



SOUTH SAN LUIS OBISPO COUNTY SANITATION DISTRICT

Post Office Box 339, Oceano, California 93475-0339
1600 Aloha Oceano, California 93445-9735
Telephone (805) 489-6666 FAX (805) 489-2765
www.sslocsd.org

South San Luis Obispo County Sanitation District Request for Proposals (RFP)

Primary Clarifier No. 2 Rehabilitation and Control Box Valve Replacement Project

INSTRUCTIONS TO PROPOSERS

A. Receipt and Opening of Proposals

The South San Luis Obispo County Sanitation District (District) invites qualified firms to submit sealed proposals for professional engineering services for the Primary Clarifier No. 2 Rehabilitation and Control Box Valve Replacement Project. Proposals will be received at the District's office by **2:00 PM PST on July 8, 2019**, located at:

South San Luis Obispo County Sanitation District
1600 Aloha Place/P.O. Box 339
Oceano, CA 93475

An envelope containing one (1) portable drive with pdf and three (3) copies of the proposal must be sealed and clearly labeled "Primary Clarifier No. 2 Rehabilitation and Control Box Valve Replacement Project". FAX submittals will not be accepted.

Proposals will not be opened publicly. Any proposal received after the established closing date and time will not be accepted and will be returned to the proposer unopened.

Proposals may be withdrawn upon written request at any time prior to the established closing date and time. The proposer or the proposer's authorized agent must sign such request.

B. Non-Mandatory Pre-Proposal Meeting

A non-mandatory pre-proposal meeting for this Request for Proposals (RFP) will be held on June 17, 2019, at 1:00 PM in the conference room, located at:

South San Luis Obispo County Sanitation District
1600 Aloha Place/P.O. Box 339
Oceano, CA 93475

C. Examination of Requirements

Each proposer must carefully examine the requirements of the RFP. Each proposer shall meet all of the terms and conditions of the RFP. By submitting a proposal, the proposer acknowledges acceptance of all provisions of the RFP.

D. Communications

All timely requests for information submitted in writing will receive a written response from the District. Any oral communication shall not be binding on the District. All requests for information must be provided in writing and directed to the District's Plant Superintendent: Mychal Jones at mychal@sslocsd.us. To be considered, all requests for information must be received by 2:00 PM PST on June 24, 2019. Responses and addenda will be posted on the District's website by 2:00 PM PST on July 1, 2019.

DESCRIPTION OF WORK

A. Project Background

The South San Luis Obispo County Sanitation District owns and operates a wastewater treatment facility (WWTP) in Oceano, California. The WWTP is permitted under National Pollutant Discharge Elimination System (NPDES) No. CA0048003/Waste Discharge Requirements Order No. R3-2019-0002. The existing plant uses mechanically cleaned bar screens, grit removal, primary clarifiers, fixed film reactor (FFR), secondary clarifier, and chlorine contact tank to provide disinfection and treat wastewater. The plant is designed and permitted to treat a peak dry weather flow of 5.0 million gallons per day (MGD).

SSLOCSD Water Pollution Control Plant Improvement Stage 2 & 3 Plans and WWTP Plant Flow Schematic are included as **Exhibit 1** and **Exhibit 2**, respectively.

Proposers should have previous experience in working with Special Districts as well as expertise in design and construction administration of Wastewater Treatment Plants.

B. Scope of Work

The minimum scope of work for the Project is described below. Proposers are encouraged to review the requirements of the RFP, examine reference documents and develop a scope of services suited to the Project. Additional services may be considered but should be presented separately as optional tasks. The design shall address at minimum the Primary Clarifier Rehabilitation and Control Box Valve Replacement Project recommendations below as follows:

GENERAL CONSTRUCTION SCOPE FOR DESIGN CONSIDERATION

- Mob/Demob/Clean-up
- Disassemble and remove existing clarifier drive unit
- Remove existing clarifier walkway bridge
- Provide and install manufacturer fabricated stainless steel walkway bridge with fiberglass walkway grating and aluminum handrails
- Remove existing clarifier channel iron, scum sweeper, and clarifier scum hopper
- Provide and install manufacturer fabricated rake arms, inner, middle blades, and stainless steel squeegees
- Provide and install new manufacturer fabricated channel iron, scum sweeper, hopper and beaches on the scum box (all stainless)

- Provide and install new drive (rated at 42,000 ft. lbs.)
- All assembly fasteners shall be stainless steel
- Provide for the rebalance of the clarifier drive arms
- Disposal of the existing, removed clarifier components
- All required labor at the local prevailing wage rate
- All required crane services to uninstall the existing clarifier components and install new clarifier components
- All required electrical services for installation of the new conduit along the walkway and termination of wires to the new drive and motor units
- All required plumbing services for installation of the new plant PVC schedule 80 reclaim water line and sprayer along the walkway
- Oil required to fill the new drive unit
- Start up, testing and leveling of the new drive unit
- Provide for functional testing and demonstrating by vendor representative
- Removal and disposal of existing control box valve
- Installation of new District furnished control box valve with new stainless steel fasteners and gaskets

GENERAL DESIGN SCOPE

Bid and oversee construction of the Primary Clarifier No. 2 Rehabilitation and Control Box Valve Replacement Project. The consultant will provide an engineer’s opinion of probable construction cost. The construction bid package shall meet all requirements of the District for the project. The consultant will prepare technical specifications. The consultant shall provide “front end” specifications which include bid forms, standard provisions and the like. The consultant will prepare responses to bidder technical questions. The consultant will assist the District in examining the bids and determining the lowest responsive, responsible bidder which will be recommended to the Board of Directors for approval and award. The consultant will plan a preconstruction meeting with District and contractor. The consultant will provide contract support. During construction of the project, consultant shall provide inspection and administrative services including but not limited to material submittal approval, pay estimate preparation, change order oversight, inspection documentation, and final walkthrough and punch list.

C. Project Schedule

The anticipated project schedule is summarized below. The dates are tentative and subject to change, based on permitting conditions, consultation with agencies, and other impacts that cannot be assessed at this time.

Issue RFP	June 3, 2019
Non-Mandatory Preproposal Meeting	2:00 PM June 17, 2019
Written Questions Due	June 24, 2019
Responses to Questions Posted	July 1, 2019
Proposals Due	2:00 PM July 8, 2019
Consultant Selection / Board Approval	July 17, 2019
Notice to Proceed	July 18, 2019
Completion of Services	January 31, 2020

GENERAL TERMS AND CONDITIONS

A. Proposal Requirements

1. **Content:** The proposal shall be concise, well organized and demonstrate the proposer's understanding of the Project and their applicable qualifications and experience. The proposal shall be limited to twenty (20) pages, exclusive of resumes, cover letter, graphics, and covers. Proposals should include the minimum Proposal Content as described in Section IV. Any additional materials that will support your proposal may be included. However, if they do not directly address the stated requirements, please include them in a separate appendix. The District will consider all material submitted, but concentrate on that which addresses the District's Project requirements.
2. **Subconsultants:** Identify all subconsultants to be used during the term of the project and provide a list of responsible staff and their qualifications. The Prime Consultant in the proposal shall be responsible for a minimum of 50% of the Project work.
3. **Insurance:** The consultant shall obtain at their own cost an insurance policy meeting the District's requirements as described in the Standard Agreement (Appendix A).
4. **Consultant's compensation:** The Consultant's fee shall include all items described in this scope of work, with optional items (if applicable) shown separately. Include a breakdown of professionals to be assigned to the tasks, the estimated hours for each task per professional, the hourly rates for each professional assigned, subtotals of the man-hour costs for each task, subconsultant costs, other direct costs to be billed, and project total costs.
5. **Commitment:** The proposal shall be signed by the individual with power to bind the company in its proposal. Parts or the entire proposal will be the basis for the contract for the work.
6. **Statement of Contract Disqualifications:** Consultant shall include a signed statement of whether it or any of its employees or officers who have a proprietary interest in it has ever been disqualified, removed or otherwise prevented from proposing on or completing a municipal government project for any reason. If so, provide a description and explanation of the circumstances.
7. **Exceptions:** Consultant shall certify that they take no exceptions to this RFP, including but not limited to the provisions of the District's Standard Agreement (Appendix A). If the Consultant takes any exceptions, identify the specific portion and provide a full explanation.

B. Contract Award and Execution

1. The District reserves the right to reject any or all responses to this RFP, waive any insubstantial irregularities in this RFP or any proposal, to negotiate with all qualified sources, or to cancel in part or in its entirety this RFP.
2. If a contract cannot be negotiated with a selected consultant for any reason, the District reserves the right to select the next most qualified proposer.
3. The District reserves discretion to determine the ability, competency and responsibility of the Consultants. Before award, Consultants may be required to furnish evidence of capability to adequately perform the work in a timely manner as deemed necessary by the District.
4. The District reserves the right to interview proposers as needed.
5. The Consultant shall provide proof of insurance in the coverages and amounts specified in the Standard Agreement (included in the appendix) within 5 calendar days after notice of selection as a precondition to contract execution and issuance of a Notice to Proceed.
6. Even if selected, the District reserves the right to terminate any agreement reached with the selected firm at any time and in an appropriate manner.

PROPOSAL CONTENT AND SELECTION PROCESS

A. Proposal Content

1. Cover letter/Executive Summary
2. Experience and References
3. Project Organization and Key Personnel
4. Project Understanding
5. Proposed Scope of Work
6. Proposed Fee
7. Acknowledgement, Exceptions, Disqualifications, Insurance Cert

B. Proposal Evaluation and Consultant Selection

Upon evaluation of the Proposals, the District will determine the top firm(s) they feel are most qualified for this Project based on the following criteria:

Criteria	Maximum Points
Understanding of the site and work to be done	25
Experience with similar kinds of work	30
Qualifications of staff and availability of Consultant	25
Demonstrated technical ability	20
Total	100

Attachments:

Exhibit 1 – SSLOCSD Water Pollution Control Plant Improvement Stage 2 & 3 Plans

Exhibit 2 – Plant Flow Schematic



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Exhibit

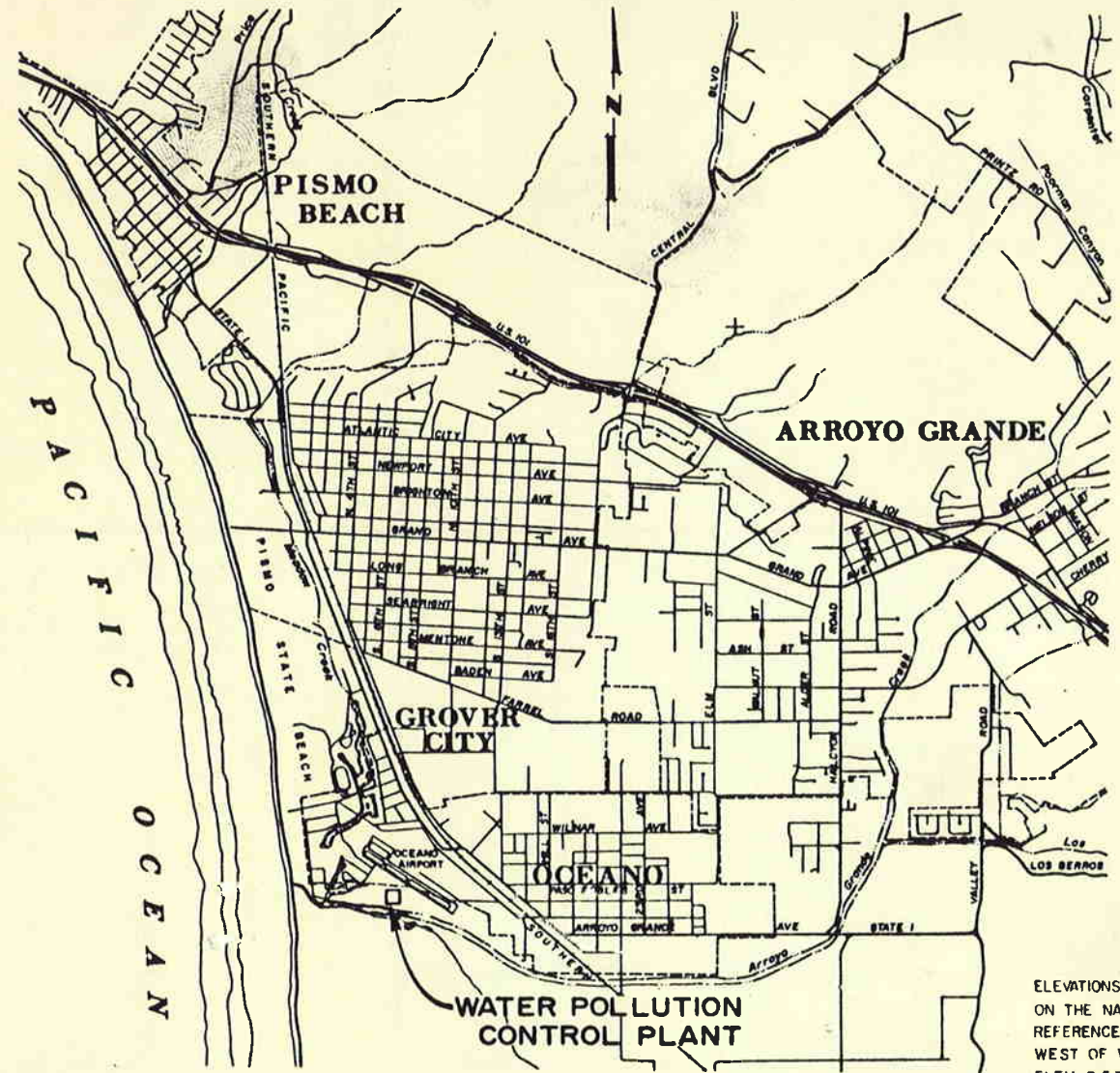
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26-1

SO. SAN LUIS OBISPO CO. SANITATION DISTRICT SAN LUIS OBISPO COUNTY, CALIFORNIA

WASTEWATER WORKS IMPROVEMENTS

PLANS FOR THE CONSTRUCTION OF WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3



PROJECT LOCATION MAP



DATUM

ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM. REFERENCE BENCH MARK MON Y-532 (27 FEET WEST OF WIND SOCK POLE AT OLD HANGER) ELEV. 8 573. PLANT PROJECT REFERENCE BENCH MARK IS A "+" CUT IN THE NORTHEAST CORNER OF THE CONTROL BUILDING ENTRANCE SLAB (SEE SHT. 9) ELEV 10 03.

INDEX TO PLANS

- 1 - PROJECT LOCATION MAP AND - INDEX TO PLANS
- 2 - ABBREVIATIONS AND LEGENDS
- 3 - WATER POLLUTION CONTROL PLANT - DESIGN ANALYSIS
- 4 - BASIC FLOW DIAGRAM
- 5 - SLUDGE AND SCUM FLOW DIAGRAM
- 6 - HYDRAULIC PROFILE
- 7 - SITE PLAN
- 8 - PLANT LAYOUT - EXISTING CONDITION
- 9 - PLANT LAYOUT
- 10 - EXISTING CONTROL BOX MODIFICATIONS - GENERAL DETAILS - PLANS AND DETAILS
- 11 - STRUCTURAL DETAILS - PLANS AND SECTIONS
- 12 - PRIMARY CLARIFIER NO.2 - GENERAL - PLANS
- 13 - SECTIONS AND DETAILS
- 14 - STRUCTURAL - TYPICAL WALL SECTION - AND CENTER PIER DETAILS
- 15 - EFFLUENT BOX AND PUMP SLAB DETAILS
- 16 - EXISTING SLUDGE DIGESTER - EXISTING CONDITION
- 17 - MODIFICATIONS - PRIMARY SLUDGE DIGESTER - PLANS AND SECTIONS
- 18 - MISCELLANEOUS DETAILS
- 19 - SECONDARY DIGESTER - GENERAL - ROOF PLAN AND SECTIONAL PLAN
- 20 SECONDARY DIGESTER - GENERAL - SECTIONS AND DETAILS
- 21 - PLANS, SECTIONS AND DETAILS
- 22 - MISCELLANEOUS DETAILS
- 23 EXISTING DIGESTER HEAT. AND MIX. BLDG. - MODIFICATIONS
- 24 MISCELLANEOUS GENERAL DETAILS SHEET NO.1
- 25 - NO. 2
- 26 MISCELLANEOUS STRUCTURAL DETAILS
- 27 EXISTING PLANT PROCESS PIPEWORK - YARD PIPING LAYOUT
- 28 PLANT PROCESS PIPEWORK - YARD PIPING LAYOUT
- 29 - SLUDGE AND SCUM HANDLING - SCHEMATIC
- 30 YARD PIPING CONNECTIONS AND - FIXED FILM REACTOR CONTROL BOX SLIDE GATE DETAILS
- 31 SITE WORK - GRADING, PAVING AND FENCING
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- 36 - ELEMENTARY DIAGRAMS - E-4
- 37 - MISCELLANEOUS DETAILS AND PANELS - E-5
- 38 INSTRUMENTATION GRAPHIC PANEL MODIFICATION - I-1
- 39 FERROUS CHLORIDE STORAGE AND FEEDING SYSTEM AT EXISTING SLUDGE THICKENER - GENERAL
- 40 - STRUCTURAL

KENNEDY / JENKS / CHILTON
CONSULTING ENGINEERS
PALO ALTO, CALIFORNIA

1990



	REFERENCE INFORMATION AND NOTES:	GRAPHIC SCALES (in Feet)	DESIGNED DAB	SO. SAN LUIS OBISPO CO. SANITATION DISTRICT SAN LUIS OBISPO COUNTY, CALIFORNIA WASTEWATER WORKS IMPROVEMENTS	WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3	SCALE AS NOTED
			DRAWN JKJ	Kennedy/Jenks/Chilton Palo Alto	PROJECT LOCATION MAP AND INDEX TO PLANS	JOB NO 895119.00
			CHECKED RHC	APPROVED: John H. Jenks R.E. NO. 8120		SHEET 1
			DATE FEB 1989	APPROVED: John L. Wallace DISTRICT ADMINISTRATOR		OF 40

