

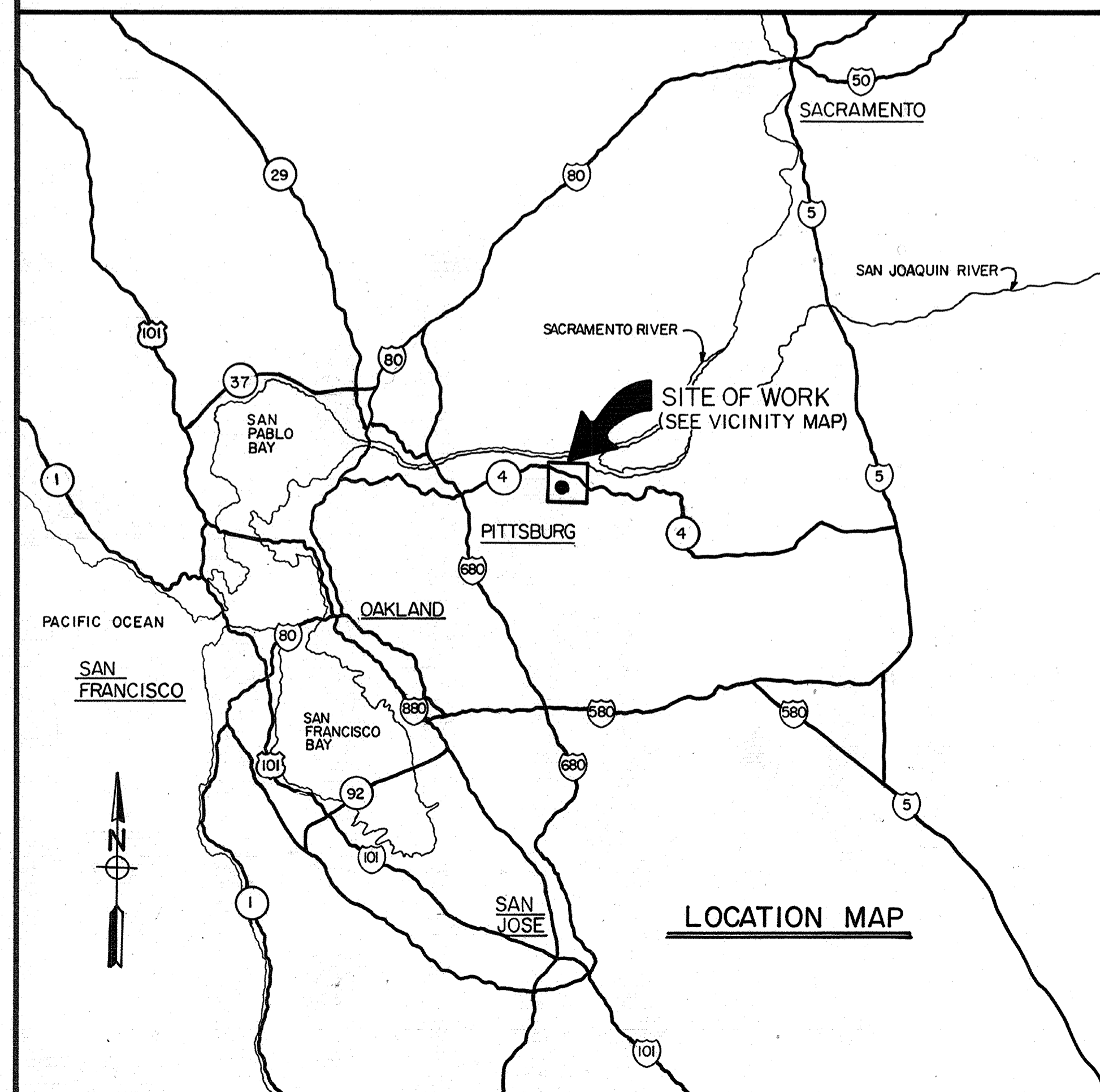
CITY OF PITTSBURG

ENGINEERING DIVISION

CONTRACT NO. 87-02

WATER TREATMENT PLANT EXPANSION

SEPTEMBER, 1988



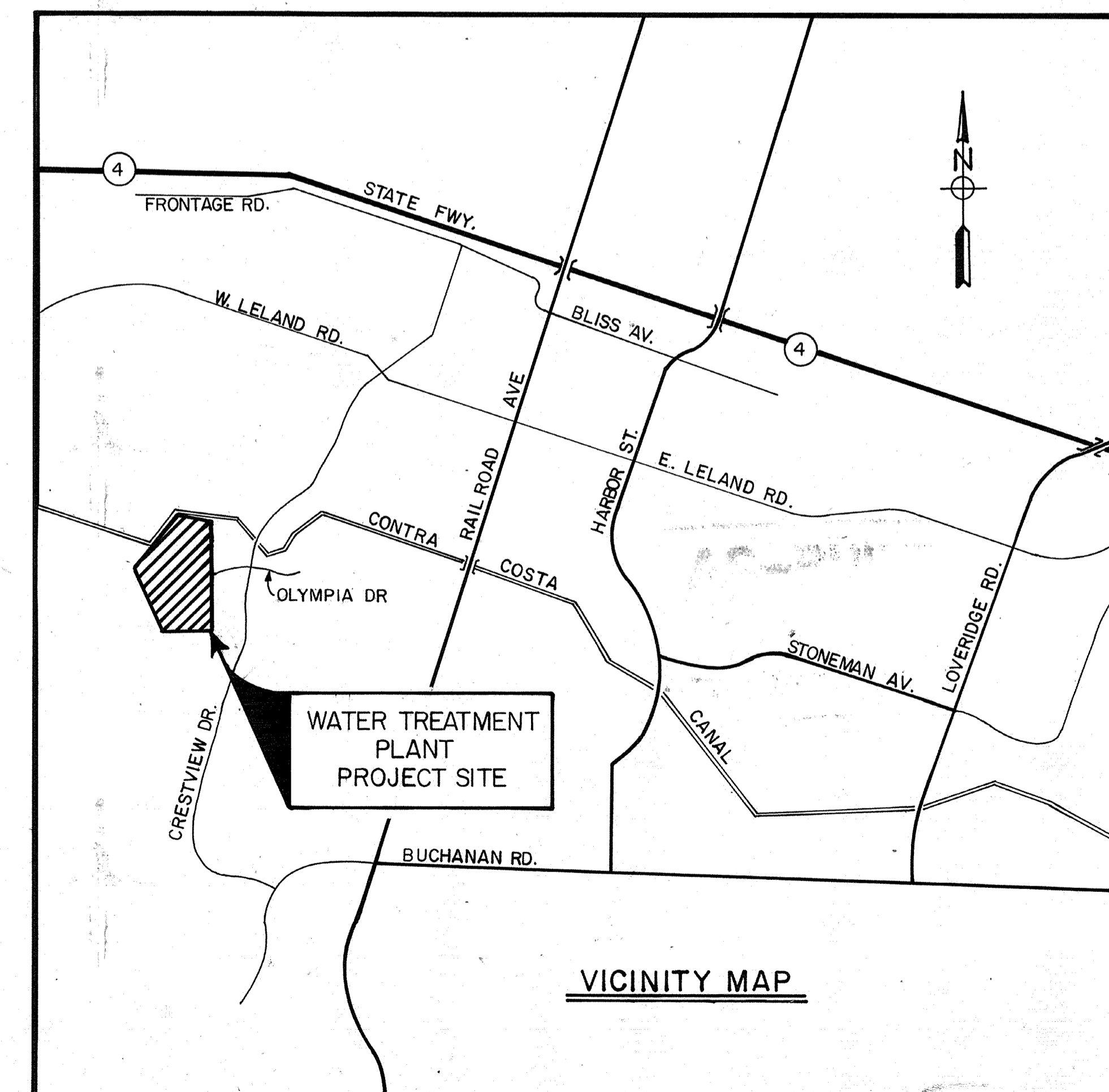
LOCATION MAP

RECEIVED: 4-23-91
CITY OF PITTSBURG
 ENGINEERING DIVISION
 BY: *Nasser Shirazi*
 NASSER SHIRAZI, Assistant City Engineer

SUBMITTED
Paul Meyerhofer
 Paul Meyerhofer, PROJECT MANAGER
 RCE 026310 EXP. DATE 3/31/90
Tina Edwards
 Tina Edwards, PROJECT ENGINEER
 RCE C042055 EXP. DATE 3/31/92

AS-BUILT
PTM 5/10/91
 SIGNATURE DATE

CAMP DRESSER & McKEE INC.
 CONSULTING ENGINEERS
 WALNUT CREEK, CALIFORNIA



VICINITY MAP

PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____

SHT. NO. DWG. NO. TITLE

GENERAL			STRUCTURAL			MECHANICAL			ELECTRICAL		
1	-	COVER SHEET	40	S-1	STANDARD DETAILS & NOTES	75	M-1	EQUIPMENT SCHEDULE	108	E-1	ELECTRICAL LEGEND I
2	-	PROJECT TITLE SHEET	41	S-2	STANDARD DETAILS	76	M-2	MISCELLANEOUS DETAILS	109	E-2	ELECTRICAL LEGEND II
3	G-1	DRAWING INDEX	42	S-3	STANDARD DETAILS AND NOTES	77	M-3	MISCELLANEOUS DETAILS	110	E-3	SINGLE LINE - MSB & GCP
4	G-2	DESIGN CRITERIA	43	S-4	STANDARD DETAILS AND NOTES	78	M-4	CHEMICAL FEED - SCHEMATICS I	111	E-4	SINGLE LINE - MSB, GCP & DP-E & F
5	G-3	SYMBOLS	44	S-5	BEAM AND COLUMN SCHEDULES	79	M-5	CHEMICAL FEED - SCHEMATICS II	112	E-5	SINGLE LINE - MCC-A
6	G-4	ABBREVIATIONS	45	1S-1	RAW WATER PUMP COVER - PLANS & ELEVATIONS	80	M-6	CHEMICAL FEED - SCHEMATICS III	113	E-6	SINGLE LINE - MCC-B
7	G-5	PROCESS FLOW DIAGRAM	46	1S-2	PUMP COVER DETAILS	81	M-7	CHEMICAL FEED - SCHEMATICS IV	114	E-7	SINGLE LINE - MCC-B (CONT'D)
8	G-6	HYDRAULIC PROFILE	47	1S-3	RAW WATER PUMP MCC BLDG. - PLANS & SECTIONS	82	M-8	CHEMICAL FEED - SCHEMATICS V & COMPRESSED AIR SYSTEM	115	E-8	SINGLE LINE - MCC-C & D
9	G-7	GENERAL PROJECT SITE PLAN	48	1S-4	FLOW SPLITTER BOX PLAN & SECTIONS	83	1M-1	RAW WATER INTAKE MODIFICATIONS - PLAN, SECTION & DETAILS	116	E-9	ELEVATIONS
10	C-1	MISCELLANEOUS YARD STRUCTURES & DETAILS	49	2S-1	SEDIMENTATION/FLOCCULATION BASIN PLAN & DETAILS	84	1M-2	RAW WATER PUMPING STATION - PLAN, SECTIONS & DETAILS	117	E-10	DEMOLITION SINGLE LINE I
11	C-2	MISCELLANEOUS YARD DETAILS	50	2S-2	SEDIMENTATION/FLOCCULATION BASIN PARTIAL PLAN & DETAILS	85	2M-1	FLOCCULATION BASIN MODIFICATIONS & FLOW SPLIT BOX - PLAN & SECTIONS	118	E-11	DEMOLITION SINGLE LINE II
12	C-3	MISCELLANEOUS YARD DETAILS	51	2S-3	SEDIMENTATION/FLOCCULATION BASIN SECTIONS	86	3M-1	FILTER MODIFICATIONS - PLAN, SECTIONS & DETAILS	119	E-12	SITE PLAN
13	C-4	GRADING & PAVING I	52	2S-4	SEDIMENTATION/FLOCCULATION PARTIAL PLAN & SECTIONS	87	3M-2	FILTER MODIFICATIONS - SECTIONS & DETAILS	120	E-13	ELECTRICAL DETAILS
14	C-5	GRADING & PAVING II	53	2S-5	SEDIMENTATION/FLOCCULATION BASIN MISCELLANEOUS DETAILS	88	5M-1	OPERATIONS BUILDING - LOWER LEVEL CHEMICAL HANDLING FACILITIES - PLAN & SECTIONS	121	E-14	CONTROL SCHEMATICS I
15	C-6	YARD PIPING I	54	2S-6	EXISTING FLOCCULATION/SEDIMENTATION BASINS MODIFICATIONS - PLAN, SECTION & DETAILS	89	5M-2	OPERATIONS BUILDING - LOWER LEVEL CHEMICAL HANDLING FACILITIES - SECTIONS	122	E-15	CONTROL SCHEMATICS II
16	C-7	YARD PIPING II	55	2S-7	EXISTING FLOCCULATION/SEDIMENTATION BASINS MODIFICATIONS - PARTIAL PLAN	90	5M-3	OPERATIONS BUILDING - LOWER LEVEL CHEMICAL HANDLING FACILITIES - SECTIONS & DETAILS	123	E-16	CONTROL SCHEMATICS III
17	A-1	DOOR AND FINISH SCHEDULES	56	2S-8	EXISTING FLOCCULATION/SEDIMENTATION BASINS MODIFICATIONS - SECTIONS	91	6M-1	CHEMICAL STORAGE AREA - PLAN & SECTIONS	124	E-17	CONTROL SCHEMATICS IV
18	A-2	DOOR AND FINISH SCHEDULES	57	2S-9	EXISTING FLOCCULATION/SEDIMENTATION BASINS MODIFICATIONS - ELEVATIONS & DETAILS	92	3H-1	FILTER GALLERY - PLAN, DETAILS & SCHEDULES	125	E-18	CONTROL SCHEMATICS V
19	A-3	DETAILS	58	3S-1	EXISTING FILTER COMPLEX MODIFICATIONS - DEMOLITION	93	3H-2	FILTER GALLERY - PLANS & SECTION	126	1E-1	RAW WATER PUMP STATION POWER & INST.
20	A-4	DETAILS	59	3S-2	EXISTING FILTER COMPLEX MODIFICATIONS - PLAN & SECTIONS	94	5H-1	OPERATIONS BUILDING - SYMBOLS & SCHEDULES	127	1E-2	RAW WATER PUMP STATION LIGHTING
21	A-5	DETAILS	60	3S-3	EXISTING FILTER COMPLEX MODIFICATIONS - ROOF PLAN	95	5H-2	OPERATIONS BUILDING - SCHEDULES	128	1E-3	RAW WATER PUMP STATION MCC BLDG. POWER, INST. & LIGHTING
22	1A-1	MCC BUILDING- FLOOR & ROOF PLAN	61	4S-1	NORTH CLEARWELL PUMP COVER - PLANS & ELEVATIONS	96	5H-3	OPERATIONS BUILDING - DETAILS	129	2E-1	FLOCCULATION/SEDIMENTATION BASINS POWER, INST. AND LIGHTING
23	3A-1	FILTER CONTROL ROOM- FLOOR PLAN	62	4S-2	SOUTH CLEARWELL PUMP COVER - PLANS & ELEVATIONS	97	5H-4	OPERATIONS BUILDING - SCHEMATIC CONTROL DIAGRAM	130	3E-1	FILTERS 1-4 & FILTER CONTROL CENTER POWER & INST.
24	3A-2	FILTER CONTROL ROOM- ELEVATIONS, SECTION	63	5S-1	OPERATIONS BLDG - PLAN	98	5H-5	OPERATIONS BUILDING - PLAN	131	3E-2	FILTERS 5-8 & FILTER CONTROL CENTER POWER & INST.
25	3A-3	FILTER CONTROL ROOM- ROOF PLAN	64	5S-2	OPERATIONS BLDG - PLAN	99	5H-6	OPERATIONS BUILDING - PLAN & SCHEDULE	132	3E-3	FILTERS 1-4 PIPE GALLERY POWER & INST.
26	3A-4	FILTER CONTROL ROOM - REFLECTED CEILING PLAN	65	5S-3	OPERATIONS BLDG - PLAN	100	5H-7	OPERATIONS BUILDING - ROOF PLAN	133	3E-4	FILTERS 5-8 PIPE GALLERY POWER & INST.
27	5A-1	OPERATIONS BUILDING - SITE PLAN	66	5S-4	OPERATIONS BLDG - PLAN & SECTIONS	101	5H-8	OPERATIONS BUILDING - SECTIONS & DETAILS	134	3E-5	CONTROL BLDG. BASEMENT POWER & LIGHTING
28	5A-2	OPERATIONS BUILDING - LOWER LEVEL PLAN	67	5S-5	OPERATIONS BLDG - SECTIONS & DETAILS	102	7H-1	MISCELLANEOUS STRUCTURES - PLANS	135	3E-6	CONTROL BLDG. & FILTERS LIGHTING
29	5A-3	OPERATIONS BUILDING - UPPER LEVEL PLAN	68	5S-6	OPERATIONS BLDG - SECTIONS & DETAILS	103	5P-1	OPERATIONS BUILDING - SYMBOLS & SCHEDULE	136	3E-7	FILTERS 5-8 & FILTER CONTROL CENTER LIGHTING
30	5A-4	OPERATIONS BUILDING - INTERIOR ELEVATIONS	69	5S-7	OPERATIONS BLDG - SECTIONS	104	5P-2	OPERATIONS BUILDING - DETAILS	137	3E-8	FILTER PIPE GALLERY LIGHTING
31	5A-5	OPERATIONS BUILDING - STAIR SECTION	70	5S-8	OPERATIONS BLDG - SECTIONS & DETAILS	105	5P-3	OPERATIONS BUILDING - PLAN	138	4E-1	NORTH & SOUTH CLEARWELL POWER & LIGHTING
32	5A-6	OPERATIONS BUILDING - ROOF PLAN	71	6S-1	CHEMICAL STORAGE TANKS - PLAN & SECTIONS	106	5P-4	OPERATIONS BUILDING - PLAN & DIAGRAM	139	5E-1	OPERATIONS BLDG. LOWER LEVEL POWER
33	5A-7	OPERATIONS BUILDING - LOWER LEVEL REFLECTED CEILING PLAN	72	6S-2	CHEMICAL STORAGE SPILL TANK & PIPE CHASE PLAN & SECTION	107	5P-5	OPERATIONS BUILDING - FIRE SPRINKLER SYSTEM	140	5E-2	OPERATIONS BLDG. LOWER LEVEL LTG. & HVAC POWER
34	5A-8	OPERATIONS BUILDING - UPPER LEVEL REFLECTED CEILING PLAN	73	7S-1	EXISTING CHLORINE BUILDING MODIFICATIONS - PLAN, SECTION & DETAILS				141	5E-3	OPERATIONS BLDG. UPPER LEVEL POWER & INST.
35	5A-9	OPERATIONS BUILDING - ELEVATIONS	74	7S-2	EXISTING CHLORINE BUILDING MODIFICATIONS - SECTIONS & DETAILS				142	5E-4	OPERATIONS BLDG. UPPER LEVEL HVAC POWER
36	5A-10	OPERATIONS BUILDING - ELEVATIONS							143	5E-5	OPERATIONS BLDG. UPPER LEVEL LIGHTING
37	5A-11	OPERATIONS BUILDING - SECTIONS							144	6E-1	CHEMICAL TANK AREA POWER, LIGHTING & INST.
38	7A-1	MISC. EXISTING BUILDING FLOOR PLAN, INTERIOR ELEVATIONS AT EXISTING OPERATIONS BUILDING							145	7E-1	GENERATOR AREA - POWER & LIGHTING
39	7A-2	MISC. EXISTING BUILDING FLOOR PLAN, ROOF PLAN AT EXISTING CHLORINE STORAGE BUILDING							146	7E-2	CHEMICAL & EQUIPMENT BLDG AND PUMP REPAIR SHOP - POWER & LIGHTING
									147	7E-3	MISC. PLANS

AS-BUILT
 Pjm 5/10/91
 SIGNATURE DATE



Tina Edwards

CITY OF PITTSBURG, CALIFORNIA		WATER TREATMENT PLANT EXPANSION 1988	
DRAWING INDEX			
Date	Ch'k'd	Revision	
Designed by: _____	Drawn by: <u>GM</u>	Date: <u>SEPT., 1988</u>	CAMP DRESSER & McKEE INC. 710 South Broadway Walnut Creek, CA 94596 <small>environmental engineers, scientists, planners, & management consultants</small>
Checked by: <u>MDR</u>	Approved by: <u>PFM</u>	Scale: <u>NONE</u>	
SHEET NO. G-1			

PROJECT MANAGER Approved by: Date: PROJECT ENGINEER Approved by: Date: PLUMBING Approved by: Date: HVAC Approved by: Date: INSTRUMENTATION Approved by: Date: ELECTRICAL Approved by: Date: STRUCTURAL Approved by: Date: ARCHITECTURAL Approved by: Date:

Description	Units	Value
Plant Design Capacity	mgd	32
Raw Water Pump Station		
Number of Pumps	number	6
Pump Design Capacity	gpm	3 at 3,600 3 at 6,000
Maximum Output	mgd	35
Pump Power	horsepower	3 at 50 2 at 100 1 at 125
Rapid Mixing		
Type: Mechanical		
Number of Mixer	number	1
Mixing Energy (g)	per second	575
Flocculation Basins		
Type: Compartmentalized, Baffled Flocculation		
Basins	number	5
Design Capacity (each)	mgd	6.4
Detention Time	minutes	22
Average Water Depth	feet	11
Total Basin Length and Width		
1953 & New	feet x feet	60 x 20
1976	feet x feet	40 x 30
Basin Volume	gallons	98,700
Flocculation Mixing Energy (G)	per second	35
Flocculation Ct	—	47,500
Sedimentation Basins		
Type: Rectangular, Horizontal Flow		
Basins	number	5
Design Capacity (each)	mgd	6.4
Surface Loading Rate	gpm/ft ²	0.55
Detention Time	hours	3.4
Horizontal Velocity	feet per minute	1.3
Overall Basin Dimensions	feet x feet	60 x 135
Average Water Depth	feet	15
Basin Volume	gallons	908,800
Sludge Equipment	—	None
Filters		
Type: Gravity, dual media with tile block underdrains and rotary arm surface wash systems		
Number of Filters	number	8
Filtration Rate (all filters)	gpm/ft ²	4.0
Filtration Rate (with one filter in backwash)	gpm/ft ²	4.5
Filter Inside Dimensions per Bay (2 bays per filter)	feet x feet	13 x 27
Media Area (per filter)	square feet	702
Maximum Filter Backwash Rate	gpm/ft ²	10
Maximum Filter Backwash Rate	gpm	6,250
Maximum Surface Wash Rate	gpm/ft ²	0.5
Maximum Surface Wash Rate	gpm	356
Filter Media		
Granular Activated Carbon		
Average Depth	inches	24
Average Effective Size	millimeters	1.0
Average Uniformity Coefficient	—	1.4
Average Specific Gravity	grams/cc	1.6
Sand		
Average Depth	inches	10
Average Effective Size	millimeters	0.5
Average Uniformity Coefficient	—	1.5
Specific Gravity	grams/cc	2.65
Sludge Pond		
Type: Earthen/Unlined		
Volume	million gallons	6.5
Surface Area	acres	2.1
Maximum Water Depth	feet	15
Sludge Storage Lagoon		
Type: Earthen/Unlined		
Volume	million gallons	2.5
Surface Area	acres	0.9
Maximum Water Depth	feet	15

Description	Units	Value
Filter Clearwell (Clear Water) Pumps		
Number of Pumps	number	6
Pump Design Capacity	gpm	3 at 2800 1 at 4000 2 at 6000
Maximum Output	mgd	35
Pump Power	horsepower	3 at 60 1 at 75 2 at 150
Finished Water Reservoir		
Capacity	million gallons	6.0
Diameter	feet	290
Maximum Water Depth	feet	15
Chemical Feed Rate (Average Dose at Design Flow)		
Anhydrous Ammonia		
Plant Influent (Flash Mixer)	ppd	320
Filtered Water	ppd	94
Anionic/Nonionic Polymer (0.5% solution, 0.04 lb/gal)		
Plant Influent (Flash Mixer or Post-Flash Mixer)	gph	139
Settled Water	gph	139
Backwash Water ⁽²⁾	gph	43
Cationic Polymer (8.6 lb/gal)		
Plant Influent (Flash Mixer or Post-Flash Mixer)	gph	2.6
Settled Water	gph	2.6
Backwash Water ⁽²⁾	gph	0.4
Chlorine		
Plant Influent (Flash Mixer)	ppd	667
Settled Water	ppd	267
Filtered Water	ppd	267
Corrosion Control		
Plant Influent (Flash Mixer)	gph	2
Filtered Water	gph	2
Hydrofluosilicic Acid		
Plant Influent (Flash Mixer)	gph	5
Filtered Water	gph	5
Liquid Alum (100% Solution, 5.4 lb/gal)		
Plant Influent (Flash Mixer or Post-Flash Mixer)	gph	51
Potassium Permanganate (1% solution, 0.08 lb/gal)		
Plant Influent (Flash Mixer)	gph	104
Powdered Activated Carbon (1 lb/gal slurry)		
Plant Influent (Flash Mixer)	gph	33
Flocculated Water	gph	33
Spare Chemical ⁽³⁾		
Plant Influent (Flash Mixer)	gph	46
Settled Water	gph	26
Filtered Water	gph	42
Chemical Feed Equipment (Maximum Capacity)⁽¹⁾		
Anhydrous Ammonia		
FD-C-901	ppd	500
FD-C-902	ppd	500
Anionic/Nonionic Polymer		
P-C-301	gph	20
P-C-302	gph	100
P-C-303 (Fixed Rate)	gph	50
P-C-304 (Fixed Rate)	gph	10
Cationic Polymer		
P-C-201	gph	10
P-C-202	gph	10
P-C-203 (Fixed Rate)	gph	10
P-C-204 (Fixed Rate) NIC	gph	50
Chlorine		
FD-C-001	ppd	500
FD-C-002	ppd	2000
FD-C-003	ppd	2000
Corrosion Control		
P-C-601	gph	10
Hydrofluosilicic Acid		
P-C-501	gph	10

Description	Units	Value
Liquid Alum		
P-C-101	gph	60
P-C-102	gph	60
Potassium Permanganate		
FD-C-401 (Fixed Rate)	ft ³ /hr	1
P-C-401	gph	70
P-C-402	gph	70
Powdered Activated Carbon		
P-C-801	gph	90
P-C-802	gph	90
Spare Chemical		
P-C-701	gph	40
Chemical Storage Capacity (Average Dose at Design Flow)		
Anhydrous Ammonia		
Bulk Tank	number	1
Total Storage	pounds	4400
Days of Storage	days	10
Anionic/Nonionic Polymer		
Drums (55 gallon)	number	25
Total Storage	gallons	1375
Days of Storage	days	9
Cationic Polymer		
Bulk Tank	number	1
Total Storage	gallons	6500
Days of Storage	days	104
Chlorine		
One Ton Cylinders	number	9
Total Storage	pounds	18,000
Days of Storage	days	19
Corrosion Control		
Bulk Tank	number	1
Total Storage	gallons	6,500
Days of Storage	days	158
Hydrofluosilicic Acid		
Bulk Tank	number	1
Total Storage	gallons	6,500
Days of Storage	days	60
Liquid Alum		
Bulk Tank	number	2
Total Storage	gallons	26,000
Days of Storage	days	21
Potassium Permanganate		
Drums (110 lb/drum)	number	25
Total Storage	pounds	2,750
Days of Storage	days	14
Powdered Activated Carbon		
Bulk Tank (concrete)	number	1
Total Storage (1 lb/gal slurry)	gallons	40,000
Days of Storage	days	50
Spare Chemical ⁽⁴⁾		
Bulk Tank	number	1
Total Storage	gallons	13,000
Days of Storage	days	12

Chemical Point of Application	Chemical Dosage (mg/l)		
	Minimum	Average	Maximum
Anhydrous Ammonia			
Plant Influent (Flash Mixer)	0.5	1.2	1.6
Filtered Water Line	0	0.35	0.5
Anionic/Nonionic Polymer			
Plant Influent (Flash Mixer or Post-Flash Mixer)	0	0.5	1.5
Settled Water (Pipeline Inlet - 3 Locations)	0	0.5	1.5
Backwash Water (Rate of Flow Controller) ⁽²⁾	0	0.5	1.0
Cationic Polymer			
Plant Influent (Flash Mixer or Post-Flash Mixer)	0	2.0	3.0
Settled Water (Pipeline Inlet - 3 Locations)	0	2.0	3.0
Backwash Water (Rate of Flow Controller) ⁽²⁾	0	1.0	2.0
Chlorine			
Plant Influent (Flash Mixer)	1.0	2.5	5.0
Settled Water (Pipeline Inlet - 3 Locations)	0	1.0	5.0
Filtered Water (36" Dia. Pipeline)	0.25	1.0	1.5
Corrosion Control			
Plant Influent (Flash Mixer)	0.5	2.0	3.0
Filtered Water (36" Dia. Pipeline)	0.5	2.0	3.0
Hydrofluosilicic Acid			
Plant Influent (Flash Mixer)	1.0	1.0	1.0
Filtered Water (36" Dia. Pipeline)	1.0	1.0	1.0
Liquid Alum			
Plant Influent (Flash Mixer or Post-Flash Mixer)	15	25	50
Potassium Permanganate			
Plant Influent (Flash Mixer)	0	0.75	2.0
Powdered Activated Carbon			
Plant Influent (Flash Mixer)	1	3	25
Flocculated Water (Midpoint of Flocculation Basin - 5 Locations)	1	3	25
Spare Chemical⁽³⁾			
Plant Influent (Flash Mixer)	10	20	40
Settled Water (Pipeline Inlet - 3 Locations)	0	2	3
Filtered Water (36" Dia. Pipeline)	5	10	30

(1) All feed equipment is variable rate unless noted otherwise.
 (2) Backwash water flow rate is 10 mgd.
 (3) For spare chemical assume the following chemicals:
 a. Plant influent use 40% FeCl₃, 4.8 lb/gal.
 b. Settled water use 10% cationic polymer, 0.86 lb/gal.
 c. Filtered water use 25% NaOH, 2.66 lb/gal.
 (4) Use case a., above, for spare chemical storage.



Jim Edwards

AS-BUILT

5/10/91
SIGNATURE DATE

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
DESIGN CRITERIA

Designed by: TCE
 Drawn by: JH
 Checked by: TLE
 Approved by: PFM

Date: SEPT. 1988
 Scale: NONE

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
environmental engineers, scientists,
planners & management consultants

SHEET NO.
G-2
 4 of 147

PROJECT MANAGER Approved by: _____ Date: _____
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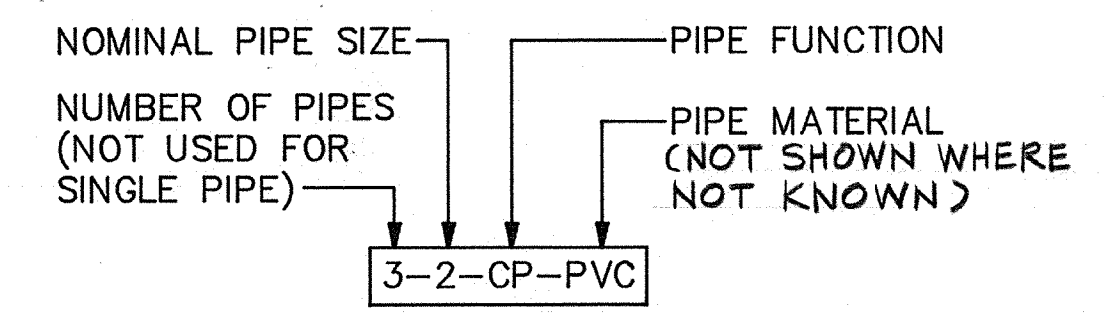
	CONCRETE
	GRAVEL
	SAND
	GRATING
	CHECKERED PLATE
	WOOD (ROUGH FRAMING)
	WOOD (FINISH)
	PROPOSED STRUCTURE OR OUT OF SECTION
	EXISTING STRUCTURE OR FACILITY
	FUTURE STRUCTURE OR FACILITY
	RIP RAP
	OPEN DITCH W/ DRAINAGE ARROWS
	PROPOSED CULVERT
	EXISTING CULVERT
	CATCH BASIN
	VAULT OR JUNCTION STRUCTURE
	PROPOSED FENCE
	EXISTING FENCE
	CONTOUR LINE, FINISHED GRADE
	CONTOUR LINE, EXISTING GRADE
	FINISHED ELEVATION
	EXISTING ELEVATION
	PROPOSED CUT OR FILL SLOPE

	EXISTING CUT OR FILL SLOPE
	EXISTING A.C. PAVING
	PROPOSED A.C. PAVING
	GRAVEL ROAD
	TREES OR BRUSH
	MANHOLE
	AIR VALVE STATION
	BLOWOFF
	CONCRETE WALKWAY
	FIRE HYDRANT
	TEST PIT
	BENCH MARK
	SURVEY MONUMENT OR ROCK ANCHOR LOCATION
	SOIL BORING, OR SURFACE ELEVATION
	GATE VALVE
	KNIFE GATE VALVE
	GLOBE VALVE
	BALL VALVE
	NEEDLE VALVE
	PINCH VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	OPEN EQUIPMENT DRAIN
	PLUG VALVE
	SOLENOID VALVE
	FLOAT ACTUATED VALVE

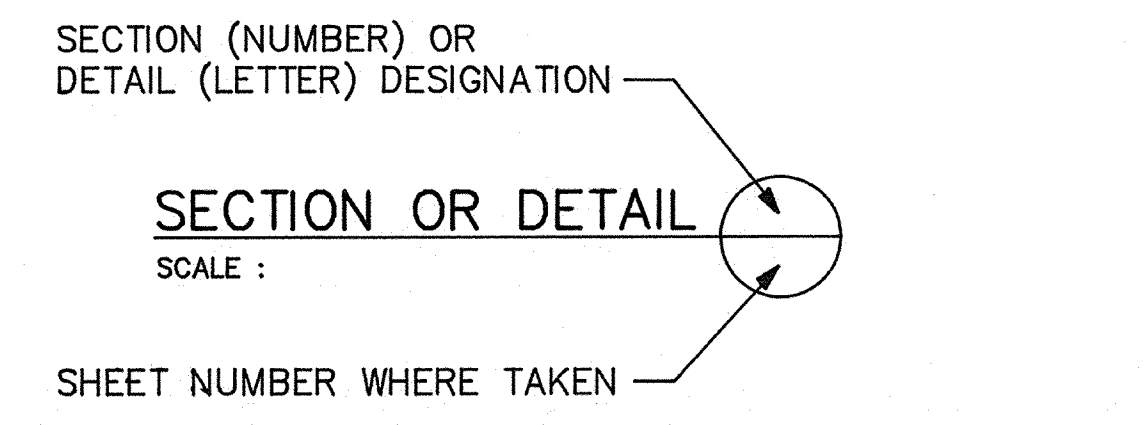
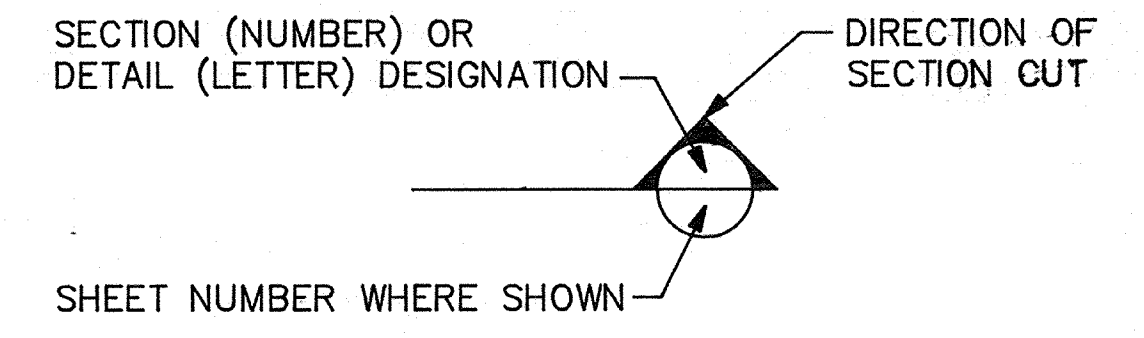
	MUD VALVE
	DIAPHRAGM VALVE
	MOTOR OPERATED VALVES
	FLOW SWITCH
	BACK PRESSURE VALVE
	PRESSURE CONTROL (REGULATING)
	PRESSURE RELIEF VALVE
	VACUUM RELIEF VALVE
	HOSE BIBB
	AIR VACUUM AND AIR RELEASE VALVE ASSEMBLY
	FLOAT VALVE
	MULTIPOINT VALVE-- 3 WAY
	BACKFLOW PREVENTER
	TEE AND 90 DEGREE BEND DOWN
	TEE AND 90 DEGREE BEND UP
	CONCENTRIC REDUCER (RED.)
	ECCENTRIC REDUCER (ECC. RED.)
	WELDED JOINT
	FLANGED JOINT
	MECHANICAL JOINT
	PUSH ON JOINT
	FLEXIBLE CONNECTOR OR EXPANSION JOINT BELLOWS TYPE
	NEW YARD PIPING
	EXIST YARD PIPING
	PRESSURE SWITCH
	PRESSURE GAGE
	VACUUM GAGE

	SLEEVE TYPE COUPLING (HARNESSED WHERE REQUIRED)
	GROOVED END COUPLING-- RIGID
	GROOVED END COUPLING
	UNION
	BLIND FLANGE
	CAPPED OR PLUGGED END
	FLANGED ADAPTER COUPLING
	ACCUMULATOR
	PIPE SUPPORT
	FLOOR DRAIN
	FLOOR SINK
	HUB DRAIN
	CLEANOUT
	QUICK CONNECT COUPLER
	FIRE EXTINGUISHER
	FIRE EXTINGUISHER CABINET
	CHANGE IN PIPING MATERIAL
	PUMP CALIBRATION CYLINDER
	Y--STRAINER
	NEW EQUIPMENT
	NEW PIPE
	EXIST PIPE

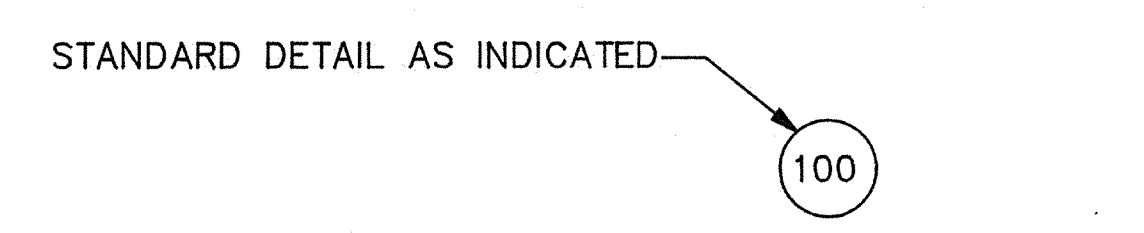
	ROTAMETER
	PULSATION DAMPENNER
	ORIFICE PLATE AND FLANGES
	FLOW TUBE
	INJECTOR OR EDUCTOR
	DIAPHRAGM
	ELECTRIC MOTOR (M)



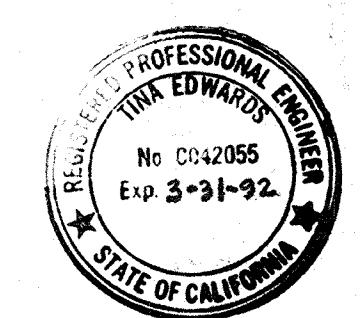
PIPE DESIGNATION



DETAIL AND SECTION DESIGNATION



STANDARD DETAIL DESIGNATION



AS-BUILT
 Signature: *Jim Edwards* 5/10/91
 Date: 5/10/91

Date	Ch'k'd	Revision
Designed by: _____	Drawn by: GM	Date: SEPT., 1988
Checked by: MDR	Approved by: PFM	Scale: NONE

CITY OF PITTSBURG, CALIFORNIA

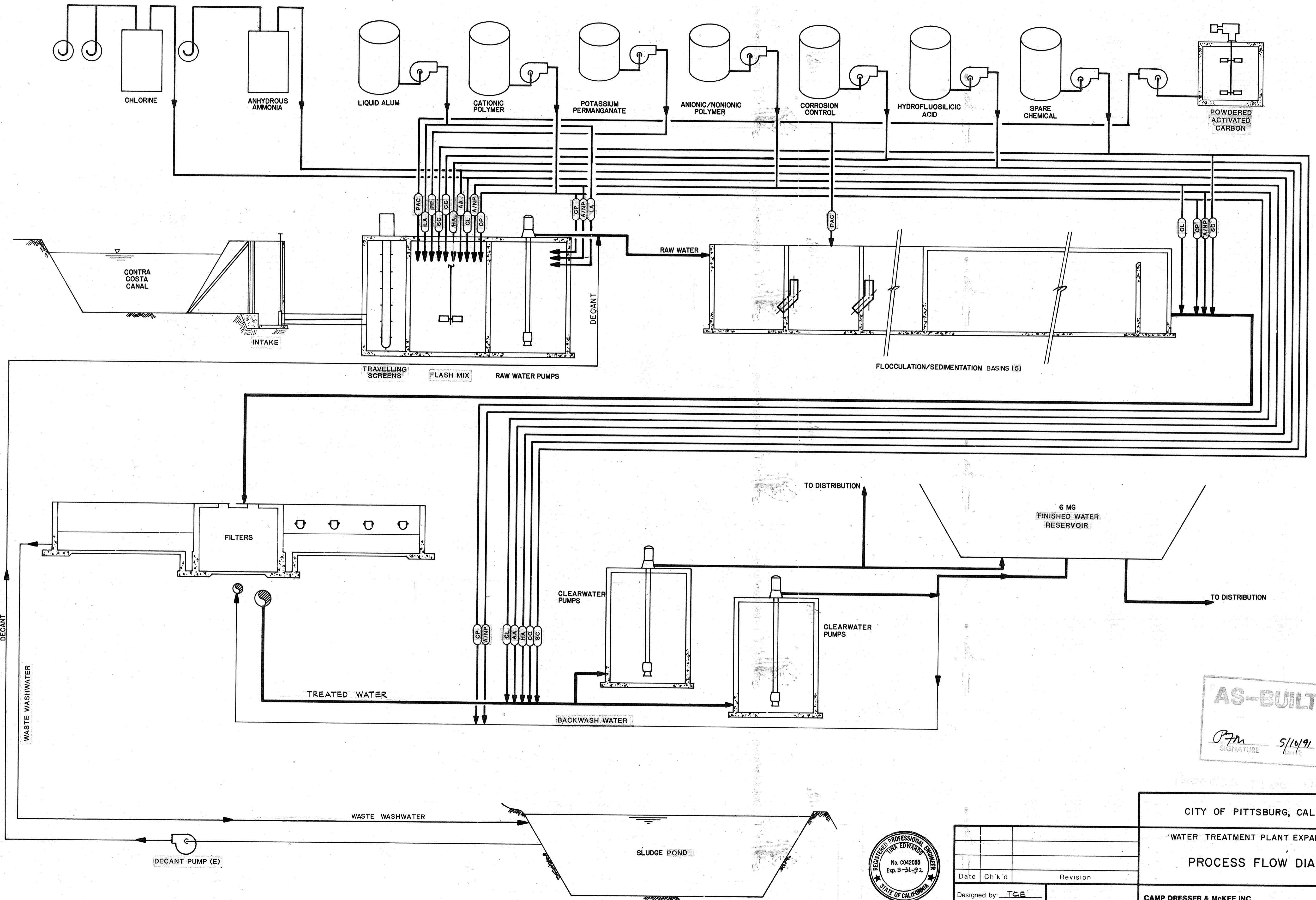
WATER TREATMENT PLANT EXPANSION 1988

SYMBOLS

CAMP DRESSER & McKEE INC. **CDM**
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners, & management consultants

SHEET NO. **G-3**
 5 of 147

PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



AS-BUILT
 Signature: *Pfm* 5/14/91
 DATE



Tina Edwards

Date	Ch'k'd	Revision

Designed by: TCE
 Drawn by: GM
 Checked by: MDR
 Approved by: PFM

Date: SEPT 1988
 Scale: NONE

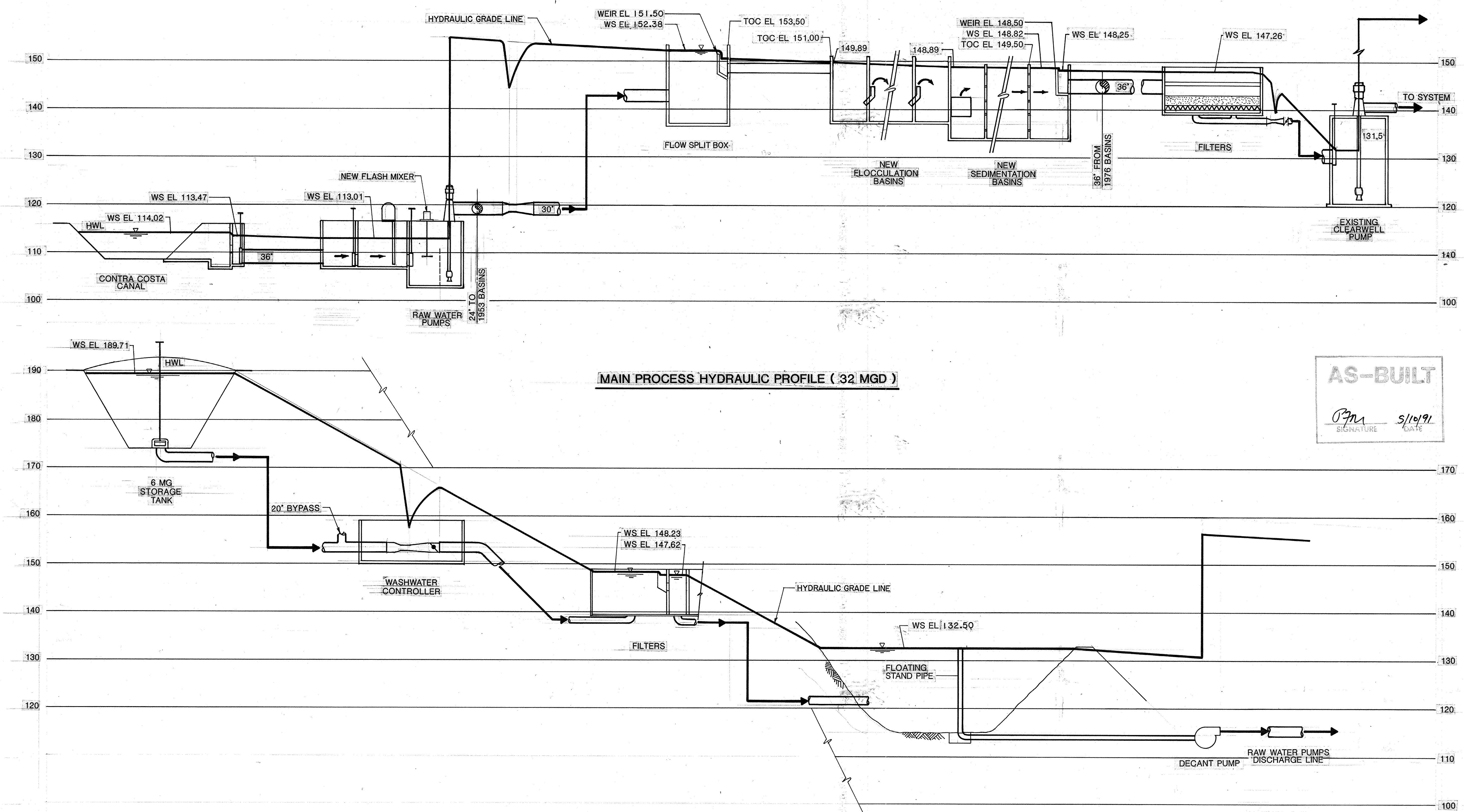
CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
PROCESS FLOW DIAGRAM

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

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 environmental engineers scientists
 planners & management consultants

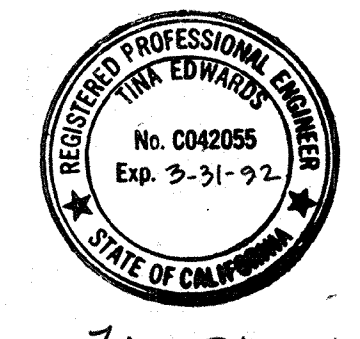
SHEET NO.
G-5
 7 of 147

PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



FILTER BACKWASH HYDRAULIC PROFILE (9 MGD)

AS-BUILT
 Signature: *PJM*
 Date: 5/10/91



Tina Edwards

Date	Ch'k'd	Revision

Designed by: TCE
 Drawn by: GM
 Checked by: MDR
 Approved by: PEM

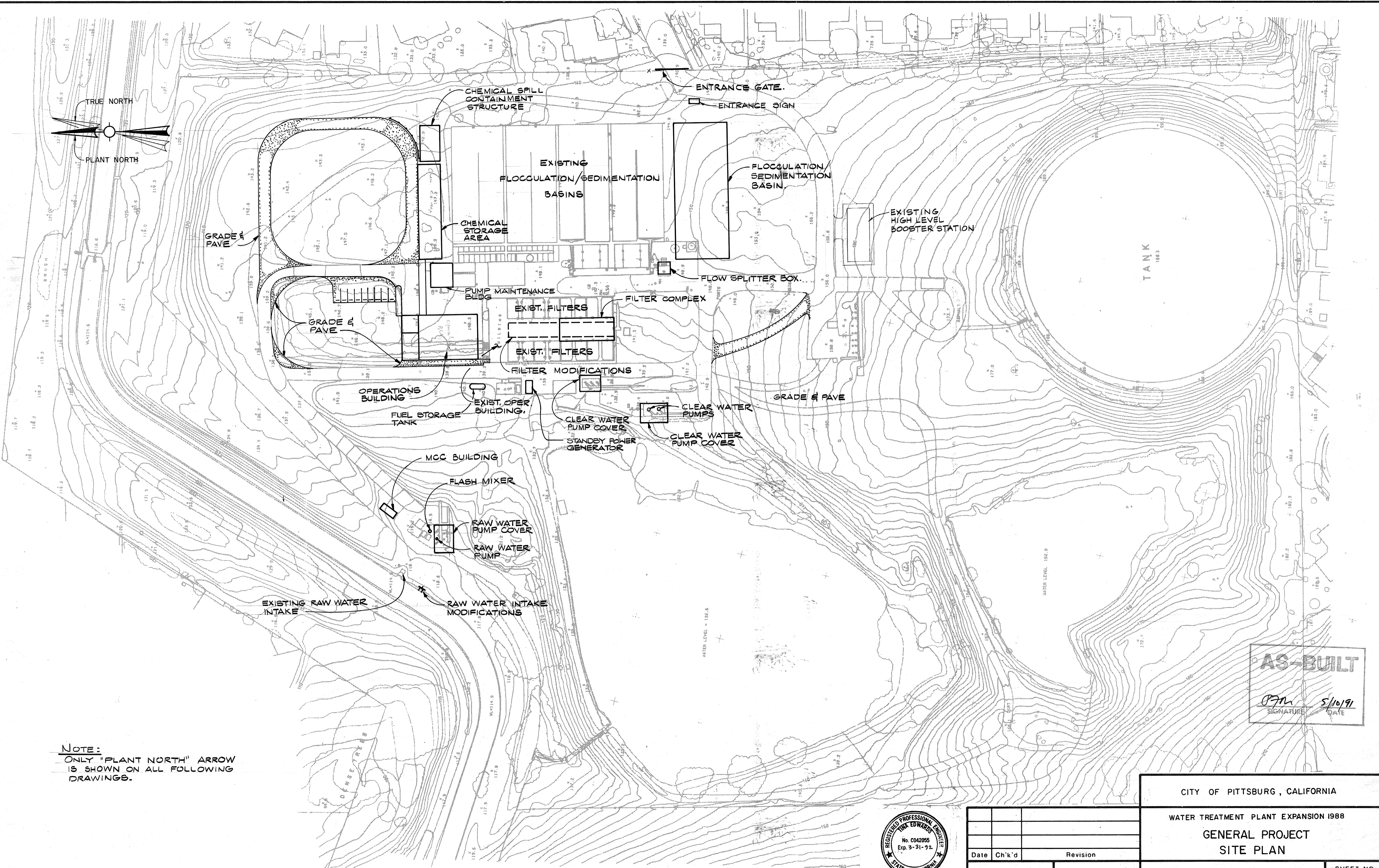
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 Scale: HORIZ.: NONE
 VERT.: 1"=10'

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
HYDRAULIC PROFILE

CAMP DRESSER & McKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
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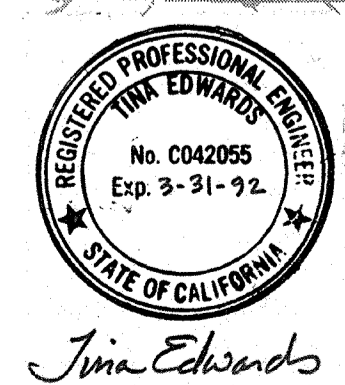
SHEET NO. G-6
 8 of 147

PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



NOTE:
 ONLY "PLANT NORTH" ARROW
 IS SHOWN ON ALL FOLLOWING
 DRAWINGS.

AS-BUILT
 PFM
 SIGNATURE
 5/10/91
 DATE



Date	Ch'k'd	Revision

Designed by: TCE
 Drawn by: VM
 Checked by: MDR
 Approved by: PFM

Date: SEPT. 1988
 Scale: 1" = 50'

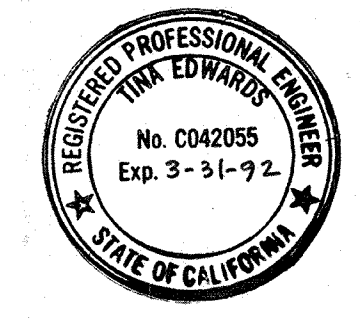
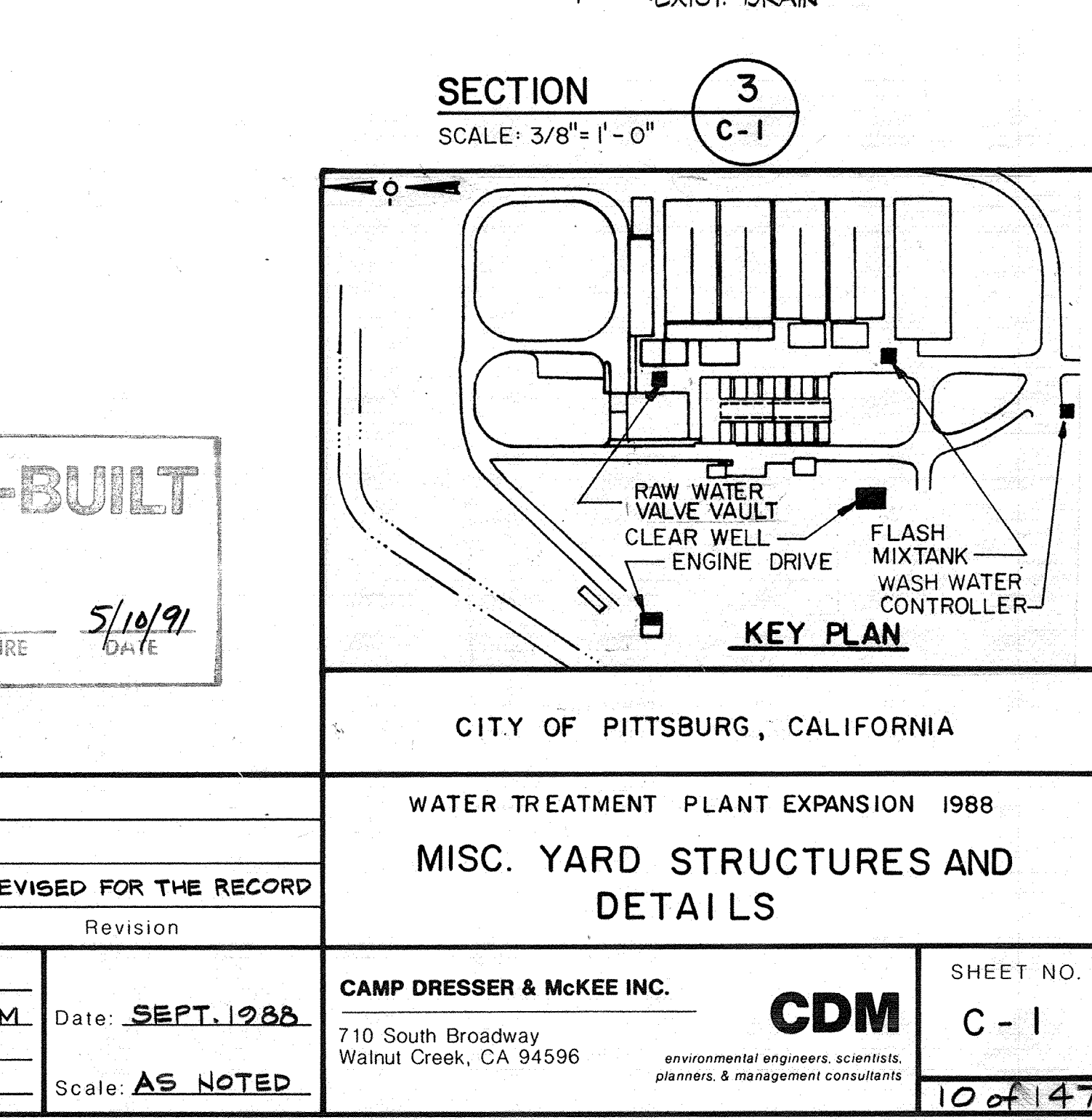
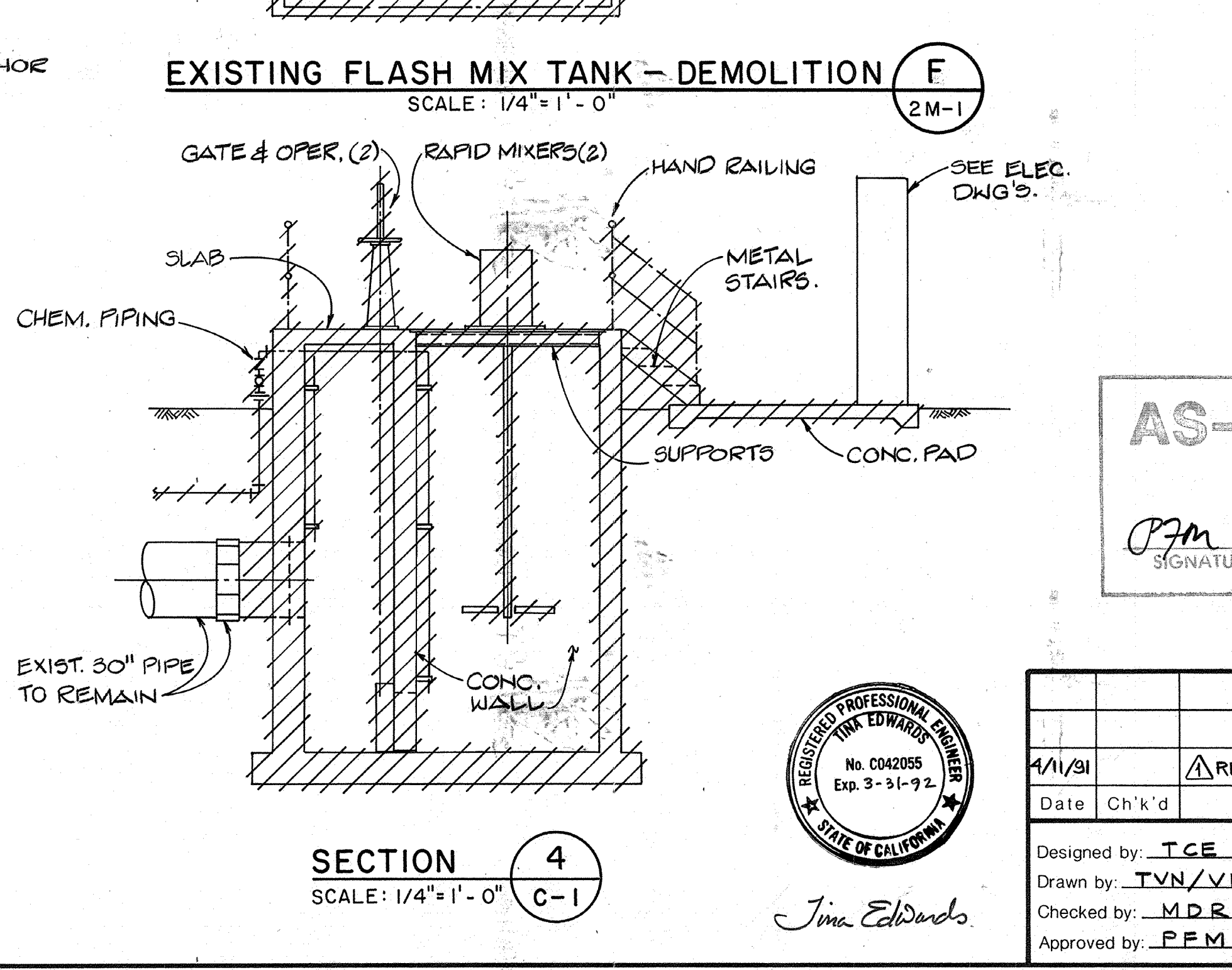
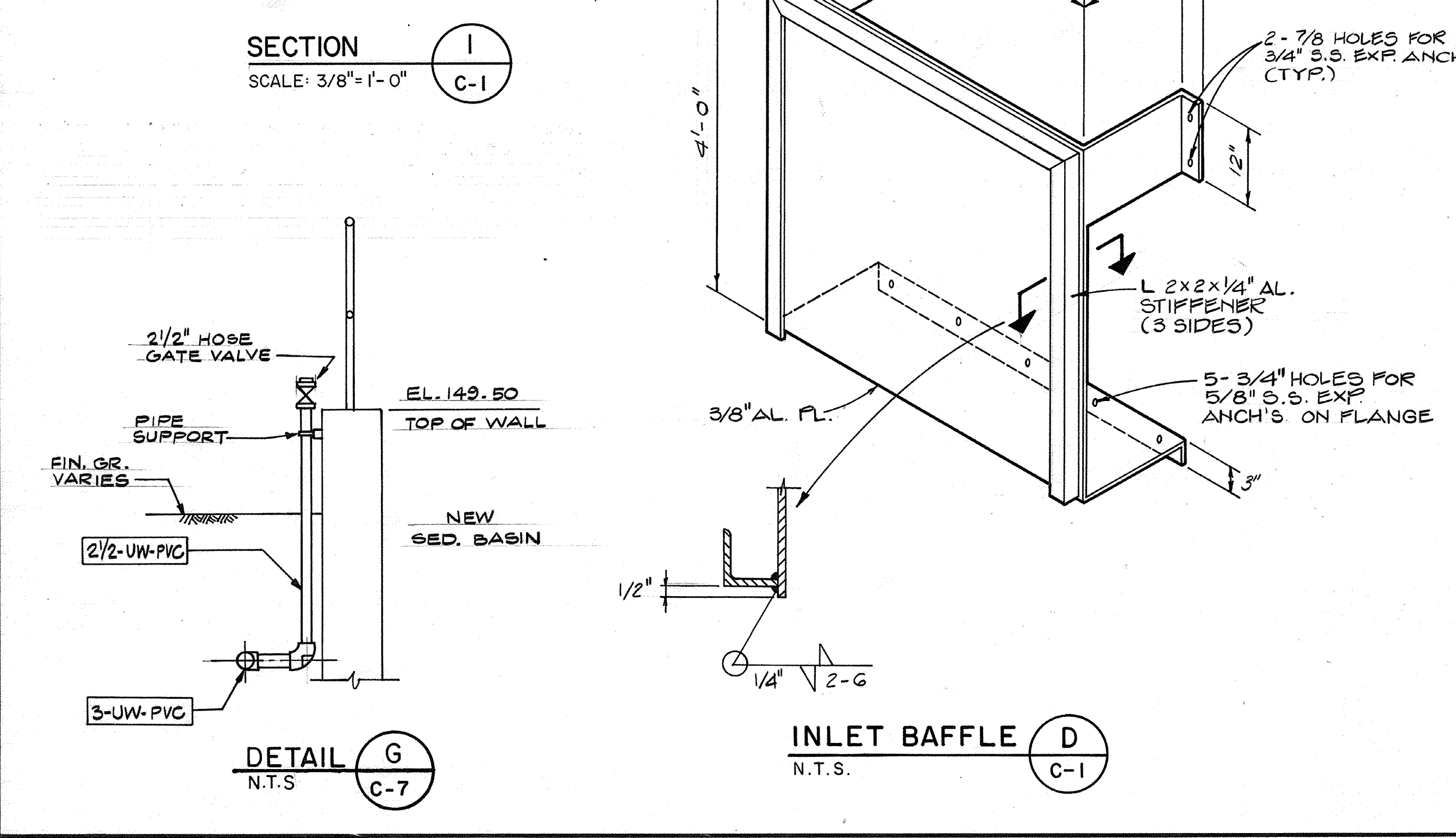
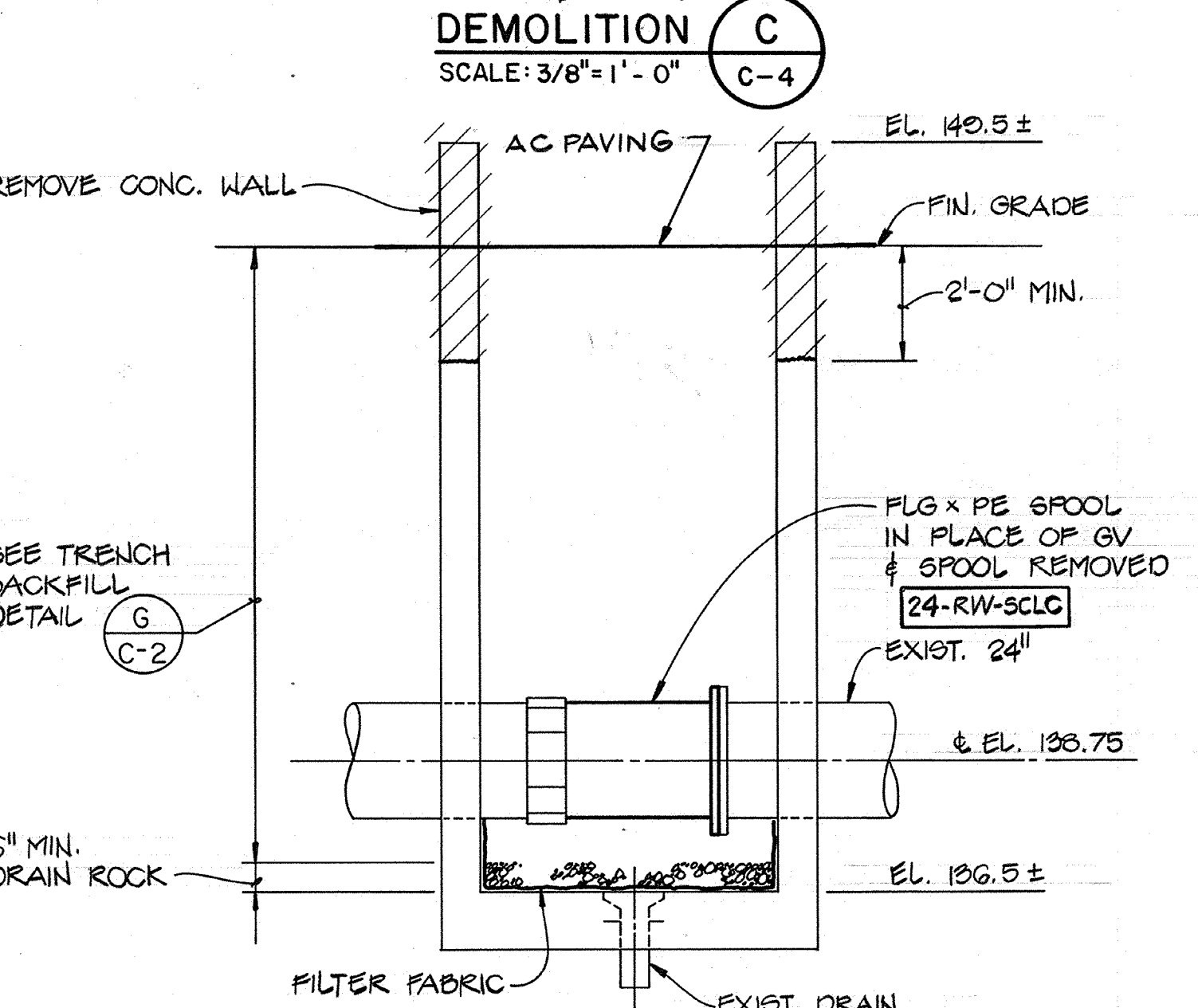
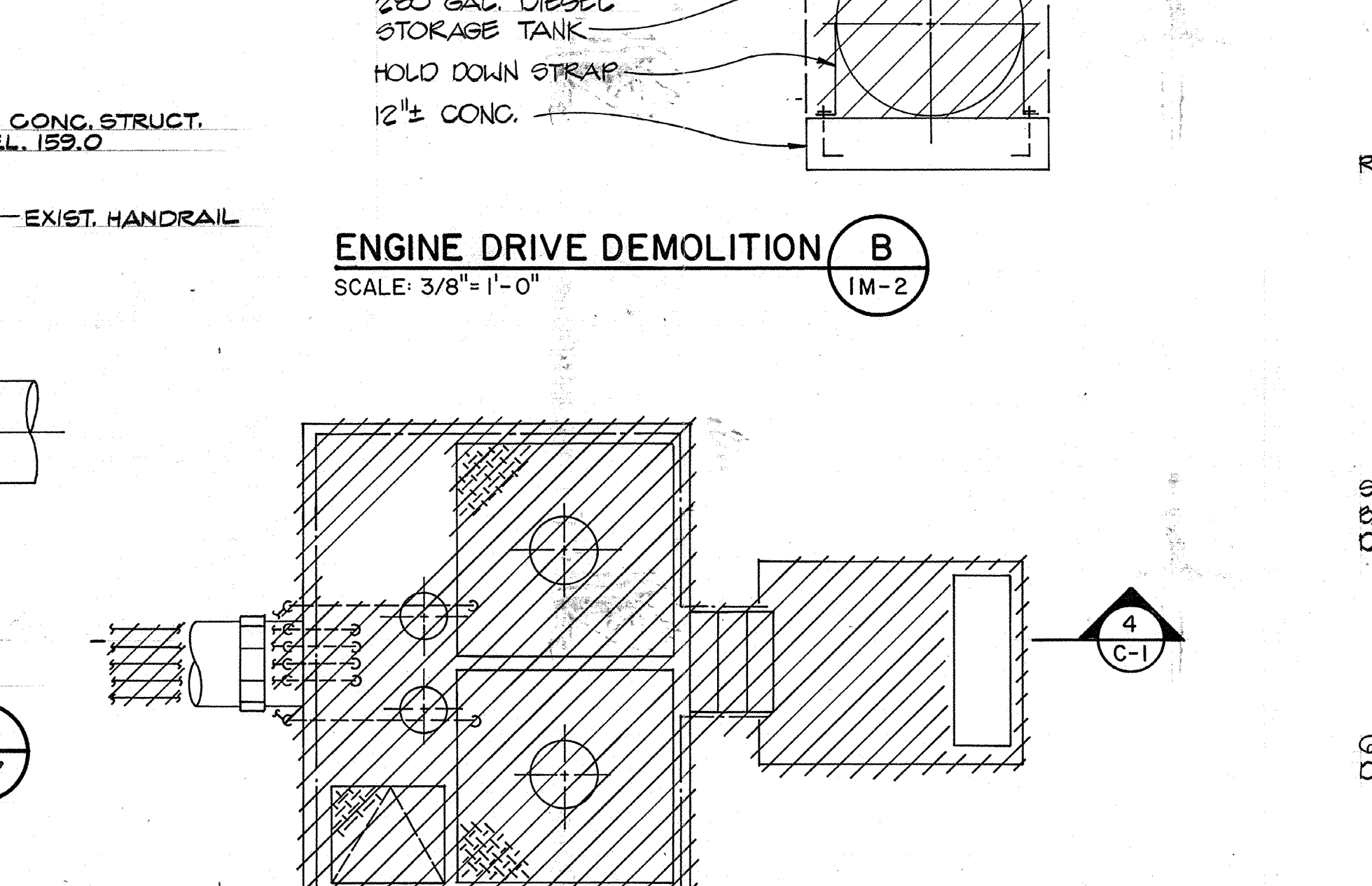
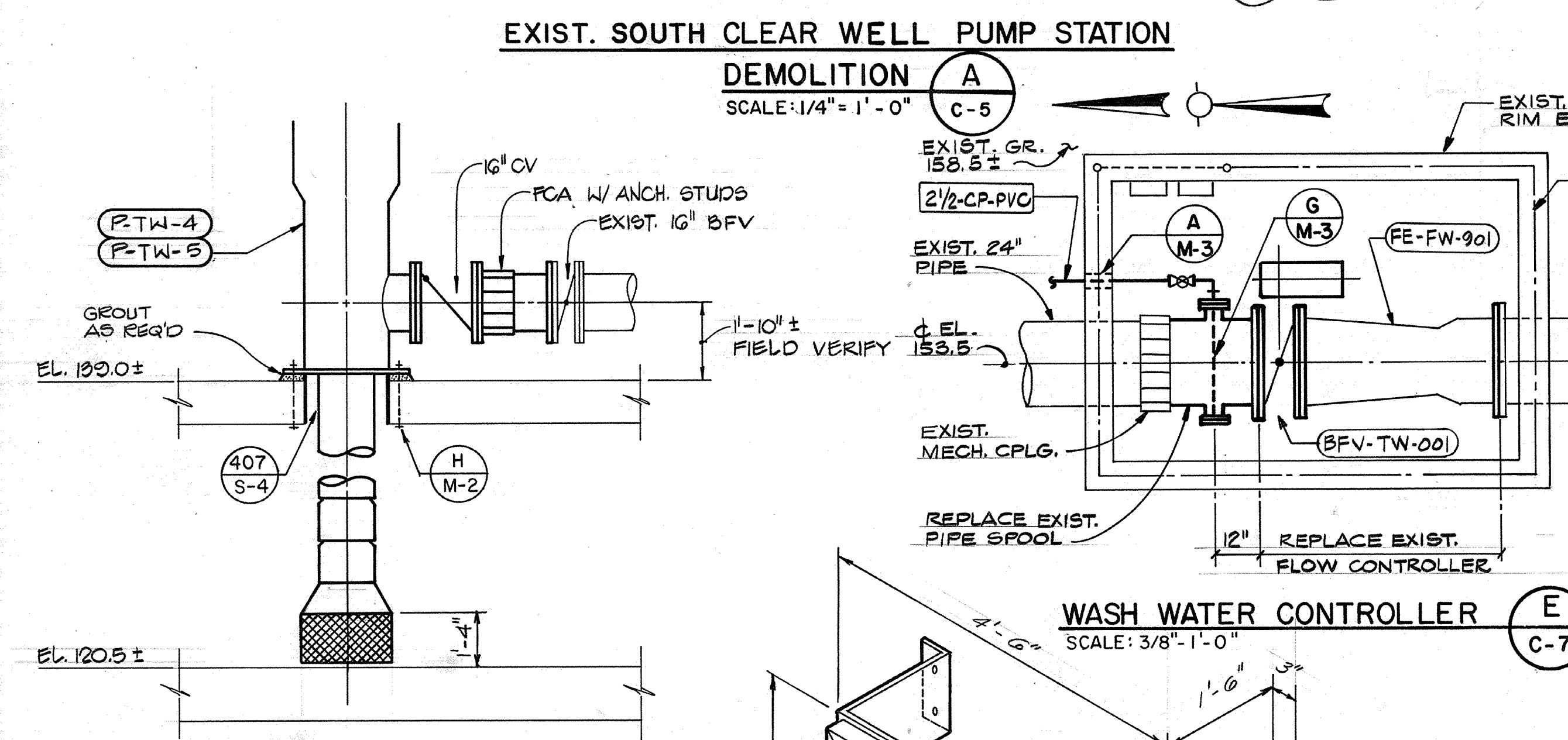
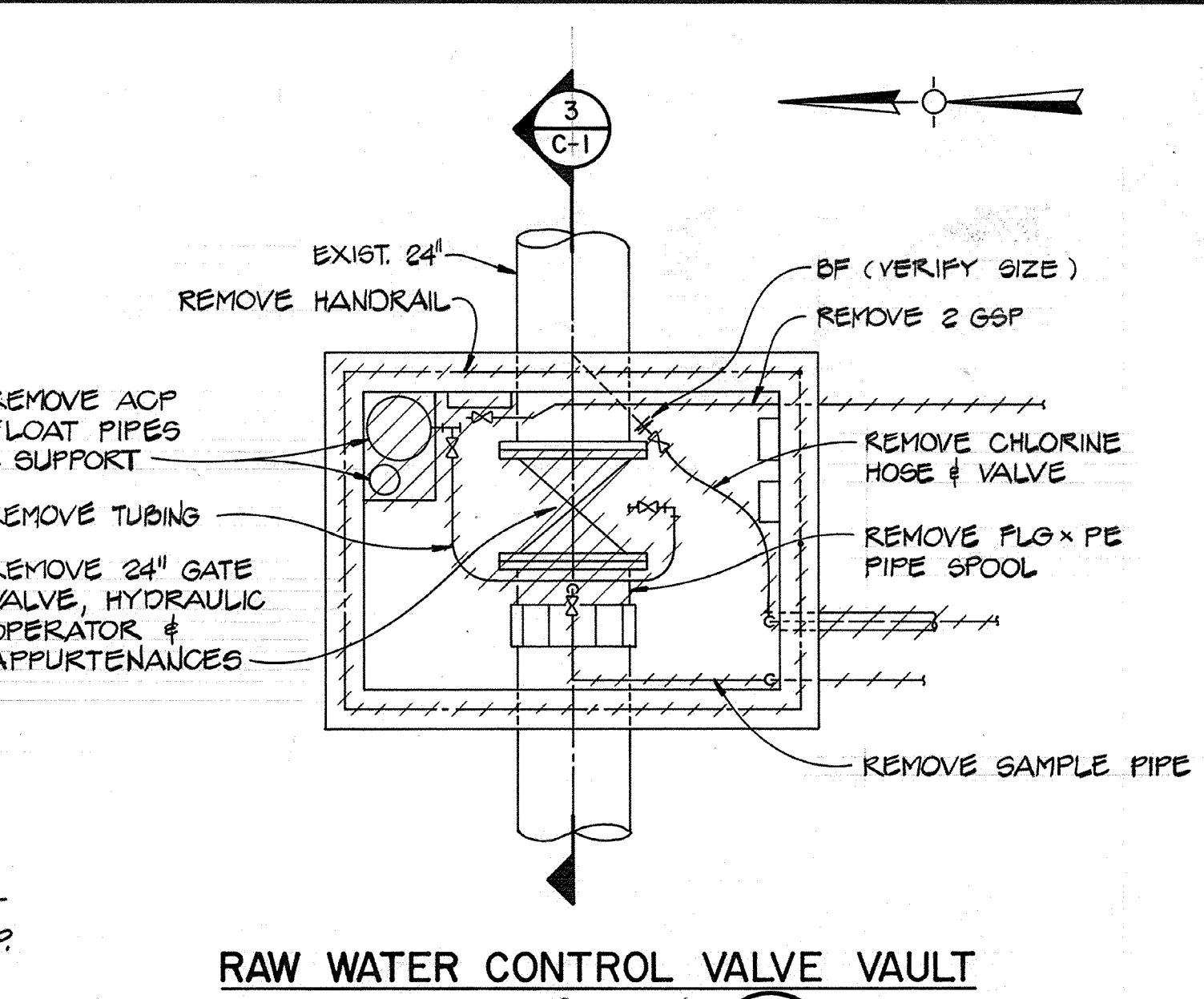
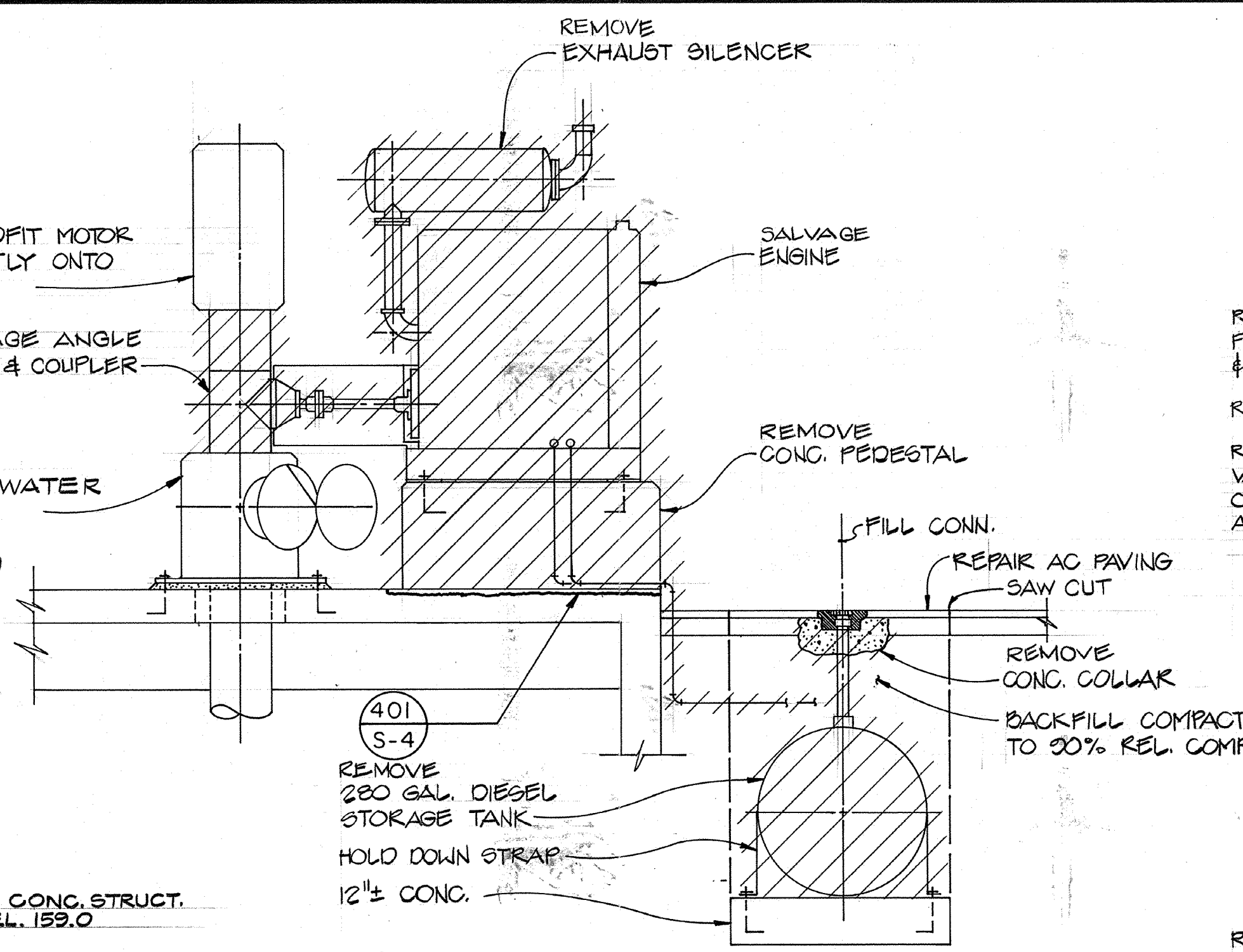
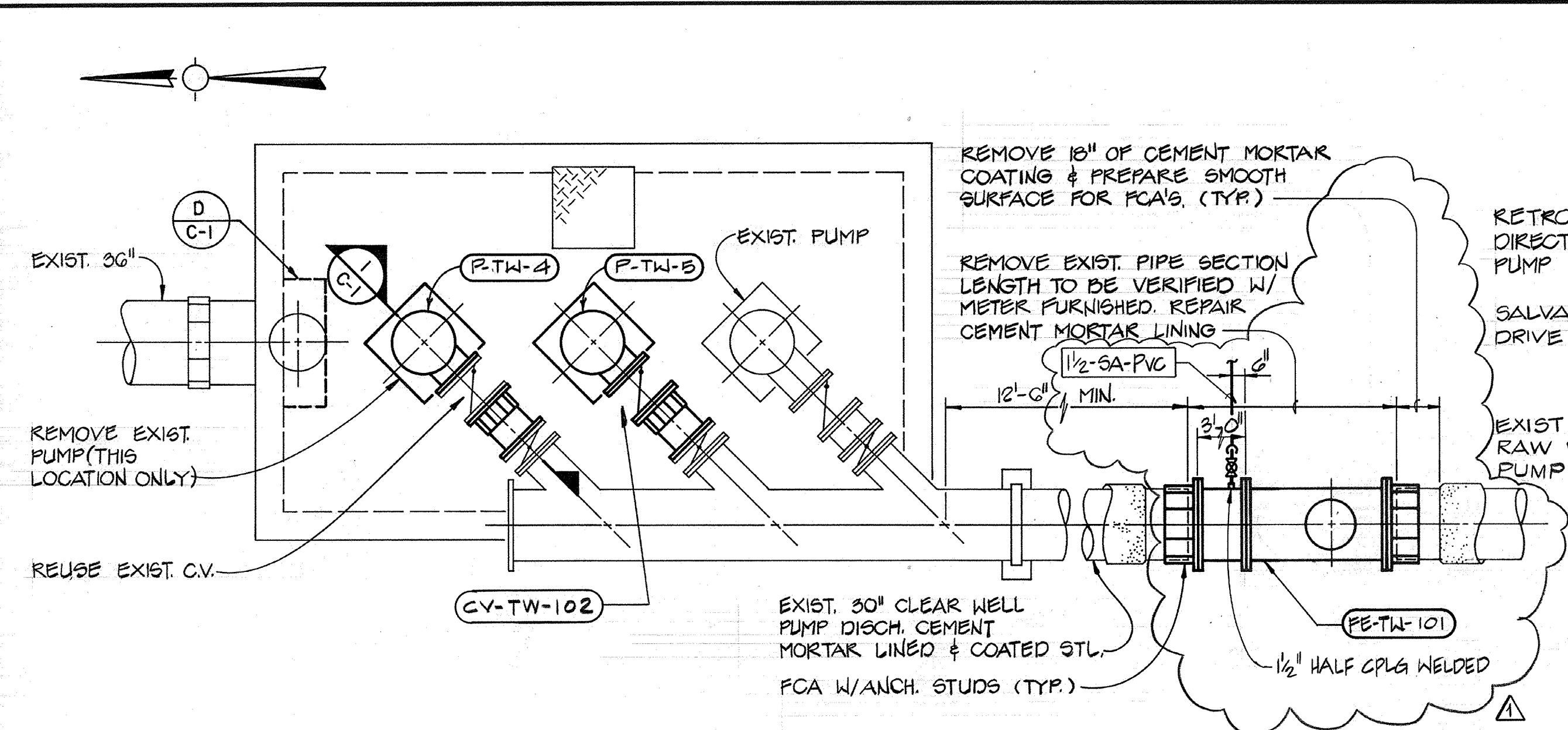
CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
GENERAL PROJECT
SITE PLAN

CAMP DRESSER & McKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners & management consultants

CDM

SHEET NO.
G-7
 9 of 147

111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:

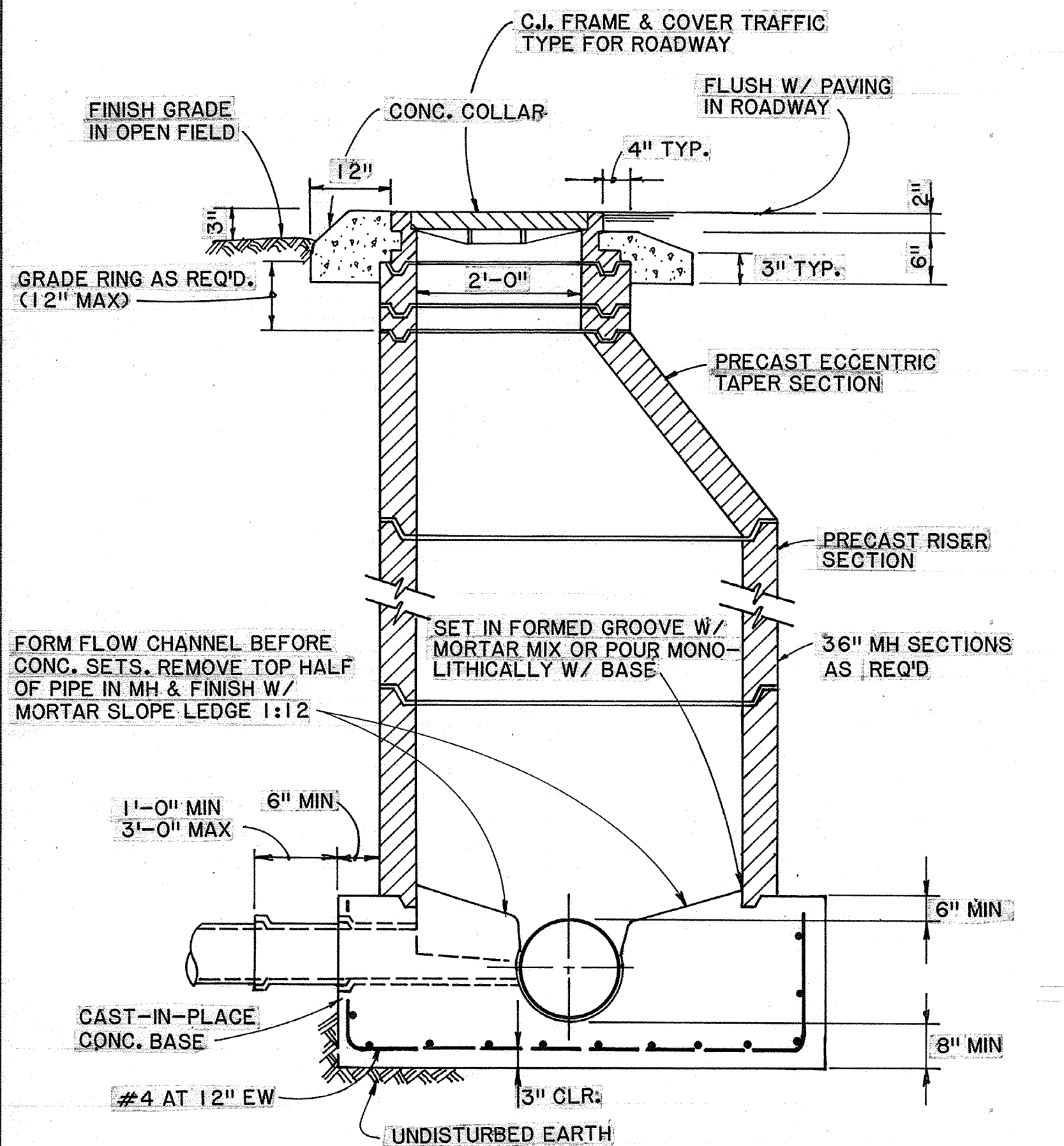


AS-BUILT
 PJM SIGNATURE 5/10/91 DATE

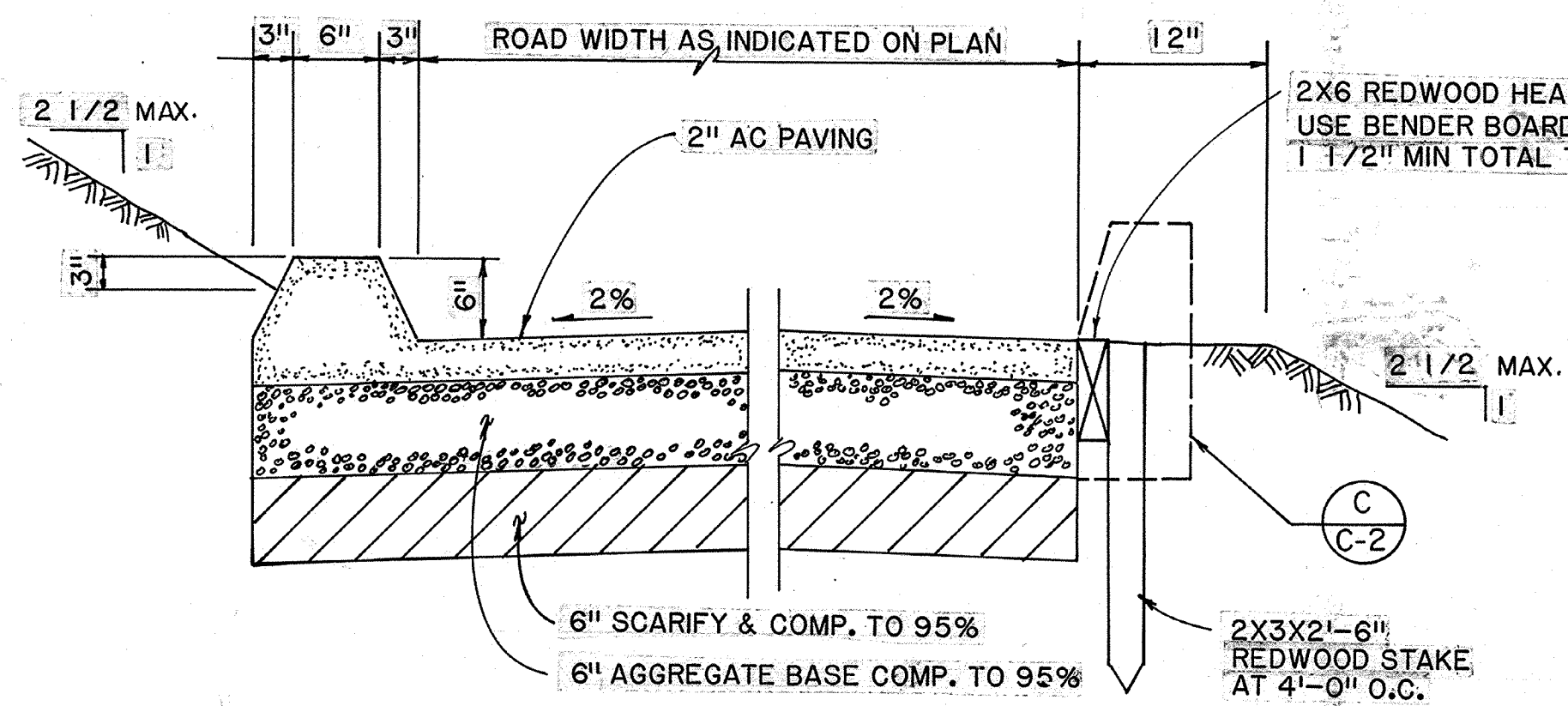
Date:	4/1/91	Revised for the Record
Ch'k'd:		Revision
Designed by:	TCE	
Drawn by:	TVN/VM	Date: SEPT. 1988
Checked by:	MDR	
Approved by:	PEM	Scale: AS NOTED

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 MISC. YARD STRUCTURES AND DETAILS
 CAMP DRESSER & MCKEE INC.
 710 South Broadway, Walnut Creek, CA 94596
 CDM environmental engineers, scientists, planners, & management consultants
 SHEET NO. C-1
 10 of 147

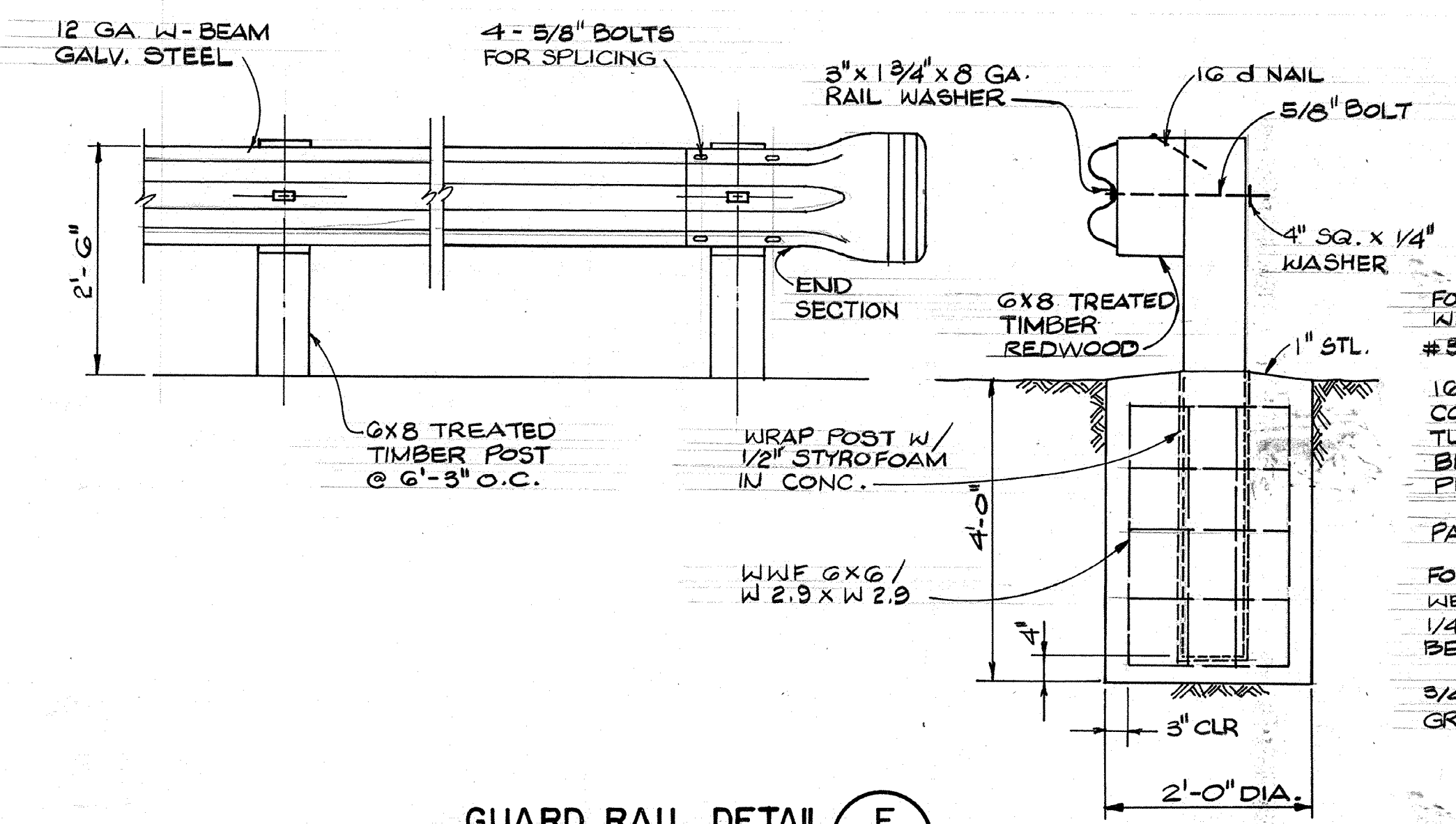
111335
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 Approved by: _____
 PROJECT ENGINEER Date: _____
 Approved by: _____
 PLUMBING Date: _____
 Approved by: _____
 HVAC Date: _____
 Approved by: _____
 INSTRUMENTATION Date: _____
 Approved by: _____
 ELECTRICAL Date: _____
 Approved by: _____
 STRUCTURAL Date: _____
 Approved by: _____
 ARCHITECTURAL Date: _____
 Approved by: _____



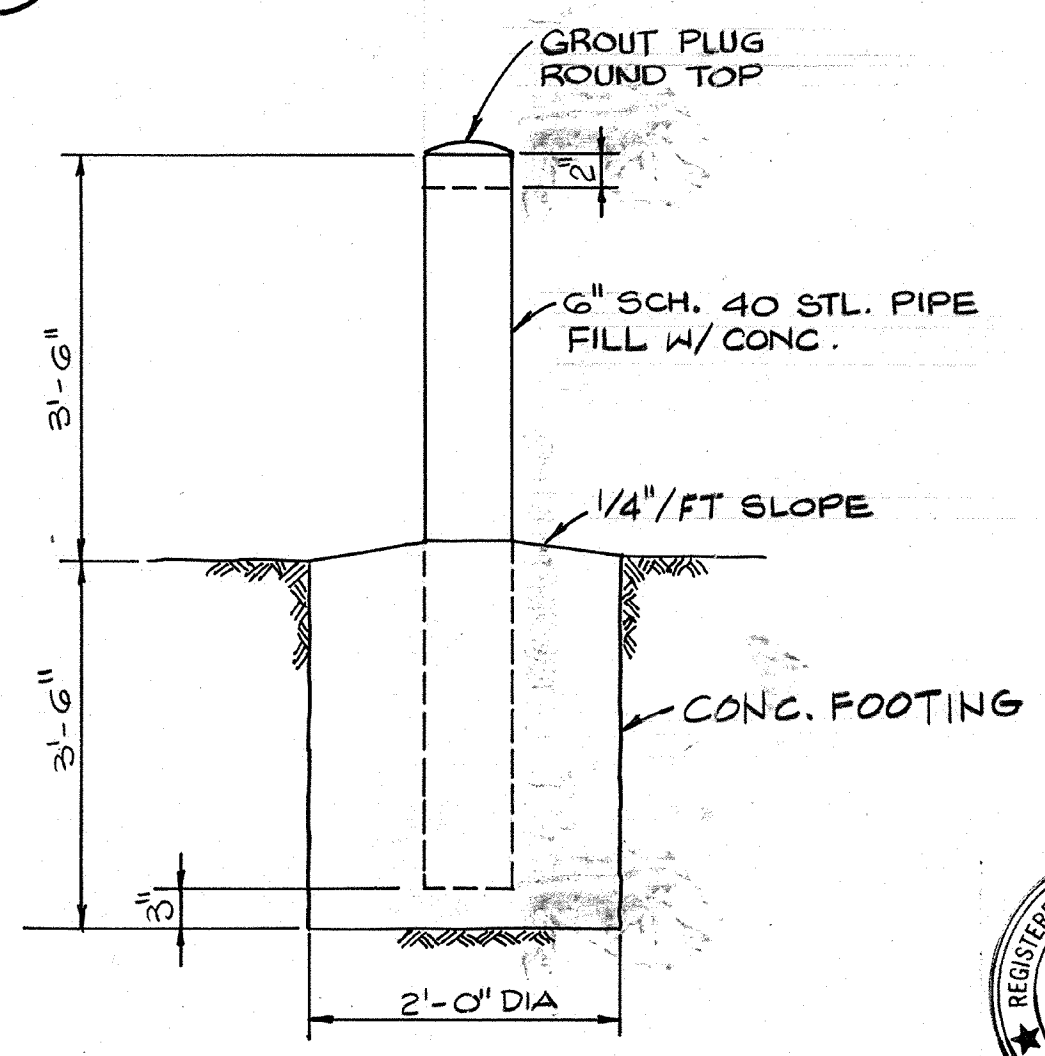
MANHOLE DETAIL A
 N.T.S. (C-6,7)



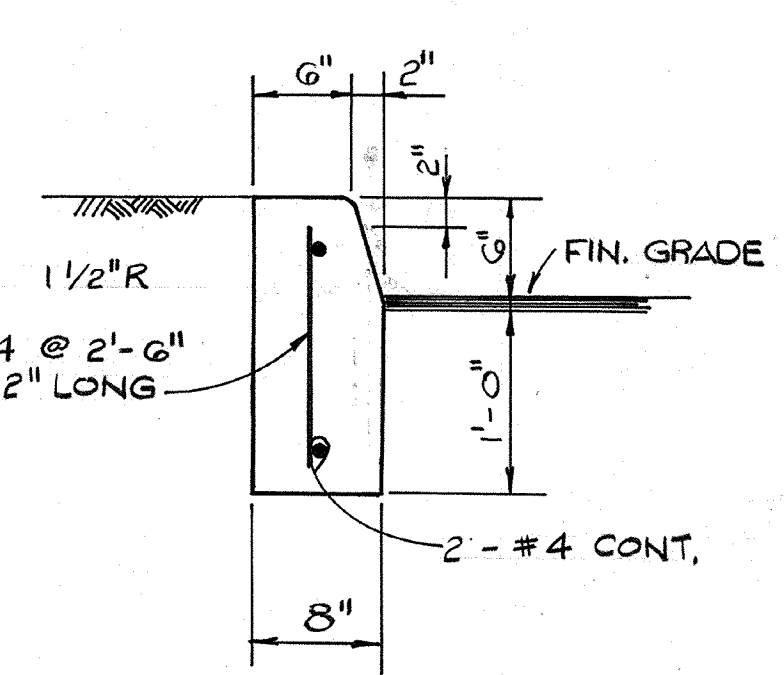
AC PAVING B
 N.T.S. (C-4,5)



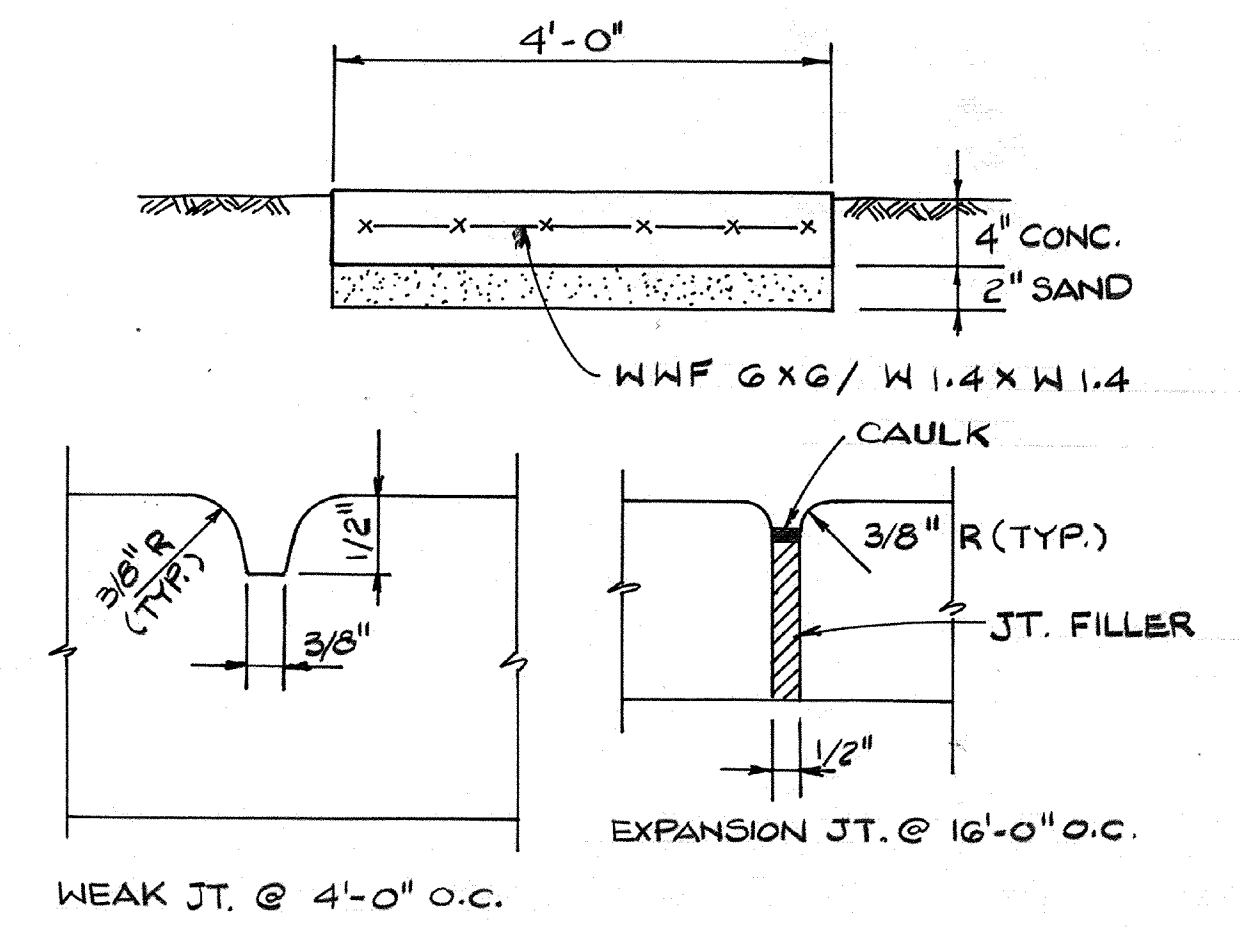
GUARD RAIL DETAIL E
 N.T.S. (C-4)



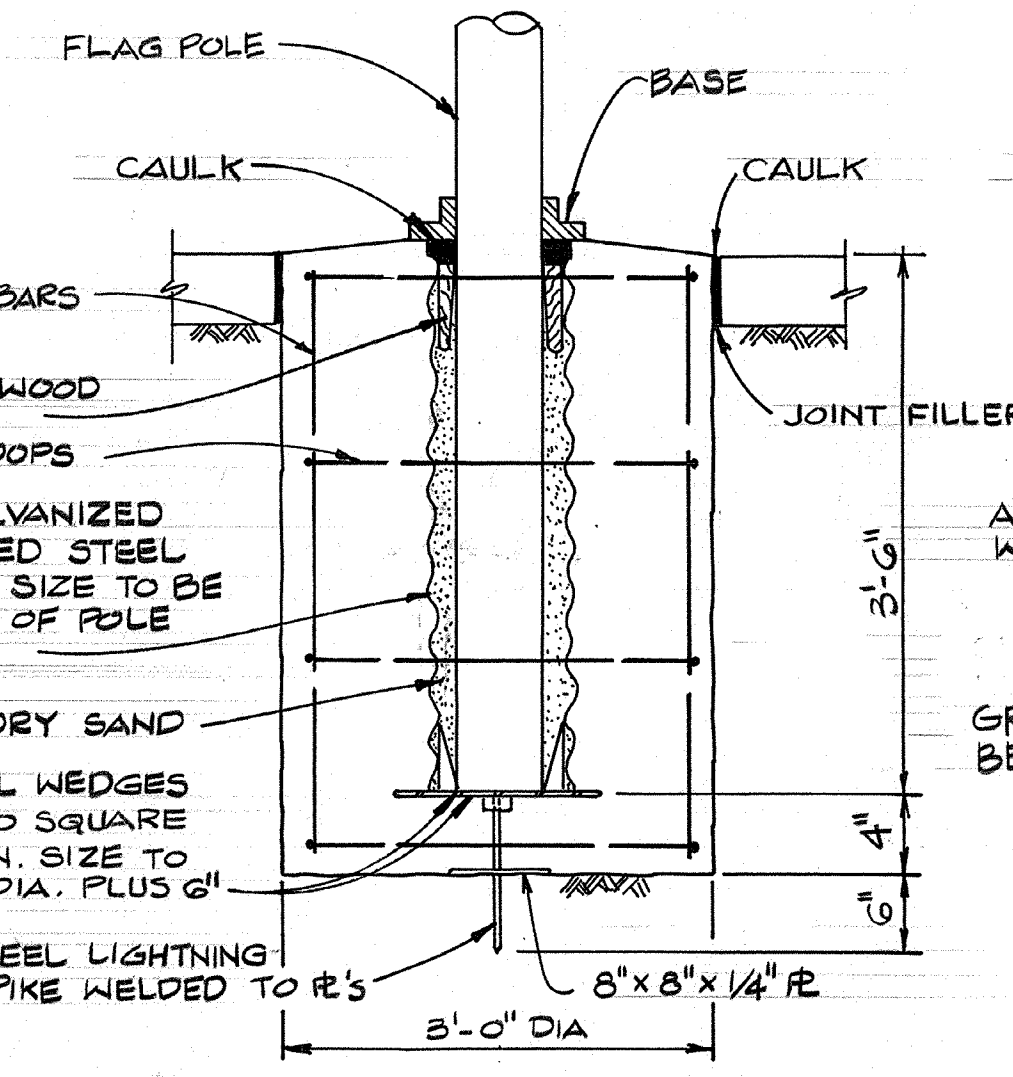
GUARD POST DETAIL J
 N.T.S. (VAR)



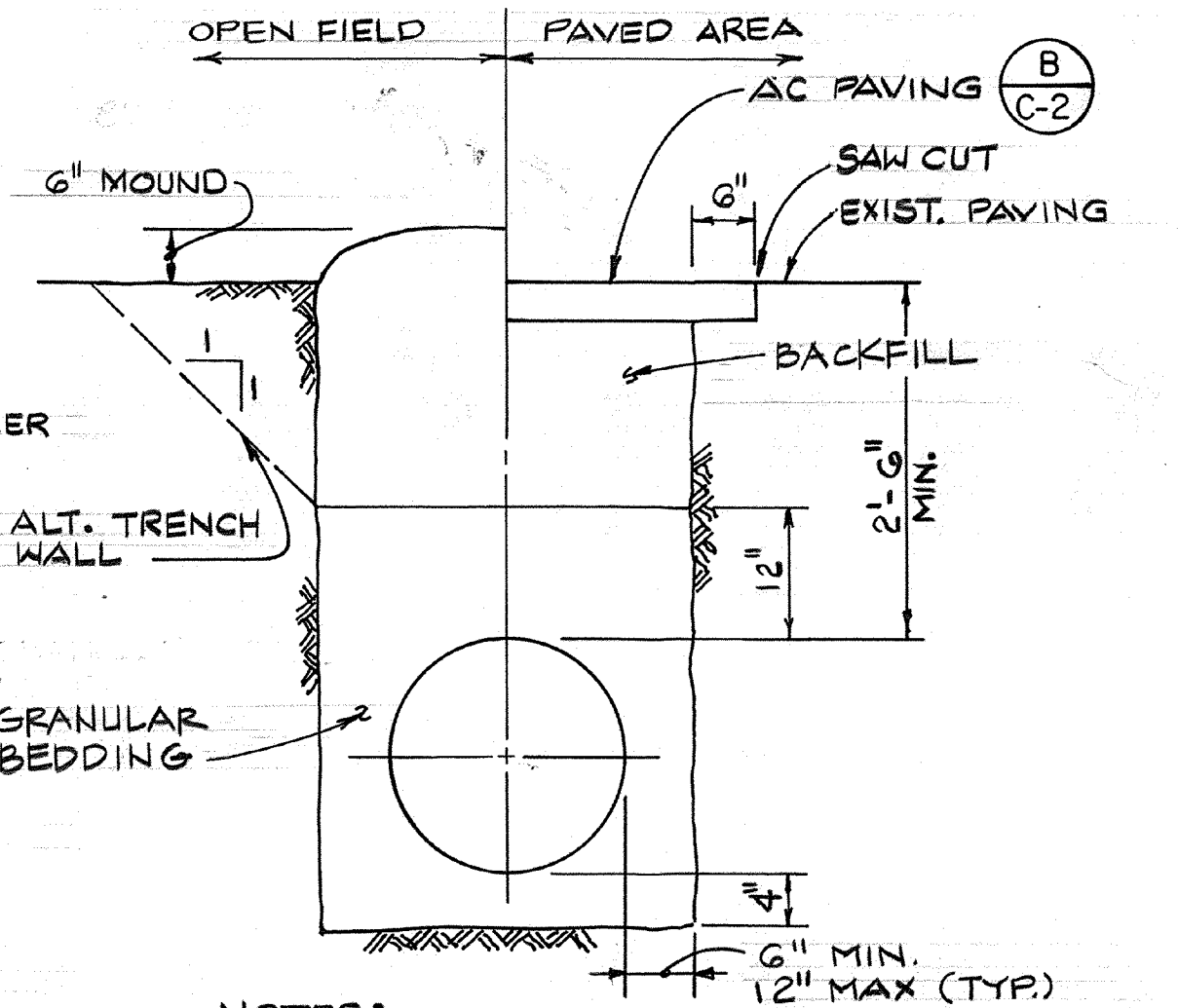
CONCRETE CURB C
 N.T.S. (C-4)



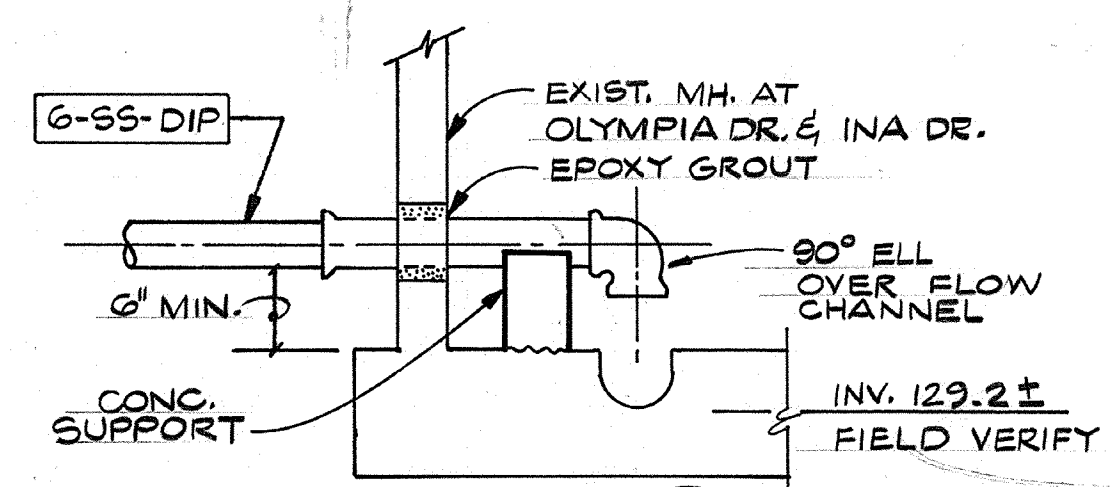
SIDEWALK DETAIL D
 N.T.S. (C-4)



FLAGPOLE FOUNDATION DETAIL F
 N.T.S. (C-4)

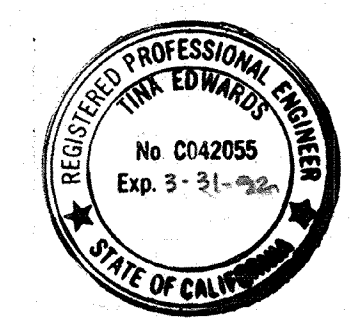


TRENCH BACKFILL DETAIL G
 N.T.S. (VAR)



DETAIL K
 N.T.S. (C-7)

AS-BUILT
 Signature: *PJM* 5/10/91
 DATE

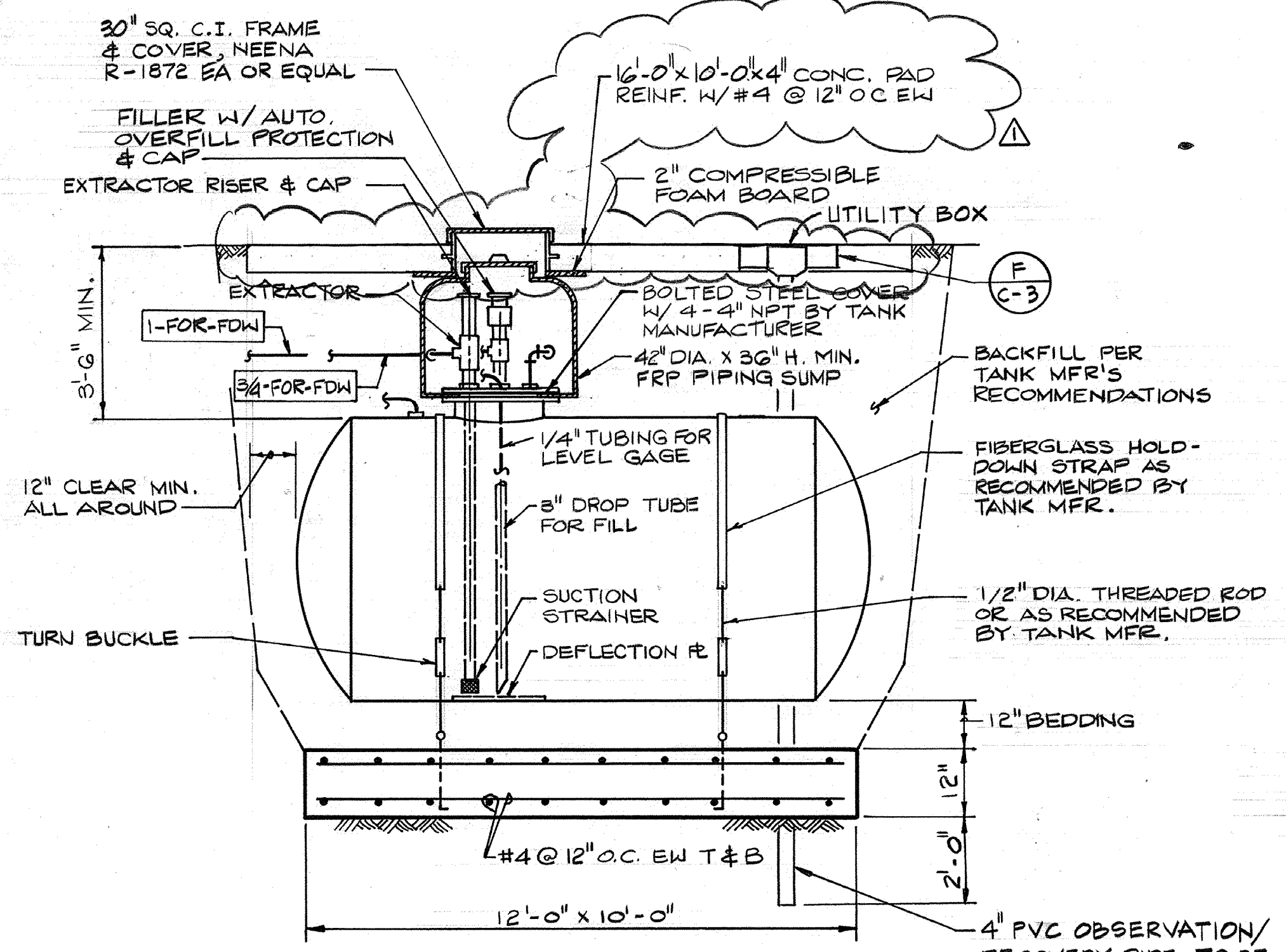


Jim Edwards

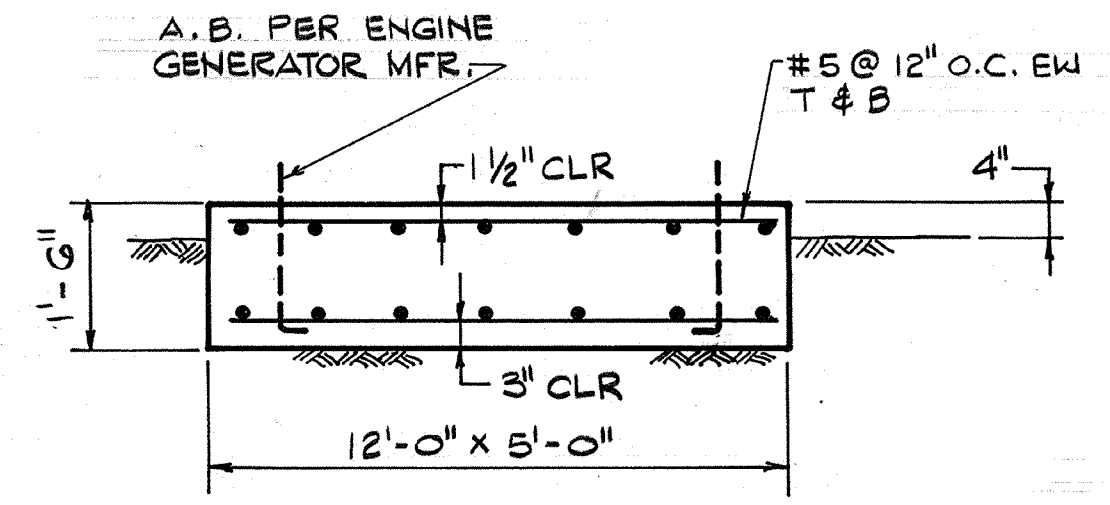
Date	Ch'k'd	Revision
Designed by: TCE	Drawn by: GM	Date: SEPT. 1988
Checked by: MDR	Approved by: PEM	Scale: AS NOTED

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
MISCELLANEOUS YARD DETAILS
 SHEET NO. C-2
 CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists, planners & management consultants
 11 of 147

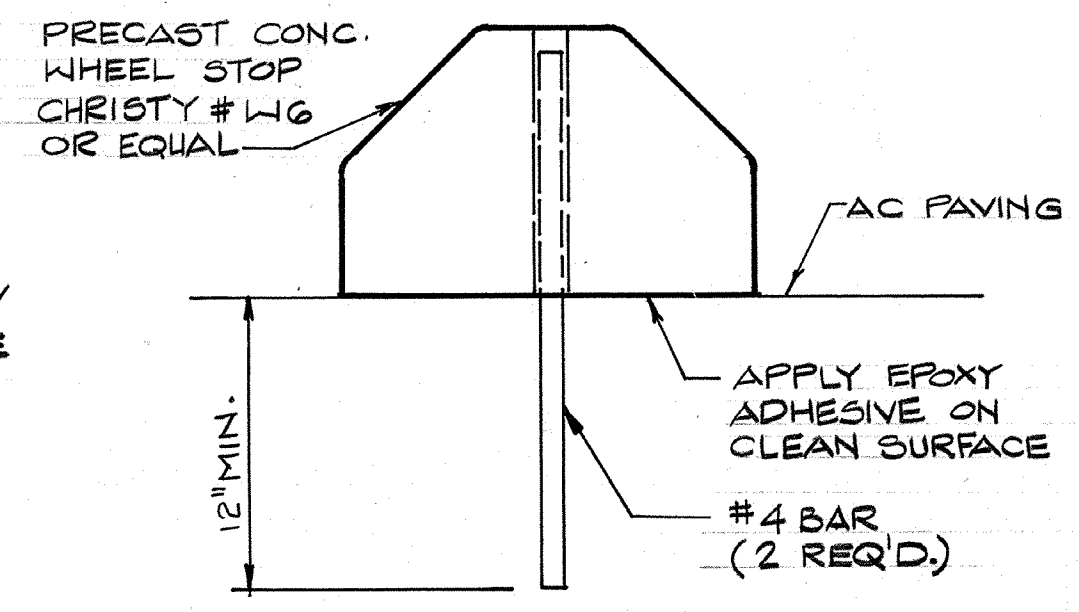
111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



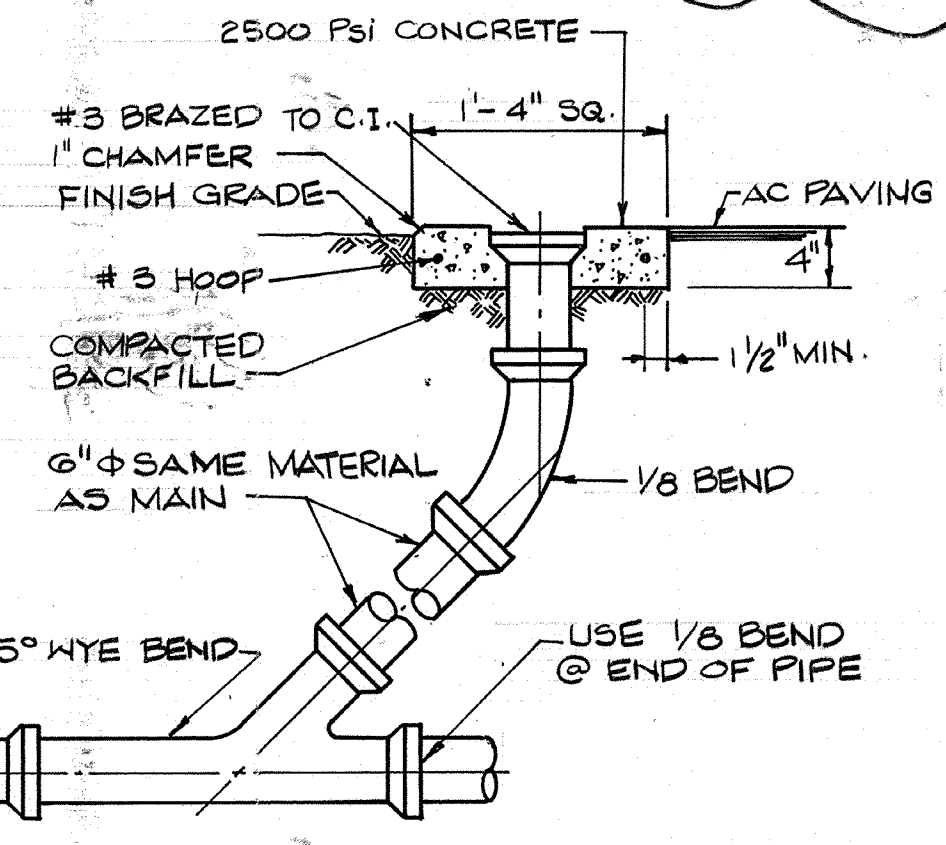
FUEL STORAGE TANK (A)
 N.T.S. C-4



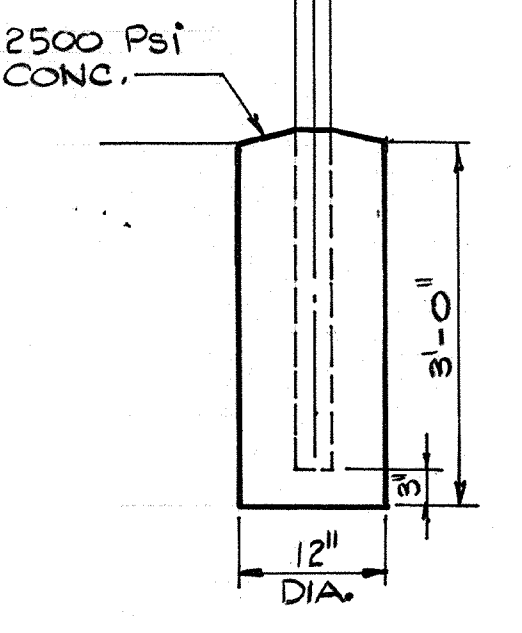
ENGINE GENERATOR PAD (B)
 N.T.S. C-4



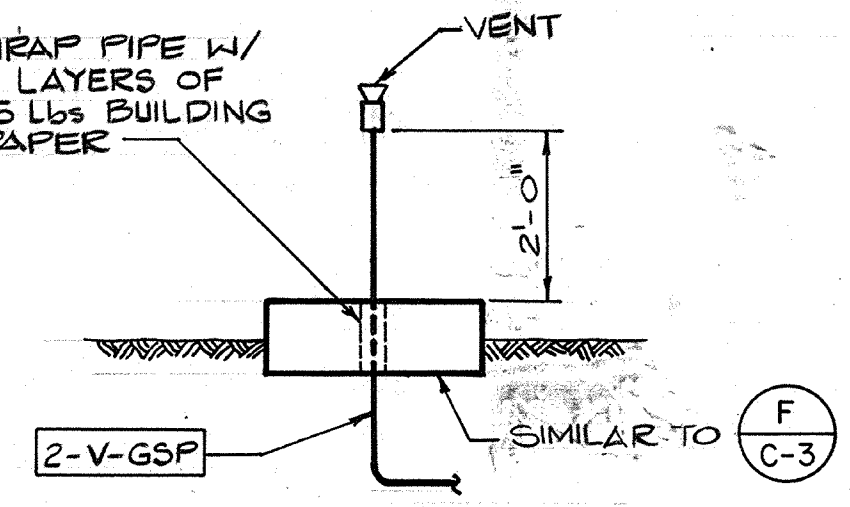
WHEEL STOP (E)
 N.T.S. C-4



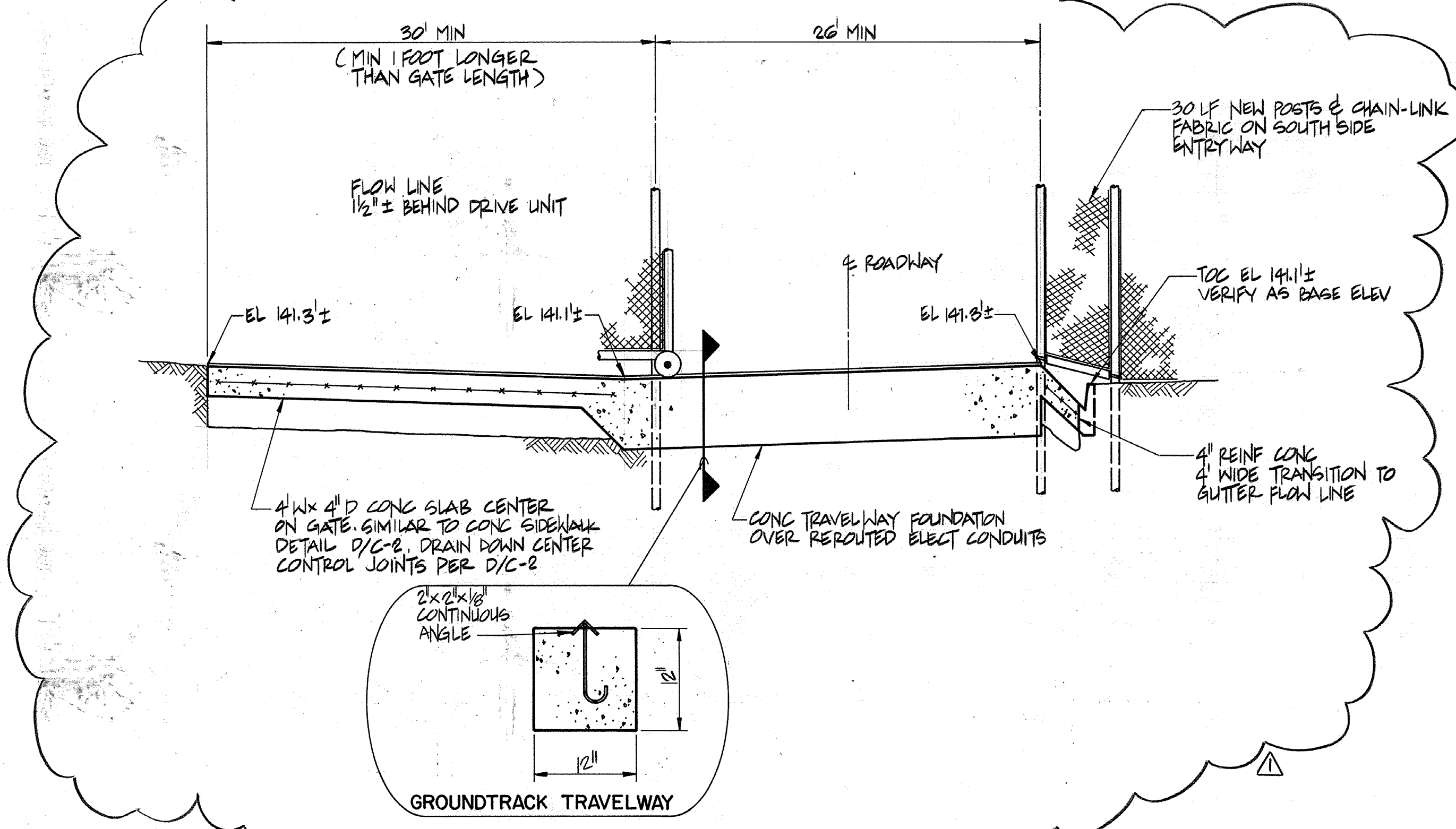
CLEAN-OUT DETAIL (F)
 N.T.S. VAR



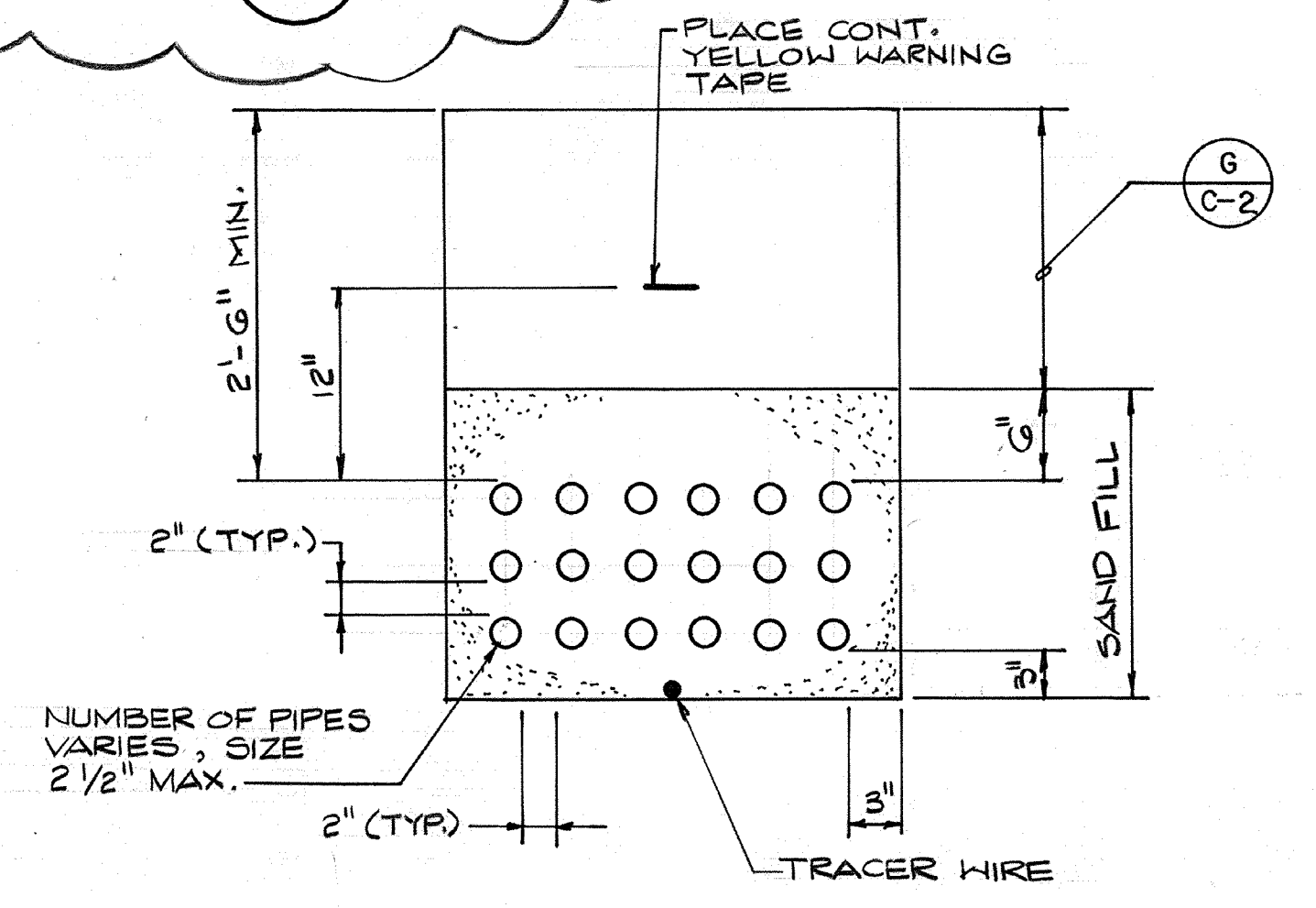
DETAIL (H)
 N.T.S. G-2



DETAIL (J)
 N.T.S. C-6

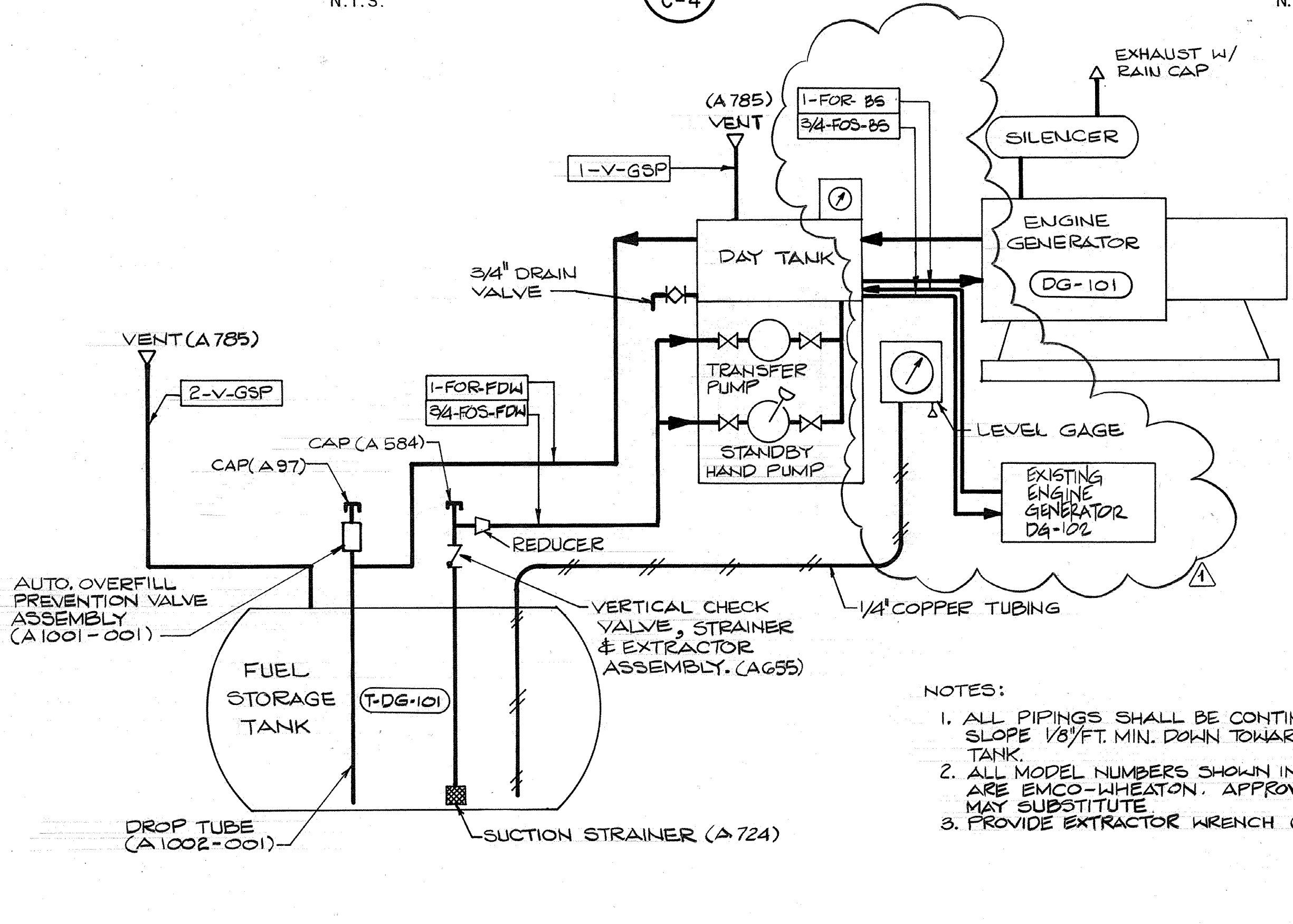


GATE DETAIL (D)
 N.T.S. C-5



TYPICAL MULTI-PIPE TRENCH (G)
 N.T.S. C-6.7

NOTES:
 1. ALL RECOMMENDATIONS BY TANK MFR. REGARDING INSTALLATION OF TANK SHALL BE OBSERVED IN ADDITION TO INFORMATION GIVEN IN THIS DETAIL.
 2. SEE SCHEMATIC FOR PIPING.



STANDBY POWER FUEL SYSTEM - SCHEMATIC (C)
 N.T.S.

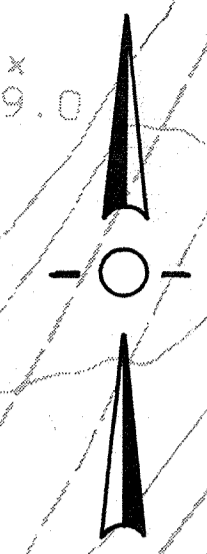
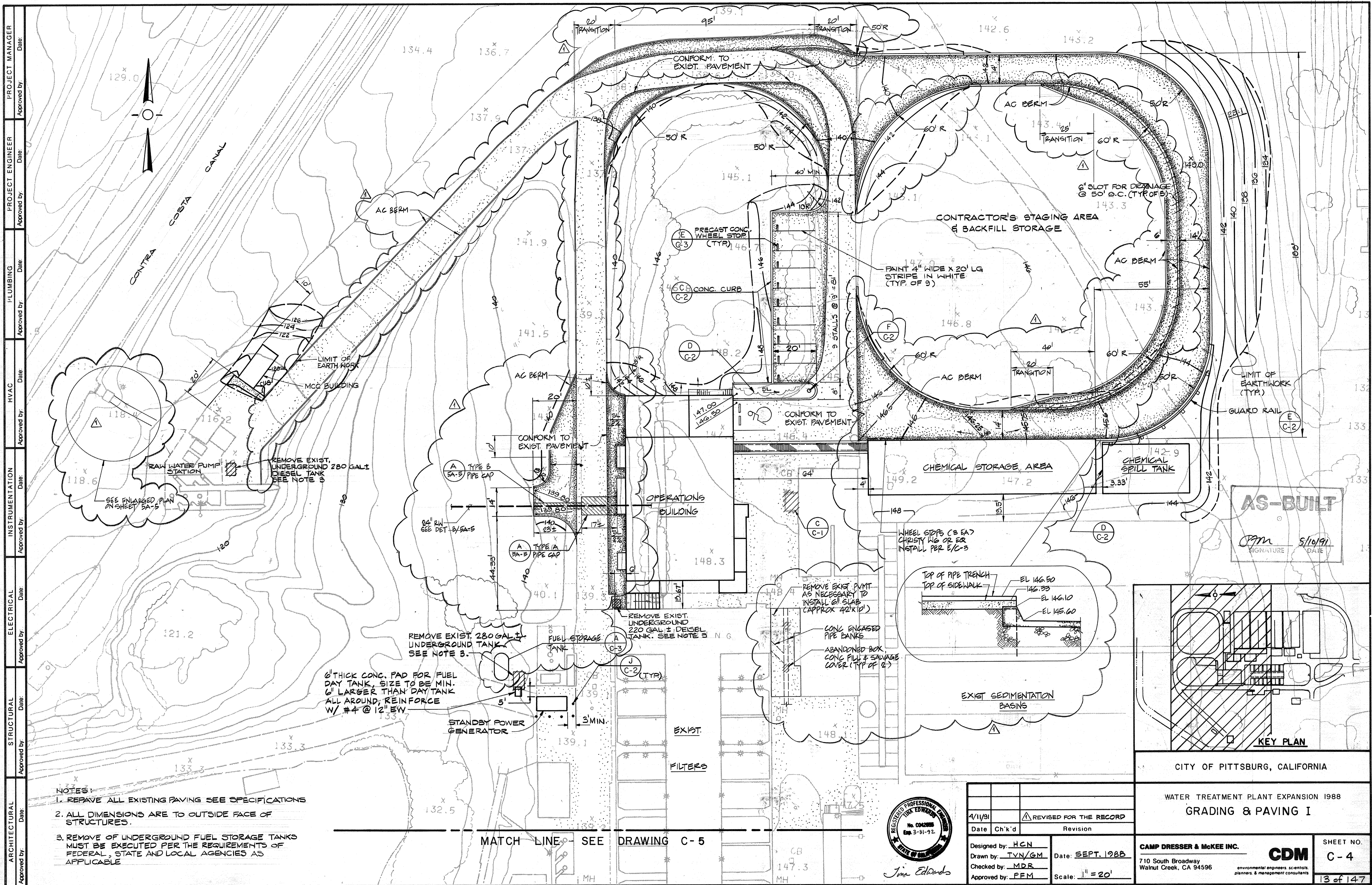
NOTES:
 1. ALL PIPINGS SHALL BE CONTINUOUSLY SLOPE 1/8" FT. MIN. DOWN TOWARD STORAGE TANK.
 2. ALL MODEL NUMBERS SHOWN IN PARANTHESES ARE EMCO-WHEATON. APPROVED EQUAL MAY SUBSTITUTE.
 3. PROVIDE EXTRACTOR WRENCH (A 560)

AS-BUILT
 Signature: PFM Date: 5/10/91



Date	Ch'k'd	Revision
4/11/91		REVISOR FOR THE RECORD
Designed by:	TCE	
Drawn by:	GM	Date: SEPT. 1988
Checked by:	MDR	
Approved by:	PFM	Scale: AS NOTED

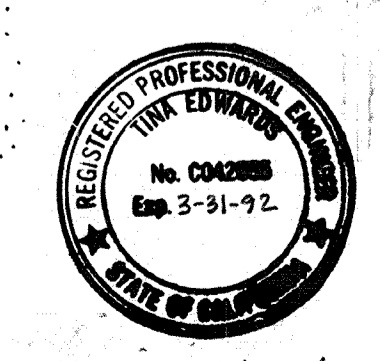
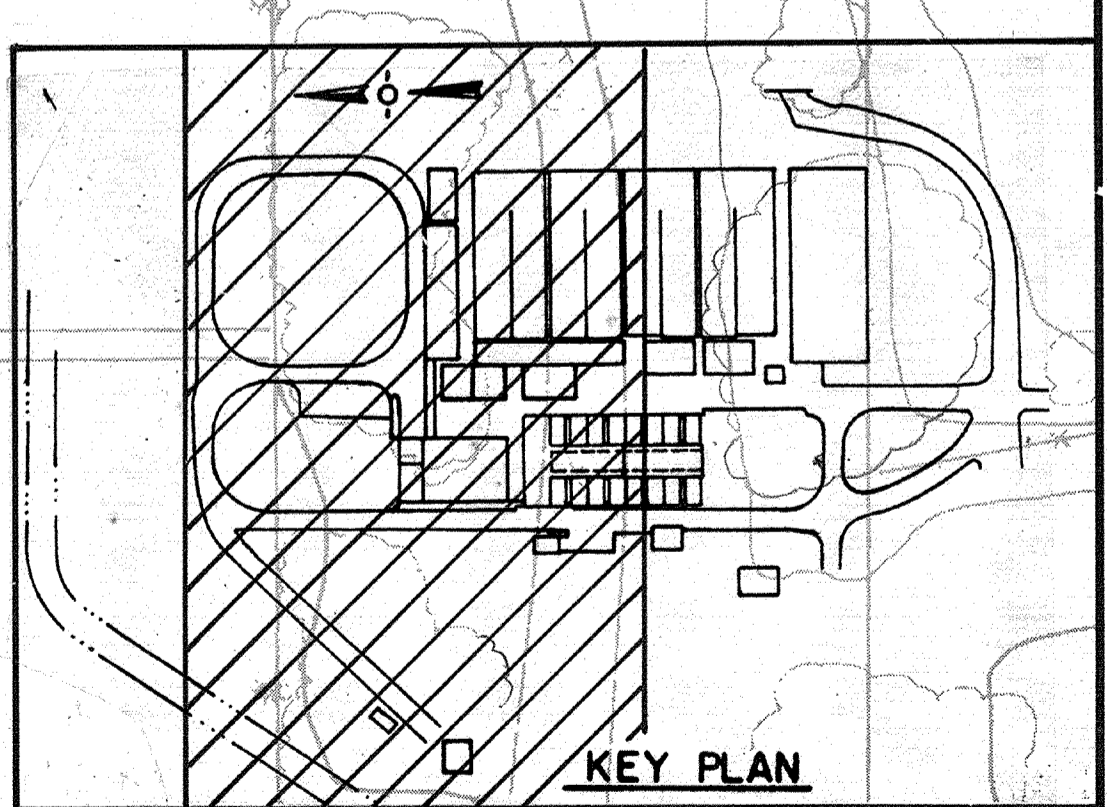
CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
MISCELLANEOUS YARD DETAILS
 CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners & management consultants
 SHEET NO. **C-3**
 12 of 147



- NOTES:**
1. REPAVE ALL EXISTING PAVING SEE SPECIFICATIONS
 2. ALL DIMENSIONS ARE TO OUTSIDE FACE OF STRUCTURES.
 3. REMOVE OF UNDERGROUND FUEL STORAGE TANKS MUST BE EXECUTED PER THE REQUIREMENTS OF FEDERAL, STATE AND LOCAL AGENCIES AS APPLICABLE

MATCH LINE - SEE DRAWING C-5

AS-BUILT
 Signature: *[Signature]*
 Date: 5/10/91



Date	4/11/91	Revised for the Record
Ch'k'd		Revision
Designed by:	H.C.N.	
Drawn by:	T.V.N./G.M.	Date: SEPT. 1988
Checked by:	M.D.R.	Scale: 1" = 20'
Approved by:	P.F.M.	

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

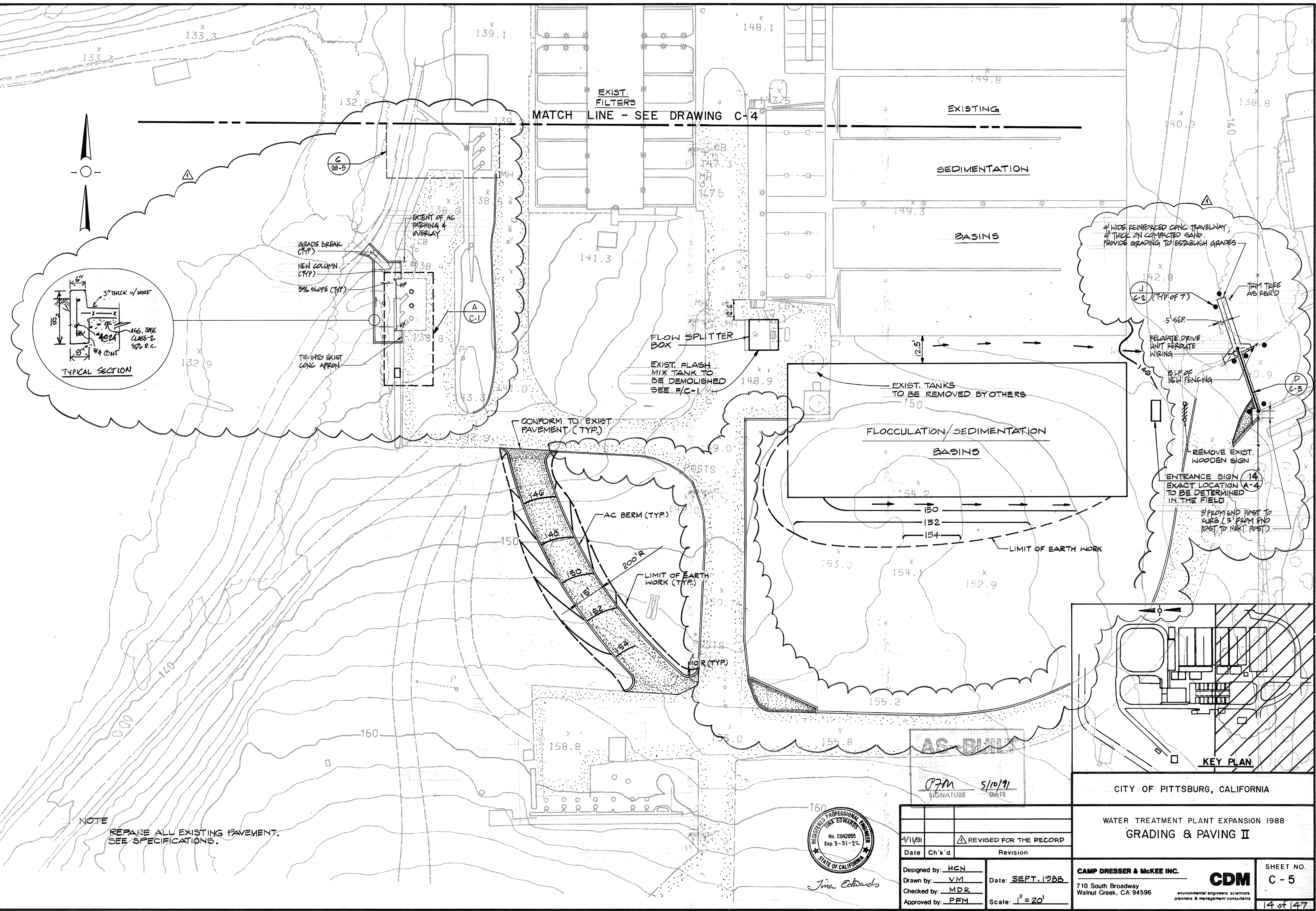
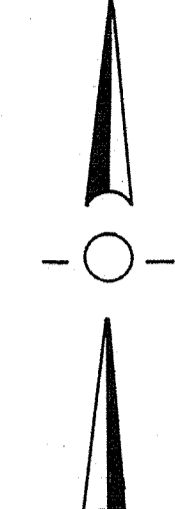
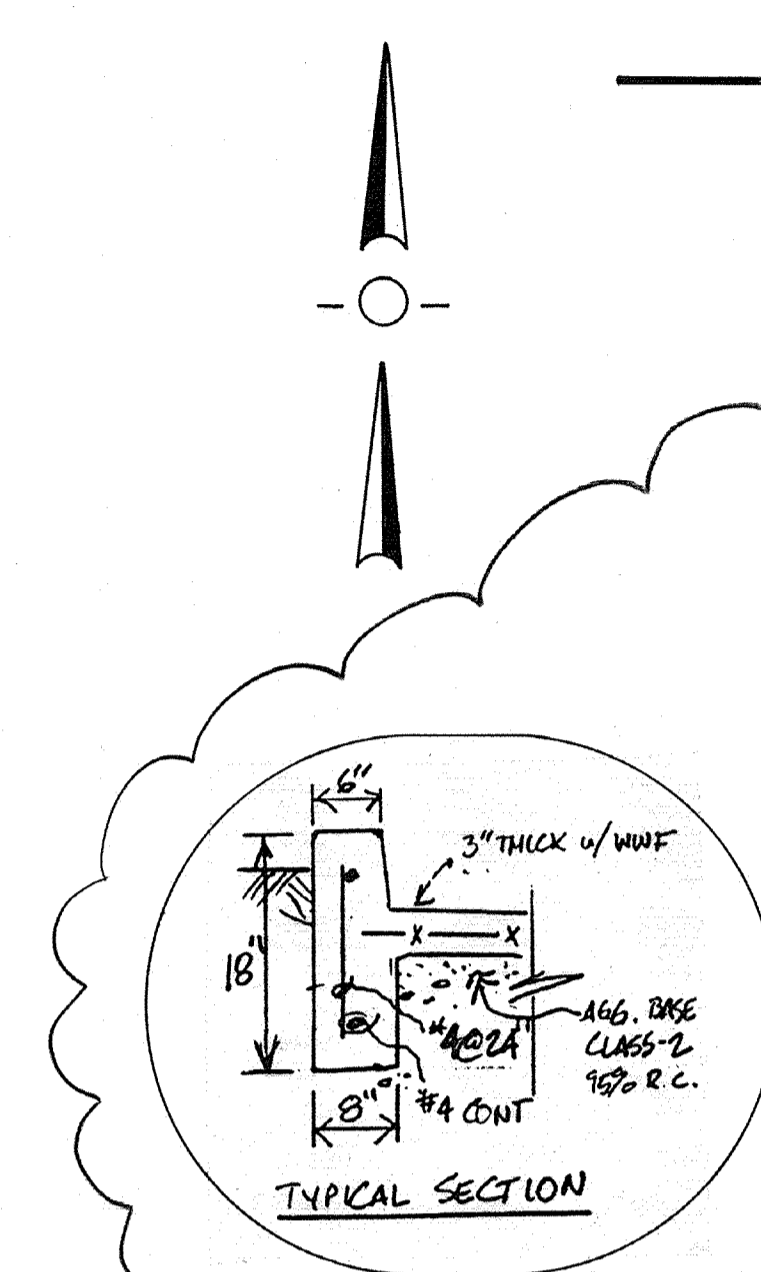
GRADING & PAVING I

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

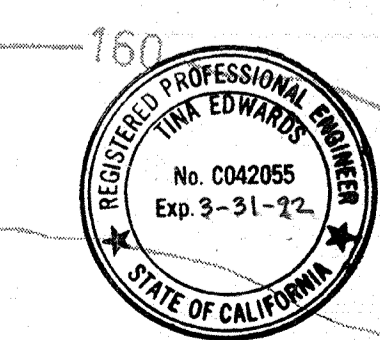
CDM
 environmental engineers, scientists,
 planners & management consultants

SHEET NO.
C-4
 13 of 147

PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____

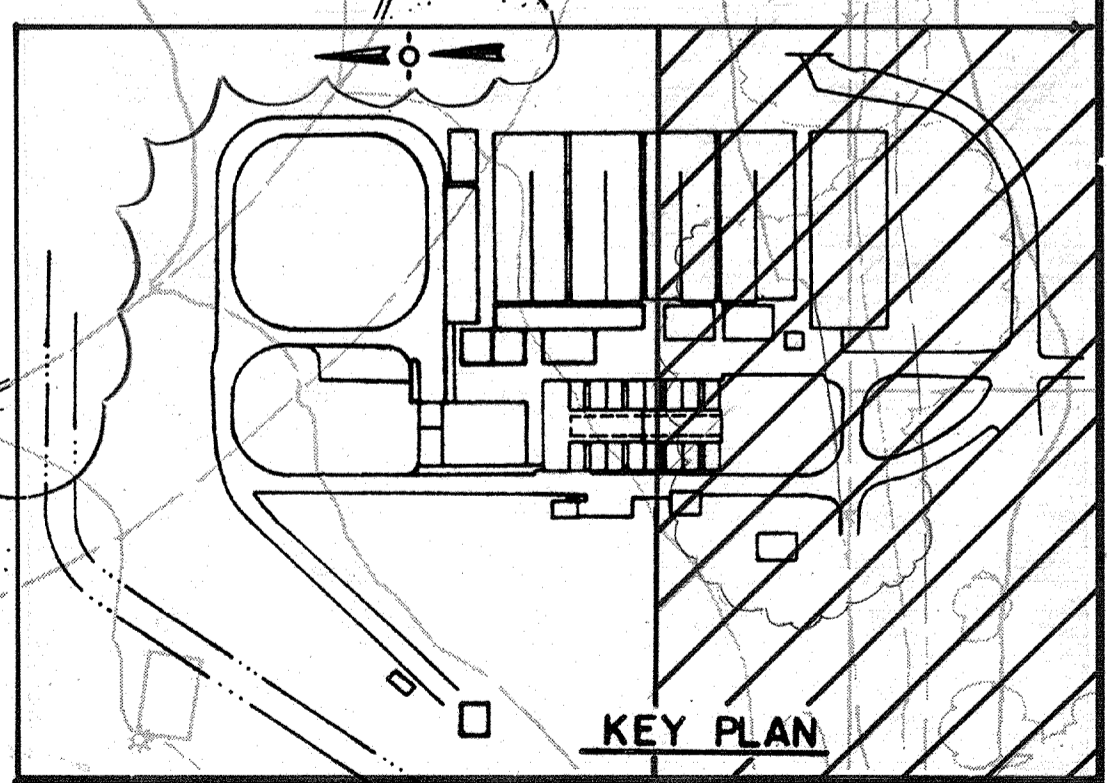


NOTE
REPAIR ALL EXISTING PAVEMENT.
SEE SPECIFICATIONS.

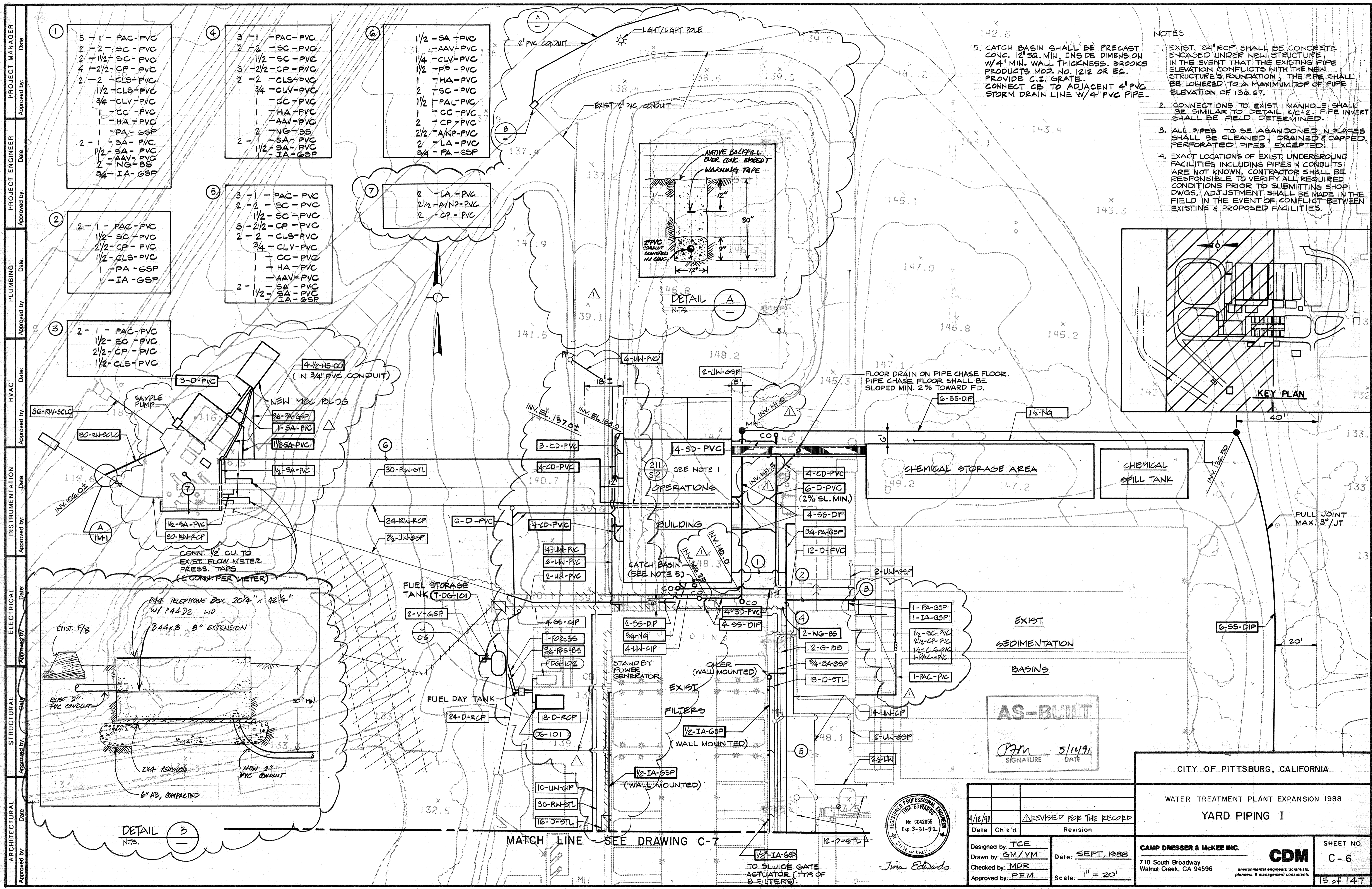


PFM 5/10/91
 SIGNATURE DATE

4/11/91	REVISOR	REVISION
Date	Ch'k'd	Revision
Designed by: HGN	Drawn by: VM	Date: SEPT. 1988
Checked by: MDR	Approved by: PFM	Scale: 1" = 20'



CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 GRADING & PAVING II
 SHEET NO. C-5
 CAMP DRESSER & McKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners & management consultants
 14 of 147



- ①
- 5 - 1 - PAC-PVC
 - 2 - 2 - SC-PVC
 - 2 - 1/2 - SC-PVC
 - 4 - 2/2 - CP-PVC
 - 2 - 2 - CLS-PVC
 - 1/2 - CLS-PVC
 - 3/4 - CLV-PVC
 - 1 - CC-PVC
 - 1 - HA-PVC
 - 1 - PA-GSP
 - 2 - 1 - SA-PVC
 - 1/2 - SA-PVC
 - 2 - AAV-PVC
 - 2 - NG-BS
 - 3/4 - IA-GSP

- ④
- 3 - 1 - PAC-PVC
 - 2 - 2 - SC-PVC
 - 1/2 - SC-PVC
 - 3 - 2/2 - CP-PVC
 - 2 - 2 - CLS-PVC
 - 3/4 - CLV-PVC
 - 1 - CC-PVC
 - 1 - HA-PVC
 - 1 - AAV-PVC
 - 2 - NG-BS
 - 2 - 1 - SA-PVC
 - 1/2 - SA-PVC
 - 1 - IA-GSP

- ⑥
- 1/2 - SA-PVC
 - 1/4 - CLV-PVC
 - 1/2 - PP-PVC
 - 1 - HA-PVC
 - 2 - SC-PVC
 - 1/2 - PAL-PVC
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 - 2/2 - ANP-PVC
 - 2 - LA-PVC
 - 3/4 - PA-GSP

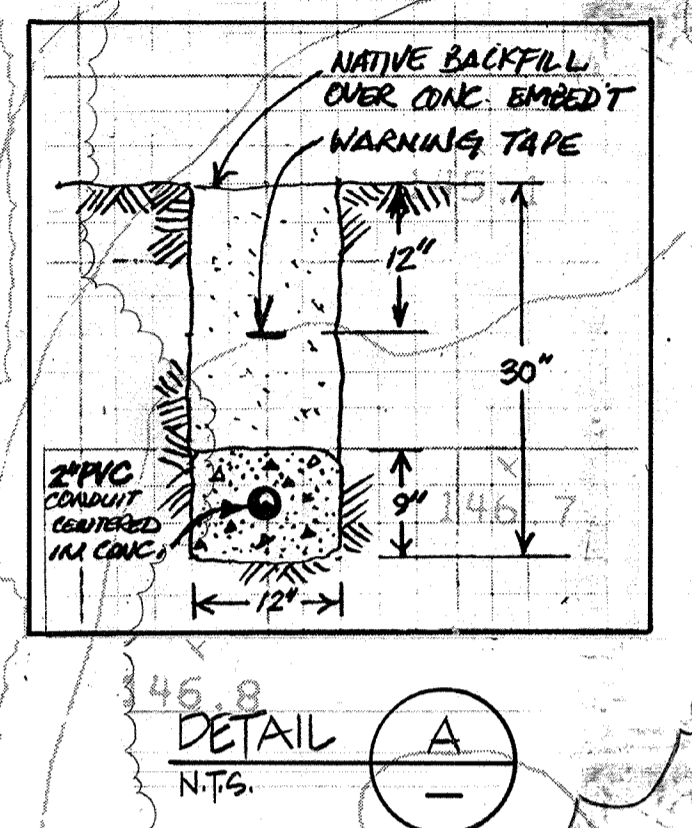
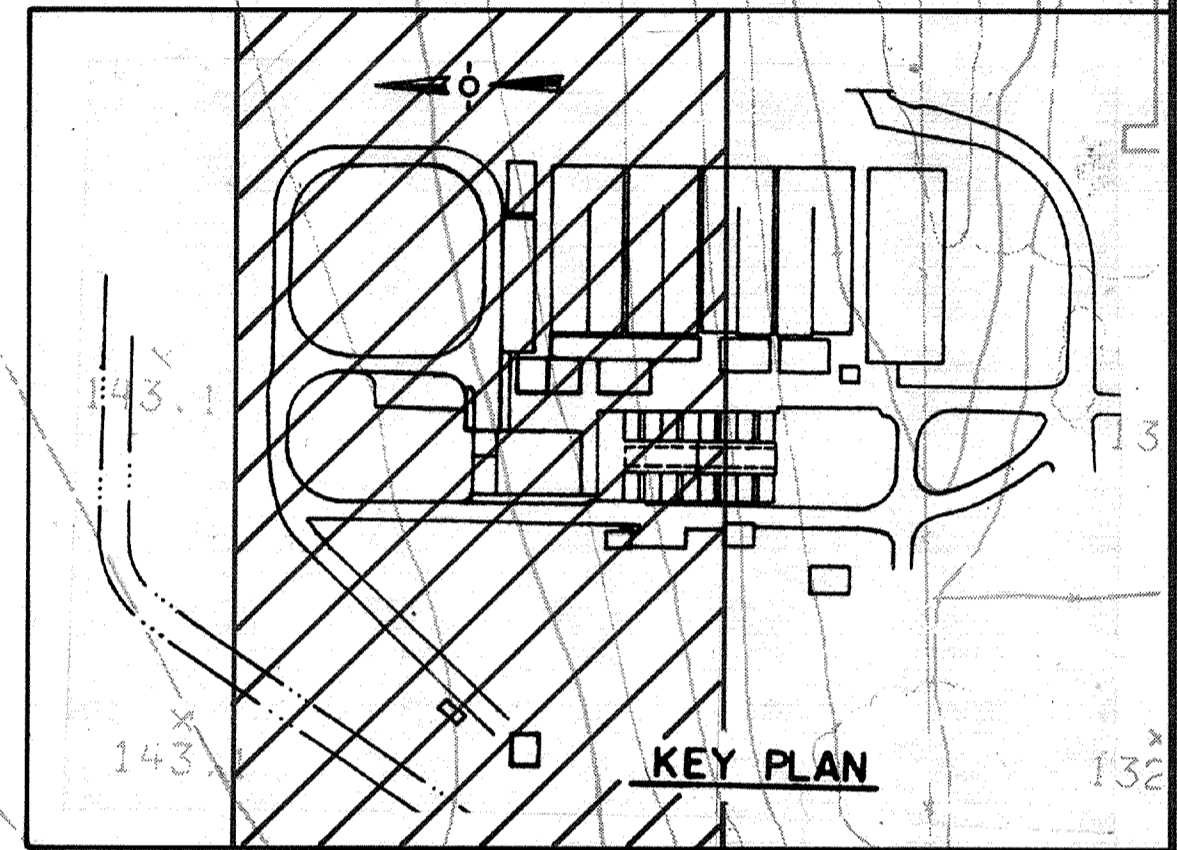
- ②
- 2 - 1 - PAC-PVC
 - 1/2 - SC-PVC
 - 2/2 - CP-PVC
 - 1/2 - CLS-PVC
 - 1 - PA-GSP
 - 1 - IA-GSP

- ⑤
- 3 - 1 - PAC-PVC
 - 2 - 2 - SC-PVC
 - 1/2 - SC-PVC
 - 3 - 2/2 - CP-PVC
 - 2 - 2 - CLS-PVC
 - 3/4 - CLV-PVC
 - 1 - CC-PVC
 - 1 - HA-PVC
 - 1 - AAV-PVC
 - 2 - 1 - SA-PVC
 - 1/2 - SA-PVC
 - 1 - IA-GSP

- ⑦
- 2 - LA-PVC
 - 2/2 - ANP-PVC
 - 2 - CP-PVC

- ③
- 2 - 1 - PAC-PVC
 - 1/2 - SC-PVC
 - 2/2 - CP-PVC
 - 1/2 - CLS-PVC

- NOTES
1. EXIST. 24" RCP SHALL BE CONCRETE ENCASED UNDER NEW STRUCTURE. IN THE EVENT THAT THE EXISTING PIPE ELEVATION CONFLICTS WITH THE NEW STRUCTURE'S FOUNDATION, THE PIPE SHALL BE LOWERED TO A MAXIMUM TOP OF PIPE ELEVATION OF 136.67.
 2. CONNECTIONS TO EXIST. MANHOLE SHALL BE SIMILAR TO DETAIL K/C-2. PIPE INVERT SHALL BE FIELD DETERMINED.
 3. ALL PIPES TO BE ABANDONED IN PLACES SHALL BE CLEANED, DRAINED & CAPPED. PERFORATED PIPES EXCEPTED.
 4. EXACT LOCATIONS OF EXIST. UNDERGROUND FACILITIES INCLUDING PIPES & CONDUITS ARE NOT KNOWN. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL REQUIRED CONDITIONS PRIOR TO SUBMITTING SHOP DWGS. ADJUSTMENT SHALL BE MADE IN THE FIELD IN THE EVENT OF CONFLICT BETWEEN EXISTING & PROPOSED FACILITIES.



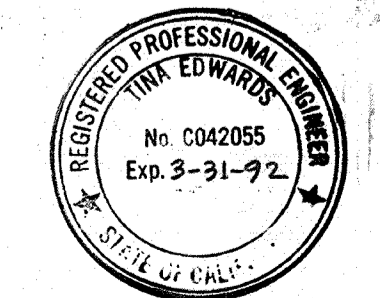
FLOOR DRAIN ON PIPE CHASE FLOOR. PIPE CHASE FLOOR SHALL BE SLOPED MIN. 2% TOWARD F.D.

CHEMICAL STORAGE AREA

CHEMICAL SPILL TANK

EXIST. SEDIMENTATION BASINS

AS-BUILT
 PFM
 SIGNATURE 5/10/91
 DATE



4/12/91	REVISED FOR THE RECORD
Date	Ch'k'd
	Revision
Designed by: TCE	Date: SEPT, 1988
Drawn by: GM/YM	Scale: 1" = 20'
Checked by: MDR	
Approved by: PFM	

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

YARD PIPING I

CAMP DRESSER & McKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

CDM
 environmental engineers, scientists,
 planners & management consultants

SHEET NO. C-6
 15 of 147

PROJECT MANAGER Approved by: _____ Date: _____

PROJECT ENGINEER Approved by: _____ Date: _____

PLUMBING Approved by: _____ Date: _____

HVAC Approved by: _____ Date: _____

INSTRUMENTATION Approved by: _____ Date: _____

ELECTRICAL Approved by: _____ Date: _____

STRUCTURAL Approved by: _____ Date: _____

ARCHITECTURAL Approved by: _____ Date: _____

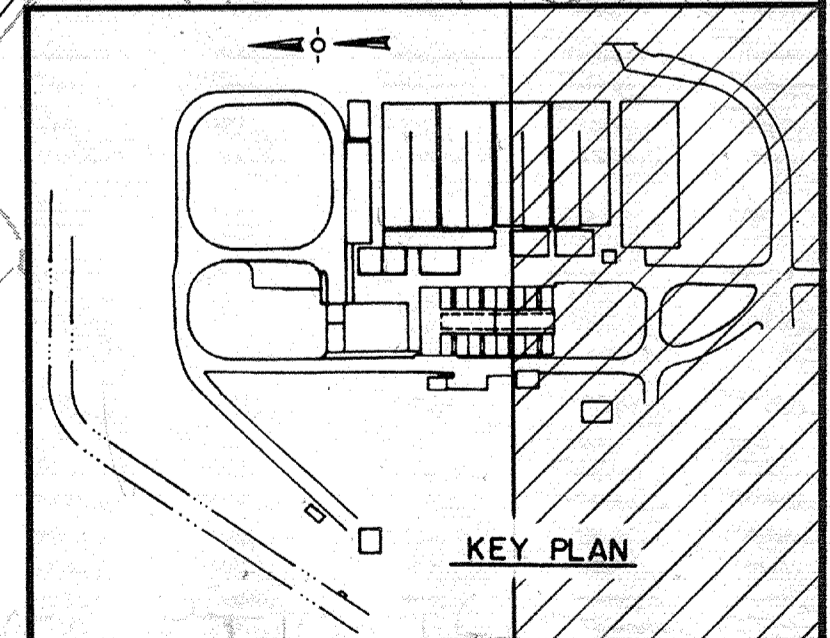
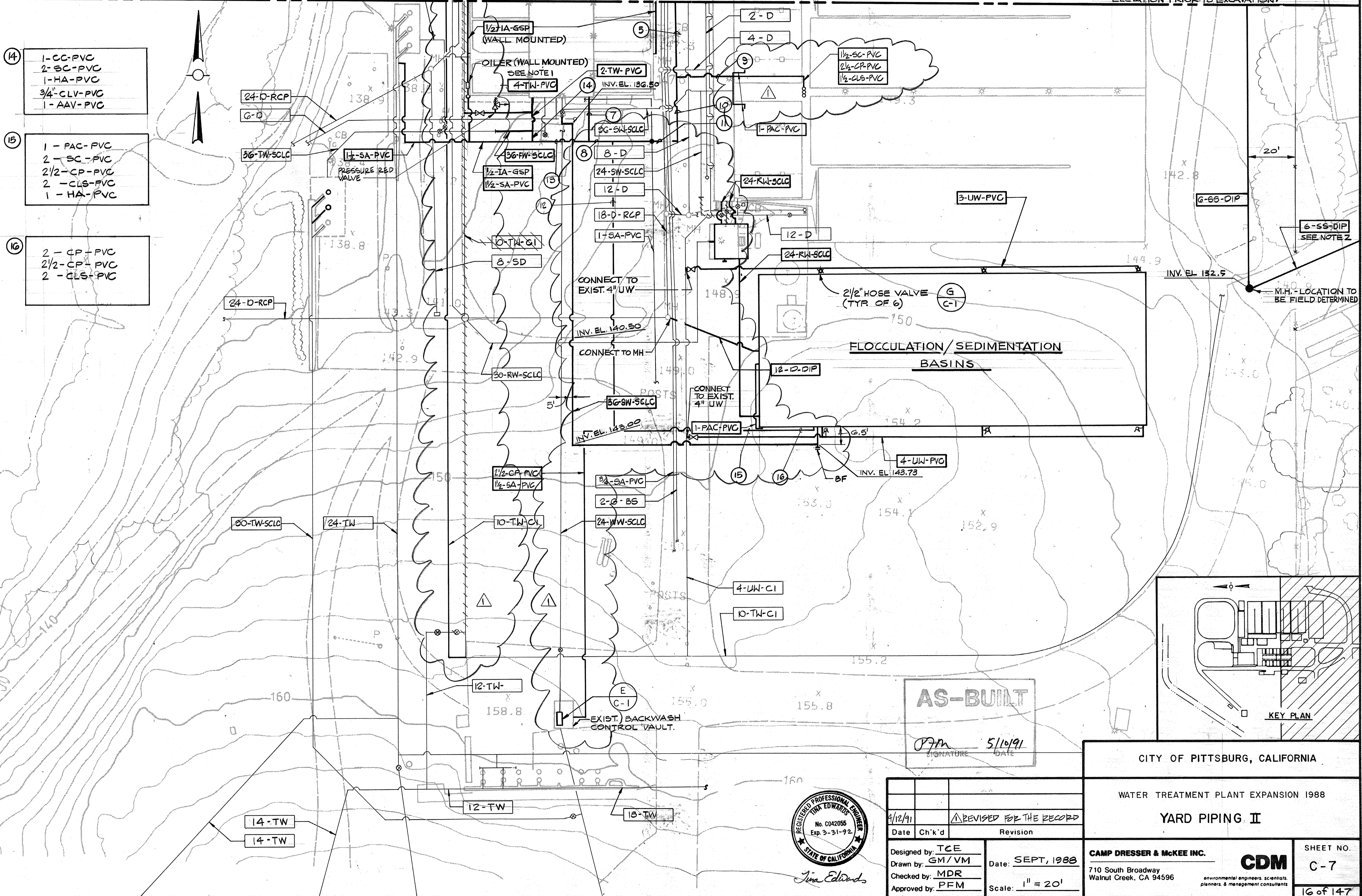
PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:

NOTES:
 1. REPLACE EXISTING 2" CI WATER PIPE & VALVE W/ 4" PVC & 4" B.F.V. IN EXISTING PRECAST CONC. BOX. REINSTATE 2" BRANCH LINE
 2. INSTALL 6" DIP SANITARY SEWER PIPE IN OLYMPIA DR. & CONNECT TO MANHOLE LOCATED AT INTERSECTION OF OLYMPIA DR. & INA DR. APPROXIMATE LAYING LENGTH IS 174 FEET. ALIGNMENT SHALL BE PARALLEL TO THE ROAD. MINIMUM SLOPE SHALL BE 1%. SEE DETAIL K/C-2 FOR CONNECTION. VERIFY DOWNSTREAM ELEVATION PRIOR TO EXCAVATION.

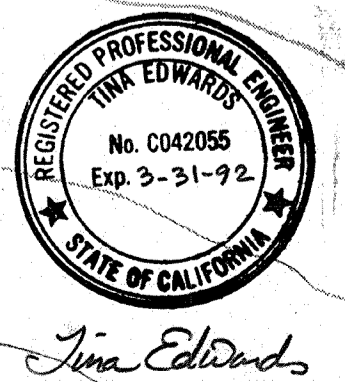
- ⑦ 1 - SA - PVC
1 - IA - GSP
2 - 1/2 - SA - PVC
- ⑧ 2 - 1/2 - SA - PVC
1 - IA - GSP
2 - CC - PVC
2 - SC - PVC
1 - HA - PVC
3/4 - CLV - PVC
1 - AAV - PVC
- ⑨ 2 - 1 - PAC - PVC
1 1/2 - SC - PVC
2 1/2 - CP - PVC
2 - CLS - PVC
- ⑩ 1 - PAC - PVC
2 - 2 - SC - PVC
2 1/2 - CP - PVC
2 - CLS - PVC
3/4 - CLV - PVC
2 - 1 - SA - PVC
1 1/2 - SA - PVC
1 - CC - PVC
1 - HA - PVC
1 - AAV - PVC
- ⑪ 2 - 1 - SA - PVC
1 1/2 - SA - PVC
1 - CC - PVC
2 - SC - PVC
1 - HA - PVC
3/4 - CLV - PVC
1 - AAV - PVC
- ⑫ 1 1/2 - SA - PVC
1 - PAC - PVC
2 - 2 1/2 - CP - PVC
2 - CLS - PVC
2 - SC - PVC
- ⑬ 1 1/2 - SA - PVC
1 - CC - PVC
2 - SC - PVC
1 - HA - PVC
3/4 - CLV - PVC
1 - AAV - PVC
1/2 - IA - GSP

- ⑭ 1 - CC - PVC
2 - SC - PVC
1 - HA - PVC
3/4 - CLV - PVC
1 - AAV - PVC
- ⑮ 1 - PAC - PVC
2 - SC - PVC
2 1/2 - CP - PVC
2 - CLS - PVC
1 - HA - PVC
- ⑯ 2 - CP - PVC
2 1/2 - CP - PVC
2 - CLS - PVC

MATCH LINE - SEE DRAWING C-6



AS-BUILT
 JEM 5/10/91
 SIGNATURE DATE



4/12/91	REVISOR FOR THE RECORD
Date	Ch'k'd
Revised	Revision
Designed by: TCE	Drawn by: GM/VM
Checked by: MDR	Approved by: PFM
Date: SEPT, 1988	Scale: 1" = 20'

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 YARD PIPING II
 SHEET NO. C-7
 16 of 147

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists, planners, & management consultants

INTERIOR FINISH SCHEDULE

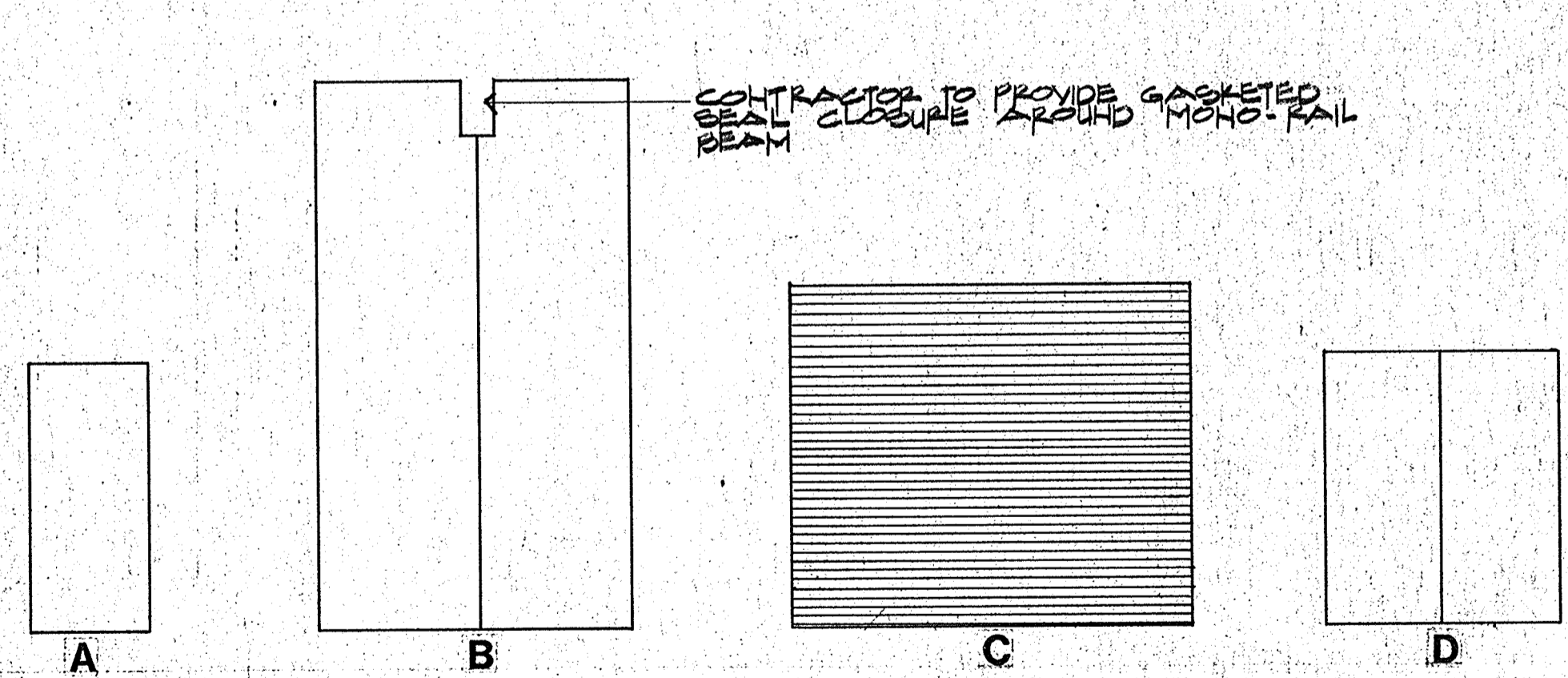
PROJECT MANAGER Approved by Date	area #	room	floor		walls				base		trim		ceiling			soffit			REMARKS		
			MAT'L	FIN.	north		east		south		west		MAT'L	FIN.	HT.	MAT'L	FIN.	HT.		MAT'L	FIN.
					MAT'L	FIN.	MAT'L	FIN.	MAT'L	FIN.	MAT'L	FIN.									
	1	100 RAW WATER PUMP	B	—	D	—	D	—	D	—	—	—	J	1	VARIES	—	—	—	—		
	3	100 FILTER CONTROL ROOM	A	1	B	2	B	2	B	2	C	1	—	—	B	2	VARIES	—	—		
	5	100 MECHANICAL ROOM	B	—	D	—	D	—	D	—	—	—	—	B	—	11'-4"	—	—	—		
		101 ELECTRIC ROOM	B	—	D	—	D	—	D	—	—	—	—	B	—	11'-4"	—	—	—		
		102 STAIR	B	—	D	—	D	—	D	—	—	—	—	—	—	8'-0"	K	5	8'-0"	K	5
		103 CHEMICAL FEED	B	—	B	—	B	—	B, D	—	B, D	—	—	—	—	VARIES	—	—	—	—	
		104 CHLORINE STORAGE	B	—	B	—	D	—	B	—	—	—	—	B	—	VARIES	—	—	—	—	
		200 OPERATIONS	A	1	E	5	E	5	E	5	E	5	C	1	—	F	1	9'-0"	—	—	
		201 CORRIDOR	A	1	E	5	E	5	E	5	—	—	C	1	—	F	1	9'-0"	—	—	NOTE: LABORATORY AND DRINKING FOUNTAIN ALCOVES TO HAVE 5/8" GYP BOARD
		202 STAIR	B	—	D	—	D	—	D	—	—	—	—	—	—	E	5	8'-0"	—	—	* AT TOP LANDING
		203 CLOSET	G	1	E	5	E	5	E	5	E	5	C	1	—	F	1	9'-0"	—	—	
		204 ELECTRIC ROOM	A	1	K	5	K	5	D	—	K	5	C	1	—	K	5	9'-0"	—	—	

MATERIALS		FINISHES		COLORS	
A	VINYL TILES	1	FACTORY APPLIED FINISH	a	
B	CONCRETE	2	SEMI-GLOSS FINISH ON CONCRETE, MASONRY OR PLASTER	b	
C	4" RUBBER BASE	3	SEMI-GLOSS FINISH ON GYPSUM WALLBOARD	c	
D	CONCRETE BLOCK	4	EGGSHELL FINISH ON CONCRETE, MASONRY OR PLASTER	d	
E	5/8" GYP. BD.	5	EGGSHELL FINISH ON GYPSUM WALLBOARD	e	
F	2" x 2" SUSPENDED CEILING	6	EGGSHELL FIN ON GYP. BD. (DEEP COLORS ONLY)	f	
G	IN/OUTDOOR CARPET	7	FLAT FINISH GYPSUM WALLBOARD	g	
H	PORCELAIN TILE	8	FLAT FIN. GYP. BD. (DEEP COLORS ONLY)	h	
I	PLASTER	9	PAINT FINISH ON WOOD	i	
J	FORMED MTL. DECK	10	STAIN AND LACQUER FINISH ON WOOD	j	
K	5/8" TYPE 'X' GYP. BD.	11	STAIN FINISH ON WOOD	k	
L	5/8" WATER-RESISTANT GYP. BD.	12	OIL AND TURPENTINE ON WOOD	l	
M		13	PAINT FINISH ON METAL	m	
N		14	PAINT FINISH ON METAL EQUIPMENT	n	
O		15	PAINT FIN. ON EXPOSED PIPE AND DUCT INSULATION	o	
P		16	SEMI-GLOSS FINISH ON METAL	p	
Q		17		q	
R		18		r	
S		19		s	
T		20		t	
U		21		u	
V		22		v	
W		23		w	
X		24		x	
Y		25		y	
Z		26		z	

DOOR SCHEDULE

no.	door description							hdwre group	frame description				detail refer			remarks	
	arch	type	size	core	face	louver	label		finish	frame	trim	label	finish	jamb	head		thres.
101	A	I	3'-0" x 7'-0" x 1 3/4"	HONEYCOMB	METAL	—	—	10	SEE SPEC'S	METAL	—	—	10	3 A3	2 A3	1	
101	B	I	2'-8" x 6'-8" x 1 3/4"	HONEYCOMB	METAL	—	—	10		METAL	—	—	10	4 A3	4 A3	6 A4	*NO DOOR GASKET
102	B	I															
103	B	I															
104	B	I															
100	B	A	3'-0" x 7'-0" x 1 3/4"	HONEYCOMB	METAL	—	—	10		METAL	—	—	10	4 A3	4 A3	6 A4	DOOR TO BE FULLY GASKETED TO SEAL AGAINST THE ESCAPE OF CHLORINE GAS. PROVIDE DOOR BOTTOM DRIP PROTECTION AT BOTTOM OF DOORS. INCLUDE GASKET AT ASTRAGAL AT DOOR #102.
101	B	A															
102	B	B	PR 4'-0" x 15'-4" x 1 3/4"											4 A3	4 A3	6 A4	
103	B	A	3'-0" x 7'-0" x 1 3/4"											4 A3	4 A3	6 A4	
104	B	A												4 A3	4 A3	6 A4	
105	B	C	PR 3'-0" x 8'-0" x 1 3/4"											4 A3	4 A3	6 A4	
106	B	D	10'-0" x 9'-0" ROLL-UP											3 A3	3 A3	1	
107	B	A	3'-0" x 7'-0" x 1 3/4"											3 A3	3 A3	6 A4	PROVIDE DOOR GASKET AND DOOR BOTTOM PROTECTION
108	B	A	3'-0" x 7'-0" x 1 3/4"				1 HR				1 HR			3 A3	3 A3	6 A4	
109	B	A	3'-0" x 7'-0" x 1 3/4"				1 HR				1 HR			3 A3	3 A3	6 A4	
200	B	E	3'-0" x 7'-0" x 1 3/4"	HONEYCOMB	METAL	—	—	10					10	4 A3	4 A3	6 A4	
201	B	F	3'-0" x 7'-0" x 1 3/4"		ALUM/GLASS	—	—			ALUM.	—	—		13 A3	13 A3	15 A3	
202	B	G	0'-0" x 0'-8" SLIDER		ALUM/GLASS	—	—				—	—		10 A3	10 A3	10 A3	
203	B	G	0'-0" x 0'-8" SLIDER		ALUM/GLASS	—	—				—	—		10 A3	10 A3	10 A3	
204	B	F	3'-0" x 7'-0" x 1 3/4"		ALUM/GLASS	—	—				—	—		5 A3	7 A3	7 A3	
205	B	A	3'-0" x 7'-0" x 1 3/4"	HONEYCOMB	METAL	—	—	10					10	1 A3	1 A3	1	
206	B	A												1 A3	1 A3	1	
207	B	A	2'-6" x 7'-0" x 1 3/4"											1 A3	1 A3	1	
208	B	E	3'-0" x 7'-0" x 1 3/4"											1 A3	1 A3	2 A4	

DOOR TYPES



CRAIG & WOOD ARCHITECTS
199 No. Hartz Ave., Suite Q
Danville, California 94526

Designed by _____
Drawn by KKL
Checked by CC
Approved by _____
Date 3-26-88
Scale NONE

CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
DOOR & FINISH SCHEDULES

CAMP DRESSER & MCKEE INC.
710 South Broadway
Walnut Creek, CA 94596

CDM
environmental engineers, scientists
planners & management consultants

SHEET NO
A-1
17 of 147

INTERIOR FINISH SCHEDULE

PROJECT MANAGER Approved by _____ Date _____
 PROJECT ENGINEER Approved by _____ Date _____
 PLUMBING Approved by _____ Date _____
 HVAC Approved by _____ Date _____
 INSTRUMENTATION Approved by _____ Date _____
 ELECTRICAL Approved by _____ Date _____
 STRUCTURAL Approved by _____ Date _____
 ARCHITECTURAL Approved by _____ Date _____

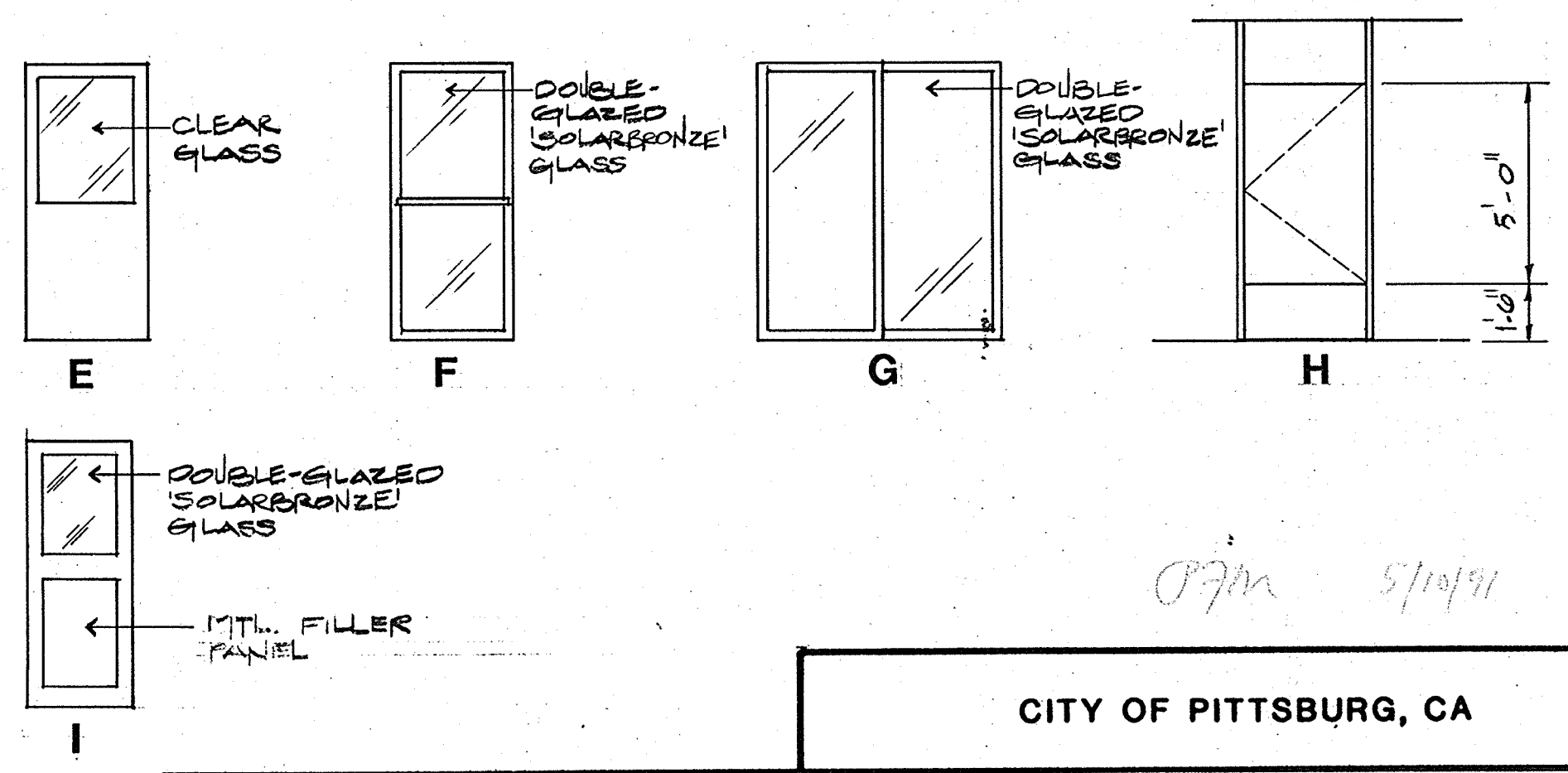
Room #	Room	Floor	Walls								Base		Trim		Ceiling			Soffit			Soffit face	REMARKS		
			North		East		South		West		Mat'l	Fin.	Mat'l	Fin.	Mat'l	Fin.	HT.	Mat'l	Fin.	HT.			Mat'l	Fin.
			Mat'l	Fin.	Mat'l	Fin.	Mat'l	Fin.	Mat'l	Fin.														
205	JANITOR	A	1	E	3	E	3	E	3	E	3	C	1	—	—	B	—	VARIES	—	—	—	—	—	* 4'-0" WAINSCOT
206	OFFICE	G	1	E	5	E	5	E	5	E	5	C	1	—	—	F	1	0'-0"±	—	—	—	—	—	
207	LABORATORY	H	1	E	5	E	5	E	5	E	5	C	1	—	—	F	1	0'-0"±	—	—	—	—	—	
208	MEN			E	3	E	3	E	3	E	3	H	1	—	—	E	3	8'-0"	E	3	7'-0"	E	3	
209	WOMEN																		B	3	7'-0"	B	3	
210	LOCKER # 1																							
211	LOCKER # 2																							
212	TOILET # 1			L	3	L	3	L	3	L	3													* 4'-0" WAINSCOT
213	TOILET # 2			L	3	L	3	L	3	L	3													* 4'-0" WAINSCOT
214	SHOWER # 1			H	1	H	1	H	1	H	1					H	1							
215	SHOWER # 2			H	1	H	1	H	1	H	1					H	1							
7	100 LUNCH ROOM	G	1	I*	5	I*	5	I*	5	I*	5	C	1	—	—	I*	5	8'-0"±	—	—	—	—	—	* PATCH ALL EXISTING WALLS & CEILING AFTER DEMOLITION
7	100 CHLORINE STORAGE BLDG	B	—	D	—	D	—	D	—	D	—	—	—	—	—	J	1	13'-8"±	—	—	—	—	—	

MATERIALS	FINISHES	COLORS
A VINYL TILES	1 FACTORY APPLIED FINISH	a
B CONCRETE	2 SEMI-GLOSS FINISH ON CONCRETE, MASONRY OR PLASTER	b
C 4" RUBBER BASE	3 SEMI-GLOSS FINISH ON GYPSUM WALLBOARD	c
D CONCRETE BLOCK	4 EGGSHELL FINISH ON CONCRETE, MASONRY OR PLASTER	d
E 5/8" GYP. BD	5 EGGSHELL FINISH ON GYPSUM WALLBOARD	e
F 2x2' SUSPENDED CEILING	6 EGGSHELL FIN. ON GYP. BD. (DEEP COLORS ONLY)	f
G IN/OUT CARPET	7 FLAT FINISH GYPSUM WALLBOARD	g
H PORCELAIN TILE	8 FLAT FIN. GYP. BD. (DEEP COLORS ONLY)	h
I PLASTER	9 PAINT FINISH ON WOOD	i
J FORMED MTL. DECK	10 STAIN AND LACQUER FINISH ON WOOD	j
K 5/8" TYPE X' GYP. BD	11 STAIN FINISH ON WOOD	k
L 5/8" WATER-RESISTANT GYP. BD	12 OIL AND TURPENTINE ON WOOD	l
M	13 PAINT FINISH ON METAL	m
N	14 PAINT FINISH ON METAL EQUIPMENT	n
O	15 PAINT FIN. ON EXPOSED PIPE AND DUCT INSULATION	o
P	16 SEMI-GLOSS FINISH ON METAL	p
Q	17	q
R	18	r
S	19	s
T	20	t
U	21	u
V	22	v
W	23	w
X	24	x
Y	25	y
Z	26	z

DOOR SCHEDULE

no.	door description								hdwre group	frame description			detail refer			remarks	
	area #	type	size	core	face	louver	label	finish		frame	trim	label	finish	jamb	head		thres.
205	5	E	3'-0" x 7'-0" x 1 3/4"	HONEYCOMB	METAL	—	—	10	SEE SPECS	METAL	—	—	10	(1) A3	(1) A3	(2) A4	
206	5	A												(1) A3	(1) A3	(2) A4	
211	5	A												(1) A3	(1) A3	(2) A4	
212	5	H	3'-0" x 5'-0" x 1 3/4"											(1) A3	(*)	(*)	* NO HEAD OR SILL
213	5	H												(1) A3	(*)	(*)	* NO HEAD OR SILL
101	7	D	10'-0" x 8'-0"		METAL			10		METAL			10	(1) A3	(1) A3	(2) A4	* DOOR AT EXIST CHLORINE STORAGE BUILDING

DOOR TYPES



CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
DOOR & FINISH SCHEDULES

SHEET NO. A-2

CAMP DRESSER & MCKEE INC.
710 South Broadway
Walnut Creek, CA 94596
environmental engineers scientists
planners & management consultants

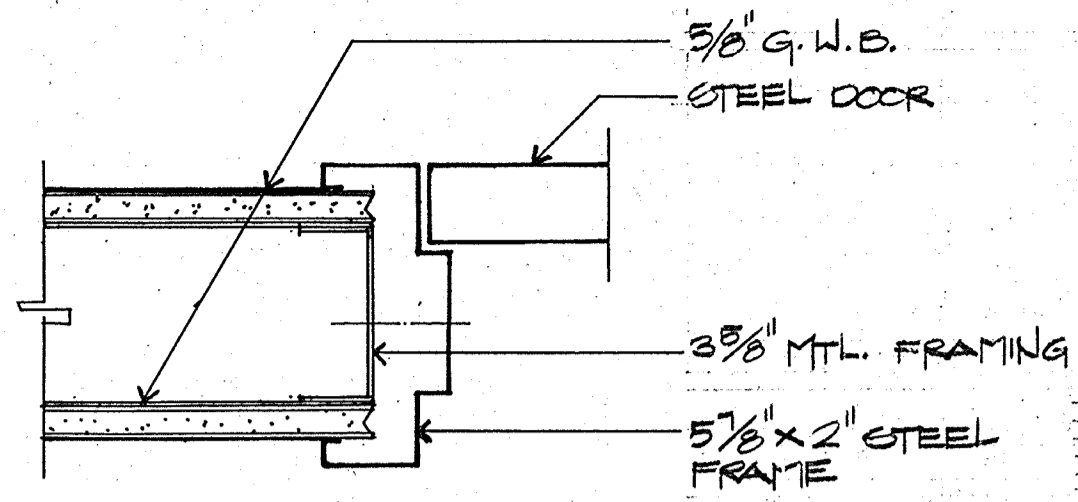
8 of 147

CRAIG & WOOD ARCHITECTS
199 No. Hartz Ave., Suite Q
Danville, California 94526

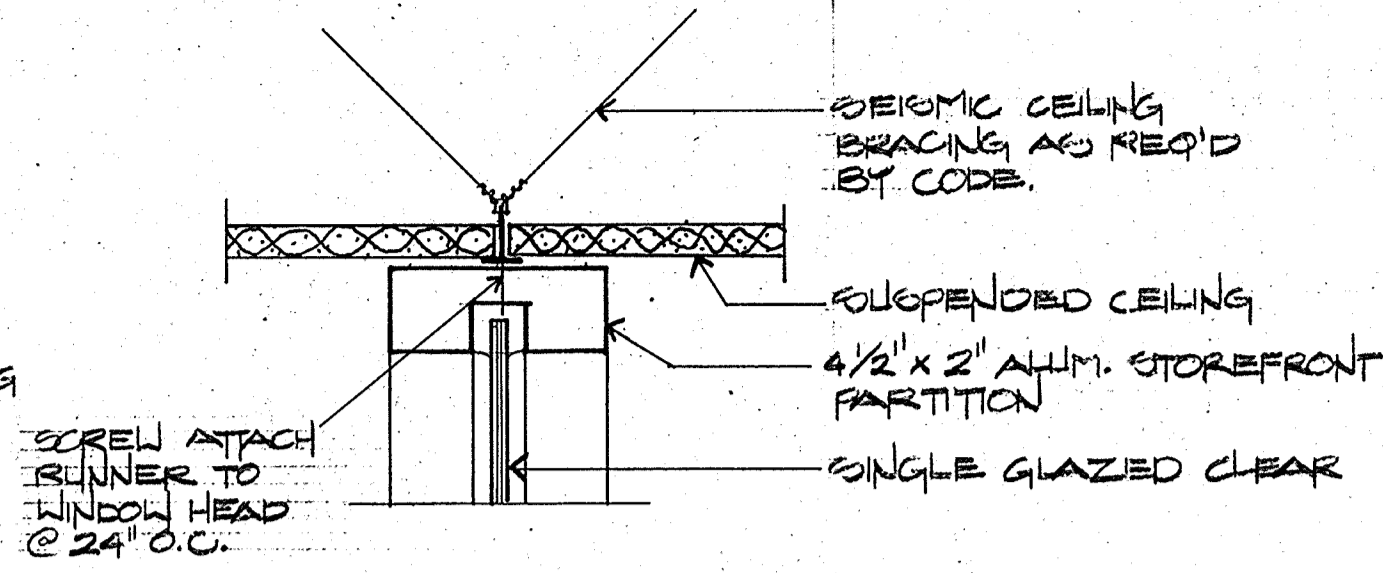
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 Drawn by WKL
 Checked by WKL
 Approved by _____
 Date 8-26-88
 Scale: NONE

Date	Ch'k'd	Revision

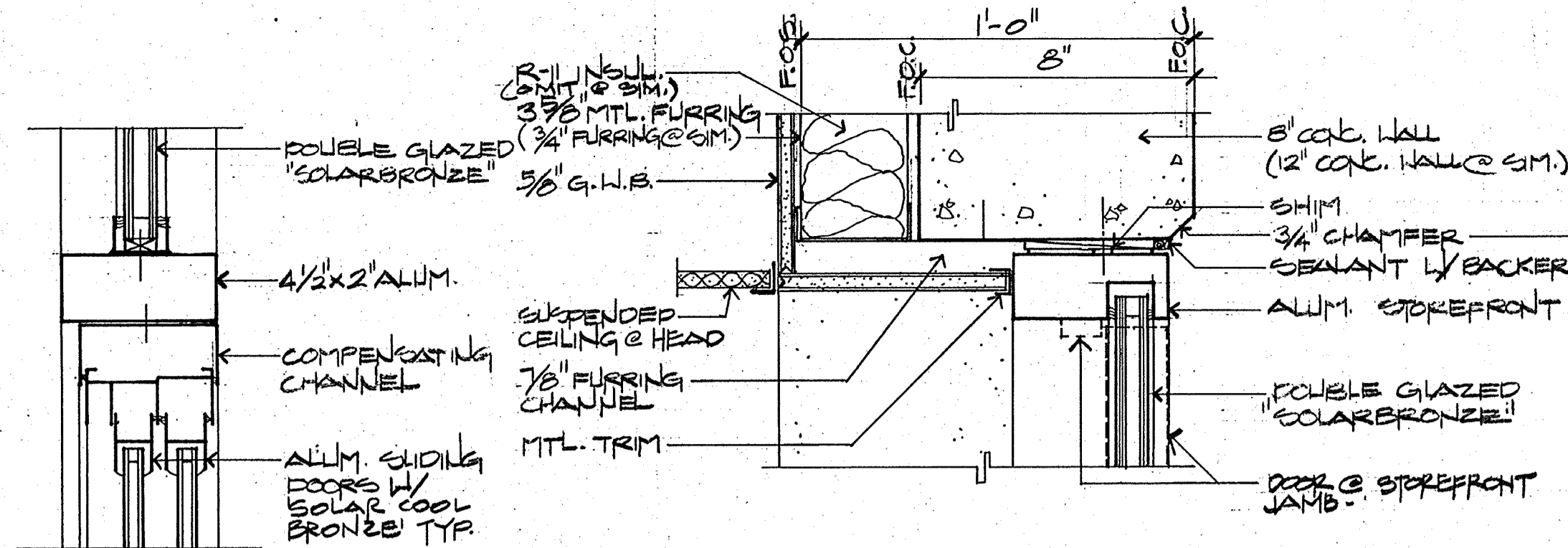
111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



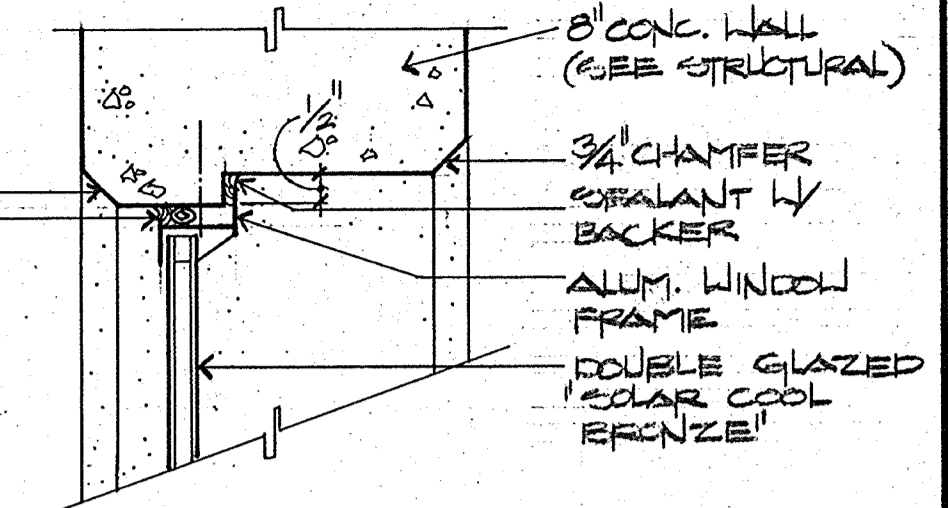
1 DOOR JAMB
A3 HEAD SIMILAR 3'-1'-0"



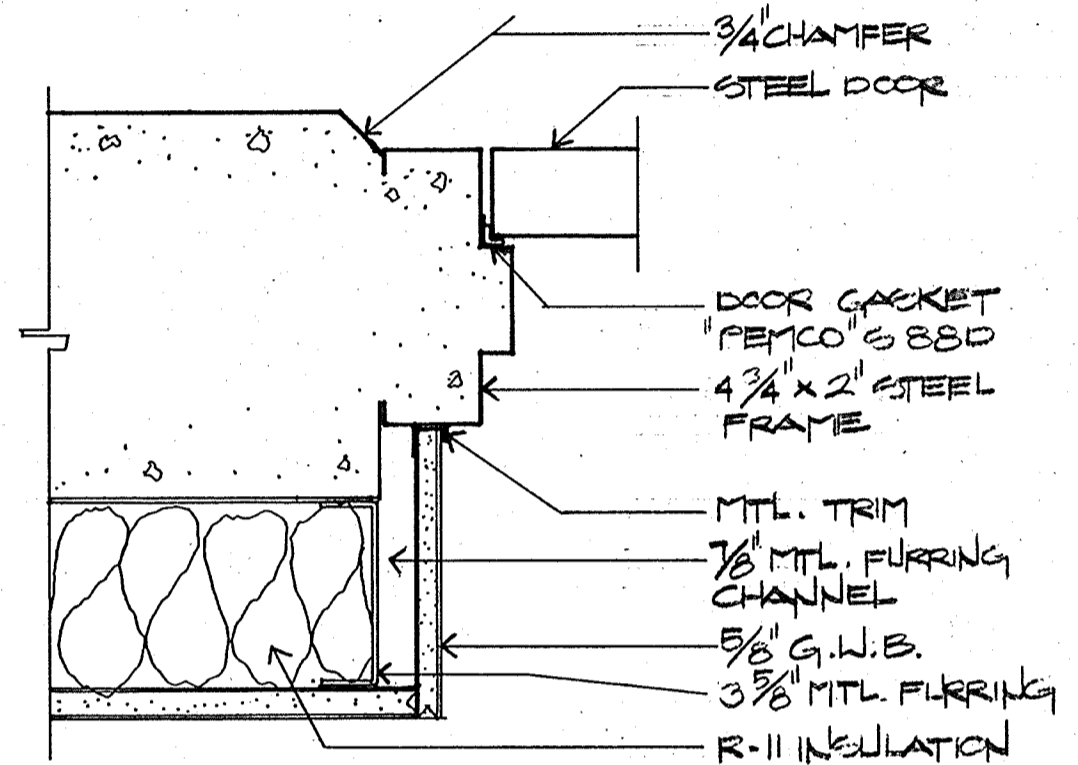
5 WINDOW PARTITION HEAD
A3 3'-1'-0"



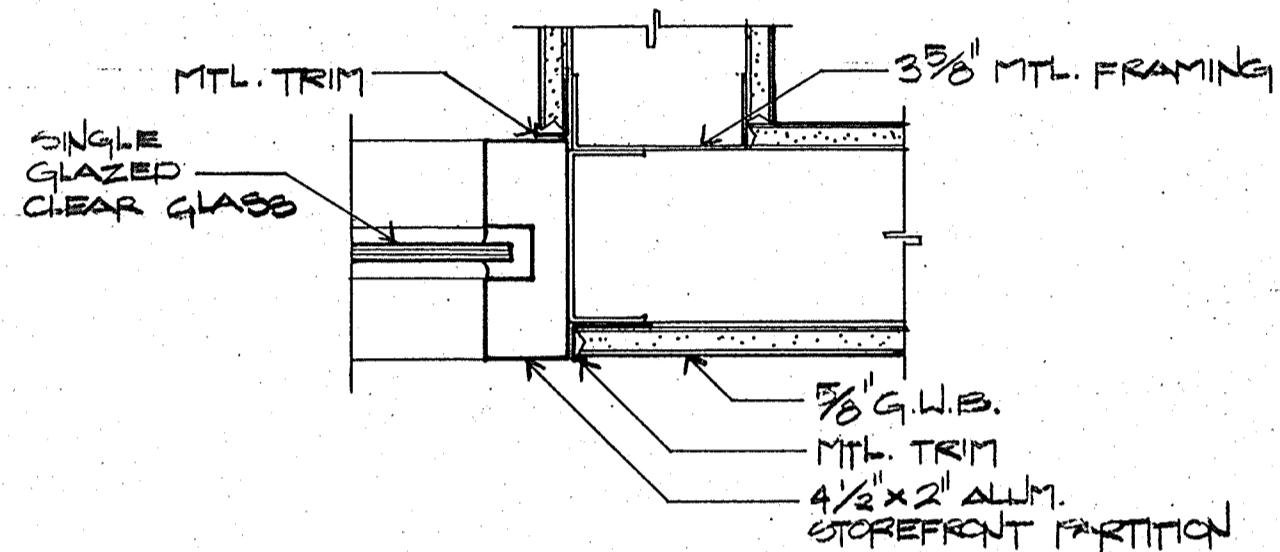
13 STOREFRONT HEAD/JAMB
A3 3'-1'-0"



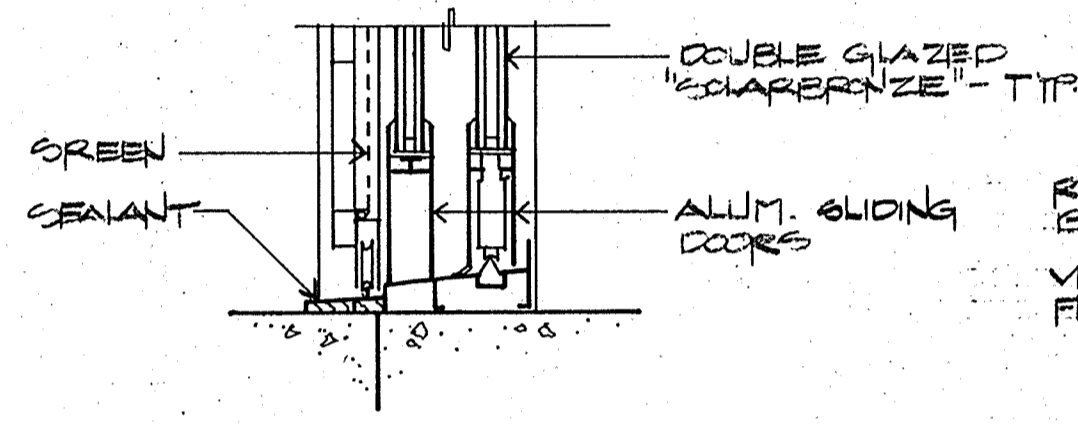
16 WINDOW HEAD/JAMB
A3 3'-1'-0"



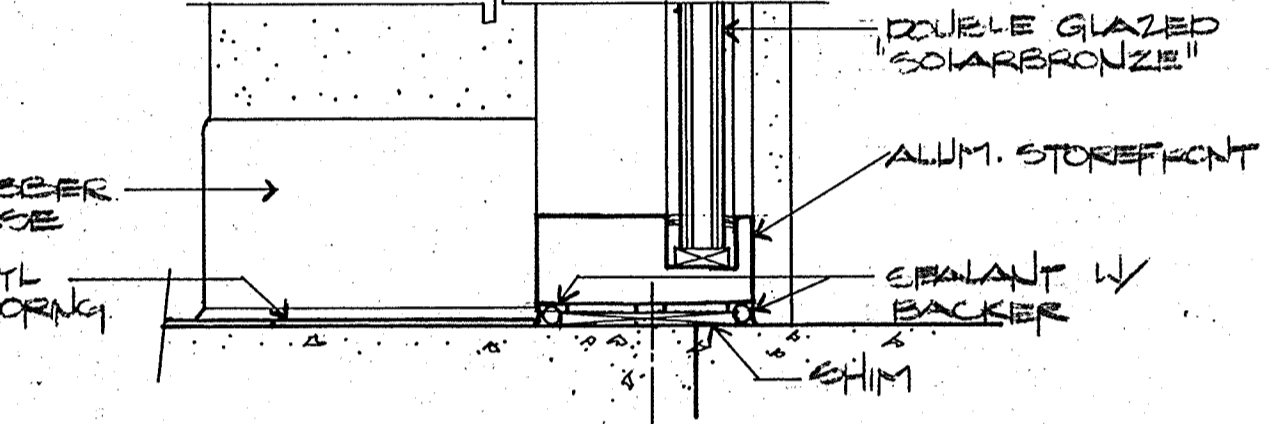
2 DOOR JAMB
A3 HEAD SIMILAR 3'-1'-0"



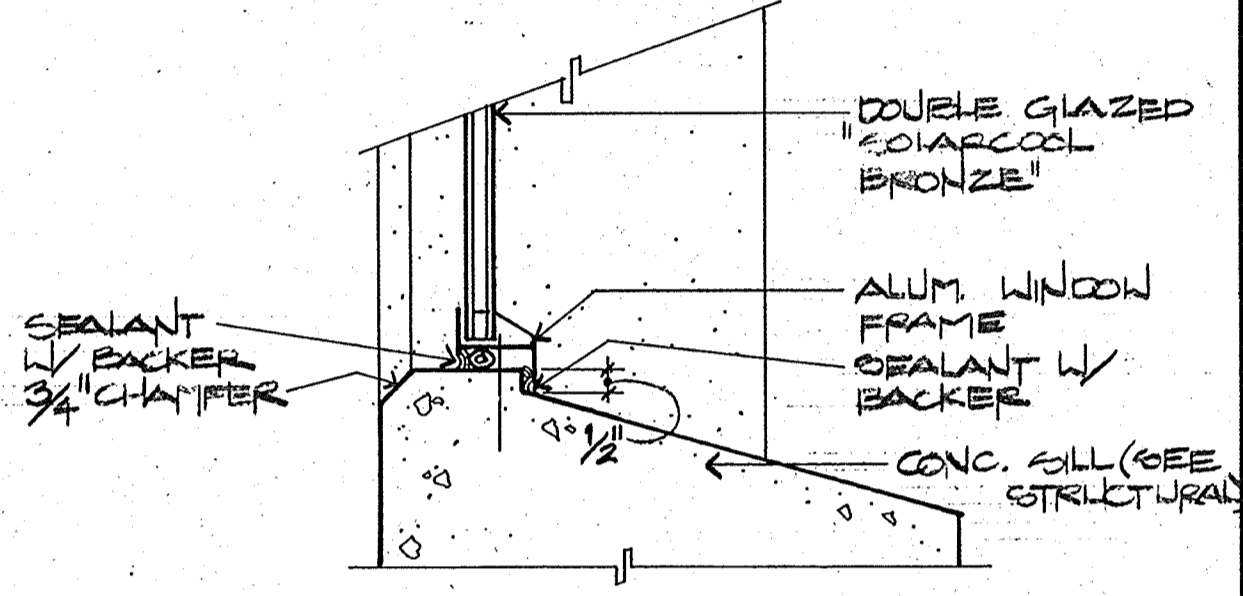
6 WINDOW PARTITION JAMB
A3 3'-1'-0"



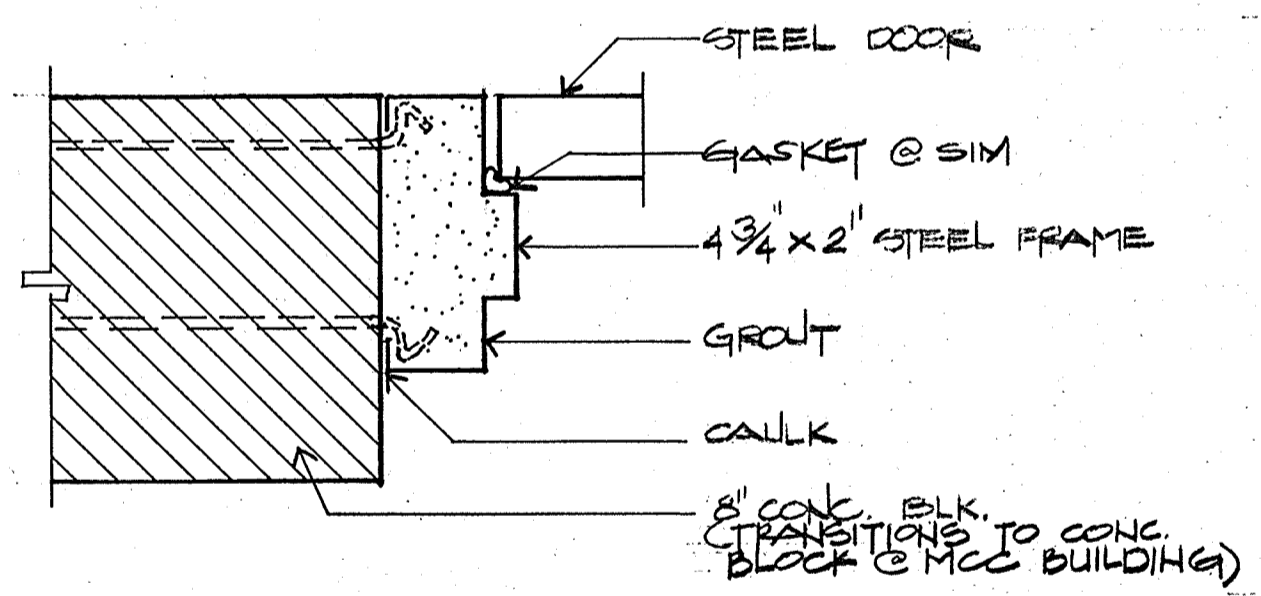
10 SLIDER THRESHOLD
A3 3'-1'-0"



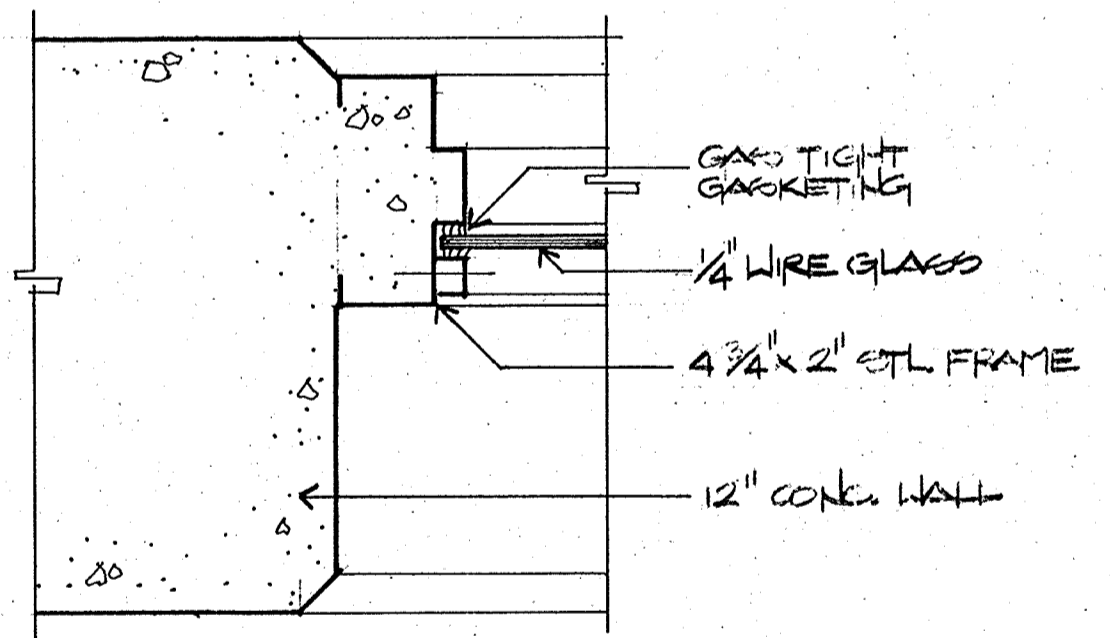
14 STOREFRONT SILL
A3 3'-1'-0"



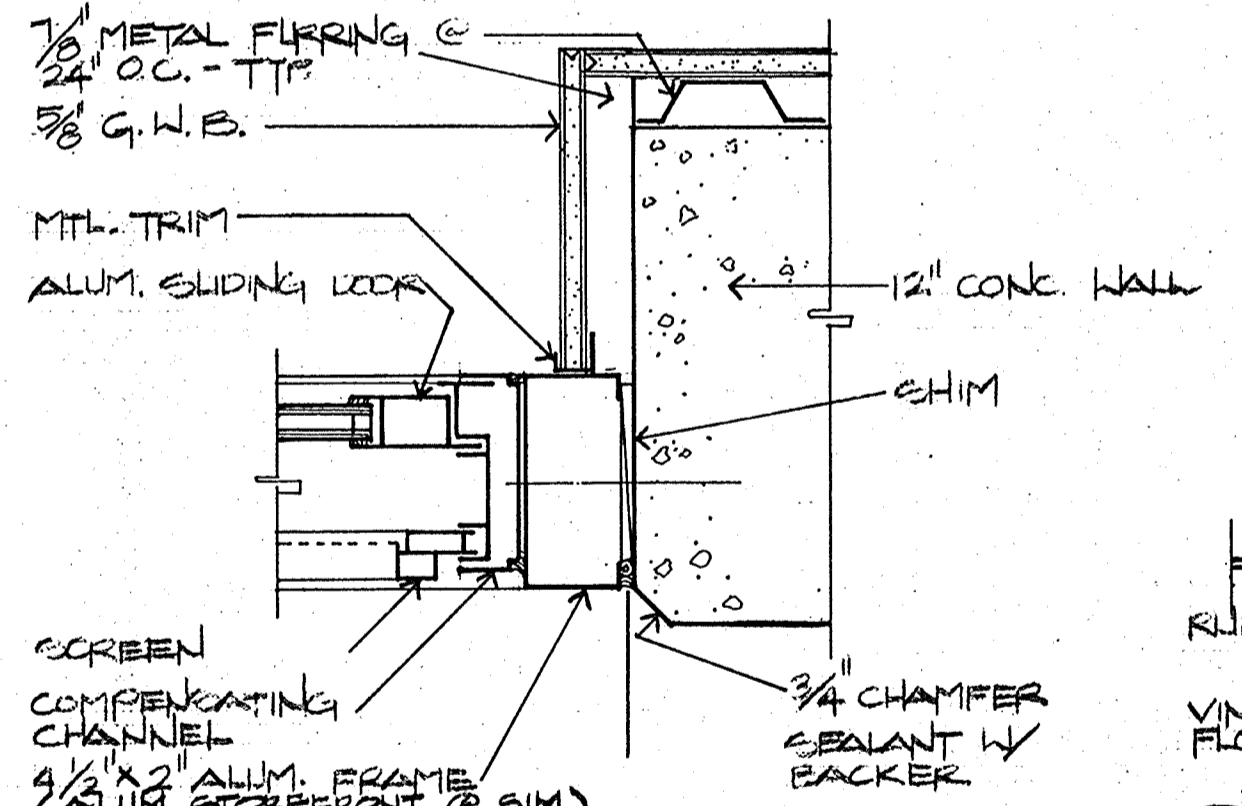
17 WINDOW HEAD
A3 3'-1'-0"



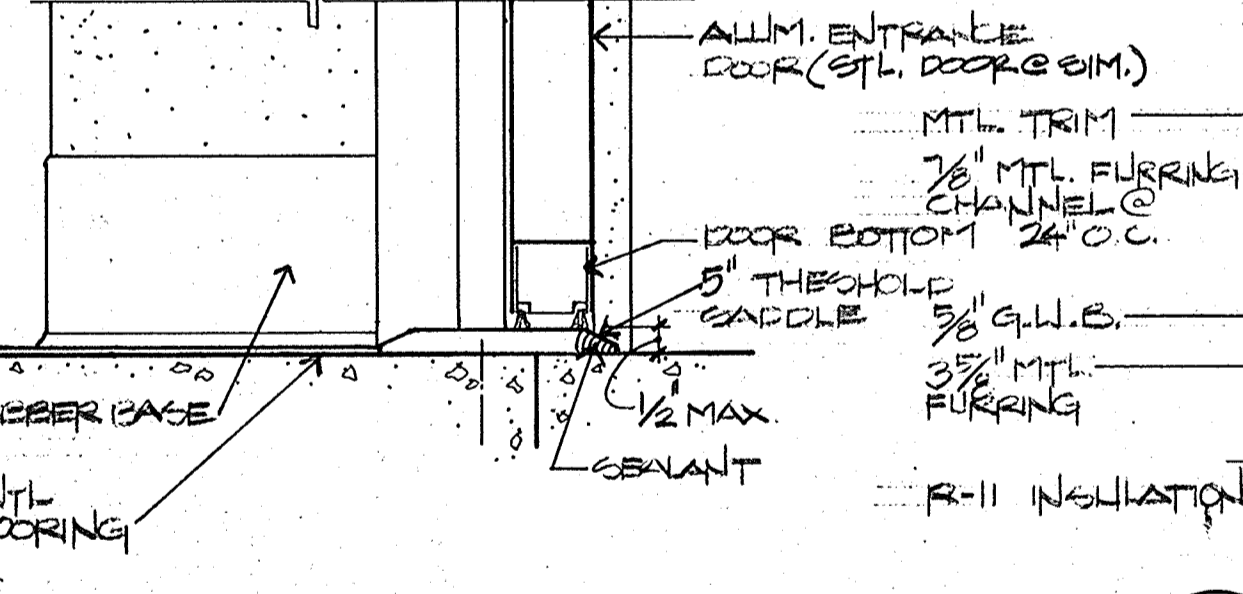
3 DOOR JAMB
A3 HEAD SIMILAR 3'-1'-0"



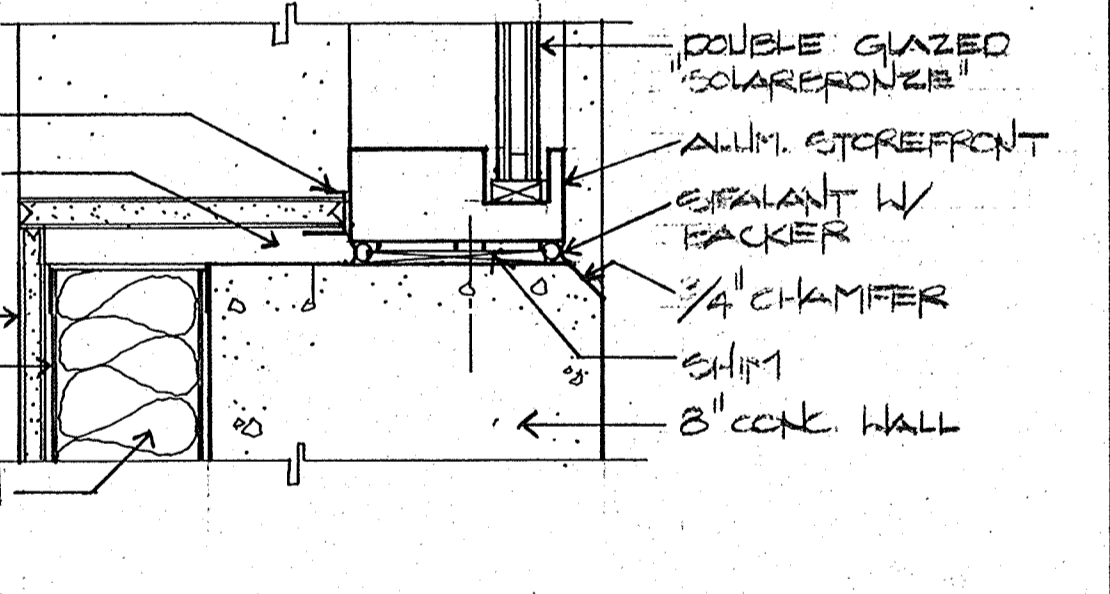
7 WINDOW JAMB
A3 HEAD/SILL SIMILAR 3'-1'-0"



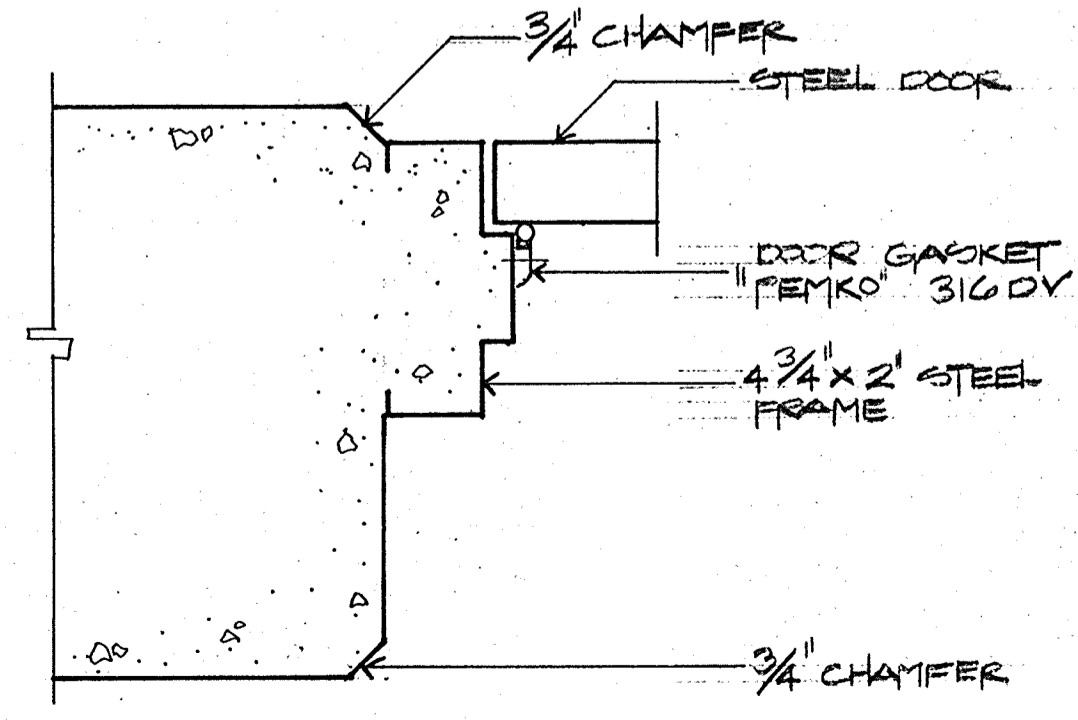
11 SLIDER JAMB
A3 3'-1'-0"



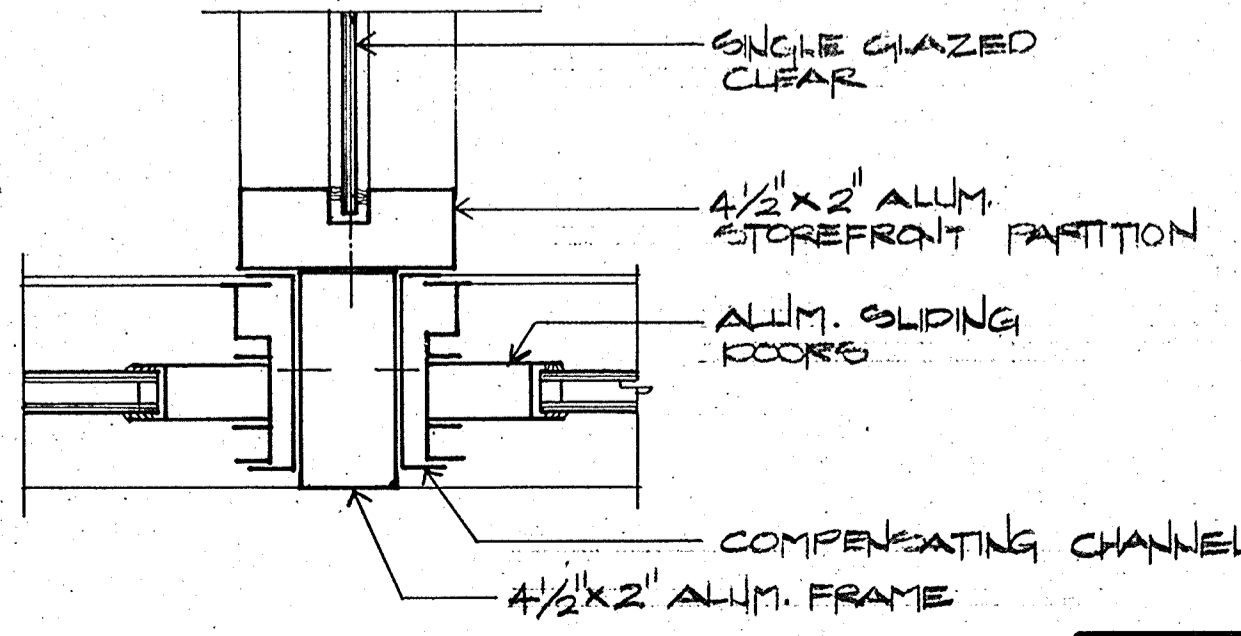
15 THRESHOLD
A3 3'-1'-0"



18 STOREFRONT SILL
A3 3'-1'-0"



4 DOOR JAMB/HEAD
A3 3'-1'-0"



12 SLIDER PARTITION JAMB
A3 3'-1'-0"

CRAIG & WOOD ARCHITECTS
 199 No. Hartz Ave., Suite Q
 Danville, California 94526

Designed by:
 Drawn by: *CC, WKL*
 Checked by: *CC*
 Approved by:

Date: *8-26-88*
 Scale: *SHOWN*

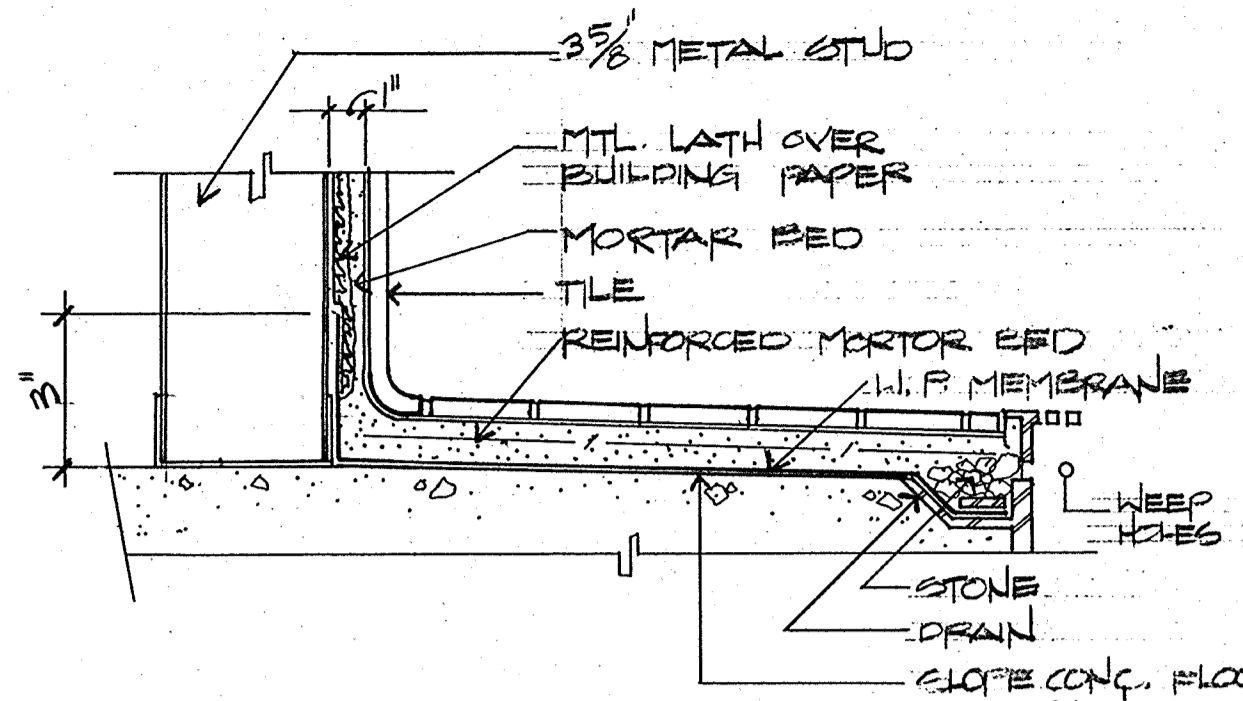
CITY OF PITTSBURG, CA
 WATER TREATMENT PLANT EXPANSION
 DETAILS

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

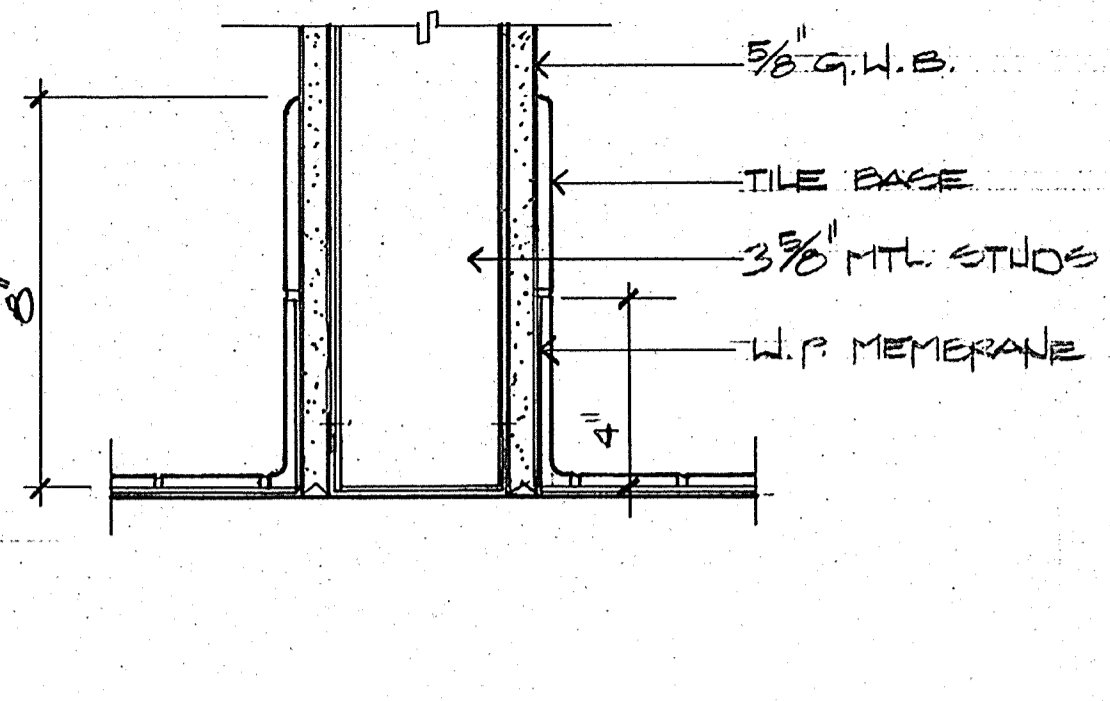
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 environmental engineers, scientists,
 planners, & management consultants

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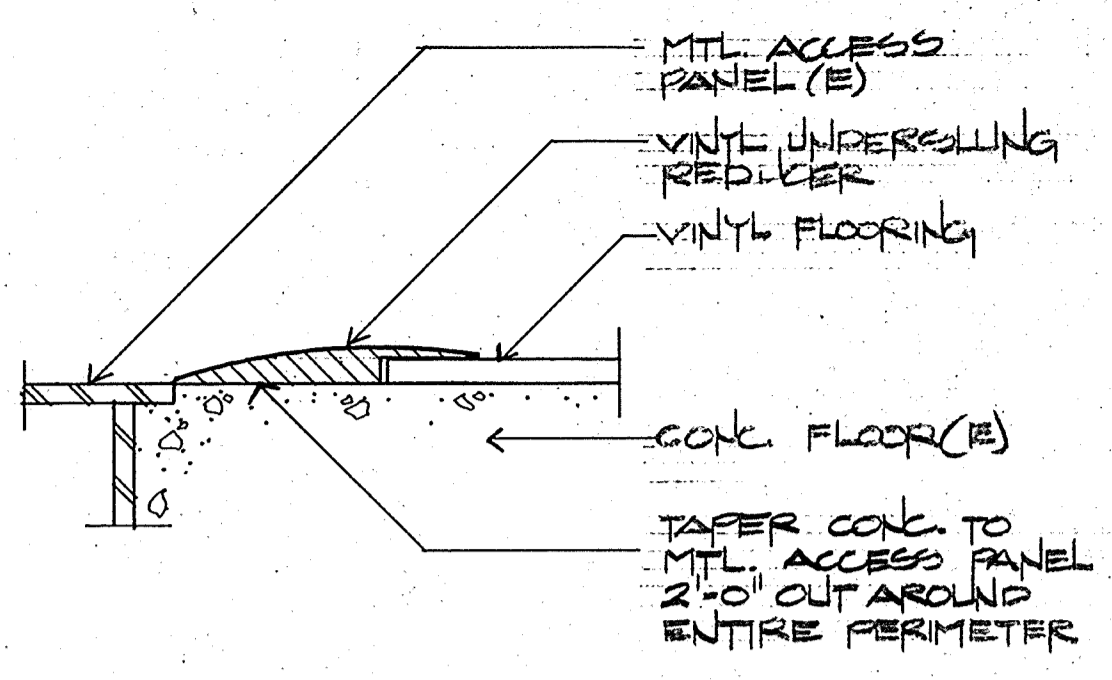
111395
 PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



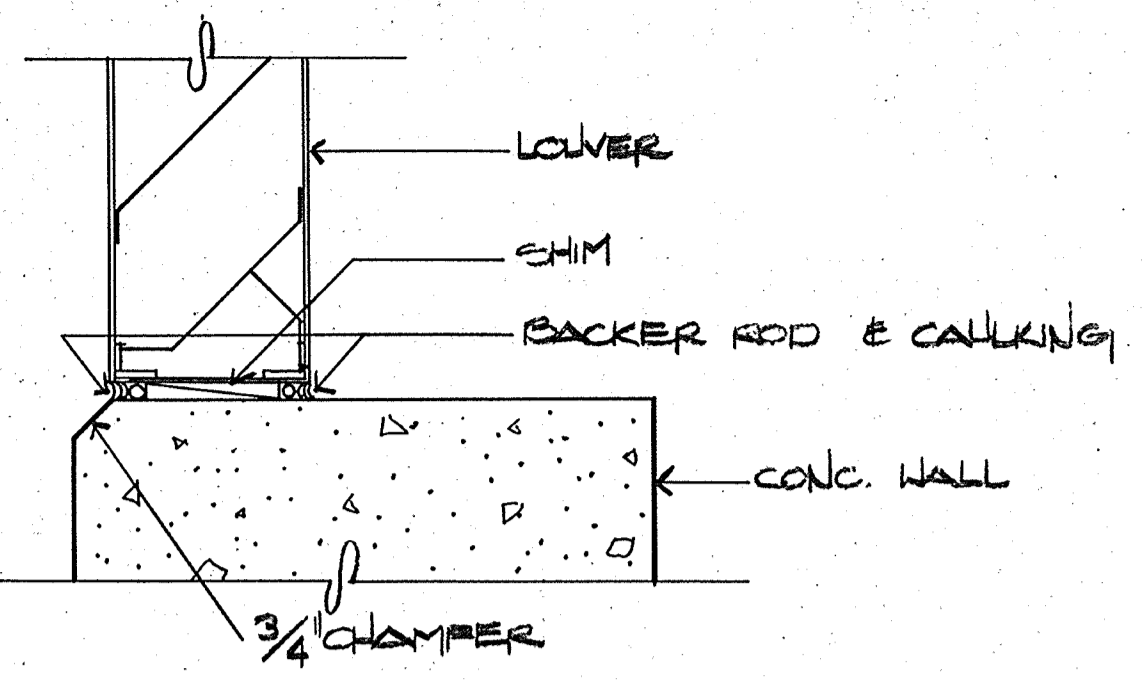
1 **A4** **SHOWER DETAIL**
 3"=1'-0"



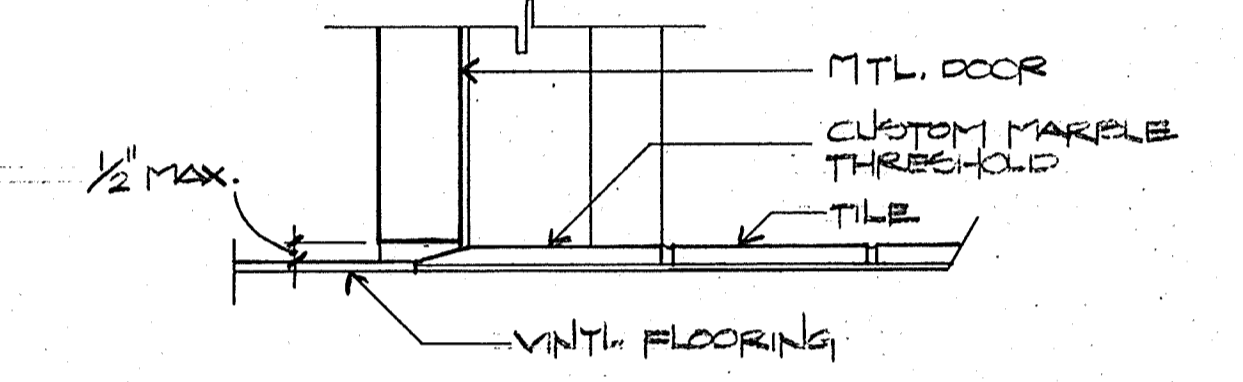
5 **A4** **TILE BASE DETAIL**
 3"=1'-0"



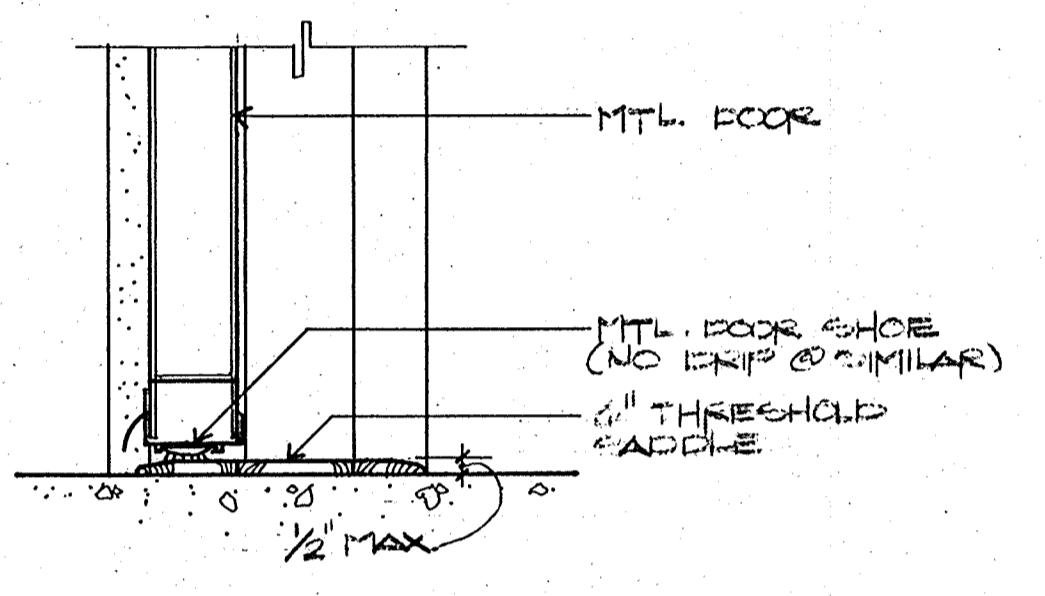
9 **A4** **REDUCER DETAIL**
 ACTUAL SIZE



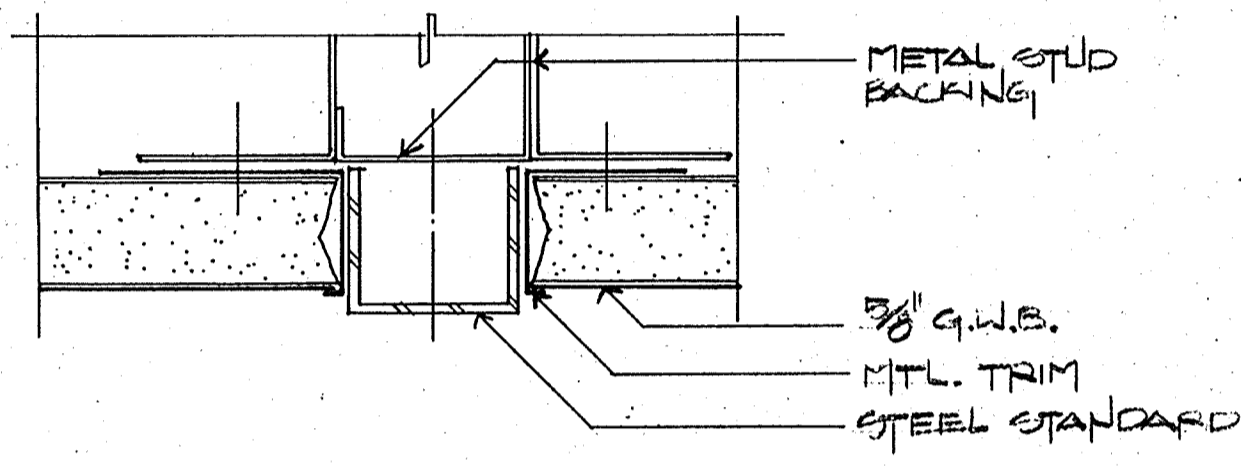
13 **A4** **LOUVER SILL DETAIL-TYP.**
 HEAD & JAMB SIM. 3"=1'-0"



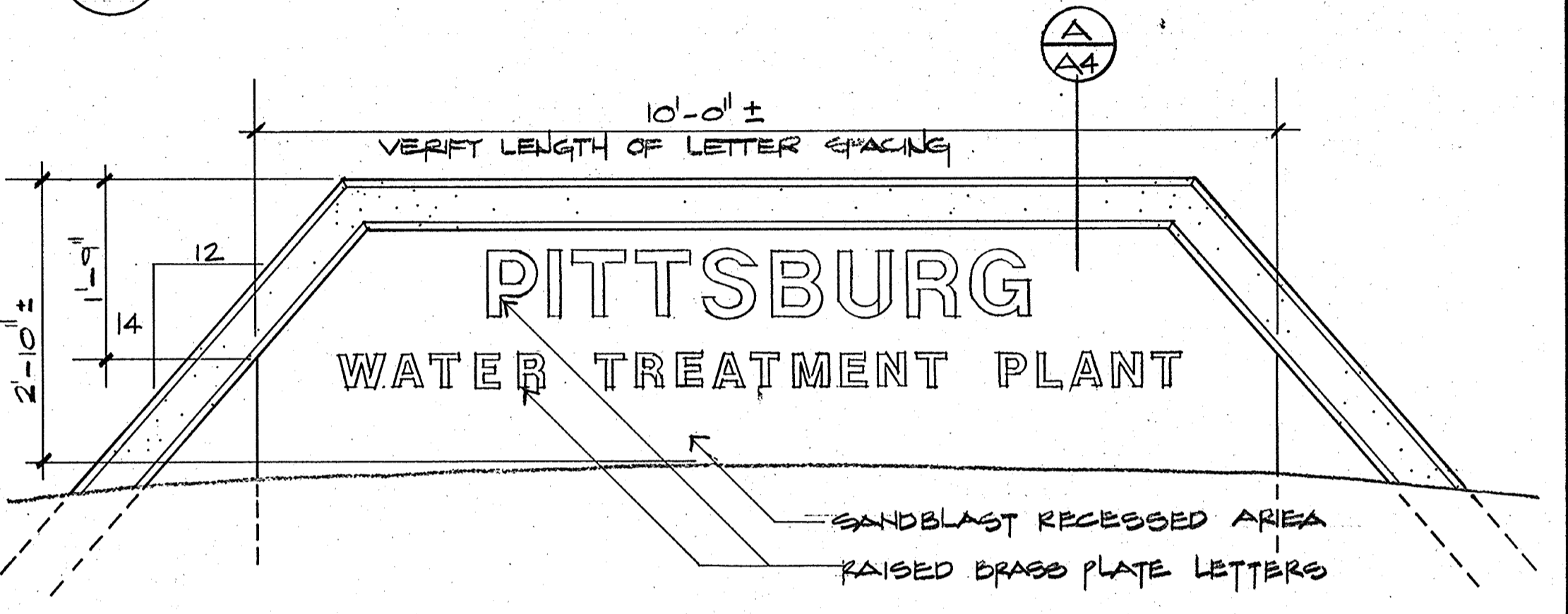
2 **A4** **THRESHOLD**
 3"=1'-0"



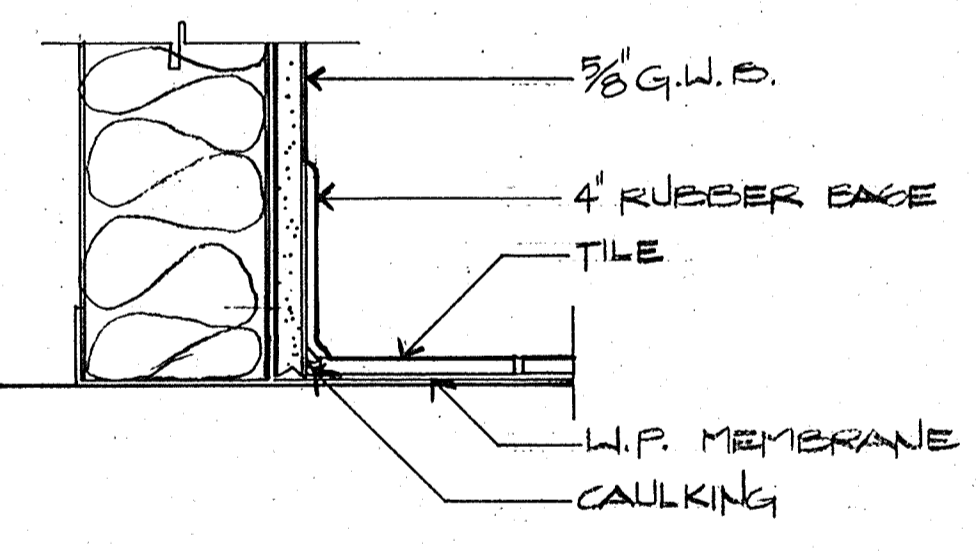
6 **A4** **THRESHOLD**
 3"=1'-0"



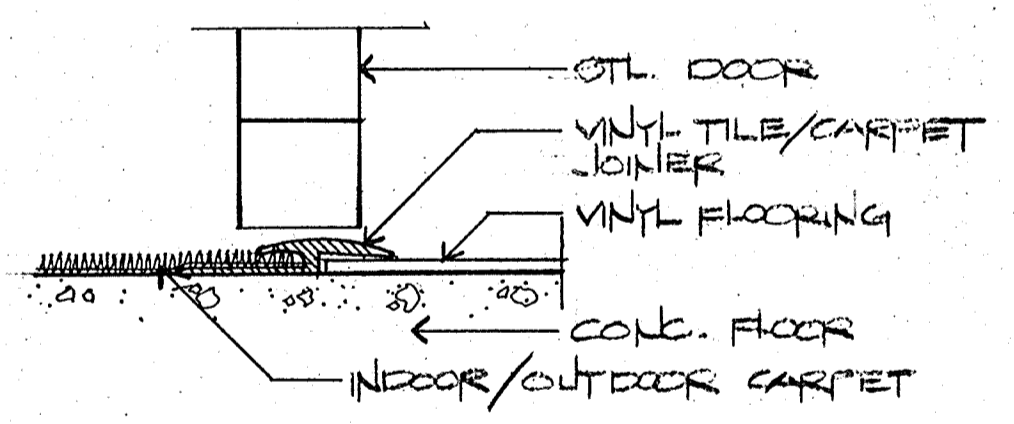
10 **A4** **SHELF STANDARD**
 ACTUAL SIZE



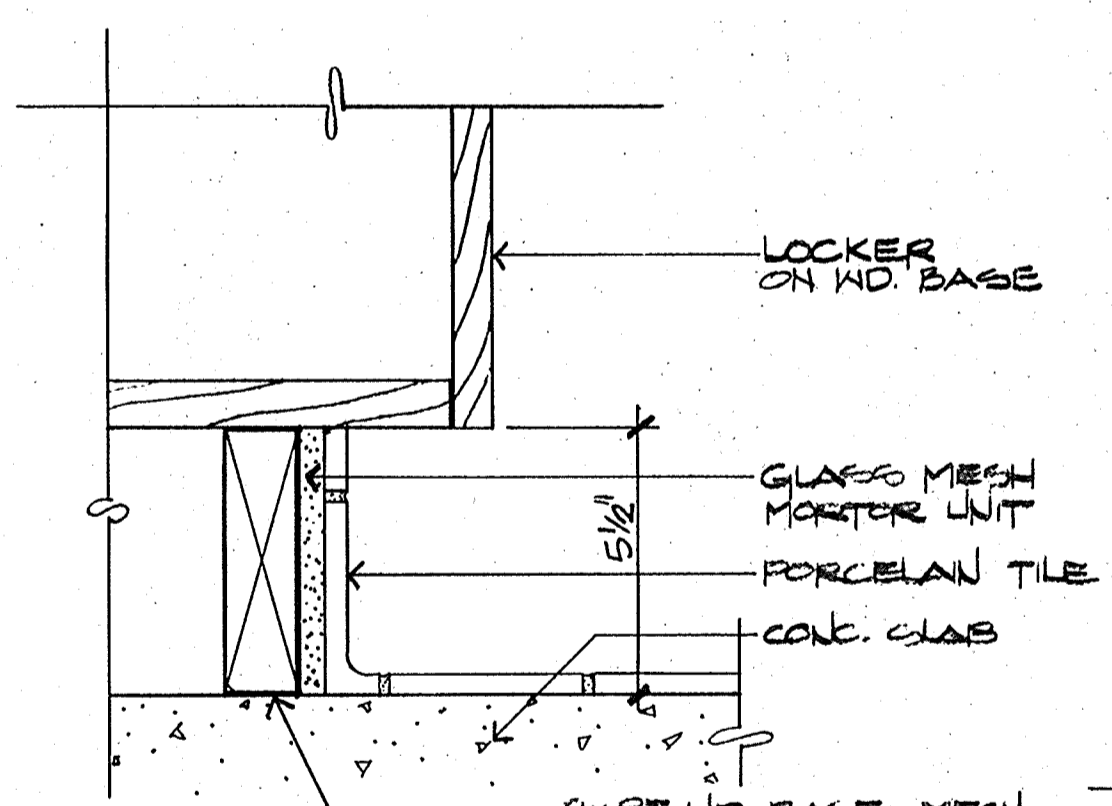
14 **A4** **ENTRANCE SIGN DETAIL**
 3/4"=1'-0"



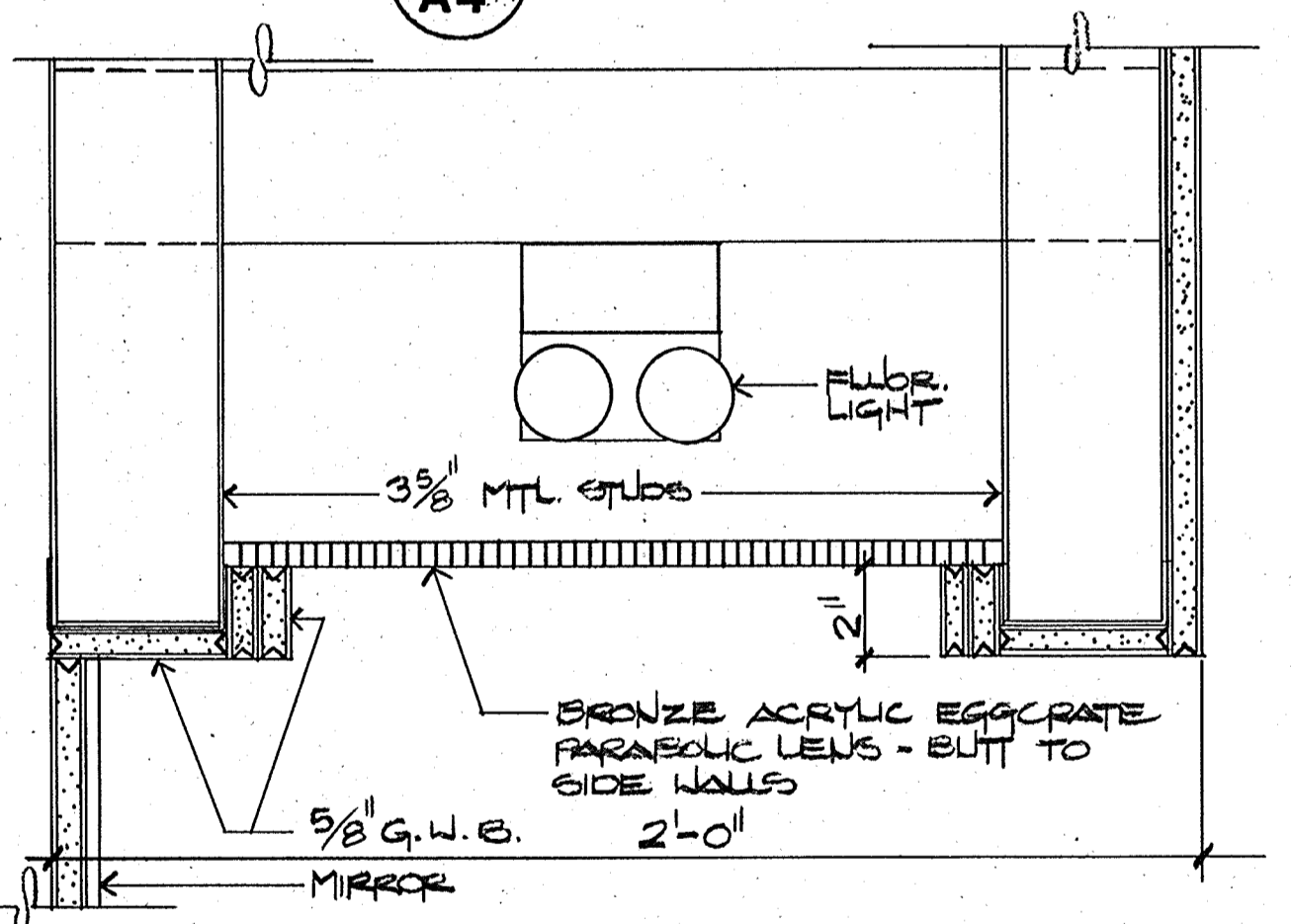
3 **A4** **TILE/BASE DETAIL**
 3"=1'-0"



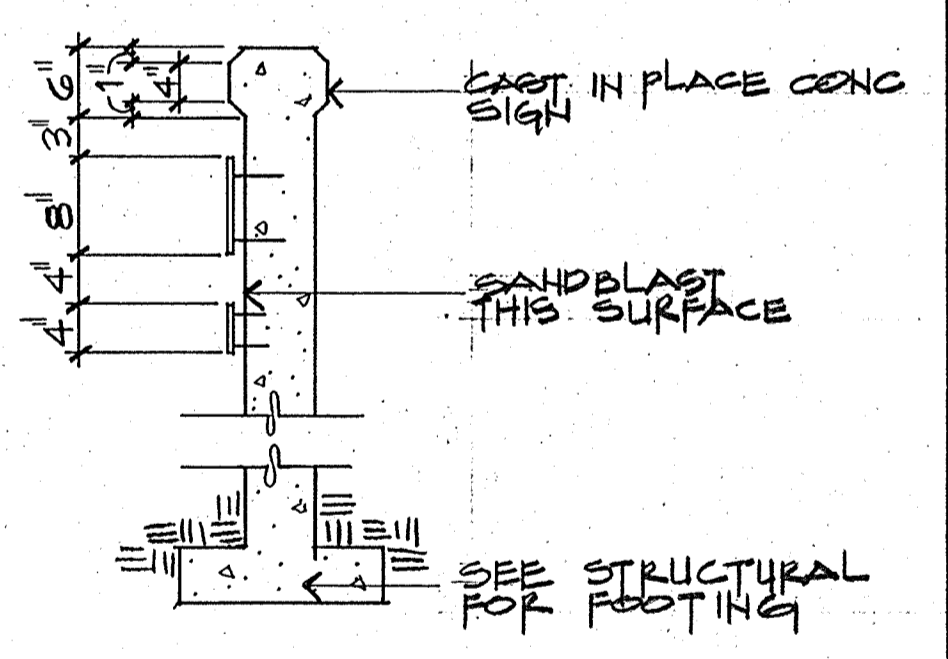
7 **A4** **JOINER DETAIL**
 NO SCALE



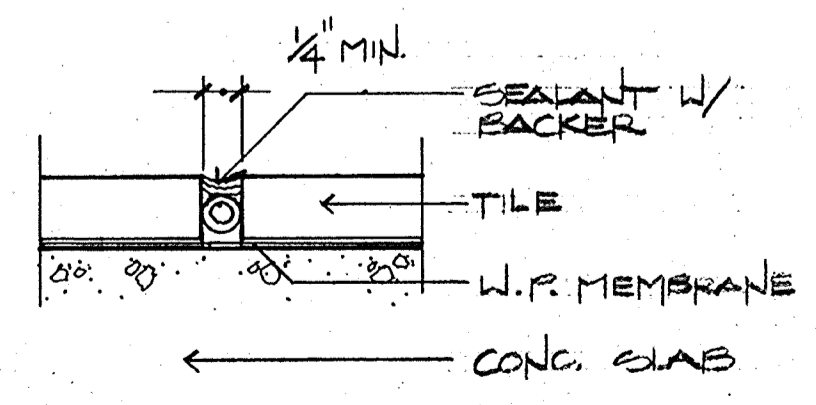
11 **A4** **LOCKER BASE**
 3"=1'-0"



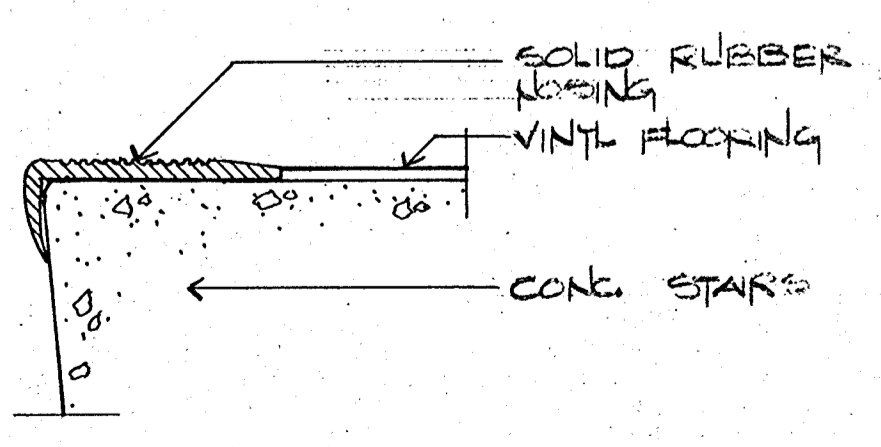
15 **A4** **LIGHT SOFFIT**
 3"=1'-0"



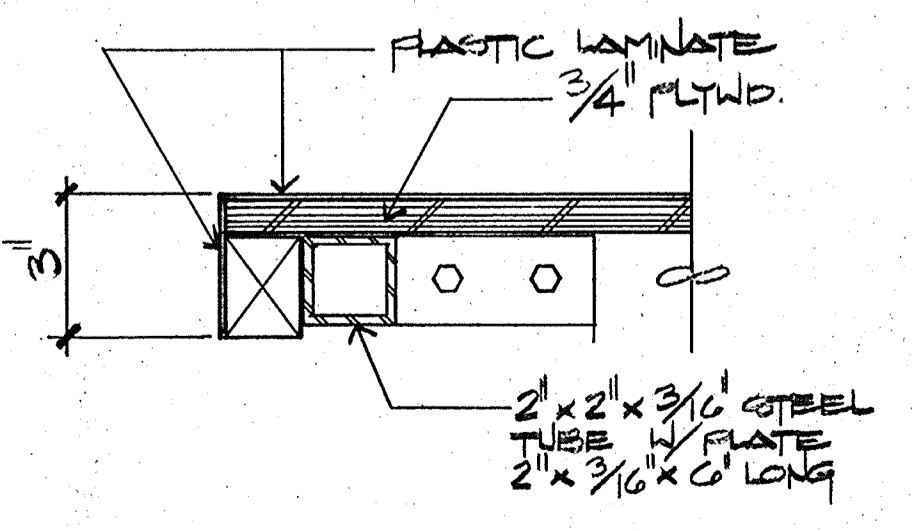
A **A4** **SECTION**
 3/4"=1'-0"



4 **A4** **EXPANSION JOINT**
 3"=1'-0"



