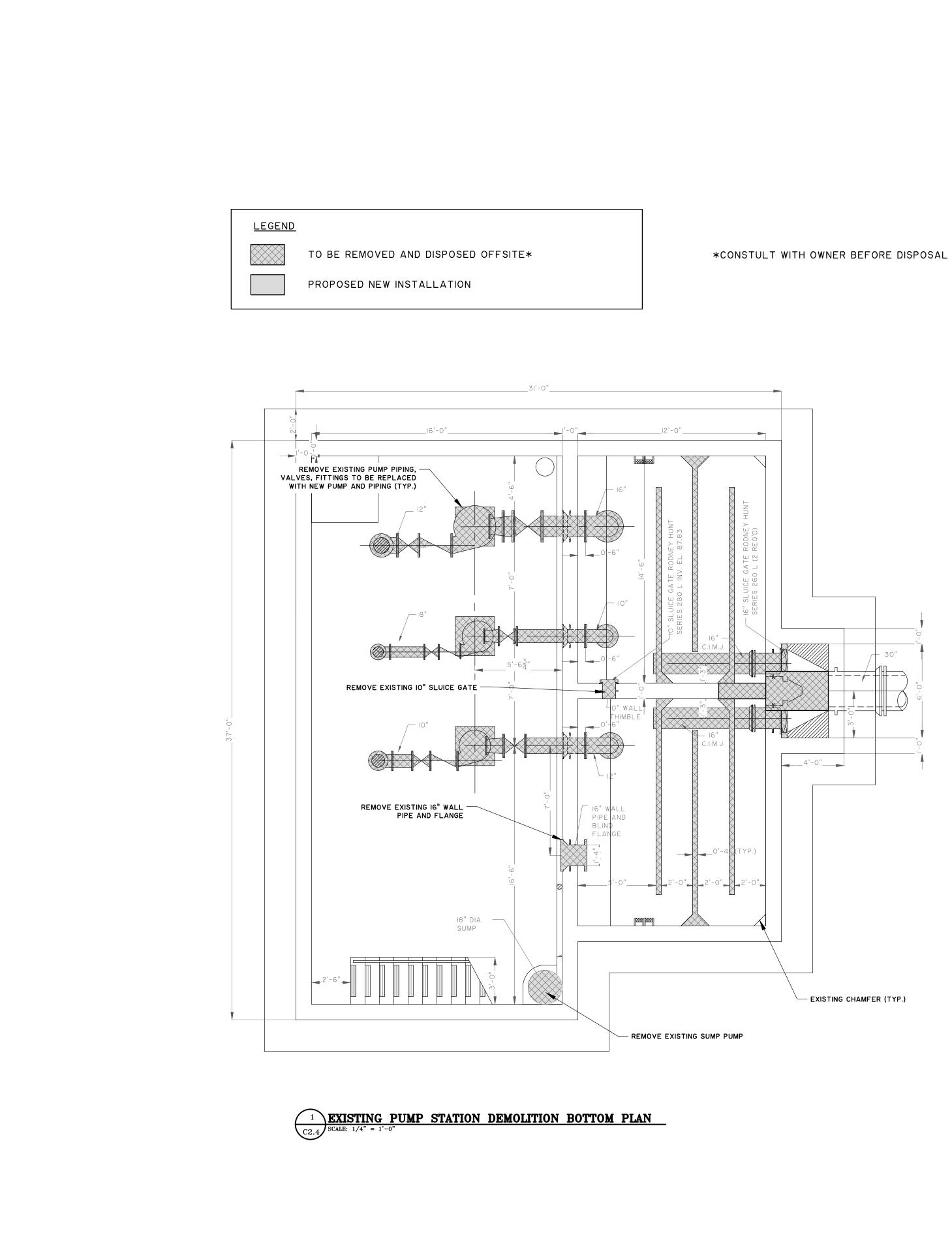
JOB NO DATE: 10-19-2020 DRAWN: CDR DESIGNED: CDR REVIEWED: FS

APPROVED: FS SCALE: 1/4" = 1'  $\frown 4$ 



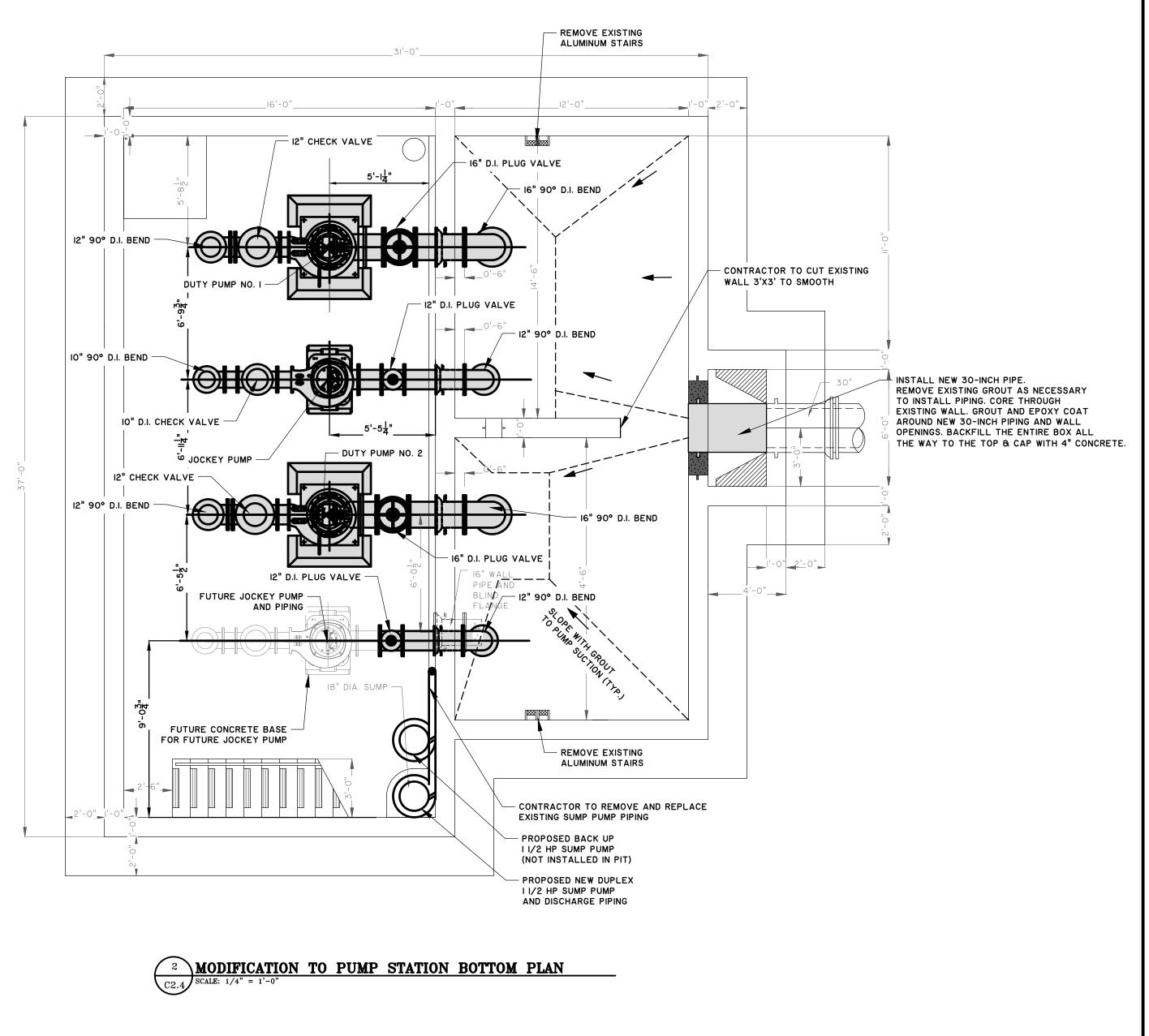






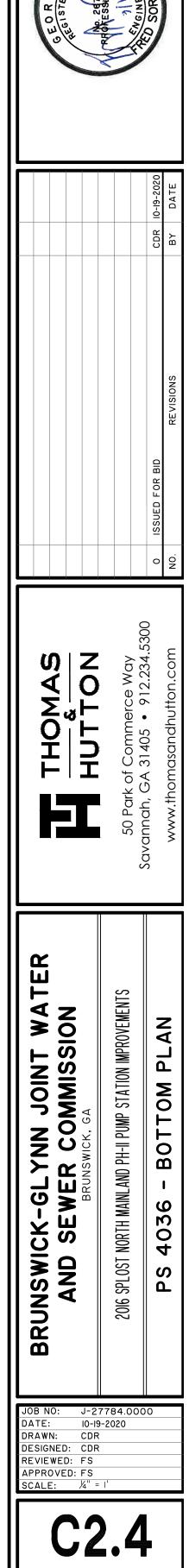
### NOTE TO CONTRACTOR:

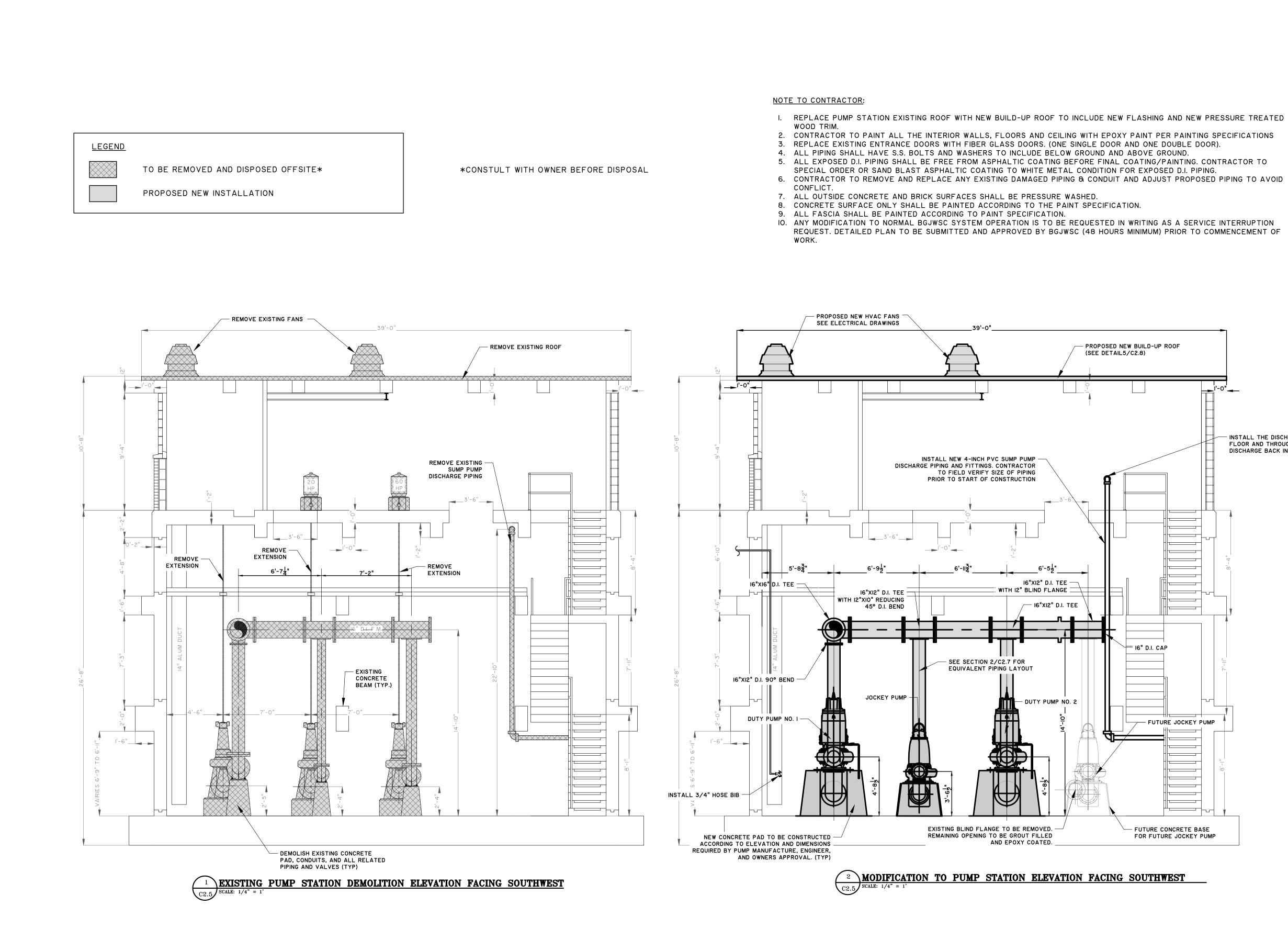
- I. REPLACE PUMP STATION EXISTING ROOF WITH NEW BUILD-UP ROOF TO INCLUDE NEW FLASHING AND NEW PRESSURE TREATED WOOD TRIM.
- CONTRACTOR TO PAINT ALL THE INTERIOR WALLS, FLOORS AND CEILING WITH EPOXY PAINT PER PAINTING SPECIFICATIONS 2. 3. REPLACE EXISTING ENTRANCE DOORS WITH FIBER GLASS DOORS. (ONE SINGLE DOOR AND ONE DOUBLE DOOR).
- 4. ALL PIPING SHALL HAVE S.S. BOLTS AND WASHERS TO INCLUDE BELOW GROUND AND ABOVE GROUND. 5. ALL EXPOSED D.I. PIPING SHALL BE FREE FROM ASPHALTIC COATING BEFORE FINAL COATING/PAINTING. CONTRACTOR TO
- SPECIAL ORDER OR SAND BLAST ASPHALTIC COATING TO WHITE METAL CONDITION FOR EXPOSED D.I. PIPING. 6. CONTRACTOR TO REMOVE AND REPLACE ANY EXISTING DAMAGED PIPING & CONDUIT AND ADJUST PROPOSED PIPING TO AVOID
- CONFLICT. 7. ALL OUTSIDE CONCRETE AND BRICK SURFACES SHALL BE PRESSURE WASHED.
- 8. CONCRETE SURFACE ONLY SHALL BE PAINTED ACCORDING TO THE PAINT SPECIFICATION.
- 9. ALL FASCIA SHALL BE PAINTED ACCORDING TO PAINT SPECIFICATION.
- IO. ANY MODIFICATION TO NORMAL BGJWSC SYSTEM OPERATION IS TO BE REQUESTED IN WRITING AS A SERVICE INTERRUPTION REQUEST. DETAILED PLAN TO BE SUBMITTED AND APPROVED BY BGJWSC (48 HOURS MINIMUM) PRIOR TO COMMENCEMENT OF WORK.