REFER TO TRACING FOR LATEST REVISION

GENERAL ABBREVIATIONS

ABD.	ABANDON (ED)	F.R.P.	FIBERGLASS REINF. PLASTIC
ABAN.	ABANDON (-ED)	FH	FLATHEAD
ADJ.	ADJUST (-ED, -MENT)	F.B.	FLAT BAR
AL., ALUM.	ALUMINUM	F.D.	FLOOR DRAIN
A.B.	ANCHOR BOLT (-S)	F.L.	FLOW LINE
AND	AND	FT.,'	FOOT, FEET
∠	ANGLE	G.P.D.	GALLONS PER DAY
ANC.	ANCHOR	G.P.H.	GALLONS PER HOUR
APPR.	APPROVED	G.P.M.	GALLONS PER MINUTE
APPROX.	APPROXIMATE (-LY)	GALV.	GALVANIZED (-D)
A/C	ASPHALT CONCRETE	G.S.	GALVANIZED STEEL
AT	AT	HEAT	HEATING
AUX.	AUXILIARY	H.P.	HIGH POINT
AVE.	AVENUE	HORIZ.	HORIZONTAL
A.D.W.F.	AVERAGE DRY WEATHER FLOW	IN.,"	INCH (-ES)
B.M.	BENCH MARK	I.D.	INSIDE DIAMETER
B.F.	BLIND FLANGE	INV.	INVERT
BOT.	BOTTOM	LG.	LONG
BLDG.	BUILDING	L.P.	LOW POINT
C.I.	CAST IRON	M.B.	MACHINE BOLT
CL	CENTERLINE	M.S.	MACHINE SCREW
CC	CENTER TO CENTER	MFR.	MANUFACTURER
CHANNEL	CHANNEL	MAX.	MAXIMUM
CHKD.	CHECKED	M.G.D.	MILLIONS OF GALLONS PER DAY
CIRC.	CIRCULAR (-R, -TION)	MIN.	MINIMUM
CLR., CLEAR.	CLEAR (-ANCE)	MIX.	MIXING
CONC.	CONCRETE	NOM.	NOMINAL
CONN.	CONNECT (-ION, -S)	NORM.	NORMAL
CONST.	CONSTRUCT (-ION)	N	NORTH
CONT.	CONTINU (-ED, -OUS)	N.E.	NORTHEAST
COURT	COURT	N.W.	NORTHWEST
CUB.	CUBIC	N.T.S.	NOT TO SCALE
DEG.	DEGREE (-S)	N.W.L.	NORMAL WATER LEVEL (LINE)
DET.	DETAIL (-S)	NO., #	NUMBER
DIA.	DIAMETER	O.D.	OUTSIDE DIAMETER
DIM.	DIMENSION (-S)	PART.	PARTIAL
DWG.	DRAWING (-S)	PVMT.	PAV (-EMENT, -ING)
D.T.	DUCTILE IRON	P.W.W.F.	PEAK WET WEATHER FLOW
E	EAST	P.H.	PHILLIPS HEAD
ECC.	ECCENTRIC	PC.	PIECE (-S)
E.P.	EDGE OF PAVEMENT	PL.	PLACE
ELEC.	ELECTRIC (-AL)	PL.,	PLATE (-S)
EL., ELEV.	ELEVATION	PL.,	PLUS OR MINUS
EQ.	EQUAL (-LY)	P.V.C.	POLYVINYL CHLORIDE
EQUIP.	EQUIPMENT		
EX., EXIST.	EXISTING		

PROJ.	PROJECT (-ION)	SCHED.	SCHEDULE
P.L.	PROPERTY LINE	SECONDS	SECONDS
R., RAD.	RADIUS	SECT.	SECTION (-S)
RECIRC.	RECIRCULATE (-E, -ION)	SHT.	SHEET
RED.	REDUCE (-R)	S	SLOPE
REINF.	REINFORCE (-D, -ED, -ING)	SND	SIDE WALL DIMENSION
REQD.	REQUIRED	S	SOUTH
REV.	REVISION	S.E.	SOUTHEAST
		S.W.	SOUTHWEST
		SPA.	SPAC (-E, -ED, -ES, -ING)
		SPEC.	SPECIFICATION (-S)
		S.S.	STAINLESS STEEL
		STD.	STANDARD
		STA.	STATION
		STL.	STEEL
		STIFF.	STIFFENER
		SUB.	SUBMIT (-S, -TAL, -TED)
		TBM	TEMPORARY BENCH MARK
		T.C., T.O.C.	TOP OF CONCRETE
		T.P.	TOP OF PAVEMENT
		TOPO.	TOPOGRAPHY
		TR.	TREAD (-S)
		TYP.	TYPICAL
		U.G.	UNDERGROUND
		V.G.E.	UNDERGROUND ELECTRIC
		VERT.	VERTICAL
		W.S.	WELDED STEEL
		W.W.M.	WELDED WIRE MESH
		W	WEST
		W	WITH
		YD.	YARD (-S)

PIPE LININGS, COATINGS & JOINTS

C.C.	Cement Mortar Coated
C.L.	Cement Mortar Lined
C.L/C	Cement Mortar Lined & Coated
E.C.	Epoxy Coated
E.L.	Epoxy Lined
E.L/C	Epoxy Lined & Coated
GL	Glass Lined
I.C.	Insulation Coated
M.J.	Mechanical Joint
P.C.	Plastic Coated
S.R.G.	Single Rubber Gasket Joint
T/G	Tongue & Groove Joint

VALVES AND ACCESSORIES

B.C.V.	Ball Check Valve
B.V.	Ball Valve
B.C.	Bolt on Coupling
B.F.V.	Butterfly Valve
C.V.	Check Valve
C.O.	Cleanout
F.C.	Flexible Coupling (Rubber)
G.V.	Gate Valve
G.C.	Grooved Coupling
H/B	Hose Bibb
P.D.V.	Plug Down Valve
P.V.	Plug Valve
S.G.	Sluice Gate
S.V.	Solenoid Valve
T.C.V.	Two Element Check Valve

PIPE TYPES

A.B.S.	Acrylonitrile-Butadiene-Styrene Pipe
A.B.C.M.	Asbestos-Banded Corrugated Metal Pipe
A.C.	Asbestos Cement Pipe
AL	Aluminum Pipe
B.I.	Black Iron Pipe
B.S.	Black Steel Pipe
C.I.	Cast Iron Pipe
C.I.S.	Cast Iron Soil Pipe
C.P.V.C.	Chlorinated Polyvinyl Chloride Pipe
C.C.	Concrete Cylinder Pipe
CU	Copper Pipe
CM	Corrugated Metal Pipe
DI	Ductile Iron Pipe
F.R.P.	Fiberglass Reinforced Plastic Pipe
GI	Galvanized Iron Pipe
G.S.	Galvanized Steel Pipe
G.W.I.	Genuine Wrought Iron Pipe
PE	Polyethylene Pipe
P.V.C.	Polyvinyl Chloride Pipe
RC	Reinforced Concrete Pipe
R.P.M.	Reinforced Plastic Mortar Pipe
V.C.	Vitrified Clay Pipe
W.S.	Welded Steel Pipe

PIPE CONTENT DESIGNATIONS

EXISTING	CONTENT	ABBREVIATION	NEW
	Air	A	
	Air (Contaminated)	CA	
	Air (Fresh)	FA	
	Air (Pressurized)	PA	
	Carbide	CE	
	Chlorine Gas	CLG	
	Chlorine Liquid	CLL	
	Chlorine Solution	CLS	
	Drain	D	
	Electrical Conduit	EL	
	Ferric Chloride	FC	
	Filtrate	FI	
	Fuel Oil	FO	
	Gas	G	
	Gas (Natural)	NG	
	Gas (Propane)	PG	
	Gas (Sludge)	SG	
	Gasoline	GA	
	Hypochlorite	HCL	
	Lime	L	
	Polymer	PO	
	Scum	SC	
	Scum Underflow	SCU	
	Sludge	SL	
	Sludge (Return Activated)	RAS	
	Sludge (Waste Activated)	WAS	
	Sludge (Digested)	DSL	
	Sludge (Thickened)	TSL	
	Sulphur Dioxide Gas	SOG	
	Sulphur Dioxide Liquid	SOL	
	Sulphur Dioxide Solution	SOS	
	Supernatant	SU	
	Thickener Overflow	TO	
	Wastewater	WW	
	Wastewater (Treated)	TWW	
	No 1 Water (Potable)	W1	
	No 2 Water (Non-potable)	W2	
	No 3 Water (Reclaimed)	W3	
	No 4 Water (Well)	W4	
	Cold Water	CW	
	Hot Water	HW	
	Chilled Water Supply	CWS	
	Chilled Water Return	CWR	

PIPE INSTALLATION

Yard Pipework shall conform to the following:
 1. Process Pipes shall be set on uniform grades sloping in the direction of flow (or as shown on the plans).
 2. Sludge Gas and Natural Gas Pipes shall be set on uniform grades sloping to low points which shall be equipped with manual drip traps.
 3. Water Pipes shall be set on uniform grades, high points in each line shall include an air relief assembly.

All pipe runs under concrete slabs shall be encased in reinf conc. jackets.

The Contractor shall compile and transmit to the Engineer, accurate records of the "as built" locations of all yard pipework installed as part of this project.

SECTION A Section Designation
 Sheet Cut on 34 Sheet Drawn on

EQUIPMENT NOTE

THIS NOTE SHALL APPLY TO ALL EQUIPMENT INSTALLED AS PART OF THIS PROJECT. Refer to Specifications for Equipment requirements. See Equip Mfrs Dngs for necessary Equip settings and Anchor Bolt locations. Verify all clearances before placing concrete. The Equip Mfr. shall provide and the Contractor shall install approved guarding for shafts, gears and other moving parts as required by the General Industry Safety Orders issued by the California Division of Industrial Safety.

LEGEND

- UNLESS OTHERWISE NOTED
- [Pattern] Indicates New Concrete in Section
- [Pattern] Indicates Exist. Concrete in Section
- [Pattern] Indicates Items to be Removed
- [Pattern] Indicates New Paving (or as noted)



REFERENCE INFORMATION AND NOTES: REFER TO TRACING FOR LATEST REVISION				GRAPHIC SCALES (In Feet) _____ = 10 Feet _____ = 20 Feet _____ = 30 Feet		DESIGNED: DAB DRAWN: LLK CHECKED: RHC DATE: FEB 1989		SO. SAN LUIS OBISPO CO. SANITATION DISTRICT SAN LUIS OBISPO COUNTY, CALIFORNIA WASTEWATER WORKS IMPROVEMENTS Kennedy/Jenks/Chilton Palo Alto		WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3 ABBREVIATIONS AND LEGENDS		SCALE: NONE JOB NO: 885119.00 SHEET: 2 OF: 40	
REV	DESCRIPTION	SUB	APPR	DATE	SUBMITTED: John H. Jenks APPROVED: John L. Wallace JOHN H. JENKS R.E. NO. 6120 JOHN L. WALLACE DISTRICT ADMINISTRATOR								

DESIGN ANALYSIS

DESIGN OBJECTIVES (NPDES NO. CA0048003)

CONSTITUENT	30-DAY AVERAGE	7-DAY AVERAGE	MAXIMUM
B.O.D. MG/L	45	60	80
LBS/DAY	1,877	2,502	3,336
SUSPENDED SOLIDS, MG/L	45	60	80
LBS/DAY	1,877	2,502	3,336
SETTLABLE SOLIDS, ML/L	0.1		0.3

CONSTITUENT	50% OF TIME	10% OF TIME
GREASE & OIL, MG/L	10	15
FLOATING PARTICULATES, MG/L	1.0	2.0
TURBIDITY, JTU	50	75

pH NOT LESS THAN 6.0 NOR GREATER THAN 9.0
INITIAL DILUTION 200:1

FLOW AND LOADINGS

PLANT AVERAGE DRY WEATHER FLOW	5.0 MGD
PLANT PEAK WET WEATHER FLOW	9.0 MGD
BIOCHEMICAL OXYGEN DEMAND	10,425 LBS/DAY
SUSPENDED SOLIDS	10,425 LBS/DAY

PUMP PLANT (EXISTING)

PARSHALL FLUME CAPACITY, MGD	12
COMBINED FLOWMETER CAPACITY, MGD	14
PUMP NO. 1 CAPACITY, MGD	4.68
PUMP NO. 2 CAPACITY, MGD	2.02
PUMP NO. 3 CAPACITY, MGD	2.95
PUMP NO. 4 CAPACITY, MGD (FUTURE)	4.68

PRIMARY CLARIFIERS (ONE NEW NO. 2 & ONE EXISTING NO. 1)

NUMBER OF CLARIFIERS	2
DIAMETER, FT.	55
DEPTH, FT.	9
OVERFLOW RATE, GPD/FT. ²	1,052
DETENTION TIME, HRS.	1.54
EXPECTED RESIDUAL SUSPENDED SOLIDS, LBS/DAY	4,170
EXPECTED RESIDUAL BOD, LBS/DAY	7,819

FIXED FILM REACTOR (EXISTING)

DESIGN TEMPERATURE, °C	15
TREATABILITY FACTOR, k	0.08
INFLUENT BOD, MG/L	188
INFLUENT SOLUBLE BOD, MG/L	100
REACTOR AREA, FT. ²	10,751
REACTOR DIAMETER, FT.	117
REACTOR DEPTH, FT.	12
REACTOR VOLUME, FT. ³	129,012
LOADING, LB BOD/1000 FT. ³	60.6
APPLICATION RATE, GPM/FT. ²	0.7
MAXIMUM APPLICATION RATE, GPM	7,500
MINIMUM APPLICATION RATE, GPM	1,900
VENTILATION RATE, CFM	24,000
REACTOR EFFLUENT, TOTAL BOD, MG/L	32

SECONDARY CLARIFIER (EXISTING)

DIAMETER, FT.	97
DEPTH, SIDEWATER, FT.	11
AREA, FT. ²	7,390
VOLUME, FT. ³	81,290
AREA, EFFECTIVE, FT. ²	6,315
OVERFLOW RATE, GPD/FT. ²	792
DETENTION, HRS	2.92

SLUDGE THICKENER (EXISTING)

NUMBER OF TANKS	1
DIAMETER, FT.	30
DEPTH, FT.	10
PRIMARY SLUDGE SOLIDS, LBS/DAY	6,255
SECONDARY SLUDGE SOLIDS, LBS/DAY	4,715
TOTAL SLUDGE SOLIDS, LBS/DAY	10,970
SOLIDS LOADING, LBS/FT. ² /DAY	15.5
HYDRAULIC LOADING, GPD/FT. ²	795
PRIMARY SLUDGE FEED, GPM	300
FIXED FILM REACTOR SLUDGE FEED, GPM	79
SCUM FEED, GPM	10
TOTAL THICKENER FEED, GPM	389
THICKENED SLUDGE CONCENTRATION, PERCENT	4.0
THICKENED SLUDGE FLOW, 1000 GPM	32.9

SLUDGE DIGESTERS (ONE NEW & ONE EXISTING)

PRIMARY (EXISTING)	1	PUMPED VORTEX
TYPE OF MIXING		
DIAMETER, FT.	70	
DEPTH, FT.	24	
VOLUME, 1000 FT. ³	92.4	
SOLIDS LOAD, LBS/DAY	10,970	
SLUDGE FLOW, 1000 GPD	32.9	
DETENTION TIME, DAYS	21.0	
SOLIDS LOADING RATE, LBS SS/FT. ³ /DAY	0.119	
GAS PRODUCTION, 1000 FT. ³ /DAY	73.1	
SECONDARY (NEW)	1	
DIAMETER, FT.	60	
DEPTH, FT.	20	
VOLUME, 1000 FT. ³	56.5	
NET SOLIDS REDUCTION, PERCENT	35	
DIGESTED SOLIDS TO DEWATERING, LBS/DAY	7,130	

SLUDGE CENTRIFUGE (EXISTING)

NUMBER OF CENTRIFUGES	1
SIZE, IN.	18 X 54
CAPACITY, LBS/DAY	3,300

SLUDGE DRYING BEDS (EXISTING)

NUMBER OF BEDS	10
AVERAGE LENGTH, FT.	100
AVERAGE WIDTH, FT.	30
TOTAL BED AREA, 1000 FT. ²	30
SOLIDS LOAD, LBS/DAY	1,800
SOLIDS LOADING RATE, LBS/FT. ² /YR	22

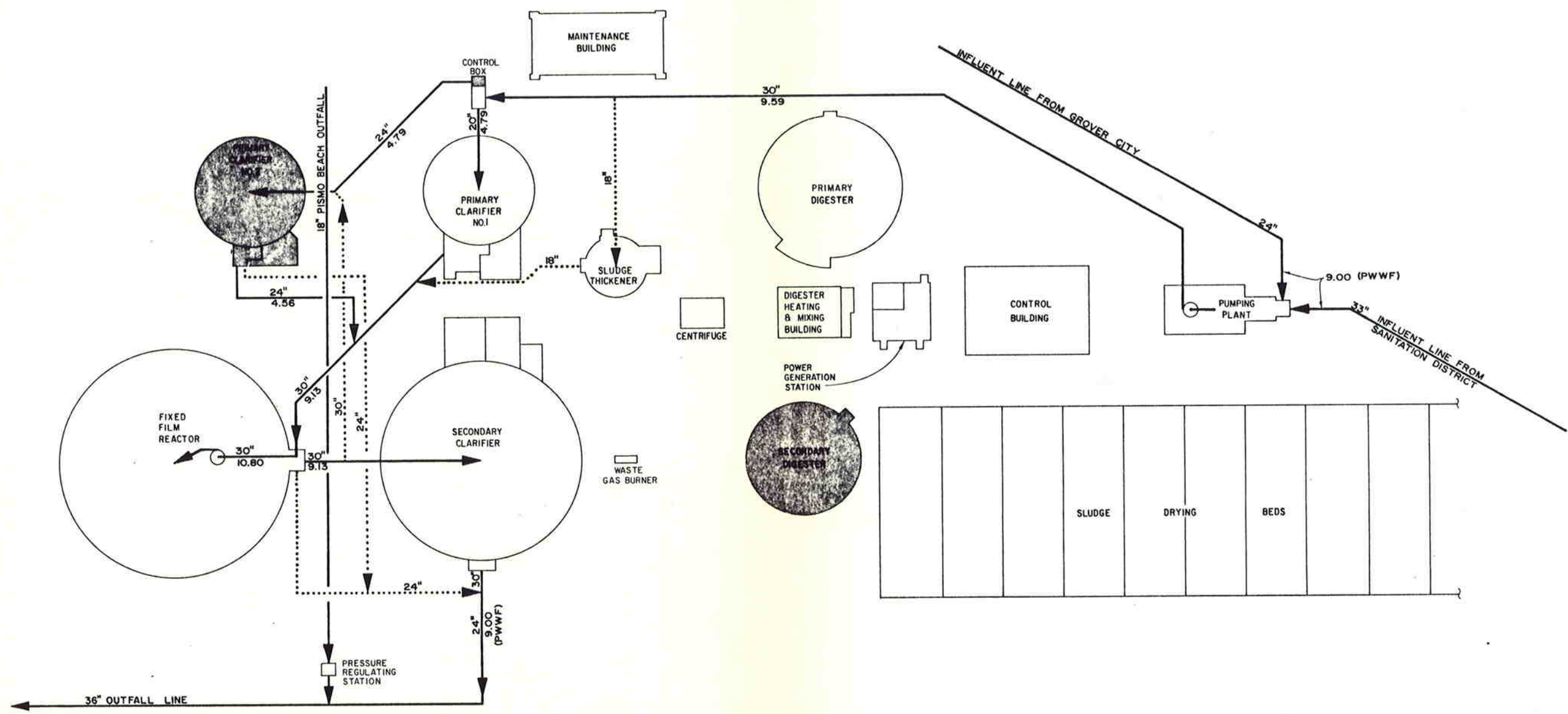
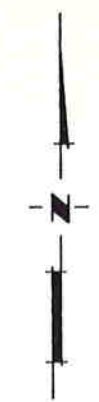
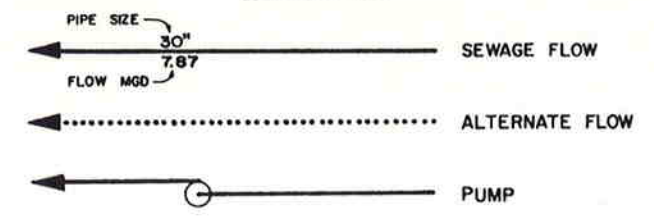
OCEAN OUTFALL (EXISTING)