8 **A4** **DETAIL AT STAIRS**
 NO SCALE



12 **A4** **COUNTERTOP EDGE**
 3"=1'-0"

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 Checked by: CC
 Approved by: _____
 Date: 8-26-88
 Scale: AS SHOWN

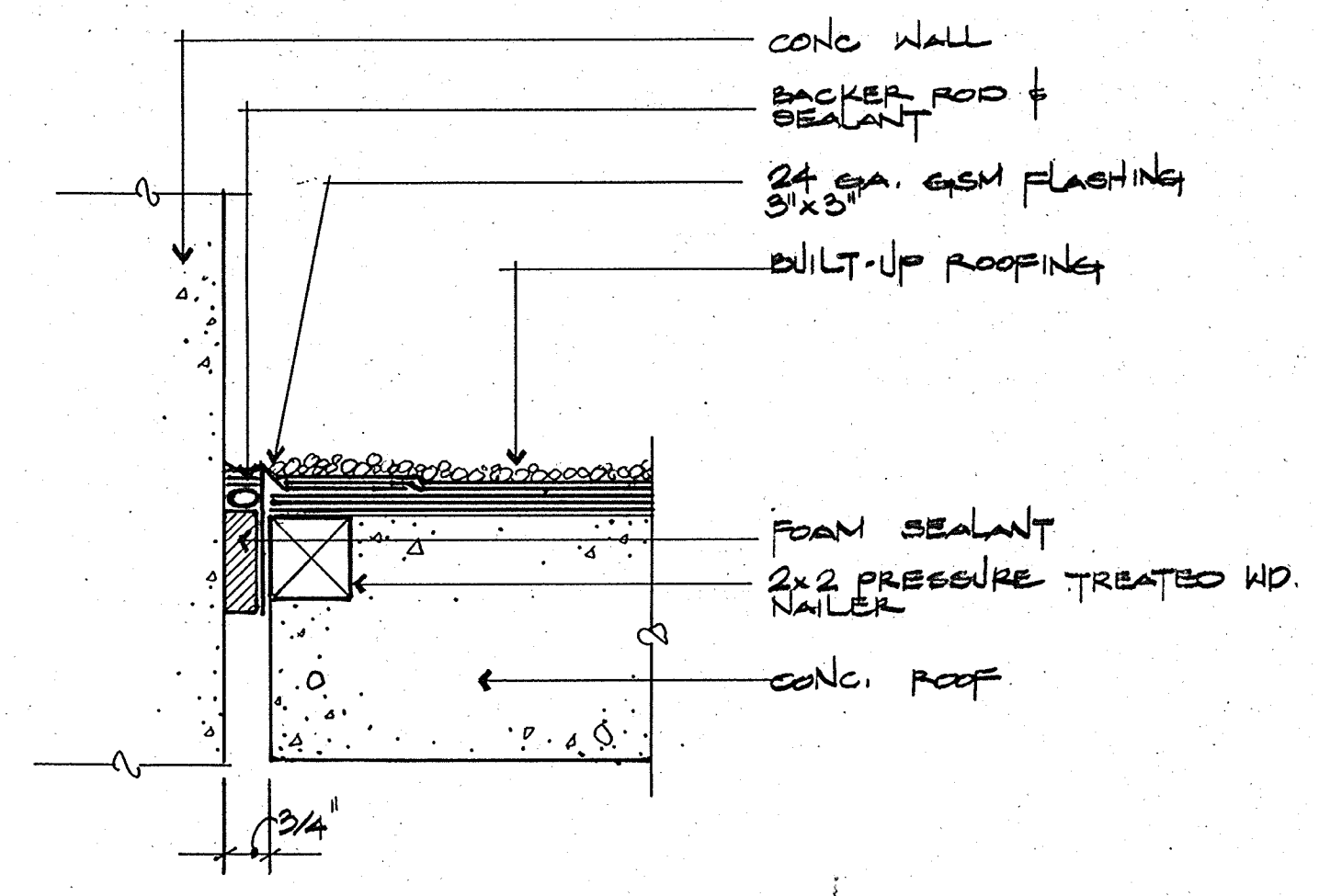
CITY OF PITTSBURG, CA
WATER TREATMENT PLANT EXPANSION
DETAILS

Date	Ch'k'd	Revision

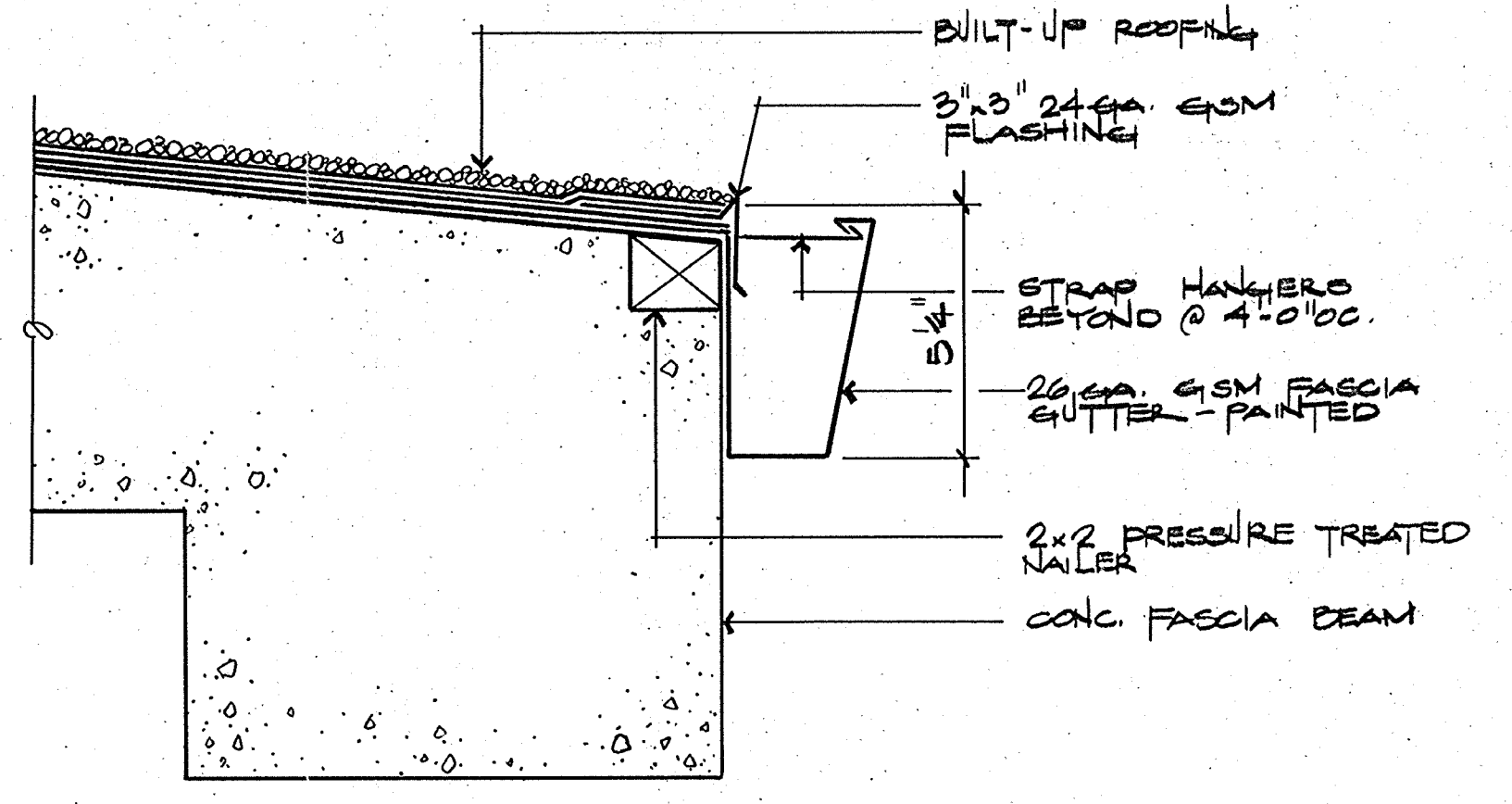
CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
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 planners, & management consultants

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 SHEET NO. **A-4**
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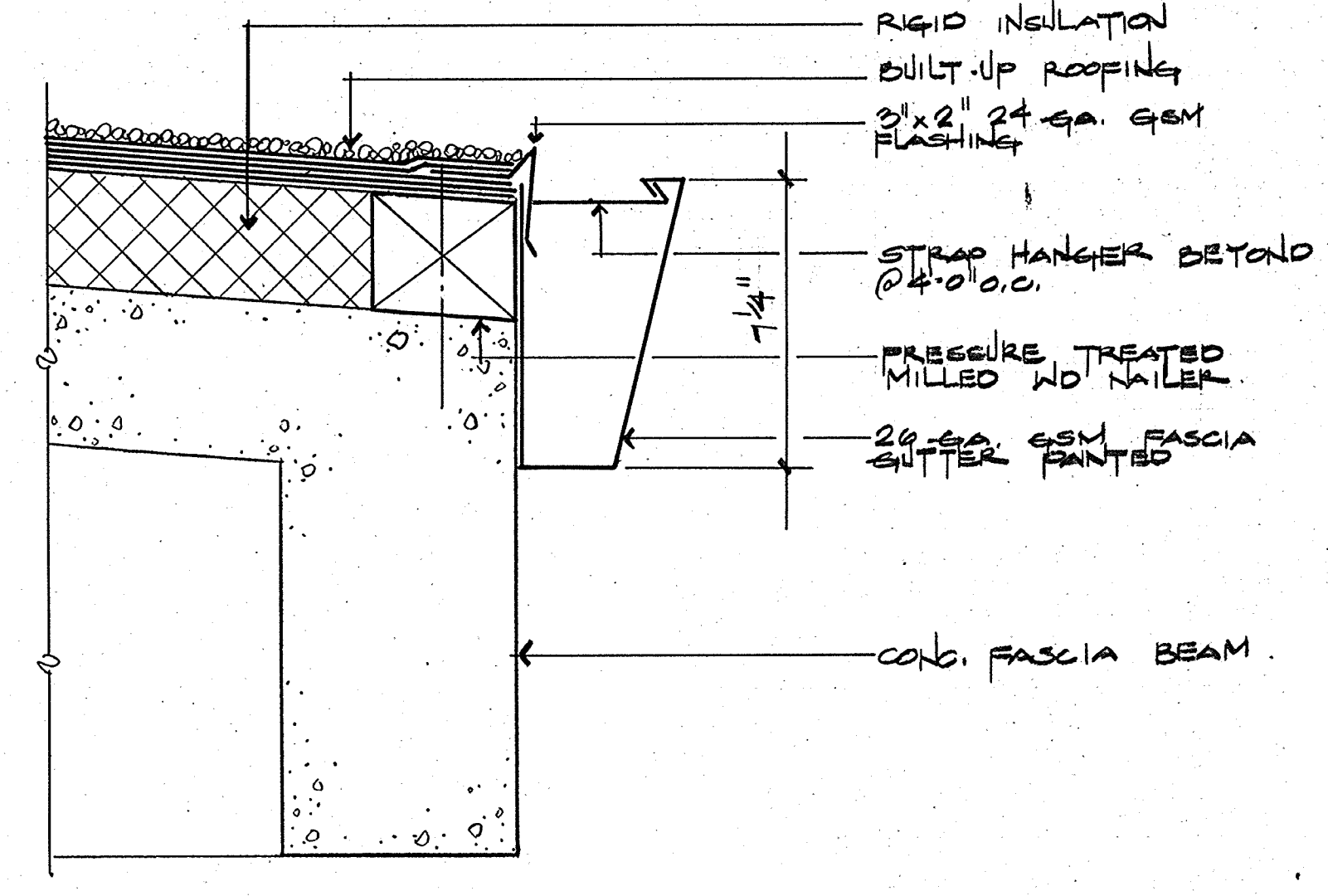
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 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



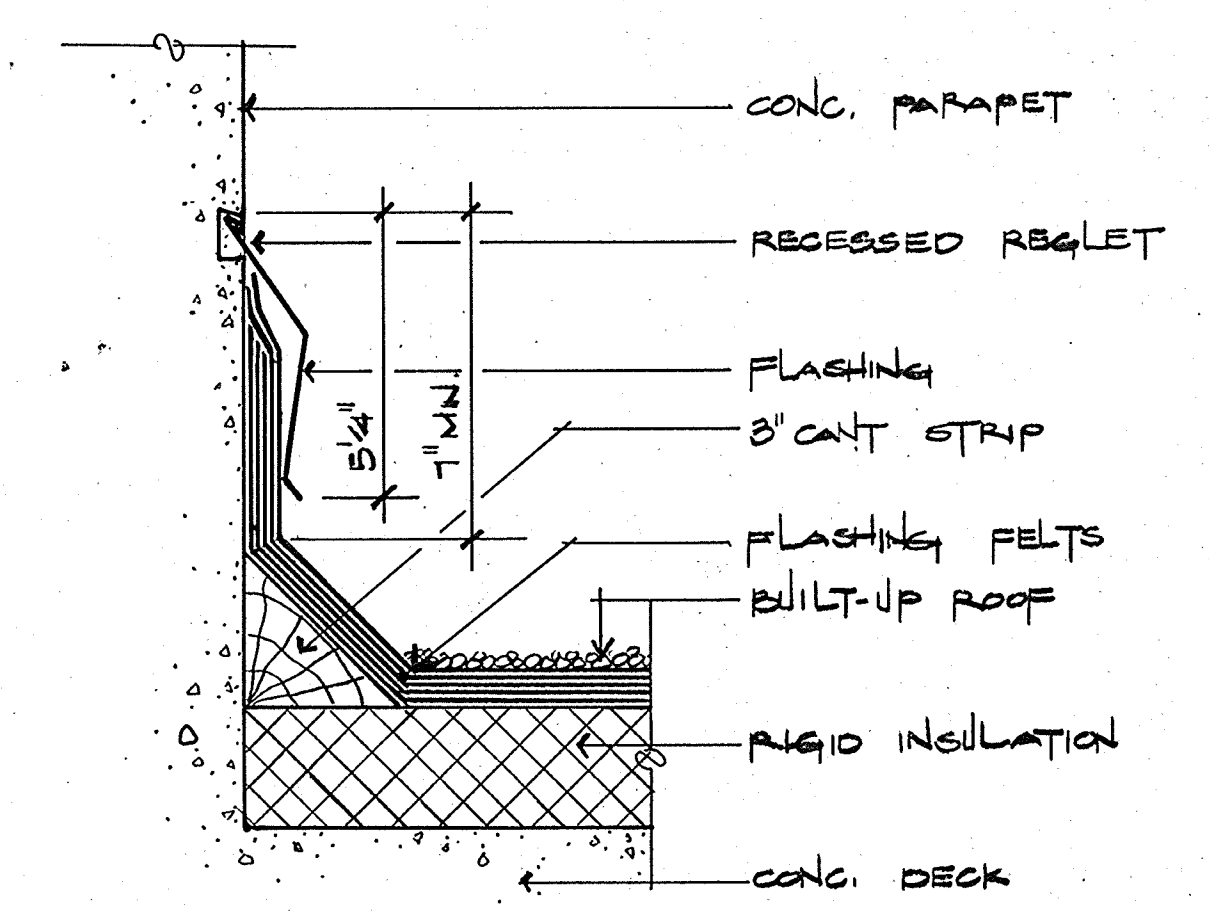
1 JOINT DETAIL
 A5 3"=1'-0"



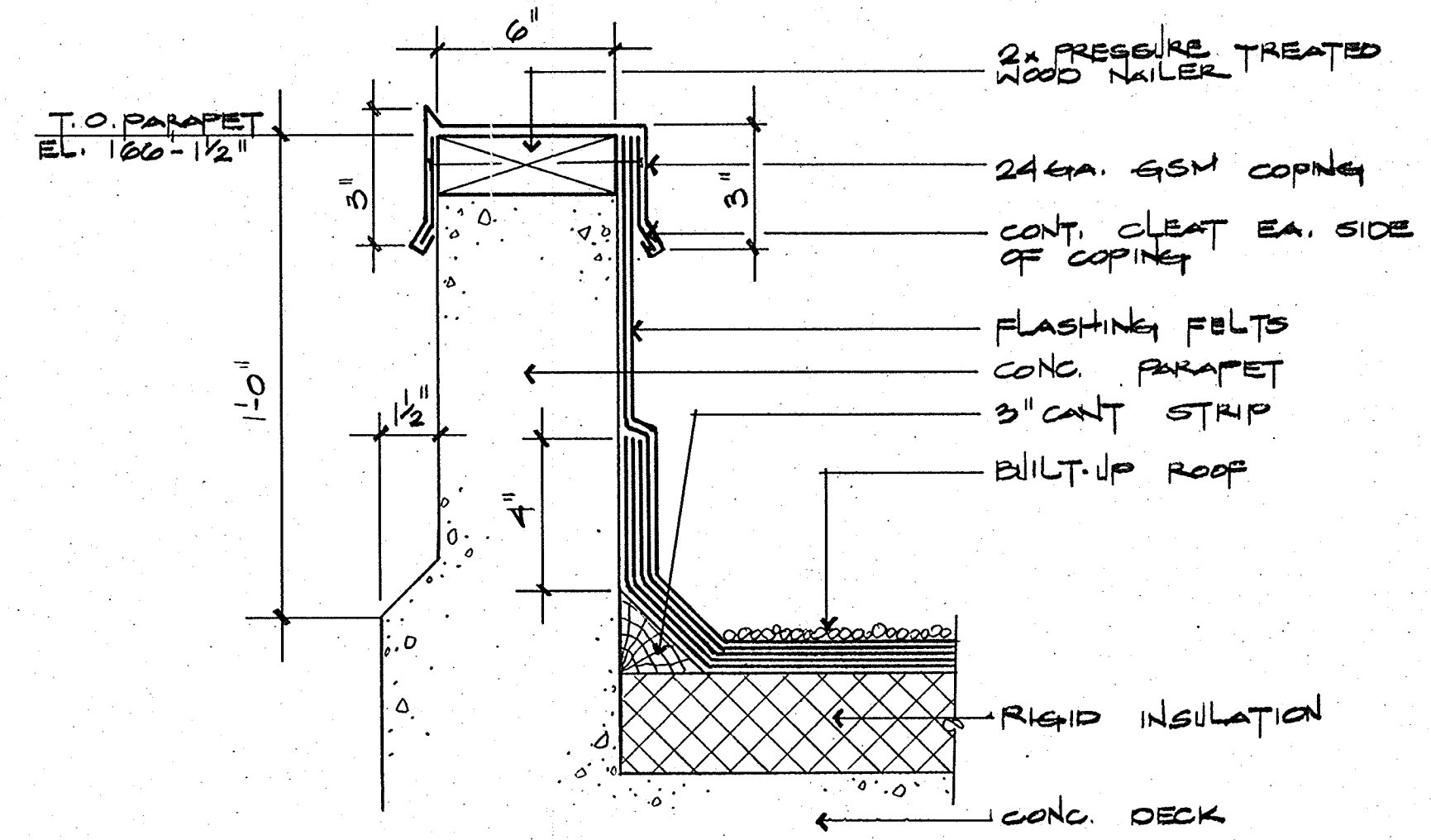
4 FASCIA DETAIL
 A5 3"=1'-0"



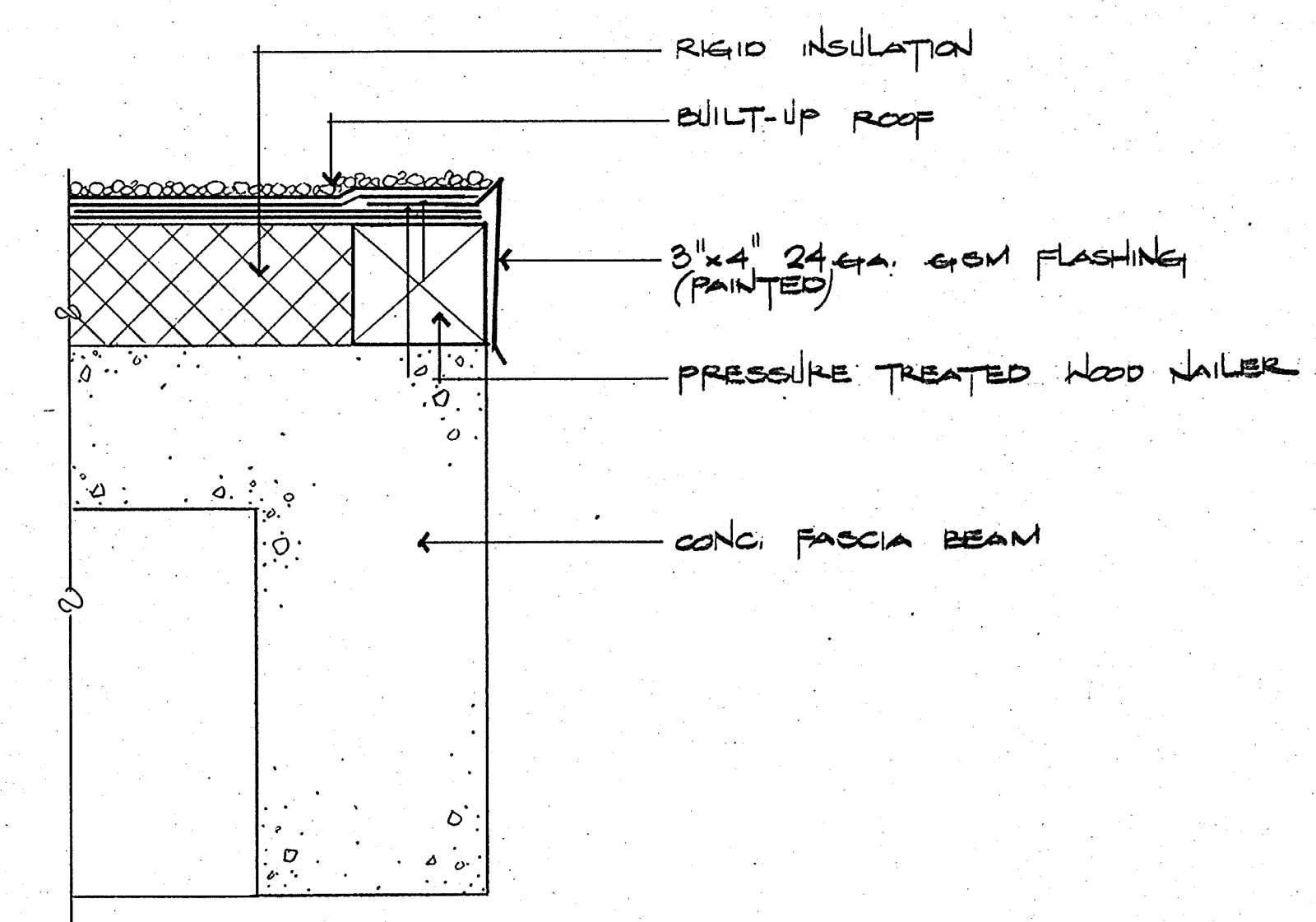
7 FASCIA DETAIL
 A5 3"=1'-0"



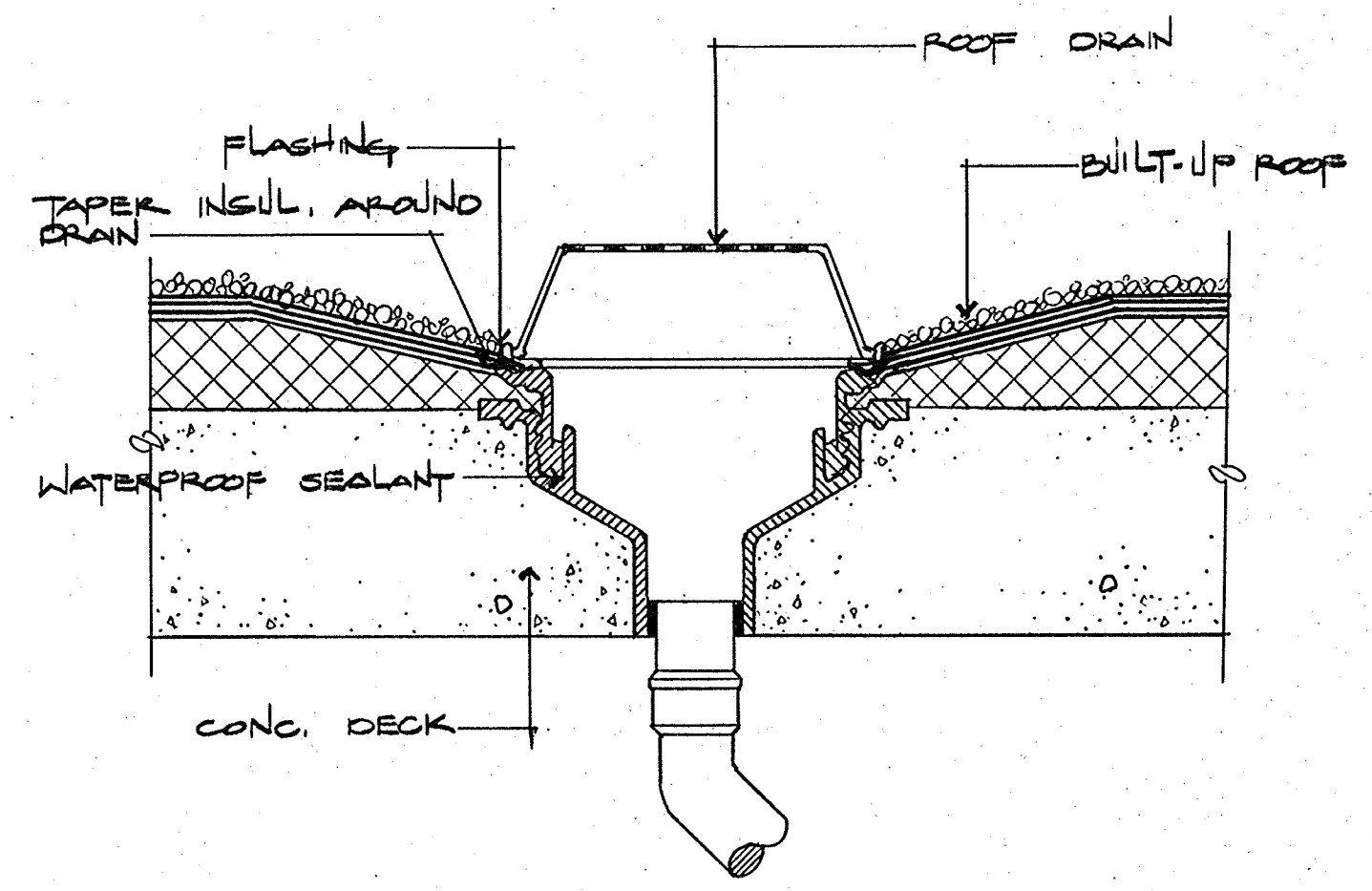
2 REGLET DETAIL
 A5 3"=1'-0"



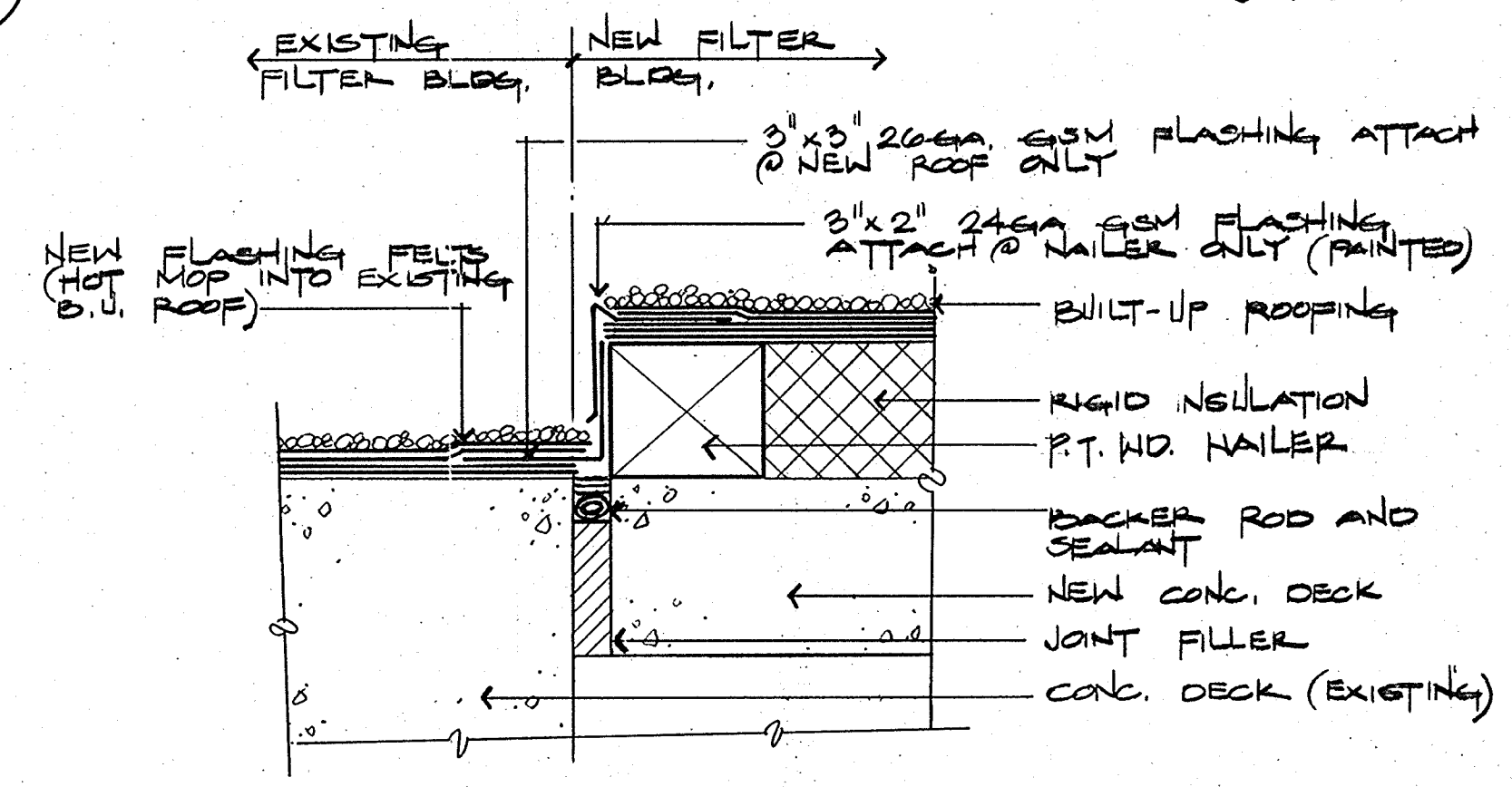
5 ROOF PARAPET
 A5 3"=1'-0"



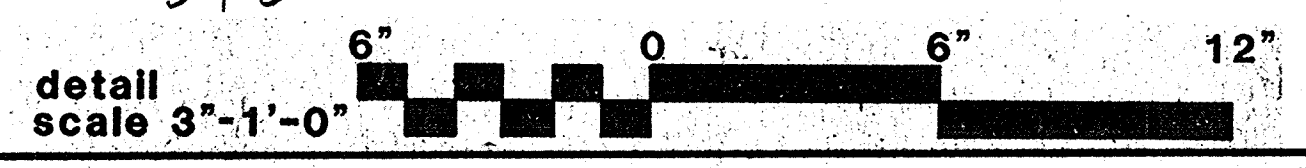
8 RAKE DETAIL
 A5 3"=1'-0"



3 ROOF DRAIN
 A5 NO SCALE



6 TRANSITION DETAIL
 A5 3"=1'-0"



PJM 5/10/97

CITY OF PITTSBURG, CA
 WATER TREATMENT PLANT EXPANSION
 DETAILS

Date	Ch'k'd	Revision

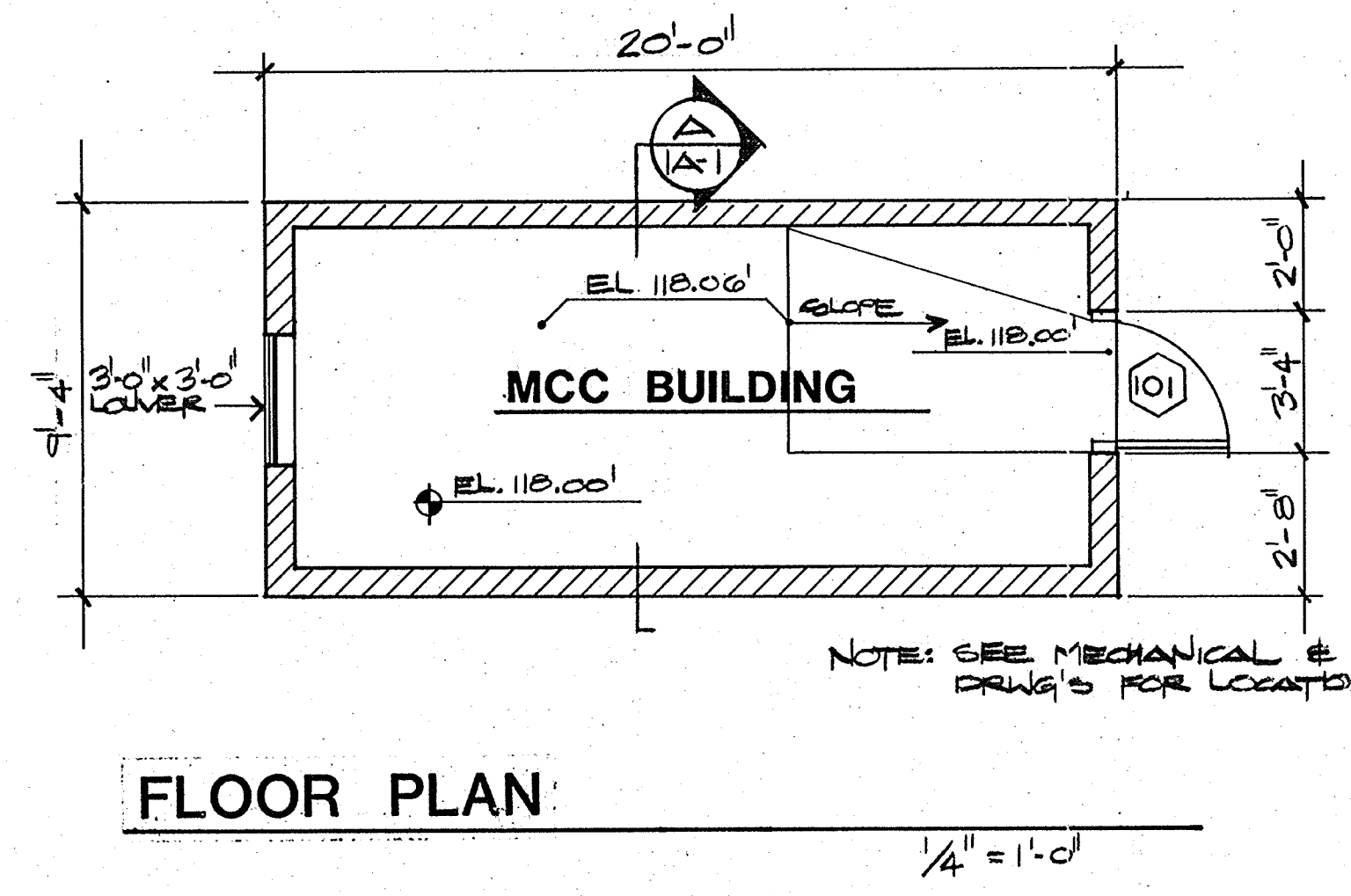
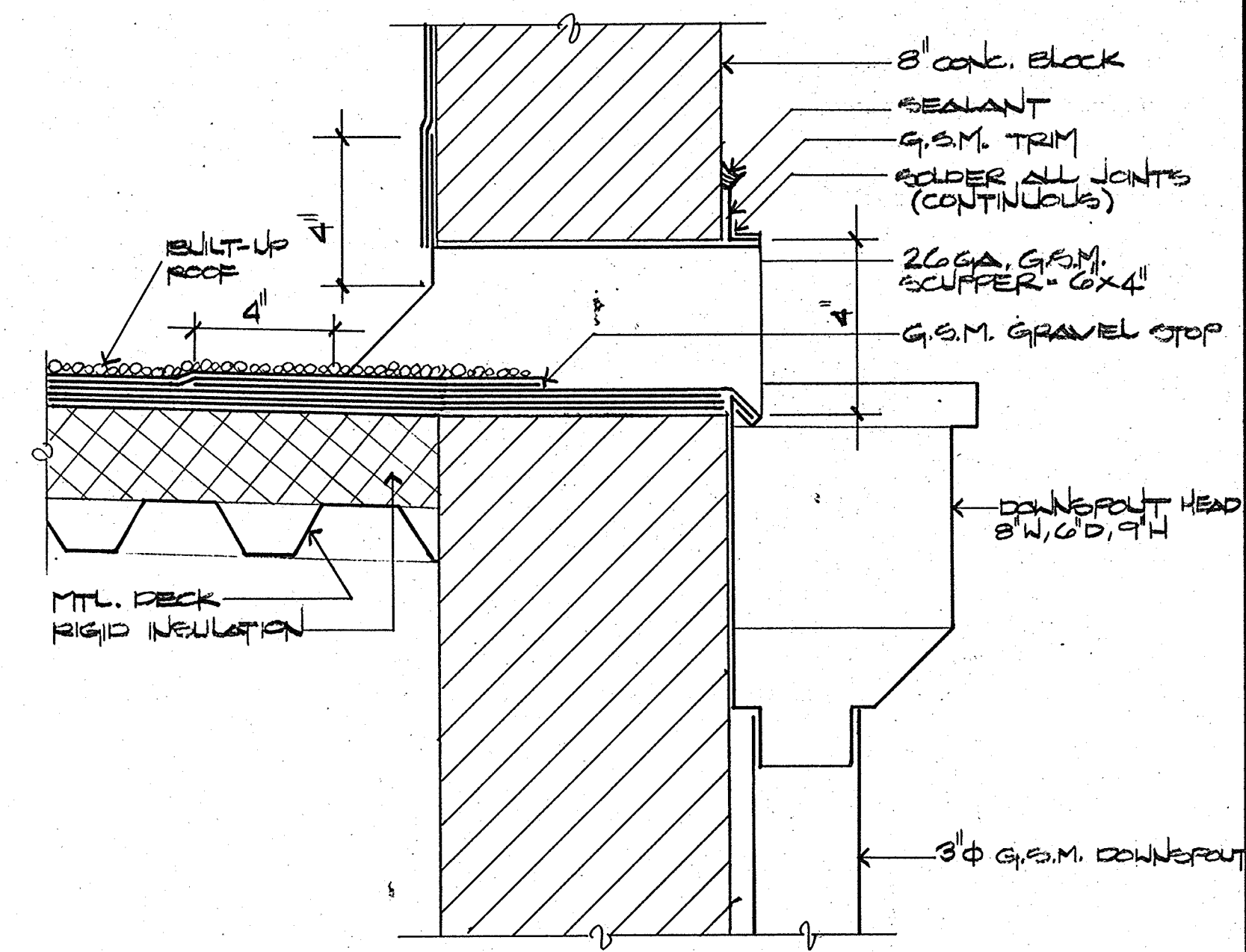
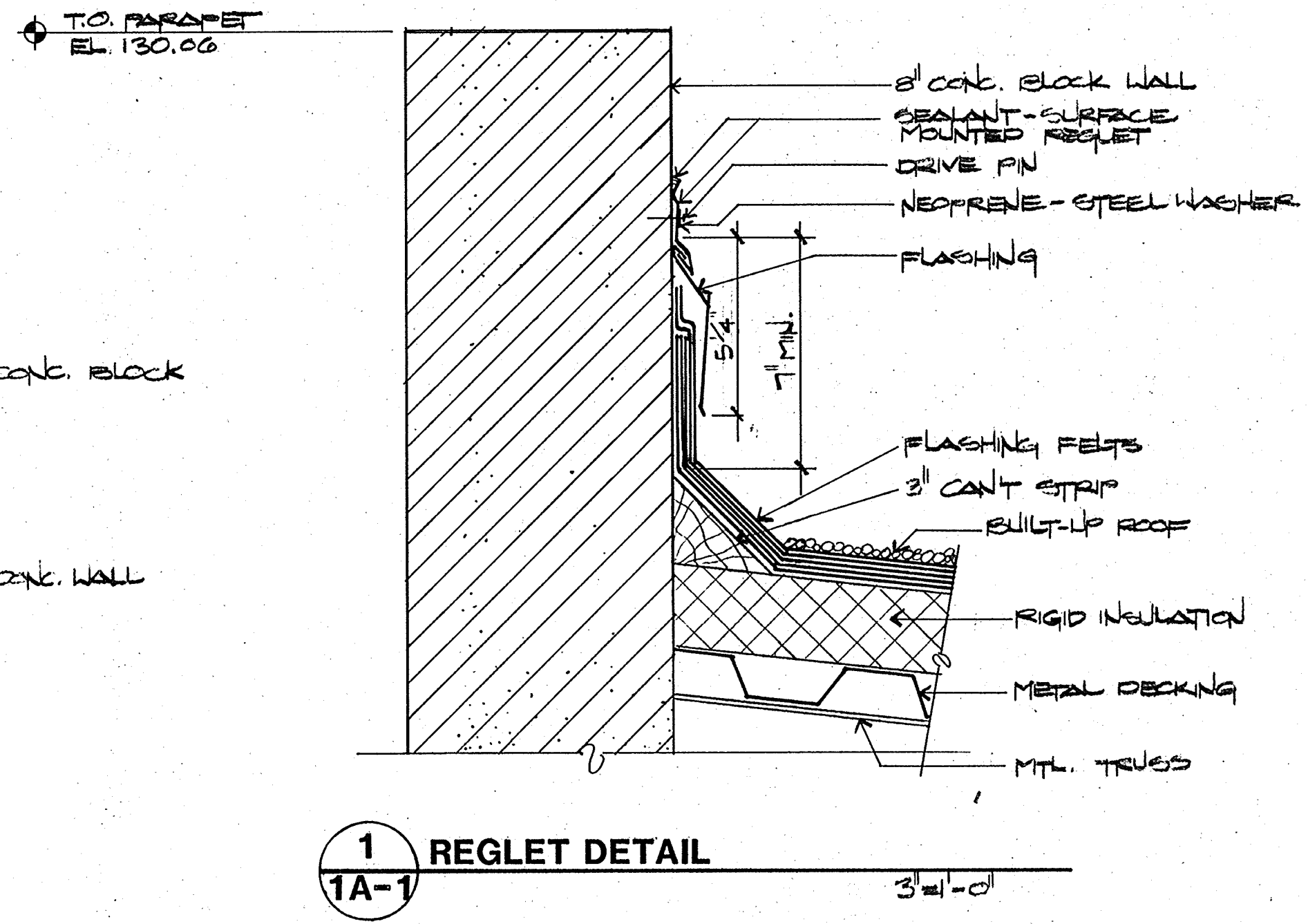
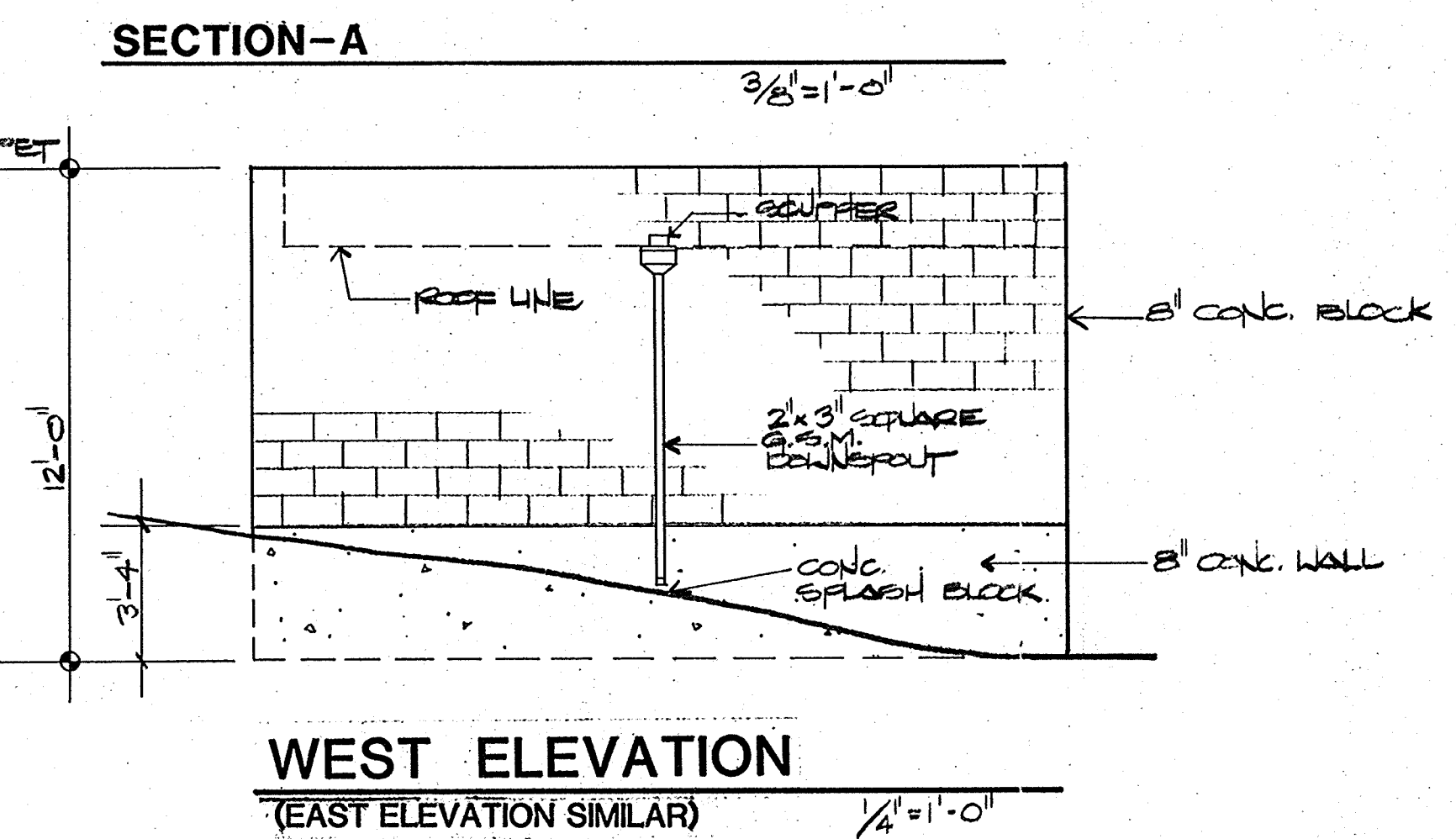
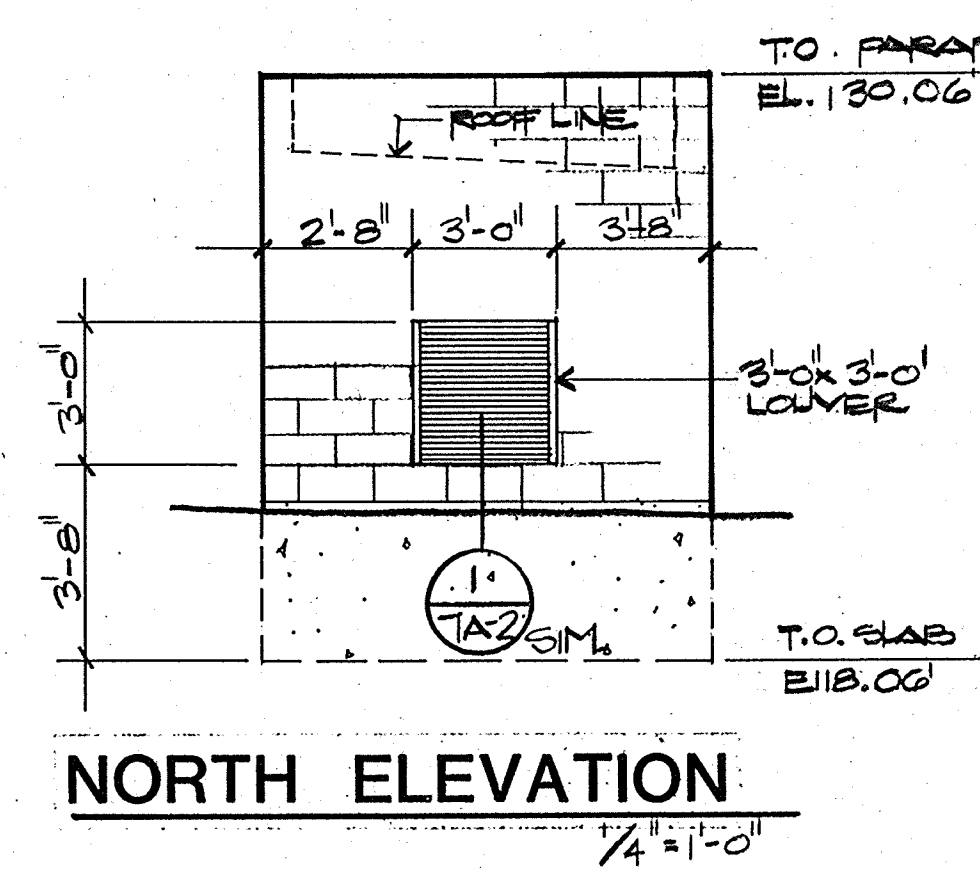
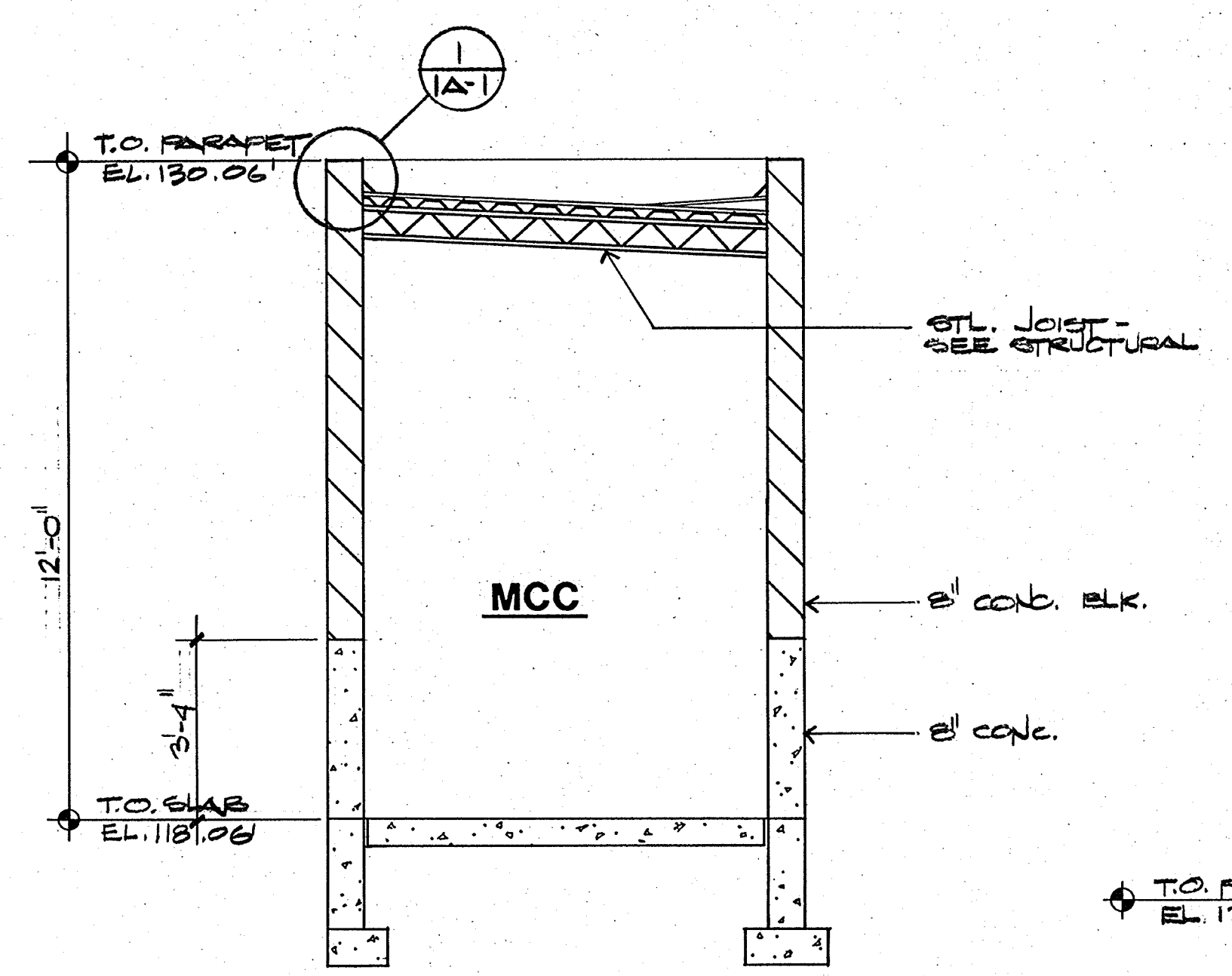
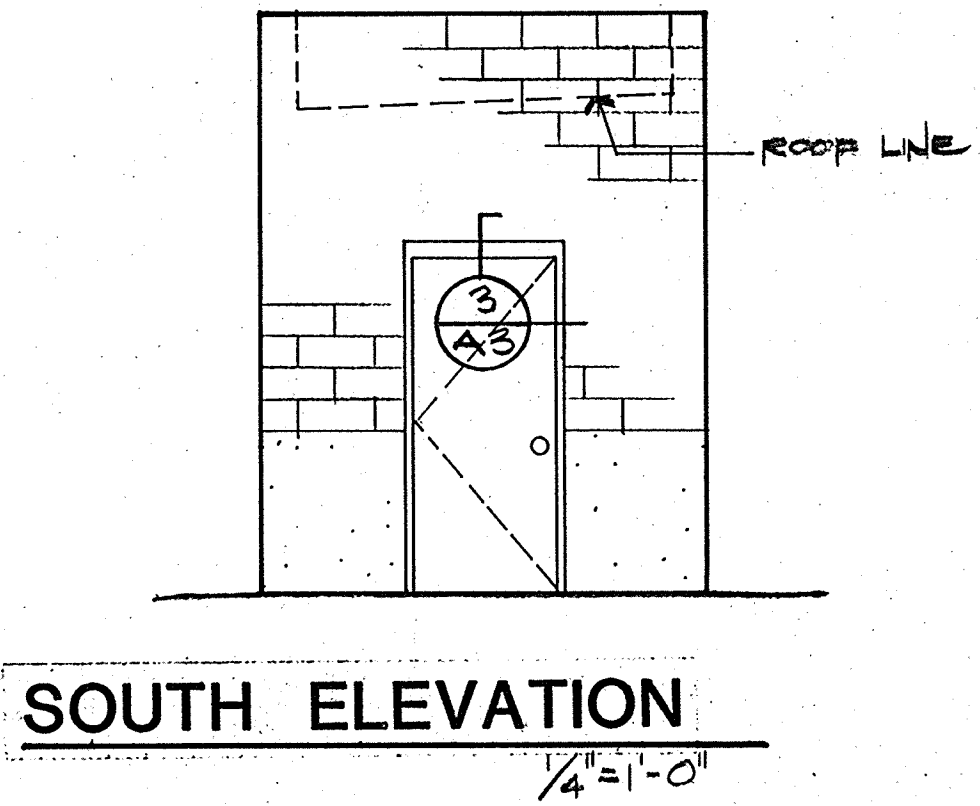
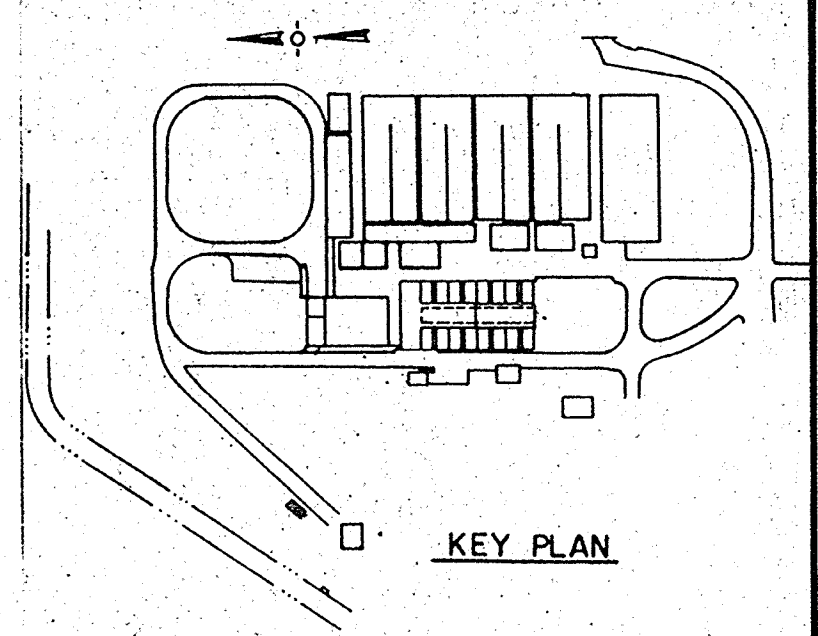
Designed by: N.A.W.
 Drawn by: C.C.
 Checked by: C.C.
 Approved by:

Date: 8-20-08
 Scale: SHOWN

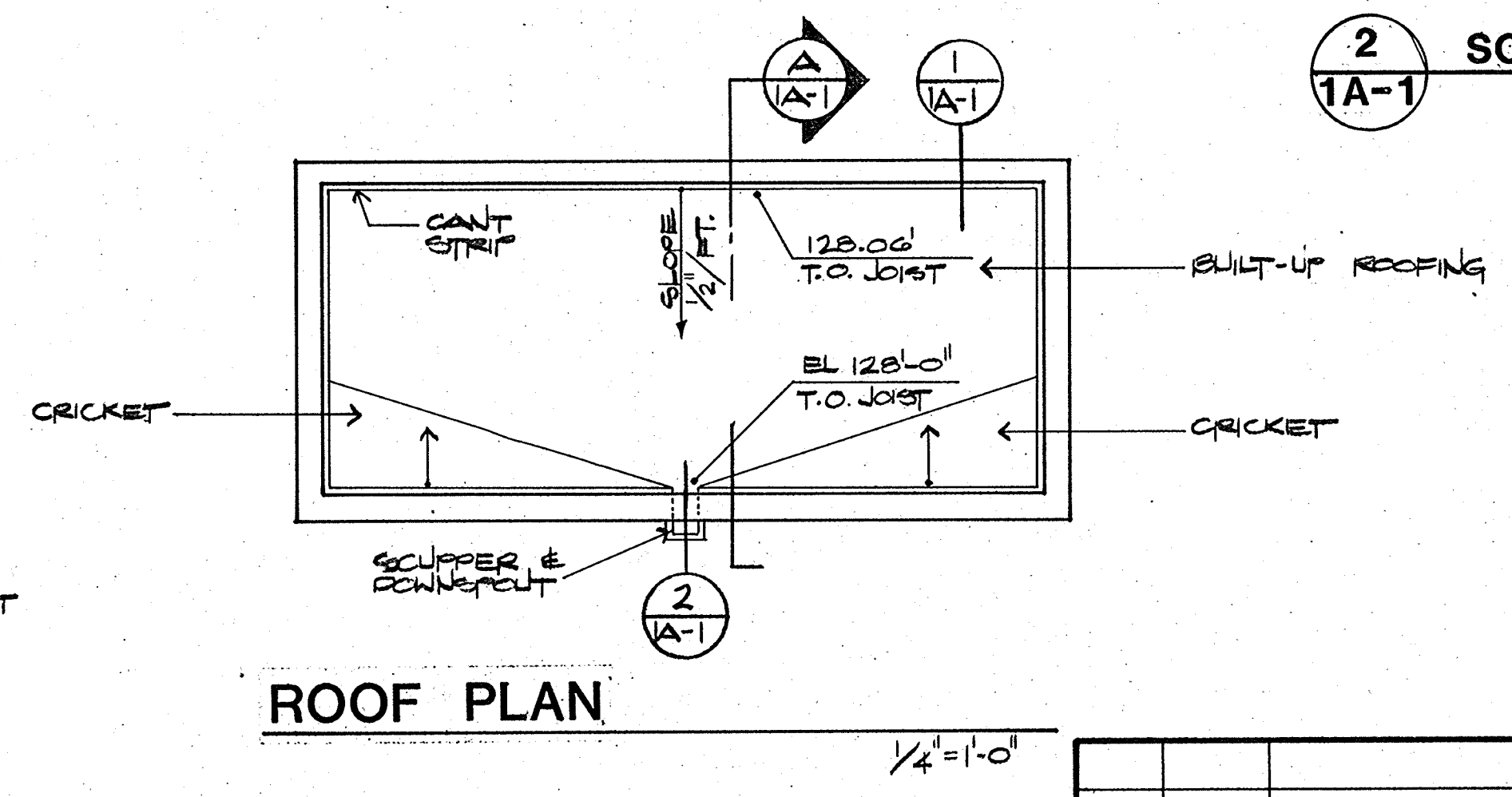
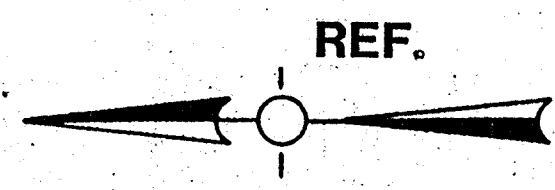
CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners & management consultants

SHEET NO.
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111335
 PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



NOTE: SEE MECHANICAL & ELECTRICAL DRWG'S FOR LOCATION OF EQUIPMENT



Date	Ch'k'd	Revision

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 Danville, California 94526

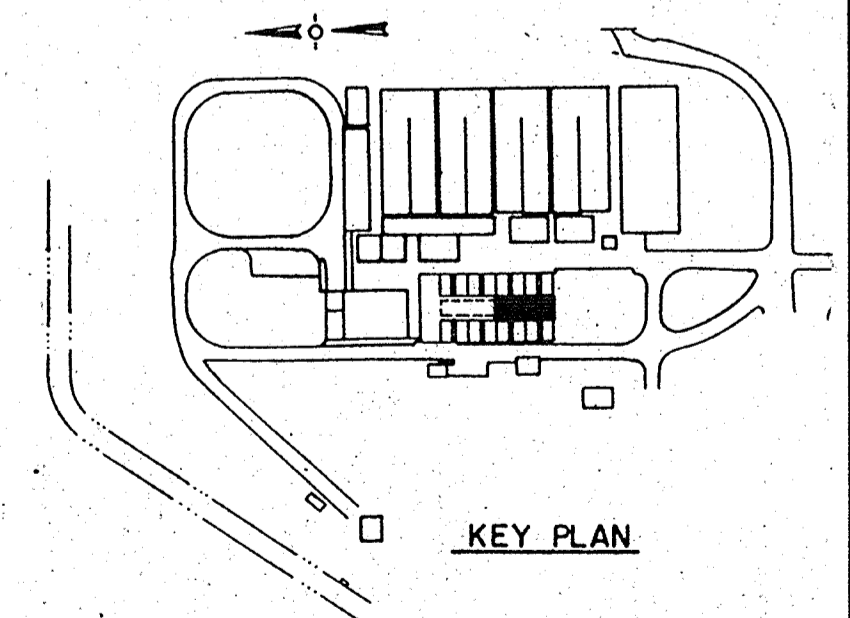
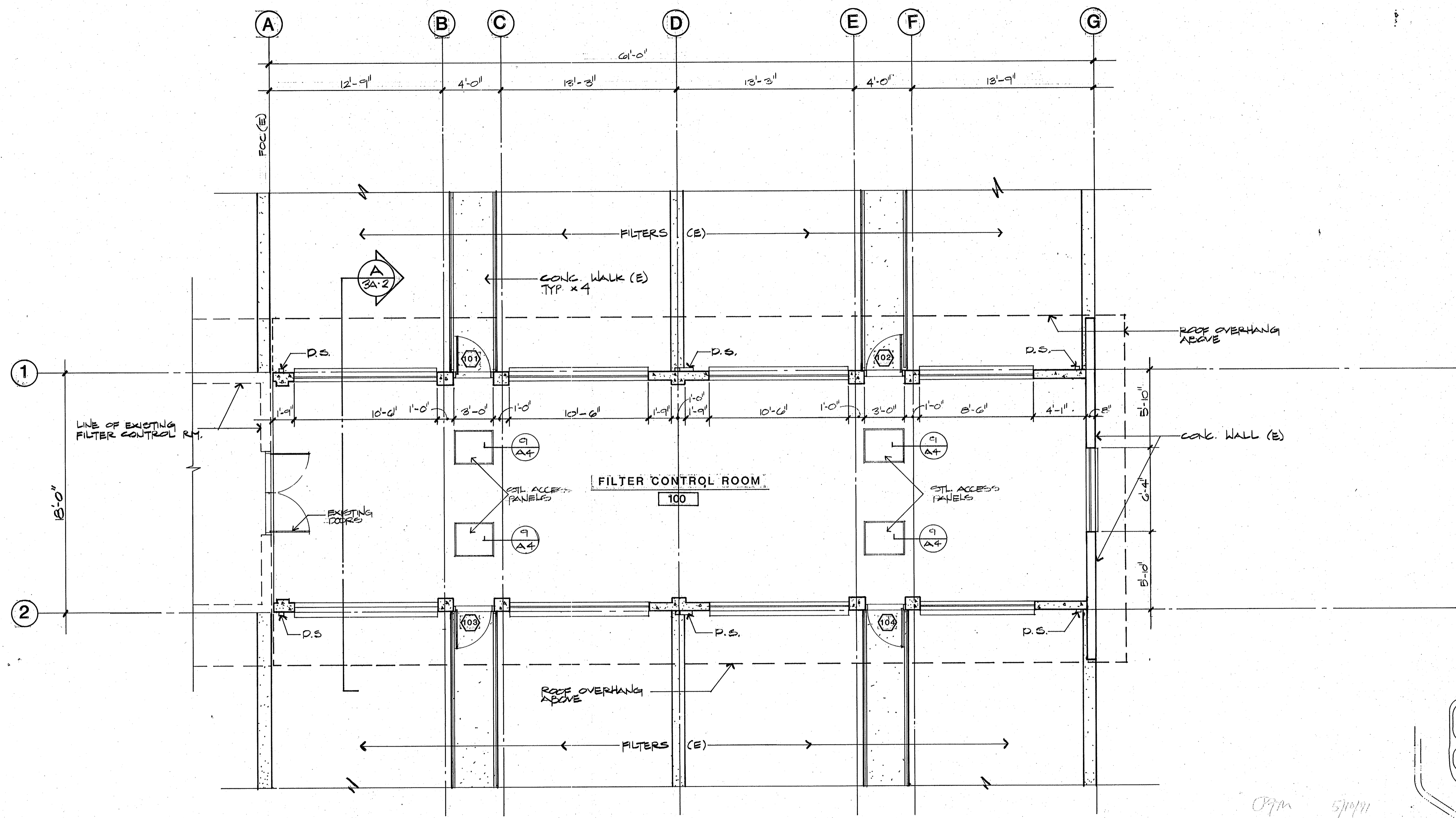
Designed by: _____
 Drawn by: MB, WKL
 Checked by: CC
 Approved by: _____
 Date: 8-26-88
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CITY OF PITTSBURG, CA
 WATER TREATMENT PLANT EXPANSION
 MCC BUILDING
 FLOOR AND ROOF PLAN

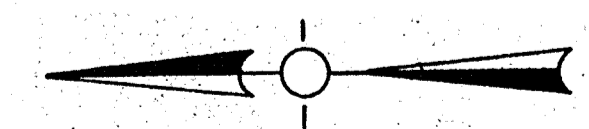
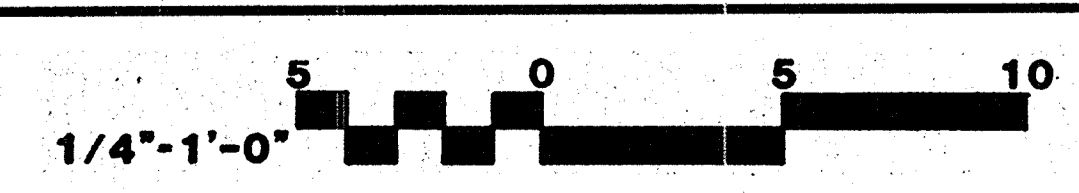
CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
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 planners, & management consultants

SHEET NO.
 1A-1
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111335
 PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



FLOOR PLAN



Date	Ch'k'd	Revision

Designed by: _____
 Drawn by: E.H.
 Checked by: CC
 Approved by: _____

Date: 8-26-88
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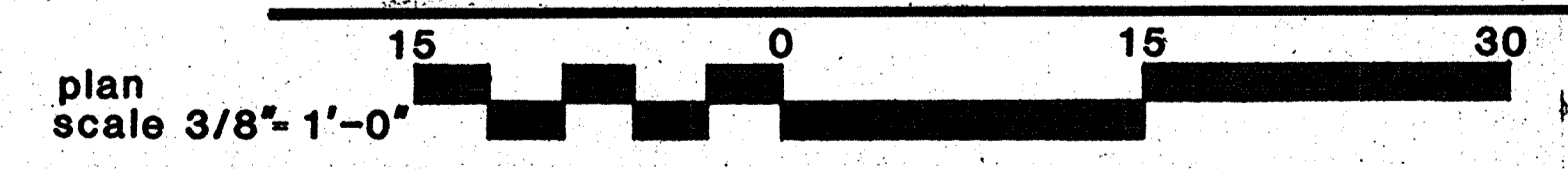
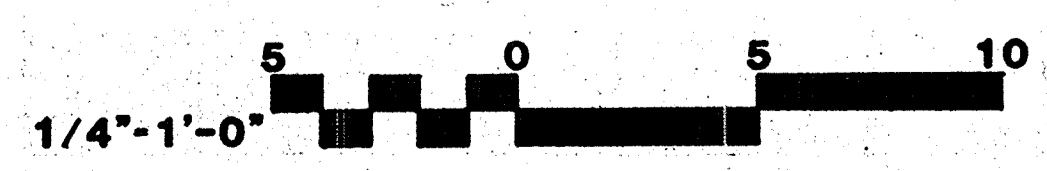
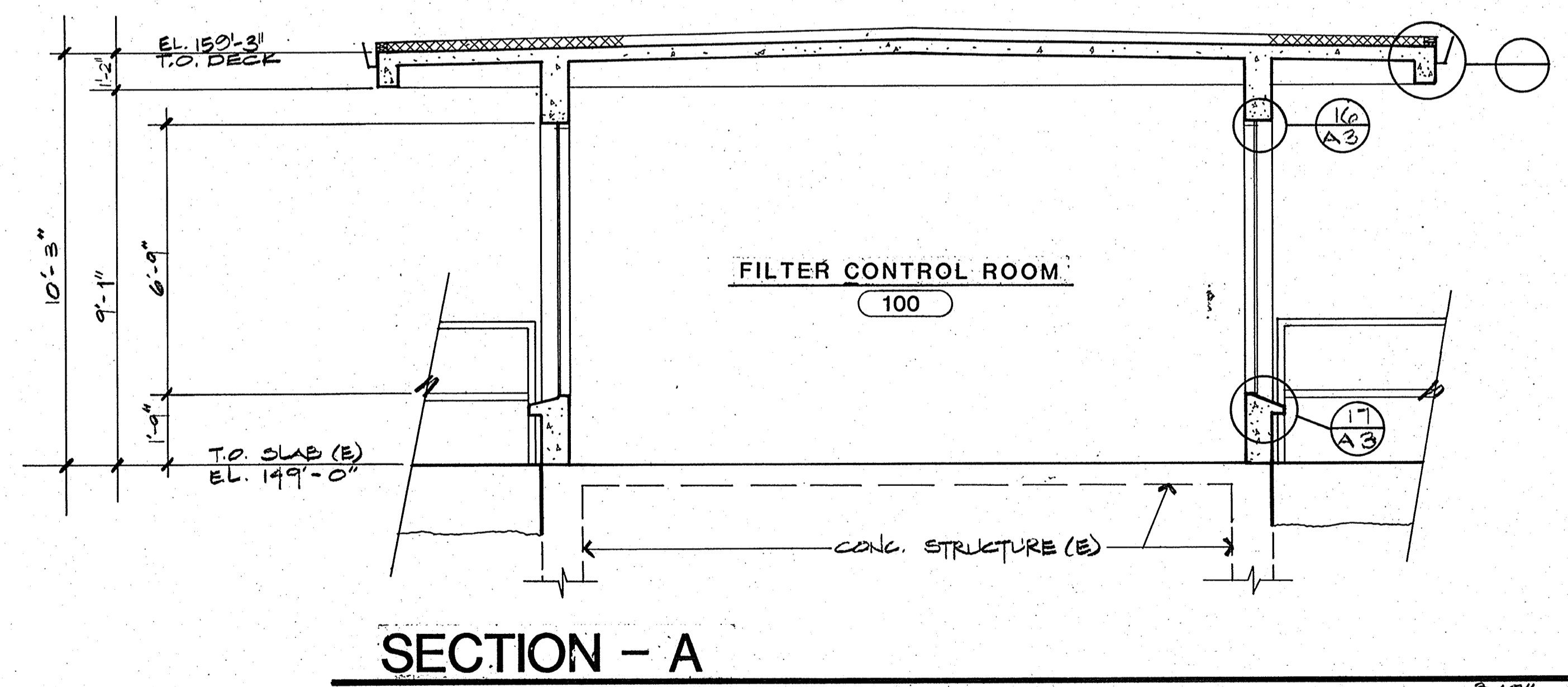
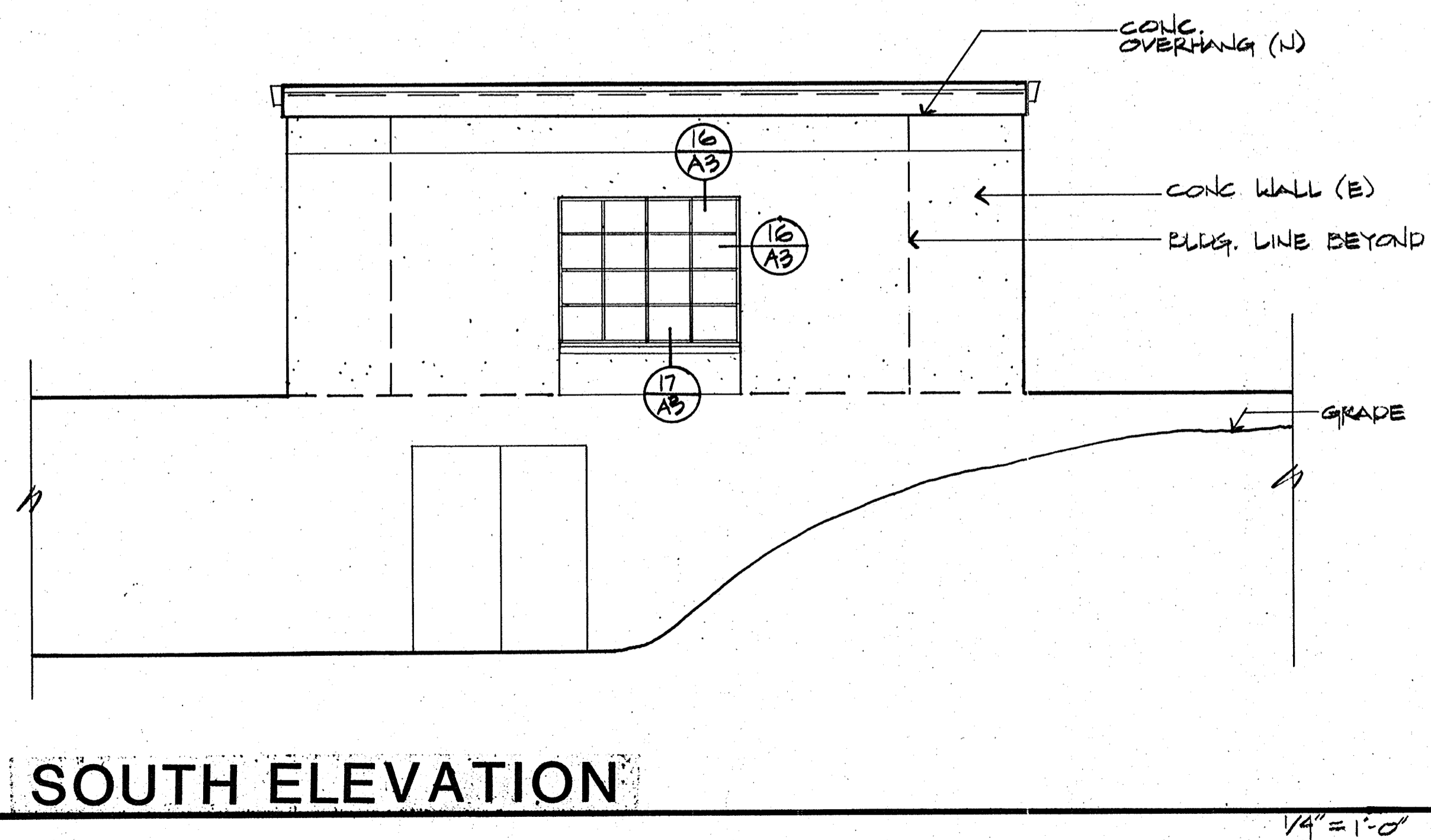
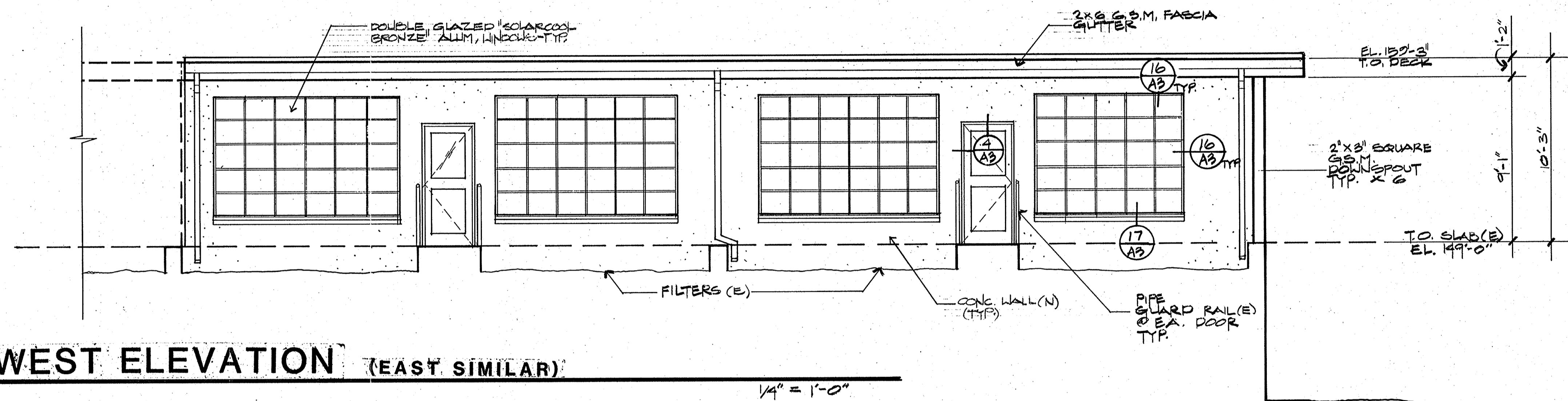
CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
FILTER CONTROL ROOM
 FLOOR PLAN

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 Walnut Creek, CA 94596
 environmental engineers, scientists,
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SHEET NO.
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111335
 PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



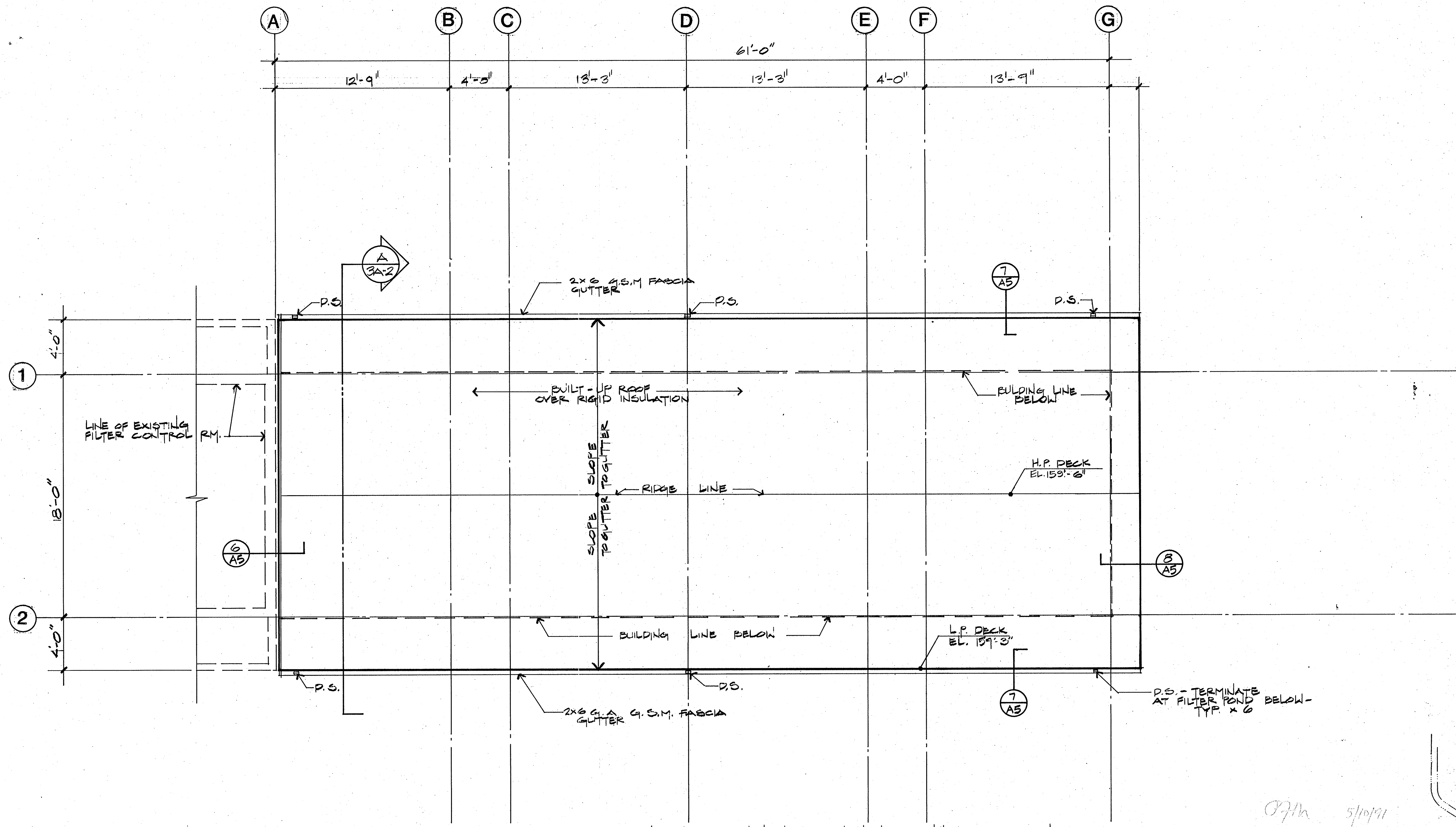
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 Danville, California 94526

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 Checked by: _____
 Approved by: _____
 Date: _____
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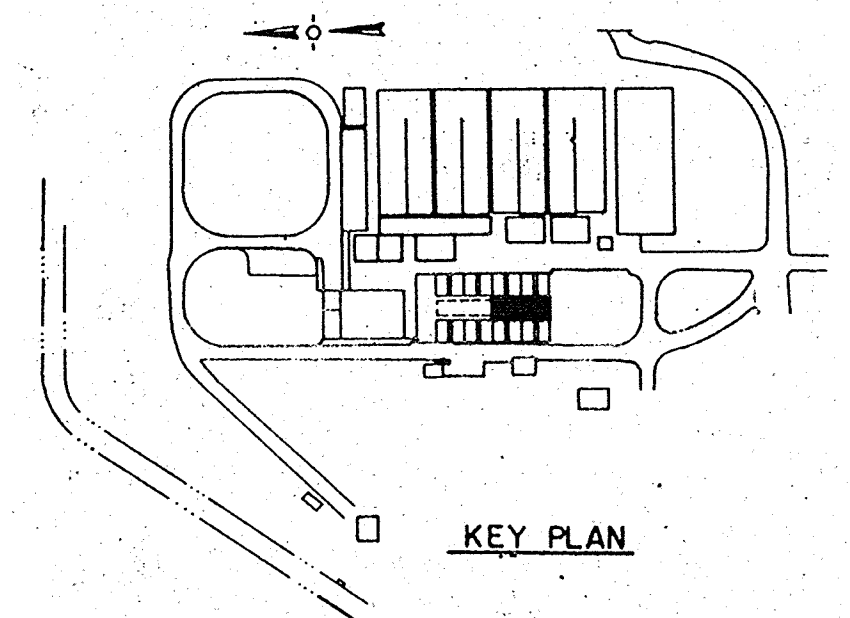
CITY OF PITTSBURG, CA	
WATER TREATMENT PLANT EXPANSION	
FILTER CONTROL ROOM	
ELEVATIONS, SECTION	
CAMP DRESSER & MCKEE INC.	CDM
710 South Broadway Walnut Creek, CA 94596	environmental engineers, scientists, planners, & management consultants
SHEET NO. 3A-2	24 of 147

07m 5/10/91

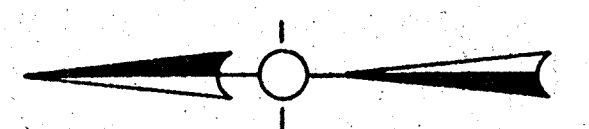
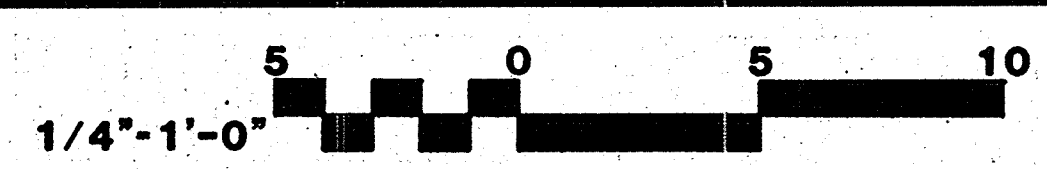
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 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



NOTE: SEE MECHANICAL & STRUCTURAL DRAWINGS FOR LOCATION OF MECH. UNITS AND DUCT PENETRATIONS THROUGH ROOF.



ROOF PLAN



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 Danville, California 94526

Date	Ch'k'd	Revision

Designed by: _____
 Drawn by: E.H.
 Checked by: C.C.
 Approved by: _____

Date: 8-26-88
 Scale: SHOWN

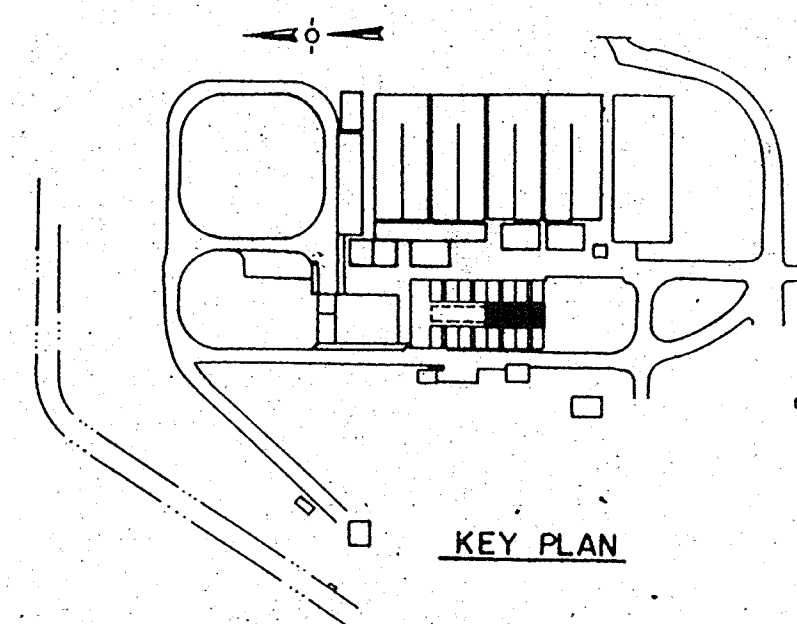
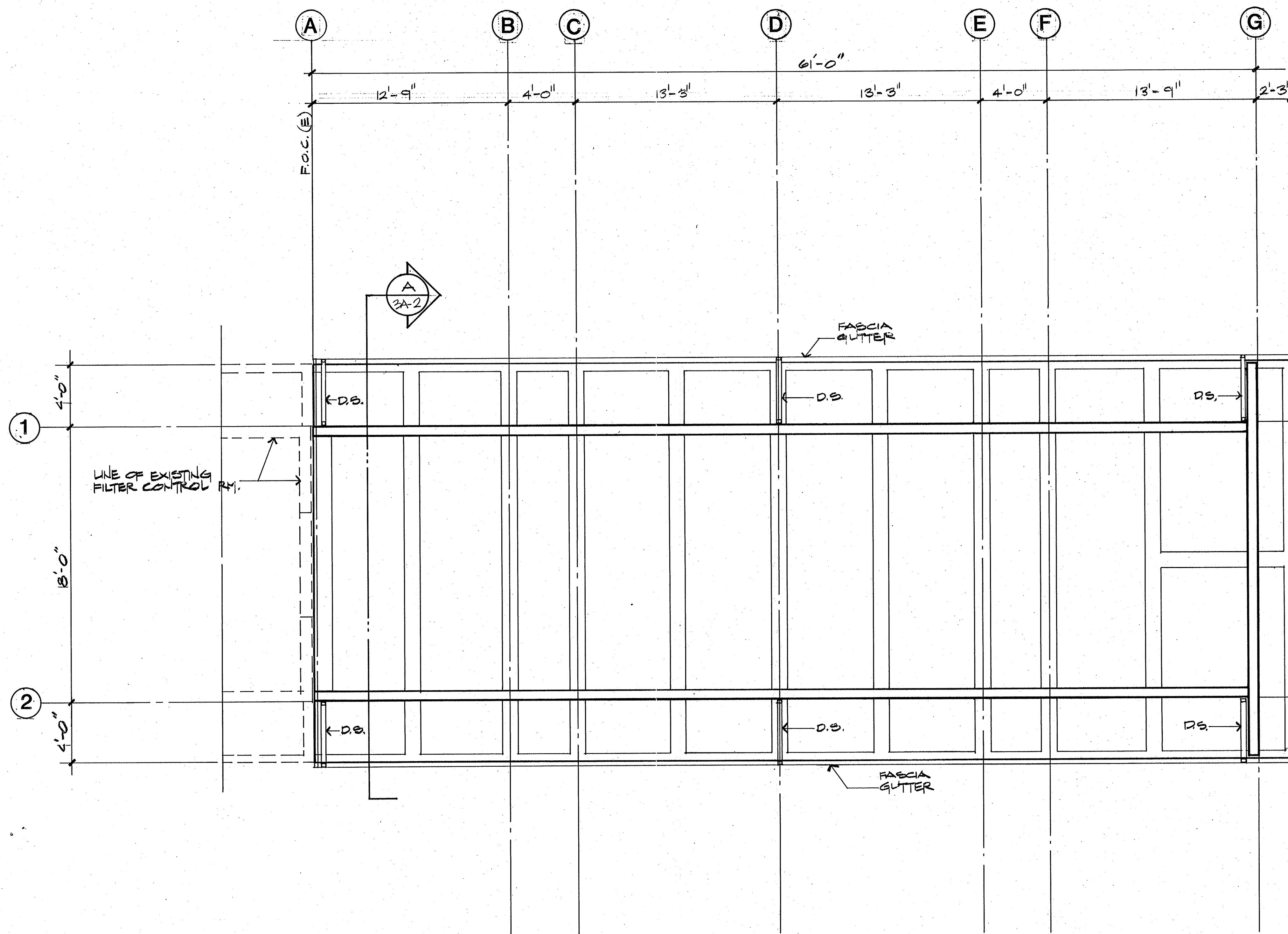
CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
FILTER CONTROL ROOM
 ROOF PLAN

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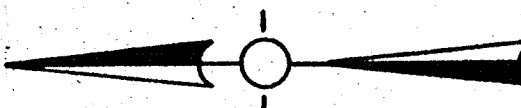
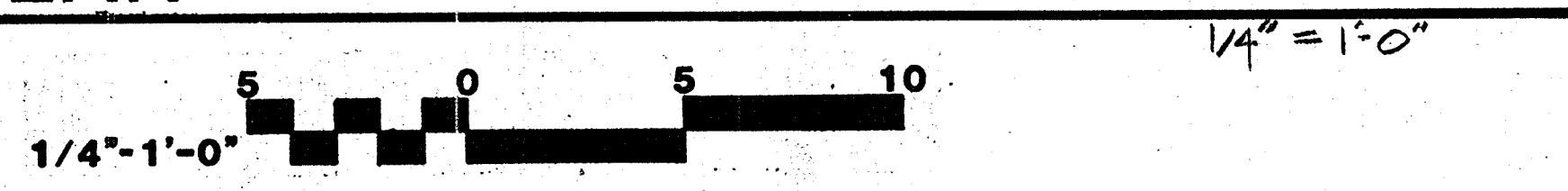
SHEET NO.
3A-3
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111335
 PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



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REFLECTED CEILING PLAN



CRAIG & WOOD ARCHITECTS
 199 No. Hartz Ave., Suite Q
 Danville, California 94526

Date	Ch'k'd	Revision

Designed by: _____
 Drawn by: E.H.
 Checked by: CC
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Date: 5-26-88
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CITY OF PITTSBURG, CA

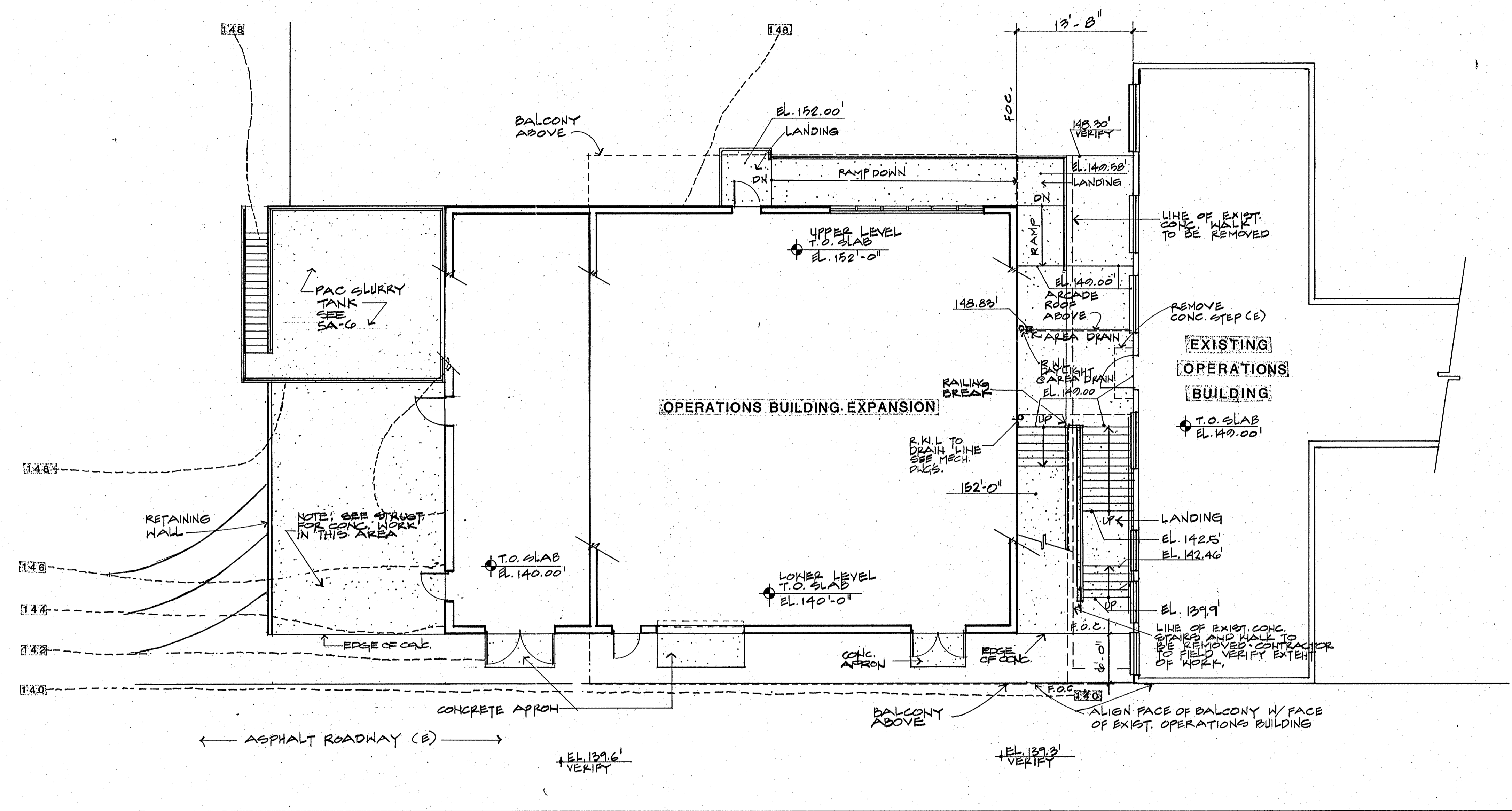
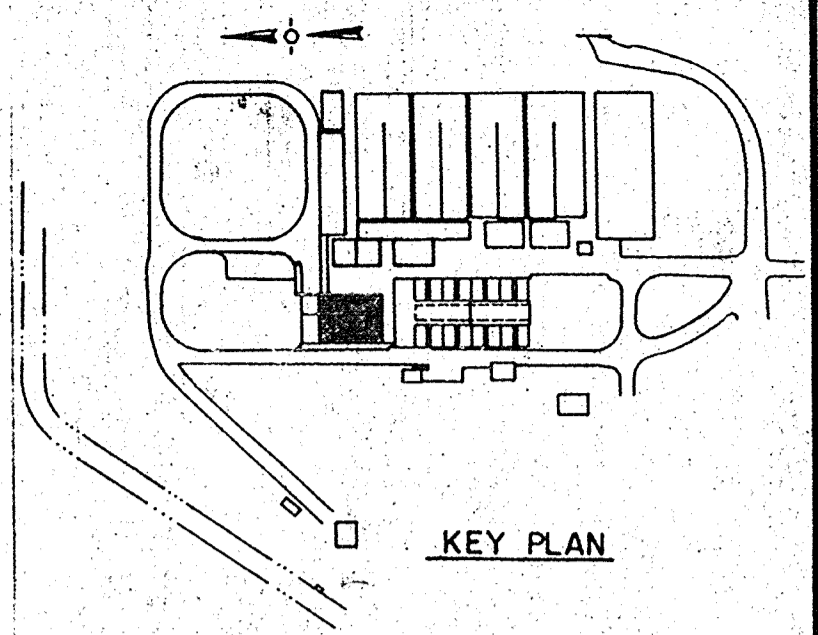
WATER TREATMENT PLANT EXPANSION
FILTER CONTROL ROOM
REFLECTED CEILING PLAN

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
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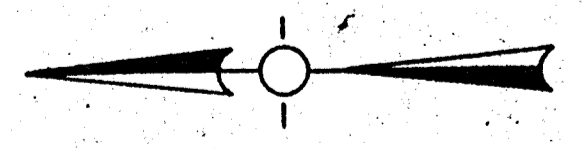
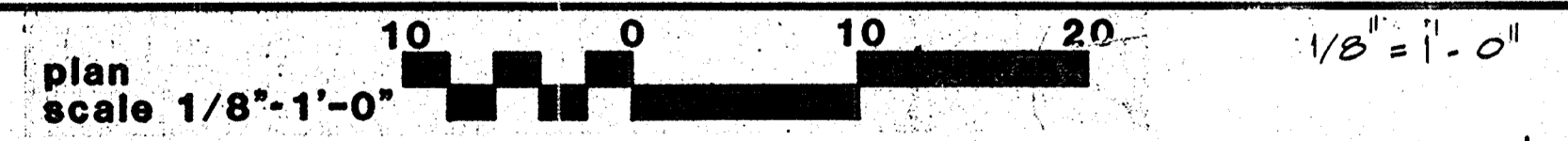
CDM

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111335
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 PLUMBING Approved by: _____ Date: _____
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 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



SITE PLAN



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CRAIG & WOOD ARCHITECTS
 199 No. Hartz Ave., Suite Q
 Danville, California 94526

Date	Ch'k'd	Revision

Designed by: _____
 Drawn by: CC, EH
 Checked by: CC
 Approved by: _____

Date: _____
 Scale: 1/8"=1'-0"

CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
OPERATIONS BUILDING

SITE PLAN

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners, & management consultants

SHEET NO.
5A-1

27 of 147

111335

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

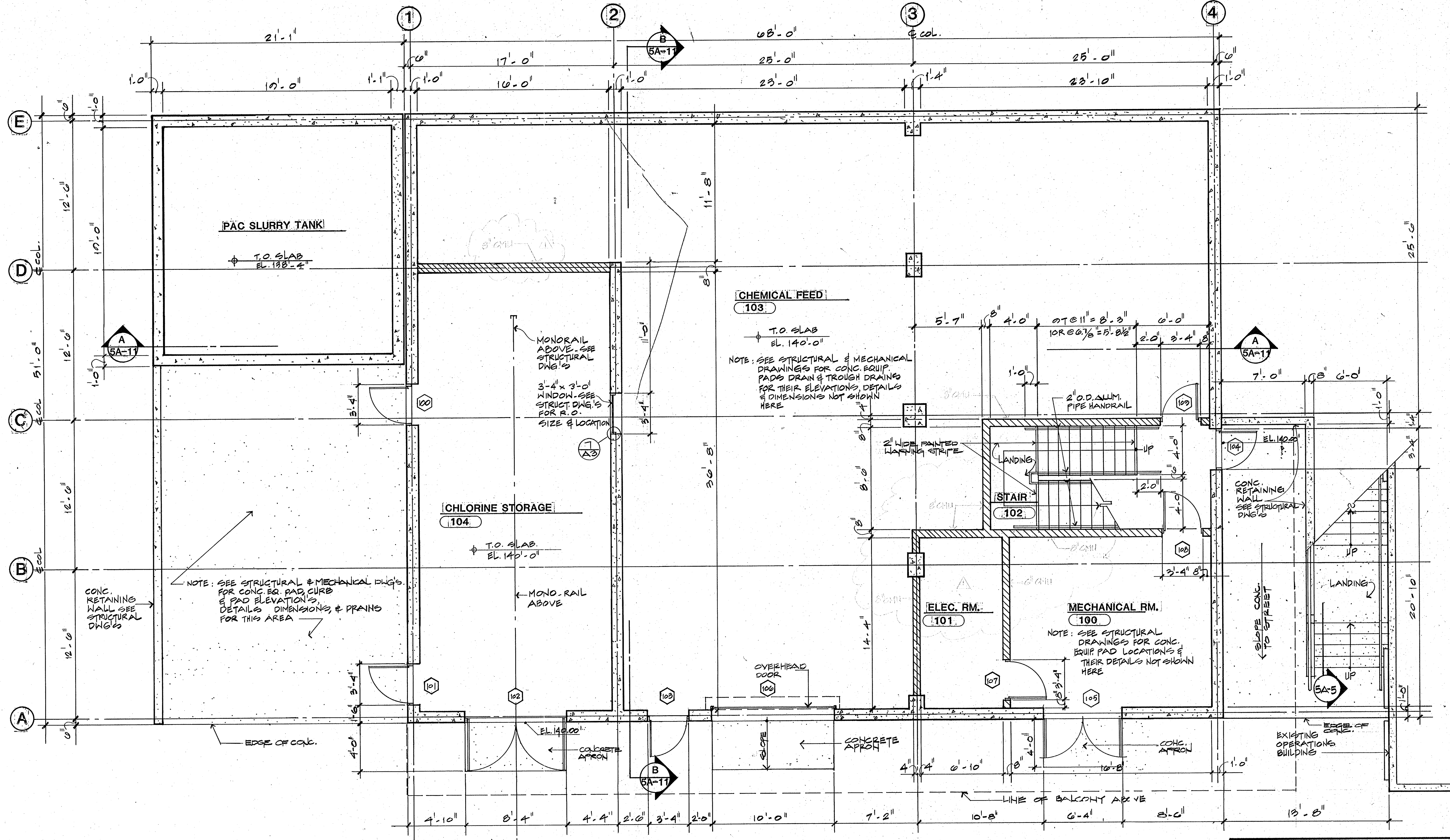
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INSTRUMENTATION Approved by: Date:

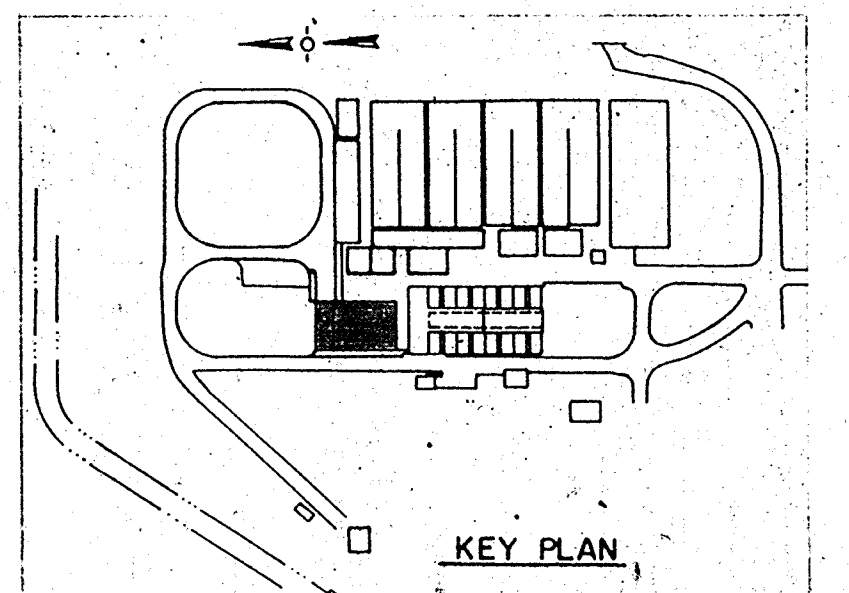
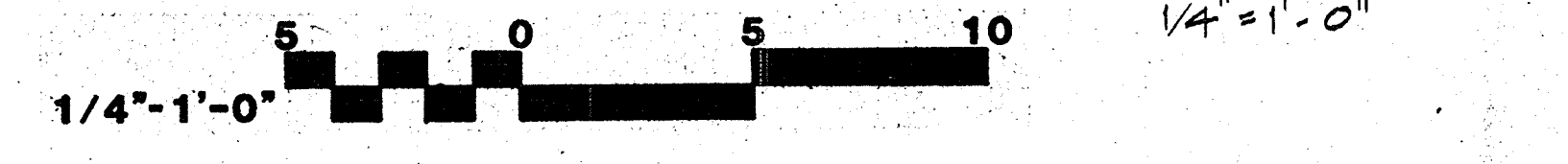
ELECTRICAL Approved by: Date:

STRUCTURAL Approved by: Date:

ARCHITECTURAL Approved by: Date:



LOWER LEVEL PLAN



CRAIG & WOOD ARCHITECTS
199 No. Hartz Ave., Suite Q
Danville, California 94526

Date	Ch'k'd	Revision
8-26-88	EH, MB	REVISED FOR THE PROJECT
	CC	

Designed by: EH, MB
 Drawn by: CC
 Checked by: CC
 Approved by: _____

Date: 8-26-88
 Scale: 1/4" = 1'-0"

CITY OF PITTSBURG, CA

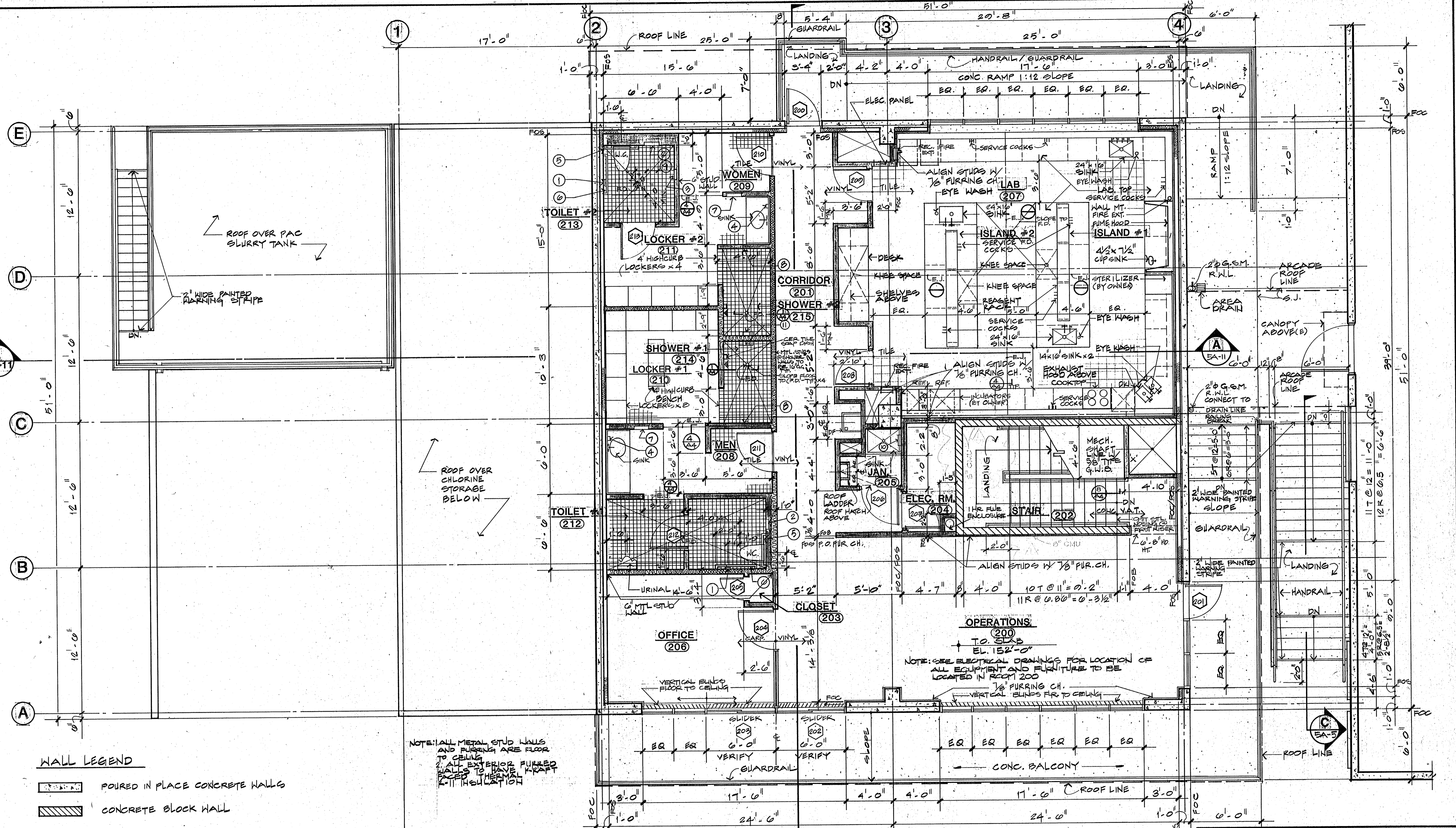
WATER TREATMENT PLANT EXPANSION
OPERATIONS BUILDING
LOWER LEVEL PLAN

CAMP DRESSER & McKEE INC.
710 South Broadway
Walnut Creek, CA 94596
environmental engineers, scientists,
planners, & management consultants

CDM

SHEET NO. **5A-2**
28 of 147

PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



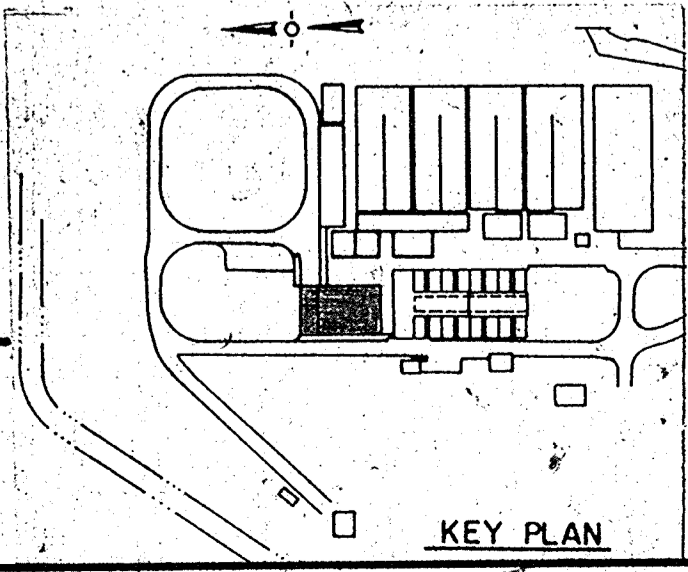
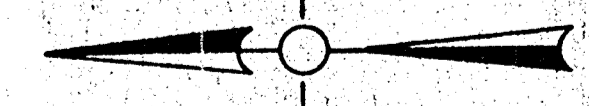
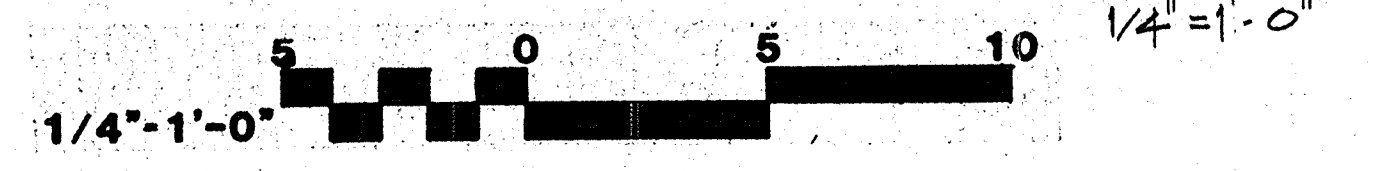
- WALL LEGEND**
- POURED IN PLACE CONCRETE WALLS
 - CONCRETE BLOCK WALL
 - SHEET ROCK OVER METAL STUDS
 - SHEET ROCK OVER METAL STUD WALLS W/ SOUND ATTENUATION BATTS (UNFACED)

NOTE: ALL METAL STUD WALLS AND FURRING ARE FLOOR TO CEILING
 2. ALL EXTERIOR FURRED WALLS TO HAVE KRAFT K-11 INSULATION

OPERATIONS (200)
 TO SLAB
 EL. 152'-0"

NOTE: SEE ELECTRICAL DRAWINGS FOR LOCATION OF ALL EQUIPMENT AND FURNITURE TO BE LOCATED IN ROOM 200

UPPER LEVEL PLAN



CRAIG & WOOD ARCHITECTS
 199 No. Hartz Ave., Suite Q
 Danville, California 94526

Date	Ch'k'd	Revision

Designed by: *cc, EH*
 Checked by: *cc*
 Approved by: _____

Date: _____
 Scale: 1/4"=1'-0"

CITY OF PITTSBURG, CA

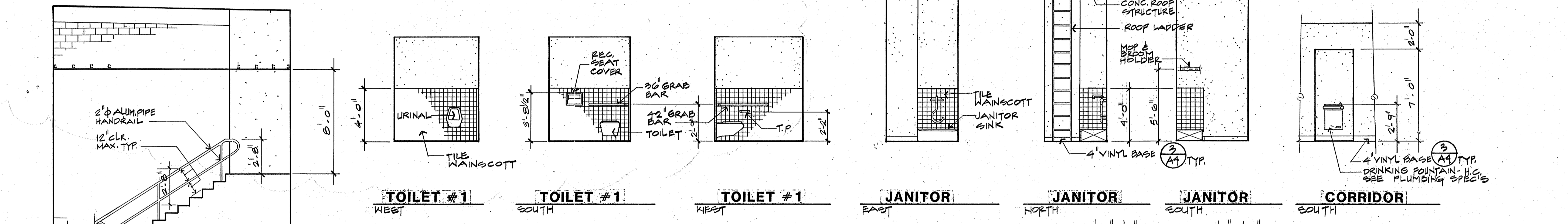
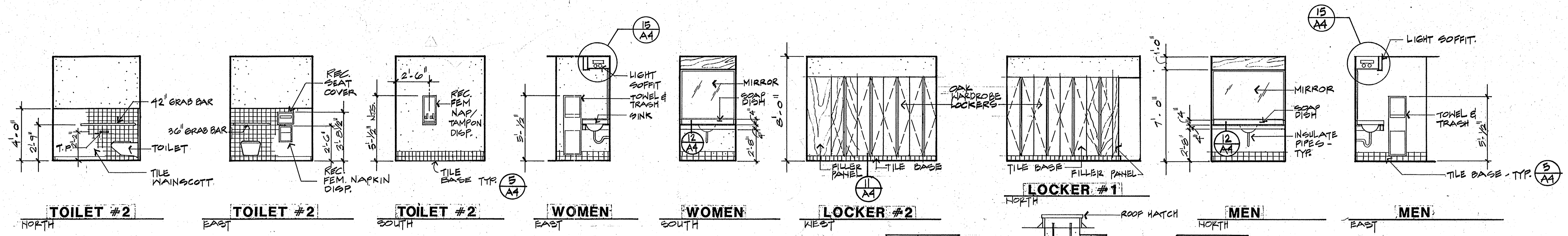
WATER TREATMENT PLANT EXPANSION
OPERATIONS BUILDING
 UPPER LEVEL PLAN

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners & management consultants

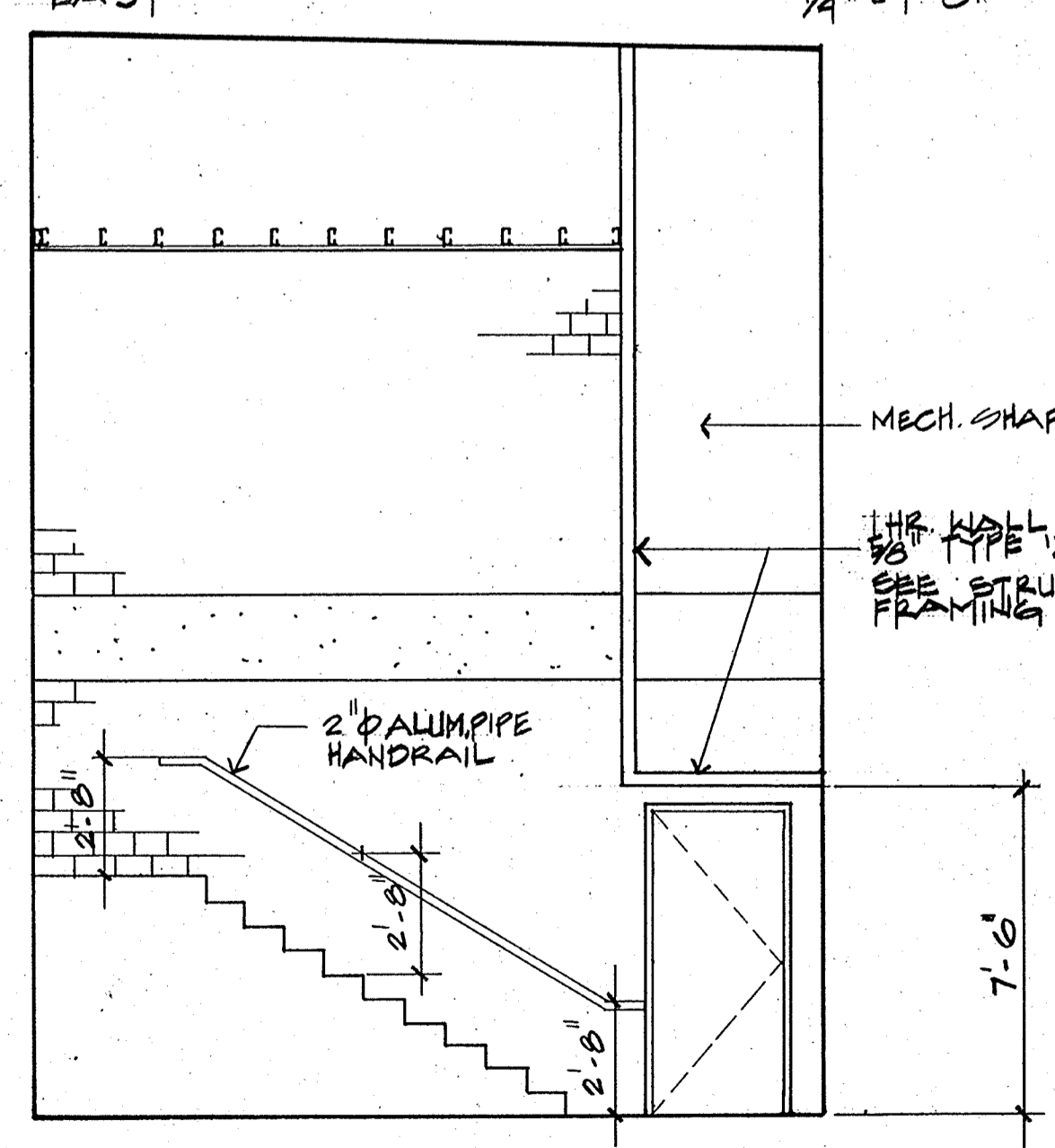
CDM

SHEET NO. **5A-3**
 29 of 147

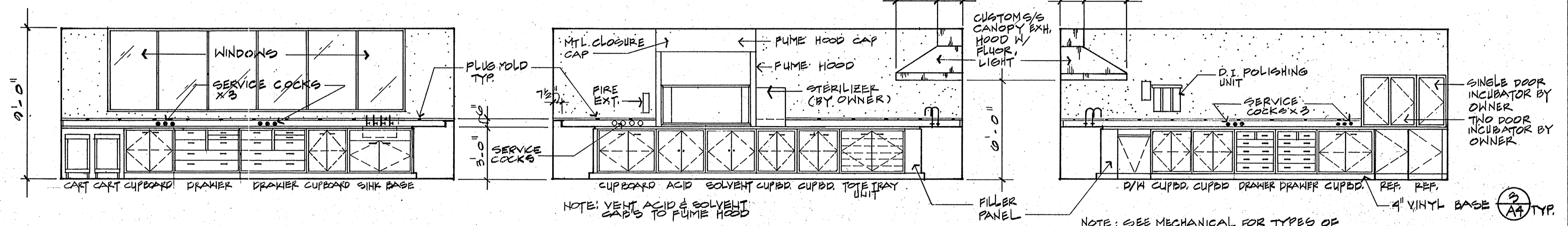
111335
 PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



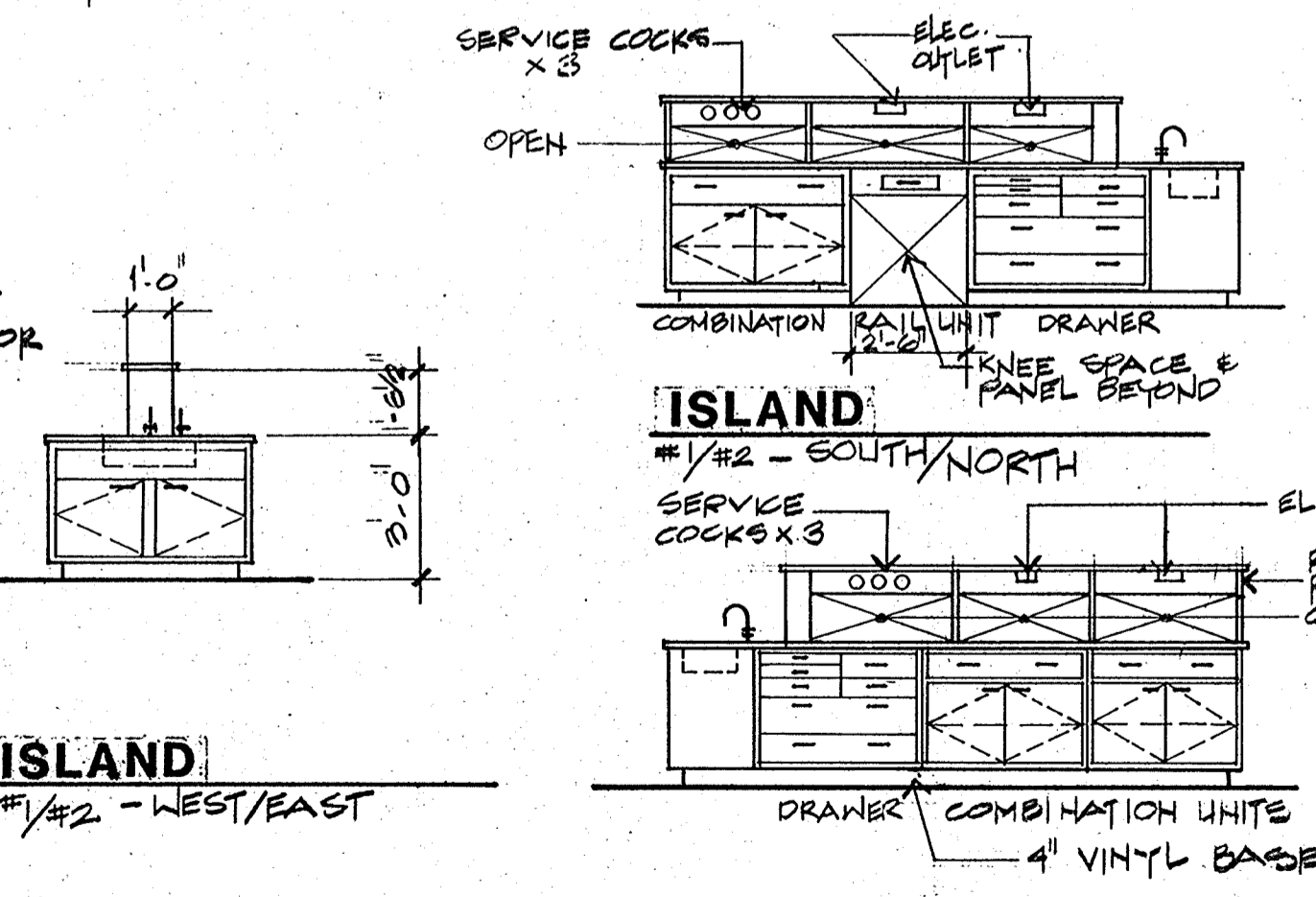
STAIR ELEVATIONS



STAIR ELEVATIONS



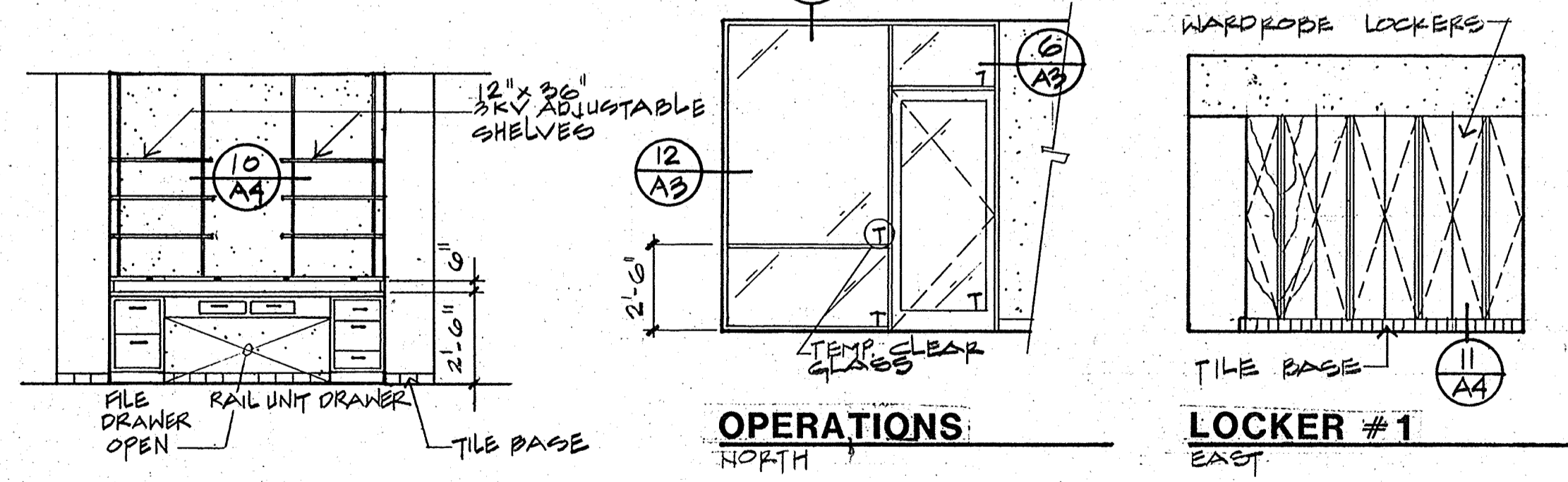
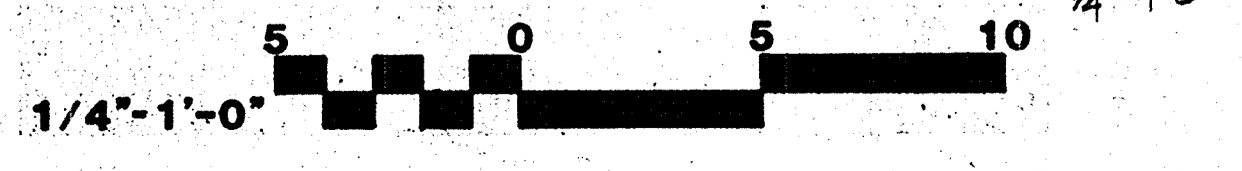
LABORATORY



ISLAND



INTERIOR ELEVATIONS



CRAIG & WOOD ARCHITECTS
 199 No. Hartz Ave., Suite Q
 Danville, California 94526

Designed by: _____
 Drawn by: CC, EH
 Checked by: CC
 Approved by: _____
 Date: 8-26-88
 Scale: 1/4" = 1'-0"

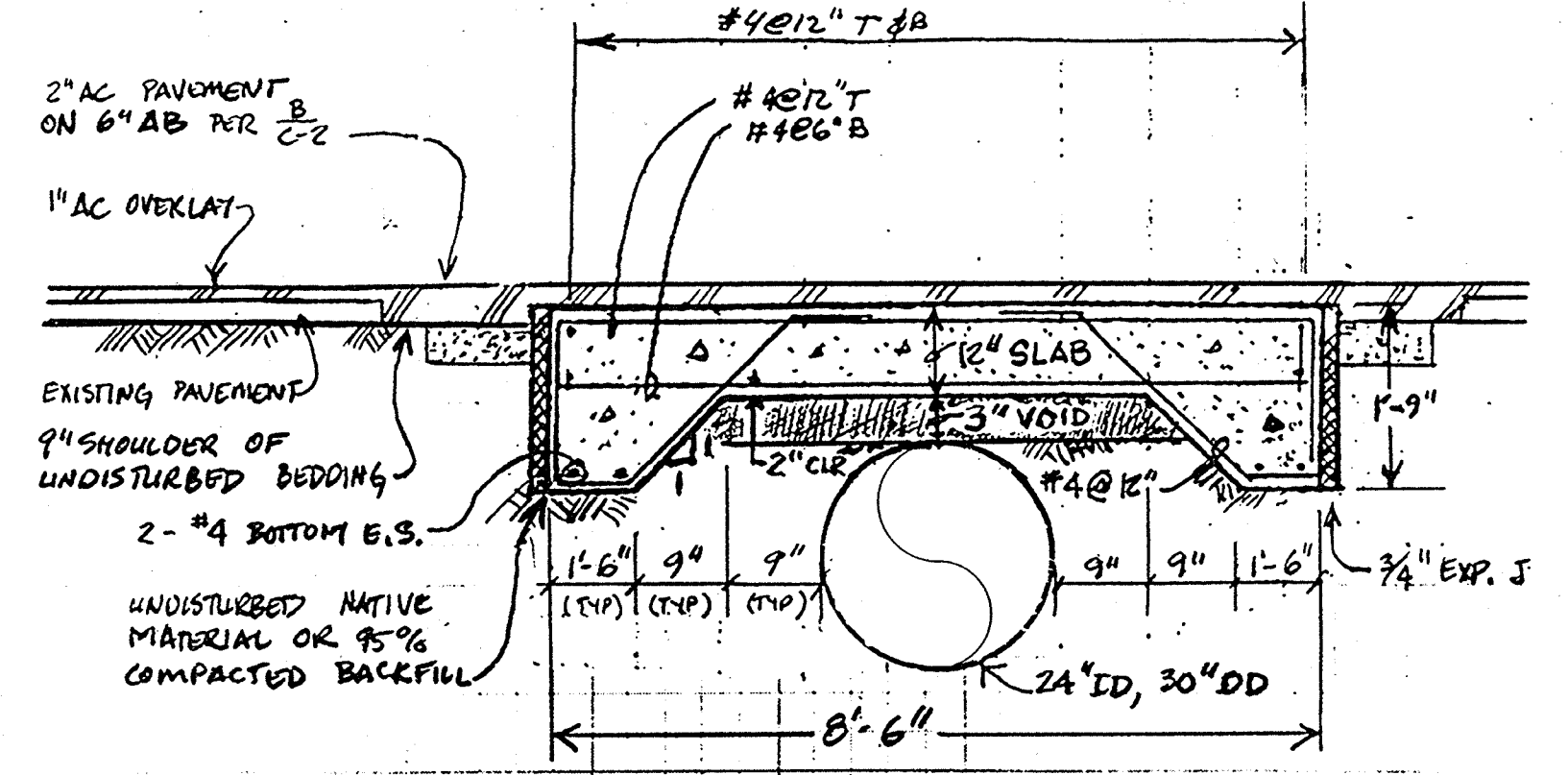
CITY OF PITTSBURG, CA
 WATER TREATMENT PLANT EXPANSION
OPERATIONS BUILDING
 INTERIOR ELEVATIONS

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

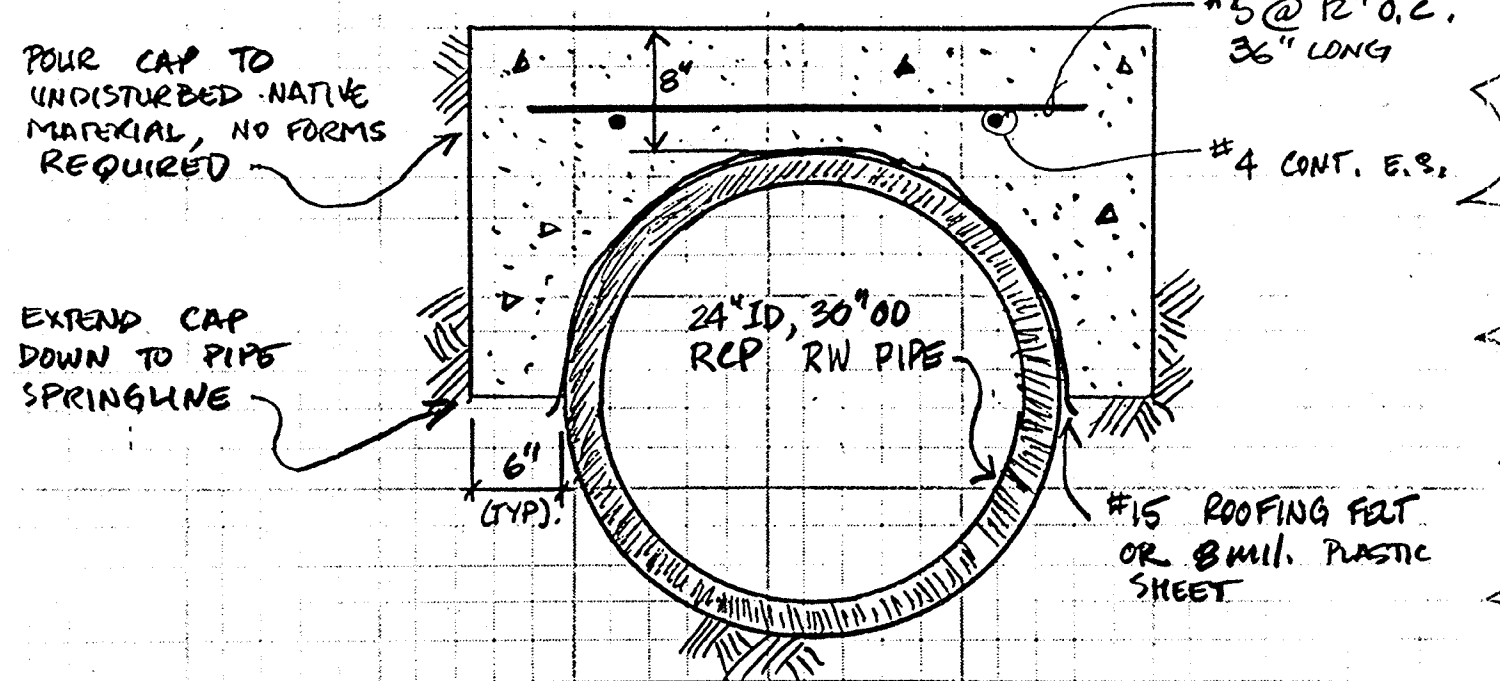
CDM environmental engineers, scientists, planners, & management consultants

SHEET NO. **5A-4**
 30 of 147

PROJECT MANAGER
PROJECT ENGINEER
PLUMBING
HVAC
INSURUMENTATION
ELECTRICAL
STRUCTURAL
ARCHITECTURAL

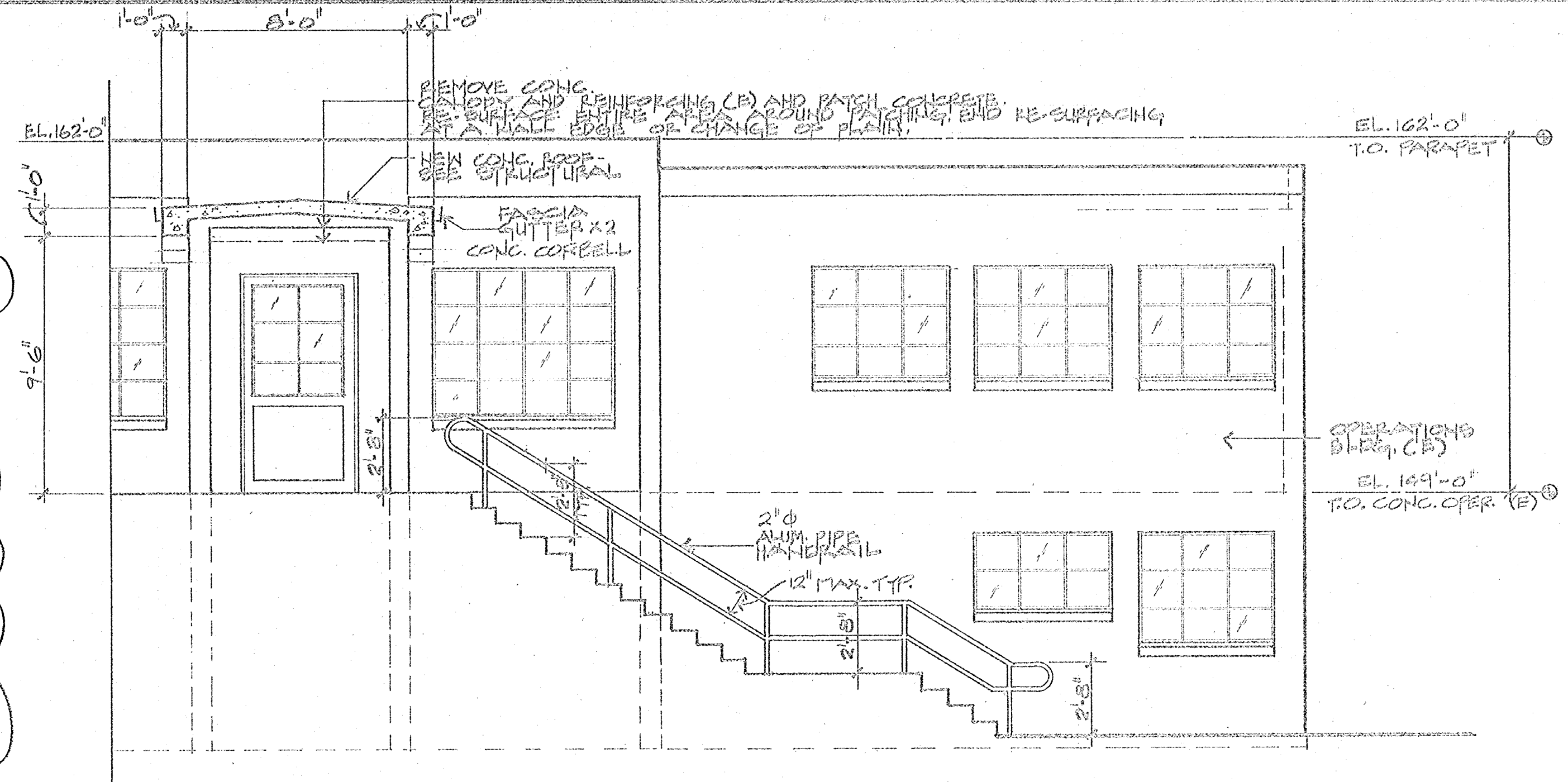


TYPE A



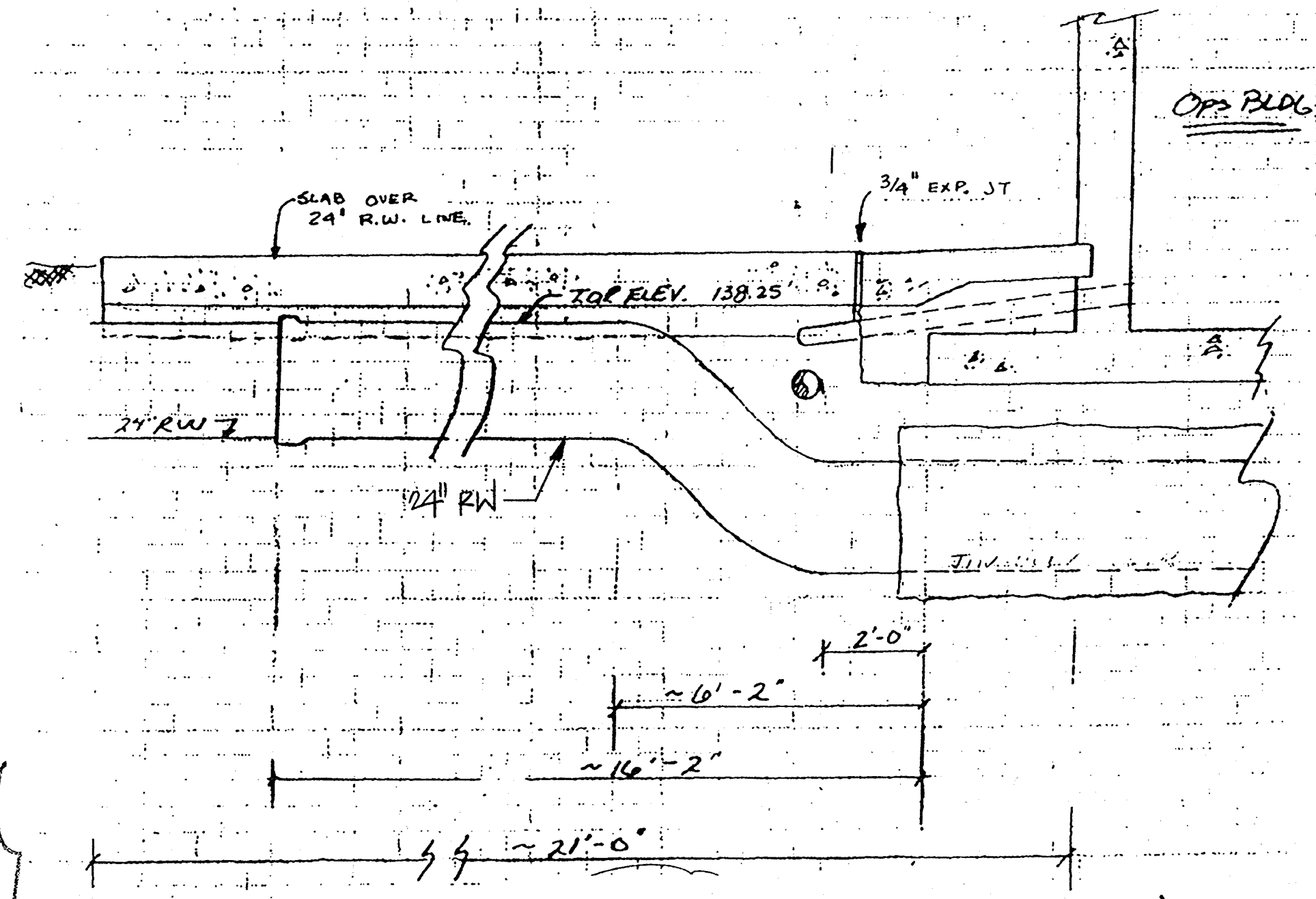
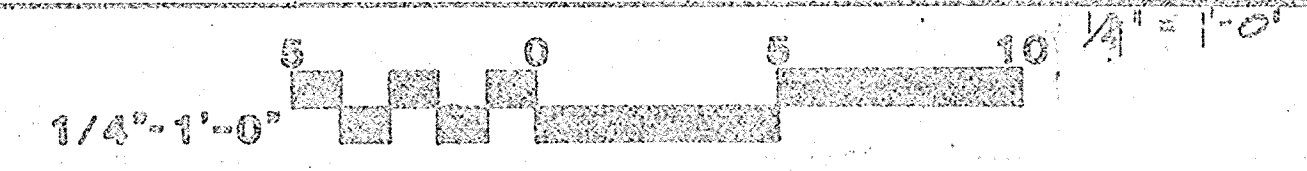
TYPE B

PIPE CAP DETAIL
NTG. (A)
C-4

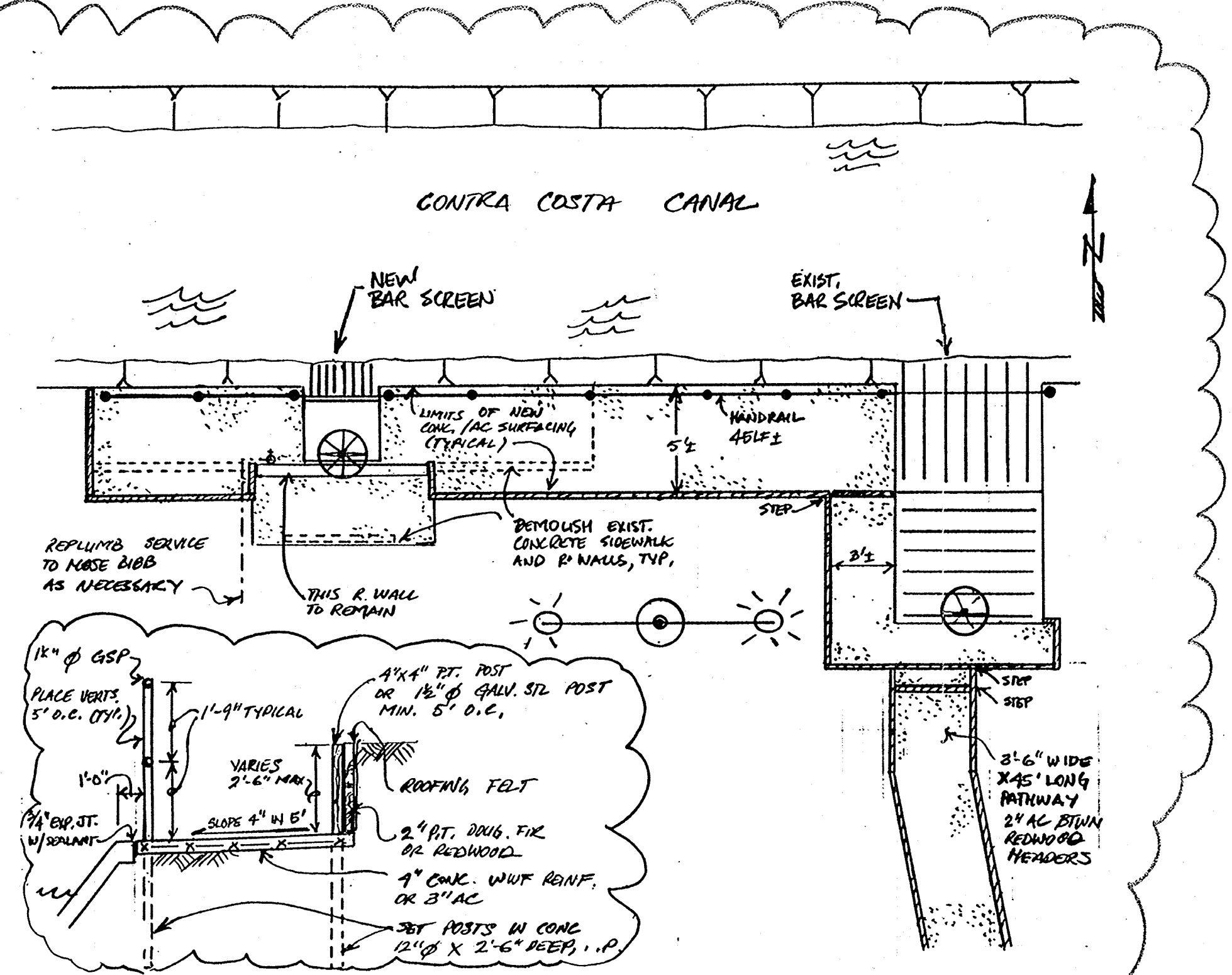


SECTION C

AT EXISTING OPERATIONS BLDG.



DETAIL
NTG. (B)
C-4



SEE SHEET C-4 FOR LOCATION
ENLARGED PLAN
NTG.

CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
OPERATIONS BUILDING

STAIR SECTION

SHEET NO.

5A-5

31 of 147

4/1/91
Date Ch'k'd Revision

REVISOR FOR THE RECORD

Designed by: CC, EA

Date: 8-26-83

Checked by: CC

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

Approved by:

CRAIG & WOOD
ARCHITECTS
199 No. Hartz Ave., Suite Q
Danville, California 94526

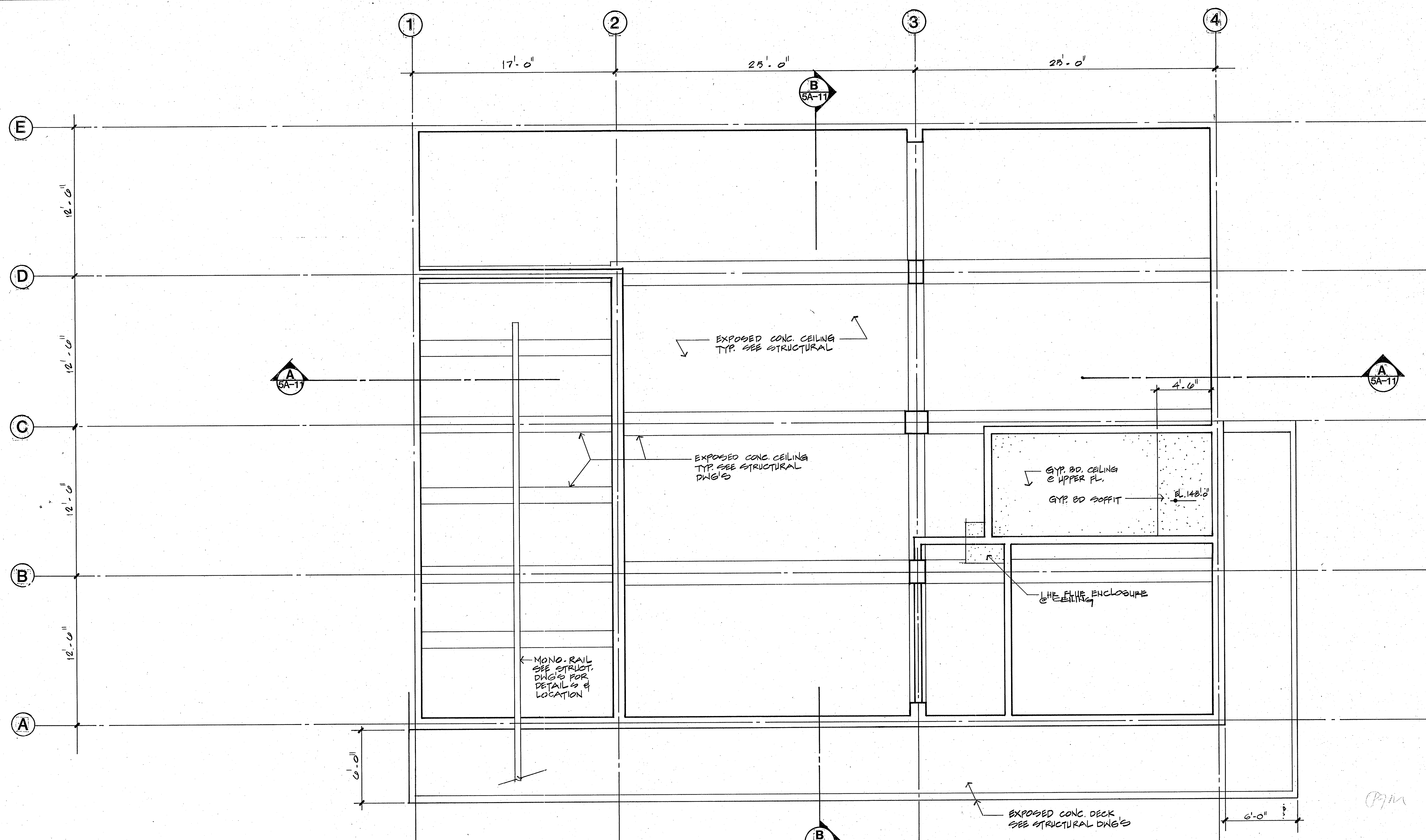
CAMP DRESSER & MCKEE INC.

710 South Broadway
Walnut Creek, CA 94596

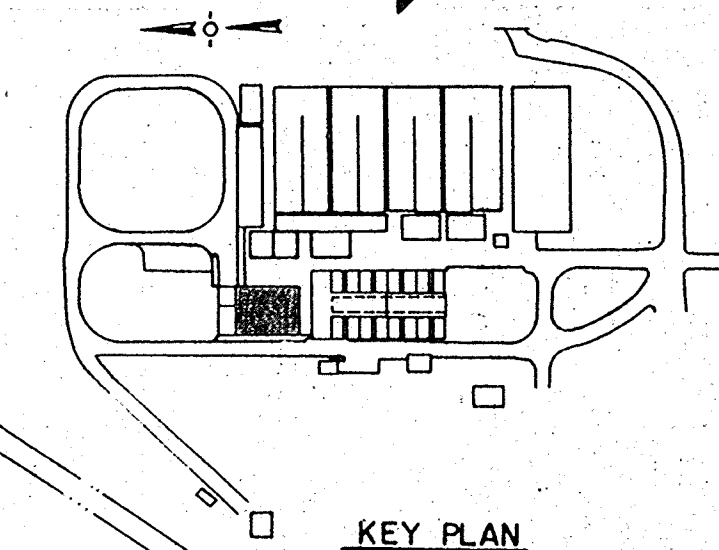
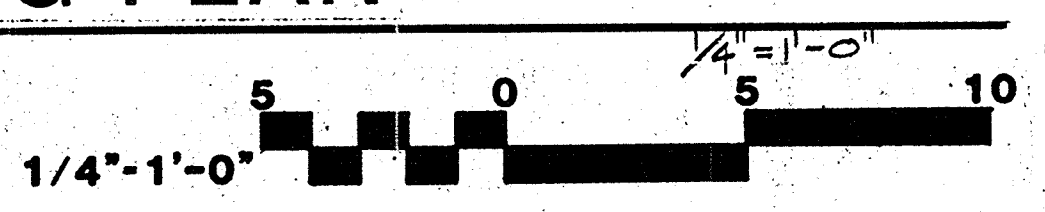
CDM

environmental engineers, scientists,
planners, & management consultants

111235
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



NOTE: SEE MECHANICAL & ELECTRICAL DWG'S FOR LOCATION OF DUCTS, REGISTERS AND ELECTRICAL FIXTURES



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 199 No. Hartz Ave., Suite Q
 Danville, California 94526

Date	Ch'k'd	Revision

Designed by: _____
 Drawn by: EH, CC
 Checked by: CC
 Approved by: _____

Date: 8-26-88
 Scale: 1/4"=1'-0"

CITY OF PITTSBURG, CA

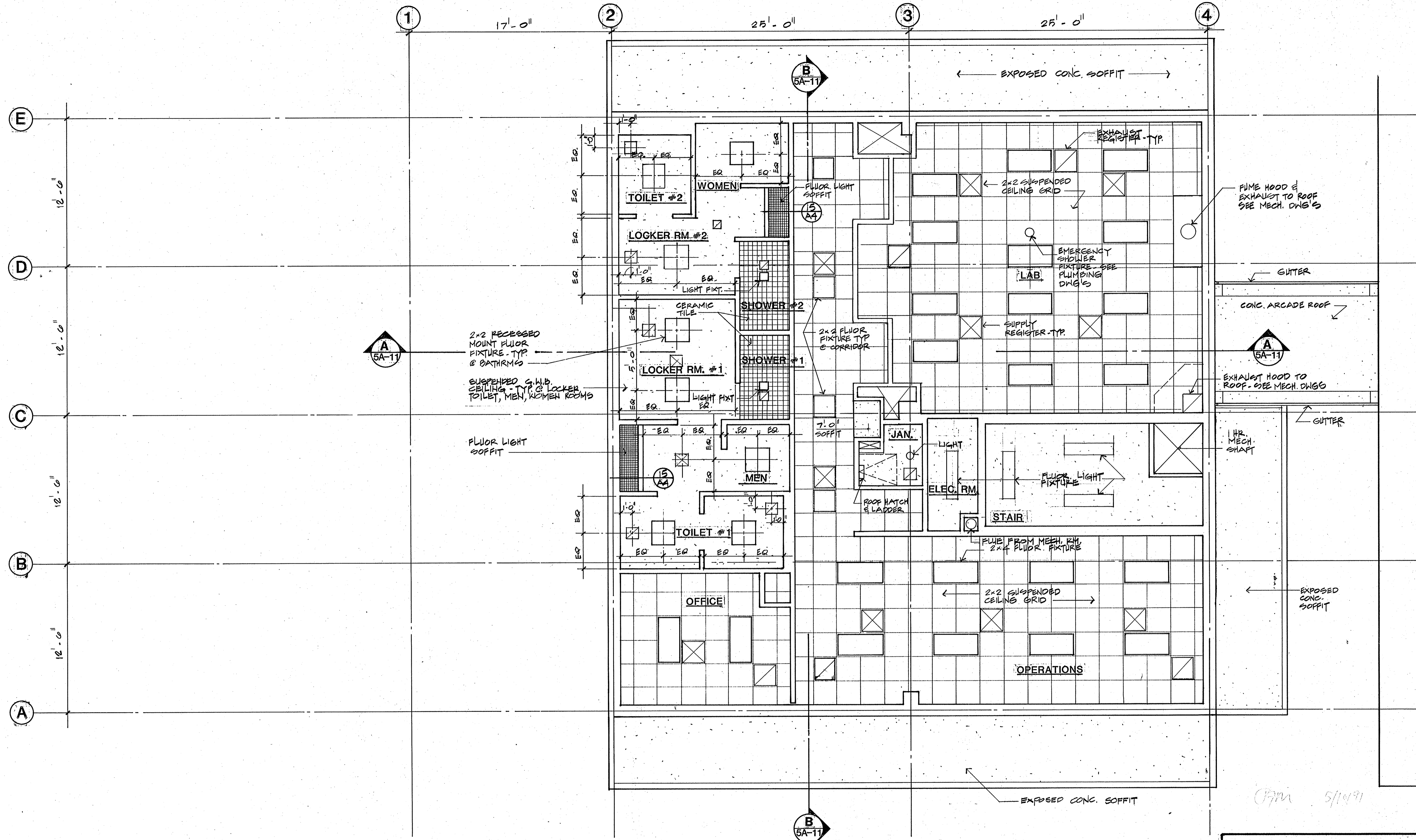
WATER TREATMENT PLANT EXPANSION
OPERATIONS BUILDING
 LOWER LEVEL REFLECTED CEILING PLAN

CAMP DRESSER & McKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
environmental engineers, scientists,
 planners, & management consultants

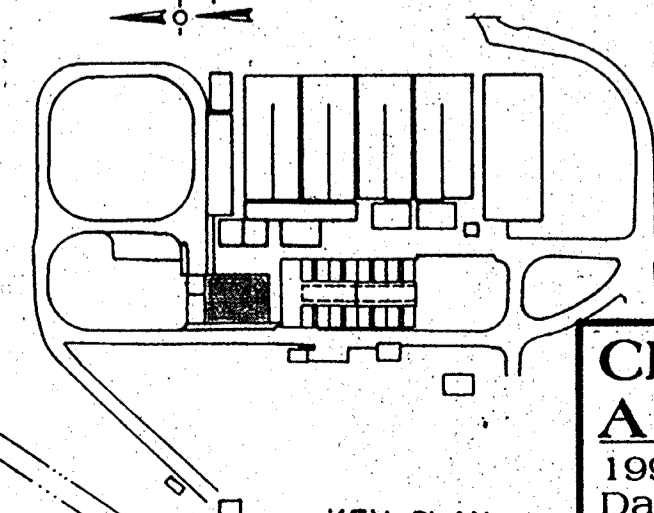
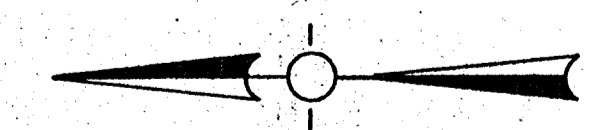
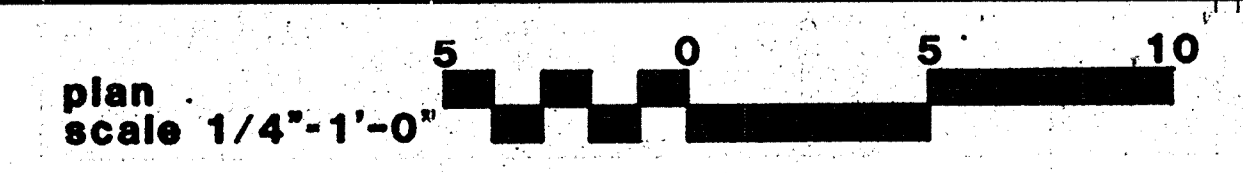
CDM
 SHEET NO. **5A-7**
 33 of 147

LOWER LEVEL REFLECTED CEILING PLAN

111335
 PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



UPPER LEVEL REFLECTED CEILING PLAN



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 199 No. Hartz Ave., Suite Q
 Danville, California 94526

Date	Ch'k'd	Revision

Designed by: _____
 Drawn by: _____
 Checked by: _____
 Approved by: _____

Date: _____
 Scale: 1/4" = 1'-0"

CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
OPERATIONS BUILDING
 UPPER LEVEL REFLECTED CEILING PLAN

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

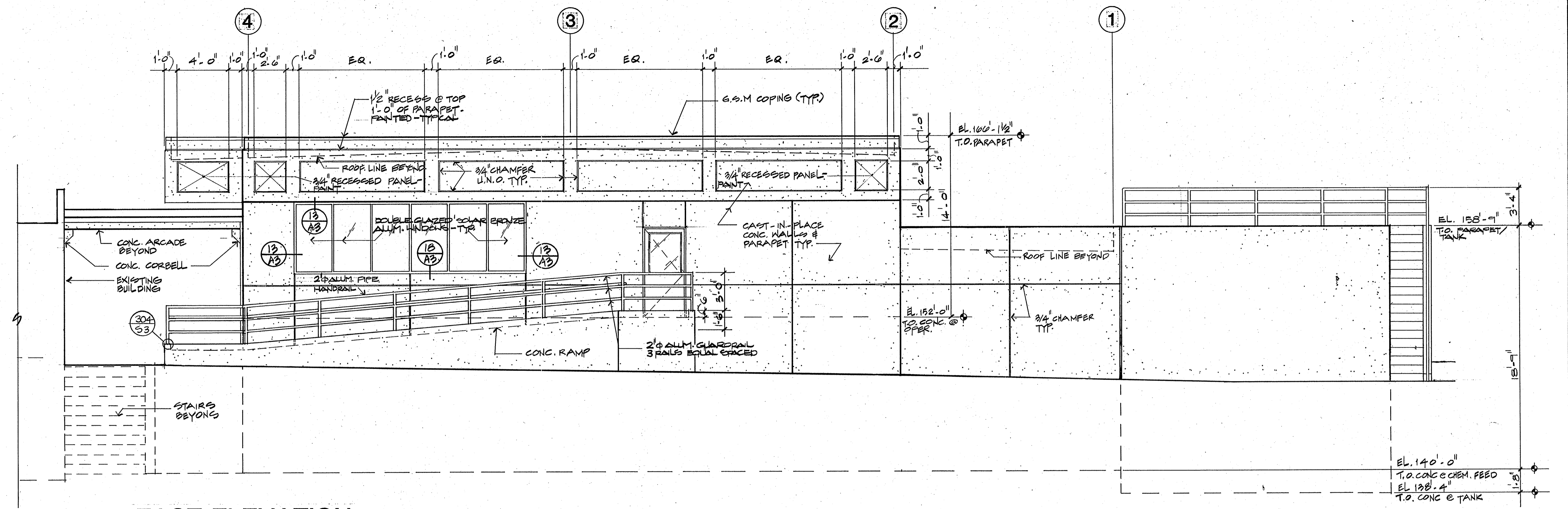
CDM
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SHEET NO.
5A-8

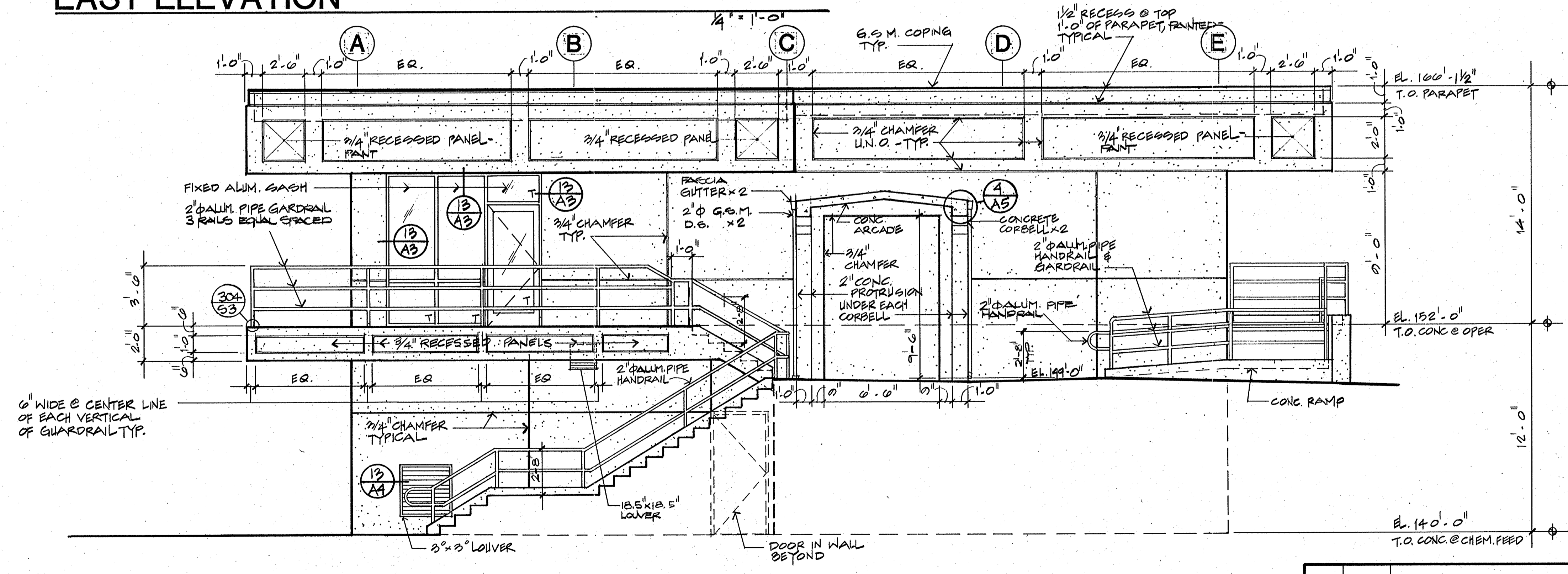
34 of 147

CPM 5/1/97

111335
 PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
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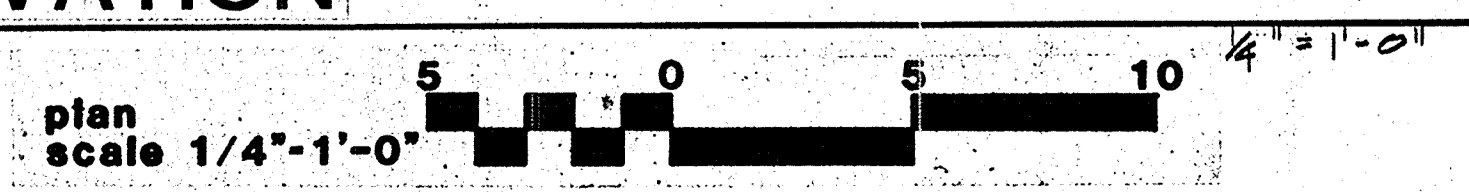


EAST ELEVATION



SOUTH ELEVATION

NOTE: SEE STRUCTURAL FOR LOCATIONS AND R.O. SIZES OF ALL MECHANICAL LOUVERS



Date	Ch'k'd	Revision

CRAIG & WOOD ARCHITECTS
 109 No. Hartz Ave., Suite Q
 Danville, California 94526

Designed by: _____
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 Checked by: CC
 Approved by: _____
 Date: 8-26-88
 Scale: 1/4" = 1'-0"

CITY OF PITTSBURG, CA

**WATER TREATMENT PLANT EXPANSION
 OPERATIONS BUILDING**

ELEVATIONS

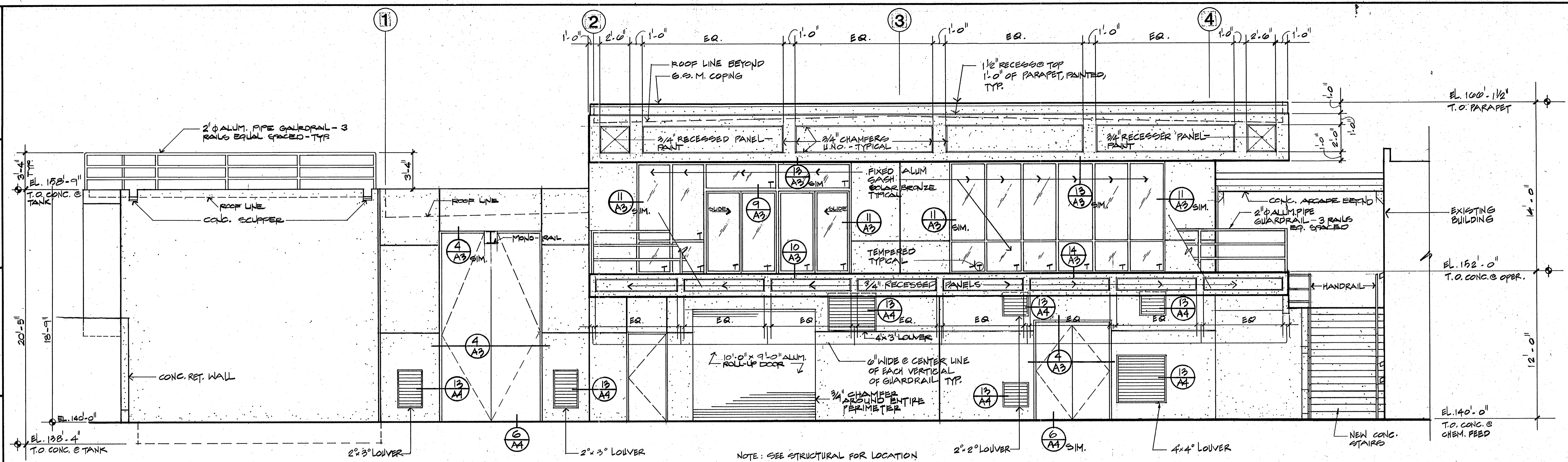
CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
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CDM

SHEET NO.
5A-9

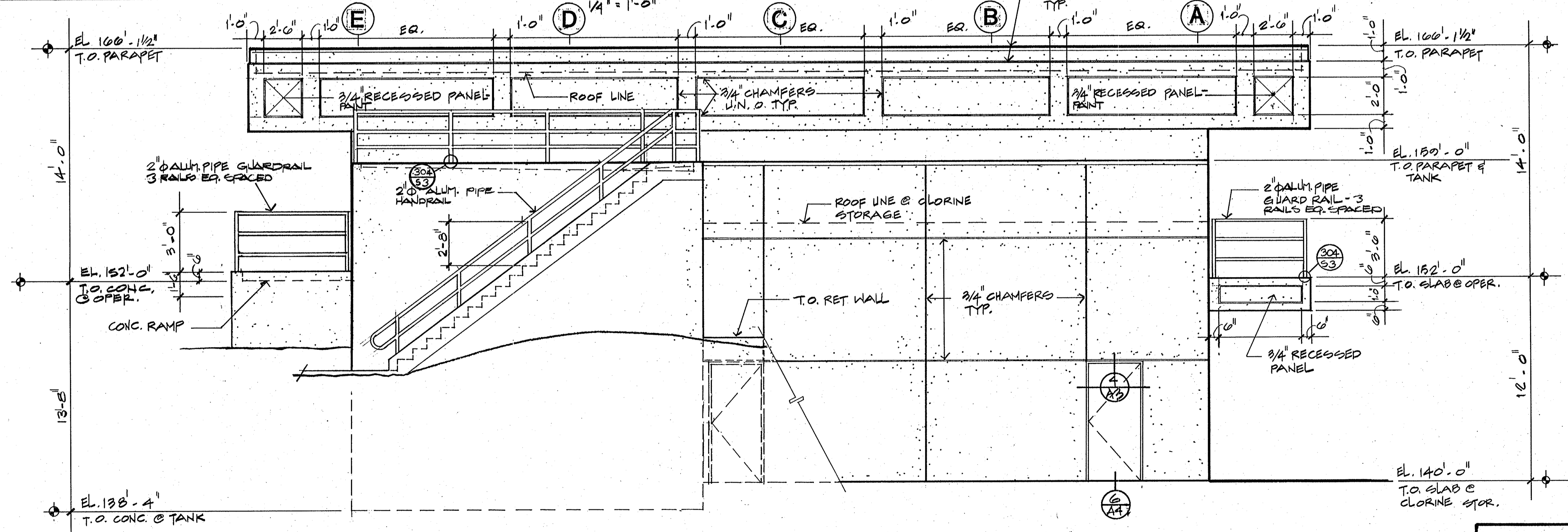
35 of 147

111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
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 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:

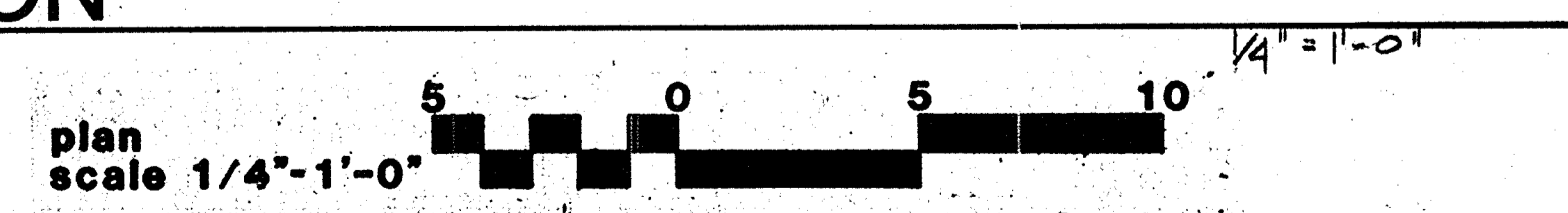


WEST ELEVATION

NOTE: SEE STRUCTURAL FOR LOCATION AND R.O. SIZES OF ALL MECHANICAL LOUVERS. CONTRACTOR TO VERIFY ALL ROUGH OPENING SIZES



NORTH ELEVATION



CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
OPERATIONS BUILDING
 ELEVATIONS

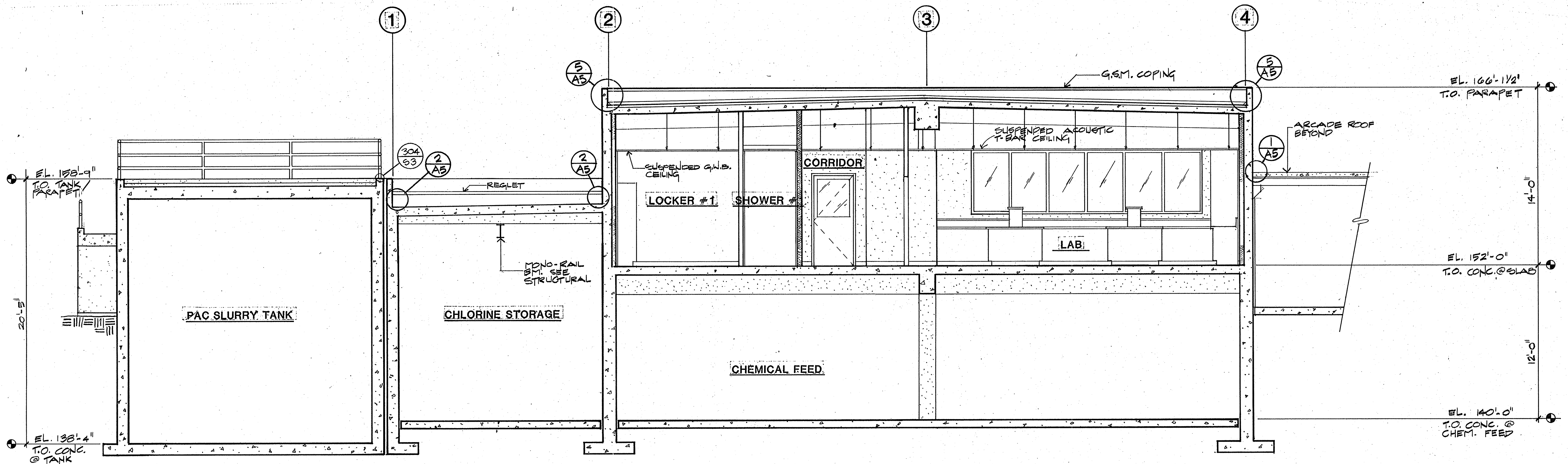
Date	Ch'k'd	Revision

CRAIG & WOOD ARCHITECTS
 199 No. Hartz Ave, Suite Q
 Danville, California 94526

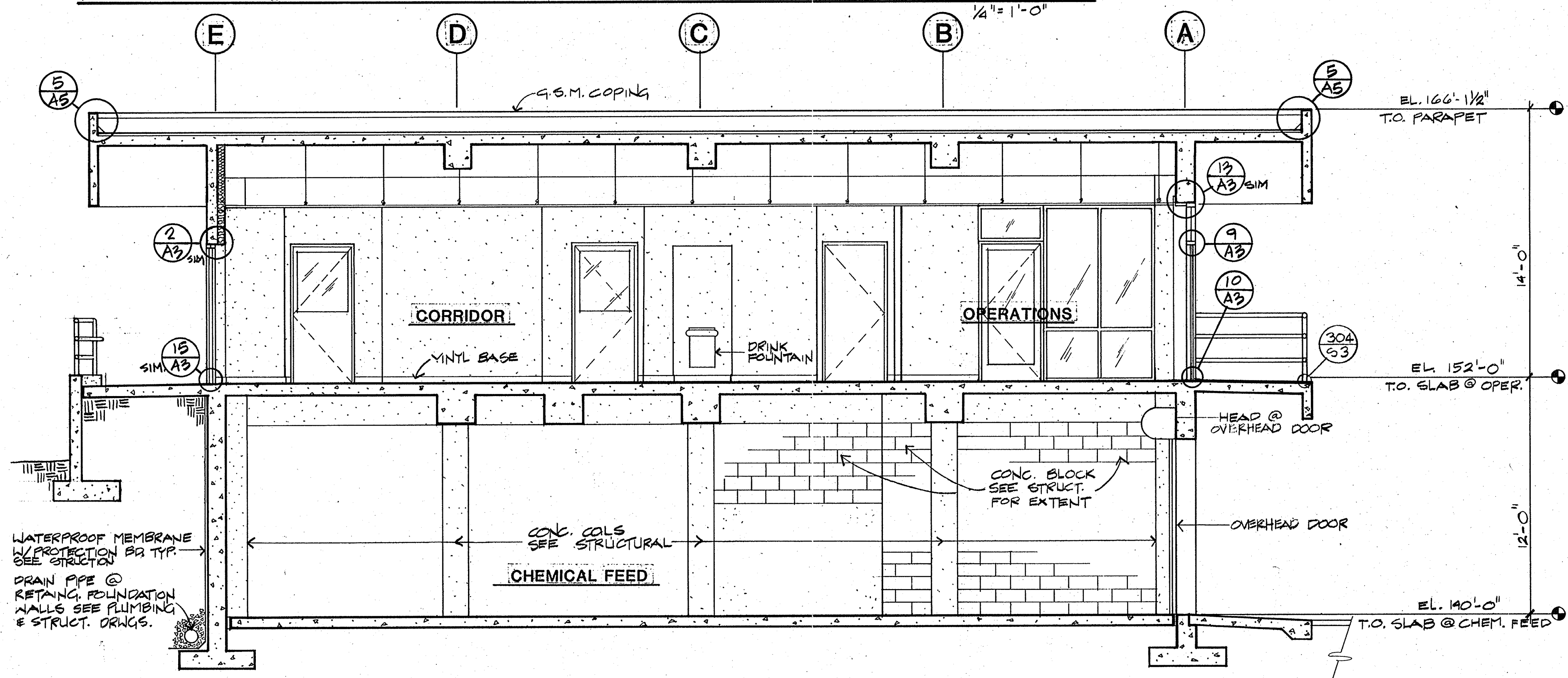
Designed by: CC, EH
 Drawn by: CC
 Checked by: CC
 Approved by:
 Date: 8-26-88
 Scale: 1/4" = 1'-0"

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
CDM
 environmental engineers, scientists,
 planners, & management consultants
 SHEET NO. **5A-10**
 36 of 147

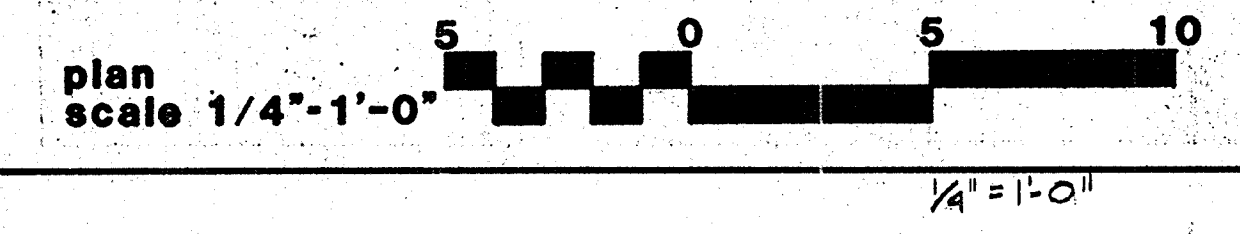
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 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



SECTION A



SECTION B



Pjm 5/10/91

Date	Ch'k'd	Revision

CRAIG & WOOD ARCHITECTS
 199 No. Hartz Ave., Suite Q
 Danville, California 94526

Designed by: EH, CC
 Drawn by: CC
 Checked by: CC
 Approved by:
 Date: 8-26-89
 Scale: 1/4" = 1'-0"

CITY OF PITTSBURG, CA

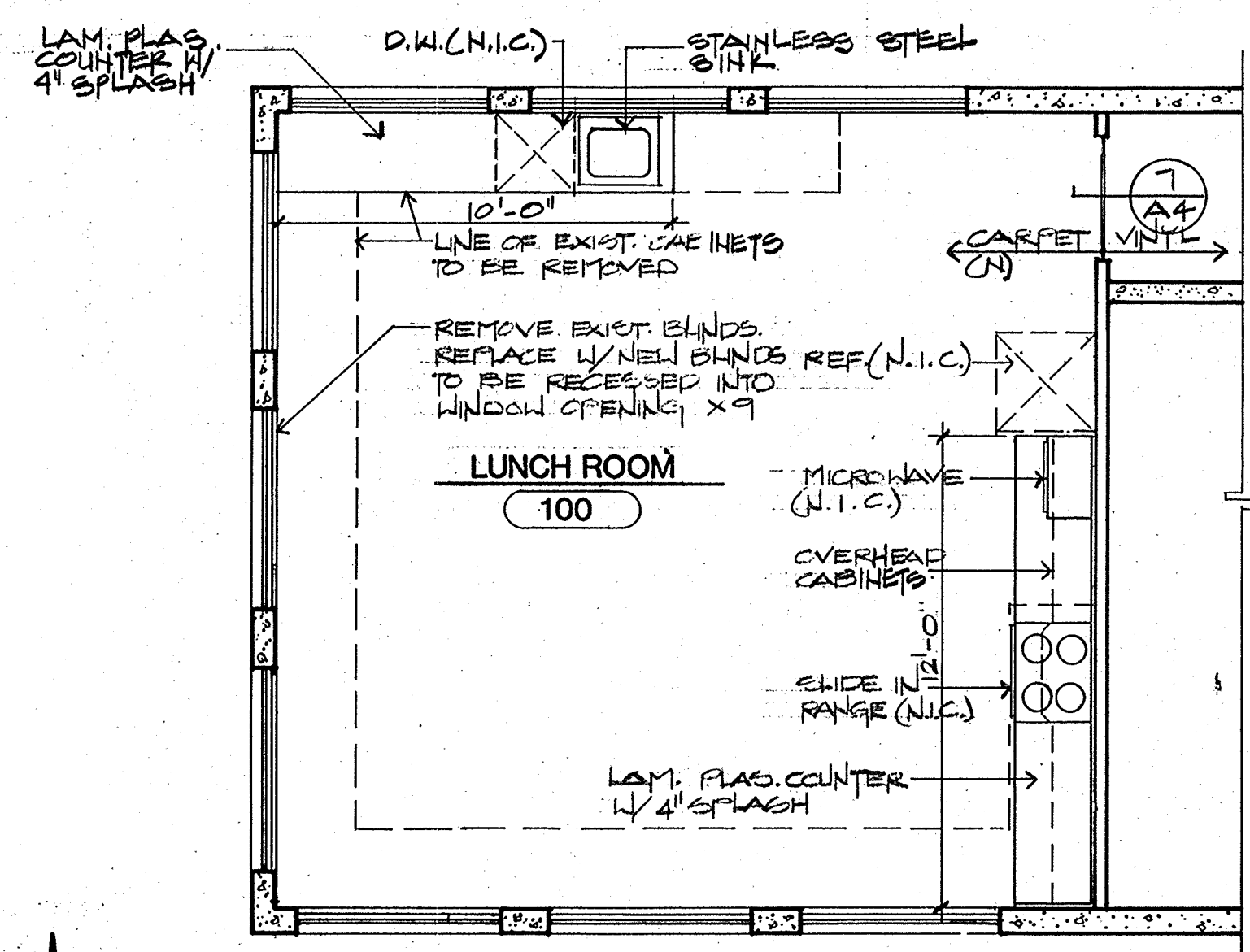
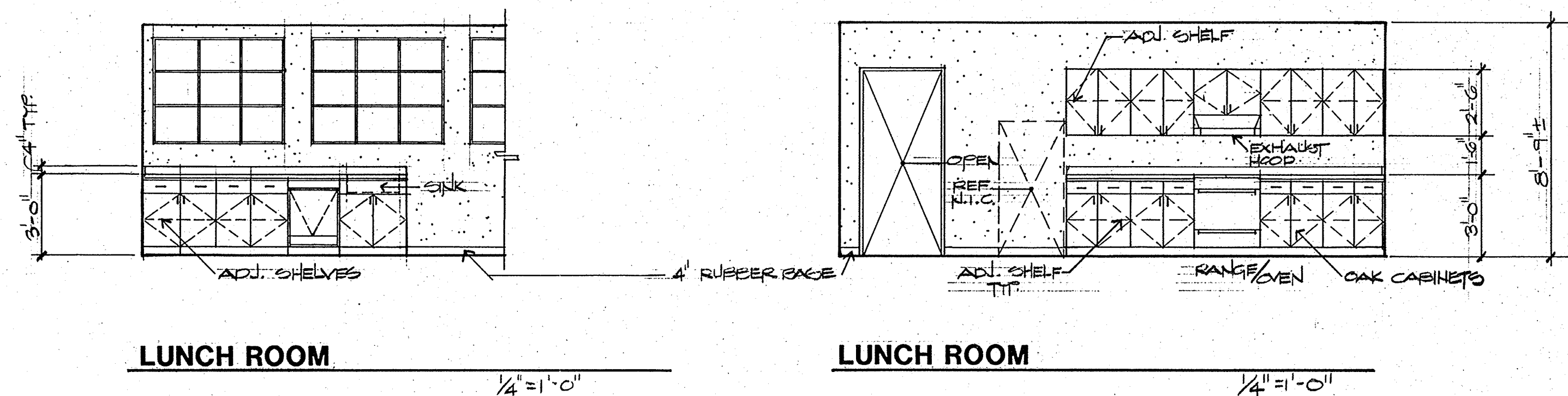
WATER TREATMENT PLANT EXPANSION
OPERATIONS BUILDING

SECTIONS

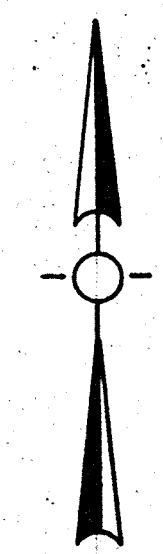
CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners, & management consultants

SHEET NO.
5A-11
 37 of 147

111335
 PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
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 ARCHITECTURAL Approved by: _____ Date: _____

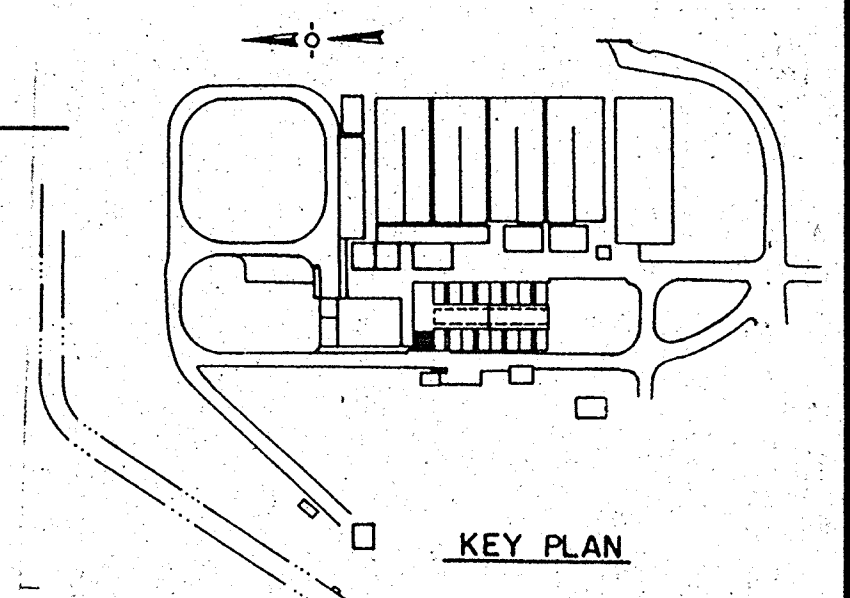


NOTE: 1. PATCH ALL EXISTING PLASTER WALLS AFTER REMOVAL OF EXIST. CABINETS PLUMBING AND ELECTRICAL FIXTURES AND MISC. EQUIPMENT.
 2. SEE MECHANICAL & ELECTRICAL DRAWINGS FOR EXTENT OF PLUMBING, HVAC AND ELECTRICAL DEMOLITION, RELOCATION AND REMODEL.



FLOOR PLAN

REMDEL LABORATORY ON EXIST. OPERATIONS BLDG. 1/4"=1'-0"

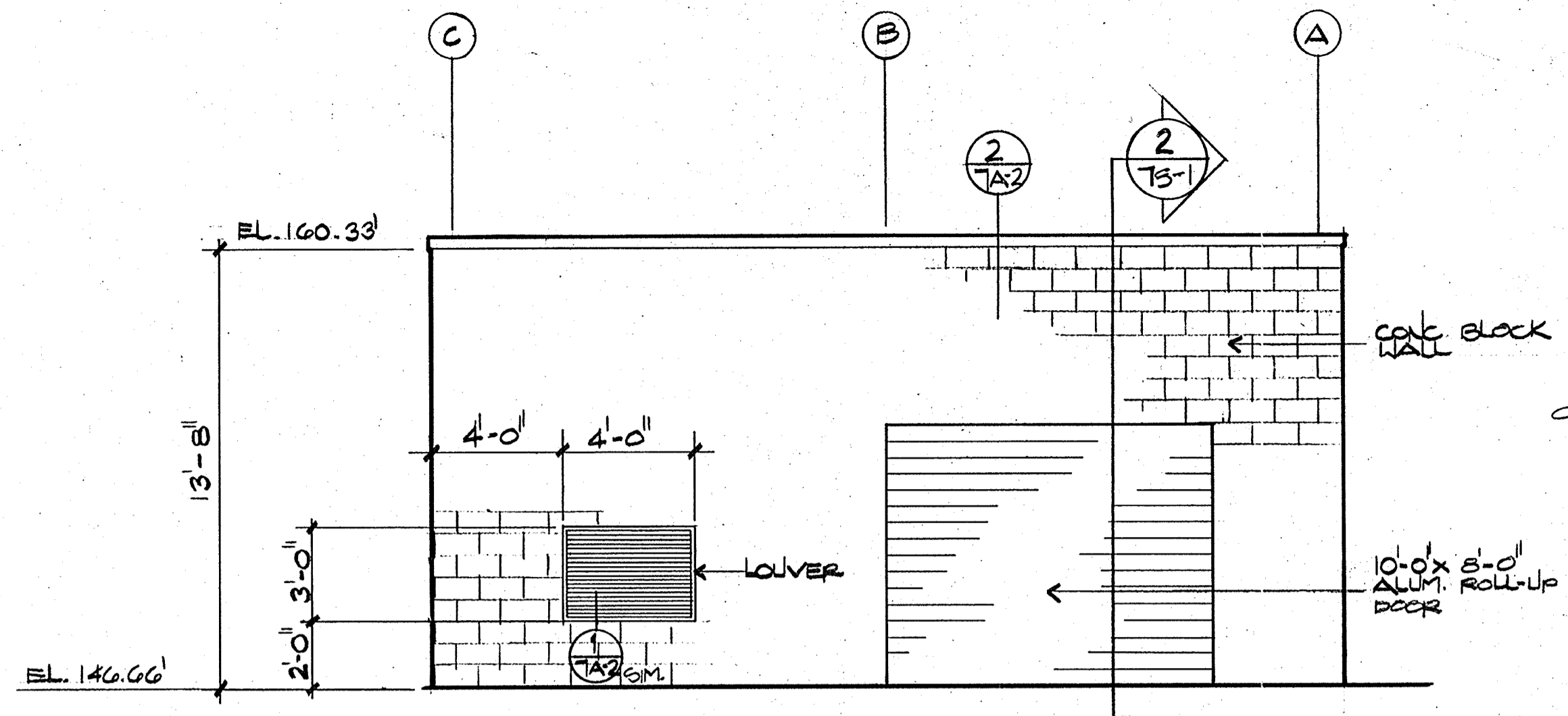


CRAIG & WOOD ARCHITECTS
 199 No. Hartz Ave., Suite Q
 Danville, California 94526

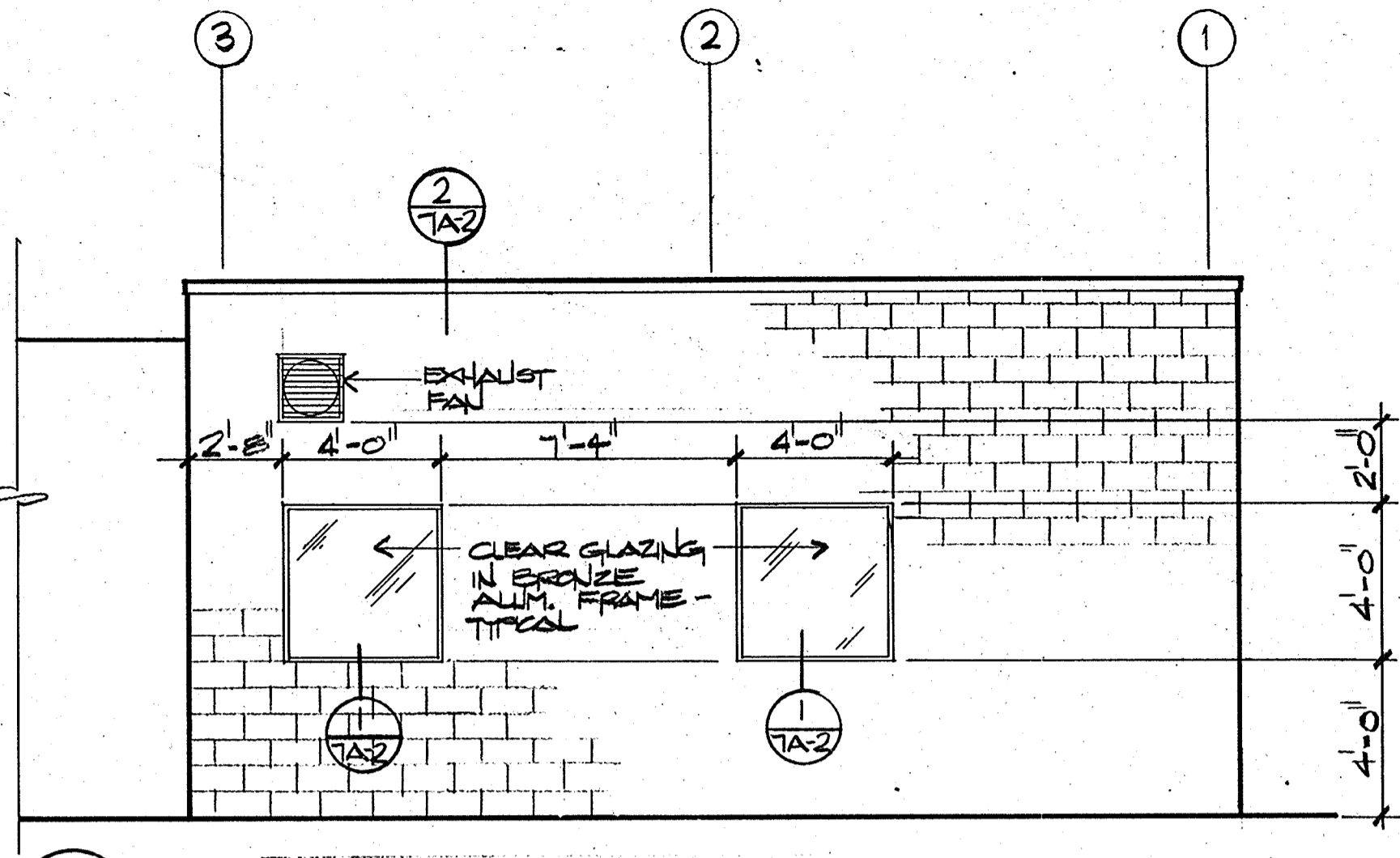
Designed by: _____
 Drawn by: CC, MB
 Checked by: CC
 Approved by: _____
 Date: 8-26-88
 Scale: SHOWN

CITY OF PITTSBURG, CA	
WATER TREATMENT PLANT EXPANSION MISC. & EXISTING BUILDING FLOOR PLAN, INTERIOR ELEVATIONS AT EXISTING OPERATIONS BUILDING	
CAMP DRESSER & MCKEE INC. 710 South Broadway Walnut Creek, CA 94596 <small>environmental engineers, scientists, planners, & management consultants</small>	CDM SHEET NO. 7A-1 38 of 147

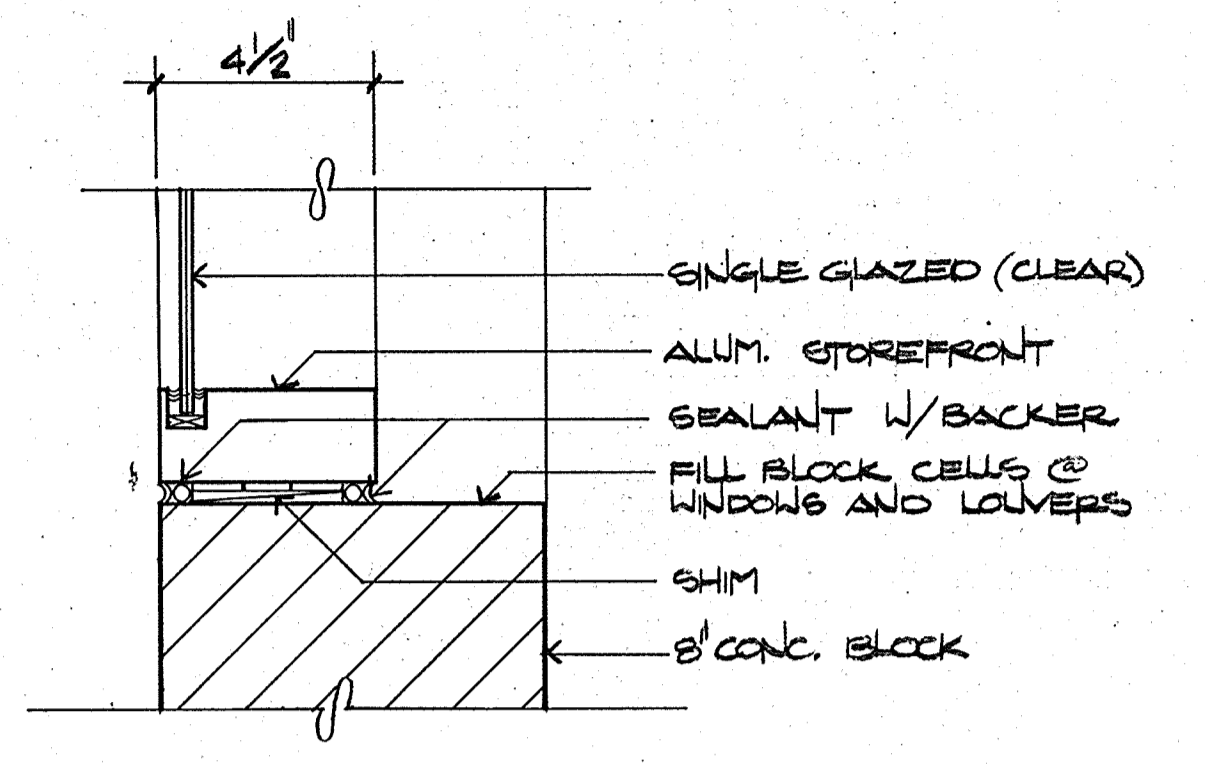
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 ARCHITECTURAL Approved by: Date:



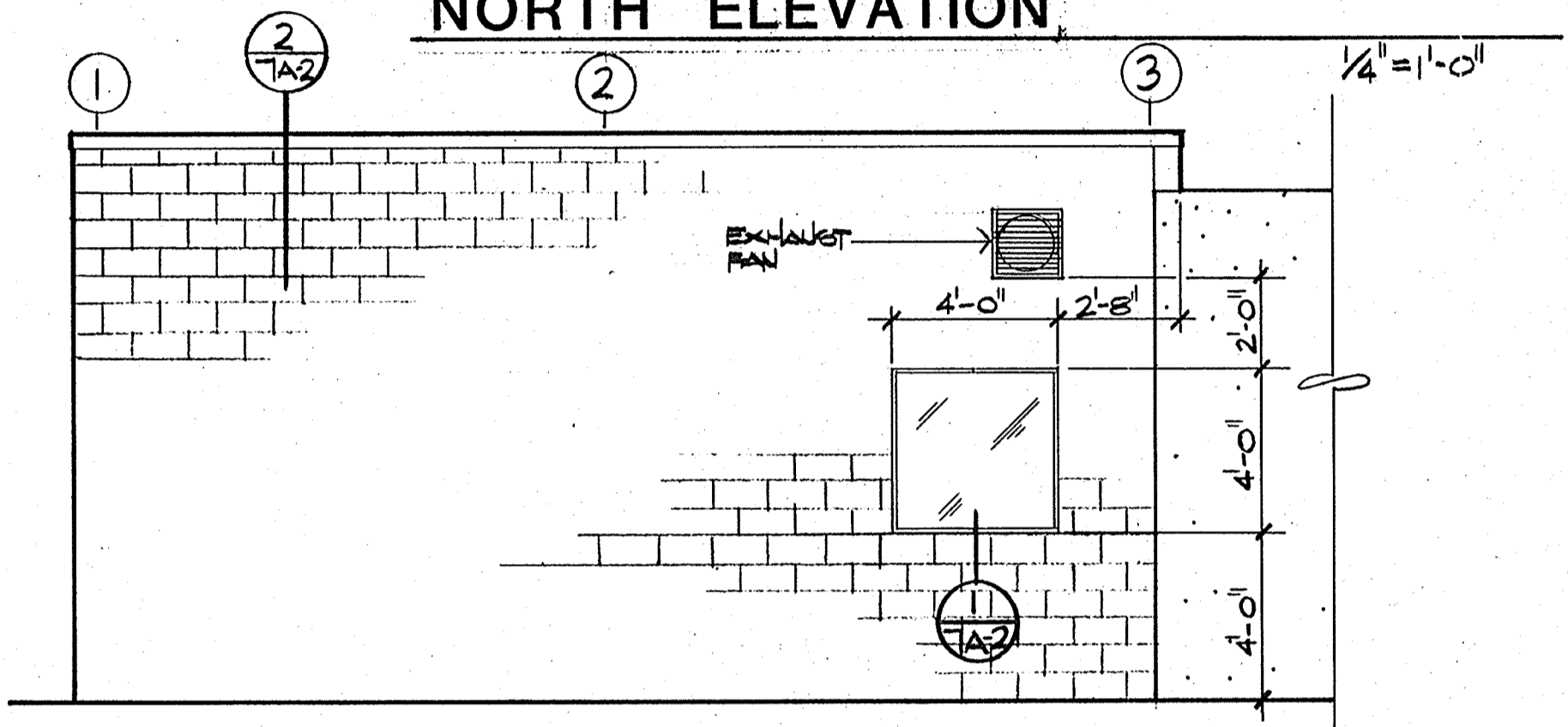
NORTH ELEVATION



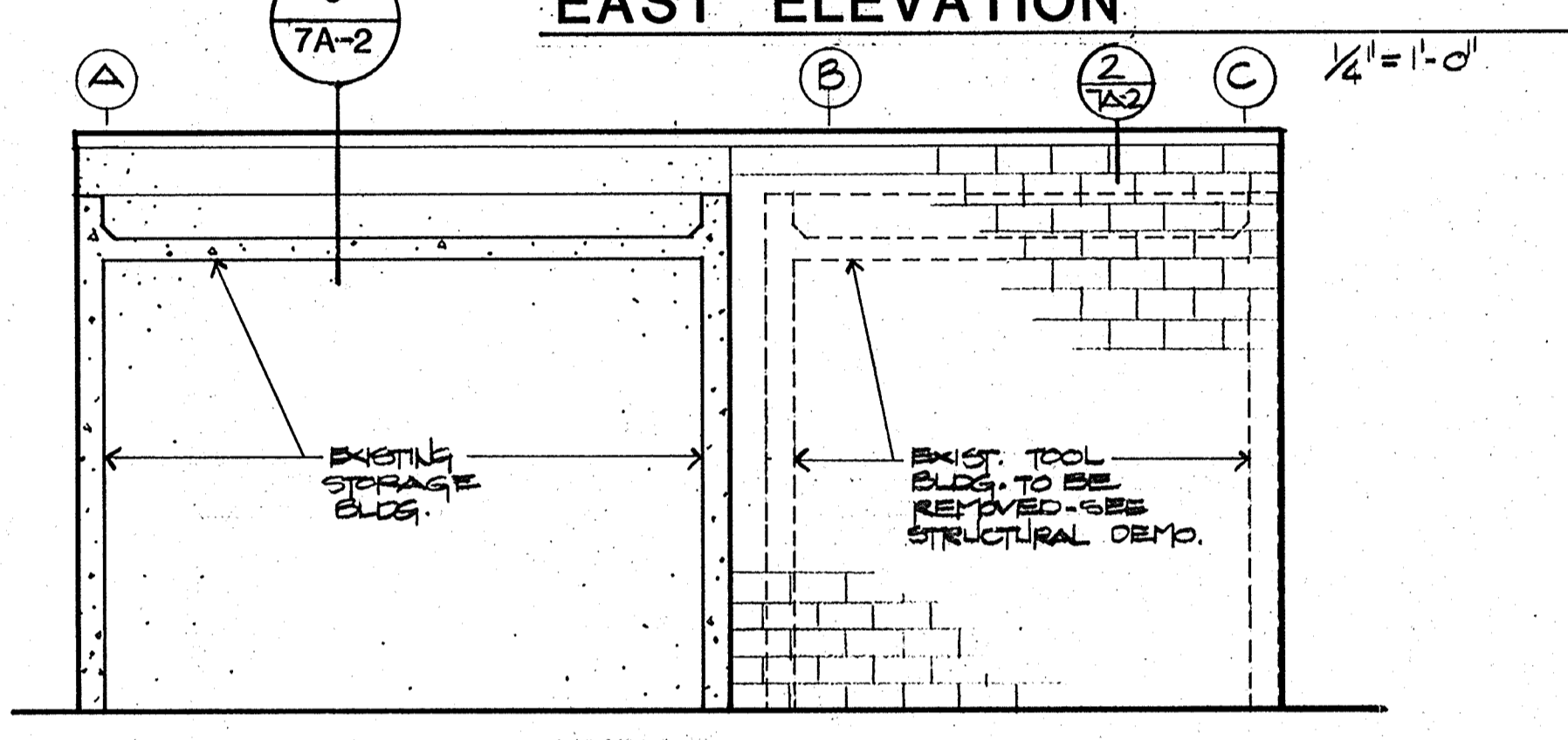
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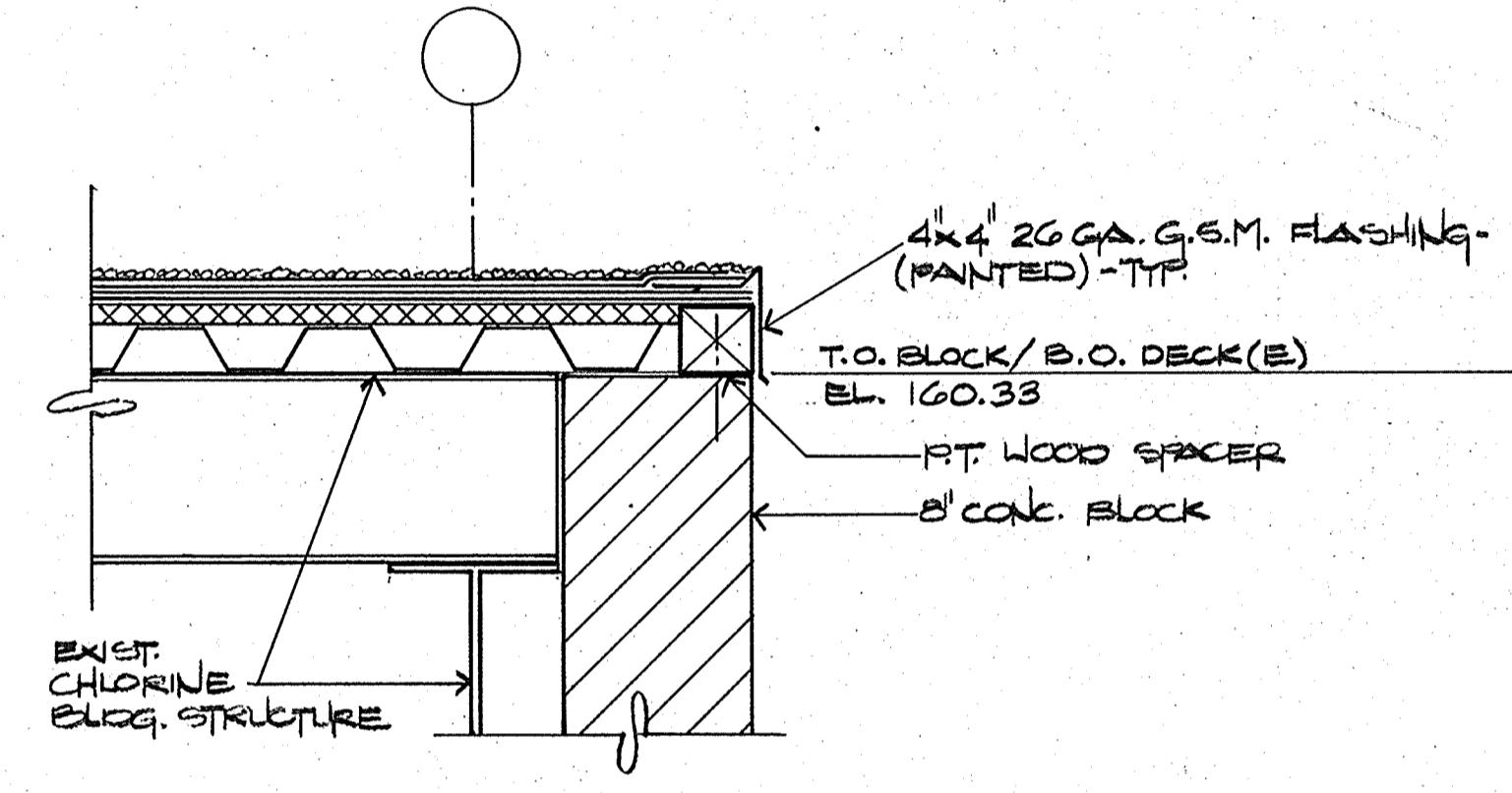
1 WINDOW HEAD/JAMB/SILL
 LOUVER SIMILAR



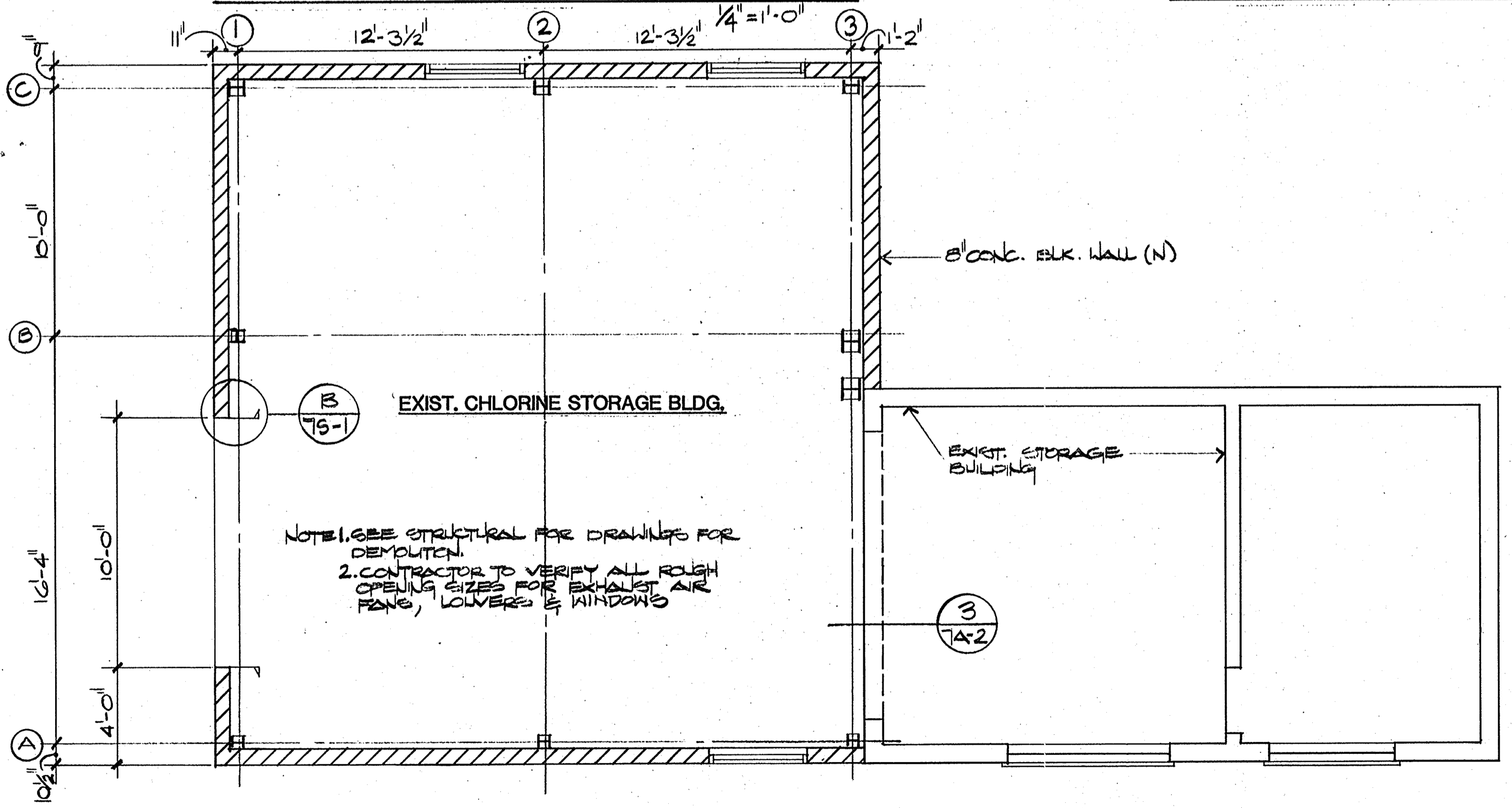
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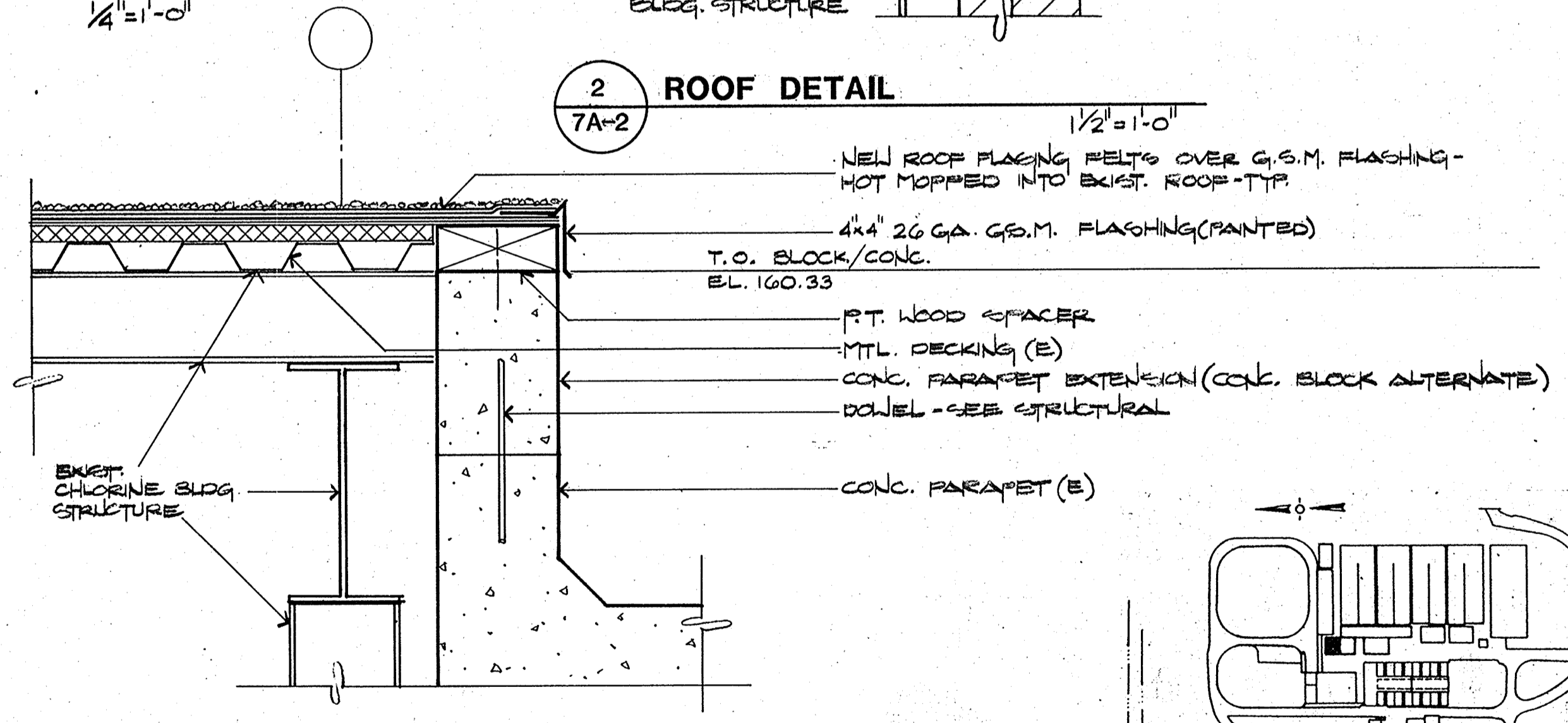
SOUTH ELEVATION



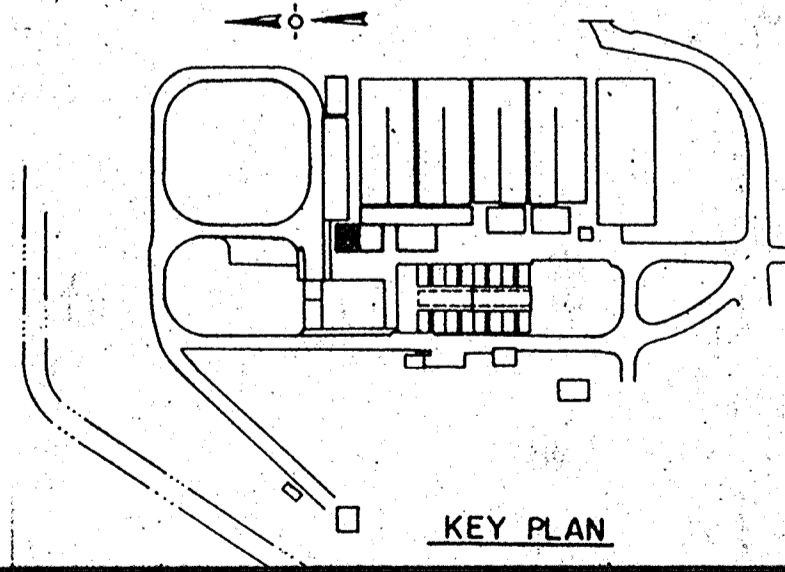
2 ROOF DETAIL



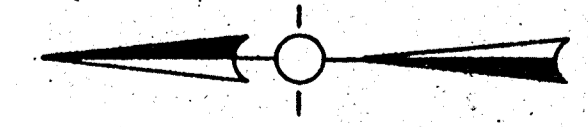
FLOOR PLAN



3 ROOF DETAIL



KEY PLAN



CRAIG & WOOD ARCHITECTS
 199 No. Hartz Ave., Suite Q
 Danville, California 94526

Date	Ch'k'd	Revision

CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
MISC. & EXISTING BUILDING
 FLOOR PLAN, ROOF PLAN AT
 EXISTING CHLORINE STORAGE BUILDING

Designed by: _____
 Drawn by: MB
 Checked by: CC
 Approved by: _____

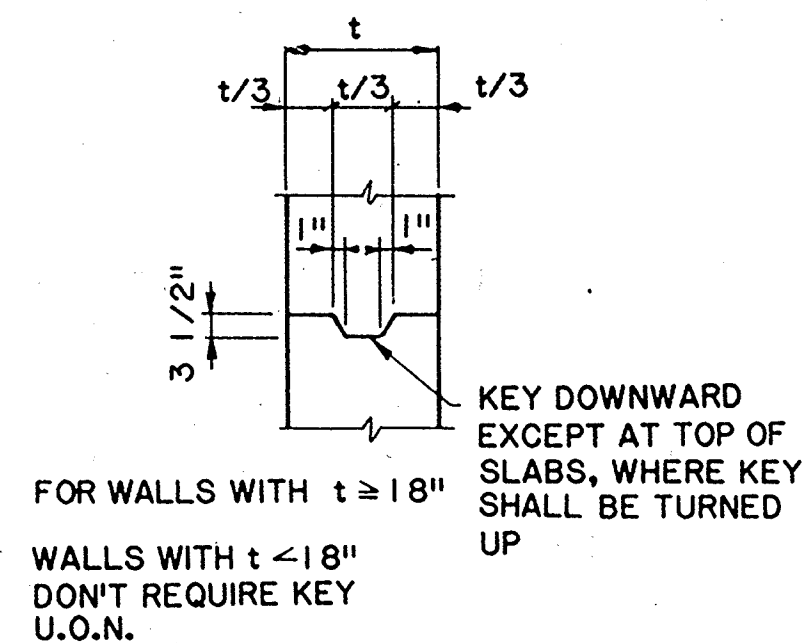
Date: 8-26-88
 Scale: SHOWN

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

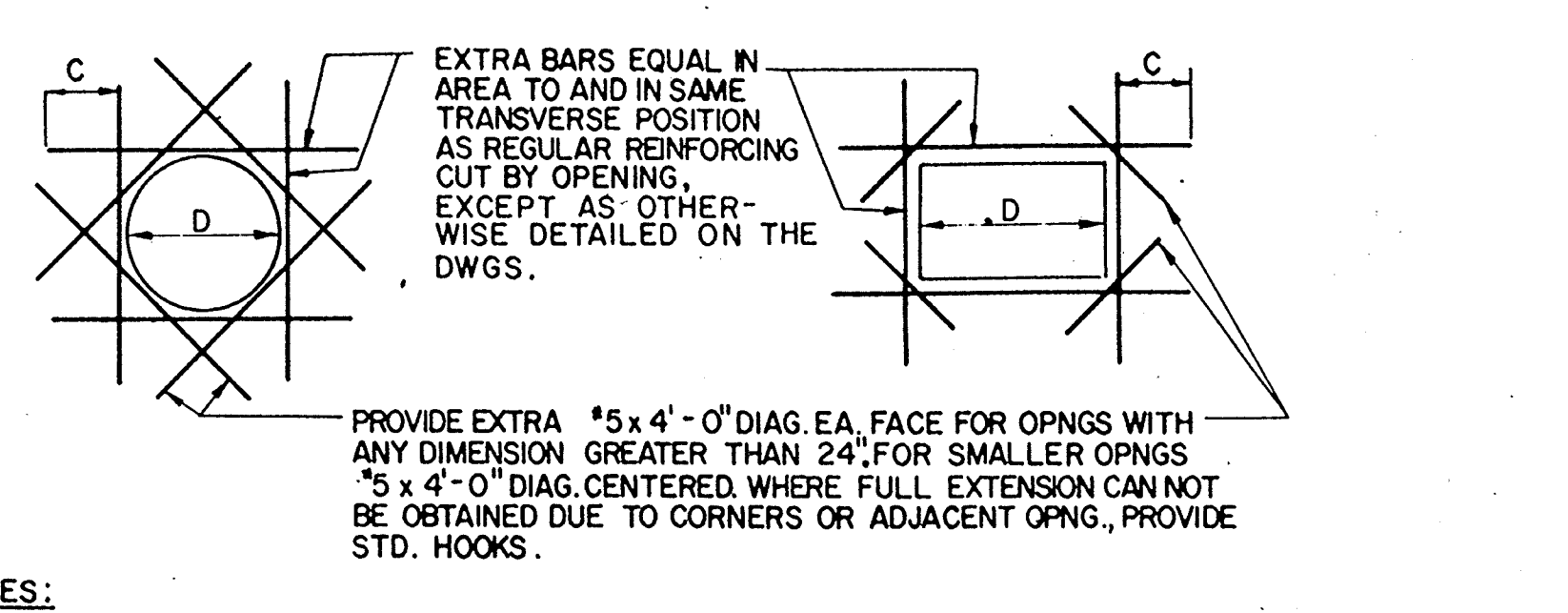
CDM
 environmental engineers, scientists,
 planners, & management consultants

SHEET NO.
7A-2
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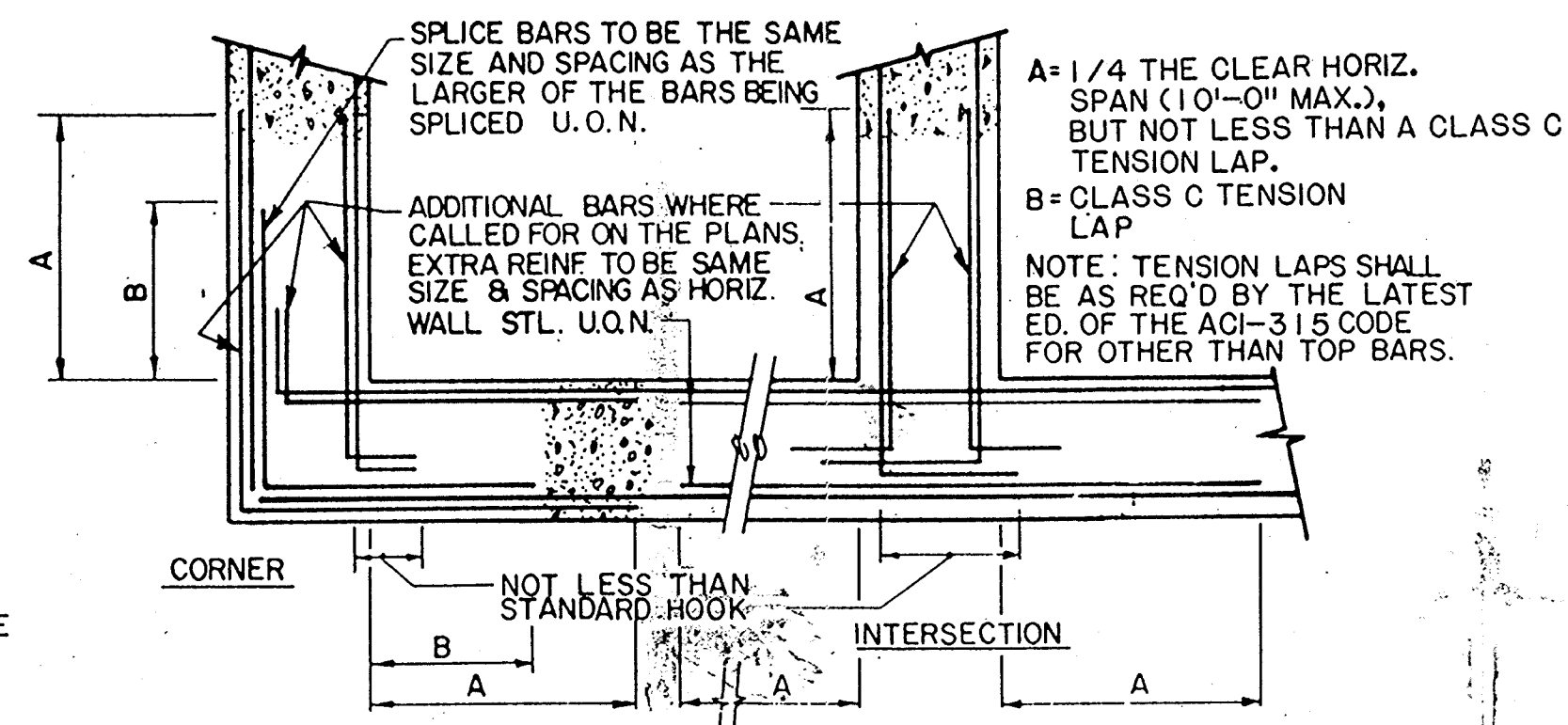
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 PROJECT ENGINEER Date: Approved by:
 PLUMBING Date: Approved by:
 HVAC Date: Approved by:
 INSULATION Date: Approved by:
 ELECTRICAL Date: Approved by:
 STRUCTURAL Date: Approved by:
 ARCHITECTURAL Date: Approved by:



CONCRETE KEY DETAIL 101



EXTRA REINFORCING AT OPENINGS 102



WALL REINFORCING CORNER DETAIL 103

GENERAL NOTES
 ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, HEATING AND VENTILATING, SHOP DRAWINGS AND SPECIFICATIONS.
 SEE ARCHITECTURAL, MECHANICAL, HEATING AND VENTILATING, AND ELECTRICAL DRAWINGS FOR REGLETS, PIPE SLEEVES, CONDUITS OR OTHER ITEMS TO BE EMBEDDED OR PASSED THROUGH THE CONCRETE.
 WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED SIZES.

CONCRETE NOTES
 REINFORCED CONCRETE SHALL CONFORM TO THE ACI SPECIFICATION 318-83.
 MINIMUM CONCRETE STRENGTH IN 28 DAYS.
 STRUCTURAL CONCRETE $f'_c = 4000$ psi
 CONCRETE FILL $f'_c = 2500$ psi
 REINFORCING STEEL SHALL BE BILLET STEEL CONFORMING TO THE LATEST EDITION OF ASTM SPECIFICATION A615 GRADE 60.
 REINFORCING STEEL FABRICATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION CRSI MANUAL OF STANDARD PRACTICE.
 REINFORCING SHALL HAVE THE FOLLOWING CLEAR CONCRETE COVER UNLESS OTHERWISE NOTED.

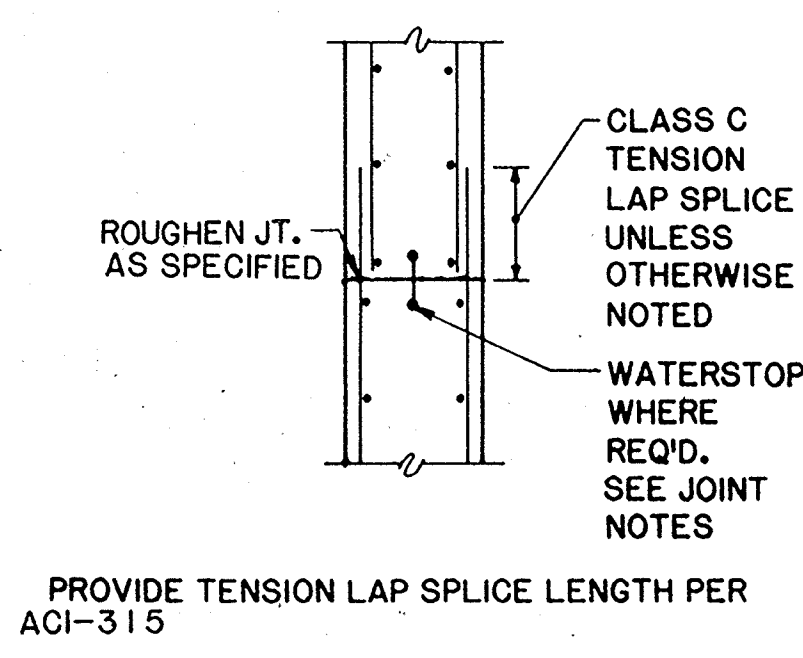
- FOOTING BOTTOMS	3"
- CONCRETE SURFACES IN CONTACT WITH SOIL, SLUDGE, WATER OR EXPOSED TO WEATHER	2"
- CONCRETE SURFACES NOT IN CONTACT WITH SOIL, WATER, SLUDGE OR EXPOSED TO WEATHER	1 1/2"
COLUMNS, BEAMS, AND WALLS	1"
BOTTOMS OF SLABS	1"
TOP OF SLABS	3/4"

SPLICED BARS SHALL HAVE A MINIMUM LAP AS SPECIFIED IN THE LATEST EDITION OF THE ACI 315 DETAILING MANUAL UNLESS OTHERWISE NOTED.
 CONSTRUCTION JOINTS SHALL NOT BE PLACED AT LOCATIONS OTHER THAN SHOWN ON THE DRAWINGS UNLESS ACCEPTABLE TO THE ENGINEER.
 SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE AS REQUIRED BY THE EQUIPMENT MANUFACTURER.
 ALL EXPOSED CORNERS OF CONCRETE TO HAVE 3/4" MINIMUM CHAMFER UNLESS OTHERWISE NOTED.

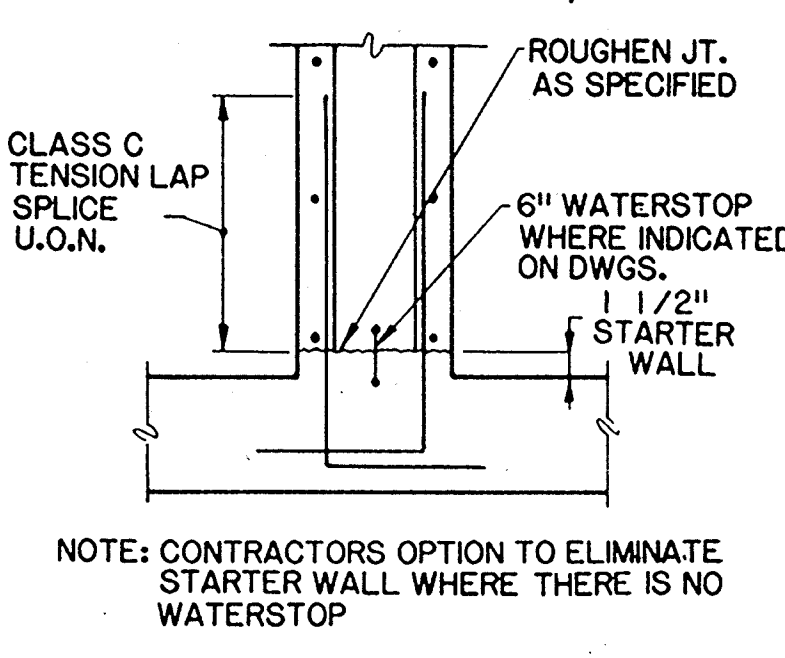
JOINT NOTES
 ALL CONTROL JOINTS WITHIN WATER CONTAINMENT STRUCTURES SHALL HAVE BLOCKOUTS WITH SEALANT ON THE WATER SIDE OF THE WALL OR SLAB. EXPANSION JOINTS SHALL ALWAYS HAVE SEALANT ON BOTH SIDES OF JOINT EXCEPT ON UNDERSIDE OF BASE SLAB. CONSTRUCTION JOINTS SHALL BE SEALED ON THE WATER SIDE OF THE WALL OR SLAB ONLY WHERE NOTED ON THE DRAWINGS.
 WATERSTOPS SHALL BE PROVIDED AT ALL JOINTS INDICATED ON THE DRAWINGS. WATERSTOP SHALL ALSO BE PROVIDED IN ALL JOINTS IN WATER CONTAINMENT STRUCTURES TO PREVENT EXFILTRATION INTO SOIL OR DRY AREAS OF THE STRUCTURE. WATERSTOPS SHALL BE CONTINUOUS AROUND ALL CORNERS AND INTERSECTIONS.

DESIGN LIVE LOADS

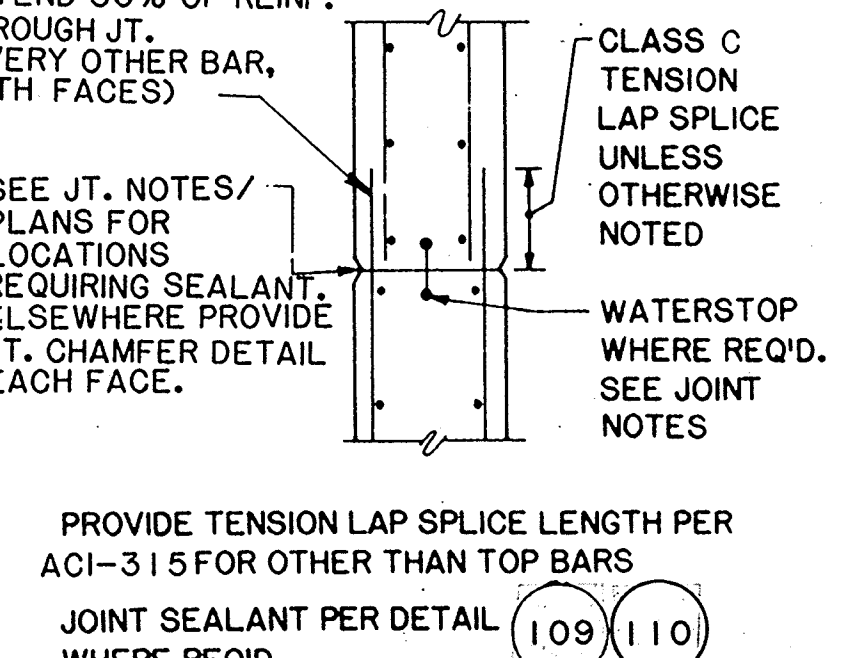
GRAVITY: ROOF:	20 PSF
FLOOR SLABS:	100 PSF
STAIRS/PLATFORMS/GRATING:	100 PSF
LATERAL: WIND: 1985 UBC, $V_{30} = 70$ MPH, EXPOSURE C	
SEISMIC: 1985 UBC, ZONE 4	
GROUND ACCELERATION - 0.40g	
SOIL: BEARING PRESSURE: 2500 PSF (BASIC)	
EQUIVALENT LIQUID PRESSURES:	
(PSF/FT)	BASIC
PASSIVE	300
ACTIVE (HORIZ. BACKFILL)	45
AT REST (HORIZ. BACKFILL)	60



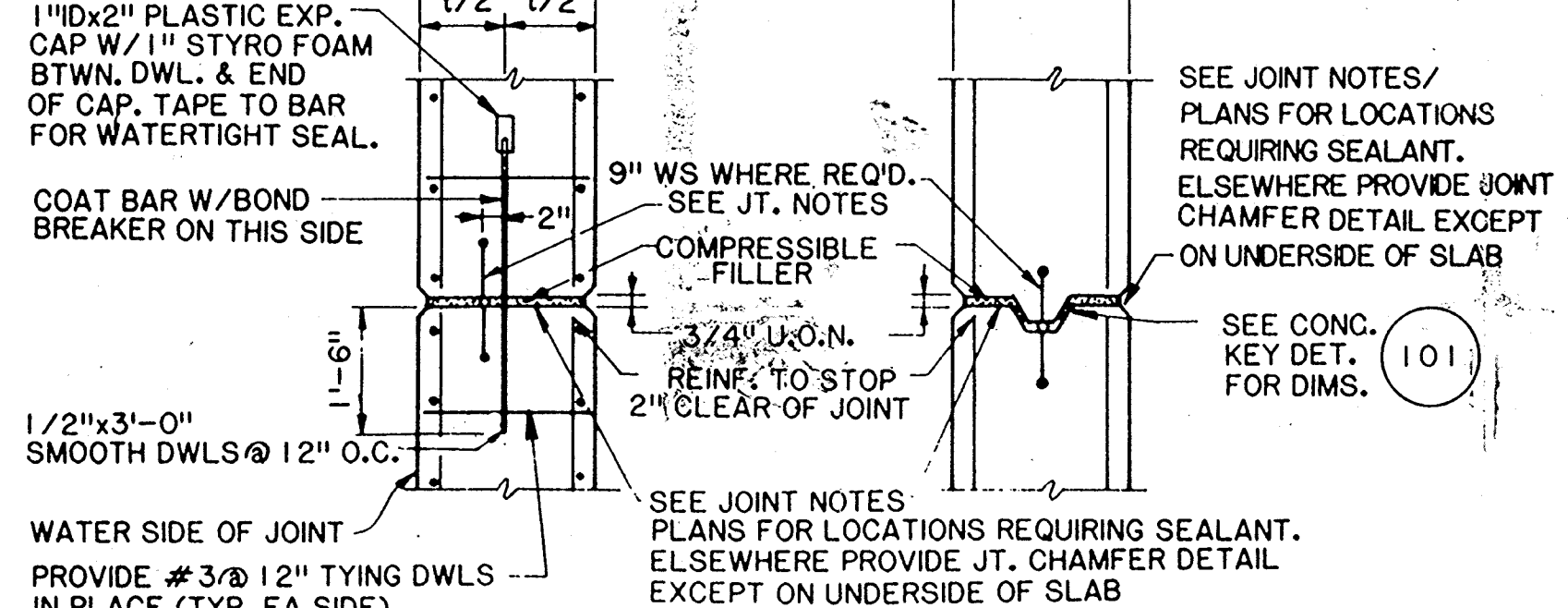
CONSTRUCTION JOINT 104



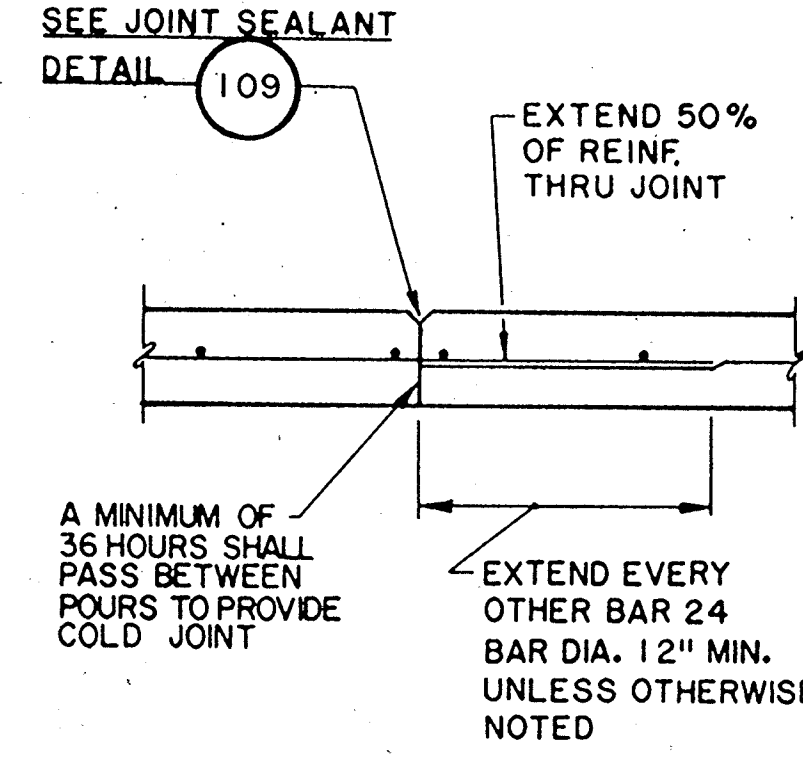
WALL CONSTRUCTION JOINT AT BASE SLAB DETAIL 105



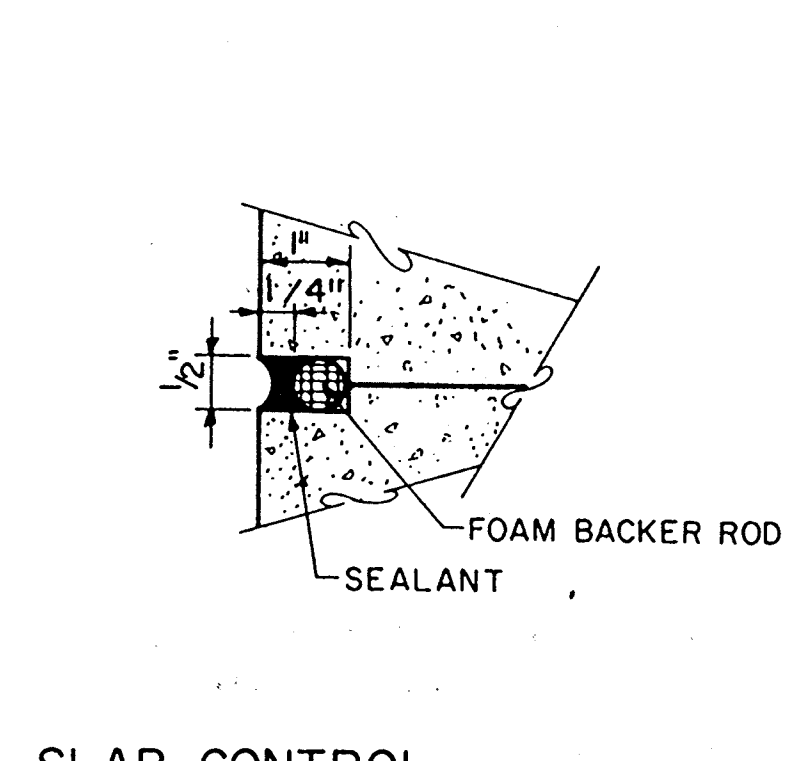
CONTROL JOINT 106



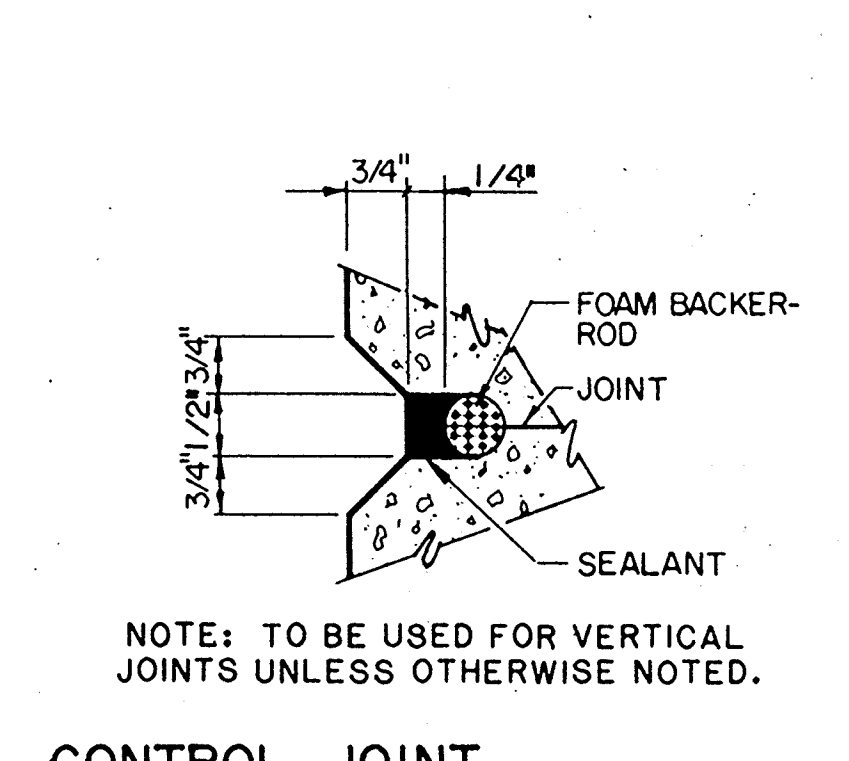
EXPANSION JOINT DETAIL 107



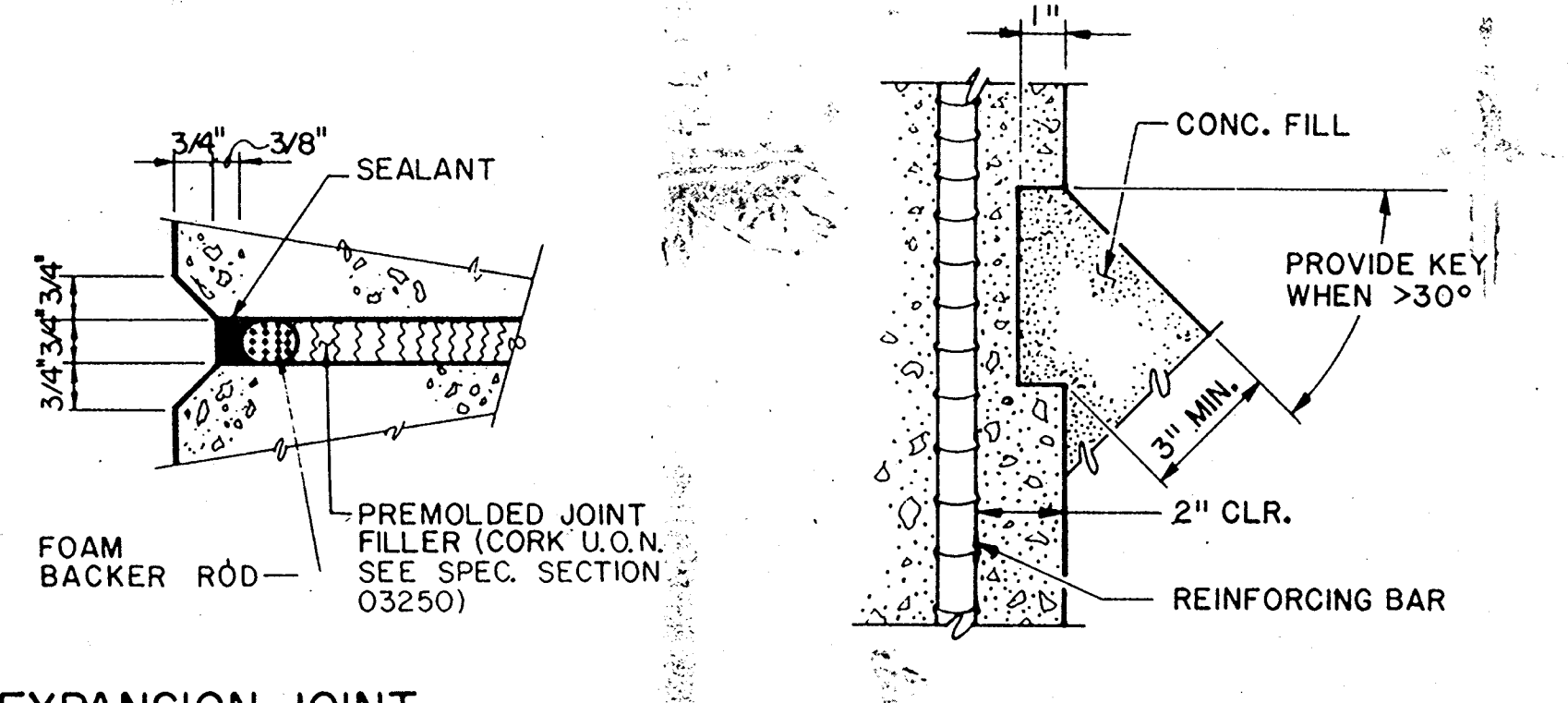
SLAB CONTROL JOINT SEALANT DETAIL 108



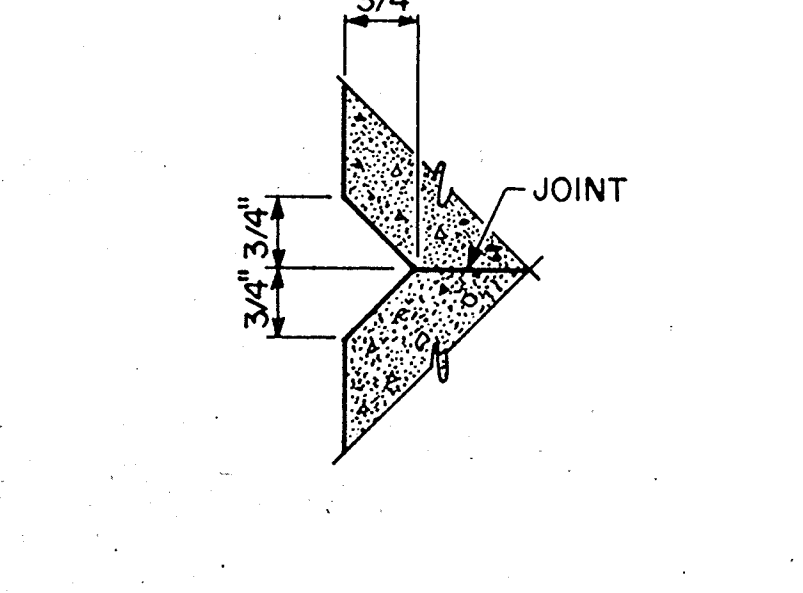
SLAB CONTROL JOINT SEALANT DETAIL 109



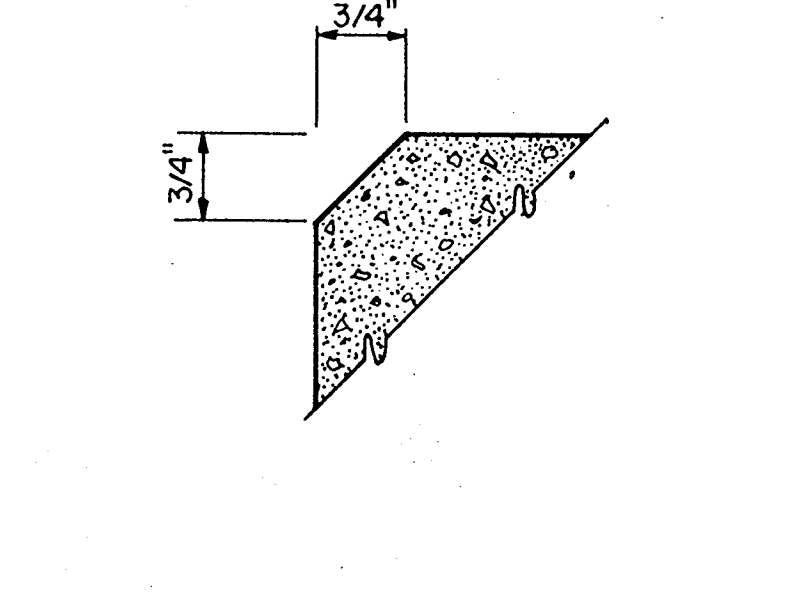
EXPANSION JOINT SEALANT DETAIL 110



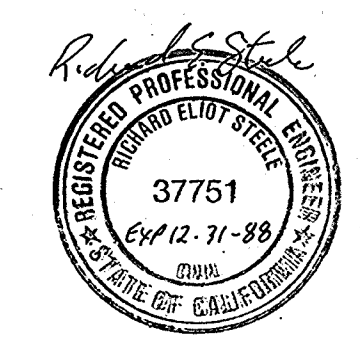
CONCRETE FILL KEY 112



JOINT CHAMFER DETAIL 113



CHAMFER DETAIL 114



Date	Ch'k'd	Revision
Designed by: JVI	Drawn by: PHOTO	Date: 9/88
Checked by: JTC	Approved by: RES	Scale: NONE

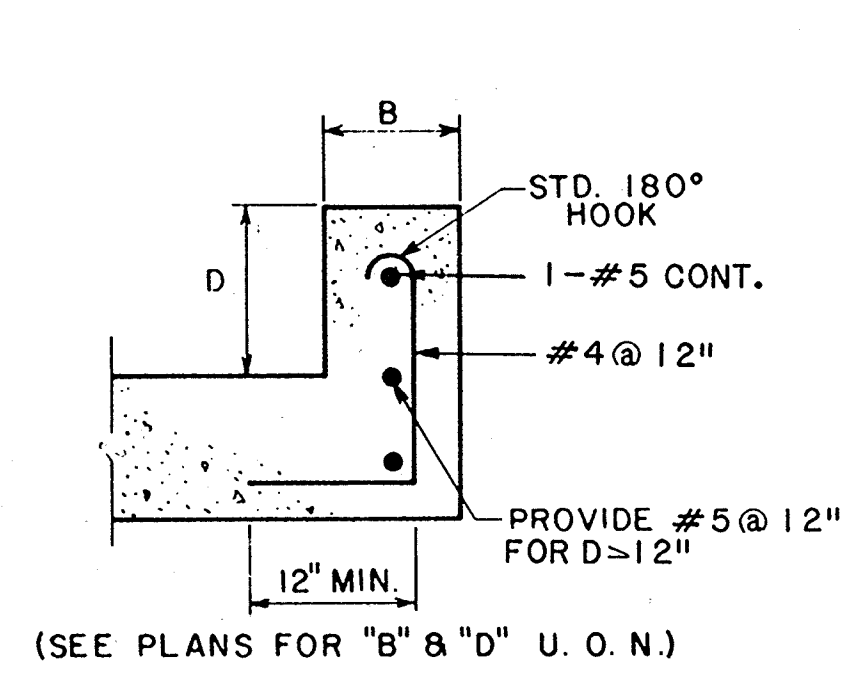
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STANDARD DETAILS AND NOTES

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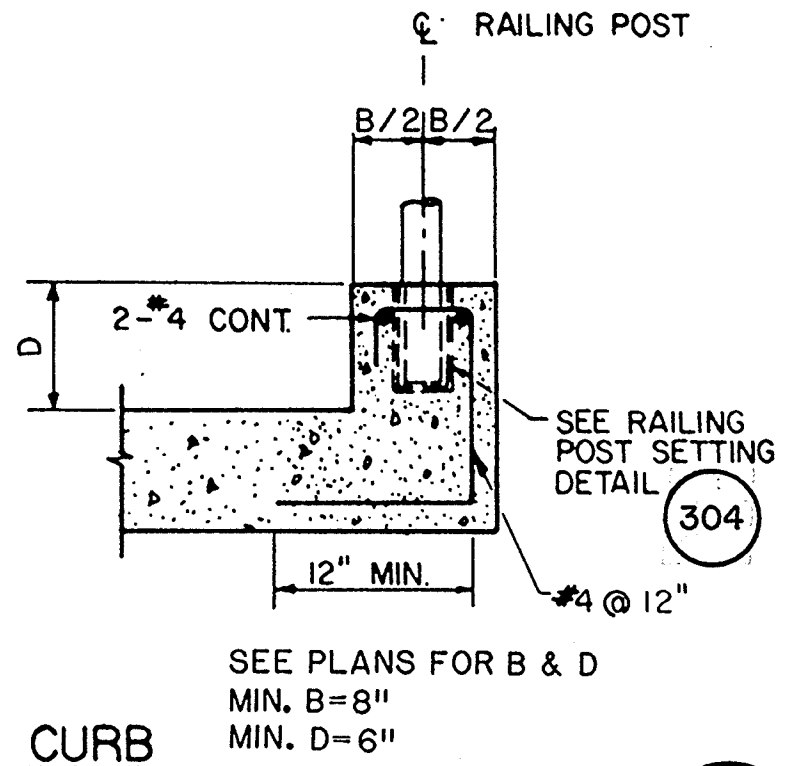
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AS-BUILT
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 DATE

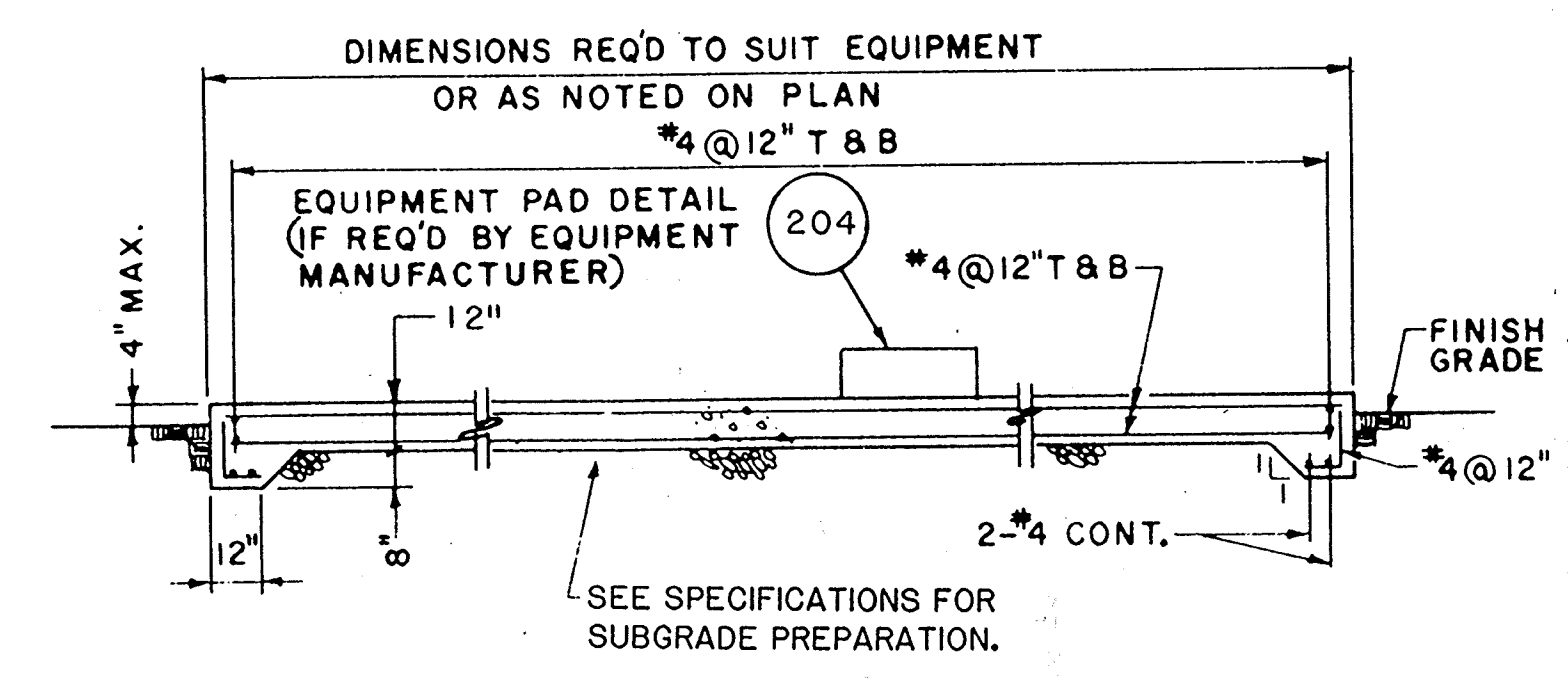
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 ARCHITECTURAL Approved by: Date:



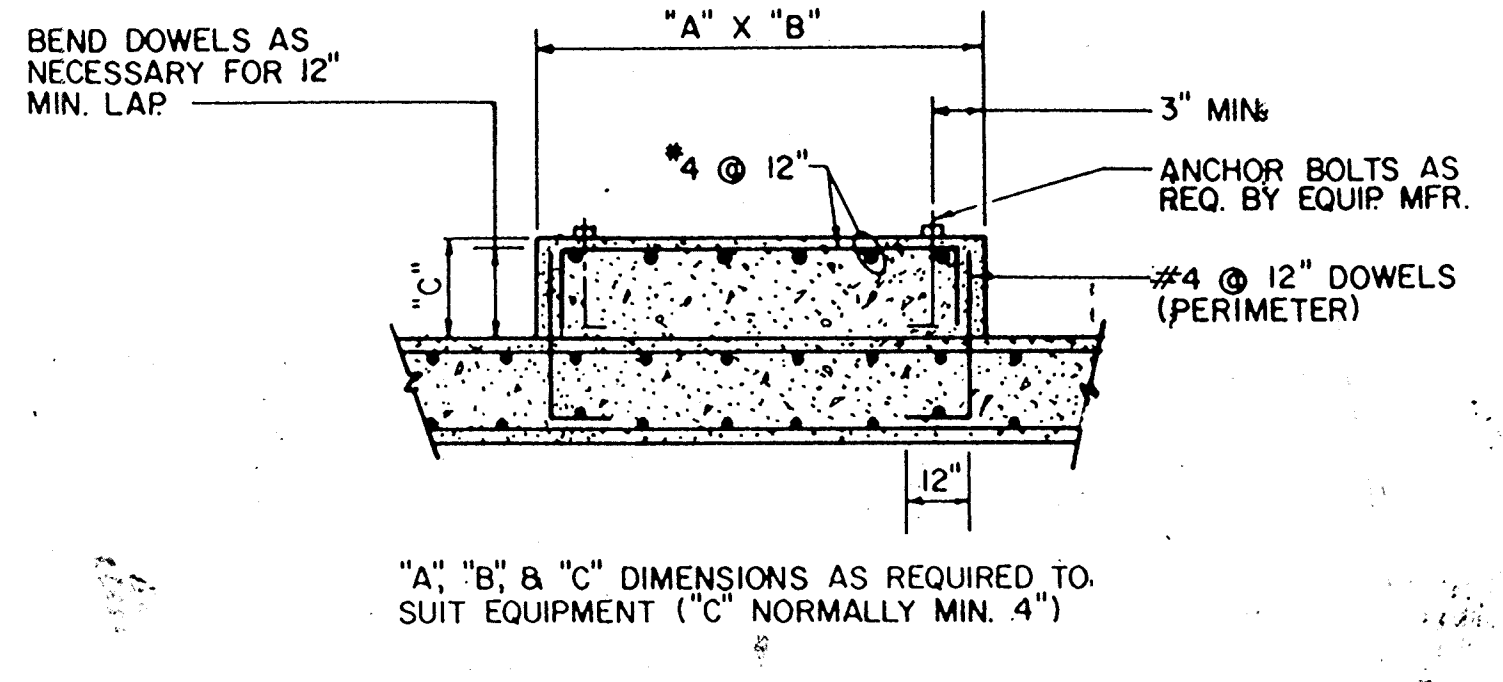
CURB DETAIL (201)



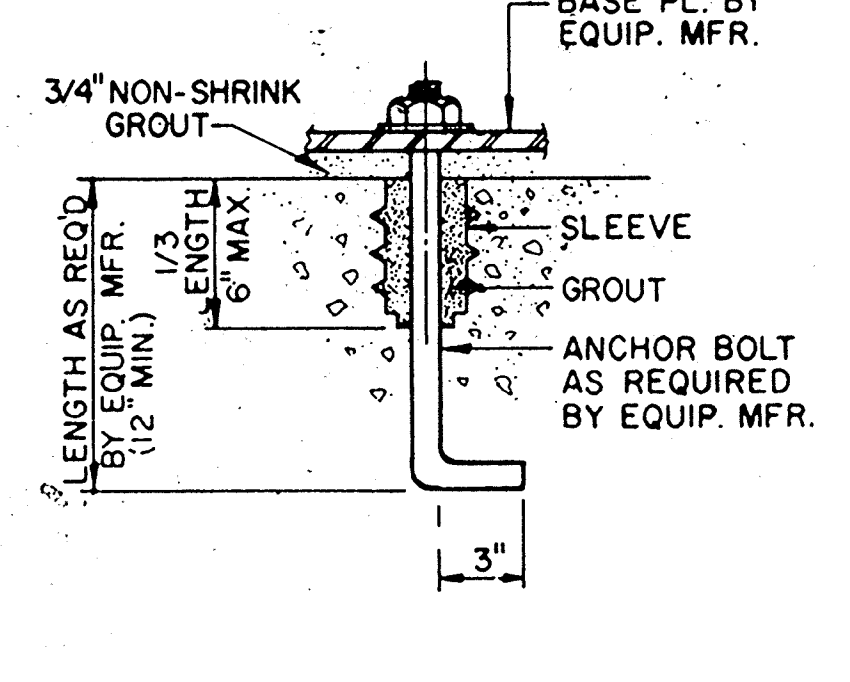
CURB WITH RAILING DETAIL (202)



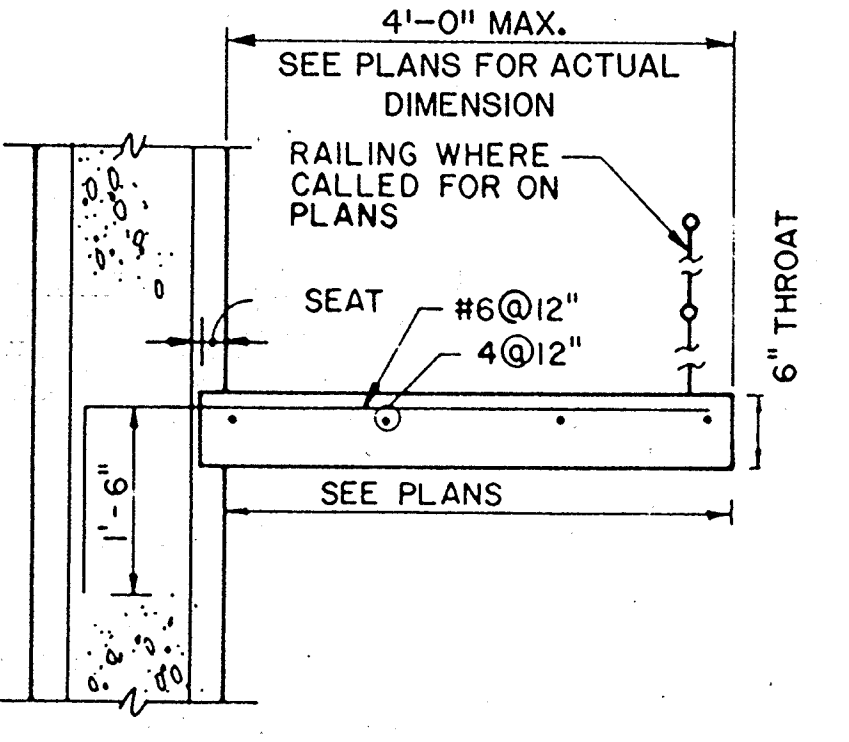
EQUIPMENT SLAB DETAIL (203)



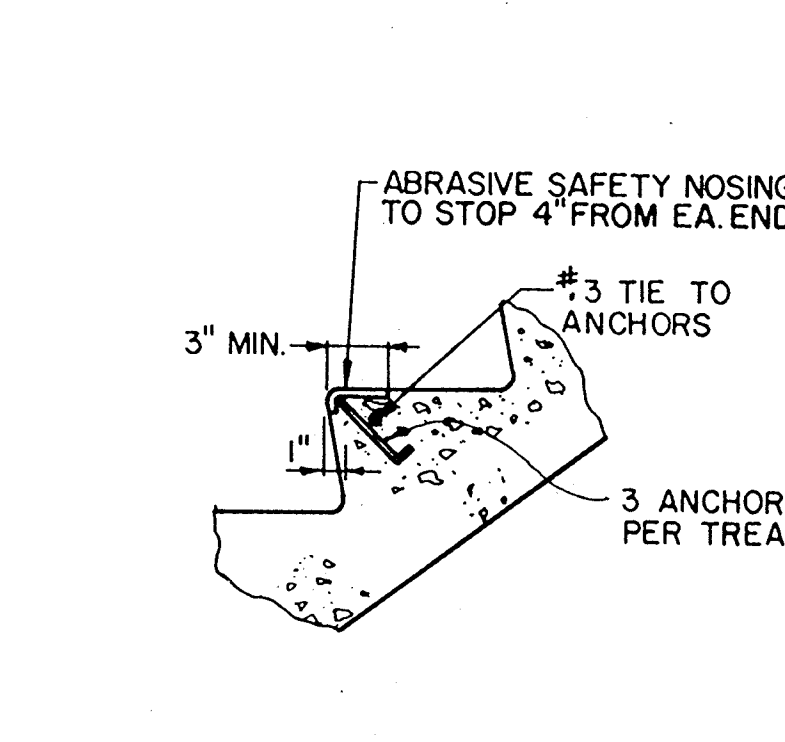
EQUIPMENT PAD DETAIL (204)



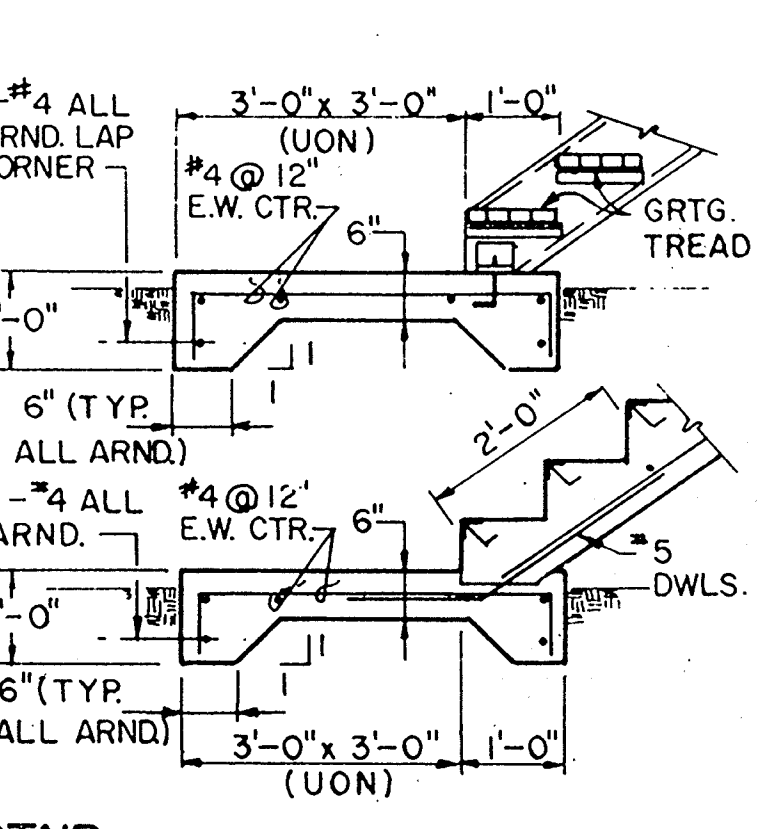
ANCHOR BOLT DETAIL (205)



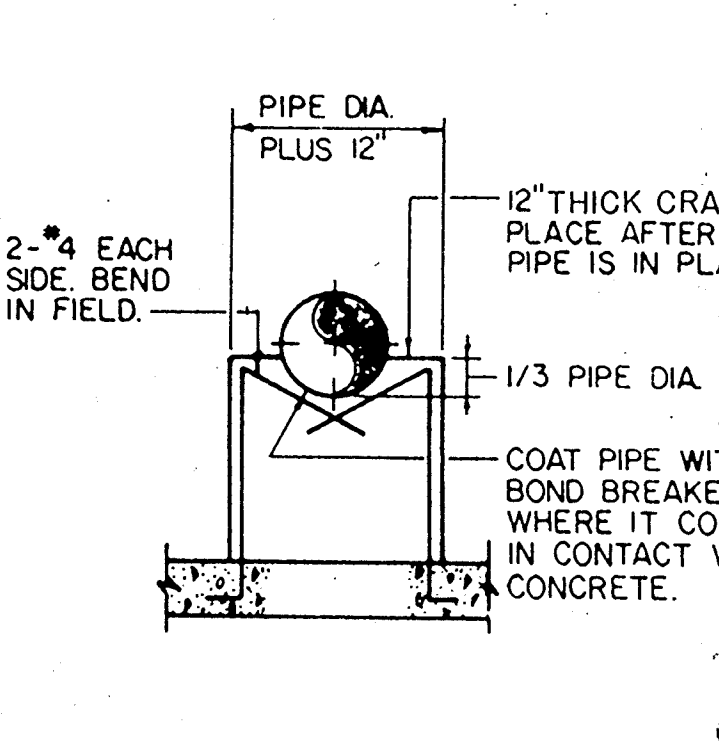
CANTILEVER STAIR DETAIL (206)



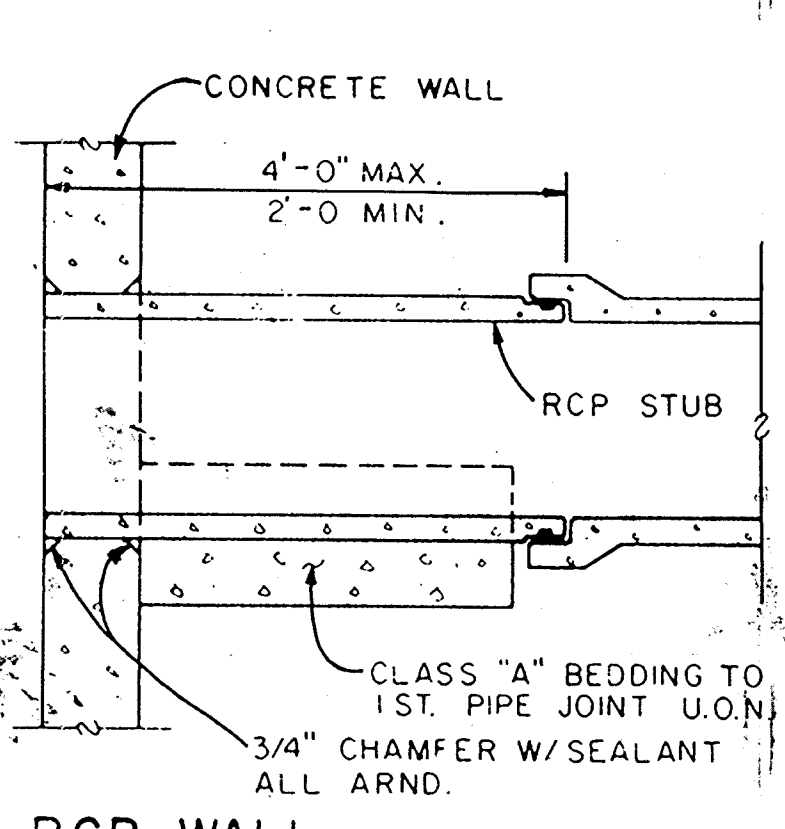
CONCRETE STEP DETAIL (207)



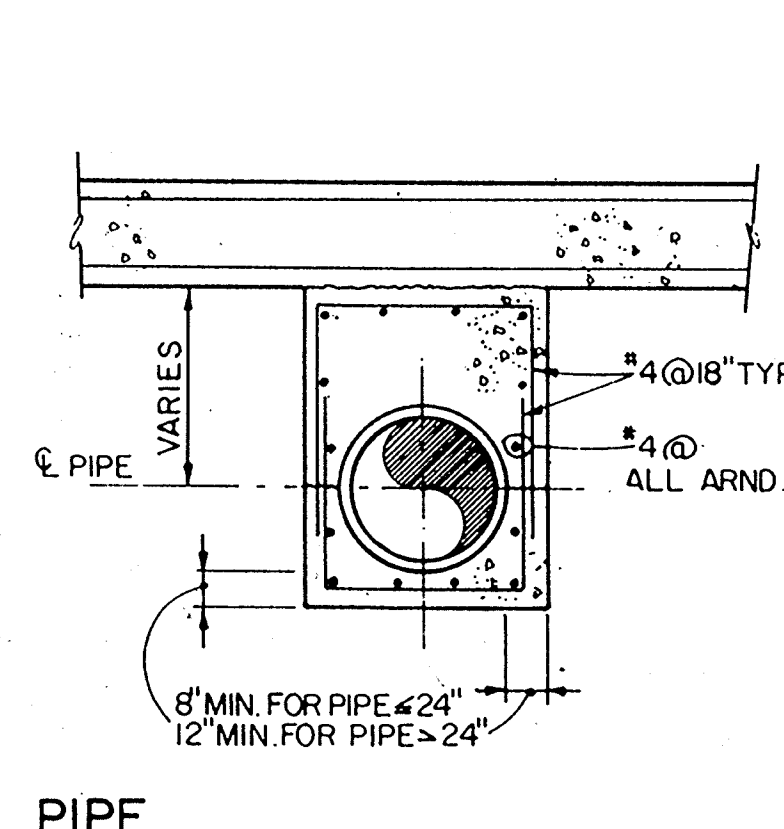
STAIR LANDING SLAB DETAIL (208)



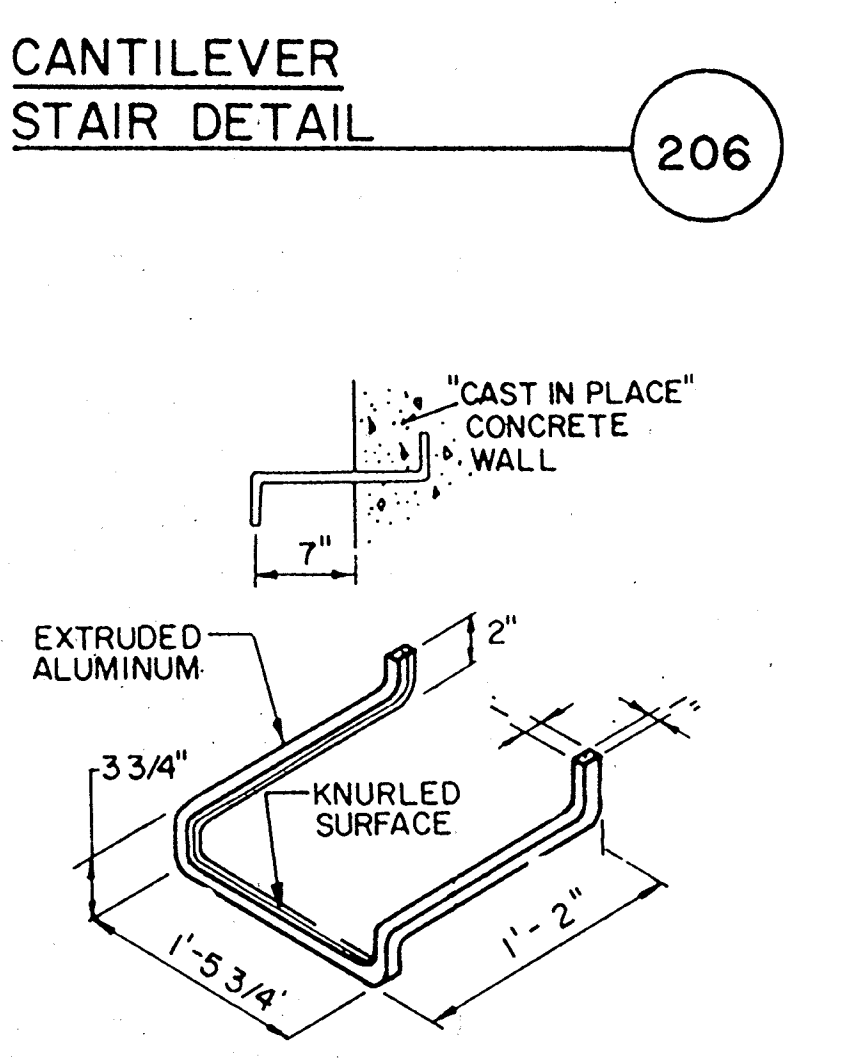
CONCRETE PIPE CRADLE DETAIL (209)



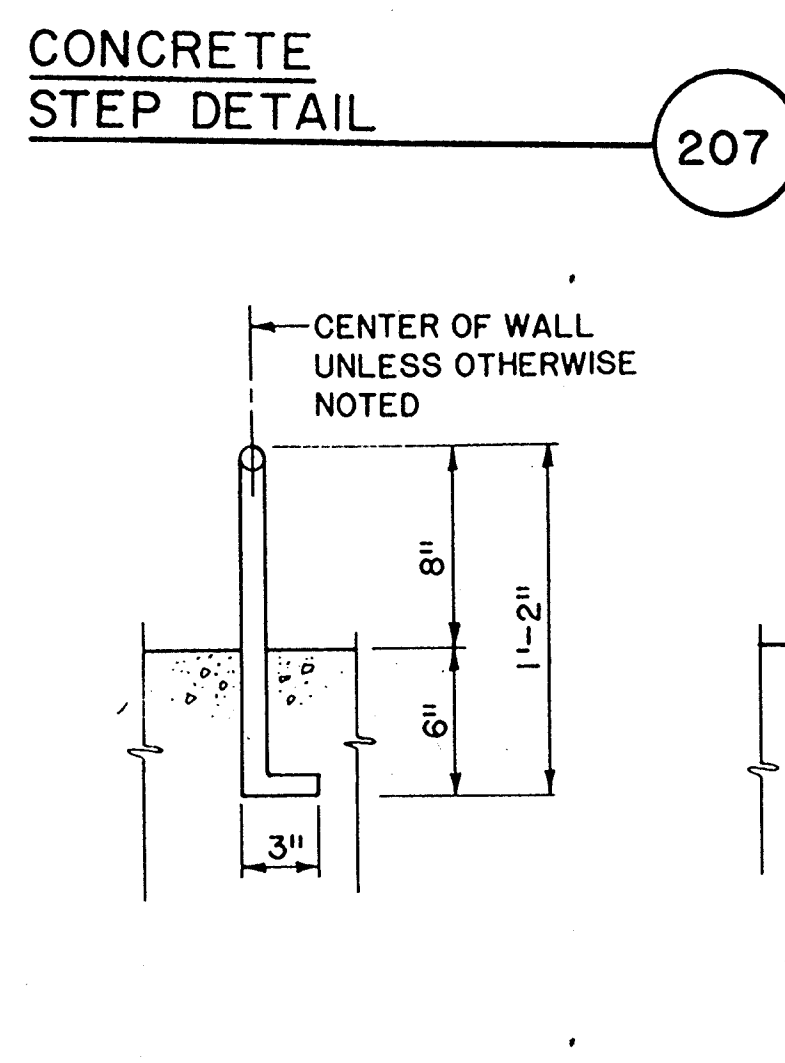
RCP WALL JOINT DETAIL (210)



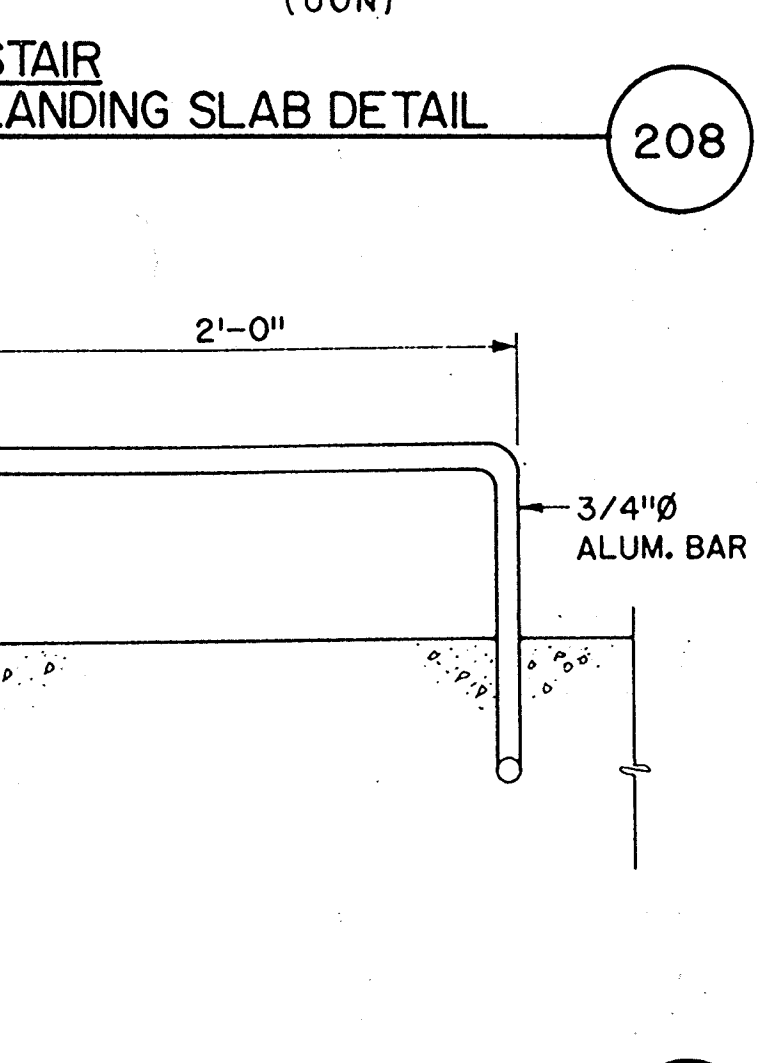
PIPE ENCASEMENT DETAIL (211)



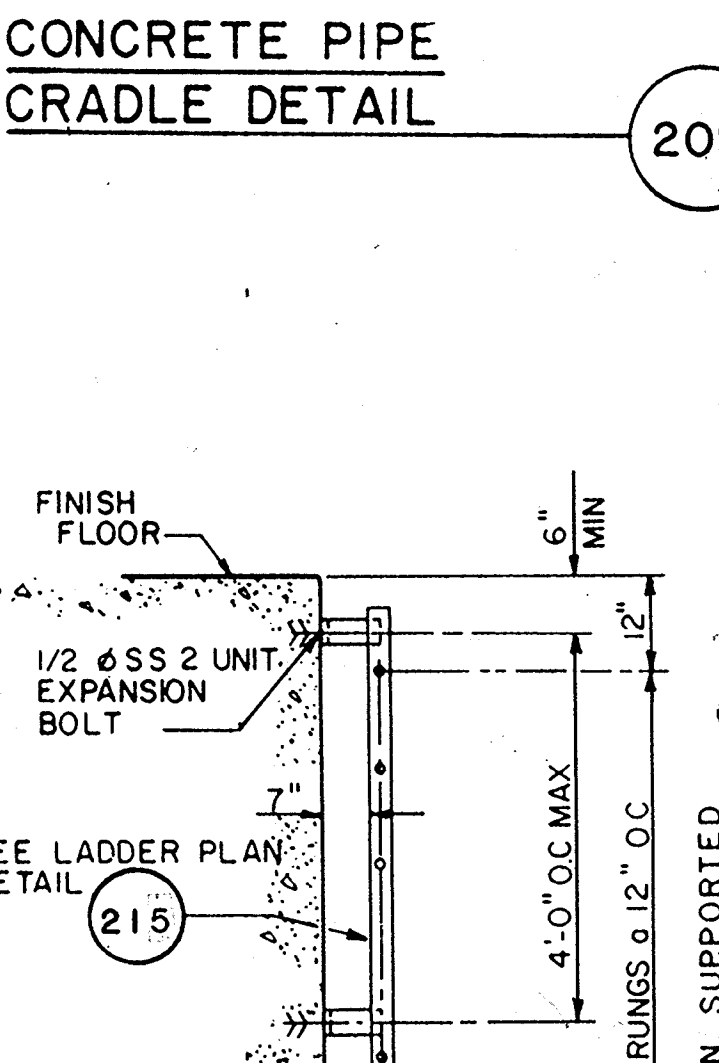
MANHOLE RUNG (212)



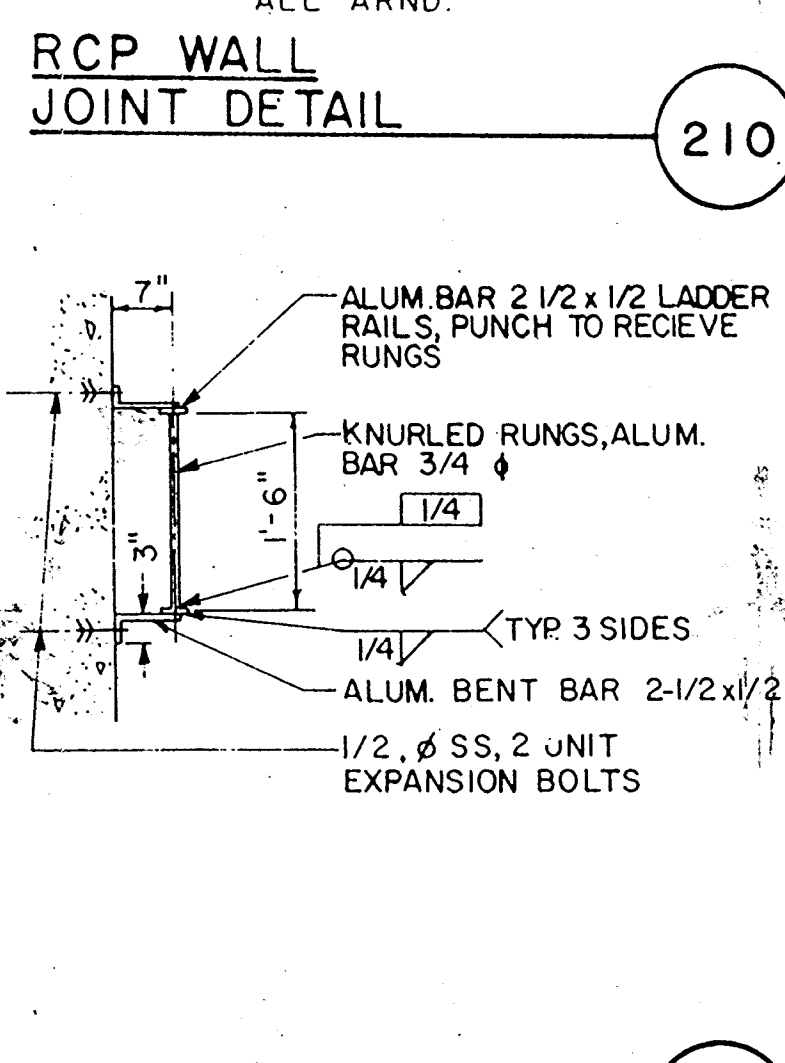
GRAB BAR DETAIL (213)



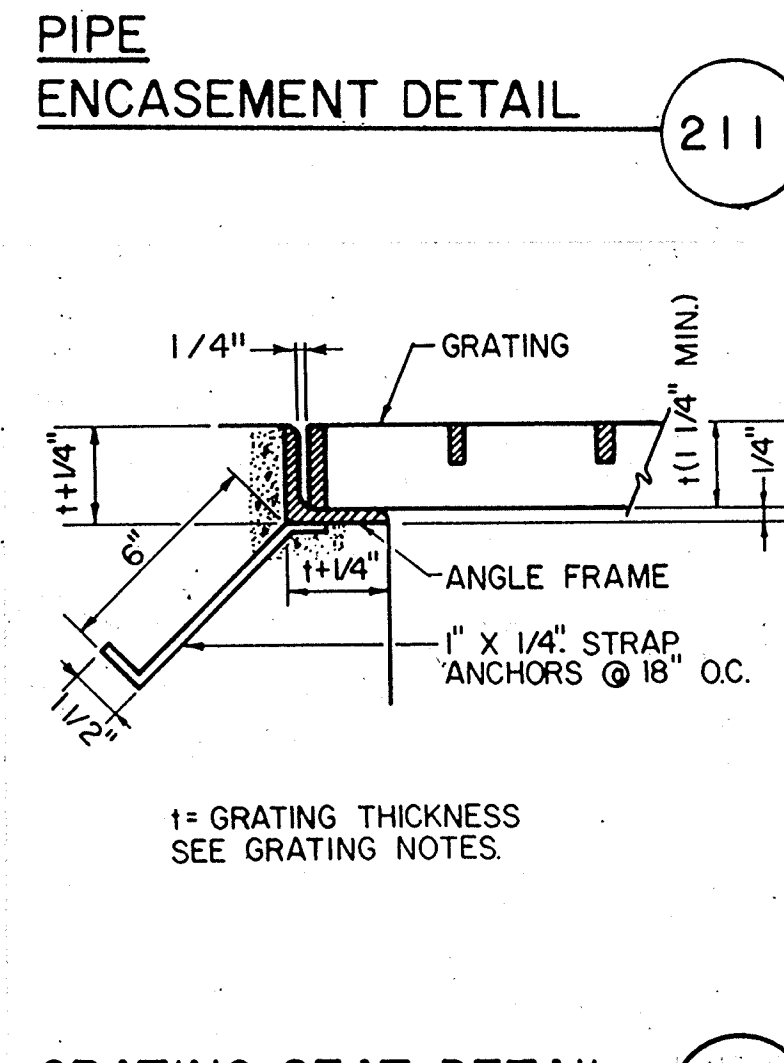
LADDER DETAIL (214)



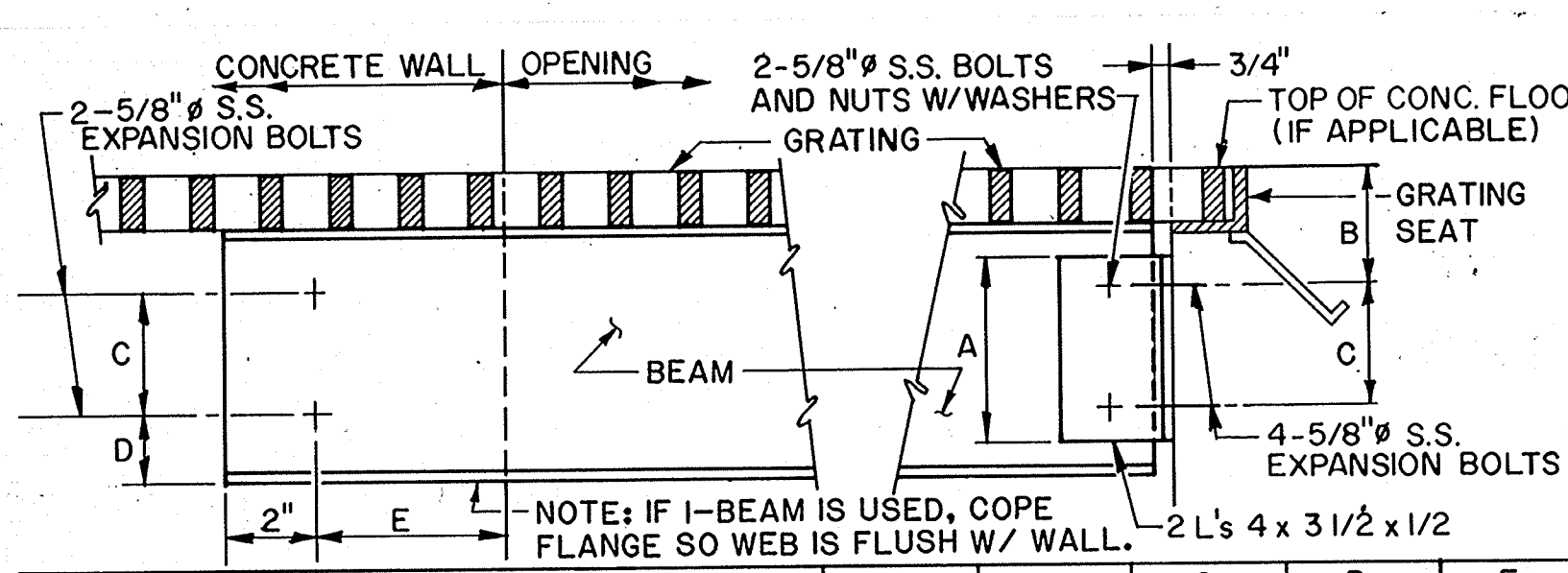
LADDER PLAN DETAIL (215)



GRATING SEAT DETAIL (216)

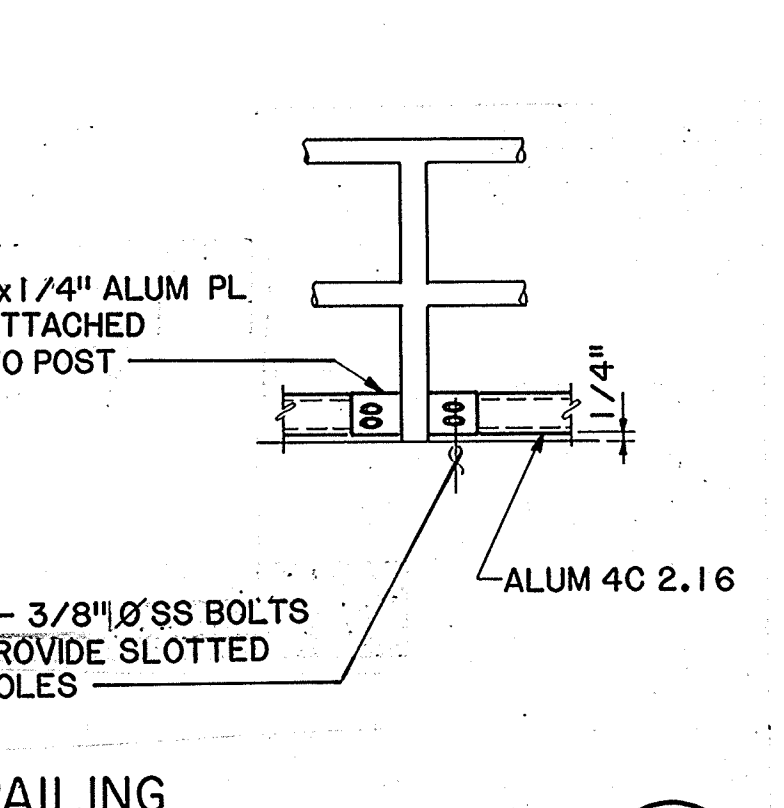


GRATING WALL SUPPORT DETAIL (217)

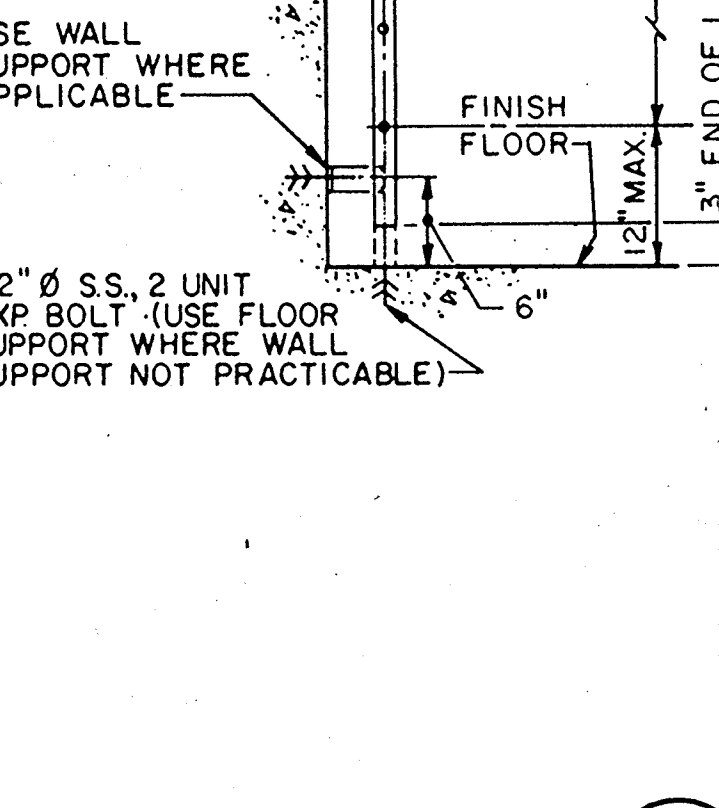


BEAM TYPE	TYPE	A	B	C	D	E
ALUM	C8.00 x 4.147	6.25"	2.50" MIN	3.25"	N/A	N/A

GRATING SUPPORT BEAM TO CONCRETE CONNECTION (218)



RAILING TOEBOARD DETAIL (219)



LADDER DETAIL (214)

AS-BUILT
 P.M. 5/10/91
 SIGNATURE DATE

REGISTERED PROFESSIONAL ENGINEER
 37751
 EXP. 12-31-98
 CIVIL
 STATE OF CALIFORNIA

Date	Ch'k'd	Revision

Designed by: JWI
 Drawn by: PHOTO
 Checked by: JTC
 Approved by: RES

Date: 9/88
 Scale: NONE

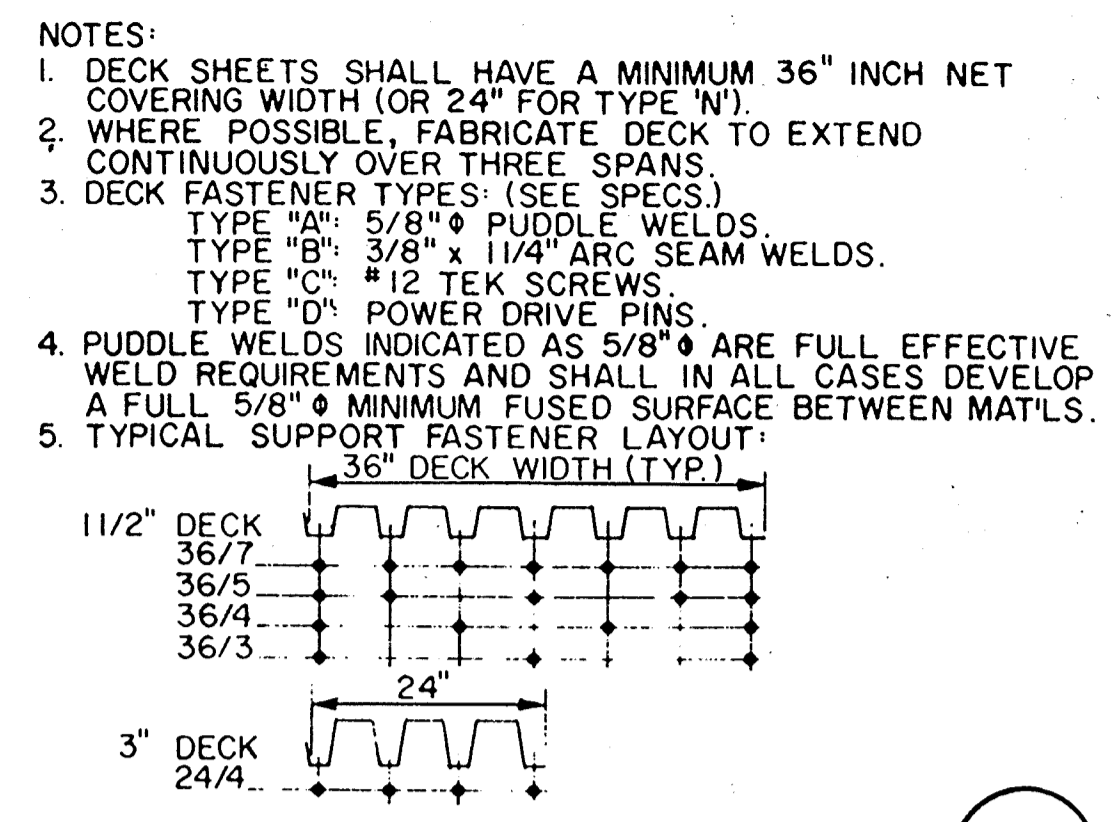
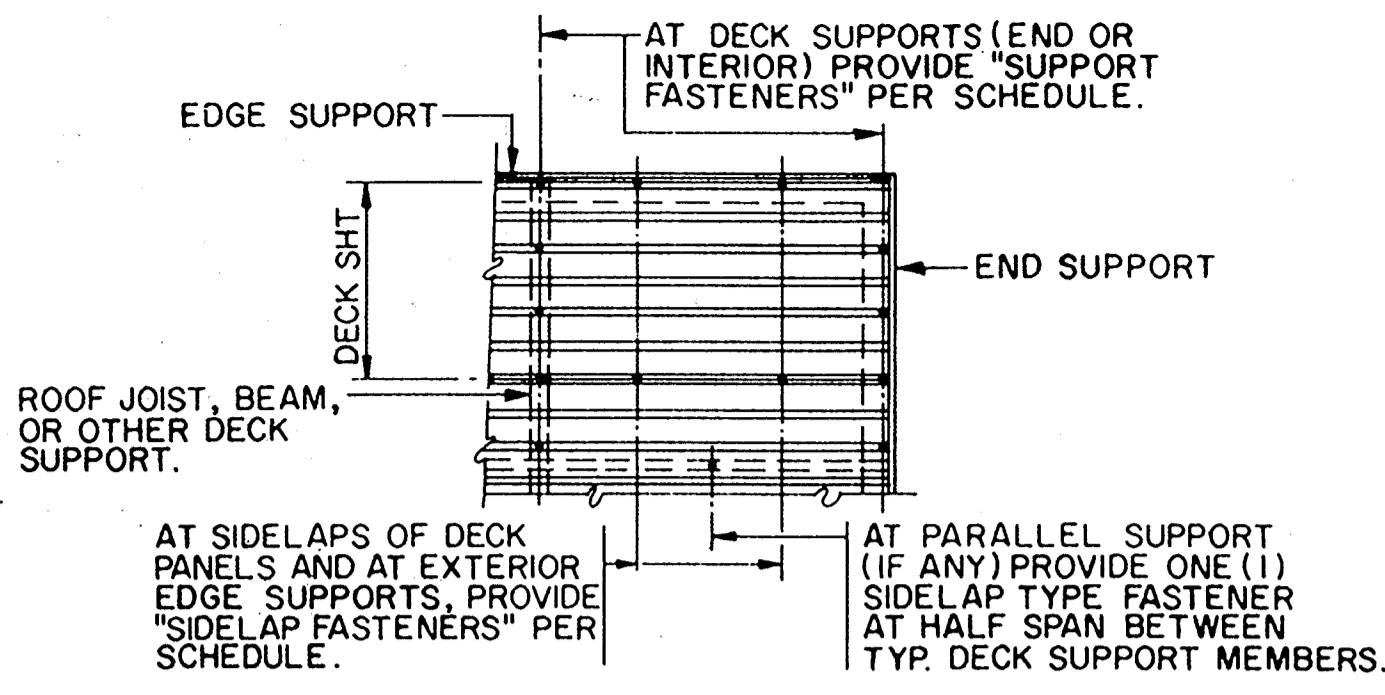
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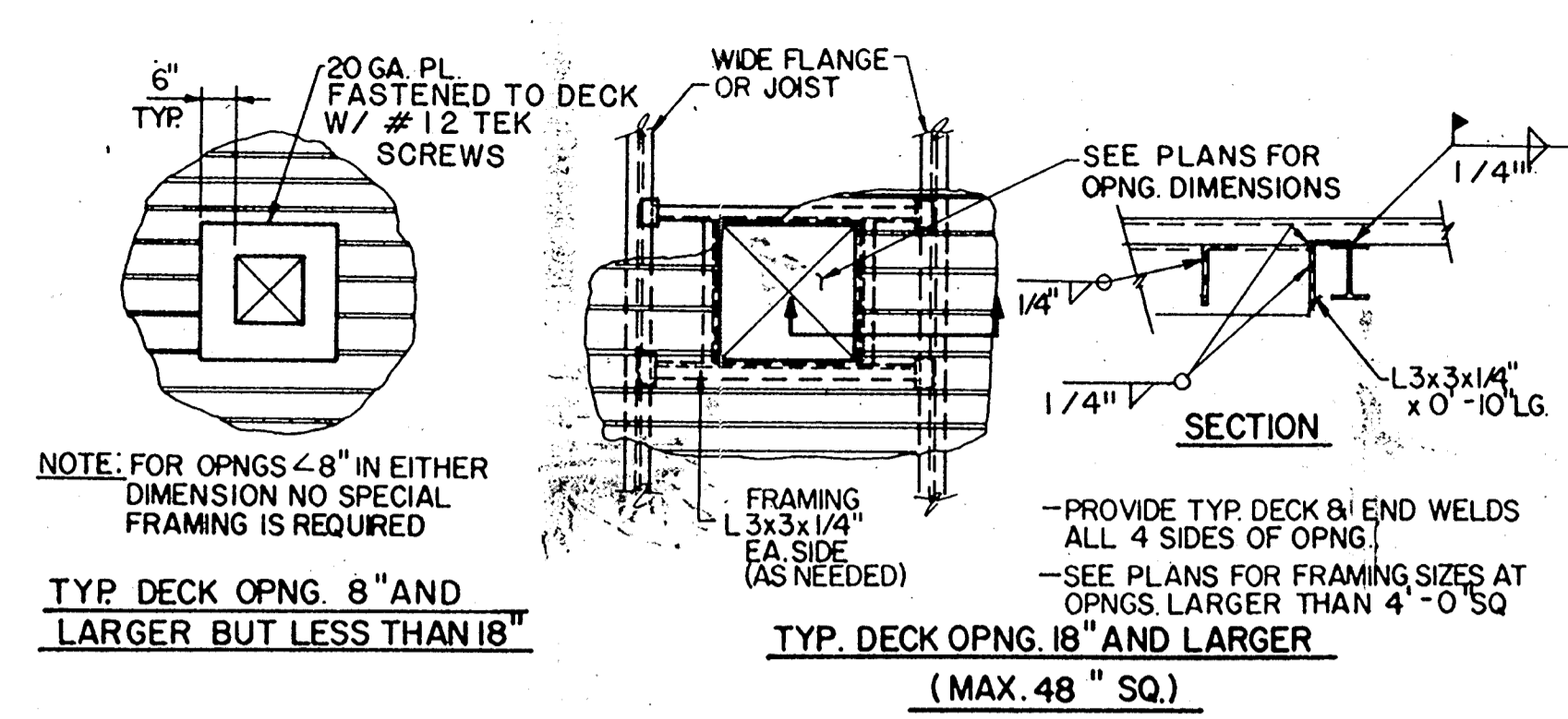
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 INSTRUMENTATION Approved by: Date:
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 ARCHITECTURAL Approved by: Date:



ROOF DECK FASTENING DETAIL

301



ROOF OPENING FRAMING DETAIL

302

STEEL NOTES
 STRUCTURAL SHAPES, PLATE AND BARS SHALL CONFORM TO ASTM A-36.
 STRUCTURAL STEEL TUBES SHALL CONFORM TO ASTM A500, GRADE B.
 ALL STRUCTURAL STEEL SHALL BE FABRICATED, ERECTED AND CONNECTED IN COMPLIANCE WITH THE LATEST AISC AND ANSI SPECIFICATIONS.
 STANDARD FRAMED BEAM CONNECTIONS SHALL BE DESIGNED (UNLESS DESIGN LOADS OR DETAILS ARE SHOWN IN THE PLANS) FOR ONE-HALF THE TOTAL ALLOWABLE UNIFORM LOAD FOR A GIVEN MEMBER AND SPAN AS INDICATED IN THE UNIFORM LOAD CONSTANTS TABLES OF THE AISC MANUAL OF STEEL CONSTRUCTION. MINIMUM THICKNESS OF CLIP ANGLES OR CONNECTOR PLATES SHALL BE 1/4 INCH.
 BOLTED CONNECTIONS SHALL BE MADE USING ASTM A325 HIGH STRENGTH BOLTS AS SHOWN ON THE DRAWINGS OR AS SPECIFIED. ALL BOLTS SHALL BE 3/4" DIAMETER IN 1 3/16" HOLES UNLESS OTHERWISE SPECIFIED. PROVIDE A MINIMUM OF TWO BOLTS PER CONNECTION.
 ALL WELDING SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STRUCTURAL WELDING CODE OF THE AWS (D1.1)
 SHOP PAINTING AND FIELD PAINTING (IF REQUIRED) SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS.

