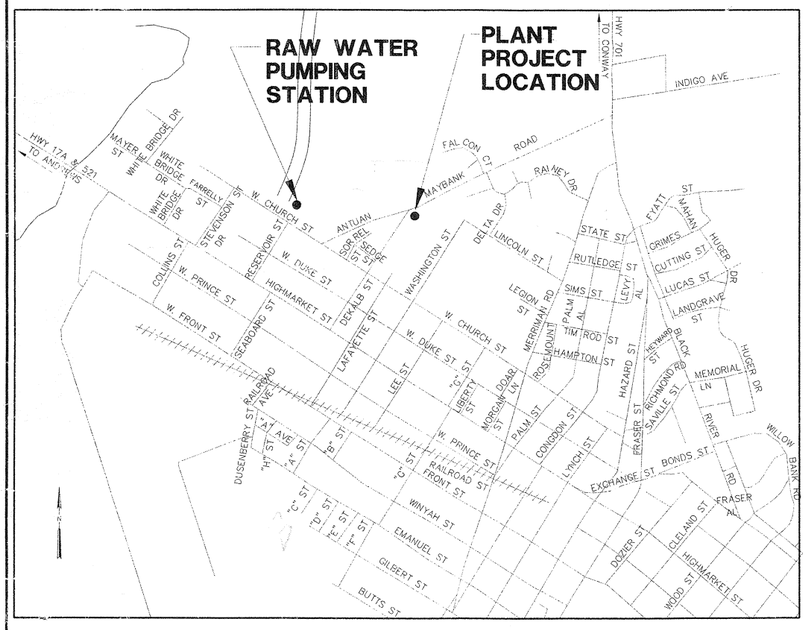
City of Georgetown Water Utilities

WATER TREATMENT PLANT IMPROVEMENTS



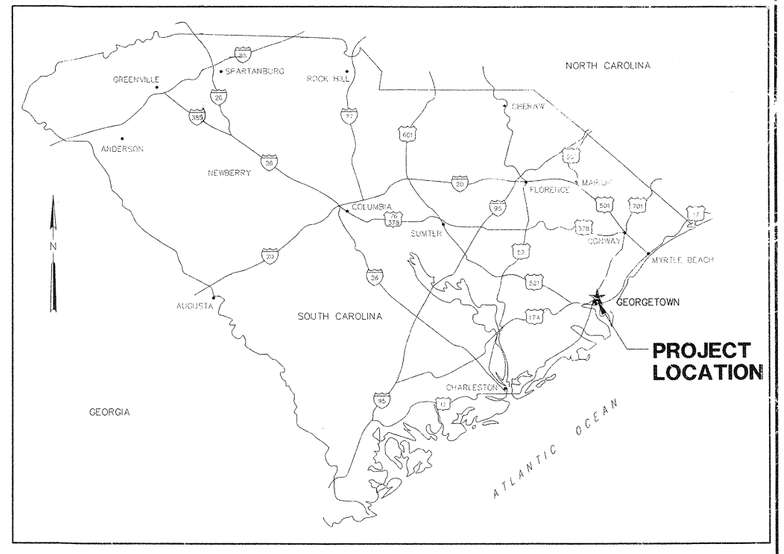
LOCATION MAP

CITY OF GEORGETOWN
SOUTH CAROLINA

Jordan Jones & Goulding

RECORD DRAWINGS

AUGUST 2001



VICINITY MAP

DRAWING INDEX

GENERAL

SHEET NO.	DRAWING TITLE
G0.0	COVER
G0.1	DRAWING INDEX
G0.2	PROCESS FLOW SCHEMATIC
G0.3	HYDRAULIC PROFILE

CIVIL

SHEET NO.	DRAWING TITLE
C1.1	LAYOUT PLAN
C1.2	GRADING PLAN
C1.2a	ENLARGED GRADING PLAN
C1.3	YARD PIPING PLAN
C1.4	ENLARGED YARD PIPING PLAN
C1.5	MISCELLANEOUS PAVING DETAILS
C1.6	MISCELLANEOUS DETAILS
C1.7	MISCELLANEOUS DETAILS

PROCESS

SHEET NO.	DRAWING TITLE
P2.0	CHEMICAL BUILDING – DEMOLITION PLAN
P2.1	CHEMICAL BUILDING – FIRST FLOOR MODIFICATIONS
P2.2	CHEMICAL BUILDING – SECOND FLOOR MODIFICATIONS
P2.3	CHEMICAL BUILDING – FIRST FLOOR SECTIONS & DETAILS
P2.4	CAUSTIC, FERRIC CHLORIDE & CORROSION INHIBITOR ISOMETRICS
P2.5	FLUORIDE, PERMANGANATE & POLYMER PIPING ISOMETRICS
P3.1	FLOCCULATION / SEDIMENTATION BASIN – PLAN
P3.2	FLOCCULATION / SEDIMENTATION BASIN – SECTION
P3.3	FLOCCULATION / SEDIMENTATION BASIN– SECTIONS & DETAILS
P4.0	FILTER DEMOLITION PLAN
P4.1	FILTER BUILDING – MODIFICATIONS
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P5.1	FERRIC CHLORIDE AND CAUSTIC BULK STORAGE TANKS – PLAN
P5.2	FERRIC CHLORIDE AND CAUSTIC BULK STORAGE TANKS – SECTION, SCHEMATICS AND DETAIL
P6.1	HIGH SERVICE PUMPING BUILDING – PLAN
P8.1	RAW WATER PUMPING BUILDING IMPROVEMENTS/POTASSIUM PERMANGANATE SYSTEM
P9.1	SLUDGE CONTROL STRUCTURE MODIFICATIONS
PD.1	MISCELLANEOUS METALS
PD.2	MISCELLANEOUS PROCESS METALS
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SHEET NO.	DRAWING TITLE
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I0.2	PROCESS AND INSTRUMENTATION DIAGRAM – INSTRUMENTATION LEGEND
I0.3	PROCESS AND INSTRUMENTATION DIAGRAM – RAW WATER CHEMICAL DOSAGE SYSTEMS
I0.4	PROCESS AND INSTRUMENTATION DIAGRAM – FLOCCULATION & SEDIMENTATION
I0.5	PROCESS AND INSTRUMENTATION DIAGRAM – GRAVITY FILTER SYSTEM
I0.6	PROCESS AND INSTRUMENTATION DIAGRAM – FILTERED WATER SYSTEM
I0.7	PROCESS AND INSTRUMENTATION DIAGRAM – CLEARWELL & HIGH SERVICE PUMPING SYSTEM
I0.8	PROCESS AND INSTRUMENTATION DIAGRAM – CAUSTIC & FERRIC CHLORIDE SYSTEMS
I0.9	PROCESS AND INSTRUMENTATION DIAGRAM – POLYMER SYSTEM–FLOCCULANT AID
I0.10	PROCESS AND INSTRUMENTATION DIAGRAM – FLUORIDE & PHOSPHATE FEED SYSTEMS
I0.11	PROCESS AND INSTRUMENTATION DIAGRAM – CHLORINE FEED SYSTEM
I0.12	PROCESS AND INSTRUMENTATION DIAGRAM – AMMONIA FEED SYSTEMS
I0.13	PROCESS AND INSTRUMENTATION DIAGRAM – CHLORINE SCRUBBER
I0.14	PROCESS AND INSTRUMENTATION DIAGRAM – PLC SYSTEM CONFIGURATION
I0.15	MAIN CONTROL PANEL (MCP) – CONTROL CONSOLE

ARCHITECTURAL

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A2.2	CHEMICAL & ADMINISTRATION BUILDING – SECOND FLOOR PLAN
A2.3	CHEMICAL & ADMINISTRATION BUILDING – ELEVATIONS
A2.4	CHEMICAL & ADMINISTRATION BUILDING – ROOF PLAN AND REFLECTED CEILING PLAN
A2.5	CHEMICAL & ADMINISTRATION BUILDING – ENLARGED LABORATORY PLAN AND DETAILS
A4.1	FILTER BUILDING MODIFICATIONS – FLOOR PLAN
A4.2	FILTER BUILDING MODIFICATIONS – ELEVATIONS
A4.3	FILTER BUILDING MODIFICATIONS – ELEVATIONS
A4.4	FILTER BUILDING MODIFICATIONS – ELEVATIONS
A4.5	FILTER BUILDING MODIFICATIONS – SECTION
A4.6	FILTER BUILDING MODIFICATIONS – SECTION
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A5.2	FERRIC CHLORIDE AND CAUSTIC BULK TANKS – ELEVATIONS
A5.3	FERRIC CHLORIDE AND CAUSTIC BULK TANKS – SECTION
A6.1	HIGH SERVICE PUMP STATION – ROOF PLAN
A99.1	TYPICAL DOOR SCHEDULE, FINISH SCHEDULE & DETAILS
A99.2	TYPICAL DOOR DETAILS AND MISCELLANEOUS DETAILS
A99.3	TYPICAL DOOR ROOFING MEMBRANE DETAILS
A99.4	TYPICAL WALL SECTIONS
A99.5	EXISTING DOOR REPAIR DETAILS

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S4.3	FILTER BUILDING SECTIONS – SECTIONS AND DETAILS
S5.1	FERRIC CHLORIDE AND CAUSTIC BULK TANKS
S5.2	FERRIC CHLORIDE AND CAUSTIC BULK TANKS – SECTIONS AND DETAILS
S7.1	SCRUBBER CONTAINMENT STRUCTURE – PLAN AND SECTION
ST1	TYPICAL SECTIONS AND DETAILS
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MECHANICAL

SHEET NO.	DRAWING TITLE
M0.1	LEGEND, SCHEDULES, ABBREVIATIONS & DETAILS
M0.2	MECHANICAL DETAILS
M2.1	ADMINISTRATION & CHEMICAL BUILDING/FIRST FLOOR – MECHANICAL
M2.2	ADMINISTRATION & CHEMICAL BUILDING/SECOND FLOOR – MECHANICAL
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M2.4	ADMINISTRATION & CHEMICAL BUILDING – RISER DIAGRAMS
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SHEET NO.	DRAWING TITLE
E0.1	ELECTRICAL SYMBOLS LEGEND
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E0.3	ELECTRICAL ONE–LINE DIAGRAM – MODIFICATION
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E2.3	CHEMICAL & ADMINISTRATION BUILDING – FIRST FLOOR ELECTRICAL LIGHTING AND RECEPTACLE PLAN
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E4.1	FILTER BUILDING – ELECTRICAL DEMOLITION PLAN
E4.2	FILTER BUILDING – ELECTRICAL LIGHTING AND RECEPTACLES PLAN
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E5.1	FERRIC CHLORIDE AND CAUSTIC BULK TANKS – ELECTRICAL PLAN
E6.1	HIGH SERVICE PUMPING BUILDING – ELECTRICAL PLAN
E8.1	RAW WATER PUMPING BUILDING – ELECTRICAL PLAN

NOTES:
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SOUTH CAROLINA Jordan, Jones & Goulding, Inc. No. C00554 CERTIFICATE OF AUTHORIZATION

NO.	DATE	DESCRIPTION OF REVISION
1	08-02-01	RECORD DRAWING
0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

GEORGETOWN 1734 SOUTH CAROLINA

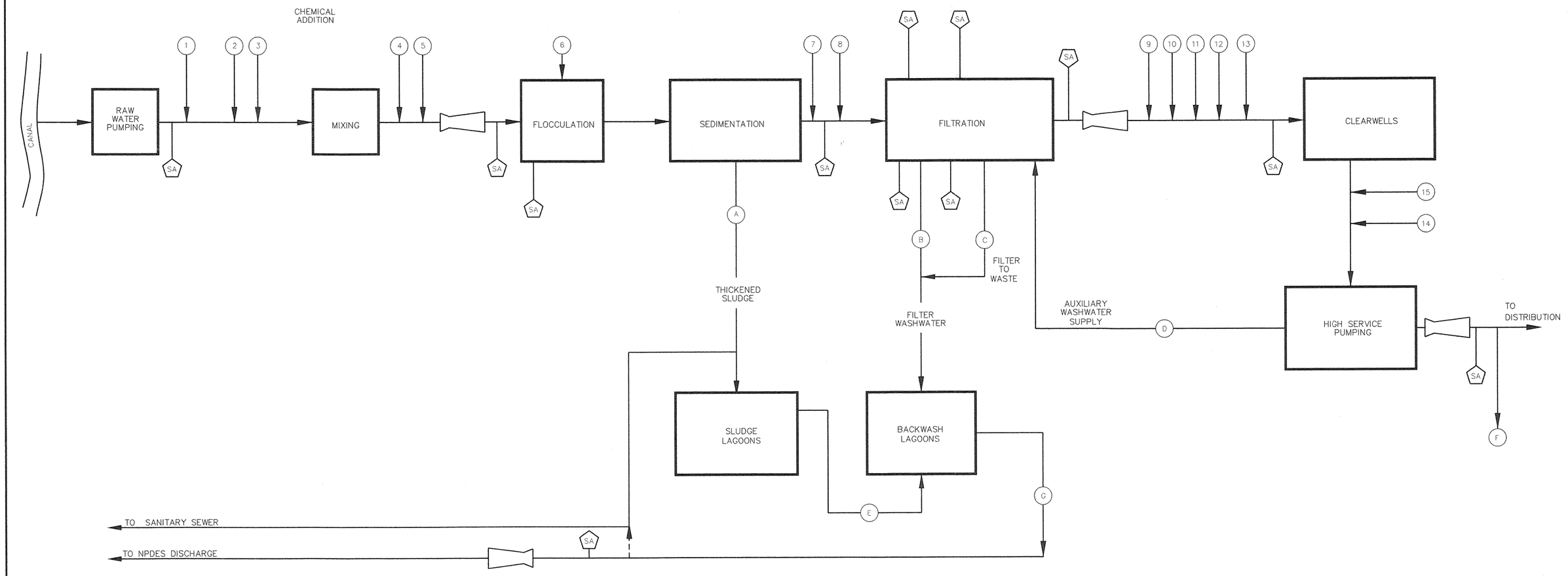
CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 11180 ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

DRAWING INDEX

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	G0.1 SHEET	1 REV
DRAWN: RB	JOB NO. 2193.006	SCALE: N.T.S.		



MASS BALANCE QUANTITIES (6-MGD PLANT- 24 HOUR OPERATION)

FLOW STREAM CODE	FLOW STREAM DESCRIPTION	24-HOUR VOLUME, MG		FLOW RATE, MGD		CONCENTRATION, mg/l		DRY SOLIDS, lbs/day	
		AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM	AVERAGE	MAXIMUM
(A)	THICKENED SLUDGE	.006	.023	0.58	0.58	15,000	20,000	750	3,840
(B)	FILTER WASHWATER (1) (3)	.080	.320	5.75	5.75	85	180	56	480
(C)	FILTER TO WASTE (2) (3)	.016	.064	1.50	1.50	–	–	–	–
(D)	AUXILIARY WASHWATER SUPPLY	.016	.028	1.15	1.15	–	–	–	–
(E)	SLUDGE DECANT	.004	.017	0.29	0.45	30	60	1	9
(F)	PLANT WATER	.072	.137	.072	.137	–	–	–	–
(G)	NPDES DISCHARGE (4)	.096	.384	.432	.720	15	30	12	96

NOTES:
1. 20 MIN. BACKWASH @ 4000 GPM
2. 15 MIN. FILTER TO WASTE @ 1064 GPM
3. 4 CELLS BACKWASH IN 24 HOURS
4. DECANT FROM LAGOONS 300 GPM OR 500 GPM

LEGEND

SA — SAMPLING POINT

FLOW MEASUREMENT

CHEMICAL FEED POINT	CHEMICAL	CHEMICAL SOLUTION, GPD			AVERAGE DOSAGE (@ 6 MGD)	
		AVERAGE	MAXIMUM	MINIMUM	mg/l	lbs/day
(1)	POTASSIUM PERMANGANATE (3% SOLUTION)	200	500	67	1.5	75
(2)	25% CAUSTIC (PRE-MIXER) (2.66 lbs/gal)	300	900	75	24	1200
(3)	37% FERRIC CHLORIDE (4.27 lbs/gal)	352	703	234	45	2252
(4)	AMMONIA				0.5	25
(5)	CHLORINE				1.5	75
(6)	FLOCCULANT AID POLYMER (0.5% SOLUTION)	60	120	40	.075	3.8
(7)	CHLORINE (PRE-FILTER)				1.0	50
(8)	25% CAUSTIC (PRE-FILTER)	188	470	62	15	750
(9)	25% CAUSTIC (POST-FILTER) (2.66 lbs/gal)	188	470	62	15	750
(10)	CHLORINE (POST-FILTER)				2.5	125
(11)	AMMONIA (POST-FILTER)				1.0	50
(12)	SODIUM FLUORIDE (4% SOLUTION, NaF)	100	150	80	1.0	50
(13)	ORTHOPHOSPHATE CORROSION INHIBITOR (11.3 lbs/gal)	12	53	3	4.0	200
(14)	CHLORINE (POST-CLEARWELL)				1.0	50
(15)	AMMONIA (POST-CLEARWELL)				0.3	15

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Jordan Jones & Goulding

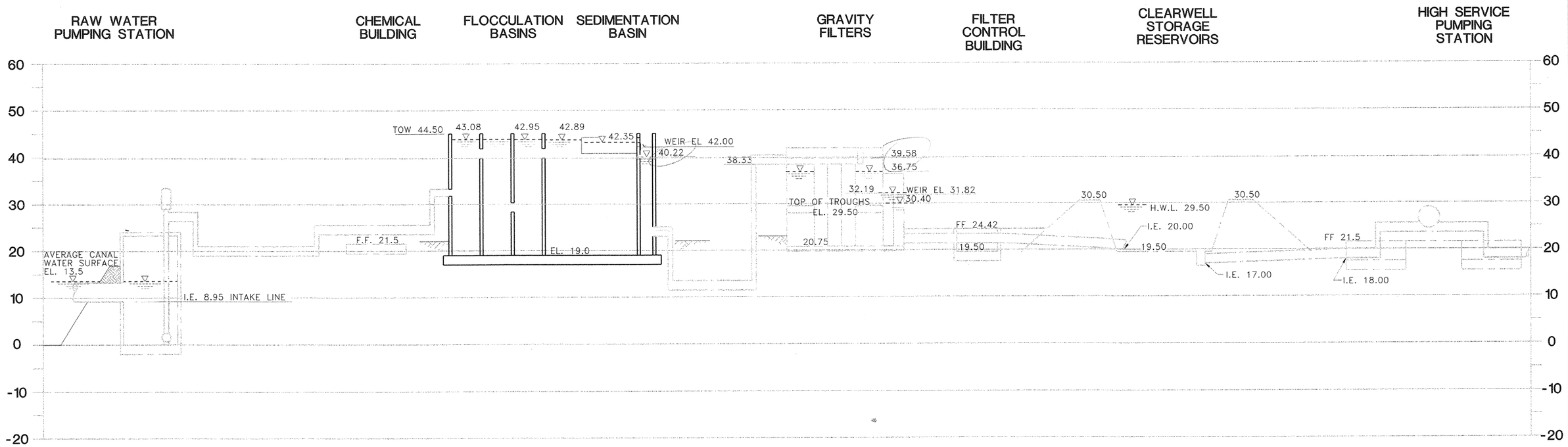
CITY OF GEORGETOWN SOUTH CAROLINA

REGISTERED PROFESSIONAL ENGINEER SOUTH CAROLINA No. 11180 ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

PROCESS FLOW DIAGRAM

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	G0.2	1
DRAWN: ST	JOB NO. 2193.006	SCALE: NONE	SHEET	REV



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Jordan Jones & Goulding

GEORGETOWN 1729 SOUTH CAROLINA

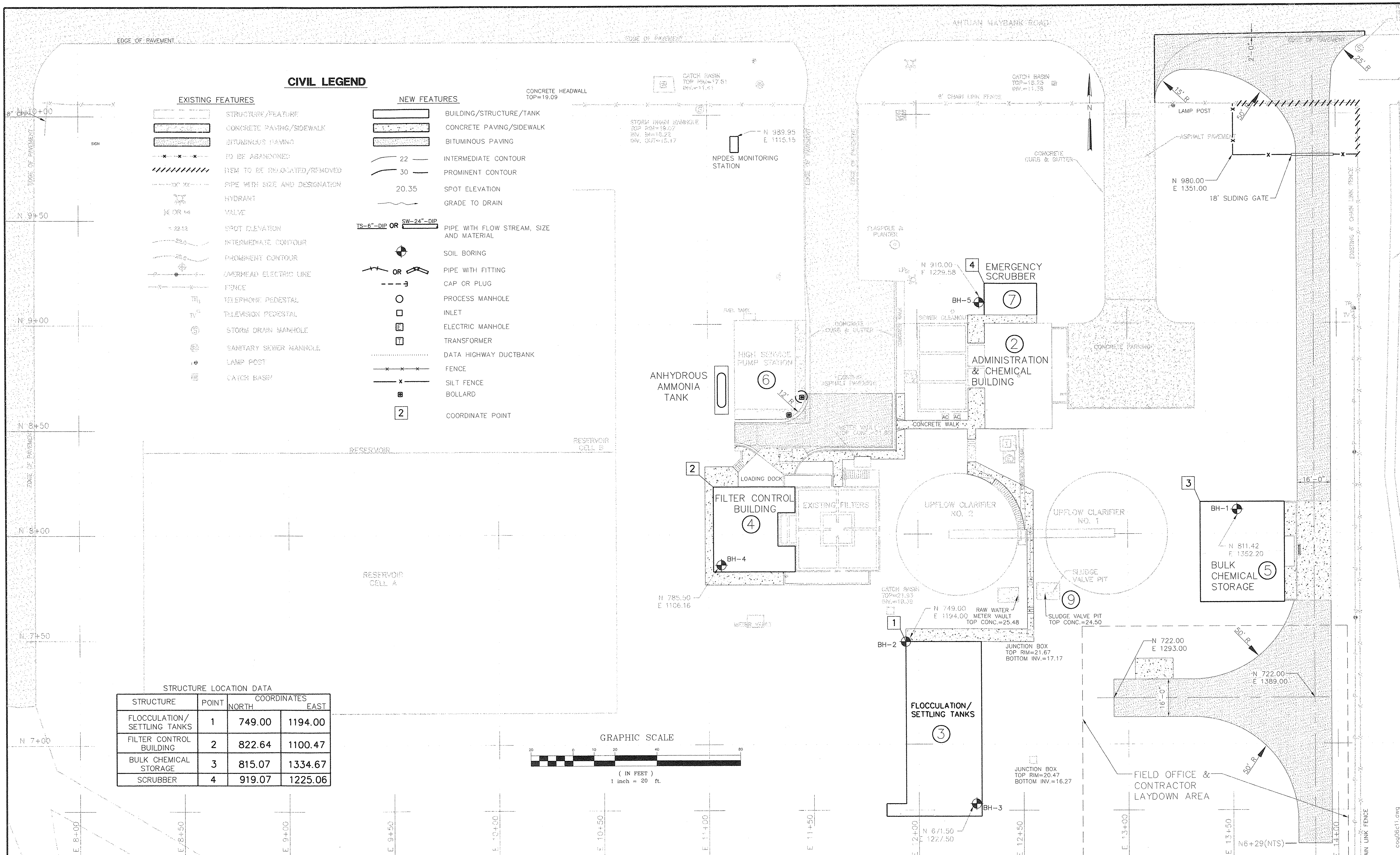
CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 11180 — ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

HYDRAULIC PROFILE

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	G0.3	1
DRAWN: RB	JOB NO. 2193.006	SCALE: NONE	SHEET	REV



CIVIL LEGEND
EXISTING FEATURES
STRUCTURE/FEATURE
CONCRETE PAVING/SIDEWALK
BITUMINOUS PAVING
TO BE ABANDONED
ITEM TO BE RELOCATED/REMOVED
PIPE WITH SIZE AND DESIGNATION
HYDRANT
VALVE
SPOT ELEVATION
INTERMEDIATE CONTOUR
PROMINENT CONTOUR
OVERHEAD ELECTRIC LINE
FENCE
TELEPHONE PEDESTAL
TELEVISION PEDESTAL
STORM DRAIN MANHOLE
SANITARY SEWER MANHOLE
LAMP POST
CATCH BASIN
NEW FEATURES
BUILDING/STRUCTURE/TANK
CONCRETE PAVING/SIDEWALK
BITUMINOUS PAVING
22 INTERMEDIATE CONTOUR
30 PROMINENT CONTOUR
20.35 SPOT ELEVATION
GRADE TO DRAIN
TS-6"-DIP OR SW-24"-DIP PIPE WITH FLOW STREAM, SIZE AND MATERIAL
SOIL BORING
OR PIPE WITH FITTING
CAP OR PLUG
PROCESS MANHOLE
INLET
ELECTRIC MANHOLE
TRANSFORMER
DATA HIGHWAY DUCTBANK
FENCE
SILT FENCE
BOLLARD
2 COORDINATE POINT
EDGE OF PAVEMENT
CONCRETE HEADWALL TOP=19.09
NPDES MONITORING STATION
N 989.95 E 1115.15
N
LAMP POST
ASPHALT PAVEMENT
CONCRETE CURB & GUTTER
N 980.00 E 1351.00
18' SLIDING GATE
15' R
25' R
N 910.00 E 1229.58
4 EMERGENCY SCRUBBER
BH-5
7
2 ADMINISTRATION & CHEMICAL BUILDING
CONCRETE PARKING
CONCRETE WALK
ANHYDROUS AMMONIA TANK
6
12' R
RESERVOIR
RESERVOIR CELL A
2 LOADING DOCK
FILTER CONTROL BUILDING 4
BH-4
EXISTING FILTERS
UPFLOW CLARIFIER NO. 2
UPFLOW CLARIFIER NO. 1
N 785.50 E 1106.16
3 BH-1
N 811.42 E 1352.20
BULK CHEMICAL STORAGE 5
16'-0"
SLUDGE VALVE PIT
9
SLUDGE VALVE PIT TOP CONC.=24.50
N 749.00 E 1194.00
RAW WATER METER VAULT TOP CONC.=25.48
1 BH-2
JUNCTION BOX TOP RIM=21.67 BOTTOM INV.=17.17
FLOCCULATION/ SETTLING TANKS 3
BH-3
N 671.50 E 1227.50
JUNCTION BOX TOP RIM=20.47 BOTTOM INV.=16.27
N 722.00 E 1293.00
N 722.00 E 1389.00
50' R
FIELD OFFICE & CONTRACTOR LAYDOWN AREA
N6+29(NTS)
N 9+50
N 9+00
N 8+50
N 8+00
N 7+50
N 7+00
E 8+00
E 8+50
E 9+00
E 9+50
E 10+00
E 10+50
E 11+00
E 11+50
E 12+00
E 12+50
E 13+00
E 13+50
E 14+00
GRAPHIC SCALE
(IN FEET) 1 inch = 20 ft.

STRUCTURE LOCATION DATA

STRUCTURE	POINT	COORDINATES NORTH	EAST
FLOCCULATION/ SETTLING TANKS	1	749.00	1194.00
FILTER CONTROL BUILDING	2	822.64	1100.47
BULK CHEMICAL STORAGE	3	815.07	1334.67
SCRUBBER	4	919.07	1225.06

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Jordan Jones & Goulding

CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 11180 ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

LAYOUT PLAN

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	C1.1 SHEET	1 REV
DRAWN: ST	JOB NO. 2193.036	SCALE: 1"= 20'		

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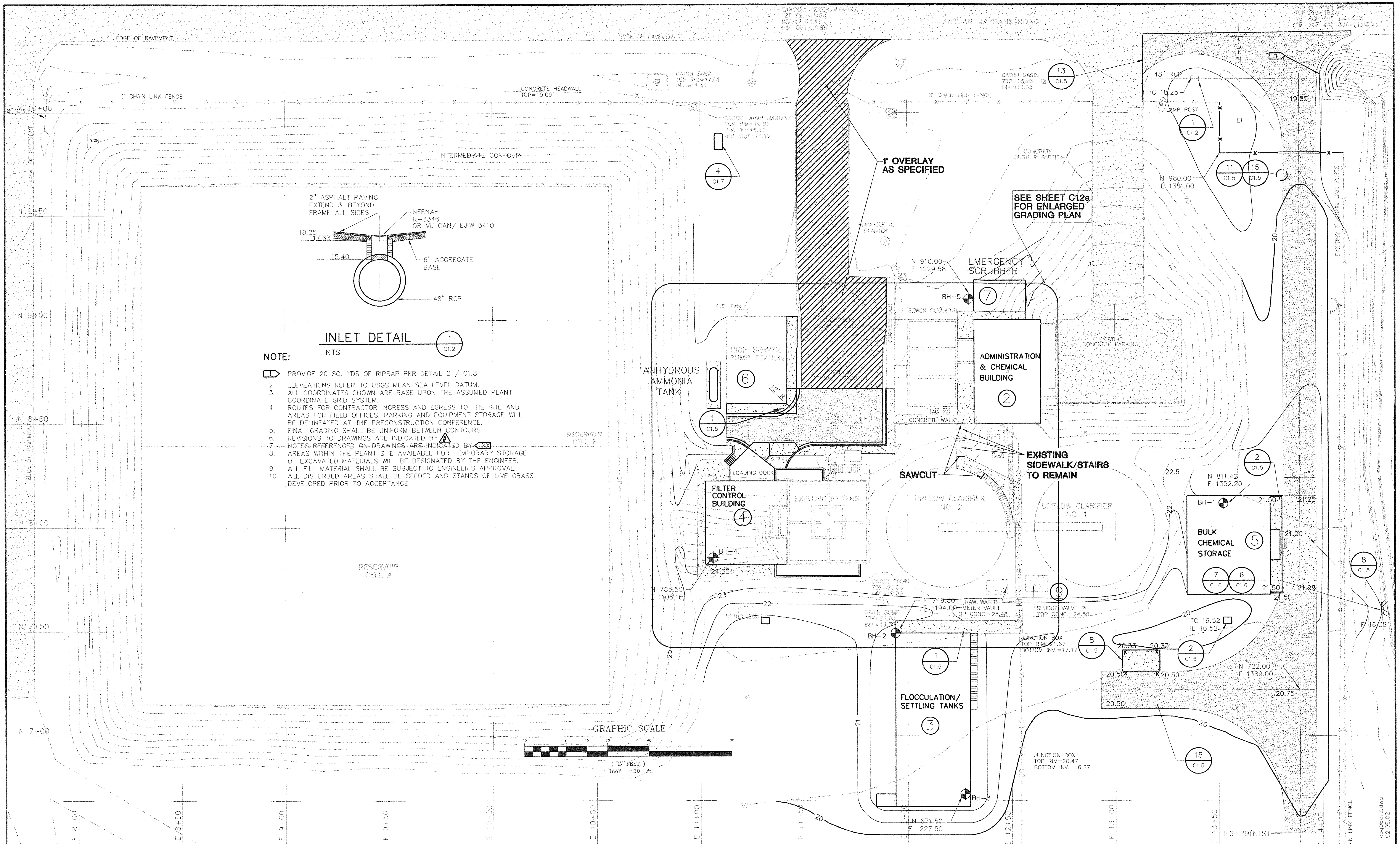

NOTE:

1. PROVIDE 20 SQ. YDS OF RIPRAP PER DETAIL 2 / C1.8
2. ELEVATIONS REFER TO USGS MEAN SEA LEVEL DATUM.
3. ALL COORDINATES SHOWN ARE BASE UPON THE ASSUMED PLANT COORDINATE GRID SYSTEM.
4. ROUTES FOR CONTRACTOR INGRESS AND EGRESS TO THE SITE AND AREAS FOR FIELD OFFICES, PARKING AND EQUIPMENT STORAGE WILL BE DELINEATED AT THE PRECONSTRUCTION CONFERENCE.
5. FINAL GRADING SHALL BE UNIFORM BETWEEN CONTOURS.
6. REVISIONS TO DRAWINGS ARE INDICATED BY △
7. NOTES REFERENCED ON DRAWINGS ARE INDICATED BY XX
8. AREAS WITHIN THE PLANT SITE AVAILABLE FOR TEMPORARY STORAGE OF EXCAVATED MATERIALS WILL BE DESIGNATED BY THE ENGINEER.
9. ALL FILL MATERIAL SHALL BE SUBJECT TO ENGINEER'S APPROVAL.
10. ALL DISTURBED AREAS SHALL BE SEEDED AND STANDS OF LIVE GRASS DEVELOPED PRIOR TO ACCEPTANCE.

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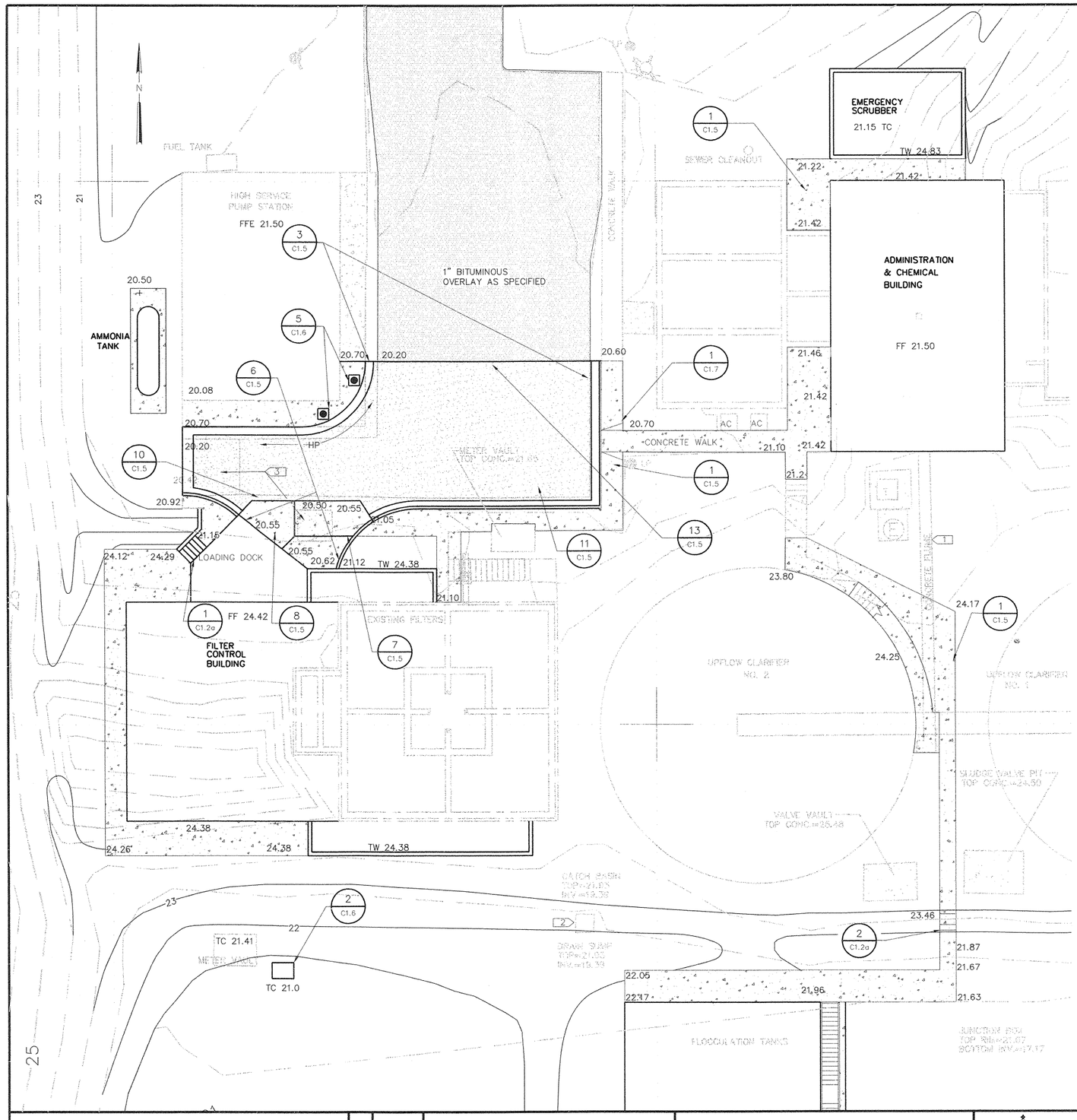
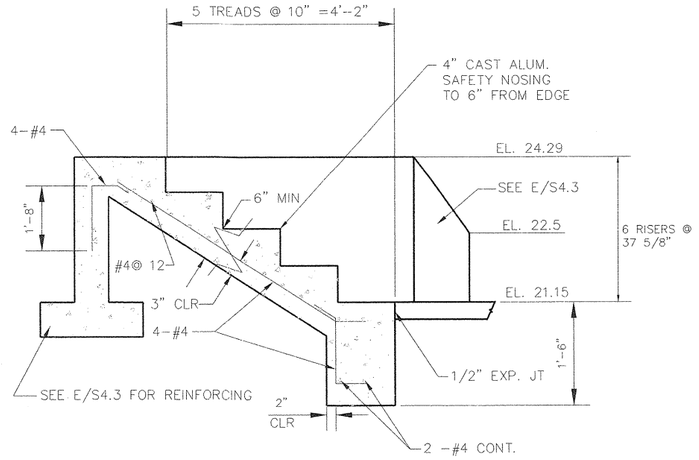
SOUTH CAROLINA

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

GRADING PLAN

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	C1.2 SHEET	1 REV
DRAWN: ST	JOB NO. 2193.006	SCALE: 1"= 20'		





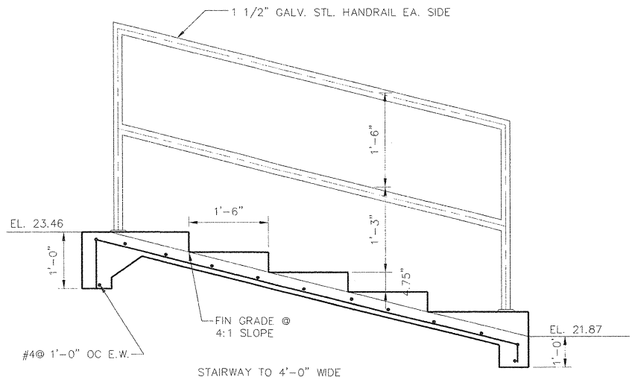
CONCRETE STEPS

NTS

1 / C1.2a

NOTES:

1. REMOVE PIPE CONCRETE PIPE TRENCH AND GRATING
2. REMOVE DRAIN SUMP
3. REMOVE CONCRETE PAD.



YARD STAIRWAY

NTS

2 / C1.2a

cogdc12c.dwg
02.06.02

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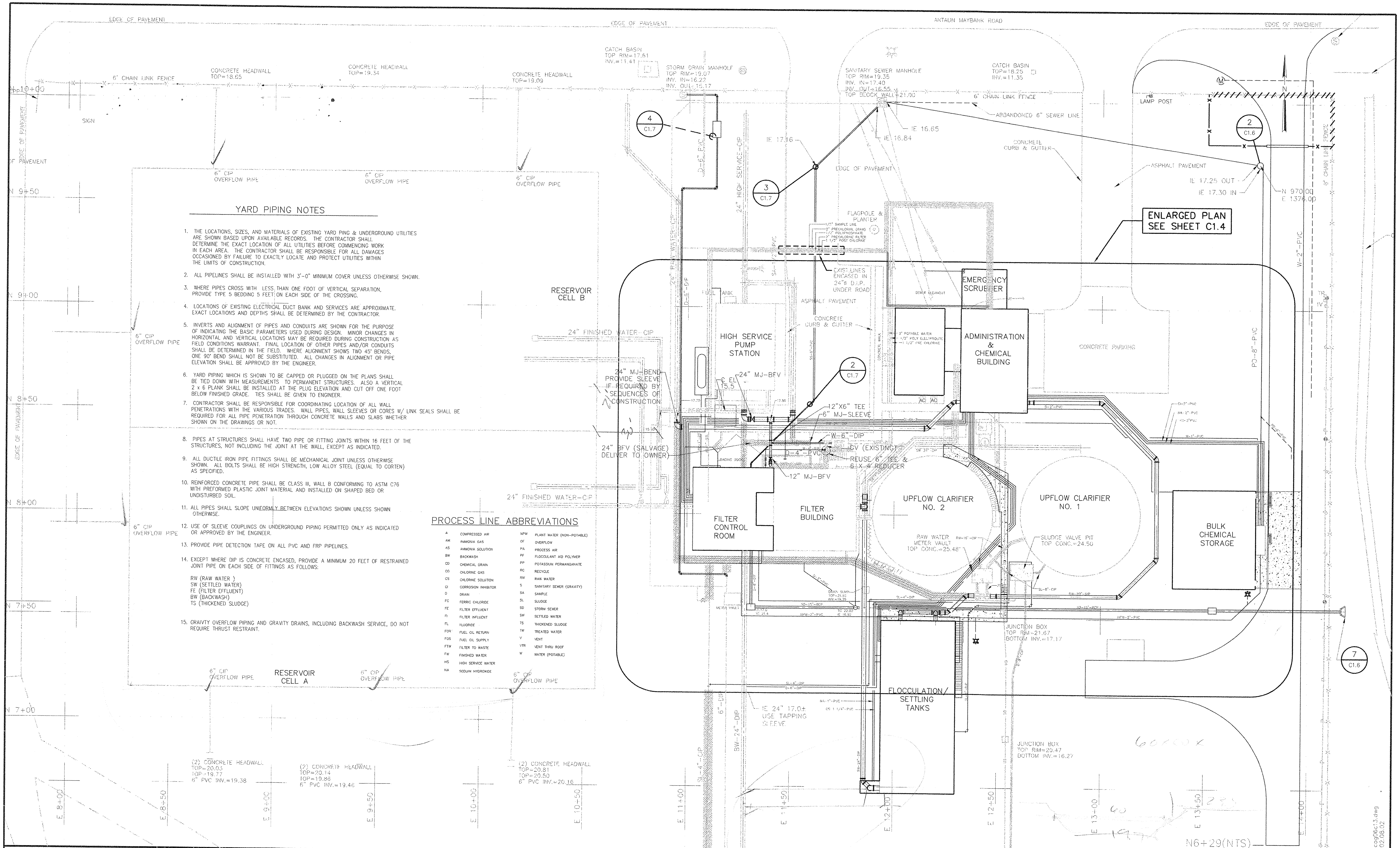
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

ENLARGED GRADING PLAN

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	C1.2a SHEET	1 REV
DRAWN: RB	JOB NO. 2193.006	SCALE: 1"= 10'		

R&OCOLE



YARD PIPING NOTES

1. THE LOCATIONS, SIZES, AND MATERIALS OF EXISTING YARD PING & UNDERGROUND UTILITIES ARE SHOWN BASED UPON AVAILABLE RECORDS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK IN EACH AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES OCCASIONED BY FAILURE TO EXACTLY LOCATE AND PROTECT UTILITIES WITHIN THE LIMITS OF CONSTRUCTION.
2. ALL PIPELINES SHALL BE INSTALLED WITH 3'-0" MINIMUM COVER UNLESS OTHERWISE SHOWN.
3. WHERE PIPES CROSS WITH LESS THAN ONE FOOT OF VERTICAL SEPARATION, PROVIDE TYPE 5 BEDDING 5 FEET ON EACH SIDE OF THE CROSSING.
4. LOCATIONS OF EXISTING ELECTRICAL DUCT BANK AND SERVICES ARE APPROXIMATE. EXACT LOCATIONS AND DEPTHS SHALL BE DETERMINED BY THE CONTRACTOR.
5. INVERTS AND ALIGNMENT OF PIPES AND CONDUITS ARE SHOWN FOR THE PURPOSE OF INDICATING THE BASIC PARAMETERS USED DURING DESIGN. MINOR CHANGES IN HORIZONTAL AND VERTICAL LOCATIONS MAY BE REQUIRED DURING CONSTRUCTION AS FIELD CONDITIONS WARRANT. FINAL LOCATION OF OTHER PIPES AND/OR CONDUITS SHALL BE DETERMINED IN THE FIELD. WHERE ALIGNMENT SHOWS TWO 45° BENDS, ONE 90° BEND SHALL NOT BE SUBSTITUTED. ALL CHANGES IN ALIGNMENT OR PIPE ELEVATION SHALL BE APPROVED BY THE ENGINEER.
6. YARD PIPING WHICH IS SHOWN TO BE CAPPED OR PLUGGED ON THE PLANS SHALL BE TIED DOWN WITH MEASUREMENTS TO PERMANENT STRUCTURES. ALSO A VERTICAL 2 x 6 PLANK SHALL BE INSTALLED AT THE PLUG ELEVATION AND CUT OFF ONE FOOT BELOW FINISHED GRADE. TIES SHALL BE GIVEN TO ENGINEER.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING LOCATION OF ALL WALL PENETRATIONS WITH THE VARIOUS TRADES. WALL PIPES, WALL SLEEVES OR CORES W/ LINK SEALS SHALL BE REQUIRED FOR ALL PIPE PENETRATION THROUGH CONCRETE WALLS AND SLABS WHETHER SHOWN ON THE DRAWINGS OR NOT.
8. PIPES AT STRUCTURES SHALL HAVE TWO PIPE OR FITTING JOINTS WITHIN 16 FEET OF THE STRUCTURES, NOT INCLUDING THE JOINT AT THE WALL, EXCEPT AS INDICATED.
9. ALL DUCTILE IRON PIPE FITTINGS SHALL BE MECHANICAL JOINT UNLESS OTHERWISE SHOWN. ALL BOLTS SHALL BE HIGH STRENGTH, LOW ALLOY STEEL (EQUAL TO CORTEN) AS SPECIFIED.
10. REINFORCED CONCRETE PIPE SHALL BE CLASS III, WALL B CONFORMING TO ASTM C76 WITH PREFORMED PLASTIC JOINT MATERIAL AND INSTALLED ON SHAPED BED OR UNDISTURBED SOIL.
11. ALL PIPES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS SHOWN UNLESS SHOWN OTHERWISE.
12. USE OF SLEEVE COUPLINGS ON UNDERGROUND PIPING PERMITTED ONLY AS INDICATED OR APPROVED BY THE ENGINEER.
13. PROVIDE PIPE DETECTION TAPE ON ALL PVC AND FRP PIPELINES.
14. EXCEPT WHERE DIP IS CONCRETE ENCASED, PROVIDE A MINIMUM 20 FEET OF RESTRAINED JOINT PIPE ON EACH SIDE OF FITTINGS AS FOLLOWS:

    RW (RAW WATER)
    SW (SETTLED WATER)
    FE (FILTER EFFLUENT)
    BW (BACKWASH)
    TS (THICKENED SLUDGE)

15. GRAIVTY OVERFLOW PIPING AND GRAVITY DRAINS, INCLUDING BACKWASH SERVICE, DO NOT REQUIRE THRUST RESTRAINT.

PROCESS LINE ABBREVIATIONS

A	COMPRESSED AIR	NPW	PLANT WATER (NON-POTABLE)
AM	AMMONIA GAS	OF	OVERFLOW
AS	AMMONIA SOLUTION	PA	PROCESS AIR
BW	BACKWASH	PF	FLOCCULANT AID POLYMER
CD	CHEMICAL DRAIN	PP	POTASSIUM PERMANGANATE
CG	CHLORINE GAS	RC	RECYCLE
CS	CHLORINE SOLUTION	RW	RAW WATER
CI	CORROSION INHIBITOR	S	SANITARY SEWER (GRAVITY)
D	DRAIN	SA	SAMPLE
FC	FERRIC CHLORIDE	SL	SLUDGE
FE	FILTER EFFLUENT	SD	STORM SEWER
FI	FILTER INFLUENT	SW	SETTLED WATER
FL	FLUORIDE	TS	THICKENED SLUDGE
FOR	FUEL OIL RETURN	TW	TREATED WATER
FOS	FUEL OIL SUPPLY	V	VENT
FTW	FILTER TO WASTE	VTR	VENT THRU ROOF
FW	FINISHED WATER	W	WATER (POTABLE)
HS	HIGH SERVICE WATER		
NA	SODUIM HYDROXIDE		

NOTES:
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NO.	DATE	DESCRIPTION OF REVISION
1	08-02-01	RECORD DRAWING
0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

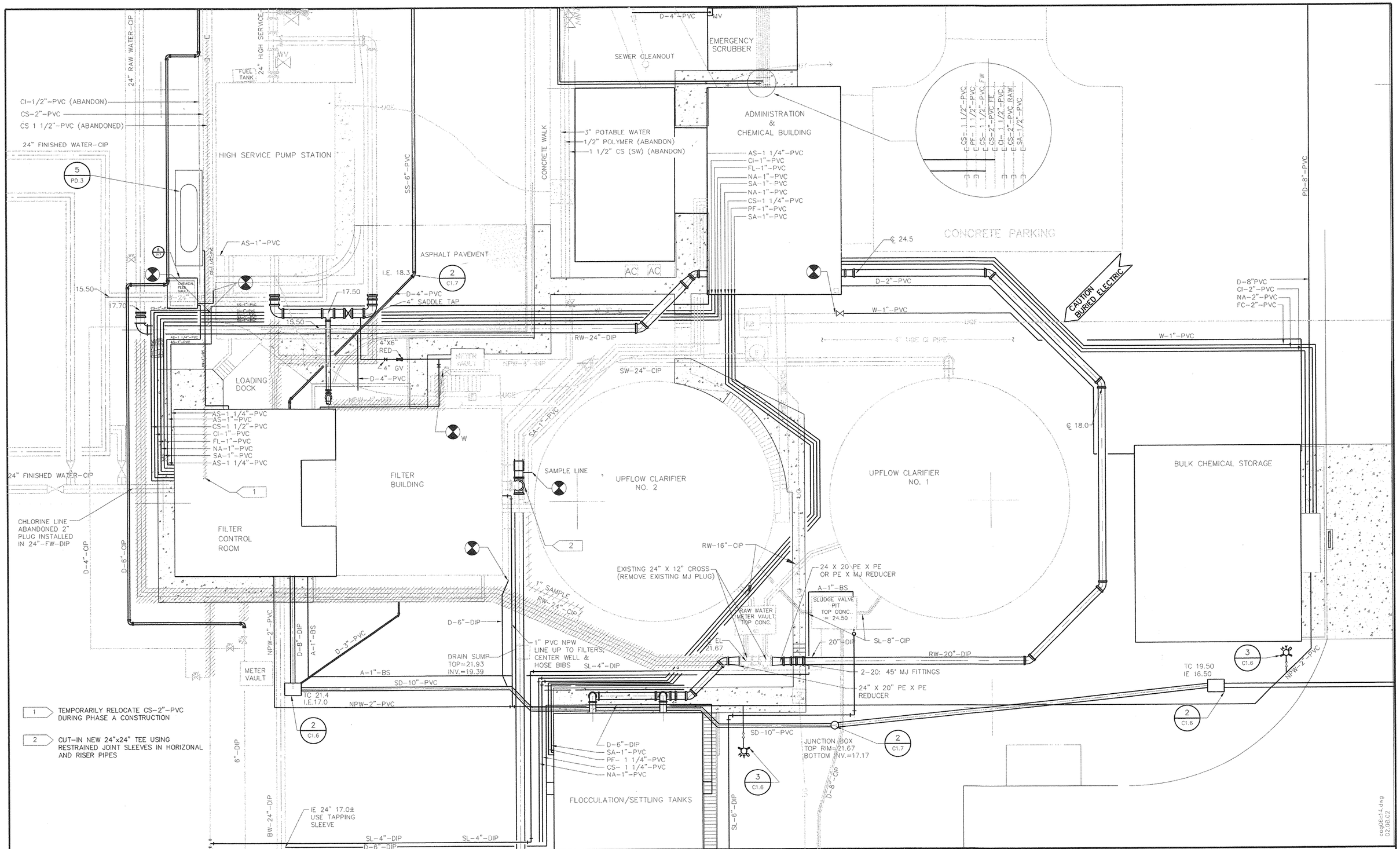
CITY OF GEORGETOWN SOUTH CAROLINA

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 11180 ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

YARD PIPING PLAN

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	C1.3	1
DRAWN: ST	JOB NO. 2193.006	SCALE: 1"= 20'	SHEET	REV



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Jordan Jones & Goulding

GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

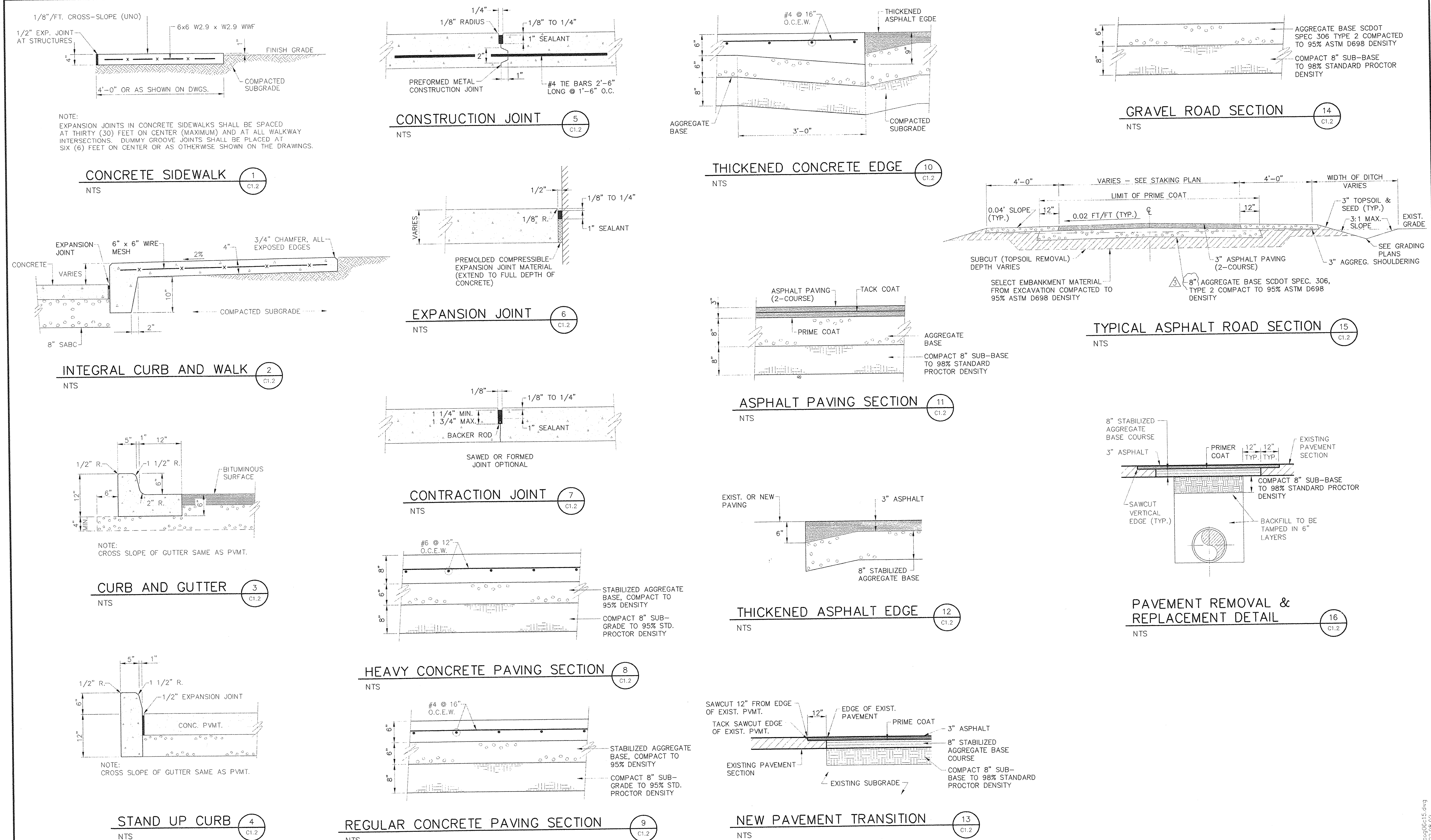
REGISTERED PROFESSIONAL ENGINEER — SOUTH CAROLINA — No. 11180 — ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

ENLARGED YARD PIPING PLAN

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	C1.4 SHEET	1 REV
DRAWN: ST	JOB NO. 2193.006	SCALE: 1"= 10'		

P:\DOCDLE


1/8"/FT. CROSS-SLOPE (UNO)
1/2" EXP. JOINT AT STRUCTURES
6x6 W2.9 x W2.9 WWF
FINISH GRADE
COMPACTED SUBGRADE
4'-0" OR AS SHOWN ON DWGS.
NOTE:
EXPANSION JOINTS IN CONCRETE SIDEWALKS SHALL BE SPACED AT THIRTY (30) FEET ON CENTER (MAXIMUM) AND AT ALL WALKWAY INTERSECTIONS. DUMMY GROOVE JOINTS SHALL BE PLACED AT SIX (6) FEET ON CENTER OR AS OTHERWISE SHOWN ON THE DRAWINGS.
CONCRETE SIDEWALK 1 C1.2
NTS
EXPANSION JOINT
6" x 6" WIRE MESH
3/4" CHAMFER, ALL EXPOSED EDGES
CONCRETE
VARIES
2%
COMPACTED SUBGRADE
8" SABC
INTEGRAL CURB AND WALK 2 C1.2
NTS
1/2" R.
1 1/2" R.
BITUMINOUS SURFACE
2" R.
NOTE:
CROSS SLOPE OF GUTTER SAME AS PVMT.
CURB AND GUTTER 3 C1.2
NTS
1/2" R.
1 1/2" R.
1/2" EXPANSION JOINT
CONC. PVMT.
NOTE:
CROSS SLOPE OF GUTTER SAME AS PVMT.
STAND UP CURB 4 C1.2
NTS
1/8" RADIUS
1/8" TO 1/4"
1" SEALANT
PREFORMED METAL CONSTRUCTION JOINT
#4 TIE BARS 2'-6" LONG @ 1'-6" O.C.
CONSTRUCTION JOINT 5 C1.2
NTS
1/2"
1/8" TO 1/4"
1/8" R.
1" SEALANT
VARIES
PREMOLDED COMPRESSIBLE EXPANSION JOINT MATERIAL (EXTEND TO FULL DEPTH OF CONCRETE)
EXPANSION JOINT 6 C1.2
NTS
1/8"
1/8" TO 1/4"
1 1/4" MIN.
1 3/4" MAX.
1" SEALANT
BACKER ROD
SAWED OR FORMED JOINT OPTIONAL
CONTRACTION JOINT 7 C1.2
NTS
#6 @ 12" O.C.E.W.
STABILIZED AGGREGATE BASE, COMPACT TO 95% DENSITY
COMPACT 8" SUB-GRADE TO 95% STD. PROCTOR DENSITY
HEAVY CONCRETE PAVING SECTION 8 C1.2
NTS
#4 @ 16" O.C.E.W.
STABILIZED AGGREGATE BASE, COMPACT TO 95% DENSITY
COMPACT 8" SUB-GRADE TO 95% STD. PROCTOR DENSITY
REGULAR CONCRETE PAVING SECTION 9 C1.2
NTS
#4 @ 16" O.C.E.W.
THICKENED ASPHALT EGDE
AGGREGATE BASE
COMPACTED SUBGRADE
3'-0"
THICKENED CONCRETE EDGE 10 C1.2
NTS
ASPHALT PAVING (2-COURSE)
TACK COAT
PRIME COAT
AGGREGATE BASE
COMPACT 8" SUB-BASE TO 98% STANDARD PROCTOR DENSITY
ASPHALT PAVING SECTION 11 C1.2
NTS
EXIST. OR NEW PAVING
3" ASPHALT
8" STABILIZED AGGREGATE BASE
THICKENED ASPHALT EDGE 12 C1.2
NTS
SAWCUT 12" FROM EDGE OF EXIST. PVMT.
TACK SAWCUT EDGE OF EXIST. PVMT.
EDGE OF EXIST. PAVEMENT
PRIME COAT
3" ASPHALT
8" STABILIZED AGGREGATE BASE COURSE
COMPACT 8" SUB-BASE TO 98% STANDARD PROCTOR DENSITY
EXISTING PAVEMENT SECTION
EXISTING SUBGRADE
NEW PAVEMENT TRANSITION 13 C1.2
NTS
AGGREGATE BASE SCDOT SPEC 306 TYPE 2 COMPACTED TO 95% ASTM D698 DENSITY
COMPACT 8" SUB-BASE TO 98% STANDARD PROCTOR DENSITY
GRAVEL ROAD SECTION 14 C1.2
NTS
4'-0"
VARIES - SEE STAKING PLAN
4'-0"
WIDTH OF DITCH VARIES
LIMIT OF PRIME COAT
0.04' SLOPE (TYP.)
0.02 FT/FT (TYP.)
3" TOPSOIL & SEED (TYP.)
3:1 MAX. SLOPE
EXIST. GRADE
SEE GRADING PLANS
SUBCUT (TOPSOIL REMOVAL) DEPTH VARIES
3" ASPHALT PAVING (2-COURSE)
3" AGGREG. SHOULDERING
SELECT EMBANKMENT MATERIAL FROM EXCAVATION COMPACTED TO 95% ASTM D698 DENSITY
8" AGGREGATE BASE SCDOT SPEC. 306, TYPE 2 COMPACT TO 95% ASTM D698 DENSITY
TYPICAL ASPHALT ROAD SECTION 15 C1.2
NTS
8" STABILIZED AGGREGATE BASE COURSE
3" ASPHALT
PRIMER COAT
12" TYP.
EXISTING PAVEMENT SECTION
COMPACT 8" SUB-BASE TO 98% STANDARD PROCTOR DENSITY
SAWCUT VERTICAL EDGE (TYP.)
BACKFILL TO BE TAMPED IN 6" LAYERS
PAVEMENT REMOVAL & REPLACEMENT DETAIL 16 C1.2
NTS
cog06c15.dwg 02.08.02

NOTES:
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Jordan Jones & Goulding

CITY OF GEORGETOWN
SOUTH CAROLINA

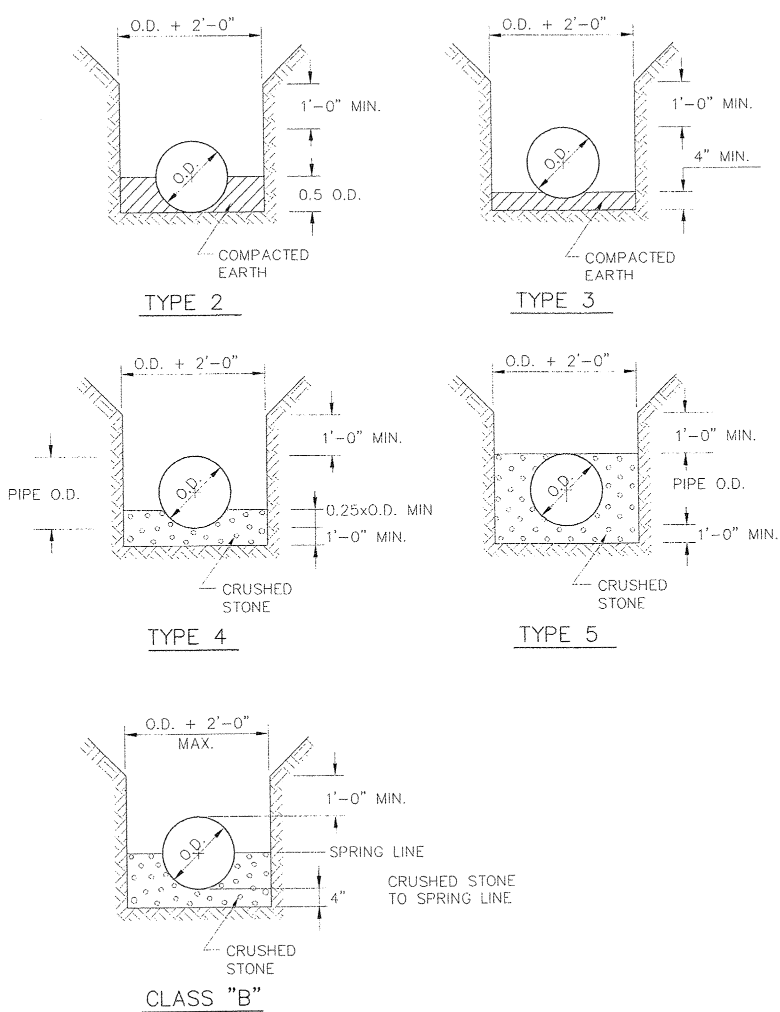
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 11180 ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

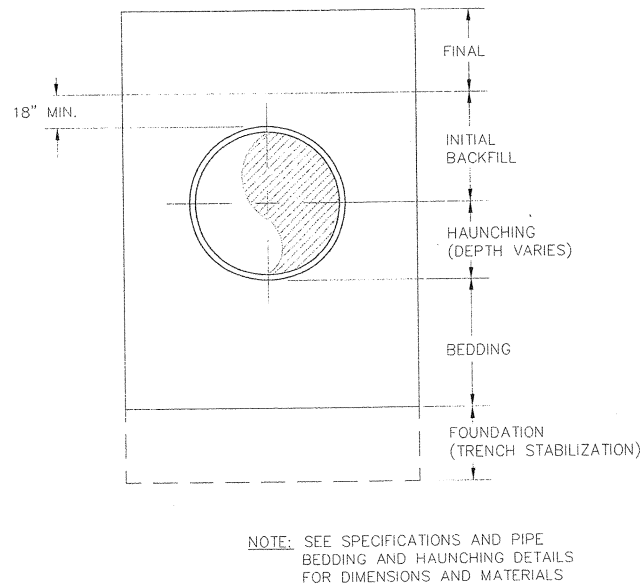
MISCELLANEOUS PAVING DETAILS

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	C1.5 SHEET	1 REV
DRAWN: RB	JOB NO. 2193.006	SCALE: AS SHOWN		

P8006LE

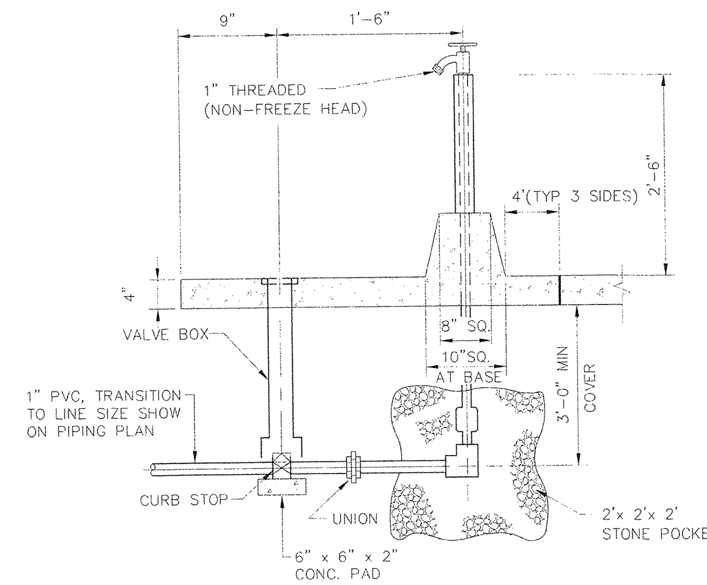


PIPE BEDDING AND HAUNCHING DETAILS
N.T.S.



NOTE: SEE SPECIFICATIONS AND PIPE BEDDING AND HAUNCHING DETAILS FOR DIMENSIONS AND MATERIALS

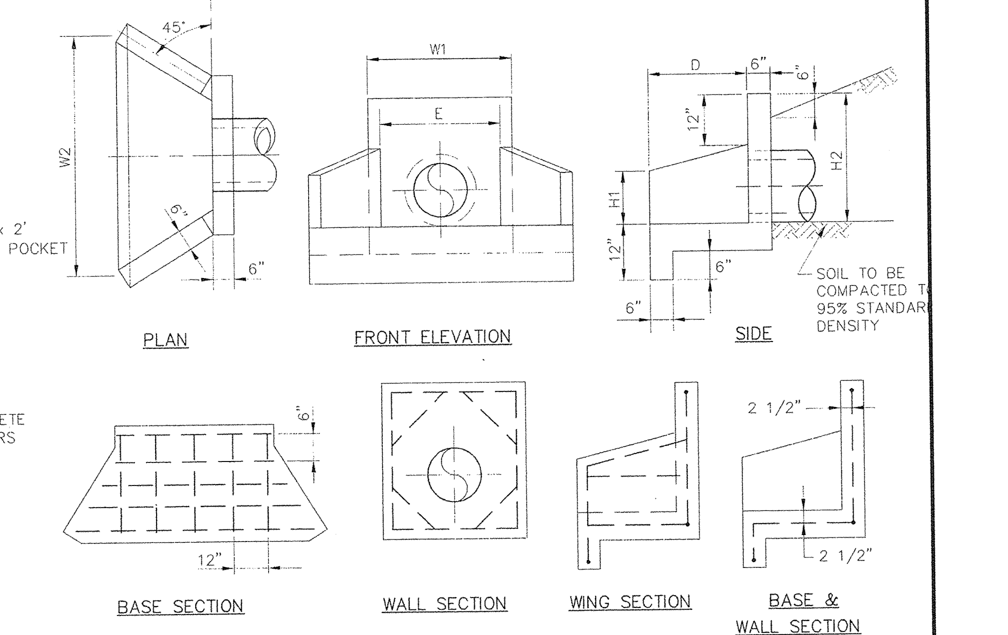
TRENCH TERMINOLOGY DETAIL
N.T.S.



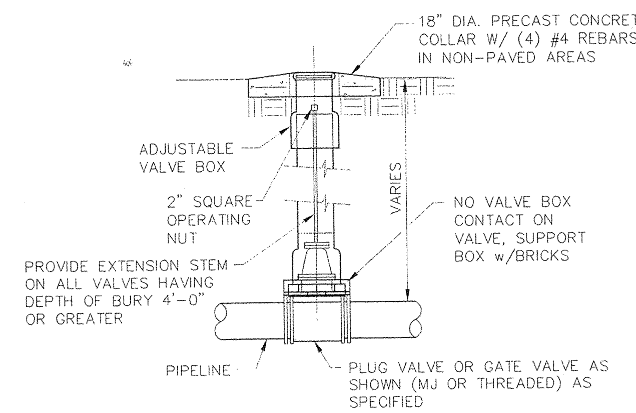
YARD HYDRANT DETAIL (3 / C1.1)
NTS

HEADWALL DIMENSIONS								
PIPE INSIDE DIA.	W1	W2	H1	H2	D	E	WT.	SQ. FT. BASE AREA
15" & 18"	3'-8"	6'-1"	1'-9"	3'-8"	1'-6"	2'-3"	2100	990

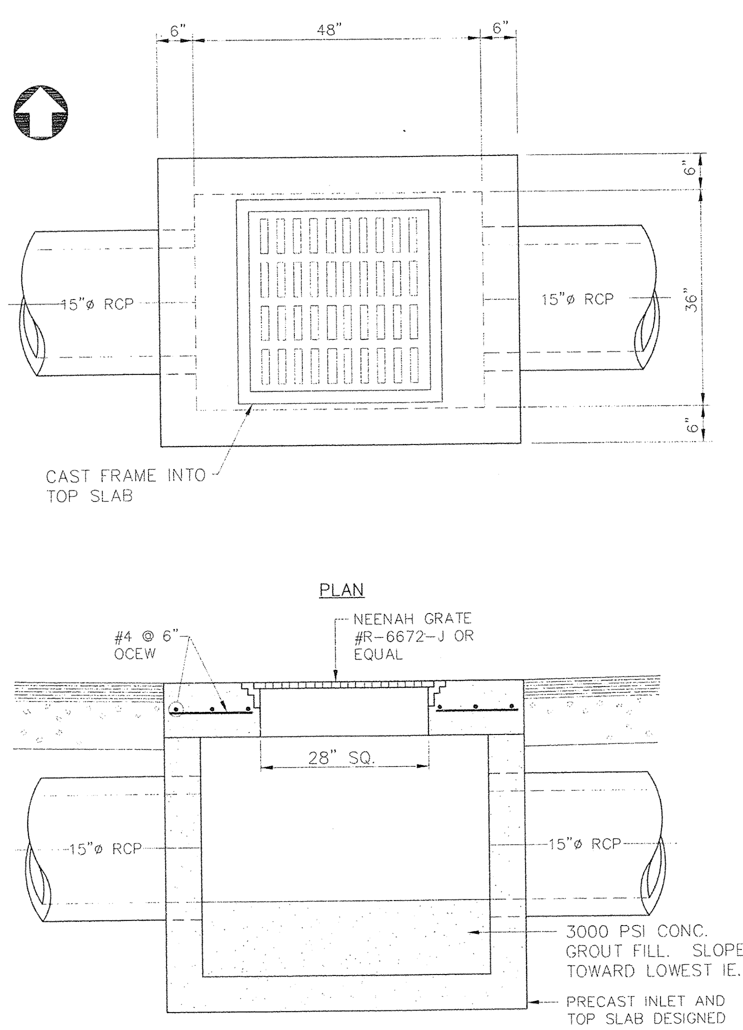
NOTES:
1. ALL CONCRETE SHALL BE 4000 PSI.
2. REINFORCEMENT STEEL SHALL BE 1/2" DIA. OF INTERMEDIATE GRADE.
3. CHAMFER ALL EXPOSED EDGES 3/4".



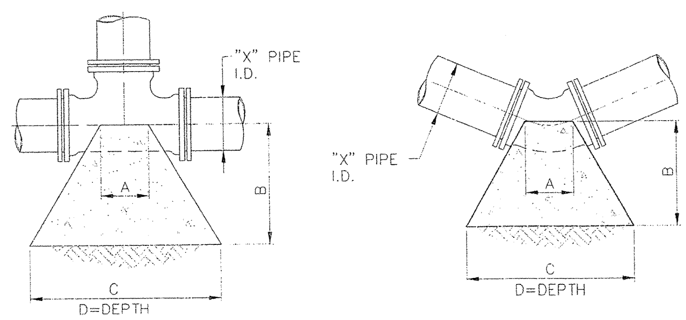
HEADWALL DETAIL (6 / C1.1)
NTS



TYPICAL VALVE DETAIL (4 / C1.1)
NTS



DROP INLET DETAIL (2 / C1.1)
NTS



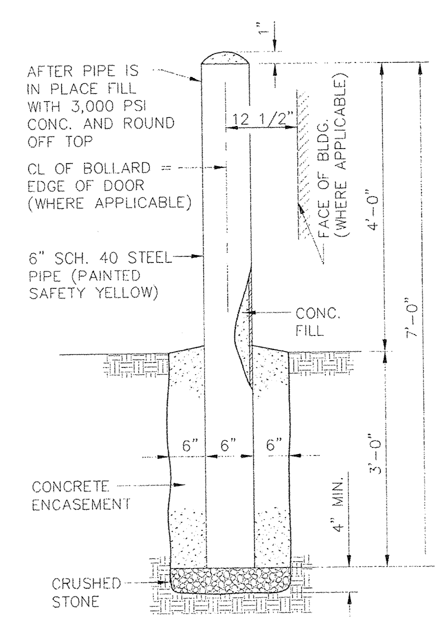
BLOCKING DIMENSIONS						
		X*	A	B	C	D
TEES		2", 4" & 6"	10"	2'-3"	3'-3"	2'-0"
BENDS	22.5° & 45°	2", 4" & 6"	10"	1'-6"	2'-6"	2'-0"
BENDS	90°	2", 4" & 6"	10"	2'-9"	4'-0"	2'-3"

150 PSI TEST PRESSURE
1500 PSF SOIL BEARING

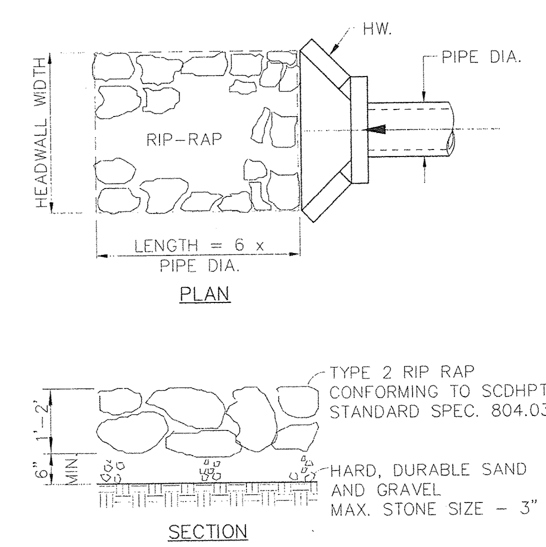
X* = DIAMETER OF PIPE TO BE BLOCKED

ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED EARTH.

TYPICAL BLOCKING DETAIL
NTS



BOLLARD DETAIL (5 / C1.1)
NTS



RIP-RAP PLACEMENT DETAIL (7 / C1.2)
NTS

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02.08.02

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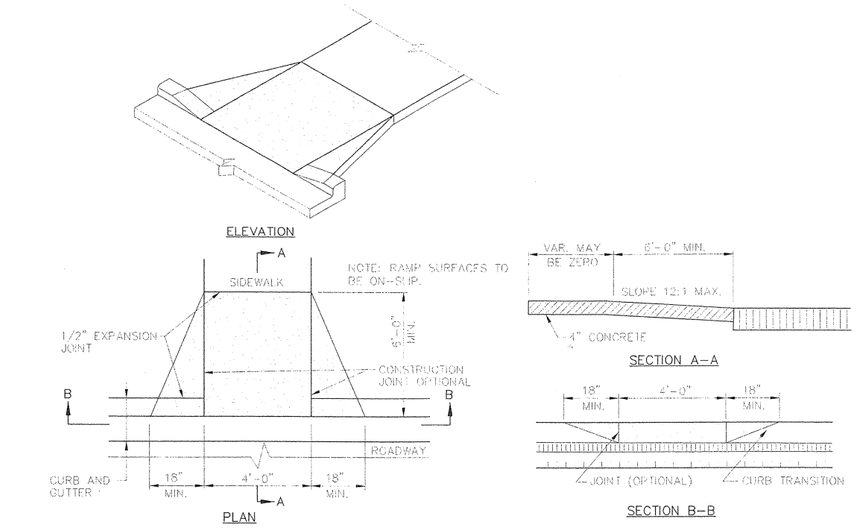
CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 11190 ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

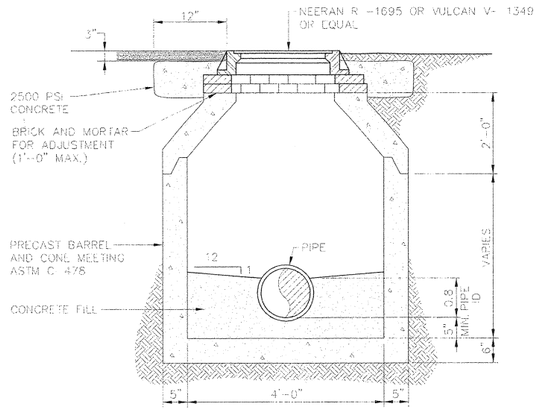
MISCELLANEOUS DETAILS

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	C1.6 SHEET	1 REV
DRAWN: RB	JOB NO. 2193.006	SCALE: AS SHOWN		



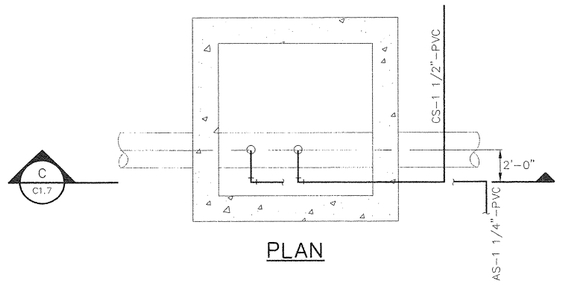
DOUBLE BEVELED HANDICAP RAMP (1 / C1.2)

NTS (NOT USED)

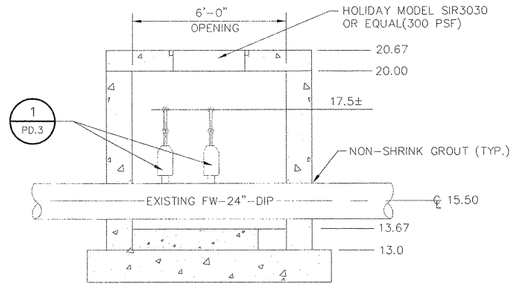


PRECAST SHALLOW MANHOLE DETAIL (2 / C1.1)

NTS



PLAN

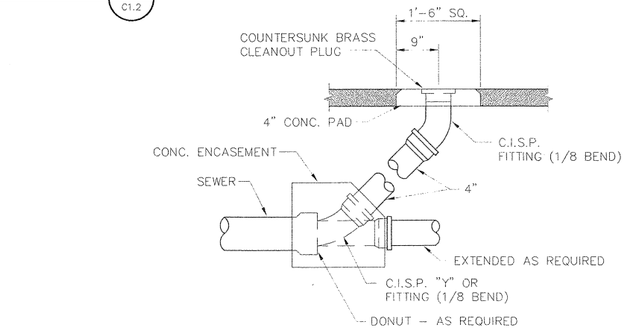


SECTION (C / C1.7)

N.T.S.

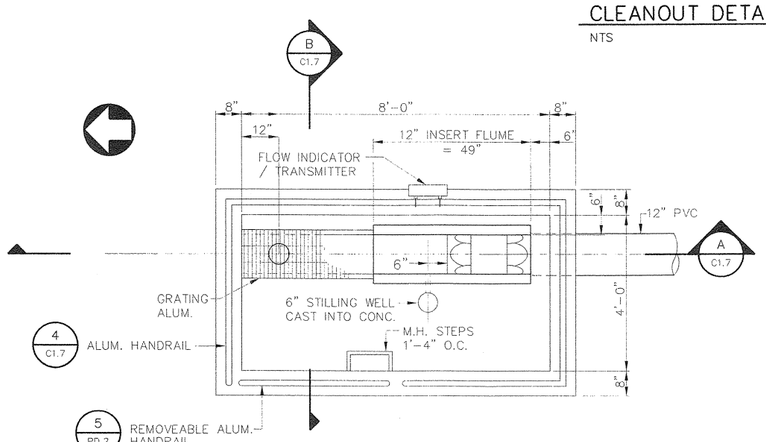
CHEMICAL FEED VAULT (5 / C1.7)

N.T.S.



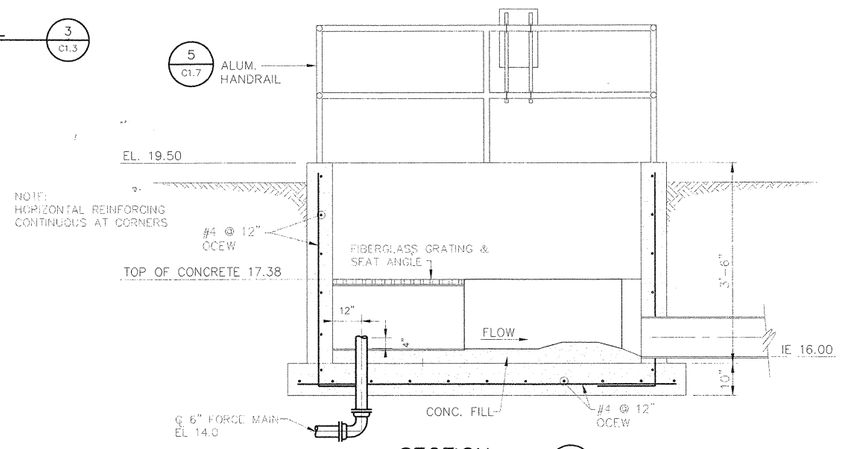
CLEANOUT DETAIL (3 / C1.3)

NTS



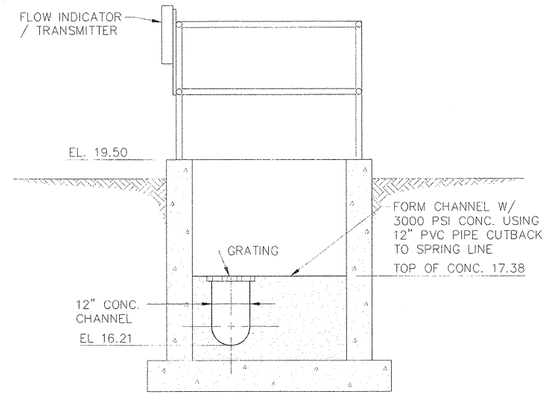
PLAN-METERING STATION (4 / C1.7)

NTS



SECTION (A / C1.7)

NTS



SECTION (B / C1.7)

NTS

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02.08.02

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Jordan Jones & Goulding

GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 11180 — ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

MISCELLANEOUS DETAILS

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	C1.7 SHEET	1 REV
DRAWN: RB	JOB NO. 2193.006	SCALE: AS SHOWN		

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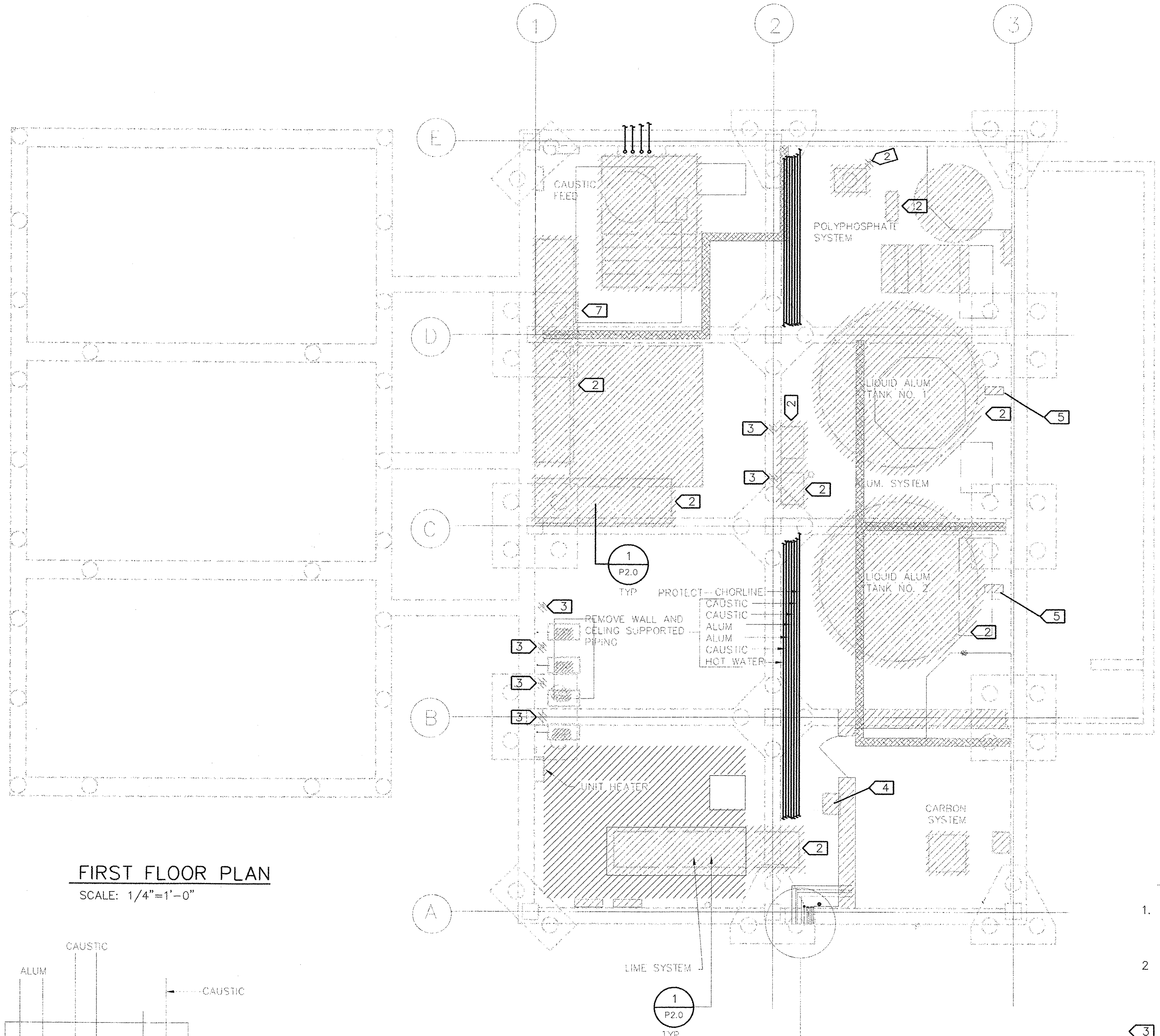
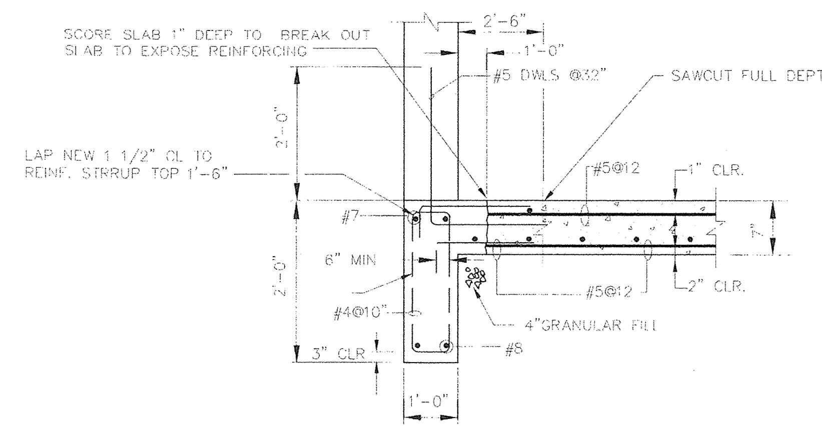
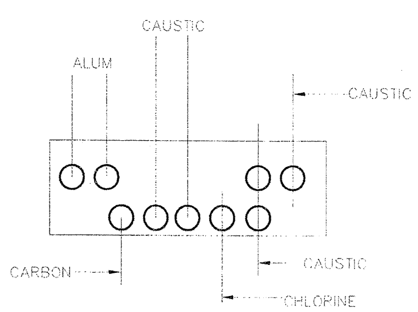


FIRST FLOOR PLAN

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



REPLACEMENT FLOOR DETAIL



EXISTING SOUTH WALL PENETRATION

NTS

DEMOLITION NOTES

1. CROSS-HATCHED AREAS INDICATE THE LIMITS OF DEMOLITION WORK SEE SPECIFICATION SECTIONS 02060 AND 02073 FOR EQUIPMENT DEMOLITION REQUIREMENTS.

2 SEE SPECIFICATION SECTIONS 02060 AND 02075 FOR FLOOR RESTORATION REQUIREMENTS FOLLOWING REMOVAL OF OF CONCRETE EQUIPMENT BASES, CURBS, ,TANK PADS, WALLS, ETC.