SIZE, IN.	30
LENGTH, SHORE TO DIFFUSER, FT.	4,375
DIFFUSER LENGTH, FT.	600
NUMBER OF PORTS	78
PORT DIAMETER, IN.	3 X 3-1/4
MIN. DPETH AT DIFFUSER	55
INITIAL DILUTION	200:1
CAPACITY AT MAX, TIDE, MGD	8.5



	REFERENCE INFORMATION AND NOTES:	GRAPHIC SCALES (In Feet)	DESIGNED: DAB DRAWN: LLK CHECKED: BMW DATE: FEB 1989	SO. SAN LUIS OBISPO CO. SANITATION DISTRICT SAN LUIS OBISPO COUNTY, CALIFORNIA WASTEWATER WORKS IMPROVEMENTS Kennedy/Jenks/Chilton Palo Alto SUBMITTED: [Signature] APPROVED: [Signature] JOHN L. WALLACE DISTRICT ADMINISTRATOR	WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3 WATER POLLUTION CONTROL PLANT DESIGN ANALYSIS	SCALE: NONE JOB NO: 885119.00 SHEET: 3 OF: 40
REV DESCRIPTION SUB APPR DATE REFER TO TRACING FOR LATEST REVISION						

LEGEND



REV.	DESCRIPTION	SUB.	APPR.	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:

GRAPHIC SCALES (in Feet)	

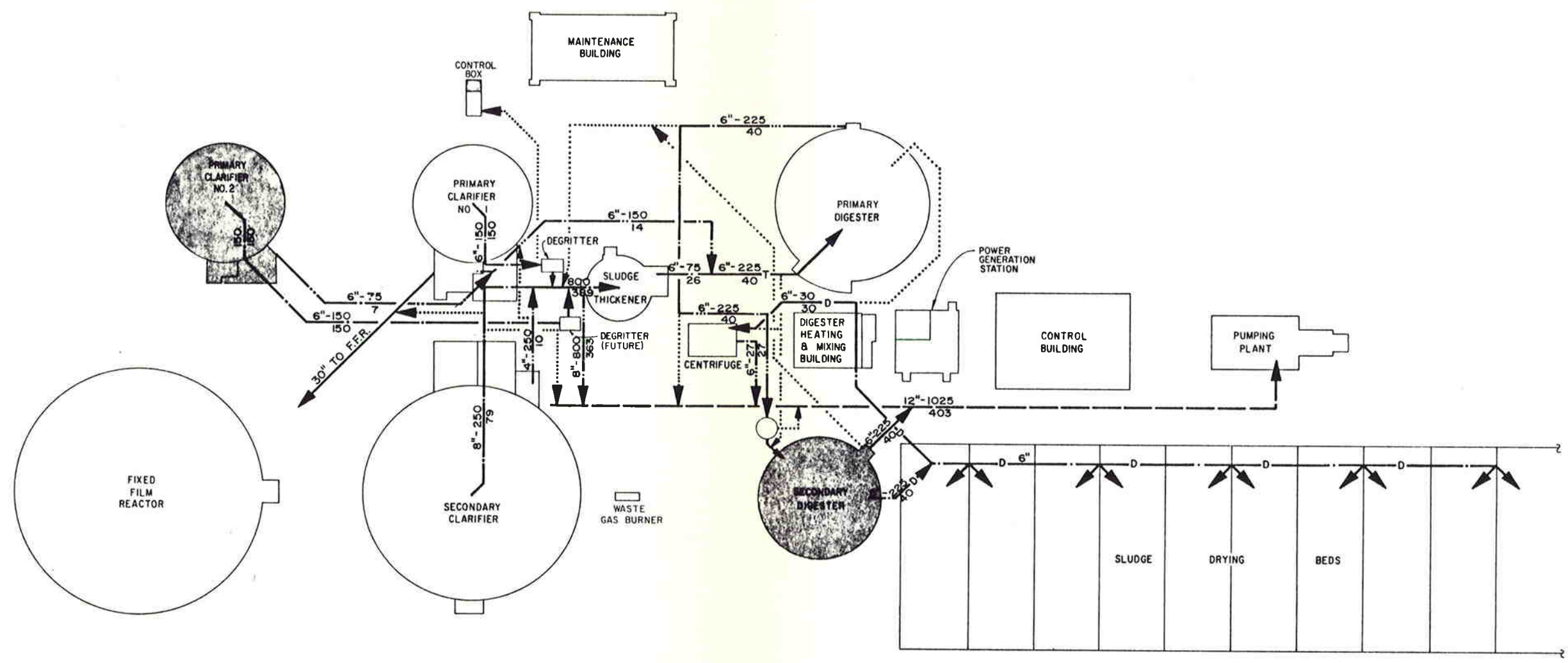
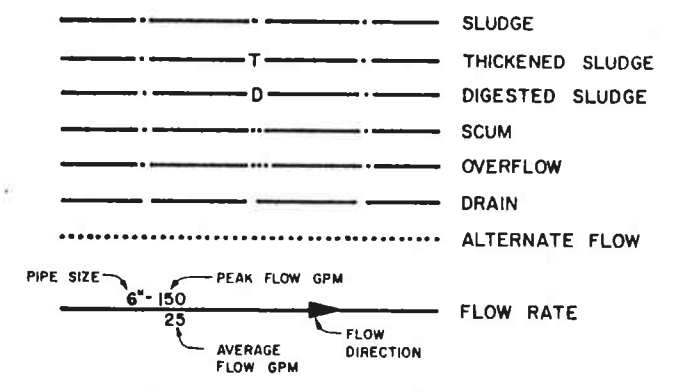
DESIGNED: DAB
DRAWN: CAJ
CHECKED: RHC
DATE: FEB 1989

SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
SAN LUIS OBISPO COUNTY, CALIFORNIA
WASTEWATER WORKS IMPROVEMENTS
Kennedy/Jenks/Chilton Palo Alto

SUBMITTED: [Signature]
APPROVED: John L. Wallace
JOHN L. WALLACE DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3		SCALE: NONE
WATER POLLUTION CONTROL PLANT BASIC FLOW DIAGRAM		JOB NO: 885119.00
		SHEET: 4
		OF: 40

LEGEND



REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:

GRAPHIC SCALES (In Feet)

DESIGNED: DAB
 DRAWN: CAJ
 CHECKED: BMW
 DATE: FEB 1989

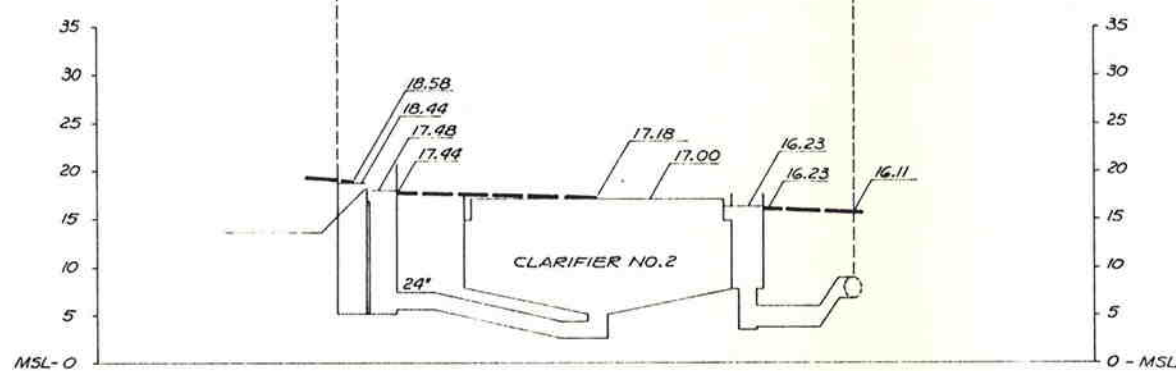
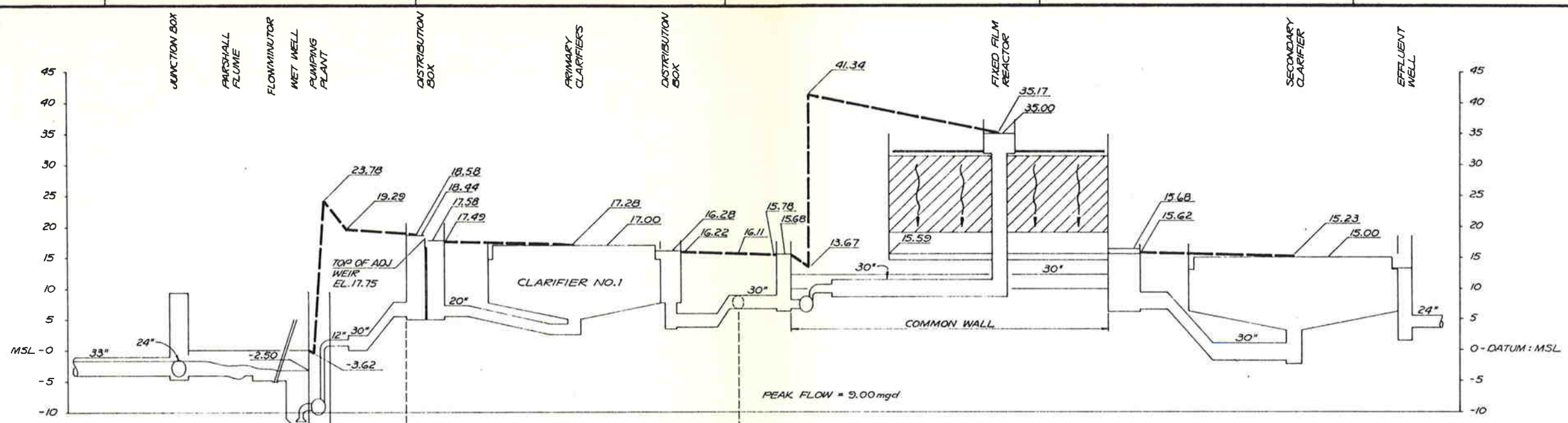
SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
WASTEWATER WORKS IMPROVEMENTS
 Kennedy/Jenks/Chilton Palo Alto

SUBMITTED: *John H. Jenks*
 APPROVED: *John L. Wallace*
 JOHN L. WALLACE DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3

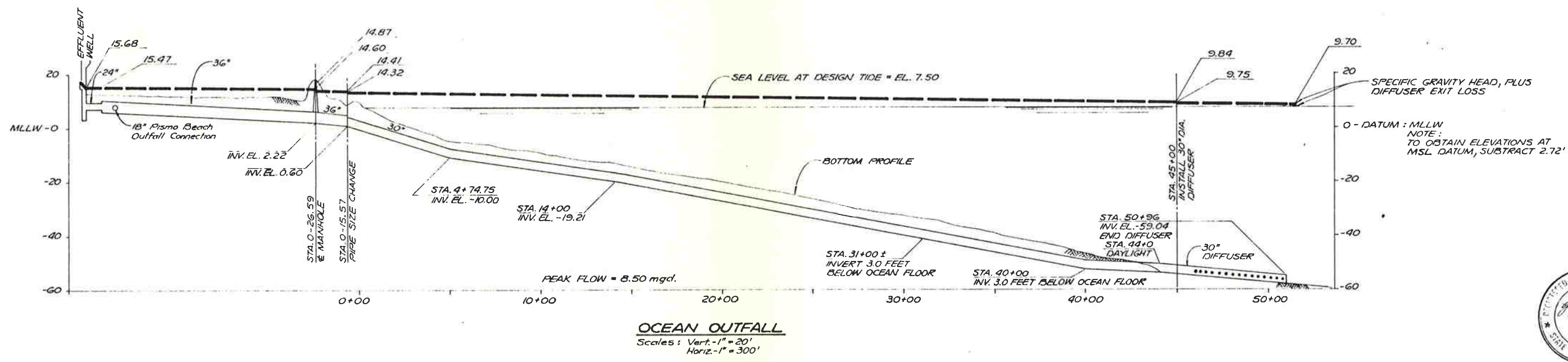
WATER POLLUTION CONTROL PLANT
 SLUDGE AND SCUM FLOW DIAGRAM

SCALE: NONE
 JOB NO: 885119.00
 SHEET: 5
 OF: 40



NOTE:
 THE WATER POLLUTION CONTROL PLANT PROFILE DATUM IS MSL WHILE THE OCEAN OUTFALL PROFILE DATUM IS MLLW. TO CONVERT MLLW ELEVATIONS TO MSL DATUM, SUBTRACT 2.72'.
 THE ELEVATIONS SHOWN ON THESE CONSTRUCTION PLANS FOR THE WATER POLLUTION CONTROL PLANT IMPROVEMENTS ARE BASED ON MSL DATUM.

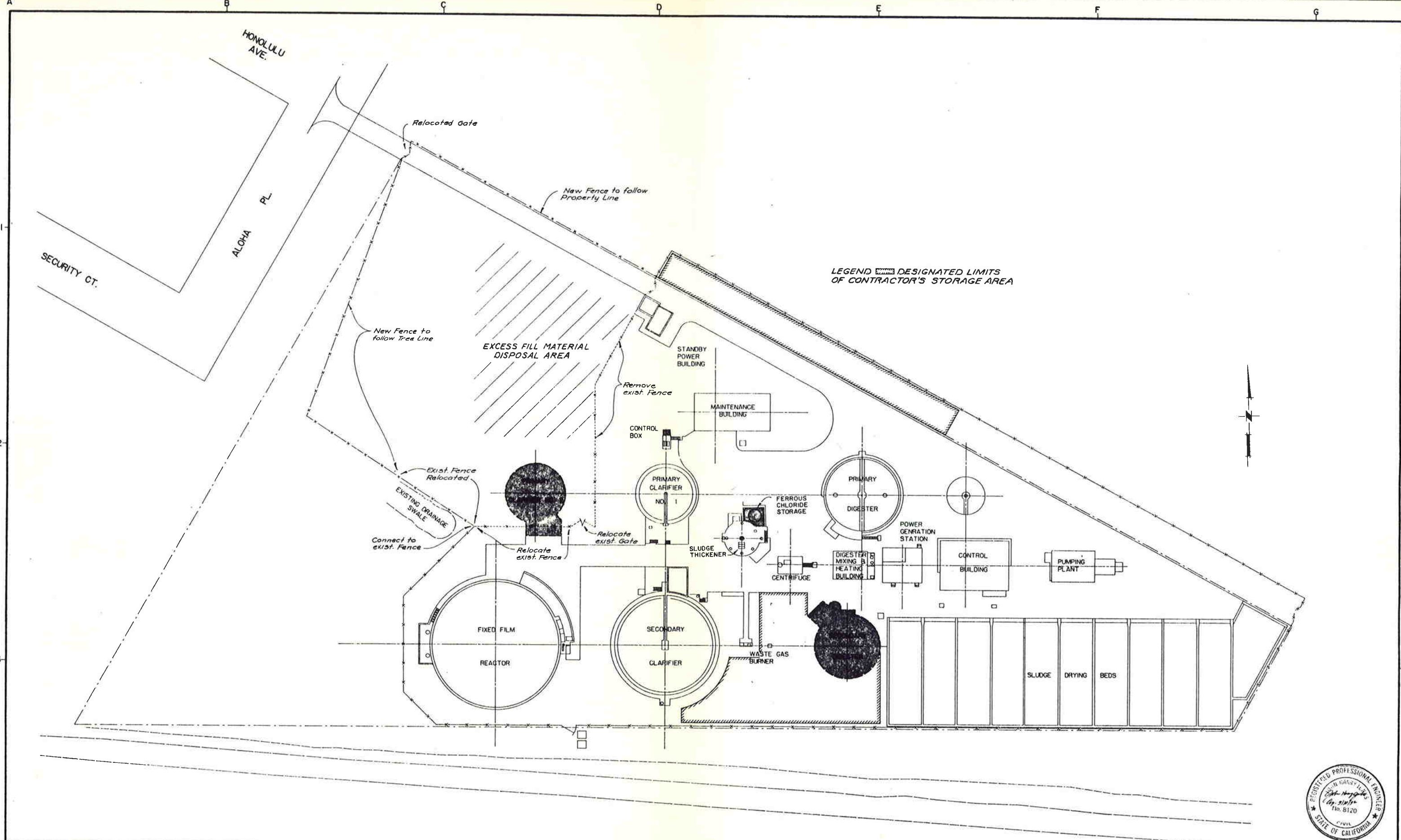
WATER POLLUTION CONTROL PLANT
 Scales: Vert. - 1" = 5'
 Horiz. - None



OCEAN OUTFALL
 Scales: Vert. - 1" = 20'
 Horiz. - 1" = 300'