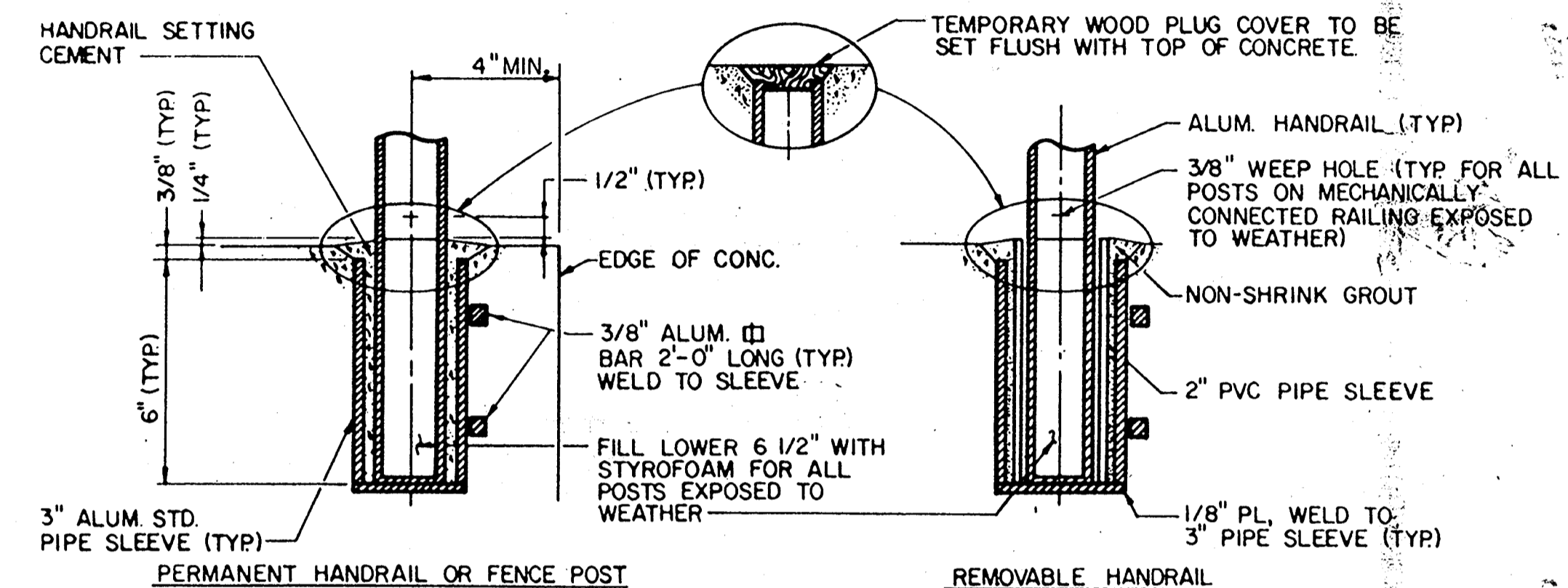
STEEL DECK SCHEDULE

STRUCTURE	DECKING TYPE (1)	SUPPORT FASTENERS (2)		SIDELAP FASTENERS (2)	
		TYPE	LAYOUT	TYPE	LAYOUT
PUMP COVERS	22 GA	A	36/7	C	5 PER SPAN
RAW WATER MCG BLDG	22 GA	C	36/5	C	3 PER SPAN

1. ROOF DECKING SHALL BE 36" WIDE W/RIBS @ 6" O.C. U.O.N.
 2. SEE ROOF DECK FASTENING DETAIL 301 FOR DECK FASTENING NOTES.

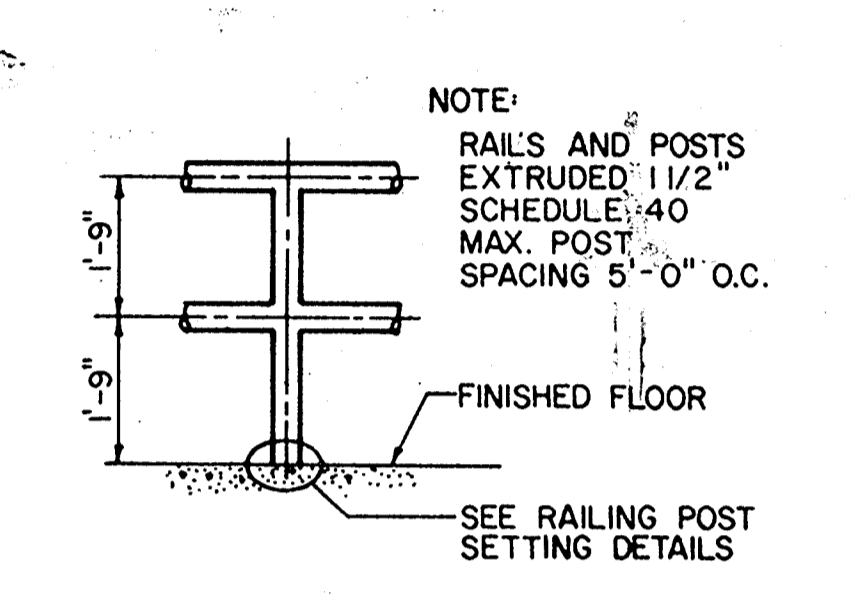
STEEL DECK SCHEDULE

303



RAILING POST SETTING DETAILS

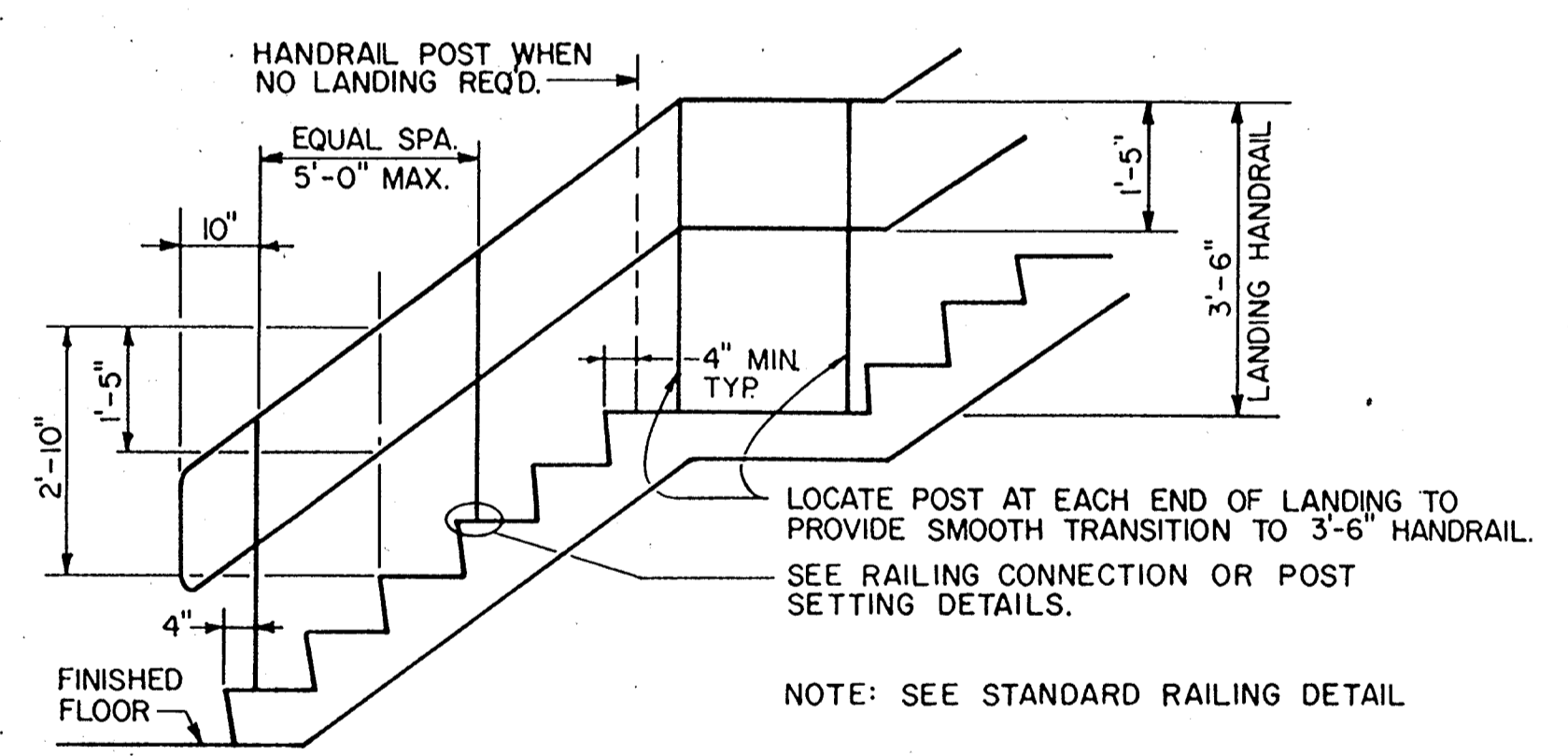
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STANDARD RAILING DETAIL

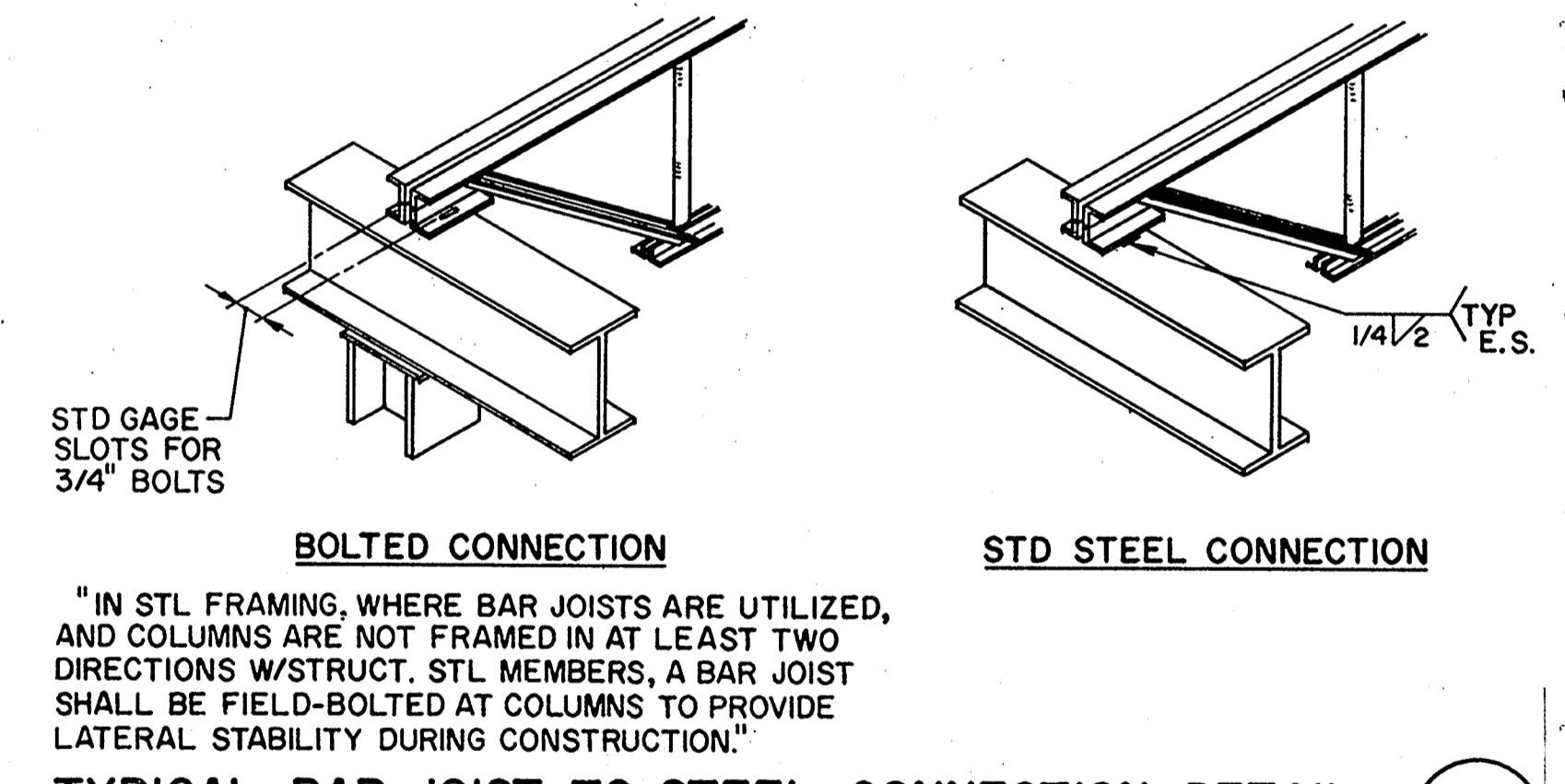
305

MASONRY NOTES
 HOLLOW, LOAD-BEARING CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE N, TYPE I.
 MASONRY REINFORCEMENT SHALL BE BILLET STEEL CONFORMING TO THE LATEST EDITION OF ASTM A615, GRADE 60 (EXCEPT GRADE 40 HORIZONTAL TIES AND STIRRUPS). SEE PLANS FOR ADDITIONAL REQUIREMENTS.
 MORTAR FOR REINFORCED MASONRY SHALL CONFORM TO ASTM C270 TYPE S (1800 PSD). GROUT SHALL CONFORM TO ASTM C476.



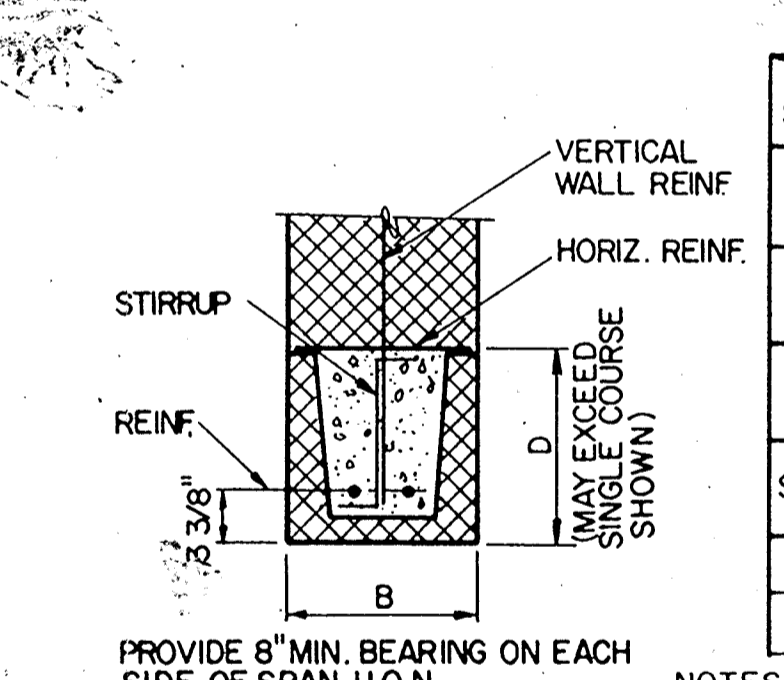
STAIR RAILING DETAIL

306



TYPICAL BAR JOIST TO STEEL CONNECTION DETAIL

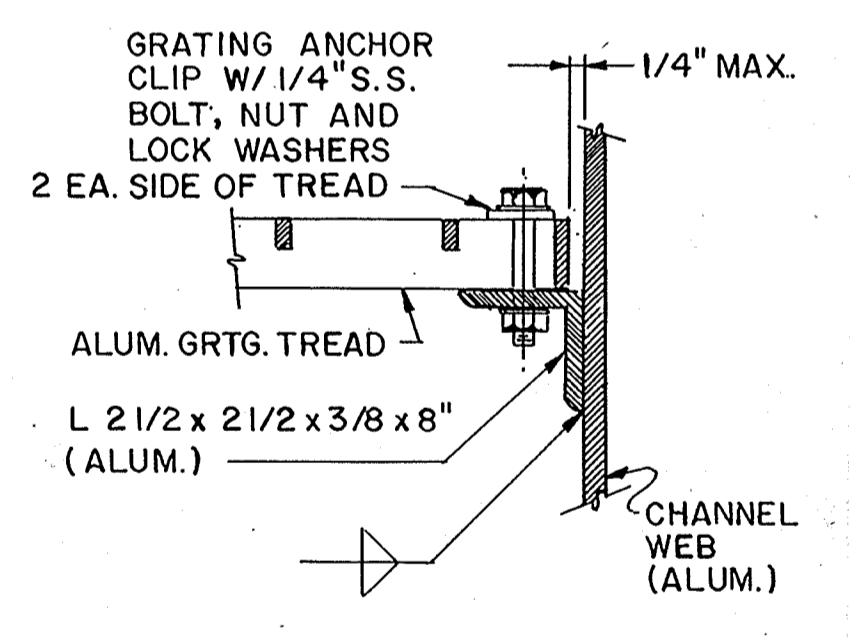
307



MASONRY LINTEL REINFORCING SCHEDULE

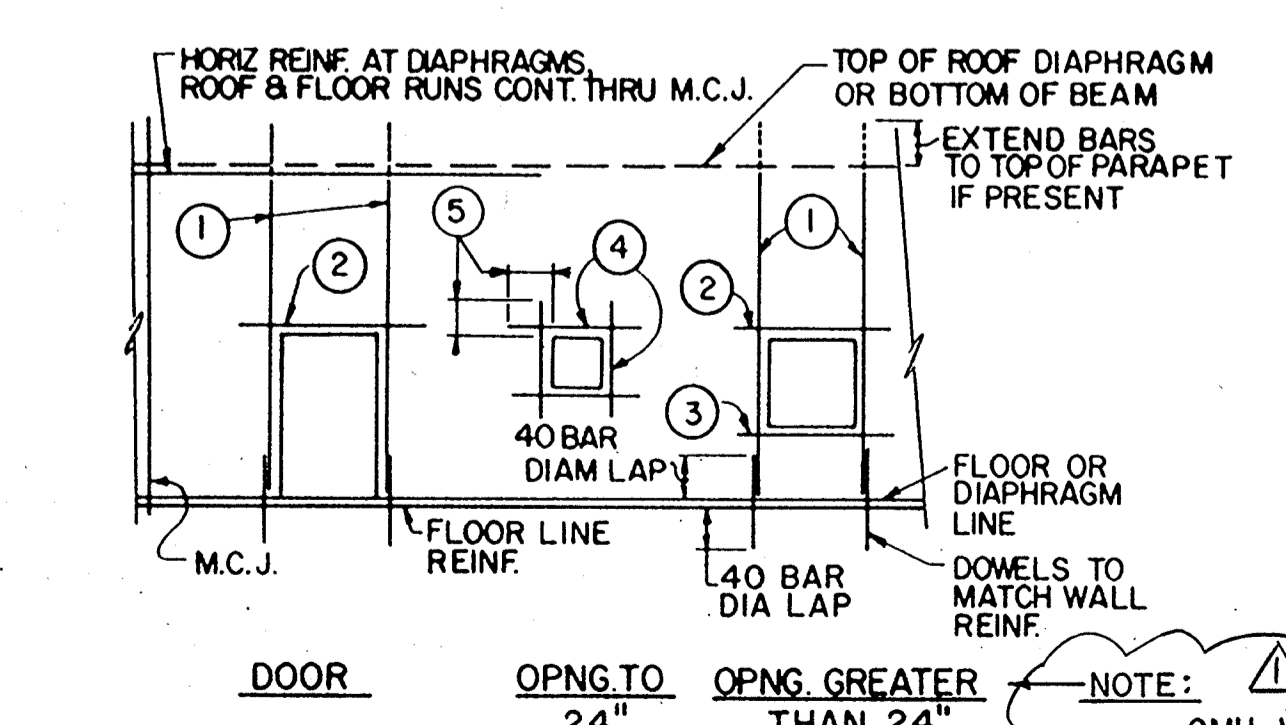
SPAN	MARK	B	D	REINF.	STIRRUPS
TO 4'-0"	6'/8"	8"	8"	2-#3	-
4'-0" TO 6'-0"	12"	8"	8"	2-#3	-
6'-0" TO 8'-0"	6'/8"	8"	8"	2-#4	-
	12"	8"	8"	2-#4	-
	6'/8"	16"	8"	2-#5	-
	12"	8"	8"	2-#6	-
SPECIAL LINTELS	PROVIDE THE ABOVE MIN. REINF. AT ALL OPNGS. U.O.N. ON DRAWINGS				
LINTEL A	8'	16"	8"	2-#5	-
LINTEL B					

NOTES: LINTEL DESIGN IS BASED ON THE FOLLOWING ALLOWABLE STRESSES: $f_m = 800$ psi
 $f_s = 24000$ psi
 SPECIAL INSPECTION OF ALL LINTELS IS REQUIRED

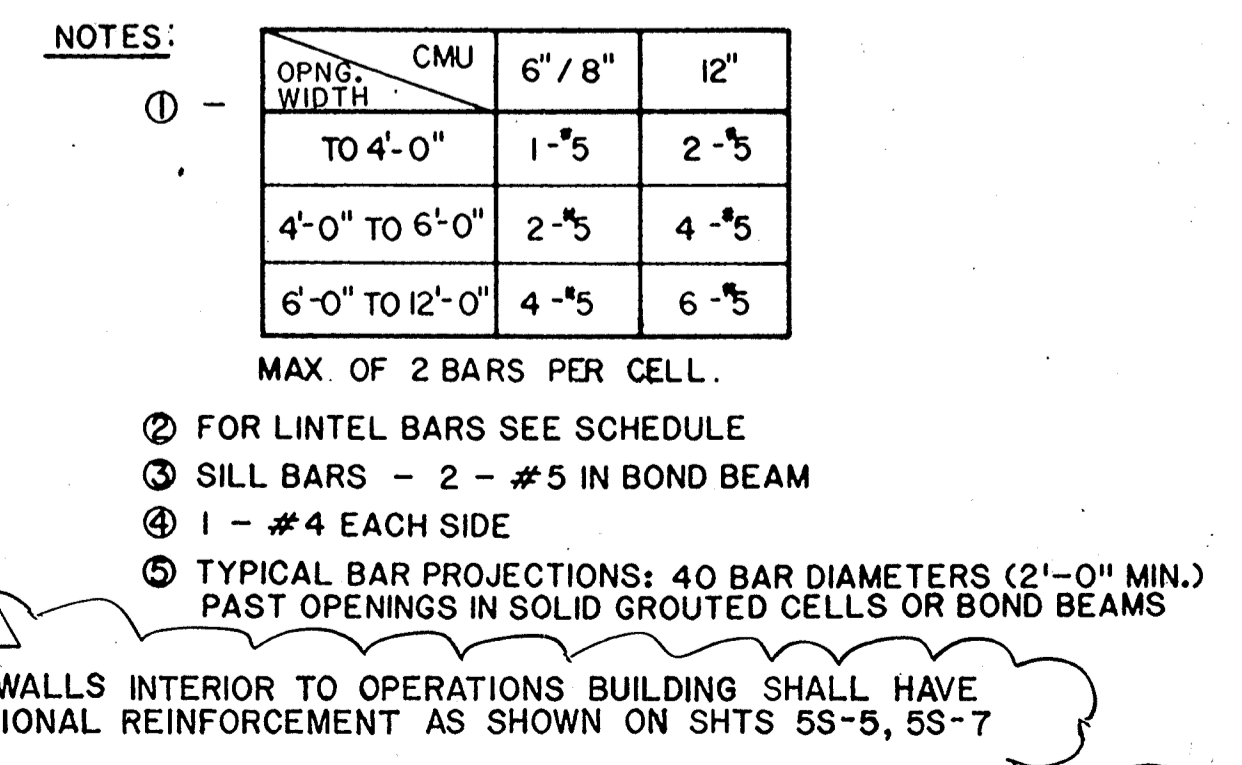


TREAD DETAIL

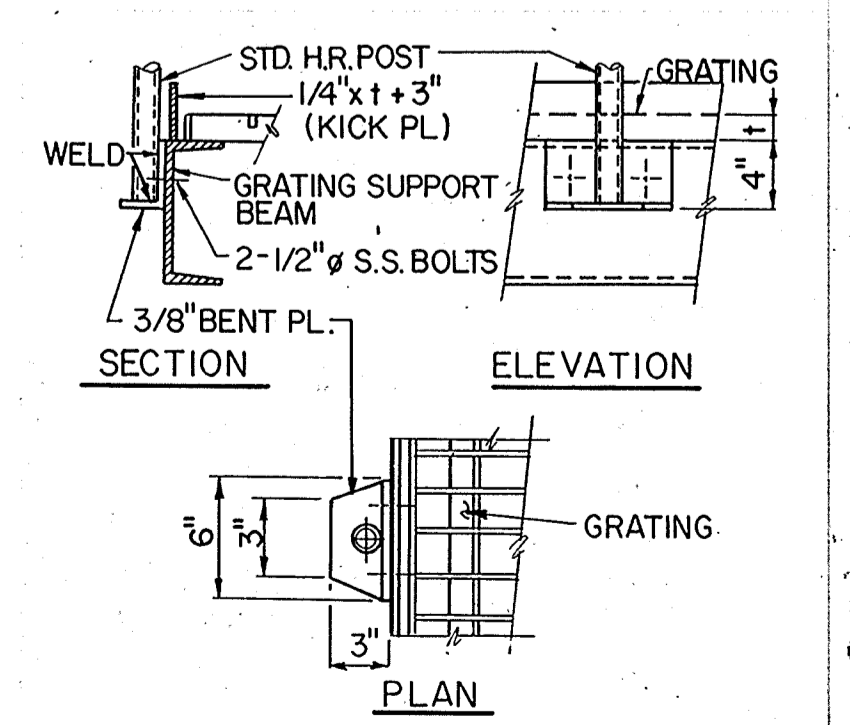
309



WALL REINFORCING DETAILS IN CMU WALLS

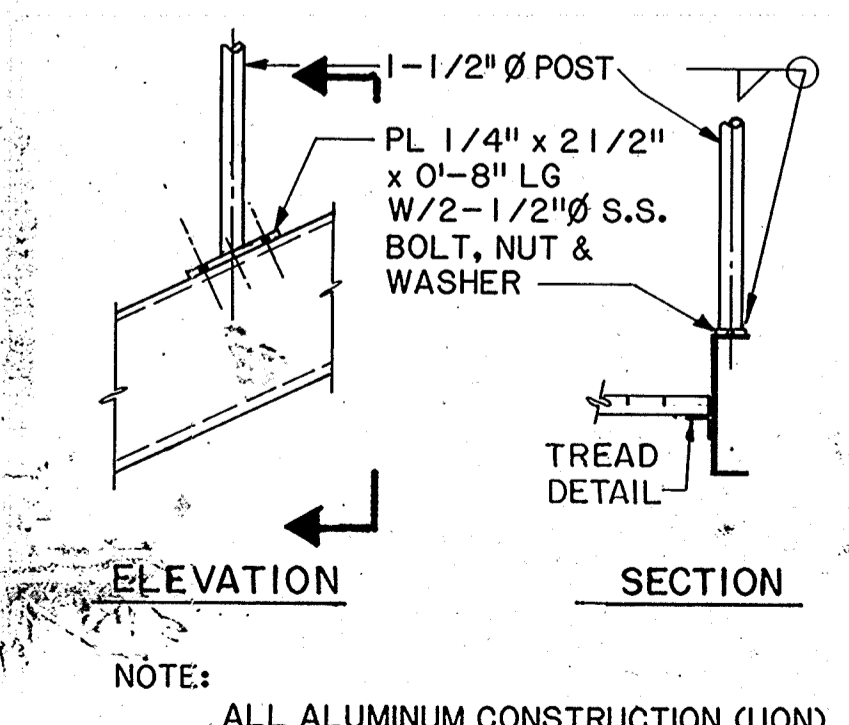


310



RAILING CONNECTION TO GRTG. SUPPORT

311

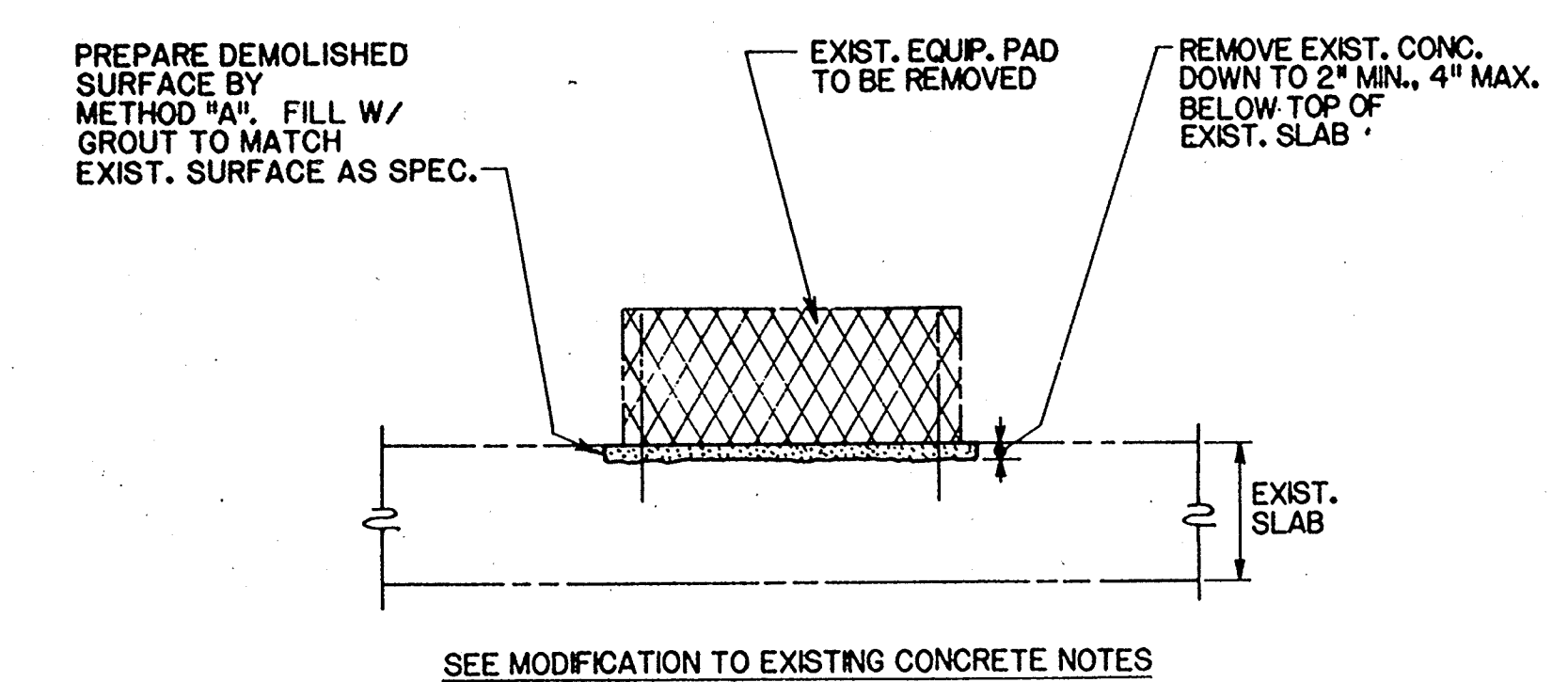


RAILING CONN. TO STAIR STRINGER

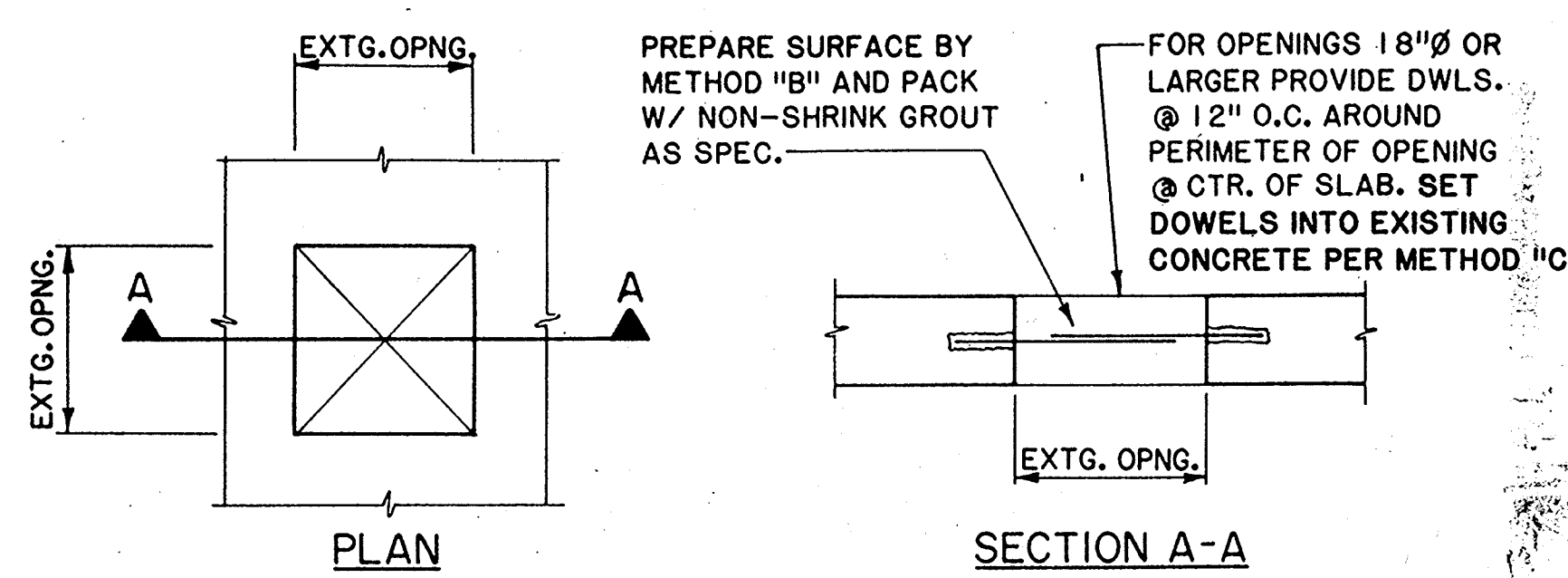
312

AS-BUILT
 P.M. 5/10/91
 REGISTERED PROFESSIONAL ENGINEER
 37751
 5/12-1-88
 CIVIL
 STATE OF CALIFORNIA
 CITY OF PITTSBURG, CALIFORNIA
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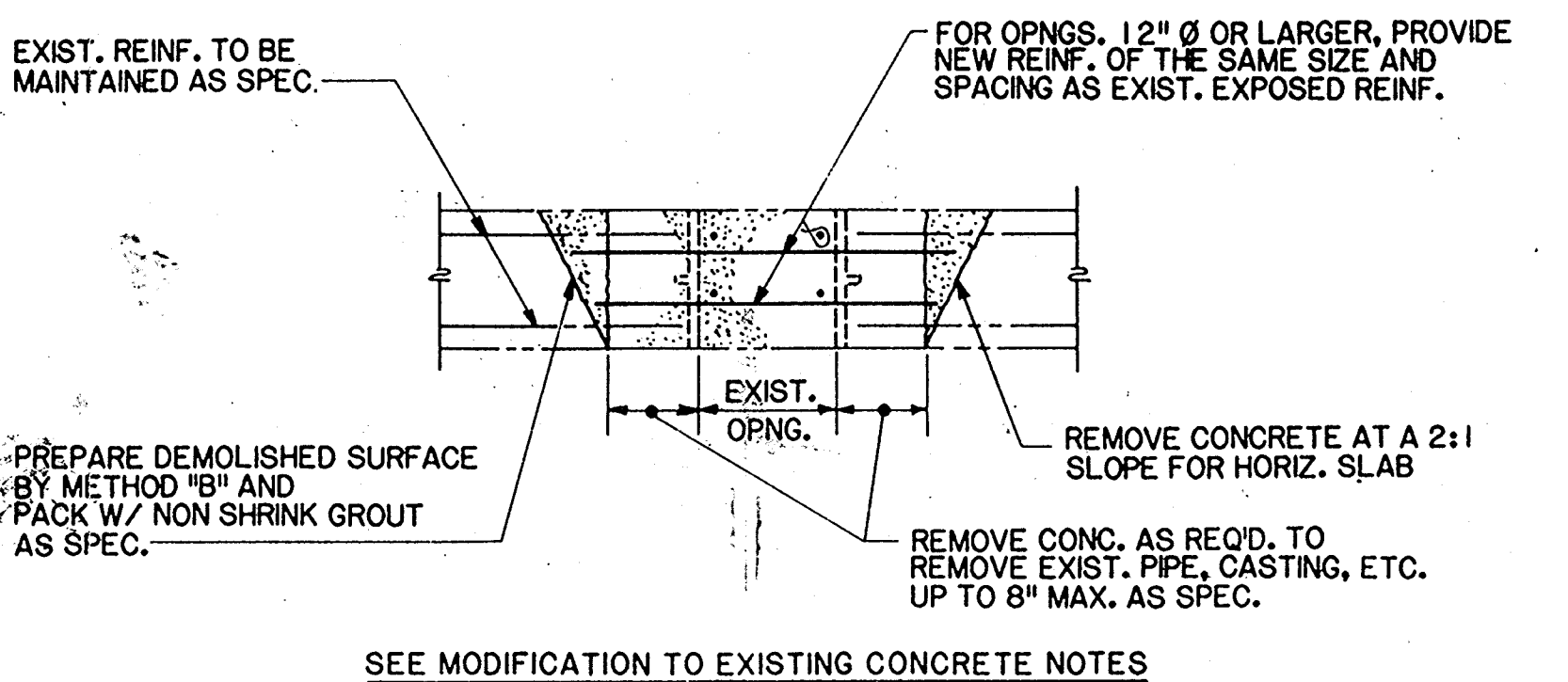
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 STRUCTURAL Approved by: Date:
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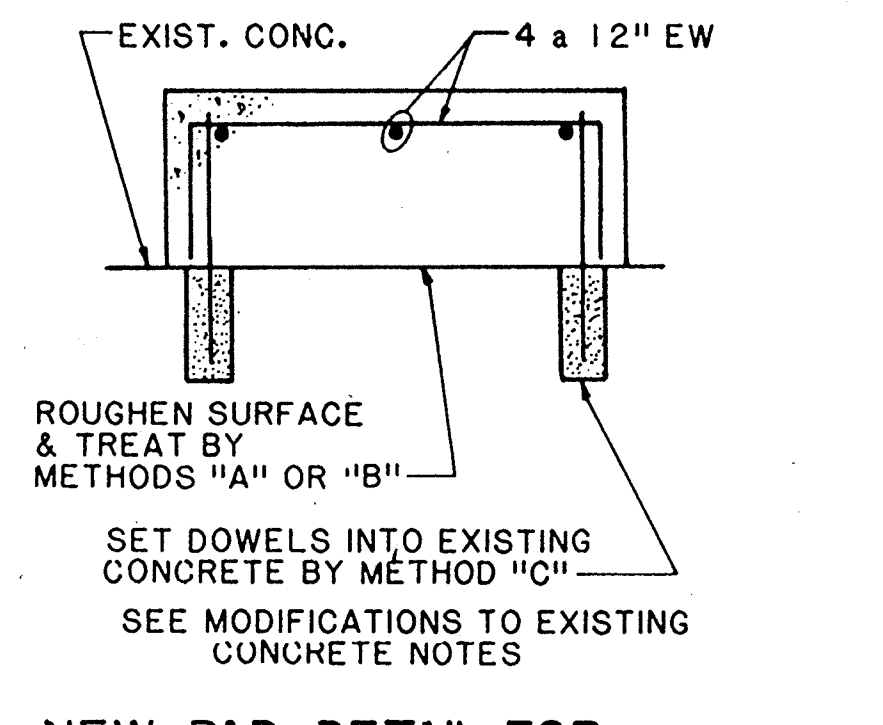
EXISTING EQUIPMENT PAD REMOVAL DETAIL (401)



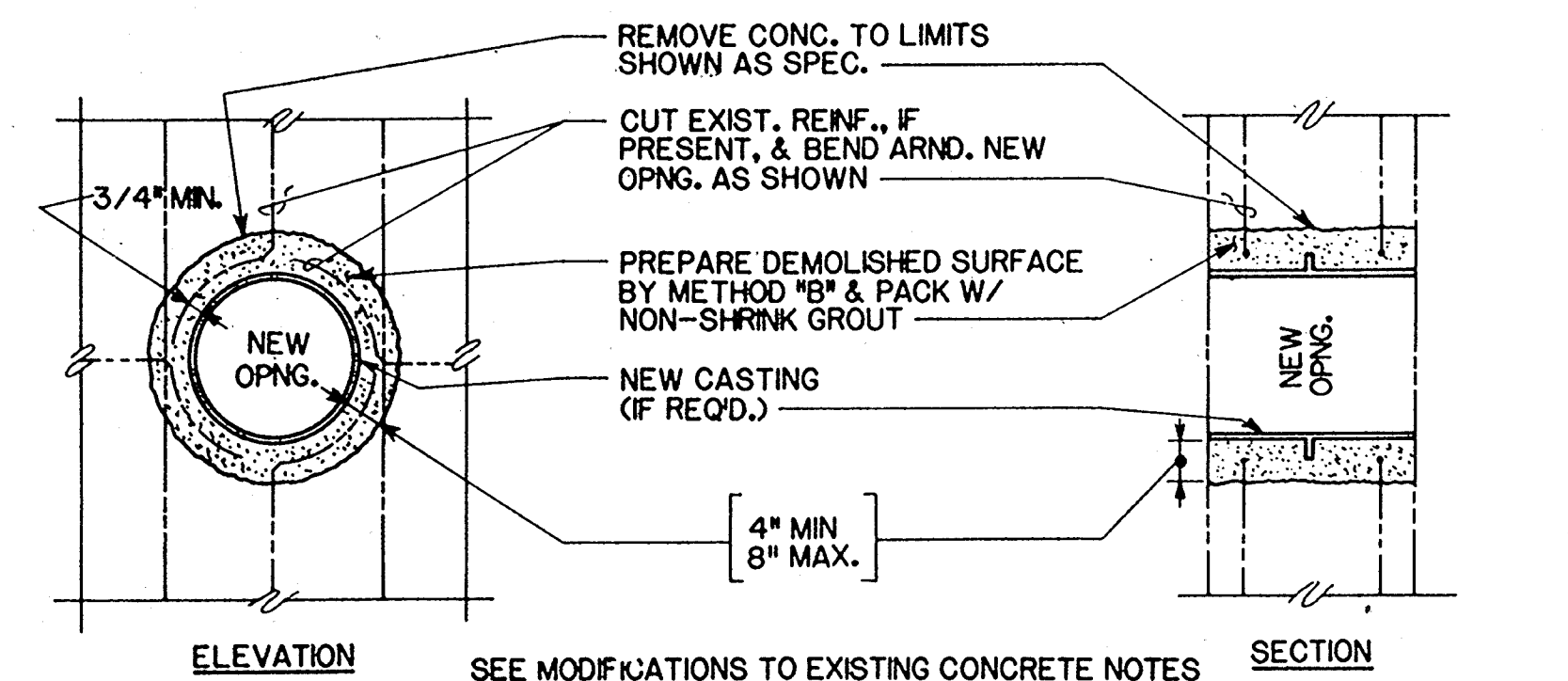
NOTE: SEE MODIFICATION TO EXISTING CONCRETE NOTES.
 PATCH HOLES THROUGH EXISTING CONCRETE DETAIL (402)



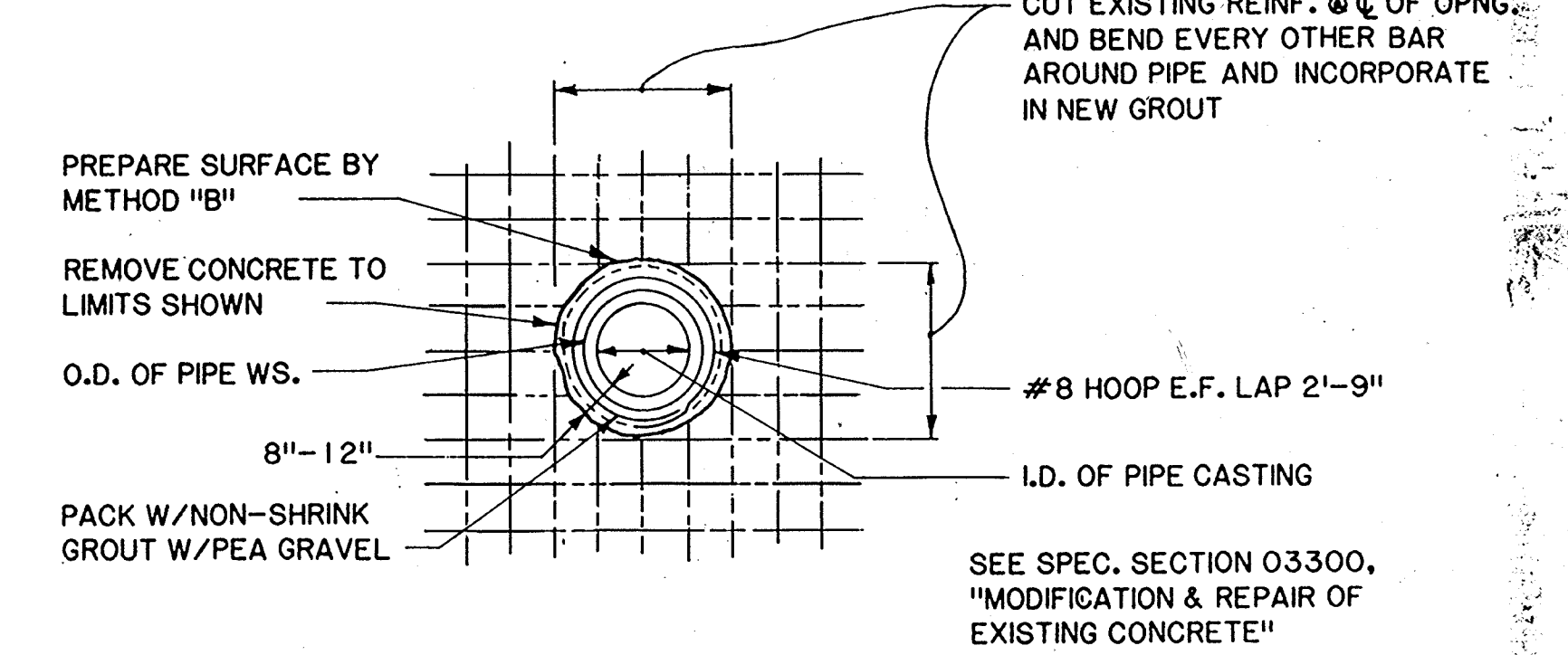
SEE MODIFICATION TO EXISTING CONCRETE NOTES
 REMOVAL OF EXIST. PIPE PENETRATION DETAIL (403)



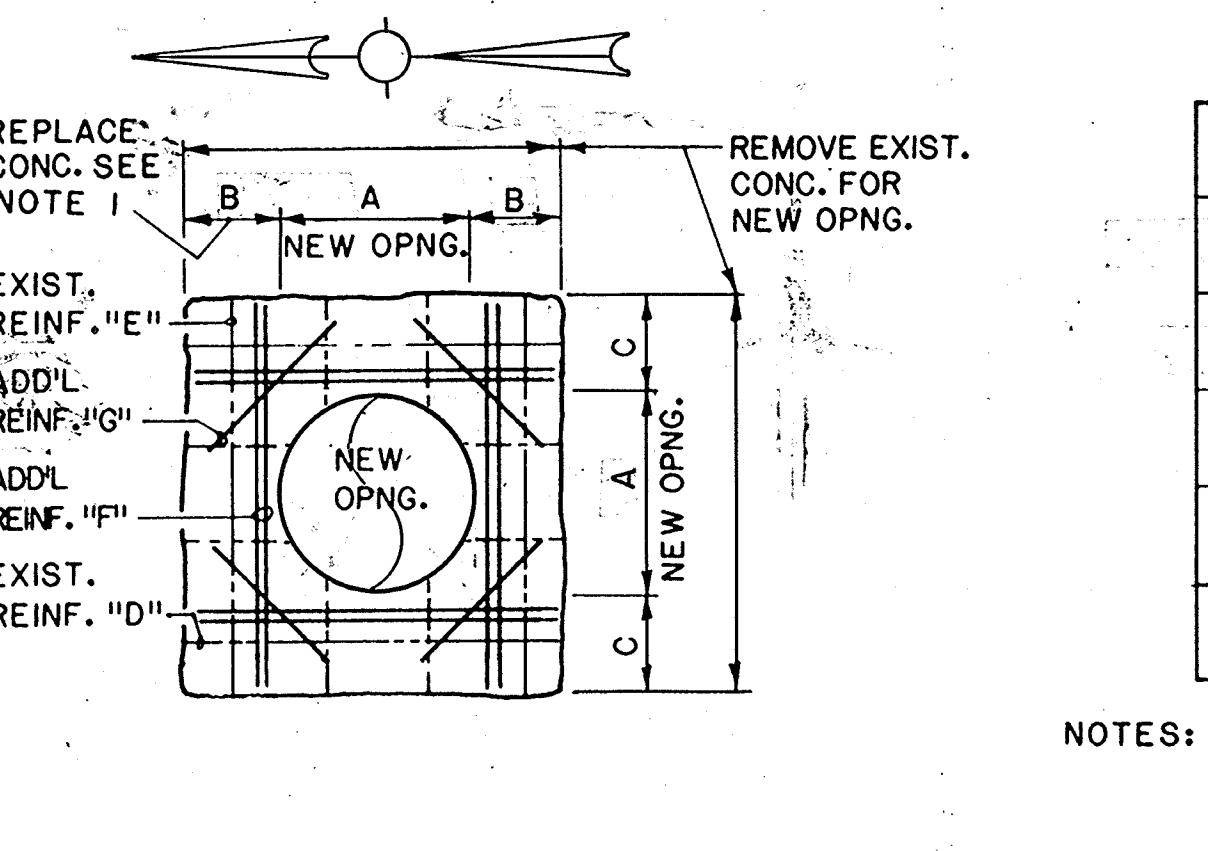
NEW PAD DETAIL FOR EXISTING BUILDING (404)



NEW PENETRATION THROUGH EXIST. CONCRETE DETAIL (405)
 (FOR NEW OPNG. 24" Ø OR SMALLER)



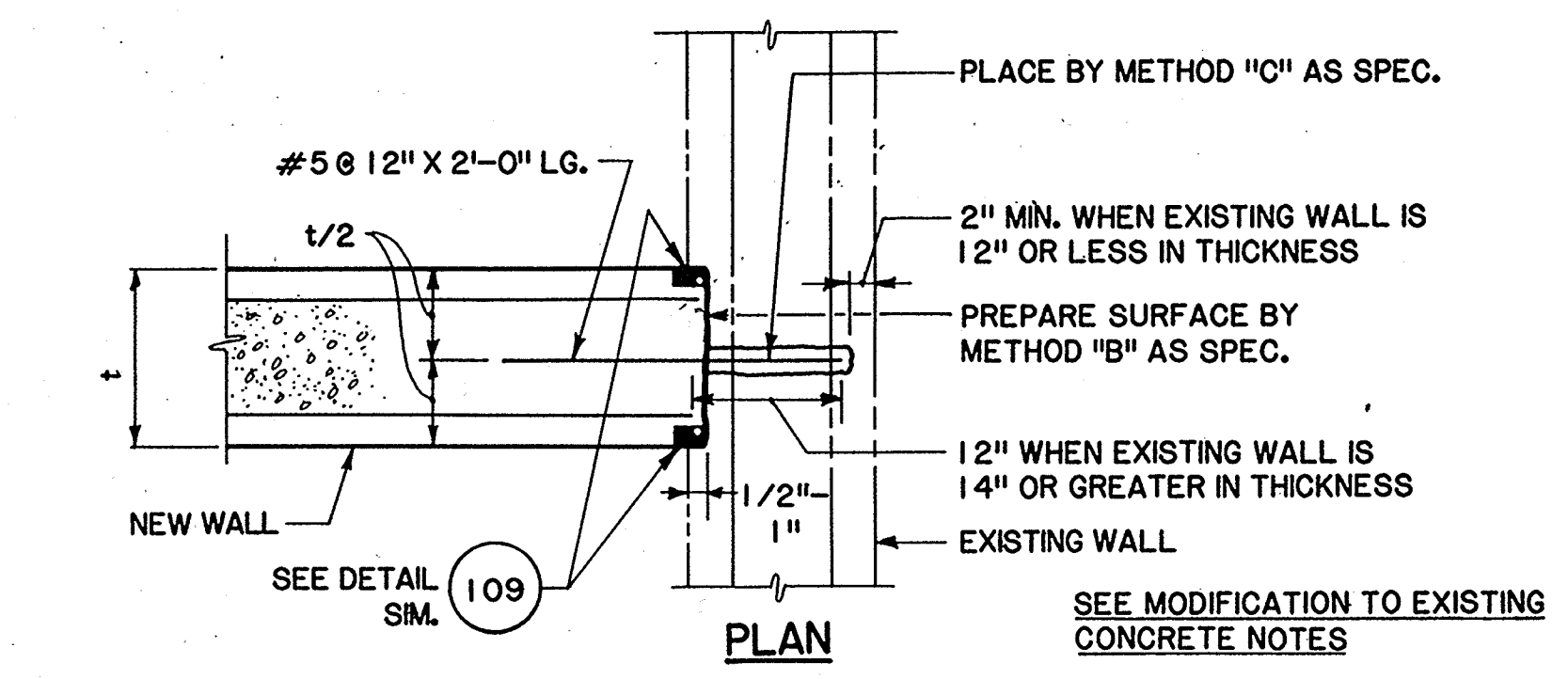
NEW PIPE CASTING IN EXISTING WALL DETAIL (406)
 (FOR NEW OPNG. GREATER THAN 24" Ø)



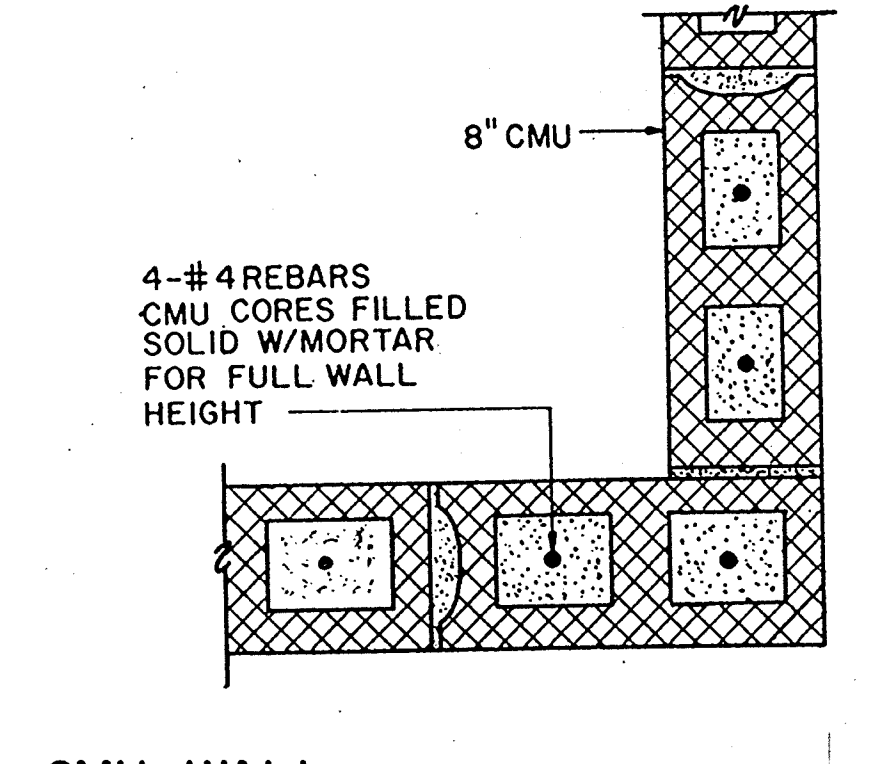
NEW OPENING IN EXISTING CONCRETE (407)

LOCATION	OPNG. BREAK OUT			EXIST. REINF.		NEW REINF.	
	A	B	C	D	E	F	G
76" CLEAR WELL SUMP	30"	1'-4"	2'-8"	#4 @ 12" T&B	#4 @ 8" T	2-#7 T&B	#4 x 4'-0" T&B
RAW WATER SUMP	30"	1'-4"	1'-4"	#5 @ 12" T	#5 @ 12" T	2-#5 T&B	#4 x 4'-0" T&B

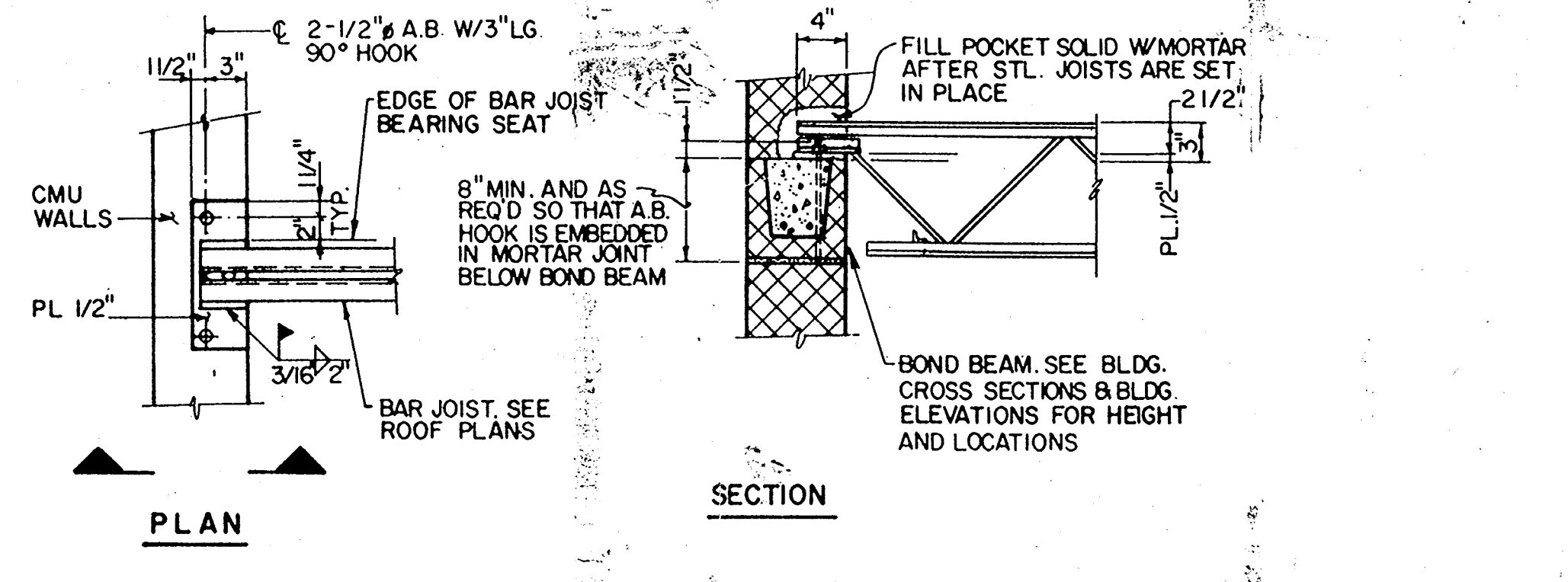
NOTES: 1. REMOVE CONCRETE, PREPARE EXISTING REINFORCING AND CONCRETE, AND USE CONNECTION METHODS AS SPEC. SECTION 03300 "MODIFICATION OF EXISTING CONCRETE."
 2. SALVAGE ALL EXIST. REINF. IN AREA OF CONC. REMOVAL CUT EXIST. REINF. 1" FROM EDGE OF NEW OPNG.



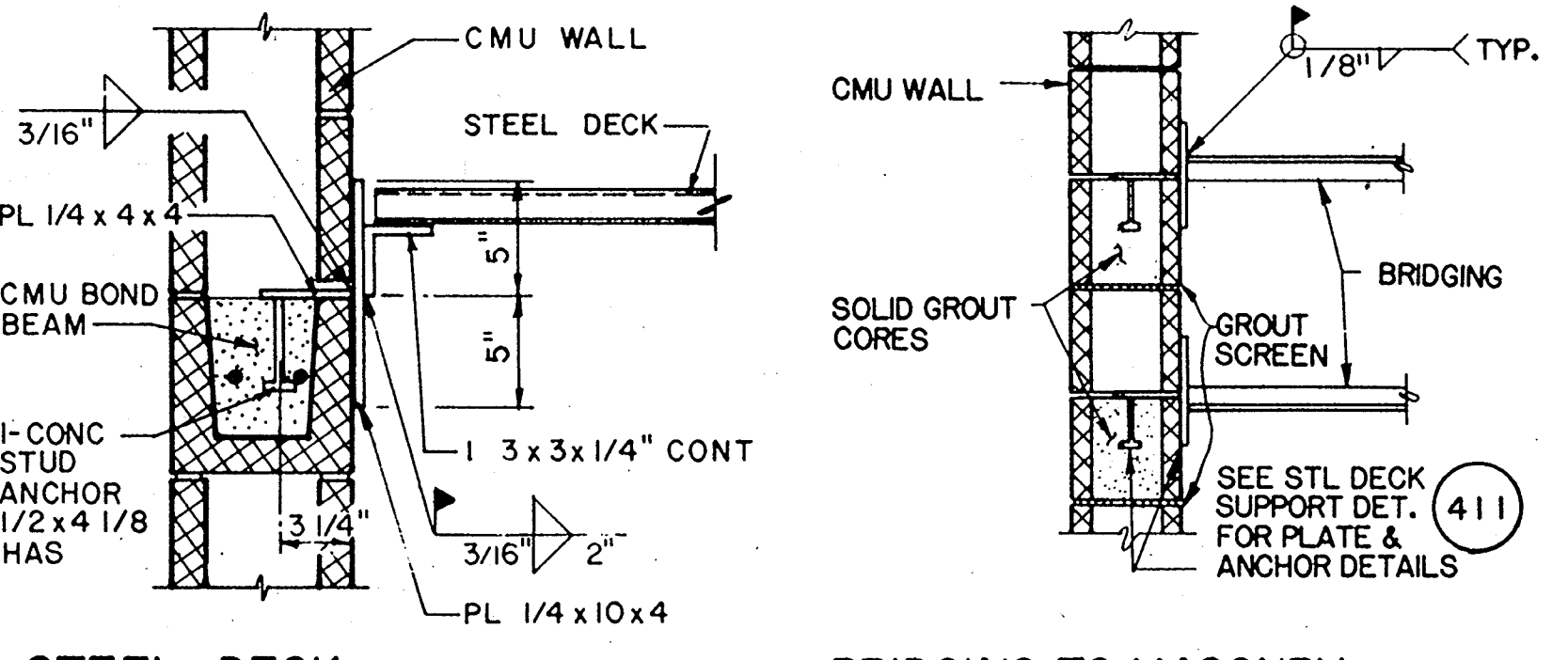
CONNECTION OF NEW TO EXISTING WALL DETAIL (408)



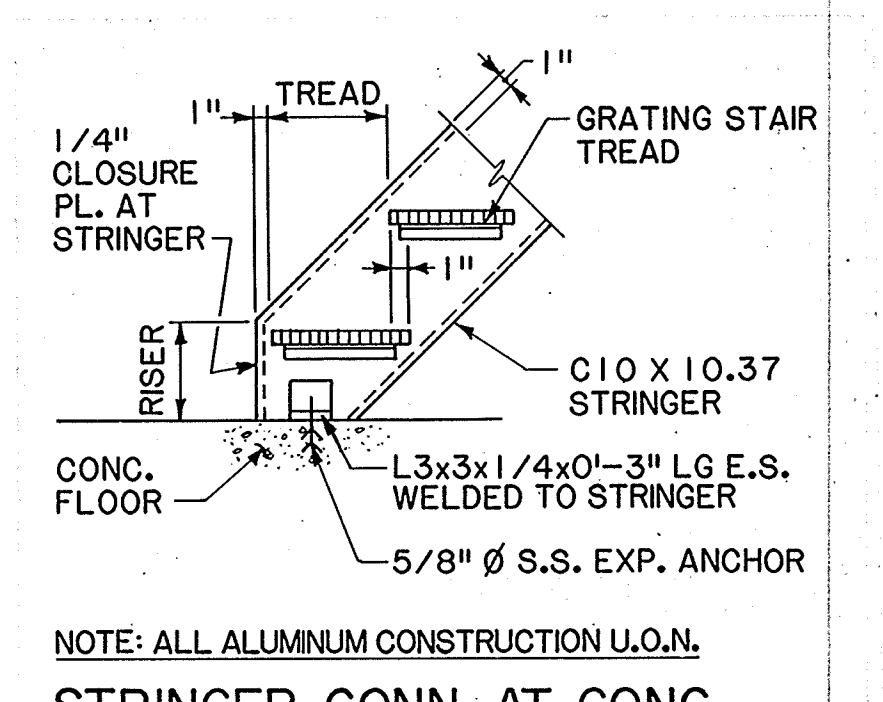
CMU WALL CORNER DETAIL (409)



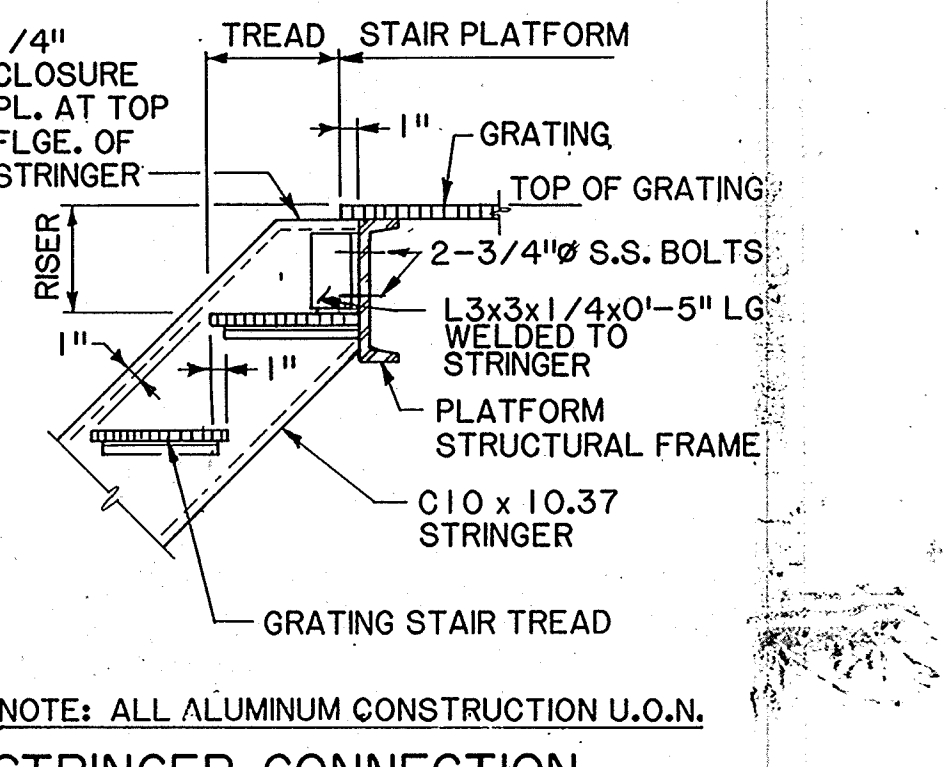
TYP. BAR JOIST MASONRY CONNECTION DETAIL (410)



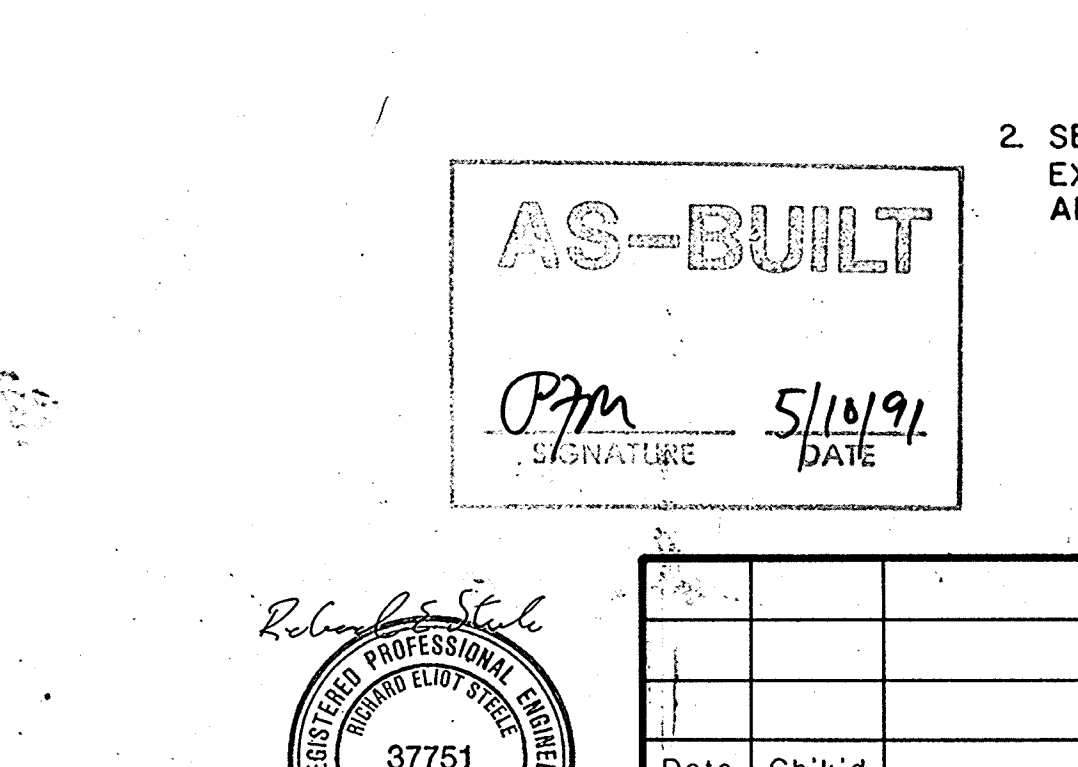
STEEL DECK SUPPORT DETAIL (411)



BRIDGING TO MASONRY WALL CONNECTION DETAIL (412)



STRINGER CONN. AT CONC. FLOOR SLAB (BOTTOM) (413)



STRINGER CONNECTION AT PLATFORM (TOP) (414)

MODIFICATION AND REPAIR TO EXISTING CONCRETE NOTES
 1. CONNECTION METHODS:
 - METHOD A - BONDING TO SATURATED SURFACE
 - METHOD B - BONDING BY USING BONDING AGENT
 - METHOD C - DRILLED DOWELS USING NON-SHRINK EPOXY GROUT.
 2. SEE CONCRETE SPECIFICATIONS SECTION 03300 (3.12) FOR COMPLETE EXPLANATION OF CONCRETE REMOVAL METHODS, CONNECTION METHODS AND MATERIALS USED.

AS-BUILT
 P.M. SIGNATURE 5/10/91 DATE

Professional Engineer
 37751
 5/12/91
 CIVIL
 STATE OF CALIFORNIA

Date	Ch'k'd	Revision

Designed by: JWI
 Drawn by: PHOTO
 Checked by: JTC
 Approved by: RES
 Date: 9/98
 Scale: NONE

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 STANDARD DETAILS AND NOTES
 CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 CDM environmental engineers, scientists, planners, & management consultants
 SHEET NO. S-4
 43 of 147

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PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

HVAC Approved by: Date:

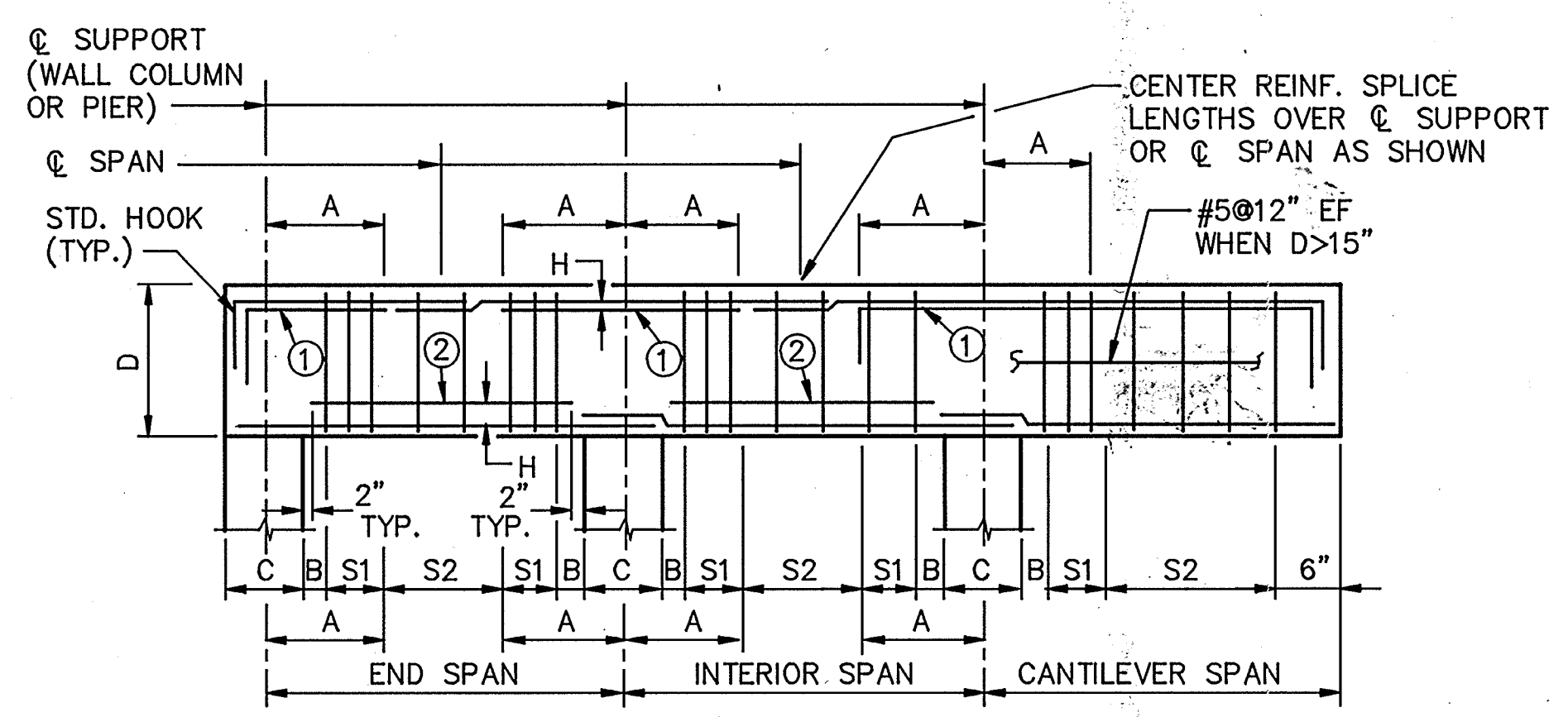
INSTRUMENTATION Approved by: Date:

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STRUCTURAL Approved by: Date:

ARCHITECTURAL Approved by: Date:

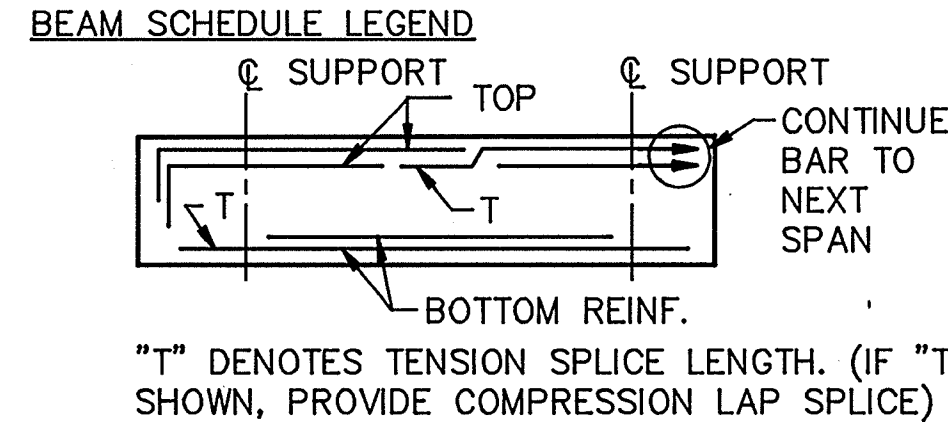
BEAM NO.	TYPE	REINFORCING		GRID NO.	STIRRUPS		GRID NO.	REMARKS
		B X D	Q SUPPORT		SIZE	S1		
NEW OPERATIONS BUILDING								
RB-2	A	18X20	3	#3	8"	8"	4	SEE NOTE 1
RB-3	A	24X26	A	#3	10"	10"	C	SEE NOTE 1
RB-4	A	24X26	C	#3	10"	10"	E	SEE NOTE 1
RB-5	A	12X16	-	#3	12"	12"	-	SEE NOTE 1
FB-1	A	24X26	2	#4	10"	10"	3	
FB-2	A,B	24X26	3	#4	10"	10"	4	
FB-3	A	16X26	A	#3	12"	12"	B	
FB-4	A	16X26	B	#3	12"	12"	C	
FB-5	A	16X26	C	#4	10"	10"	D	
FB-6	A	16X26	D	#3	12"	12"	E	
FB-7	B	12X26	B	#3	12"	12"	C	
FB-8	A	16X26	2	#3	10"	10"	3	
FB-9	A	16X26	C.5	#3	10"	10"	D	
FB-10	A	12X26	-	#3	12"	12"	-	TOP OF BEAM SLOPES TO MATCH WALKWAY
NEW CHLORINE BUILDING								
CB-1	A	16X16	1	#3	6"	12"	2	NOTE 1
CB-2	A	12X16	1	#3	6"	12"	2	NOTE 1
EXISTING FILTER COMPLEX MODIFICATIONS NEW FILTER CONTROL BUILDING								
RB-1	C	12X14	1	SEE SECTION 2	3S-2	4		NOTE 1
RB-2	A	12X14	1	#3	6"	6"	4	NOTE 1
RB-3	A	12X17	F.5	#3	6"	6"	H	NOTE 1



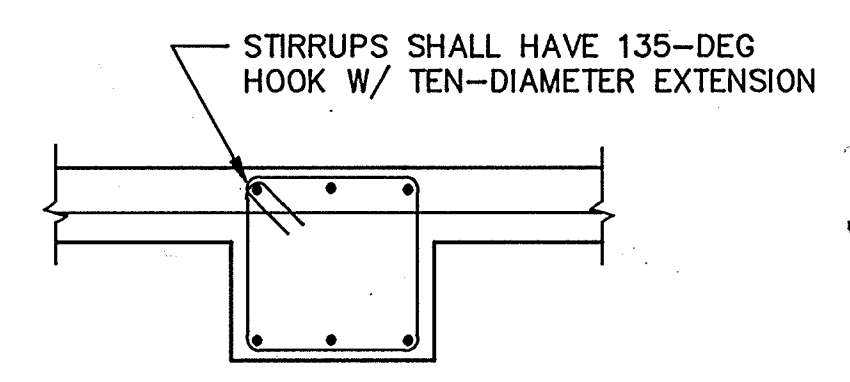
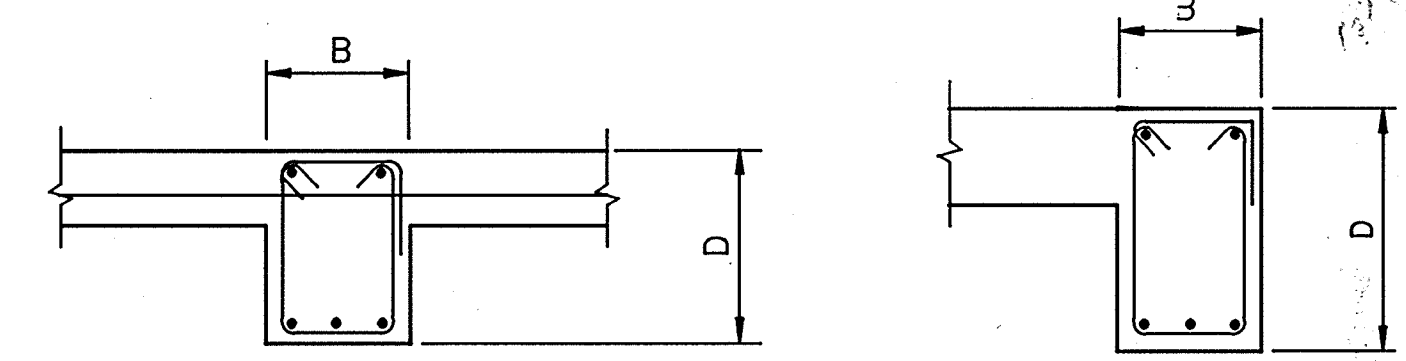
NOTATION: A. TYPICAL SPAN/3 UNLESS NOTED.
B. ONE HALF STD. STIRRUP SPACING (6" MAX.)
C. SUPPORT WIDTH.
D. BEAM DEPTH.
H. CLEAR DISTANCE BTWN. REINF. LAYERS: 1 BAR DIA. OR 1" MIN.
S1,S2. STIRRUP SPACING.
① BOTTOM LAYER OF TOP REINF.
② TOP LAYER OF BOTTOM REINF.

BAR SIZE	COMPRESSION LAP SPLICE	TENSION LAP SPLICE
#3	1'-4"	1'-10"
#4	1'-8"	2'-6"
#5	2'-2"	3'-0"
#6	2'-6"	3'-8"
#7	3'-0"	4'-6"
#8	3'-4"	6'-0"
#9	4'-0"	7'-6"
#10	5'-4"	9'-6"
#11	5'-10"	11'-8"

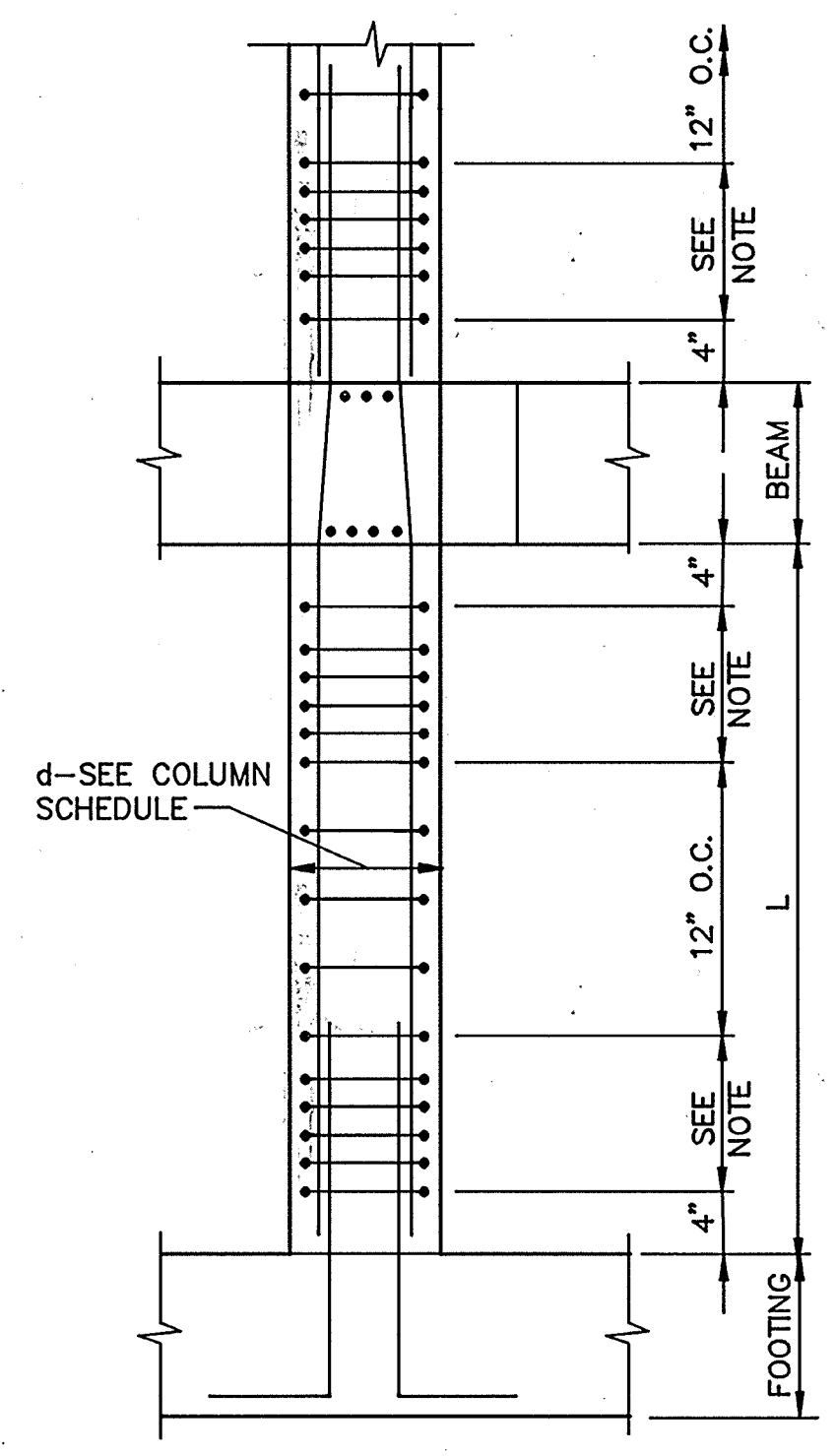
(SPLICE LENGTH IN INCHES)



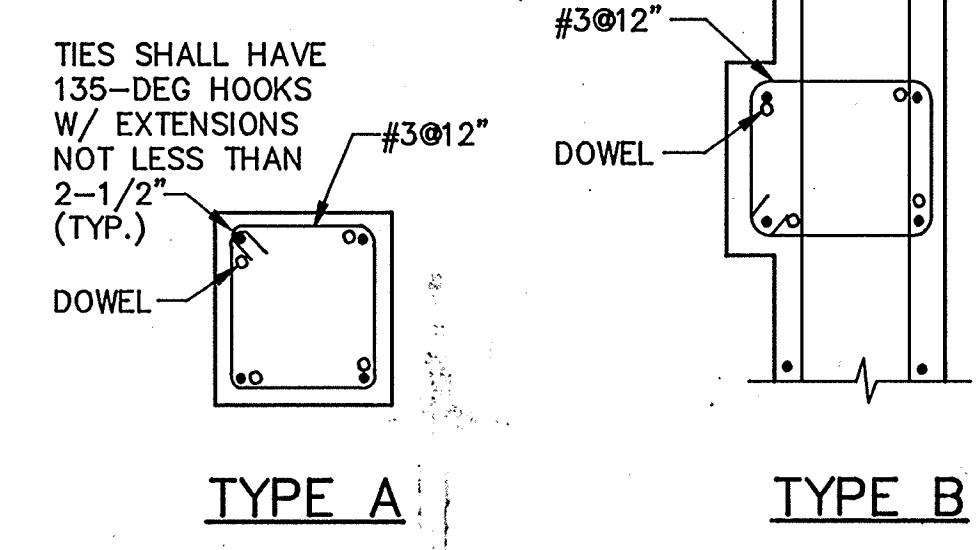
TYPICAL BEAM ELEVATION



NOTE:
1. BOTTOM OF ALL ROOF BEAMS RUN AT LEVEL ELEVATION, TOP OF BEAMS SLOPE TO MATCH ROOF. DEPTH OF BEAM SHOWN IS THE MINIMUM DEPTH OF THE BEAM. SEE APPROPRIATE SECTIONS & PLANS FOR THE SLOPE OF THE ROOF & DETAILS OF BEAMS FOR EACH STRUCTURE.



COLUMN DETAIL



BUILDING	OPERATIONS BUILDING			
	COLUMN GRID	3B,3D	3C	3A,3E
ELEVATION	A	A	B	
TYPE	16X16	16X16	16X16	
SIZE				
EL. 165.00				
T.O. ROOF BEAM				
EL. 162.83				
B.O. ROOF BEAM				
EL. 152.00				
T.O. FLOOR BEAM				
EL. 149.83				
B.O. FLOOR BEAM				
EL. 138.33				
T.O. FOOTING				

AS-BUILT
PJM SIGNATURE 5/10/91 DATE



Date	Ch'k'd	Revision

Designed by: JW1
Drawn by: KC, LS
Checked by: JMH
Approved by: RES

Date: 9/88
Scale: NONE

CITY OF PITTSBURG, CALIFORNIA
WATER TREATMENT PLANT EXPANSION 1988
BEAM & COLUMN SCHEDULES

CAMP DRESSER & MCKEE INC.
710 South Broadway
Walnut Creek, CA 94596
environmental engineers, scientists,
planners & management consultants

SHEET NO. S-5
44 of 147

111335

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

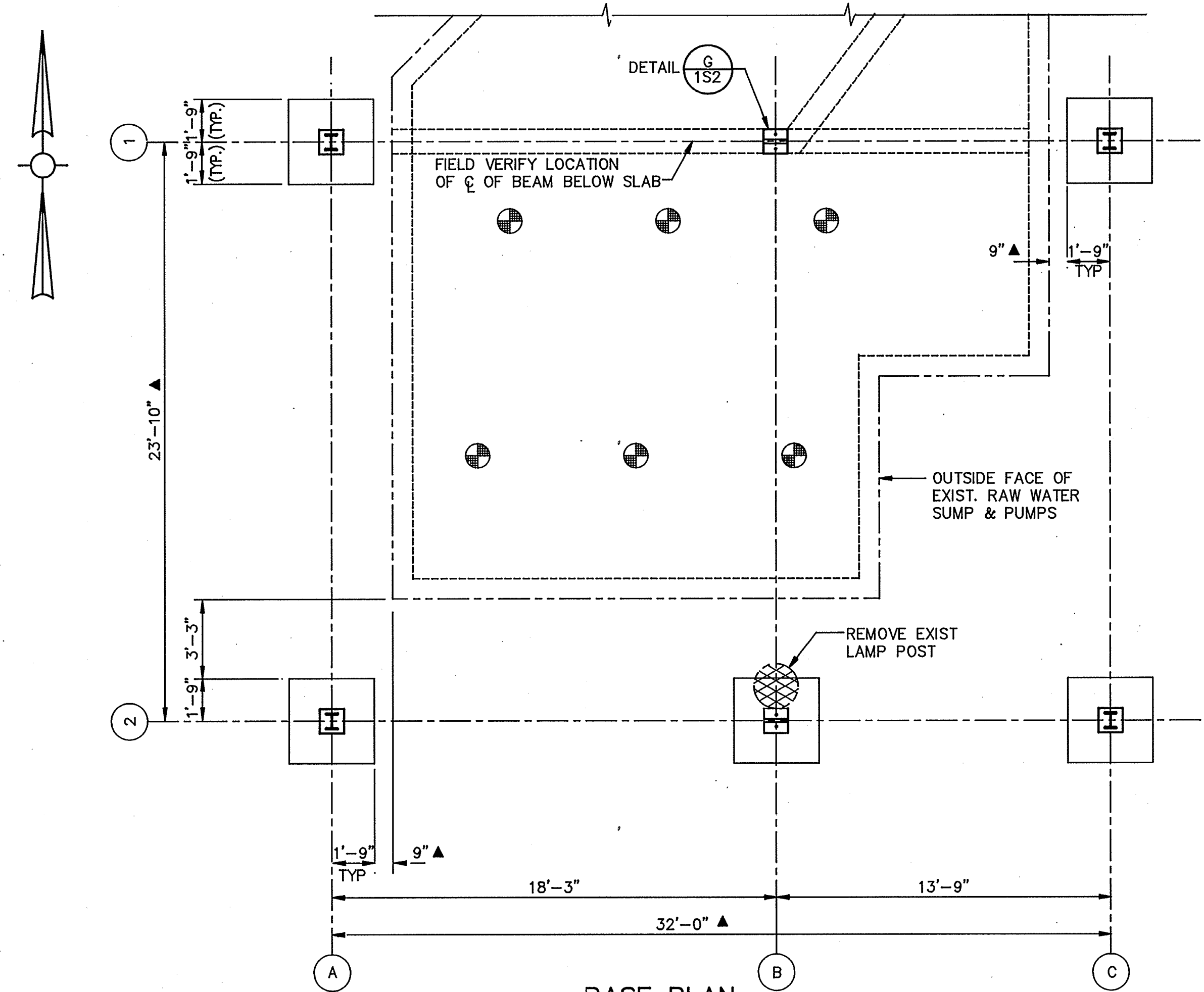
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INSTRUMENTATION Approved by: Date:

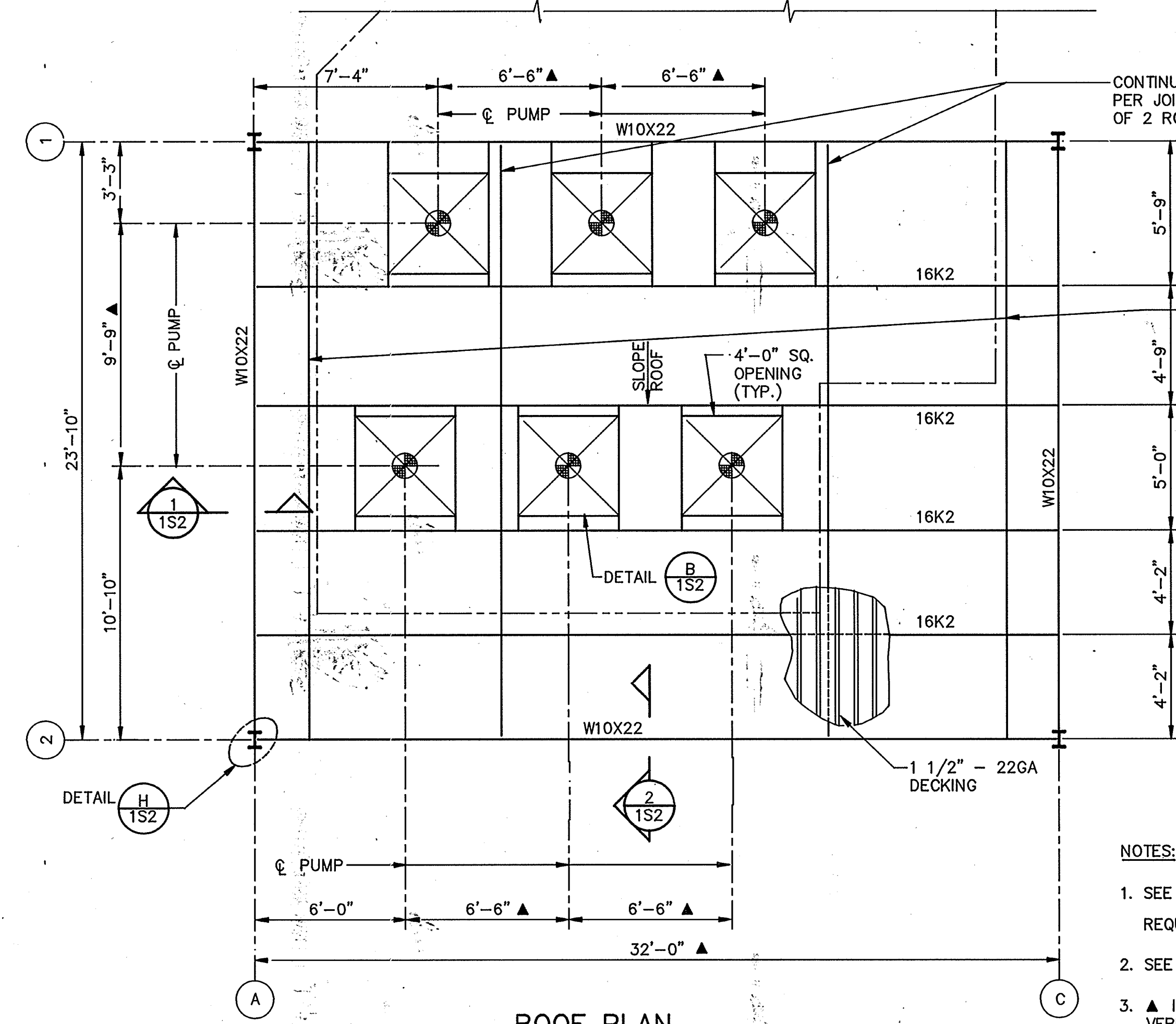
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STRUCTURAL Approved by: Date:

ARCHITECTURAL Approved by: Date:

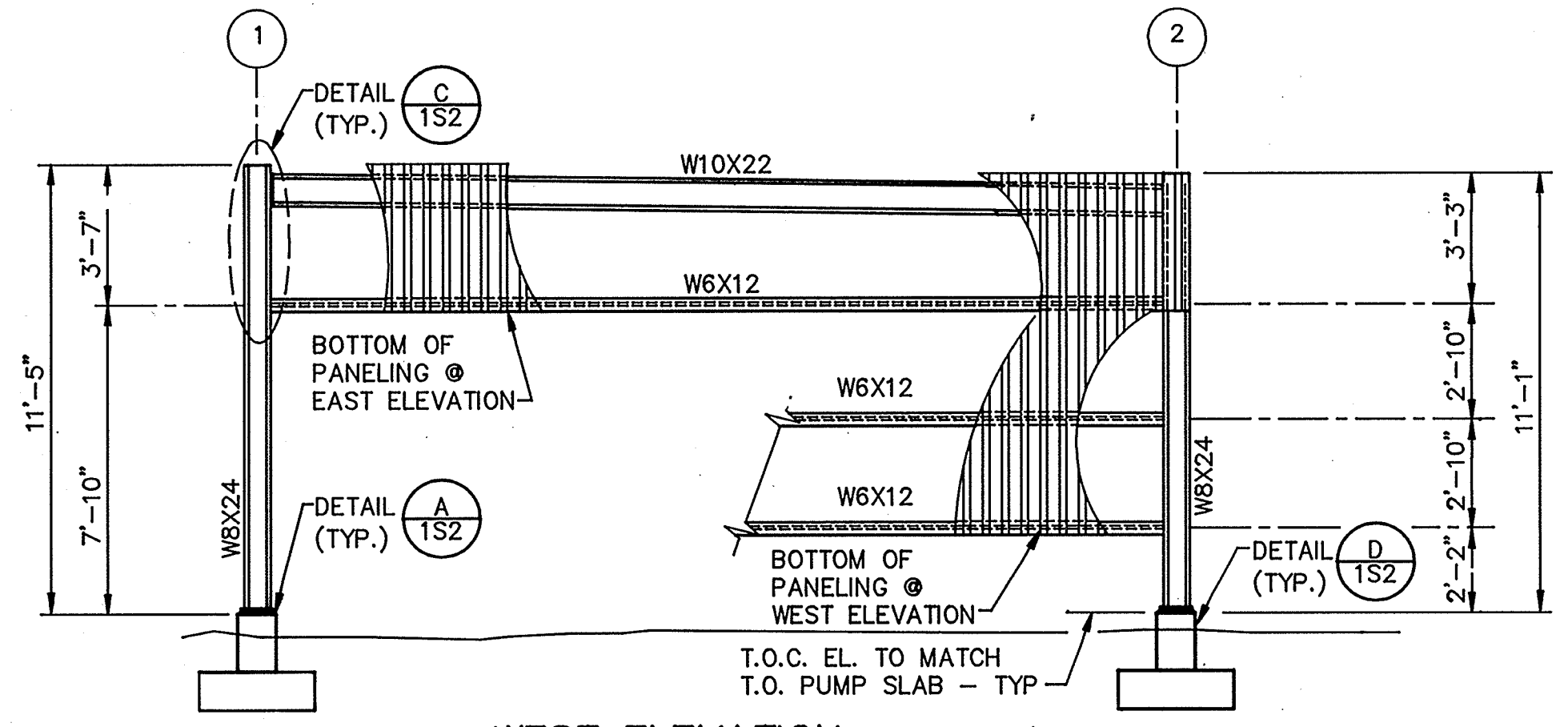


BASE PLAN
SCALE: 1/4" = 1'-0"



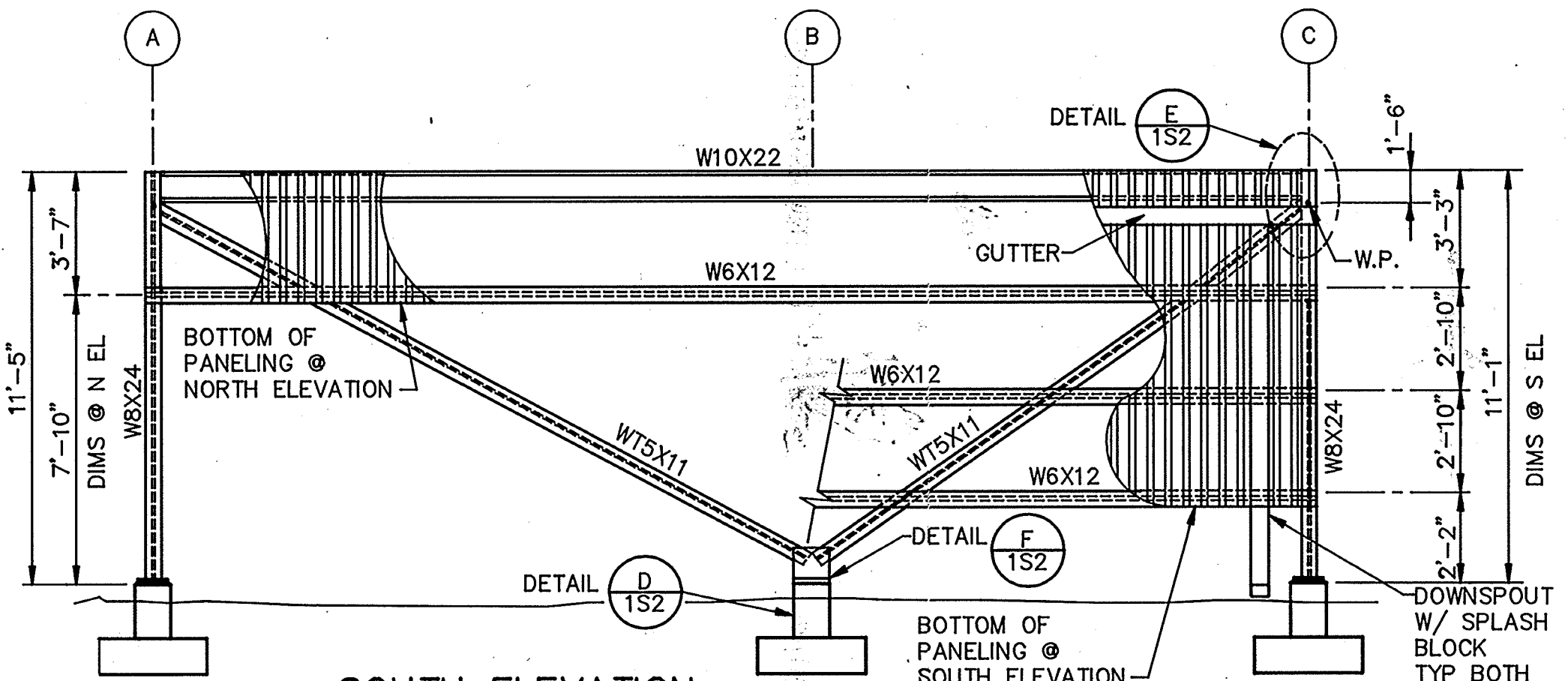
ROOF PLAN
SCALE: 1/4" = 1'-0"

- NOTES:**
- SEE DETAIL **302** FOR FRAMING REQUIREMENTS AROUND ROOF OPENINGS
 - SEE DETAIL **301** FOR DECK FASTENING PATTERN
 - ▲ INDICATES DIMENSIONS TO BE FIELD VERIFIED
 - FOR SUBGRADE PREPARATION AND EXCAVATION SEE SPEC. SECTION 02220
 - VERIFY LOCATIONS OF EXISTING UTILITIES
 - BRACE W6 X 12 GIRTS UNTIL SIDE PANELING HAS BEEN ERECTED AND ATTACHED TO ALL GIRTS
 - INDICATES LOCATION OF PUMP
 - ALL STRUCTURAL STEEL, STEEL DECKING & JOISTS SHALL BE GALVANIZED



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

EAST ELEVATION
SIMILAR EXCEPT OPP. HAND



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

NORTH ELEVATION
SIMILAR EXCEPT OPP. HAND

AS-BUILT

Jm 5/10/91



Date	Ch'k'd	Revision

Designed by: JVI, BCO
 Drawn by: KC, LS
 Checked by: JOG, BCO
 Approved by: RES

Date: 9/88
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CITY OF PITTSBURG, CALIFORNIA

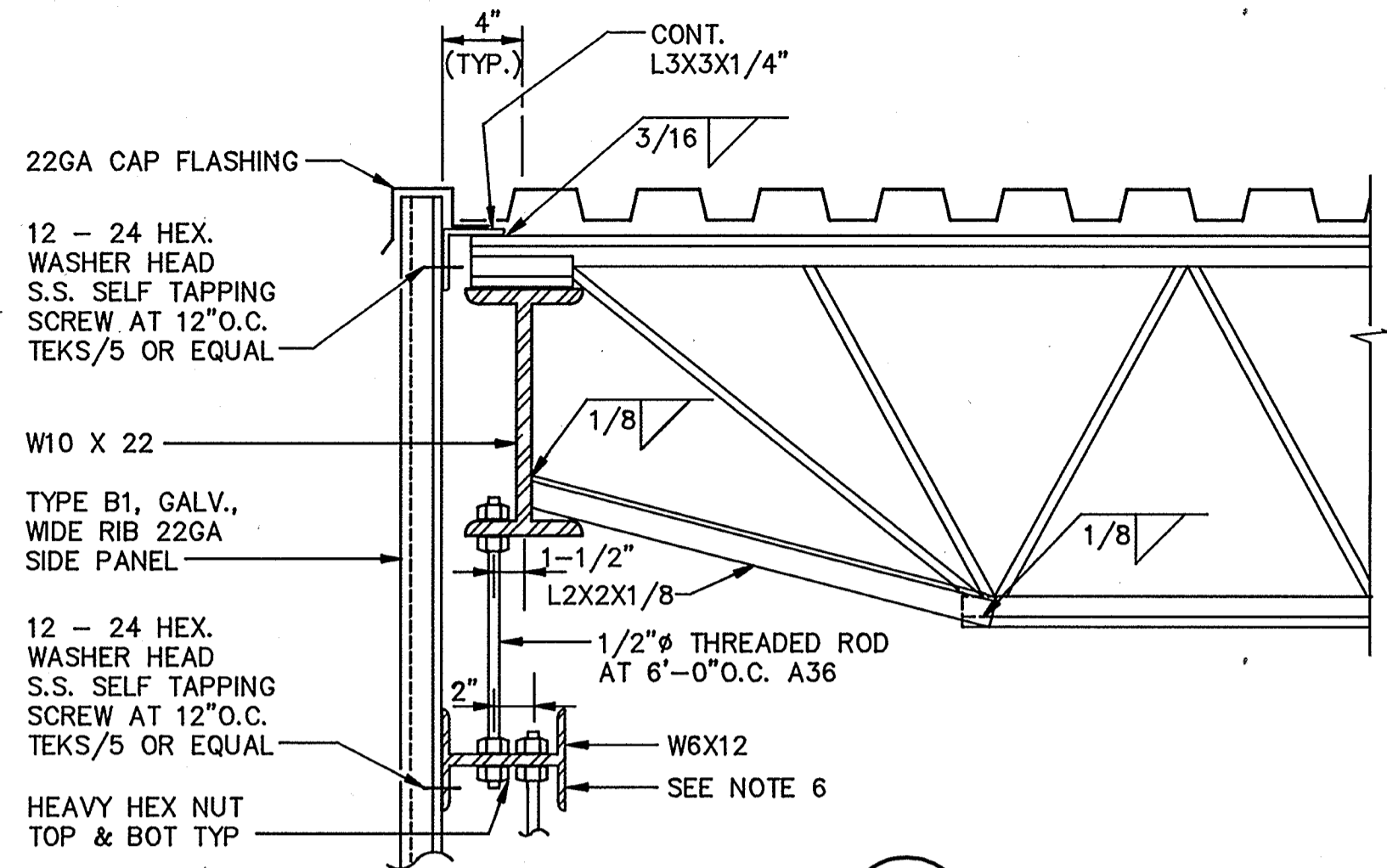
WATER TREATMENT PLANT EXPANSION 1988

RAW WATER PUMP COVER - PLANS & ELEVATIONS

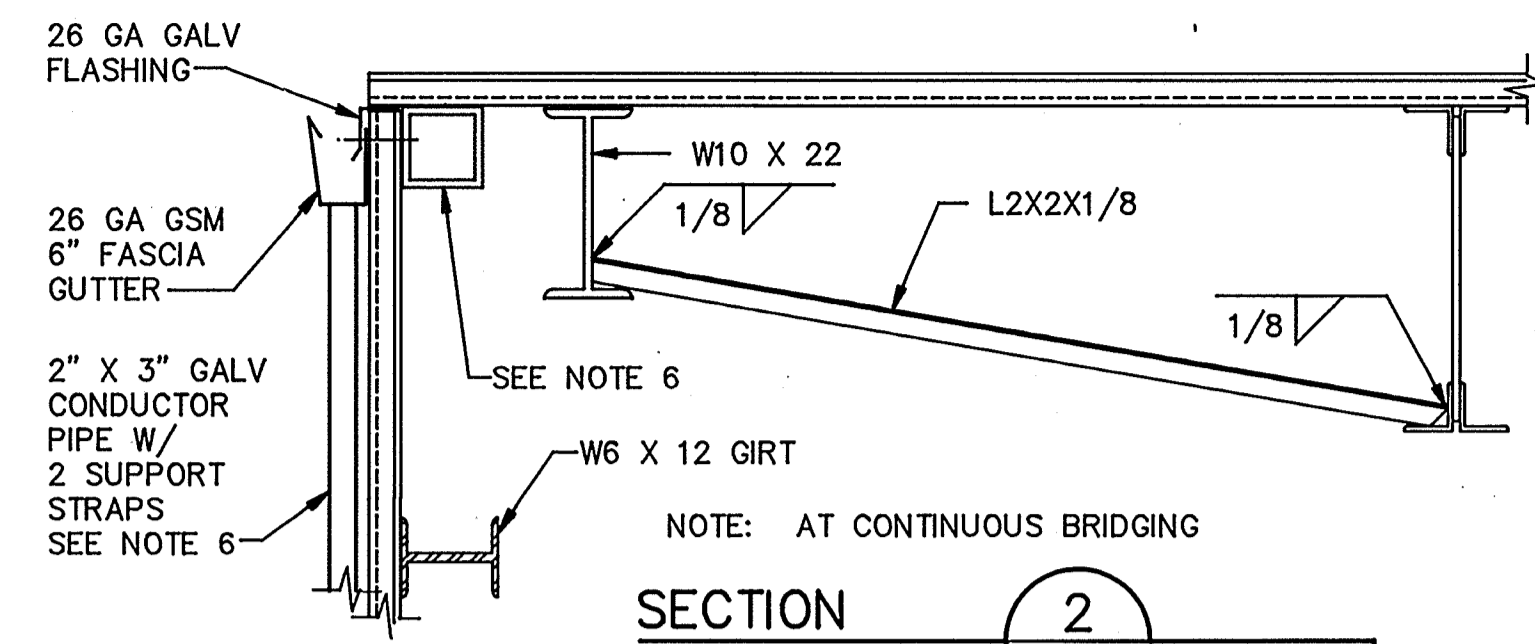
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 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists, planners & management consultants

SHEET NO. 1S-1
 4 of 147

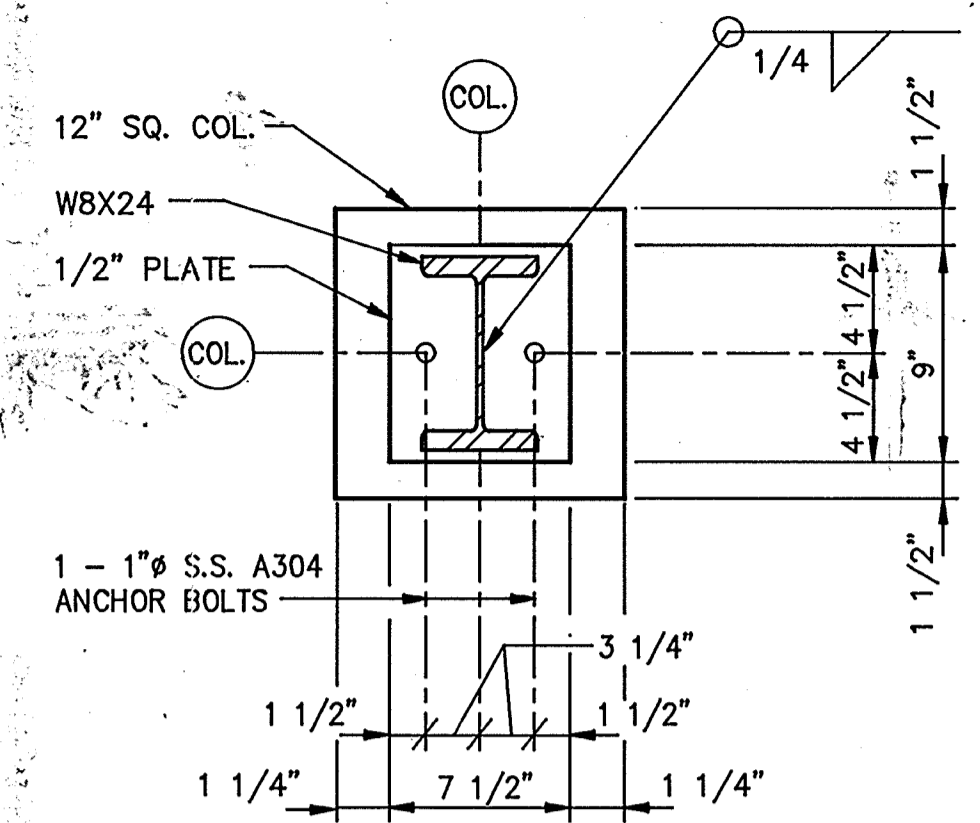
PROJECT MANAGER Approved by: Date: PROJECT ENGINEER Approved by: Date: PLUMBING Approved by: Date: HVAC Approved by: Date: INSTRUMENTATION Approved by: Date: ELECTRICAL Approved by: Date: STRUCTURAL Approved by: Date: ARCHITECTURAL Approved by: Date:



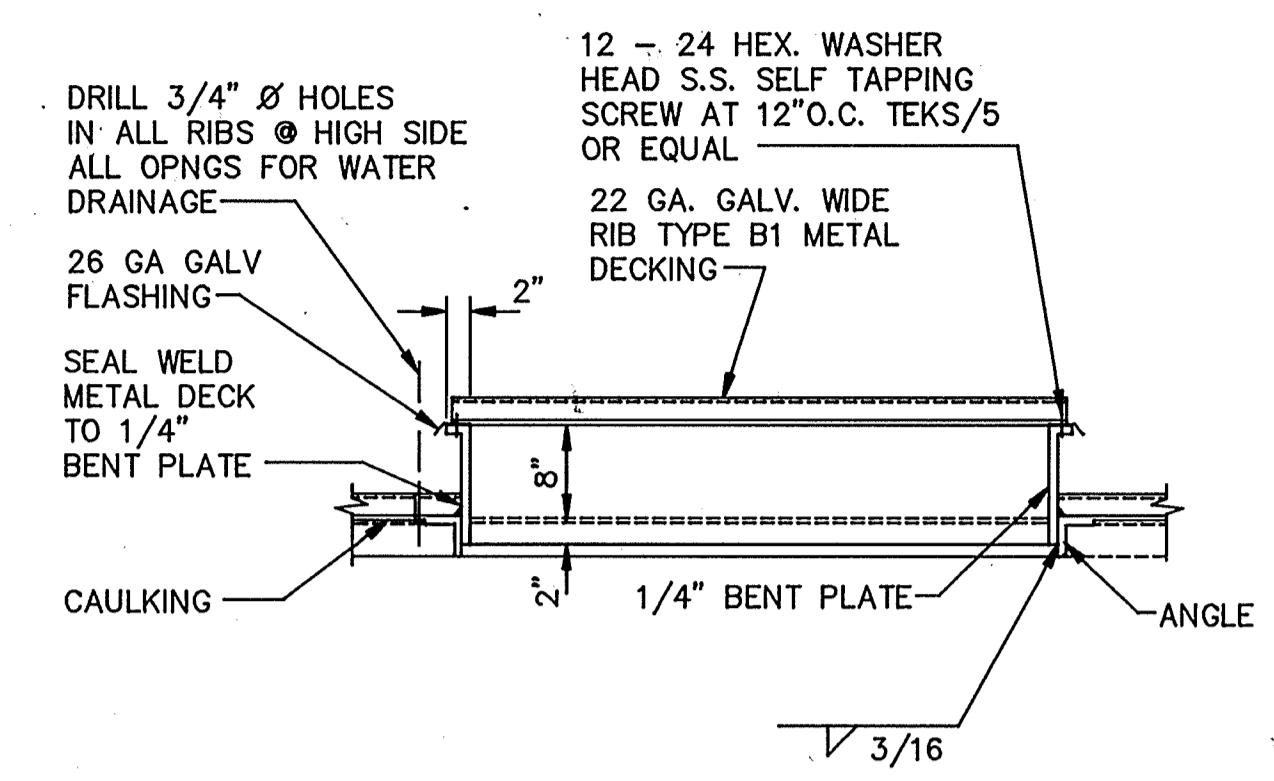
SECTION 1
SCALE: 1 1/2" = 1'-0"
1S1, 4S1, 4S2



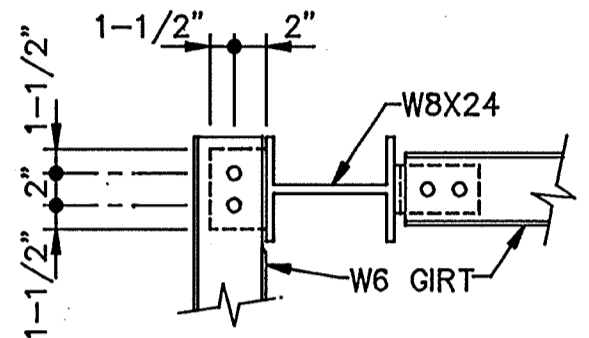
SECTION 2
SCALE: 1" = 1'-0"
1S1, 4S1, 4S2



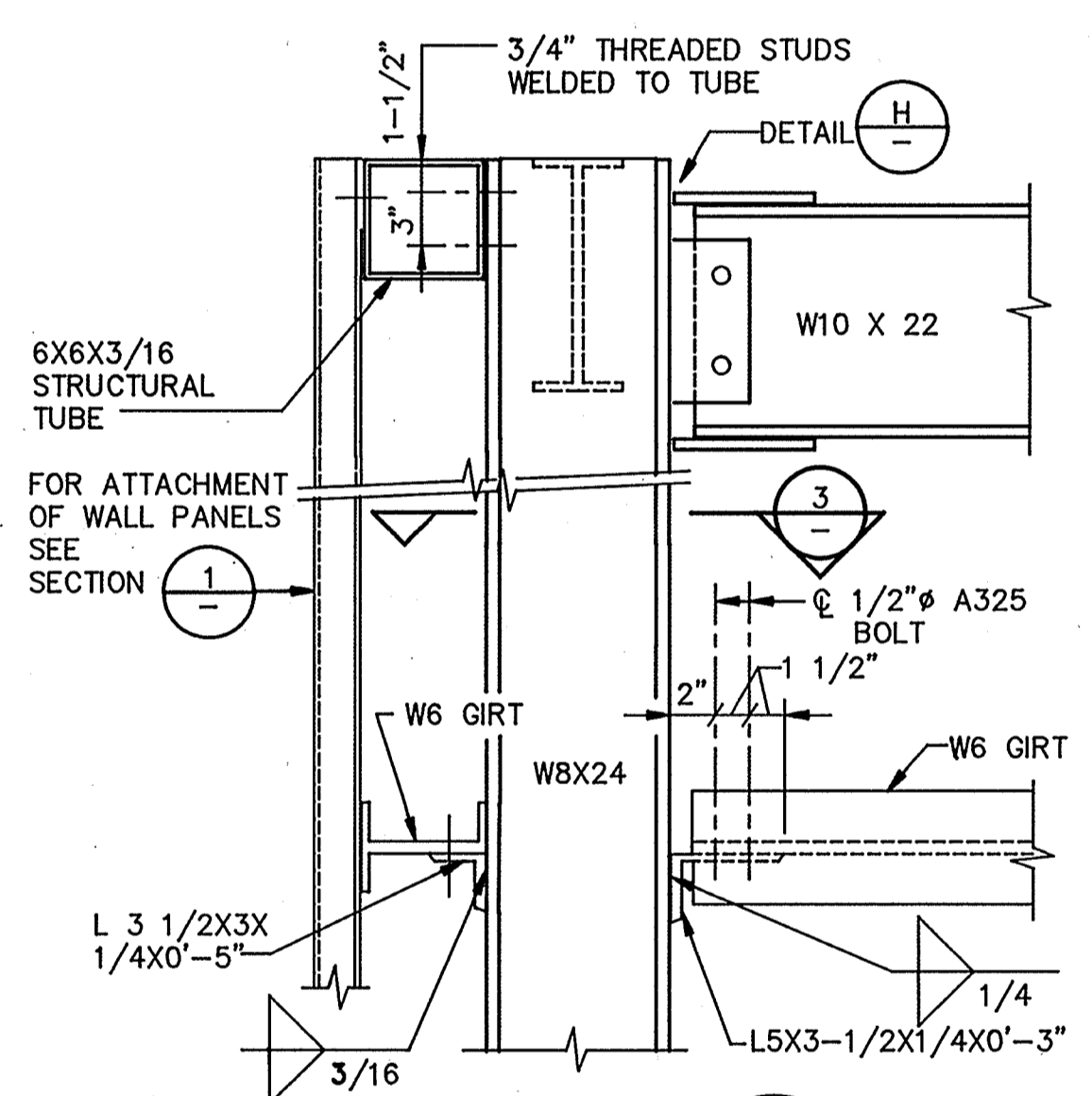
SECTION
SCALE: 1 1/2" = 1'-0"
1S1, 4S1, 4S2



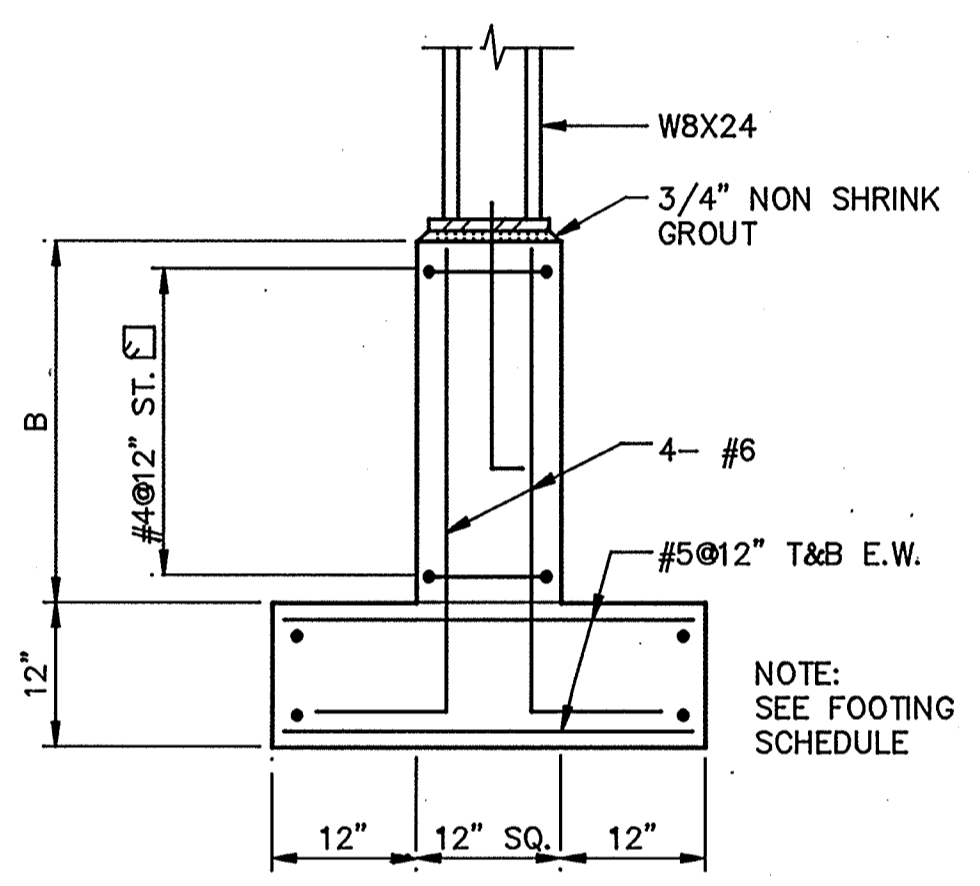
DETAIL B
SCALE: 3/4" = 1'-0"
1S1, 4S1, 4S2



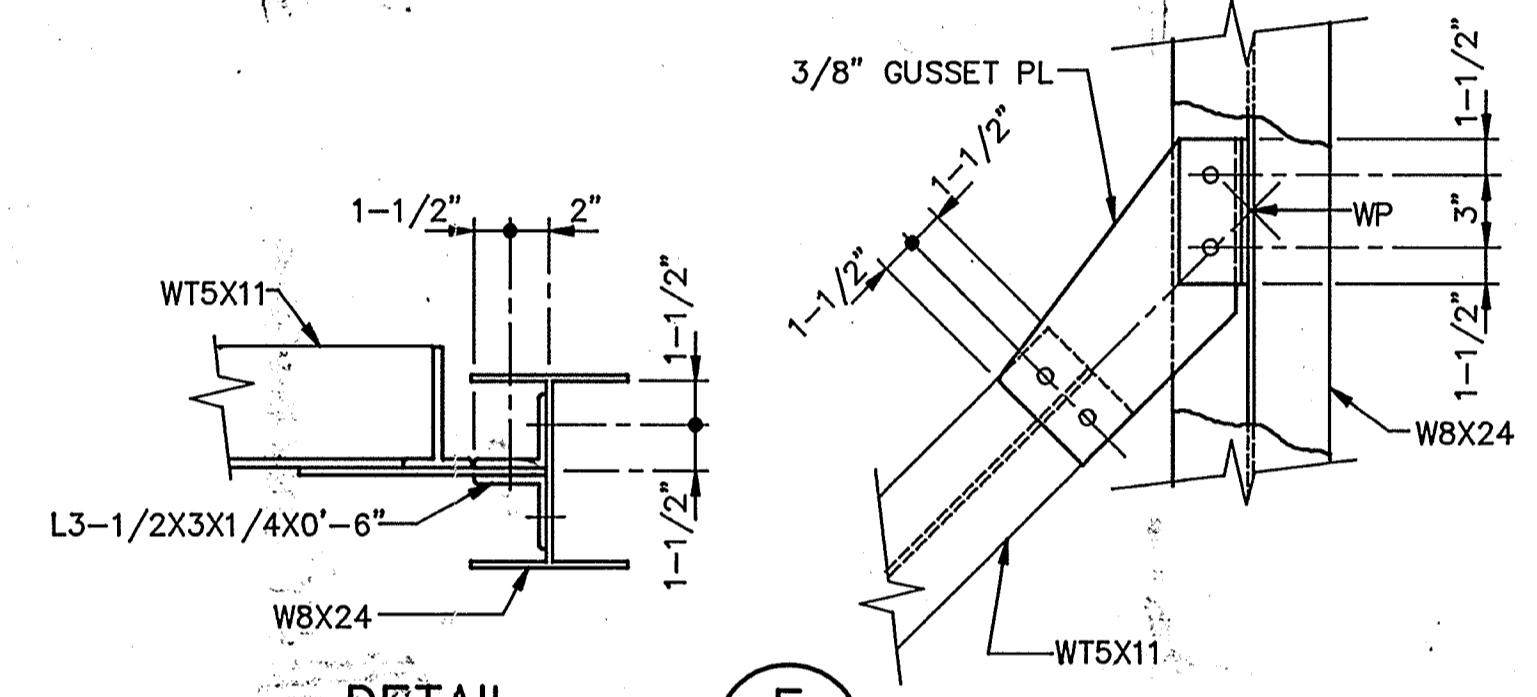
SECTION 3
SCALE: 1" = 1'-0"
1S1, 4S1, 4S2



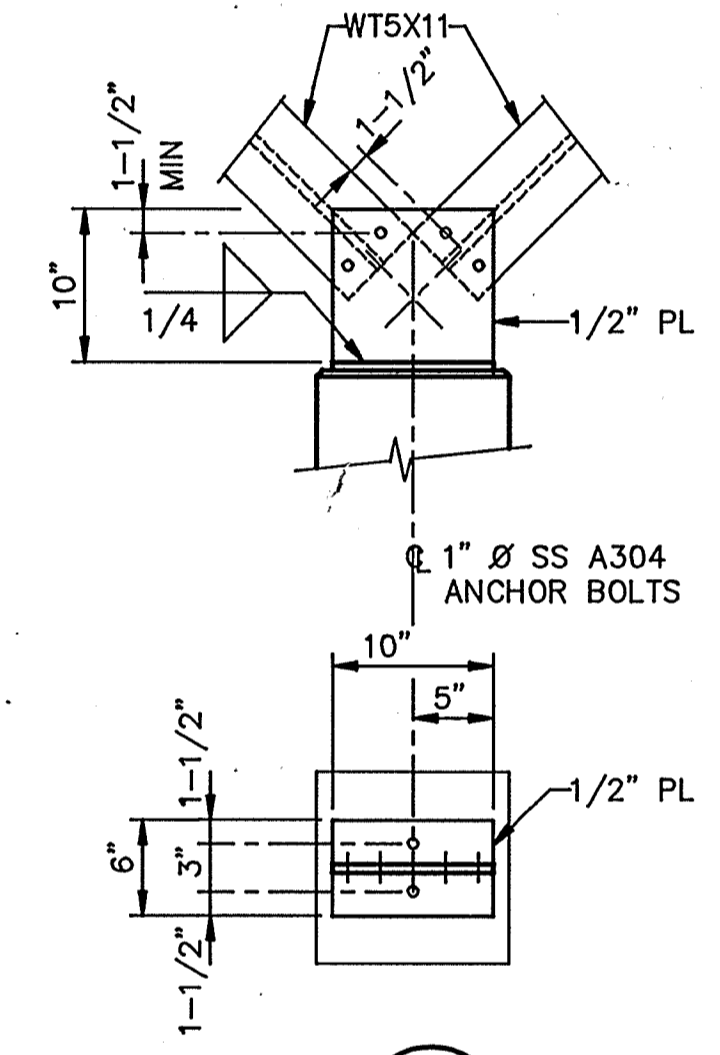
DETAIL C
SCALE: 1 1/2" = 1'-0"
1S1, 4S1, 4S2



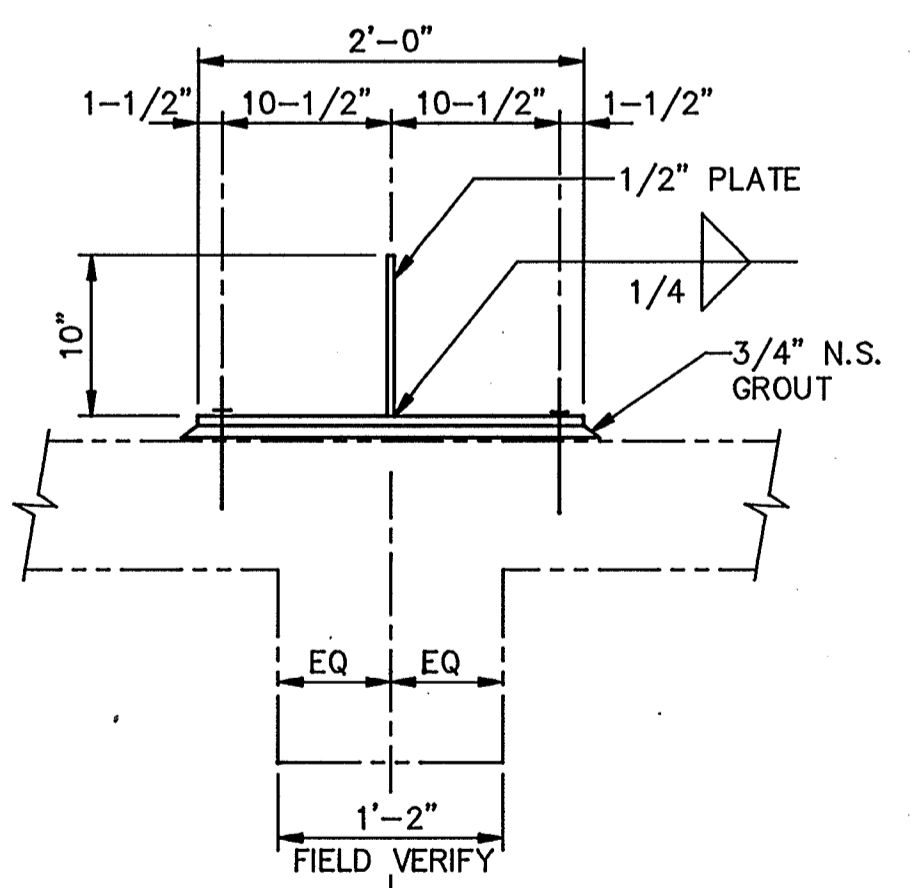
DETAIL D
SCALE: 3/4" = 1'-0"
1S1, 4S1, 4S2



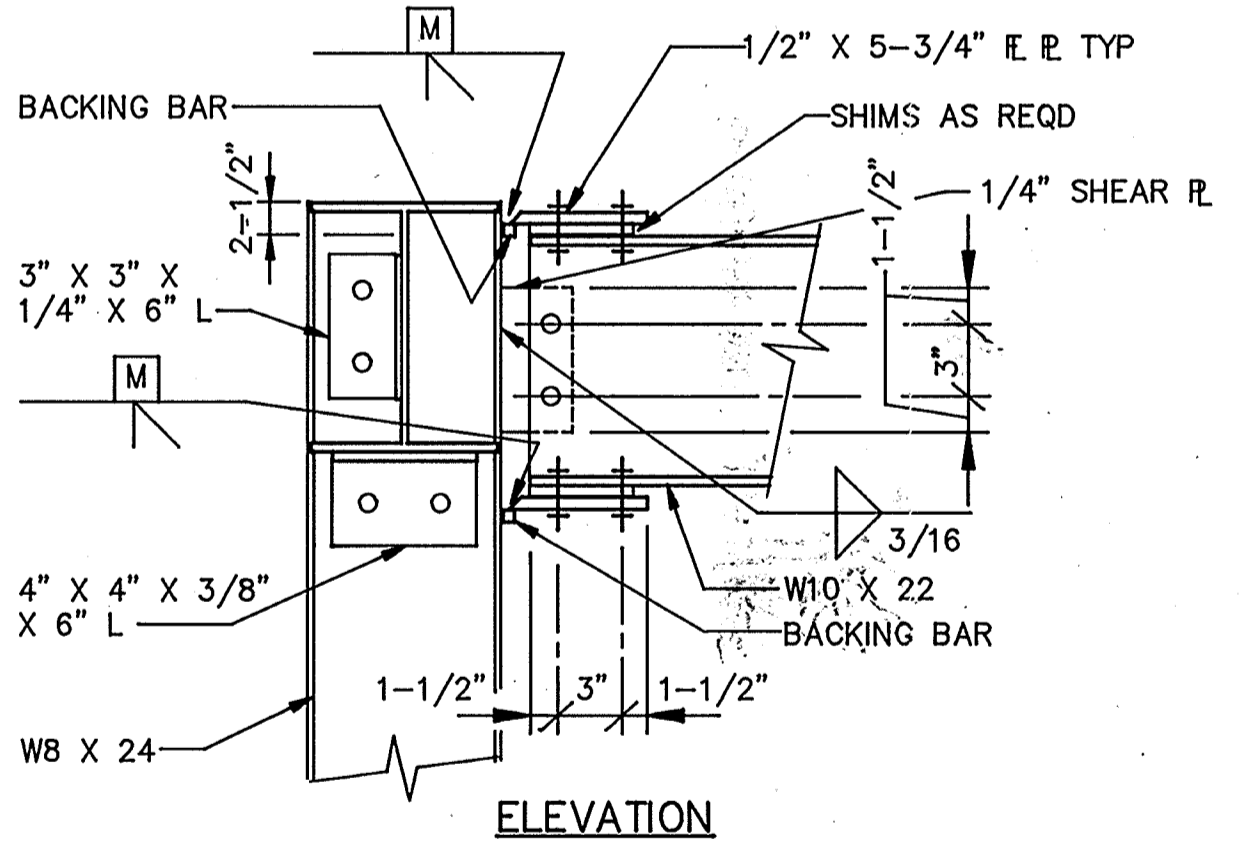
DETAIL E
SCALE: 1" = 1'-0"
1S1, 4S1, 4S2



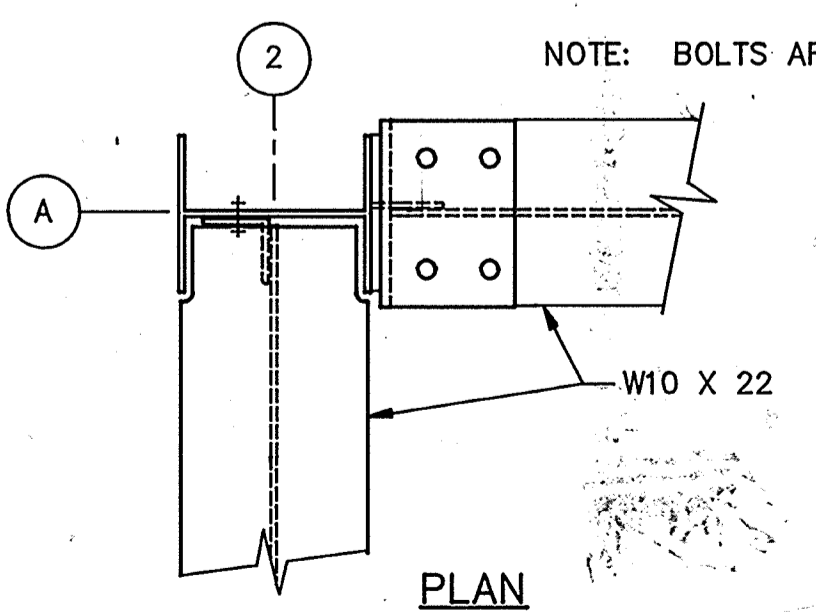
DETAIL F
SCALE: 1" = 1'-0"
1S1, 4S1, 4S2



DETAIL G
SCALE: 1" = 1'-0"
1S1

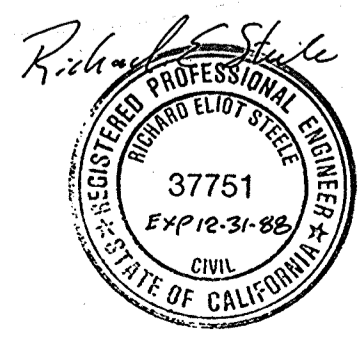


ELEVATION
NOTE: BOLTS ARE 3/4" Ø A325



DETAIL H
SCALE: 1-1/2" = 1'-0"
1S1, 1S2

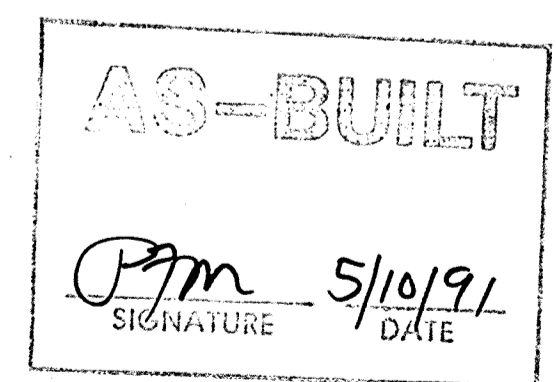
FOOTING SCHEDULE		
STRUCTURE	COLUMN LINE INTERSECTION	B
RAW WATER SUMP	A1, A2, B1, B2, C2	2'-0"
	C1	3'-0"
1953 CLEAR WELL SUMP	ALL	2'-0"
1976 CLEAR WELL SUMP	ALL	2'-0"



Date	Ch'k'd	Revision

Designed by: JVI, BCO
 Drawn by: KC, LS
 Checked by: JCG, BCO
 Approved by: RES

Date: 9/88
 Scale: AS SHOWN



CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 PUMP COVER DETAILS

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

CDM
 environmental engineers, scientists,
 planners, & management consultants

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PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

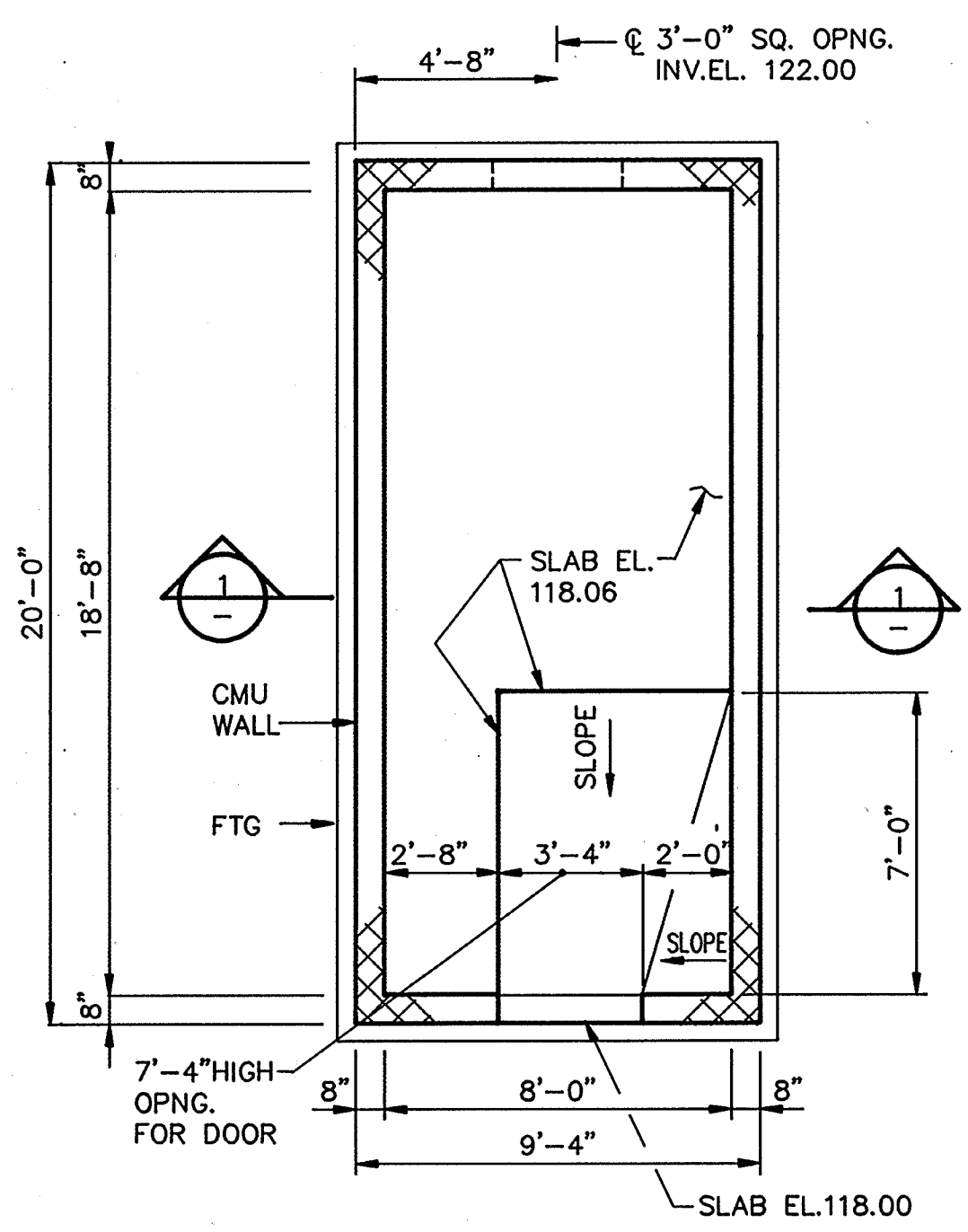
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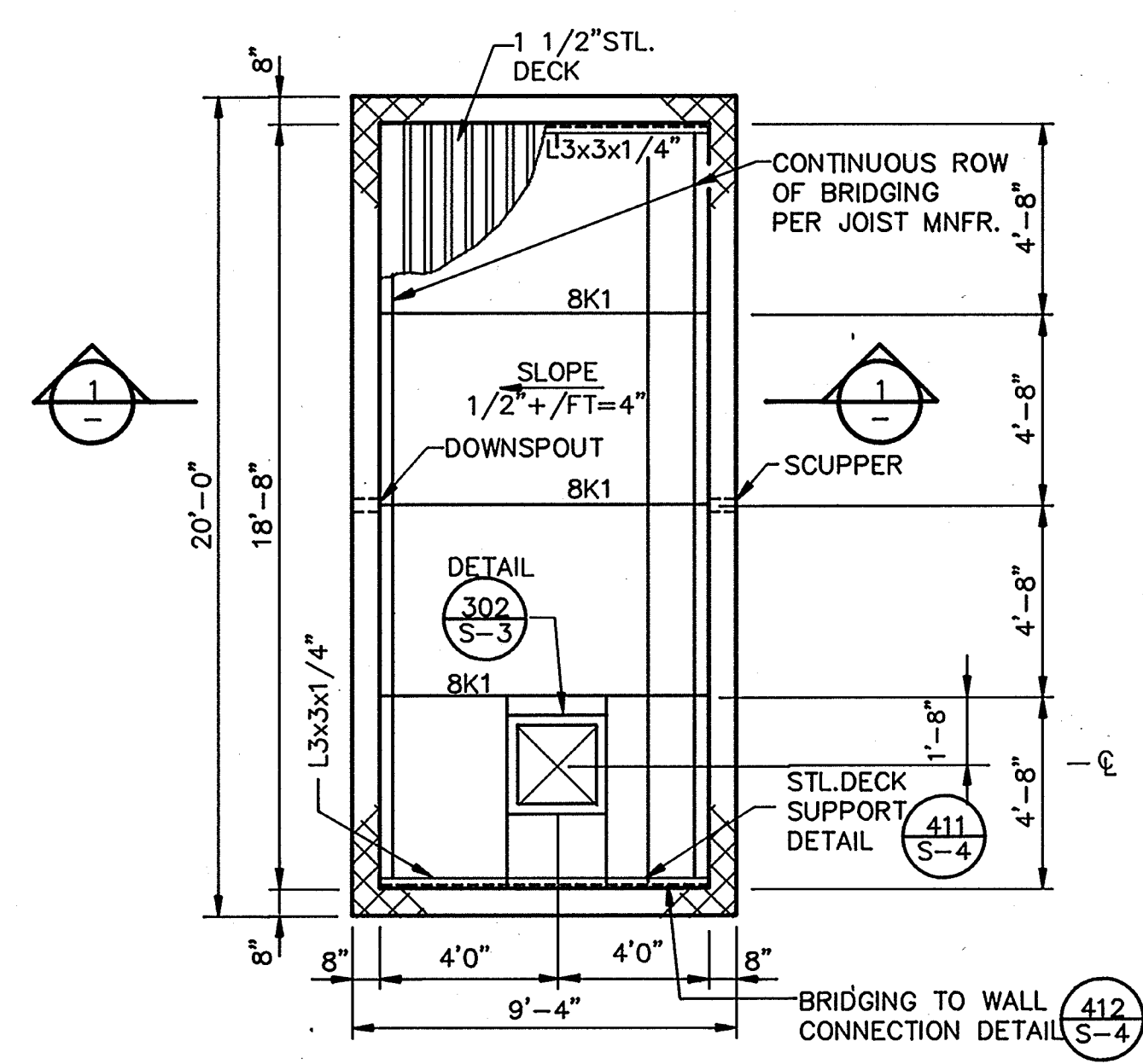
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STRUCTURAL Approved by: Date:

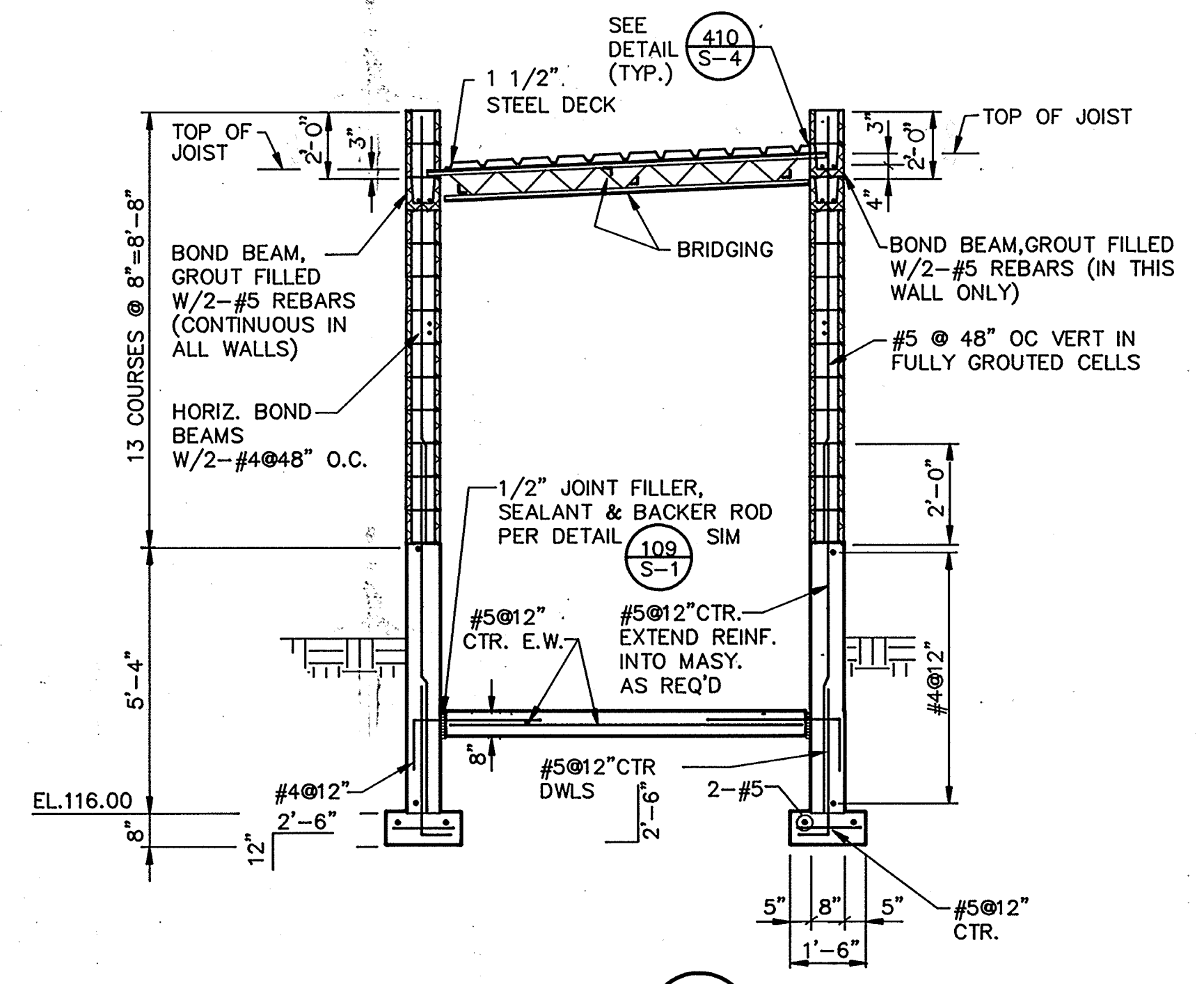
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FLOOR PLAN
SCALE: 1/4" = 1'-0"

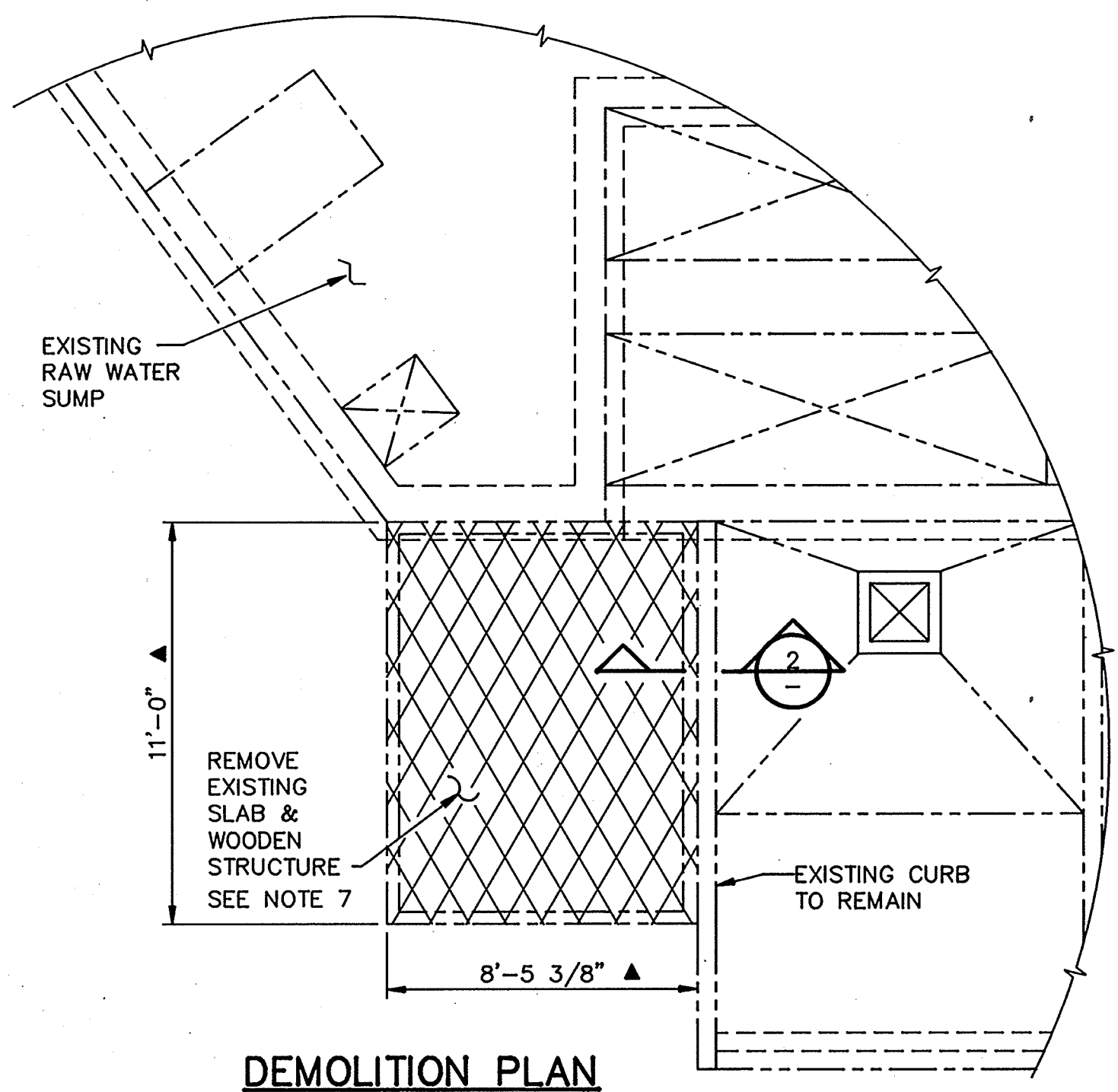


ROOF PLAN
SCALE: 1/4" = 1'-0"

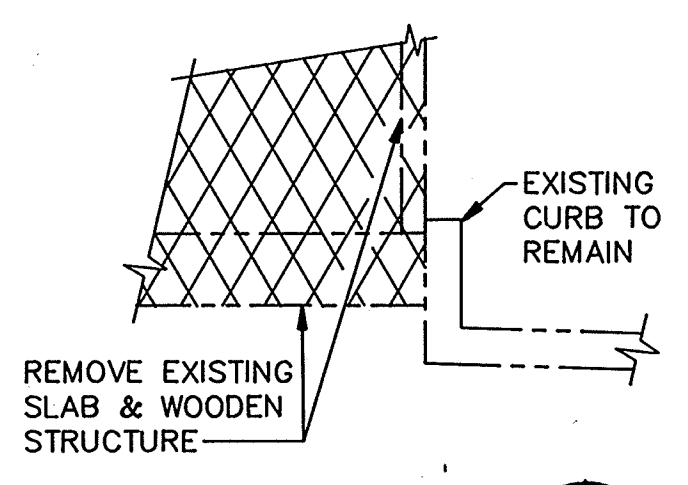


SECTION 1
SCALE: 3/8" = 1'-0"

- NOTES:
- SEE DETAIL (204 S-2) FOR EQUIPMENT PAD
 - FOR MASONRY REINF. SEE DETAILS (308 S-3), (310 S-3), (409 S-4)
 - SEE DETAIL (301 S-3) FOR ROOF DECK FASTENING & FOR STEEL DECK SCHEDULE SEE DETAIL (303 S-3)
 - FOR SUBGRADE PREPARATION & EXCAVATION SEE SPEC. SECTION 02220.
 - FILL CMU CORES AT VERT. REINF. & HORIZ. BOND BEAMS SOLID W/MORTAR. ALL OTHER CORES TO BE FILLED W/ LOOSE FILL INSULATION.
 - SHADED TRIANGLE (▲) INDICATES UNVERIFIED DIMENSIONS TAKEN FROM EXISTING DRAWINGS FIELD VERIFY.
 - CONSTRUCTION SEQUENCE AND METHODS OF DISCONNECTING EXISTING MCC EQUIPMENT AND CONNECTING NEW MCC EQUIPMENT SHALL BE COORDINATED WITH AND APPROVED BY THE ENGINEER



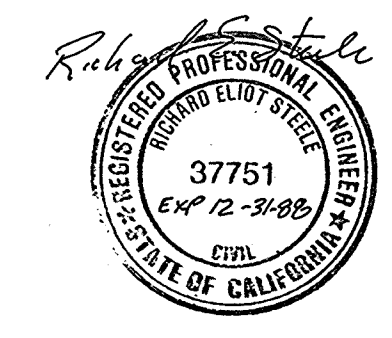
DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



SECTION 2
SCALE: 3/8" = 1'-0"

AS-BUILT

P7m 5/10/91
SIGNATURE DATE



Date	Ch'k'd	Revision

Designed by: JVI
 Drawn by: KC, LS
 Checked by: JTC
 Approved by: RES

Date: 9/88
 Scale: AS SHOWN

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

RAW WATER PUMP MCC BLDG. -

PLANS & SECTIONS

CAMP DRESSER & MCKEE INC. **CDM**
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners, & management consultants

SHEET NO. 1S-3
 47 of 147

111335

PROJECT MANAGER Approved by: _____ Date: _____

PROJECT ENGINEER Approved by: _____ Date: _____

PLUMBING Approved by: _____ Date: _____

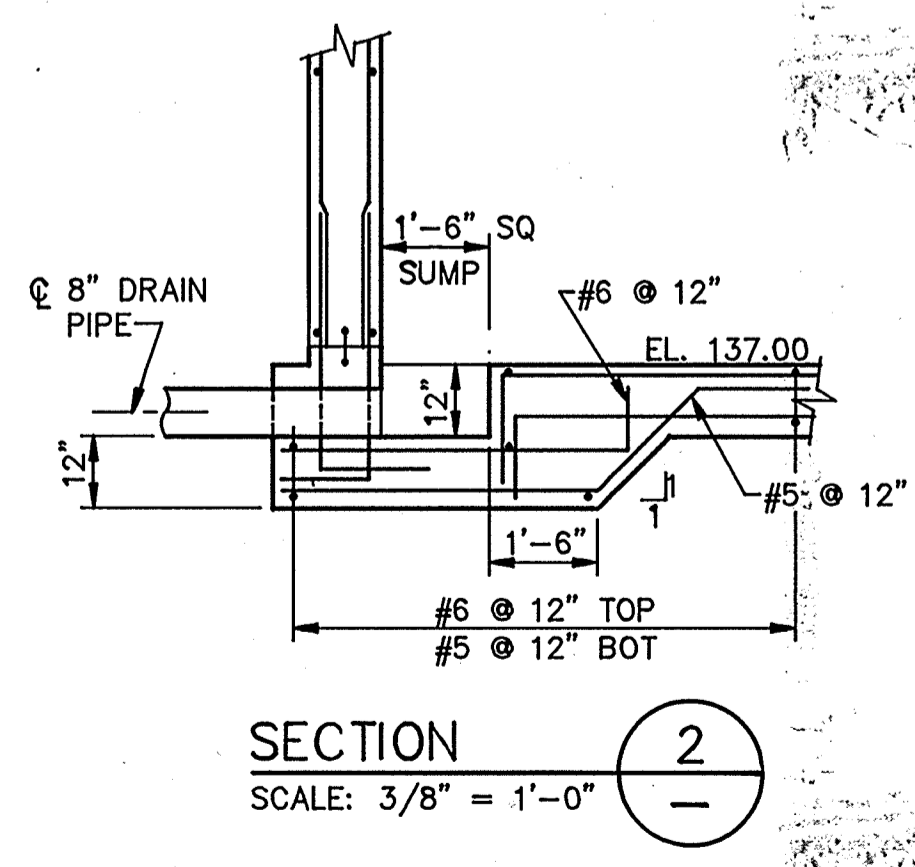
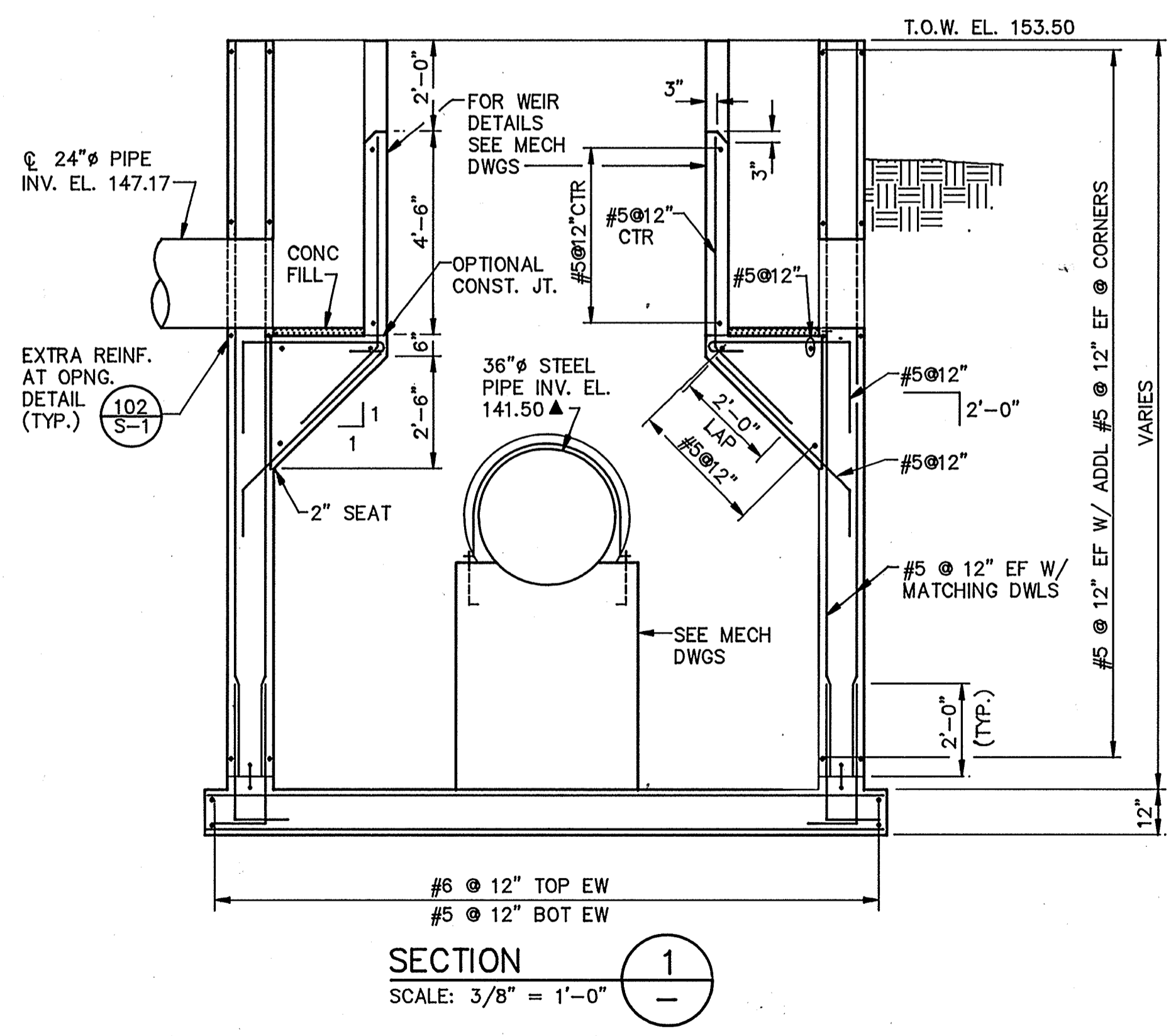
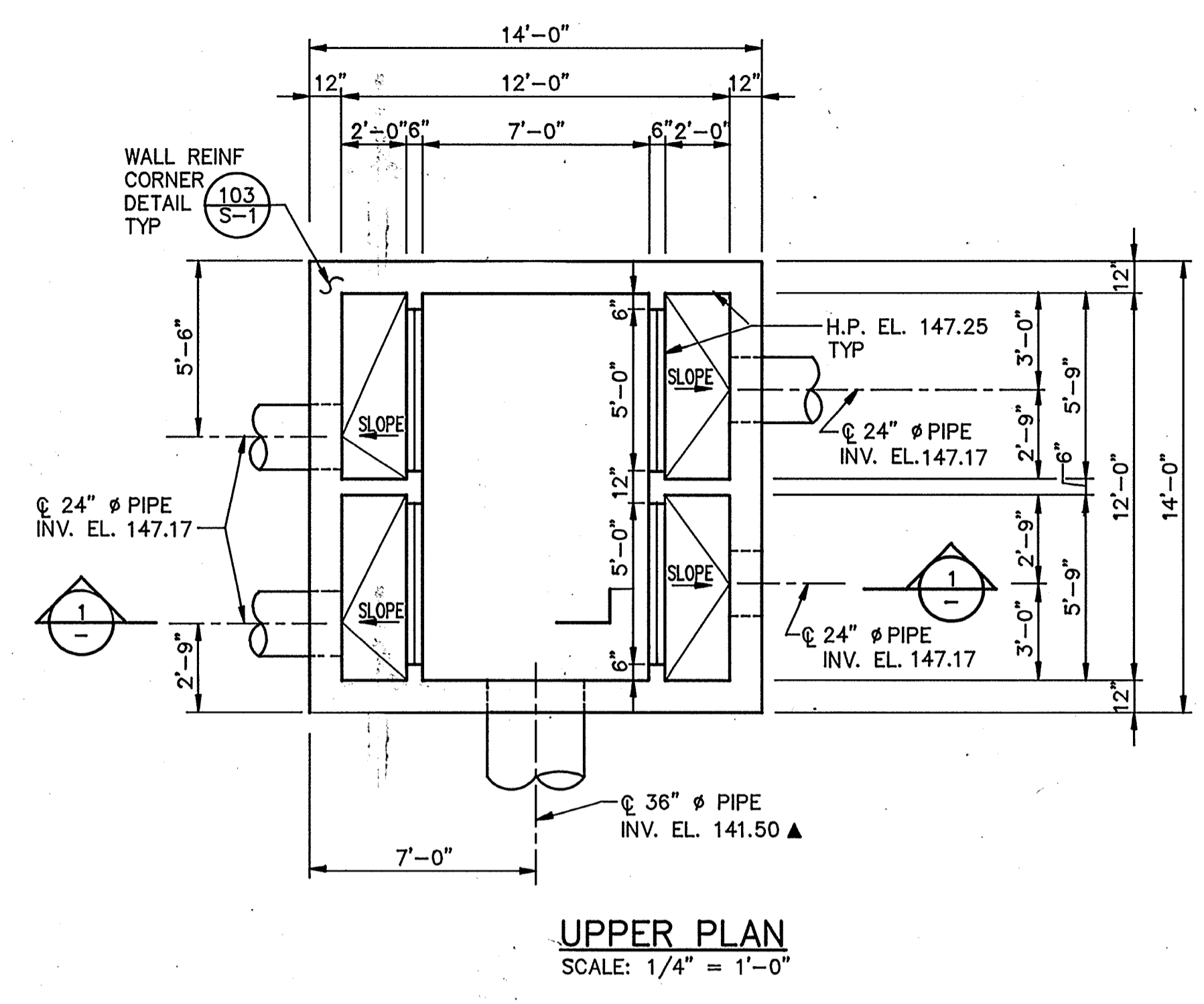
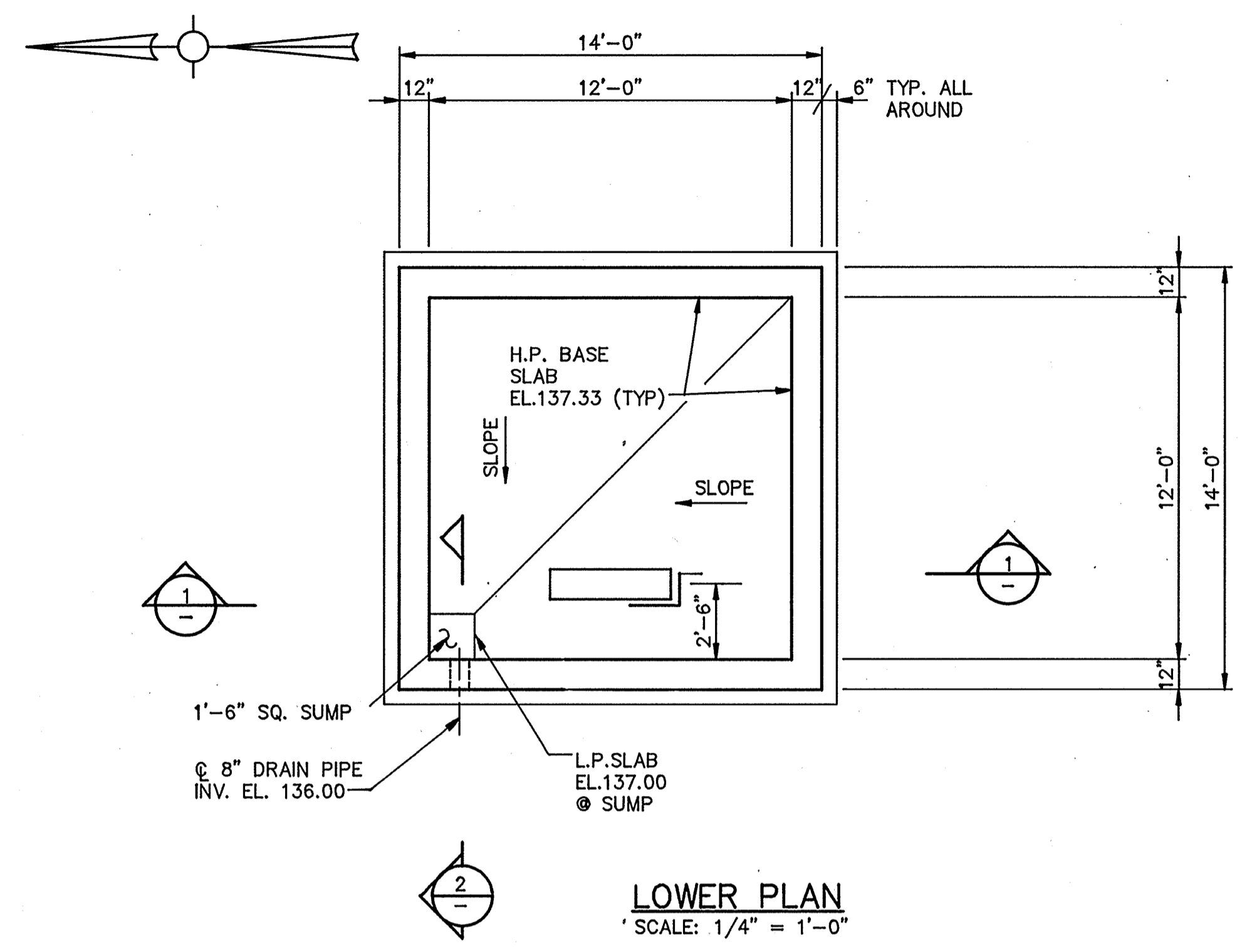
HVAC Approved by: _____ Date: _____

INSTRUMENTATION Approved by: _____ Date: _____

ELECTRICAL Approved by: _____ Date: _____

STRUCTURAL Approved by: _____ Date: _____

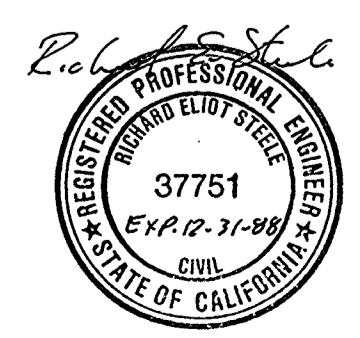
ARCHITECTURAL Approved by: _____ Date: _____



- NOTES:
1. SHADED TRIANGLE (▲) INDICATES UNVERIFIED DIMENSIONS, ELEVATIONS OR INFORMATION OF EXISTING WORK TAKEN FROM EXISTING DRAWINGS - FIELD VERIFY.
 2. FOR SUBGRADE PREPARATION AND BACKFILLING, SEE SPECIFICATION SECTION 02220.

AS-BUILT

PJM 5/10/91



CITY OF PITTSBURG, CALIFORNIA		WATER TREATMENT PLANT EXPANSION 1988		FLOW SPLITTER BOX PLAN & SECTIONS	
Date	Ch'kd	Revision	Designed by: <u>JWL</u>	Date: <u>9/88</u>	CAMP DRESSER & MCKEE INC. 710 South Broadway Walnut Creek, CA 94596 <small>environmental engineers, scientists, planners, & management consultants</small>
Drawn by: <u>KC, LS</u>	Checked by: <u>JOG</u>	Approved by: <u>RES</u>	Scale: <u>AS SHOWN</u>	SHEET NO. <u>15-4</u>	
<p>48 of 147</p>					

111335

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

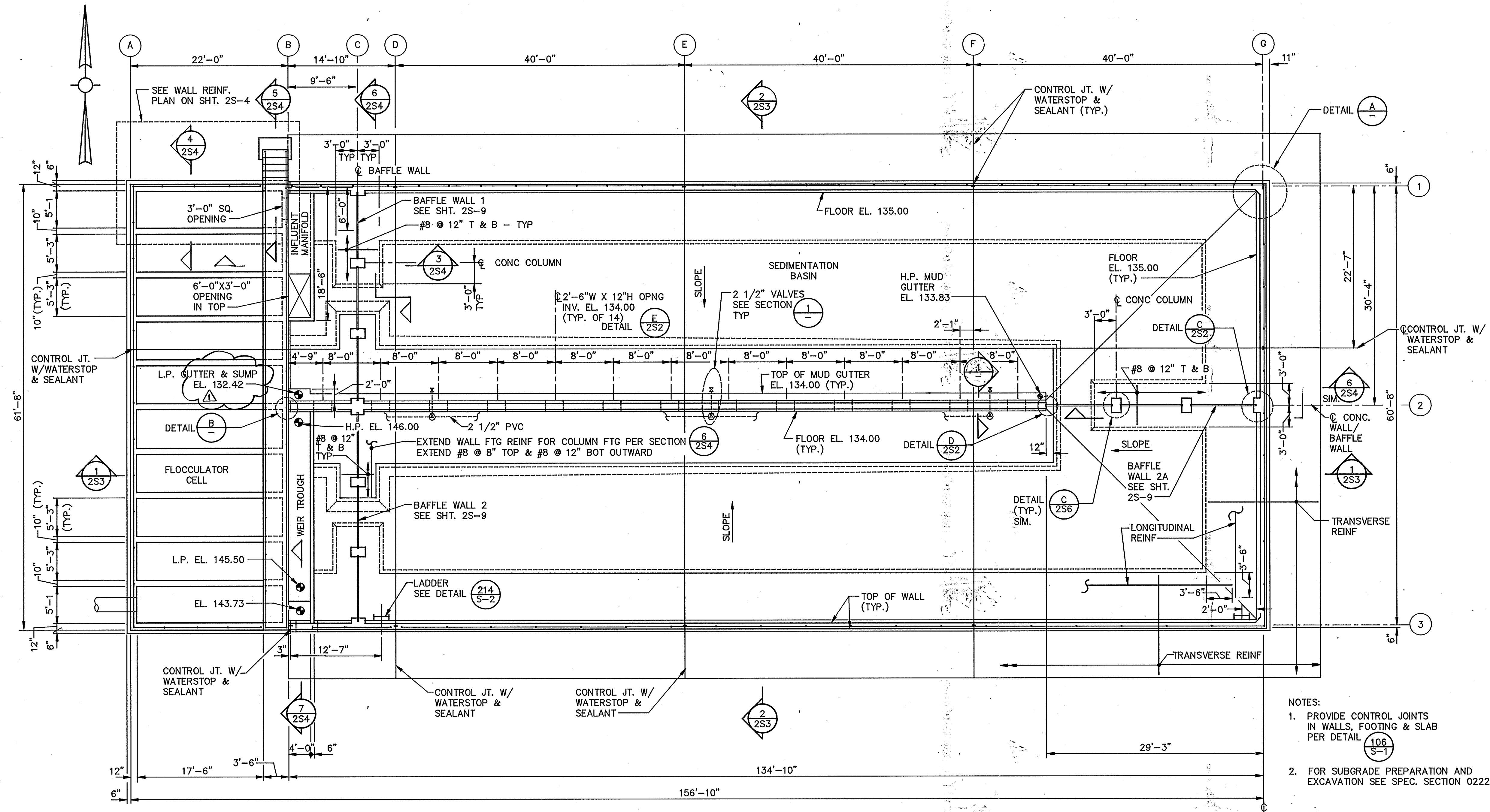
HVAC Approved by: Date:

INSTRUMENTATION Approved by: Date:

ELECTRICAL Approved by: Date:

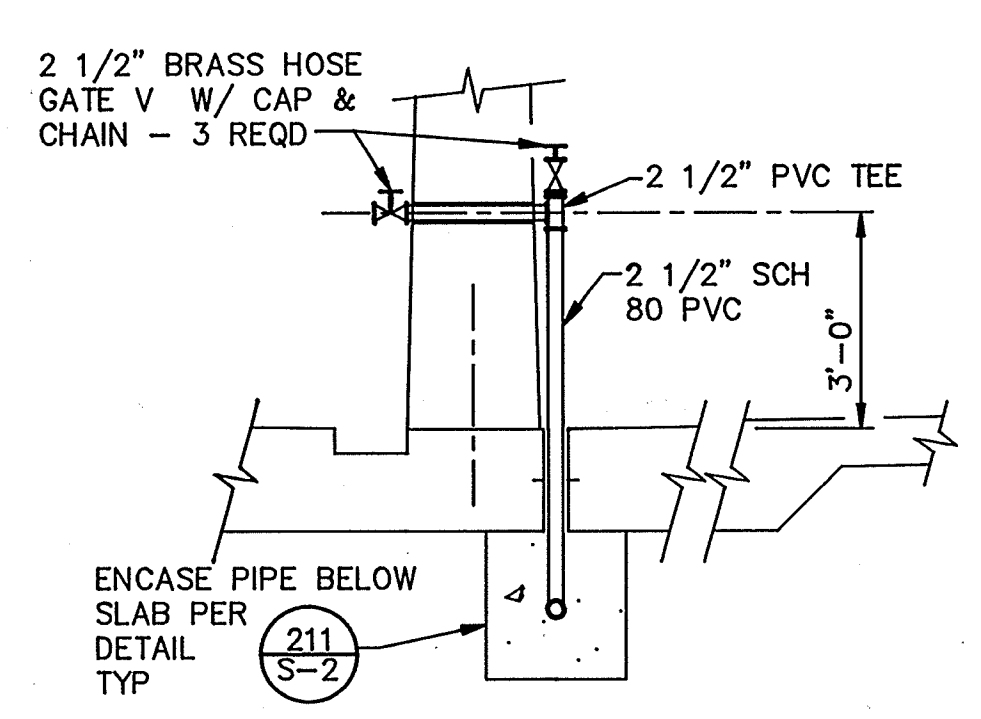
STRUCTURAL Approved by: Date:

ARCHITECTURAL Approved by: Date:

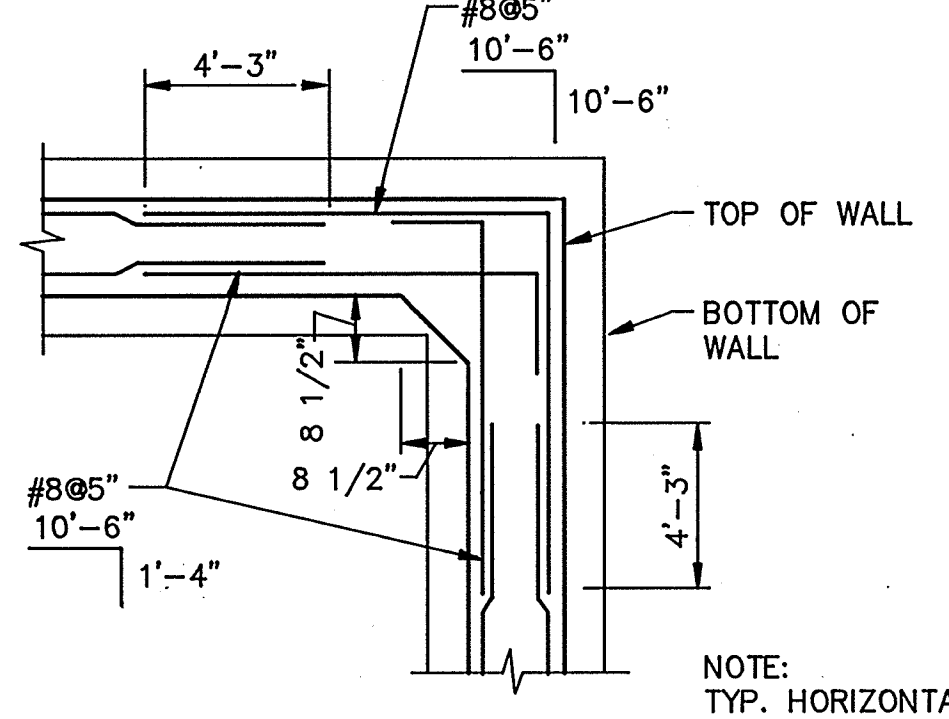


- NOTES:
1. PROVIDE CONTROL JOINTS IN WALLS, FOOTING & SLAB PER DETAIL (106) S-1
 2. FOR SUBGRADE PREPARATION AND EXCAVATION SEE SPEC. SECTION 02220

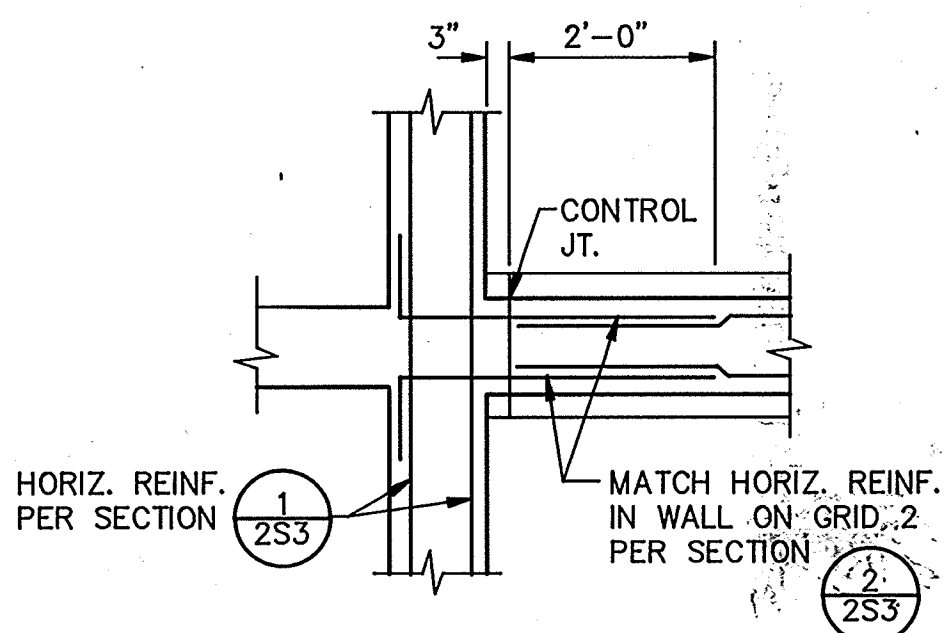
BASE PLAN
SCALE: 1/8" = 1'-0"



SECTION 1
SCALE: 3/8" = 1'-0"



DETAIL A
NTS

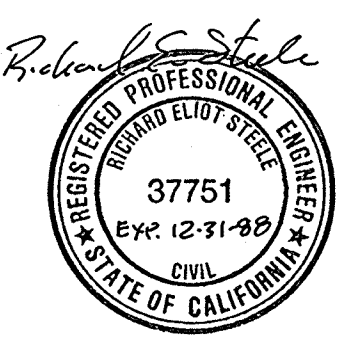


DETAIL B
NTS

NOTE:
TYP. HORIZONTAL REINF. IN CORNERS AT GRIDS 1G & 3G.

AS-BUILT

PJM 5/10/91
SIGNATURE DATE



Date	Ch'k'd	Revision
4/12/91	JWL	REVISED FOR THE RECORD

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988
SEDIMENTATION/FLOCCULATION BASIN
PLAN & DETAILS

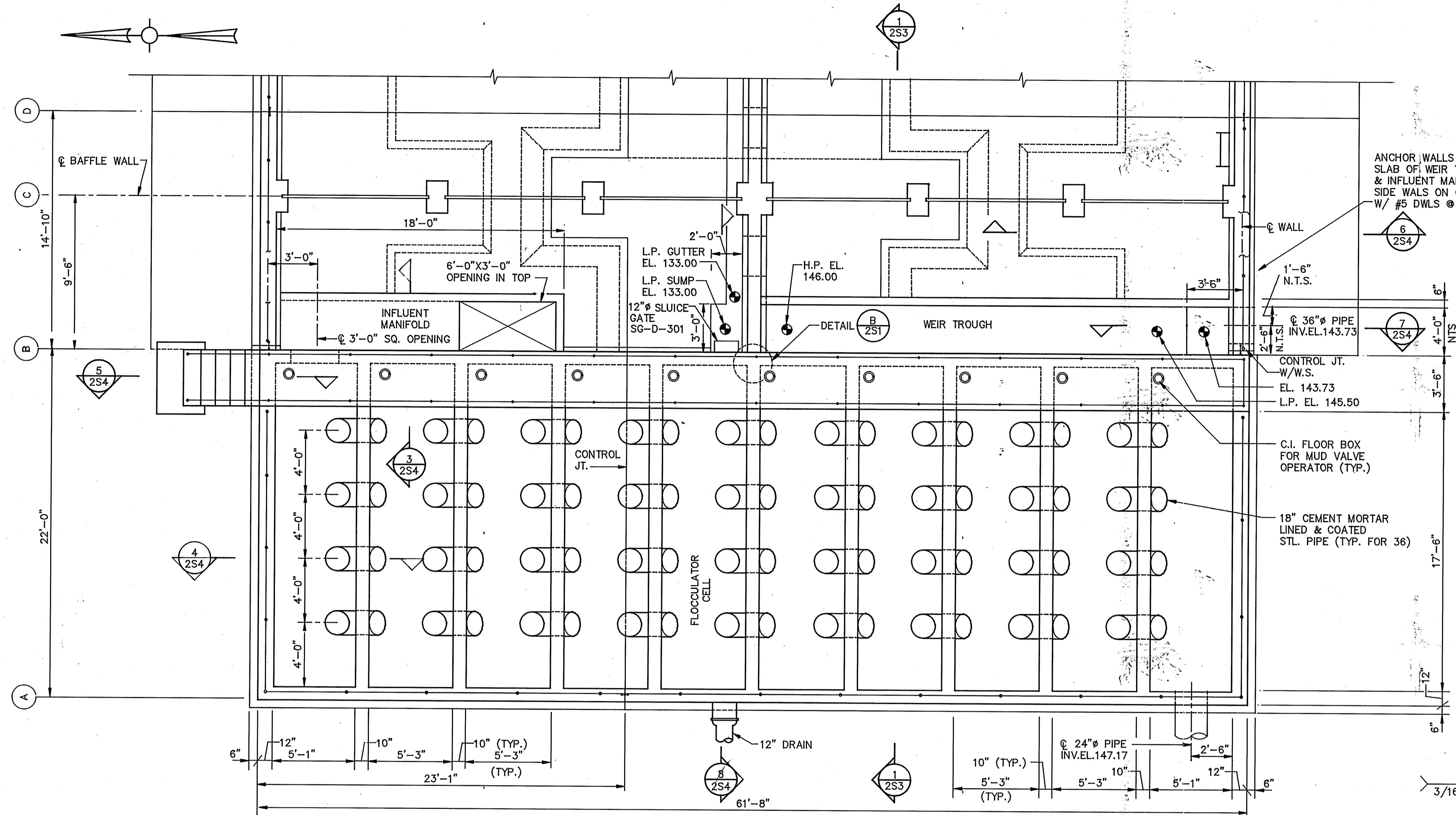
CAMP DRESSER & MCKEE INC. **CDM**
710 South Broadway
Walnut Creek, CA 94596
environmental engineers, scientists,
planners, & management consultants

DESIGNED BY: JWL
DRAWN BY: KC, LS
CHECKED BY: JMH
APPROVED BY: RES

DATE: 9/88
SCALE: AS SHOWN

SHEET NO. **25-11**
49 of 147

111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



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

ANCHOR WALLS AND SLAB OF WEIR TROUGH & INFLUENT MANIFOLD INTO SIDE WALLS ON GRIDS 1, 2 & 3 W/ #5 DWLS @ 18" 3'-5"

6 2S4

1'-6" N.T.S.

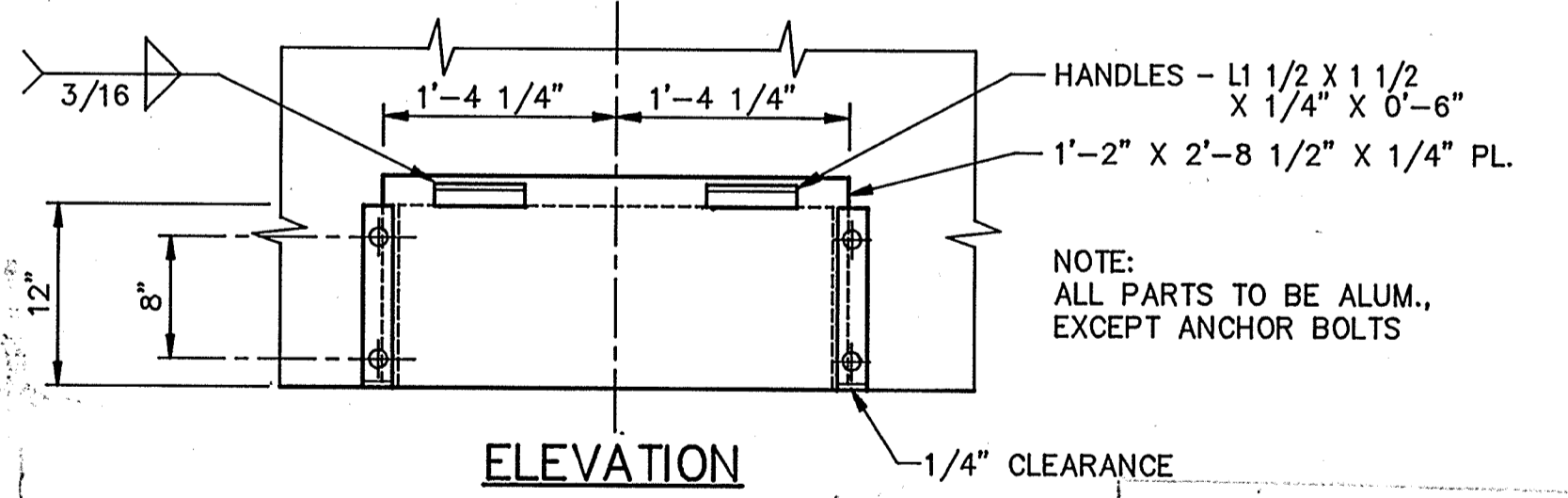
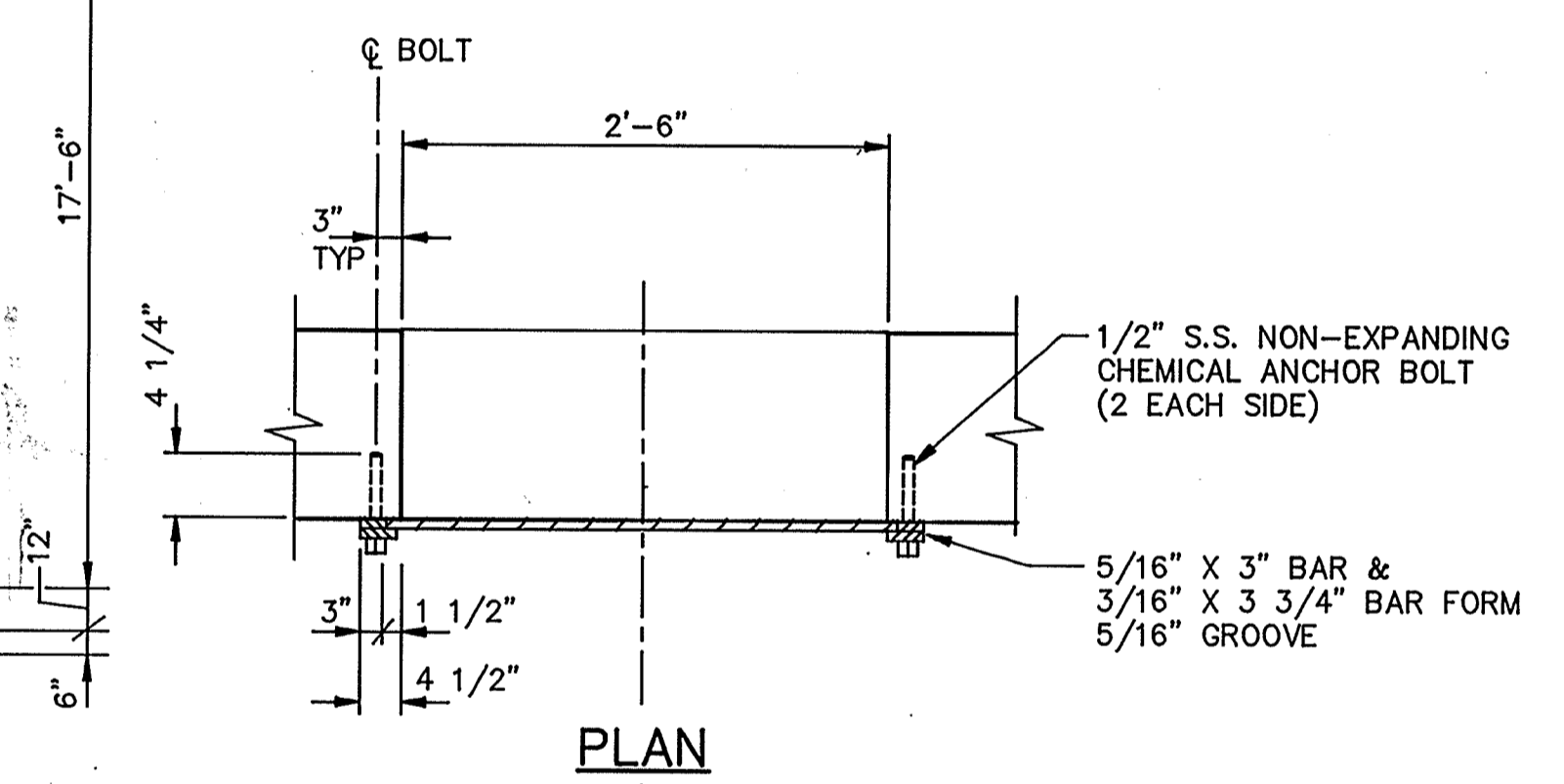
7 2S4

36" Ø PIPE INV. EL. 143.73

CONTROL JT. W/W.S. EL. 143.73 L.P. EL. 145.50

C.I. FLOOR BOX FOR MUD VALVE OPERATOR (TYP.)

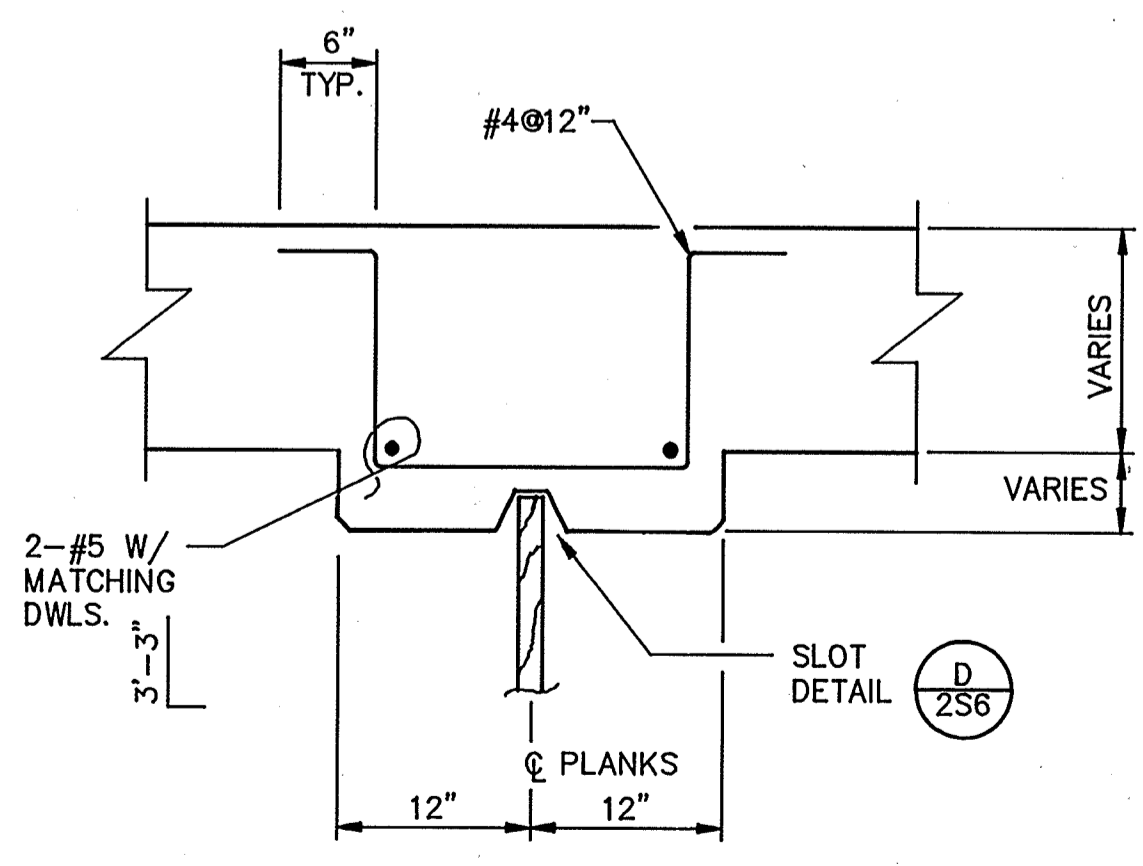
18" CEMENT MORTAR LINED & COATED STL. PIPE (TYP. FOR 36)



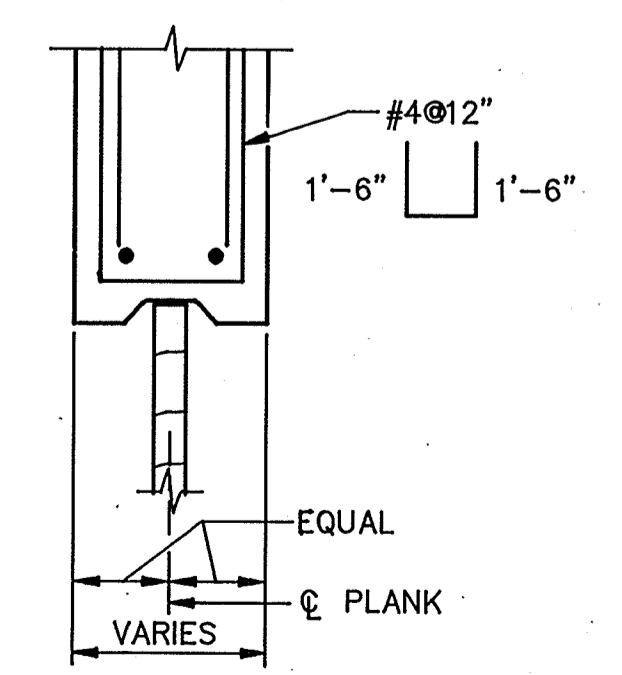
DETAIL E
 SCALE: 1" = 1'-0"

AS-BUILT

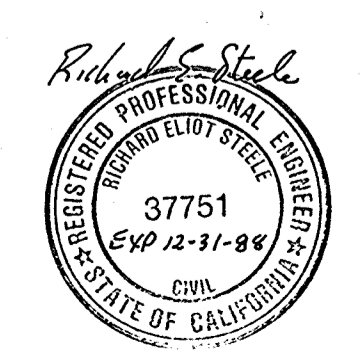
PTM 5/10/91
 SIGNATURE DATE



DETAIL C
 SCALE: 1" = 1'-0"



DETAIL D
 SCALE: 1" = 1'-0"



Date	Ch'k'd	Revision

Designed by: JWI
 Drawn by: KC, LS
 Checked by: JMH
 Approved by: RES

Date: 9/88
 Scale: AS SHOWN

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

SEDIMENTATION/FLOCCULATION BASIN PARTIAL

PLAN & DETAILS

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

CDM
 environmental engineers, scientists,
 planners, & management consultants

SHEET NO. 25-2
 50 of 147

111325

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

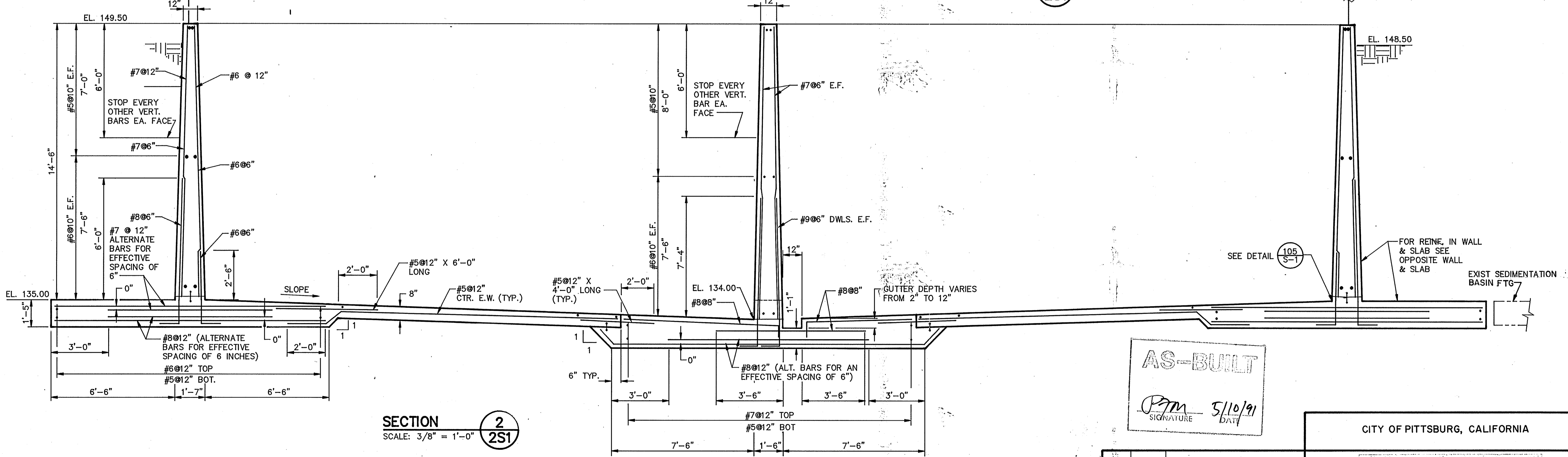
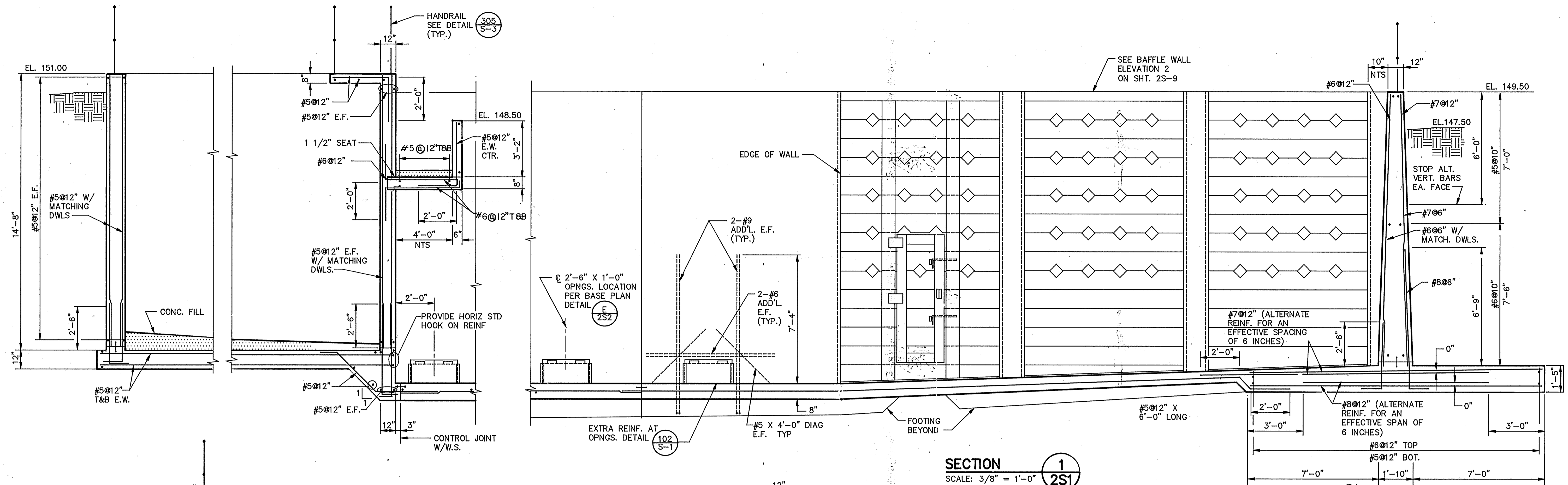
HVAC Approved by: Date:

INSTRUMENTATION Approved by: Date:

ELECTRICAL Approved by: Date:

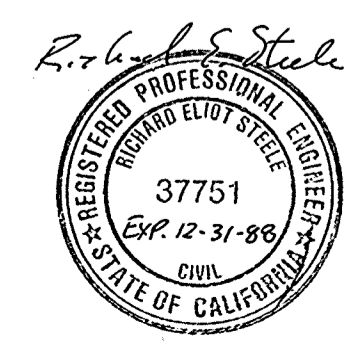
STRUCTURAL Approved by: Date:

ARCHITECTURAL Approved by: Date:



AS-BUILT

PJM 5/10/91
SIGNATURE DATE



Date	Ch'k'd	Revision

Designed by: JVI
 Drawn by: KC, LS
 Checked by: JMH
 Approved by: RES

Date: 9/88
 Scale: AS SHOWN

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

SEDIMENTATION/FLOCCULATION BASIN SECTIONS

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

CDM
 environmental engineers, scientists,
 planners, & management consultants

SHEET NO. 2S-3
 51 of 147

111335

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

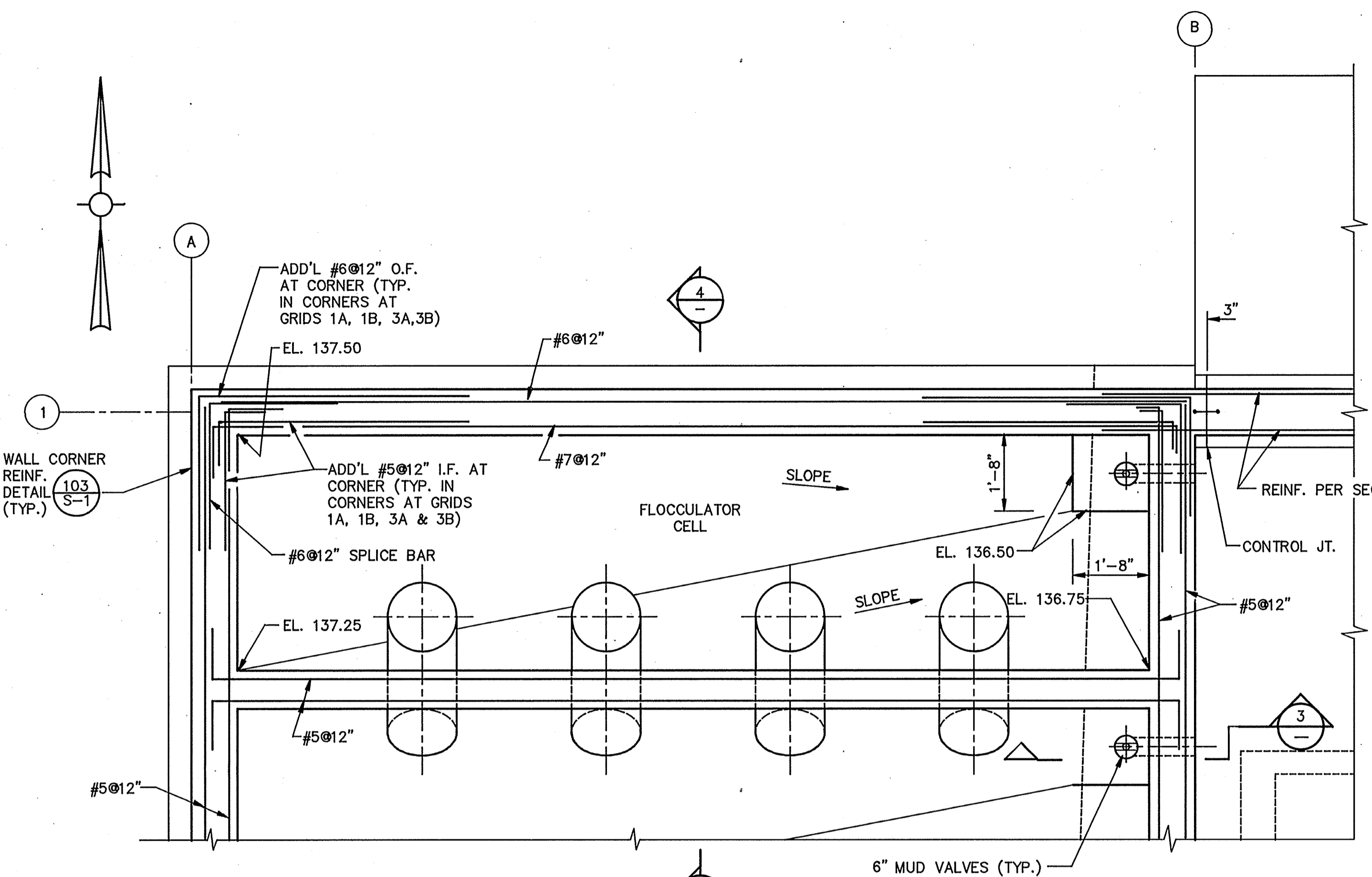
HVAC Approved by: Date:

INSTRUMENTATION Approved by: Date:

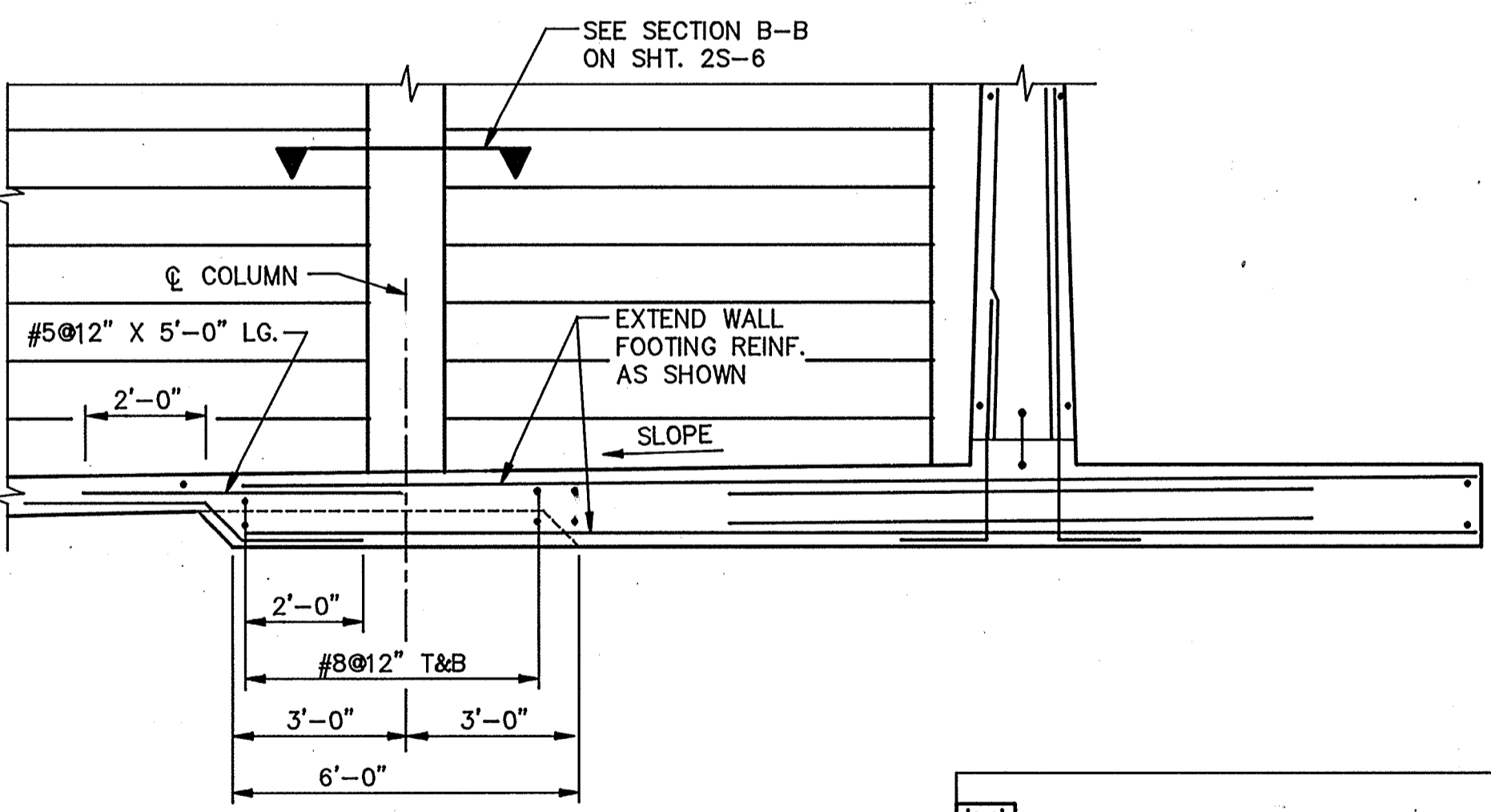
ELECTRICAL Approved by: Date:

STRUCTURAL Approved by: Date:

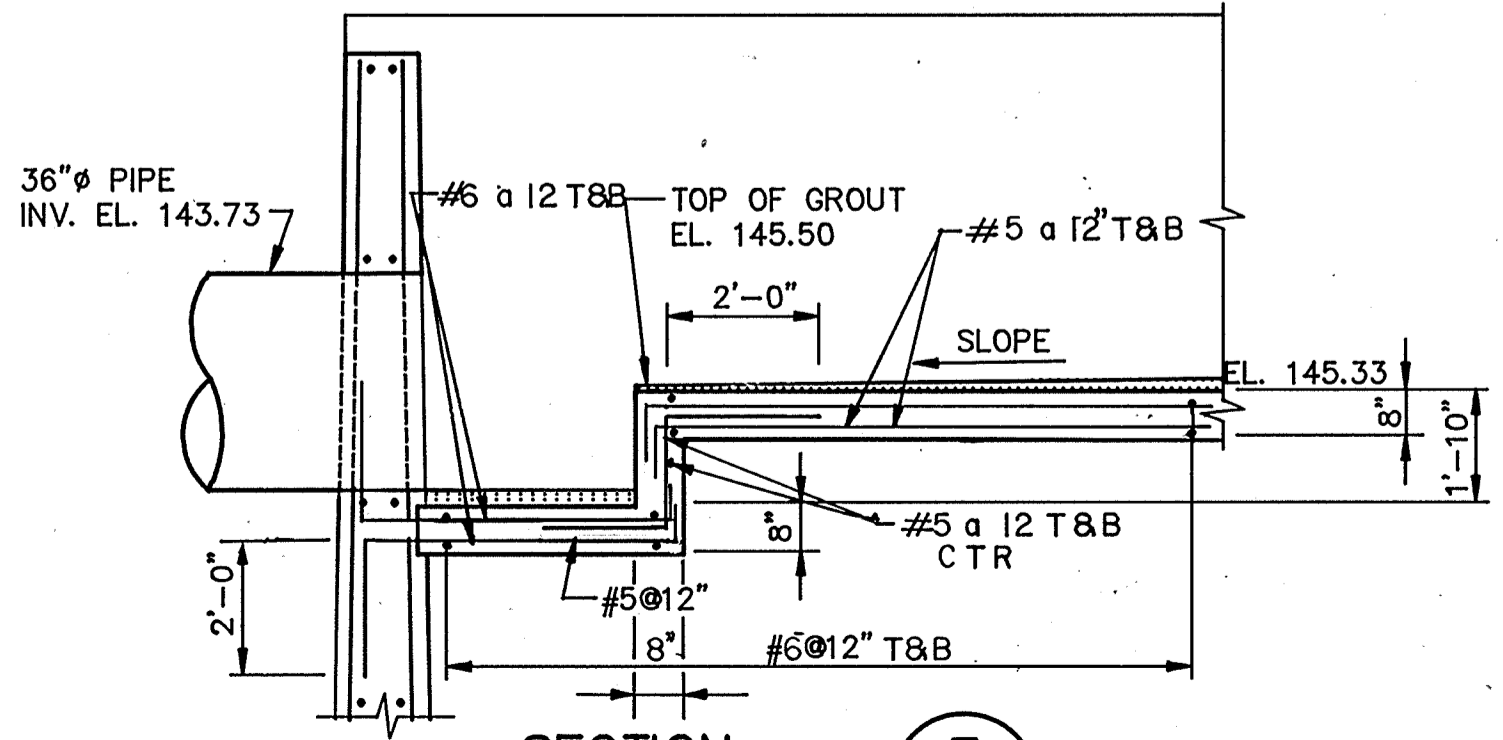
ARCHITECTURAL Approved by: Date:



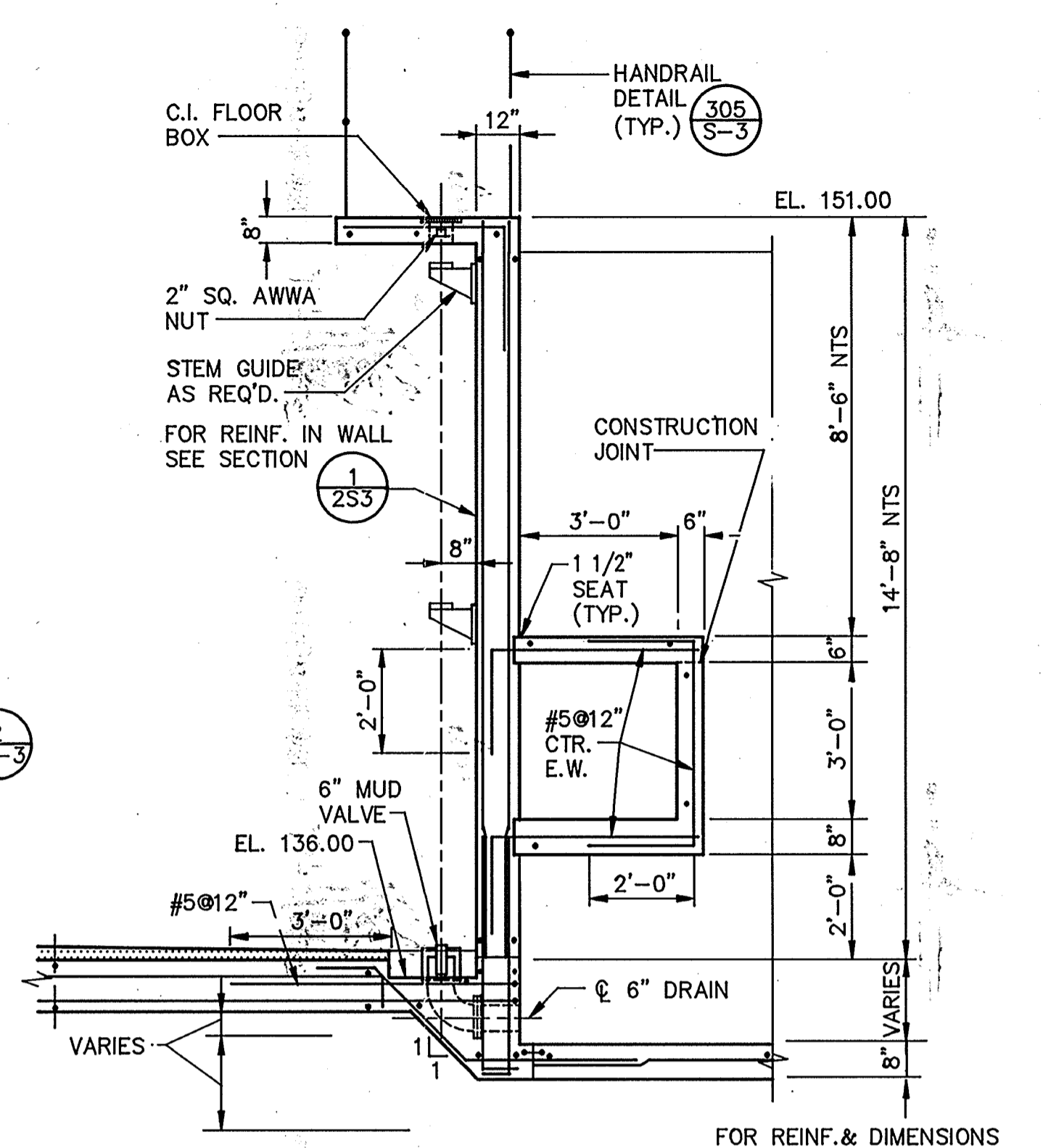
WALL REIN. PLAN AT EL. 138.00
SCALE: 1/2" = 1'-0"



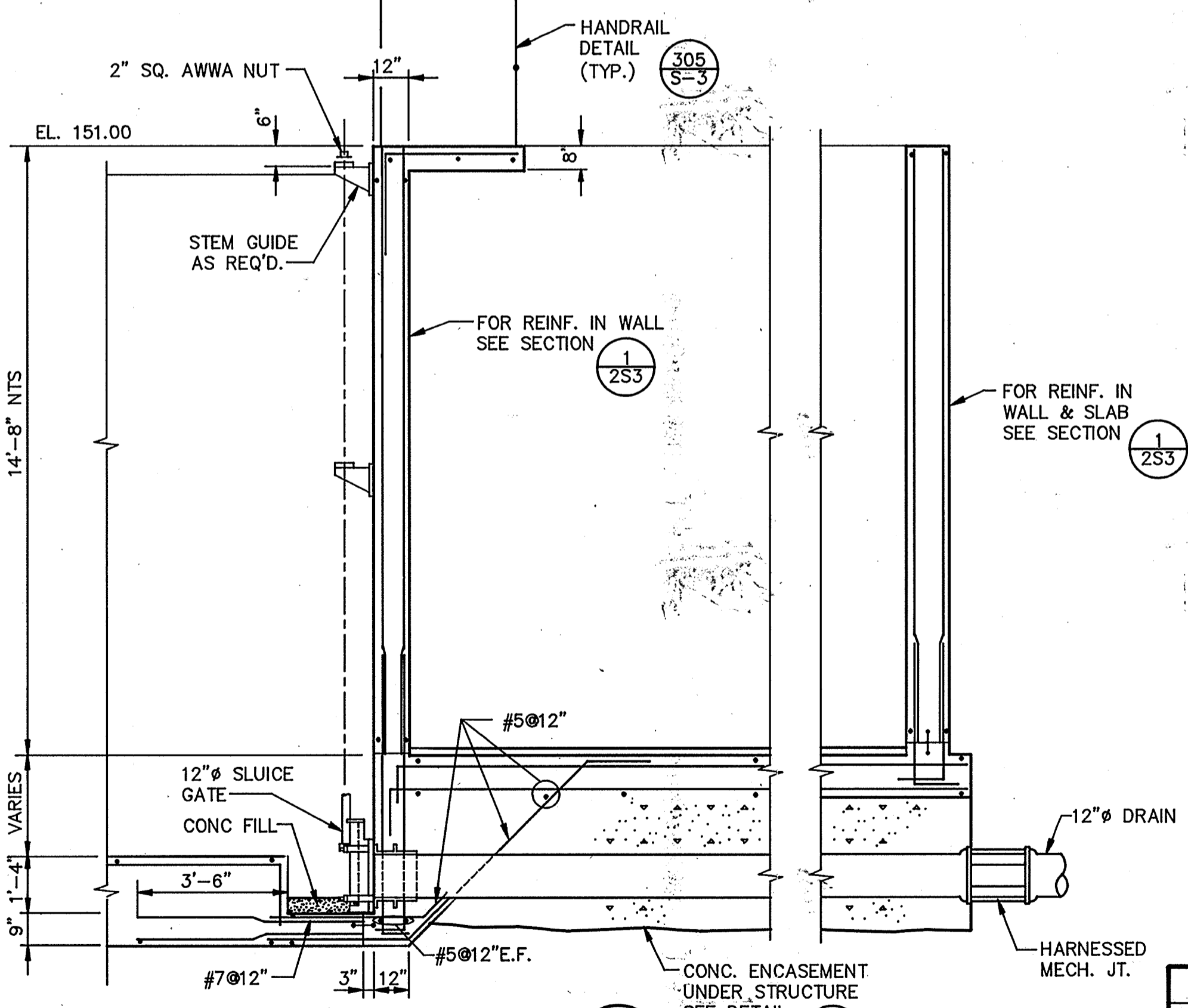
SECTION 6
SCALE: 3/8" = 1'-0"



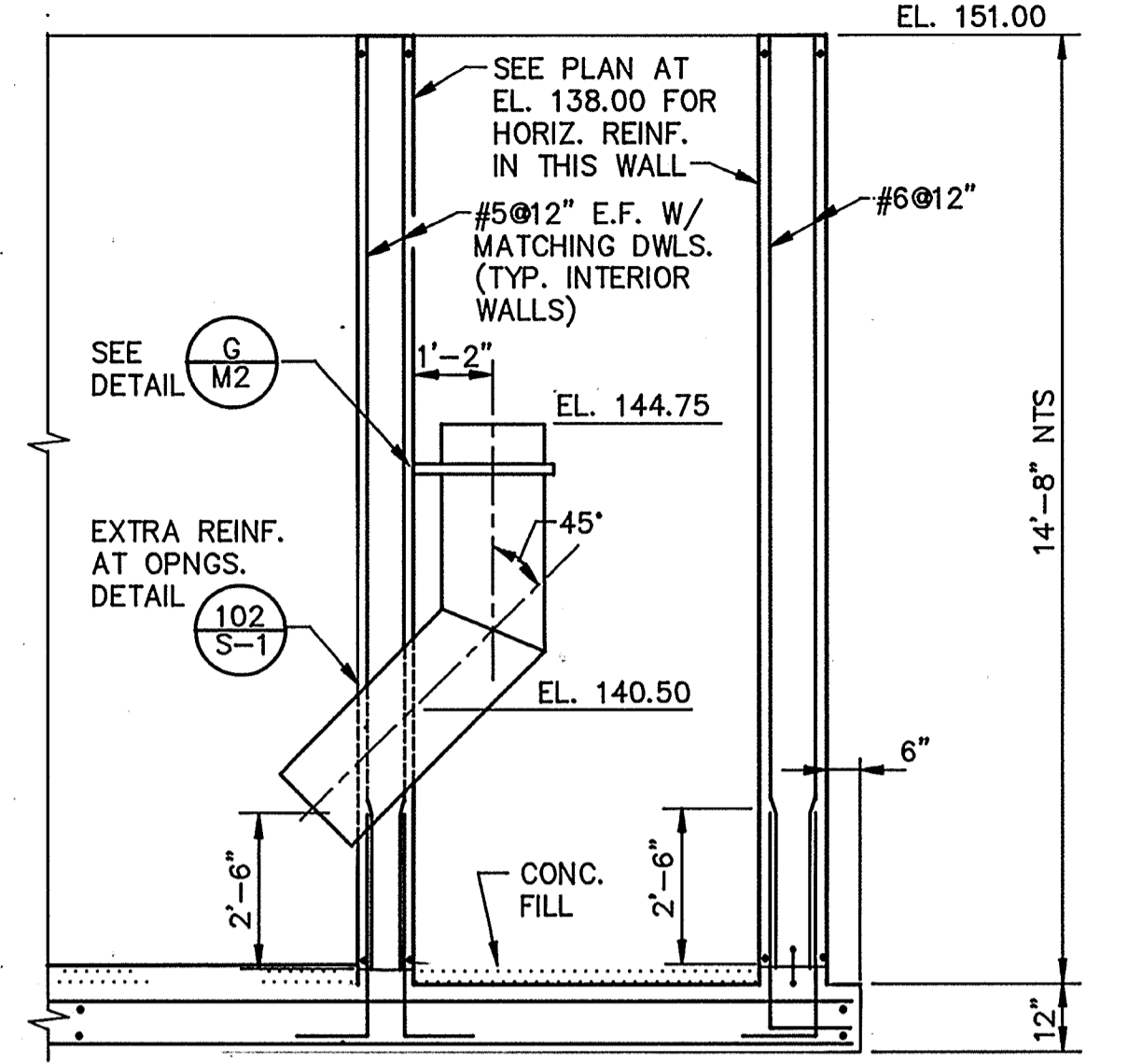
SECTION 7
SCALE: 3/8" = 1'-0"



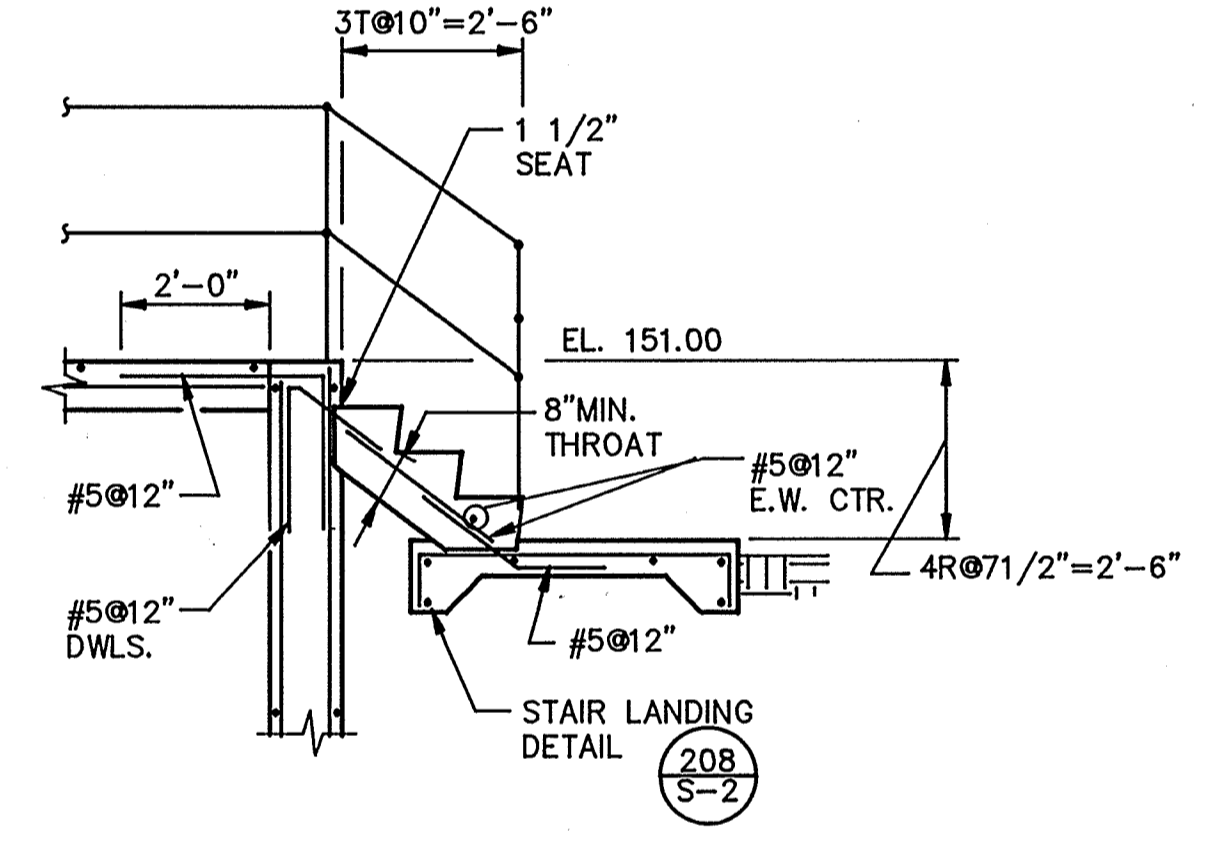
SECTION 3
SCALE: 3/8" = 1'-0"



SECTION 8
SCALE: 3/8" = 1'-0"



SECTION 4
SCALE: 3/8" = 1'-0"



SECTION 5
SCALE: 3/8" = 1'-0"

AS-BUILT

PJM 5/10/91
SIGNATURE DATE

Professional Engineer
37751
Exp. 12-31-88
CIVIL
STATE OF CALIFORNIA

Date	Ch'k'd	Revision

Designed by: JVI
 Drawn by: KC, LS
 Checked by: JMH
 Approved by: RES

Date: 9/88
 Scale: AS SHOWN

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988
 SEDIMENTATION/FLOCCULATION PARTIAL
 PLAN & SECTIONS

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners & management consultants

SHEET NO.
 2S-4
 52 of 147

111325

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

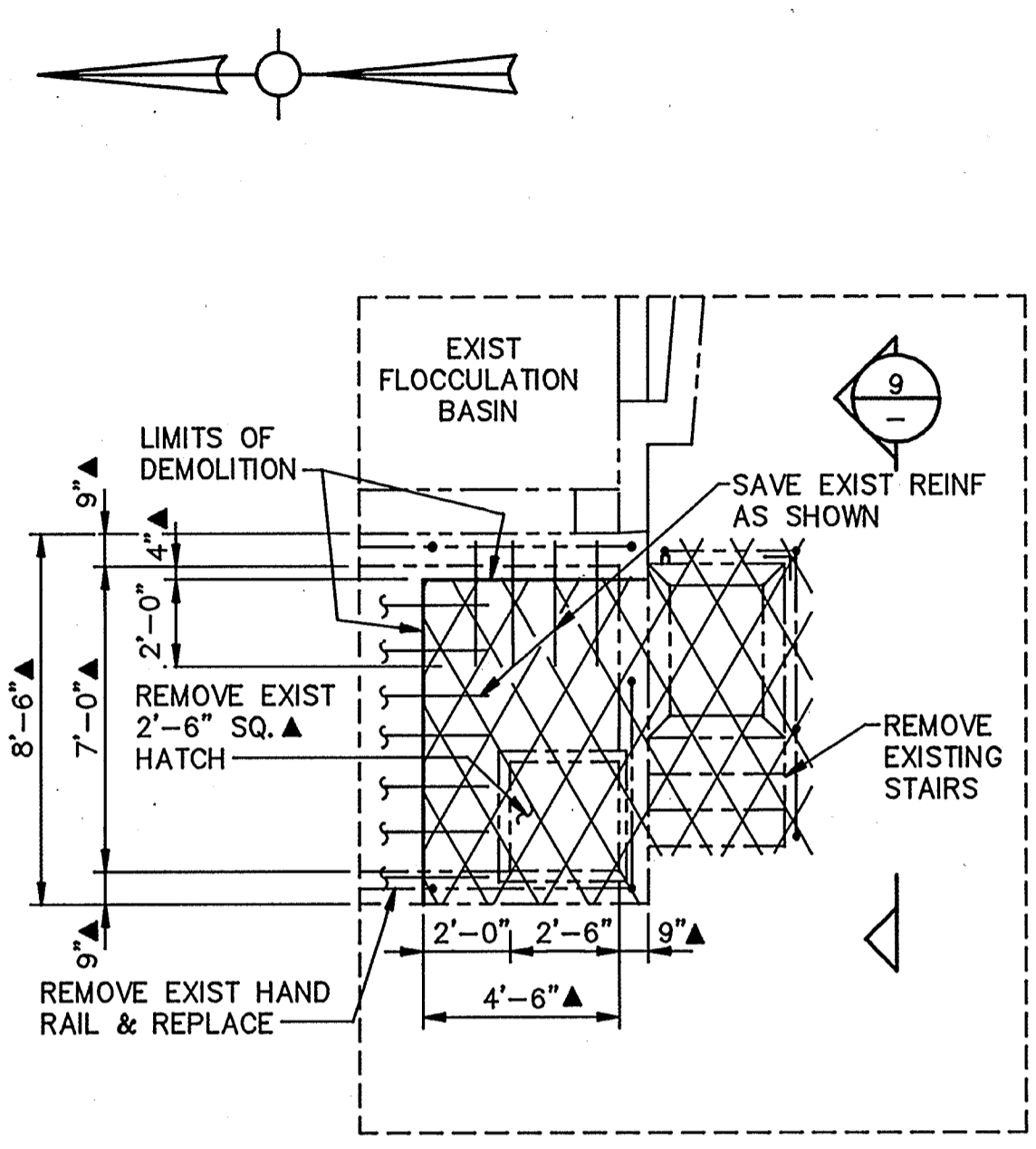
HVAC Approved by: Date:

INSTRUMENTATION Approved by: Date:

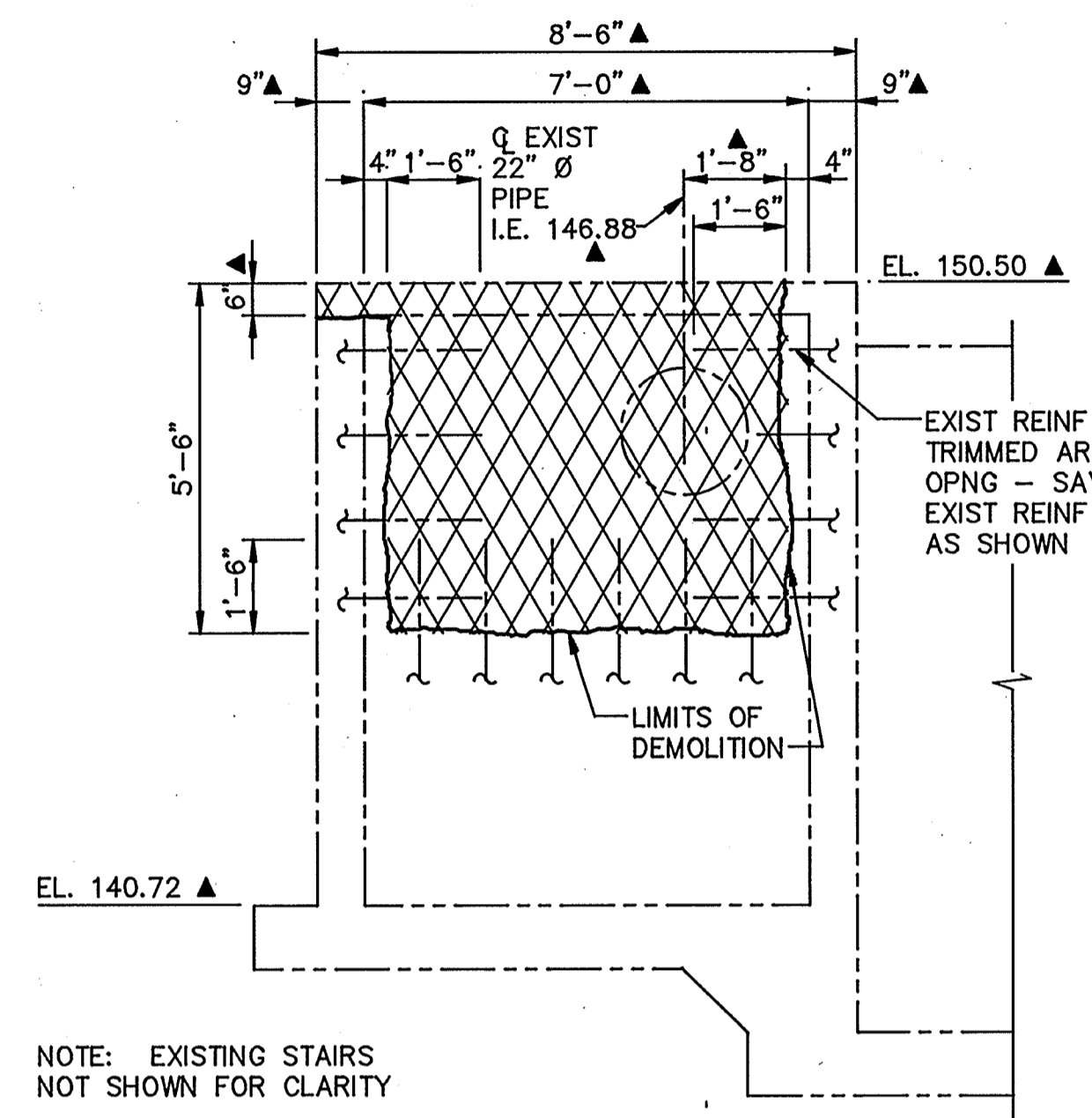
ELECTRICAL Approved by: Date:

STRUCTURAL Approved by: Date:

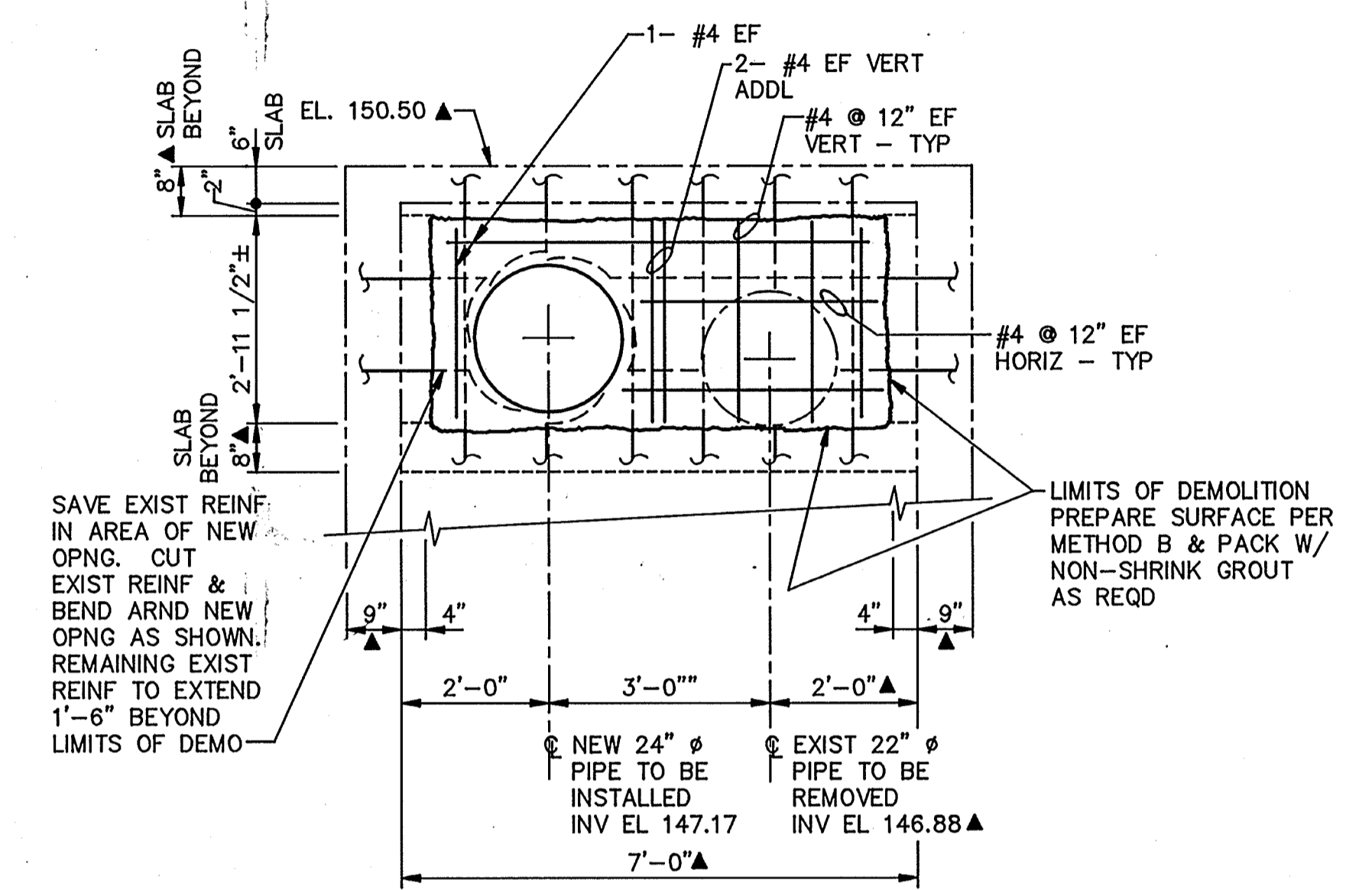
ARCHITECTURAL Approved by: Date:



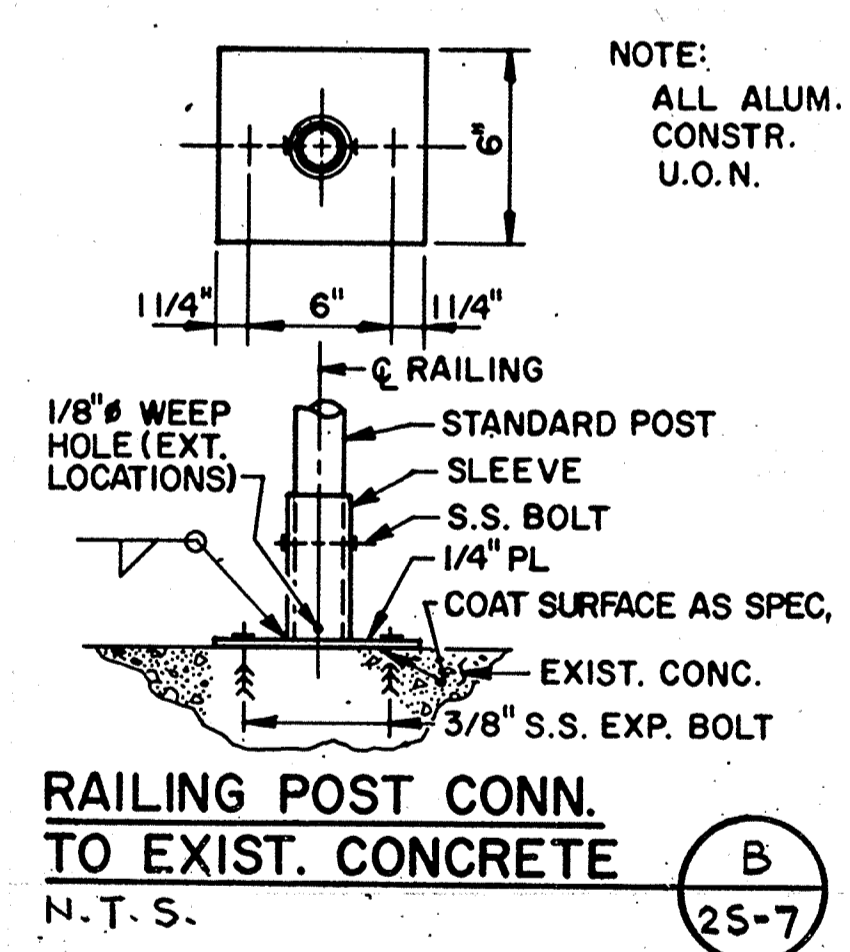
DEMOLITION PARTIAL PLAN
SCALE: 1/4" = 1'-0"



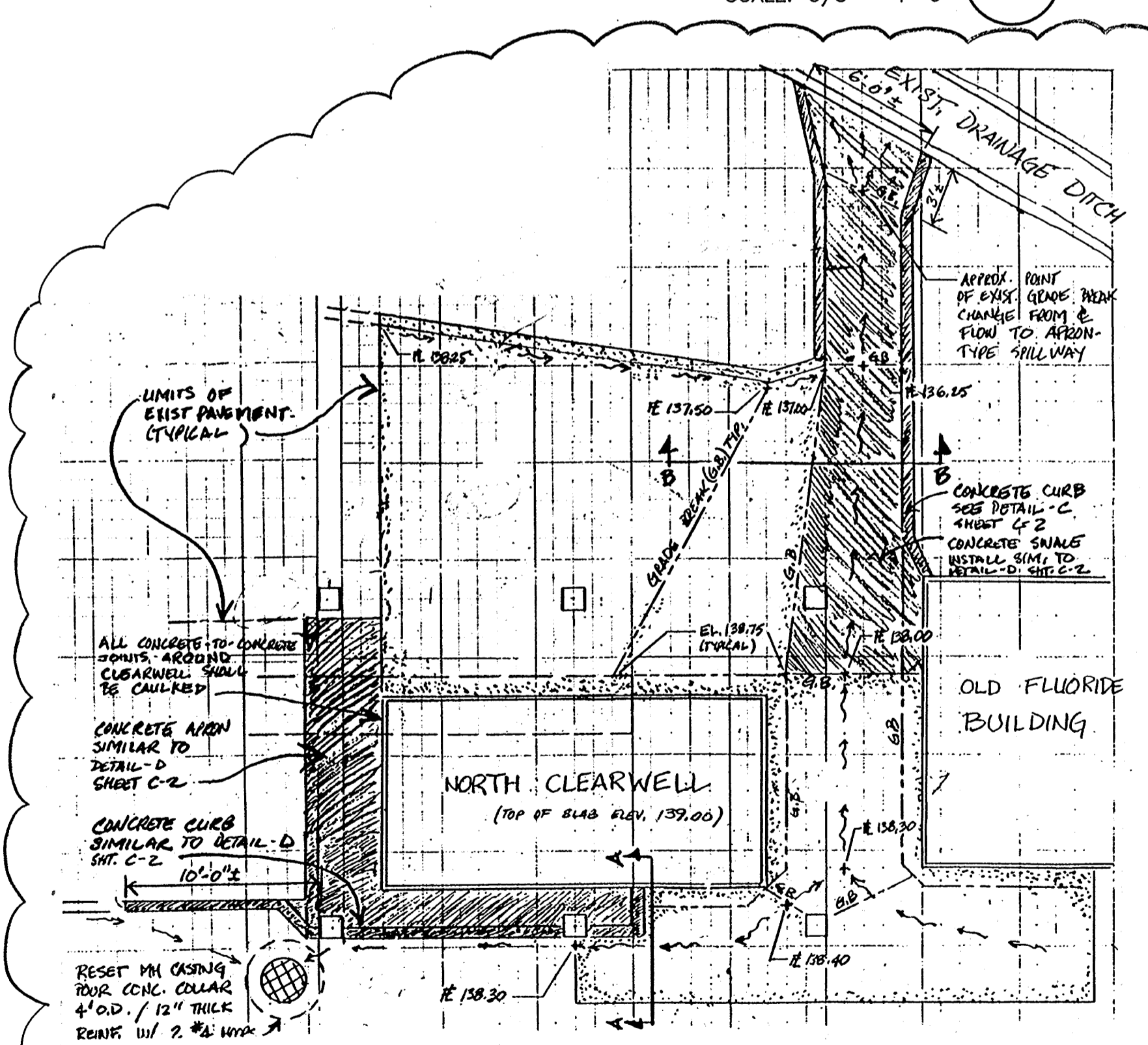
SECTION 9
SCALE: 3/8" = 1'-0"



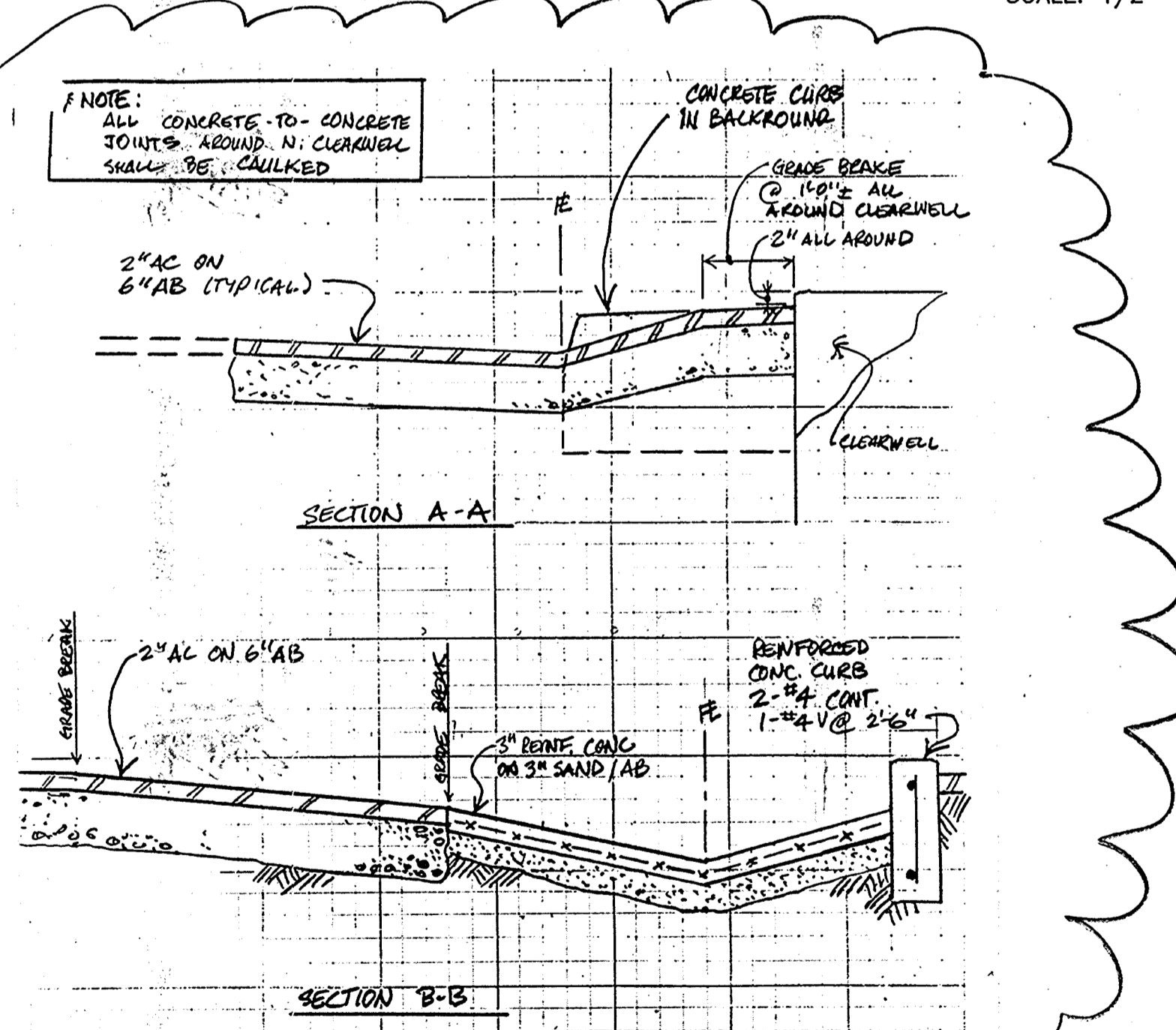
DETAIL F
SCALE: 1/2" = 1'



B
25-7

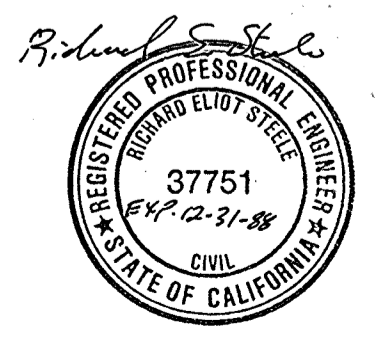


DETAIL C
N.T.S.