3 REMOVE ALL STRUCTURAL STEEL MEMBERS USED FOR MOUNTING EQUIPEMENT SWITCHES

4 REMOVE SINK AND ALL RELATED SUPPLY AND DRAIN PIPING

5 CAP ALUM. FILL & VENT PIPING AT INSIDE FACE OF WALL.

6 PLUG/CAP ALL ABANDONED PENETRATIONS PEER SPECIFICATION SECTION 02073,

7 SEE SPECIFICATION SECTION 16040 AND SEE SHEET 2.1 FOR ELECT. DEMOLITION.

(OLD CARBON)

NOTES:
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NO.	DATE	DESCRIPTION OF REVISION
1	08-02-01	RECORD DRAWING
0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

CITY OF GEORGETOWN SOUTH CAROLINA

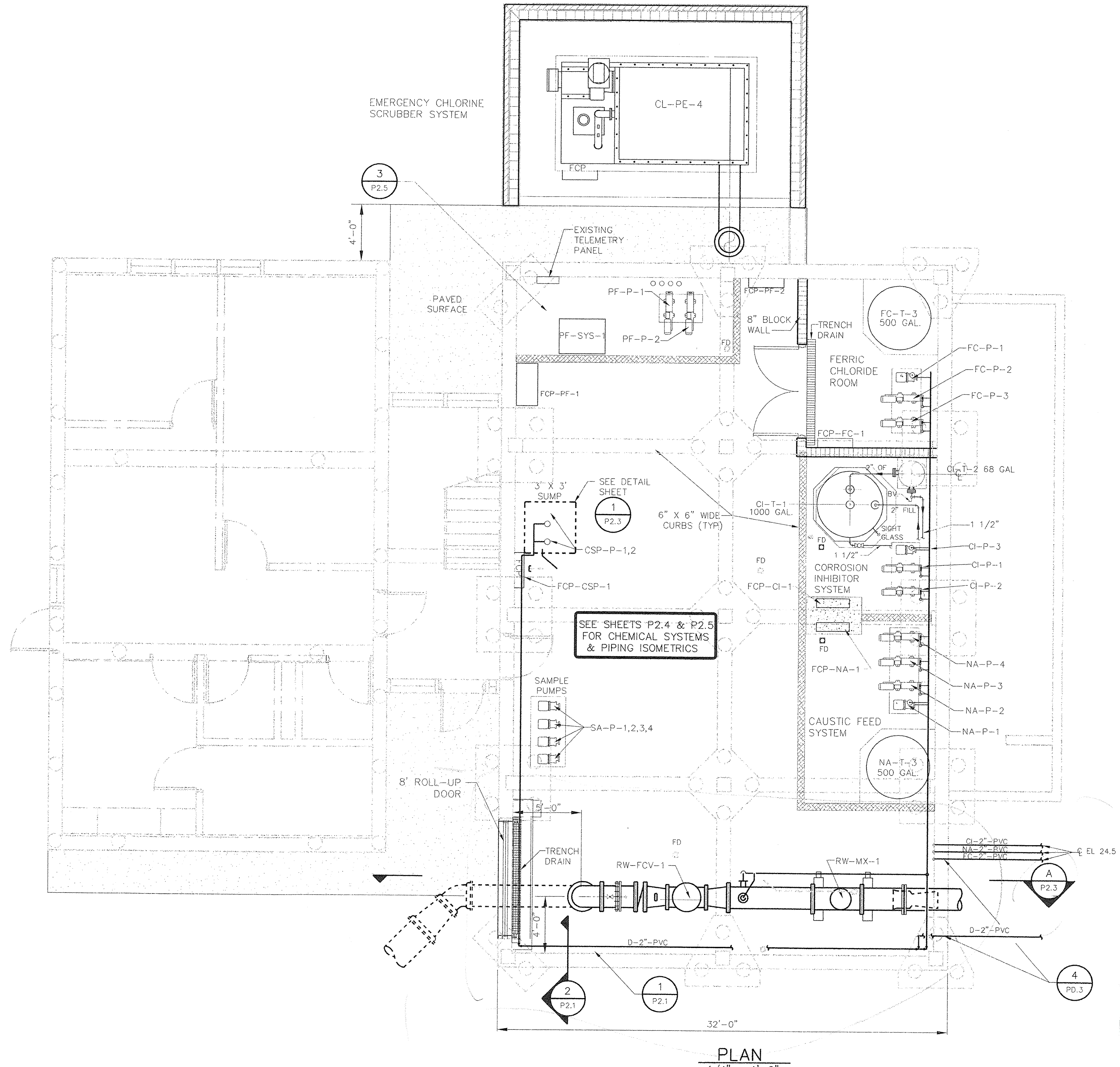
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 11180 ROBERT F. HOFFMAN

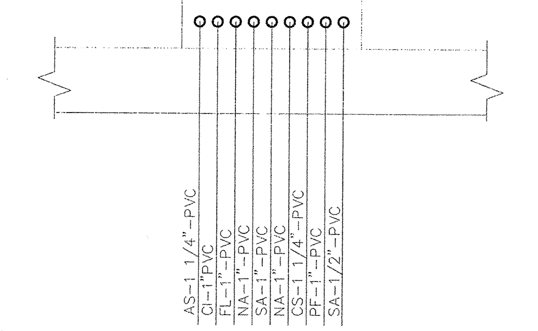
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

CHEMICAL BUILDING
DEMOLITION PLAN

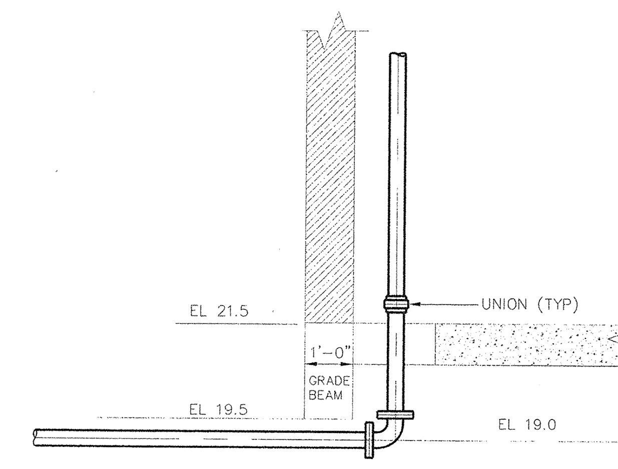
DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P2.0 SHEET	1 REV
DRAWN: ST	JOB NO. 2193.006	SCALE: AS SHOWN		

cg06p0.dwg 08.01.01





FLOOR PENETRATION (1, P2.1)
NTS



SECTION (2, P2.1)
NTS

NOTES:
1. ALL METERING PUMP BASES TO BE 1'-6" HIGH UNLESS OTHERWISE SHOWN.
2. ALL TANKS PADS SHALL BE 4".

3. EXPOSED RAW WATER LINE SHALL BE 18" DIP WITH REDUCTION TO 16" FOR 16" RW-FCV-1.
4. RAW WATER STATIC MIXER (RW-MX-2) AND RAW WATER FLOW TUBE (FE308) SHALL BE 18".

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SOUTH CAROLINA

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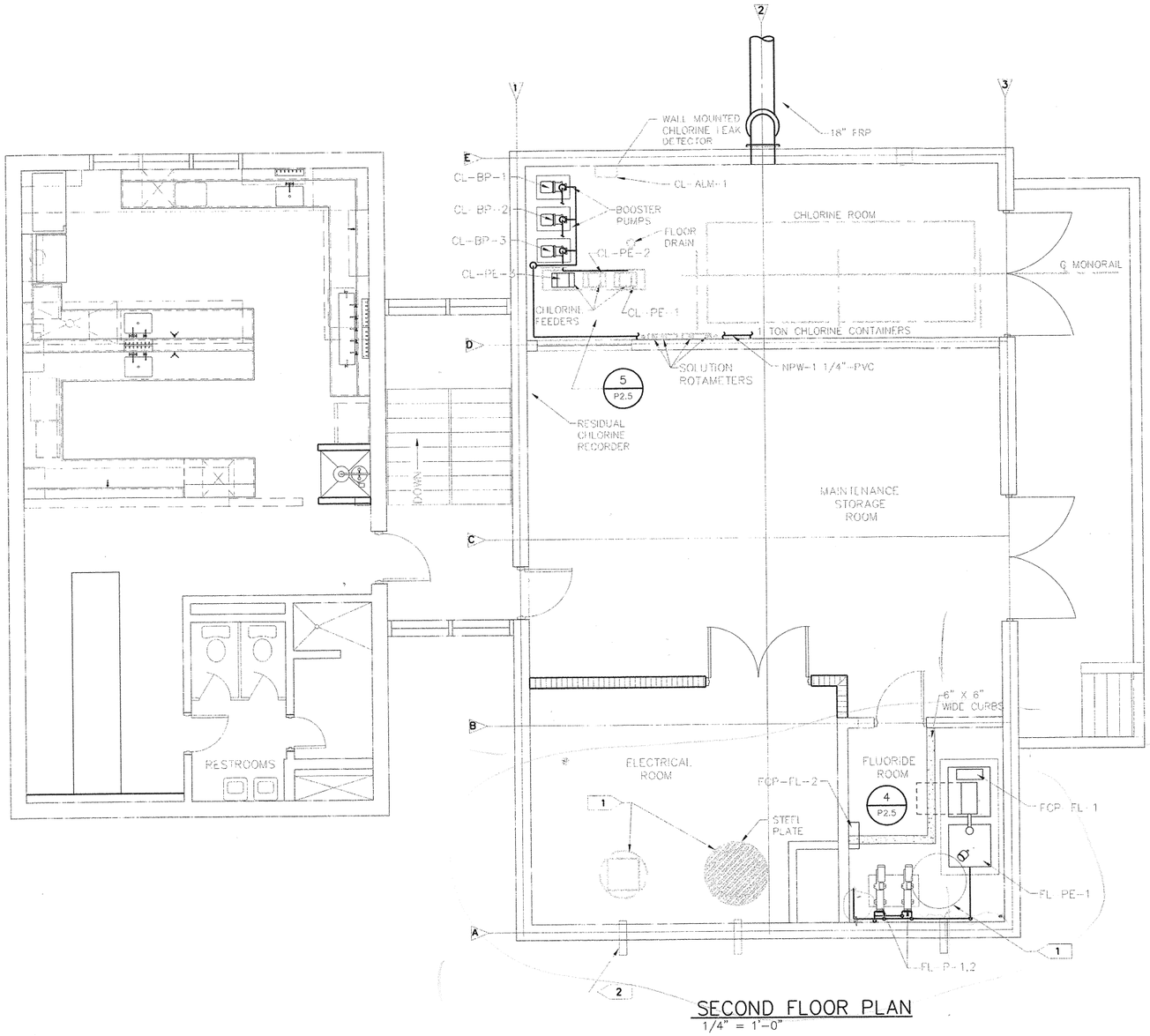
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

CHEMICAL BUILDING
FIRST FLOOR MODIFICATIONS

DESIGNED: BH	CHECKED:	DATE: NOVEMBER 2000	P2.1 SHEET	1 REV
DRAWN: ST	JOB NO. 2193.006	SCALE: AS SHOWN		



SECOND FLOOR PLAN
1/4" = 1'-0"

NOTES:
1. SEE SHT. C/S2.1 FOR PATCH DETAIL
2. REMOVE DUST COLLECTOR VENTS AND PATCH MASONRY PER SPECIFICATION 02075

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08.01.01

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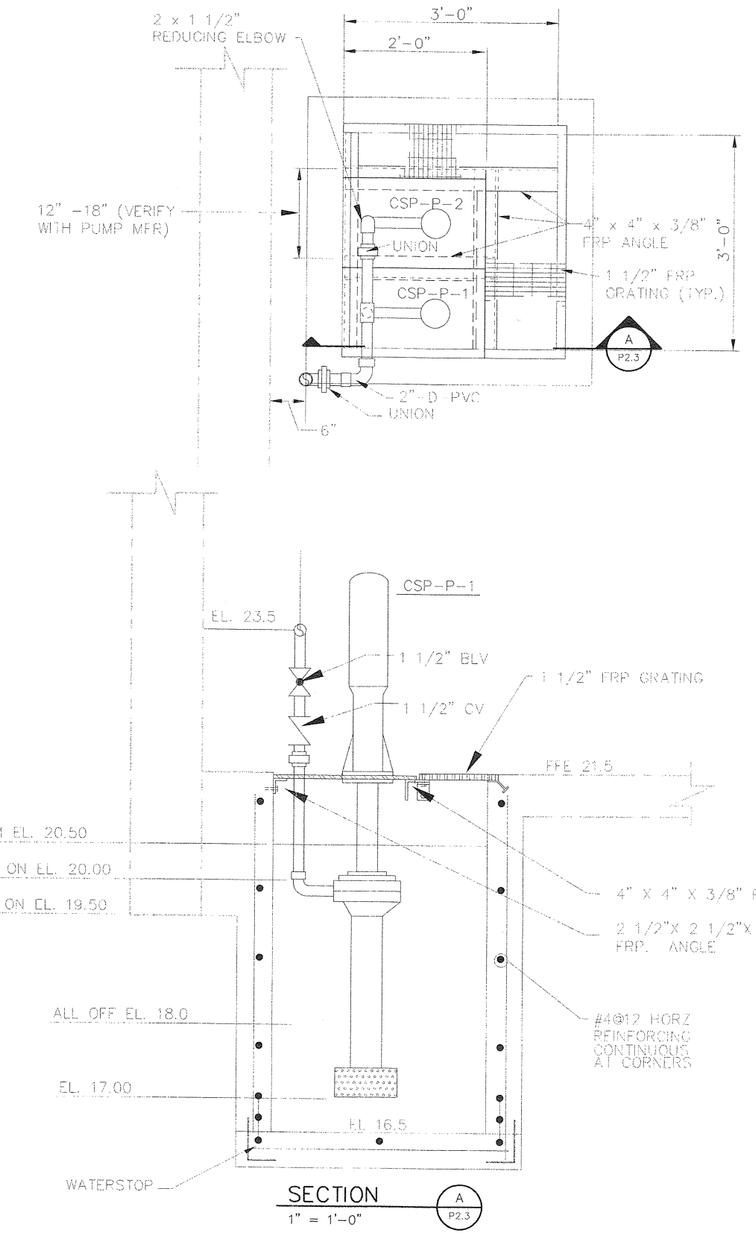
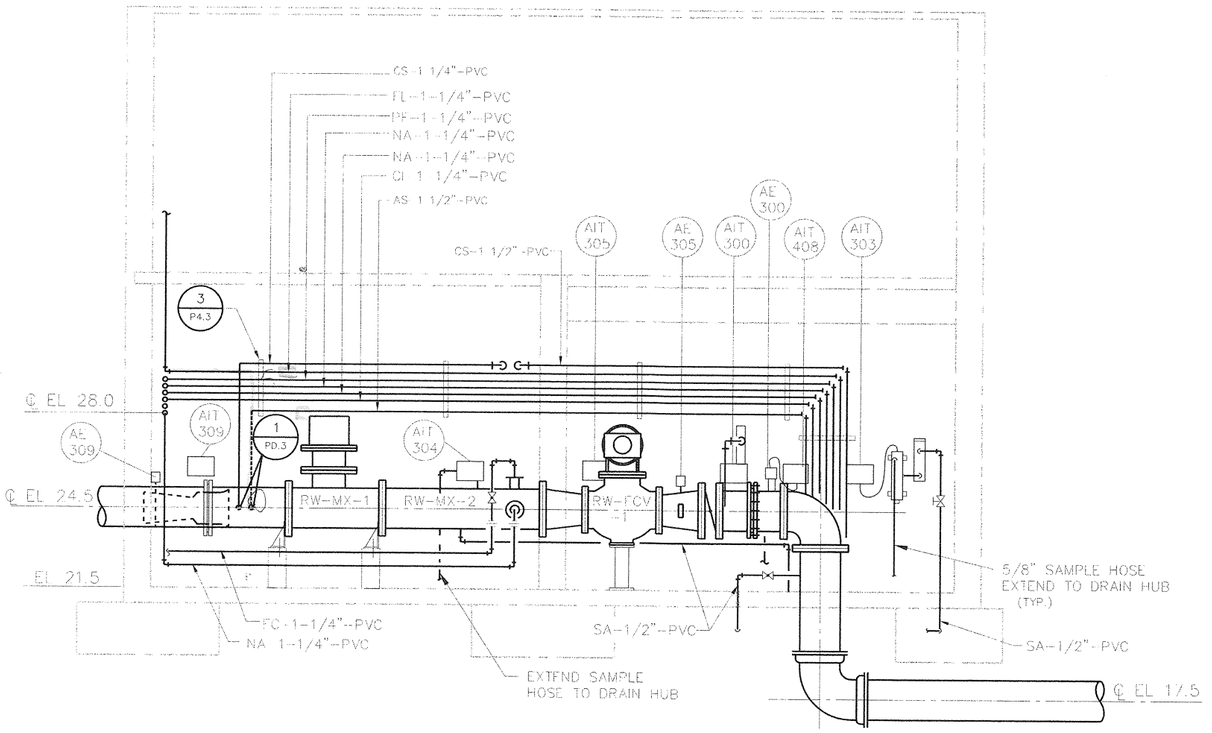
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

CHEMICAL BUILDING
SECOND FLOOR MODIFICATIONS

DESIGNED: BH	CHECKED:	DATE: NOVEMBER 2000	P2.2	1
DRAWN: ST	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV



SECTION
1" = 1'-0"
A
P2.3



SECTION – RAW WATER CHEMICAL FEED HEADER
3/8" = 1'-0"
A
P2.1

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08.01.01

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GEORGETOWN 1734 SOUTH CAROLINA

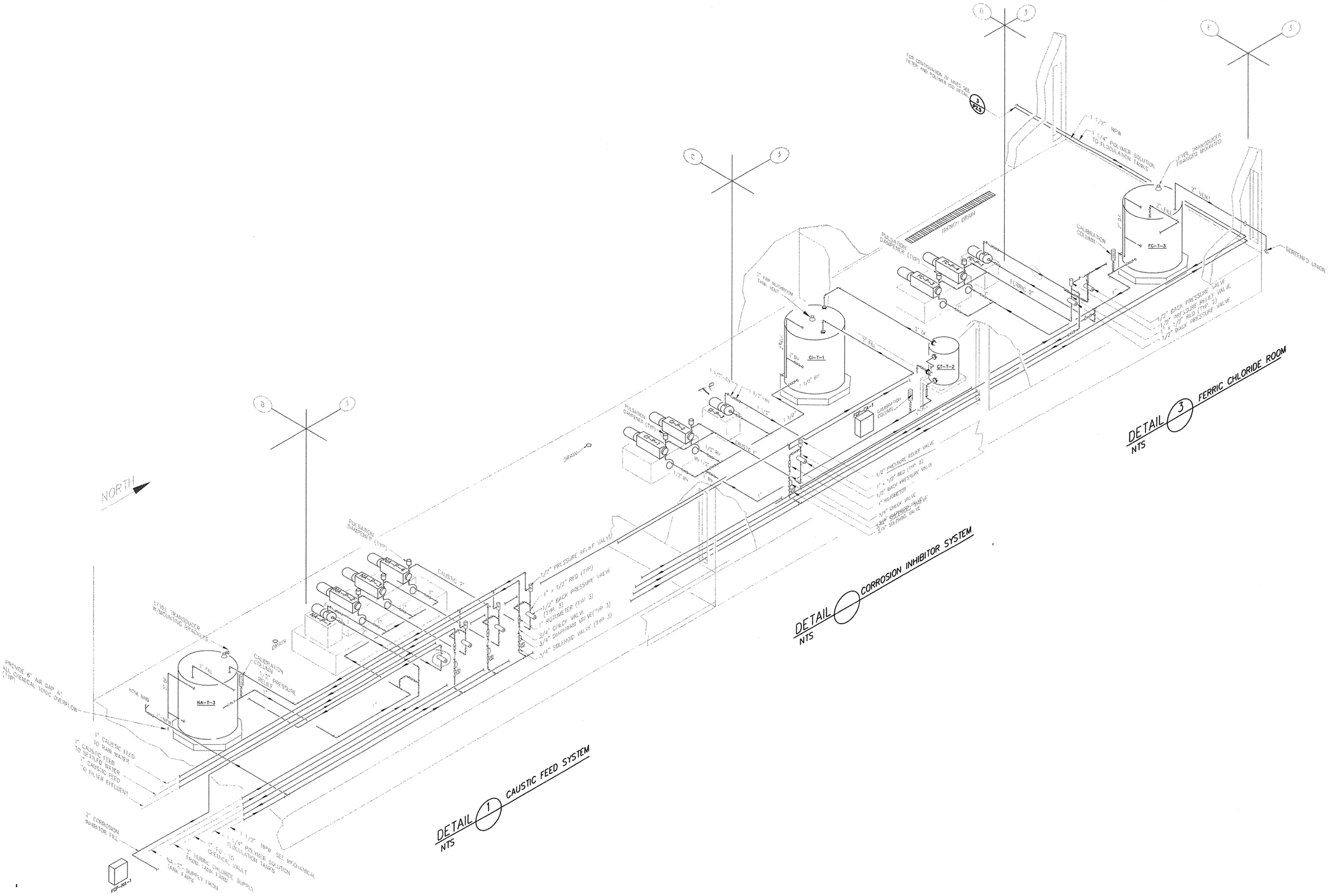
CITY OF GEORGETOWN
SOUTH CAROLINA

REGISTERED PROFESSIONAL ENGINEER SOUTH CAROLINA No. 11180 ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

CHEMICAL BUILDING
FIRST FLOOR SECTIONS AND DETAILS

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P2.3	1
DRAWN: ST	JOB NO. 2193.006	SCALE: 1/2" = 1'-0"	SHEET	REV



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SOUTH CAROLINA

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CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

CAUSTIC,FERRIC CHLORIDE, AND CORROSION INHIBITOR PIPING ISOMETRICS

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P2.4	1
DRAWN: ZWG	JOB NO. 2193.006	SCALE: NONE	SHEET	REV

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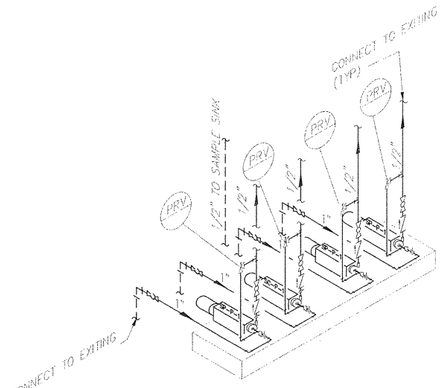
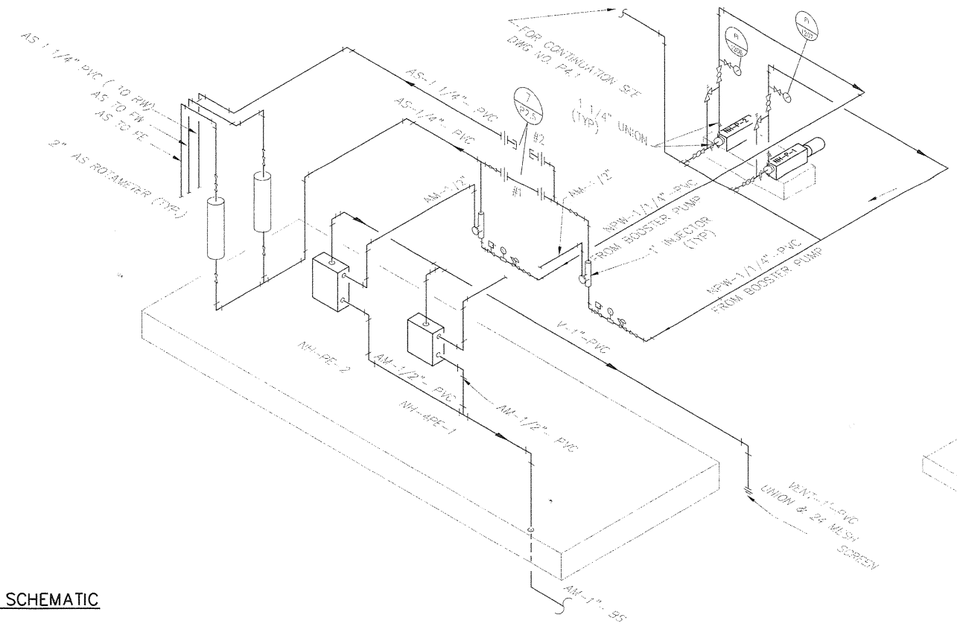
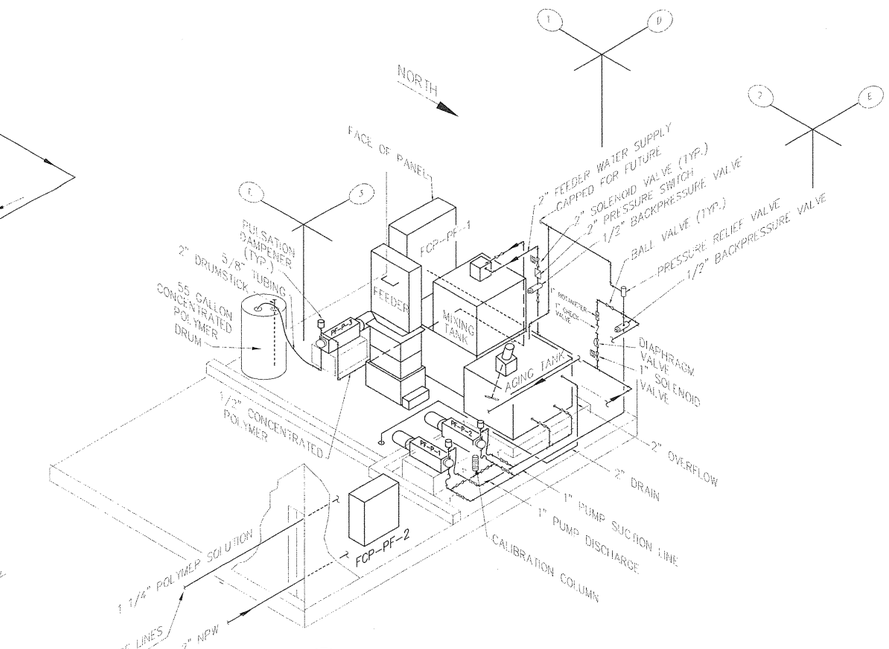
08.01.01



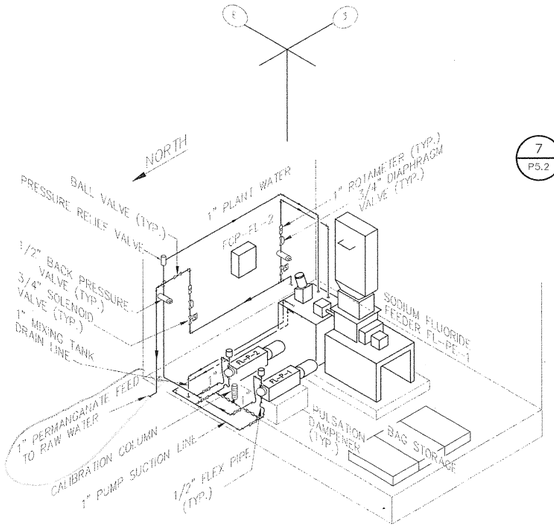
1 P2.0 SAMPLE PUMP PIPING SCHEMATIC
NTS



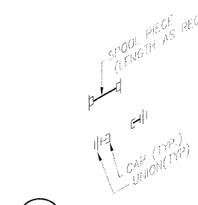
2 P4.1 AMMONIA SYSTEM SCHEMATIC
NTS



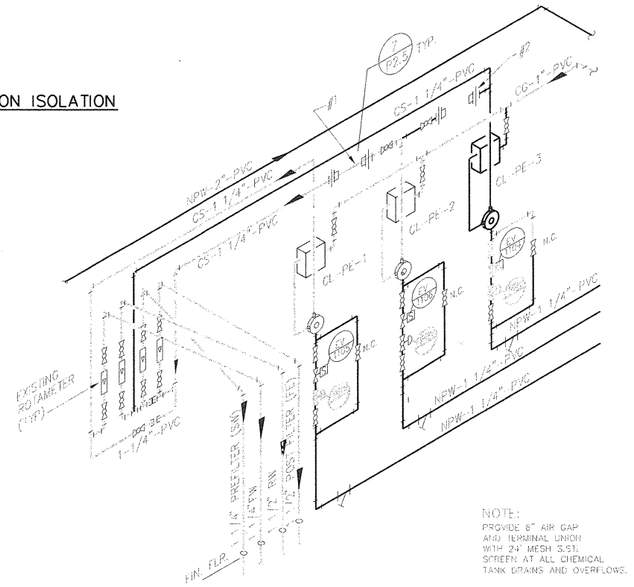
3 P2.1 FILTER AID POLYMER SCHEMATIC
NTS



4 P2.2 FLUORIDE FEED SCHEMATIC
NTS

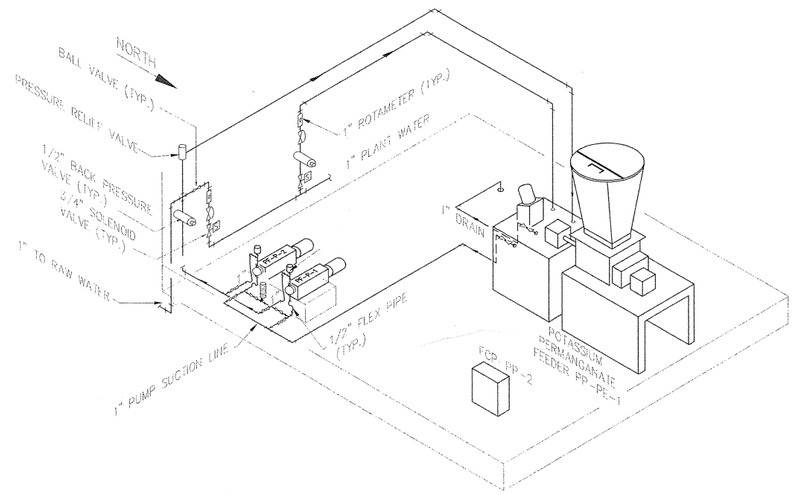


7 P5.2 CROSS CONNECTION ISOLATION
NTS



NOTE:
PROVIDE 6" AIR GAP AND TERMINAL UNION WITH 24" MESH S.S.TL SCREEN AT ALL CHEMICAL TANK DRAINS AND OVERFLOWS.

5 P2.2 CHLORINE SYSTEM SCHEMATIC



6 P8.1 POTASSIUM PERMANGANATE SCHEMATIC
NTS

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02.12.02

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SOUTH CAROLINA

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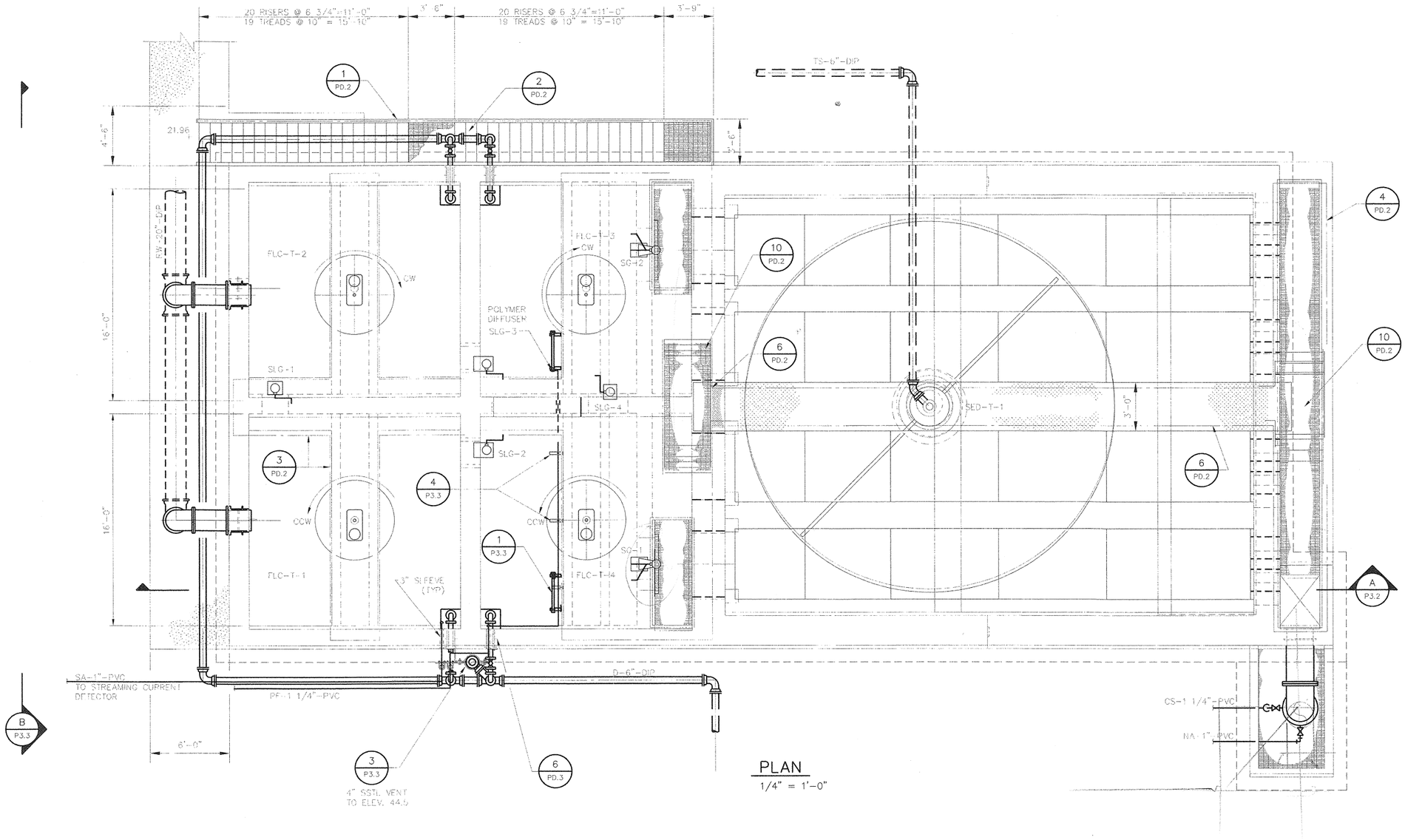
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

POTASSIUM PERMANGANATE, POLY , FLUORIDE, CHLORINE & CHLORINE GAS ISOMETRIC PIPING SCHEMATICS

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P2.5 SHEET	1 REV
DRAWN: ZWG	JOB NO. 2193.006	SCALE: N.T.S.		

PBGGDLE



PLAN
1/4" = 1'-0"

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08.02.01

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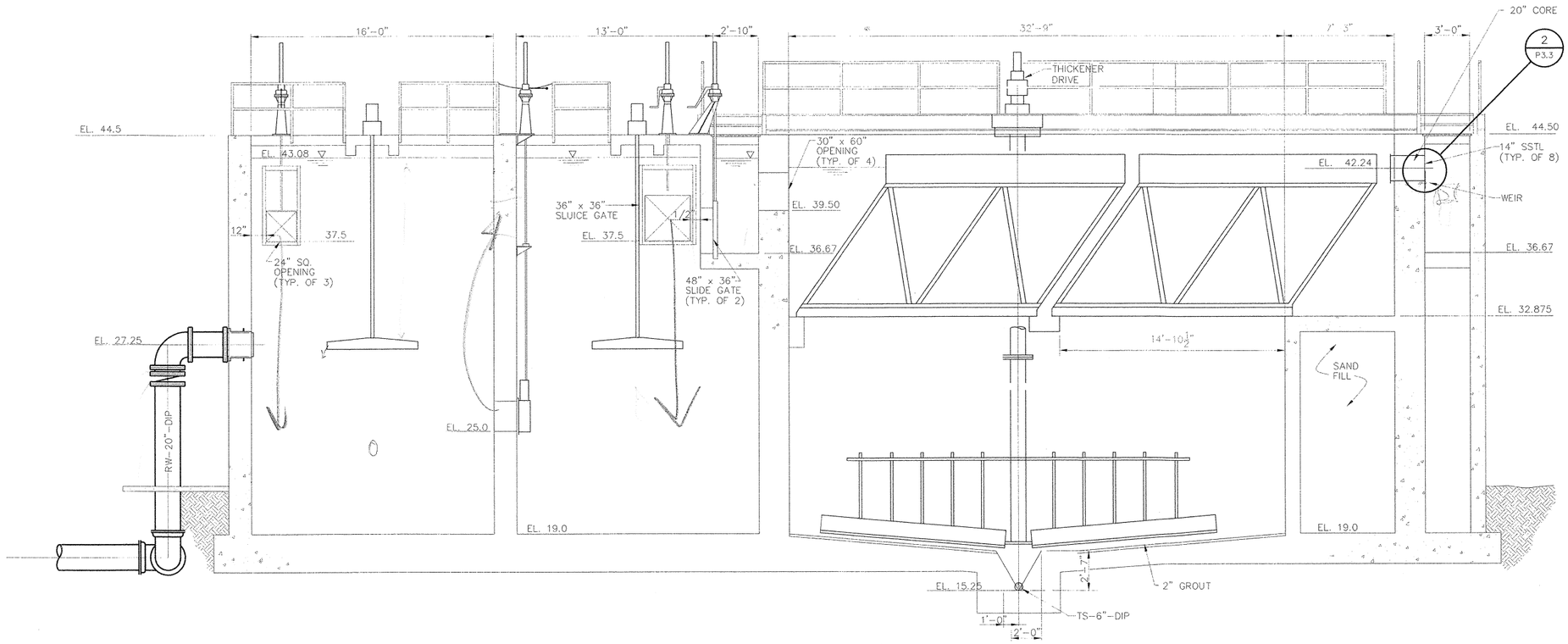
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FLOCCULATION/SEDIMENTATION BASIN
PLAN

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P3.1	1
DRAWN: ST	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV



A / P3.1 SECTION
1/4" = 1'-0"

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08.01.01

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GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

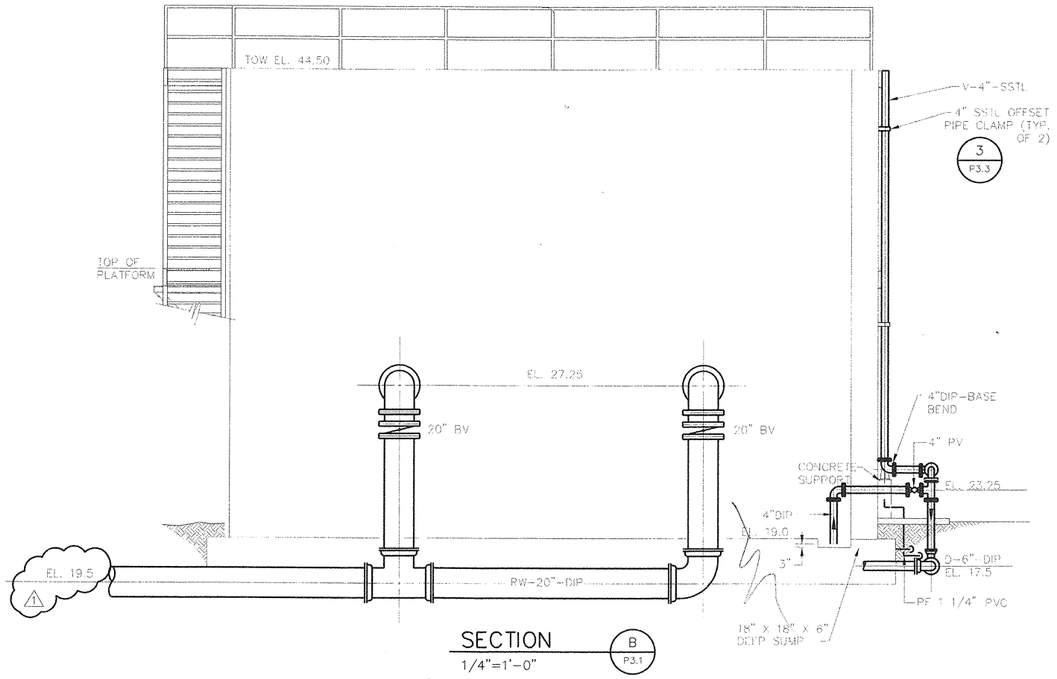
REGISTERED PROFESSIONAL ENGINEER — SOUTH CAROLINA — No. 11183 — ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

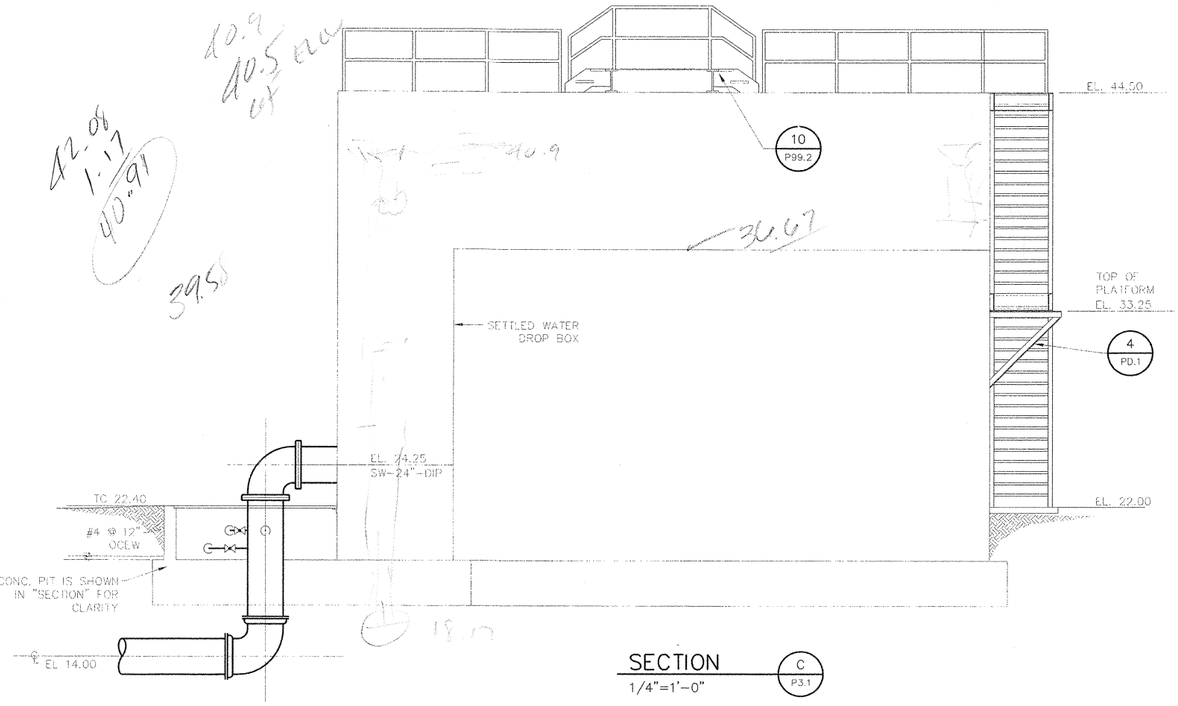
FLOCCULATION/SEDIMENTATION BASIN
SECTION

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P3.2	1
DRAWN: ST	JOB NO. 2193.006	SCALE: 1/4" = 1'-0"	SHEET	REV

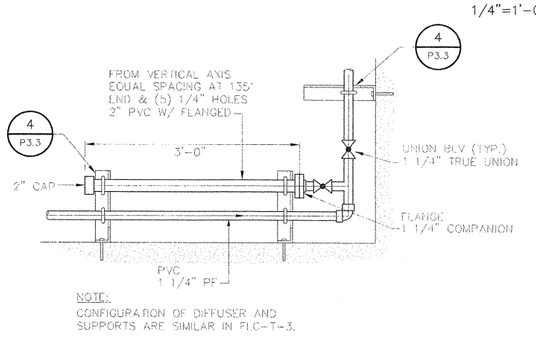
CMIZELL



SECTION
1/4"=1'-0"
B
P3.1

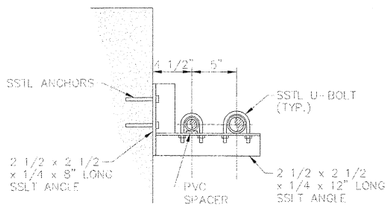


SECTION
1/4"=1'-0"
C
P3.1

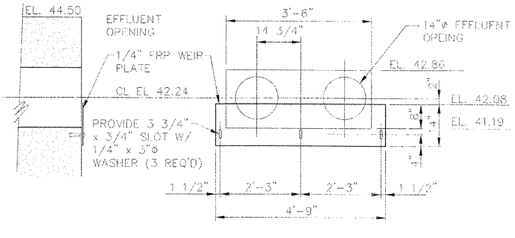


NOTE:
CONFIGURATION OF DIFFUSER AND SUPPORTS ARE SIMILAR IN FLC-T-3.

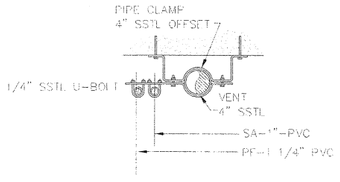
POLYMER DIFFUSER
1"=1'-0"
1
P3.1



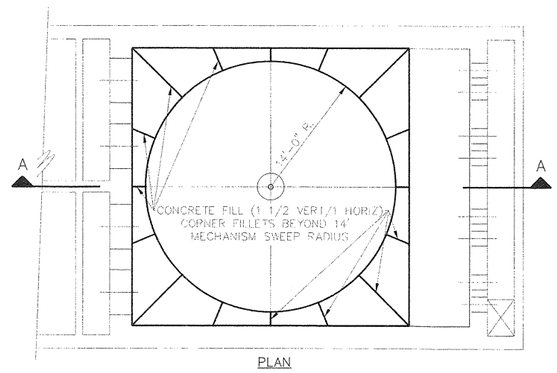
POLYMER HANGER
1 1/2"=1'-0"
4
P3.3



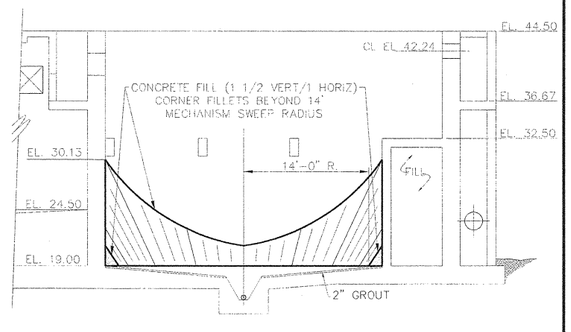
WEIR DETAIL
1/2"=1'-0"
2
P3.1



PIPE CLAMP DETAIL
1/4"=1'-0"
3
P3.3



PLAN



SECTION "A"

SEDIMENTATION BASIN – CONC. CORNER FILLETS DETAILS
NTS

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06.02.01

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GEORGETOWN 1734 SOUTH CAROLINA

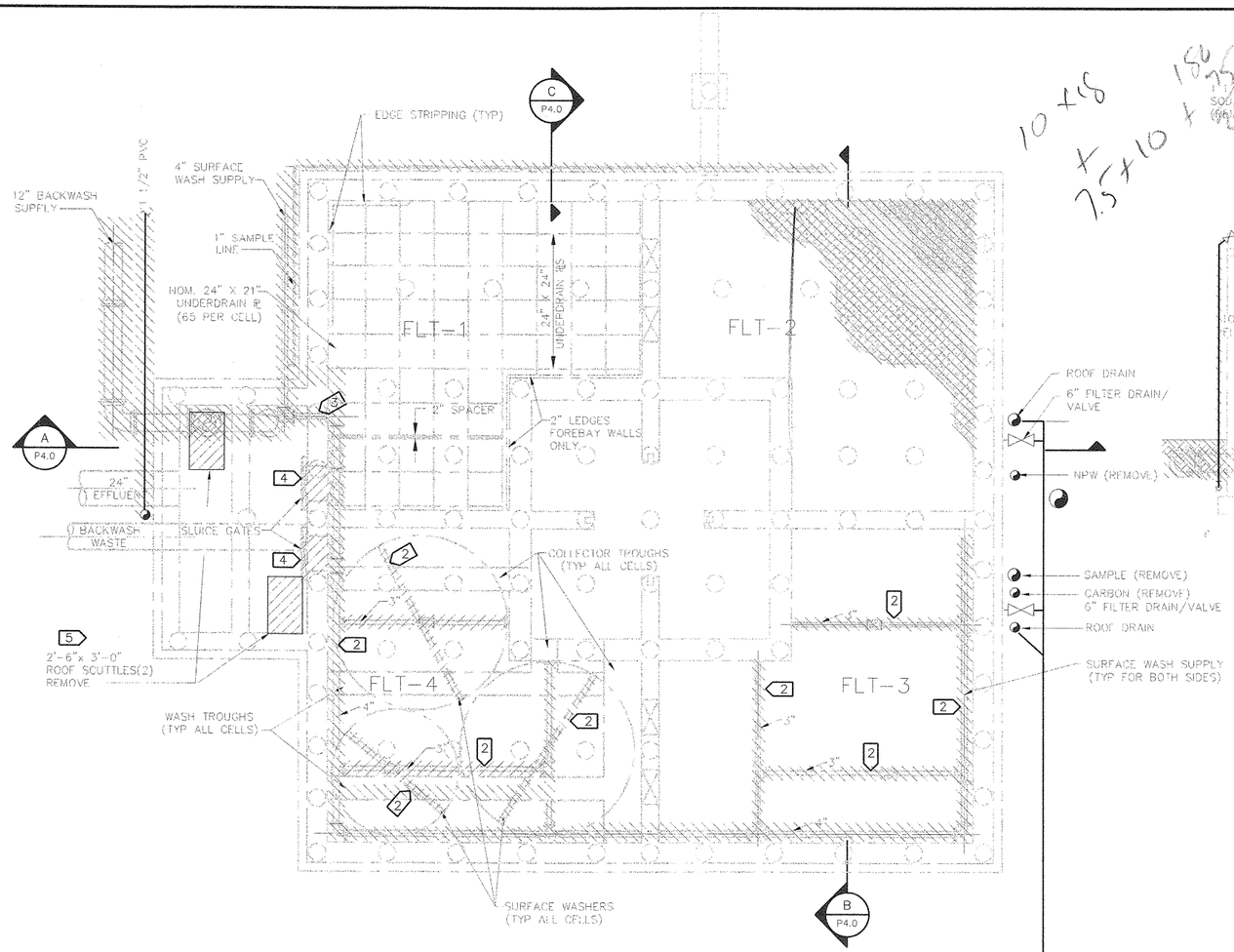
CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 11180 — ROBERT F. HOFFMAN

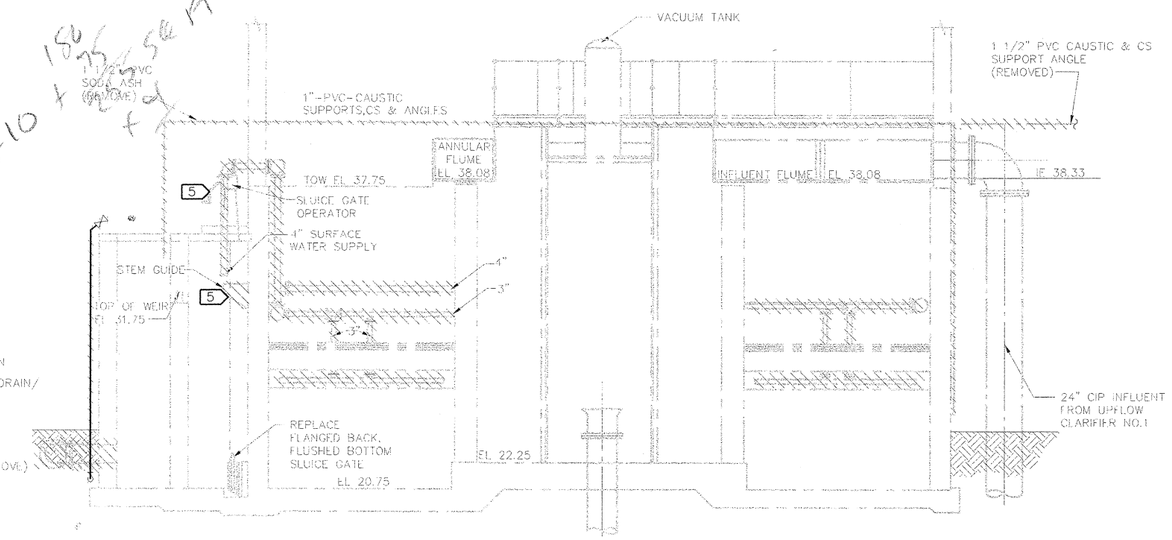
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FLOCCULATION / SEDIMENTATION BASINS
SECTIONS & DETAILS

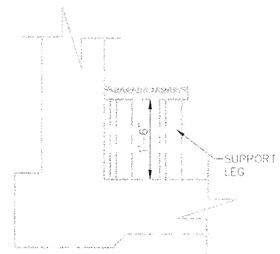
DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P3.3	1
DRAWN: RB	JOB NO. 2193.005	SCALE: AS SHOWN	SHEET	REV



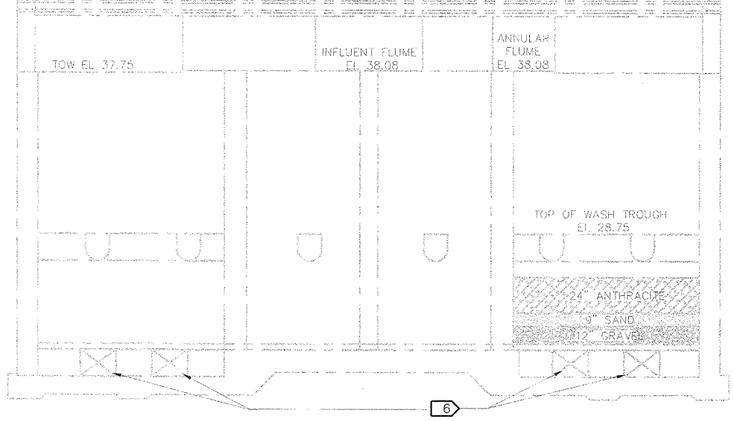
PLAN
1/4" = 1'-0"



SECTION
1/4" = 1'-0"
A
P4.0



SECTION
NTS
C
P4.0



SECTION
1/4" = 1'-0"
B
P4.0

PROCESS DEMOLITION NOTES:

1. CROSS-HATCHED AREAS INDICATE THE LIMITS OF DEMOLITION WORK SEE SPECIFICATION SECTION 02060 AND 02073 FOR EQUIPMENT DEMOLITION REQUIREMENTS.

2. DEMOLISH ALL 3" AND 4" SURFACE WASH PIPING, SWEEP ARMS AND SUPPORTS (TYP ALL FILTERS)

3. CAP OR PLUG ALL WALL PENETRATIONS AS SPECIFIED

4. REMOVE & REPLACE SLUICE GATES (SEE P4.1)

5. REMOVE THE GATE OPERATING PEDESTALS, STEM GUIDES & ROOF SCUTTLES

6. FILL 2'-0" X 1'-6" HOLES IN 12" WALL WITH NON-SHRINKING GRUNT AS DIRECTED

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08.01.01

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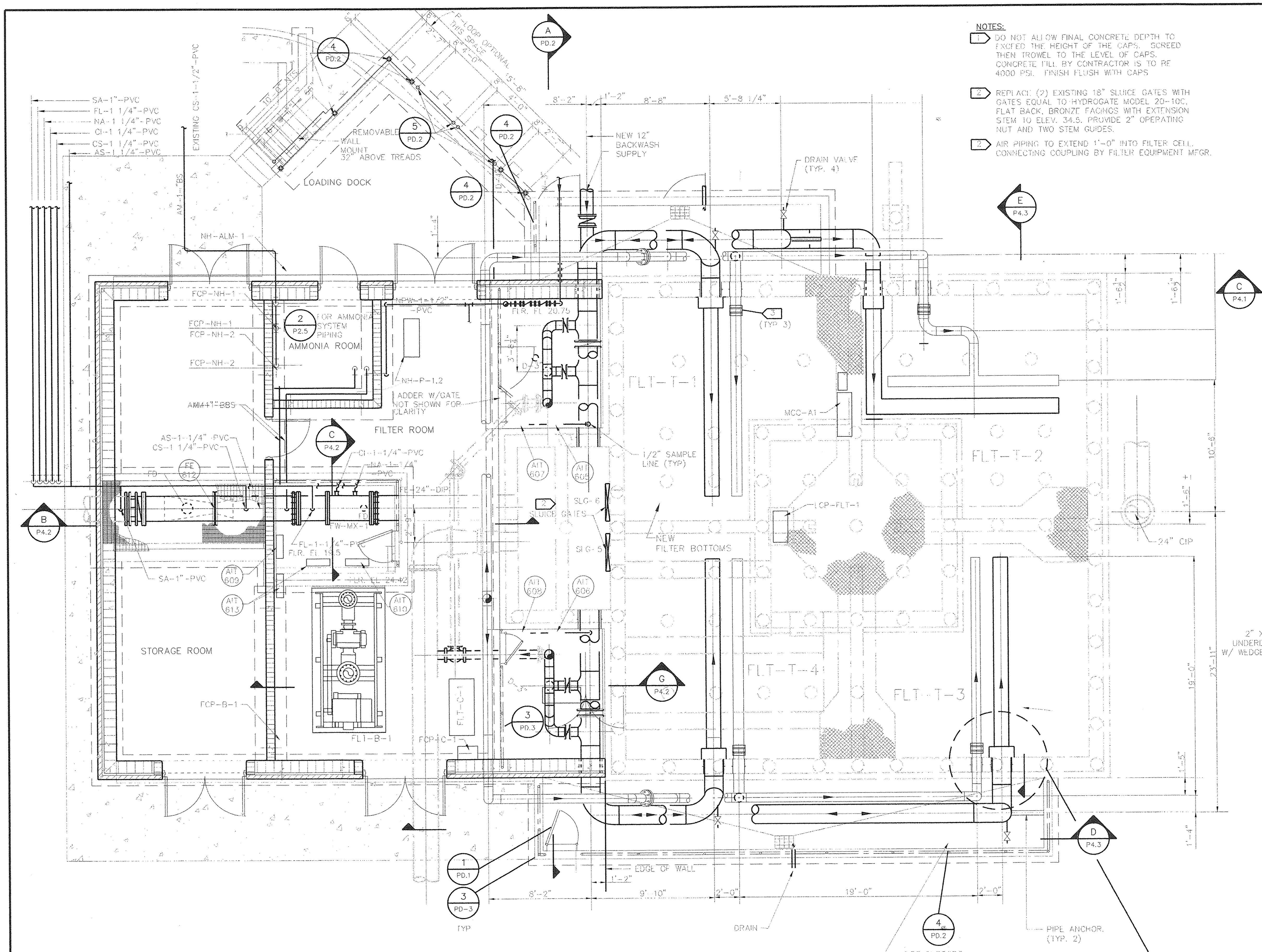
SOUTH CAROLINA

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 11180 ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FILTER DEMOLITION PLAN

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P4.0	1
DRAWN: ST	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV



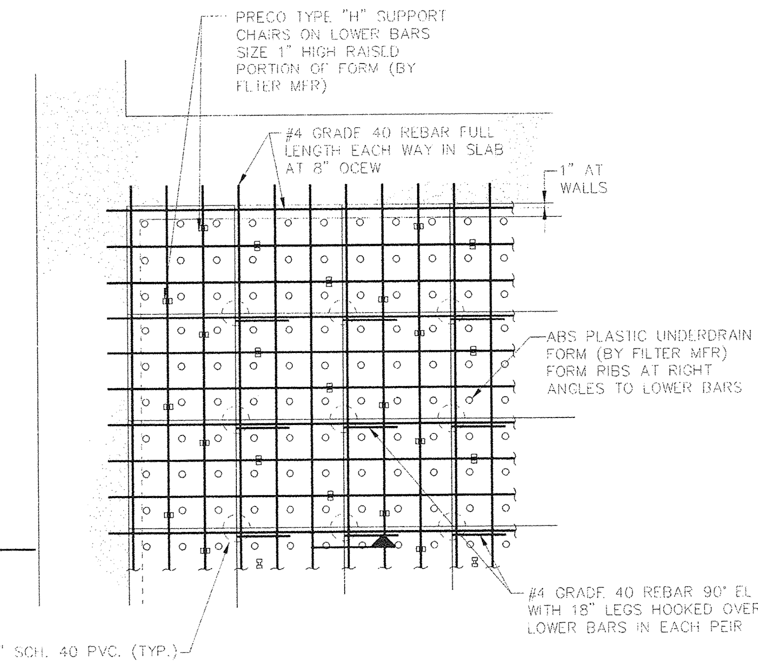
PLAN
1/4" = 1'-0"

NOTES:

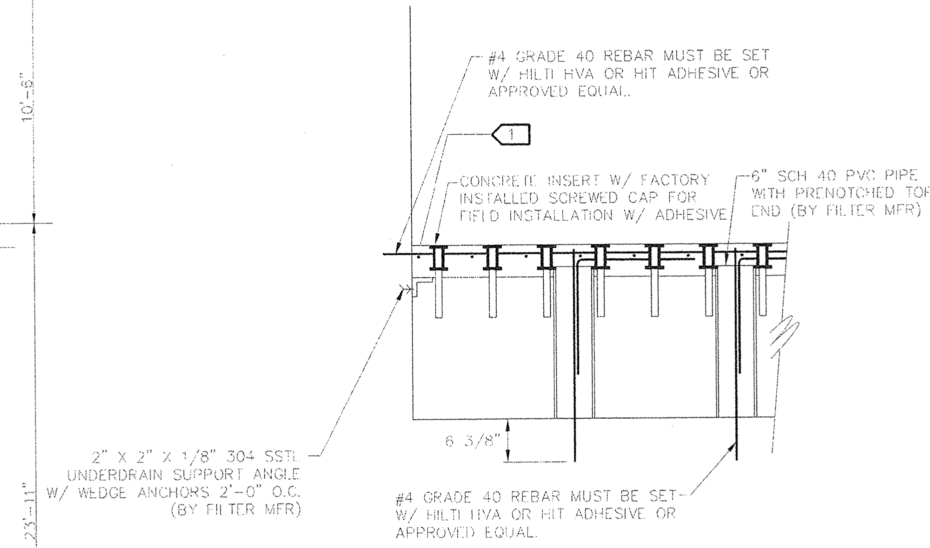
1. DO NOT ALLOW FINAL CONCRETE DEPTH TO EXCEED THE HEIGHT OF THE CAPS. SCREED THEN TROWEL TO THE LEVEL OF CAPS. CONCRETE FILL BY CONTRACTOR IS TO BE 4000 PSI. FINISH FLUSH WITH CAPS

2. REPLACE (2) EXISTING 18" SLUICE GATES WITH GATES EQUAL TO HYDROGATE MODEL 20-10C, FLAT BACK, BRONZE FACINGS WITH EXTENSION STEM TO ELEV. 34.5. PROVIDE 2" OPERATING NUT AND TWO STEM GUIDES.

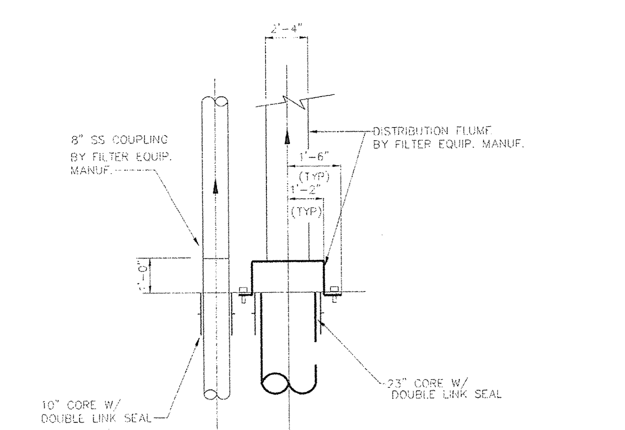
2. AIR PIPING TO EXTEND 1'-0" INTO FILTER CELL. CONNECTING COUPLING BY FILTER EQUIPMENT MFGR.



DETAIL 1 / P4.1
NTS



SECTION C / P4.1
NTS



DETAIL 2 / P4.1
NTS

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NO.	DATE	DESCRIPTION OF REVISION
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0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

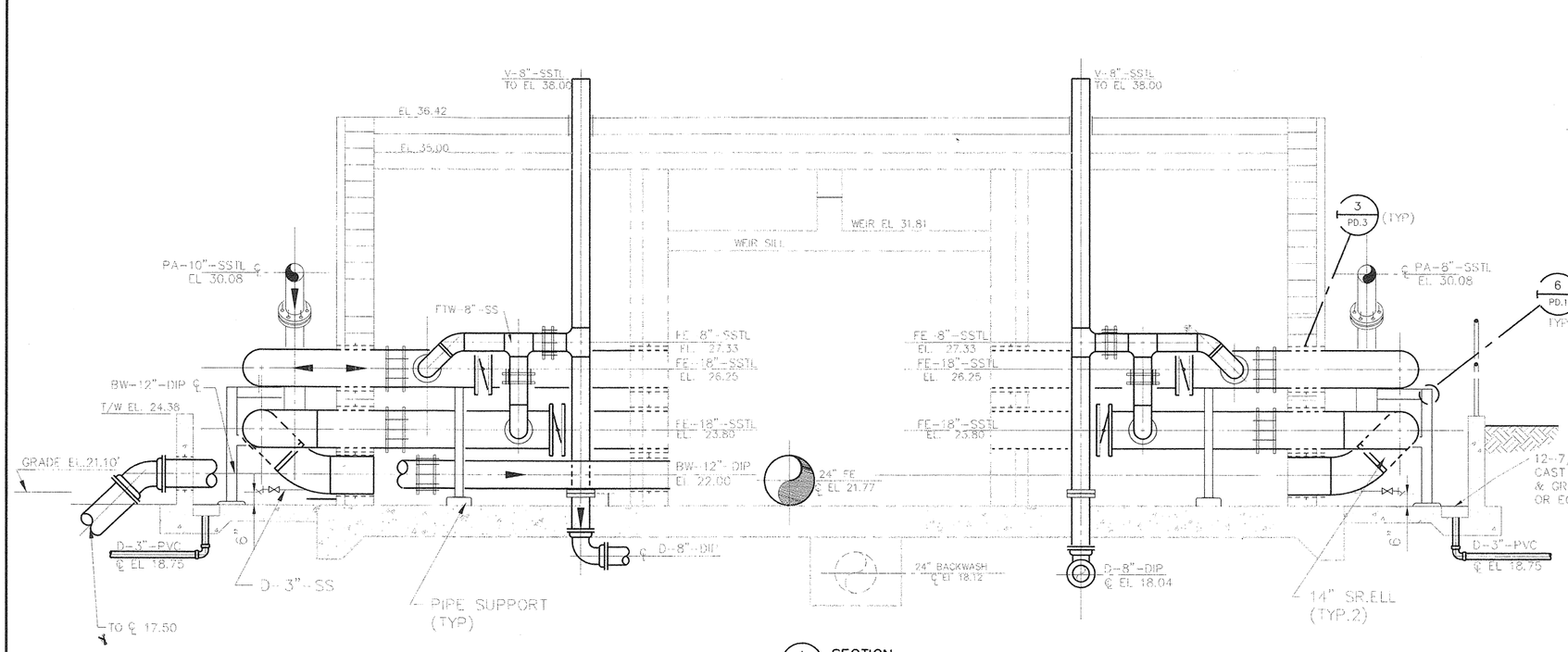
CITY OF GEORGETOWN
SOUTH CAROLINA

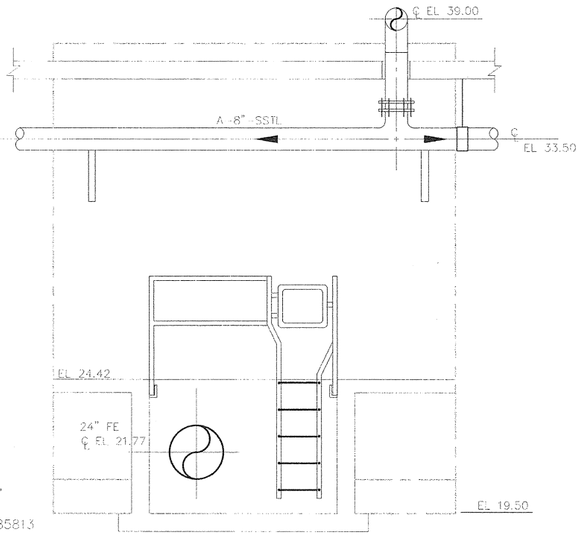
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 11180 ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

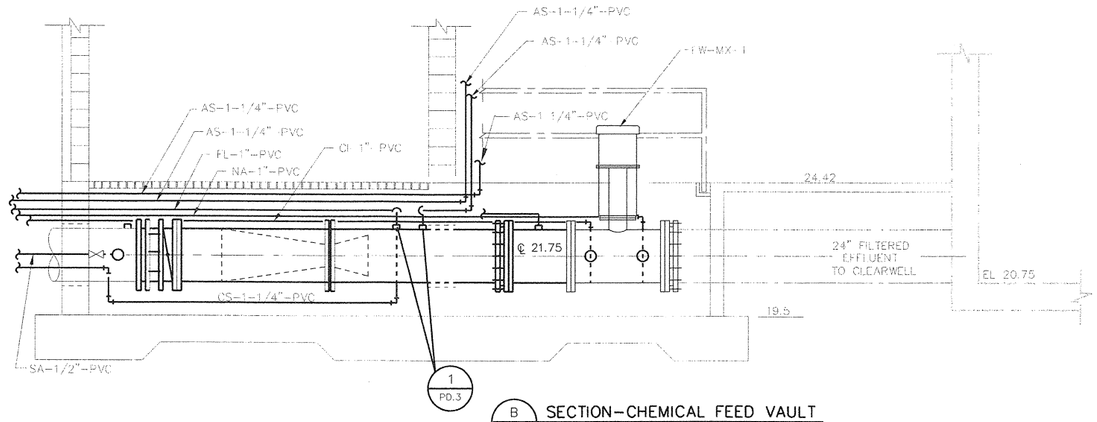
FILTER BUILDING MODIFICATIONS

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P4.1	1
DRAWN: ST	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

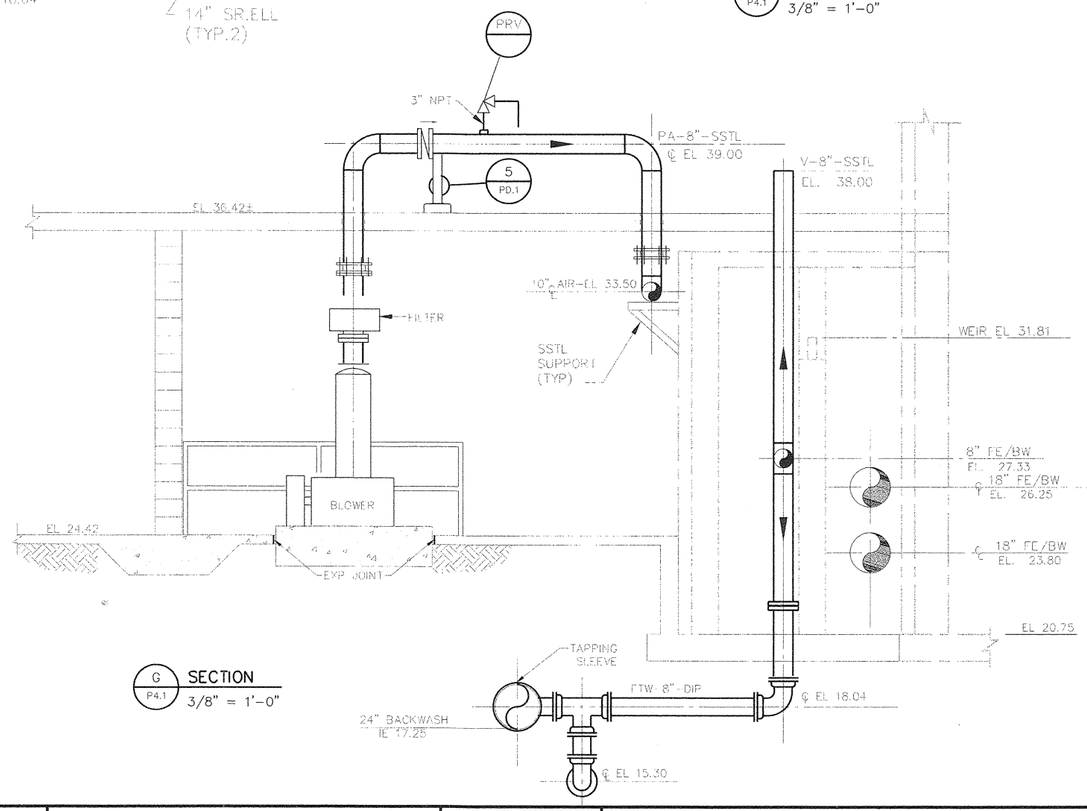




C P4.1 SECTION 3/8" = 1'-0"



B P4.1 SECTION-CHEMICAL FEED VAULT



G P4.1 SECTION 3/8" = 1'-0"

cap08pc2.dwg 08.01.01

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GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

REGISTERED PROFESSIONAL ENGINEER — SOUTH CAROLINA — No. 11180 — ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FILTER BUILDING SECTIONS
CHEMICAL FEED VAULT

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P4.2	1
DRAWN: ST	JOB NO. 2193.006	SCALE: 3/8" = 1'-0"	SHEET	REV

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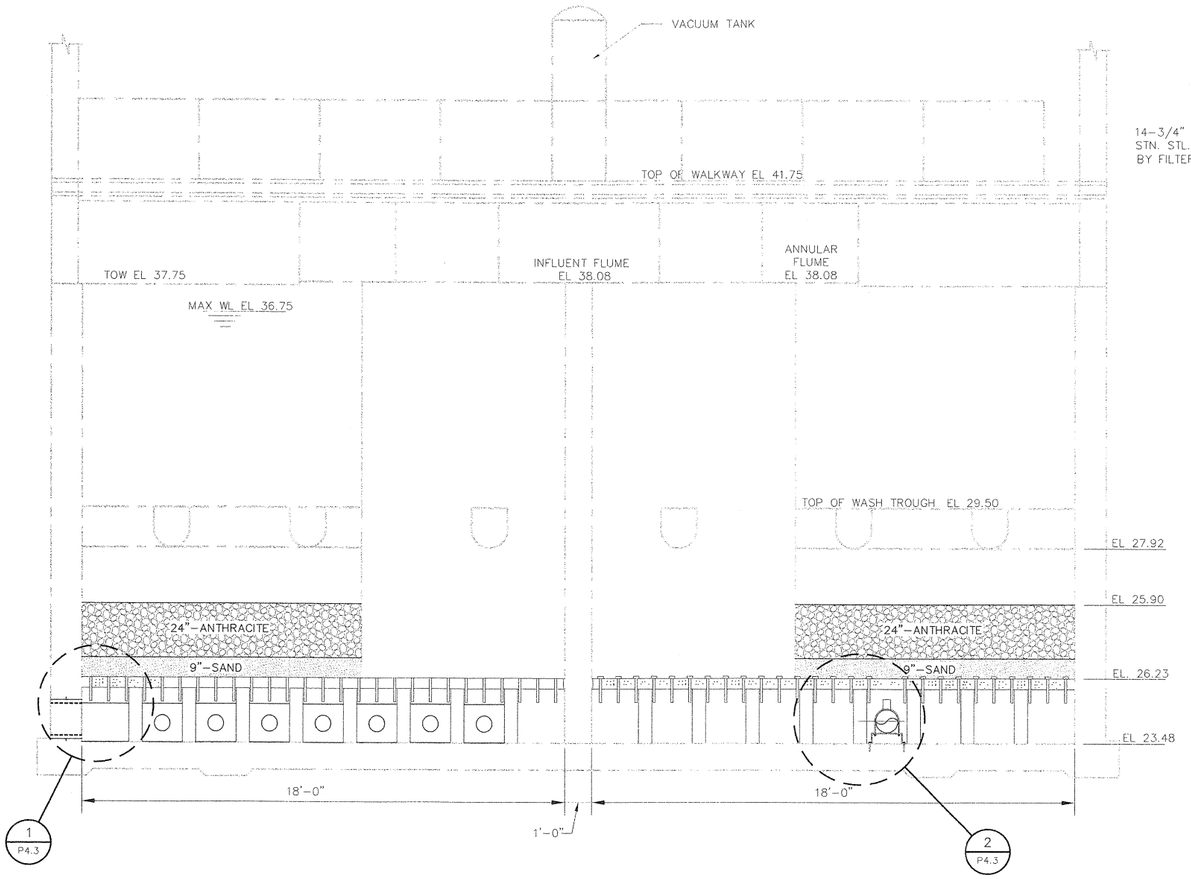

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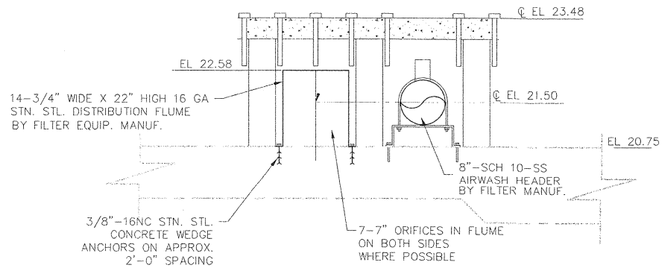
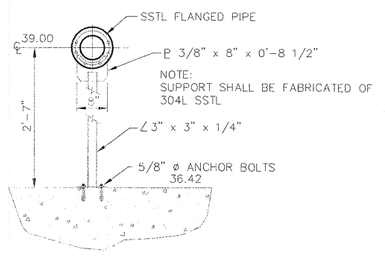
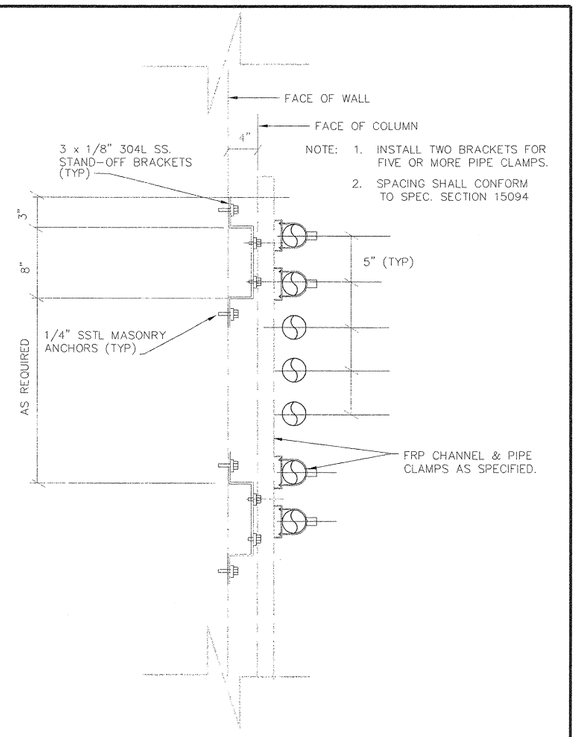
3/8" = 1'-0"



DETAIL 2 P4.3
NTS

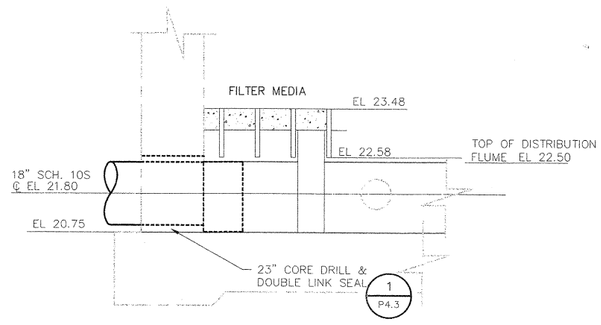


PIPE SUPPORT DETAIL 5 P5.2
NTS



STAND-OFF STACKED PIPE SUPPORT

DETAIL 3 P4.3
NTS



PENETRATION DETAIL 1 P4.3
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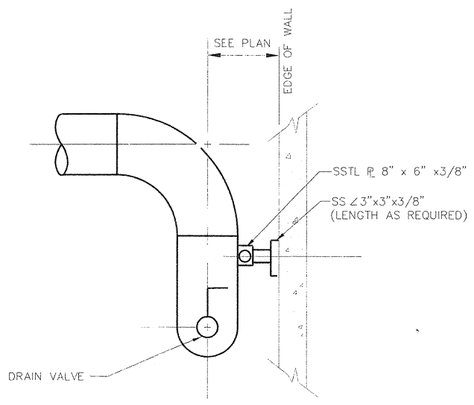
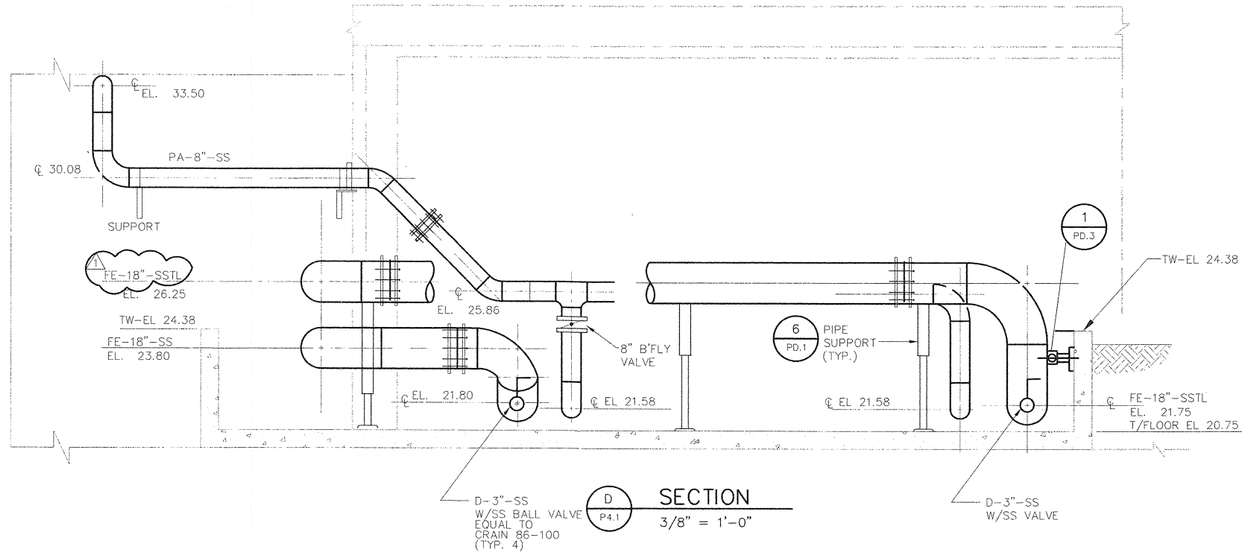


SUPPORT DETAIL 1 P4.3
NTS



D P4.1 SECTION
3/8" = 1'-0"

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08.01.01

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Jordan Jones & Goulding

GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

REGISTERED PROFESSIONAL ENGINEER — No. 11180 — ROBERT F. HOFFMAN — SOUTH CAROLINA

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FILTER BUILDING SECTIONS

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P4.3 SHEET	1 REV
DRAWN: ST	JOB NO. 2193.006	SCALE: 3/8" = 1'-0"		

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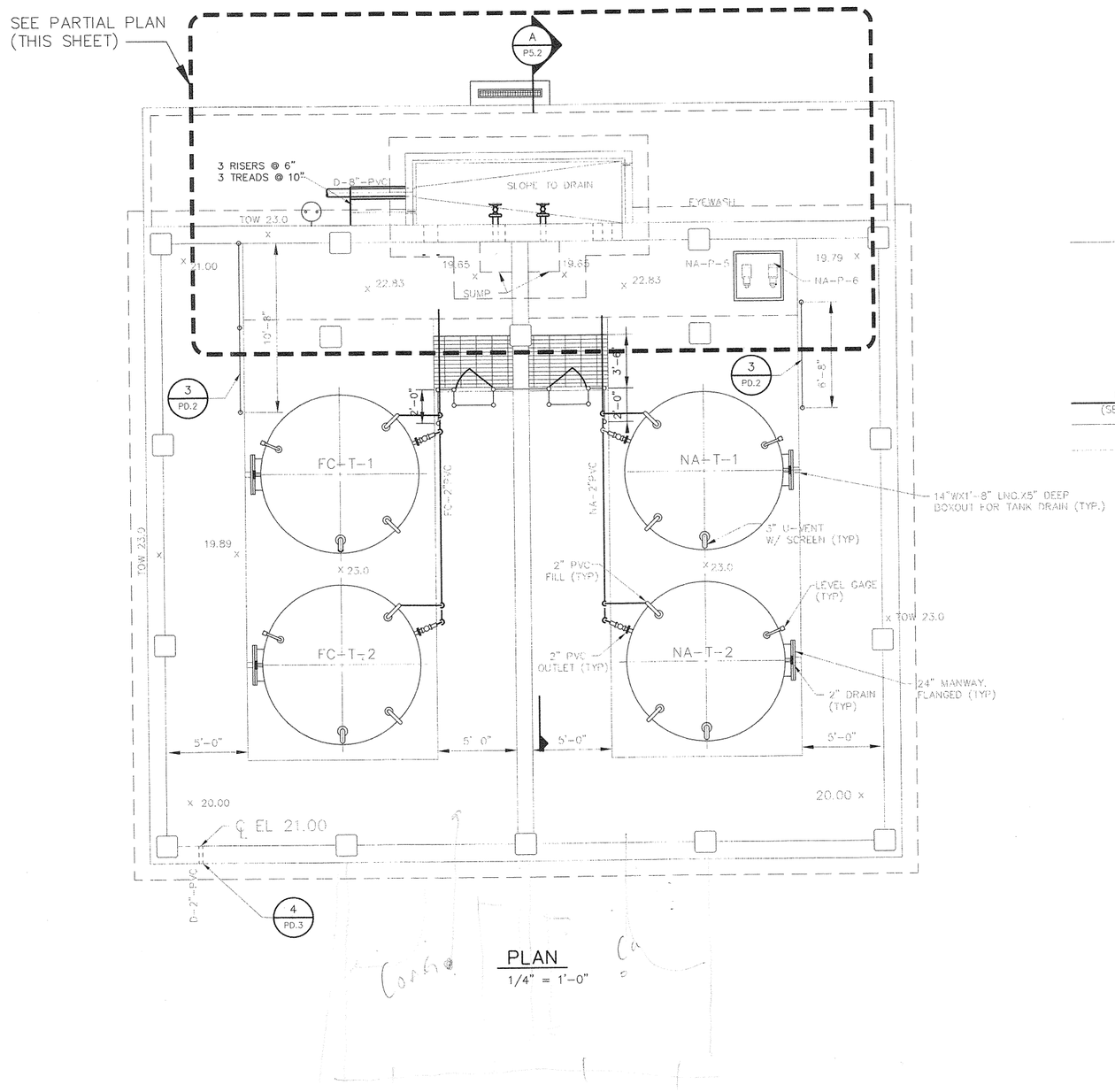
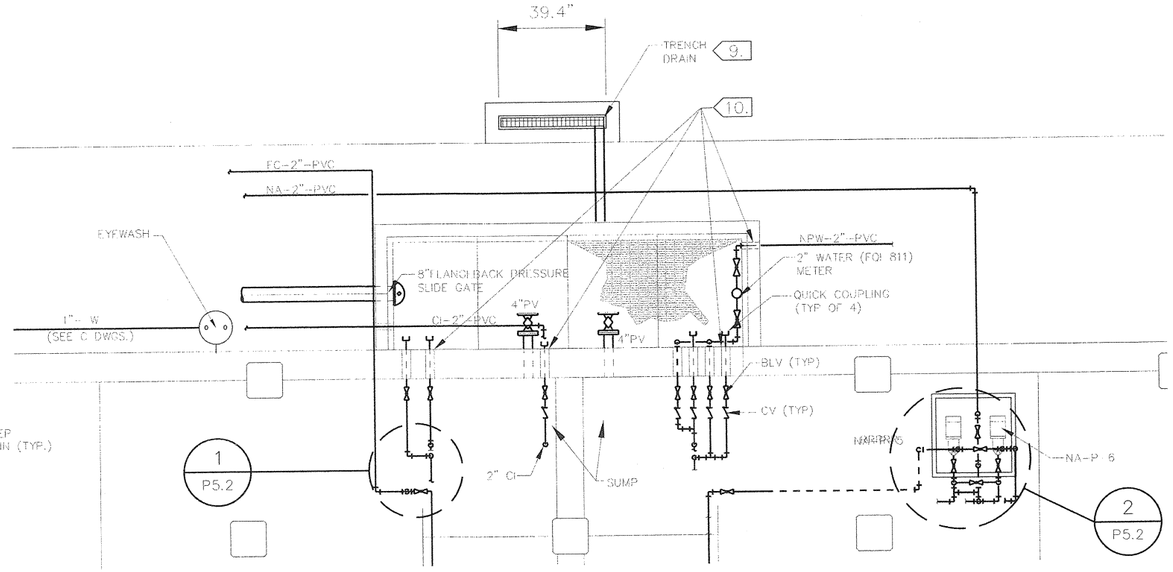


PLAN
1/4" = 1'-0"



PARTIAL PLAN
3/8" = 1'-0"

NOTES

1. ALL PIPE SUPPORTS FOR PVC PIPING SHALL BE GLASS REINFORCED POLYESTER CHANNEL FRAMING SYSTEM WITH POLYURETHANE STRAPS AND FITTINGS. POST BASES SHALL BE USED FOR ALL POST SUPPORTS. SUPPORT SYSTEM SHALL BE MANUFACTURED BY AICKINSTRUT.
2. CHECK VALVES SHALL BE BALL TYPE, PVC, SINGLE UNION, SPRING LOADED, EPDM SEAT/SEAL.
3. BALL VALVES SHALL BE PVC, TRUE UNION, EPDM SEAT/SEAL.
4. ALL PVC PIPING AND FITTINGS SHALL BE SCHEDULE 80.
5. ALL EXPOSED PIPING 2-INCH AND SMALLER SHALL BE HEAT TRACED AND INSULATED AS SPECIFIED.
6. PROVIDE 2" NUT OPERATOR ON PLUG VALVE & SLIDE GATE NO EXTENSIONS REQUIRED.
7. MALL QUICK COUPLING ADAPTERS FOR FERRIC CHLORIDE SUPPLY SHALL BE POLYPROPYLENE GLASS FIBER REINFORCED, EQUAL TO ANDREWS 200-F. ADAPTERS FOR CAUSTIC AND CORROSION INHIBITOR SUPPLY SHALL BE 304 STAINLESS STEEL.
8. GRATING AND SEAT ANGLE SHALL BE 1 1/2" FRP. FURNISH FOUR PANELS AS SHOWN ON THE PLAN.
9. TRENCH DRAIN SHALL BE POLYESTER CONCRETE EQUAL TO ACO,S-100, 4-INCH WIDTH. GRATE SHALL BE VINYLESTER FIBERGLASS.
10. CORES AND LINK-SEAL ALL PIPING PENETRATIONS.

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02.12.02

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GEORGETOWN SOUTH CAROLINA 1734

CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 11180 ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FERRIC CHLORIDE AND CAUSTIC BULK TANKS

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P5.1	1
DRAWN: RB/ST	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV.