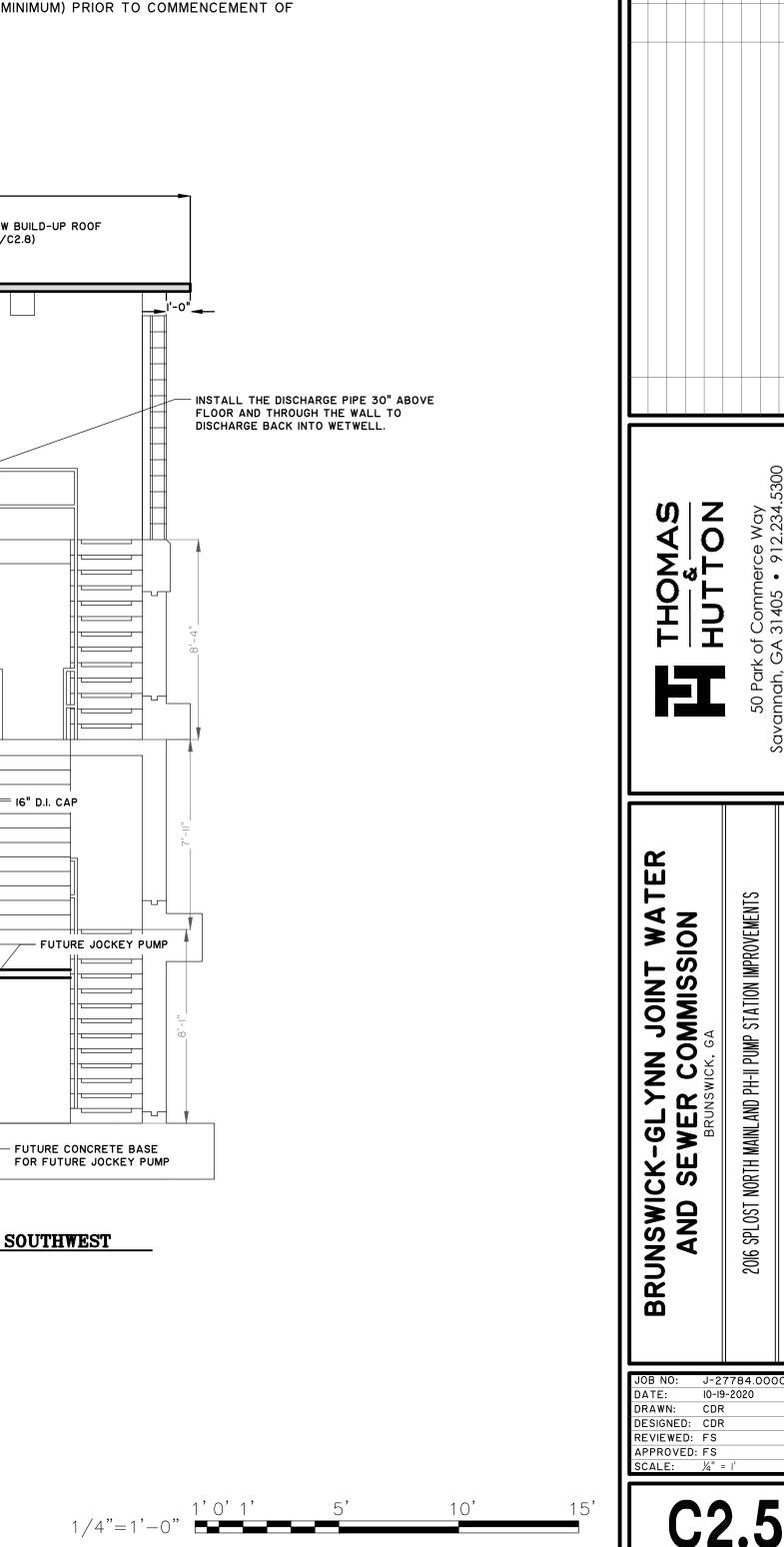
1/4"=1'-0" **1**'0'1'







- REQUEST. DETAILED PLAN TO BE SUBMITTED AND APPROVED BY BGJWSC (48 HOURS MINIMUM) PRIOR TO COMMENCEMENT OF



- PROPOSED NEW BUILD-UP ROOF

+ 16" D.I. CAP

(SEE DETAIL5/C2.8)

6'-5날"

I. REPLACE PUMP STATION EXISTING ROOF WITH NEW BUILD-UP ROOF TO INCLUDE NEW FLASHING AND NEW PRESSURE TREATED

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SOUTH

FACING

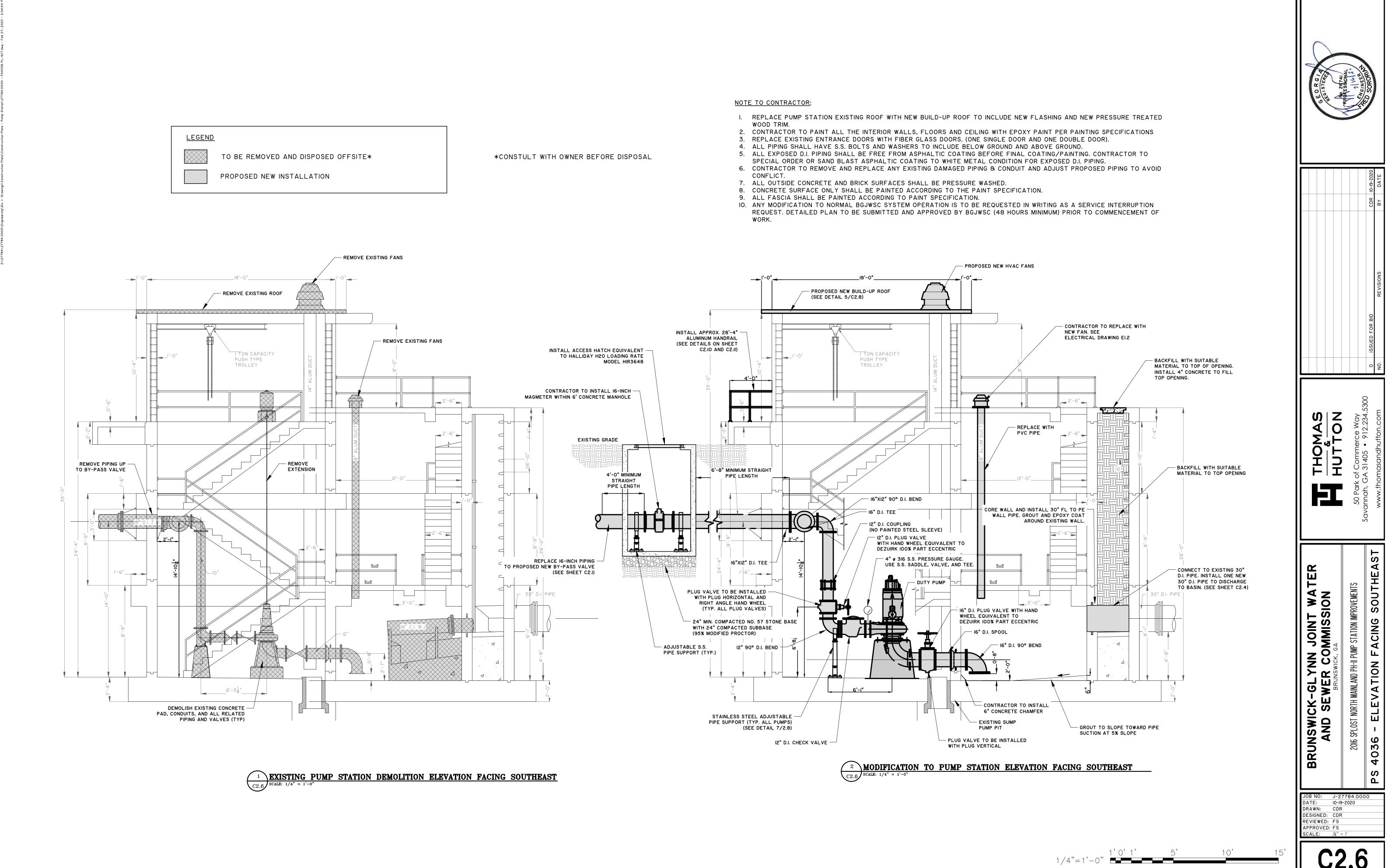
ELEVATION

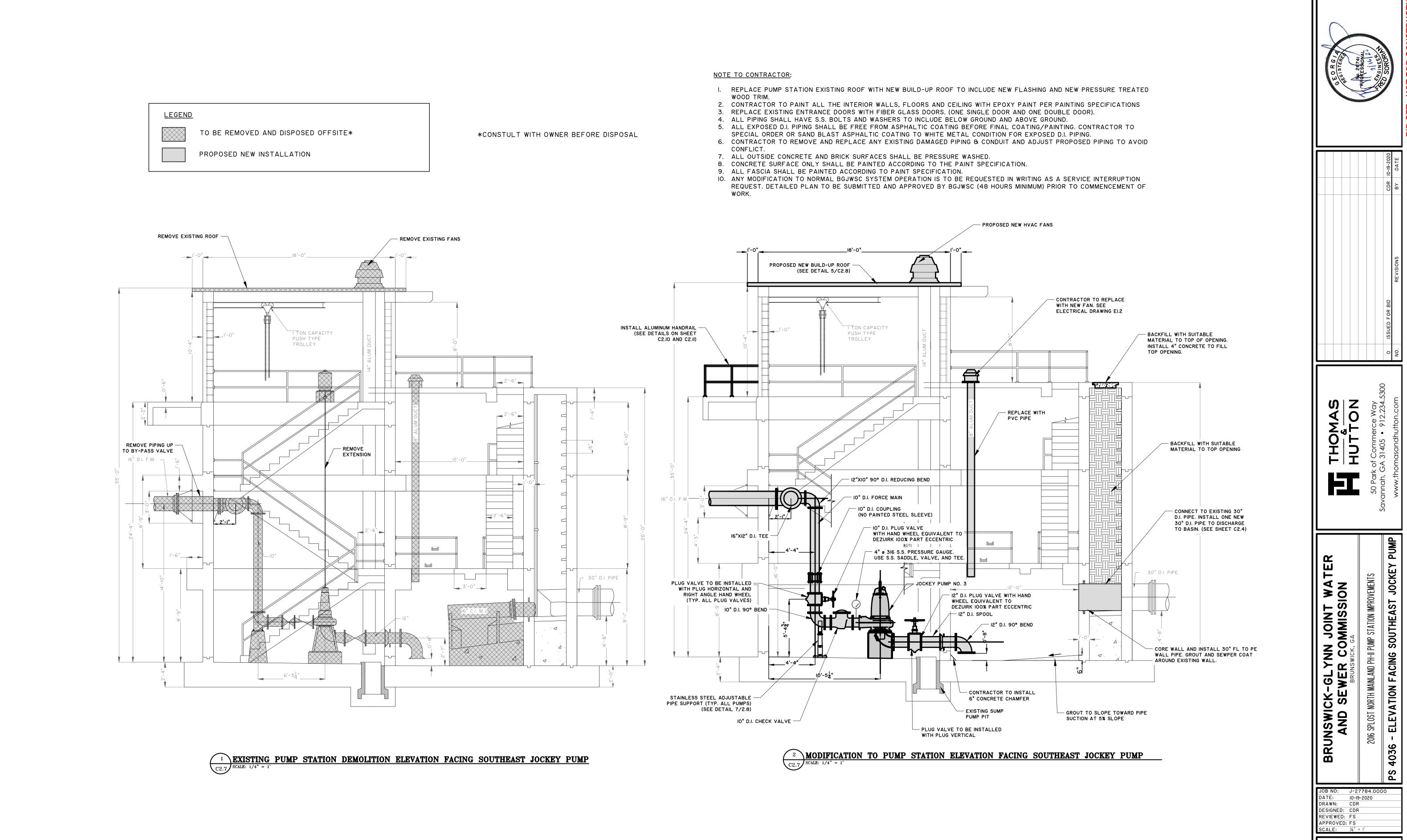
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2016 SPL0ST |

10-19-2020

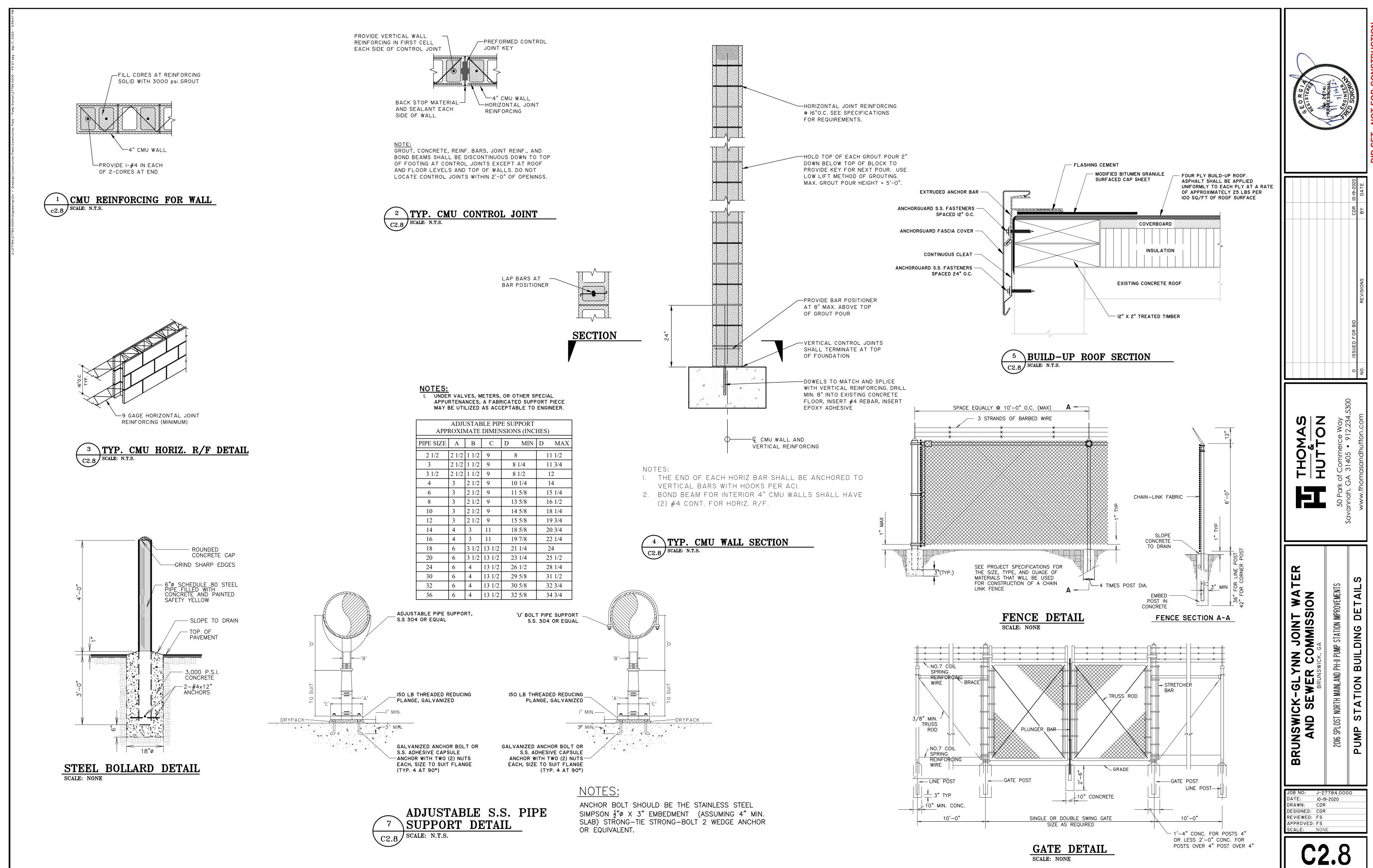
NORTH MAINLAND PH-II PUMP STATION IMPROVEMENTS



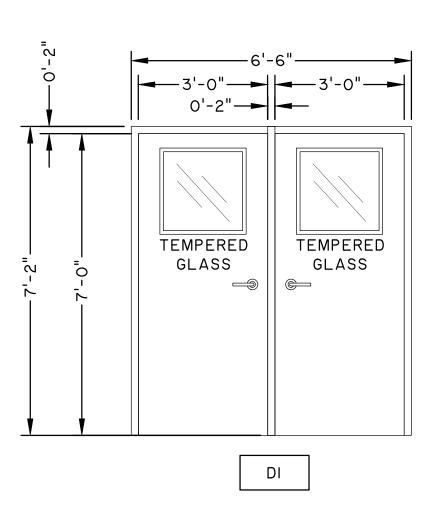


1'0'1'

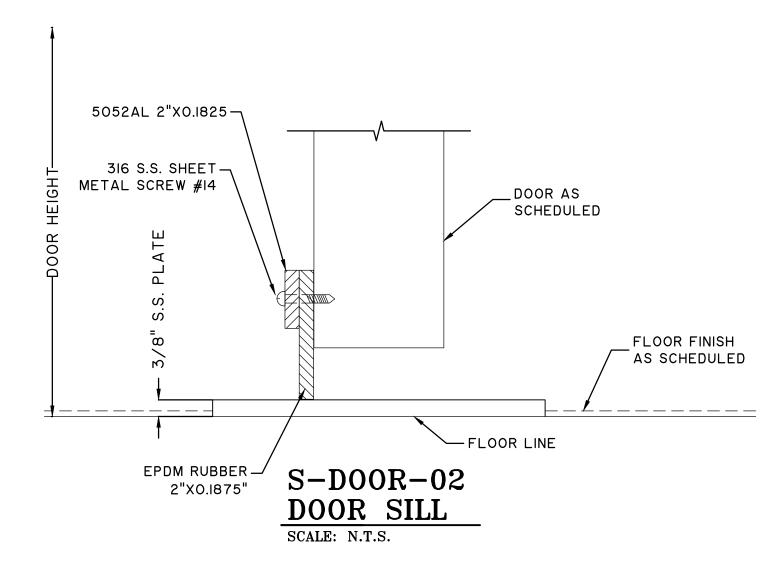
1/4"=1'-0"