AS-BUILT

JPM 5/10/91
SIGNATURE DATE



4/11/91	REVISOR	REVISION
Date	Ch'k'd	Revision
Designed by: JVI	Drawn by: KC,LS	Date: 9/88
Checked by: JMH	Approved by: RES	Scale: AS SHOWN

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

SEDIMENTATION/FLOCCULATION BASIN

MISCELLANEOUS DETAILS

CAMP DRESSER & MCKEE INC. 710 South Broadway Walnut Creek, CA 94596

CDM environmental engineers, scientists, planners & management consultants

SHEET NO. 25-5
53 of 147

111325

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

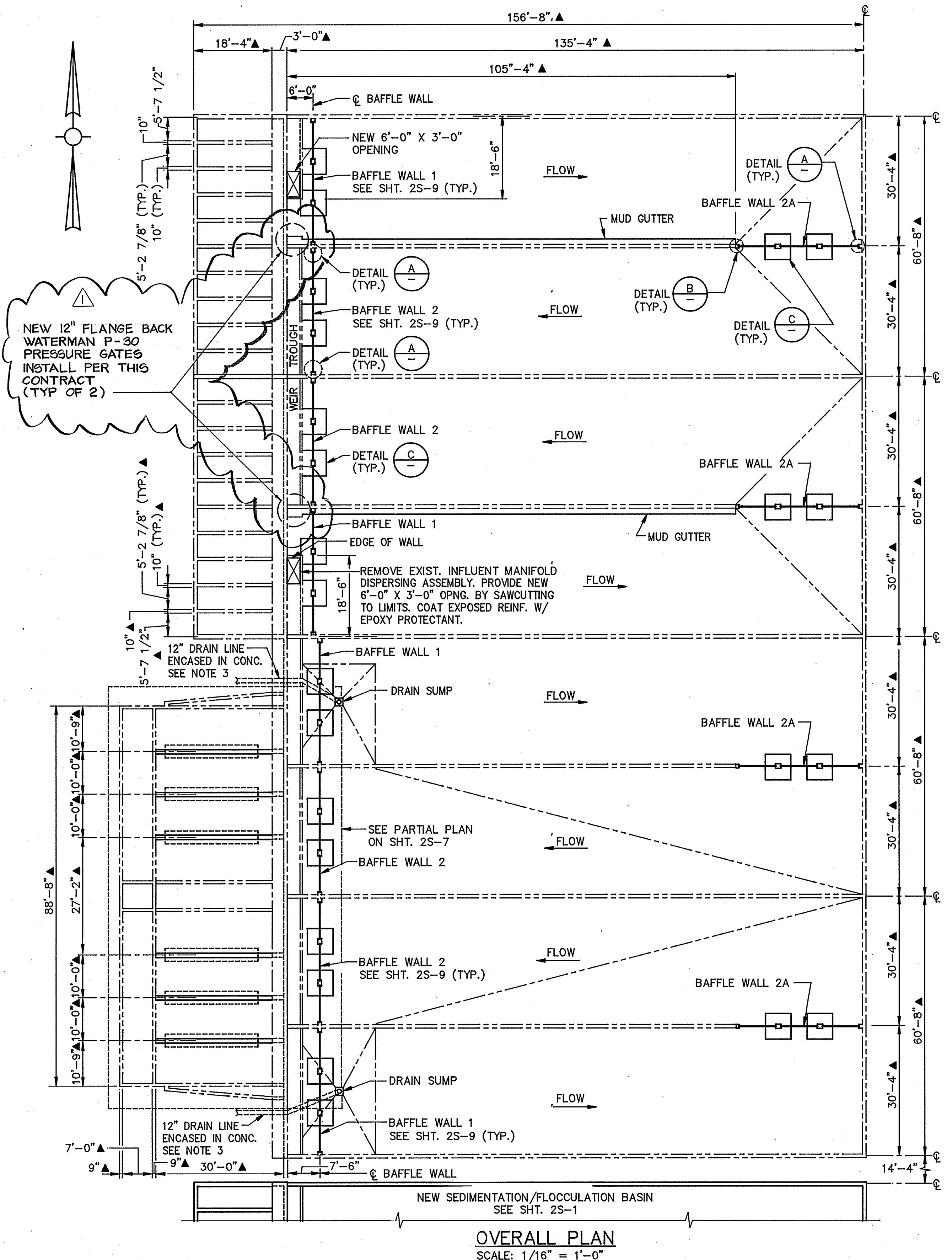
HVAC Approved by: Date:

INSTRUMENTATION Approved by: Date:

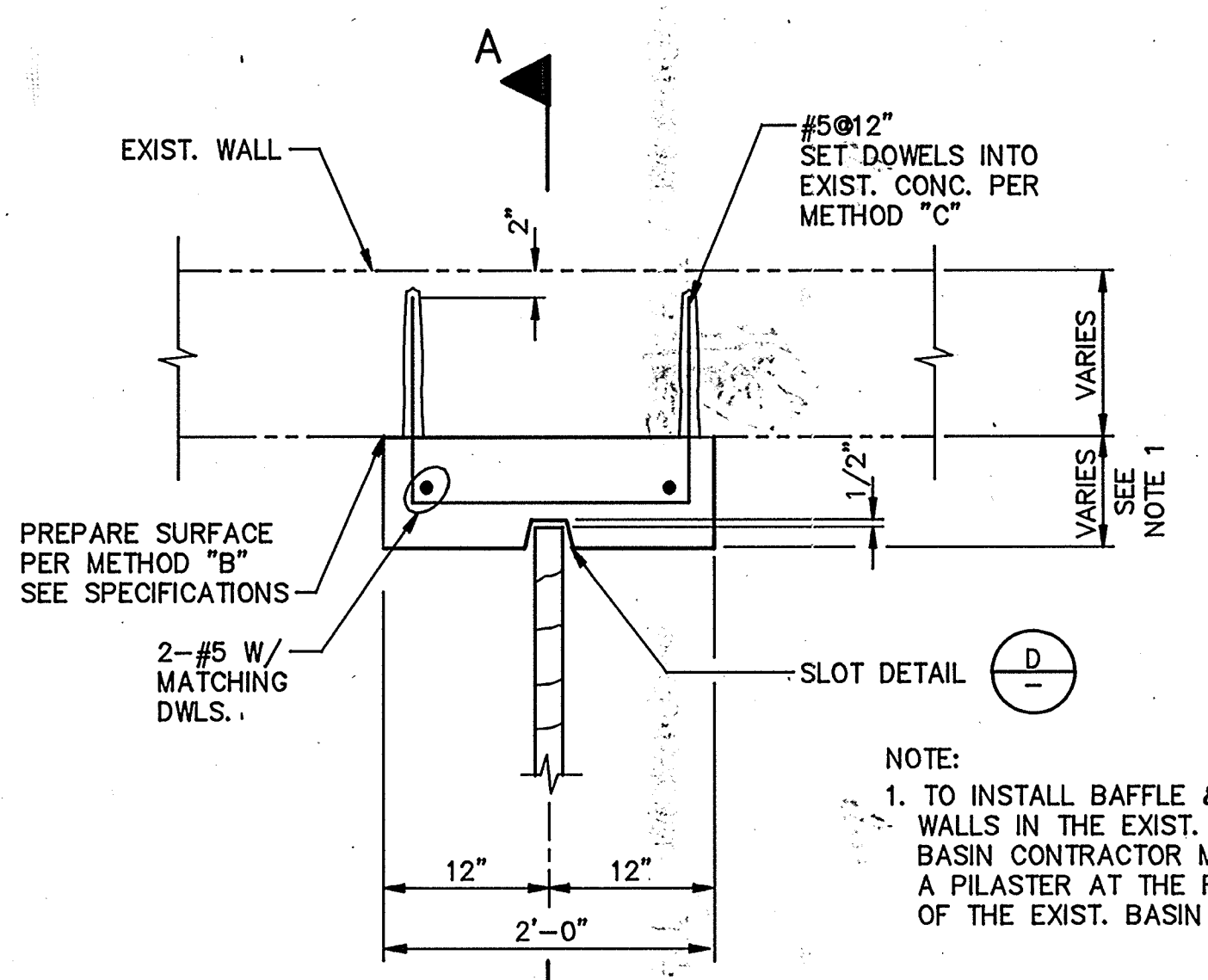
ELECTRICAL Approved by: Date:

STRUCTURAL Approved by: Date:

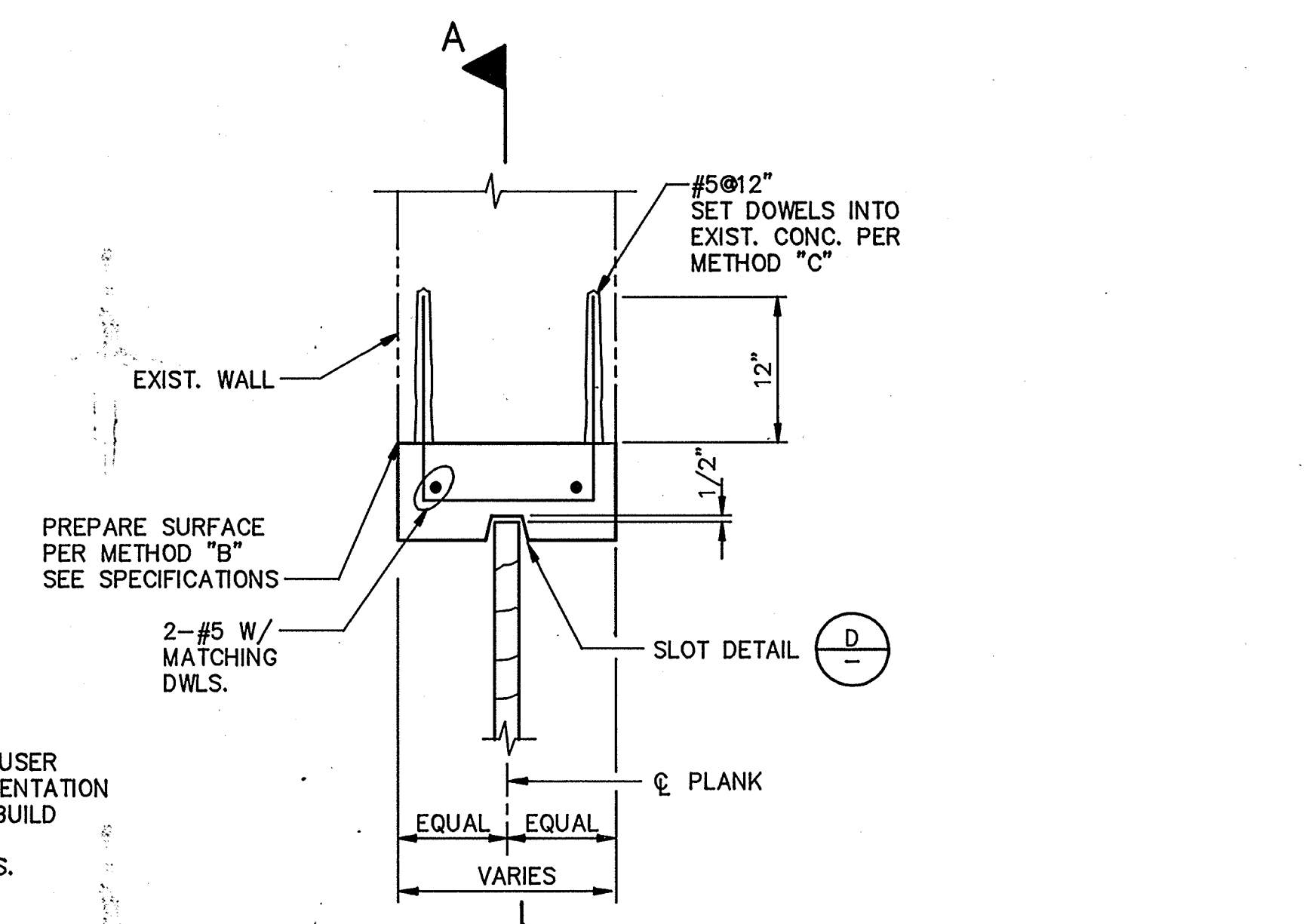
ARCHITECTURAL Approved by: Date:



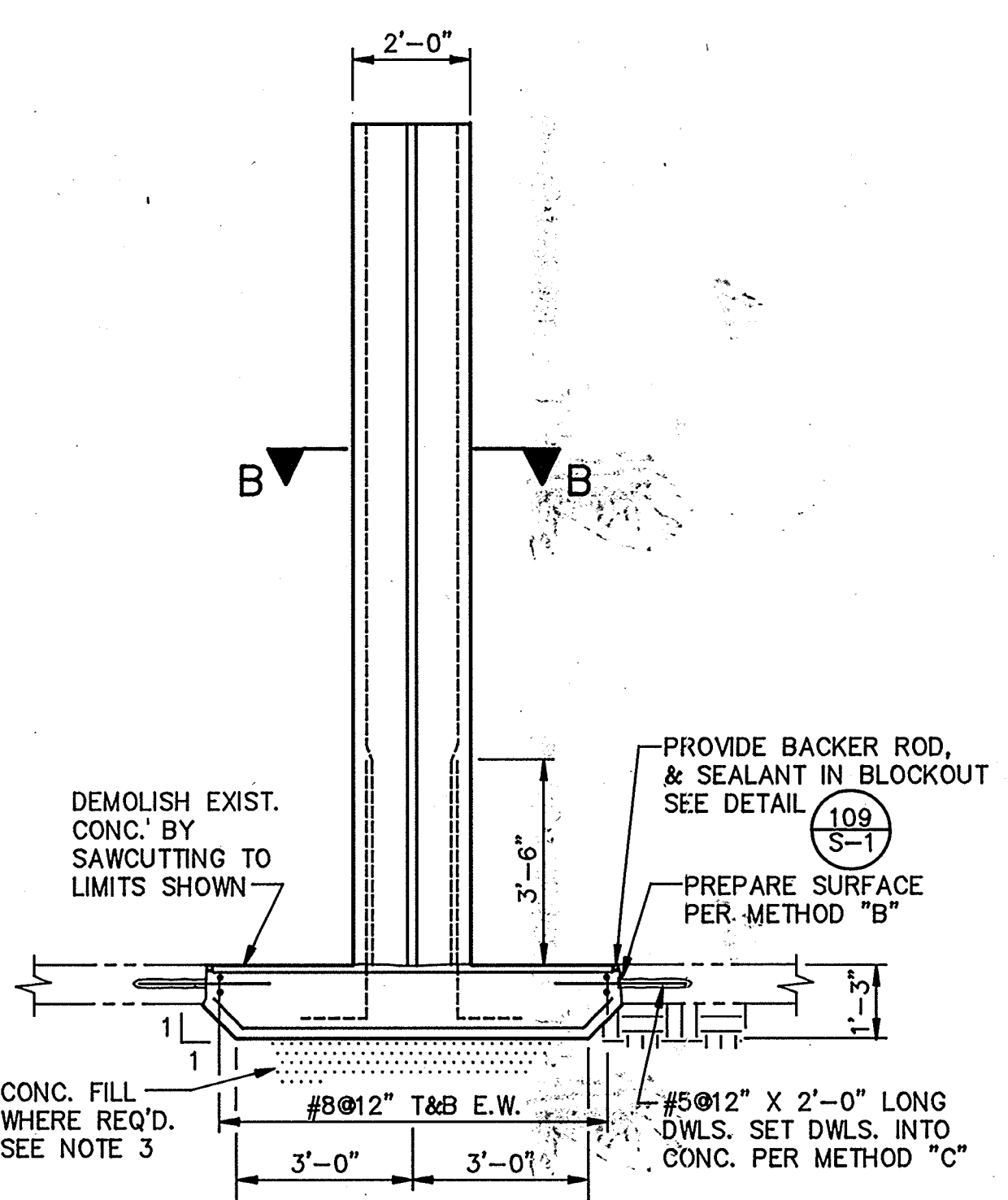
OVERALL PLAN
SCALE: 1/16" = 1'-0"



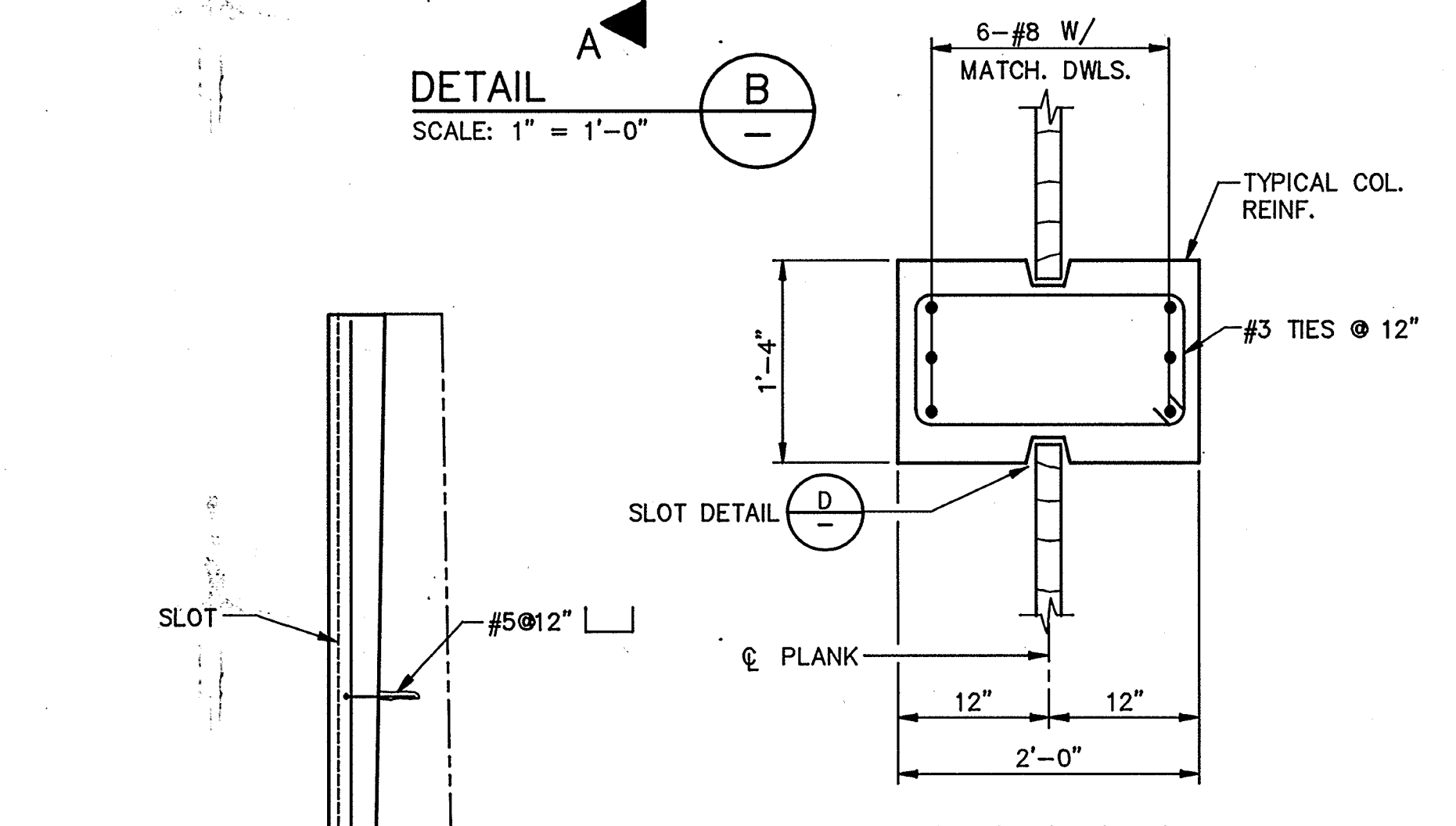
DETAIL A
SCALE: 1" = 1'-0"



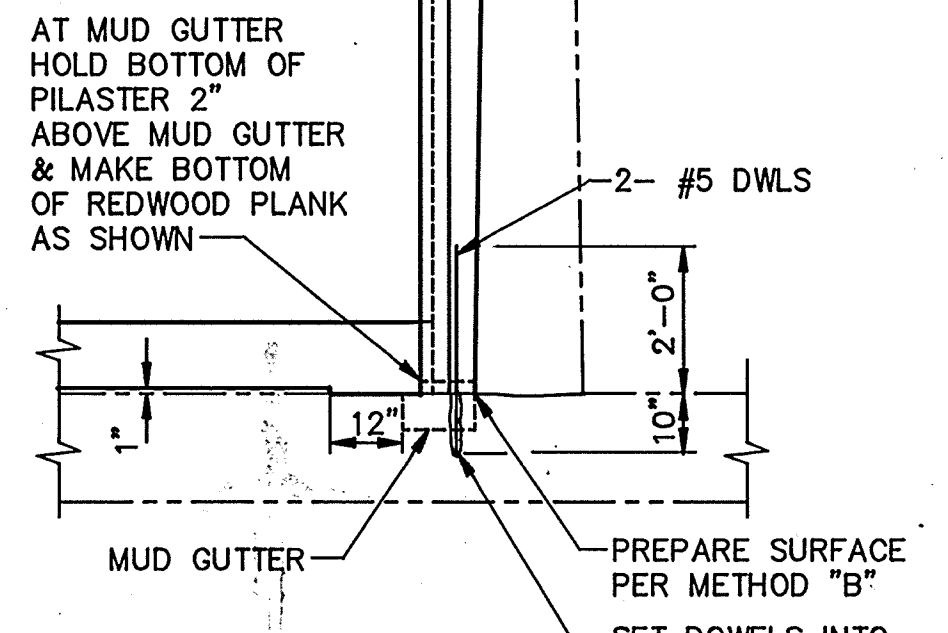
DETAIL B
SCALE: 1" = 1'-0"



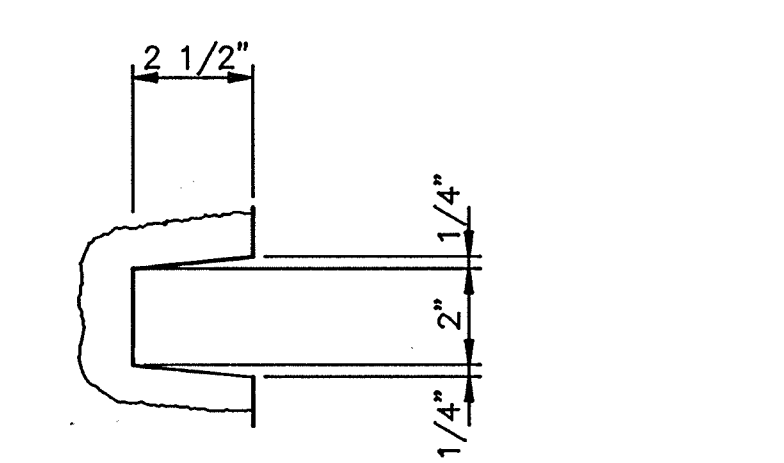
DETAIL C
SCALE: 3/8" = 1'-0"



SECTION B-B
SCALE: 1" = 1'-0"



SECTION A-A
SCALE: 3/8" = 1'-0"

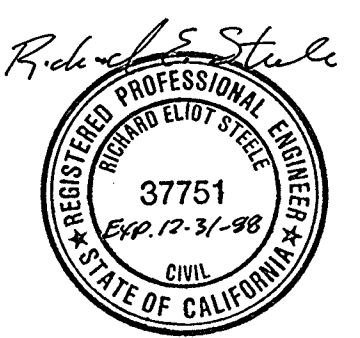


TYPICAL SLOT DETAIL
SCALE: 3" = 1'-0"

- NOTES:
- FOR BAFFLE WALL 1 SEE BAFFLE WALL ELEVATION 1 ON SHT. 2S-9
 - FOR BAFFLE WALL 2 & 2A SEE BAFFLE WALL ELEVATION 2 ON SHT. 2S-9
 - WHERE BAFFLE WALL SUPPORT COLUMN IS ADJACENT TO A CONC. ENCASED PIPE, OVER EXCAVATE BELOW COLUMN FTG. TO BOTTOM OF ENCASEMENT & FILL W/ LEAN CONCRETE TO BOTTOM OF FTG. ELEVATION.
 - FOR SUBGRADE PREPARATION AND EXCAVATION SEE SPEC. SECTION 02220

AS-BUILT

Pjm 5/10/91
SIGNATURE DATE



Date	4/12/91	Revision	REVISOR FOR THE RECORD
Ch'k'd		Revision	
Designed by:	JWL	Date:	9/88
Drawn by:	KC, LS	Scale:	AS SHOWN
Checked by:	JMH		
Approved by:	RES		

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

EXISTING FLOCCULATION/SEDIMENTATION BASINS MODIFICATIONS - PLAN, SECTION & DETAILS

CAMP DRESSER & MCKEE INC. **CDM**
710 South Broadway
Walnut Creek, CA 94596
environmental engineers, scientists, planners, & management consultants

SHEET NO. 2S-6
54 of 147

111355

ARCHITECTURAL Approved by: _____ Date: _____

STRUCTURAL Approved by: _____ Date: _____

ELECTRICAL Approved by: _____ Date: _____

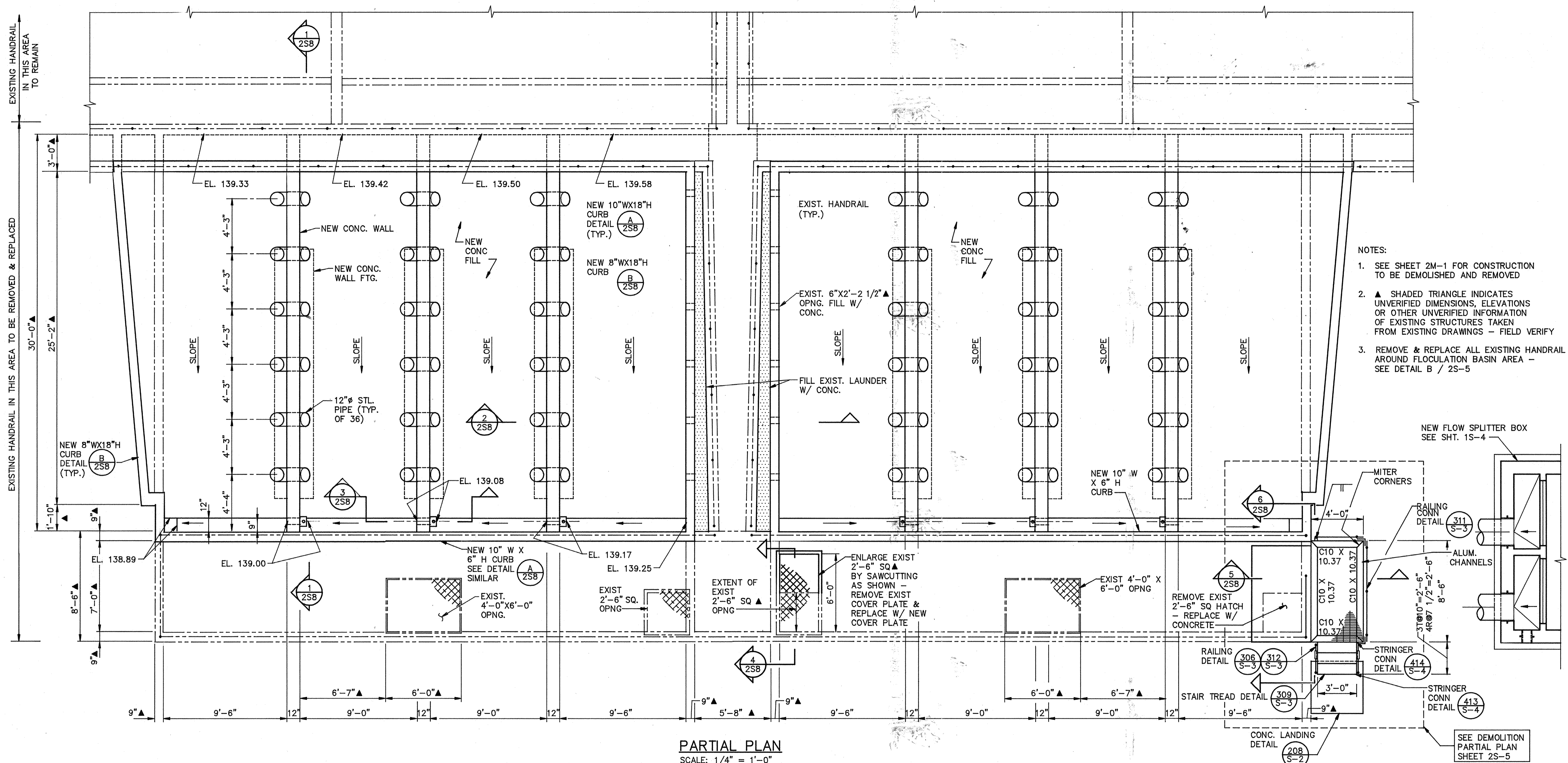
INSTRUMENTATION Approved by: _____ Date: _____

HVAC Approved by: _____ Date: _____

PLUMBING Approved by: _____ Date: _____

PROJECT ENGINEER Approved by: _____ Date: _____

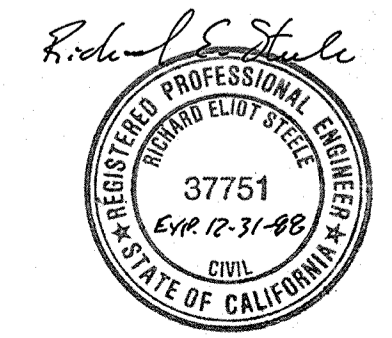
PROJECT MANAGER Approved by: _____ Date: _____



- NOTES:
1. SEE SHEET 2M-1 FOR CONSTRUCTION TO BE DEMOLISHED AND REMOVED
 2. ▲ SHADED TRIANGLE INDICATES UNVERIFIED DIMENSIONS, ELEVATIONS OR OTHER UNVERIFIED INFORMATION OF EXISTING STRUCTURES TAKEN FROM EXISTING DRAWINGS - FIELD VERIFY
 3. REMOVE & REPLACE ALL EXISTING HANDRAIL AROUND FLOCCULATION BASIN AREA - SEE DETAIL B / 2S-5

AS-BUILT

OTM 5/10/91
SIGNATURE DATE



Date	Ch'k'd	Revision

Designed by: JWI
 Drawn by: KC, LS
 Checked by: JMH
 Approved by: RES

Date: _____
 Scale: AS SHOWN

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988
 EXISTING FLOCCULATION/SEDIMENTATION BASIN
 MODIFICATIONS - PARTIAL PLAN

CAMP DRESSER & MCKEE INC.

710 South Broadway
 Walnut Creek, CA 94596

environmental engineers, scientists,
 planners & management consultants

SHEET NO.
2S-7

55 of 147

111935

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

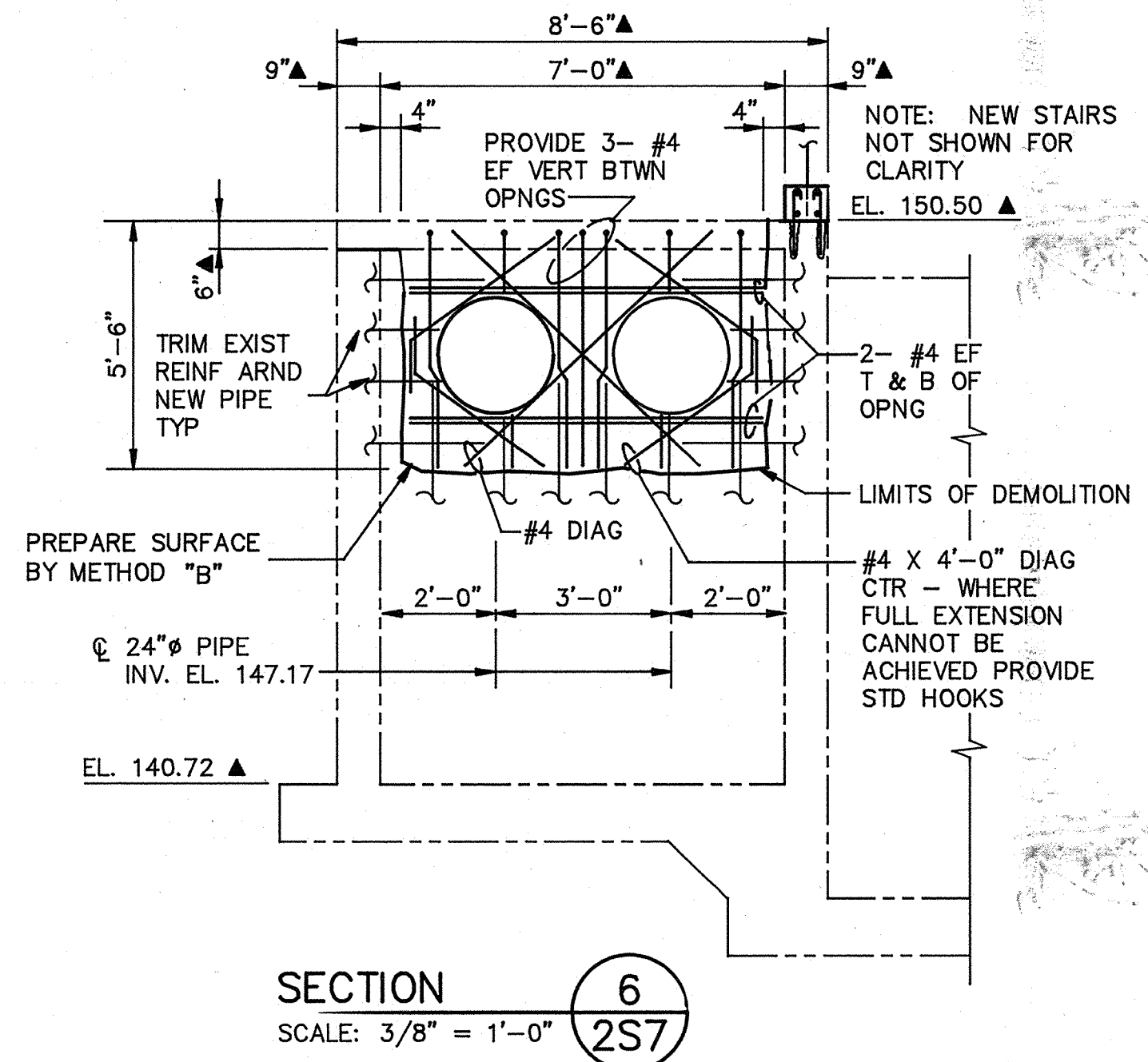
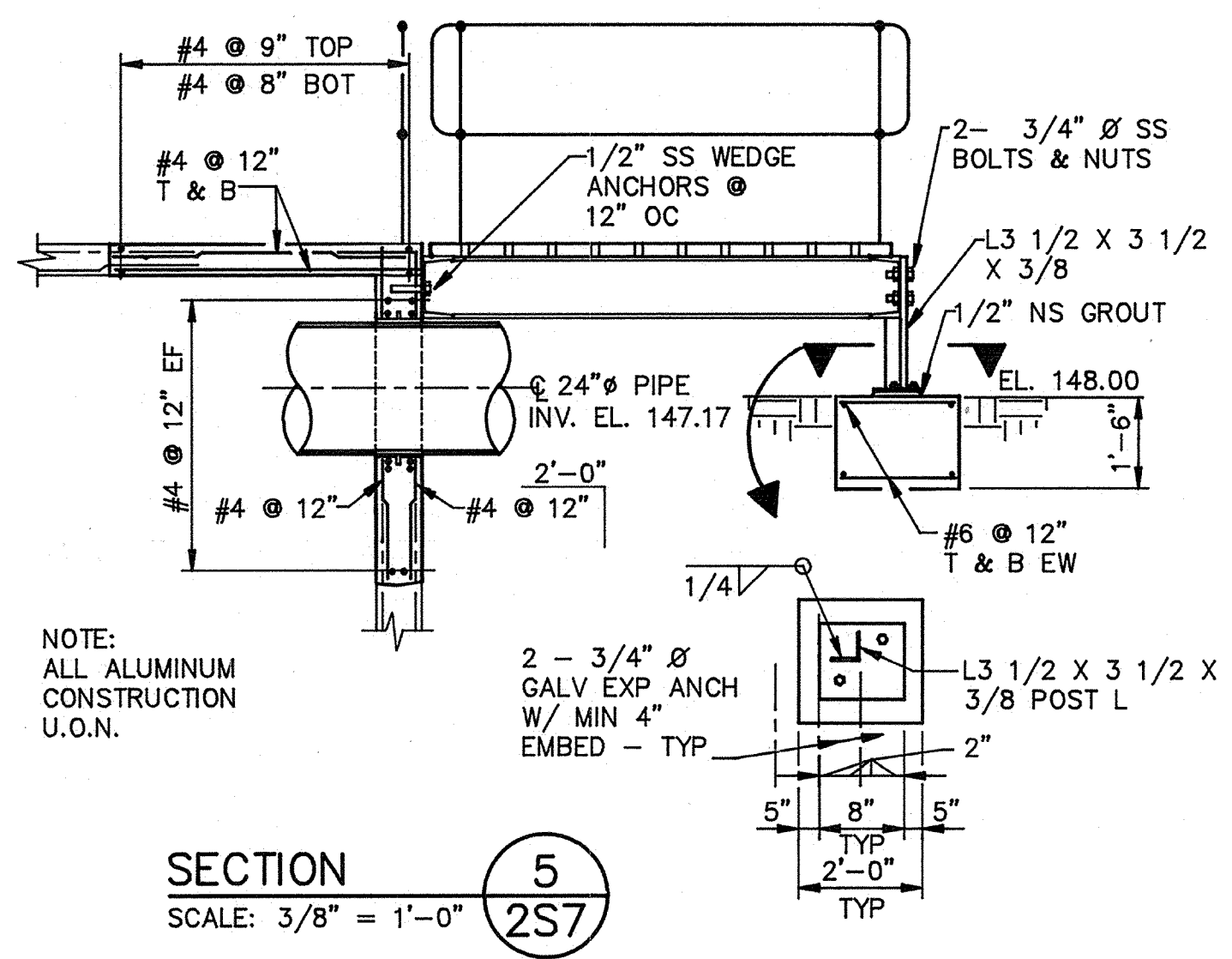
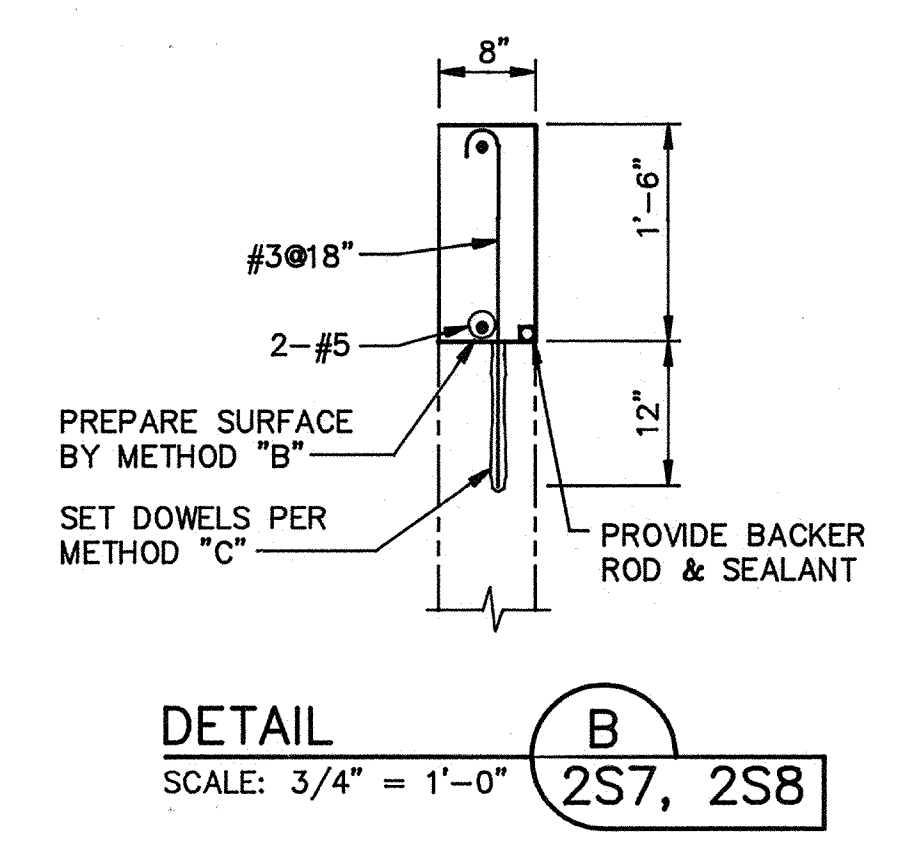
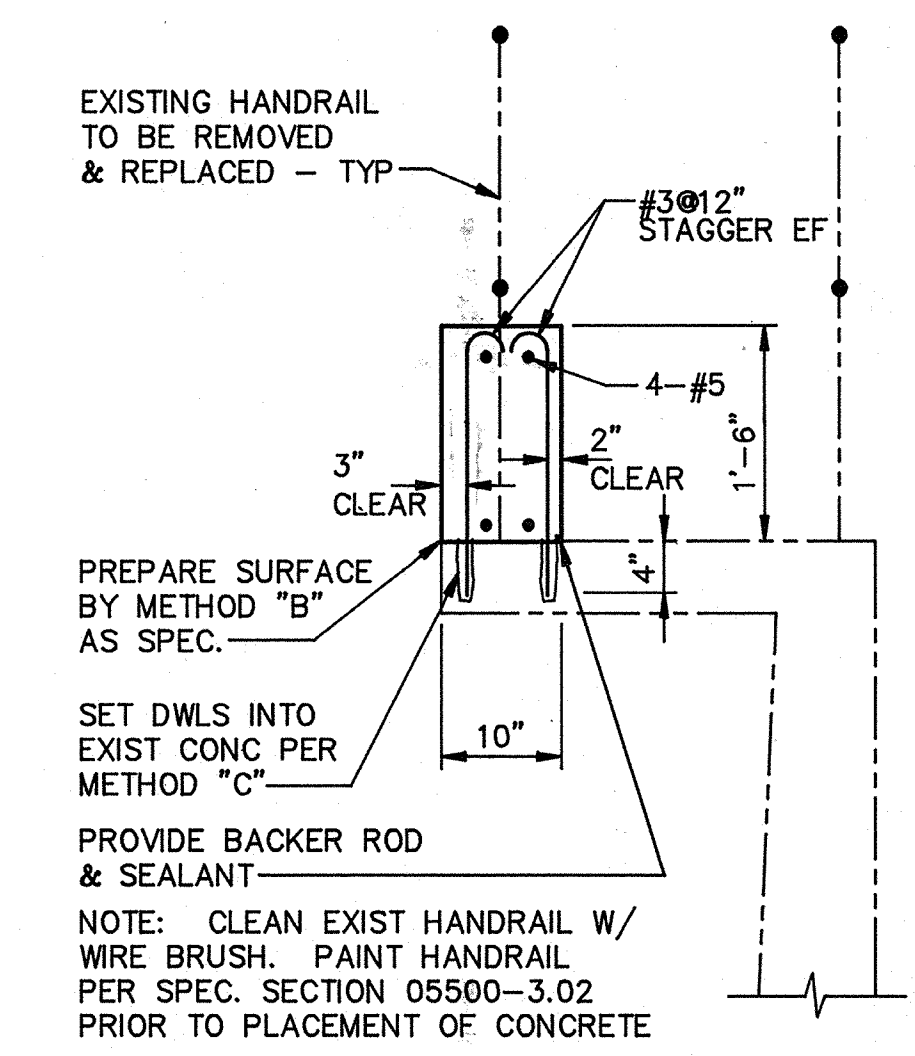
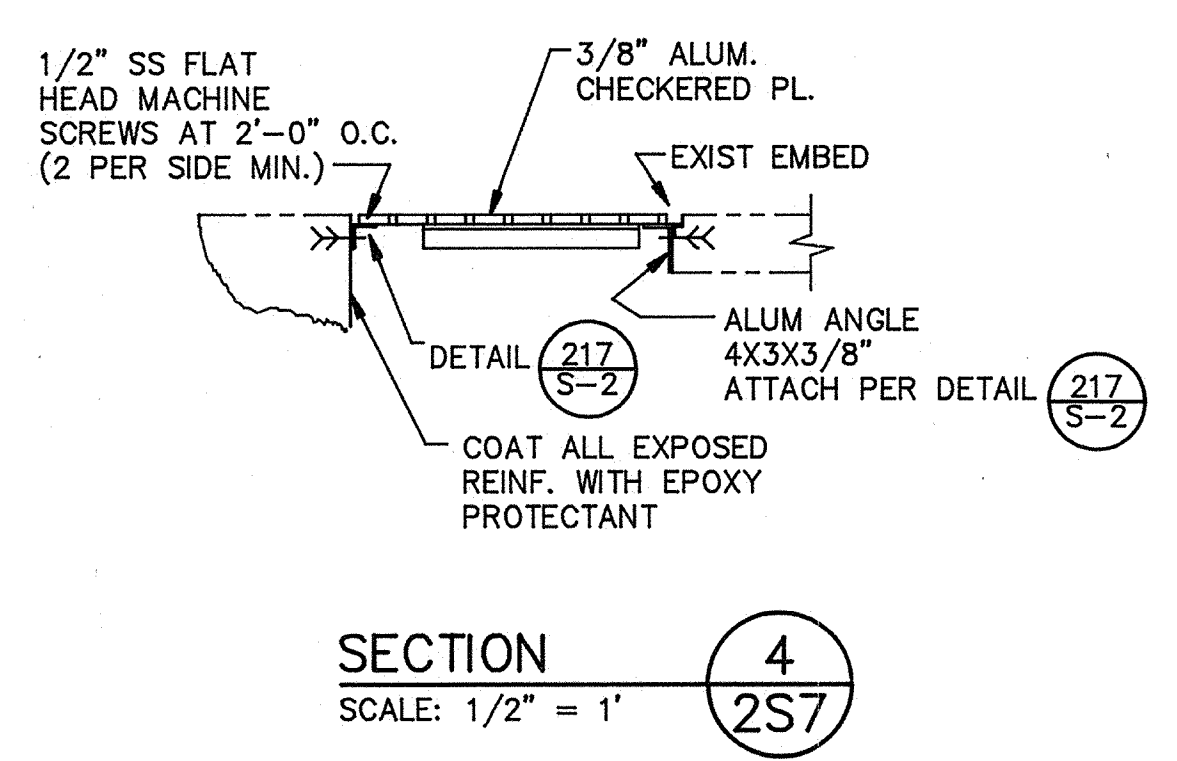
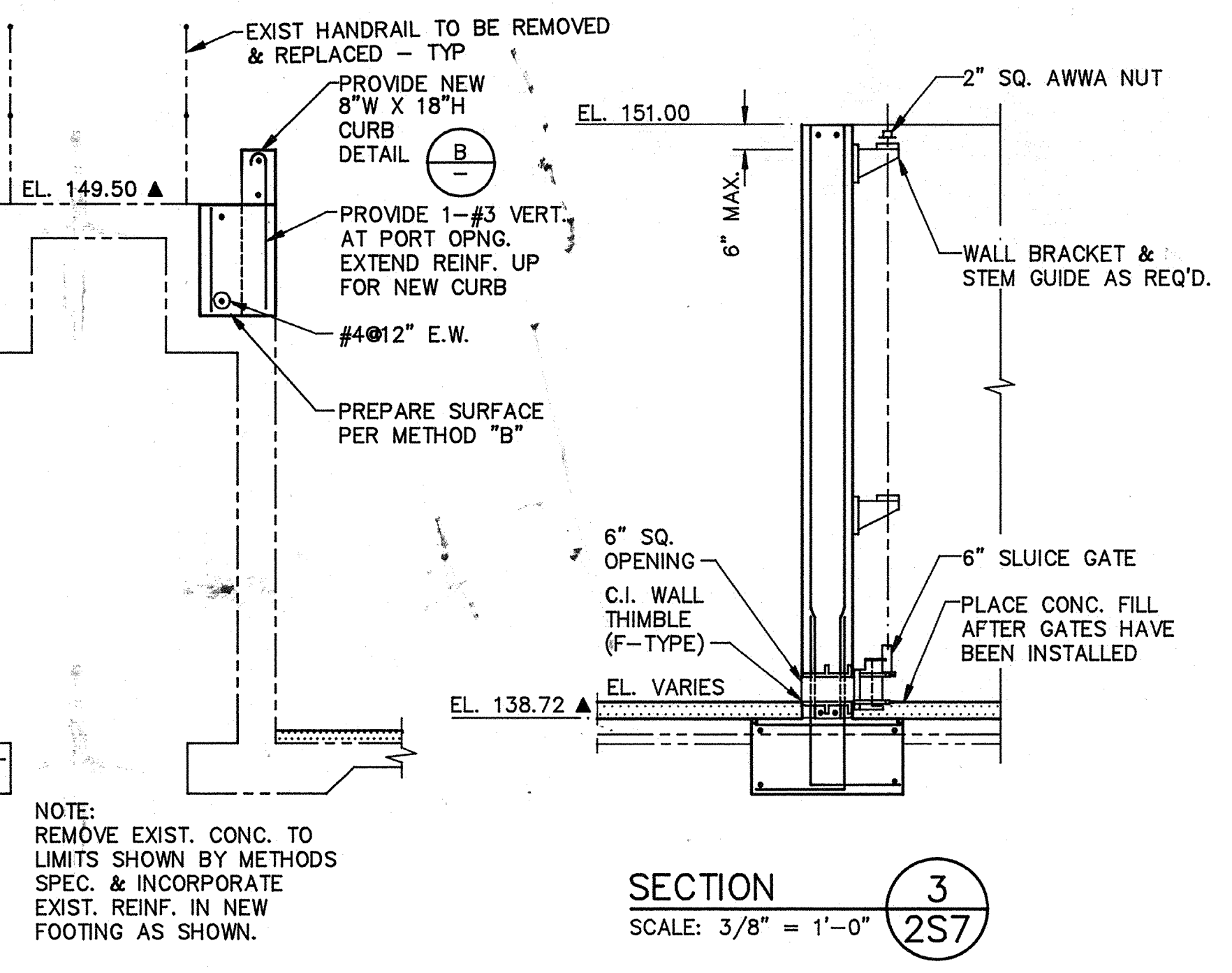
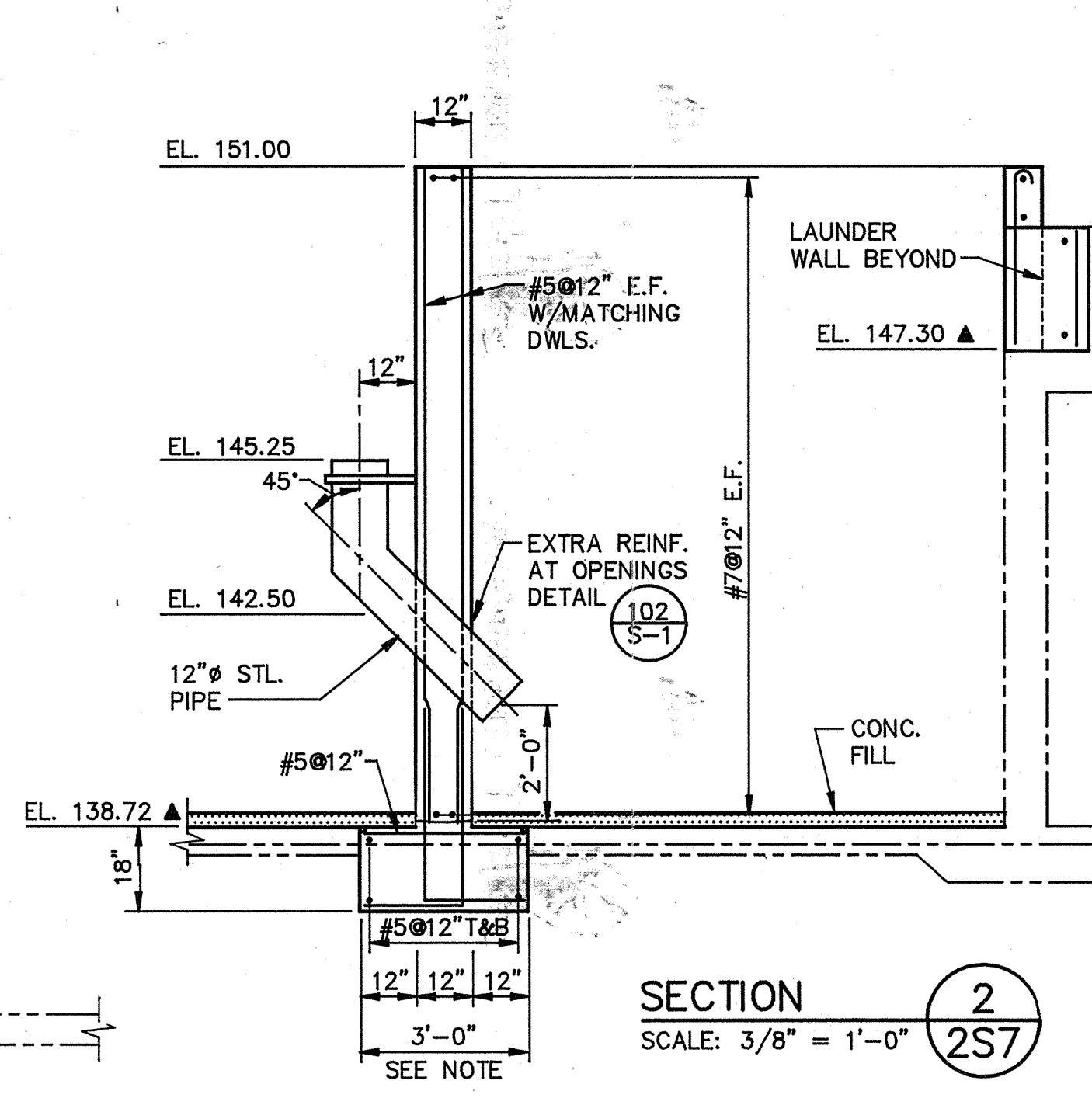
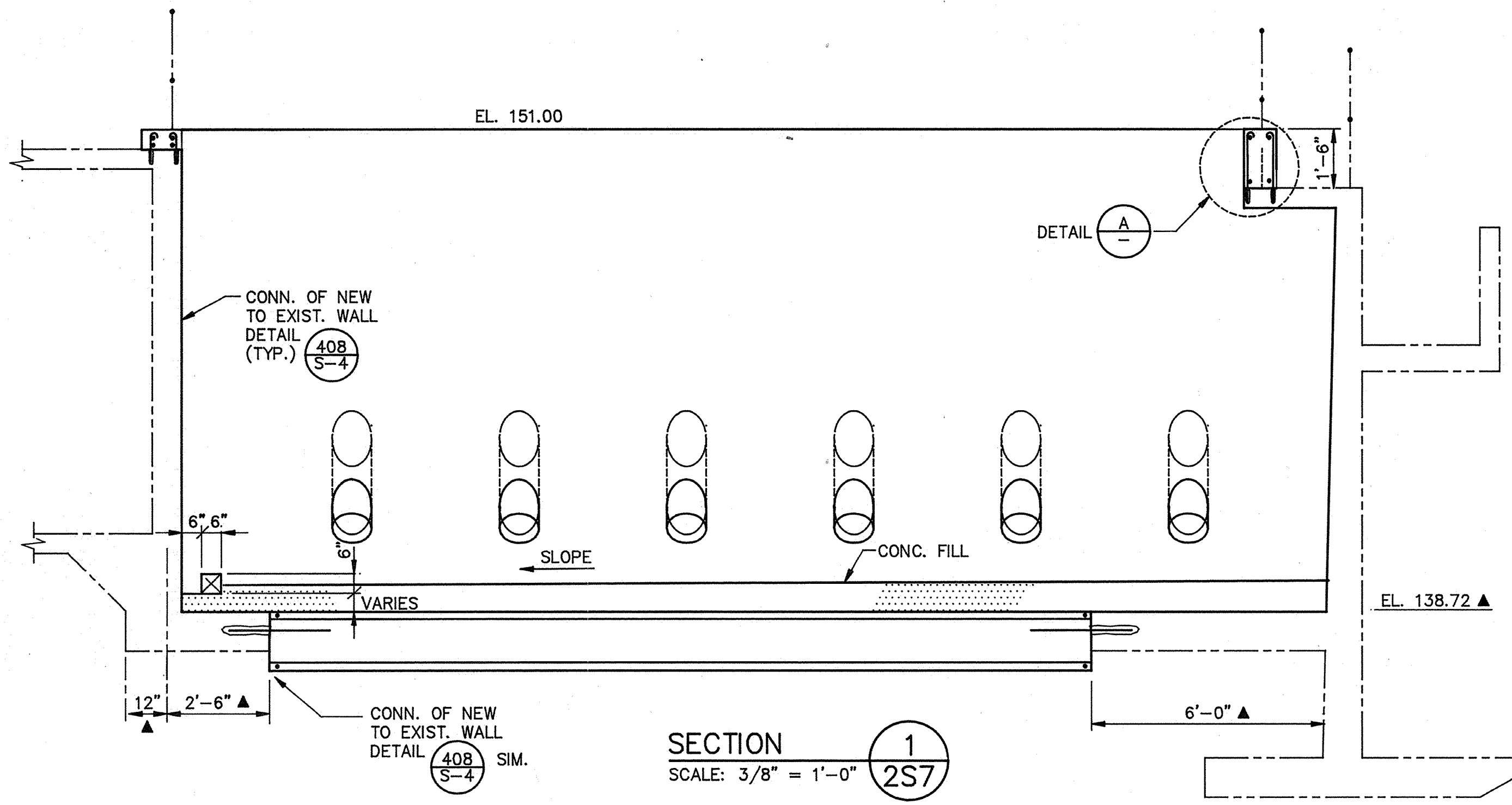
HVAC Approved by: Date:

INSTRUMENTATION Approved by: Date:

ELECTRICAL Approved by: Date:

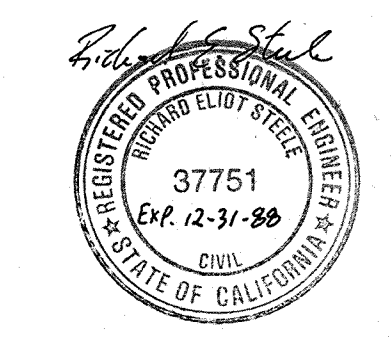
STRUCTURAL Approved by: Date:

ARCHITECTURAL Approved by: Date:



AS-BUILT

PJM 5/10/91



Date	Ch'k'd	Revision
Designed by: JWL	Drawn by: KC, LS	Date: 9/88
Checked by: JMH	Approved by: RES	Scale: AS SHOWN

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

EXISTING FLOCCULATION/SEDIMENTATION BASINS

MODIFICATIONS - SECTIONS

CAMP DRESSER & MCKEE INC.

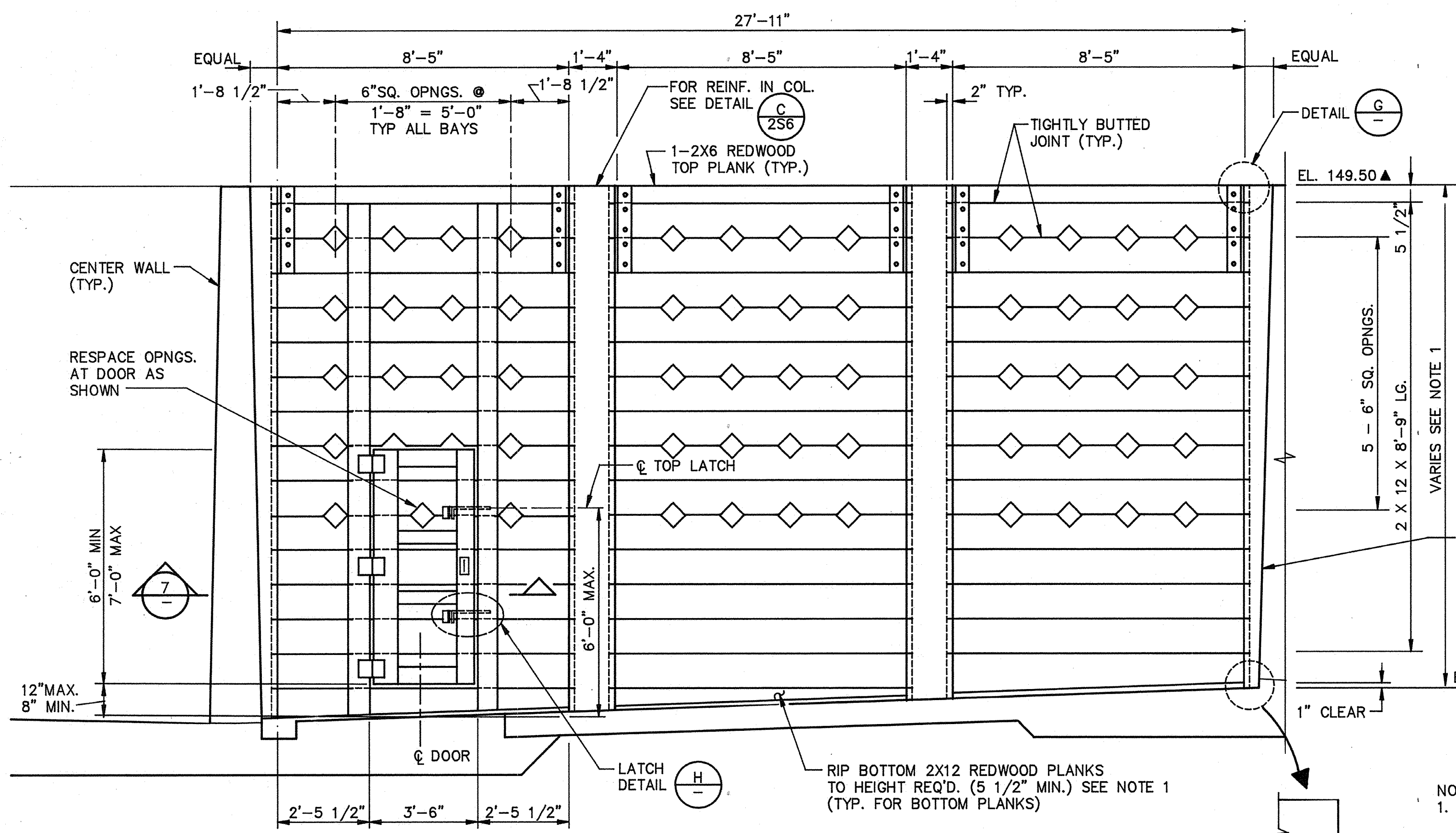
710 South Broadway
Walnut Creek, CA 94596

CDM
environmental engineers, scientists,
planners, & management consultants

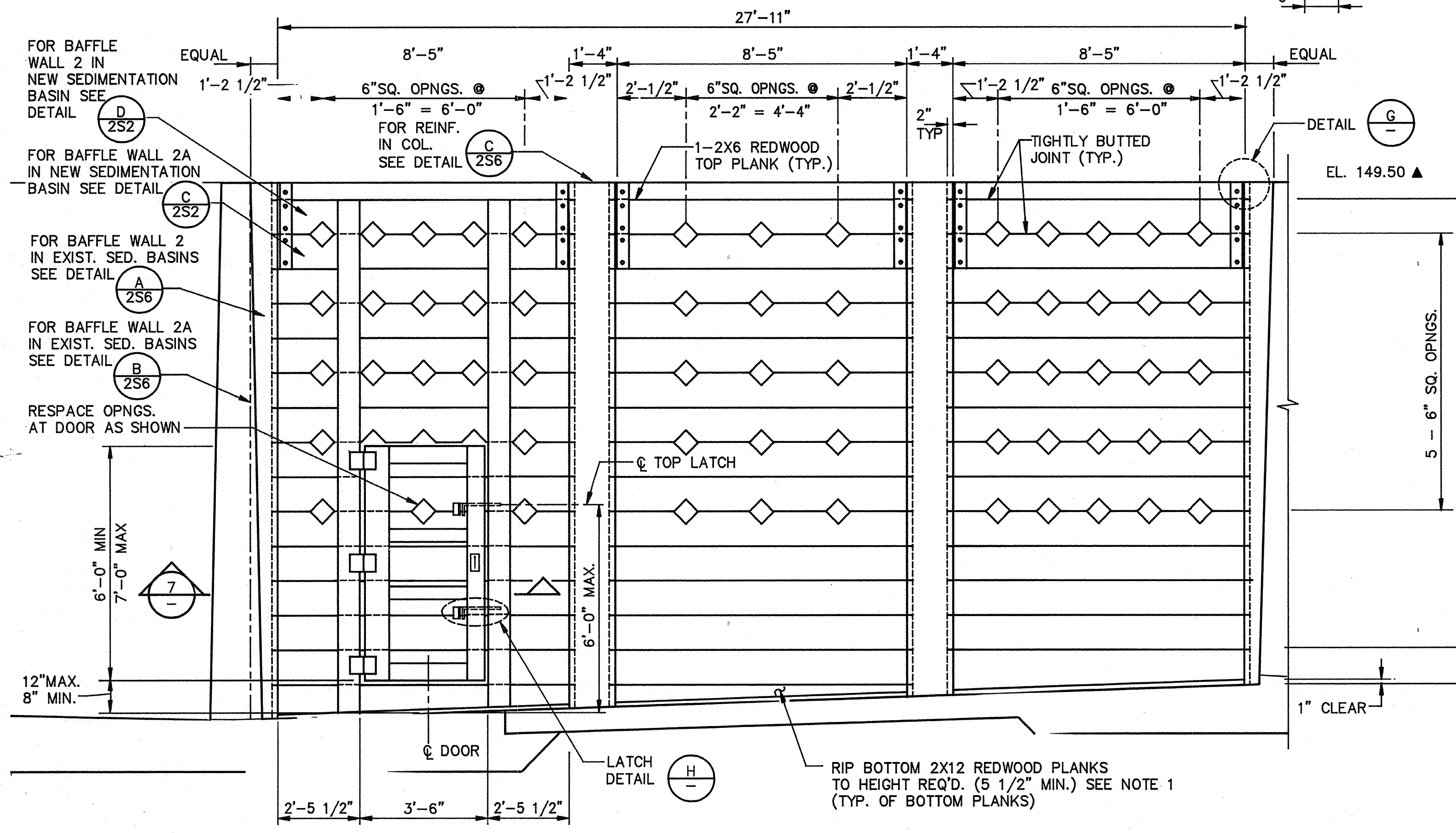
SHEET NO. 25-8

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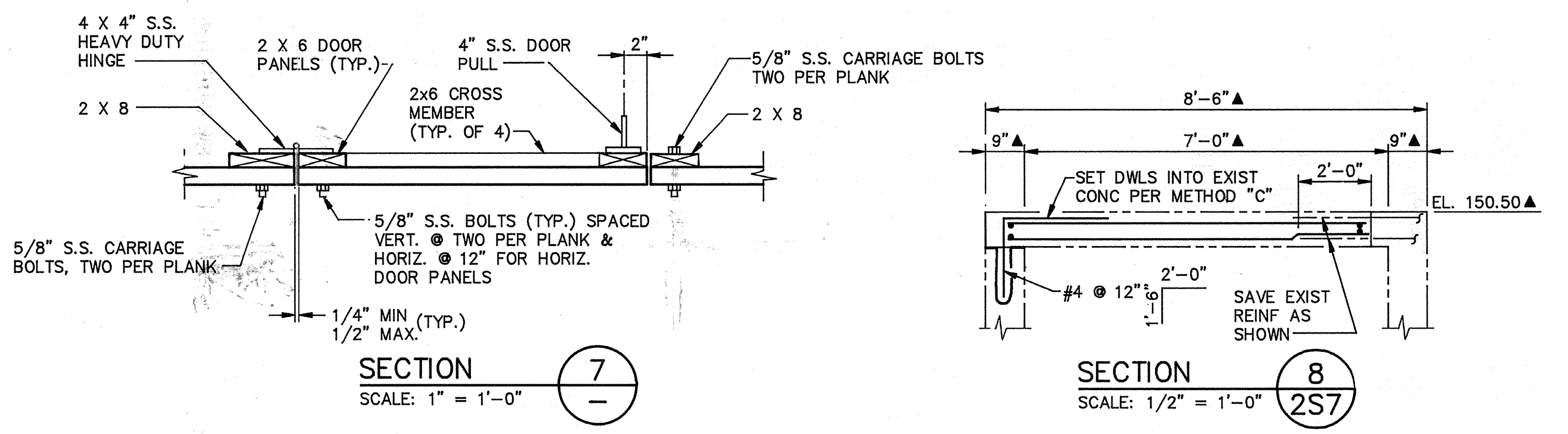
PROJECT MANAGER Approved by: Date: _____
 PROJECT ENGINEER Approved by: Date: _____
 PLUMBING Approved by: Date: _____
 HVAC Approved by: Date: _____
 INSTRUMENTATION Approved by: Date: _____
 ELECTRICAL Approved by: Date: _____
 STRUCTURAL Approved by: Date: _____
 ARCHITECTURAL Approved by: Date: _____



BAFFLE WALL ELEVATION 1
 SCALE: 3/8" = 1'-0"

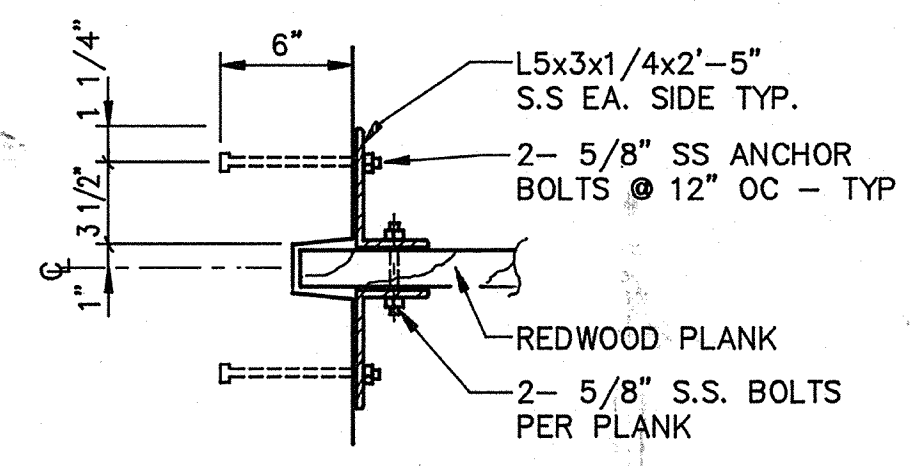


BAFFLE WALL ELEVATION 2
 SCALE: 3/8" = 1'-0"

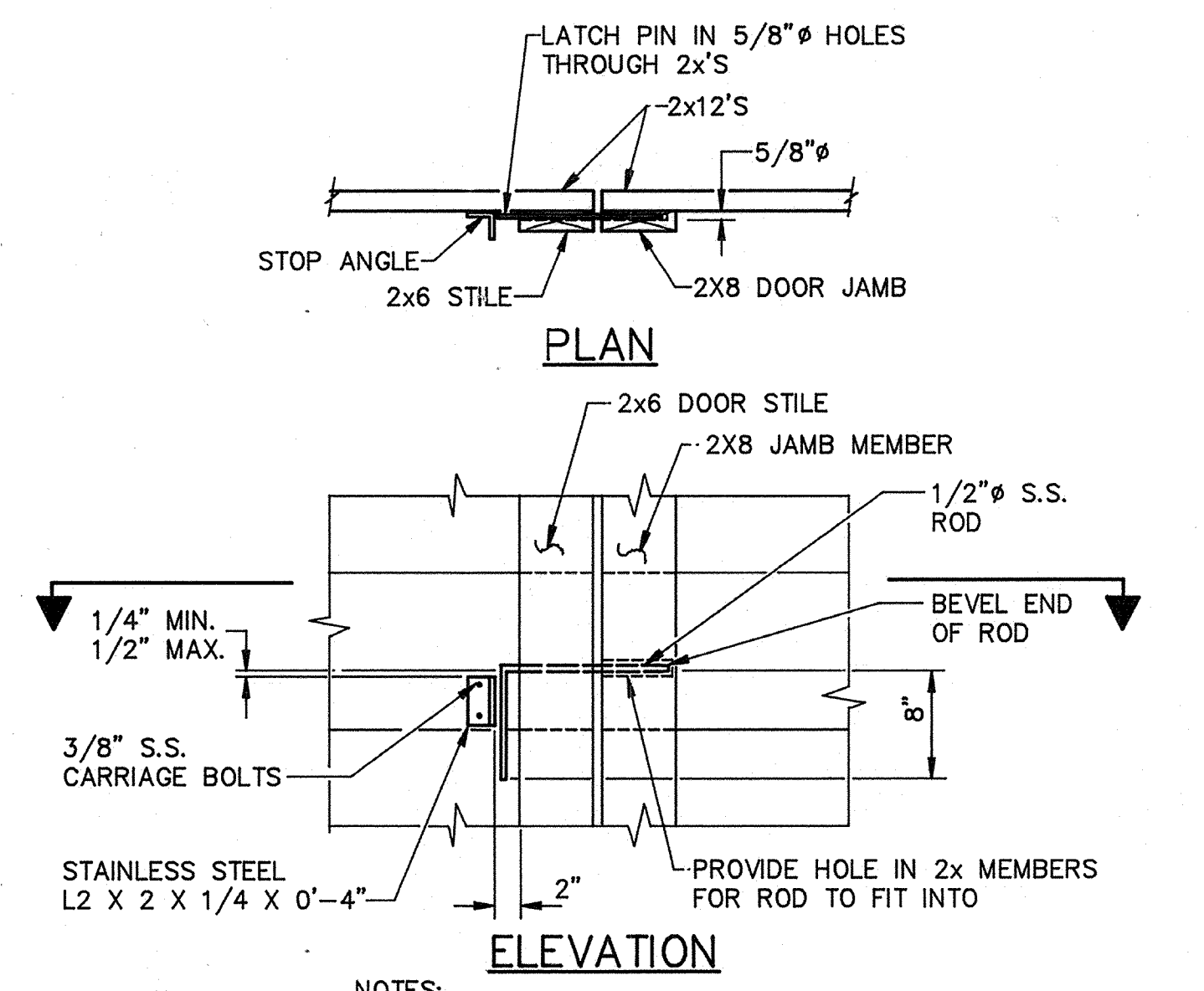


SECTION 8
 SCALE: 1/2" = 1'-0"

NOTE:
 1. FOR FLOOR SLOPES & ELEVATIONS OF EXISTING SEDIMENTATION BASINS, SEE EXISTING PLANS & FIELD VERIFY. FOR SLOPE OF NEW SEDIMENTATION BASINS SEE SHEETS 2S-1 THROUGH 2S-4.



TYP. BAFFLE HOLD-DOWN DETAIL (G)
 SCALE: 1 1/2" = 1'-0"



LATCH DETAIL (H)
 SCALE: 1" = 1'-0"

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

EXISTING FLOCCULATION/SEDIMENTATION BASINS

MODIFICATIONS - ELEVATIONS & DETAILS

DESIGNED BY: JWJ
 DRAWN BY: KC, LS
 CHECKED BY: JMH
 APPROVED BY: RES

DATE: 9/88

SCALE: AS SHOWN

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

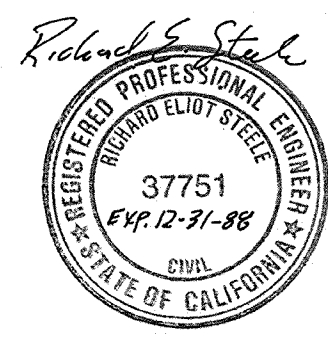
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 planners & management consultants

SHEET NO. 2S-9

57 of 147

AS-BUILT

Signature: [Handwritten Signature] DATE: 5/10/91



111335

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

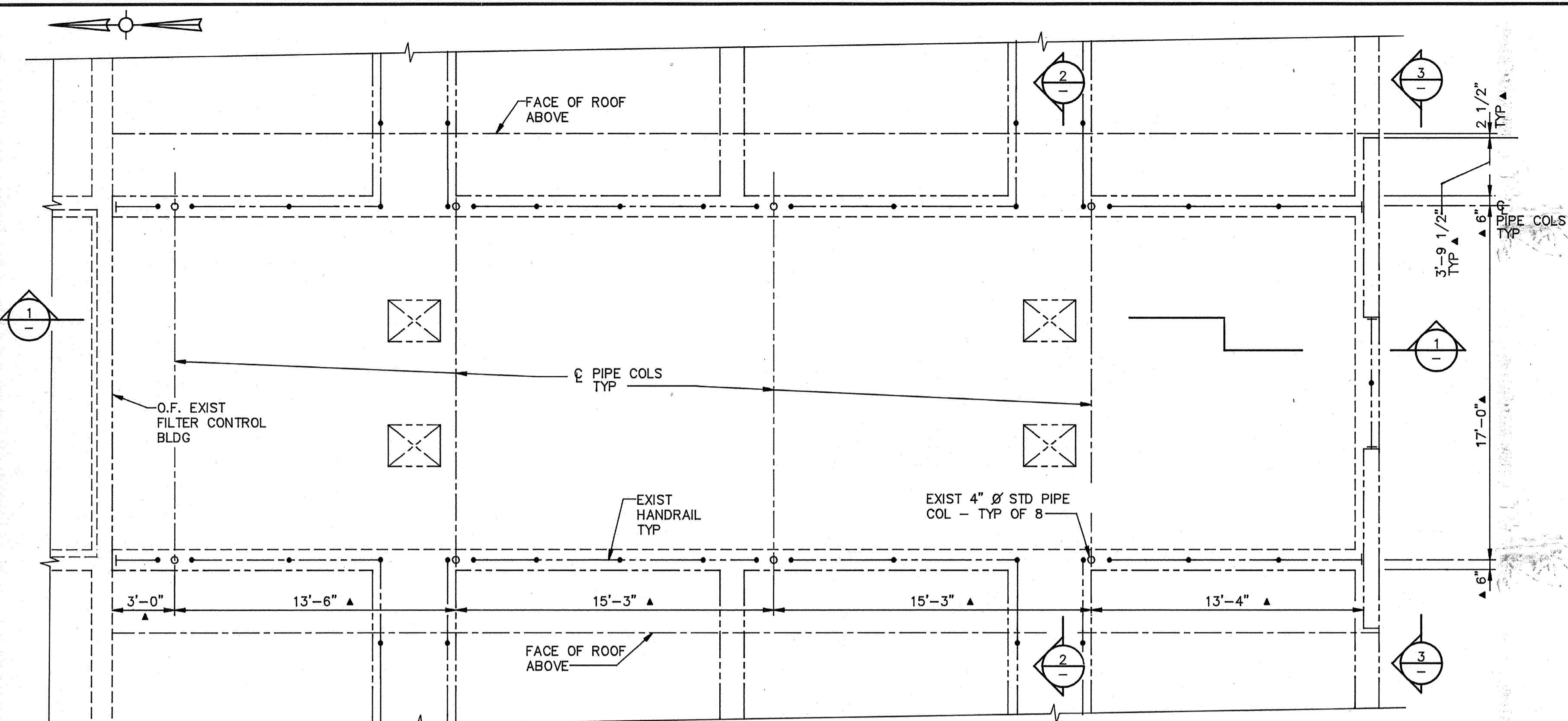
HVAC Approved by: Date:

INSTRUMENTATION Approved by: Date:

ELECTRICAL Approved by: Date:

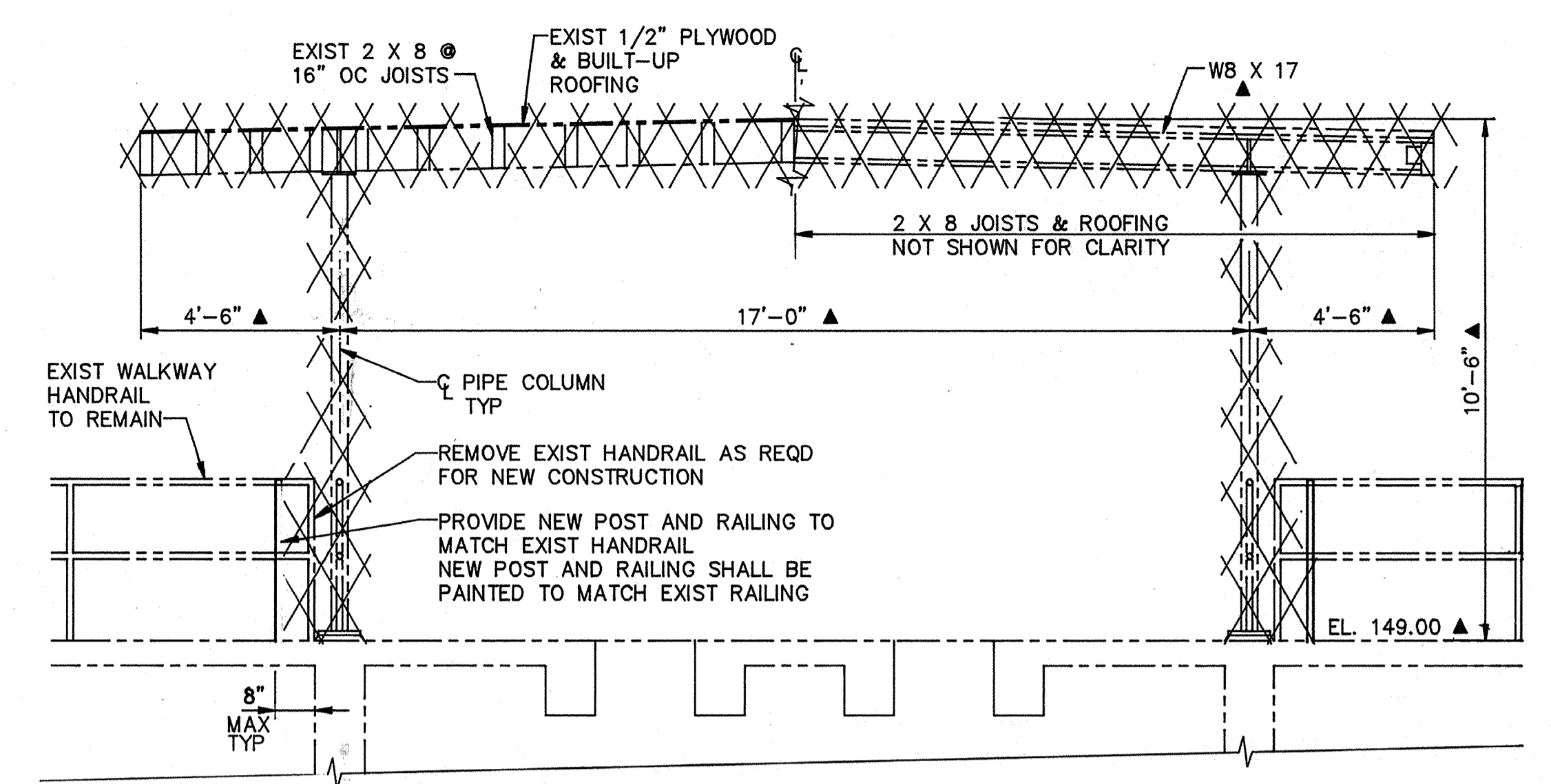
STRUCTURAL Approved by: Date:

ARCHITECTURAL Approved by: Date:

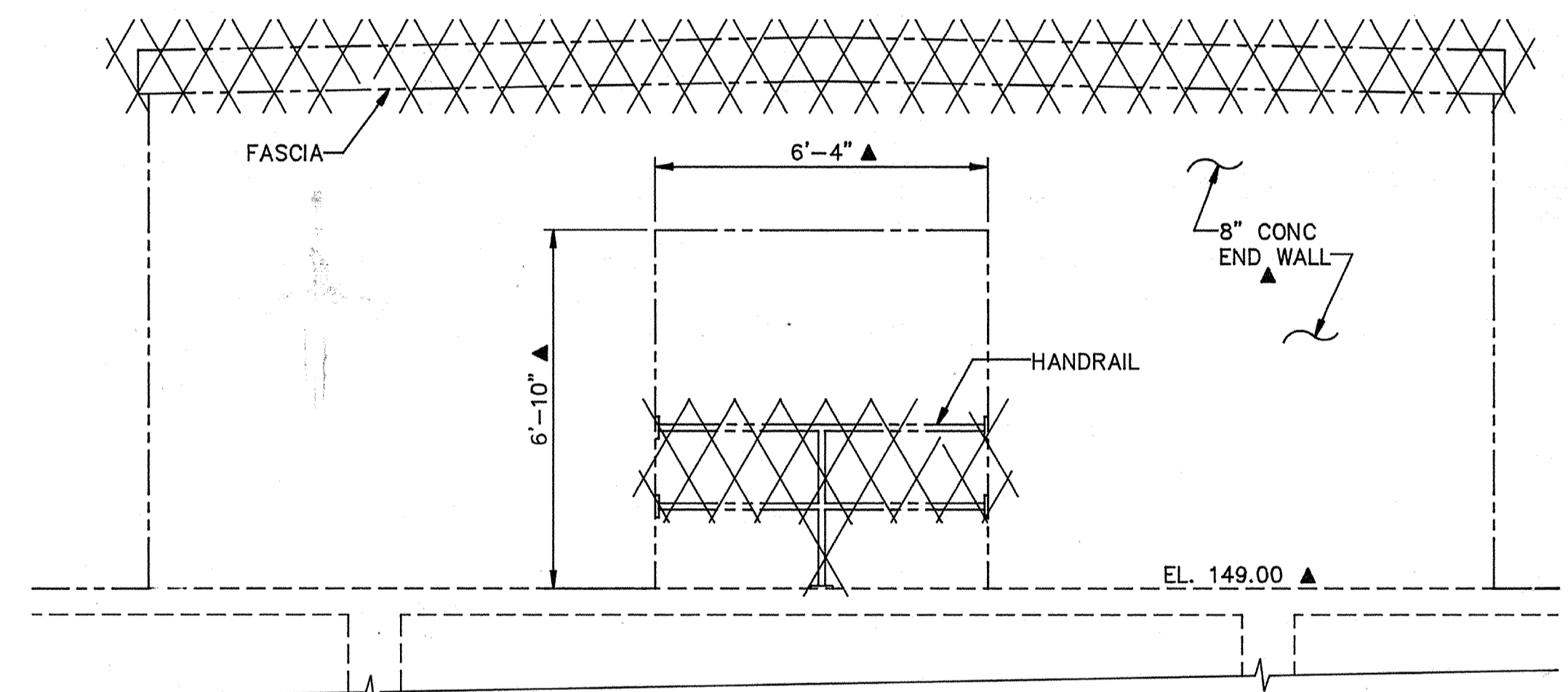


DEMOLITION PLAN AT EL. 149.00
SCALE: 1/4" = 1'-0"

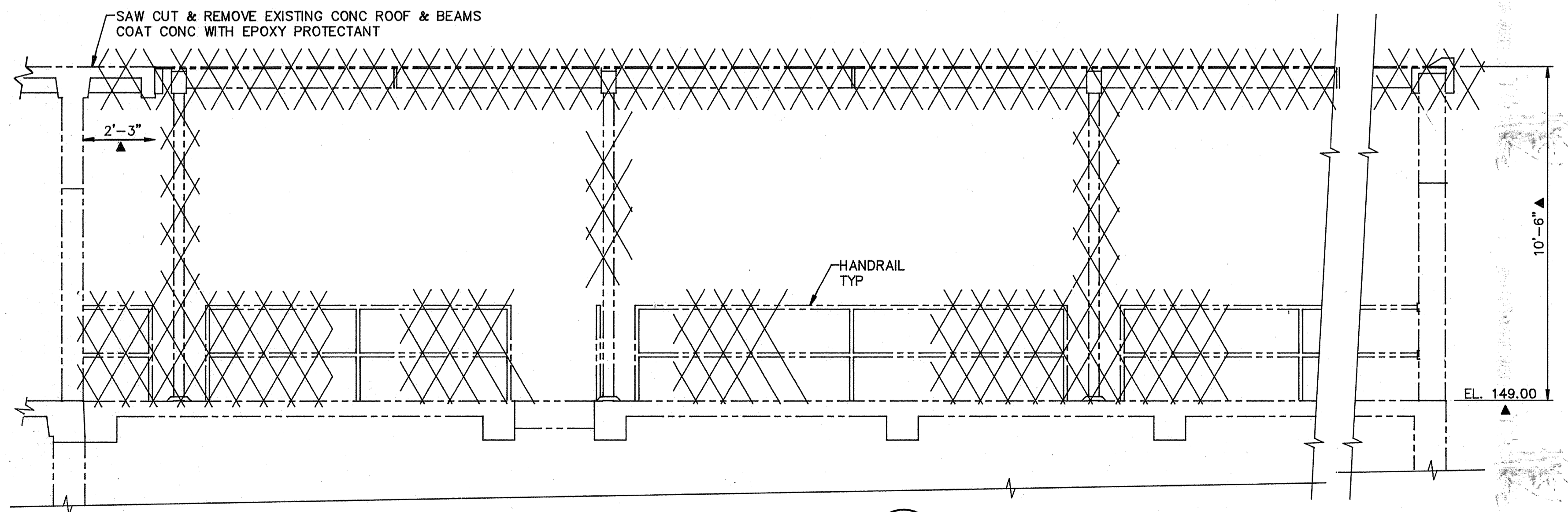
NOTES:
1. SHADED TRIANGLE (▲) INDICATES UNVERIFIED DIMENSIONS, ELEVATIONS OR OTHER INFORMATION OF EXISTING STRUCTURES TAKEN FROM EXISTING DRAWINGS - FIELD VERIFY.



SECTION 2
SCALE: 3/8" = 1'-0"



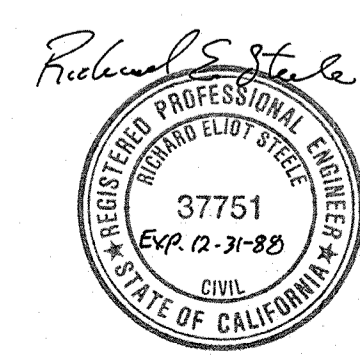
SECTION 3
SCALE: 3/8" = 1'-0"



SECTION 1
SCALE: 3/8" = 1'-0"

AS-BUILT

OPM 5/10/91



Date	Ch'k'd	Revision

Designed by: JWI
 Drawn by: LS
 Checked by: JOG
 Approved by: RES

Date: 9/88
 Scale: AS SHOWN

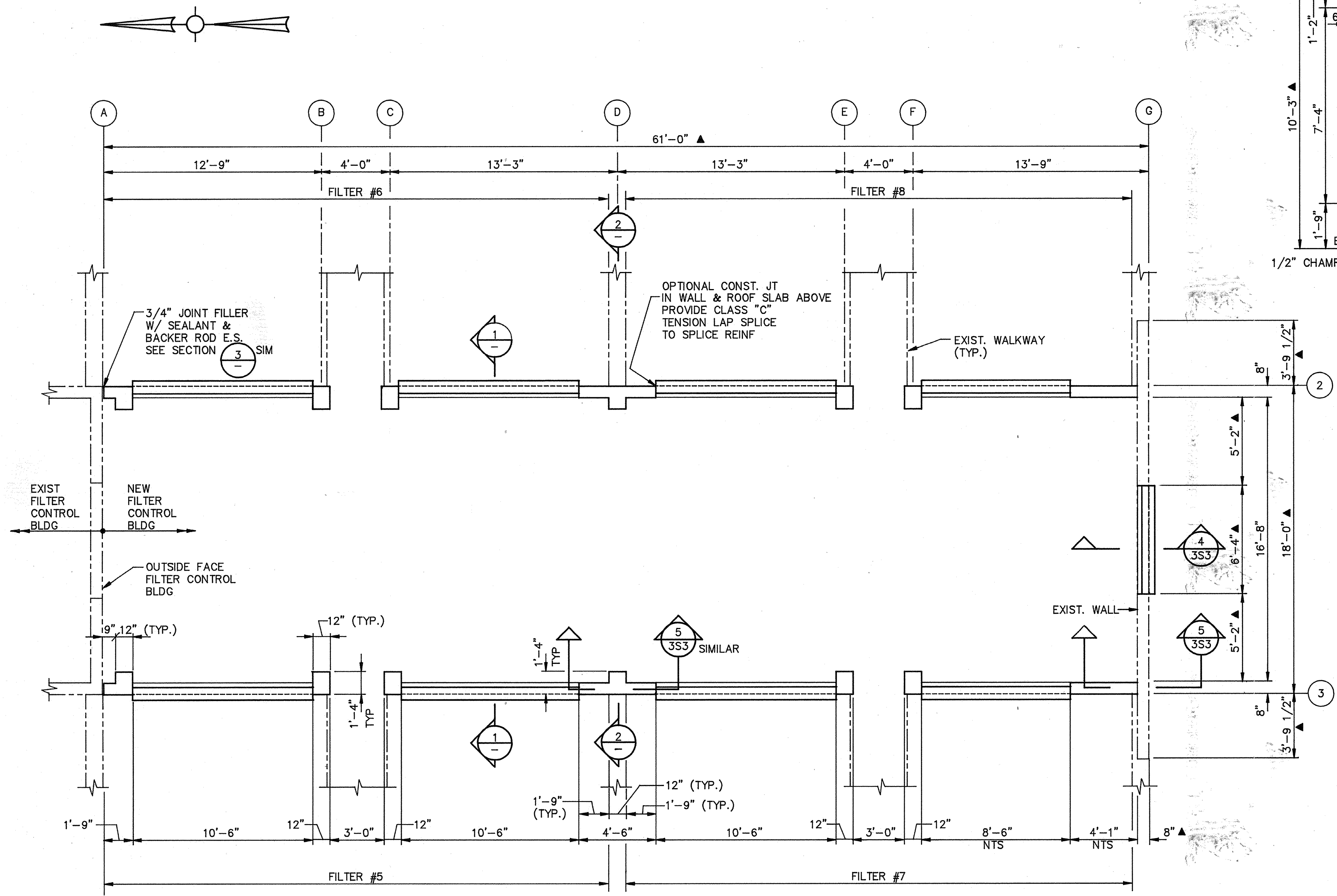
CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION | 988 |
**EXISTING FILTER COMPLEX
 MODIFICATIONS DEMOLITION**

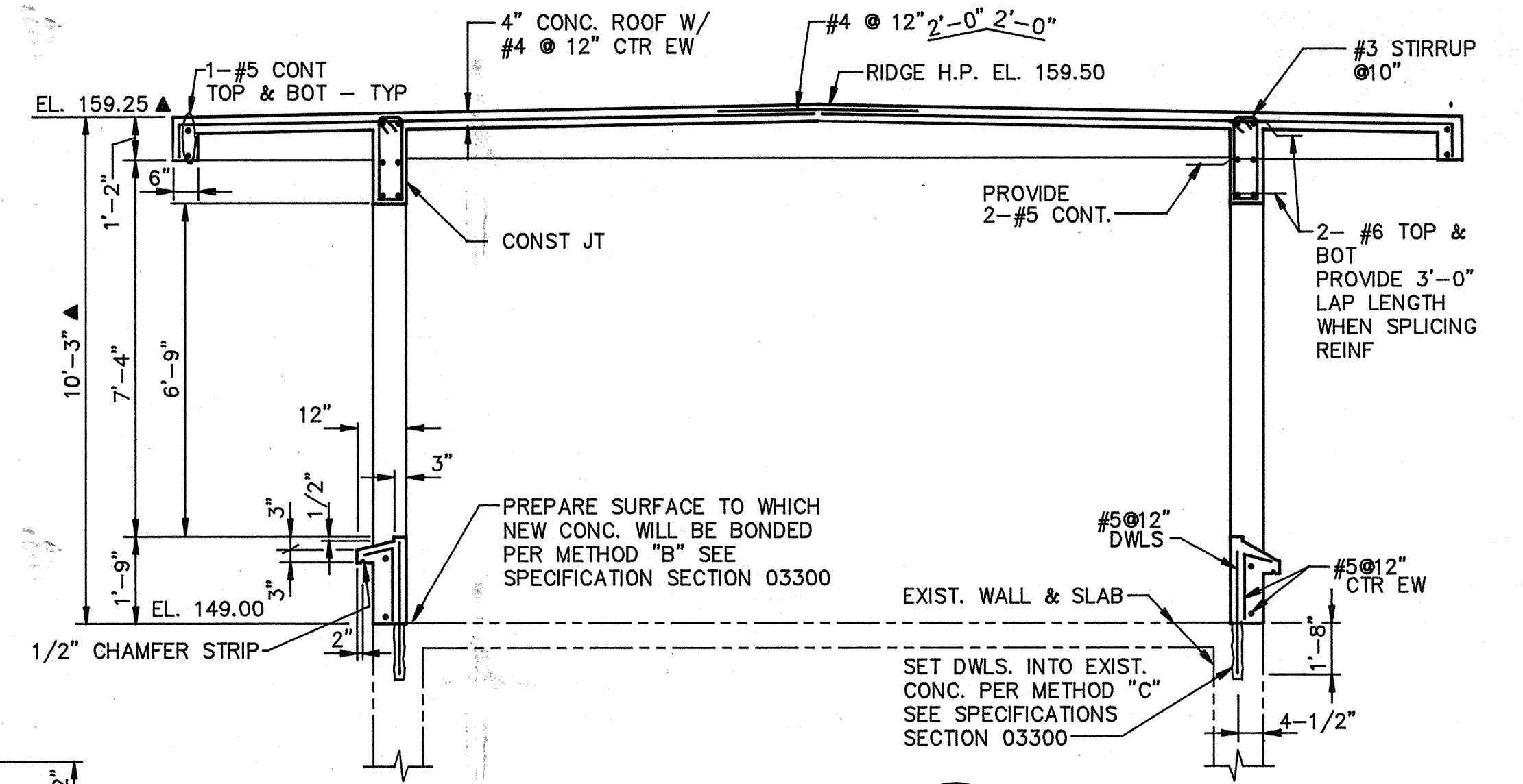
CAMP DRESSER & MCKEE INC.
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 Walnut Creek, CA 94596
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 planners, & management consultants

SHEET NO.
3S-1
 58 of 147

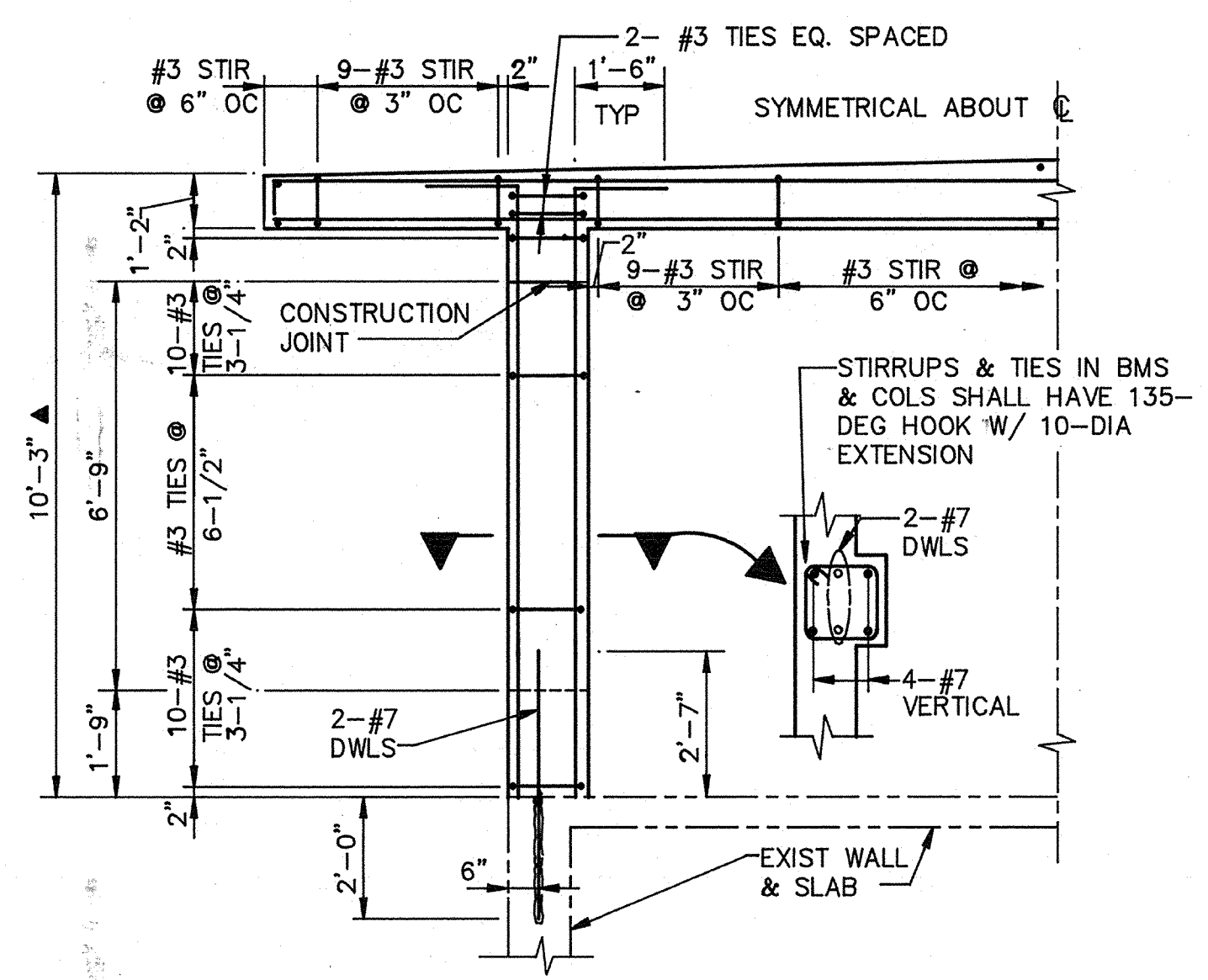
PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



SEE NOTES SHEET 3S-3



SECTION 1 SCALE: 3/8" = 1'-0" 3S2, 3



SECTION 2 SCALE: 3/8" = 1'-0" 3S2, 3

AS-BUILT
 Ogm 5/10/91
 SIGNATURE DATE



Date	Ch'k'd	Revision
Designed by: JW1	Drawn by: KC, LS	Date: 9/88
Checked by: JOG	Approved by: RES	Scale: AS SHOWN

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
EXISTING FILTER COMPLEX MODIFICATIONS - PLAN & SECTIONS

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists, planners, & management consultants

SHEET NO. 3S-2
 59 of 147

111835

PROJECT MANAGER Approved by: _____ Date: _____

PROJECT ENGINEER Approved by: _____ Date: _____

PLUMBING Approved by: _____ Date: _____

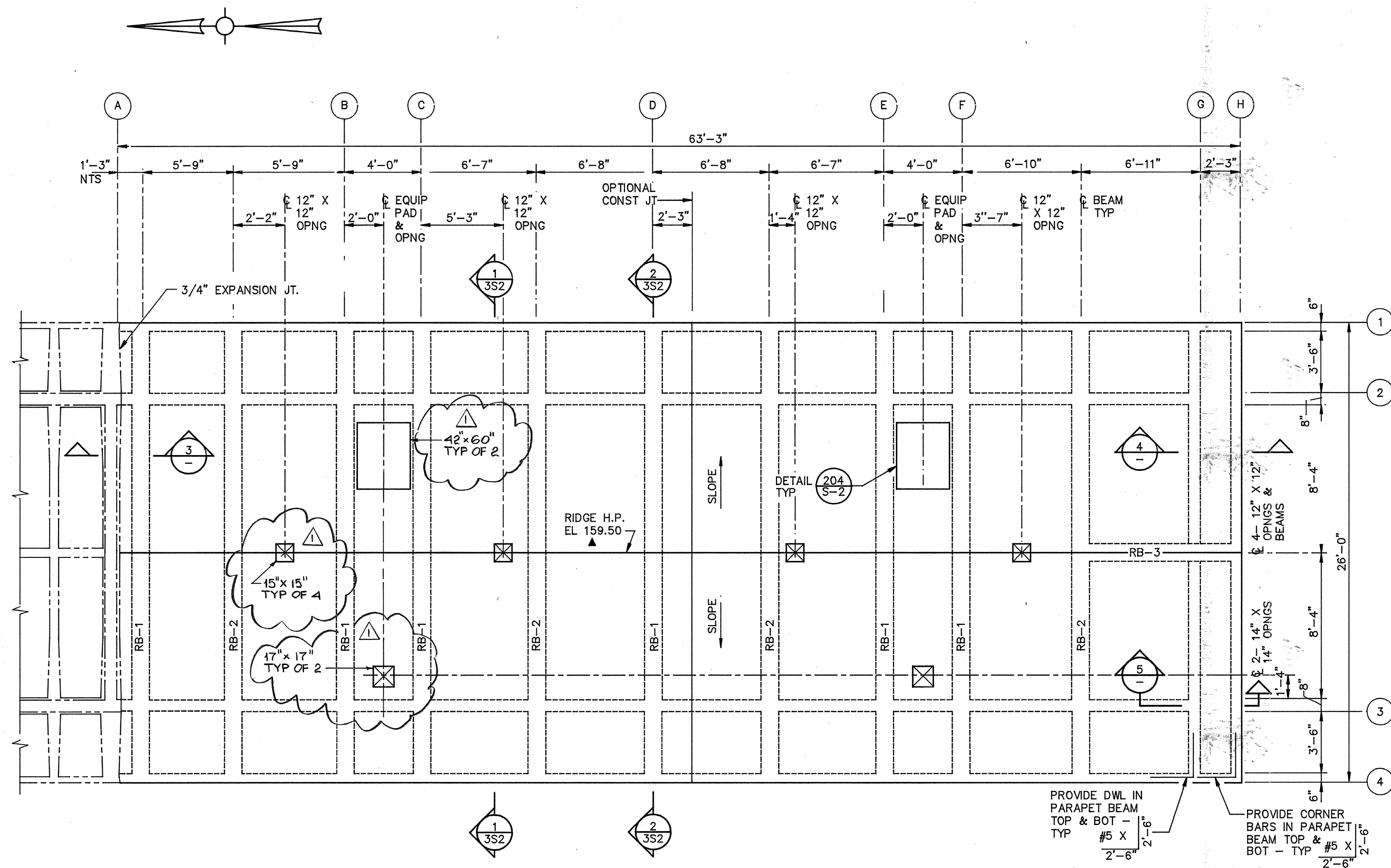
HVAC Approved by: _____ Date: _____

INSTRUMENTATION Approved by: _____ Date: _____

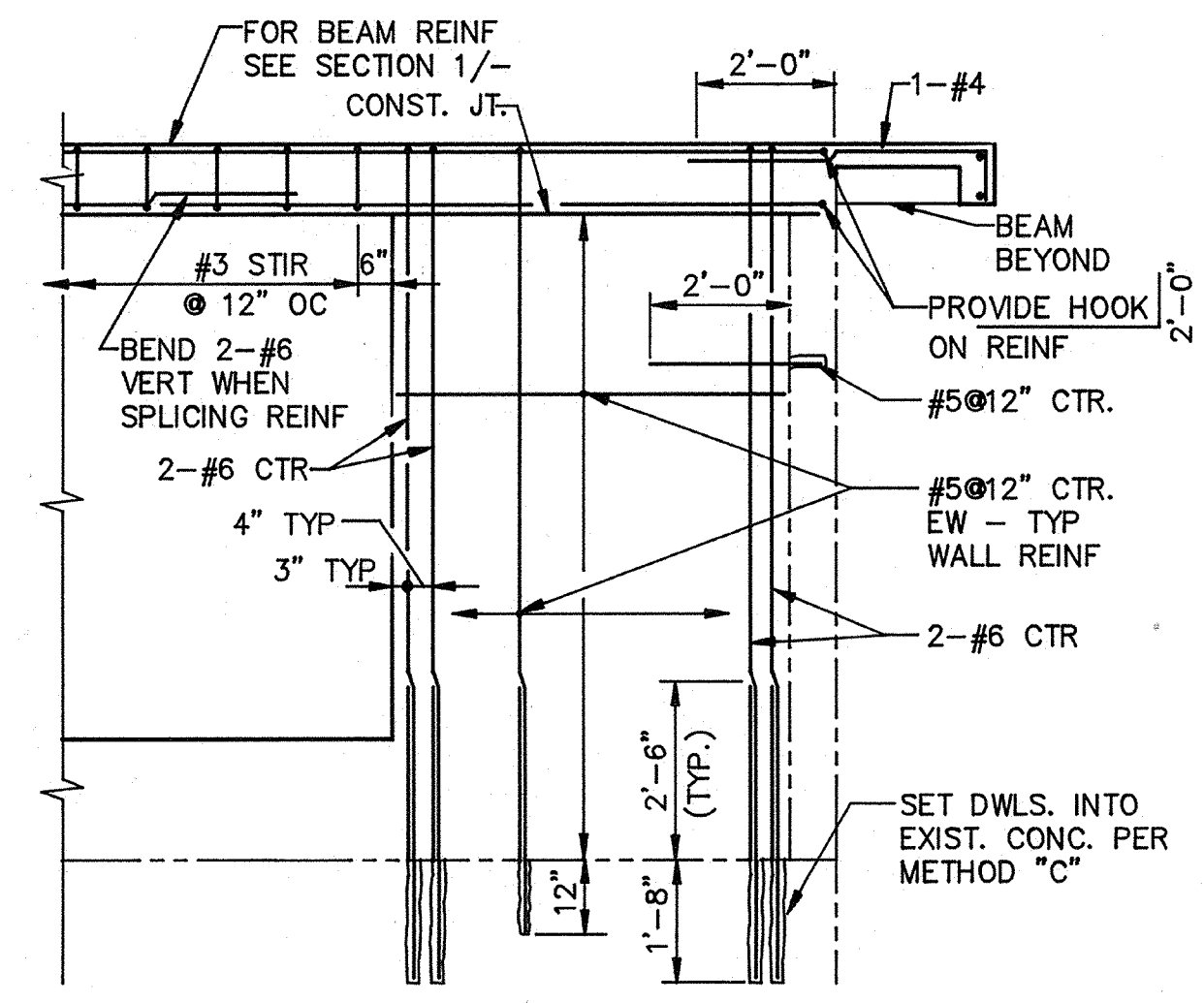
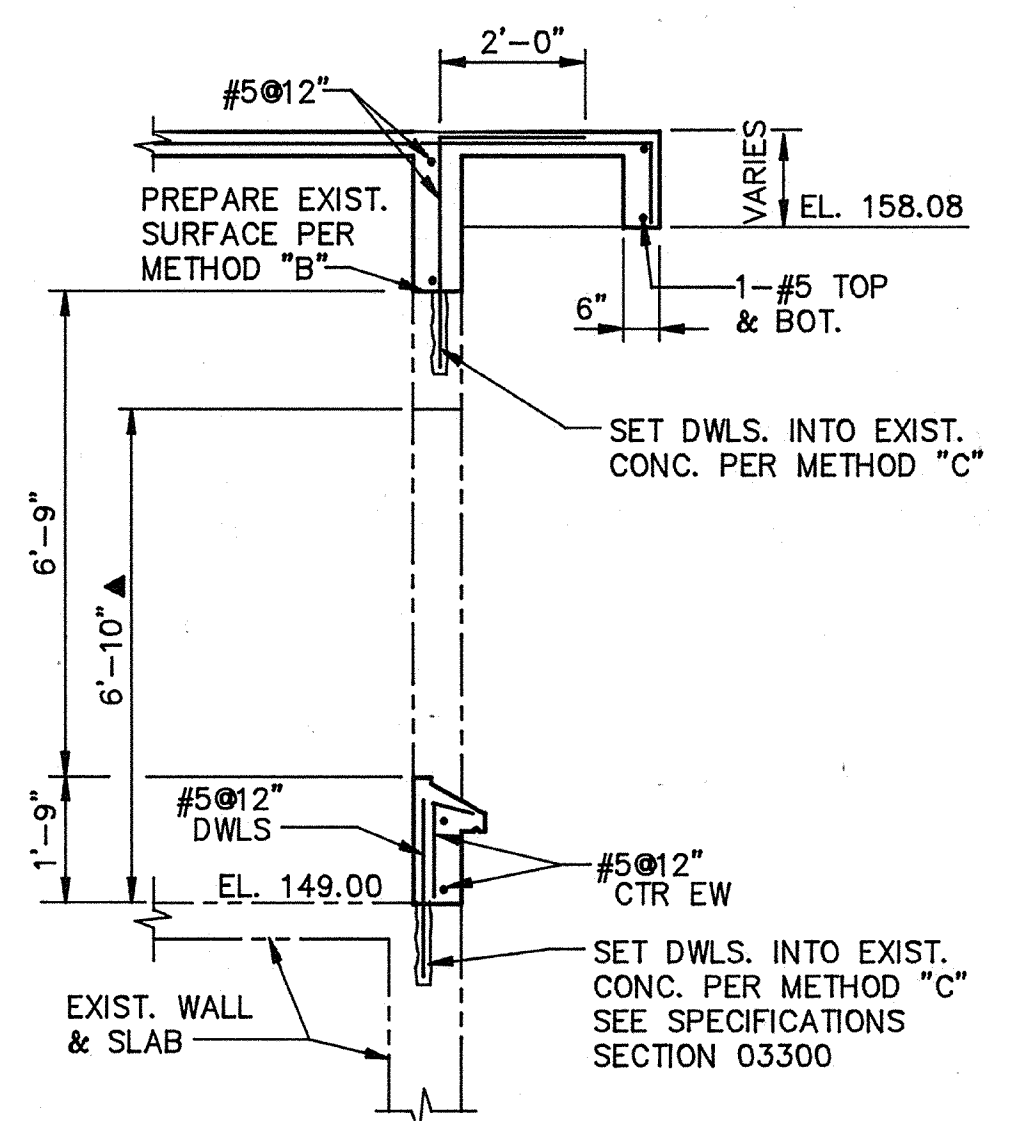
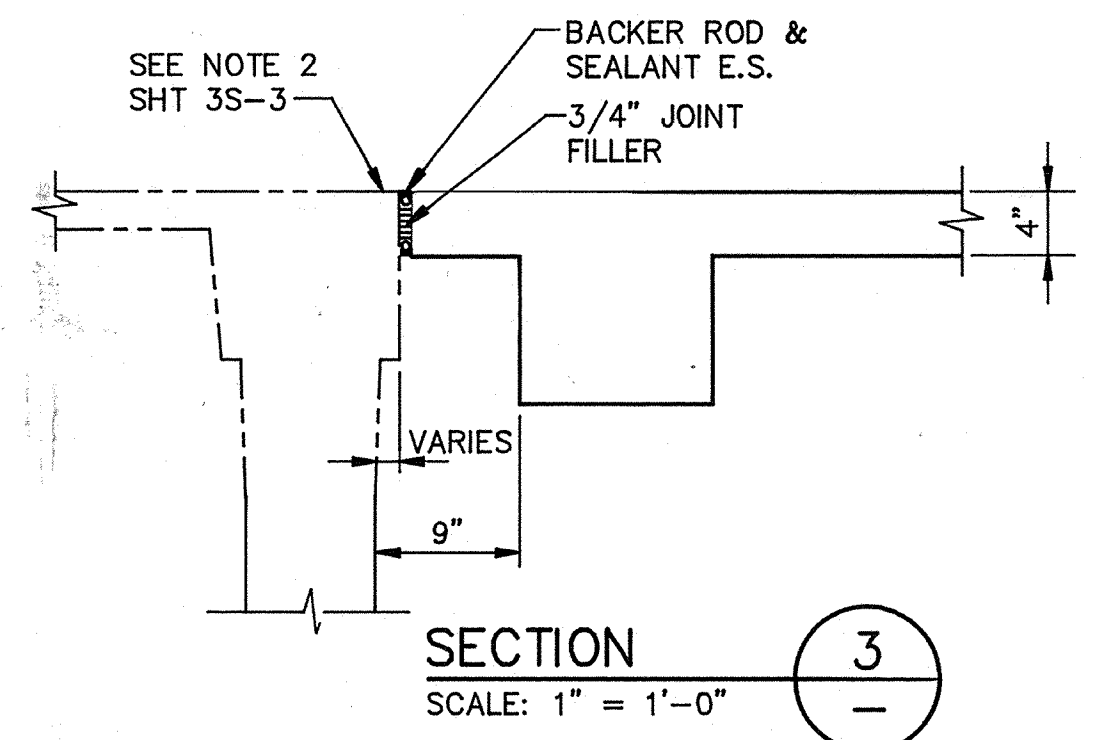
ELECTRICAL Approved by: _____ Date: _____

STRUCTURAL Approved by: _____ Date: _____

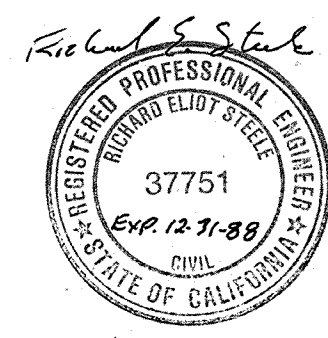
ARCHITECTURAL Approved by: _____ Date: _____



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



- NOTES:
1. SHADED TRIANGLE (▲) INDICATES UNVERIFIED DIMENSIONS, ELEVATIONS OR INFORMATION OF EXISTING STRUCTURES TAKEN FROM EXISTING DRAWINGS - FIELD VERIFY.
 2. T.O. NEW CONCRETE ROOF SHALL MATCH T.O. EXISTING CONCRETE ROOF. FIELD VERIFY ELEVATIONS FOR T.O. NEW CONCRETE ROOF PRIOR TO CONSTRUCTION.
 3. PRIOR TO CONSTRUCTION OF THE ROOF, VERIFY WITH HVAC, MECH & PLUMBING SUPPLIERS SIZE & LOCATION OF ALL OPENINGS & EQUIPMENT PADS TO BE INSTALLED.
 4. PROVIDE EXTRA REINF AT OPENINGS PER DETAIL 102 S-1



Date	Ch'k'd	Revision
4/12/91		REVISOR FOR THE RECORD
Designed by: JYI	Drawn by: KCLS	Date: 9/88
Checked by: JOG	Approved by: RES	Scale: AS SHOWN

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

EXISTING FILTER COMPLEX MODIFICATIONS - ROOF PLAN

CAMP DRESSER & MCKEE INC. CDM

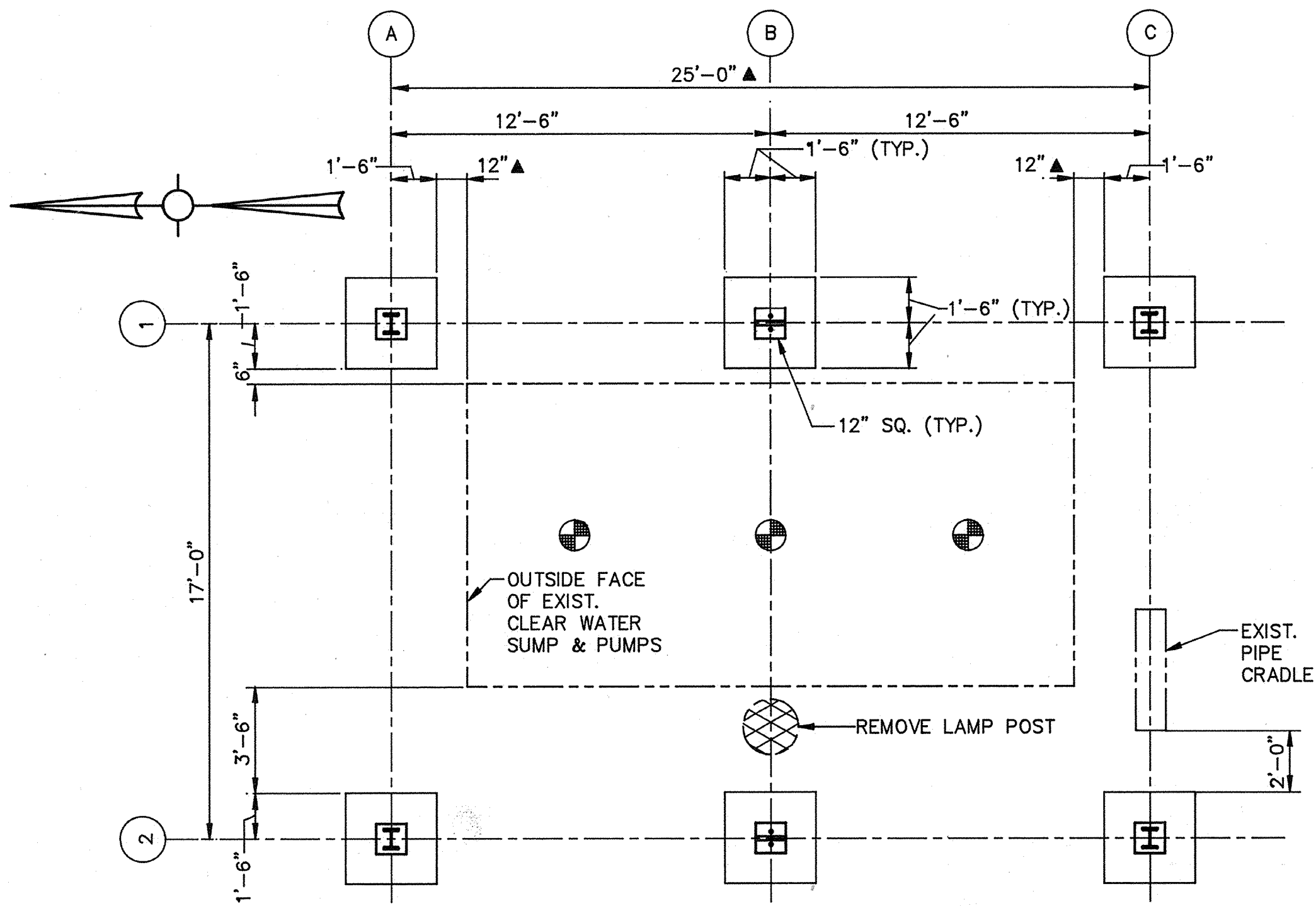
710 South Broadway
Walnut Creek, CA 94596
environmental engineers, scientists, planners, & management consultants

SHEET NO. 3S-3
60 of 147

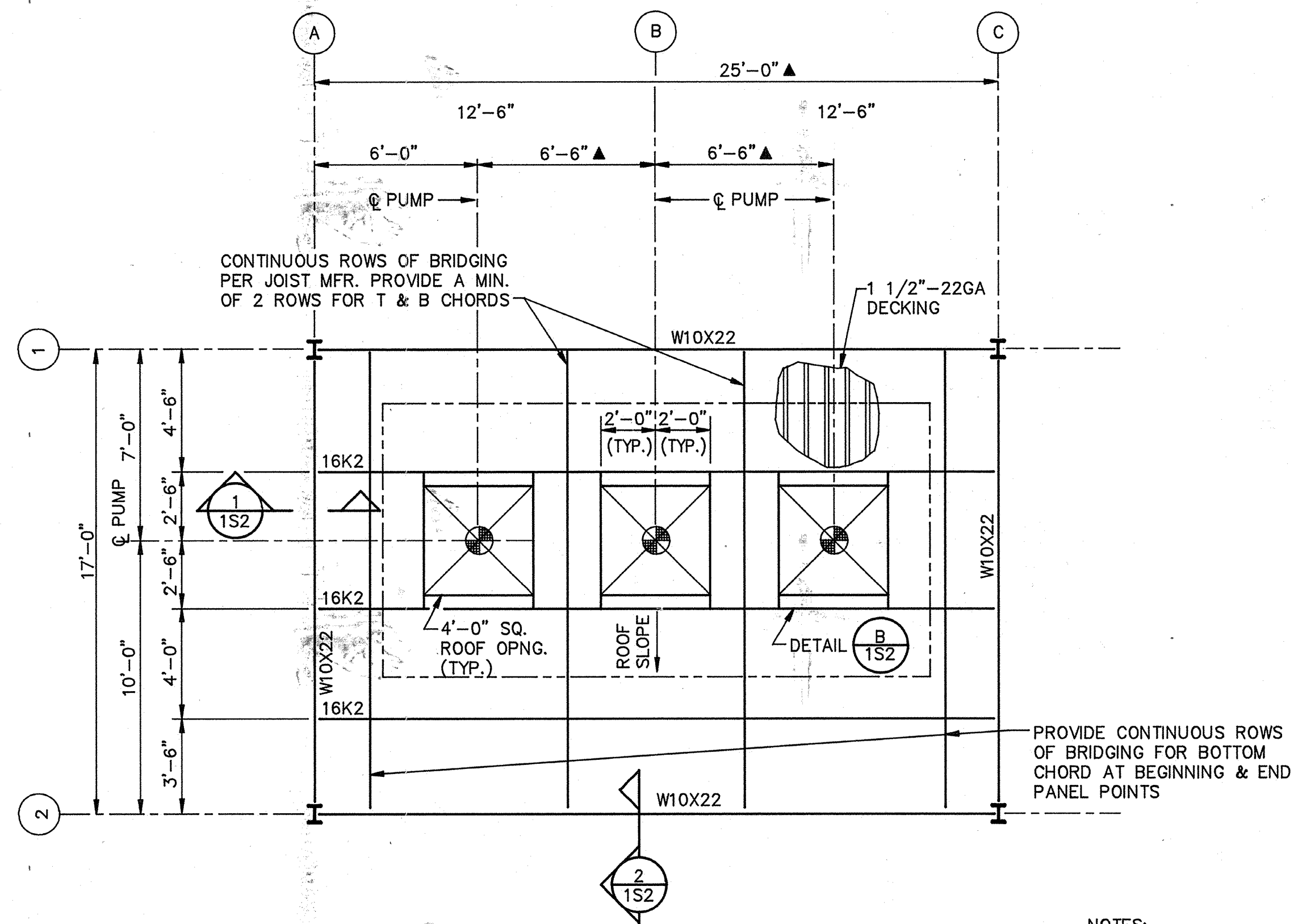
AS-BUILT

PJM 5/10/91
SIGNATURE DATE

PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:

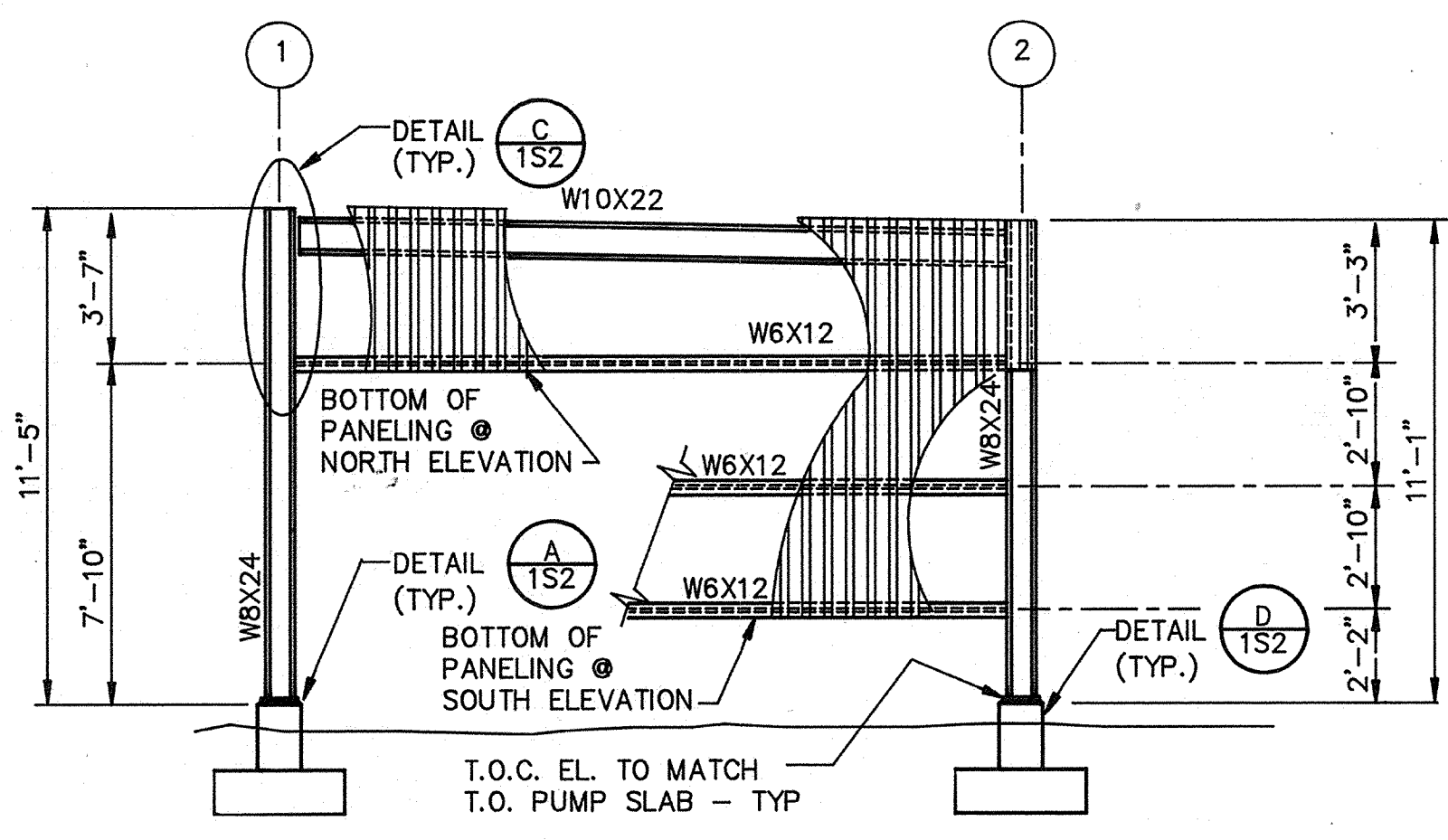


BASE PLAN
 SCALE: 1/4" = 1'-0"



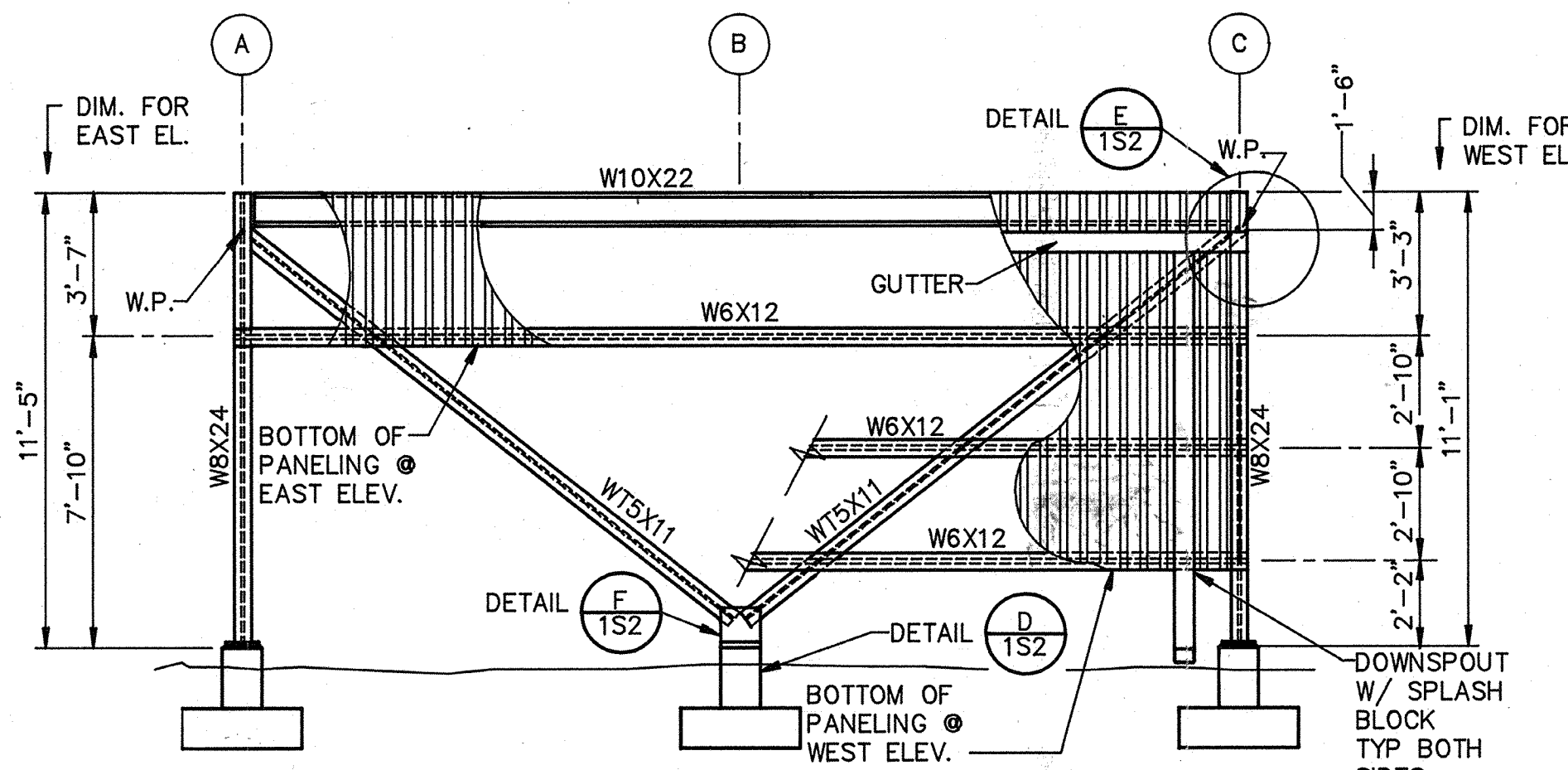
ROOF PLAN
 SCALE: 1/4" = 1'-0"

- NOTES:**
- SEE DETAIL 302/5-3 FOR FRAMING REQUIREMENTS AROUND ROOF OPENINGS
 - SEE DETAIL 301/5-3 FOR DECK FASTENING PATTERN
 - ▲ INDICATES DIMENSIONS TO BE FIELD VERIFIED
 - FOR SUBGRADE PREPARATION AND EXCAVATION SEE SPEC. SECTION 02220
 - VERIFY LOCATIONS OF EXISTING UTILITIES
 - BRACE W6 X 12 GIRTS UNTIL SIDE PANELING HAS BEEN ERRECTED AND ATTACHED TO ALL GIRTS
 - INDICATES LOCATION OF PUMP
 - ALL STRUCTURAL STEEL, STEEL DECKING & JOISTS SHALL BE GALVANIZED



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

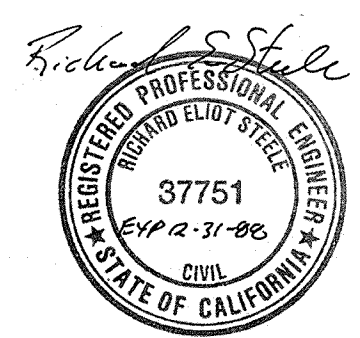
SOUTH ELEVATION
 SIMILAR EXCEPT OPP. HAND



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

EAST ELEVATION

AS-BUILT
 Signature: [Signature] DATE: 5/10/91



Date	Ch'k'd	Revision
Designed by: <u>JWL, BCO</u>	Drawn by: <u>KC, LS</u>	Date: <u>9/88</u>
Checked by: <u>JOG, BCO</u>	Approved by: <u>RES</u>	Scale: <u>AS SHOWN</u>

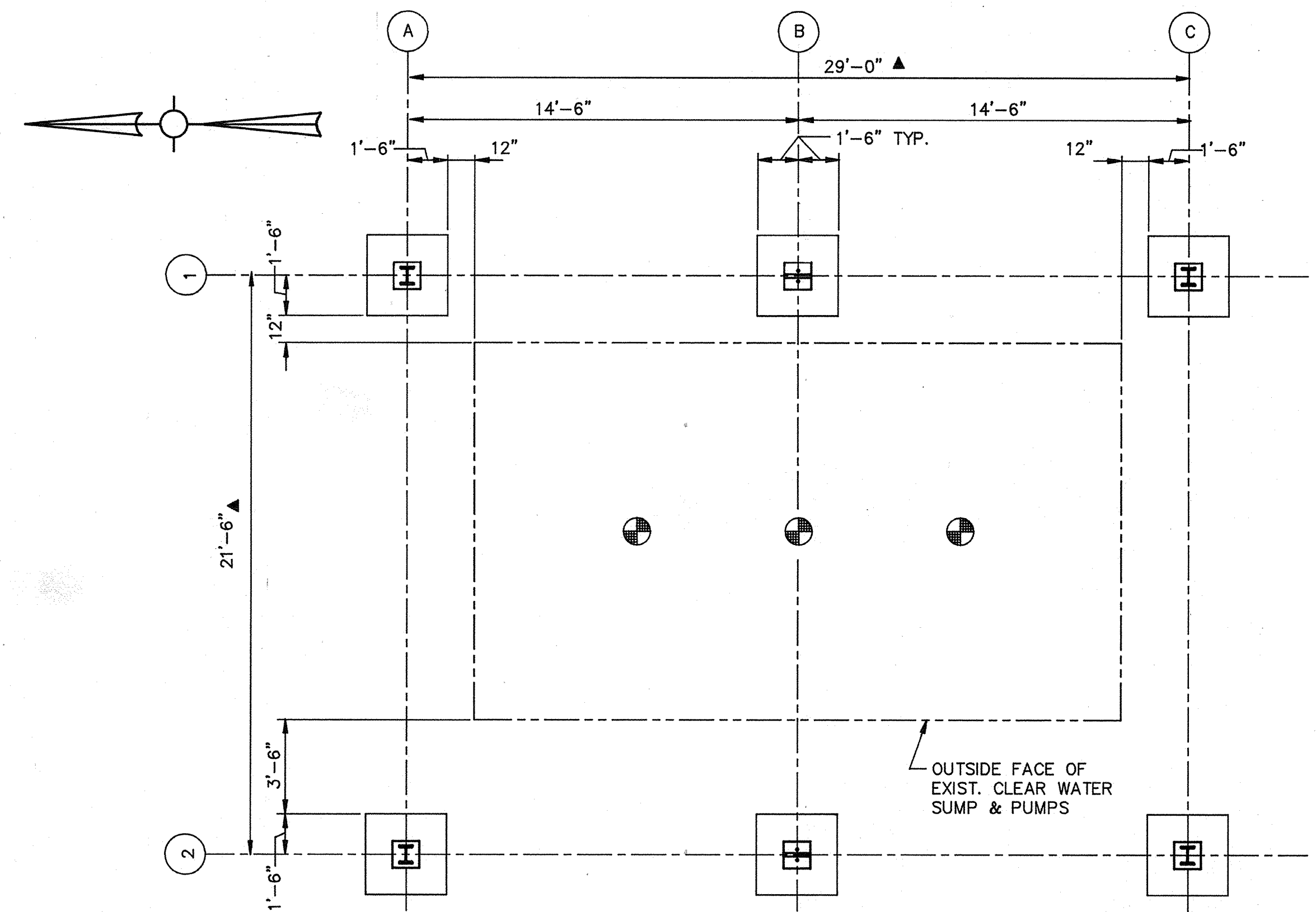
CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 NORTH CLEARWELL PUMP COVER -
 PLANS & ELEVATIONS

CAMP DRESSER & MCKEE INC.
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 environmental engineers, scientists,
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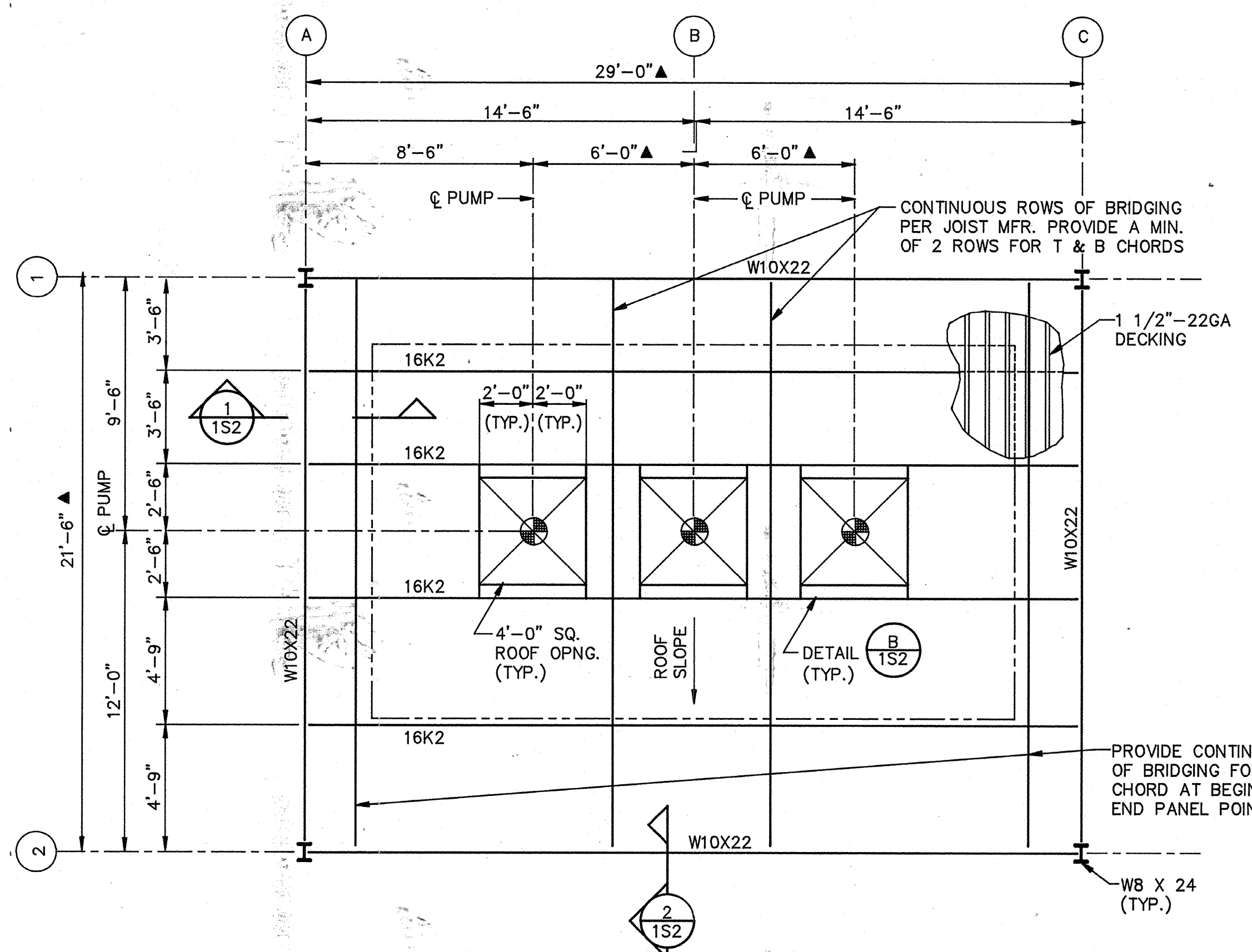
CDM
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SHEET NO. **4S-1**
 61 of 147
 4S-1

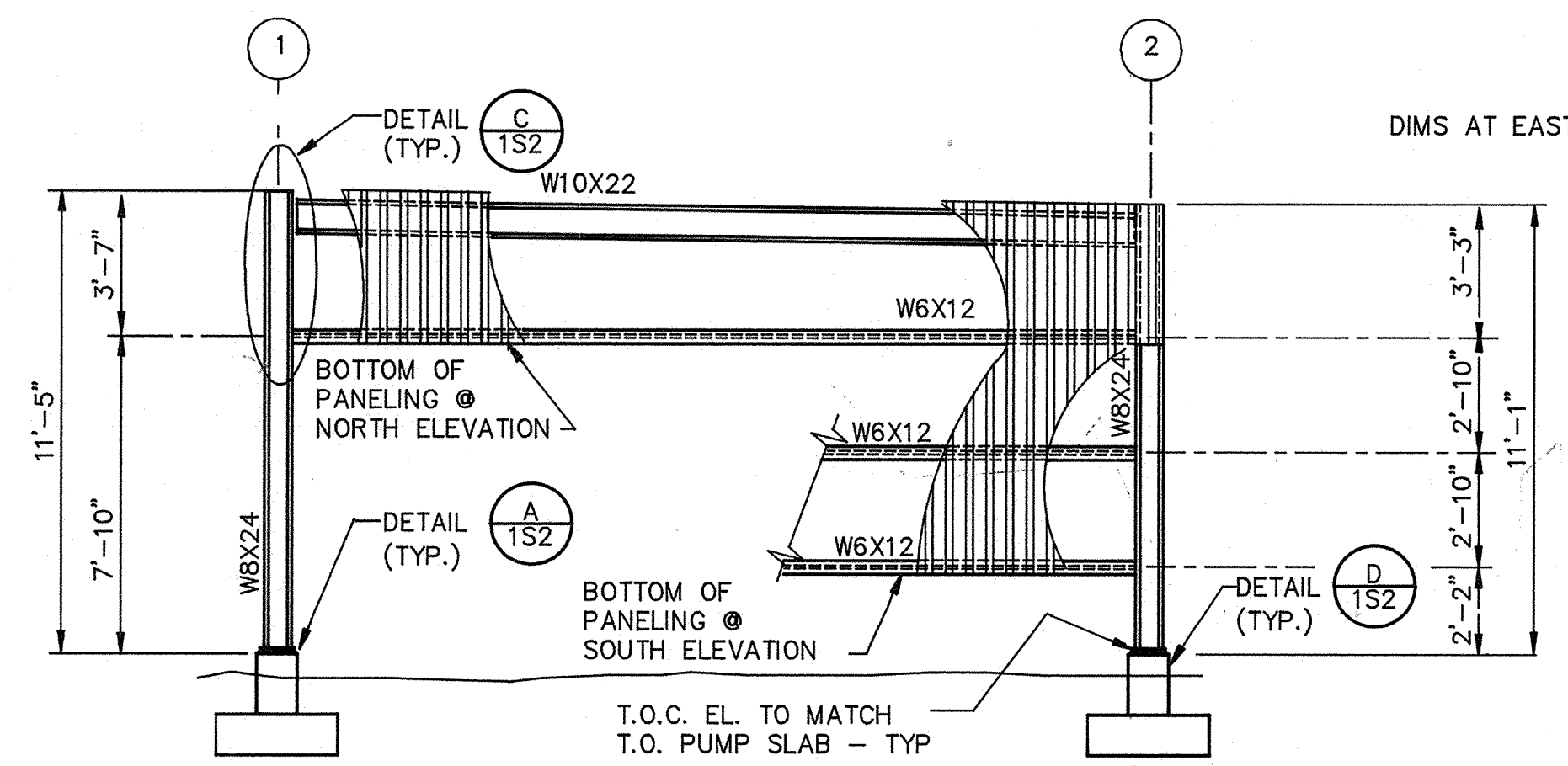
PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



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

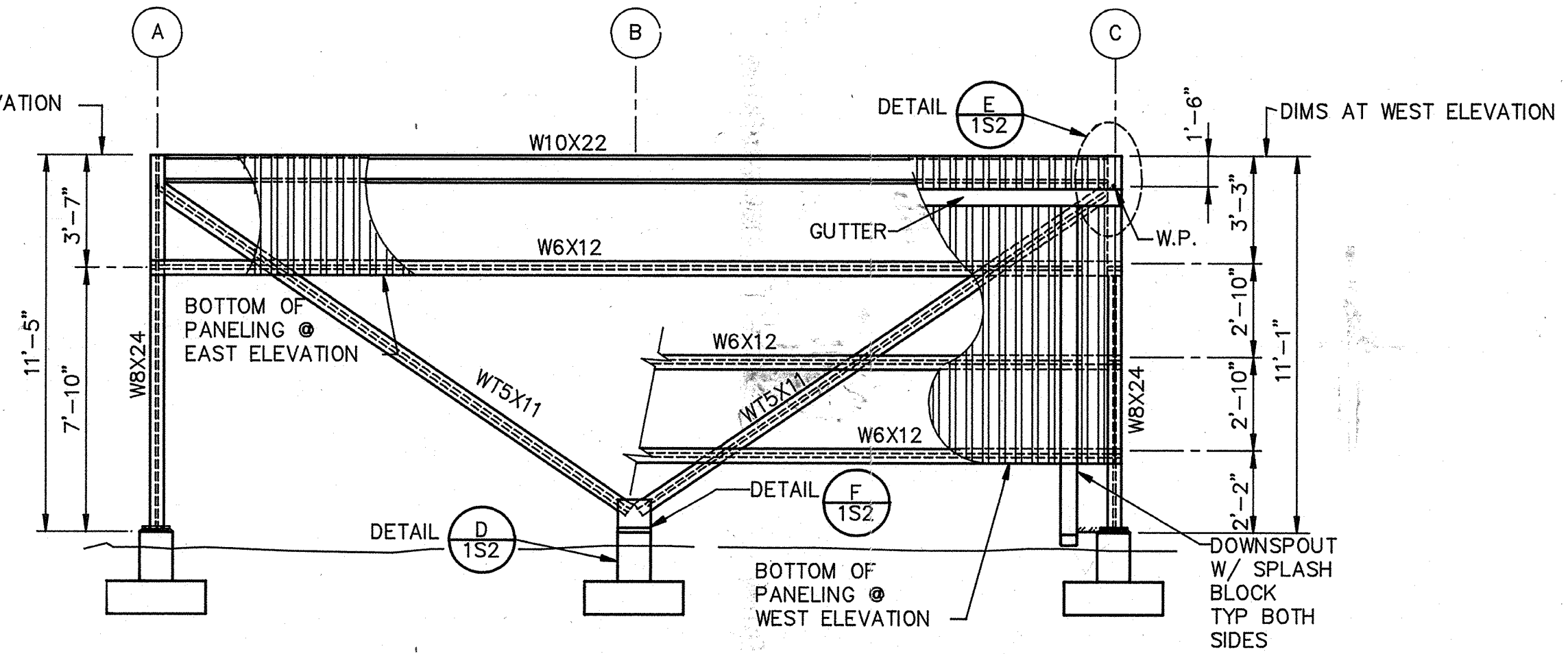


ROOF PLAN
SCALE: 1/4" = 1'-0"



NORTH ELEVATION
SCALE: 1/4" = 1'-0"
SOUTH ELEVATION

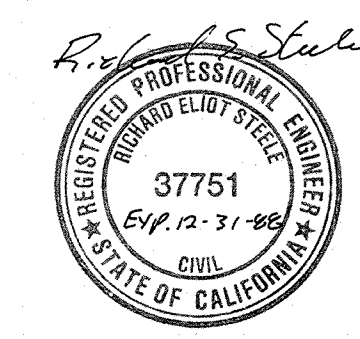
SIMILAR EXCEPT OPP. HAND



WEST ELEVATION
SCALE: 1/4" = 1'-0"
EAST ELEVATION

- NOTES:**
- SEE DETAIL ³⁰²/₅₋₃ FOR FRAMING REQUIREMENTS AROUND ROOF OPENINGS
 - SEE DETAIL ³⁰¹/₅₋₃ FOR DECK FASTENING PATTERN
 - ▲ INDICATES DIMENSIONS TO BE FIELD VERIFIED
 - FOR SUBGRADE PREPARATION AND EXCAVATION SEE SPEC. SECTION 02220
 - VERIFY LOCATIONS OF EXISTING UTILITIES
 - BRACE W6 X 12 GIRTS UNTIL SIDE PANELING HAS BEEN ERECTED AND ATTACHED TO ALL GIRTS
 - INDICATES LOCATION OF PUMP
 - ALL STRUCTURAL STEEL, STEEL DECKING & JOISTS SHALL BE GALVANIZED

AS-BUILT
 Signature: *Ofm* 5/10/91
 DATE



Date	Ch'k'd	Revision
Designed by:	JWI, BCO	
Drawn by:	KC, LS	Date: 9/88
Checked by:	JQG, BCO	
Approved by:	RES	Scale: AS SHOWN

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988
**SOUTH CLEARWELL PUMP COVER -
 PLANS & ELEVATIONS**

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners, & management consultants

SHEET NO.
4S-2
 62 of 147

111335

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

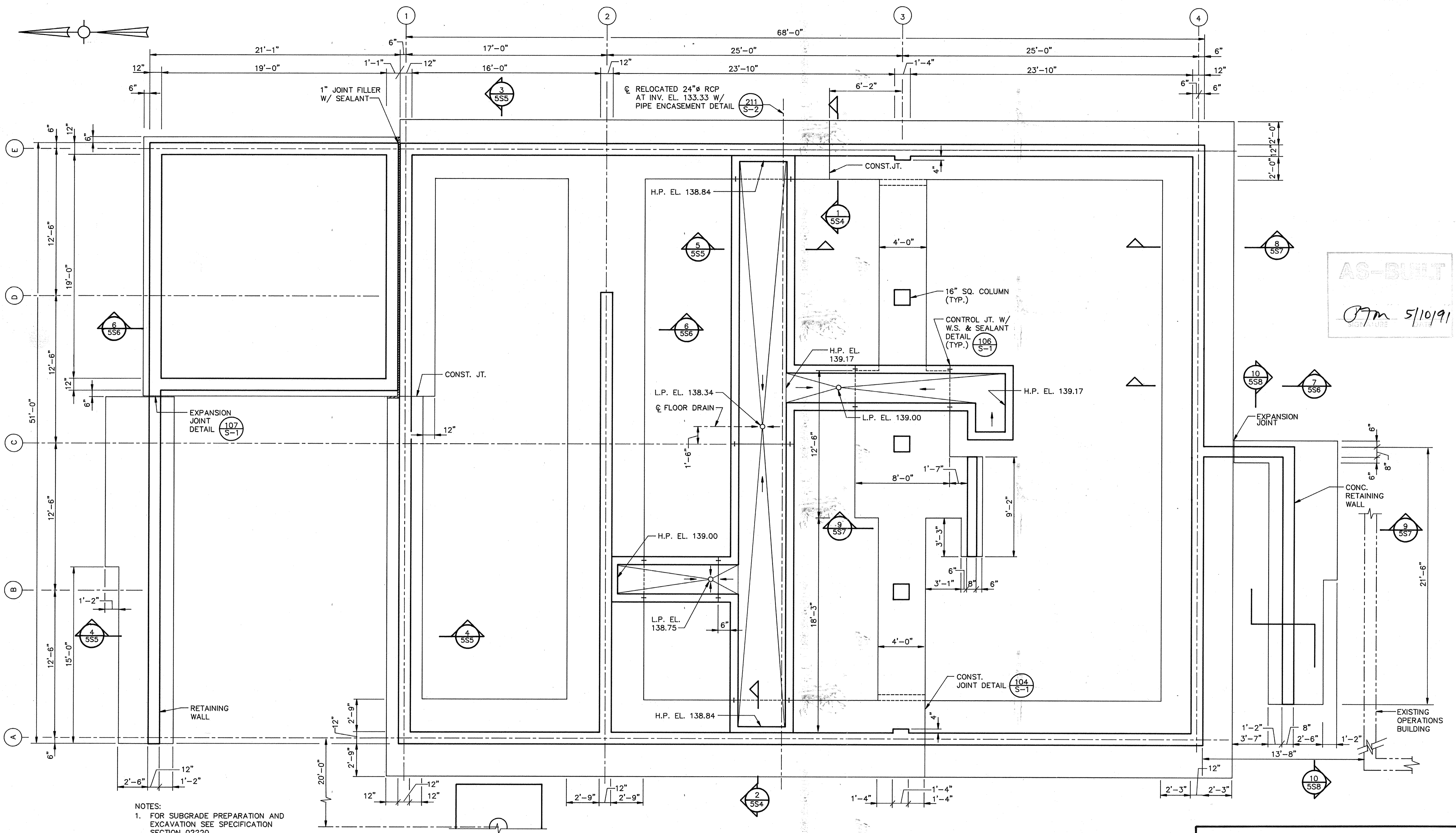
HVAC Approved by: Date:

INSTRUMENTATION Approved by: Date:

ELECTRICAL Approved by: Date:

STRUCTURAL Approved by: Date:

ARCHITECTURAL Approved by: Date:

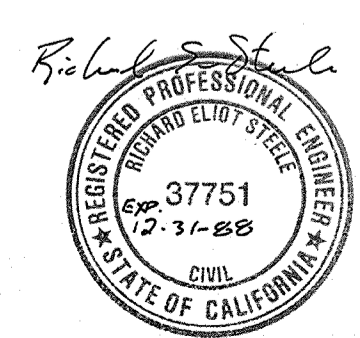


AS-BUILT

PTM 5/10/91

NOTES:
 1. FOR SUBGRADE PREPARATION AND EXCAVATION SEE SPECIFICATION SECTION 02220

PLAN AT EL. 139.00
 SCALE: 1/4" = 1'-0"



Date	Ch'k'd	Revision

Designed by: JWI
 Drawn by: KC, LS
 Checked by: JMH
 Approved by: RES

Date: 9/88
 Scale: AS SHOWN

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

OPERATIONS BUILDING - PLAN

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

CDM
 environmental engineers, scientists,
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SHEET NO.
 5S-1
 63 of 147

111335

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

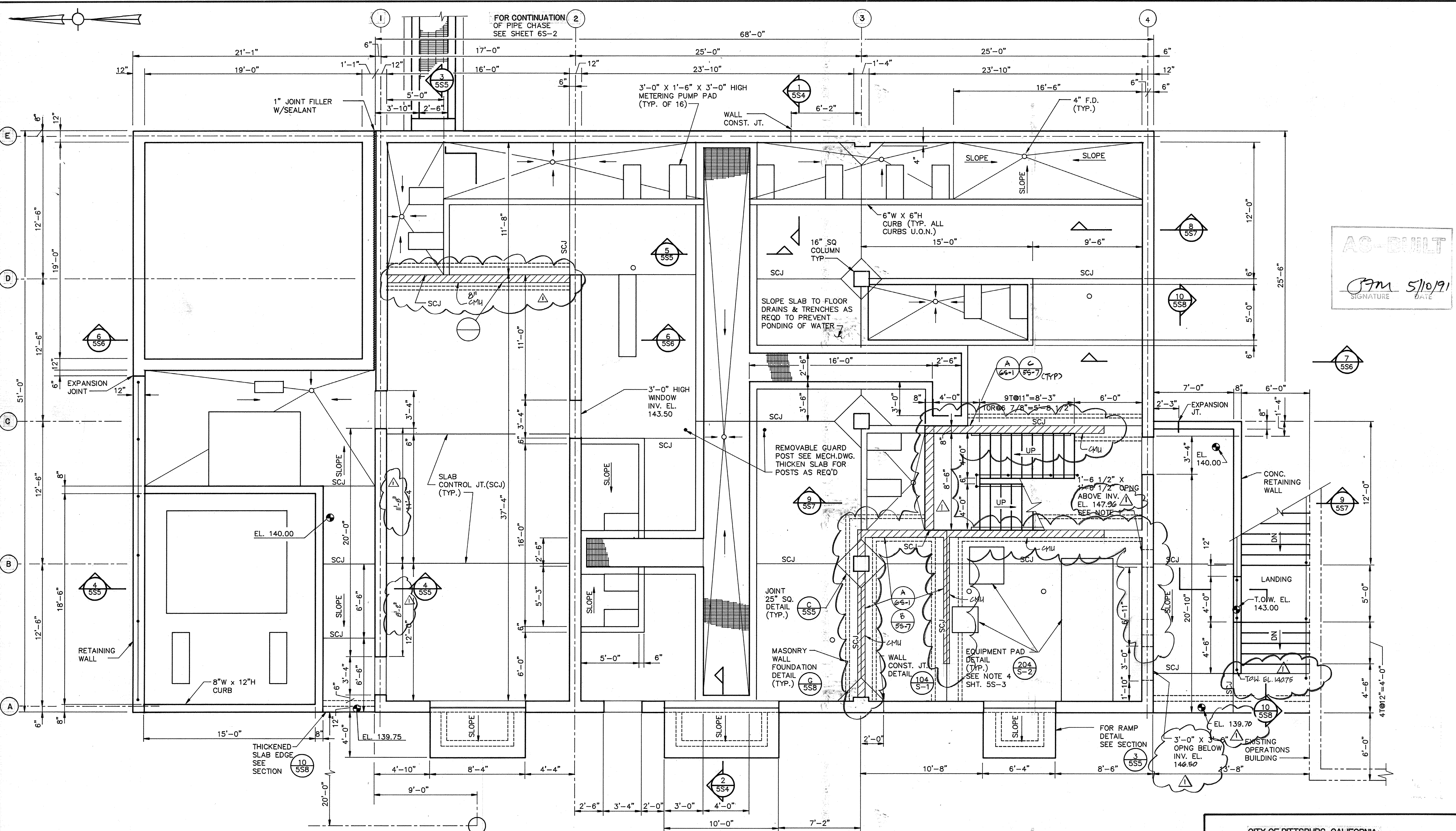
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INSTRUMENTATION Approved by: Date:

ELECTRICAL Approved by: Date:

STRUCTURAL Approved by: Date:

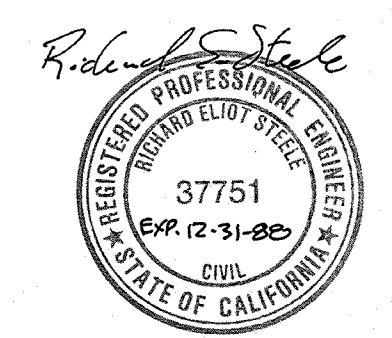
ARCHITECTURAL Approved by: Date:



AS-BUILT

Jm 5/10/91
SIGNATURE DATE

PLAN AT EL. 146.0
SCALE: 1/4" = 1'-0"



Date	4/12/91	Revised for the Record
Ch'k'd		Revision
Designed by:		Date: 9/88
Drawn by:		Scale:
Checked by:		
Approved by:		

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

OPERATIONS BUILDING - PLAN

CAMP DRESSER & MCKEE INC. **CDM**

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Walnut Creek, CA 94596
environmental engineers, scientists,
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SHEET NO. **5S-2**
64 of 147

111335

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

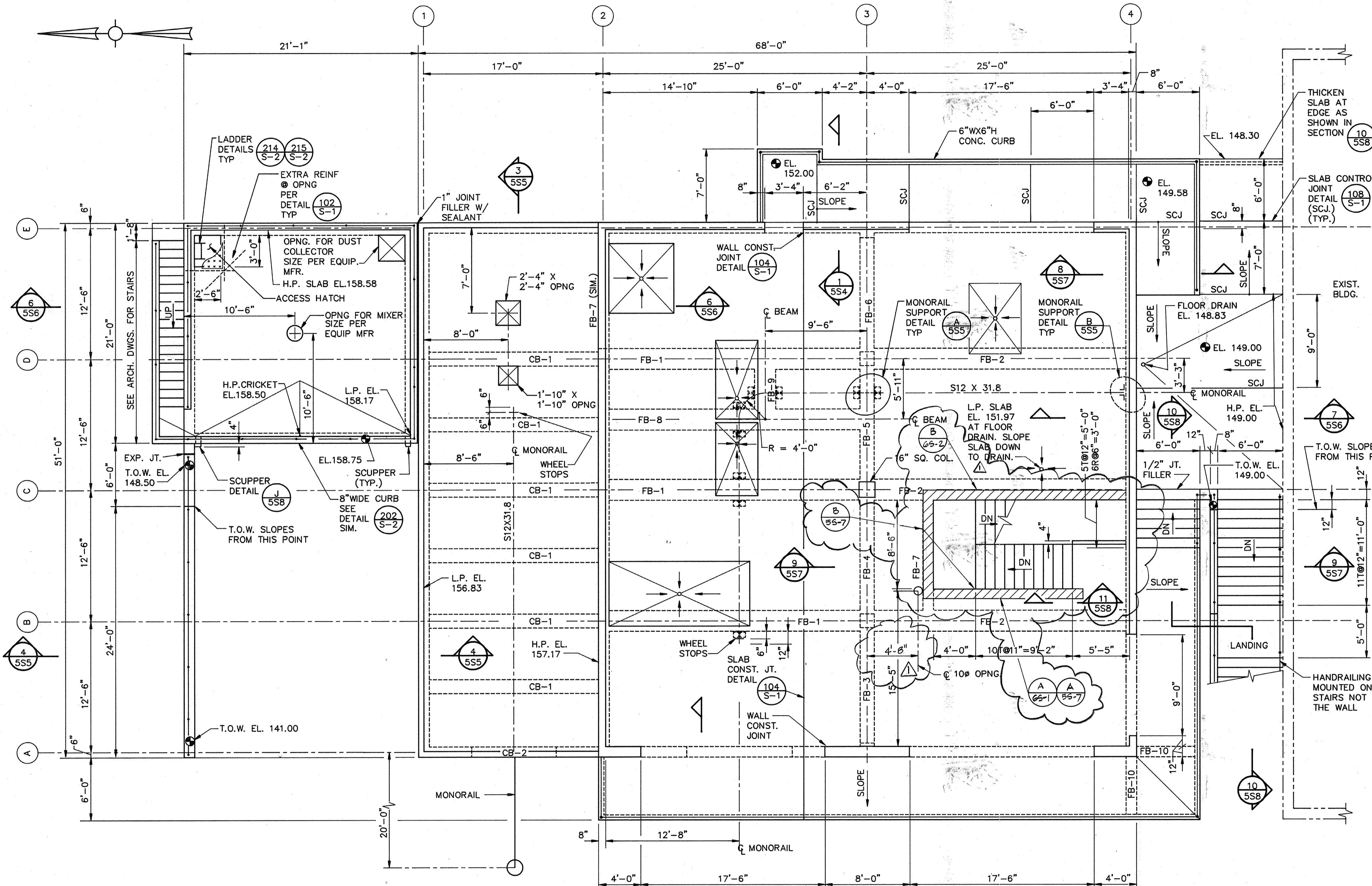
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INSTRUMENTATION Approved by: Date:

ELECTRICAL Approved by: Date:

STRUCTURAL Approved by: Date:

ARCHITECTURAL Approved by: Date:



PLAN AT EL. 158.50
SCALE: 3/16" = 1'-0"

NOTES FOR SHEET 5S-3

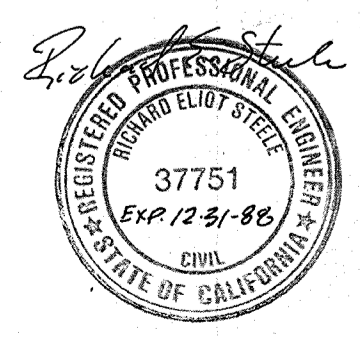
- SEE BEAM SCHEDULE SHEET S-5 FOR BEAM REINFORCEMENT AND DIMENSIONS.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONFIRM IN WRITING THAT THE MONORAIL BEAM AND SUPPORTS ARE ADEQUATE TO SUPPORT MONORAIL LOADS.
- SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND LOCATION OF SLAB AREAS THAT SLOPE DOWN TO FLOOR DRAINS. FLOOR DRAINS SHALL HAVE INVERT ELEV. 151.94 U.O.N.

NOTES FOR SHEET 5S-2

- PRIOR TO CONSTRUCTION, VERIFY WITH EQUIPMENT SUPPLIERS SIZE AND LOCATION OF ALL WALL PENETRATIONS, BLOCKOUT WALL CASTINGS, AND ANCHOR BOLTS TO BE CAST INTO THE SEE HVAC, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWING.
- EQUIPMENT PADS SHALL BE LOCATED AS SHOWN ON HVAC, ELECTRICAL, AND MECHANICAL DRAWINGS. FOR CONSTRUCTION EQUIPMENT PADS SEE DETAIL 204/S-2.
- FLOOR DRAINS SHALL BE LOCATED AS SHOWN ON THE PLUMB DRAWINGS. LOW POINT OF CONCRETE AT FLOOR DRAINS SHALL BE 139.87 U.O.N.
- A MASONRY LINTEL SHALL BE PLACED ABOVE ALL OPENINGS IN MASONRY WALLS U.O.N. SEE DETAIL 308/S-3.
- FILL ALL MASONRY CORES SOLID WITH GROUT FROM ELEVATION 140.00 TO ELEVATION 141.33.
- PROVIDE ADDITIONAL REINFORCEMENT AT ALL CONCRETE WALLS. THE WEST WALL OF THE OPERATIONS BLDG. SHALL BE REINFORCED WEST WALL ELEVATION ON SHT. 5S-8. ALL OTHER OPENING REINFORCED PER DETAIL H/5S-8.
- ALL CONCRETE SLAB JOINTS FOR THE SLAB AT ELEVATION 1 THE OPERATIONS BLDG. SHALL BE SEALED WITH A CHEMICAL SEALANT. SEE SPECIFICATION SECTION 07920.
- SEE DETAIL 108/S-1 FOR CONSTRUCTION OF SLAB CONTROL JOINTS.
- FOR CONSTRUCTION OF CONCRETE CURB SEE DETAIL 201/S-1.
- SEE ARCHITECTURAL DRAWINGS FOR THE LOCATION AND SIZE RECESSES, PROTRUSIONS, AND CHAMFER STRIPS TO BE INCORPORATED INTO THE CONCRETE.
- THE CONTRACTOR SHALL SUBMIT FOR APPROVAL DRAWINGS SHOWING CONCRETE POURING SEQUENCE, JOINT LOCATIONS, RUSTICATION LOCATIONS, AND OPENING LOCATIONS FOR THIS BUILDING. APPROVED DRAWINGS SHALL THEN BE GIVEN TO THE REBAR FABRICATOR IN PREPARING REINFORCING SHOP DRAWINGS.
- FOR HANDRAIL DETAILS SEE ARCH. DWGS.

AS-BUILT

[Signature] 5/10/91
SIGNATURE DATE



Date	4/12/91	Revised For The Record
Ch'k'd	JWL	Revision
Drawn by	KC, LS	Date: 9/88
Checked by	JMH	Scale: AS SHOWN
Approved by	RES	

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

OPERATIONS BUILDING - PLAN

CAMP DRESSER & MCKEE INC.

710 South Broadway
Walnut Creek, CA 94596

environmental engineers, scientists,
planners & management consultants

SHEET NO. **5S-3**
65 of 147

111335

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

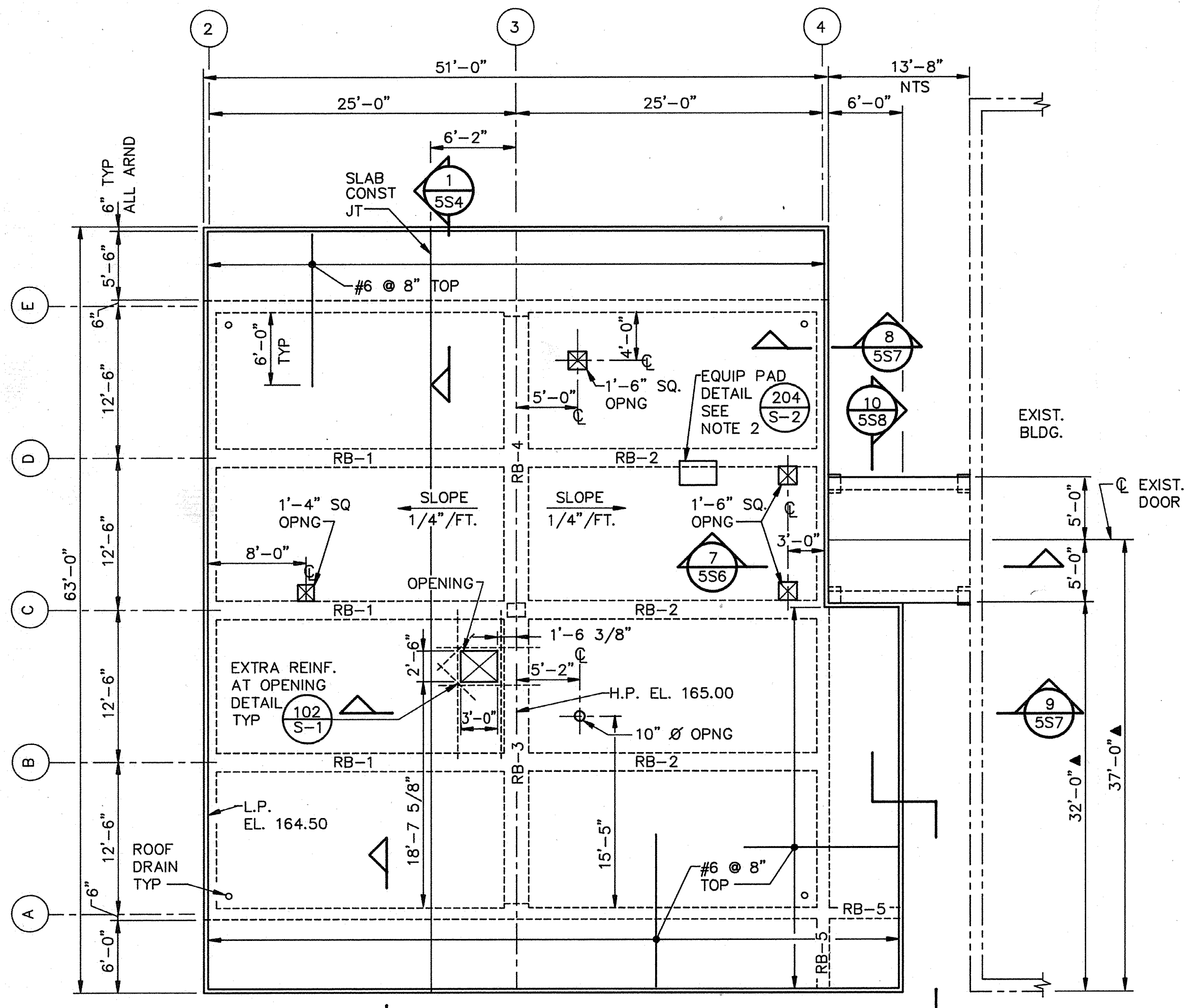
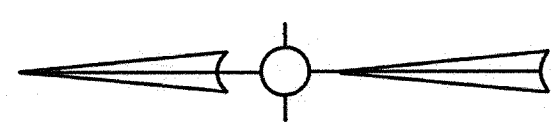
HVAC Approved by: Date:

INSTRUMENTATION Approved by: Date:

ELECTRICAL Approved by: Date:

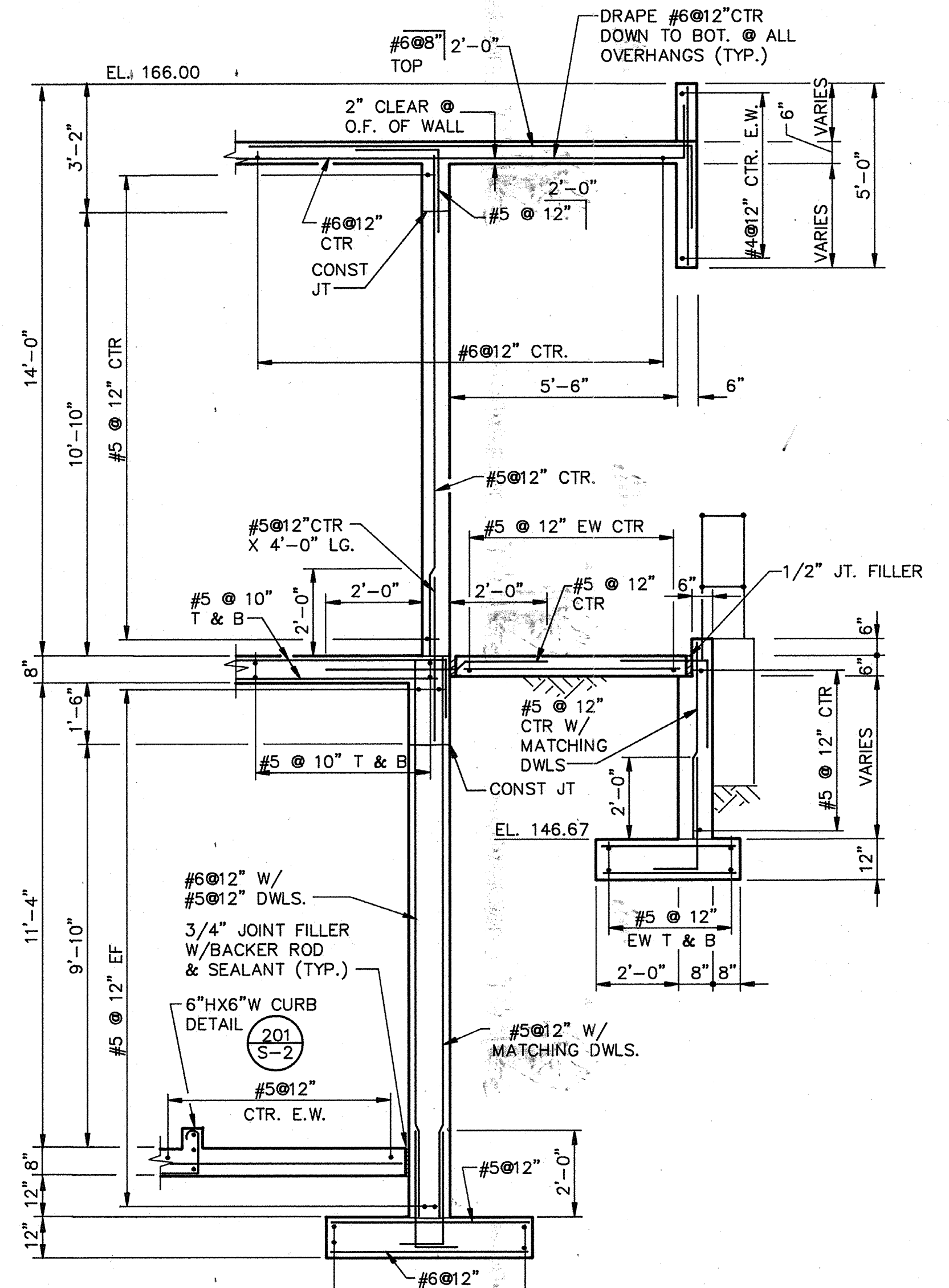
STRUCTURAL Approved by: Date:

ARCHITECTURAL Approved by: Date:

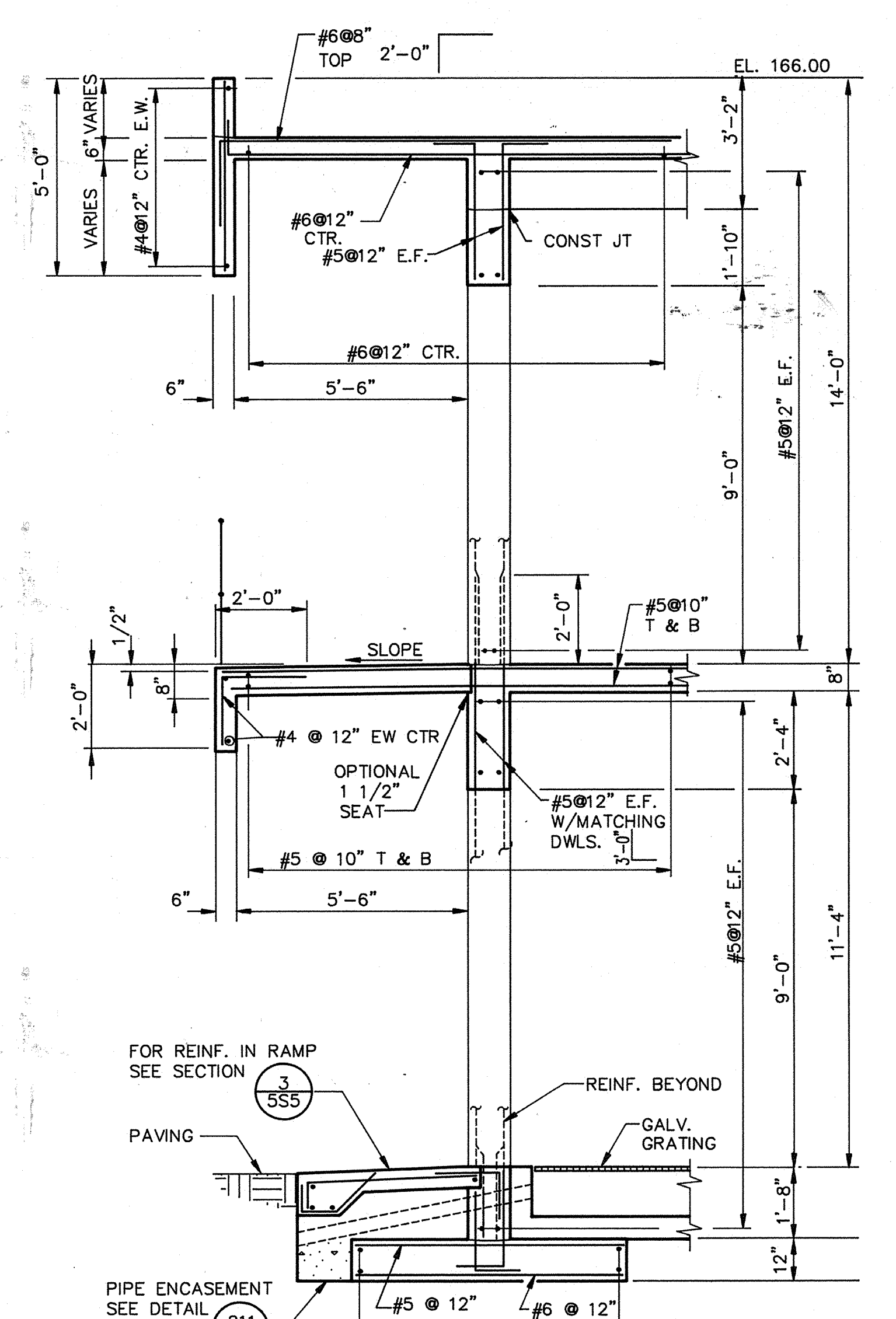


ROOF PLAN
SCALE: 1/8" = 1'-0"

- NOTES:
- FOR BEAM DIMENSIONS AND REINFORCEMENT SEE BEAM SCHEDULE SHT S-5
 - PRIOR TO CONSTRUCTION OF THE ROOF, VERIFY WITH SUPPLIER SIZE AND LOCATION OF ALL OPENINGS AND EQUIPMENT PADS TO BE INSTALLED. SEE HVAC, MECHANICAL & PLUMBING DRAWINGS



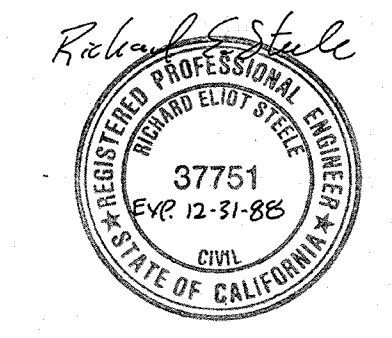
SECTION 1
SCALE: 3/8" = 1'-0" 5S1,2,3,4



SECTION 2
SCALE: 3/8" = 1'-0" 5S1,2,3,4

AS-BUILT

Pgm 5/10/91
SIGNATURE DATE



Date	Ch'k'd	Revision
Designed by: <u>JWI</u>	Drawn by: <u>KC, LS</u>	Date: <u>SEPT. 1988</u>
Checked by: <u>JMH</u>	Approved by: <u>RES</u>	Scale: <u>AS SHOWN</u>

CITY OF PITTSBURG, CALIFORNIA

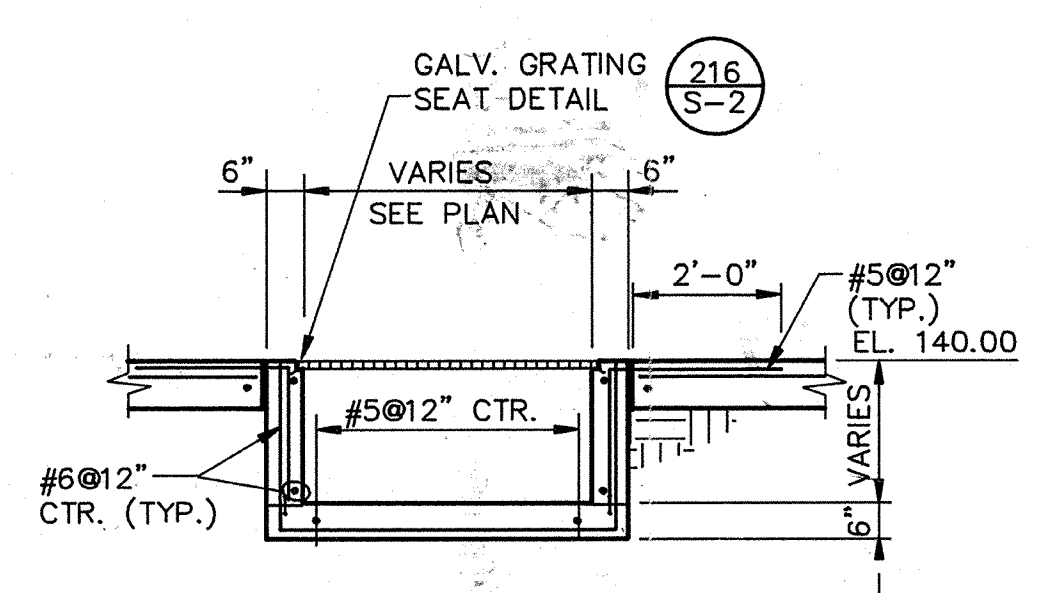
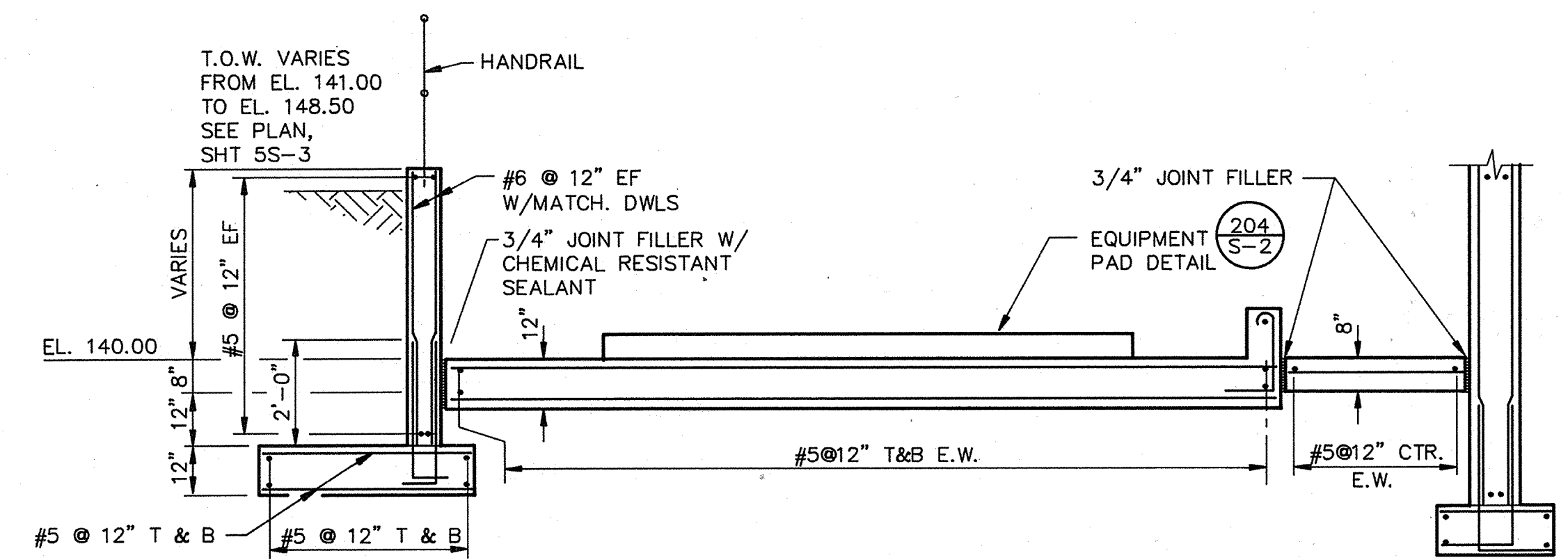
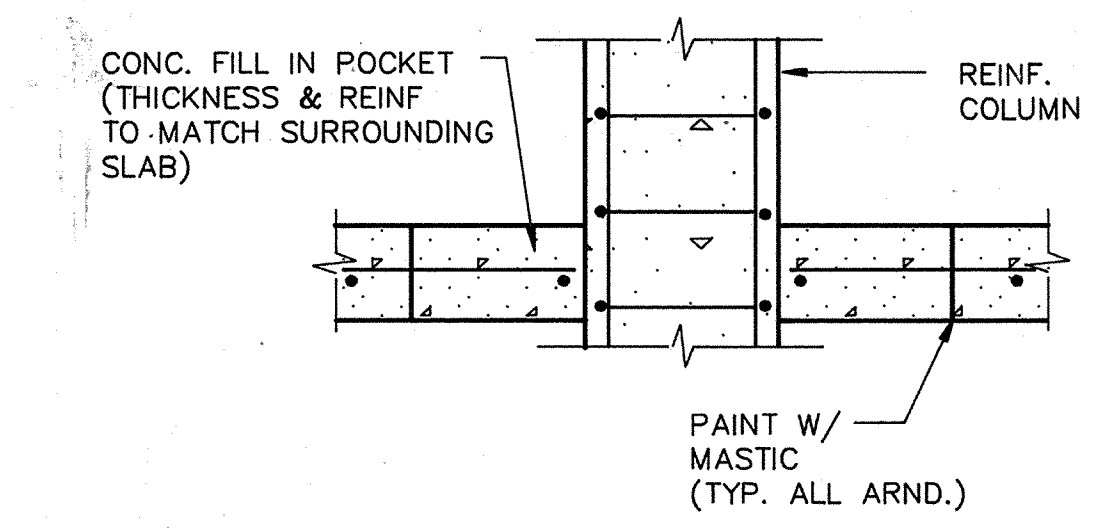
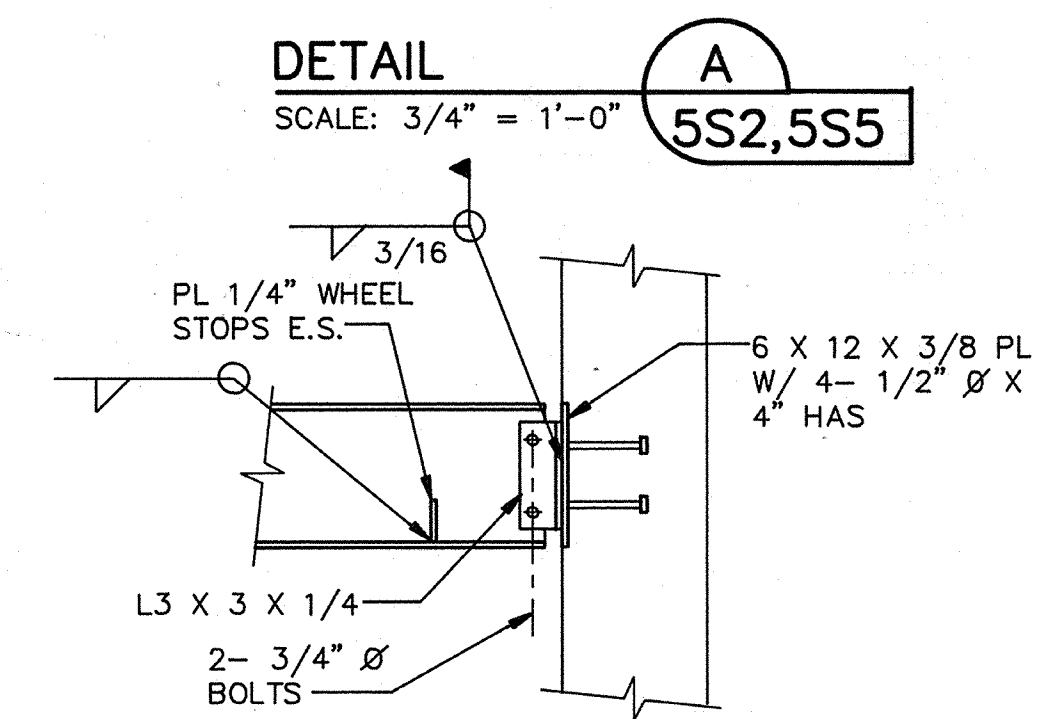
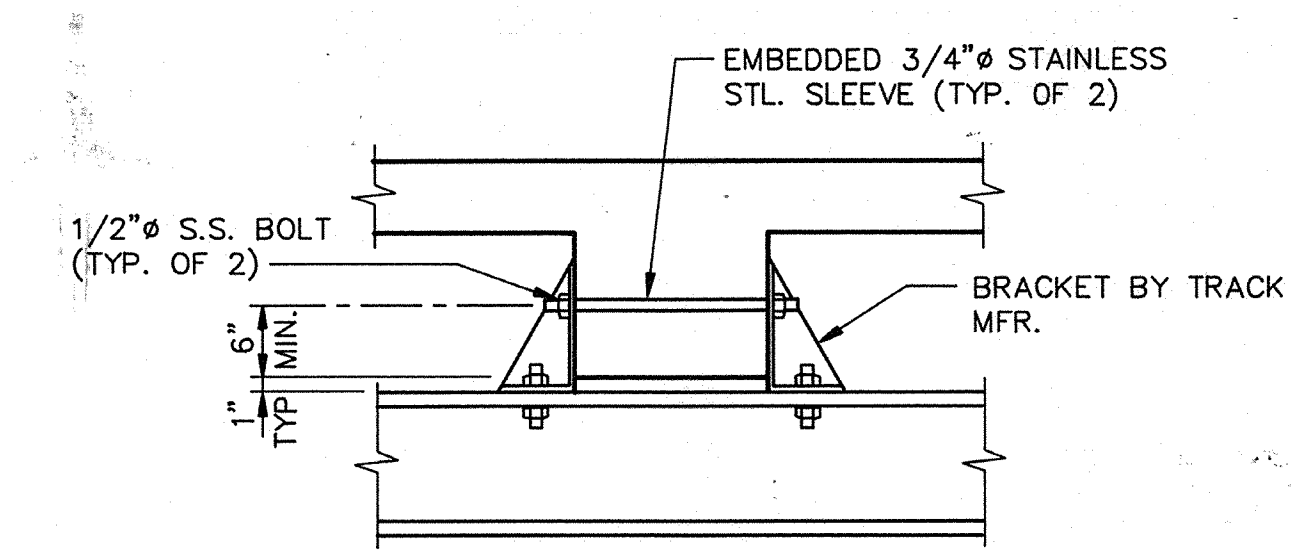
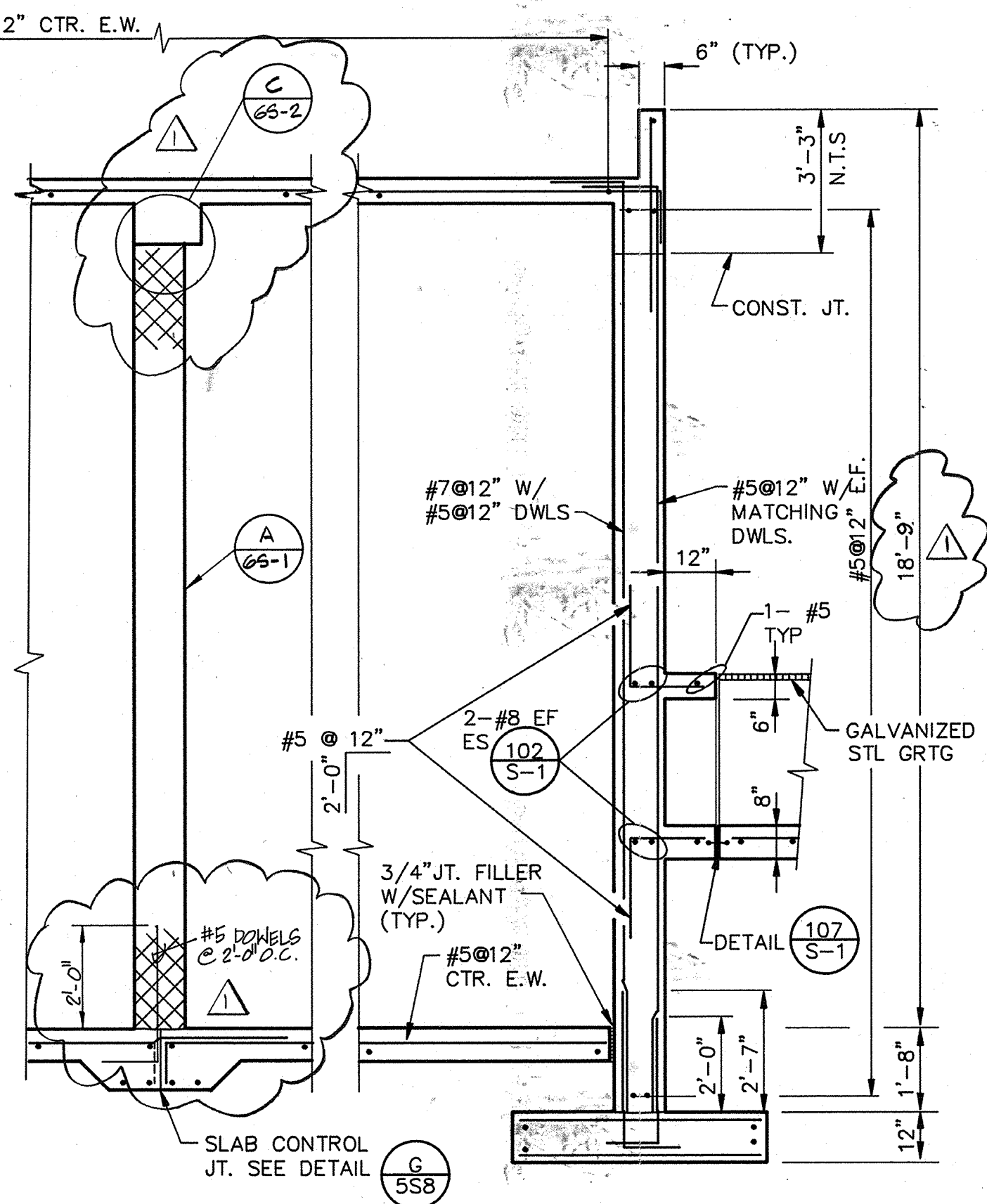
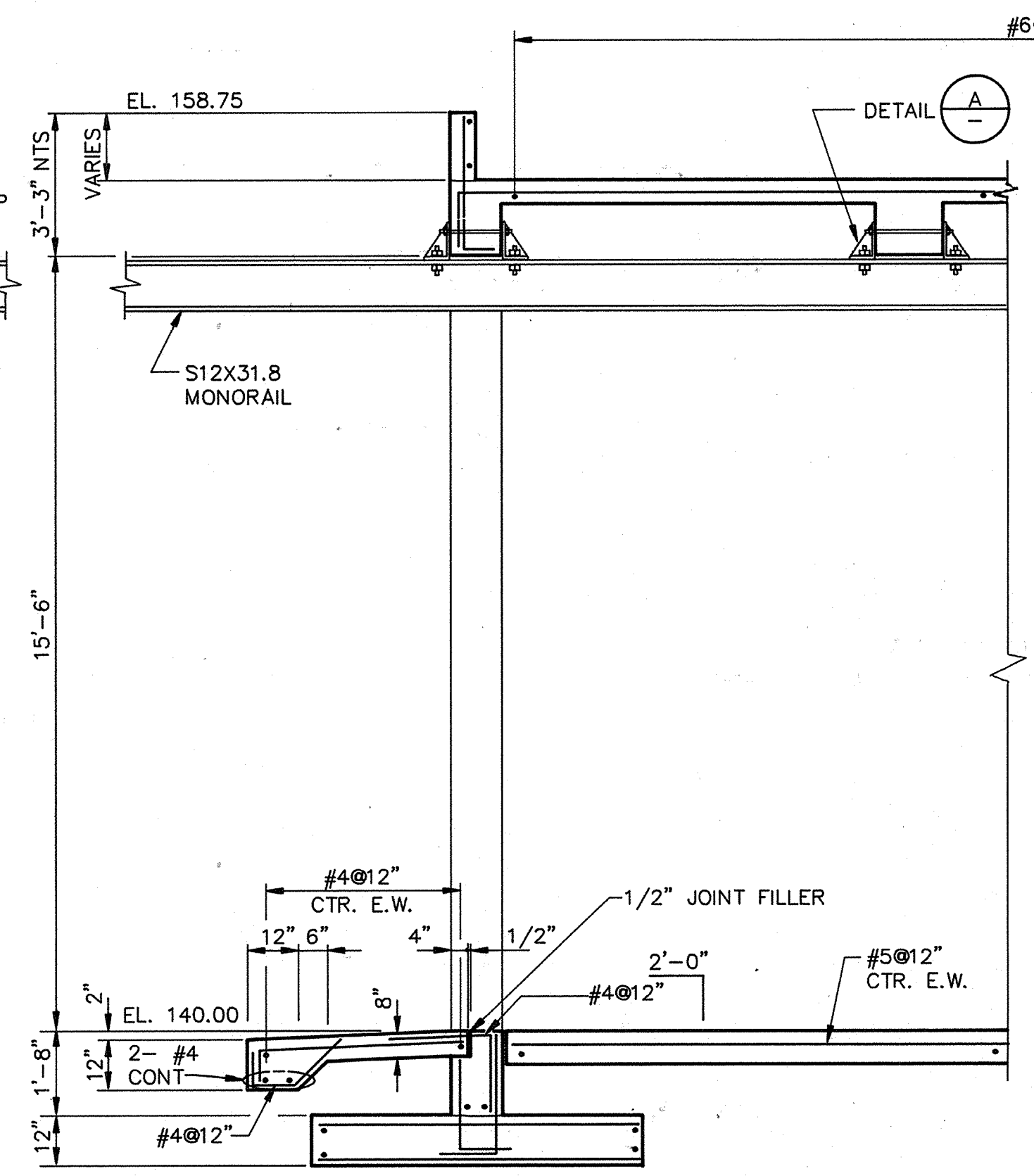
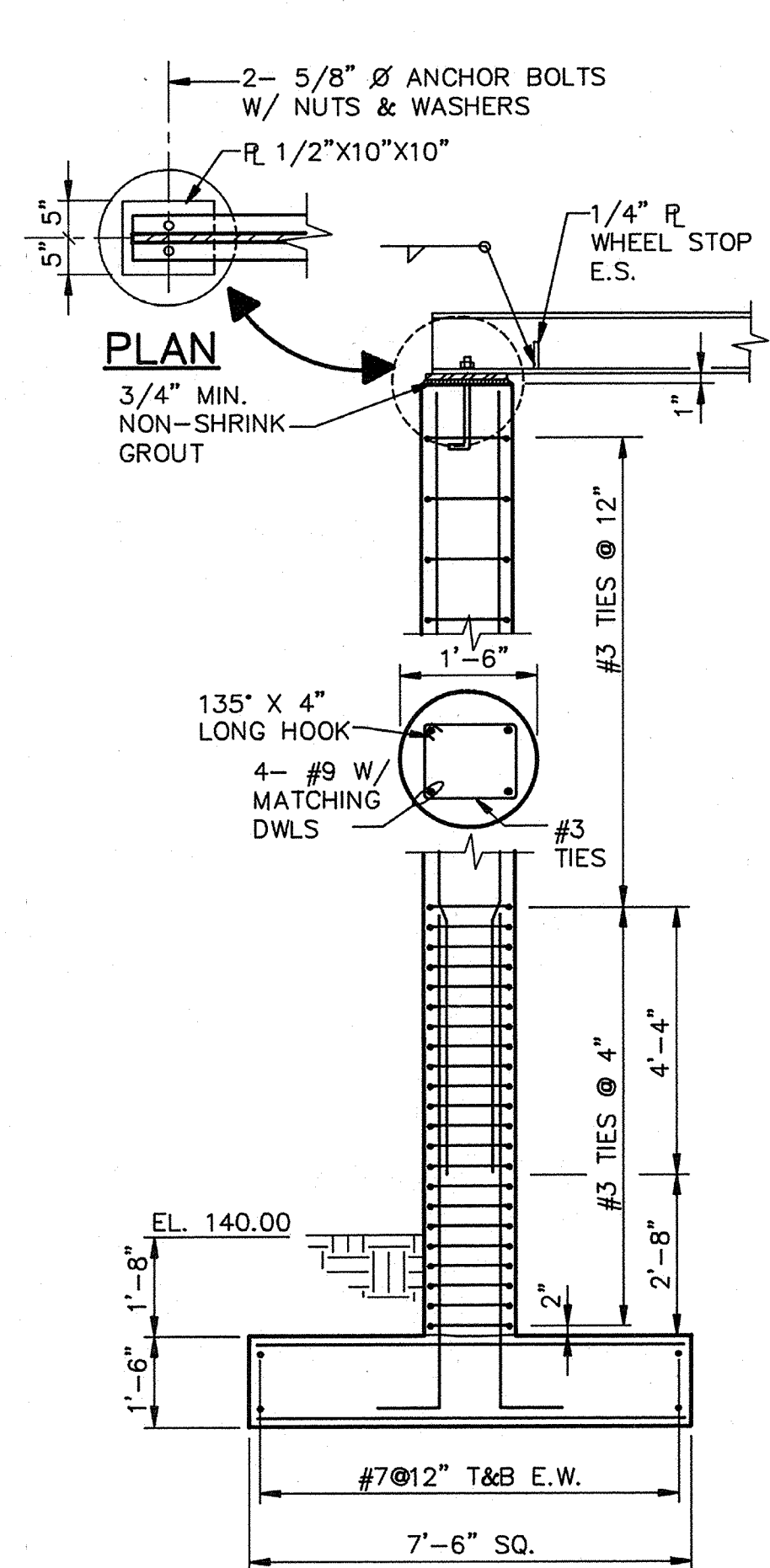
WATER TREATMENT PLANT EXPANSION 1988

OPERATIONS BUILDING - PLAN & SECTIONS

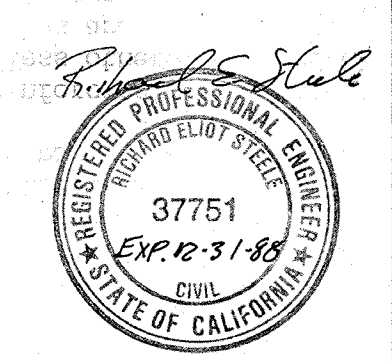
CAMP DRESSER & MCKEE INC. **CDM**
710 South Broadway
Walnut Creek, CA 94596
environmental engineers, scientists,
planners, & management consultants

SHEET NO. **5S-4**
66 of 147

PROJECT MANAGER Approved by: Date: _____
 PROJECT ENGINEER Approved by: Date: _____
 PLUMBING Approved by: Date: _____
 HVAC Approved by: Date: _____
 INSTRUMENTATION Approved by: Date: _____
 ELECTRICAL Approved by: Date: _____
 STRUCTURAL Approved by: Date: _____
 ARCHITECTURAL Approved by: Date: _____



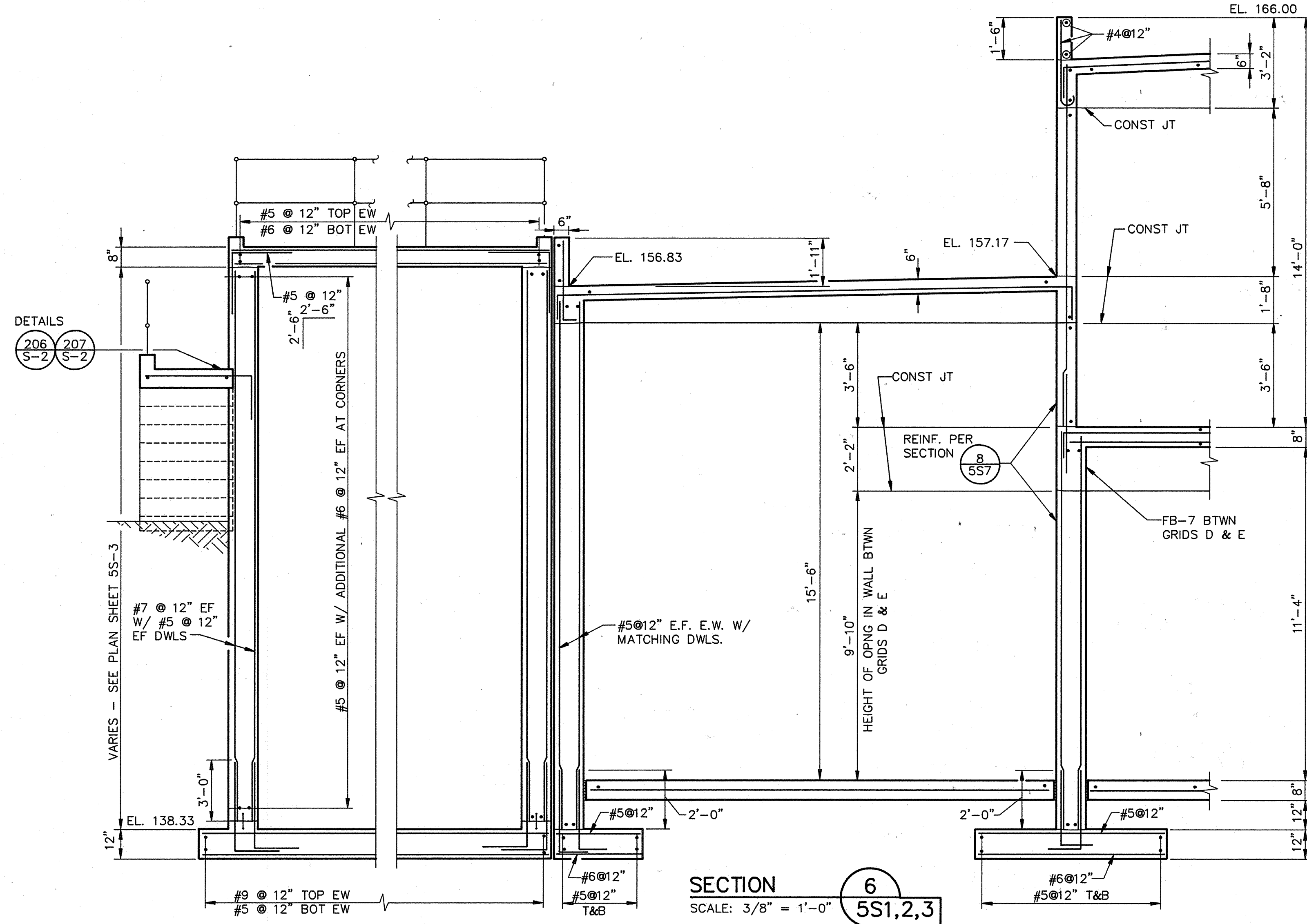
AS-BUILT
 Signature: JPM
 Date: 5/10/91



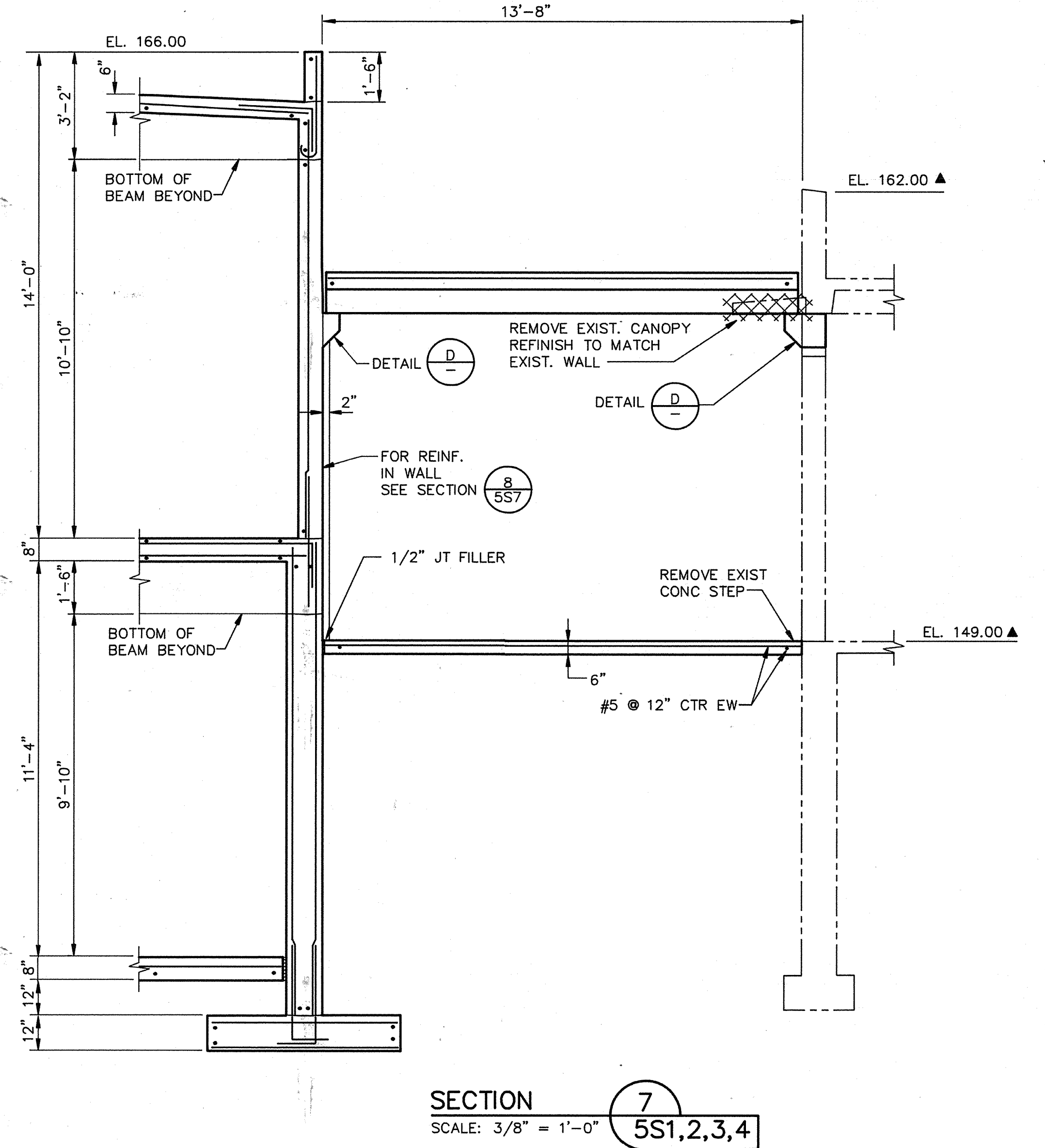
Date	Checked	Revision
4/12/91	RES	REVISED FOR THE RECORD
Designed by:	JWI	Date: SEPT. 1988
Drawn by:	KC, LS	Scale: AS SHOWN
Checked by:	JMH	
Approved by:	RES	

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 OPERATIONS BUILDING -- SECTIONS & DETAILS
 SHEET NO. 5S-5
 CAMP DRESSER & MCKEE INC.
 710 South Broadway, Walnut Creek, CA 94596
 environmental engineers, scientists, planners, & management consultants

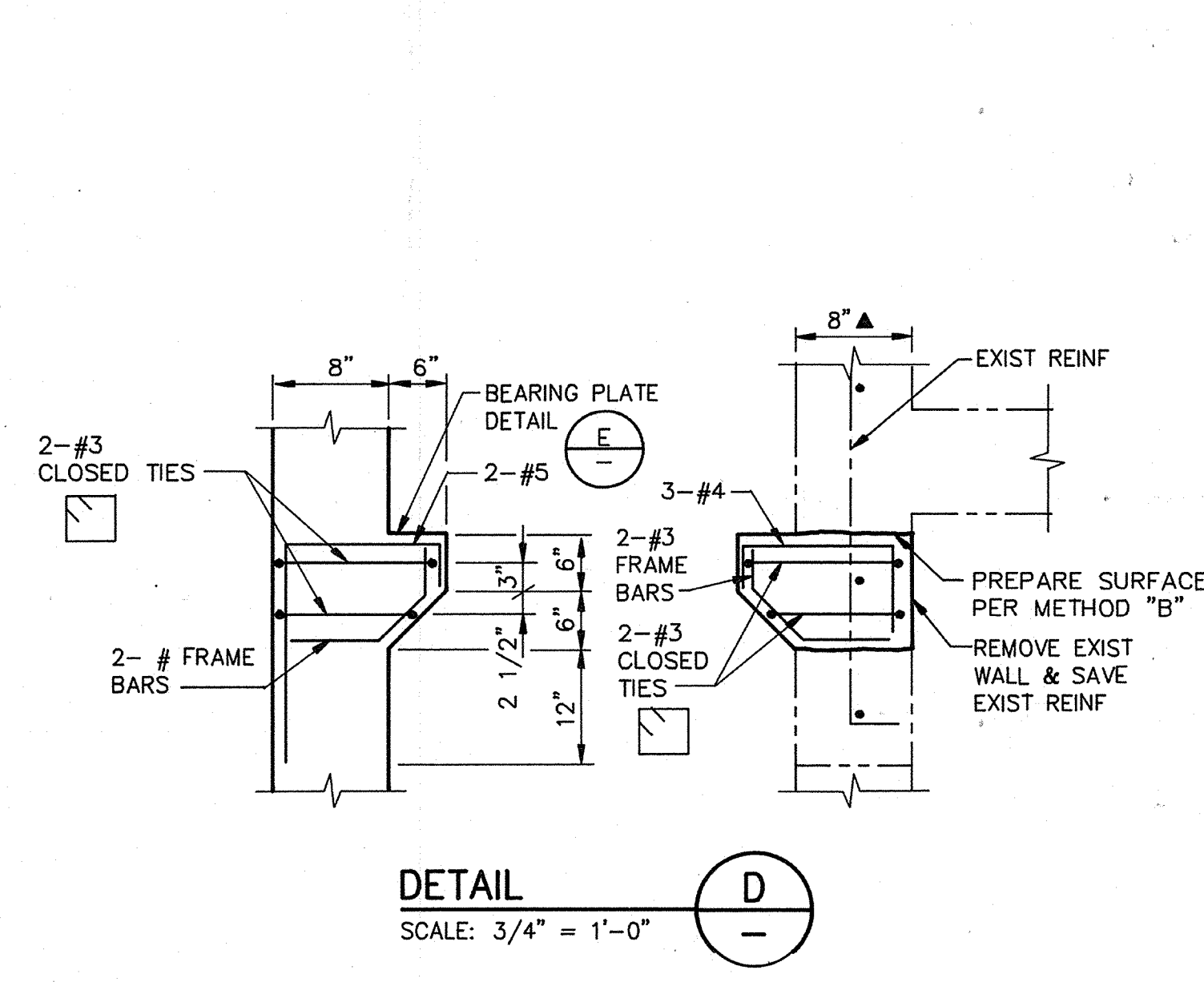
PROJECT MANAGER Approved by: Date: PROJECT ENGINEER Approved by: Date: PLUMBING Approved by: Date: HVAC Approved by: Date: INSTRUMENTATION Approved by: Date: ELECTRICAL Approved by: Date: STRUCTURAL Approved by: Date: ARCHITECTURAL Approved by: Date:



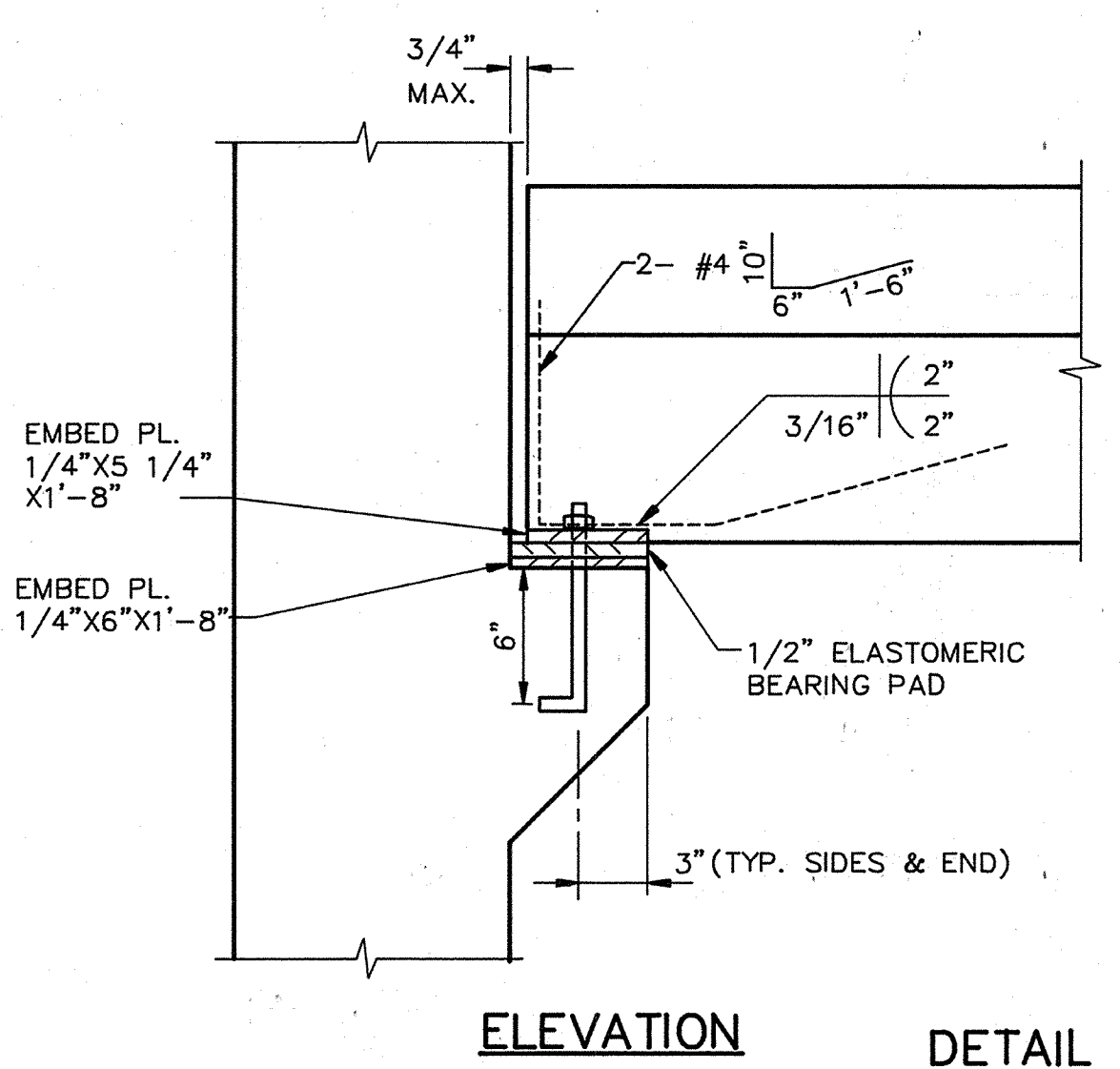
SECTION 6
SCALE: 3/8" = 1'-0" 5S1,2,3



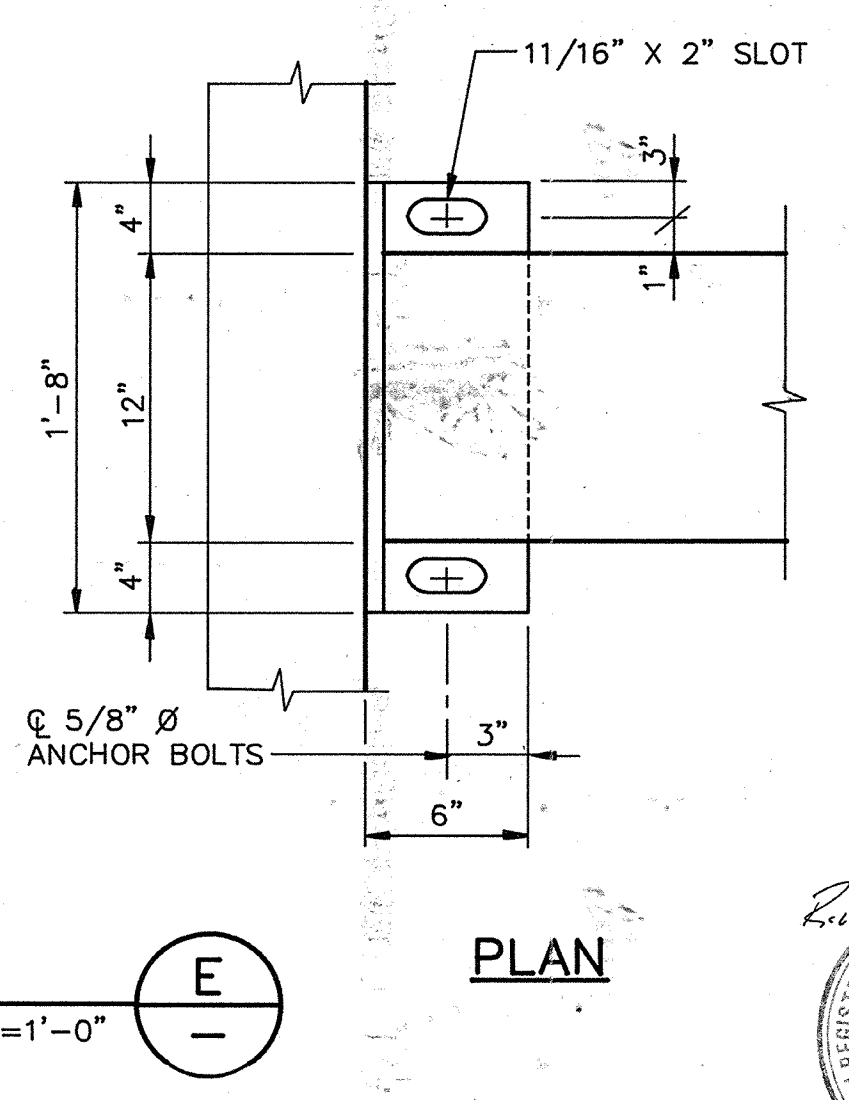
SECTION 7
SCALE: 3/8" = 1'-0" 5S1,2,3,4



DETAIL D
SCALE: 3/4" = 1'-0"



ELEVATION



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

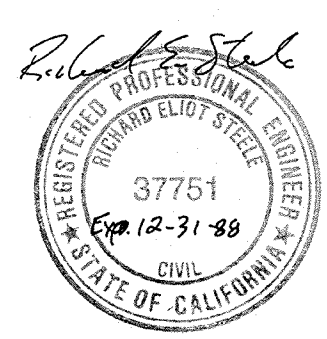
PLAN

AS-BUILT
SIGNATURE DATE

Date	Checked	Revision

Designed by: JWI
 Drawn by: KC, LS
 Checked by: JMH
 Approved by: RES

Date: SEPT. 1988
 Scale: AS SHOWN

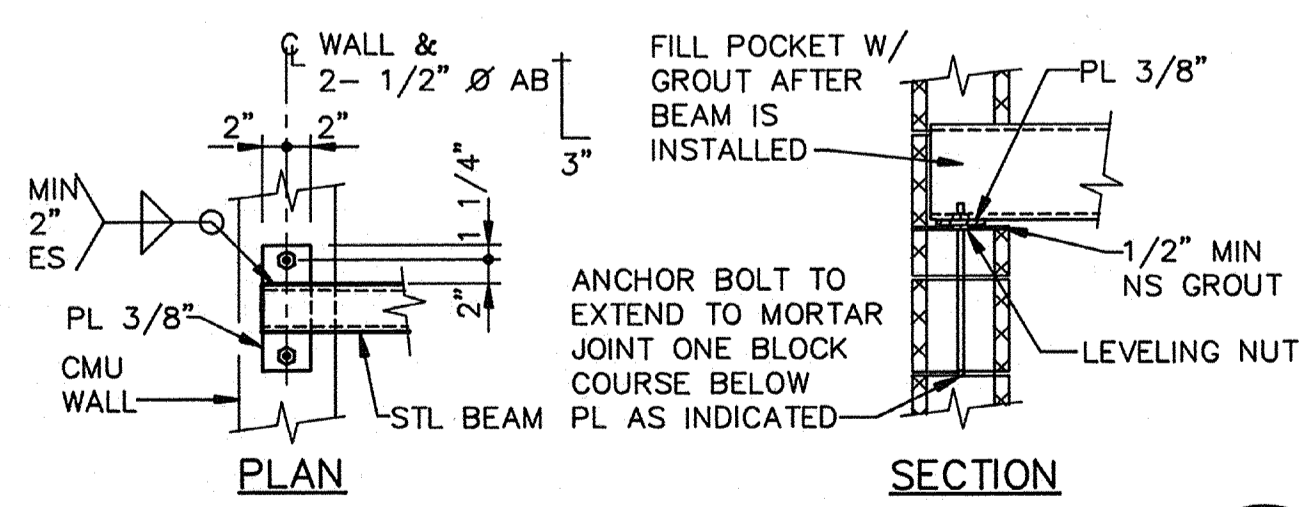
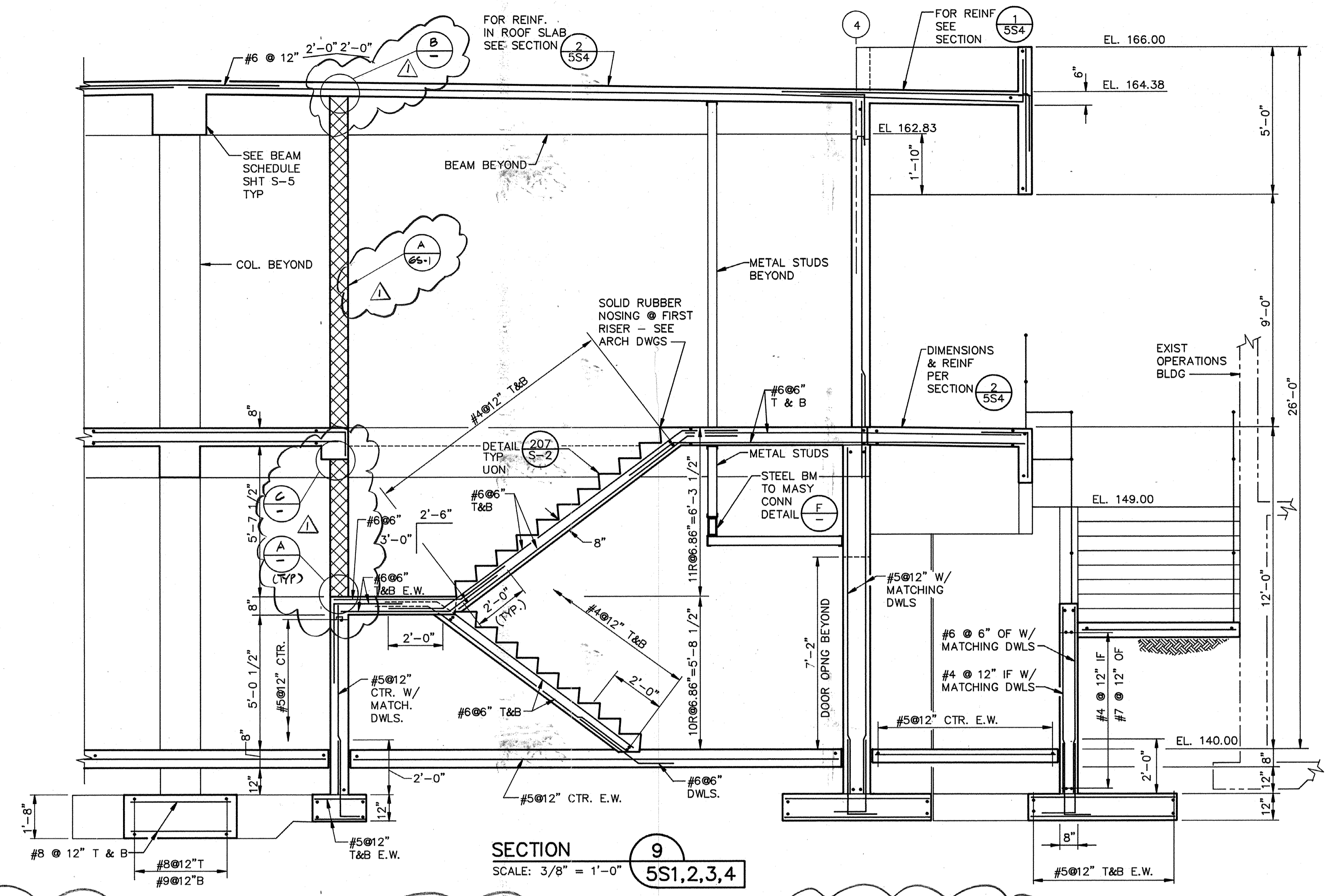
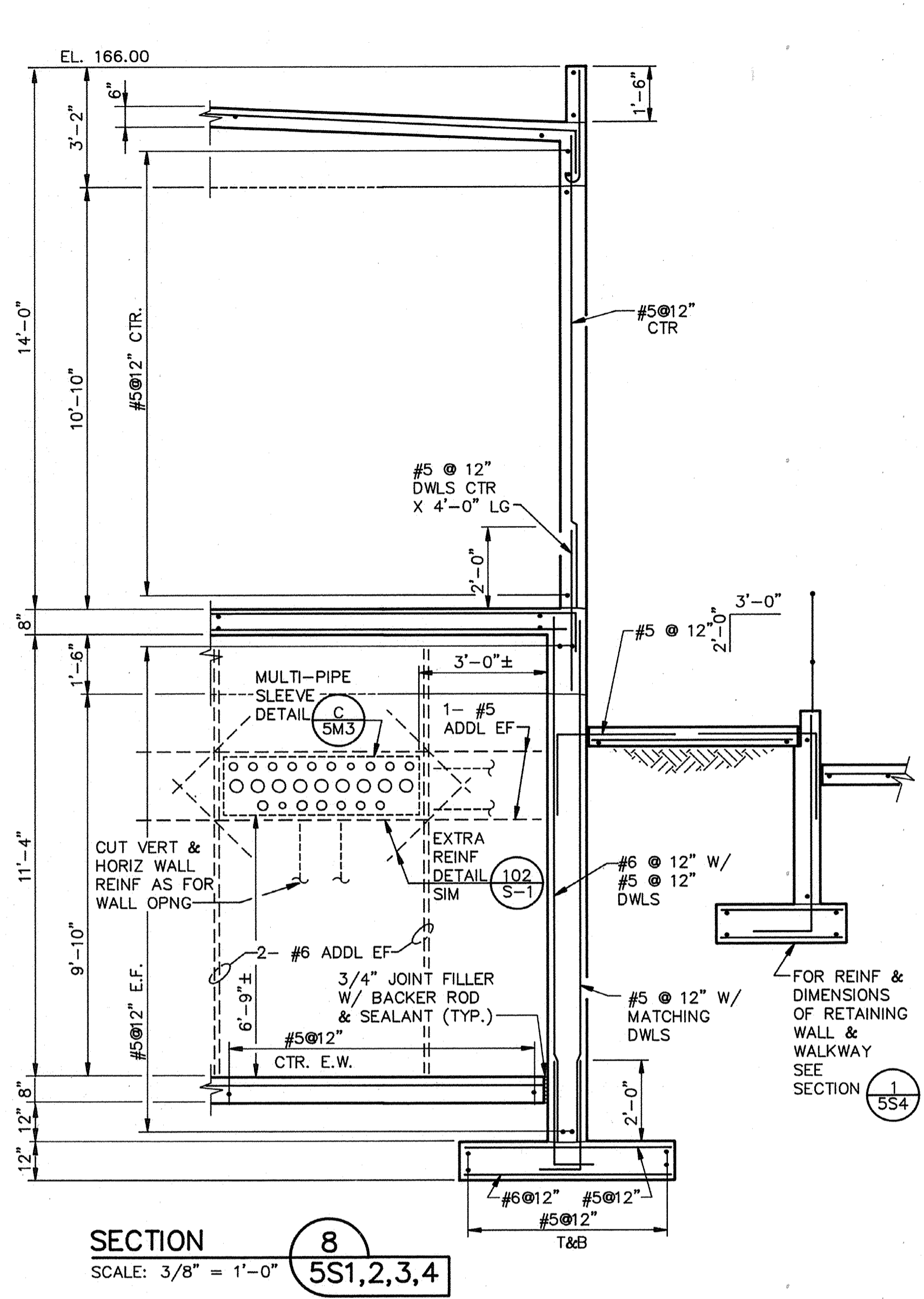


CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 OPERATIONS BUILDING - SECTIONS & DETAILS

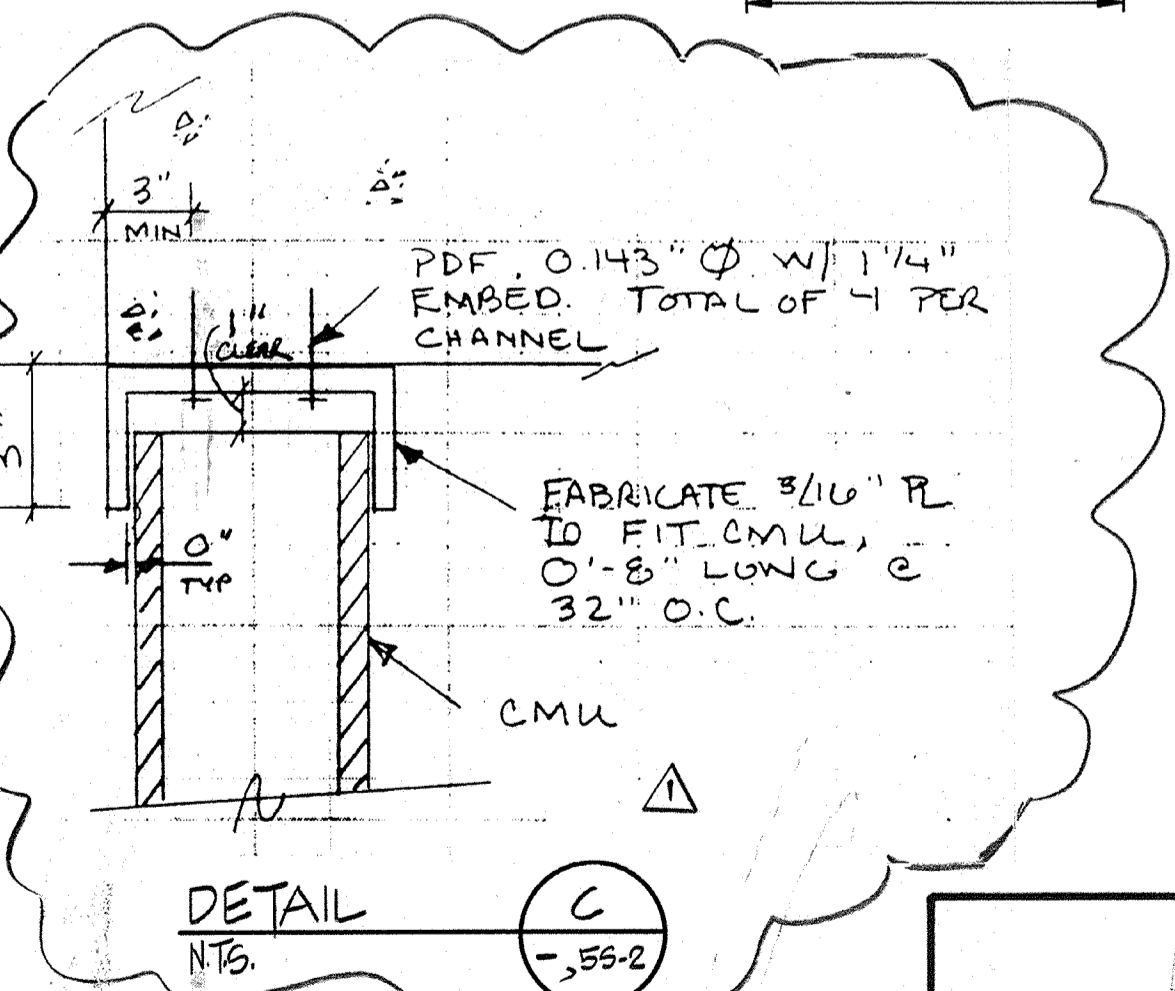
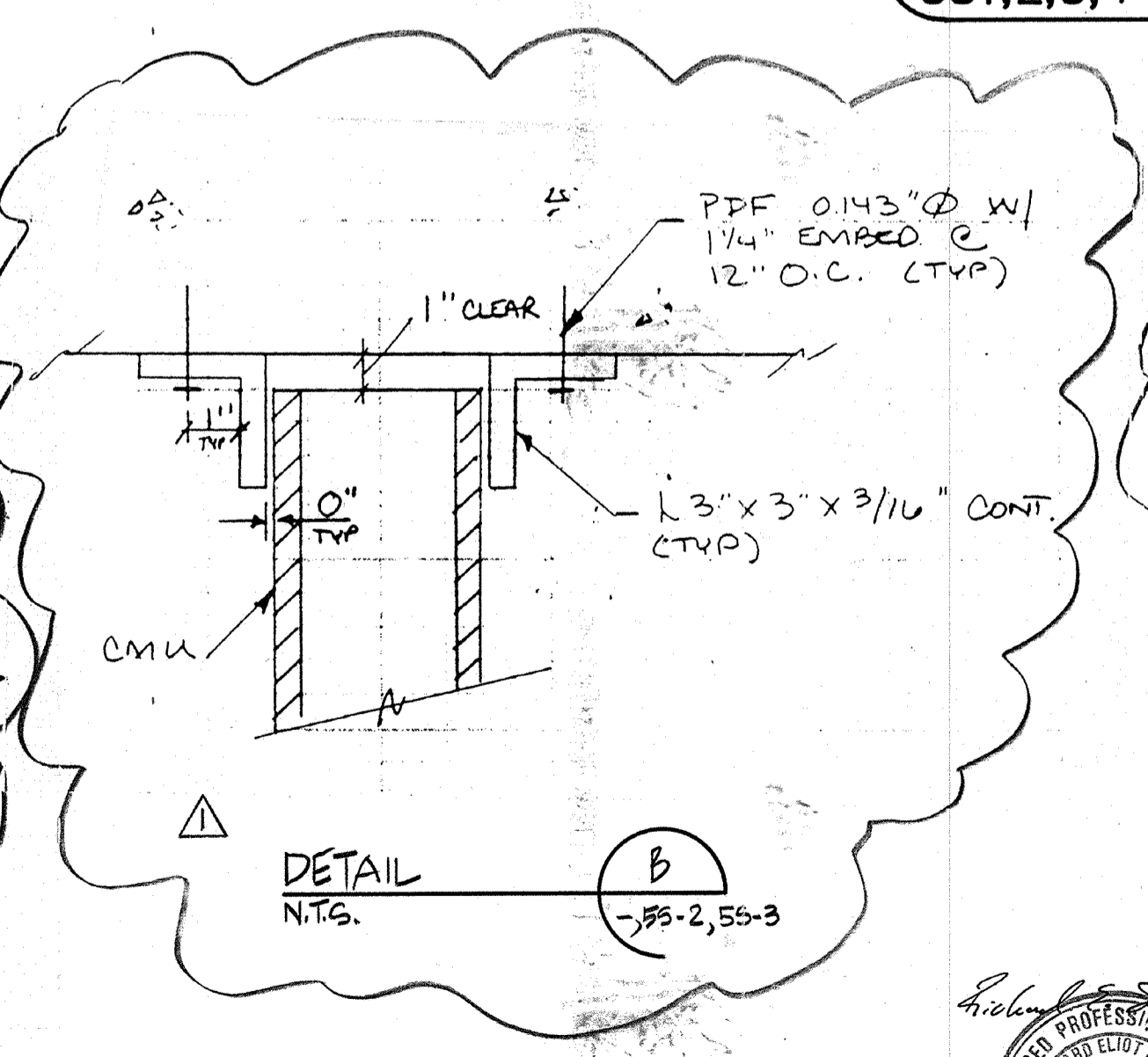
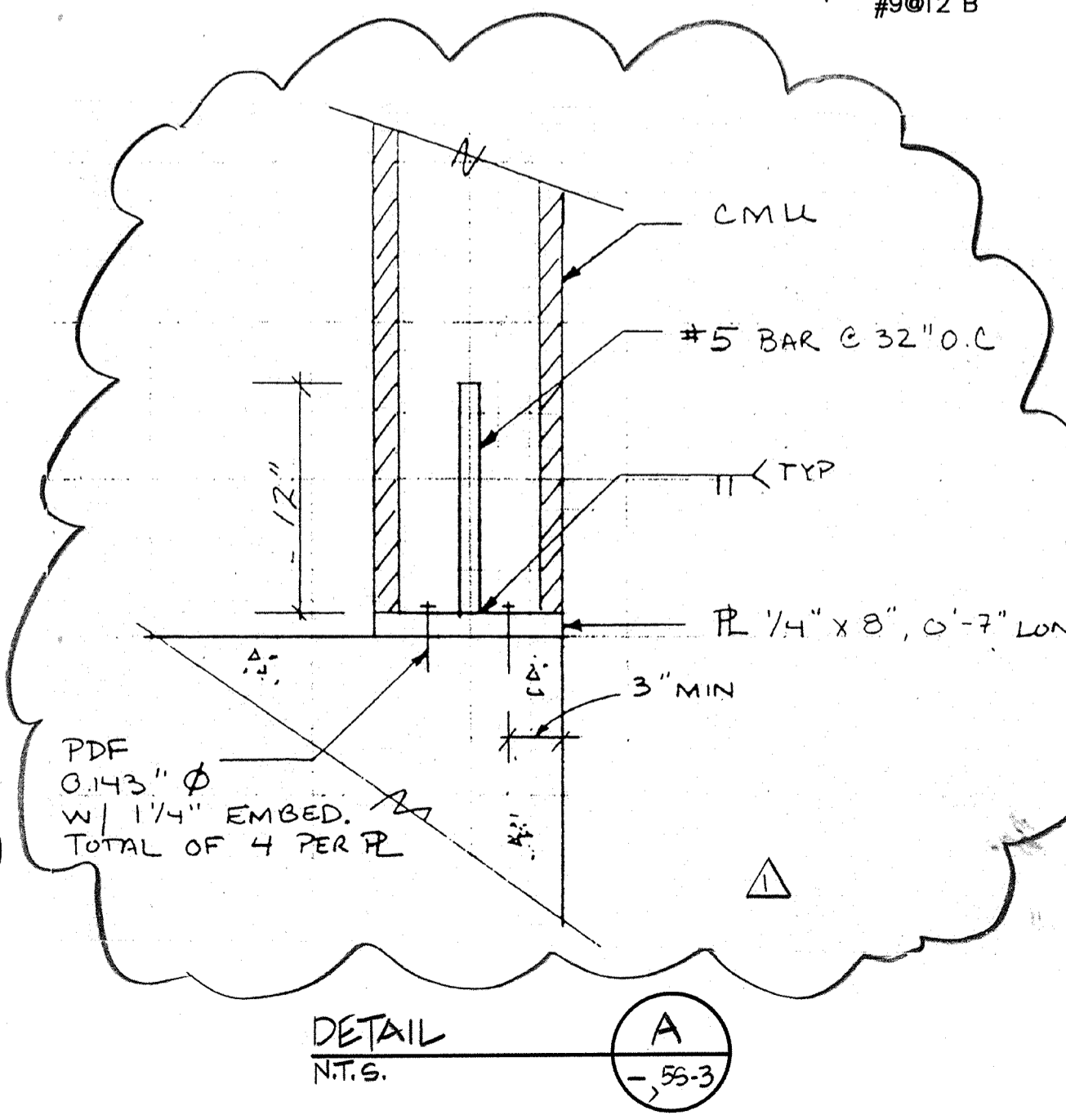
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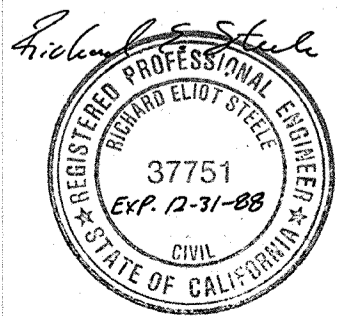
11323
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



STEEL BEAM TO MASY CONNECTION DETAIL F
 SCALE: 3/4" = 1'



AS-BUILT
 PAM 5/10/91



Date	Ch'k'd	Revision
4/12/91	JWV	REVIEWED FOR THE RECORD
Designed by:	Drawn by:	Checked by:
JWV	KC, LS	JMH
Approved by:	Scale:	AS SHOWN
RES		

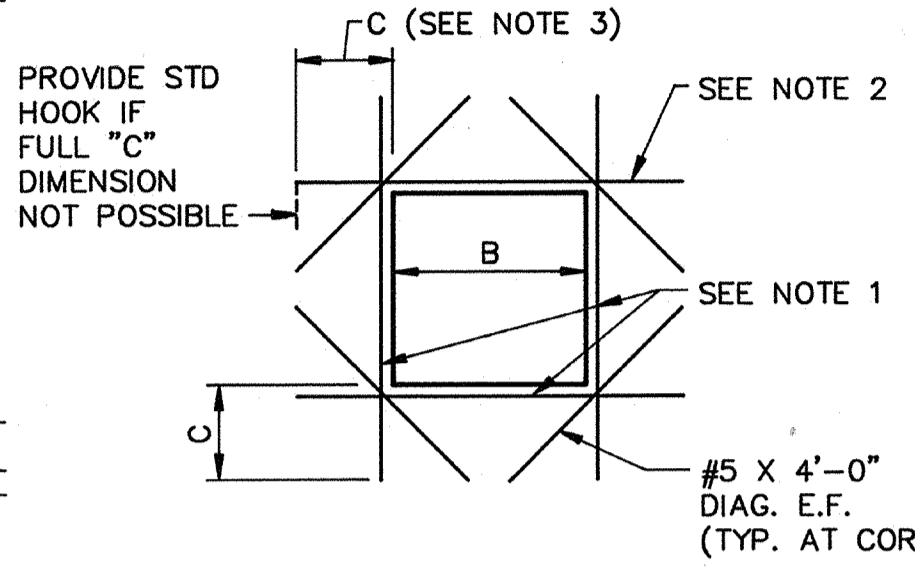
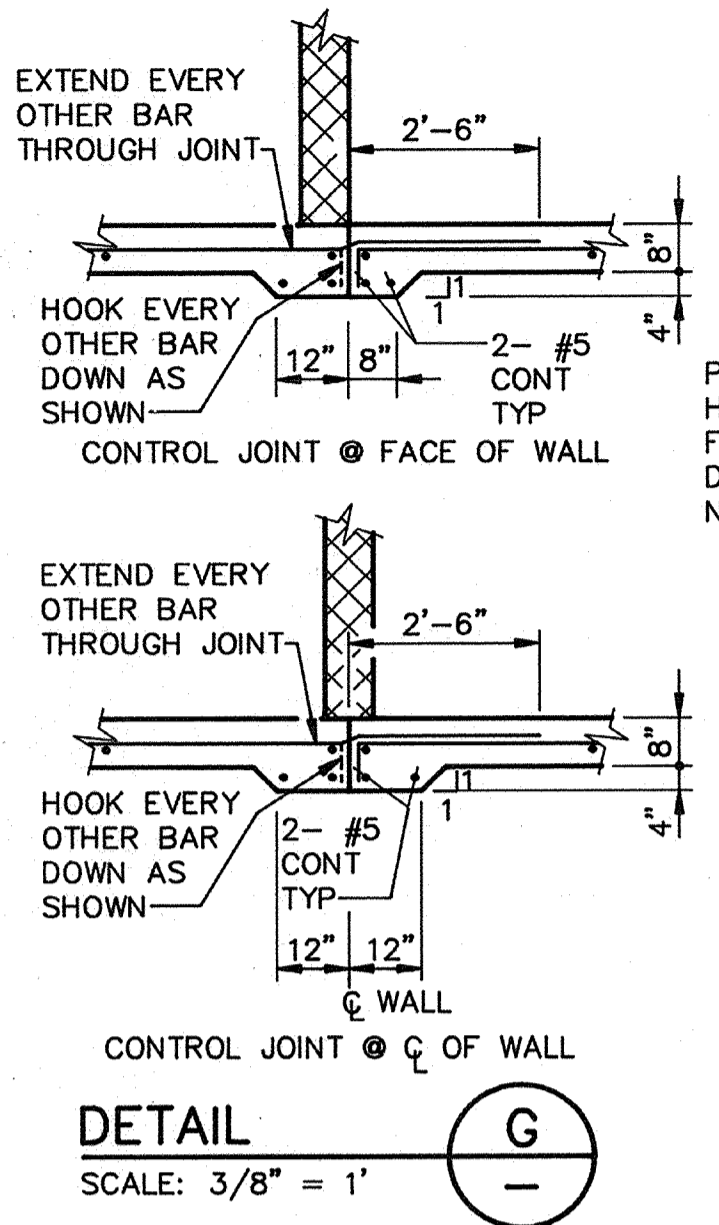
CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 OPERATIONS BUILDING - SECTIONS

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 5S-7
 69 of 147

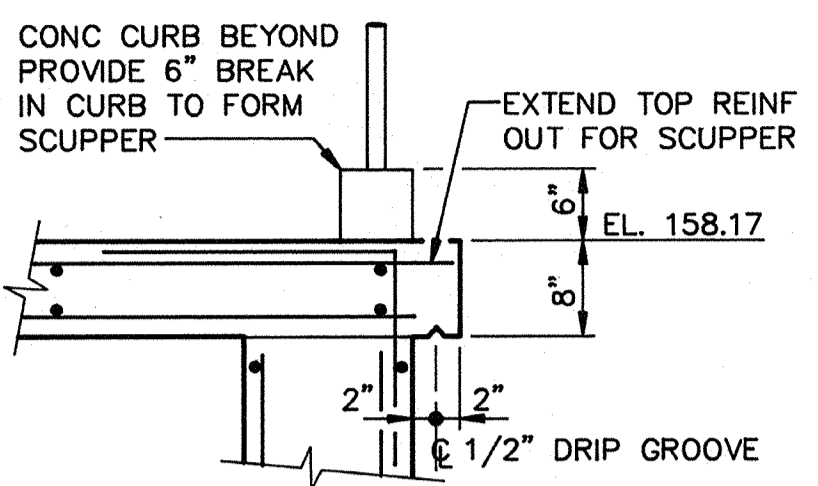
111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



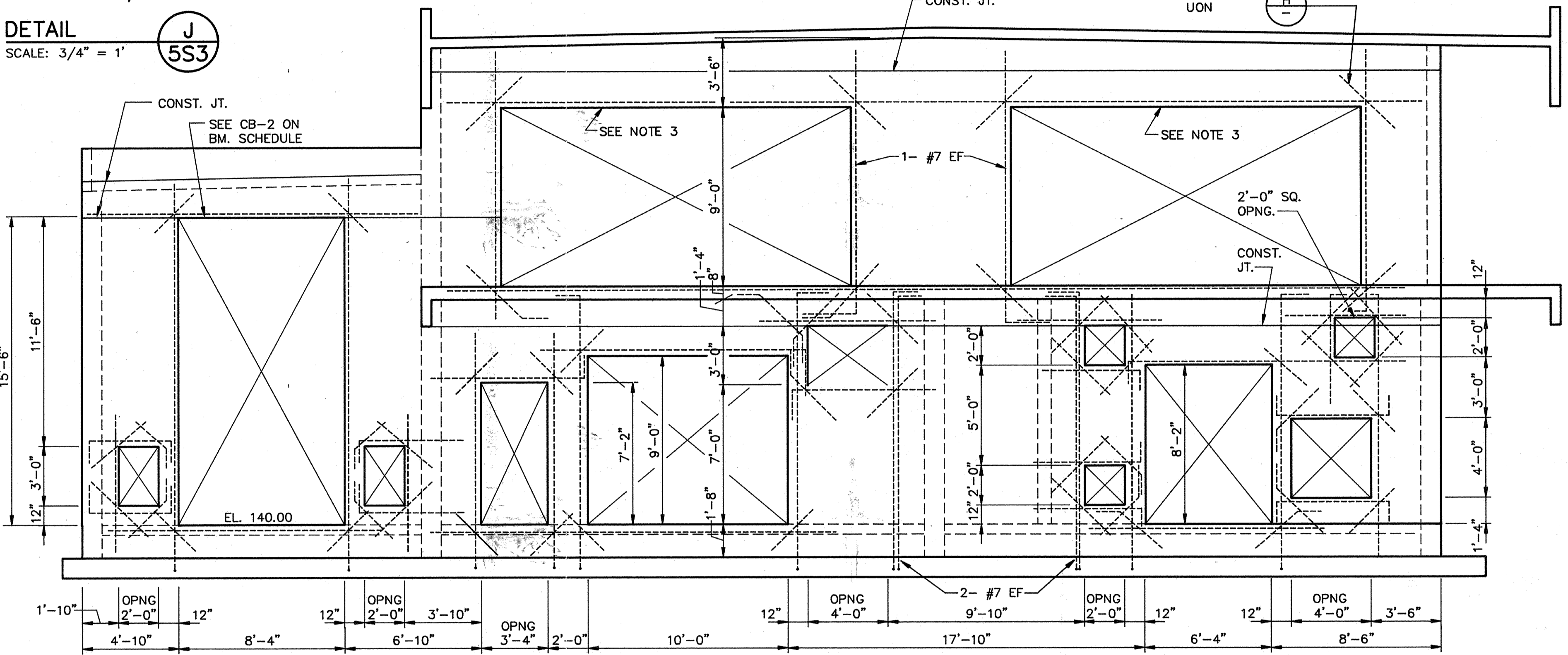
WALL ELEVATION AT GRID A

DETAIL D
SCALE: 1" = 1'-0"

- NOTES:
1. 8" WALLS: 1-#5 CTR.
12" WALLS: 1-#5 E.F. U.O.N.
 2. B ≤ 4'-0"
8" WALLS: 2-#5 CTR.
12" WALLS: 1-#5 E.F.
B > 4'-0"
8" WALLS: 2-#7 CTR.
12" WALLS: 1-#7 CTR.
 3. #5 BARS: C=2'-4"
#7 BARS: C=3'-6"

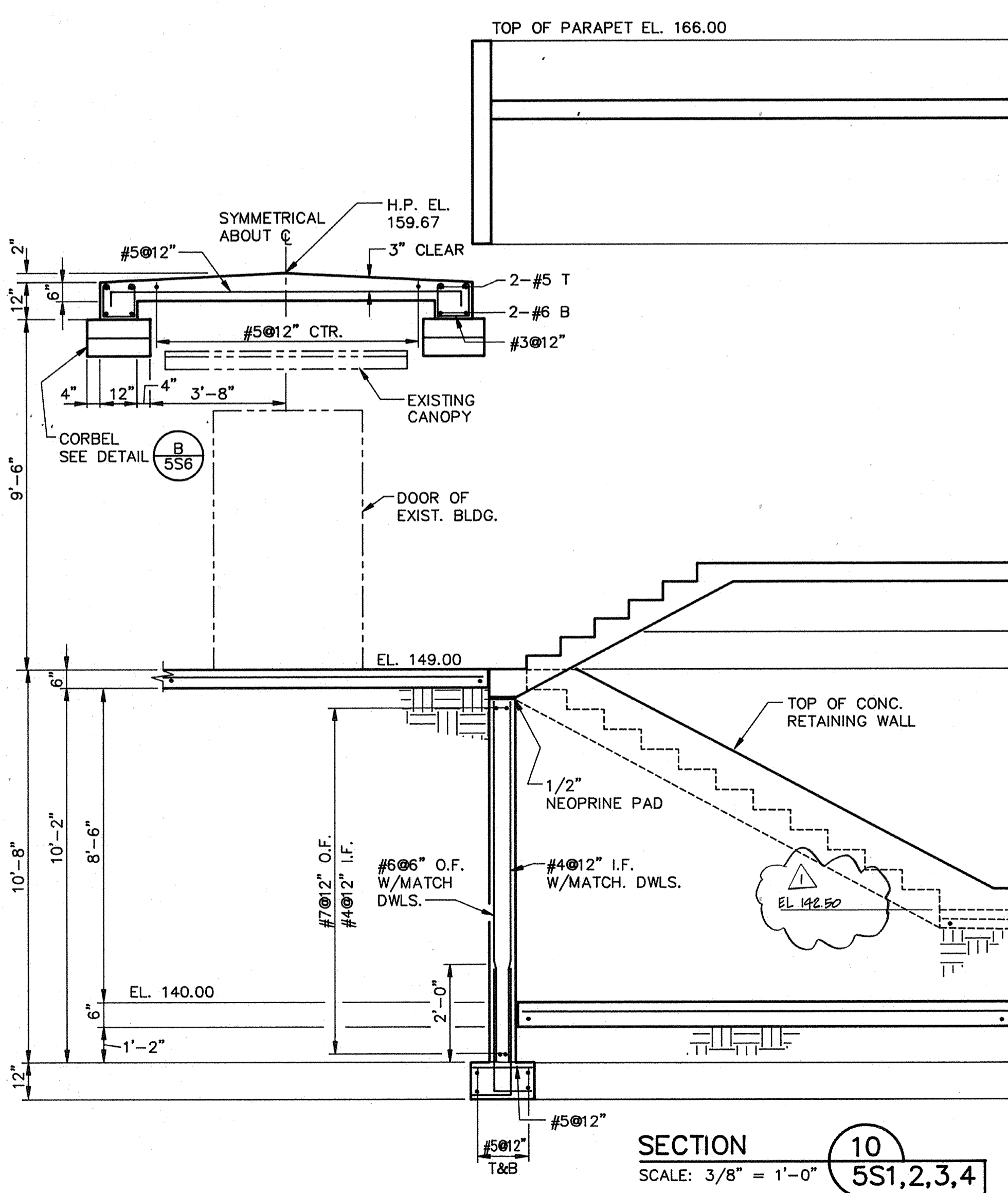


DETAIL J
SCALE: 3/4" = 1"