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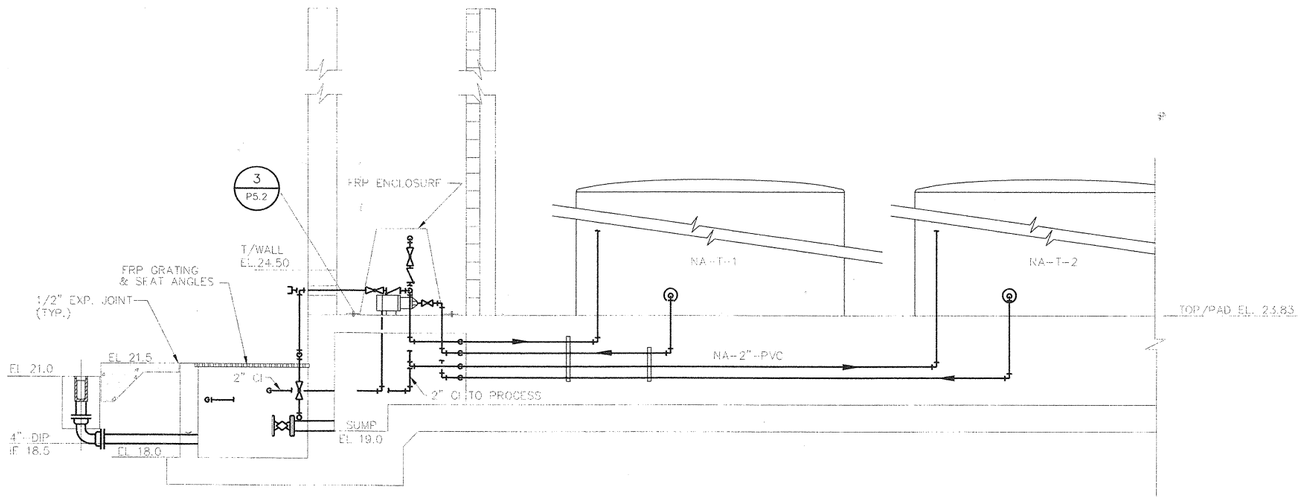
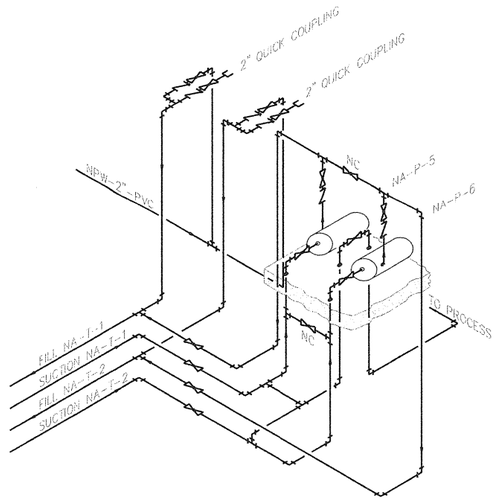


SECTION
3/8" = 1'-0"
A
P5.1



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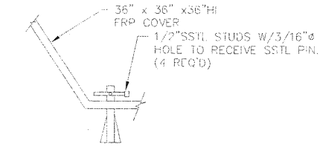
P5.1
SODIUM HYDROXIDE PIPING SCHEMATIC
NTS



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P5.2
ANCHOR DETAIL
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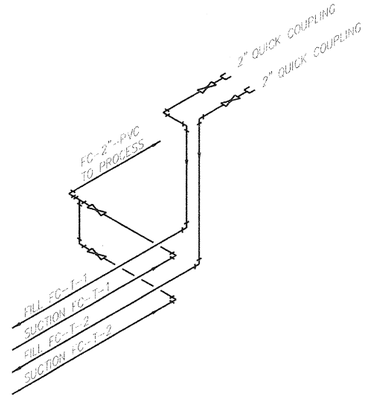

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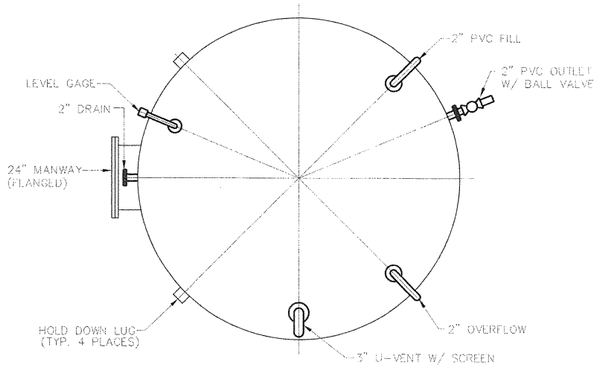
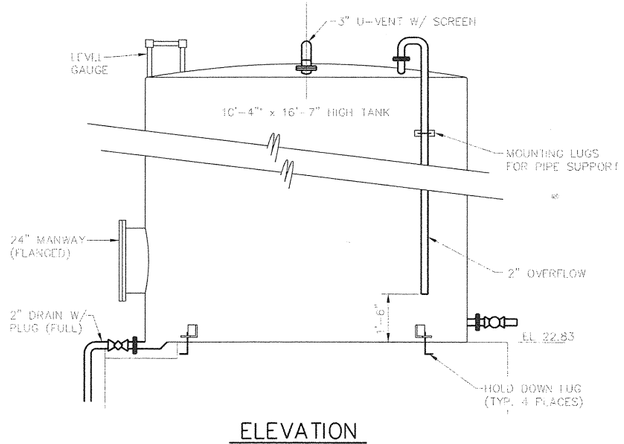
P5.1
FERRIC CHLORIDE PIPING SCHEMATIC
NTS



PLAN
NTS



ELEVATION
NTS

TANK DETAIL

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08.01.01

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SOUTH CAROLINA

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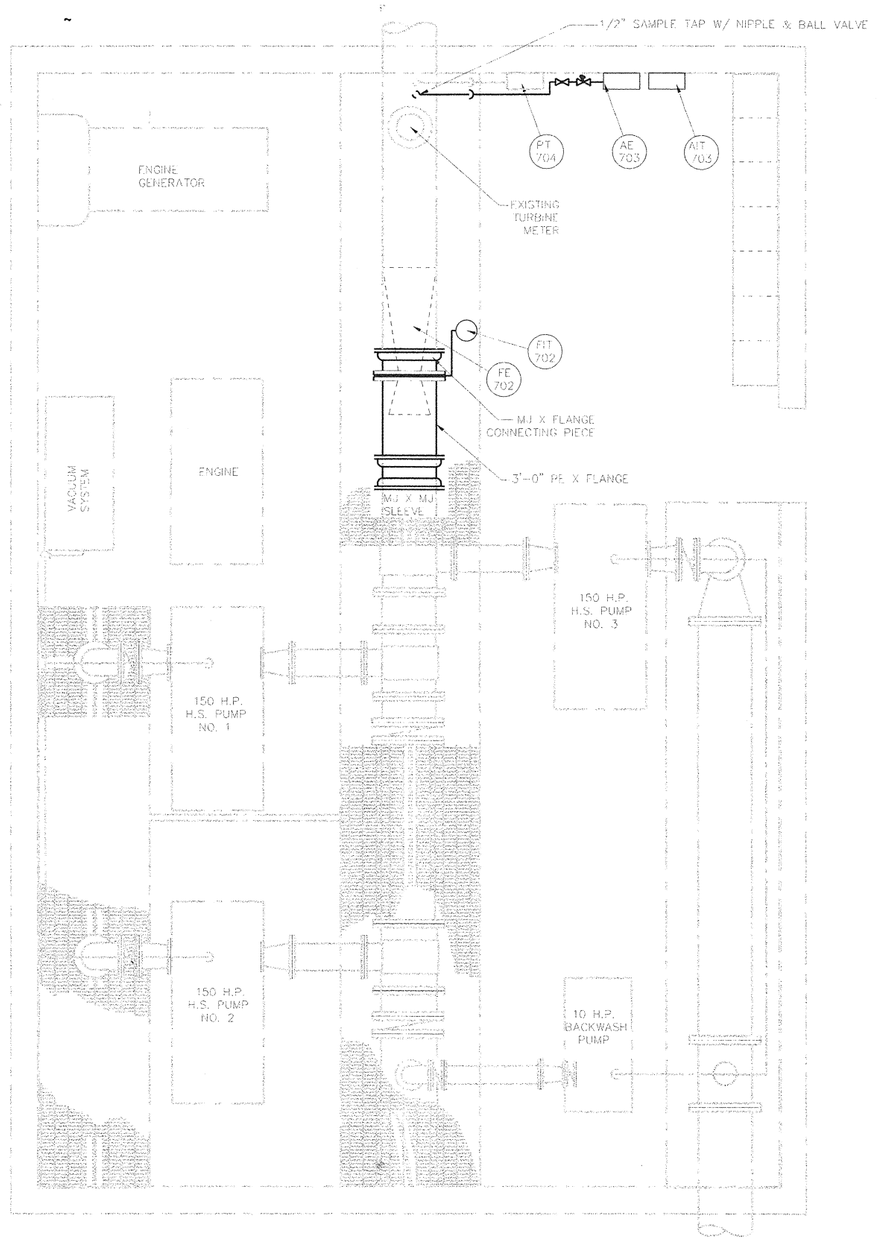
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FERRIC CHLORIDE AND CAUSTIC BULK TANKS
SECTION, SCHEMATICS AND DETAIL

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P5.2 SHEET	1 REV
DRAWN: ST	JOB NO. 2193.006	SCALE: AS SHOWN		

CMIZZELL



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02.12.02

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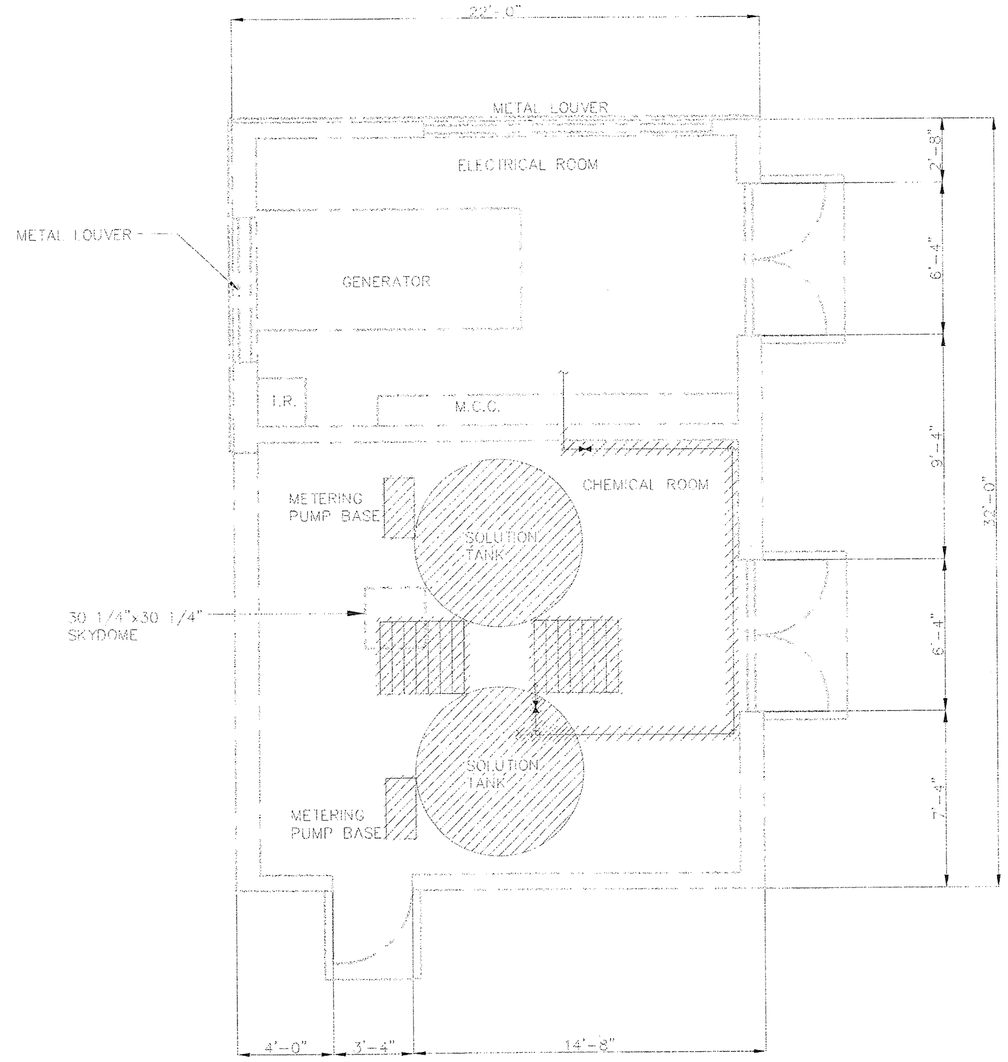
No. 11180
ROBERT F. HOFFMAN

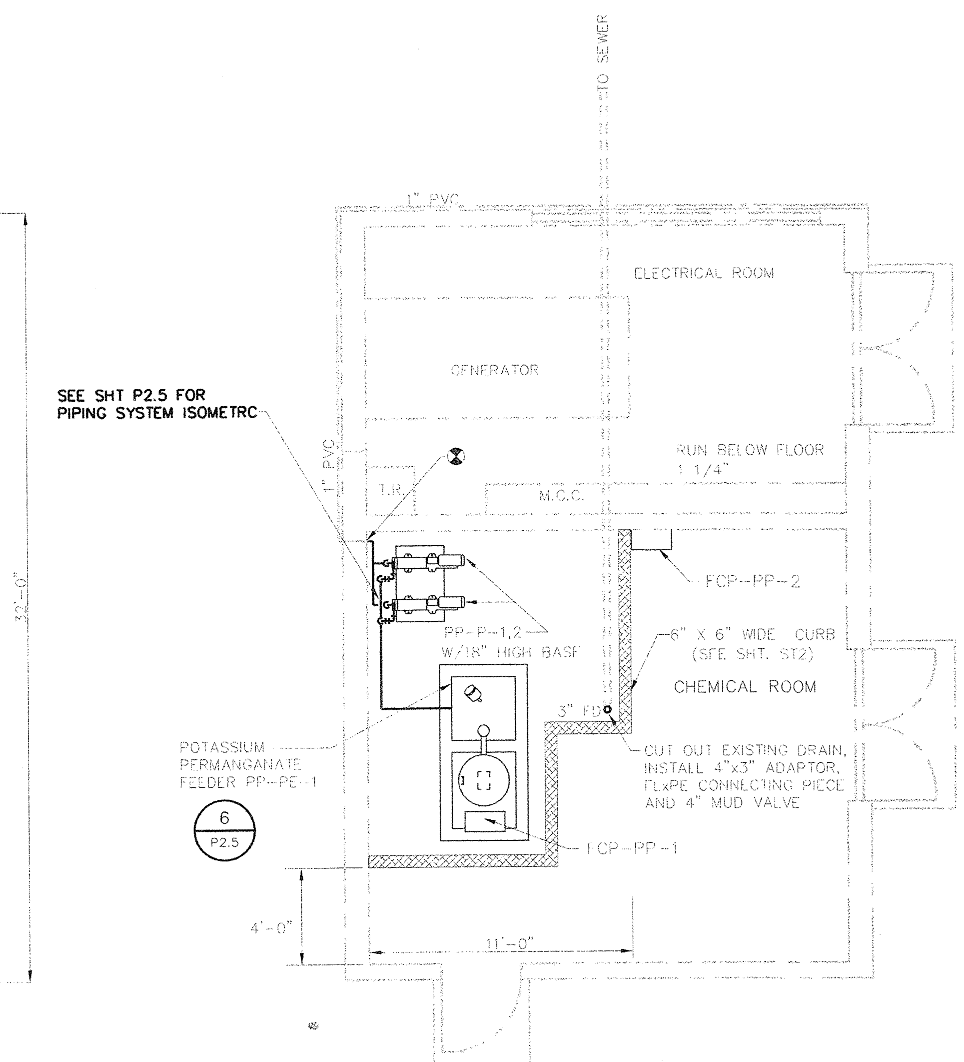
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

HIGH SERVICE PUMPING BUILDING PLAN

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P6.1	1
DRAWN: ST	JOB NO. 2193.006	SCALE: 3/8" = 1'-0"	SHEET	REV



DEMOLITION PLAN
1/4" 1'-0"



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

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08.01.01

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SOUTH CAROLINA

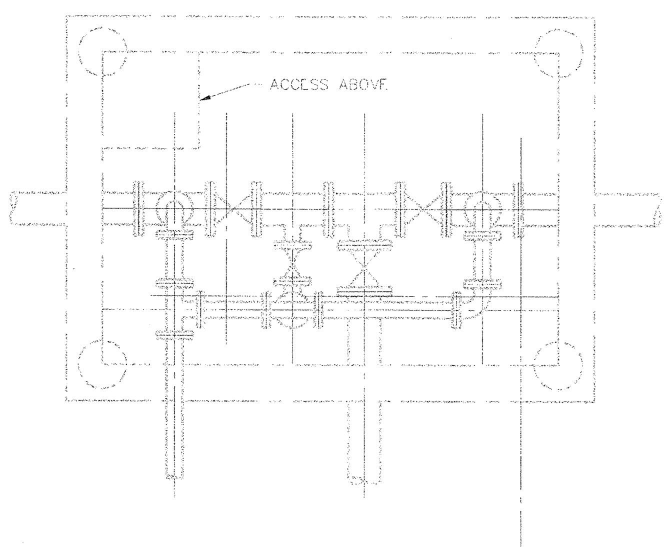
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 11180 ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

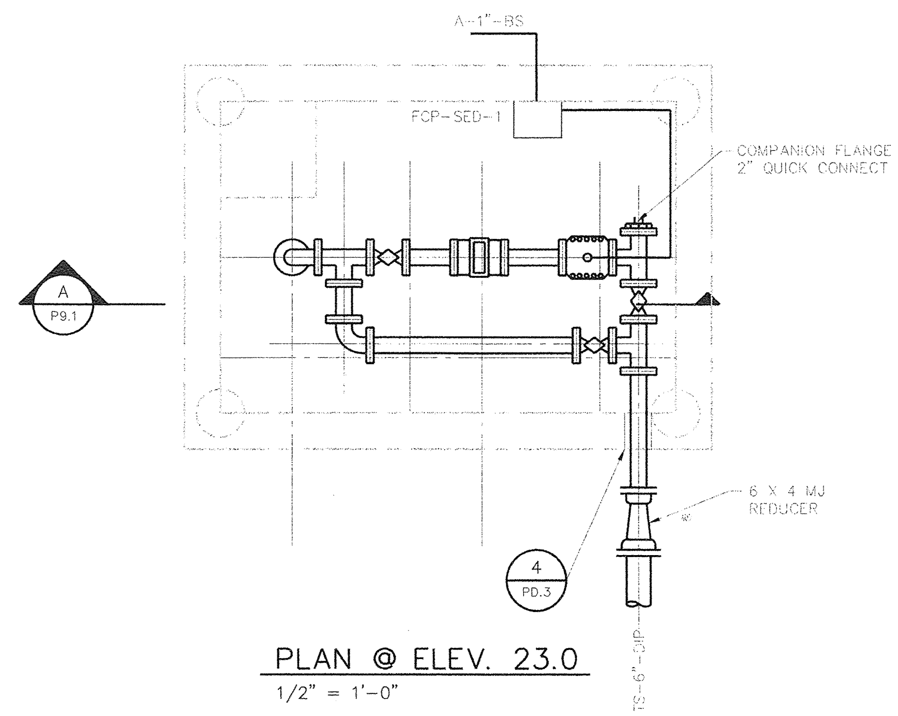
RAW WATER PUMPING BUILDING IMPROVEMENTS
POTASSIUM PERMANGANATE SYSTEM

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P8.1 SHEET	1 REV
DRAWN: RB	JOB NO. 2193.006	SCALE: AS SHOWN		

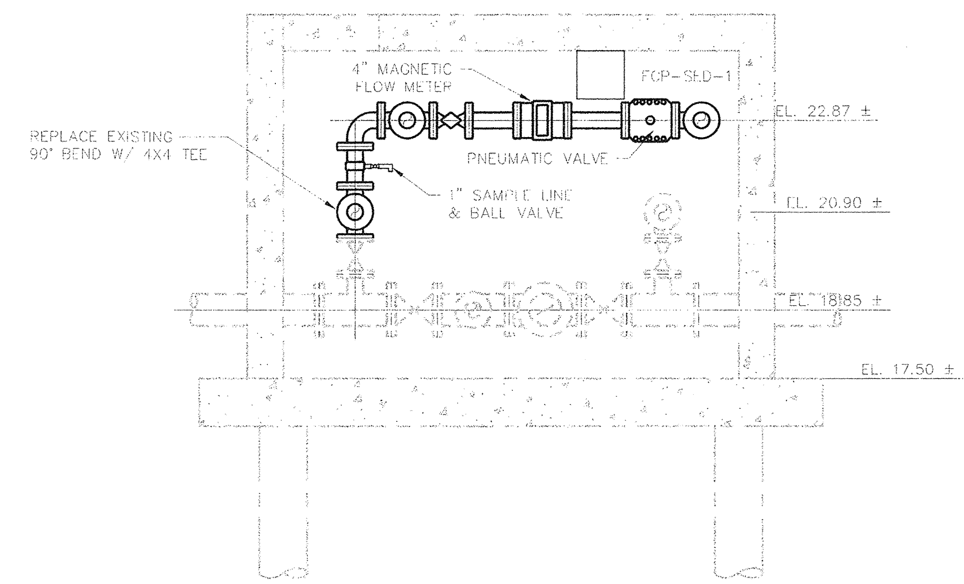
CMIZZELL



EXISTING PIPING PLAN
1/2" = 1'-0"



PLAN @ ELEV. 23.0
1/2" = 1'-0"



A
P9.1
SECTION
1/2" = 1'-0"

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08.01.01

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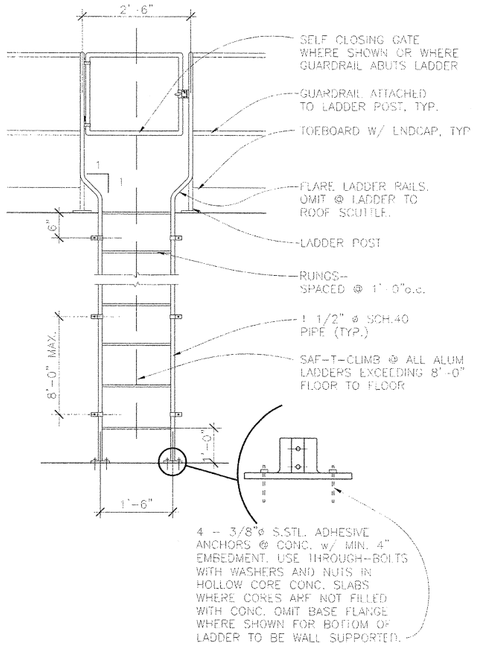
No. 11180
ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

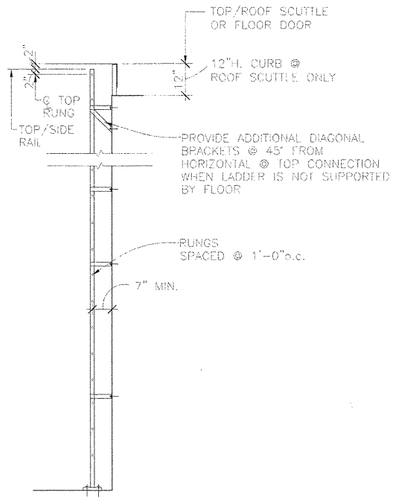
SLUDGE CONTROL STUCTURE MODIFICATIONS

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	P9.1	1
DRAWN: ST	JOB NO. 2193.006	SCALE: 1/2" = 1'-0"	SHEET	REV



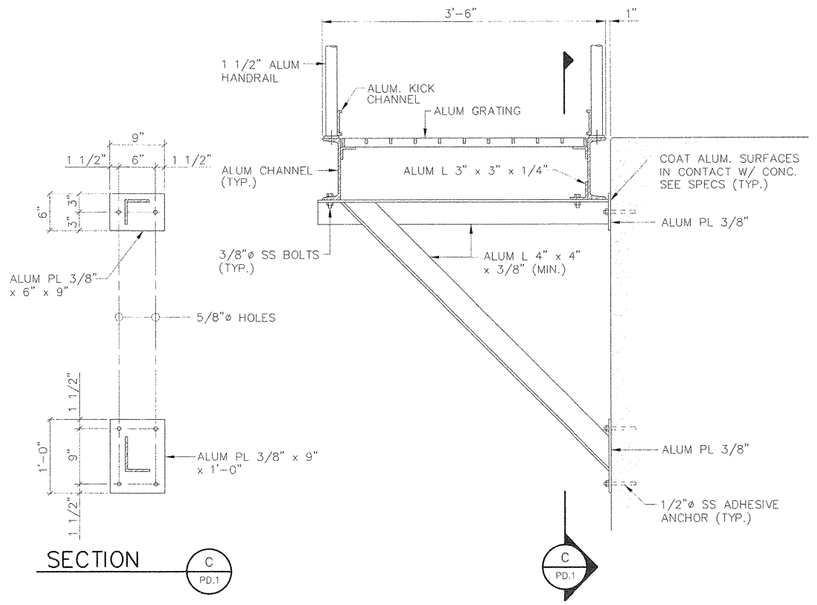
1 / P4.1 TYPICAL ALUMINUM LADDER DETAILS

N.T.S.



A / A4.5 TYPICAL ALUM. LADDER TO ROOF SCUTTLE OR FLOOR DOOR

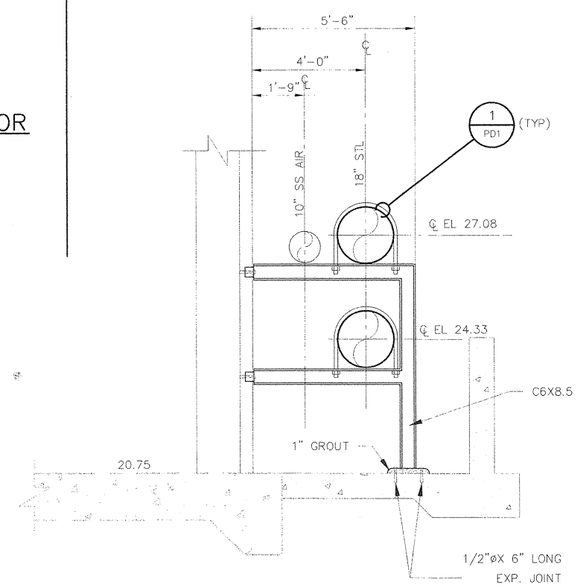
N.T.S.



SECTION C / PD.1

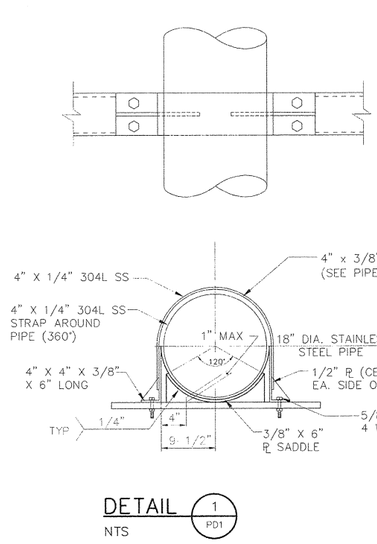
SUPPORT BRACKET DETAIL 4 / P3.3

NTS



PIPE SUPPORT DETAIL 6 / P4.2

NTS

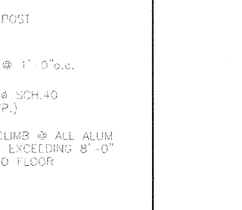


DETAIL 1 / PD1

NTS

NOTE: ALL FRAME COMPONENTS SHALL BE HOT-DIP GALVANIZED FOLLOWING FABRICATION

SADDLE, STRAP AND ANCHORS SHALL BE STAINLESS STEEL



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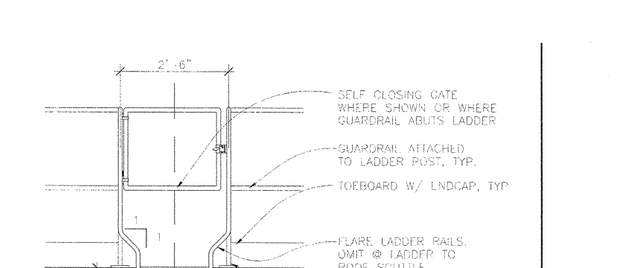

NOTES:
1. UNLESS SHOWN OTHERWISE, TYPE "A" SHALL BE USED.
2. ALL MATERIALS ARE ALUMINUM EXCEPT HARDWARE WHICH SHALL BE STAINLESS STEEL.

TYPICAL ALUMINUM GRATING DETAILS 7

NTS

NOTES:
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SOUTH CAROLINA — Jordan, Jones & Goulding, Inc. — No. C00554 — CERTIFICATE OF AUTHORIZATION

NO.	DATE	DESCRIPTION OF REVISION
1	08-02-01	RECORD DRAWING
0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

CITY OF GEORGETOWN SOUTH CAROLINA

REGISTERED PROFESSIONAL ENGINEER — SOUTH CAROLINA — No. 11180 — ROBERT F. HOFFMAN

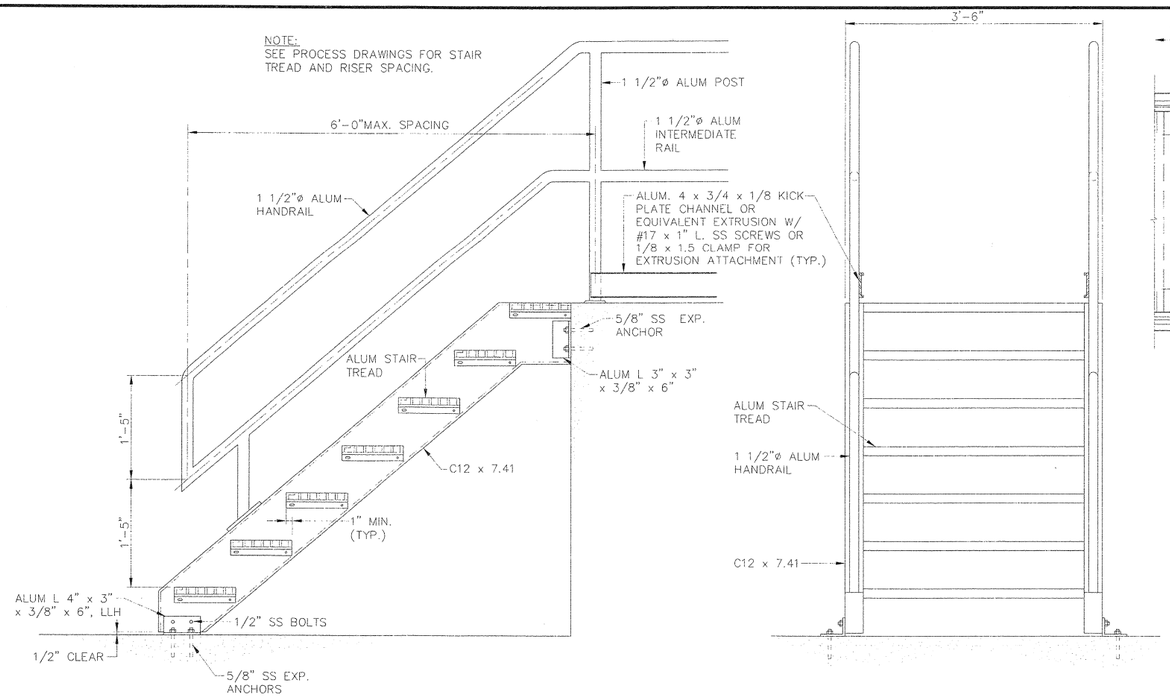
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

MISCELLANEOUS METALS

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	PD.1 SHEET	1 REV
DRAWN: RB	JOB NO. 2193.006	SCALE: AS SHOWN		

cog06p1.dwg 08.01.01

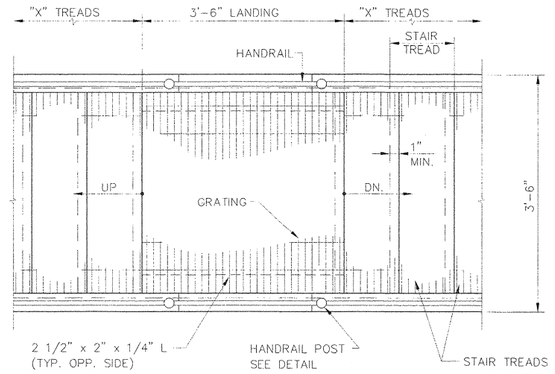
CAD FILE



TYPICAL SINGLE FLIGHT ALUMINUM STAIR DETAIL

NTS

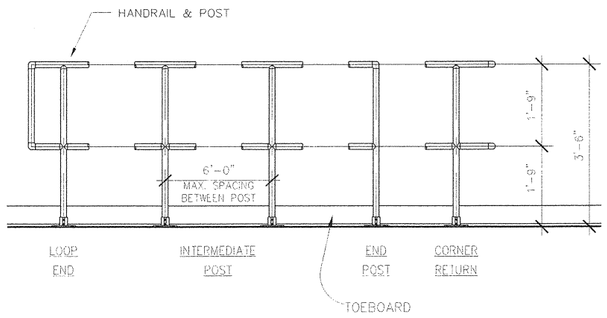
1 PD.2



NOTE:
HANDRAIL SHALL NOT BE PROVIDED ON INTERIOR STRINGER WHERE STAIRWAY IS ENCLOSED ON ONE SIDE BY A WALL AT LEAST 34 INCHES HIGH WHEN MEASURED AT THE FOWARD EDGE OF TREAD.

TYPICAL PLAN AT INTERMEDIATE LANDING ALUMINUM STAIR DETAIL

NTS



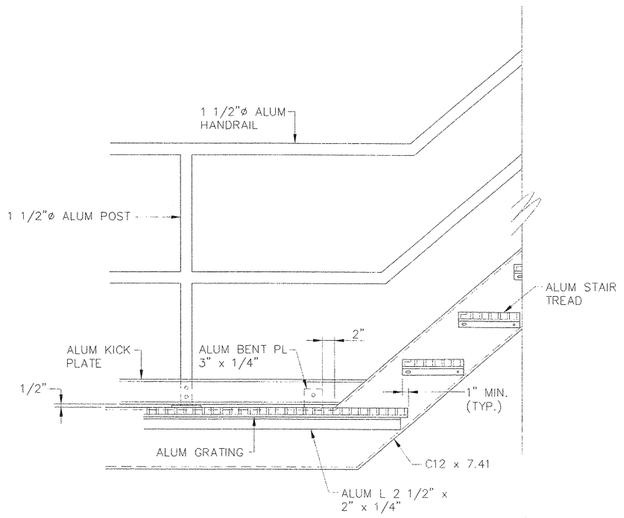
NOTE: MAX. POST SPACING 6'-0" O.C.

ELEVATION

TYPICAL ALUMINUM HANDRAIL DETAILS

NTS

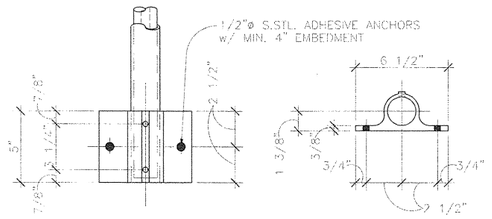
8 PD.2



TYPICAL STAIR LANDING TO GRATING

NTS

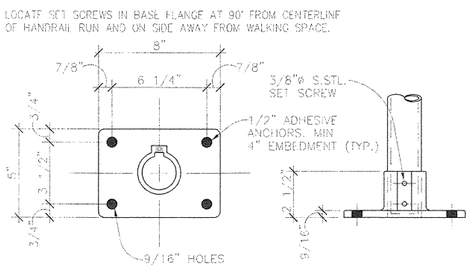
2 PD.2



SIDE MOUNT HANDRAIL DETAIL

NTS

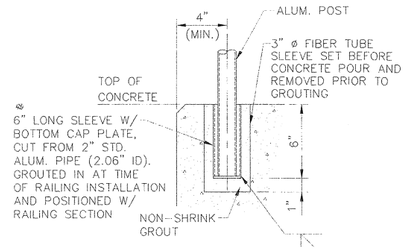
3 PD.2



EMBEDDED HANDRAIL DETAIL

NTS

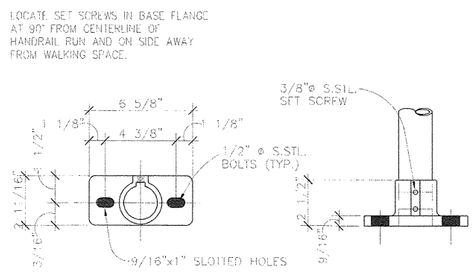
4 PD.2



REMOVABLE HANDRAIL DETAIL

NTS

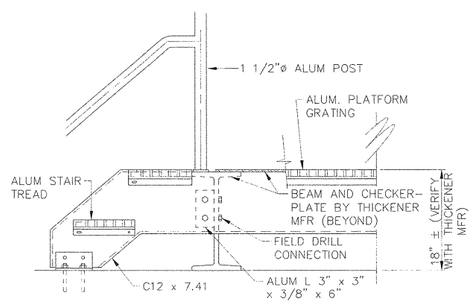
5 PD.2



TYP. CHANNEL MOUNT ALUM POST DETAIL

NTS

6 PD.2



STAIR CONNECTION TO SETTLER BRIDGE

NTS

10 PD.2

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CITY OF GEORGETOWN SOUTH CAROLINA

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 11180 — ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

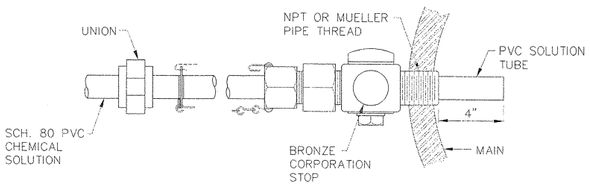
MISCELLANEOUS PROCESS METALS

DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2000	PD.2 SHEET	1 REV
DRAWN: RB	JOB NO. 2193.006	SCALE: AS SHOWN		

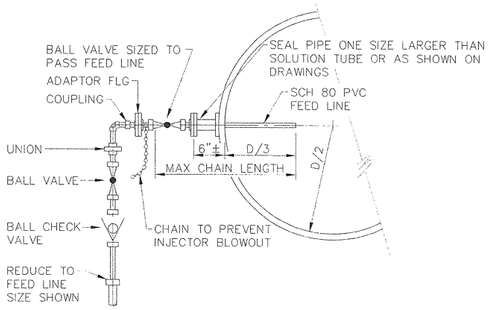
CMIZZELL

PROCESS PIPING NOTES

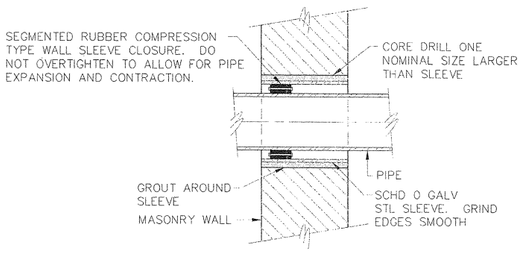
1. FLANGED BENDS IN DUCTILE IRON PIPE ARE SHORT RADIUS UNLESS OTHERWISE INDICATED.
2. ELBOWS IN FABRICATED STAINLESS STEEL PIPE ARE LONG RADIUS UNLESS OTHERWISE NOTED
3. PIPE SUPPORTS, HANGERS AND BRACKETS NECESSARY TO INSTALL PIPING AND THE SPACING OF SUPPORTS SHALL BE PROVIDED AS SPECIFIED IN SECTION 15094 UNLESS OTHERWISE INDICATED.
4. PROVIDE STAINLESS STEEL HANGERS, RODS AND HARDWARE WHERE INDICATED. SPACING SHALL BE AS SPECIFIED FOR GENERAL PURPOSE HANGERS.
5. THE CONTRACTOR SHALL MAKE ALL REQUIRED FIELD MEASUREMENTS TO VERIFY EXISTING DIMENSIONS AND ELEVATIONS.
6. ALL PLUG VALVES SHALL BE LEVER OPERATED UNLESS OTHERWISE NOTED.
7. ALL PENETRATIONS OF CONCRETE STRUCTURES BY DUCTILE IRON PIPE 4-INCHES IN DIAMETER AND LARGER SHALL BE MADE WITH NEW MECHANICAL JOINT WALL SLEEVES UNLESS OTHERWISE SHOWN ON THE DRAWINGS. PROVIDE RETAINER GLANDS WHERE SHOWN.



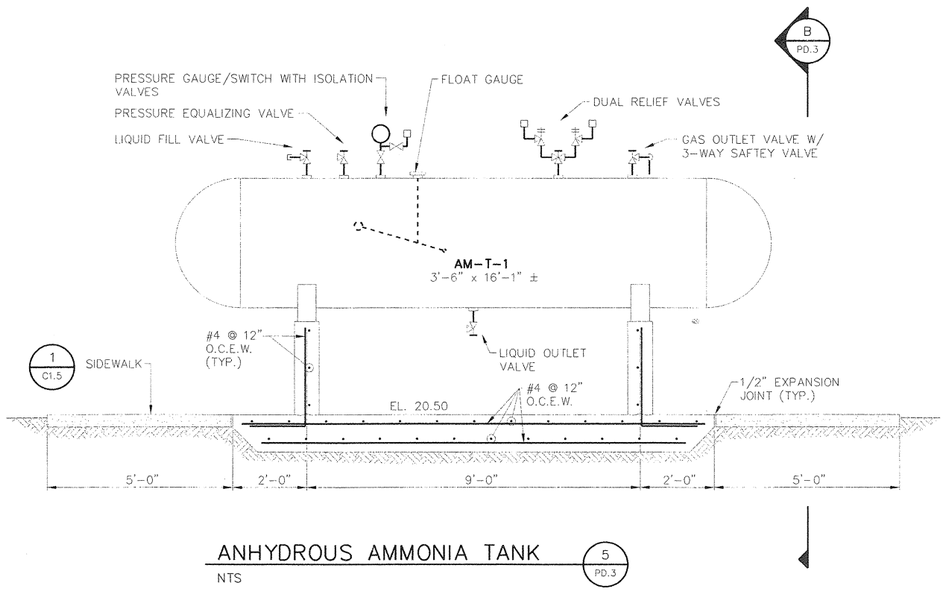
SOLUTION DIFFUSER DETAIL (TYPE A) — 1 / PD.3



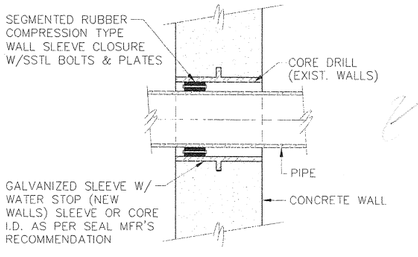
SOLUTION DIFFUSER DETAIL (TYPE B) — 2 / PD.3



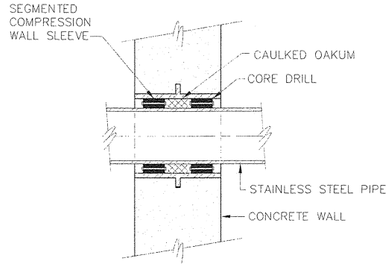
MASONRY WALL SLEEVE DETAIL — 3 / PD.3
NTS



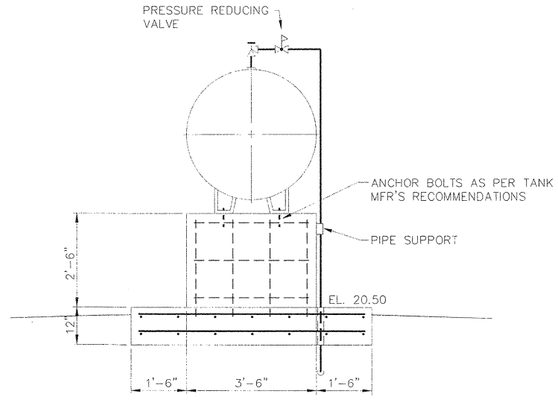
ANHYDROUS AMMONIA TANK — 5 / PD.3
NTS



WALL PENETRATION DETAIL — 4 / PD.3
NTS



WALL PENETRATION DETAIL — 4 / PD.3
NTS



SECTION — B / PD.3
NTS

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CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 11180 — ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

MISCELLANEOUS PROCESS DETAILS

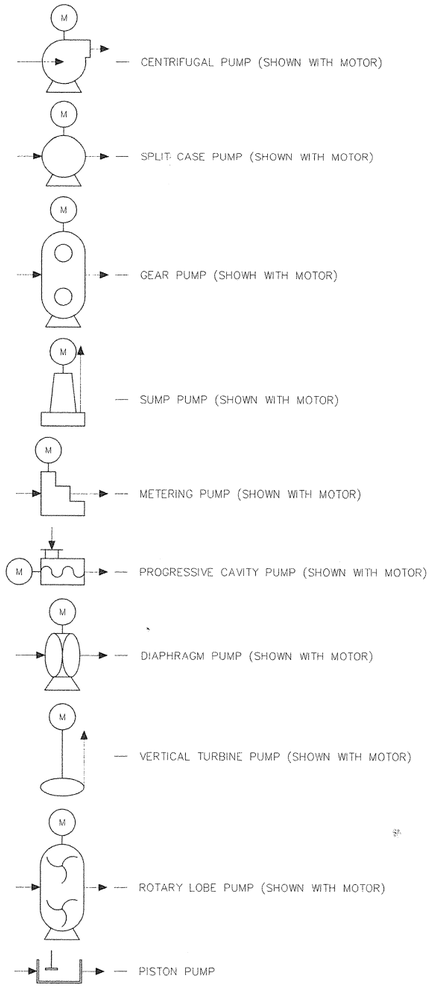
DESIGNED: RFH	CHECKED:	DATE: NOVEMBER 2001	PD.3 SHEET	1 REV
DRAWN: RB	JOB NO. 2193.005	SCALE: AS SHOWN		

PIPING AND VALVE SYMBOLS

- GATE VALVE
- GLOBE VALVE
- BALL VALVE
- CHECK VALVE
- BUTTERFLY VALVE
- PLUG VALVE
- DIAPHRAGM
- ANGLE VALVE
- THREE WAY VALVE
- PRESSURE REDUCING VALVE
- BACKFLOW PREVENTER
- SOLENOID OPERATED VALVE
- BACK PRESSURE VALVE
- PRESSURE RELIEF OR SAFETY VALVE
- KNIFE GATE VALVE
- NEEDLE VALVE
- ROTARY VALVE
- FOOT VALVE
- POST INDICATING VALVE
- PINCH VALVE
- DIAPHRAM WEIR VALVE
- PNEUMATIC DIAPHRAGM OPERATED VALVE
- HYDRAULIC DIAPHRAGM OPERATED VALVE
- ELECTRIC MOTOR OPERATED VALVE
- FLOAT VALVE
- PRESSURE CONTROL VALVE (PCV)
- TEMPERATURE CONTROL VALVE (TCV)
- AUTOMATIC AIR VENT (AAV)
- MANUAL AIR VENT (MAV)
- THERMOWELL
- WEIR GATE (WG)
- SLIDE GATE (SG)
- SLUICE GATE (SLG)
- TELESCOPING VALVE (TV)
- STEAM TRAP
- MANUAL VOLUME DAMPER
- ACTUATED VOLUME DAMPER
- FLEXIBLE CONNECTION
- EXPANSION JOINT
- PIPE GUIDE
- PIPE ANCHOR

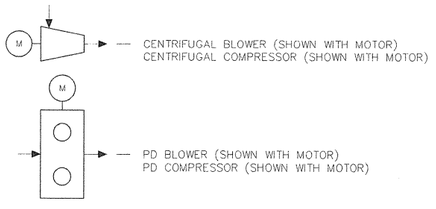
- REDUCER
- UNION
- WYE STRAINER
- BASKET STRAINER
- COUPLING (TRANSITION)
- QUICK COUPLING
- CALIBRATION CHAMBER
- WATER HAMMER ARRESTOR
- ROTAMETER
- PULSATION DAMPER
- EDUCTOR
- INJECTOR
- STATIC METER
- MIXER
- V-NOTCH WEIR
- DRAIN
- DIAPHRAGM OR LOAD CELL
- AIR SET
- INSERTION INSTRUMENT
- AUTOMATIC CONDENSATE TRAP
- PRESS/VAC RELIEF VALVE W/O FLAME ARRESTOR
- PRESS/VAC RELIEF WITH FLAME ARRESTOR
- FLAME ARRESTOR WITH COVER
- FLAME ARRESTER
- SPACE HEATER/HEAT TRACING
- ELECTRIC MOTOR
- CAP
- RUPTURE DISK (ON PRESSURE)
- RUPTURE DISK (ON VACUUM)
- FLEXIBLE HOSE WITH QUICK COUPLINGS
- FLANGES
- PRESSURE INSTRUMENT PROTECTOR
- PARTICULATE FILTER
- DESSICANT DRYER
- SEPARATOR
- BUBBLER SYSTEM
- OPEN CHANNEL OR OPENINGS BETWEEN TANKS (NON-PIPED FLOW)
- PRESSURE RELIEF AND FLAME TRAP

PUMP SYMBOLS



- CENTRIFUGAL PUMP (SHOWN WITH MOTOR)
- SPLIT CASE PUMP (SHOWN WITH MOTOR)
- GEAR PUMP (SHOWH WITH MOTOR)
- SUMP PUMP (SHOWN WITH MOTOR)
- METERING PUMP (SHOWN WITH MOTOR)
- PROGRESSIVE CAVITY PUMP (SHOWN WITH MOTOR)
- DIAPHRAGM PUMP (SHOWN WITH MOTOR)
- VERTICAL TURBINE PUMP (SHOWN WITH MOTOR)
- ROTARY LOBE PUMP (SHOWN WITH MOTOR)
- PISTON PUMP

BLOWER/COMPRESSOR SYMBOLS



- CENTRIFUGAL BLOWER (SHOWN WITH MOTOR)
  CENTRIFUGAL COMPRESSOR (SHOWN WITH MOTOR)
- PD BLOWER (SHOWN WITH MOTOR)
  PD COMPRESSOR (SHOWN WITH MOTOR)

LINE SYMBOLS

- PRIMARY PROCESS LINE
- SECONDARY PROCESS LINE
- EXISTING
- EXISTING TO BE REMOVED
- EXISTING TO BE ABANDONED
- FUTURE PIPING
- PIPE SPEC CHANGE (DIP / PVC)
- INSTRUMENT AIR (IA) OR SIGNAL AIR (SA)
- AIR SUPPLY (AS)
- SHEET CONTINUATION (SHEET: LINE ONE, LINE TWO)
- CONTINUATION ELSEWHERE, SAME SHEET (XX)

FLOW ELEMENT SYMBOLS

- VORTEX FLOW METER
- CORIOLIS FLOW METER
- PROPELLER FLOW METER
- ORIFICE PLATE
- PARSHALL FLUME
- MAGNETIC FLOW METER
- FLOW TUBE (VENTURI)

PIPELINE IDENTIFICATION

SSSS-DT-MOC-IT-DW

- DUAL WALL
- INSULATED AND/OR HEAT TRACED
- MATERIAL OF CONSTRUCTION
- NOMINAL PIPE DIAMETER
- SERVICE IDENTIFICATION

NOTES:

1. ALL DETAIL WIRING AND ELECTRICAL COMPONENTS ARE NOT SHOWN ON THE PROCESS AND INSTRUMENTATION DIAGRAM DRAWINGS. THE ELECTRICAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE PROCESS AND INSTRUMENTATION DIAGRAM DRAWINGS. THE PROCESS AND INSTRUMENTATION DIAGRAM DRAWINGS ARE PRESENTED AS A COORDINATING TOOL THAT INDICATES THE MAIN CONTROL LOGIC FOR THE PROJECT PROCESS SYSTEMS AND COMPONENTS. ACTUAL DETAIL LOGIC AND CONTROL COMPONENTS MAY DIFFER DEPENDING ON THE MANUFACTURER THAT IS AWARDED THE CONTRACT.
2. SEE CIVIL AND PROCESS DRAWINGS FOR PIPING DETAILS.
3. ALL INFORMATION ON THIS LEGEND MAY NOT BE USED.

SYSTEM, PROCESS & SERVICE LEGEND

SYSTEM OR UNIT DESIGNATION

A	AERATOR
AB	AERATION BASIN
AC	AIR COMPRESSOR
ADIG	ANAEROBIC DIGESTER
BFP	BELT FILTER PRESS
BL	BLOWER
BLR	BOILER
CENT	CENTRIFUGE
CLA	CHEMICAL LOAD AREA
CLAR	CLARIFIER
CLAS	CLASSIFIER
CON	CONVEYOR
DAF	DISSOLVED AIR FLOTATION
DER	DEAERATOR
DIG	DIGESTER
DT	DAY TANK
ED	EDUCTOR
EFF	EFFLUENT
EQ	EQUALIZATION
FOT	FUEL OIL TANK
FP	FILTER PRESS
GRC	GRIT CHAMBER
HT	HOLDING TANK
INF	INFLUENT
LA	LAND APPLICATION
MP	METERING PUMP
MX	MIXER
NAOCL	SODIUM HYPOCHLORITE
NEU	NEUTRALIZATION
O/W	OIL WATER SEPARATOR
P	PUMP
PA	POST AERATION
SAMP	SAMPLER
SB	SPLITTER BOX
SCR	SCRUBBER
SCRN	SCREEN
SEP	SEPARATOR
SHT	SLUDGE HOLDING TANK
T	TANK
THK	THICKENER

ABBREVIATIONS

B	BURNER
BRH	BLOWDOWN HEAT RECOVERY
BT	BULK TANK
C	CARBON
CB	CORE BLOW
CHEM	CHEMICAL FEED
CONC	CONCRETE
CS	CARBON STEEL (SEAMLESS)
EF	EXHAUST FAN
ELSG	ELECTRIC SLUICE GATE
EMV	ELECTRIC MOTOR OPERATED VALVE
FC	FAILED CLOSED
FCP	FIELD CONTROL PANEL
FIN	FINAL
FL	FAIL LOCKED
FLOC	FLOCULATION
FO	FAILED OPEN
HSG	HYDRAULIC SLUICE GATE
HT	HEAT TRACE
HV	HYDRAULIC VALVE
INT	INTERMEDIATE
IT	INSULATE & HEAT TRACE
LC	LEVEL CONTROL
LCP	LOCAL CONTROL PANEL
MCP	MAIN CONTROL PANEL
ME	MECHANICAL EQUIPMENT
MV	METERING VAULT
MV	MOTORIZED VALVE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
PE	PROCESS EQUIPMENT
PG	PIPE GALLERY
PRCS	PROCESS BUILDING
REC	RECYCLE
RM	ROTAMETER
RP	RECIRCULATING PUMP
S	SUMP
SF	SUPPLY FAN
SG	SLIDE GATE
SLG	SLUICE GATE
SMX	STATIC MIXER
STG	STAGE
SV	SOLENOID VALVE
SYS	SYSTEM
TCV	TEMPERATURE CONTROL VALVE
V	VALVE
VTX	VORTEX
WG	WEIR GATE

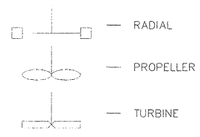
SERVICE IDENTIFICATION

AS	AIR SERVICE
AL	ALUM
BIOG	BIO-GAS
BWS	BACKWASH SUPPLY
BYP	BYPASS
CAUS	CAUSTIC
CD	CONDENSATE
CHWR	COOLING WATER RETURN
CHWS	COOLING WATER SUPPLY
CL	CHLORINE
COAG	COAGULANT
COMP	COMPOST
D	DRAIN
DSL	DIGESTED SLUDGE
FE	FILTER EFFLUENT
FECL	FERRIC CHLORIDE
FI	FILTER INFLUENT
FIL	FILTRATE
FL	FLUORIDE
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
GR	GRIT
HPS	HIGH PRESSURE STEAM
HPW	HIGH PRESSURE WATER
HWR	HEATED WATER RETURN
HWS	HEATED WATER SUPPLY
IA	INSTRUMENT AIR
LI	LIME
LPG	LP GAS TANK
LPO	LIQUID POLYMER
LPS	LOW PRESSURE STEAM
MH	METHANE
ML	MIXED LIQUOR
NH	AMMONIA
NAOH	SODIUM HYDROXIDE
NG	NATURAL GAS
NPW	NON-POTABLE WATER
NPY	NEAT POLYMER
NU	NUTRIENT
OG	OFF GAS
PD	PROCESS DRAIN
PE	PRIMARY EFFLUENT
PHOS	PHOSPHATE
PI	PRIMARY INFLUENT
POA	PHOSPHORIC ACID
PSL	PRIMARY SLUDGE
PW	POTABLE WATER
PY	POLYMER
RAS	RETURN ACTIVATED SLUDGE
RO	RECOVERED OIL
SA	SULFURIC ACID
SAM	SAMPLE LINE
SAM	SAMPLER
SC	SCUM
SD	STORM DRAIN
SL	SLUDGE
SS	SANITARY SEWER
THDSL	THICKENED DIGESTED SLUDGE
THWAS	THICKENED WASTE ACTIVATED SLUDGE
UD	UNDERDRAIN
UW	UTILITY WATER
WAS	WASTE ACTIVATED SLUDGE
WAT	WATER

MATERIAL OF CONSTRUCTION

BS	BLACK STEEL
CISP	CAST IRON SOIL PIPE
CPVC	CHLORINATED POLYVINYL CHLORIDE
CU	COPPER
DIP	DUCTILE IRON PIPE
FRP	FIBERGLASS REINFORCED PLASTIC
GS	GALVANIZED STEEL
PB	POLYBUTYLENE
PE	POLYETHYLENE
PVC	POLYVINYL CHLORIDE
SSTL	STAINLESS STEEL

AGITATOR SYMBOLS



- RADIAL
- PROPELLER
- TURBINE

FILENAME
PLOTDATE

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GEORGETOWN — 1734 — SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — 18552 — ASHIM K. RAY

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

PROCESS AND INSTRUMENTATION DIAGRAM
RAW WATER CHEMICAL DOSAGE SYSTEMS

DESIGNED: AZ	CHECKED:	DATE: DECEMBER 1999	I0.1	1
DRAWN: DH	JOB NO. 2193.006	SCALE: NONE	SHEET	REV

ELECTRICAL AND CONTROL SYMBOLS

- INDIVIDUAL STARTER OR CONTROLLER
- STARTER OR CONTROLLER IN MOTOR CONTROL CENTER
- STARTER OR CONTROLLER IN CONTROL PANEL
- STARTER OR CONTROLLER (FURNISHED WITH EQUIPMENT)
- GENERAL CONTROL PANEL OR EQUIPMENT, AS NOTED
- GENERAL CONTROL PANEL OR EQUIPMENT, AS NOTED (FURNISHED WITH EQUIPMENT)
- I OR I — GENERAL INTERLOCK OR CONTROL FUNCTION
- INDICATING LIGHT
- ALARM LIGHT/ANNUNCIATOR
- T — TELEMETERED
- T — TELEPHONE
- MODULATING OR POSITIONING MOTOR (CONTROLLER FURNISHED WITH MOTOR)
- M — OPEN/CLOSE MOTOR (CONTROLLER FURNISHED WITH MOTOR)
- VFD — VARIABLE FREQUENCY DRIVE (AC)
- VSD — VARIABLE SPEED DRIVE (DC)
- AUDIBLE DEVICE
- SKID MOUNTED EQUIPMENT

HAND SWITCH SYMBOLS AND LEGEND

- XXX / XXX — FIELD MOUNTED
- XXX / XXX — FRONT PANEL MOUNTED
- XXX / XXX — REAR PANEL MOUNTED
- XXX / XXX — FIELD MOUNTED (FURNISHED WITH EQUIPMENT)
- XXX / XXX — FRONT PANEL MOUNTED (FURNISHED WITH EQUIPMENT)
- XXX / XXX — REAR PANEL MOUNTED (FURNISHED WITH EQUIPMENT)
- XXX / XXX — SOFTWARE DEVICE DISPLAYED (CRT)
- XXX / XXX — SOFTWARE DEVICE NOT DISPLAYED

AB	FUNCTION SELECTOR
ES	EMERGENCY STOP
FOR	FORWARD/OFF/REVERSE (MAINTAINED)
FSR	FORWARD/STOP/REVERSE (MAINTAINED)
HOA	HAND/OFF/AUTO
LOR	LOCAL/OFF/REMOTE
LR	LOCAL/REMOTE
MA	MANUAL/AUTO
OC	OPEN/CLOSE
OCA	OPEN/CLOSE/AUTO
OCAO	OPEN/CLOSE/AUTO/OFF
OO	ON/OFF
R	RESET
RSJ	RUN/STOP/JOG
S	SILENCE
SR	SAFE/RUN
SS	START/STOP
T	TEST

ABBREVIATIONS

CP	CONTROL PANEL
FCP	FACTORY CONTROL PANEL
FWE	FURNISHED WITH EQUIPMENT
LCP	LOCAL CONTROL PANEL
MCC	MOTOR CONTROL CENTER
MCP	MAIN CONTROL PANEL
VIB	VIBRATION
VHC	VOLATILE HYDROCARBONS
TOR	TORQUE
DO	DISSOLVED OXIGEN
ORP	OXIDATION REDUCTION POTENTIAL
pH	HYDROGEN ION CONCENTRATION
SLBL	SLUDGE BLANKET LEVEL

INSTRUMENT SYMBOLS AND DESIGNATIONS

- XXXX / WZZZQ — FIELD MOUNTED
- XXXX / WZZZQ — FRONT PANEL MOUNTED
- XXXX / WZZZQ — REAR PANEL MOUNTED
- XXXX / WZZZQ — FIELD MOUNTED (FURNISHED WITH EQUIPMENT)
- XXXX / WZZZQ — FRONT PANEL MOUNTED (FURNISHED WITH EQUIPMENT)
- XXXX / WZZZQ — REAR PANEL MOUNTED (FURNISHED WITH EQUIPMENT)
- XXXX / WZZZQ — SOFTWARE DEVICE DISPLAYED (CRT)
- XXXX / WZZZQ — SOFTWARE DEVICE NOT DISPLAYED

NOTES:

1. ALL DETAIL WIRING AND ELECTRICAL COMPONENTS ARE NOT SHOWN ON THE PROCESS AND INSTRUMENTATION DIAGRAM DRAWINGS. THE ELECTRICAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE PROCESS AND INSTRUMENTATION DIAGRAM DRAWINGS. THE PROCESS AND INSTRUMENTATION DIAGRAM DRAWINGS ARE PRESENTED AS A COORDINATING TOOL THAT INDICATES THE MAIN CONTROL LOGIC FOR THE PROJECT PROCESS SYSTEMS AND COMPONENTS. ACTUAL DETAIL LOGIC AND CONTROL COMPONENTS MAY DIFFER DEPENDING ON THE MANUFACTURER THAT IS AWARDED THE CONTRACT.
2. SEE CIVIL AND PROCESS DRAWINGS FOR PIPING DETAILS.
3. ALL INFORMATION ON THIS LEGEND MAY NOT BE USED.

LINE SYMBOLS

- PLC DATA HIGHWAY
- ELECTRICAL SIGNAL
- A — ANALOG ELECTRICAL SIGNAL
- C — DIGITAL SIGNAL
- D — DISCRETE ELECTRIC SIGNAL
- E — EXISTING WIRING
- F — CABLE (FURNISHED WITH EQUIPMENT)
- P — POWER OR EQUIPMENT CONNECTION
- S — CABLE AND CONDUIT (FURNISHED WITH EQUIPMENT)
- ES 120/1 — ELECTRIC SUPPLY VOLTAGE/PHASE
- SIGNAL LINES NOT CONNECTED
- SIGNAL LINES CONNECTED

LETTERS FOR FUNCTIONAL IDENTIFICATION

	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER FLAME				
C	CONDUCTIVITY (ELECTRICAL)			CONTROL	
D	DENSITY (MASS) OR SPECIFIC GRAVITY	DIFFERENTIAL			
E	VOLTAGE (EMF)		PRIMARY ELEMENT		
F	FLOW RATE	RATIO (FRACTION)			
G	GAGING		GLASS		
H	HAND (MANUALLY INITIATED)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME OR SCHEDULE			CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOISTURE OR HUMIDITY	MOMENTARY			MIDDLE OR INTERMEDIATE
N	UNCLASSIFIED				
O	DISSOLVED OXYGEN		ORIFICE (RESTRICTION)		
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)		
Q	QUANTITY OR EVENT	INTEGRATE OR TOTALIZE			
R	RADIOACTIVITY		RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT OR TRANSMITTER	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER OR LOUVER	
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED		UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE			RELAY, COMPUTE OR CONVERT	
Z	POSITION			DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

INSTRUMENT IDENTIFICATION

XXXX / WZZZQ

- XXXX — FUNCTIONAL IDENTIFICATION
- WZZZQ
  - MULTIPLE UNITS (A, B, ETC.)
  - SEQUENCE NUMBER
  - P&ID SHEET NUMBER — LOOP NUMBER

FILENAME
PLOTDATE

NOTES:
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NO.	DATE	DESCRIPTION OF REVISION
1	08-02-01	RECORD DRAWING
0	12/15/99	INITIAL ISSUE

Jordan Jones & Goulding

GEORGETOWN — 1734 — SOUTH CAROLINA

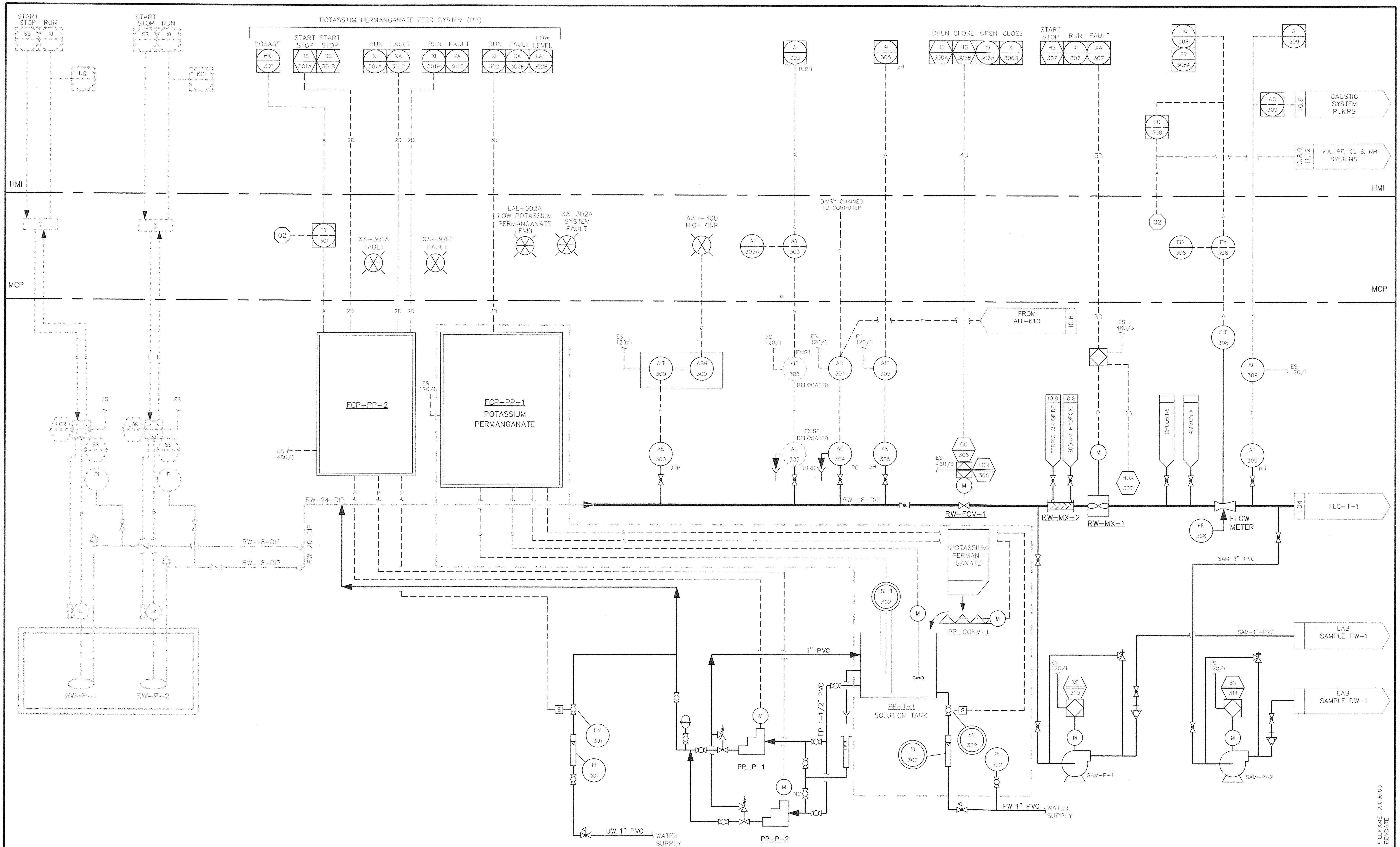
CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — 18552 — ASHIM K. RAY

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

PROCESS & INSTRUMENTATION DIAGRAM
RAW WATER CHEMICAL DOSAGE SYSTEMS

DESIGNED: AZ	CHECKED:	DATE: DECEMBER 1999	10.2 SHEET	1 REV
DRAWN: DH	JOB NO. 2193.006	SCALE: NONE		



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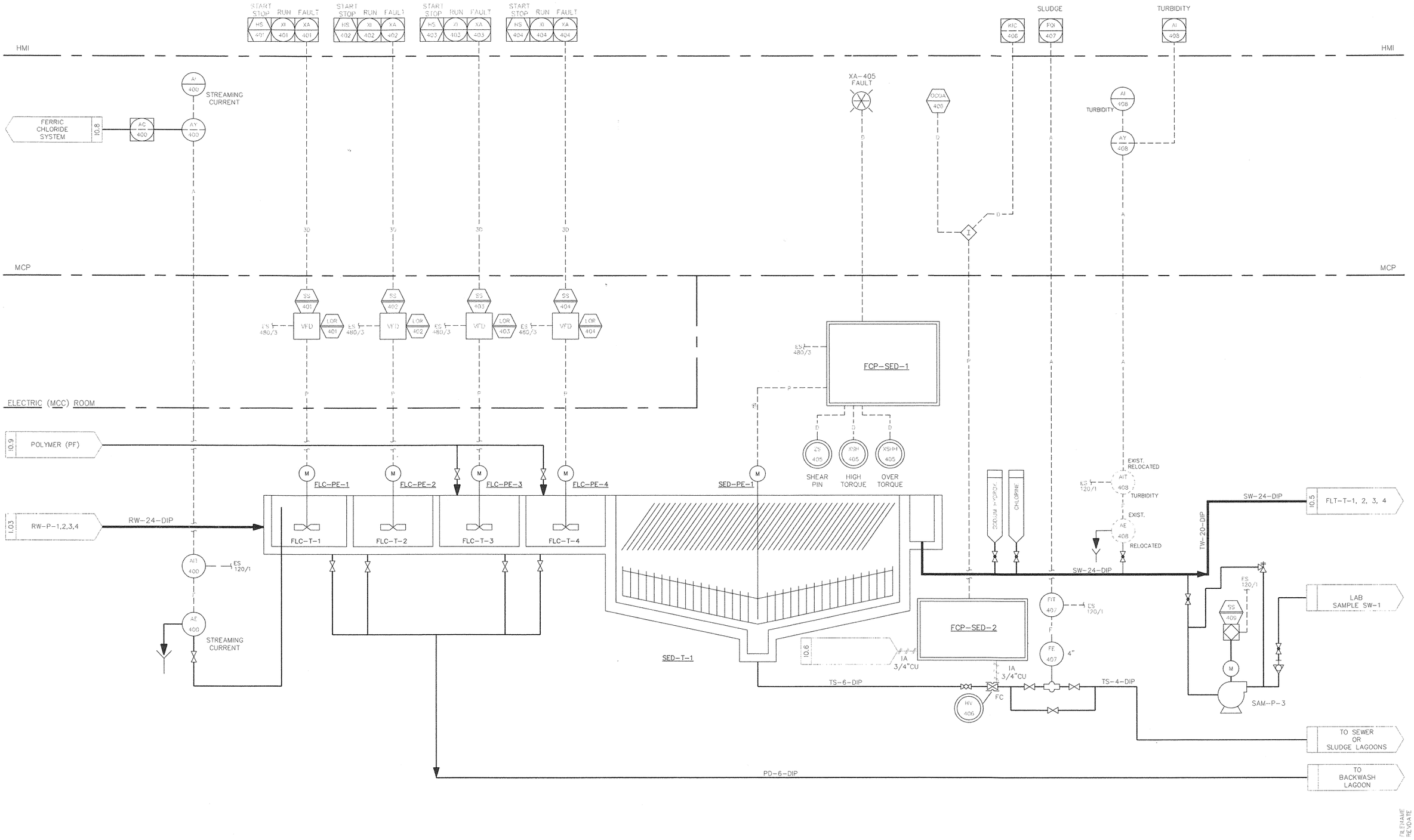
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 18552 ASHIM K. RAY

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

PROCESS & INTRUMENTATION DIAGRAM
RAW WATER CHEMICAL DOSAGE SYSTEMS

DESIGNED: AZ	CHECKED:	DATE: DECEMBER 1999	10.3	1
DRAWN: DH	JOB NO. 2193.006	SCALE: NONE	SHEET	REV



FILENAME
REVDATE

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WATER TREATMENT PLANT IMPROVEMENTS

PROCESS & INSTRMENTATION DIAGRAM
FLOCCULATION / SEDIMENTATION

DESIGNED: AZ	CHECKED:	DATE: DECEMBER 1999	10.4 SHEET	1 REV
DRAWN: DH	JOB NO. 2193.006	SCALE: NONE		

FILTER LEVEL

LI 501 | LI 502

FILTER STATUS

XI 501 | XI 502 | XI 503 | XI 504

FILTER LEVEL

LI 503 | LI 504

HMI

LAL-501 LAL-502 LAL-503 LAL-504
HIGH LEVEL FOR EACH FILTER

XA-505
FAULT

MCP

LCP-FLT-1 (PLC-F)

1.04 SEDIMENTATION BASIN SED-T-1

SW-24-DIP

ES 120/1 — LE 500 — LSH 500

VACUUM TANK

LT 501 — ES 120/1 — LE 501

LT 502 — ES 120/1 — LE 502

LT 503 — ES 120/1 — LE 503

LT 504 — ES 120/1 — LE 504

AS-10"-STL

1A-1/4"-CU FROM FCP-FLT-2

CV 501 — FLT-T-1

CV 502 — FLT-T-2

CV 503 — FLT-T-3

CV 504 — FLT-T-4

WW-20-DIP

TO BACKWASH LAGOON

TO ATMOSPHERE

1.07 FCP-FLT-1

FW-P-1
EXISTING

ES 480/3 — FCP-B-1

FE-18-DIP

FE-18-STL

WW-20-DIP

IT-18-STL

PD-24-DIP

1.06 FILTER CONTROL ROOM

1.06 FILTER CONTROL ROOM

1.06 FILTER CONTROL ROOM

1.06 TO FILTER CONTROL ROOM

PI 505A | PRV 505 | FLT-B-1 | M | PI 505B | PDSH 505

TI 505A | TI 505B

FILENAME
REVDATE

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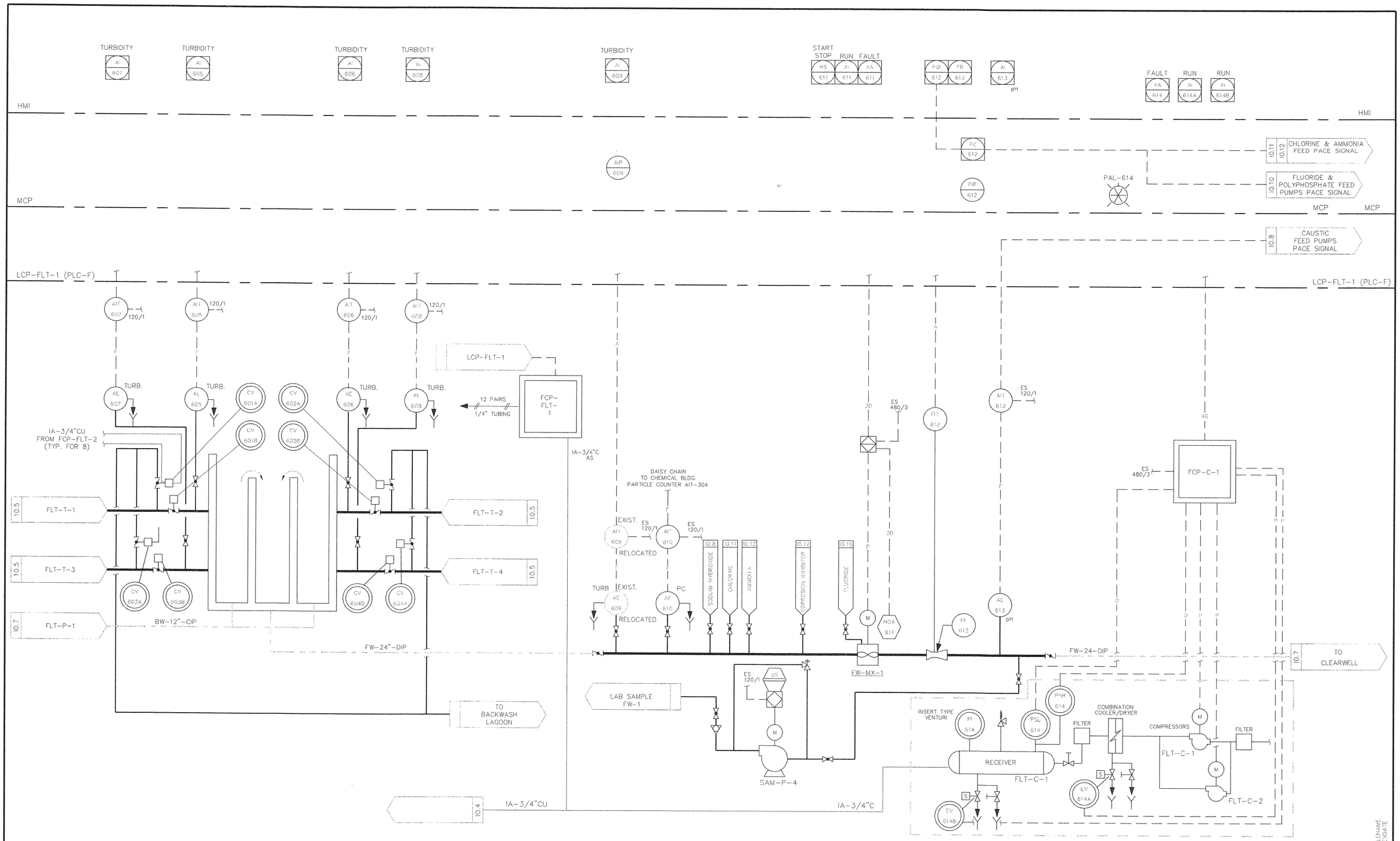
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

PROCESS & INSTRUMENTATION DIAGRAM
GRAVITY FILTER SYSTEM

DESIGNED: AZ	CHECKED:	DATE: DECEMBER 1999	10.5 SHEET	1 REV
DRAWN: DH	JOB NO. 2193.006	SCALE: NONE		



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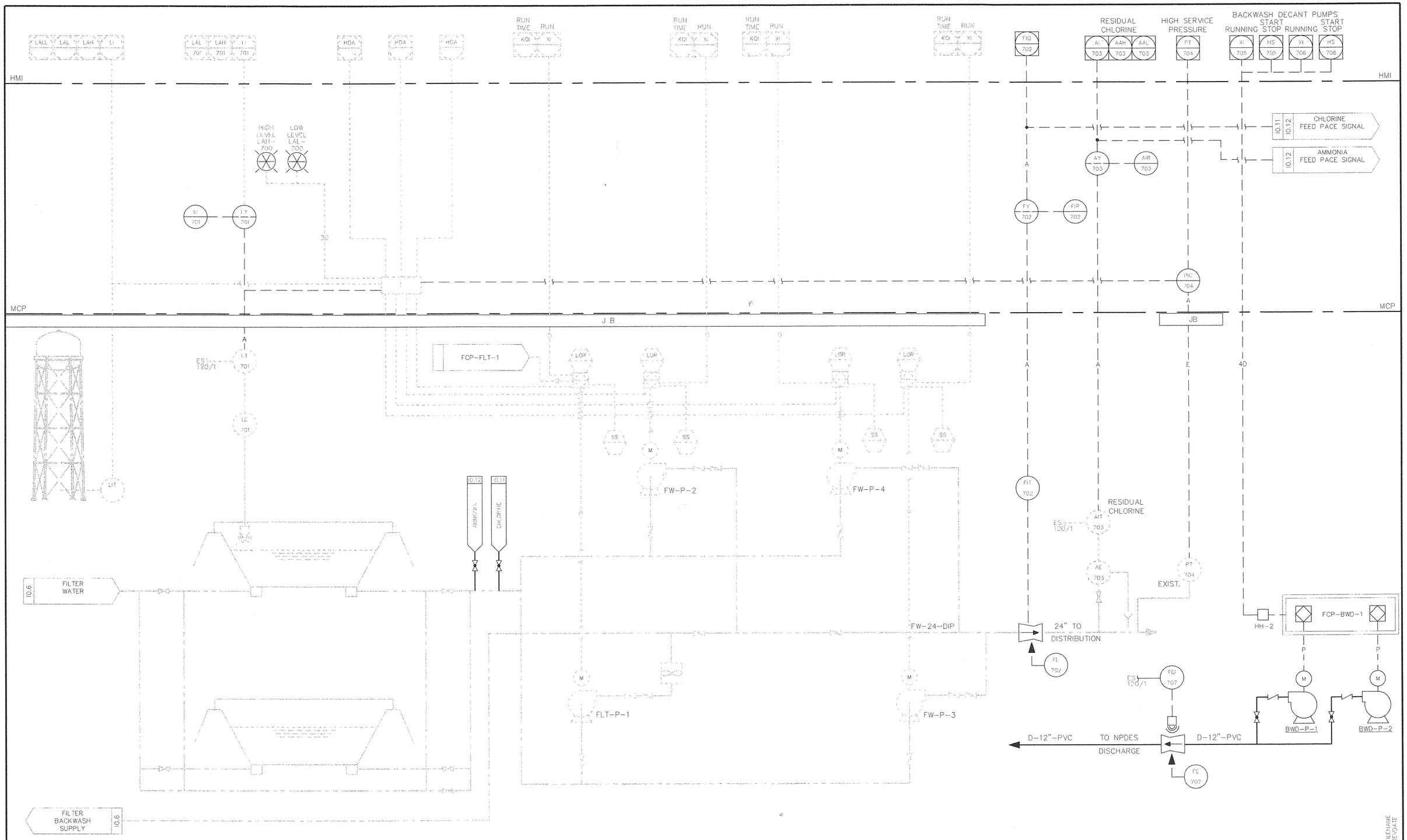
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

PROCESS AND INSTRUMENTATION DIAGRAM FILTERED WATER SYSTEMS

DESIGNED: AZ	CHECKED:	DATE: DECEMBER 1999	10.6 SHEET	1 REV
DRAWN: DH	JOB NO. 2193.006	SCALE: NONE		

FILENAME
SHEET



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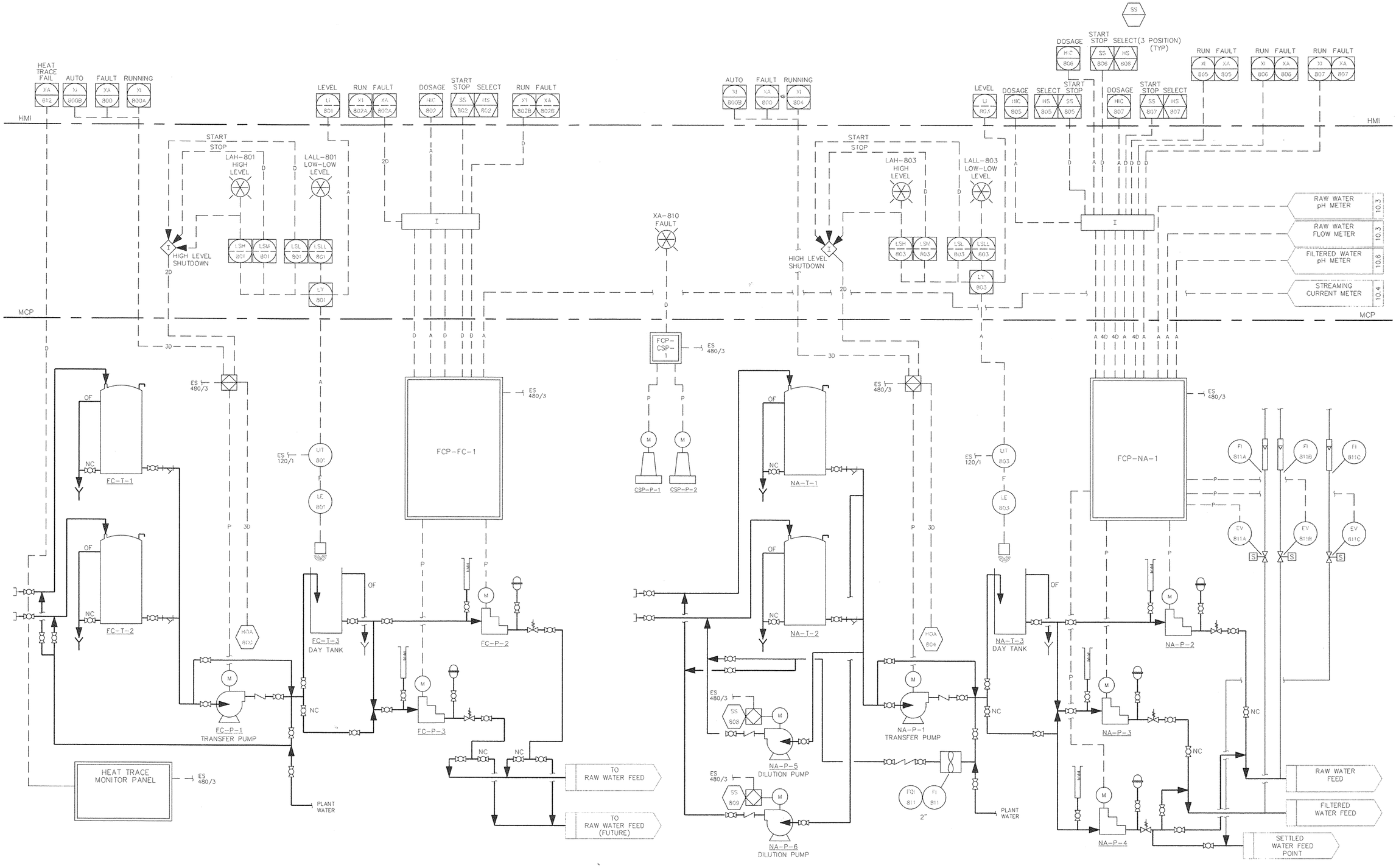
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

PROCESS & INSTRUMENTATION DIAGRAM CLEARWELL AND HIGH SERVICE PUMPING SYSTEM

DESIGNED: AZ	CHECKED:	DATE: DECEMBER 1999	10.7 SHEET	1 REV.
DRAWN: DH	JOB NO. 2193.006	SCALE: NONE		



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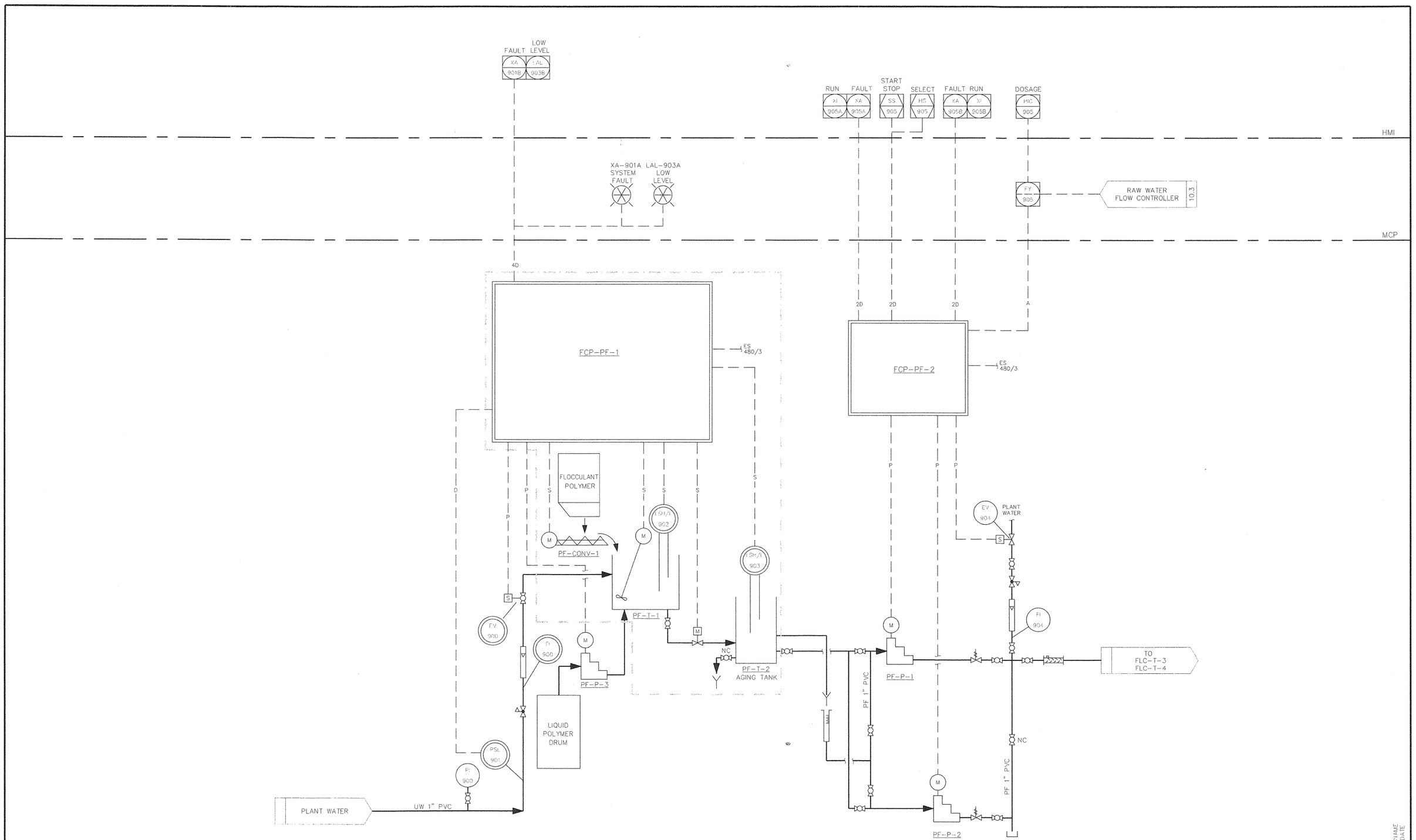
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