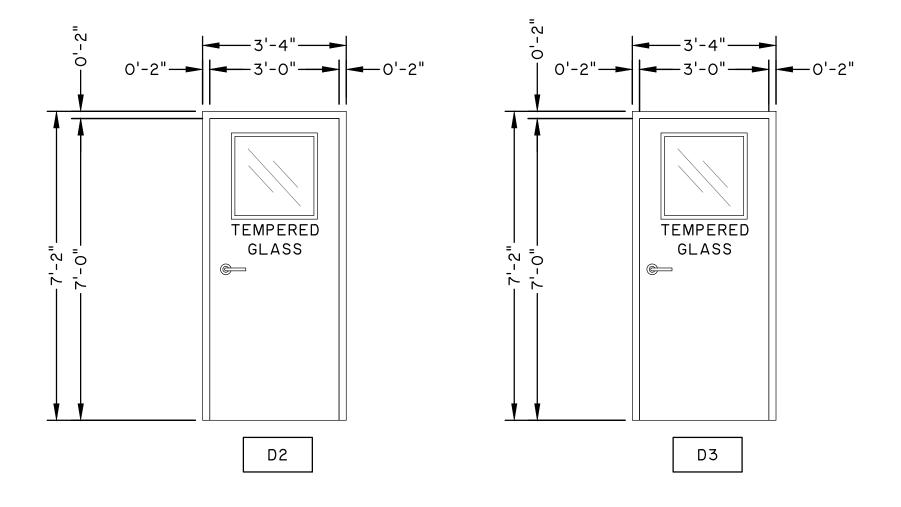


**BID SET - NOT FOR CONSTRUCTION** 

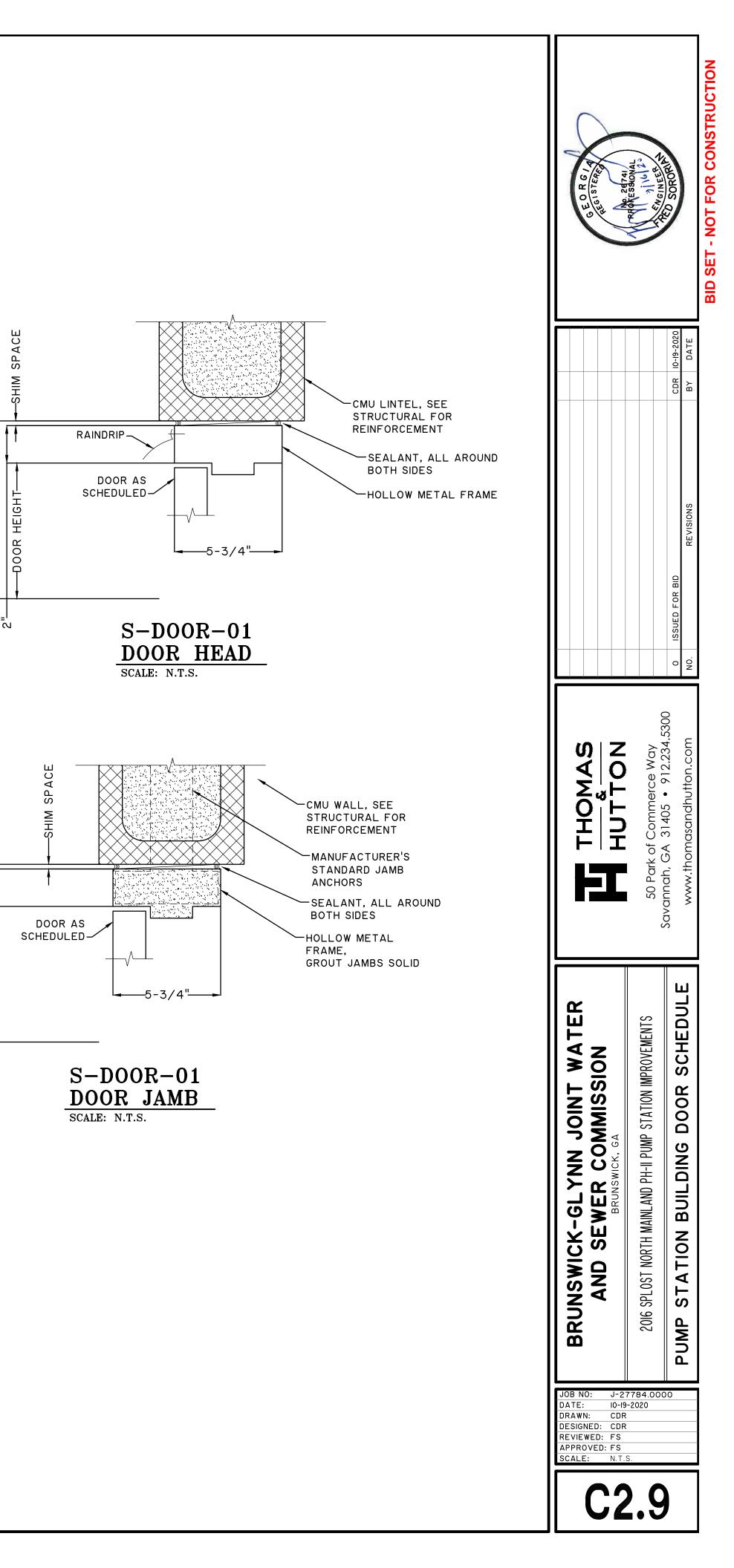


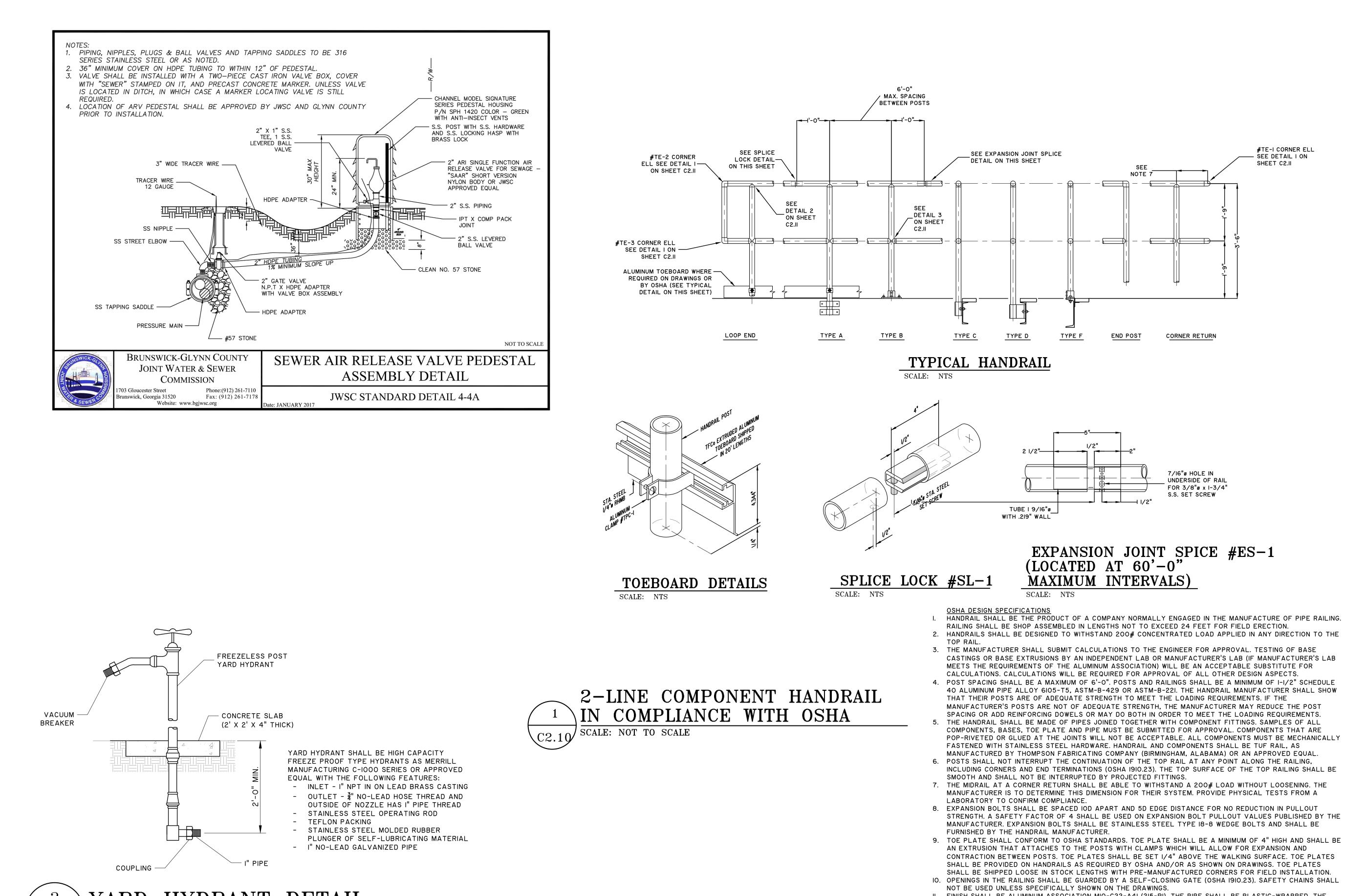
DOOR SCHEDULE															
	DOOR	DOOR		DIMENSI	ONS		I	DOOR		FRAM	£		DOOR I	DETAILS	
PUMP STATION.	NO.	TYPE	WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	GLASS	FIRE LABEL	MATERIAL	FINISH	HEAD	JAMB	SILL	MISC.
PS 4035	DIOI	DI	6'-2"	7'-0"	1-3/4"	FIBERGLASS	PAINT	IMPACT RESISTANT		FIBERGLASS	PAINT	S-DOOR-I	S-DOOR-I	S-DOOR-2	CLOSER
PS 4035	D102	D2	3'-0"	7'-0"	1-3/4"	FIBERGLASS	PAINT	IMPACT RESISTANT		FIBERGLASS	PAINT	S-DOOR-I	S-DOOR-I	S-DOOR-2	CLOSER
PS 4035	D103	D3	3'-0"	7'-0"	1-3/4"	FIBERGLASS	PAINT	IMPACT RESISTANT		FIBERGLASS	PAINT	S-DOOR-I	S-DOOR-I	S-DOOR-2	
PS 4036	D201	DI	6'-2"	7'-0"	1-3/4"	FIBERGLASS	PAINT	IMPACT RESISTANT		FIBERGLASS	PAINT	S-DOOR-I	S-DOOR-I	S-DOOR-2	CLOSER
PS 4036	D202	D2	3'-0"	7'-0"	1-3/4"	FIBERGLASS	PAINT	IMPACT RESISTANT		FIBERGLASS	PAINT	S-DOOR-I	S-DOOR-I	S-DOOR-2	CLOSER
PS 4036	D203	D3	3'-0"	7'-0"	1-3/4"	FIBERGLASS	PAINT	IMPACT RESISTANT		FIBERGLASS	PAINT	S-DOOR-I	S-DOOR-I	S-DOOR-2	

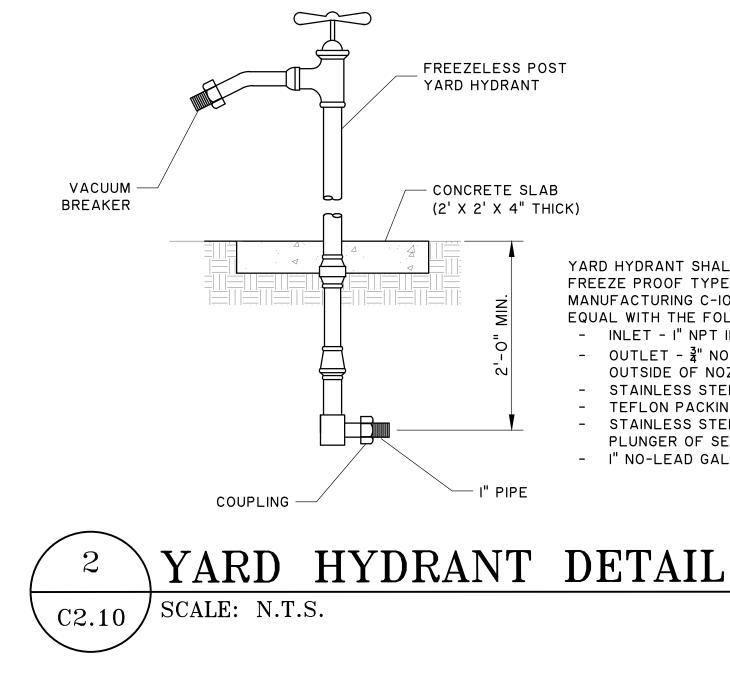




HEIGHT





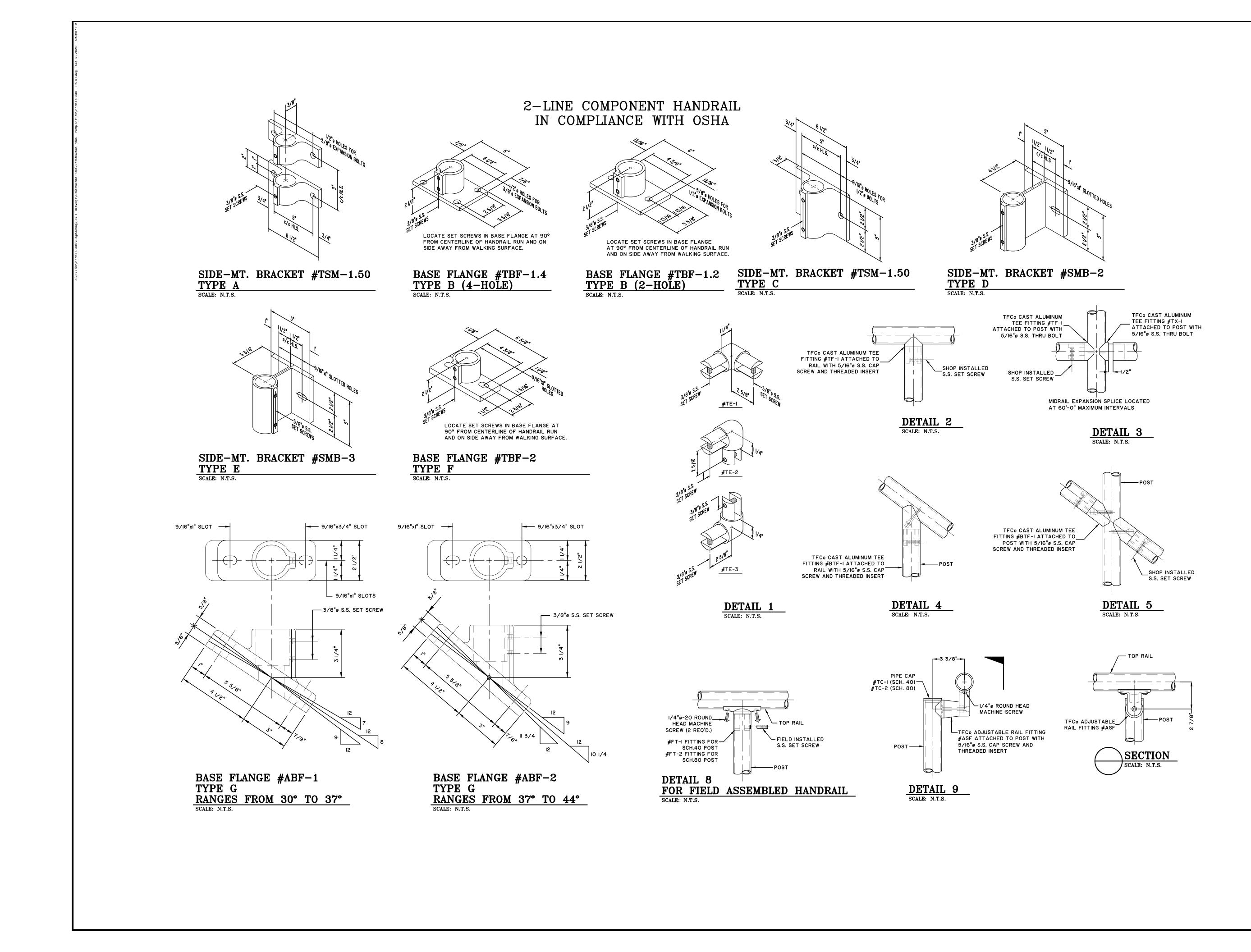


- PLASTIC WRAP IS TO BE REMOVED AFTER ERECTION.

II. FINISH SHALL BE ALUMINUM ASSOCIATION MIO-C22-A4I (215-RI). THE PIPE SHALL BE PLASTIC-WRAPPED. THE

12. ALUMINUM SURFACES IN CONTACT WITH CONCRETE, GROUT OR DISSIMILAR METALS WILL BE PROTECTED WITH A COAT OF BITUMINOUS PAINT, MYLAR ISOLATORS OR OTHER APPROVED MATERIAL.

