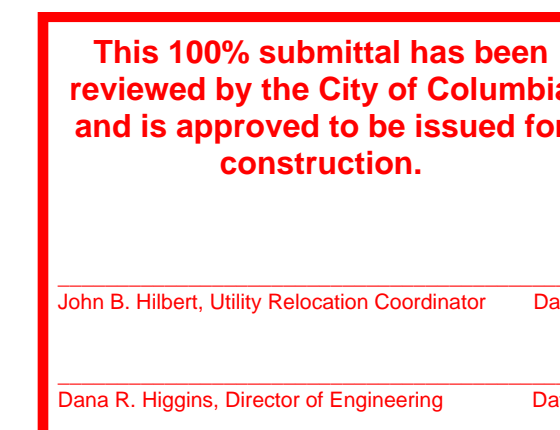


CAROLINA CROSSROADS, PHASE 1 CONFLICT 1057

COLONIAL LIFE PUMP STATION AND ASSOCIATED GRAVITY SEWER AND FORCE MAIN RELOCATIONS AND LAWAND DRIVE WATER MAIN RELOCATIONS FACILITY 1, 9, 10, 11, 12, 13, AND 14



The utilities are shown for the contractor's convenience only. There may be other utilities not shown on these Plans. The Engineer assumes no responsibility to verify the locations shown and it shall be the contractor's responsibility to verify the locations of all utilities within the limits of the work. All damage made to existing utilities by the contractor shall be the sole responsibility of the contractor.

MAYOR

DANIEL J. RICKENMANN

CITY COUNCIL

HOWARD E. DUVALL, JR.
EDWARD H. MCDOWELL, JR.
WILL BRENNAN
JOE E. TAYLOR, JR.
TINA N. HERBERT
ADITI BUSSELLS

CITY MANAGER

TERESA B. WILSON

ASSISTANT CITY MANAGER OF COLUMBIA WATER

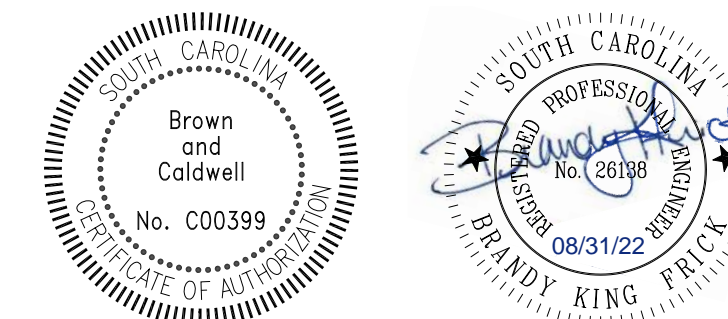
CLINT SHEALY, P.E.

DIRECTOR OF UTILITY OPERATIONS

WILLIAM FRANK ESKRIDGE, P.E.

DIRECTOR OF ENGINEERING

DANA R. HIGGINS, P.E.



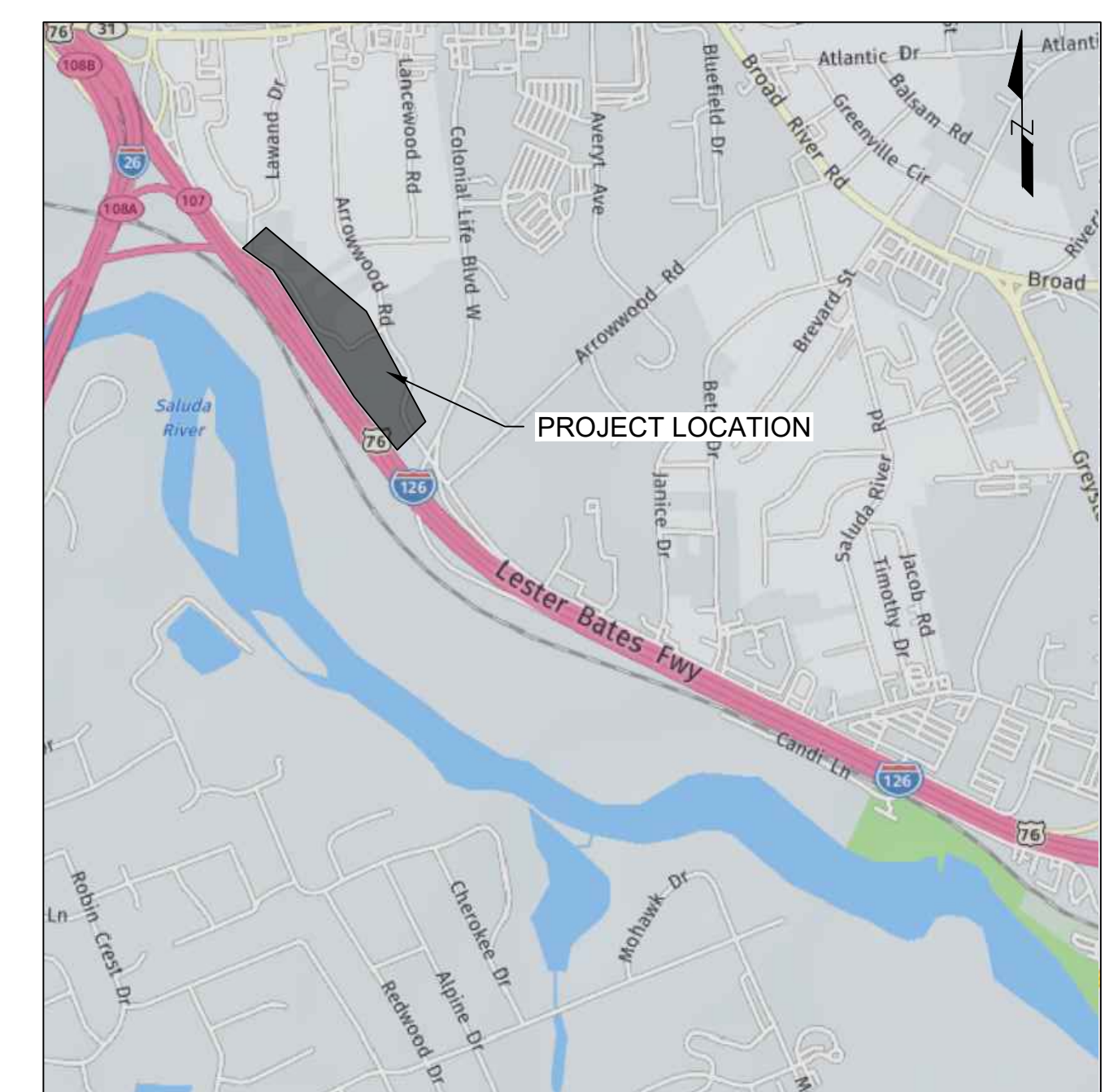
100% DESIGN DOCUMENTS
NOVEMBER 2022

PREPARED BY:

Brown AND Caldwell

Environmental Engineering and Consulting
250 Berryhill Road, Suite 104, Columbia, SC 29210 803-873-9701

HOWARD ENGINEERING
ELECTRICAL—CONTROLS—AUTOMATION
MARIETTA, SOUTH CAROLINA
(864) 836-0440

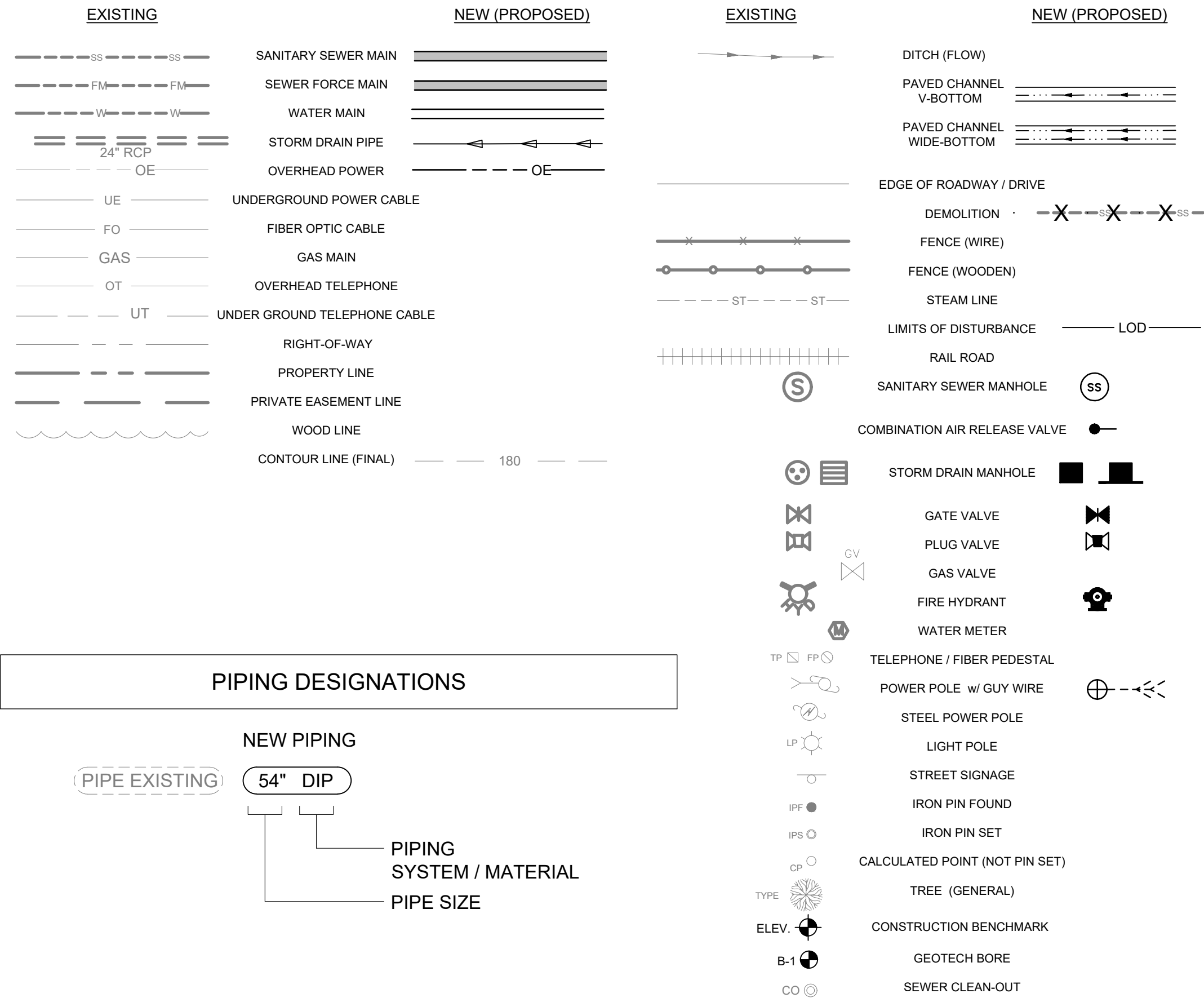


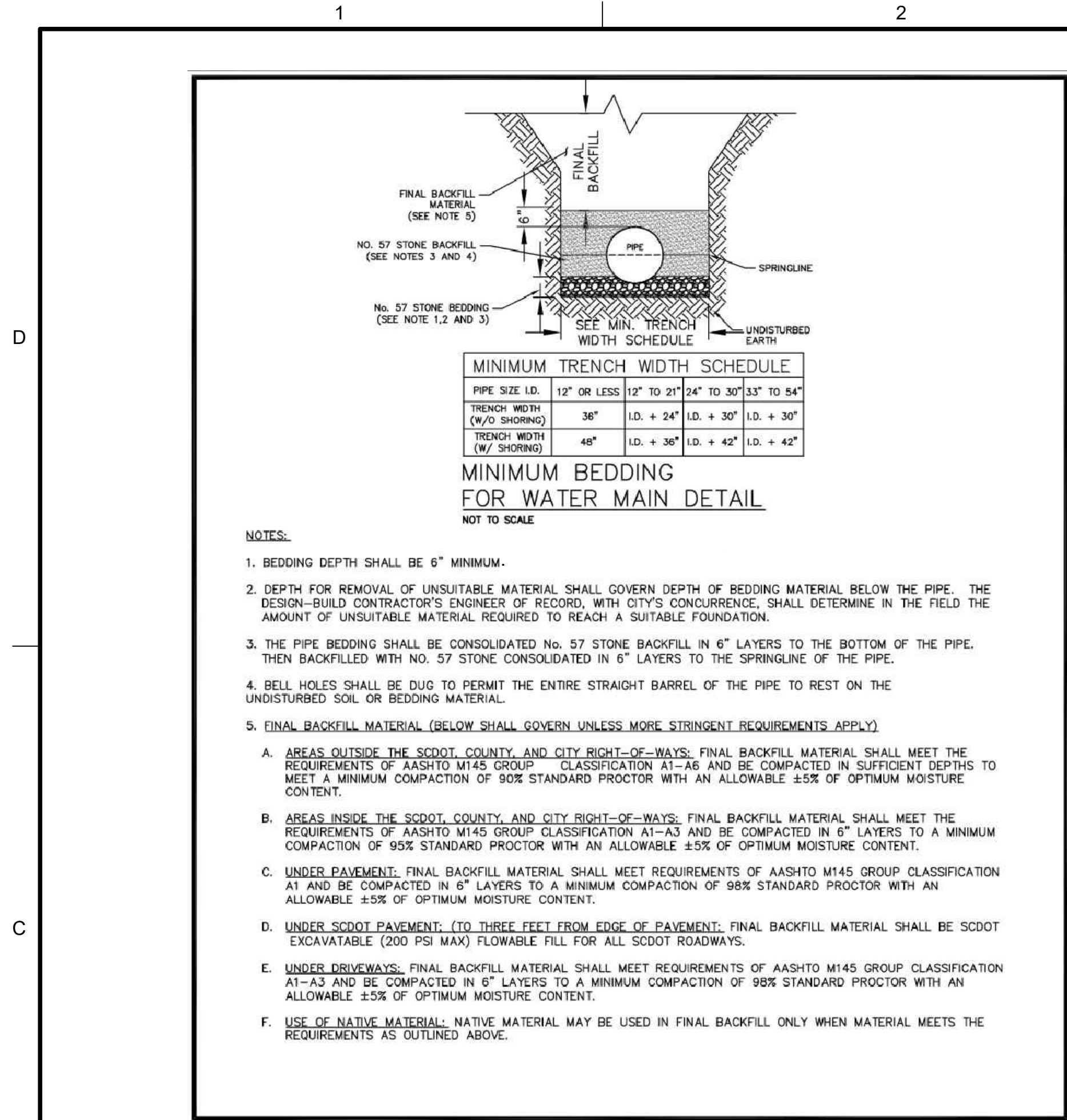
LOCATION MAP
NTS

Path: C:\BCPWD\1874299 FILENAME: 000-G-01.DWG PLOT DATE: 8/5/2022 10:16 AM CAD USER: ANDY JUMPER

1		2		3		4		5		6																																																																																																																																																																																																																																																																															
GENERAL NOTES																																																																																																																																																																																																																																																																																									
1. PROVIDE SHORING, SHEETING AND BRACING, AS NEEDED, IN CONFORMANCE WITH THE APPLICABLE RULES AND REGULATIONS PROMULGATED BY THE DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), INCLUDING OSHA MANUAL 2226, "EXCAVATIONS". WHEN REQUIRED BY RULES AND REGULATIONS, THE CONTRACTOR SHALL PROVIDE DESIGNED SHORING SYSTEMS CERTIFICATIONS APPROVED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF SOUTH CAROLINA TO THE OWNER AND ENGINEER.				17. SEE SECTION 02221 FOR EARTHWORK AND BEDDING REQUIREMENTS.				<div><div>SHEET INDEX</div><table><thead><tr><th>SHEET NUMBER</th><th>DRAWING NUMBER</th><th>DRAWING TITLE</th></tr></thead><tbody><tr><td colspan="3">GENERAL</td></tr><tr><td>1</td><td>000-G-00</td><td>COVER</td></tr><tr><td>2</td><td>000-G-01</td><td>INDEX OF DRAWINGS, GENERAL NOTES, & ABBREVIATIONS</td></tr><tr><td colspan="3">CIVIL</td></tr><tr><td>3</td><td>000-C-01</td><td>STANDARD CIVIL DETAILS -1</td></tr><tr><td>4</td><td>000-C-02</td><td>STANDARD CIVIL DETAILS -2</td></tr><tr><td>5</td><td>000-C-03</td><td>STANDARD CIVIL DETAILS -3</td></tr><tr><td>6</td><td>000-C-04</td><td>STANDARD CIVIL DETAILS -4</td></tr><tr><td>7</td><td>000-C-05</td><td>STANDARD CIVIL DETAILS -5</td></tr><tr><td>8</td><td>000-C-06</td><td>STANDARD CIVIL DETAILS -6</td></tr><tr><td>9</td><td>000-C-07</td><td>EROSION & SEDIMENTATION CONTROL DETAILS AND NOTES</td></tr><tr><td>10</td><td>000-C-08</td><td>EROSION & SEDIMENTATION CONTROL DETAILS</td></tr><tr><td>11</td><td>100-C-01</td><td>OVERALL DEMOLITION & ABANDONMENT PLAN</td></tr><tr><td>12</td><td>100-C-02</td><td>PUMP STATION - SITE PLAN</td></tr><tr><td>13</td><td>200-C-01</td><td>GRAVITY SEWER LINE A PLAN AND PROFILE</td></tr><tr><td>14</td><td>200-C-02</td><td>GRAVITY SEWER LINE B PLAN AND PROFILE</td></tr><tr><td>15</td><td>300-C-01</td><td>8" WATER MAIN PLAN AND PROFILE</td></tr><tr><td>16</td><td>300-C-02</td><td>8" WATER MAIN PLAN AND PROFILE</td></tr><tr><td colspan="3">MECHANICAL</td></tr><tr><td>17</td><td>100-M-01</td><td>PUMP STATION PLAN AND DETAILS</td></tr><tr><td>18</td><td>100-M-02</td><td>PUMP STATION SECTION AND DETAILS</td></tr><tr><td colspan="3">ELECTRICAL</td></tr><tr><td>19</td><td>000-E-01</td><td>ELECTRICAL DETAILS -1</td></tr><tr><td>20</td><td>000-E-02</td><td>ELECTRICAL DETAILS -2</td></tr><tr><td>21</td><td>000-E-03</td><td>ELECTRICAL DETAILS -3</td></tr><tr><td>22</td><td>100-E-01</td><td>SITE PLAN, ONE-LINE DIAGRAM & DETAILS</td></tr></tbody></table></div>				SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE	GENERAL			1	000-G-00	COVER	2	000-G-01	INDEX OF DRAWINGS, GENERAL NOTES, & ABBREVIATIONS	CIVIL			3	000-C-01	STANDARD CIVIL DETAILS -1	4	000-C-02	STANDARD CIVIL DETAILS -2	5	000-C-03	STANDARD CIVIL DETAILS -3	6	000-C-04	STANDARD CIVIL DETAILS -4	7	000-C-05	STANDARD CIVIL DETAILS -5	8	000-C-06	STANDARD CIVIL DETAILS -6	9	000-C-07	EROSION & SEDIMENTATION CONTROL DETAILS AND NOTES	10	000-C-08	EROSION & SEDIMENTATION CONTROL DETAILS	11	100-C-01	OVERALL DEMOLITION & ABANDONMENT PLAN	12	100-C-02	PUMP STATION - SITE PLAN	13	200-C-01	GRAVITY SEWER LINE A PLAN AND PROFILE	14	200-C-02	GRAVITY SEWER LINE B PLAN AND PROFILE	15	300-C-01	8" WATER MAIN PLAN AND PROFILE	16	300-C-02	8" WATER MAIN PLAN AND PROFILE	MECHANICAL			17	100-M-01	PUMP STATION PLAN AND DETAILS	18	100-M-02	PUMP STATION SECTION AND DETAILS	ELECTRICAL			19	000-E-01	ELECTRICAL DETAILS -1	20	000-E-02	ELECTRICAL DETAILS -2	21	000-E-03	ELECTRICAL DETAILS -3	22	100-E-01	SITE PLAN, ONE-LINE DIAGRAM & DETAILS																																																																																																																																																																																													
SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE																																																																																																																																																																																																																																																																																							
GENERAL																																																																																																																																																																																																																																																																																									
1	000-G-00	COVER																																																																																																																																																																																																																																																																																							
2	000-G-01	INDEX OF DRAWINGS, GENERAL NOTES, & ABBREVIATIONS																																																																																																																																																																																																																																																																																							
CIVIL																																																																																																																																																																																																																																																																																									
3	000-C-01	STANDARD CIVIL DETAILS -1																																																																																																																																																																																																																																																																																							
4	000-C-02	STANDARD CIVIL DETAILS -2																																																																																																																																																																																																																																																																																							
5	000-C-03	STANDARD CIVIL DETAILS -3																																																																																																																																																																																																																																																																																							
6	000-C-04	STANDARD CIVIL DETAILS -4																																																																																																																																																																																																																																																																																							
7	000-C-05	STANDARD CIVIL DETAILS -5																																																																																																																																																																																																																																																																																							
8	000-C-06	STANDARD CIVIL DETAILS -6																																																																																																																																																																																																																																																																																							
9	000-C-07	EROSION & SEDIMENTATION CONTROL DETAILS AND NOTES																																																																																																																																																																																																																																																																																							
10	000-C-08	EROSION & SEDIMENTATION CONTROL DETAILS																																																																																																																																																																																																																																																																																							
11	100-C-01	OVERALL DEMOLITION & ABANDONMENT PLAN																																																																																																																																																																																																																																																																																							
12	100-C-02	PUMP STATION - SITE PLAN																																																																																																																																																																																																																																																																																							
13	200-C-01	GRAVITY SEWER LINE A PLAN AND PROFILE																																																																																																																																																																																																																																																																																							
14	200-C-02	GRAVITY SEWER LINE B PLAN AND PROFILE																																																																																																																																																																																																																																																																																							
15	300-C-01	8" WATER MAIN PLAN AND PROFILE																																																																																																																																																																																																																																																																																							
16	300-C-02	8" WATER MAIN PLAN AND PROFILE																																																																																																																																																																																																																																																																																							
MECHANICAL																																																																																																																																																																																																																																																																																									
17	100-M-01	PUMP STATION PLAN AND DETAILS																																																																																																																																																																																																																																																																																							
18	100-M-02	PUMP STATION SECTION AND DETAILS																																																																																																																																																																																																																																																																																							
ELECTRICAL																																																																																																																																																																																																																																																																																									
19	000-E-01	ELECTRICAL DETAILS -1																																																																																																																																																																																																																																																																																							
20	000-E-02	ELECTRICAL DETAILS -2																																																																																																																																																																																																																																																																																							
21	000-E-03	ELECTRICAL DETAILS -3																																																																																																																																																																																																																																																																																							
22	100-E-01	SITE PLAN, ONE-LINE DIAGRAM & DETAILS																																																																																																																																																																																																																																																																																							
2. COMPLY WITH THE GUIDELINES OF THE SCDHEC SOUTH CAROLINA STORM WATER MANAGEMENT AND SEDIMENT AND EROSION CONTROL HANDBOOK FOR LAND DISTURBANCE ACTIVITIES DURING THE ENTIRE CONSTRUCTION PERIOD. SEDIMENT AND EROSION CONTROL PRACTICES SHALL INCLUDE, BUT NOT BE LIMITED TO, SILT FENCES, BERMS, HAY BALES, ETC. AS NEEDED OR AS DIRECTED BY THE ENGINEER.				18. CONTRACTOR TO REFERENCE GEOTECHNICAL REPORT RECOMMENDATIONS IN THIS AREA. SOME UNDERCUTTING AND TRENCH STABILIZATION MAY BE REQUIRED. SEE SECTIONS 02221 FOR STABILIZATION REQUIREMENTS.																																																																																																																																																																																																																																																																																					
3. RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO ORIGINAL CONTOURS, UNLESS OTHERWISE NOTED.				19. GEOTECHNICAL INFORMATION IS AVAILABLE AT THE SCDOT WEB SITE LOCATED AT: WWW.SCDOT.ORG/BUSINESS/CAROLINA-CROSSROADS-PHASE1.ASPX																																																																																																																																																																																																																																																																																					
4. AREAS DISTURBED BY CONSTRUCTION SHALL BE GRASSED IN ACCORDANCE WITH THE APPROVED SEEDING SCHEDULE IN SPECIFICATION SECTION 02930 AND DRAWING 000-C-07.				20. THE PROPOSED ROADWAY IMPROVEMENTS ARE UNDER DESIGN BY THE ARCHER-UNITED JOINT VENTURE TEAM. WATER AND SEWER ALIGNMENTS TO BE ROUGH GRADED PRIOR TO UTILITY RELOCATIONS. MANHOLES WILL BE ADJUSTED ON THE CONSTRUCTION DRAWINGS TO MATCH FINAL GRADES.CONTRACTOR TO COORDINATE WITH THE DESIGN TEAM PRIOR TO CONSTRUCTION TO ACCOUNT FOR ANY MODIFICATIONS FROM THOSE FEATURES SHOWN HEREIN.																																																																																																																																																																																																																																																																																					
5. UTILITIES SHOWN ARE APPROXIMATE LOCATIONS DETERMINED FROM BEST AVAILABLE INFORMATION AND SITE SURVEYS AND SUBSURFACE UTILITY EXPLORATIONS. HOWEVER, PRIOR TO BEGINNING ANY EXCAVATION, CALL PALMETTO UTILITY PROTECTION SERVICE (PUPS) AT 1-888-721-7877 OR 811 TO LOCATE ALL EXISTING UTILITIES. TO LOCATE EXISTING SEWER FACILITIES, CONTACT CITY OF COLUMBIA.				21. CONTRACTOR SHALL CONDUCT COMPACTION TESTING AT 500' INTERVALS ALONG THE PIPELINE. TESTING SHALL BE IN 1.5' LIFTS AND AS DIRECTED IN SECTION 02221.																																																																																																																																																																																																																																																																																					
6. REPAIR OR REPLACE EXISTING FEATURES DISTURBED OR DESTROYED DURING CONSTRUCTION OF THIS PROJECT AT NO ADDITIONAL COST TO THE OWNER. THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO, FENCES, IRRIGATION SYSTEMS, SHRUBS, SMALL TREES, LANDSCAPE MATERIALS, CONCRETE CURBING,SIDEWALKS AND ROADWAYS OUTSIDE THE AREAS OF DISTURBANCE.																																																																																																																																																																																																																																																																																									
7. ANY CONCRETE MONUMENT ENCOUNTERED DURING CONSTRUCTION WILL NEED TO REMAIN IN PLACE. IF MONUMENTS ARE REMOVED, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER, ENGINEER AND SCDOT FOR REPLACEMENT OF THE MONUMENT.																																																																																																																																																																																																																																																																																									
8. THE CONTRACTOR SHALL RESTORE ROAD RIGHTS OF WAY TO EXISTING OR BETTER CONDITION. ALL DITCHES AND SWALES SHALL BE RESTORED PER SCDOT STANDARD SPECIFICATIONS CONCERNING SLOPE AND GRADE. THE CONTRACTOR SHALL DETERMINE GRADES ON EXISTING STORM CULVERTS PRIOR TO REMOVAL TO ENSURE PROPER REPLACEMENT AT EXISTING GRADES AND ELEVATIONS.																																																																																																																																																																																																																																																																																									
9. THE CONTRACTOR SHALL RESTORE DRIVES WITH THE SAME OR LIKE MATERIAL AS EXISTING DRIVES. CONCRETE DRIVES AND SIDEWALKS SHALL BE POURED WITH 3000 PSI FIBER FILLED CONCRETE A MINIMUM OF 4" THICK TO A NEWLY CUT STRAIGHT EDGE. ASPHALT DRIVES AND SIDEWALKS SHALL BE REPLACED WITH A TYPE I ASPHALT PER SCDOT REQUIREMENTS TO A MINIMUM THICKNESS OF 2 INCHES.																																																																																																																																																																																																																																																																																									
10. PRESERVE AND PROTECT FROM INJURY ALL TREES NOT REQUIRED TO BE REMOVED. PROVIDE BARRICADES OR OTHER TYPES OF PROTECTION NECESSARY TO PREVENT UNNECESSARY DAMAGE TO TREES 6" IN DIAMETER OR LARGER. ORNAMENTAL SHRUBBERY AND TREE BRANCHES SHALL BE TEMPORARILY TIED BACK, WHERE APPROPRIATE, TO MINIMIZE DAMAGE.																																																																																																																																																																																																																																																																																									
11. MAINTAIN A HORIZONTAL SEPARATION OF 10-FEET AND VERTICAL SEPARATION OF 18-INCHES (EDGE OF PIPE TO EDGE OF PIPE) BETWEEN WATER MAIN PIPES AND SEWER MAIN PIPES.																																																																																																																																																																																																																																																																																									
12. ALL BURIED FITTINGS SHALL BE DUCTILE IRON, COMPACT, RESTRAINED JOINT, MANUFACTURED IN ACCORDANCE WITH AWWA C153, AND PRESSURE RATED FOR 250 PSI. STANDARD AWWA C110 M.J. FITTINGS MAY BE SUBSTITUTED WITH NO ADDITIONAL COST TO THE OWNER FOR THE INCREASE IN WEIGHT.																																																																																																																																																																																																																																																																																									
13. ALL RESTRAINED JOINT DIP PIPE AND NON-RESTRAINED PIPE SHALL BE INSTALLED BEDDING PER DETAIL 19/000-C-02.																																																																																																																																																																																																																																																																																									
14. ALL CONNECTIONS TO THE EXISTING SYSTEM SHALL BE COORDINATED WITH THE OWNER.																																																																																																																																																																																																																																																																																									
15. ALL TREES, SHRUBBERY, SPOILS, ALL ROCK, CONSTRUCTION MATERIALS, ETC. THAT IS REMOVED/EXCAVATED FOR CONSTRUCTION OF THE PROPOSED FACILITIES, AND NOT INCORPORATED INTO THE WORK (i.e. BACKFILL) AND IS TO BE HAULED OFF-SITE, SHALL BE LEGALLY DISPOSED OF BY THE CONTRACTOR IN AN ENVIRONMENTALLY SOUND MANNER THAT IS IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS																																																																																																																																																																																																																																																																																									
16. CONTRACTOR TO FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATIONS OF THE EXISTING UTILITIES. SUBMITTALS SHALL BE BASED ON FIELD VERIFIED DIMENSIONS. (ALSO SEE GENERAL NOTE 20)																																																																																																																																																																																																																																																																																									
<table><tr><td>AC</td><td>ASPHALTIC CONCRETE</td><td>CV</td><td>CONTROL VALVE</td><td>GV</td><td>GATE VALVE</td><td>PP</td><td>POWER POLE</td><td>w/</td><td>WITH</td></tr><tr><td>AFF</td><td>ABOVE FINISHED FLOOR</td><td>DB</td><td>DUCT BANK</td><td>H/A</td><td>HAND AUTO</td><td>PRES</td><td>PRESSURE</td><td>WSP</td><td>WELDING PROCEDURE</td></tr><tr><td>ANC</td><td>ANCHOR</td><td>DIP</td><td>DUCTILE IRON PIPE</td><td>HOA</td><td>HAND-OFF-AUTO</td><td>PRV</td><td>PRESSURE REGULATING</td><td></td><td>SPECIFICATION</td></tr><tr><td>ARV</td><td>AIR RELEASE VALVE</td><td>EE</td><td>EACH END</td><td>HOR</td><td>HORIZONTAL</td><td>PS</td><td>PERMANENT SEEDING</td><td>WSTP</td><td>WATERSTOP</td></tr><tr><td>C</td><td>BEGINNING OF CURVE</td><td>EL</td><td>ELEVATION</td><td>HR</td><td>HANDRAIL</td><td>PV</td><td>PLUG VALVE</td><td>WT</td><td>WATER TIGHT FRAME & COVER</td></tr><tr><td>CARV</td><td>COMBO AIR RELEASE VALVE</td><td>ELL</td><td>ELBOW</td><td>HV</td><td>HOSE VALVE</td><td>PVT</td><td>PAVEMENT</td><td></td><td></td></tr><tr><td>BF</td><td>BLIND FLANGE</td><td>EMBD</td><td>EMBEDDED</td><td>HYDT</td><td>HYDRANT</td><td>Q</td><td>RATE OF FLOW</td><td></td><td></td></tr><tr><td>BFV</td><td>BUTTERFLY VALVE</td><td>EQ</td><td>EQUAL</td><td>ID</td><td>INSIDE DIAMETER</td><td>R</td><td>RADIUS</td><td></td><td></td></tr><tr><td>BV</td><td>BALL VALVE</td><td>EQUIP</td><td>EQUIPMENT</td><td>IF</td><td>INSIDE FACE</td><td>RJ</td><td>RESTRAINED JOINT</td><td></td><td></td></tr><tr><td>CAB</td><td>DIRECT BURIAL CABLE</td><td>EWEF</td><td>EACH WAY EACH FACE</td><td>IP</td><td>INLET PROTECTION</td><td>SS</td><td>SANITARY SEWER</td><td></td><td></td></tr><tr><td>C-C</td><td>CENTER TO CENTER</td><td>EXIST</td><td>EXISTING</td><td>INF</td><td>INFLUENT</td><td>S</td><td>SEWER, SPEED SELECTOR</td><td></td><td></td></tr><tr><td>CCP</td><td>CONCRETE CYLINDER PIPE</td><td>FC</td><td>FAIL CLOSED</td><td>INT</td><td>INTERIOR</td><td>SF</td><td>SILT FENCE</td><td></td><td></td></tr><tr><td>CDR</td><td>CONDUCTOR</td><td>FF</td><td>FAR FACE</td><td>INV</td><td>INVERT</td><td>SSC</td><td>SOLID STATE CONTROLLER</td><td></td><td></td></tr><tr><td>CF</td><td>CUBIC FEET</td><td>F-F</td><td>FACE TO FACE</td><td>LF</td><td>LINEAR FEET</td><td>SYM</td><td>SYMMETRICAL</td><td></td><td></td></tr><tr><td>CFH</td><td>CUBIC FEET PER HOUR</td><td>FH</td><td>FIRE HYDRANT</td><td>MGD</td><td>MILLION GALLONS PER DAY</td><td>T</td><td>TRAP</td><td></td><td></td></tr><tr><td>CIRC</td><td>CIRCUMFERENCE</td><td>FIN</td><td>FINISHED</td><td>MIN</td><td>MINIMUM, MINUTE</td><td>TC</td><td>TOP OF COVER</td><td></td><td></td></tr><tr><td>CK</td><td>CHECKER(ED)</td><td>FL</td><td>FLANGED</td><td>MJ</td><td>MECHANICAL JOINT</td><td>T/C</td><td>TOP OF CURB</td><td></td><td></td></tr><tr><td>CKPL</td><td>CHECKER PLATE</td><td>FLR</td><td>FLOOR</td><td>MME</td><td>MISC. MECHANICAL EQUIPMENT</td><td>TFR</td><td>TRANSFORMER</td><td></td><td></td></tr><tr><td>ε</td><td>CENTERLINE</td><td>FLT</td><td>FILTER</td><td>MOP</td><td>MOTOR OPERATOR</td><td>TS</td><td>TEMPORARY SEEDING</td><td></td><td></td></tr><tr><td>CL</td><td>CLEARANCE</td><td>FM</td><td>FORCE MAIN</td><td>N</td><td>NEUTRAL</td><td>TYP</td><td>TYPICAL</td><td></td><td></td></tr><tr><td>CNTL</td><td>CONTROL</td><td>FO</td><td>FAIL OPEN</td><td>OHP</td><td>OVERHEAD POWER</td><td>UE</td><td>UNDERGROUND ELECTRIC</td><td></td><td></td></tr><tr><td>CO</td><td>CLEANOUT</td><td>FPC</td><td>FLEXIBLE PIPE COUPLING</td><td>OD</td><td>OUTSIDE DIAMETER</td><td>UN</td><td>UNION</td><td></td><td></td></tr><tr><td>CJ</td><td>CONSTRUCTION JOINT</td><td>G</td><td>POWER ACTUATED GATE</td><td>P</td><td>PUMP</td><td>UT</td><td>UTILITY POLE</td><td></td><td></td></tr><tr><td>CJP</td><td>COMPLETE JOINT PENETRATION</td><td>GBV</td><td>GLOBE VALVE</td><td>PAR</td><td>PARALLEL</td><td>US</td><td>UTILITY STATION</td><td></td><td></td></tr><tr><td>CONT</td><td>CONTINUED</td><td>GPD</td><td>GALLONS PER DAY</td><td>PCCP</td><td>PRESTRESSED CONCRETE</td><td>V</td><td>VALVE, VOLTS, VENT</td><td></td><td></td></tr><tr><td>CR</td><td>CONDUIT RACK</td><td>GRT</td><td>GROUT</td><td></td><td>CYLINDER PIPE</td><td>VAR</td><td>VARIES, VARIABLE</td><td></td><td></td></tr><tr><td>CRN</td><td>CRANE</td><td>GSP</td><td>GALVANIZED STEEL PIPE</td><td>PL</td><td>PROPERTY LINE</td><td>W</td><td>WATER</td><td></td><td></td></tr></table>												AC	ASPHALTIC CONCRETE	CV	CONTROL VALVE	GV	GATE VALVE	PP	POWER POLE	w/	WITH	AFF	ABOVE FINISHED FLOOR	DB	DUCT BANK	H/A	HAND AUTO	PRES	PRESSURE	WSP	WELDING PROCEDURE	ANC	ANCHOR	DIP	DUCTILE IRON PIPE	HOA	HAND-OFF-AUTO	PRV	PRESSURE REGULATING		SPECIFICATION	ARV	AIR RELEASE VALVE	EE	EACH END	HOR	HORIZONTAL	PS	PERMANENT SEEDING	WSTP	WATERSTOP	C	BEGINNING OF CURVE	EL	ELEVATION	HR	HANDRAIL	PV	PLUG VALVE	WT	WATER TIGHT FRAME & COVER	CARV	COMBO AIR RELEASE VALVE	ELL	ELBOW	HV	HOSE VALVE	PVT	PAVEMENT			BF	BLIND FLANGE	EMBD	EMBEDDED	HYDT	HYDRANT	Q	RATE OF FLOW			BFV	BUTTERFLY VALVE	EQ	EQUAL	ID	INSIDE DIAMETER	R	RADIUS			BV	BALL VALVE	EQUIP	EQUIPMENT	IF	INSIDE FACE	RJ	RESTRAINED JOINT			CAB	DIRECT BURIAL CABLE	EWEF	EACH WAY EACH FACE	IP	INLET PROTECTION	SS	SANITARY SEWER			C-C	CENTER TO CENTER	EXIST	EXISTING	INF	INFLUENT	S	SEWER, SPEED SELECTOR			CCP	CONCRETE CYLINDER PIPE	FC	FAIL CLOSED	INT	INTERIOR	SF	SILT FENCE			CDR	CONDUCTOR	FF	FAR FACE	INV	INVERT	SSC	SOLID STATE CONTROLLER			CF	CUBIC FEET	F-F	FACE TO FACE	LF	LINEAR FEET	SYM	SYMMETRICAL			CFH	CUBIC FEET PER HOUR	FH	FIRE HYDRANT	MGD	MILLION GALLONS PER DAY	T	TRAP			CIRC	CIRCUMFERENCE	FIN	FINISHED	MIN	MINIMUM, MINUTE	TC	TOP OF COVER			CK	CHECKER(ED)	FL	FLANGED	MJ	MECHANICAL JOINT	T/C	TOP OF CURB			CKPL	CHECKER PLATE	FLR	FLOOR	MME	MISC. MECHANICAL EQUIPMENT	TFR	TRANSFORMER			ε	CENTERLINE	FLT	FILTER	MOP	MOTOR OPERATOR	TS	TEMPORARY SEEDING			CL	CLEARANCE	FM	FORCE MAIN	N	NEUTRAL	TYP	TYPICAL			CNTL	CONTROL	FO	FAIL OPEN	OHP	OVERHEAD POWER	UE	UNDERGROUND ELECTRIC			CO	CLEANOUT	FPC	FLEXIBLE PIPE COUPLING	OD	OUTSIDE DIAMETER	UN	UNION			CJ	CONSTRUCTION JOINT	G	POWER ACTUATED GATE	P	PUMP	UT	UTILITY POLE			CJP	COMPLETE JOINT PENETRATION	GBV	GLOBE VALVE	PAR	PARALLEL	US	UTILITY STATION			CONT	CONTINUED	GPD	GALLONS PER DAY	PCCP	PRESTRESSED CONCRETE	V	VALVE, VOLTS, VENT			CR	CONDUIT RACK	GRT	GROUT		CYLINDER PIPE	VAR	VARIES, VARIABLE			CRN	CRANE	GSP	GALVANIZED STEEL PIPE	PL	PROPERTY LINE	W	WATER		
AC	ASPHALTIC CONCRETE	CV	CONTROL VALVE	GV	GATE VALVE	PP	POWER POLE	w/	WITH																																																																																																																																																																																																																																																																																
AFF	ABOVE FINISHED FLOOR	DB	DUCT BANK	H/A	HAND AUTO	PRES	PRESSURE	WSP	WELDING PROCEDURE																																																																																																																																																																																																																																																																																
ANC	ANCHOR	DIP	DUCTILE IRON PIPE	HOA	HAND-OFF-AUTO	PRV	PRESSURE REGULATING		SPECIFICATION																																																																																																																																																																																																																																																																																
ARV	AIR RELEASE VALVE	EE	EACH END	HOR	HORIZONTAL	PS	PERMANENT SEEDING	WSTP	WATERSTOP																																																																																																																																																																																																																																																																																
C	BEGINNING OF CURVE	EL	ELEVATION	HR	HANDRAIL	PV	PLUG VALVE	WT	WATER TIGHT FRAME & COVER																																																																																																																																																																																																																																																																																
CARV	COMBO AIR RELEASE VALVE	ELL	ELBOW	HV	HOSE VALVE	PVT	PAVEMENT																																																																																																																																																																																																																																																																																		
BF	BLIND FLANGE	EMBD	EMBEDDED	HYDT	HYDRANT	Q	RATE OF FLOW																																																																																																																																																																																																																																																																																		
BFV	BUTTERFLY VALVE	EQ	EQUAL	ID	INSIDE DIAMETER	R	RADIUS																																																																																																																																																																																																																																																																																		
BV	BALL VALVE	EQUIP	EQUIPMENT	IF	INSIDE FACE	RJ	RESTRAINED JOINT																																																																																																																																																																																																																																																																																		
CAB	DIRECT BURIAL CABLE	EWEF	EACH WAY EACH FACE	IP	INLET PROTECTION	SS	SANITARY SEWER																																																																																																																																																																																																																																																																																		
C-C	CENTER TO CENTER	EXIST	EXISTING	INF	INFLUENT	S	SEWER, SPEED SELECTOR																																																																																																																																																																																																																																																																																		
CCP	CONCRETE CYLINDER PIPE	FC	FAIL CLOSED	INT	INTERIOR	SF	SILT FENCE																																																																																																																																																																																																																																																																																		
CDR	CONDUCTOR	FF	FAR FACE	INV	INVERT	SSC	SOLID STATE CONTROLLER																																																																																																																																																																																																																																																																																		
CF	CUBIC FEET	F-F	FACE TO FACE	LF	LINEAR FEET	SYM	SYMMETRICAL																																																																																																																																																																																																																																																																																		
CFH	CUBIC FEET PER HOUR	FH	FIRE HYDRANT	MGD	MILLION GALLONS PER DAY	T	TRAP																																																																																																																																																																																																																																																																																		
CIRC	CIRCUMFERENCE	FIN	FINISHED	MIN	MINIMUM, MINUTE	TC	TOP OF COVER																																																																																																																																																																																																																																																																																		
CK	CHECKER(ED)	FL	FLANGED	MJ	MECHANICAL JOINT	T/C	TOP OF CURB																																																																																																																																																																																																																																																																																		
CKPL	CHECKER PLATE	FLR	FLOOR	MME	MISC. MECHANICAL EQUIPMENT	TFR	TRANSFORMER																																																																																																																																																																																																																																																																																		
ε	CENTERLINE	FLT	FILTER	MOP	MOTOR OPERATOR	TS	TEMPORARY SEEDING																																																																																																																																																																																																																																																																																		
CL	CLEARANCE	FM	FORCE MAIN	N	NEUTRAL	TYP	TYPICAL																																																																																																																																																																																																																																																																																		
CNTL	CONTROL	FO	FAIL OPEN	OHP	OVERHEAD POWER	UE	UNDERGROUND ELECTRIC																																																																																																																																																																																																																																																																																		
CO	CLEANOUT	FPC	FLEXIBLE PIPE COUPLING	OD	OUTSIDE DIAMETER	UN	UNION																																																																																																																																																																																																																																																																																		
CJ	CONSTRUCTION JOINT	G	POWER ACTUATED GATE	P	PUMP	UT	UTILITY POLE																																																																																																																																																																																																																																																																																		
CJP	COMPLETE JOINT PENETRATION	GBV	GLOBE VALVE	PAR	PARALLEL	US	UTILITY STATION																																																																																																																																																																																																																																																																																		
CONT	CONTINUED	GPD	GALLONS PER DAY	PCCP	PRESTRESSED CONCRETE	V	VALVE, VOLTS, VENT																																																																																																																																																																																																																																																																																		
CR	CONDUIT RACK	GRT	GROUT		CYLINDER PIPE	VAR	VARIES, VARIABLE																																																																																																																																																																																																																																																																																		
CRN	CRANE	GSP	GALVANIZED STEEL PIPE	PL	PROPERTY LINE	W	WATER																																																																																																																																																																																																																																																																																		
GENERAL NOTES																																																																																																																																																																																																																																																																																									
1. THIS DRAWING IS GENERAL IN NATURE. SOME DESIGNATIONS SHOWN HEREON MAY NOT BE USED ON THE CONTRACT DRAWINGS.																																																																																																																																																																																																																																																																																									
2. EXISTING PIPING IS DESIGNATED BY SERVICE WITHOUT IMPLICATION AS TO PIPING MATERIAL. EXISTING PIPING MATERIAL, IF KNOWN, IS INDICATED SEPARATELY, AND MAY NOT BE THE SAME MATERIAL AS SPECIFIED FOR NEW PIPING FOR THE SAME SERVICE.																																																																																																																																																																																																																																																																																									
<div>*****UTILITY WARNING:***** The underground utilities shown have been located from field survey information and existing drawings, sub surface explorations. The engineer/surveyor makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The engineer/surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from the information available. The engineer/surveyor have not physically located the underground utilities.</div>																																																																																																																																																																																																																																																																																									
1																																																																																																																																																																																																																																																																																									
2																																																																																																																																																																																																																																																																																									
3																																																																																																																																																																																																																																																																																									
4																																																																																																																																																																																																																																																																																									
5																																																																																																																																																																																																																																																																																									
6																																																																																																																																																																																																																																																																																									