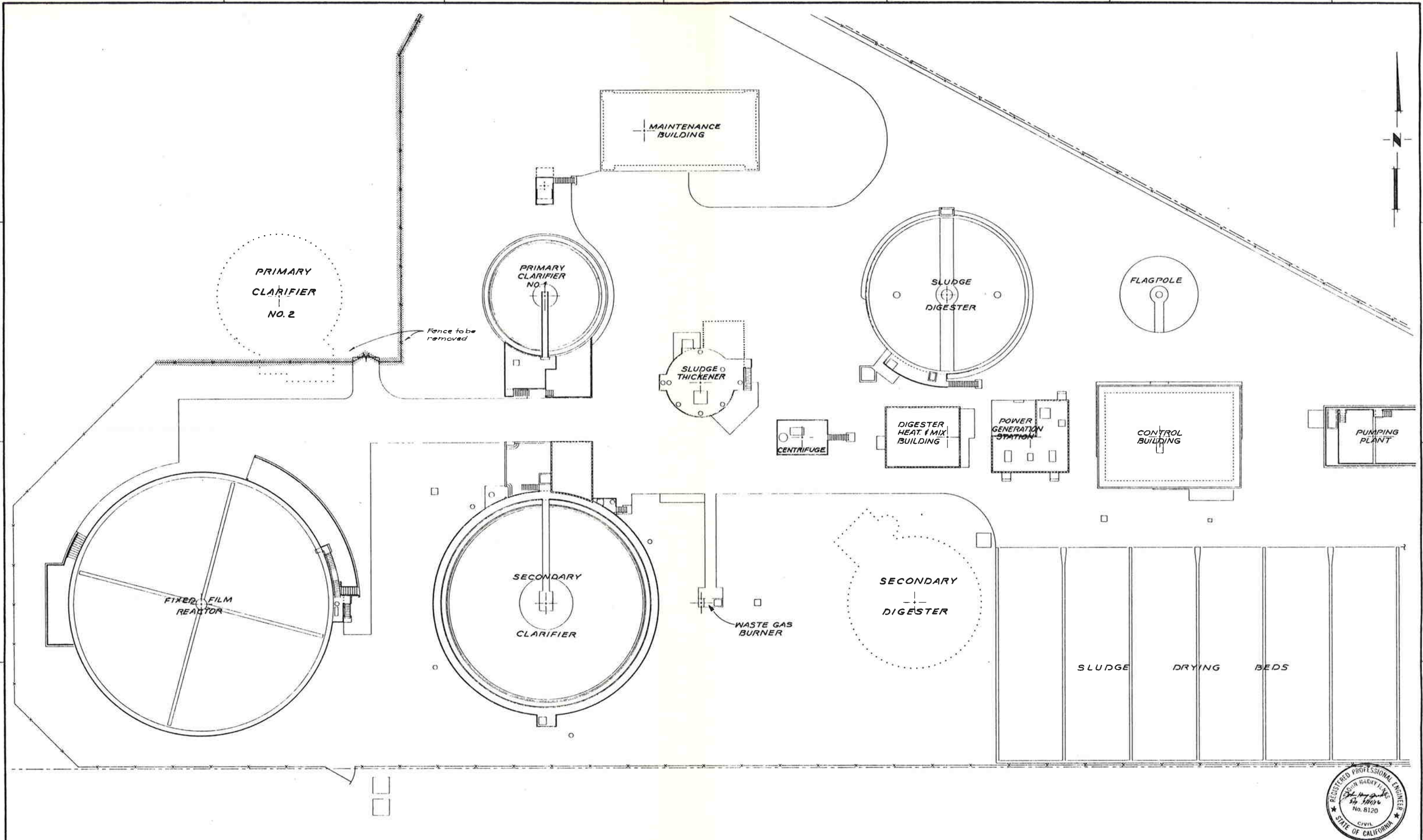
REFERENCE INFORMATION AND NOTES: REFER TO TRACING FOR LATEST REVISION				GRAPHIC SCALES (In Feet) 1" = 5' 1" = 20' 1" = 300'		DESIGNED: DAB DRAWN: CAJ CHECKED: BMW DATE: FEB 1989		SO. SAN LUIS OBISPO CO. SANITATION DISTRICT SAN LUIS OBISPO COUNTY, CALIFORNIA WASTEWATER WORKS IMPROVEMENTS Kennedy/Jenks/Chilton Palo Alto		WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3 WATER POLLUTION CONTROL PLANT HYDRAULIC PROFILE		SCALE AS NOTED JOB NO. 885119.00 SHEET 6 OF 40
REV	DESCRIPTION	SUB	APPR	DATE	SUBMITTED: <i>John H. Jenks</i> JOHN H. JENKS		APPROVED: <i>John H. Wallace</i> JOHN H. WALLACE DISTRICT ADMINISTRATOR					



LEGEND DESIGNATED LIMITS OF CONTRACTOR'S STORAGE AREA



REFERENCE INFORMATION AND NOTES: REFER TO TRACING FOR LATEST REVISION				GRAPHIC SCALES (In Feet) 		DESIGNED: DAB DRAWN: CAJ CHECKED: RHC DATE: FEB 1989		SO. SAN LUIS OBISPO CO. SANITATION DISTRICT SAN LUIS OBISPO COUNTY, CALIFORNIA WASTEWATER WORKS IMPROVEMENTS Kennedy/Jenks/Chilton Palo Alto		WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3 WATER POLLUTION CONTROL PLANT SITE PLAN		SCALE: 1" = 40' JOB NO: 885119.00 SHEET: 7 OF: 40	
REV	DESCRIPTION	SUB	APPR	DATE	SUBMITTED: JOHN H. JENKS, P.E. NO. 8120		APPROVED: JOHN L. WALLACE, DISTRICT ADMINISTRATOR						



REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:

GRAPHIC SCALES (in Feet)

1" = 20'

0 10 20 30

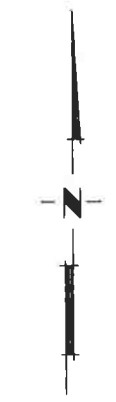
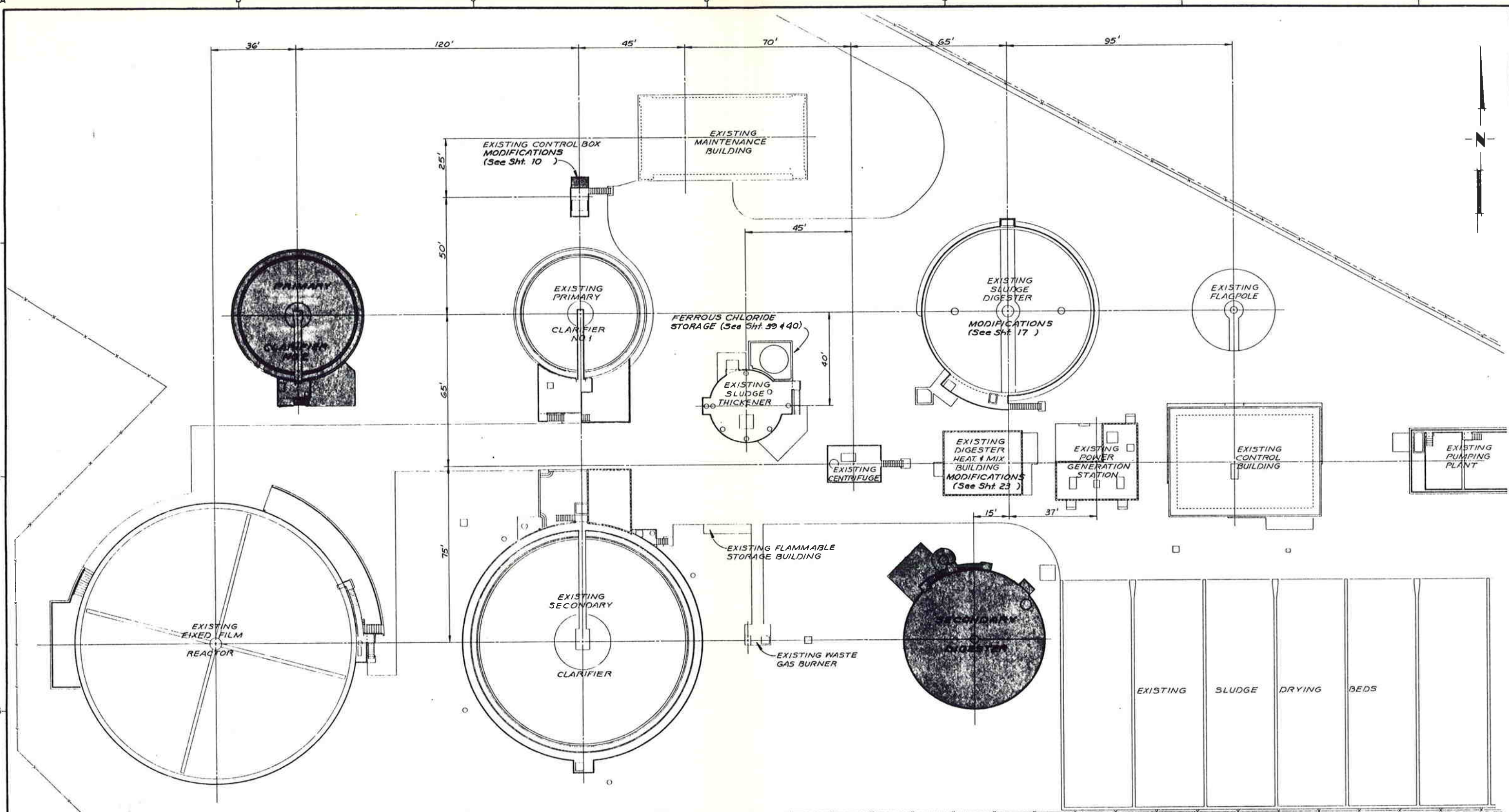
DESIGNED: DAB
 DRAWN: CWW KCH
 CHECKED: RHC
 DATE: FEB 1989

SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
 WASTEWATER WORKS IMPROVEMENTS
 Kennedy/Jenks/Chilton Palo Alto

SUBMITTED: [Signature]
 APPROVED: [Signature] L. WALLACE DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3
 WATER POLLUTION CONTROL PLANT
 PLANT LAYOUT
 EXISTING CONDITION

SCALE	1" = 20'
JOB NO.	885119.00
SHEET	8
OF	40



- Exist. Valve Box
- Exist. Junction Box



REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:

GRAPHIC SCALES (in Feet)

1" = 20'

0 10 20 30

DESIGNED: DAB
 DRAWN: KCH CWW
 CHECKED: RHC
 DATE: FEB 1989

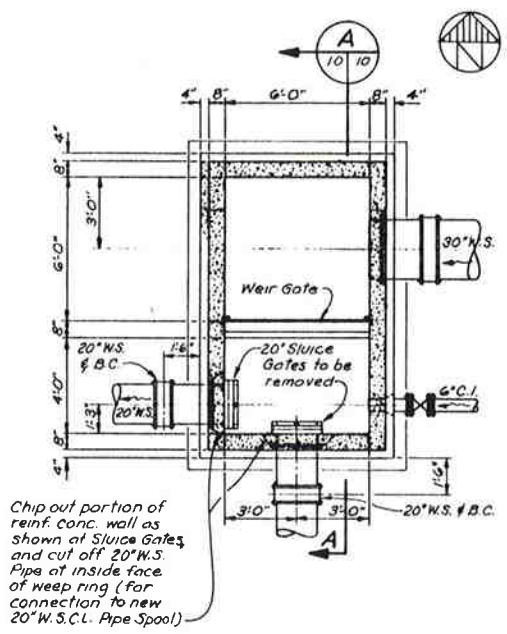
SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
 WASTEWATER WORKS IMPROVEMENTS
 Kennedy/Jenks/Chilton
 Palo Alto

SUBMITTED: [Signature]
 APPROVED: [Signature]
 JOHN H. JENKS R.E. NO. 8120 JOHN E. WALLACE DISTRICT ADMINISTRATOR

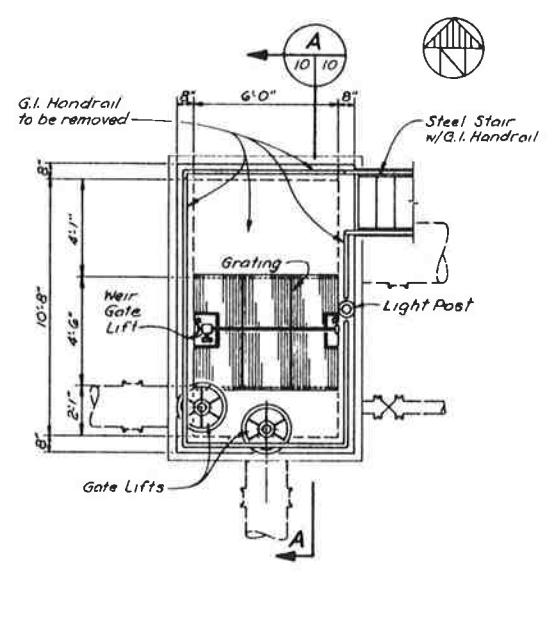
WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3

WATER POLLUTION CONTROL PLANT PLANT LAYOUT

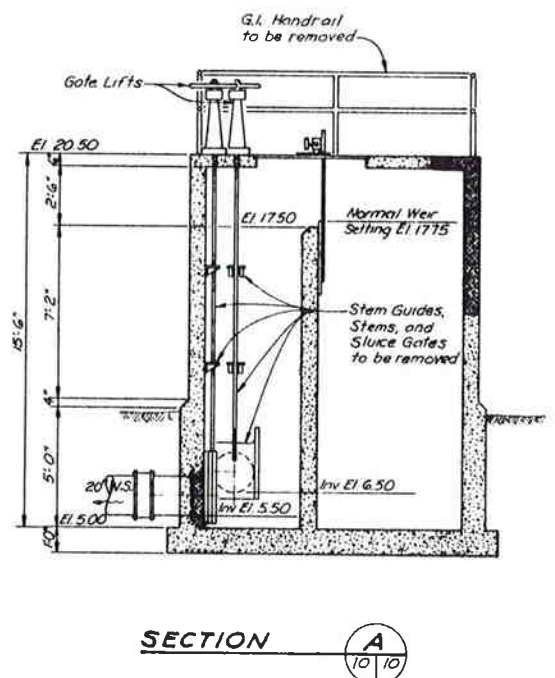
SCALE: 1" = 20'
 JOB NO: 885119.00
 SHEET: 9 OF 40



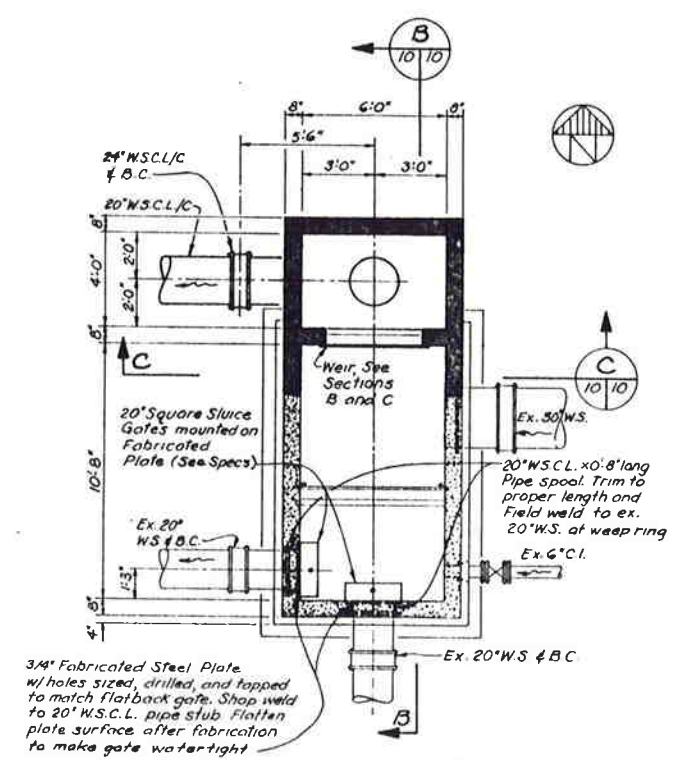
SECTIONAL PLAN



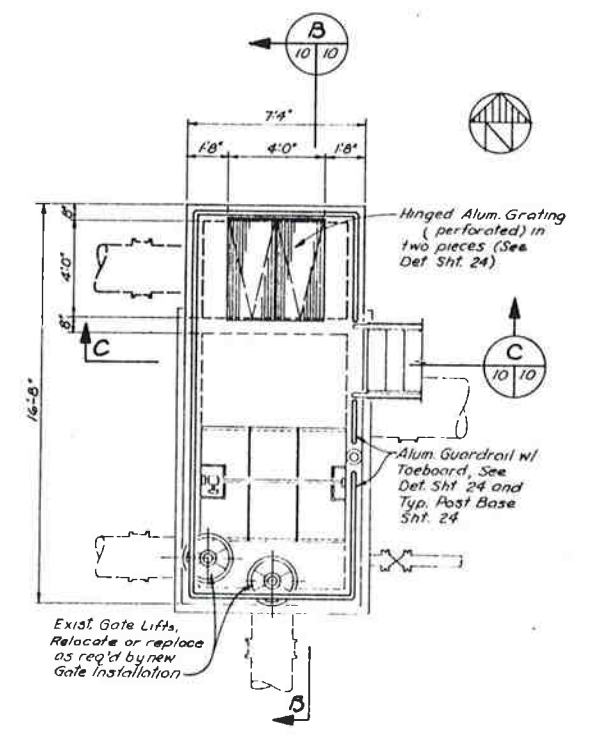
DECK PLAN



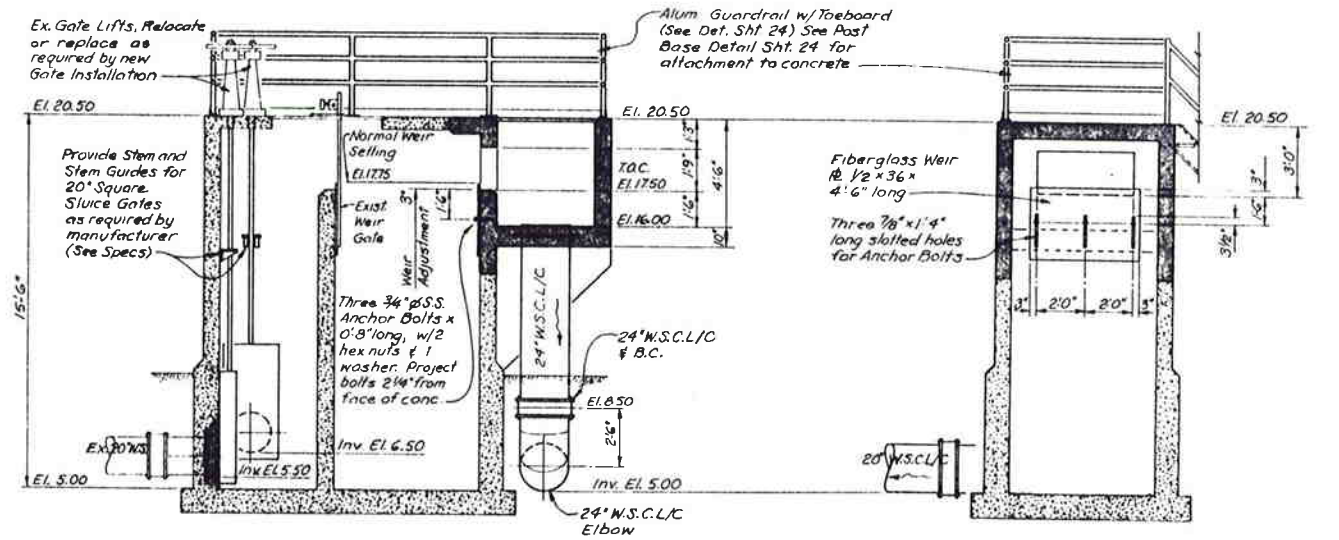
SECTION A



SECTIONAL PLAN



DECK PLAN



SECTION B

SECTION C

EXISTING CONDITION

FINAL CONDITION



REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:

DESIGNED	DAB
DRAWN	JKJ
CHECKED	RHC
DATE	FEB 1989

GRAPHIC SCALES (in Feet)

1/4" = 1'-0"

SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
 WASTEWATER WORKS IMPROVEMENTS
 Kennedy/Jenka/Chilton
 Palo Alto

SUBMITTED: [Signature]
 APPROVED: [Signature] ALAN L. WALLACE
 DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3