GEORG/A GEOSTERAL	TRACESSIONAL 11623	SORORU
		2 10-19-2020 DATE
		CDR sions BY
		0 ISSUED FOR BID REVISI NO.
	50 Park of Commerce Way	www.thomasandhutton.com
BRUNSWICK-GLYNN JOINT WATER AND SEWER COMMISSION BRUNSWICK, GA	2016 SPLOST NORTH MAINLAND PH-II PUMP STATION IMPROVEMENTS	PUMP STATION HANDRAIL DETAILS
	7784.000 -2020	0
<b>C2</b>	.1(	)





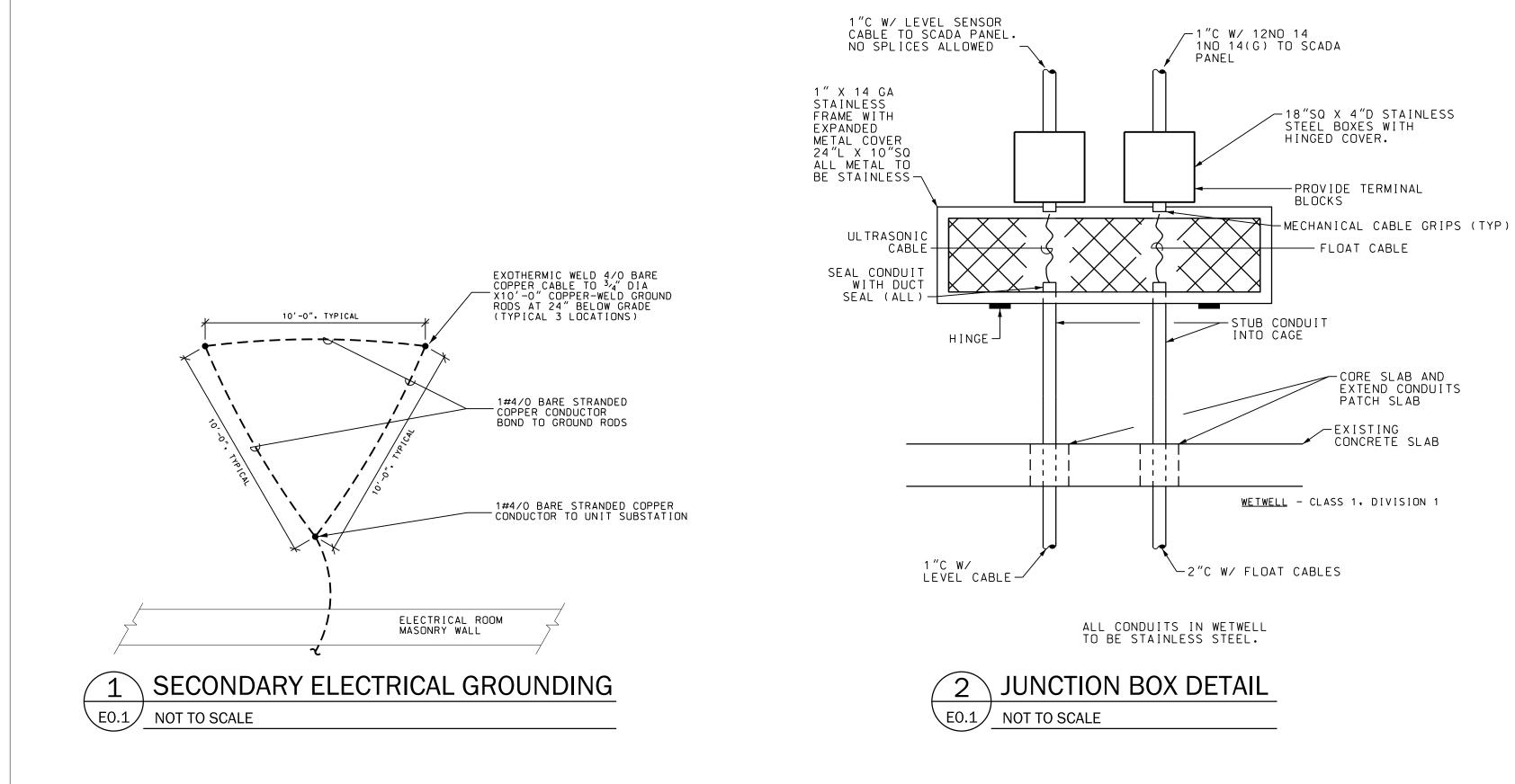
	JOB NO: DATE: DRAWN: DESIGNED: REVIEWED: APPROVED: SCALE:	BRUNSWICK-GLYNN JOINT WATER AND SEWER COMMISSION	THOMAS				GEORG14
2	J-27 IO-I9- CDR CDR FS FS NONE						26741/
		2016 SPLOST NORTH MAINLAND PH-II PUMP STATION IMPROVEMENTS	50 Park of Commerce Way				11112
4	0		30Vannan, GA 31403 • 712.234.3300	0 ISSUED FOR BID		CDR 10-19-2020	
			www.thomasandhutton.com	NO.	REVISIONS	BY DATE	

## LEGEND:

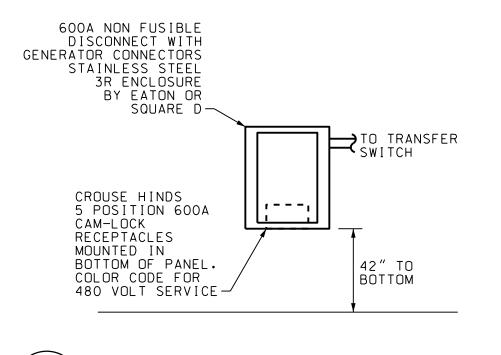
LLGLND	•	9
$\frown$	HOME RUN	G
	EQUIPMENT AS NOTED	G
_^_	CIRCUIT BREAKER	
20A	DUPLEX RECEPTACLE, NEMA 5-20R, TYPE WR	G
WP	WEATHERPROOF	
GF	GROUND TO GROUND ROD SYSTEM GROUND FAULT CIRCUIT INTERRUPTER PROTECTION	G
AIC	INTERRUPTING CAPACITY IN AMPS	G
/\	CONDUIT SYSTEM CONCEALED BELOW GRADE	G
	EXPOSED CONDUIT	
/10/	PUMP MOTOR, HORSEPOWER INDICATED	G
N.T.S.	NOT TO SCALE	0
SP	SURGE PROTECTION DEVICE	G
	DRIVEN GROUND ROD LOCATION	
€→	SERVICE POLE WITH DOWN GUY	
S	SWITCH, 48" UP	
S <sub>3</sub>	THREE WAY SWITCH, 48" AFF	
S <sup>3P</sup>	20A 120/277V 3-WAY TOGGLE SWITCH WITH PILOT LIGHT, 48″ AFF	G
Ю	NEMA 4X STAINLESS STEEL DISCONNECT SWITCH MOUNTED ON EQUIPMENT FRAME, RATINGS AS NOTED ON ONE-LINE	
	ALARM HORN. MOUNT 12' AFF ON BUILDING - NOTE G6	
Д	RED ALARM LIGHT, MOUNT 12' AFF ON BUILDING - NOTE (	37
шт	MULTI-COLOR ALARM LIGHT ON BUILDING - NOTE G6.	
¥	WALL MOUNTED LED EMERGENCY BATTERY PACK	
EXP	EXPLOSION PROOF: CLASS 1, DIV. 1	
Ð	GENERATOR RECEPTACLE - SEE 3/E0.1	

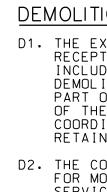
- GENERAL NOTES (APPLICABLE TO ALL DRAWINGS)
- G1. FIELD COORDINATE THE ELECTRICAL SERVICE WITH LEAH HALL, GEORGIA POWER ACCOUNT MANAGER, 912-267-5155.
- G2. INSTALL GROUNDING DELTA IN THIS AREA. REFER TO SECONDARY GROUNDING DETAIL, SHEET E0.1, FOR INSTALLATION REQUIREMENTS.
- G3. PROVIDE A TRANS-SOCKET. METER SYSTEM. EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OF THE GEORGIA POWER BLUE BOOK, 2017 EDITION.
- G4. ALL CONDUIT TERMINATIONS TO ELECTRICAL ENCLOSURES SHALL UTILIZE THREADED HUBS; LOCK NUTS AND BUSHINGS ARE NOT ACCEPTABLE. SEE SPECIFICATIONS FOR CONDUIT REQUIREMENTS.
- G5. EXTEND UNSWITCHED AND ENERGIZED CONDUCTOR TO ALL EXIT SIGNS AND EMERGENCY BATTERY PACKS.
- G6. PROVIDE MULTI-COLOR ALARM LIGHT AND RED LIGHT ON OUTSIDE OF EACH STATION, REFER TO SCADA SPEC ON SHEET E3.1. PROVIDE PLASTIC ENGRAVED SIGN WITH 11/2" LETTERING ADJACENT TO FRONT DOOR IDENTIFYING LIGHT STATUS.
- G7. IF EITHER ALARM OCCURS, HORN TO SOUND UNTIL SILENCE SWITCH IS PUSHED.
- G8. ANY CONDUIT WITHOUT DESIGNATION CONTAINS 3 #10, #12 GND IN 1" CONDUIT. CONDUITS IMBEDDED IN STRUCTURAL CONCRETE (FLOOR SLABS, ETC) SHALL BE SO LOCATED AS NOT TO UNDULY IMPAIR THE STRENGTH OF THE CONSTRUCTION AND SHALL BE SPACED NOT LESS THAN TWO TIMES THE CONDUIT OD BETWEEN ADJACENT CONDUITS EXCEPT WHERE CROSSING OR OTHERWISE APPROVED BY THE ENGINEER. WIRING FOR LIGHTING, RECEPTACLES AND OTHER MISCELLANEOUS CIRCUITS SHALL CONFORM TO THE CIRCUITING INDICATED ON THE DRAWINGS WITH FIELD ARRANGMENT AND ROUTING AS REQUIRED. THE WIRING SHALL BE SO ARRANGED THAT NO MORE THAN 3 CURRENT CONDUCTORS SHALL BE INSTALLED DEP CONDUCT AND CURCULTS OF CONDUCTORS SHALL BE INSTALLED PER CONDUIT AND CIRCUITS OF DIFFERENT PANELS SHALL BE INSTALLED IN SEPARATE RACEWAYS.

G9. CONNECT TO AIR FLOW SWITCH PROVIDED BY MECHANICAL EXTEND CIRCUIT TO SCADA PANEL.











	LIGHTING FIXTURE SO	CHEDULE - LF	-/	
TYPE	DESCRIPTION	LAMP	MOUNTING	NOTES
А	LED ENCLOSED/GASKETED INDUSTRIAL	LED INCLUDED	PENDANT	LF-2
	LITHONIA FEM-L48-6000-LM-LPPCL-MD-MVOLT-GZ10-			
	40K-80CRI-DPMB-STSL			
В	LED ENCLOSED/GASKETED INDUSTRIAL WALL MTD	LED INCLUDED	WALL	10' AFF
	LITHONIA FEM-L48-6000-LM-LPPCL-MD-MVOLT-GZ10-			
	40K-80CRI-DPMB-STSL			
С	LED EXTERIOR WALL SCONCE	LED INCLUDED	WALL	12' AFF
	LITHONIA WSTLED-P3-40K-VW-MVOLT-E20WH-DDBXD			
	WITH WSTVCPBBW DDBXD U SURFACE MTD BACKBOX			
D	LED HAZARDOUS LOCATION CEILING FIXTURE	LED INCLUDED	SURFACE	LF-3
	APPLETON AAL-C-L2-2-C-BU-AAP-75			
ХА	LED EXIT SIGN	LED INCLUDED	WALL	8' AFF
	LITHONIA LHQM-LED-R-SD			
ELU	LED EMERGENCY LIGHT	LED INCLUDED	WALL	8' AFF
₽	ELM2-LED-SD			

NOTES	_	LIGHTING	FIXTURE	SCHEDULE
10120			TINTORE	SOULDOLL

LF-1.	FIXTURES SHOWN INDICATE QUALITY OF FIXTURE OTHER MANUFACTURERS OF EQUAL FIXTURES ARE UPON REVIEW AND APPROVAL OF THE ENGINEER. APPROVAL NOT REQUIRED.
LF-2.	MOUNT FIXTURE WITH BOTTOM OF LENS AT SAME AS BOTTOM OF CONCRETE STRUCTURE.
15-3	PROVINE CLASS 1 DIV 1 RATED EIVILLE

LF-3. PROVIDE CLASS 1, DIV 1 RATED FIXTURE.

## DEMOLITION NOTES

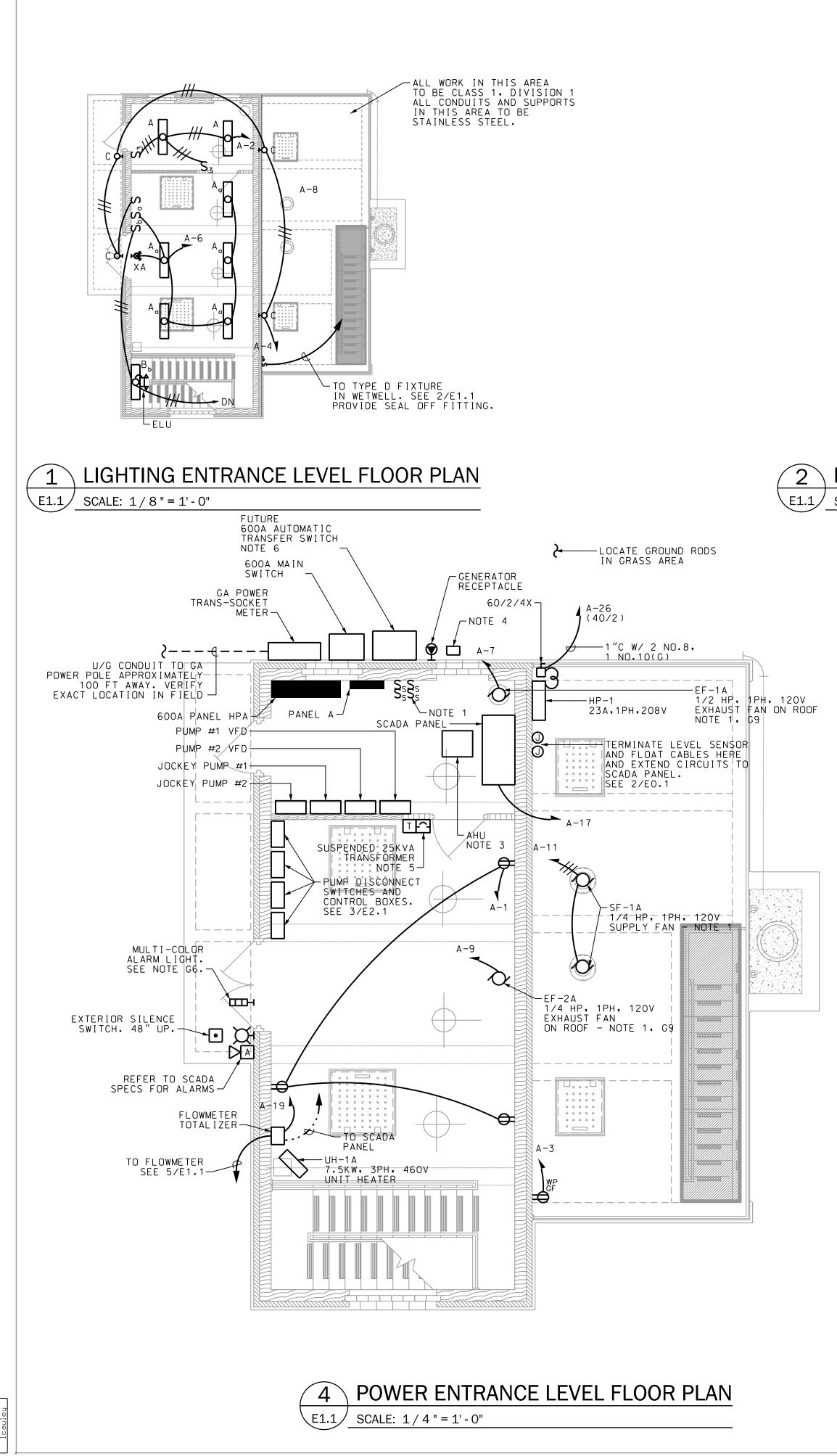
D1. THE EXISTING MCC, TRANSFER SWITCH, LIGHTING SYSTEM, RECEPTACLES, VFDS, AND OTHER ELECTRICAL EQUIPMENT INCLUDING ALL CONDUITS AND CONDUCTORS SHALL BE DEMOLISHED AND REMOVED FROM THE PROJECT SITE AS PART OF THIS CONTRACT. THE CONTRACTOR SHALL DISPOSE OF THEMATERIAL OFF-SITE AS PART OF THE CONTRACT. COORDINATE WITH OWNER FOR ANY MATERIALS TO BE RETAINED BY THE OWNER.

D2. THE CONTRACTOR SHALL COORDINATE WITH GEORGIA POWER FOR MODIFICATIONS AND/OR REMOVAL OF THE EXISTING SERVICES TO THE EXISTING PUMP STATION BUILDINGS.