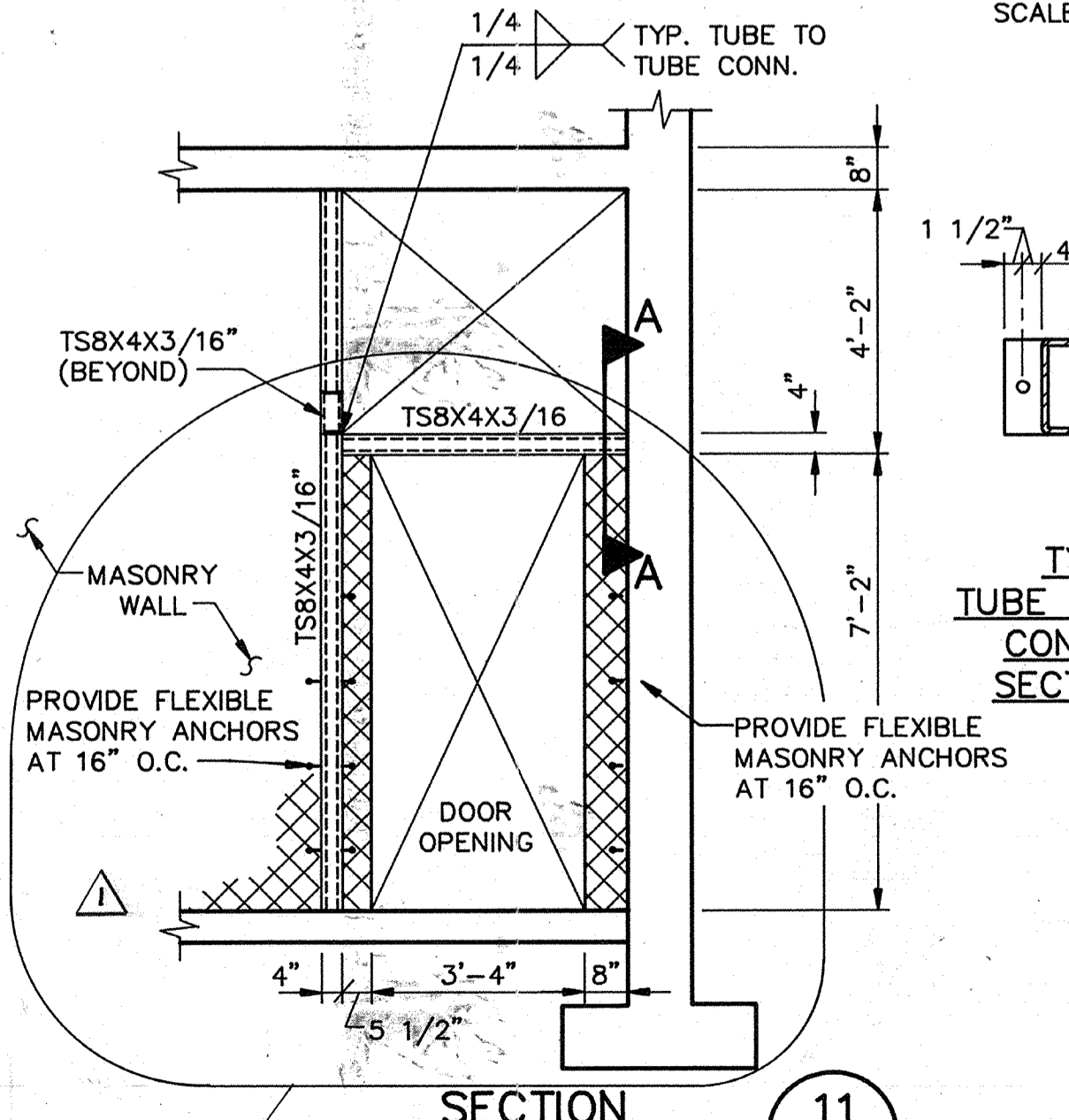


WEST WALL ELEVATION
SCALE: 1/4" = 1'-0"

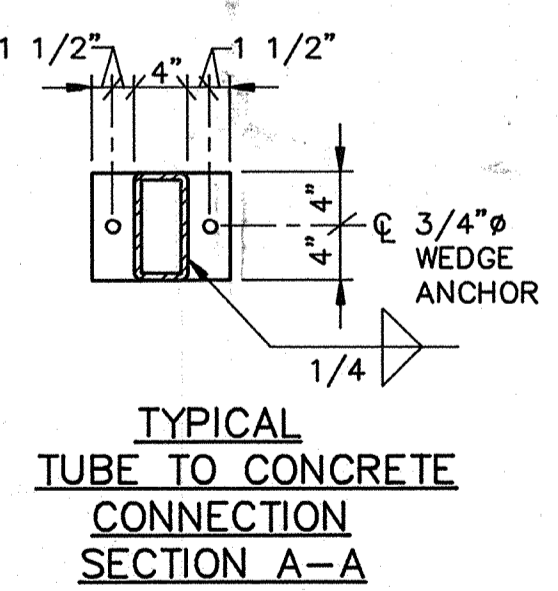
- NOTES:
1. PRIOR TO CONSTRUCTION CONFIRM THE SIZE OF OPENING WITH SUPPLIER. SEE ARCH. & HVAC DWGS.
 2. MINIMUM DISTANCE BETWEEN OPENINGS IS 12".
 3. MAINTAIN SUPPORT OVER WINDOWS UNTIL ENTIRE ROOF IS POURED & COVERED



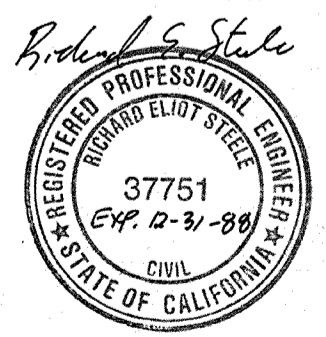
SECTION 10
SCALE: 3/8" = 1'-0"



SECTION 11
SCALE: 3/8" = 1'-0"



TYPICAL TUBE TO CONCRETE CONNECTION SECTION A-A



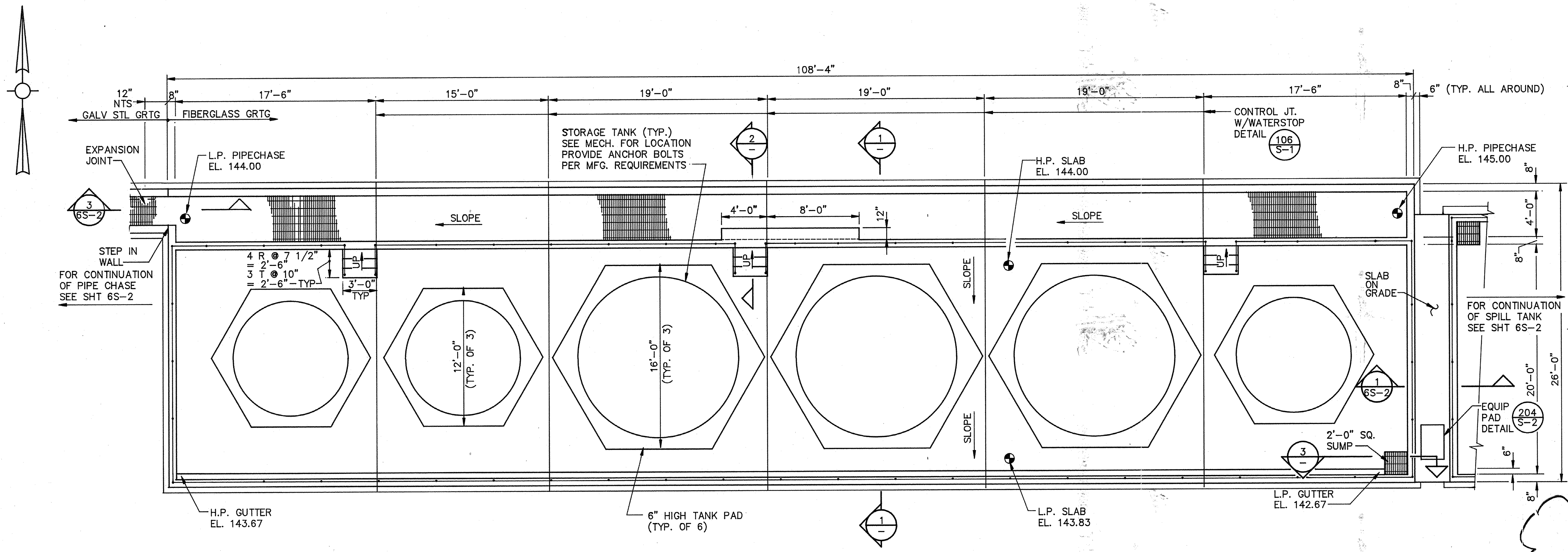
5/10/91

Date	Ch'k'd	Revision
4/12/91	RES	APPROVED FOR THE RECORD
Designed by:	JWL	
Drawn by:	KC, LS	Date: SEPT. 1988
Checked by:	JMH	
Approved by:	RES	Scale: AS SHOWN

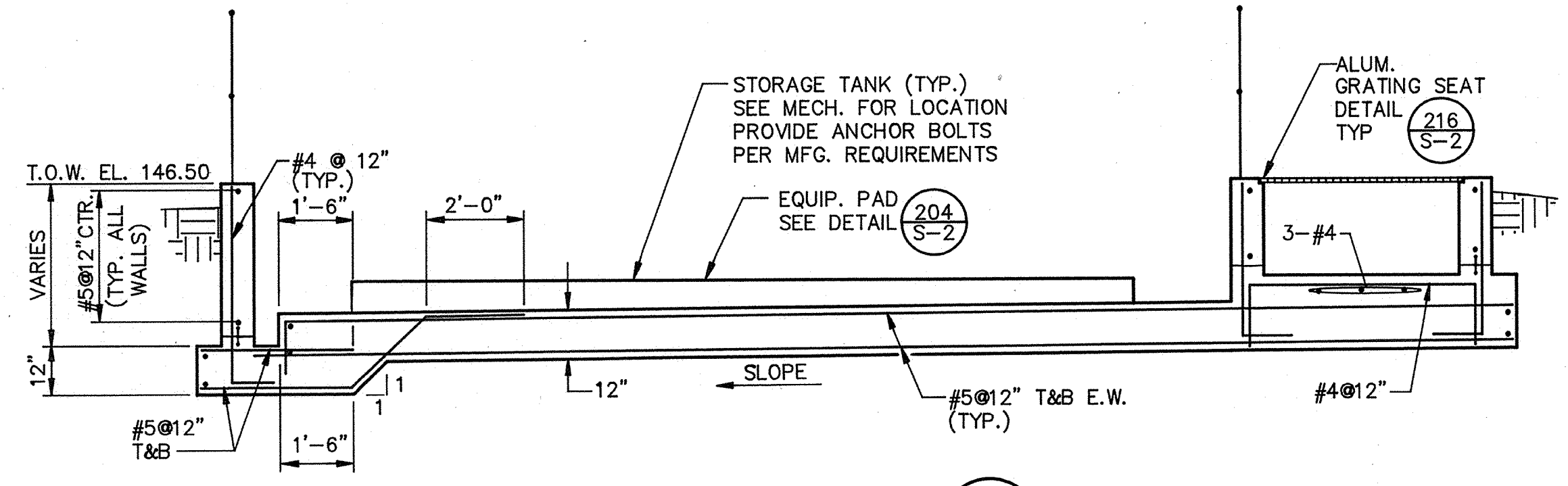
CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 OPERATIONS BUILDING - SECTIONS & DETAILS
 SHEET NO. 5S-8
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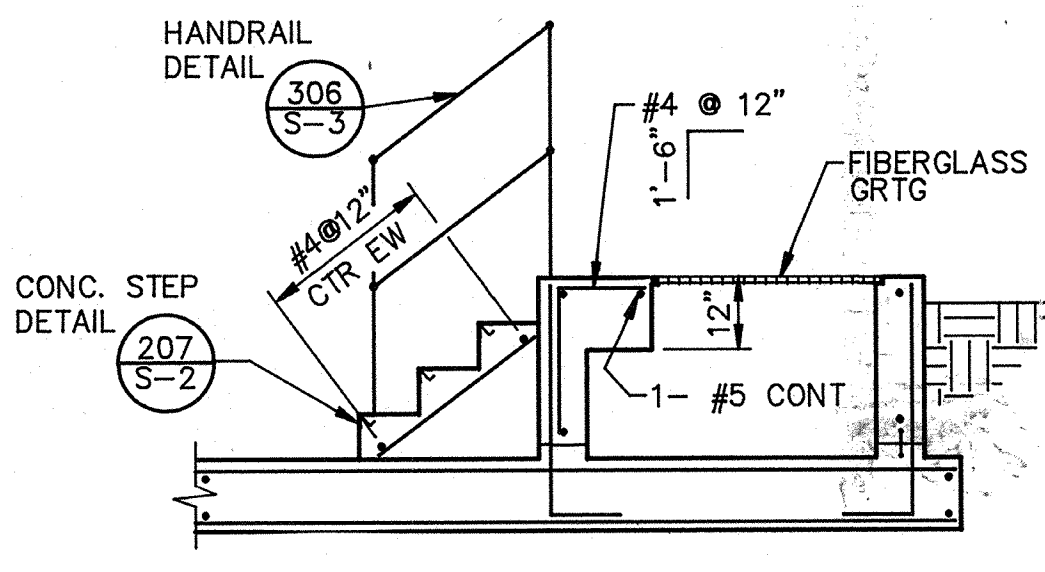
111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



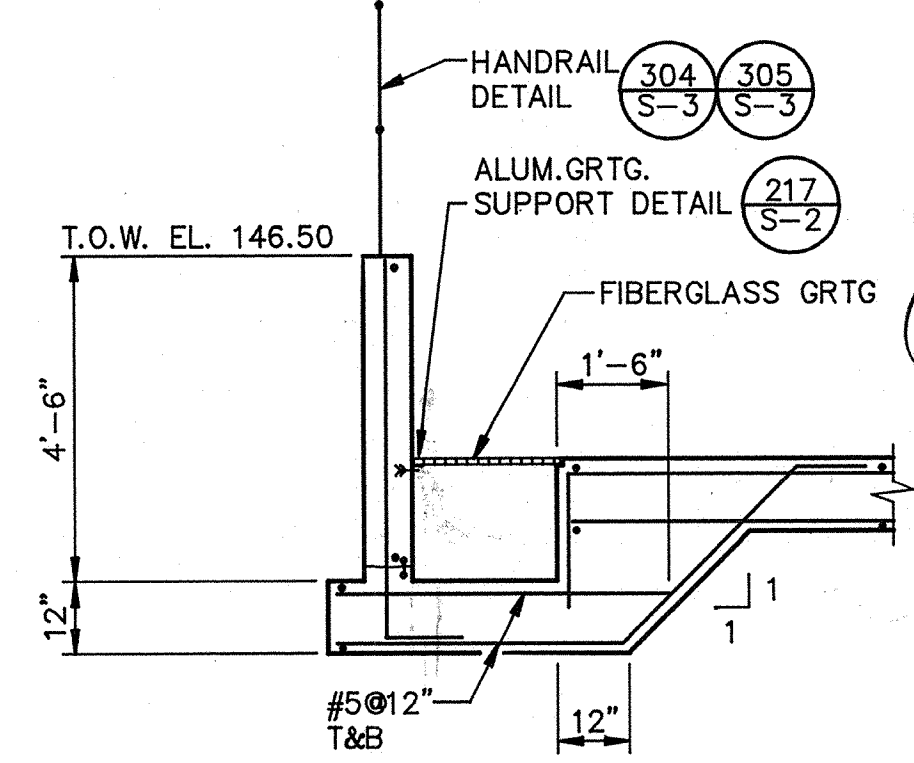
PLAN
 SCALE: 3/16" = 1'-0"



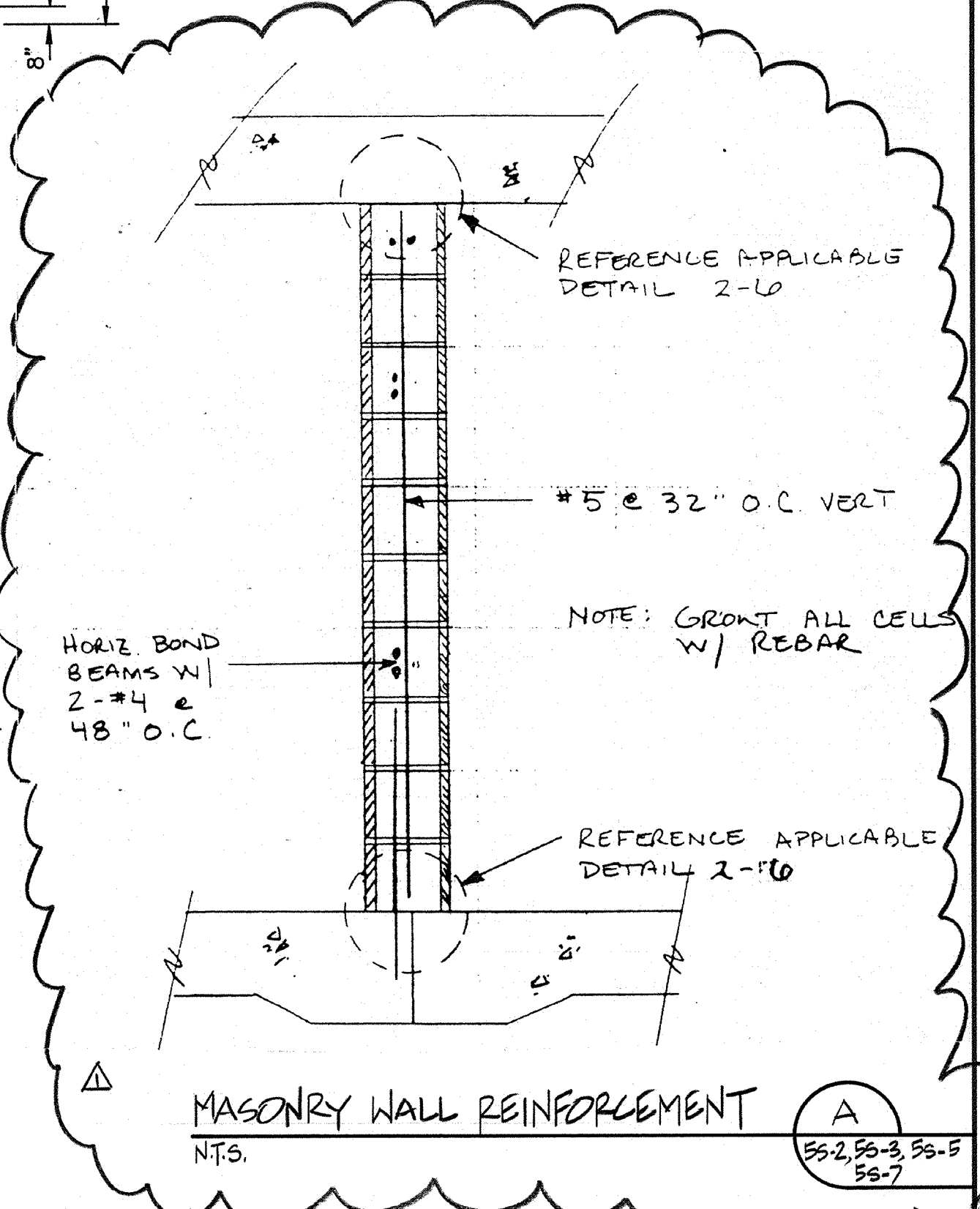
SECTION 1
 SCALE: 3/8" = 1'-0"



SECTION 2
 SCALE: 3/8" = 1'-0"



SECTION 3
 SCALE: 3/8" = 1'-0"



- NOTES:
1. FOR SUBGRADE PREPARATION & EXCAVATION SEE SPEC. SECTION 02220
 2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL EMBEDMENTS, BLOCKOUTS, CONNECTIONS & ANY OTHER APPURTENANCES CONNECTED TO THE CONCRETE SLAB
 3. CONTRACTOR IS RESPONSIBLE FOR DETERMINING & PROVIDING CHANGES TO THE TANK FOUNDATION AS REQUIRED BY THE TANK RESTRAINT SYSTEM SUPPLIER AND THE ENGINEER'S COMMENTS FROM THE RESTRAINT SYSTEM SUBMITTED

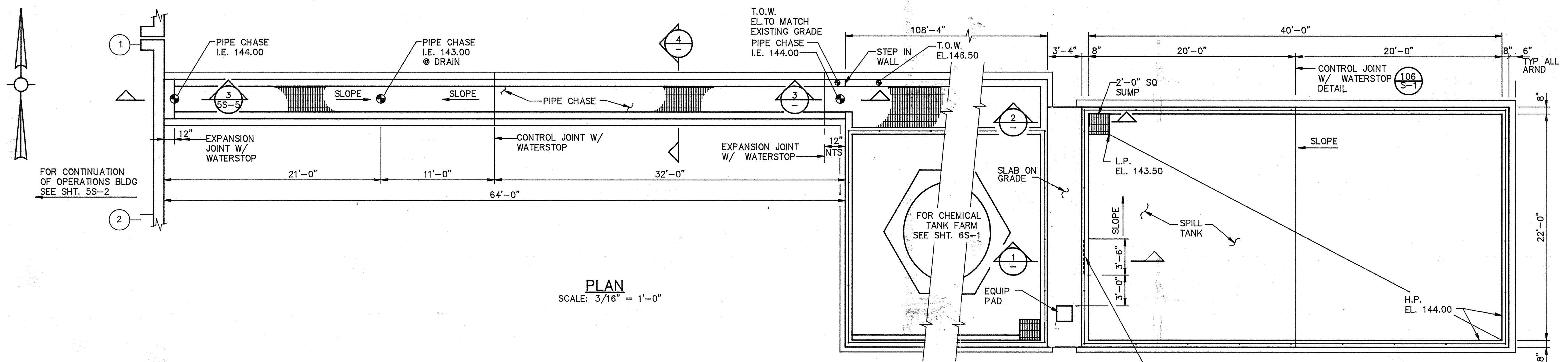
AS-BUILT
 Pjm 5/10/91
 DATE



Date	Ch'kd	Revision
4/12/91		REVISOR FOR THE RECORD
Designed by: JWI	Drawn by: KC, LS	Date: SEPT. 1988
Checked by: JOG	Approved by: RES	Scale: AS SHOWN

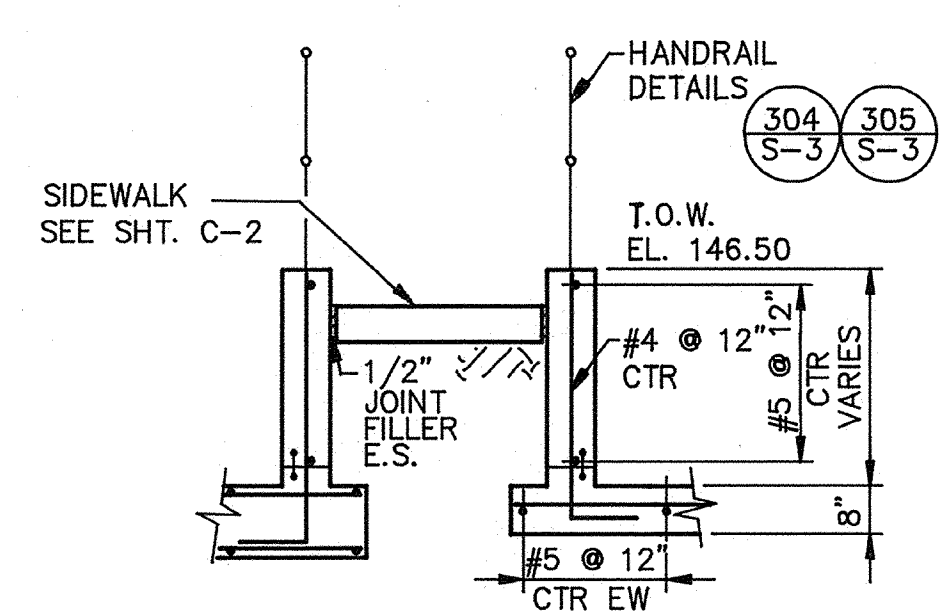
CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
CHEMICAL STORAGE TANKS - PLANS & SECTIONS
 CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
CDM
 environmental engineers, scientists,
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 SHEET NO. 6S-1
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PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
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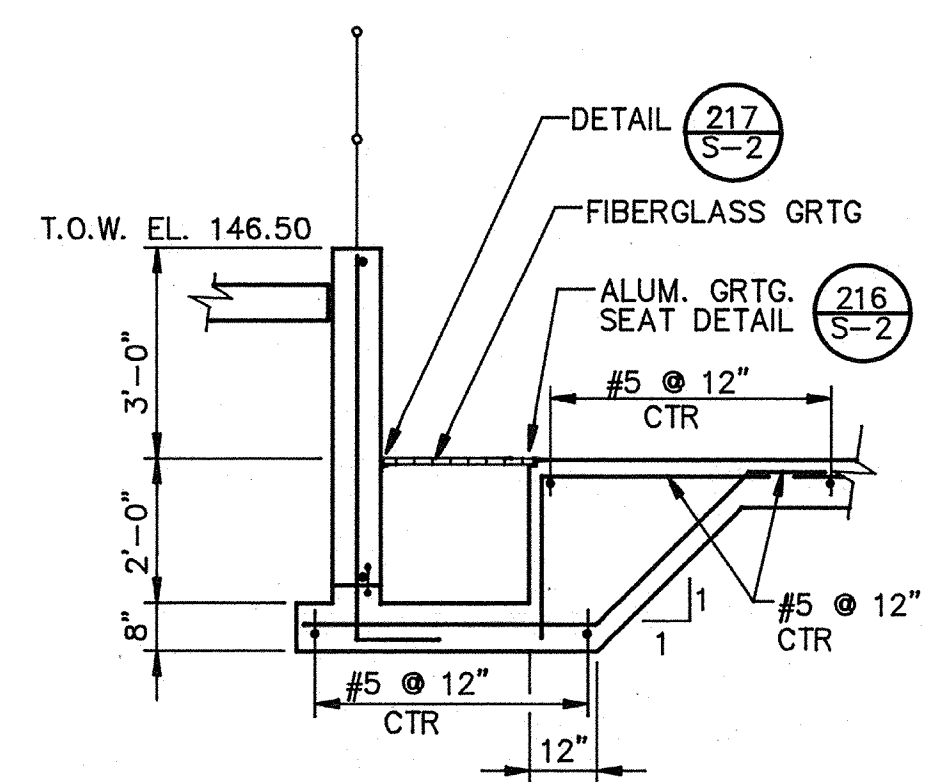


PLAN
 SCALE: 3/16" = 1'-0"

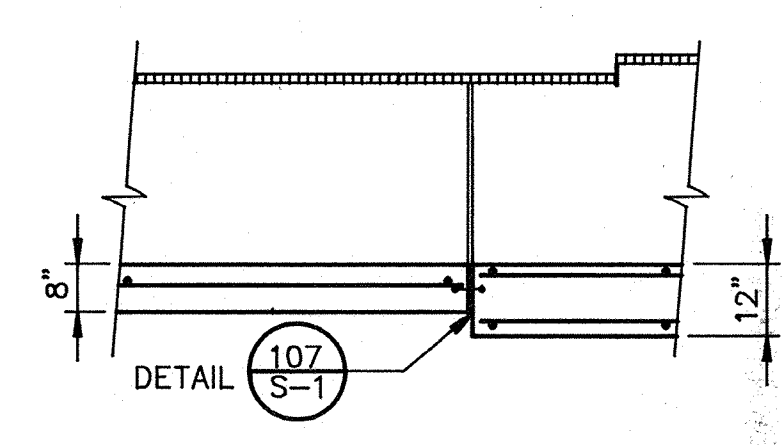
TWO ROWS 3/16" S.S. SAFETY CHAIN WITH DOUBLE ENDED SAFETY APPROVED SPRING SNAP AT EACH END. CHAINS SHALL BE POSITIONED TO MATCH HEIGHT OF RAILING



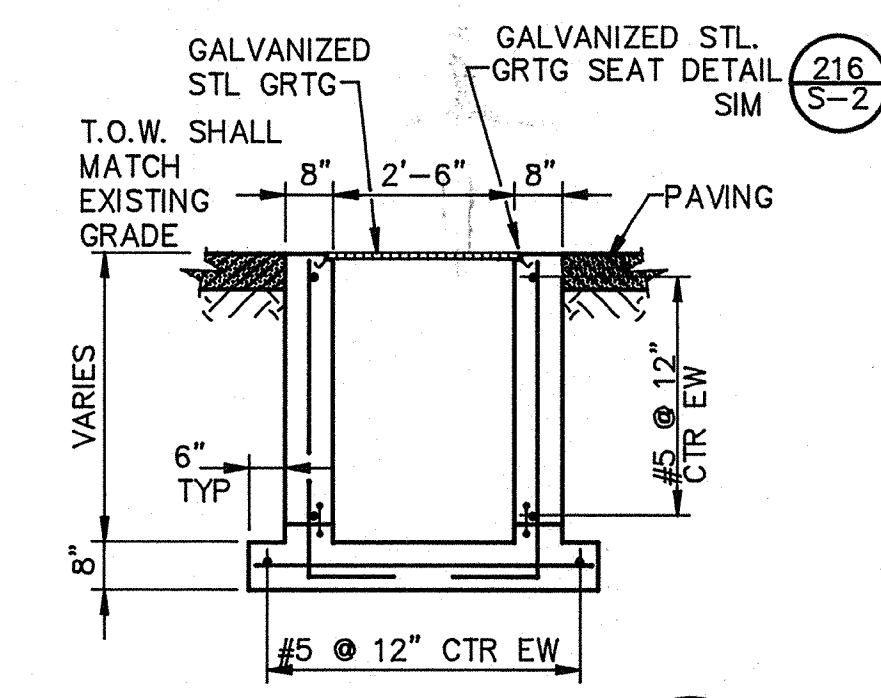
SECTION 1
 SCALE: 3/8" = 1'-0" (6S-1, 2)



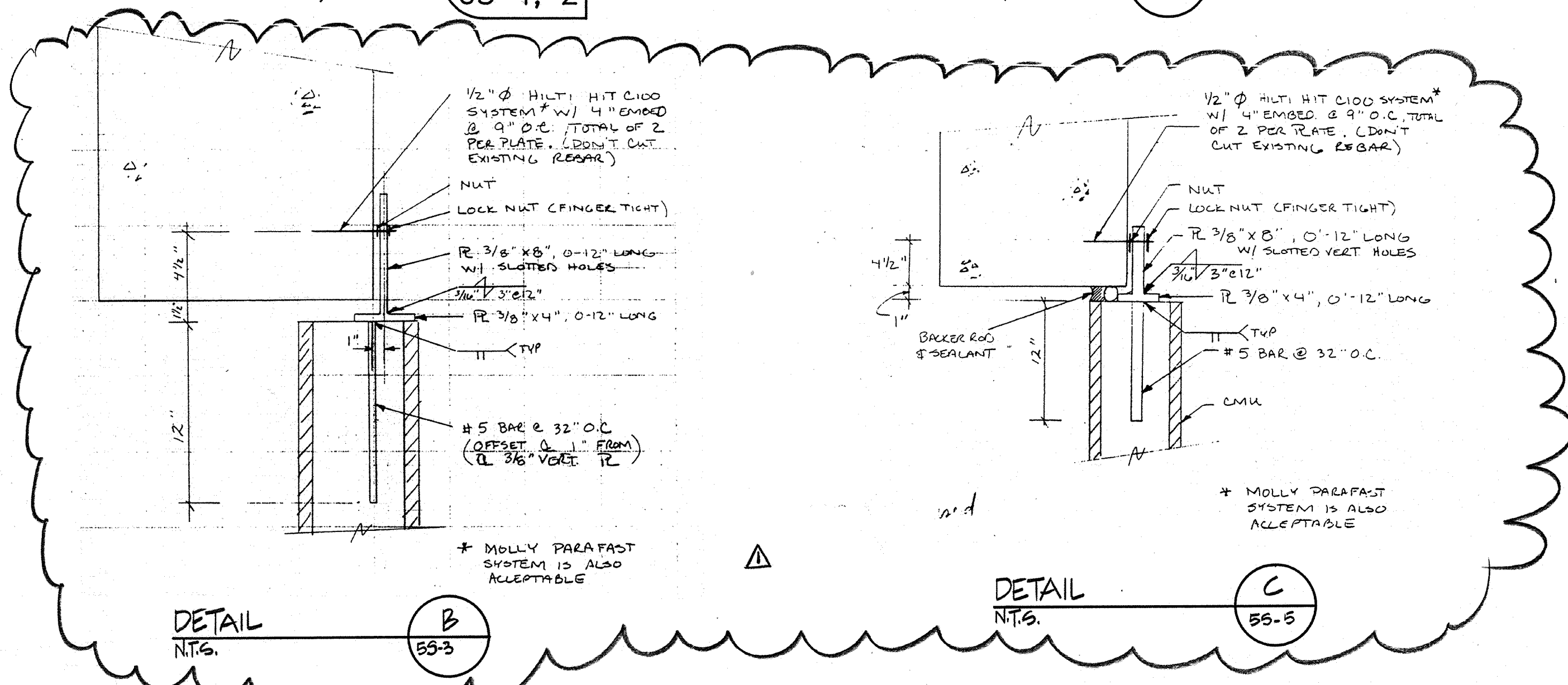
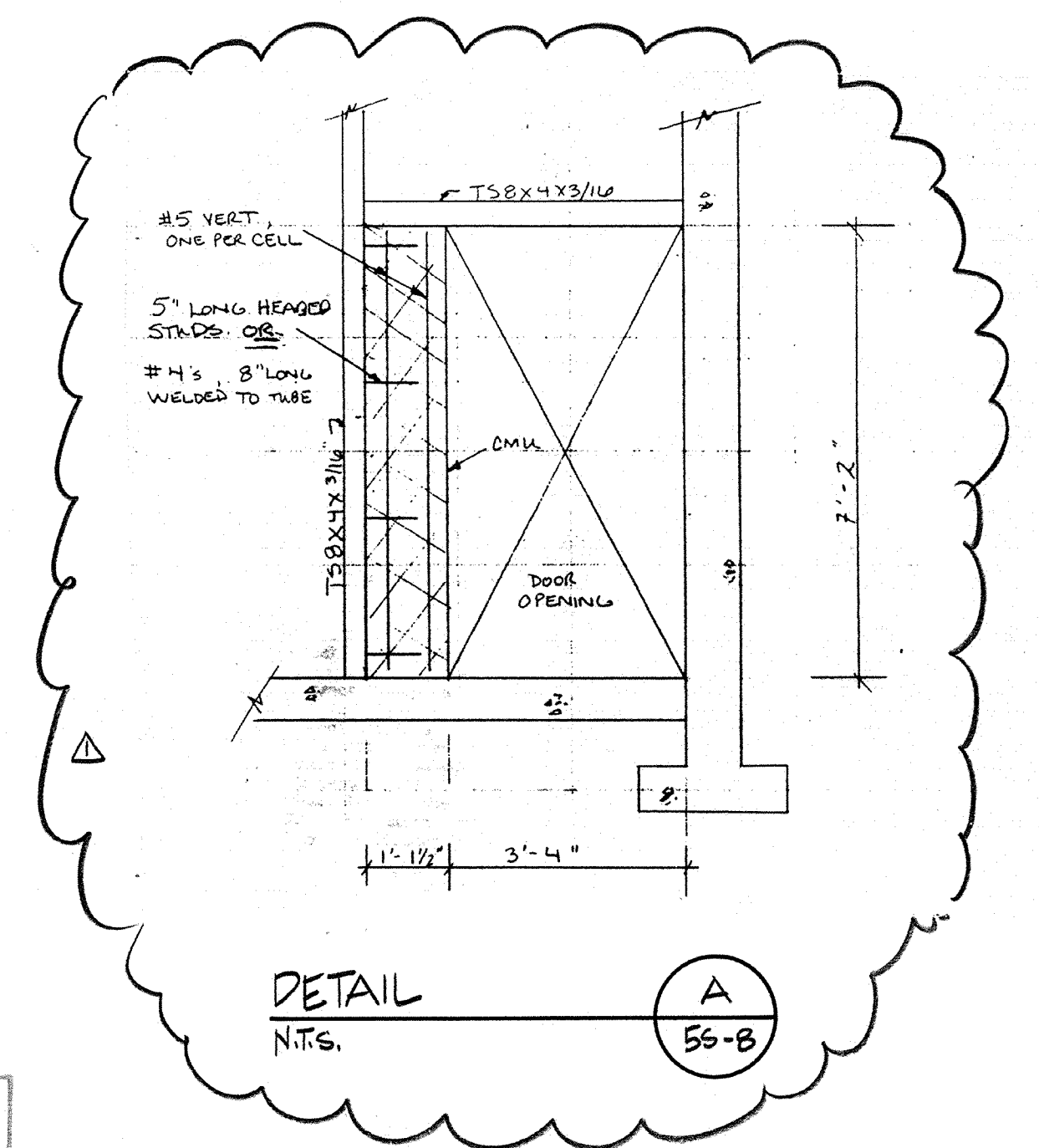
SECTION 2
 SCALE: 3/8" = 1'



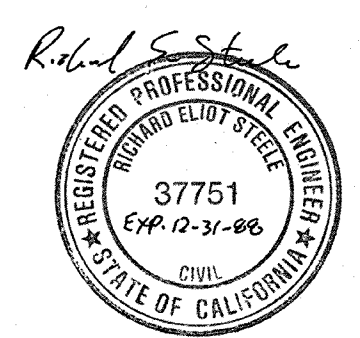
SECTION 3
 SCALE: 3/8" = 1'-0" (6S-1, 2)



SECTION 4
 SCALE: 3/8" = 1'-0"



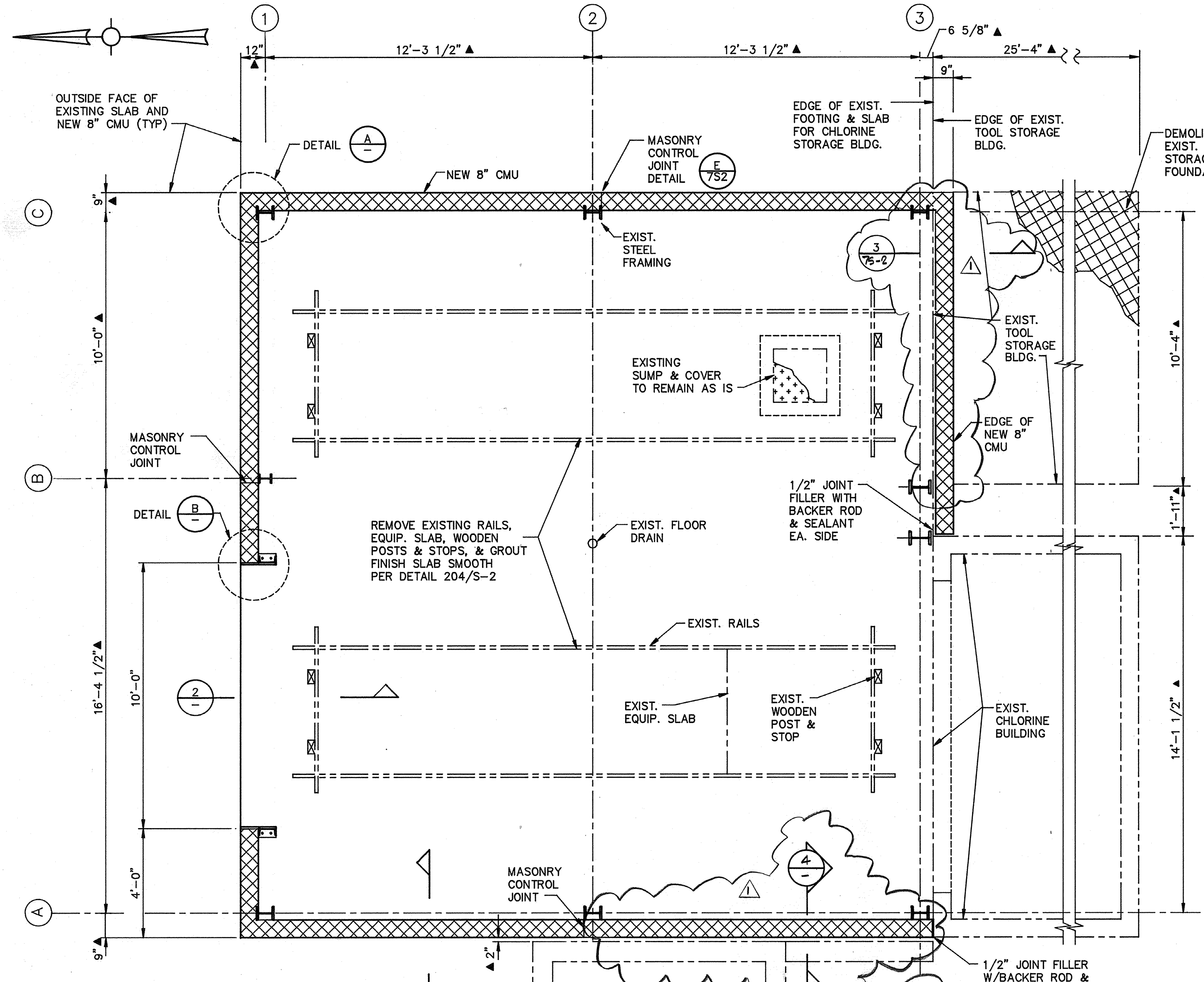
AS-BUILT
 07m 5/10/91
 SIGNATURE DATE



4/12/91	REVISED FOR THE RECORD
Date	Ch'k'd
	Revision
Designed by: JVI	Date: SEPT. 1988
Drawn by: LS	Scale: AS SHOWN
Checked by: JTC	
Approved by: RES	

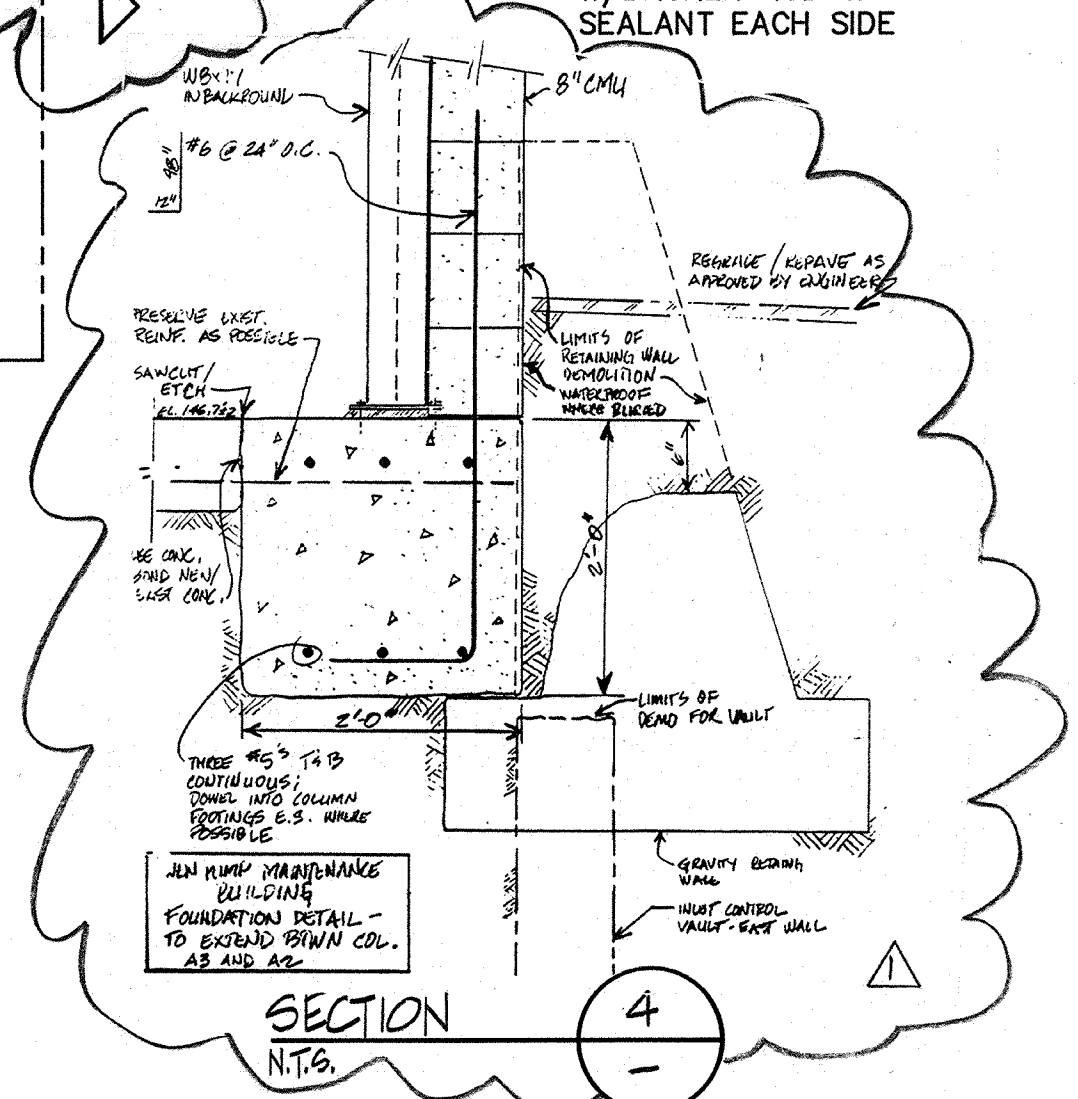
CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 CHEMICAL STORAGE SPILL TANK & PIPE CHASE
 PLAN & SECTIONS
 SHEET NO. 6S-2
 72 of 147
 CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists, planners, & management consultants

PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____

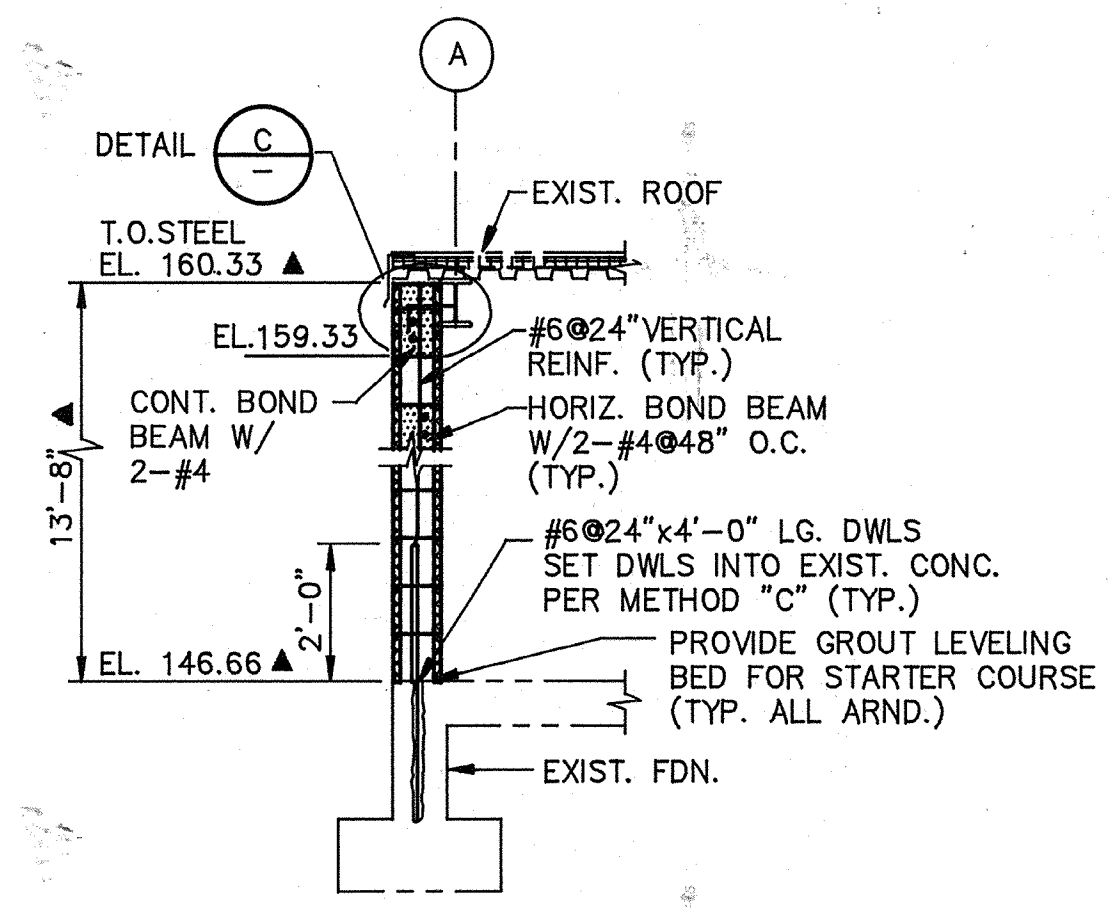


- NOTES:
1. SHADED TRIANGLE (▲) INDICATES UNVERIFIED DIMENSIONS, ELEVATIONS OR INFORMATION OF EXISTING DRAWINGS - FIELD VERIFY
 2. FOR MASONRY REINF. SEE DETAILS 309, 310, 409 U.O.N.
 3. FILL CMU CORES AT VERT. REINF. & HORIZ. BOND BEAMS SOLID W/MORTAR. ALL OTHER CORES TO BE FILLED W/LOOSE FILL INSULATION
 4. PRIOR TO CONSTRUCTION, VERIFY WITH EQUIPMENT SUPPLIERS THE SIZE AND LOCATION OF ALL WALL PENETRATIONS, BLOCKOUTS, OPENINGS, WALL CASTINGS, AND ANCHOR BOLTS TO BE CAST INTO THE MASONRY. SEE HVAC, ELECTRICAL, AND ARCHITECTURAL DRAWINGS
 5. CUT OFF LEG OF ANGLE BRACING AS REQUIRED IF DIAGONAL BRACING INTERFERS WITH NEW MASONRY. REMOVAL OF ANGLE LEG SHALL BE APPROVED BY ENGINEER

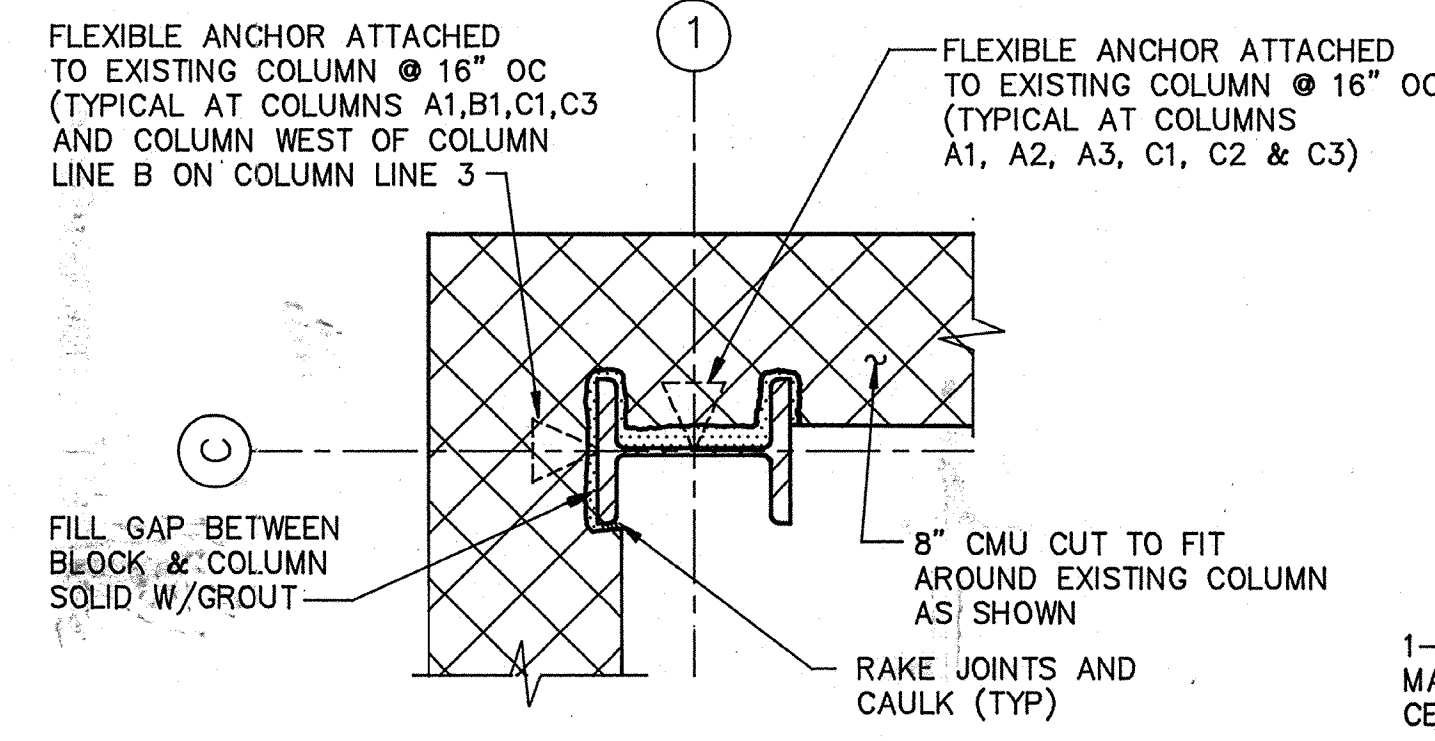
PLAN
SCALE: 3/8" = 1'-0"



SECTION 4
N.T.S.

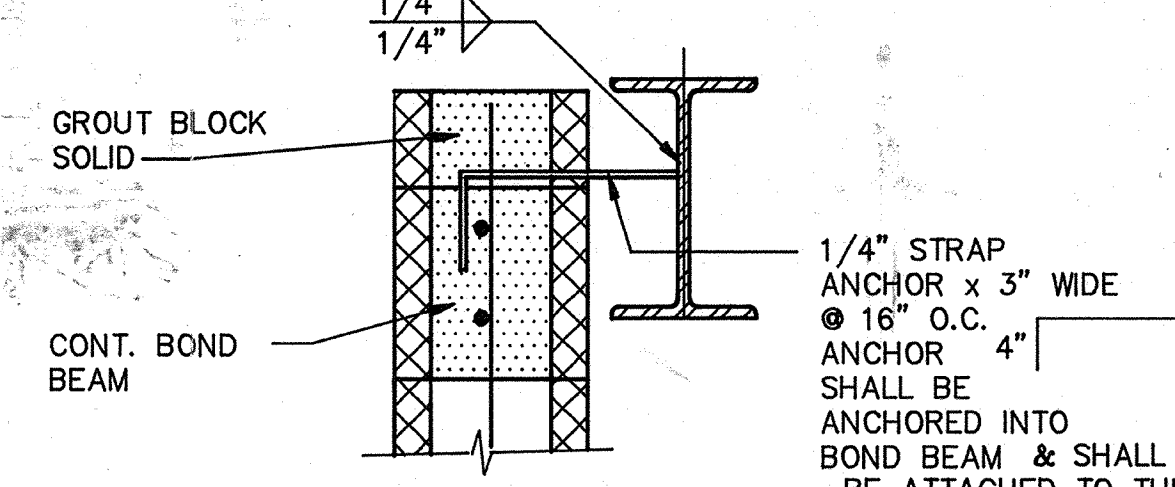


SECTION 1
SCALE: 3/8" = 1'-0"

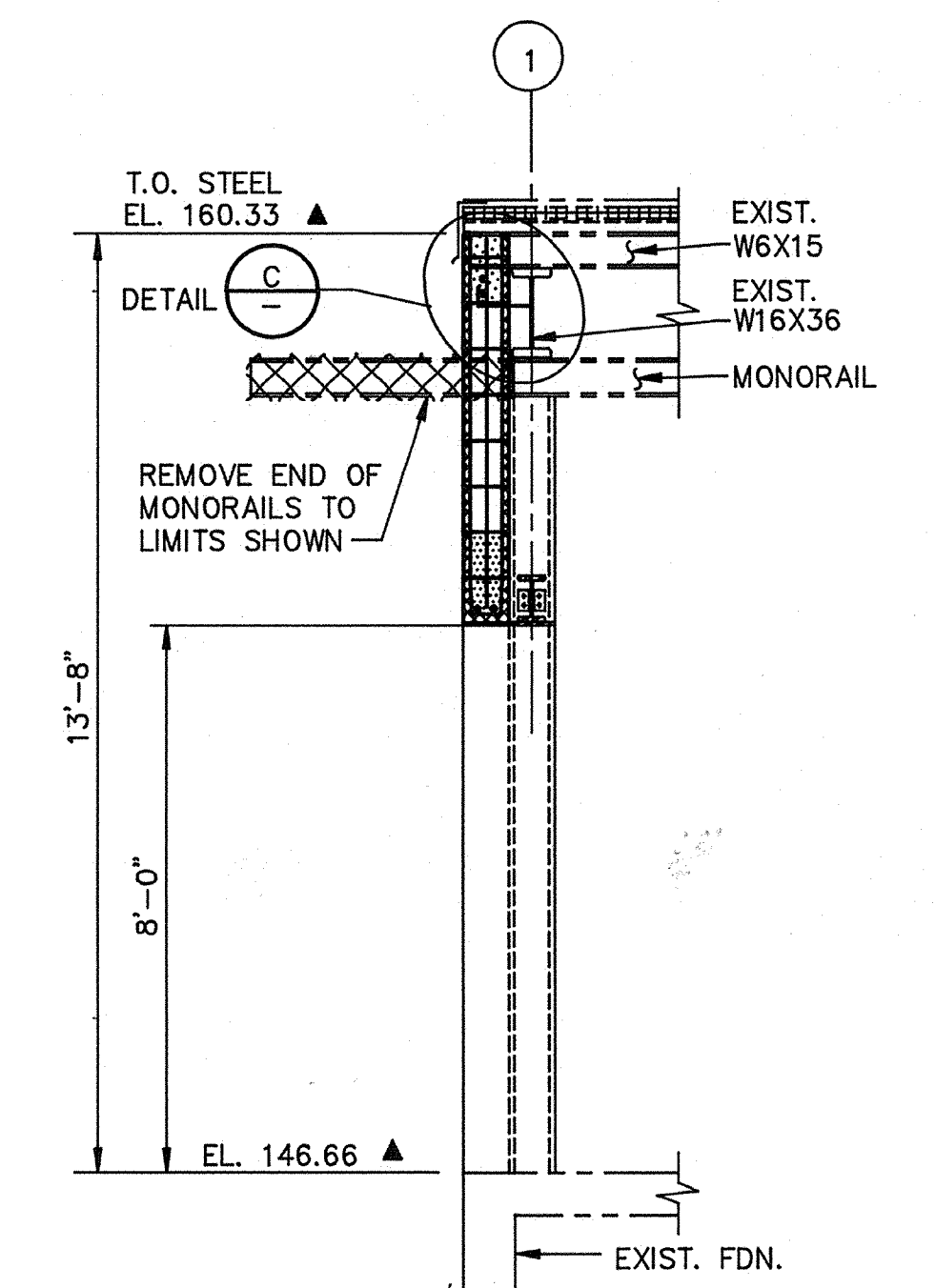


TYPICAL MASONRY TO STEEL COLUMN CONNECTION

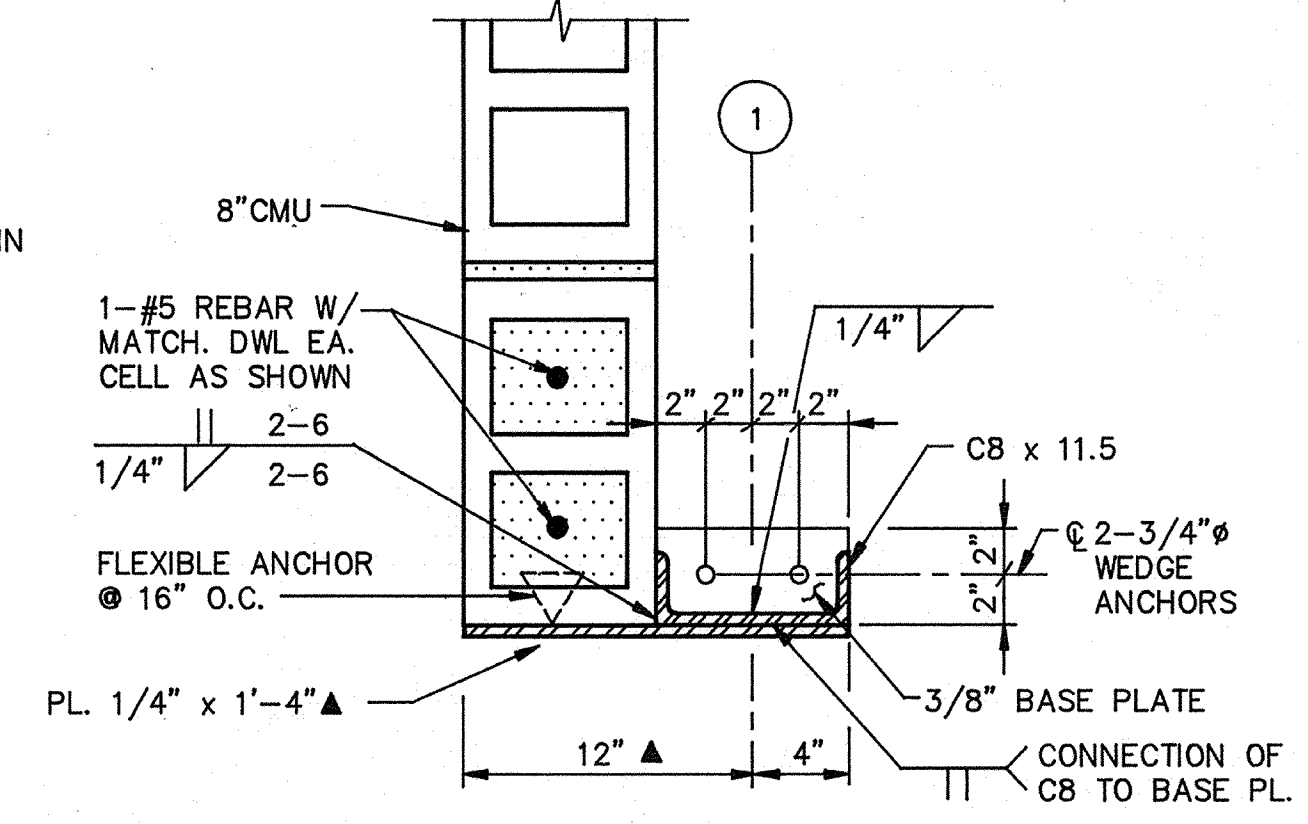
DETAIL A
SCALE: 1 1/2" = 1'-0"



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



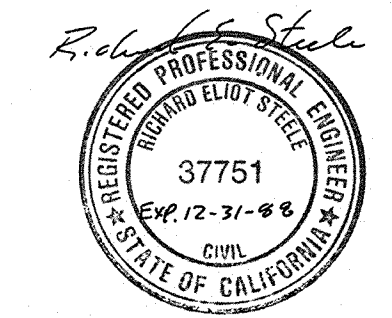
SECTION 2
SCALE: 3/8" = 1'-0"



DOOR JAMB

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

AS-BUILT
PJM 5/10/91
SIGNATURE DATE



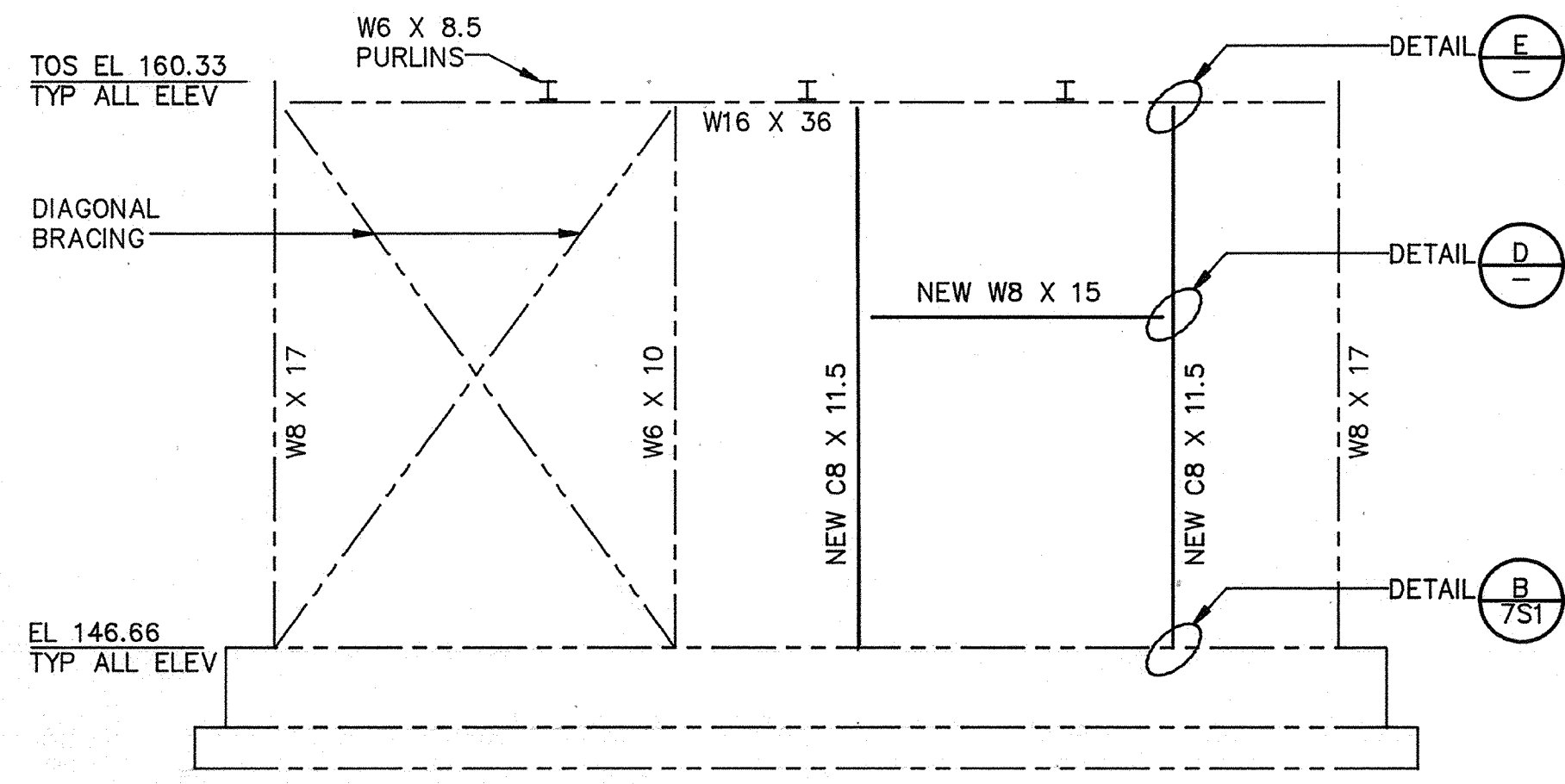
Date	4/13/91	Revised for the record
Ch'k'd		Revision
Designed by:	JTC	
Drawn by:	JTC	Date: SEPT. 1988
Checked by:	JV1	Scale: AS SHOWN
Approved by:	RES	

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
EXISTING CHLORINE BUILDING MODIFICATIONS -
PLAN, SECTION & DETAILS

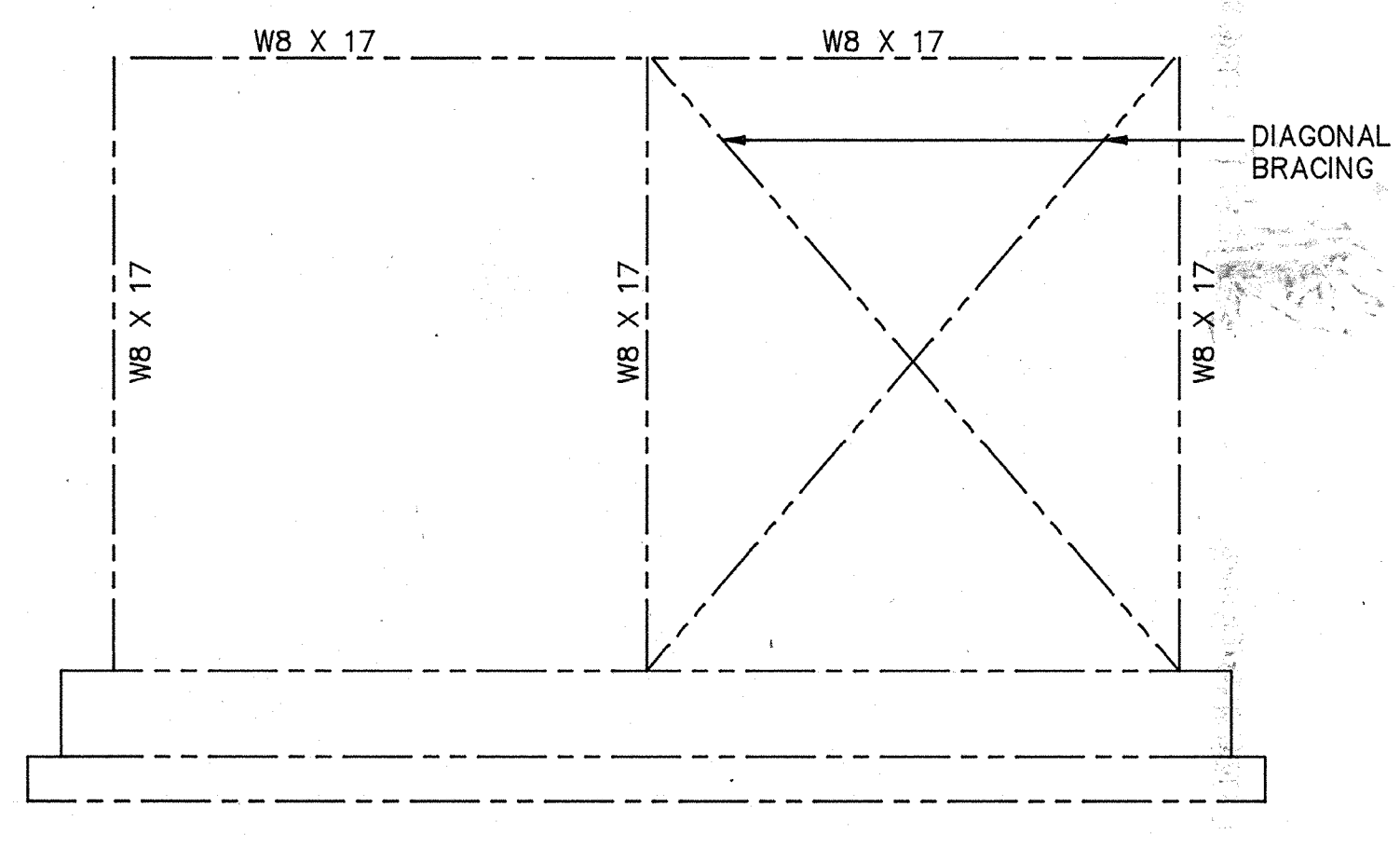
CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners & management consultants

SHEET NO.
73-1
 73 of 147

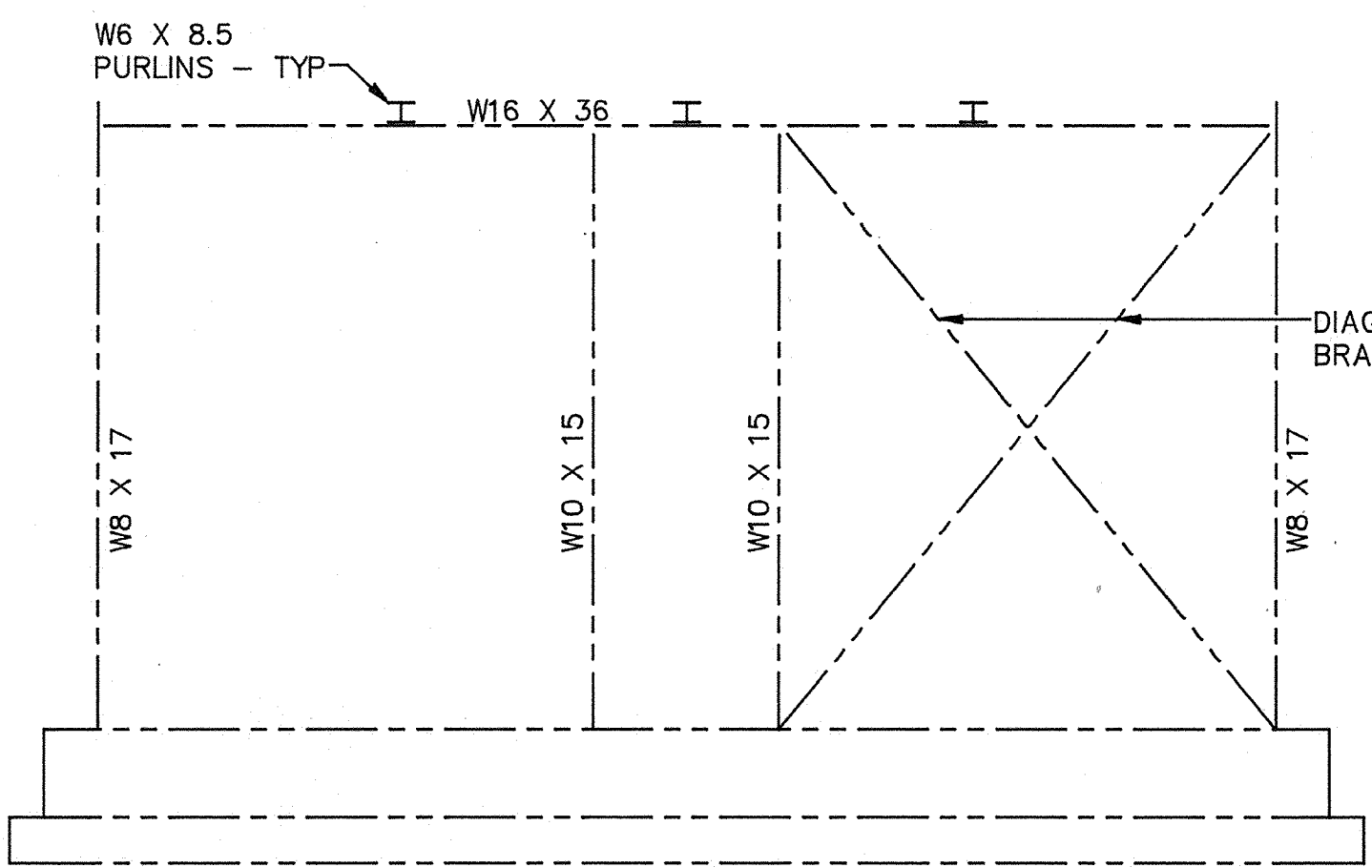
PROJECT MANAGER Approved by: Date: PROJECT ENGINEER Approved by: Date: PLUMBING Approved by: Date: HVAC Approved by: Date: INSTRUMENTATION Approved by: Date: ELECTRICAL Approved by: Date: STRUCTURAL Approved by: Date: ARCHITECTURAL Approved by: Date:



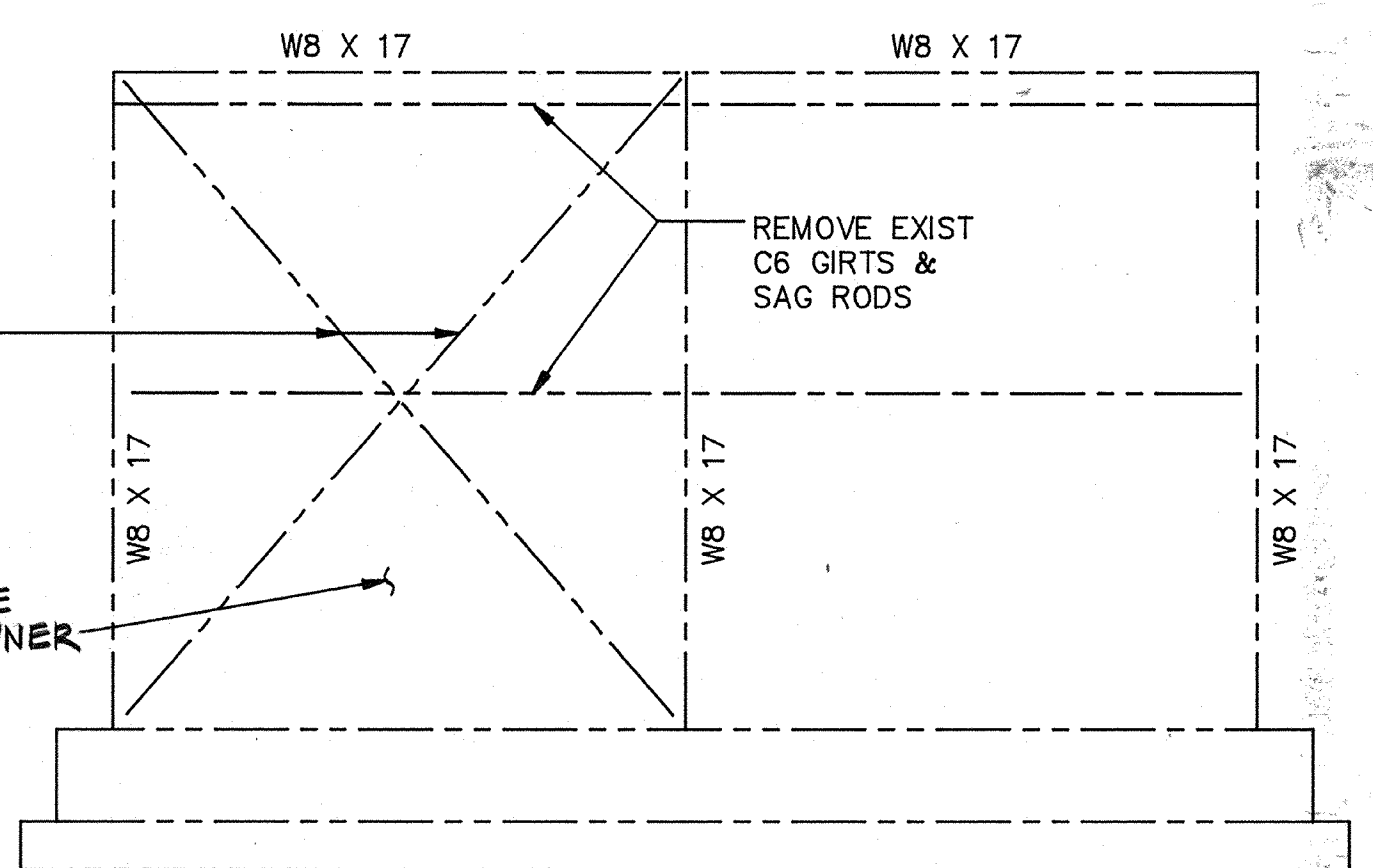
NORTH FRAMING ELEVATION
N.T.S.



EAST FRAMING ELEVATION
N.T.S.

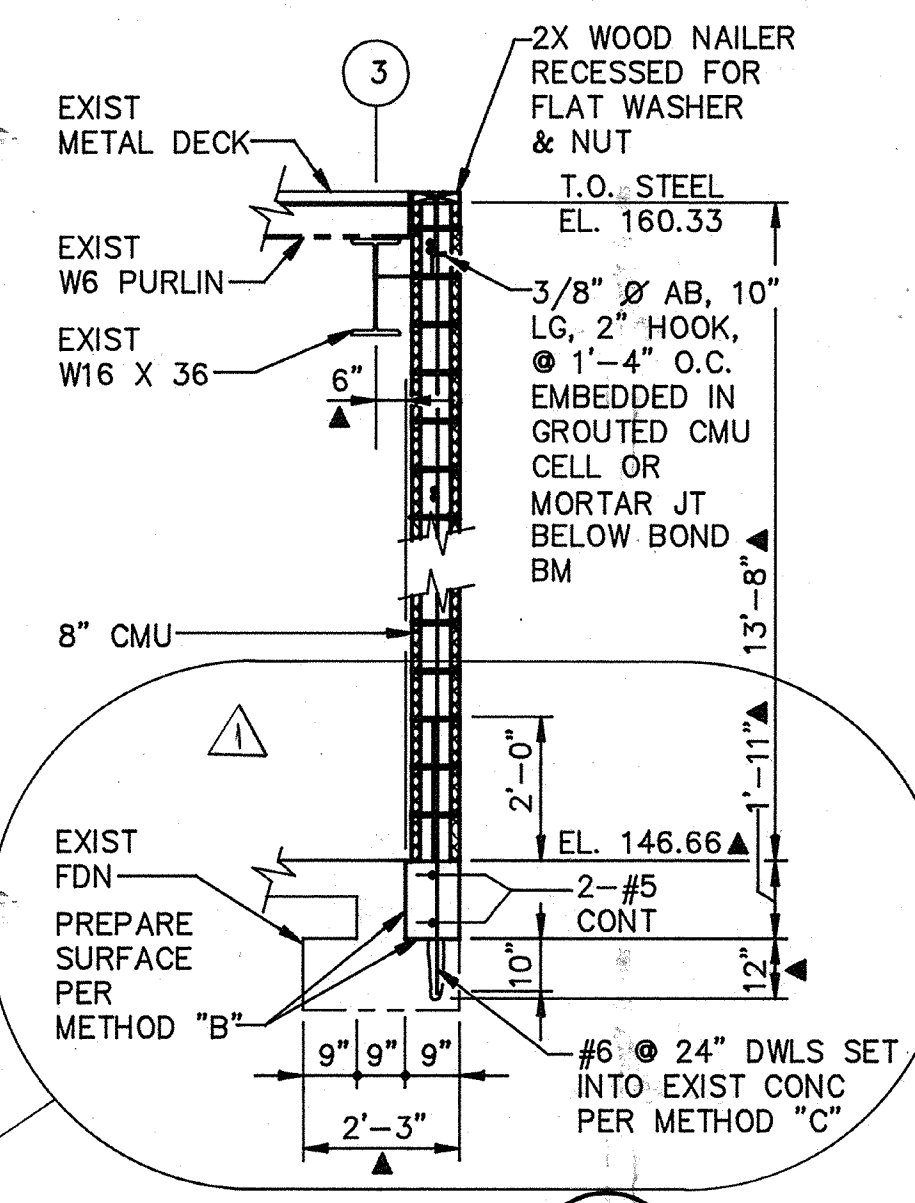


SOUTH FRAMING ELEVATION
N.T.S.

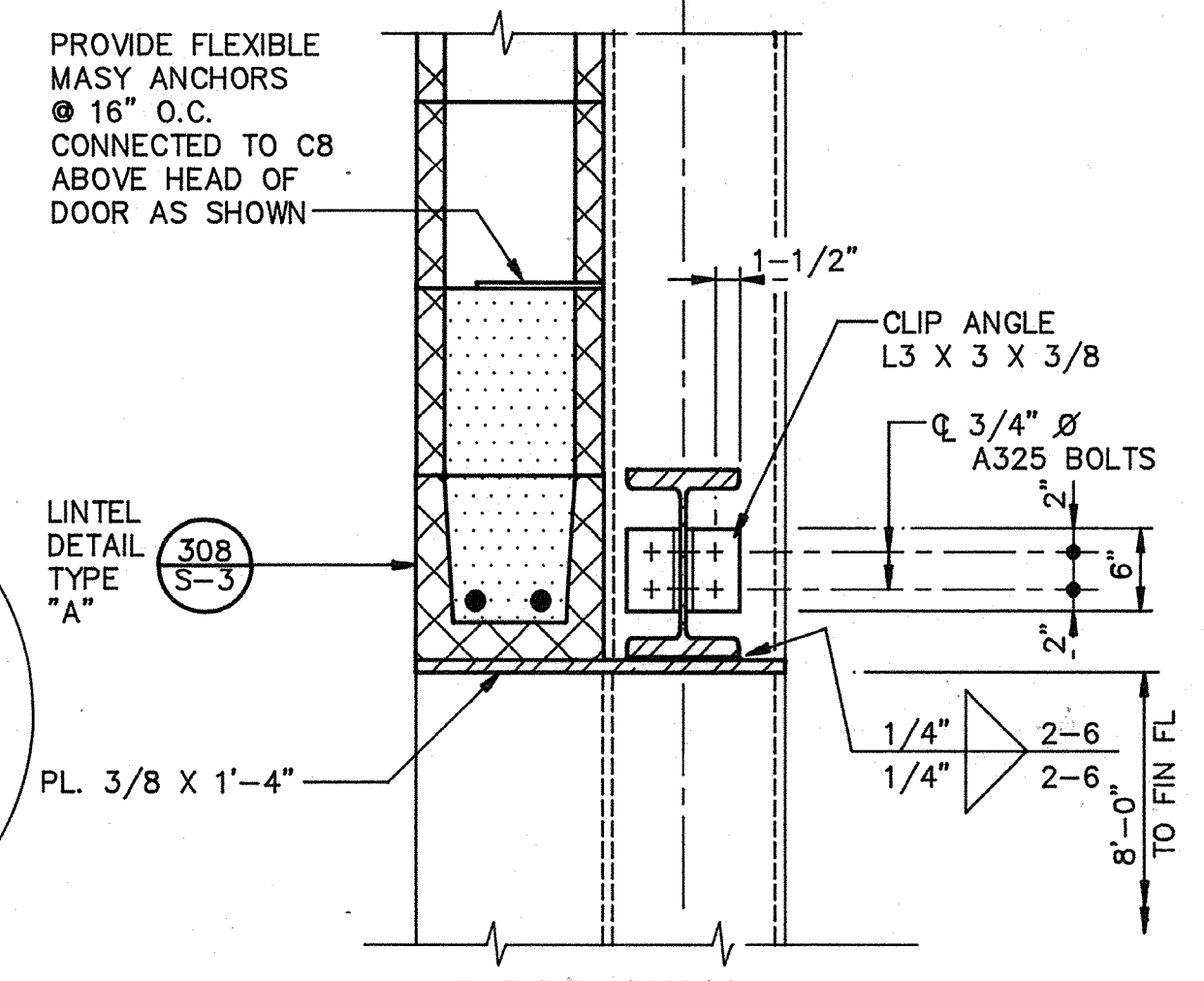


WEST FRAMING ELEVATION
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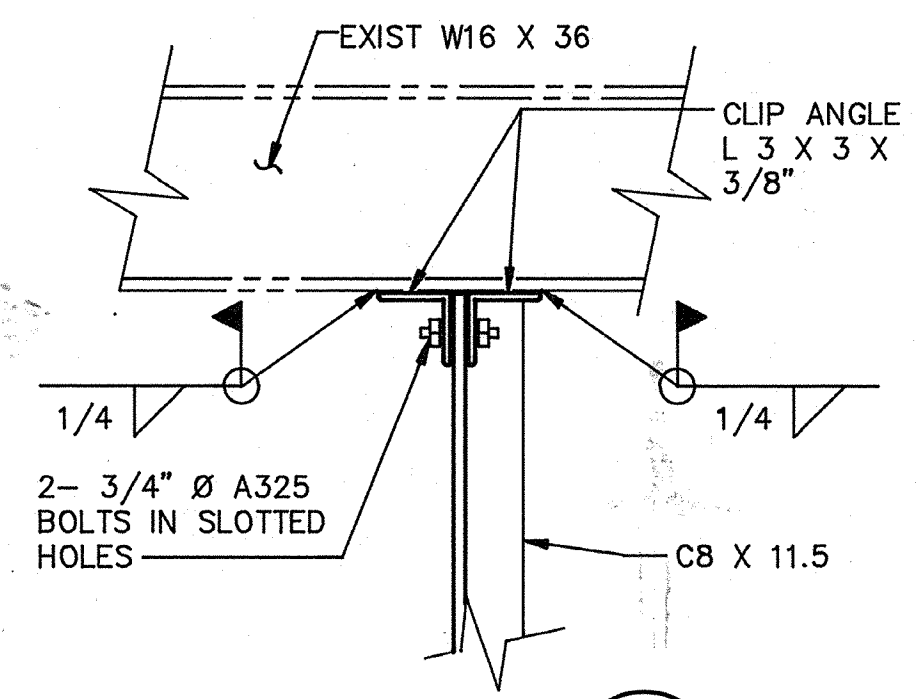
ALL FRAMING MEMBER SIZES, DETAILS, LOCATIONS AND LENGTHS ARE TAKEN FROM EXISTING DRAWINGS U.O.N. FIELD VERIFY



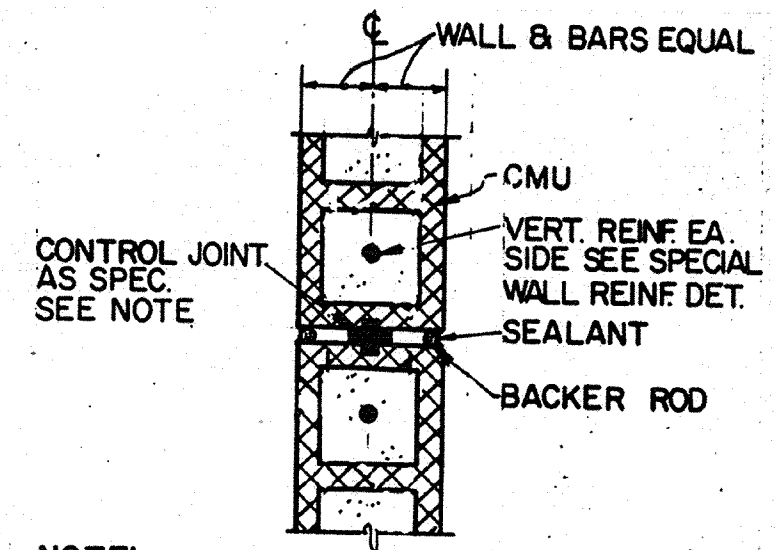
SECTION 3
SCALE: 3/8" = 1'
7S1



DETAIL D
SCALE: 1 1/2" = 1'-0"
7S1

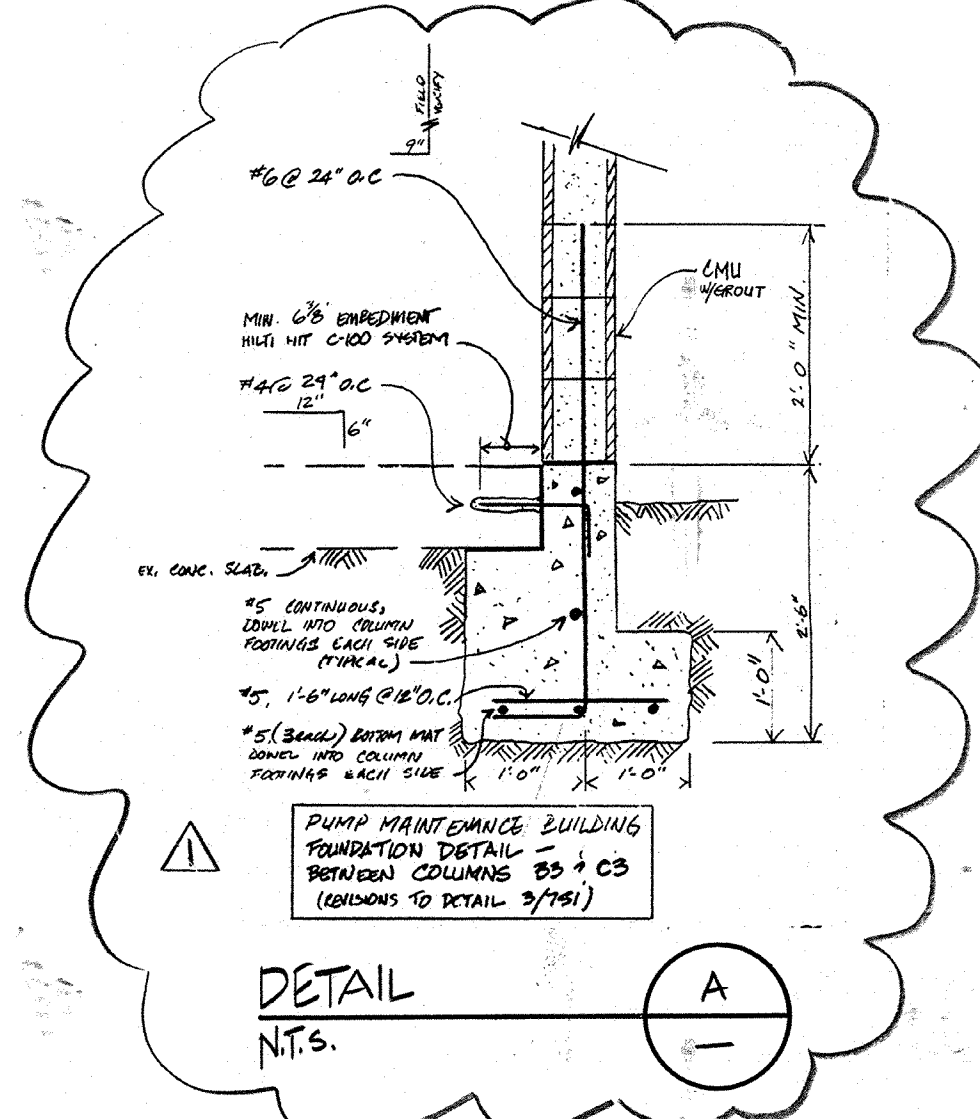


DETAIL E
SCALE: 1-1/2" = 1'
7S1

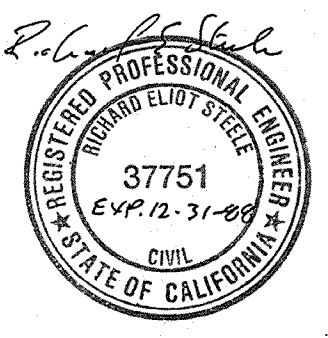


NOTE: EXTEND FULL HEIGHT OF MASONRY. ALL HORIZ. REINF. TERMINATES AT MCJ

MASONRY CONTROL JOINT DETAIL F
N.T.S.
7S-1



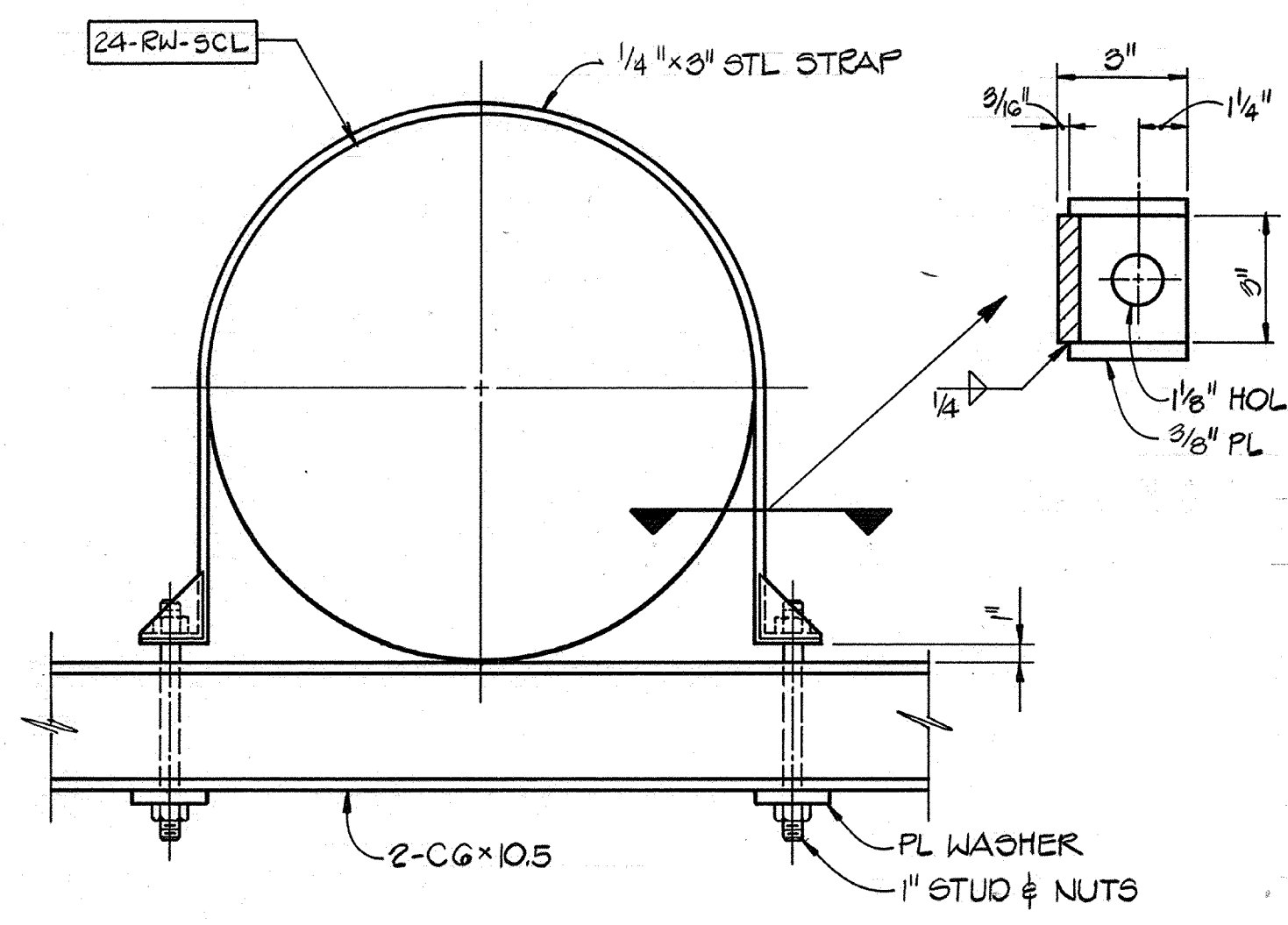
DETAIL A
N.T.S.
7S1



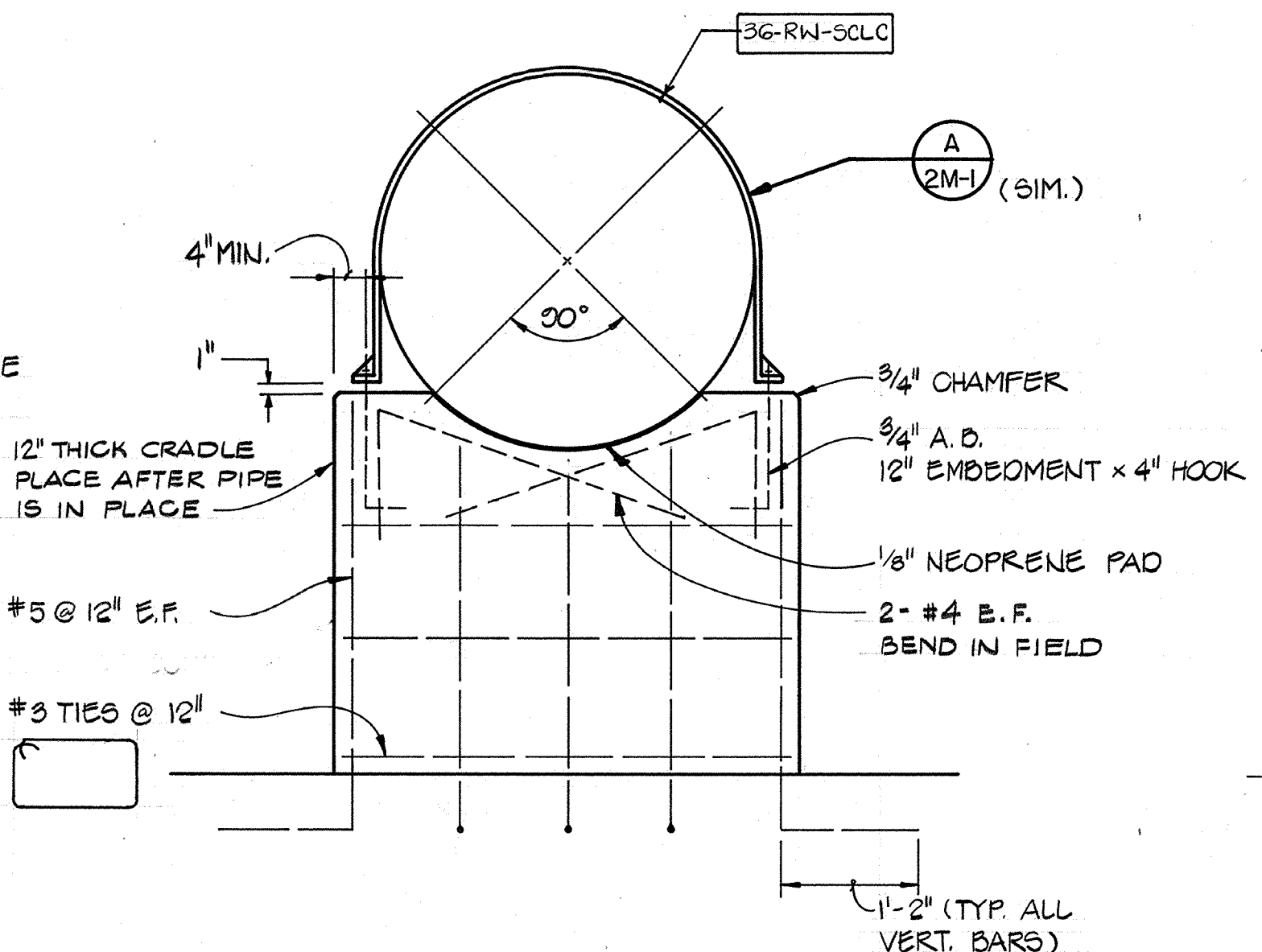
AS-BUILT
Signature: Pm
Date: 5/10/91

CITY OF PITTSBURG, CALIFORNIA		WATER TREATMENT PLANT EXPANSION 1988	
Date: 4/12/91		REVISOR FOR THE RECORD	
Designed by: JWI	Drawn by: LS	Date: SEPT. 1988	CAMP DRESSER & MCKEE INC.
Checked by: JTC	Approved by: RES	Scale: AS SHOWN	710 South Broadway Walnut Creek, CA 94596
SHEET NO. 7S-2			environmental engineers, scientists, planners, & management consultants
74 of 147			

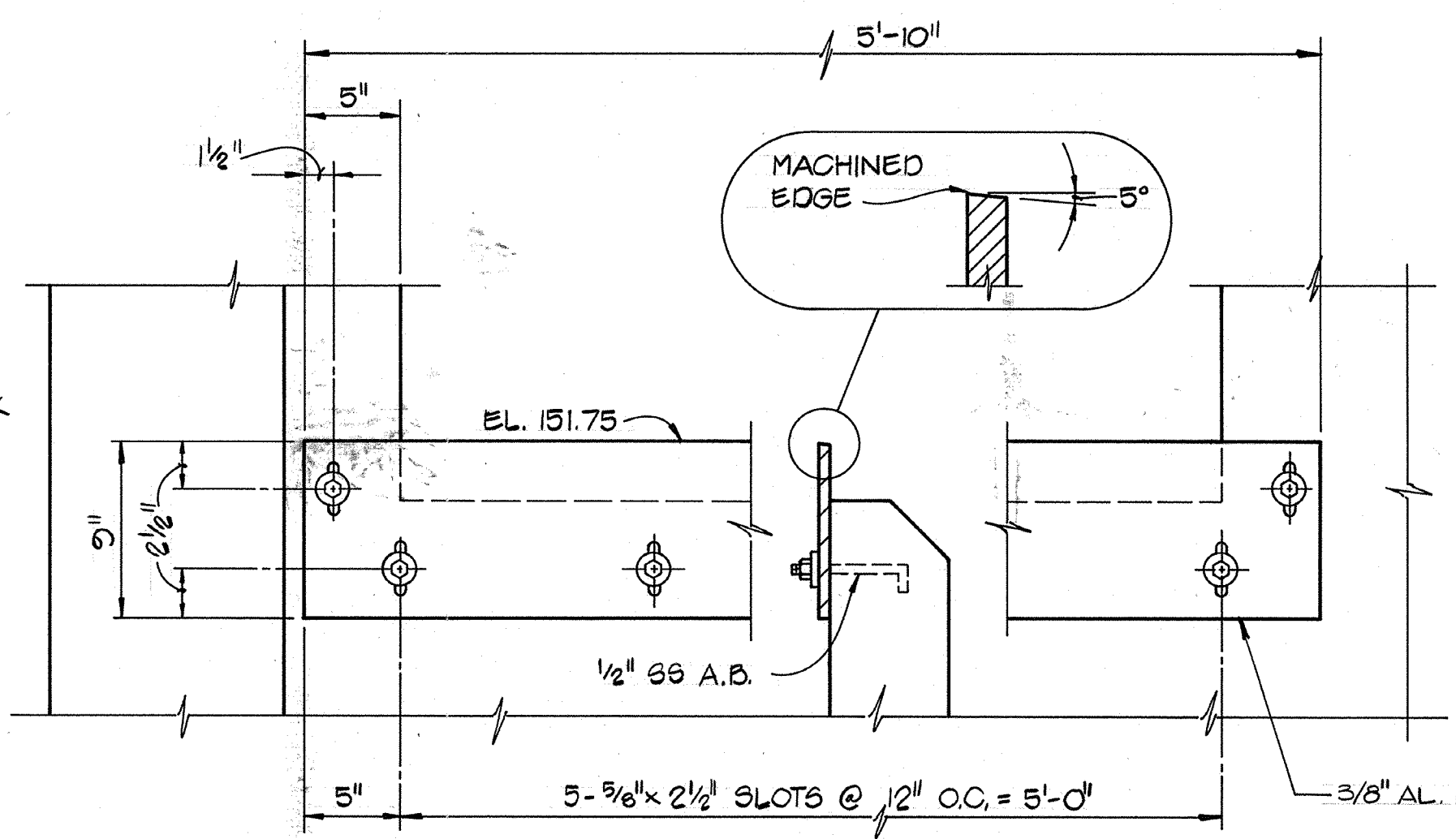
111325
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



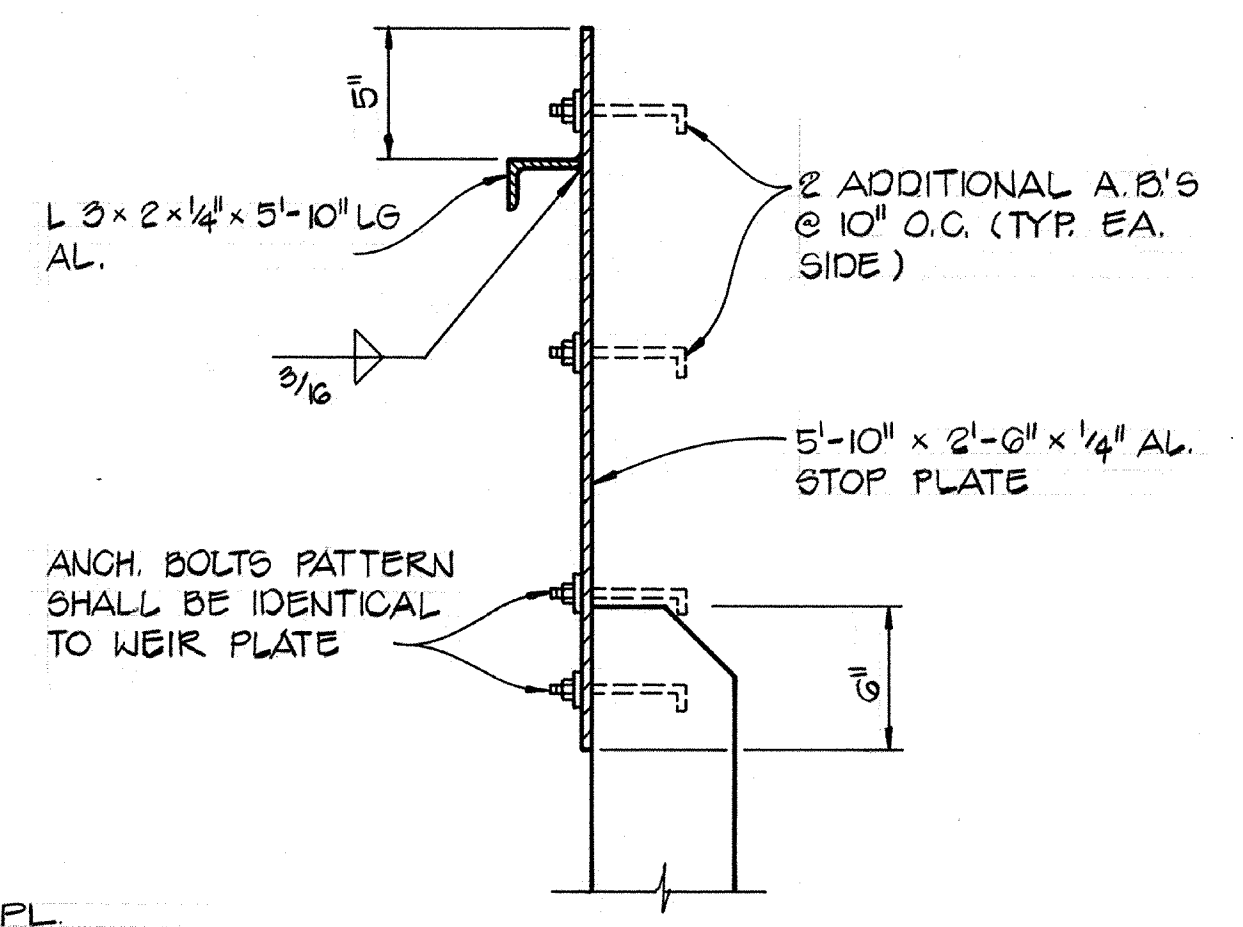
DETAIL A
 N.T.S. 2M-1



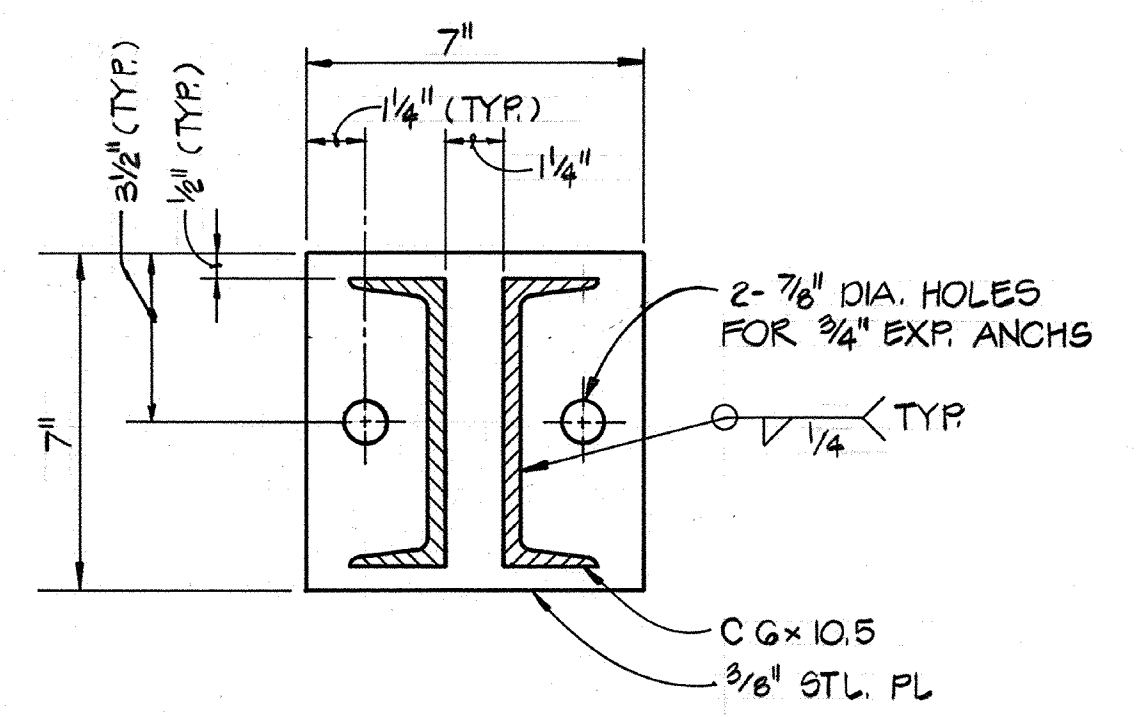
DETAIL B
 N.T.S. 2M-1



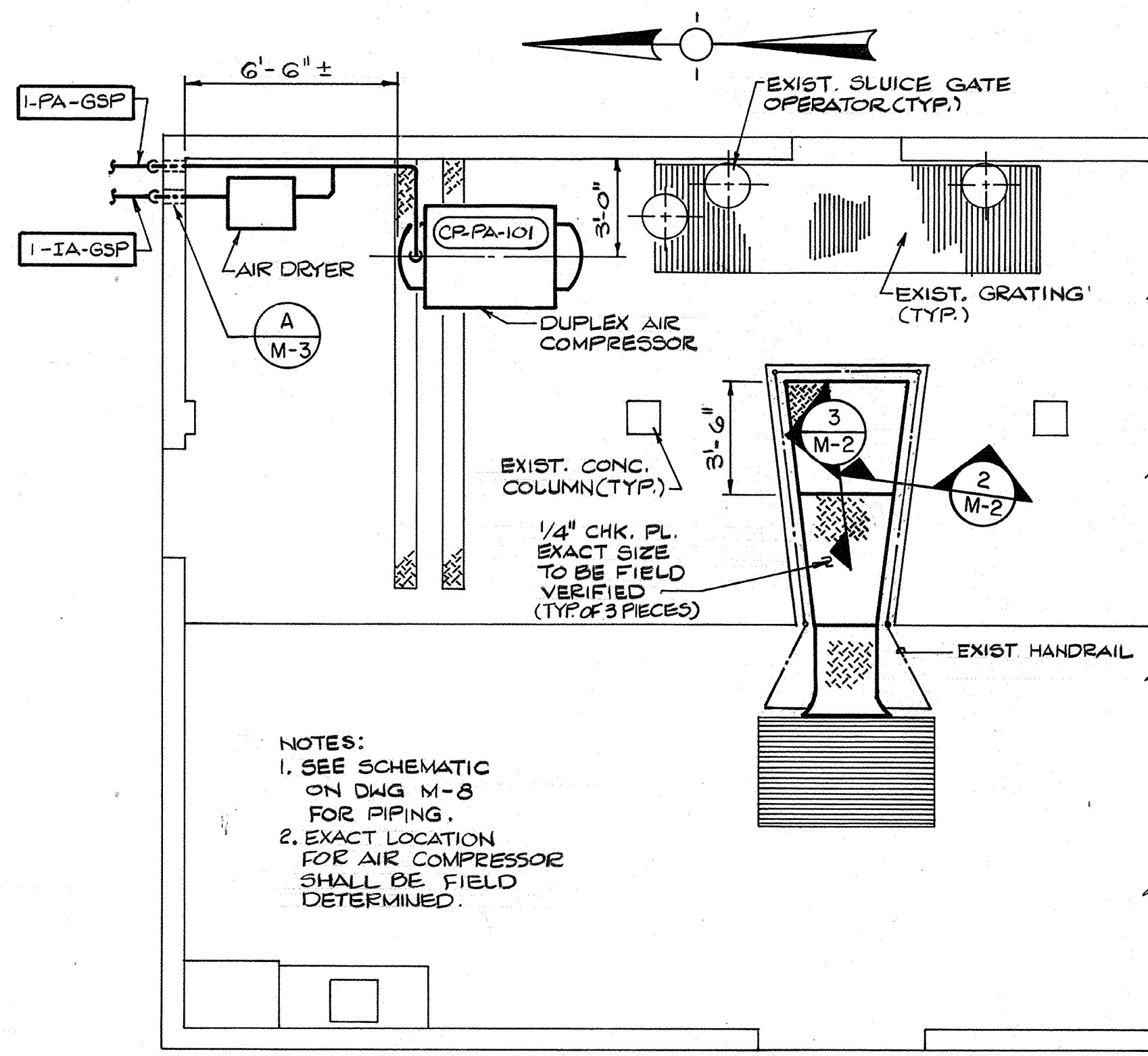
DETAIL C
 N.T.S. 2M-1



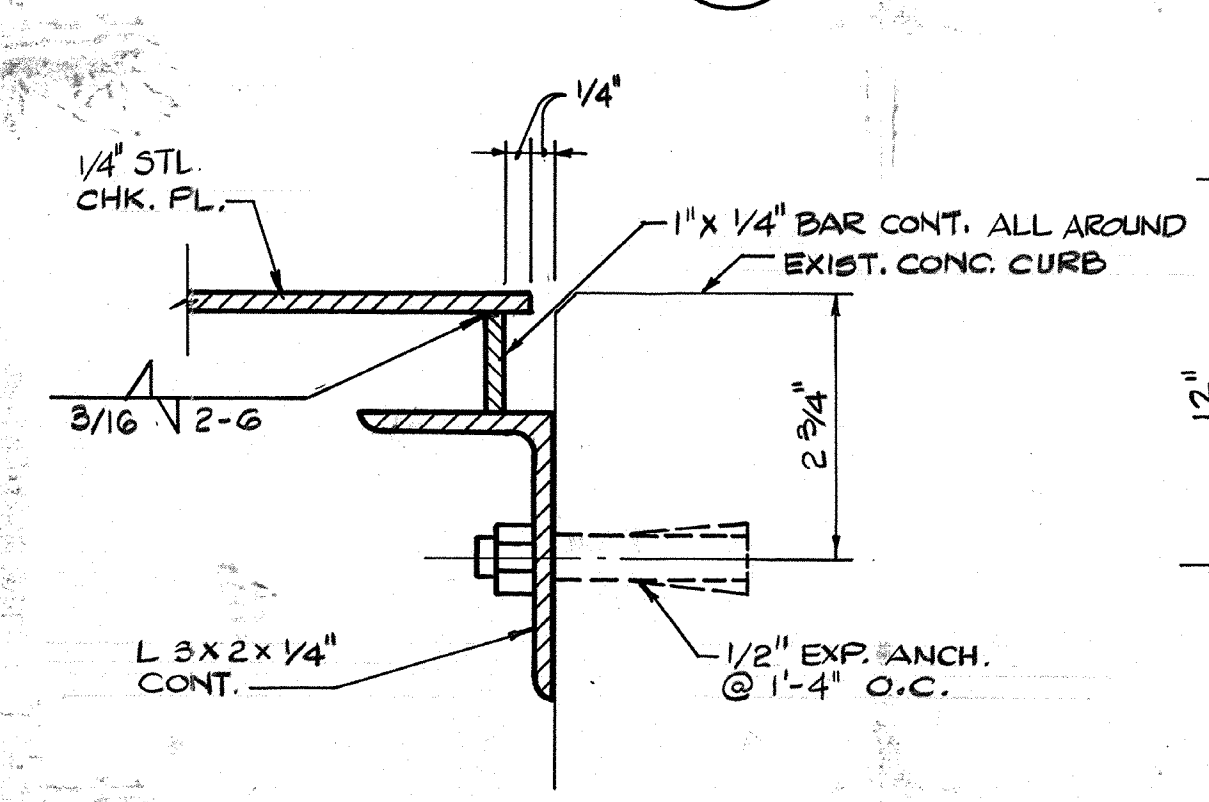
DETAIL D
 N.T.S. 2M-1



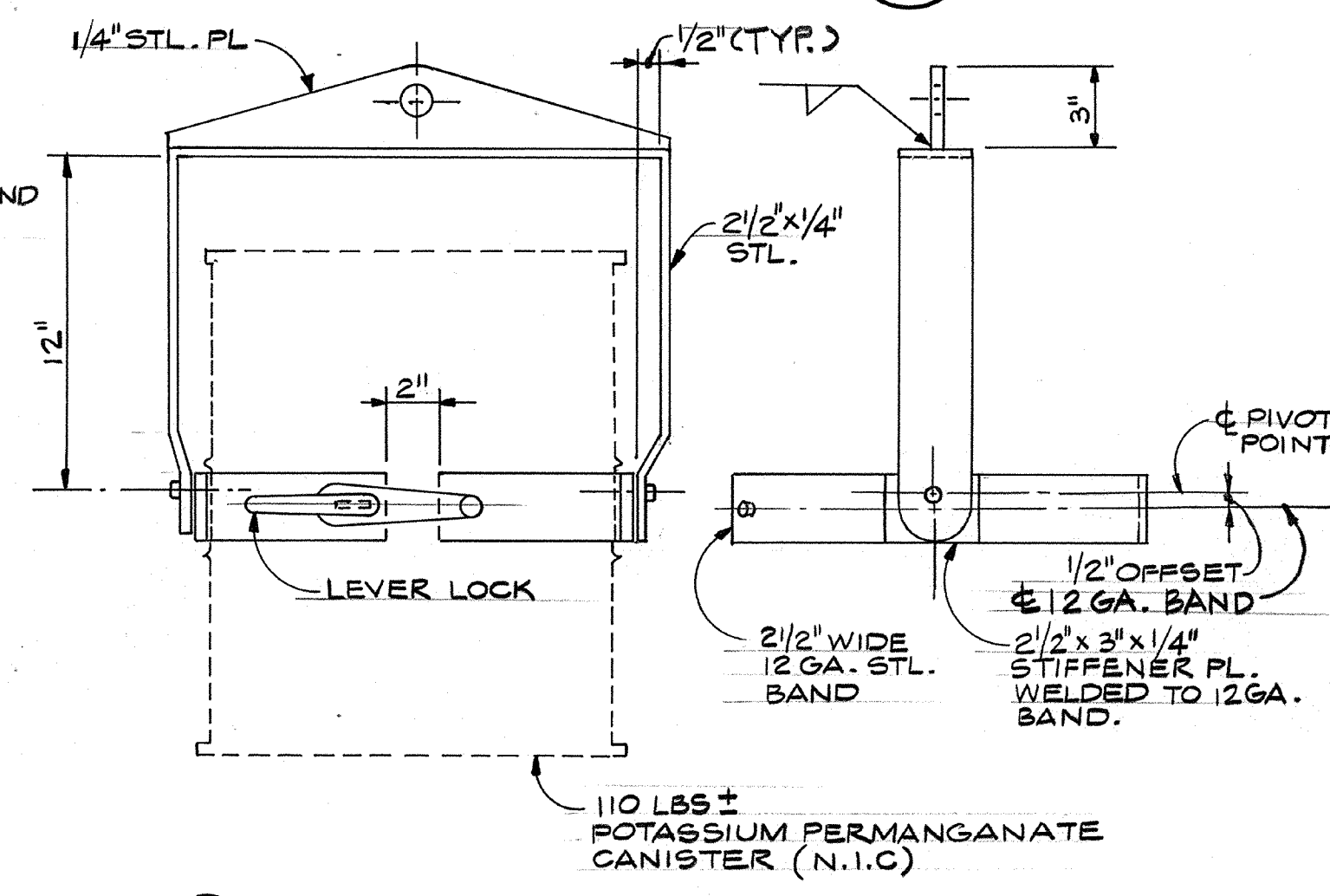
SECTION I
 N.T.S. 2M-1



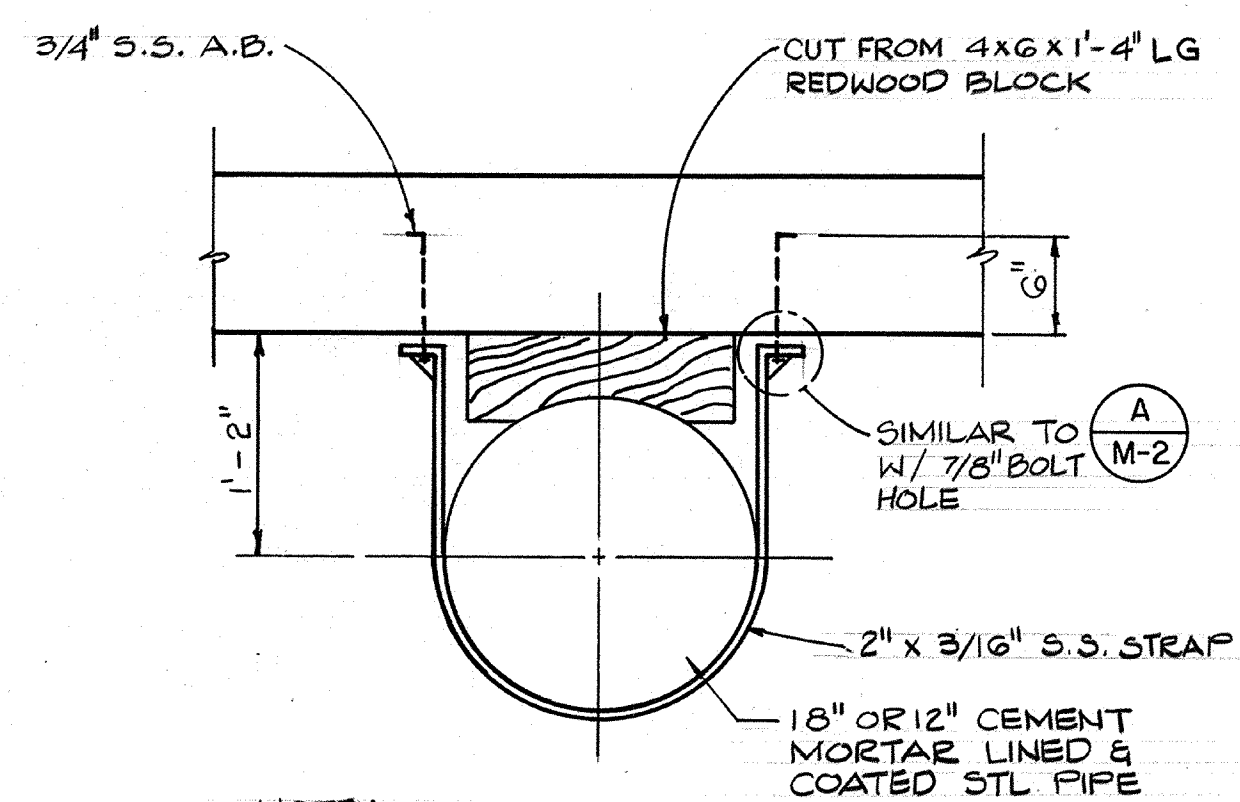
EXIST. CHEMICAL & EQUIPMENT BUILDING
 PARTIAL PLAN
 SCALE: 1/4" = 1' - 0"



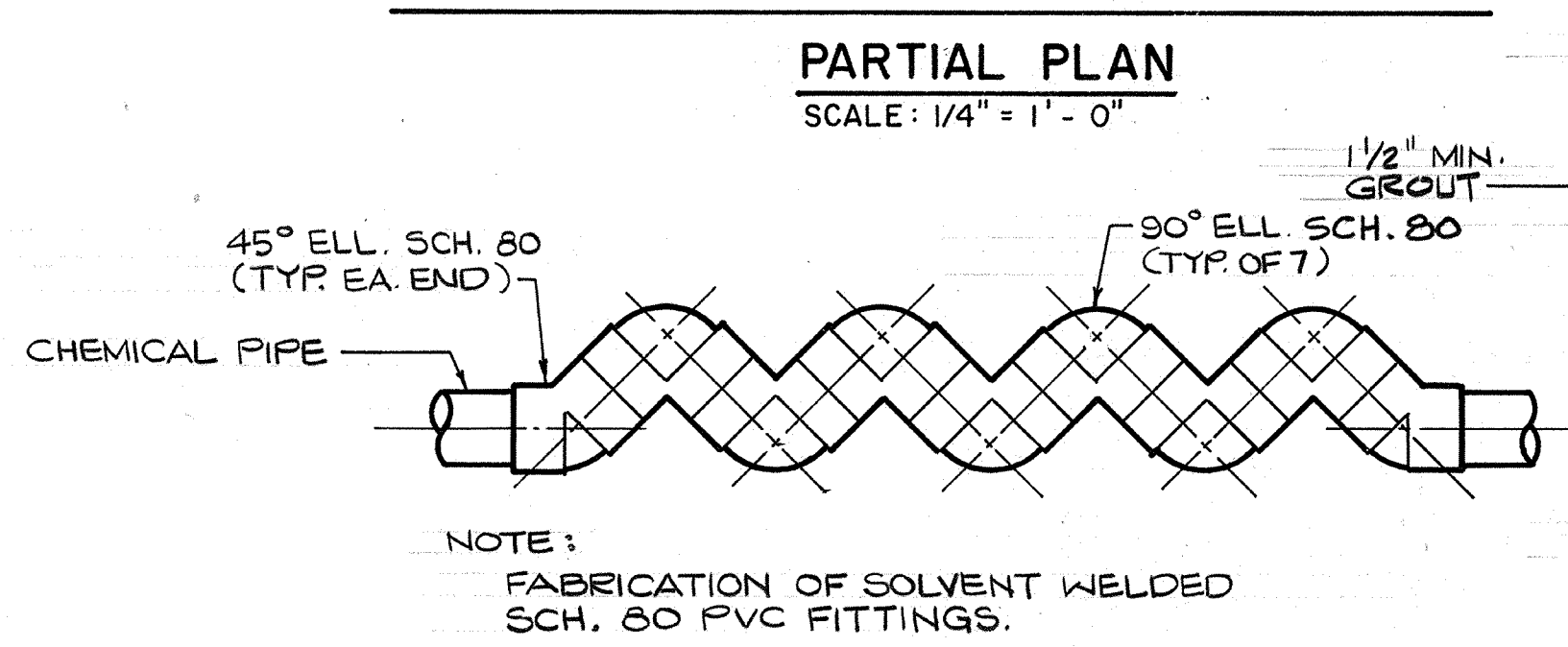
SECTION 2
 N.T.S. M-2



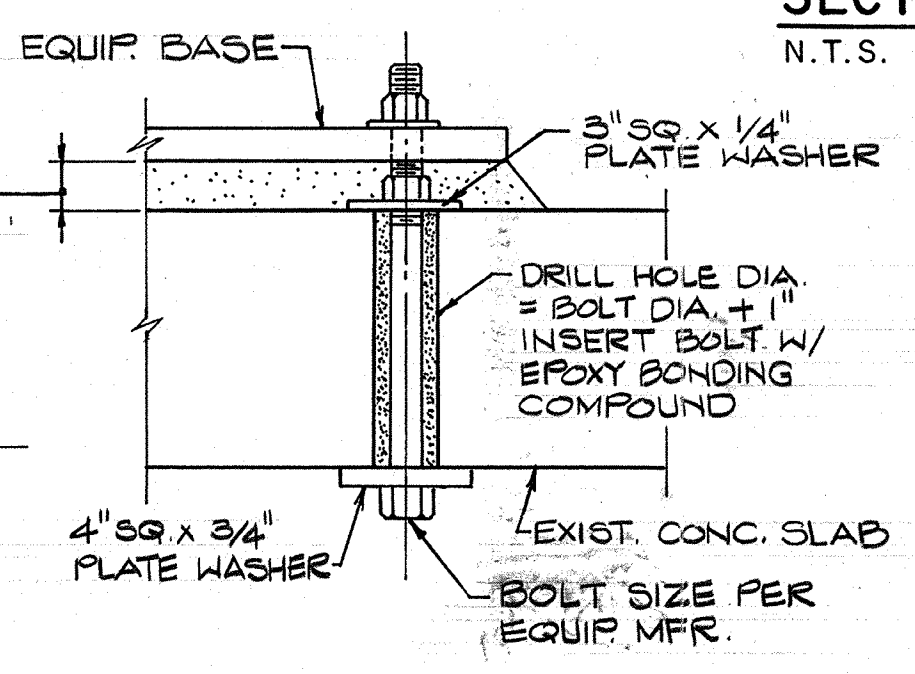
DETAIL E
 N.T.S. 5M-2



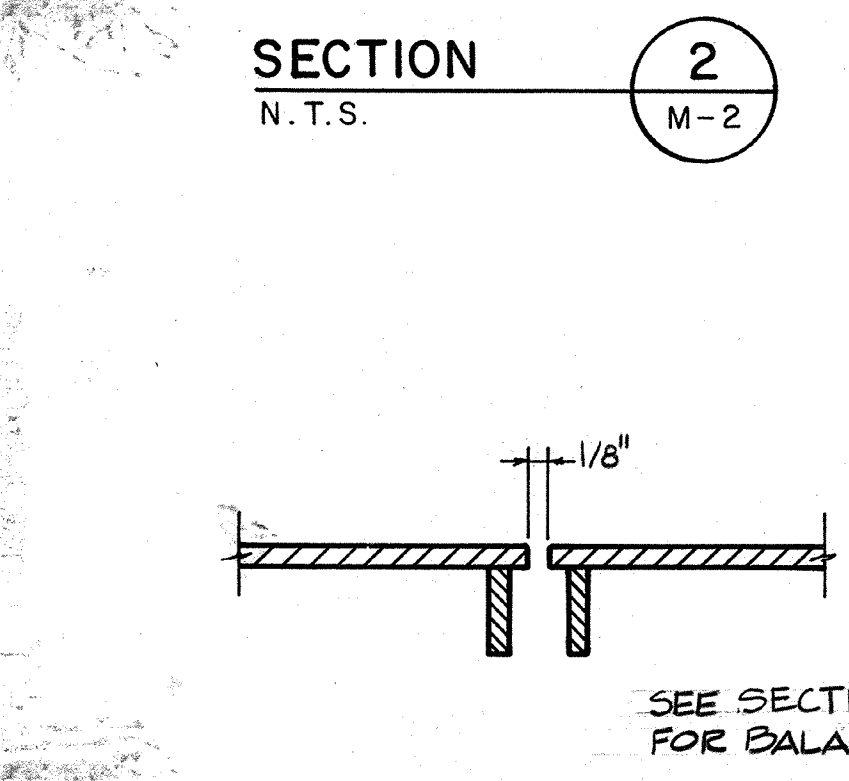
DETAIL G
 N.T.S. 2S-4



STATIC MIXER
 N.T.S. VAR



DETAIL H
 N.T.S. VAR



SECTION 3
 N.T.S. M-2

AS-BUILT
 PFM SIGNATURE 5/10/91 DATE

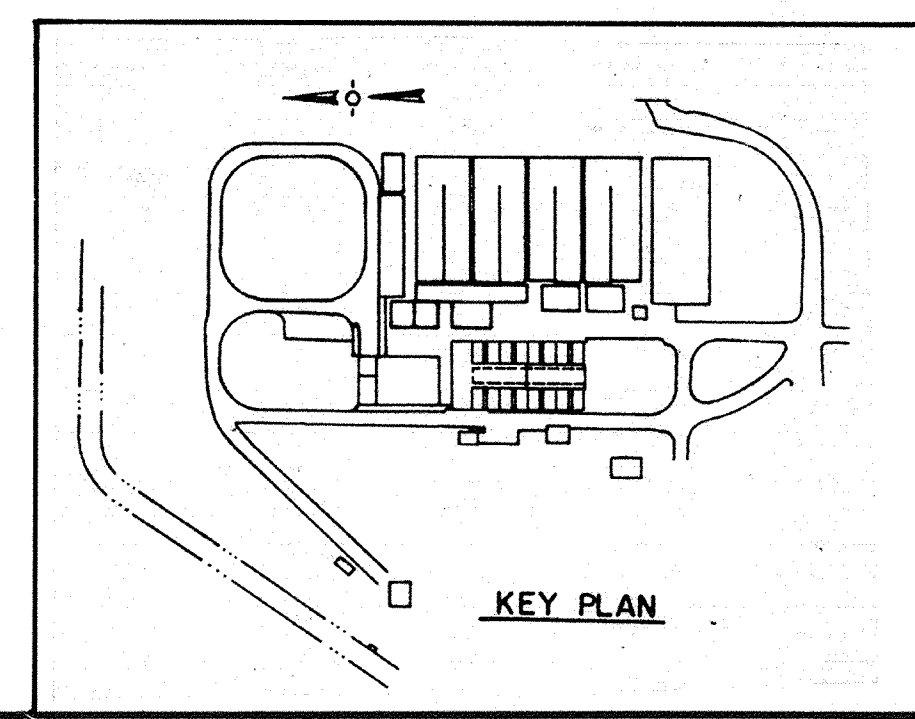


Tina Edwards

Date	Ch'k'd	Revision

Designed by: TCE
 Drawn by: TVN/GM
 Checked by: MDR
 Approved by: PEM

Date: SEPT. 1988
 Scale: AS NOTED

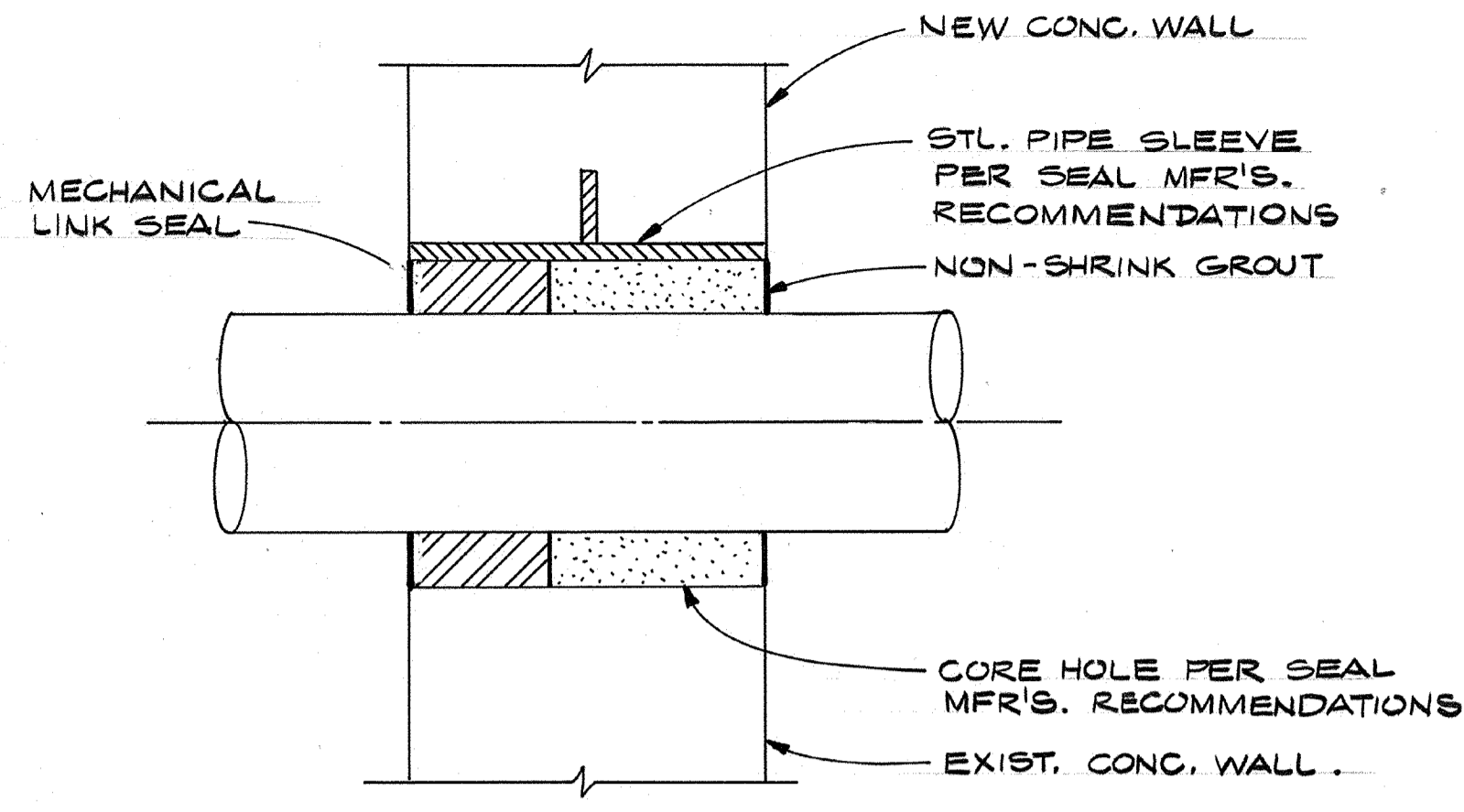


CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 MISCELLANEOUS DETAILS I

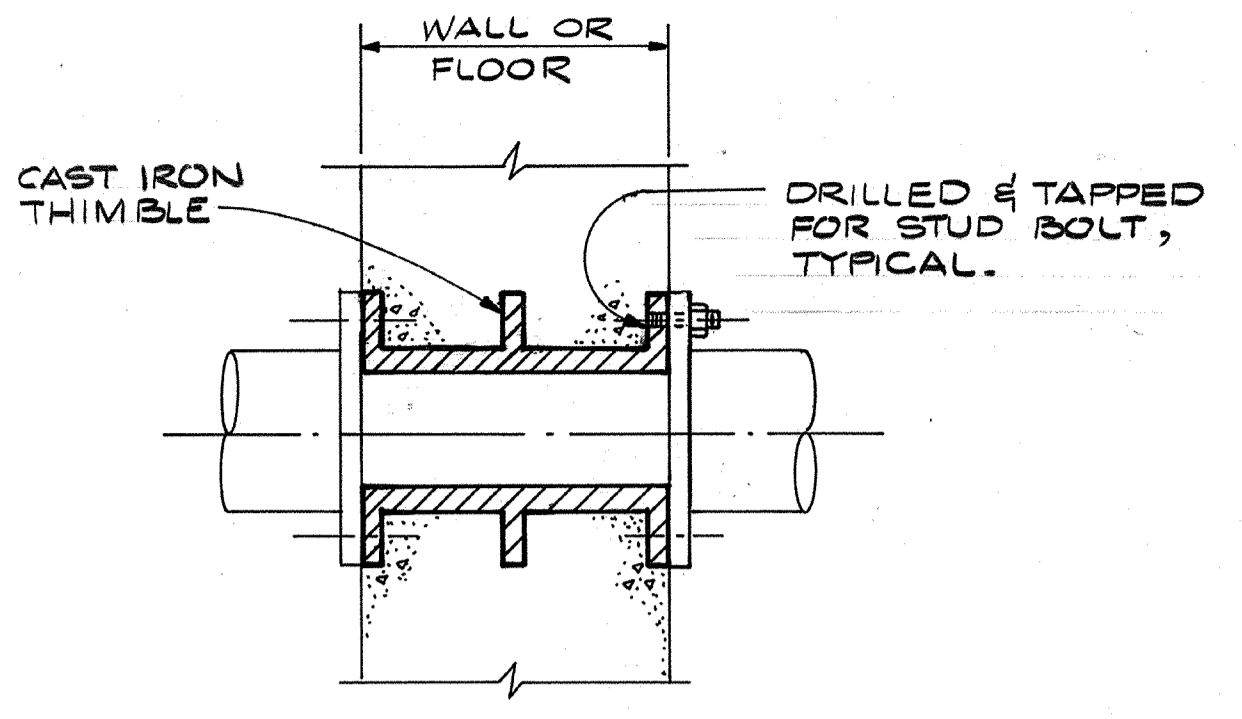
CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners, & management consultants

SHEET NO. M-2
 76 of 147

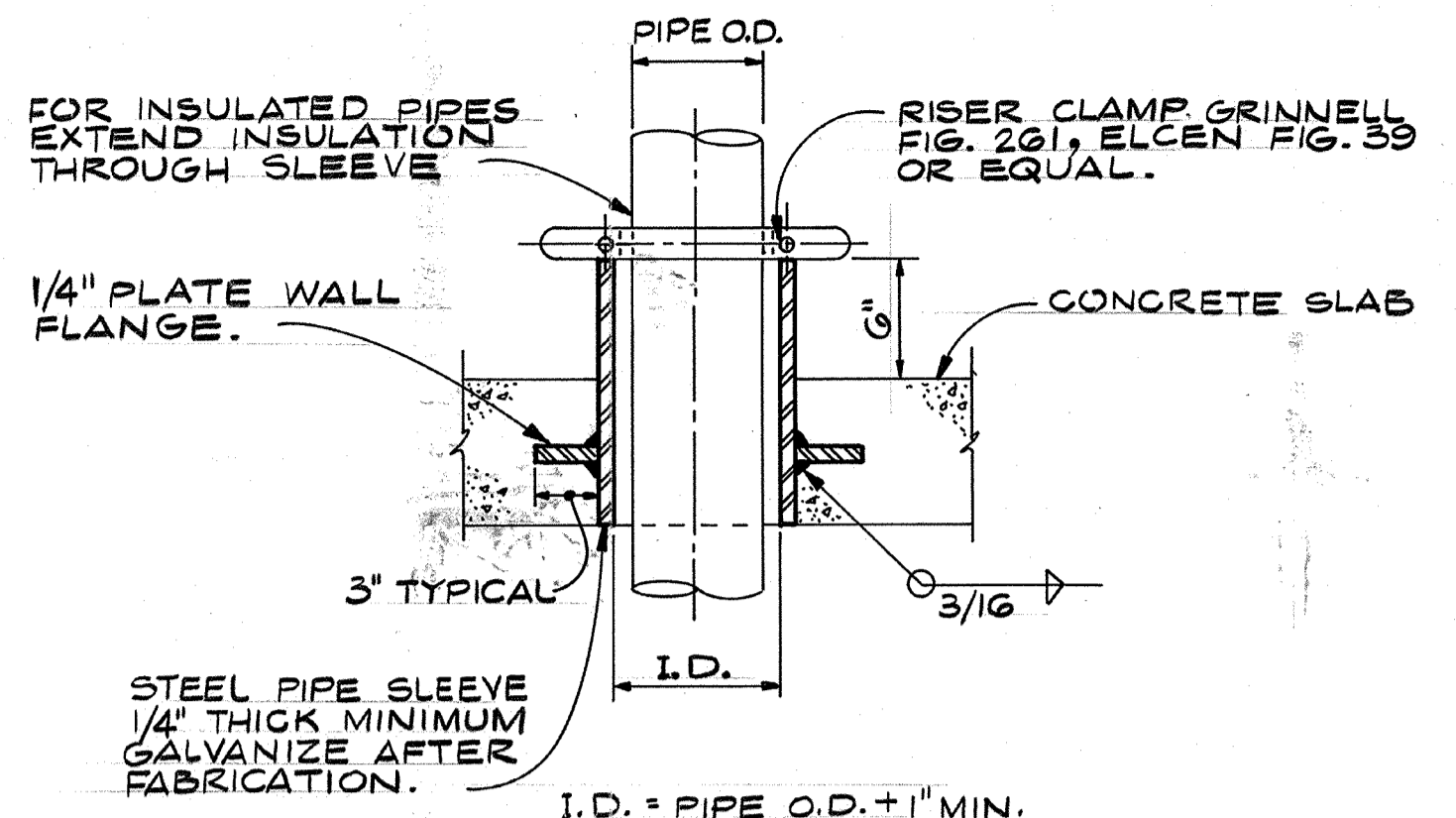
111325
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



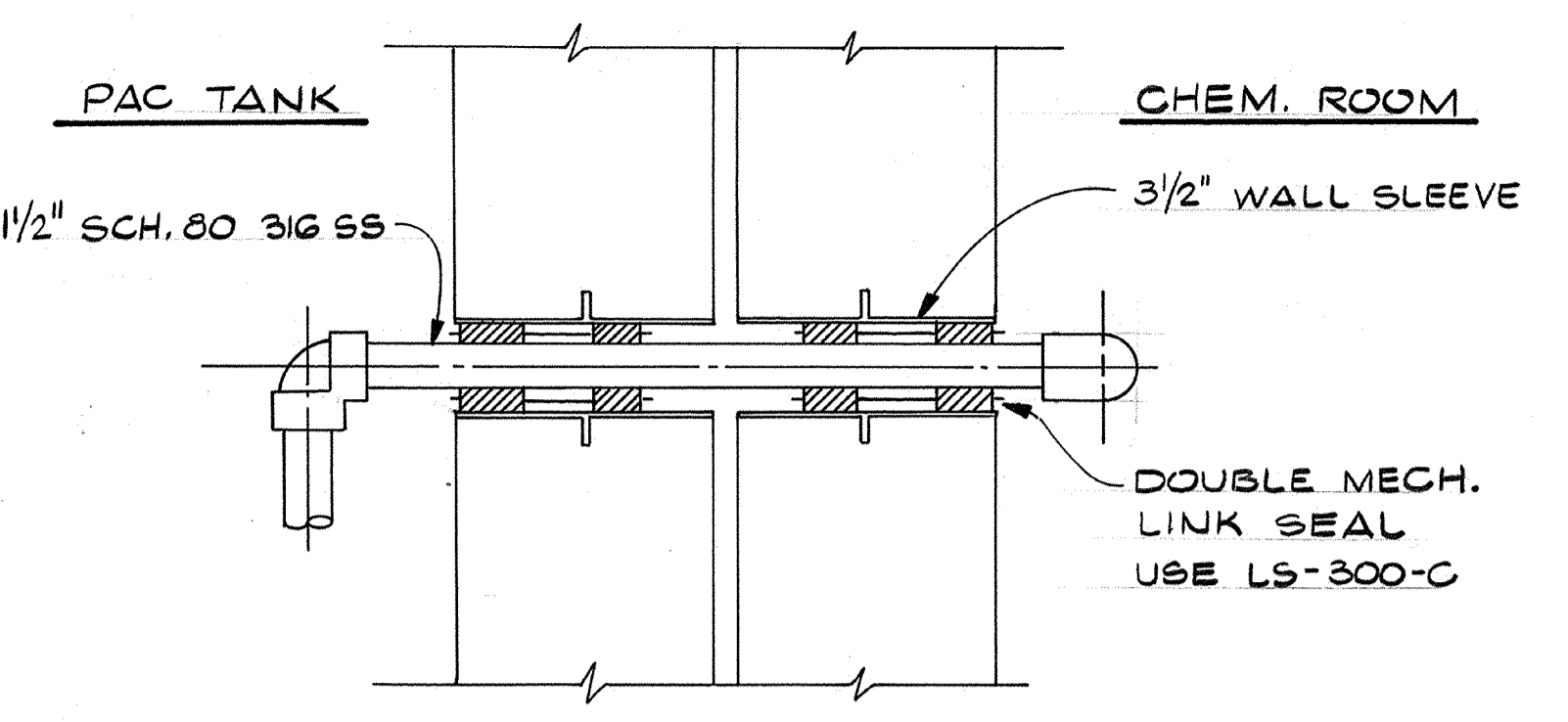
WALL PENETRATION (A) VAR
 N.T.S.



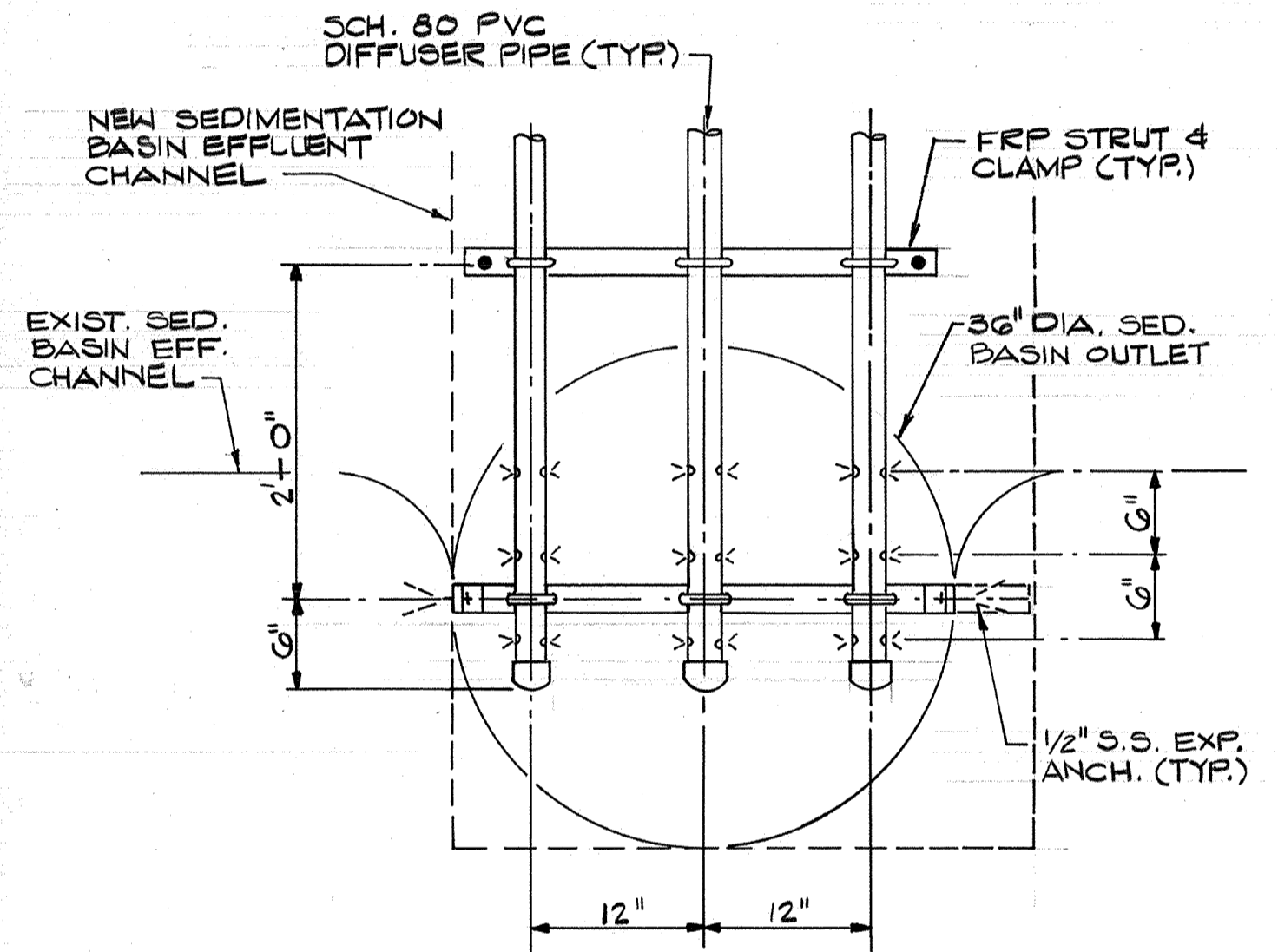
FLANGED CAST IRON THIMBLE (B) VAR
 N.T.S.



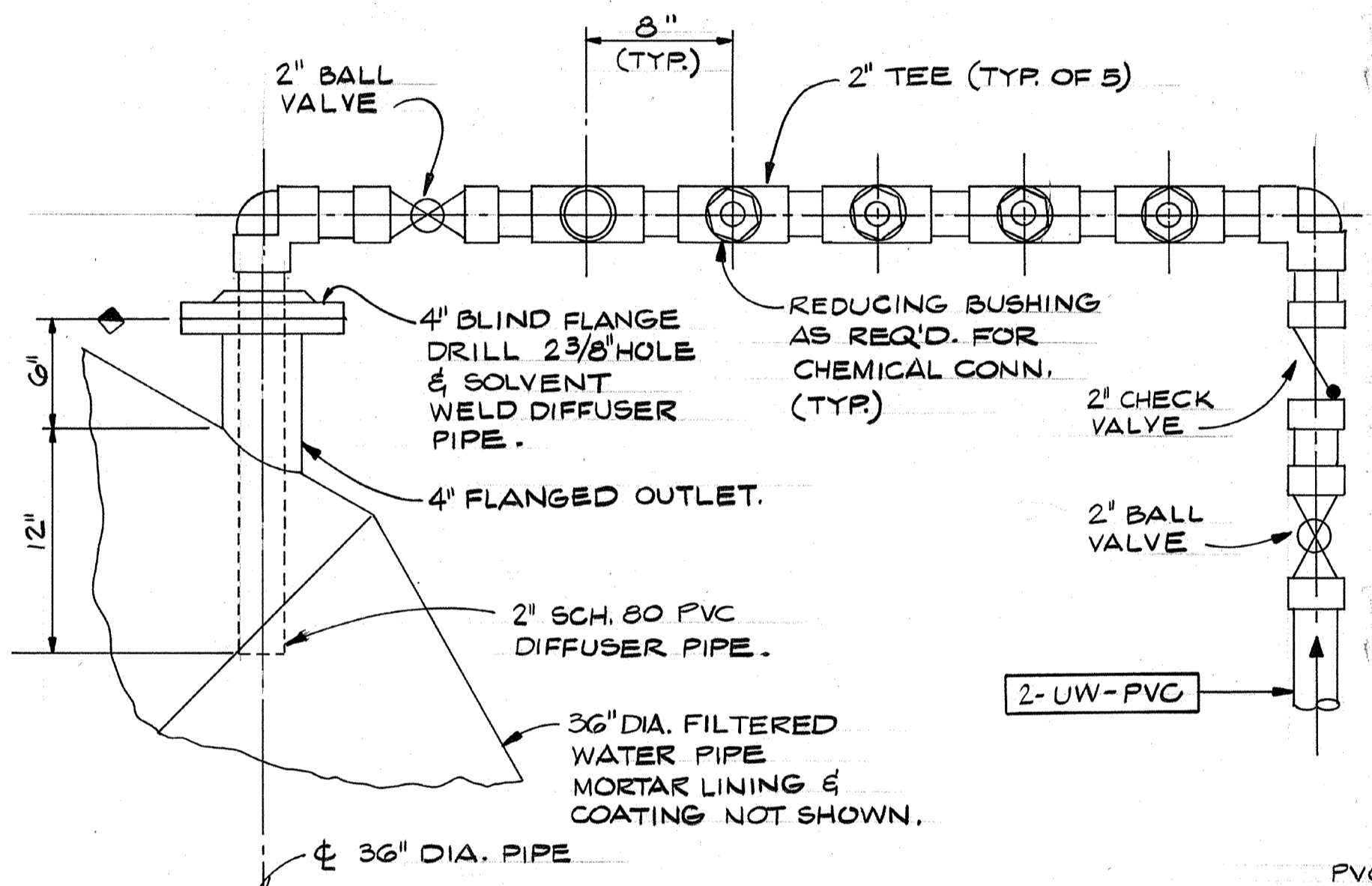
VERTICAL PIPE SUPPORT SLEEVE (C) VAR
 N.T.S.



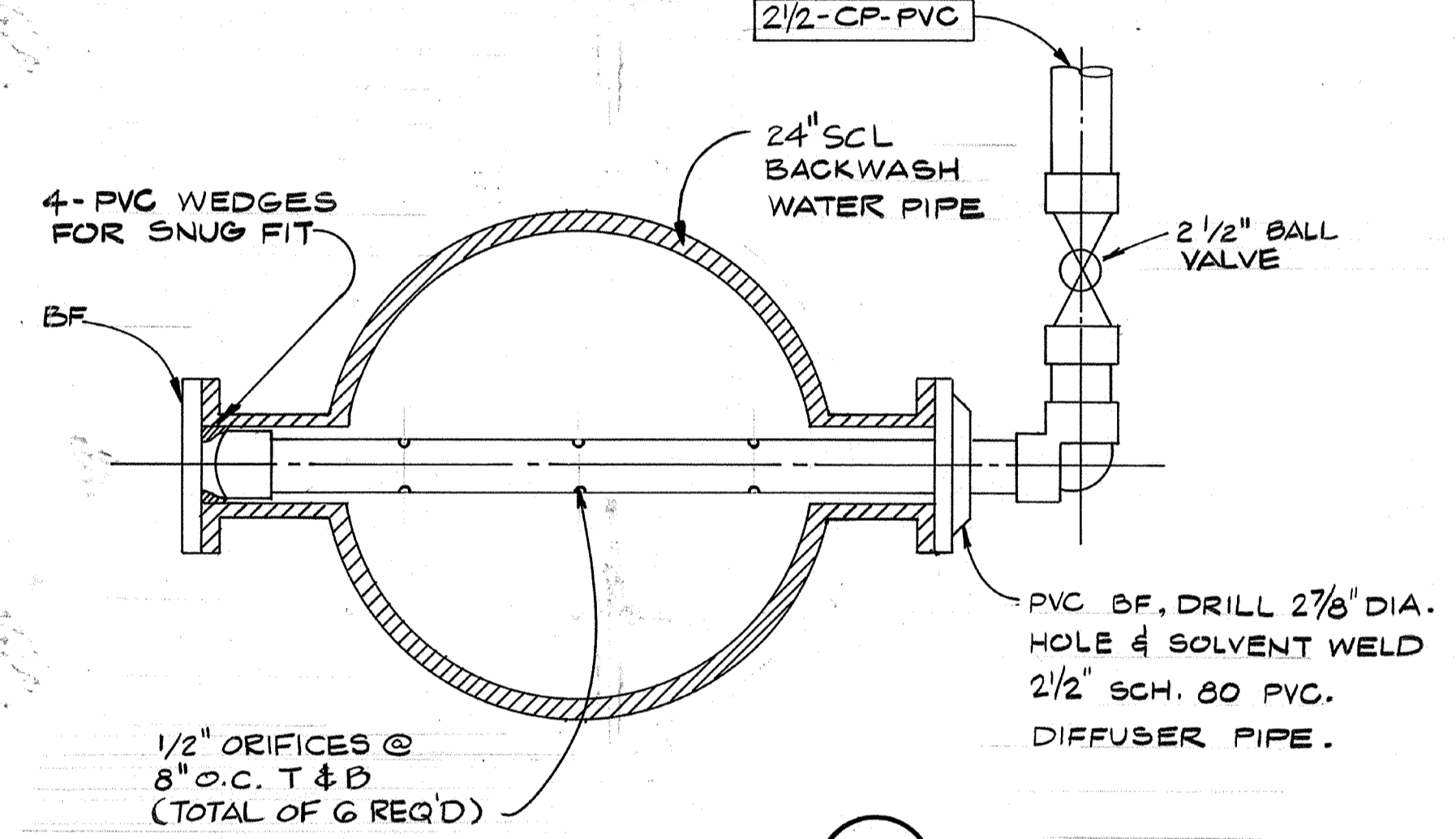
DETAIL (D) 5M-1
 N.T.S.



CHEMICAL DIFFUSER (E) VAR
 N.T.S.

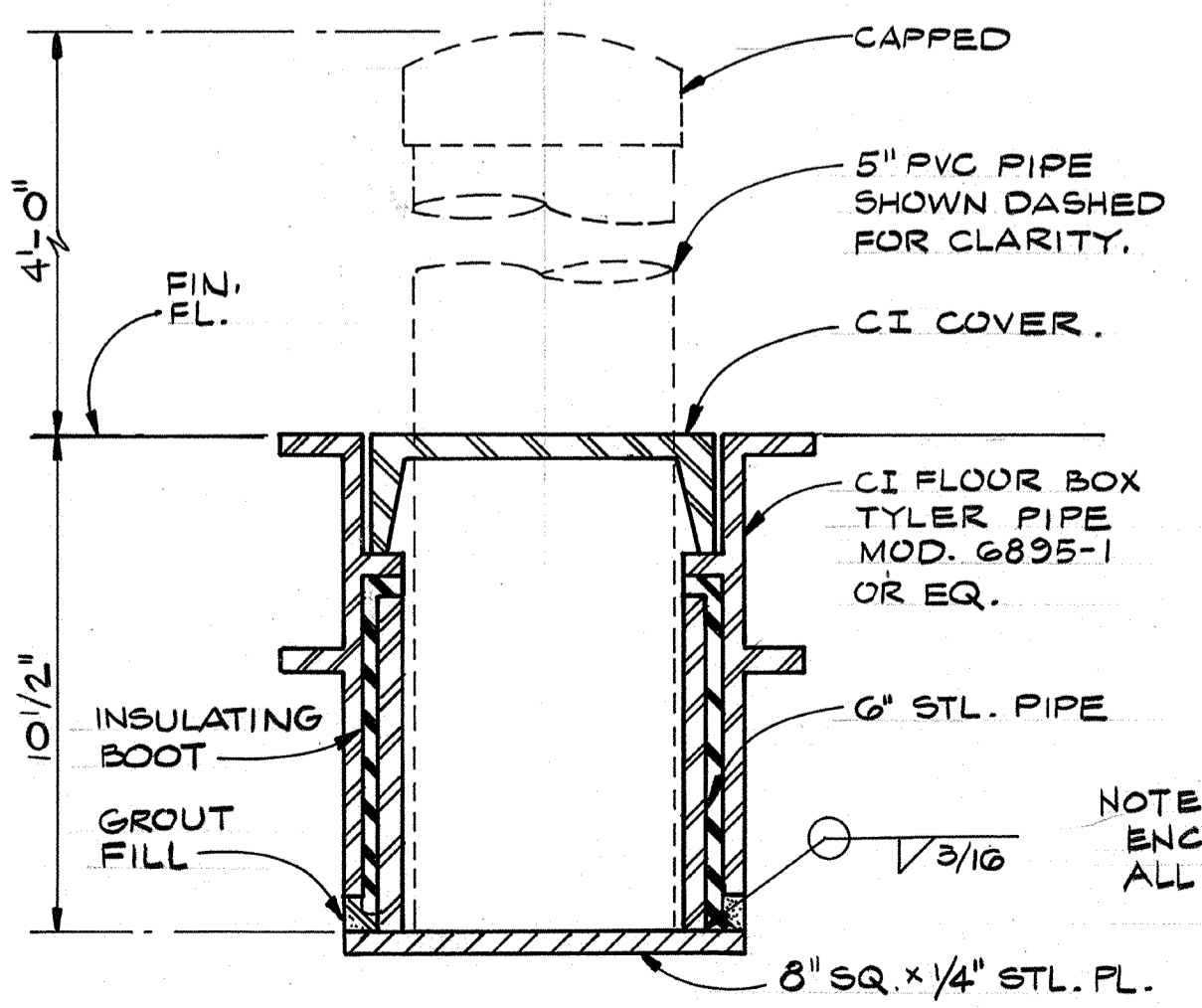


CHEMICAL DIFFUSER (F) 3M-1
 N.T.S.

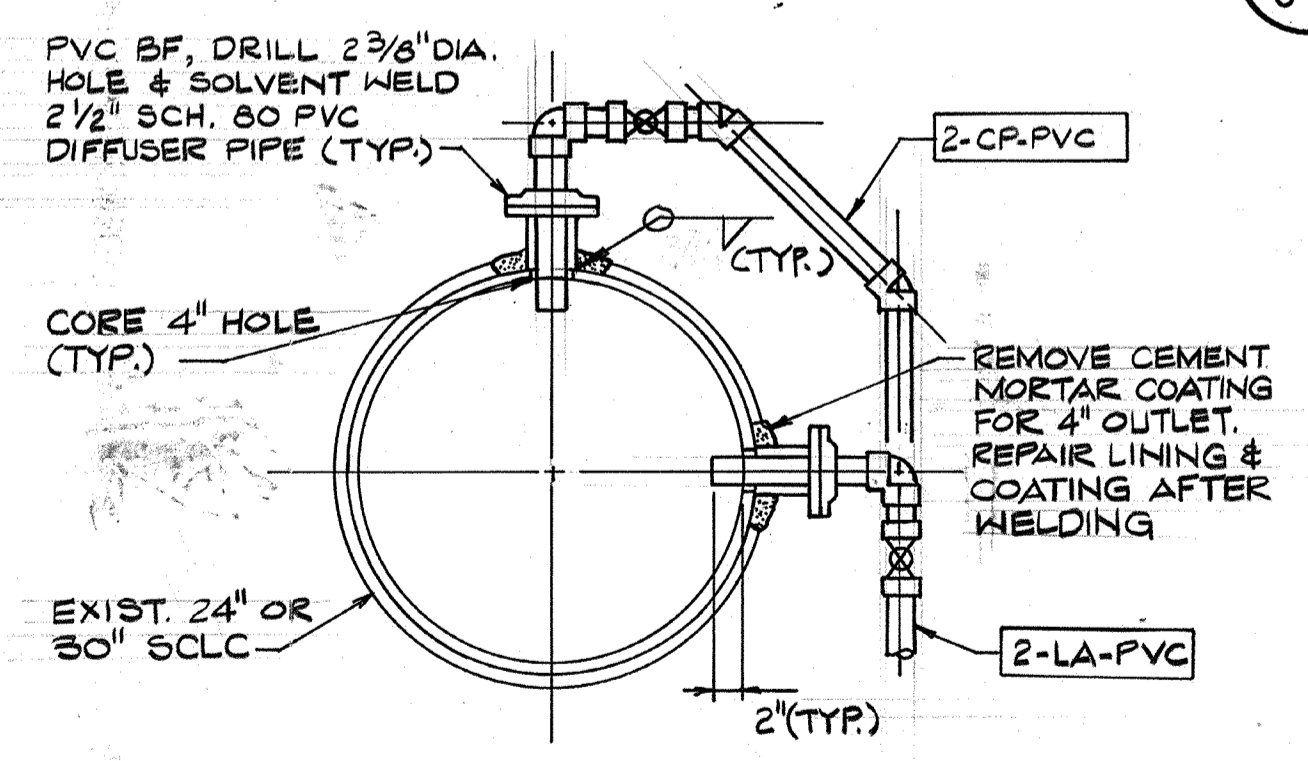


CHEMICAL DIFFUSER (G) C-1
 N.T.S.

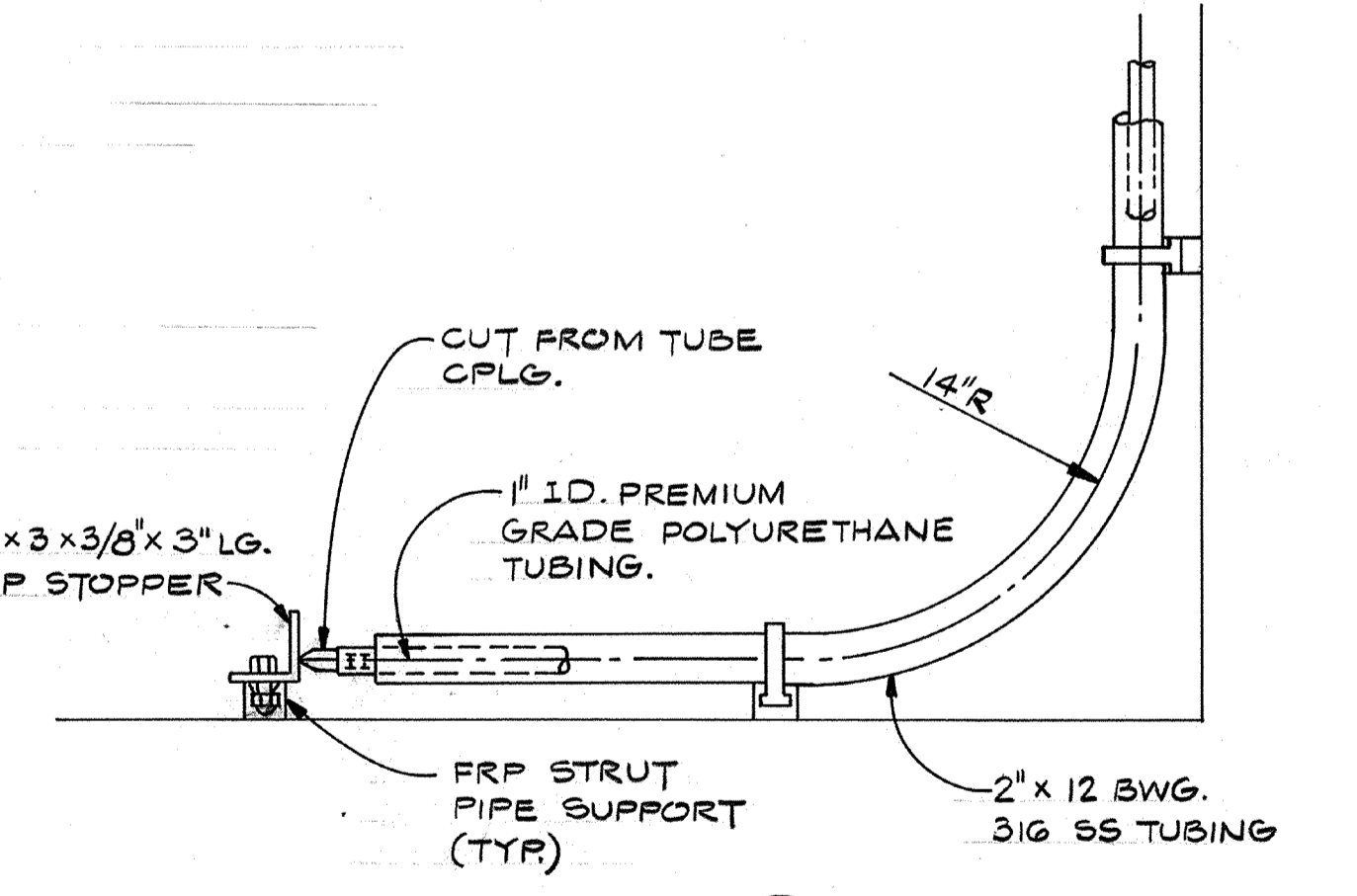
LOCATION	CHEM.	NOM. PIPE DIA.	NO. OF ORIFICES	ORIFICE DIA.
1953 SED. BASIN	CLS	1 1/2"	6	5/16"
	SC	1 1/2"	6	5/16"
	CP	2"	6	3/8"
1976 SED. BASIN	CLS	2"	6	3/8"
	SC	1 1/2"	6	5/16"
	CP	2 1/2"	6	1/2"
NEW SED. BASIN	CLS	2"	6	3/8"
	SC	2"	6	3/8"
	CP	2 1/2"	6	1/2"



REMOVABLE GUARD POST SETTING (H) 5M-1
 N.T.S.



DETAIL (J) 1M-2
 N.T.S.



DETAIL (K) 1M-2
 N.T.S.

AS-BUILT
 PFM 5/10/19

NOTE: ENCASE IN 12" MIN. CONC. ALL AROUND INCLUDING BOTTOM.



Date	Ch'k'd	Revision

Designed by: TLE
 Drawn by: V.M.
 Checked by: MDR
 Approved by: PFM

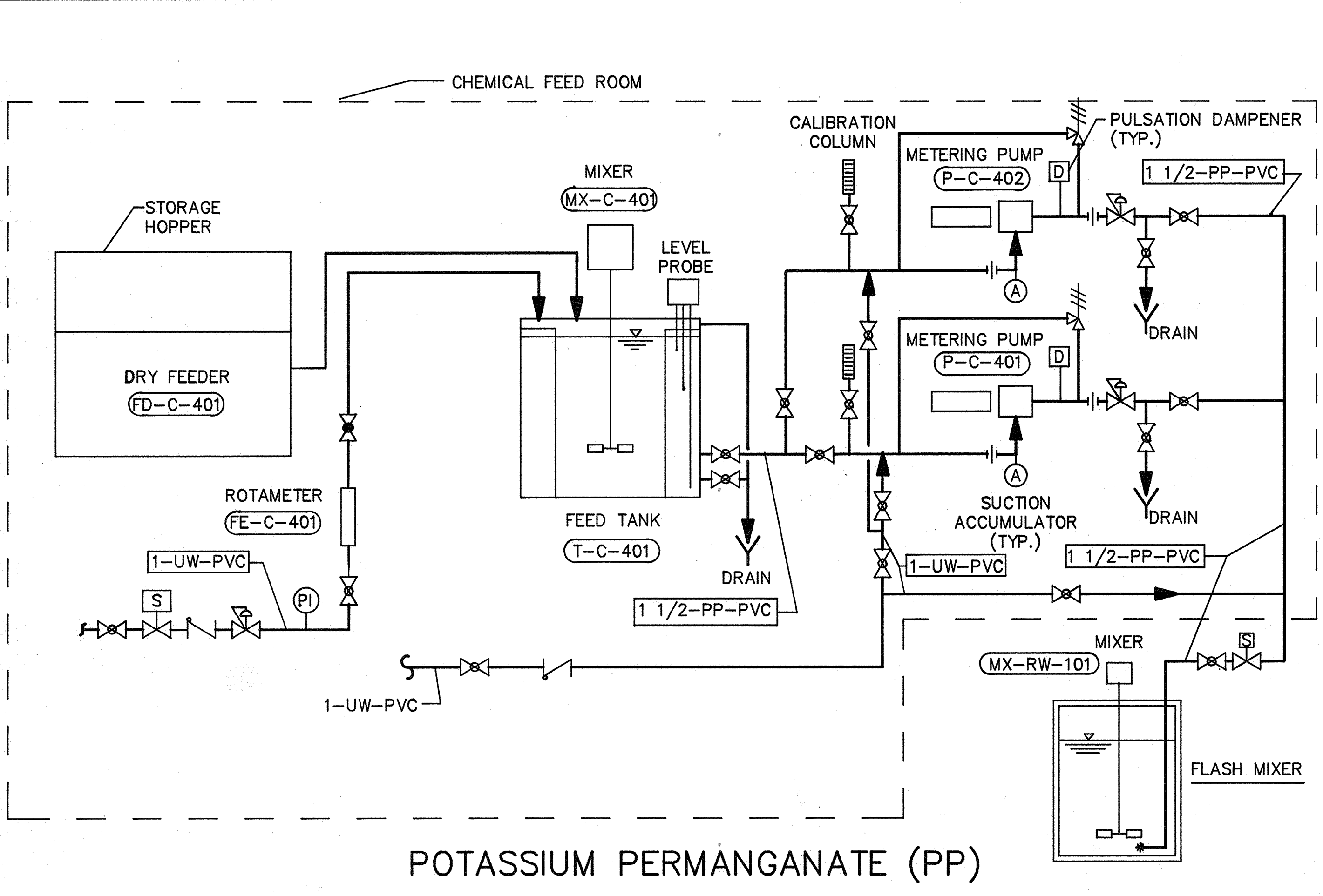
Date: SEPT. 1988
 Scale: AS NOTED

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
MISCELLANEOUS DETAILS

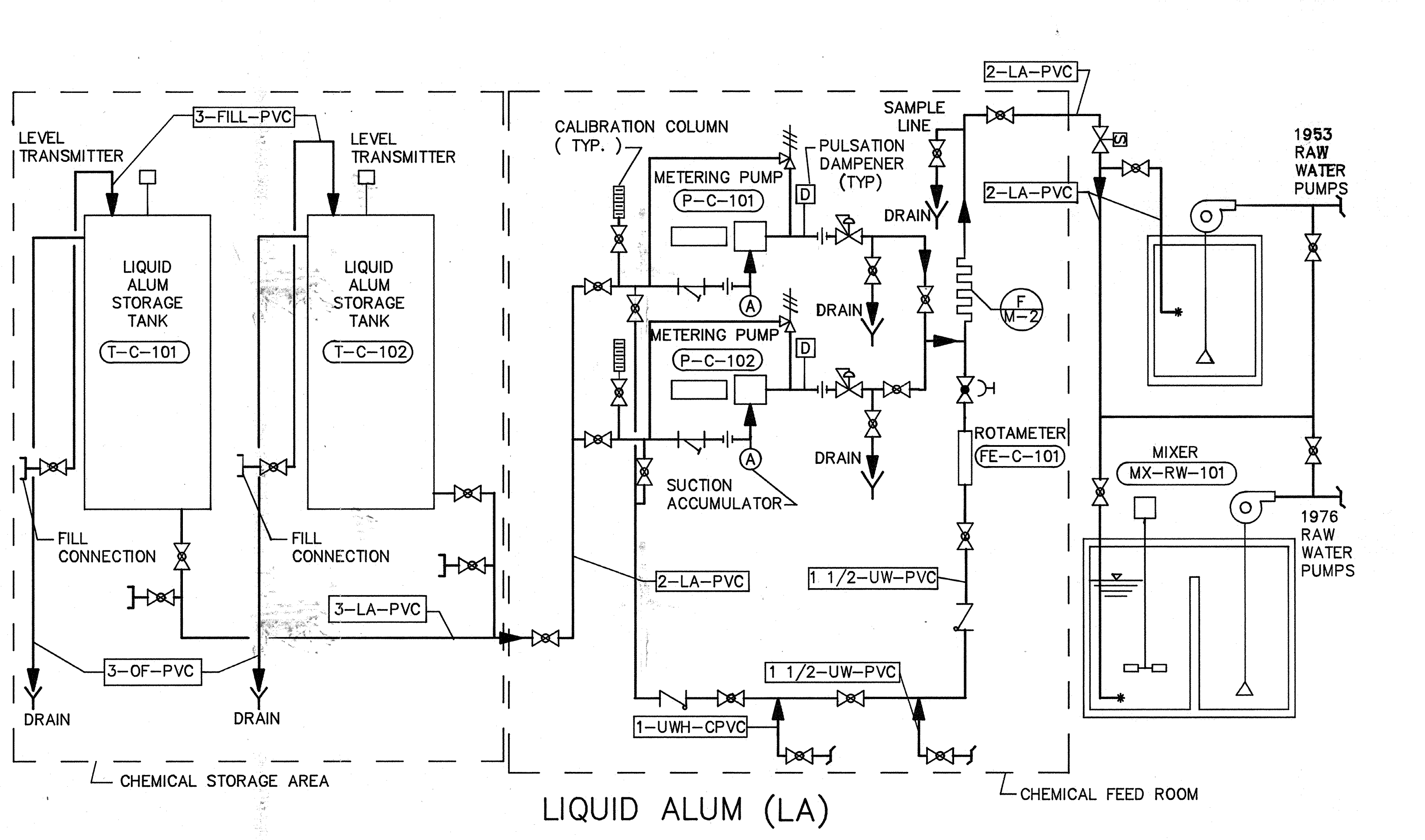
CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners, & management consultants

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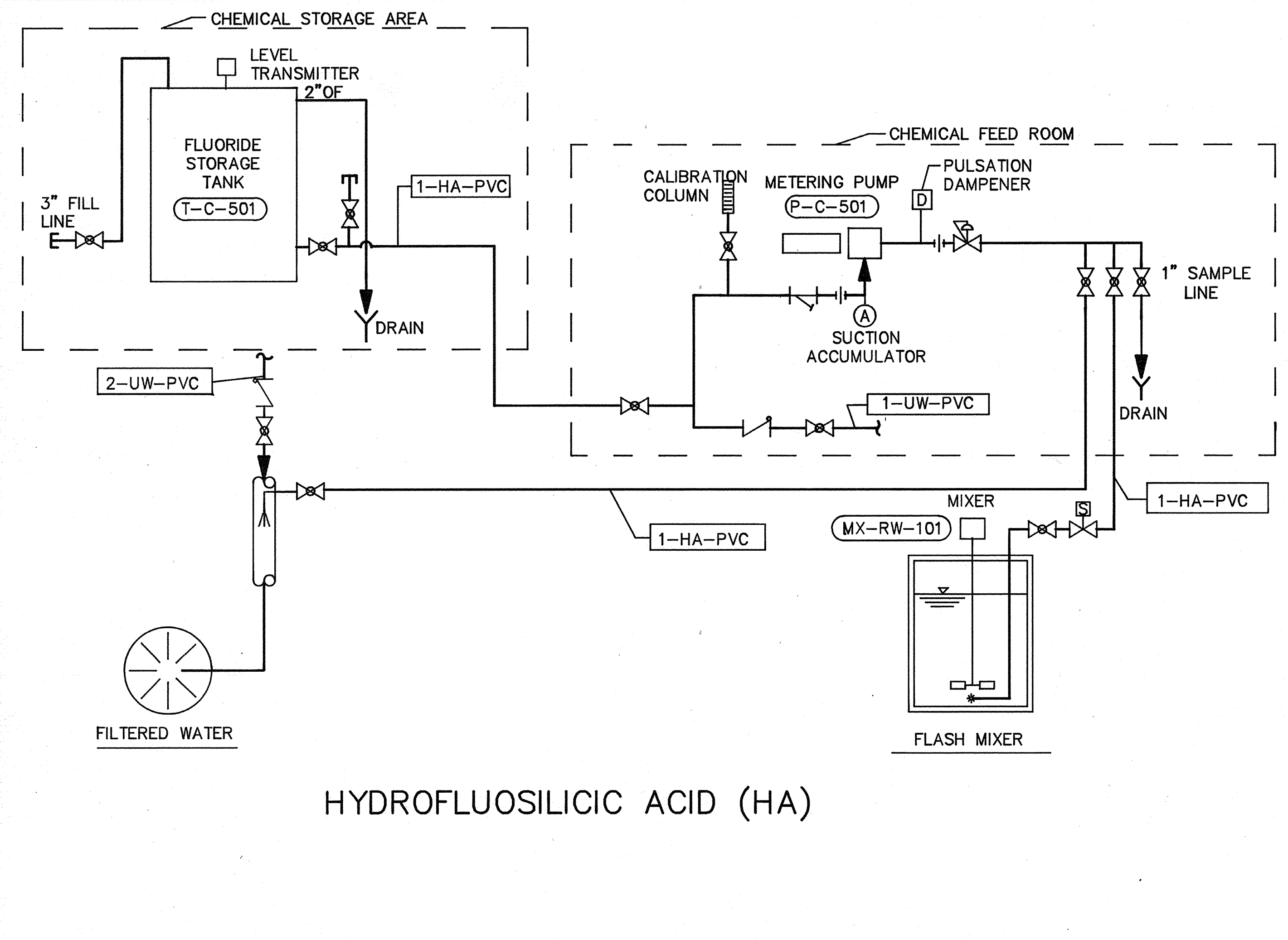
PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



POTASSIUM PERMANGANATE (PP)



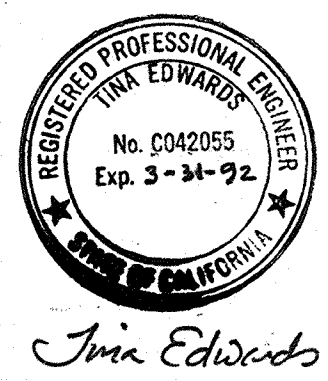
LIQUID ALUM (LA)



HYDROFLUOSILICIC ACID (HA)

AS-BUILT
 Signature: PFM
 Date: 5/10/91

NOTE:
 1. ALL PIPINGS SHOWN ON DWG'S M-4 THRU M-8 ARE NEW UNLESS OTHERWISE NOTED



Date	Ch'k'd	Revision
Designed by: TCE	Drawn by: GM	Date: SEPT., 1988
Checked by: MDR	Approved by: PFM	Scale: NONE

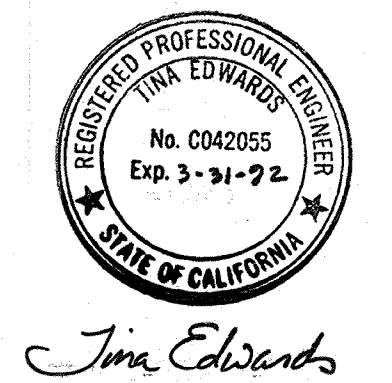
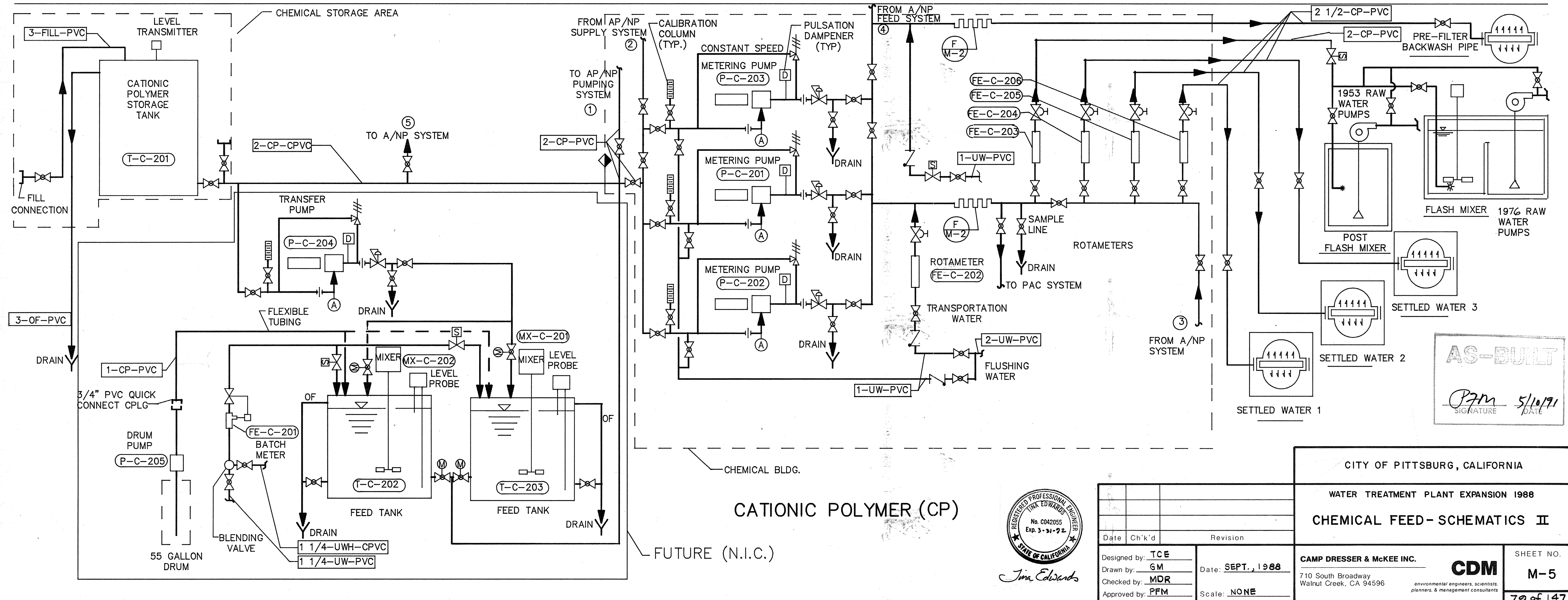
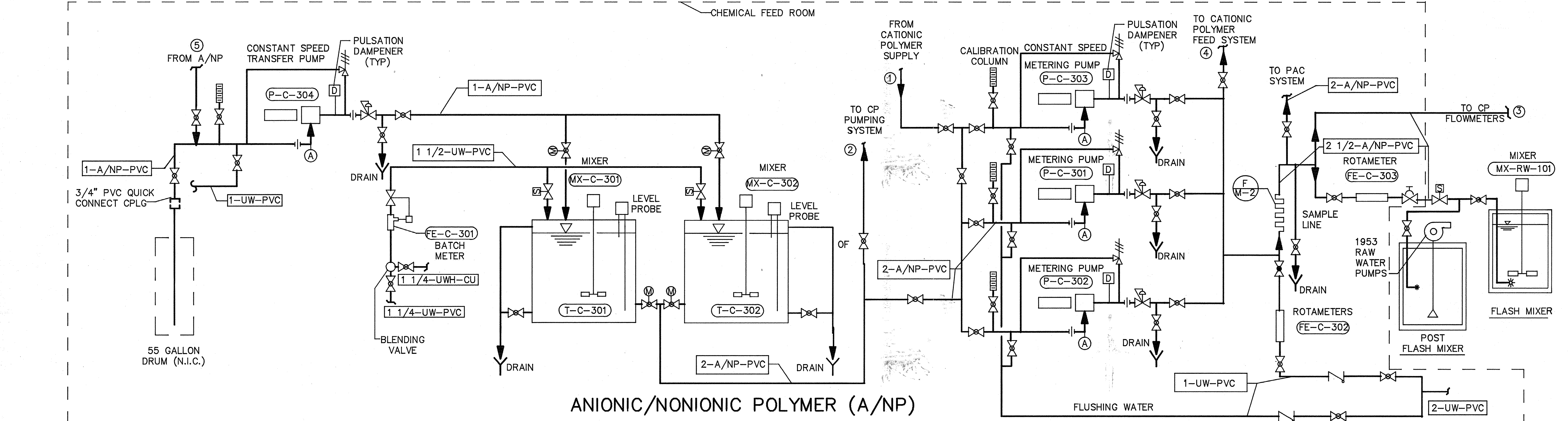
CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 CHEMICAL FEED - SCHEMATICS I

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

CDM
 environmental engineers, scientists,
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SHEET NO. M-4
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PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



Jim Edwards

Date	Ch'k'd	Revision

Designed by: **TCE**
 Drawn by: **GM**
 Checked by: **MDR**
 Approved by: **PFM**

Date: **SEPT., 1988**
 Scale: **NONE**

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

CHEMICAL FEED - SCHEMATICS II

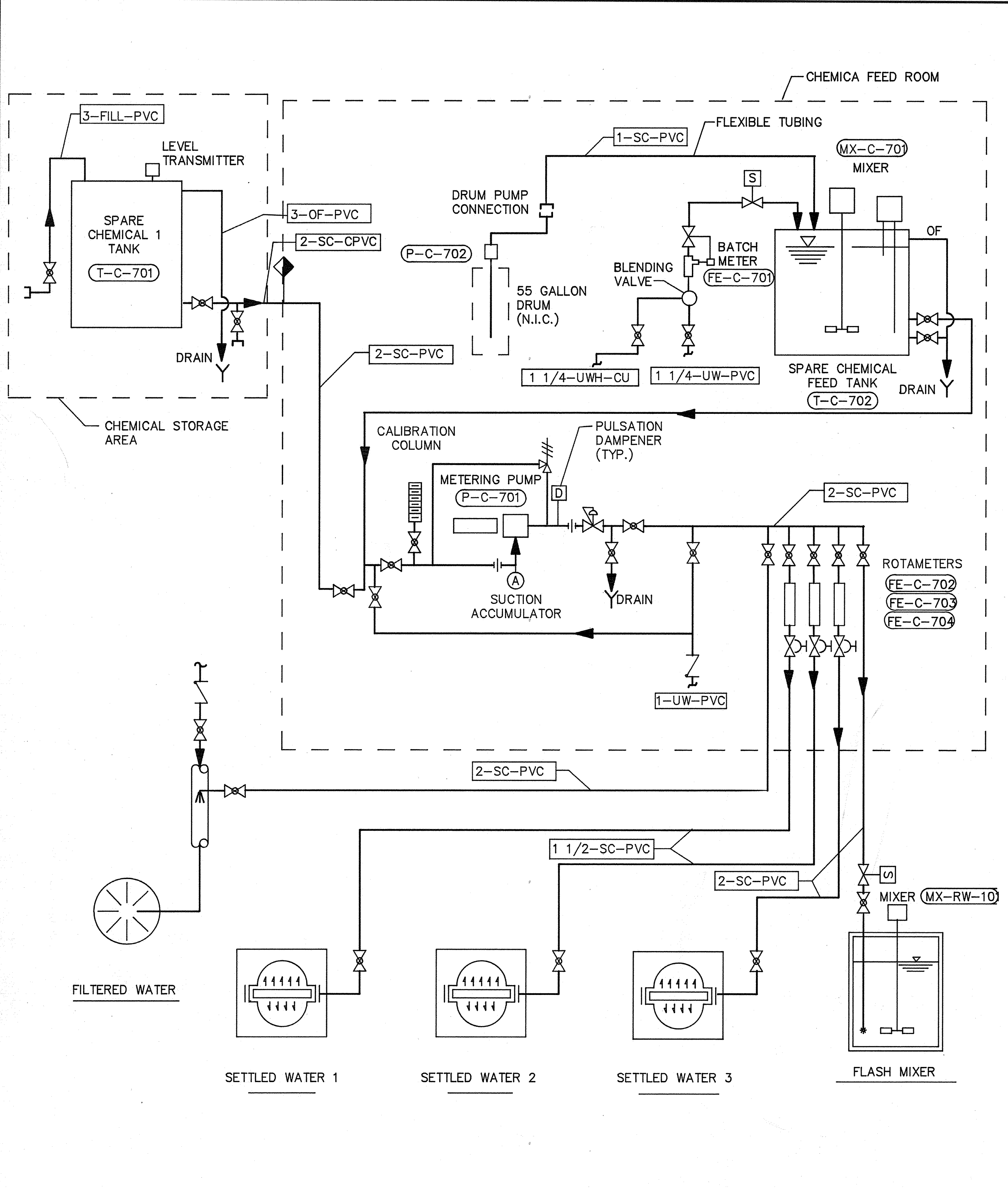
SHEET NO. **M-5**

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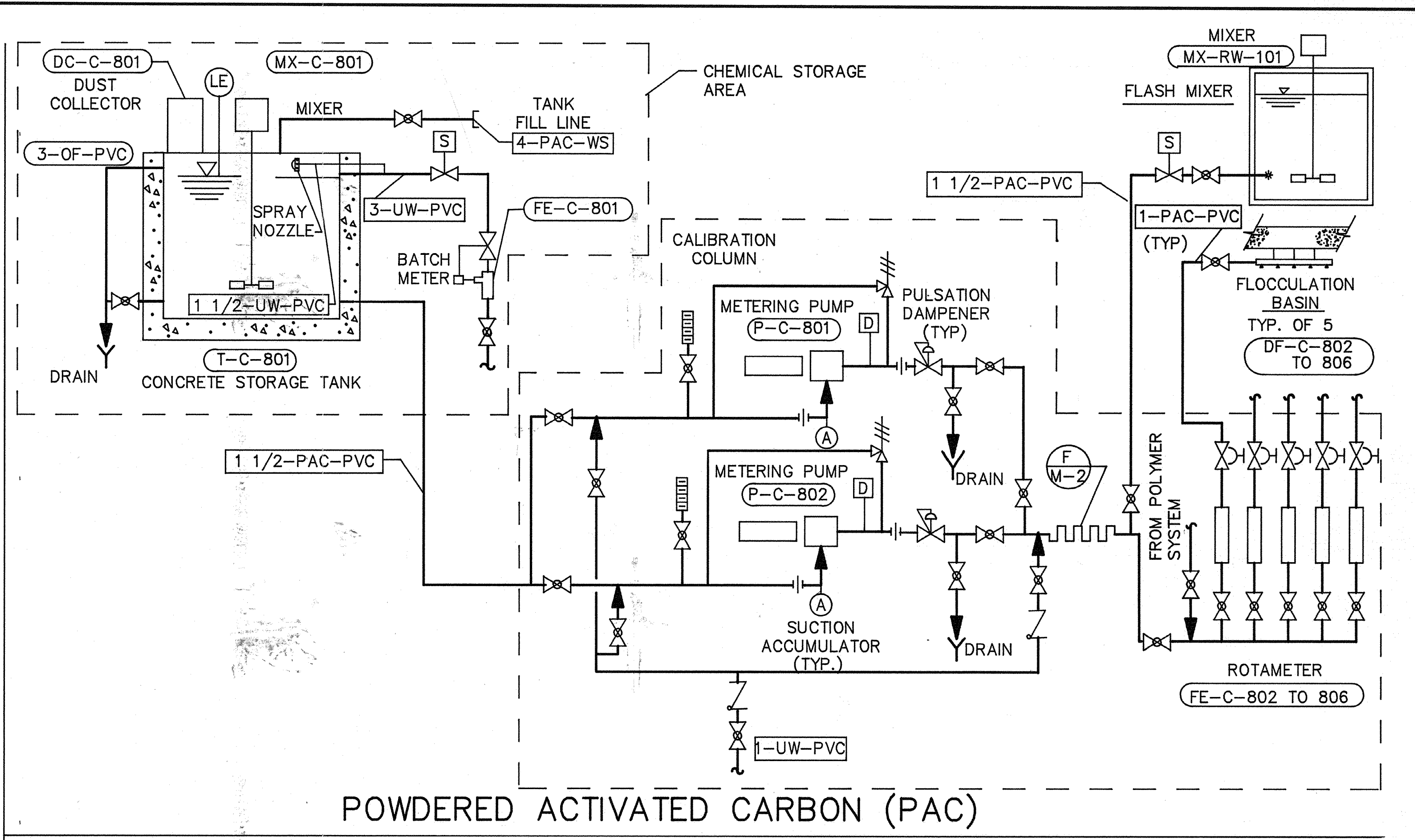
CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
environmental engineers, scientists,
planners, & management consultants

CDM
PFM 5/10/71
SIGNATURE DATE

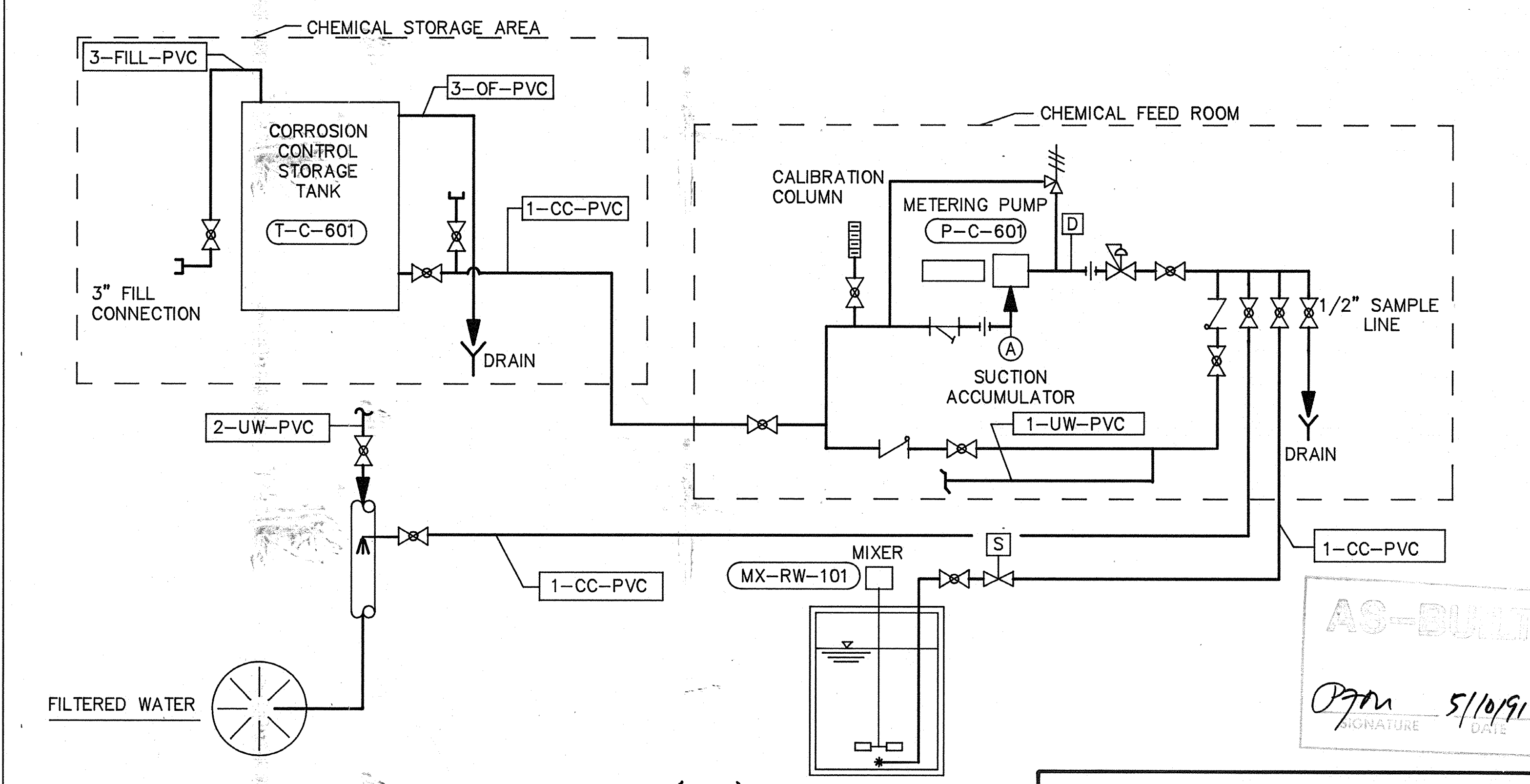
PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
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 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



SPARE CHEMICAL (SC)

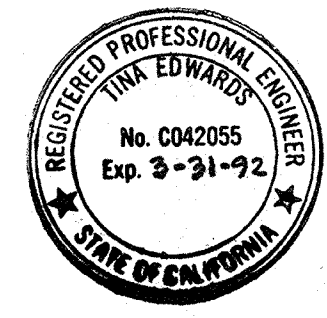


POWDERED ACTIVATED CARBON (PAC)



CORROSION CONTROL (CC)

AS-BUILT
 O'Connell 5/10/91
 SIGNATURE DATE



Tina Edwards

Date	Ch'k'd	Revision

Designed by: TCE
 Drawn by: GM
 Checked by: MDR
 Approved by: PFM

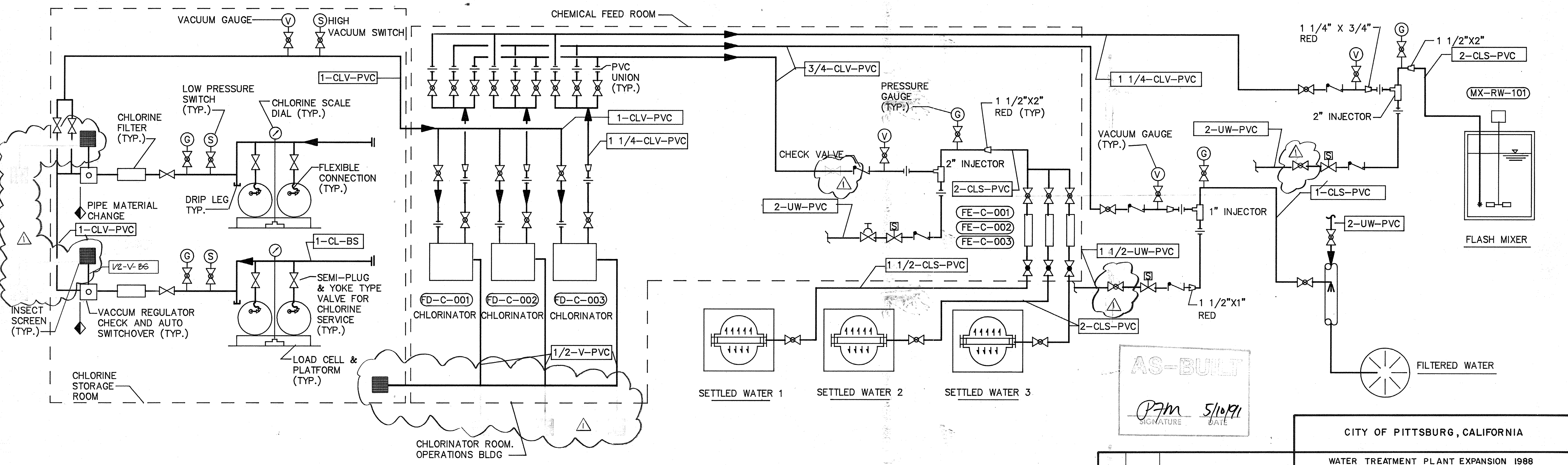
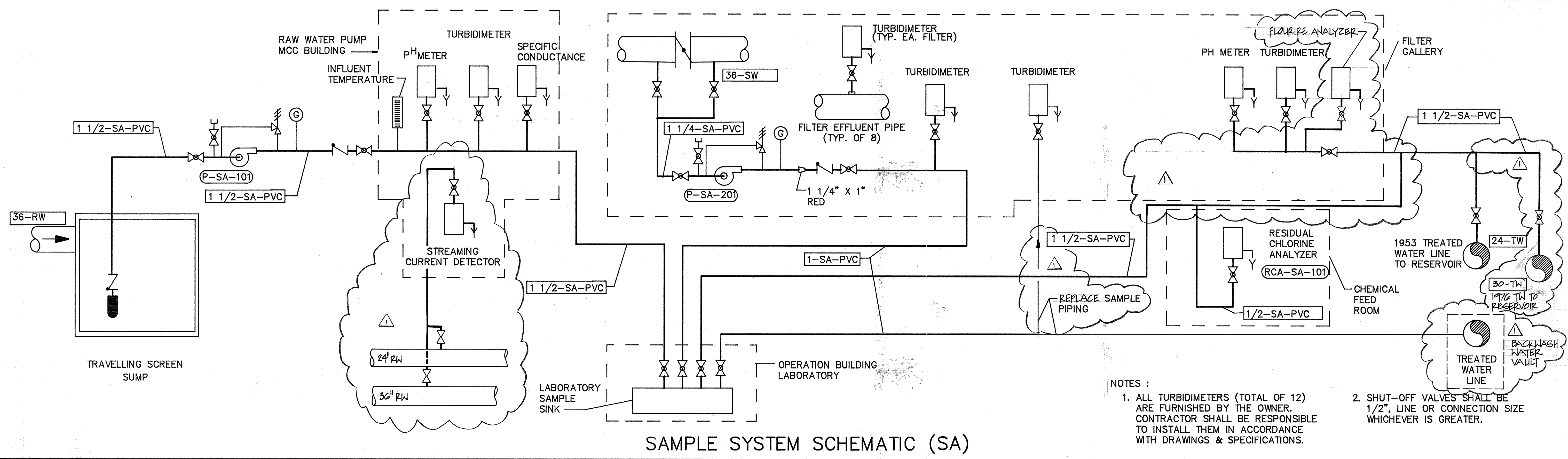
Date: SEPT., 1988
 Scale: NONE

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 CHEMICAL FEED - SCHEMATICS III

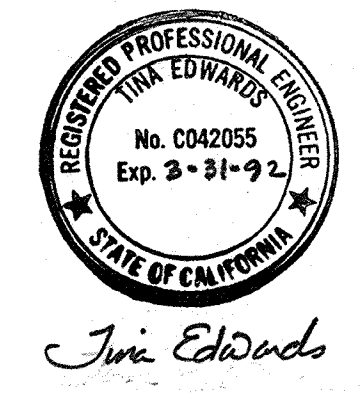
CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners, & management consultants

SHEET NO. M-6
 80 of 147

PROJECT MANAGER Approved by: Date: _____
 PROJECT ENGINEER Approved by: Date: _____
 PLUMBING Approved by: Date: _____
 HVAC Approved by: Date: _____
 INSTRUMENTATION Approved by: Date: _____
 ELECTRICAL Approved by: Date: _____
 STRUCTURAL Approved by: Date: _____
 ARCHITECTURAL Approved by: Date: _____



CHLORINE FEEDING SYSTEM (CL)



4/12/91	REVISOR	REVISION
Date	Ch'k'd	Revision
Designed by: TGE	Date: SEPT., 1988	
Drawn by: GM	Scale: NONE	
Checked by: MDR	Approved by: PFM	

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

CHEMICAL FEED - SCHEMATICS IV

SHEET NO. M-7

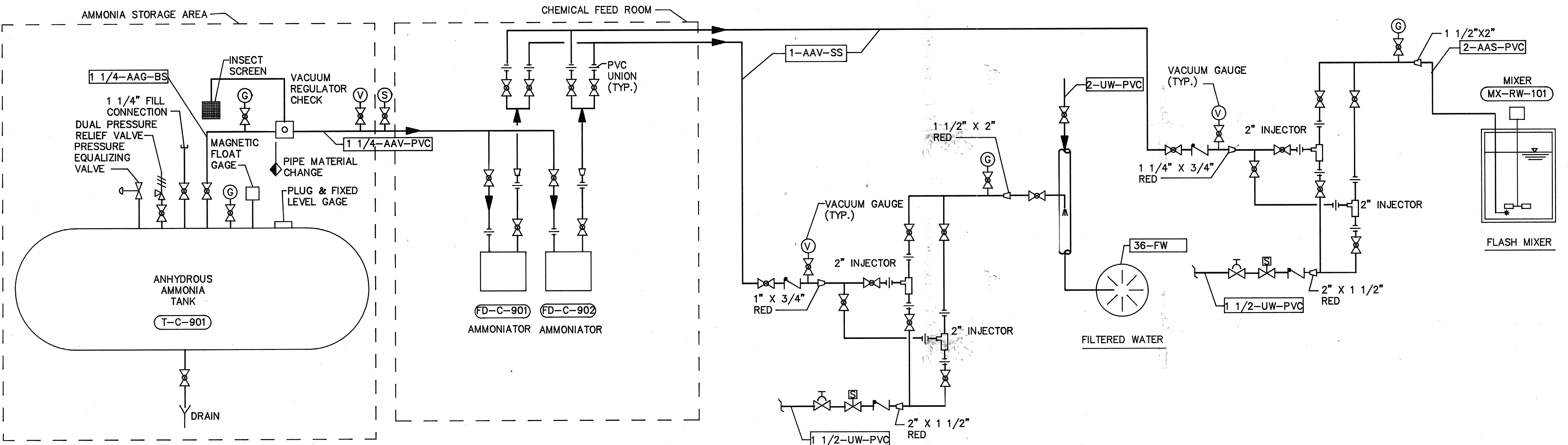
CAMP DRESSER & MCKEE INC.

710 South Broadway
Walnut Creek, CA 94596

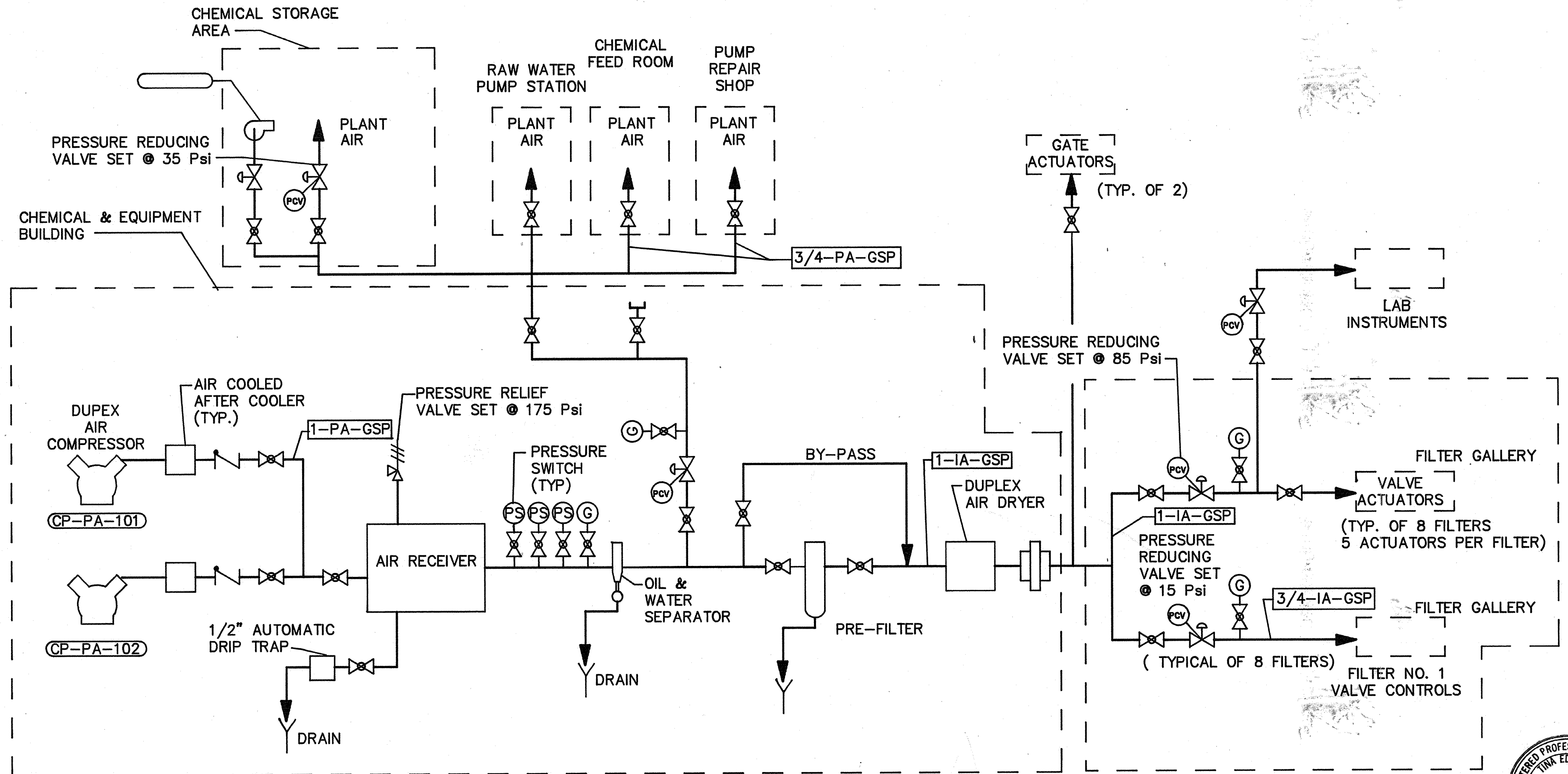
environmental engineers, scientists,
planners, & management consultants

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PROJECT MANAGER Approved by: Date: _____
 PROJECT ENGINEER Approved by: Date: _____
 PLUMBING Approved by: Date: _____
 HVAC Approved by: Date: _____
 INSTRUMENTATION Approved by: Date: _____
 ELECTRICAL Approved by: Date: _____
 STRUCTURAL Approved by: Date: _____
 ARCHITECTURAL Approved by: Date: _____

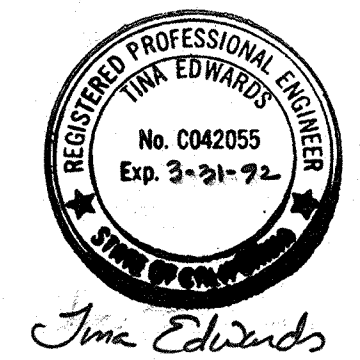


ANHYDROUS AMMONIA (AA)



PLANT & INSTRUMENT AIR (PA & IA)

NOTE :
 SEE SPECIFICATIONS SECTION 15100
 FOR ADDITIONAL REQUIREMENTS.



AS-BUILT
 Signature: PFM 5/10/91
 DATE

Date	Ch'k'd	Revision

Designed by: TCE
 Drawn by: GM
 Checked by: MDR
 Approved by: PFM

Date: SEPT., 1988
 Scale: NONE

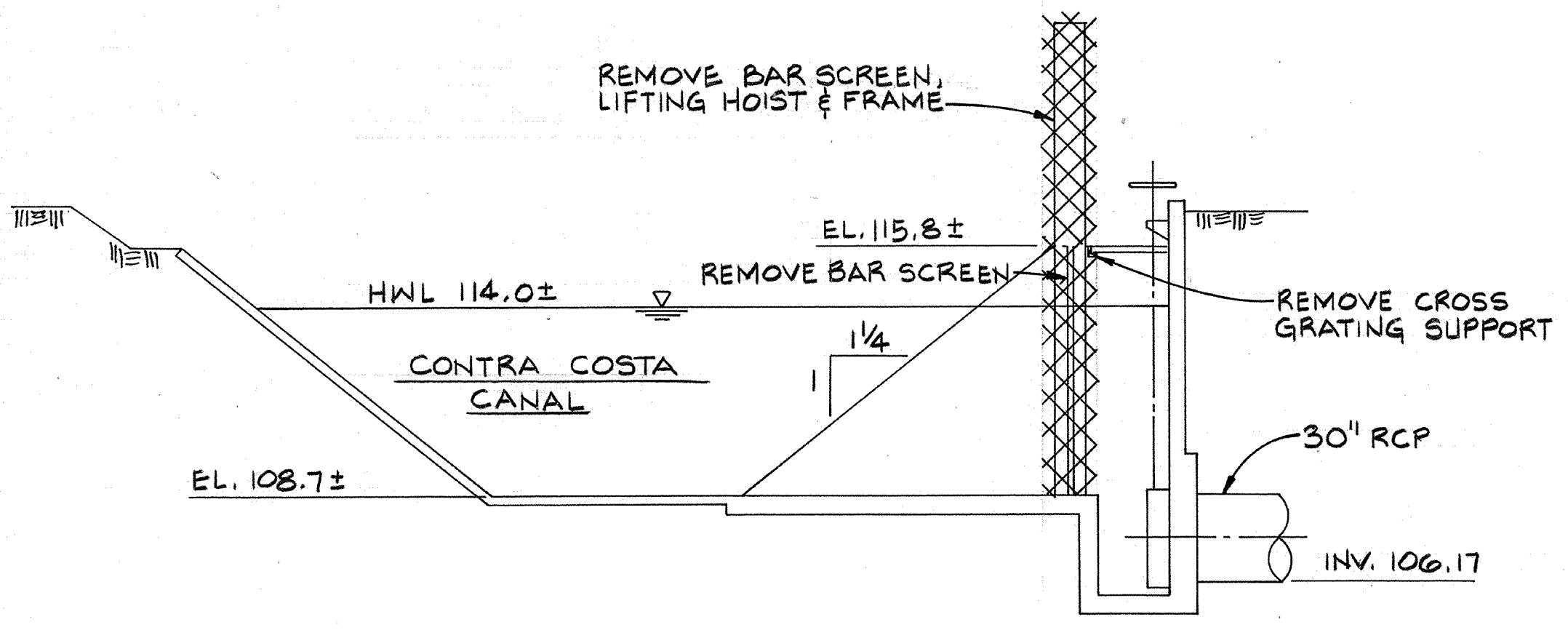
CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
CHEMICAL FEED - SCHEMATICS V

CAMP DRESSER & McKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
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 planners, & management consultants

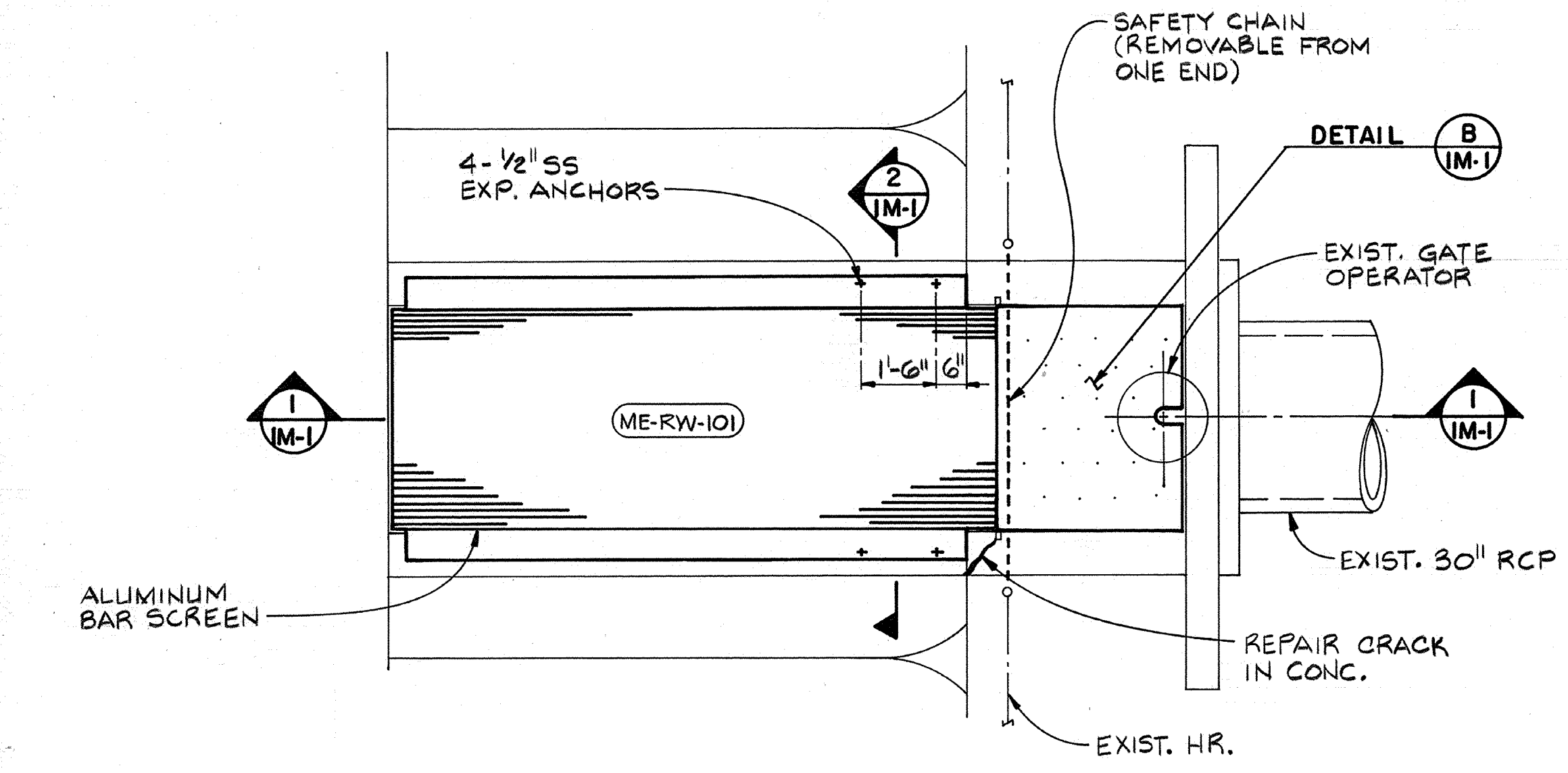
SHEET NO.
M-8

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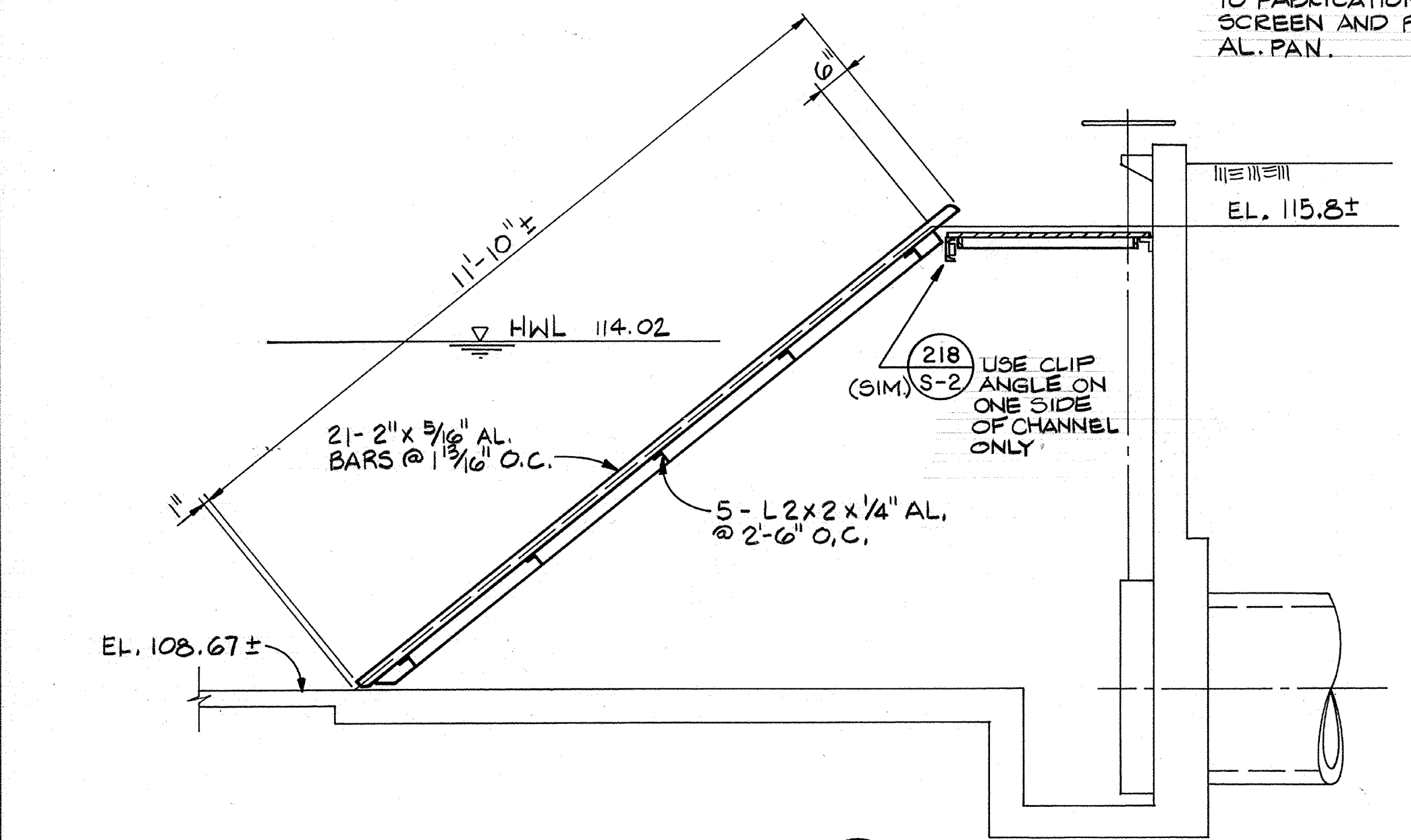
PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



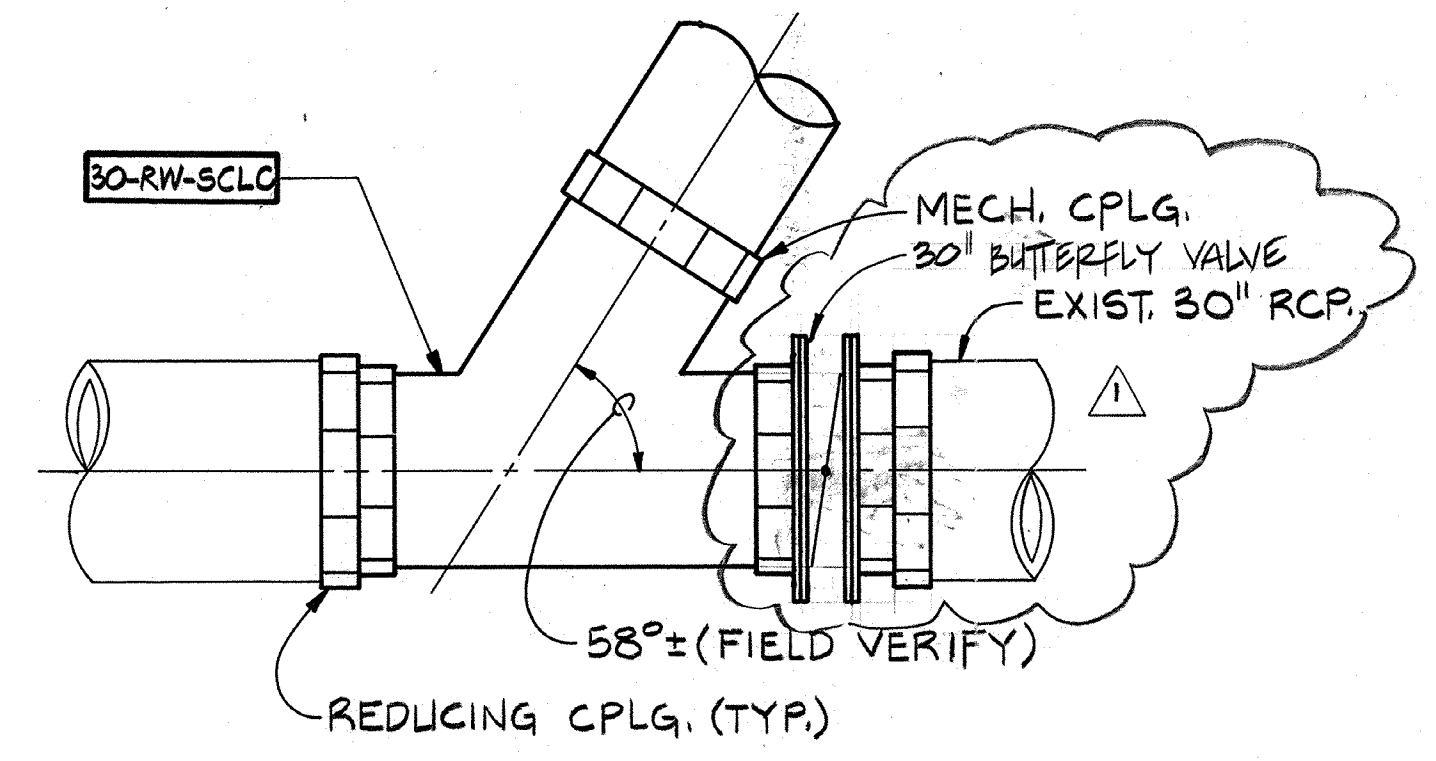
EXISTING INTAKE STRUCTURE SECTION
SCALE: 1/4" = 1'-0"



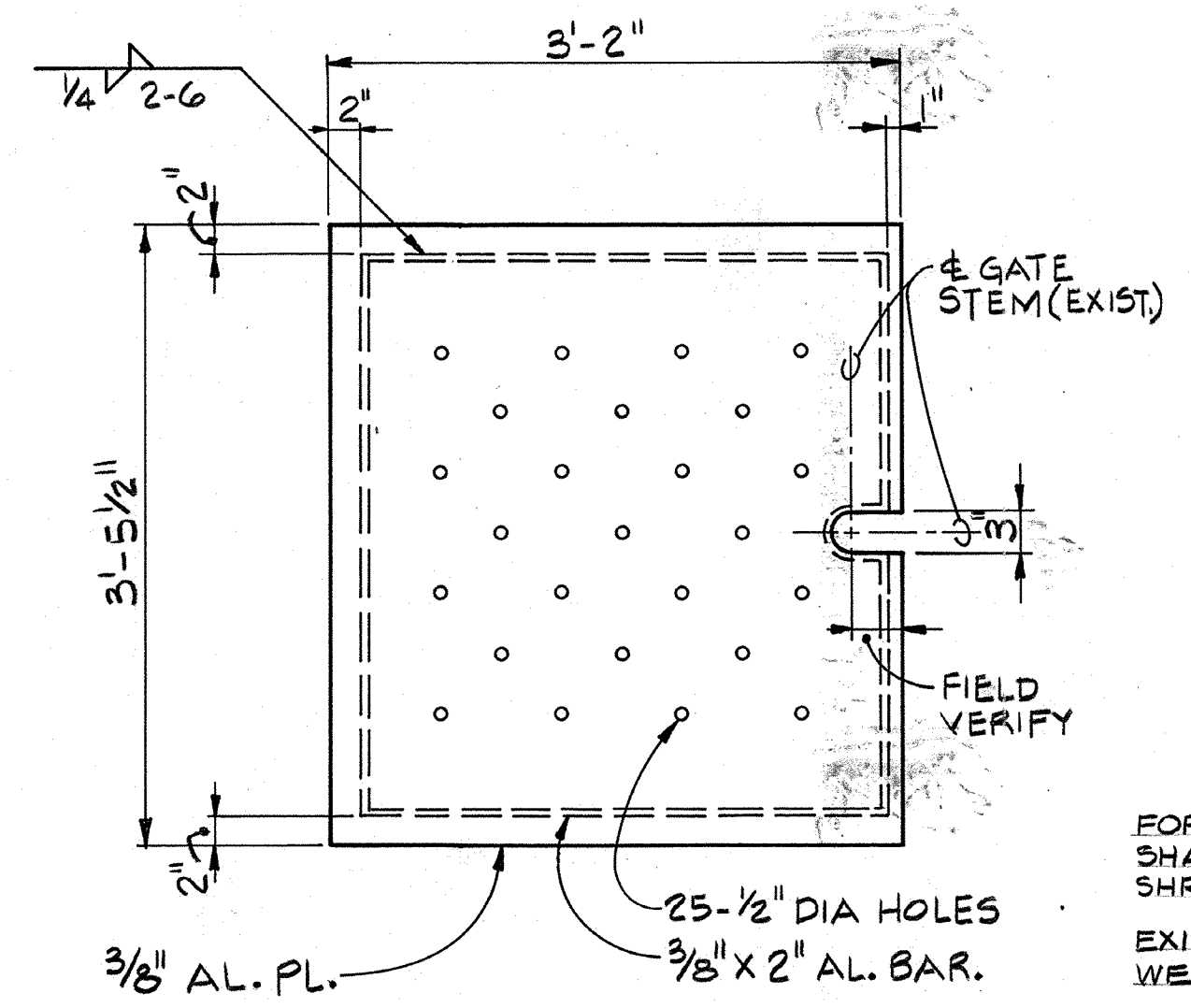
RAW WATER INTAKE MODIFICATION PLAN
SCALE: 1/2" = 1'-0"



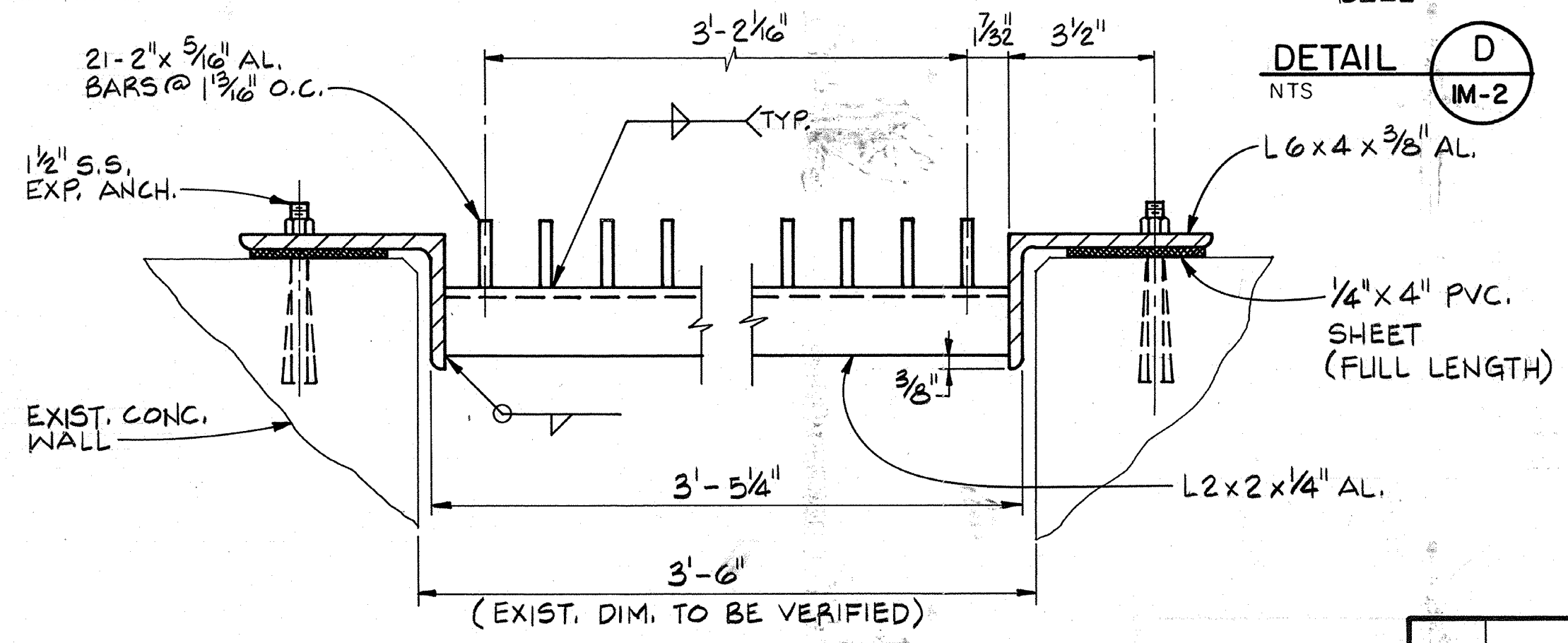
SECTION 1
SCALE: 1/2" = 1'-0"



DETAIL A
N.T.S.

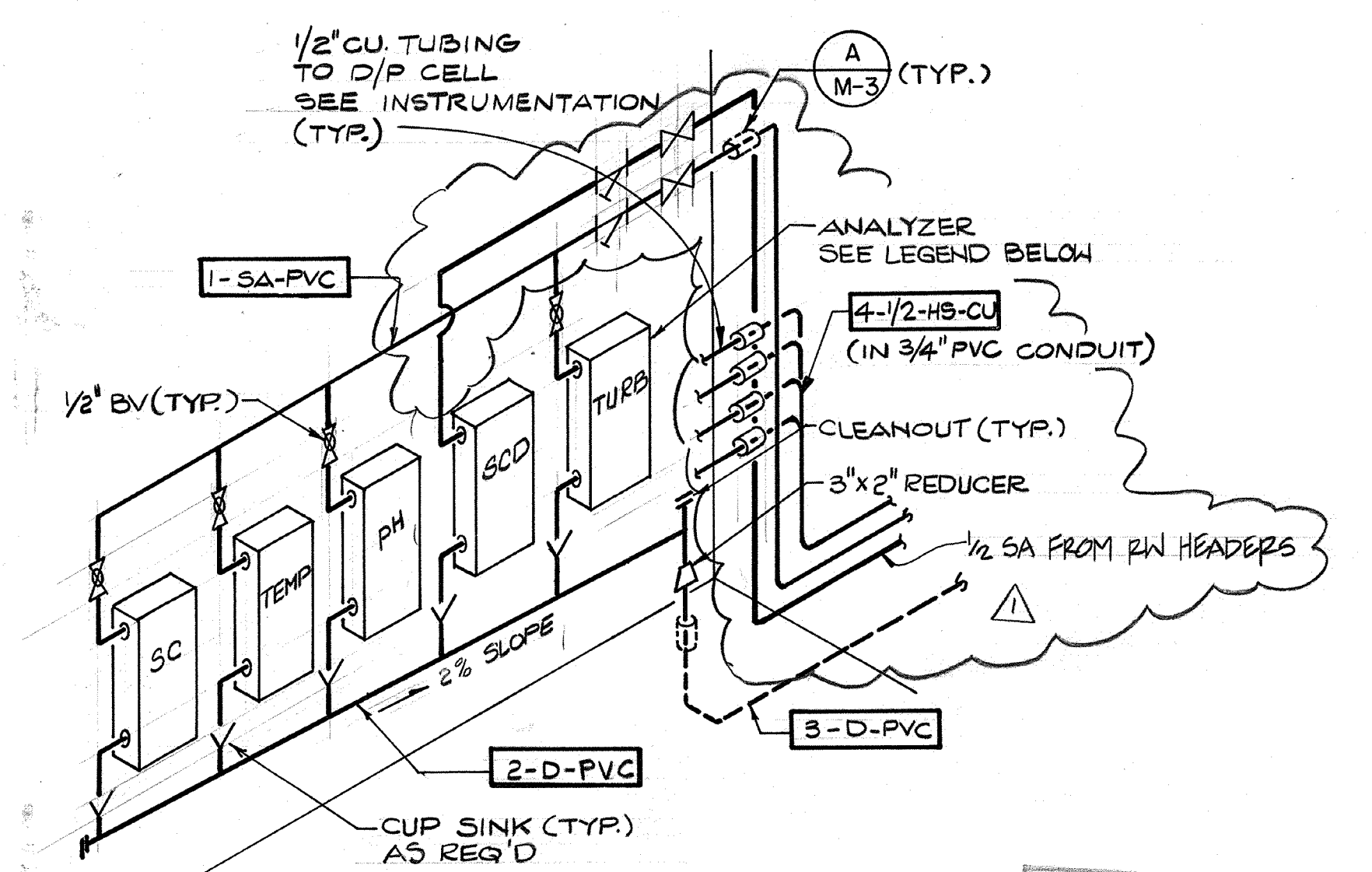


DETAIL B
SCALE: 1" = 1'-0"



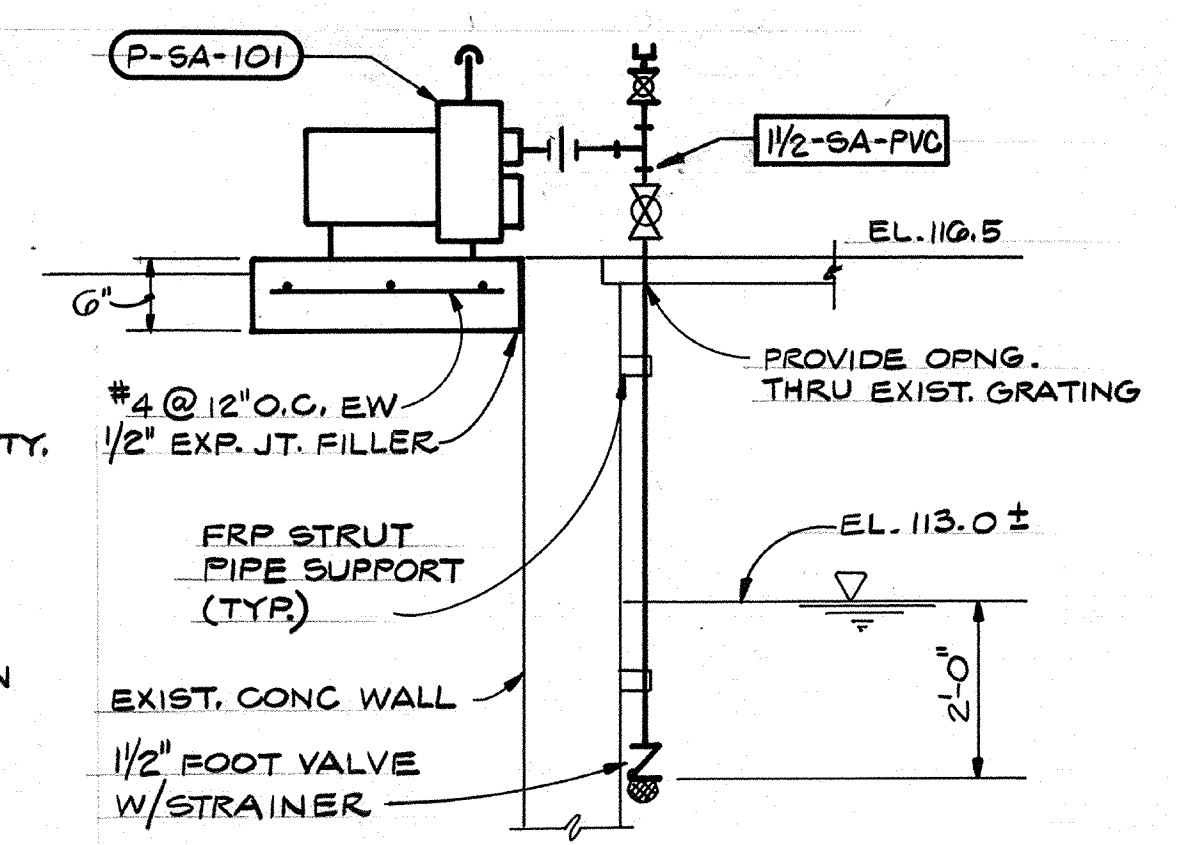
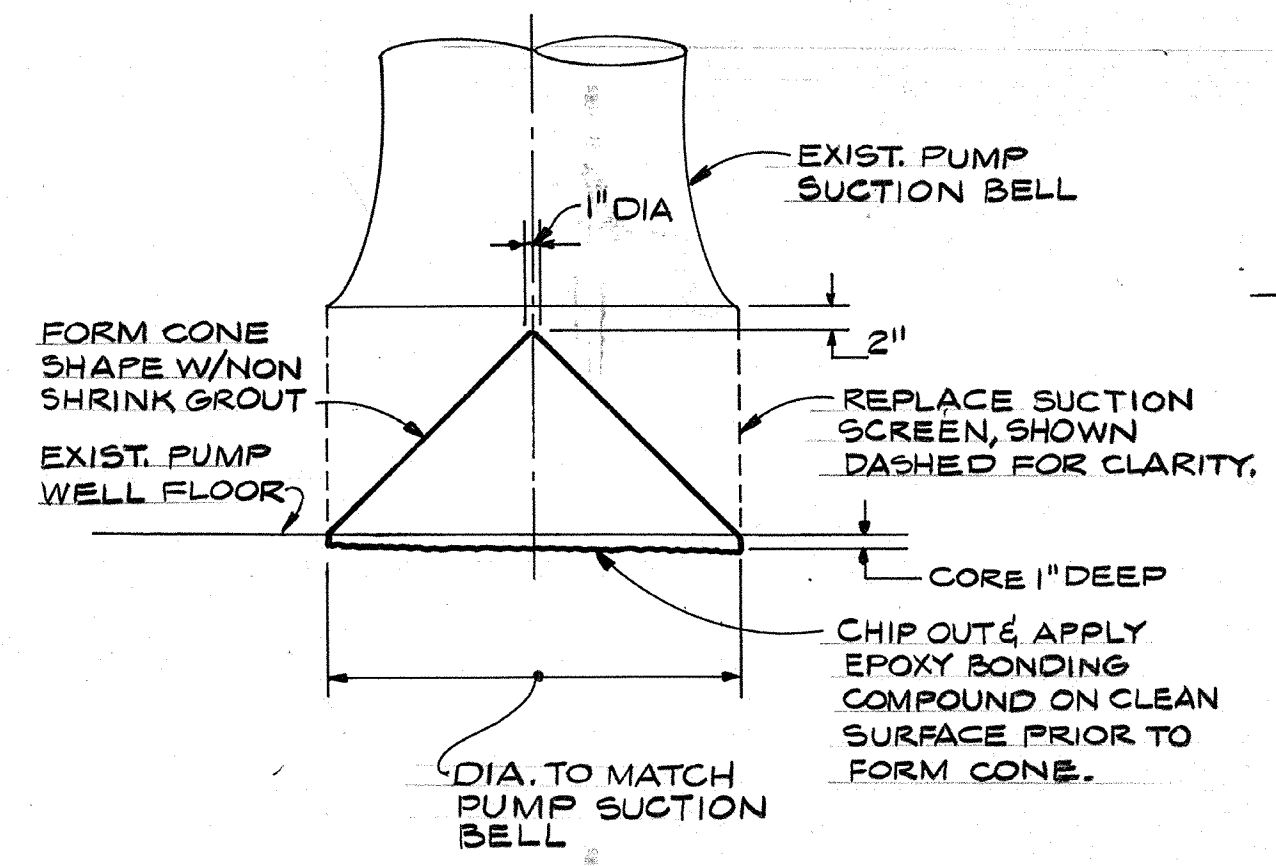
SECTION 2
SCALE: 3" = 1'-0"

DETAIL D
N.T.S.

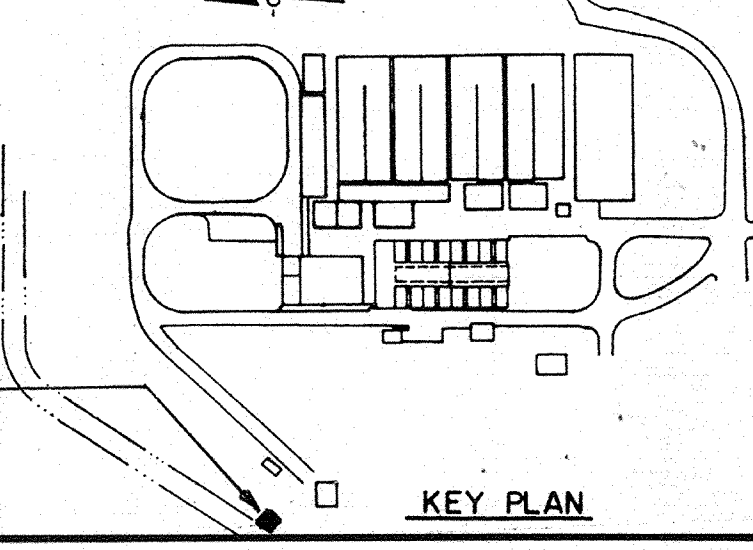


- TURB - TURBIDITY METER (TU-SA-10)
- SC - SPECIFIC CONDUCTANCE (SC-SA-10)
- TEMP - TEMPERATURE PROBE
- PH - POTENTIAL OF HYDROGEN PROBE (PH-SA-10)
- SCD - STREAMING CURRENT DETECTOR (SCD-SA-10)

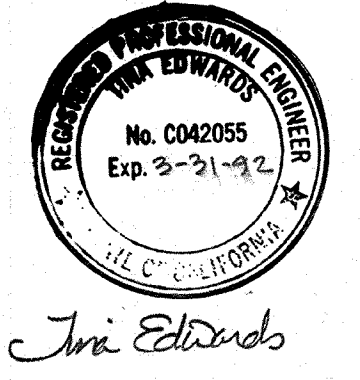
RAW WATER PUMP STATION MCC BLDG. ANALYZERS ARRANGEMENT



SECTION 3
SCALE: 1/2" = 1'-0"



AS-BUILT
Signature: *Bm* 5/10/91
DATE



Date	Ch'kd	Revision
4/12/91		REVISIED FOR THE RECORD
Designed by:	TCE	Date: SEPT 1988
Drawn by:	FD	Checked by: MDR
Approved by:	PFM	Scale: AS NOTED

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
RAW WATER INTAKE MODIFICATIONS
 PLAN, SECTIONS & DETAILS
 SHEET NO. **1M-1**
 CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners, & management consultants
 83 of 147

111335

PROJECT MANAGER: Approved by: _____ Date: _____

PROJECT ENGINEER: Approved by: _____ Date: _____

PLUMBING: Approved by: _____ Date: _____

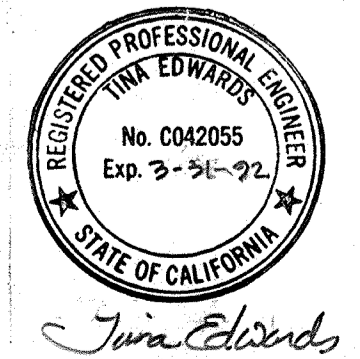
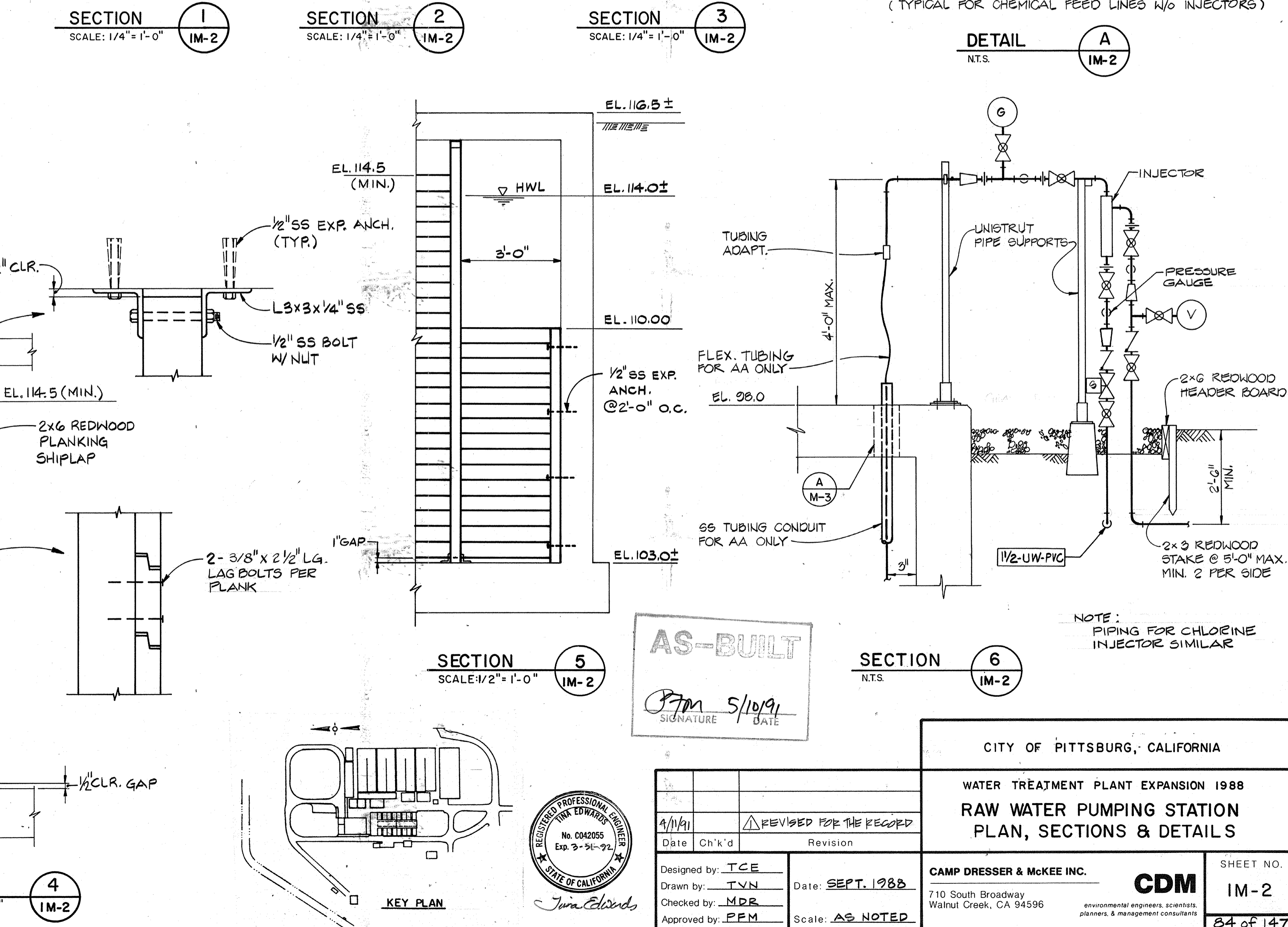
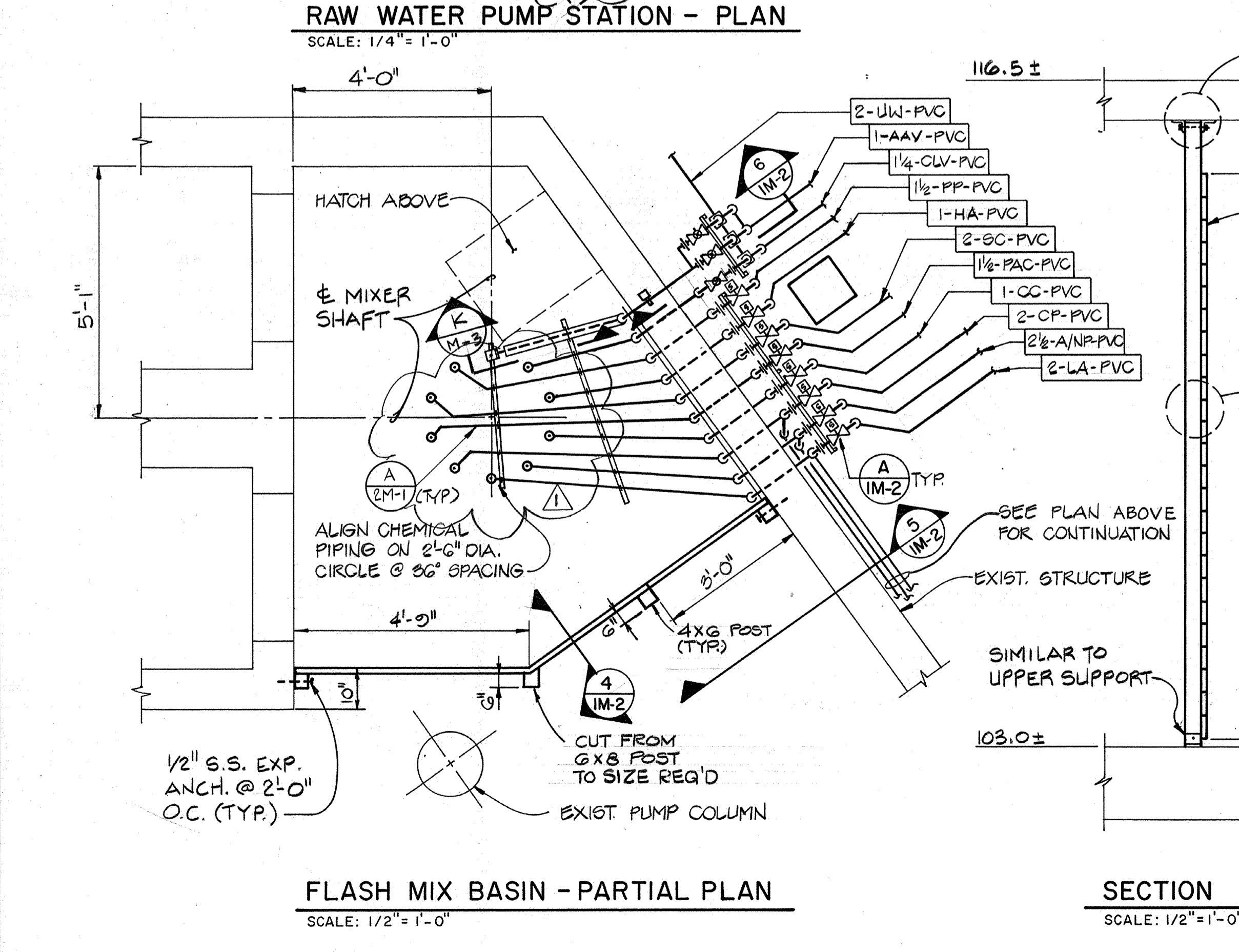
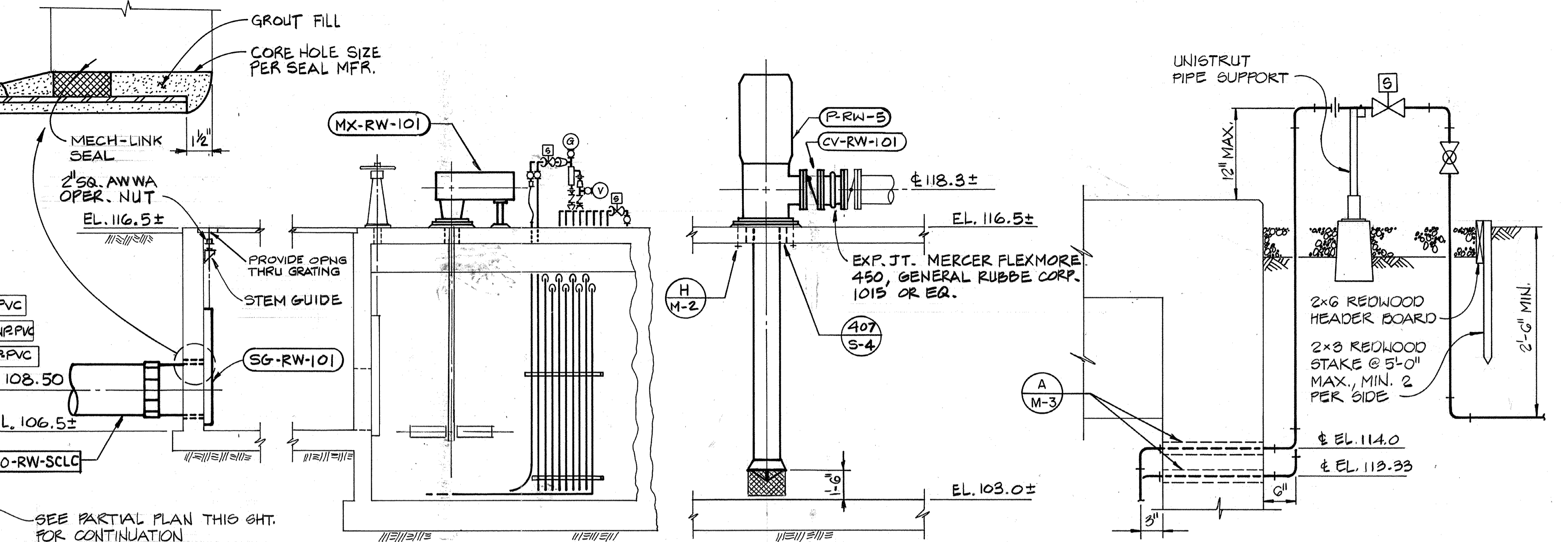
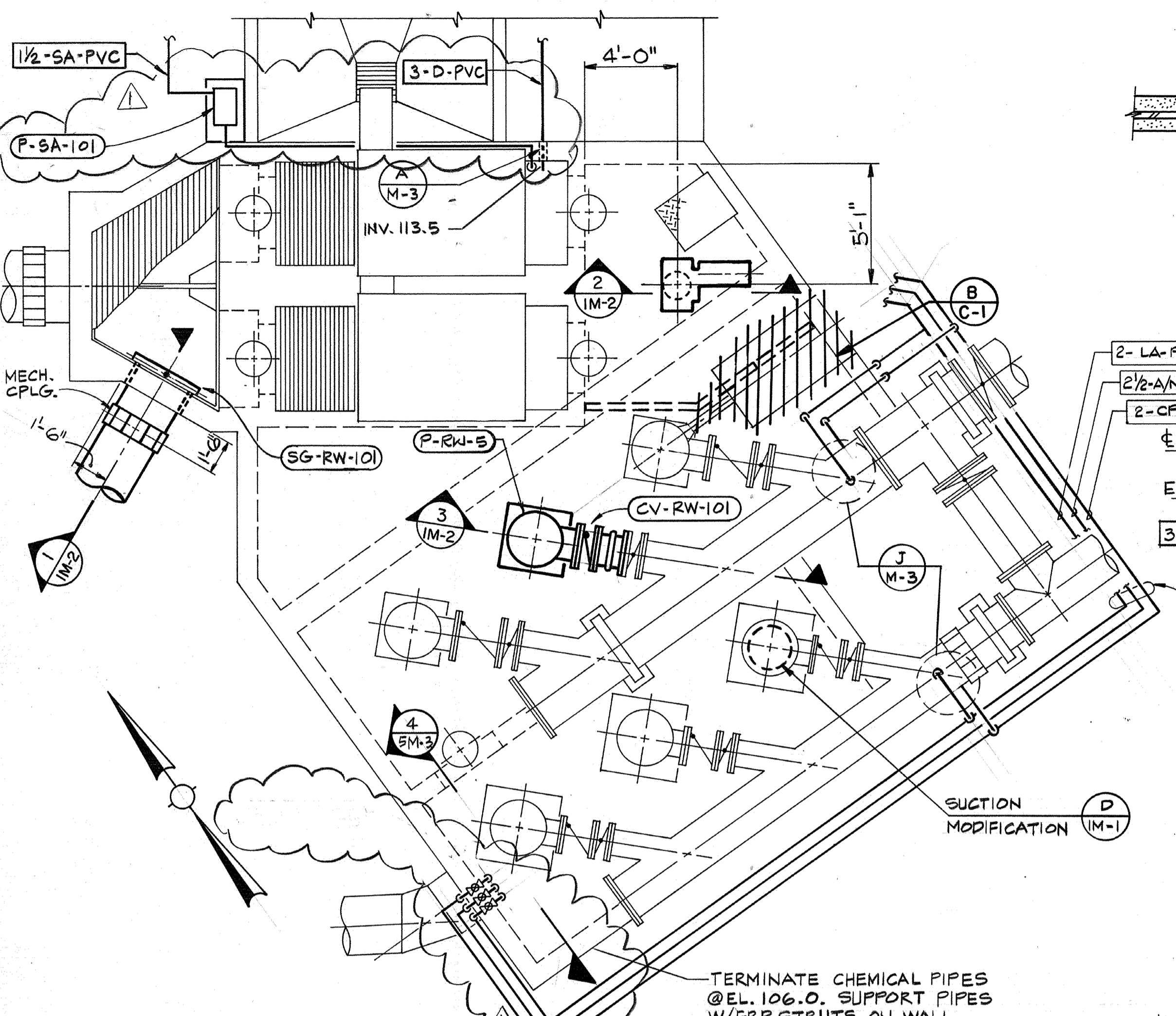
HVAC: Approved by: _____ Date: _____

INSTRUMENTATION: Approved by: _____ Date: _____

ELECTRICAL: Approved by: _____ Date: _____

STRUCTURAL: Approved by: _____ Date: _____

ARCHITECTURAL: Approved by: _____ Date: _____



Designed by: TCE	Date: SEPT. 1988
Drawn by: TVN	
Checked by: MDR	
Approved by: PFM	
Scale: AS NOTED	

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

RAW WATER PUMPING STATION PLAN, SECTIONS & DETAILS

CAMP DRESSER & MCKEE INC.