AC	ASPHALTIC CONCRETE	CV	CONTROL VALVE	GV	GATE VALVE	PP	POWER POLE	w/	WITH
AFF	ABOVE FINISHED FLOOR	DB	DUCT BANK	H/A	HAND AUTO	PRES	PRESSURE	WSP	WELDING PROCEDURE
ANC	ANCHOR	DIP	DUCTILE IRON PIPE	HOA	HAND-OFF-AUTO	PRV	PRESSURE REGULATING		SPECIFICATION
ARV	AIR RELEASE VALVE	EE	EACH END	HOR	HORIZONTAL	PS	PERMANENT SEEDING	WSTP	WATERSTOP
C	BEGINNING OF CURVE	EL	ELEVATION	HR	HANDRAIL	PV	PLUG VALVE	WT	WATER TIGHT FRAME & COVER
CARV	COMBO AIR RELEASE VALVE	ELL	ELBOW	HV	HOSE VALVE	PVT	PAVEMENT		
BF	BLIND FLANGE	EMBD	EMBEDDED	HYDT	HYDRANT	Q	RATE OF FLOW		
BFV	BUTTERFLY VALVE	EQ	EQUAL	ID	INSIDE DIAMETER	R	RADIUS		
BV	BALL VALVE	EQUIP	EQUIPMENT	IF	INSIDE FACE	RJ	RESTRAINED JOINT		
CAB	DIRECT BURIAL CABLE	EWEF	EACH WAY EACH FACE	IP	INLET PROTECTION	SS	SANITARY SEWER		
C-C	CENTER TO CENTER	EXIST	EXISTING	INF	INFLUENT	S	SEWER, SPEED SELECTOR		
CCP	CONCRETE CYLINDER PIPE	FC	FAIL CLOSED	INT	INTERIOR	SF	SILT FENCE		
CDR	CONDUCTOR	FF	FAR FACE	INV	INVERT	SSC	SOLID STATE CONTROLLER		
CF	CUBIC FEET	F-F	FACE TO FACE	LF	LINEAR FEET	SYM	SYMMETRICAL		
CFH	CUBIC FEET PER HOUR	FH	FIRE HYDRANT	MGD	MILLION GALLONS PER DAY	T	TRAP		
CIRC	CIRCUMFERENCE	FIN	FINISHED	MIN	MINIMUM, MINUTE	TC	TOP OF COVER		
CK	CHECKER(ED)	FL	FLANGED	MJ	MECHANICAL JOINT	T/C	TOP OF CURB		
CKPL	CHECKER PLATE	FLR	FLOOR	MME	MISC. MECHANICAL EQUIPMENT	TFR	TRANSFORMER		
ε	CENTERLINE	FLT	FILTER	MOP	MOTOR OPERATOR	TS	TEMPORARY SEEDING		
CL	CLEARANCE	FM	FORCE MAIN	N	NEUTRAL	TYP	TYPICAL		
CNTL	CONTROL	FO	FAIL OPEN	OHP	OVERHEAD POWER	UE	UNDERGROUND ELECTRIC		
CO	CLEANOUT	FPC	FLEXIBLE PIPE COUPLING	OD	OUTSIDE DIAMETER	UN	UNION		
CJ	CONSTRUCTION JOINT	G	POWER ACTUATED GATE	P	PUMP	UT	UTILITY POLE		
CJP	COMPLETE JOINT PENETRATION	GBV	GLOBE VALVE	PAR	PARALLEL	US	UTILITY STATION		
CONT	CONTINUED	GPD	GALLONS PER DAY	PCCP	PRESTRESSED CONCRETE	V	VALVE, VOLTS, VENT		
CR	CONDUIT RACK	GRT	GROUT		CYLINDER PIPE	VAR	VARIES, VARIABLE		
CRN	CRANE	GSP	GALVANIZED STEEL PIPE	PL	PROPERTY LINE	W	WATER		