PROCESS & INSTRUMENTATION DIAGRAM CAUSTIC & FERRIC CHLORIDE FEED SYSTEMS

DESIGNED: AZ	CHECKED:	DATE: DECEMBER 1999	10.8 SHEET	1 REV
DRAWN: DH	JOB NO. 2193.006	SCALE: NONE		

FILENAME
FILEDATE



FILENAME
PE/DATE

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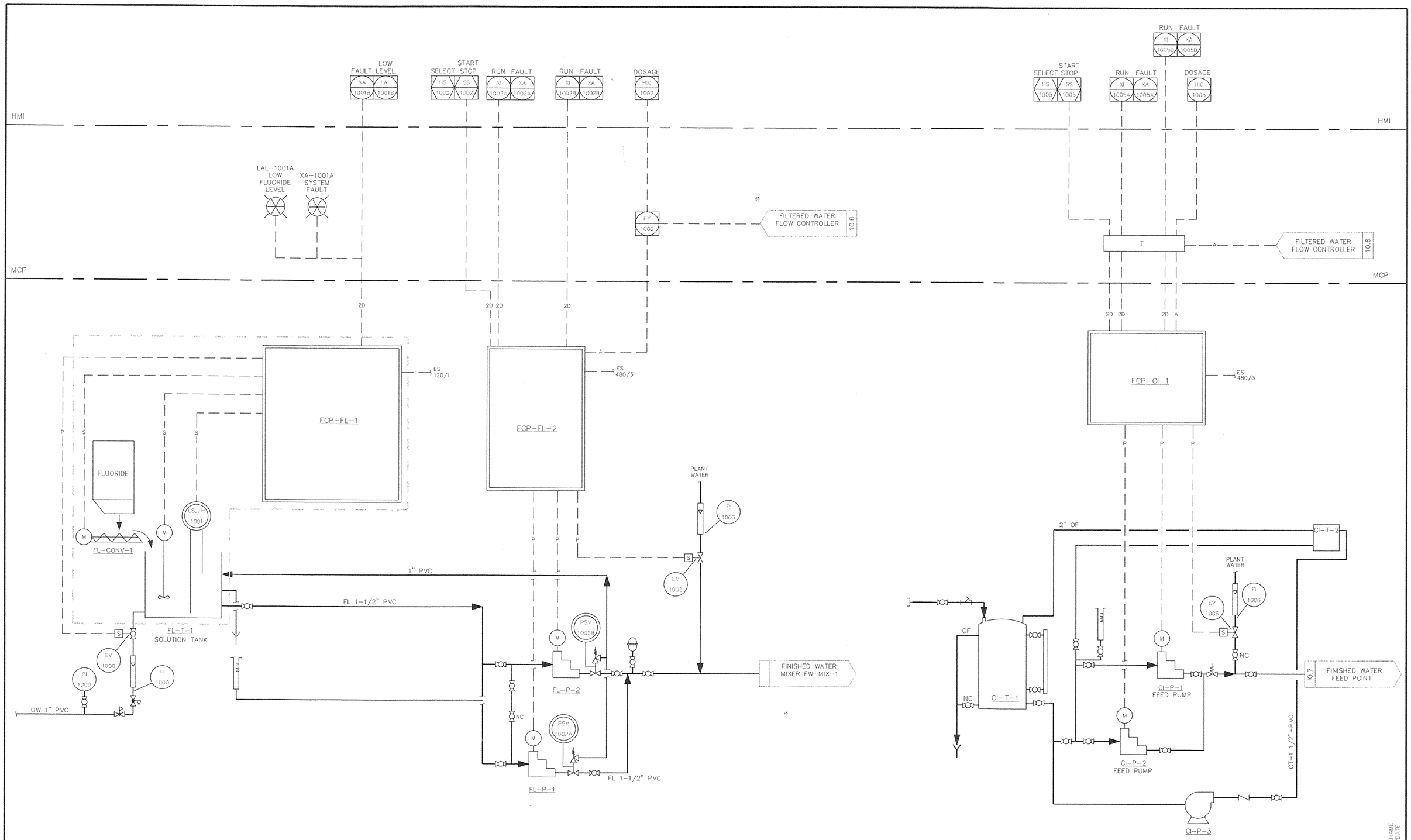
REGISTERED PROFESSIONAL ENGINEER
18552
ASHIM K. RAY

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

PROCESS & INSTRUMENTATION DIAGRAM POLYMER SYSTEM–FLOCCULANT AID

DESIGNED: AZ	CHECKED:	DATE: DECEMBER 1999	10.9 SHEET	1 REV
DRAWN: DH	JOB NO. 2193.006	SCALE: NONE		



FILENAME
REVDATE

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CITY OF GEORGETOWN
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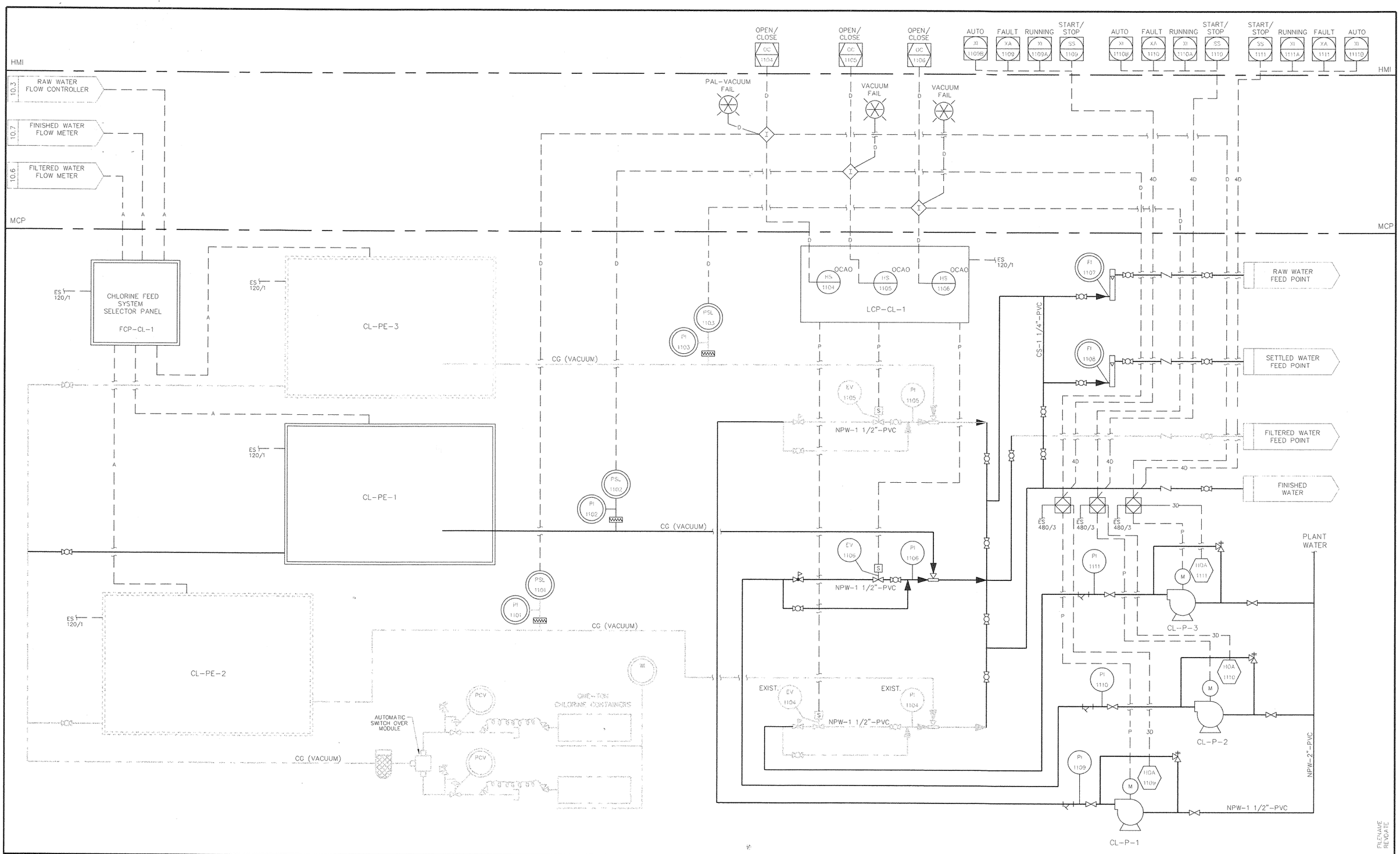
SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — 18552 — ASHIM K. RAI

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

PROCESS & INSTRUMENTATION DIAGRAM FLUORIDE & PHOSPHATE FEED SYSTEMS

DESIGNED: AZ	CHECKED:	DATE: DECEMBER 1999	10.10 SHEET	1 REV
DRAWN: DH	JOB NO. 2193.006	SCALE: NONE		



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0	12/15/99	INITIAL ISSUE

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SOUTH CAROLINA

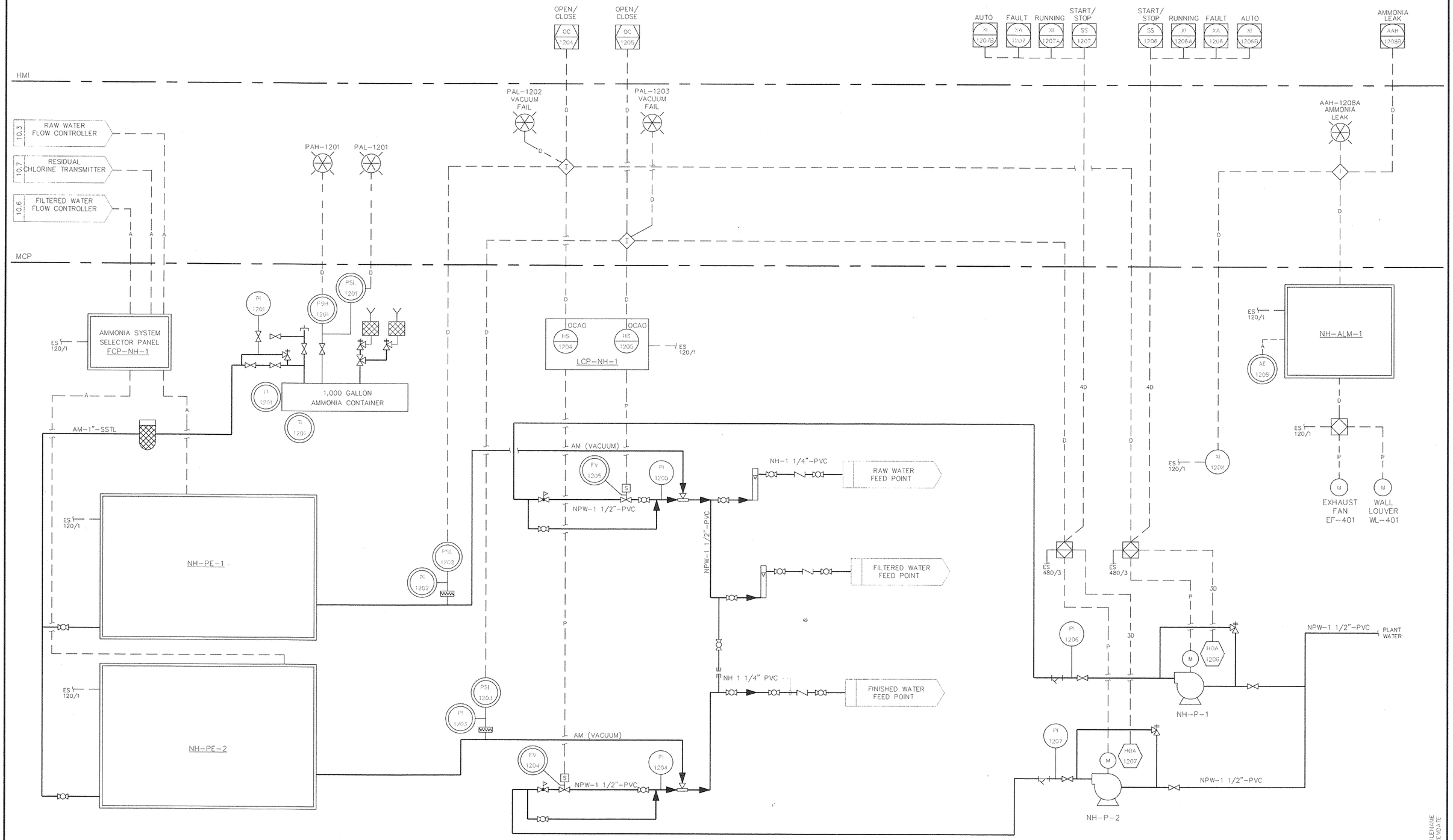
South Carolina Registered Professional Engineer 18552 — Ashim K. Ray

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

PROCESS & INSTRUMENTATION DIAGRAM CHLORINE FEED SYSTEM

DESIGNED: AZ	CHECKED:	DATE: DECEMBER 1999	10.11	1
DRAWN: DH	JOB NO. 2193.006	SCALE: NONE	SHEET	REV

FILENAME
REVDATE



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0	12/15/99	INITIAL ISSUE

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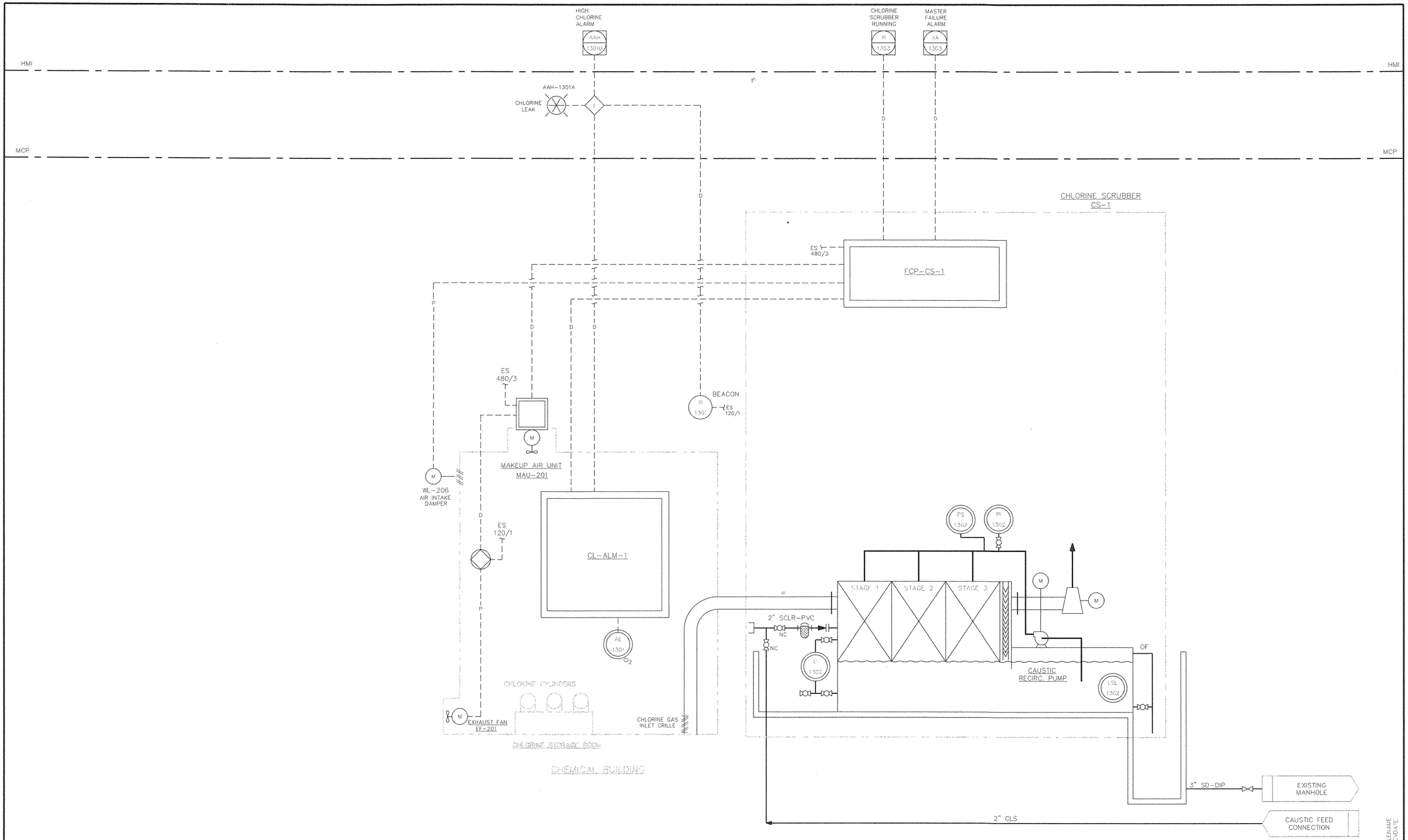
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 18552 ASHIM K. RAY

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

PROCESS & INSTRUMENTATION DIAGRAM
AMMONIA FEED SYSTEMS

DESIGNED: AZ	CHECKED:	DATE: DECEMBER 1999	10.12 SHEET	1 REV
DRAWN: DH	JOB NO. 2193.006	SCALE: NONE		

FILENAME
PLOTDATE



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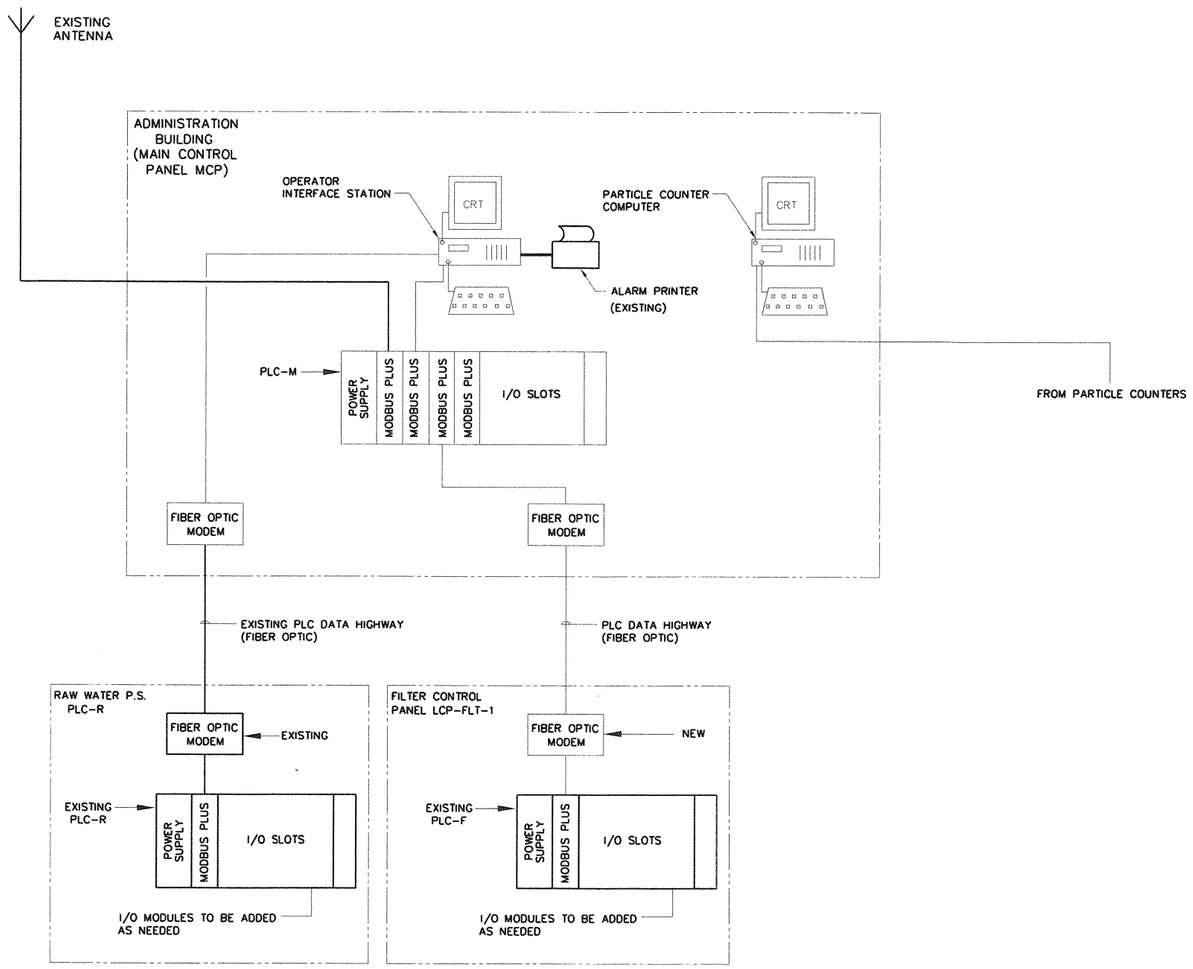
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

PROCESS & INSTRUMENTATION DIAGRAM
CHLORINE SCRUBBER

DESIGNED: AZ	CHECKED:	DATE: DECEMBER 1999	10.13 SHEET	1 REV
DRAWN: DH	JOB NO. 2193.006	SCALE: NONE		



CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

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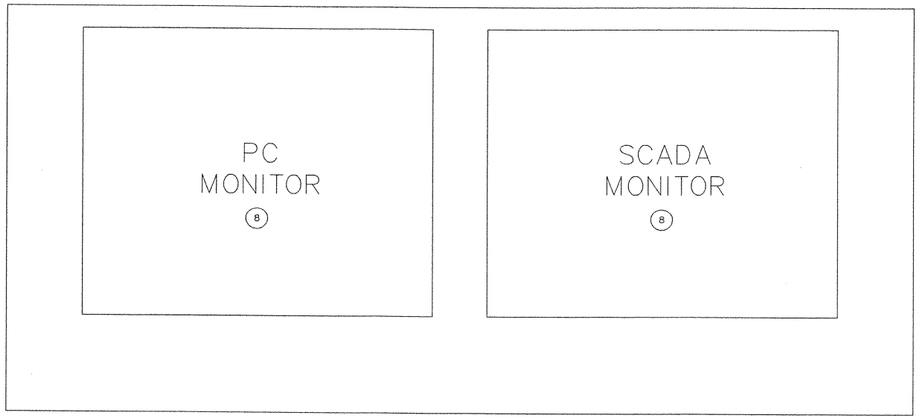
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

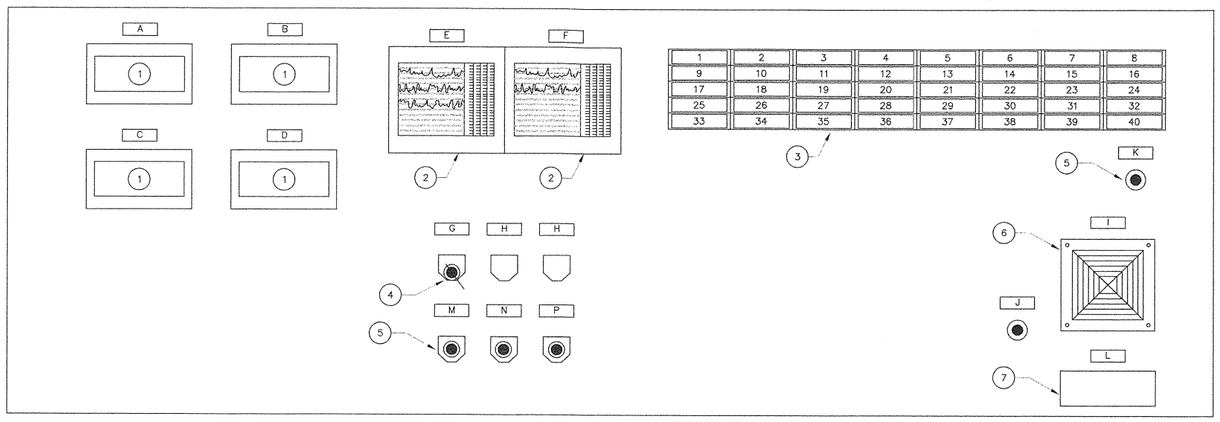
PLS SYSTEM CONFIGURATION

DESIGNED: AZ	CHECKED:	DATE: DECEMBER 1999	10.14 SHEET	1 REV
DRAWN: DH	JOB NO. 2193.006	SCALE: NONE		

PANEL "A"



PANEL "B"



BILL OF MATERIALS

ITEM	QTY.	DESCRIPTION	SPECIFICATION SECTION/ MODEL NO.
1	4	INDICATOR	17300
2	2	4–CHANNEL, PAPERLESS RECORDER	17300
3	1	40–LAMP, PANEL–MOUNTED ANNUNCIATOR PANEL BY EDWARDS	#470X,120V, PANEL–MOUNTED, 5 ROWS HIGH X 8 ROWS WIDE TYPE "A" INDICATION PLATES
4	1	4–POSITION SWITCH	17300
5	5	NON–ILLUMINATED PUSBUTTONS	17300
6	1	PANEL MOUNTED, 120V, ALARM HORN BY EDWARDS	#870P–N5
7	1	PANEL–MOUNTED, LED ELECTRONIC CLOCK BY RED LION	#APLCK000
8	2	MCP MONITOR SCREEN	17810
9	AS RQD'	4 – 20 mA SIGNAL ISOLATORS	NOTE 1
10	1	SURGE SUPPRESSOR	NOTE 2
11	1	AUTODIALER	NOTE 3

ANNUNCIATOR SCHEDULE

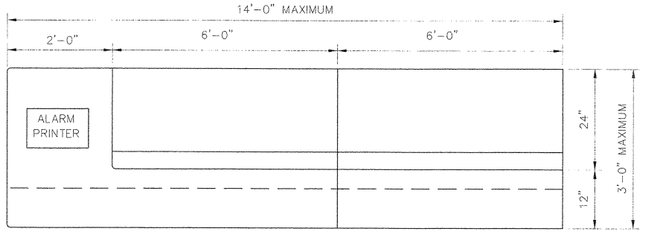
1 FAULT – POTASSIUM PERMANGANATE PUMP NO.1
2 FAULT – POTASSIUM PERMANGANATE PUMP NO.2
3 LOW LEVEL – POTASSIUM PERMANGANATE SOLUTION TANK
4 FAULT – POTASSIUM PERMANGANATE SYSTEM
5 HIGH ORP – RAW WATER
6 FAULT – SEDIMENTATION TANK MIXER
7 LOW LEVEL – GRAVITY FILTER NO.1
8 LOW LEVEL – GRAVITY FILTER NO.2
9 LOW LEVEL – GRAVITY FILTER NO.3
10 LOW LEVEL – GRAVITY FILTER NO.4
11 FAULT – GRAVITY FILTER BLOWER
12 LOW PRESSURE – FILTERS AIR
13 HIGH LEVEL – CLEARWELL
14 LOW LEVEL – CLEARWELL
15 HIGH LEVEL – FERRIC CHLORIDE DAY TANK
16 LOW LEVEL – FERRIC CHLORIDE DAY TANK
17 HIGH LEVEL – CAUSTIC DAY TANK
18 LOW LEVEL – CAUSTIC DAY TANK
19 FAULT – CHEMICAL BUILDING
20 FAULT – POLYMER SYSTEM
21 LOW LEVEL – POLYMER/FLOCCULANT AID AGING TANK
22 LOW LEVEL – FLUORIDE SOLUTION TANK
23 FAULT – FLUORIDE SYSTEM
24 LOW LEVEL – PHOSPHATE TANK
25 FAIL – CHLORINE VACUUM FAIL NO.1
26 FAIL – CHLORINE VACUUM FAIL NO.2
27 FAIL – CHLORINE VACUUM FAIL NO.3
28 HIGH PRESSURE – AMMONIA TANK
29 LOW PRESSURE – AMMONIA TANK
30 FAIL – AMMONIA VACUUM FAIL NO.1
31 FAIL – AMMONIA VACUUM FAIL NO.2
32 LEAK – AMMONIA

MAIN CONTROL CONSOLE SCHEDULE

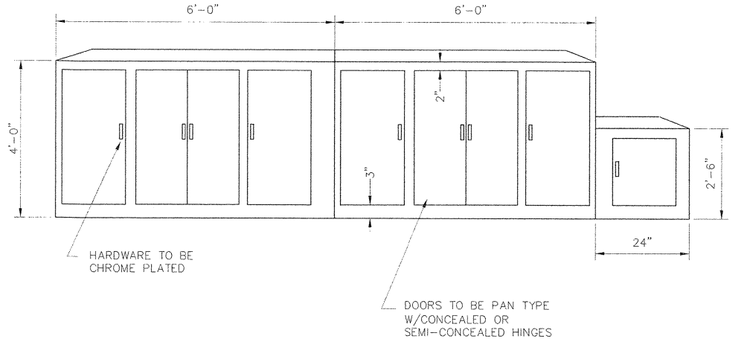
A INDICATOR – RAW WATER TURBIDITY
B INDICATOR – STREAMING CURRENT
C INDICATOR – SETTLED WATER TURBIDITY
D INDICATOR – CLEARWELL – LEVEL
E RECORDER – CHANNEL 1 – RAW WATER FLOW
CHANNEL 2 – FILTERED WATER FLOW TO CLEARWELL
CHANNEL 3 – FILTERED WATER TURBIDITY
CHANNEL 4 – SPARE
F RECORDER – CHANNEL 1 – FILTERED WATER FLOW TO DISTRIBUTION
CHANNEL 2 – RESIDUAL CHLORINE
CHANNEL 3 – SPARE
CHANNEL 4 – SPARE
G SWITCH – OPEN/CLOSE/AUTO/OFF FOR SLUDGE BLOWDOWN VALVE
H SWITCH – SPARE
I HORN
J PUSHBUTTON – ALARM ACKNOWLEDGE
K PUSHBUTTON – ANNUNCIATOR PANEL TEST
L ELECTRONIC CLOCK
M PUSHBUTTON – DELIVERY GATE TO OPEN
N PUSHBUTTON – DELIVERY GATE TO CLOSE
P PUSHBUTTON – DELIVERY GATE TO STOP

NOTES:

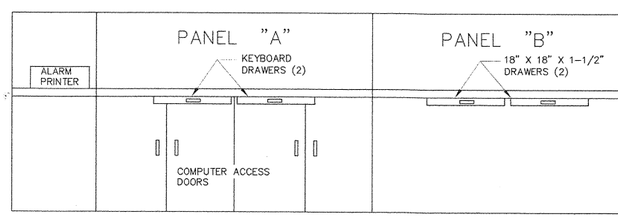
1. PROVIDE 4 – 20 mA SIGNAL ISOLATORS FOR ALL INCOMING AND OUTGOING mA SIGNALS. THE ISOLATORS SHALL BE FIELD CONFIGURABLE, ACTION INSTRUMENTS MODEL G408–0000 OR APPROVED EQUAL.
2. PROVIDE 120V, 1PH SURGE ARRESTER FOR THE PANEL INCOMING POWER. THE ARRESTER SHALL BE SQUARE "D" MODEL QO2175SB OR APPROVED EQUAL.
3. PROVIDE AUTODIALER INSIDE THE PANEL. THE AUTODIALER SHALL BE AS SPECIFIED IN SECTION 17300.
4. MODICON PLC–M SHALL BE MOUNTED INSIDE THE PANEL.



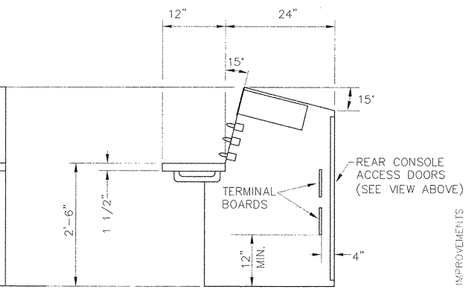
CONSOLE – PLAN VIEW
NOT TO SCALE



REAR CONSOLE ACCESS DOORS
NOT TO SCALE



CONSOLE – FRONT VIEW
NOT TO SCALE



CONSOLE – SIDE VIEW
NOT TO SCALE

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

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CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 18552 ASHIM K. RAY

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

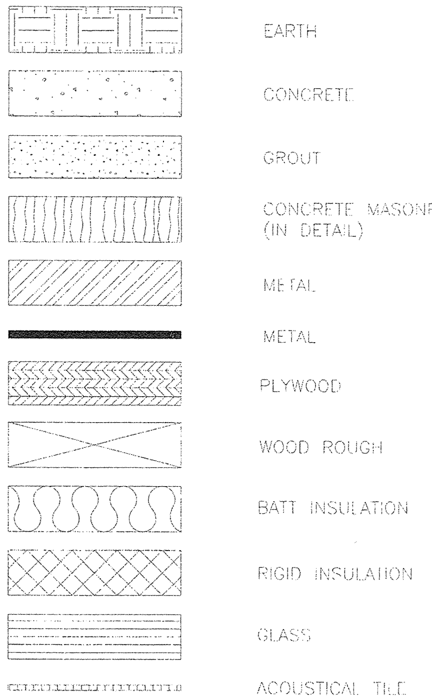
MAIN CONTROL PANEL (MCP) CONTROL CONSOLE

DESIGNED: AZ	CHECKED:	DATE: DECEMBER 1999	10.15 SHEET	1 REV
DRAWN: DH	JOB NO. 2193.006	SCALE: NONE		

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

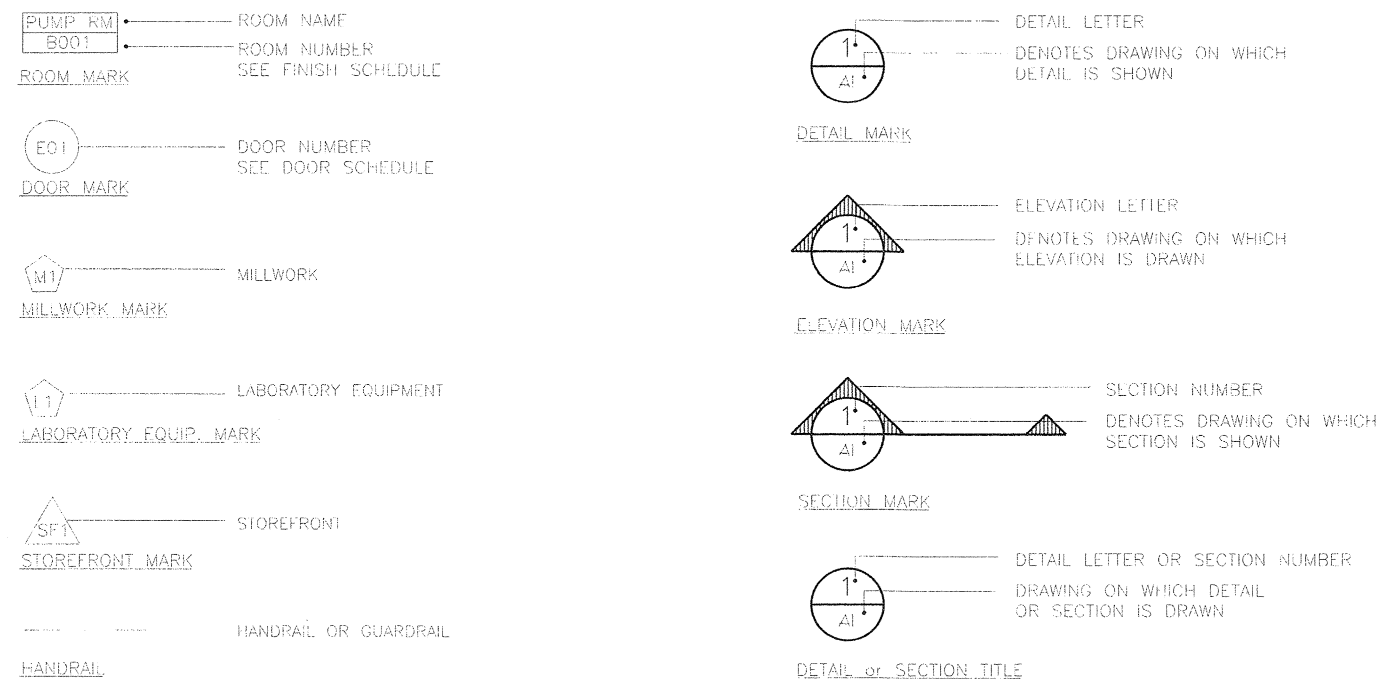
MATERIAL INDICATIONS

NOTE: ALL MATERIAL INDICATIONS MAY NOT NECESSARILY APPEAR WITHIN THIS SET OF DRAWINGS



DRAWING SYMBOLS

NOTE: ALL DRAWING SYMBOLS MAY NOT NECESSARILY APPEAR WITHIN THIS SET OF DRAWINGS



ABBREVIATIONS

NOTE: ALL ABBREVIATIONS ARE GENERAL AND MAY NOT APPEAR WITHIN THIS SET OF DRAWINGS.

<	ANGLE
℄	CENTERLINE
C	CHANNEL
d	PENNY
⊥	PERPENDICULAR
ℙ	PLATE
Ø	DIAMETER
ABV	ABOVE
AFF	ABOVE FINISH FLOOR
ACC	ACCESS
AP	ACCESS PANEL
ACOUS	ACOUSTICAL
ACT	ACOUSTICAL TILE
ADD	ADDENDUM
ADH	ADHESIVE
ADJ	ADJACENT
ADJT	ADJUSTABLE
A/C	AIR CONDITIONING
ALT	ALTERNATE
AL	ALUMINUM
ALUM	ALUMINUM
ANC	ANCHOR, ANCHORAGE
AB	ANCHOR BOLT
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECT (URAL)
ASPH	ASPHALT
BACC	BATH ACCESSORY
BSMT	BASEMENT
BM	BEAM
BRG	BEARING
BRG PL	BEARING PLATE
BEL	BELOW
BET	BETWEEN
BEV	BEVELED
BIT	BITUMINOUS
BLK	BLOCK
BLKG	BLOCKING
BD	BOARD
BS	BOTH SIDES
BW	BOTH WAYS
BOT	BOTTOM
BRK	BRICK
BLDG	BUILDING
BUR	BUILT UP ROOFING
BBD	BULLETIN BOARD
CAB	CABINET
CPT	CARPET (ED)
CIP	CAST IN PLACE
CK	CALK (ING) CAULK (ING)
CLG	CEILING
CT	CERAMIC TILE
CHBD	CHALKBOARD
CIRC	CIRCUMFERENCE
CR	CHROMIUM (PLATED)
CO	CLEAN OUT
CLR	CLEAR (ANCE)
CLS	CLOSURE
CMU	CONCRETE MASONRY UNIT
CNR. BD.	CORNER BEAD
COL	COLUMN
COMP	COMPRESS (ED) (ION) (IBLE)
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS OR CONTINUE
CONTR	CONTRACT (OR)
CJ	CONTROL JOINT
CG	CORNER GUARD
CORR	CORRUGATED
CTR	COUNTER
CFL	COUNTERFLASHING
CSG. BD.	CASING BEAD
CTSK	COUNTERSINK
DPR	DAMPER
DP	DAMPPROOFING
DL	DEAD LOAD
DEM	DEMOLISH, DEMOLITION
DMT	DEMOUNTABLE
DEPR	DEPRESSED
DET	DETAIL
DIAG	DIAGONAL
DIA	DIAMETER
DIM	DIMENSION
DIV	DIVISION
DR	DOOR
DA	DOUBLE ACTING
DS	DOWNSPOUT
D	DRAIN
DT	DRAIN TILE
DWR	DRAWER
DWG	DRAWING
DF	DRINKING FOUNTAIN
DW	DUMBWAITER
EXF	EXHAUST FAN
ELEC	ELECTRIC (AL)
EWC	ELECTRIC WATER COOLER
EL	ELEVATION
ELEV	ELEVATOR
EMER	EMERGENCY
EQ	EQUAL
EQUIP	EQUIPMENT
EST	ESTIMATE
EXH	EXHAUST
EXIST	EXISTING
EB	EXPANSION BOLT
EJ	EXPANSION JOINT
EXPD	EXPOSED
EXT	EXTERIOR
F/CONC	FACE OF CONCRETE
F/FIN	FACE OF FINISH
F/MAS	FACE OF MASONRY
F/STUDS	FACE OF STUDS
FFH	FACTORY FINISH
FAS	FASTEN (ER)
FGL	FIBERGLASS
FIN	FINISH (ED)
FFL	FINISHED FLOOR LINE
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FHS	FIRE HOSE STATION
FHC	FIRE HOSE CABINET
FPRF	FIREPROOF
FLASH	FLASHING
FLSG	FLASHING
FHMS	FLATHEAD MACHINE SCREW
FHWS	FLATHEAD WOOD SCREW
FLX	FLEXIBLE
FL	FLOOR (ING)
FD	FLOOR DRAIN
FLUR	FLUORESCENT
FTG	FOOTING
FDN	FOUNDATION
FR	FRAME (D) (ING)
FSZ	FULL SIZE
FBO	FURNISHED BY OTHERS
FUR	FURRED (ING)
GA	GAGE, GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GLA	GLASS, GLAZING
GLULAM	GLUE LAMINATED WOOD BEAM
GVL	GRAVEL
GWB	GYPSUM WALL BOARD
GYP. BD.	GYPSUM BOARD
HDW	HARDWARE
HP	HIGH POINT
HTG	HEATING
HVAC	HEATING/VENTILATING/AIR – CONDITIONING
HT	HEIGHT
HC	HOLLOW CORE
HM	HOLLOW METAL
HK	HOOK (S)
HORIZ	HORIZONTAL
HB	HOSE BIBB
HWH	HOT WATER HEATER
INCL	INCLUDE (D) (ING)
ID	INSIDE DIAMETER
INSUL	INSULATE (D) (ION)
INT	INTERIOR
INV	INVERT
JC	JANITOR'S CLOSET
JT	JOINT
KCPL	KEENE'S CEMENT PLASTER
KPL	KICKPLATE
KIT	KITCHEN
KO	KNOCKOUT
LAB	LABORATORY
LAM	LAMINATE (D)
LAV	LAVATORY
L	LENGTH
LT	LIGHT
LL	LIVE LOAD
LVR	LOUVER
LP	LOW POINT
MFR	MANUFACTURE (ER)
MAS	MASONRY
MO	MASONRY OPENING
MAT	MATERIAL (S)
MAX	MAXIMUM
MECH	MECHANIC (AL)
MED	MEDIUM
MFL	MAXIMUM FORSEEABLE LOSS (WALL)
MTL	METAL
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MR	MOP RECEPTOR
MULL	MULLION
NRC	NOISE REDUCTION COEFFICIENT
NOM	NOMINAL
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER (S)
OFD	OVERFLOW DRAIN
OPNG	OPENING
OPP	OPPOSITE
OD	OUTSIDE DIAMETER
OA	OVERALL
OHD	OVERHEAD
PNT	PAINT (ED)
PNB	PANIC BAR
PTD	PAPER TOWEL DISPENSER
PTR	PAPER TOWEL RECEPTOR
PTN	PARTITION
PLAM	PLASTIC LAMINATE
PL	PLATE
PLY. WD.	PLYWOOD
PWD	PLYWOOD
PT	PRESSURE TREATED
PFB	PREFABRICATE (D)
PFN	PREFINISHED
PM	PRESSED METAL
QT	QUARRY TILE
RAD	RADIUS
REF	REFERENCE
REFL	REFLECT (ED) (VE) (OR)
RB	RESILIENT BASE
RA	RETURN AIR
REV	REVISION (S) REVISED
R	RISER
RD	ROOF DRAIN
RDC	ROOF DRAIN CONDUCTOR
RFG	ROOFING
RM	ROOM
RO	ROUGH OPENING
SFGL	SAFETY GLASS
SCH	SCHEDULE
SNT	SEALANT
STG	SEATING
SEC	SECTION
SSK	SERVICE SINK
SHTH	SHEATHING
SHT	SHEET
SIM	SIMILAR
SC	SOLID CORE
SPK	SPEAKER
SPEC	SPECIFICATION (S)
SQ	SQUARE
SST	STAINLESS STEEL
STD	STANDARD
STA	STATION
STL	STEEL
STO	STORAGE
SFRT	STOREFRONT
SD	STORM DRAIN
STRUC	STRUCTURAL
SUSP	SUSPENDED
SWP	STANDARD WEIGHT PIPE
SYM	SYMMETRY (ICAL)
TKBD	TACKBOARD
TKS	TACKSTRIP
TEL	TELEPHONE
TV	TELEVISION
TERR	TERRAZZO
THK	THICK (NESS)
THRES	THRESHOLD
TPTN	TOILET PARTITION
TPD	TOILET PAPER DISPENSER
TOL	TOLERANCE
T&G	TONGUE AND GROOVE
T/SLB	TOP OF SLAB
T/STL	TOP OF STEEL
T/W	TOP OF WALL
TLB	TOWEL BAR
T	TREAD
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UNF	UNFINISHED
UR	URINAL
VPB	VAPOR BARRIER
VERT	VERTICAL
VIN	VINYL
VCT	VINYL COMPOSITION TILE
VB	VINYL BASE
VT	VINYL TILE
VWF	VINYL WALL FABRIC
WSCT	WAINSCOT
WC	WATER CLOSET
WPF	WATERPROOFING
WWM	WELDED WIRE MESH
W.	WIDTH, WIDE
WIN	WINDOW
WGL	WIRED GLASS
WMP	WIRE MESH PARTITION
W/	WITH
W/O	WITHOUT
WD	WOOD
WB	WOOD BASE
WPT	WORKING POINT

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CITY OF GEORGETOWN
SOUTH CAROLINA

STATE OF SOUTH CAROLINA — 12-15-99 — MARK B. GARBER — 1841 — REGISTERED ARCHITECT

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

COVER SHEET

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A0.1 SHEET	1 REV
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN		

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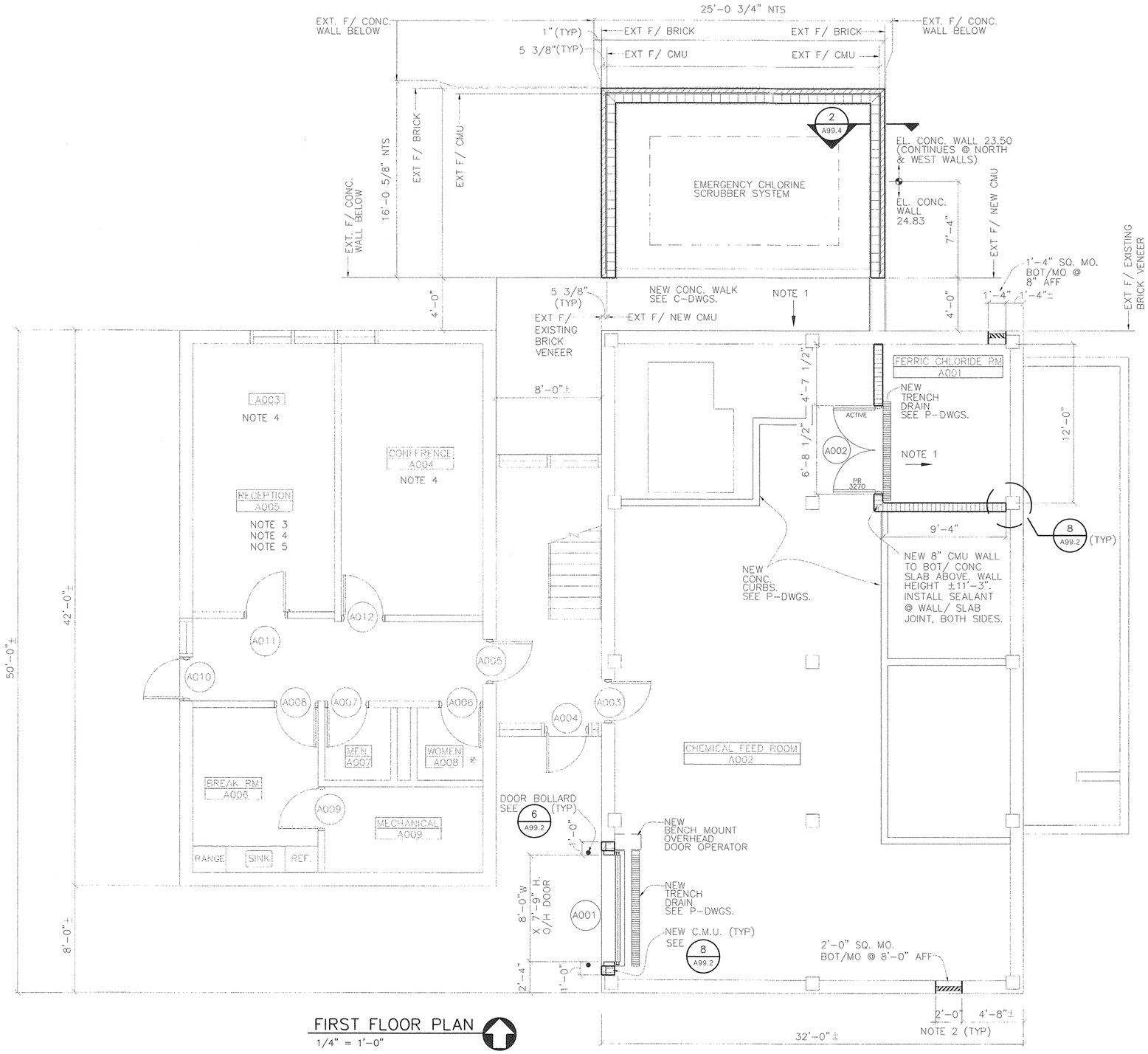

NOTES:

1. MASONRY OPENING FOR HVAC – SEE M-DWGS.
2. LOCATE NEW LOUVERS IN EXISTING MASONRY WALLS TO NEAREST VERTICAL MASONRY JOINT (TYPICAL).
   SEE 5 / A99.2 FOR LOUVER DETAILS
3. REMOVE CARPET AND CARPET GLUE IN THEIR ENTIRETY. NEW FLOOR COVERING IS NOT IN THE CONTRACT AND IS TO BE INSTALLED AT A LATER DATE BY THE OWNER.
4. REMOVE EXISTING SUSPENDED ACOUSTICAL CEILING IN ITS ENTIRETY AND INSTALL NEW SUSPENDED CEILING AT COMPLETION OF PLUMBING WORK FOR NEW LAB. LAYOUT OF NEW CEILING TO MATCH LAYOUT OF EXISTING CEILING.
5. COORDINATE WITH OWNER AND RELOCATE SOME EXISTING LAB CASEWORK AND ACCESSORIES INTO THIS AREA FOR USE AS A TEMPORARY LAB DURING CONSTRUCTION OF THE NEW LAB. PROVIDE ADEQUATE TEMPORARY LIGHTING AND POWER AS REQUIRED. COORDINATE CONSTRUCTION SO AS TO MINIMIZE THE TIME REQUIRED FOR TEMPORARY LAB USE.

LEGEND:

- OFFICE / D105 — ROOM NAME / ROOM NUMBER SEE FINISH SCHEDULE - SEE SHEET A99.1
- OFFICE / D105 — EXISTING ROOM NAME / EXISTING ROOM NUMBER
- (D104) — NEW DOOR NUMBER SEE DOOR SCHEDULE - SEE SHEET A99.1
- (D104) — EXISTING DOOR NUMBER
- 12" CMU
- 8" CMU
- 4" BRICK
- CAST-IN-PLACE CONC.

FIRST FLOOR PLAN

1/4" = 1'-0"

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CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

CHEMICAL AND ADMINISTRATION BUILDING
FIRST FLOOR PLAN

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A2.1	1
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV.

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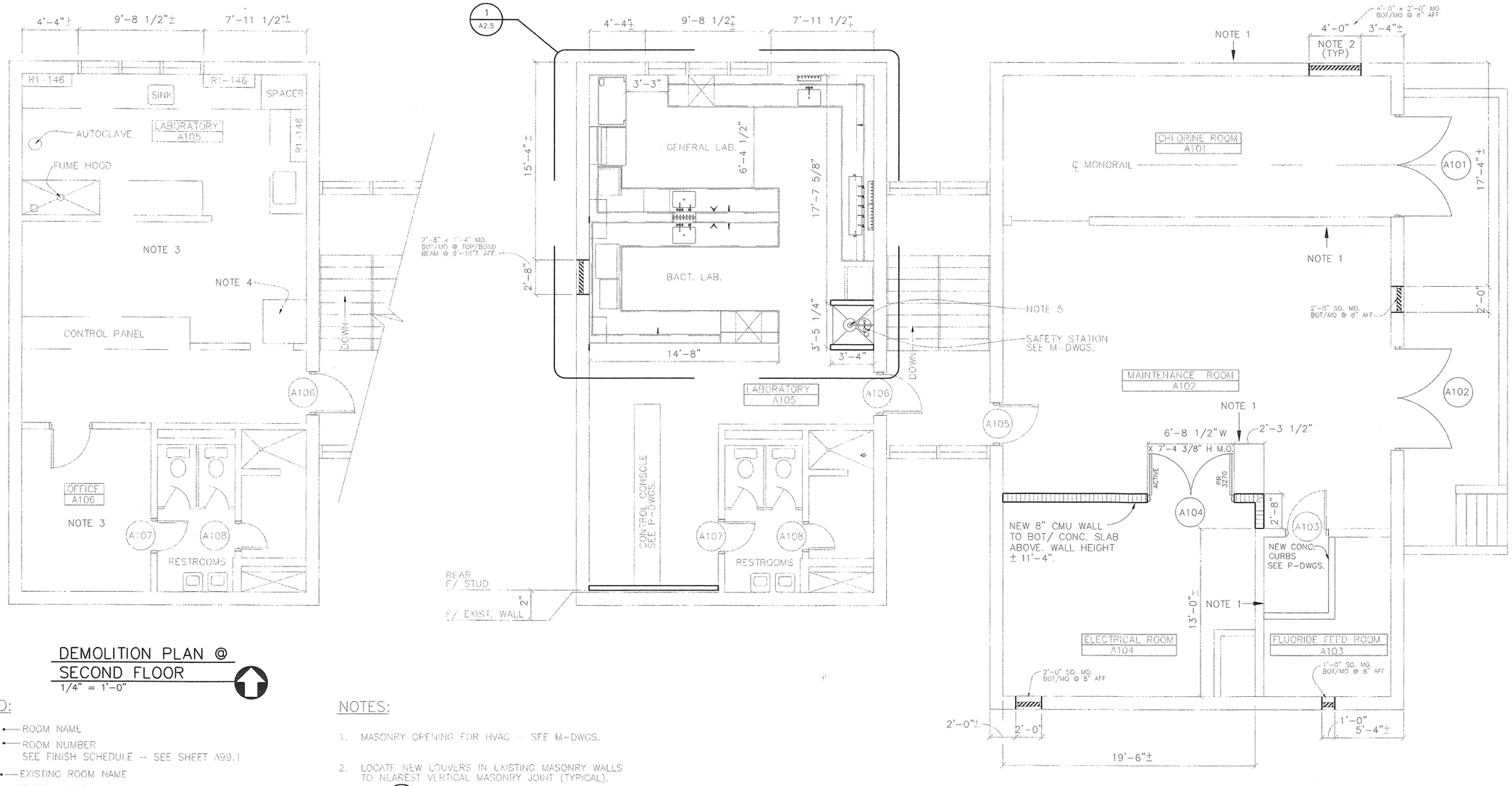
12.15.99

JMRICK



DEMOLITION PLAN @ SECOND FLOOR

1/4" = 1'-0"

SECOND FLOOR PLAN

1/4" = 1'-0"

LEGEND:

- OFFICE / D105 — ROOM NAME / ROOM NUMBER SEE FINISH SCHEDULE -- SEE SHEET A99.1
- OFFICE / A105 — EXISTING ROOM NAME / EXISTING ROOM NUMBER
- (D104) NEW DOOR NUMBER SEE DOOR SCHEDULE - SEE SHEET A99.1
- (A104) EXISTING DOOR NUMBER
- 12" CMU
- 8" CMU
- 4" BRICK
- CAST-IN-PLACE CONC.
- NEW 9'-0" HIGH WALL BOARD PARTITION WITH 3 5/8" METAL STUDS @ 16" O.C.

NOTES:

1. MASONRY OPENING FOR HVAC - SEE M-DWGS.
2. LOCATE NEW LOUVERS IN EXISTING MASONRY WALLS TO NEAREST VERTICAL MASONRY JOINT (TYPICAL). SEE 5 / A99.2 FOR LOUVER DETAILS
3. COMPLETELY REMOVE ALL DOTTED PARTITIONS AND DOORS, LABORATORY CASEWORK, FLOOR TILE, FLOOR TILE GLUE, BASE AND SUSPENDED CEILING. PATCH EXISTING WALLS AND FLOORING AS REQUIRED. SEE FINISH SCHEDULE FOR SURFACE PREPARATION.
4. REMOVE EXISTING 2 1/2" (+/-) THICK CONCRETE TOPPING @ SAFETY STATION.
5. NEW CERAMIC TILE FLOOR AND WAINSCOT @ SAFETY STATION. SEE DETAIL 1 / A99.1

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SOUTH CAROLINA

STATE OF SOUTH CAROLINA — 12-15-99 — MARK B. GARBER — REGISTERED ARCHITECT

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

CHEMICAL AND ADMINISTRATION BUILDING
SECOND FLOOR PLAN

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A2.2	1
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

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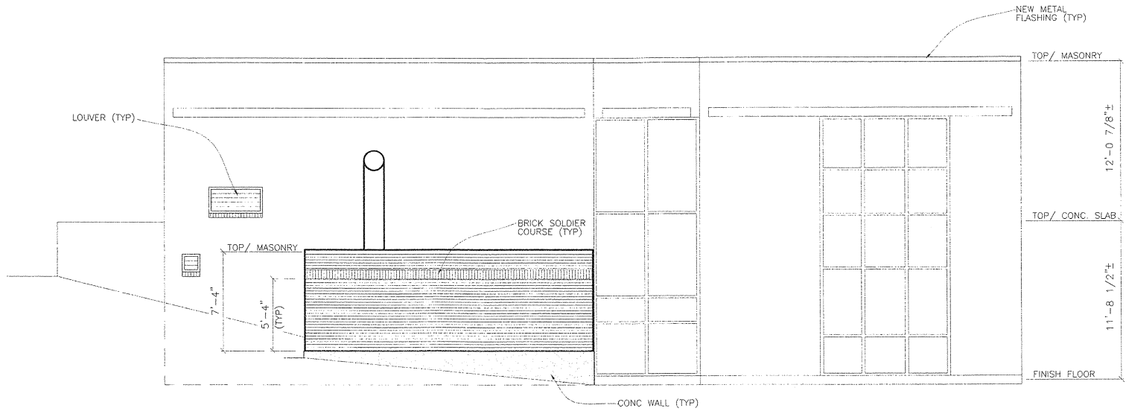
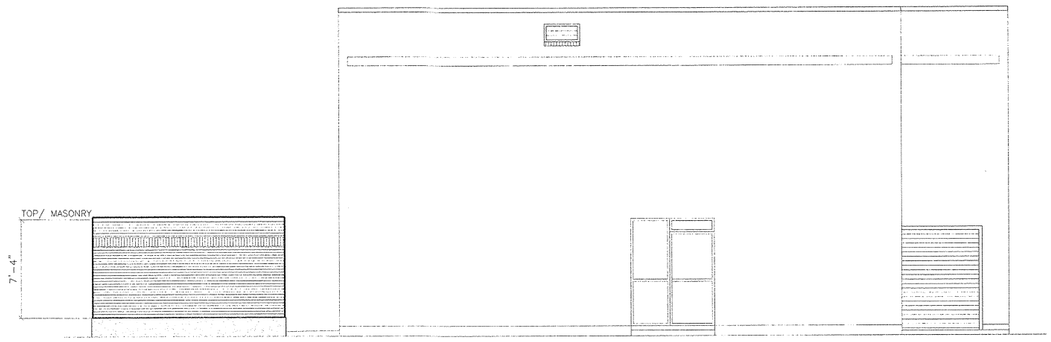
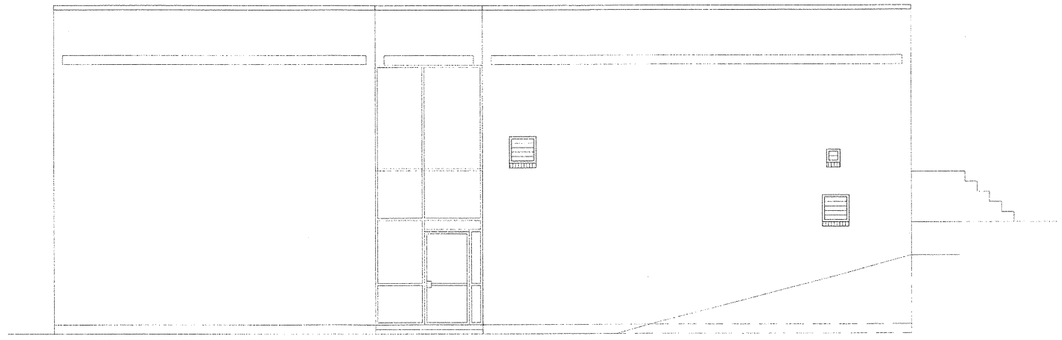
JMNICK



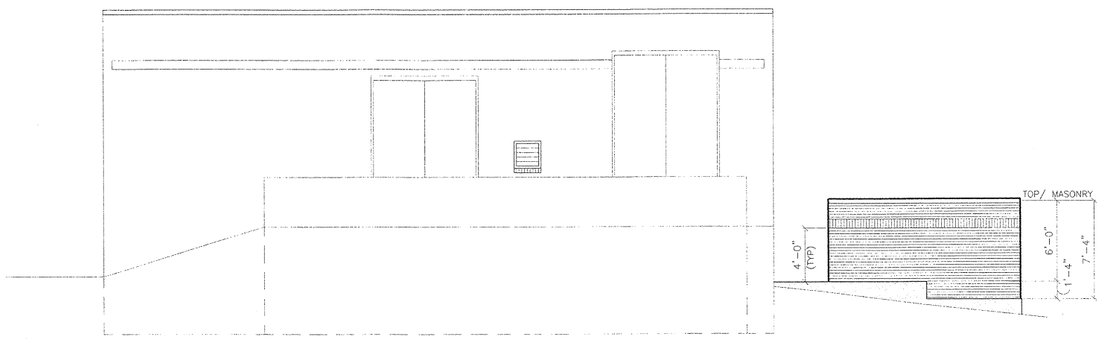
NORTH ELEVATION
3/16" = 1'-0"



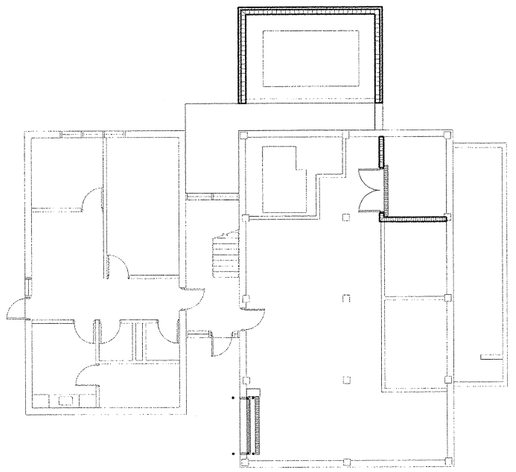
WEST ELEVATION
3/16" = 1'-0"



SOUTH ELEVATION
3/16" = 1'-0"



EAST ELEVATION
3/16" = 1'-0"



KEY PLAN
N.T.S.

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GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

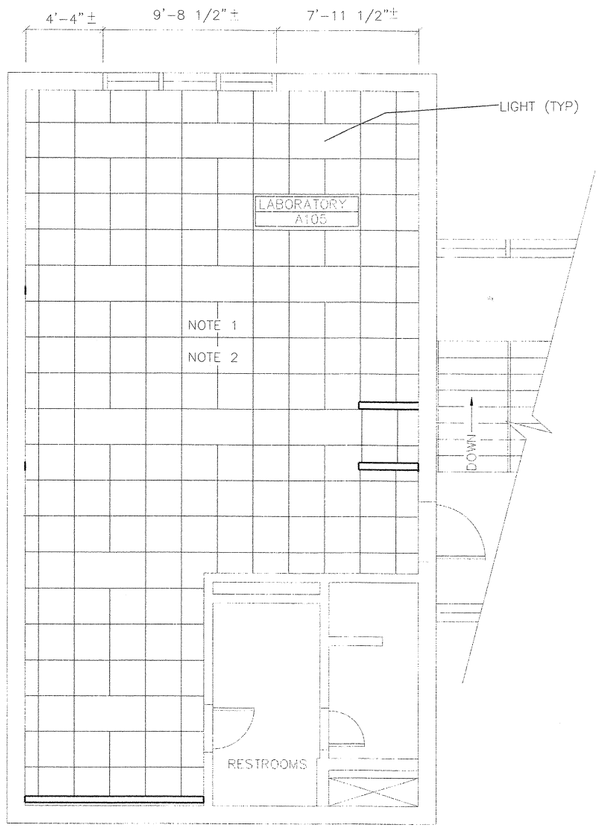
STATE OF SOUTH CAROLINA — 12-15-99 — MARK B. CARROLL — REGISTERED ARCHITECT — 1841

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

CHEMICAL AND ADMINISTRATION BUILDING ELEVATIONS

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A2.3 SHEET	1 REV
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN		

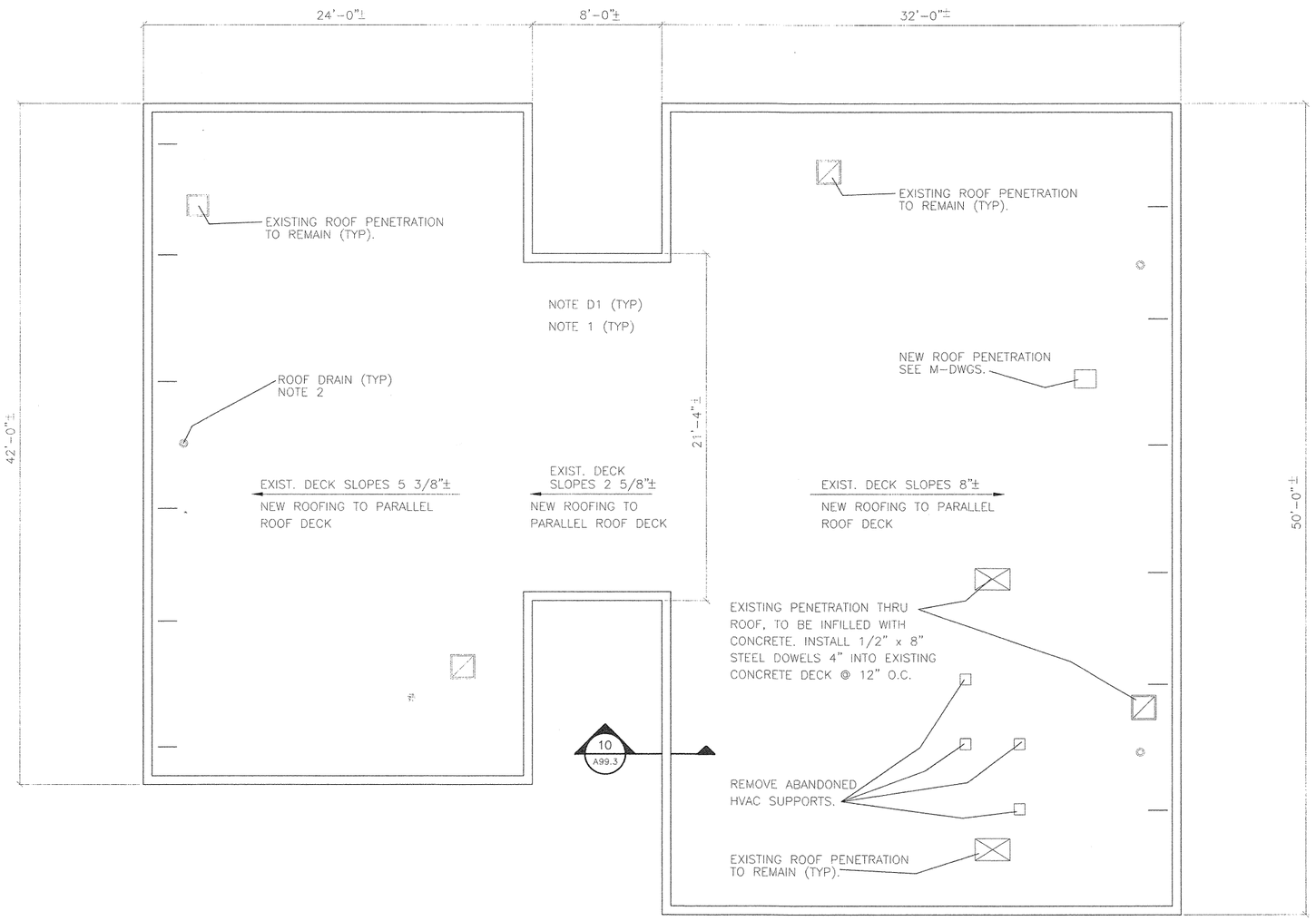
JAMNCK



REFLECTED CEILING PLAN
1/4" = 1'-0"

NOTES:

1. NEW SUSPENDED ACOUSTICAL CEILING
2. EXISTING CEILING MOUNTED HVAC ITEMS TO BE REINSTALLED IN NEW SUSPENDED ACOUSTICAL CEILING. SEE M-DWGS.



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

DEMOLITION NOTES:

D1. REMOVE ALL EXISTING ROOFING, ROOF INSULATION, ROOF EDGE FLASHING, AND WOOD BLOCKING.

NOTES:

1. INSTALL NEW WOOD BLOCKING, NEW 1 1/2" ISO ROOF INSULATION, NEW ROOFING, AND NEW ROOF EDGE FLASHING. SEE SHEET A99.3 FOR DETAILS.
2. EXISTING ROOF DRAIN TO REMAIN.
3. SEE M-DWGS FOR ALTERATION OF SIZE OF EXISTING ROOF PENETRATIONS TO REMAIN

ccgd03a04.dwg
12.15.99

NOTES:
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SOUTH CAROLINA — Jordan, Jones & Goulding, Inc. — No. C00554 — CERTIFICATE OF AUTHORIZATION

NO.	DATE	DESCRIPTION OF REVISION
1	08-02-01	RECORD DRAWING
0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

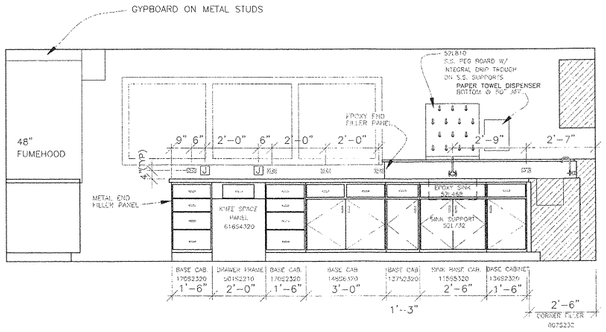
STATE OF SOUTH CAROLINA — 12-15-99 — MARK B. CARPENTER — REGISTERED ARCHITECT — 1841

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

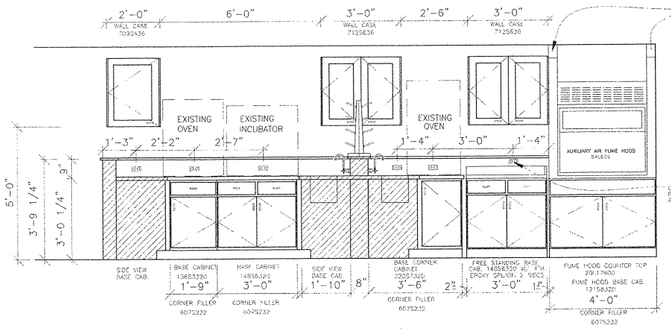
CHEMICAL AND ADMINISTRATION BUILDING
ROOF PLAN AND
REFLECTED CEILING PLAN

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A2.4 SHEET	1 REV
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN		

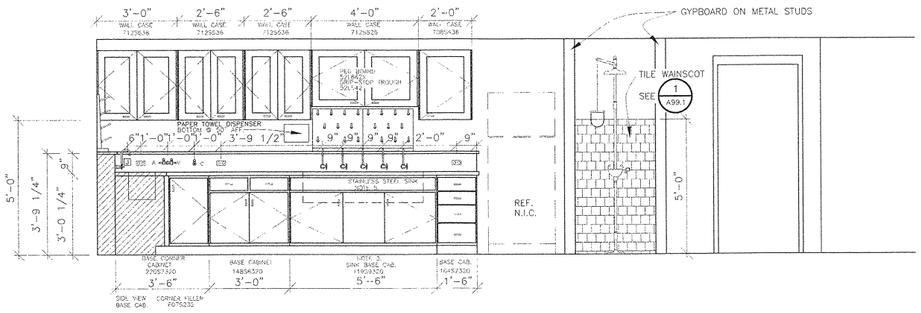
JOBNICK



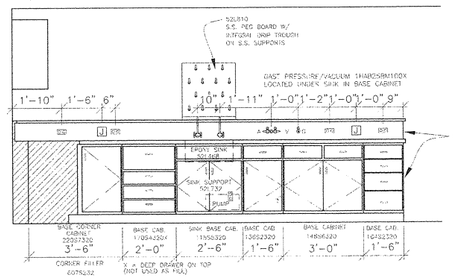
A A2.5 **ELEVATION A**
3/8" = 1'-0"



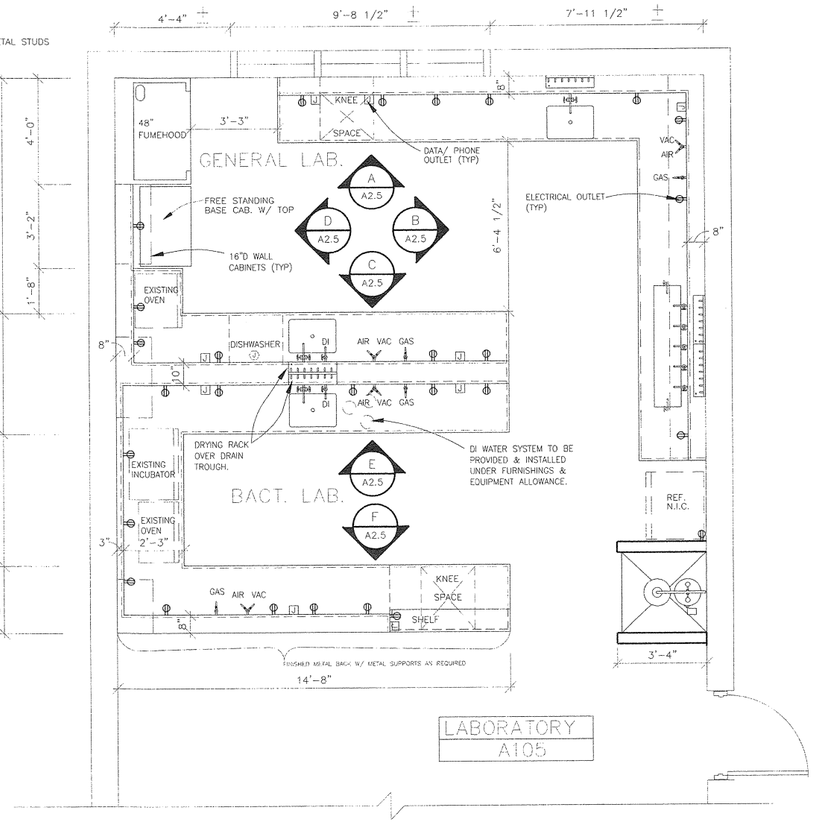
D A2.5 **ELEVATION D**
3/8" = 1'-0"



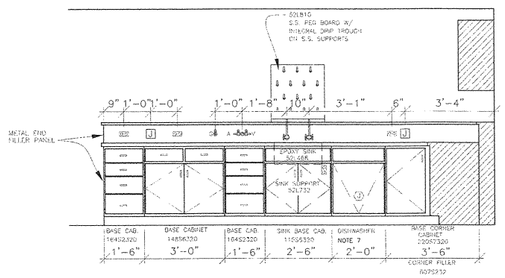
B A2.5 **ELEVATION B**
3/8" = 1'-0"



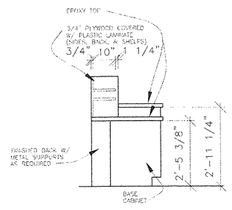
E A2.5 **ELEVATION E**
3/8" = 1'-0"



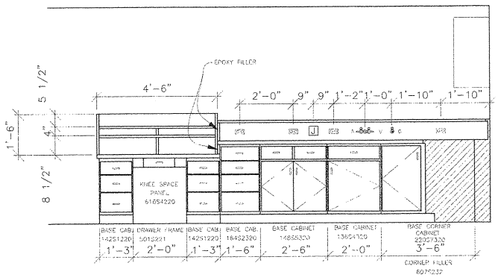
1 A2.5 **LAB BLOWUP**
3/8" = 1'-0"



C A2.5 **ELEVATION C**
3/8" = 1'-0"



PARTIAL SIDE ELEV. F
3/8" = 1'-0"



F A2.5 **ELEVATION F**
3/8" = 1'-0"

DETAIL NOTES:

1. MIXING FAUCET - 32L418 (3 EA.) - SEE M-DWGS FOR PIPING.
2. DI FAUCET - 28L14900 (2 EA.) - SEE M-DWGS FOR PIPING.
3. SAMPLE FAUCET - 32L413 (5 EA.) - SEE M-DWGS FOR PIPING.
4. SERVICE COCK - 30L565 (4 EA.) - SEE M-DWGS FOR PIPING.
5. SERVICE COCK - 30L564 (4 EA.) - SEE M-DWGS FOR PIPING.
6. 56"L. x 12"w x 12"d 18-8 GA. TYPE 304 S.S. WITH 2 DRAIN CUTOUTS. SEE M-DWGS FOR DRAIN SIZES AND LOCATIONS. SINK SHALL SUSPEND UNDER THE COUNTER TOP WITH SINK SUPPORTS AS REQUIRED. COMPLETELY SEAL BETWEEN SINK AND COUNTER TOP.
7. UNDER COUNTER DISHWASHER - G.E. MOD #: GSD43202BB - SEE M-DWGS & E-DWGS.

GENERAL NOTES:

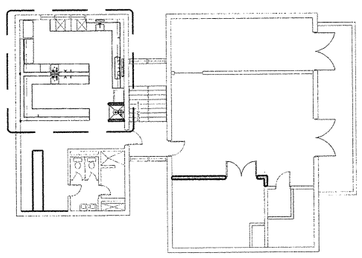
A. ALL MODEL NUMBERS REFER TO FISHER HAMILTON ITEMS, U.N.O.

B. ALL COUNTER TOPS, REAGENT RISERS & SHELVES, AND BACK SPLASHES SHALL BE EPOXY RESIN, COLOR TO BE SELECTED BY ENGINEER. THIS IS APPLICABLE @ STANDING HEIGHT CASEWORK.

C. LABORATORY EQUIPMENT INSTALLER SHALL INSTALL ALL FAUCETS AND SERVICE COCKS. SEE M-DWGS FOR DRAINS AND PIPING.

D. LABORATORY EQUIPMENT INSTALLER SHALL CUT ALL OPENINGS IN EPOXY RESIN AND PLASTIC LAMINATE FOR ELECTRICAL AND PLUMBING ITEMS. SEE E-DWGS FOR JUNCTION BOXES, DEVICES AND COVER PLATES.

E. NEW BATT INSULATION @ CEILING OMITTED FOR CLARITY.



KEY PLAN
N.T.S.

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12.15.99

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Jordan Jones & Goulding

GEORGETOWN 1734 SOUTH CAROLINA

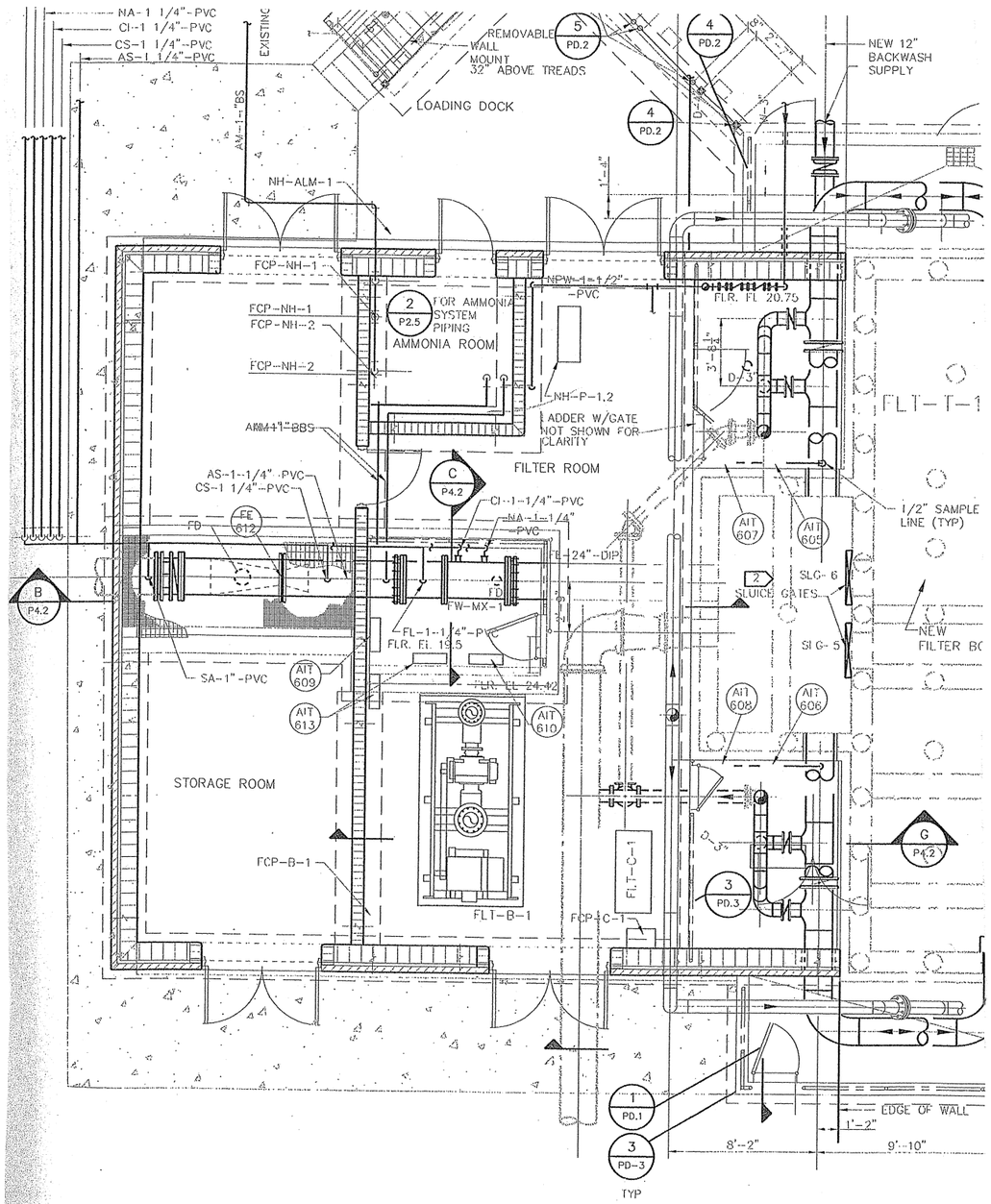
CITY OF GEORGETOWN
SOUTH CAROLINA

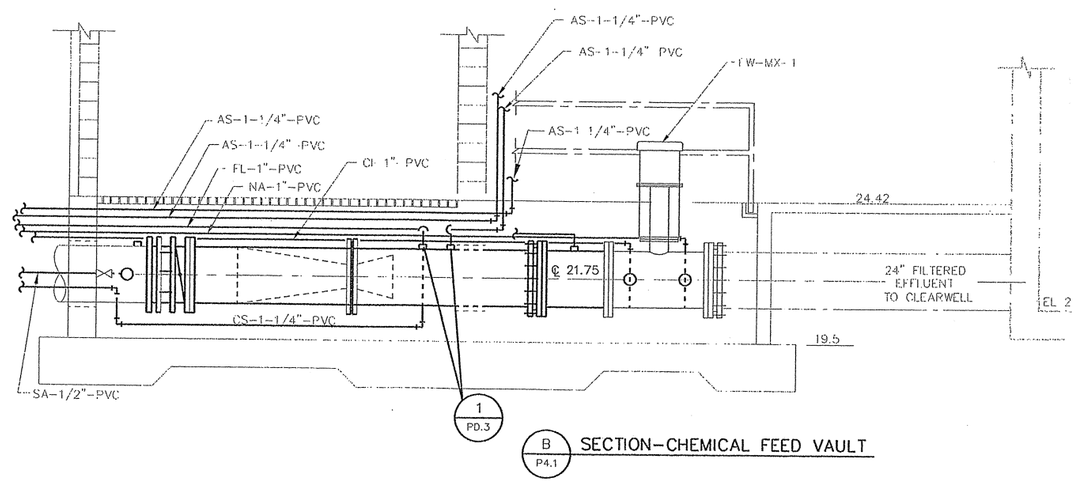
STATE OF SOUTH CAROLINA — 12-15-99 — MARK B. CARRE — REGISTERED ARCHITECT — 1841

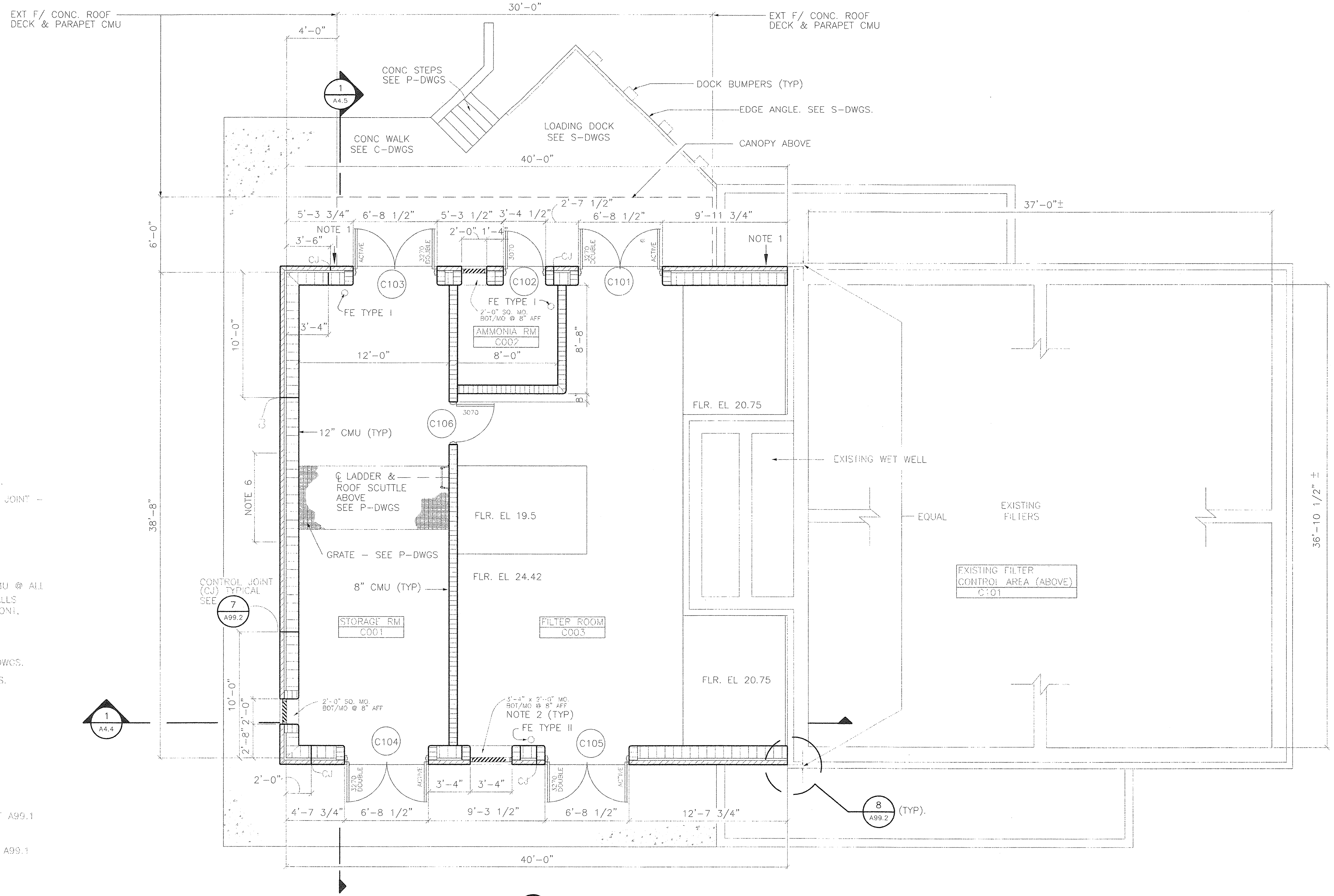
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

CHEMICAL AND ADMINISTRATION BUILDING
ENLARGED LABORATORY PLAN
AND DETAILS

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A2.5 SHEET	1 REV
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN		


NA-1 1/4"-PVC
CI-1 1/4"-PVC
CS-1 1/4"-PVC
AS-1 1/4"-PVC
EXISTING
AM-1-1"BS
REMOVABLE WALL MOUNT 32" ABOVE TREADS
5 PD.2
4 PD.2
4 PD.2
LOADING DOCK
NEW 12" BACKWASH SUPPLY
NH-ALM-1
FCP-NH-1
NPW-1-1/2"-PVC
FLR. EL 20.75
2 P2.5 FOR AMMONIA SYSTEM PIPING
AMMONIA ROOM
FCP-NH-1
FCP-NH-2
FCP-NH-2
NH-P-1,2
ADDER W/GATE NOT SHOWN FOR CLARITY
AM-1-1"BS
FILTER ROOM
C P4.2
AS-1-1/4"-PVC
CS-1 1/4"-PVC
CI-1-1/4"-PVC
NA-1-1/4"-PVC
FE 612
FD
FE-24"-DIP
FD
FW-MX-1
FL-1-1/4"-PVC
FLR. EL 19.5
FLR. EL 24.42
AIT 607
AIT 605
2 SLUICE GATES
SLG-6
SLG-5
1/2" SAMPLE LINE (TYP)
NEW FILTER BO
B P4.2
SA-1"-PVC
AIT 609
AIT 613
AIT 610
AIT 608
AIT 606
STORAGE ROOM
FCP-B-1
FLT-B-1
FLT-C-1
FCP-C-1
3 PD.3
G P4.2
1" PD.1
3 PD-3
TYP
EDGE OF WALL
1'-2"
8'-2"
9'-10"
FLT-T-1


AS-1-1/4"-PVC
AS-1-1/4" PVC
FW-MX-1
AS-1-1/4"-PVC
AS-1-1/4" PVC
FL-1"-PVC
NA-1"-PVC
CI-1"-PVC
24.42
℄ 21.75
24" FILTERED EFFLUENT TO CLEARWELL
EL 2
CS-1-1/4"-PVC
19.5
SA-1/2"-PVC
1 PD.3
B P4.1
SECTION-CHEMICAL FEED VAULT



PLAN
1/4" = 1'-0"

NOTES:

1. MASONRY OPENING FOR HVAC – SEE M-DWGS.
2. LOCATE LOUVERS TO NEAREST VERT. MASONRY JOINT – SEE (4 / A99.2) FOR LOUVER DETAILS
3. ALL PERSONAL DOORS SHALL HAVE A 7'-4 3/8" HIGH M.O., U.N.O.
4. UNLESS NOTED OTHERWISE, USE BULLNOSE CMU @ ALL
   - CMU OUTSIDE CORNERS @ INTERIOR WALLS
   - EXPOSED CORNERS OF DOOR, STOREFRONT, & LOUVER JAMBS
   - EXPOSED CORNERS OF STOREFRONT & LOUVER SILLS
5. GUARDRAILS, LADDERS, & GATES – SEE P-DWGS.
6. CONCRETE FOUNDATION WALL -- SEE S-DWGS.