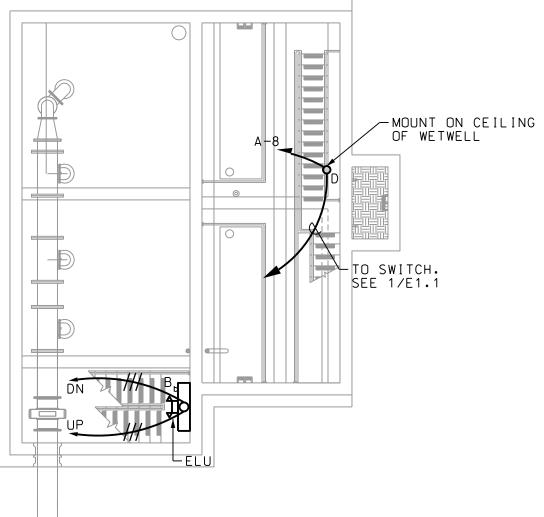
> RES DESIRED. ACCEPTABLE PRIOR

ELEVATION



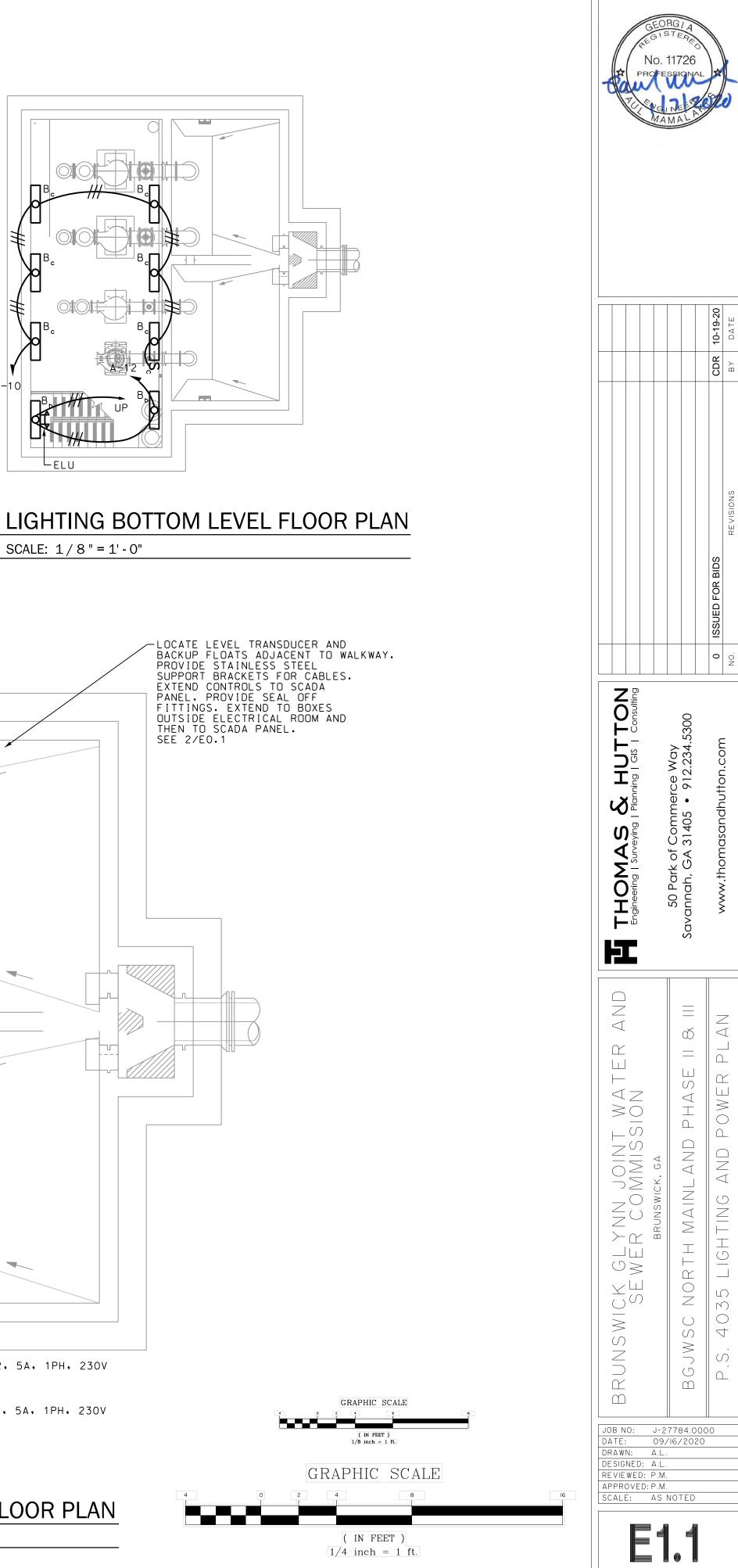


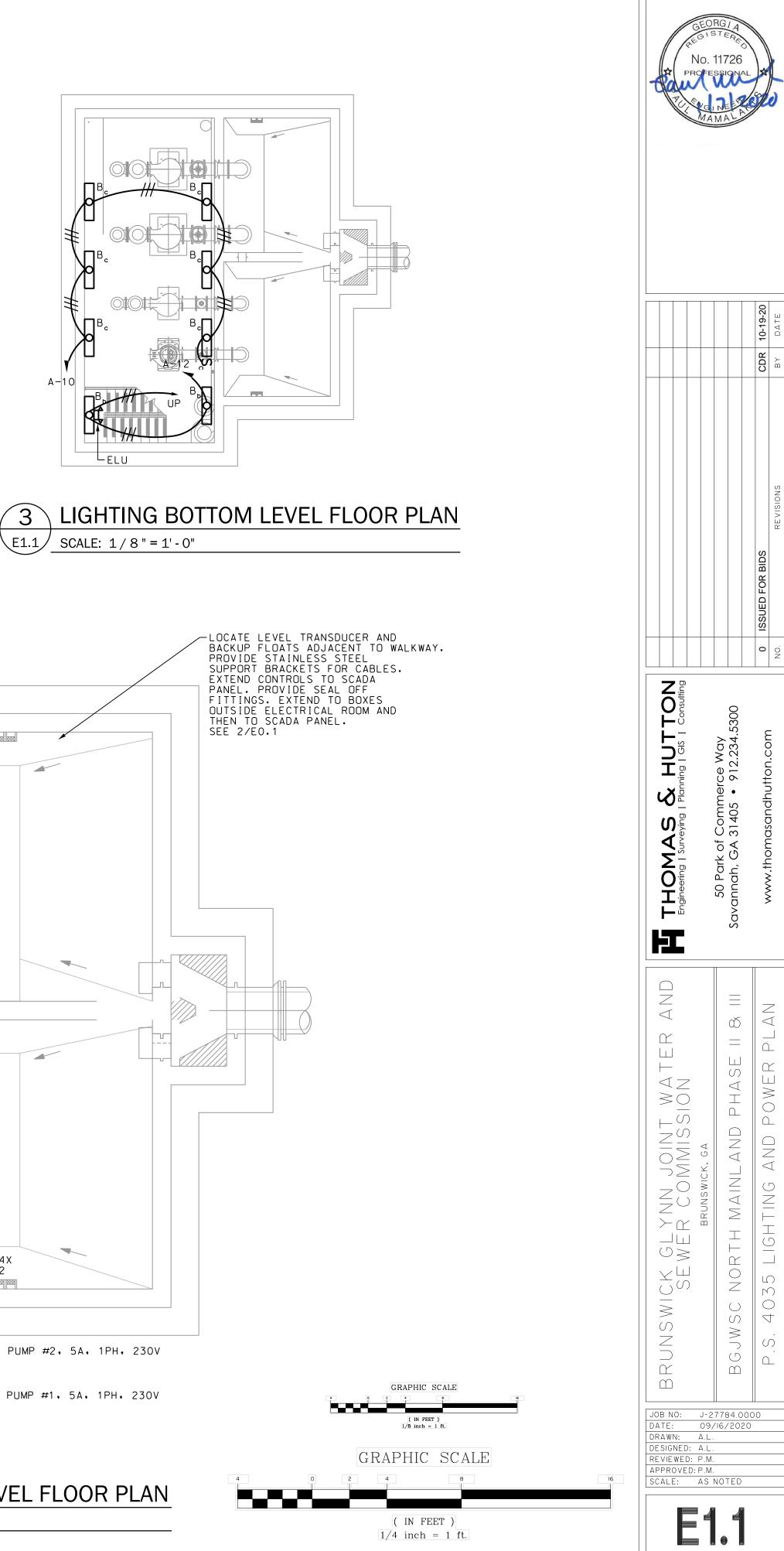
CADD PLOT 11-SEP-2020 14:59



## LIGHTING INTERMEDIATE LEVEL FLOOR PLAN

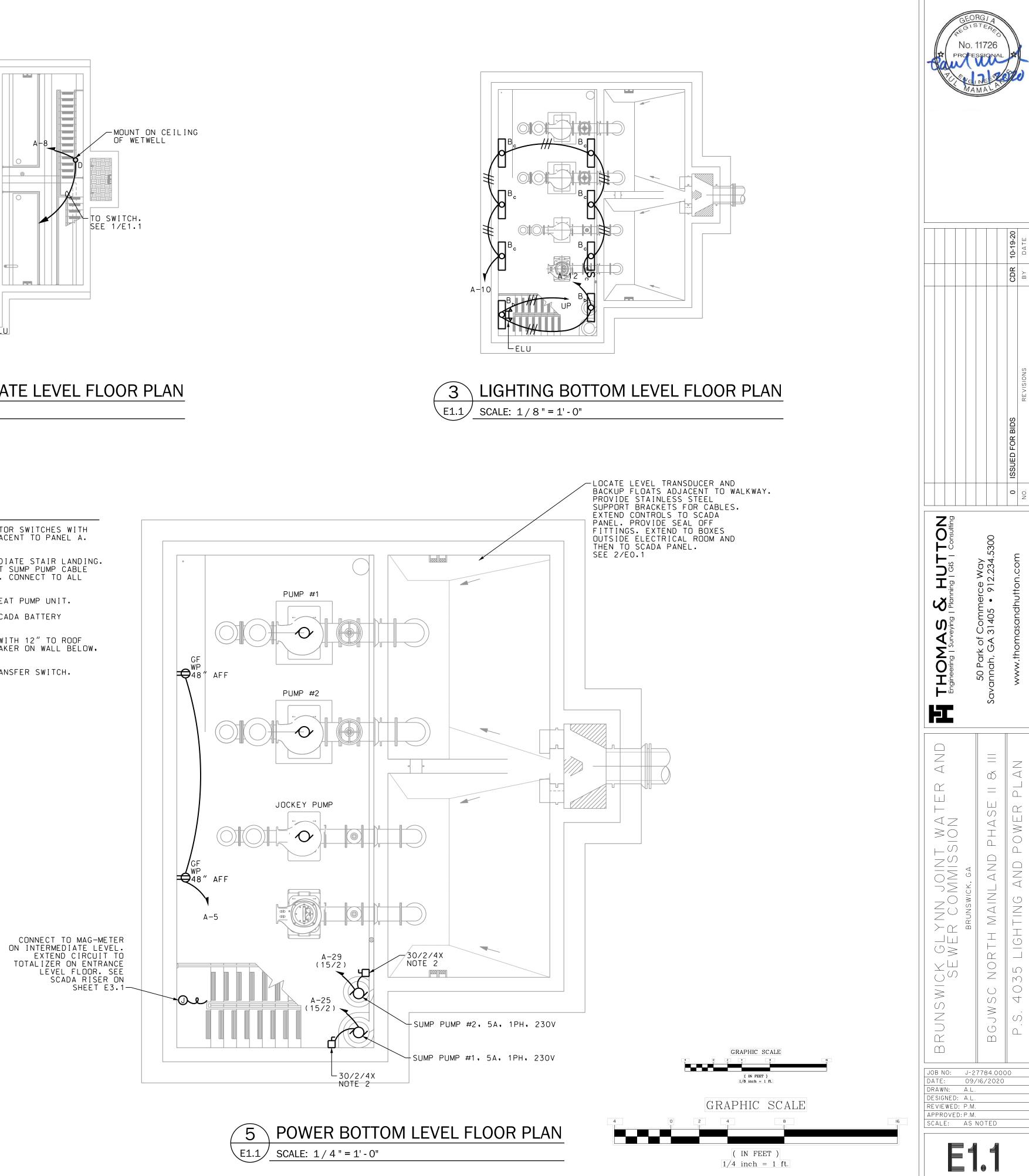
SCALE: 1 / 8 " = 1' - 0"