WATER DETAIL # 1		REVISION	
NO.	DATE	INITIALS	DESCRIPTION

MINIMUM BEDDING FOR WATER MAIN

SHEET 1 OF 1

CITY OF COLUMBIA

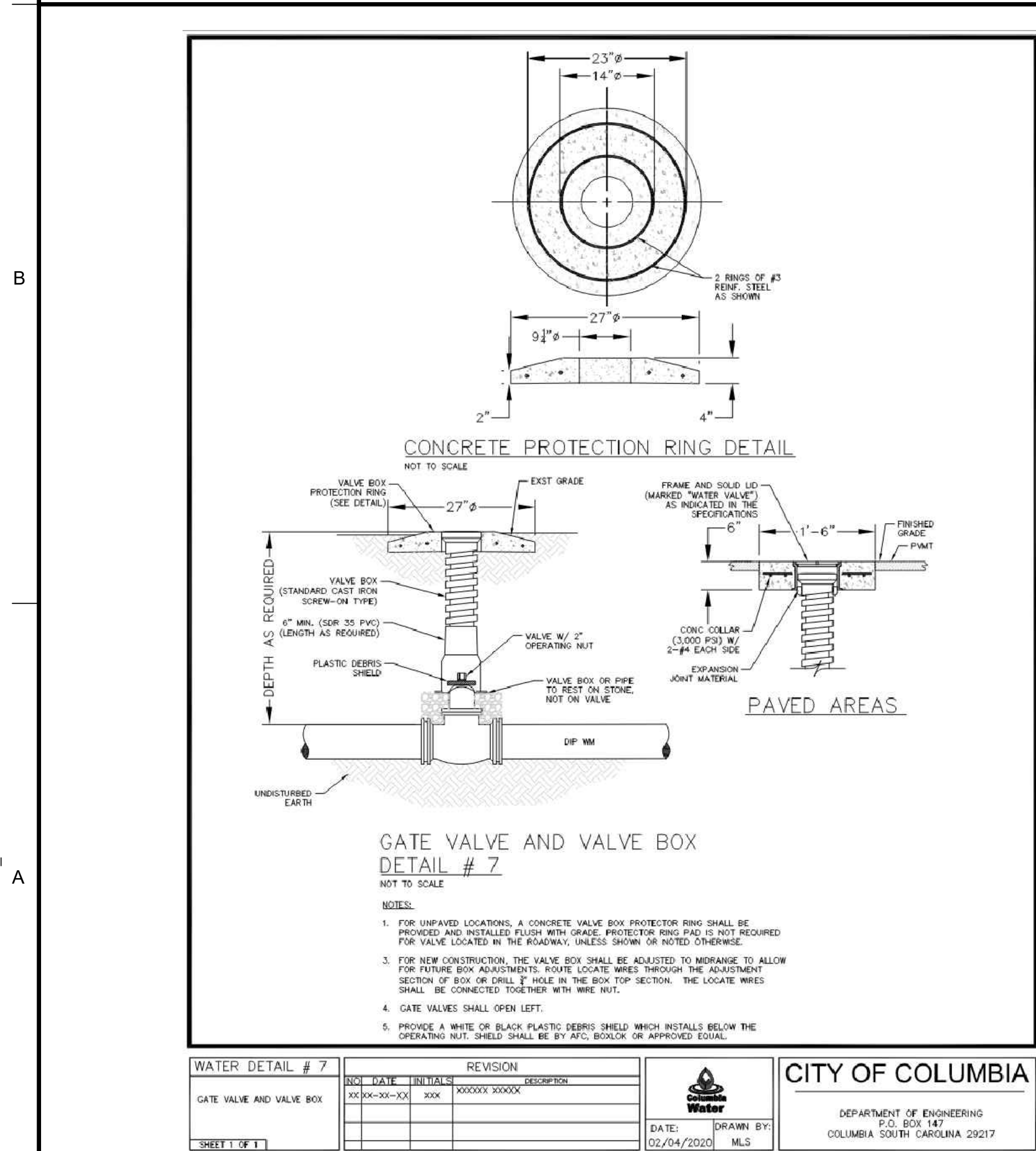
DEPARTMENT OF ENGINEERING

P.O. BOX 147

COLUMBIA SOUTH CAROLINA 29217

DATE: 02/04/2020

DRAWN BY: MLS



WATER DETAIL # 7		REVISION	
NO.	DATE	INITIALS	DESCRIPTION

GATE VALVE AND VALVE BOX

SHEET 1 OF 1

CITY OF COLUMBIA

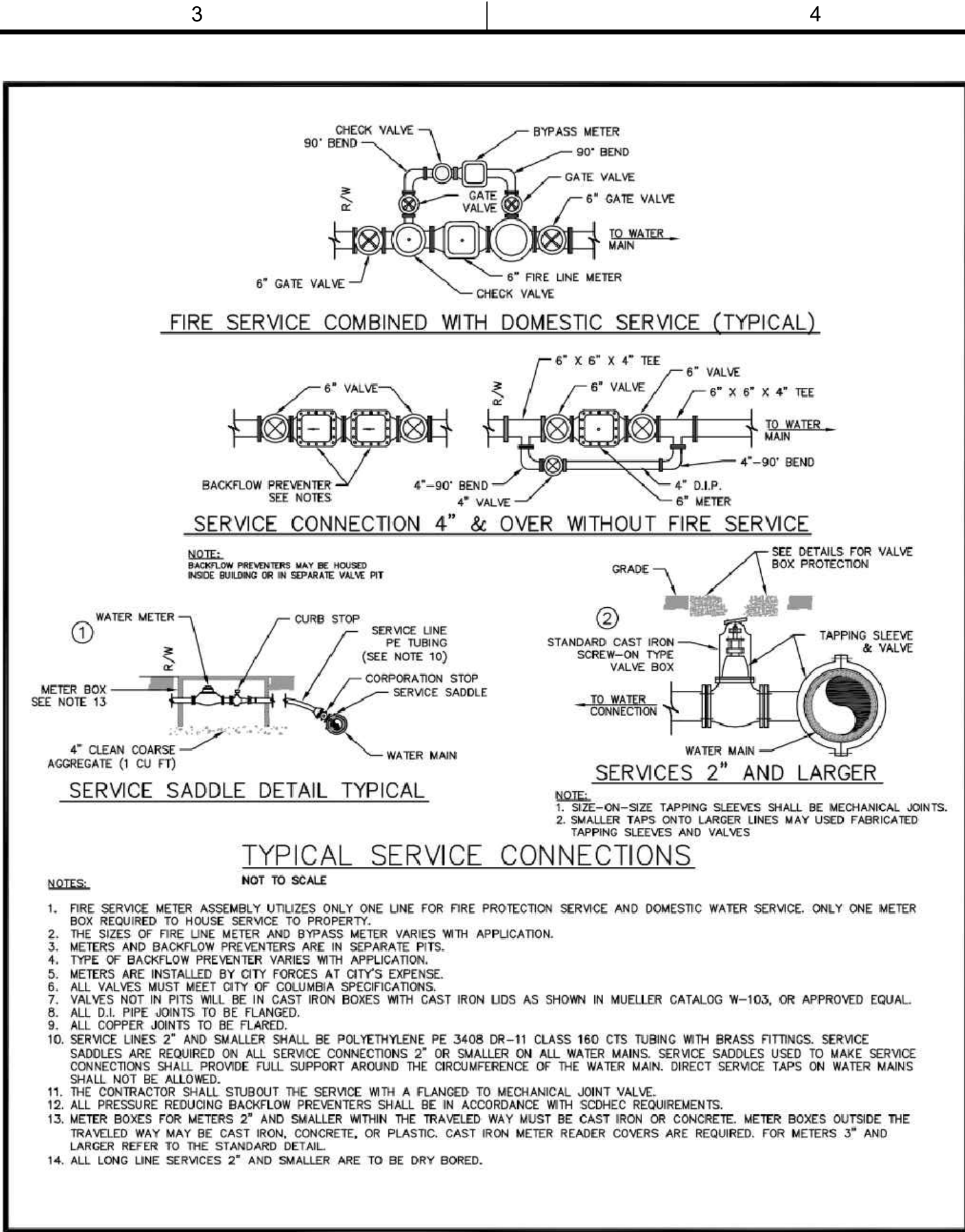
DEPARTMENT OF ENGINEERING

P.O. BOX 147

COLUMBIA SOUTH CAROLINA 29217

DATE: 02/04/2020

DRAWN BY: MLS



WATER DETAIL # 5		REVISION	
NO.	DATE	INITIALS	DESCRIPTION

TYPICAL SERVICE CONNECTIONS

SHEET 1 OF 1

CITY OF COLUMBIA

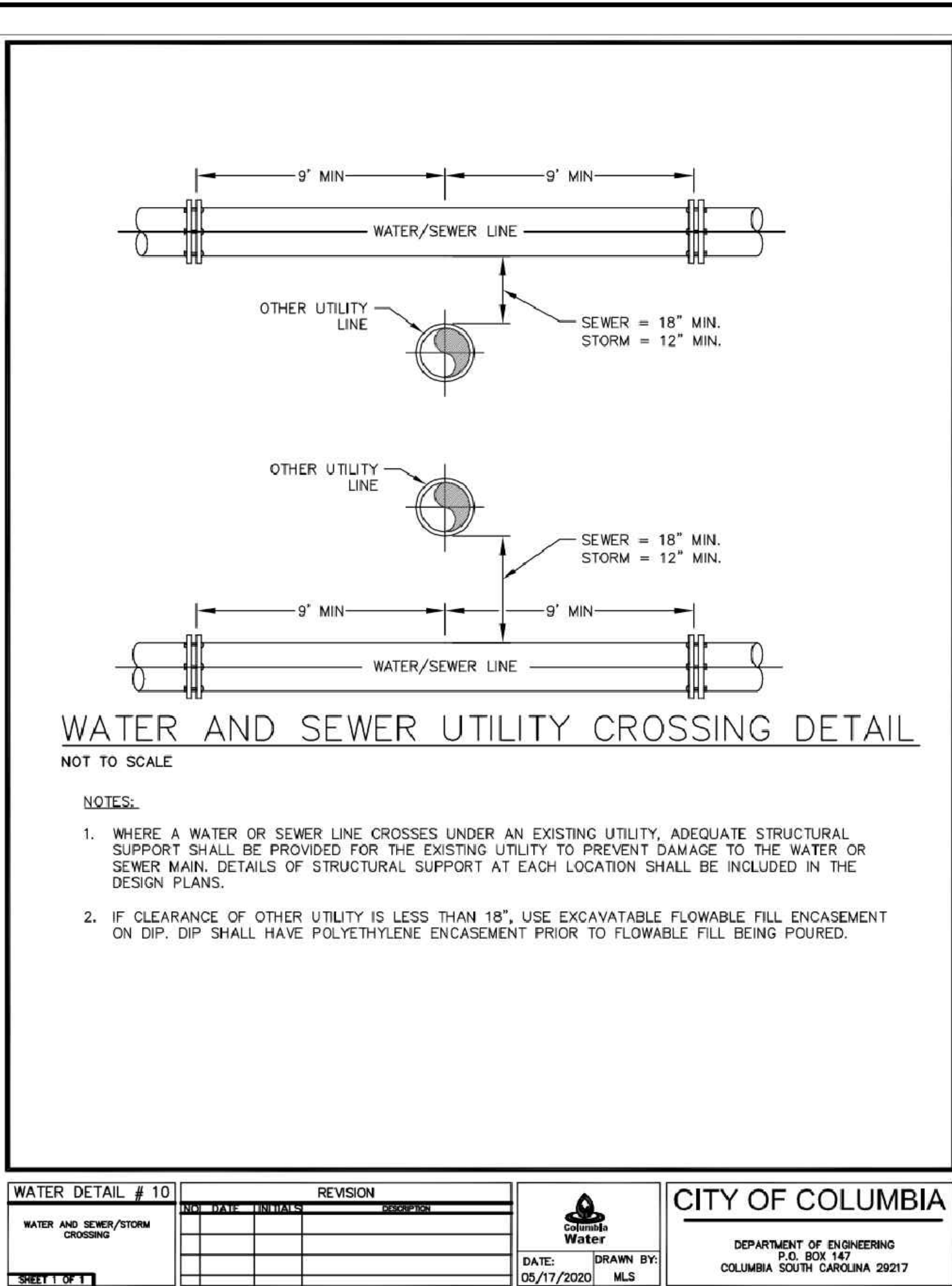
DEPARTMENT OF ENGINEERING

P.O. BOX 147

COLUMBIA SOUTH CAROLINA 29217

DATE: 02/04/2020

DRAWN BY: MLS



WATER DETAIL # 10		REVISION	
NO.	DATE	INITIALS	DESCRIPTION

WATER AND SEWER/STORM CROSSING

SHEET 1 OF 1

CITY OF COLUMBIA

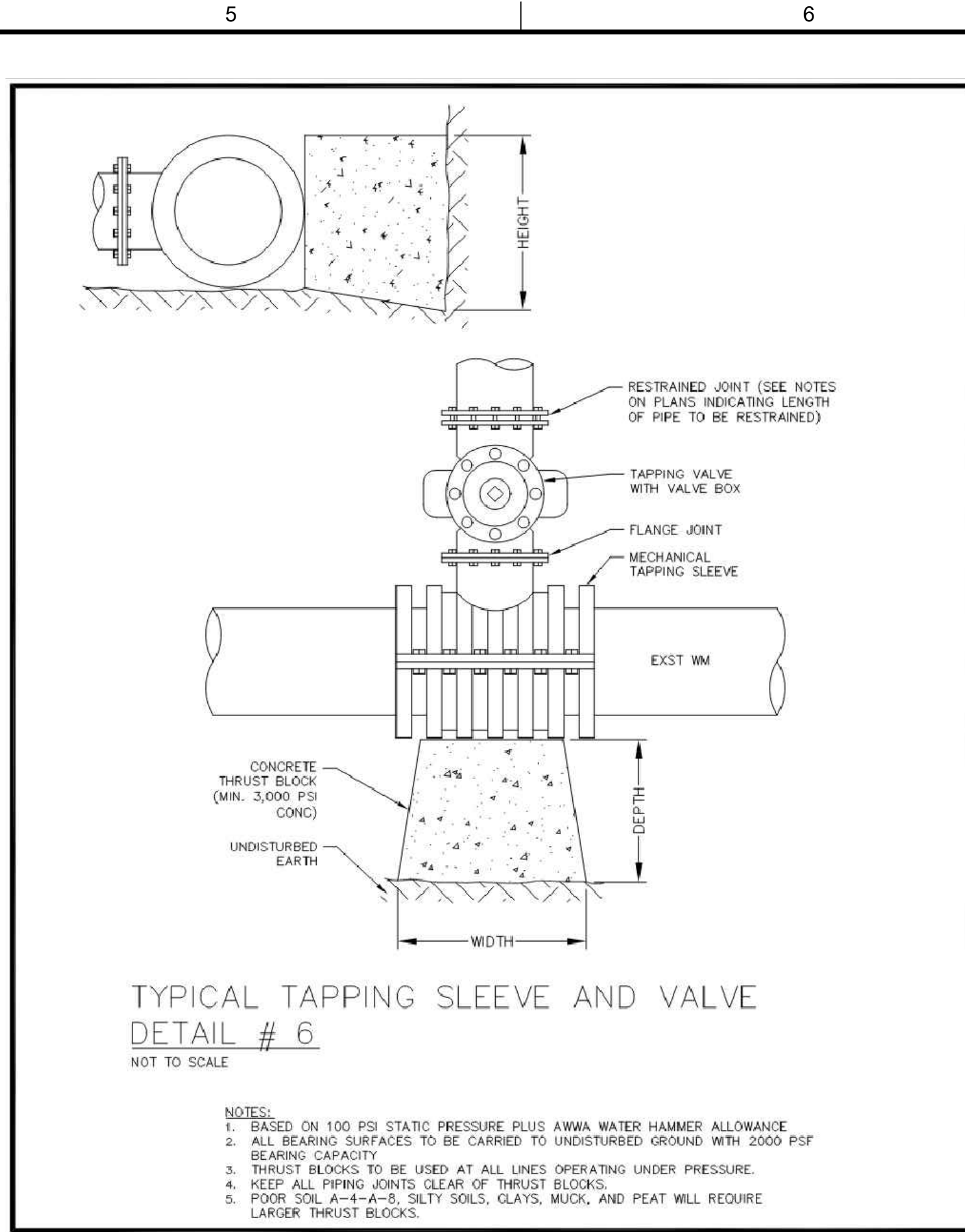
DEPARTMENT OF ENGINEERING

P.O. BOX 147

COLUMBIA SOUTH CAROLINA 29217

DATE: 02/04/2020

DRAWN BY: MLS



WATER DETAIL # 6		REVISION	
NO.	DATE	INITIALS	DESCRIPTION

TYPICAL TAPPING SLEEVE AND VALVE

SHEET 1 OF 1

CITY OF COLUMBIA

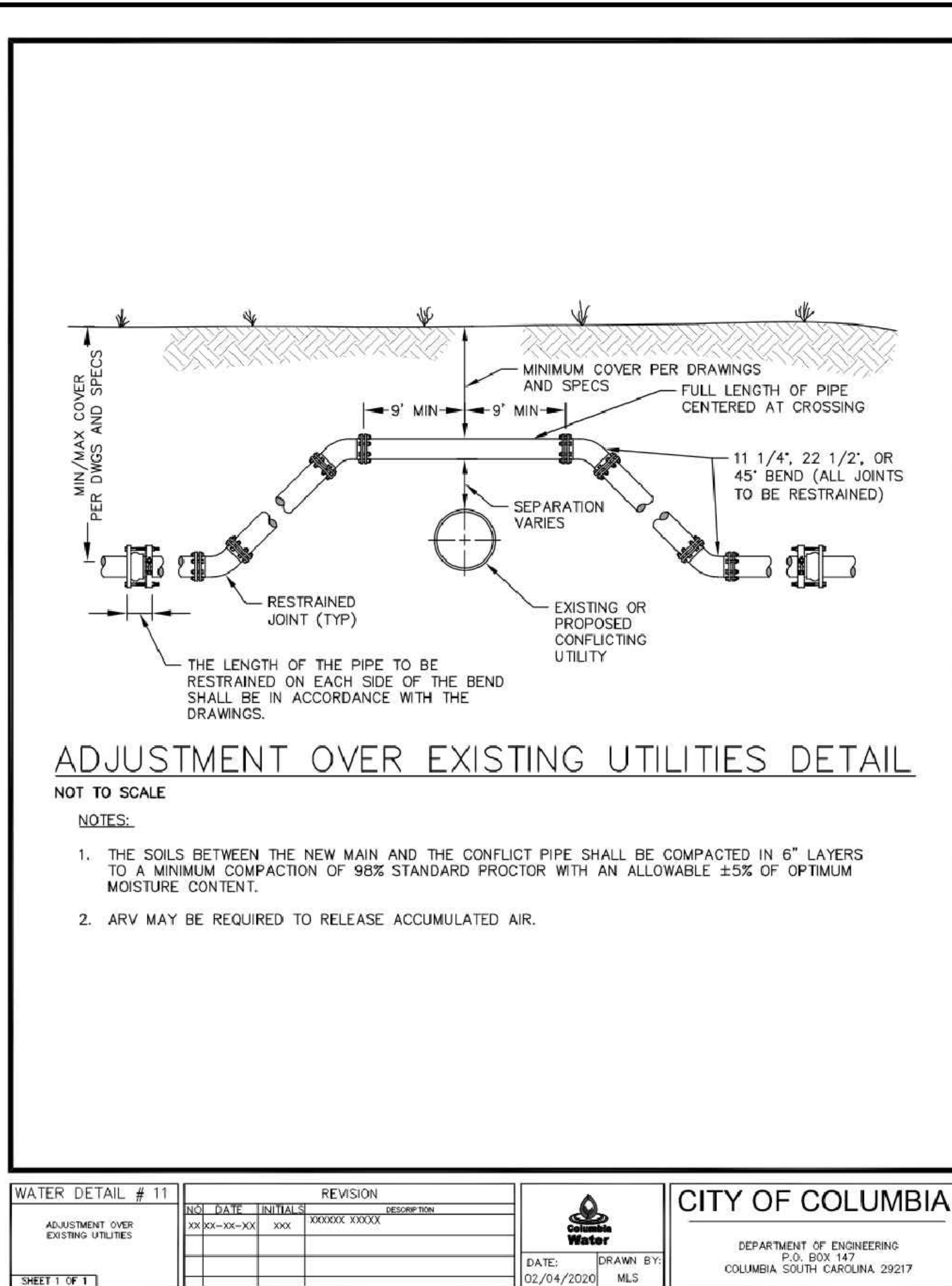
DEPARTMENT OF ENGINEERING

P.O. BOX 147

COLUMBIA SOUTH CAROLINA 29217

DATE: 02/04/2020

DRAWN BY: MLS



WATER DETAIL # 11		REVISION	
NO.	DATE	INITIALS	DESCRIPTION

ADJUSTMENT OVER EXISTING UTILITIES

SHEET 1 OF 1

CITY OF COLUMBIA

DEPARTMENT OF ENGINEERING

P.O. BOX 147

COLUMBIA SOUTH CAROLINA 29217

DATE: 02/04/2020

DRAWN BY: MLS

Brown and Caldwell

COLUMBIA, SOUTH CAROLINA

Professional Engineer

South Carolina

No. 000399

Professional Engineer

South Carolina

No. 28198

BRANDY KING PRICK

Columbia Water

Drinking Water • Wastewater • Stormwater

100% DESIGN SUBMITTAL

CAROLINA CROSSROADS

PHASE 1

CONFLICTS 1057 FACILITY 1, 9, 10, 11, 12, 13, AND 14

REVISIONS

REV

DATE

DESCRIPTION

DESIGNED:

DRAWN:

CHECKED:

CHECKED:

APPROVED:

FILENAME

000-C-01_000-E-02.DWG

BC PROJECT NUMBER

156904

CLIENT PROJECT NUMBER

SCDOT PROJECT ID P027662

CIVIL

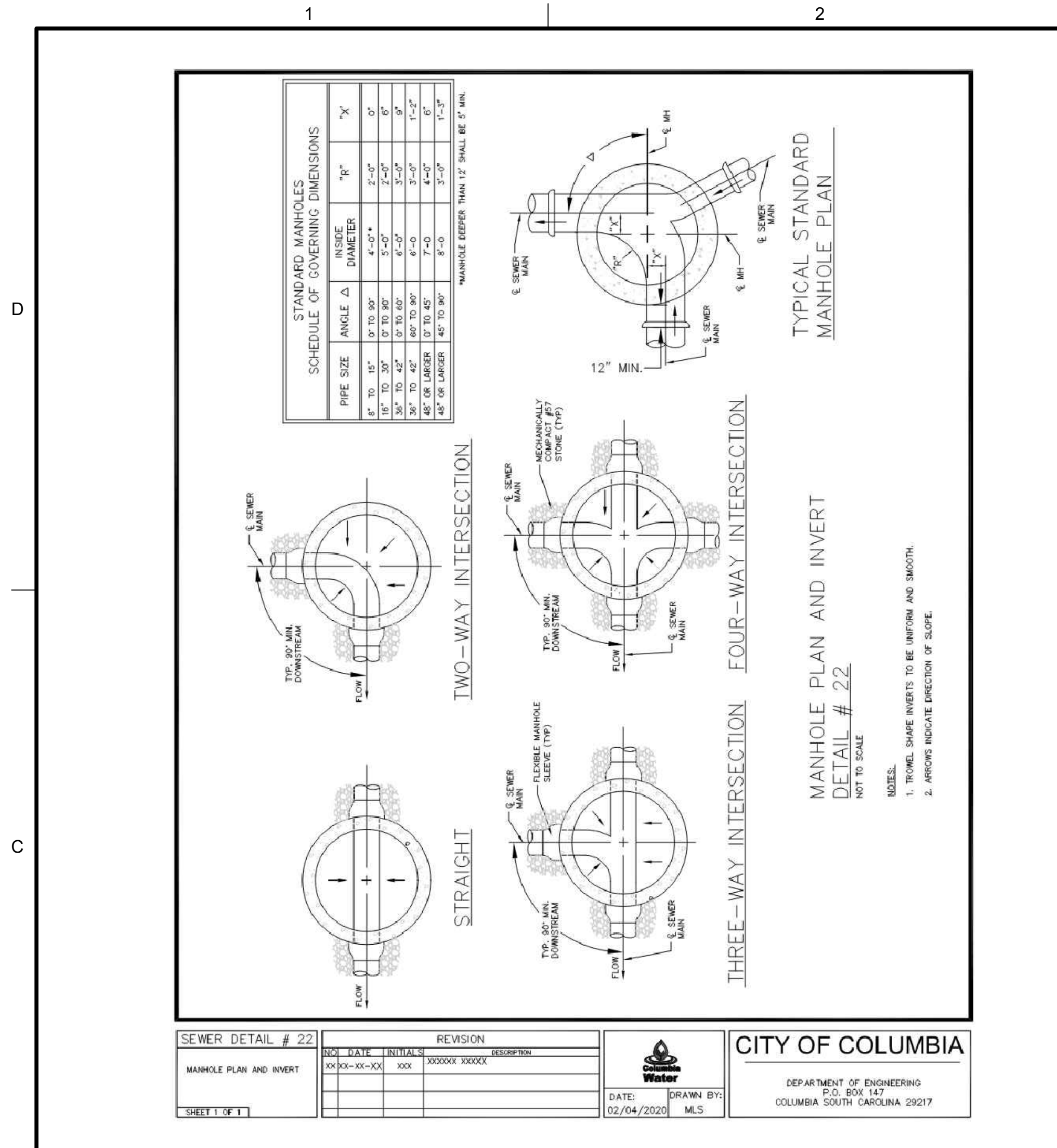
STANDARD CIVIL DETAILS -1

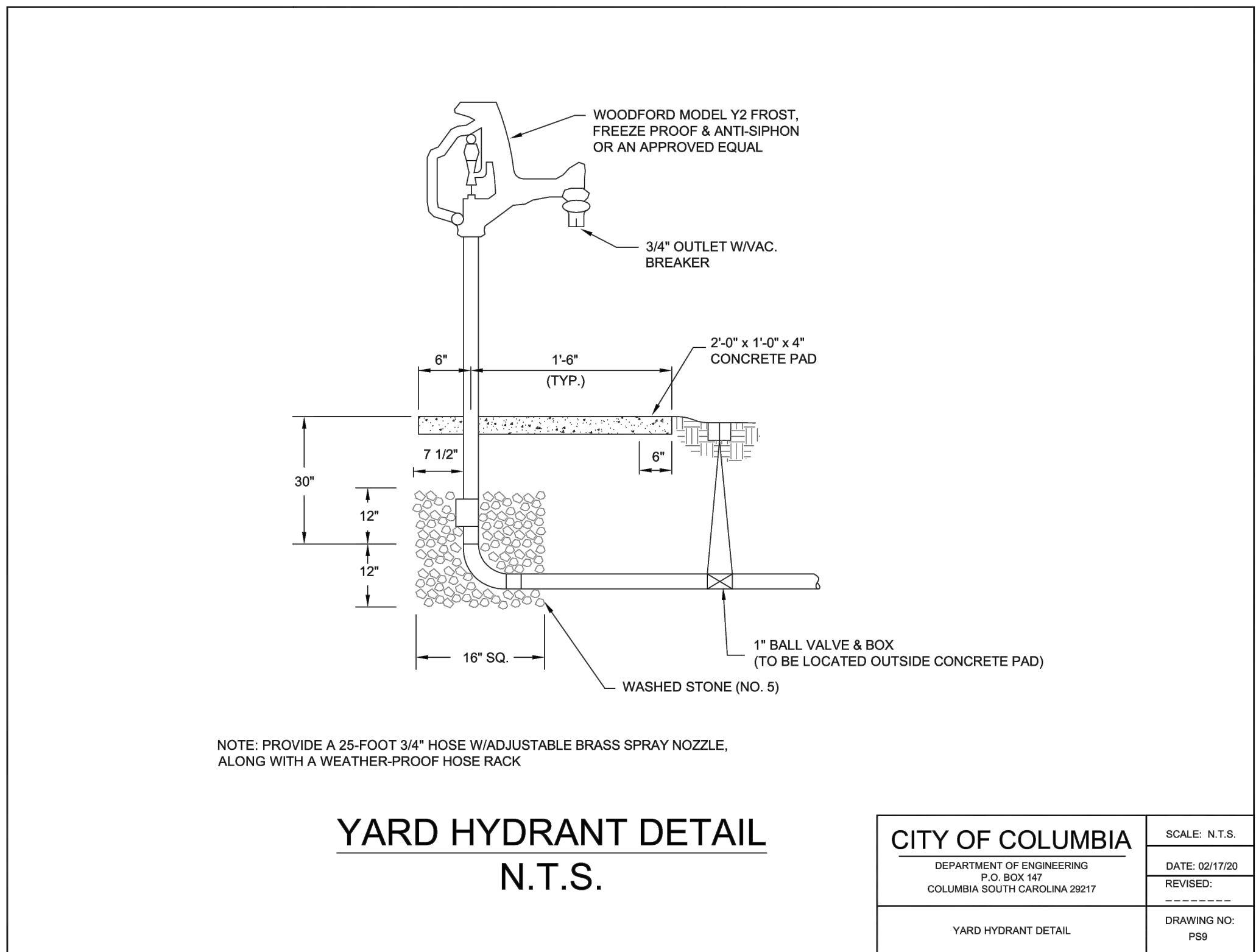
DRAWING NUMBER

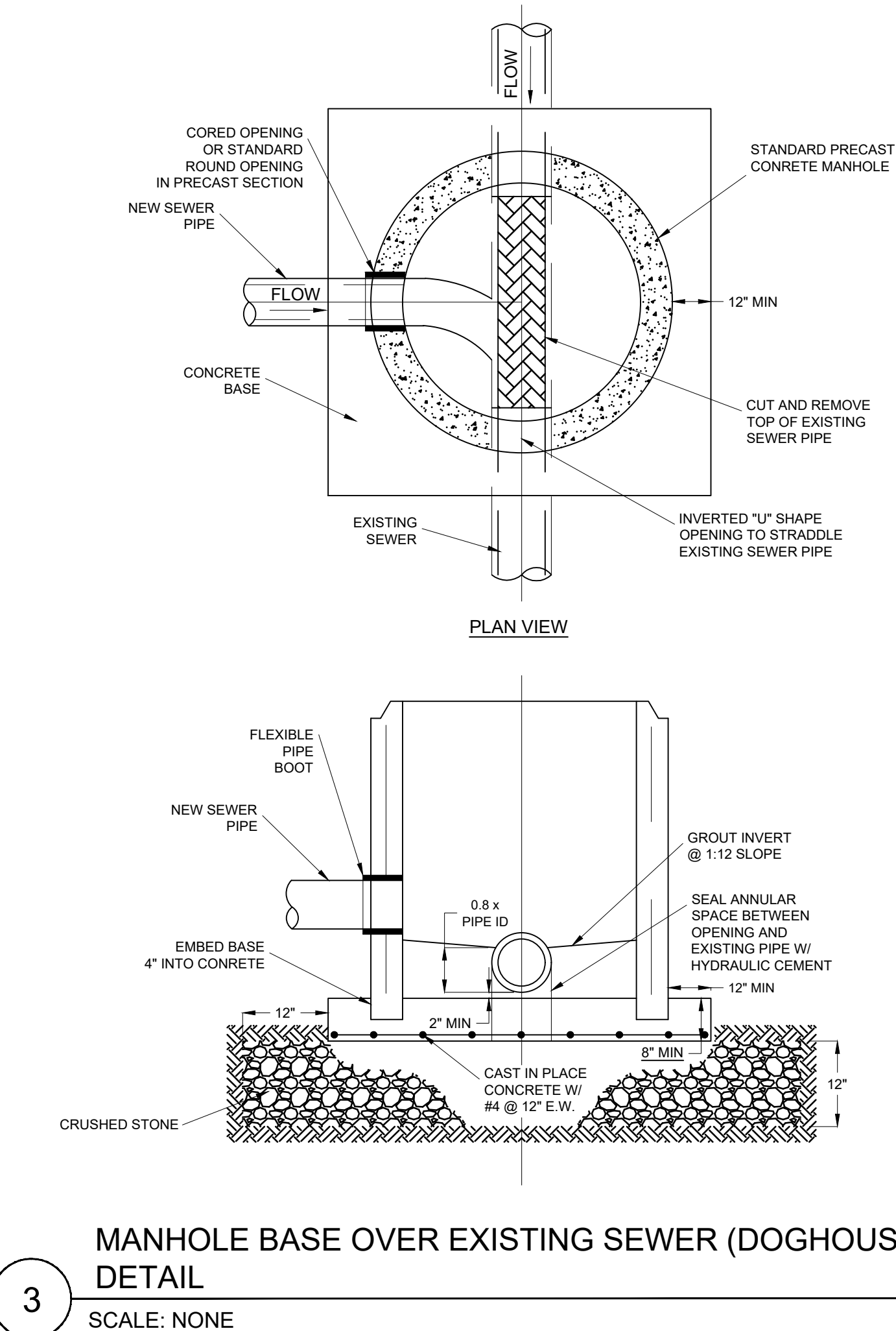
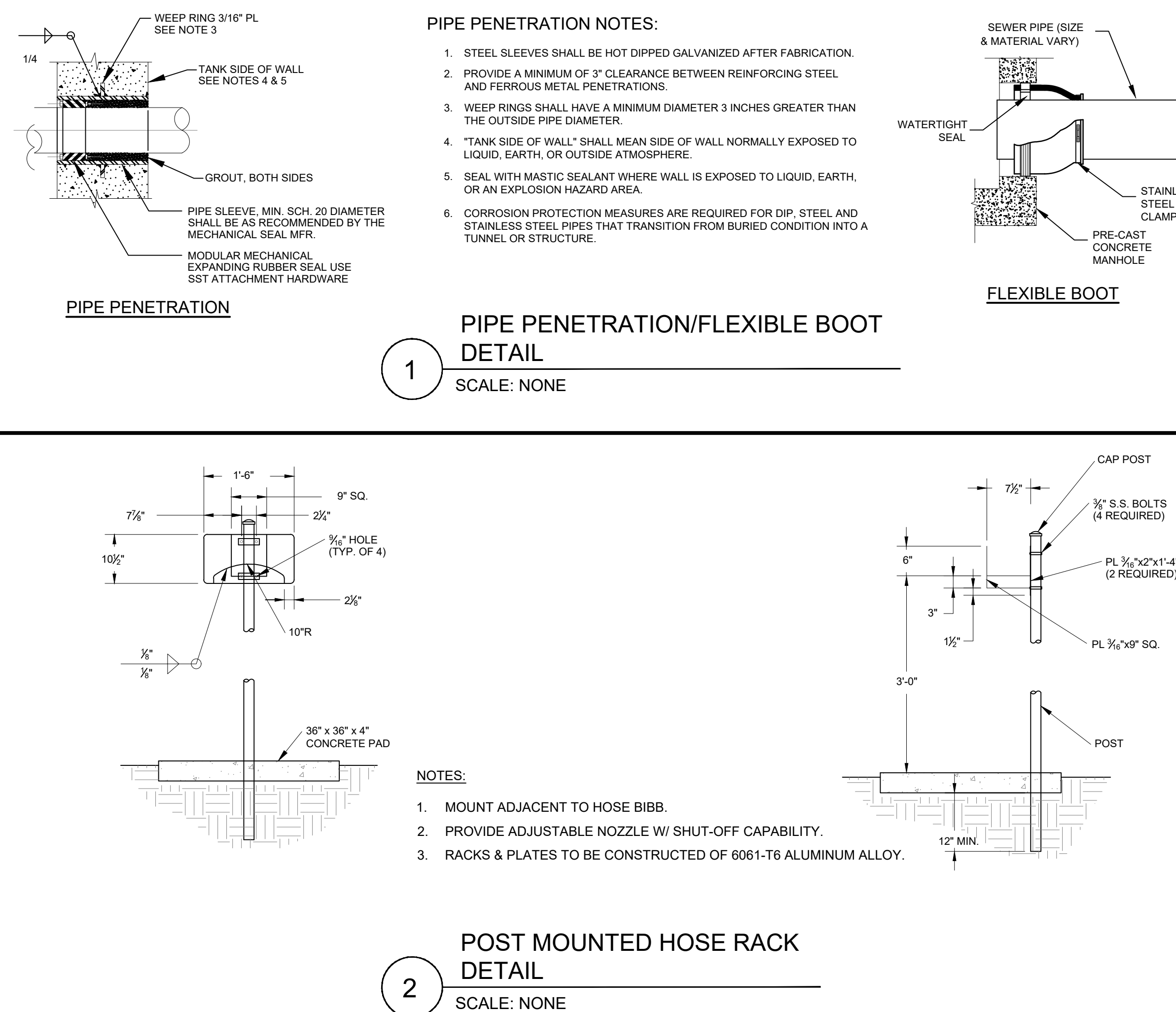
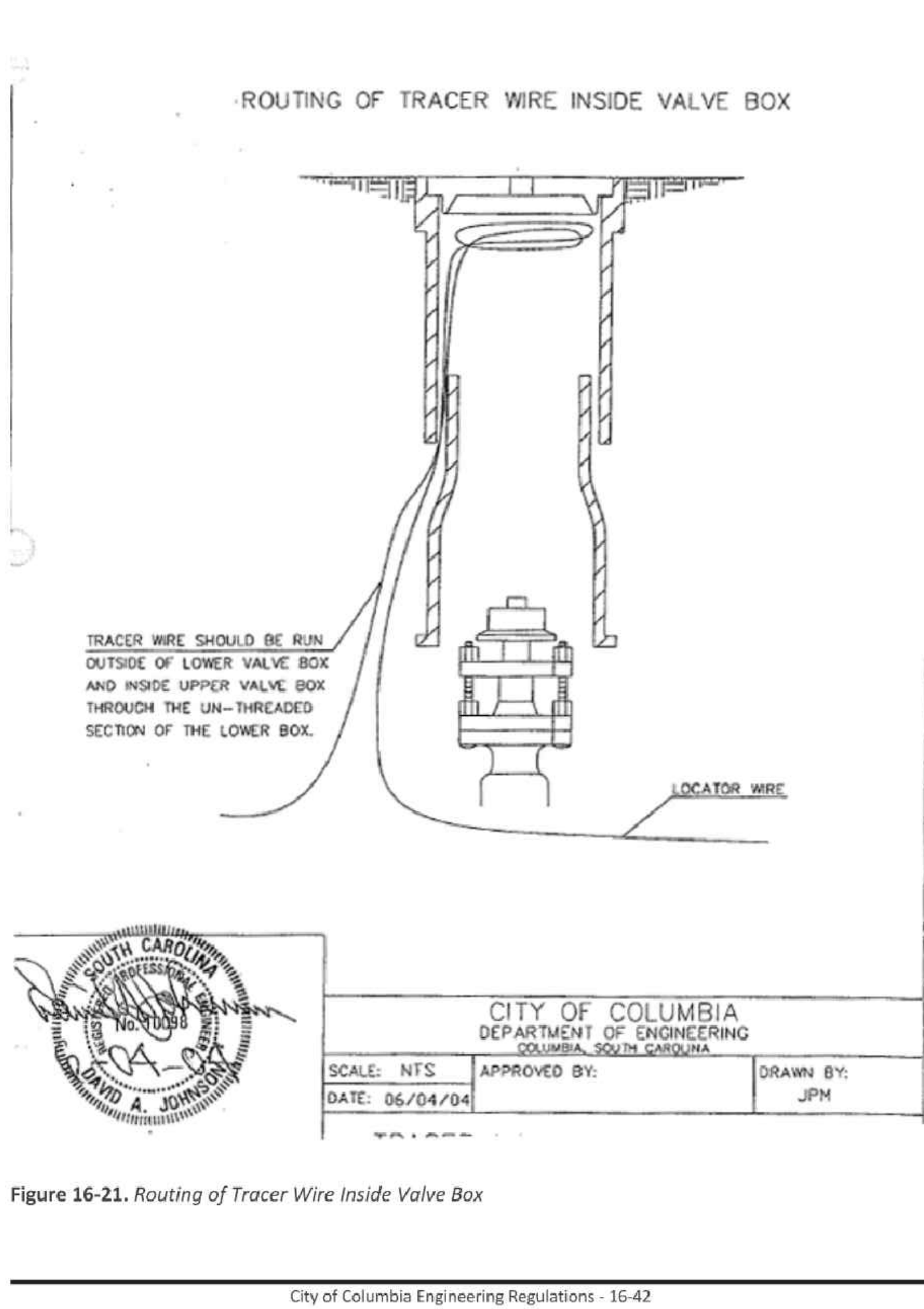
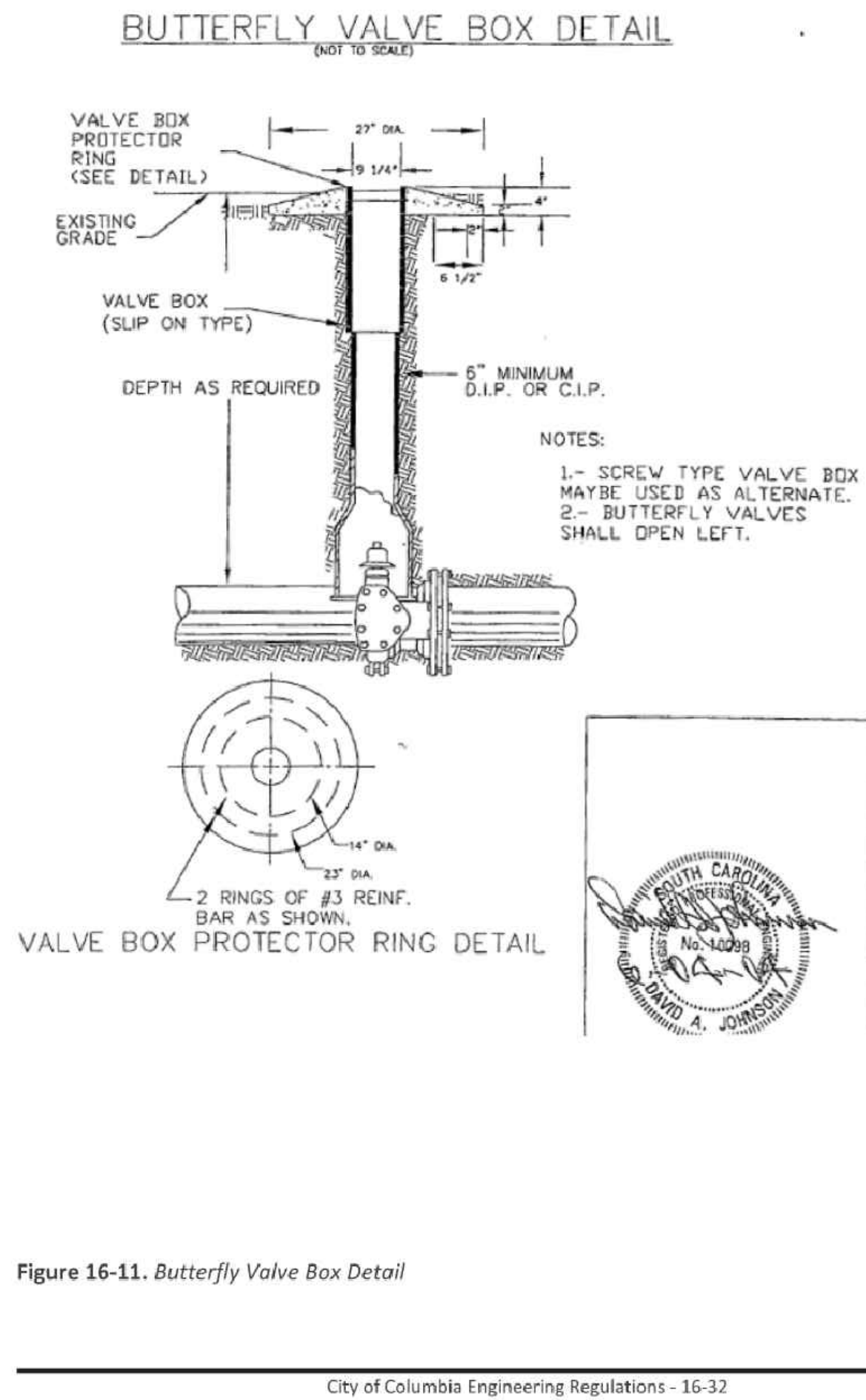
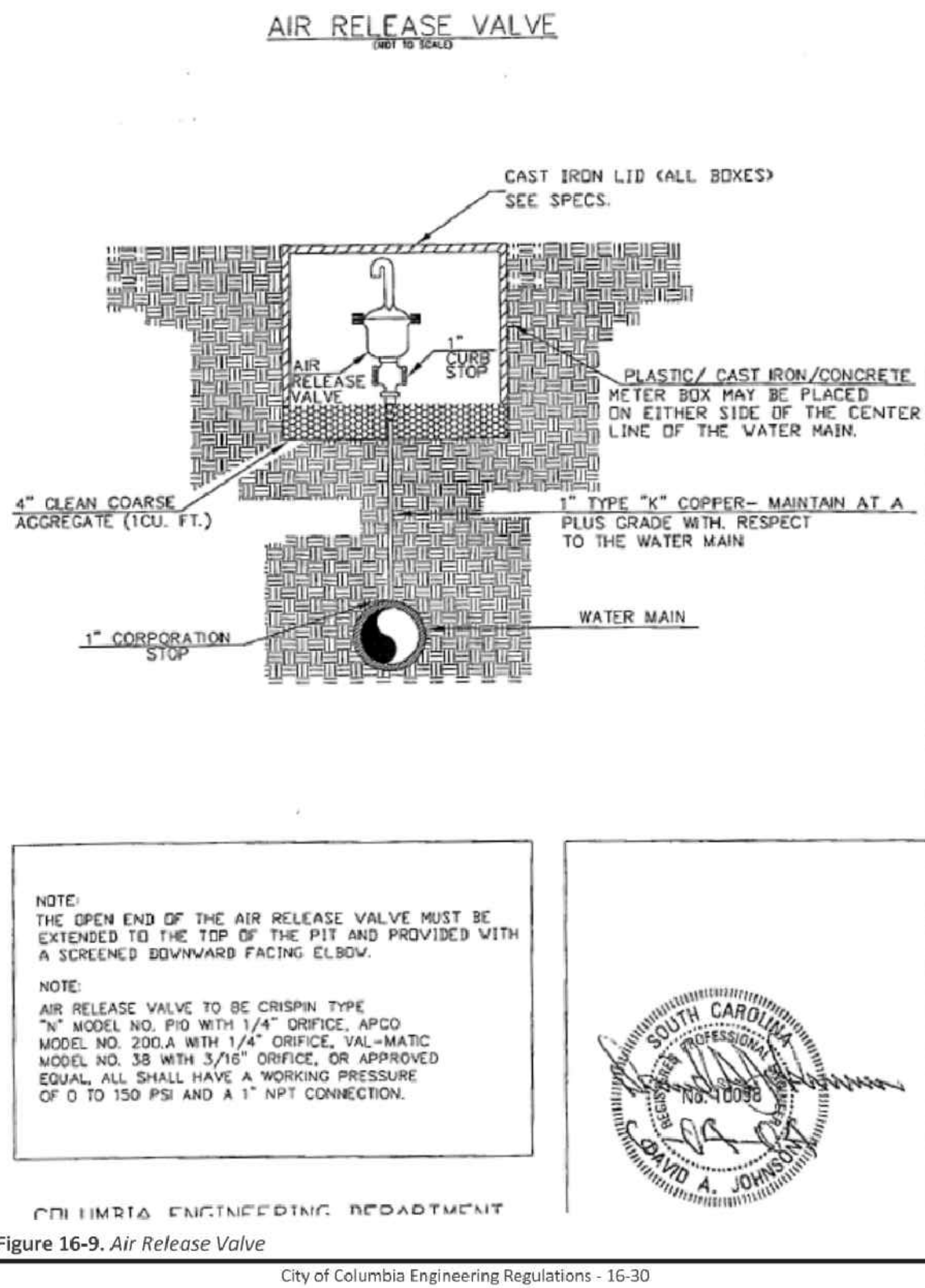
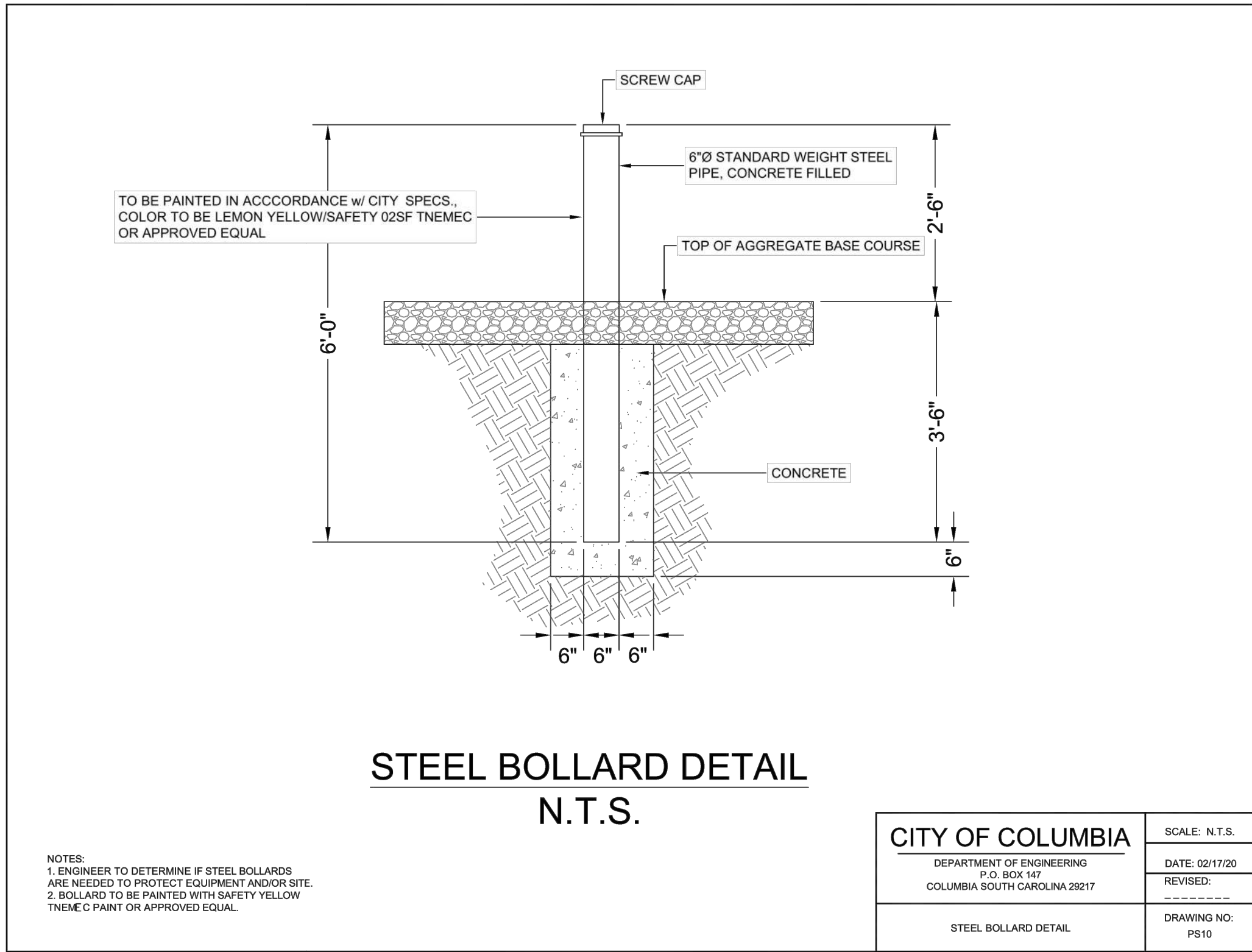
000-C-01