LEGEND:

OFFICE / D105 — ROOM NAME — ROOM NUMBER SEE FINISH SCHEDULE – SEE SHEET A99.1

(D104) DOOR NUMBER SEE DOOR SCHEDULE – SEE SHEET A99.1

12" CMU

8" CMU

4" BRICK

CAST-IN-PLACE CONC.

cog08ac1.dwg 12.15.99

NOTES:
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South Carolina Jordan, Jones & Goulding, Inc. No. C00554 Certificate of Authorization

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Jordan Jones & Goulding

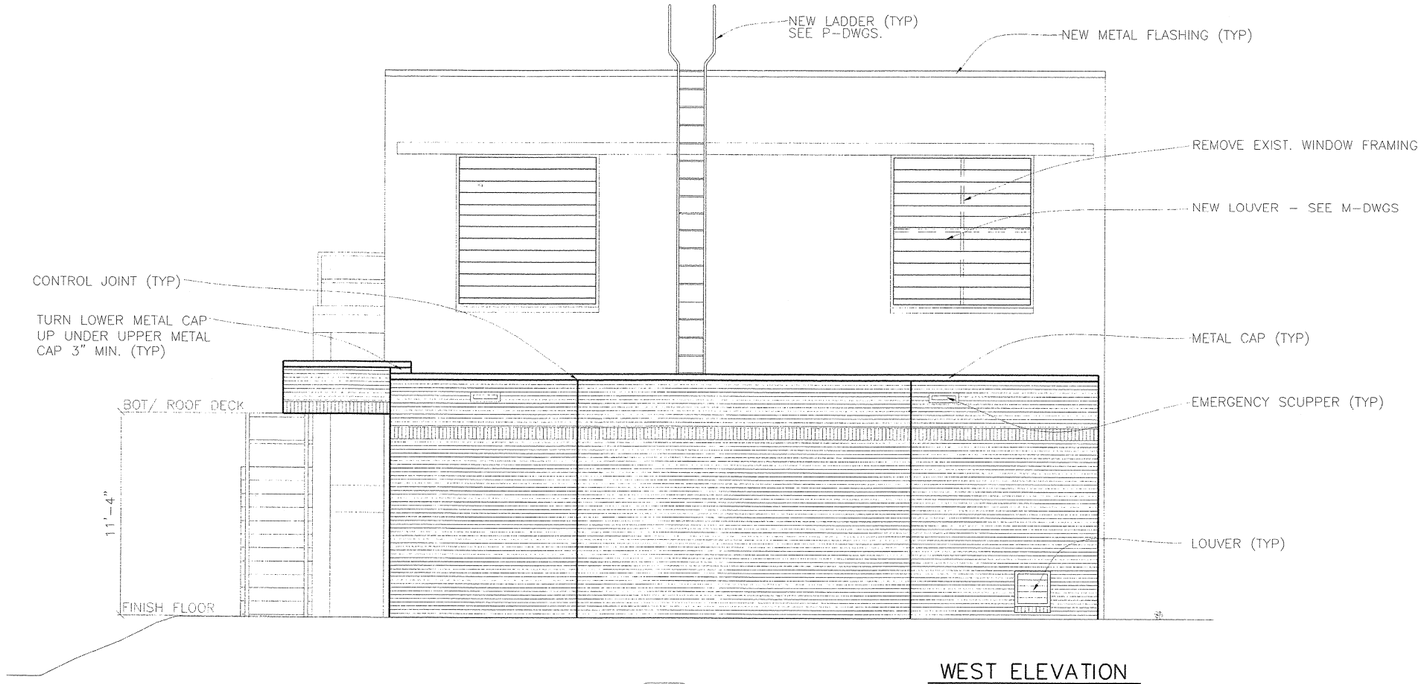
CITY OF GEORGETOWN
SOUTH CAROLINA

State of South Carolina Mark B. Garber 1841 Registered Architect 12-15-99

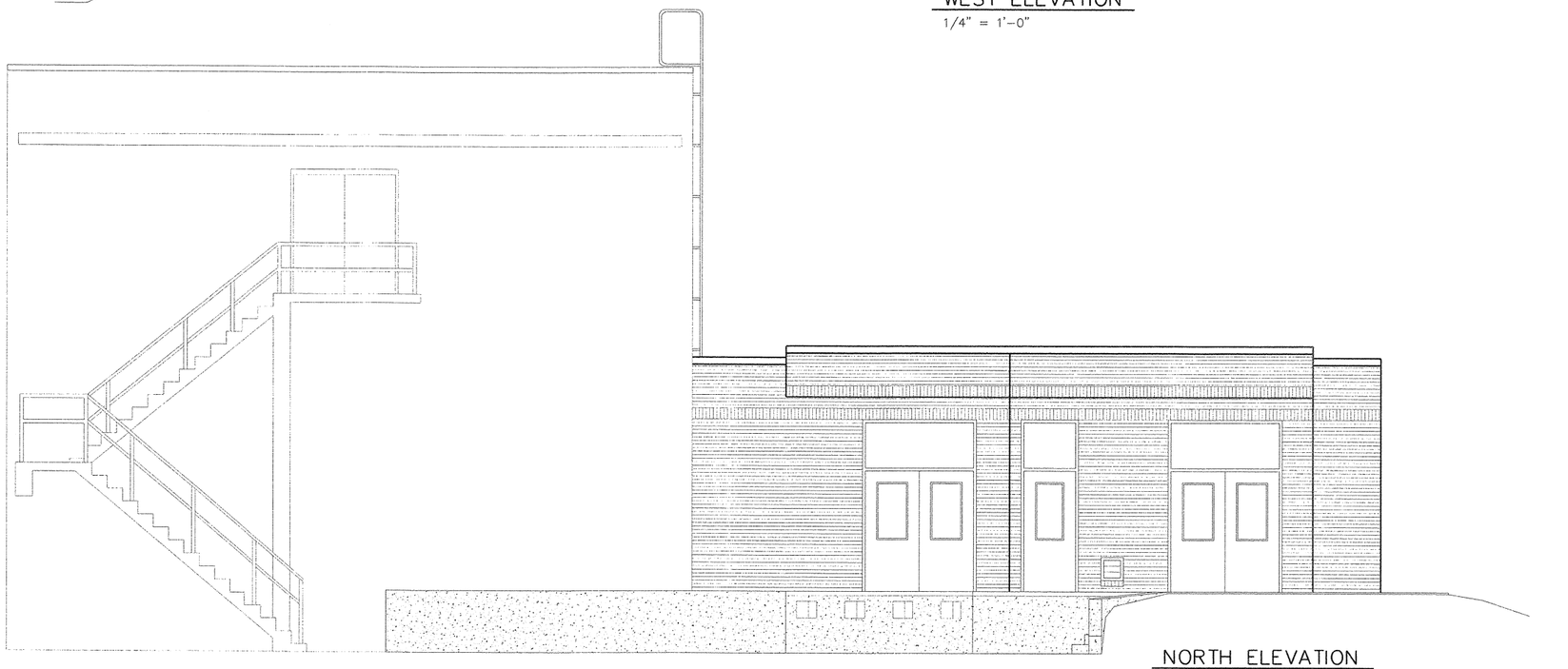
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FILTER BUILDING MODIFICATIONS
FLOOR PLAN

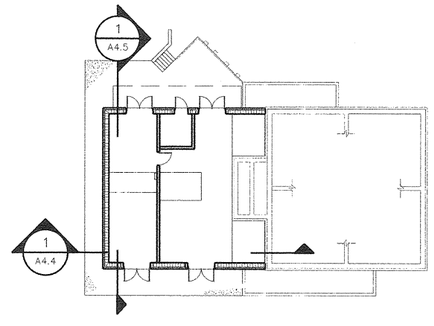
DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A4.1 SHEET	1 REV
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN		



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



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



KEY PLAN
N.T.S.

cg96as2.dwg
12-15-99

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Jordan Jones & Goulding

GEORGETOWN 1734 SOUTH CAROLINA

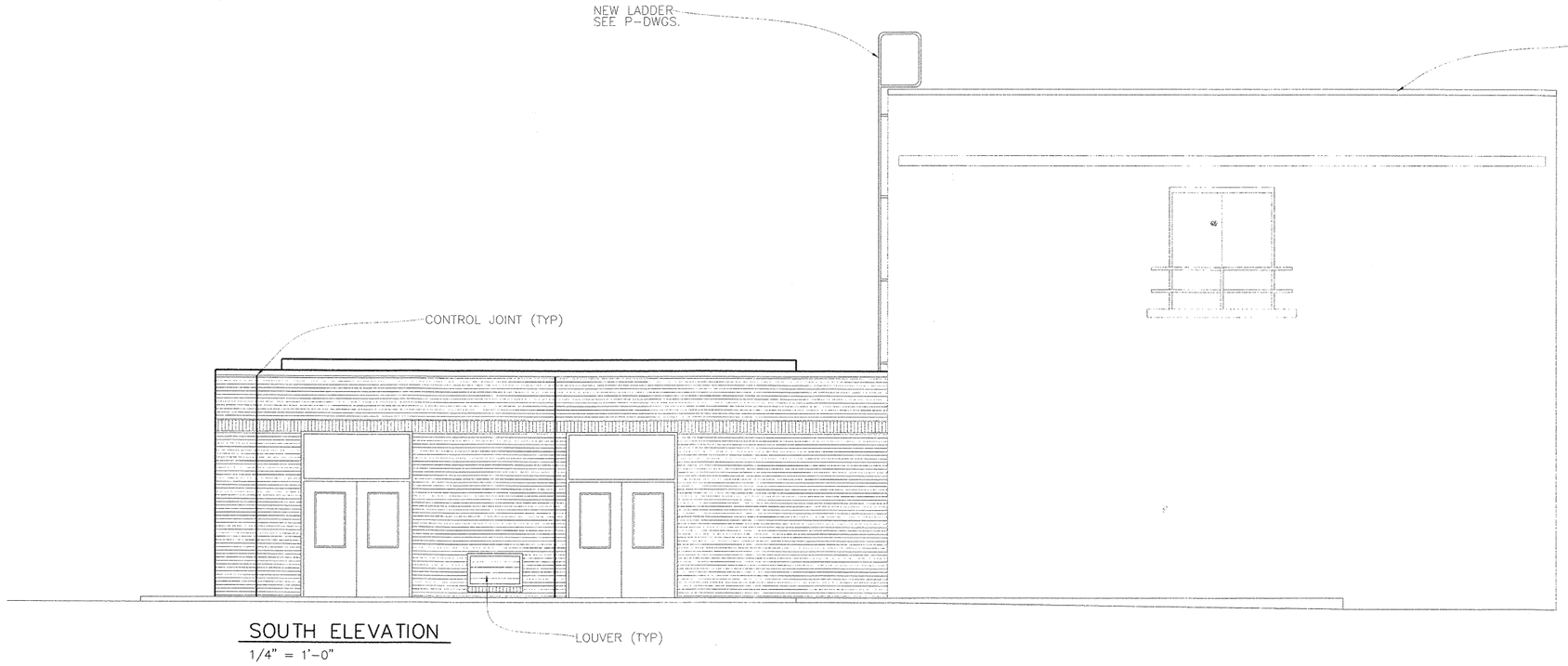
CITY OF GEORGETOWN
SOUTH CAROLINA

STATE OF SOUTH CAROLINA — 12-15-99 — MARK B. GARRETT — REGISTERED ARCHITECT — 1841

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

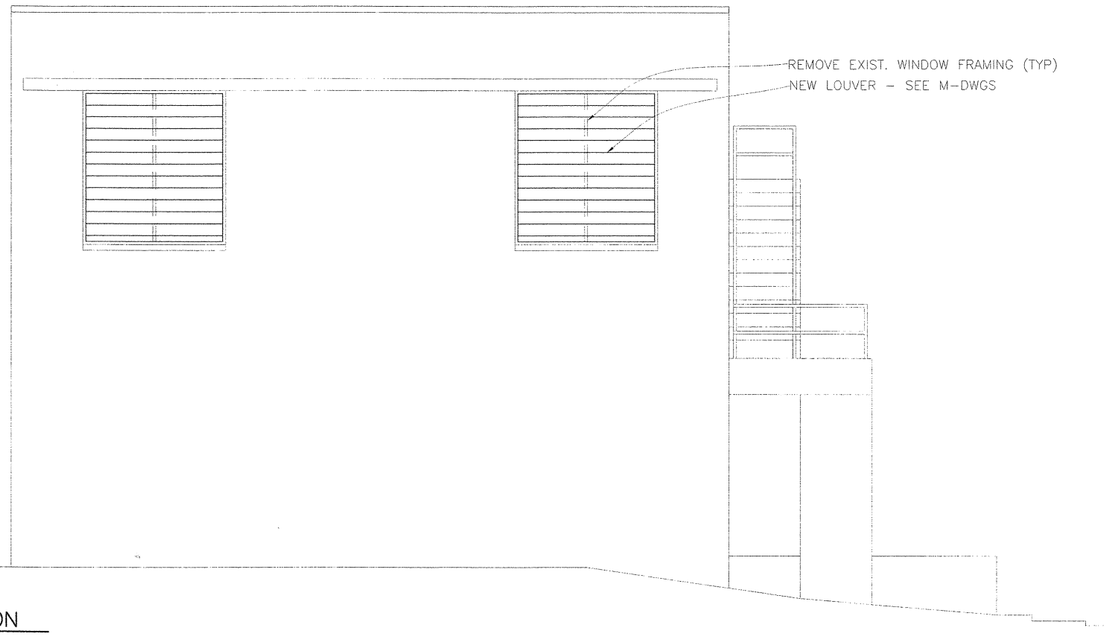
FILTER BUILDING MODIFICATIONS
ELEVATIONS

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A4.2	1
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV



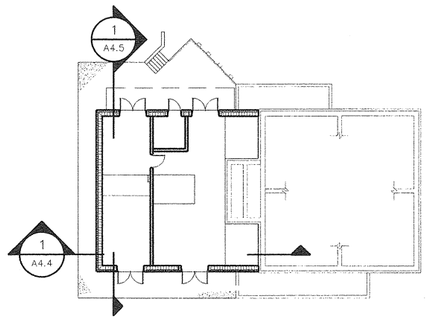
SOUTH ELEVATION

1/4" = 1'-0"



EAST ELEVATION

1/4" = 1'-0"



KEY PLAN

N.T.S.

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Jordan Jones & Goulding

GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

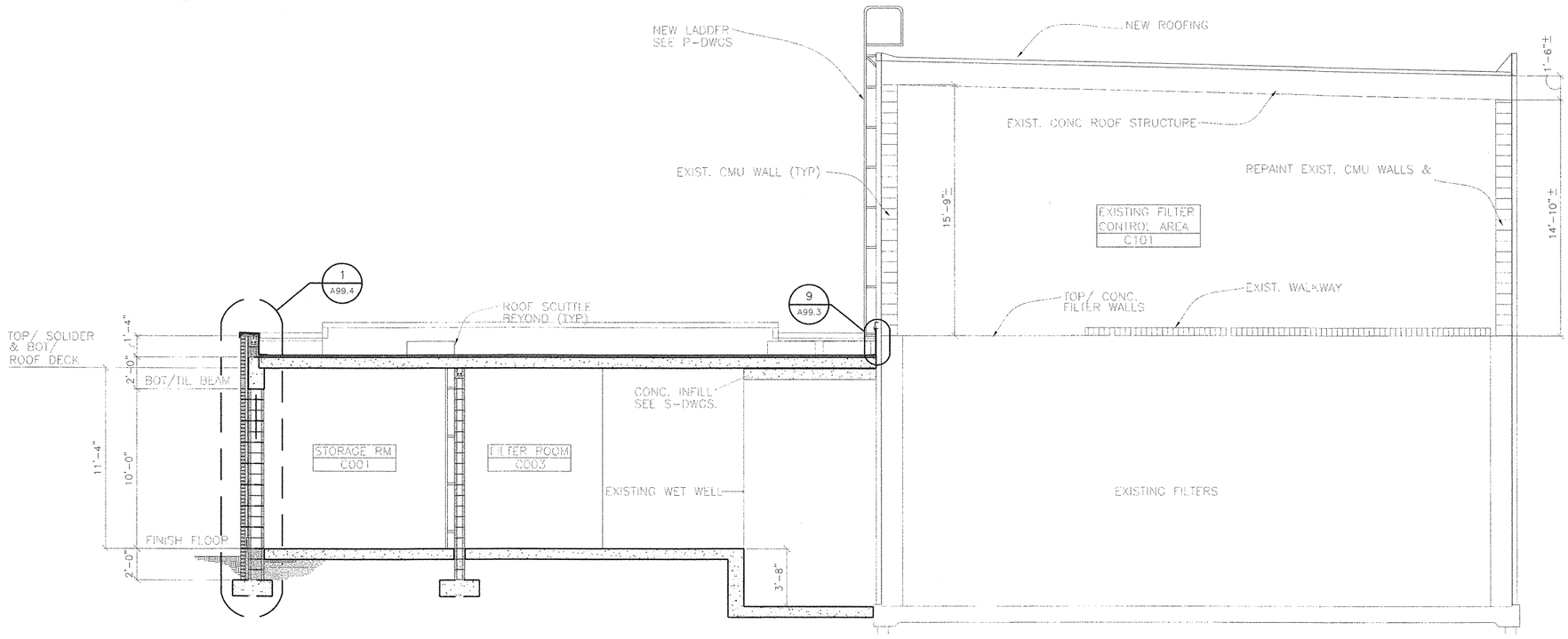
STATE OF SOUTH CAROLINA — 12-15-99 — MARK B. CARTER — 1841 — REGISTERED ARCHITECT

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

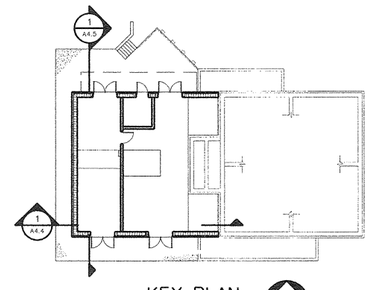
FILTER BUILDING MODIFICATIONS
ELEVATIONS

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A4.3	1
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

JDM/SCK



1 A4.4 SECTION
1/4" = 1'-0"



KEY PLAN
N.T.S.

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12.15.99

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GEORGETOWN 1734 SOUTH CAROLINA

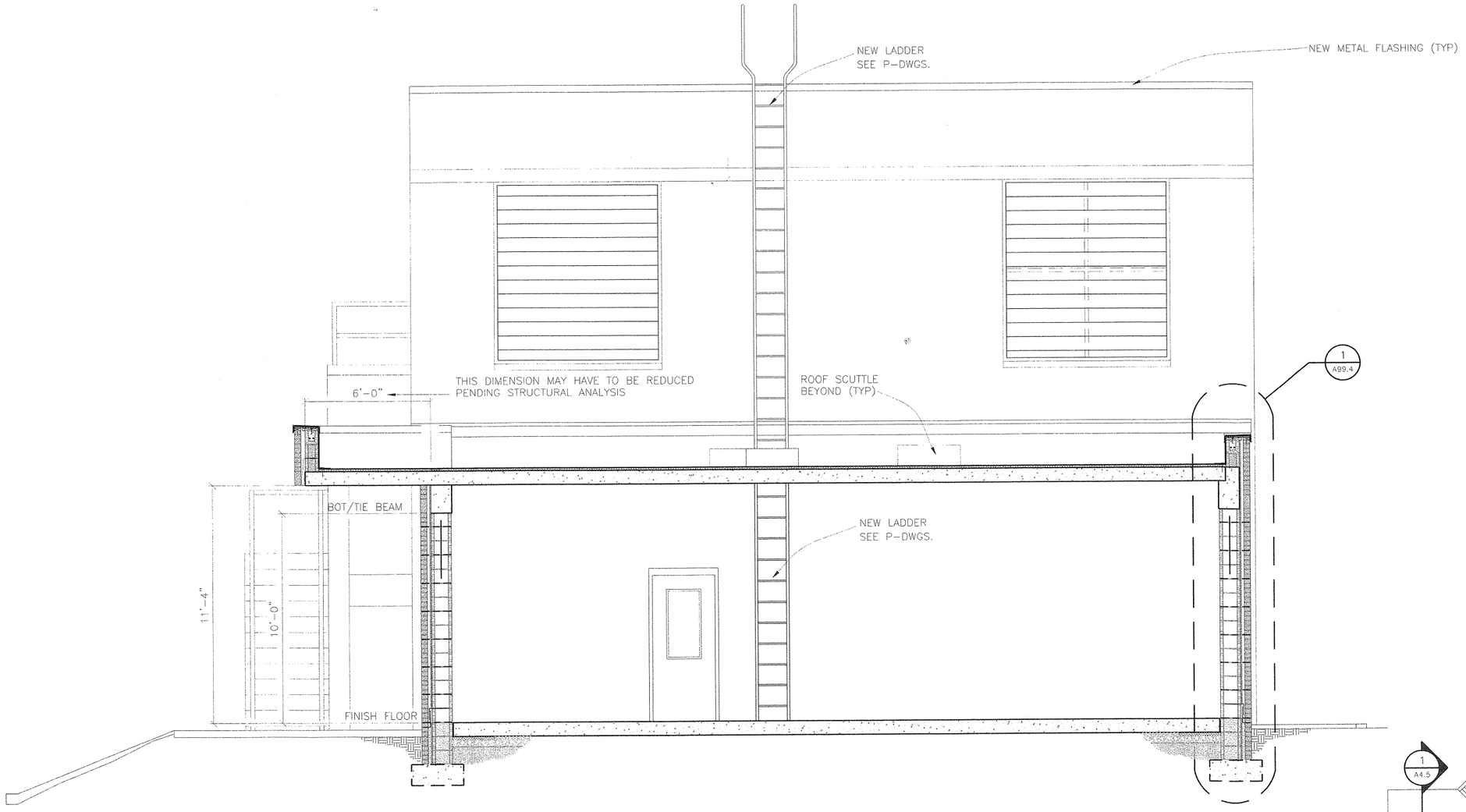
CITY OF GEORGETOWN
SOUTH CAROLINA

STATE OF SOUTH CAROLINA — 12-15-99 — MARK B. CARROLL — GEORGETOWN, SC — 1841 — REGISTERED ARCHITECT

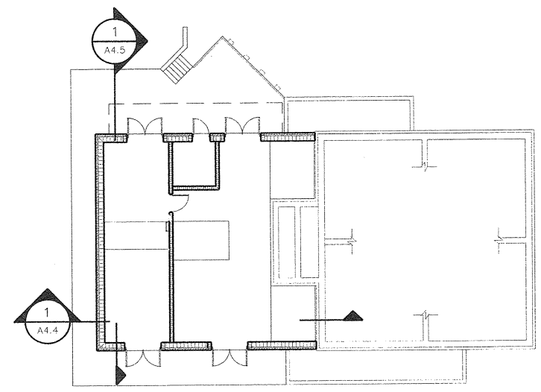
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FILTER BUILDING MODIFICATIONS
SECTION

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A4.4	1
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV



1 / A4.5 SECTION
3/8" = 1'-0"



KEY PLAN
N.T.S.

LEGEND:

OFFICE / D105 ····· ROOM NAME / ROOM NUMBER
SEE FINISH SCHEDULE - SEE SHEET A99.1

(D104) DOOR NUMBER
SEE DOOR SCHEDULE - SEE SHEET A99.1

12" CMU

8" CMU

4" BRICK

CAST-IN-PLACE CONC.

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GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

STATE OF SOUTH CAROLINA — 12-15-99 — MARK B. GARBER — 1841 — REGISTERED ARCHITECT

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FILTER BUILDING MODIFICATIONS
SECTION

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A4.5	1
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

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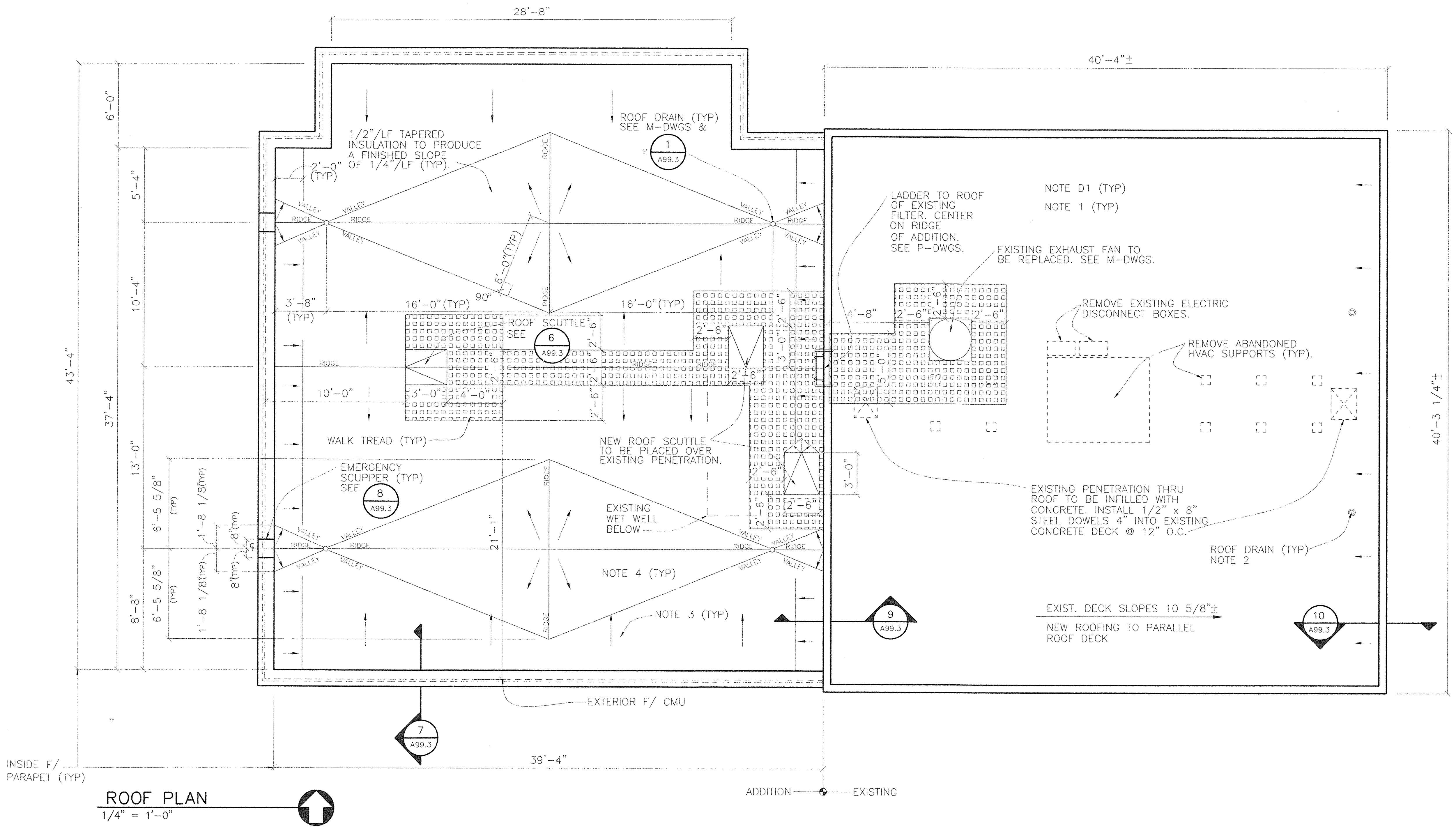
12.15.99

JANNICK



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

DEMOLITION NOTES:

D1. REMOVE ALL EXISTING ROOFING, ROOF INSULATION, ROOF EDGE FLASHING, AND WOOD BLOCKING.

NOTES:

1. INSTALL NEW WOOD BLOCKING, NEW 1 1/2" ISO ROOF INSULATION, NEW ROOFING, AND NEW ROOF EDGE FLASHING. SEE SHEET A99.3 FOR DETAILS.
2. EXISTING ROOF DRAIN TO REMAIN.
3. ALL TAPERED ROOF INSULATION SHALL HAVE A 1/4" PER LINEAR FOOT FINISHED SLOPE.
4. NEW ROOFING ON ADDITION - SEE SPECS.

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Jordan Jones & Goulding

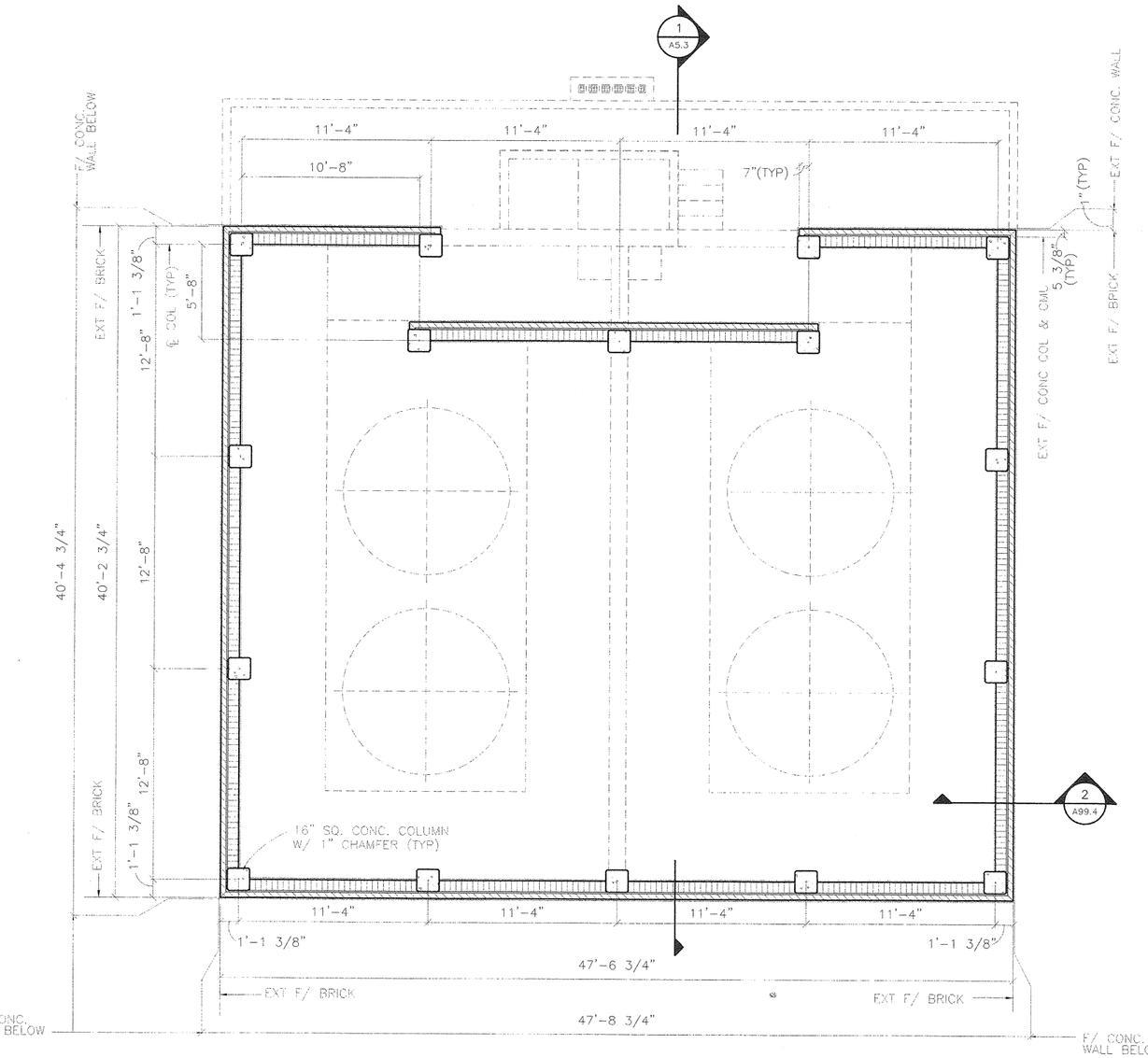
CITY OF GEORGETOWN SOUTH CAROLINA

STATE OF SOUTH CAROLINA 12-15-99 MARK B. CARROLL 1841 REGISTERED ARCHITECT

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FILTER BUILDING MODIFICATIONS
ROOF PLAN

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A4.6 SHEET	1 REV
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN		



PLAN
1/4" = 1'-0"

LEGEND:

- 12" CMU
- 8" CMU
- 4" BRICK
- CAST-IN-PLACE CONC.

NOTES:
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NO.	DATE	DESCRIPTION OF REVISION
1	08-02-01	RECORD DRAWING
0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

CITY OF GEORGETOWN
SOUTH CAROLINA

STATE OF SOUTH CAROLINA — 12-15-99 — MARK B. CARROLL — REGISTERED ARCHITECT

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FERRIC CHLORIDE AND CAUSTIC
BULK TANKS
PLAN

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A5.1	1
DRAWN: JDM	JOB NO. 2193.005	SCALE: AS SHOWN	SHEET	REV

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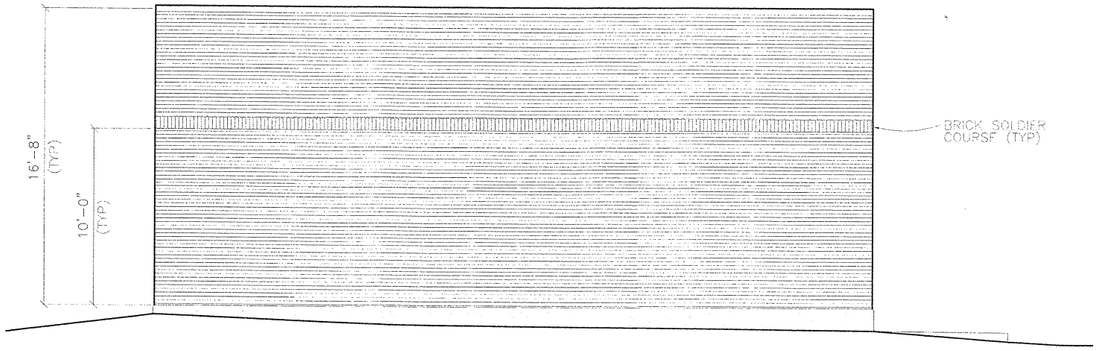
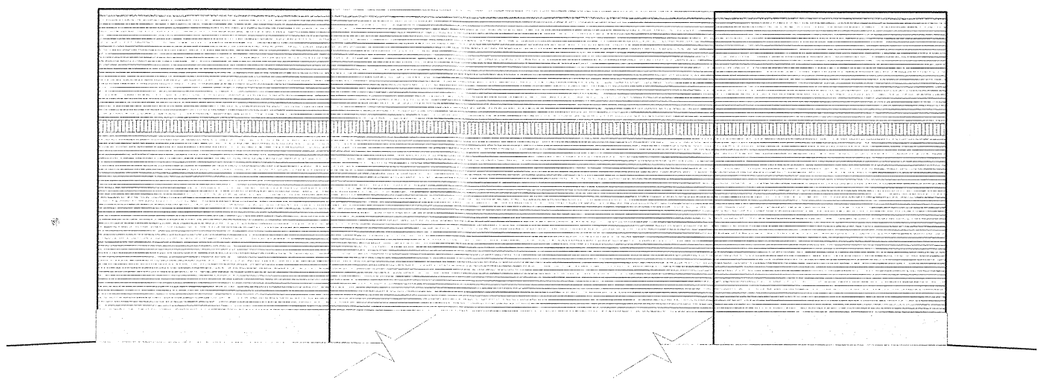


SOUTH ELEVATION
1/4" = 1'-0"



EAST ELEVATION
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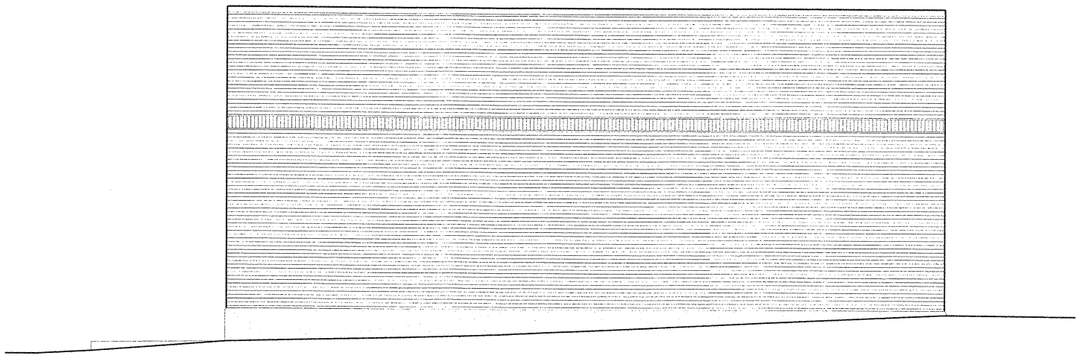

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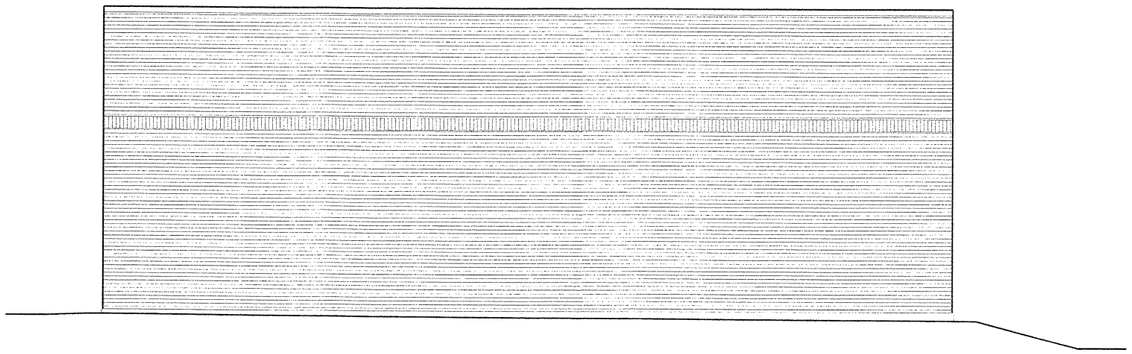
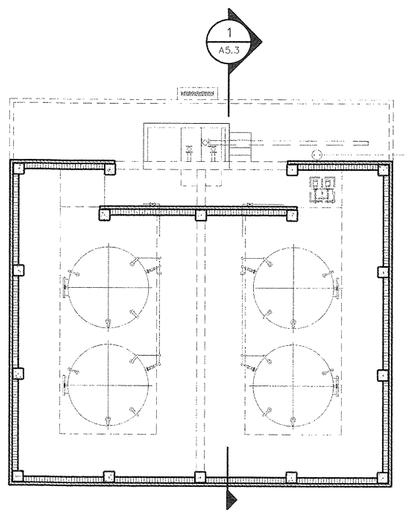


WEST ELEVATION
1/4" = 1'-0"



KEY PLAN
N.T.S.

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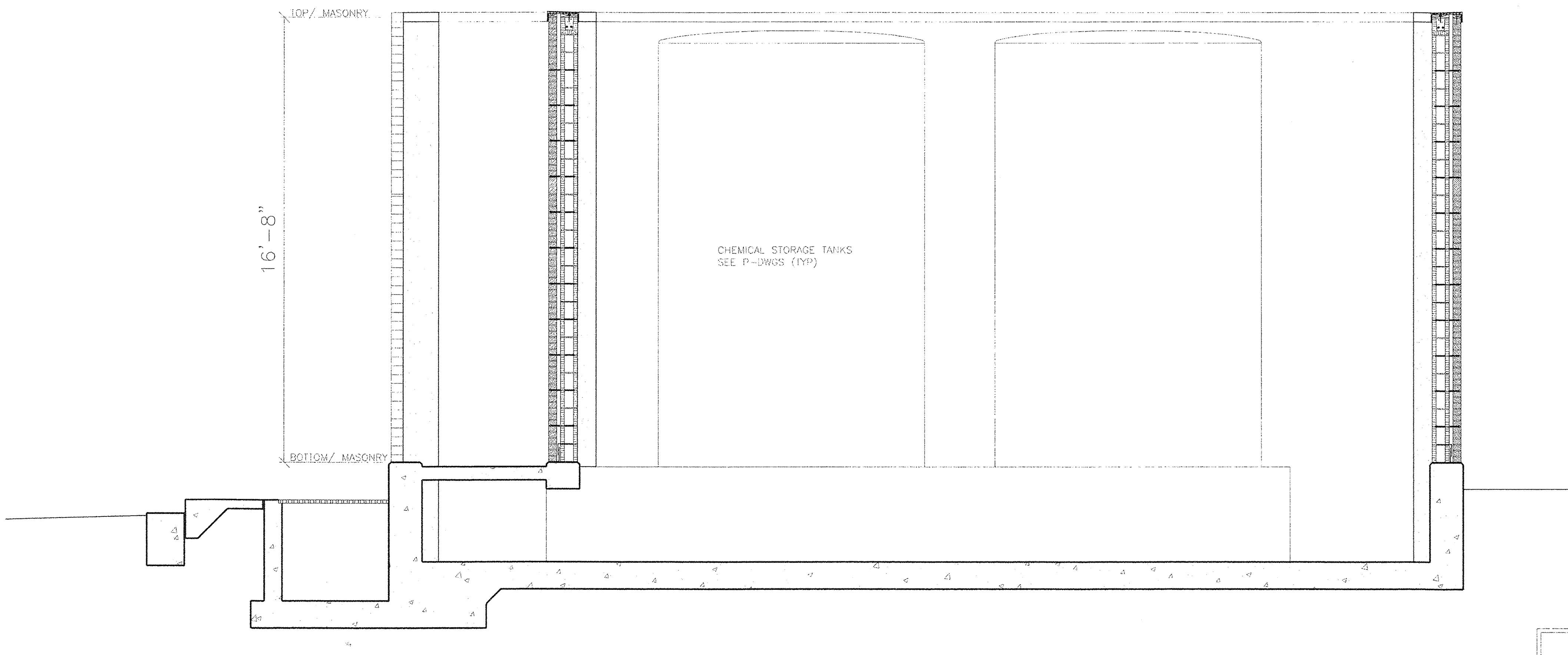
GEORGETOWN 1734 SOUTH CAROLINA
CITY OF GEORGETOWN
SOUTH CAROLINA

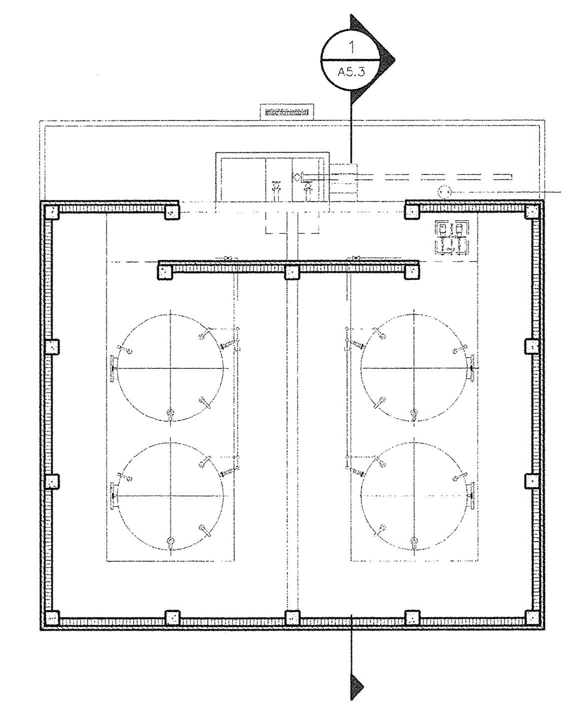
STATE OF SOUTH CAROLINA
12-15-99
MARK B. GARBER
REGISTERED ARCHITECT
1841

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS
FERRIC CHLORIDE AND CAUSTIC
BULK TANKS
ELEVATIONS

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A5.2	1
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV



SECTION (1/A5.3)
3/8" = 1'-0"



KEY PLAN
N.T.S.

LEGEND:

- 12" CMU
- 8" CMU
- 4" BRICK
- CAST-IN-PLACE CONC.

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1841
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CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FERRIC CHLORIDE AND CAUSTIC
BULK TANKS
SECTION

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A5.3	1
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

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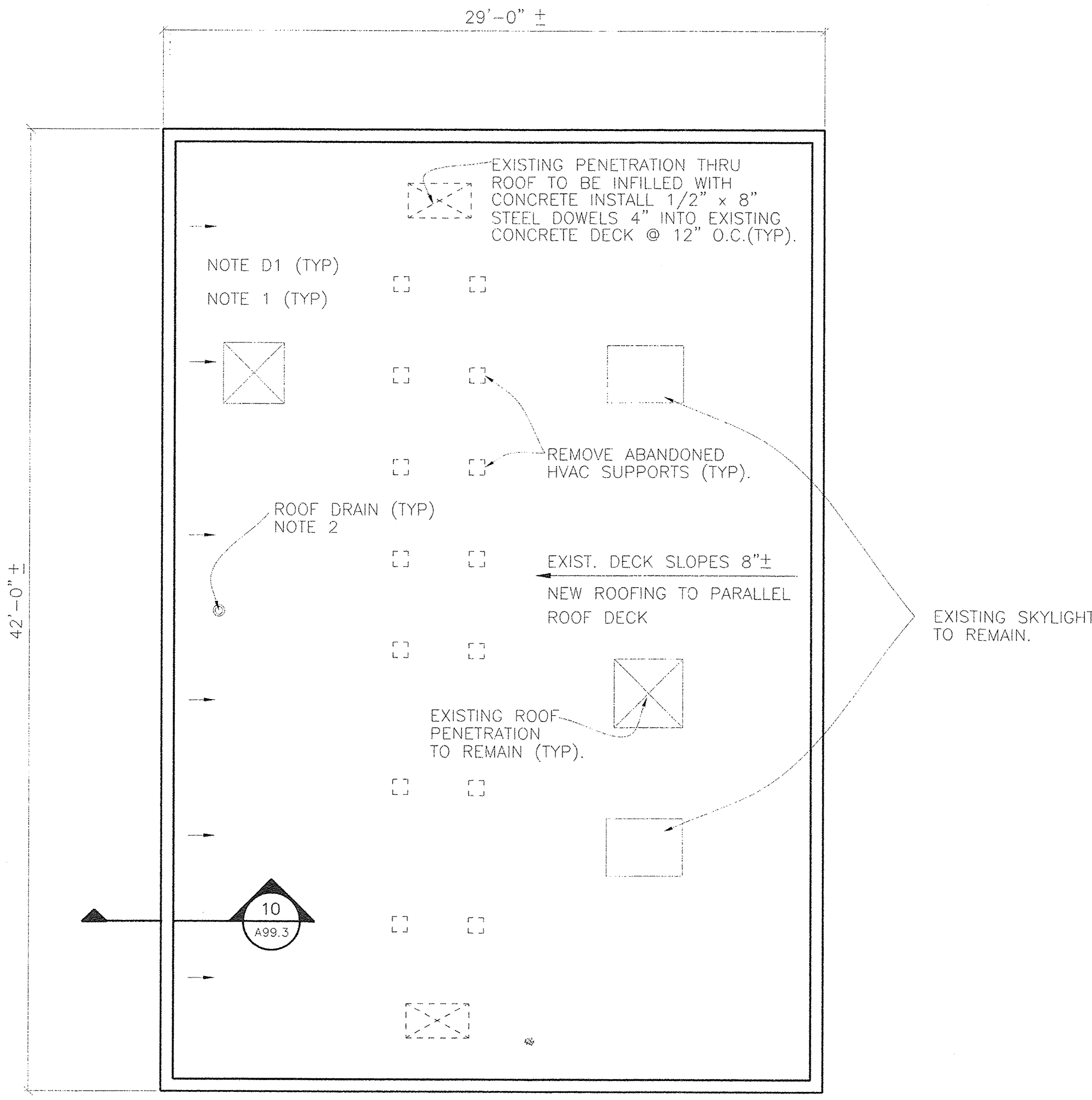

HSPS ROOF PLAN

1/4" = 1'-0"

DEMOLITION NOTES:

D1. REMOVE ALL EXISTING ROOFING, ROOF INSULATION, ROOF EDGE FLASHING, AND WOOD BLOCKING.

NOTES:

1. INSTALL NEW WOOD BLOCKING, NEW 1 1/2" ISO ROOF INSULATION, NEW ROOFING, AND NEW ROOF EDGE FLASHING. SEE SHEET A99.3 FOR DETAILS.
2. EXISTING ROOF DRAIN TO REMAIN.

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12.15.99

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STATE OF SOUTH CAROLINA — MARK B. CARROLL — 12-15-99 — 1841 — REGISTERED ARCHITECT

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

HIGH SERVICE PUMP STATION
ROOF PLAN

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A6.1	1
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

DOOR SCHEDULE

DOOR NO	DOOR SIZE	DOOR MATERIAL	DOOR TYPE	FRAME TYPE	INSTALLATION TYPE	HARDWARE	REMARKS
CHEMICAL & ADMINISTRATION BUILDING							
A001	8'-0"x7'-9" H. O/H	AL	D-3	F-5	3	---	
A002	3'-2" x 7'-0" PR	FRP	D-1	F-1	2	SET 1	
A101	3'-10" x 9'-0" PR	---	---	---	---	---	SEE SHEET A99.5
A102	3'-10" x 7'-2" PR	---	---	---	---	---	SEE SHEET A99.5
A104	3'-2" x 7'-0" PR	FRP	D-1	F-1	2	SET 1	
FILTER BUILDING							
C101	3'-2"x7'-0" PR	FRP	D-1	F-3	1	SET 2	
C102	3'-0"x7'-0"	FRP	D-2	F-4	1	SET 3	
C103	3'-2"x7'-0" PR	FRP	D-1	F-3	1	SET 2	
C104	3'-2"x7'-0" PR	FRP	D-1	F-3	1	SET 4	
C105	3'-2"x7'-0" PR	FRP	D-1	F-3	1	SET 4	
C106	3'-0"x7'-0"	FRP	D-2	F-2	2	SET 5	

FINISH SCHEDULE

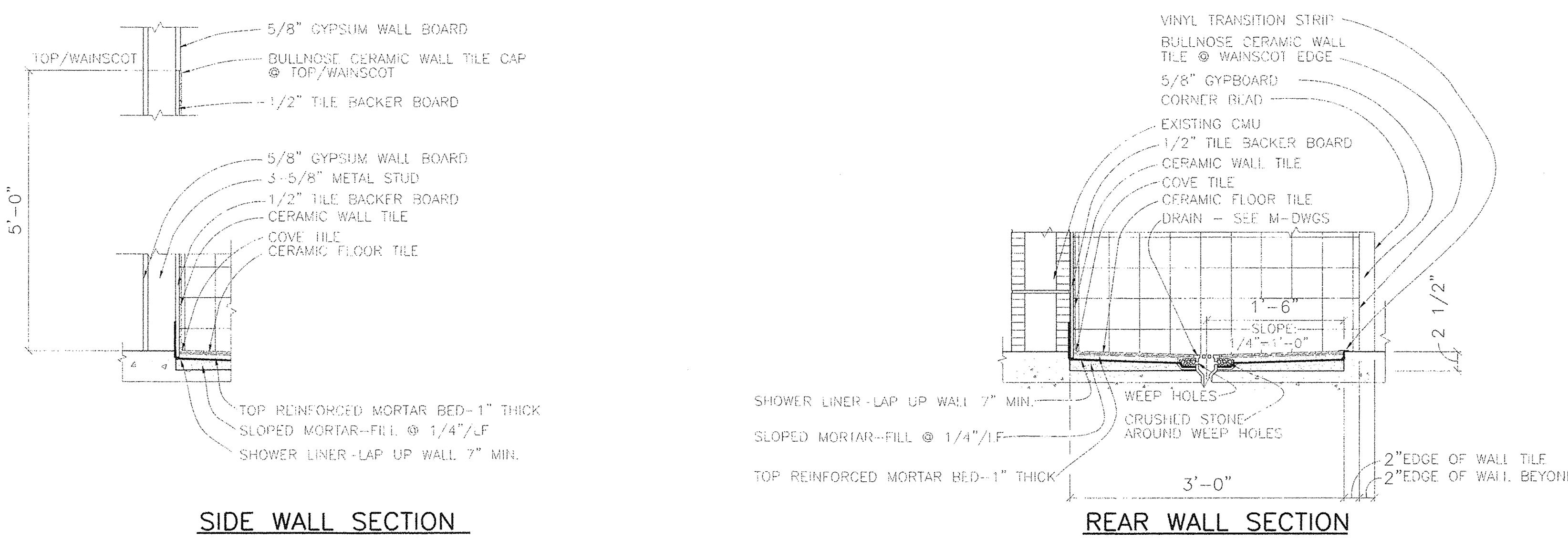
ROOM NO	ROOM NAME	WALLS				BASE	FLOOR FINISH	CEILING TYPE	CEILING FINISH	CEILING HEIGHT	REMARKS
		NORTH TYPE FINISH	SOUTH TYPE FINISH	EAST TYPE FINISH	WEST TYPE FINISH						
CHEMICAL & ADMINISTRATION BUILDING											
A001	FERRIC CHLORIDE RM	CMU/P	CMU/P	CMU/P	CMU/P	---	---	EXPST	---	11'-3 1/2" ±	
A002	CHEMICAL FEED RM	CMU/P	CMU/P	CMU/P	CMU/P	---	---	EXPST	---	11'-3 1/2" ±	
A003	OFFICE	CMU/P	CMU/P	CMU/P	CMU/P	---	---	NEW ACT	---	8'-0"	
A004	CONFERENCE	CMU/P	CMU/P	CMU/P	CMU/P	---	---	NEW ACT	---	8'-0"	
A005	RECEPTION	CMU/P	CMU/P	CMU/P	CMU/P	---	---	NEW ACT	---	8'-0"	
A101	CHLORINE RM	CMU/P	CMU/P	CMU/P	CMU/P	---	--	EXPST	---	11'-6"±	
A102	MAINTENANCE RM	CMU/P	CMU/P	CMU/P	CMU/P	---	---	EXPST	---	11'-6"±	
A103	FLUORIDE RM	CMU/P	CMU/P	CMU/P	CMU/P	---	---	EXPST	---	11'-6"±	
A104	ELECTRICAL RM	CMU/P	CMU/P	CMU/P	CMU/P	---	---	EXPST	---	11'-6"±	
A105	LABORATORY	CMU/P	CMU/P *	CMU/P *	CMU/P *	RB	RT NOTE 3	NEW ACT	---	8'-0"	* GB/P @ NEW PARTITIONS
FILTER BUILDING											
C001	STORAGE RM	CMU/P	CMU/P	CMU/P	CMU/P	---	CONC	EXPST	---	11'-4"	
C002	AMMONIA RM	CMU/P	CMU/P	CMU/P	CMU/P	---	CONC	EXPST	---	11'-4"	
C003	FILTER RM	CMU/P	CMU/P	BRK/P	CMU/P	---	CONC	EXPST	---	11'-4"	NOTE 5
C101	FILTER CONTROL AREA	CMU/P	CMU/P	CMU/P	CMU/P	---	---	EXIST. CONC.	CONC/P	16'-9"±	NOTE 4

FINISH NOTES

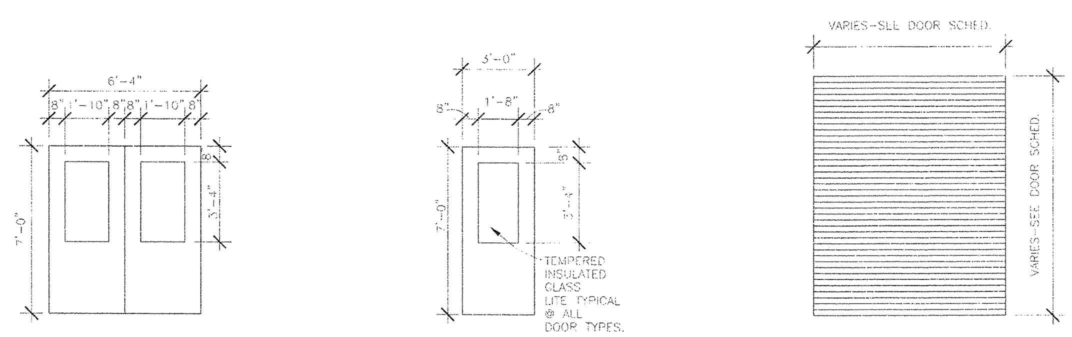
1. CAST-IN-PLACE CONCRETE ITEMS SUCH AS BOND BEAMS, COLUMNS, AND PILASTERS WHICH ARE EXPOSED IN CMU WALLS AND BRICK WALLS, WHICH ARE TO BE PAINTED, SHALL BE PAINTED TO MATCH CMU OR BRICK WALL PAINT (TYPICAL).
2. PRIOR TO PAINTING OF EXISTING SURFACES, PREPARE THE SURFACES BY COMPLETELY REMOVING ALL LAITANCE, OTHER FOREIGN MATERIALS, AND IMPROPERLY ADHERED PAINT IN ACCORDANCE WITH THE NEW PAINT MANUFACTURER'S WRITTEN RECOMMENDATIONS (TYPICAL).
3. PRIOR TO INSTALLATION OF NEW RESILIENT TILE, GRIND THE SURFACE OF THE EXISTING EPOXY FLOOR FINISH TO CREATE A ROUGH SURFACE WHICH WILL ALLOW PROPER ADHESION OF THE NEW RESILIENT TILE ADHESIVE.
4. PAINT THE EXISTING CMU WALLS AND CONCRETE CEILING ABOVE THE FILTERS AFTER PREPARING THE EXISTING SURFACES IN ACCORDANCE WITH SYSTEM CC-3 AS DETAILED IN THE SPECIFICATIONS. 2 OF THE 4 FILTERS WILL BE DRAINED AT A TIME. PREPARE AND PAINT SURFACES OVER 2 FILTERS AT A TIME WHEN THEY ARE DRAINED AND COMPLETELY PROTECT THE 2 OTHER OPERATING FILTERS FROM ALL FOREIGN MATERIALS.
5. WALL HEIGHT INCREASES AT DEPRESSED FLOOR AREAS.

FINISH SCHEDULE LEGEND

RB:	RUBBER BASE
RT:	RESILIENT TILE
CMU:	CONCRETE MASONRY UNIT-UNPAINTED
CMU/P:	CONCRETE MASONRY UNIT-PAINTED - SEE FINISH NOTE 1.
CT:	CERAMIC TILE
COVE CT:	COVE CERAMIC TILE
ACT:	ACOUSTICAL TILE WITH R-19 BATT INSULATION
EXPST:	EXPOSED STRUCTURE
BRK:	BRICK - UNPAINTED
BRK/P:	BRICK - PAINTED - SEE FINISH NOTE 1.
SF:	STOREFRONT
EFTR:	EXISTING FINISH TO REMAIN
GB/P:	GYPSUM BOARD - PAINTED
CONC/P:	CONCRETE - PAINTED



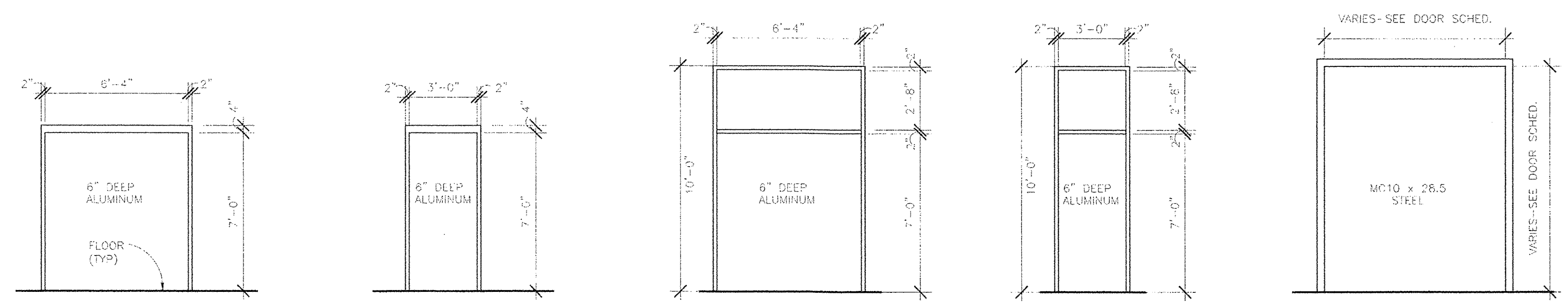
1 / A99.1 SAFETY SHOWER TILE DETAILS
1" = 1'-0"



DOOR TYPE D-1 | DOOR TYPE D-2 | DOOR TYPE D-3

DOOR ELEVATIONS

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



FRAME TYPE F-1 | FRAME TYPE F-2 | FRAME TYPE F-3 | FRAME TYPE F-4 | FRAME TYPE F-5

FRAME ELEVATIONS

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

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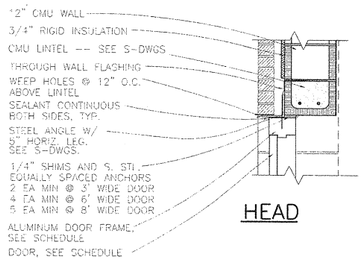
CITY OF GEORGETOWN
SOUTH CAROLINA

STATE OF SOUTH CAROLINA 12-15-99 MARK B. GARRETT 1841 REGISTERED ARCHITECT

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

TYPICAL DOOR SCHEDULE, FINISH SCHEDULE & DETAILS

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A99.1 SHEET	1 REV
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN		



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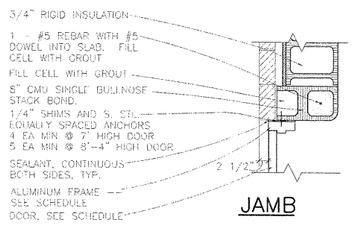

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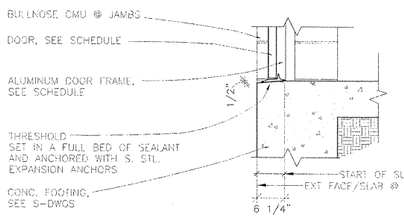
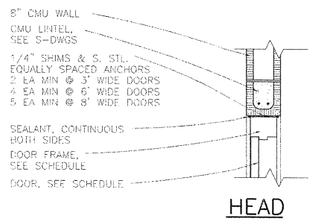


SILL

INSTALLATION TYPE 1

PERSONNEL DOOR
EXTERIOR WALL - 12" C.M.U.
SCALE: 3/4"=1'-0"



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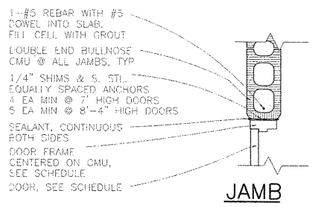
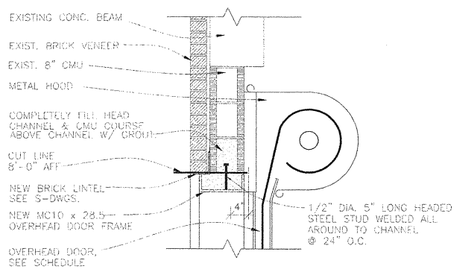


JAMB

INSTALLATION TYPE 2

PERSONNEL DOOR
INTERIOR WALL - 8" C.M.U.
SCALE: 3/4"=1'-0"



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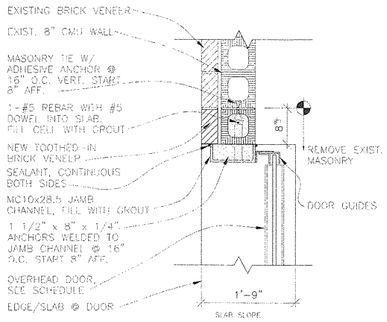

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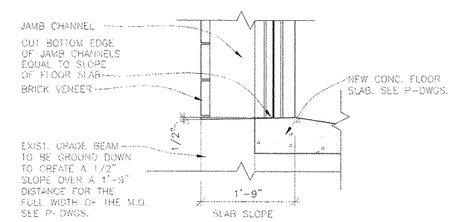
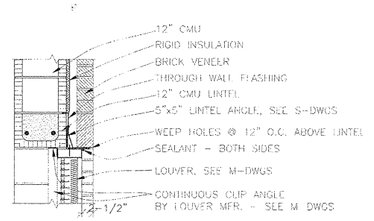


SILL

INSTALLATION TYPE 3

OVERHEAD COILING DOOR
EXTERIOR WALL - 8" C.M.U.
SCALE: 3/4"=1'-0"



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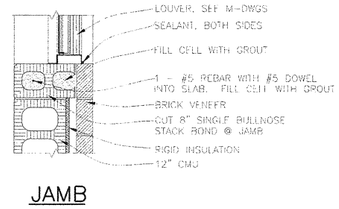

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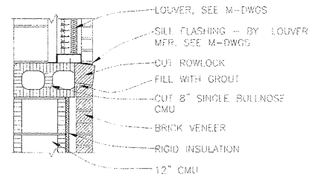
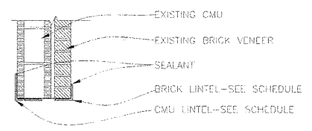


SILL

4 A99.2 LOUVER DETAILS @ NEW CMU & BRICK
3/4" = 1'-0"



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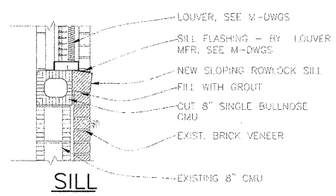
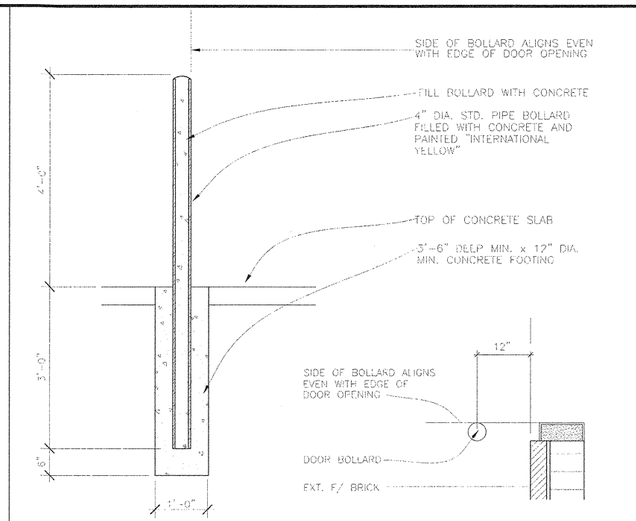


SILL

5 A99.2 LOUVER DETAILS @ EXIST. MASONRY
3/4" = 1'-0"

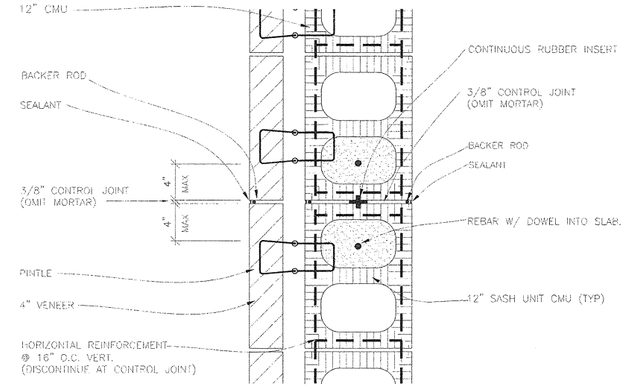
MASONRY LINTEL SCHEDULE		
OPENING WIDTH	CMU LINTEL	BRICK LINTEL
UP TO 2'-0"	6" x 4" x 5/16" SLV	5/16" x 3" PLATE
2'-0" TO 2'-8"	6" x 4" x 5/16" SLV	4" x 3 1/2" x 5/16" LLV
2'-8" TO 4'-0"	6" x 8" x 5/16"	4" x 3 1/2" x 5/16" LLV
NOTE: 4" MIN. BEARING @ EACH END		



SECTION

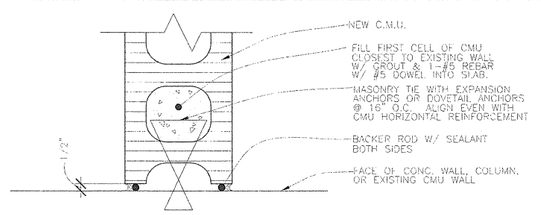
PLAN
(TYP. @ D/H DOORS)

6 A99.2 DOOR BOLLARD DTL.
3/4" = 1'-0"



NOTES:
1. ALIGN HORIZONTAL REINFORCEMENT SO THAT PINTLES ARE LOCATED WITHIN 4" OF C.J.
2. BRICK CJ LOCATION MAY VARY FROM CMU CJ LOCATION A MAXIMUM OF 2"

7 A99.2 CONTROL JOINT DTL - PLAN
1 1/2" = 1'-0"



8 A99.2 C.M.U. ANCHORING DETAIL
1 1/2" = 1'-0"

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2.15.99

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SOUTH CAROLINA — Jordan, Jones & Goulding, Inc. — No. C00554 — CERTIFICATE OF AUTHORIZATION

NO.	DATE	DESCRIPTION OF REVISION
1	08-02-01	RECORD DRAWING
0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

GEORGETOWN SOUTH CAROLINA 1734

CITY OF GEORGETOWN
SOUTH CAROLINA

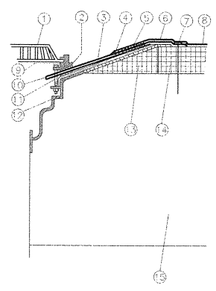
STATE OF SOUTH CAROLINA — 12-15-99 — MARK B. CARGILE — REGISTERED ARCHITECT

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

TYPICAL DOOR DETAILS AND MISCELLANEOUS DETAILS

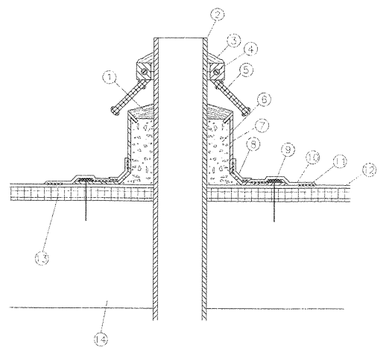
DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A99.2	1
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

1. STRAINER
2. FTR #101 SEALANT
3. LEAD FLASHING
4. FTR #201 MASTIC
5. HOT AIR WELD
6. FTR FLASHING
7. APPROVED FASTENER W/ STRESS PLATE
8. FTR FIELD SHEET
9. CLAMPING RING
10. EXTEND FLASHING 1" INSIDE CLAMPING RING
11. DRAIN BOLT
12. DRAIN ASSEMBLY
13. TAPERED INSULATION
14. 1 1/2" ISO INSULATION
15. CONC. ROOF DECK



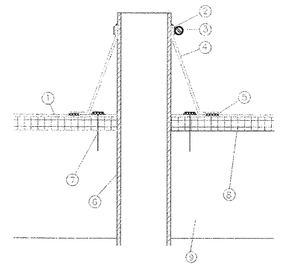
1 A99.3 ROOF DRAIN FLASHING
SCALE: N.T.S.

1. FTR #101 SL SEALANT
2. PENETRATION
3. FTR #101 SEALANT
4. SS WORMGEAR CLAMP
5. FIBERCLAD 22 GA. METAL FLASHING
6. NON-SHRINK GROUT
7. FIBERCLAD METAL PAN (22 GA.)
8. FTR NONREINFORCED
9. APPROVED FASTENER
10. FTR FLASHING
11. HOT AIR WELD
12. FTR MEMBRANE
13. 1 1/2" ISO INSULATION
14. CONC. ROOF DECK



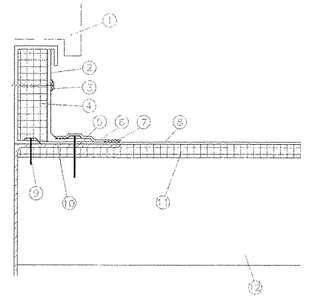
2 A99.3 PITCH PAN FLASHING
SCALE: N.T.S.

1. FTR MEMBRANE
2. FTR #101 SEALANT
3. STAINLESS STEEL WORMGEAR CLAMP
4. PREFORMED FTR PIPE FLASHING (60 MIL NONREINFORCED MEMBRANE)
5. HOT AIR WELD
6. STACK - SEE M-DWGS
7. APPROVED FASTENER W/STRESS PLATE (2 MINIMUM)
8. 1 1/2" ISO INSULATION
9. CONC. ROOF DECK



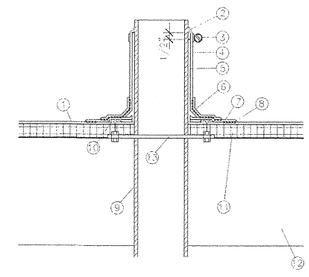
3 A99.3 PREFORMED PIPE FLASHING
SCALE: N.T.S.

1. ROOFTOP UNIT - SEE M-DWGS
2. FIBERCLAD METAL
3. APPROVED FASTENER W/NEOPRENE SEALING WASHER
4. 1" ISO INSULATION
5. APPROVED FASTENER
6. FTR FLASHING
7. HOT AIR WELD
8. FTR MEMBRANE
9. APPROVED FASTENER
10. STEEL CURB SUPPORT - SEE S DWGS
11. 1 1/2" ISO INSULATION
12. CONC. ROOF DECK



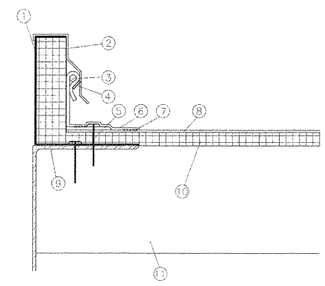
4 A99.3 INSULATED CURB
SCALE: N.T.S.

1. FTR MEMBRANE
2. FTR #101 SEALANT
3. STAINLESS STEEL WORMGEAR CLAMP
4. FTR FLASHING
5. FTR #201 MASTIC
6. FTR 60 MIL NONREINFORCED MEMBRANE
7. FTR FLASHING
8. HOT AIR WELD
9. STACK - SEE M-DWGS OR SUPPORT POST
10. APPROVED FASTENER W/STRESS PLATE (2 MINIMUM)
11. 1 1/2" ISO INSULATION
12. CONC. ROOF DECK
13. BASE PLATE @ POST WHERE APPLICABLE



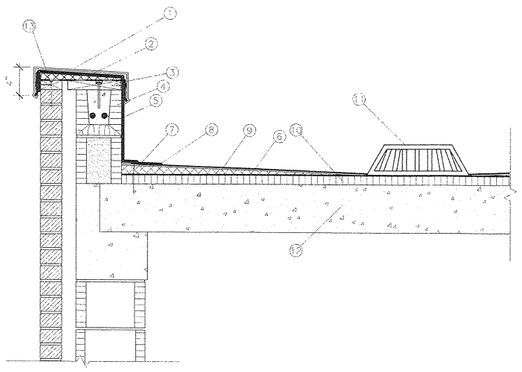
5 A99.3 FIELD FABRICATED STACK/ SUPPORT POST FLASHING
SCALE: N.T.S.

1. BILCO CURB
2. BILCO CAP FLASHING
3. BILCO "PAK-ROPE"
4. REPRESSED BILCLIP TO RETAIN ROOF MEMBRANE
5. APPROVED FASTENER
6. FTR FLASHING
7. HOT AIR WELD
8. FTR MEMBRANE
9. STEEL CURB SUPPORT - SEE S-DWGS
10. 1 1/2" ISO INSULATION
11. CONC. ROOF DECK



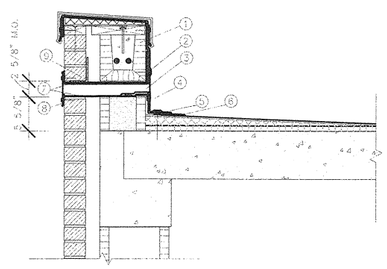
6 A99.3 ROOF SCUTTLE FLASHING
SCALE: N.T.S.

1. METAL CAP FLASHING - SLOPED TO ROOF & ATTACHED TO CONTINUOUS CLEATS ON BOTH SIDES OF PARAPET.
2. 1/2" TAPERED ISO INSULATION
3. PT 2x10 WOOD BLOCKING ANCHORED TO BOND BEAM W/ COUNTERSUNK 1/2" DIA. S.S. ANCHORS @ 4'-0" O.C. MIN. 4" EMBEDMENT
4. 8" C.M.U. BOND BEAM
5. FTR #201 MASTIC
6. FTR MEMBRANE - EXTEND MEMBRANE UP PARAPET WALL, OVER TOP OF PARAPET, AND OVER EXTERIOR FACE OF WOOD BLOCKING.
7. APPROVED FASTENER W/ BARBED STRESS PLATE @ 6" O.C.
8. HOT AIR WELD
9. TAPERED ISO INSULATION
10. 1 1/2" ISO ISULATION
11. STRAINER
12. CONC. ROOF DECK
13. PT 2x4 WOOD BLOCKING ANCHORED TO VENEER W/ S.S. FASTENERS @ 2'-0" O.C.



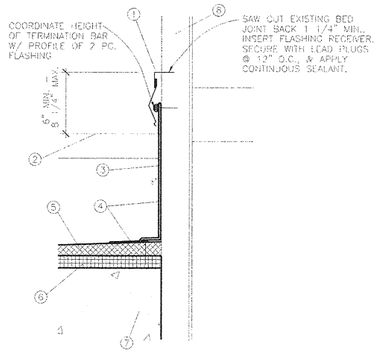
7 A99.3 PARAPET DTL
SCALE: 1" = 1'-0"

1. 8" C.M.U. BOND BEAM
2. APPROVED FASTENER
3. 2-1/2"H x 16"L OPENING
4. FTR FLASHING HOT AIR WELDED TO FIBER CLAD METAL (NO SEALANT TO BE USED).
5. APPROVED FASTENER W/ BARBED STRESS PLATE @ 6" O.C.
6. HOT AIR WELD
7. FIBERCLAD METAL
8. 1 1/4" WIDE SCUPPER FLANGE
9. STEEL LINTEL



8 A99.3 EMERGENCY SCUPPER
SCALE: 1" = 1'-0"

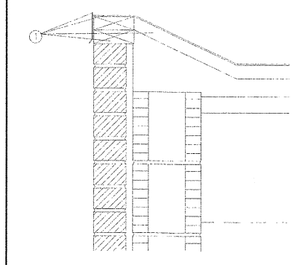
1. NEW 2 PIECE IN-WALL FLAT TYPE COUNTER FLASHING
2. TOP/ PARAPET WALL BEYOND. TURN UP CAP FLASHING 4" UP UNDER 2 PIECE FLASHING & INSTALL SEALANT IN EXPOSED END OF 2 PIECE FLASHING.
3. FTR #201 MASTIC
4. ROOFING MEMBRANE
5. TAPERED ISO INSULATION
6. 1 1/2" ISO INSULATION
7. NEW CONC. ROOF DECK
8. EXISTING BRICK



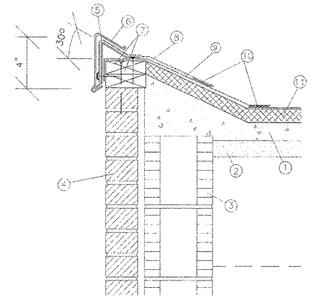
9 A99.3 ROOF TO EXIST. BLDG. DTL
SCALE: 1" = 1'-0"

1. REMOVE EXISTING METAL FLASHING, ROOFING, ROOF INSULATION, AND WOOD BLOCKING IN THEIR ENTIRETY.

1. EXIST. 2" CONC. TOPPING
2. EXIST. CONC. DOUBLE "T" ROOF DECK
3. EXIST. CMU WALL
4. EXIST. BRICK VENEER
5. PIECE 1 OF 2 PIECE LOCKING .040 DARK BRONZE ALUMINUM FLASHING FABRICATED AS SHOWN AND ANCHORED TO WOOD BLOCKING W/ SS FASTENERS.
6. PIECE 2 OF 2 PIECE LOCKING .040 DARK BRONZE ALUMINUM FLASHING FABRICATED AS SHOWN.
7. NEW PT WOOD BLOCKING ANCHORED TO EXIST. BRICK W/ SS FASTENERS @ 2'-0" O.C. COUNTER SINK FASTENERS AS REQUIRED TO PROVIDE A LEVEL TOP SURFACE.
8. FIRST LAYER OF NEW FTR MEMBRANE - EXTEND OVER ISO INSULATION AND WOOD BLOCKING AND ANCHOR TO WOOD BLOCKING.
9. SECOND LAYER OF NEW FTR MEMBRANE - EXTEND OVER FACE OF PIECE 1 OF 2 PIECE FLASHING, AND ANCHOR TO WOOD BLOCKING.
10. HOT AIR WELD
11. NEW 1 1/2" ISO INSULATION



EXISTING CONDITIONS



REROOFING CONDITIONS

10 A99.3 REROOFING DTLS @ EXIST BLDG
SCALE: 1" = 1'-0"

cag06x3.dwg
12.15.99

NOTES:
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SOUTH CAROLINA — Jordan, Jones & Goulding, Inc. — No. C00554 — CERTIFICATE OF AUTHORIZATION

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Jordan Jones & Goulding

GEORGETOWN — S.C. — 1734 — NORTH CAROLINA

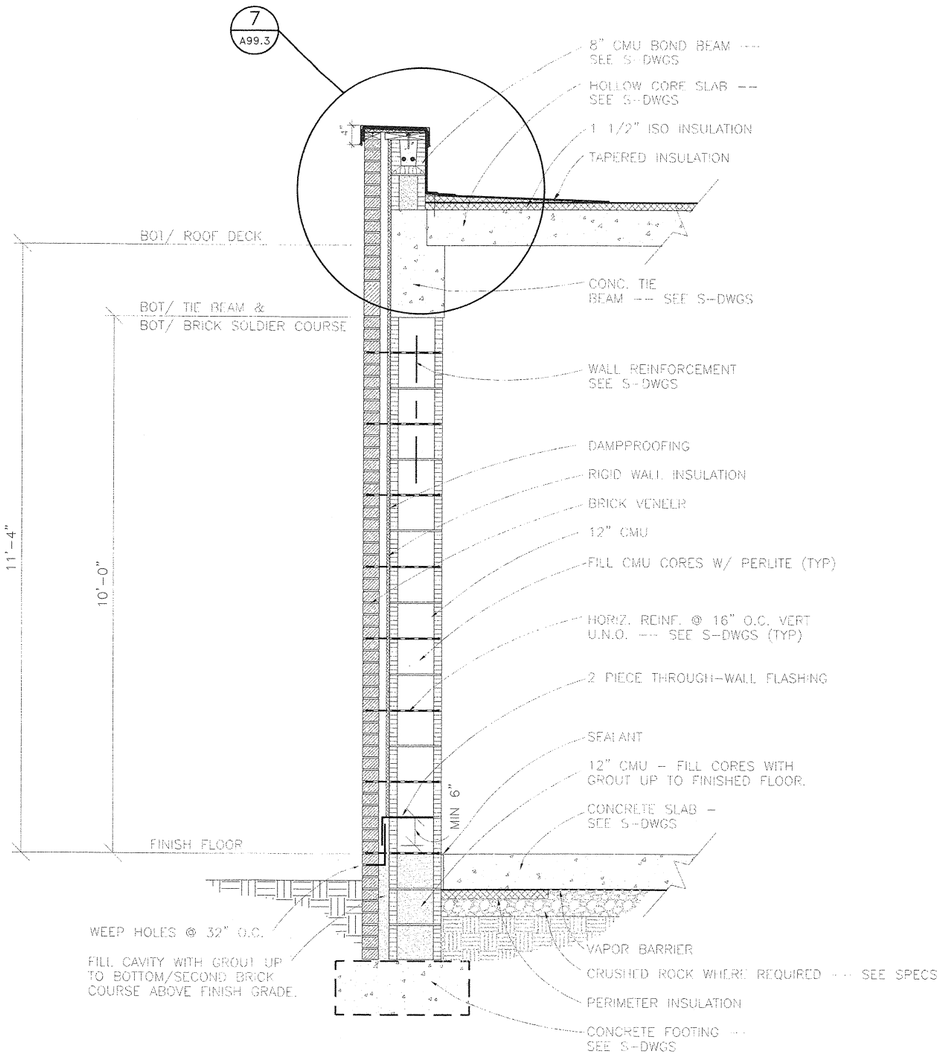
CITY OF GEORGETOWN
SOUTH CAROLINA

STATE OF SOUTH CAROLINA — 12.15.99 — MARK B. CARBO, JR. — REGISTERED ARCHITECT — 1841

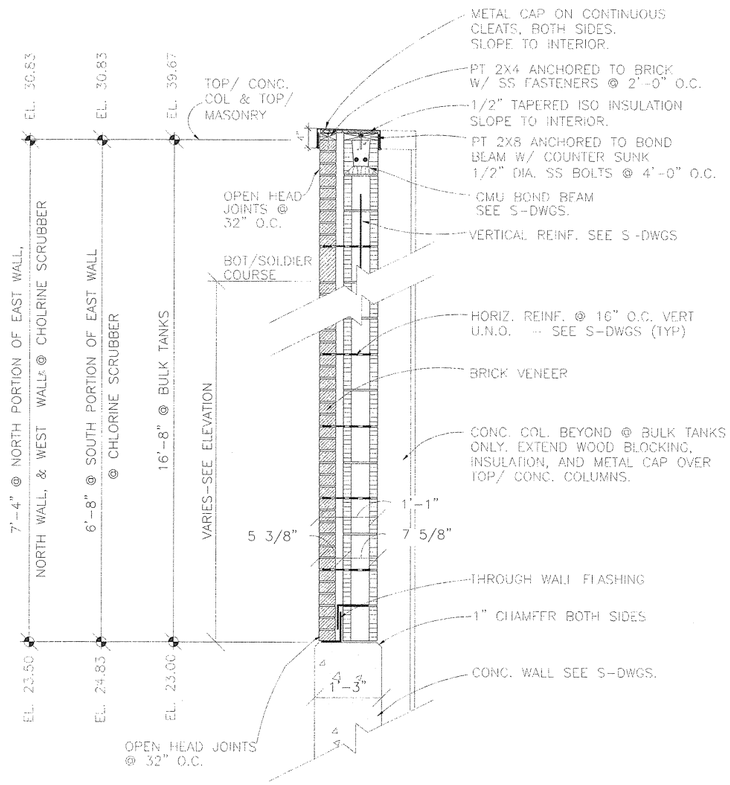
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

TYPICAL ROOFING
MEMBRANE DETAILS

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A99.3 SHEET	1 REV
DRAWN: JDM	JOB NO. 2193.005	SCALE: AS SHOWN		



1 / A99.4 TYPICAL WALL SECTION @ FILTER BUILDING
3/4" = 1'-0"



2 / A99.4 TYPICAL WALL SECTION @ SCREEN WALLS
3/4" = 1'-0"

cad06a04.dwg
12.15.99

NOTES:
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CITY OF GEORGETOWN
SOUTH CAROLINA

STATE OF SOUTH CAROLINA — 12.15.99 — MARK B. GARRETT — REGISTERED ARCHITECT

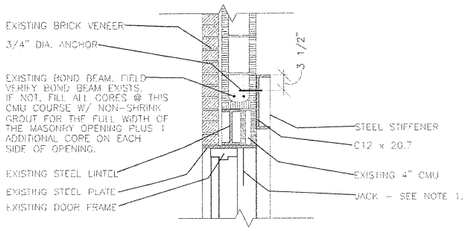
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

TYPICAL
WALL SECTIONS

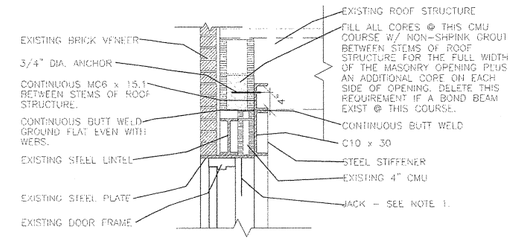
DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A99.4 SHEET	1 REV
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN		

NOTES:

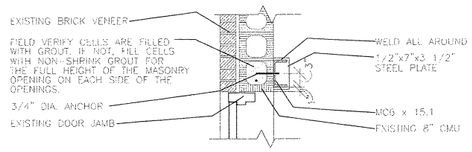
1. JACK UP EXISTING LINTEL 1/8" TO 3/16" BEYOND DESIRED LOCATION BEFORE ANCHORING FRAME ASSEMBLY TO MASONRY AND GROUTING BASE PLATE. ALLOW JACK TO REMAIN IN PLACE FOR 7 DAYS PRIOR TO REMOVAL.
2. AFTER JACK IS REMOVED, SEAL ALL CRACKS, INSTALL A NEW 4" WIDE SADDLE TYPE THRESHOD IN A FULL BED OF SEALANT AT DOOR 19 AND ADJUST BOTH PAIRS OF DOORS TO OPERATE PROPERLY.