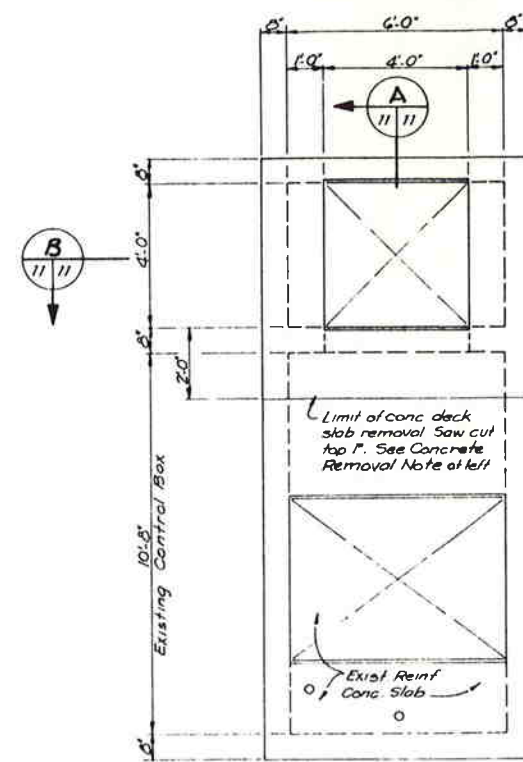
EXISTING CONTROL BOX MODIFICATIONS
GENERAL DETAILS
PLANS AND DETAILS

SCALE
 1/4" = 1'-0"

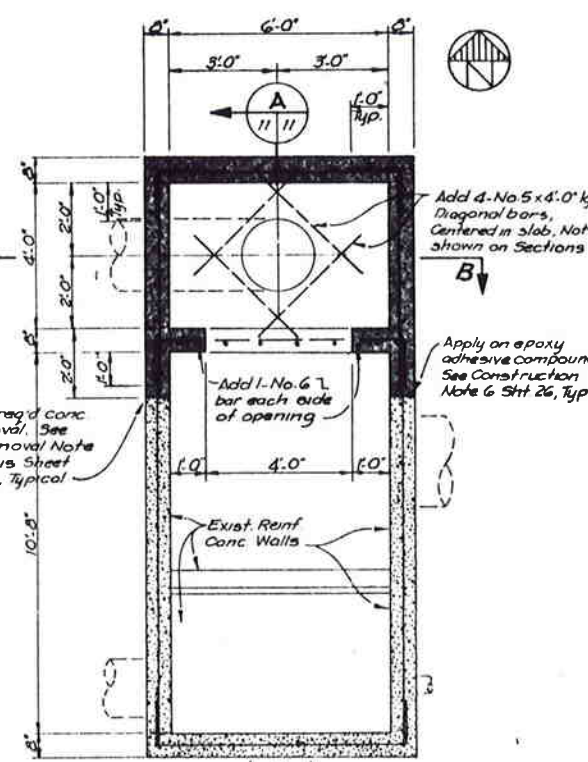
JOB NO
 885119.00

SHEET
 10

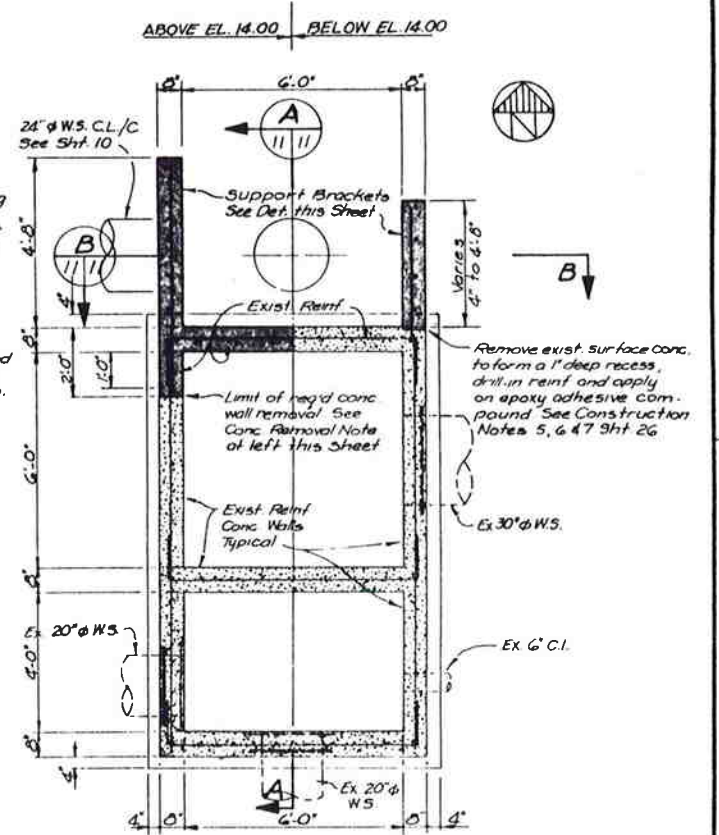
OF
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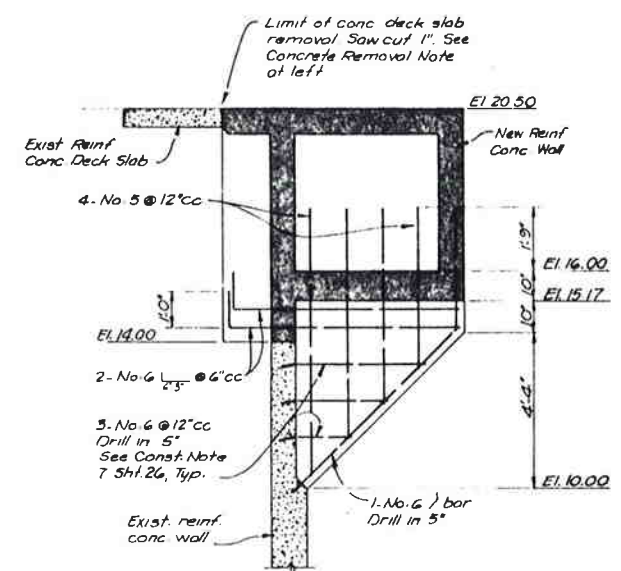
DECK PLAN



SECTIONAL PLAN AT EL. 13.50

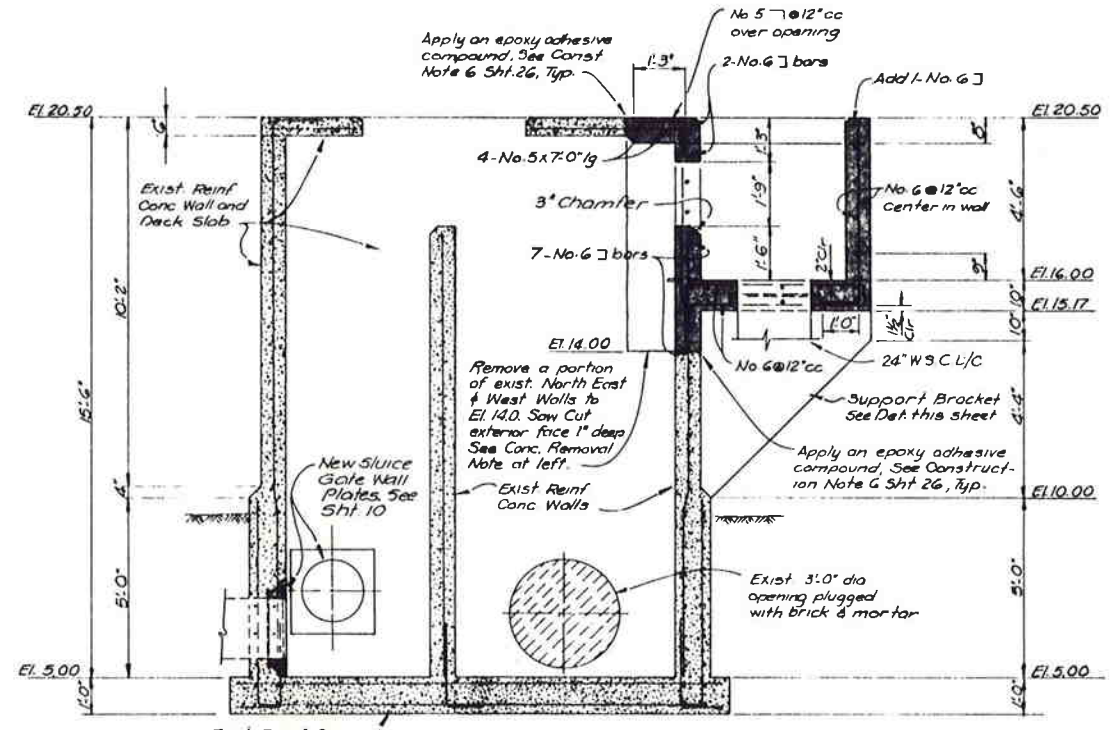


SECTIONAL PLAN - EL. 15.17 TO EL. 10.00

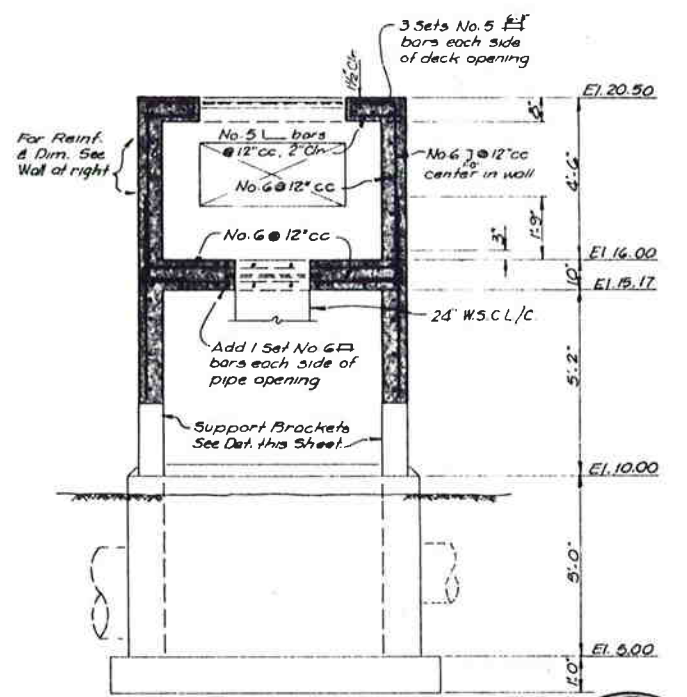


ELEVATION

SUPPORT BRACKET (2-REQ'D)



SECTION A



SECTION B

CONCRETE REMOVAL NOTE

THE CONTRACTOR SHALL REMOVE PORTIONS OF THE REINFORCED CONCRETE WALLS AND DECK SLAB OF THE EXISTING CONTROL BOX. THIS REMOVAL SHALL BE TO THE LIMITS SHOWN ON THIS SHEET. EXISTING REINFORCING SHALL REMAIN IN PLACE EXCEPT THE HORIZONTAL BARS IN THE NORTH WALL WHICH SHALL BE REPLACED WITH NO. 6 BARS AND THE EAST/WEST BARS IN THE DECK SLAB WHICH SHALL BE REPLACED WITH NO. 5 BARS. SEE CONSTRUCTION NOTES SHEET 26 FOR ADDITIONAL REQUIREMENTS.



REF	DESCRIPTION	SUB	APPR	DATE

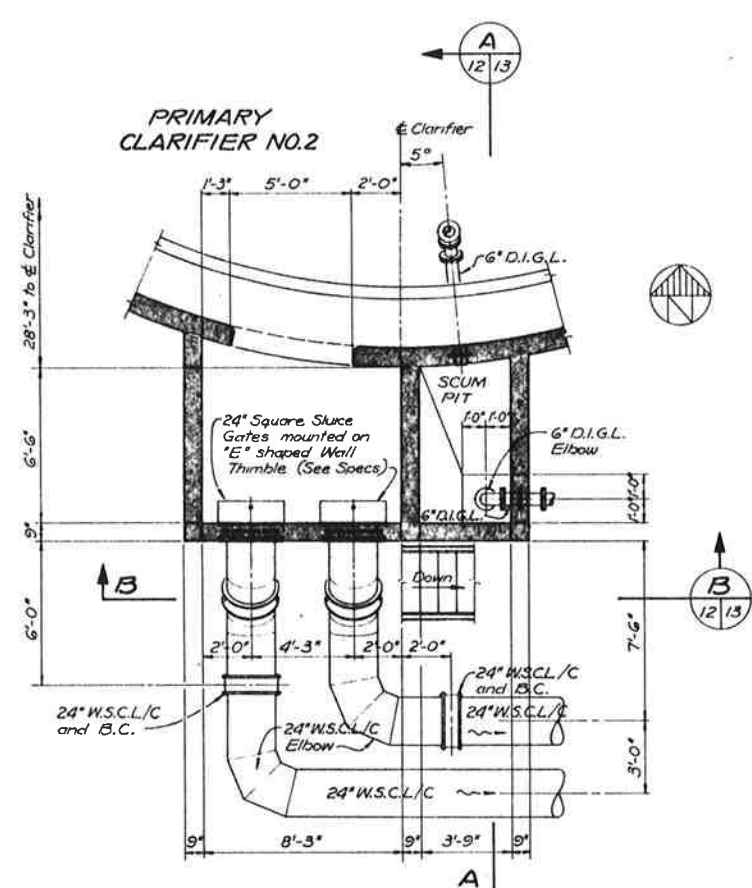
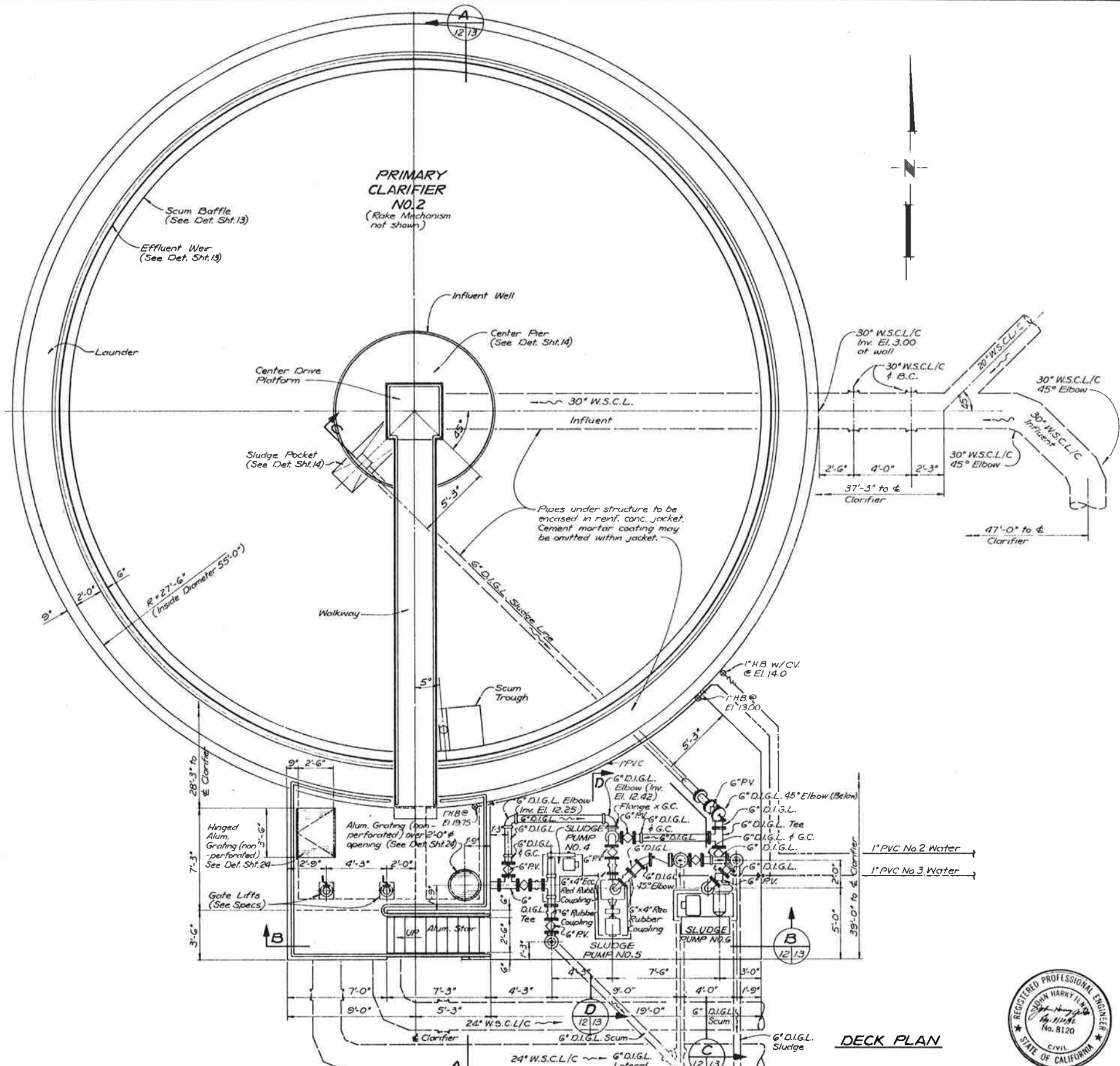
REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:

DESIGNED DAB	GRAPHIC SCALES (In Feet)
DRAWN MR DCC	
CHECKED RHC	
DATE FEB 1989	

SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
 WASTEWATER WORKS IMPROVEMENTS
 Kennedy/Jenks/Chilton Palo Alto
 SUBMITTED: [Signature] APPROVED: [Signature]
 JOY H. JENKS R.E. NO. 820 JERRY L. WALLACE DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3
 EXISTING CONTROL BOX MODIFICATIONS
 STRUCTURAL DETAILS
 PLANS AND SECTIONS
 SCALE 3/8" = 1'-0"
 JOB NO 88519.00
 SHEET 11 OF 40



SECTIONAL PLAN

DECK PLAN



REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:

GRAPHIC SCALES (in Feet)

1/4" = 1'-0"

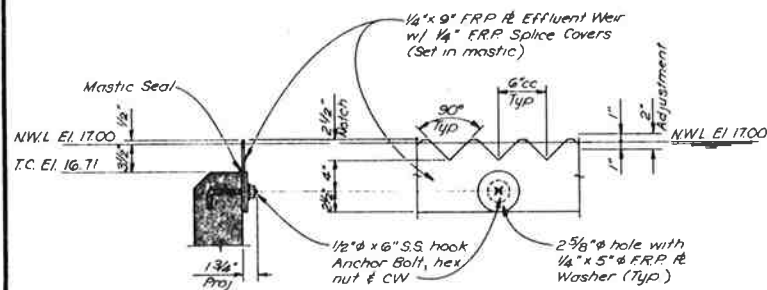
DESIGNED: DAB
 DRAWN: JKJ CAJ
 CHECKED: RHC
 DATE: FEB 1989

SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
 WASTEWATER WORKS IMPROVEMENTS
 Kennedy/Jenks/Chilton Palo Alto