SHEET NUMBER

3 OF 22







COLUMBIA, SOUTH CAROLINA

100% DESIGN SUBMITTAL

CAROLINA CROSSROADS PHASE 1

CONFLICTS 1057 FACILITY 1, 9, 10, 11, 12, 13, AND 14

REVISIONS		
REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED:

DRAWN:

CHECKED:

CHECKED:

APPROVED:

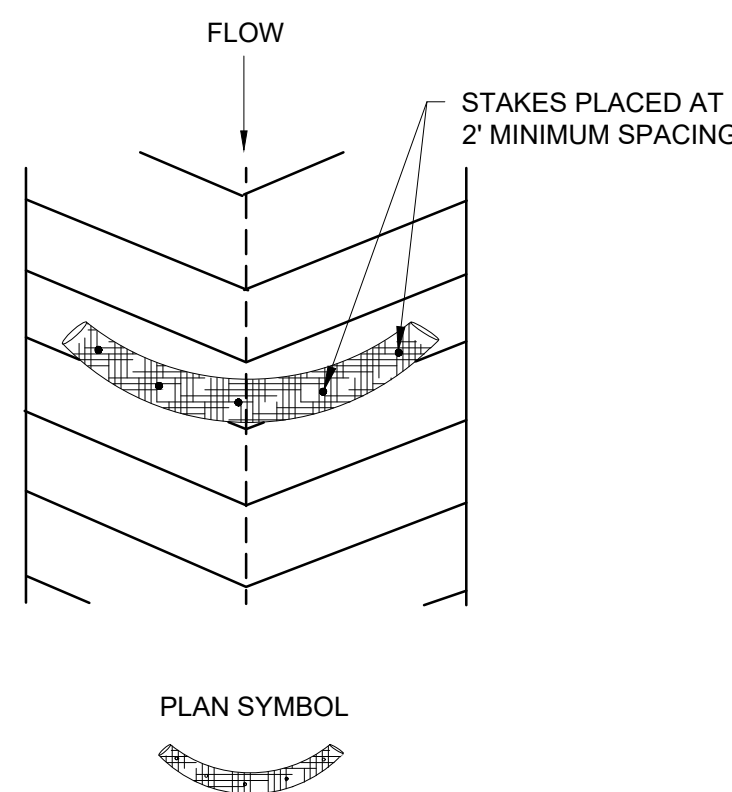
FILENAME: 000-C-01_000-E-02.DWG
BC PROJECT NUMBER: 156904
CLIENT PROJECT NUMBER: SCDOT PROJECT ID P027662

CIVIL

STANDARD CIVIL DETAILS -5

DRAWING NUMBER: 000-C-05

SHEET NUMBER: 7 OF 22



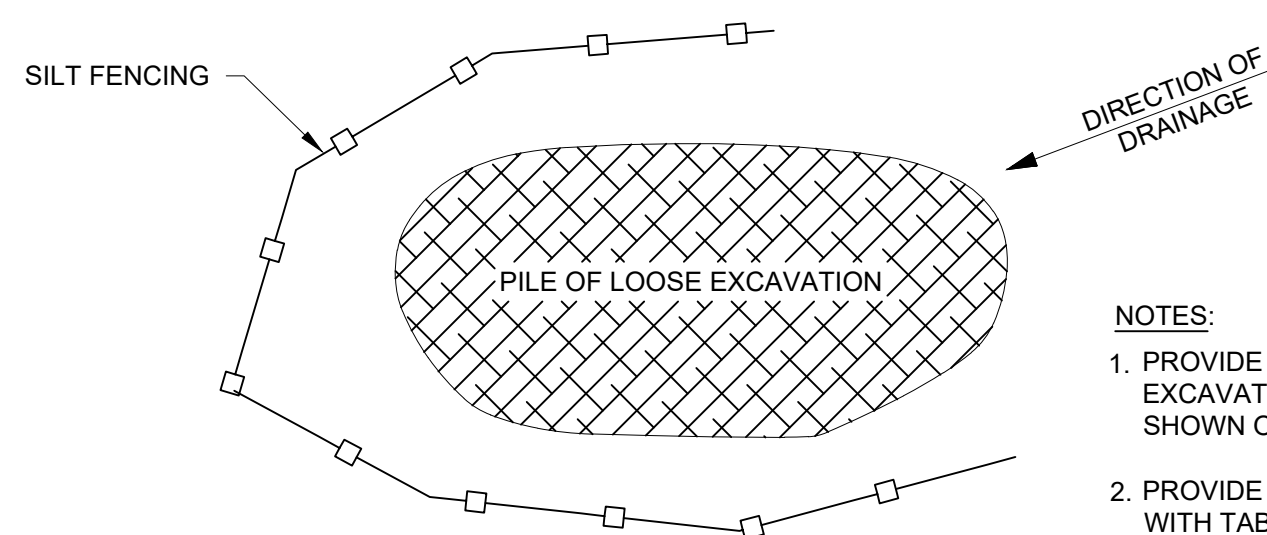
SEDIMENT TUBE SPACING TABLE	
SLOPE	MAXIMUM SEDIMENT TUBE SPACING
LESS THAN 2%	150-FEET
2%	100-FEET
3%	75-FEET
4%	50-FEET
5%	40-FEET
6%	30-FEET
GREATER THAN 6%	25-FEET

INSPECTION & MAINTENANCE

1. SEDIMENT TUBES MAY BE INSTALLED ALONG CONTOURS, IN DRAINAGE CONVEYANCE CHANNELS, AND AROUND INLETS TO HELP PREVENT OFF-SITE DISCHARGE OF SEDIMENT-LADEN STORMWATER RUNOFF.
2. SEDIMENT TUBES ARE ELONGATED TUBES OF COMPACTED GEOTEXTILES, CURLED EXCELSIOR WOOD, NATURAL COCONUT FIBER, OR HARDWOOD MULCH. STRAW, PINE NEEDLE, AND LEAF MULCH-FILLED SEDIMENT TUBES ARE NOT PERMITTED.
3. THE OUTER NETTING OF THE SEDIMENT TUBE SHOULD CONSIST OF SEAMLESS, HIGH-DENSITY POLYETHYLENE PHOTODEGRADABLE MATERIALS TREATED WITH ULTRAVIOLET STABILIZERS OR A SEAMLESS, HIGH-DENSITY POLYETHYLENE NON-DEGRADABLE MATERIAL.
4. SEDIMENT TUBES, WHEN USED AS CHECKS WITHIN CHANNELS, SHOULD RANGE BETWEEN 18-INCHES AND 24-INCHES DEPENDING ON CHANNEL DIMENSIONS. DIAMETERS OUTSIDE THIS RANGE MAY BE ALLOWED WHERE NECESSARY WHEN APPROVED.
5. CURLED EXCELSIOR WOOD, OR NATURAL COCONUT PRODUCTS THAT ARE ROLLED UP TO CREATE A SEDIMENT TUBE ARE NOT ALLOWED.
6. SEDIMENT TUBES SHOULD BE STAKED USING WOODEN STAKES (2-INCH X 2-INCH) OR STEEL POSTS (STANDARD "U" OR "T" SECTIONS WITH A MINIMUM WEIGHT OF 1.25 POUNDS PER FOOT) AT A MINIMUM OF 48-INCHES IN LENGTH PLACED ON 2-FOOT CENTERS.
7. INSTALL ALL SEDIMENT TUBES TO ENSURE THAT NO GAPS EXIST BETWEEN THE SOIL AND THE BOTTOM OF THE TUBE. MANUFACTURER'S RECOMMENDATIONS SHOULD ALWAYS BE CONSULTED BEFORE INSTALLATION.
8. THE ENDS OF ADJACENT SEDIMENT TUBES SHOULD BE OVERLAPPED 6-INCHES TO PREVENT FLOW AND SEDIMENT FROM PASSING THROUGH THE FIELD JOINT.
9. SEDIMENT TUBES SHOULD NOT BE STACKED ON TOP OF ONE ANOTHER, UNLESS RECOMMENDED BY MANUFACTURER.
10. EACH SEDIMENT TUBE SHOULD BE INSTALLED IN A TRENCH WITH A DEPTH EQUAL TO 1/5 THE DIAMETER OF THE SEDIMENT TUBE.
11. SEDIMENT TUBES SHOULD CONTINUE UP THE SIDE SLOPES A MINIMUM OF 1-FOOT ABOVE THE DESIGN FLOW DEPTH OF THE CHANNEL.
12. INSTALL STAKES AT A DIAGONAL FACING INCOMING RUNOFF.

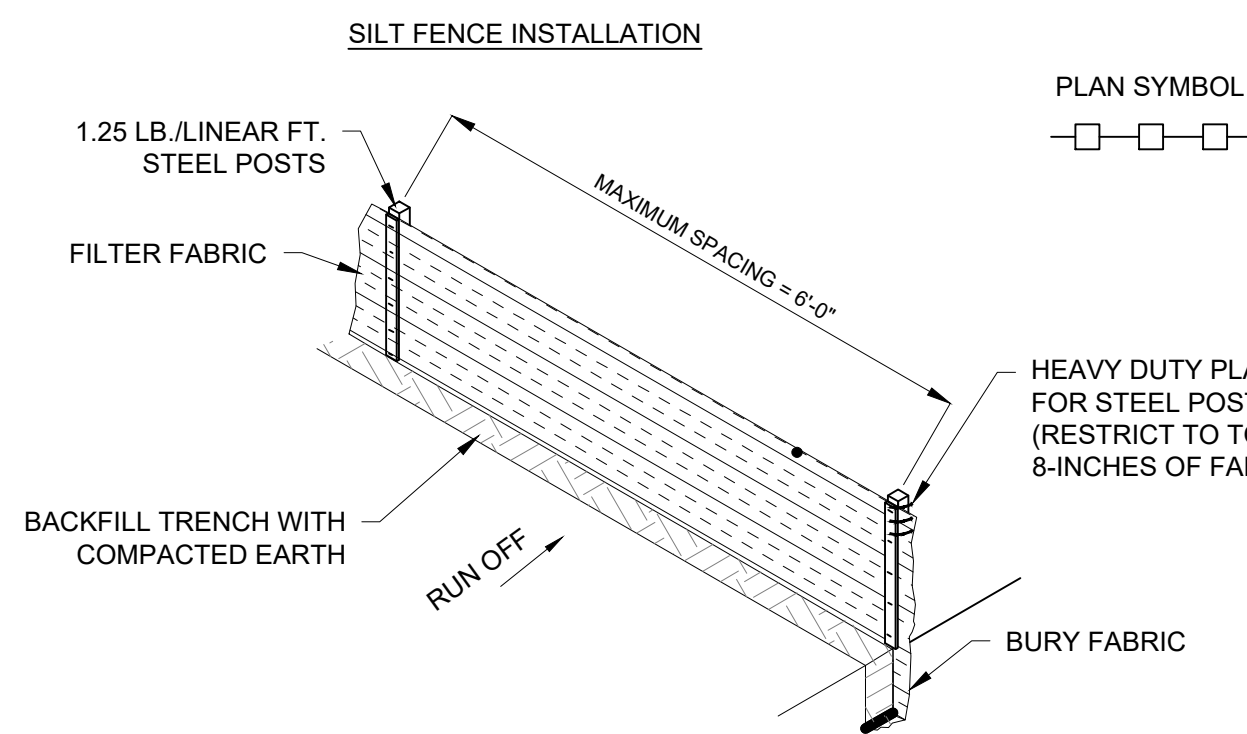
- THE KEY TO FUNCTIONAL SEDIMENT TUBES IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
- REGULAR INSPECTIONS OF SEDIMENT TUBES SHALL BE CONDUCTED ONCE PER WEEK ON A CALENDAR WEEKLY BASIS AS RECOMMENDED, WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
- ATTENTION TO SEDIMENT ACCUMULATIONS IN FRONT OF THE SEDIMENT TUBE IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE SEDIMENT TUBE.
- REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
- LARGE DEBRIS, TRASH, AND LEAVES SHOULD BE REMOVED FROM IN FRONT OF TUBES WHEN FOUND.
- IF EROSION CAUSES THE EDGES TO FALL TO A HEIGHT EQUAL TO OR BELOW THE HEIGHT OF THE SEDIMENT TUBE, REPAIRS SHOULD BE MADE IMMEDIATELY TO PREVENT RUNOFF FROM BYPASSING TUBE.
- SEDIMENT TUBES SHOULD BE REMOVED AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN COMPLETELY STABILIZED. PERMANENT VEGETATION SHOULD REPLACE AREAS FROM WHICH SEDIMENT TUBES HAVE BEEN REMOVED.

SCALE: NONE

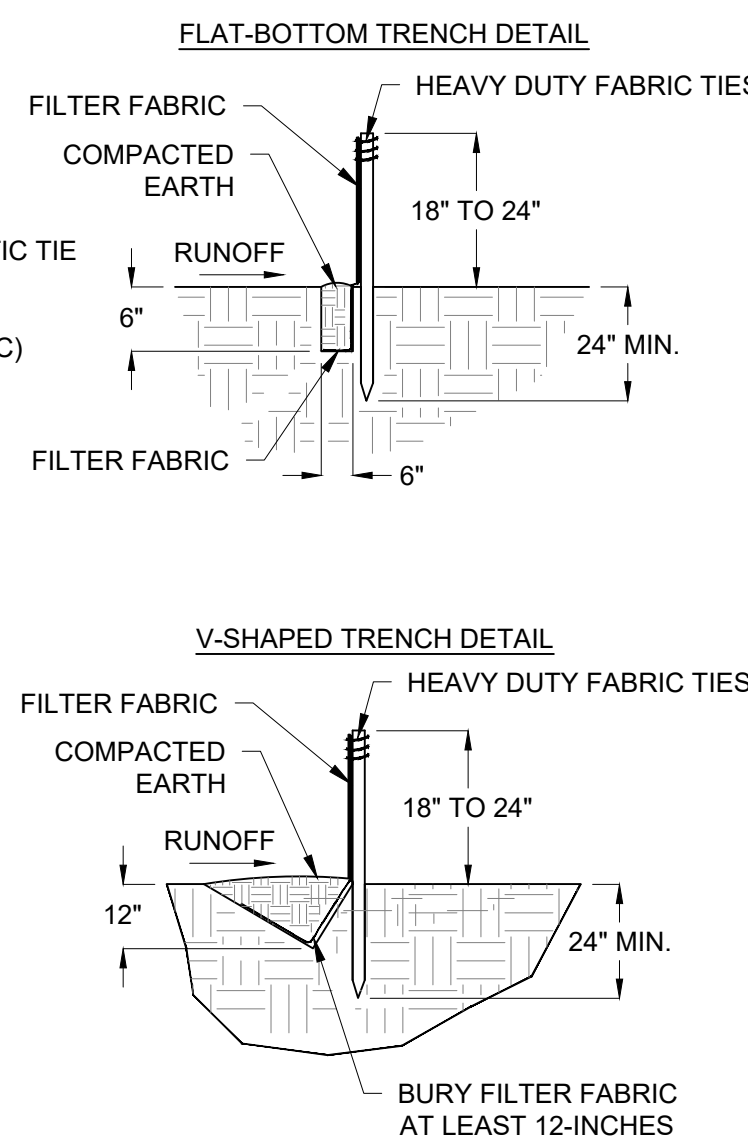


- NOTES:**
1. PROVIDE SILT FENCING AROUND ALL PILES OF LOOSE EXCAVATED MATERIALS FROM UTILITY DITCHES AS SHOWN ON THIS DRAWING.
 2. PROVIDE TEMPORARY GRASSING IN ACCORDANCE WITH TABLE SHOWN ON THIS SHEET. PROVIDE TEMPORARY GRASSING IMMEDIATELY AFTER INSTALLATION OF PIPING.

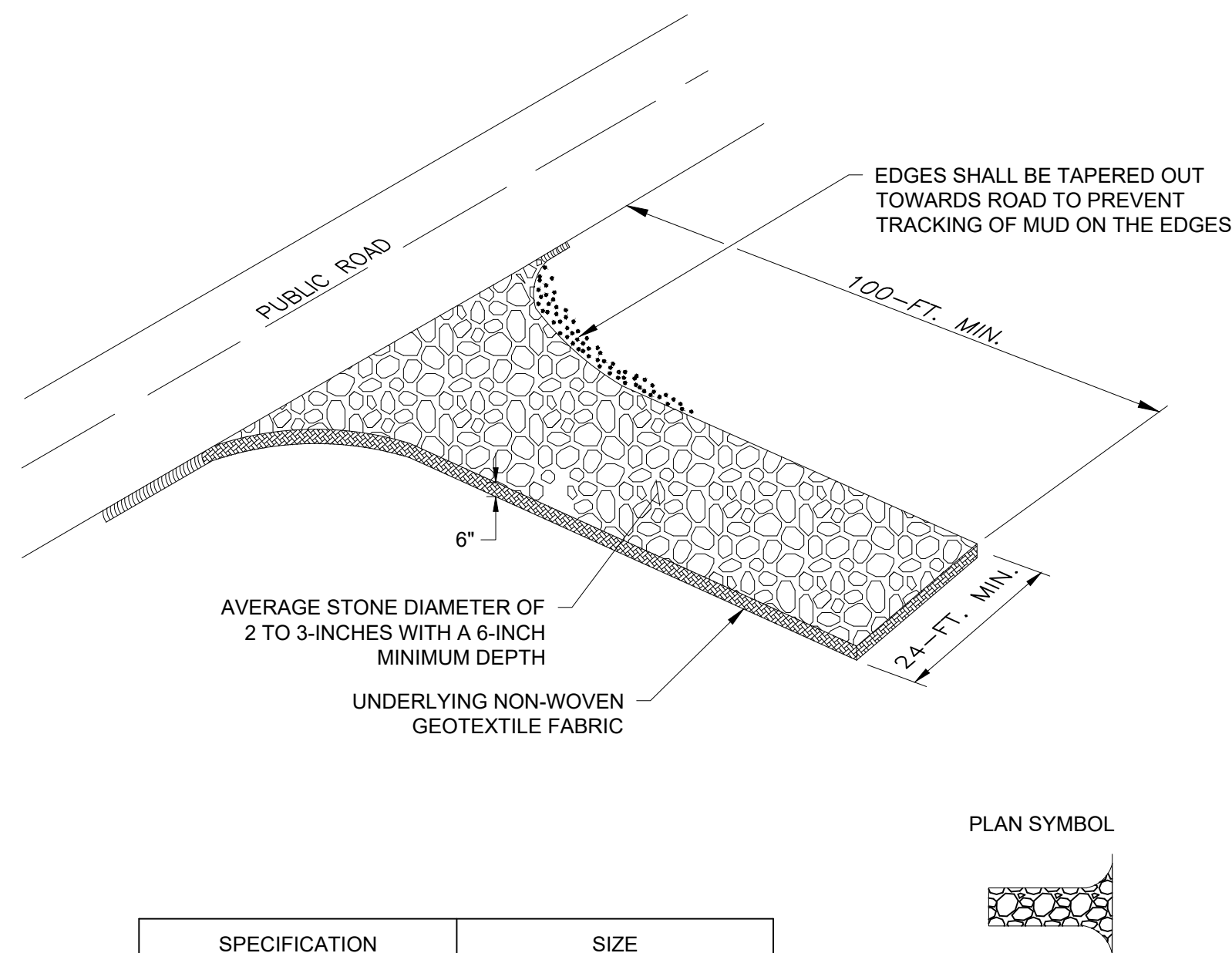
6) SCALE: NONE



1. DO NOT PLACE SILT FENCE ACROSS CHANNELS OR IN OTHER AREAS SUBJECT TO CONCENTRATED FLOWS. SILT FENCE SHOULD NOT BE USED AS A VELOCITY CONTROL BMP. CONCENTRATED FLOWS ARE ANY FLOWS GREATER THAN 0.5 CFS.
2. MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE SILT FENCE SHALL BE 100-FEET.
3. MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO THE FENCE LINE) SHALL BE 2:1.
4. SILT FENCE JOINTS, WHEN NECESSARY, SHALL BE COMPLETED BY ONE OF THE FOLLOWING OPTIONS:
 - WRAP EACH FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 1-FOOT MINIMUM OVERLAP;
 - OVERLAP SILT FENCE BY INSTALLING 3-FEET PASSED THE SUPPORT POST TO WHICH THE NEW SILT FENCE ROLL IS ATTACHED. ATTACH OLD ROLL TO NEW ROLL WITH HEAVY-DUTY PLASTIC TIES; OR
 - OVERLAP ENTIRE WIDTH OF EACH SILT FENCE ROLL FROM ONE SUPPORT POST TO THE NEXT SUPPORT POST.
5. ATTACH FILTER FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED WITHIN THE TOP 8-INCHES OF THE FABRIC.
6. INSTALL THE SILT FENCE PERPENDICULAR TO THE DIRECTION OF THE STORMWATER FLOW AND PLACE THE SILT FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.
7. INSTALL SILT FENCE CHECKS (TIE-BACKS) EVERY 50-100 FEET, DEPENDENT ON SLOPE, ALONG SILT FENCE THAT IS INSTALLED WITH SLOPE AND WHERE CONCENTRATED FLOWS ARE EXPECTED OR ARE DOCUMENTED ALONG THE PROPOSED/INSTALLED SILT FENCE.



5) DETAIL
SCALE: NONE



SPECIFICATION	SIZE
ROCK PAD THICKNESS	6 INCHES
ROCK PAD WIDTH	24 FEET
ROCK PAD LENGTH	100 FEET
ROCK PAD STONE SIZE	D = 2-3 INCHES

SCALE: NONE

1. SILT FENCE POSTS MUST BE 48-INCH LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS:
 - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
 - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38-INCHES AND A NOMINAL "T" LENGTH OF 1.48-INCHES.
 - WEIGH 1.25 POUNDS PER FOOT ($\pm 8\%$)
2. POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF FILTER FABRIC.
3. STEEL POSTS MAY NEED TO HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM WHEN INSTALLED ALONG STEEP SLOPES OR INSTALLED IN LOOSE SOILS. THE PLATE SHOULD HAVE A MINIMUM CROSS SECTION OF 17-SQUARE INCHES AND BE COMPOSED OF 15 GAUGE STEEL. AT A MINIMUM, THE METAL SOIL STABILIZATION PLATE SHOULD BE COMPLETELY BURIED.
4. INSTALL POSTS TO A MINIMUM OF 24-INCHES. A MINIMUM HEIGHT OF 1- TO 2- INCHES ABOVE THE FABRIC SHALL BE MAINTAINED, AND A MAXIMUM HEIGHT OF 3 FEET SHALL BE MAINTAINED ABOVE THE GROUND.
5. POST SPACING SHALL BE AT A MAXIMUM OF 6-FEET ON CENTER.

1. SILT FENCE MUST BE COMPOSED OF WOVEN GEOTEXTILE FILTER FABRIC THAT CONSISTS OF THE FOLLOWING REQUIREMENTS:
 - COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS, OR POLYAMIDES THAT ARE FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER;
 - FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION;
 - FREE OF ANY DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES; AND,
 - HAVE A MINIMUM WIDTH OF 36-INCHES.
2. USE ONLY FABRIC APPEARING ON SC DOT'S QUALIFIED PRODUCTS LISTING (QPL), APPROVAL SHEET #34, MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SC DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
3. 12-INCHES OF THE FABRIC SHOULD BE PLACED WITHIN EXCAVATED TRENCH AND TOED IN WHEN THE TRENCH IS BACKFILLED.
4. FILTER FABRIC SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS.
5. FILTER FABRIC SHALL BE INSTALLED AT A MINIMUM OF 24-INCHES ABOVE THE GROUND.

1. THE KEY TO FUNCTIONAL SILT FENCE IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
2. REGULAR INSPECTIONS OF SILT FENCE SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS AFTER EACH RAINFALL EVEN THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
3. ATTENTION TO SEDIMENT ACCUMULATIONS ALONG THE SILT FENCE IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
4. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE SILT FENCE.
5. REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
6. CHECK FOR AREAS WHERE STORMWATER RUNOFF HAS ERODED A CHANNEL BENEATH THE SILT FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED DUE TO RUNOFF OVERTOPPING THE SILT FENCE. INSTALL CHECKS/TIE-BACKS AND/OR REINSTALL SILT FENCE, AS NECESSARY.
7. CHECK FOR TEARS WITHIN THE SILT FENCE, AREAS WHERE SILT FENCE HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE SILT FENCE INEFFECTIVE. REMOVED DAMAGED SILT FENCE AND REINSTALL NEW SILT FENCE IMMEDIATELY.
8. SILT FENCE SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED AND ONCE IT IS REMOVED, THE RESULTING DISTURBED AREA SHALL BE PERMANENTLY STABILIZED.

1. THE KEY TO FUNCTIONAL CONSTRUCTION ENTRANCES IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.
2. REGULAR INSPECTIONS OF CONSTRUCTION ENTRANCES SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24-HOURS AFTER EACH RAINFALL EVEN THAT PRODUCES 1/2-INCH OR MORE OF PRECIPITATION.
3. DURING REGULAR INSPECTIONS, CHECK FOR MUD AND SEDIMENT BUILDUP AND PAD INTEGRITY. INSPECTION FREQUENCIES MAY NEED TO BE MORE FREQUENT DURING LONG PERIODS OF WET WEATHER.
4. RESHAPE THE STONE PAD AS NECESSARY FOR DRAINAGE AND RUNOFF CONTROL..
5. WASH OR REPLACE STONES AS NEEDED AND AS DIRECTED BY SITE INSPECTOR. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE THE AMOUNT OF MUD BEING CARRIED OFF-SITE BY VEHICLES. FREQUENT WASHING WILL EXTEND THE USEFUL LIFE OF STONE PAD.
6. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO ADJACENT IMPERVIOUS SURFACES BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED WHEN THE WATER CAN BE DISCHARGED TO A SEDIMENT TRAP OR BASIN.
7. DURING MAINTENANCE ACTIVITIES, ANY BROKEN PAVEMENT SHOULD BE REPAIRED IMMEDIATELY.
8. CONSTRUCTION ENTRANCES SHOULD BE REMOVED AFTER THE SITE HAS REACHED FINAL STABILIZATION. PERMANENT VEGETATION SHOULD REPLACE AREAS FROM WHICH CONSTRUCTION ENTRANCES HAVE BEEN REMOVED, UNLESS AREA WILL BE CONVERTED TO AN IMPERVIOUS SURFACE TO SERVE POST-CONSTRUCTION.