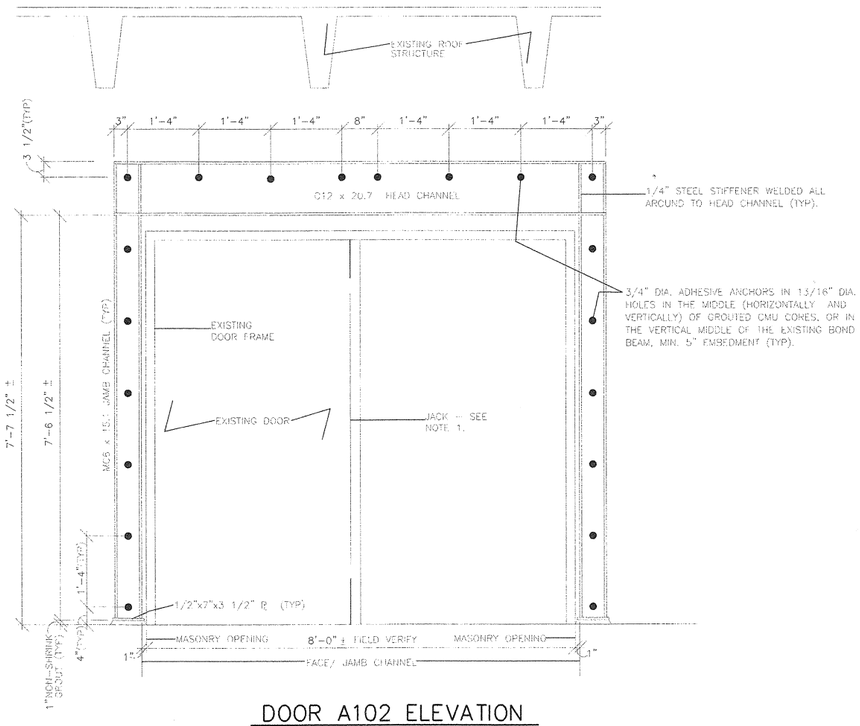
HEAD – DOOR A102



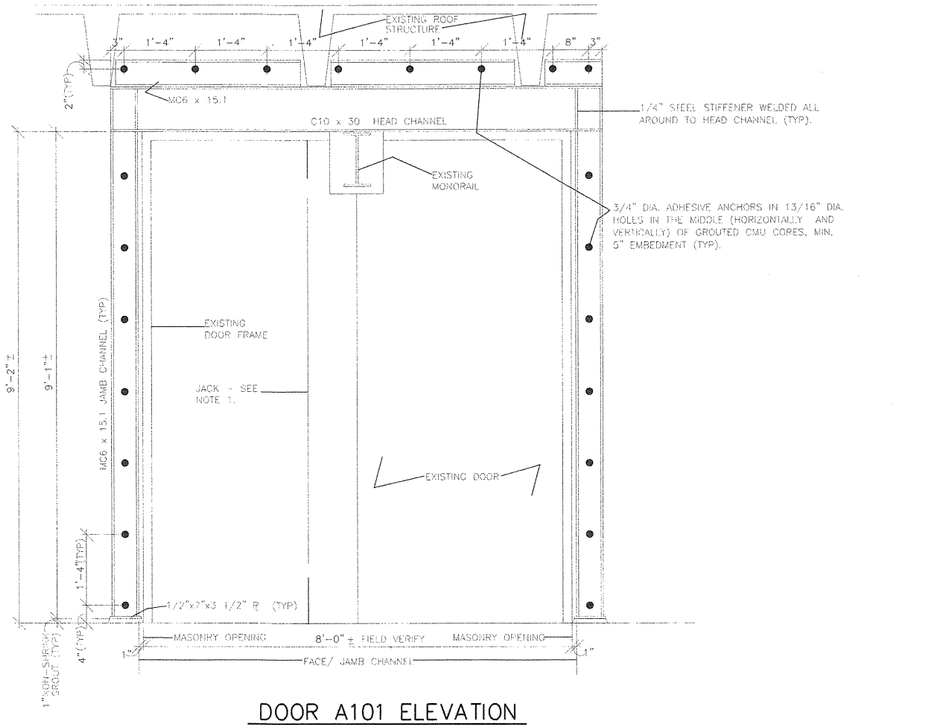
HEAD – DOOR A101



JAMB – DOORS A101 & A102



DOOR A102 ELEVATION
VIEW FROM INSIDE (1 / A99.5)
3/4" = 1'-0"



DOOR A101 ELEVATION
VIEW FROM INSIDE (2 / A99.5)
3/4" = 1'-0"

cog\Door5.dwg
12.15.99

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GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

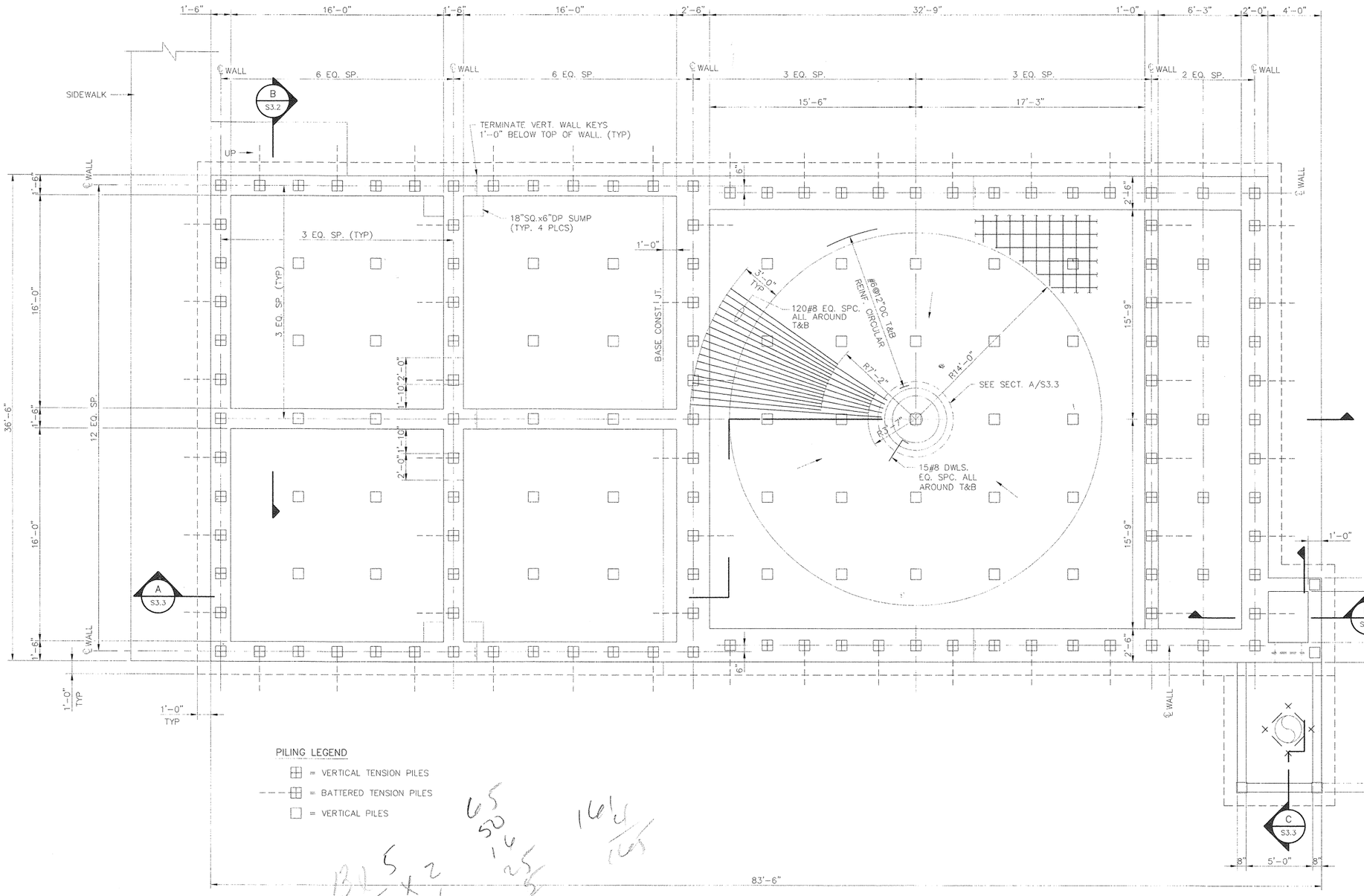
STATE OF SOUTH CAROLINA — 12-15-99 — MARK B. CARPENTER — No. 11841 — REGISTERED ARCHITECT

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

EXISTING DOOR REPAIR DETAILS

DESIGNED: MBG	CHECKED:	DATE: DECEMBER 1999	A99.5 SHEET	1 REV
DRAWN: JDM	JOB NO. 2193.006	SCALE: AS SHOWN		

DWNCK



PILING LEGEND

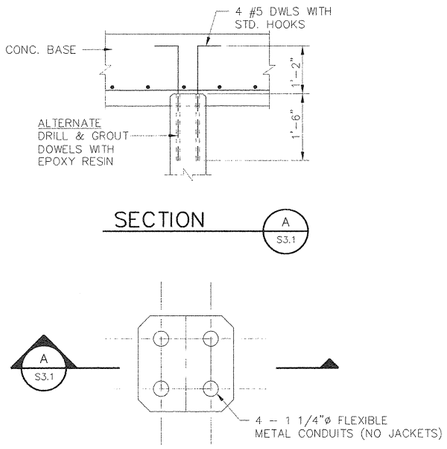
= VERTICAL TENSION PILES

= BATTERED TENSION PILES

= VERTICAL PILES

BOTTOM PLAN

1/4"=1'-0"



PILE DETAILS

N.T.S.

NOTES

1. REFER PILING SPECIFICATION.
2. SEE DETAIL THIS DWG. FOR TENSION PILE ANCHORAGE REQUIREMENTS.
3. TYPICAL PILE BATTER IS 1:6 (i.e., 1–HOR. TO 6 –VERT).
4. TYPICAL PILE EMBEDMENT INTO BASE IS 4 INCHES.
5. PILES ARE 12" SQ. 60 TONS PRECAST–PRESTRESSED CONRETE PILES TYPICAL.
6. FILLETS NOT SHOWN FOR CLARITY. REFER P–DWGS.
7. REFER SHT. ST.1 FOR GENERAL NOTES

COG06SB1.dwg
02.13.02

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CITY OF GEORGETOWN
SOUTH CAROLINA

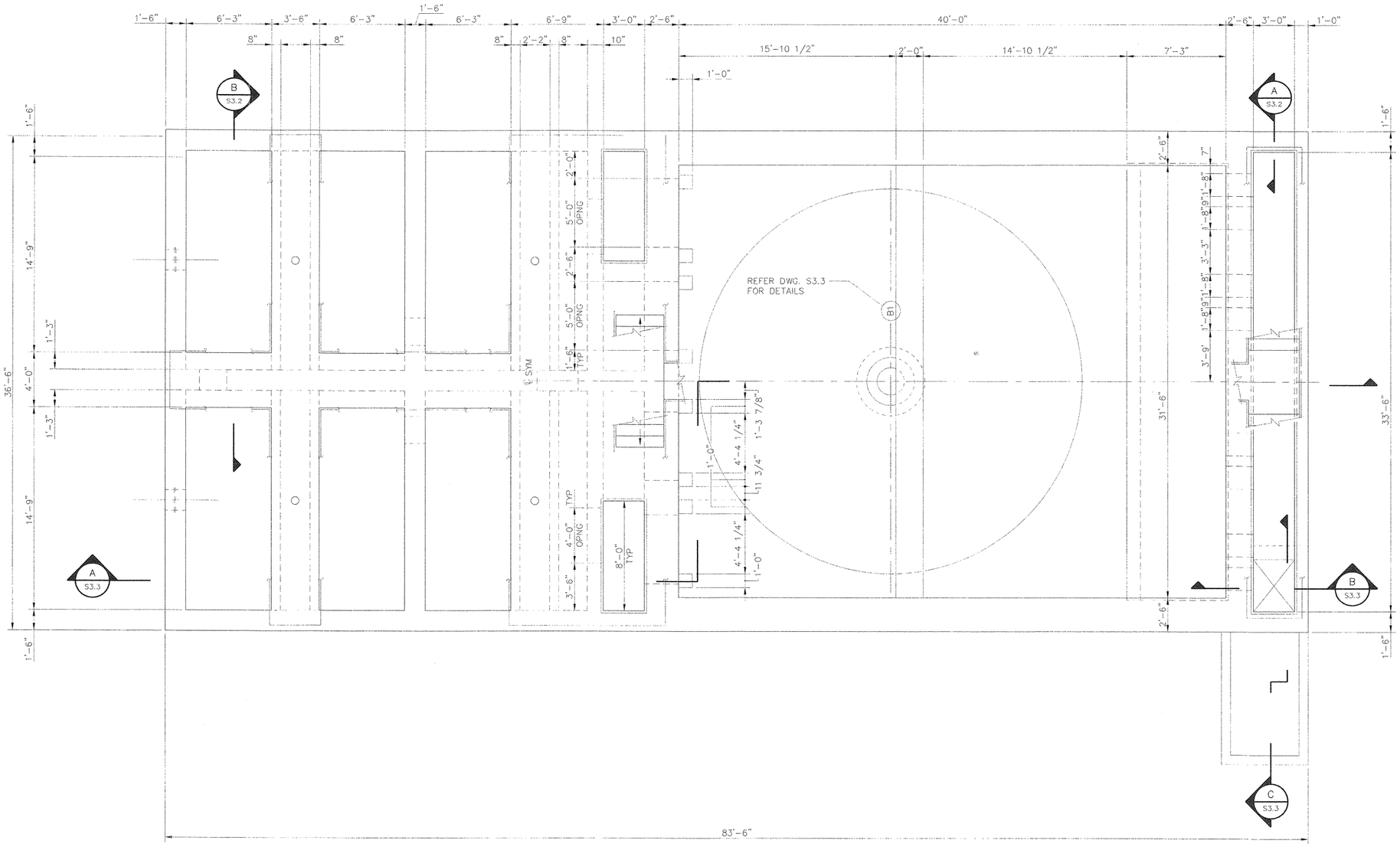
SOUTH CAROLINA REGISTERED No. 14106 PROFESSIONAL ENGINEER CHARLES D. BARNES, JR.

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

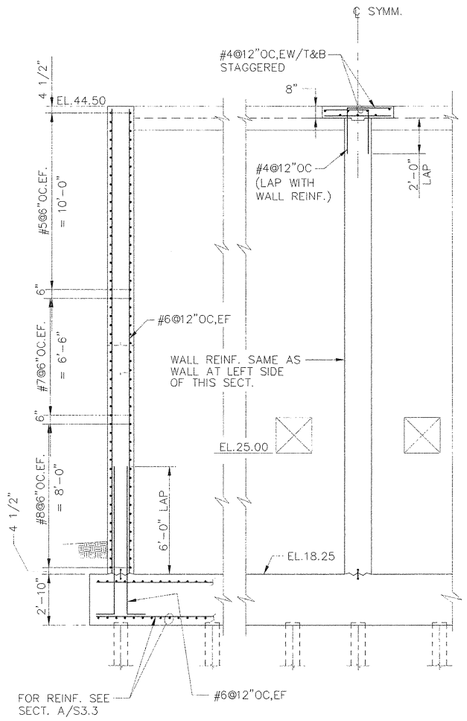
FLOCCULATION/SEDIMENTATION BASIN
BOTTOM PLAN

DESIGNED: WW	CHECKED:	DATE: NOVEMBER 2000	S3.1	1
DRAWN: OS	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

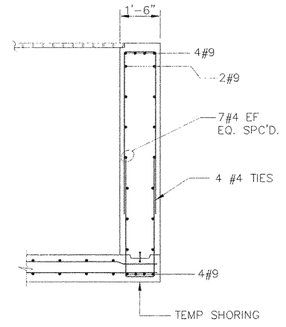
RBOODLE



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



SECTION
1/4"= 1'-0"
B
S3.1
S3.2



SECTION
3/8" = 1'-0"
A
S3.2

COG05S2.dwg
02.13.02

NOTES:
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SOUTH CAROLINA

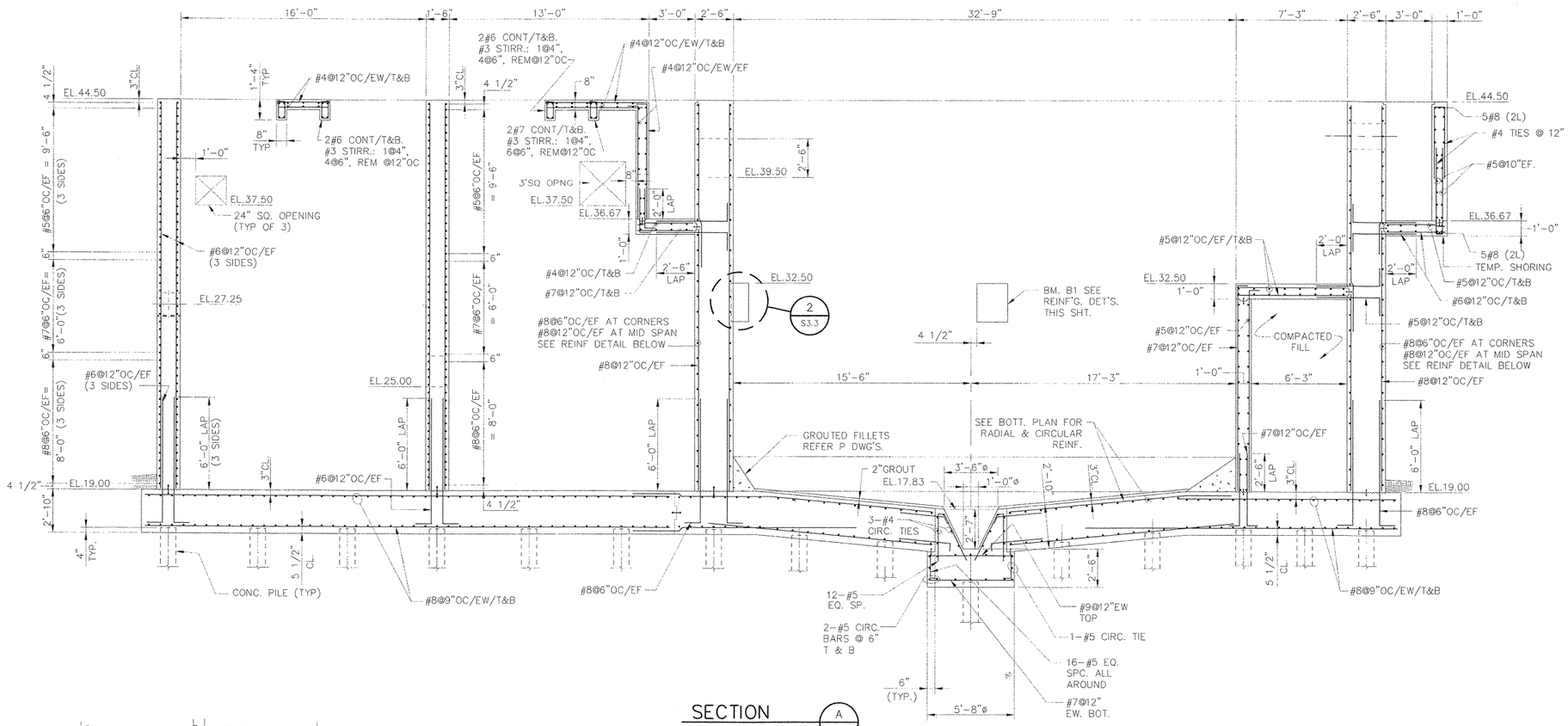
SOUTH CAROLINA
REGISTERED
No. 14106
PROFESSIONAL
ENGINEER
CHARLES D. BARNES, JR.

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FLOCCULATION/SEDIMENTATION BASIN
TOP PLAN

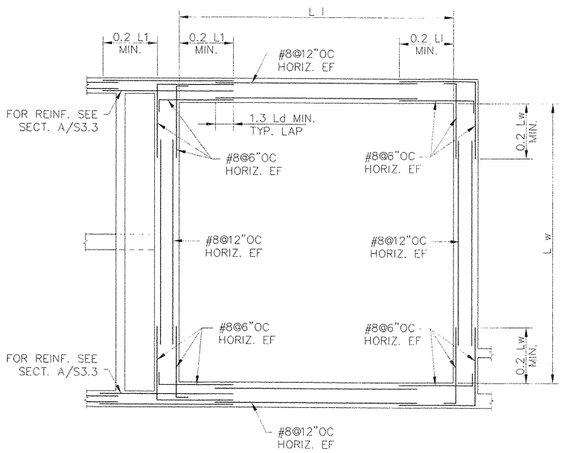
DESIGNED: WW	CHECKED:	DATE: NOVEMBER 2000	S3.2	1
DRAWN: OS	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

REDOCDLE



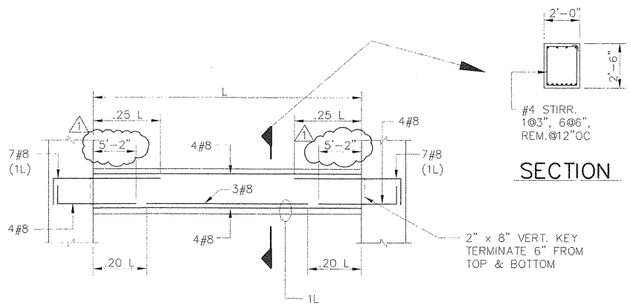
SECTION B
1/4"=1'-0"
S3.1 S3.2

SECTION A
1/4"=1'-0"
S3.1 S3.2



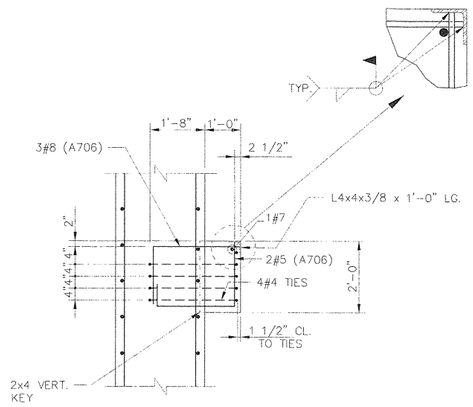
HORIZONTAL WALL REINFORCING DETAILS FOR SETTLING BASIN

N.T.S.

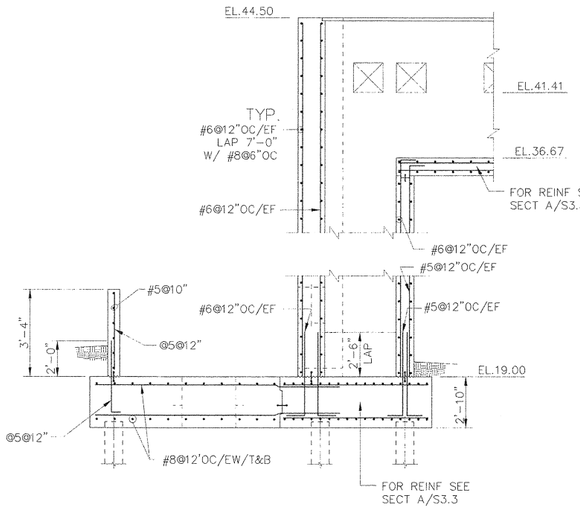


BEAM B1
REINFORCING DETAILS

SECTION



DETAIL 2
N.T.S.
S3.3



SECTION C
1/4"=1'-0"
S3.1 S3.2

COG06583.dwg 02.13.02

NOTES:
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SOUTH CAROLINA — Jordan, Jones & Goulding, Inc. — No. C00554 — CERTIFICATE OF AUTHORIZATION

NO.	DATE	DESCRIPTION OF REVISION
1	08-02-01	RECORD DRAWING
0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

CITY OF GEORGETOWN
SOUTH CAROLINA

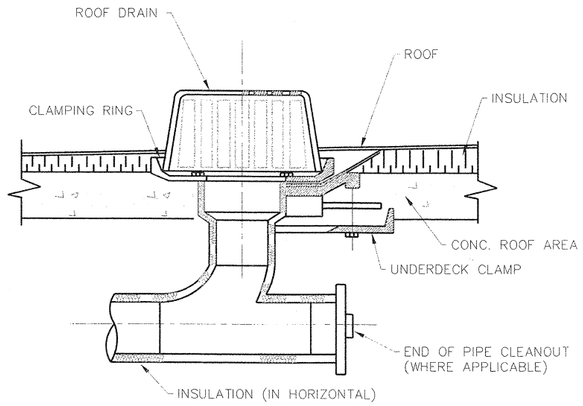
SOUTH CAROLINA REGISTERED No. 14106 PROFESSIONAL ENGINEER CHARLES D. BARNES, JR.

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FLOCCULATION / SEDIMENTATION BASIN
SECTIONS AND DETAILS

DESIGNED: WW	CHECKED:	DATE: NOVEMBER 2000	S3.3	1
DRAWN: OS	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

R3900DLE



NOTE:

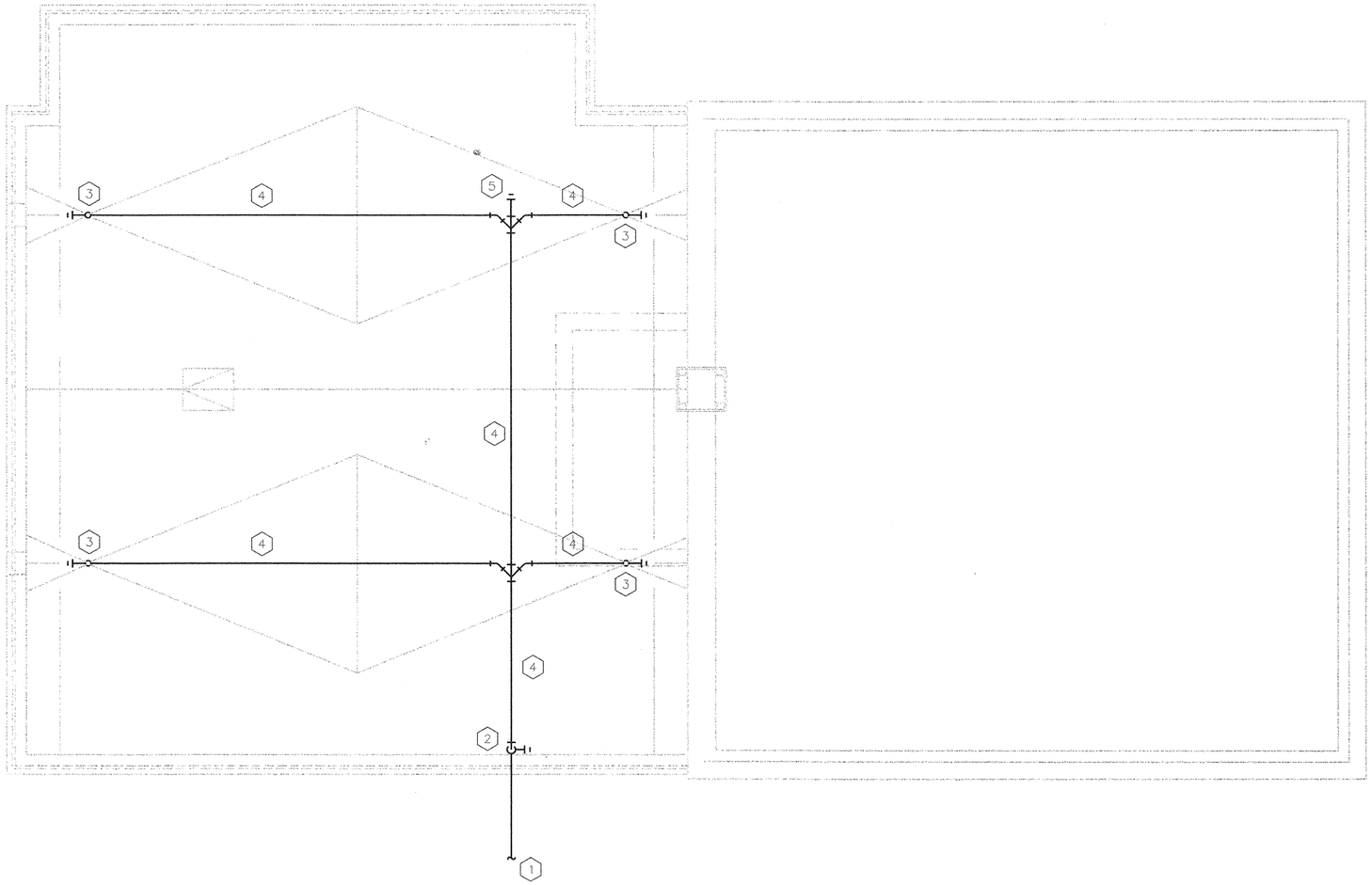
INTERIOR PIPE SHALL BE SCHEDULE 40 PVC PIPE

ROOF DRAIN — 1 / M4.2

NTS

PLUMBING LEGEND NOTES: (THIS SHEET ONLY)

1. 6" STORMWATER PIPE BELOW GRADE, INVERT ELEV. = 22.42 ± REFER TO CIVIL DRAWING FOR CONTINUATION.
2. 4" RAINWATER DOWNSPOUT; PROVIDE CLEANOUT @ BASE OF RISER. MOUNT CLEANOUT MINIMUM 24" ABOVE FINISHED FLOOR.
3. 3" ROOF DRAIN (RD-1), REFER TO THE SPECIFICATIONS; REFER TO THE DETAIL 1/M4.2 (THIS SHEET).
4. 4" RAINLEADER, ROUTE PIPE TIGHT TO STRUCTURE @ 1% SLOPE.
5. END OF PIPE CLEANOUT, REFER TO THE SPECIFICATIONS, (TYPICAL 5).



ROOF PLAN

1/4" = 1'-0"

cvg08M2.dwg
02.13.02

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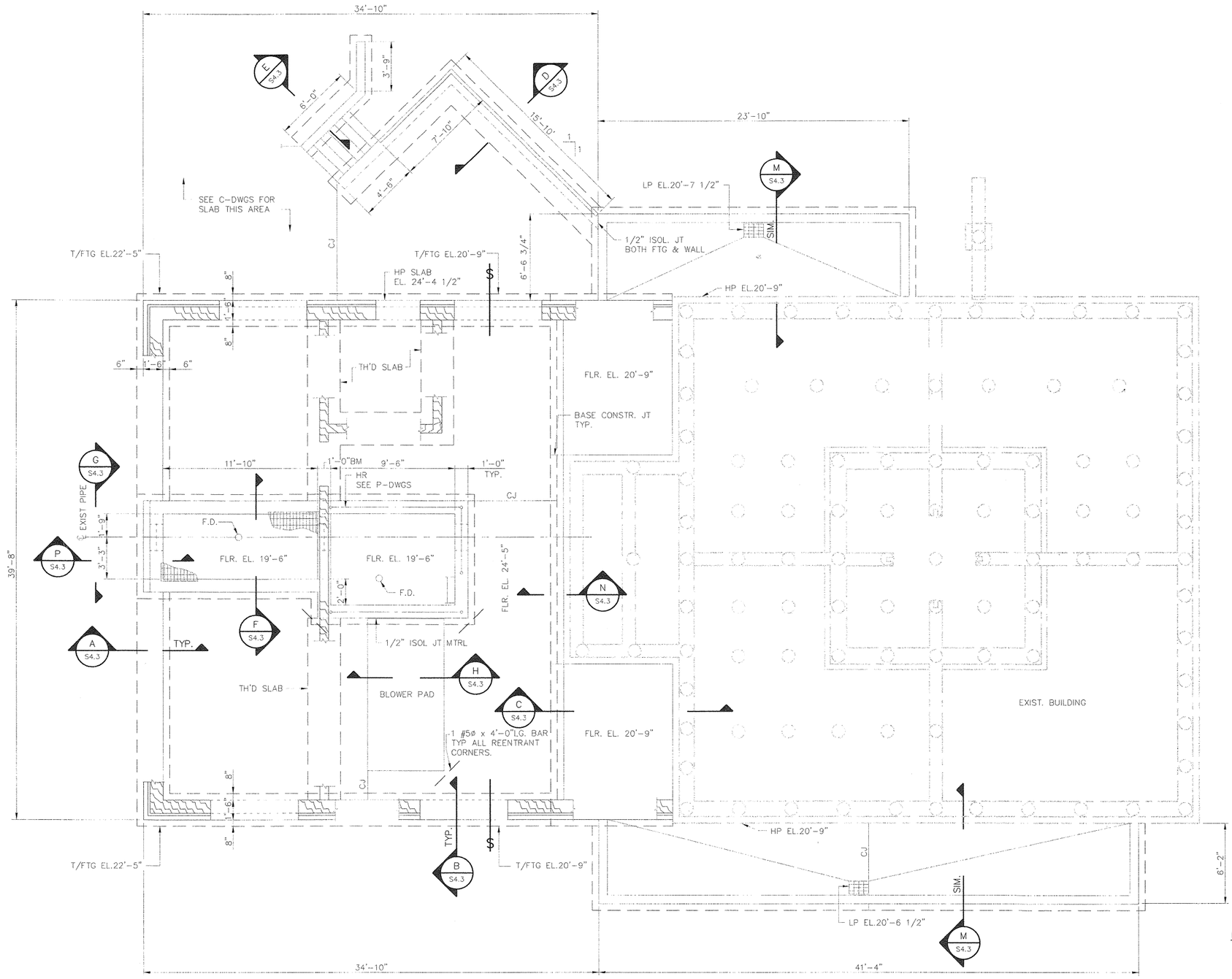
Jordan Jones & Goulding

CITY OF GEORGETOWN
SOUTH CAROLINA

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FILTER BUILDING MODIFICATIONS
ROOF PLAN – PLUMBING

DESIGNED: LWP	CHECKED:	DATE: NOVEMBER 2001	M4.2	1
DRAWN: LWP	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV



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

NOTES:
1. MIN. REQUIRED SOIL BEARING CAPACITY = 2500 PSF
2. 6" THICK SOG REINF'D WITH #4@12"/EW 2" DOWN FROM TOP UNLESS NOTED OTHERWISE.

cog06sc1.dwg
02.13.02

3x3 39
~~12x12~~
7x7 49
9x2 18
10 32
10
10 132

NOTES:
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Jordan Jones & Goulding

GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

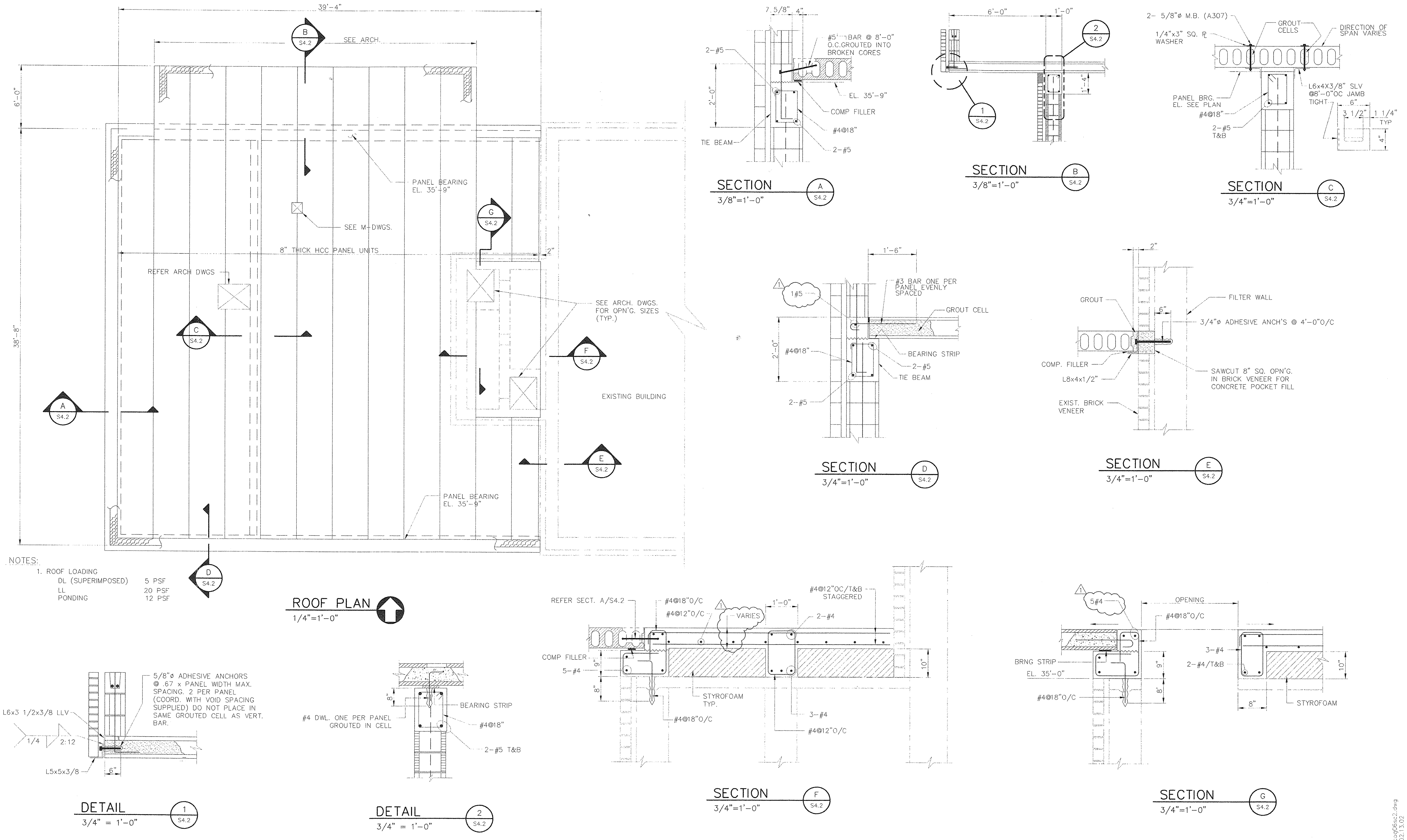
SOUTH CAROLINA — REGISTERED No. 14106 PROFESSIONAL ENGINEER — CHARLES D. BARNES, JR.

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FILTER BUILDING MODIFICATIONS
FLOOR AND FOUNDATION PLAN

DESIGNED: W.W.	CHECKED:	DATE: NOVEMBER 2000	S4.1	1
DRAWN: TA/OS	JOB NO. 2193.006	SCALE: 1/4"=1'-0"	SHEET	REV

R3\CCOVLF



NOTES:
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Jordan Jones & Goulding

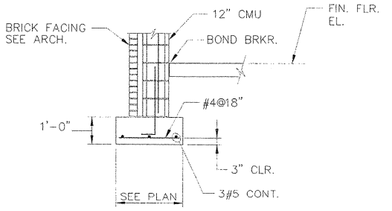
CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 14106 CHARLES D. BARNES, JR.

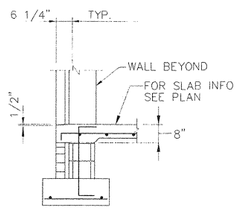
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FILTER BUILDING MODIFICATIONS
ROOF PLAN

DESIGNED: W.W.	CHECKED:	DATE: NOVEMBER 2000	S4.2 SHEET	1 REV
DRAWN: TS/OS	JOB NO. 2193.006	SCALE: 1/4"=1'-0"		

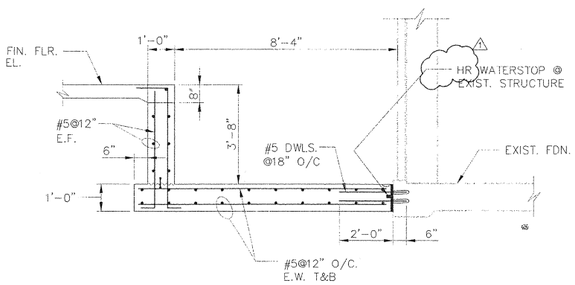


SECTION A S4.1
3/8"=1'-0"

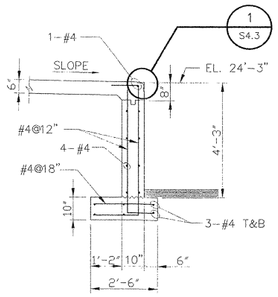


FOR REINF. AND INFO NOT SHOWN SEE TYPICAL EXTERIOR WALL FOOTING DETAIL

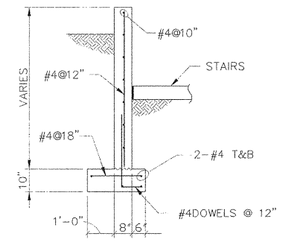
SECTION B S4.1
3/8"=1'-0"



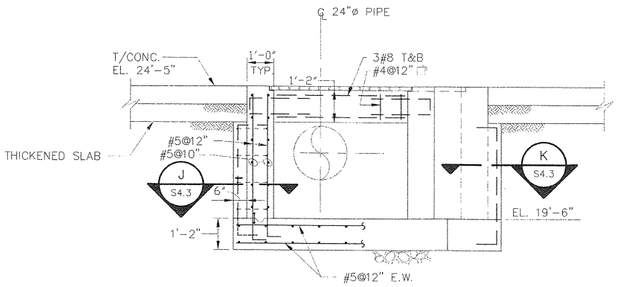
SECTION C S4.1
3/8"=1'-0"



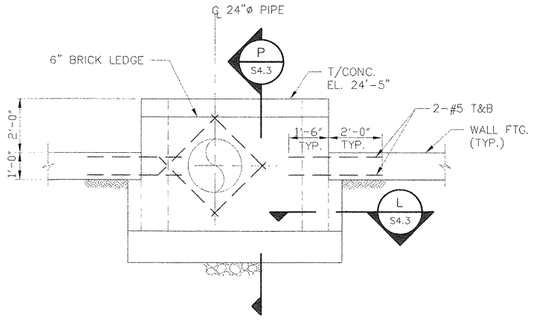
SECTION D S4.1
3/8"=1'-0"



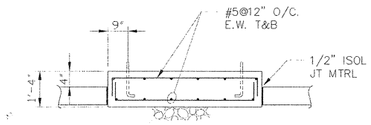
SECTION E S4.1
3/8"=1'-0"



SECTION F S4.1
3/8" = 1'-0"

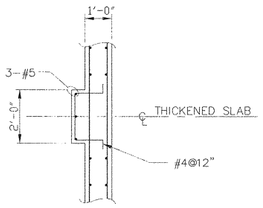


ELEVATION G S4.1
3/8" = 1'-0"

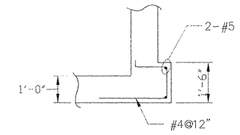


NOTE:
COORDINATE ANCHORS WITH MANUFACTURER PER SPEC'S.

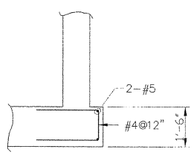
SECTION H S4.1
3/8" = 1'-0"



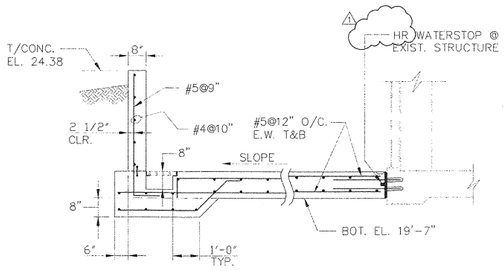
SECTION J S4.1
3/8" = 1'-0"



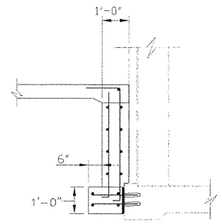
SECTION K S4.1
3/8" = 1'-0"



SECTION L S4.1
3/8" = 1'-0"

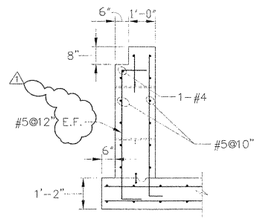


SECTION M S4.1
3/8" = 1'-0"

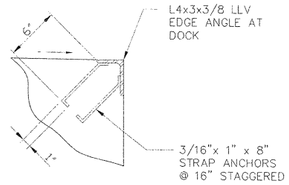


NOTE:
SEE SECT. 'C' THIS SHT. FOR DETS NOT SHOWN

SECTION N S4.1
3/8" = 1'-0"



SECTION P S4.1
3/8" = 1'-0"



DETAIL 1 S4.3
1 1/2" = 1'-0"

cog06s3.dwg
02.13.02

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Jordan Jones & Goulding

CITY OF GEORGETOWN
SOUTH CAROLINA

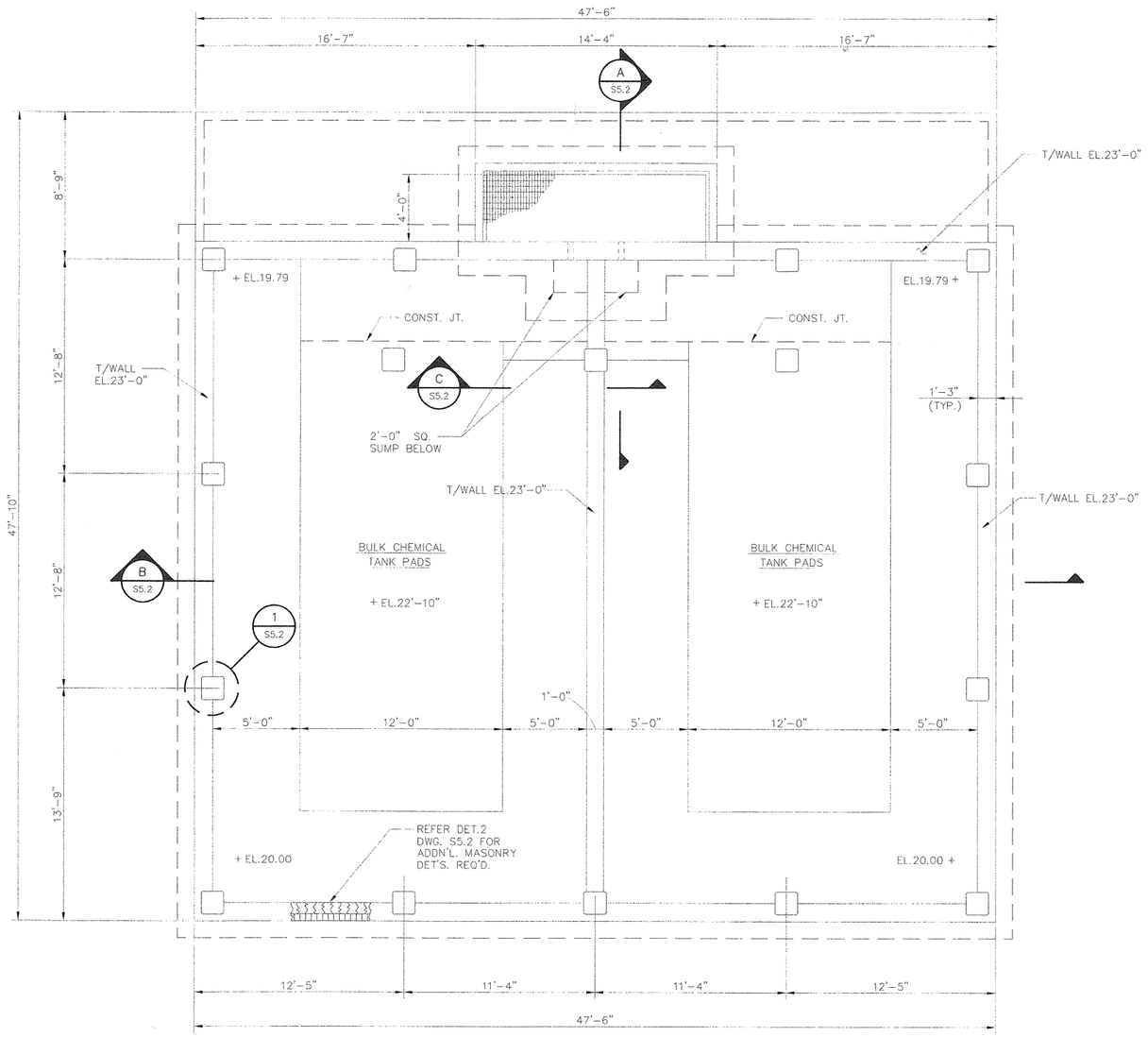
SOUTH CAROLINA — REGISTERED No. 14106 PROFESSIONAL ENGINEER — CHARLES D. BARNES, JR.

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FILTER BUILDING SECTIONS
SECTIONS AND DETAILS

DESIGNED: W.W.	CHECKED:	DATE: NOVEMBER 2000	S4.3 SHEET	1 REV.
DRAWN: T.A.	JOB NO. 2193.006	SCALE: 3/8" = 1'-0"		

REGGDLE



PLAN
1/4"=1'-0"

NOTES:

1. REFER P-DWG'S. FOR PIPE PENETRATIONS NOT SHOWN.
2. T/CONC. COL EL. 39'-8" TYP.
3. REFER A-DWG'S. FOR ADDITIONAL DETAILS.
4. MIN. REQD. SOIL BEARING CAPACITY = 2500 PSF.

cog36s01.dwg
02.13.02

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GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

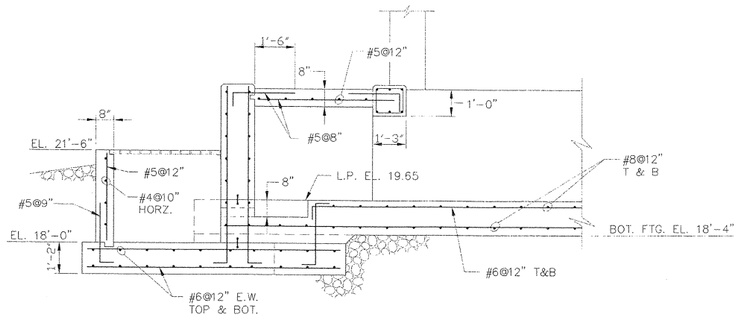
SOUTH CAROLINA — REGISTERED — No. 14106 PROFESSIONAL ENGINEER — CHARLES D. BARNES, JR.

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

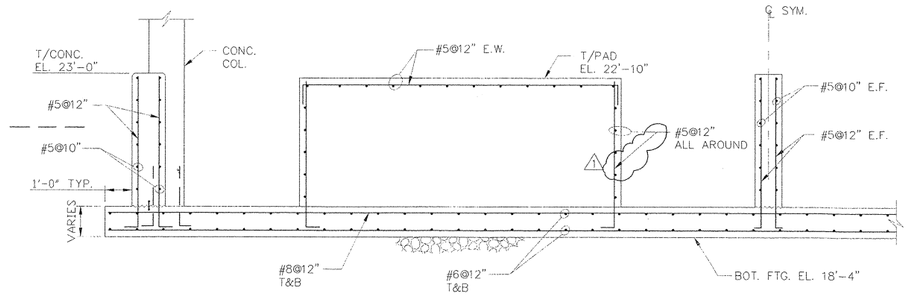
FERRIC CHLORIDE AND CAUSTIC
BULK TANKS

DESIGNED:	CHECKED:	DATE: NOVEMBER 2000	S5.1	1
DRAWN: ASKEW	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

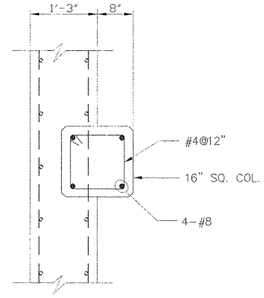
R800TLE



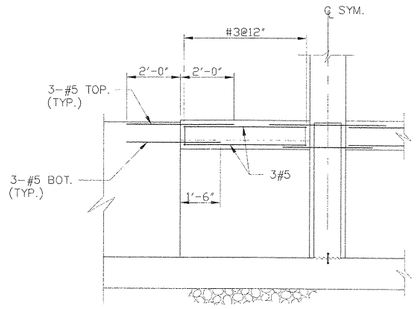
SECTION A S5.1
3/8" = 1'-0"



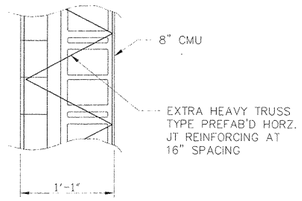
SECTION B S5.1
3/8" = 1'-0"



DETAIL 1 S5.1
3/4" = 1'-0"



SECTION C S5.1
3/8" = 1'-0"



DETAIL 2 S5.1
N.T.S.

cng06ed2.dwg
02.13.02

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Jordan Jones & Goulding

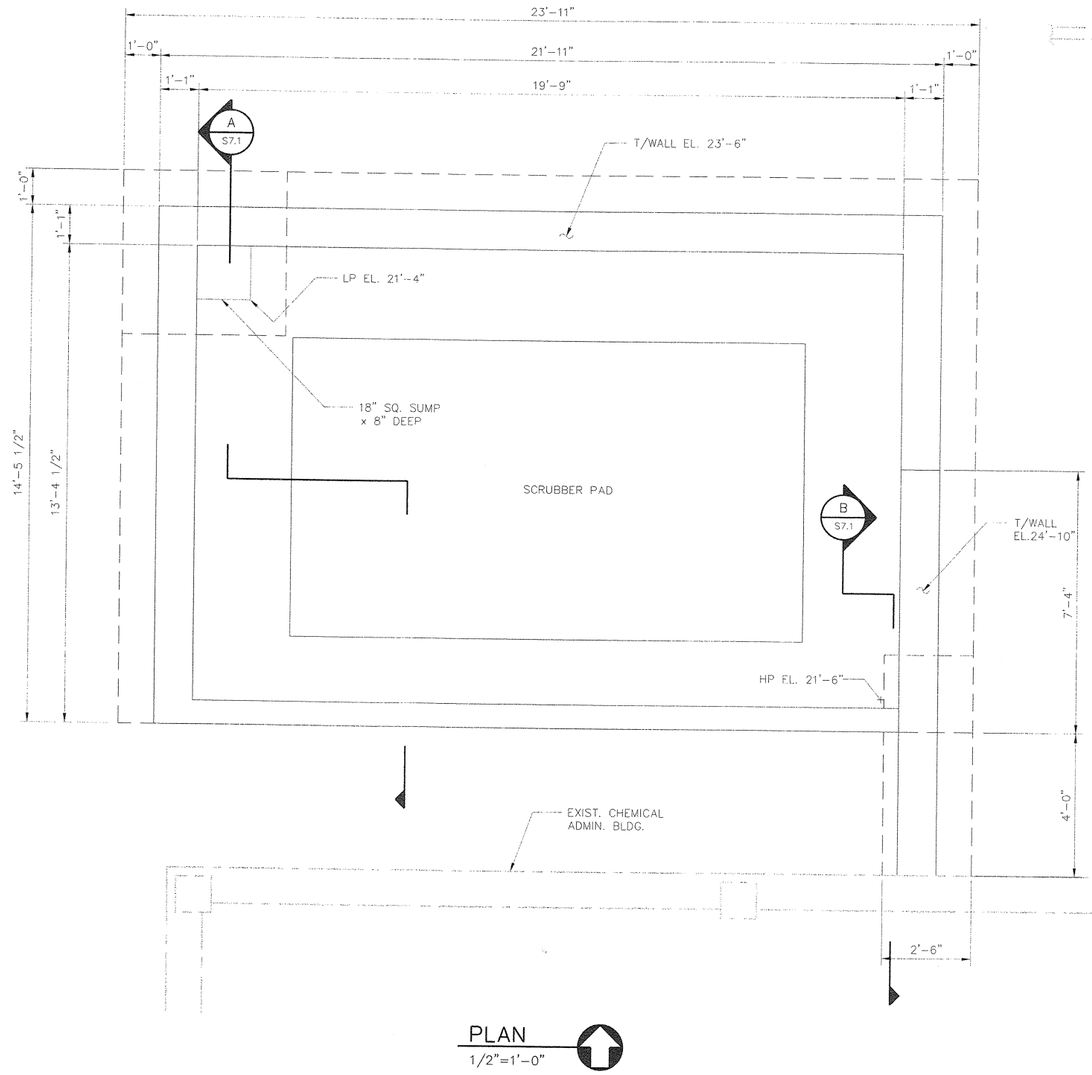
CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA — REGISTERED — No. 14106 PROFESSIONAL — ENGINEER — CHARLES D. BARNES, JR.

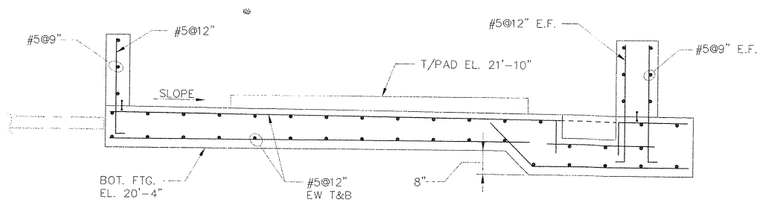
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FERRIC CHLORIDE AND CAUSTIC BULK TANKS
SECTIONS AND DETAILS

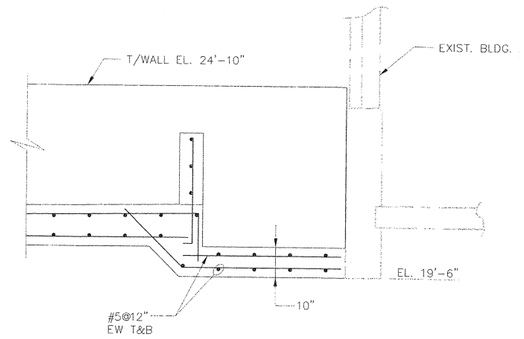
DESIGNED: W.W.	CHECKED:	DATE: NOVEMBER 2000	S5.2 SHEET	1 REV
DRAWN: T.A.	JOB NO. 2193.006	SCALE: 3/8" = 1'-0"		



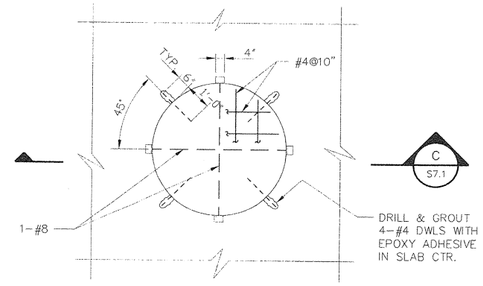
PLAN
1/2"=1'-0"



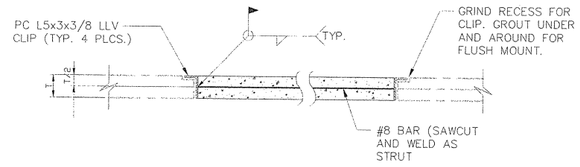
SECTION
1/2"=1'-0"



SECTION
1/2"=1'-0"



PLAN
CHEMICAL BLDG. HOLE PATCH DETAIL
3/8" = 1'-0" (REFER DWG. P2.2)



SECTION
3/4" = 1'-0"

NOTES:
1. MIN. REQUIRED SOIL BEARING CAPACITY = 2500 PSF.

C:\06SEI.dwg
02.13.02

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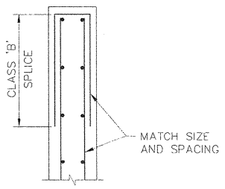
GEORGETOWN 1734 SOUTH CAROLINA
CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA
REGISTERED
No. 14106
PROFESSIONAL
ENGINEER
CHARLES D. BARNES, JR.

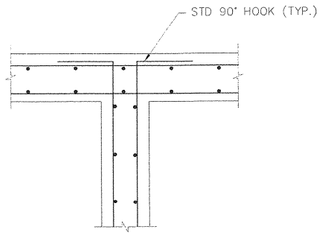
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

SCRUBBER CONTAIMENT STRUCTURE
PLAN AND SECTION

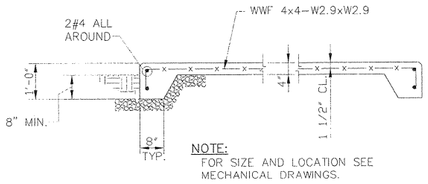
DESIGNED: WW	CHECKED:	DATE: NOVEMBER 2000	S7.1 SHEET	1 REV
DRAWN: OS	JOB NO. 2193.006	SCALE: AS SHOWN		



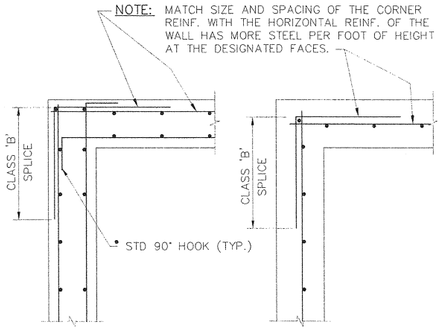
TYPICAL WALL END DETAIL
N.T.S.



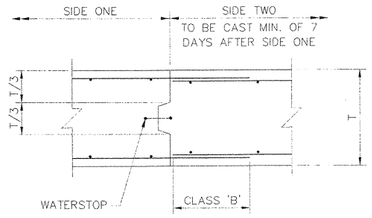
TYPICAL WALL INTERSECTION DETAIL
N.T.S.



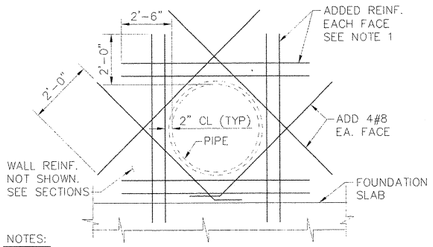
MISCELLANEOUS EQUIPMENT PAD EXTERIOR
1/2" = 1'-0"



TYPICAL WALL CORNER DETAIL
N.T.S.



TYPICAL WALL / BASE SLAB CONST. JOINT
N.T.S.



NOTES:
1. THE EQUIVALENT NUMBER OF VERTICAL & HORIZONTAL BARS INTERRUPTED BY OPENINGS SHALL BE PROVIDED BY PLACING 1/2 OF BARS ON EACH SIDE OF THE OPENING @3"OC.
2. MAINTAIN NOT LESS THAN 1 1/4" CLEAR BETWEEN ADJACENT PARALLEL BAR.

TYPICAL WALL REINFORCING REQ'D AT PIPE OPENING
N.T.S.

GENERAL NOTES

1. COORDINATE PLUMBING, PIPING, ELECTRICAL, & MECHANICAL PRIOR TO PLACING CONCRETE.
2. FIELD VERIFY DIMENSIONS PRIOR TO COMMENCEMENT OF WORK.
3. CONTRACTOR COORDINATE EQUIPMENT ANCHORS WITH MANUFACTURER SELECTED.
4. FOUNDATIONS ARE DESIGNED BASED ON RECOMMENDATIONS MADE IN PROJECT GEOTECHNICAL REPORT PREPARED BY S & ME, INC. MINIMUM ALLOWABLE SOIL BEARING SHALL BE AS SHOWN ON DRAWINGS AND SHALL BE VERIFIED BY REGISTERED SOILS ENGINEER AT TIME OF INSTALLATION.
5. DESIGN LOADING:

   WIND: 120 MPH

   SEISMIC: Av = .12
   Aa = .12
   EXP GRP III
   PERFORMANCE CATEGORY C
   SOIL PROFILE 1.5
   EQUIV. LATERAL FORCE METHOD

6. GROUT ALL KEYWAYS BETWEEN HOLLOW CORE PRECAST SLAB UNIT AND WHERE SHOWN ON DWGS.

CONCRETE NOTES

1. CONCRETE COVER REQUIREMENTS PER ACI 318 LATEST EDITION, EXCEPT AS NOTED ON DRAWINGS.
2. REINFORCED STEEL SHALL CONFORM TO ASTM A615 GRADE 60.
3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
4. PROVIDE VERTICAL CONSTRUCTION JOINTS IN WALLS EVERY 40 FEET MAXIMUM.
5. CONCRETE SHALL DEVELOP FOLLOWING MINIMUM 28 DAY COMPRESSIVE STRENGTHS:

MASONRY GROUT	2500 PSI
FTGS, PIERS	3000 PSI
WALLS, SLABS, MATS	4000 PSI

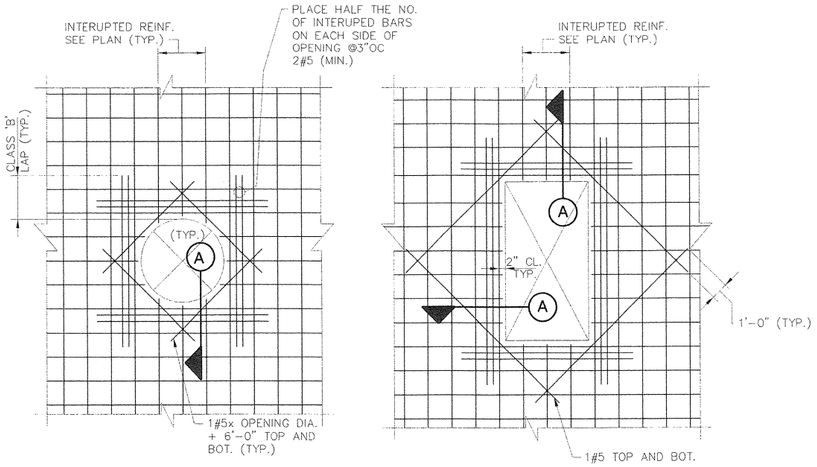
6. HORIZONTAL REINFORCING CONTINUOUS AROUND ALL CORNERS.
7. CHAMFER EXPOSED EDGES OF CONCRETE 1" UNO.
8. PROVIDE WATERSTOP TYPICAL ALL TANK PITS.

MASONRY

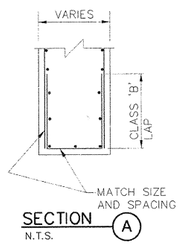
1. USE 2-#5 VERTICAL BARS AT CORNERS, EACH SIDE OF OPENINGS AND CONSTRUCTION JOINTS. PROVIDE MAXIMUM VERTICAL BAR SPACING OF 2-#5@48" FOR 12" CMU. AND 1 #5 @ 32" FOR 8" CMU. PROVIDE 1-#5 DOWEL IN FOOTING FOR EACH VERTICAL BAR.
2. PROVIDE LADDER TYPE GALVANIZED PREFABRICATED HORIZONTAL REINFORCING @ 16" O.C. VERTICAL IN MASONRY WALLS. UNLESS NOTED OTHER WISE ON DWGS.
3. FILL BLOCK CELLS WITH APPROVED GROUT MIX AT ALL BAR AND ANCHOR LOCATIONS.
4. SEE ARCHITECTURAL DRAWINGS FOR WALL LOCATIONS.
5. THE FOLLOWING MATERIAL PROPERTIES SHALL BE USED FOR MASONRY CONSTRUCTION:

MASONRY COMP STRENGTH (F'M)	1350 PSI
MORTAR (28 DAY) STRENGTH	1800 PSI

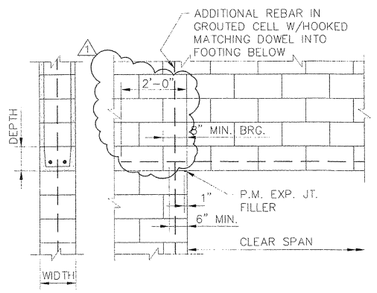
6. PROVIDE BOND BM AT TOP COURSE WITH 2 #5 TYPICAL.
7. REFER TYPICAL DETAILS FOR EMBEDDED HEADER PLATE AT O/H DOOR LINTEL.



TYPICAL SLAB AND WALL OPENING DETAILS
N.T.S.



SECTION A
N.T.S.



SECTION ELEVATION

TYPICAL CMU LINTEL DETAILS
N.T.S.

STEEL (FOR 4" OF BRICK OR MASONRY)

SPANS TO 5'-0"	1 ANGLE 4"x 3 1/2"x 5/16"
5'+ TO 6'-0"	1 ANGLE 4"x 4"x 5/16" S.L.O
6'+ TO 7'-0"	1 ANGLE 5"x 4"x 5/16 S.L.O.
7'+ TO 8'-0"	1 ANGLE 5"x 4"x 3/8" S.L.O.
8'+ TO 9'-0"	1 ANGLE 6"x 4"x 3/8" S.L.O.
9'+ TO 14'-6"	1 ANGLE 5"x 5"x 3/8" S.L.O. *

CONCRETE (PRECAST)

SPANS UNDER 4'-0"	8" DEEP 2#3 BOTTOM
4'-0" TO 5'-6"	8" DEEP 2#4 BOTTOM
5'-6" TO 7'-0"	8" DEEP 2#5 BOTTOM
7'-0" TO 8'-6"	8" DEEP 2#6 BOTTOM
8'-6" TO 11'-0"	16" DEEP 2#5 TOP & BOT., #3 TIES @8"OC
11'-0" TO 14'-6"	16" DEEP 2#6 TOP & BOT., #3 TIES @8"OC

BLOCK (CONCRETE FILLED LINTEL BLOCKS)

SPANS UNDER 3'-6"	8" DEEP 2#3 BOTTOM
3'-6" TO 5'-0"	8" DEEP 2#4 BOTTOM
5'-0" TO 6'-0"	8" DEEP 2#5 BOTTOM
6'-0" TO 8'-0"	16" DEEP 2#6 BOTTOM

NOTE: BEAR ALL LINTELS A MINIMUM OF 8" EACH END.

* INDICATES LINTEL ANGLE IS TO BE SUPPORTED AT MIDSPAN, WITH 1 -5/8"ø ADHESIVE BOLT DRILLED INTO BACKING LINTEL LOCATE BOLT 3 1/2" MIN. FROM UNDERSIDE OF BACKING LINTEL.

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02.13.02

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SOUTH CAROLINA — Jordan, Jones & Goulding, Inc. — No. C00554 — CERTIFICATE OF AUTHORIZATION

NO.	DATE	DESCRIPTION OF REVISION
1	08-02-01	RECORD DRAWING
0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

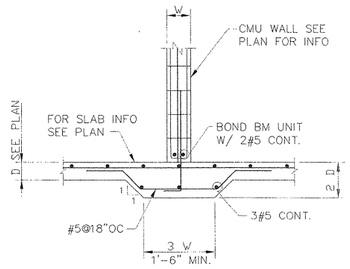
SOUTH CAROLINA REGISTERED No. 14106 PROFESSIONAL ENGINEER CHARLES D. BARNES, JR.

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

TYPICAL SECTIONS AND DETAILS

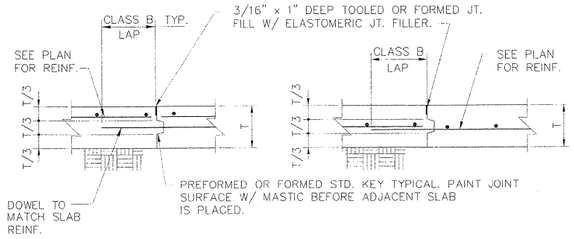
DESIGNED: WW	CHECKED:	DATE: NOVEMBER 2001	ST1	1
DRAWN: OS	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV.

FB3DOBLE



TYPICAL THICKENED SLAB DETAIL

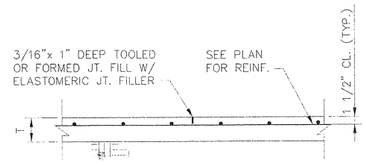
1/2" = 1'-0"



CONSTRUCTION JOINT DETAIL

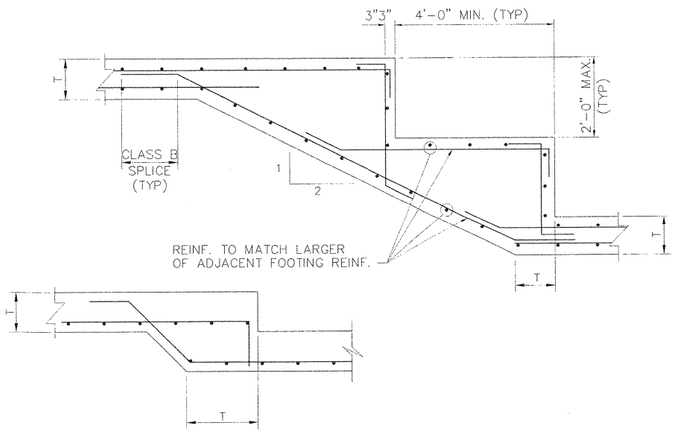
TYPICAL FLOOR JOINT DETAIL

N.T.S.



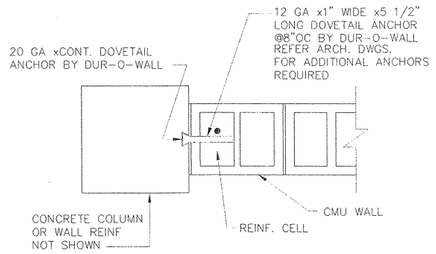
TYPICAL CONTROL JOINT DETAIL

N.T.S.



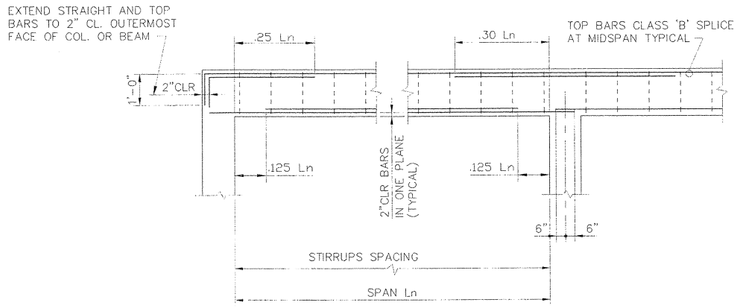
STEPPED FOOTING DETAILS

N.T.S.



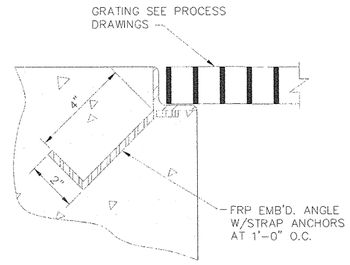
TYPICAL CMU WALL ANCHOR TO CONCRETE COLUMN DETAIL

N.T.S.



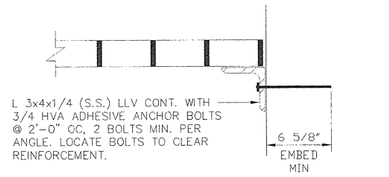
BEAM REINF. DETAILS

N.T.S.



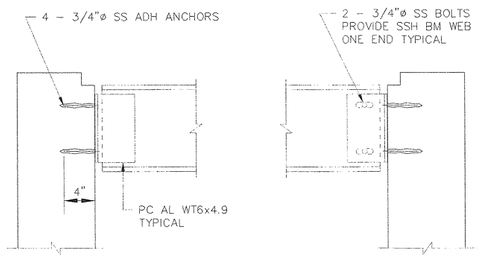
GRATING EDGE SUPPORT DETAIL

N.T.S.



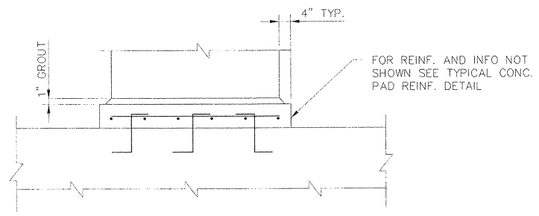
GRATING SUPPORT DETAIL AT WALL

N.T.S.



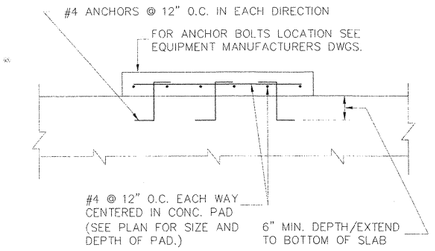
TYPICAL ALUMINUM BEAM CONNECTION TO CONCRETE WALL DETAIL

N.T.S.



TYPICAL CONC. PUMP PAD REINF. DETAIL

N.T.S.



TYPICAL CONC. PAD REINF. DETAIL

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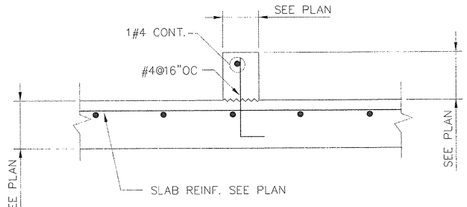

TYPICAL CURB DETAIL U.N.O.

N.T.S.

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CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

TYPICAL SECTIONS AND DETAILS

DESIGNED: WW	CHECKED:	DATE: NOVEMBER 2000	ST2	1
DRAWN: OS	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

RBOOBLE

AIR MOVING DEVICES & COMPONENTS

- PROPELLER WALL FAN
- GAS-FIRED UNIT HEATER
- ELECTRIC UNIT HEATER
- DUCT WITH FLOW ARROW
- 20 x 14 — DUCT WITH SIZE
- SUPPLY DUCT OR POSITIVE PRESSURE RISER
- RETURN DUCT OR NEGATIVE PRESSURE RISER
- R — ELEVATION CHANGE, (R) RISE OR (D) DROP
- 14 X 12 — DUCT SIZE (RECTANGULAR)
- 8"ø — DUCT SIZE (ROUND)
- FLEXIBLE CONNECTION
- FLEXIBLE DUCT
- TRANSITION
- ELBOW WITH TURNING VANES
- M — MOTORIZED DAMPER
- FIRE DAMPER & SLEEVE
- MANUAL VOLUME DAMPER
- SD — SMOKE DETECTOR
- T — THERMOSTAT (ELECTRIC, PNEUMATIC)
- S — WALL SWITCH
- STANDARD BRANCH, MANUAL SPLITTER
- STANDARD BRANCH, NO SPLITTER
- SPIN-IN FITTING WITH DAMPER
- RETURN GRILLE OR REGISTER (CEILING)
- SUPPLY GRILLE OR REGISTER (CEILING)
- DG — DOOR GRILLE
- FIXED WALL LOUVER
- COMBINATION WALL LOUVER
- EQUIPMENT SYMBOL

MECHANICAL ABBREVIATIONS

°F	DEGREES FAHRENHEIT
Δ P	PRESSURE DIFFERENCE
ø	PHASE
ø	ROUND OR DIAMETER
AC	AIR CONDITIONING/ACCESS COVER
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
ALUM	ALUMINUM
AUX	AUXILLARY
A/C	ABOVE CEILING
BDD	BACK DRAFT DAMPER
BFF	BELOW FINISHED FLOOR
BLW	BELOW
BOD	BOTTOM OF DUCT
BOF	BOTTOM OF FAN
BOH	BOTTOM OF HEATER
BOL	BOTTOM OF LOUVER
BOS	BOTTOM OF STEEL
BOU	BOTTOM OF UNIT
BSP	BLACK STEEL PIPE
BTU	BRITISH THERMAL UNITS
BTUH	BRITISH THERMAL UNITS PER HOUR
B/F	BELOW FLOOR
B/G	BELOW GRADE
CAP	CAPACITY
CCF	100 CUBIC FEET
CF	CUBIC FEET
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CISP	CAST IRON SOIL PIPE
CO	CLEANOUT
CONC	CONCRETE
COP	COEFFICIENT OF PERFORMANCE
CPVC	CHLORINATED POLYVINYL CHLORIDE
CS	CARBON STEEL (SEAMLESS)
CU	CONDENSING UNIT OR COPPER
D	DAMPER
DB	DRY BULB
DEG	DEGREES
DF	DRINKING FOUNTAIN
DG	DOOR GRILLE
DIP	DUCTILE IRON PIPE
DN	DOWN
DWG	DRAWING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB
EER	ENERGY EFFICIENCY RATIO
EEW	EMERGENCY EYEWASH
EF	EXHAUST FAN
EFF	EFFICIENCY
EL	ELEVATION
ELEC	ELECTRICAL
ESH	EMERGENCY EYEWASH/SHOWER
ESP	EXTERNAL STATIC PRESSURE
EUH	ELECTRIC UNIT HEATER
EWB	ENTERING WET BULB
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
EXIST	EXISTING
FD	FIRE DAMPER
FF EL	FINISH FLOOR ELEVATION
FLEX	FLEXIBLE
FPM	FEET PER MINUTE
FT	FEET
GAL	GALLON
GH	GRAVITY HOOD
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GSP	GALVANIZED STEEL PIPE
GFUH	GAS-FIRED UNIT HEATER
HOA	HAND/OFF/AUTO
HP	HEAT PUMP OR HORSEPOWER
HR	HOUR
HVAC	HEATING, VENTILATING, & AIR CONDITIONING
HZ	HERTZ
IE	INVERT ELEVATION
IN	INCHES
IWG	INCHES WATER GAUGE
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LDB	LEAVING DRY BULB
LH	LATENT HEAT
LWB	LEAVING WET BULB
LWT	LEAVING WATER TEMPERATURE
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MBH	1000 BTUH
MCF	1000 CUBIC FEET
MD	MOTORIZED DAMPER
MIN	MINIMUM OR MINUTE
MVD	MANUAL VOLUME DAMPER
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
P	PUMP
PH	PHASE
PP	POLYPROPYLENE
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
PVC	POLYVINYL CHLORIDE
PW	POTABLE WATER
RA	RETURN AIR OR RELIEF AIR
RAG	RETURN AIR GRILLE
REF	REFERENCE
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
SHF	SENSIBLE HEAT FACTOR
SA	SUPPLY AIR
SEN	SENSIBLE HEAT
SF	SQUARE FEET
SF	SUPPLY FAN
SH	SHOWER
SK	SINK
SP	STATIC PRESSURE OR SUMP PUMP
SSK	SERVICE SINK
SSTL	STAINLESS STEEL
ST	STAGES OF HEAT
TDH	TOTAL DYNAMIC HEAD
TOD	TOP OF DUCT
TOT	TOTAL HEAT
TYP	TYPICAL
T'STAT	THERMOSTAT
UCD	UNDER CUT DOOR
UNO	UNLESS NOTED OTHERWISE
UP	UP
UR	URINAL
V	VOLTS
VB	VACUUM BREAKER
VEL	VELOCITY
VTR	VENT THRU ROOF
W	WATTS
W X H	WIDTH BY HEIGHT
WB	WET BULB OR WASHER BOX
WC	WATER CLOSET
WC	WATER COLUMN
WG	WATER GAUGE
WH	WATER HEATER/WALL HUNG
WL	WALL LOUVER
WMS	WIRE MESH SCREEN
WV	WET VENT
W/	WITH/WHERE
W/O	WITHOUT

- PLUG
- PRESSURE REGULATING VALVE (UPSTREAM SENSING, DOWNSTREAM CONTROL)
- P--TRAP (ELEVATION, PLAN)
- RISER OR ELBOW (ELEVATION, UP, DOWN)
- STRAINER
- TEE (ELEVATION, UP, DOWN)
- UNION, FLANGED
- UNION, SCREWED
- M — WATER METER
- A/R — PIPE ABANDONED OR REMOVED

PLUMBING ABBREVIATIONS & SYMBOLS (ALL SYMBOLS MAY NOT APPEAR ON DRAWINGS)

BFP	BACKFLOW PREVENTER (RPZ OR DOUBLE CHECK ASSEMBLY)
BLV	BALL VALVE
CKV	CHECK VALVE
CW	COLD WATER (POTABLE)
ECO	EXTERIOR CLEANOUT (ELEVATION, PLAN)
FCO	FLOOR CLEANOUT (ELEVATION, PLAN)
FD	FLOOR DRAIN (ELEVATION, PLAN) W/TRAP PRIMER CONNECTION
GV	GLOBE VALVE (GENERIC VALVE)
HB	HOSE BIBB
HW	HOT WATER (POTABLE)
NFWH	NON-FREEZE WALL HYDRANT
NPW	NON-POTABLE WATER
PRV	PRESSURE REDUCING VALVE
SS	SANITARY AND/OR WASTE SEWER
TP	TRAP PRIMER
T & P	TEMPERATURE & PRESSURE RELIEF VALVE
V	VENT
W	WASTE
WCO	WALL CLEANOUT
WHA	WATER HAMMER ARRESTER
	BRANCH CONNECTION (TOP, BOTTOM)
	CAP
	FLOW ARROW
	CONNECT NEW PIPE TO EXISTING PIPE
	EXISTING PIPE TO BE DEMOLISHED/REMOVED

PLUMBING DEMOLITION GENERAL NOTES:

1. EXCEPT WHERE SPECIFICALLY SHOWN OR SPECIFIED, EXISTING WORK IS TO REMAIN AND SHALL BE MAINTAINED OPERATIONAL.
2. UNLESS OTHERWISE NOTED, ALL MATERIALS & EQUIPMENT SHOWN OR SPECIFIED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE REMOVED FROM THE SITE, BY THE OWNERS DIRECTION.
3. THE CONTRCTOR SHALL REMOVE ALL SUPPORTING FACILITIES NO LONGER NEEDED OR MADE OBSOLETE BY THE NEW EQUIPMENT AND/OR MATERIALS FURNISHED IN THIS CONTRACT. SUCH REMOVAL INCLUDES, BUT IS NOT LIMITED TO, ABANDONED PIPING, VALVES, SUPPORT FRAMES, SUPPORT BRACKETS, PLUMBING FIXTURES, ETC.
4. THE PLUMBING CONTRACTOR SHALL FIELD VERIFY PRIOR TO INSTALLATION OF NEW PIPING CONNECTION INTO EXISTING PIPE AND PRIOR TO DEMOLITION OF EXISTING PIPING. LOCATIONS OF ALL PIPE SHOWN AS AN AIDE FOR PLUMBING CONTRACTORS DEMOLITION TAKE-OFF. IF EXACT LOCATIONS ARE REQUIRED, THE PLUMBING CONTRACTOR SHALL FIELD LOCATE PRIOR TO THE BID DATE.
5. COORDINATE WITH WORK DONE UNDER OTHER DIVISIONS OF THE SPECIFICATIONS TO AVOID CONFLICT.
6. NEW VENT , COLD AND HOT WATER PIPING SHALL BE ROUTED ABOVE CEILING. COORDINATE WITH ALL OTHER TRADES, EXISTING AND NEW.
7. PROVIDE FOR ACCESS TO ALL EQUIPMENT REQUIRING CLEANING OR ADJUSTMENT.
8. ALL WALL AND FLOOR PENETRATIONS FOR THIS PROJECT TO BE PATCHED, SHALL MATCH SURROUNDING SURFACES WHERE EXISTING PIPE IS REMOVED AND/OR NEW PIPE INSTALLED.
9. DO NOT SCALE DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS, FIXTURE LOCATIONS, ETC.

ELECTRIC HEATERS

MARK	MODEL	KW	FAN CFM	FAN HP	ELECT. VOLT/PHASE	REMARKS
EUH-201	HDH	2	405	1/15	208/1	1
EUH-202	HDH	2	405	1/15	208/1	1
EUH-203	HDH	2	405	1/15	208/1	1
EUH-204	HDH	2	405	1/15	208/1	1
EUH-205	HDH	2	405	1/15	208/1	1
EUH-206	HDH	2	405	1/15	208/1	1
EUH-207	HDH	2	405	1/15	208/1	1
EUH-208	HDH	2	405	1/15	208/1	1
EUH-209	HDH	2	405	1/15	208/1	1
EUH-401	HDH	3	405	1/15	208/1	1
EUH-402	HDH	3	405	1/15	208/1	1
EUH-403	HDH	2	405	1/15	208/1	1
EUH-404	HDH	2	405	1/15	208/1	1

SELECTION BASED ON CHROMALOX

REMARKS:
1. FURNISH INTEGRAL THERMOSTAT.

ELECTRIC MAKEUP AIR UNITS

MARK	MODEL	KW	FAN CFM	FAN T.S.P.(in. w.g.)	FAN HP	ELECT. VOLT/PHASE	REMARKS
MAU-201	SBEV-112	31	1,000	1 1/2	1	480/3	1, 2
MAU-202	SB-112	-	2,400	1 1/2	2	480/3	1

SELECTION BASED ON HASTINGS

REMARKS:
1. FURNISH HORIZONTAL UNIT WITH DOWNBLAST DISCHARGE .
2. FURNISH SINGLE-POINT POWER CONNECTION.

FANS

MARK	MODEL	TYPE	CFM	MAX SP	MAX HP	MAX RPM	ELECTRICAL	INTERLOCK	REMARKS
EF-201	120R2B	UPBLAST CENTRIFUGAL	1,000	0.25	.17	907	120/1	MAU-201	
EF-202	70W15DM	WALL CENTRIFUGAL	130	0.125	1/20	1680	120/1	WL-201	
EF-401	120R2B	UPBLAST CENTRIFUGAL	740	0.25	.17	907	120/1	WL-401	
EF-402	100W2B	WALL CENTRIFUGAL	495	0.25	.17	1161	120/1	WL-402	
EF-403	120W2B	WALL CENTRIFUGAL	855	0.25	.17	988	120/1	-	

SELECTION BASED ON COOK

REMARKS:

DIFFUSER, GRILLE, AND REGISTER SCHEDULE

MARK	MODEL	FACE SIZE IN.	NECK SIZE IN.	MAX CFM	MAX. SP. IN.	MAX. NC	SERVICE	DAMPER	MATERIAL	REMARKS
A	300RS	12 X 8	12 X 8	400	0.1	25	SUPPLY	OBVD	ALUMINUM	
B	300RS	8 X 8	8 X 8	260	0.1	23	SUPPLY	OBVD	ALUMINUM	
C	300RS	18 X 8	18 X 8	615	0.1	26	SUPPLY	OBVD	ALUMINUM	

REMARKS: SELECTION BASED ON TITUS

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	CONNECTION SIZE, IN CW	HW	SAN	VENT	REMARKS
ESH-1	EMERGENCY SHOWER/EYEWASH	1-1/4"	-	3"-FD	2"	FLOOR MOUNT
ESH-2	EMERGENCY SHOWER/EYEWASH	1-1/4"	-	3"-FD	2"	FLOOR MOUNT, FROST-PROOF
DW-1	DISHWASHER	1/2"	1/2"	2"	-	UNDERCOUNTER TYPE
LSK-1	LAB SINK	1/2"	1/2"	2"	2"	ROUGH-IN ONLY; SEE DIVISION 12

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SOUTH CAROLINA — Jordan, Jones & Goulding, Inc. — No. C00554 — CERTIFICATE OF AUTHORIZATION

NO.	DATE	DESCRIPTION OF REVISION
1	08-02-01	RECORD DRAWING
0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

GEORGETOWN — 1734 — SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 16687 — NEAL D. STUBBLEFIELD

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

LEGEND, SCHEDULES, ABBREVIATIONS & DETAILS

DESIGNED: RJS	CHECKED:	DATE: NOVEMBER 2000	M0.1	1
DRAWN: CRC	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

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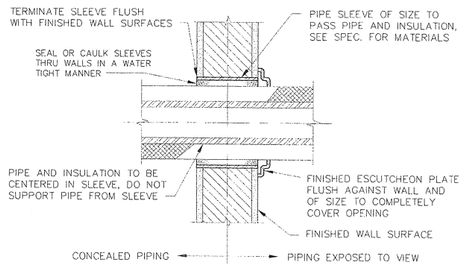
02.13.02

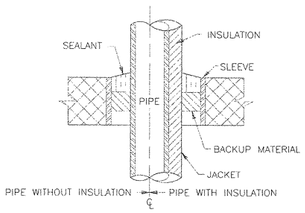
R80C01E



EXTERIOR/INTERIOR WALLS

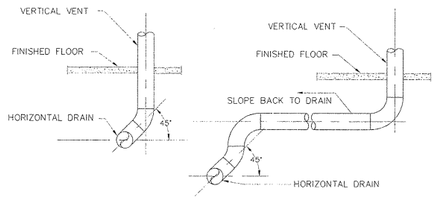
PIPE SLEEVE/PIPE THRU WALL (1 M0.2)

NTS



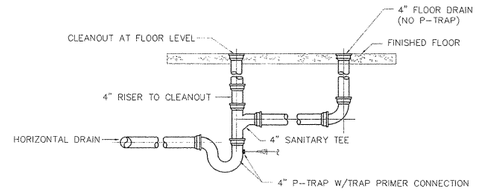
PIPE SLEEVE/PIPE THRU CONC. FLOOR (2 M0.2)

NTS



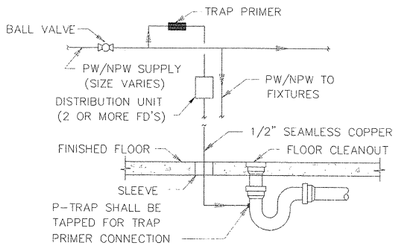
HORIZONTAL VENT DETAIL (3 M0.2)

NTS



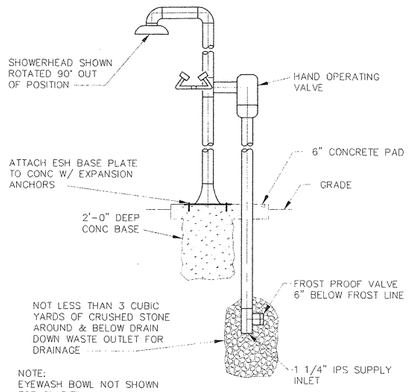
INDIRECT WASTE DETAIL (4 M0.2)

NTS



TRAP PRIMER (5 M0.2)

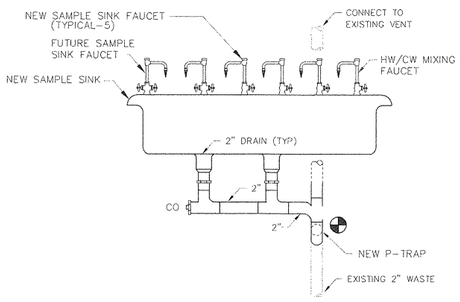
NTS



ESH-2

NON-FREEZE ESH INSTALLATION DETAIL (6 M0.2)

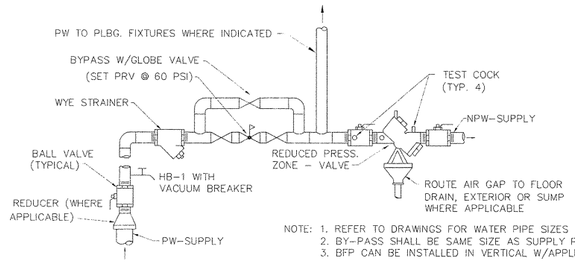
NTS



NOTE:
1. REFER TO DIVISION 12 SPECIFICATIONS FOR SAMPLE SINK/LAB SINKS

NEW SAMPLE SINK/LAB SINK WASTE PIPE-DETAIL (7 M0.2)

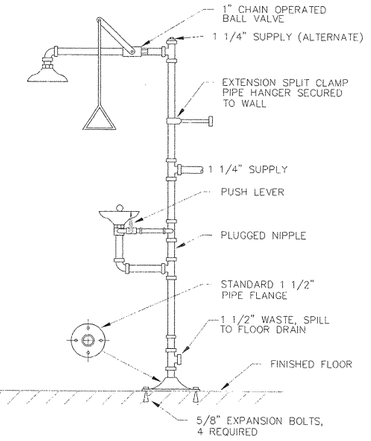
NTS



NOTE: 1. REFER TO DRAWINGS FOR WATER PIPE SIZES
2. BY-PASS SHALL BE SAME SIZE AS SUPPLY PIPE
3. BFP CAN BE INSTALLED IN VERTICAL W/APPLICABLE

REDUCED PRESSURE ZONE BACKFLOW PREVENTER ASSEMBLY (8 M0.2)

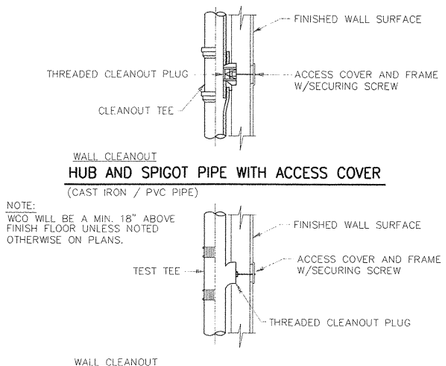
NTS MOUNT MAX. 4'-0" AFF



ESH-1

EMERGENCY SHOWER/EYEWASH (9 M0.2)

NTS



WALL CLEANOUT

HUB AND SPIGOT PIPE WITH ACCESS COVER

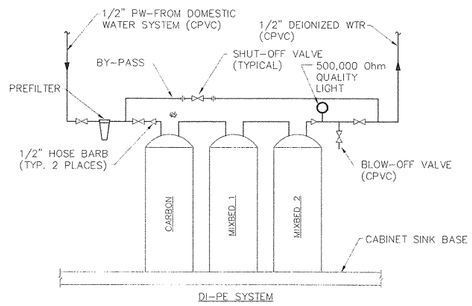
(CAST IRON / PVC PIPE)

NOTE:
WCO WILL BE A MIN. 18" ABOVE FINISH FLOOR UNLESS NOTED OTHERWISE ON PLANS.