SUBMITTED: [Signature]
 APPROVED: [Signature]
 JOHN H. JENKS R.E. NO. 8120 JOHN L. WALLACE DISTRICT ADMINISTRATOR

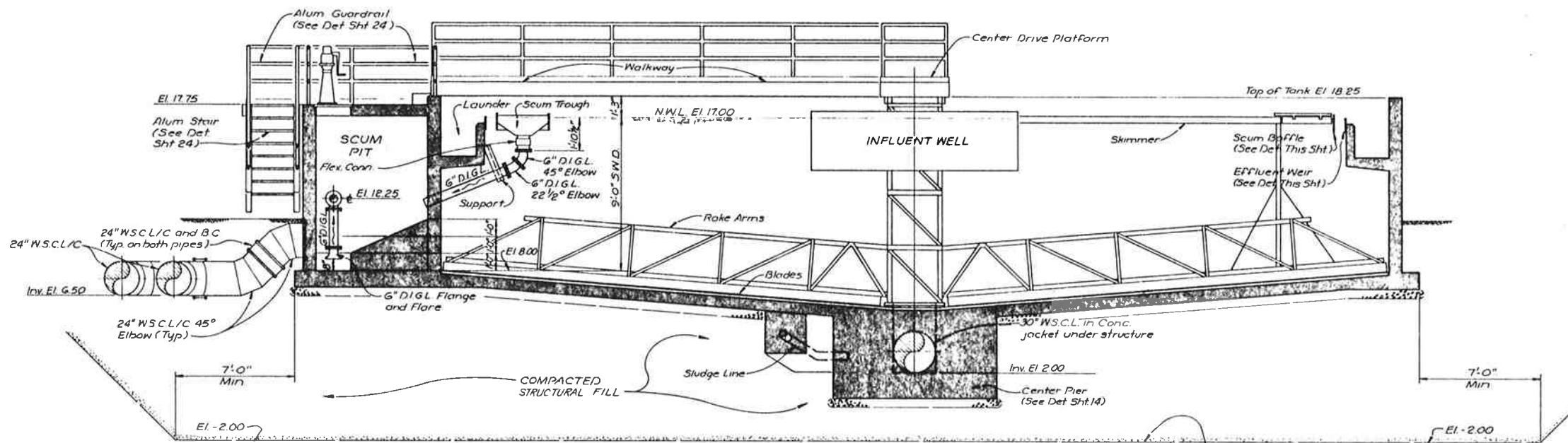
WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3
 PRIMARY CLARIFIER NO. 2
 GENERAL PLANS

SCALE: 1/4" = 1'-0"
 JOB NO: 885119.00
 SHEET: 12 OF 40



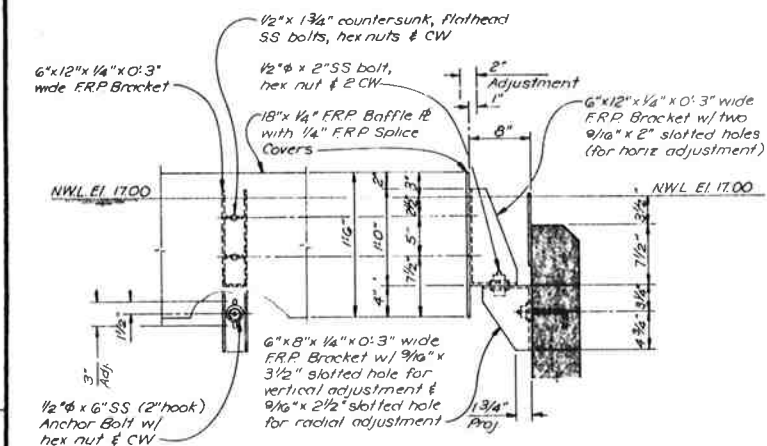
SECTION ELEVATION
TYPICAL EFFLUENT WEIR

NOTE: See Equipment Manufacturer's drawings for details and spacing of all splice joints and anchor bolt locations.



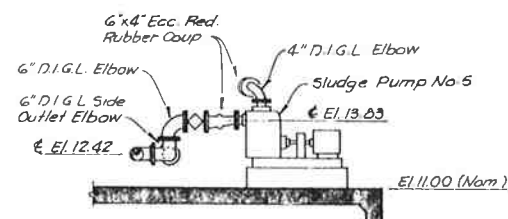
SECTION A
Scale 1/4" = 1'-0"
12/13

Limit of required structural excavation and fill, EI -2.00

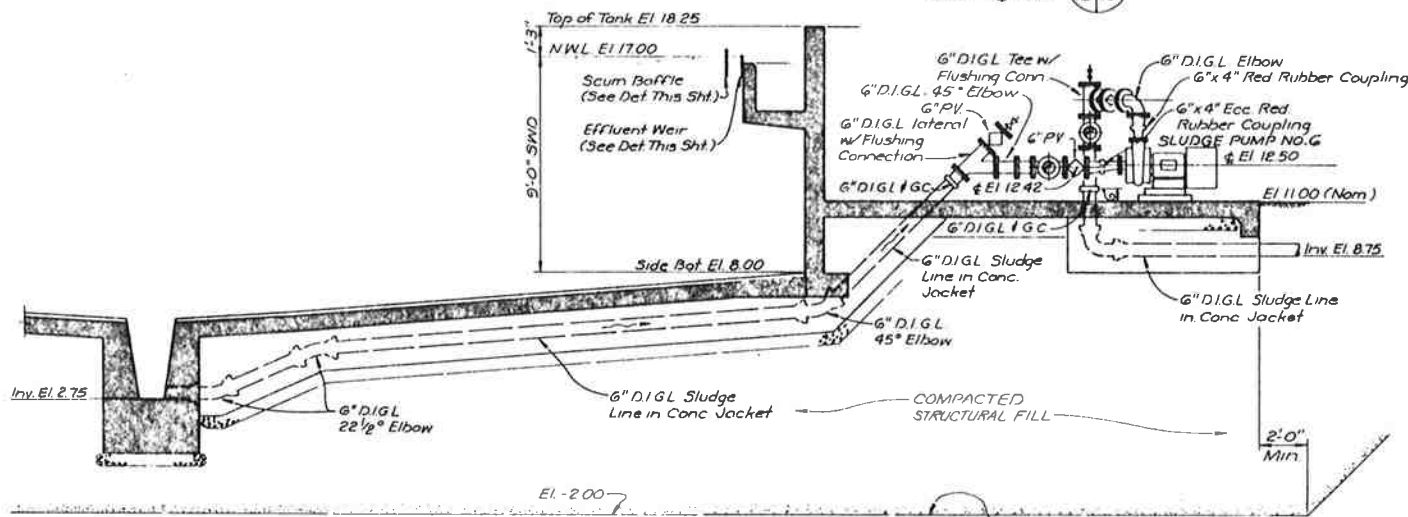


SECTION ELEVATION
TYPICAL SCUM BAFFLE WEIR AND SCUM BAFFLE DETAILS

Scale: 1" = 1'-0"

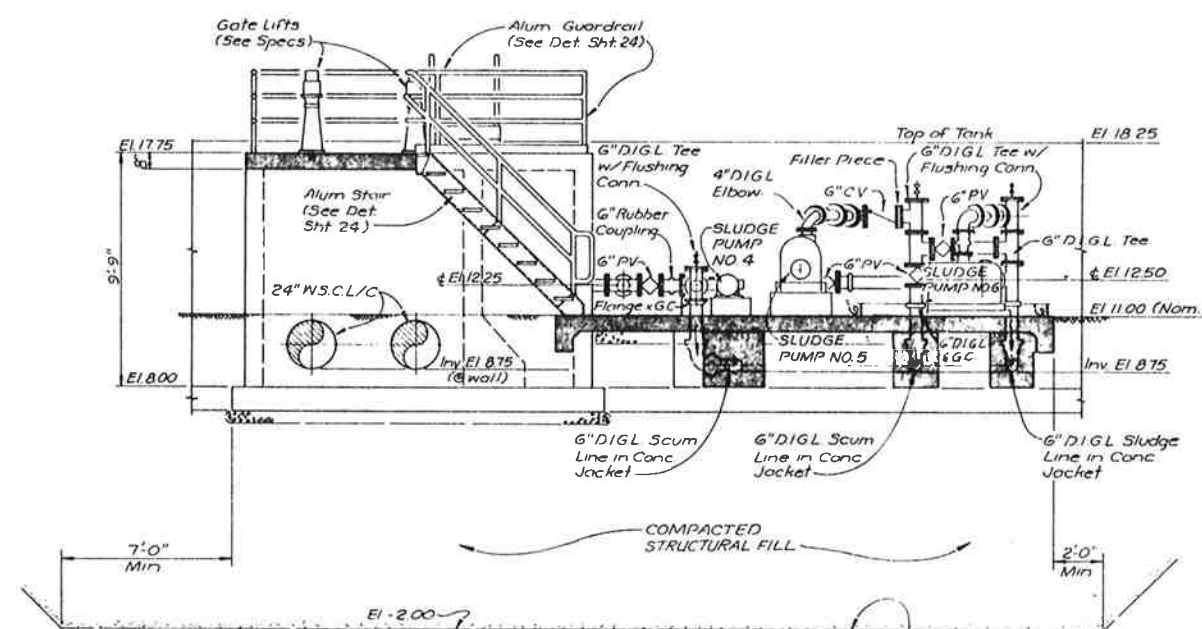


SECTION D
Scale 1/8" = 1'-0"
12/13



SECTION C
Scale 1/4" = 1'-0"
12/13

Limit of required structural Excavation and Fill, EI -2.00



SECTION B
Scale 1/4" = 1'-0"
12/13

Limit of required structural Excavation and Fill, EI -2.00



REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

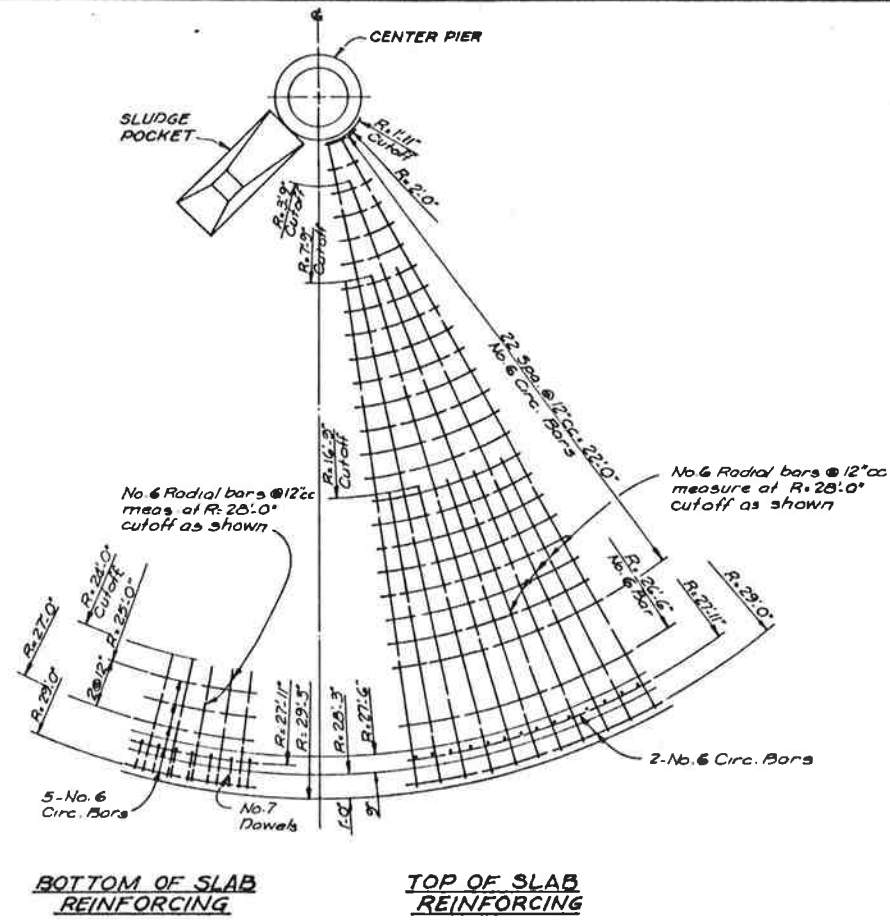
REFERENCE INFORMATION AND NOTES:	

GRAPHIC SCALES (In Feet)	
1/4" = 1'-0"	
1" = 1'-0"	

DESIGNED DAB	SO. SAN LUIS OBISPO CO. SANITATION DISTRICT SAN LUIS OBISPO COUNTY, CALIFORNIA WASTEWATER WORKS IMPROVEMENTS Kennedy/Jenks/Chilton Palo Alto
DRAWN JKJ KCH	
CHECKED RHC	
DATE FEB 1989	
SUBMITTED:	APPROVED:

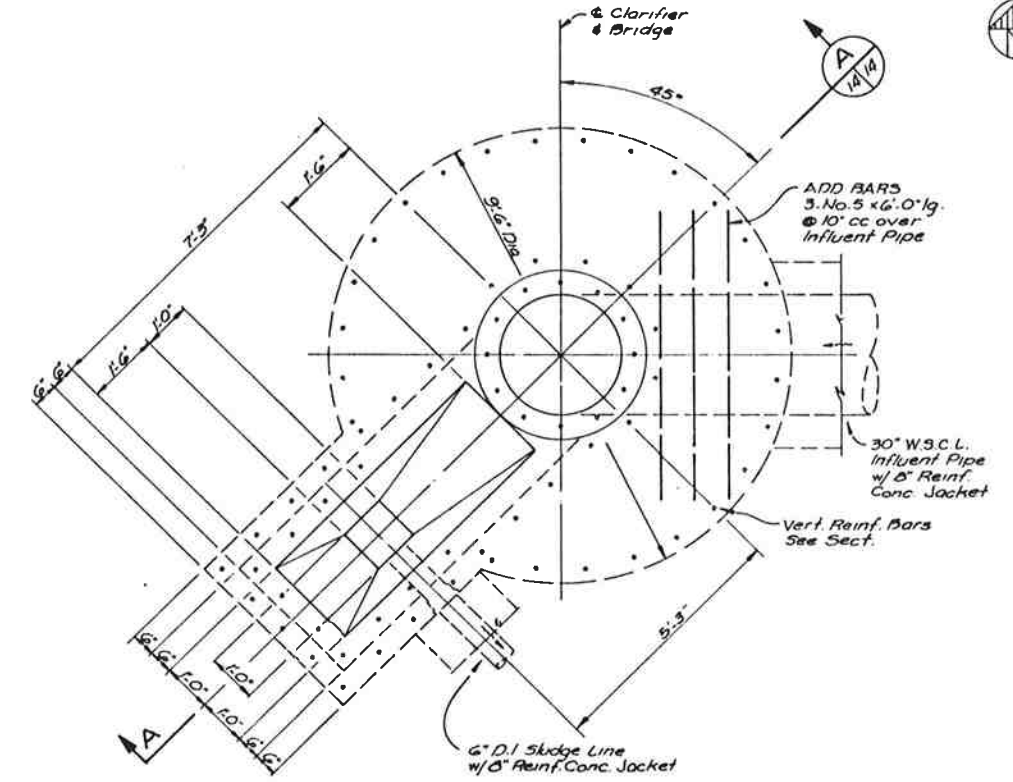
WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3	
PRIMARY CLARIFIER NO. 2	
GENERAL SECTIONS AND DETAILS	

SCALE AS NOTED
JOB NO. 885119.00
SHEET 13
OF 40

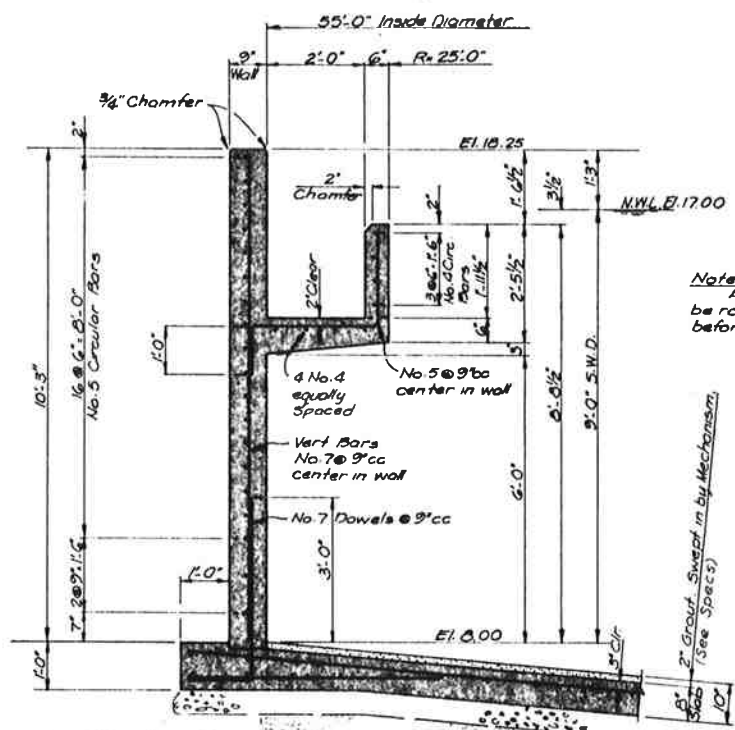


BOTTOM OF SLAB REINFORCING **TOP OF SLAB REINFORCING**

TYP. SLAB REINFORCING
Scale: 1/4" = 1'-0"

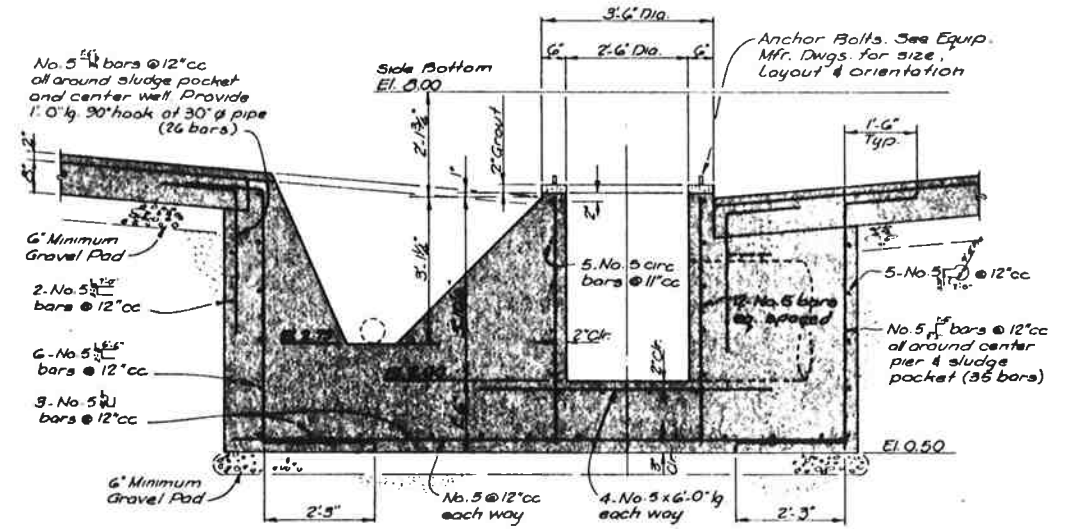


PLAN
Scale: 1/2" = 1'-0"



See Plan above for Typ. Slab Reinforcing See Sht. 13 for Limit of Structural Fill 6" Minimum Gravel Pad

TYPICAL WALL SECTION
Scale: 1/2" = 1'-0"



See Sht. 13 for Limit of Structural Fill

SECTION A
Scale: 1/2" = 1'-0"

REV	DESCRIPTION	SUB	APPR	DATE

REFERENCE INFORMATION AND NOTES:

GRAPHIC SCALES (in Feet)

1/4" = 1'-0"	
1/2" = 1'-0"	

DESIGNED: DAB
DRAWN: MR DCC
CHECKED: RHC
DATE: FEB 1989

SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
SAN LUIS OBISPO COUNTY, CALIFORNIA
WASTEWATER WORKS IMPROVEMENTS
Kennedy/Jenks/Chilton Palo Alto

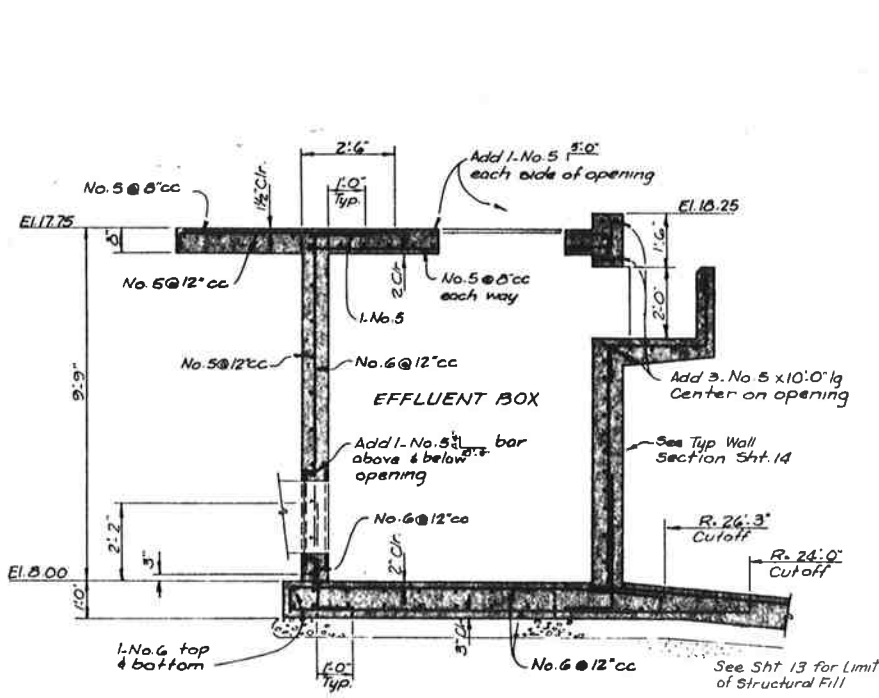
SUBMITTED: APPROVED: *John L. Wallace*
JOHN L. WALLACE DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3

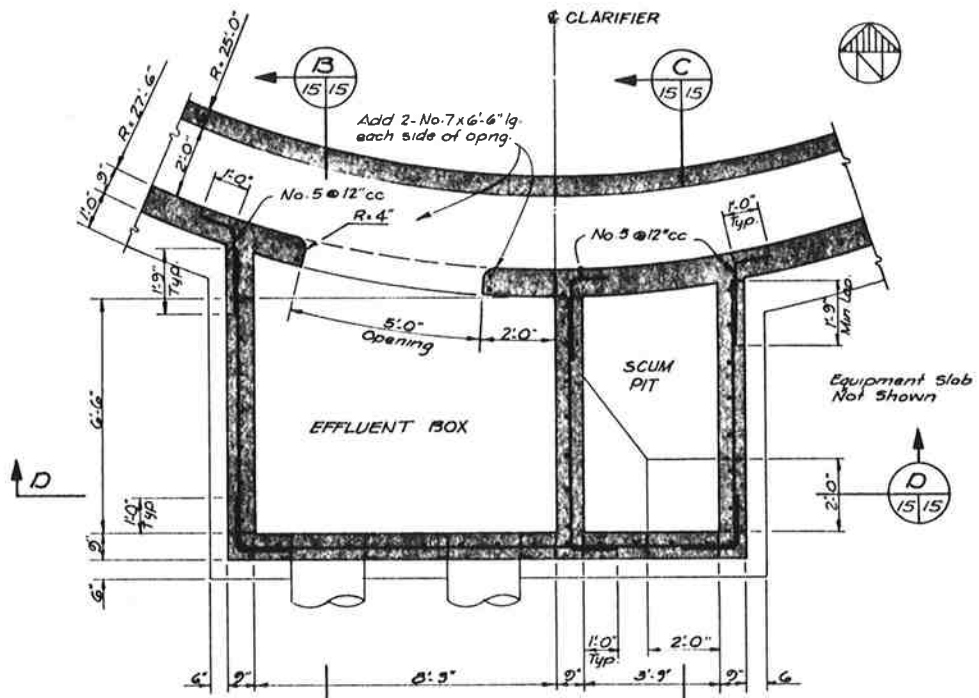
PRIMARY CLARIFIER NO. 2
STRUCTURAL
TYPICAL WALL SECTION AND CENTER PIER DETAILS

SCALE AS NOTED
JOB NO. 885119.00
SHEET 14 OF 40

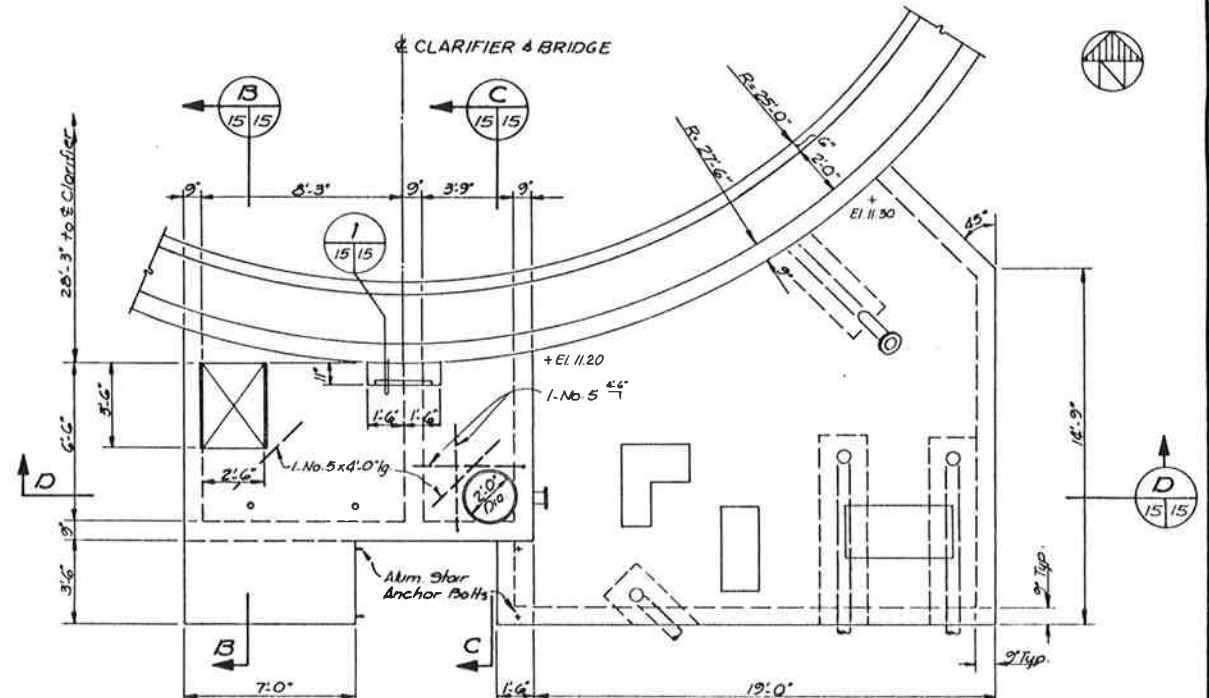




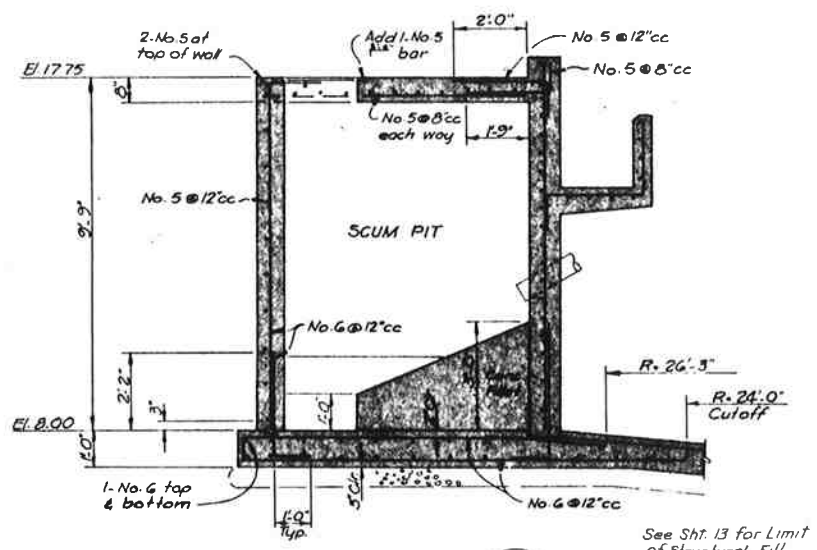
SECTION B
Scale: 3/8" = 1'-0"
15/15



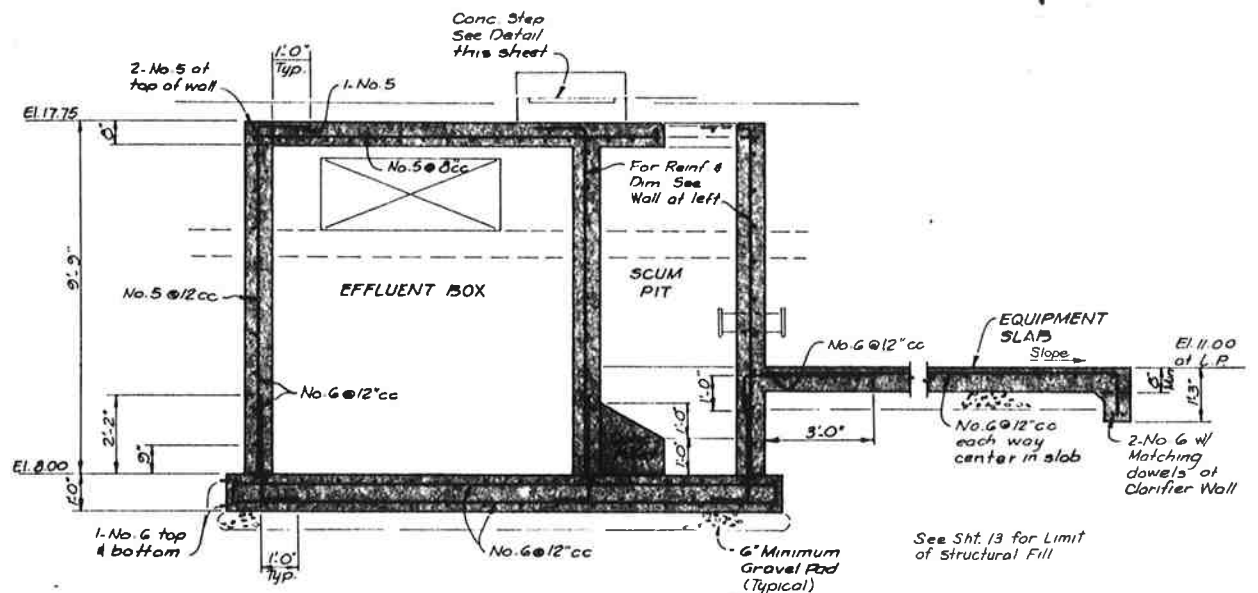
SECTIONAL PLAN
Scale: 3/8" = 1'-0"
15/15



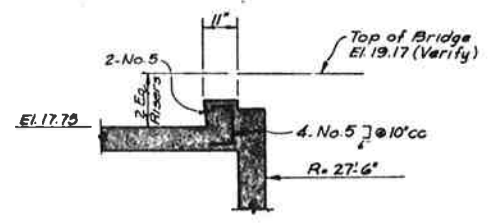
DECK PLAN
Scale: 1/4" = 1'-0"
15/15



SECTION C
Scale: 3/8" = 1'-0"
15/15



SECTION D
Scale: 3/8" = 1'-0"
15/15



DETAIL I
Scale: 3/8" = 1'-0"
15/15

REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:

GRAPHIC SCALES (In Feet)

1/4" = 1'-0" 3/8" = 1'-0"

DESIGNED AGE
DRAWN MR DCC
CHECKED DAB
DATE FEB 1989

SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
SAN LUIS OBISPO COUNTY, CALIFORNIA
WASTEWATER WORKS IMPROVEMENTS
Kennedy/Jenks/Chilton Palo Alto

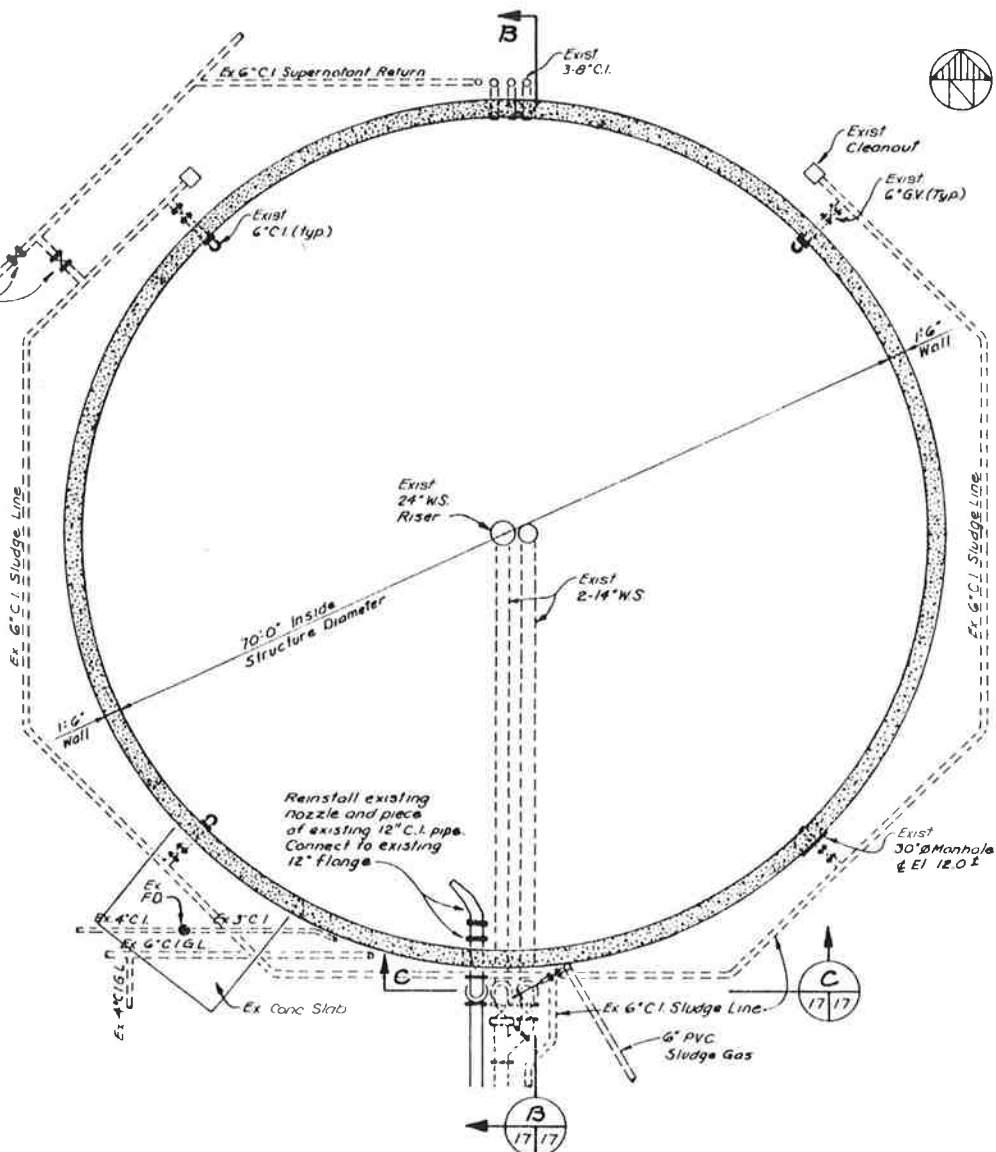
SUBMITTED: [Signature]
APPROVED: John L. Wallace
JOHN L. WALLACE DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3
PRIMARY CLARIFIER NO. 2
STRUCTURAL
EFFLUENT BOX AND PUMP SLAB DETAILS

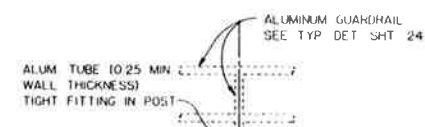
SCALE AS NOTED
JOB NO 885119.00
SHEET 15 OF 40



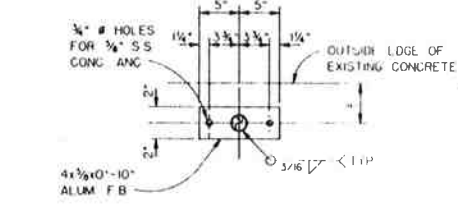
Remove Two Existing 6-Inch Gate Valves and Install Two 6-Inch Plug Valves. Modify Existing Piping as Required for Installation of New Valves



SECTIONAL PLAN
Scale 1/8"=1'-0"