100% DESIGN SUBMITTAL

CAROLINA
CROSSROADS
PHASE 1

CONFLICTS 1057
FACILITY 1, 9, 10, 11,
12, 13, AND 14

[illegible]

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED:

DRAWN:

CHECKED:

CHECKED:

APPROVED

FILENAME	000-C-08.DWG
BC PROJECT NUMBER	156904
CLIENT PROJECT NUMBER	SCDOT PROJECT ID P027662

CIVIL

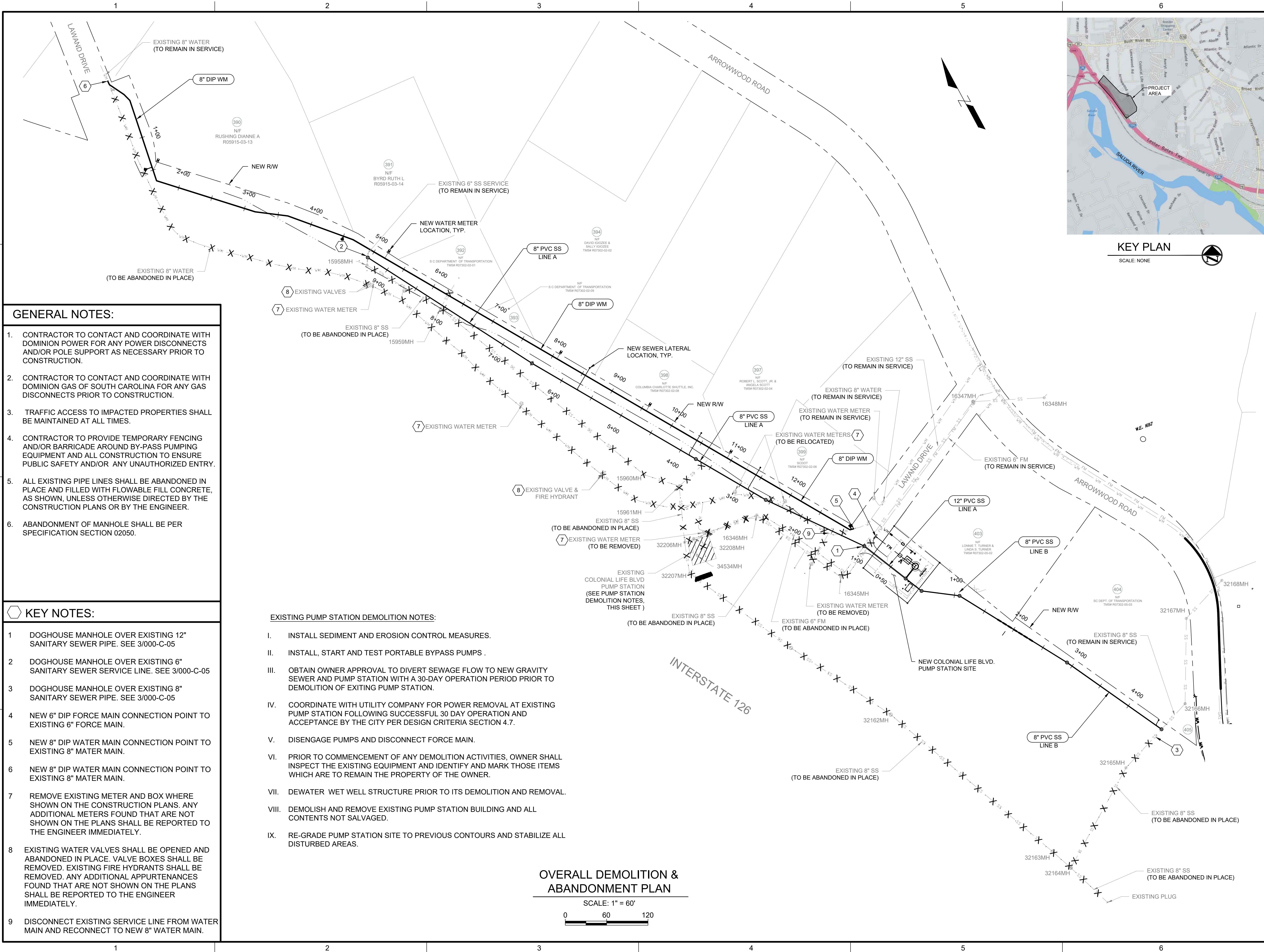
EROSION & SEDIMENTATION CONTROL DETAILS

DRAWING NUMBER

000-C-08

SHEET NUMBER
10 OF 22

Path: C:\BCPWD\1874299 FILENAME: 100-C-01.DWG PLOT DATE: 11/16/2022 2:21 PM CAD USER: ANDY JUMPER

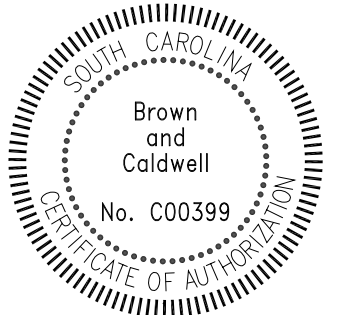


OVERALL DEMOLITION & ABANDONMENT PLAN

SCALE: 1" = 60'
0 60 120

Brown AND Caldwell

COLUMBIA, SOUTH CAROLINA



100% DESIGN SUBMITTAL

CAROLINA CROSSROADS PHASE 1

CONFLICTS 1057
FACILITY 1, 9, 10, 11,
12, 13, AND 14

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED:
DRAWN:
CHECKED:
CHECKED:
APPROVED:

FILENAME
100-C-01.DWG
BC PROJECT NUMBER
156904
CLIENT PROJECT NUMBER
SCDOT PROJECT ID P027662

CIVIL

OVERALL DEMOLITION & ABANDONMENT PLAN

DRAWING NUMBER

100-C-01

SHEET NUMBER
11 OF 22

SEQUENCE OF CONSTRUCTION FOR PUMP STATION, GRAVITY SEWER, AND FORCE MAIN

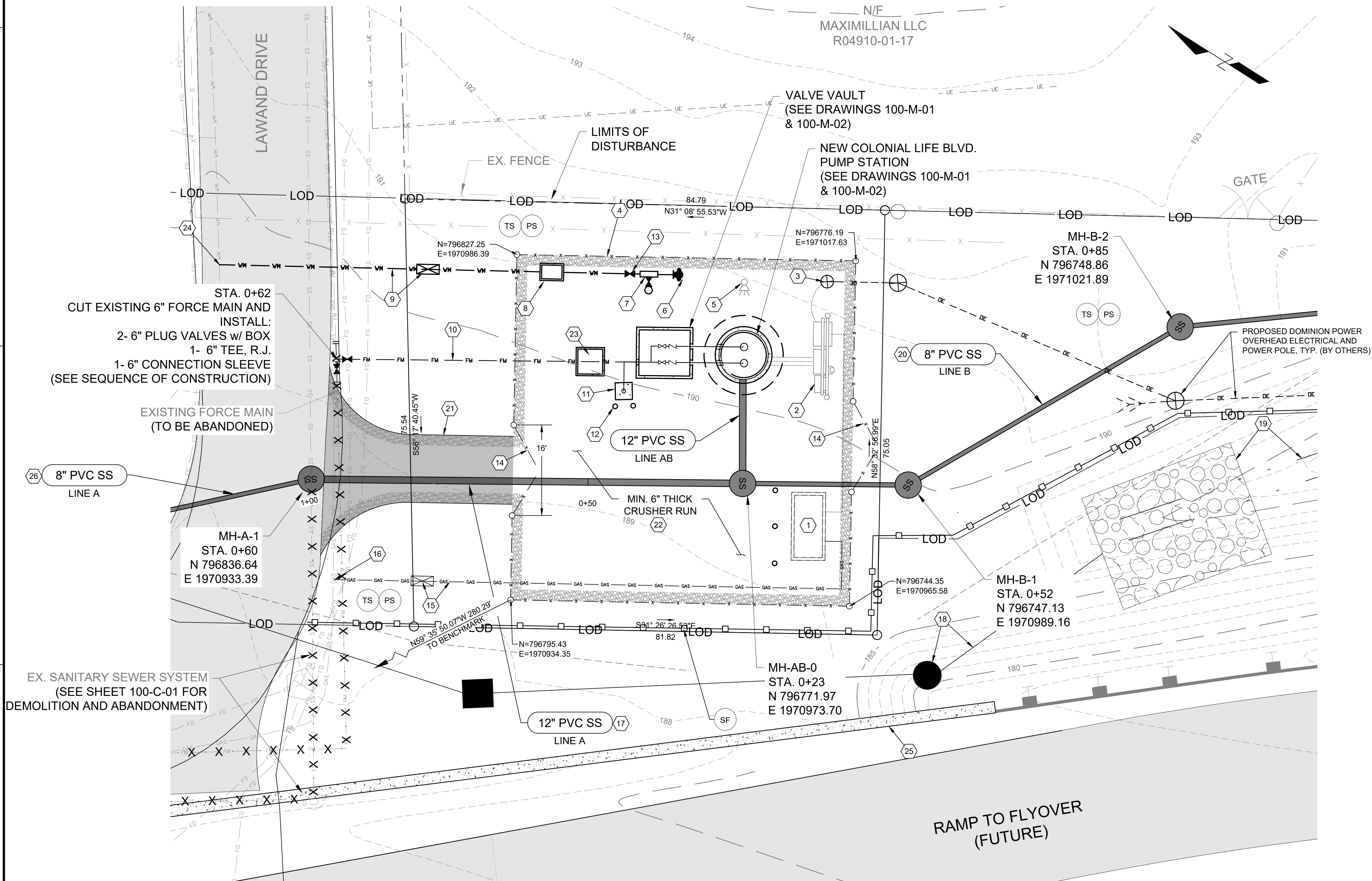
1. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AT PUMP STATION SITE. PERFORM CLEARING, GRUBBING, AND INITIAL GRADING.
2. INSPECT UNDERGROUND INFRASTRUCTURE, AS DIRECTED BY THE OWNER/ENGINEER.
3. INSTALL, INSPECT, AND ACQUIRE PERMIT TO OPERATE PUMPS, PIPING FITTINGS, VALVES, AND OTHER NECESSARY EQUIPMENT AND APPURTENANCES AS SHOWN ON THE DRAWINGS FOR THE NEW PUMPING STATION.
4. INSTALL, INSPECT, AND ACQUIRE PERMIT TO OPERATE NEW GRAVITY SEWER, EXCEPT DOGHOUSE MANHOLES.
5. INSTALL, START UP, AND TEST PORTABLE BYPASS PUMPS AND OBTAIN OWNER APPROVAL TO DIVERT SEWAGE FLOW.
6. CONNECT NEW FORCE MAIN (ON PUMP STATION SITE) TO EXISTING FORCE MAIN.
7. CONNECT DOGHOUSE MANHOLES AND DIVERT FLOW TO NEW PUMP STATION.
8. TEST AND COMMISSION NEW PUMPING STATION EQUIPMENT.
9. DECOMMISSION AND DEMOLISH EXISTING PUMP STATION AND GRAVITY SEWER AND FORCE MAINS.
10. COMPLETE SITE WORK, GRADING, PAVING, AND CLEAN UP.

GENERAL NOTES:

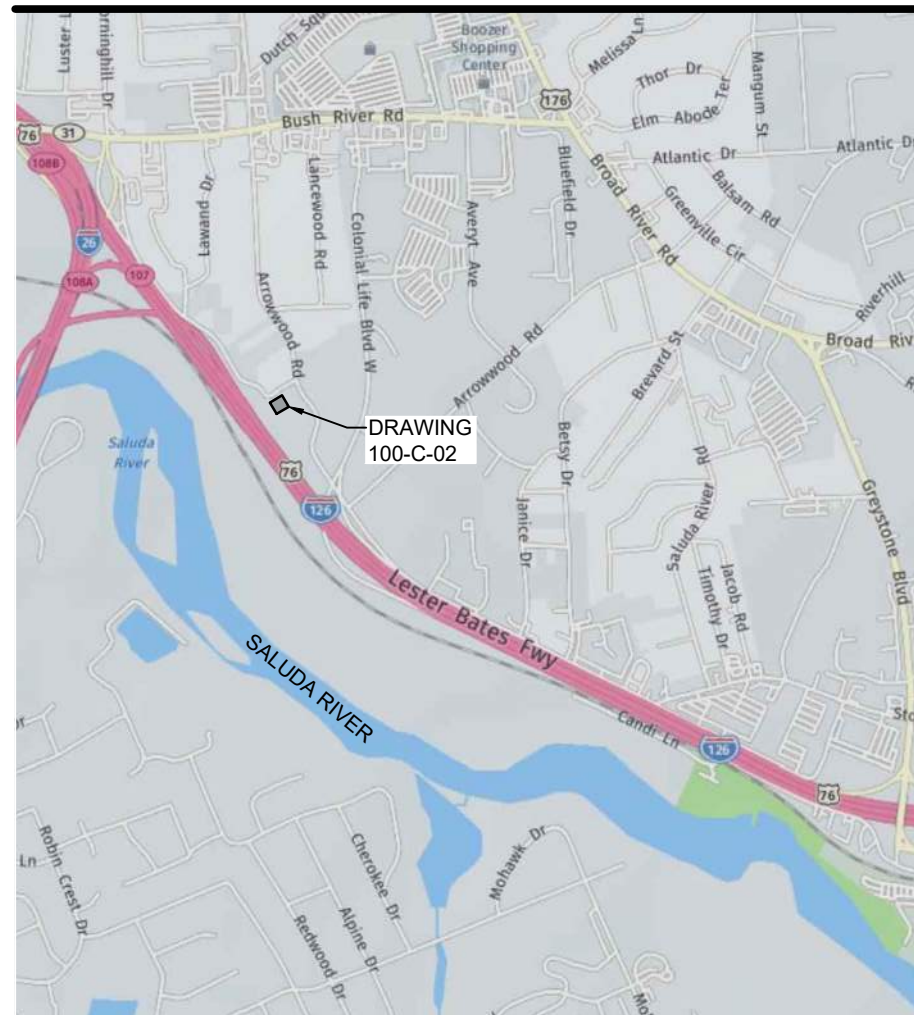
1. PRIOR TO THE DEMOLITION OR ABANDONMENT OF ANY EXISTING INFRASTRUCTURE, THE NEW PUMP STATION AND ALL RELOCATED LINES SHALL BE APPROVED BY THE CITY OF COLUMBIA, AND A PERMIT TO OPERATE RECEIVED FROM THE SCDHEC. SEE SEQUENCE OF CONSTRUCTION ON THIS SHEET.
2. PENDING APPROVAL BY SECRETARY OF TRANSPORTATION AND FHWA SCDOT PLANS TO QUITCLAIM PUMP STATION SITE AND PROPERTY ALONG GRAVITY SEWER LINE B TO CITY OF COLUMBIA. PROPERTY LENGTH AND WIDTH SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY'S DESIGN CRITERIA. FINAL PROPERTY LINES WILL BE INCORPORATED INTO THE RECORD CONSTRUCTION DRAWINGS

KEY NOTES:

- 1 6'-0"x12'-0" PRECAST CONCRETE GENERATOR PAD
- 2 CONTROL PANEL STATION w/ CANOPY (SEE FIGURE PS5/000-C-04)
- 3 POWER POLE w/ DROP FOR CONTROL PANEL
- 4 PERIMETER FENCE (SEE FIGURE PS4A/000-C-03 AND PS4B/000-C-03)
- 5 LED FLOOD LIGHT (SEE ELECTRICAL DRAWINGS)
- 6 POST HYDRANT (SEE DETAIL 5/000-C-06)
- 7 1" SERVICE TO YARD HYDRANT w/ HOSE RACK (SEE FIGURE PS9/000-C-04 AND DETAIL 2/000-C-05)
- 8 BACKFLOW PREVENTOR (SEE FIG. 16-1 IN CITY ENGINEERING REGULATIONS MANUAL)
- 9 4" WATER SERVICE & METER (SEE DETAIL 5/000-C-01)
- 10 6" DIP EFFLUENT FORCE MAIN
- 11 BY-PASS PUMP CONNECTION DETAIL. (SEE FIGURE PS6/000-C-04)
- 12 STEEL BOLLARD (SEE FIGURE PS10/000-C-05)
- 13 4" GATE VALVE w/ BOX
- 14 16'-0" WIDE SWING GATE w/ EMERGENCY SIGN (SEE FIGURES PS3/000-C-03 & PS4A/000-C-03)
- 15 NEW 2" GAS PLASTIC LINE & METER SERVICE TO GENERATOR (VERIFY WITH DOMINION ENERGY PRIOR TO INSTALLATION)
- 16 NEW GAS TAP OF EXISTING 2" GAS MAIN (COORDINATE WITH UTILITY OWNER)
- 17 SEE DRAWING 200-C-01 FOR COMPLETE PLAN AND PROFILE.
- 18 FUTURE STORM DRAIN AND PIPE. (SEE GENERAL NOTE 20 ON DRAWING 000-G-01)
- 19 FUTURE RIP-RAP & DITCH. (SEE GENERAL NOTE 20 ON DRAWING 000-G-01)
- 20 SEE DRAWING 200-C-02 FOR COMPLETE PLAN AND PROFILE.
- 21 15' ACCESS DRIVE WITH MINIMUM 6" CRUSHER RUN AND ABLE TO SUPPORT 36,000 LB. VEHICLE.
- 22 CRUSHER RUN TO COVER LIMITS OF FENCING AND BE ABLE TO SUPPORT 36,000 LB. VEHICLES.
- 23 STRAP ON MAGMETER VAULT (SEE DRAWING 100-M-01)
- 24 CONNECT NEW 4" WATER SERVICE TO EXISTING 8" WATER MAIN w/ 8"x4" TAPPING SLEEVE & VALVE. (COORDINATE WITH CITY OF COLUMBIA FOR CONNECTION)
- 25 RETAINING WALL (BY OTHERS, SEE GENERAL NOTE 20 ON DRAWING 000-G-01)
- 26 SEE DRAWING 200-C-01 FOR COMPLETE PLAN AND PROFILE.



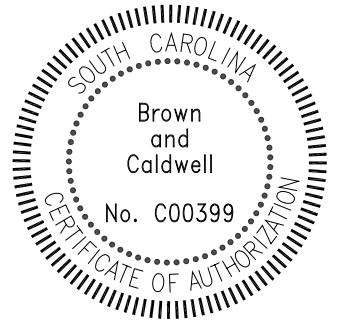
SITE PLAN
SCALE: 1" = 10'



KEY PLAN
SCALE: NONE



COLUMBIA, SOUTH CAROLINA



100% DESIGN SUBMITTAL

CAROLINA
CROSSROADS
PHASE 1

CONFLICTS 1057
FACILITY 1, 9, 10, 11,
12, 13, AND 14

REVISIONS		
REV	DATE	DESCRIPTION

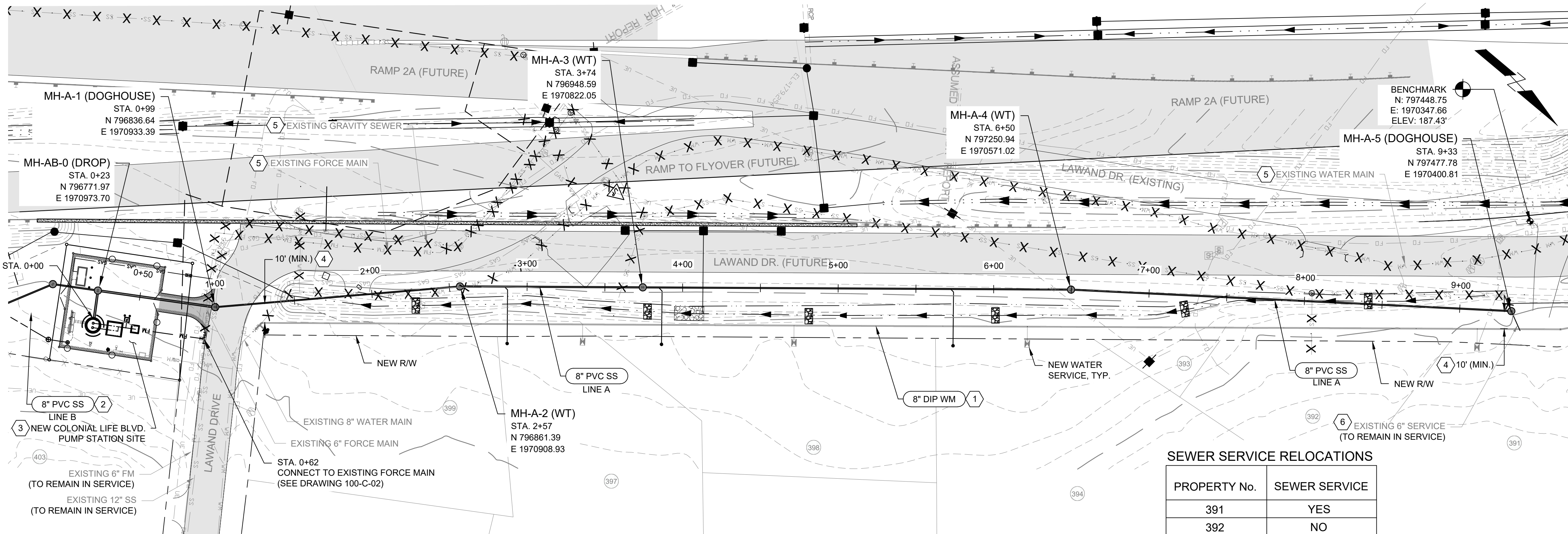
LINE IS 2 INCHES
AT FULL SIZE

DESIGNED:	
DRAWN:	
CHECKED:	
CHECKED:	
APPROVED:	
FILENAME	100-C-02.DWG
BC PROJECT NUMBER	156904
CLIENT PROJECT NUMBER	SCDOT PROJECT ID P027662

CIVIL

PUMP STATION
SITE PLAN

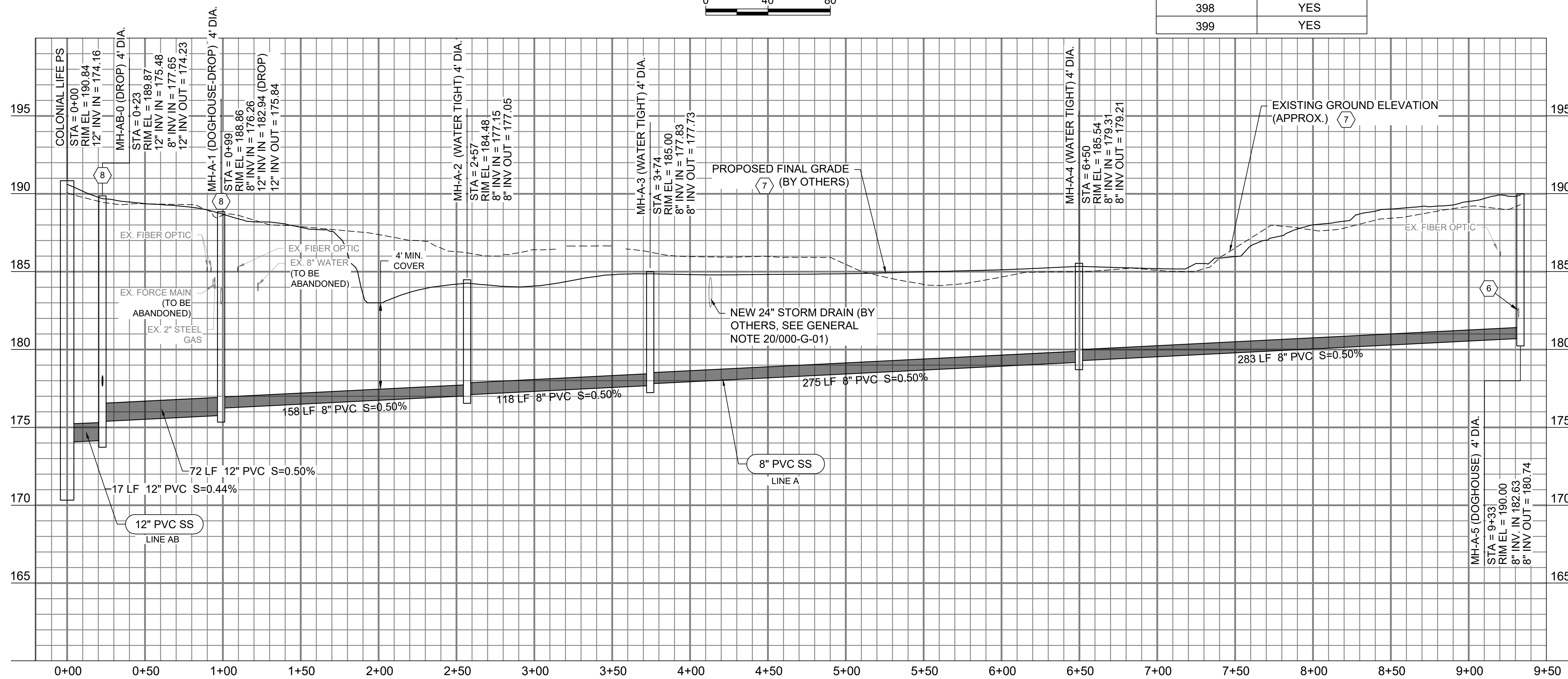
DRAWING NUMBER
100-C-02
SHEET NUMBER
12 OF 22



PLAN - LINE A
STA 0+00 TO 9+32

SEWER SERVICE RELOCATIONS

PROPERTY No.	SEWER SERVICE
391	YES
392	NO
393	NO
394	YES
397	YES
398	YES
399	YES



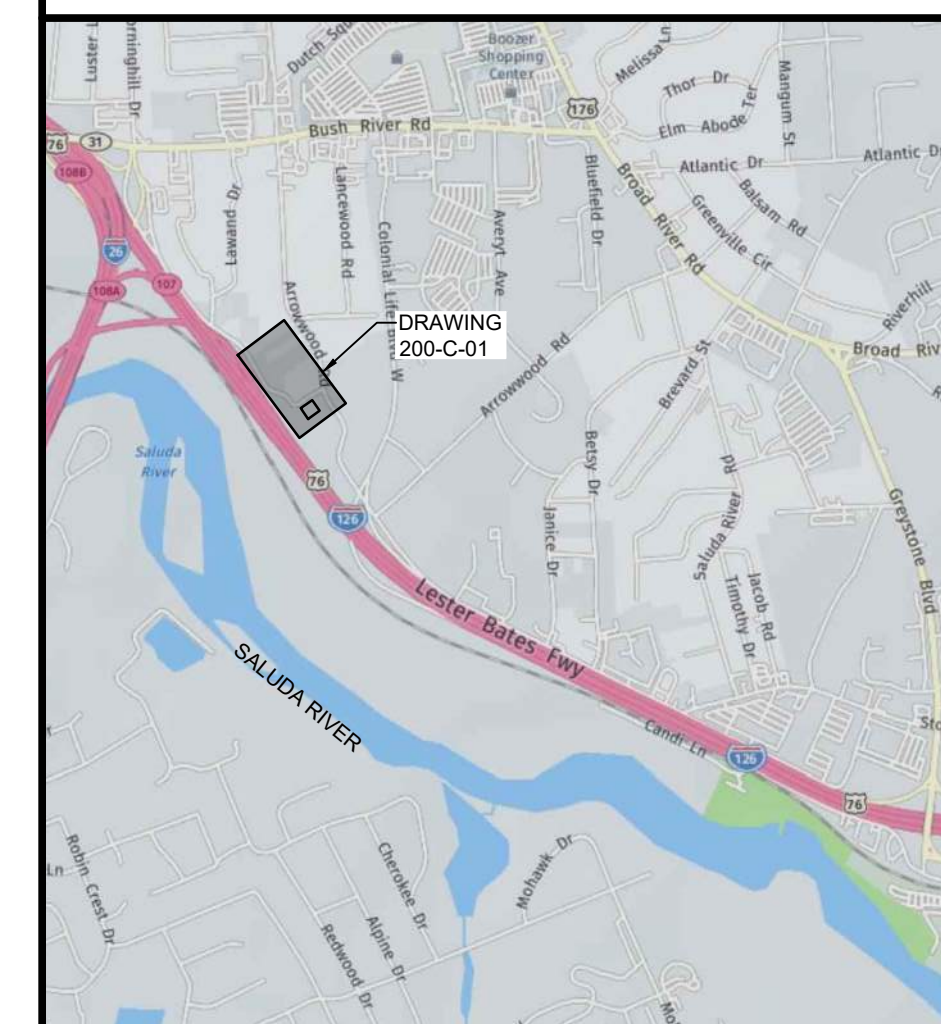
PROFILE - LINE A
STA 0+00 TO 9+32

GENERAL NOTES:

- NEW PUMP STATION AND RELOCATED LINES SHALL BE CONSTRUCTED AND APPROVED BY THE CITY OF COLUMBIA AND A PERMIT TO OPERATE RECEIVED FROM THE SCDHEC PRIOR TO THE DEMOLITION OR ABANDONMENT OF ANY EXISTING INFRASTRUCTURE. SEE SEQUENCE OF CONSTRUCTION ON 100-C-02.
- CONTRACTOR TO ROUGH GRADE WATER AND SEWER ALIGNMENTS PRIOR TO CONSTRUCTION TO ALLOW MANHOLE RIMS TO BE INSTALLED AT FINAL GRADE.

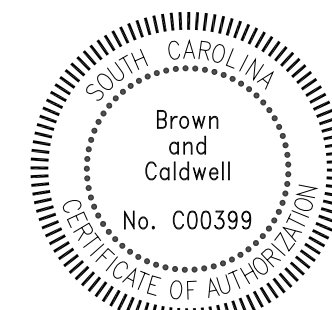
KEY NOTES:

- RELOCATED WATER MAIN (SEE DRAWING 300-C-01)
- NEW 8" SANITARY SEWER GRAVITY LINE B. SEE DRAWING 200-C-02 FOR PLAN AND PROFILE.
- REFER TO DRAWINGS 100-C-02, 100-M-01 AND 100-M-02 FOR PUMP STATION PLANS.
- SEPARATION OF RELOCATED SEWER PIPE AND RELOCATED WATER PIPE SHALL BE A MINIMUM OF 10' FROM EDGE OF PIPE TO EDGE OF PIPE.
- REFER TO DRAWING 100-C-01 FOR OVERALL ABANDONMENT AND DEMOLITION PLAN.
- PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR IS TO FIELD VERIFY EXACT DEPTH OF EXISTING 6" SERVICE LINE.
- EXISTING AND PROPOSED GRADE IN PROFILE WERE ESTABLISHED ALONG THE CENTERLINE OF THE NEW GRAVITY SEWER.
- MANHOLE SHALL RECEIVE RAVEN 405 (120 MIL) COATING.



Brown AND Caldwell

COLUMBIA, SOUTH CAROLINA



100% DESIGN SUBMITTAL

CAROLINA
CROSSROADS
PHASE 1

CONFLICTS 1057
FACILITY 1, 9, 10, 11,
12, 13, AND 14

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED:
DRAWN:
CHECKED:
CHECKED:
APPROVED:

FILENAME
200-C-01.DWG
BC PROJECT NUMBER
156904
CLIENT PROJECT NUMBER
SCDOT PROJECT ID P027662

CIVIL

GRAVITY SEWER
LINE A
PLAN & PROFILE

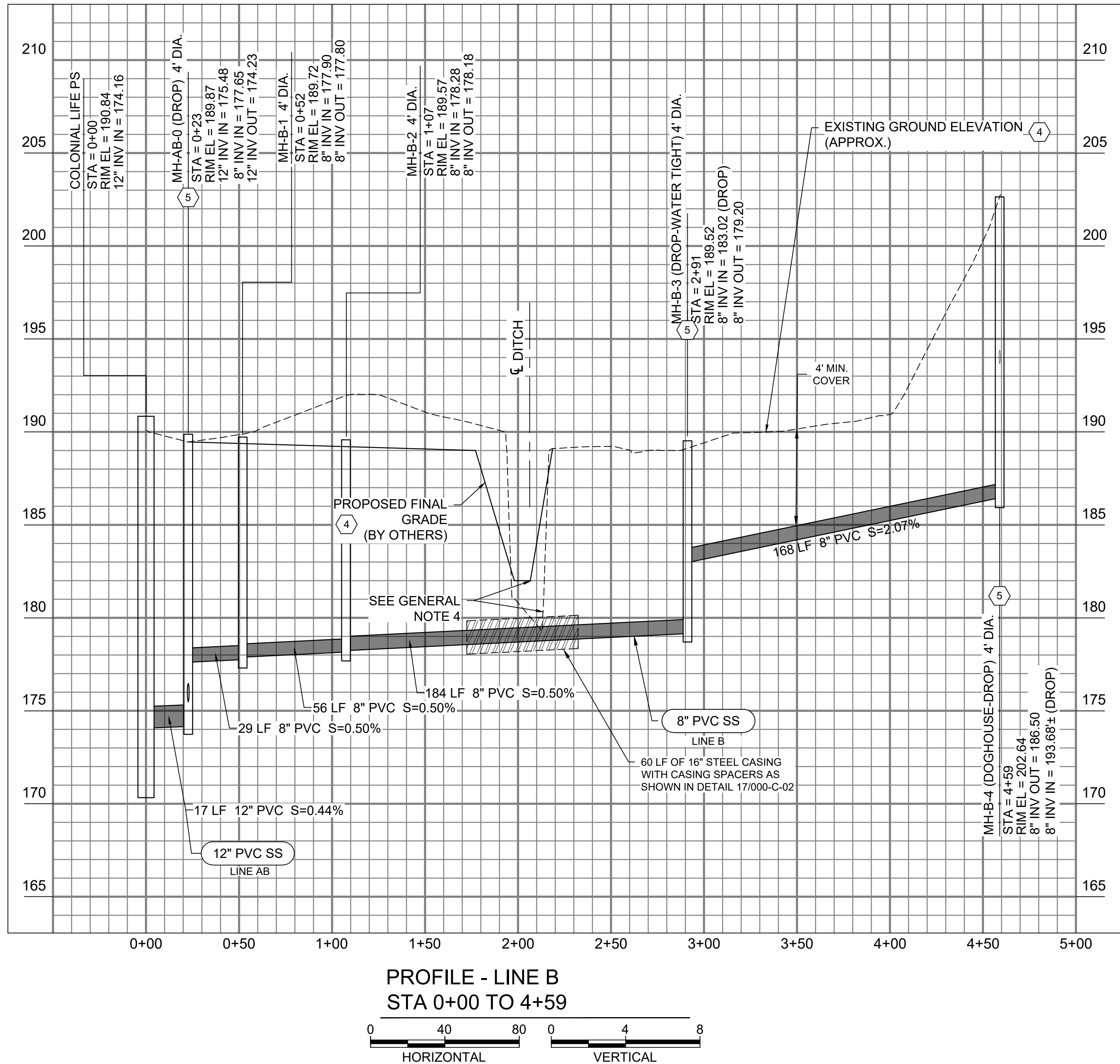
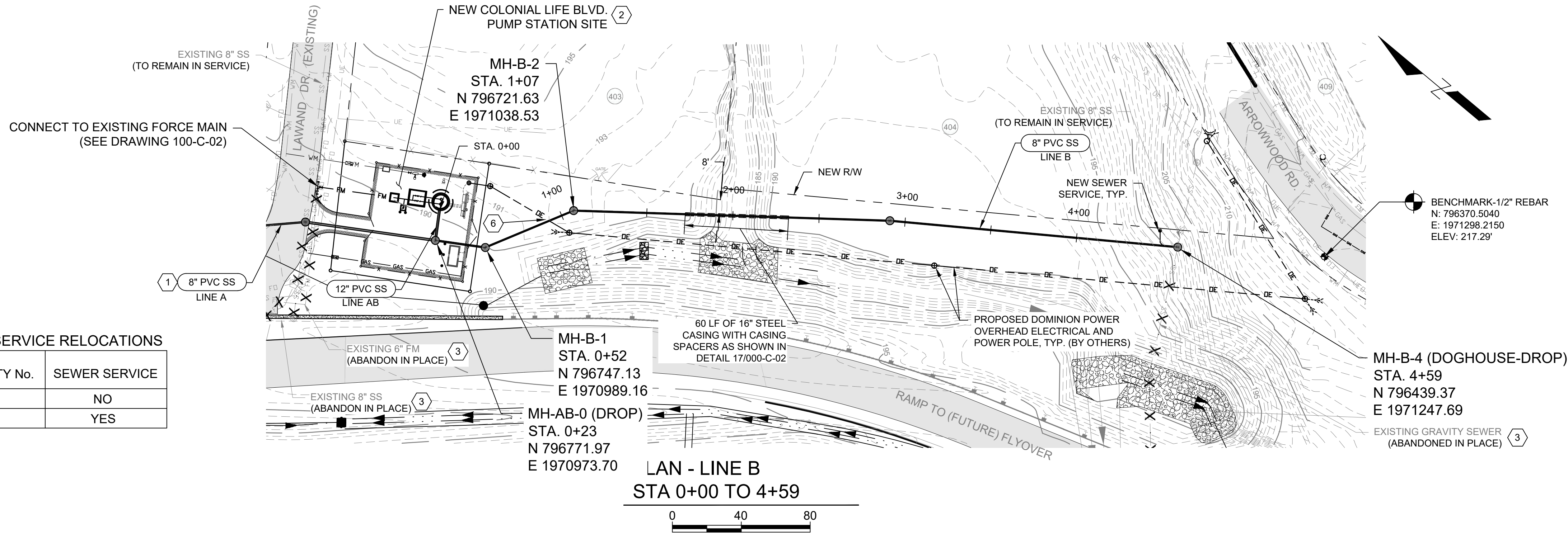
DRAWING NUMBER

200-C-01

SHEET NUMBER
13 OF 22

SEWER SERVICE RELOCATIONS

PROPERTY No.	SEWER SERVICE
403	NO
404	YES

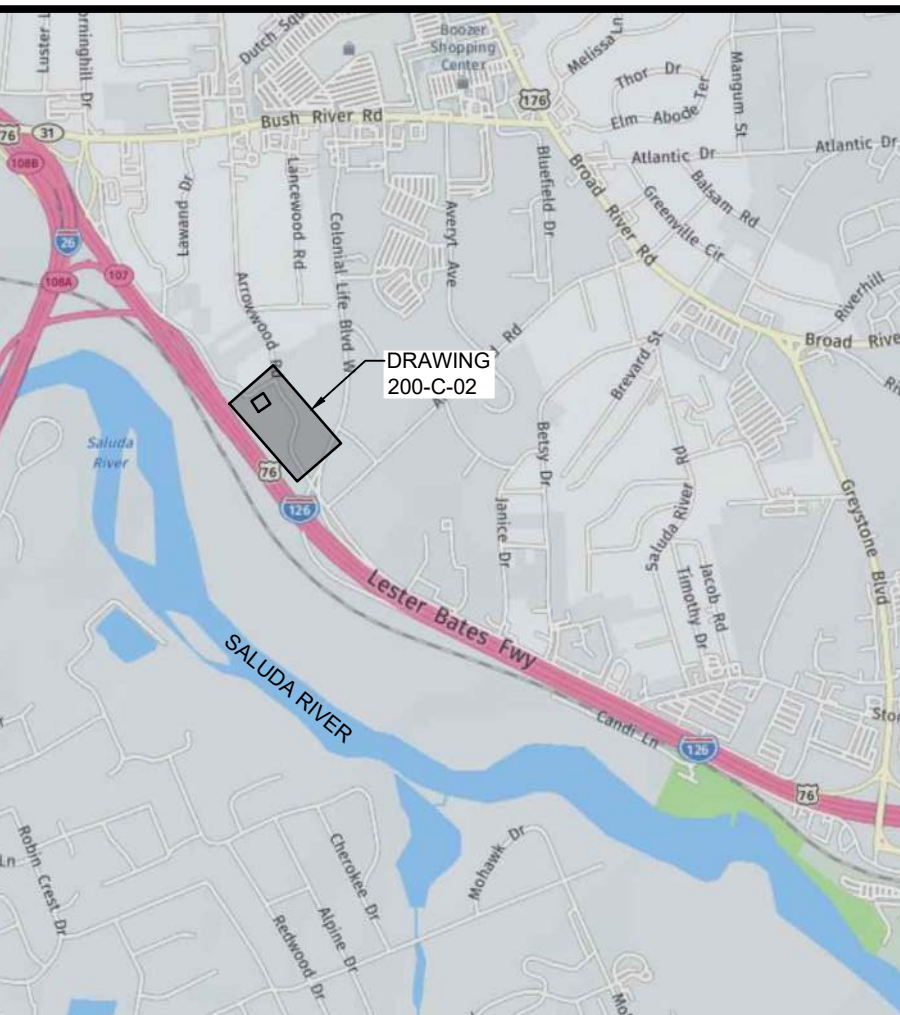


GENERAL NOTES:

- NEW PUMP STATION AND RELOCATED LINES SHALL BE CONSTRUCTED AND APPROVED BY THE CITY OF COLUMBIA AND A PERMIT TO OPERATE RECEIVED FROM THE SCDHEC PRIOR TO THE DEMOLITION OR ABANDONMENT OF ANY EXISTING INFRASTRUCTURE. SEE SEQUENCE OF CONSTRUCTION ON 100-C-02.
- SEWER SERVICE RECONNECTIONS SHALL BE MADE AT PROPERTIES SHOWN WITHIN THE PROVIDED TABLE. ALL RECONNECTIONS SHALL BE MADE USING A WYE CONNECTION.
- ALL DROP MANHOLES ARE TO BE INSIDE DROPS AS SHOWN ON DETAIL 4/000-C-06.
- CONTRACTOR TO ROUGH GRADE WATER AND SEWER ALIGNMENTS PRIOR TO CONSTRUCTION TO ALLOW MANHOLE RIMS TO BE INSTALLED AT FINAL GRADE AND TO ENSURE 4' OF COVER OVER THE NEW PIPE AT ALL TIMES.
- PENDING APPROVAL BY SECRETARY OF TRANSPORTATION AND FHWA SCOT PLANS TO QUITCLAIM PUMP STATION SITE AND PROPERTY ALONG GRAVITY SEWER LINE B TO CITY OF COLUMBIA. PROPERTY LENGTH AND WIDTH SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY'S DESIGN CRITERIA. FINAL PROPERTY LINES WILL BE INCORPORATED INTO THE RECORD CONSTRUCTION DRAWINGS.