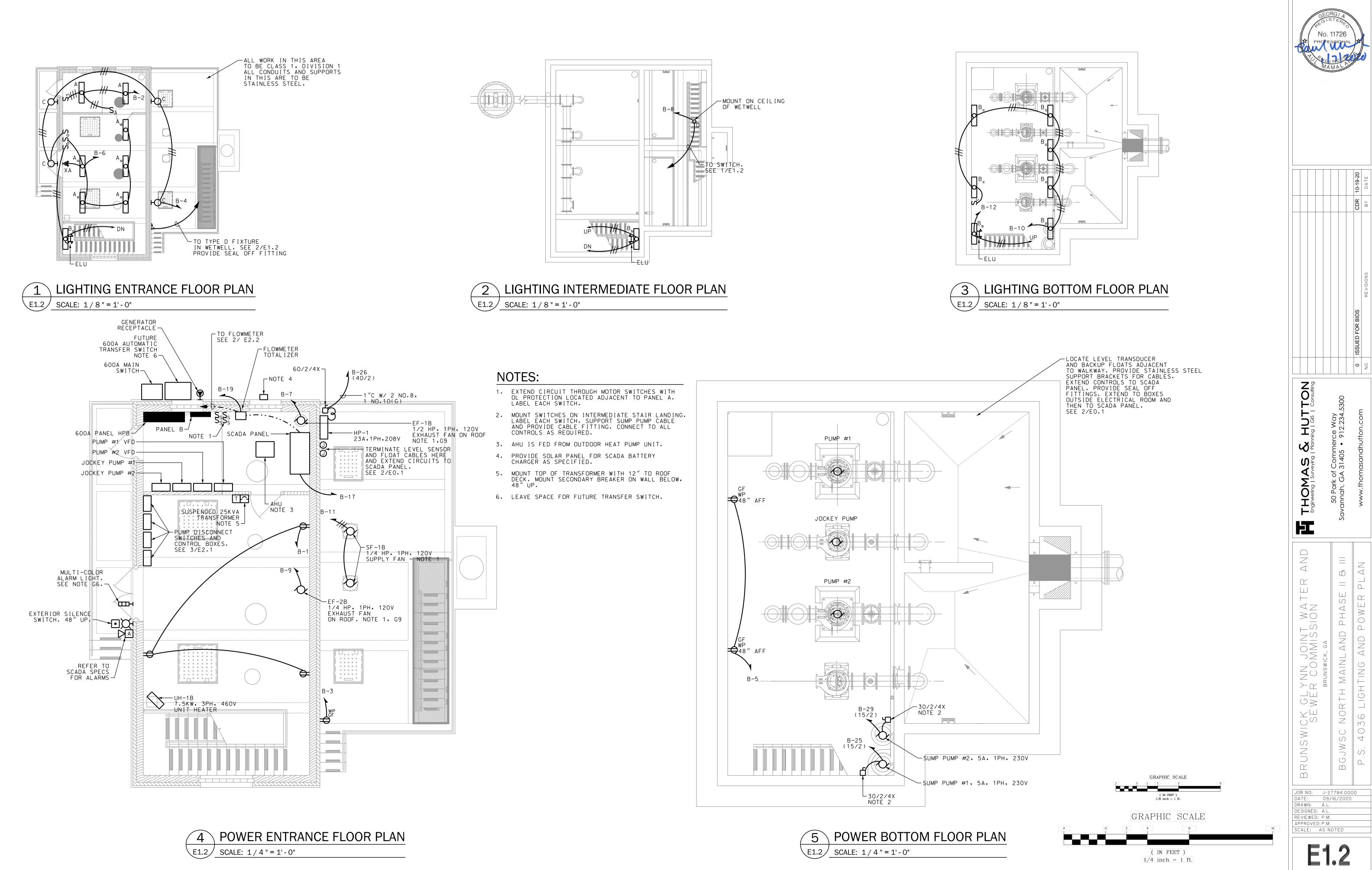


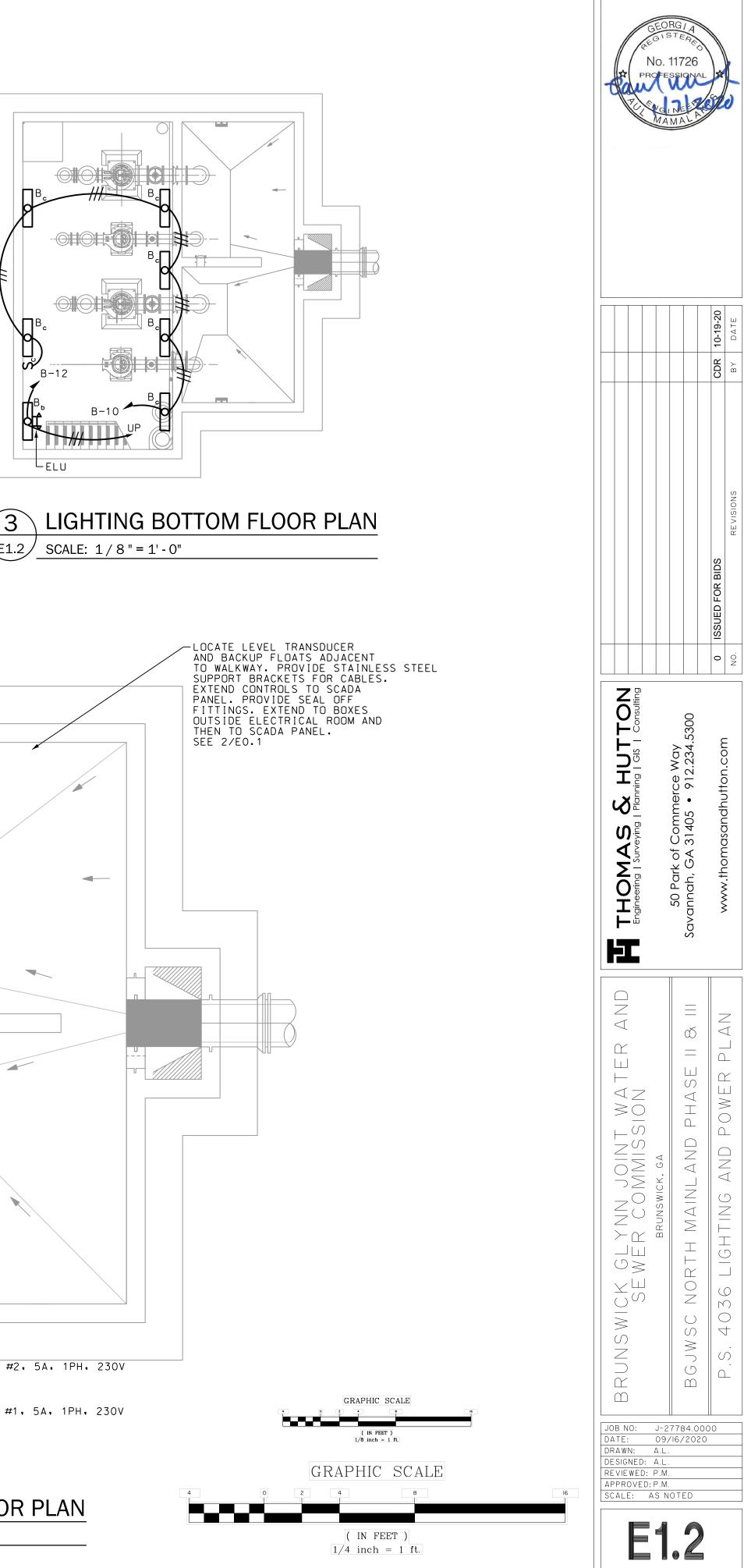
## NOTES:

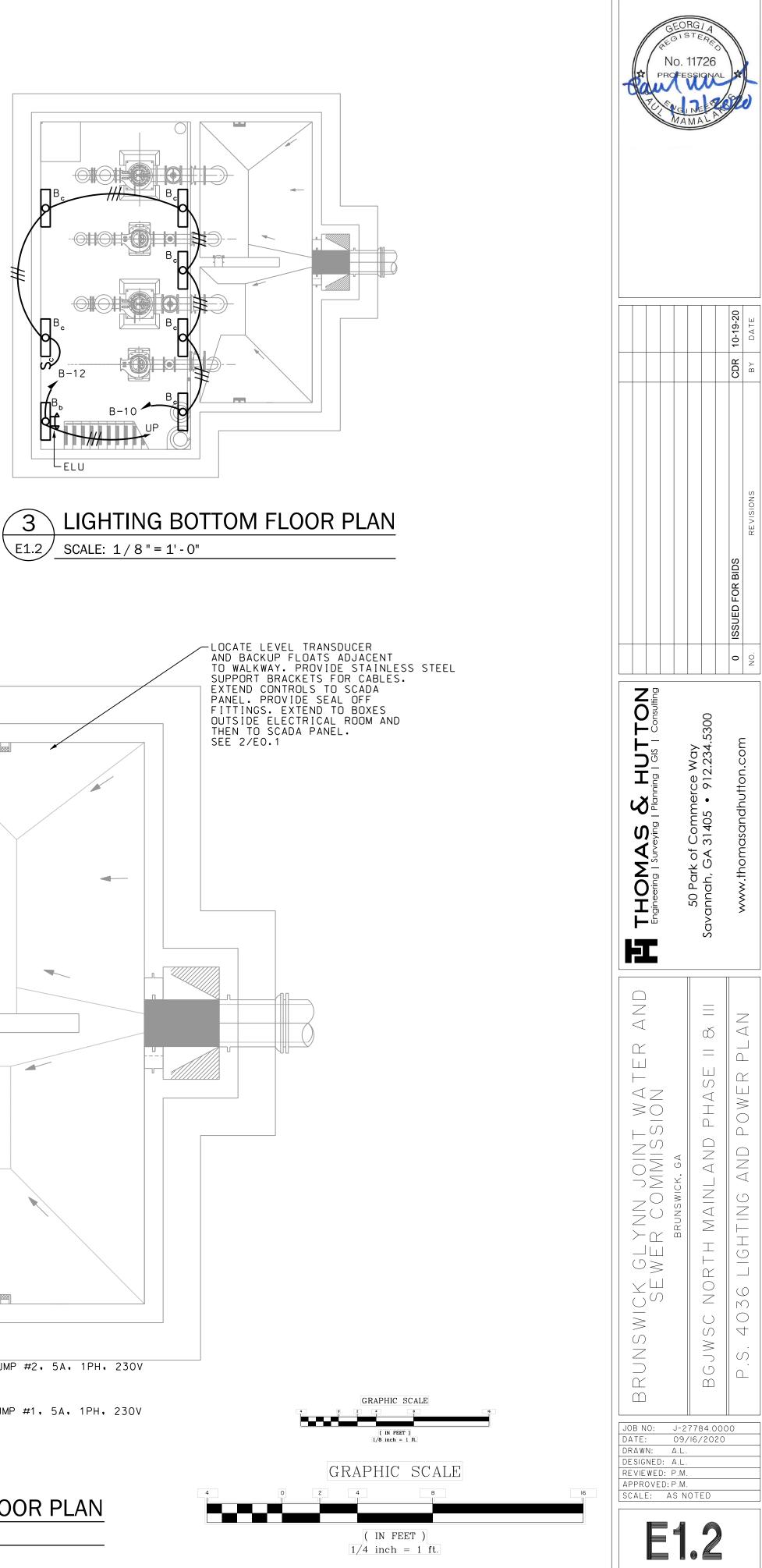
- EXTEND CIRCUIT THROUGH MOTOR SWITCHES WITH OL PROTECTION LOCATED ADJACENT TO PANEL A. LABEL EACH SWITCH.
- 2. MOUNT SWITCHES ON INTERMEDIATE STAIR LANDING. LABEL EACH SWITCH. SUPPORT SUMP PUMP CABLE AND PROVIDE CABLE FITTING. CONNECT TO ALL CONTROLS AS REQUIRED.
- 3. AHU IS FED FROM OUTDOOR HEAT PUMP UNIT.
- 4. PROVIDE SOLAR PANEL FOR SCADA BATTERY CHARGER AS SPECIFIED.
- MOUNT TOP OF TRANSFORMER WITH 12" TO ROOF DECK. MOUNT SECONDARY BREAKER ON WALL BELOW, 48" UP. 5.
- 6. LEAVE SPACE FOR FUTURE TRANSFER SWITCH.



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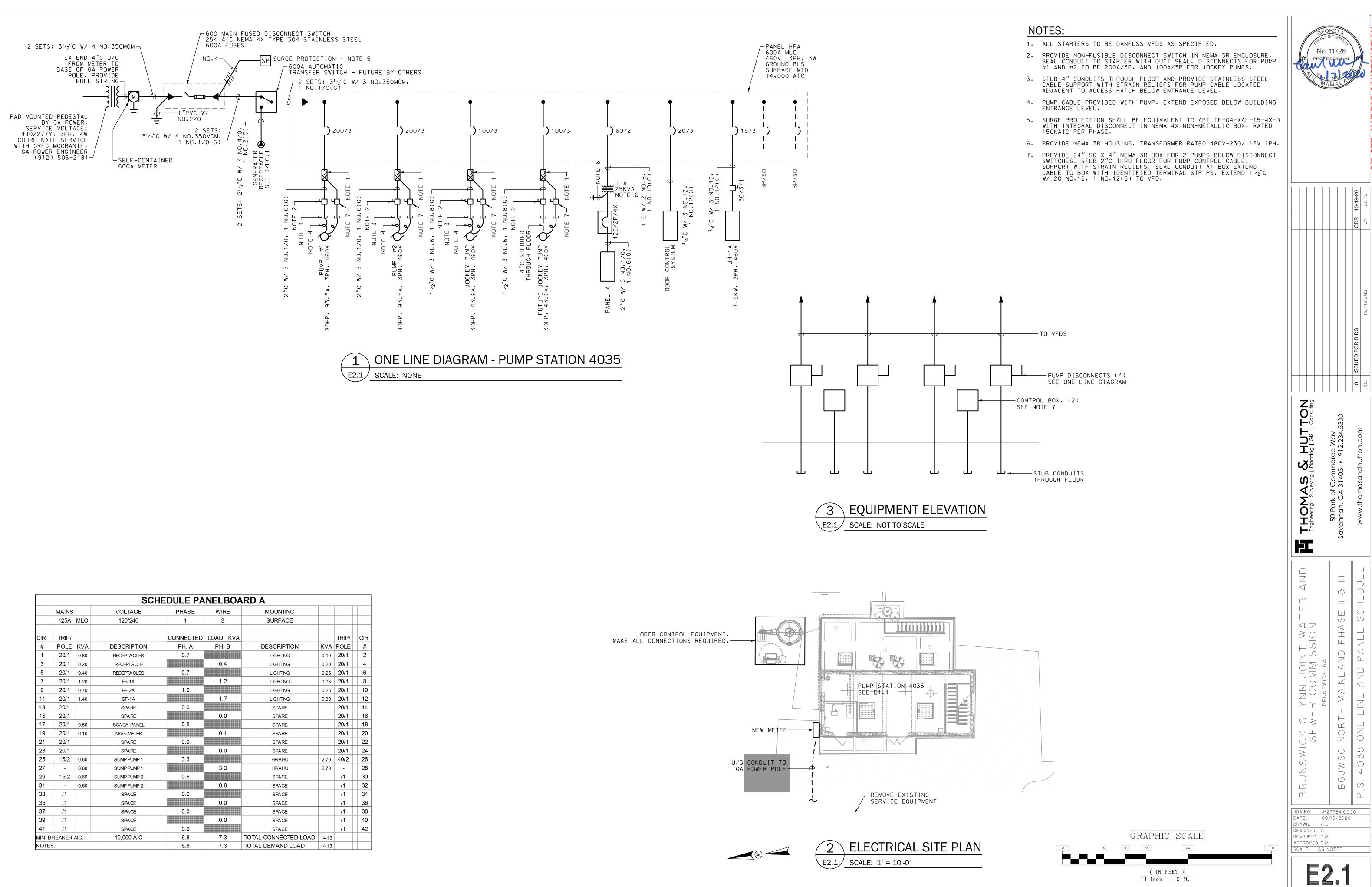






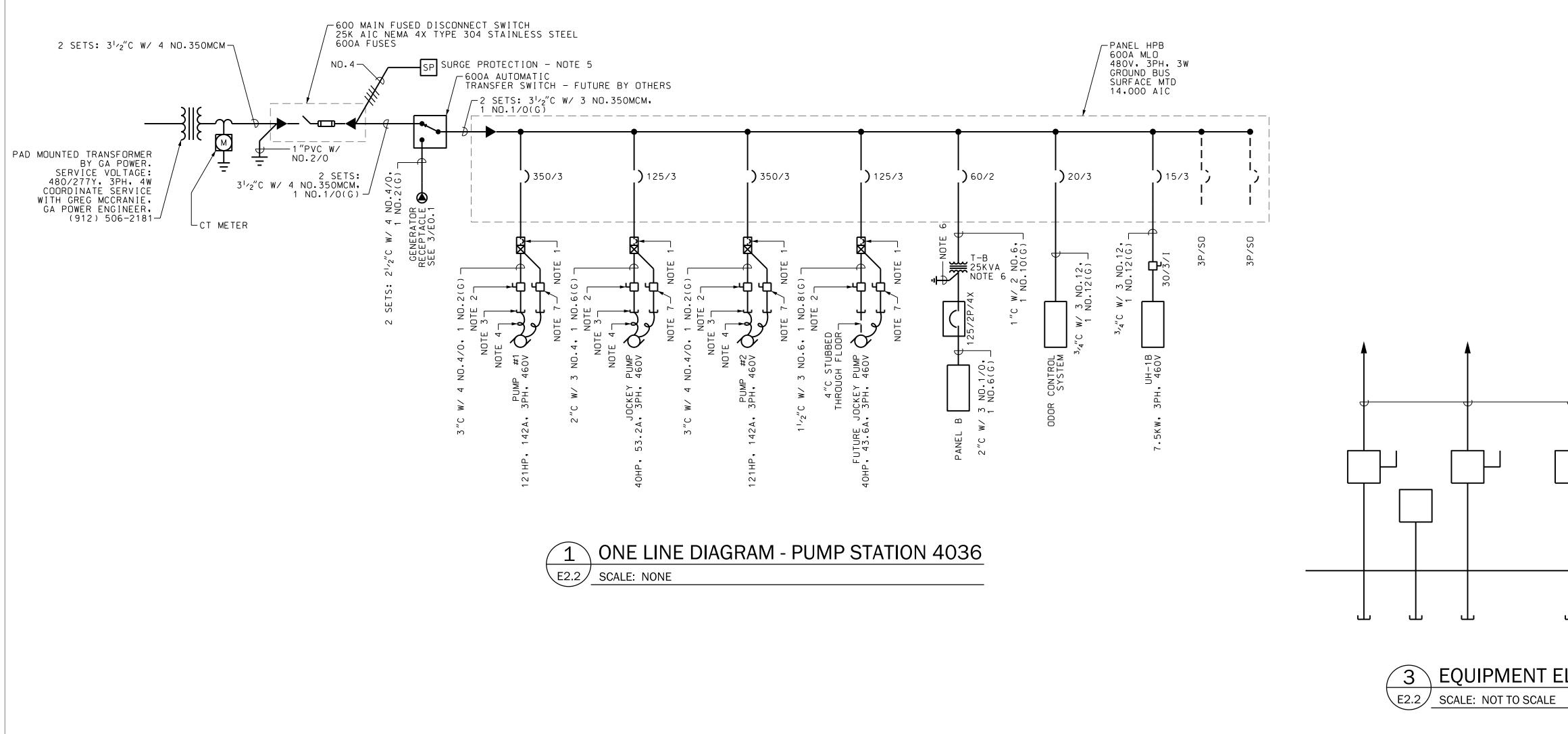
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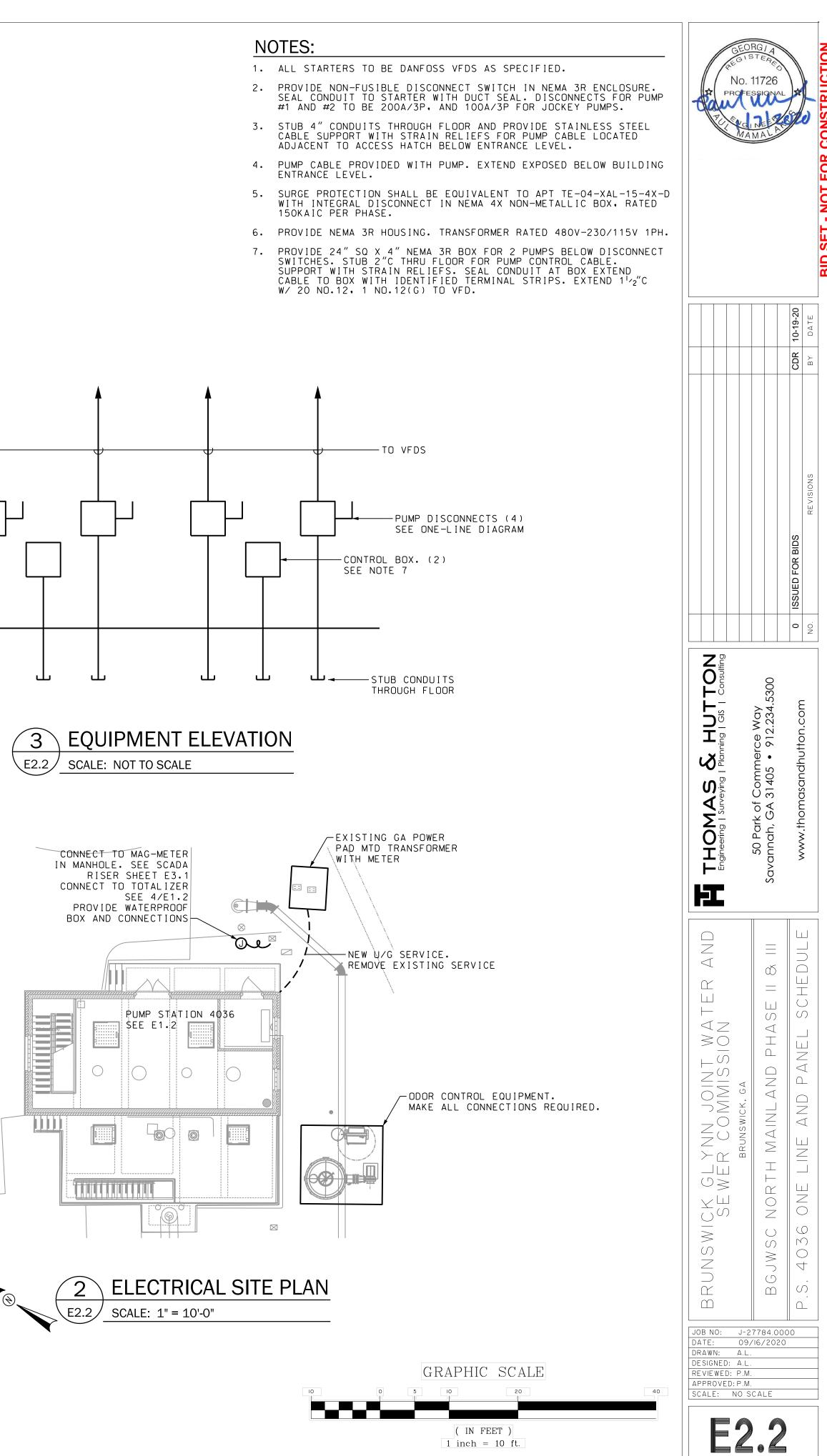