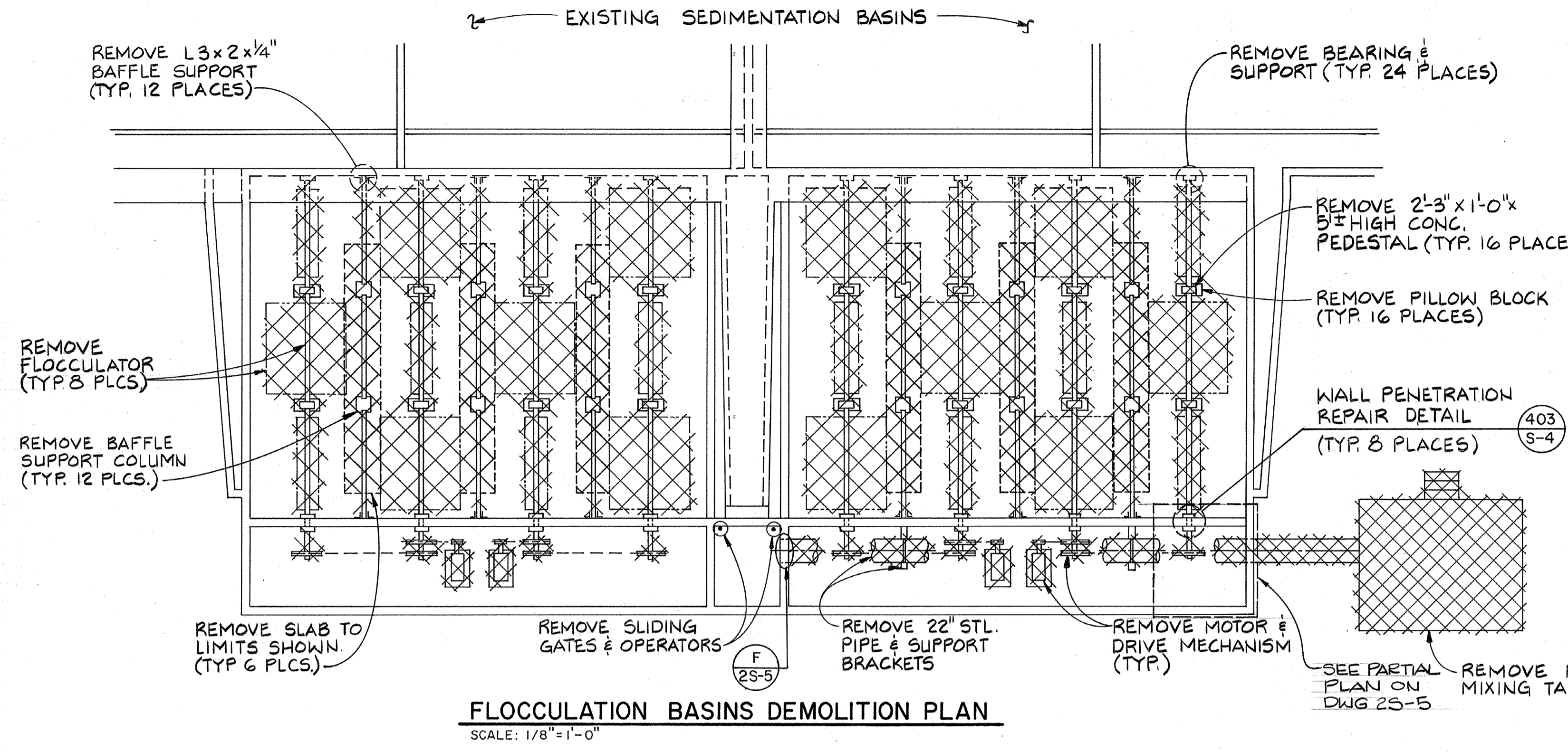
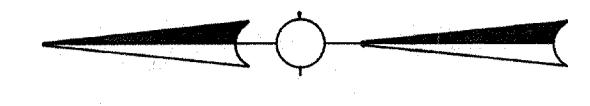
710 South Broadway
Walnut Creek, CA 94596

environmental engineers, scientists,
planners, & management consultants

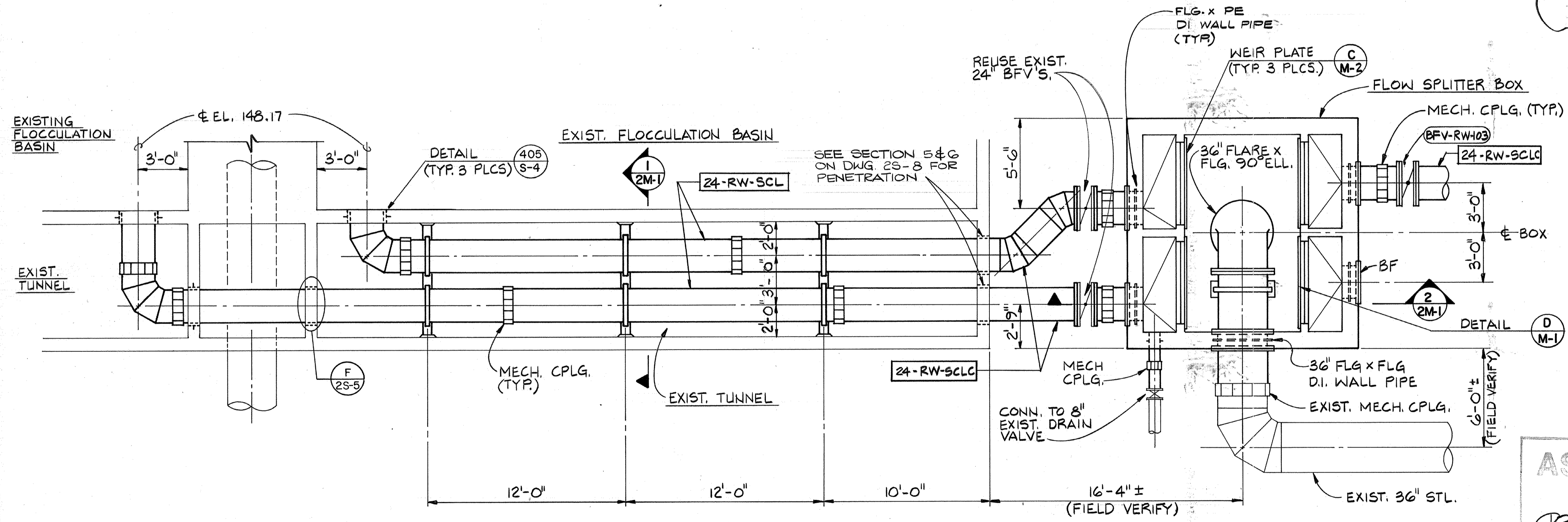
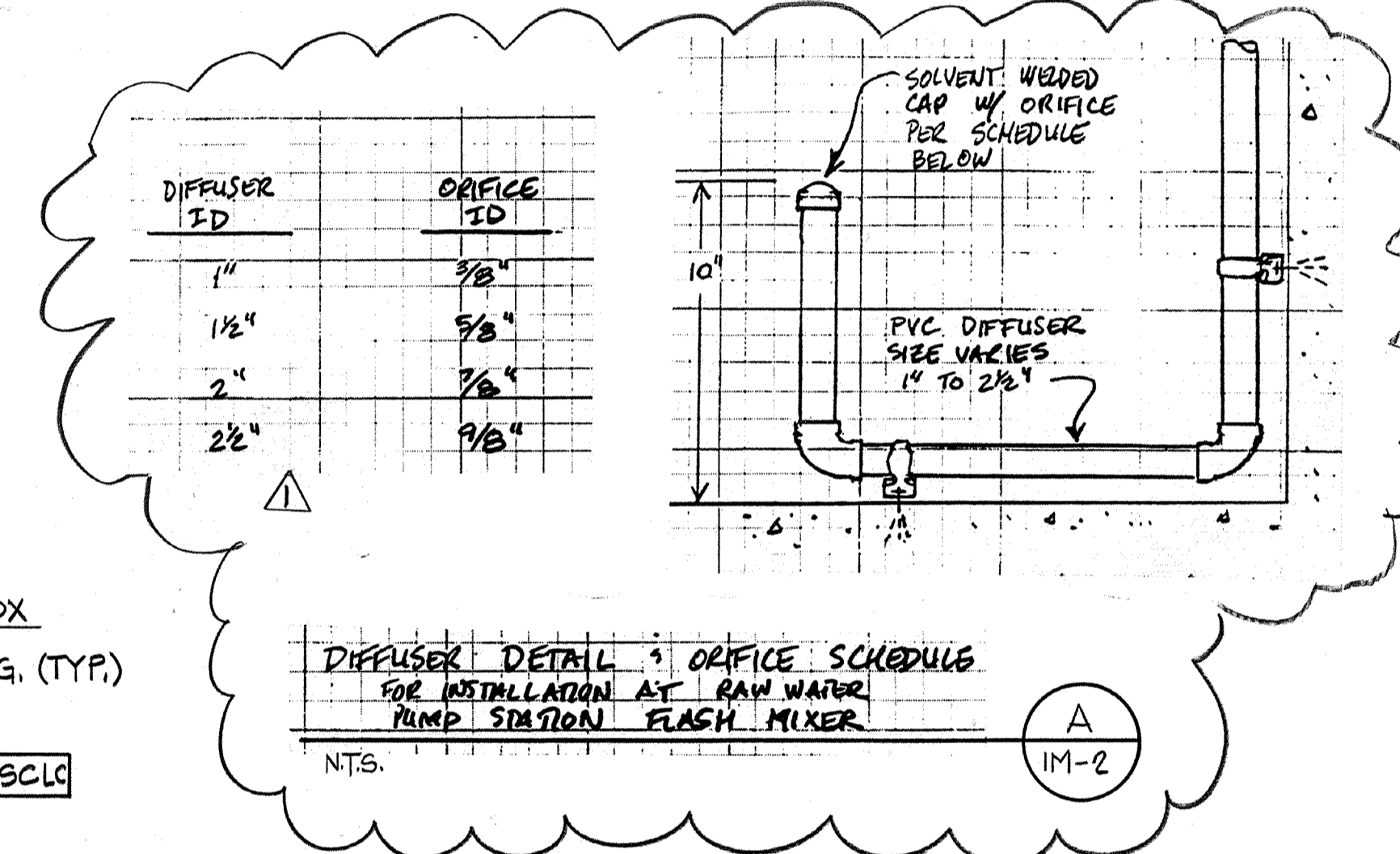
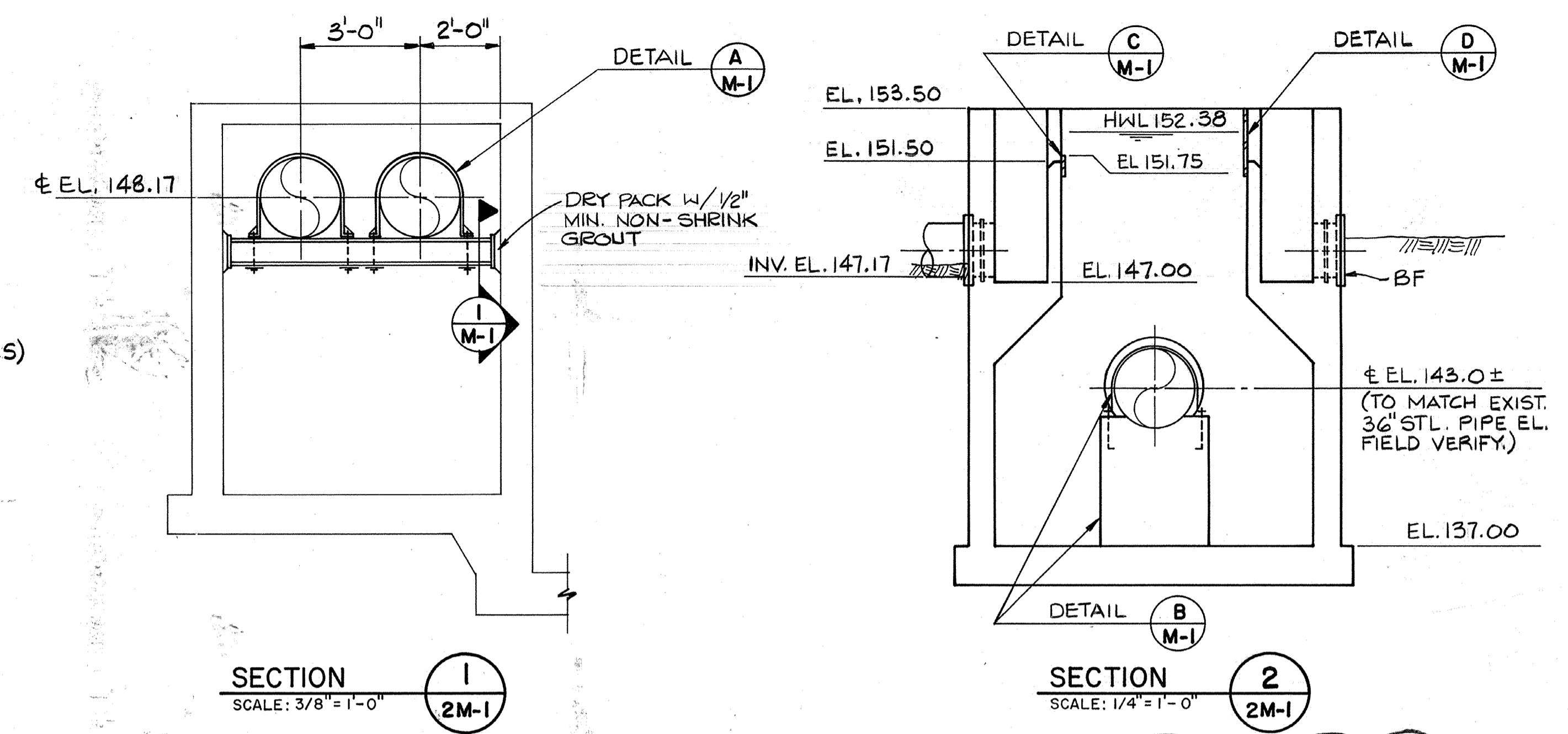
SHEET NO. IM-2

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111333
 PROJECT MANAGER
 PROJECT ENGINEER
 PLUMBING
 HVAC
 INSTRUMENTATION
 ELECTRICAL
 STRUCTURAL
 ARCHITECTURAL

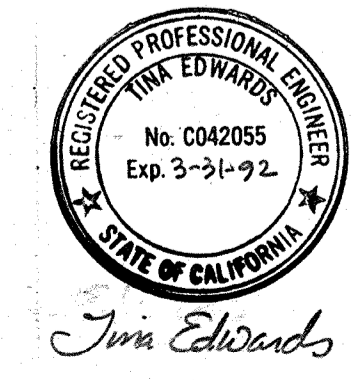


FLOCCULATION BASINS DEMOLITION PLAN
 SCALE: 1/8"=1'-0"



FLOCCULATION BASIN PIPING MODIFICATIONS
 SCALE: 1/4"=1'-0"

AS-BUILT
 Signature: JPM 5/10/91
 DATE



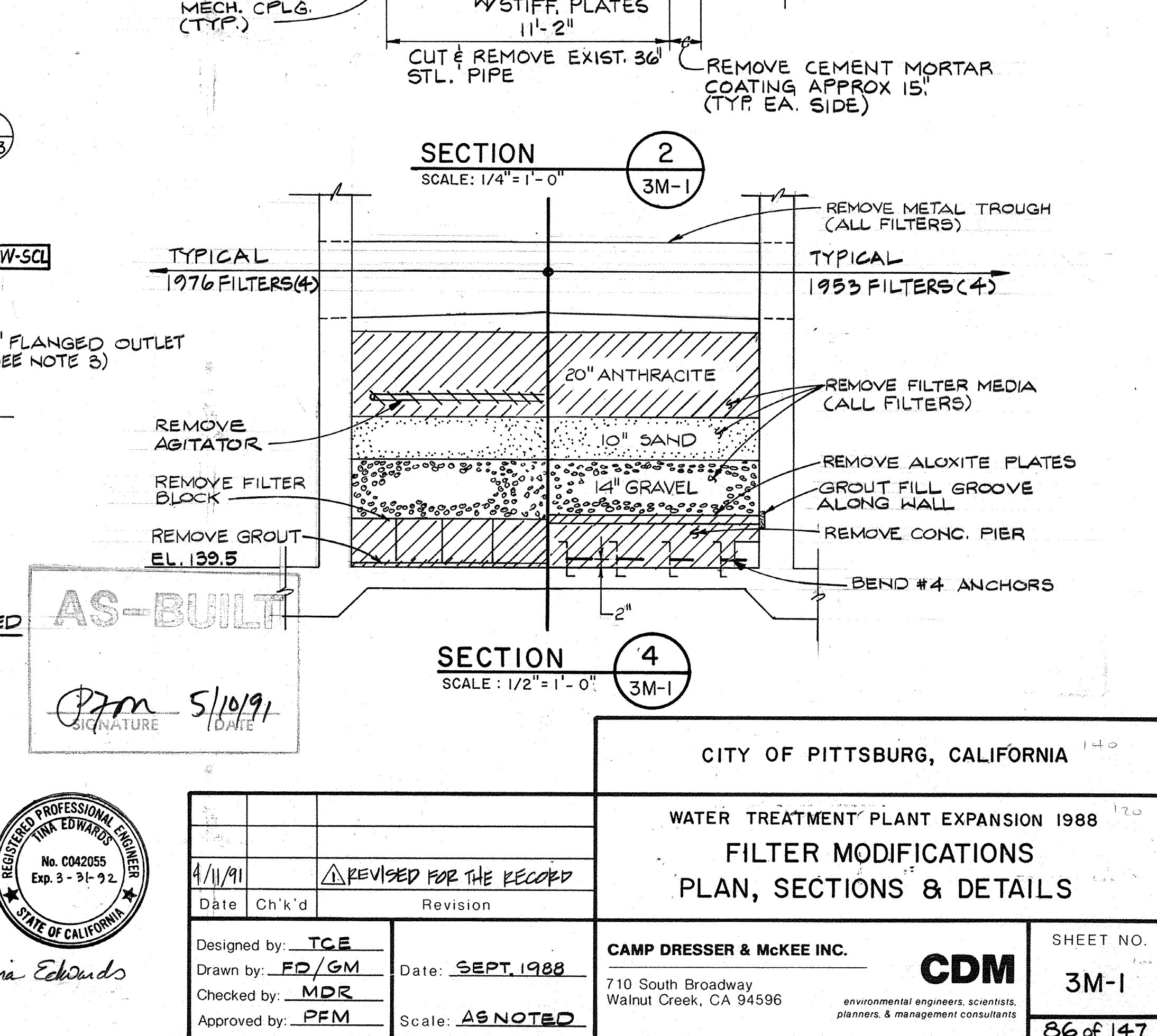
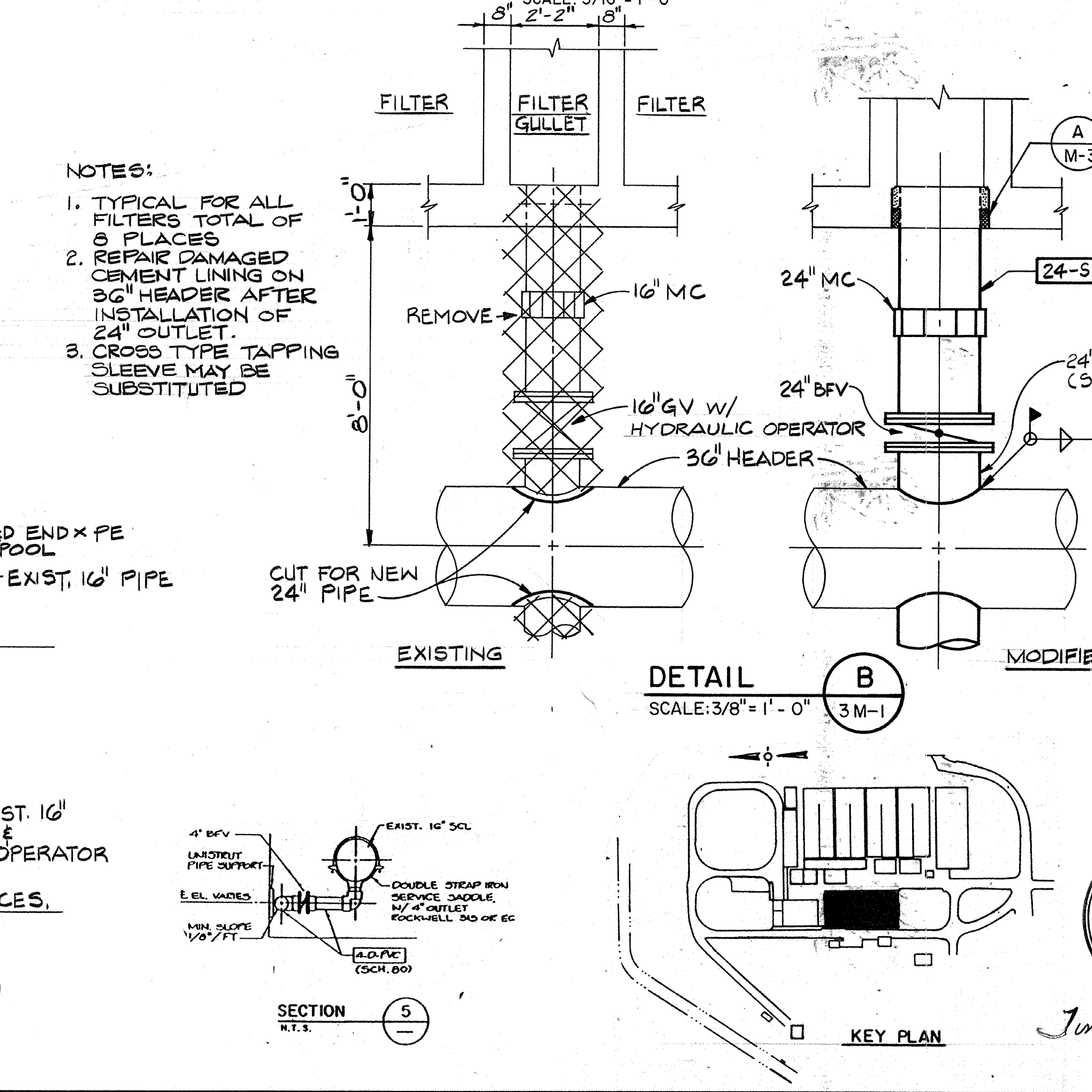
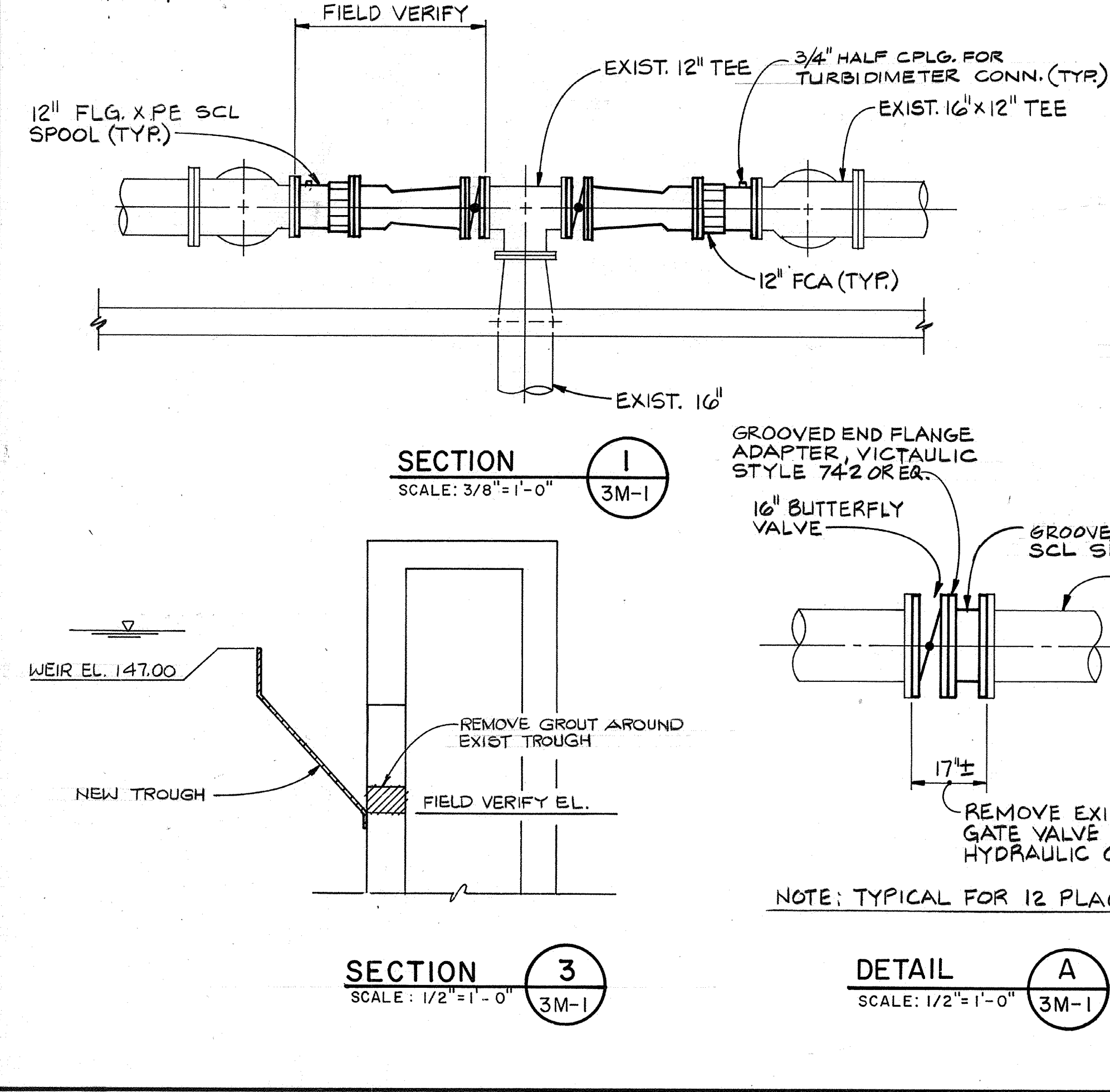
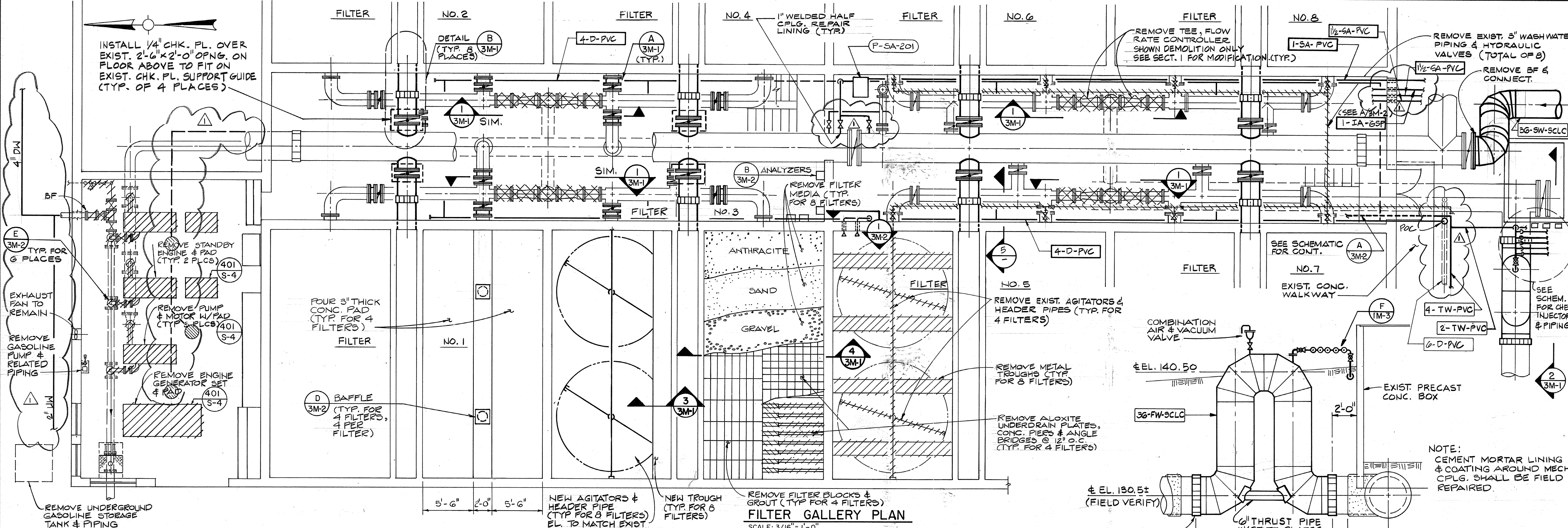
Date	4/1/91	Ch'k'd	REVISOR	Revision	REVISOR
Designed by:	TCE	Drawn by:	FL	Date:	SEPT. 1988
Checked by:	MPR	Approved by:	PFM	Scale:	AS NOTED

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
FLOCCULATION BASIN MODIFICATIONS & FLOW SPLIT BOX PLAN & SECTIONS

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists
 planners, & management consultants

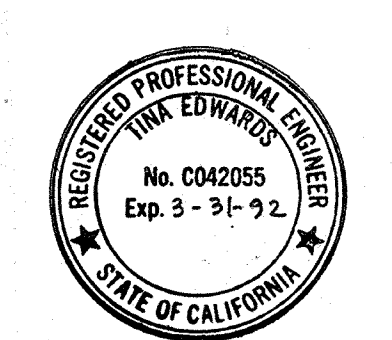
SHEET NO. **2M-1**
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11235
 PROJECT MANAGER
 PROJECT ENGINEER
 PLUMBING
 HVAC
 INSTRUMENTATION
 ELECTRICAL
 STRUCTURAL
 ARCHITECTURAL



- NOTES:
1. TYPICAL FOR ALL FILTERS TOTAL OF 8 PLACES
 2. REPAIR DAMAGED CEMENT LINING ON 36" HEADER AFTER INSTALLATION OF 24" OUTLET.
 3. CROSS TYPE TAPPING SLEEVE MAY BE SUBSTITUTED

AS-BUILT
 Pjm
 5/10/91
 DATE

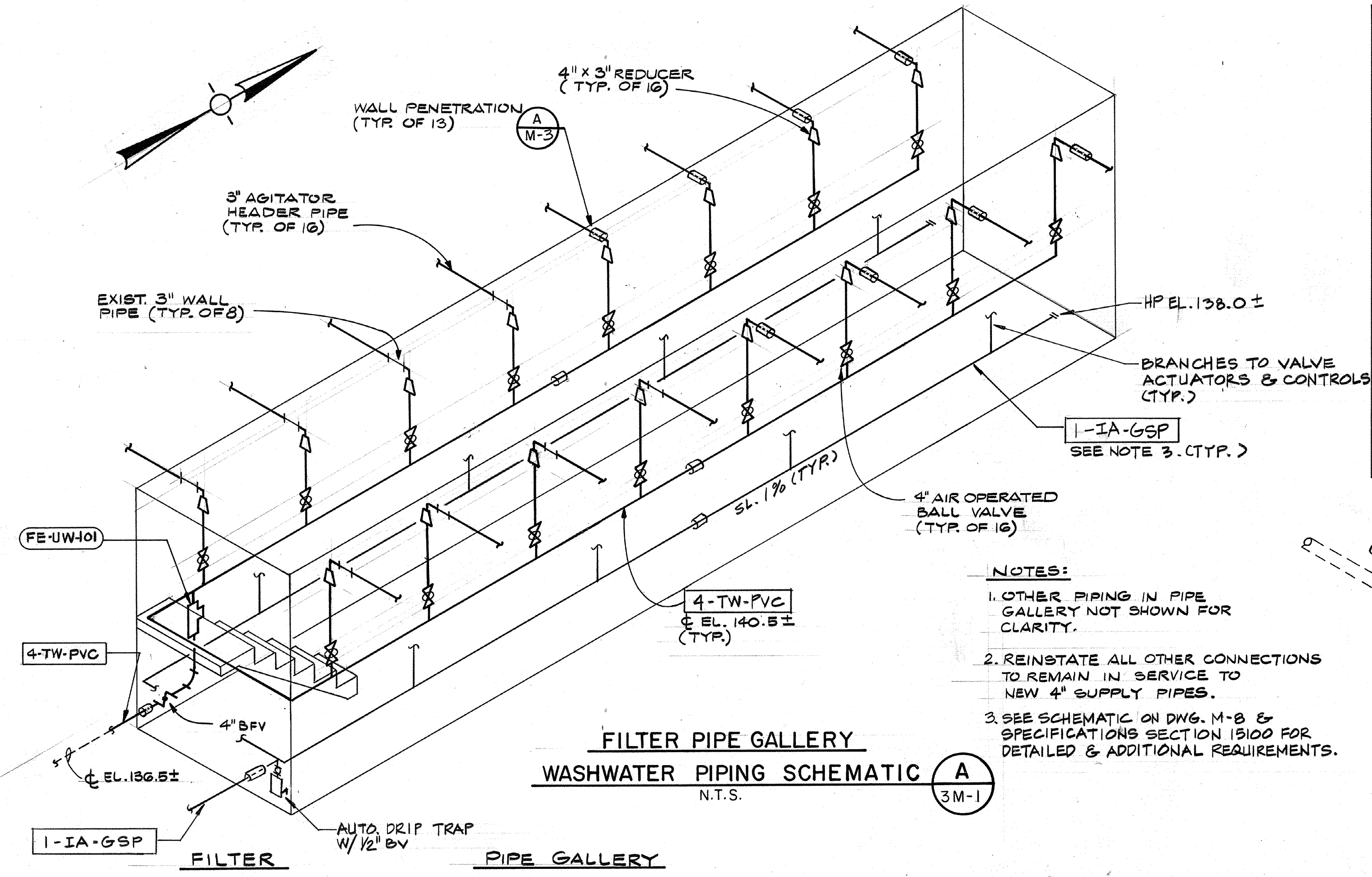


Date	4/11/91	REVISION FOR THE RECORD
Ch'k'd		Revision
Designed by	TCE	
Drawn by	FD/GM	Date: SEPT. 1988
Checked by	MDR	Scale: AS NOTED
Approved by	PEM	

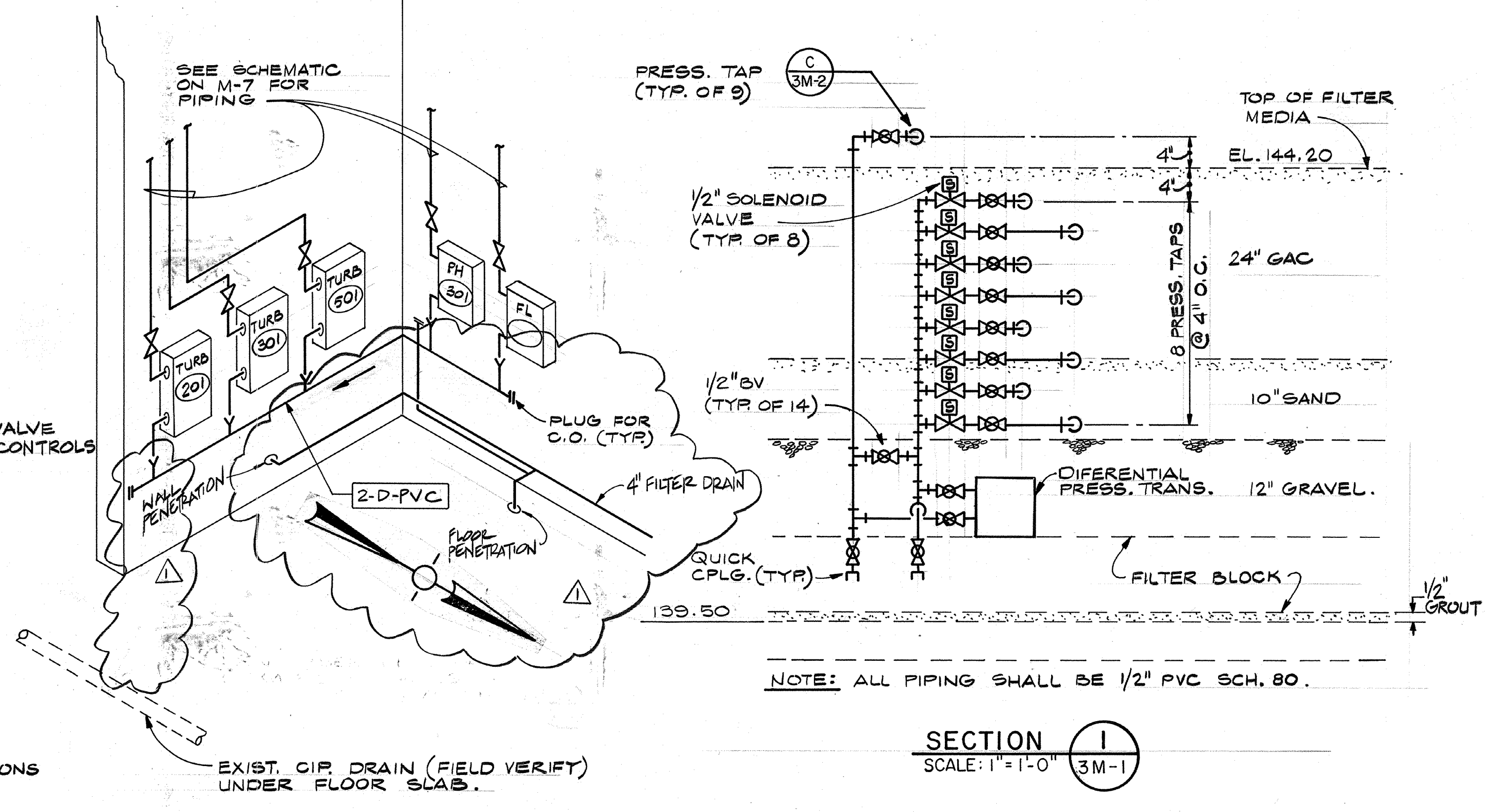
CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
**FILTER MODIFICATIONS
 PLAN, SECTIONS & DETAILS**
 SHEET NO. 3M-1
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CAMP DRESSER & MCKEE INC.
 710 South Broadway
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 environmental engineers, scientists,
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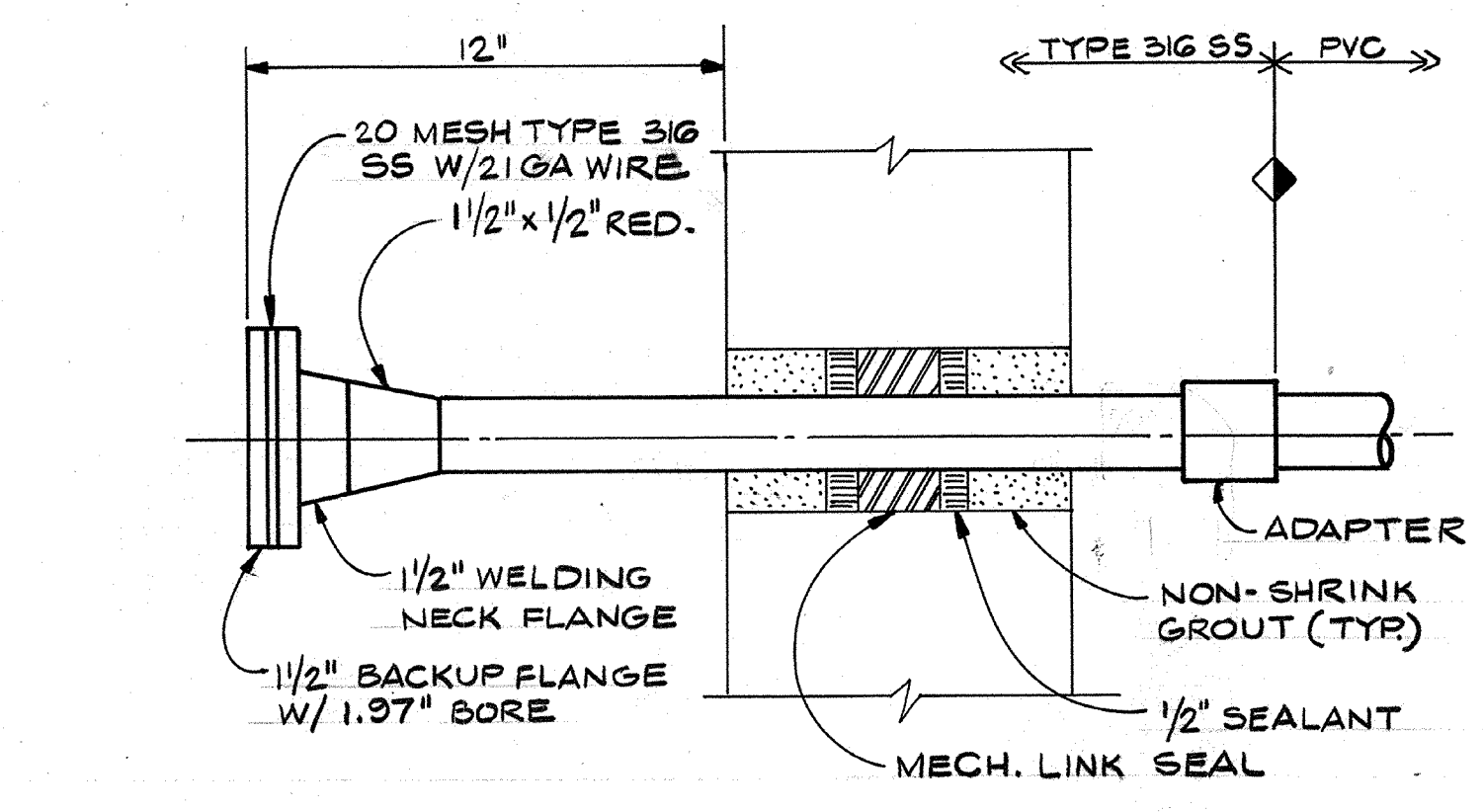
111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



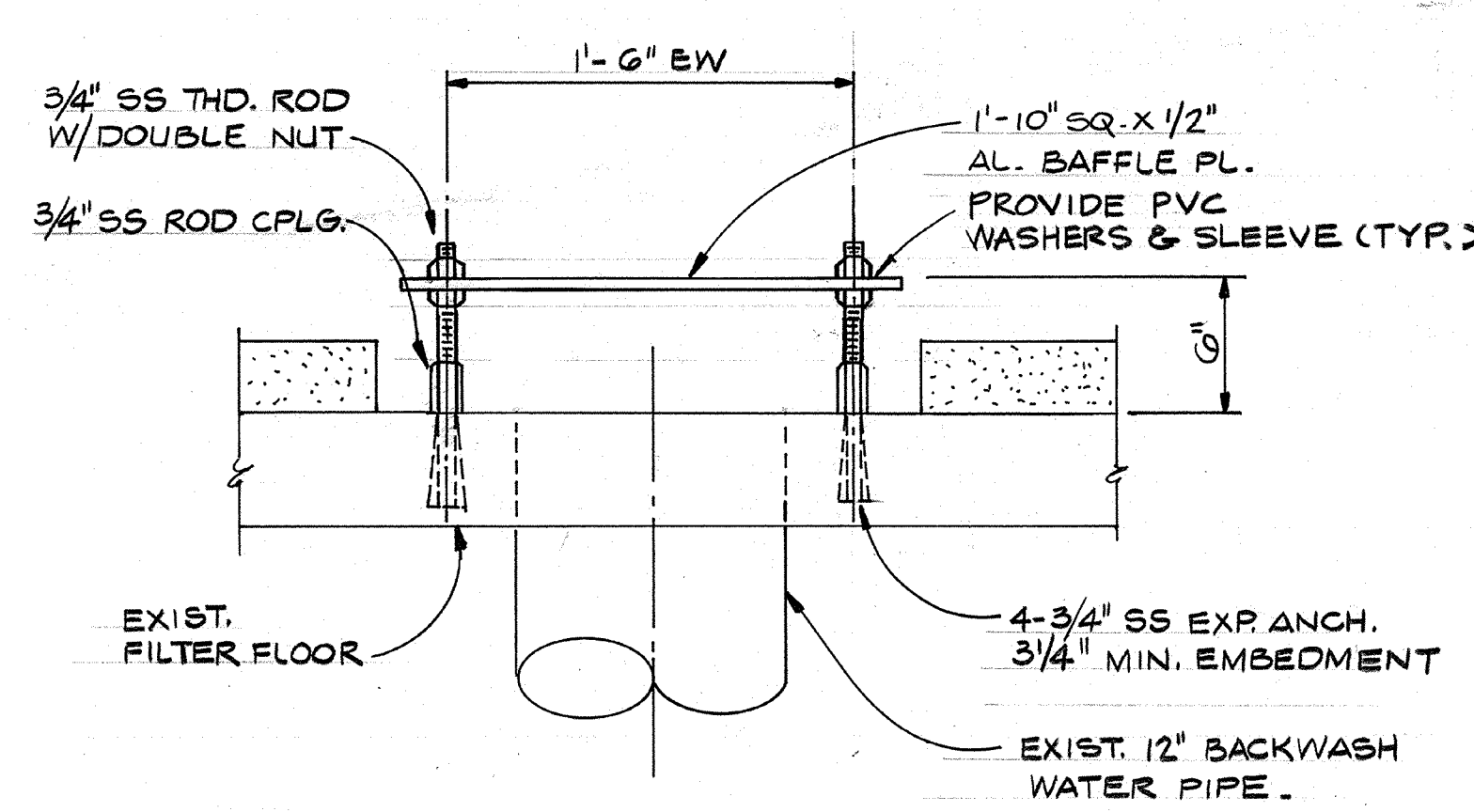
- NOTES:**
1. OTHER PIPING IN PIPE GALLERY NOT SHOWN FOR CLARITY.
 2. REINSTATE ALL OTHER CONNECTIONS TO REMAIN IN SERVICE TO NEW 4" SUPPLY PIPES.
 3. SEE SCHEMATIC ON DWG. M-8 & SPECIFICATIONS SECTION 15100 FOR DETAILED & ADDITIONAL REQUIREMENTS.



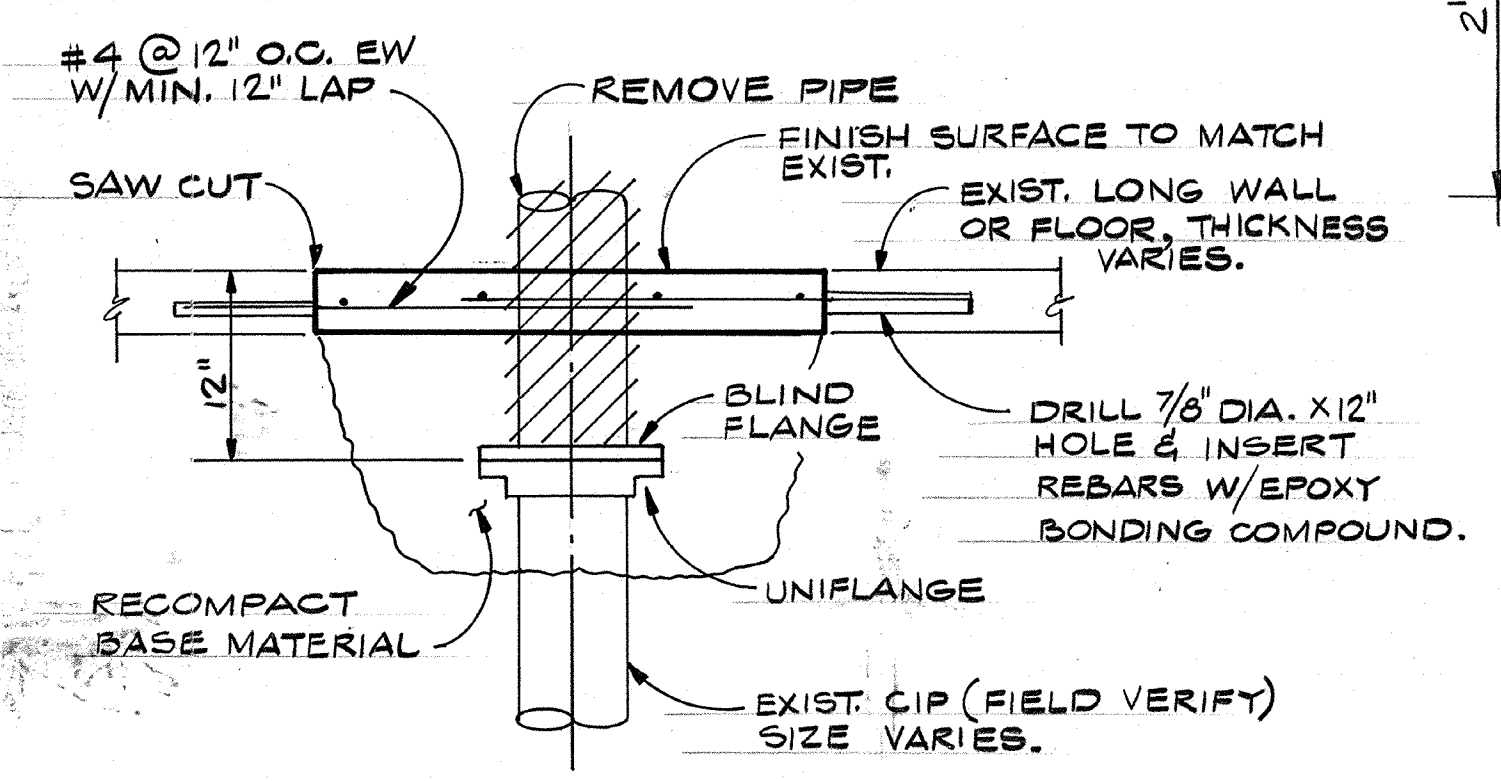
NOTE: ALL PIPING SHALL BE 1/2" PVC SCH. 80.



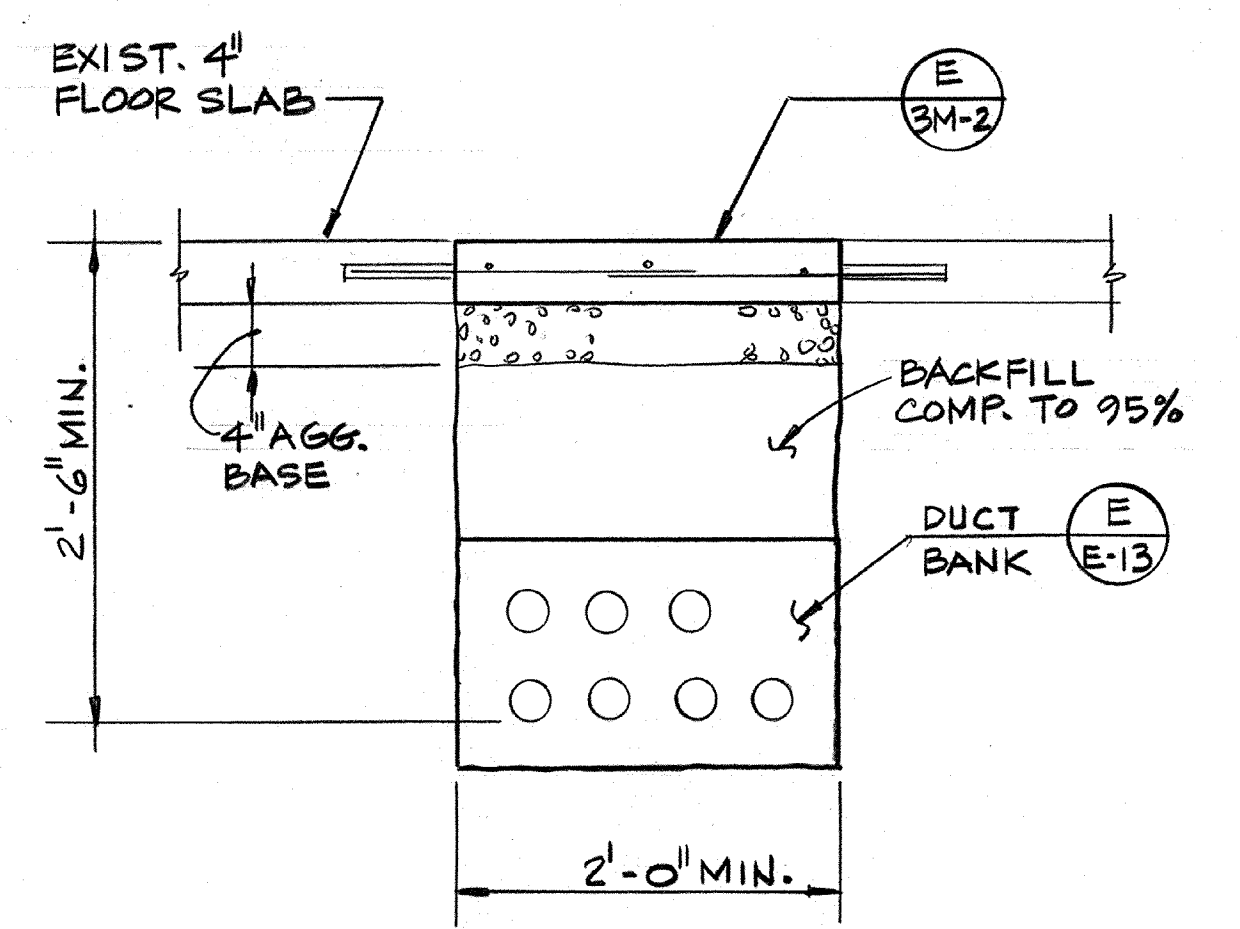
PRESSURE TAP (C)
 N.T.S. 3M-2



BACKWASH BAFFLE (D)
 N.T.S. 3M-1
 NOTE: TYPICAL FOR 4 FILTERS & EACH FILTER REQ'S 4 BAFFLES.

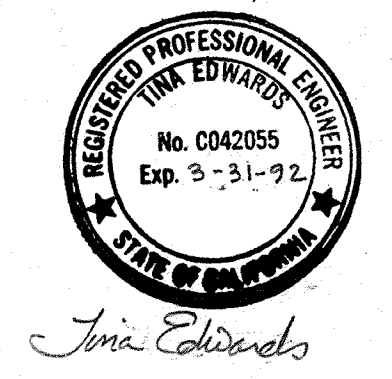


PIPE REMOVAL (E)
 N.T.S. 3M-1



SECTION 2 (E)
 N.T.S. 3M-1

AS-BUILT
 Signature: PFM 5/10/91
 DATE



Date	Ch'k'd	Revision
4/1/91		REVISOR FOR THE RECORD
Designed by: TCE	Drawn by: V.M.	Date: SEPT. 1988
Checked by: MDR	Approved by: PFM	Scale: AS NOTED

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
FILTER MODIFICATIONS SECTIONS AND DETAILS
 CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
CDM
 environmental engineers, scientists, planners & management consultants
 SHEET NO. 3M-2
 37 of 147

111335

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

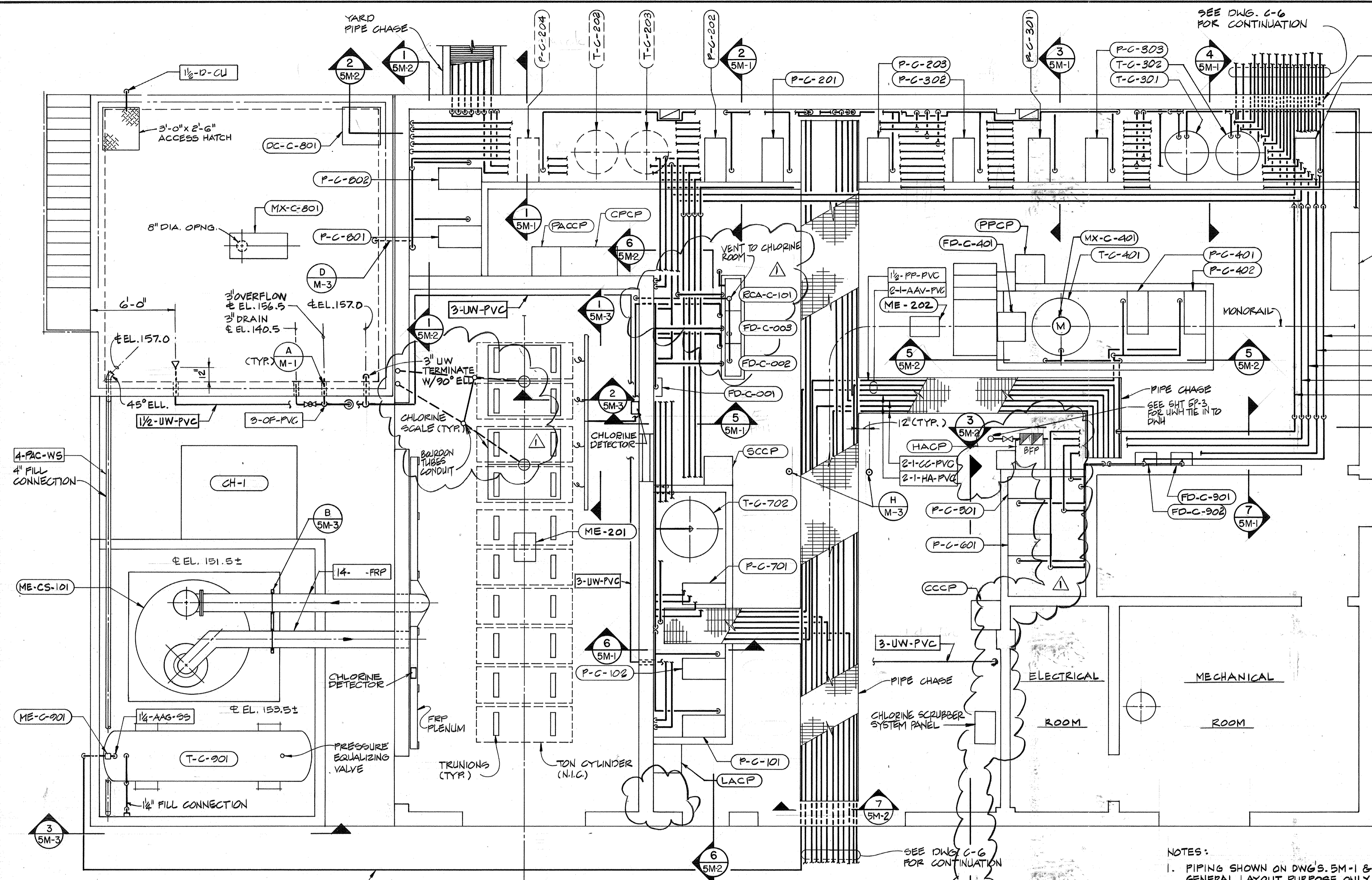
HVAC Approved by: Date:

INSTRUMENTATION Approved by: Date:

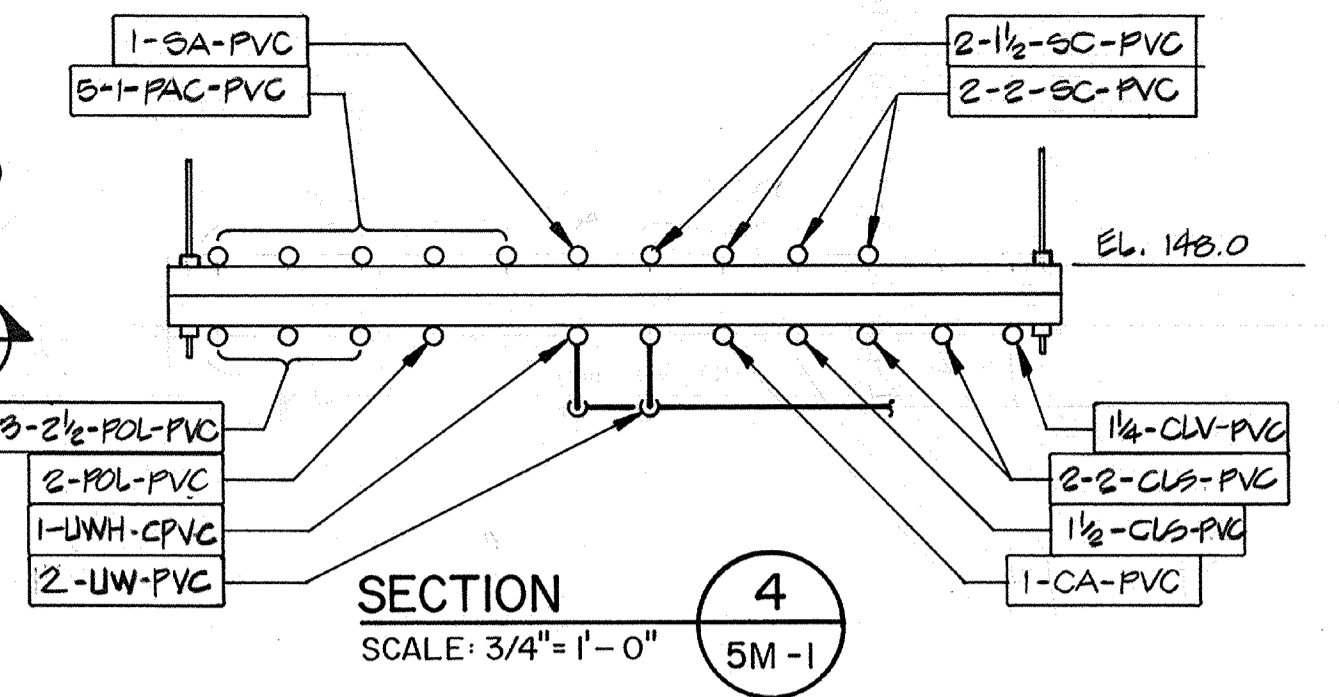
ELECTRICAL Approved by: Date:

STRUCTURAL Approved by: Date:

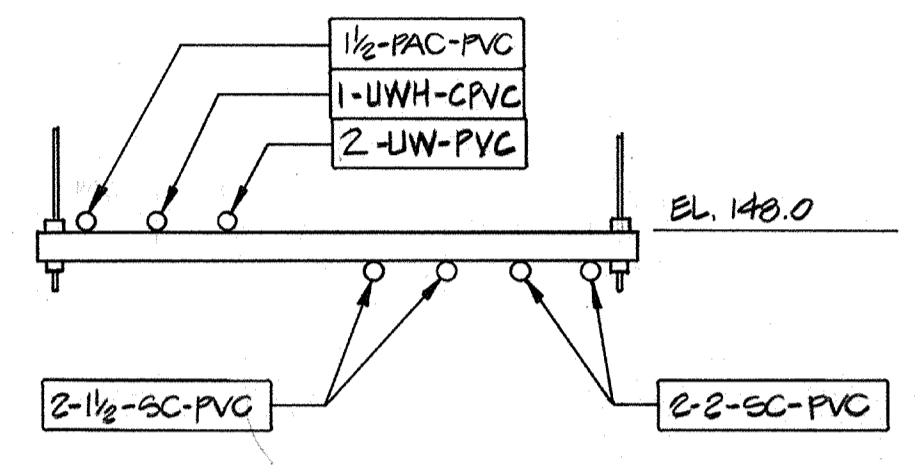
ARCHITECTURAL Approved by: Date:



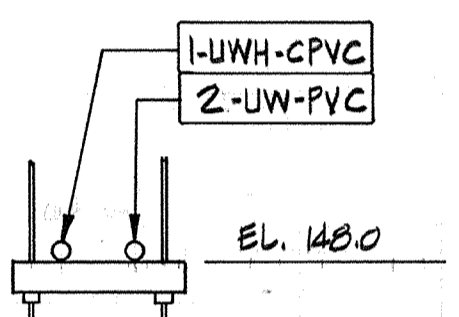
OPERATION BUILDING - LOWER LEVEL PLAN
SCALE: 1/4" = 1' - 0"



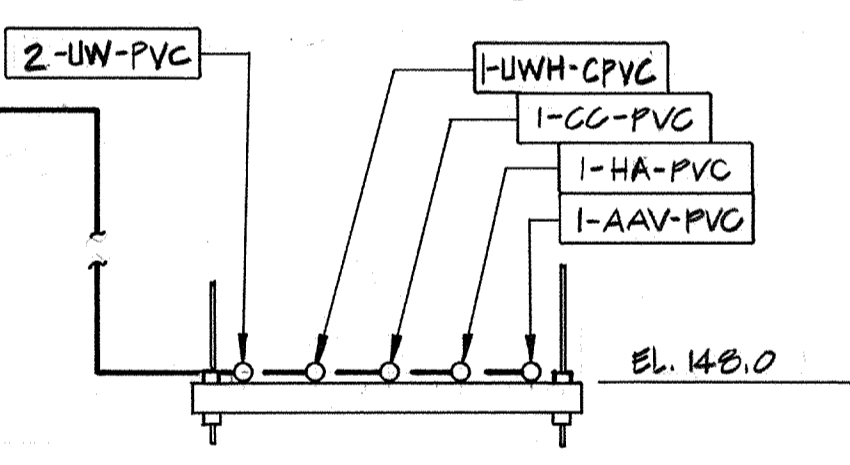
SECTION 4
SCALE: 3/4" = 1' - 0"
5M-1



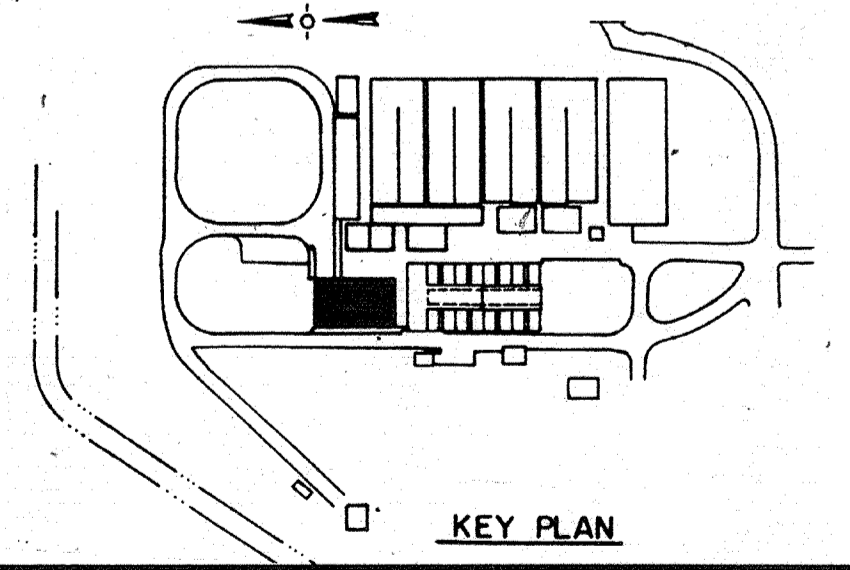
SECTION 5
SCALE: 3/4" = 1' - 0"
5M-1



SECTION 6
SCALE: 3/4" = 1' - 0"
5M-1



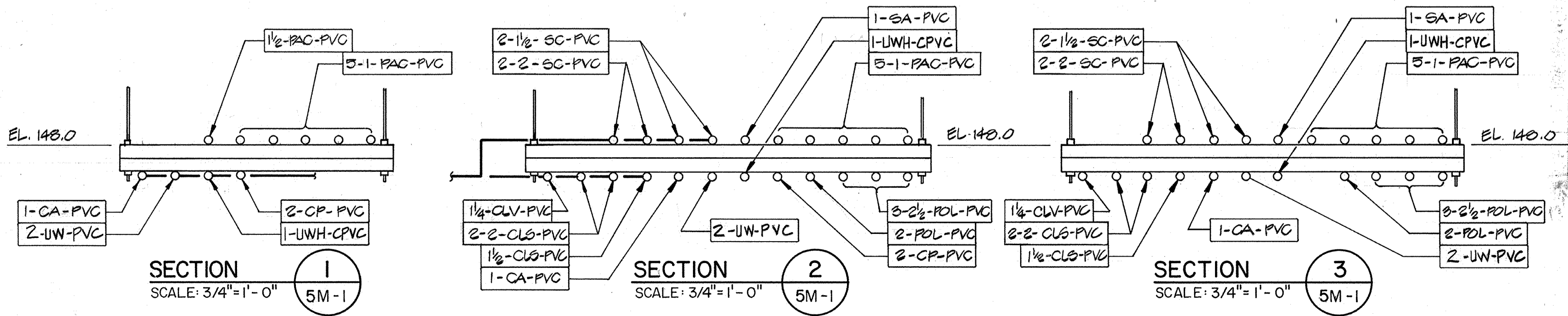
SECTION 7
SCALE: 3/4" = 1' - 0"
5M-1



KEY PLAN

NOTES:

1. PIPING SHOWN ON DWGS. 5M-1 & 5M-2 ARE FOR GENERAL LAYOUT PURPOSE ONLY. PIPINGS SHALL BE COMPLETED IN ACCORDANCE WITH SCHEMATICS SHOWN ON DWGS. M-4 THRU M-8.
2. PIPE SUPPORT STRUTS USED ON SUBFLOOR LEVEL SHALL BE FRP TYPE AND ABOVE FLOOR SHALL BE METAL TYPE. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR PIPE SUPPORTS.
3. SEE PLUMBING DWGS. FOR OTHER PIPINGS NOT SHOWN INCLUDING DRAINS.

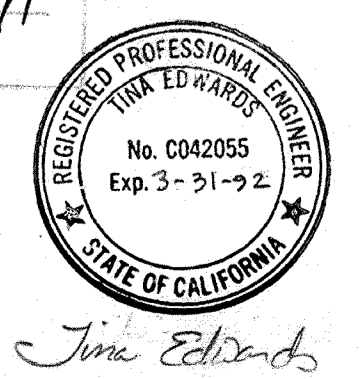


SECTION 1
SCALE: 3/4" = 1' - 0"
5M-1

SECTION 2
SCALE: 3/4" = 1' - 0"
5M-1

SECTION 3
SCALE: 3/4" = 1' - 0"
5M-1

AS-BUILT
SIGNATURE: [Signature] DATE: 5/10/91



Date:	4/1/91	Revised for the Record
Ch'k'd:		Revision
Designed by:	TCE	Date: SEPT. 1988
Drawn by:	TYN	
Checked by:	MDR	
Approved by:	PEM	Scale: AS NOTED

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

OPERATIONS BUILDING - LOWER LEVEL

CHEMICAL HANDLING FACILITIES PLAN

CAMP DRESSER & MCKEE INC.

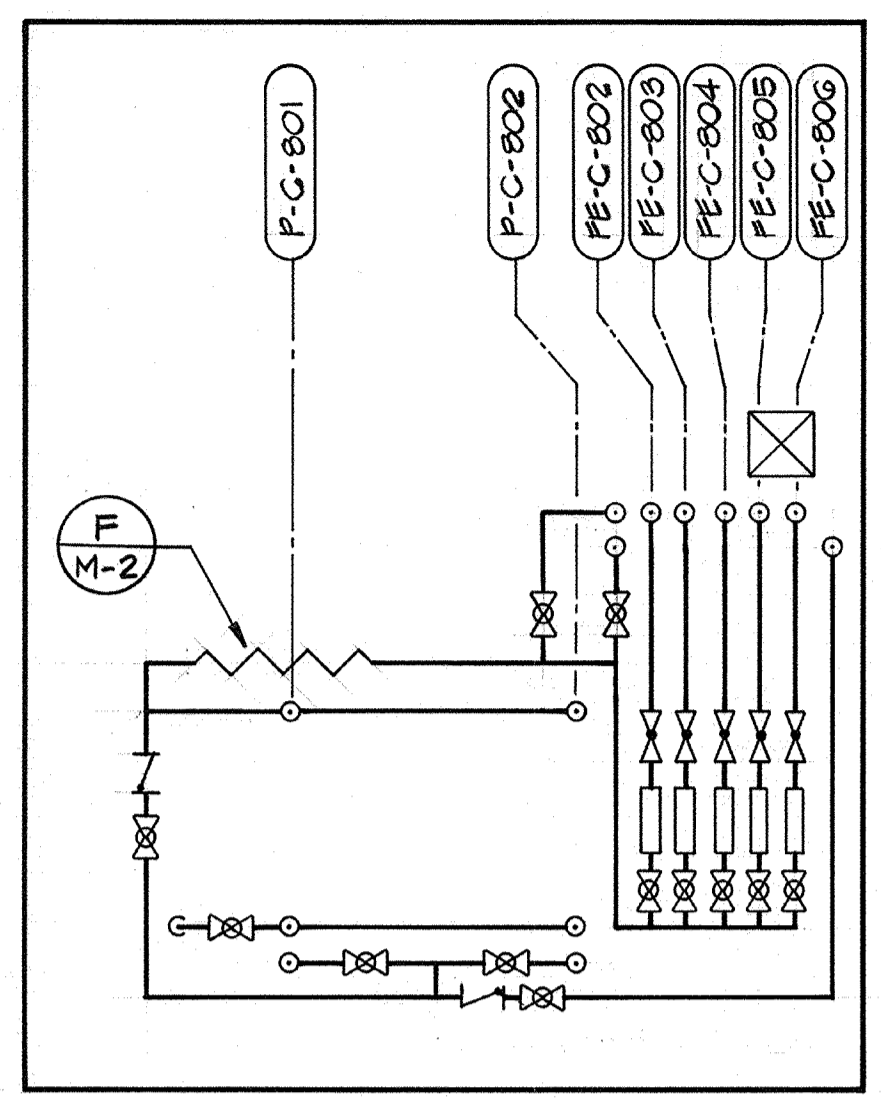
710 South Broadway
Walnut Creek, CA 94596

CDM
environmental engineers, scientists,
planners, & management consultants

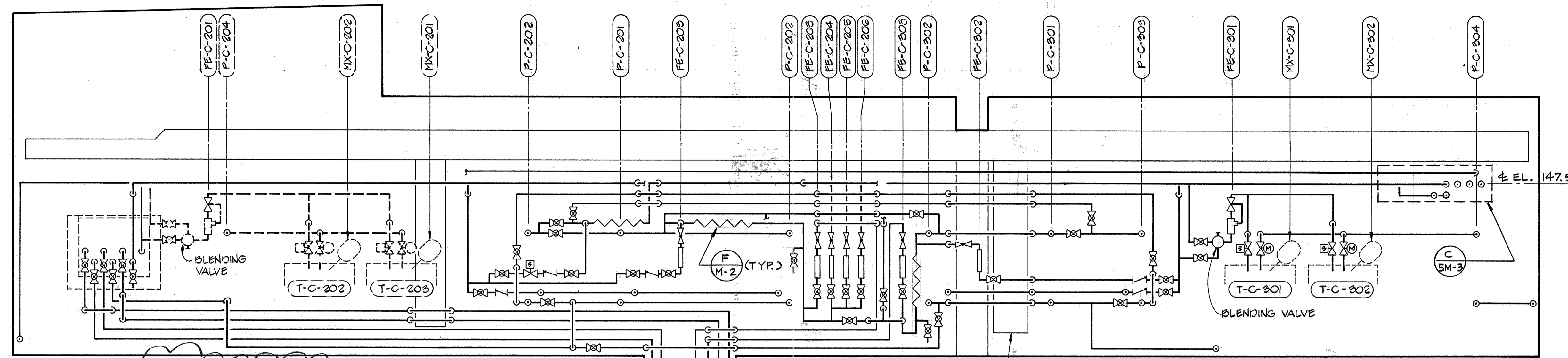
SHEET NO. 5M-1

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111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:

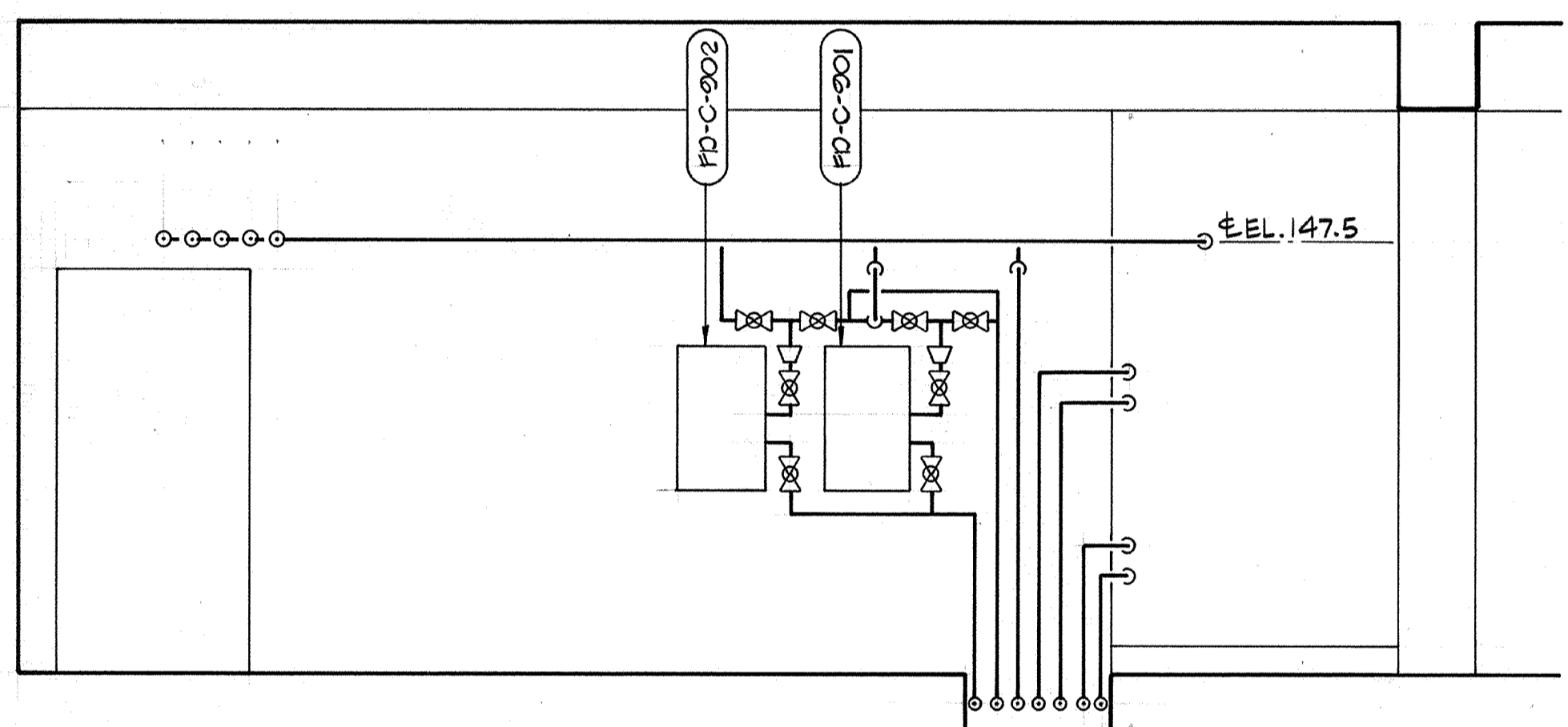


SECTION 1
 SCALE: 3/8"=1'-0"
 5M-1

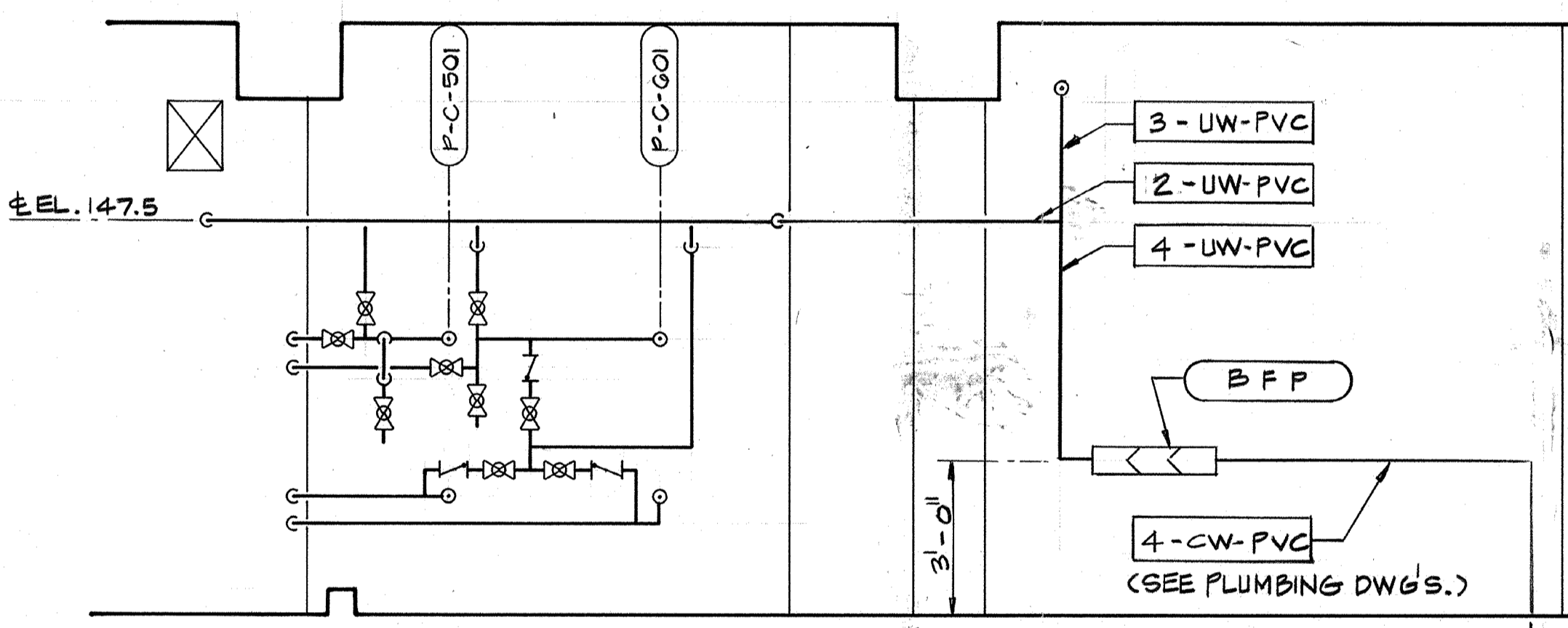


SECTION 2
 SCALE: 3/8"=1'-0"
 5M-1

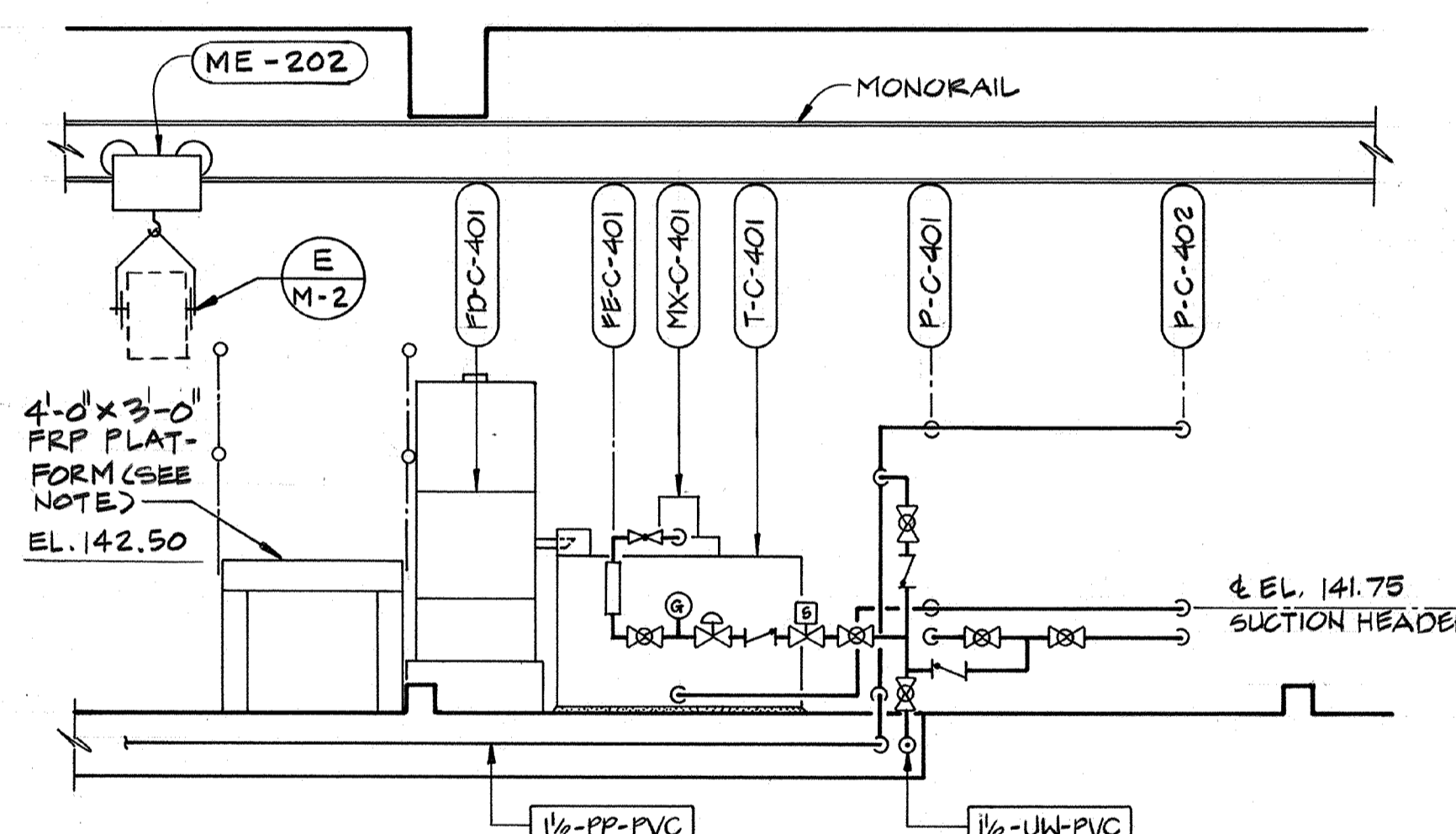
SEE BELOW FOR ADDITIONAL CALLOUTS
 ON DWG 5M-2, SECTIONS 1, 2, 3, & 4, CHANGE 1-GA-PVC TO 1-PA-PVC



SECTION 3
 SCALE: 3/8"=1'-0"
 5M-1

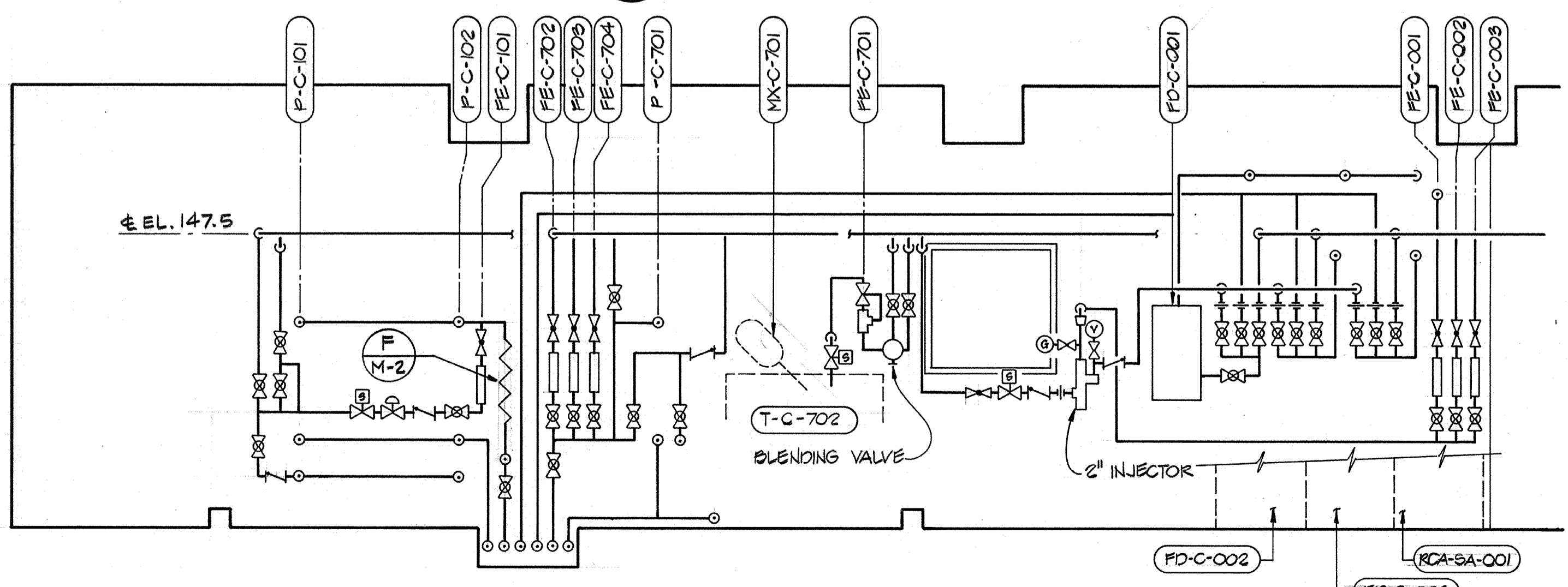


SECTION 4
 SCALE: 3/8"=1'-0"
 5M-1

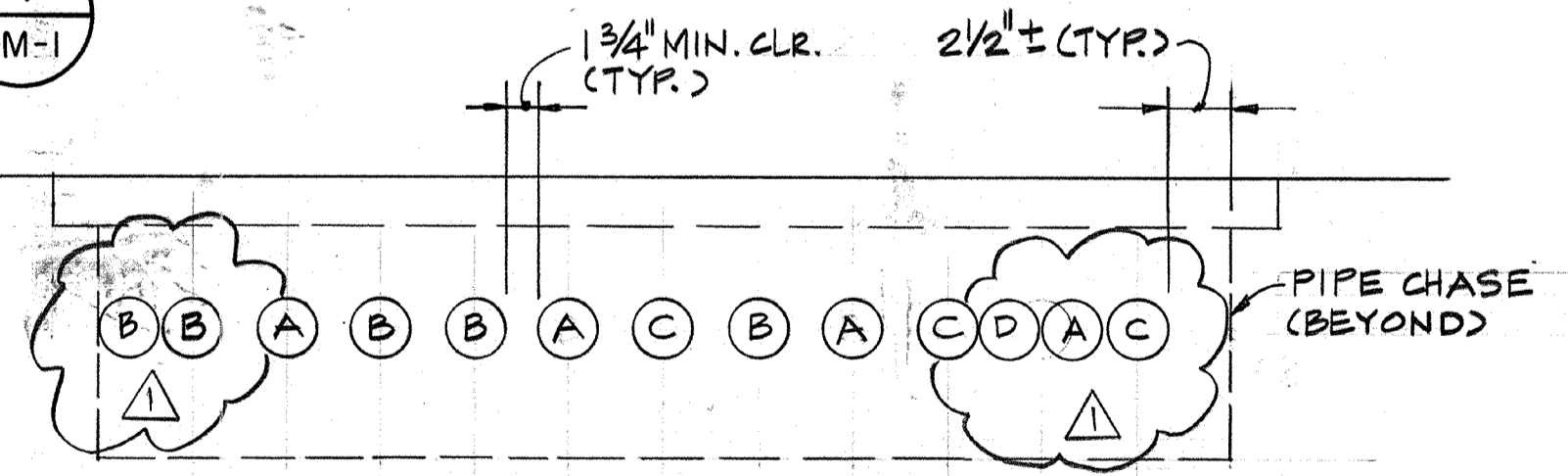


SECTION 5
 SCALE: 3/8"=1'-0"
 5M-1

NOTE:
 FRP PLATFORM SHALL BE COMPLETE W/ FRP STAIRS, FRP HANDRAILS AND GALV. STL. CHAIN GUARD AS SHOWN ON PLAN/5M-2.



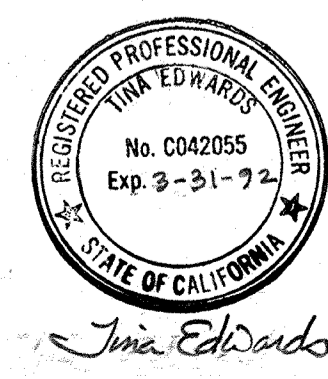
SECTION 6
 SCALE: 3/8"=1'-0"
 5M-1



CONDUIT SCHEDULE
 A: 1/4" PVC SCH. 40
 B: 2" PVC SCH. 40
 C: 2 1/2" PVC SCH. 40
 D: 3" PVC SCH. 40

SECTION 7
 SCALE: NONE
 5M-1

NOTE:
 RUN CHEMICAL AND SAMPLE PIPES THRU CONDUITS & SEAL EACH END W/ ELECTRICAL TYPE DUCT SEAL.



Date	4/11/91	Revision	REVISED FOR THE RECORD
Designed by:	TCE	Date:	SEPT. 1988
Drawn by:	TVN	Checked by:	MDR
Approved by:	PEM	Scale:	AS NOTED

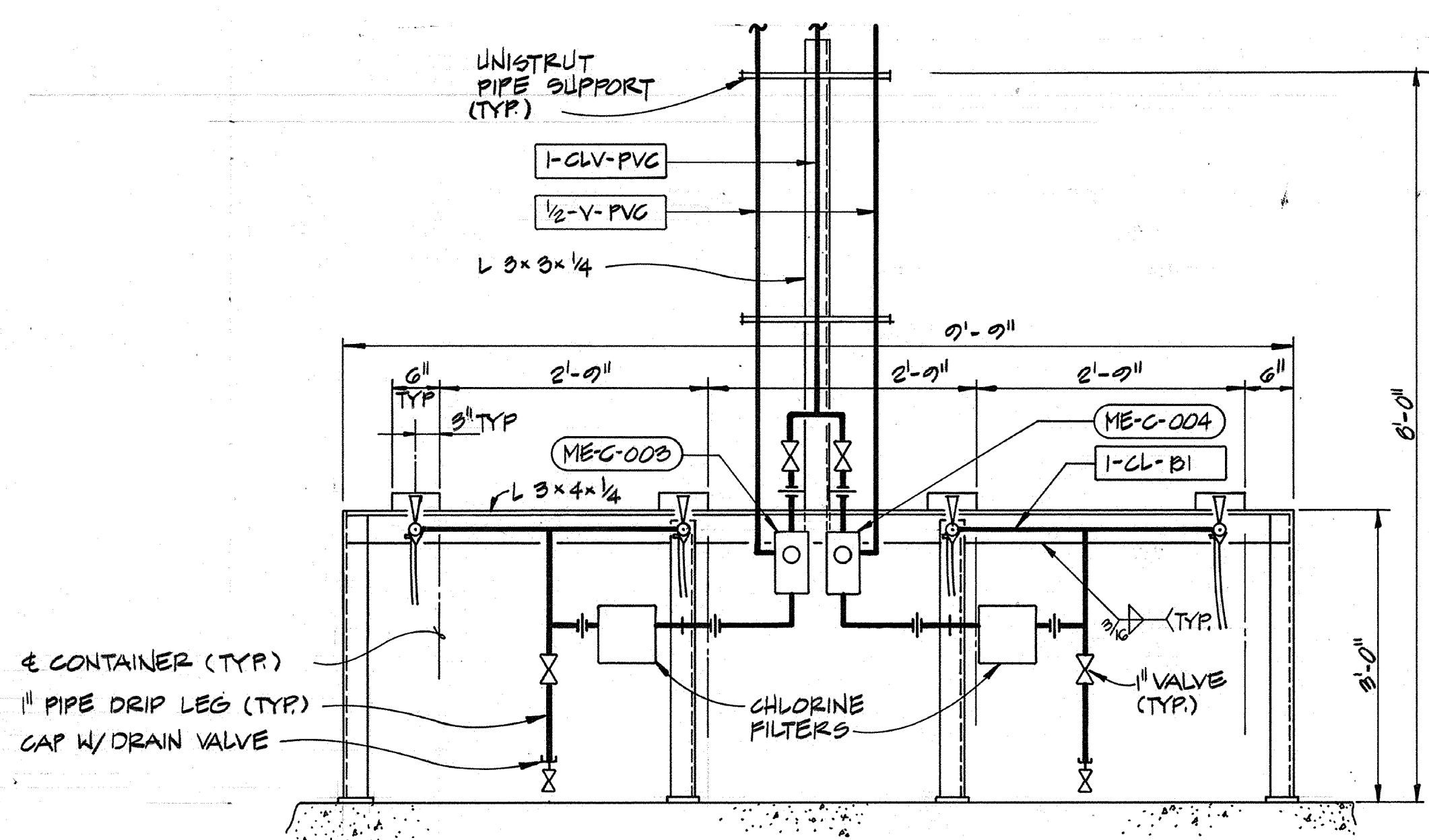
CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 OPERATION BUILDING SECTIONS

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

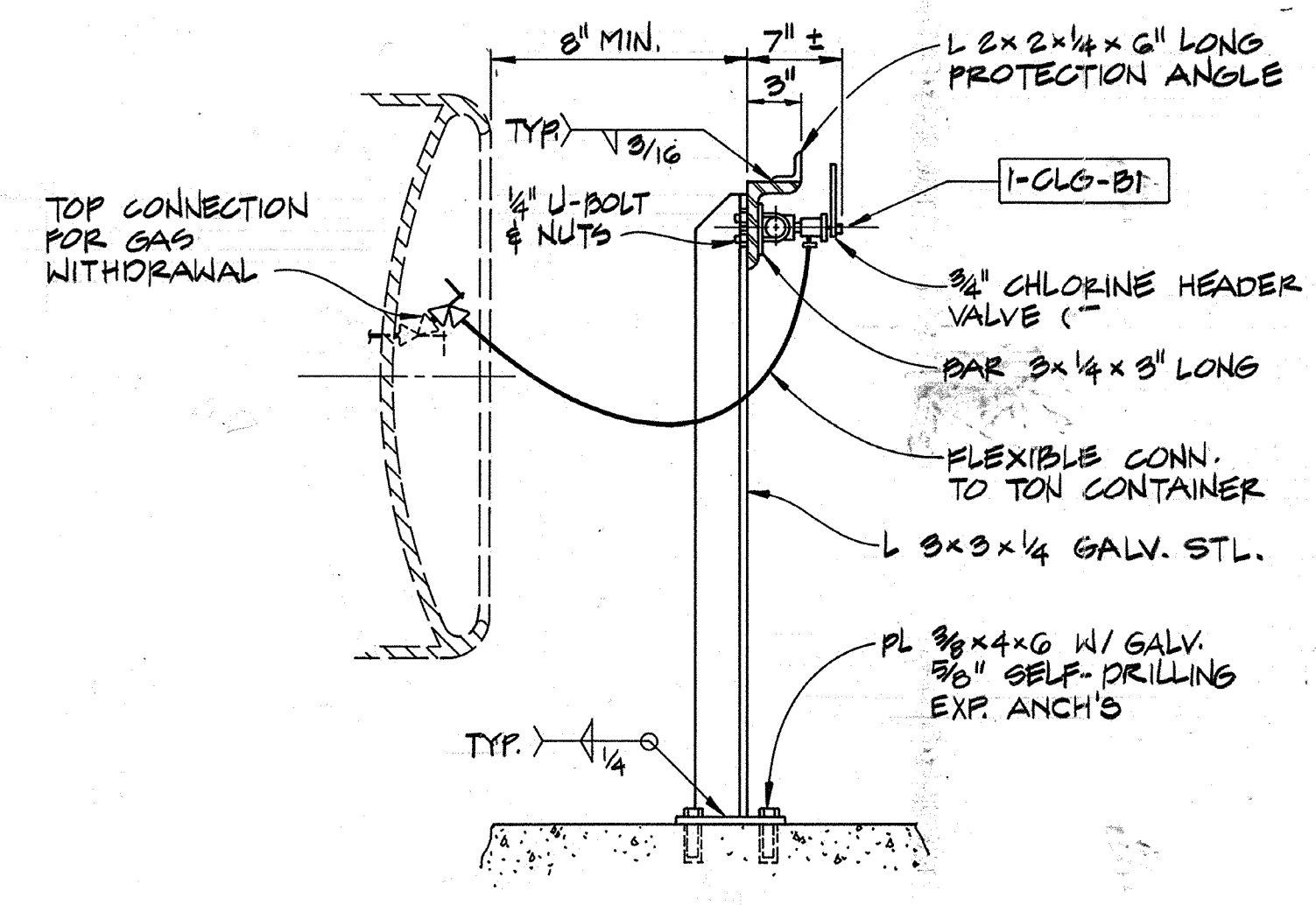
SHEET NO. 5M-2
 89 of 147

AS-BUILT
 Signature: Pm
 Date: 5/10/91

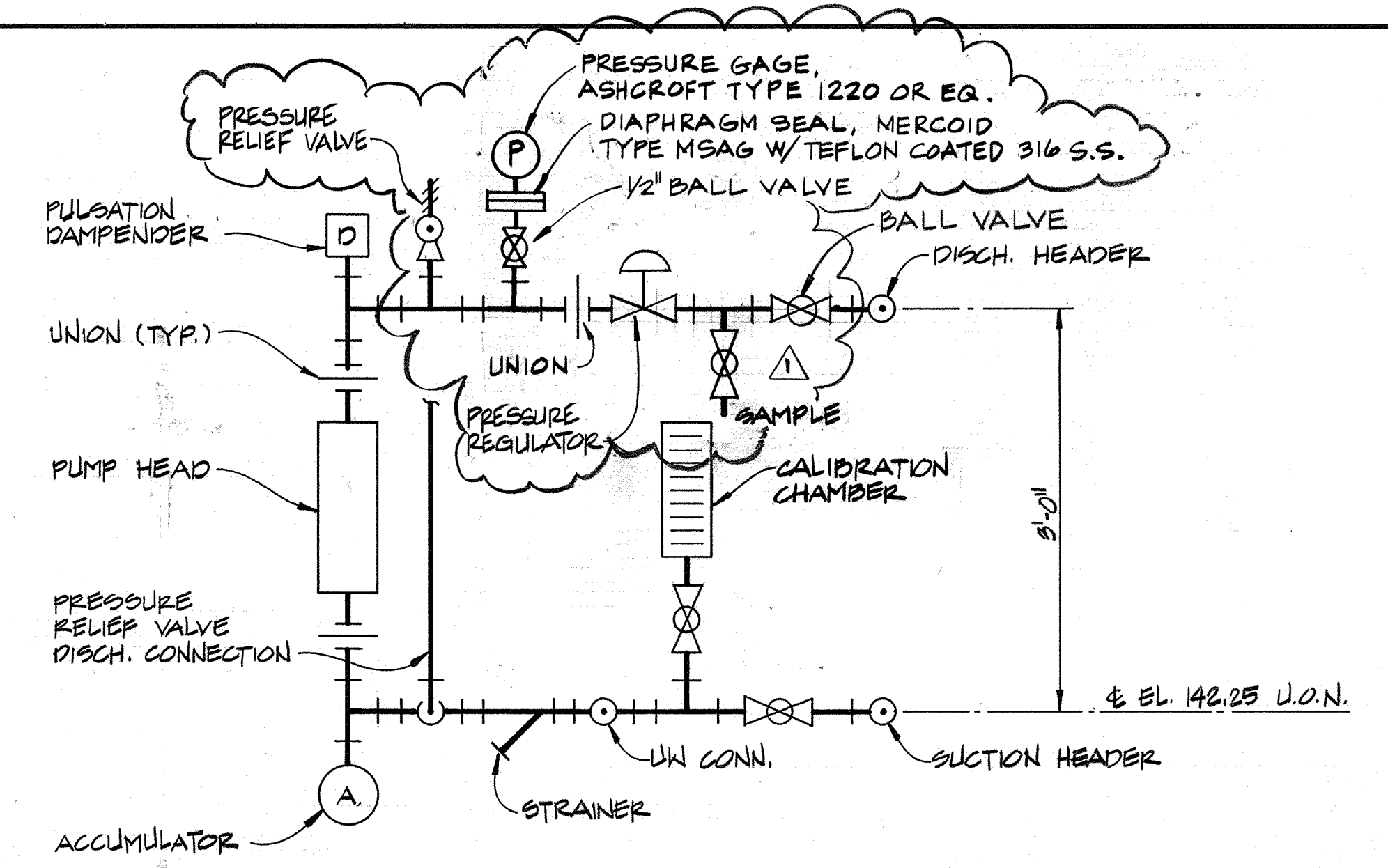
PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



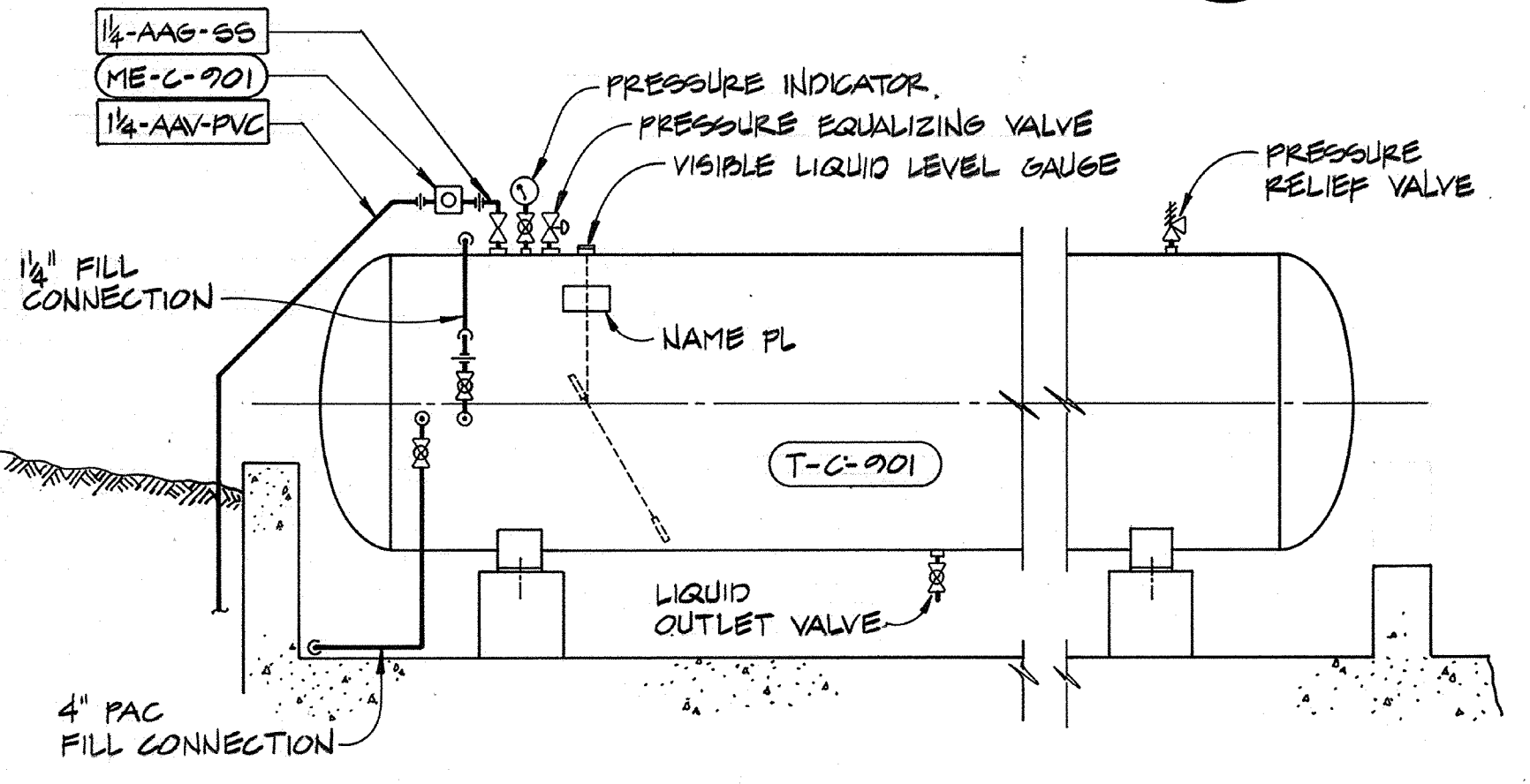
SECTION 1
N.T.S. 5M-1



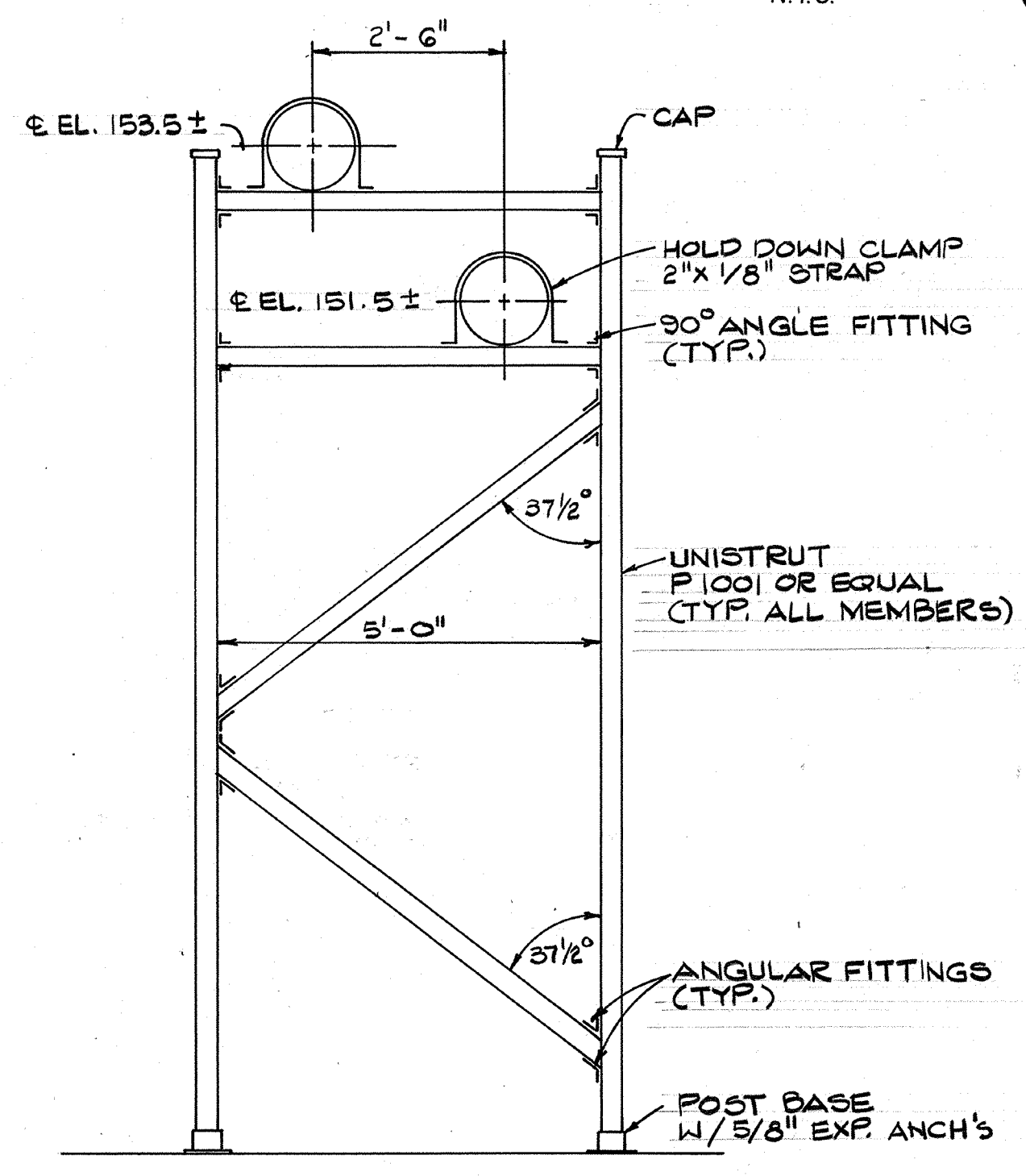
SECTION 2
N.T.S. 5M-1



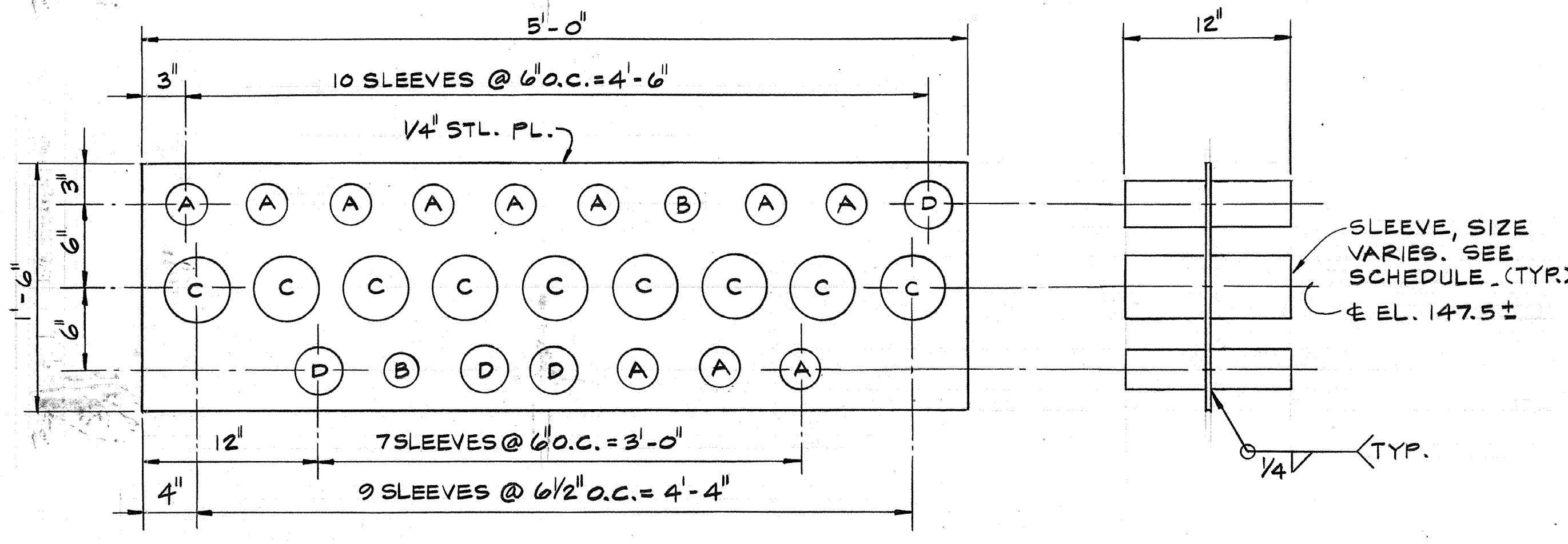
TYPICAL METERING PUMP PIPING - DETAIL A
N.T.S.



SECTION 3
N.T.S. 5M-1



DETAIL B
N.T.S. 5M-1

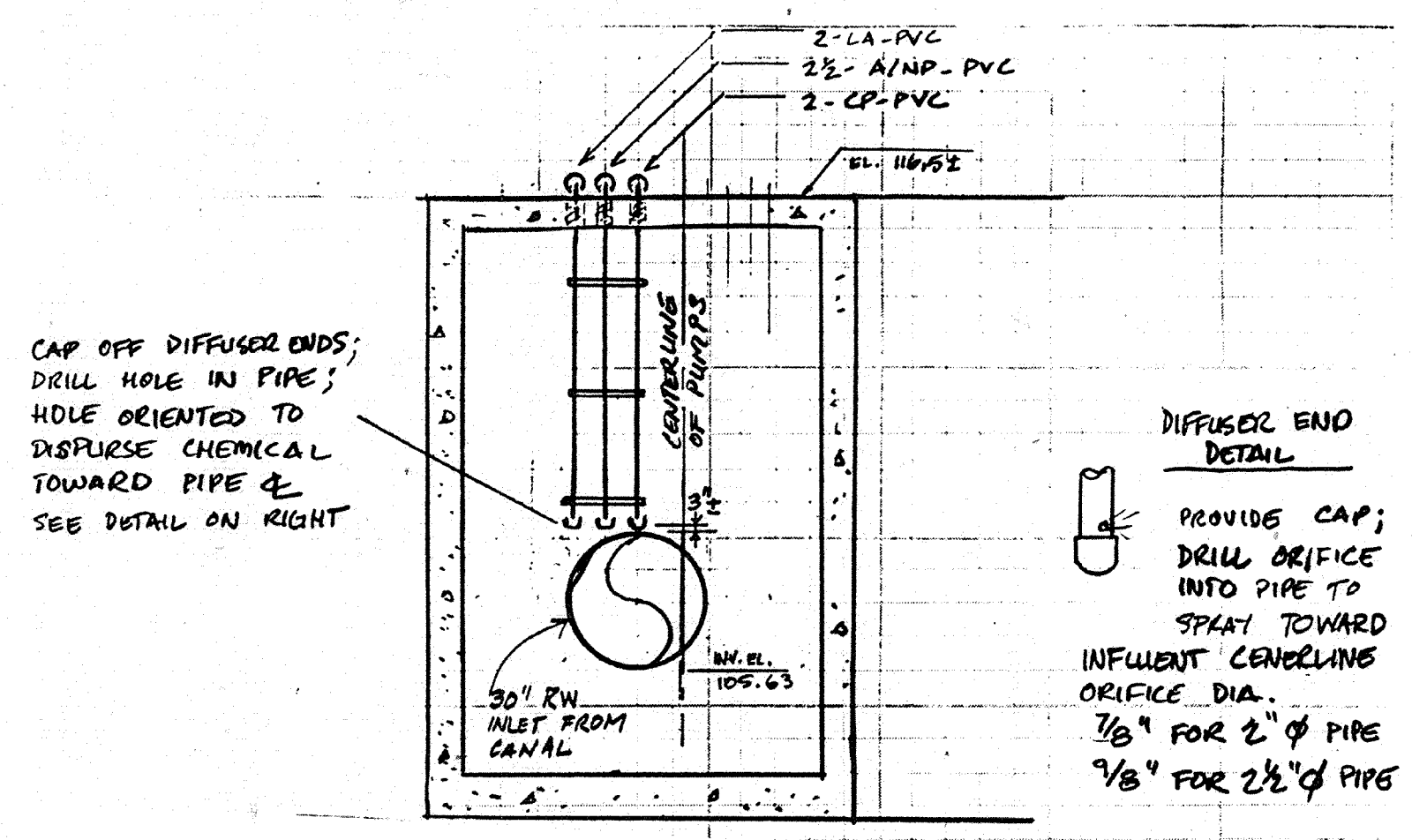


DETAIL C
N.T.S. 5M-2

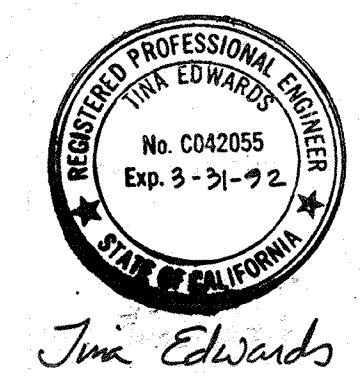
SLEEVE SCHEDULE

A	2 1/2" SCH. 40 STL. PIPE
B	2" "
C	4" "
D	3" "

NOTE: ALL FASTENERS SHALL BE 1/2" BOLTS U.O.N



SECTION 4
N.T.S. 1M-2



Jim Edwards

Date	4/1/91	Revised for the Record
Ch'k'd		Revision
Designed by	TCE	
Drawn by	TVN/vm	Date: SEPT. 1988
Checked by	MDR	Scale: AS NOTED
Approved by	PFM	

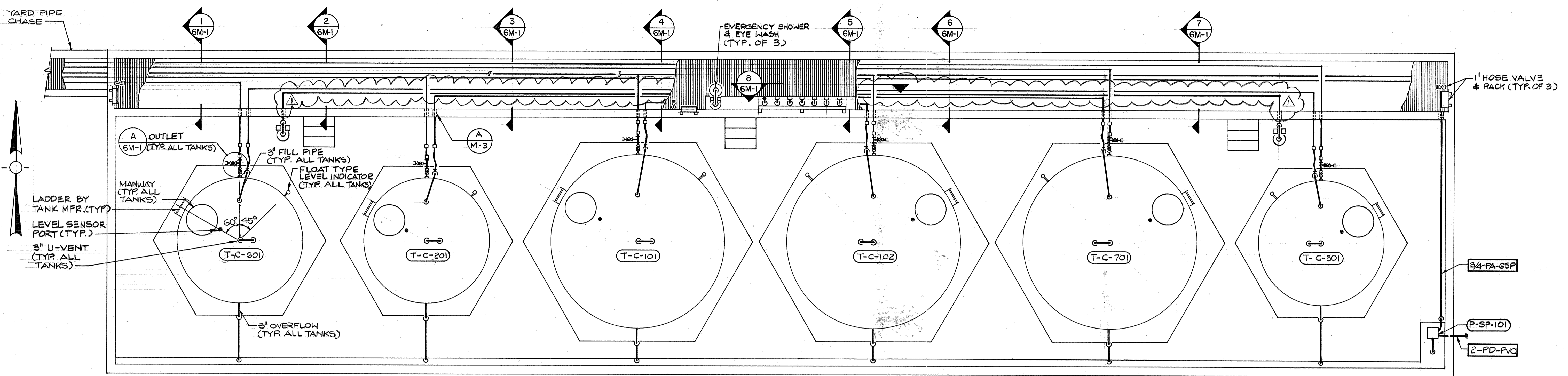
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 WATER TREATMENT PLANT EXPANSION 1988
 OPERATION BUILDING
 SECTIONS & DETAILS

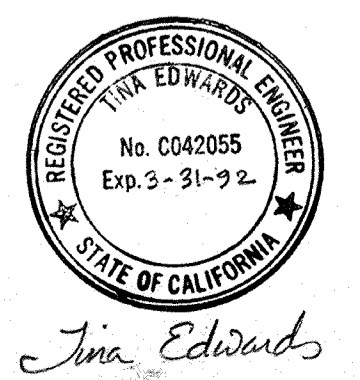
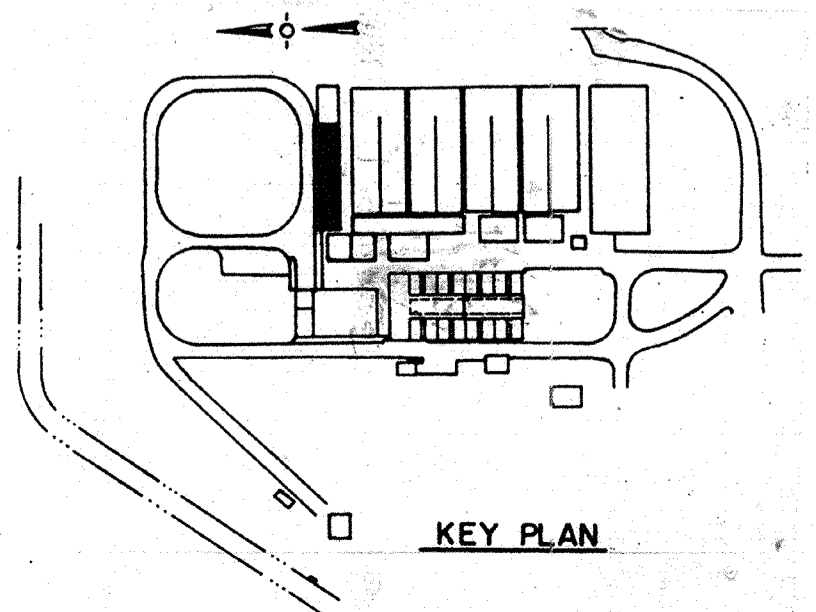
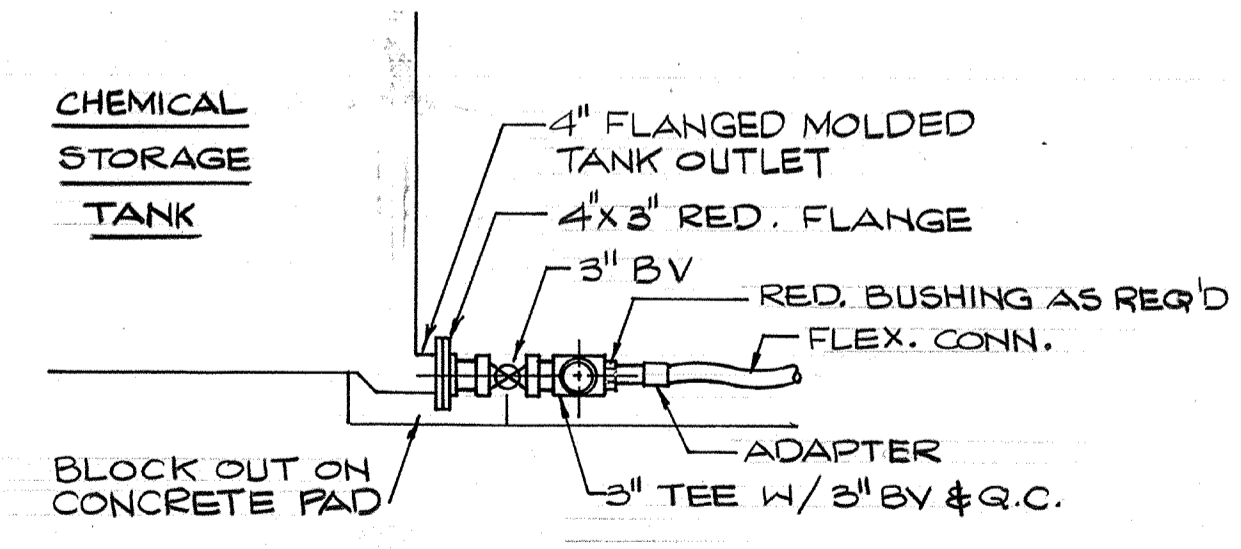
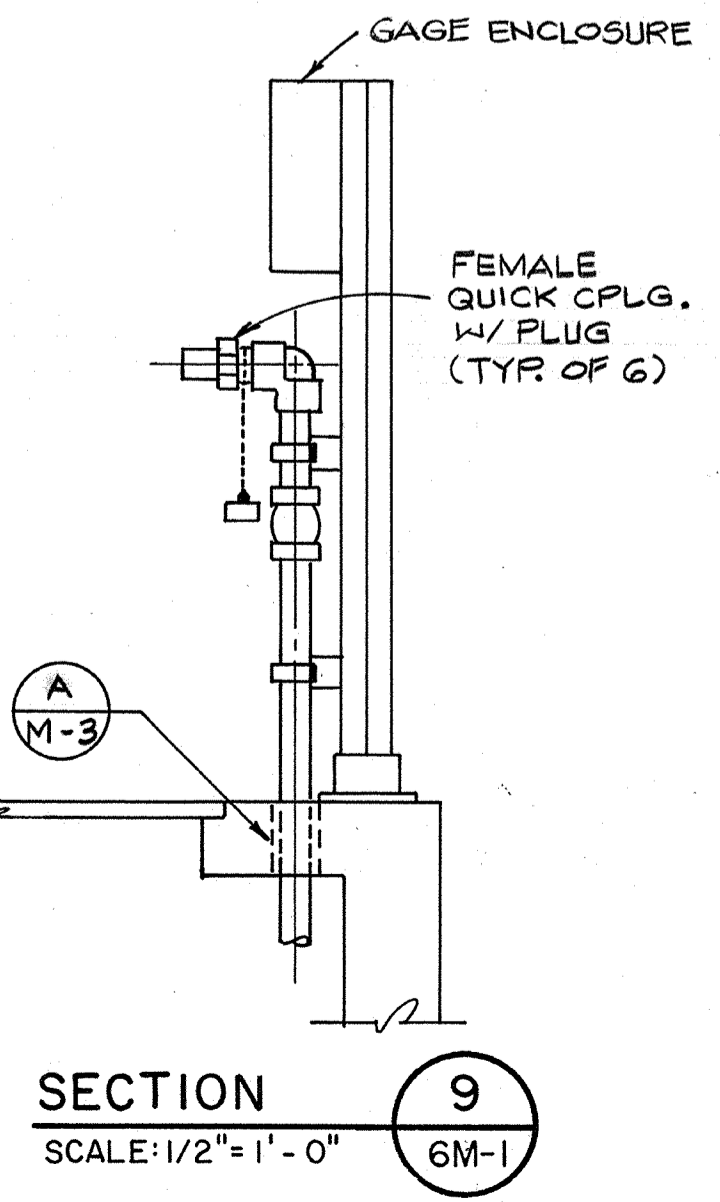
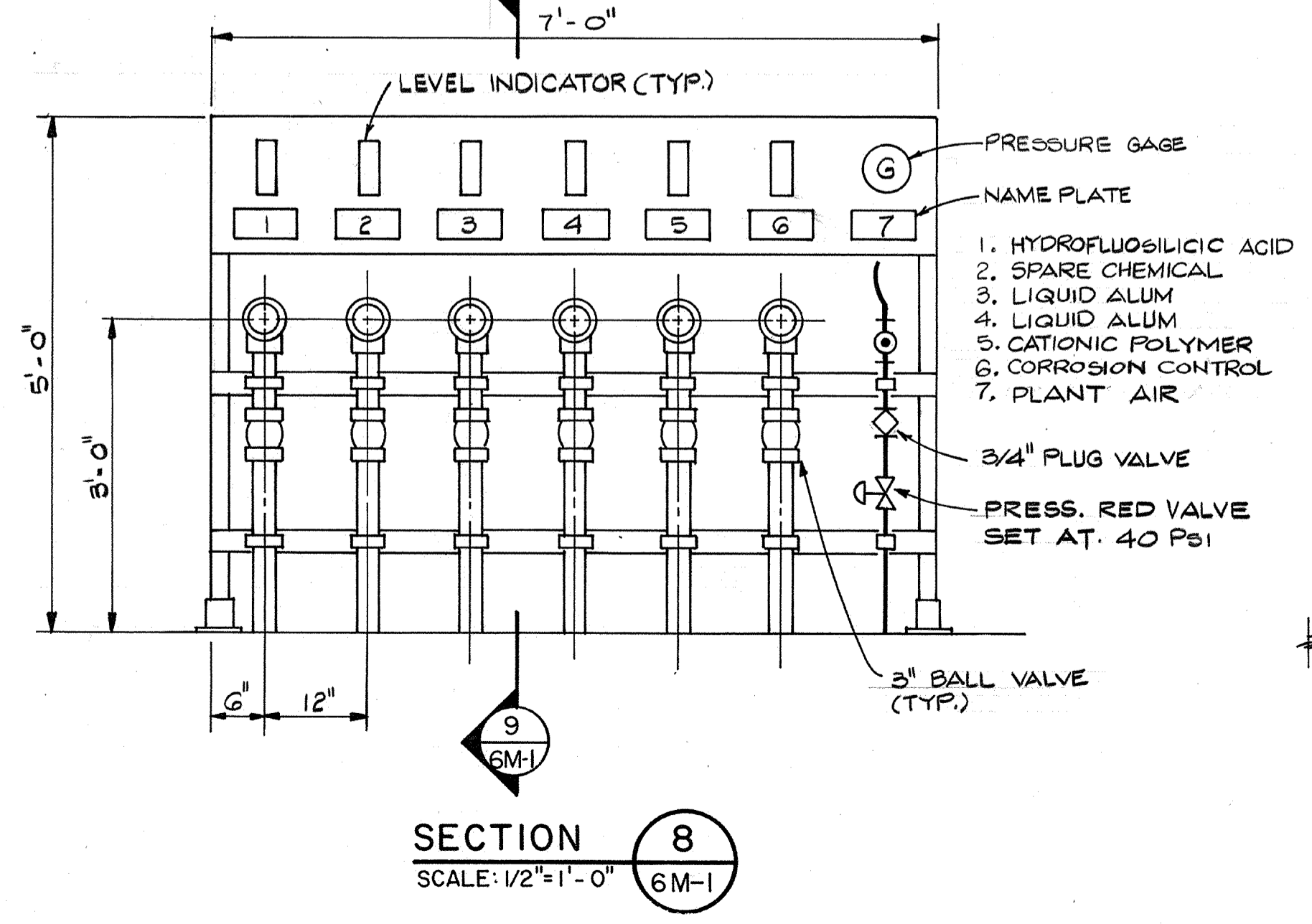
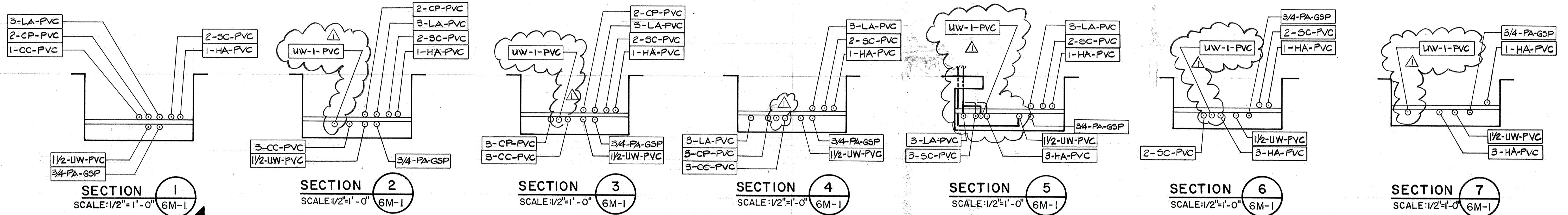
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 710 South Broadway
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 environmental engineers, scientists,
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SHEET NO.
 5M - 3
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111335
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 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



CHEMICAL STORAGE AREA - PLAN
 SCALE: 1/4" = 1'-0"



Date	Ch'k'd	Revision
4/11/91		REVISOR FOR THE RECORD
Designed by:	TCE	Date: SEPT. 1988
Drawn by:	FD/GM	Checked by: MDR
Approved by:	PFM	Scale: AS NOTED

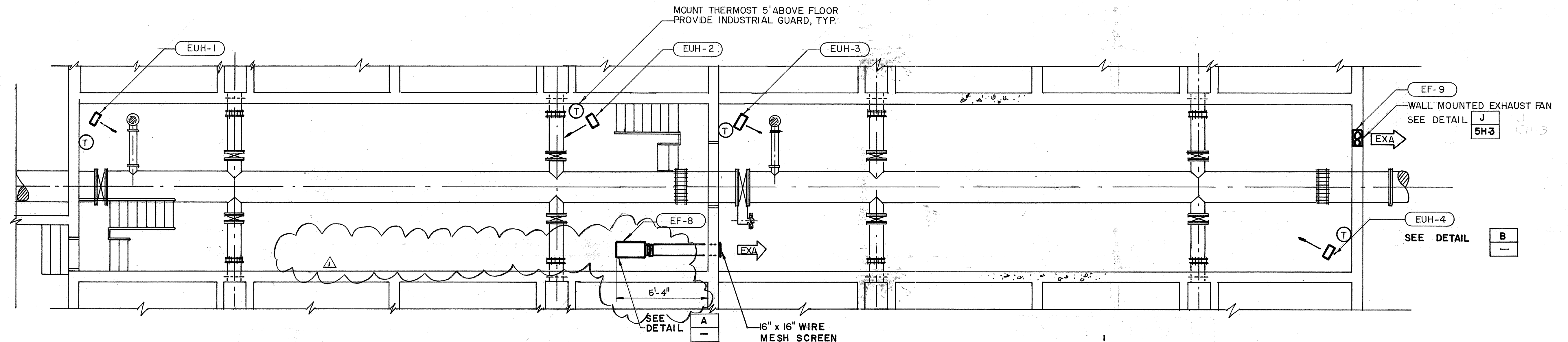
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 WATER TREATMENT PLANT EXPANSION 1988
CHEMICAL STORAGE AREA
 PLAN, SECTIONS & DETAILS

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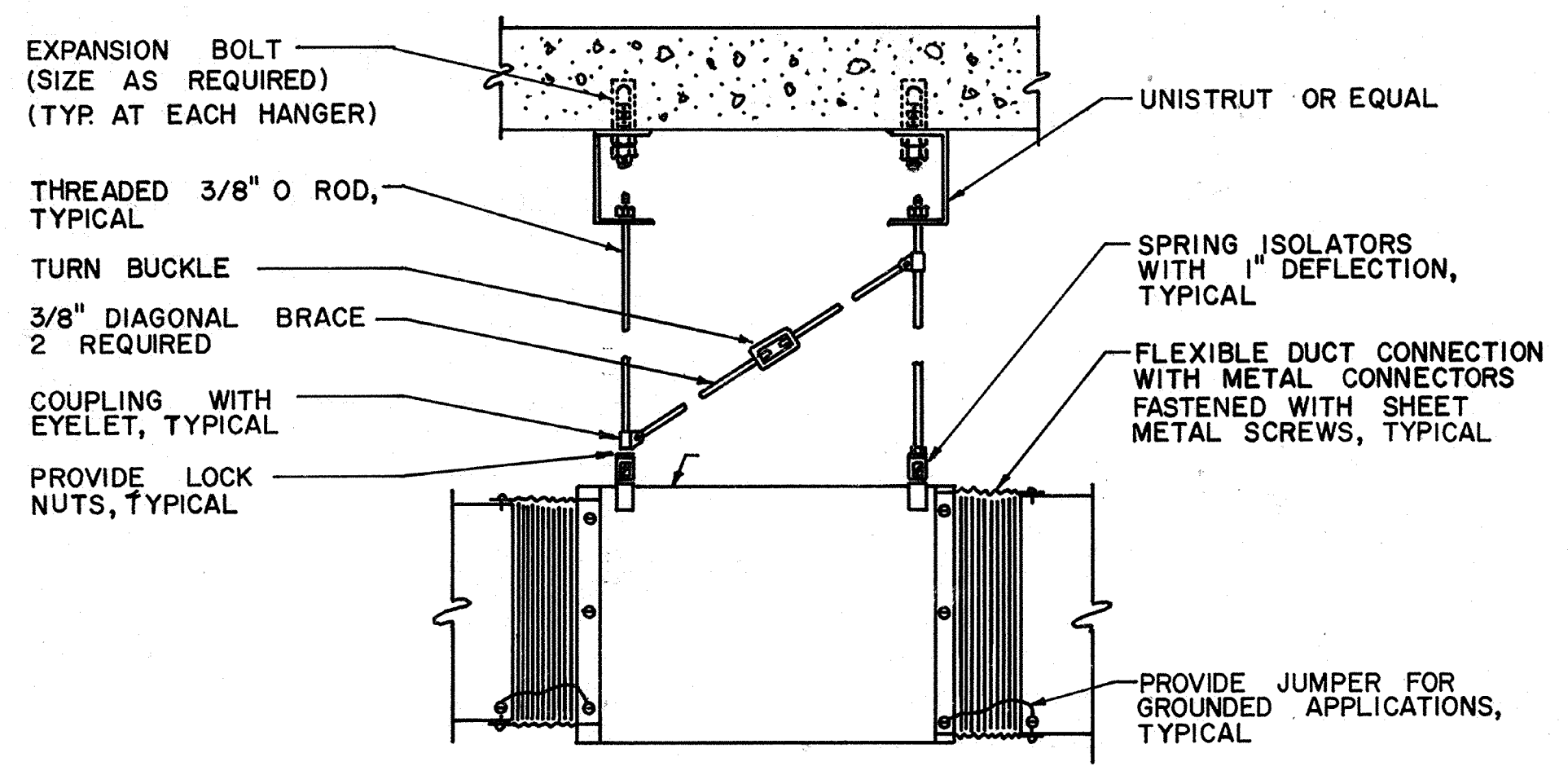
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 ELECTRICAL Approved by: Date:
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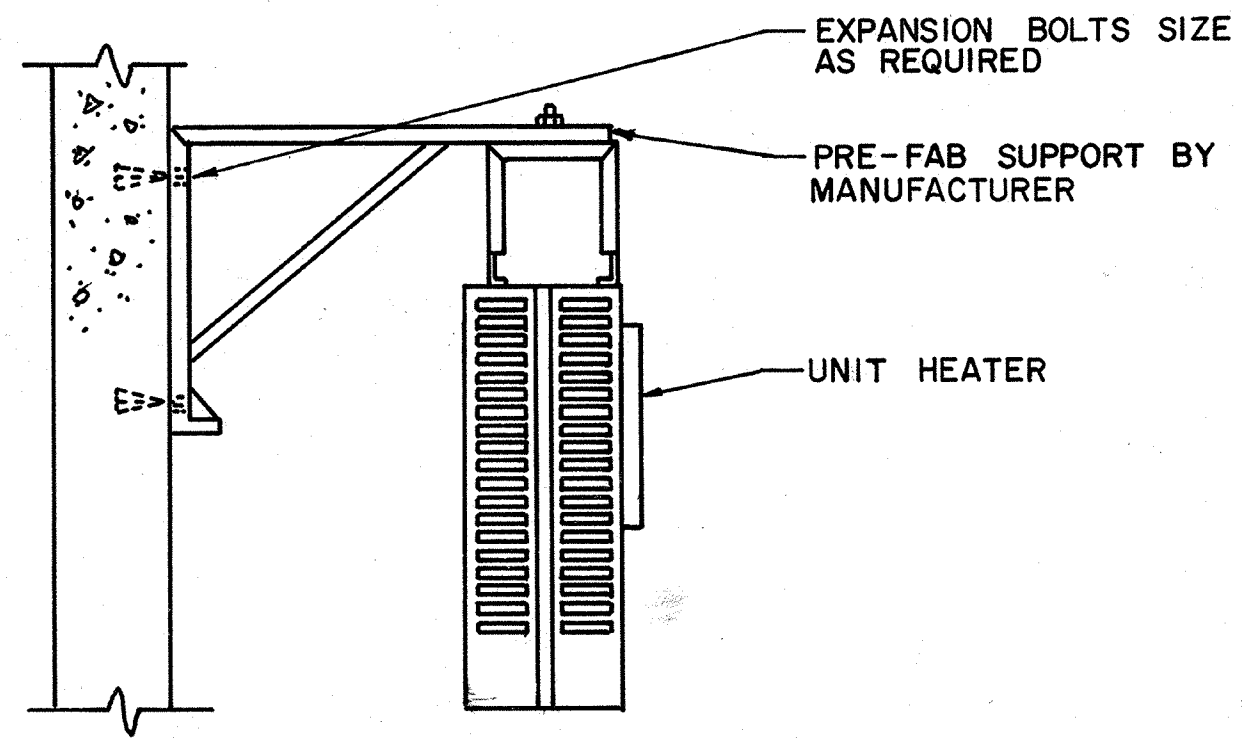


FLOOR PLAN
SCALE: 3/16" = 1'0"



INLINE FAN

DETAIL A
NO SCALE



ELECTRIC UNIT HEATER

DETAIL B
NO SCALE

FAN SCHEDULE												
EQUIPMENT NUMBER	LOCATION	MANUFACTURER & MODEL NO.	TYPE	WHEEL DIAM. INCHES	DRIVE	FAN			MOTOR			REMARKS
						CFM	S.P. "WC.	RPM	HP	RPM	VOLTS PHASE	
EF - 8	FILTER GALLERY	GREENHECK BSQ - 12	IN-LINE CENTRIFUGAL	12	BELT	1170	.125	1275	1/4	1725	120V-1Ø	—
EF - 9	FILTER GALLERY	GREENHECK SDE - 12 - 24 - A	PROPELLER	12	DIRECT	1030	.10	1725	1/4	1725	120V-1Ø	—
EF - 10	ELECT. R.M. OP. BLDG.	GREENHECK SDE - 12 - 32 C	PROPELLER	12	DIRECT	288	.125	860	1/8	860	120V-1Ø	—
EF - 11	RAW W. PUMP STATION MCC	GREENHECK GB - 10	ROOF EXHAUST	10	BELT	700	.125	970	1/4	1725	120V-1Ø	—
EF - 12	EXIST. CHLORIN. BUILDING	GREENHECK SDE - 16 - 24 B	PROPELLER	16	DIRECT	1470	.125	1140	1/6	1140	120V-1Ø	—
EF - 13	EXIST. CHLORIN. BUILDING	GREENHECK SDE - 16 - 24 B	PROPELLER	16	DIRECT	1470	.125	1140	1/6	1140	120V-1Ø	—
EF - 14	CONTROL BLDG. BASEMENT	GREENHECK BSQ - 16	IN-LINE CENTRIFUGAL	16	BELT	2400	.125	910	1/3	1725	120V-1Ø	—

ELECTRIC UNIT HEATER SCHEDULE								
EQUIPMENT NUMBER	LOCATION	MANUFACTURER & MODEL NO.	CFM	KW	VOLTS PH ASE	MOUNTING HEIGHT	ACCESSORIES	REMARKS
EUH - 1	FILTER GALLERY	TRANE UHEC - 053D	400	5.0	480V-3Ø	—	AS SPEC.	—
EUH - 2	FILTER GALLERY	TRANE UHEC - 053D	400	5.0	480V-3Ø	—	AS SPEC.	—
EUH - 3	FILTER GALLERY	TRANE UHEC - 053D	400	5.0	480V-3Ø	—	AS SPEC.	—
EUH - 4	FILTER GALLERY	TRANE UHEC - 053D	400	5.0	480V-3Ø	—	AS SPEC.	—

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 PFM 5/10/91
 SIGNATURE DATE

CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
 FILTER GALLERY
 HVAC PLAN, SECTION,
 DETAILS AND SCHEDULES

4/11/91 REVISOR FOR THE RECORD
 Date Ch'k'd Revision

Designed by: RK
 Drawn by: RK/JB
 Checked by: LF
 Approved by: PFM

Date: 9/88
 Scale: AS SHOWN

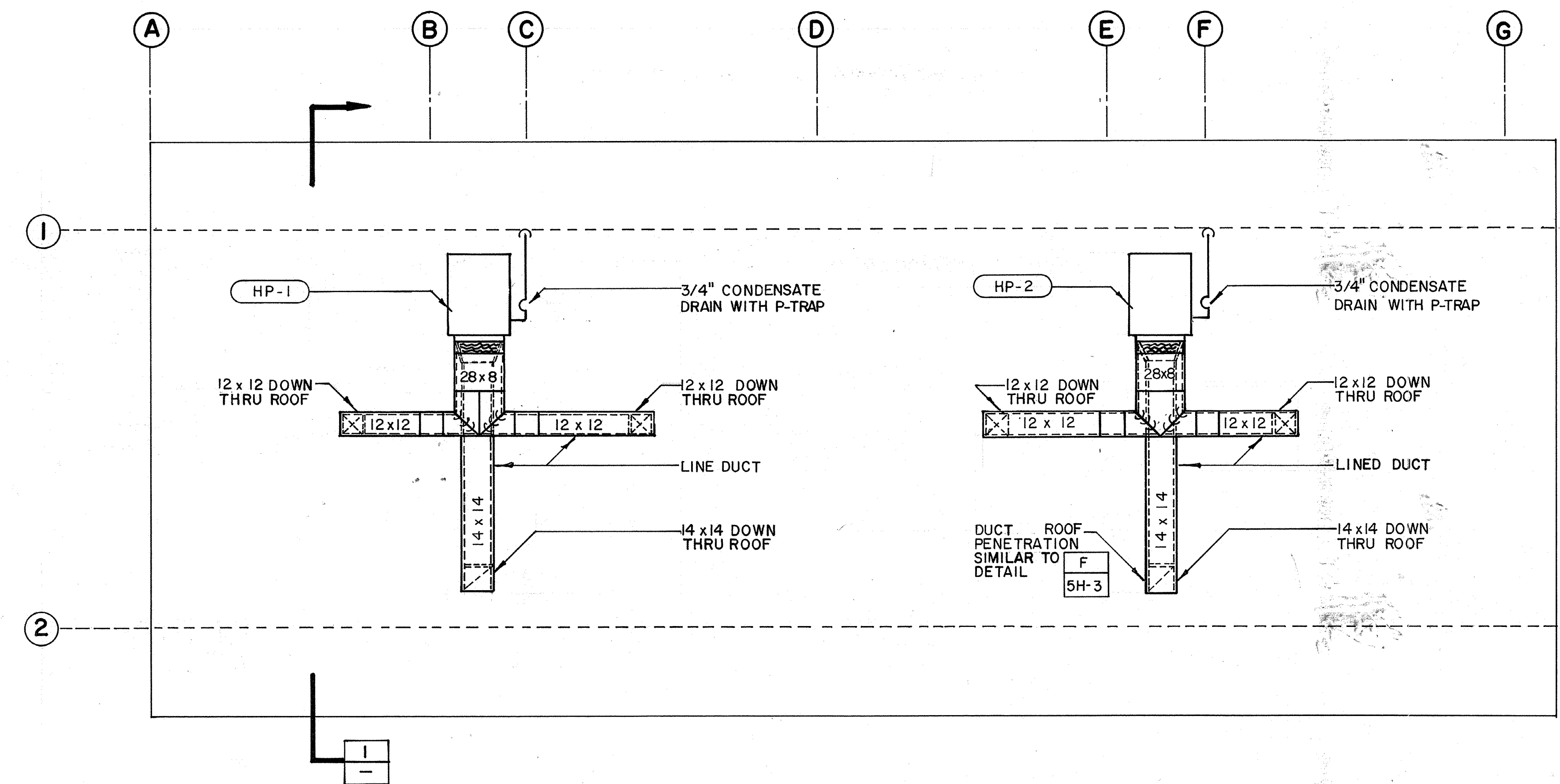
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environmental engineers, scientists,
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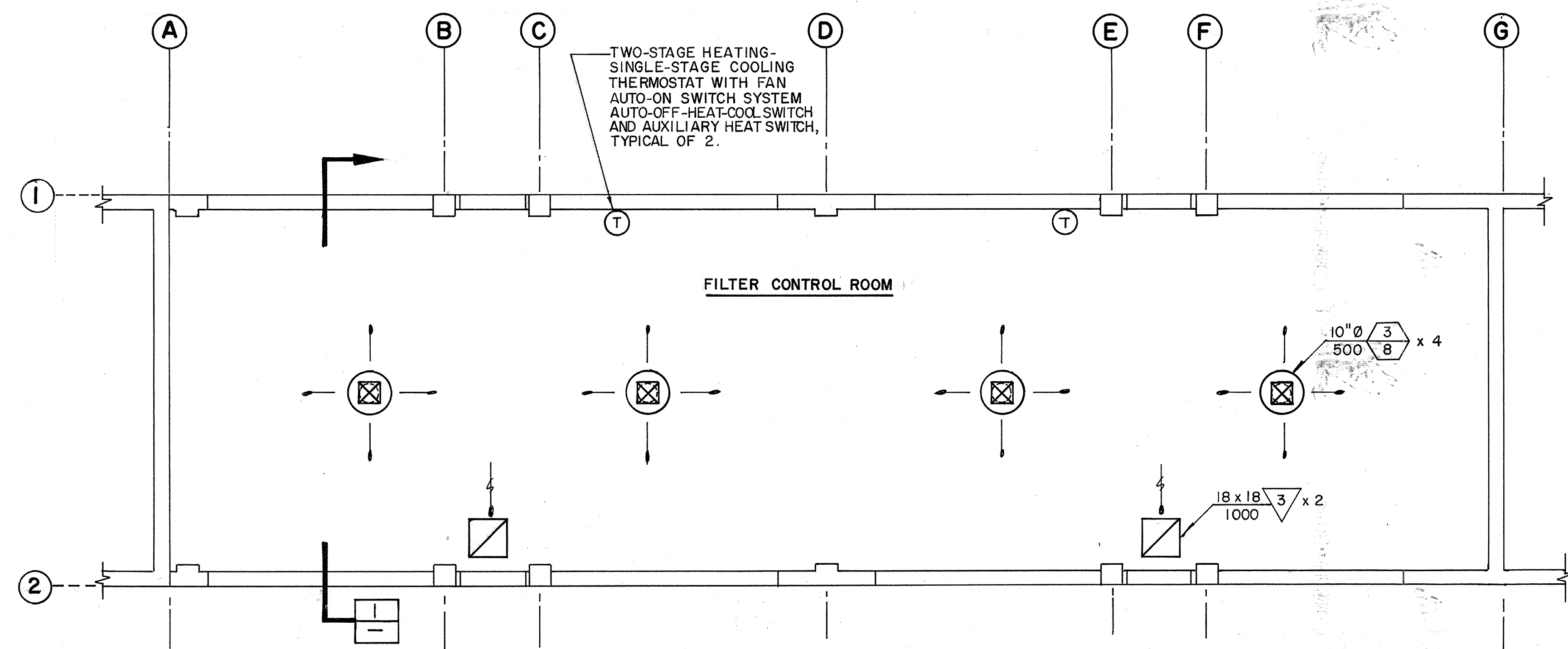
SHEET NO.
3H-1
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 CONSULTING ENGINEERS, INC.
 100 BONDARIE BLVD SUITE 200 WALNUT CREEK, CALIFORNIA 94596

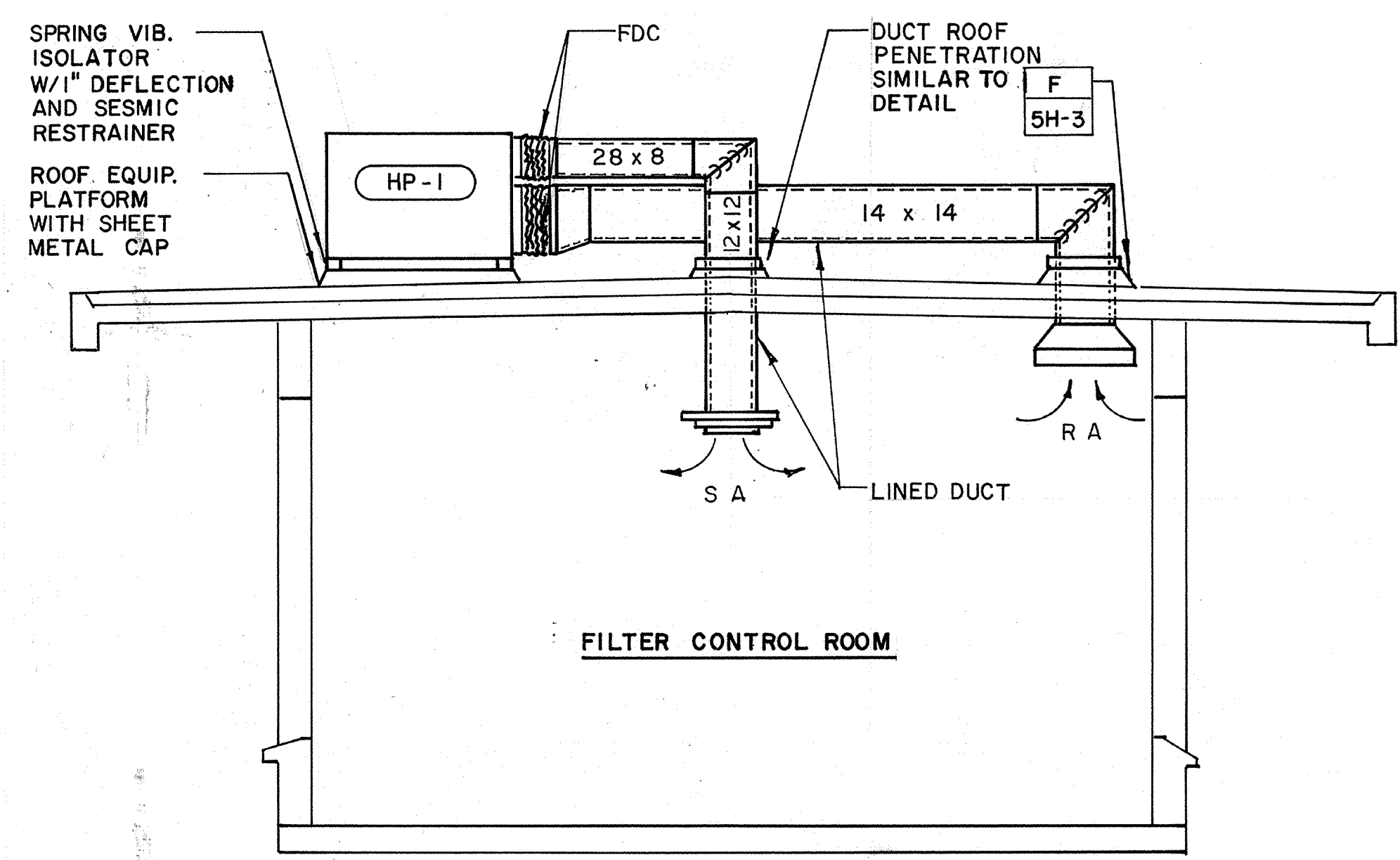
11235
 PROJECT MANAGER Date: Approved by:
 PROJECT ENGINEER Date: Approved by:
 PLUMBING Date: Approved by:
 HVAC Date: Approved by:
 INSTRUMENTATION Date: Approved by:
 ELECTRICAL Date: Approved by:
 STRUCTURAL Date: Approved by:
 ARCHITECTURAL Date: Approved by:



ROOF PLAN
 SCALE: 1/4" = 1'0"



FLOOR PLAN
 SCALE: 1/4" = 1'0"



SECTION 1
 SCALE: 3/8" = 1'0"

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CITY OF PITTSBURG, CA		SHEET NO. 3H-2	
WATER TREATMENT PLANT EXPANSION		CAMP DRESSER & MCKEE INC.	
FILTER GALLERY		710 South Broadway Walnut Creek, CA 94596	
HVAC PLANS AND SECTION		environmental engineers, scientists, planners, & management consultants	
Date	Ch'k'd	Revision	AS SHOWN
Designed by: RK	Drawn by: JB/RK	Date: 9/88	
Checked by: LF	Approved by: PFM		

LARS FAGERSTROM
 CONSULTING ENGINEERS, INC.
 400 BOND ST. SUITE 200, WALNUT CREEK, CALIFORNIA 94596 (916) 932-2000

11338
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:

FAN SCHEDULE (ADDITIONAL SCHEDULE SHOWN ON DRAWING 3H-1)													
EQUIPMENT NUMBER	LOCATION	MANUFACTURER & MODEL NO.	TYPE	WHEEL DIAM. INCHES	DRIVE	FAN			MOTOR			ACCESSORIES	REMARKS
						CFM	SP WC	RPM	HP	RPM	VOLT PHASE		
EF-1	LOWER ROOF	GREENHECK GB-24-3	ROOF EXHAUST	24	BELT	3700	.35	550	1-1/2	1725	460V-3Ø	AS SPECIFIED	
EF-2	LOWER ROOF	GREENHECK GB-14-4	ROOF EXHAUST	14	BELT	1460	.125	865	1/4	1725	120V-1Ø	AS SPECIFIED	
EF-3	MECHANICAL ROOM	GREENHECK SDE-12-32-B	SIDE WALL PROPELLER	12-3/8	DIRECT	680	.125	1140	1/6	1140	120V-1Ø	AS SPECIFIED	
EF-4	ROOF	AEROVENT SWCB 315A9	CENTRIFUGAL	12.4	BELT	1500	.60	2153	1/2	1725	460V-3Ø	AS SPECIFIED	FIBER GLASS
EF-5	ROOF	GREENHECK GB-10-4	ROOF EXHAUST	10	BELT	1000	.35	1400	1/4	1725	120V-1Ø	AS SPECIFIED	
RF-1	MECHANICAL ROOM	GREENHECK BSQ 14-5	IN-LINE CENTRIFUGAL	14	BELT	2000	.50	1320	3/4	1725	460V-3Ø	AS SPECIFIED	
EF-6	ROOF	GREENHECK GB-14-4	ROOF EXHAUST	14	BELT	1800	.25	1125	1/3	1725	120V-1Ø	AS SPECIFIED	
EF-7	ROOF	GREENHECK GB-14-4	ROOF EXHAUST	14	BELT	1500	.25	970	1/4	1725	120V-1Ø	AS SPECIFIED	

HOT WATER HEATING COIL SCHEDULE															
EQUIPMENT NUMBER	LOCATION	MANUFACTURER & MODEL NO.	CFM	NO. OF COILS xW xL INCHES	FACE VEL FPM	ROWS	FINS PER INCH	AIR				WATER			
								EDB °F	LDB °F	PD °WC	MBH	GPM	EWT °F	LWT °F	PD FT. WC
HC-1	AHU-1	TRANE-W-PF	6000	1 x 30 x 48	600	1	133	41	71.9	.14	200.9	13.4	190	160	.1
HC-2	AHU-2	TRANE-W-PF	3600	1 x 24 x 36	600	2	99	34	78.8	.19	175.0	8.8	190	150	.1

PACKAGE HEAT PUMP SCHEDULE																		
EQUIPMENT NUMBER	LOCATION	MANUFACTURER & MODEL NO.	SENSIBLE COOLING MBH	MBH HEATING	EVAP. FAN			COOLING				HEATING		COND. FAN CFM	ELECTRICAL			REMARKS
					CFM	EXT. SP	RPM	EWB °F	EDB °F	LWB °F	LDB °F	EDB °F	LDB °F		KW*	VOLT PHASE	FLA	
HP-1	FILTER GALLERY ROOF	TRANE BWCO36C	27.3	26.0	1200	.54	STD.	63	78	54	55	68	90	STD.	4.13	460V-3Ø	7.4	AUX. ELEC. HTG. COIL 5.76 KW
HP-2	FILTER GALLERY ROOF	TRANE BWCO36C	27.3	26.0	1200	.54	STD.	63	78	54	55	68	90	STD.	4.13	460V-3Ø	7.4	AUX. ELEC. HTG. COIL 5.76 KW

*AUX. HEATING NOT INCLUDED

AIR FILTER SCHEDULE												
EQUIPMENT NUMBER	LOCATION	MANUFACTURER & MODEL NO.	TYPE	ENCLOSURE	CFM	SIZE WIDTH X HEIGHT	MAXIMUM FACE VELOCITY FPM	PRE FILTER	EFF %	PRESSURE DROP		ELECT. POWER
										INITIAL INCH WC	FINAL INCH WC	
AF-1	AHU-1	CAMBRIDGE SIDE CAP	CARTRIDGE	SIDE SERVICE HOUSING	6000	4' 1-3/4" x 3' 2-3/8"	500	YES	40	.2	.5	

VARIABLE VOLUME REHEAT BOX SCHEDULE															
EQUIPMENT NUMBER	LOCATION	MANUFACTURER MODEL NO.	CFM MAX.	CFM MIN.	MAX. P. D.	AIRFLOW MAX. SELF-GENERATED NOISE IN DECIBELS RE 10-12 WATTS						REHEAT	ARRANGEMENT	REMARKS	
						OCTAVE BAND MID-FREQUENCY, HZ									
						125	250	500	1000	2000	4000				8000
VVB-1	OPERATIONS BLDG.		1500	940	.09	60	53	48	45	42	40	39	RH-1	OPEN END	
VVB-2	OPERATIONS BLDG.		1255	440	.10	60	53	48	45	42	40	39	RH-2	OPEN END	
VVB-3	OPERATIONS BLDG.		450	160	.06	60	53	48	45	42	40	39	RH-3	OPEN END	
VVB-4	OPERATIONS BLDG.		600	280	.09	60	53	48	45	42	40	39	RH-4	OPEN END	
VVB-5	OPERATIONS BLDG.		400	200	.05	60	53	48	45	42	40	39	RH-5	OPEN END	

HVAC SYMBOLS

- SUPPLY AIR DUCT
- OUTSIDE AIR DUCT
- RETURN OR EXHAUST AIR DUCT
- DUCT WITH INTERNAL LINING
- FLEXIBLE DUCT CONNECTION
- MANUAL VOLUME DAMPER
- AUTOMATIC DAMPER
- FIRE DAMPER
- BACK DRAFT DAMPER
- AIR TURNING VANES IN DUCT
- OSA OUTSIDE AIR
- EXA EXHAUST AIR
- RA RETURN AIR
- TA TRANSFER AIR
- SA SUPPLY AIR
- NECK SIZE CFM TYPE 1-4 THROW SUPPLY DIFFUSER
- NECK SIZE CFM TYPE 2-4 EXTRACTOR SUPPLY GRILLE OR REGISTER
- NECK SIZE CFM TYPE 4-6 RETURN GRILLE OR REGISTER
- T THERMOSTAT
- S SENSOR
- FS FLOW SWITCH
- DS DISCONNECT SWITCH
- MS MOTOR STARTER
- OBVD OPPOSED BLADE VOLUME DAMPER
- HC HEATING COIL
- CC COOLING COIL
- TCP TEMPERATURE CONTROL PANEL
- FC FLEXIBLE CONNECTION
- NC NORMALLY CLOSED
- NO NORMALLY OPEN

PIPING SYMBOLS

- MOTOR OPERATED VALVE 2-WAY
- MOTOR OPERATED VALVE 3-WAY
- GATE VALVE
- PLUG VALVE
- BALANCING VALVE
- PRESSURE RELIEF VALVE
- DIRECTION OF FLOW
- GAGE COCK
- PRESSURE GAGE
- STRAINER
- UNION OR FLANGE
- AUTOMATIC AIR VENT
- FLEXIBLE PIPE CONNECTION
- PUMP
- THERMOMETER
- RISER DOWN (ELBOW)
- RISER UP (ELBOW)
- BRANCH - TOP CONNECTION
- BFP BACKFLOW PREVENTER
- PRESSURE REGULATING VALVE
- SAFETY RELIEF VALVE
- CHS CHILLED WATER SUPPLY
- CHR CHILLED WATER RETURN
- HWS HOT WATER SUPPLY
- HWR HOT WATER RETURN
- PRESSURE/TEMP. PLUG

AS-BUILT
 Signature: *[Signature]* 5/10/91
 DATE

CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
 OPERATIONS BUILDING
 HVAC SYMBOLS AND SCHEDULES

Date	Ch'k'd	Revision
Designed by: RK	Drawn by: LDF/JB	Date: 9/88
Checked by: LFP	Approved by: PFM	Scale: NS

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

CDM

SHEET NO.
 5H-1
 94 of 147

LARS FAGERSTROM
 CONSULTING ENGINEERS, INC.

111335
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 ELECTRICAL Approved by: _____ Date: _____
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WATER CHILLER SCHEDULE																	
EQUIPMENT NUMBER	LOCATION	MANUFACTURER & MODEL NO.	EVAPORATOR				CONDENSER				UNIT				OP. WT. LBS.	ACCESSORIES	
			GPM	EWT °F	LWT °F	PD FT	TONS	CFM	ET °F	-	-	KW	VOLT PHASE	FLA			LRA
CH-1	OPERATIONS BLDG.	TRANE CGAC-C20	42.5	55	45	13.5	17.7	12,400	97	-	-	22.3	460V-3Ø	33.2	172	2278	AS SPECIFIED

PUMP SCHEDULE														
EQUIPMENT NUMBER	LOCATION	MANUFACTURER & MODEL NO.	TYPE	SUCTION SIZE INCHES	DISCH. SIZE INCHES	SERVICE	GPM	THD FT.	%EFF	MOTOR				REMARKS
										HP	RPM	VOLTS PHASE	ENCLOSURE	
P-1	OPERATIONS BLDG.	BELL & GOSSETT SERIES 1510	BASE MOUNTED	1-1/2	1-1/4	CHILLED WATER	45	36	49	1	1750	460V-3Ø	TEFC	-
P-2	OPERATIONS BLDG.	BELL & GOSSETT SERIES 60	IN-LINE	1-1/2	1-1/2	HOT WATER	40	30	43	3/4	1750	460V-3Ø	TEFC	-

HOT WATER UNIT HEATER SCHEDULE														
EQUIPMENT NUMBER	LOCATION	MANUFACTURER & MODEL NO.	FAN CFM	MOTOR			HEATING COIL					ACCESSORIES	OPER. WT. LBS.	
				HP	RPM	VOLTS PHASE	TYPE	MIN MBH	GPM	EWT °F	LWT °F			PD
UH-1	CHLORINE STORAGE ROOM	TRANE UHSA-070-S	100	1/8	1550	115V-1Ø	W	36.3	2.4	190	160	0.26	MTNG. BRACKET	60
UH-2	CHLORINE STORAGE ROOM	TRANE UHSA-070-S	100	1/8	1550	115V-1Ø	W	36.3	2.4	190	160	0.26	MTNG. BRACKET	60

EXPANSION TANK SCHEDULE													
EQUIPMENT NUMBER	LOCATION	MANUFACTURER & MODEL NO.	TYPE	TANK VOL. GAL.	SIZE		INITIAL CHARGE PSI	AMSE WORKING PRESS. PSI.	ACCESSORIES				OPER. WT. LBS.
					DIA. INCHES	LENGTH INCHES			PRESSURE GAGE	CHARGE CONNECTION	DRAIN	VENT	
EXP-1	OPERATIONS BLDG.	EXTROL-20	COMPRESSION	10	12	25-3/4	12	27	YES	YES	YES	YES	200
EXP-2	OPERATIONS BLDG.	EXTROL-40	COMPRESSION	20	12	49	12	27	YES	YES	YES	YES	400

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BOILER SCHEDULE													
EQUIPMENT NUMBER	LOCATION	MANUFACTURER & MODEL NO.	TYPE	FUEL	CAPACITY MBH		ELECTRICAL		HTG. SURFACE SQ. FT.	ASME DESIGN PRESSURE PSI	OPER. WT. LBS.	ACCESSORIES	REMARKS
					INPUT	OUTPUT	HP	VOLTS PHASE					
B-1	OPERATIONS BLDG.	BRYAN D650W-WT-FDG	FORCED DRAFT	GAS	650	520	-	120V-1Ø	3020	30	850	AS SPECIFIED	-

AIR HANDLING UNIT SCHEDULE																			
EQUIPMENT NUMBER	LOCATION	MANUFACTURER & MODEL NO.	PRESSURE CLASSIFICATION	FAN			MOTOR				FAN WHEEL		HEATING COIL	COOLING COIL	FILTER	FINISH TYPE		OPER. WT. LBS.	REMARKS
				CFM	EXT SP "WC	RPM	HP	VOLT	RPM	ENCLOSURE	SIZE INCHES	TYPE				INT.	EXT.		
AHU-1	MECHANICAL ROOM	TRANE CLIMATE CHANGER NO. 12	MEDIUM	6000	2.25	900	5	460V-3Ø	1725	TEFC	16.5	FC	HC-1	CC-1	AF-1	STD.	STD.	1500	-
AHU-2	CHEM. FEED ROOM	TRANE TORRIVENT NO. 6A	MEDIUM	3600	1.00	875	1-1/2	460V-3Ø	1725	TEFC	12.25	FC	HC-2	-	2" THROW AWAY	STD.	STD.	500	-

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE							
MARK	MANUFACTURER & MODEL NO.	TYPE	NECK SIZE INCHES	MATERIAL	SERVICE	MAX. NC. LEVELS (SEE SPEC)	REMARKS
1	BARBER COLMAN P SERIES	PERF. FACE DIFFUSER	VARIES	STEEL	CEILING	NC-30	VOLUME CONTROL
2	BARBER COLMAN P SERIES	PERF. FACE DIFFUSER	VARIES	STEEL	CEILING	NC-30	VOLUME CONTROL
1	BARBER COLMAN P SERIES	PERF. FACE RETURN	VARIES	STEEL	CEILING	NC-30	VOLUME CONTROL
2	BARBER COLMAN P SERIES	PERF. FACE RETURN	VARIES	STEEL	CEILING	NC-30	VOLUME CONTROL
3	BARBER COLMAN T DX	LATTICE GRID RETURN	VARIES	STEEL	CEILING	NC-30	VOLUME CONTROL
4	BARBER COLMAN GMRV	RETURN REGISTER	VARIES	STEEL	SIDEWALL DUCT	NC-30	VOLUME CONTROL
5	NOT USED						
6	BARBER COLMAN GCH	RETURN REGISTER	VARIES	STEEL	SIDEWALL DUCT	NC-30	VOLUME CONTROL
3	BARBER COLMAN VJSV	ROUND DIFFUSER	VARIES	STEEL	CEILING	NC-30	VOLUME CONTROL
4	BARBER COLMAN GMAY	REGISTER	VARIES	STEEL	SIDEWALL DUCT	NC-30	VOLUME CONTROL

CONTROL VALVE SCHEDULE									
EQUIPMENT NUMBER	LOCATION	MANUFACTURER & MODEL NO.	TYPE	SERVICE	SIZE INCHES	GPM	PD PSI	Cv	
TCV-1	AHU-1	BARBER COLMAN	PROPORATIONAL 3-WAY	CHILLED WATER	1-1/2	42.5	2.9	25.0	
TCV-2	AHU-1	BARBER COLMAN	PROPORATIONAL 3-WAY	HOT WATER	3/4	13.4	4.7	6.2	
TCV-3	AHU-2	BARBER COLMAN	PROPORATIONAL 3-WAY	HOT WATER	3/4	11.7	3.6	6.2	
TCV-4	UH-1	BARBER COLMAN	PROPORATIONAL 2-WAY	HOT WATER	1/2	2.4	3.4	1.33	
TCV-5	UH-2	BARBER COLMAN	PROPORATIONAL 2-WAY	HOT WATER	1/2	2.4	3.4	1.33	
TCV-6	VVB-1	BARBER COLMAN	PROPORATIONAL 2-WAY	HOT WATER	1/2	2.2	2.7	1.3	
TCV-7	VVB-2	BARBER COLMAN	PROPORATIONAL 2-WAY	HOT WATER	1/2	1.8	1.9	1.3	
TCV-8	VVB-3	BARBER COLMAN	PROPORATIONAL 2-WAY	HOT WATER	1/2	0.7	2.6	0.4	
TCV-9	VVB-4	BARBER COLMAN	PROPORATIONAL 2-WAY	HOT WATER	1/2	0.9	4.7	0.4	
TCV-10	VVB-5	BARBER COLMAN	PROPORATIONAL 2-WAY	HOT WATER	1/2	0.6	2.1	0.4	
TCV-11	CVB-1	BARBER COLMAN	PROPORATIONAL 2-WAY	HOT WATER	1/2	2.2	2.7	1.33	

CITY OF PITTSBURG, CA

**WATER TREATMENT PLANT EXPANSION
 OPERATIONS BUILDING
 HVAC SCHEDULES**

Date Ch'k'd _____ Revision _____

Designed by: RK
 Drawn by: JB/LDF
 Checked by: LF
 Approved by: PFM

Date: 9/88
 Scale: N S

CAMP DRESSER & McKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

CDM SHEET NO. **5H-2**
 environmental engineers scientists
 planners & management consultants
 95 of 147

LARS FAGERSTROM
 CONSULTING ENGINEERS, INC.
 1000 BOWLING GREEN BLVD., WALNUT CREEK, CALIFORNIA 94596

111335

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

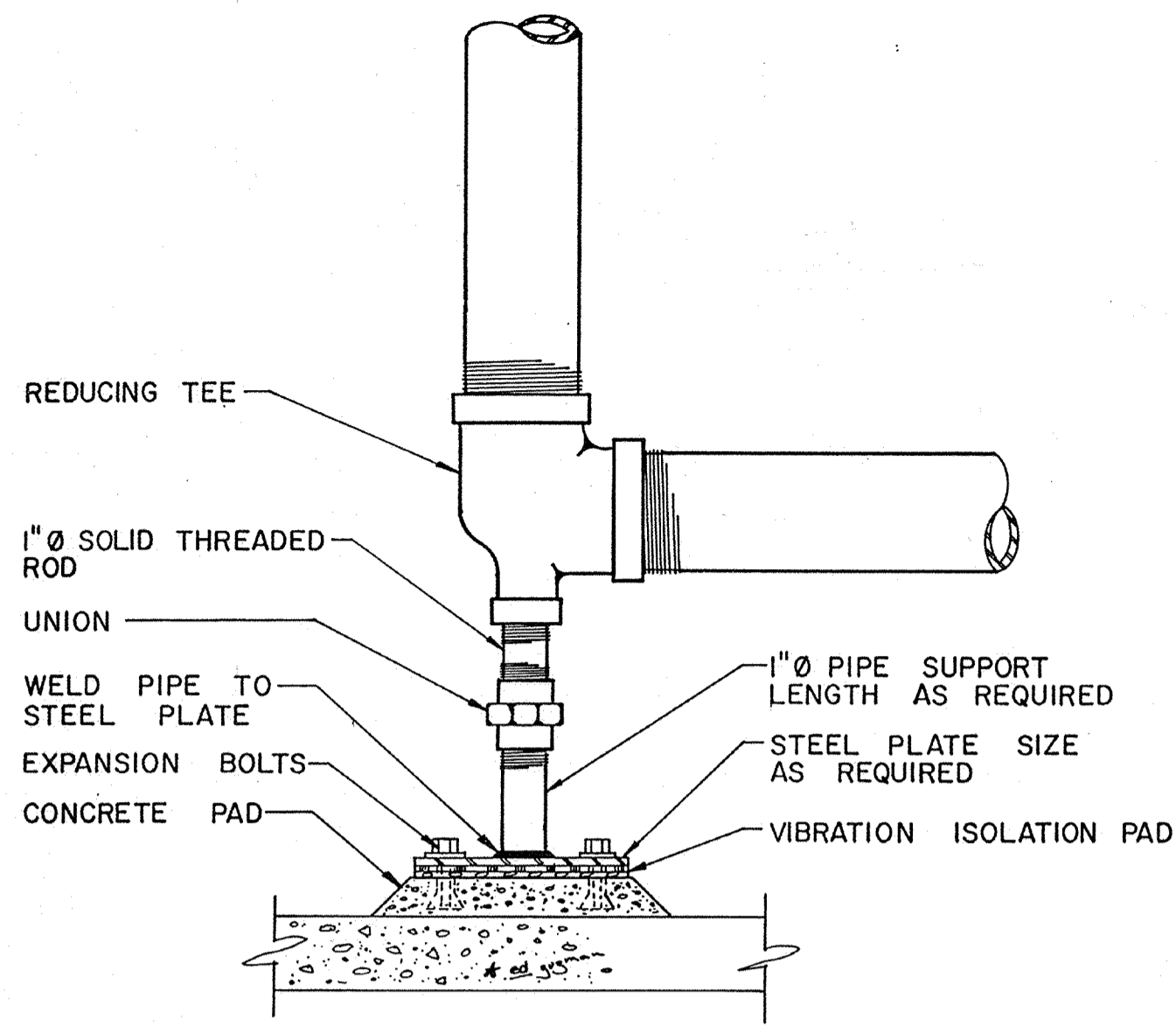
HVAC Approved by: Date:

INSTRUMENTATION Approved by: Date:

ELECTRICAL Approved by: Date:

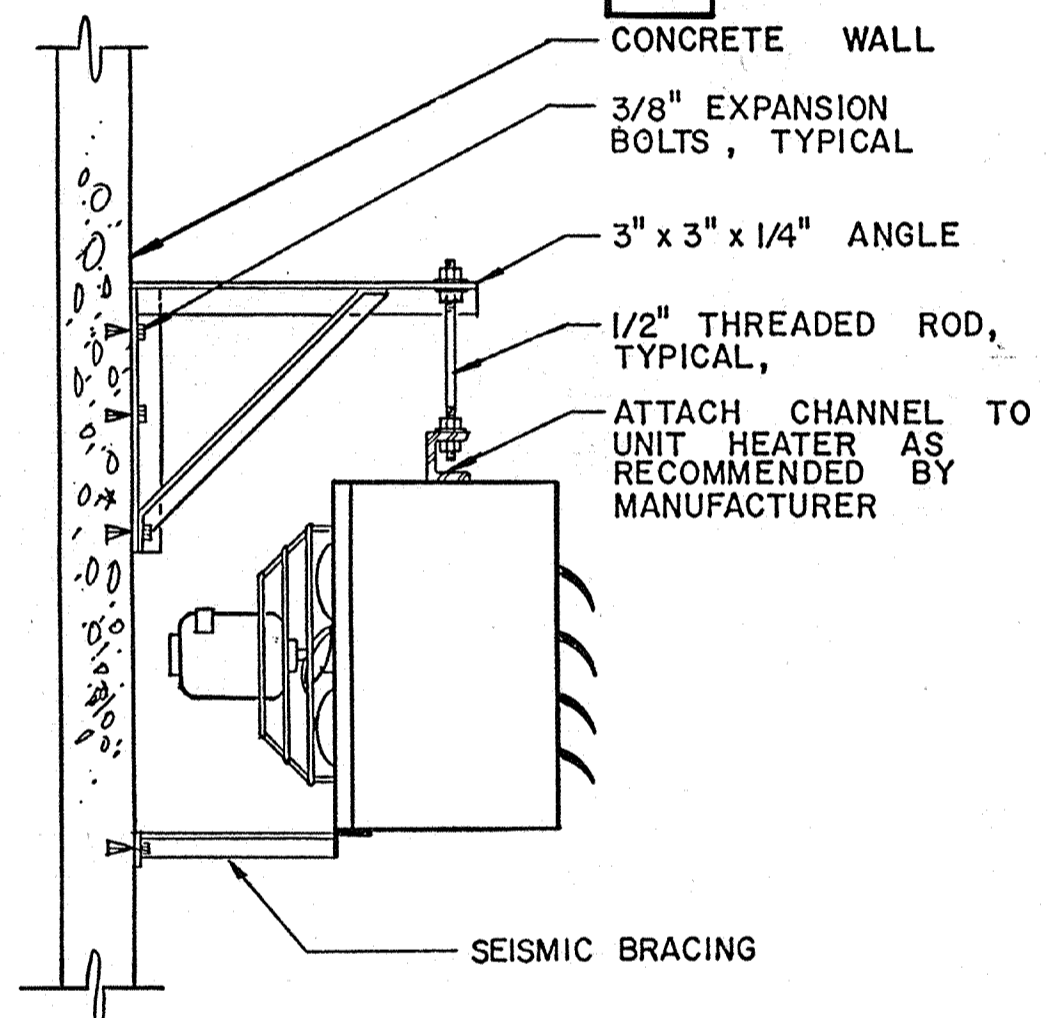
STRUCTURAL Approved by: Date:

ARCHITECTURAL Approved by: Date:



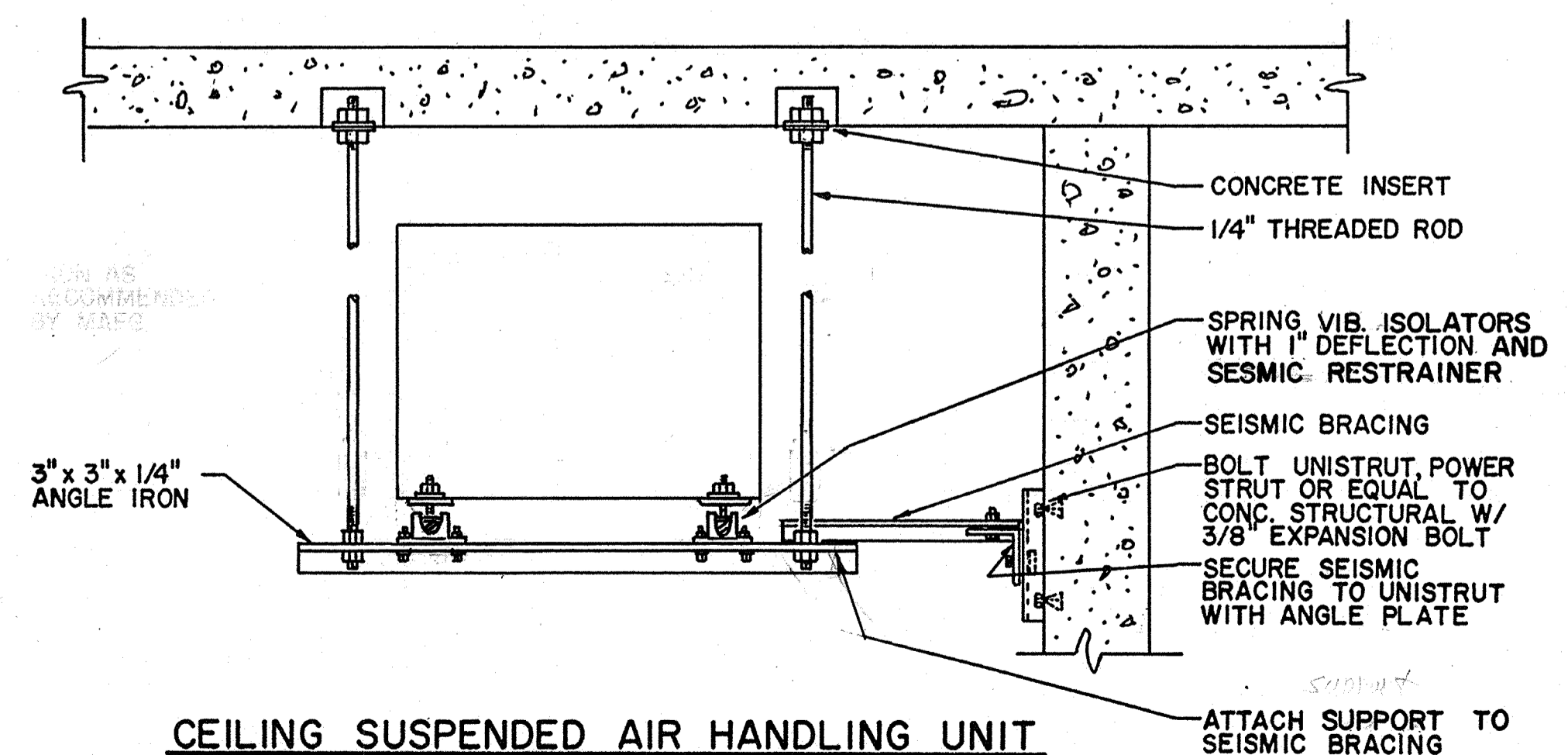
COIL PIPING SUPPORT

DETAIL **A**
NO SCALE



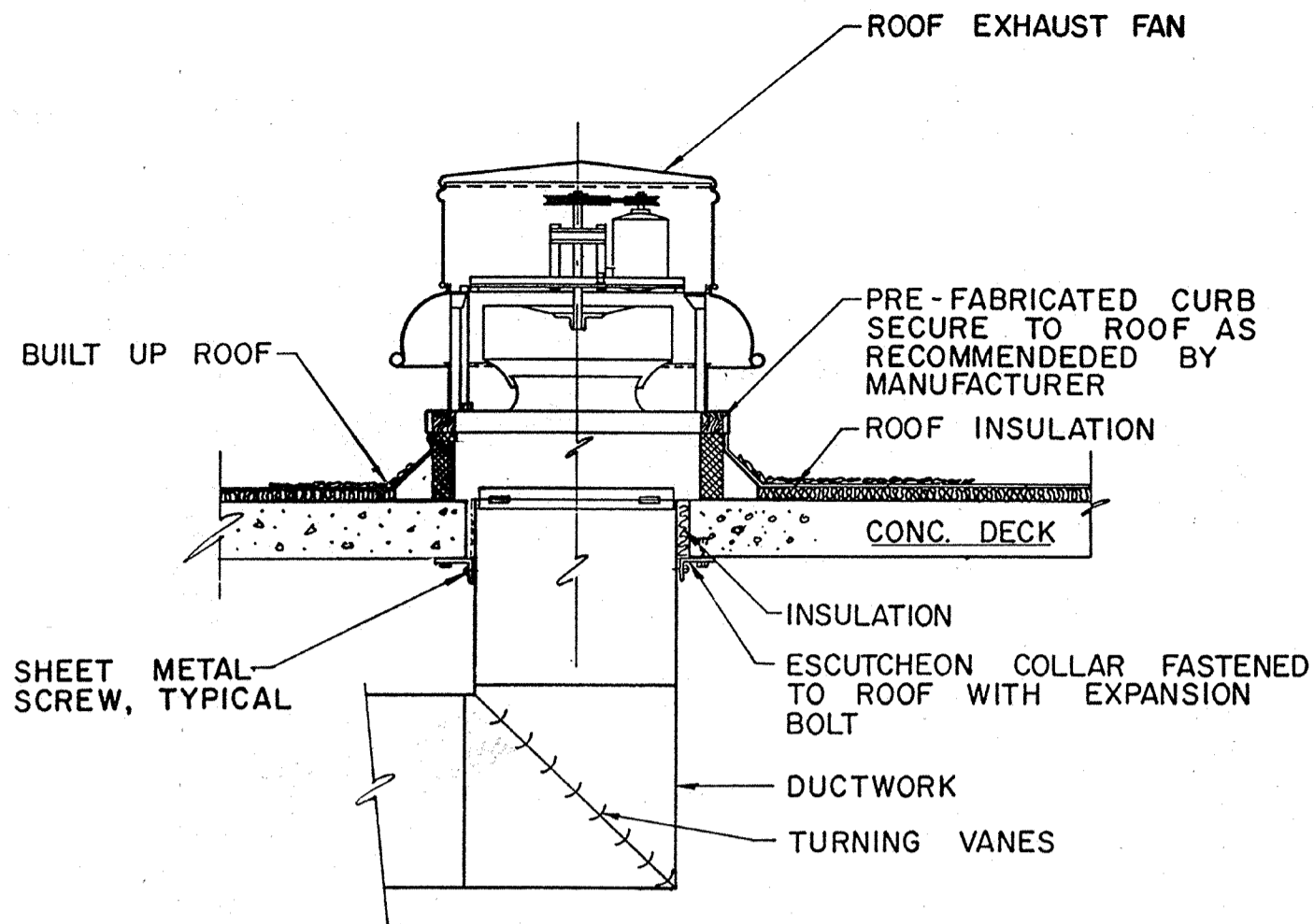
UNIT HEATER WALL MOUNTED

DETAIL **B**
NO SCALE



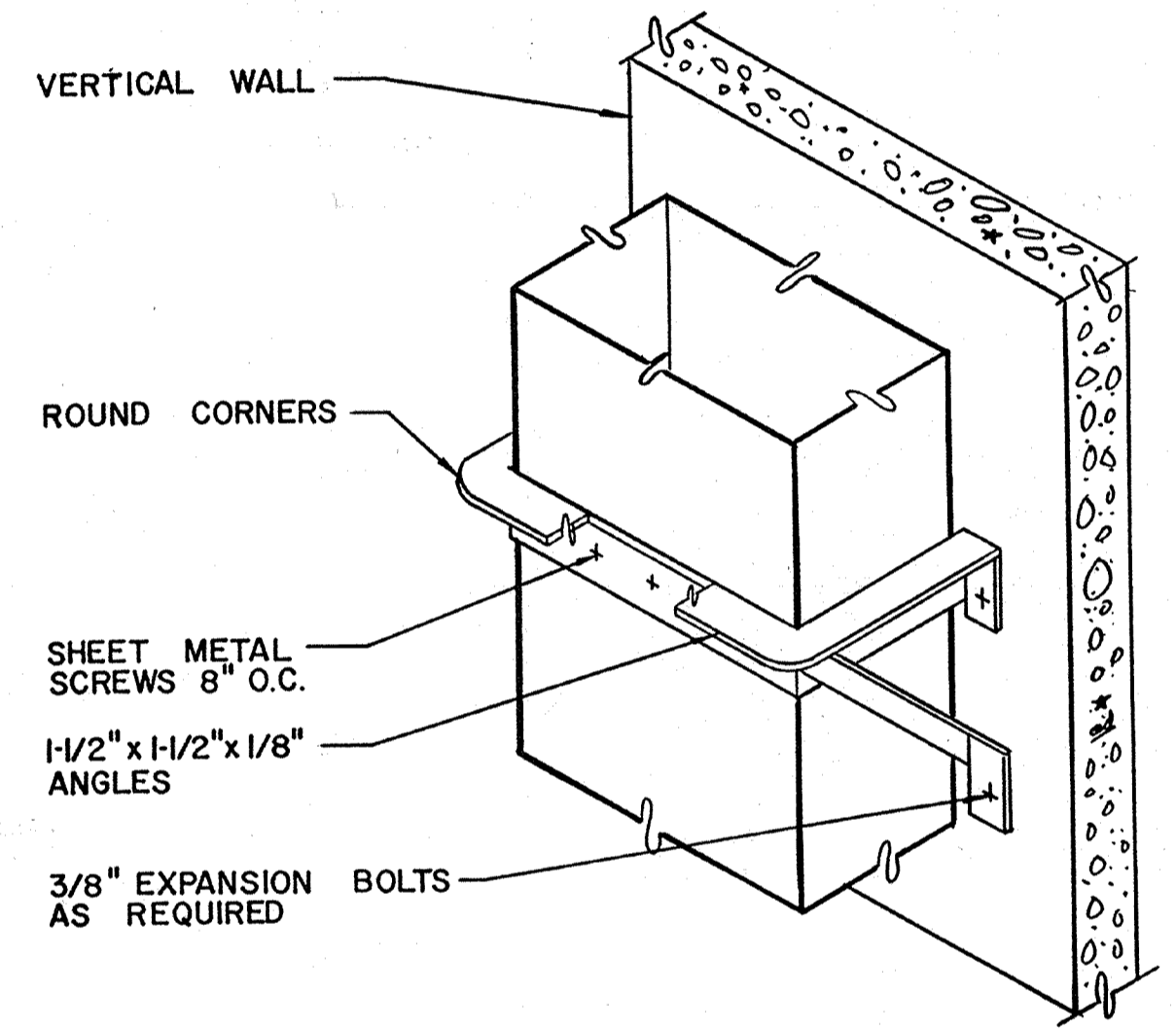
CEILING SUSPENDED AIR HANDLING UNIT

DETAIL **C**
NO SCALE



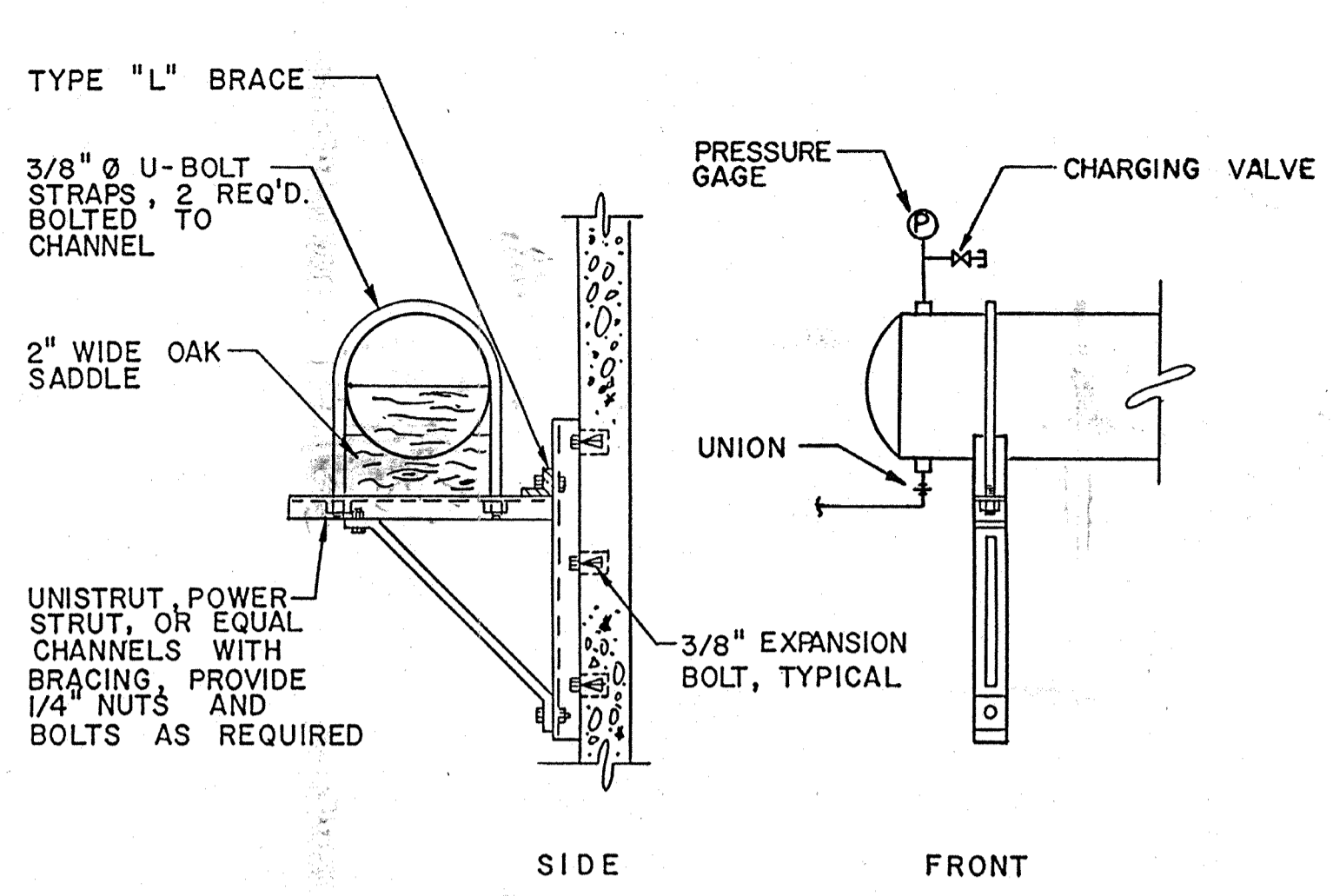
ROOF EXHAUST FAN

DETAIL **D**
NO SCALE



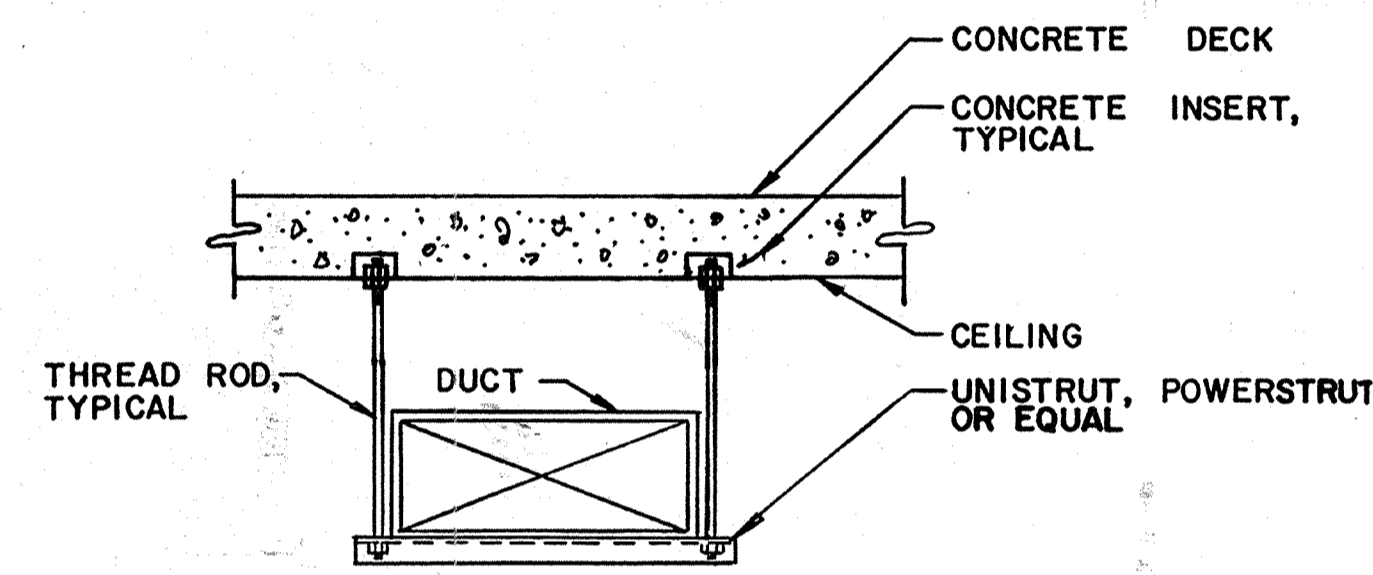
VERTICAL DUCT SUPPORT

DETAIL **E**
NO SCALE



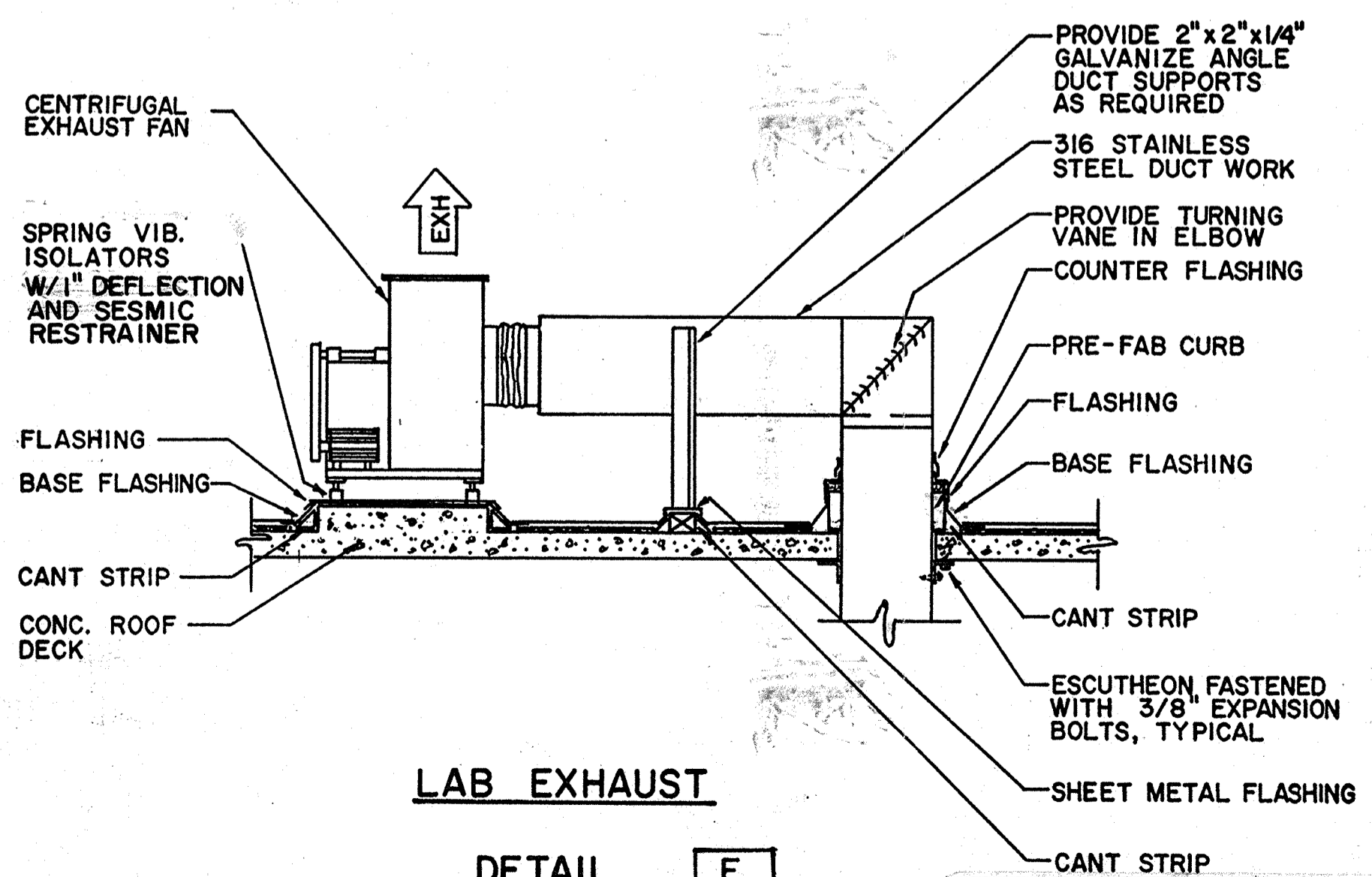
COMPRESSION TANK

DETAIL **G**
NO SCALE



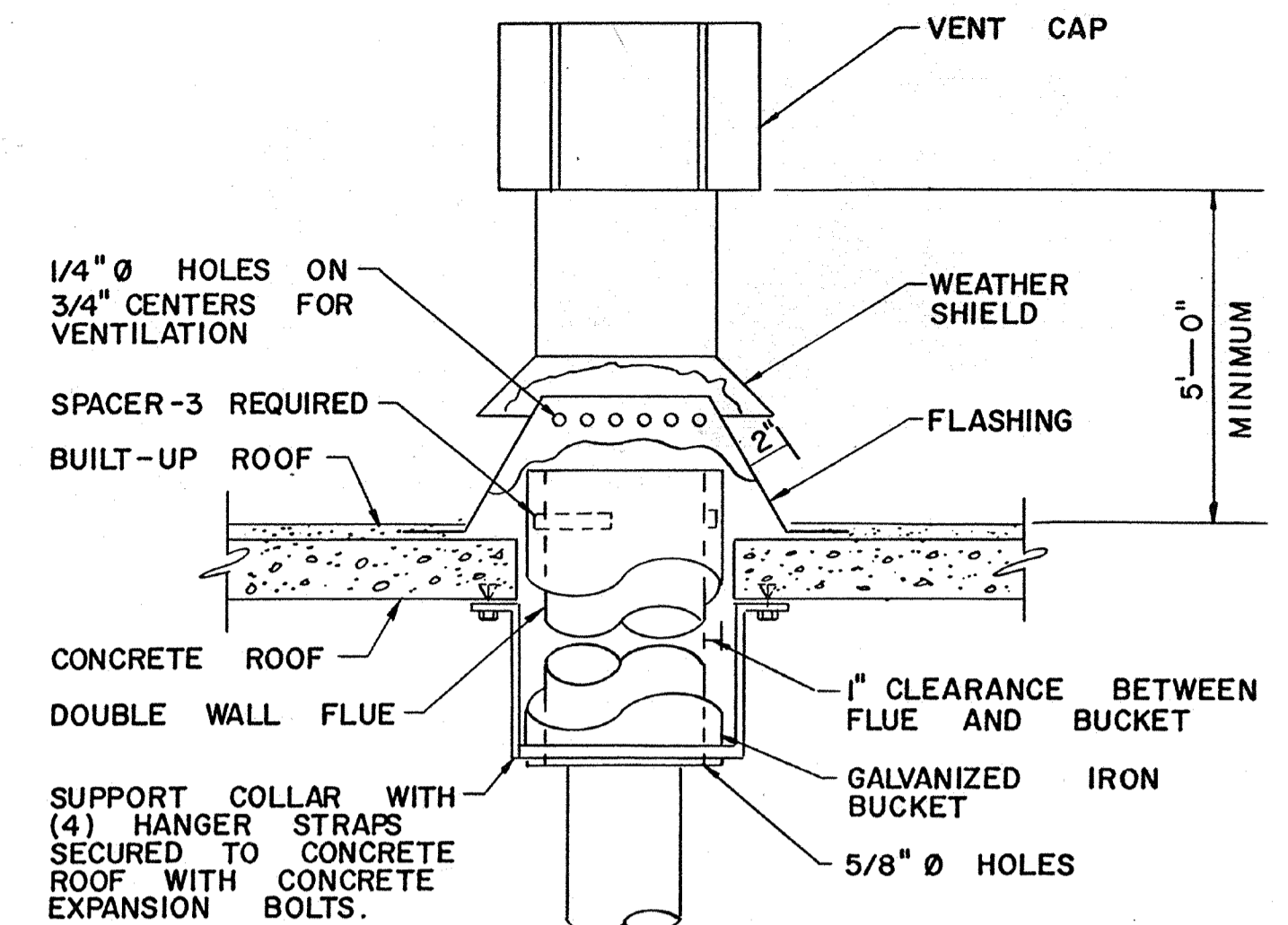
RECTANGULAR DUCT HANGER & SCHEDULE

DETAIL **H**
NO SCALE



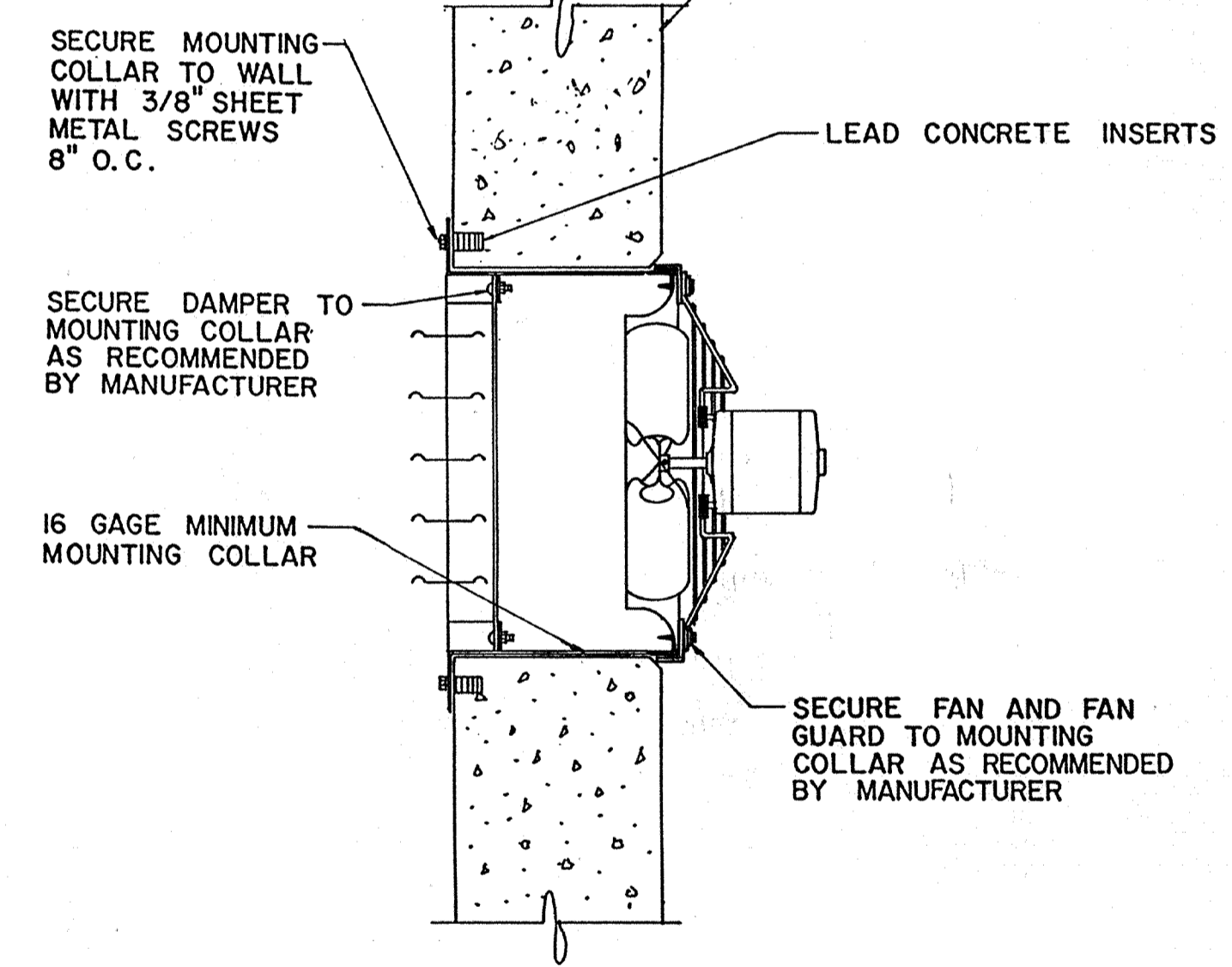
LAB EXHAUST

DETAIL **F**
NO SCALE



FLUE THRU CONCRETE ROOF

DETAIL **I**
NO SCALE



WALL EXHAUST FAN

DETAIL **J**
NO SCALE

AS-BUILT
Signature: PFM
Date: 5/10/91

Date	Ch'k'd	Revision

Designed by: RK
 Drawn by: RK
 Checked by: LF
 Approved by: PFM

Date: 9/88
 Scale: NS

CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
OPERATIONS BUILDING
HVAC DETAILS

CAMP DRESSER & McKEE INC.
710 South Broadway
Walnut Creek, CA 94596

CDM
environmental engineers, scientists,
planners, & management consultants

SHEET NO.
5H-3

96 of 147

LARS FAGERSTROM CONSULTING ENGINEERS, INC.

111355

PROJECT MANAGER Approved by: _____ Date: _____

PROJECT ENGINEER Approved by: _____ Date: _____

PLUMBING Approved by: _____ Date: _____

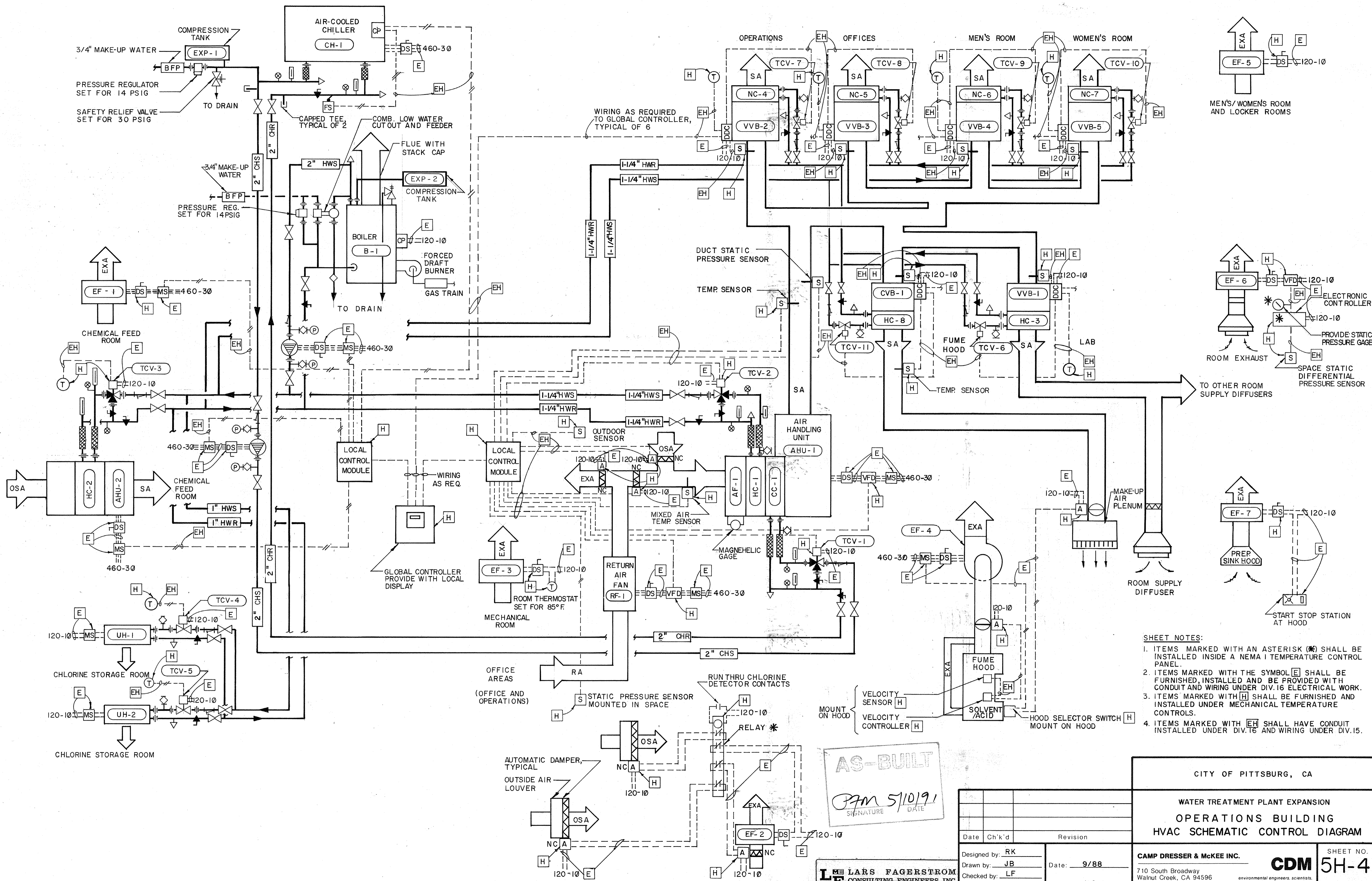
HVAC Approved by: _____ Date: _____

INSTRUMENTATION Approved by: _____ Date: _____

ELECTRICAL Approved by: _____ Date: _____

STRUCTURAL Approved by: _____ Date: _____

ARCHITECTURAL Approved by: _____ Date: _____



- SHEET NOTES:**
- ITEMS MARKED WITH AN ASTERISK (*) SHALL BE INSTALLED INSIDE A NEMA 1 TEMPERATURE CONTROL PANEL.
 - ITEMS MARKED WITH THE SYMBOL [E] SHALL BE FURNISHED, INSTALLED AND BE PROVIDED WITH CONDUIT AND WIRING UNDER DIV.16 ELECTRICAL WORK.
 - ITEMS MARKED WITH [H] SHALL BE FURNISHED AND INSTALLED UNDER MECHANICAL TEMPERATURE CONTROLS.
 - ITEMS MARKED WITH [EH] SHALL HAVE CONDUIT INSTALLED UNDER DIV.16 AND WIRING UNDER DIV.15.

AS-BUILT

PFM 5/10/91
SIGNATURE DATE

LARS FAGERSTROM
CONSULTING ENGINEERS, INC.

Date	Ch'kd	Revision

Designed by: RK
 Drawn by: JB
 Checked by: LF
 Approved by: PFM

Date: 9/88
 Scale: NS

CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
 OPERATIONS BUILDING
 HVAC SCHEMATIC CONTROL DIAGRAM

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

SHEET NO. **5H-4**
 97 of 147

111325

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

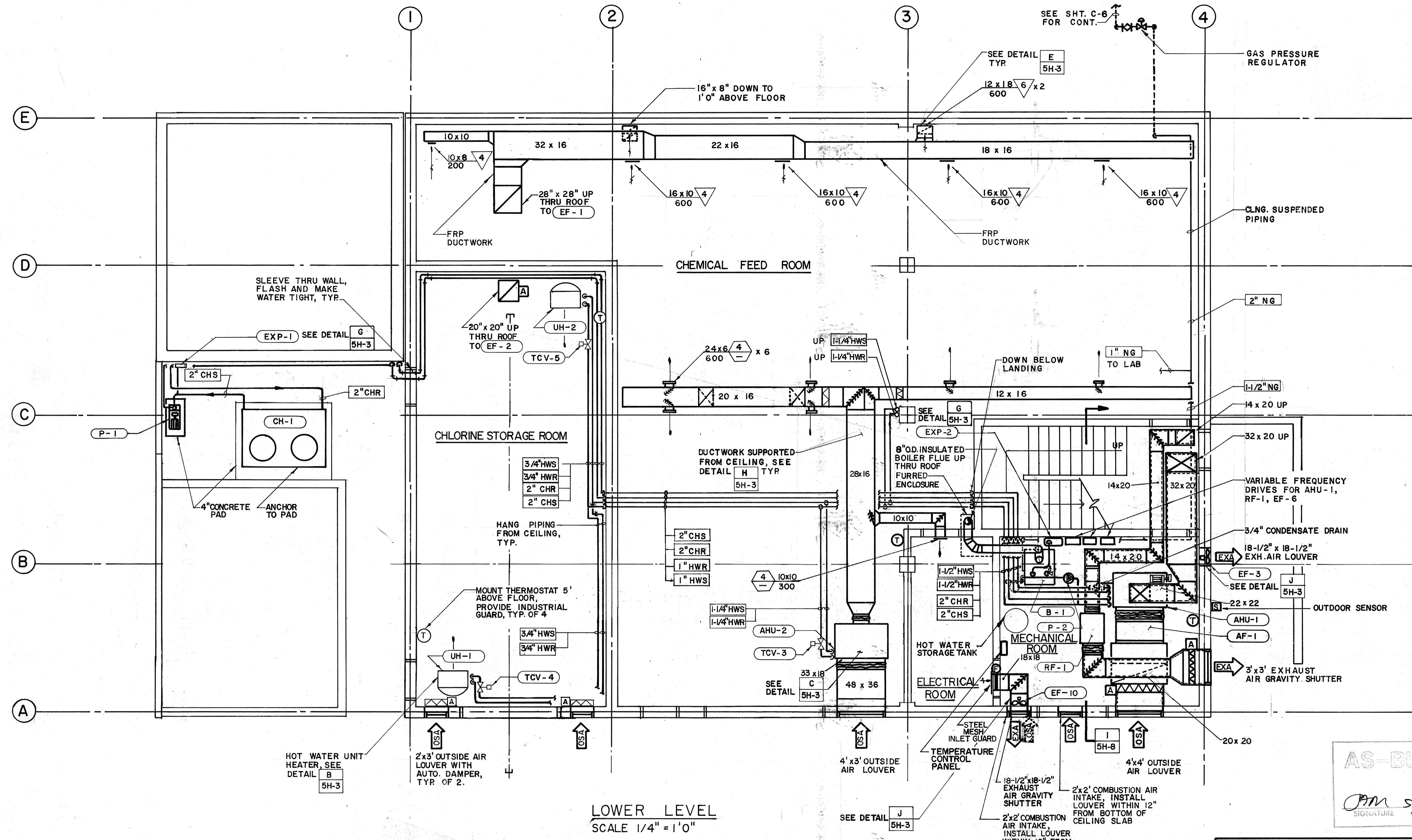
HVAC Approved by: Date:

INSTRUMENTATION Approved by: Date:

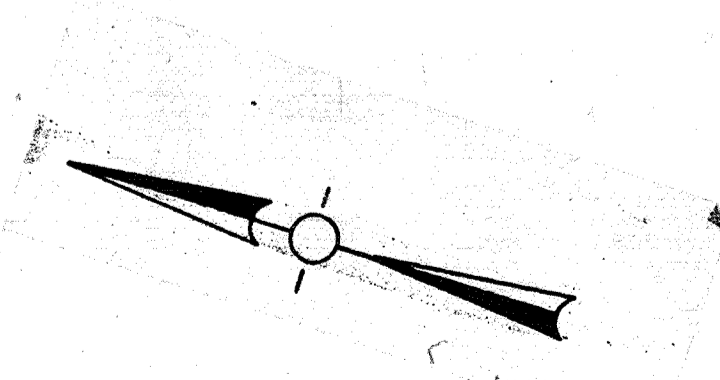
ELECTRICAL Approved by: Date:

STRUCTURAL Approved by: Date:

ARCHITECTURAL Approved by: Date:



LOWER LEVEL
SCALE 1/4" = 1'0"



AS-BUILT

PM 5/10/91
SIGNATURE DATE

CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
OPERATIONS BUILDING
HVAC PLAN

DESIGNED BY: RK
DRAWN BY: JB/RK
CHECKED BY: LF
APPROVED BY: PFM

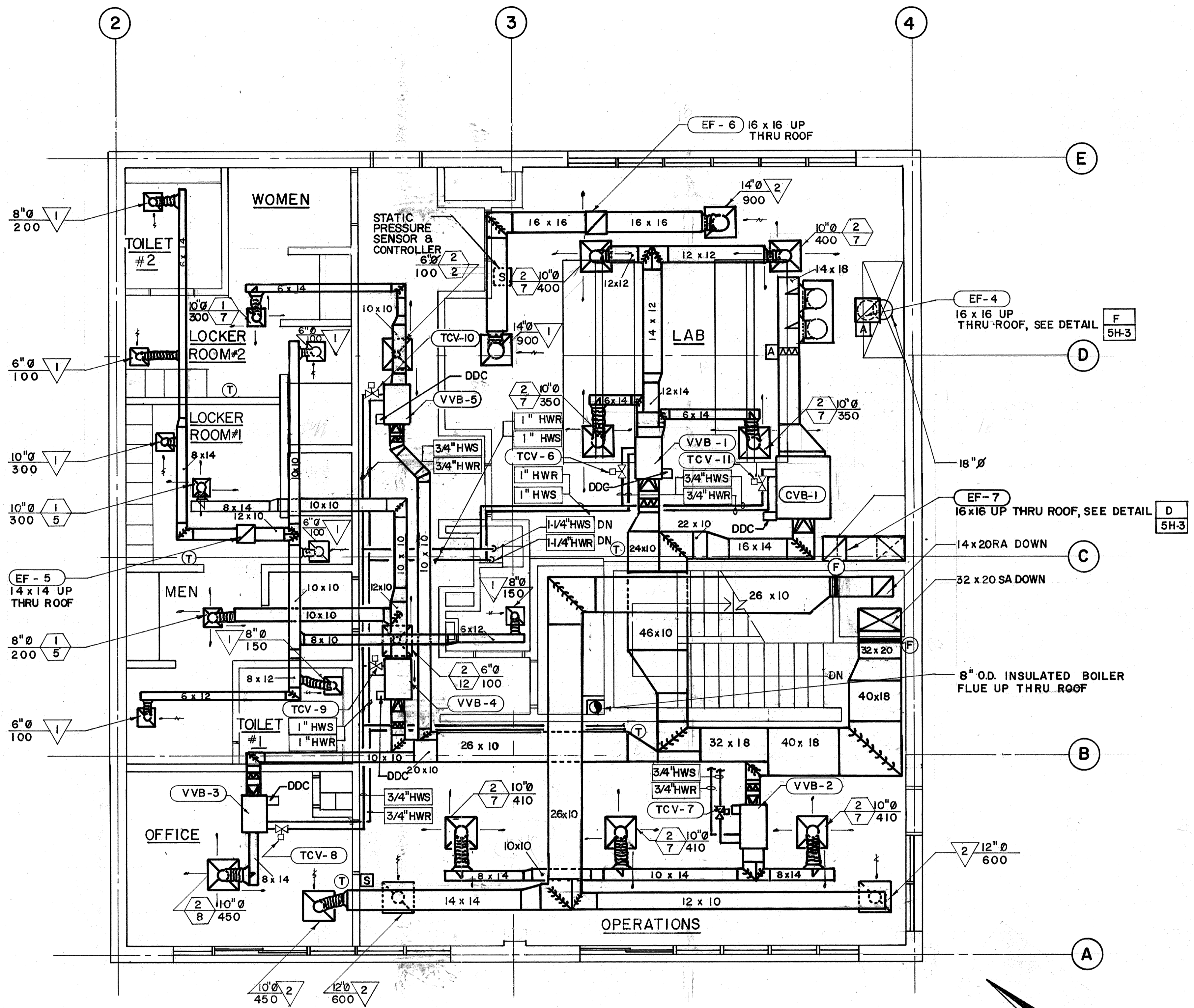
DATE: 9/88
SCALE: 1/4" = 1'0"

CAMP DRESSER & MCKEE INC.
710 South Broadway
Walnut Creek, CA 94596
environmental engineers, scientists,
planners & management consultants

SHEET NO. 5H-5
98 of 147

LARS FAGERSTROM
CONSULTING ENGINEERS, INC.

111333
 PROJECT MANAGER: Approved by: Date:
 PROJECT ENGINEER: Approved by: Date:
 PLUMBING: Approved by: Date:
 HVAC: Approved by: Date:
 INSTRUMENTATION: Approved by: Date:
 ELECTRICAL: Approved by: Date:
 STRUCTURAL: Approved by: Date:
 ARCHITECTURAL: Approved by: Date:



UPPER LEVEL
 SCALE 1/4" = 1'0"

AS-BUILT
 PFM 5/10/91
 SIGNATURE DATE

COOLING COIL SCHEDULE																	
EQUIPMENT NUMBER	LOCATION	MANUFACTURER & MODEL NO.	CFM	NO. OF COILS x W x L INCHES	FACE VEL FPM	ROWS	FINS PER FOOT	AIR					WATER				
								EDB °F	EWB °F	LDB °F	LWB °F	CAPACITY MBH	PD "WC	GPM	EWT °F	LWT °F	PD FT
CC-1	AHU-1	TRANE-W-PF	6000	1 x 30 x 48	600	4	150	93	68	60	56.5	217.8	.55	43.6	45	55	1.8

CITY OF PITTSBURG, CA	
WATER TREATMENT PLANT EXPANSION OPERATIONS BUILDING HVAC PLAN AND SCHEDULE	
Date: _____	Revision: _____
Designed by: RK	Date: 9/88
Drawn by: RK/JB	SHEET NO. 5H-6
Checked by: LF	
Approved by: PFM	Scale: 1/4" = 1'0"

LF LARS FAGERSTROM
 CONSULTING ENGINEERS, INC.
 1100 BOULVARD DE SUITE 300, WALNUT CREEK, CALIFORNIA 94596

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners, & management consultants

PROJECT MANAGER Approved by: _____ Date: _____

PROJECT ENGINEER Approved by: _____ Date: _____

PLUMBING Approved by: _____ Date: _____

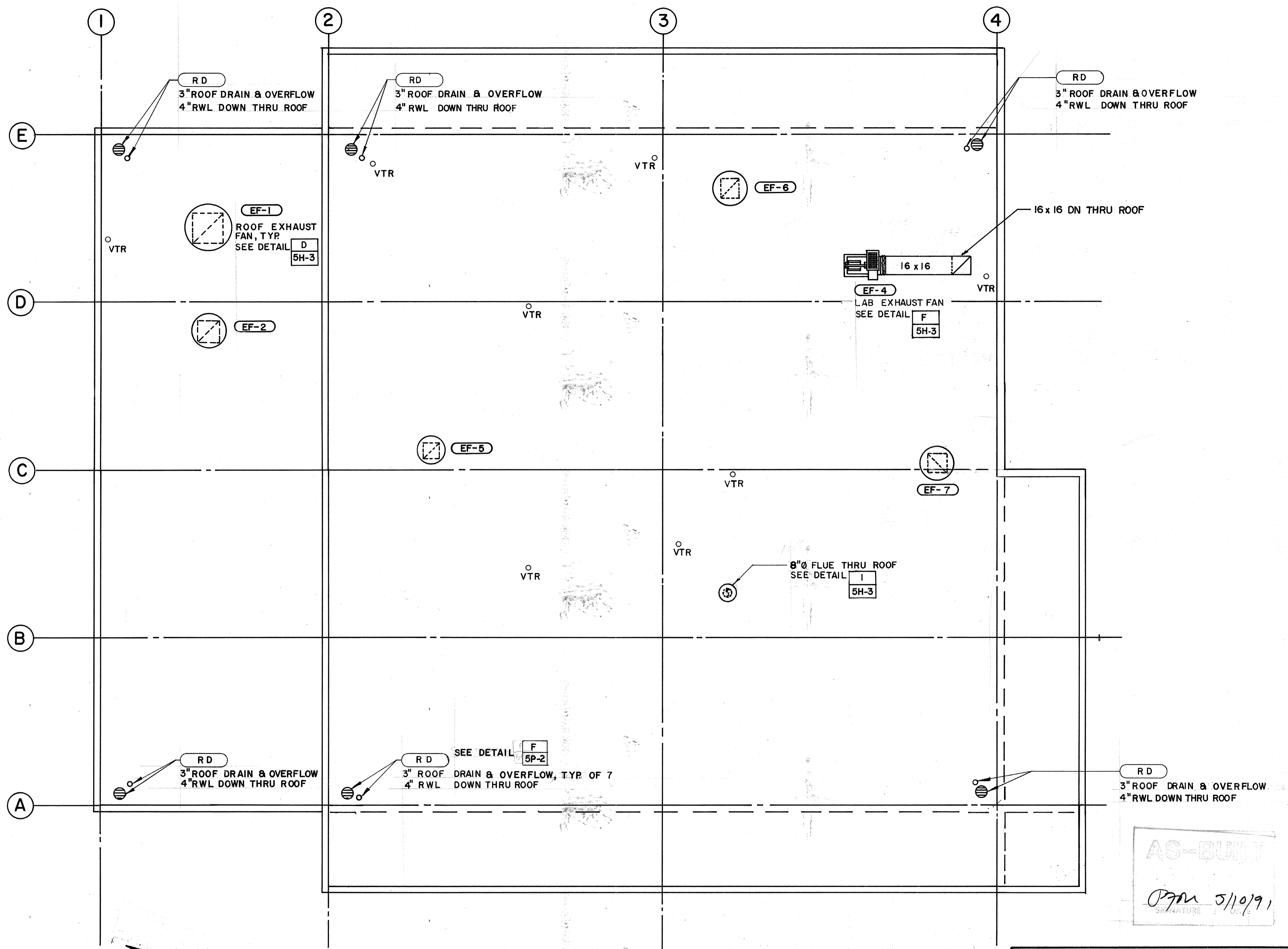
HVAC Approved by: _____ Date: _____

INSTRUMENTATION Approved by: _____ Date: _____

ELECTRICAL Approved by: _____ Date: _____

STRUCTURAL Approved by: _____ Date: _____

ARCHITECTURAL Approved by: _____ Date: _____



AS-BUILT

Pgm 5/10/91

SIGNATURE

CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
OPERATIONS BUILDING
HVAC/PLUMBING ROOF PLAN

CAMP DRESSER & MCKEE INC.
710 South Broadway
Walnut Creek, CA 94596
environmental engineers, scientists,
planners & management consultants

SHEET NO.
5H-7

100 of 147

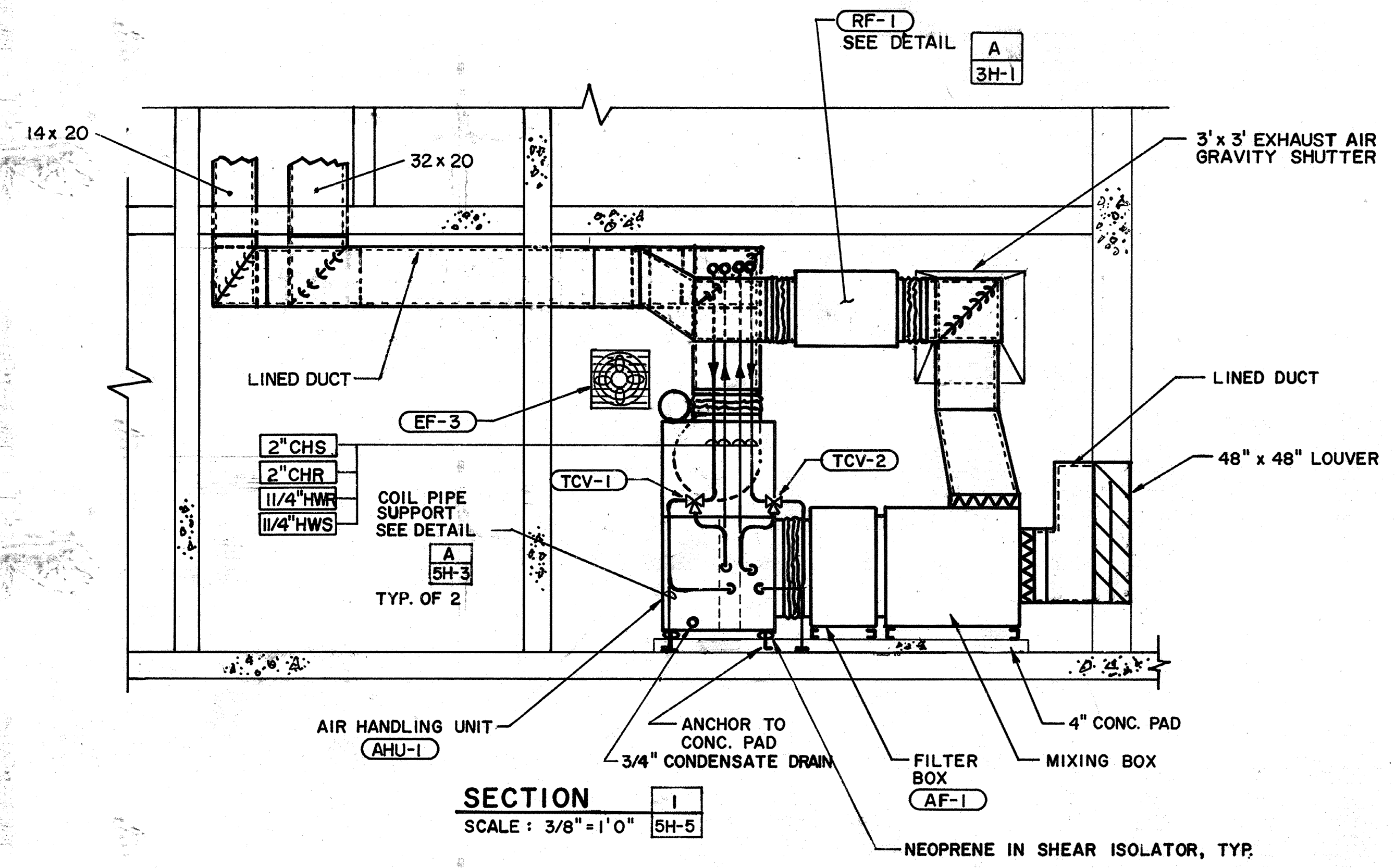
Date	Ch'k'd	Revision

Designed by: **RK**
 Drawn by: **RK/JB**
 Checked by: **LF**
 Approved by: **PFM**

Date: **9/88**
 Scale: **1/4" = 1'0"**

LF LARS FAGERSTROM
CONSULTING ENGINEERS, INC.
100 BOWLING BY SUITE 200, WALNUT CREEK, CALIFORNIA 94596 (916) 851-0444

PROJECT MANAGER	Approved by:	Date:
PROJECT ENGINEER	Approved by:	Date:
PLUMBING	Approved by:	Date:
HVAC	Approved by:	Date:
INSTRUMENTATION	Approved by:	Date:
ELECTRICAL	Approved by:	Date:
STRUCTURAL	Approved by:	Date:
ARCHITECTURAL	Approved by:	Date:



SECTION 1
SCALE: 3/8" = 1'0" 5H-5

AS-BUILT
Signature: *PJM* 5/10/91
DATE

CITY OF PITTSBURG, CA

**WATER TREATMENT PLANT EXPANSION
OPERATIONS BUILDING
HVAC SECTIONS & DETAILS**

CAMP DRESSER & MCKEE INC.
710 South Broadway
Walnut Creek, CA 94596
environmental engineers, scientists,
planners & management consultants

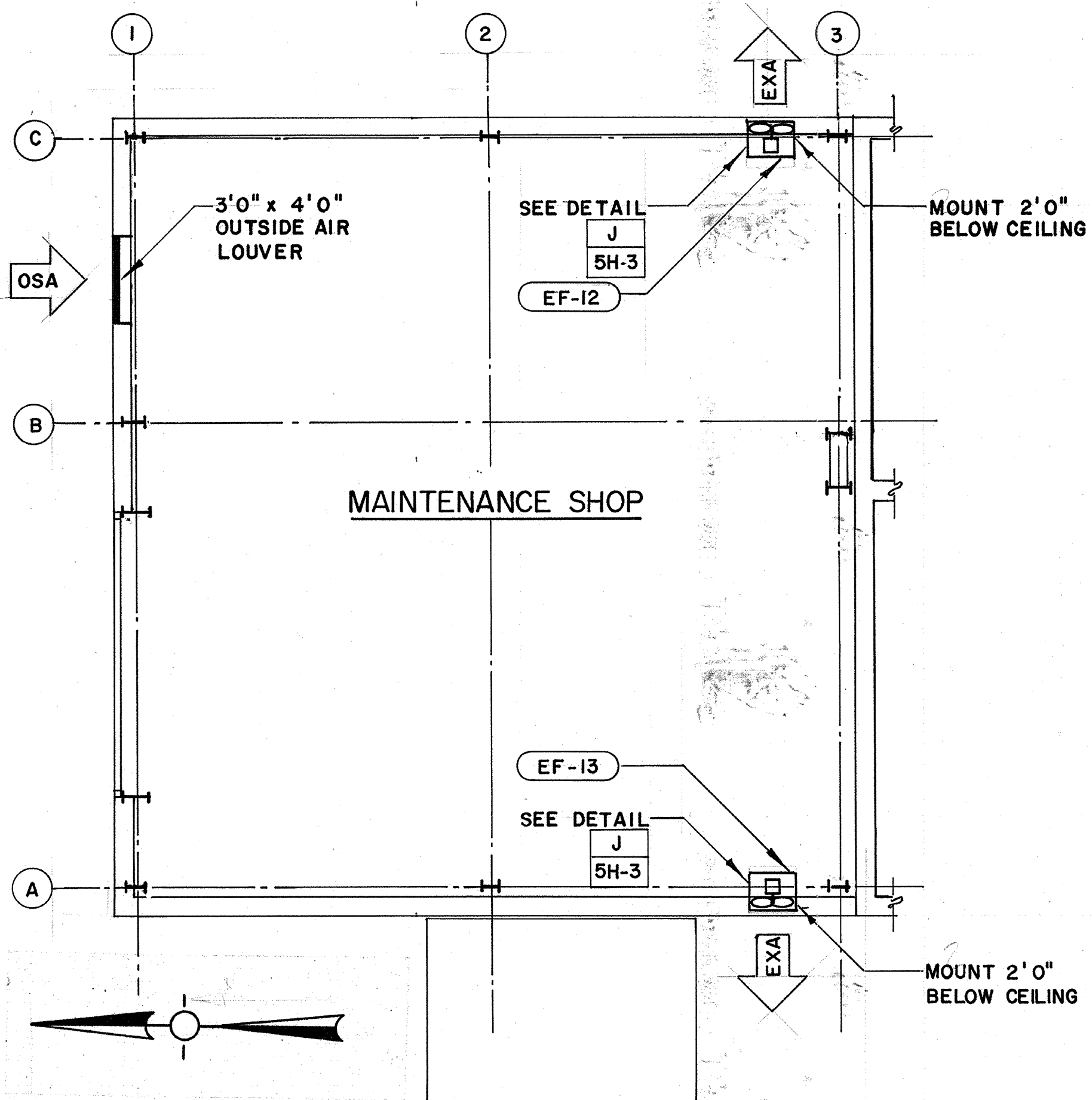
SHEET NO. **5H-8**
101 of 147

LARS FAGERSTROM CONSULTING ENGINEERS, INC.
1100 MONROE ST. SUITE 100, WALNUT CREEK, CALIFORNIA 94596 (415) 932-9442

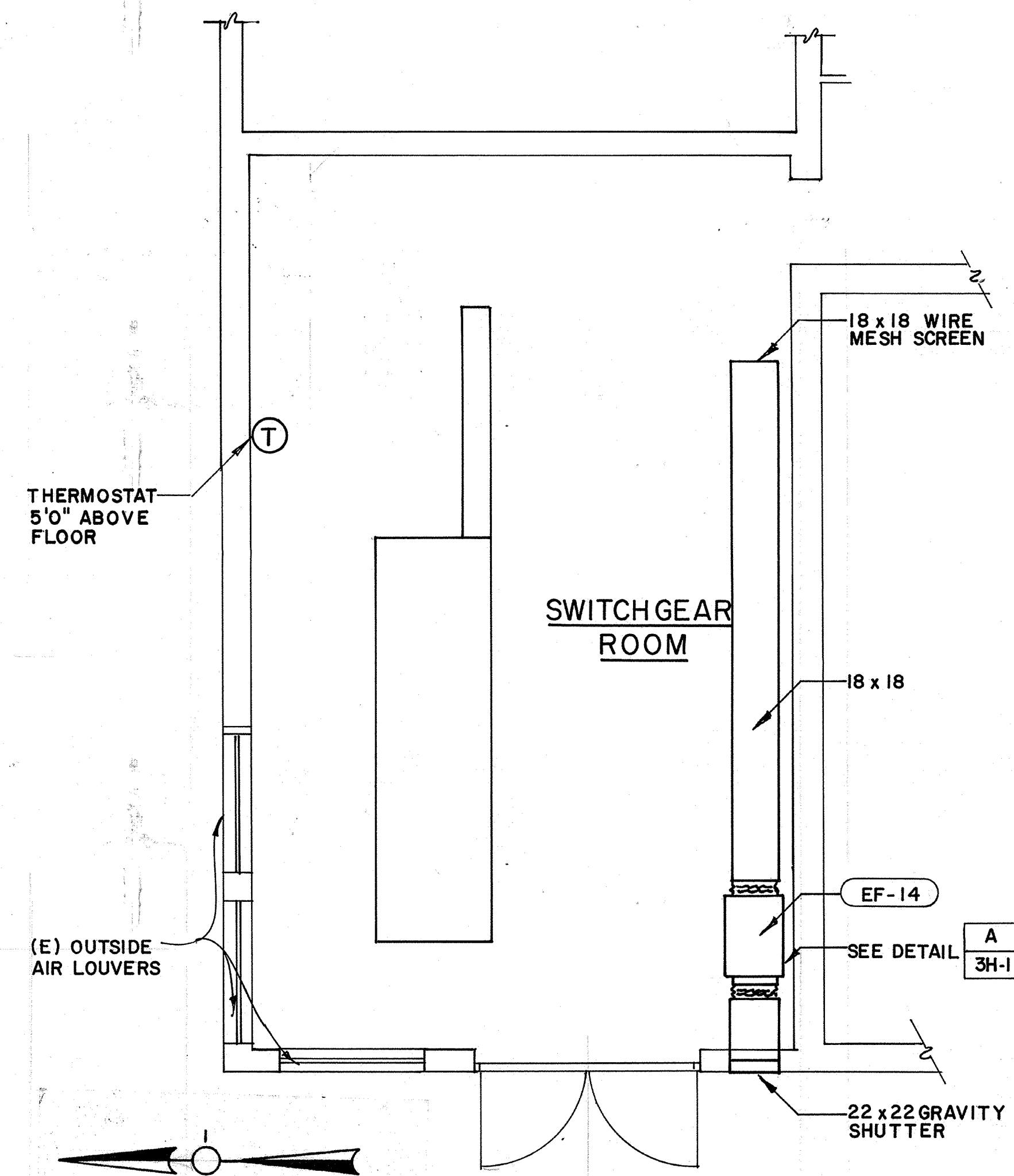
Date	Ch'k'd	Revision

Designed by: **RK**
 Drawn by: **RK/JB**
 Checked by: **LF**
 Approved by: **PFM**

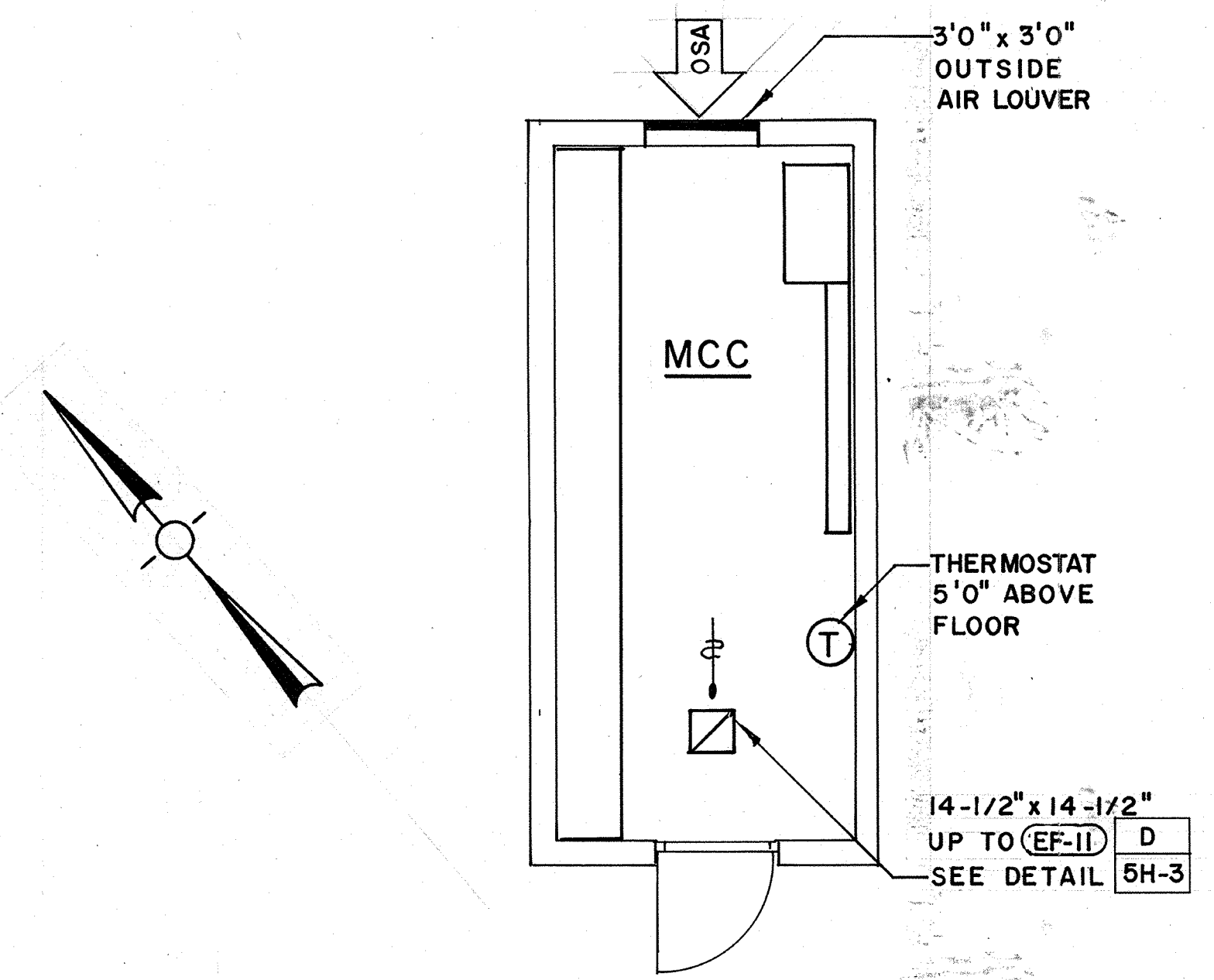
Date: **9/88**
 Scale: **AS SHOWN**



PLAN-EXISTING CHLORINE STORAGE BUILDING
SCALE: 1/4" = 1'0"



PLAN-CONTROL BLDG. BASEMENT
SCALE: 1/4" = 1'0"



PLAN-RAW WATER PUMP STATION MCC
SCALE: 1/4" = 1'0"

AS-BUILT
Signature: *PJM* 5/10/91
DATE

CITY OF PITTSBURG, CA		
WATER TREATMENT PLANT EXPANSION MISCELLANEOUS STRUCTURES PLANS		
Date	Ch'k'd	Revision
Designed by: LF	Drawn by: JB	Date: 9/88
Checked by: LF	AS SHOWN	
Approved by: PFM		
CAMP DRESSER & MCKEE INC. 710 South Broadway Walnut Creek, CA 94596 environmental engineers, scientists, planners, & management consultants		SHEET NO. 7H-1 102 of 147

LF LARS FAGERSTROM
CONSULTING ENGINEERS, INC.
100 BOWMAN ST. SUITE 200 WALNUT CREEK, CALIFORNIA 94596 (415) 940-2000

PROJECT MANAGER Approved by: Date: PROJECT ENGINEER Approved by: Date: PLUMBING Approved by: Date: HVAC Approved by: Date: INSTRUMENTATION Approved by: Date: ELECTRICAL Approved by: Date: STRUCTURAL Approved by: Date: ARCHITECTURAL Approved by: Date:

FIXTURE AND EQUIPMENT SCHEDULE

Table with 6 columns: ABBR. & NO., FIXTURE EQUIPMENT, MANUFACTURER MODEL NUMBER, SIZE CAPACITY, TRIM ACCESSORIES, REMARKS. Rows include items like WATER CLOSET - FLUSH, URINAL, LAVATORY, SHOWER FITTINGS, SERVICE SINK, DRINKING FOUNTAIN, VACUUM PUMP, CUP SINK, HOT WATER PUMP, HOT WATER RECIRC. PUMP, EMERGENCY EYE WASH, WATER HAMMER ARRESTOR, EMERGENCY SHOWER, ACCESS PANEL, DEIONIZER UNIT, BACKFLOW PREVENTER, DISHWASHER ROUGH-IN, GAS COCK, NI, IA, VAC, HOT WATER STORAGE TANK, LAB SINK FAUCET, DEIONIZED WATER FAUCET, FLOOR SINK, ROOF DRAIN, FLOOR DRAIN, CLEAN - OUT, INDOOR HOSE BIBB, OUTDOOR HOSE BIBB, TRAP PRIMER, EMERGENCY SHOWER/EYE WASH, STAND PIPE DRAIN, LAB SINK FAUCET, FLOW SWITCH, GAS COCKS WITH EXTENSION, SAMPLE COCK.

PLUMBING SYMBOLS

Table of plumbing symbols and abbreviations. Symbols include Gate Valve, Check Valve, Plug Valve, Union, Safety Relief Valve, Hose Bibb, Floor Drain, Floor Cleanout, Water Hammer Arrestor, Emergency Shower and Eyewash, Piping Below/Vent Piping, Suspended Piping/Above Grade Piping, Ceiling Suspended Cleanout, Floor Sink. Abbreviations include CW, DHWS, DHWR, SS, CD, V, NG, VTR, IA, VAC, SA, RWL, SD.

FIXTURE CONNECTION SCHEDULE

Table with 10 columns: ABBR., FIXTURE, FIXTURE UNITS (COLD WATER, HOT WATER, DRAIN & VENT), LOCAL FIXTURE CONNECTIONS (WATER BRANCH, WATER OUTLET, DRAINAGE BRANCH, DRAINAGE OUTLET), VENT. Rows include items like WATER CLOSET-FLUSH, URINAL, LAVATORY, SHOWER FITTINGS, SERVICE SINK, DRINKING FOUNTAIN, HOSE BIBB, FLOOR DRAIN, TRAP PRIMER, LAB SINK.

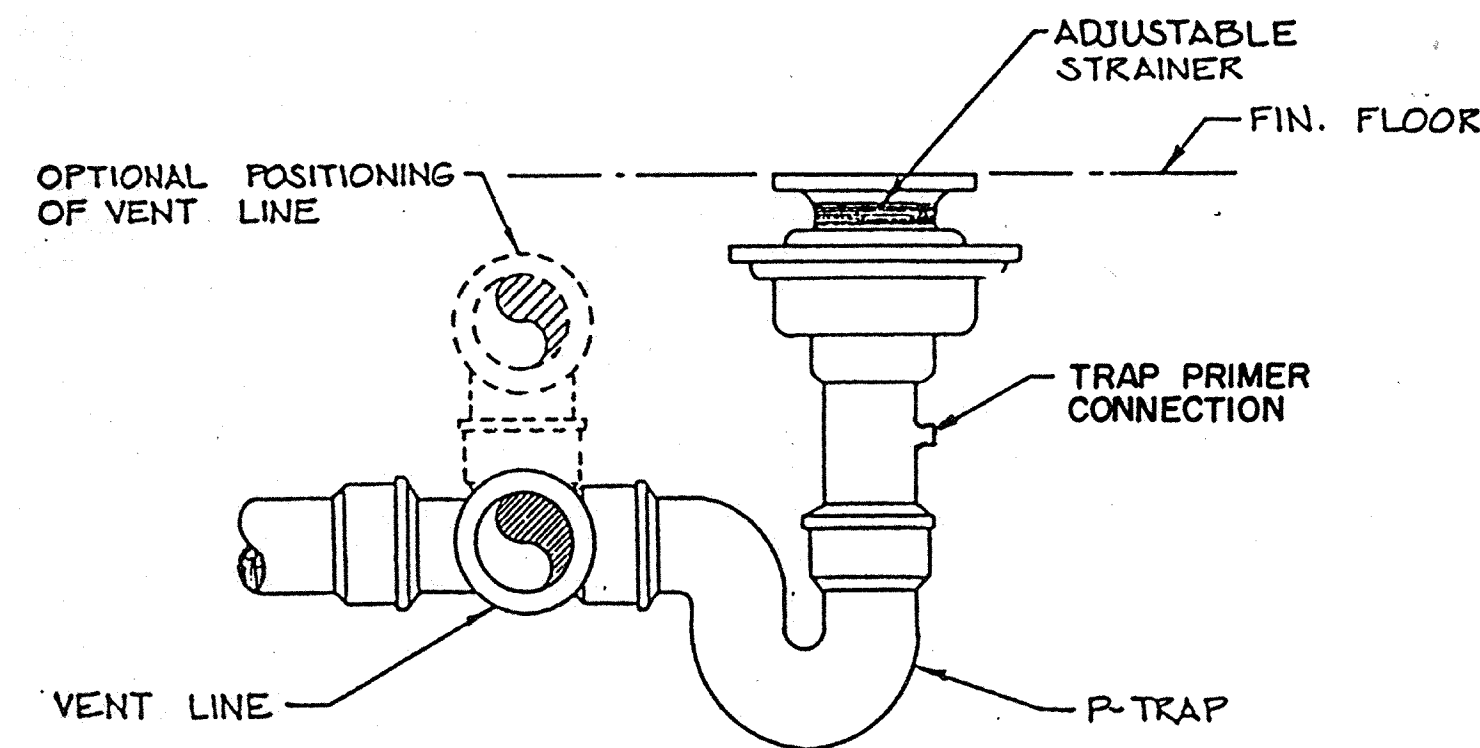
AS-BUILT stamp with signature and date 5/10/91.

Project information block including: CITY OF PITTSBURG, CA; WATER TREATMENT PLANT EXPANSION OPERATIONS BUILDING PLUMBING SYMBOLS AND SCHEDULE; SHEET NO. 5P-1; CDM logo; 710 South Broadway Walnut Creek, CA 94596; environmental engineers, scientists, planners & management consultants.

LARS FAGERSTROM CONSULTING ENGINEERS, INC. logo and address: 100 BONDAGE ST SUITE 200 WALNUT CREEK, CALIFORNIA 94596 (415) 933-2447

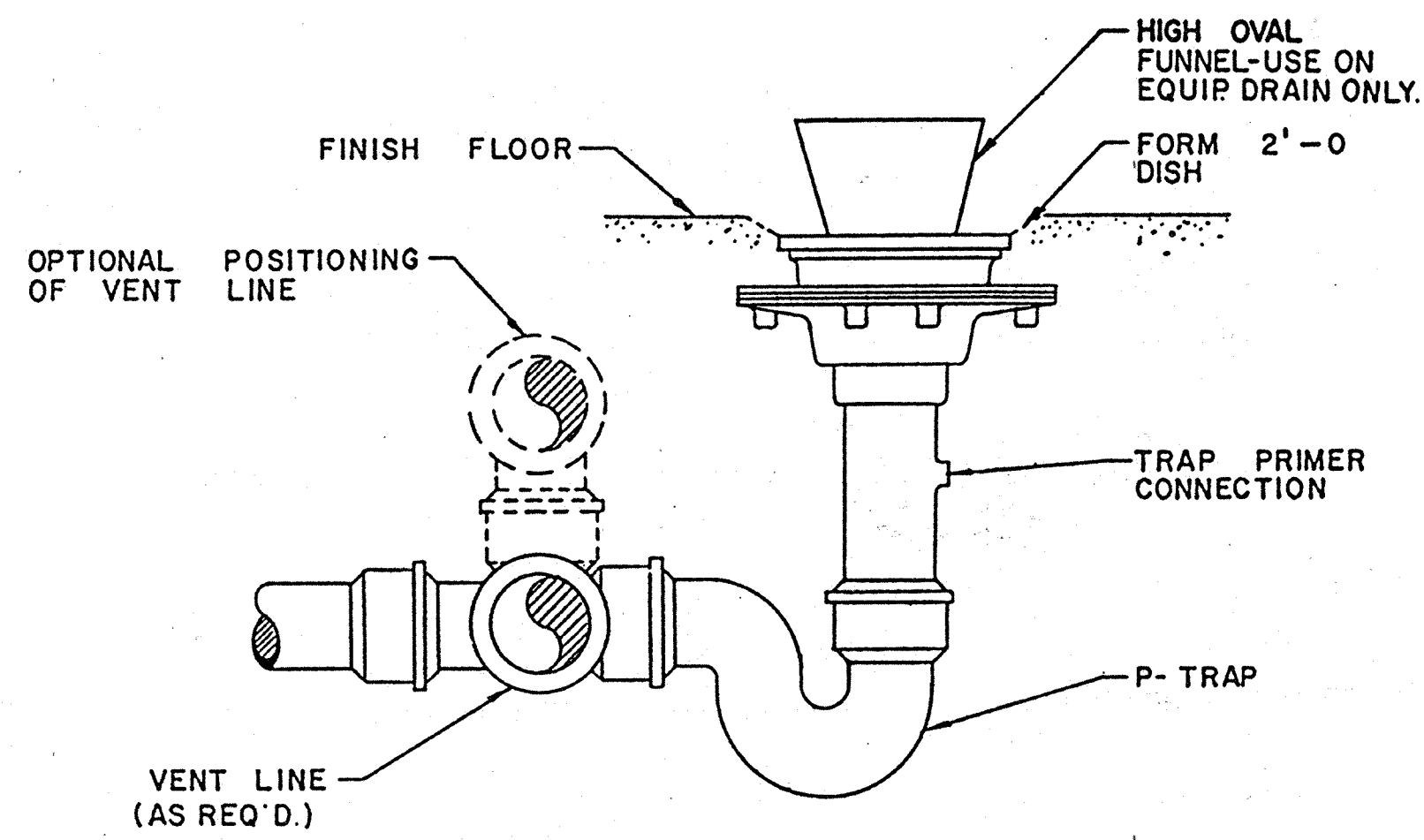
Design information: Designed by: RK, Drawn by: LJF/JB, Checked by: LF, Approved by: PFM, Date: 9/88, Scale: NS.

11333
 PROJECT MANAGER Date: _____
 PROJECT ENGINEER Date: _____
 PLUMBING Date: _____
 HVAC Date: _____
 INSTRUMENTATION Date: _____
 ELECTRICAL Date: _____
 STRUCTURAL Date: _____
 ARCHITECTURAL Date: _____



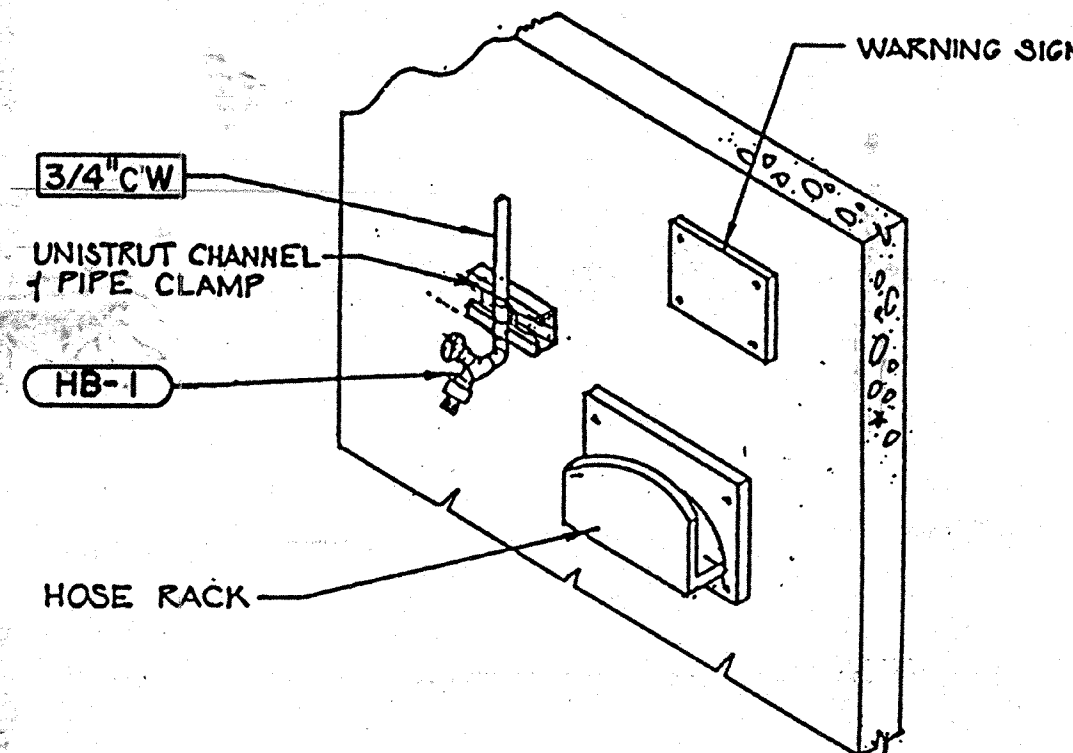
FLOOR DRAIN FD-1

DETAIL A
 NO SCALE



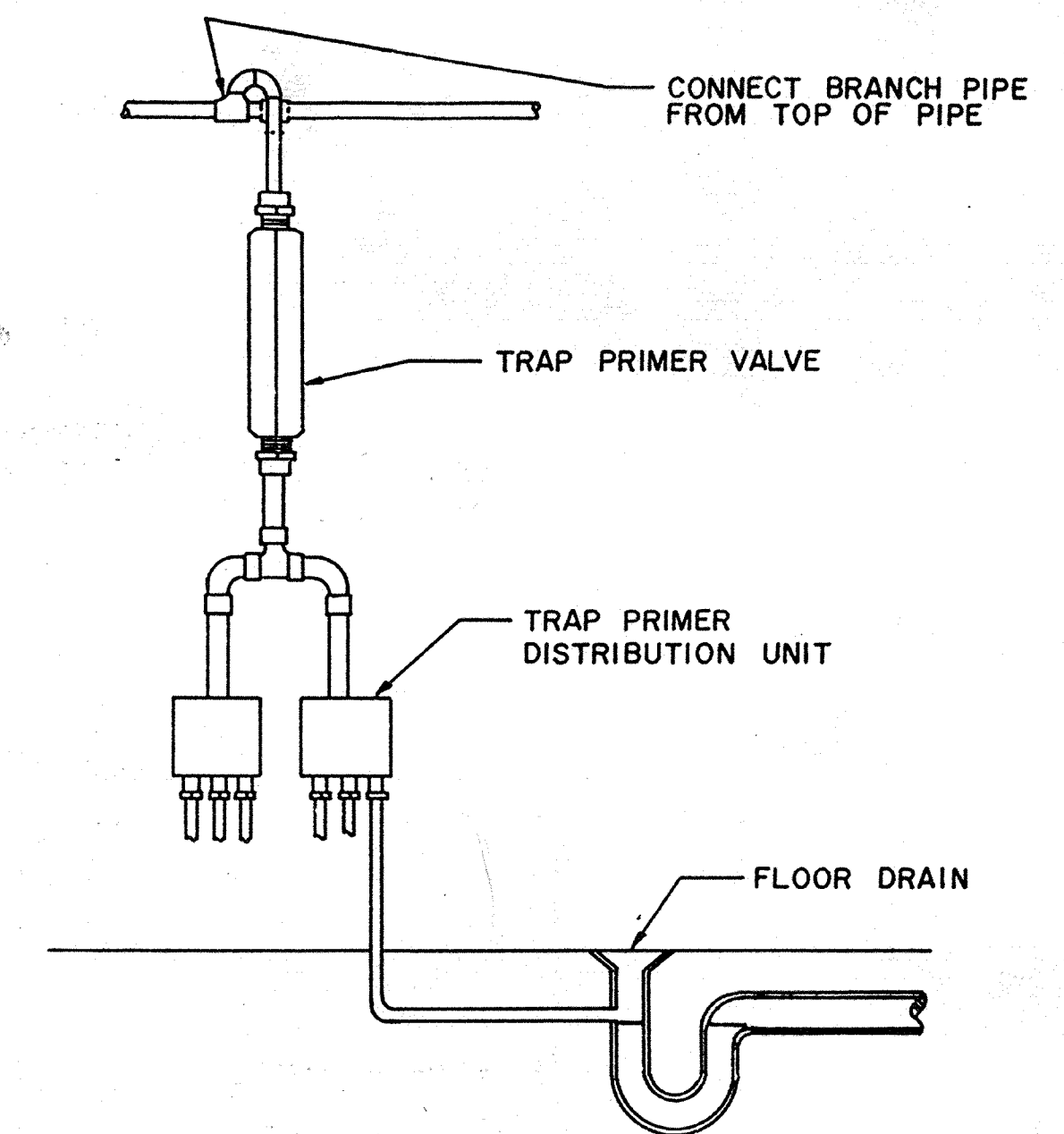
FLOOR DRAIN FD-4

DETAIL D
 NO SCALE



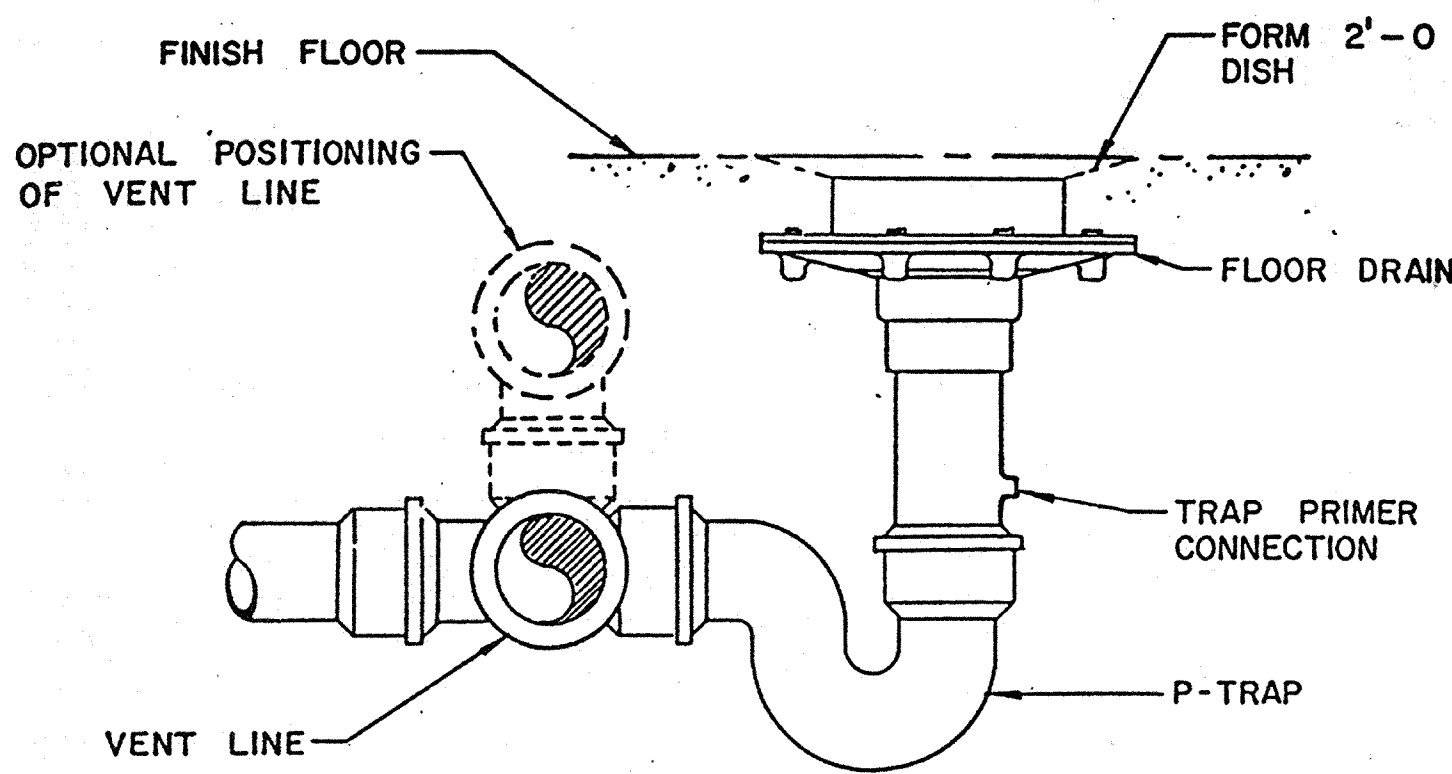
INDOOR HOSE BIBB & RACK

DETAIL G
 NO SCALE



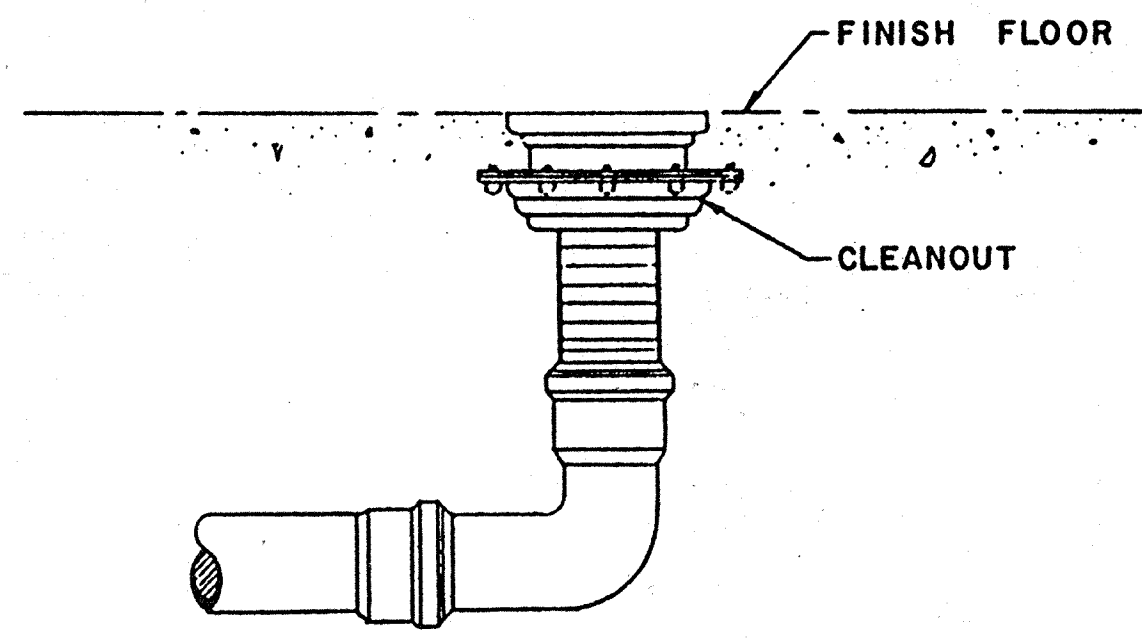
TRAP PRIMER

DETAIL I
 NO SCALE



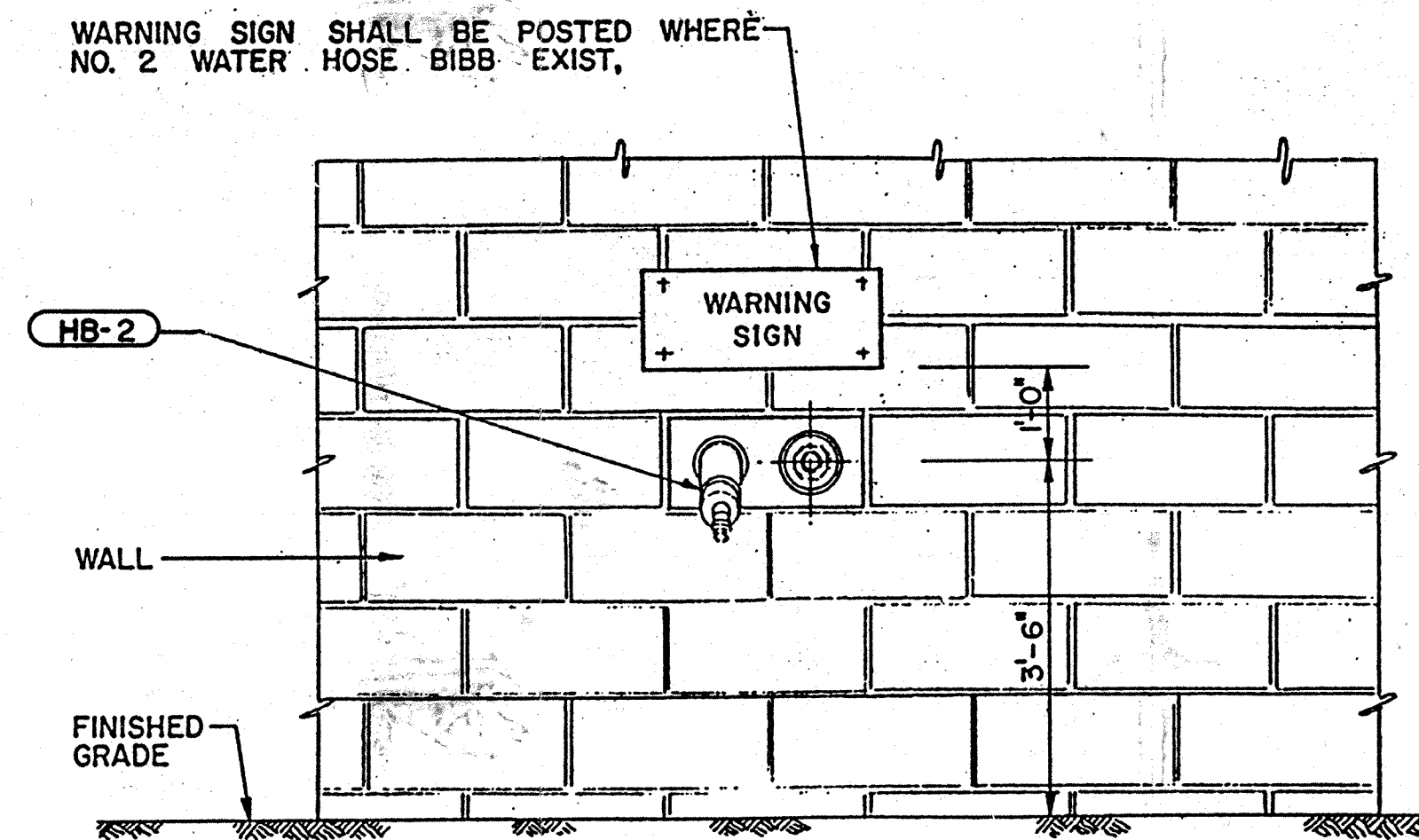
FLOOR DRAIN FD-2

DETAIL B
 NO SCALE



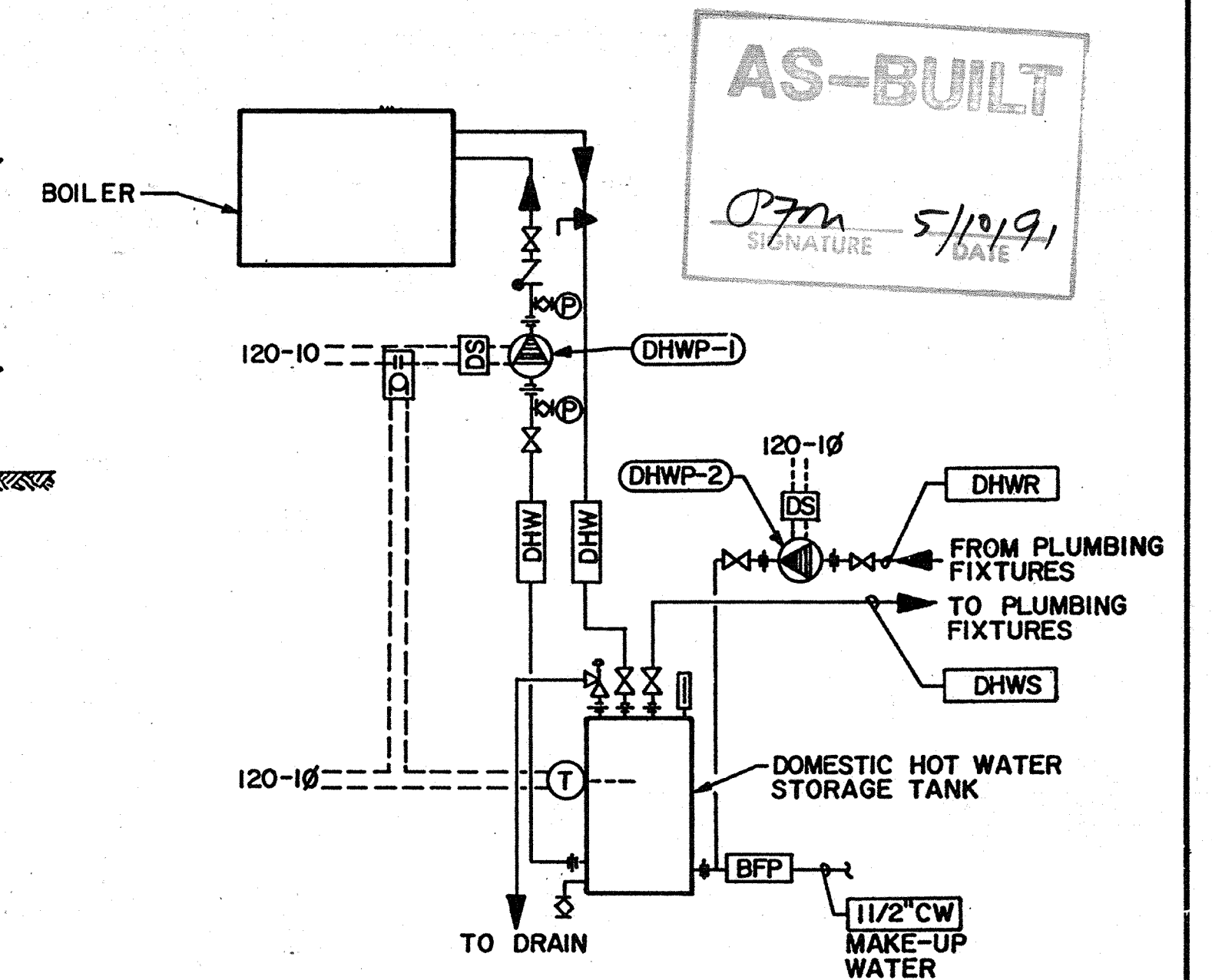
FLOOR CLEANOUT CO-1

DETAIL E
 NO SCALE



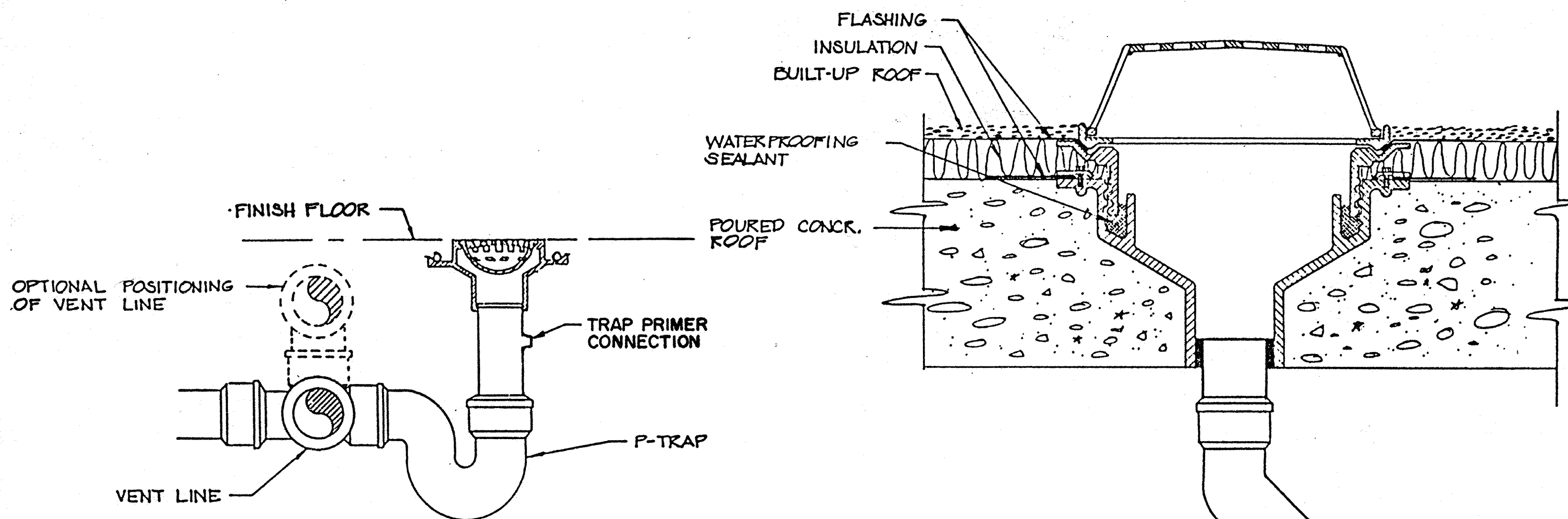
TYPICAL OUTDOOR HOSE BIBB

DETAIL H
 NO SCALE



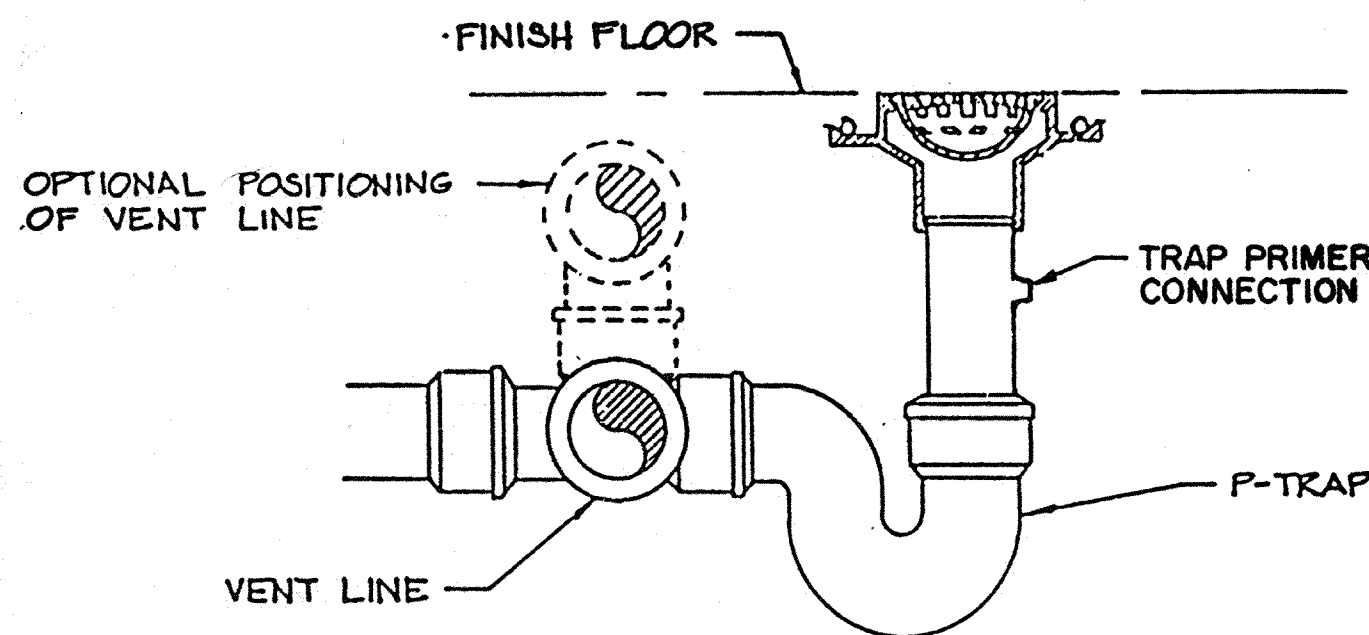
DOMESTIC HOT WATER SCHEMATIC DIAGRAM

AS-BUILT
 Signature: PFM
 Date: 5/10/91



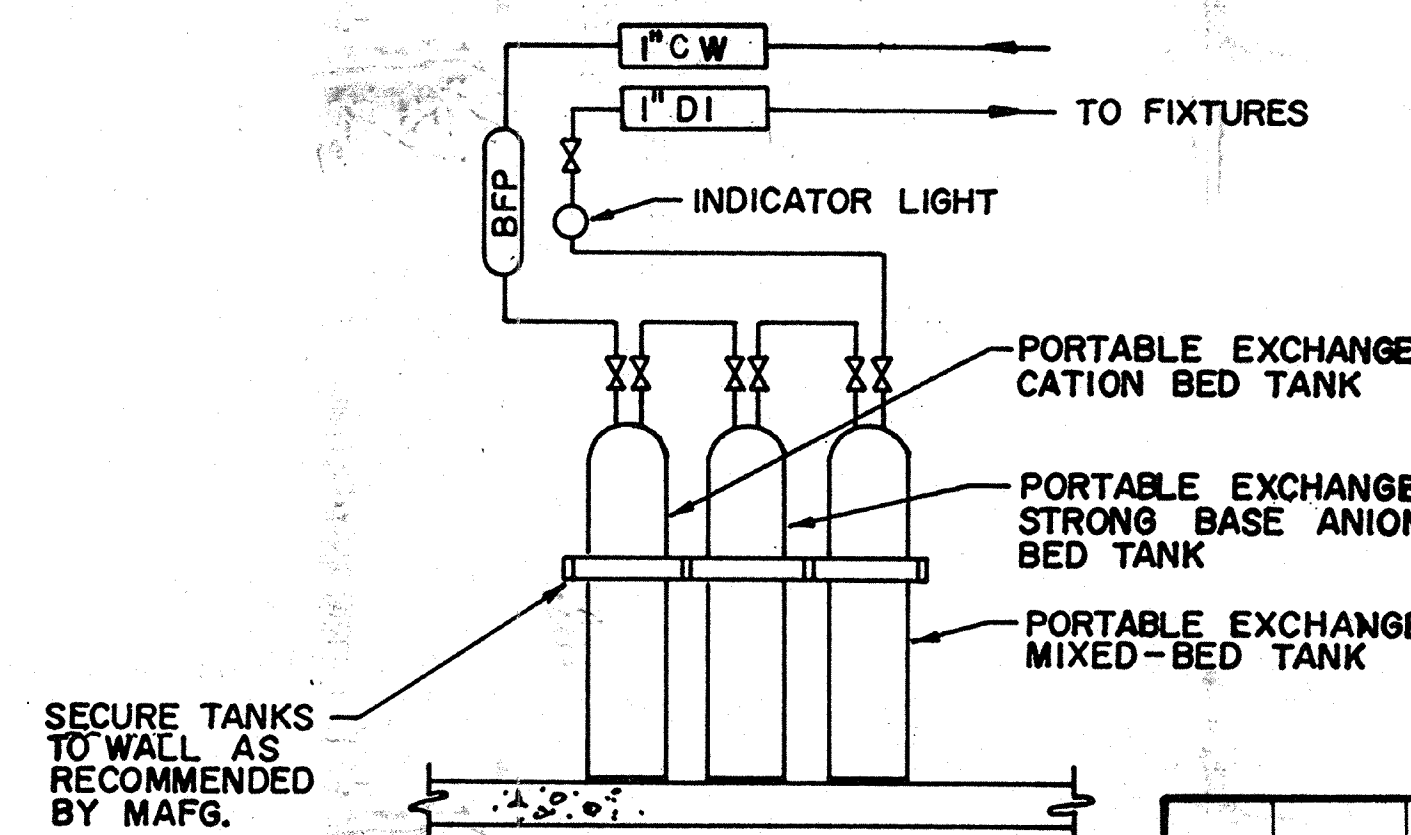
ROOF DRAIN

DETAIL F
 NO SCALE



FLOOR DRAIN FD-3

DETAIL C
 NO SCALE



DEIONIZING UNIT SCHEMATIC

SECURE TANKS TO WALL AS RECOMMENDED BY MAFG.

Date	Ch'k'd	Revision

Designed by: RK
 Drawn by: RK
 Checked by: LF
 Approved by: PFM

Date: 9/88
 Scale: NS

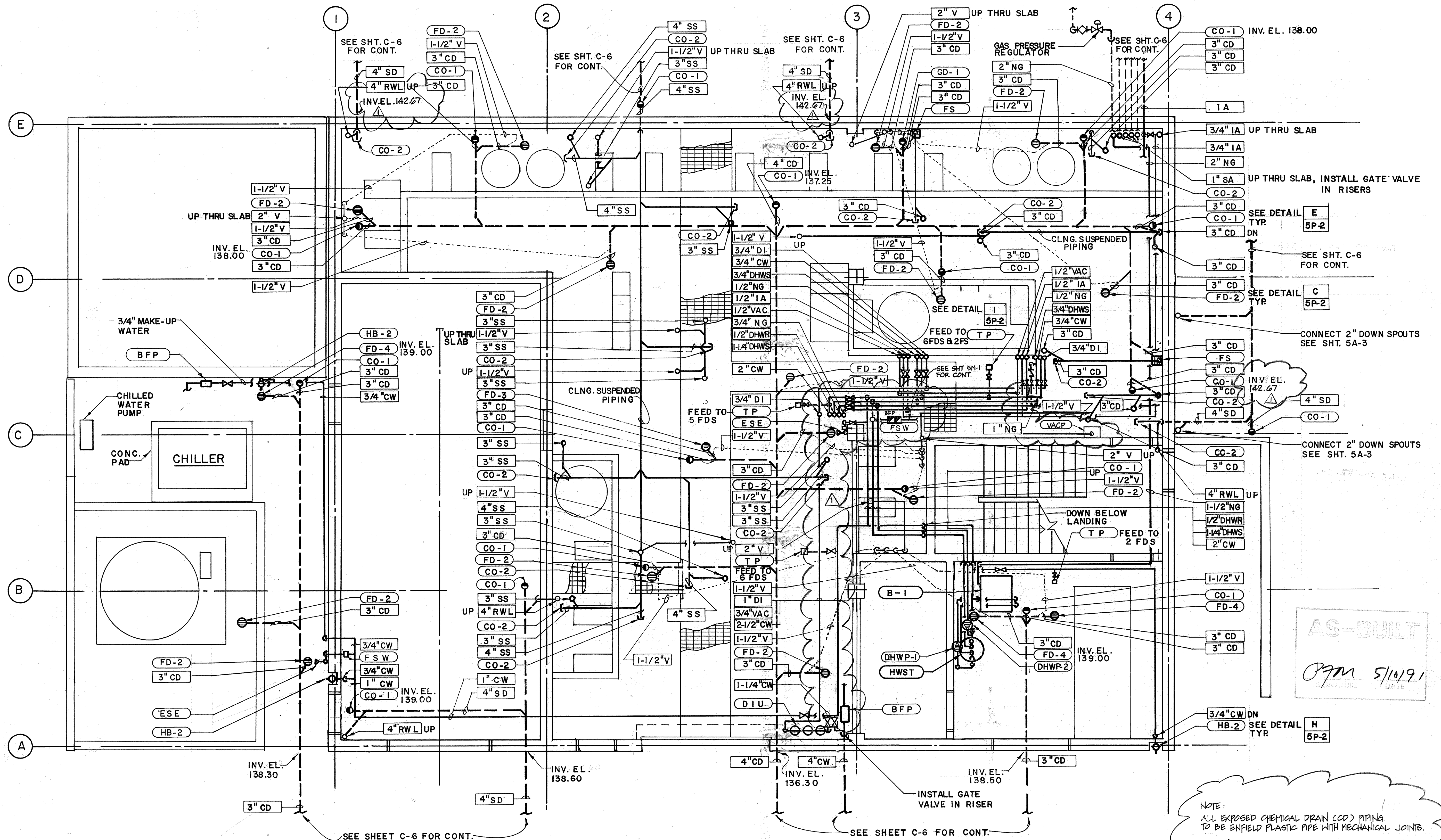
CITY OF PITTSBURG, CA
 WATER TREATMENT PLANT EXPANSION
 OPERATIONS BUILDING
 PLUMBING DETAILS

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners, & management consultants

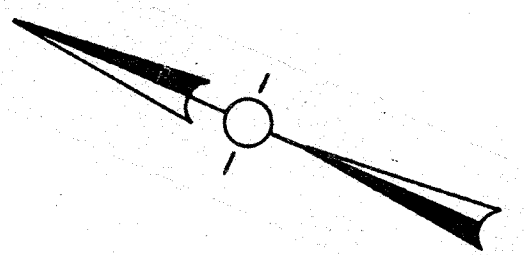
SHEET NO.
5P-2
 104 of 147

LARS FAGERSTROM CONSULTING ENGINEERS, INC.

PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



LOWER LEVEL
SCALE: 1/4" = 1'0"



NOTE:
ALL EXPOSED CHEMICAL DRAIN (CD) PIPING TO BE ENFIELD PLASTIC PIPE WITH MECHANICAL JOINTS.

AS-BUILT
Signature: [Handwritten Signature]
Date: 5/10/91

CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
OPERATIONS BUILDING
PLUMBING PLAN

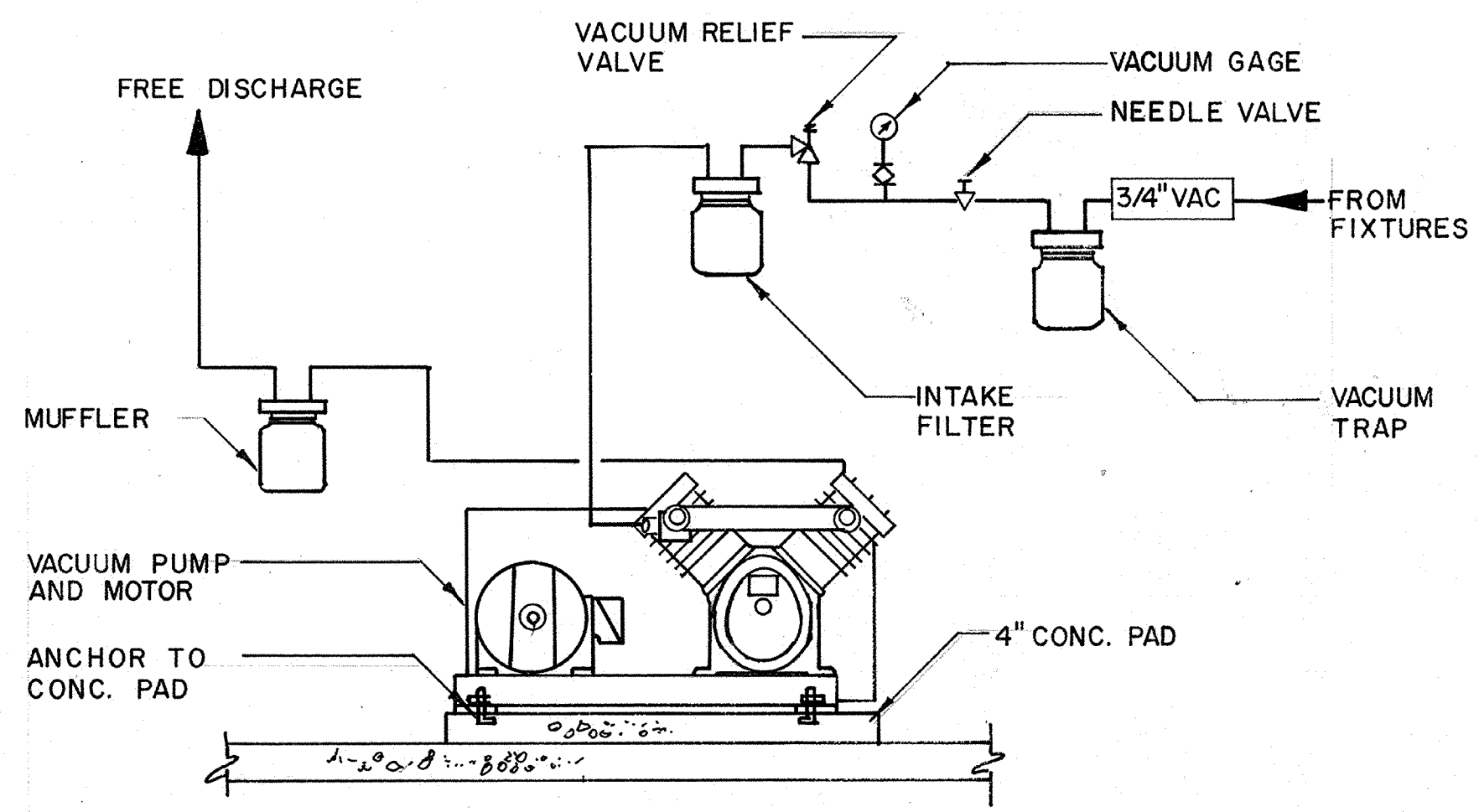
Date	Ch'k'd	Revision
4/1/91		REVISOR FOR THE RECORD
Designed by: RK	Drawn by: RK/JB	Date: 9/88
Checked by: LF	Approved by: PFM	Scale: 1/4" = 1'0"

LARS FAGERSTROM
CONSULTING ENGINEERS, INC.

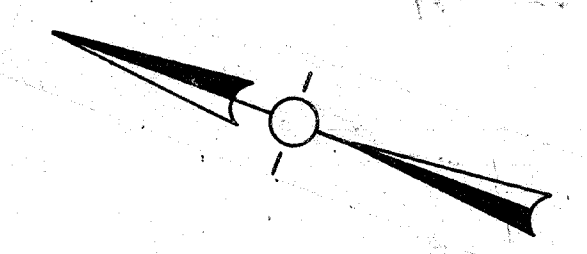
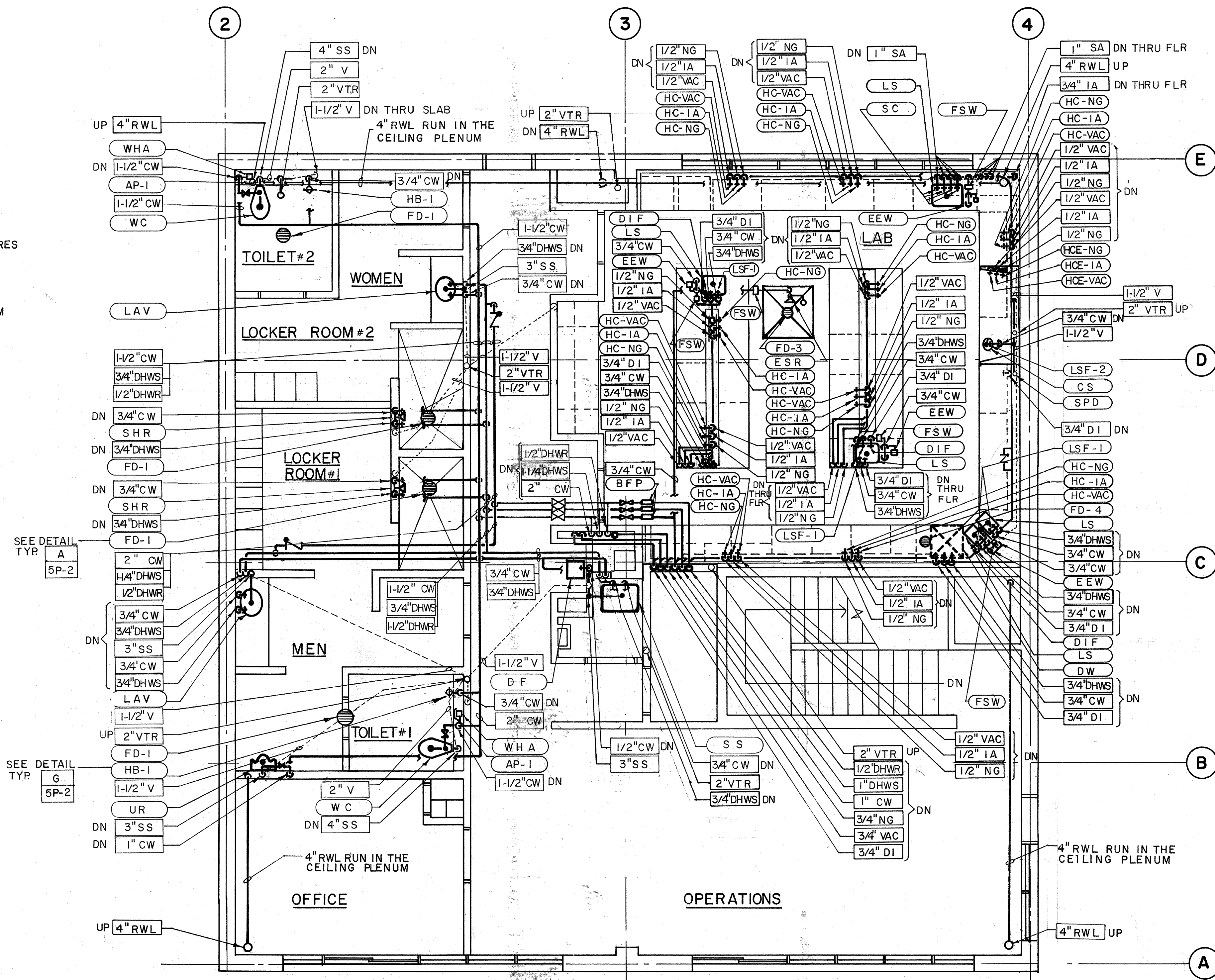
CAMP DRESSER & MCKEE INC.
710 South Broadway
Walnut Creek, CA 94596

CDM SHEET NO. 5P-3
environmental engineers, scientists, planners, & management consultants

PROJECT MANAGER: _____ Date: _____
 PROJECT ENGINEER: _____ Date: _____
 PLUMBING: _____ Date: _____
 HVAC: _____ Date: _____
 INSTRUMENTATION: _____ Date: _____
 ELECTRICAL: _____ Date: _____
 STRUCTURAL: _____ Date: _____
 ARCHITECTURAL: _____ Date: _____



VACUUM PUMP SCHEMATIC DIAGRAM



UPPER LEVEL
SCALE 1/4" = 1'0"

AS-BUILT
Pfm 5/10/91
 SIGNATURE DATE

CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION
 OPERATIONS BUILDING
 PLUMBING PLAN AND DIAGRAM

SHEET NO. 5P-4

106 of 147

Date	Ch'kd	Revision

DESIGNED BY: **RK**
 DRAWN BY: **RK/JB**
 CHECKED BY: **LF**
 APPROVED BY: **PFM**

DATE: **9/88**
 SCALE: **1/4" = 1'0"**

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners, & management consultants

111335

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

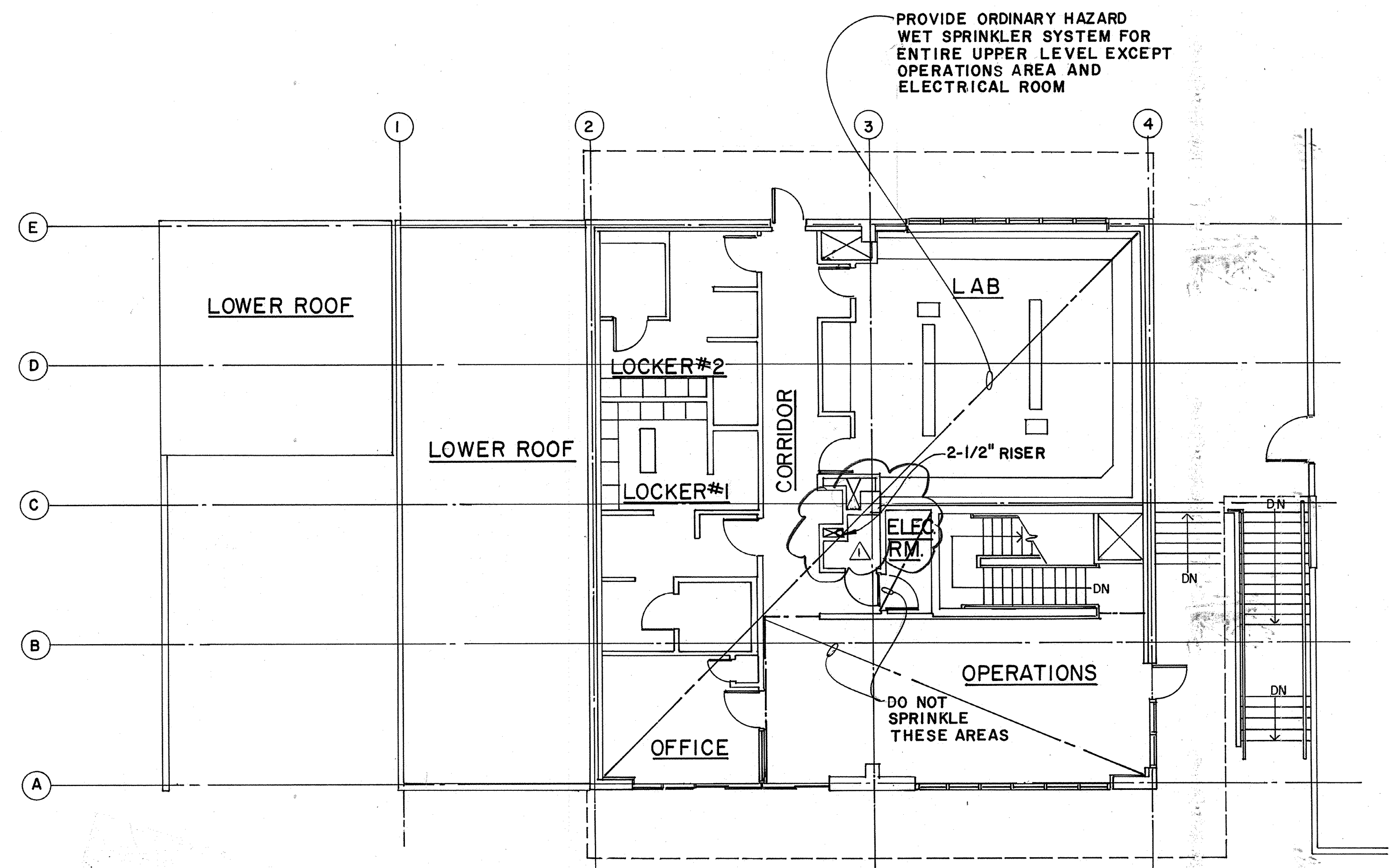
HVAC Approved by: Date:

INSTRUMENTATION Approved by: Date:

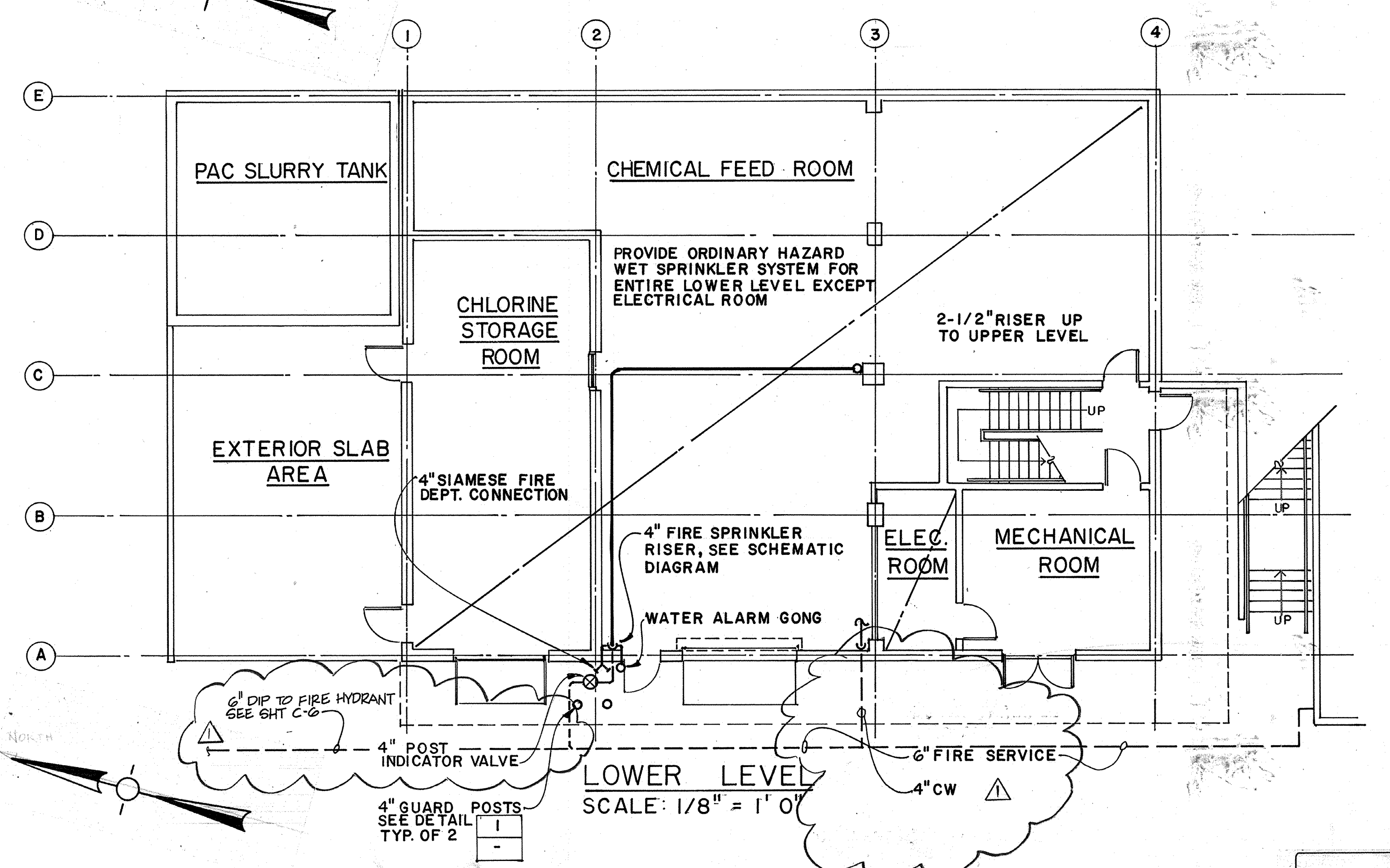
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STRUCTURAL Approved by: Date:

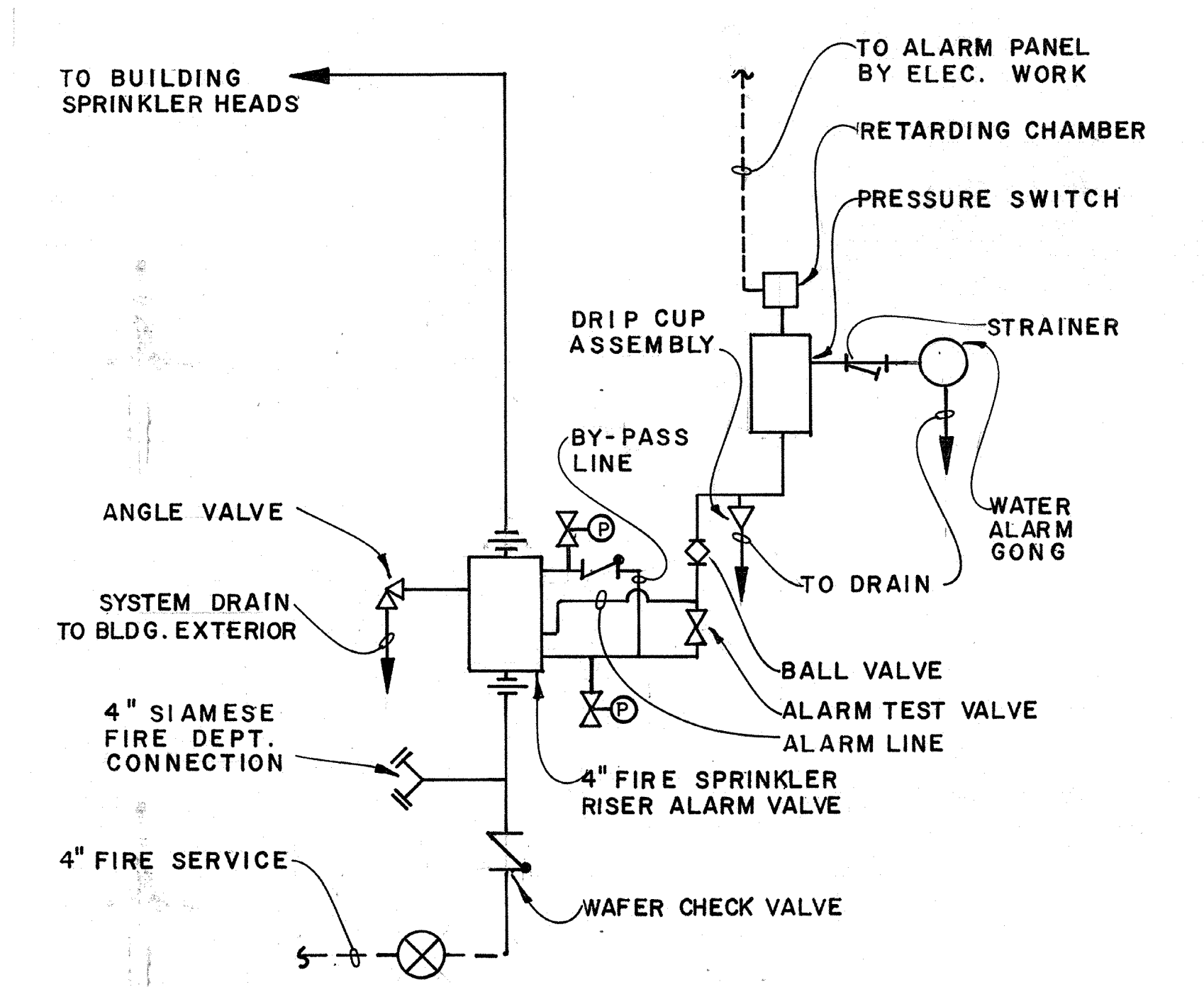
ARCHITECTURAL Approved by: Date:



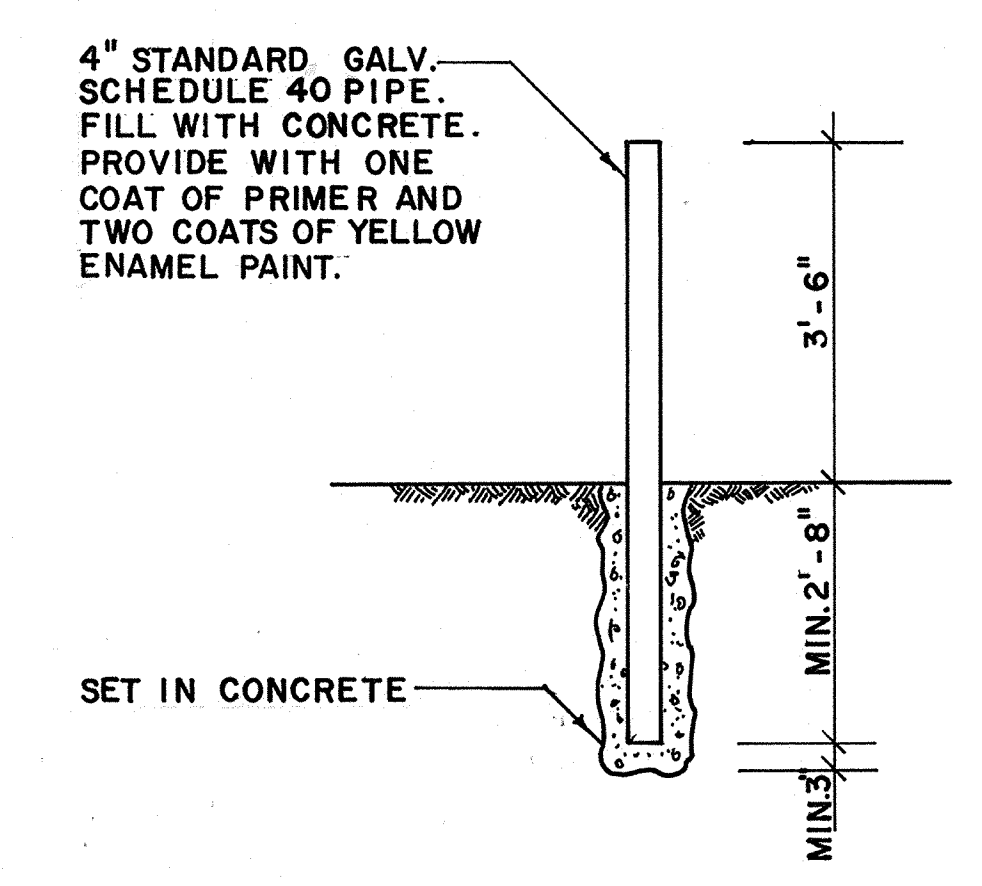
UPPER LEVEL
SCALE: 1/8" = 1'0"



LOWER LEVEL
SCALE: 1/8" = 1'0"



SYSTEM RISER SCHEMATIC DIAGRAM



GUARD POST DETAIL
SCALE: 1/2" = 1'0"

AS-BUILT
PJM 5/10/91

Date	4/11/91	Revision	REVISED FOR THE RECORD
Ch'k'd	LF	Revision	
Designed by	LF	Date	9/88
Drawn by	JB	Scale	AS SHOWN
Checked by	LF		
Approved by	PFM		

LF LARS FAGERSTROM
CONSULTING ENGINEERS, INC.
100 BONHOMME DE DIEPPE BLVD. WALNUT CREEK, CALIFORNIA 94596 (415) 932-2440

CITY OF PITTSBURG, CA

WATER TREATMENT PLANT EXPANSION

FIRE SPRINKLER SYSTEM
PLANS, DIAGRAM AND DETAIL

CAMP DRESSER & MCKEE INC.

710 South Broadway
Walnut Creek, CA 94596

environmental engineers, scientists,
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SHEET NO.
5P-5

107 of 147

PROJECT MANAGER Approved by: Date: PROJECT ENGINEER Approved by: Date: PLUMBING Approved by: Date: HVAC Approved by: Date: INSTRUMENTATION Approved by: Date: ELECTRICAL Approved by: Date: STRUCTURAL Approved by: Date: ARCHITECTURAL Approved by: Date:

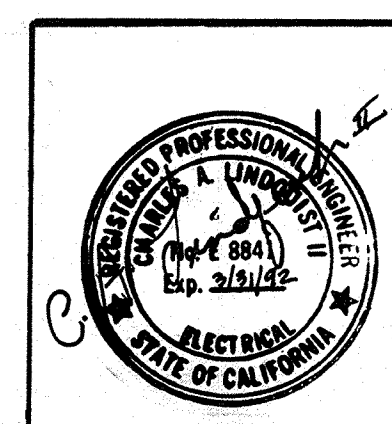
PLAN	SINGLE LINE DIAGRAM	CONTROL SCHEM DIAGRAM	DESCRIPTION
[S]	* **	(M#) M# N.O. M# N.C.	Combination motor circuit protector and magnetic full voltage starter with 120 volt control transformer. # Control circuit ID number * Magnetic trip motor circuit protector trip rating ** NEMA contactor size N.O. Normally open N.C. Normally closed
[S]	* **	(F#) (S#)	Same as above, except 2 speed, "Fast and Slow" (refer to singleline for 1 winding or 2 winding)
[S]	* **	(F#) (R#)	Same as above, except reversing, "Forward" and "Reverse"
[S]	* **	(M#)	Combination non-fusible disconnect and magnetic full voltage starter with 120V control transformer
[]	30A		600 volt, 3 pole, non-fused disconnect (enclosure as noted). (30A horsepower rated, heavy duty type unless noted otherwise)
[C]		(C#)	600 volt, 3 pole contactor with 120 volt control transformer (amps/NEMA size and enclosure as noted)
	100A ATS-1 N S		Automatic transfer switch #1 (ATS 1): "N" indicates normal source, "S" indicates standby source. 100A indicates continuous current rating.
[B]			Molded case circuit breaker (3 pole unless otherwise noted).
	CL		Circuit Breakers with this symbol to be current limiting type.
	SST		Circuit Breakers with this symbol to have solid state trips per specifications.
	AT AF In. C.		Circuit Breaker frame size (AF) and continuous amp trip setting (AT). High voltage vacuum circuit breaker (52) or 600 volt insulated case (In. C.) or air power (AP.) circuit breaker. Refer to specifications for complete details.
	←→ D.O.		Equipment and/or devices between inverted arrows indicates that it is of the drawout type with carriage (D.O.) or plug in type without carriage (P.I.) as noted.
			5 kv or 15 kv Load Interrupter switch.
			Current transformer (C.T.)
			Potential transformer (P.T.)

PLAN	SINGLE LINE DIAGRAM	CONTROL SCHEM DIAGRAM	DESCRIPTION
(T#)	T#	T#	Power transformer #
G.R.			Ground
			Grounding Rod
			Fuse
A(1b) or			Fluorescent lighting fixture
A(1b) or			Incandescent or HID lighting fixture
(ALR)		(ALR)	Incandescent alarm indicating fixture
			1) A() indicates fixture type. Refer to lighting fixture schedule 2) _(1) indicates circuit 3) _(b) indicates control by switch b 4) Shading indicates fixture on standby power ckt
			Emergency lighting units with integral battery—two lighting heads shown
			Remote mounted emergency lighting heads, see note 2.
			Push to test red run light
			Indicating pilot light, non - push to test A = amber, G = green, R = red, etc.
			Audible alarm horn or bell (as specified)
			Thermostat (see note 2) (specified with HVAC unless noted otherwise.)
			Fractional horsepower motor starting switch w/overloads unless indicated otherwise. (see note 2)
			Duplex 20 amp grounding type convenience outlet (WP indicates weatherproof) (see note 2)
			GFI (Ground fault interrupting) type receptacle
			Switch controlling circuit 2b (3w indicates 3way switch) (see note 2)
			Special purpose receptacle. Refer to receptacle schedule for details. ("A" indicates receptacle type "A") (see note 2)
			Conduit sealing fitting for Class 1 Div. 1 areas, Chlorination areas or other locations as noted.

PLAN	SINGLE LINE DIAGRAM	CONTROL SCHEM DIAGRAM	DESCRIPTION
[J]			Junction box
(#)			Underground raceway # Refer to u/g raceway schedule for conduits in raceway.
---			Concealed conduit run. (Floor, ceiling, walls or underground)
[I2]			Instrumentation conduit #2 (All conduit prefixed with I or J)
///G			Exposed conduit run (hot, neutral, and ground) (Crosshatches indicates number of conductors) (No crosshatches indicates 3 #12 awg in 3/4" conduit) (see note 1)
1,3 LP# 1'C			Home run to light panel LP# with circuits 1 and 3 in 1' conduit (see note 1)
[BP]			Home run to MCC B with conduit #2 (refer to conduit schedule for conduit size and fill)
[DPK3]			Home run to distribution panel K with conduit #3 (Refer to conduit schedule for conduit size & fill)
[NEMA #]			All panels, starters, disconnect, etc, within the room noted to have enclosures w/NEMA type # enclosures (except as specifically noted)
[K]			Key interlock.
[Hatched]			Cross-hatching indicates electrical/ instrumentation equipment to be removed Refer to specifications for details

NOTES
 1. Applicable to lighting 120V or receptacle circuits only. Wire is #12 unless noted otherwise.
 2. ■ Indicates location of device (ie in wall, on surface etc as located by ■)

AS-BUILT
 Pgm 5/10/91
 SIGNATURE DATE



Date Ch'k'd Revision
 Designed by: DR
 Drawn by: DR
 Checked by: GKK
 Approved by: CAL
 Date: SEPT 1988
 Scale: NONE

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 ELECTRICAL LEGEND I
 SHEET NO. E-1
 CAMP DRESSER & McKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists, planners, & management consultants
 108 OF 147

PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____

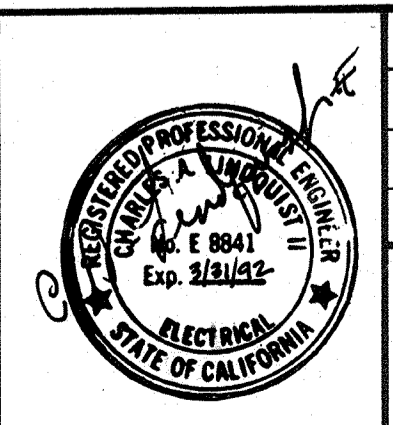
PLAN	SINGLE LINE DIAGRAM	CONTROL SCHEM DIAGRAM	DESCRIPTION
(MCC #)	MCC #		Motor Control Center (* = Letter designating specific MCC)
(MSB)	MSB		Main Switch Board
(GSB)	GSB		Generator Switch Board
(SSS #)	SSS #		Solid State Starter
(SB #)	SB #		Switch board (* = Letter designating specific panel)
(LP #)	LP #		Lighting Panel # (# Designates specific panel)
(LCP #)			Load Center Panel #
(MCP)			Main Control Panel
(MH #)			Manhole #
(PB #)			Pullbox #
(ITB #)			Instrumentation Terminal Box #
(FCC #)			Filter Control Console #
(M)	(15)	(1/3)	Motor, number inside circle = hp
(H)			Heater, see HVAC for details
(G)	(G)		Generator
(S)	(S)	(S)	Solenoid valve
(RT)	(RT)	(RT)	Running time meter
(ST)	(ST)	(ST)	Shunt trip coil for designated circuit breaker
(VM)	(VM)	(VM)	Voltmeter
(AM)	(AM)	(AM)	Ammeter
(F)	(F)	(F)	Frequency meter
(WM)	(WM)	(WM)	Wattmeter
(WHM)	(WHM)	(WHM)	Watt-hour meter
(GS)	(GS)	(GS)	Ground sensing
(AS)	(AS)		Ammeter switch three phase w/off position
(VS)	(VS)		Voltmeter switch, three phase w/off position
(LCS)	(LCS)	(LCS)	Level control system
(VSC)	(VSC)	(VSC)	Variable speed controller
(PE)	(PE)	(PE)	Photoelectric eye

PLAN	SINGLE LINE DIAGRAM	CONTROL SCHEM DIAGRAM	DESCRIPTION
(SEL)	(SEL)	On Off	Specific purpose selector switch as noted on schematic (on-off, etc)
(L/R)	(L/R)	L R	Local - Remote selector switch
(PB)	(PB)	Test	Specific purpose pushbutton control station as noted
(SS)	(SS)	Start Stop	Stop - Start pushbutton control station momentary type
(SSL)	(SSL)	Start Stop LOS	Stop - Start pushbutton control station momentary type w/lock-out device on stop position
(LOS)	(LOS)	LOS	Stop pushbutton control station momentary type w/lock-out device
(SSL)	(SSL)	Start LOS	Start-Lockout stop pushbutton control station, maintaining type
(FSR)	(FSR)	Note 2	Forward-stop-reverse control station
(RSL)	(RSL)	Note 2	Raise-stop-lower control station
(HOA)	(HOA)	H A	Hand-off-automatic selector switch
(XX-###)		Note 4 (typ)	Designates instrument (Refer to instrumentation specifications and instrumentation legend sheet for additional details)
(FS)	(FS)	FS #	Flow switch #(NC opens on increasing flow at * gpm)
(PS)	(PS)	PS #	Pressure switch #(NO closes on rising pressure at * psi)
(ZS)	(ZS)	ZS #	Position switch #(Limit switch) closes in high position, ie valve full open
(LS)	(LS)	LS #	Level switch #(NO closes on rising level at * elevation)
(WS)	(WS)	WS #	Torque overload switch #(NC opens at * pounds torque)
(TS)	(TS)	TS #	Temperature switch #(NO closes on rising temp. at * degrees)
(CR#)		(CR#)	Control relay # Designates control circuit * Sequential prefix for circuit in which device used more than once
(TD)		(TD#)	Time delay relay. See note 1 # See control relay description * See control relay description

PLAN	SINGLE LINE DIAGRAM	CONTROL SCHEM DIAGRAM	DESCRIPTION
	(PT)	(PT#)	Programmable timer #
		(A#)	Alternator coil # # See control relay description * See control relay description
		(LR#)	Latching relay. Refer to specifications for details
		(T)	Solid state time delay relay. See note 1 # See control relay description * See control relay description
(P-10)	P-10	P-10	Mechanical equipment identification number.

NOTES

- The function of the time delay relays is coded as follows:
 - On Delay 0-60 Sec.
 - SP 30 Sec.
 - Use combination of pushbutton or selector switches symbols and N O, N C contacts as required.
 - The following symbols are used on the schematic diagrams to indicate location of devices, unless otherwise noted:
 - ▲ Electrical device located near motor, valve or other mechanical equipment as noted
 - Equipment located in MCC Control Relay Panel (CRP)
 - Device or function located in Filter Control Console (FCC)
 - ▣ Device or function located in a panel as noted
 - PLC I/O point
- Devices not noted are located in the associated MCC starter compartment



Date	Ch'k'd	Revision
Designed by: DR	Drawn by: DR	Checked by: GKK
Approved by: CAL	Date: SEPT. 1989	Scale: NONE

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

ELECTRICAL LEGEND II

CAMP DRESSER & McKEE INC.

710 South Broadway
Walnut Creek, CA 94596

CDM
environmental engineers, scientists,
planners, & management consultants

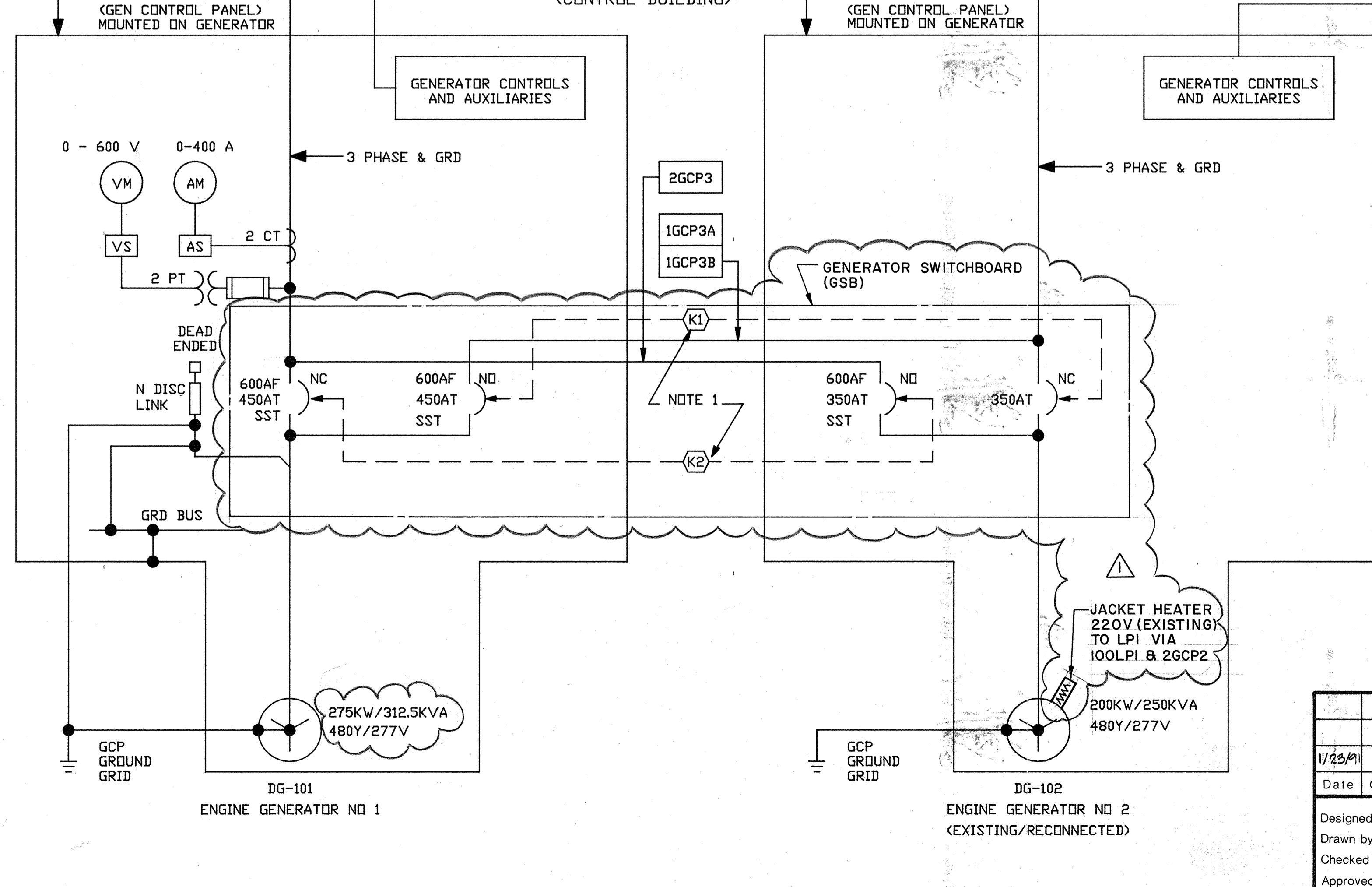
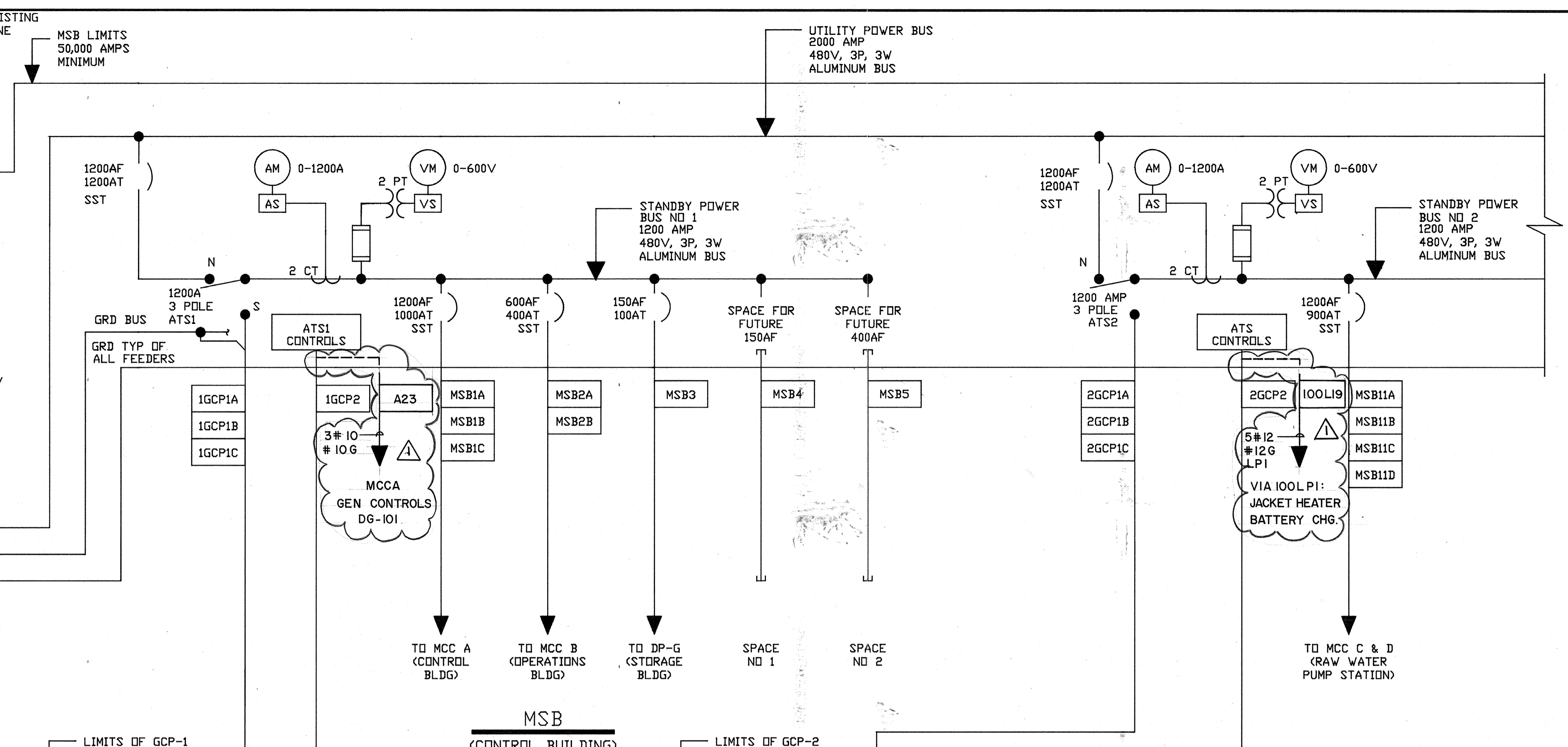
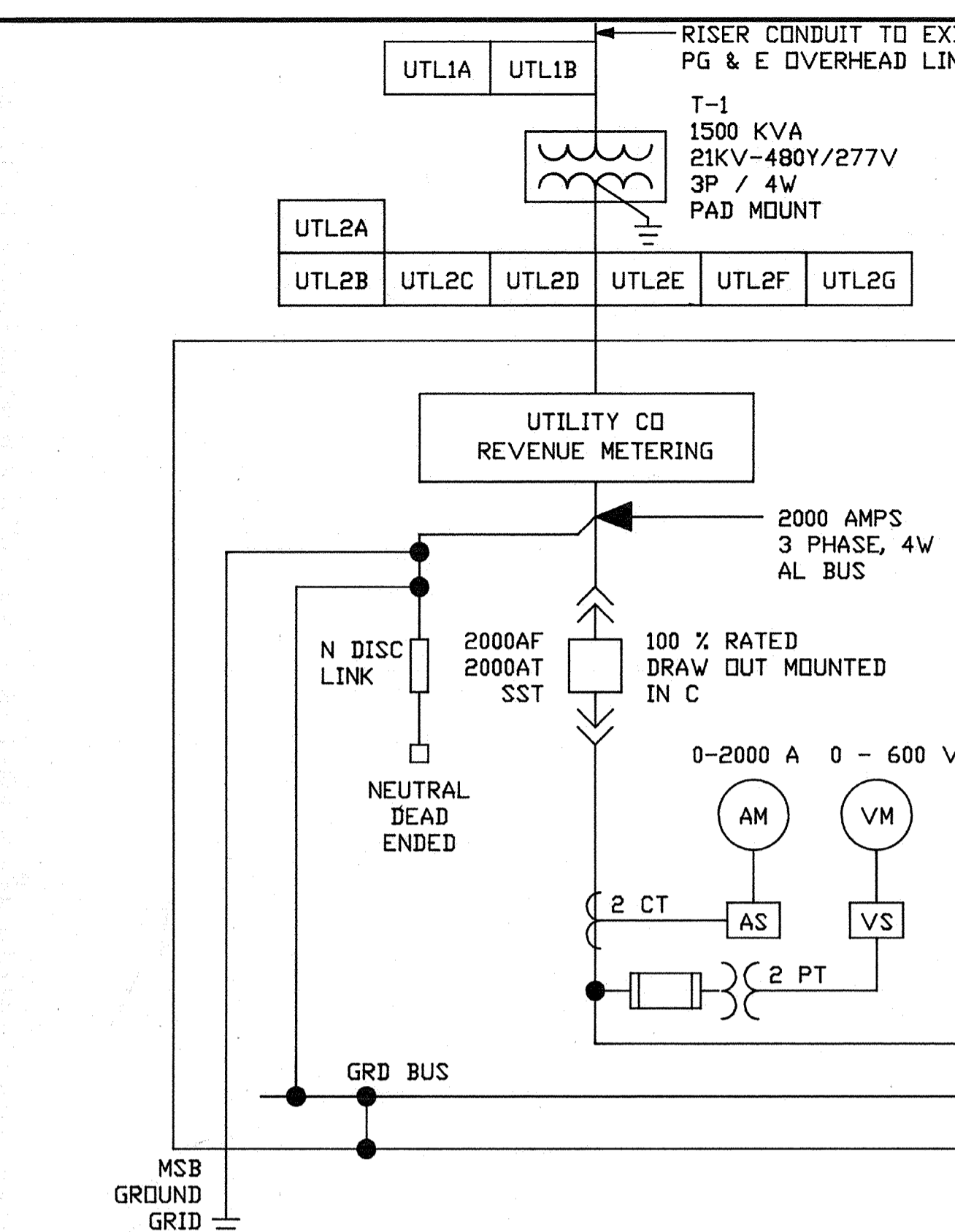
SHEET NO. E-2

109 OF 147

AS-BUILT

Signature: [Signature] DATE: 5/12/91

111355
 PROJECT MANAGER
 PROJECT ENGINEER
 PLUMBING
 HVAC
 INSTRUMENTATION
 ELECTRICAL
 STRUCTURAL
 ARCHITECTURAL



- NOTES:
- RETROFIT KIRK KEY INTERLOCK SYSTEM TO EXISTING GENERATOR. INTERLOCK SYSTEM TO FUNCTION AS FOLLOWS:
 - K1 - ONLY ONE BREAKER CAN BE CLOSED AT TIME ALLOWS DG-101 TO POWER STANDBY BUS NO 2
 - K2 - ONLY ONE BREAKER CLOSED AT A TIME ALLOWS DG-102 TO POWER STANDBY BUS NO 1

AS-BUILT
 Signature: Pjm
 Date: 5/10/91



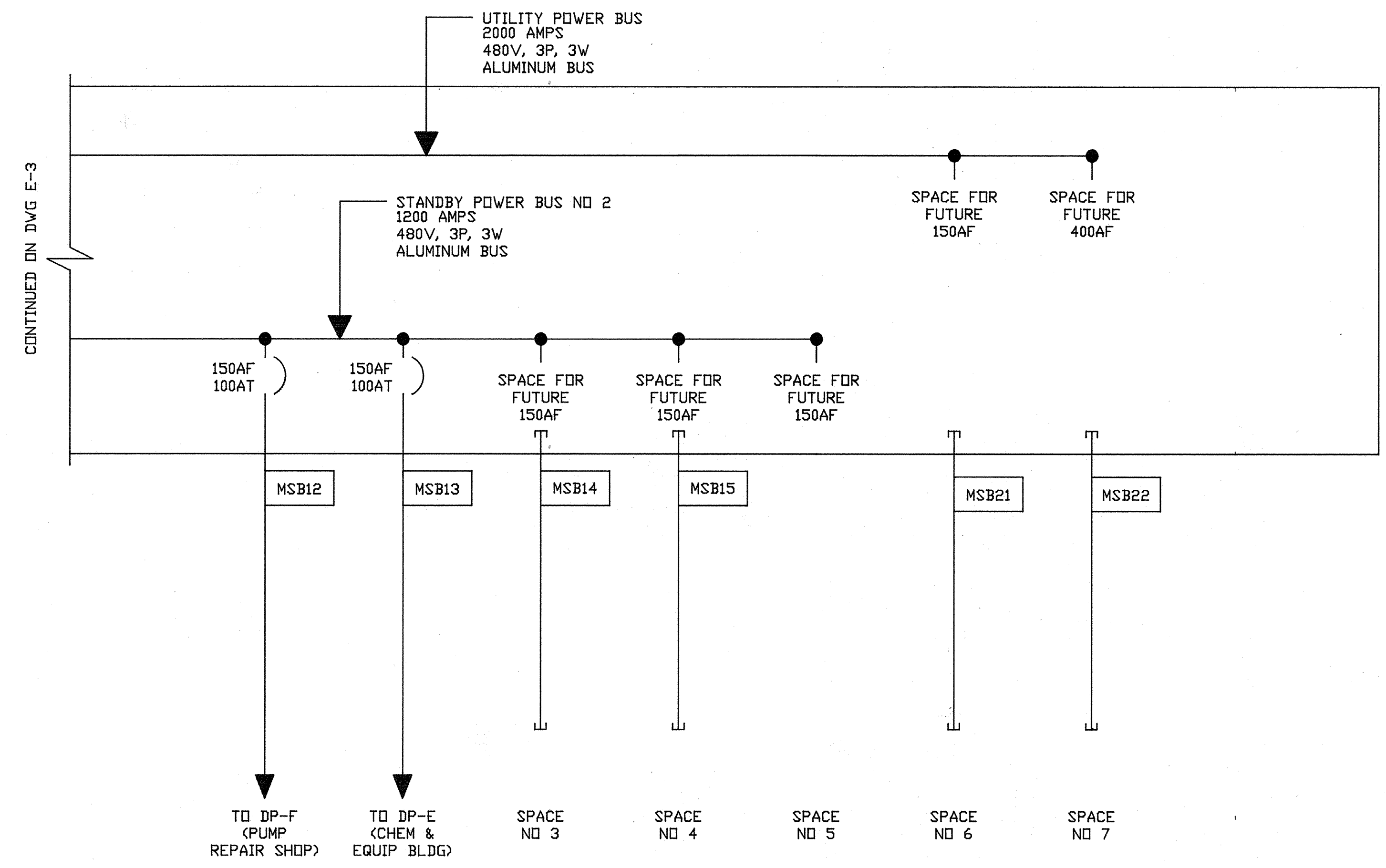
CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 SINGLELINE
 MSB & GCP

CAMP DRESSER & MCKEE INC.
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 Walnut Creek, CA 94596
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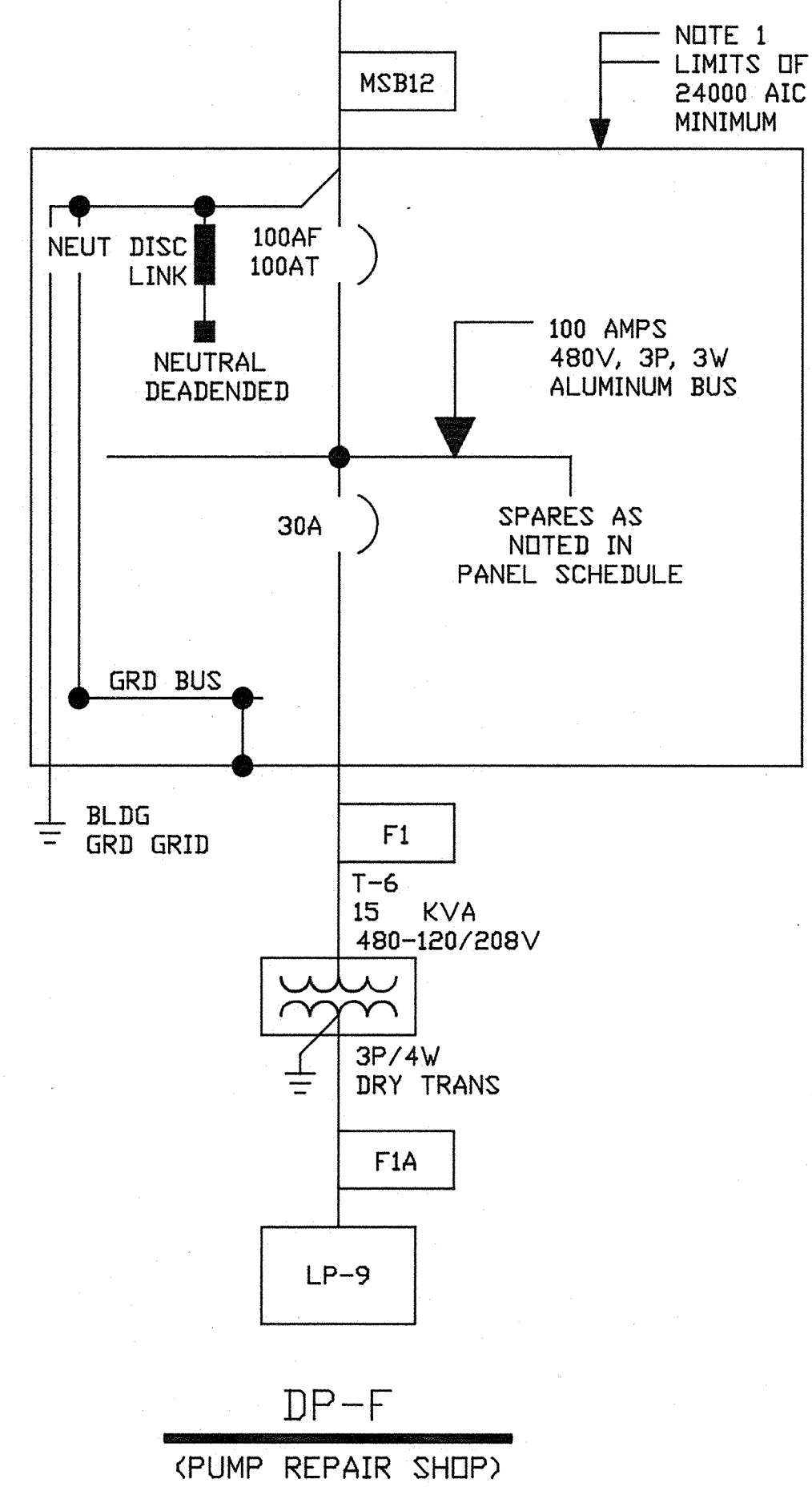
SHEET NO. E-3
 110 OF 147

1/23/91	REVISED FOR THE RECORD
Date	Revision
Designed by: R.R.R.	Date: SEPT. 1988
Drawn by: DR	Checked by: GKK
Approved by: CAL	Scale: NONE

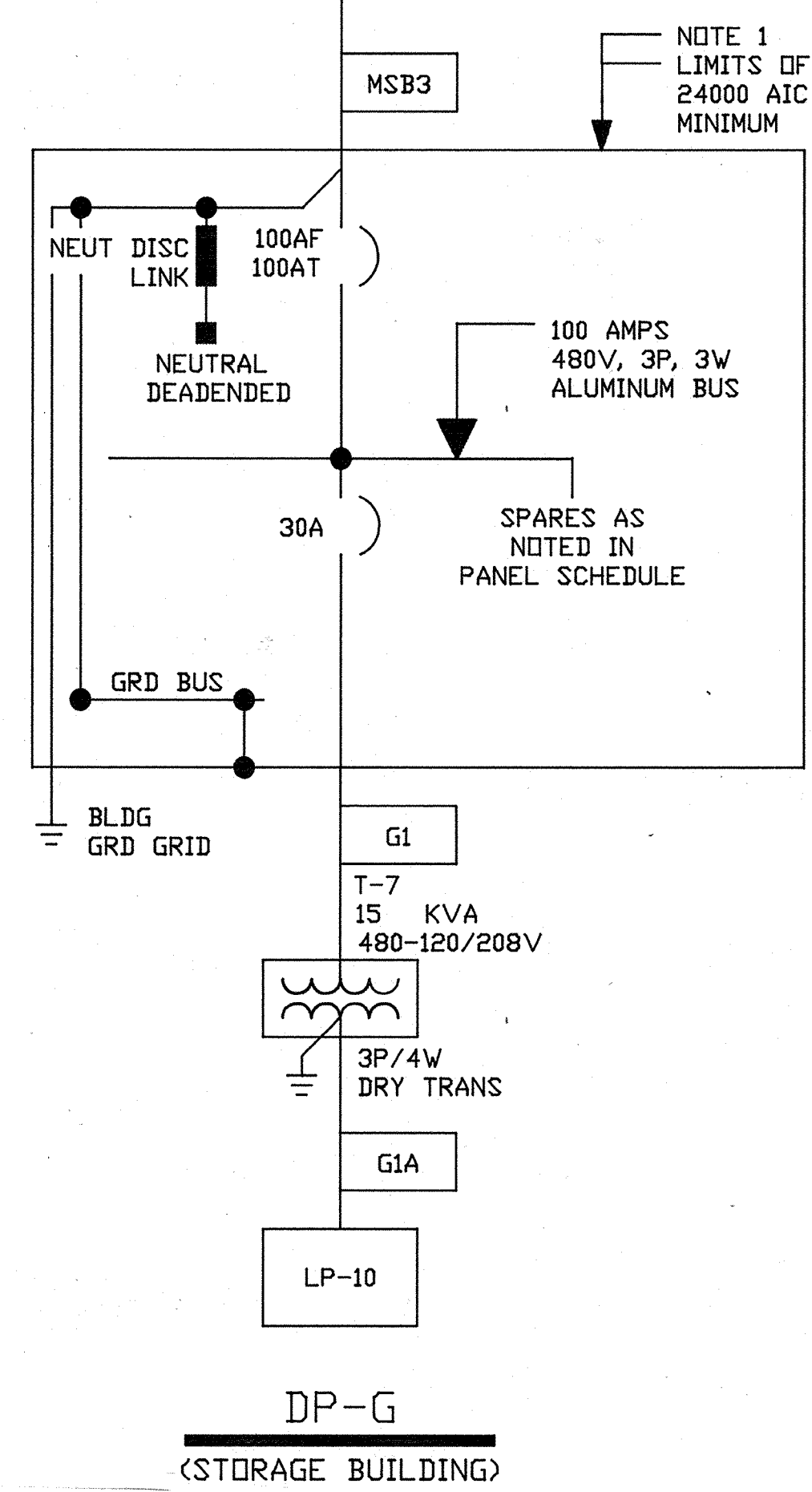
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 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



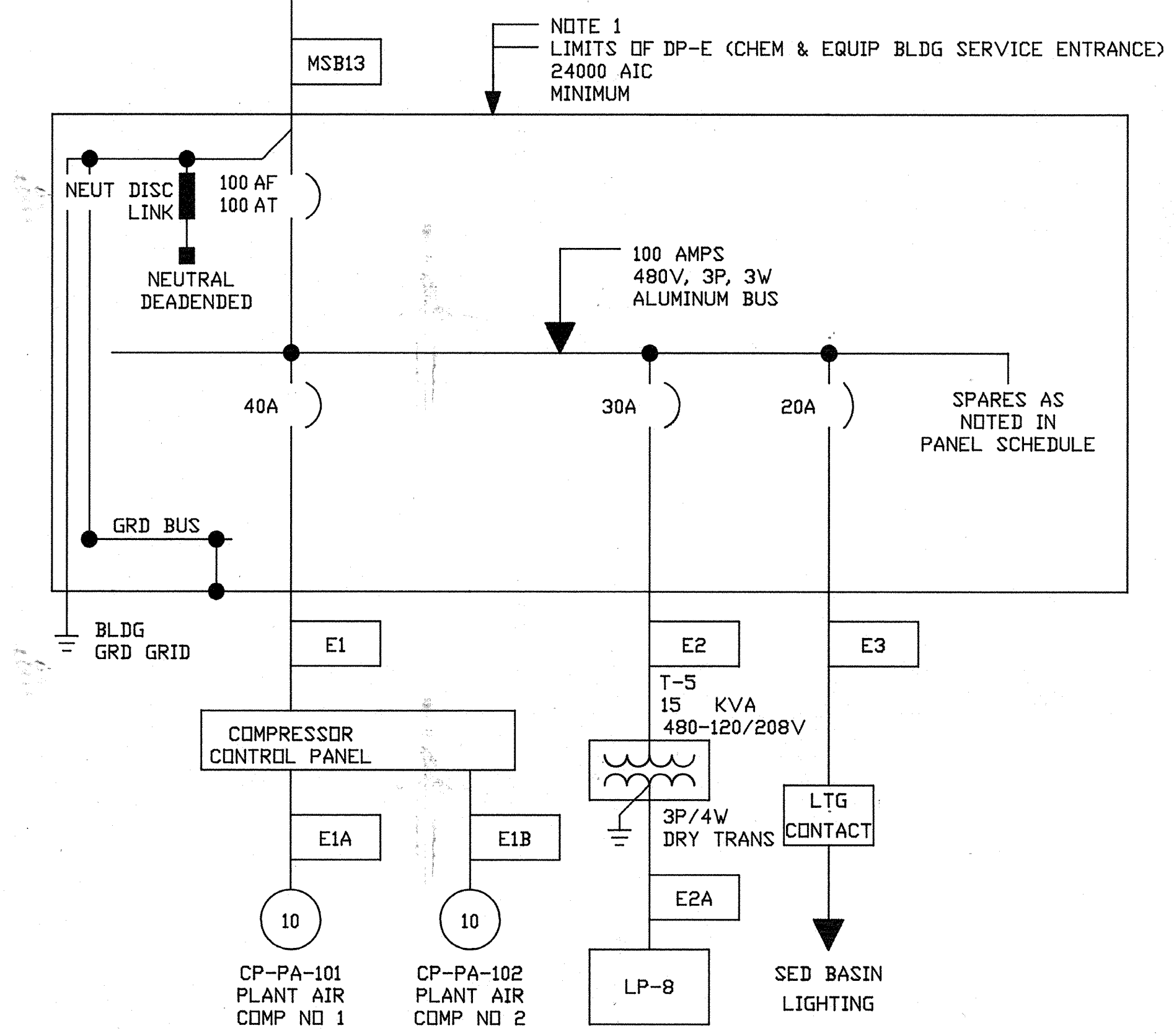
MSB (CONT)
(CONTROL BUILDING)



DP-F
(PUMP REPAIR SHOP)



DP-G
(STORAGE BUILDING)

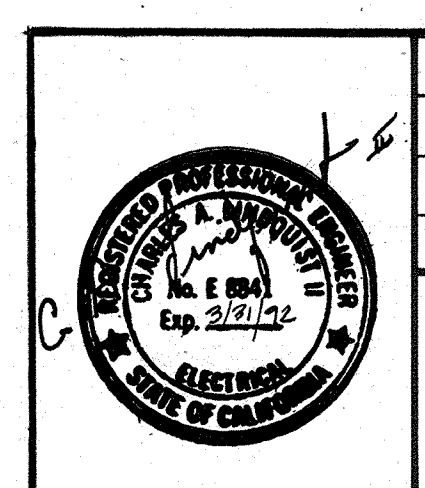


DP-E
(CHEM & EQUIP BUILDING)

NOTES:

1. REFERENCE SPEC SECTION 16007 MISCELLANEOUS EQUIP - 480V DISTRIBUTION PANELS AND 16030-B PANEL SCHEDULES.

AS-BUILT
 Signature: *ORM* 5/10/91



Date	Ch'k'd	Revision
Designed by: RRR	Drawn by: DR	Date: SEPT 1988
Checked by: GKK	Approved by: CAL	Scale: NONE

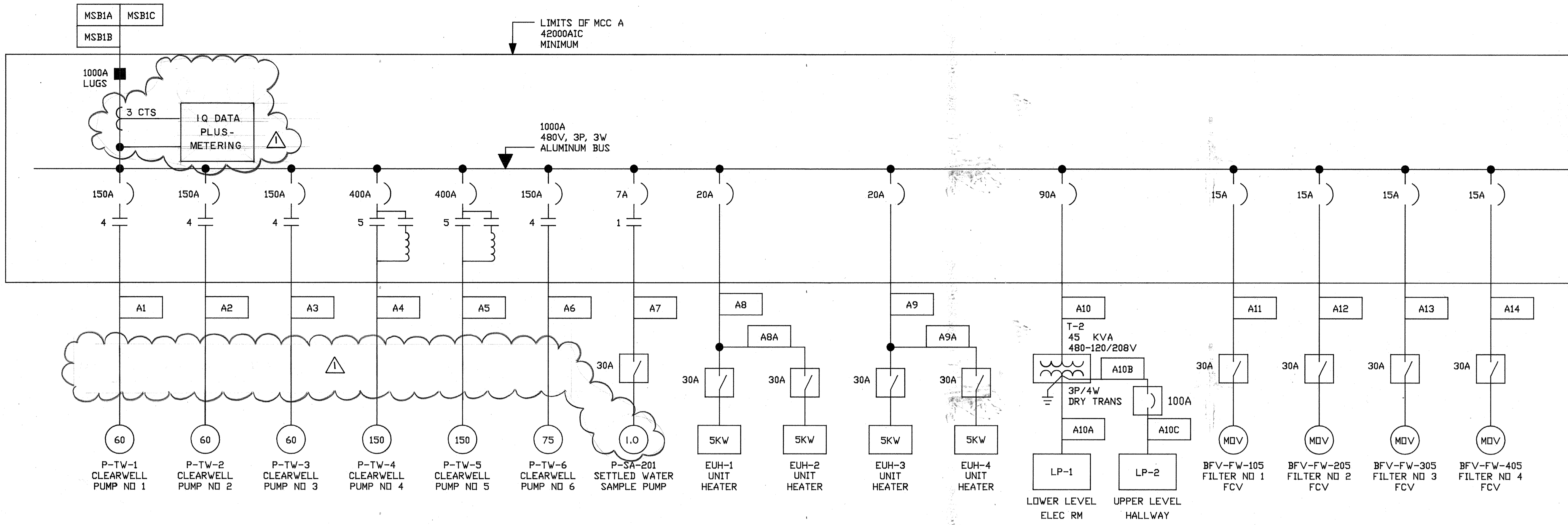
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WATER TREATMENT PLANT EXPANSION 1988
SINGLELINE MSB (CONT'D)
DP-E, DP-F & DP-G

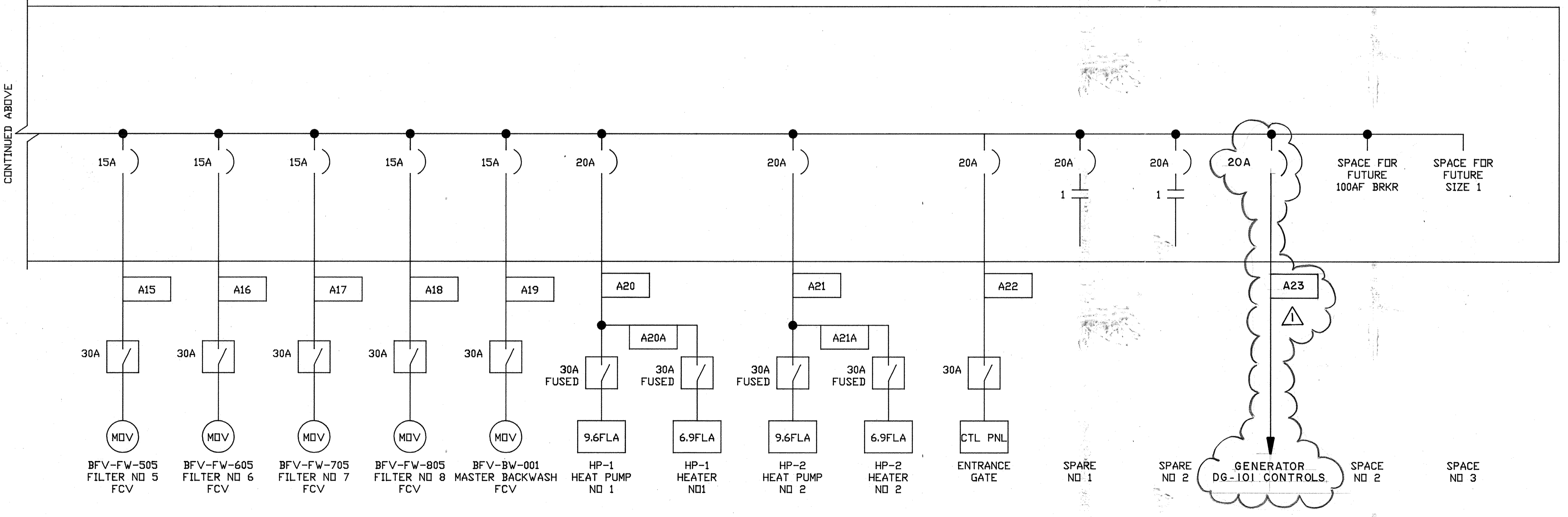
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 Walnut Creek, CA 94596
 environmental engineers, scientists,
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SHEET NO.
E-4
 111 OF 147

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 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



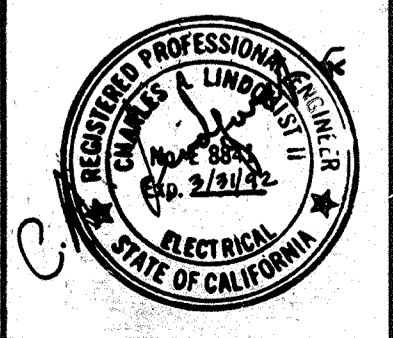
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MCC-A
 (CONTROL BUILDING)

AS-BUILT
 Signature: *B7m*
 Date: 5/10/91



Date	Ch'k'd	Revision
1/28/91		REVISED FOR THE RECORD
Drawn by: RRR	Date: SEPT. 1988	
Checked by: GKK		
Approved by: CAL	Scale: NONE	

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WATER TREATMENT PLANT EXPANSION 1988

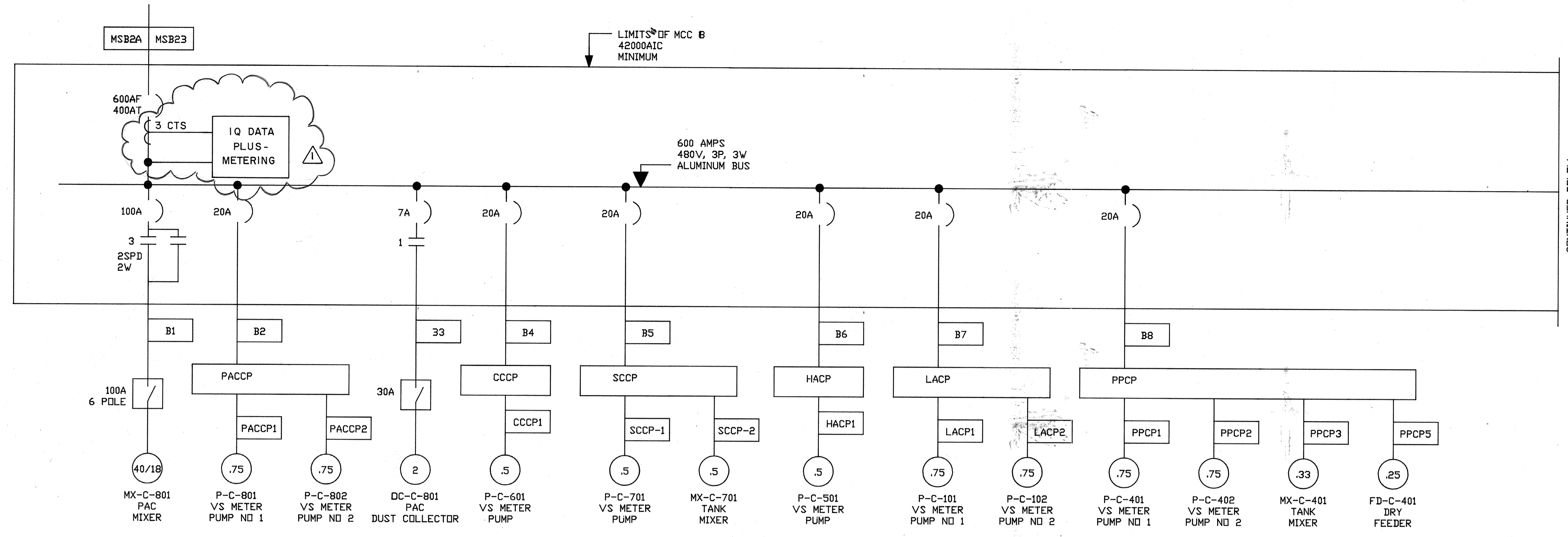
SINGLELINE
 MCC-A

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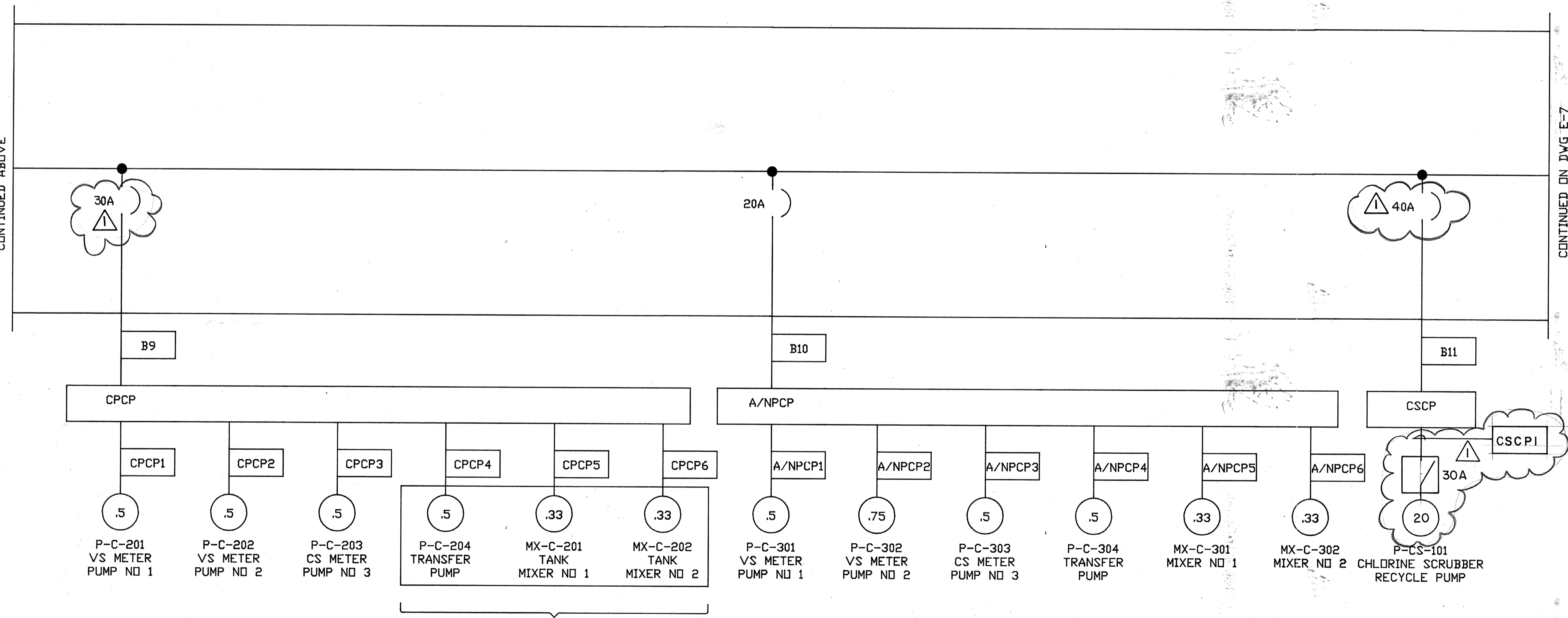
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 PROJECT MANAGER Approved by: Date:
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 HVAC Approved by: Date:
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 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



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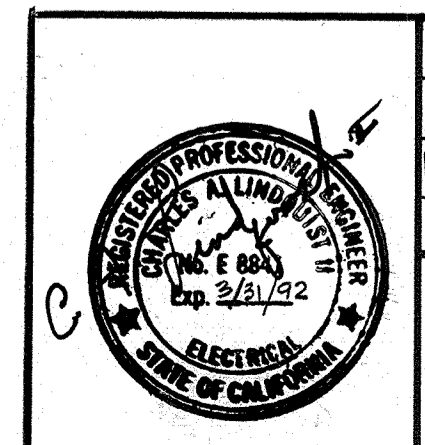


CONTINUED ON DVG E-7

FUTURE EQUIPMENT
 -CONDUIT ONLY THIS CONTRACT-

MCC B
 (OPERATIONS BLDG)

AS-BUILT
 Pjm 5/10/91



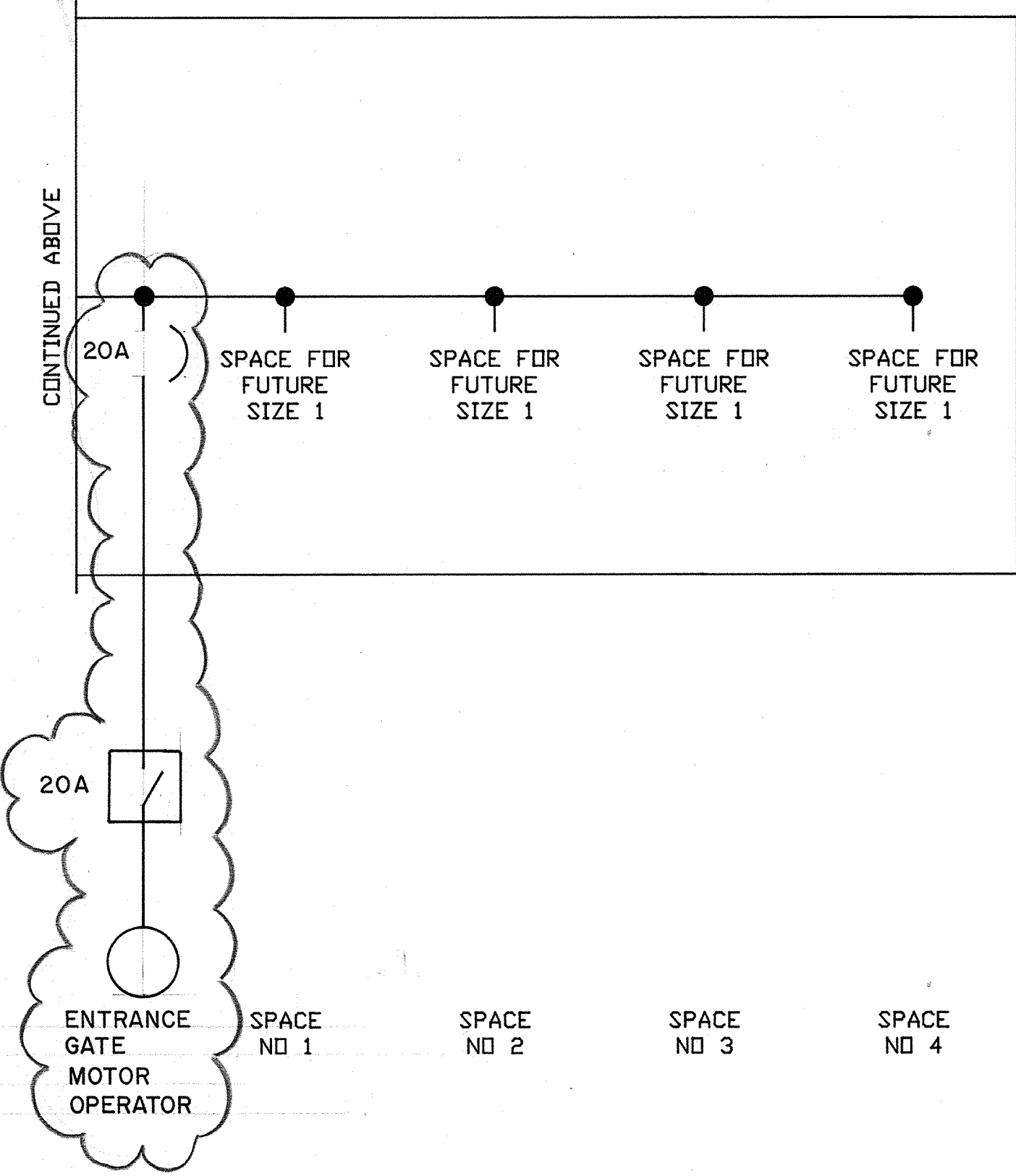
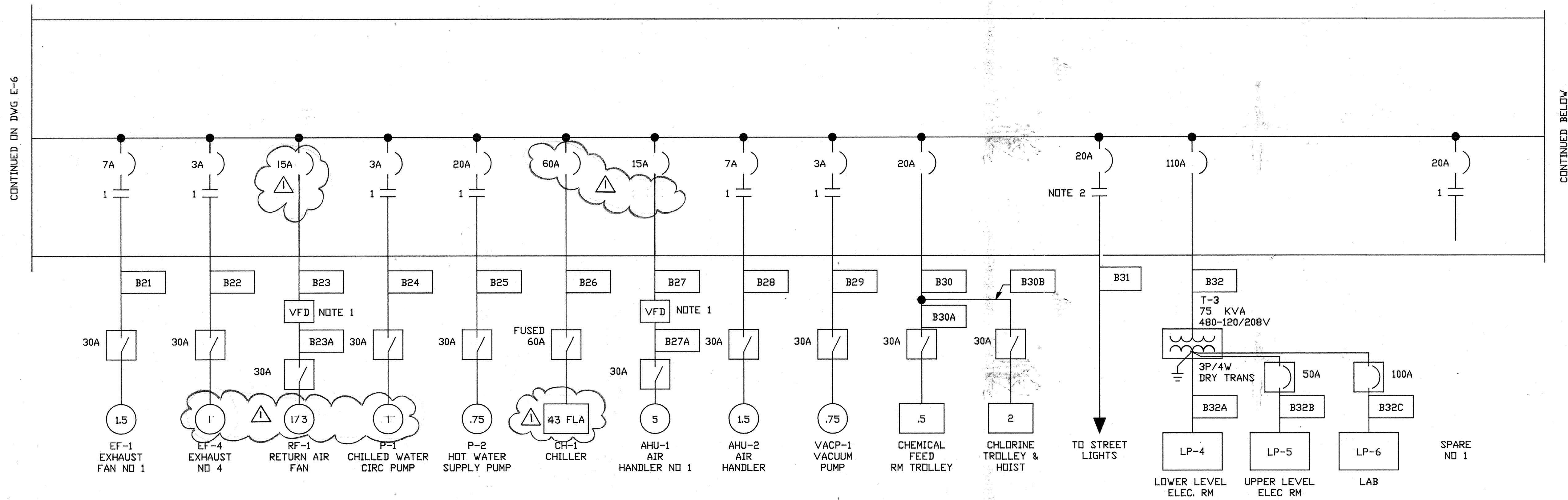
Date	Ch'k'd	Revision
1/22/91		REVISOR FOR THE RECORD
Designed by: RRR	Drawn by: DR	Date: SEPT, 1988
Checked by: GKK	Approved by: CAL	Scale: NONE

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 SINGLELINE
 MCC-B

CAMP DRESSER & McKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners & management consultants

SHEET NO.
 E-6
 113 OF 147

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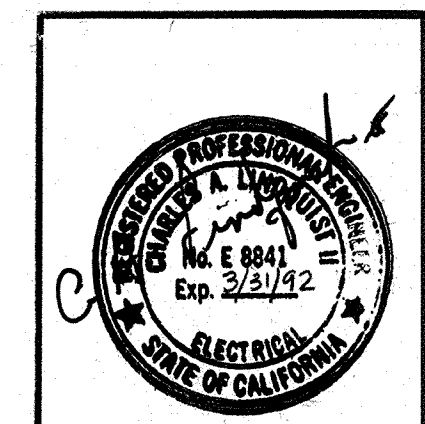


MCC B
 (OPERATIONS BLDG)

NOTES:

1. VFD SPECIFIED WITH HVAC EQUIPMENT.
2. NEMA SIZE 1 CONTACTOR.

AS-BUILT
 Signature: *PJM* 5/10/91
 DATE



Date	Ch'k'd	Revision
11/23/91		REVISOR FOR THE RECORD
Designed by: RRR	Drawn by: DR	Date: SEPT 1988
Checked by: GKK	Approved by: CAL	Scale: NONE

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988
 SINGLELINE
 MCC-B (CONT'D)

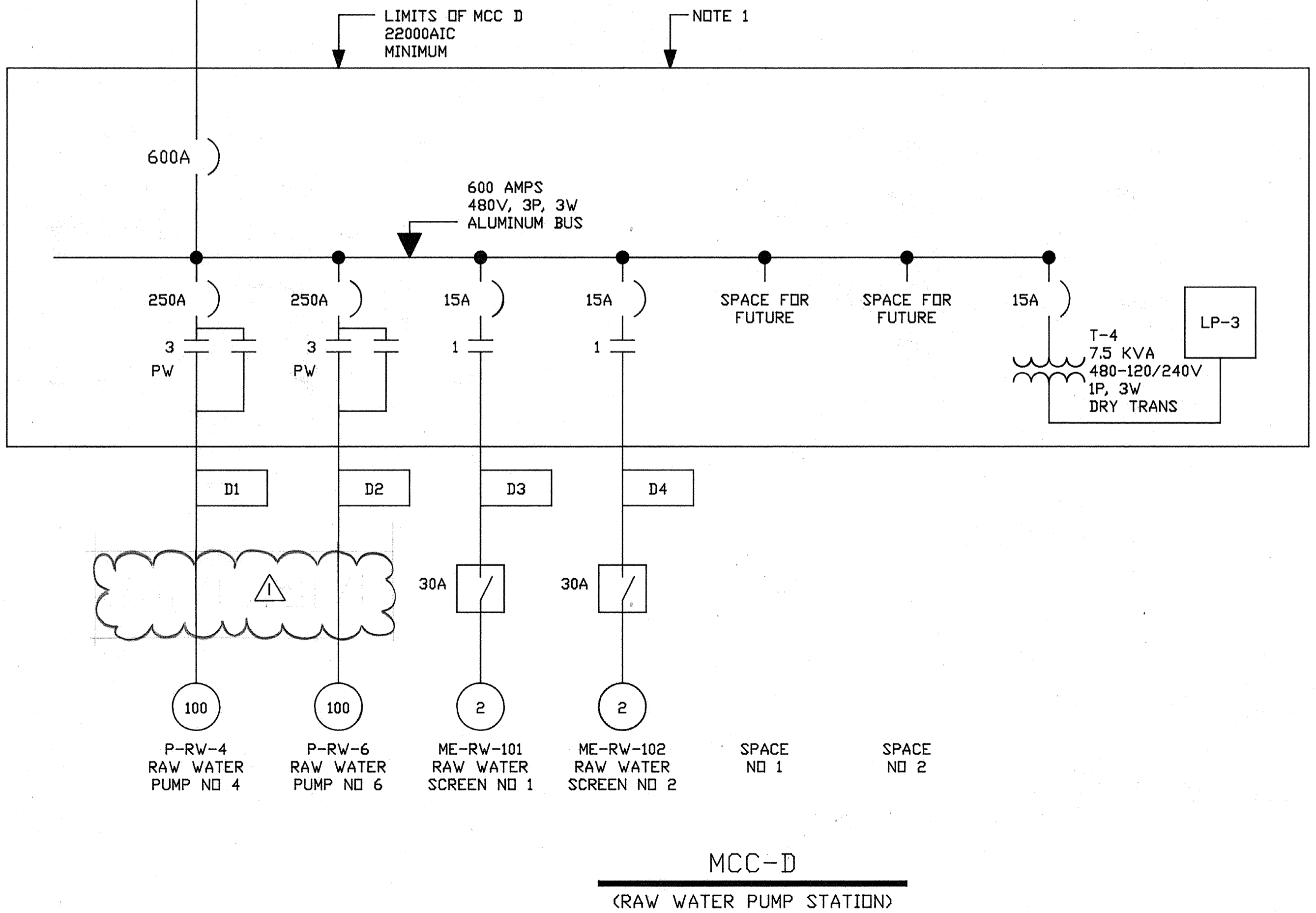
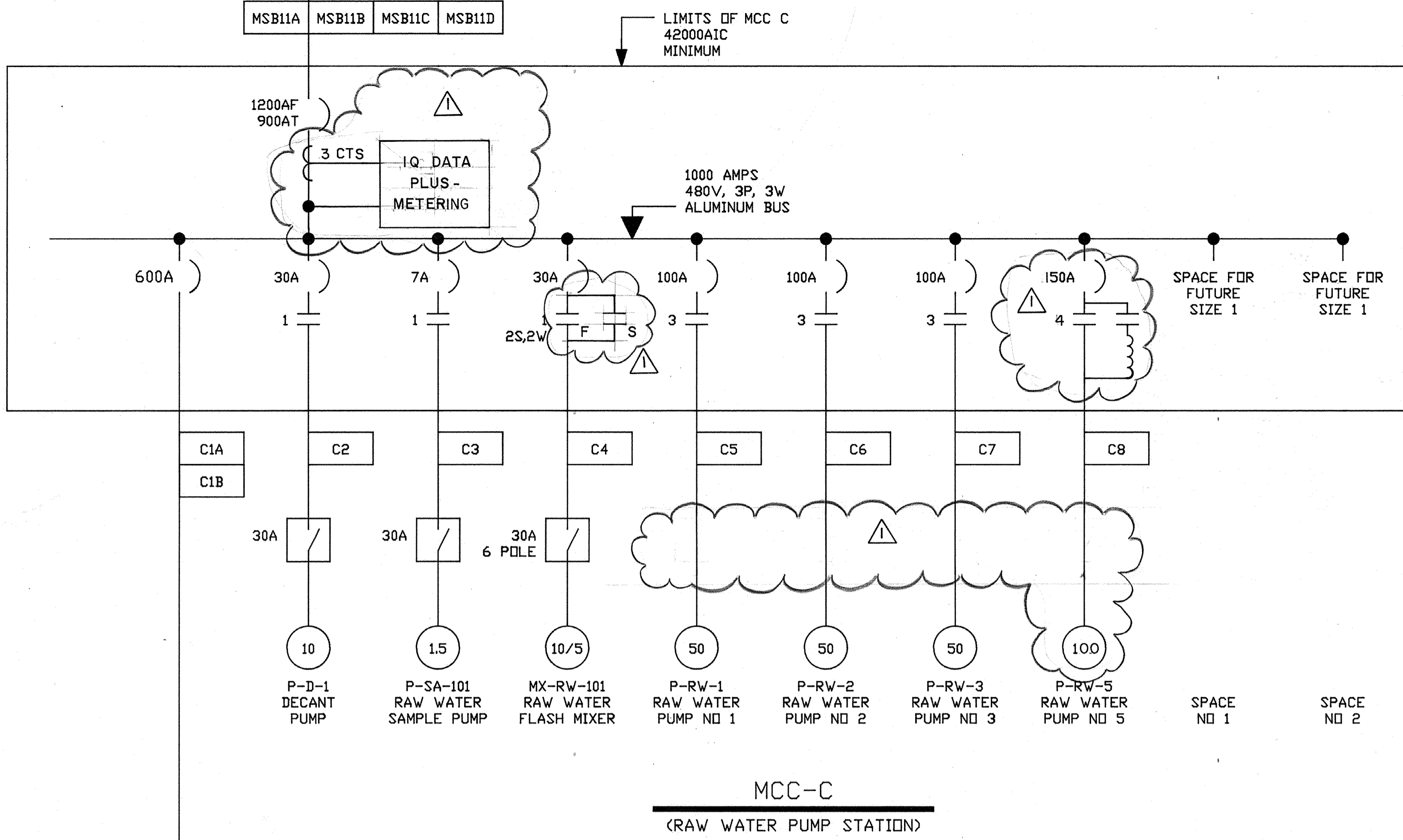
CAMP DRESSER & McKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
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SHEET NO. E-7
 114 OF 147

CONTINUED ON DWG E-6

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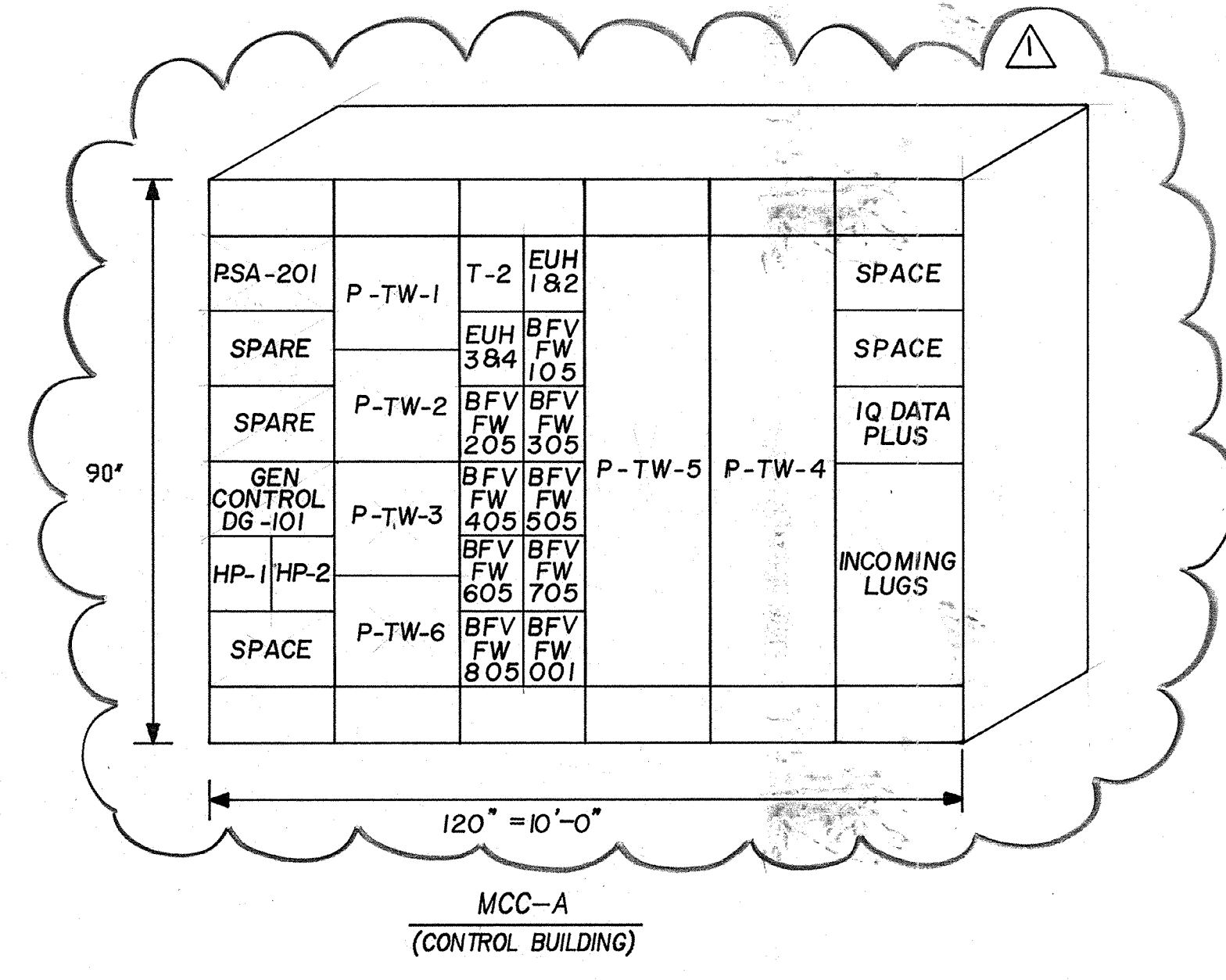
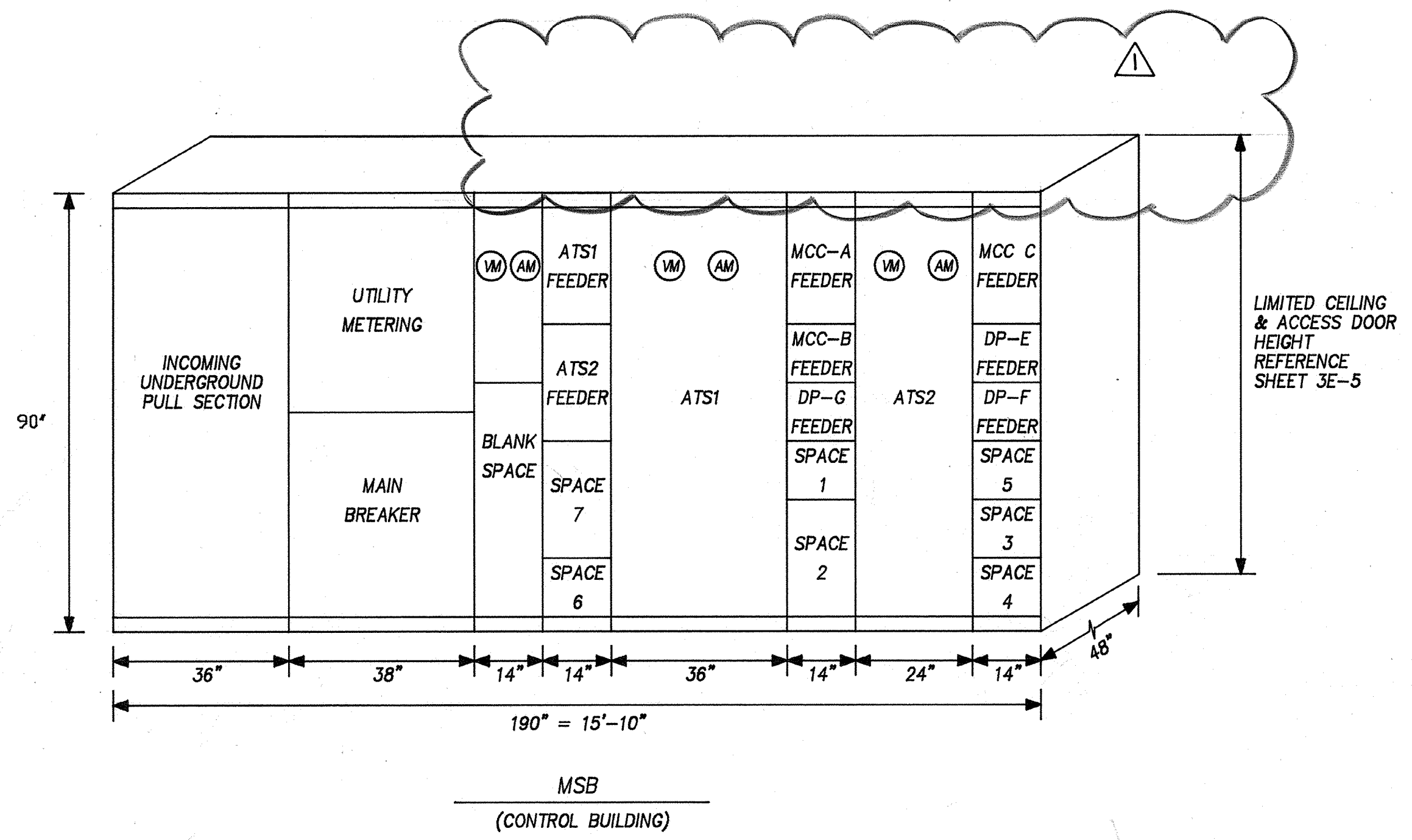


NOTES:
 1. MCC D IS EXISTING, TO BE RELOCATED TO NEW BLDG. ALL INTERNAL COMPONENTS SHOWN ARE EXISTING, NO CHANGES UNLESS NOTED. RECONNECT TO NEW FEEDER FROM MCC C AND NEW BRANCH CIRCUITS TO LOADS.

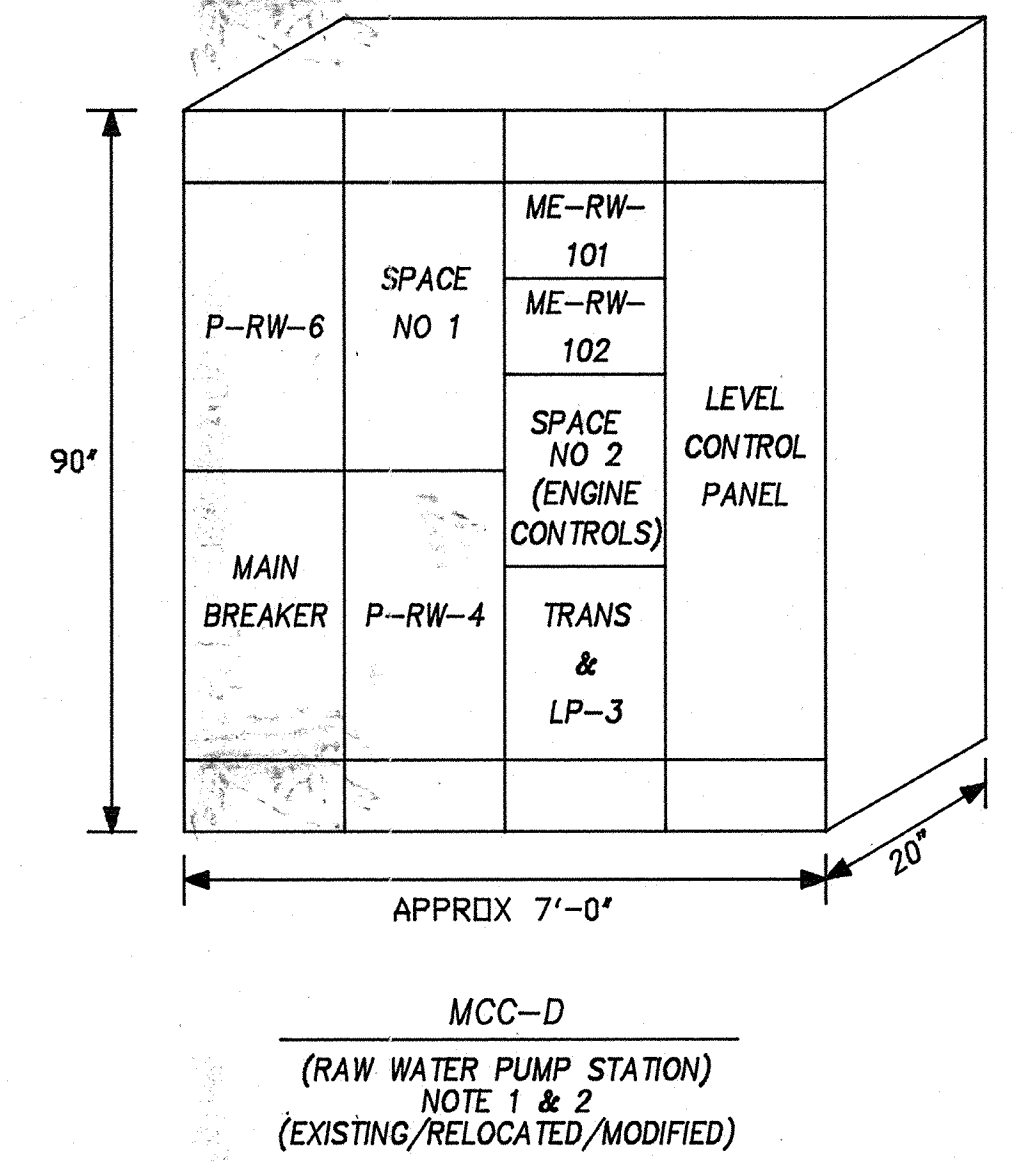
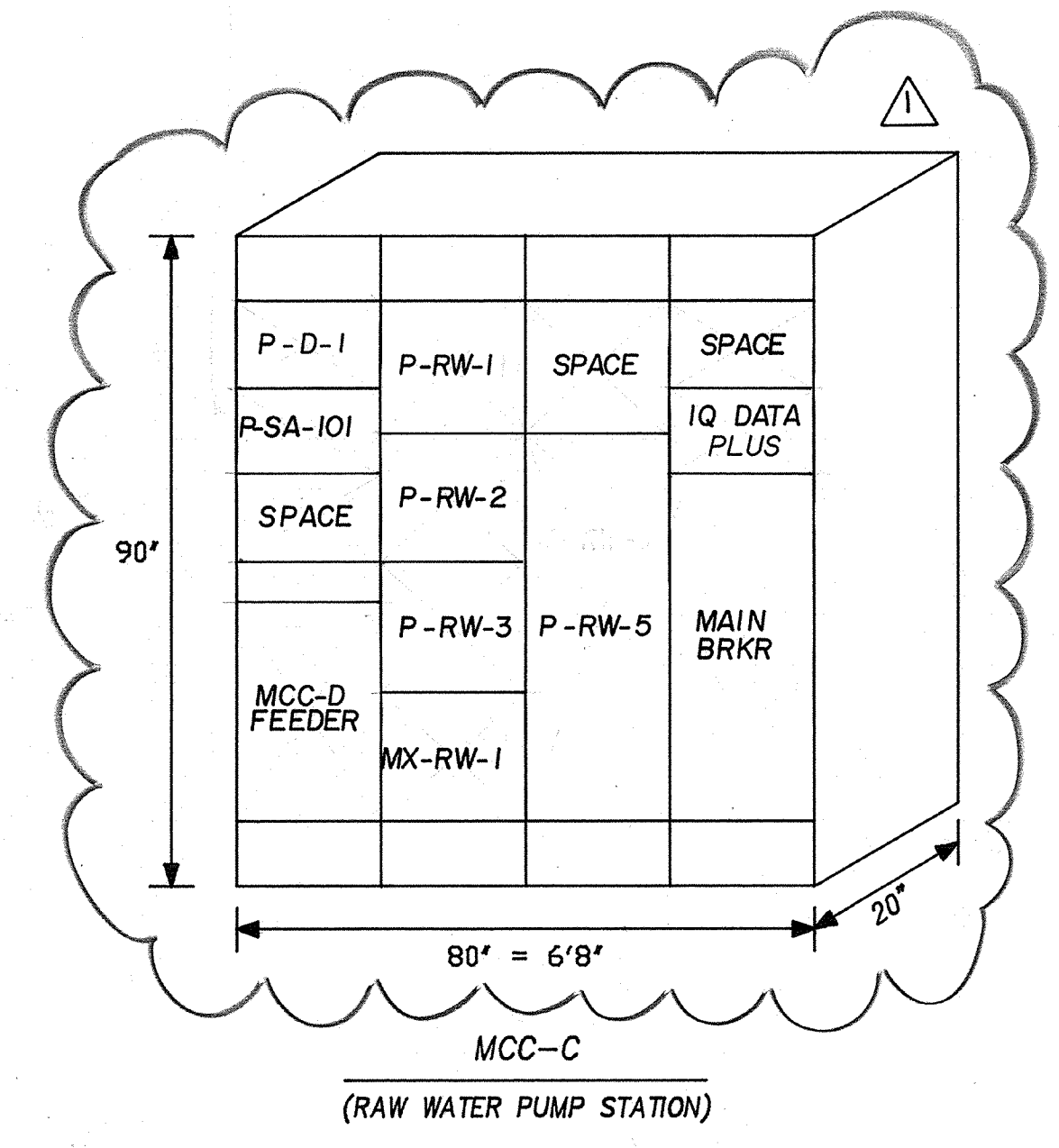
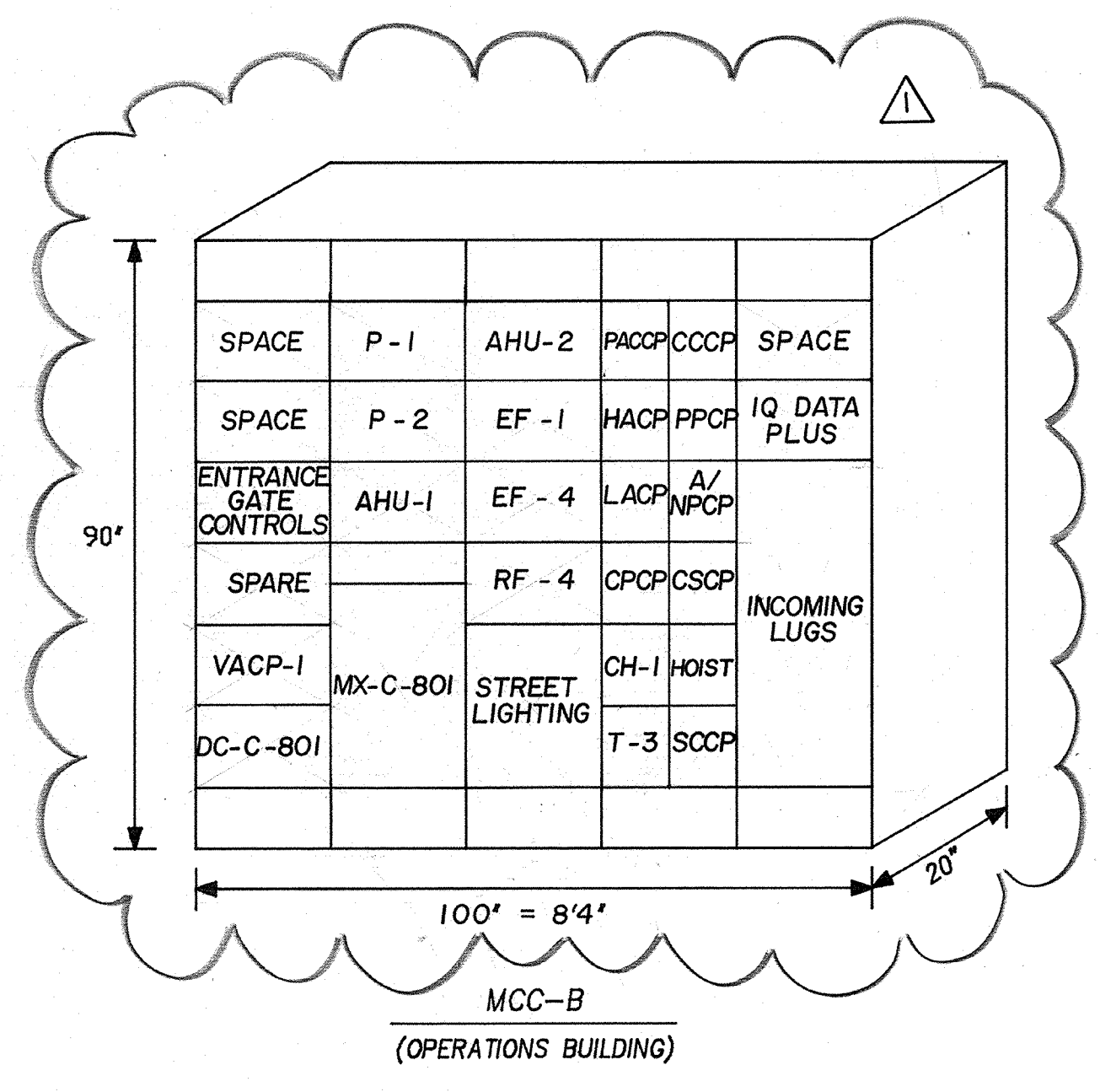
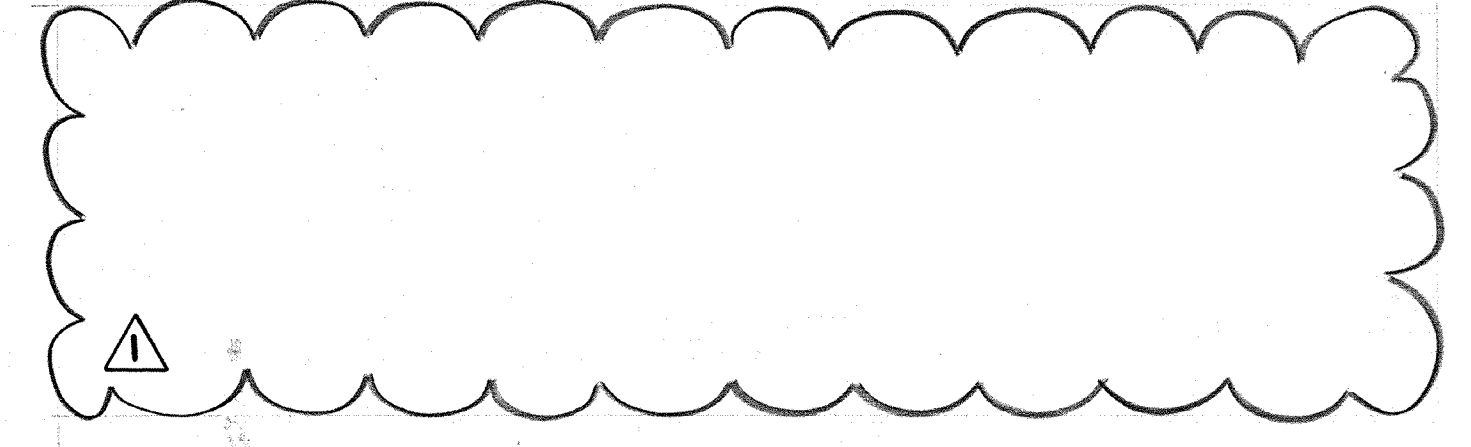
AS-BUILT
 P7m 5/10/91
 DATE

	Date	Ch'k'd	Revision	CITY OF PITTSBURG, CALIFORNIA WATER TREATMENT PLANT EXPANSION 1988 SINGLELINE MCC-C & MCC-D	SHEET NO. E-8
	Designed by: <u>RRR</u> Drawn by: <u>DR</u> Checked by: <u>GKK</u> Approved by: <u>CAL</u>	Date: <u>SEPT. 1988</u>	Scale: <u>NONE</u>		

PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



- NOTES:
1. PROVIDE NEW NAMEPLATES FOR CUBICAL P-RW-4, P-RW-6, ME-RW-101, ME-RW-102, SPACE NO 1, SPACE NO 2 & LP-3.
 2. REMOVE ALL EXISTING EQUIPMENT FROM SPACE NO 2 (ENGINE CONTROL CUBICAL).
 3. PROVIDE NEW NAMEPLATE FOR MCC = MCC-D.



AS-BUILT

[Signature] 5/10/91
SIGNATURE DATE

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

ELEVATIONS

DESIGNED BY: RRR
 DRAWN BY: DR
 CHECKED BY: GKK
 APPROVED BY: CAL

DATE: SEPT. 1988

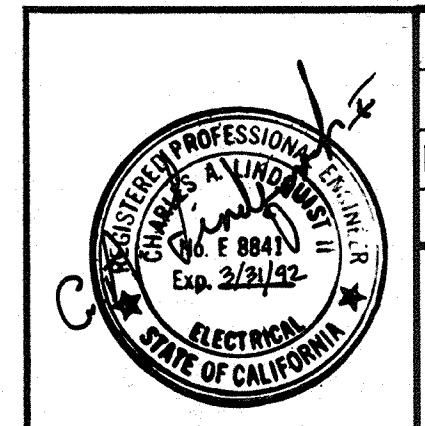
SCALE: NONE

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

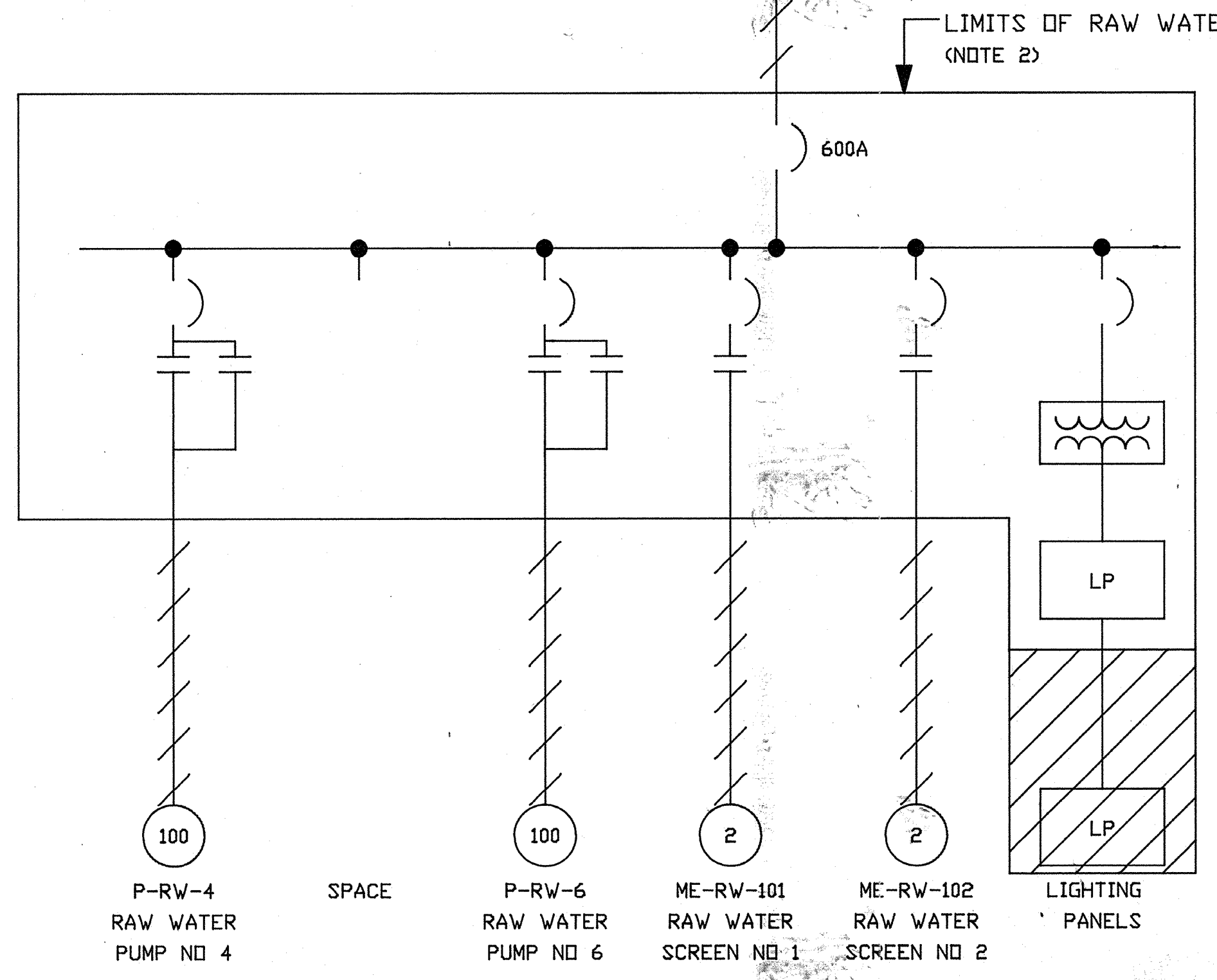
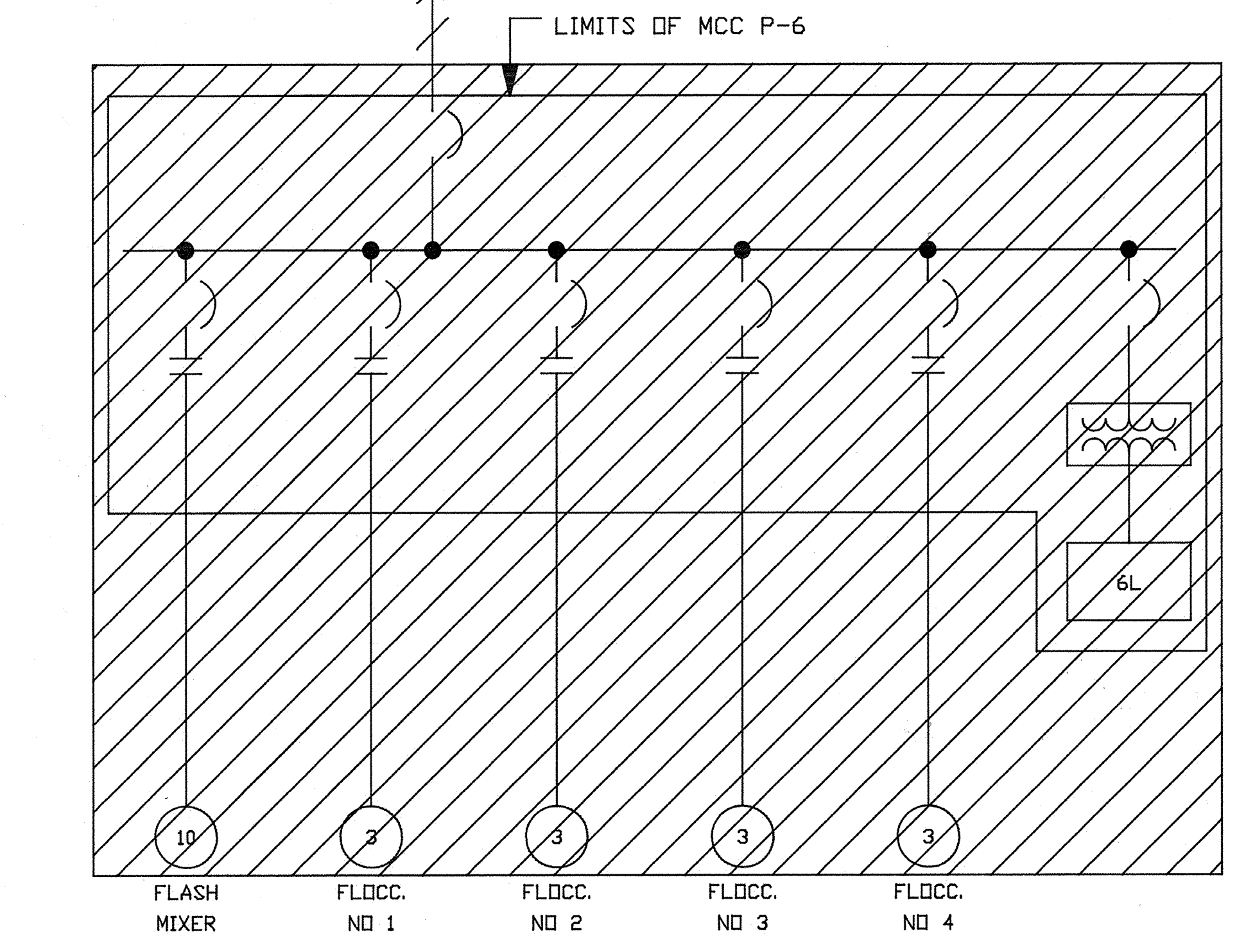
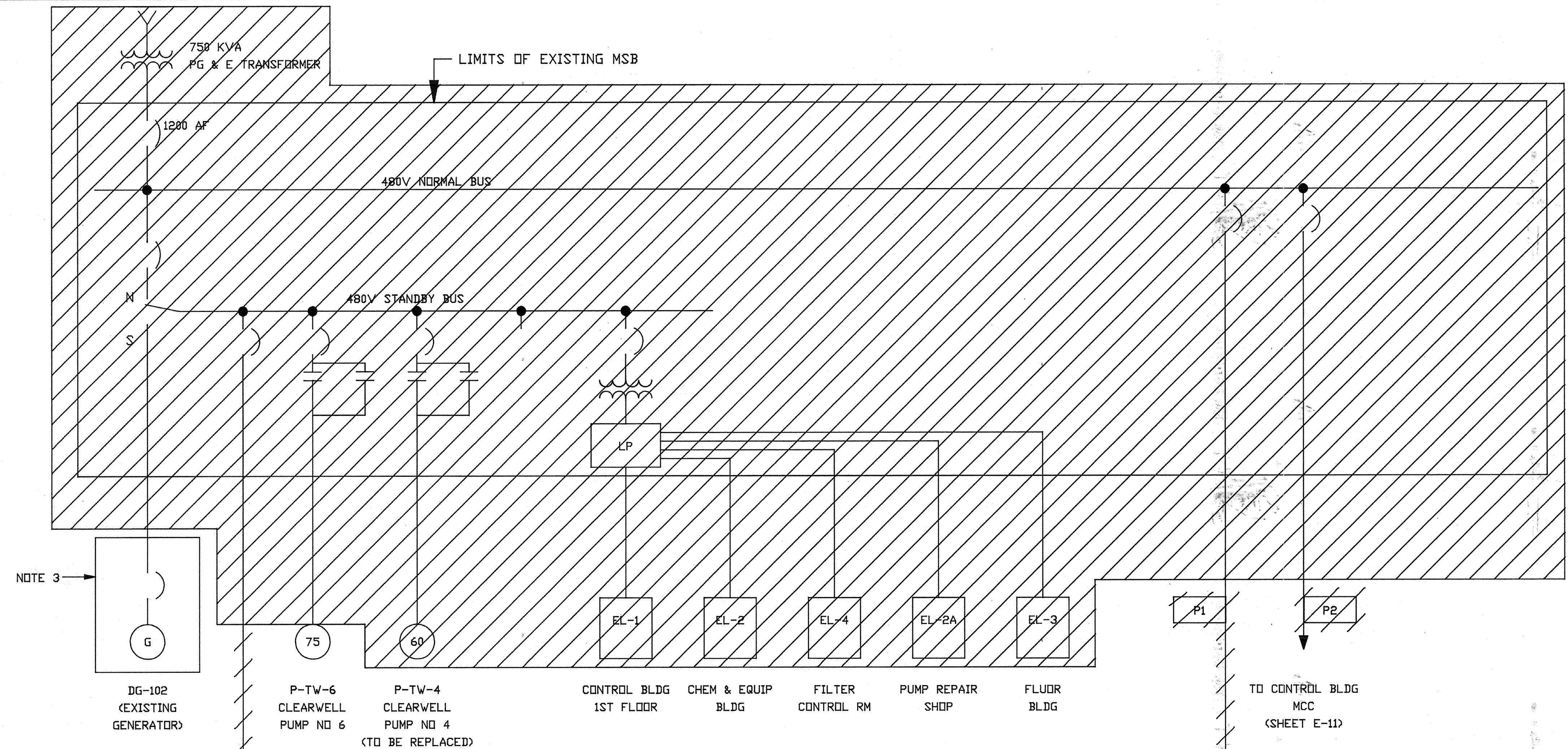
environmental engineers, scientists,
 planners, & management consultants

SHEET NO. E-9

116 OF 147

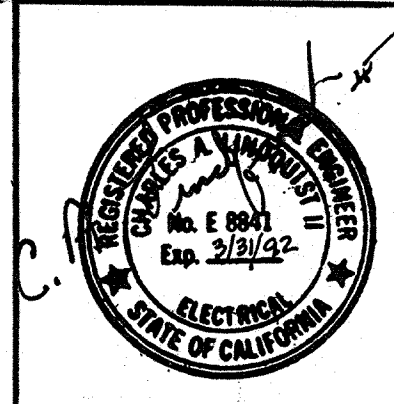


PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



- NOTES:
- CROSSHATCHING INDICATES GENERALLY THE ELECTRICAL EQUIPMENT TO BE REMOVED FROM SERVICE UNDER THIS CONTRACT. REFERENCE SPEC SECTION 16010 MODIFICATIONS AND REMOVALS FOR ADDITIONAL DETAILS.
 - RAW WATER PUMP STATION MCC TO BE RELOCATED/ RECONNECTED/MODIFIED AS DETAILED ON SHEET E-8.
 - EXISTING GENERATOR TO BE RECONNECTED/MODIFIED AS DETAILED ON SHEET E-3.

AS-BUILT
 CDM 5/10/91
 SIGNATURE DATE



CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 DEMOLITION
 SINGLELINE I

DESIGNED BY: RRR
 DRAWN BY: DR
 CHECKED BY: GKK
 APPROVED BY: CAL

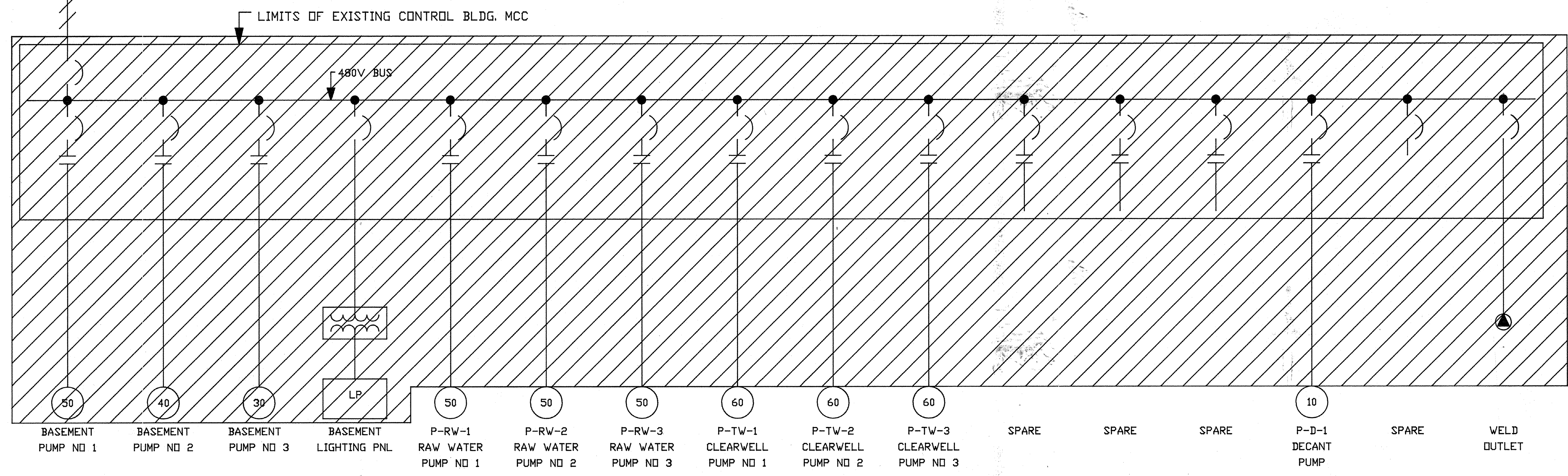
DATE: SEPT. 1988
 SCALE: NONE

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 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners, & management consultants

SHEET NO. E-10
 117 OF 147

111335
 PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____

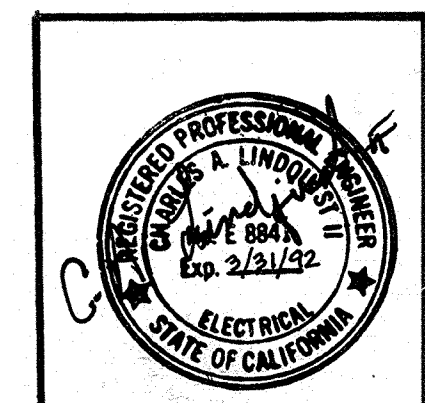
CONTINUED ON
 DWG. E-10



NOTES:

- CROSSHATCHING INDICATES GENERALLY THE ELECTRICAL EQUIPMENT TO BE REMOVED FROM SERVICE UNDER THIS CONTRACT. REFERENCE SPEC SECTION 16010 MODIFICATIONS AND REMOVALS FOR ADDITIONAL DETAILS.

AS-BUILT
ORm 5/10/91
 SIGNATURE DATE



Date	Ch'k'd	Revision

Designed by: RRR
 Drawn by: DR
 Checked by: GKK
 Approved by: CAL

Date: SEPT 1988
 Scale: NONE

CITY OF PITTSBURG, CALIFORNIA

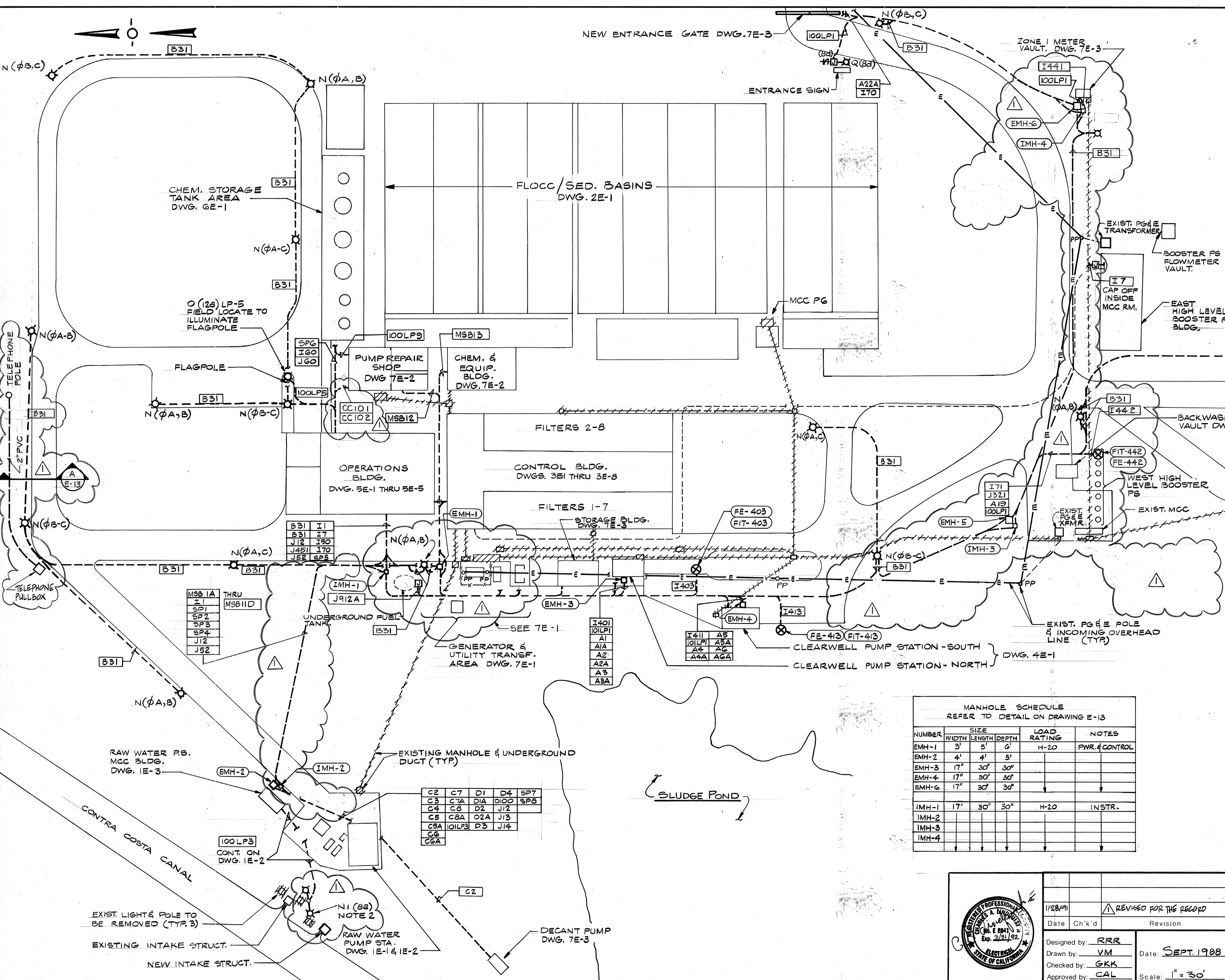
WATER TREATMENT PLANT EXPANSION 1988
 DEMOLITION
 SINGLELINE II

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 Walnut Creek, CA 94596
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 planners & management consultants

SHEET NO.
 E-11

118 OF 147

111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



- NOTES:
1. CROSSHATCHING INDICATES GENERALLY THE ELECTRICAL EQUIPMENT TO BE REMOVED FROM SERVICE UNDER THIS CONTRACT. REFERENCE SPEC. SECTION 1610 MODIFICATIONS & REMOVALS FOR ADDITIONAL DETAILS.
 2. PROVIDE WP RECEPTACLE IN RECEPT. HOLDER IN LIGHT POLE BASE. CIRCUIT TO LP-3 CKT. 8 (UNSWITCHED)
 3. MOUNT FIT431 ON MOUNTING STAND ON RESERVOIR ROOF. EXACT LOCATION OF FE-431 & FIT-431 TO BE DETERMINED IN FIELD BY ENGINEER.

J(8b) REPLACE EXIST. POLE MTD. LIGHT FIXT. (NOT SHOWN). MOUNT SWITCH & RECEPT. ON MTD. STAND

MANHOLE SCHEDULE
 REFER TO DETAIL ON DRAWING E-13

NUMBER	SIZE	LOAD RATING	NOTES	
	WIDTH	LENGTH	DEPTH	
EMH-1	3'	5'	6'	H-20 PWR. & CONTROL
EMH-2	4'	4'	5'	
EMH-3	17"	30'	30'	
EMH-4	17"	30'	30'	
EMH-6	17"	30'	30'	
IMH-1	17"	30'	30"	H-20 INSTR.
IMH-2				
IMH-3				
IMH-4				

AS SET
 07m 5/10/91

C2	C7	D1	D4	SPT7
C3	C7A	D1A	D100	SP8
C4	C8	D2	J12	
C5	C8A	D2A	J13	
C5A	QILP3	D3	J14	
C6				
C6A				

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 SITE PLAN

DESIGNED BY: RRR
 DRAWN BY: VM
 CHECKED BY: GKK
 APPROVED BY: CAL

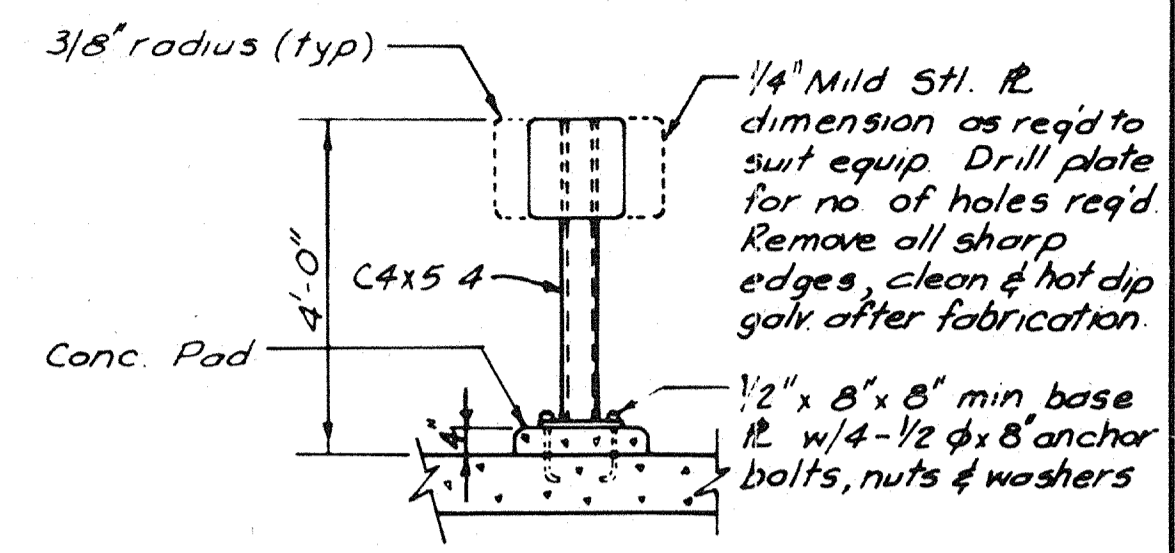
DATE: 1/23/91
 REVISION: REVISED FOR THE RECORD
 DATE: SEPT 1988

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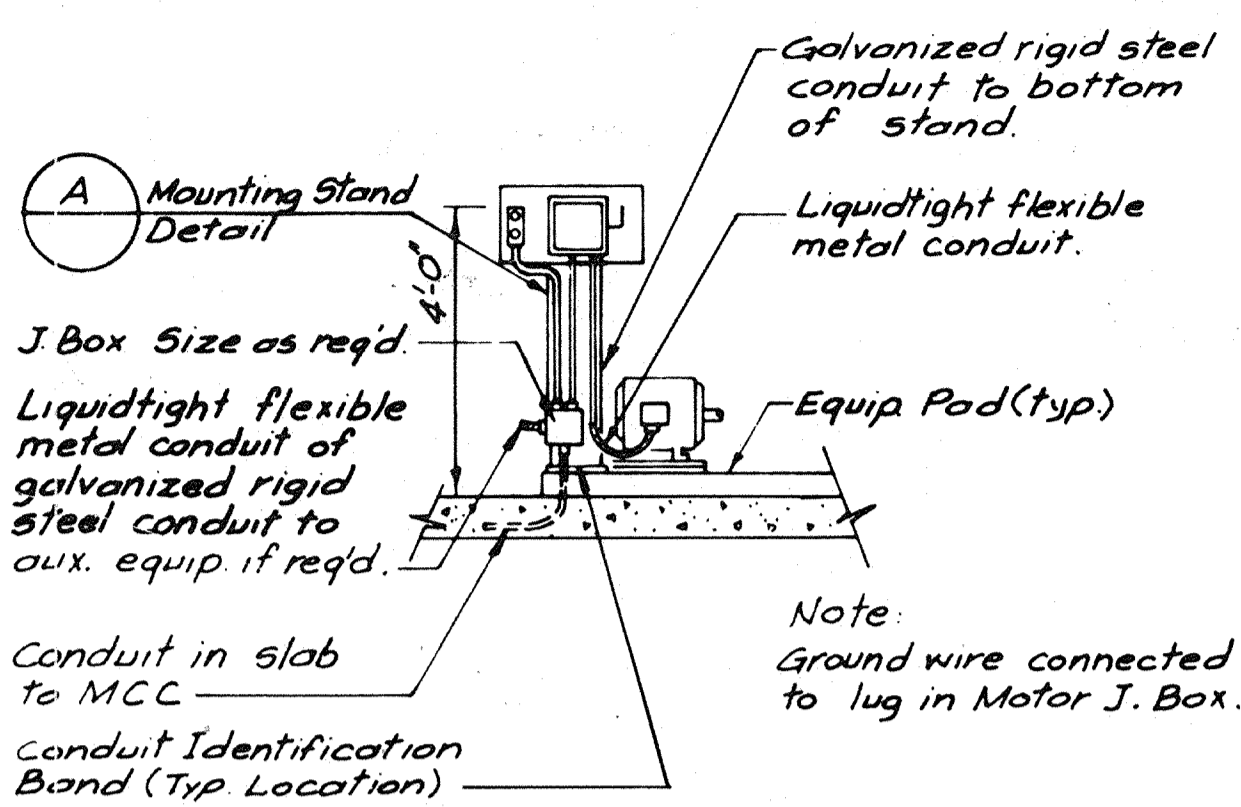
SHEET NO. E-12
 119 OF 147



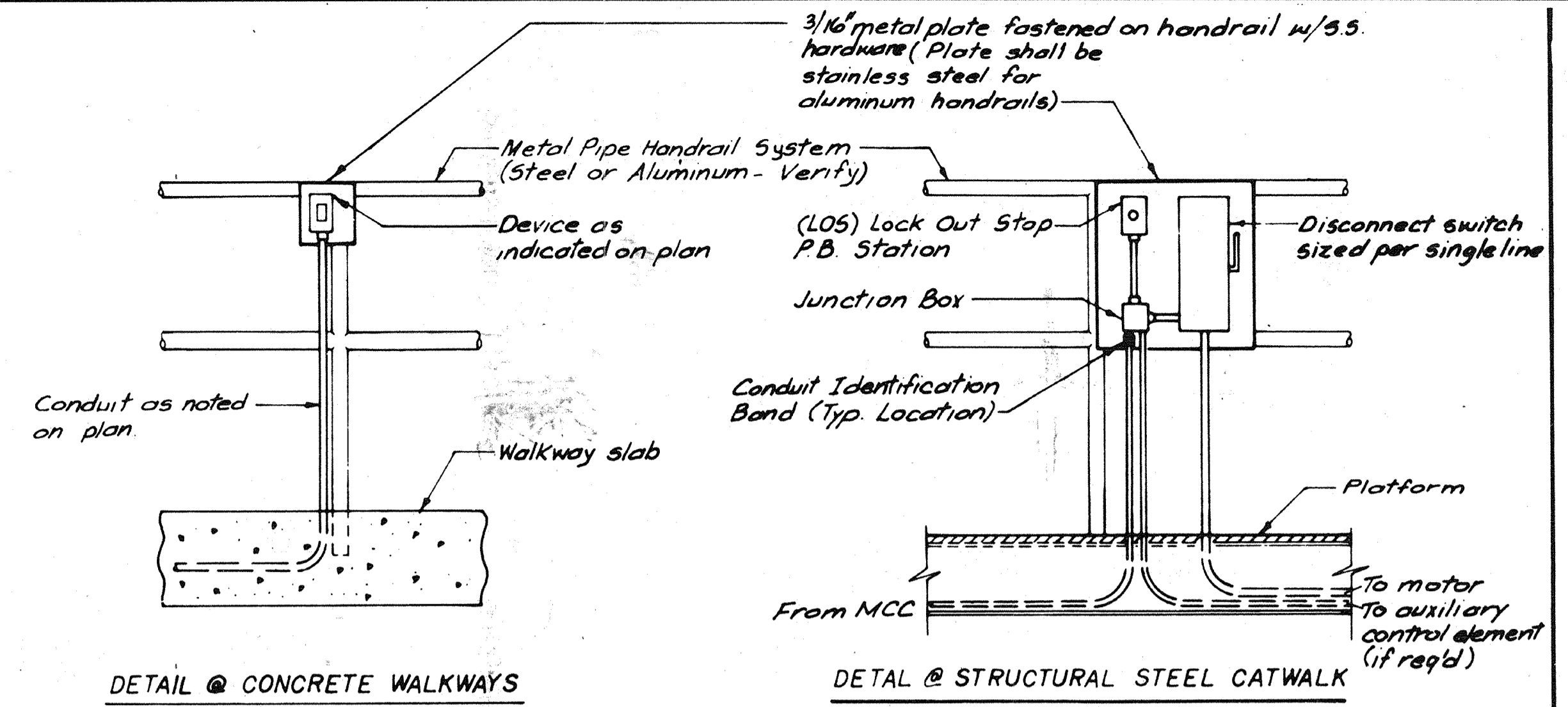
PROJECT MANAGER Approved by Date
 PROJECT ENGINEER Approved by Date
 PLUMBING Approved by Date
 HVAC Approved by Date
 INSTRUMENTATION Approved by Date
 ELECTRICAL Approved by Date
 STRUCTURAL Approved by Date
 ARCHITECTURAL Approved by Date



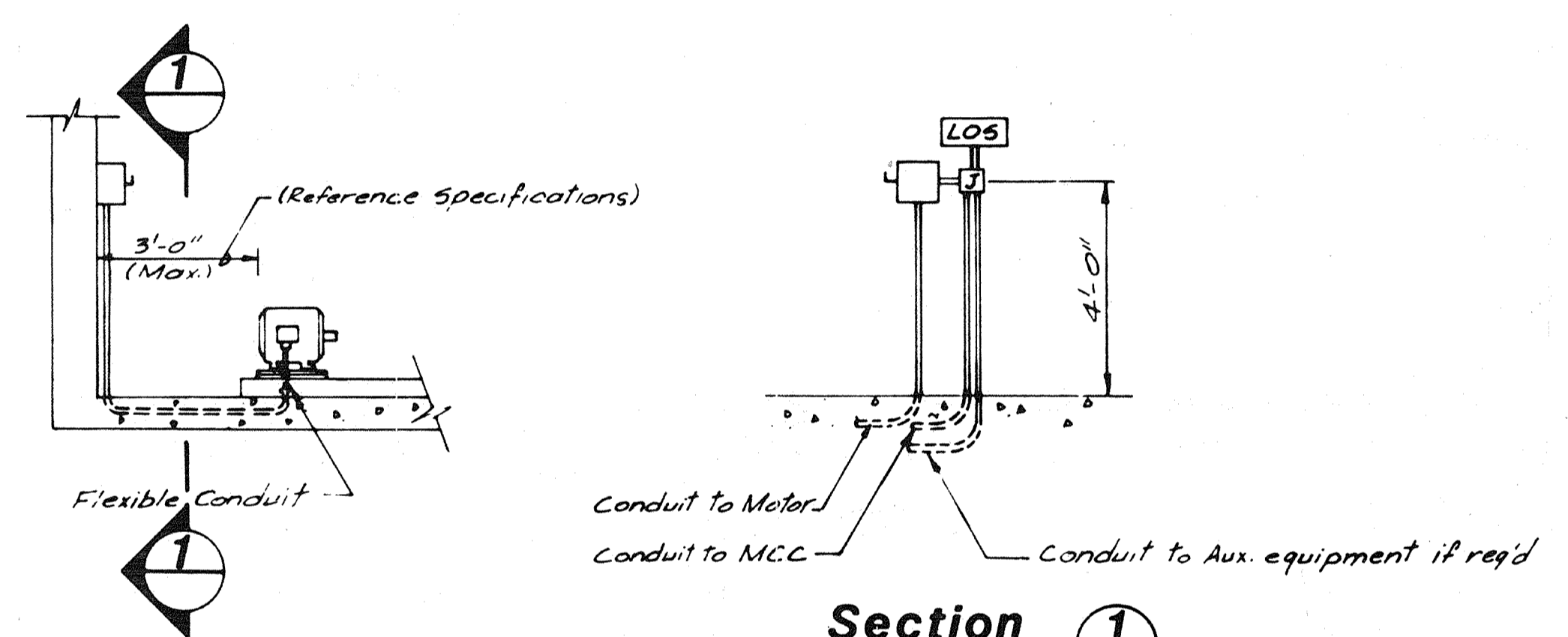
Typical Power Disconnect/Control Station Mounting Stand (A)



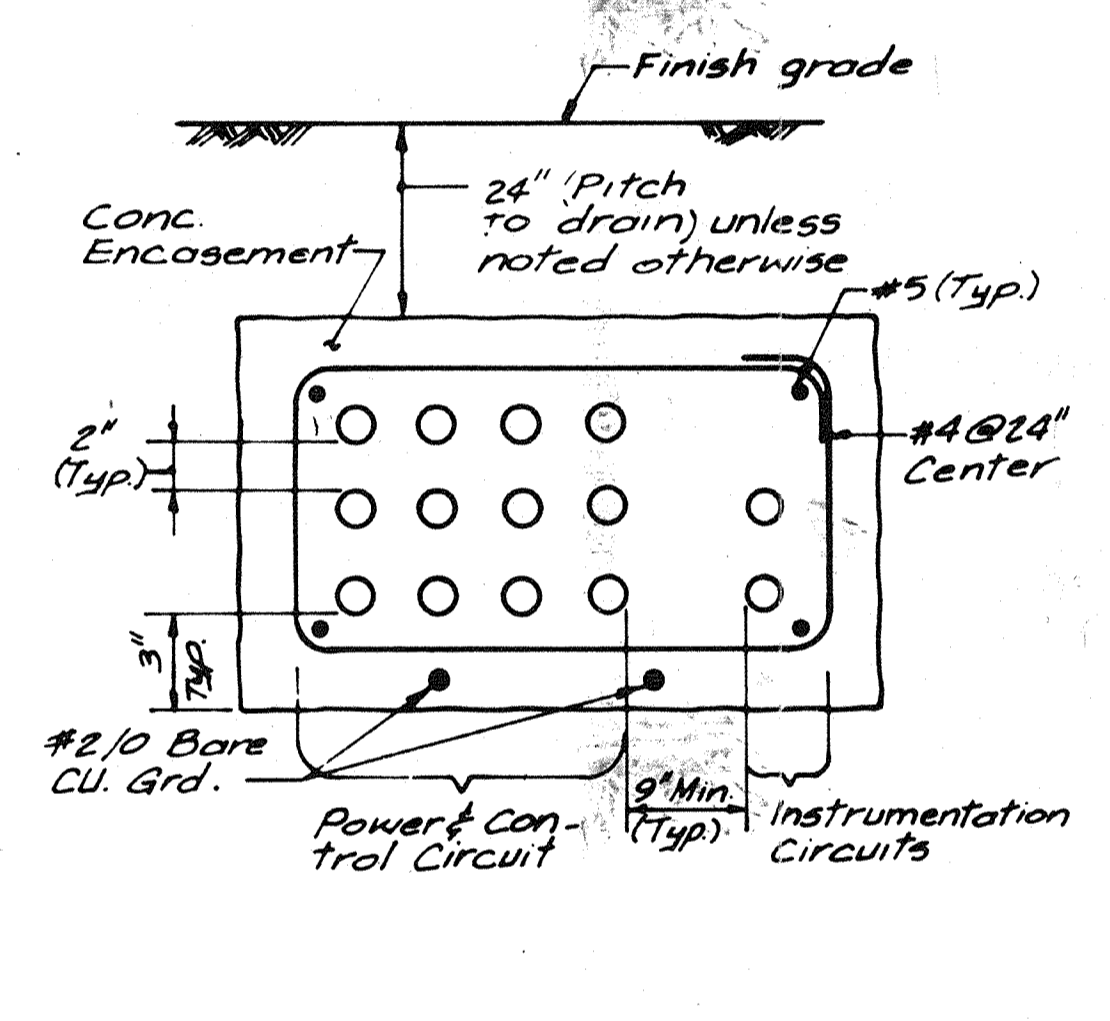
Typical Motor Feed Detail (B)



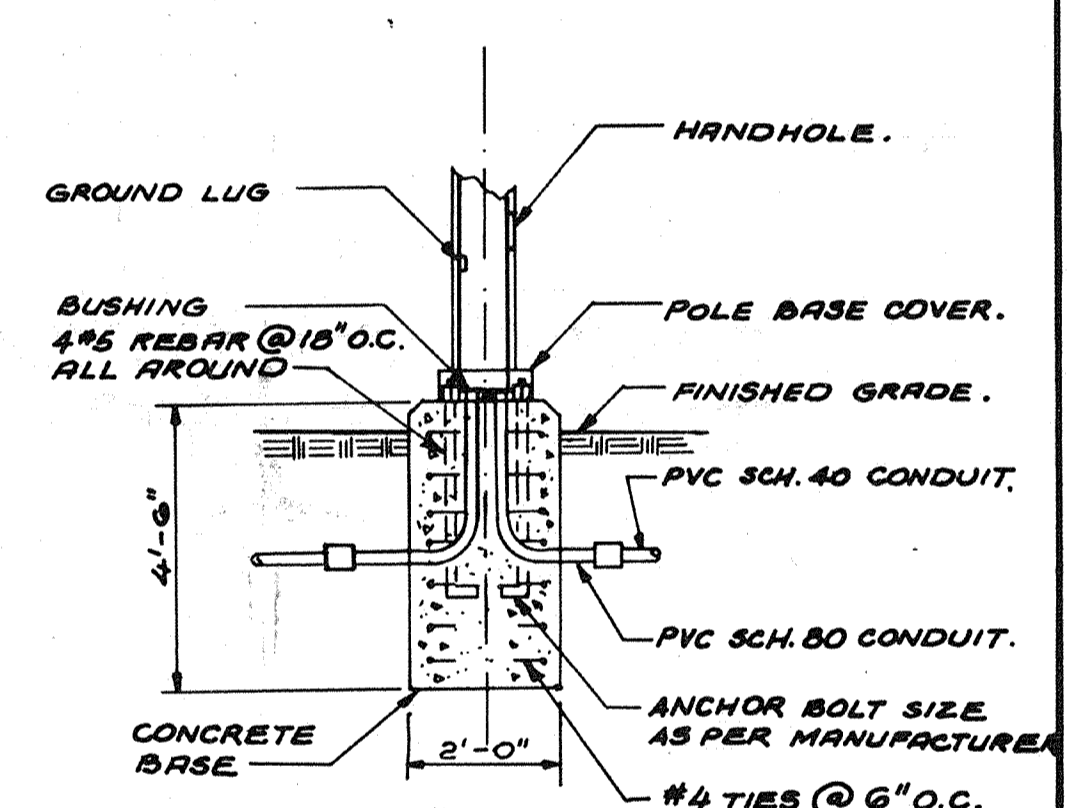
Typical installation of Equipment on Handrail (C)



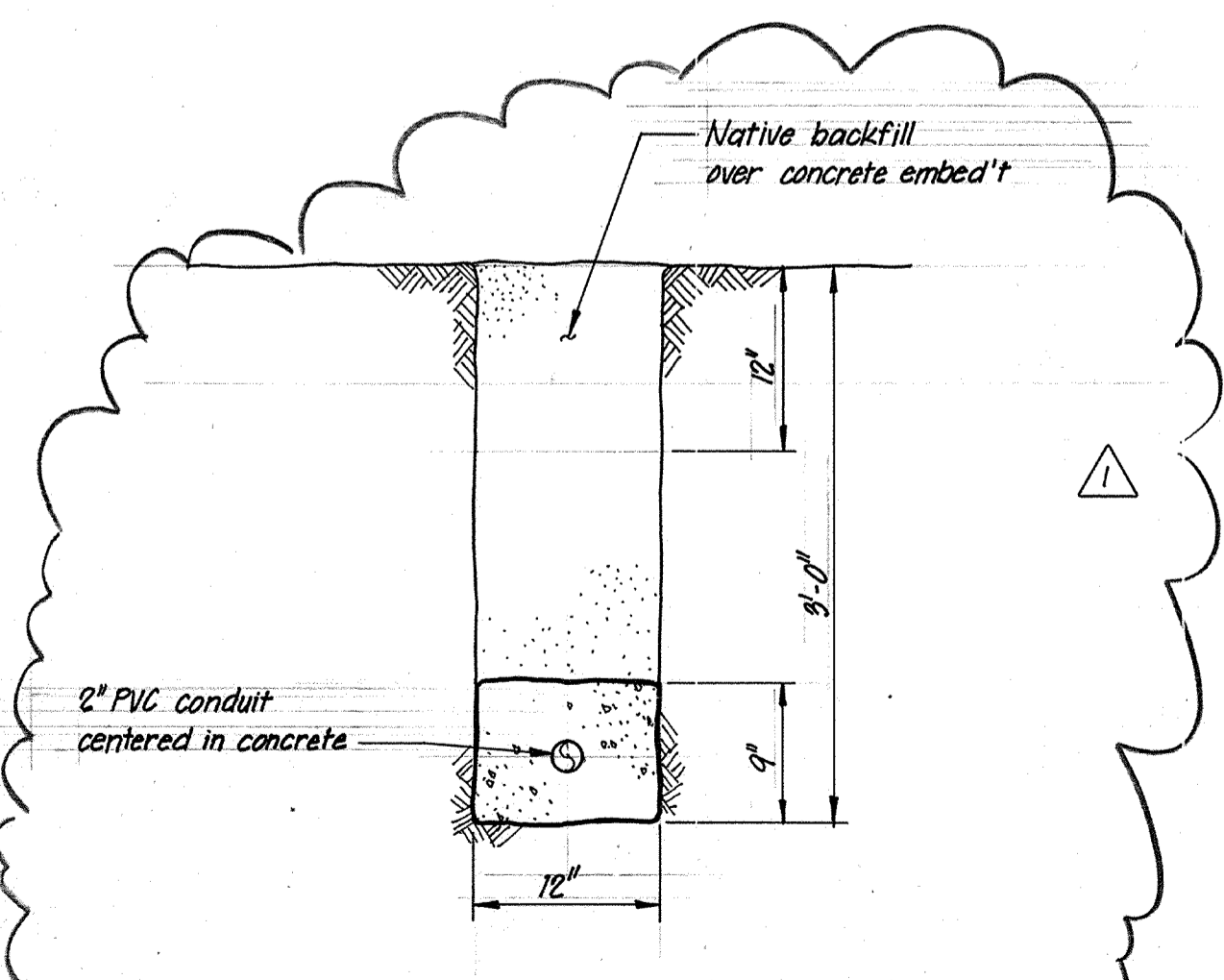
Typical installation of Equipment on Wall (D)



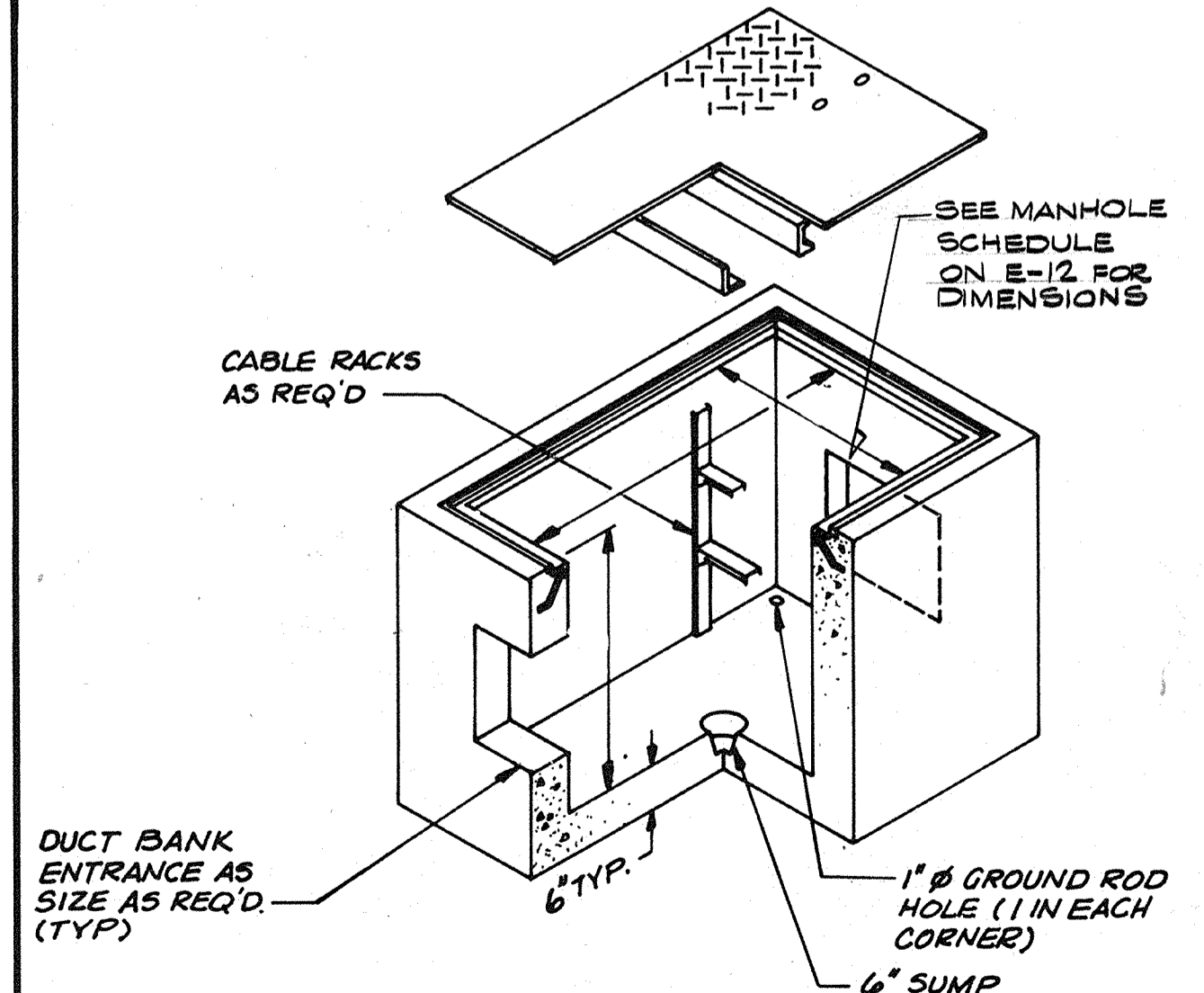
Typical Duct Bank Detail (E)



Light Pole Detail (J)



Telephone Conduit Detail (A)



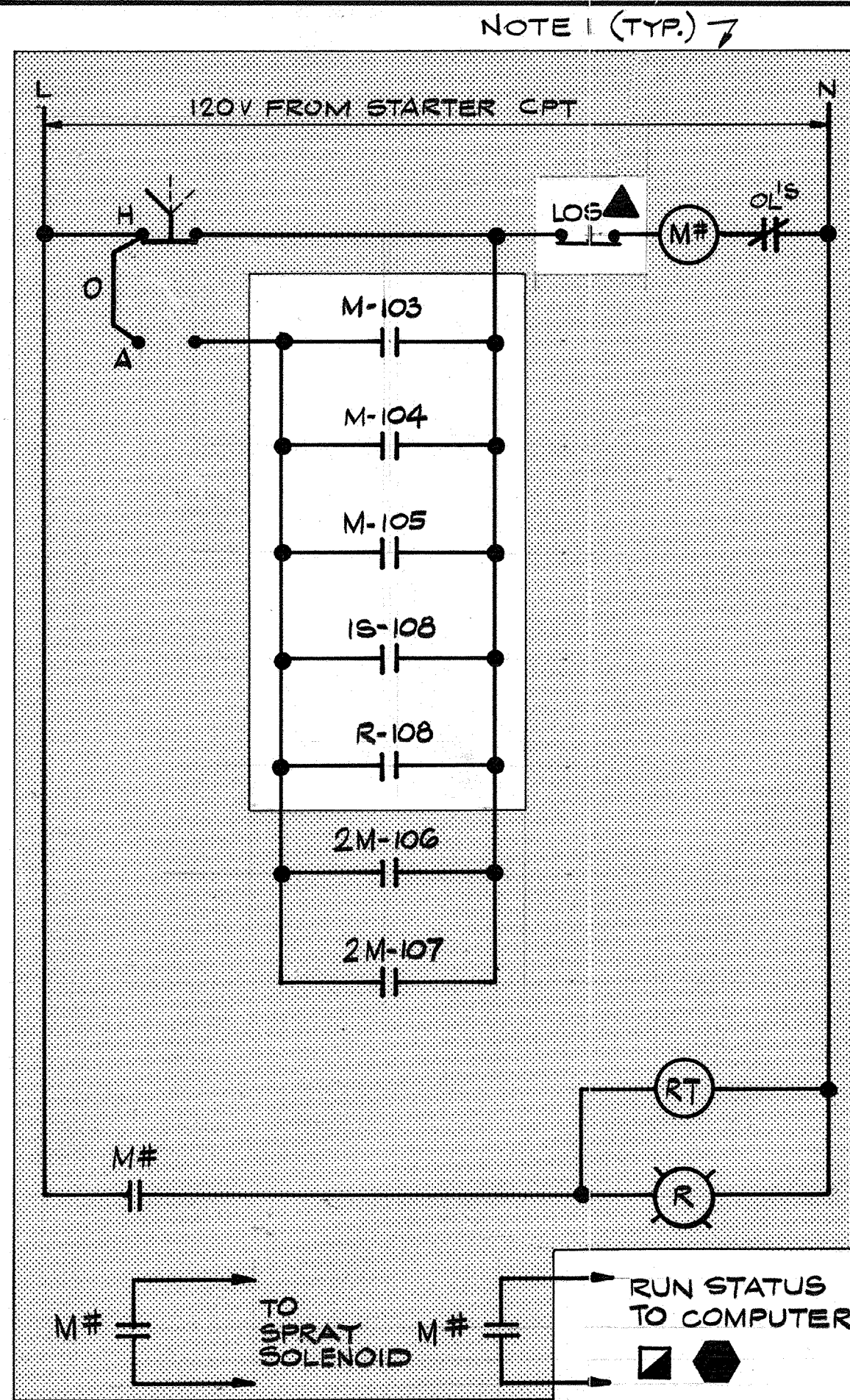
Detail (G)

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 Ojm 5/10/91
 SIGNATURE DATE

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 ELECTRICAL DETAILS
 SHEET NO. E-13
 120 OF 147

	Date	1/23/91	REVISOR	REVISOR
	Ch'kd		REVISION	
Designed by	RRR	Date	SEPT 1988	
Drawn by	VM	Checked by	GKK	Scale
Approved by	CAL			

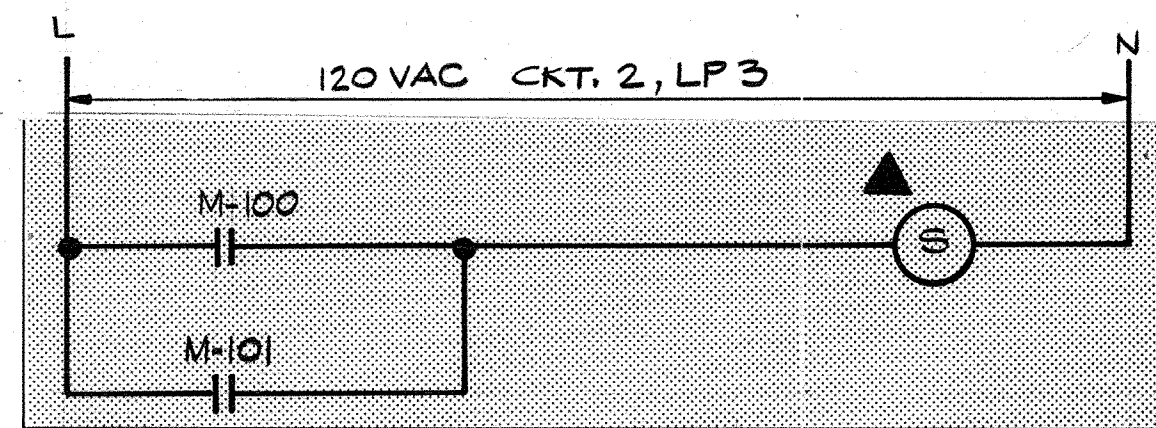
111335 PROJECT MANAGER Approved by: Date: PROJECT ENGINEER Approved by: Date: PLUMBING Approved by: Date: HVAC Approved by: Date: INSTRUMENTATION Approved by: Date: ELECTRICAL Approved by: Date: STRUCTURAL Approved by: Date: ARCHITECTURAL Approved by: Date:



CIRCUIT FOR	
ITEM	ME-RW-101 ME-RW-102
#	100 101

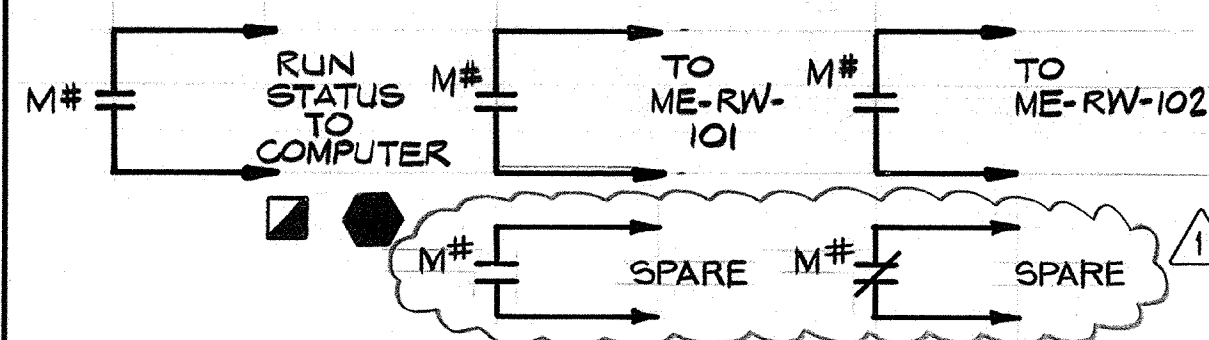
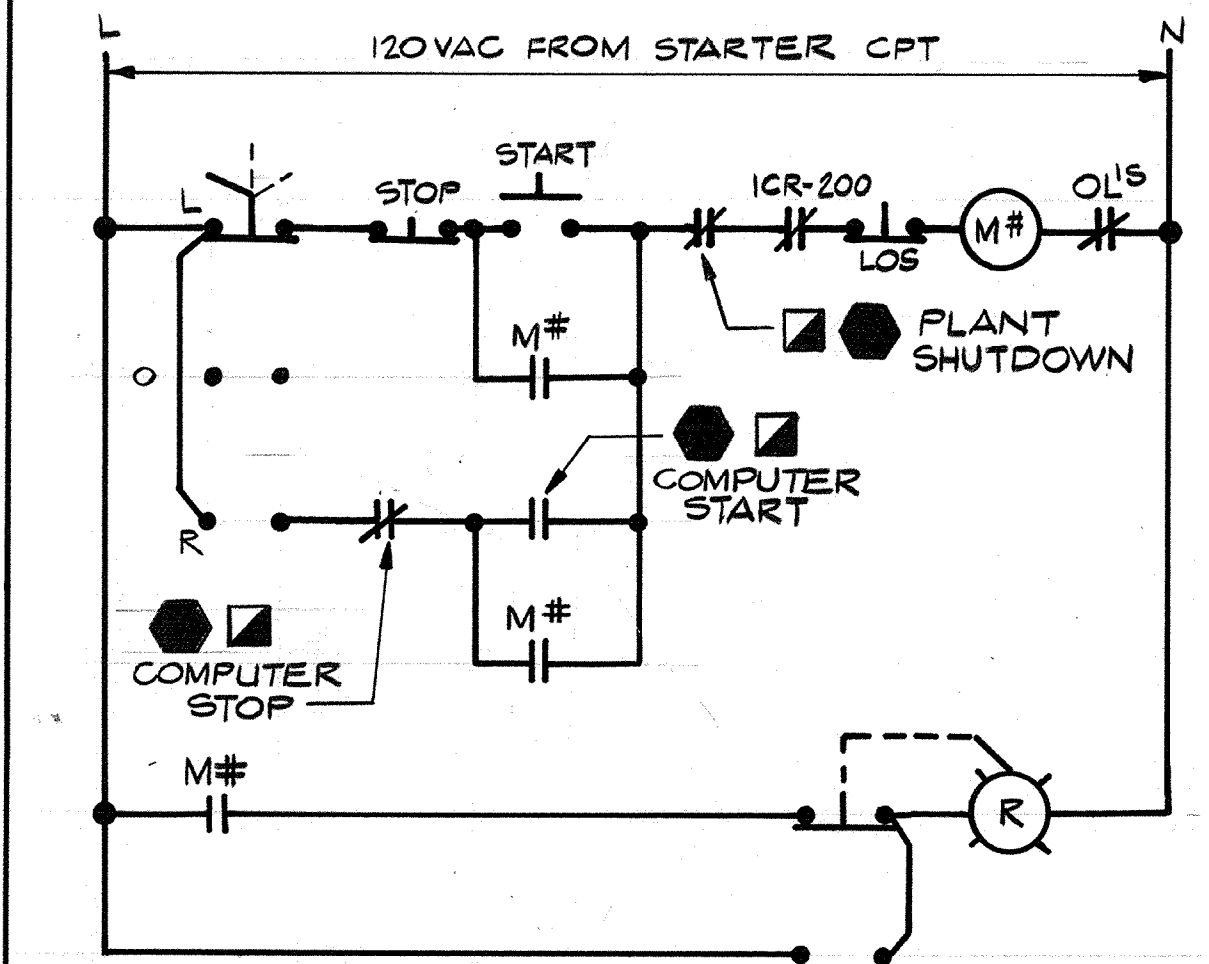
**ME-RW-101 & ME-RW-102
RAW WATER SCREENS NO.1&2**

DEVICES LOCATED IN RWPSCP.



CIRCUIT FOR	
ITEM	SOLENOID
#	102

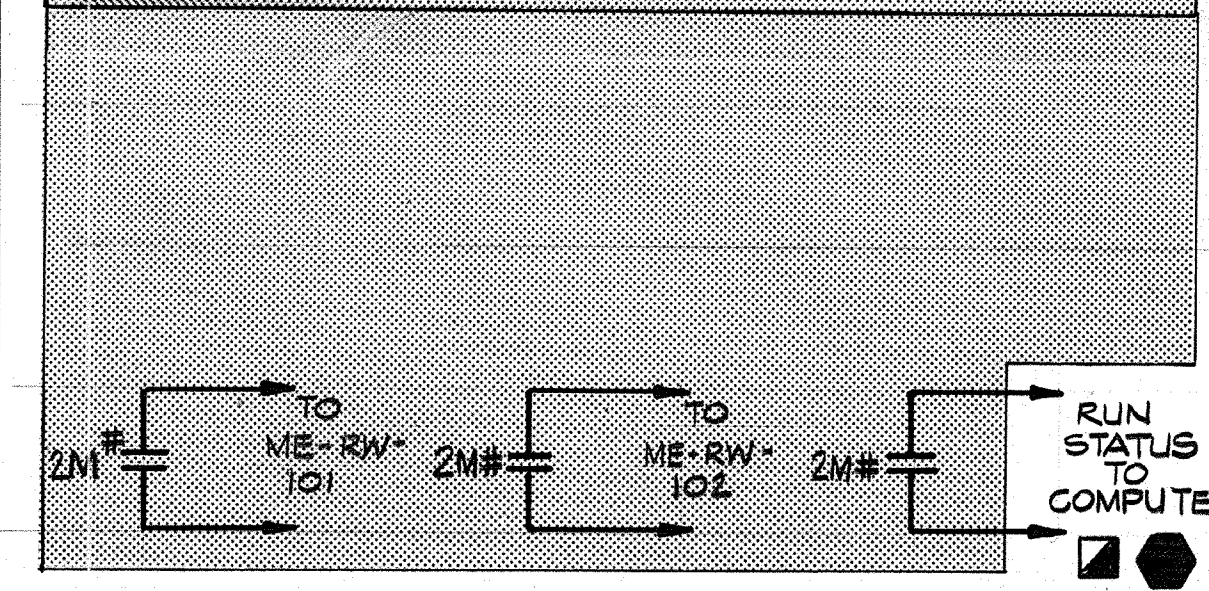
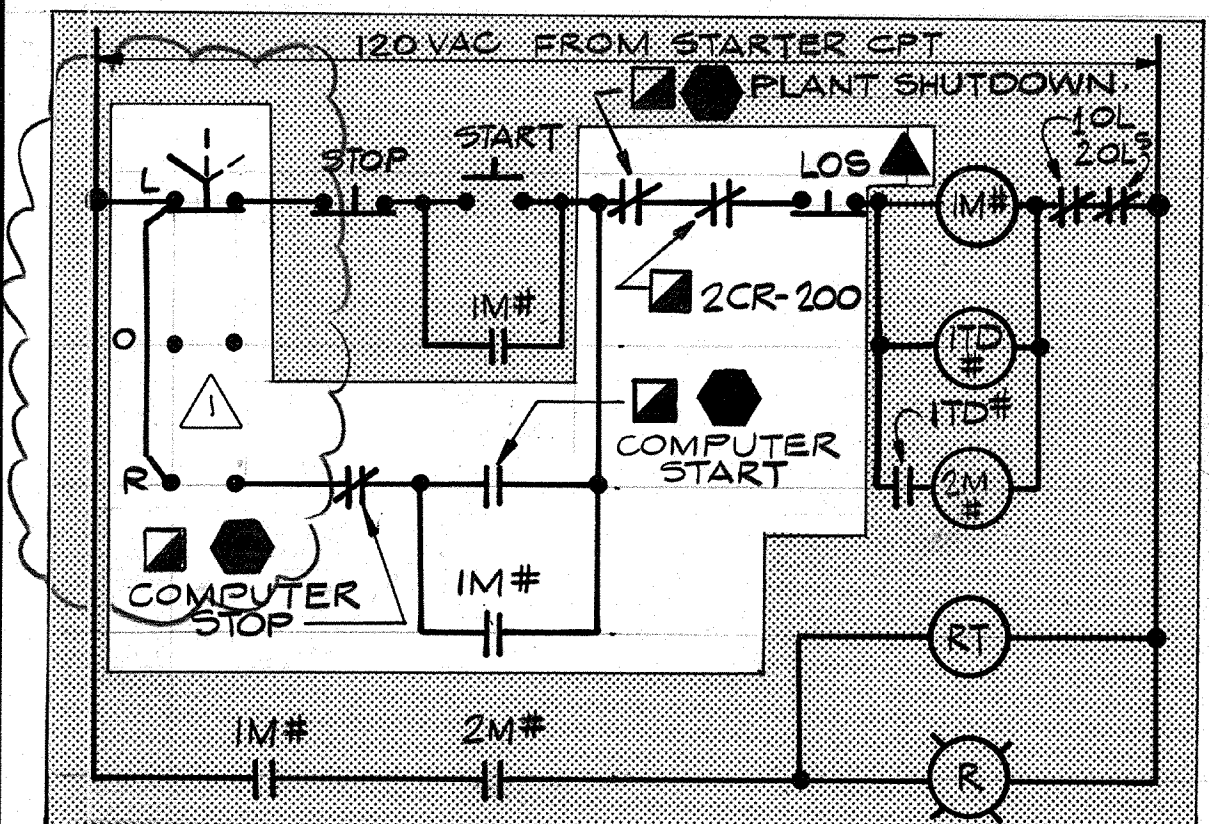
RAW WATER SCREEN SPRAY SOLENOID



CIRCUIT FOR			
ITEM	R-RW-1	P-RW-2	P-RW-3
#	103	104	105

**P-RW-1, 2 & 3
RAW WATER PUMPS NO.1, 2 & 3**

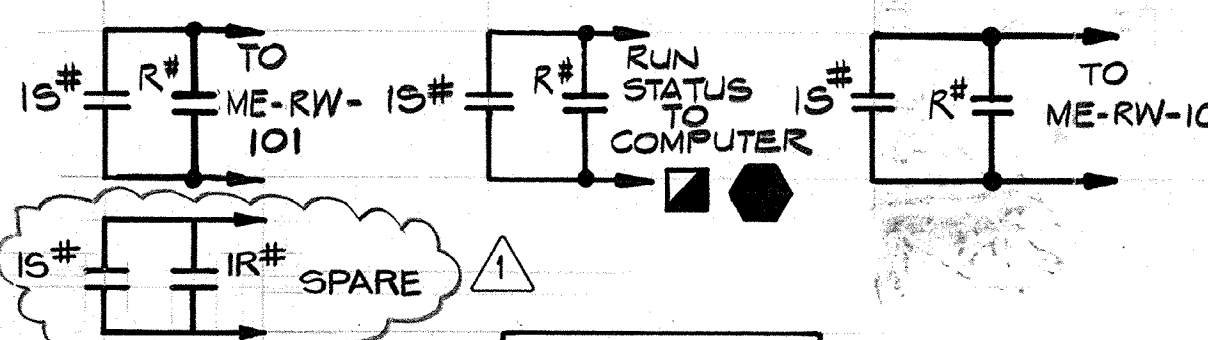
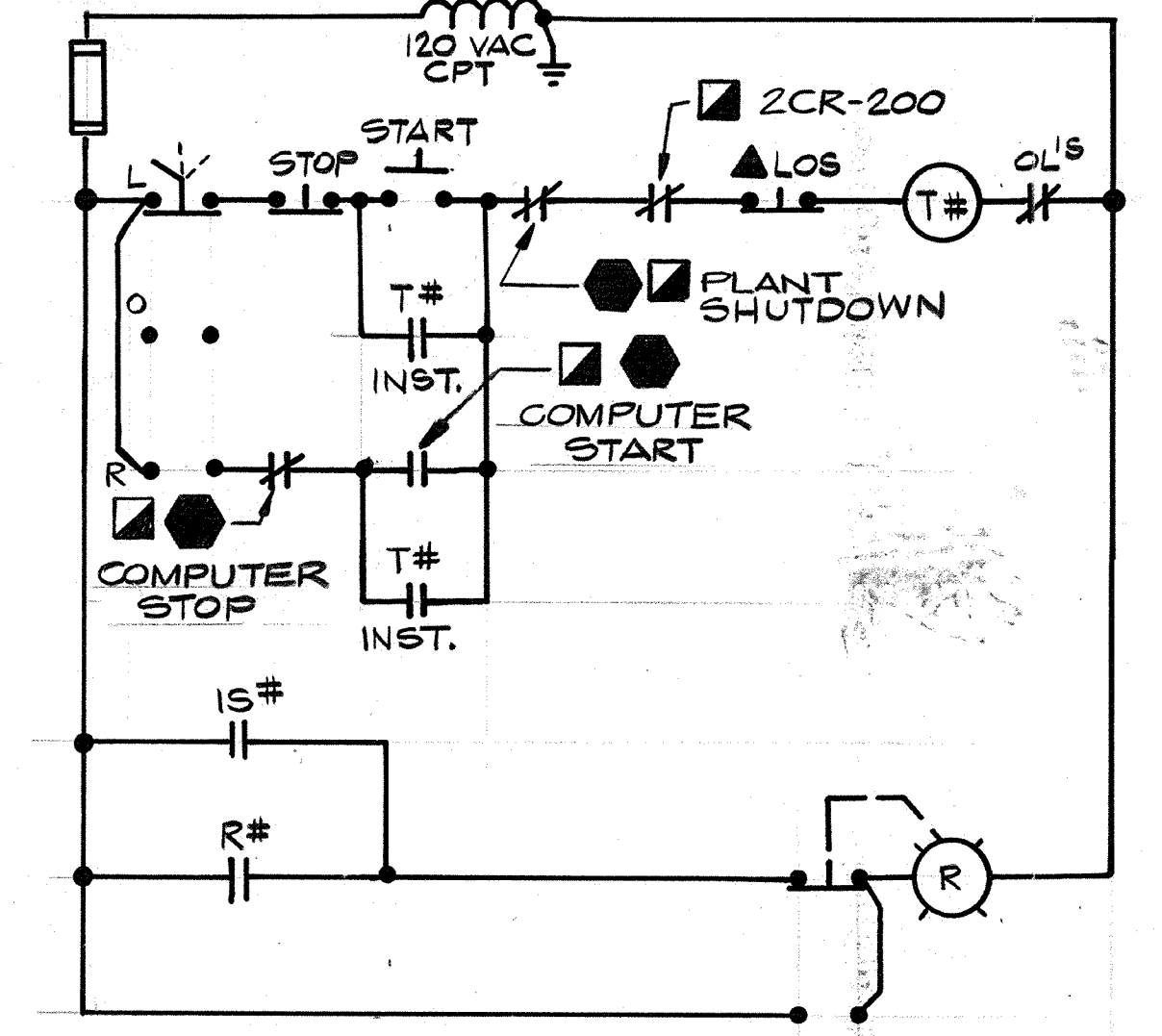
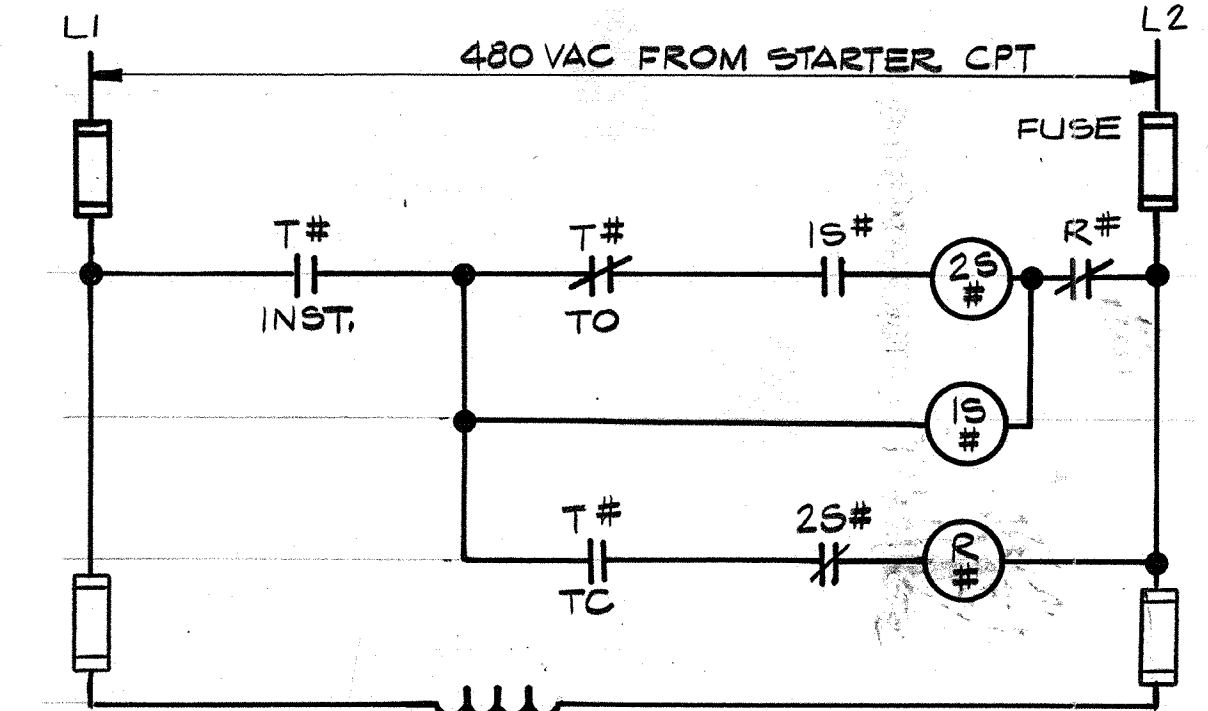
DEVICES LOCATED IN RWPSCP



CIRCUIT FOR	
ITEM	P-RW-4 P-RW-6
#	106 107

**P-RW-4 & P-RW-6
RAW WATER PUMPS NO.4 & 6**

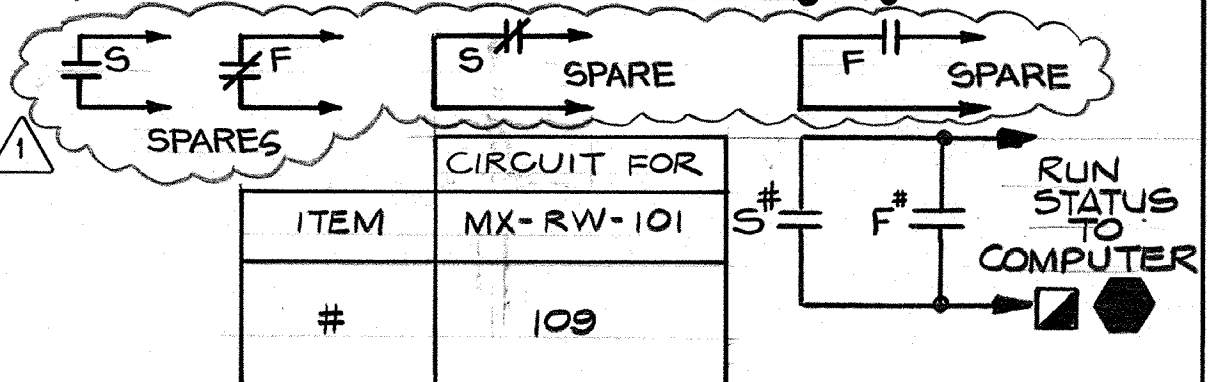
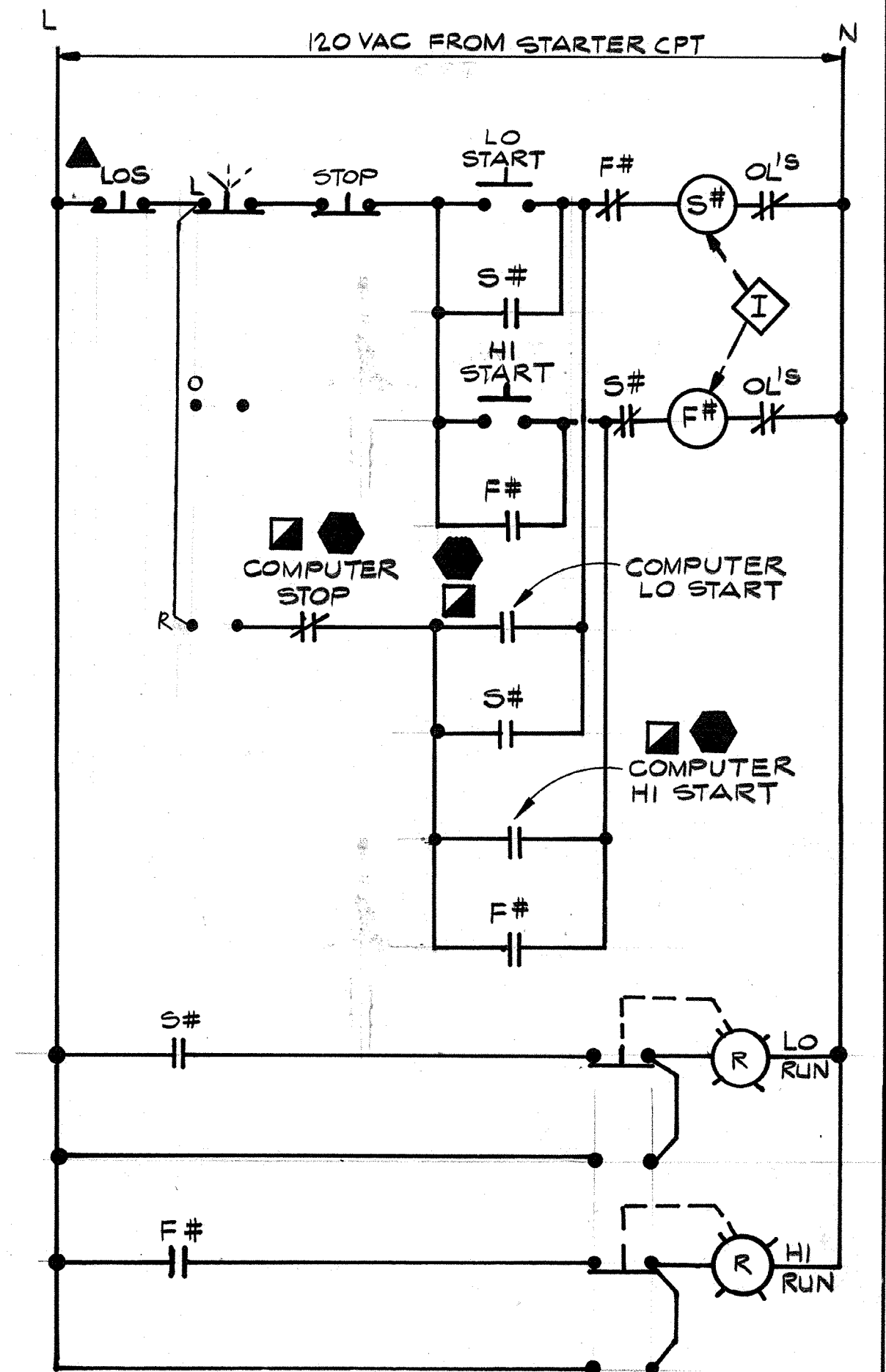
DEVICES LOCATED IN RWPSCP



CIRCUIT FOR	
ITEM	P-RW-5
#	108

**P-RW-5
RAW WATER PUMP NO.5**

DEVICES LOCATED IN RWPSCP



**MX-RW-101
FLASH MIXER**

DEVICES LOCATED IN RWPSCP

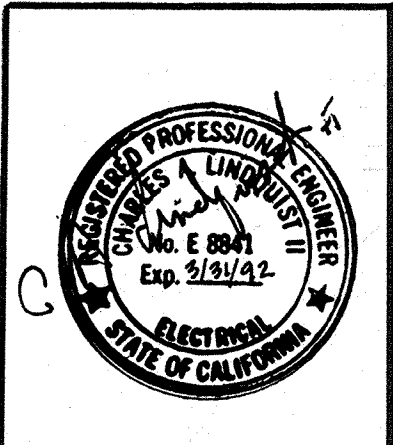
NOTES:
1. COMPONENTS INSIDE SHADED AREAS ARE EXISTING DEVICES & CIRCUITING RECONNECTED AS SHOWN. ALL AREAS NOT SHADED REPRESENT NEW EQUIP. & CIRCUITING. EXIST. CIRCUITS TO BE FIELD CONFIRMED

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Pm 5/10/91

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

CONTROL SCHEMATIC I



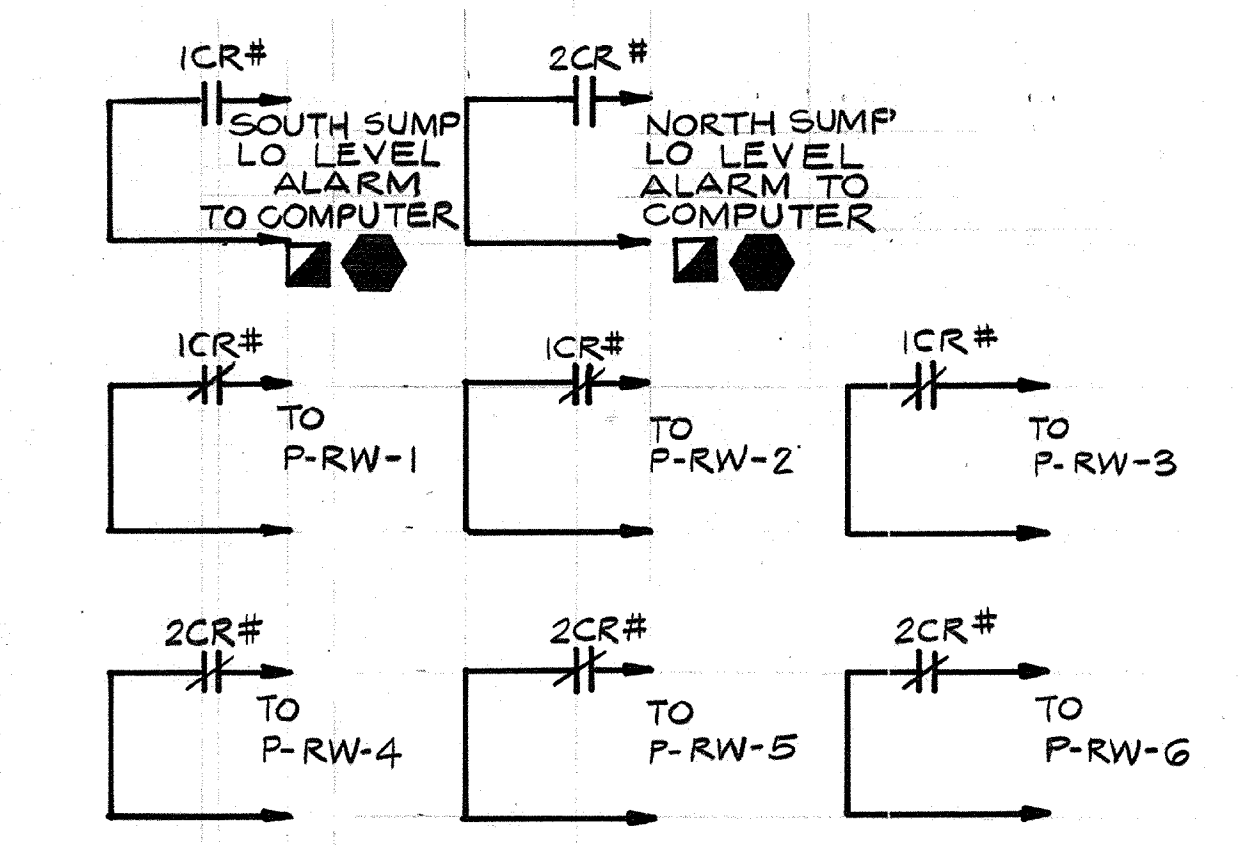
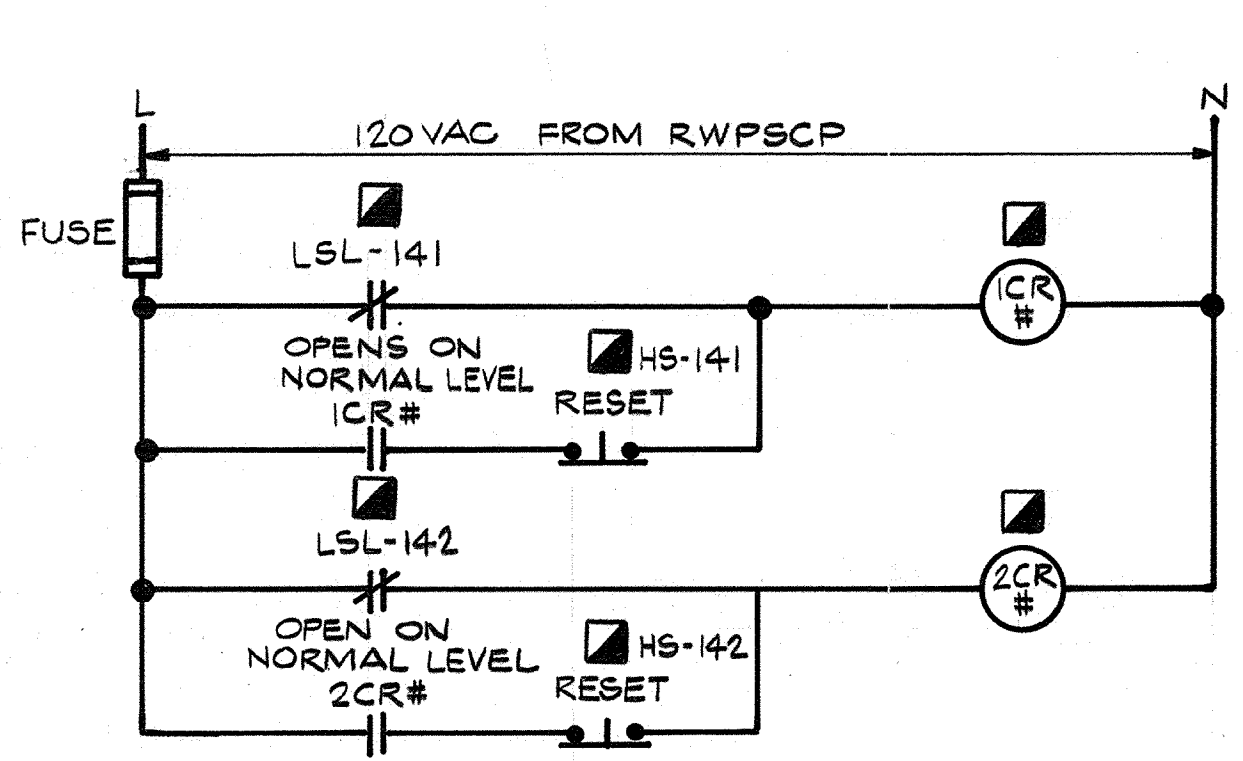
Date	1/23/91	Revision	REVISED FOR THE RECORD
Drawn by	V.M.	Date	SEPT 1988
Checked by	GKK	Scale	NONE
Approved by	CAL		

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710 South Broadway
Walnut Creek, CA 94596



SHEET NO.
E-14

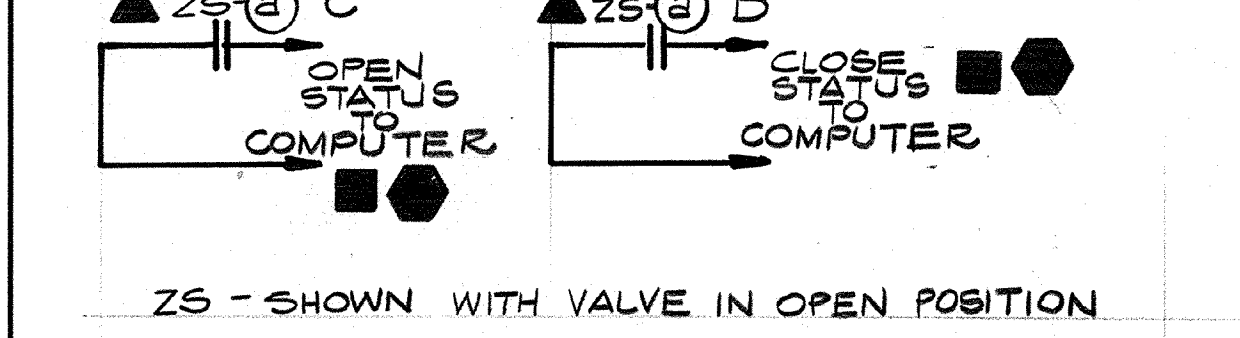
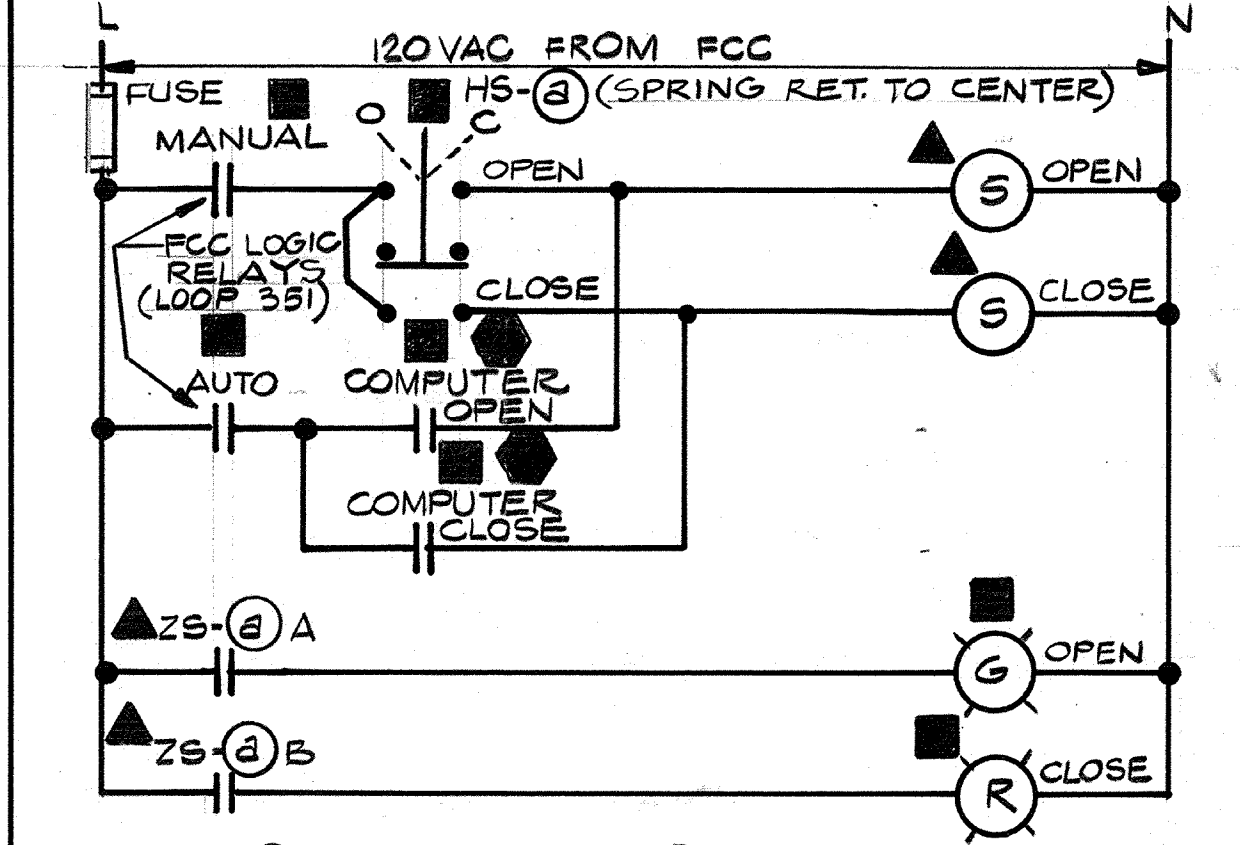
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 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



ITEM	CIRCUIT FOR
#	200

RAW WATER SUMP LEVEL CONTROL

DEVICES LOCATED IN RWPSCP



CIRCUIT FOR

ITEM	BFW-SW-101	BFW-SW-201	BFW-SW-301	BFW-SW-401	BFW-SW-501	BFW-SW-601	BFW-SW-701	BFW-SW-801
#	201	202	203	204	205	206	207	208
(a)	302-1	302-2	302-3	302-4	302-5	302-6	302-7	302-8

CIRCUIT FOR

ITEM	BFW-BW-104	BFW-BW-204	BFW-BW-304	BFW-BW-404	BFW-BW-504	BFW-BW-604	BFW-BW-704	BFW-BW-804
#	209	210	211	212	213	214	215	216
(a)	304-1	304-2	304-3	304-4	304-5	304-6	304-7	304-8

CIRCUIT FOR

ITEM	SG-WW-101	SG-WW-201	SG-WW-301	SG-WW-401	SG-WW-501	SG-WW-601	SG-WW-701	SG-WW-801
#	217	218	219	220	221	222	223	224
(a)	305-1	305-2	305-3	305-4	305-5	305-6	305-7	305-8

CIRCUIT FOR

ITEM	BV-UW-106	BV-UW-107	BV-UW-206	BV-UW-207	BV-UW-306	BV-UW-307	BV-UW-406	BV-UW-407
#	225	226	227	228	229	230	231	232
(a)	306-1	306-2	306-3	306-4	306-5	306-6	306-7	306-8

CIRCUIT FOR

ITEM	BV-UW-506	BV-UW-507	BV-UW-606	BV-UW-607	BV-UW-706	BV-UW-707	BV-UW-806	BV-UW-807
#	233	234	235	236	237	238	239	240
(a)	306-9	306-10	306-11	306-12	306-13	306-14	306-15	306-16

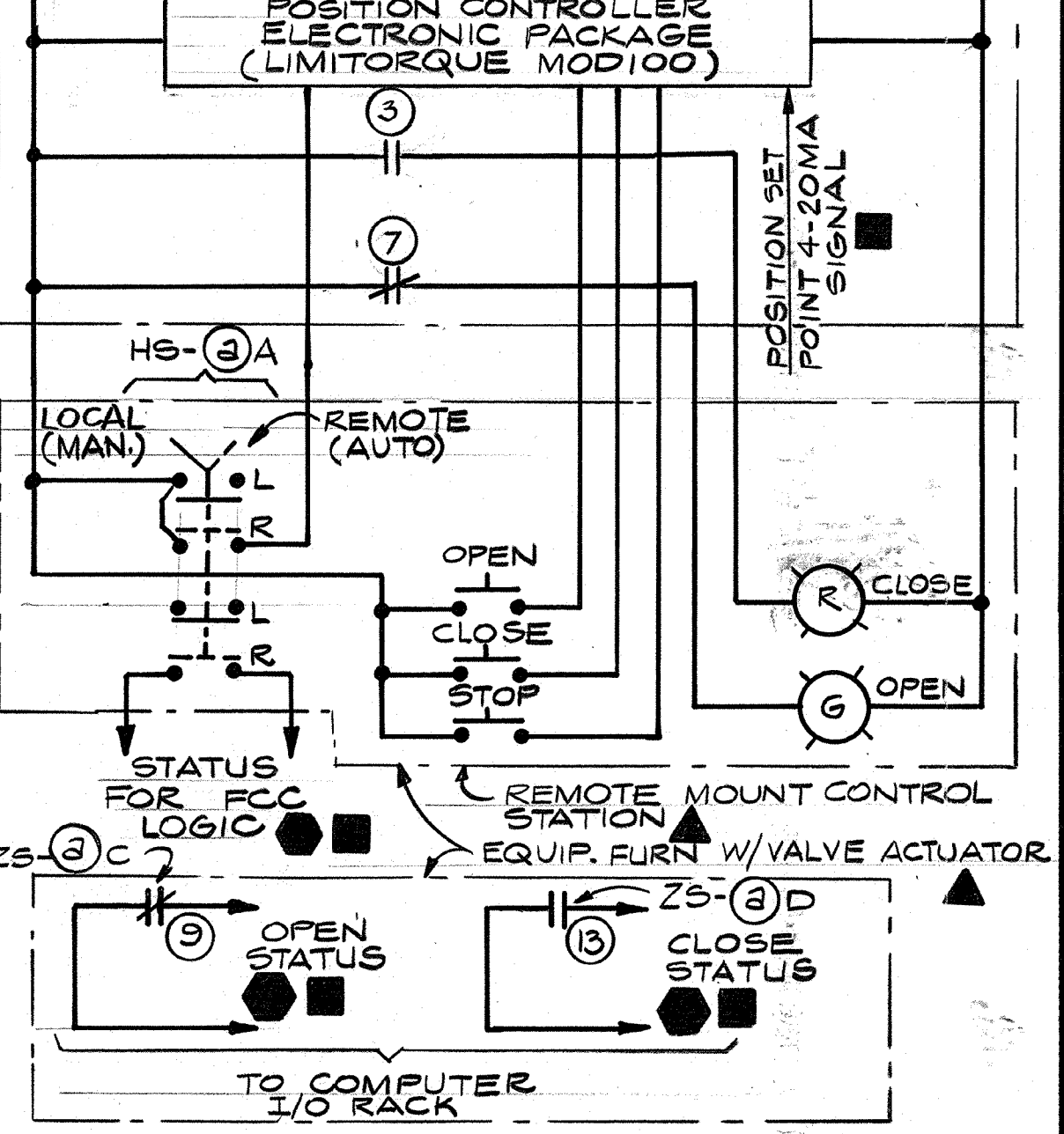
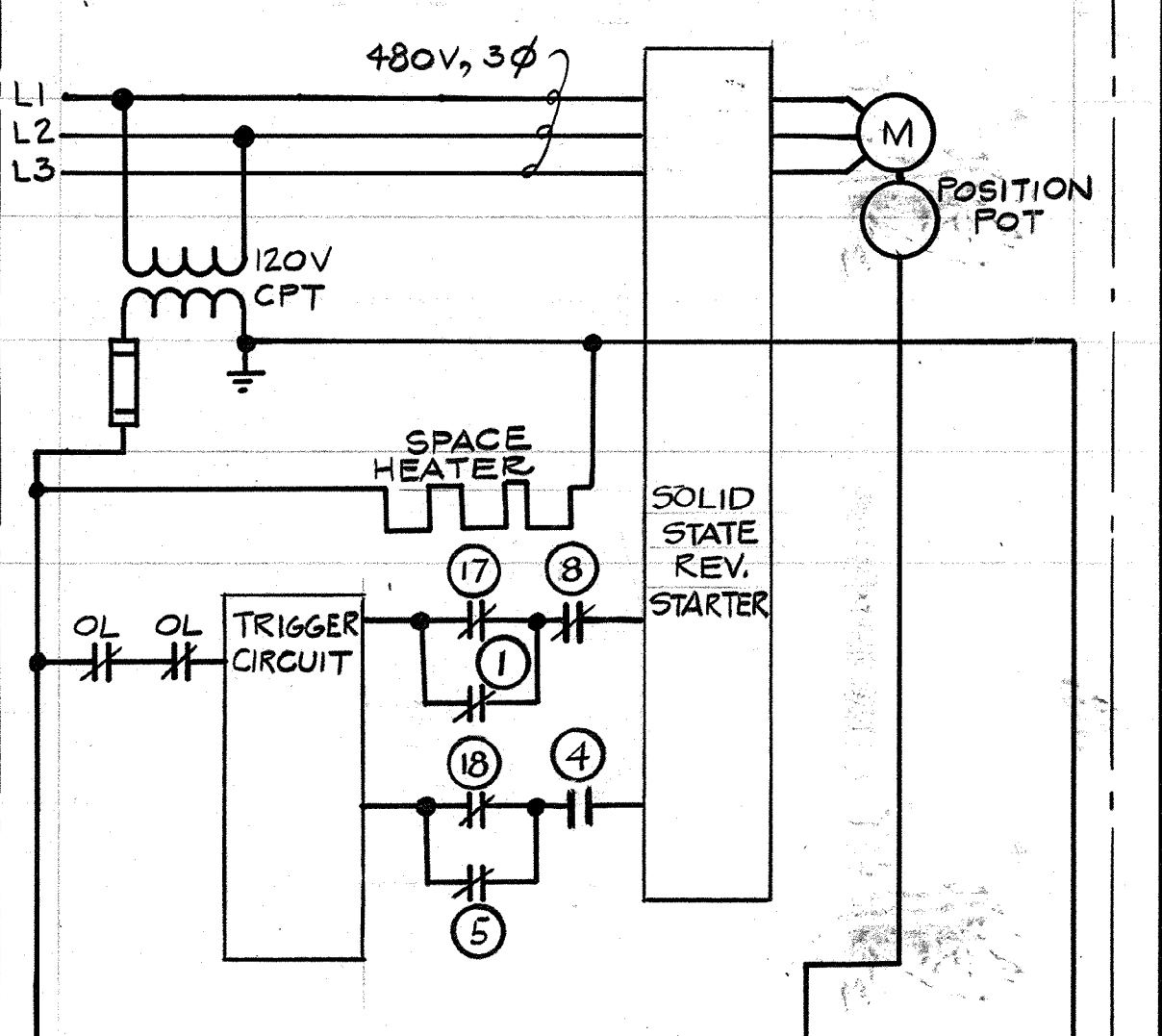
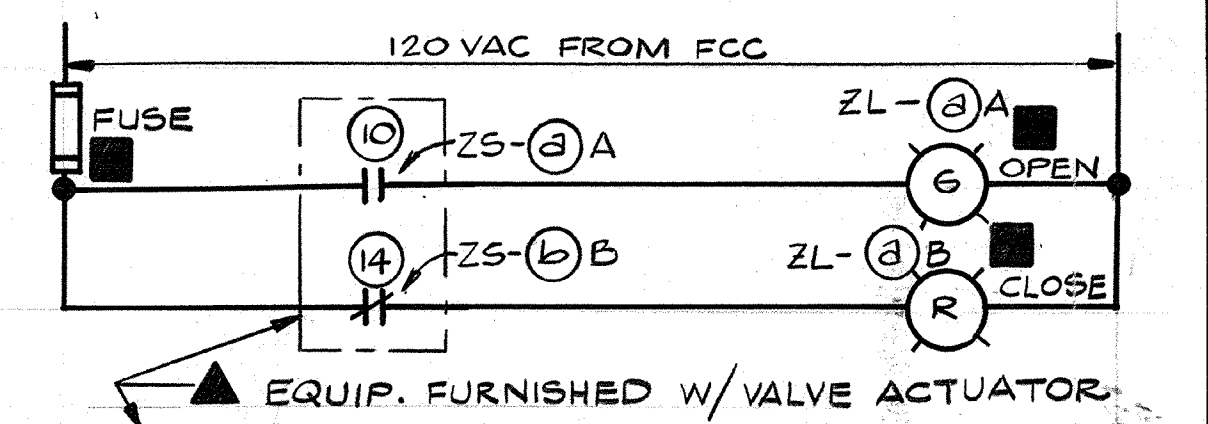
CIRCUIT FOR

ITEM	BV-FW-102	BV-FW-103	BV-FW-202	BV-FW-203	BV-FW-302	BV-FW-303	BV-FW-402	BV-FW-403
#	241	242	243	244	245	246	247	248
(a)	307-1	307-2	307-3	307-4	307-5	307-6	307-7	307-8

CIRCUIT FOR

ITEM	BV-FW-502	BV-FW-503	BV-FW-602	BV-FW-603	BV-FW-702	BV-FW-703	BV-FW-802	BV-FW-803
#	249	250	251	252	253	254	255	256
(a)	307-9	307-10	307-11	307-12	307-13	307-14	307-15	307-16

BFW-SW-101 THRU BFW-SW-801 SETTLED WTR. VAL.
 BFW-BW-104 THRU BFW-BW-804 BACKWASH IN. VAL.
 SG-WW-101 THRU SG-WW-801 WASH WTR. DRAIN GTS.
 BV-UW-106 THRU BV-UW-807 SURF. WASH VALVES.
 BV-FW-102 THRU BV-FW-803 FLTR. WTR. VALVES



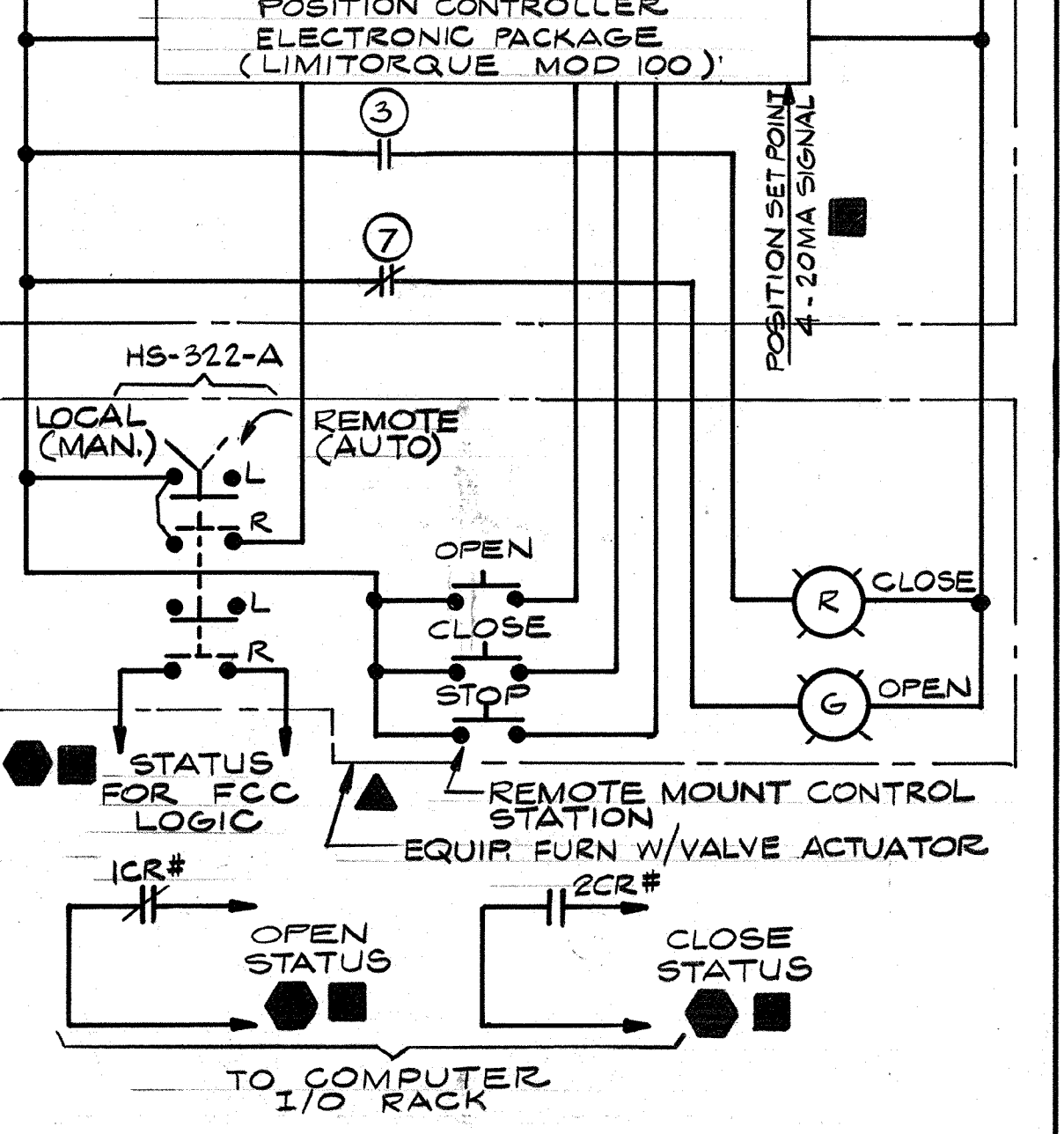
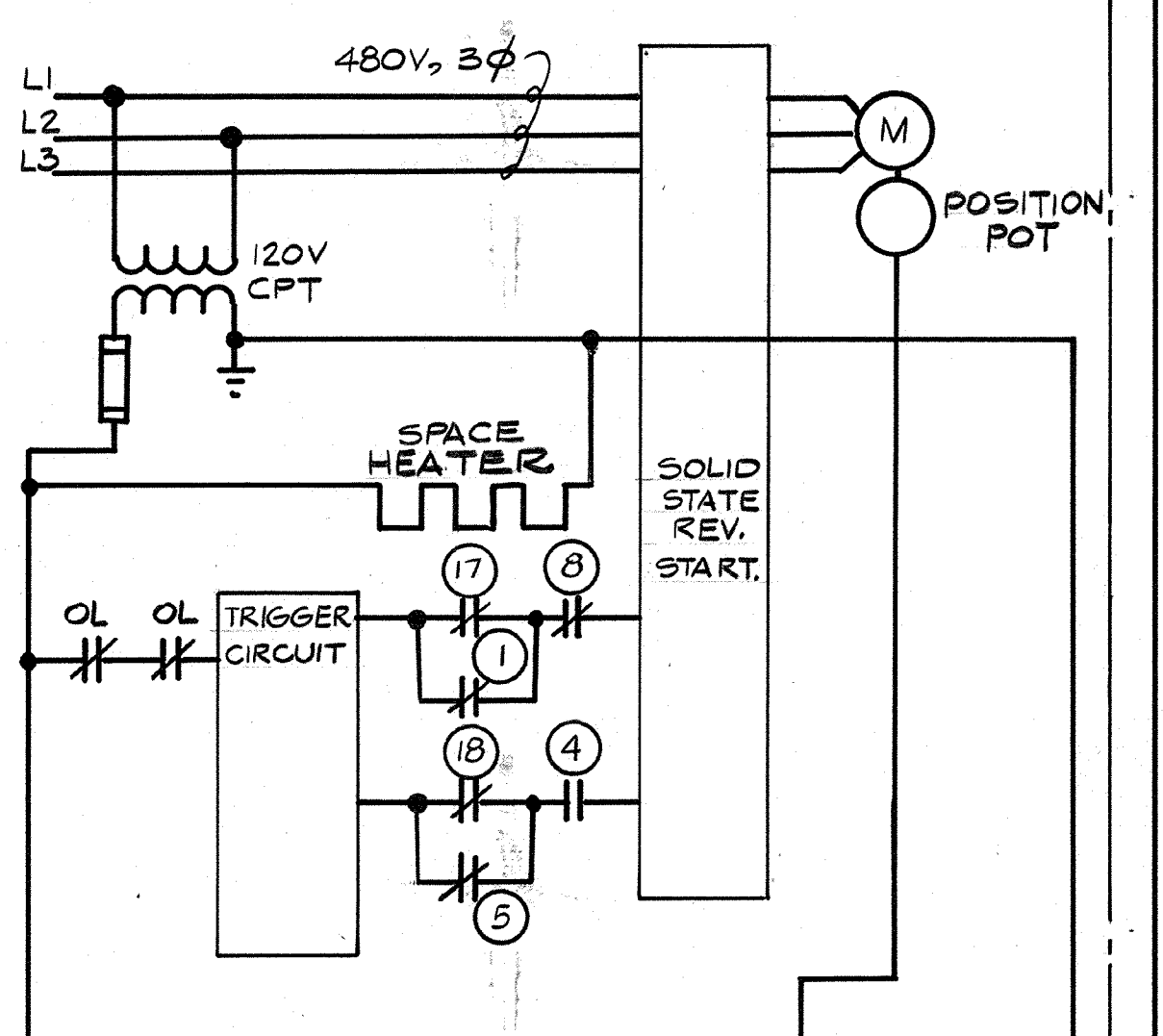
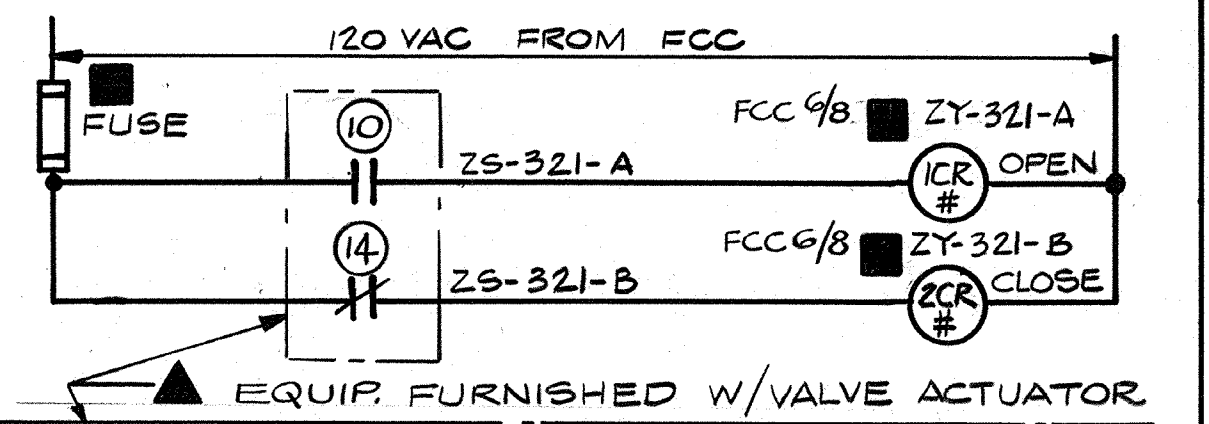
VALVE SHOWN IN FULLY OPEN POSITION

ROTOR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
OPEN																
CLOSE																
INT. 1																
INT. 2																

CIRCUIT FOR

ITEM	BV-FW-105	BV-FW-205	BV-FW-305	BV-FW-405	BV-FW-505	BV-FW-605	BV-FW-705	BV-FW-805
#	257	258	259	260	261	262	263	264
(a)	303-1	303-2	303-3	303-4	303-5	303-6	303-7	303-8

**BFW-FW-105 THRU BFW-FW-805
 FILTER CONTROL VALVES**



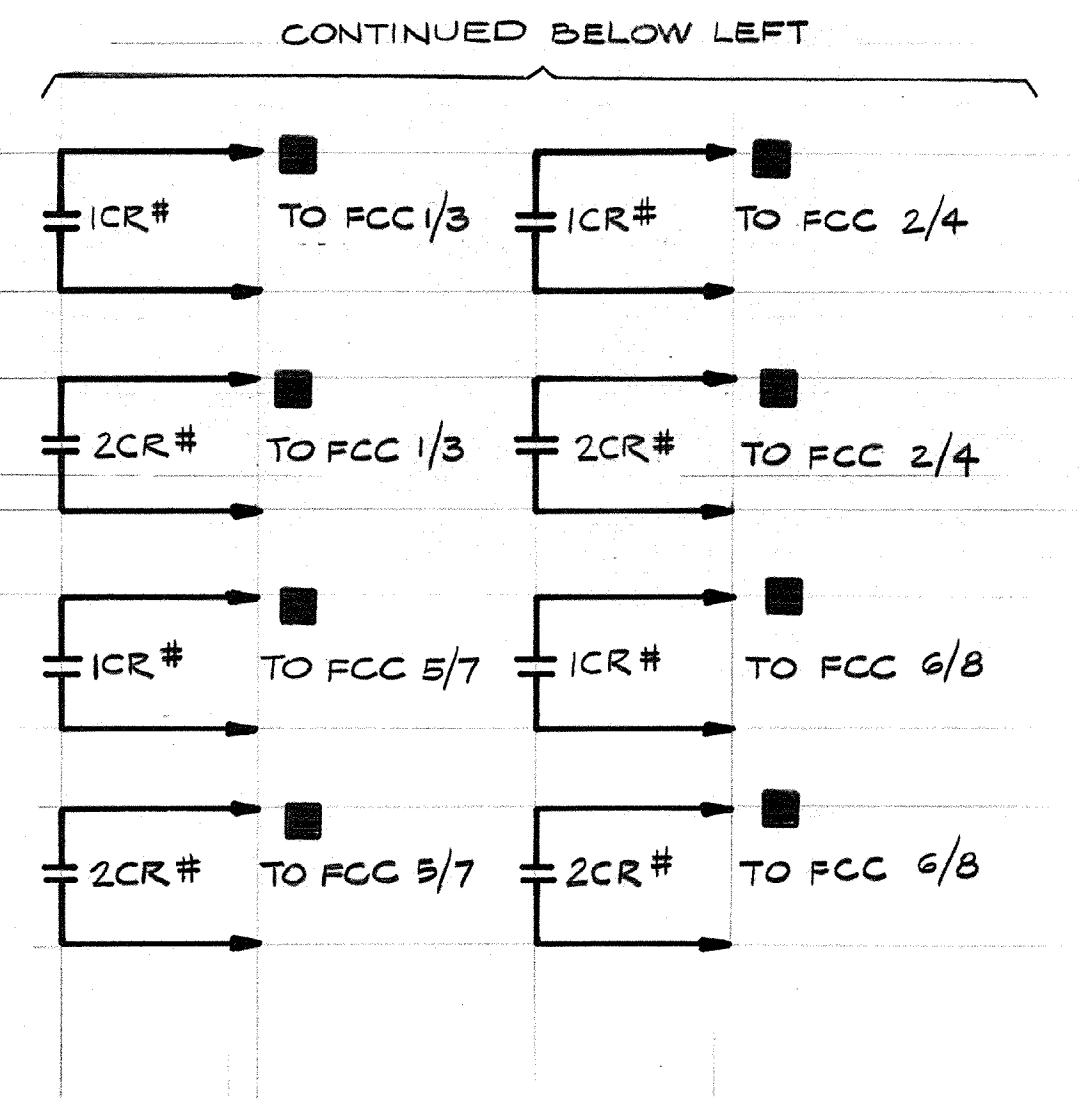
VALVE SHOWN IN FULLY OPEN POSITION

ROTOR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
OPEN																
CLOSE																
INT. 1																
INT. 2																

CIRCUIT FOR

ITEM	FCC 1/3	FCC 2/4	FCC 5/7	FCC 6/8
#	266	267	268	269
(a)	-G	-E	-C	-A
(b)	-H	-F	-D	-B

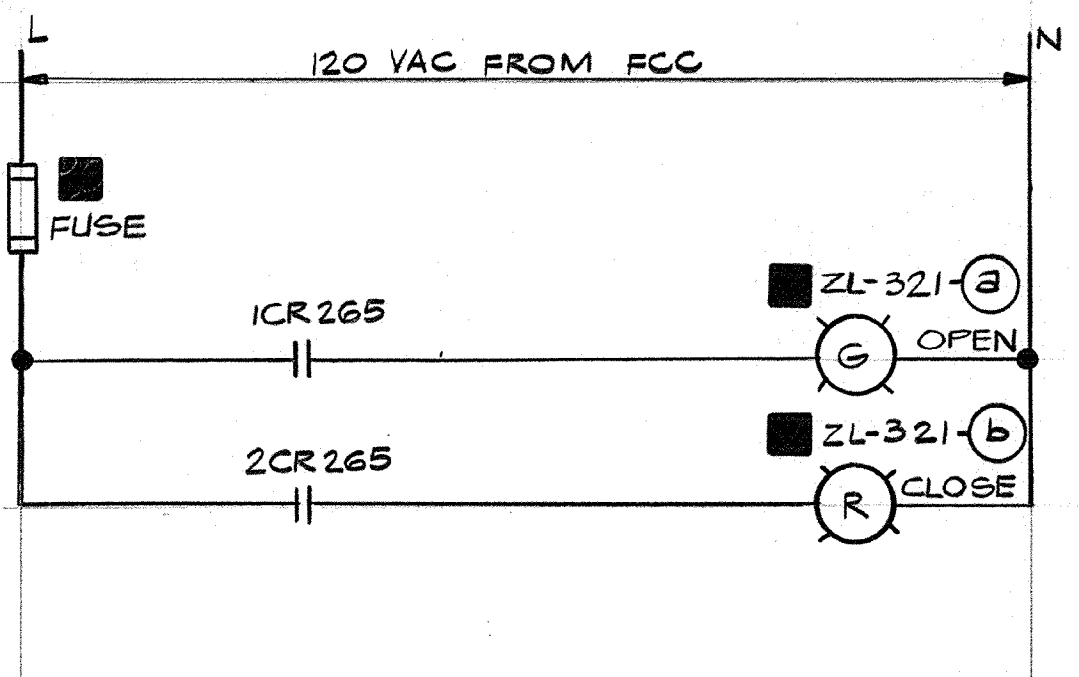
**BFV-BW-001
 MASTER BACKWASH VALVE POSITION INDIC.**



CIRCUIT FOR

ITEM	CIRCUIT FOR
#	265

**BFV-BW-001
 MASTER BACKWASH FLOW CONTROL VALVE**



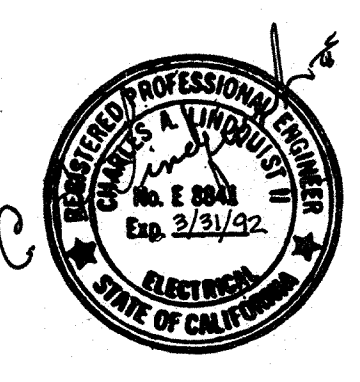
CIRCUIT FOR

ITEM	FCC 1/3	FCC 2/4	FCC 5/7	FCC 6/8
#	266	267	268	269
(a)	-G	-E	-C	-A
(b)	-H	-F	-D	-B

**BFV-BW-001
 MASTER BACKWASH VALVE POSITION INDIC.**

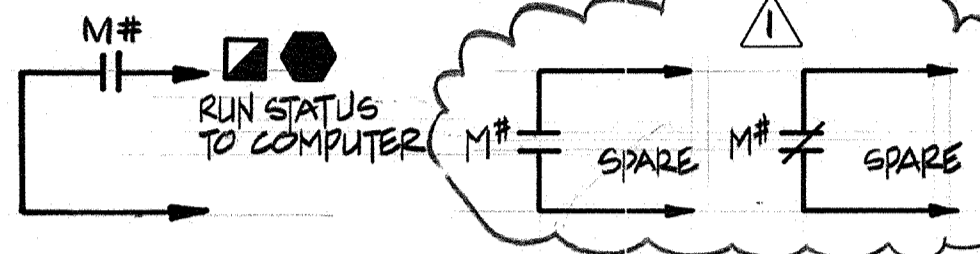
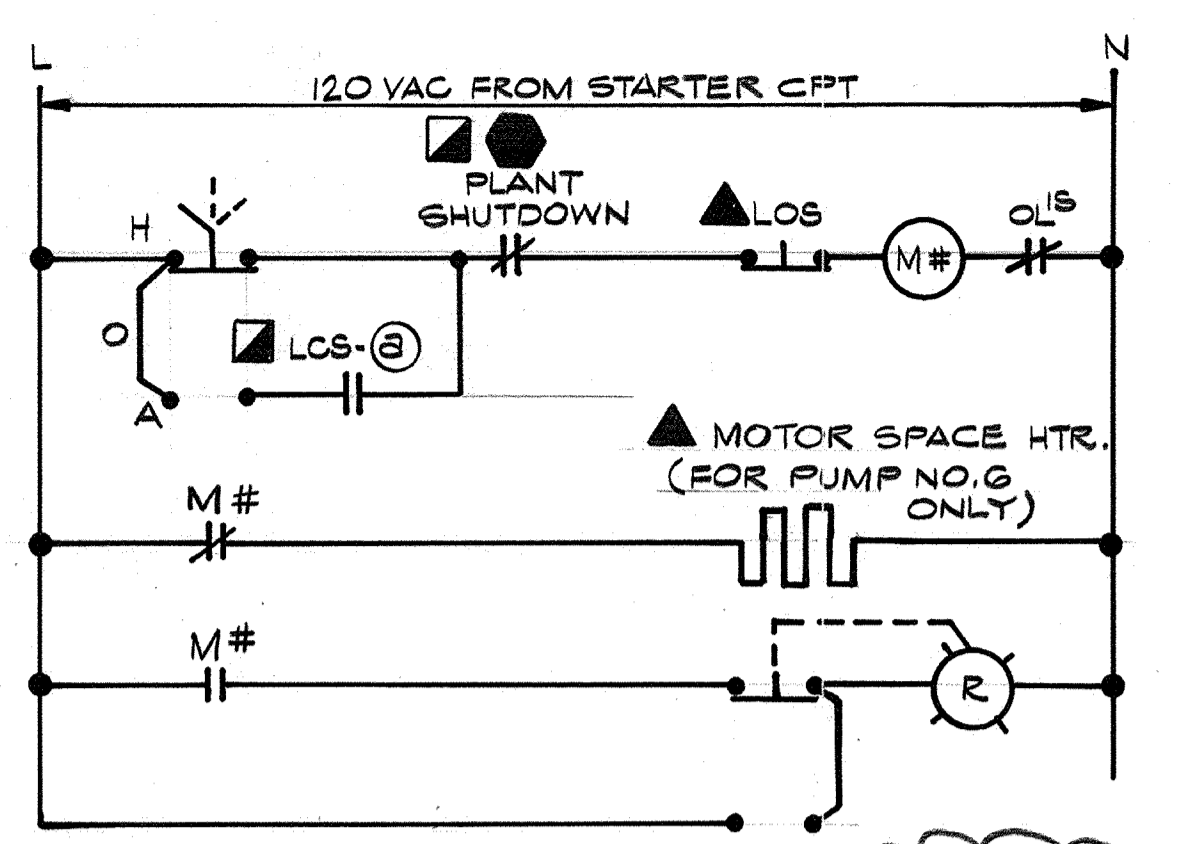
AS-BUILT
 5/10/91
 CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988
CONTROL SCHEMATICS II
 SHEET NO. E-15
 CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners, & management consultants



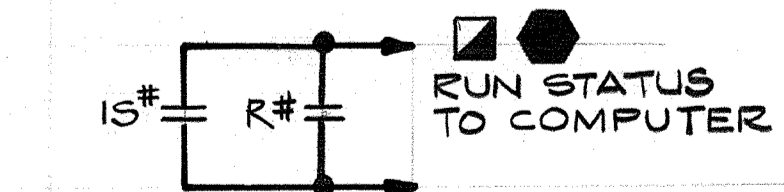
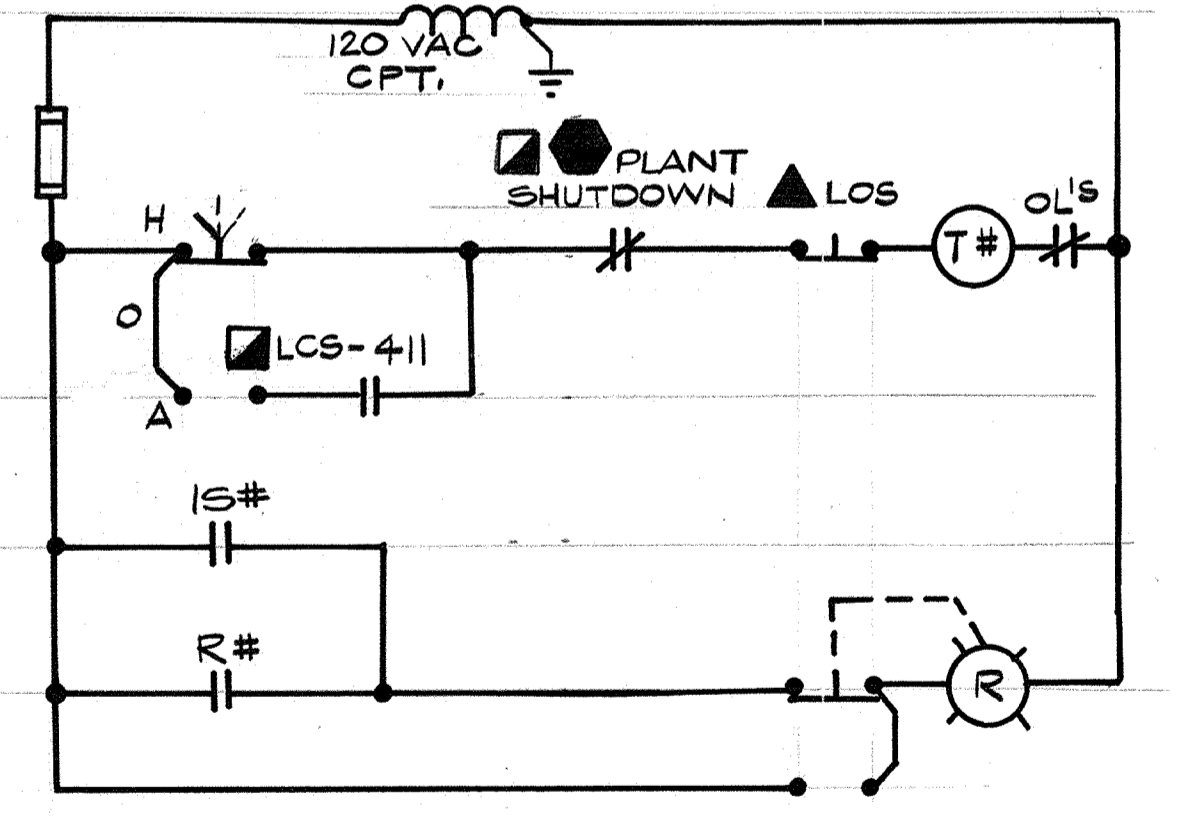
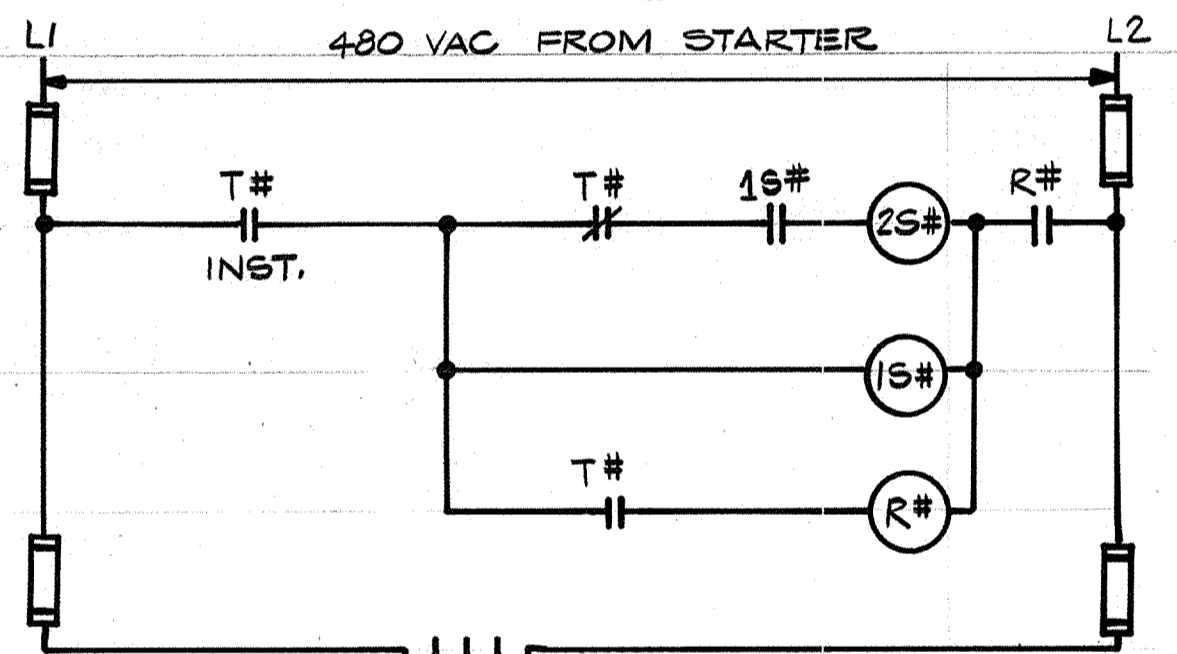
Date: Ch'k'd: Revision:
 Designed by: RRR
 Drawn by: V.M.
 Checked by: GKK
 Approved by: CAL
 Date: SEPT 1988
 Scale: NONE

111325
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



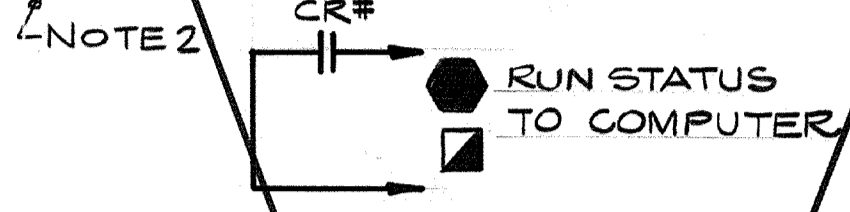
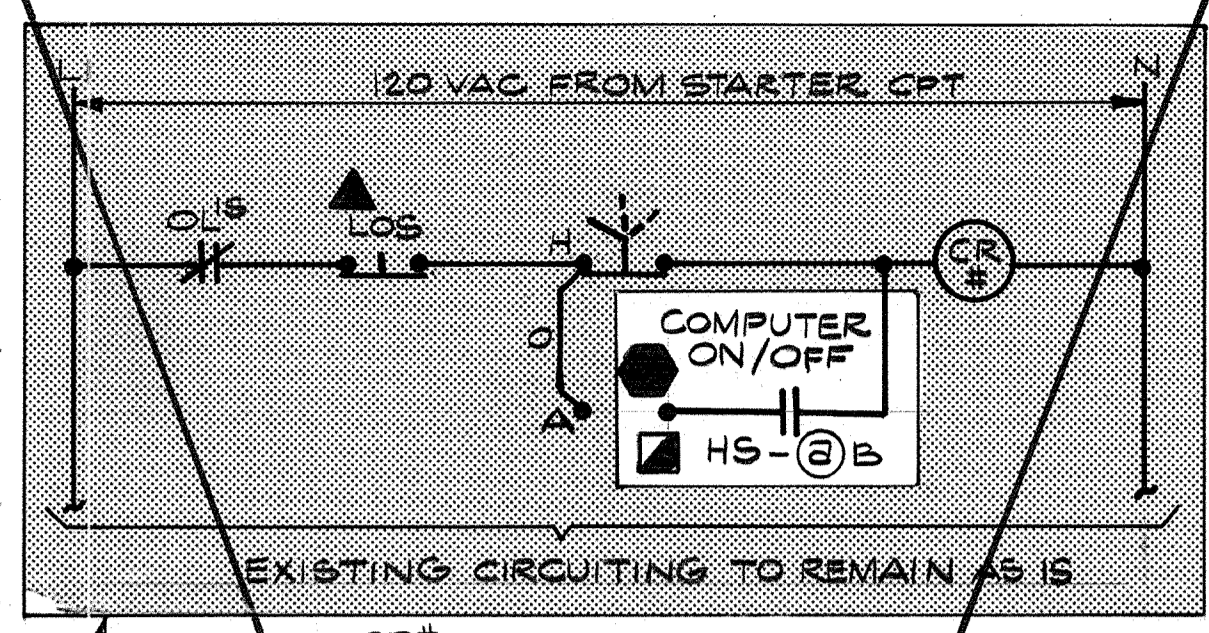
CIRCUIT FOR				
ITEM #	P-TW-1	P-TW-2	P-TW-3	P-TW-6
#	300	301	302	303
(a)	LCS-401	LCS-401	LCS-401	LCS-411

P-TW-1, P-TW-2, P-TW-3 & P-TW-6
 CLEARWELL PUMPS NO. 1, 2, 3 & 6
 DEVICES LOCATED IN CBCP



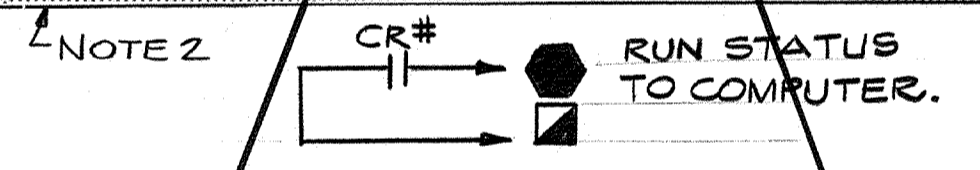
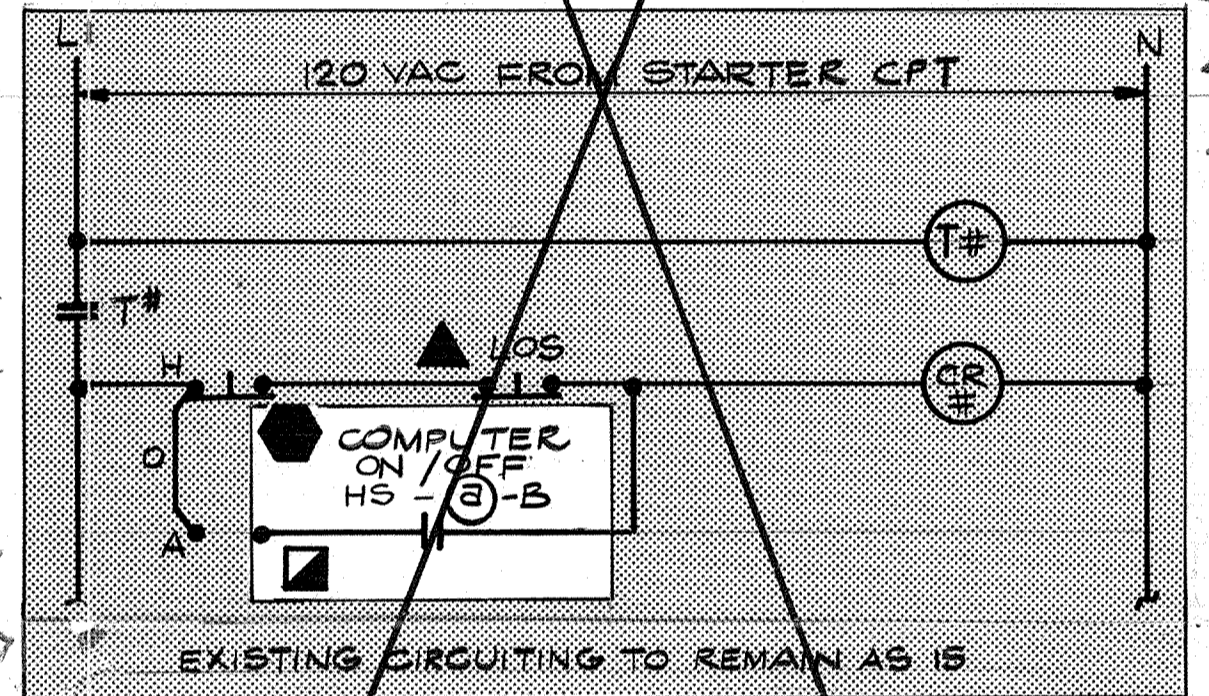
CIRCUIT FOR		
ITEM #	P-TW-4	P-TW-5
#	304	305

DEVICES LOCATED IN CBCP.
 P-TW-4 & P-TW-5
 CLEARWELL PUMPS NO. 4 & 5



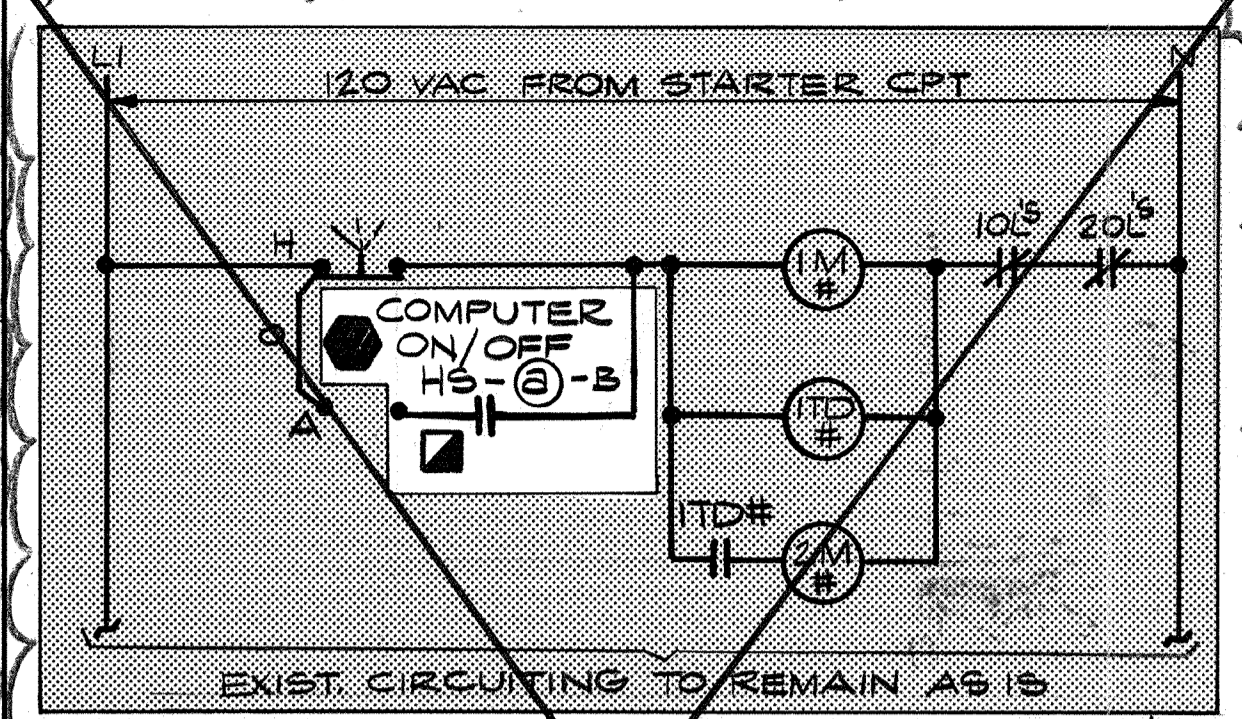
CIRCUIT FOR		
ITEM #	PUMP NO.1	PUMP NO.2
#	306	307
(a)	451-1	451-2

WEST HIGH LEVEL BOOSTER PUMPS NO. 1 & 2
 DEVICES LOCATED IN MCP



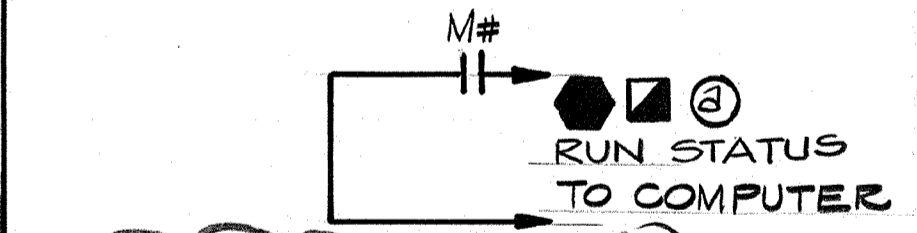
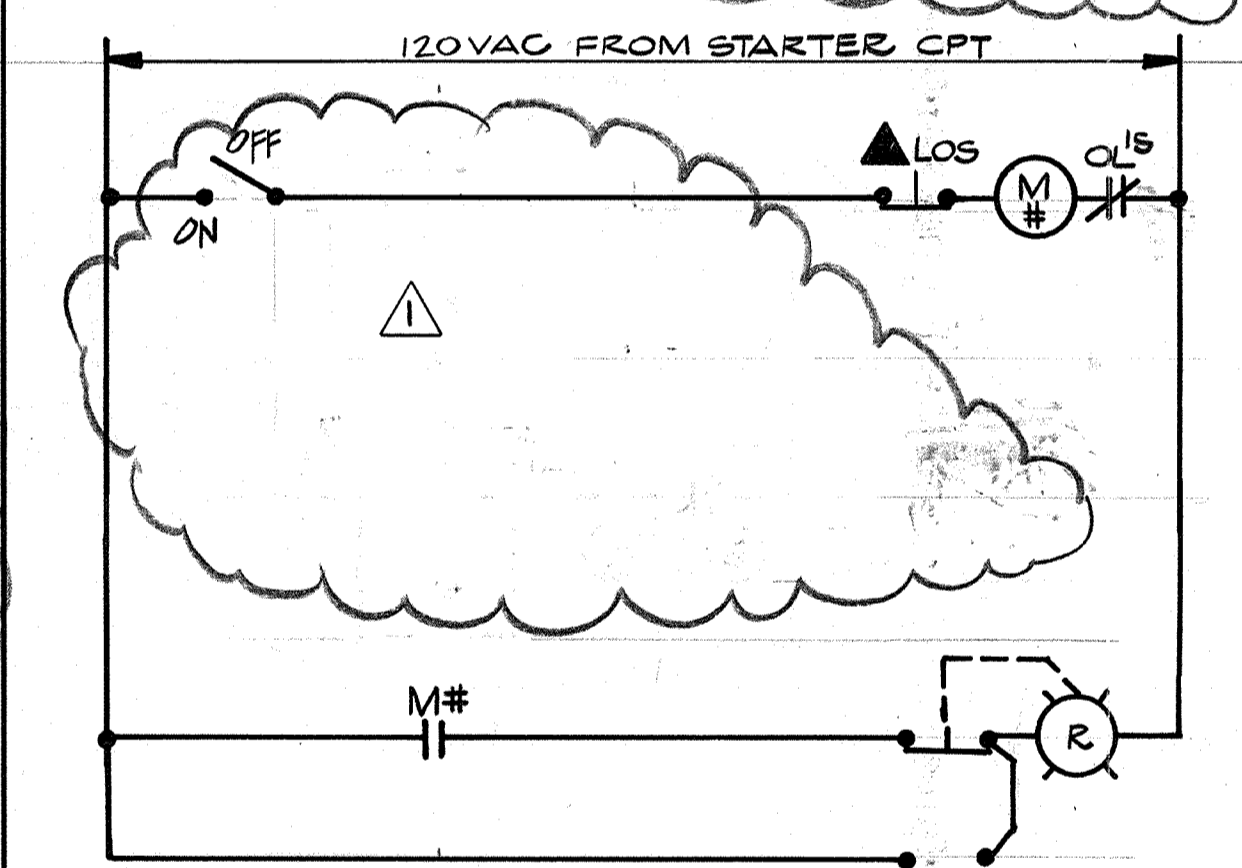
CIRCUIT FOR			
ITEM #	PUMP NO.3	PUMP NO.4	PUMP NO.5
#	308	309	310
(a)	451-3	451-4	451-5

WEST HIGH LEVEL BOOSTER PUMPS NO. 3, 4 & 5
 DEVICES LOCATED IN MCP



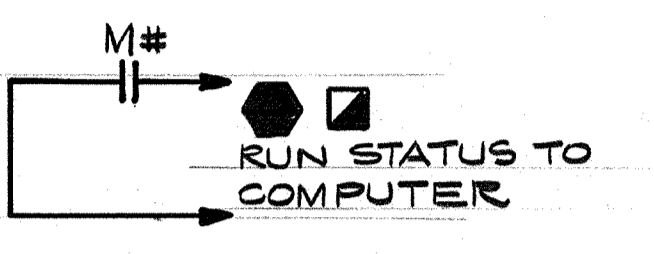
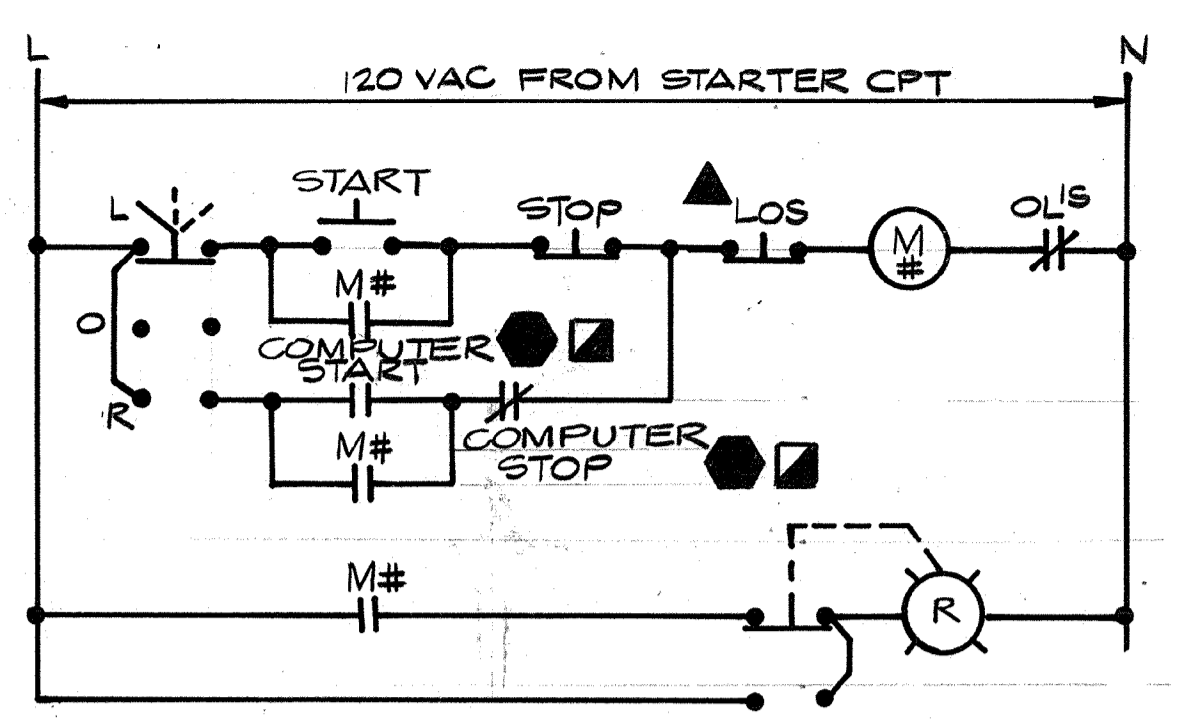
CIRCUIT FOR		
ITEM #	PUMP NO.6	PUMP NO.7
#	311	312
(a)	451-6	451-7

WEST HIGH LEVEL BOOSTER PUMPS NO. 6 & 7
 DEVICES LOCATED IN MCP



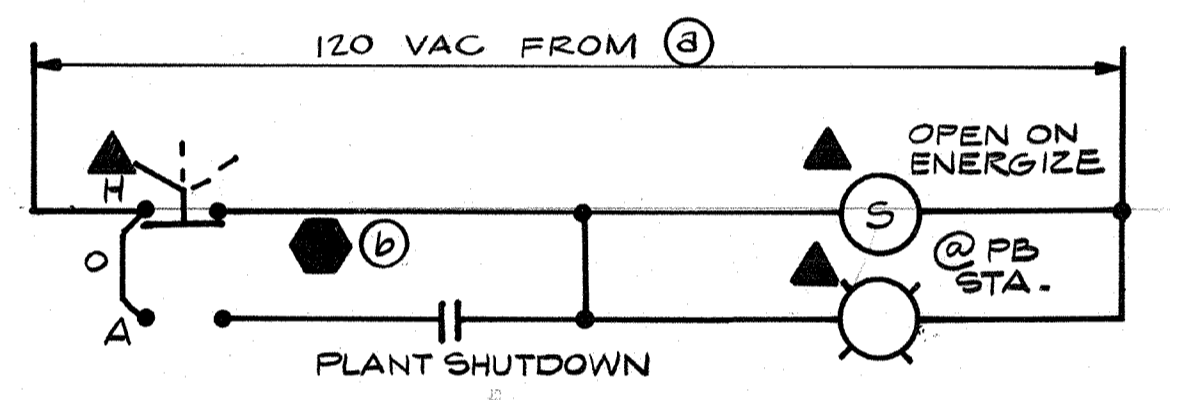
CIRCUIT FOR		
ITEM #	PUMP NO.1	PUMP NO.2
#	313	314
(a)	RWSPCP	CBCP

P-SA-101, RAW WATER SAMPLE PUMP
 P-SA-201, SETTLED WATER SAMPLE PUMP



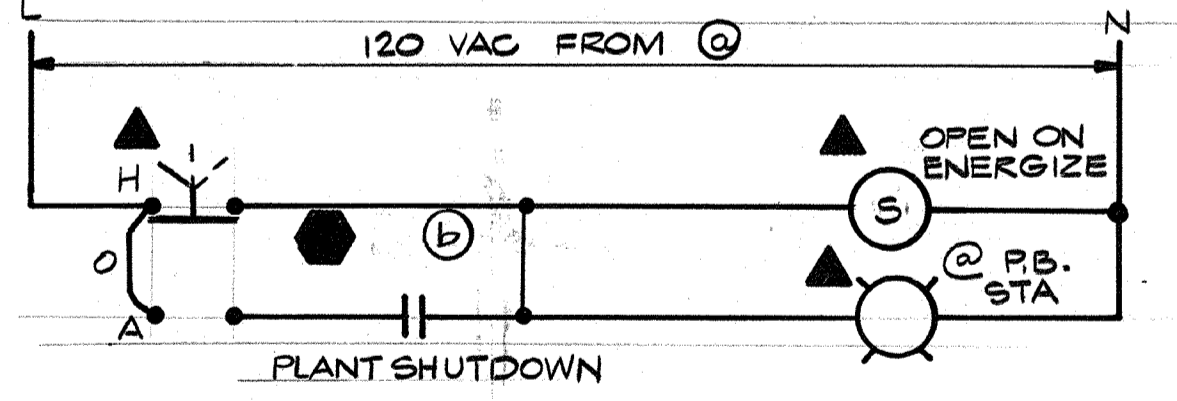
CIRCUIT FOR	
ITEM #	P-D-1
#	315

P-D-1
 DECANT PUMP
 DEVICES LOCATED RWSPCP



CIRCUIT FOR			
ITEM #	SV-UW-001	SV-UW-002	SV-UW-003
#	316	317	318
(a)	CKT. 21 LP 4	CKT. 36 LP 2	CKT. 2 LP 7
(b)	MCP	FCC G/B	RWSPCP

SV-UW-001, SV-UW-002, SV-UW-003
 CHLORINE INJECTOR SHUTOFF VALVES

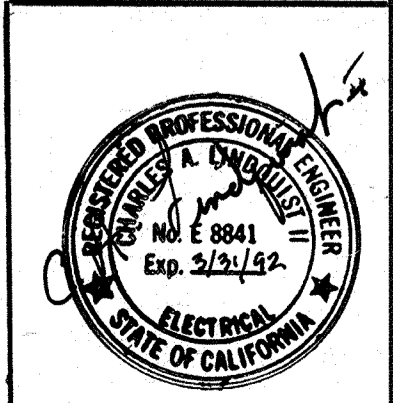


CIRCUIT FOR		
ITEM #	SV-UW-901	SV-UW-902
#	319	320
(a)	CKT. 36 LP-2	CKT. 2 LP-7
(b)	FCC G/B	RWSPCP

SV-UW-901 & SV-UW-902
 AMMONIA INJECTOR SHUTOFF VALVES

NOTES:
 1. COMPONENT INSIDE SHADED AREAS ARE EXISTING DEVICES & CIRCUITING RECONNECTED AS SHOWN. ALL AREAS NOT SHADED REPRESENT NEW EQUIP. EXIST. CIRCUITS TO BE FIELD CONFIRMED.
 2. CIRCUITS LOCATED IN EXIST. WEST HIGH LEVEL BOOSTER PS MCC.