KEY NOTES:

- NEW 8" SANITARY SEWER GRAVITY LINE A. SEE DRAWING 200-C-01 FOR PLAN AND PROFILE.
- REFER TO DRAWINGS 100-C-02, 100-M-01 AND 100-M-02 FOR PUMP STATION PLANS.
- REFER TO DRAWING 100-C-01 FOR OVERALL ABANDONMENT AND DEMOLITION PLANS.
- EXISTING GRADE AND PROPOSED GRADE IN PROFILE WERE BOTH ESTABLISHED ALONG THE CENTERLINE OF THE NEW GRAVITY SEWER.
- NEW MANHOLE SHALL RECEIVE RAVEN 405 (120 MIL) COATING.
- OVERHEAD POWER LINE (BY OTHERS). POLE HEIGHTS AT 30' ABOVE GRADE WITH A DIP POINT OF 20' FROM GRADE.

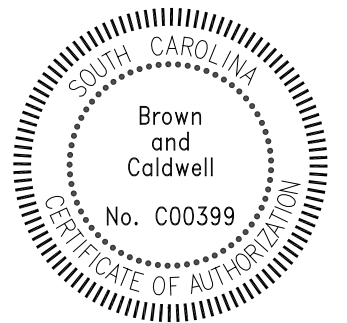


KEY PLAN

SCALE: NONE

Brown AND Caldwell

COLUMBIA, SOUTH CAROLINA



100% DESIGN SUBMITTAL

CAROLINA CROSSROADS PHASE 1

CONFLICTS 1057 FACILITY 1, 9, 10, 11, 12, 13, AND 14

REVISIONS		
REV	DATE	DESCRIPTION

DESIGNED:	FILENAME
DRAWN:	200-C-02.DWG
CHECKED:	BC PROJECT NUMBER
CHECKED:	156904
APPROVED:	CLIENT PROJECT NUMBER
	SCDOT PROJECT ID P027662

CIVIL

GRAVITY SEWER LINE B PLAN & PROFILE

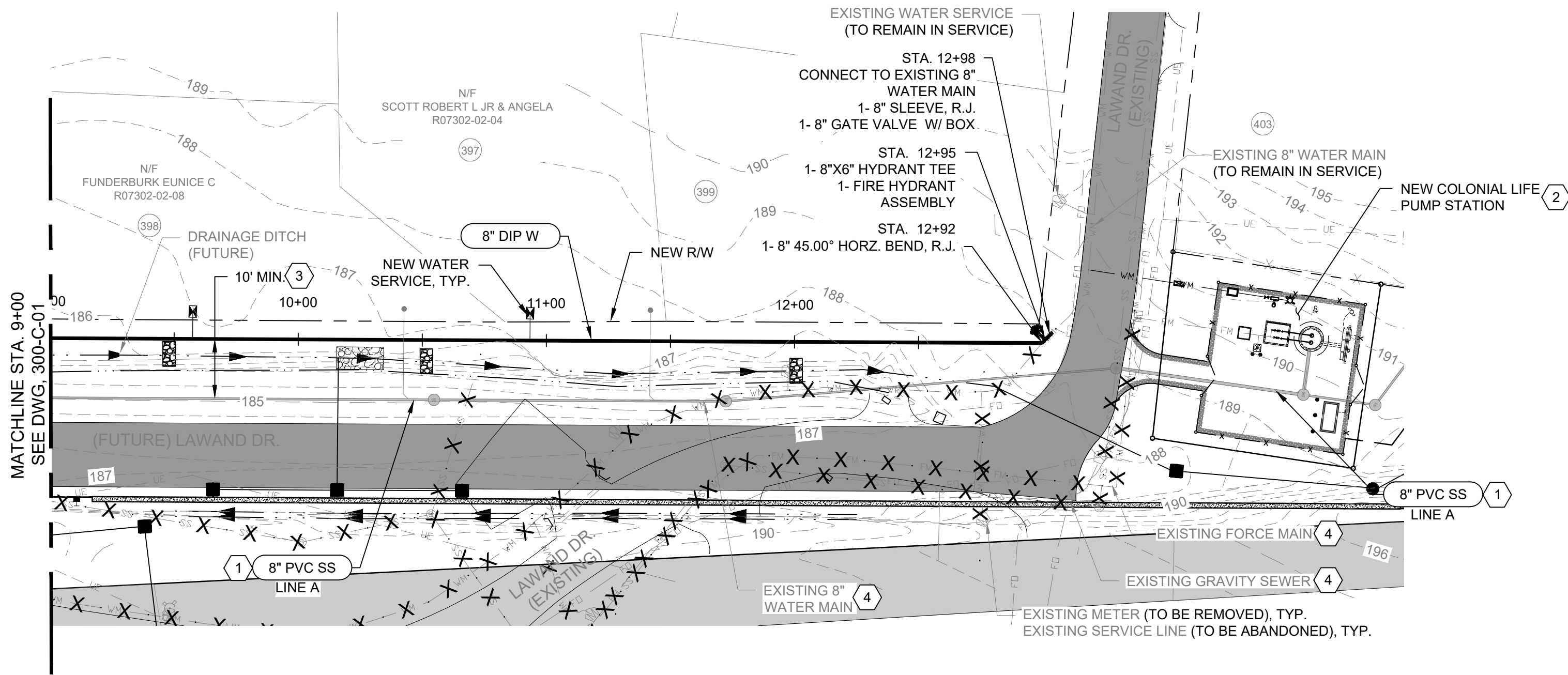
DRAWING NUMBER

200-C-02

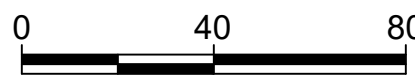
SHEET NUMBER

14 OF 22

Path: C:\BCPWD\1874299 FILENAME: 300-C-02.DWG PLOT DATE: 7/22/2022 2:48 PM CAD USER: ANDY JUMPER



PLAN
STA 9+00 TO 12+98



WATER SERVICE & METER
RELOCATIONS

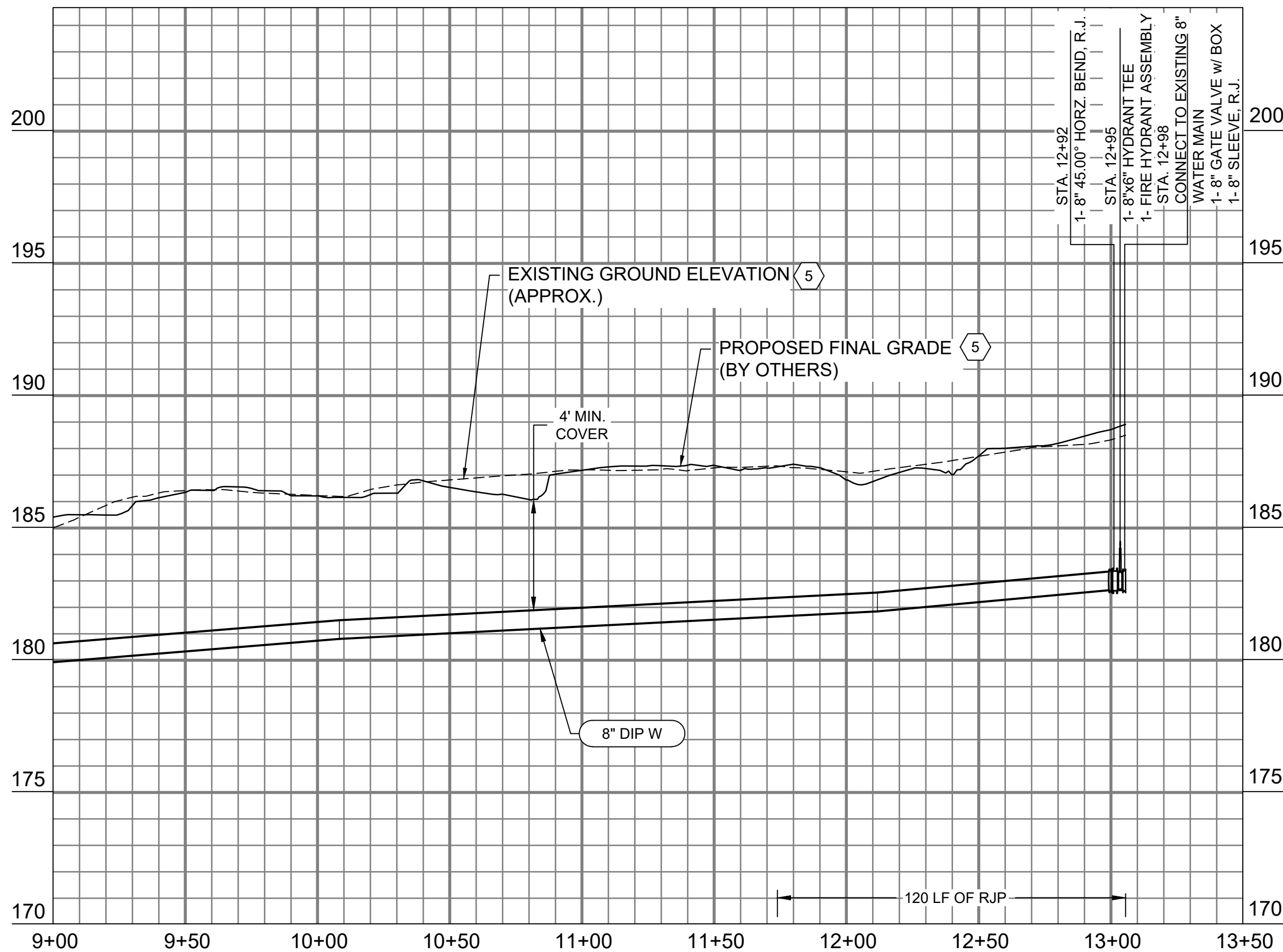
PROPERTY No.	NEW SERVICE & METER
397	YES
398	YES
399	NO
Pump Station	YES

MINIMUM REQUIRED LENGTH OF RESTRAINED JOINT PIPE (LF)

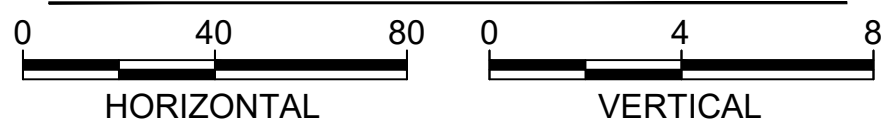
WATER MAIN (In.)	TEE	90° BEND	45° BEND	22.50 BEND	11.25° BEND	DEAD END/VALVES
8	N/A	N/A	20	10	5	120

NOTES:

- ALL JOINTS WITHIN THE DETERMINED MINIMUM LENGTHS MUST BE RESTRAINED.
- IF YOUR DISTANCE BETWEEN FITTINGS IS LESS THAN OR EQUAL TO THE CALCULATED RESTRAINT LENGTH, RESTRAIN ALL JOINTS BETWEEN THOSE FITTINGS.



PROFILE
STA 9+00 TO 12+98

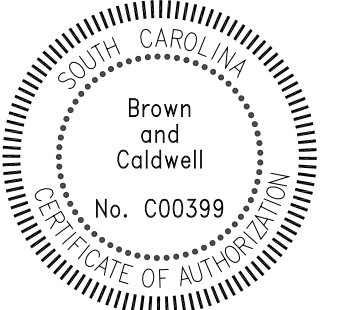


GENERAL NOTES:

- RELOCATED WATER MAINS SHALL BE CONSTRUCTED AND THEN APPROVED BY THE CITY OF COLUMBIA AND A PERMIT TO OPERATE RECEIVED FROM THE SCDHEC PRIOR TO THE DEMOLITION OR ABANDONMENT OF ANY EXISTING INFRASTRUCTURE. SEE SEQUENCE OF CONSTRUCTION ON 100-C-02.
- NEW WATER MAINS SHALL BE INSTALLED, TESTED, AND APPROVED TO PLACE INTO OPERATION BEFORE CONNECTING TO EXISTING WATER MAINS AND INSTALLING SERVICES. CONTRACTOR SHALL ISOLATE EXISTING WATER MAIN AND CUT IN SLEEVE TO CONNECT NEW WATER MAIN
- CONTRACTOR SHALL SET WATER METER BOXES AT EDGE OF NEW RIGHT OF WAY AND CONNECT NEW METER TO EXISTING SERVICE TO HOUSE. WATER METERS FROM EXISTING SERVICES SHALL BE SALVAGED, WHERE POSSIBLE.

Brown AND Caldwell

COLUMBIA, SOUTH CAROLINA



100% DESIGN SUBMITTAL

KEY NOTES:

- RELOCATED GRAVITY SEWER (SEE DRAWING 200-C-01 AND 200-C-02)
- REFER TO DRAWINGS 100-C-02, 100-M-01 AND 100-M-02 FOR PUMP STATION PLANS.
- SEPARATION OF RELOCATED SEWER PIPE AND RELOCATED WATER PIPE SHALL BE A MINIMUM OF 10' FROM EDGE OF PIPE TO EDGE OF PIPE.
- REFER TO DRAWING 100-C-01 FOR OVERALL ABANDONMENT AND DEMOLITION PLANS.
- EXISTING GRADE IN PROFILE WAS ESTABLISHED ALONG THE CENTERLINE OF THE WATER LINE. PROPOSED GRADING IS NOT PLANNED ACROSS THE WATER LINE DURING THE FUTURE ROADWAY PROJECT.

CAROLINA
CROSSROADS
PHASE 1

CONFLICTS 1057
FACILITY 1, 9, 10, 11,
12, 13, AND 14

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED:

DRAWN:

CHECKED:

CHECKED:

APPROVED:

FILENAME
300-C-02.DWG
BC PROJECT NUMBER
156904
CLIENT PROJECT NUMBER
SCDOT PROJECT ID P027662

CIVIL

8" WATER MAIN
PLAN & PROFILE

DRAWING NUMBER

300-C-02

SHEET NUMBER

16 OF 22

KEY PLAN

SCALE: NONE



Path: C:\BCP\WD1874299 FILENAME: 100-M-01.DWG PLOT DATE: 11/16/2022 2:03 PM CAD USER: ANDY JUMPER

D
C
B
A

1

2

3

4

5

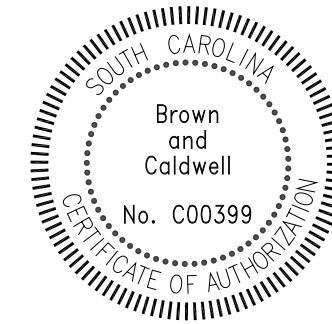
6

GENERAL NOTES:

- ALL EQUIPMENT, ANCHOR BOLT SIZES, LOCATIONS, CLEARANCES, ETC. SHALL BE IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL HAVE A BITUMASTIC COATING OR APPROVED EQUAL.
- PRECAST CONCRETE VAULT SHALL BE PER SPECIFICATION SECTION 02607.
- ACCESS COVER FOR SUBMERSIBLE PUMPS AND VALVE VAULT TO BE SIZED AND PROVIDED BY THE PUMP MANUFACTURER, PER SPECIFICATION SECTION 08305. ACCESS HATCH TO BE A MINIMUM SIZE OF 4' x 4'.
- ALL PIPING FROM STA. 0+00 TO THE END OF THE FORCE MAIN SHALL BE DESIGNED, PER SPECIFICATION 02615. ALL PIPING FITTINGS AND VALVES FROM WET WELL TO STA. 0+00 SHALL BE DESIGNED, PER SPECIFICATION 02615 AND SHALL BE RESTRAINED JOINT.
- CONTRACTOR SHALL PROVIDE ADJUSTABLE PIPE SADDLE SUPPORT FOR EACH PIPE AND COMMON HEADER INSIDE VALE VAULT. SUPPORTS SHALL BE STANDON MODEL S92 - 304 STAINLESS STEEL. SADDLE AND SUPPORT SHALL BE INSTALLED COMPLETE WITH SADDLE, BASE AND COLLAR ASSEMBLIES, AND SS EXTENSION PIPE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- INSTALL ACCESS STEPS INSIDE VAULT AT LOCATION SHOWN ON PLAN. STEPS SHALL BE SPACED VERTICALLY AT 16" O.C., ORIENTED WITH HATCH OPENING.
- ALL PRECAST CONCRETE MANHOLE AND VAULT PIPE PENETRATIONS SHALL BE PER DETAIL 20/000-C-02 AND DETAIL 1/000-C-05.
- SEE SPECIFICATION APPENDIX B FOR CONTROL STRATEGY.
- REFER TO ELECTRICAL DRAWINGS FOR CONSTRUCTION DETAILS FOR ELECTRICAL AND CONTROL EQUIPMENT AND STANDBY EMERGENCY GENERATOR SYSTEM.
- WET WELL INTERIOR (EXCLUDING THE BOTTOM) AND ALL EXPOSED PIPING IN THE WET WELL SHALL BE COATED WITH RAVEN 405 COATING WITH A MINIMUM OF 120 MILS.
- ALL EXPOSED PIPING, FITTINGS, AND VALVES SHALL BE PAINTED ACCORDING TO SPECIFICATION SECTION 09900.

Brown AND Caldwell

COLUMBIA, SOUTH CAROLINA



100% DESIGN SUBMITTAL

CAROLINA
CROSSROADS
PHASE 1

CONFLICTS 1057
FACILITY 1, 9, 10, 11,
12, 13, AND 14

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED:
DRAWN:
CHECKED:
CHECKED:
APPROVED:
FILENAME 100-M-01.DWG
BC PROJECT NUMBER 156904
CLIENT PROJECT NUMBER SCDOT PROJECT ID P027662

MECHANICAL

PUMP STATION
PLAN AND DETAILS

DRAWING NUMBER

100-M-01

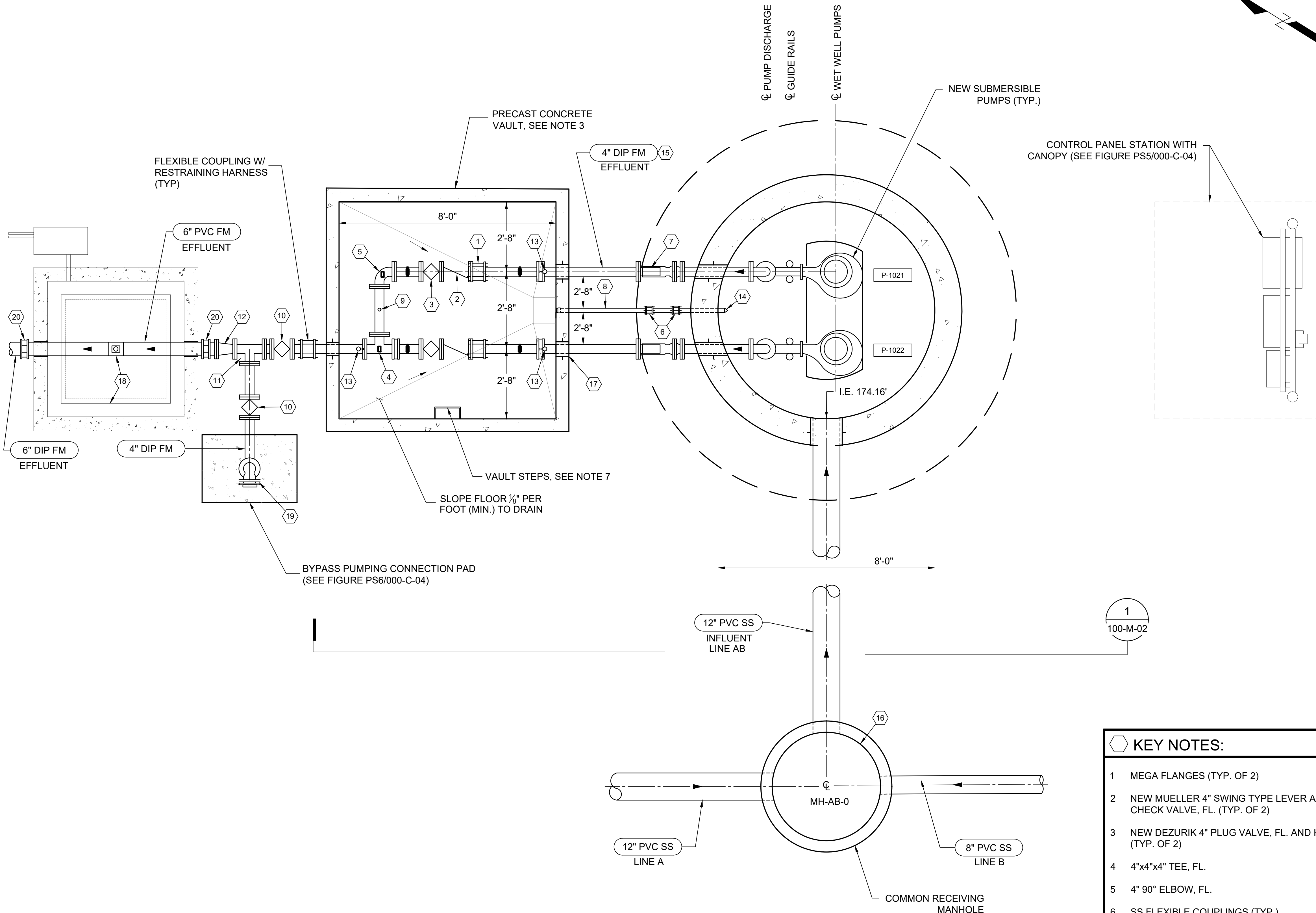
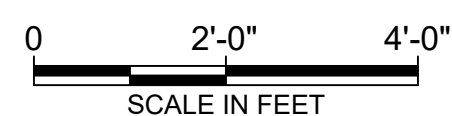
SHEET NUMBER
17 OF 22

KEY NOTES:

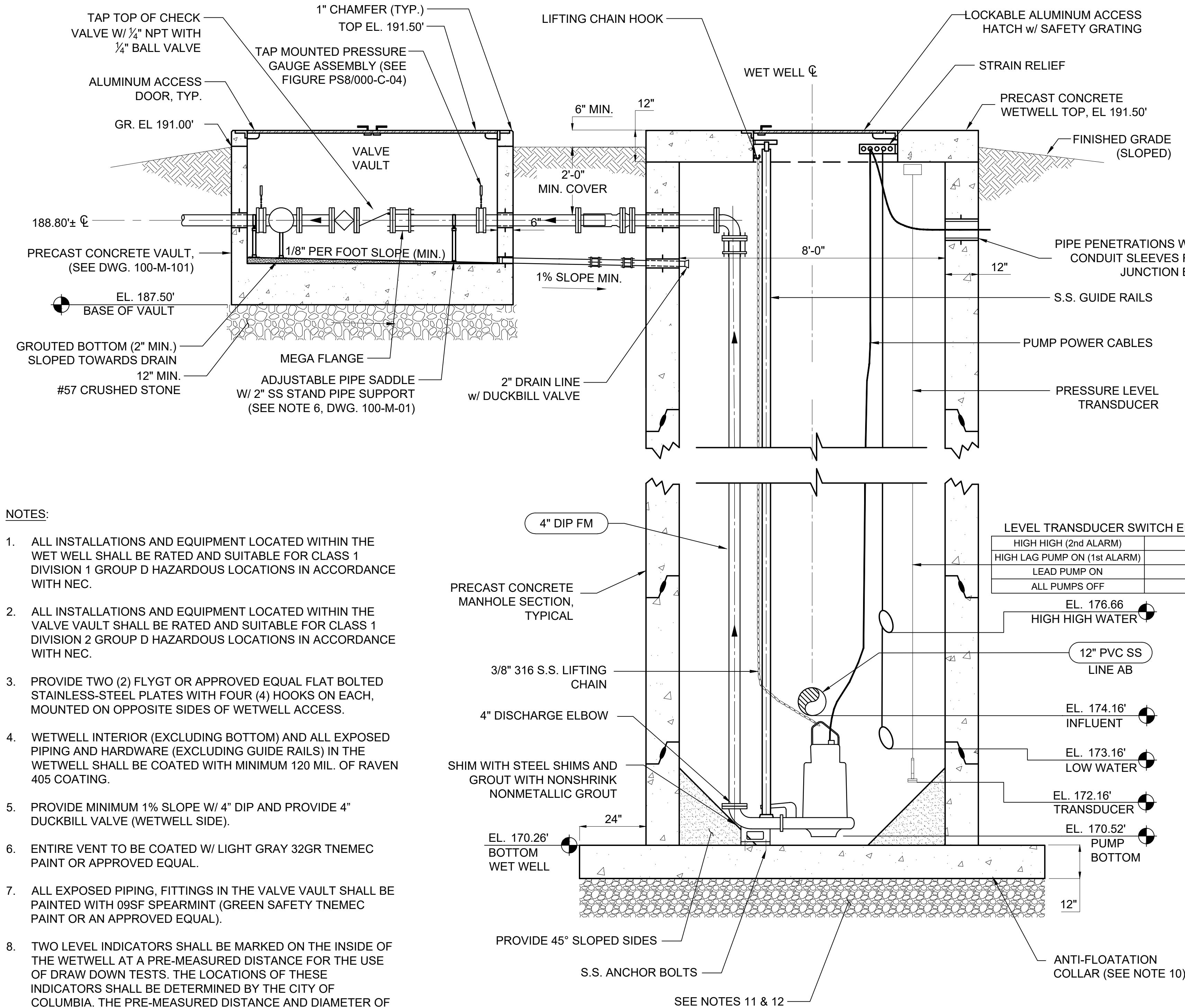
- | | |
|--|---|
| 1 MEGA FLANGES (TYP. OF 2) | 15 M/J'S TO BE INSTALLED ON ALL PIPES BETWEEN WETWELL AND VALVE VAULT |
| 2 NEW MUELLER 4" SWING TYPE LEVER AND WEIGHT CHECK VALVE, FL. (TYP. OF 2) | 16 FLAT SLAB TOP MANHOLE w/ ALUMINUM HATCH (TYP. OF 2) |
| 3 NEW DEZURIK 4" PLUG VALVE, FL. AND HANDWHEEL (TYP. OF 2) | 17 WALL PENETRATION WITH PIPE (SEE DETAIL 1/000-C-05) |
| 4 4"x4"x4" TEE, FL. | 18 STRAP ON MAGMETER AND VAULT AND ASSOCIATED APPURTENANCES, PER SECTION 3.3.2.28 OF THE CITY STANDARDS |
| 5 4" 90° ELBOW, FL. | 19 BYPASS PUMPING CONNECTION. (SEE FIGURE PS6/000-C-04) |
| 6 SS FLEXIBLE COUPLINGS (TYP.) | 20 PVC x DIP TRANSITION ADAPTER, 1 EACH SIDE OF METER VAULT. |
| 7 FLEXIBLE BALL JOINT COUPLING (TYP. OF 2) | |
| 8 2" SCH 40 SS PIPE BETWEEN WET WELL AND VALVE VAULT. PIPE SHALL BE SLOPED 1% MIN. TO WET WELL AND STUBBED OUT 2" ON EACH END WITH EXPANSION PLUGS | |
| 9 1" BRONZE CORPORATION AND TAPPING SADDLE | |
| 10 BURIED 4" PLUG VALVE w/ BOX, M.J. | |
| 11 4"x4"x4" TEE, M.J. | |
| 12 6"x4" REDUCER, M.J. | |
| 13 TAP MOUNTED PRESSURE GAUGE ASSEMBLY (SEE FIGURE PS8/000-C-04) | |
| 14 2" DRAIN LINE W/ DUCKBILL VALVE, PER CITY SECTION 3.3.3.24 OF THE CITY STANDARDS | |

COLONIAL LIFE PUMP STATION PLAN

SCALE: 1/2"=1'-0"



Path: C:\BCP\WD\1874299 FILENAME: 100-M-02.DWG PLOT DATE: 10/27/2022 2:52 PM CAD USER: ANDY JUMPER

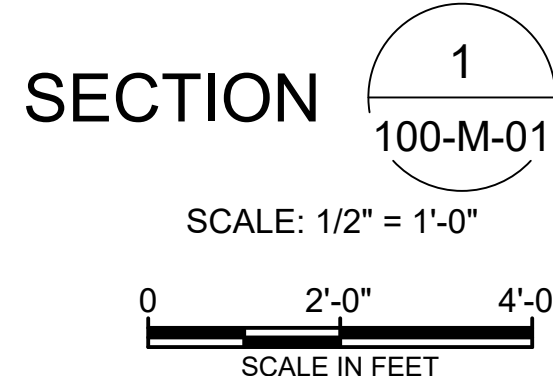


NOTES:

- ALL INSTALLATIONS AND EQUIPMENT LOCATED WITHIN THE WET WELL SHALL BE RATED AND SUITABLE FOR CLASS 1 DIVISION 1 GROUP D HAZARDOUS LOCATIONS IN ACCORDANCE WITH NEC.
- ALL INSTALLATIONS AND EQUIPMENT LOCATED WITHIN THE VALVE VAULT SHALL BE RATED AND SUITABLE FOR CLASS 1 DIVISION 2 GROUP D HAZARDOUS LOCATIONS IN ACCORDANCE WITH NEC.
- PROVIDE TWO (2) FLYGT OR APPROVED EQUAL FLAT BOLTED STAINLESS-STEEL PLATES WITH FOUR (4) HOOKS ON EACH, MOUNTED ON OPPOSITE SIDES OF WETWELL ACCESS.
- WETWELL INTERIOR (EXCLUDING BOTTOM) AND ALL EXPOSED PIPING AND HARDWARE (EXCLUDING GUIDE RAILS) IN THE WETWELL SHALL BE COATED WITH MINIMUM 120 MIL. OF RAVEN 405 COATING.
- PROVIDE MINIMUM 1% SLOPE W/ 4" DIP AND PROVIDE 4" DUCKBILL VALVE (WETWELL SIDE).
- ENTIRE VENT TO BE COATED W/ LIGHT GRAY 32GR TNEMEC PAINT OR APPROVED EQUAL.
- ALL EXPOSED PIPING, FITTINGS IN THE VALVE VAULT SHALL BE PAINTED WITH 09SF SPEARMINT (GREEN SAFETY TNEMEC PAINT OR AN APPROVED EQUAL).
- TWO LEVEL INDICATORS SHALL BE MARKED ON THE INSIDE OF THE WETWELL AT A PRE-MEASURED DISTANCE FOR THE USE OF DRAW DOWN TESTS. THE LOCATIONS OF THESE INDICATORS SHALL BE DETERMINED BY THE CITY OF COLUMBIA. THE PRE-MEASURED DISTANCE AND DIAMETER OF THE WETWELL SHALL BE WRITTEN CLEARLY ABOVE THE HIGHER OF THE TWO LEVELS AND READABLE FROM THE OUTSIDE OF THE WETWELL. THE MARKINGS SHALL NOT BE SUCH TO VOID THE WARRANTY OF THE COATING ON THE INTERIOR OF THE WETWELL. CONTRACTOR TO SUBMIT MARKING PROCESS FOR REVIEW AND APPROVAL.
- TWO (2) BACKUP FLOAT SWITCHES THAT OPERATE IN CASE OF LEVEL SENSOR FAILURE.
- PROVIDE MAT THICKNESS OF 12-INCHES WITH A DIAMETER OF 14-FEET. REINFORCEMENT WITHIN MAT SHALL BE TOP AND BOTTOM OF #5 @ 12-INCHES ON CENTER, EACH WAY, WITH 3-INCH CLEARANCE FROM THE EDGE
- PROVIDE 12-INCHES OF #57 CRUSHED STONE SUB BASE, COMPACTED TO 95%.
- THE FOUNDATION IS DESIGNED BASED ON THE ASSUMED ALLOWABLE SOIL BEARING PRESSURE OF 2 KSF. THE FOUNDATION EXCAVATION SHALL BE VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER BEFORE PLACEMENT OF THE FOUNDATION. FOUNDATION CONSTRUCTION SHALL BE COMPLIANT WITH THE GEOTECHNICAL REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER. ALL FILL SOIL SHALL BE COMPACTED AT 8" LIFTS IN LOOSE THICKNESS, AND ALL SUBGRADE OF FOUNDATION SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY AS A MINIMUM OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

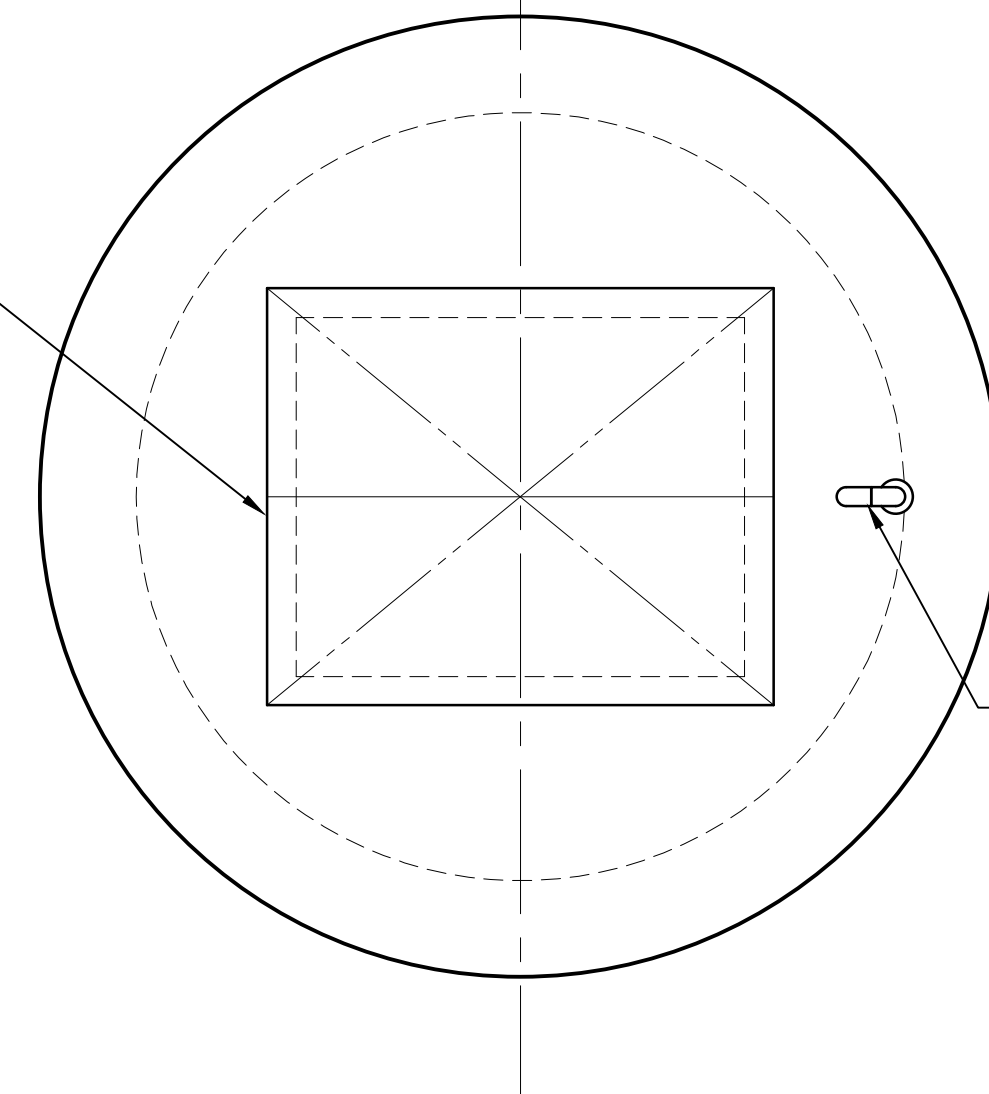
- CONCRETE FOR FOUNDATION MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 4,000 PSI.
- CONCRETE WORK SHALL COMPLY WITH ACI "SPECIFICATIONS FOR STRUCTURAL CONCRETE" (ACI 301-10), "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES" (ACI 350-06) AND APPLICABLE PROVISIONS OF ACI 318-14. KEEP A COPY OF ACI FIELD REFERENCE MANUAL (ACI SP-15-10) INCLUDING ACI 301 AND OTHER ACI AND ASTM REFERENCES ON THE JOB.
- THE OWNER SHALL SELECT THE TESTING LABORATORY AND EMPLOY THE LABORATORY AT THE CONTRACTOR'S EXPENSE TO PERFORM CONCRETE STRENGTH TESTING PER ACI 350-06.

COLONIAL LIFE PUMP STATION



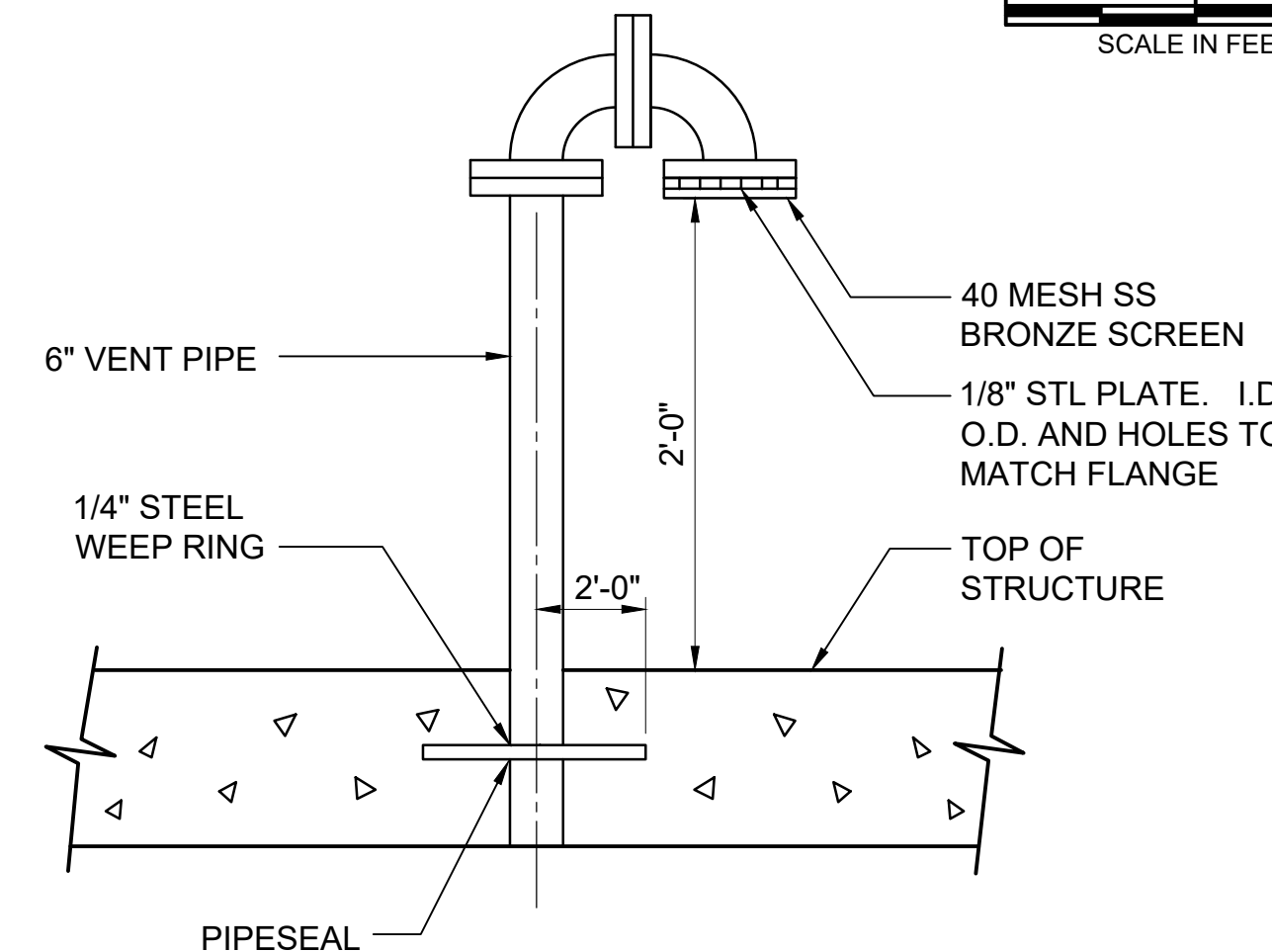
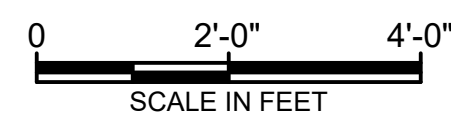
LEVEL TRANSDUCER SWITCH ELEVATIONS	
HIGH HIGH (2nd ALARM)	176.66'
HIGH LAG PUMP ON (1st ALARM)	175.16'
LEAD PUMP ON	174.16'
ALL PUMPS OFF	173.16'

DOUBLE LEAF LOCKABLE, ALUMINUM ACCESS DOOR (SEE NOTE 4, DWG. 100-M-01)



COLONIAL LIFE PUMP STATION TOP PLAN

SCALE: 1/2"=1'-0"



NOTE:
ENTIRE VENT SHALL BE COATED WITH LIGHT GREY 32GR
TNEMEC PAINT OR APPROVED EQUAL.

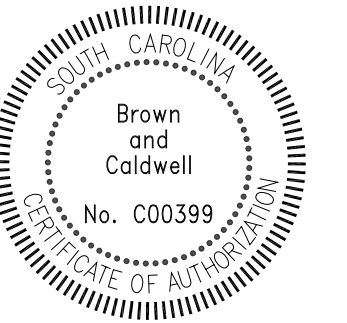
SEWER PUMP STATION VENT

DETAIL

SCALE: NONE

Brown and Caldwell

COLUMBIA, SOUTH CAROLINA



100% DESIGN SUBMITTAL

CAROLINA CROSSROADS PHASE 1

CONFLICTS 1057
FACILITY 1, 9, 10, 11,
12, 13, AND 14

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED:

DRAWN:

CHECKED:

CHECKED:

APPROVED:

FILENAME
100-M-02.DWG
BC PROJECT NUMBER
156904
CLIENT PROJECT NUMBER
SCDOT PROJECT ID P027662

MECHANICAL

PUMP STATION SECTION AND DETAILS

DRAWING NUMBER

100-M-02

SHEET NUMBER
18 OF 22

D

C

B

A

1

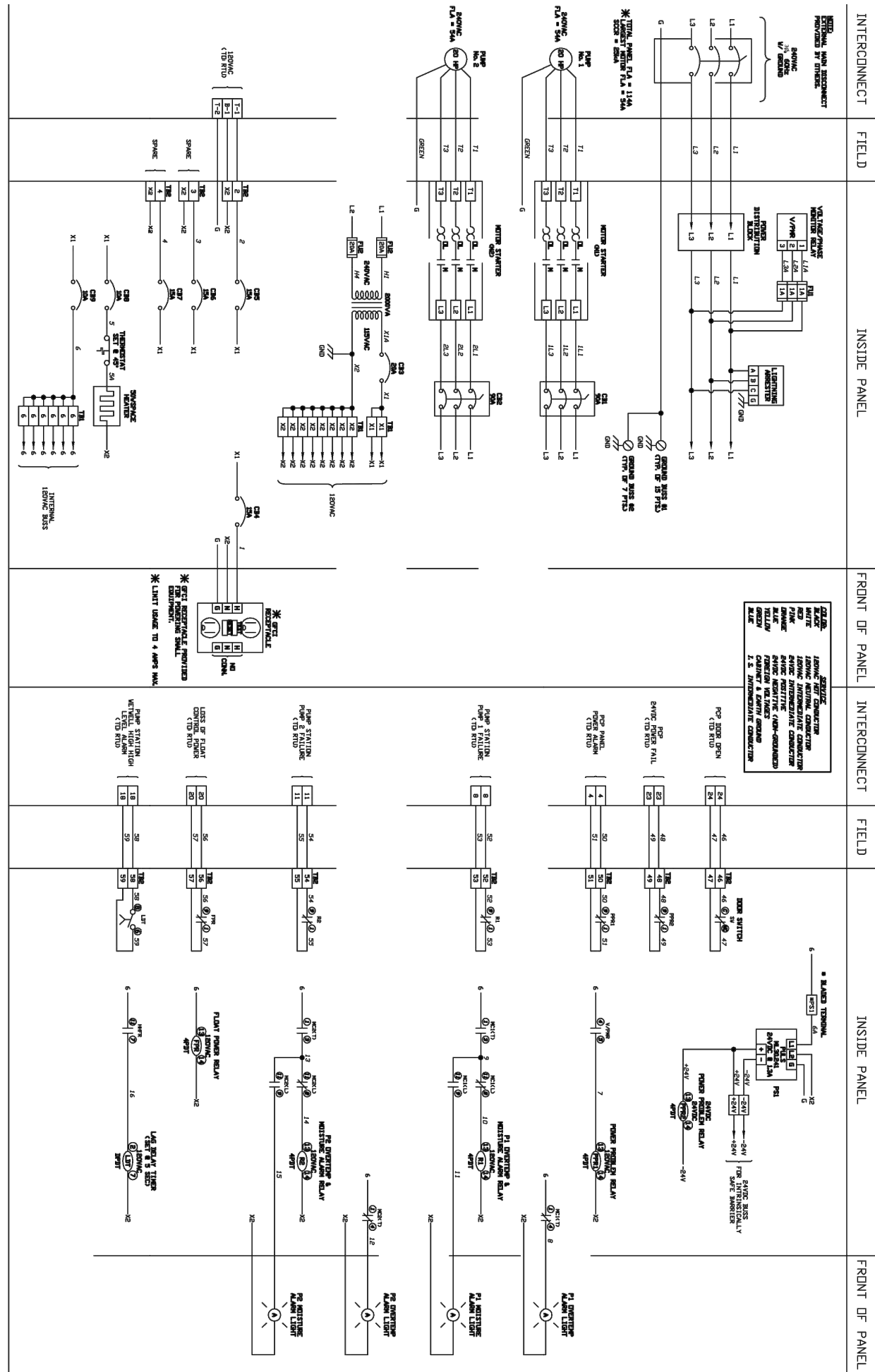
2

3

4

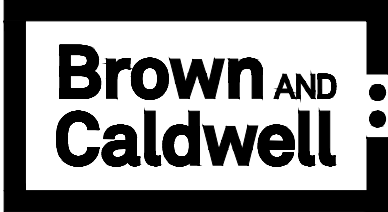
5

6

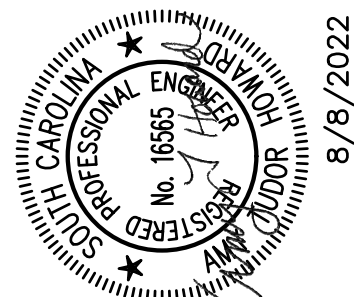
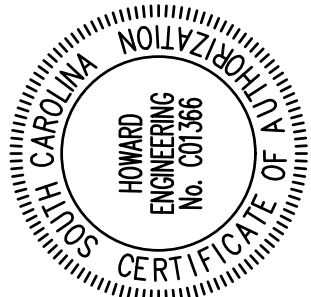


CITY OF COLUMBIA
DEPARTMENT OF ENGINEERING
COLUMBIA, SOUTH CAROLINA 29217

SCALE: N.T.S.
DATE: 02/17/20
REVISED



COLUMBIA, SOUTH CAROLINA



100% DESIGN SUBMITTAL

CAROLINA
CROSSROADS
PHASE 1

CONFLICTS 1057
FACILITY 1, 9, 10, 11,
12, 13, AND 14

REVISIONS

REV	DATE	DESCRIPTION

AT FULL SIZE

DESIGNED:
DRAWN:
CHECKED:
CHECKED:
APPROVED:
FILENAME 000-E-01_000-E-02.DWG
BC PROJECT NUMBER 158904
CLIENT PROJECT NUMBER SCDOT PROJECT ID P027662

ELECTRICAL

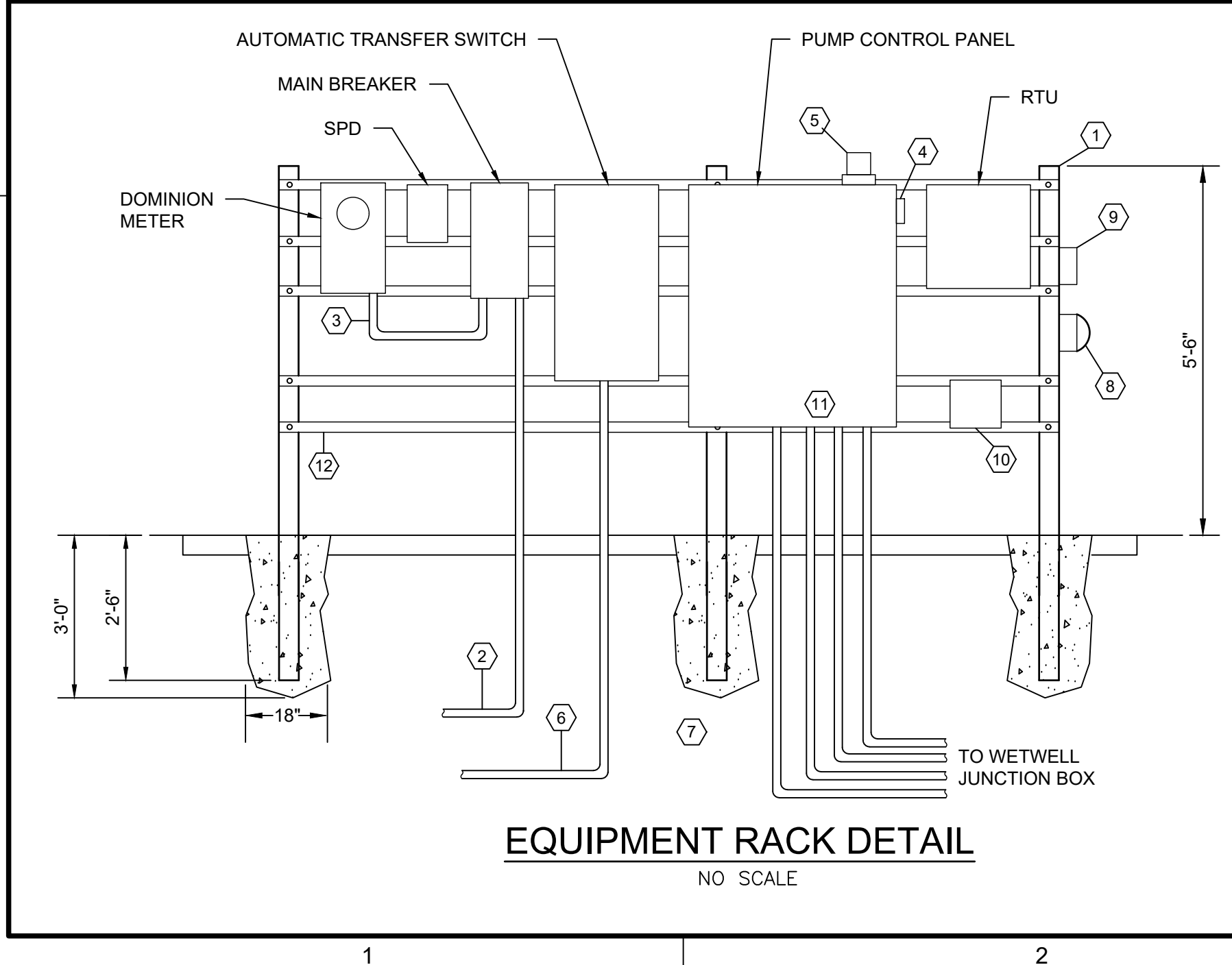
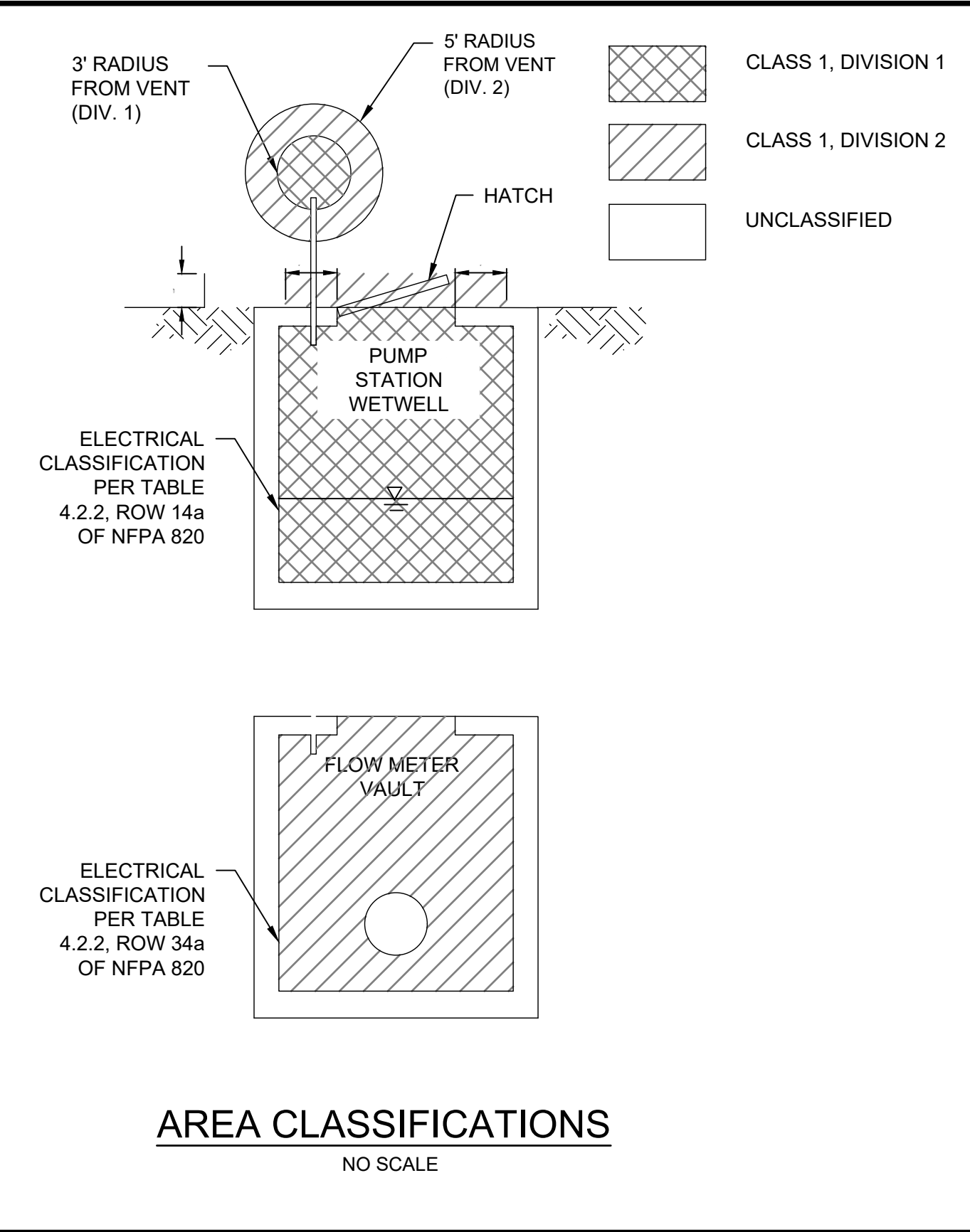
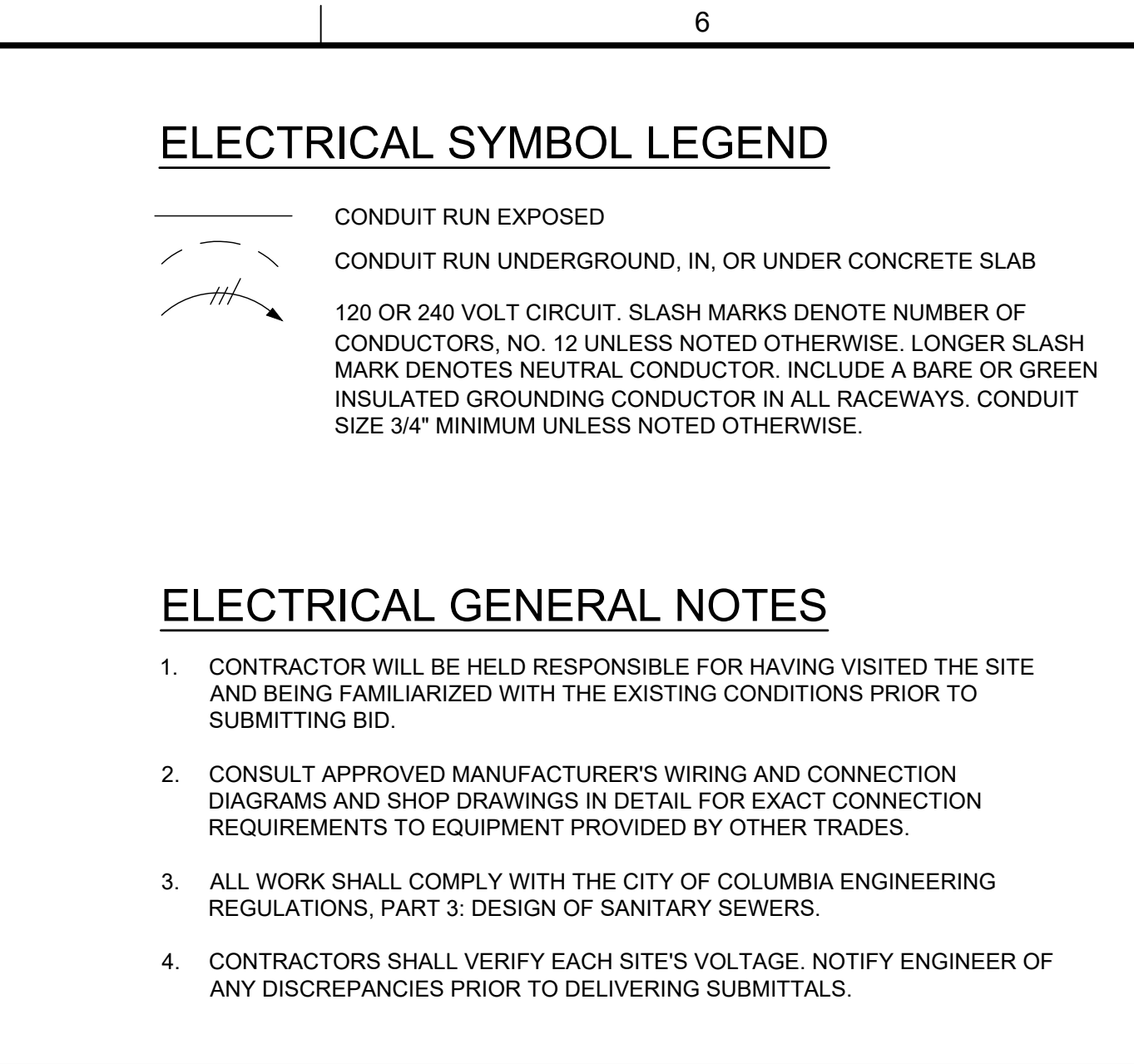
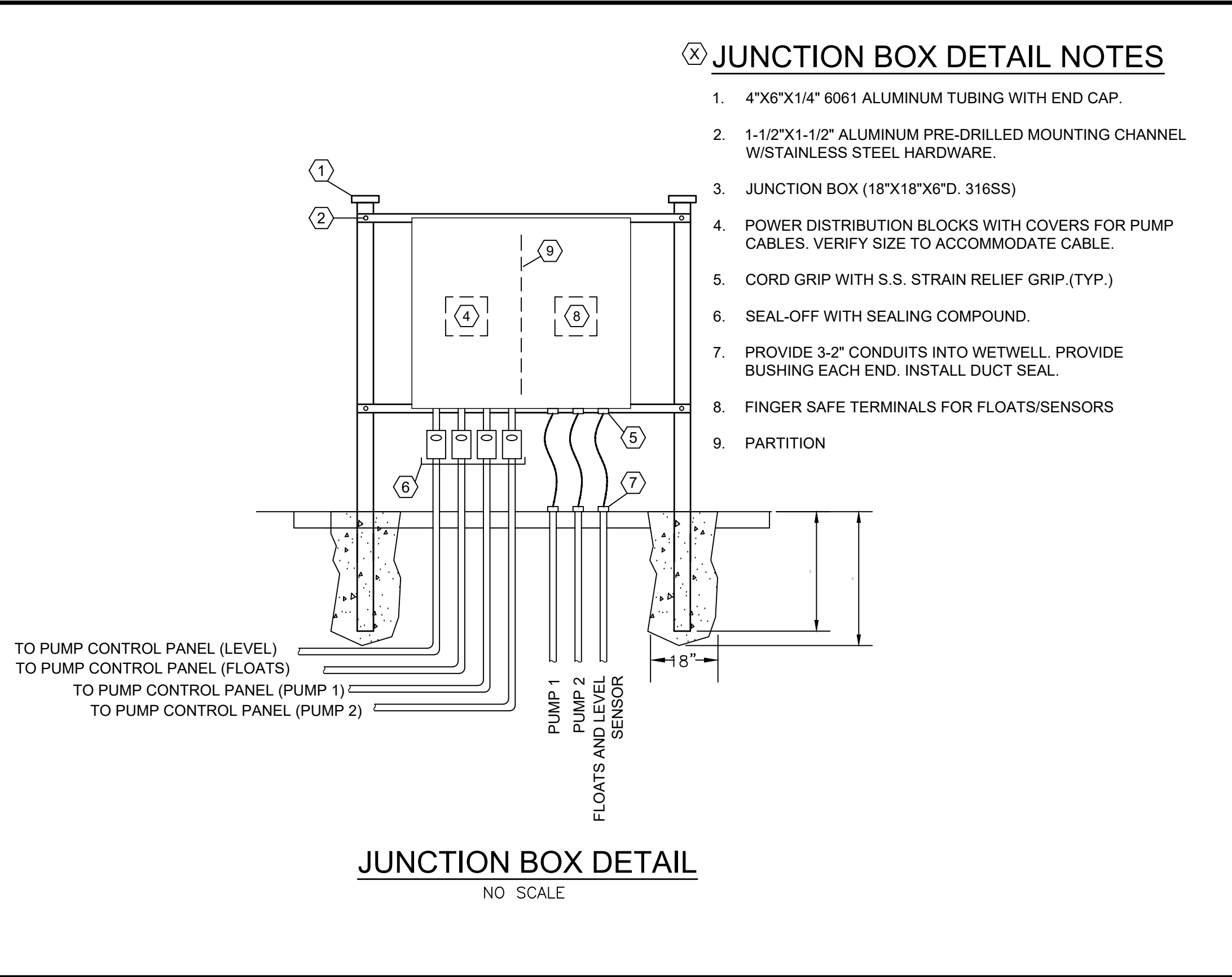
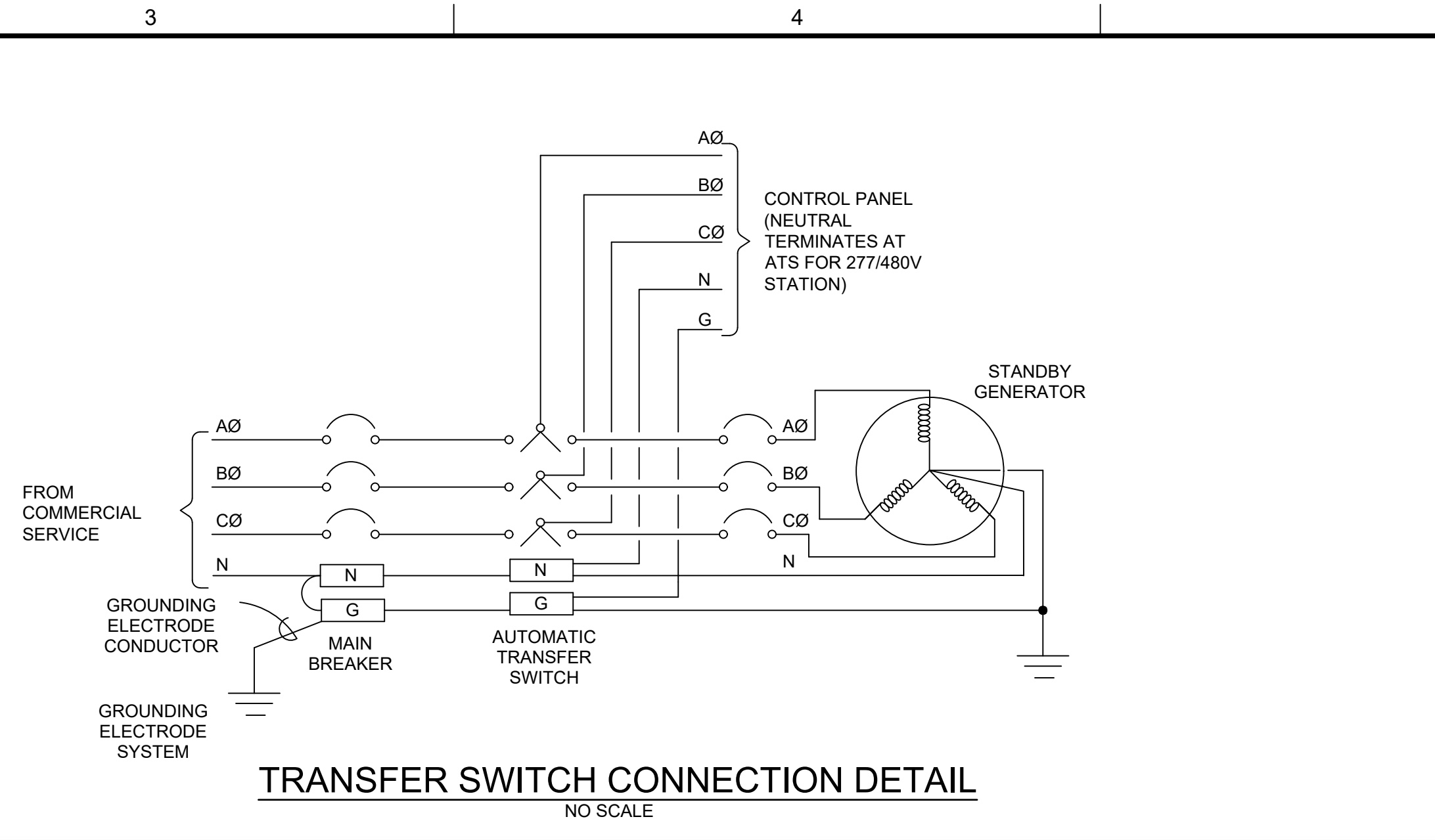
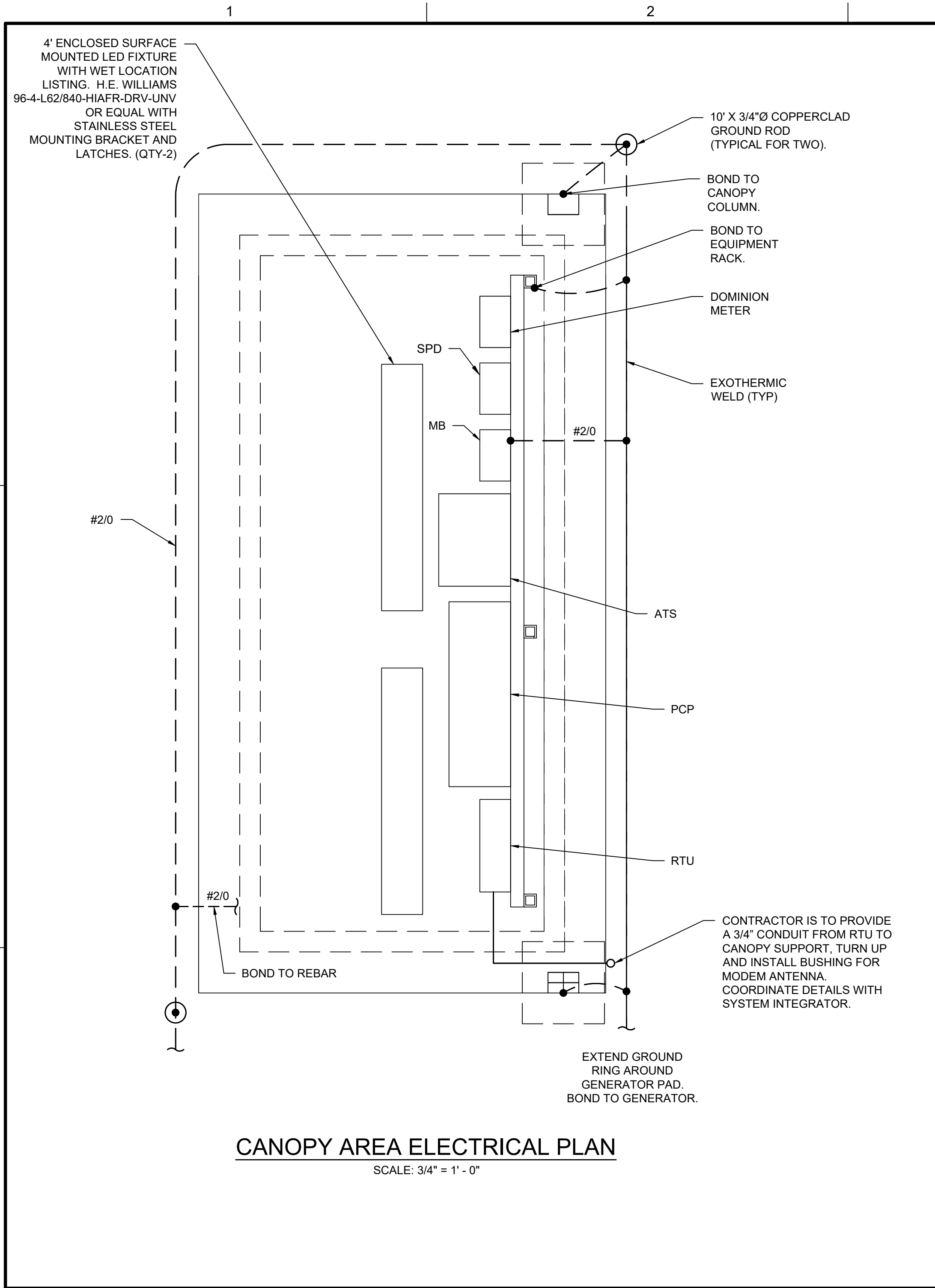
STANDARD
ELECTRICAL
DETAILS -2