			SCH	EDULE PA					
	MAINS		VOLTAGE	PHASE	WIRE	MOUNTING			
	125A	MLO	120/240	1	3	SURFACE			
CIR.	TRIP/			CONNECTED	LOAD KVA			TRIP/	CIR.
#	POLE	KVA	DESCRIPTION	PH. A	PH. B	DESCRIPTION	KVA	POLE	#
1	20/1	0.60	RECEPTACLES	0.7		LIGHTING	0.10	20/1	2
3	20/1	0.20	RECEPTACLE		0.4	LIGHTING	0.20	20/1	4
5	20/1	0.40	RECEPTACLES	0.7		LIGHTING	0.25	20/1	6
7	20/1	1.20	EF-1A		1.2	LIGHTING	0.03	20/1	8
9	20/1	0.70	EF-2A	1.0		LIGHTING	0.25	20/1	10
11	20/1	1.40	SF-1A		1.7	LIGHTING	0.30	20/1	12
13	20/1		SPARE	0.0		SPARE		20/1	14
15	20/1		SPARE		0.0	SPARE		20/1	16
17	20/1	0.50	SCADA PANEL	0.5		SPARE		20/1	18
19	20/1	0.10	MAG-METER		0.1	SPARE		20/1	20
21	20/1		SPARE	0.0		SPARE		20/1	22
23	20/1		SPARE		0.0	SPARE		20/1	24
25	15/2	0.60	SUMP PUMP 1	3.3		HP/AHU	2.70	40/2	26
27	-	0.60	SUMP PUMP 1		3.3	HP/AHU	2.70	-	28
29	15/2	0.60	SUMP PUMP 2	0.6		SPACE		/1	30
31	-	0.60	SUMP PUMP 2		0.6	SPACE		/1	32
33	/1		SPACE	0.0		SPACE		/1	34
35	/1		SPACE		0.0	SPACE		/1	36
37	/1		SPACE	0.0		SPACE		/1	38
39	/1		SPACE		0.0	SPACE		/1	40
41	/1		SPACE	0.0		SPACE		/1	42
MIN. BREAKER AIC: 10,000 AIC			6.8	7.3	TOTAL CONNECTED LOAD	14.13			
NOTES:			6.8	7.3	TOTAL DEMAND LOAD	14.13			

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SCHEDULE PANELBOARD B									
	MAINS		VOLTAGE	PHASE	WIRE	MOUNTING			
	125A	MB	120/240	1	3	SURFACE			
CIR.	TRIP/			CONNECTED	LOAD KVA			TRIP/	CIR.
#	POLE	KVA	DESCRIPTION	PH. A	PH. B	DESCRIPTION	KVA	POLE	#
1	20/1	0.60	RECEPTACLES	0.7		LIGHTING	0.10	20/1	2
3	20/1	0.20	RECEPTACLE		0.4	LIGHTING	0.20	20/1	4
5	20/1	0.40	RECEPTACLES	0.7		LIGHTING	0.25	20/1	6
7	20/1	1.20	EF-1B		1.2	LIGHTING	0.03	20/1	8
9	20/1	0.70	EF-2B	1.0		LIGHTING	0.25	20/1	10
11	20/1	1.40	SF-1B		1.7	LIGHTING	0.25	20/1	12
13	20/1		SPARE	0.0		SPARE		20/1	14
15	20/1		SPARE		0.0	SPARE		20/1	16
17	20/1	0.50	SCADA PANEL	0.5		SPARE		20/1	18
19	20/1	0.10	MAG METER		0.1	SPARE		20/1	20
21	20/1		SPARE	0.0		SPARE		20/1	22
23	20/1		SPARE		0.0	SPARE		20/1	24
25	15/2	0.60	SUMP PUMP 1	3.3		HP/AHU	2.70	40/2	26
27	-	0.60	SUMP PUMP 1		3.3	HP/AHU	2.70	-	28
29	15/2	0.60	SUMP PUMP 2	0.6		SPACE		/1	30
31	-	0.60	SUMP PUMP 2		0.6	SPACE		/1	32
33	/1		SPACE	0.0		SPACE		/1	34
35	/1		SPACE		0.0	SPACE		/1	36
37	/1		SPACE	0.0		SPACE		/1	38
39	/1		SPACE		0.0	SPACE		/1	40
41	/1		SPACE	0.0		SPACE		/1	42
MIN. B	MIN. BREAKER AIC: 10,000 AIC		6.8	7.3	TOTAL CONNECTED LOAD	14.08			
NOTES:			6.8	7.3	TOTAL DEMAND LOAD	14.08			



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### SCADA SYSTEM - TYPICAL OF EACH PUMP STATION

I. SYSTEM REQUIREMENTS

- A. PROVIDE SCADA SYSTEM THAT MEETS OWNER'S STANDARDS INCLUDING ALL HARDWARE, SOFTWARE, PROGRAMMING, INSTALLATION, TESTING, DEMONSTRATING OPERATION AND WARRENTY.
- THE SYSTEM SHALL BE PROVIDED BY ELECTRIC MACHINE CONTROL, INC. (EMC). CONTACT JAMES DENTON (205) 661-3998, Β. CELL (205) 910-8348. EMC SHALL ALSO PROVIDE ALL INSTRUMENTATION AND VFDS.
- C. PROVIDE ALL FIELD WIRING IN CONDUITS AS REQUIRED. COORDINATE ALL CONNECTIONS, ALARMS AND CONTROL WITH EQUIPMENT PROVIDED UNDER OTHER SECTIONS OF THE SPECIFICATIONS. ALL CONTROL WIRING TO BE TIN COATED.
- II. PRODUCTS
  - A. THE SCADA PANEL SHALL BE PROVIDED IN A NEMA 4X SS ENCLOSURE, PREWIRED OFF-SITE AND TESTED BEFORE INSTALLATION, ALL CONDUCTORS SHALL BE TERMINATED ON IDENTIFIED TERMINAL STRIPS. ALL WIRING AND COMPONENTS SHALL BE IDENTIFIED AND MATCHED TO AS BUILT DRAWING. LABEL ALL FIELD WIRING TO MATCH TERMINAL STRIP.
  - B. SCADA PANEL SHALL BE POWERED FROM A 120 VOLT CIRCUIT WITH INTEGRAL SURGE PROTECTION, UPS WITH SOLAR PANEL TO POWER BACKUP BATTERIES, INTEGRAL RECEPTACLE, 24 VDC POWER SUPPLY, MODEM WITH CELLULAR ALARM SYSTEM, AXIOM SEL PLC AND RTAC WITH ALL I/O REQUIRED, DATA SWITCH, SIGNAL ISOLATORS AND CONTROL RELAYS, PROVIDE CONTROL DEVICES ON COVER OF PANEL TO INCLUDE HOA SWITCH, ETM FOR EACH PUMP, HMI PANEL IDENTIFYING STATUS AND ALARMS, FLOAT MODE STATUS LIGHT AND RESET BUTTON AND SILENCE SWITCH.
  - C. SCADA PANEL TO BE HOFFMAN 48" X 36" X 12" WITH SUBPANEL, DRAWING POCKET, INTERNAL WIRE DUCT, SQUARE D CONTROL DEVICES, FUSES, TERMINAL BLOCKS, GROUND BUS, LISTED FOR UL 508, AND ALL INTERNAL WIRING.
  - D. WETWELL LEVEL SENSOR TO BE RADAR SENSOR RATED FOR CLASS I, DIV I LOCATION VEGAPULS C23 WITH SENSOR CABLE EXTENDING CONTINUOUS TO SCADA PANEL. MOUNT SENSOR ON STAINLESS STEEL BRACKET. CALIBRATE IN FIELD.
- E. FLOATS TO BE MERCURY TYPE WITH CABLES EXTENDING CONTINUOUS TO FIELD JUNCTION BOX, RATED FOR CLASS I, DIV I LOCATION, MOUNT FLOATS ON STAINLESS STEEL BRACKET. SET ELEVATION IN FIELD.
- F. REMOTE ALARM LIGHTS SHALL BE PATLITE, 24 VDC, RATED FOR EXTERIOR LOCATION, MULTI-LIGHT TOWER TO BE GREEN/RED/ YELLOW AND HI-LEVEL ALARM TO BE RED, PROVIDE 24 VDC EXTERIOR RATED ALARM HORN SIMILAR TO FEDERAL SIGNAL 450E SERIRES.
- G. DUPLEX PUMP BACKUP CONTROLLER TO BE IDECC CONTROLLER SERIES.

H. MODEM TO BE SEL #3061 #JBCB FOR VERIZON NETWORK.

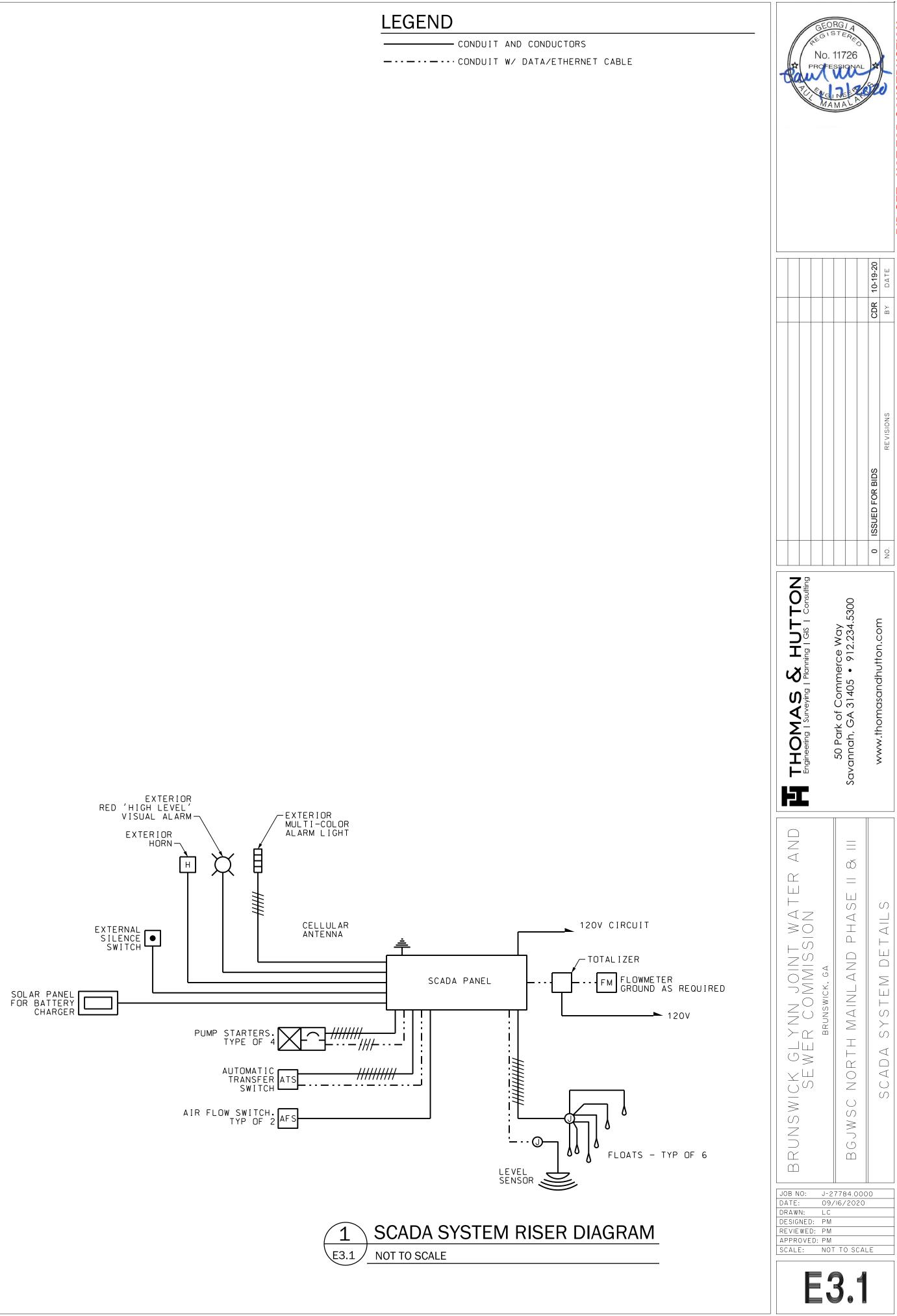
- III.SYSTEM OPERATION
  - A. PUMP CONTROL SHALL BE AS FOLLOWS: THE JOCKEY PUMP SHALL RUN WHEN CALLED UPON AND WITH A CONTROL SCHEME TO MATCH INFLUENT FLOW. (FLOW MATCHING). THE PRIMARY PUMPS WILL BE CALLED UPON ONCE THE JOCKEY PUMP IS AT FULL SPEED AND THE RATE OF RISE OF THE WATER LEVEL EXCEEDS THE PUMPING CAPACITY OF THE JOCKEY. THE JOCKEY SHALL DECELERATE TO STOP PRIOR TO THE FIRST PRIMARY PUMP START UP, TO CURB STOP PRIOR TO THE FIRST PRIMARY PUMP START UP, TO CURB ANY INSTANCE OF THE JOCKEY PUMP BEING DEAD HEADED AGAINST THE LARGER PUMP, AND TO REDUCE THE POSSIBILITY OF WATER HAMMER. THE FIRST PRIMARY PUMP WILL BE IN ALTERNATION WITH THE OTHER PRIMARY PUMP SO NOT TO ALWAYS HAVE THE SAME PRIMARY AS LEAD IN SEQUENCE. THE SECONDARY PUMP SHALL COME ON AFTER THE PRIMARY PUMP FLOW MATCHES WITH INFLUENT FLOW AND THE PUMP HAS RAMPED TO FULL SPEED BUT THE RATE OF RISE EXCEEDS THE POSSIBLE FLOW OF THE PRIMARY PUMP. THEN THE 2 PRIMARY PUMPS SHALL TRY TO FLOW MATCH UNTIL THE LEVEL HAS REACHED THE ALL OFF POINT. PROVIDE THE LEVEL HAS REACHED THE ALL OFF POINT, PROVID UNTT FOR ABILITY TO MODIFY CONTROLS FOR RATE AND FLOW GAIN AND TO AVOID PUMP SPEED CONSTANTLY CHANGING TO MATCH INSTANTANEOUS FLOW CHANGES. PROGRAM FOR ONE JOCKEY PUMP. WHEN SECOND JOCKEY PUMP IS ADDED, REPROGRAM, PROVIDE POINTS FOR JOCKEY PUMP NO.2.
  - B. FLOAT MODE CONTROLLER TO BE IDECC CONTROLLER TO CONTROL ONLY THE 2 PRIMARY PUMPS. IF THE HIGH FLOAT HAS BECOME ACTIVE AND THE FLOAT CONTROLLER TO TAKE CONTROL OF THE STATION UNLESS OVERRIDDEN BY THE SCADA SYSTEM REMOTELY OR LOCAL HUMAN INTERACTION.
- C. PROVIDE AUDIBLE AND VISUAL ALARMS OUTSIDE STATION, MULTI LIGHT TO BE USED WITH A SEQUENCING FOR DIFFERENT ISSUES. MULTI LIGHT TOWER, GREEN, YELLOW, RED.