WALL CLEANOUT

NO HUB PIPE WITH ACCESS COVER (10 M0.2)

NOT TO SCALE CAST IRON PIPE

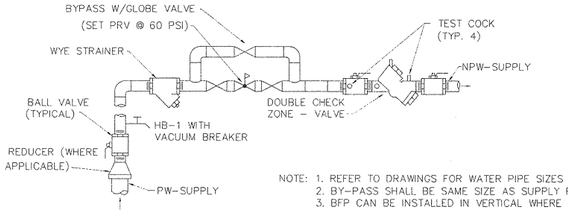


DI-PE SYSTEM

NOTE: EXACT LOCATION BY OWNER

DETAIL - DEIONIZED WATER (11 M0.2)

NTS (UNDERCOUNTER MODEL)



NOTE: 1. REFER TO DRAWINGS FOR WATER PIPE SIZES
2. BY-PASS SHALL BE SAME SIZE AS SUPPLY PIPE
3. BFP CAN BE INSTALLED IN VERTICAL WHERE APPLICABLE

DOUBLE CHECK ZONE BACKFLOW PREVENTER ASSEMBLY (12 M0.2)

NTS MOUNT MAX. 4'-0" AFF

WALL LOUVERS

MARK	MODEL	SIZE (") (W X H)	CFM	MAX SP	FRAME	SCREEN	DAMPER	INTERLOCK	REMARKS
WL-201	ALC-6375	12 X 12	130	0.1	BOX	BIRD	MOTORIZED	EF-202	
WL-202	ALC-6375	24 X 24	1,315	0.1	BOX	BIRD	MOTORIZED	MAU-202	
WL-203	ALC-6375	24 X 24	690	0.1	BOX	BIRD	MOTORIZED	MAU-202	
WL-204	ALC-6375	12 X 12	120	0.1	BOX	BIRD	MOTORIZED	MAU-202	
WL-205	ALC-6375	24 X 24	275	0.1	BOX	BIRD	MOTORIZED	MAU-202	
WL-401	ALC-6375	24 X 24	740	0.1	BOX	BIRD	MOTORIZED	EF-401	
WL-402	ALC-6375	24 X 24	495	0.1	BOX	BIRD	MOTORIZED	EF-402	
WL-403	ALC-845AF	36 X 24	855	0.1	BOX	BIRD	-	-	

SELECTION BASED ON RUSKIN

REMARKS:
1. SEE ARCHITECTURAL DWGS FOR WALL OPENING LOCATIONS.

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0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

CITY OF GEORGETOWN SOUTH CAROLINA

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 16687 NEAL D. STUBBLEFIELD

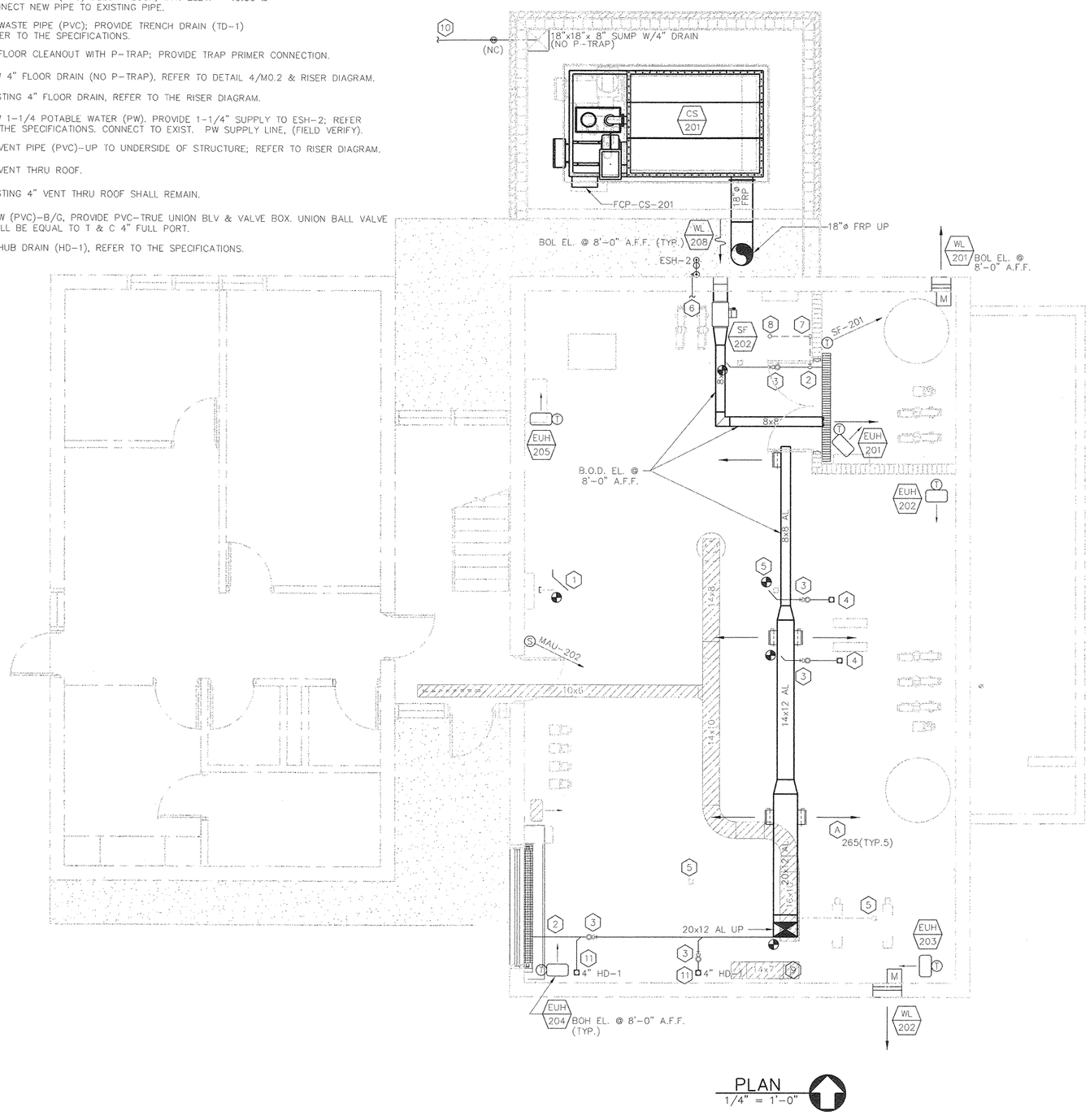
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

MECHANICAL DETAILS & DETAILS

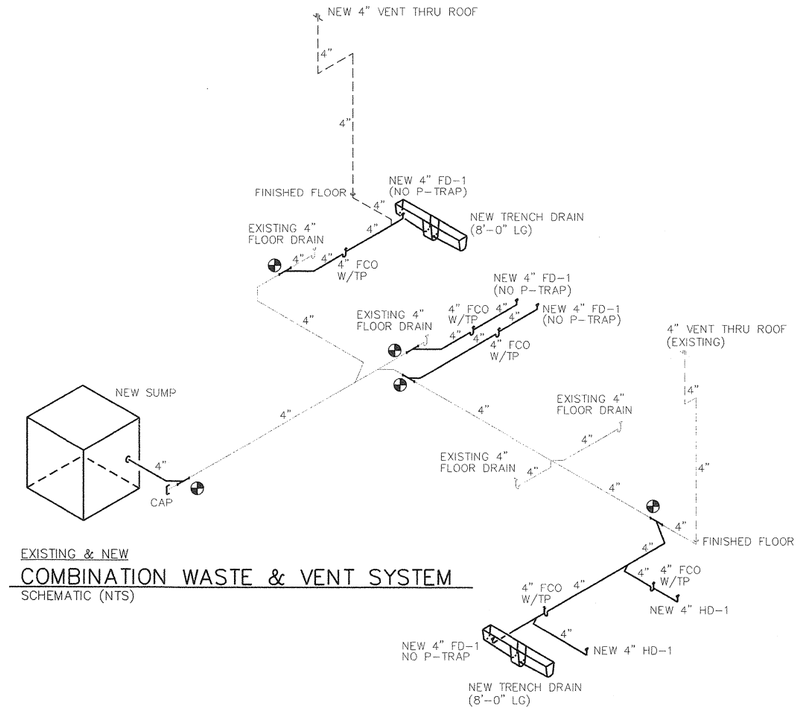
DESIGNED: RJS/LWP	CHECKED:	DATE: NOVEMBER 2000	M0.2 SHEET	1 REV
DRAWN: CRC/LWP	JOB NO. 2193.006	SCALE: AS SHOWN		

PLUMBING LEGEND NOTES: (THIS SHEET ONLY)

1. 4" WASTE PIPE (PVC) BELOW FLOOR; INV. ELEV. = 19.50 ± CONNECT NEW PIPE TO EXISTING PIPE.
2. 4" WASTE PIPE (PVC); PROVIDE TRENCH DRAIN (TD-1) REFER TO THE SPECIFICATIONS.
3. 4" FLOOR CLEANOUT WITH P-TRAP; PROVIDE TRAP PRIMER CONNECTION.
4. NEW 4" FLOOR DRAIN (NO P-TRAP), REFER TO DETAIL 4/M0.2 & RISER DIAGRAM.
5. EXISTING 4" FLOOR DRAIN, REFER TO THE RISER DIAGRAM.
6. NEW 1-1/4 POTABLE WATER (PW). PROVIDE 1-1/4" SUPPLY TO ESH-2; REFER TO THE SPECIFICATIONS. CONNECT TO EXIST. PW SUPPLY LINE, (FIELD VERIFY).
7. 4" VENT PIPE (PVC)--UP TO UNDERSIDE OF STRUCTURE; REFER TO RISER DIAGRAM.
8. 4" VENT THRU ROOF.
9. EXISTING 4" VENT THRU ROOF SHALL REMAIN.
10. 4" W (PVC)-B/G, PROVIDE PVC-TRUE UNION BLV & VALVE BOX. UNION BALL VALVE SHALL BE EQUAL TO T & C 4" FULL PORT.
11. 4" HUB DRAIN (HD-1), REFER TO THE SPECIFICATIONS.



PLAN
1/4" = 1'-0"



EXISTING & NEW
COMBINATION WASTE & VENT SYSTEM
SCHEMATIC (NTS)

PLAN - DEMOLITION
NO SCALE

NOTES:
1. PROVIDE TEMPORARY SUSPENSION-TYPE HANGERS FOR EXISTING DIFFUSERS, GRILLES, AND REGISTERS DURING CEILING GRID REPLACEMENT SEE ARCHITECTURAL PLANS FOR REFLECTED CEILING PLAN.
2. PATCH REMAINING HOLE IN ROOF. FIELD VERIFY EXISTING MATERIALS FOR MATCHING PATCH TO ROOF.

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02.13.02

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CITY OF GEORGETOWN
SOUTH CAROLINA

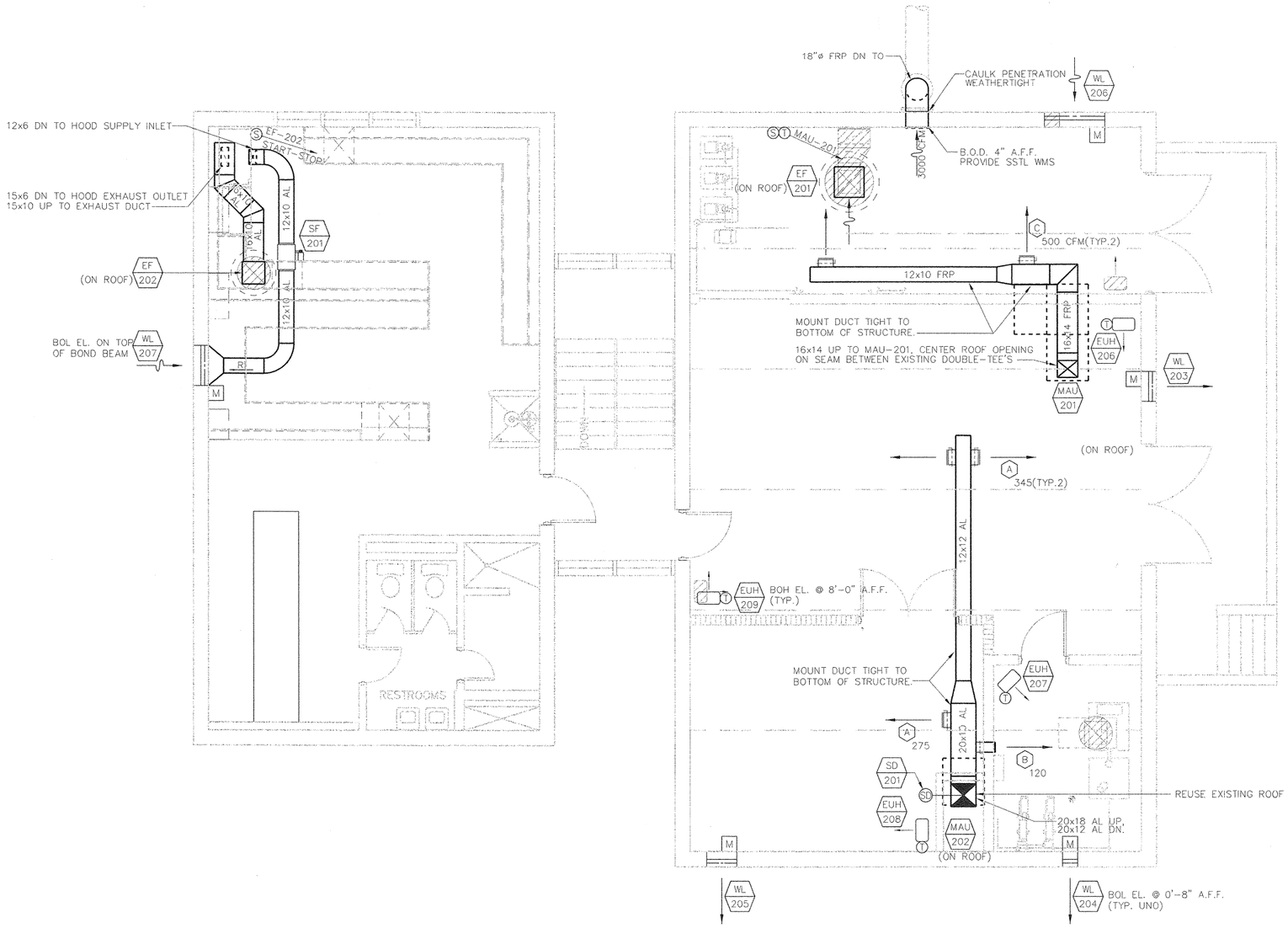
SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 11180 — ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

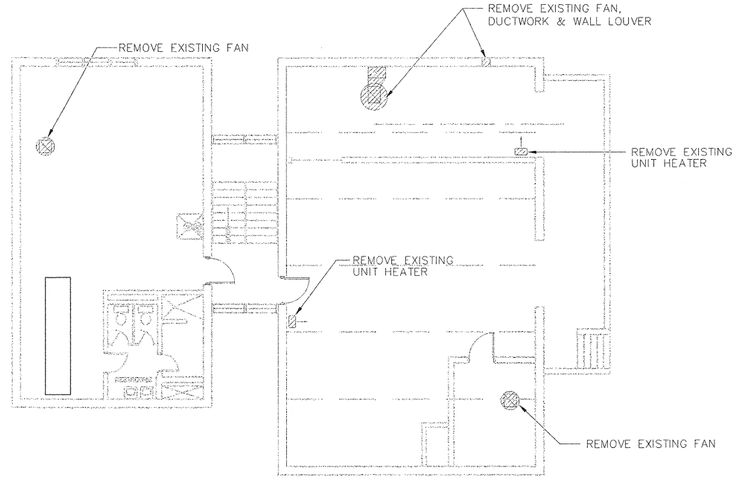
ADMINISTRATION & CHEMICAL BUILDING
FIRST FLOOR - MECHANICAL

DESIGNED: RGS/LWP	CHECKED:	DATE: NOVEMBER 2000	M2.1	1
DRAWN: CRC/LWP	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

PRECADLE



PLAN
1/4" = 1'-0"



PLAN – DEMOLITION
NO SCALE

NOTES:

1. PROVIDE TEMPORARY SUSPENSION-TYPE HANGERS FOR EXISTING DIFFUSERS, GRILLES, AND REGISTERS DURING CEILING GRID REPLACEMENT SEE ARCHITECTURAL PLANS FOR REFLECTED CEILING PLAN.
2. PATCH REMAINING HOLE IN ROOF. FIELD VERIFY EXISTING MATERIALS FOR MATCHING PATCH MATERIALS TO ROOF MATERIALS.

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02.13.02

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Jordan Jones & Goulding

CITY OF GEORGETOWN
SOUTH CAROLINA

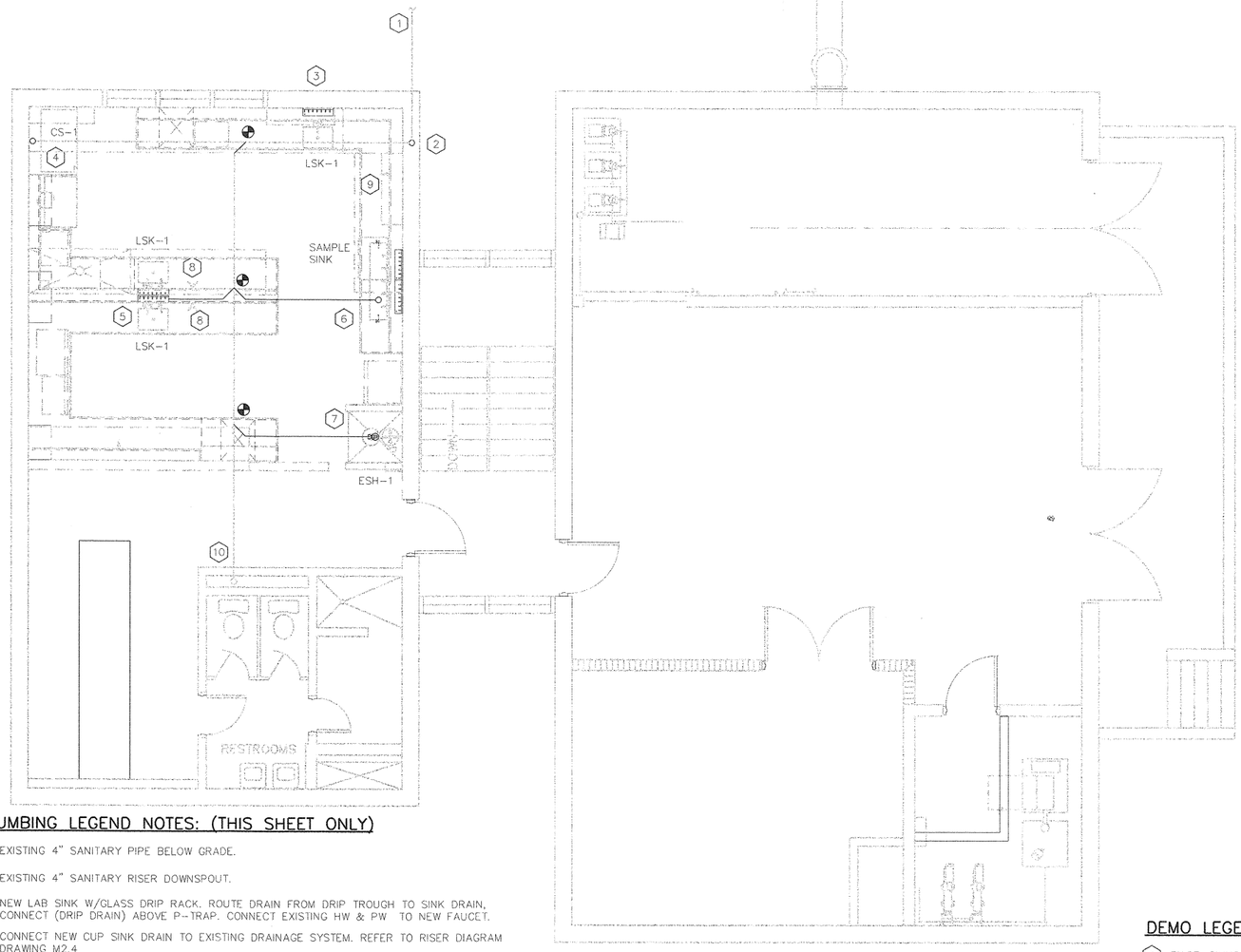
SOUTH CAROLINA — No. 16687 — REGISTERED PROFESSIONAL ENGINEER — NEAL D. STUBBLEFIELD

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

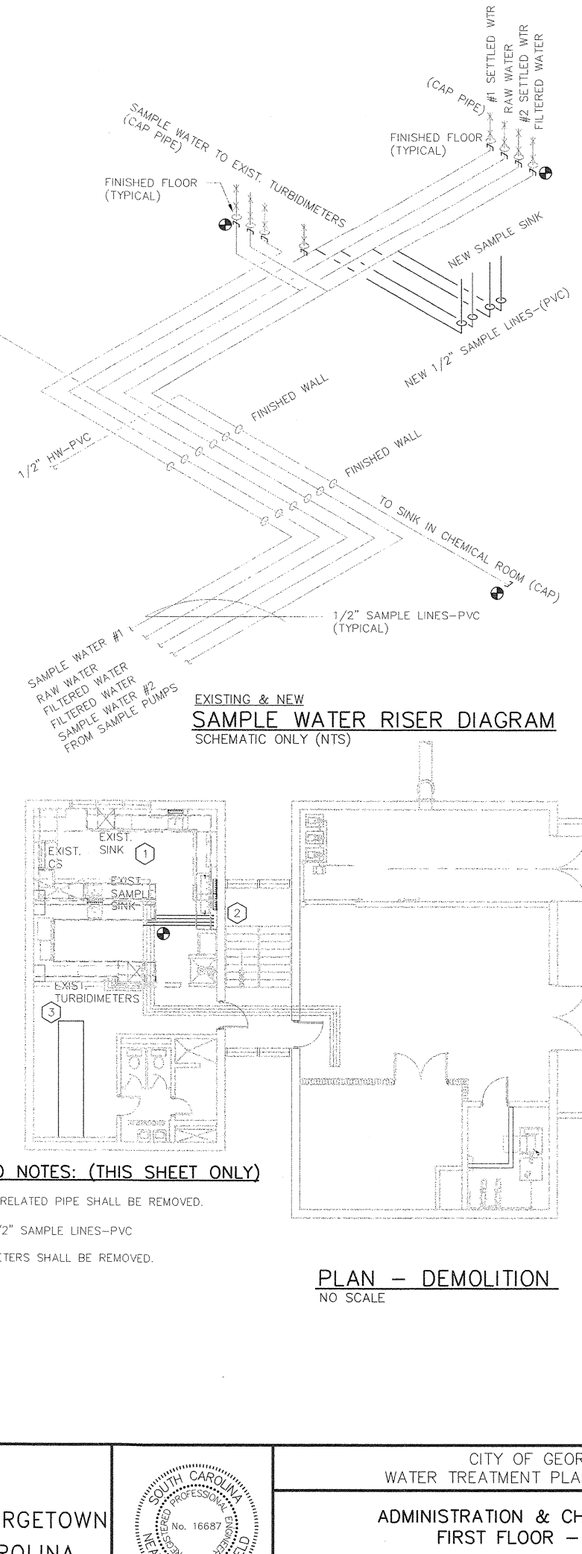
ADMINISTRATION & CHEMICAL BUILDING
SECOND FLOOR – MECHANICAL

DESIGNED: RGS	CHECKED:	DATE: NOVEMBER 2000	M2.2	1
DRAWN: CRC	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

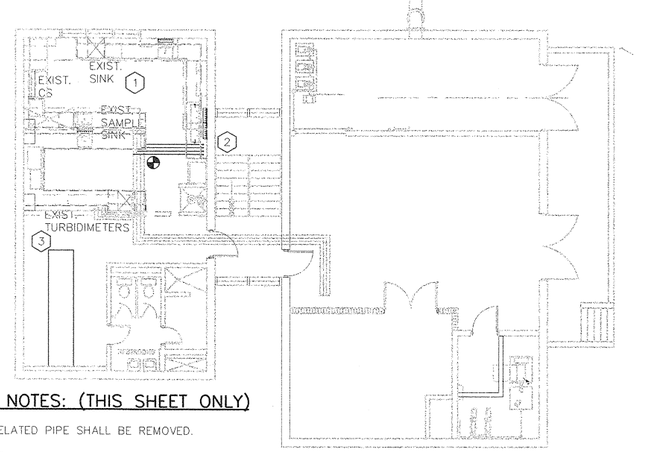
MECHANICAL



FLOOR PLAN
?"= 1'-0"



EXISTING & NEW
SAMPLE WATER RISER DIAGRAM
SCHEMATIC ONLY (NTS)



PLAN – DEMOLITION
NO SCALE

DEMO LEGEND NOTES: (THIS SHEET ONLY)
1. EXIST. SINKS & RELATED PIPE SHALL BE REMOVED.
2. PROVIDE NEW 1/2" SAMPLE LINES-PVC
3. EXIST. TURBIDIMETERS SHALL BE REMOVED.

PLUMBING LEGEND NOTES: (THIS SHEET ONLY)
1. EXISTING 4" SANITARY PIPE BELOW GRADE.
2. EXISTING 4" SANITARY RISER DOWNSPOUT.
3. NEW LAB SINK W/GLASS DRIP RACK. ROUTE DRAIN FROM DRIP TROUGH TO SINK DRAIN, CONNECT (DRIP DRAIN) ABOVE P-TRAP. CONNECT EXISTING HW & PW TO NEW FAUCET.
4. CONNECT NEW CUP SINK DRAIN TO EXISTING DRAINAGE SYSTEM. REFER TO RISER DIAGRAM DRAWING M2.4
5. NEW LAB SINKS W/GLASS DRIP RACK. ROUTE DRAIN FROM DRIP TROUGH TO SINK DRAIN, CONNECT (DRIP DRAIN) ABOVE P-TRAP. CONNECT EXISTING HW & PW TO NEW FAUCET. PROVIDE 1/2" HW SUPPLY & ROUTE DRAIN FROM DISHWASHER TO NEW WASTE PIPE. PROVIDE UNDERCOUNTER DI WATER SYSTEM, REFER TO DETAIL 11/M0.2
6. NEW SAMPLE SINK W/GLASS DRIP RACK. ROUTE DRAIN FROM DRIP TROUGH TO SINK DRAIN, CONNECT (DRIP DRAIN) ABOVE P-TRAP. CONNECT EXISTING HW & PW TO NEW FAUCET. ROUTE NEW SAMPLE LINES TO NEW SAMPLE SINK. SEE RISER DIAGRAM, (THIS SHEET).
7. NEW 4" FLOOR DRAIN (FD-1); PROVIDE TRAP PRIMER CONNECTION & 1/2" CW SUPPLY. CONNECT NEW 1-1/4" PW TO EXISTING PW, ROUTE TO NEW EMERGENCY SHOWER/EYEWASH.
8. PROVIDE UNDERCOUNTER VACUUM & AIR COMPRESSOR, (UNDER SPEC SECTION--DIVISION 12), PROVIDE SHUTOFF VALVE FOR FUTURE CONNECTION TO NATURAL GAS COCK.
9. PROVIDE SHUTOFF VALVE FOR FUTURE CONNECTION TO NATURAL GAS COCK.
10. EXISTING SANITARY AND VENT RISER SYSTEM SHALL REMAIN.

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02.3.02

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0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

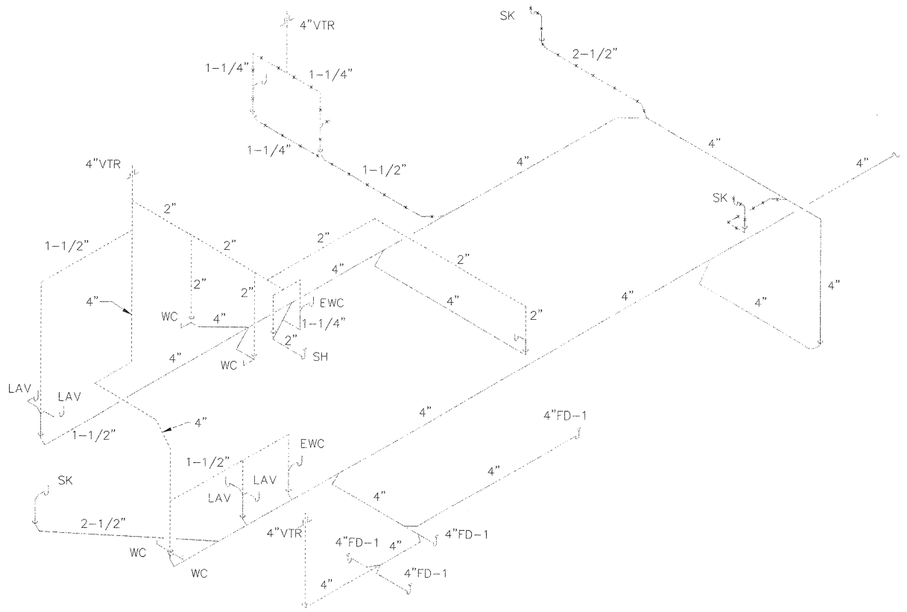
SOUTH CAROLINA – PROFESSIONAL ENGINEER – No. 16687 – NEAL D. STUBBLEFIELD

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

ADMINISTRATION & CHEMICAL BUILDING
FIRST FLOOR – PLUMBING

DESIGNED: LWP	CHECKED:	DATE: NOVEMBER 2000	M2.3	1
DRAWN: LWP	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

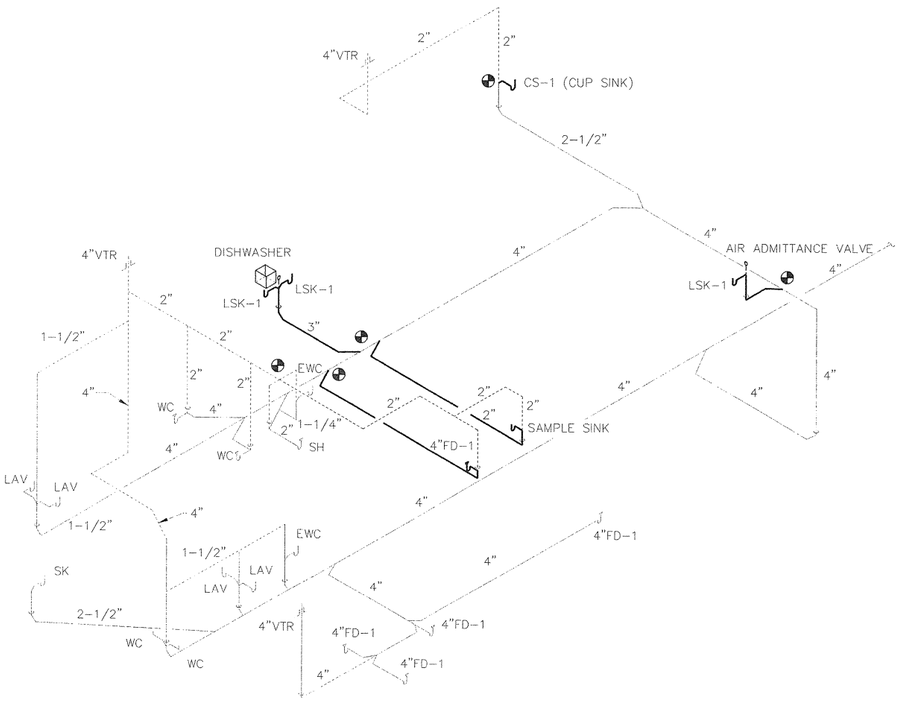
RECYCLE



DEMOLITION

EXISTING SANITARY RISER DIAGRAM

SCHEMATIC ONLY (NTS)



NEW WORK SANITARY RISER DIAGRAM

SCHEMATIC ONLY (NTS)

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02.13.02

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GEORGETOWN 1734 SOUTH CAROLINA

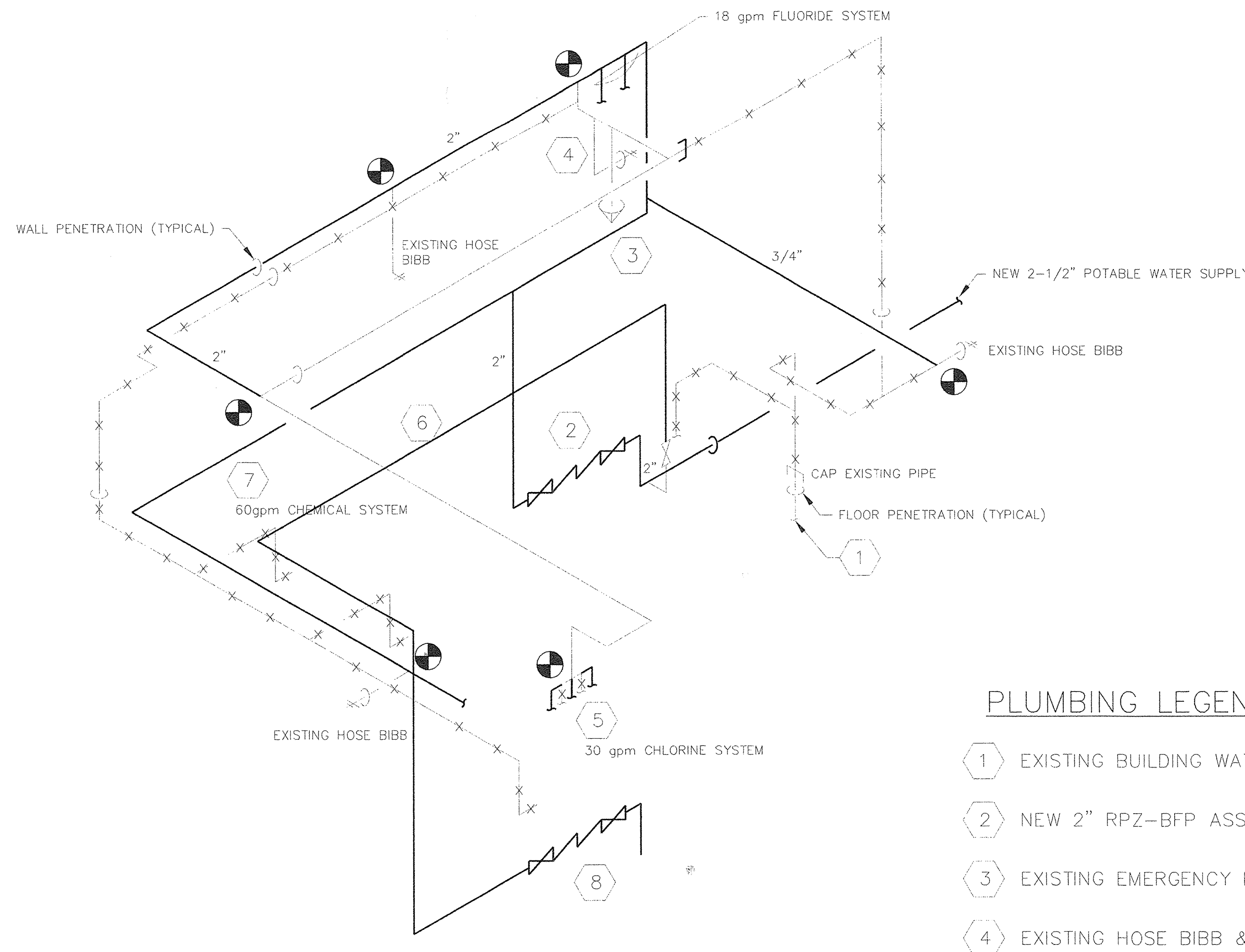
CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 16687 NEAL D. STUBBLEFIELD

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

ADMINISTRATION & CHEMICAL BUILDING
RISER DIAGRAMS

DESIGNED: LWP	CHECKED:	DATE: NOVEMBER 2000	M2.4	1
DRAWN: LWP	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV



PLANT WATER SYSTEM RISER DIAGRAM

SCHEMATIC ONLY (NTS)

PLUMBING LEGEND NOTES: (this sheet only)

1. EXISTING BUILDING WATER SERVICE SHALL BE CAPPED & ABANDON.
2. NEW 2" RPZ-BFP ASSEMBLY, REFER TO DETAIL 8/M02 & SPECIFICATIONS.
3. EXISTING EMERGENCY EYEWASH & RELATED PIPING SHALL REMAIN.
4. EXISTING HOSE BIBB & RELATED PIPING SHALL REMAIN.
5. EXISTING & NEW WATER SUPPLY @ CHLORINE ROOM, (BOOSTER PUMPS).
6. EXISTING SUPPLY PIPING SHALL REMAIN.
7. 2" TO FIRST FLOOR CHEMICAL SYSTEM.
8. 1 1/2" --RPZ-BFP ASSEMBLY

NOTES:
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CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 16687 NEAL D. STUBBLEFIELD

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

CHEMICAL BUILDING
RISER DIAGRAMS

DESIGNED: LWP	CHECKED:	DATE: NOVEMBER 2000	M2.5 SHEET	1 REV
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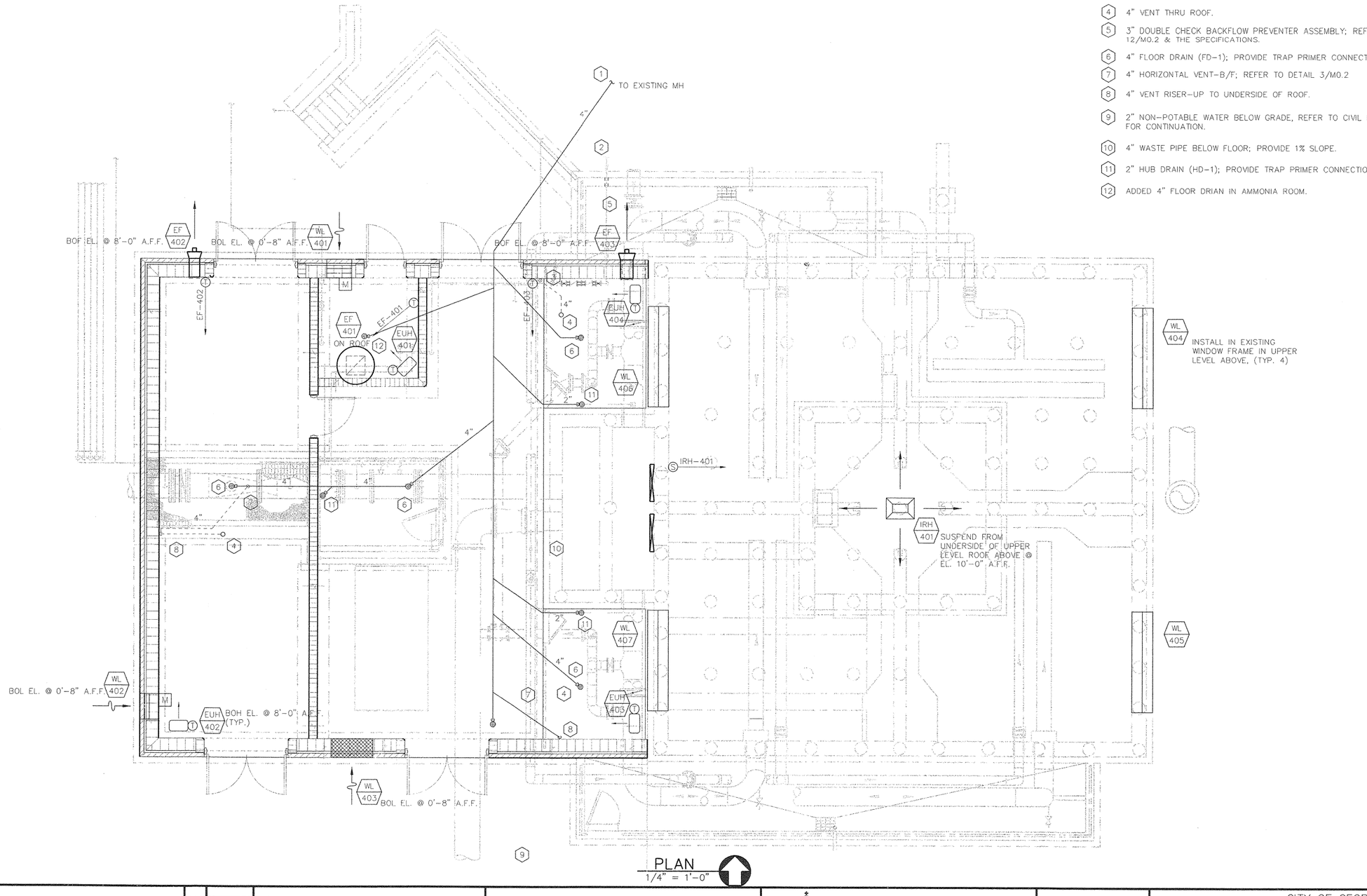
PLUMBING LEGEND NOTES: (THIS SHEET ONLY)

1. 4" PROCESS WASTE PIPE BELOW GRADE; INV. ELEV. = 18.16 ± REFER TO CIVIL DRAWING FOR CONTINUATION.
2. 3" POTABLE WATER BELOW GRADE; PROVIDE MIN. 2'-0" COVER OVER PIPE.
3. 4" VENT PIPE UP TO UNDERSIDE OF STRUCTURE; PROVIDE CLEANOUT @ BASE OF RISER. MOUNT CO MIN 24" AFF.
4. 4" VENT THRU ROOF.
5. 3" DOUBLE CHECK BACKFLOW PREVENTER ASSEMBLY; REFER TO DETAIL 12/M0.2 & THE SPECIFICATIONS.
6. 4" FLOOR DRAIN (FD-1); PROVIDE TRAP PRIMER CONNECTION & 1/2" WATER SUPPLY.
7. 4" HORIZONTAL VENT-B/F; REFER TO DETAIL 3/M0.2
8. 4" VENT RISER-UP TO UNDERSIDE OF ROOF.
9. 2" NON-POTABLE WATER BELOW GRADE, REFER TO CIVIL DRAWING FOR CONTINUATION.
10. 4" WASTE PIPE BELOW FLOOR; PROVIDE 1% SLOPE.
11. 2" HUB DRAIN (HD-1); PROVIDE TRAP PRIMER CONNECTION & 1/2" WATER SUPPLY.
12. ADDED 4" FLOOR DRIAN IN AMMONIA ROOM.



PLAN
1/4" = 1'-0"

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CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FILTER BUILDING
FLOOR PLAN – MECHANICAL

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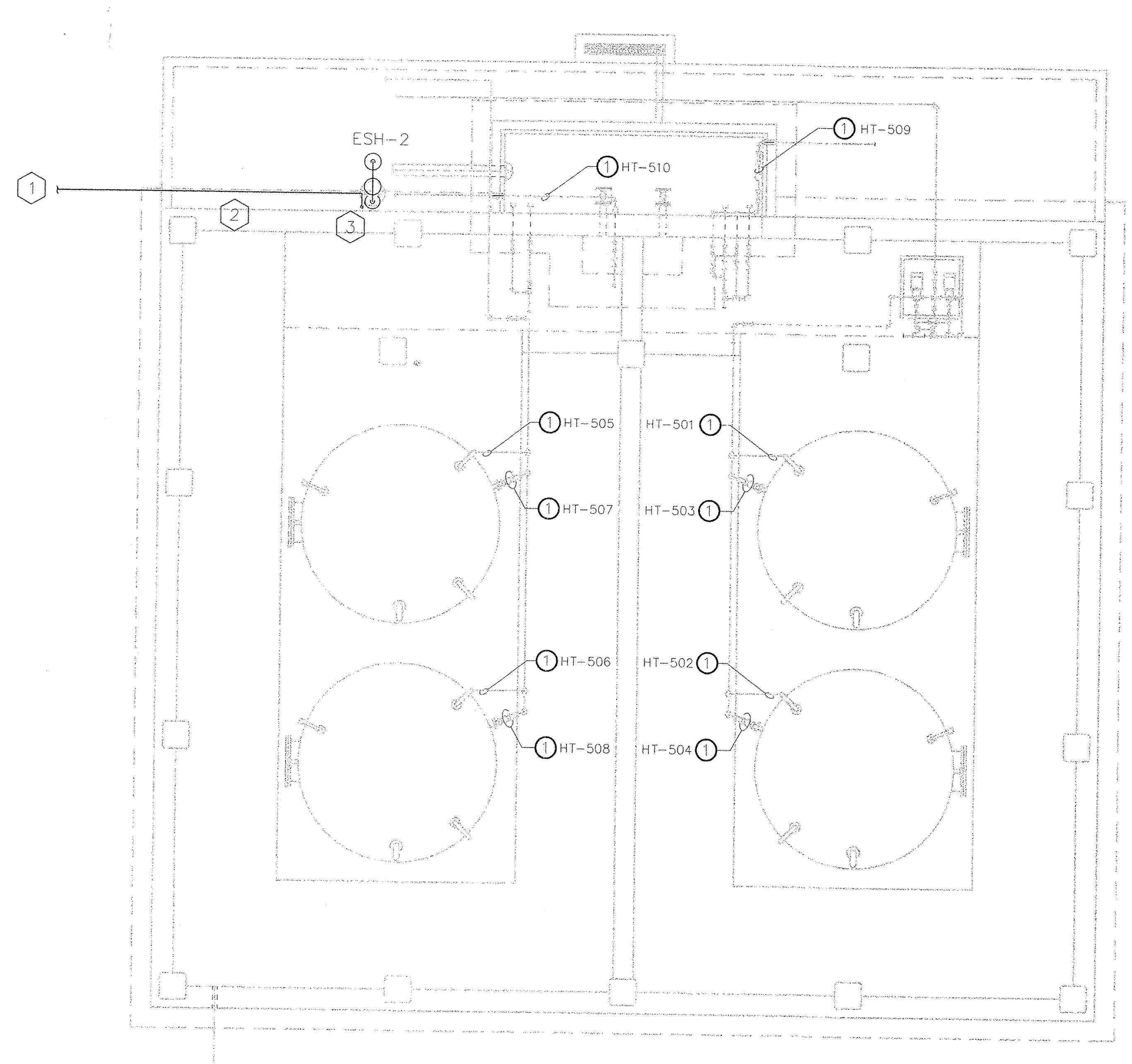

PLAN
1/4" = 1'-0"

MECHANICAL NOTES: (this sheet only)

(1) HEAT TRACE AND INSULATE EXPOSED PIPE. SEE PROCESS DRAWINGS FOR ELEVATIONS SHOWING WHERE PIPING IS EXPOSED.

PLUMBING LEGEND NOTES: (THIS SHEET ONLY)

(1) 2" POTABLE WATER BELOW GRADE. REFER TO CIVIL DRAWING FOR CONTINUATION.

(2) 1-1/4" POTABLE WATER, ROUTE PIPE BELOW SLAB.

(3) 1-1/4" POTABLE WATER – UP TO EMERGENCY SHOWER/EYEWASH (ESH-2).

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CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

BULK CHEMICAL STORAGE
MECHANICAL

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CONTROL/ONE-LINE SYMBOLS

- SELECTOR SWITCH, DPTT
- PUSHBUTTON, NORMALLY OPEN
- PUSHBUTTON, NORMALLY CLOSED
- MAINTAINED LOCK-OUT SWITCH, N.O.
- MAINTAINED LOCK-OUT SWITCH, N.C.
- SELECTOR SWITCH, SPST
- SWITCH, NORMALLY OPEN (TYP)
- SWITCH, NORMALLY CLOSED (TYP)
- TIME DELAY PICK-UP
- TIME DELAY DROPOUT
- LIMIT SWITCH
- PRESSURE SWITCH
- LEVEL SWITCH
- TEMPERATURE SWITCH
- FLOW SWITCH
- (R) RELAY COIL
- CONTACT, NORMALLY OPEN
- CONTACT, NORMALLY CLOSED
- CAPACITOR
- (G) INDICATING LIGHT, LETTER DENOTES COLOR
- (*) ANNUNCIATOR LIGHT
- WIRING NOT CONNECTED
- WIRING CONNECTED
- GROUND CONNECTION
- TERMINAL
- REMOTE LOCATION
- HEATER OR HEATING ELEMENT
- ETM ELAPSED TIME METER
- FUSE
- CURRENT TRANSFORMER, RATIO AS INDICATED
- TRANSFORMER
- 350T / 600F CIRCUIT BREAKER, TRIP/FRAME OR AMPS/POLES
- DISCONNECT STAB
- 52 HIGH VOLTAGE CIRCUIT BREAKER
- DISCONNECT SWITCH
- OVERLOAD ELEMENT
- K KIRK KEY INTERLOCK
- AS (AM) AMMETER SWITCH AND AMMETER
- VS (VM) VOLTMETER SWITCH AND VOLTMETER
- (WM) WATTMETER
- VARIABLE FREQUENCY DRIVE
- SOLID STATE REDUCED VOLTAGE STARTER
- ***** AVAILABLE SHORT CIRCUIT CURRENT, RMS SYMMETRICAL MOMENTARY VALUE

ELECTRICAL SYMBOLS

- FA FLUORESCENT FIXTURE. LETTERS DENOTE FIXTURE TYPE (TYPICAL). SHADING INDICATES NIGHTLIGHT (TYPICAL). NUMERAL INDICATES CIRCUIT NUMBER (TYPICAL). SUBSCRIPT CORRESPONDS WITH SIMILARLY IDENTIFIED SWITCH OR MULTI-WAY SWITCH GROUP (TYPICAL)
- HA LIGHTING FIXTURE, FLUSH IN CEILING
- HA LIGHTING FIXTURE, SURFACE ON OR PENDANT MOUNT FROM CEILING
- HA LIGHTING FIXTURE, WALL MOUNTED
- HA/PA POLE AND LIGHTING FIXTURE
- XA EXIT LIGHT SURFACE MOUNTED ON CEILING, ARROWS INDICATE DIRECTION
- XA EXIT LIGHT SURFACE MOUNTED ON WALL, ARROWS INDICATE DIRECTION
- BA BATTERY POWERED EMERGENCY LIGHT
- PE PHOTOELECTRIC CELL
- DUPLEX RECEPTACLE, 18" AFF UNLESS OTHERWISE INDICATED. NUMERAL INDICATES CIRCUIT NUMBER (TYPICAL)
- DUPLEX RECEPTACLE, 48" AFF OR 6" ABOVE COUNTER TOP
- TELEPHONE OUTLET IN WALL, BUSHED HOLE IN PLATE WITH EMPTY 1" CONDUIT HOMERUN WITH PULL WIRE TO TELEPHONE BACKBOARD, 18" AFF UNLESS OTHERWISE INDICATED
- (T) 3/4" PLYWOOD BACKBOARD FOR TELEPHONE (HEIGHT AND WIDTH AS INDICATED)
- S SINGLE POLE SWITCH, 48" AFF UNLESS OTHERWISE INDICATED. NUMERAL IN PARENTHESIS INDICATES CIRCUIT NUMBER (TYPICAL). SUBSCRIPT CORRESPONDS WITH SIMILARLY IDENTIFIED LIGHTING FIXTURES (TYPICAL)
- S_2 DOUBLE POLE SWITCH, 48" AFF UNLESS OTHERWISE INDICATED
- S_3 THREE WAY SWITCH, 48" AFF UNLESS OTHERWISE INDICATED
- S_4 FOUR WAY SWITCH, 48" AFF UNLESS OTHERWISE INDICATED
- S_M MANUAL MOTOR STARTER, SINGLE POLE 1 Hp UNLESS OTHERWISE INDICATED
- WIRING IN CONDUIT CONCEALED IN OR ABOVE CEILING OR IN WALL
- WIRING IN CONDUIT CONCEALED IN OR UNDER FLOOR, OR UNDERGROUND CONCRETE ENCASED SINGLE CONDUIT DUCTBANK
- WIRING IN CONDUIT EXPOSED ON CEILING OR WALL
- GND BRANCH CIRCUIT WIRING IN 3/4" CONDUIT HOMERUN AS INDICATED. ONE ARROW PER CIRCUIT. SLASHES INDICATE NUMBER OF CONDUCTORS, #12 UNLESS OTHERWISE INDICATED
- SIGNAL CONDUCTOR IN 3/4" CONDUIT, #16TSP UNLESS OTHERWISE INDICATED
- SEAL-OFF FITTING IN EXPOSED CONDUIT
- EMPTY CONDUIT CAPPED AND TAGGED "SPARE, TO_____"
- CONDUIT TURNS UP (TOWARDS VIEWER)
- CONDUIT TURNS DOWN (AWAY FROM VIEWER)
- FLEXIBLE CONDUIT CONNECTION
- (*) INDICATES CONDUCTORS IN 3/4" CONDUIT UNLESS OTHERWISE INDICATED:
  "A" INDICATES ANALOG SIGNAL CONDUCTORS. SEE SCHEDULE.
  "C" INDICATES DISCRETE OR CONTROL CONDUCTORS. SEE SCHEDULE.
  "D" INDICATES DATA HIGHWAY CONDUCTORS. SEE SCHEDULE.
  "H" INDICATES POWER CONDUCTORS ABOVE 240 VOLTS. SEE SCHEDULE.
  "L" INDICATES POWER CONDUCTORS 240 VOLTS AND BELOW. SEE SCHEDULE.
  "P" INDICATES POWER CONDUCTORS ABOVE 600 VOLTS. SEE SCHEDULE.
- (*) INDICATES UNDERGROUND ELECTRICAL DUCTBANK. SEE SCHEDULE
- D UNDERGROUND ELECTRICAL DUCTBANK. SEE DETAIL (TYPICAL)
- UT UNDERGROUND TELEPHONE DUCTBANK
- UC UNDERGROUND COMMUNICATION OR DATA HIGHWAY DUCTBANK
- G 4/0 BARE COPPER GROUND WIRE
- LP LIGHTNING PROTECTION CABLE
- UE EXISTING UNDERGROUND ELECTRICAL DUCTBANK
- UCO EXISTING UNDERGROUND COMMUNICATION OR DATA HIGHWAY DUCTBANK
- DUD EXISTING UNDERGROUND ELECTRICAL DUCTBANK TO BE DEMOLISHED OR ABANDONED, CAPPED AND TAGGED
- E EXISTING OVERHEAD POWER LINES
- E ELECTRICAL MANHOLE OR HANDHOLE, SIZE AS INDICATED (L x W x D):
  "C" INDICATES CONTROL, COMMUNICATION OR DATA HIGHWAY.
  "E" INDICATES SECONDARY DISTRIBUTION.
  "P" INDICATES PRIMARY DISTRIBUTION.
  "T" INDICATES TELEPHONE.
- GROUND ROD
- POWER POLE

ELECTRICAL SYMBOLS

- PANELBOARD, 240 VOLTS AND BELOW. SEE SCHEDULE
- PANELBOARD, ABOVE 240 VOLTS. SEE SCHEDULE
- SUPPORT STAND/EQUIPMENT RACK. SEE DETAIL
- DEVICE REQUIRING ELECTRICAL CONNECTION, TYPE AS INDICATED (INSTRUMENT DESIGNATIONS PER ISA)
- MOTOR STARTER, VOLTAGE/NEMA SIZE/NEMA ENCLOSURE
- COMBINATION MOTOR STARTER, VOLTAGE/NEMA SIZE/NEMA ENCLOSURE
- CONTROLLER FURNISHED WITH EQUIPMENT
- N NON-FUSED SAFETY SWITCH, AMPS/POLES/NEMA ENCLOSURE
- F FUSED SAFETY SWITCH, AMPS/FUSE/POLES/NEMA ENCLOSURE
- ENCLOSED CIRCUIT BREAKER, AMPS/POLES/NEMA ENCLOSURE
- T TRANSFORMER, KVA RATING AS INDICATED ON ONE LINE DIAGRAM
- (M) MOTOR, Hp AS INDICATED ON ONE LINE DIAGRAM OR ON PLAN
- (G) GENERATOR, kW AS INDICATED ON ONE LINE DIAGRAM
- (D) OVERHEAD DOOR OPERATOR COMPLETE WITH WIRING TO PUSHBUTTONS, STARTER, LIMIT SWITCHES AND OTHER ACCESSORIES
- J OR (J) OUTLET BOX, JUNCTION BOX OR PULL BOX. LETTERS/NUMERALS INDICATE NEMA TYPE OTHER THAN NEMA 1
- CONTROL STATION
- (F) FIRE ALARM DEVICE:
  "F" INDICATES MANUAL PULLSTATION MOUNTED 60" AFF.
  "FL" INDICATES FLAME DETECTOR MOUNTED 60" AFF.
  "FS" INDICATES SPRINKLER FLOW SWITCH.
  "H" INDICATES HEAT DETECTOR MOUNTED ON CEILING.
  "P" INDICATES PHOTOELECTRIC IONIZATION DETECTOR MOUNTED ON CEILING.
  "S" INDICATES SMOKE DETECTOR MOUNTED ON CEILING.
  "TS" INDICATES SPRINKLER TAMPER SWITCH.
  "V" INDICATES VISUAL INDICATOR (STROBE) MOUNTED AS INDICATED.
- (S) SMOKE DETECTOR, DUCT MOUNTED
- (F) FIRE ALARM SYSTEM HORN MOUNTED 6'-8" AFF
- (F) FIRE ALARM SYSTEM HORN AND STROBE MOUNTED 6'-8" AFF
- ***** EQUIPMENT TAG

ABBREVIATIONS

AL	ALUMINUM OR ALUM
CL	CHLORINE
CV	CONTROL VALVE
CW	CLEARWELL
EFF	EFFLUENT
EQ	EQUALIZATION
FBM	FLOCCULATION BASIN MIXER
FC	FERRIC CHLORIDE OR FILTER CONSOLE
FCV	FLOW CONTROL VALVE
FL	FLUORIDE
FLFP	FLUORIDE FEED PUMP
FLOC	FLOCCULATOR
HPFP	HYDROGEN PEROXIDE FEED PUMP
HSP	HIGH SERVICE PUMP
HSPS	HIGH SERVICE PUMP STATION
INF	INFLUENT
LOX	LIQUID OXYGEN
OZ	OZONE
P	PUMP
PFP	POLYMER FEED PUMP
PHFP	CORROSION INHIBITOR FEED PUMP
PCV	PRESSURE CONTROL VALVE
PE	PROCESS EQUIPMENT
PWP	PLANT WATER PUMP
PY	POLYMER
SAMP	SAMPLE
SC	SCUM
SP	SUMP PUMP
ST	SLUDGE THICKENER
T	TANK
TR	TRANSFER
WW	WASH WATER

ELECTRICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPS INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
C	CONDUIT
CPT	CONTROL POWER TRANSFORMER
CR	CORROSION RESISTANT, NEMA 4X
CT	CURRENT TRANSFORMER
CU	COPPER
EC	EMPTY CONDUIT
EDF	ELECTRIC DRINKING FOUNTAIN
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
ELP	EXISTING LIGHT POLE AND FOUNDATION TO BE REMOVED
EMH	ELECTRICAL MANHOLE
EPB	PULLBOX FOR EMERGENCY POWER CONDUCTORS
EX	EXISTING
EXP	EXPLOSIONPROOF
FACP	FIRE ALARM CONTROL PANEL
FCP	FACTORY CONTROL PANEL (PROVIDED WITH EQUIPMENT)
FVNR	FULL VOLTAGE, NON-REVERSING
FVR	FULL VOLTAGE, REVERSING
FWE	FURNISHED WITH EQUIPMENT
G	GROUND
GFI	GROUND FAULT INTERRUPTING
GRC	GALVANIZED RIGID STEEL CONDUIT
HT	ELECTRICAL HEAT TRACE
LCP	LOCAL CONTROL PANEL (PROVIDED UNDER DIVISION 17)
LCT	LIGHTING CONTACTOR
MB	MAIN BREAKER
MCC	MOTOR CONTROL CENTER
MCCB	MOLDED CASE CIRCUIT BREAKER
MCP	MOTOR CIRCUIT PROTECTOR OR MAIN CONTROL PANEL
MD	MOTORIZED DAMPER
MH	MANHOLE
ML	MAIN LUGS
MLO	MAIN LUGS ONLY
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OL	OVERLOAD
P	PUMP
PB	PULLBOX
PS	PUMPING STATION
PT	POTENTIAL TRANSFORMER
RVAT	REDUCED VOLTAGE AUTOTRANSFORMER
SF	SUPPLY FAN
SHLD	SHIELDED CABLE
SS	STAINLESS STEEL OR SUBSTATION
SSRV	SOLID STATE REDUCED VOLTAGE
SV	SOLENOID VALVE
TS	TWISTED, SHIELDED
TSP	TWISTED, SHIELDED PAIR
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
UH	UNIT HEATER
VFD	VARIABLE FREQUENCY DRIVE
WL	WALL LOUVER
WP	WEATHERPROOF, NEMA 4 OR 3R
2S2W	TWO SPEED TWO WINDING

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GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 11120 — ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

ELECTRICAL SYMBOLS LEGEND

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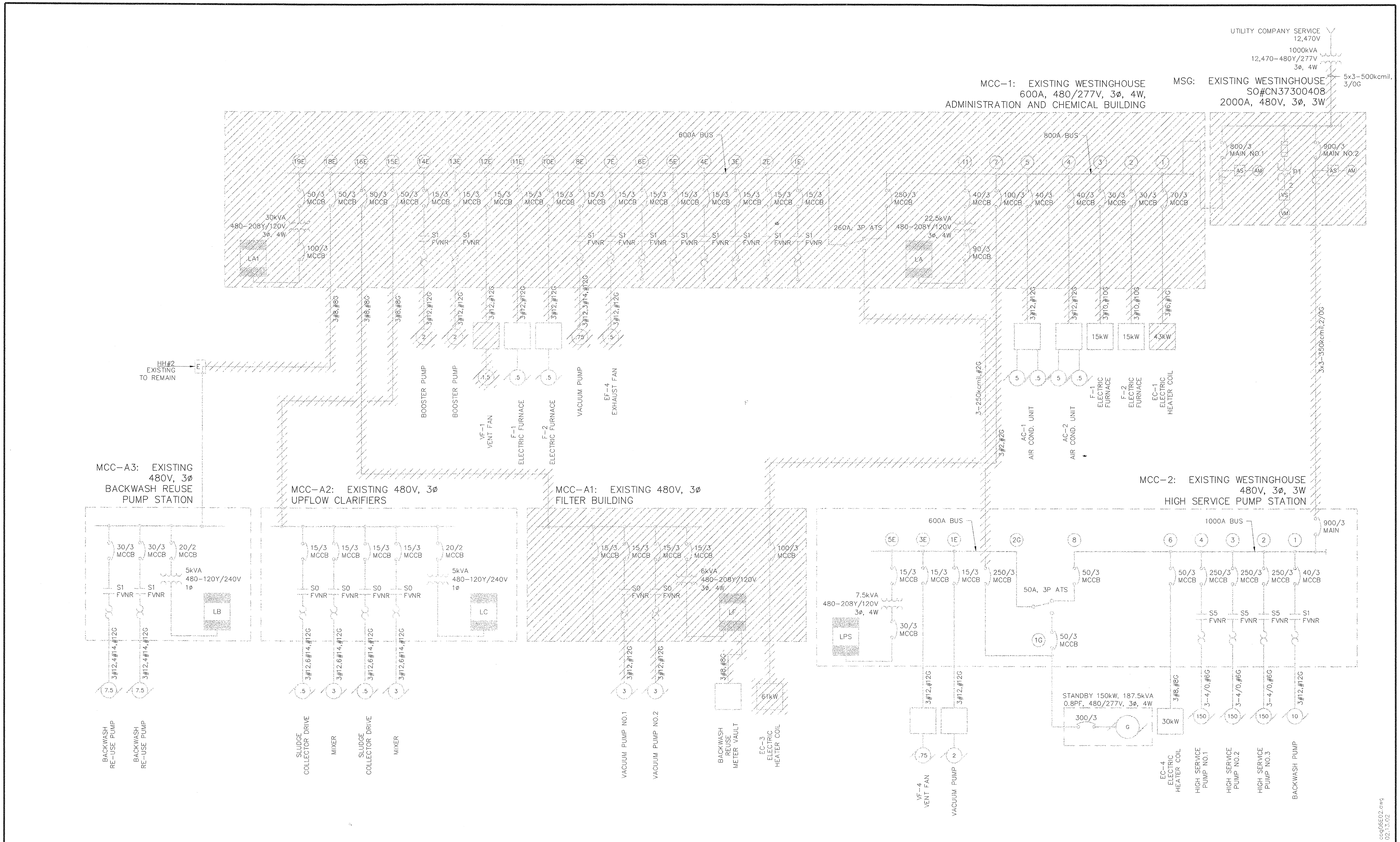

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SOUTH CAROLINA

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 11180 ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

ELECTRICAL ONE-LINE DIAGRAM
DEMOLITION

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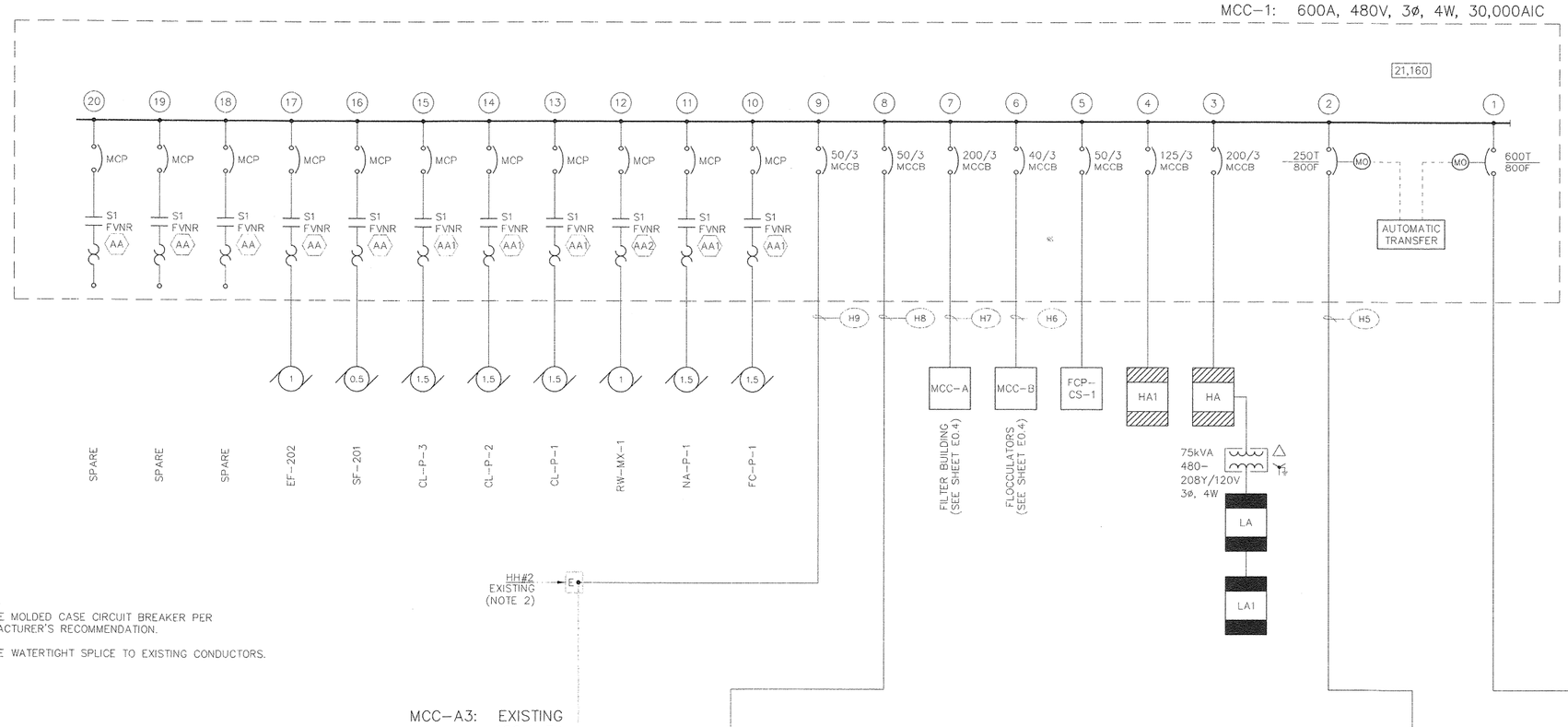
DRAWN: LAB	JOB NO. 2193.006	SCALE: NONE		



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SOUTH CAROLINA

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CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

ELECTRICAL ONE-LINE DIAGRAM MODIFICATION

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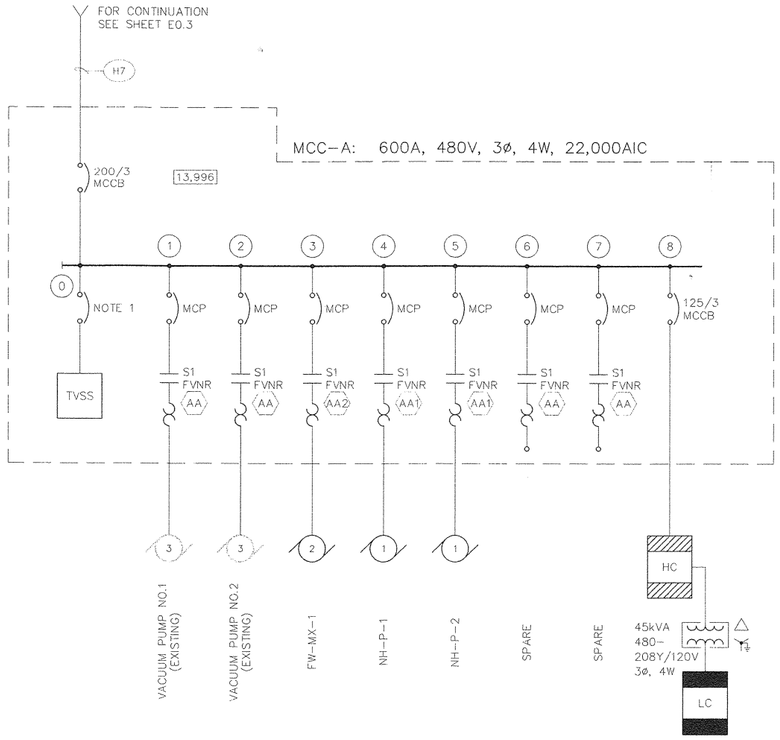
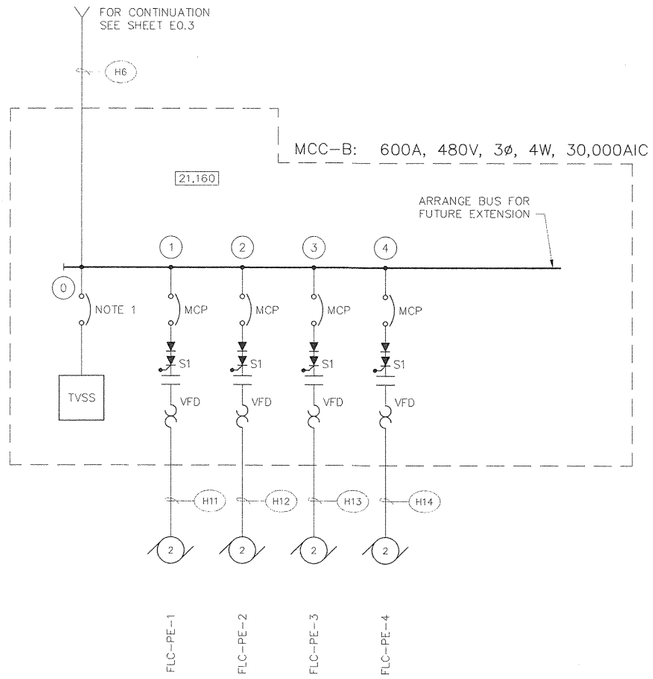
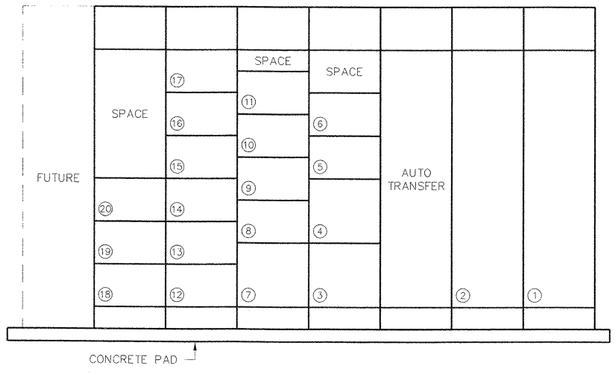
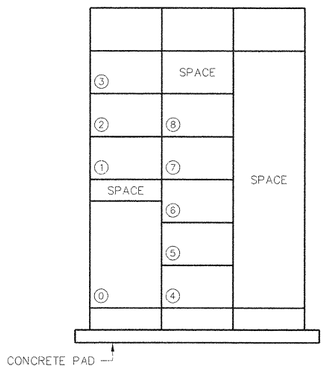






MCC-1 FRONT ELEVATION

N.T.S.



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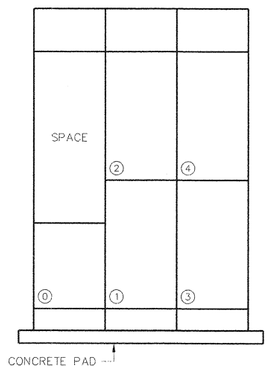
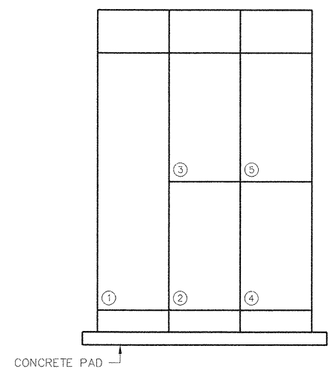


MCC-B FRONT ELEVATION

N.T.S.



MSB FRONT ELEVATION

N.T.S.

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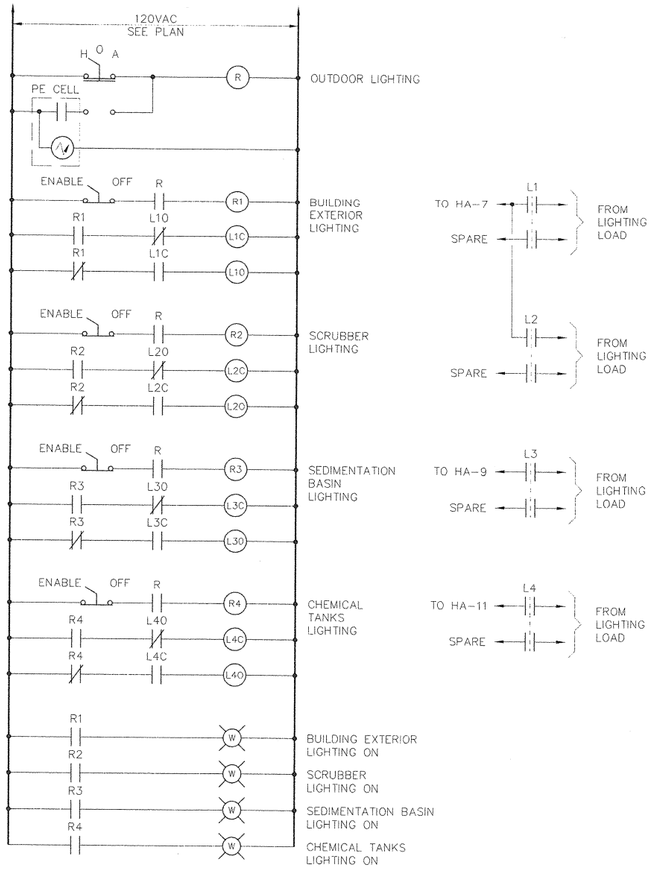
SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 11180
ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

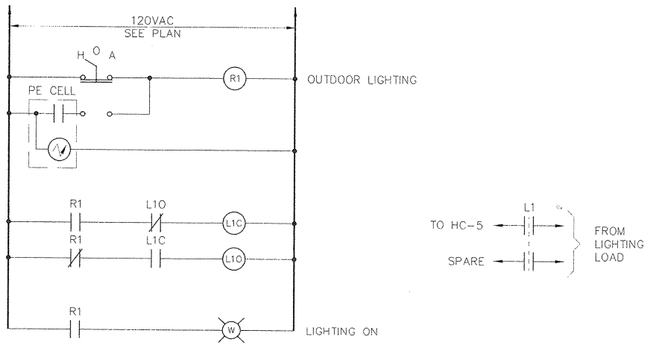
ELECTRICAL ONE-LINE DIAGRAM
MCC-A, MCC-B AND ELEVATIONS

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 2000	E0.4	1
DRAWN: LAB	JOB NO. 2193.006	SCALE: NONE	SHEET	REV



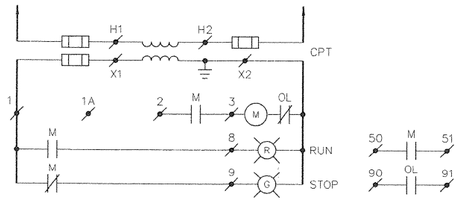
LCTA: LIGHTING CONTROL DIAGRAM

MOUNT IN NEMA 12 ENCLOSURE



LCTC: LIGHTING CONTROL DIAGRAM

MOUNT IN NEMA 12 ENCLOSURE

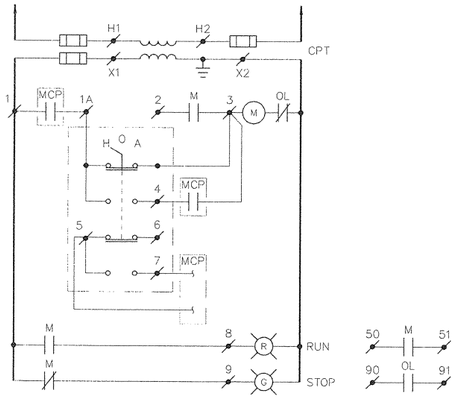


STARTER TYPE AA

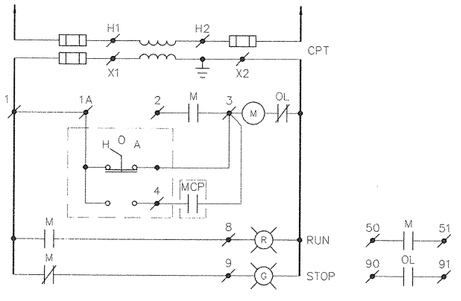
NOTE:
TYPE AA STARTERS FOR MECHANICAL EQUIPMENT SHALL BE CONFIGURED AS FOLLOWS:

EF/SF-****	INTERFACE	ACCESSORY	CPT
SF-201	EF-202	WL-207	150VA SPARE
EF-202	FUME HOOD		150VA SPARE

COORDINATE CONTROLS WITH THE REQUIREMENTS OF DIVISION 15.



STARTER TYPE AA1



STARTER TYPE AA2

LEGEND

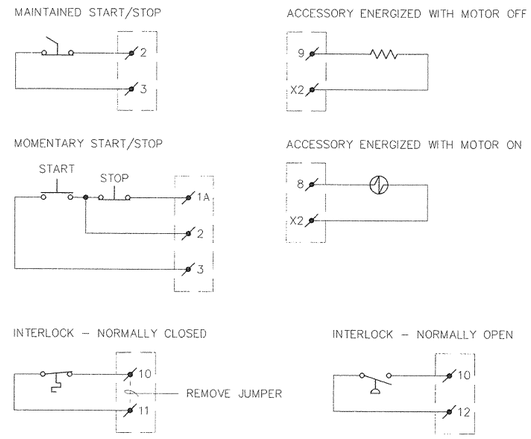
1st LETTER – BASIC STARTER TYPE

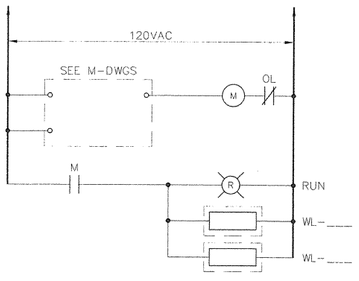
- A – FVNR
- B – FVR
- C – RVNR-AT
- D – RVNR-SS
- E – 2S2W
- F – 2S2W-RVSS
- G – 2S1W (CT & VT)
- H – 2S1W (CHP)

2nd LETTER – STARTER CONTROL VARIATIONS

- A – R & G INDICATOR LIGHTS (MAY VARY WITH FIRST LETTER)
- B – s.a. A EXTRA AUX
- C – s.a. A REMOTE INT
- D – s.a. C EXTRA AUX
- E – ELECTRIC CHECK VALVE

TYPICAL STARTER INTERFACE

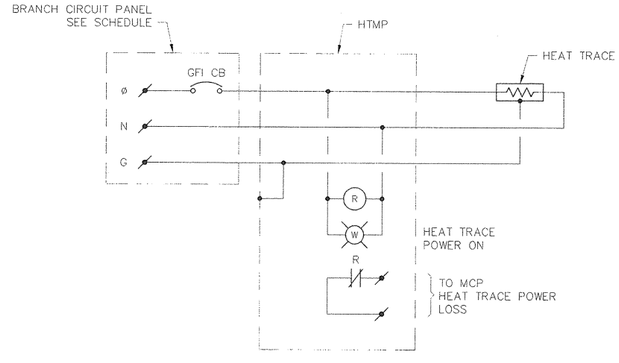




SINGLE SPEED, 120V FAN CONTROL DIAGRAM

EF/SF-****	INTERFACE	ACCESSORY
EF-201	MAU-201	
SF-202	T'STAT/HOA	WL-201
EF-401	LIGHT SWITCH	WL-401
EF-402	T'STAT/HOA	WL-402
EF-403	T'STAT/HOA	

NOTE:
COORDINATE CONTROLS WITH THE REQUIREMENTS OF DIVISION 15.



DETAIL – HEAT TRACE MONITOR PANEL (HTMP)

MOUNT IN NEMA 12 ENCLOSURE

NOTE: WHERE BRANCH CIRCUIT PANEL SUPPLYS MULTIPLE HEAT TRACE CIRCUITS, CIRCUITS MAY BE COMBINED IN HTMP WITH ONE RELAY AND PILOT LIGHT PER CIRCUIT. CONNECT RELAY CONTACTS IN PARALLEL FOR REMOTE POWER LOSS INDICATION.

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SOUTH CAROLINA – Jordan, Jones & Goulding, Inc. – No. C00554 – CERTIFICATE OF AUTHORIZATION

NO.	DATE	DESCRIPTION OF REVISION
1	08-02-01	RECORD DRAWING
0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

GEORGETOWN – 1734 – SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA – REGISTERED PROFESSIONAL ENGINEER – No. 11180 – ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

ELECTRICAL WIRING DIAGRAMS

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 2000	E0.5	1
DRAWN: GAB	JOB NO. 2193.006	SCALE: NONE	SHEET	REV

ADMIN/CHEM BUILDING

TOP ENTRY

PANEL LA (SECTION 1)			SERVICE 208/120V, 3ø, 4W		
MAINS 225A MB			TRIM SURFACE	AIC 10,000	
CKT.	C/B	LOAD	LOAD	C/B	CKT.
1	20/1	SPARE	CHEM RM RECEPT	20/1	2
3	20/1	SPARE	CHEM RM RECEPT	20/1	4
5	20/1	BREAK RM (REFRIG)	CHLORINE RM RECEPT	20/1	6
7	20/1	FLOC/SED BASIN	MAINT RM RECEPT	20/1	8
9	20/1	RECEPTACLES	MAINT RM RECEPT	20/1	10
11	20/1	SPARE	ELEC/FLUOR RM RECEPT	20/1	12
13	20/1	LIGHTING	EF-201(CL RM)	20/1	14
15	20/1	LIGHTING	SF-202(FC RM)	20/1	16
17	60	WATER HEATER	LAB REFRIGERATOR	20/1	18
19	2	↓	LAB RECEPTACLES	20/1	20
21	20	CHLORINE RM HOIST	LAB RECEPTACLES	20/1	22
23		↓	LAB OVEN	20/1	24
25	3	↓	LAB DISHWASHER	20/1	26
27	20/1	SD-201	LAB RECEPTACLES	20/1	28
29	50/1	BREAKROOM RANGE	LAB OVEN	20/1	30
31	50/2	BREAKROOM RANGE	RECEPT/LGT	20/1	32
33	20/1	CHEM TANKS RECEPT	MCP	20/1	34
35	20/1*	CHEM TANKS HT	LCT-A	20/1	36
37	20/1	OFFICE RECEPTACLES	YARD LIGHTING	20/1	38
39	20/1*	CHEM TANKS HT	SPARE	20/1	40
41		SPACE	SPARE	20/1	42

* GFI MCCB

TOP ENTRY

PANEL LA1 (LA SECTION 2)			SERVICE 208/120V, 3ø, 4W		
MAINS 225A MLO			TRIM SURFACE	AIC 10,000	
CKT.	C/B	LOAD	LOAD	C/B	CKT.
1	20/1	LE/LIT-801	LE/LIT-803	20/1	2
3	20/1	FCP-CL-1	LSL-1004	20/1	4
5	20/1	LCP-CL-1	SAM-P-1	20/1	6
7	20/1	CL-PE-1	SAM-P-2	20/1	8
9	20/1	CL-PE-2	SAM-P-3	20/1	10
11	20/1	CL-PE-3	SAM-P-4	20/1	12
13	20/1	CL-ALM-1/XI-1301	AIT-300,303,400,408	20/1	14
15	30/1	FCP-FL-1	AIT-304,305,309	20/1	16
17	20/1	SPARE	SPARE	20/1	18
19	20	RAW WTR METER VAULT	TELEPHONE & FIBER	20/1	20
21	2	↓	SPARE	20/1	22
23	20	RAW WTR METER VAULT	SPARE	20/1	24
25	2	↓	SPARE	20/1	26
27	20	SLUDGE VALVE PIT	SPARE	20/1	28
29	2	↓	SPARE	20/1	30
31		SPACE	SPACE		32
33		SPACE	SPACE		34
35		SPACE	SPACE		36
37		SPACE	SPACE		38
39		SPACE	SPACE		40
41		SPACE	SPACE		42

FILTER BUILDING

BOTTOM ENTRY

PANEL HC			SERVICE 480/277V, 3ø, 4W		
MAINS 125A MLO			TRIM SURFACE	AIC 22,000	
CKT.	C/B	LOAD	LOAD	C/B	CKT.
1	20/1	FILTER LIGHTING	FCP-C-1	20	2
3	20/1	MAINT/FILTER RM LGT	↓		4
5	20/1	OUTDOOR LIGHTING	↓	3	6
7		SPACE	SPARE	20	8
9		SPACE	↓		10
11		SPACE	↓	3	12
13		SPACE	SPACE		14
15		SPACE	SPACE		16
17		SPACE	SPACE		18
19		SPACE	SPACE		20
21		SPACE	SPACE		22
23		SPACE	SPACE		24
25	80	PANEL LC X'FMR	SPACE		26
27		↓	SPACE		28
29	3	↓	SPACE		30
31					32
33					34
35					36
37					38
39					40
41					42

TOP ENTRY

PANEL HA			SERVICE 480/277V, 3ø, 4W		
MAINS 225A MLO			TRIM SURFACE	AIC 30,000	
CKT.	C/B	LOAD	LOAD	C/B	CKT.
1	20/1	CHEM RM LIGHT	LA X'FMR	125	2
3	20/1	ELEC/FLUOR RM LGT	↓		4
5	20/1	MAINT/CHLOR RM LGT	↓	3	6
7	20/1	OUTDOOR LIGHTING	SPACE		8
9	20/1	SED BASIN LIGHTING	SPACE		10
11	20/1	CHEM TANKS LIGHTING	SPACE		12
13	20/1	LAB LIGHTING	SPACE		14
15	20/1	SPARE	SPACE		16
17	20/1	SPARE	SPACE		18
19		SPACE	SPACE		20
21		SPACE	SPACE		22
23		SPACE	SPACE		24
25	20	GATE OPERATOR	SPARE	20	26
27		↓	↓		28
29	3	↓	↓	3	30
31	20	FCP-CSP-1	FCP-PF-1	20	32
33		↓	↓		34
35	3	↓	↓	3	36
37	20	FCP-SED-1	RW-CV-1	20	38
39		↓	↓		40
41	3	↓	↓	3	42

TOP ENTRY

PANEL HA1			SERVICE 480V, 3ø, 3W		
MAINS 225A MLO			TRIM SURFACE	AIC 30,000	
CKT.	C/B	LOAD	LOAD	C/B	CKT.
1	20	NA-P-5	NA-P-6	20	2
3		↓	↓		4
5	3	↓	↓	3	6
7	20	FCP-FC-1	FCP-NA-1	20	8
9		↓	↓		10
11	3	↓	↓	3	12
13	20	FCP-PF-2	FCP-FL-2	20	14
15		↓	↓		16
17	3	↓	↓	3	18
19	20	FCP-CI-1	SPARE	20	20
21		↓	↓		22
23	3	↓	↓	3	24
25	20	SPARE	SPARE	20	26
27		↓	↓		28
29	3	↓	↓	3	30
31		SPACE	SPACE		32
33		SPACE	SPACE		34
35		SPACE	SPACE		36
37		SPACE	SPACE		38
39		SPACE	SPACE		40
41		SPACE	SPACE		42

TOP ENTRY

PANEL LC			SERVICE 208/120V, 3ø, 4W		
MAINS 150A MB			TRIM SURFACE	AIC 10,000	
CKT.	C/B	LOAD	LOAD	C/B	CKT.
1	20/1	LE/LSH-500	SPARE	20/1	2
3	20/1	LE/LT-501,502	EF-401(AMM RM)	20/1	4
5	20/1	LE/LT-503,504	AMMONIA RM RECEPT	20/1	6
7	20/1	AIT-605,607	FILTER RECEPTACLES	20/1	8
9	20/1	AIT-606,608	MAINT RM RECEPT	20/1	10
11	20/1	AIT-609,610	MAINT RM RECEPT	20/1	12
13	20/1	AIT-613	FILTER RM RECEPT	20/1	14
15	20/1	FCP-NH-1,LCP-NH-1	FILTER RM RECEPT	20/1	16
17	20/1	NH-ALM-1,XI-1208	NH-PE-1	20/1	18
19	20/1	VACUUM SYS CTL PNL	NH-PE-2	20/1	20
21	20/1	LCP-FLT-1	EF-402	20/1	22
23	20/1	LT-701	EF-403	20/1	24
25	20/1	SPARE	LCT-C	20/1	26
27	20/1	SPARE	SPARE	20/1	28
29	20/1	SPARE	SPARE	20/1	30
31		SPACE	SPACE		32
33		SPACE	SPACE		34
35		SPACE	SPACE		36
37	20	B/W REUSE MTR VAULT	SPACE		38
39		↓	SPACE		40
41	3	↓	SPACE		42

TOP ENTRY

PANEL HB			SERVICE 480/277V, 3ø, 4W		
MAINS 225A MLO			TRIM SURFACE	AIC 30,000	
CKT.	C/B	LOAD	LOAD	C/B	CKT.
1	20	SPARE	AC-1	30	2
3		↓	↓		4
5	3	↓	↓	3	6
7	20	SPARE	AC-2	30	8
9		↓	↓		10
11	3	↓	↓	3	12
13	40	F-1 FURNACE (FAN)	MOTORIZED DOOR	20	14
15		↓	↓		16
17	3	↓	↓	3	18
19	40	F-2 FURNACE (FAN)	MAU-201	80	20
21		↓	↓		22
23	3	↓	↓	3	24
25	20/1	EUH-201	MAU-202	20	26
27	20/1	EUH-202	↓		28
29	20/1	EUH-203	↓	3	30
31	20/1	EUH-204	SPARE	20	32
33	20/1	EUH-205	↓		34
35	20/1	EUH-206	↓	3	36
37	20/1	EUH-207	SPACE		38
39	20/1	EUH-208	SPACE		40
41	20/1	EUH-209	SPACE		42

BOTTOM ENTRY

PANEL HD			SERVICE 480V, 3ø, 3W		
MAINS 200A MB W/SURGE PROTECTION			TRIM SURFACE	AIC 22,000	
CKT.	C/B	LOAD	LOAD	C/B	CKT.
1	60	FCP-B-1	EUH-401	20/1	2
3		↓	EUH-402	20/1	4
5	3	↓	EUH-403	20/1	6
7	20	IRH-401	EUH-404	20/1	8
9		↓	SPARE	20/1	10
11	3	↓	SPARE	20/1	12
13	20	SPARE	SPACE		14
15		↓	SPACE		16
17	3	↓	SPACE		18
19		SPACE	SPACE		20
21		SPACE	SPACE		22
23		SPACE	SPACE		24
25		SPACE	SPACE		26
27		SPACE	SPACE		28
29		SPACE	SPACE		30
31		SPACE	SPACE		32
33		SPACE	SPACE		34
35		SPACE	SPACE		36
37		SPACE	SPACE		38
39		SPACE	SPACE		40
41		SPACE	SPACE		42

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Jordan Jones & Goulding

GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 11180 — ROBERT F. HOFFMANN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

ELECTRICAL PANELBOARD SCHEDULES

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 2000	E0.6	1
DRAWN: LAB	JOB NO. 2193.006	SCALE: NONE	SHEET	REV

SCHEDULE

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02.13.02

ANALOG CONDUCTORS

No.	CONDUCTORS	FROM	TO/REMARKS
A001	2#16TSP	FIT-702	MCP VIA PB-6B, 2B
A002	2#16TSP	AIT-703	MCP VIA PB-6B, 2B
A003	2#16TSP	LT-701	MCP VIA PB-1A, 4A, 2B
A004	2#16TSP	FIT-407	MCP VIA PB-2B, HH#4, 2
A005	5#16TSP	FCP-NH-1	MCP VIA PB-4A, 2B
A006	NOT USED		
A007	NOT USED		
A008	NOT USED		
A009	NOT USED		
A010	NOT USED		

CONTROL CONDUCTORS

No.	CONDUCTORS	FROM	TO/REMARKS
C001	6#14,#14G	PSH/PSL-1201	MCP VIA PB-6B, 2B
C002	4#12,#12G	FCP-SED-1	MCP VIA PB-3B, 2B, HH#4, 2
C003	10#12,#12G	BACKWASH REUSE M. V.	MCP VIA PB-4A, 2B
C004	6#14,#14G	PSL-1202, PSL-1203	MCP VIA PB-4A, 2B
C005	4#14,#14G	XI-1208 (NO INSTRUMENT INSTALLED)	MCP VIA PB-4A, 2B
C006	4#14,#14G	NH-ALM-1	MCP VIA PB-4A, 2B
C007	6#14,#14G	LCP-NH-1	MCP VIA PB-4A, 2B
C008	30#12,#12G	MCC-A	MCP VIA PB-4A, 2B
C009	NOT USED		
C010	NOT USED		

DATA HIGHWAY CONDUCTORS

No.	CONDUCTORS	FROM	TO/REMARKS
D001	NOTE1	AIT-610	AIT-304 VIA PB-4A, 2B
D002	NOTE1	FCP-FLT-1	MCP VIA PB-4A, 2B
D003	NOT USED		
D004	NOT USED		
D005	NOT USED		

NOTE:
DATA HIGHWAY CABLES ARE FURNISHED BY DIVISION 17 AND INSTALLED BY DIVISION 16.