DRAWING NUMBER

000-E-02

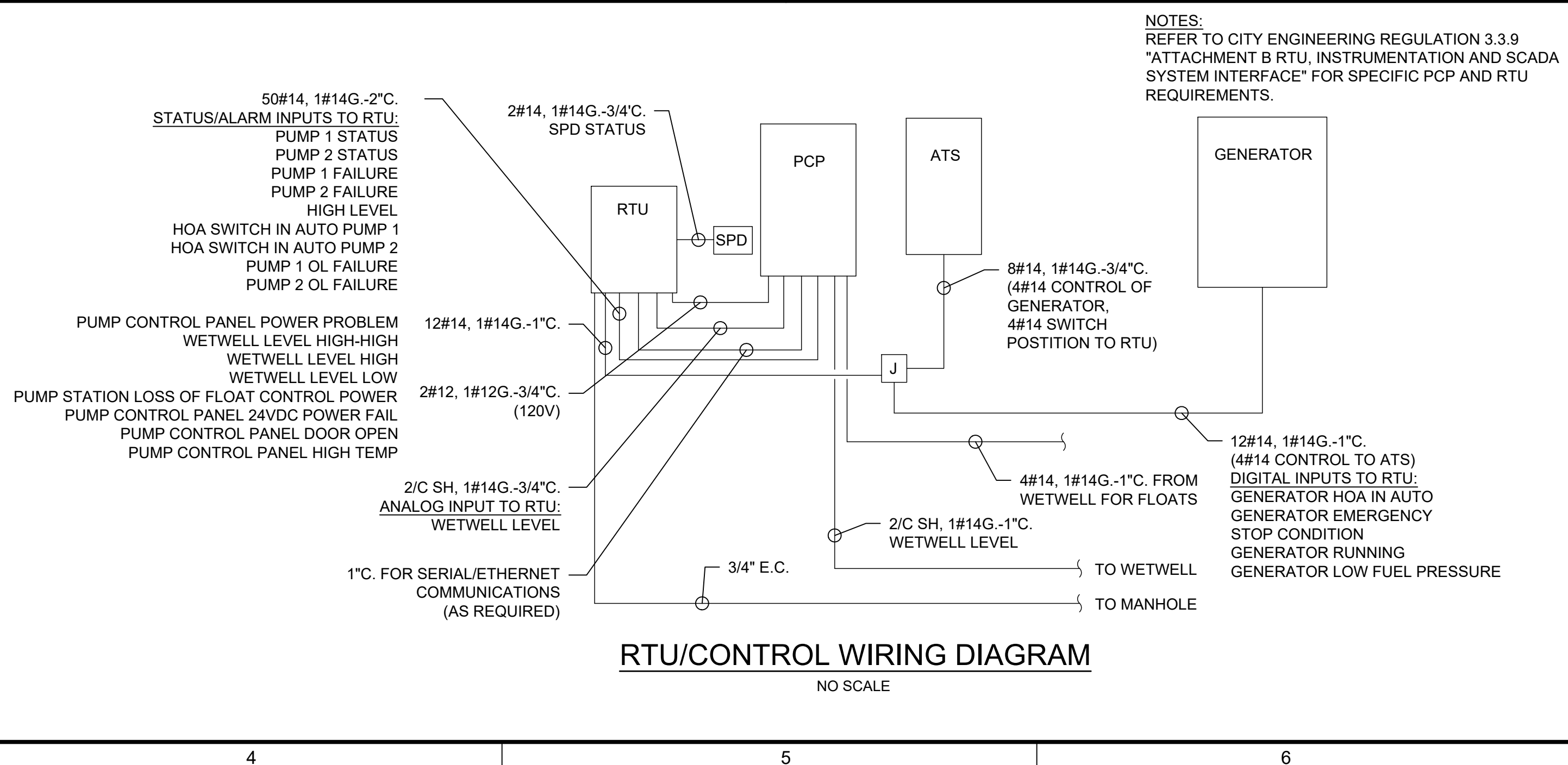
SHEET NUMBER
20 OF 22

Path: \\HEI12-SERVER\DATA\PROJECTS\A2137-ADRAWINGS FILENAME: A2137 - 100-E-001-002.DWG PLOT DATE: 8/9/2022 11:01 AM CAD USER: HANNAH WOODRUFF

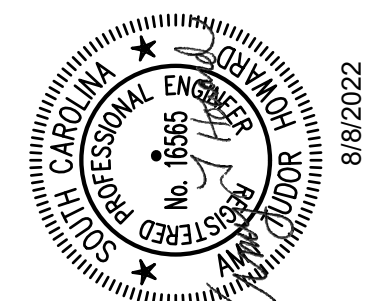
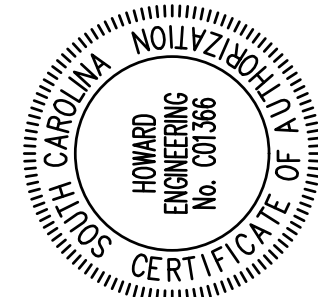


EQUIPMENT RACK DETAIL NOTES

- 4"x4"x1/4" 6061 ALUMINUM TUBING WITH END CAP.
- 3/4" SCH. 80 PVC WITH #2 BARE COPPER GROUNDING ELECTRODE TO GROUND RING.
- TO METER ON RACK.
- ALARM HORN FURNISHED WITH CONTROL PANEL. CONTRACTOR SHALL REVIEW WITH OWNER ALARM LIGHT CAN BE SEEN FROM STREET.
- 120V LED ALARM LIGHT FURNISHED WITH CONTROL PANEL. CONTRACTOR SHALL REVIEW WITH OWNER ALARM LIGHT CAN BE SEEN FROM STREET.
- TO GENERATOR.
- SEE ONE-LINE FOR ADDITIONAL REQUIREMENTS.
- 20A WEATHERPROOF "WHILE IN USE" GFI RECEPTACLE.
- 20A WEATHERPROOF LIGHT SWITCH.
- N4X S.S. JUNCTION BOX FOR RTU SIGNALS.
- SEAL CONDUITS FROM WETWELL WITH DUCT SEAL.
- 1-1/2"x1-1/2" ALUMINUM PRE-DRILLED MOUNTING CHANNEL W/STAINLESS STEEL HARDWARE.



COLUMBIA, SOUTH CAROLINA



100% DESIGN SUBMITTAL

CAROLINA
CROSSROADS
PHASE 1

CONFLICTS 1057
FACILITY 1, 9, 10, 11,
12, 13, AND 14

REVISIONS		
REV	DATE	DESCRIPTION

DESIGNED:	S. SCHUTTE
DRAWN:	H. HILL
CHECKED:	A. HOWARD
CHECKED:	
APPROVED:	
FILENAME	A2137 - 100-E-001-002.DWG
BC PROJECT NUMBER	156904
CLIENT PROJECT NUMBER	SCDOT PROJECT ID P027662

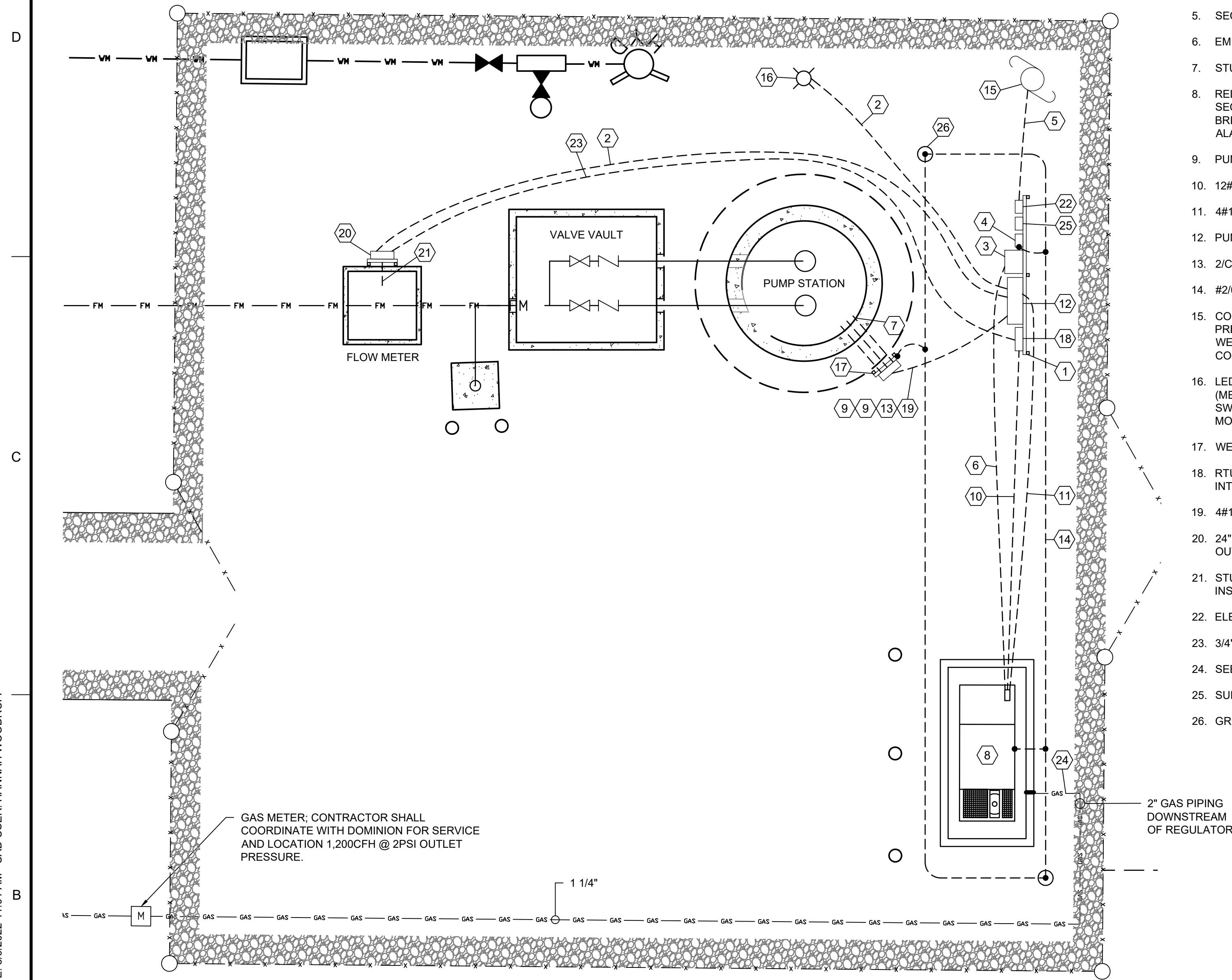
ELECTRICAL
DETAILS-3

DRAWING NUMBER

000-E-03

SHEET NUMBER
21 OF 22

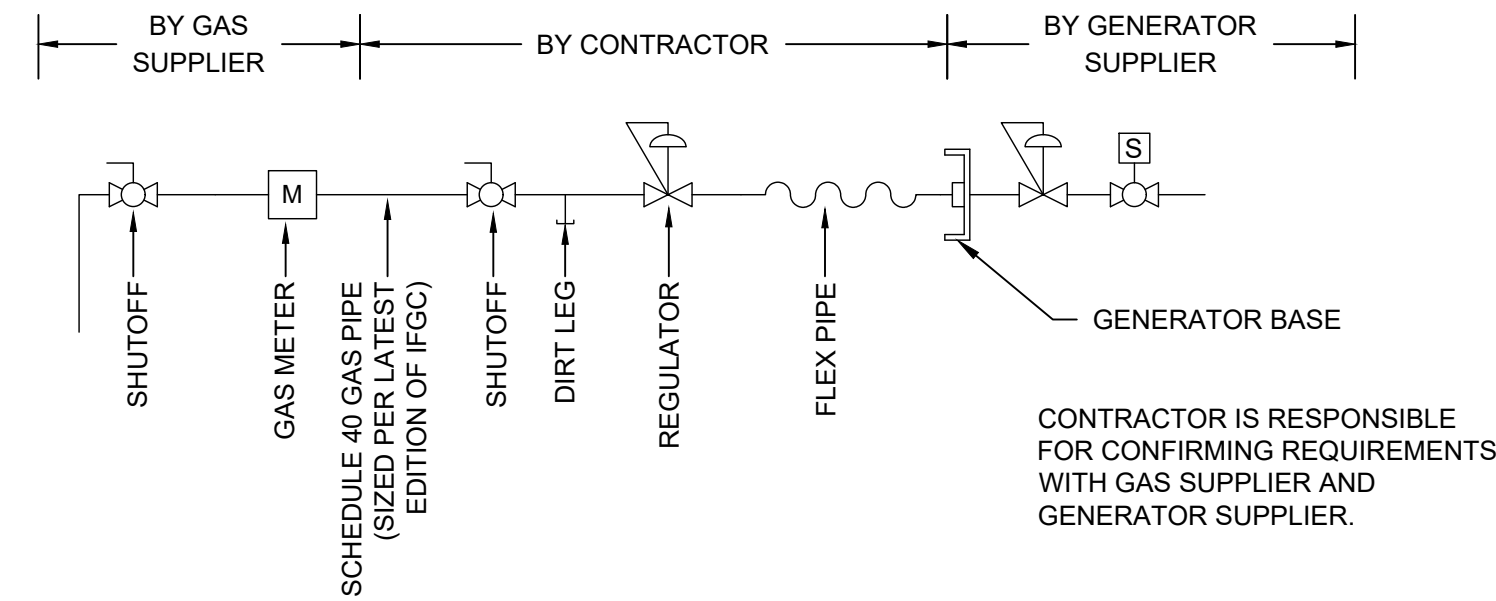
Path: \\HE12-SERVER\\DATA\\PROJECTS\\A2137-ADRAWINGS FILENAME: A2137 - 100-E-001-002.DWG PLOT DATE: 8/9/2022 11:01 AM CAD USER: HANNAH WOODRUFF



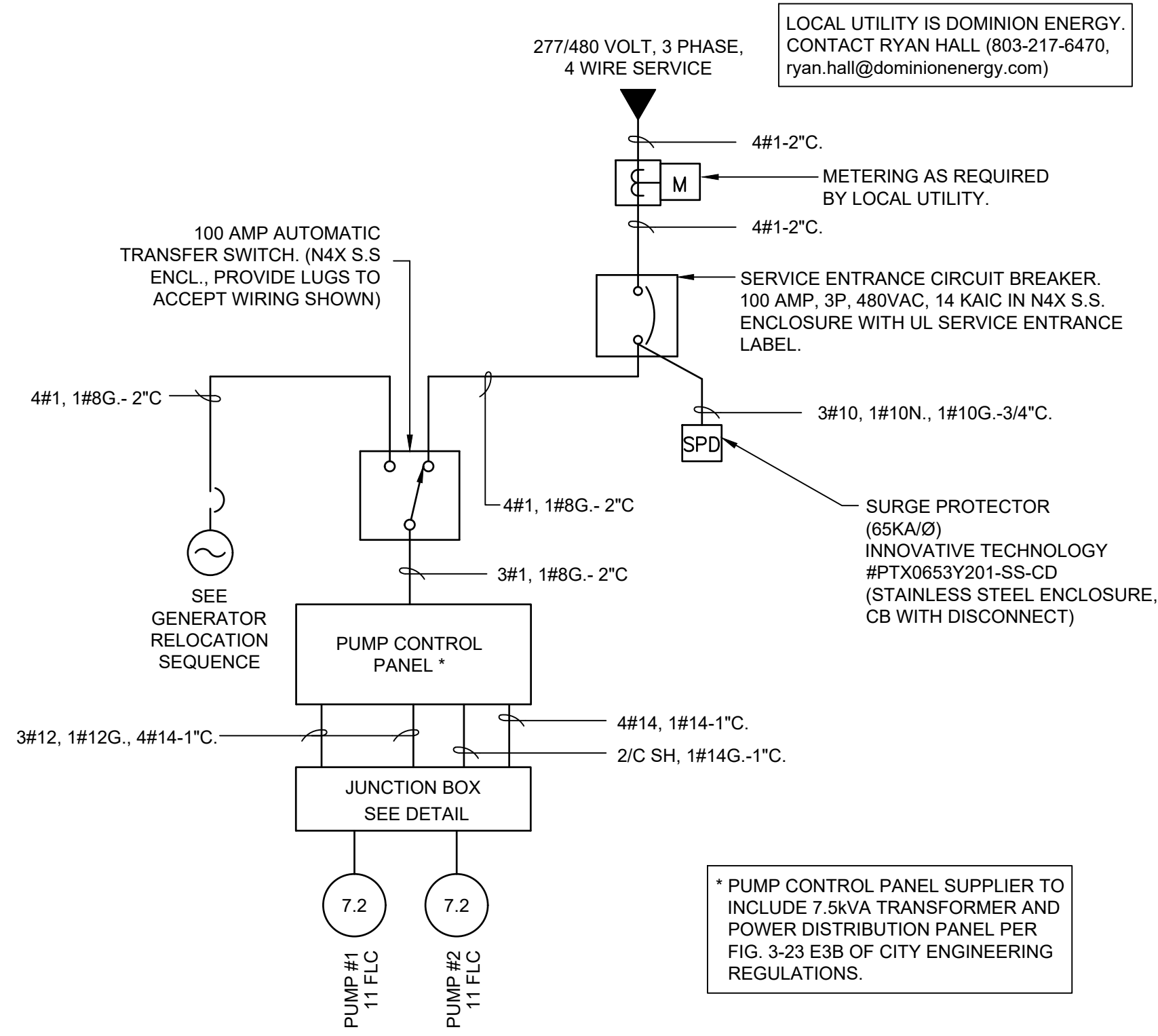
ELECTRICAL SITE PLAN
SCALE: 1" = 5'-0"

(X) ELECTRICAL SITE PLAN NOTES

1. NEW CANOPY AND EQUIPMENT RACK. SEE SH. 100-E-002 FOR DETAILS.
2. 2#12, 1#12G.-3/4"C. (120V)
3. NEW AUTOMATIC TRANSFER SWITCH
4. MAIN CIRCUIT BREAKER
5. SECONDARY SERVICE. SEE ONE-LINE DIAGRAM.
6. EMERGENCY FEED FROM GENERATOR. SEE ONE-LINE DIAGRAM.
7. STUB CONDUITS INTO WETWELL AND INSTALL BUSHINGS.
8. RELOCATED GENERATOR FROM OLD PUMP STATION. SEE GENERATOR RELOCATION SEQUENCE THIS SHEET FOR DETAILED REQUIREMENTS. CONNECT TO OUTPUT BREAKER, BATTERY CHARGER, BLOCK HEATER AND FOR CONTROL, STATUS AND ALARM. ORIENT GENERATOR SUCH THAT EXHAUST IS AWAY FROM EQUIPMENT RACK.
9. PUMP FEEDER. SEE ONE-LINE DIAGRAM AND JUNCTION BOX DETAIL.
10. 12#14, 1#14G.-1"C. TO JUNCTION BOX ON EQUIPMENT RACK
11. 4#12, 1#10G.-1"C. (120VAC FOR SHORE POWER)
12. PUMP CONTROL PANEL
13. 2/C SH, 1#14G.-1"C. (FOR LEVEL TRANSMITTER)
14. #2/0 GROUND RING WITH TWO 10"x3/4"Ø COPPERCLAD GROUND RODS.
15. CONTRACTOR SUPPLIED POLE WITH WEATHERHEAD. POLE SHALL BE 30' TALL. PRESSURE TREATED SERVICE POLE. CONTRACTOR TO LEAVE 3' OF WIRING BEYOND WEATHERHEAD FOR CONNECTION TO TRANSFORMER SECONDARY WIRING. FIELD COORDINATE LOCATION.
16. LED WIDE FLOODLIGHT. (PHILIPS STONCO GP FLOOD SERIES FLOODLIGHTING GP3 (MEDIUM) LED OR EQUAL WITH PHOTOCELL) ON 20' TREATED POLE WITH WPCR LIGHT SWITCH 48" ABOVE GRADE. COORDINATE LOCATION WITH OWNER. PROVIDE BOX FOR MOUNTING.
17. WETWELL JUNCTION BOX. SEE DETAIL SH. 100-E-002 FOR DETAIL.
18. RTU. CONNECT FOR POWER, CONTROL AND SIGNAL AS DIRECTED BY SYSTEM INTEGRATOR.
19. 4#14, 1#14G.-1"C. (FOR FLOATS)
20. 24" X 24" X 12"D N4X S.S. INSTRUMENT JUNCTION BOX WITH HINGED COVER AND GFCI OUTLET. MOUNT ON ALUMINUM RACK PER SPECS.
21. STUB 2" CONDUIT INTO MANHOLE FOR TRANSDUCER CABLES. INSTALL BUSHING. INSTALL SEAL-OFF WITH SILICONE IN CONDUIT BELOW TRANSMITTER.
22. ELECTRIC METER.
23. 3/4" CONDUIT WITH PULL STRING.
24. SEE GAS TRAIN CONNECTION DETAIL.
25. SURGE PROTECTIVE DEVICE.
26. GROUND ROD TEST WELL.



GAS TRAIN
NOT TO SCALE



ONE LINE DIAGRAM
NO SCALE

GENERATOR RELOCATION SEQUENCE

1. THE GENERATOR FROM THE EXISTING COLONIAL LIFE PUMP STATION SHALL BE DISCONNECTED AND MOVED TO THE NEW PUMP STATION. AFTER THE EXISTING GENERATOR HAS BEEN DISCONNECTED A TEMPORARY 50KW GENERATOR SHALL BE CONNECTED TO THE AUTOMATIC TRANSFER SWITCH FOR STANDBY POWER AT THE EXISTING PUMP STATION.
2. ONCE THE EXISTING GENERATOR HAS BEEN RELOCATED AND CONNECTED TO THE NEW PUMP STATION IT SHALL BE RE-STRAPPED FOR 480V 3PH SERVICE BY A GENERAC REPRESENTATIVE ALONG WITH A BELT, HOSE, FILTER AND BATTERY REPLACEMENT.
3. AFTER THE GENERATOR HAS BEEN RE-STRAPPED AND REFURBISHED, A 100% 4-HOUR LOAD BANK TEST SHALL BE PERFORMED. AUJV TO PROVIDE SCHEDULED MAINTENANCE AND GUARANTEE (WARRANTY) THE OPERATION OF THE TEMPORARY/EXISTING GENERATOR. SHOULD THE EXISTING GENERATOR BE DOWN OR NOT OPERATIONAL FOR ANY TIME PERIOD, AUJV WILL FURNISH A MOBILE GENERATOR TO PROVIDE THE SAME LEVEL OF BACKUP ELECTRICAL SERVICE UNTIL THIS UNIT IS REPAIRED AND BACK ONLINE.
4. THE TEMPORARY GENERATOR AT THE EXISTING COLONIAL LIFE PUMP STATION CAN BE REMOVED ONCE THE NEW PUMP STATION HAS BEEN FULLY COMMISSIONED AND IS OPERATIONAL.
5. THE GENERAC GENERATOR SHALL BE REPLACED AT THE NEW PUMP STATION WITH A 50KW NATURAL GAS CATERPILLAR GENERATOR. THE CONTRACTOR SHALL PROVIDE A PORTABLE 50KW GENERATOR AT THE PUMP STATION FOR TEMPORARY POWER DURING GENERATOR SWAP OUT.
6. THE CONTRACTOR SHALL REMOVE THE EXISTING GENERAC GENERATOR AND HAND IT OVER TO THE CITY. THE CONTRACTOR SHALL TRANSPORT THE GENERAC GENERATOR TO AN OFFSITE FACILITY AS DIRECTED BY THE CITY OF COLUMBIA.
7. THE NEW CATERPILLAR GENERATOR SHALL BE PLACED ON THE EXISTING PAD WITH ANY MODIFICATIONS MADE TO THE PAD AS NECESSARY.
8. THE CONTRACTOR SHALL RECONNECT THE GAS PIPING, POWER WIRING, AND CONTROL WIRING TO THE NEW CATERPILLAR GENERATOR WITH ANY MODIFICATIONS AS NECESSARY.
9. THE NEW CATERPILLAR GENERATOR SHALL BE FULLY COMMISSIONED IN ACCORDANCE WITH NFPA 110.
10. AFTER THE NEW GENERATOR HAS BEEN COMMISSIONED THE PORTABLE GENERATOR CAN BE REMOVED.

Brown AND Caldwell

COLUMBIA, SOUTH CAROLINA

HOWARD ENGINEERING
ELECTRICAL • CONTROLS • AUTOMATION
MARIETTA, SOUTH CAROLINA
(864) • 836 0449

HOWARD ENGINEERING
ELECTRICAL • CONTROLS • AUTOMATION
MARIETTA, SOUTH CAROLINA
(864) • 836 0449

8/8/2022

Columbia Water
Drinking Water • Wastewater • Stormwater

100% DESIGN SUBMITTAL

CAROLINA CROSSROADS
PHASE 1

CONFLICTS 1057
FACILITY 1, 9, 10, 11,
12, 13, AND 14

REVISIONS		
REV	DATE	DESCRIPTION

AT FULL SIZE

DESIGNED: S. SCHUTTE

DRAWN: H. HILL

CHECKED: A. HOWARD

CHECKED:

APPROVED:

FILENAME
A2137 - 100-E-001-002.DWG

BC PROJECT NUMBER
156904

CLIENT PROJECT NUMBER
SCDOT PROJECT ID P027662

ELECTRICAL

SITE PLAN AND
ONE-LINE DIAGRAM

DRAWING NUMBER
100-E-01

SHEET NUMBER
22 OF 22