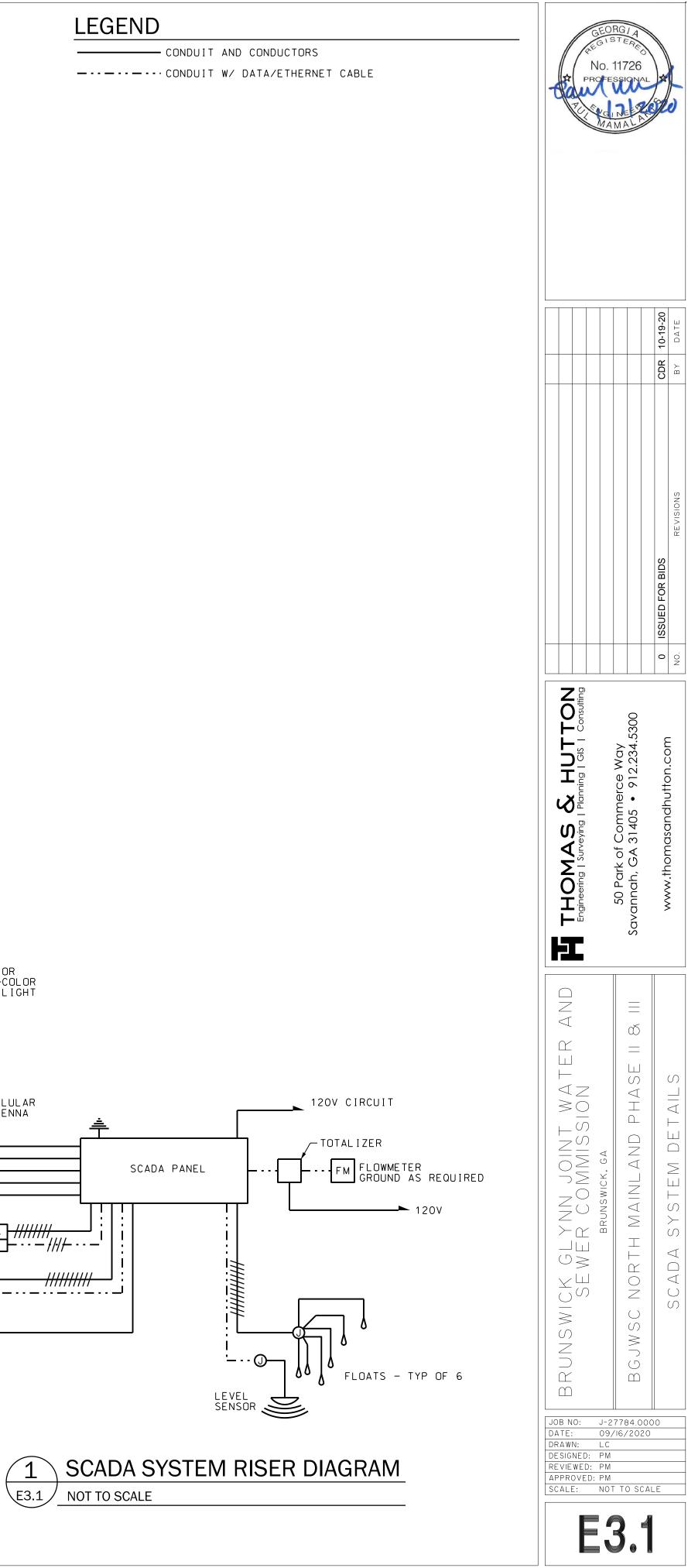
  - MOTOR FAULT YELLOW FLASH
    BIO-TOWER FAULT YELLOW AND GREEN
    VENTILATION FAULT GREEN AND RED
  - HIGH LEVEL SEPARATE RED LIGHT STROBE WITH HORN. (CONTINUOUS STROBE WHILE ACTIVE ALARM AND CONSTANT \* ILLUMINATION ALARM ACKNOWLEDGED AND ALARM CONDITION PERSISTS). PROVIDE SILENCE SWITCH ON COVER OF SCADA PANEL. PROVIDE

ENGRAVED SIGN BELOW ALARM LIGHTS IDENTIFYING ALARMS. SILENCE SWITCH TO BE SQUARE D 9001 SERIES.

- D. CONNECT TO ODOR CONTROL STATION TO MONITOR POINTS AND ALARMS FOR THIS SYSTEM.
- E. CONNECT TO AUTOMATIC TRANSFER SWITCH TO MONITOR STATUS AND TO ALLOW REMOTE TRANSFER OF SWITCH TO NORMAL, INTERMEDIATE OR EMERGENCY POSITION AS LONG AS ATS CONTROLS ARE SATISIFIED, PROVIDE CONTROLS TO GO TO INTERMEDIATE POSITION AND REMAIN THERE EVEN IF NO EMERGENCY POWER EXISTS. INFORMATION FROM TRANSFER SWITCH TO INCLUDE STATUS OF POWER AVAILABLE, SWITCH POSITION, VOLTAGES, CURRENT, POWER (KW). PROVIDE WIRING SHOWN FOR FUTURE TRANSFER SWITCH BY OTHERS.
- F. CONNECT TO FLOWMETER AIR FLOW SWITCHES FOR MONITORING AND ALARM.
- G. CONNECT TO LEVEL CONTROLLER AND FLOATS AS REQUIRED FOR CONTROLS SPECIFIED. PROVIDE 'FLOAT MODE' STATUS LIGHT IN SCADA PANEL COVER.
- CONNECT TO PUMP VFDS FOR ALL MONITOR AND CONTROL Η. FUNCTIONS, CONNECT HOA SWITCH IN SCADA PANEL TO 'AUTO' POSITION OF VFD. CONNECT ELAPSED TIME METER TO RUN CONTACT IN VFD. CONNECT COMMON FAULT AND OVERTEMPERATURE' CONTACTS IN VFD TO SCADA.
- I. FOR VFDS, PROVIDE REMOTE MOUNT KIT TO PLACE DISPLAY IN COVER OF SCADA PANEL.
- J. FOR EACH VFDS, PROVIDE INTERFACE PROTECTION, MOTOR HOUSING MONITOR, SEAL LEAKAGE DETECTOR AND BEARING TEMPERATURE MONITORING.

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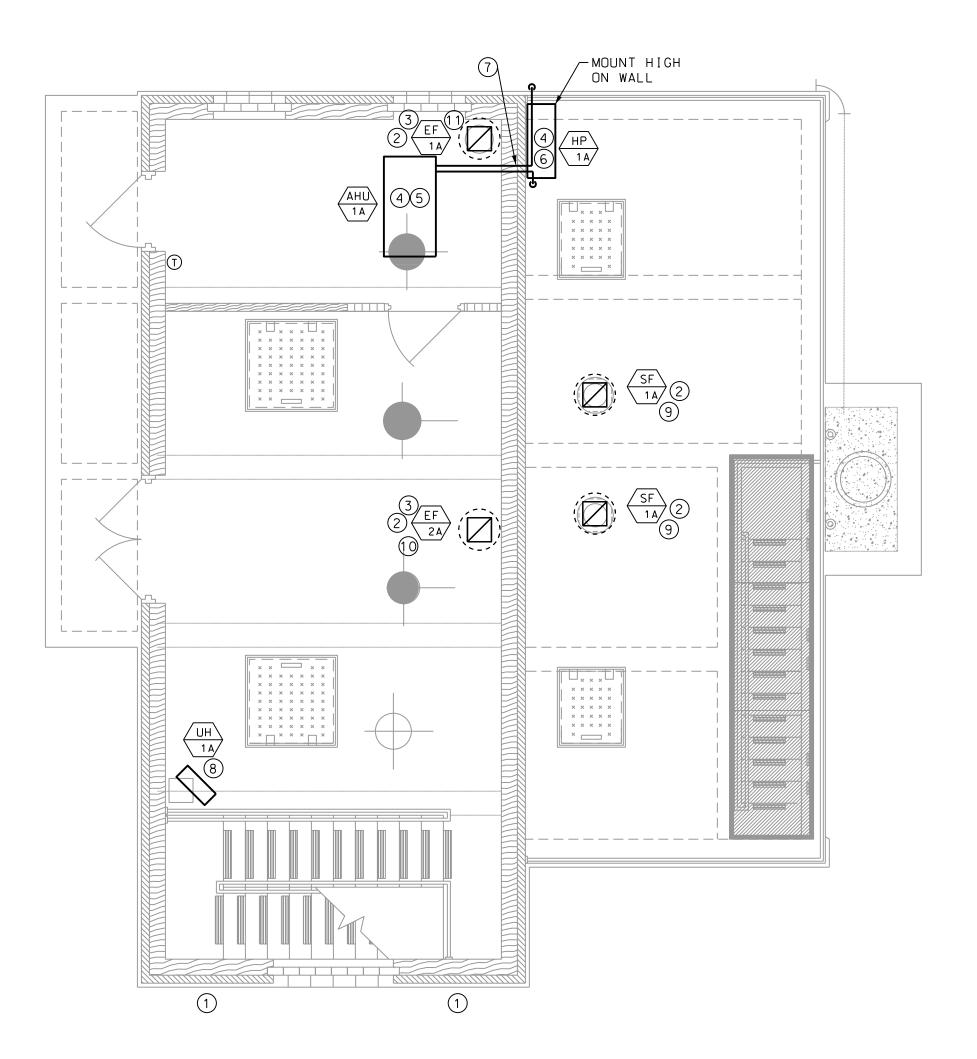




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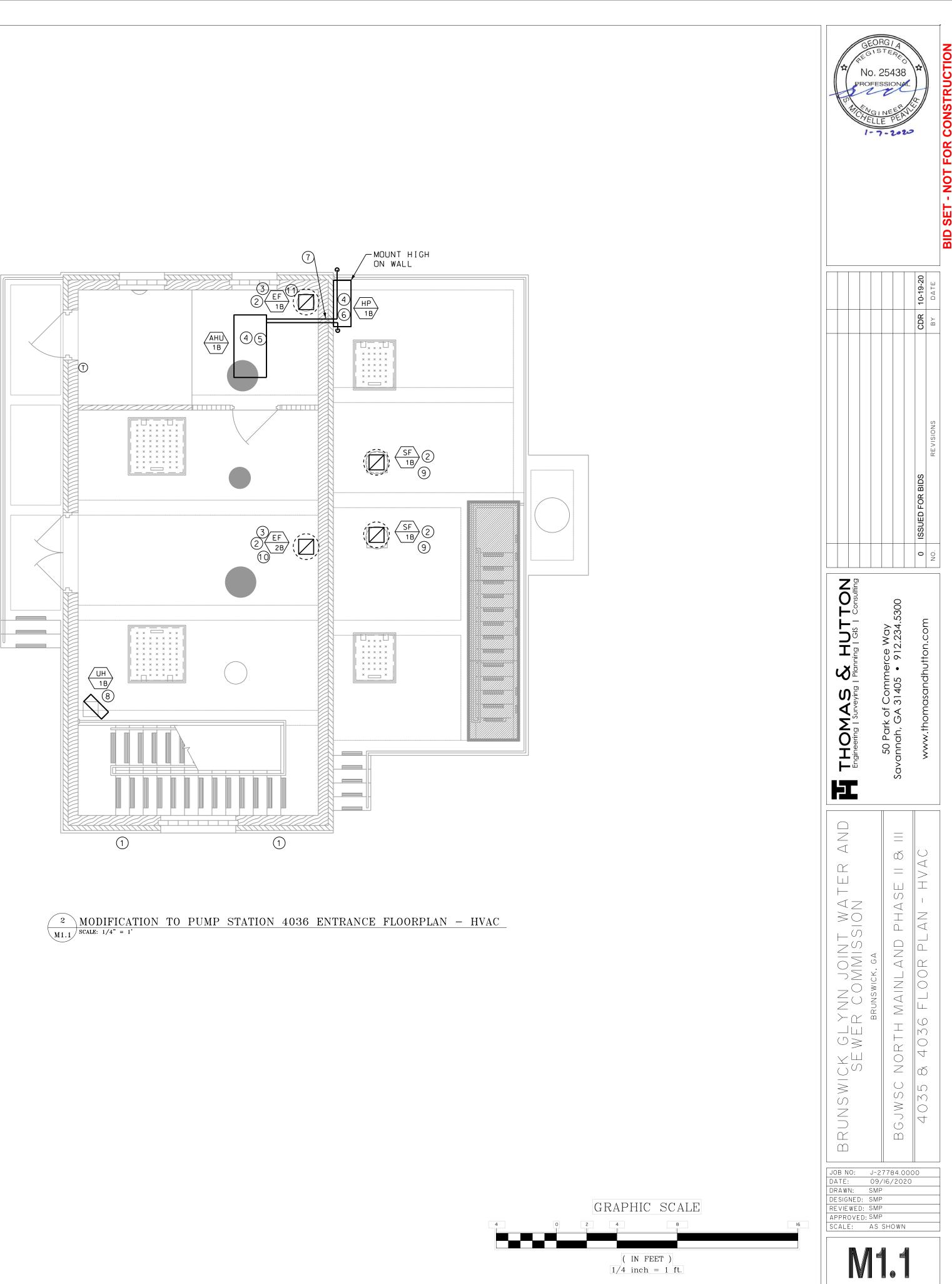




## NOTES:

1 EXISTING LOUVERS TO REMAIN FOR INTAKE AIR

- (2) REMOVE EXISTING FAN AND REPLACE WITH NEW AS SHOWN. CONNECT TO EXISTING DUCT. FIELD COORDINATE CONNECTIONS.
- (3) FAN SHALL BE PROVIDED WITH AIR PROVING SAIL SWITCH TO ALARM WHEN THERE IS NO AIR FLOW. COORDINATE WITH ELECTRICAL.
- (4) AHU/HP SHALL BE MITSUBSHI MODEL PCA-A30KA6/PUZ-A30NHA6-BS (SEACOAST COATING) OR APPROVED EQUAL. UNIT SHALL BE PROVIDED WITH DISCONNECT SWITCH, WALL MOUNTING BRACKET FOR OUTDOOR UNIT, AND WIRED THERMOSTAT.
- (5) MOUNT UNIT TIGHT TO STRUCTURE ABOVE
- 6 MOUNT UNIT ON WALL
- (7) CONDENSATE DRAIN LINE AND REFRIGERNAT LINE SET. COORDINATE ROUTING WITH EXISTING CONDITIONS AND OTHER TRADES. CONDENSATE TO TURN DOWN AND DRIP ON GROUND.
- (8) UNIT HEATER SHALL BE QMARK MUH OR APPROVED EQUAL. HEATER SHALL BE SIZED FOR 7.5 KW WITH HORIZONTAL DISCHARGE. HEATER SHALL BE PROVIDED WITH MOUNTING BRACKETS, DISCONNECT SWITCH AND BUILT-IN THERMOSTAT.
- 9 SUPPLY FAN SHALL BE GREENHECK MODEL TCBRS-1-10 OR APPROVED EQUAL. FAN SHALL BE SPARK RESISTANT B WITH ALUMINUM WHEEL AND BELT DRIVEN MOTOR OUT OF THE AIR STREAM. FAN SHALL RUN CONTINUOUSLY. COORDINATE WITH EXISTING CONDITIONS AND ELECTRICAL. FAN SHALL BE SIZED FOR 350 CFM AT 0.25 ESP AND 1/4 HP.
- () EXHAUST FAN SHALL BE GREENHECK MODEL TCBRU-1-10 OR APPROVED EQUAL. FAN SHALL BE SPARK RESISTANT B WITH ALUMINUM WHEEL AND BELT DRIVEN MOTOR OUT OF THE AIR STREAM. FAN SHALL RUN CONTINUOUSLY. COORDINATE WITH EXISTING CONDITIONS AND ELECTRICAL. FAN SHALL BE SIZED FOR 600 CFM AT 0.25 ESP AND 1/4 HP.
- 1 EXHAUST FAN SHALL BE GREENHECK MODEL TCBRU-1-10 OR APPROVED EQUAL. FAN SHALL BE SPARK RESISTANT B WITH ALUMINUM WHEEL AND BELT DRIVEN MOTOR OUT OF THE AIR STREAM, FAN SHALL RUN CONTINUOUSLY, COORDINATE WITH EXISTING CONDITIONS AND ELECTRICAL. FAN SHALL BE SIZED FOR 1100 CFM AT 0.375 ESP AND 1/2 HP.



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