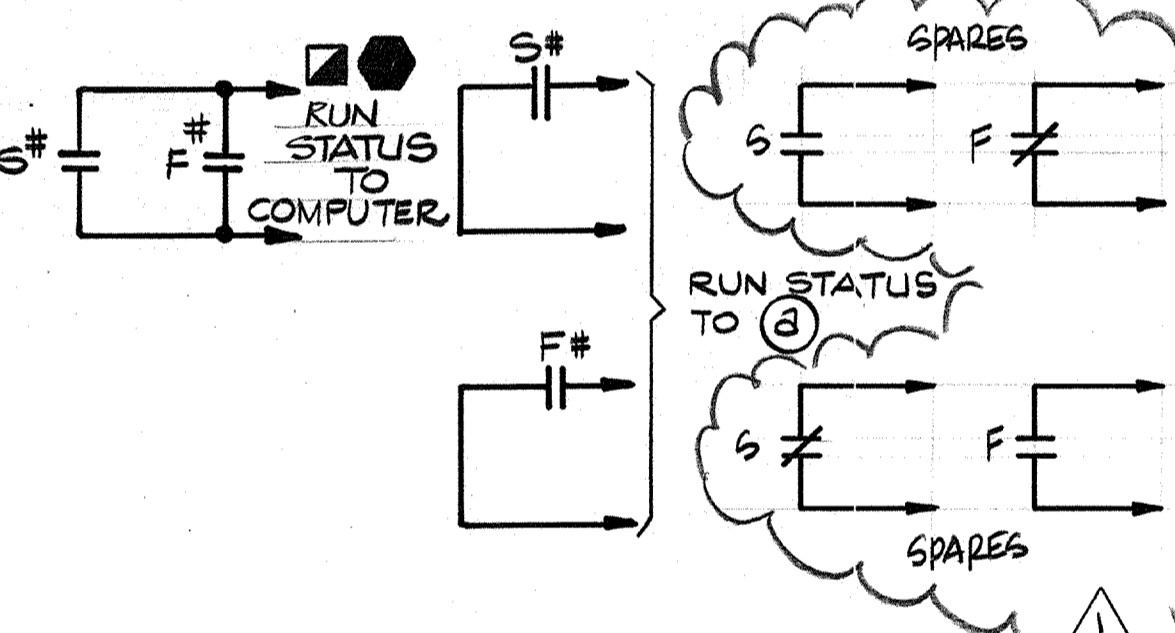
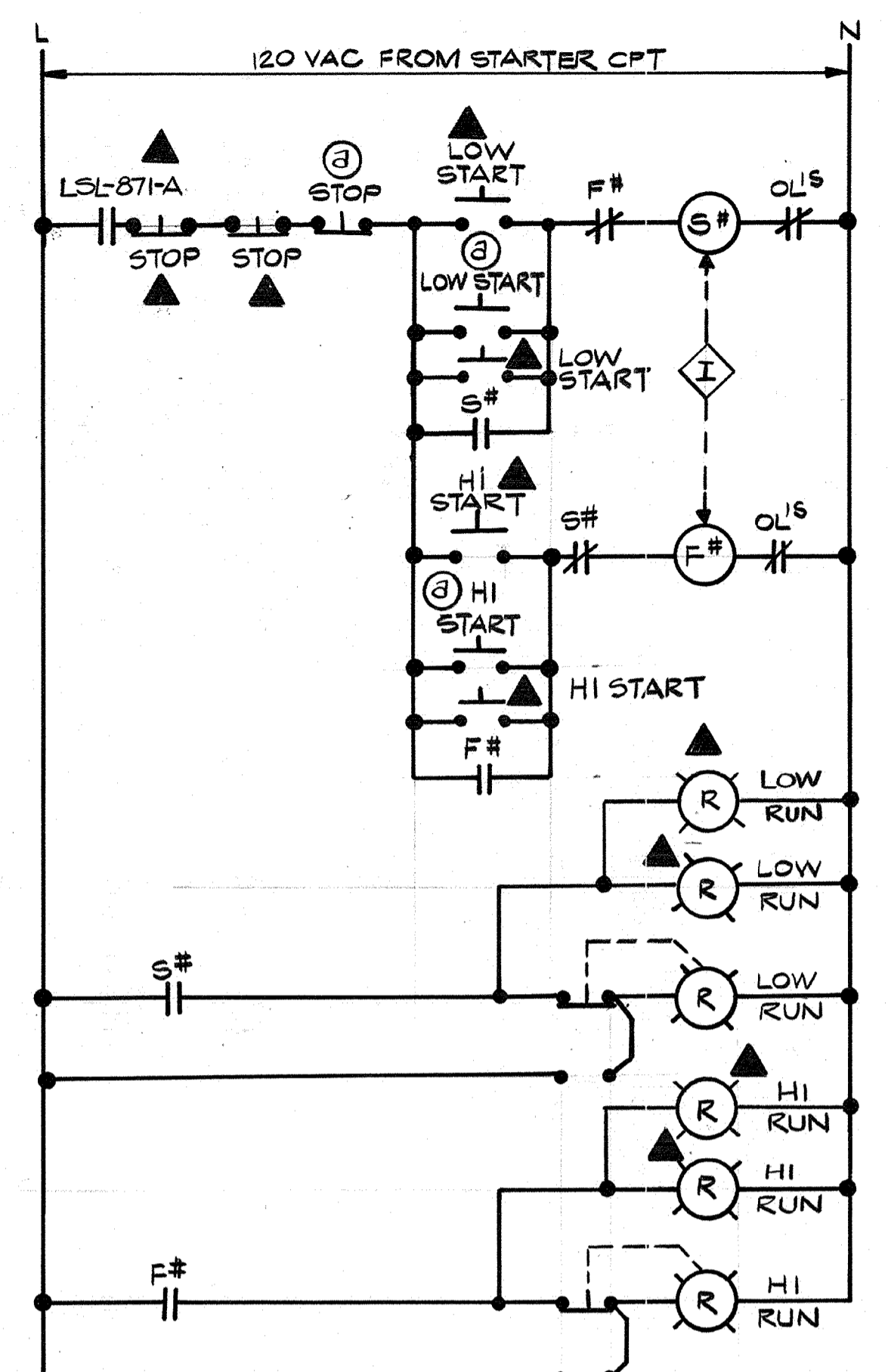
AS-BUILT
 5/10/91
 SIGNATURE DATE



1/23/91
 Date Ch'k'd
 Revised for the Record
 Revision
 Designed by: RRR
 Drawn by: V.M.
 Checked by: GKK
 Approved by: CAL
 Date: SEPT. 1988
 Scale: NONE

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 CONTROL SCHEMATICS III
 SHEET NO. E-16
 CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists, planners, & management consultants
 123 OF 147

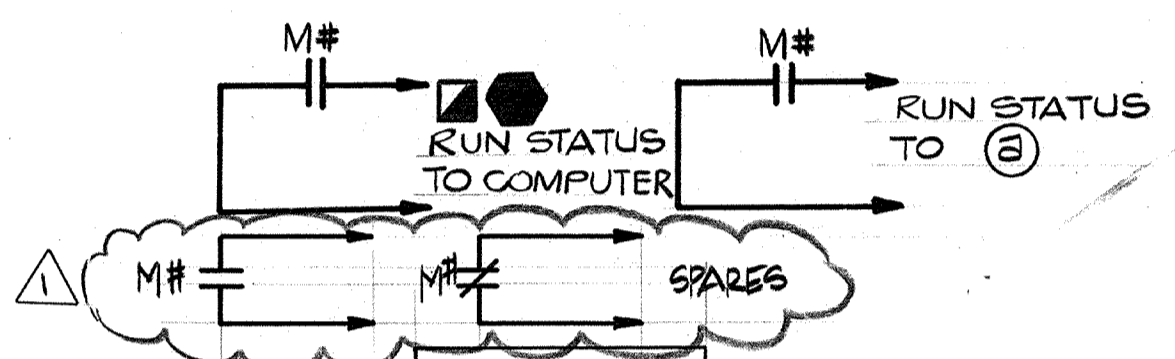
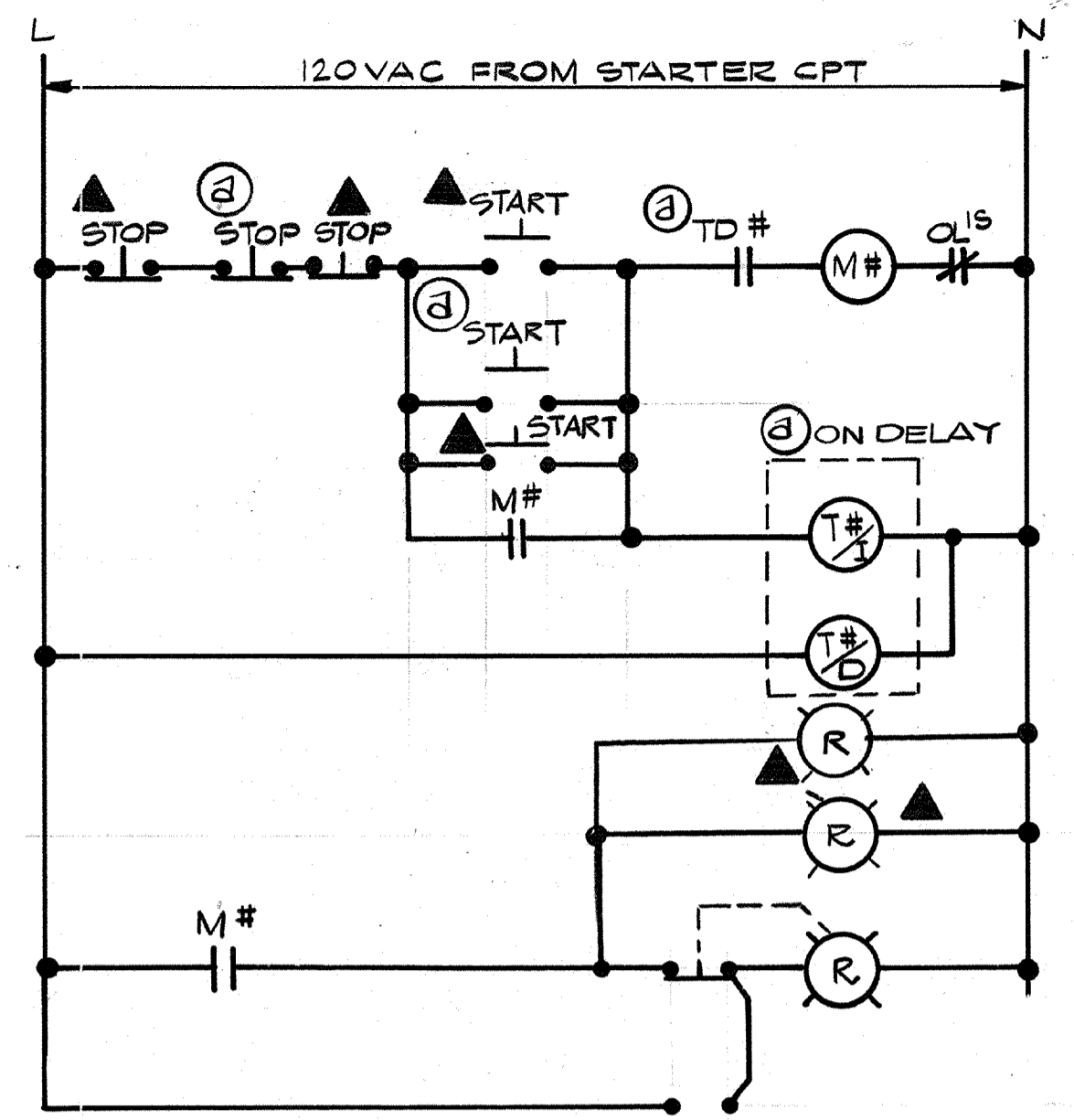
111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



CIRCUIT FOR	
ITEM	MX-C-801
#	400
ⓐ LOCATED IN	PACCP (FURNISHED UNDER SECT. 1123)

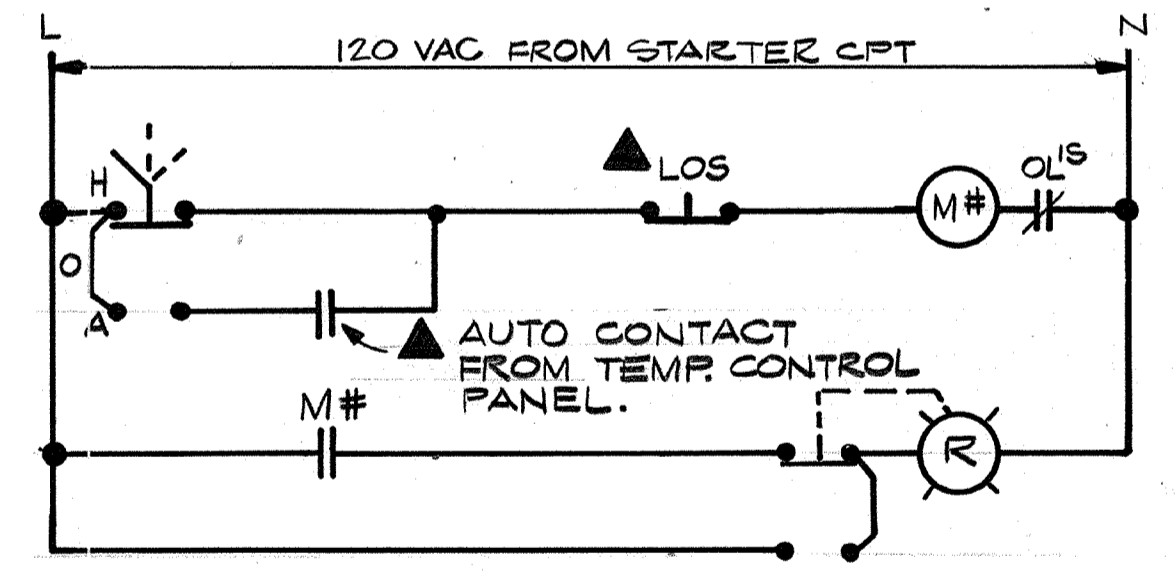
**MX-C-801
PAC MIXER**

■ DEVICES LOCATED IN MCP



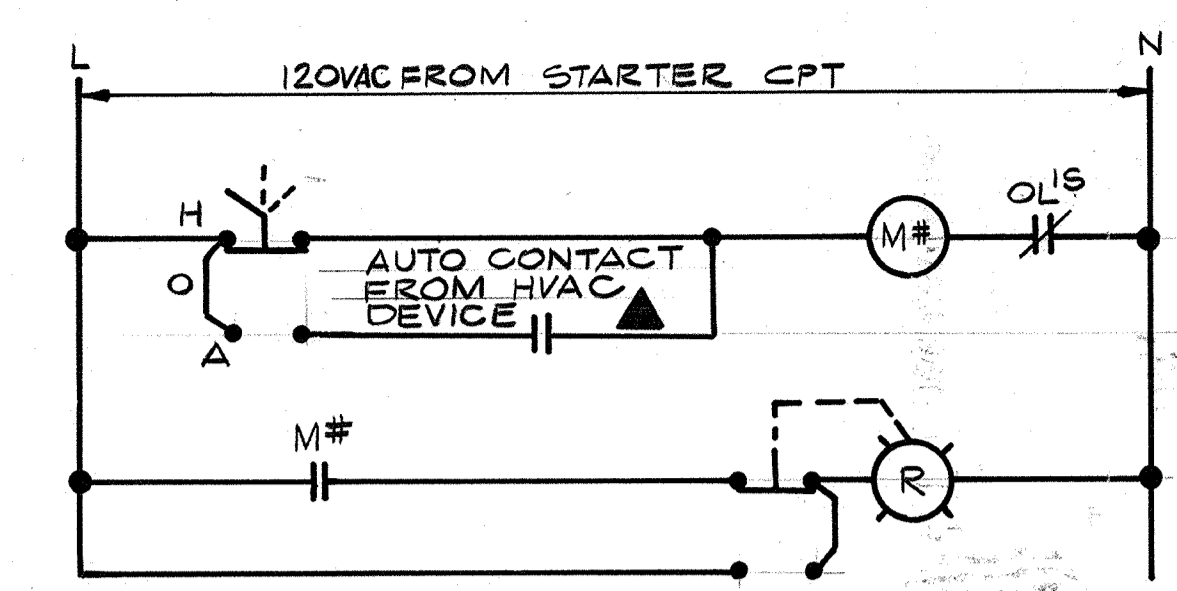
CIRCUIT FOR	
ITEM	DC-C-801
#	401
ⓐ LOCATED IN	PACCP (FURNISHED UNDER SECT. 1123)

**DC-C-801
PAC DUST COLLECTOR**

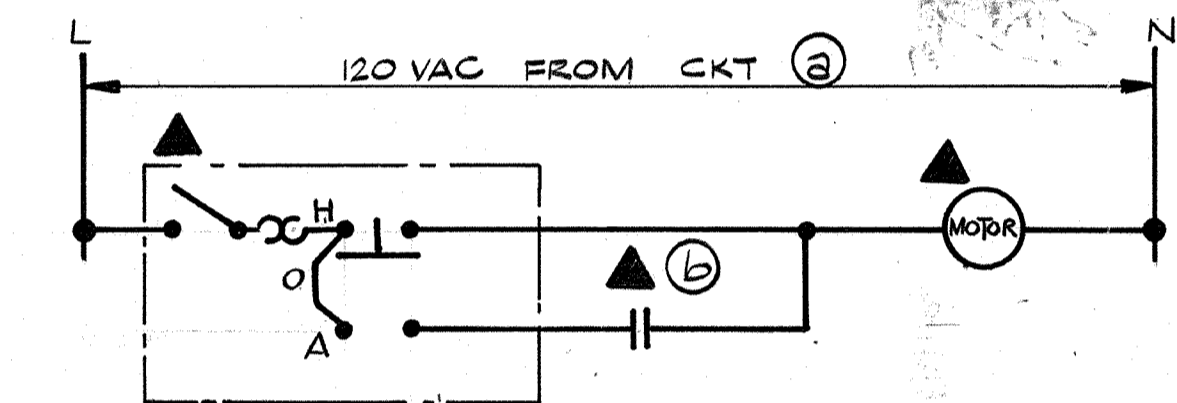
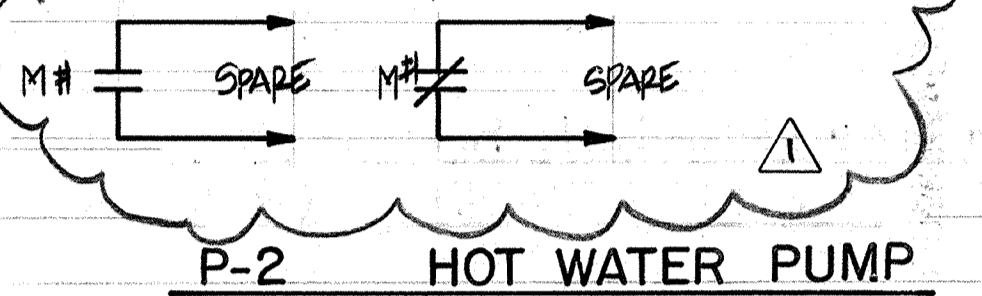


CIRCUIT FOR		
ITEM	AHU-2	RI
#	402	403
	404	

**AHU-2 AIR HANDLING UNIT NO.2
P-1 CHILLED WATER PUMP
EF-1 ROOF EXHAUST FAN**

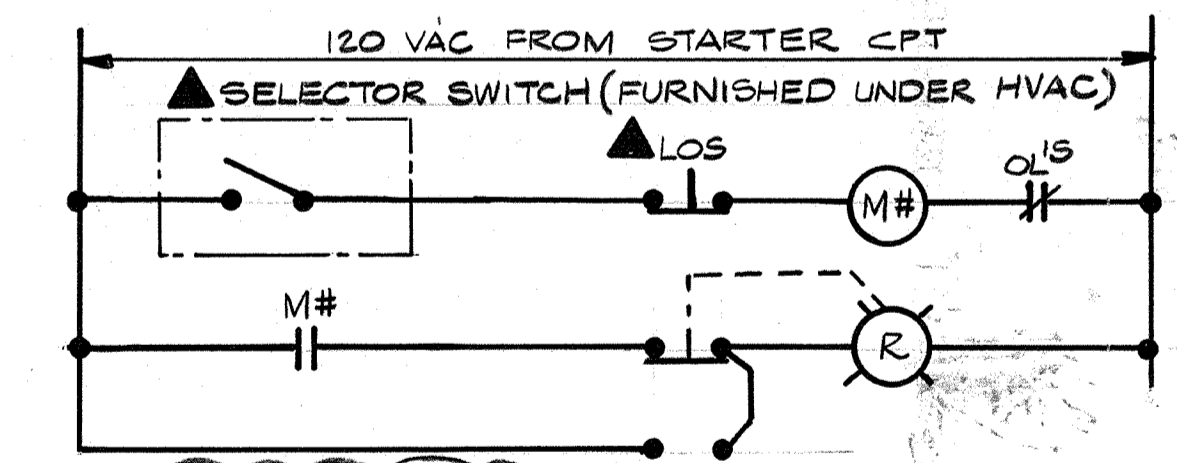


CIRCUIT FOR	
ITEM	P-2
#	407



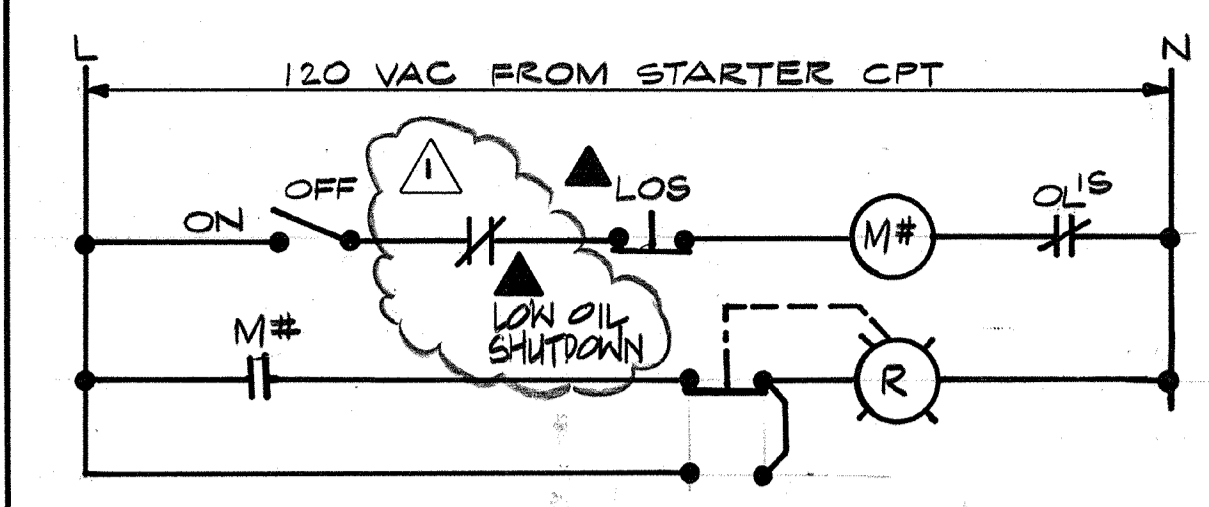
CIRCUIT FOR					
ITEM	EF-3	DHWP-1	EF-6	EF-11	EF-14
#	408	409	410	411	412
ⓐ	10, LP-4	10, LP-4	15, LP-6	11, LP-3	LP1
ⓑ	THERMO-STAT	HOT WTR TANK THERMO-STAT	CONTACT FROM VPD FURN. UNDER HVAC	THERMO-STAT	THERMO-STAT

**EF-3, EF-6, EF-11, EF-14
EXHAUST FANS
DHWP-1 DOMESTIC HOT WTR. PUMP**



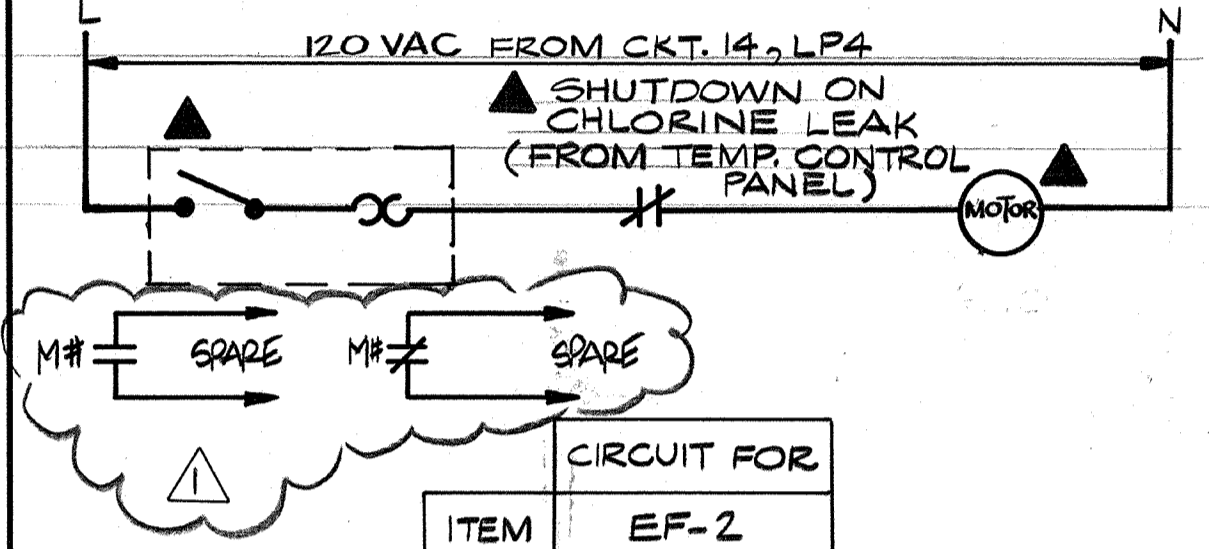
CIRCUIT FOR	
ITEM	EF-4
#	414

**EF-4
FUME HOOD EXHAUST FAN**



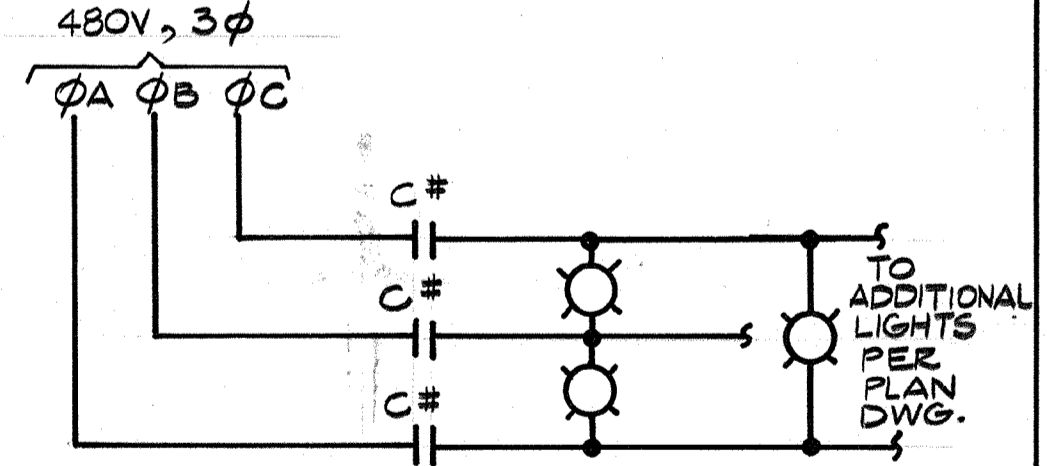
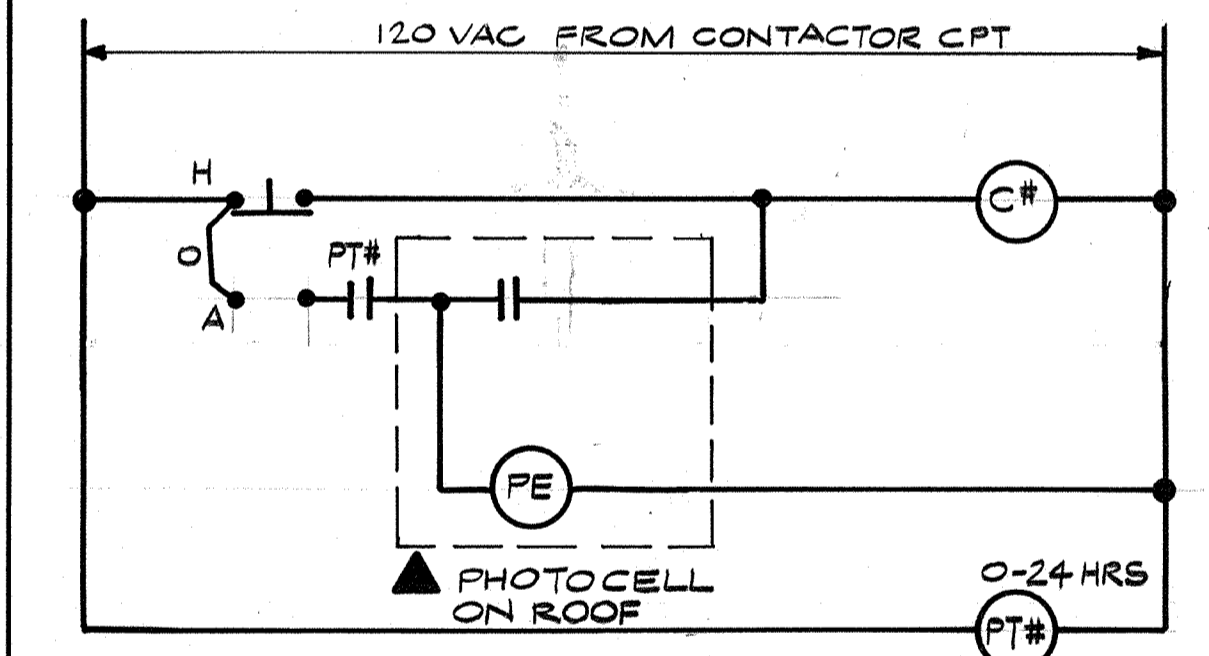
CIRCUIT FOR	
ITEM	VACP
#	416

VACP VACUUM PUMP



CIRCUIT FOR	
ITEM	EF-2
#	417

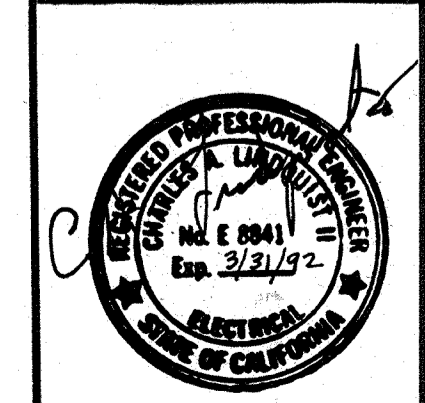
**EF-2
CHLORINE STORAGE EXHAUST FAN**



CIRCUIT FOR	
ITEM	STREET LIGHTING
#	418

STREET LIGHTING

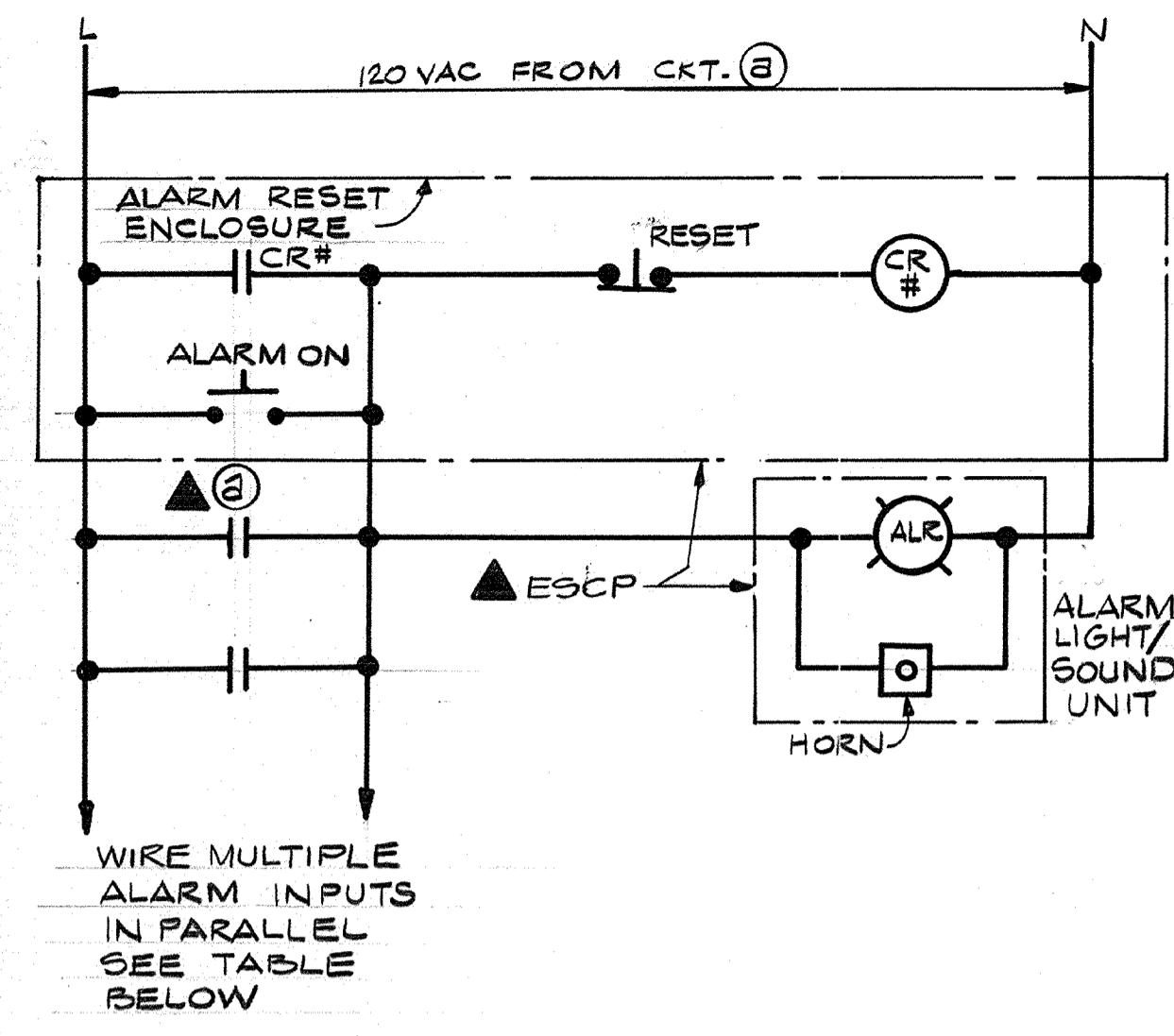
AS-BUILT
 Signature: JPM 5/10/91
 DATE



Date	1/23/91	Revised FOR THE RECORD
Ch'k'd		Revision
Designed by:	R.R.R.	
Drawn by:	V.M.	Date: SEPT. 1988
Checked by:	GKK	
Approved by:	CAL	Scale: NONE

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
CONTROL SCHEMATICS IV
 SHEET NO. E-17
 CAMP DRESSER & McKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners & management consultants
 124 OF 147

111325
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:

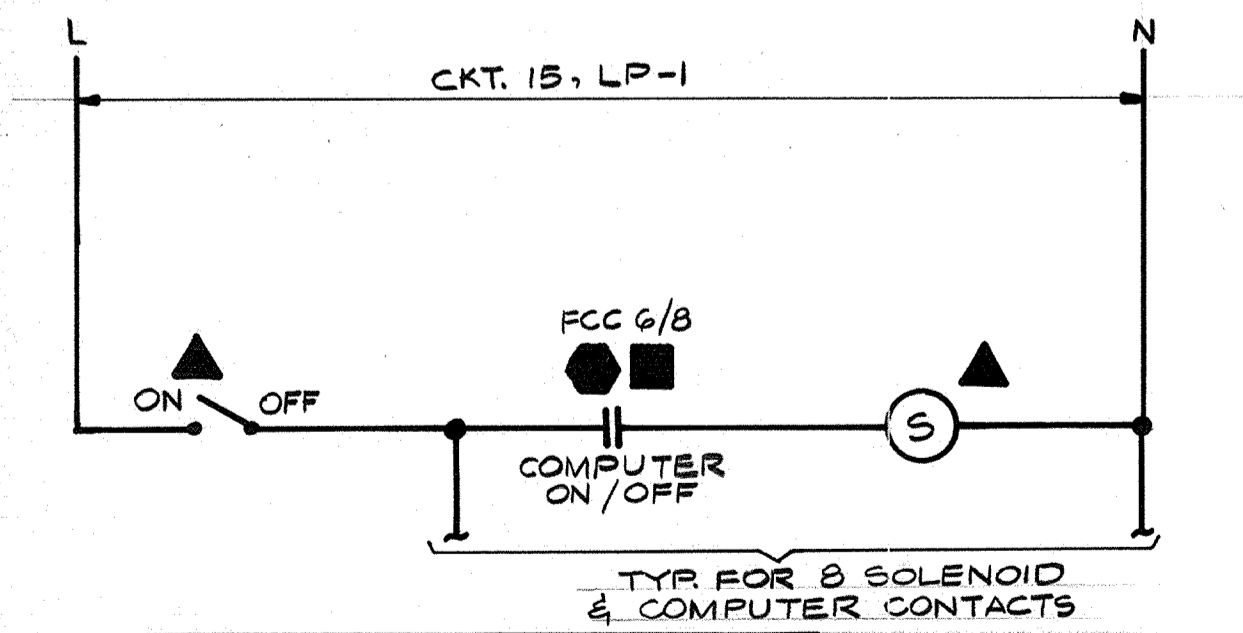


CR # FLOW ALARM TO COMPUTER

CONTROL FOR		
ITEM	ESCP-1 AT OPERATIONS BLDG	ESCP-2 AT TANK YARD
#	701	702
Ⓐ	CKT. 24, LP4	CKT. 9, LP9
Ⓑ	7 SHOWER/EYE WASH FLOW SWITCHES FSH-901-A THRU F & FSH-901-H	1 SHOWER/EYE WASH FLOW SWITCH FSH-901-G

☑ DEVICE LOCATED IN MCP

EMERGENCY EYEWASH/SHOWER ALARMS



CONTROL FOR	
ITEM	MULTIPOINT MONITOR
#	703

FILTER HEADLOSS MULTIPOINT MONITOR

AS-BUILT
 Date: 5/10/91
 RELEASE DATE

		CITY OF PITTSBURG, CALIFORNIA WATER TREATMENT PLANT EXPANSION 1988 CONTROL SCHEMATIC V	
		SHEET NO. E-18 125 OF 147	
Date: _____ Ch'k'd: _____ Revision: _____	Designed by: <u>RRR</u> Drawn by: <u>V.M.</u> Checked by: <u>GKK</u> Approved by: <u>CAL</u>	Date: <u>SEPT. 1988</u> Scale: <u>NONE</u>	CAMP DRESSER & MCKEE INC. 710 South Broadway Walnut Creek, CA 94596 environmental engineers, scientists, planners & management consultants

111335

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

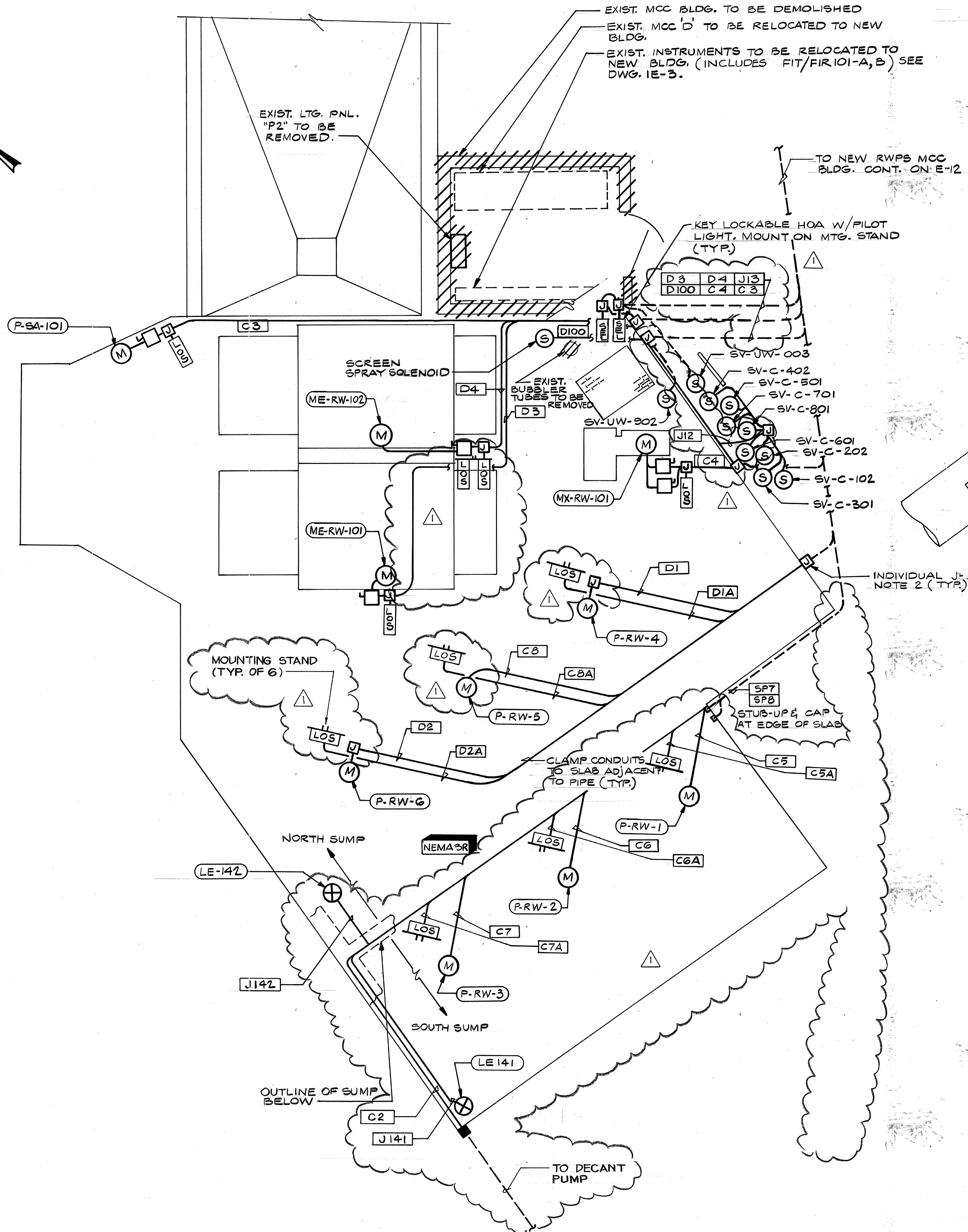
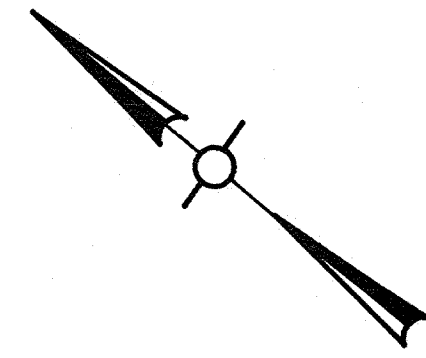
HVAC Approved by: Date:

INSTRUMENTATION Approved by: Date:

ELECTRICAL Approved by: Date:

STRUCTURAL Approved by: Date:

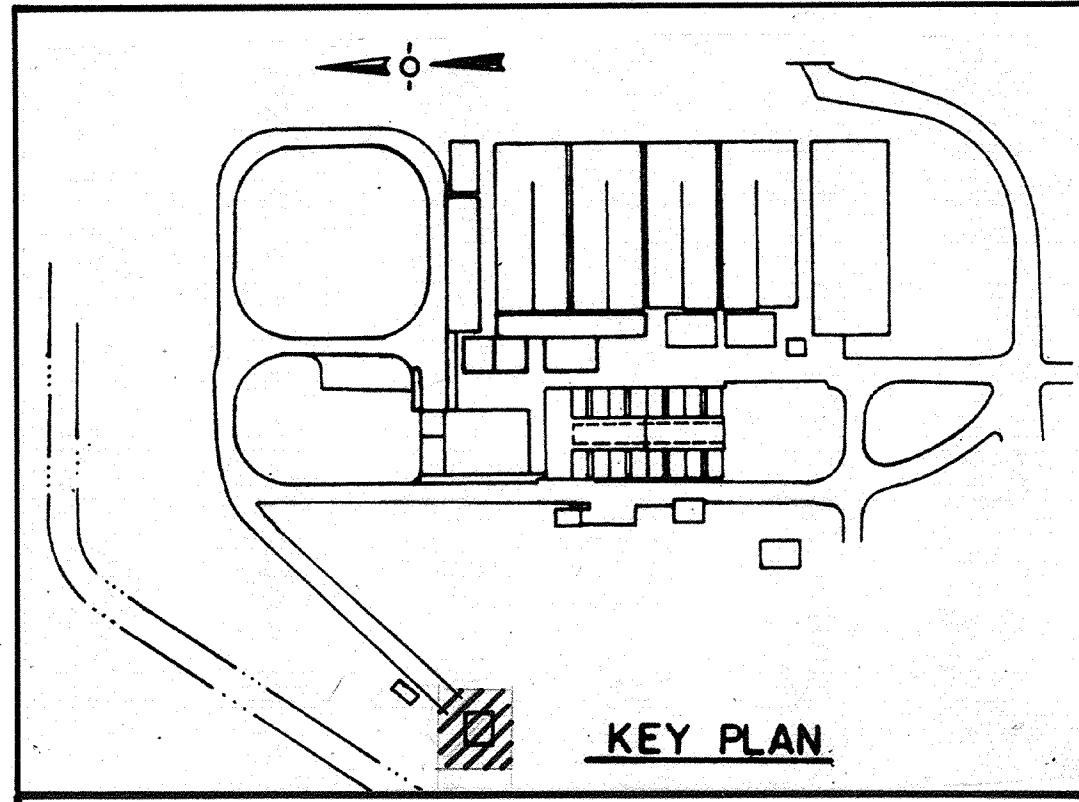
ARCHITECTURAL Approved by: Date:



- NOTES:
- CROSSHATCHING INDICATES GENERALLY THE ELECTRICAL EQUIPMENT TO BE REMOVED FROM SERVICE UNDER THIS CONTRACT. REFERENCE SPEC. SECTION 16010 MODIFICATIONS & REMOVALS FOR ADDITIONAL DETAILS.
 - PROVIDE INDIVIDUAL J-BOX OR FITTING FOR EACH CONDUIT. NOT ALL BOXES ARE SHOWN FOR CLARITY.

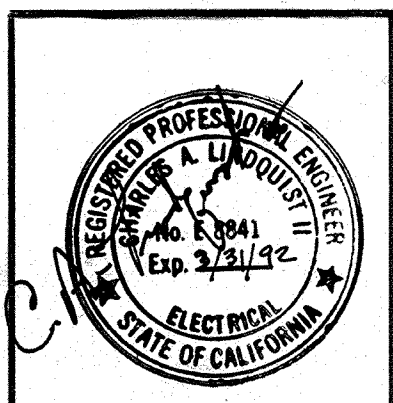
AS-BUILT

PJM 5/10/91
SIGNATURE DATE



CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988
RAW WATER PUMP STATION
POWER & INSTRUMENTATION

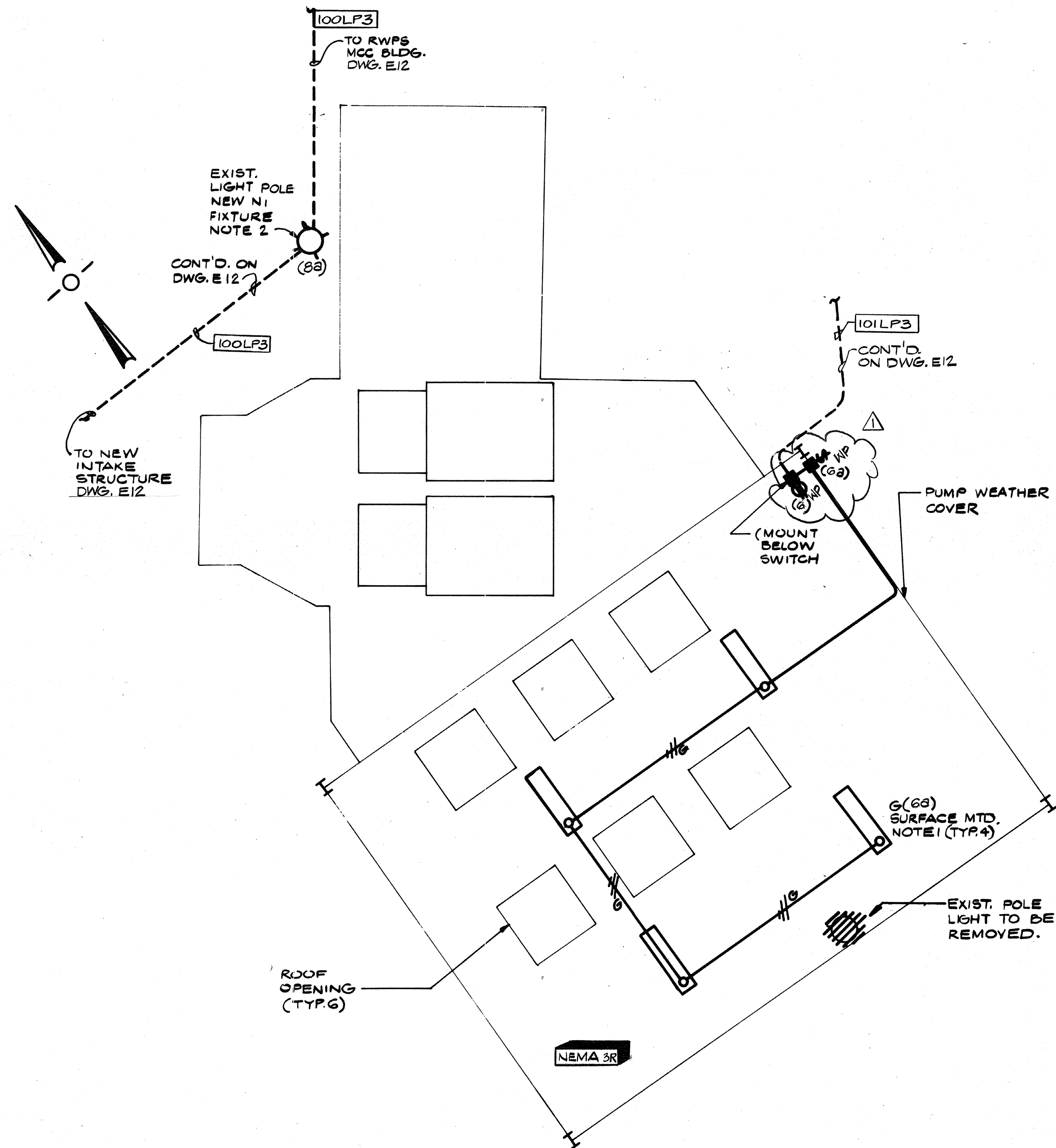


Date	1/28/91	Revision	REVISD FOR THE RECORD
Ch'k'd		Revision	
Designed by:	RRR	Date:	SEPT. 1988
Drawn by:	V.M	Scale:	3/8" = 1'-0"
Checked by:	GKK		
Approved by:	CAL		

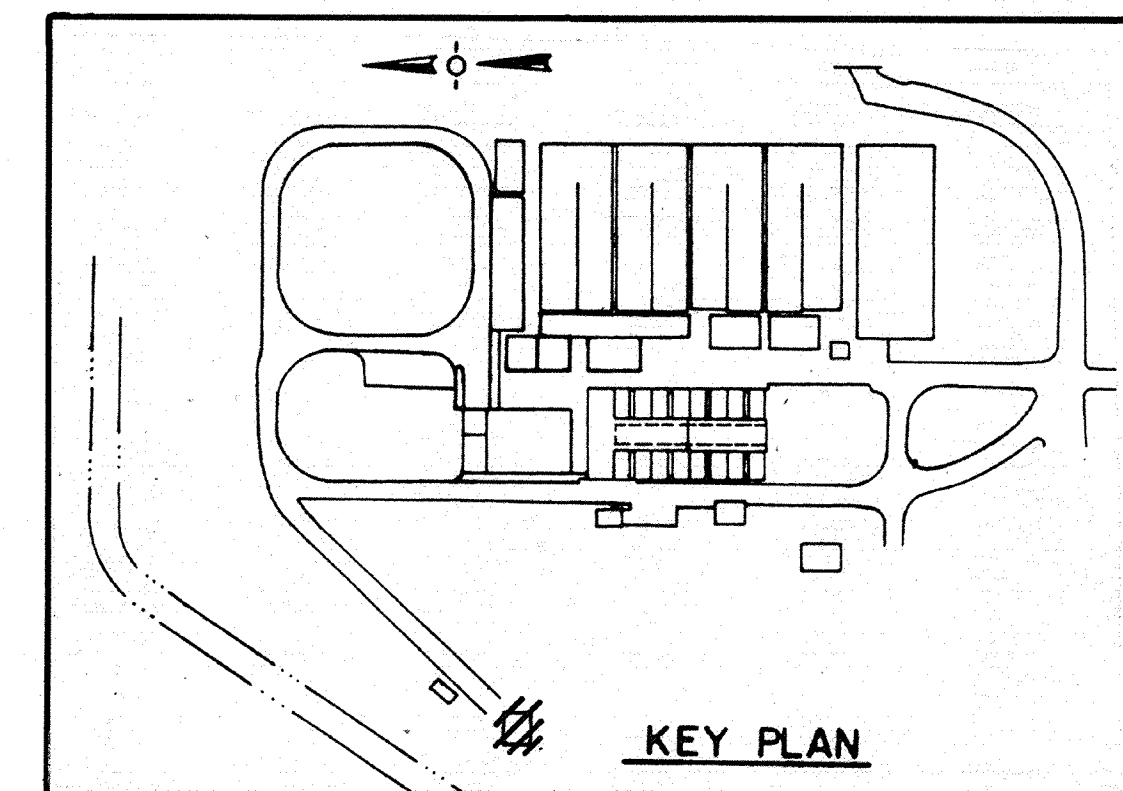
CAMP DRESSER & MCKEE INC.
710 South Broadway
Walnut Creek, CA 94596
environmental engineers, scientists,
planners & management consultants

SHEET NO.
1E-1
126 OF 147

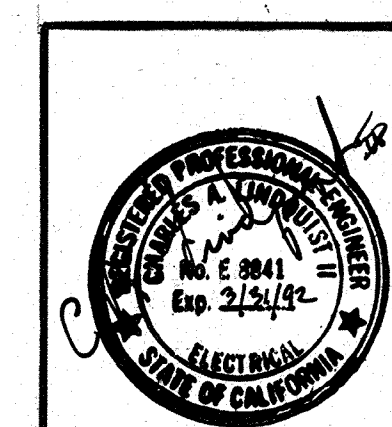
111335
 PROJECT MANAGER Approved by Date
 PROJECT ENGINEER Approved by Date
 PLUMBING Approved by Date
 HVAC Approved by Date
 INSTRUMENTATION Approved by Date
 ELECTRICAL Approved by Date
 STRUCTURAL Approved by Date
 ARCHITECTURAL Approved by Date



- NOTES:**
1. TYPE "G" FIXTURES ON THIS SHEET SHALL HAVE LOW TEMPERATURE BALLASTS.
 2. REPLACE EXISTING MERCURY LIGHTING FIXTURE HEAD WITH NEW TYPE "N1" FIXTURE HEAD (EXISTING POLE TO BE REUSED). PROVIDE SLIPFITTER AS REQ'D. TO FIT EXISTING BRACKET. REWIRE AS SHOWN.



AS-BUILT
OPM 5/10/91
 SIGNATURE DATE



Date	Ch'k'd	Revision
1/23/91		Δ REVISED FOR THE RECORD
Designed by:	RRR	Date: SEPT. 1988
Drawn by:	V.M.	Scale: 1/4" = 1'-0"
Checked by:	GKK	
Approved by:	CAL	

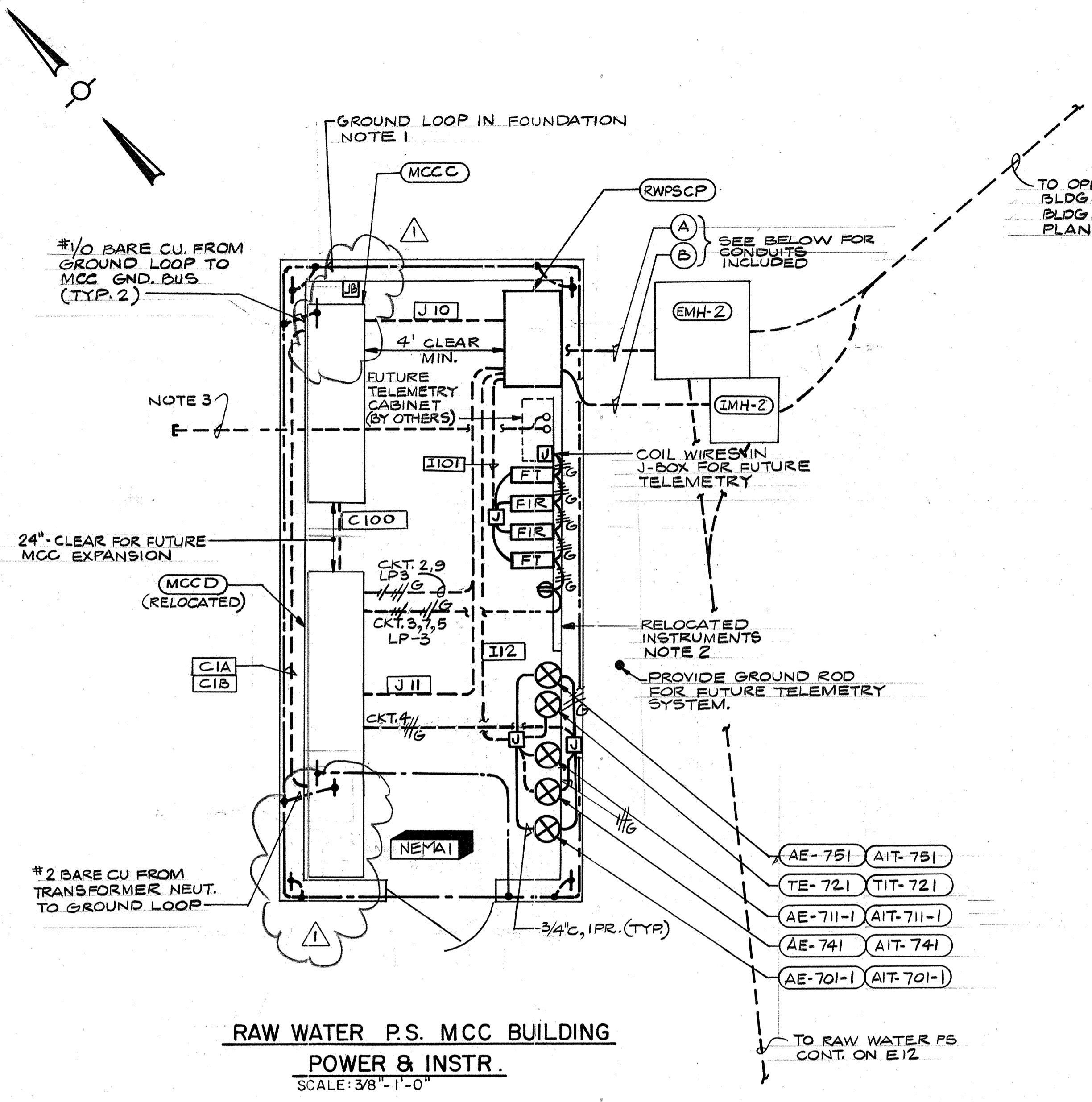
CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988
RAW WATER PUMP STATION LIGHTING

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers scientists
 planners & management consultants

SHEET NO
1E-2
 127 OF 147

111325
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:

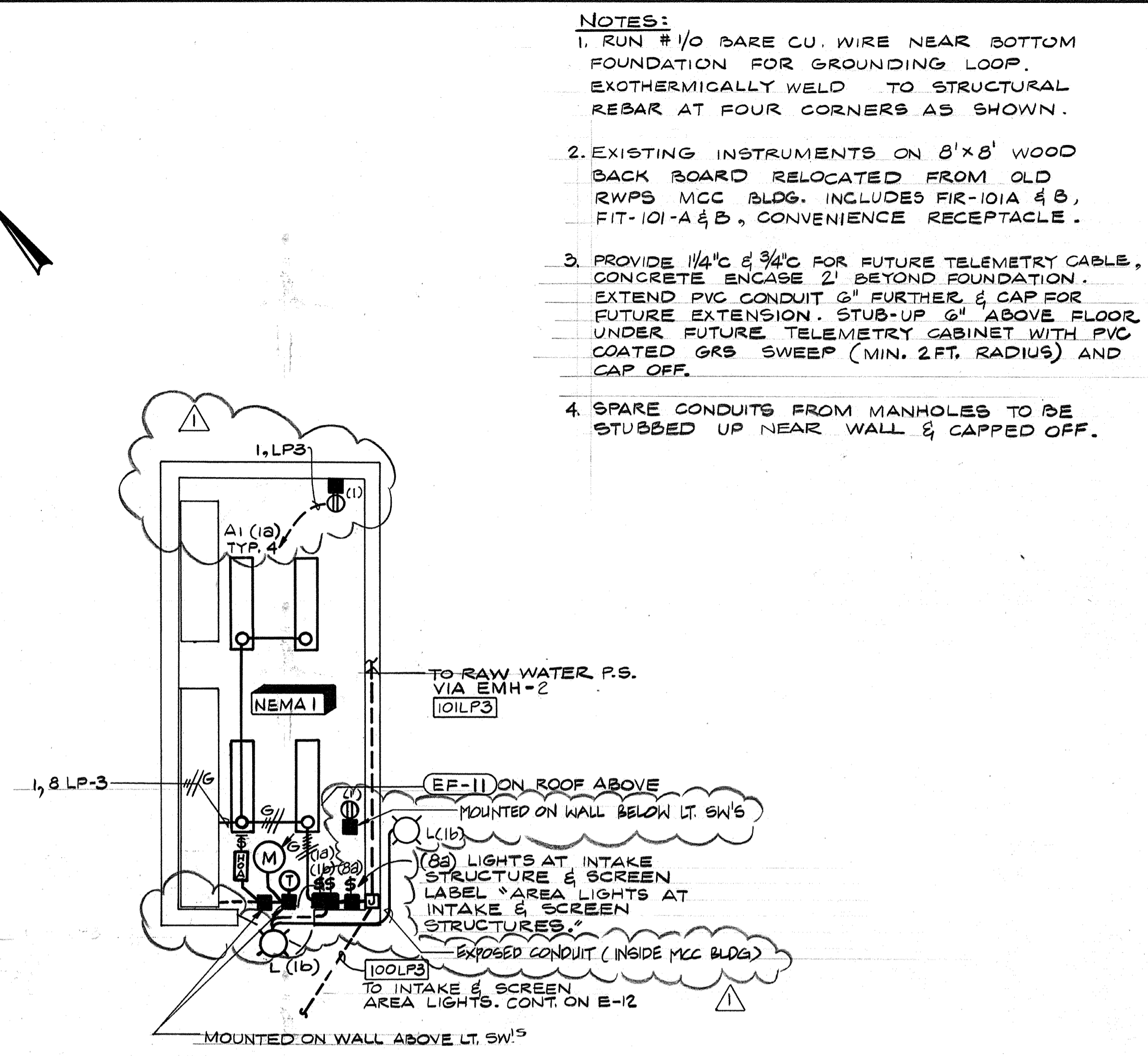


A CONDUITS FROM EMH-2		B CONDUITS FROM IMH2	
MSB11A	D1	I1	To RWPSCP
MSB11B	D1A	J52	
MSB11C	D2	J13	NOTE 4
MSB11D	D2A	J14	
C2	D3	SP3	NOTE 4
C3	D4	SP4	
C4	D100		
C5	101LP3		
C5A			
C6	SP1		
CGA	SP2		
C7			
C7A			
CB			
C8A			

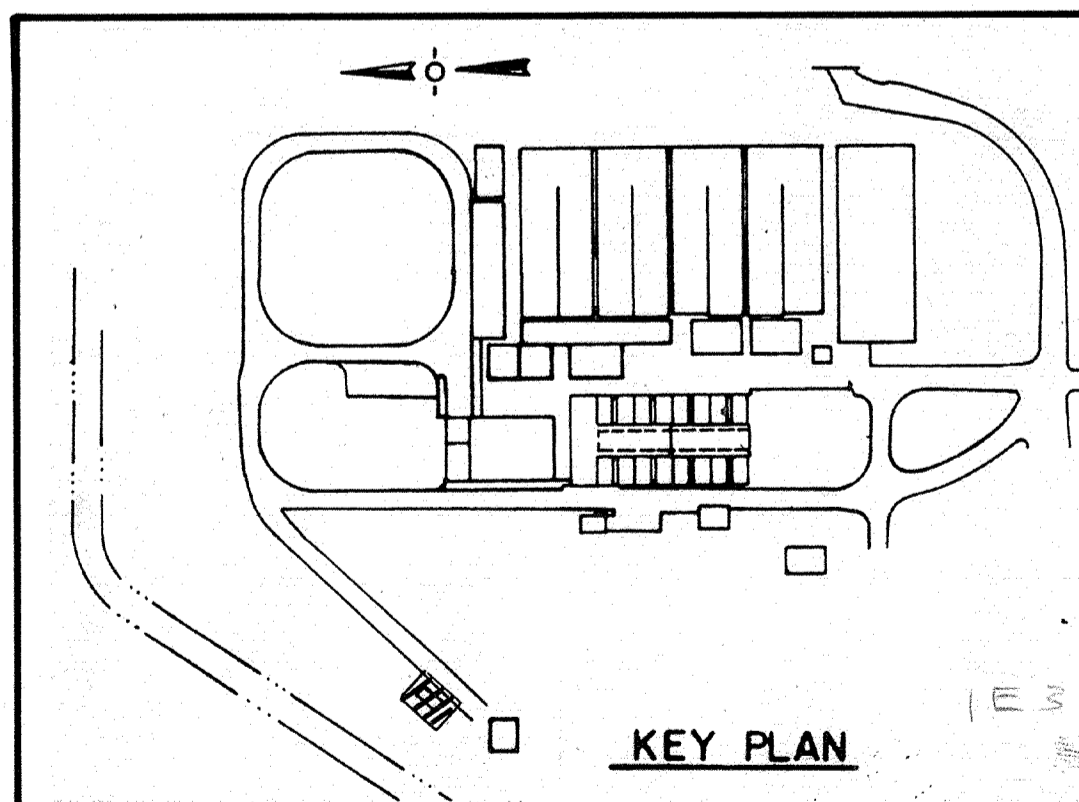
TO MCC D

TO MCC C

TO RAW WATER P.S. CONT. ON E-12

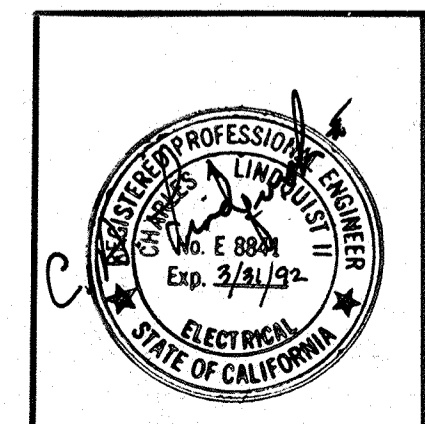


- NOTES:**
1. RUN #1/0 BARE CU. WIRE NEAR BOTTOM FOUNDATION FOR GROUNDING LOOP. EXOTHERMICALLY WELD TO STRUCTURAL REBAR AT FOUR CORNERS AS SHOWN.
 2. EXISTING INSTRUMENTS ON 8'x8' WOOD BACK BOARD RELOCATED FROM OLD RWPS MCC BLDG. INCLUDES FIR-101A & B, FIT-101-A & B, CONVENIENCE RECEPTACLE.
 3. PROVIDE 1/4" C & 3/4" C FOR FUTURE TELEMTRY CABLE, CONCRETE ENCASE 2' BEYOND FOUNDATION. EXTEND PVC CONDUIT 6" FURTHER & CAP FOR FUTURE EXTENSION. STUB-UP 6" ABOVE FLOOR UNDER FUTURE TELEMTRY CABINET WITH PVC COATED GRS SWEEP (MIN. 2 FT. RADIUS) AND CAP OFF.
 4. SPARE CONDUITS FROM MANHOLES TO BE STUBBED UP NEAR WALL & CAPPED OFF.



AS-BUILT

Signature: [Signature] 5/10/91



Date	1/23/91	Ch'k'd		Revision	REVISED FOR THE RECORD
Designed by:	R.R.R.	Drawn by:	V.M.	Date:	SEPT. 1988
Checked by:	GKK	Approved by:	CAL	Scale:	AS SHOWN

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988
 RAW WATER PUMP STATION MCC BLDG.
 POWER, INSTRUMENTATION & LIGHTING

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596

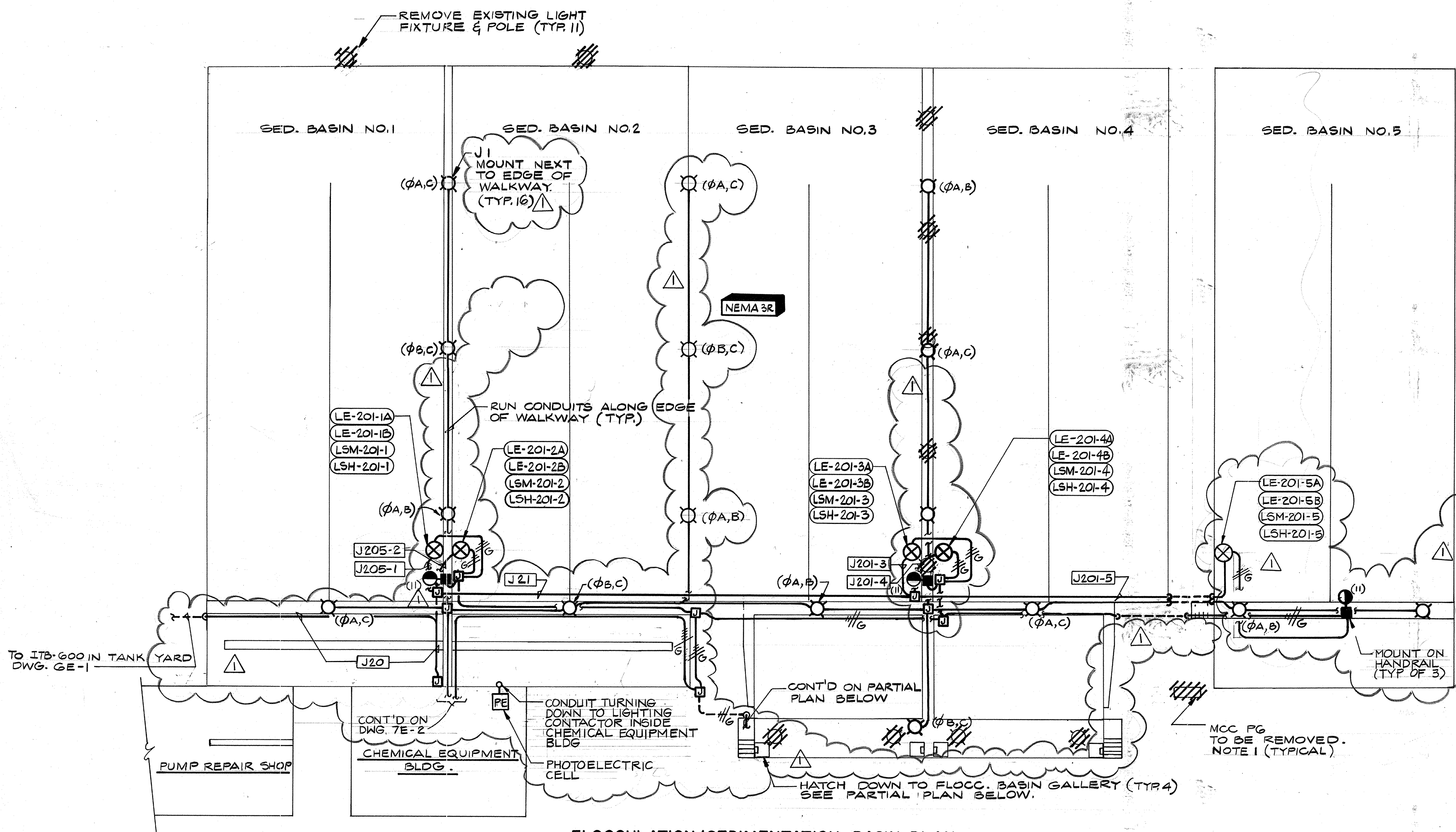
CDM
 environmental engineers, scientists,
 planners & management consultants

SHEET NO. 1E-3
 128 OF 147

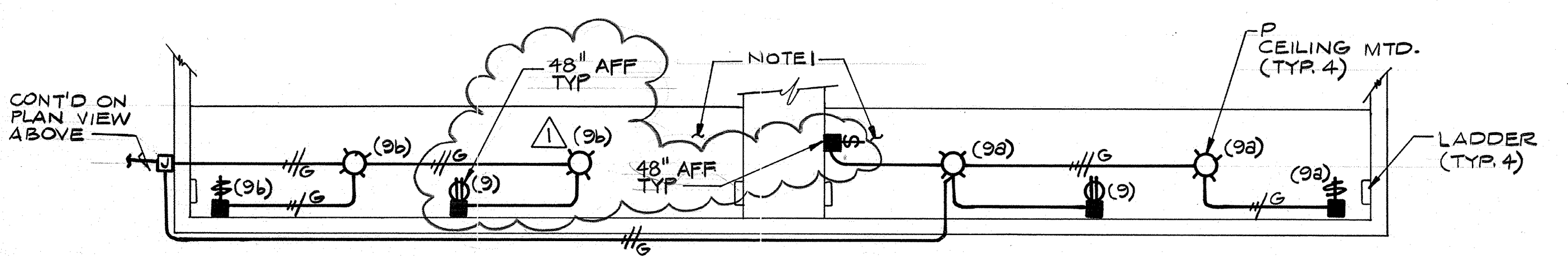
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 PROJECT ENGINEER: Approved by: Date:
 PLUMBING: Approved by: Date:
 HVAC: Approved by: Date:
 INSTRUMENTATION: Approved by: Date:
 ELECTRICAL: Approved by: Date:
 STRUCTURAL: Approved by: Date:
 ARCHITECTURAL: Approved by: Date:



NOTES:
 1. ALL EXIST. LIGHTS & RECEPTACLES & THEIR ASSOCIATED SWITCHES, WIRES EXPOSED CONDUIT ETC. TO BE REMOVED FROM FLOCC. BASIN GALLERY. CROSS HATCHING INDICATES GENERALLY THE ELECTRICAL EQUIPMENT TO BE REMOVED FROM SERVICE UNDER THIS CONTRACT. REFERENCE SPEC. SECTION 16010 MODIFICATIONS & REMOVALS FOR ADDITIONAL DETAILS.

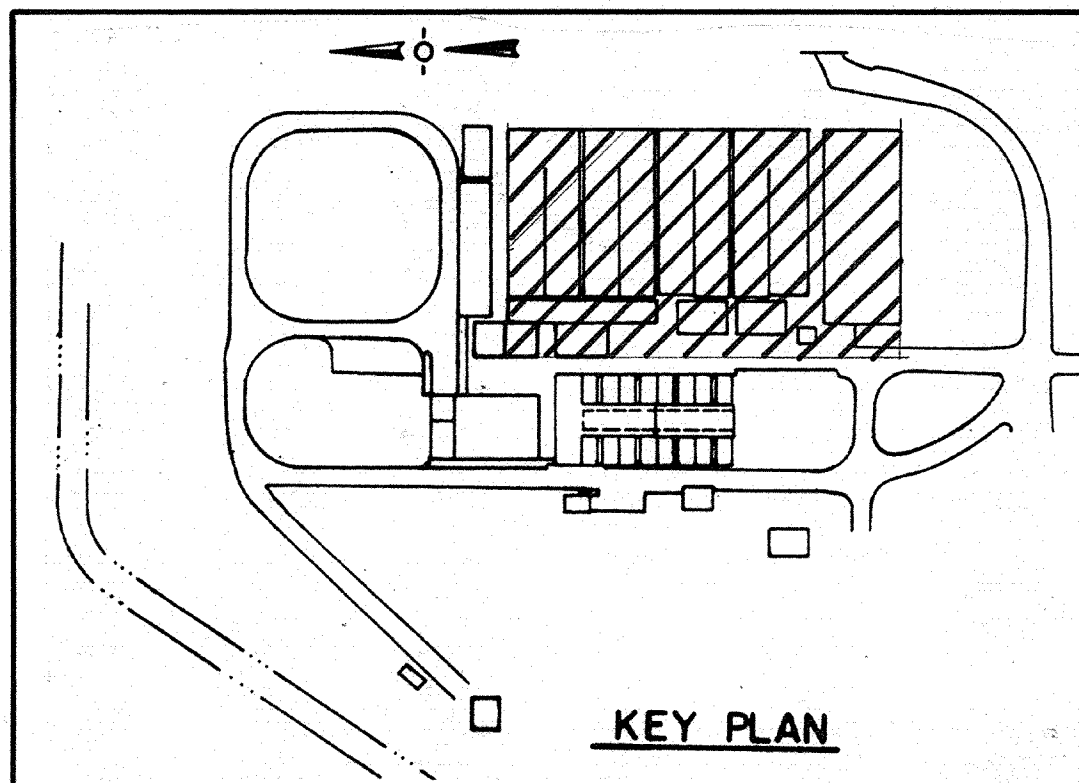


FLOCCULATION/SEDIMENTATION BASIN PLAN
 SCALE: 1/16" = 1'-0"



FLOCC. BASIN GALLERY
 SCALE: 1/8" = 1'-0"

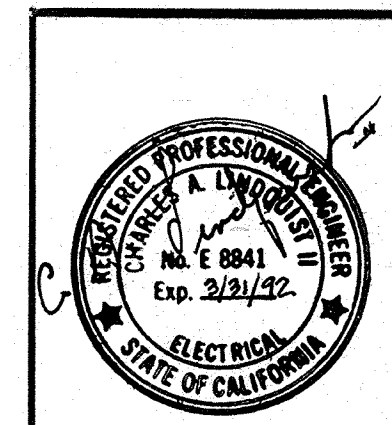
AS-BUILT
 [Signature] 5/10/89
 SIGNATURE DATE



KEY PLAN

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988
 FLOCCULATION/SEDIMENTATION BASINS
 POWER, INSTRUMENTATION & LIGHTING



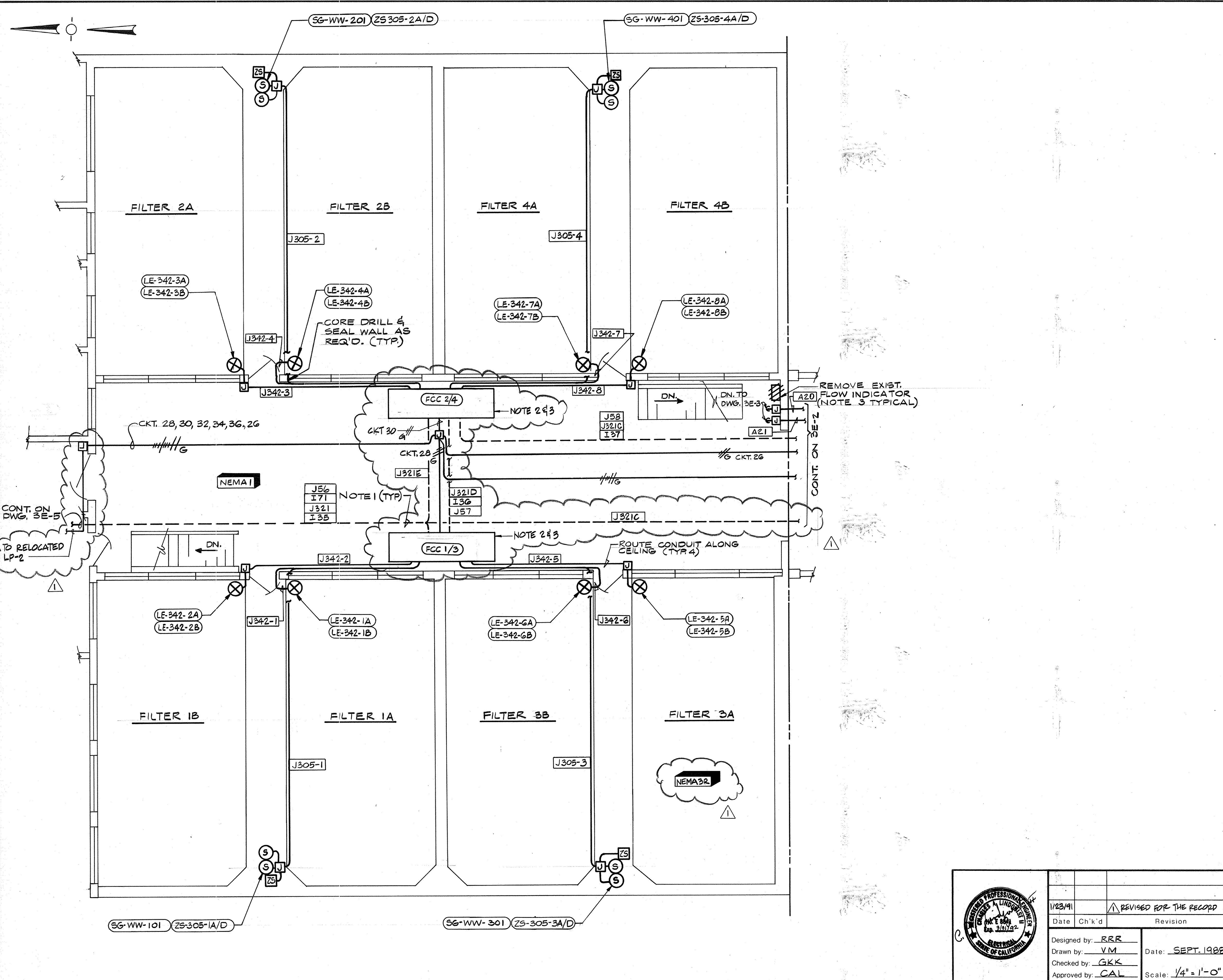
Date	1/23/81	Revision	REVISD FOR THE RECORD
Ch'k'd			
Designed by:	RRR	Date:	SEPT. 1988
Drawn by:	V.M.	Scale:	AS SHOWN
Checked by:	GKK		
Approved by:	CAL		

CAMP DRESSER & McKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners & management consultants



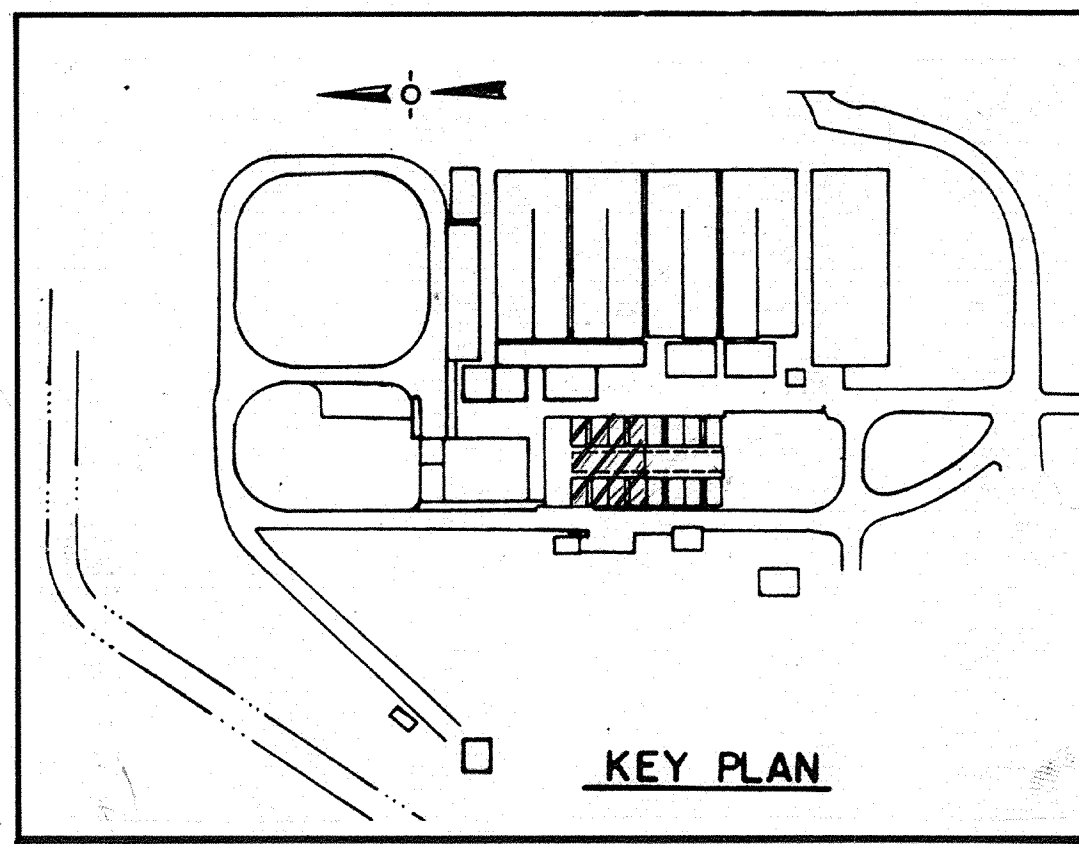
SHEET NO.
 2E-1
 129 OF 147

111355
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:

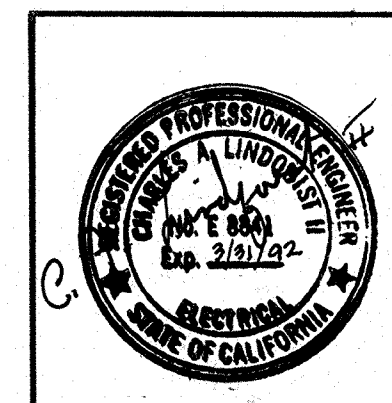


- NOTES:**
1. CONDUITS SHOWN DASHED ARE RUN EXPOSED ALONG THE PIPE GALLERY CEILING BELOW.
 2. EXISTING FCC'S IN THIS LOCATION (NOT SHOWN) TO BE REMOVED & REPLACED W/ NEW FCC'S.
 3. CROSSHATCHING INDICATES GENERALLY THE ELECTRICAL EQUIPMENT TO BE REMOVED FROM SERVICE UNDER THIS CONTRACT. REFERENCE SPEC. SECTION 16010 MODIFICATIONS & REMOVALS FOR ADDITIONAL DETAILS.

AS-BUILT
 Signature: *OPM* 5/10/91
 DATE



CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
**FILTERS 1-4 & FILTER CONTROL CENTER
 POWER & INSTRUMENTATION**

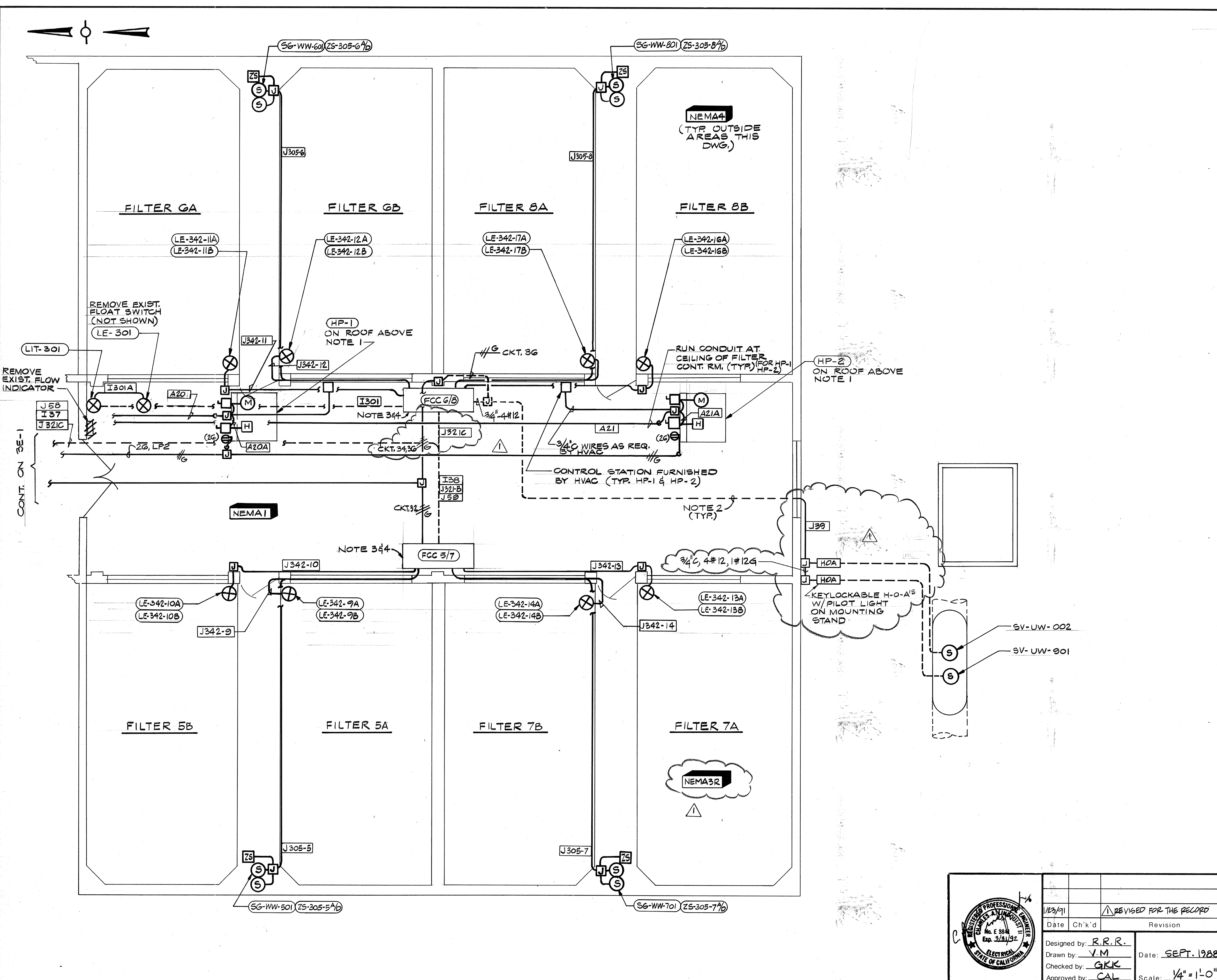


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Ch'k'd			
Designed by:	RRR	Date:	SEPT. 1988
Drawn by:	VM	Scale:	1/4" = 1'-0"
Checked by:	GKK		
Approved by:	CAL		

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
CDM
 environmental engineers, scientists,
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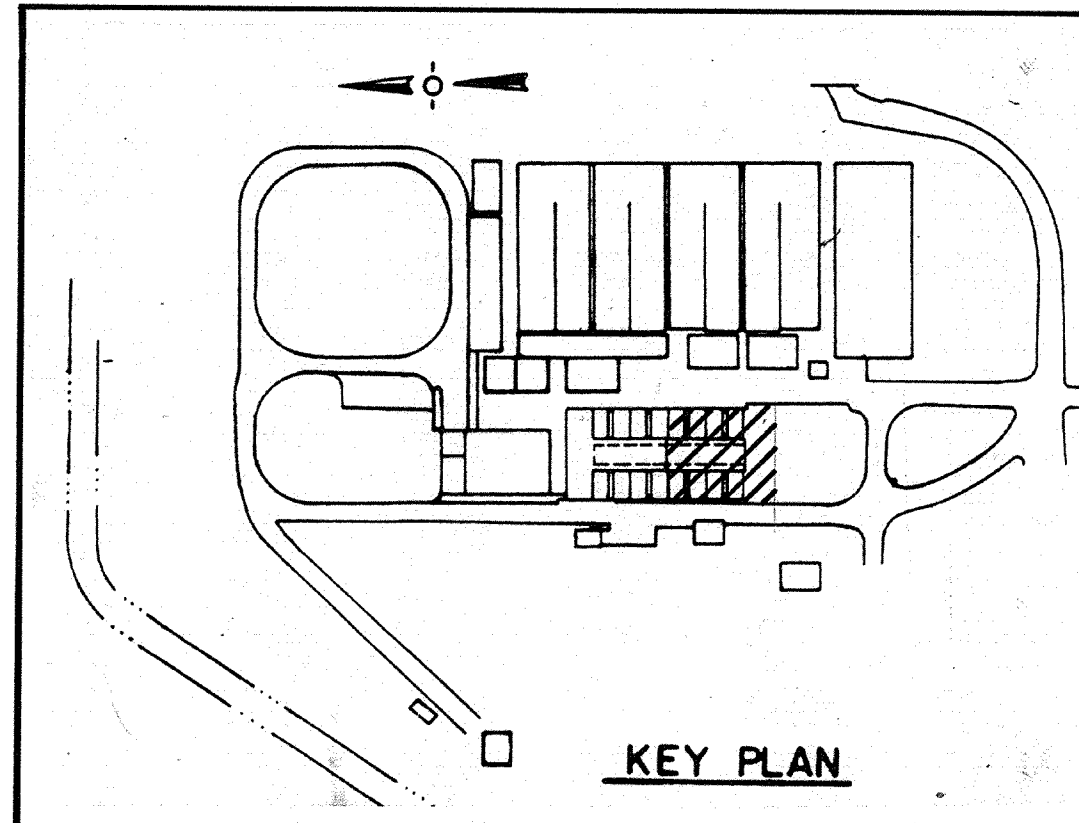
SHEET NO.
3E-1
 130 OF 147

11335
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 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:

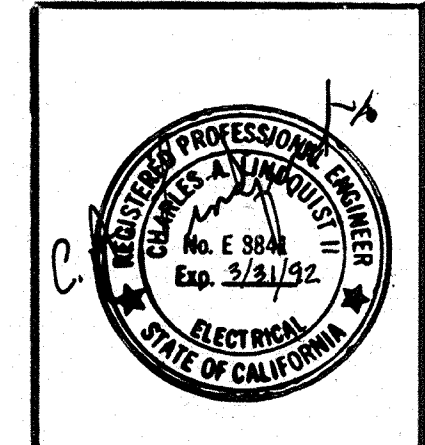


- NOTES:
1. MOUNT FUSED DISCONNECTS & WP RECEPTACLE ON MOUNTING STAND NEXT TO HP-1 & HP-2. FUSES TO BE SIZED AS REQ'D. BY MFR.
 2. CONDUITS SHOWN DASHED ARE RUN EXPOSED ON PIPE GALLERY CEILING BELOW.
 3. EXIST. FCC'S IN THESE LOCATIONS (NOT SHOWN) ARE TO BE REMOVED & REPLACED WITH NEW FCC'S.
 4. CROSSHATCHING INDICATES GENERALLY THE ELECTRICAL EQUIPMENT TO BE REMOVED FROM SERVICE UNDER THIS CONTRACT. REFERENCE SPEC. SECTION 16010 MODIFICATIONS & REMOVALS FOR ADDITIONAL DETAILS.

AS-BUILT
 Pm 5/10/91
 SIGNATURE DATE



CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 FILTERS 5-8 & FILTER CONTROL CENTER
 POWER & INSTRUMENTATION



Date	1/23/91	Revised for the Record
Ch'k'd		Revision
Designed by:	R.R.R.	
Drawn by:	V.M.	Date: SEPT. 1988
Checked by:	GKK	
Approved by:	CAL	Scale: 1/4" = 1'-0"

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners & management consultants

SHEET NO.
 3E-2
 131 OF 147

111335

PROJECT MANAGER: Approved by: Date:

PROJECT ENGINEER: Approved by: Date:

PLUMBING: Approved by: Date:

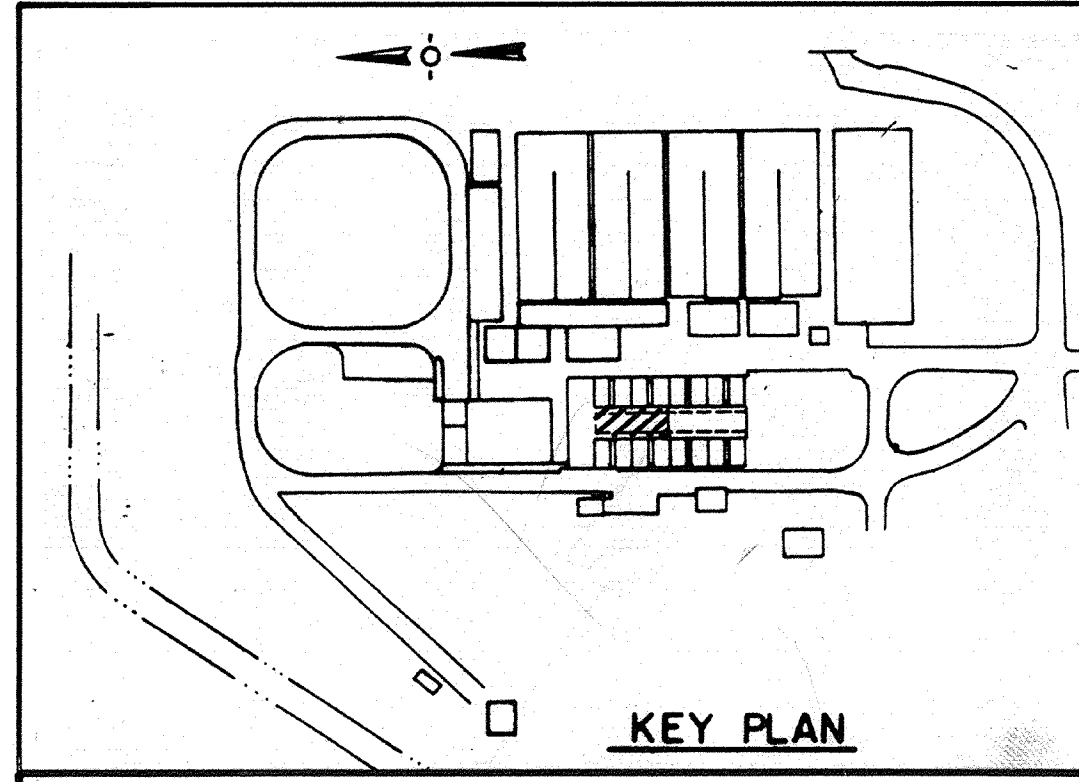
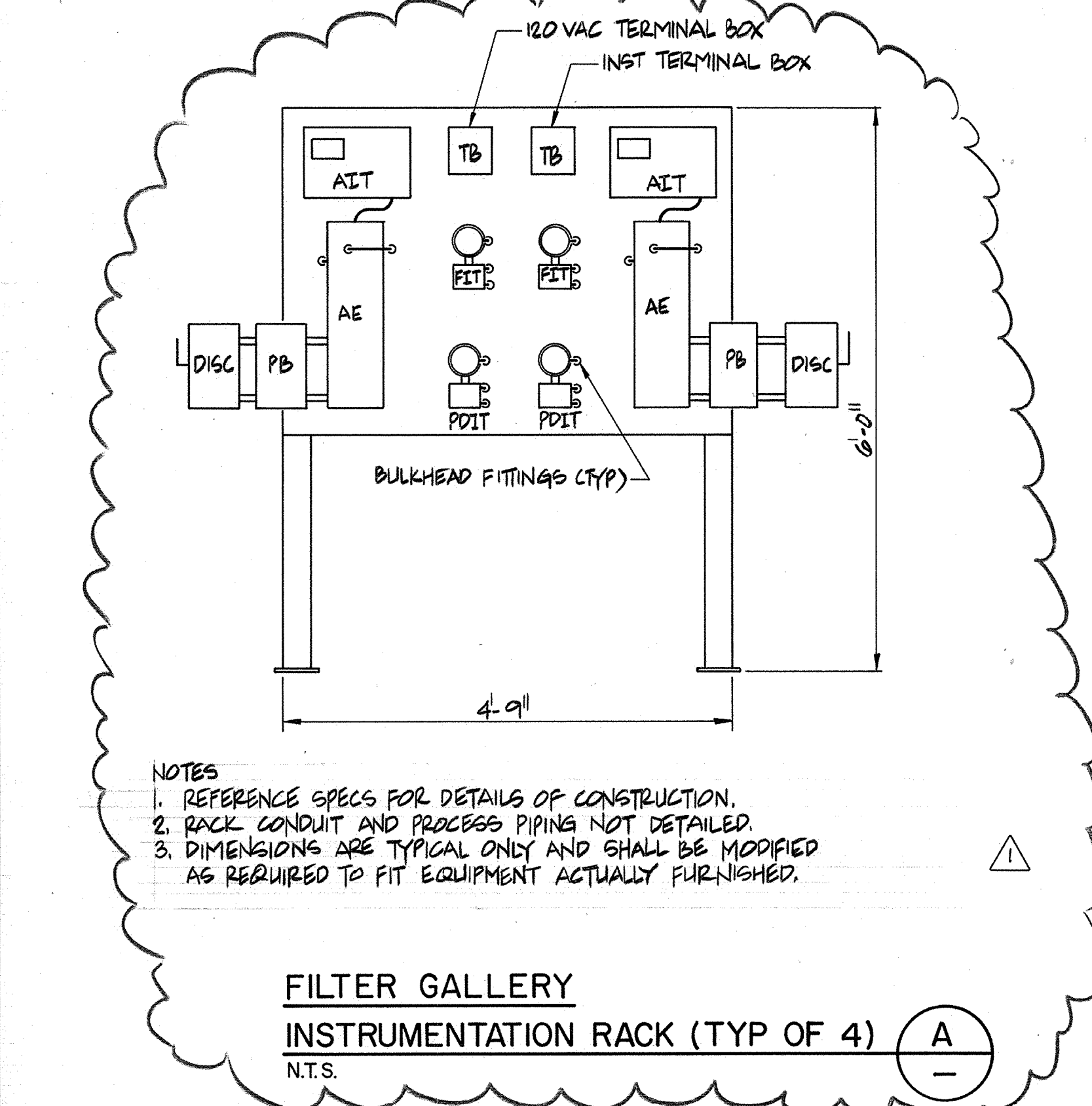
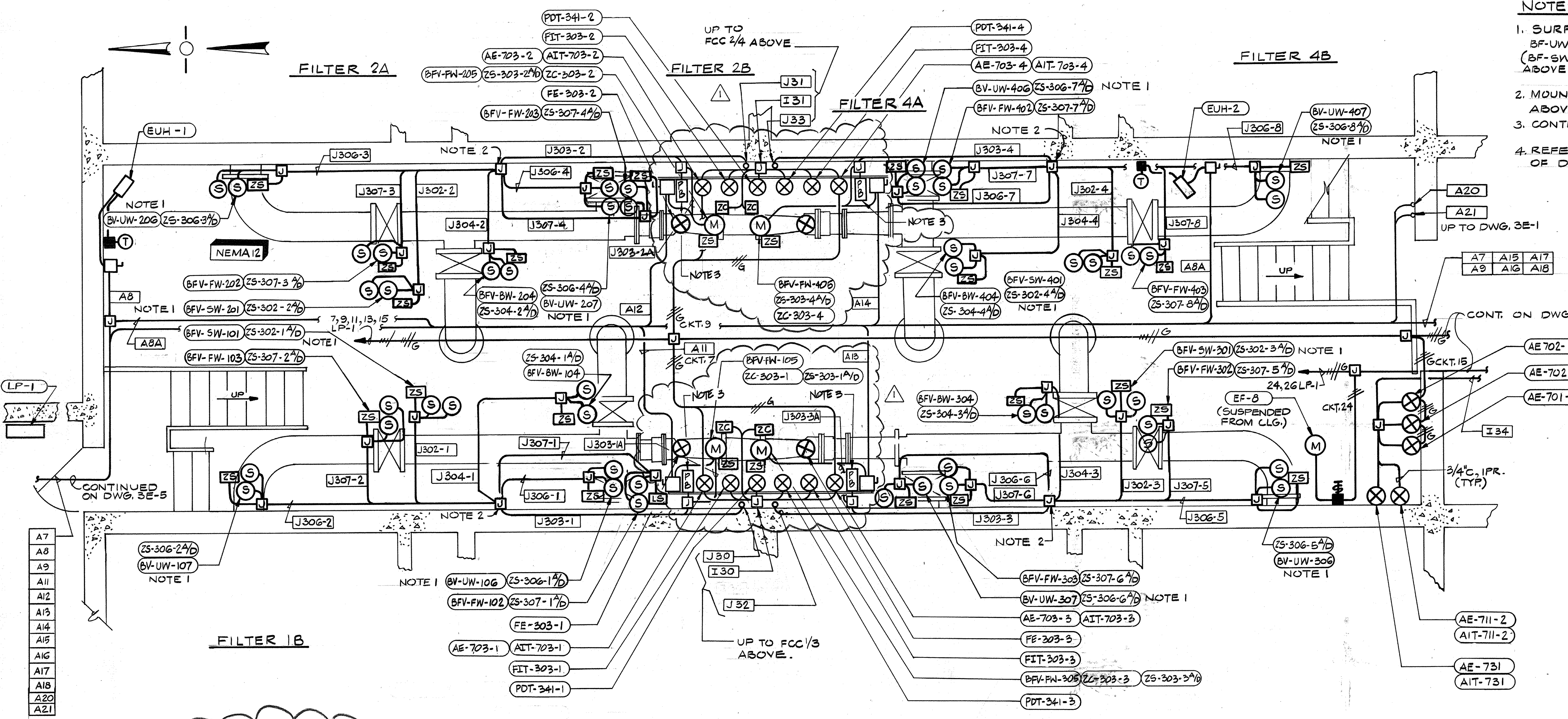
HVAC: Approved by: Date:

INSTRUMENTATION: Approved by: Date:

ELECTRICAL: Approved by: Date:

STRUCTURAL: Approved by: Date:

ARCHITECTURAL: Approved by: Date:



CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

FILTERS 1 - 4 PIPE GALLERY POWER & INSTRUMENTATION

CAMP DRESSER & MCKEE INC. **CDM** SHEET NO. 3E-3

environmental engineers, scientists, planners, & management consultants

132 OF 147

DESIGNED BY: R.R.R.
DRAWN BY: V.M.
CHECKED BY: G.K.K.
APPROVED BY: CAL

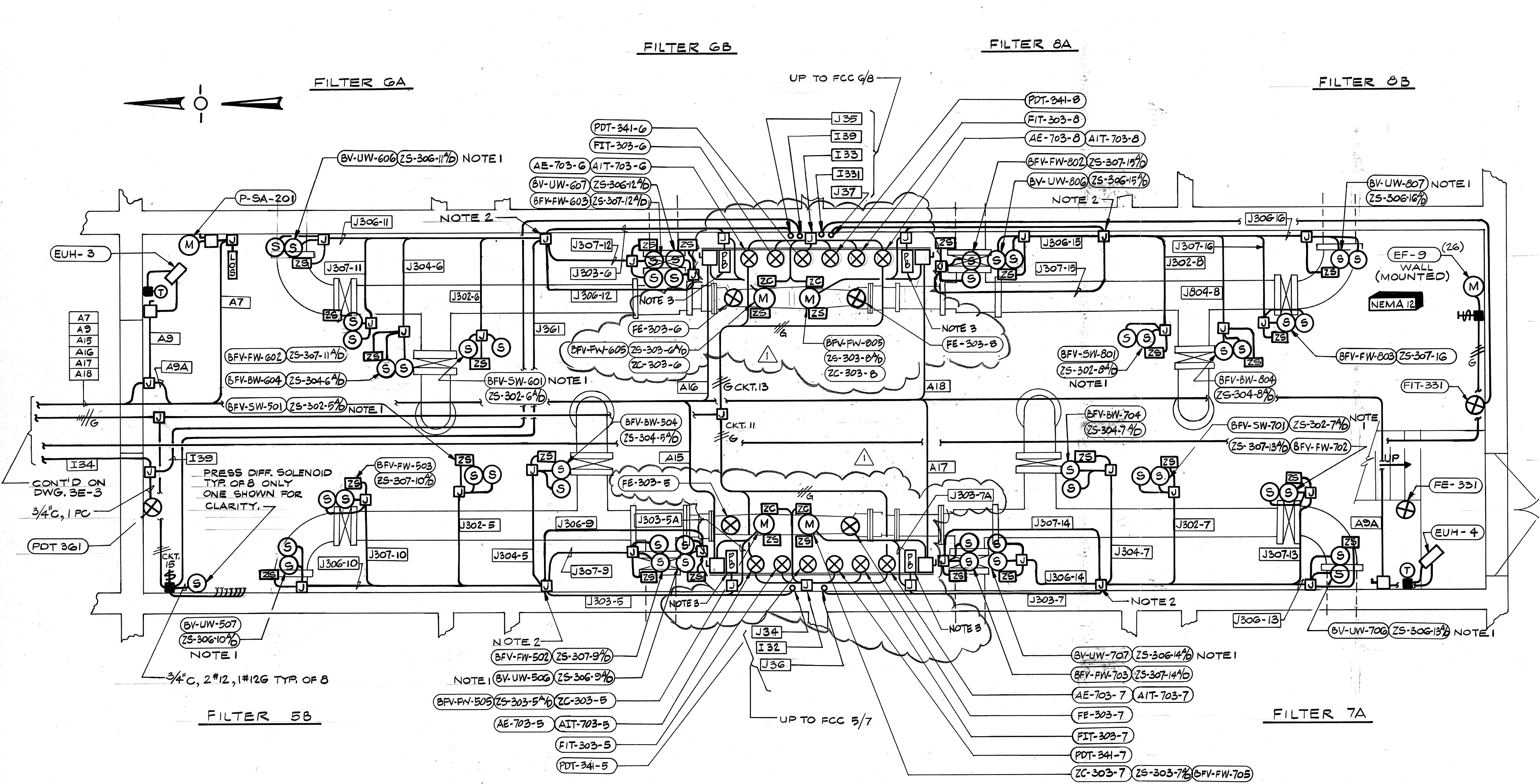
DATE: SEPT. 1988

SCALE: 3/8" = 1'-0"

REVISION: REVISED FOR THE RECORD

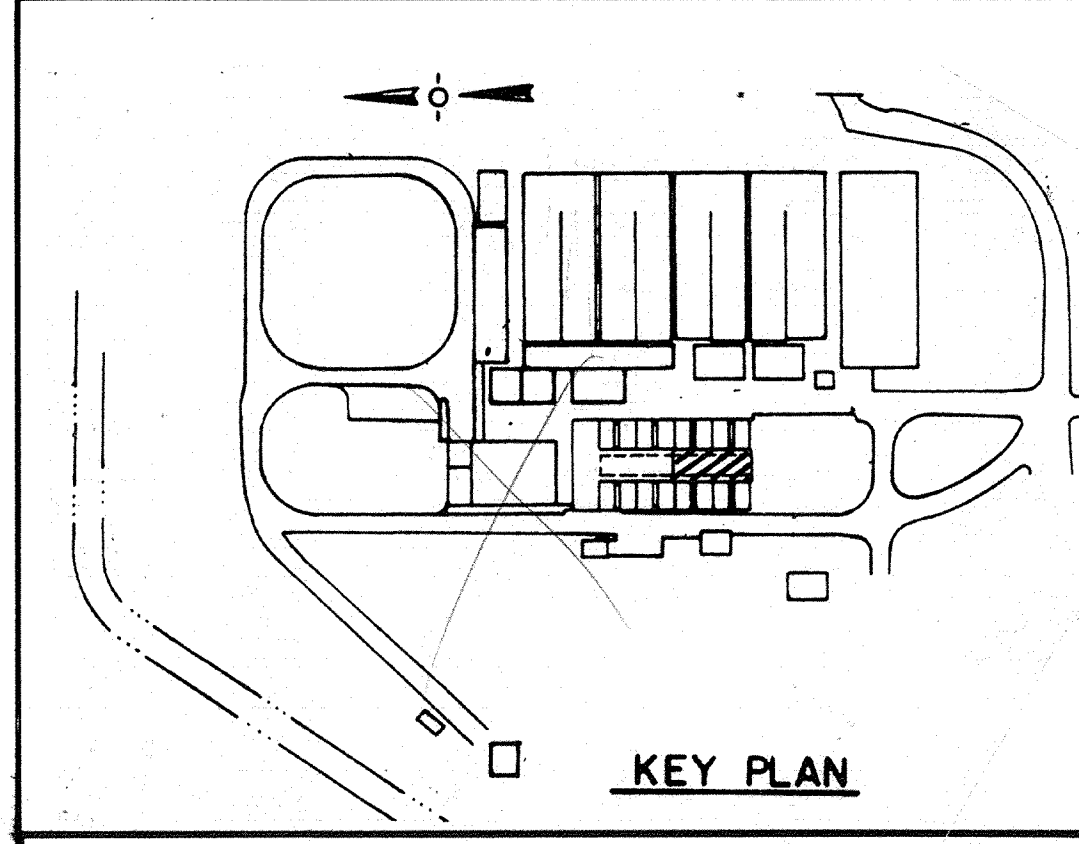
PROFESSIONAL ENGINEER
STATE OF CALIFORNIA
No. E 3841
Exp. 3/31/92

111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



- NOTES:
1. SURFACE WASH VALVES (BF-UW-506 THRU BF-UW-807) & SETTLED WATER VALVES (BF-SW-501 THRU BF-SW-801) LOCATED ~ 11'-0" ABOVE FLOOR (PIPING NOT SHOWN FOR CLARITY).
 2. MOUNT J-BOXES ON WALL AT APPROX. 11'-0" ABOVE FLOOR (TYP. 4)
 3. CONTROL STATION FURNISHED WITH VALVE (TYP. 4)
 4. REFER TO SPEC. SECTION 16010 FOR DETAILS OF DEMOLITION IN THIS AREA.

AS-BUILT
 P. J. M.
 5/1/09



CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 FILTERS 5-8 PIPE GALLERY
 POWER & INSTRUMENTATION
 SHEET NO. 3E-4
 133 OF 147

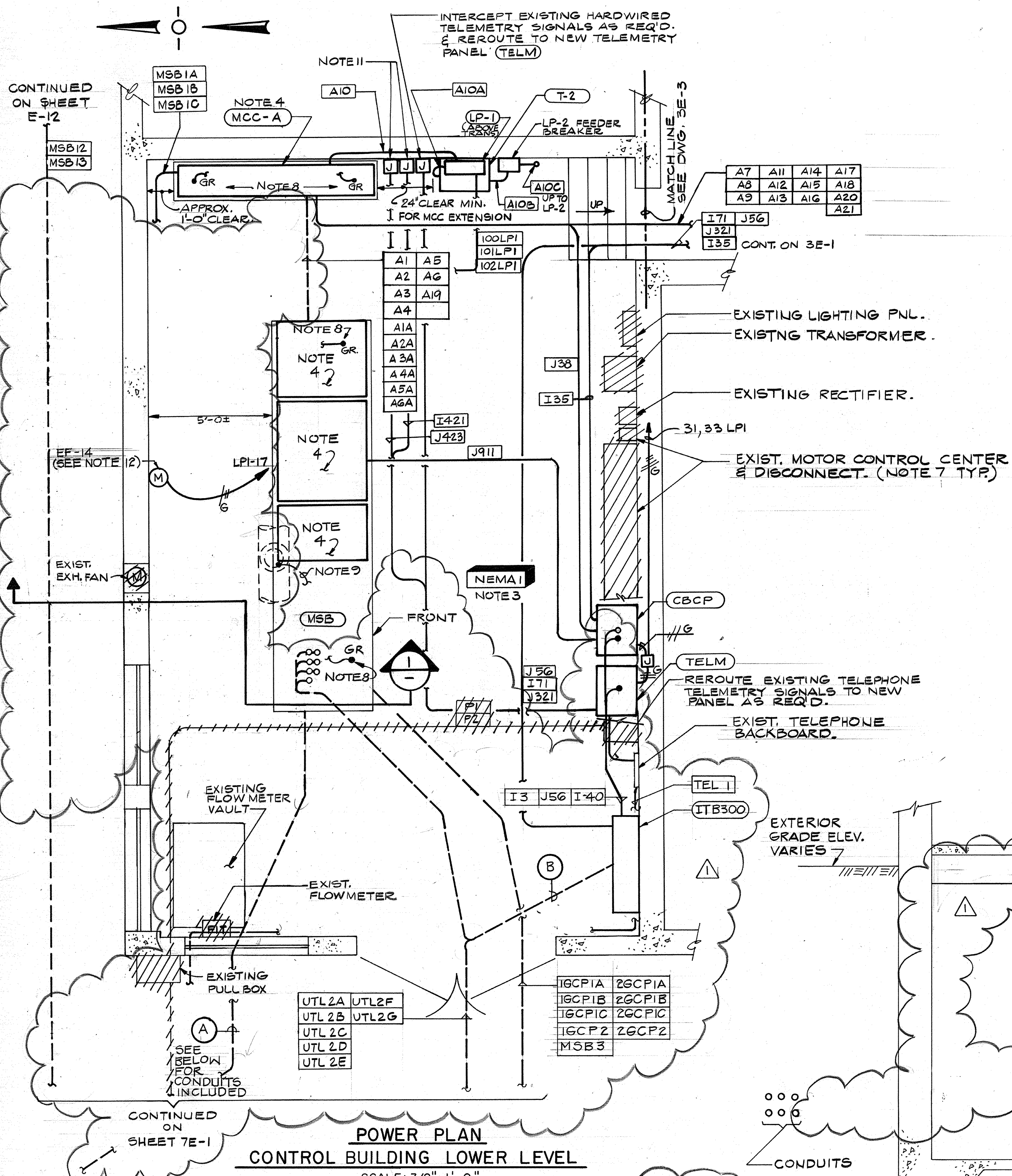
DESIGNED BY: R.R.R.
 DRAWN BY: V.M.
 CHECKED BY: GKK
 APPROVED BY: CAL

DATE: SEPT. 1988
 SCALE: 3/8" = 1'-0"

REVISION: REVISED FOR THE RECORD

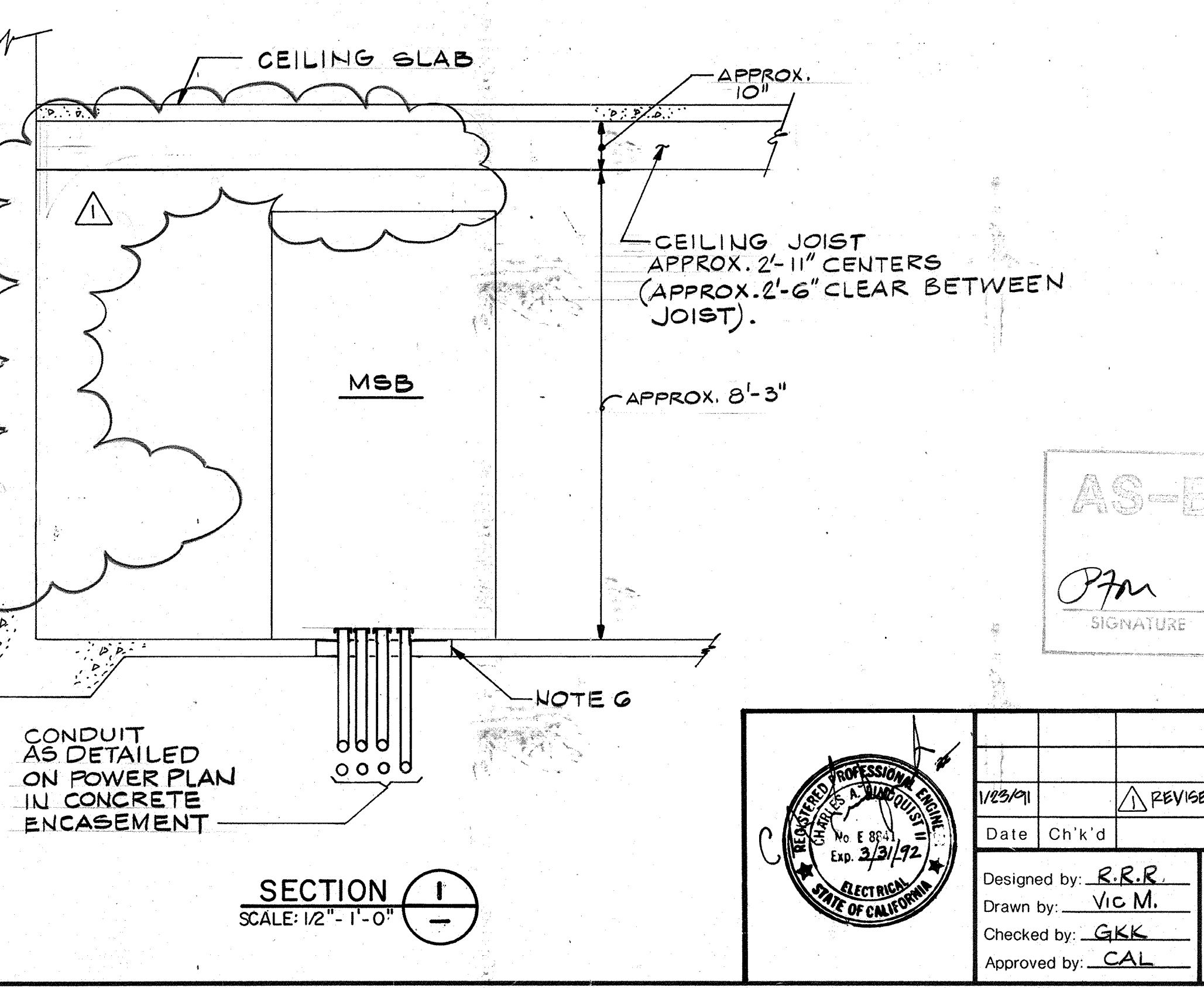
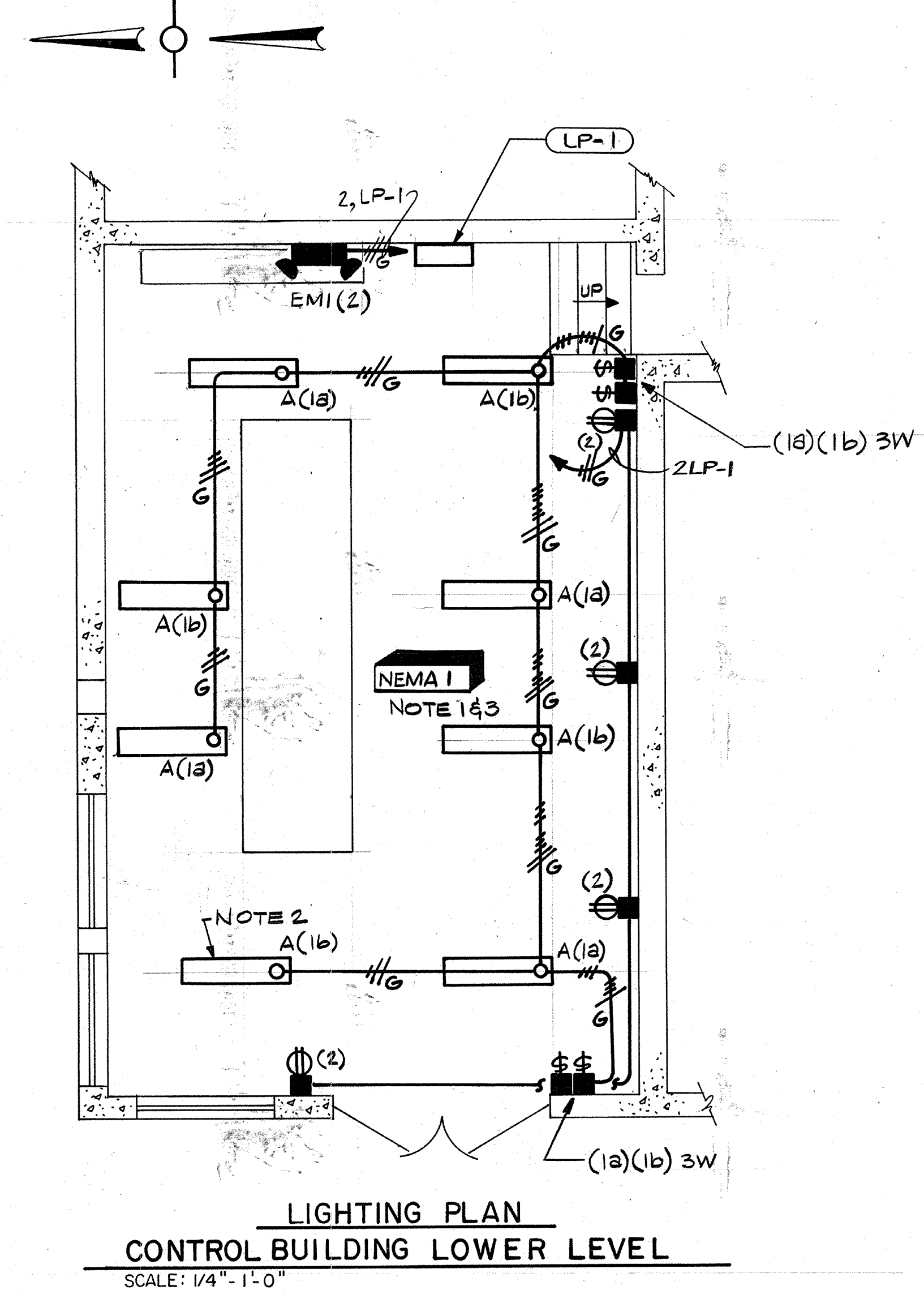
REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA
 No. E 8841
 Exp. 3/31/22

111335
 PROJECT MANAGER: _____ Date: _____
 PROJECT ENGINEER: _____ Date: _____
 PLUMBING: _____ Date: _____
 HVAC: _____ Date: _____
 INSTRUMENTATION: _____ Date: _____
 ELECTRICAL: _____ Date: _____
 STRUCTURAL: _____ Date: _____
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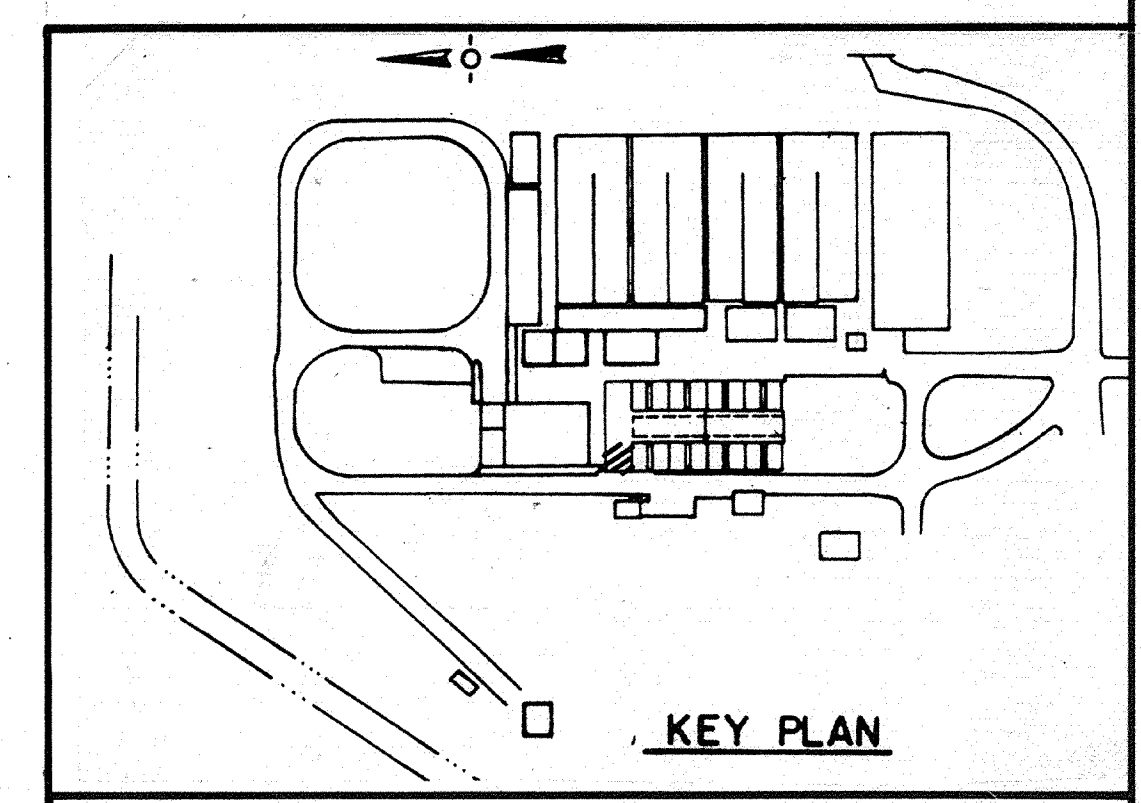


CONDUITS

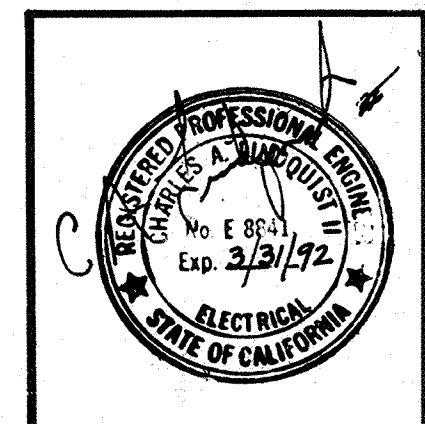
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MSB5	MSB11C		1GCP1C	2GCP1C	A3	A22A	I71	J912
	MSB11D		1GCP2	2GCP2	A4	A4A	J321	102LP1
	MSB 14				A5	A5A	SP1	I421
	MSB 15				A1A	AGA	J54	J423
					A2A		I3	TEL-2
					A3A			



- NOTES:**
1. ALL EXIST. LIGHT FIXTURES & RECEPT. & THEIR ASSOCIATED CONDUITS & SWITCHES ETC. SHALL BE REMOVED. SEE ALSO NOTE 7
 2. SUSPEND NEW FIXTURES BETWEEN BEAMS.
 3. EXIST. BASEMENT PUMPS, GENERATOR & ASSOCIATED EXPOSED PIPING & VENTING IN THIS AREA TO BE REMOVED PRIOR TO ELECTRICAL INSTALLATION.
 4. TOP MOUNT CUSTOM PULL BOX REFER TO MSB & MCC ELEVATIONS FOR DETAILS.
 5. INDIVIDUAL J-BOXES OR CONDUIT FITTING FOR EACH CONDUIT. MOUNT APPROXIMATELY 18" ABOVE FLOOR. CORE DRILL WALL FOR CONDUIT PENETRATION AND SEAL PER MECHANICAL/STRUCTURAL DETAILS AND SPECS. NOT ALL BOXES ARE SHOWN FOR CLARITY.
 6. SAW CUT FLOOR FOR NEW PG&E SERVICE CONDUITS. REFERENCE STRUCT. & MECH. DRAWINGS FOR DETAILS.
 7. CROSSHATCHING INDICATES GENERALLY THE ELECTRICAL EQUIPMENT TO BE REMOVED FROM SERVICE UNDER THIS CONTRACT. REFERENCE SPEC. SECTION 16010 MODIFICATIONS & REMOVALS FOR ADDITIONAL DETAILS. SEE ALSO NOTE 1
 8. CORE DRILL FLOOR FOR 1" X 10' GROUND RODS AT LOCATIONS NOTED. CONNECT TO MSB & MCC GROUND BUS WITH BARE COPPER CABLE PER SPEC SECTION 16005
 9. EXOTHERMICALLY WELD #4/0 BARE COPPER TO CAST IRON PIPE BELOW FLOOR, BEFORE SLAB IS REPLACED AND THEN CONNECT TO MSB GROUND BUS. REFER TO DWGS. 3M-1 & 3M-2 FOR DETAILS OF PIPING.
 10. GROUND TRANSFORMER SECONDARY NEUTRAL TO MSB GROUND BUS WITH #6 VIA CONDUIT A10
 11. INTERCEPT EXIST. SIGNALS FROM EAST HIGH LEVEL BOOSTER PUMP STATION.
 12. ADD A MANUAL MOTOR STARTER W/ HDA BELOW EF-14 AND WIRE FROM CKT 17 LPI TO EF-14 VIA THE MANUAL STARTER WITH 3/4" G. 2 #12, #12 G. SEE SHT 7H-1 FOR LOCATION OF EF-14. SEE SHT E-17 FOR CONTROL SCHEMATIC.



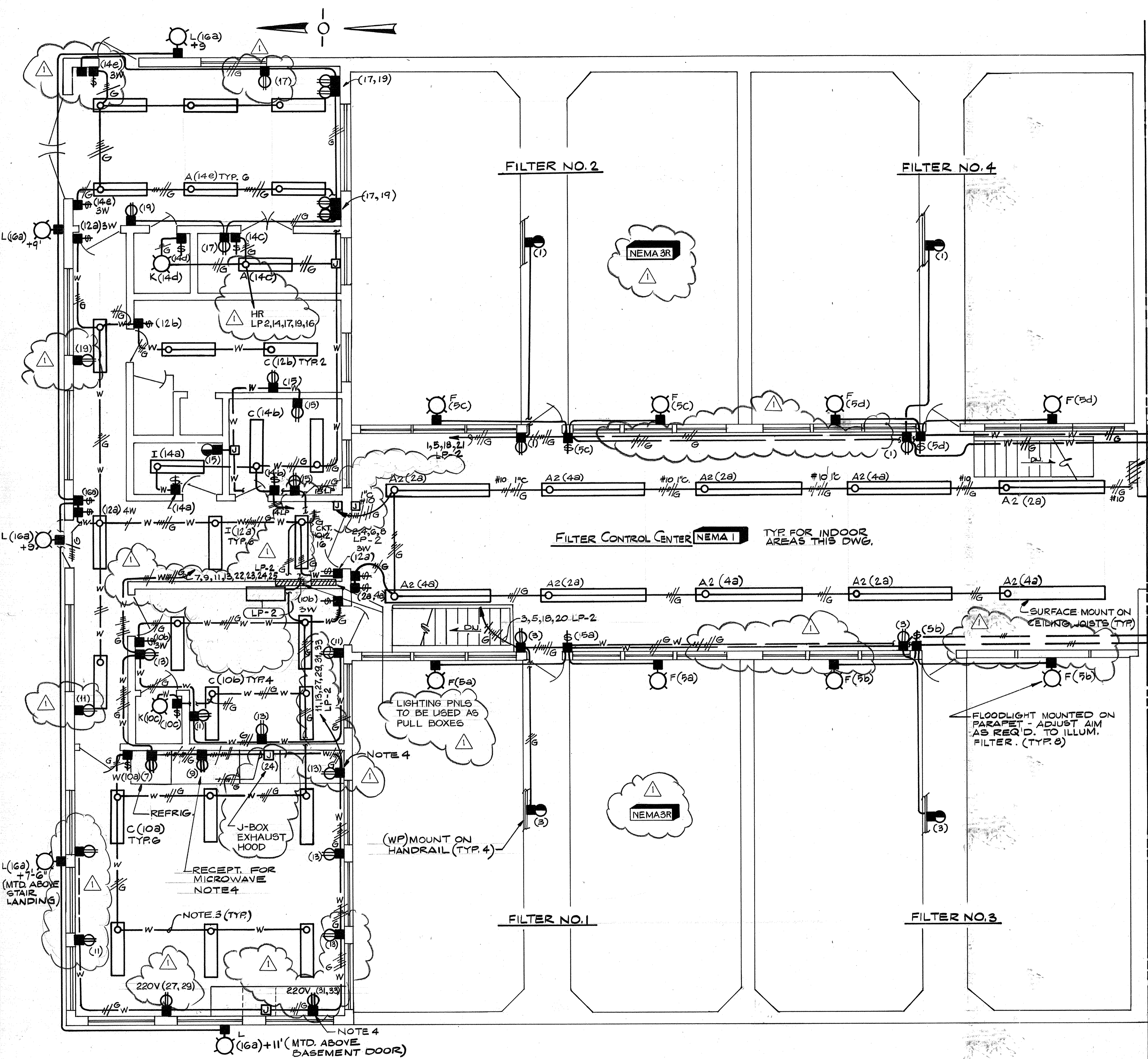
AS-BUILT
 Pm 5/10/91
 SIGNATURE DATE



Date	Ch'k'd	Revision
		REVISOR FOR THE RECORD
Designed by: R.R.R.	Drawn by: Vic M.	Date: SEPT. 1988
Checked by: GKK	Approved by: CAL	Scale: AS SHOWN

CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
**CONTROL BUILDING BASEMENT
 POWER & LIGHTING**
 CAMP DRESSER & McKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners & management consultants
 SHEET NO. **3E-5**
 134 OF 147

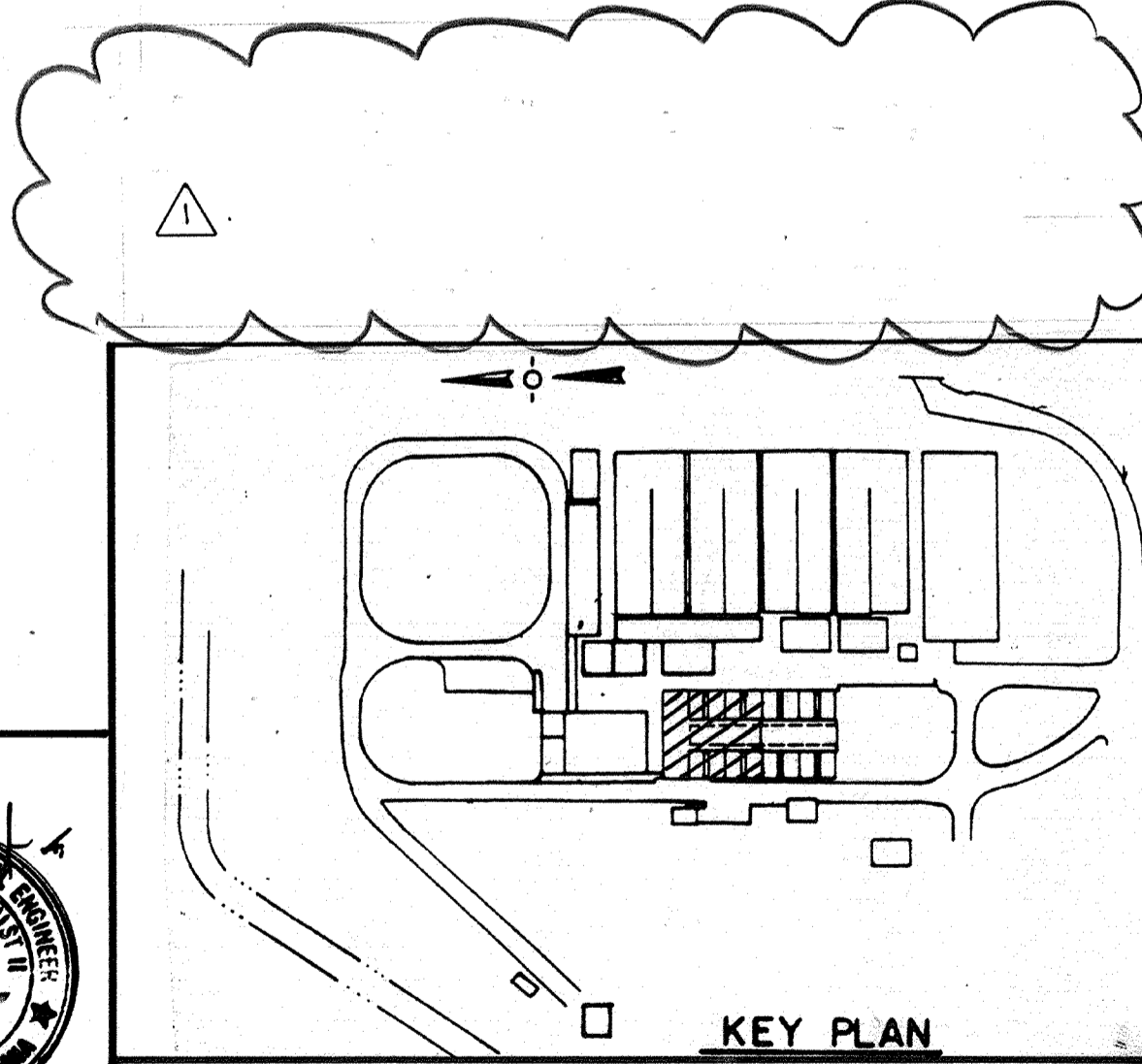
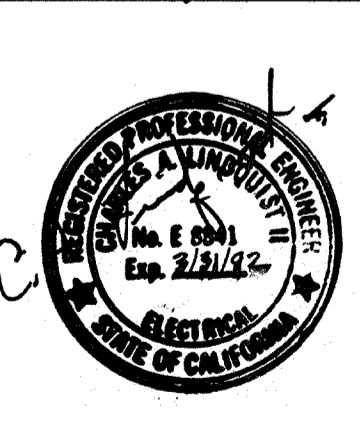
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 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



- NOTES:**
1. ALL EXIST. RECEPTACLES, LIGHTING FIXTURES & THEIR ASSOCIATED SWITCHES, INCLUDING OUTSIDE FIXTURES, IN THE AREA COVERED BY THIS DRAWING SHALL BE REMOVED. (SEE ALSO NOTE 5)
 2. ALL ELECTRICAL & INSTRUMENTATION WORK SHOWN ON THIS SHEET IS NEW, UNLESS NOTED OTHERWISE.
 3. — W — SYMBOL INDICATES SURFACE MOUNTED RACEWAY SYSTEMS, WHICH SHALL BE USED IN ALL FINISHED ROOMS ON THIS DRAWING. REFER TO SPECIFICATIONS FOR DESCRIPTION & SIZING. IN THE FILTER CONTROL AREA, WIREWAY SHALL BE USED ON ALL WALL MOUNTED RUNS. WIRES RUN ON CEILING IN THIS AREA SHALL BE IN CONDUIT.
 4. MOUNT RECEPTACLE ABOVE COUNTER TOP, REFERENCE TO ARCHITECTURAL DWG. FOR CABINET SIZE.

EXIST. LG. PNL. TO BE REMOVED.
 MATCHLINE DWG. 3E-7

AS-BUILT
 Pgm 5/10/91
 SIGNATURE DATE

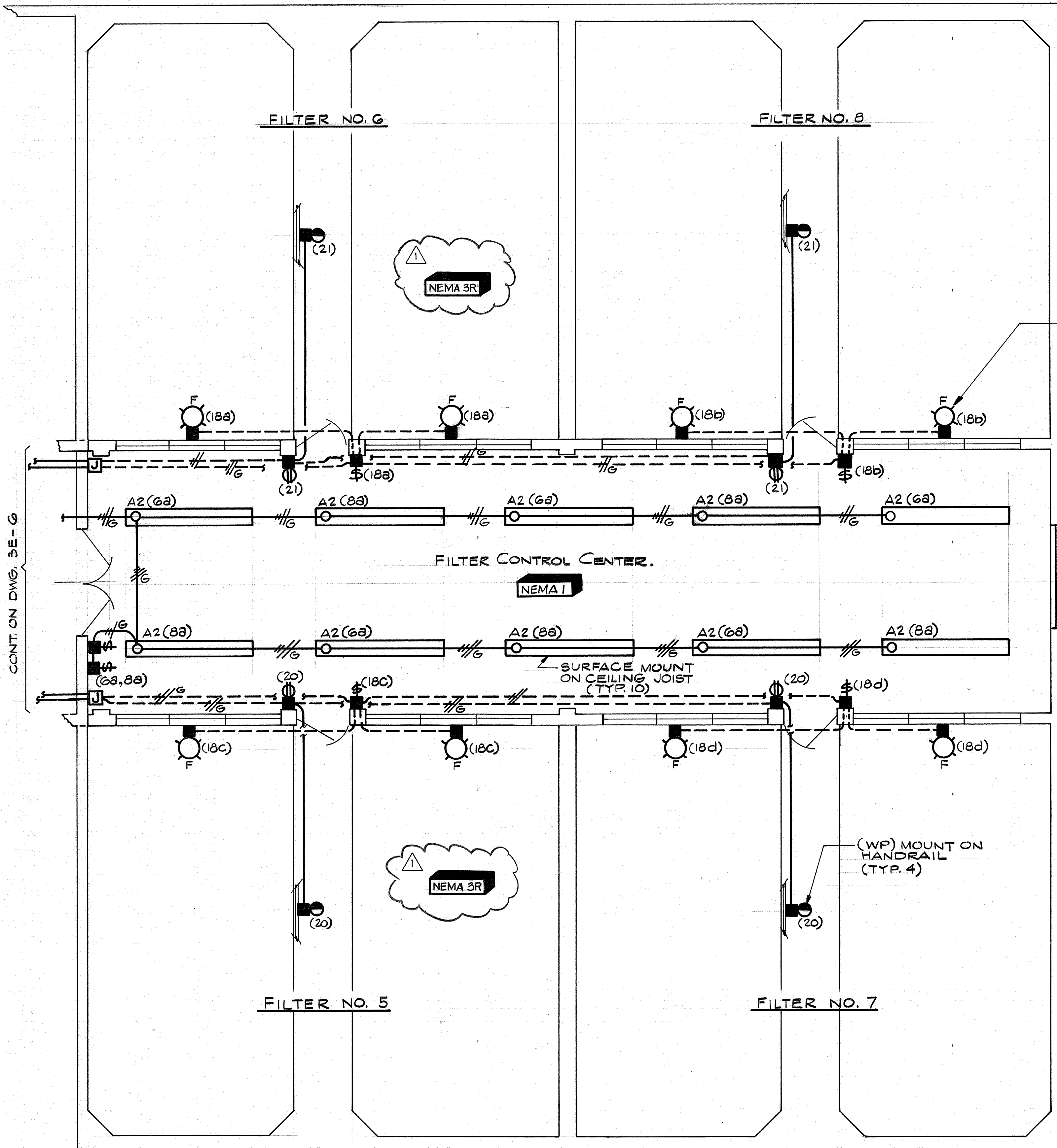
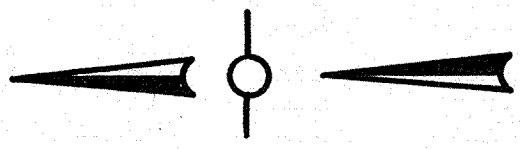


CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 CONTROL BUILDING & FILTERS
 LIGHTING

1/23/91	REVISOR FOR THE RECORD
Date	Ch'k'd Revision
Designed by: R.R.R.	Date: SEPT. 1988
Drawn by: V.M.	Scale: 1/4" = 1'-0"
Checked by: GKK	
Approved by: CAL	

CAMP DRESSER & MCKEE INC.
CDM
 environmental engineers, scientists, planners, & management consultants
 SHEET NO. 3E-6
 135 OF 147

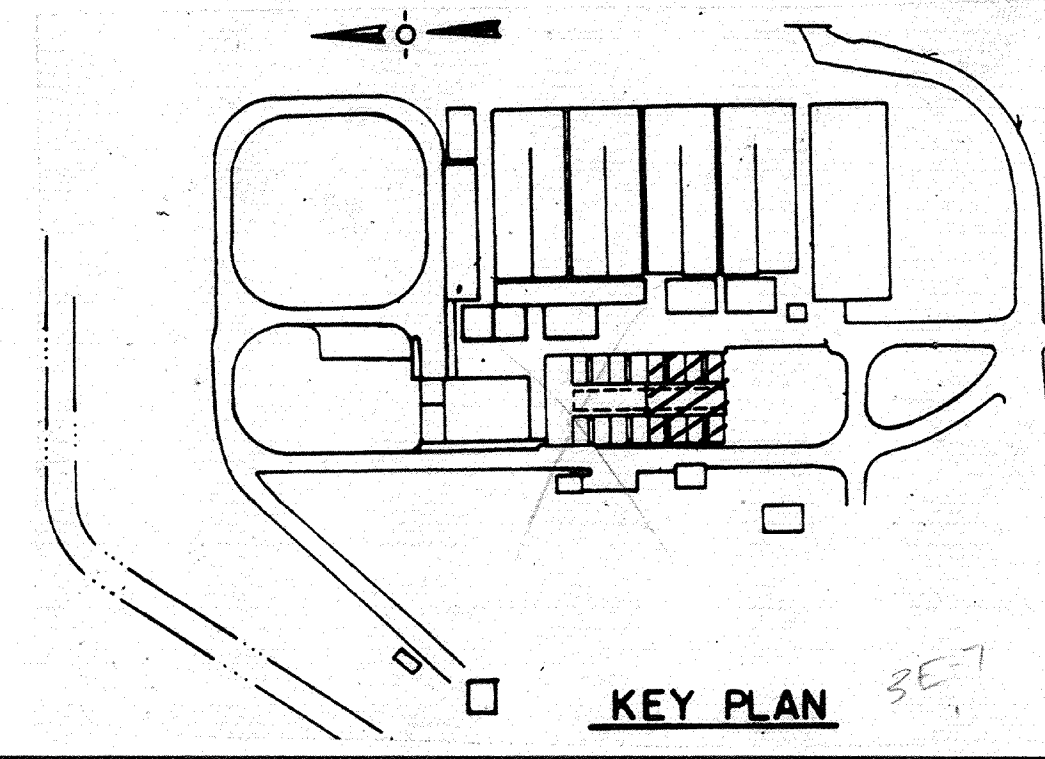
111235
 PROJECT MANAGER
 PROJECT ENGINEER
 PLUMBING
 HVAC
 INSTRUMENTATION
 ELECTRICAL
 STRUCTURAL
 ARCHITECTURAL



NOTES:
 1. ALL EXISTING RECEPTACLES, LIGHTING FIXTURES & THEIR ASSOCIATED SWITCHES INCLUDING OUTSIDE FIXTURES, IN THE AREA COVERED BY THIS DRAWING SHALL BE REMOVED. REFERENCE SPEC. SECTION 16010 MODIFICATIONS & REMOVALS FOR ADDITIONAL DETAILS.

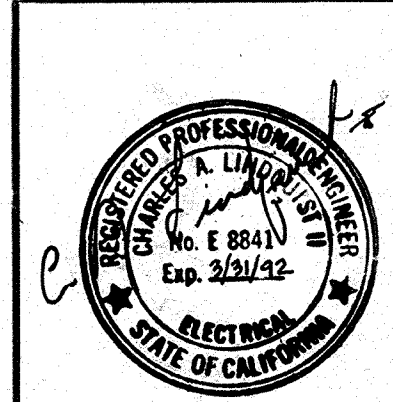
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AS-BUILT
 Signature: [Signature]
 Date: 5/10/91



CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988
 FILTERS 5-8 & FILTER CONTROL CENTER
 LIGHTING

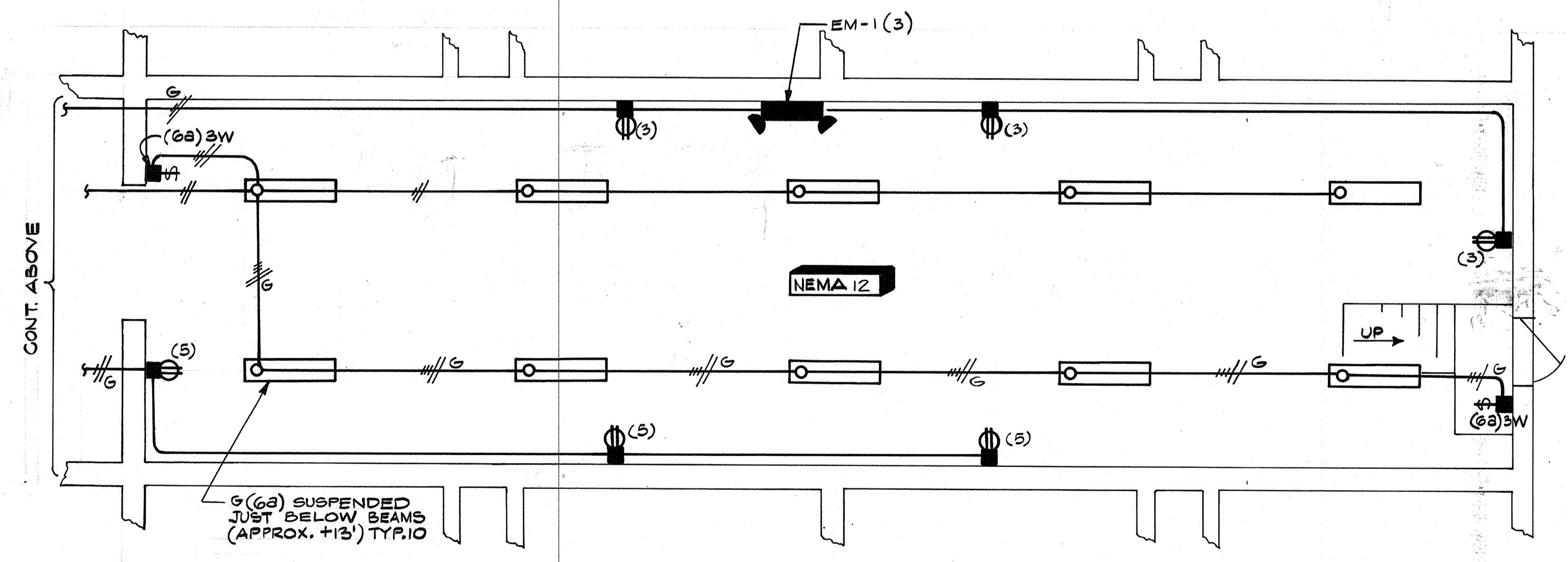
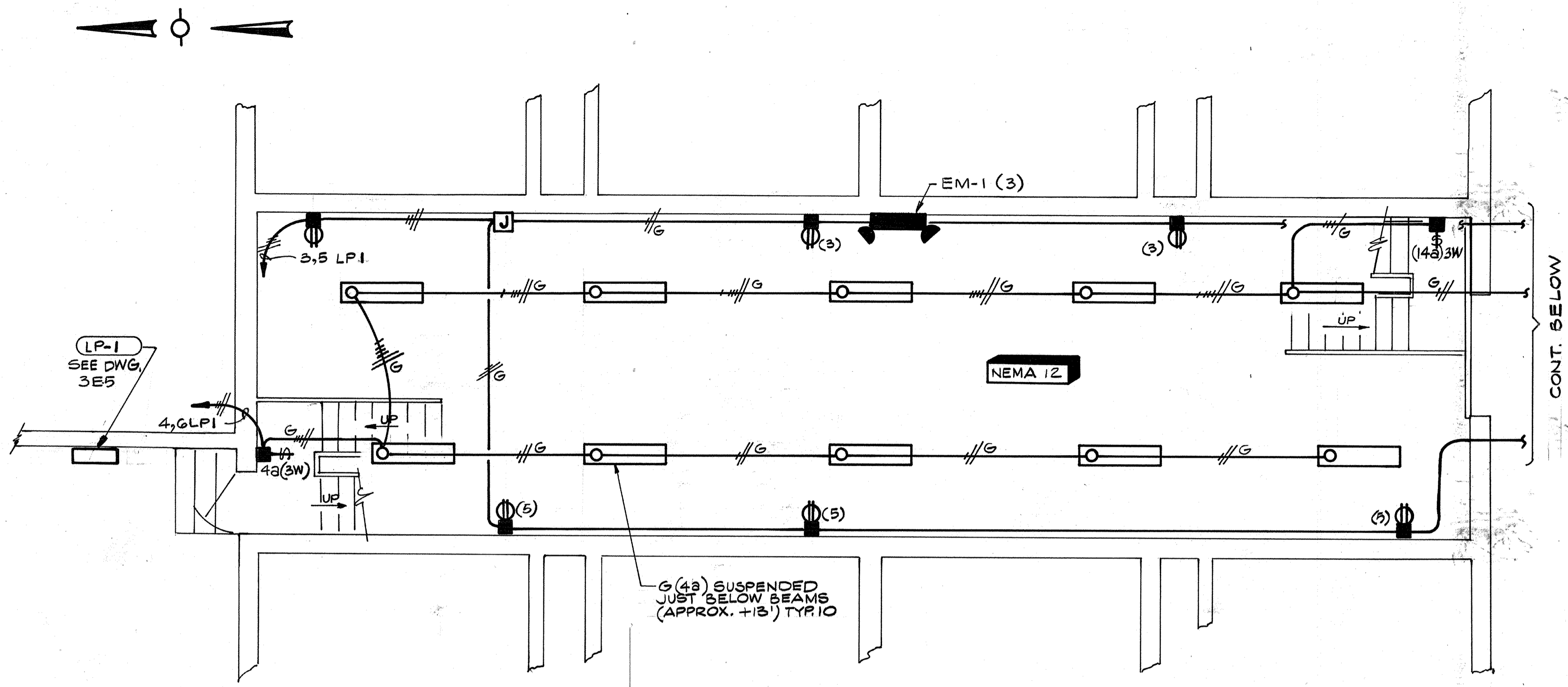


1/23/91
 Date Ch'k'd
 Revised FOR THE RECORD
 Revision
 Designed by: R.R.R.
 Drawn by: VIC M.
 Checked by: GKK
 Approved by: CAL
 Date: SEPT. 1988
 Scale: 1/4" = 1'-0"

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
 environmental engineers, scientists,
 planners, & management consultants

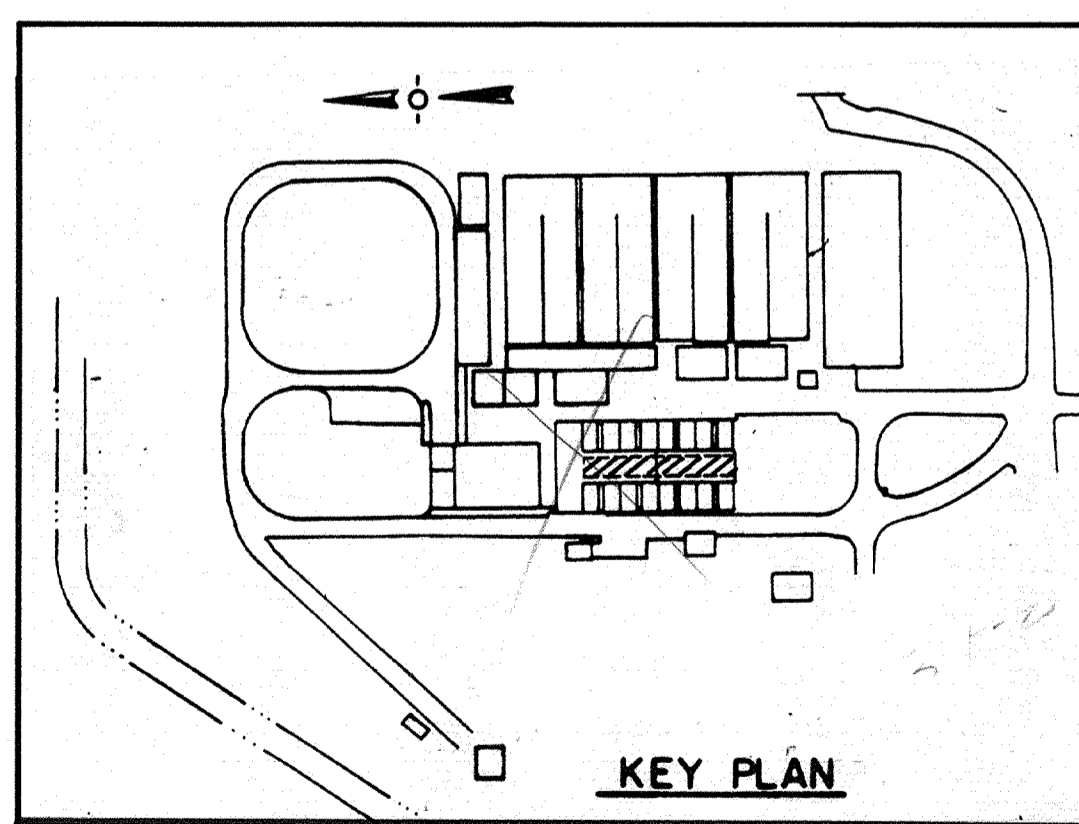
SHEET NO.
 3E-7
 136 OF 147

111338
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



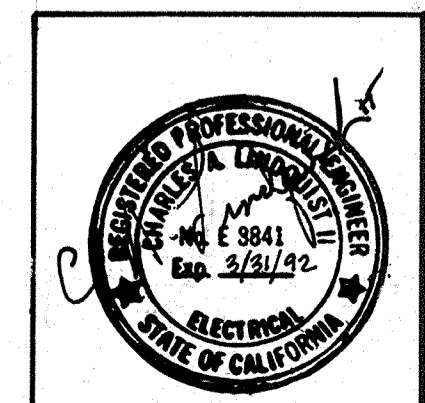
NOTES:
 1. ALL EXISTING RECEPTACLES, LIGHT FIXTURES & LIGHT SWITCHES IN FILTER PIPE GALLERY TO BE REMOVED. REFERENCE SPEC. SECTION 16010 MODIFICATIONS & REMOVALS FOR ADDITIONAL DETAILS.

AS-BUILT
Pjm 5/10/91
 SIGNATURE DATE



CITY OF PITTSBURG, CALIFORNIA

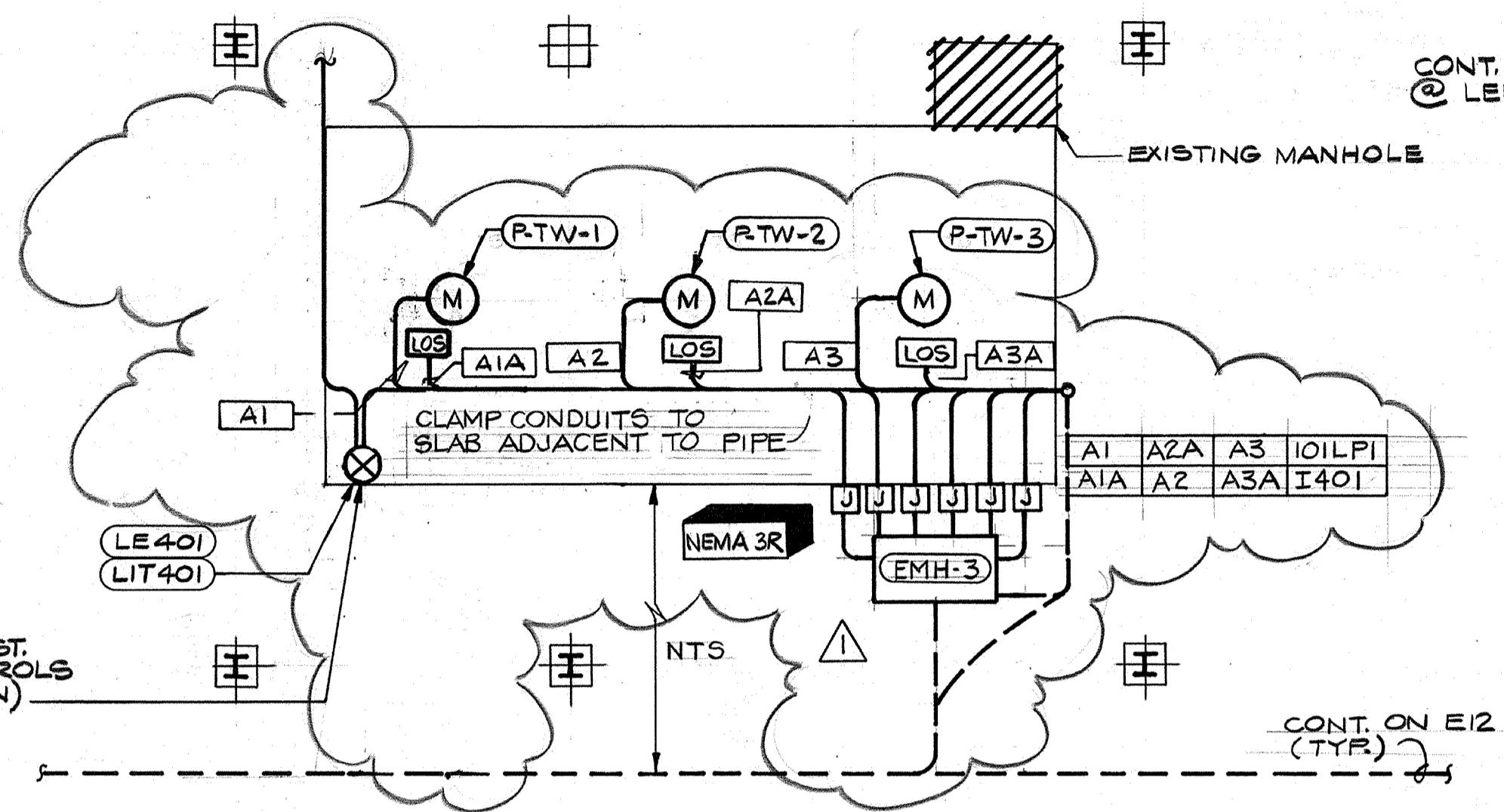
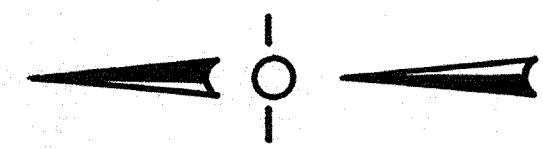
WATER TREATMENT PLANT EXPANSION 1988
 FILTER PIPE GALLERY
 LIGHTING



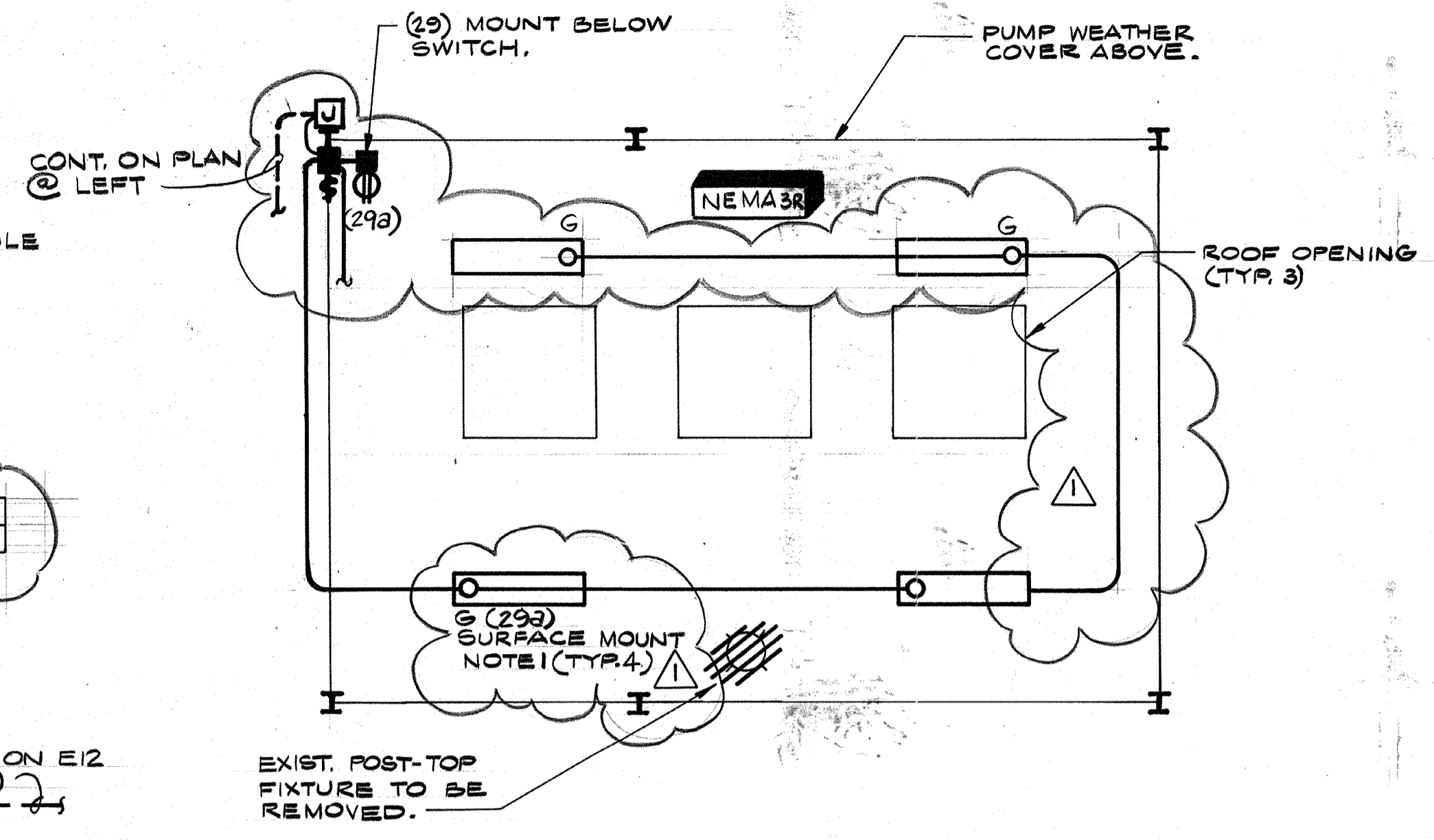
Date	Ch'k'd	Revision
Designed by:	RRR	
Drawn by:	VM	Date: SEPT. 1988
Checked by:	GKK	
Approved by:	CAL	Scale: 1/4" = 1'-0"

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
CDM
 environmental engineers, scientists,
 planners & management consultants
 SHEET NO.
3E-8
 197 OF 147

111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
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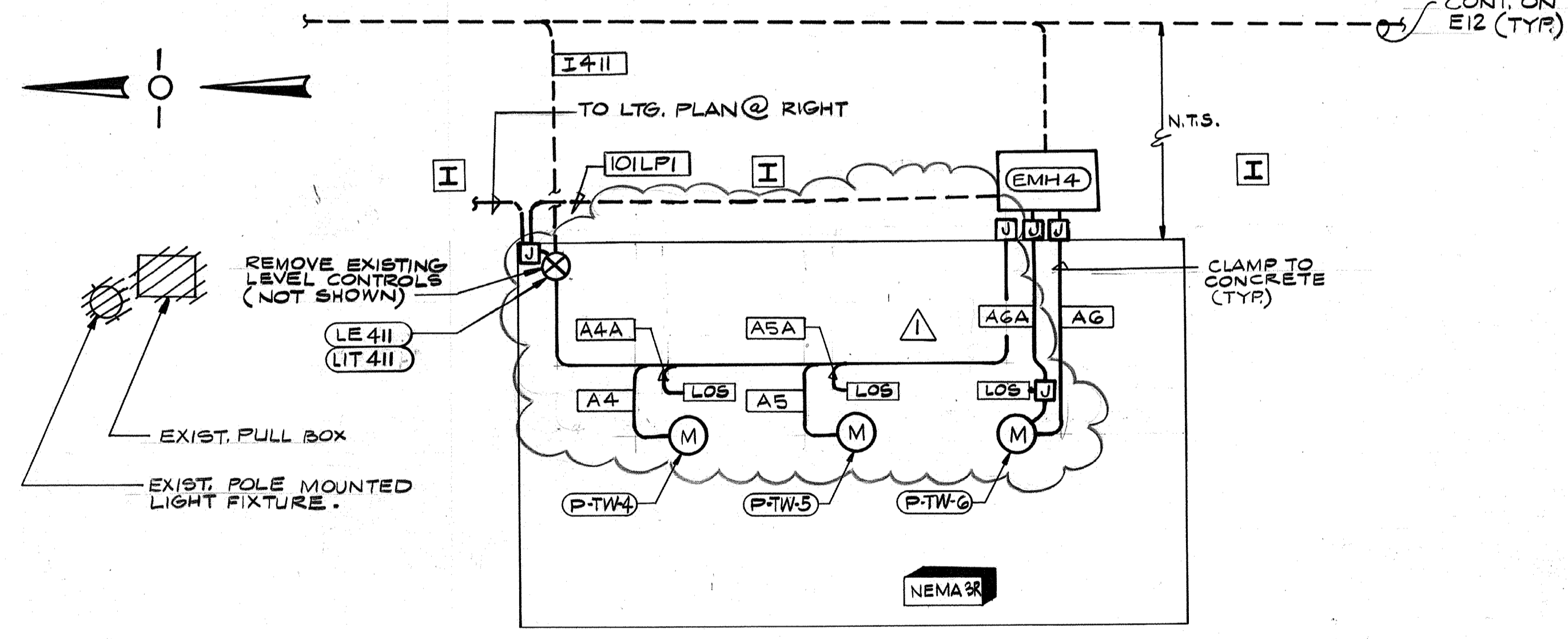
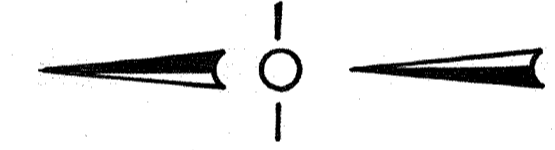


**NORTH CLEARWELL PUMP STATION
 POWER & INSTRUMENTATION**

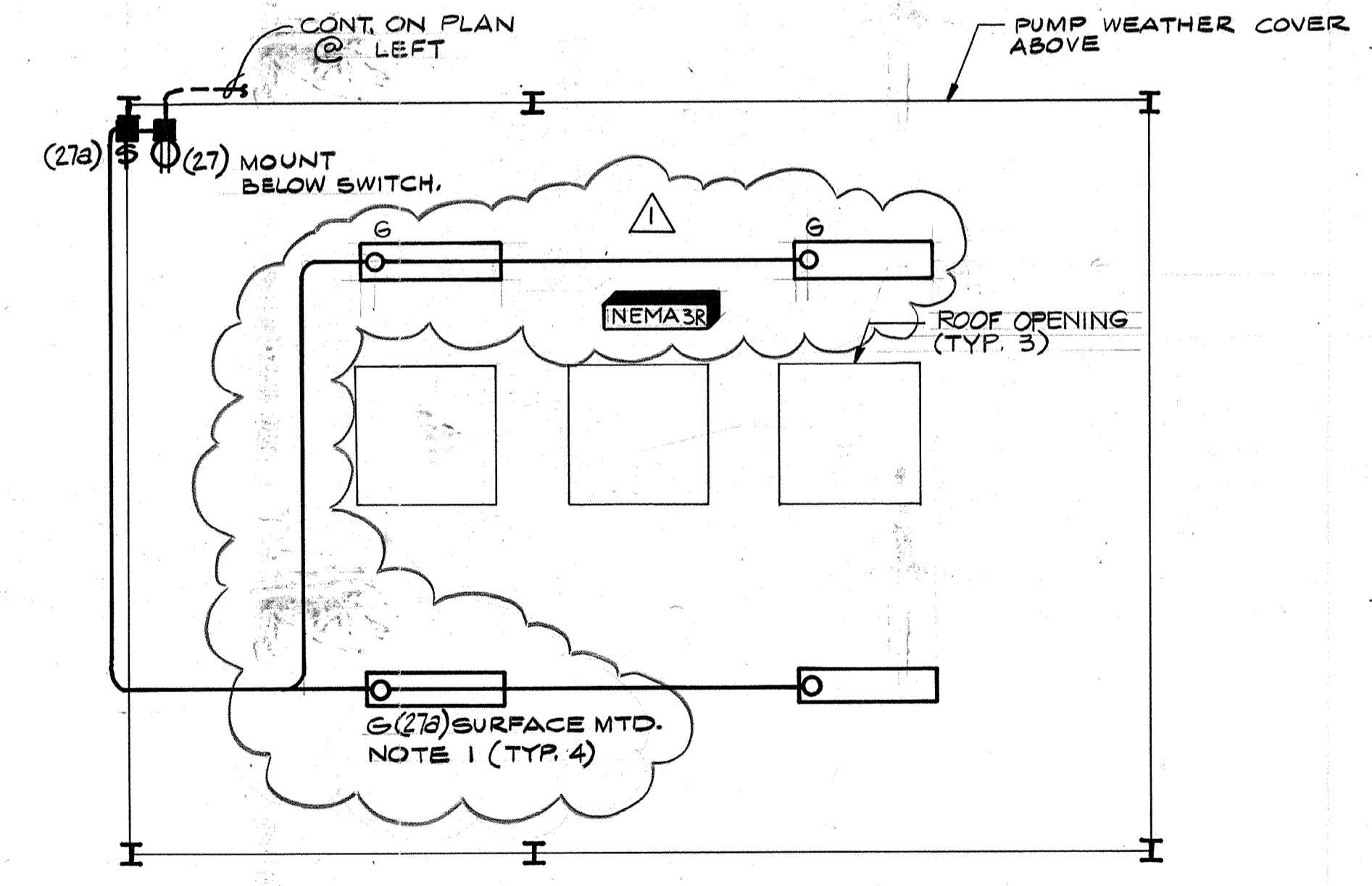


**NORTH CLEARWELL PUMP STA.
 LIGHTING PLAN**

NOTES:
 1. TYPE "G" FIXTURES ON THIS SHEET SHALL HAVE LOW TEMPERATURE BALLASTS.
 2. CROSSHATCHING INDICATES GENERALLY THE MAJOR ELECTRICAL EQUIPMENT TO BE REMOVED FROM SERVICE UNDER THIS CONTRACT REFERENCE SPEC. SECTION 16010 MODIFICATIONS & REMOVALS FOR ADDITIONAL DETAILS.

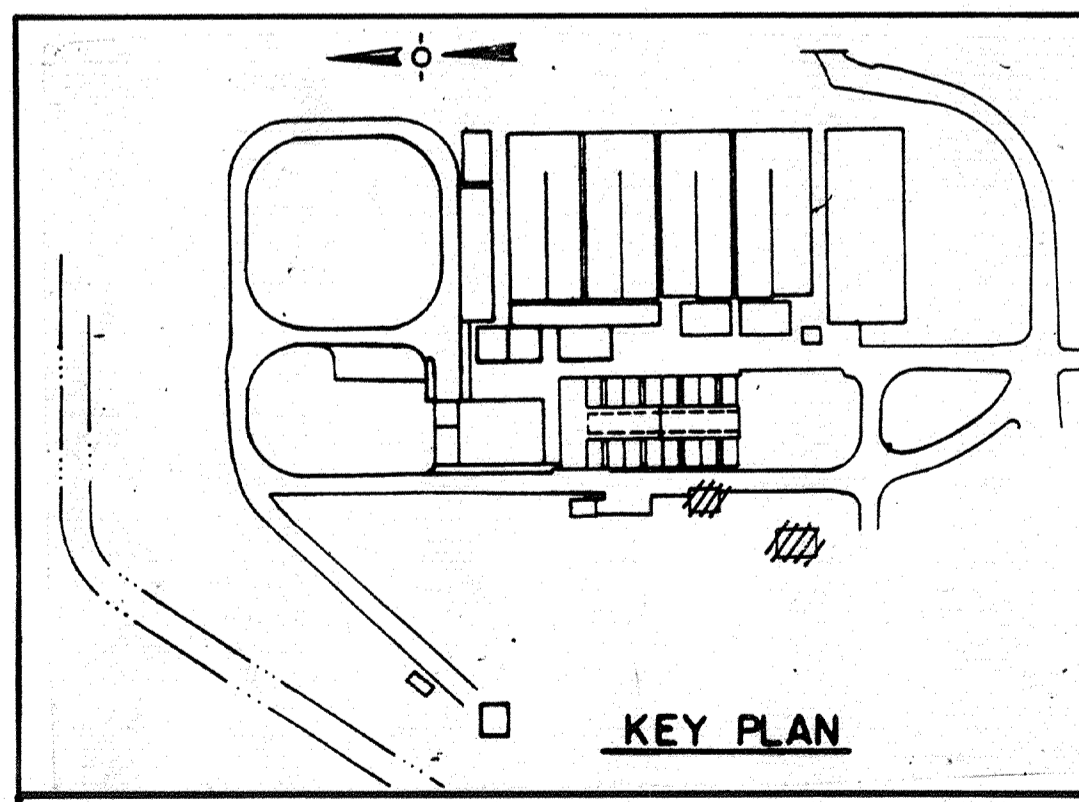


**SOUTH CLEARWELL PUMP STA.
 POWER & INSTRUMENTATION**



**SOUTH CLEARWELL PUMP STATION
 LIGHTING PLAN**

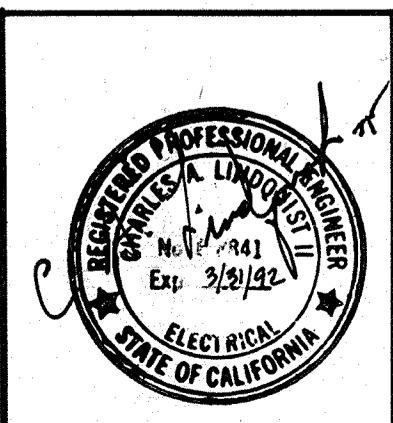
AS-BUILT
 07/11/91
 5/10/91



KEY PLAN

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988
**NORTH & SOUTH CLEARWELLS
 POWER, INSTRUMENTATION & LIGHTING**

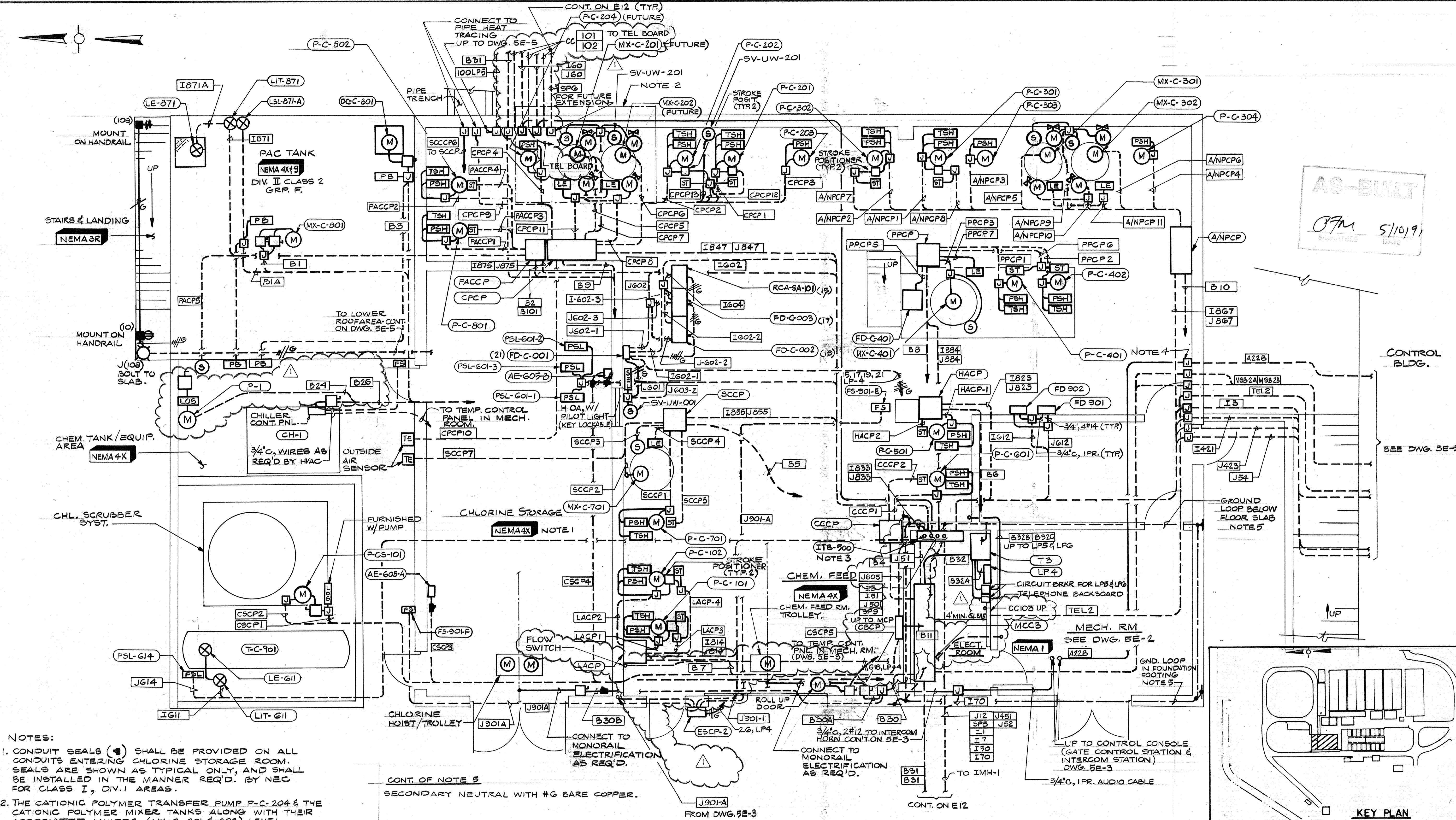


Date	Ch'k'd	Revision
10/23/91		Δ REVISED FOR THE RECORD
Designed by:	R.R.R.	Date: SEPT. 1988
Drawn by:	VM	Checked by: GKK
Approved by:	CAL	Scale: 1/4" = 1'-0"

CAMP DRESSER & MCKEE INC.
 710 South Broadway
 Walnut Creek, CA 94596
CDM
 environmental engineers, scientists,
 planners & management consultants

SHEET NO.
4E-1
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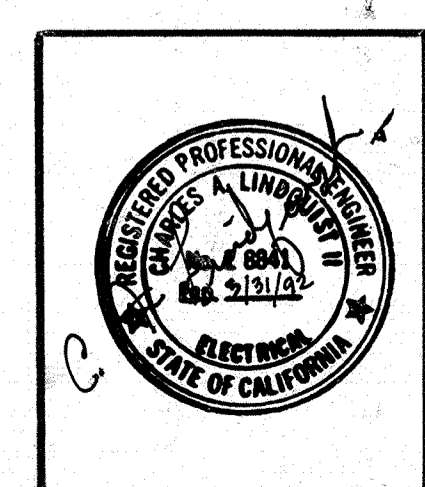
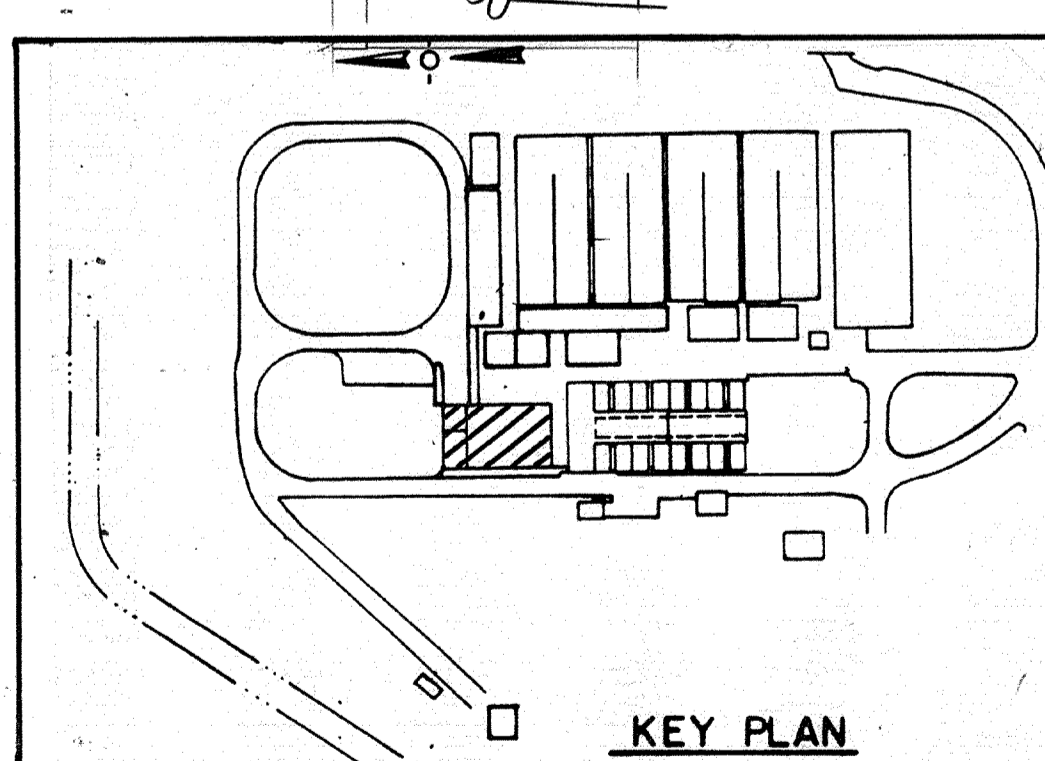
111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



AS-BUILT
 07M 5/10/91
 DATE

- NOTES:
1. CONDUIT SEALS (●) SHALL BE PROVIDED ON ALL CONDUITS ENTERING CHLORINE STORAGE ROOM. SEALS ARE SHOWN AS TYPICAL ONLY, AND SHALL BE INSTALLED IN THE MANNER REQ'D. BY NEC FOR CLASS I, DIV.1 AREAS.
 2. THE CATIONIC POLYMER TRANSFER PUMP P-C-204 & THE CATIONIC POLYMER MIXER TANKS ALONG WITH THEIR ASSOCIATED MIXERS (MX-C-201 & 202) LEVEL CONTROLS AND VALVES ARE FUTURE EQUIPMENT EMBEDDED CONDUITS FOR THIS EQUIPMENT TO BE FURNISHED UNDER THIS CONTRACT STUB UP CONDUITS IN THE APPROX. LOCATION SHOWN & CAP OFF.
 3. ITB-500 SHALL BE NEMA 12, WALL MOUNT, 36"Hx48"Wx12"D WITH 2 DOORS, HOFFMAN A364812WFLP OR EQUAL. MOUNT BOTTOM 24" AFF.
 4. SEAL CONDUITS WITH DUCT SEAL OR EQUAL. &/OR PROVIDE WEEP HOLES IN J-BOXES. (TYR 6)
 5. RUN #2/0 BARE COPPER GROUND LOOP IN FOOTING NEAR BOTTOM (OR BELOW FLOOR SLAB WHERE FOOTING IS NOT AVAILABLE). EXOTHERMICALLY WELD TO STRUCTURAL REBAR AT 4 CORNERS. EXTEND #2/0 BARE COPPER TO MCC GND. BUS FROM TWO LOCATIONS AS SHOWN. GROUND TO TRANSFORMER

CONT. OF NOTE 5
 SECONDARY NEUTRAL WITH #6 BARE COPPER.



Date	1/23/91	Revised for the Record
Ch'k'd		Revision
Designed by	RRR	Date: SEPT. 1988
Drawn by	V.M.	
Checked by	GKK	
Approved by	CAL	Scale: 1/4" = 1'-0"

CITY OF PITTSBURG, CALIFORNIA

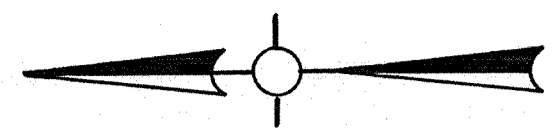
WATER TREATMENT PLANT EXPANSION 1988
 OPERATIONS BUILDING LOWER LEVEL
 POWER

CAMP DRESSER & McKEE INC.
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 Walnut Creek, CA 94596

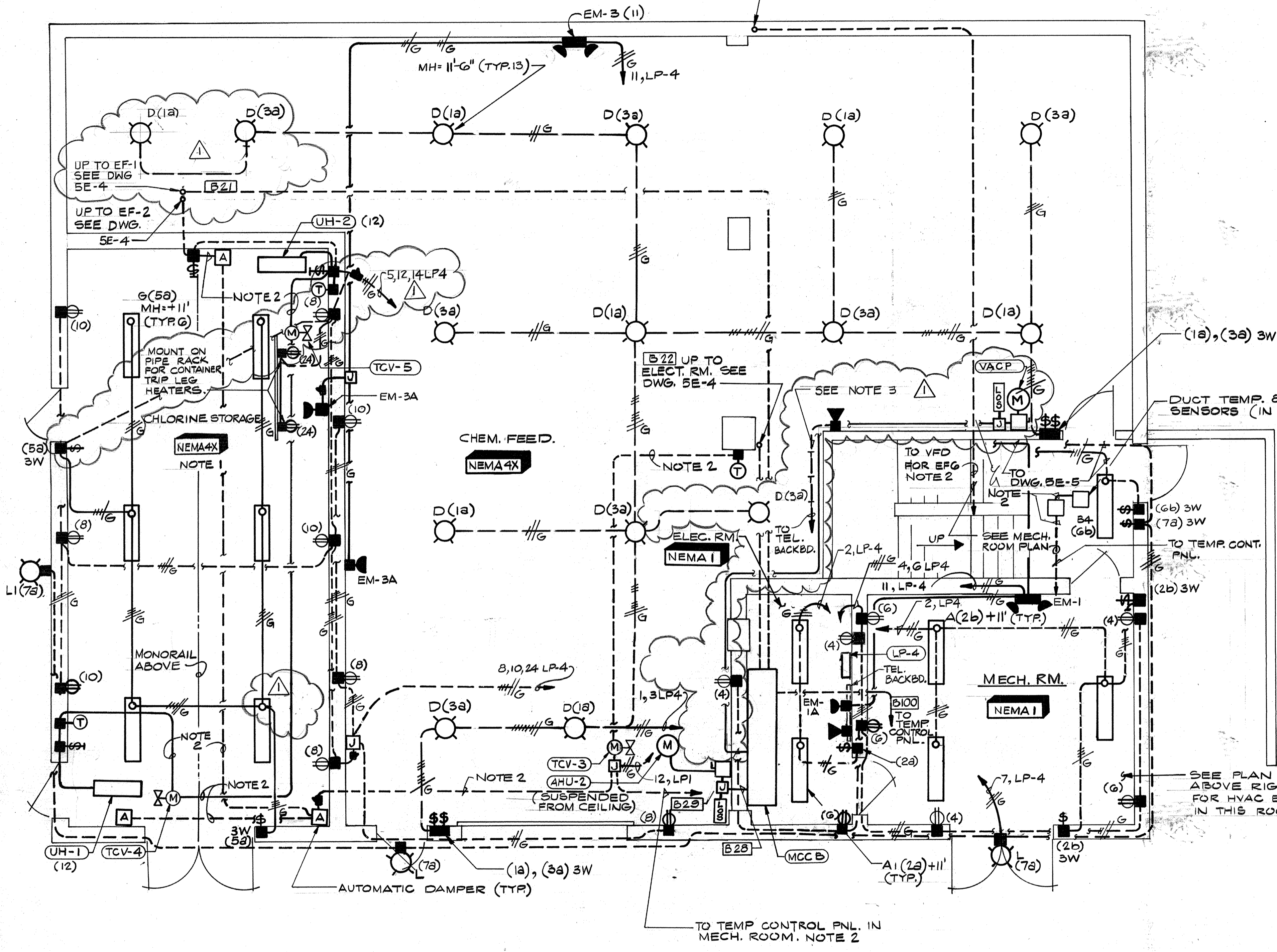
CDM
 environmental engineers, scientists
 planners, & management consultants

SHEET NO.
 5E-1
 139 OF 147

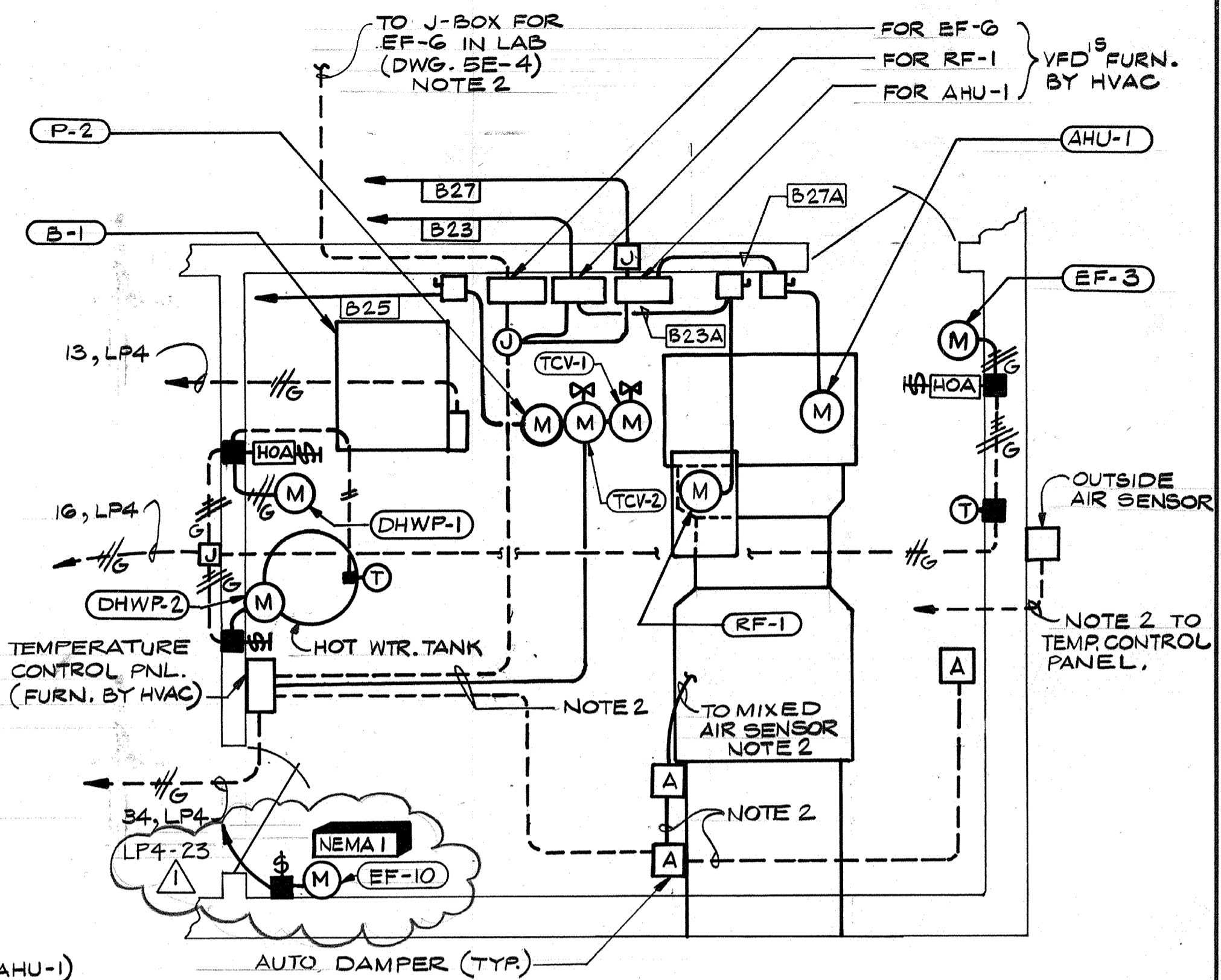
111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



UP TO DWG. 5E-4 FOR EFG



OPERATIONS BLDG. LOWER LEVEL
 SCALE: 1/4" = 1'-0"

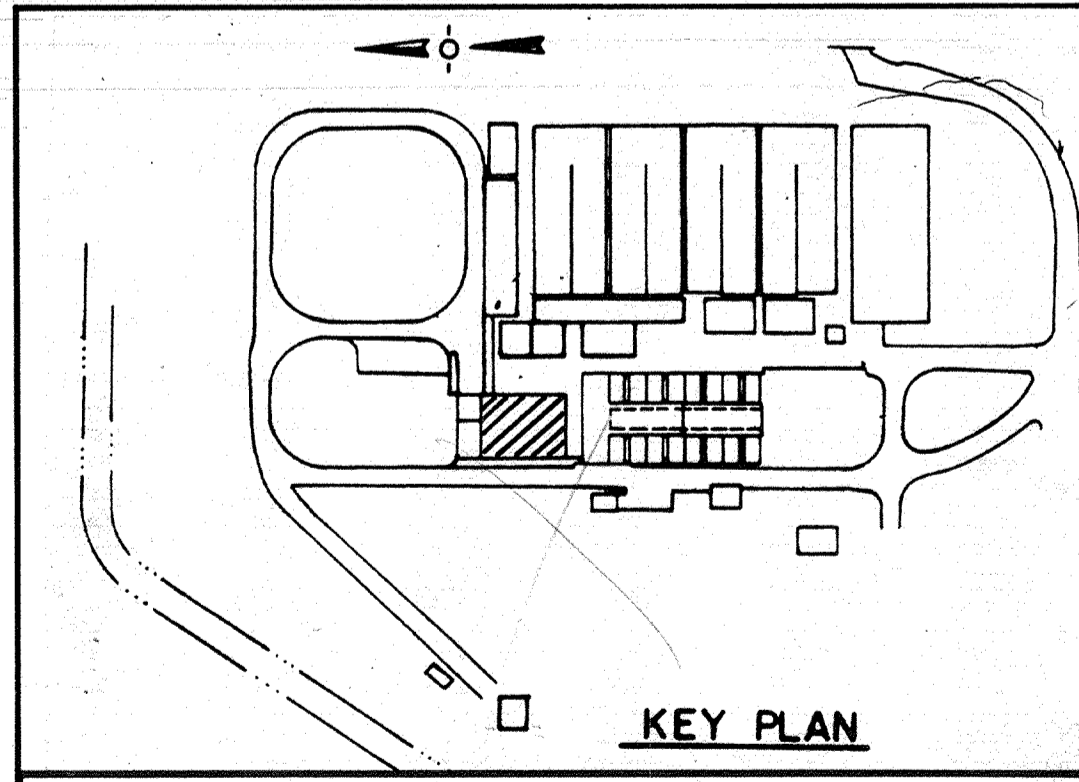


MECHANICAL ROOM
 SCALE: 3/8" = 1'-0"

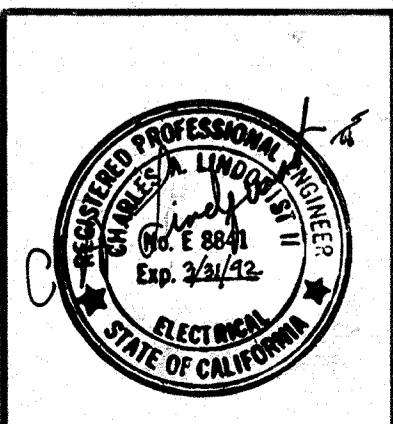
- NOTES:**
1. CONDUIT SEALS (S) SHALL BE PROVIDED ON ALL CONDUITS ENTERING CHLORINE STORAGE ROOM. SEALS ARE SHOWN AS TYPICAL ONLY, AND SHALL BE INSTALLED IN THE MANNER REQ'D. BY NEC FOR CLASS I, DIV.1 AREAS.
 2. 1" C, WIRES AS REQ'D. BY HVAC.
 3. RUN 1" CONDUIT (TAGGED "CC-104") FROM NEW TELEPHONE BACKBOARD TO THE STAIRWELL WALL OF THE CHEMICAL FEED ROOM (SHEET 5E-2)

SEE PLAN ABOVE RIGHT FOR HVAC EQUIP IN THIS ROOM.

AS-BUILT
 Signature: *PM* 5/10/91
 DATE



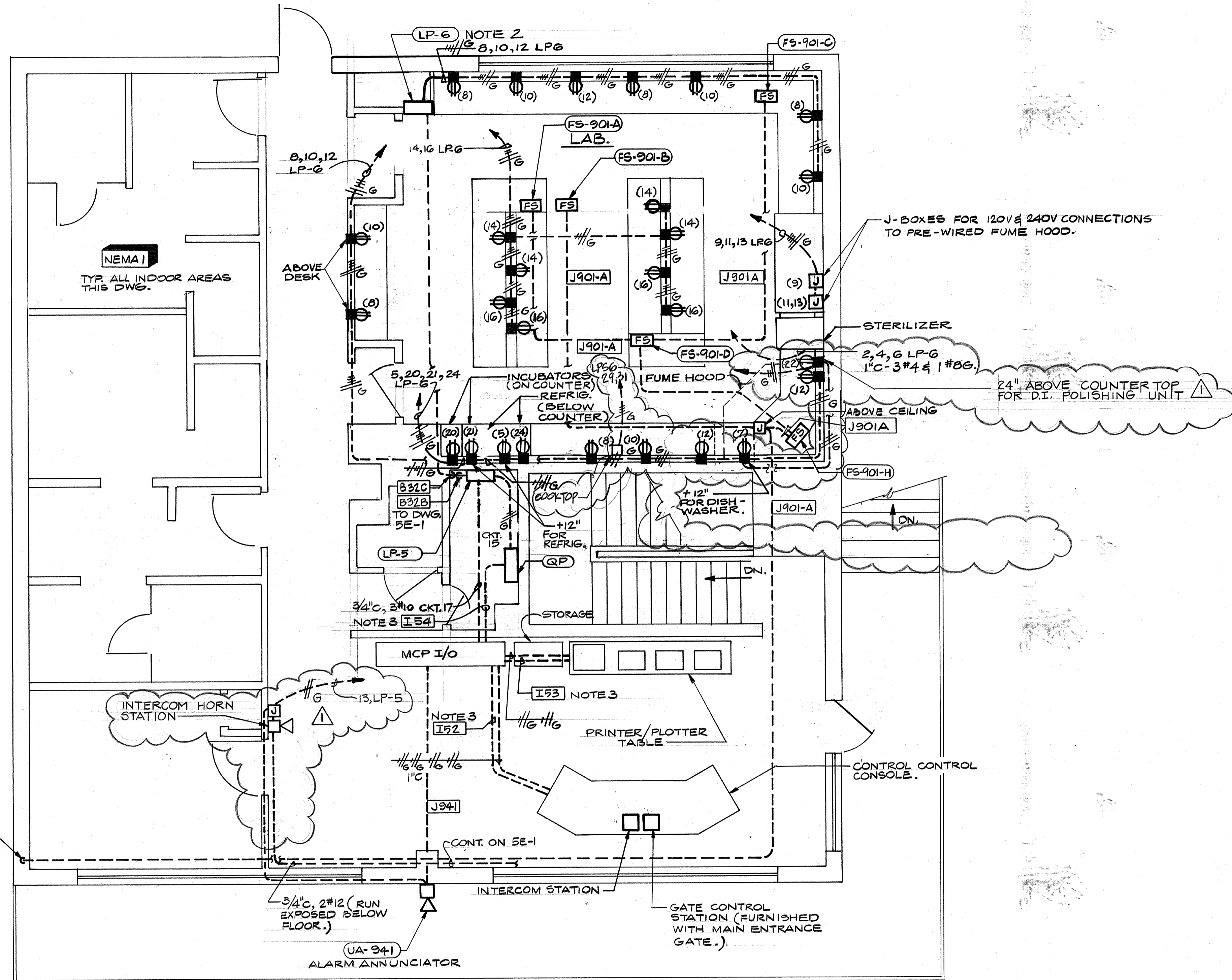
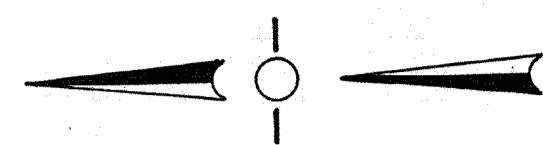
CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
OPERATIONS BUILDING
LOWER LEVEL LIGHTING & HVAC POWER
 SHEET NO. **5E-2**
 140 OF 147



Date	1/23/91	Ch'k'd	REVISOR FOR THE RECORD	Revision
Designed by:	R.R.R.	Drawn by:	V.M.	Date: SEPT. 1988
Checked by:	GKK	Approved by:	CAL	Scale: AS SHOWN

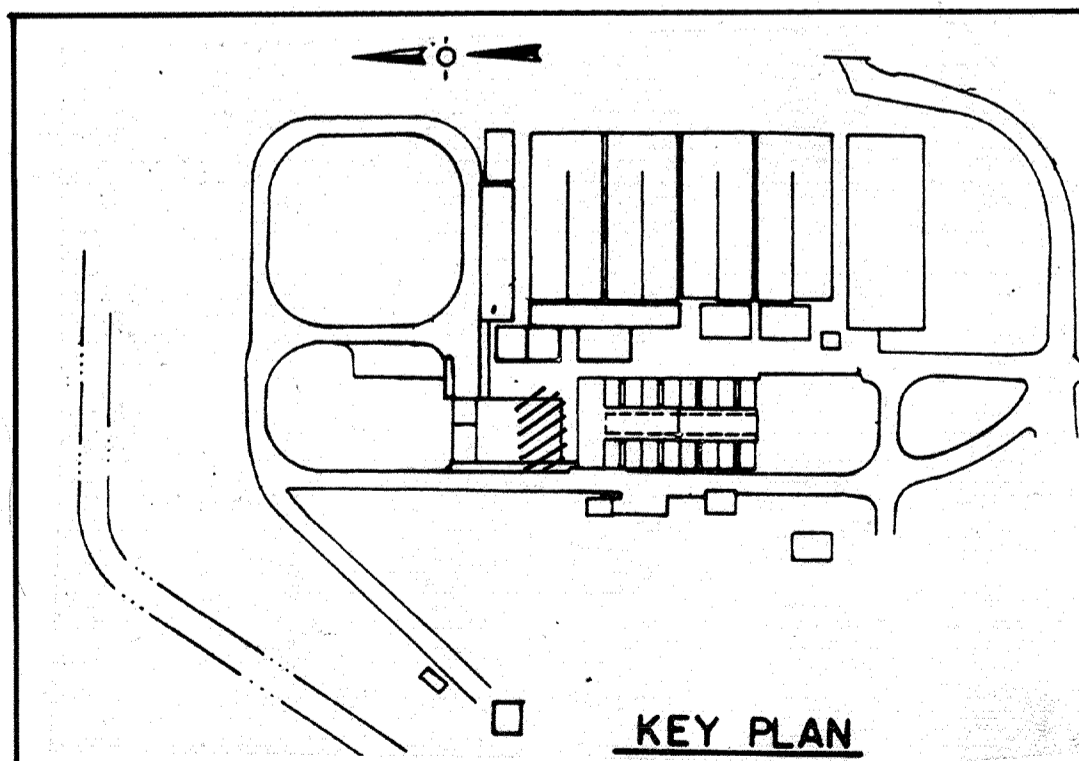
CAMP DRESSER & MCKEE INC.
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111325
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



- NOTES:**
- EXCEPT AS NOTED, ALL LAB RECEPTACLES ARE LOCATED AT COUNTER TOP HEIGHT, IN CUTOUTS SUPPLIED IN BACKSLASH. EXACT LOCATION OF ALL LAB RECEPTACLES SHALL BE COORDINATED WITH SUPPLIER OF LAB. FURNISHINGS.
 - PANEL LP-6 TO BE INSTALLED RECESSED IN LAB WALL.
 - CONDUITS I92, I93, I54 ARE RUN EXPOSED BELOW FLOOR.

AS-BUILT
 Signature: *[Signature]* 5/10/91
 DATE



CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
 OPERATIONS BUILDING UPPER LEVEL
 POWER & INSTRUMENTATION

	Date	1/23/91	Revision	REVISED FOR THE RECORD
	Ch'k'd			
	Designed by:	R.R.R.	Date:	SEPT. 1988
	Drawn by:	V.M.	Checked by:	GKK
Approved by:	CAL	Scale:	1/4" = 1'-0"	

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 SHEET NO. 5E-3
 141 OF 147

PROJECT MANAGER
Approved by: _____ Date: _____

PROJECT ENGINEER
Approved by: _____ Date: _____

PLUMBING
Approved by: _____ Date: _____

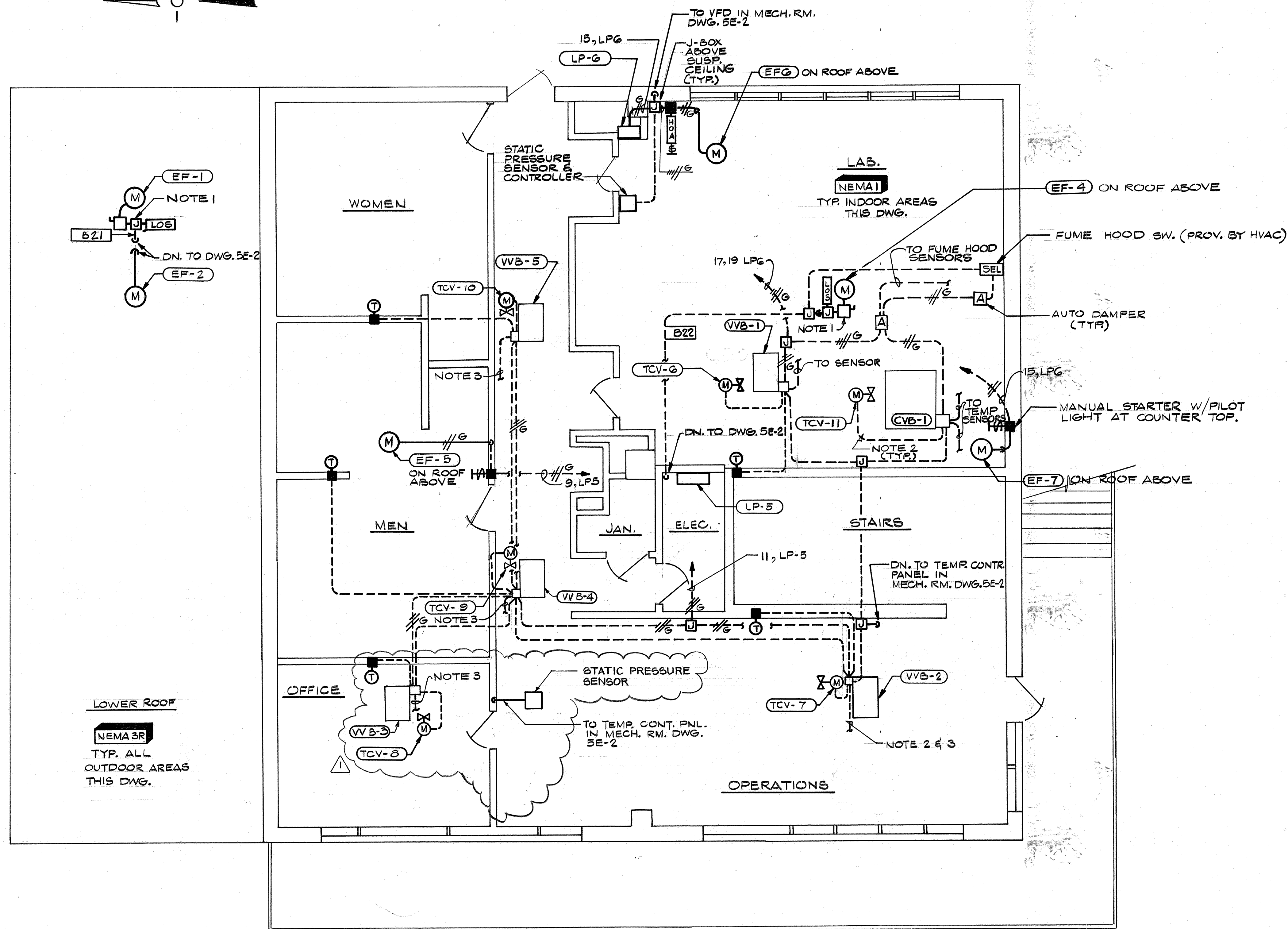
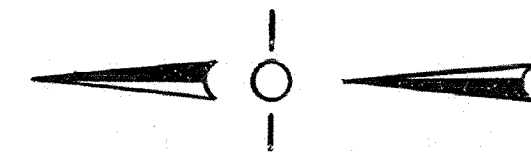
HVAC
Approved by: _____ Date: _____

INSTRUMENTATION
Approved by: _____ Date: _____

ELECTRICAL
Approved by: _____ Date: _____

STRUCTURAL
Approved by: _____ Date: _____

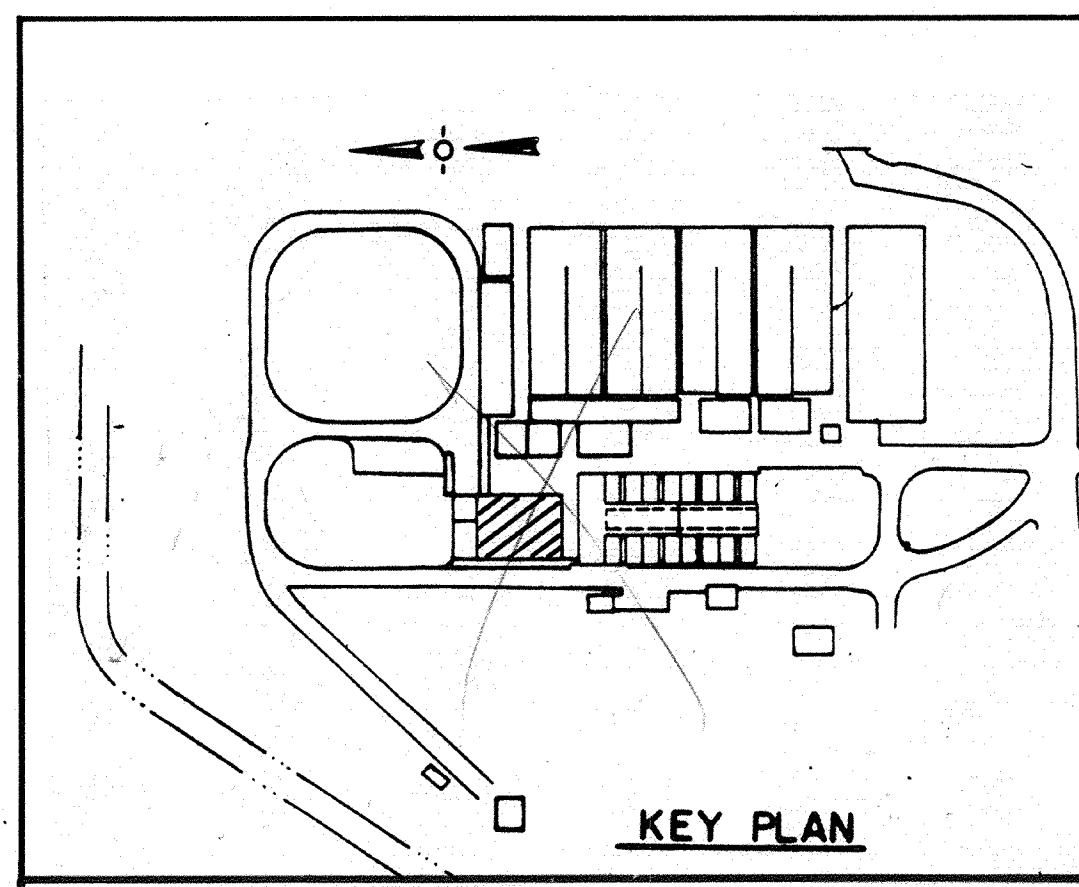
ARCHITECTURAL
Approved by: _____ Date: _____



NOTES:

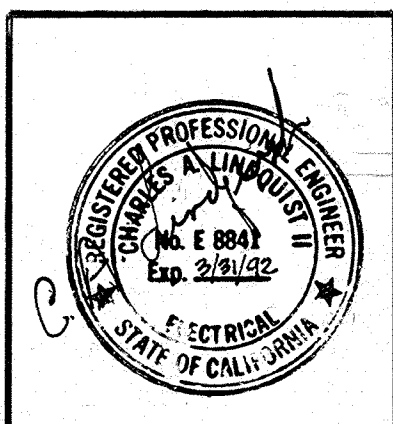
1. DISCONNECTS & P&S FOR ROOFTOP FANS ARE LOCATED ON MOUNTING STAND ON ROOF. (TYP)
2. FOR ALL HVAC CONDUITS NOT OTHERWISE NOTED BY CONDUIT NUMBER OR HASH MARKS, PROVIDE 3/4" C, WIRE AS REQUIRED BY HVAC.
3. TO DUCT SENSOR (TYP. FOR WB -2, -3, -4 & 5)

AS-BUILT
JVM 5/10/91
 SIGNATURE DATE



CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988
**OPERATIONS BUILDING UPPER LEVEL
 HVAC POWER**



Date	1/23/91	Revision	△ REVISED FOR THE RECORD
Designed by:	RRR	Date:	SEPT. 1988
Drawn by:	VVM	Scale:	1/4" = 1'-0"
Checked by:	GKK		
Approved by:	CAL		

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SHEET NO.
5E-4
 142 OF 147

111335

PROJECT MANAGER Approved by: Date:

PROJECT ENGINEER Approved by: Date:

PLUMBING Approved by: Date:

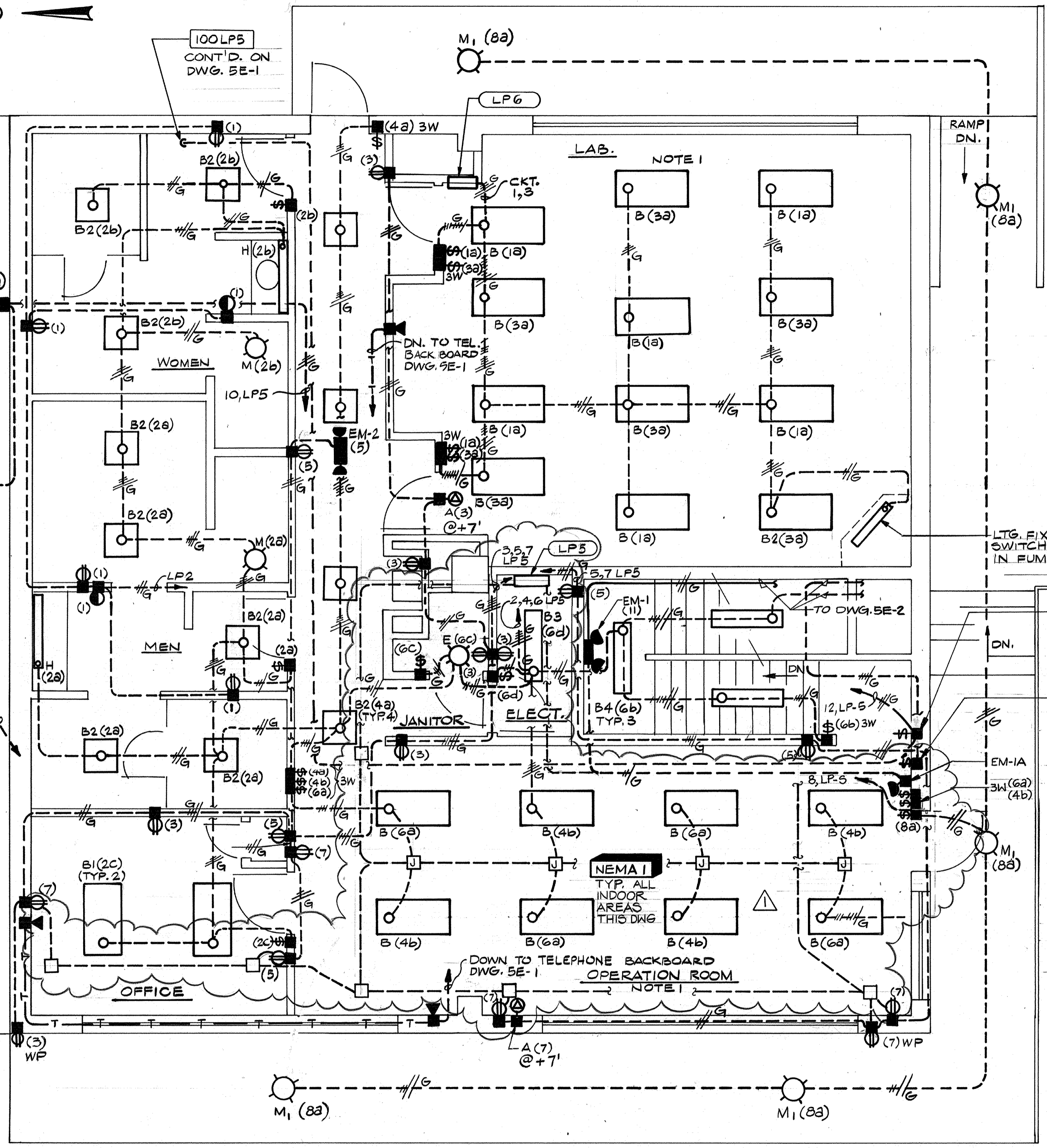
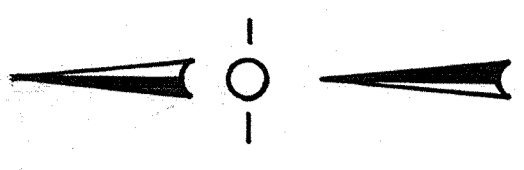
HVAC Approved by: Date:

INSTRUMENTATION Approved by: Date:

ELECTRICAL Approved by: Date:

STRUCTURAL Approved by: Date:

ARCHITECTURAL Approved by: Date:

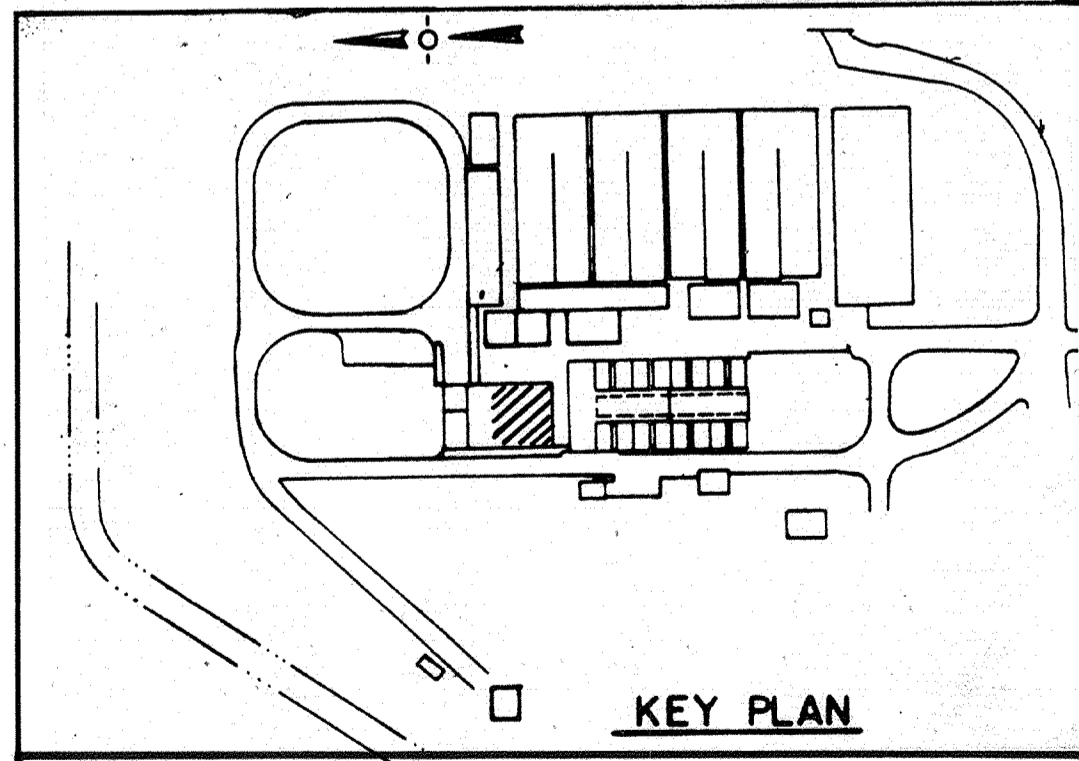


NOTES:
 1. SEE POWER PLAN DWG. SE-3 FOR LAB. RECEPTACLE LAYOUT & ADDITIONAL RECEPTACLES REQUIRED IN OPERATIONS ROOM. SEE RFI #064.

MATCH LINE SEE DWG.

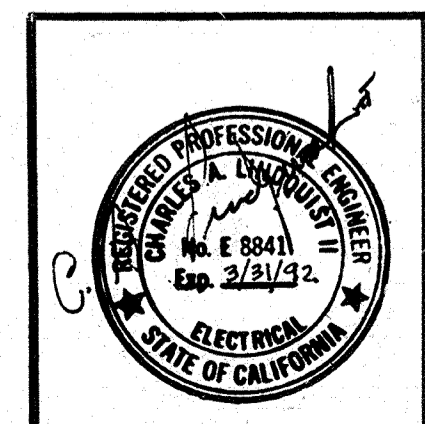
(12a) OUTSIDE LIGHT FOR FLAG POLE LABEL "FLAG POLE LIGHT"
 (7a) 3W LOWER LEVEL OUTSIDE LIGHTS.

AS-BUILT
PJM 5/10/91
 SIGNATURE DATE



CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988
OPERATIONS BUILDING UPPER LEVEL LIGHTING

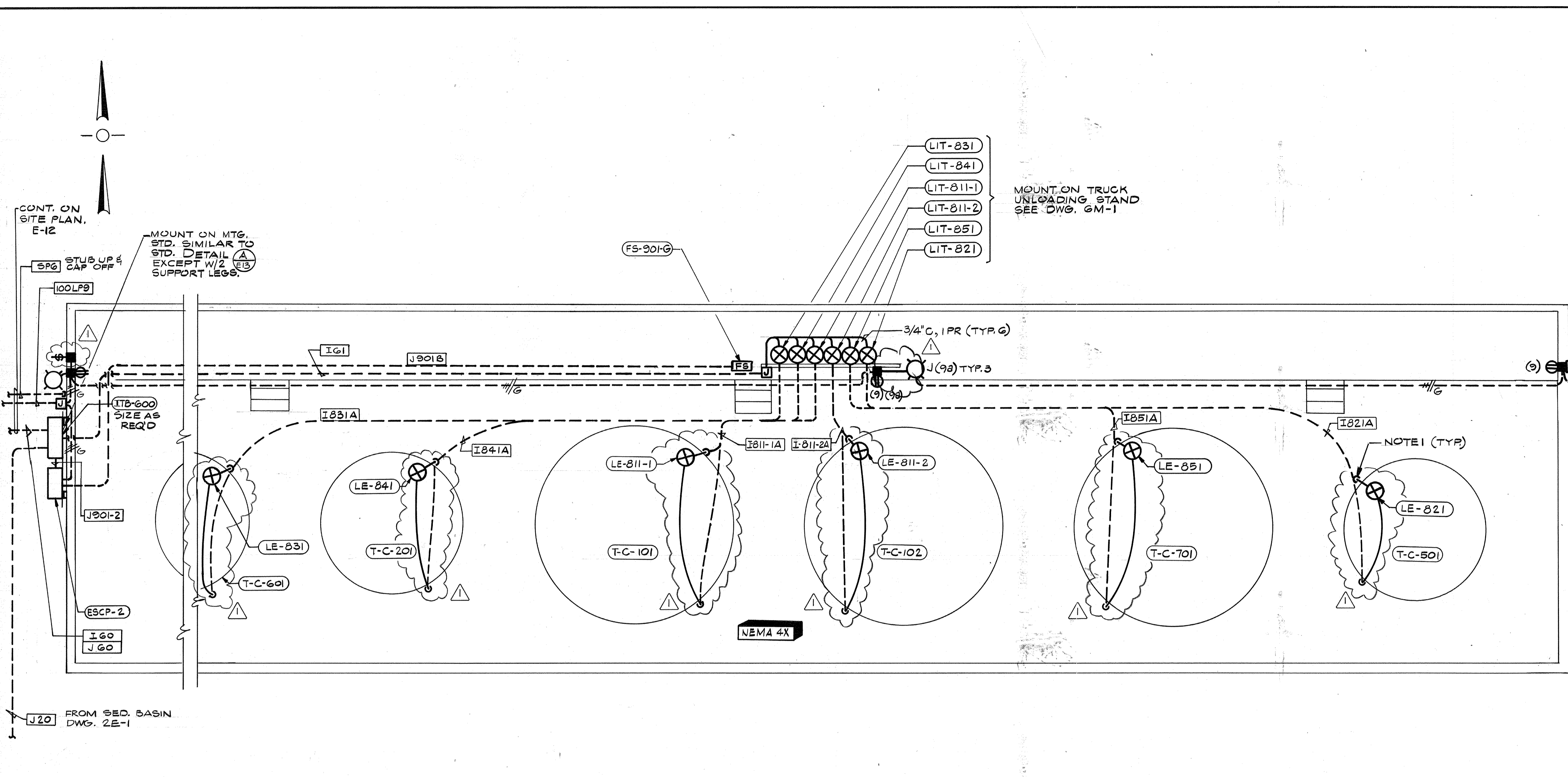


Date	1/23/91	Revision	REVISED FOR THE RECORD
Designed by:	R.R.R.	Date:	SEPT. 1988
Drawn by:	VM.	Checked by:	GKK
Approved by:	CAL	Scale:	1/4" = 1'-0"

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SHEET NO.
5E-5
 143 OF 147

111335
 PROJECT MANAGER Approved by: _____ Date: _____
 PROJECT ENGINEER Approved by: _____ Date: _____
 PLUMBING Approved by: _____ Date: _____
 HVAC Approved by: _____ Date: _____
 INSTRUMENTATION Approved by: _____ Date: _____
 ELECTRICAL Approved by: _____ Date: _____
 STRUCTURAL Approved by: _____ Date: _____
 ARCHITECTURAL Approved by: _____ Date: _____



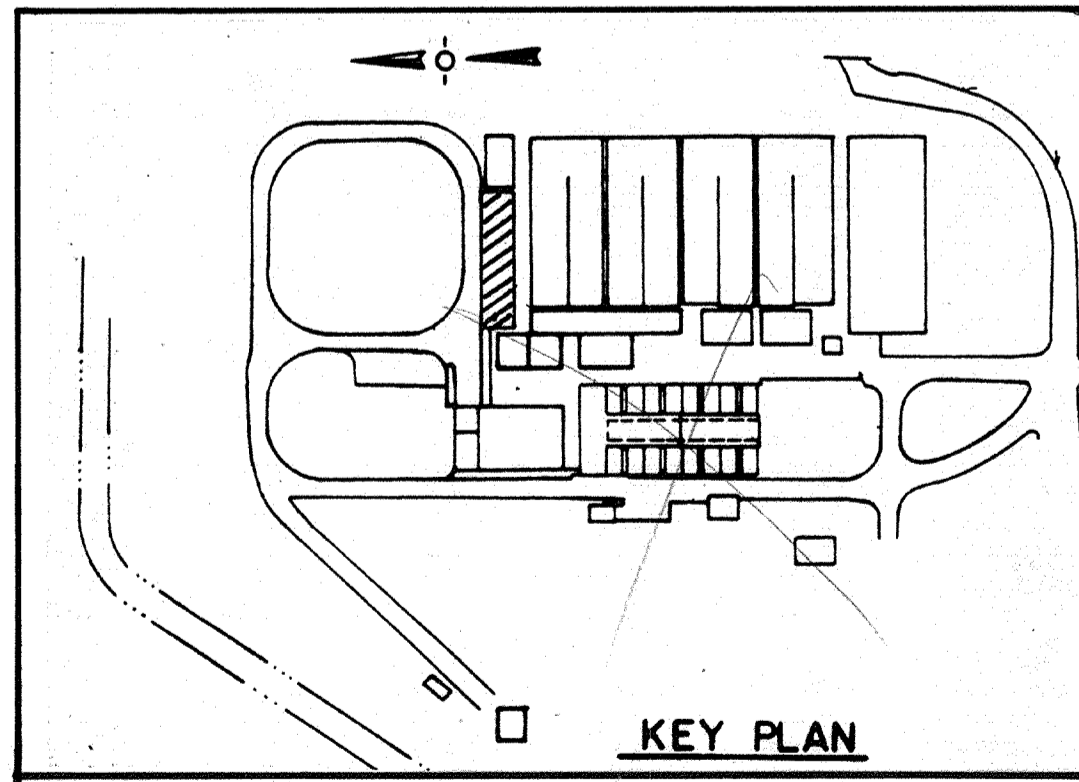
CONT. ON SITE PLAN, E-12

MOUNT ON MTG. STD. SIMILAR TO STD. DETAIL A EXCEPT W/2 SUPPORT LEGS.

MOUNT ON TRUCK UNLOADING STAND SEE DWG. 6M-1

AS-BUILT
 Signature: *OPM* DATE: 5/10/91

NOTES:
 1. PROVIDE 18" OF FLEX CONDUIT BETWEEN STUBOUT FROM SLAB & CONDUIT RISER UP TANK (TYP)



CITY OF PITTSBURG, CALIFORNIA

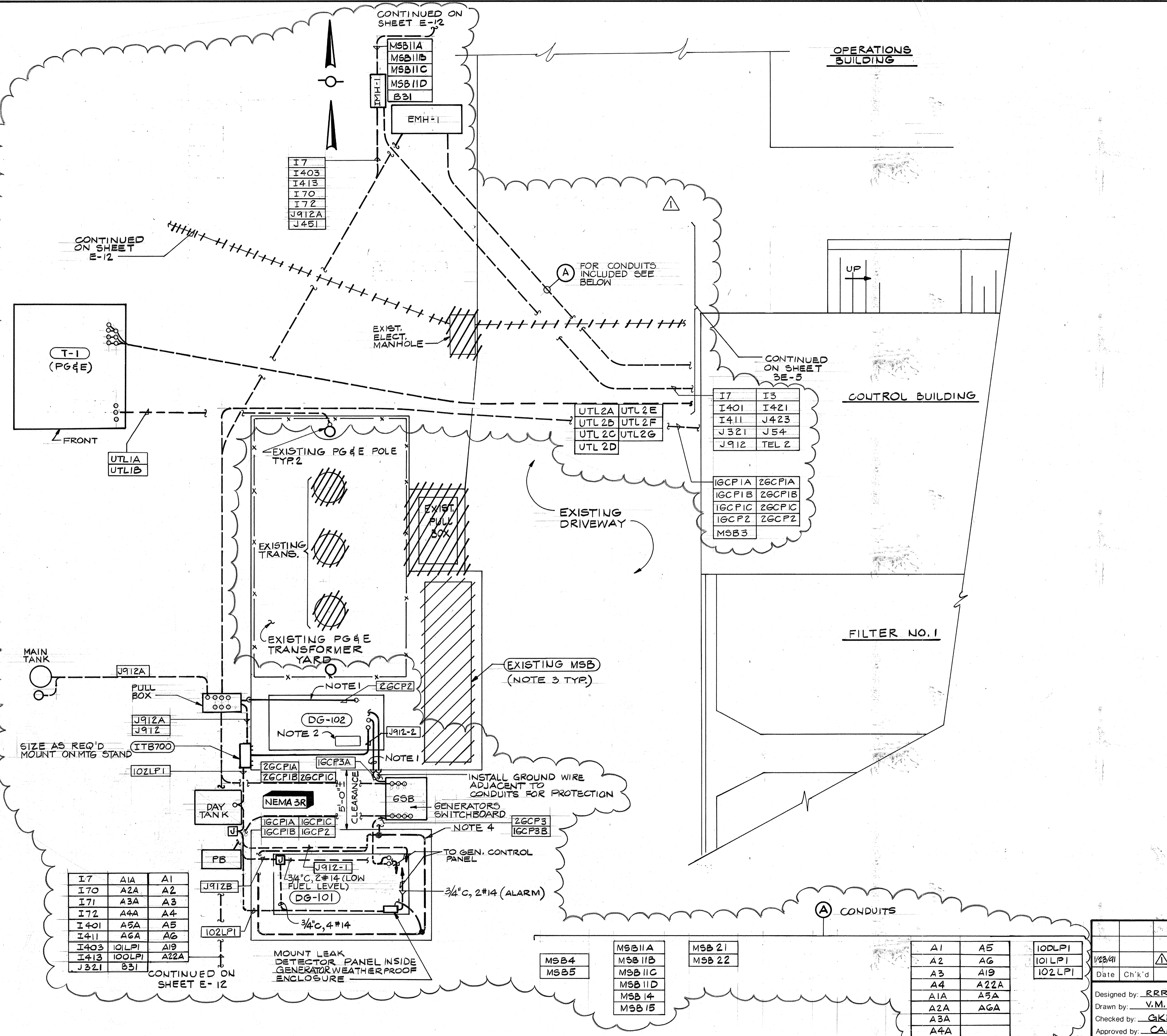
WATER TREATMENT PLANT EXPANSION 1988
**CHEMICAL TANK AREA
 POWER, INSTRUMENTATION & LIGHTING**

	Date	1/23/91	Revision	Δ REVISED FOR THE RECORD	
	Ch'k'd				
	Designed by:	RRR	Date:	SEPT. 1988	
	Drawn by:	V.M.	Checked by:	GKK	Approved by:
Scale:		1/4" = 1'-0"			

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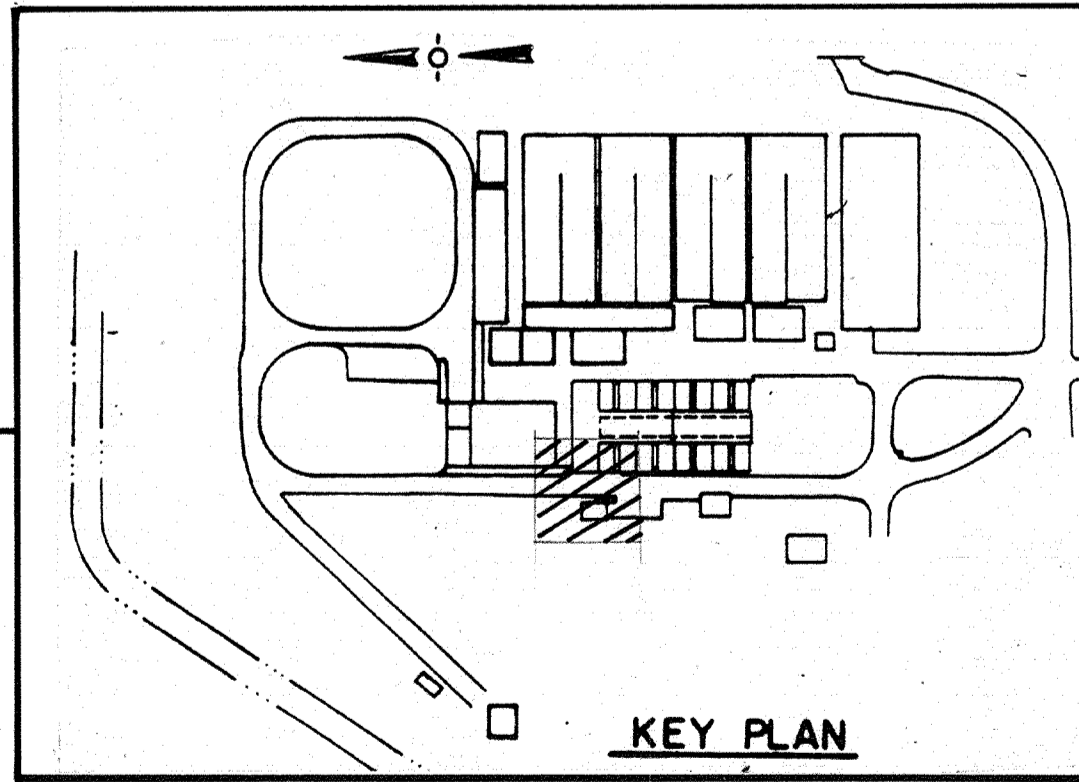
SHEET NO.
6E-1
 144 OF 147

111835
 PROJECT MANAGER: _____ Date: _____
 PROJECT ENGINEER: _____ Date: _____
 PLUMBING: _____ Date: _____
 HVAC: _____ Date: _____
 INSTRUMENTATION: _____ Date: _____
 ELECTRICAL: _____ Date: _____
 STRUCTURAL: _____ Date: _____
 ARCHITECTURAL: _____ Date: _____

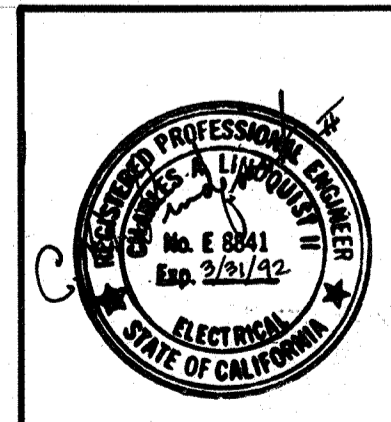


- NOTES:**
1. RUN NEW GRS CONDUIT ACROSS EXISTING GENERATOR PAD AND UP INTO EXISTING WEATHERPROOF ENCLOSURE.
 2. MOUNT NEW GENERATOR CIRCUIT BREAKER INSIDE EXISTING WEATHERPROOF ENCLOSURE.
 3. CROSSHATCHING INDICATES GENERALLY THE ELECTRICAL EQUIPMENT TO BE REMOVED FROM SERVICE UNDER THIS CONTRACT. REFERENCE SPEC. SECTION 16010 MODIFICATIONS & REMOVALS FOR ADDITIONAL DETAILS.
 4. RUN #2/0 BARE COPPER GROUND LOOP IN GENERATOR SLAB NEAR BOTTOM. EXTEND 1-#2/0 TO EACH GENERATOR AS SHOWN ON SINGLELINE.

AS-BUILT
 Signature: Pjm 5/10/91
 Date: 5/10/91



CITY OF PITTSBURG, CALIFORNIA
 WATER TREATMENT PLANT EXPANSION 1988
**GENERATOR AREA
 POWER & LIGHTING**



DESIGNED BY: RRR
 DRAWN BY: V.M.
 CHECKED BY: GKK
 APPROVED BY: CAL

DATE: SEPT. 1988
 SCALE: 1/4" = 1'-0"

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SHEET NO. 7E-1
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I7	A1A	A1
I70	A2A	A2
I71	A3A	A3
I72	A4A	A4
I401	A5A	A5
I411	A6A	A6
I403	IO2LPI	A19
I413	IO2LPI	A22A
J321	B31	

MSB4
MSB5

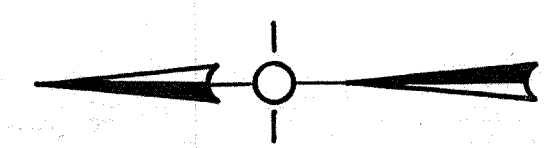
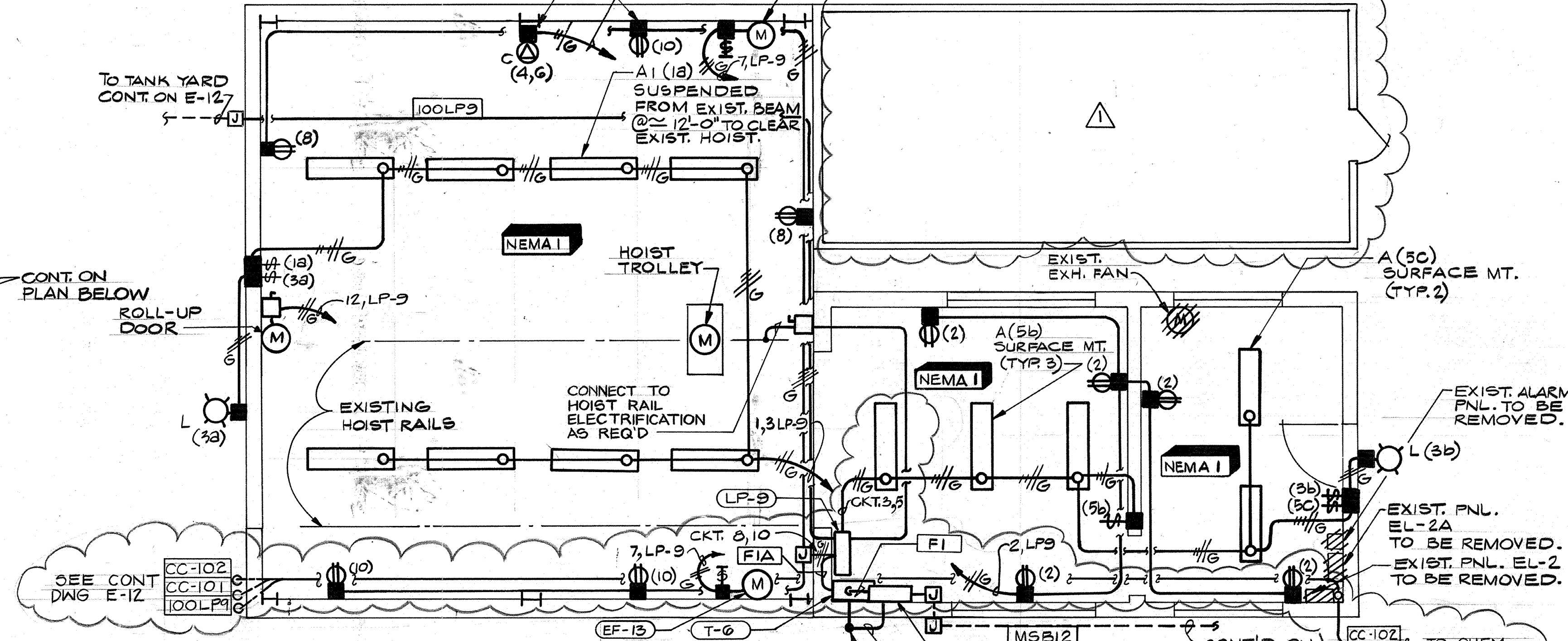
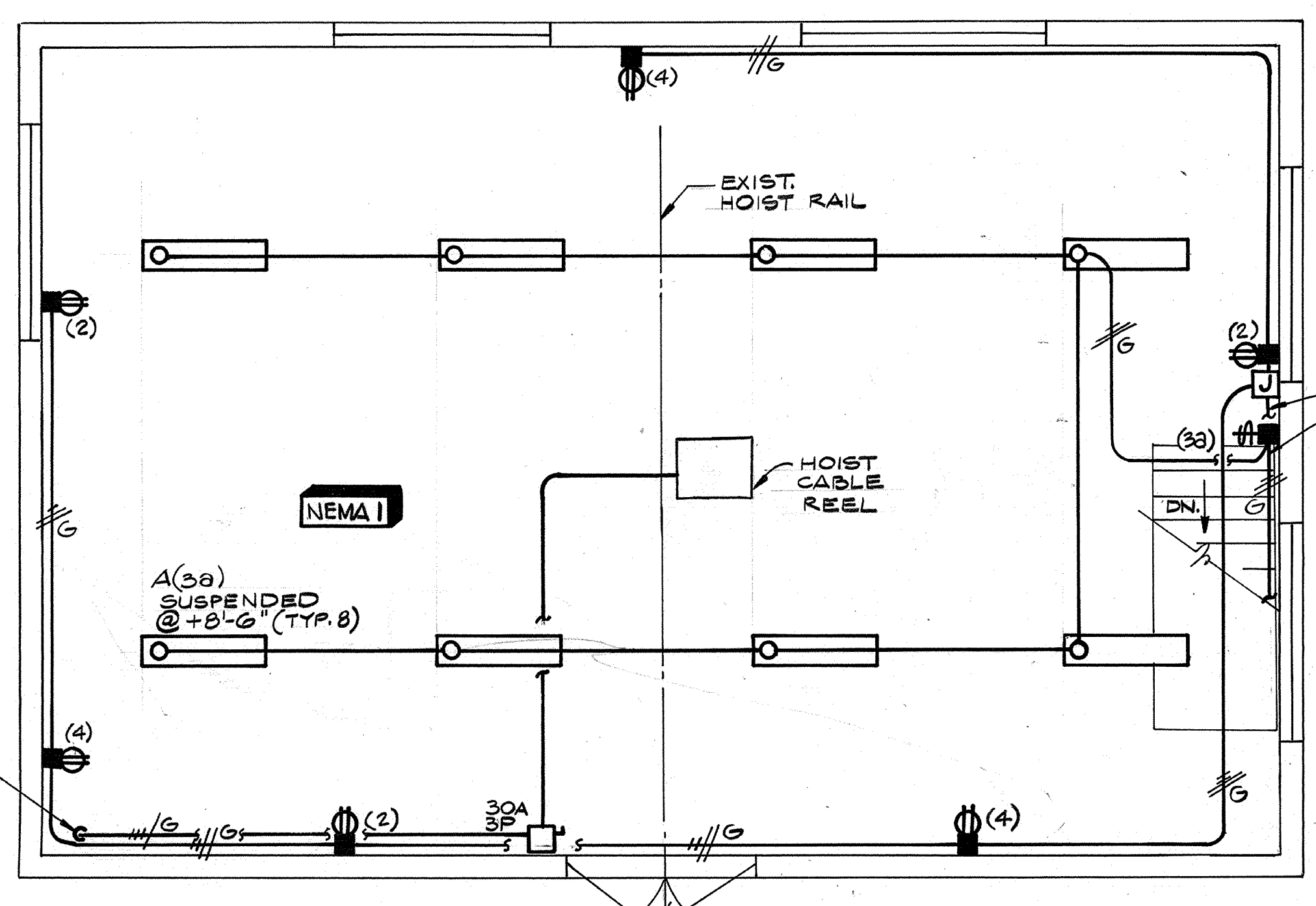
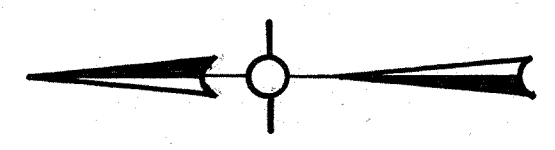
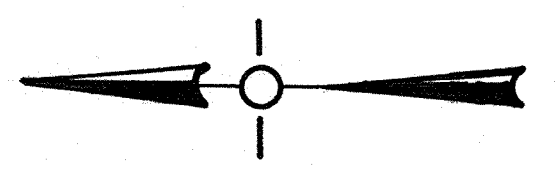
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MSB15

MSB 21
MSB 22

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A3A	
A4A	

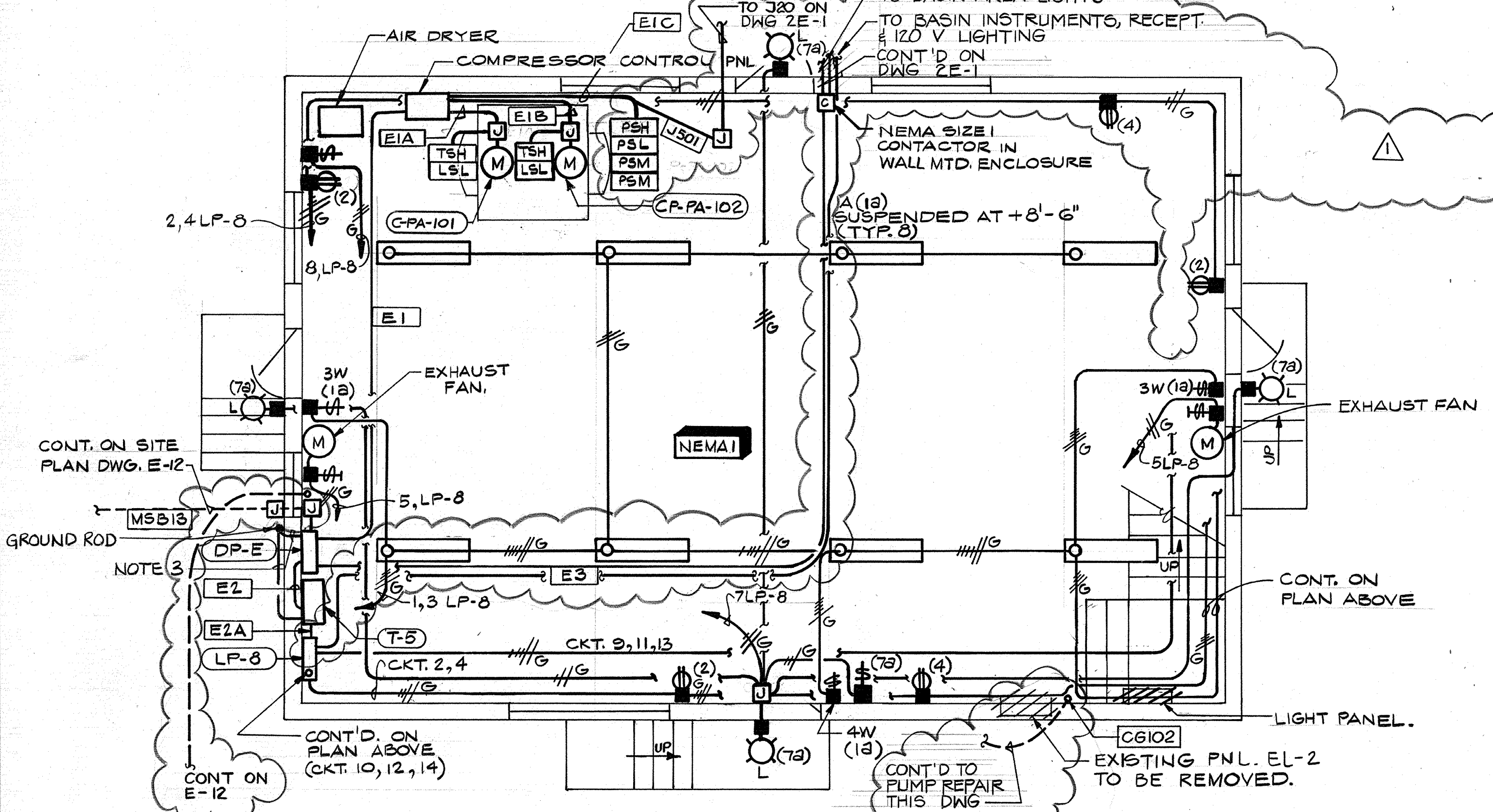
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111335
 PROJECT MANAGER Approved by: Date:
 PROJECT ENGINEER Approved by: Date:
 PLUMBING Approved by: Date:
 HVAC Approved by: Date:
 INSTRUMENTATION Approved by: Date:
 ELECTRICAL Approved by: Date:
 STRUCTURAL Approved by: Date:
 ARCHITECTURAL Approved by: Date:



CHEMICAL AND EQUIPMENT BLDG.

UPPER LEVEL



CHEMICAL AND EQUIPMENT BLDG.

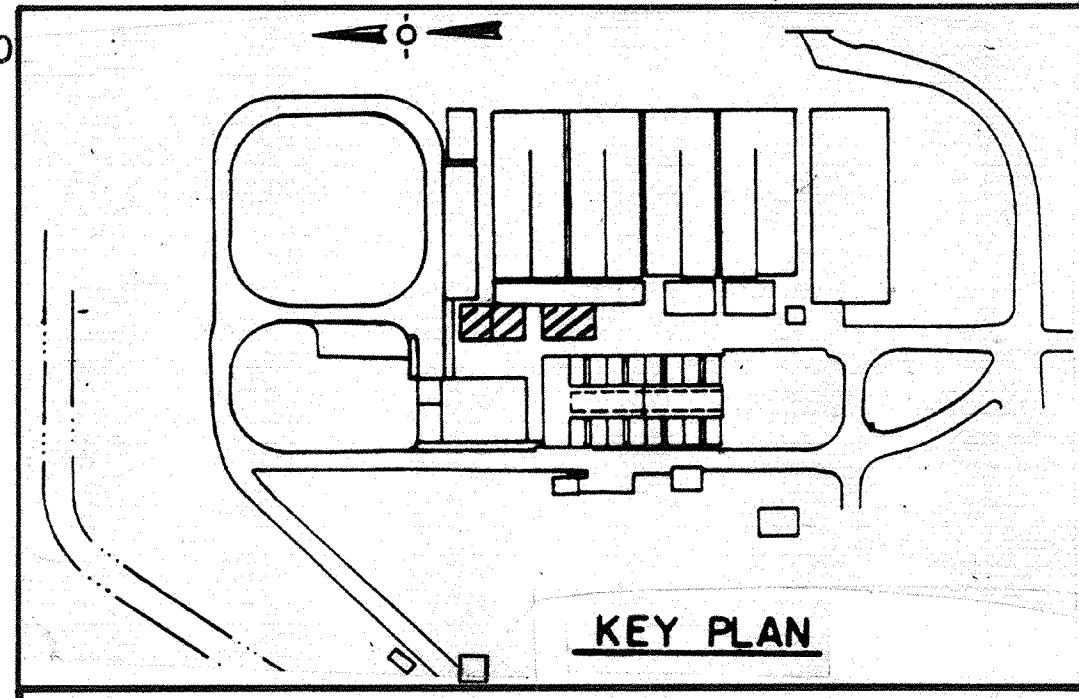
LOWER LEVEL

PUMP REPAIR SHOP

NOTES:

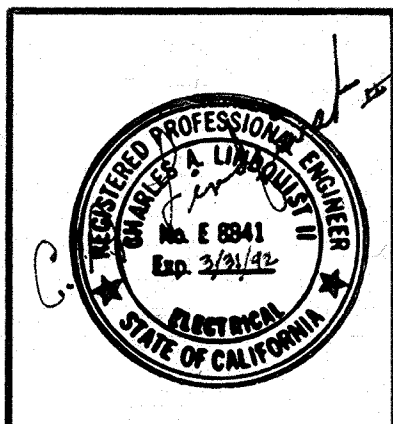
1. ALL EXISTING ELECTRICAL WORK INCLUDING PANELS, WIRES, LIGHT FIXTURES & ACCESSORIES, EXPOSED CONDUIT, RECEPTACLES, MOTOR CONTROLS, OUTSIDE BUILDING LIGHTS, WIREWAYS, DISCONNECT SWITCHES, JUNCTION BOXES, ETC., IN ALL BUILDINGS ON THIS SHEET ARE TO BE REMOVED WITH THE EXCEPTION OF CONTROLS FOR THE ELECTRIC HOISTS. (SEE ALSO NOTE 2)
2. CROSSHATCHING INDICATES MAJOR ELECTRICAL EQUIPMENT TO BE REMOVED FROM SERVICE UNDER THIS CONTRACT. REFERENCE SPEC. SECTION 16010 MODIFICATIONS & REMOVALS FOR ADDITIONAL DETAILS. (ALSO SEE NOTE)
3. #4 BARE COPPER IN 3/4" SCH. 80 PVC GROUNDING ELECTRODE CONDUCTOR. CONNECT TO TRANSFORMER NEUTRAL AND DP GROUND BUS PER SPEC SECTION 16005. GROUND TO BLDG. METALLIC WATER PIPE PER SECTION 16005.

AS-BUILT
 Pjm 5/10/91
 SIGNATURE



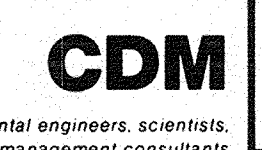
CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988
**CHEMICAL & EQUIPMENT BUILDING
 AND PUMP REPAIR SHOP
 POWER & LIGHTING**



Date	1/23/91	Revision	Δ REVISED FOR THE RECORD
Designed by	R.R.R.	Date	SEPT. 1988
Drawn by	V.M.	Checked by	GKK
Approved by	CAL	Scale	1/4" = 1'-0"

CAMP DRESSER & MCKEE INC.
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SHEET NO.
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111335

PROJECT MANAGER Approved by: _____ Date: _____

PROJECT ENGINEER Approved by: _____ Date: _____

PLUMBING Approved by: _____ Date: _____

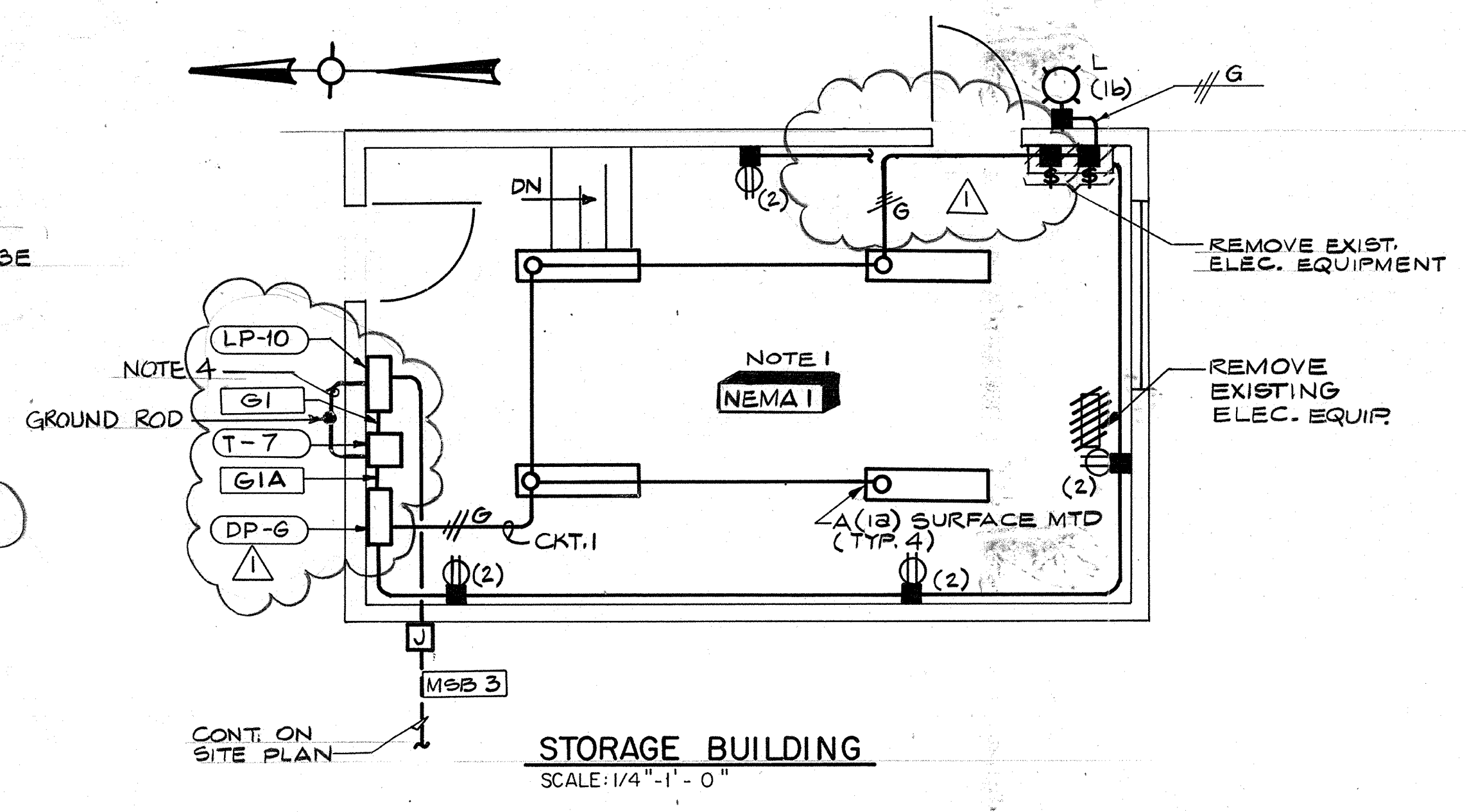
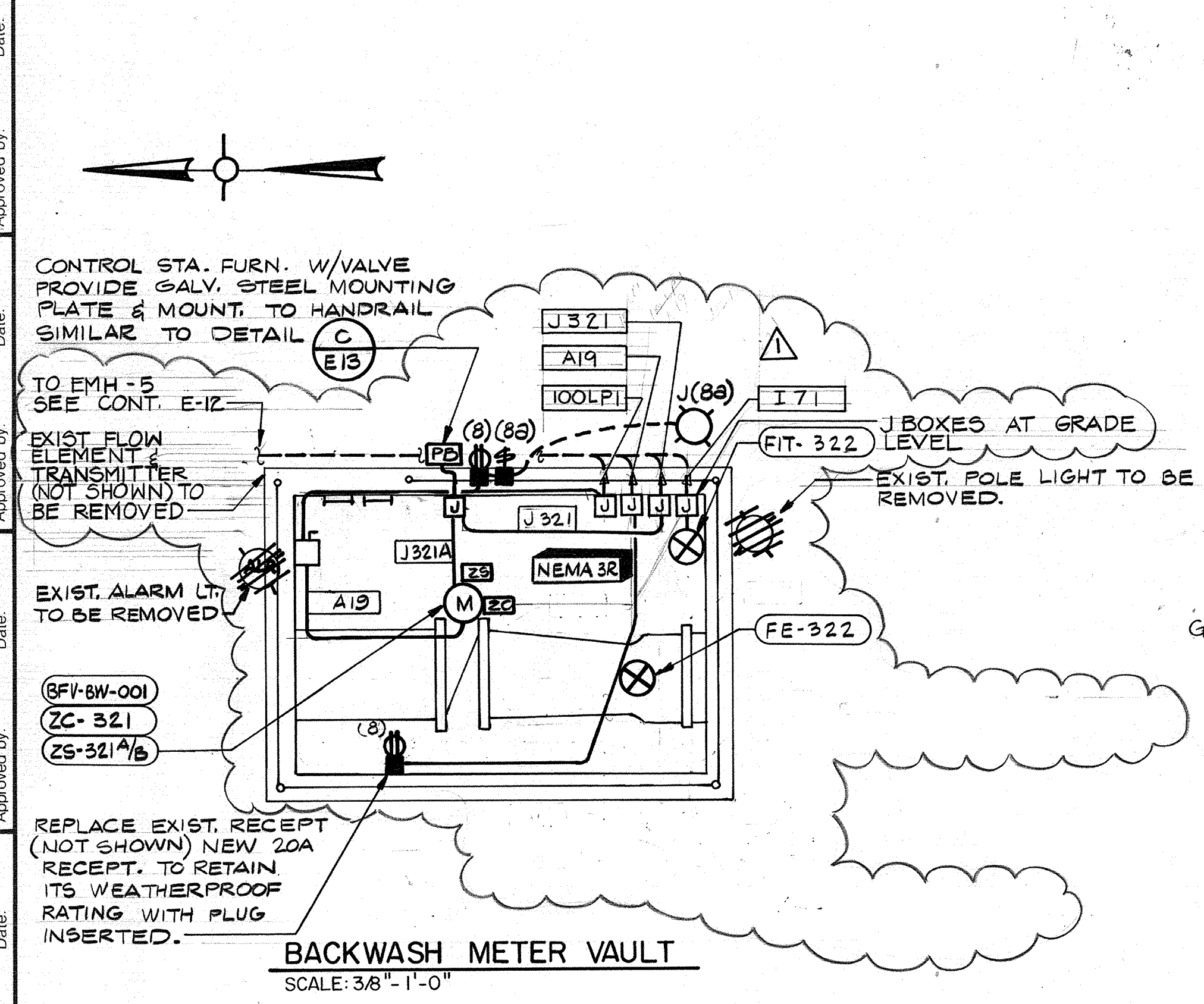
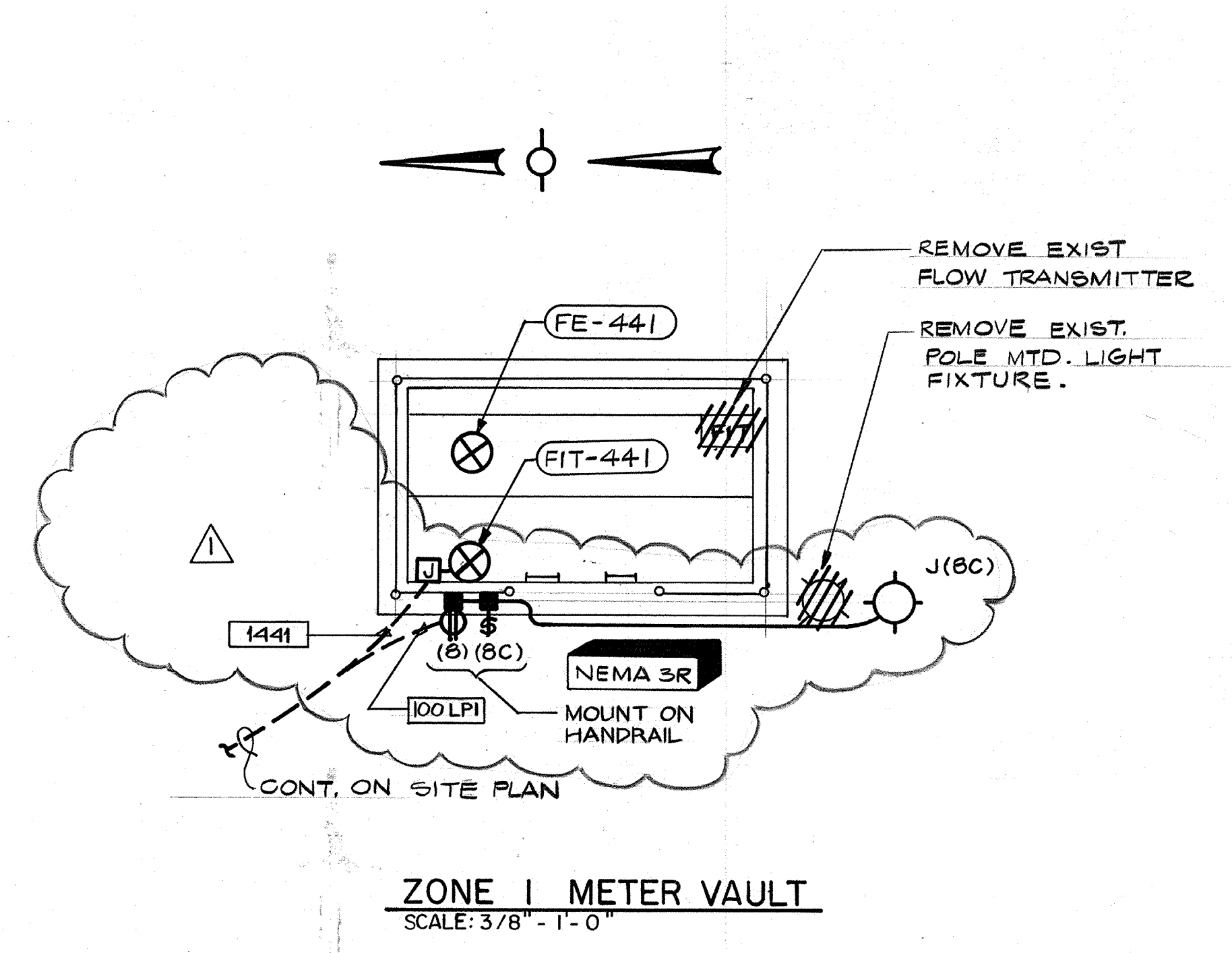
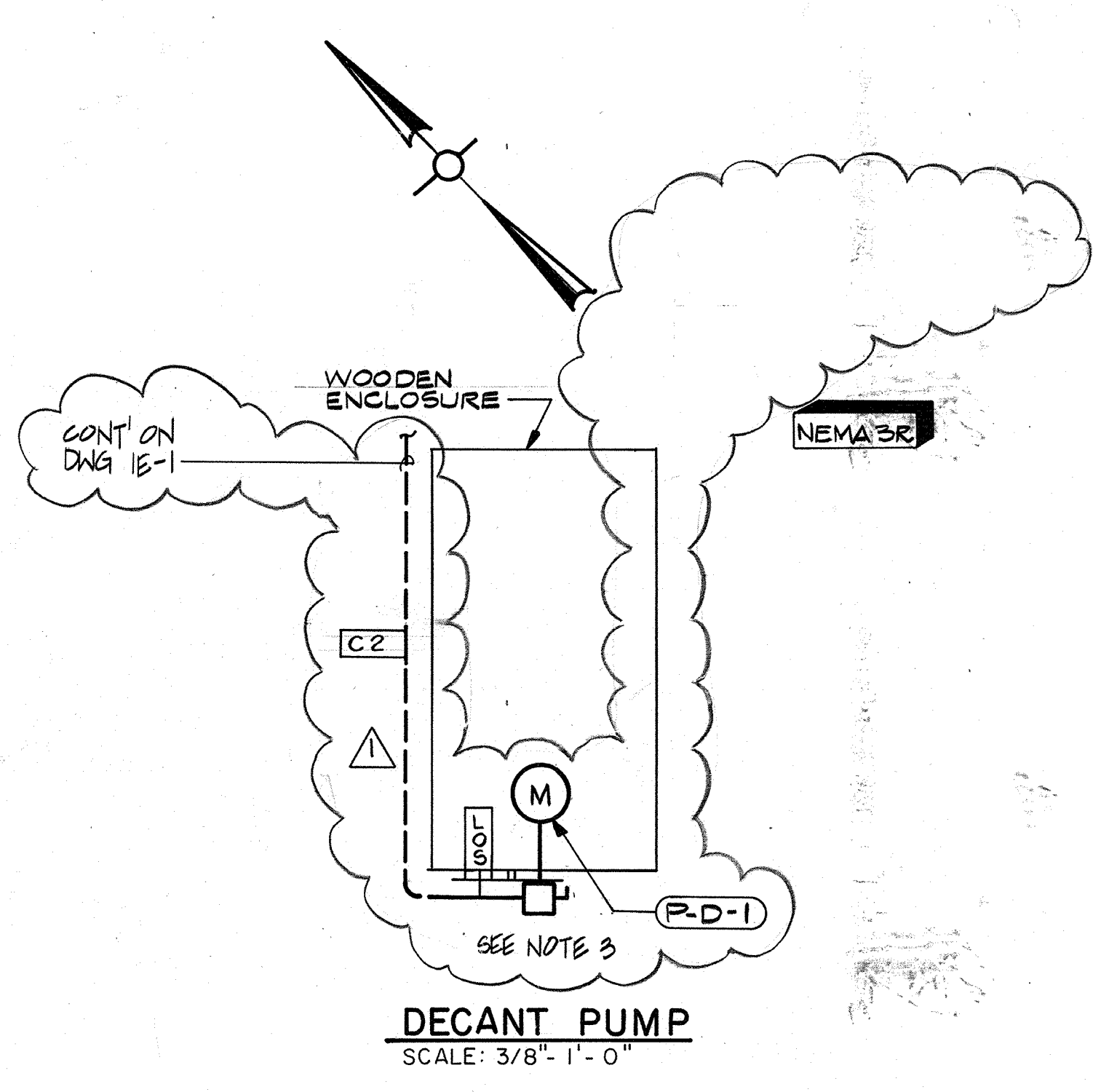
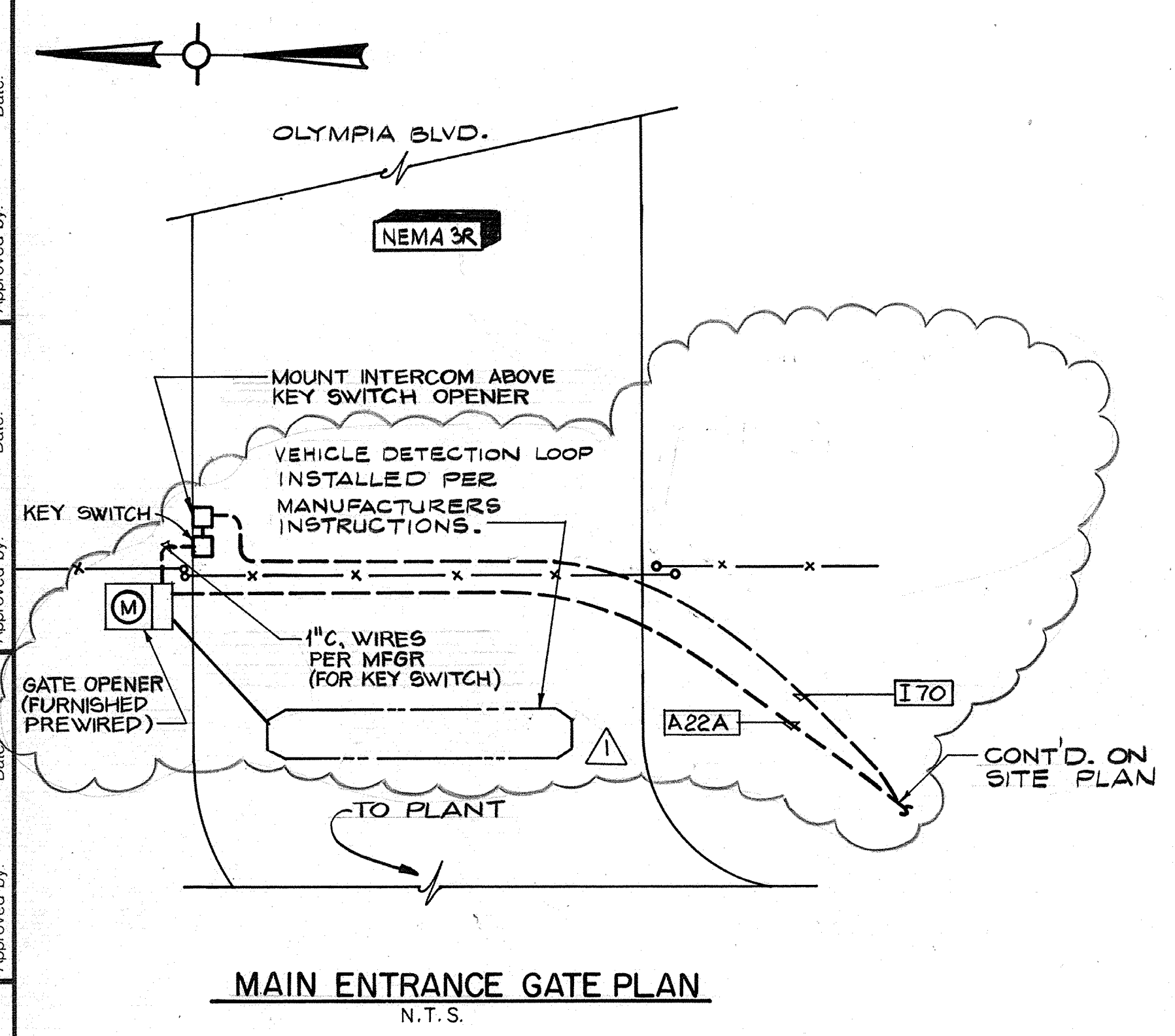
HVAC Approved by: _____ Date: _____

INSTRUMENTATION Approved by: _____ Date: _____

ELECTRICAL Approved by: _____ Date: _____

STRUCTURAL Approved by: _____ Date: _____

ARCHITECTURAL Approved by: _____ Date: _____

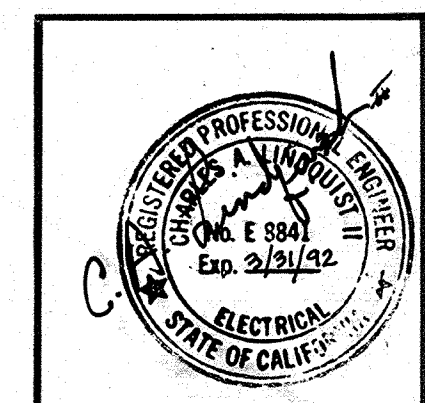
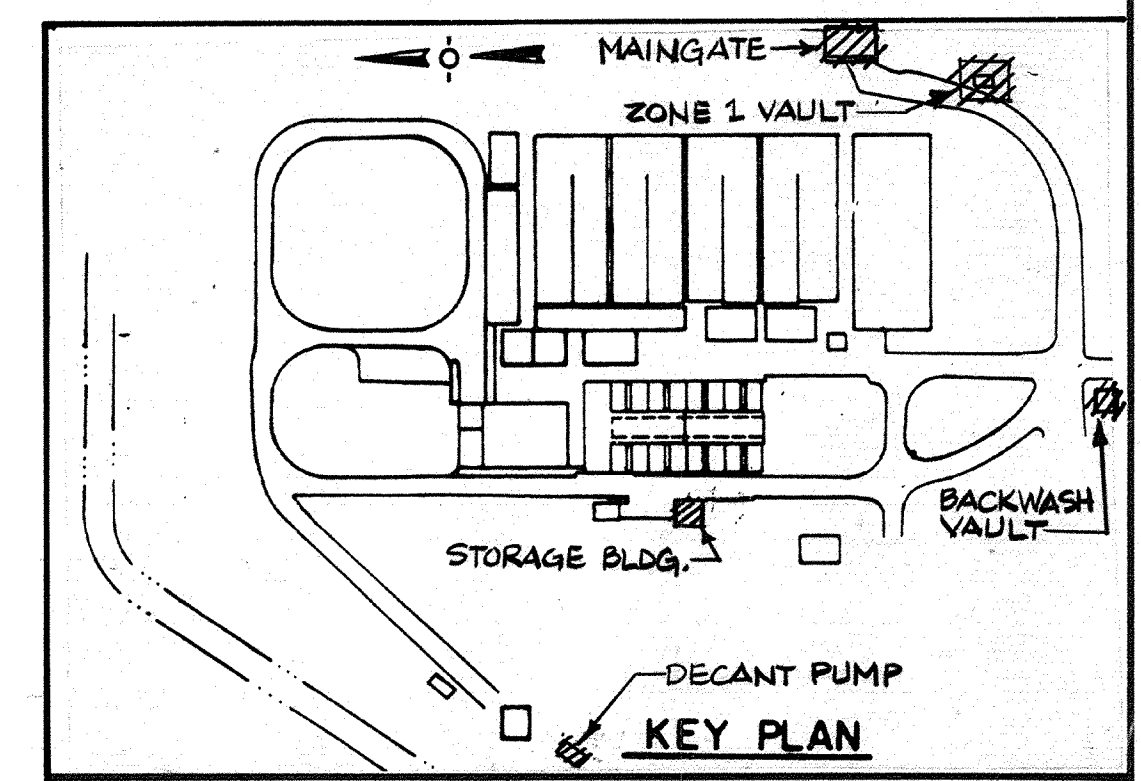


- NOTES:**
1. ALL EXISTING LIGHTING FIXTURES (INCLUDING OUTDOOR LIGHTS) RECEPTACLES AND ASSOCIATED SWITCHES ETC. AS WELL AS MOTOR CONTROLS, WIRING & EXPOSED CONDUITS TO BE REMOVED FROM STORAGE BLDG. REFER TO SPECS FOR DEMOLITION DETAILS.
 2. CROSSHATCHING INDICATES MAJOR ELECTRICAL EQUIP. TO BE REMOVED FROM SERVICE UNDER THIS CONTRACT. REFERENCE SPEC. SECTION 16010 MODIFICATION & REMOVALS FOR ADDITIONAL DETAILS. SEE ALSO NOTE 1.
 3. PROVIDE NEW EQUIP. DISCONNECT STAND (DETAIL A-13) IN FRONT OF EXISTING WOODEN ENCLOSURE.
 4. #4 BARE COPPER IN 3/4" SCHEDULE 80 PVC GROUNDING ELECTRODE CONDUCTOR. CONNECT TO TRANSFORMER NEUTRAL AND DP GROUND BUS PER SPEC SECTION 16005. GROUND TO BUILDING METALIC WATER PIPE PER SPEC SECTION 16005.

AS-BUILT

Pjm 5/10/91

SIGNATURE DATE



1/28/91	REVISOR	REVISION
Date	Ch'k'd	Revision
Designed by: <u>R.R.R.</u>	Drawn by: <u>V.M.</u>	Date: <u>SEPT. 1988</u>
Checked by: <u>GKK</u>	Approved by: <u>CAL</u>	Scale: <u>AS SHOWN</u>

CITY OF PITTSBURG, CALIFORNIA

WATER TREATMENT PLANT EXPANSION 1988

MISCELLANEOUS PLANS

CAMP DRESSER & MCKEE INC.

710 South Broadway
Walnut Creek, CA 94596

CDM
environmental engineers, scientists,
planners, & management consultants

SHEET NO. **7E-3**

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