480/277 VOLT CONDUCTORS

No.	CONDUCTORS	FROM	TO/REMARKS
H001	4x4-350kcmil	MSB-1	UTILITY CO. TRANSFORMER
H002	3x3-400kcmil,2/0G	MCC-2 MB	MSB-2 VIA PB-6A, 2A
H003	2x4-350kcmil,#1G	MCC-1-1	MSB-3
H004	4-3/0,#6G	PANEL HD MB	MSB-4 VIA PB-2A
H005	4-250kcmil,#4G	MCC-1-2	MCC-2-1G VIA PB-6A, 2C
H006	3#8,#10G	MCC-B-0	MCC-1-6
H007	4-3/0,#6G	MCC-A-0	MCC-1-7 VIA PB-2A
H008	3#6,#10G	MCC-A2 ML	MCC-1-8 VIA PB-2A, HH#2
H009	3#6,#10G	MCC-A3 EX. FEEDER	MCC-1-9 (SPLICE IN HH#2) VIA PB-2A
H010	NOT USED		
H011	3#12,#16TSP,#12G	FLC-PE-1	MCC-B-1 VIA PB-3A, 2A, HH#4, 2
H012	3#12,#16TSP,#12G	FLC-PE-2	MCC-B-2 VIA PB-3A, 2A, HH#4, 2
H013	3#12,#16TSP,#12G	FLC-PE-3	MCC-B-3 VIA PB-3A, 2A, HH#4, 2
H014	3#12,#16TSP,#12G	FLC-PE-4	MCC-B-4 VIA PB-3A, 2A, HH#4, 2
H015	3#12,#12G	FCP-SED-1	HA-37 VIA PB-3A, 2A, HH#4, 2
H016	2#12,#12G	SED BASIN LIGHTS	HA-9 VIA LCT-A, PB-3A, 2A, HH#4, 2
H017	3#12,#12G	NA-P-5	HA1-1 VIA PB-5A, 2A, HH# 2
H018	3#12,#12G	NA-P-6	HA1-2 VIA PB-5A, 2A, HH#2
H019	2#12,#12G	CHEM TANKS LIGHT	HA-11 VIA LCT-A, PB-5A, 2A, HH#2
H020	NOT USED		

240/208/120 VOLT CONDUCTORS

No.	CONDUCTORS	FROM	TO/REMARKS
L001	2#12,#12G	LT-701	LC-23 VIA PB-1A
L002	4#12,#12G	FCP-SED-2	MCP VIA PB-2A, HH#4, 2
L003	2#10,#10G	SED BASIN RECEPT	LA-7 VIA PB-3A, 2A, HH#4, 2
L004	2#10,#10G	CHEM TANKS RECEPT	LA-33 VIA PB-5A, 2A, HH#2
L005	4#10,#10G	CHEM TANKS HT	LA-35,39 VIA HTMP, PB-5A, 2A, HH#2
L006	3#12,#12G	BACKWASH REUSE M. V.	LC-37
L007	3#10,#10G	SLUDGE VALVE PIT	LA1-69 VIA PB-2A, HH#4, 2
L008	6#10,#10G	RAW WATER METER VAULT	LA1-61,65 VIA PB-2A, HH#4, 2
L009	NOT USED		
L010	NOT USED		

DUCTBANK SCHEDULE

TAG	C.	CONDUCTORS	FROM	TO	SIZE
1	a	H015,H016,H019	PB-2A	HH#2	2"
	b	H017,H018	PB-2A	HH#2	2"
	c	L003,L004,L005	PB-2A	HH#2	2"
	d	L007,L008	PB-2A	HH#2	2"
	e	H011,H012	PB-2A	HH#2	2"
	f	H013,H014	PB-2A	HH#2	2"
	g	H008,H009	PB-2A	HH#2	2"
	h	A004	PB-2B	HH#2	2"*
	i	C002,L002	PB-2B	HH#2	2"
	j	EMPTY	PB-2A	HH#2	2"
	k	EMPTY	PB-2A	HH#2	2"
	l	EMPTY	PB-2A	HH#2	2"
	m	EMPTY	PB-2B	HH#2	2"
	n	EMPTY	PB-2B	HH#2	2"
2	a	H008	HH#2	MCC-A-2	EX 2"
	b	20 #14	HH#2	MCP	
3	a	H011,H012	HH#2	HH#4	EX 2"
	b	H013,H014	HH#2	HH#4	EX 2"
	c	H015,H016	HH#2	HH#4	EX 2"
	d	L003,L007,L008	HH#2	HH#4	EX 2"
	e	C002,L002	HH#2	HH#4	EX 2"
	f	A004	HH#2	HH#4	EX 2"
4	a	H011	HH#4	PB-3A	2"
	b	H012	HH#4	PB-3A	2"
	c	H013	HH#4	PB-3A	2"
	d	H014	HH#4	PB-3A	2"
	e	H015,H016	HH#4	PB-3A	2"
	f	L003	HH#4	PB-3A	2"
	g	EMPTY	HH#4	PB-3A	2"
	h	EMPTY	HH#4	PB-3A	2"
	i	C002	HH#4	PB-3B	2"
	j	EMPTY	HH#4	PB-3B	2"
5	a	L004,L005	HH#2	PB-5A	2"
	b	H017	HH#2	PB-5A	2"
	c	H018	HH#2	PB-5A	2"
	d	H019	HH#2	PB-5A	2"
	e	EMPTY	HH#2	PB-5A	2"
	f	EMPTY	HH#2	PB-5A	2"
6		NOT USED			
7		NOT USED			
8	a	L006	PANEL LC	BACKWASH VAULT	2"
	c	EMPTY	FILTER BLDG	BACKWASH VAULT	2"
9	a	H002 (1 RUN OF 3)	PB-2A	PB-6A	3"
	b	H002 (2 RUN OF 3)	PB-2A	PB-6A	3"
	c	H002 (3 RUN OF 3)	PB-2A	PB-6A	3"
	d	H005	PB-2C	PB-6A	3"
	e	EMPTY	PB-2A	PB-6A	3"
	f	EMPTY	PB-2A	PB-6A	3"
	g	A001,A002	PB-2B	PB-6B	2"*
	h	C001	PB-2B	PB-6B	2"
	i	EMPTY	PB-2B	PB-6B	2"
10	a	L002,L007	HH#4	SLUDGE VALVE PIT	EX 1"
	b	A004	HH#4	SLUDGE VALVE PIT	EX 1"

DUCTBANK SCHEDULE

TAG	C.	CONDUCTORS	FROM	TO	SIZE
11	a	L001	PANEL LC	PB-1A	2"
	b	A003	PB-4A	PB-1A	2"*
	c	EMPTY	FILTER BLDG	PB-1A	2"
12	a	H007	PB-2A	MCC-A-0	3"
	b	H004	PB-2A	PANEL HD	3"
	c	A005,A003	PB-2B	PB-4A	2"*
	d	C003-C007	PB-2B	PB-4A	2"
	e	D001,D002	PB-2B	PB-4A	2"
	f	C008	PB-2B	PB-4A	2"
	g	EMPTY	PB-2B	PB-4A	2"
	h	EMPTY	PB-2B	PB-4A	2"
13	a	L008	HH#4	RW VAULT	EX 1"
	b	ADDED 2 # 16	TSP FROM MCP 12 #14		

NOTE:
C003 IS RELOCATED OUT TO BACKWASH VAULT THAT IS OUT AT PONDS SPLICED TO EXISTING CONTROL WIRES IN HH #4

EX – EXISTING
* – GALVANIZED RIGID STEEL

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SOUTH CAROLINA — Jordan, Jones & Goulding, Inc. — No. C00554 — CERTIFICATE OF AUTHORIZATION

NO.	DATE	DESCRIPTION OF REVISION
1	08-02-01	RECORD DRAWING
0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

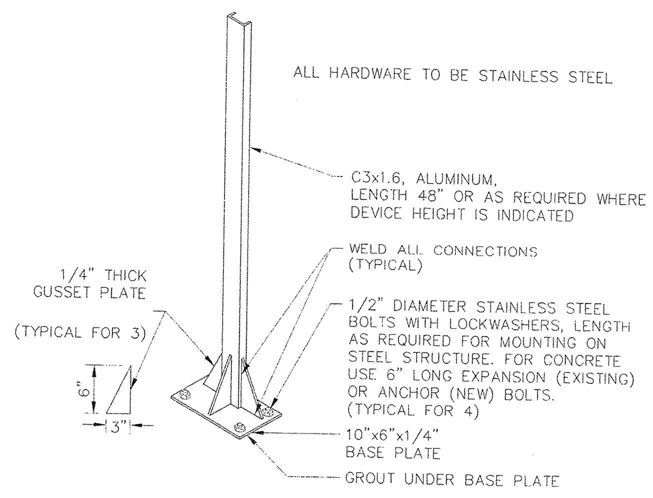
CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 11180 ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

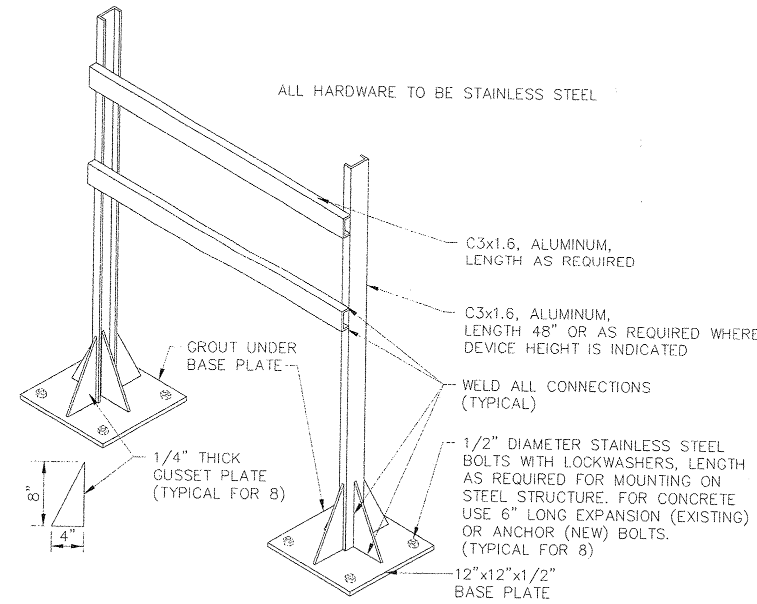
ELECTRICAL CONDUCTOR AND DUCTBANK SCHEDULES

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 2000	E0.7 SHEET	1 REV
DRAWN: LAB	JOB NO. 2193.006	SCALE: NONE		



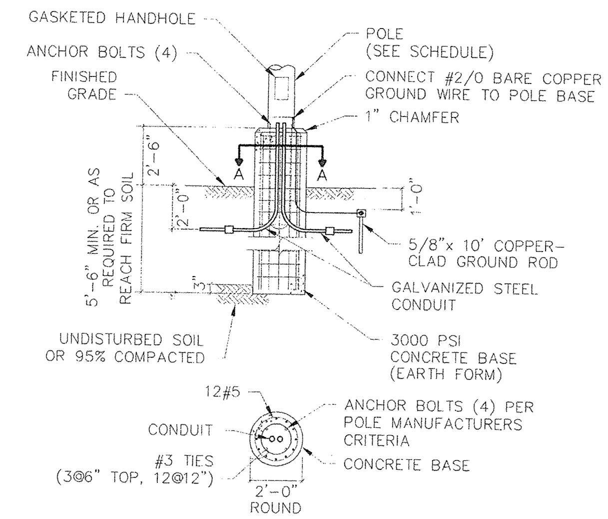
SINGLE SUPPORT STAND DETAIL

N.T.S.



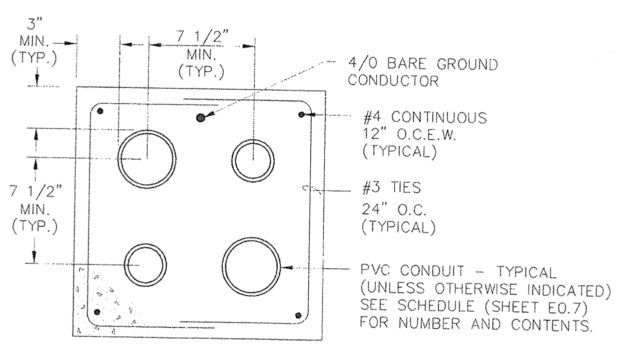
DUAL SUPPORT STAND DETAIL

N.T.S.



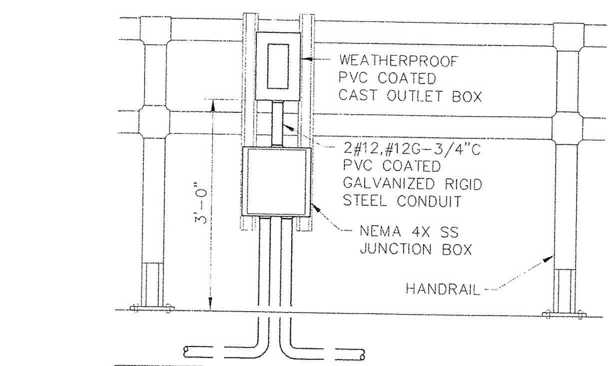
POLE BASE DETAIL

N.T.S.



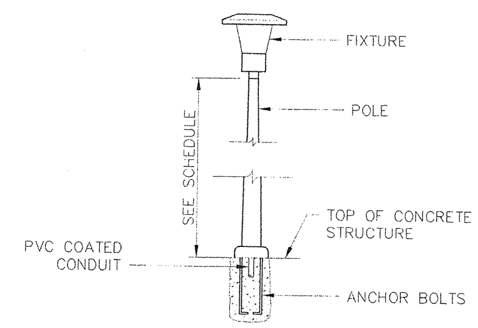
TYPICAL DUCTBANK DETAIL

N.T.S.



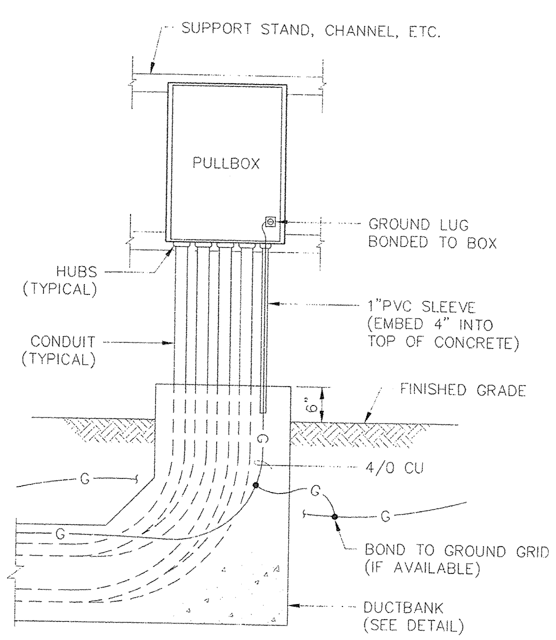
TYPICAL HANDRAIL MOUNTED RECEPTACLE DETAIL

N.T.S.



FIXTURE TYPE "HE" ON CONCRETE MOUNTING DETAIL

N.T.S.



DUCTBANK TERMINATION AND PULLBOX GROUNDING DETAIL

N.T.S.

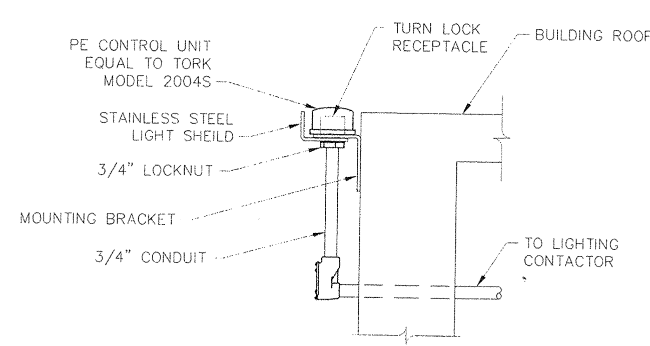
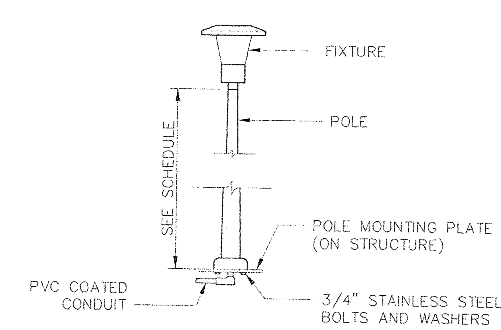


PHOTO-ELECTRIC CONTROL INSTALLATION DETAIL

N.T.S.



FIXTURE TYPE "HE" ON PLATE MOUNTING DETAIL

N.T.S.

LIGHTING FIXTURE SCHEDULE

FIXTURE REF.	TYPE CATALOG NUMBER	LAMP	VOLT.	MOUNTING	OPTIONS FEATURES	REMARKS
BA	HOLOPHANE DESOTO M-60 #DM6N50TNS2T2 EMERGENCY LIGHT	WITH UNIT	277	WALL 10'-0" AFF	NEMA 4X HOUSING, 12V NICKEL CADMIUM BATTERIES, 2 GRAY LAMP HEADS, 25W LAMPS, 277V TIME DELAY RELAY	
BB	HOLOPHANE CORTEZ A4 #C4NT50WWK2T2 EMERGENCY LIGHT	WITH UNIT	277	WALL 8'-0" AFF	20 GUAGE STEEL CABINET, 12V NiCd BATTERIES, 2 WHITE LAMP HEADS, 25W LAMPS, 277V TIME DELAY RELAY, WHITE FINISH	
FA	HOLOPHANE SM SERIES #SMS045NNNS042EP12 FLUORESCENT LUMINARE	2-F32T8	277	CEILING	22 GAUGE STEEL CHANNEL, SPECULAR REFLECTOR WITH 92% REFLECTIVITY, NO UPLIGHT	
FB	HOLOPHANE PRISMATITE #M7200427JDRP1 FLUORESCENT LUMINARE	2-F32T8	277	CEILING	UL 1570 LISTED, WET LOCATION, EXTRUDED ALUMINUM HOUSING, HIGH IMPACT IACRYLIC LENS, CORROSION RESISTANT FINISH	
FC	HOLOPHANE TG SERIES #TGR24SNH24043EP22 FLUORESCENT LUMINARE	3-F32T8	277	CEILING	22 GAUGE STEEL CHASSIS, SPECULAR REFLECTOR WITH 92% REFLECTIVITY, REGRESSED ALUMINUM DOOR, SPRING LOADED LATCHES	
HA	HOLOPHANE BANTAM 2000 ENDURALUME #BA15DHPMTCA HID LUMINAIRE	150W HPS	120 OR 277	CEILING	UL 1572 LISTED, WET LOCATION, PRISMATIC GLASS REFRACTOR, SPUN ALUMINUM REFLECTOR	
HAQ	HOLOPHANE BANTAM 2000 ENDURALUME #BA15DHPMTCA-EM HID LUMINAIRE	150W HPS	120 OR 277	CEILING	SAME AS HA WITH THE ADDITION OF HALOGEN STANDBY LAMP	
HB	HOLOPHANE PREDATOR #PF40LMHMTKW3B HID LUMINAIRE	400W MH	120 OR 277	CEILING	UL 1572 WET LOCATION, HEAVY DUTY FLOODLIGHT, WIDE DISTRIBUTION, SS YOKE, BRONZE FINISH	
HC	HOLOPHANE WALLPACK #WL2K100MHMTBZ HID LUMINAIRE	100W MH	120 OR 277	WALL AS INDICATED	UL 1572 LISTED, WET LOCATION, THERMAL SHOCK RESISTANT PRISMATIC GLASS REFRACTOR, BRONZE PAINT FINISH	
HD	HOLOPHANE MODULE 600 #MW250MHMTZ HID LUMINAIRE	250W MH	120 OR 277	WALL AS INDICATED	UL 1572 LISTED, WET LOCATION, DIE-CAST ALUMINUM HOUSING, PRISMATIC GLASS REFRACTOR, BRONZE PAINT FINISH.	
HE	HOLOPHANE CRESTWOOD #CW2A175MHMTGRCA HID LUMINAIRE	175W MH	120 OR 277	POLE	UL1572 WET LOCATION, THERMAL SHOCK RESISTANT PRISMATIC GLASS REFRACTOR, GREY FINISH	
HF	HOLOPHANE WALLPACK #WL2K100MH12BZ-WL2KPR12 HID LUMINAIRE	100W MH	120	WALL AS INDICATED	UL 1572 LISTED, WET LOCATION, THERMAL SHOCK RESISTANT PRISMATIC GLASS REFRACTOR, BRONZE PAINT FINISH	WITH PE CELL
PA	HOLOPHANE #ALRT10J/ POLE			ANCHOR	10' ROUND TAPERED ALUMINUM, ANCHOR BASE, SINGLE LUMINAIRE MOUNTING TENON, BRUSHED FINISH	SEE BASE DETAIL
XA	HOLOPHANE DELEON NM #LNMEDNCGSRSNWL EXIT LIGHT	LED	120 OR 277	ABOVE DOOR 8'-0" AFF	NEMA 4X HOUSING, NICKEL CADMIUM BATTERIES, LED LAMPS, SINGLE RED FACE	
XB	HOLOPHANE DELEON NM #LNMDDNCGSRSNWL EXIT LIGHT	LED/ WITH UNIT	120 OR 277	ABOVE DOOR 8'-0" AFF	SAME AS XA WITH THE ADDITION OF TWO EMERGENCY LIGHT HEADS	
XC	HOLOPHANE MAGELLAN LD #MLNWD1WR EXIT LIGHT	LED	120 OR 277	ABOVE DOOR 8'-0" AFF	DIE CAST ALUMINUM HOUSING, NICKEL CADMIUM BATTERIES, LED LAMPS, SINGLE RED FACE, WHITE FINISH	

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SOUTH CAROLINA Jordan, Jones & Goulding, Inc. No. C00554 CERTIFICATE OF AUTHORIZATION

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0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN SOUTH CAROLINA

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 11180 ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

ELECTRICAL LIGHTING FIXTURE SCHEDULE AND DETAILS

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 2000	E0.8 SHEET	1 REV
DRAWN: LAB	JOB NO. 2193.006	SCALE: NONE		

NOTES:

1. REMOVE THE FOLLOWING CONDUCTORS FROM DUCTBANK:
   3#8,8#12,#8G-2"C FROM HH#2 TO MCC-1 (MCC-A3 FEEDER AND PUMP CONTROLS.
   RETAIN CONDUCTORS IN HH#2 FOR SPLICING)
   3#8,#8G,4-6/C#12-3"C FROM HH#2 TO MCC-1 AND MCP (MCC-A2 FEEDER)
   3#8,#8G,1-3/C#12,1-5/C#12-2"C FROM HH#2 TO MCC-1 AND MCP (MCC-A1 FEEDER)
   3#2,#2G-2"C FROM HH#2 TO MCC-1 (EC-3 FEEDER)
   DUCTBANK SHALL BE ABANDONED FOLLOWING REMOVAL OF CONDUCTORS.

2. REMOVE THE FOLLOWING CONDUCTORS FROM DUCTBANK:
   3#8,#8G,4-6/C#12-3"C FROM MCC-A2 TO HH#2 (MCC-A2 FEEDER)
   RETAIN CONDUIT/DUCTBANK FOR INSTALLATION OF NEW CONDUCTORS.

3. REMOVE THE FOLLOWING CONDUCTORS FROM DUCTBANK:
   3#8,#8G,1-3/C#12,1-5/C#12-2"C FROM HH#3 TO HH#2 (MCC-A1 FEEDER)
   3#2,#2G-2"C FROM HH#3 TO HH#2 (EC-3 FEEDER)
   DUCTBANK SHALL BE ABANDONED FOLLOWING REMOVAL OF CONDUCTORS.

4. REMOVE THE FOLLOWING CONDUCTORS FROM DUCTBANK:
   3#8,#8G,1-3/C#12,1-5/C#12-2"C FROM MCC-A1 TO HH#3 (MCC-A1 FEEDER)
   3#2,#2G-2"C FROM EC-3 TO HH#3 (EC-3 FEEDER)
   DUCTBANK SHALL BE ABANDONED FOLLOWING REMOVAL OF CONDUCTORS.

5. REMOVE THE FOLLOWING CONDUCTORS FROM DUCTBANK:
   2#12,#12G FROM LT-701 TO PANEL IN FILTER BUILDING.
   2#12,#12G FROM LT-701 TO CONTROL PANEL IN FILTER BUILDING.
   DUCTBANK SHALL BE REMOVED FOLLOWING REMOVAL OF CONDUCTORS.

6. REMOVE THE FOLLOWING CONDUCTORS FROM DUCTBANK:
   3#8,#8G,1-5/C#12-2"C FROM METER VAULT TO PANEL LF IN FILTER BUILDING.
   DUCTBANK SHALL BE REMOVED FOLLOWING REMOVAL OF CONDUCTORS.

7. REMOVE THE FOLLOWING CONDUCTORS FROM DUCTBANK:
   3-350kcmil,2/0G-3 1/2"C FROM MCC-2 TO MSG (3 SETS TOTAL).
   3-250kcmil,#2G-3"C FROM MCC-2 GENERATOR TO MCC-1
   CONTROL AND SIGNAL CONDUCTORS TO MCP SHALL REMAIN.

8. REMOVE THE FOLLOWING CONDUCTORS FROM DUCTBANK:
   1-3/C#12 FROM HSPS TO FILTER BUILDING.
   DUCTBANK SHALL BE ABANDONED FOLLOWING REMOVAL OF CONDUCTORS.

9. ALL CONDUIT, FITTINGS, ETC. EXPOSED TO THE WEATHER SHALL BE PVC COATED GALVANIZED RIGID STEEL.
   ALL ELECTRICAL EQUIPMENT AND DEVICES EXPOSED TO THE WEATHER SHALL HAVE A MINIMUM RATING OF NEMA 4X.
   ALL SUPPORTING MATERIALS AND HARDWARE SHALL BE STAINLESS STEEL.

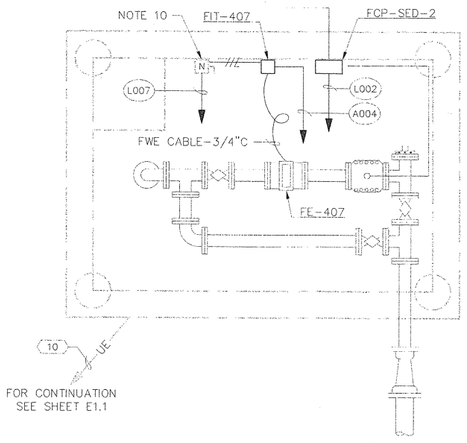
10. CONNECT FIT-407 TO 120V CIRCUIT FOR PIT LIGHTS AND RECEPTACLE.

11. ALL EXPOSED CONDUIT, FITTINGS, ETC. SHALL BE PVC COATED GALVANIZED RIGID STEEL.
    ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL HAVE A MINIMUM RATING OF NEMA 4X.
    ALL SUPPORTING MATERIALS AND HARDWARE SHALL BE STAINLESS STEEL.

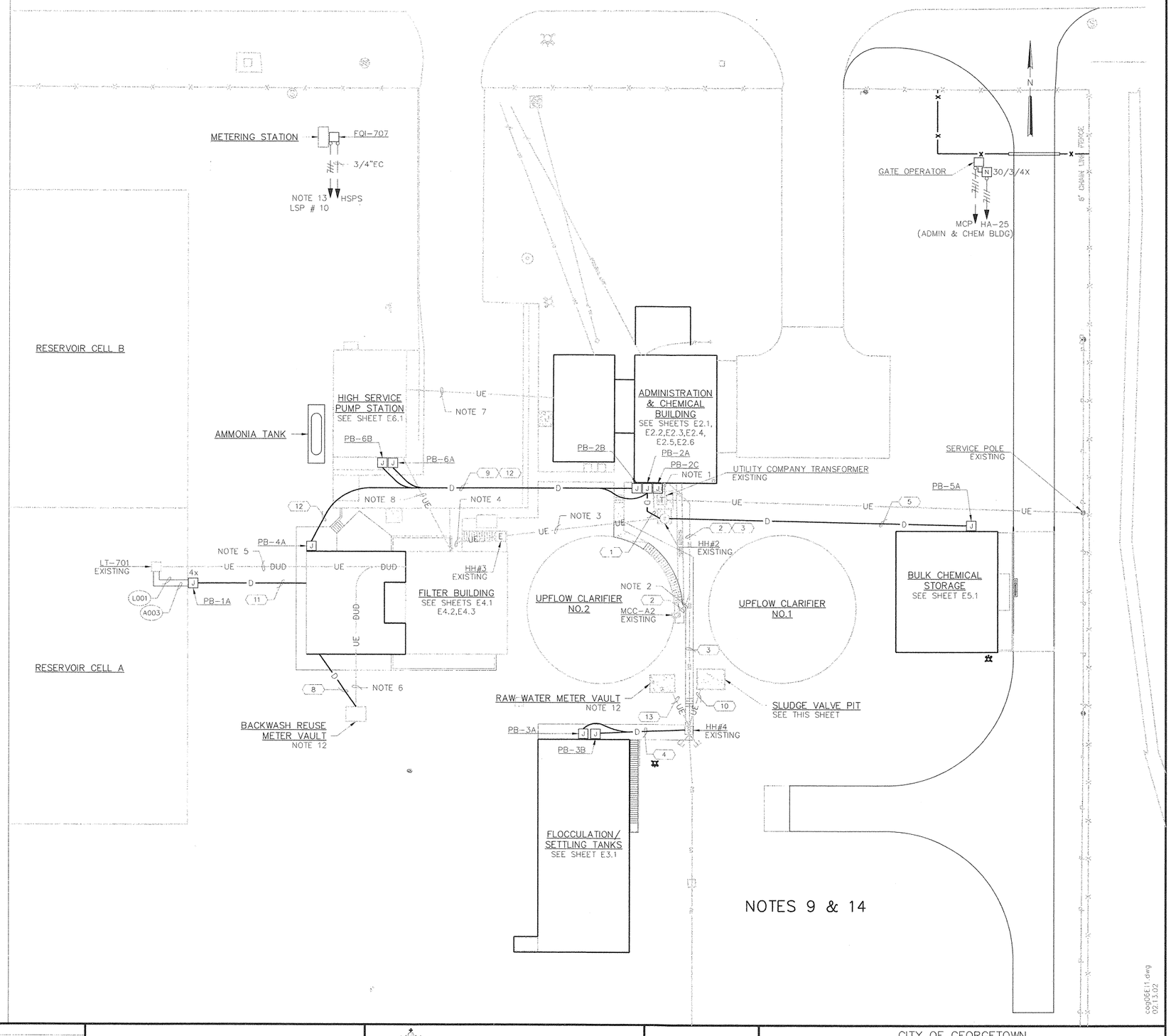
12. CONNECT 120V CONDUCTORS TO EXISTING 3P DISCONNECT SWITCH(ES). CONNECT CONTROL CONDUCTORS TO EXISTING METER(S) AND VALVE(S).

13. ROUTE TO EXISTING PANEL LPS IN MCC-2 IN HSPS. IN EXISTING SPACE PROVIDE MATCHING TYPE 20/1 MCCB. UPDATE DIRECTORY CARD.

14. YARD LIGHTING CIRCUITS PREVIOUSLY SERVED FROM DEMOLISHED PANELS IN THE CHEMICAL BUILDING SHALL BE RE-FED FROM CIRCUIT LA-38.



SLUDGE VALVE PIT
1/2" = 1'-0"
(NOTE 11)



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SOUTH CAROLINA — Jordan, Jones, & Goulding, Inc. — No. C00554 — CERTIFICATE OF AUTHORIZATION

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0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

CITY OF GEORGETOWN
SOUTH CAROLINA

REGISTERED PROFESSIONAL ENGINEER — SOUTH CAROLINA — No. 11180 — ROBERT F. HOFFMAN

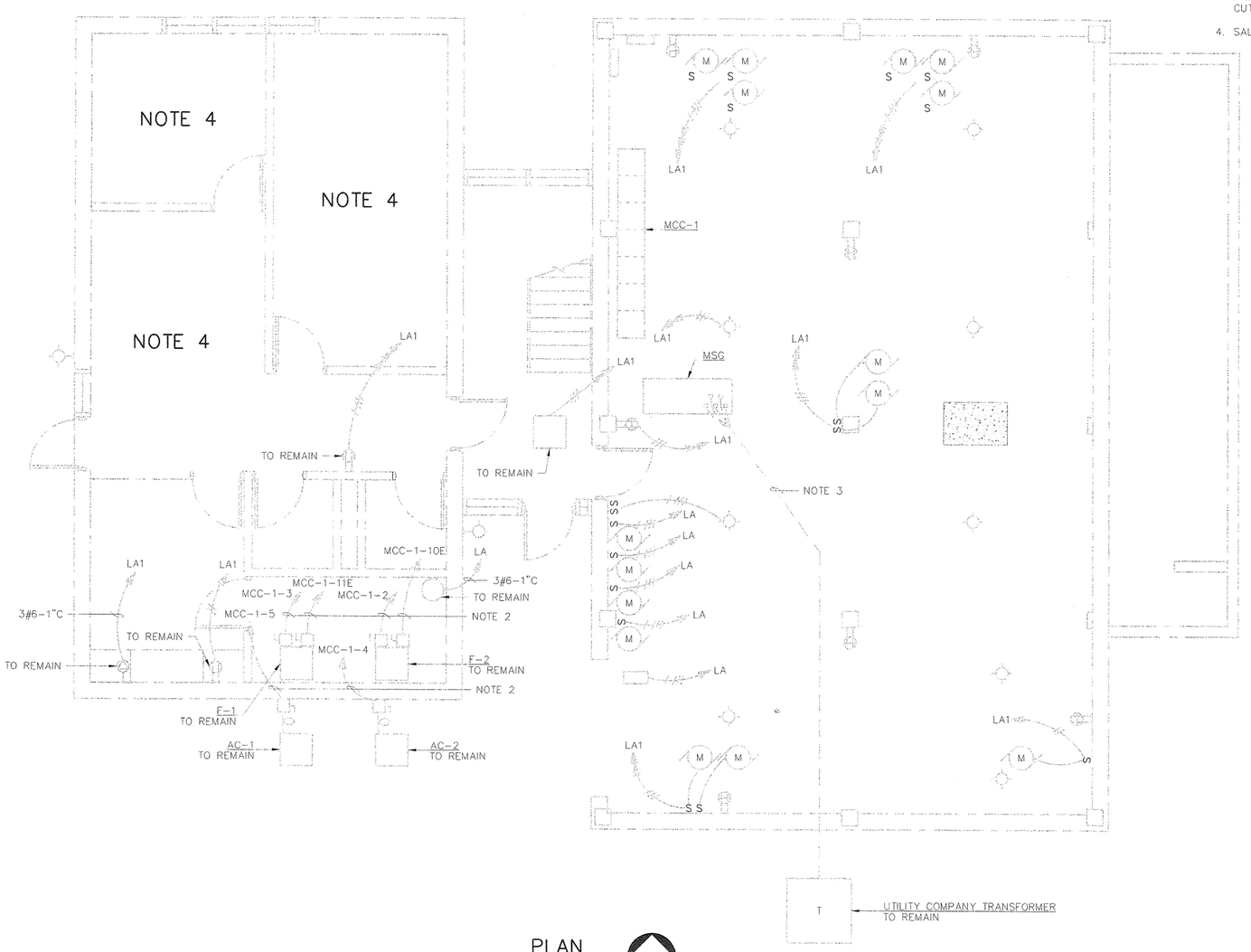
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

ELECTRICAL SITE PLAN

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 2000	E1.1 SHEET	1 REV
DRAWN: LAB	JOB NO. 2193.006	SCALE: 1" = 20'-0"		

NOTES:

1. ALL ELECTRICAL EQUIPMENT DEPICTED ON THIS DRAWING SHALL BE REMOVED UNLESS OTHERWISE INDICATED. REMOVAL OF LIGHTING FIXTURES SHALL INCLUDE REMOVAL OF FIXTURE, MOUNTING HARDWARE, SWITCHES, SWITCH PLATES AND CONDUCTORS. CONDUCTORS SHALL BE REMOVED BACK TO PANELBOARD. CONDUIT SHALL BE REMOVED TO THE EXTENT POSSIBLE AND REMAINING SECTIONS TAGGED "ABANDONED MM/DD/YY". CONDUIT AND BOXES LOCATED IN MASONRY WALLS FOR LIGHT SWITCHES AND RECEPTACLES MAY REMAIN IN PLACE FOR FUTURE USE.
2. CONDUCTORS TO CIRCUIT DESIGNATED TO BE REMOVED. SEE ONE-LINE DIAGRAM ON SHEET E0.2 FOR CONDUCTOR SIZE AND QUANTITY.
3. CONDUCTORS FROM MSG TO UTILITY COMPANY TRANSFORMER TO BE REMOVED. SEE ONE-LINE DIAGRAM ON SHEET E0.2 FOR CONDUCTOR SIZE AND QUANTITY. COORDINATE WITH THE OWNER FOR POWER OUTAGES AND TEMPORARY SERVICE ARRANGEMENTS DURING REMOVAL OF MSG AND INSTALLATION OF MSB AND MCC-1. CUT AND PLUG CONDUITS FOLLOWING CONDUCTOR REMOVAL.
4. SALVAGE EXISTING LIGHTING FIXTURES FOR RE-INSTALLATION.



PLAN
1/4" = 1'-0"
(NOTE 1)

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02.13.07

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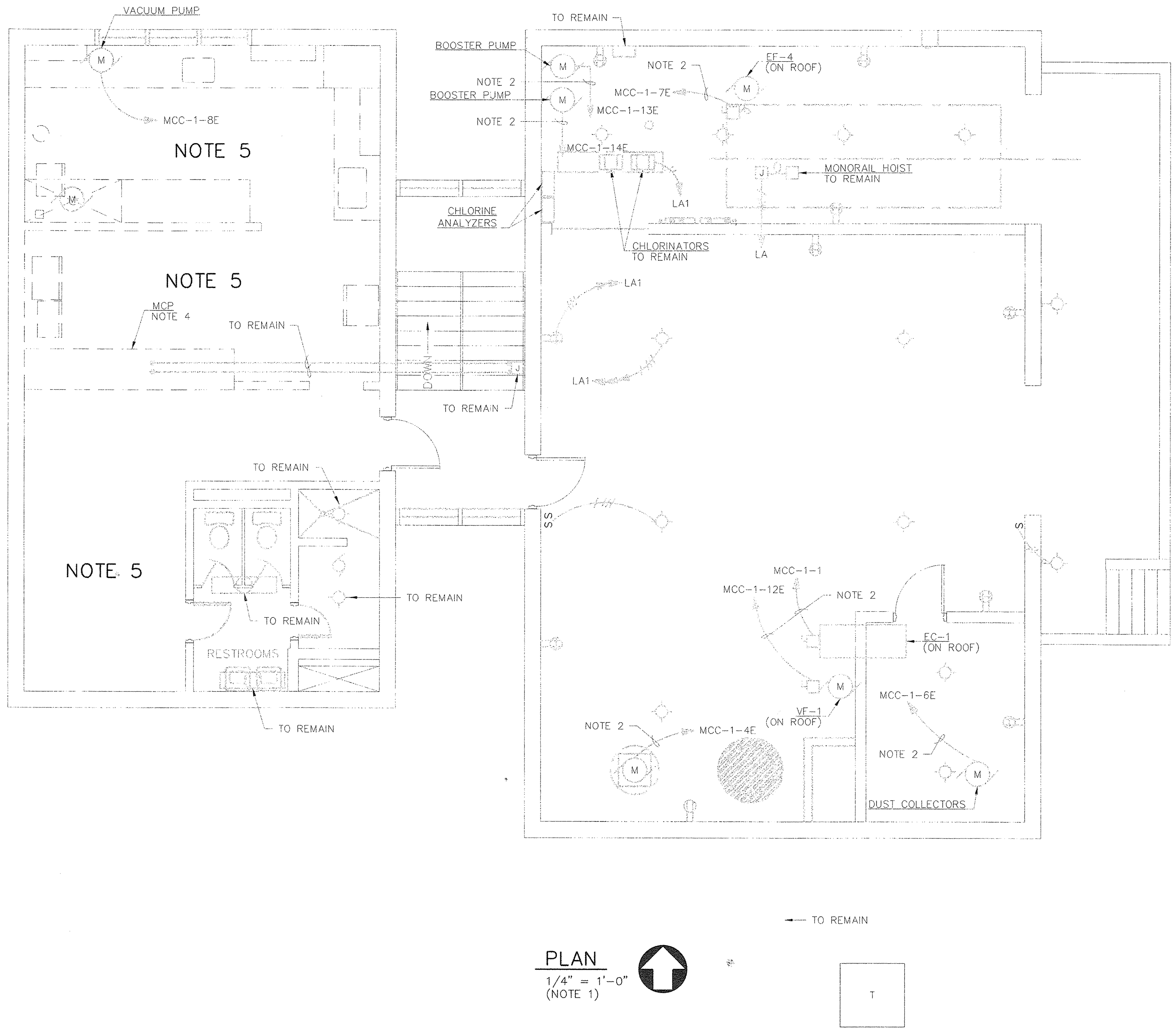
CITY OF GEORGETOWN
SOUTH CAROLINA

REGISTERED PROFESSIONAL ENGINEER — SOUTH CAROLINA — No. 11180 — ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

CHEMICAL BUILDING
FIRST FLOOR
ELECTRICAL DEMOLITION PLAN

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 2000	E2.1	1
DRAWN: LAB	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV



PLAN
1/4" = 1'-0"
(NOTE 1)

NOTES:

1. ALL ELECTRICAL EQUIPMENT DEPICTED ON THIS DRAWING SHALL BE REMOVED UNLESS OTHERWISE INDICATED. REMOVAL OF LIGHTING FIXTURES SHALL INCLUDE REMOVAL OF FIXTURE, MOUNTING HARDWARE, SWITCHES, SWITCH PLATES AND CONDUCTORS. CONDUCTORS SHALL BE REMOVED BACK TO PANELBOARD, CONDUIT SHALL BE REMOVED TO THE EXTENT POSSIBLE AND REMAINING SECTIONS TAGGED "ABANDONED MM/DD/YY". CONDUIT AND BOXES LOCATED IN MASONRY WALLS FOR LIGHT SWITCHES AND RECEPTACLES MAY REMAIN IN PLACE FOR FUTURE USE.

2. CONDUCTORS TO CIRCUIT DESIGNATED TO BE REMOVED. SEE ONE-LINE DIAGRAM ON SHEET E0.2 FOR CONDUCTOR SIZE AND QUANTITY.

3. CONDUCTORS FROM MSG TO UTILITY COMPANY TRANSFORMER TO BE REMOVED. SEE ONE-LINE DIAGRAM ON SHEET E0.2 FOR CONDUCTOR SIZE AND QUANTITY. COORDINATE WITH THE OWNER FOR POWER OUTAGES AND TEMPORARY SERVICE ARRANGEMENTS DURING REMOVAL OF MSG AND INSTALLATION OF MSB AND MCC-1.

4. MCP TO BE REMOVED. PROVIDE J-BOXES WITH TERMINAL STRIPS ON BACK PANELS ABOVE CEILING FOR CONTINUATION OF EXISTING SIGNAL AND CONTROL CONDUCTORS TO NEW MCP.

5. ALL LIGHTING FIXTURES AND RECEPTACLES IN LAB/CONTROL ROOM AND OFFICE SHALL BE REMOVED. LIGHTING FIXTURES IN RESTROOMS SHALL REMAIN. LIGHTING AND RECEPTACLES ARE PRESENTLY FED FROM PANEL LA1.

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02.13.02

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CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA · REGISTERED PROFESSIONAL ENGINEER · No. 11180 · ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

CHEMICAL BUILDING
SECOND FLOOR
ELECTRICAL DEMOLITION PLAN

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 2000	E2.2	1
DRAWN: LAB	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

NOTES:

1. ALL EXPOSED CONDUIT, FITTINGS, ETC. SHALL BE PVC COATED GALVANIZED RIGID STEEL IN ALL AREAS EXCEPT OFFICES AND MECHANICAL ROOM.
   ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL HAVE A MINIMUM RATING OF NEMA 4X IN ALL AREAS EXCEPT OFFICES AND MECHANICAL ROOM.
   ALL SUPPORTING MATERIALS AND HARDWARE SHALL BE STAINLESS STEEL.
2. MOUNT IN PLACE OF EXISTING FIXTURE.
3. RE-INSTALL EXISTING LIGHTING FIXTURES IN NEW CEILING GRID.

PLAN
1/4" = 1'-0"
(NOTE 1)

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02.13.02

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Jordan Jones & Goulding

GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

REGISTERED PROFESSIONAL ENGINEER — SOUTH CAROLINA — No. 11180 — ROBERT F. HOFFMAN

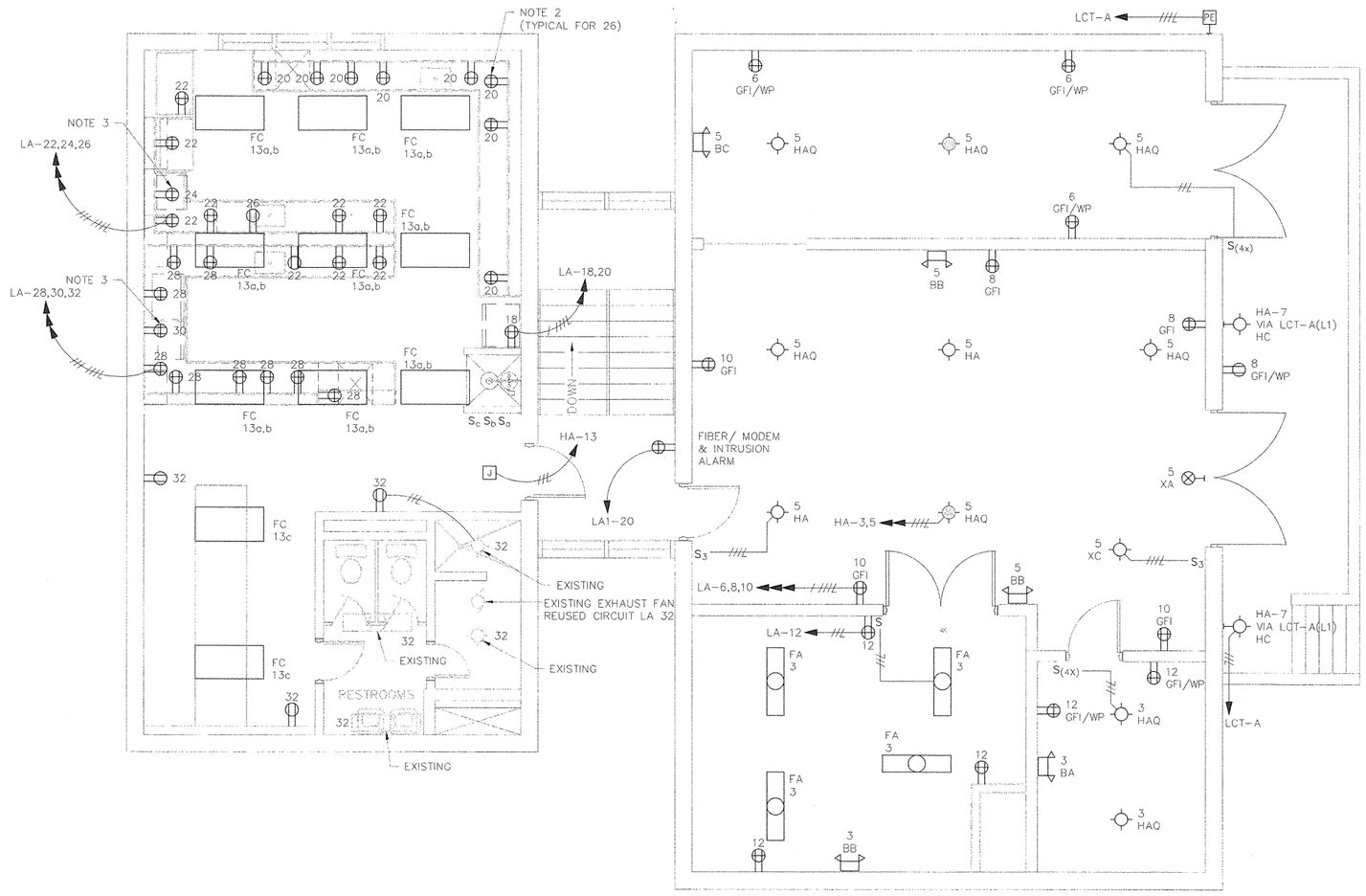
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

CHEMICAL & ADMINISTRATION BUILDING
FIRST FLOOR
ELECTRICAL LIGHTING AND RECEPTACLE PLAN

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 2001	E2.3	1
DRAWN: LAB	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

NOTES:

1. ALL EXPOSED CONDUIT, FITTINGS, ETC. IN THE CHLORINE AND FLUORIDE ROOMS AND EXPOSED TO THE WEATHER SHALL BE PVC COATED GALVANIZED RIGID STEEL. ALL ELECTRICAL EQUIPMENT AND DEVICES IN THE CHLORINE AND FLUORIDE ROOMS AND EXPOSED TO THE WEATHER SHALL HAVE A MINIMUM RATING OF NEMA 4X. ALL SUPPORTING MATERIALS AND HARDWARE SHALL BE STAINLESS STEEL.
2. ALL COUNTER TOP RECEPTACLES SHALL BE GFI PROTECTED.
3. PROVIDE WHITE FACE RECEPTACLES FOR DEDICATED COUNTER TOP CIRCUITS IN LAB.



PLAN
1/4" = 1'-0"
(NOTE 1)

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SOUTH CAROLINA — Jordan, Jones & Goulding, Inc. — No. C00554 — CERTIFICATE OF AUTHORIZATION

NO.	DATE	DESCRIPTION OF REVISION
1	08-02-01	RECORD DRAWING
0	12-15-99	INITIAL ISSUE

Jordan Jones & Goulding

CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 11180 — ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS
CHEMICAL & ADMINISTRATION BUILDING
SECOND FLOOR
ELECTRICAL LIGHTING AND RECEPTACLE PLAN

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 2001	E2.4	1
DRAWN: LAB	JOB NO. 2193.005	SCALE: AS SHOWN	SHEET	REV

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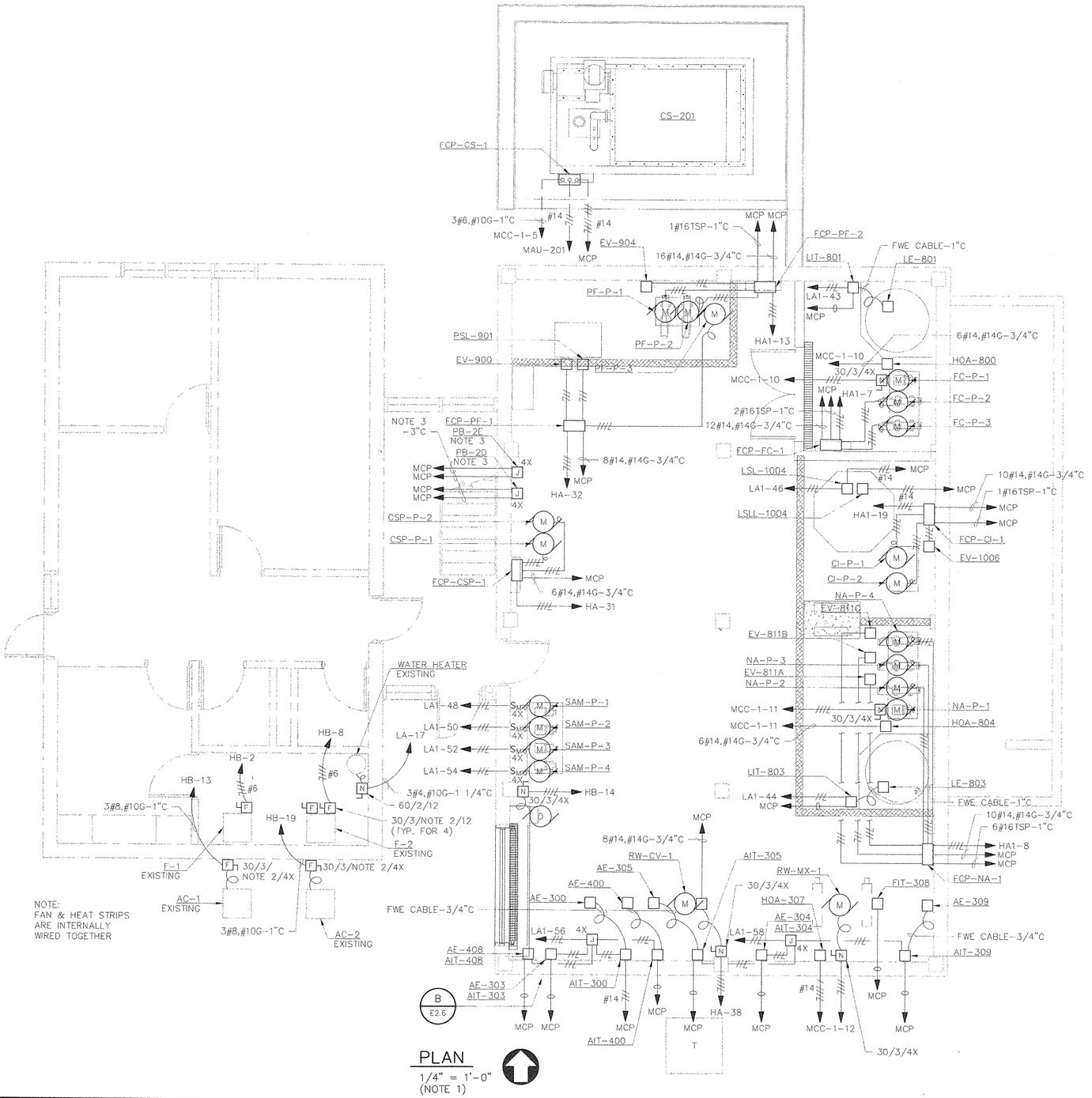
02.13.02

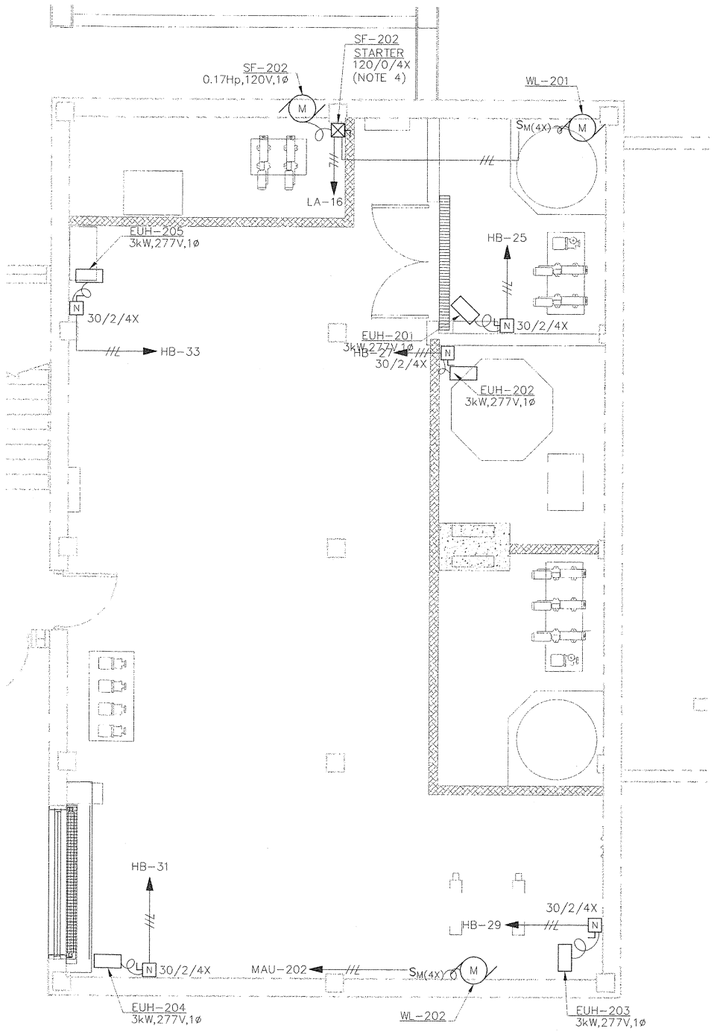


PLAN

1/4" = 1'-0"
(NOTE 1)

NOTES:

1. ALL EXPOSED CONDUIT, FITTINGS, ETC. SHALL BE PVC COATED GALVANIZED RIGID STEEL IN ALL AREAS EXCEPT OFFICES AND MECHANINCAL ROOM.
   ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL HAVE A MINIMUM RATING OF NEMA 4X IN ALL AREAS EXCEPT OFFICES AND MECHANINCAL ROOM.
   ALL SUPPORTING MATERIALS AND HARDWARE SHALL BE STAINLESS STEEL.
2. PROVIDE FUSES PER MANUFACTURER'S REQUIREMENTS.
3. ROUTE ALL CONTROL CONDUCTORS FROM CHEMICAL AREA TO MCP THROUGH PB-2D AND ALL ANALOG CONDUCTORS THROUGH PB-2E.
4. SEE WIRING DIAGRAM ON SHEET E0.5.



HVAC POWER & SYSTEMS PLAN

1/4" = 1'-0"
(NOTE 1)

ccdPlan5.dwg
02.13.02

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CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 11180 — ROBERT F. HOFFMAN

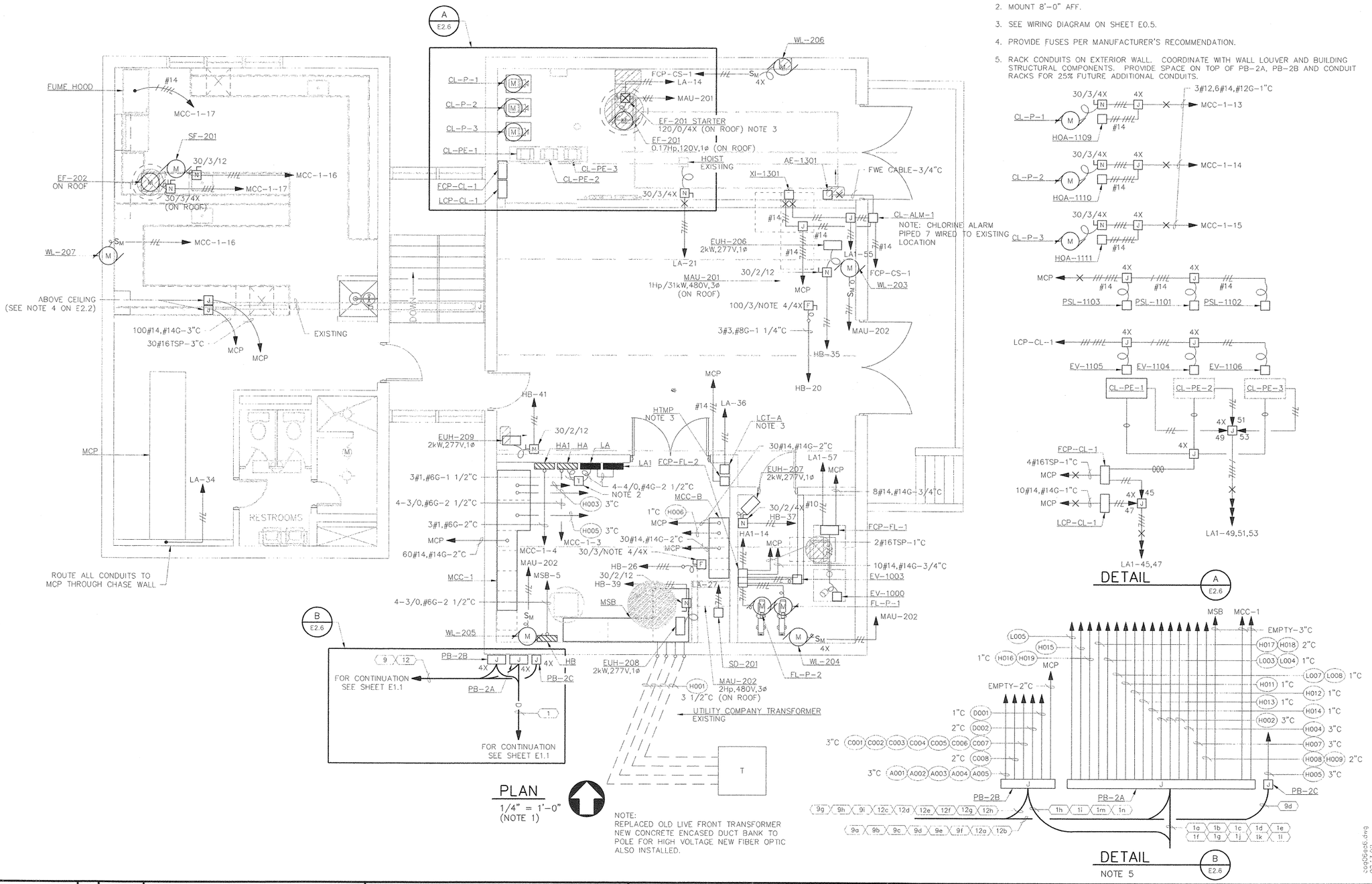
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

CHEMICAL & ADMINISTRATION BUILDING
FIRST FLOOR
ELECTRICAL POWER AND SYSTEMS PLAN

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 2000	E2.5	1
DRAWN: LAB	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

NOTES:

1. ALL EXPOSED CONDUIT, FITTINGS, ETC. IN THE CHLORINE AND FLUORIDE ROOMS AND EXPOSED TO THE WEATHER SHALL BE PVC COATED GALVANIZED RIGID STEEL. ALL ELECTRICAL EQUIPMENT AND DEVICES IN THE CHLORINE AND FLUORIDE ROOMS AND EXPOSED TO THE WEATHER SHALL HAVE A MINIMUM RATING OF NEMA 4X. ALL SUPPORTING MATERIALS AND HARDWARE SHALL BE STAINLESS STEEL.
2. MOUNT 8'-0" AFF.
3. SEE WIRING DIAGRAM ON SHEET E0.5.
4. PROVIDE FUSES PER MANUFACTURER'S RECOMMENDATION.
5. RACK CONDUITS ON EXTERIOR WALL. COORDINATE WITH WALL LOUVER AND BUILDING STRUCTURAL COMPONENTS. PROVIDE SPACE ON TOP OF PB-2A, PB-2B AND CONDUIT RACKS FOR 25% FUTURE ADDITIONAL CONDUITS.



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SOUTH CAROLINA

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CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

CHEMICAL & ADMINISTRATION BUILDING
SECOND FLOOR
ELECTRICAL POWER AND SYSTEMS PLAN

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 2000	E2.6 SHEET	1 REV
DRAWN: LAB	JOB NO. 2193.006	SCALE: AS SHOWN		

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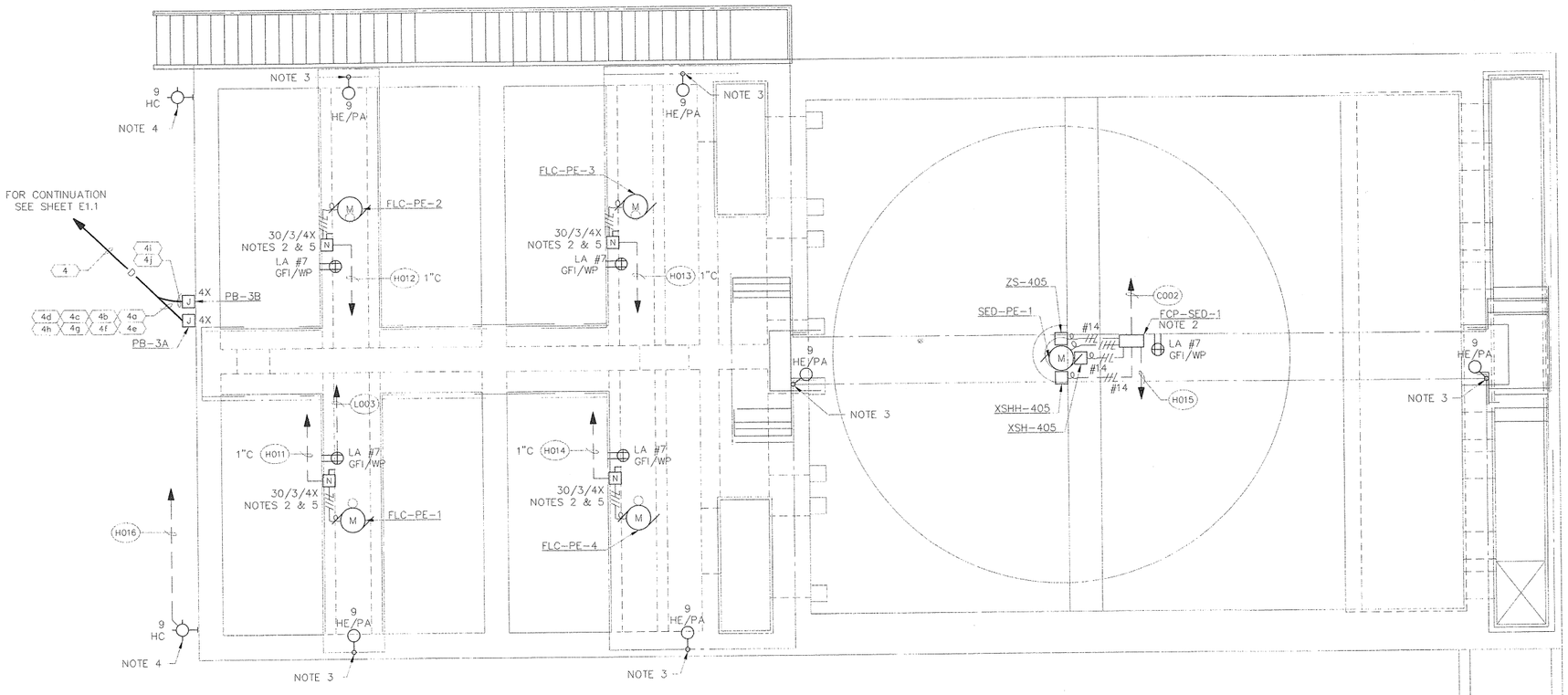
02.1.02

NOTES:

1. ALL EXPOSED CONDUIT, FITTINGS, ETC. SHALL BE PVC COATED GALVANIZED RIGID STEEL. ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL HAVE A MINIMUM RATING OF NEMA 4X. ALL SUPPORTING MATERIALS AND HARDWARE SHALL BE STAINLESS STEEL.
2. MOUNT ON HANDRAIL.
3. SEE MOUNTING DETAIL ON SHEET E0.8.
4. MOUNT 10'-0" AFG.
5. PROVIDE AUXILIARY INTERLOCK TO SHUT DOWN DRIVE WHEN DISCONNECT IS IN OFF POSITION.



PLAN
1/4" = 1'-0"
(NOTE 1)

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02.13.02

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GEORGETOWN 1734 SOUTH CAROLINA
CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
No. 11180
ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

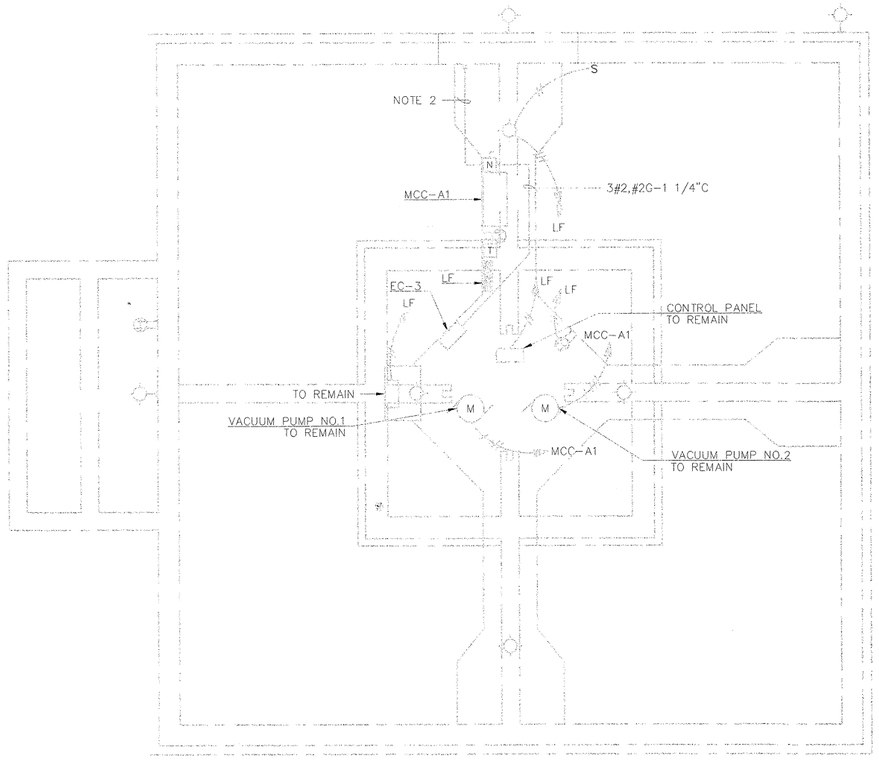
FLOCCULATION/SEDIMENTATION BASIN
ELECTRICAL PLAN

DESIGNED: WAC	CHECKED:	DATE: NOVEMBER 2000	E3.1	1
DRAWN: LAB	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

NOTES:

1. ALL ELECTRICAL EQUIPMENT DEPICTED ON THIS DRAWING SHALL BE REMOVED UNLESS OTHERWISE INDICATED. REMOVAL OF LIGHTING FIXTURES SHALL INCLUDE REMOVAL OF FIXTURE, MOUNTING HARDWARE, SWITCHES, SWITCH PLATES AND CONDUCTORS. CONDUCTORS SHALL BE REMOVED BACK TO PANELBOARD, CONDUIT SHALL BE REMOVED TO THE EXTENT POSSIBLE AND REMAINING SECTIONS TAGGED "ABANDONED MM/DD/YY". CONDUIT AND BOXES LOCATED IN MASONRY WALLS FOR LIGHT SWITCHES AND RECEPTACLES MAY REMAIN IN PLACE FOR FUTURE USE.

2. CONDUCTORS TO CIRCUIT DESIGNATED TO BE REMOVED. SEE ONE-LINE DIAGRAM ON SHEET E0.2 FOR CONDUCTOR SIZE AND QUANTITY.



PLAN
1/4" = 1'-0"
(NOTE 1)

cap06ecl.dwg
02.13.02

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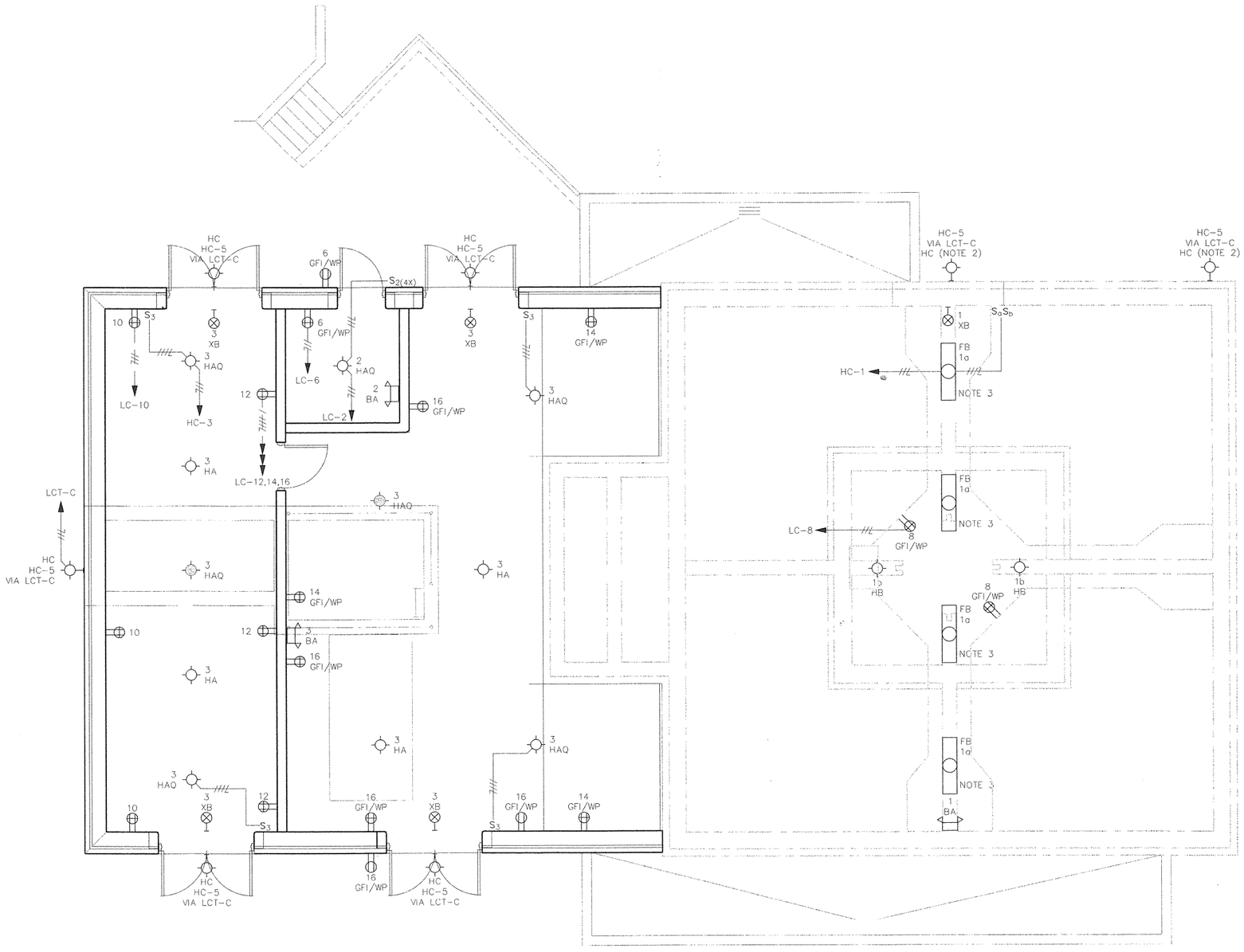
CITY OF GEORGETOWN
SOUTH CAROLINA

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 11180 — ROBERT E. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FILTER BUILDING
ELECTRICAL DEMOLITION PLAN

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 2000	E4.1	1
DRAWN: LAB	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV



PLAN
1/4" = 1'-0"
(NOTE 1)

NOTES:

1. ALL EXPOSED CONDUIT, FITTINGS, ETC. SHALL BE PVC COATED GALVANIZED RIGID STEEL. IN ALL AREAS EXCEPT THE MAINTENANCE ROOM.
   ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL HAVE A MINIMUM RATING OF NEMA 4X. IN ALL AREAS EXCEPT THE MAINTENANCE ROOM.
   ALL SUPPORTING MATERIALS AND HARDWARE SHALL BE STAINLESS STEEL.
   SEE SHEET E4.3.
2. MOUNT IN LOCATION OF EXISTING (REMOVED) FIXTURE.
3. MOUNT/SUSPEND 10'-0" ABOVE WALKWAY.

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02.13.02

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SOUTH CAROLINA

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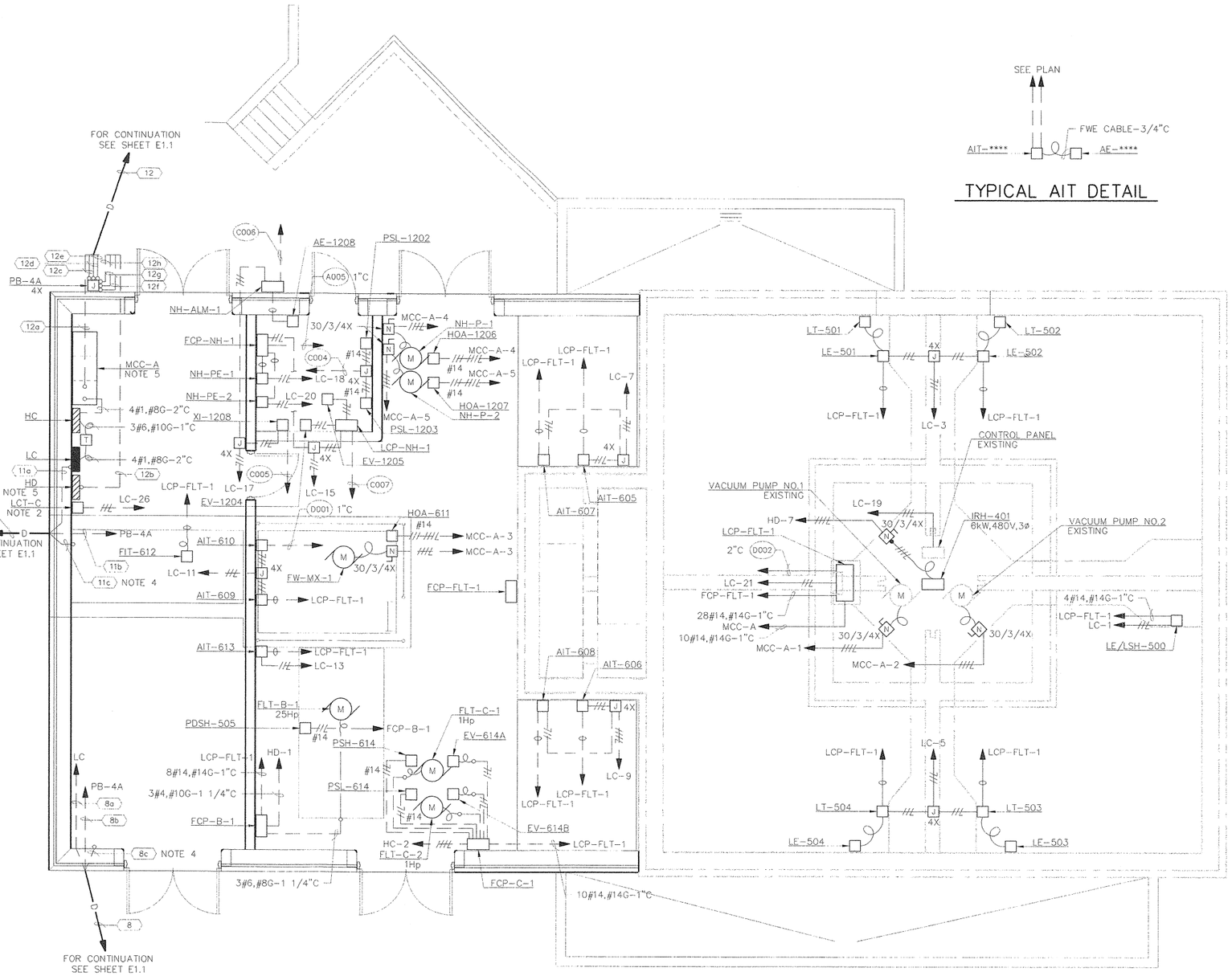
CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FILTER BUILDING
ELECTRICAL LIGHTING AND RECEPTACLES PLAN

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 200	E4.2	1
DRAWN: LAB	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV



SEE PLAN

FWE CABLE-3/4"C

AIT-**** AE-****

TYPICAL AIT DETAIL

PLAN

1/4" = 1'-0"
(NOTE 1)

NOTES:

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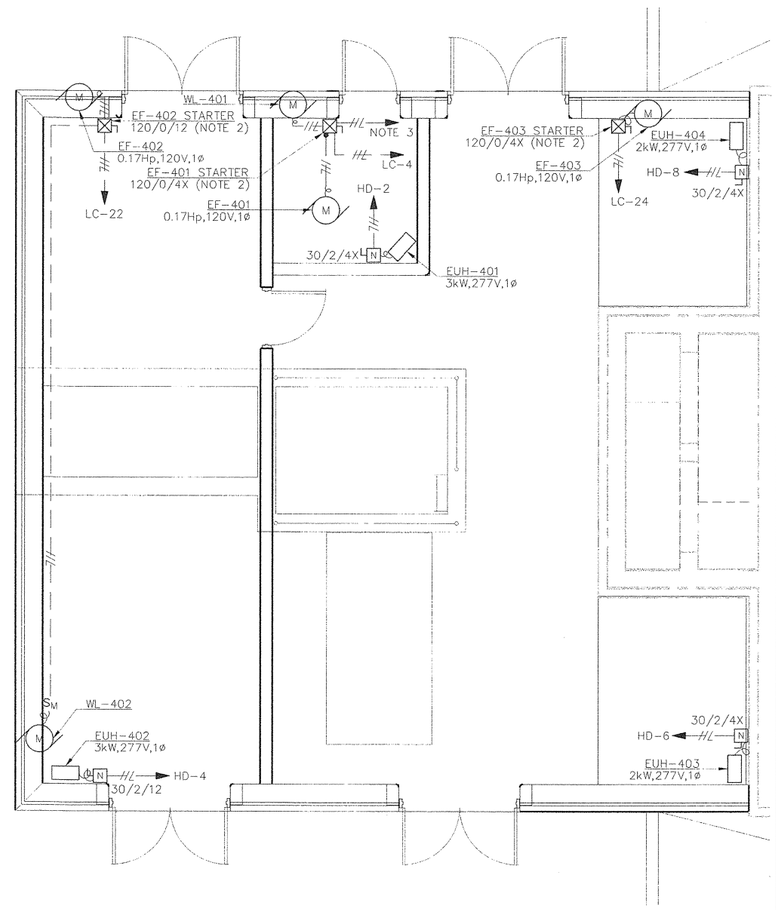
   ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL HAVE A MINIMUM RATING OF NEMA 4X IN ALL AREAS EXCEPT THE MAINTENANCE ROOM.
   ALL SUPPORTING MATERIALS AND HARDWARE SHALL BE STAINLESS STEEL.
2. SEE WIRING DIAGRAM ON SHEET E0.5.
3. TO LIGHT SWITCH. SEE SHEET E4.2.
4. STUB UP 6", CAP AND TAG.
5. PROVIDE SIGNS PER NEC 230-2(e).



HVAC POWER & SYSTEMS PLAN

1/4" = 1'-0"
(NOTE 1)

cap06ec3.dwg
02.13.02

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SOUTH CAROLINA

REGISTERED PROFESSIONAL ENGINEER — SOUTH CAROLINA — No. 11180 — ROBERT F. HOFFMAN

CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FILTER BUILDING
ELECTRICAL POWER AND SYSTEMS PLAN

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 2001	E4.3	1
DRAWN: LAB	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV

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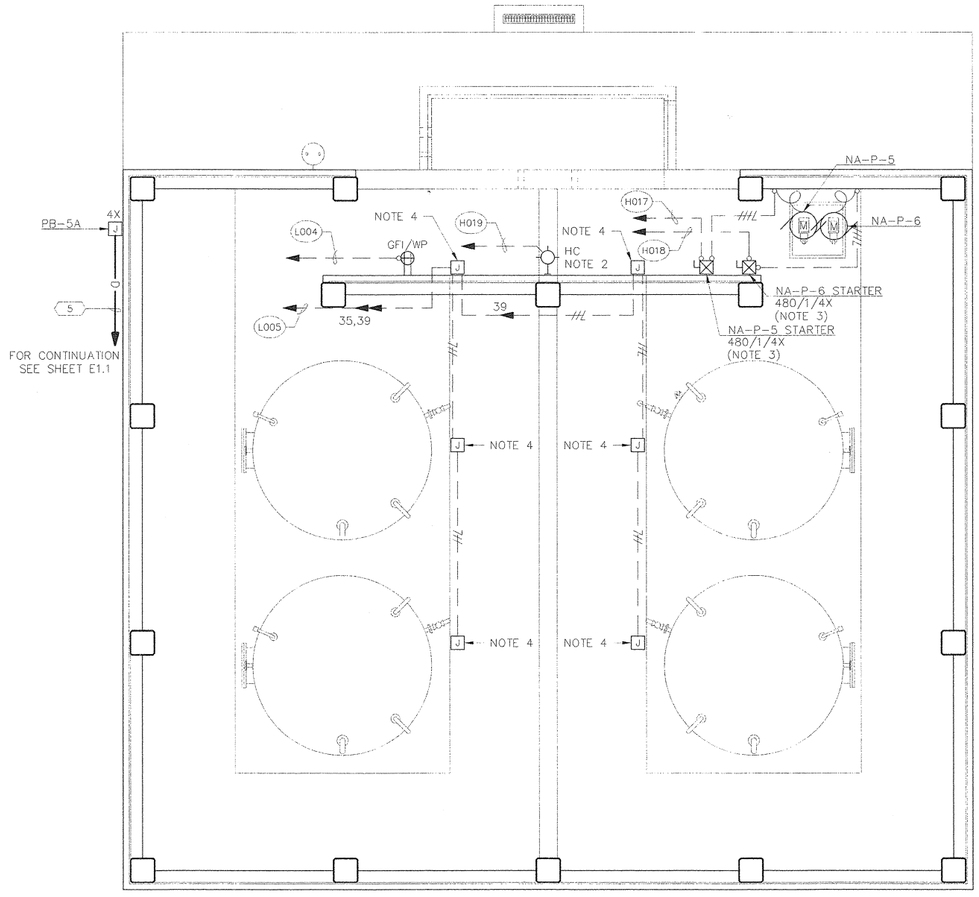
2. MOUNT AT 10'-0" AFG.
3. SEE SHEET E0.5 FOR WIRING DIAGRAM.
4. HINGED COVER NEMA 4X JUNCTION BOX WITH TERMINAL STRIPS ON BACK PANEL FOR CONNECTION OF ELECTRICAL HEAT TRACE. COORDINATE WITH THE REQUIREMENTS OF SPECIFICATION SECTION 15250.



PLAN
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(NOTE 1)

cap05ed1.dwg
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GEORGETOWN 1734 SOUTH CAROLINA

CITY OF GEORGETOWN
SOUTH CAROLINA

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CITY OF GEORGETOWN
WATER TREATMENT PLANT IMPROVEMENTS

FERRIC CHLORIDE AND CAUSTIC
BULK TANKS
ELECTRICAL PLAN

DESIGNED: GAB	CHECKED:	DATE: NOVEMBER 2000	E5.1	1
DRAWN: LAB	JOB NO. 2193.006	SCALE: AS SHOWN	SHEET	REV