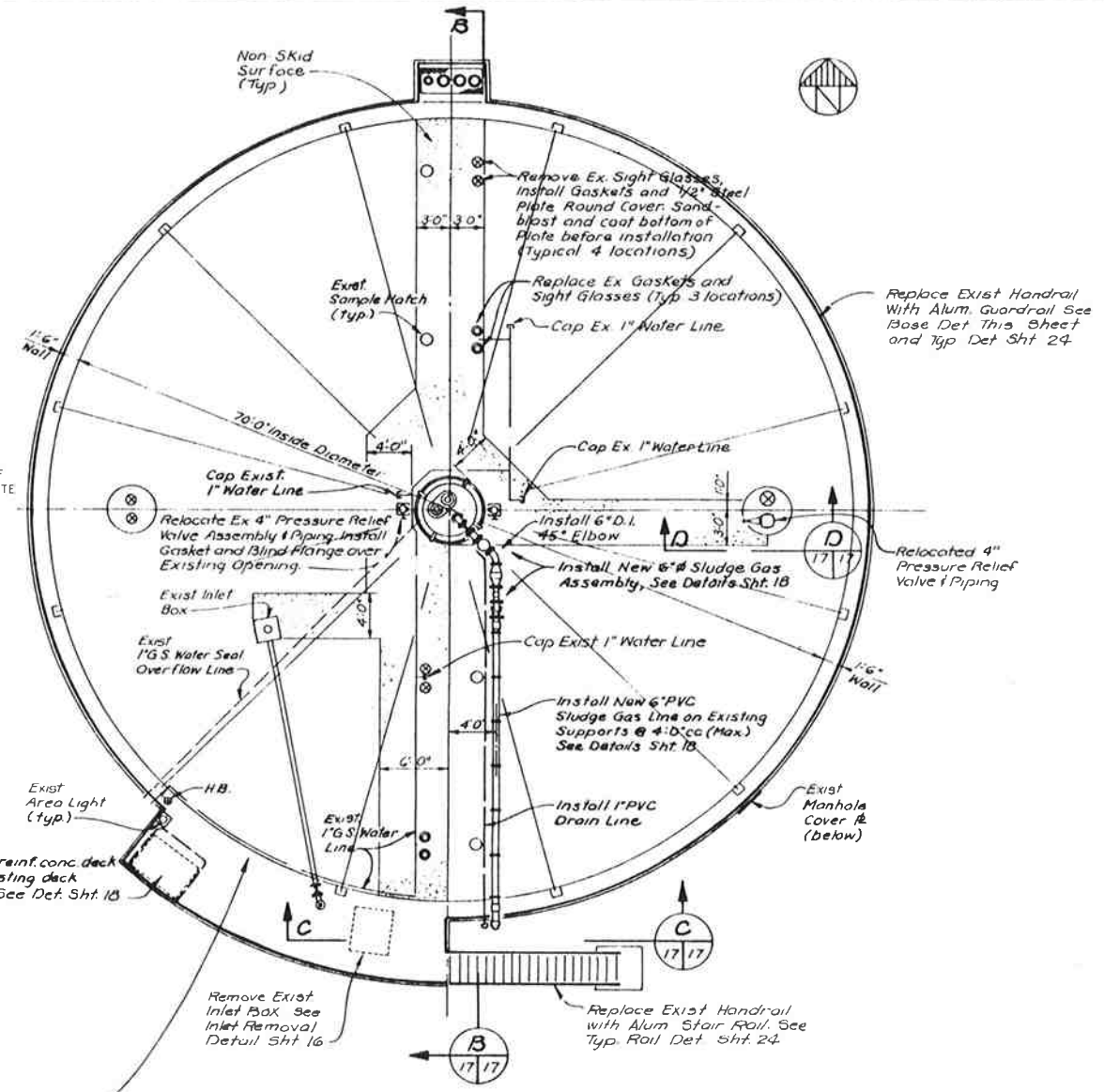


ELEVATION

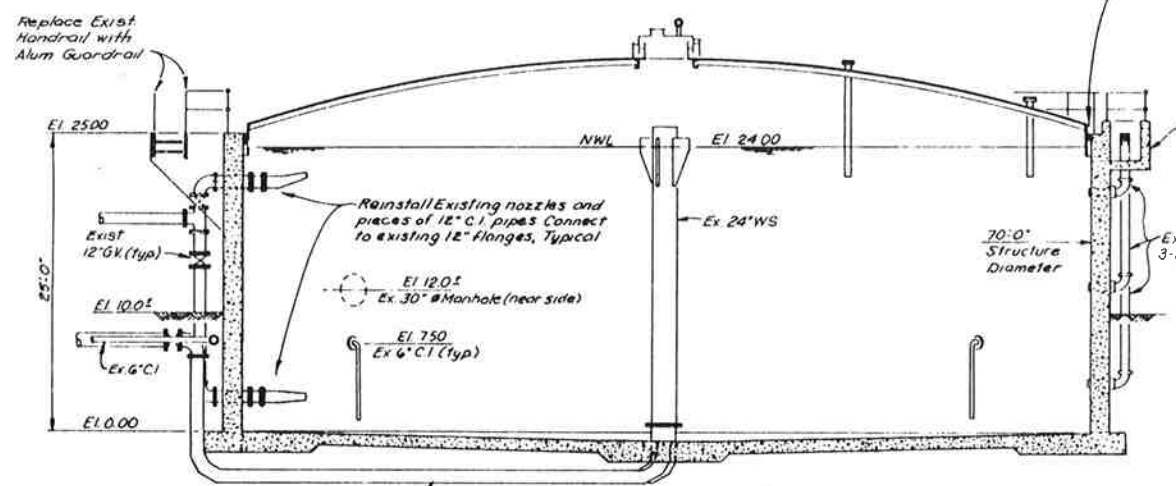


BASE PLATE PLAN

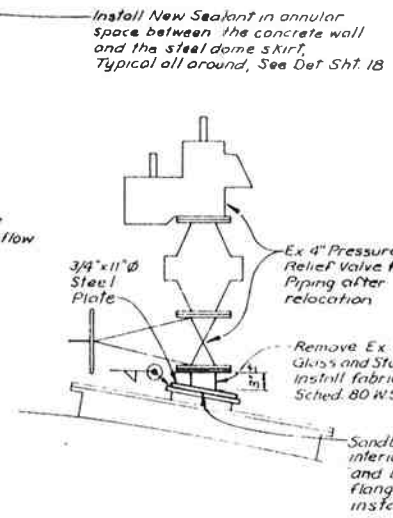
ALUM. GUARDRAIL BASE DETAIL
NO SCALE



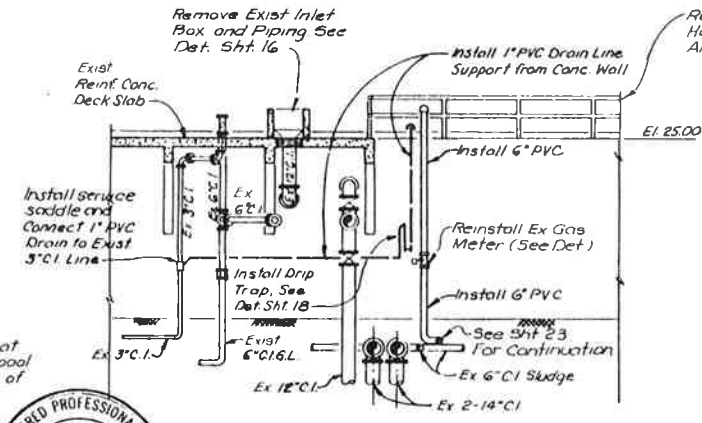
ROOF PLAN
Scale 1/8"=1'-0"



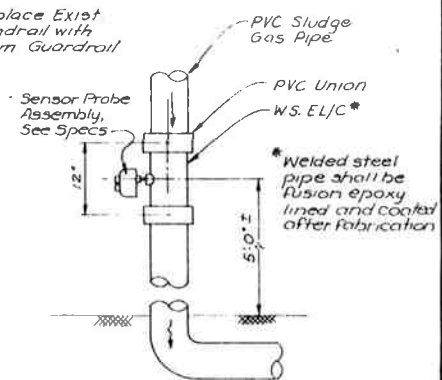
SECTION B
Scale 1/8"=1'-0"



SECTION D
Scale 3/4"=1'-0"



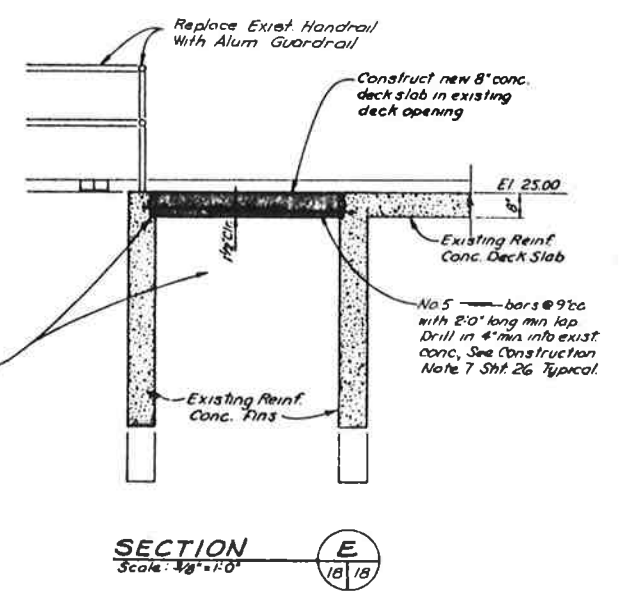
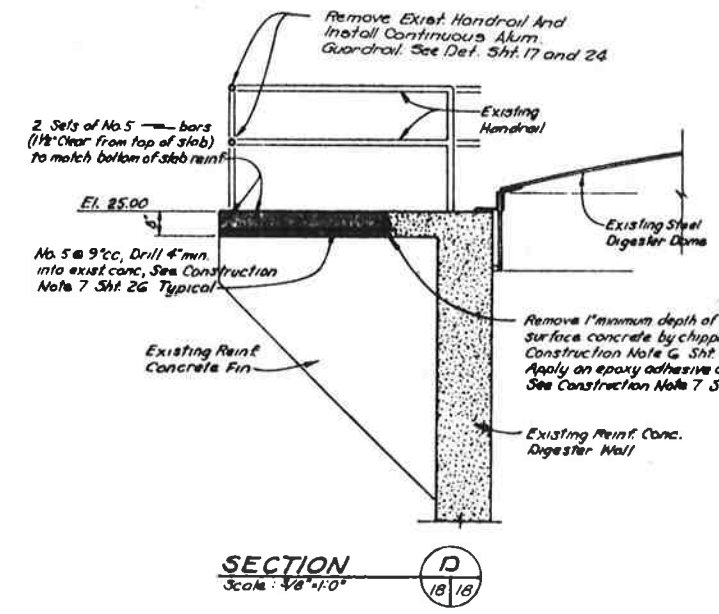
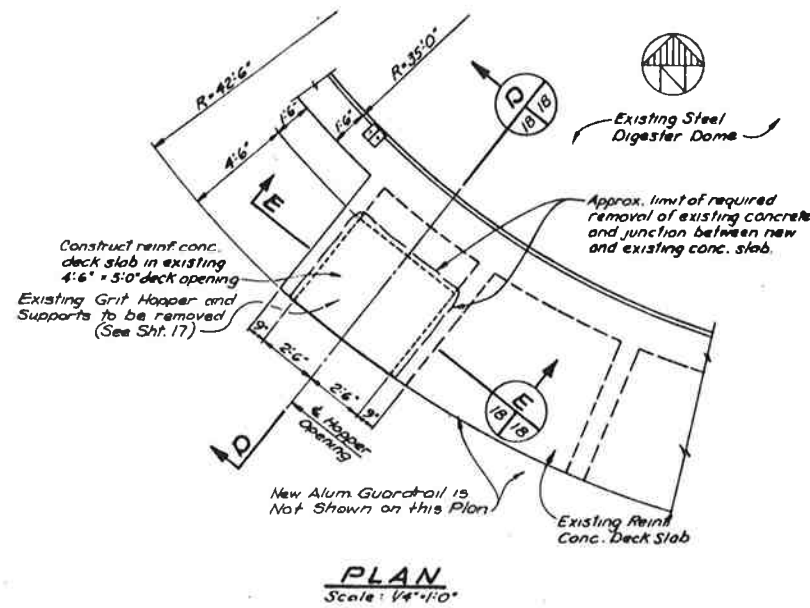
SECTION C
Scale 1/8"=1'-0"



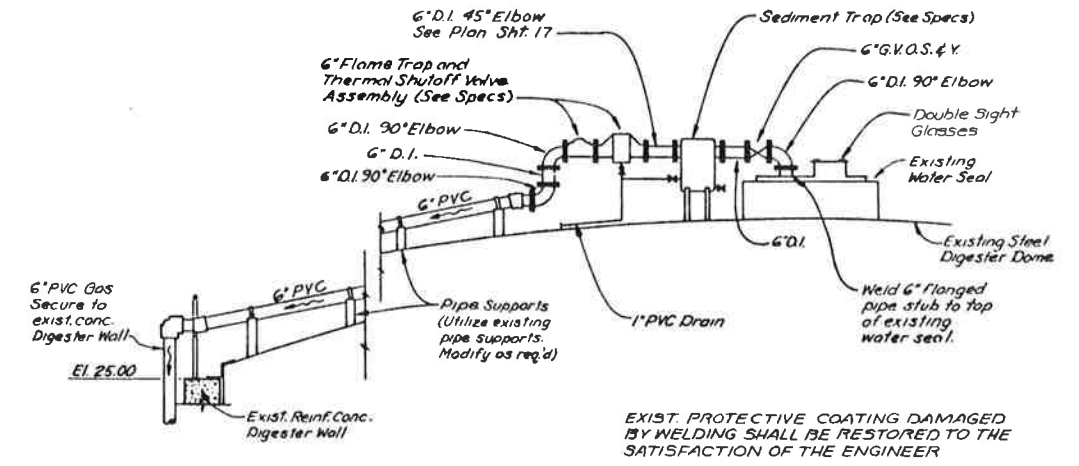
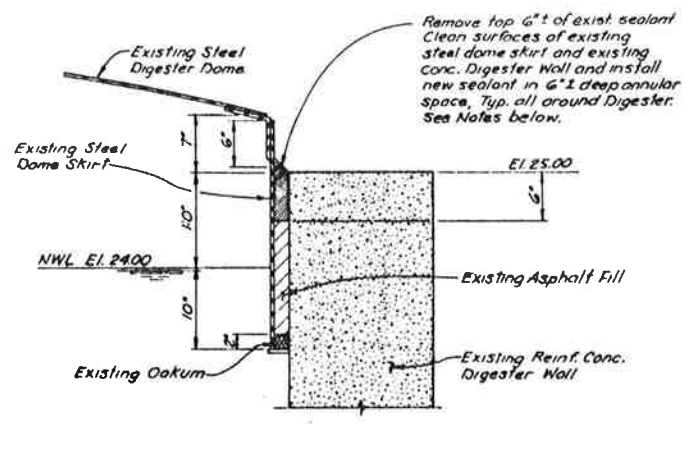
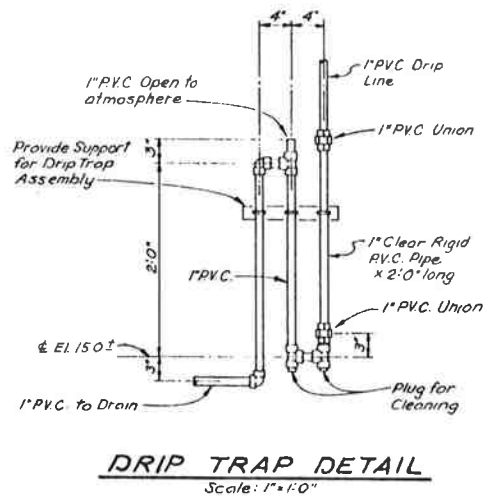
GAS METER CONNECTION DETAIL
Scale 3/4"=1'-0"



REFERENCE INFORMATION AND NOTES:				GRAPHIC SCALES (in Feet) 1/8"=1'-0" 3/4"=1'-0"		DESIGNED DAB DRAWN DCC CHECKED RHC DATE FEB. 1989		SO. SAN LUIS OBISPO CO. SANITATION DISTRICT SAN LUIS OBISPO COUNTY, CALIFORNIA WASTEWATER WORKS IMPROVEMENTS Kennedy/Jenks/Chilton Palo Alto		WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3 EXISTING SLUDGE DIGESTER MODIFICATIONS PRIMARY SLUDGE DIGESTER PLANS AND SECTIONS		SCALE AS NOTED JOB NO. 885119.00 SHEET 17 OF 40
REV	DESCRIPTION	SUB	APPR	DATE	REFER TO TRACING FOR LATEST REVISION							



**EXISTING REINF. CONC. DECK SLAB OPENING
REINF. CONC. DECK SLAB DETAILS**



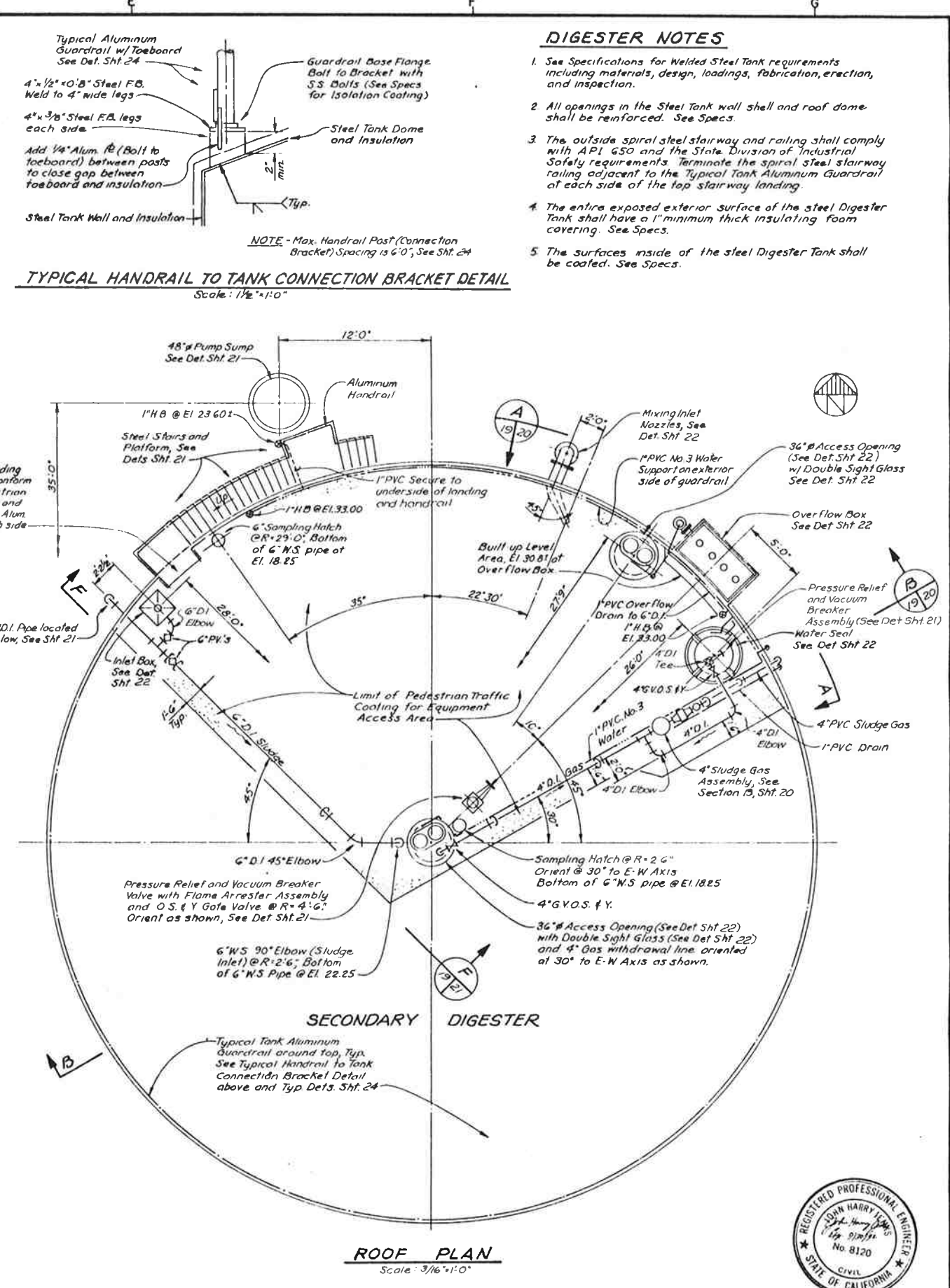
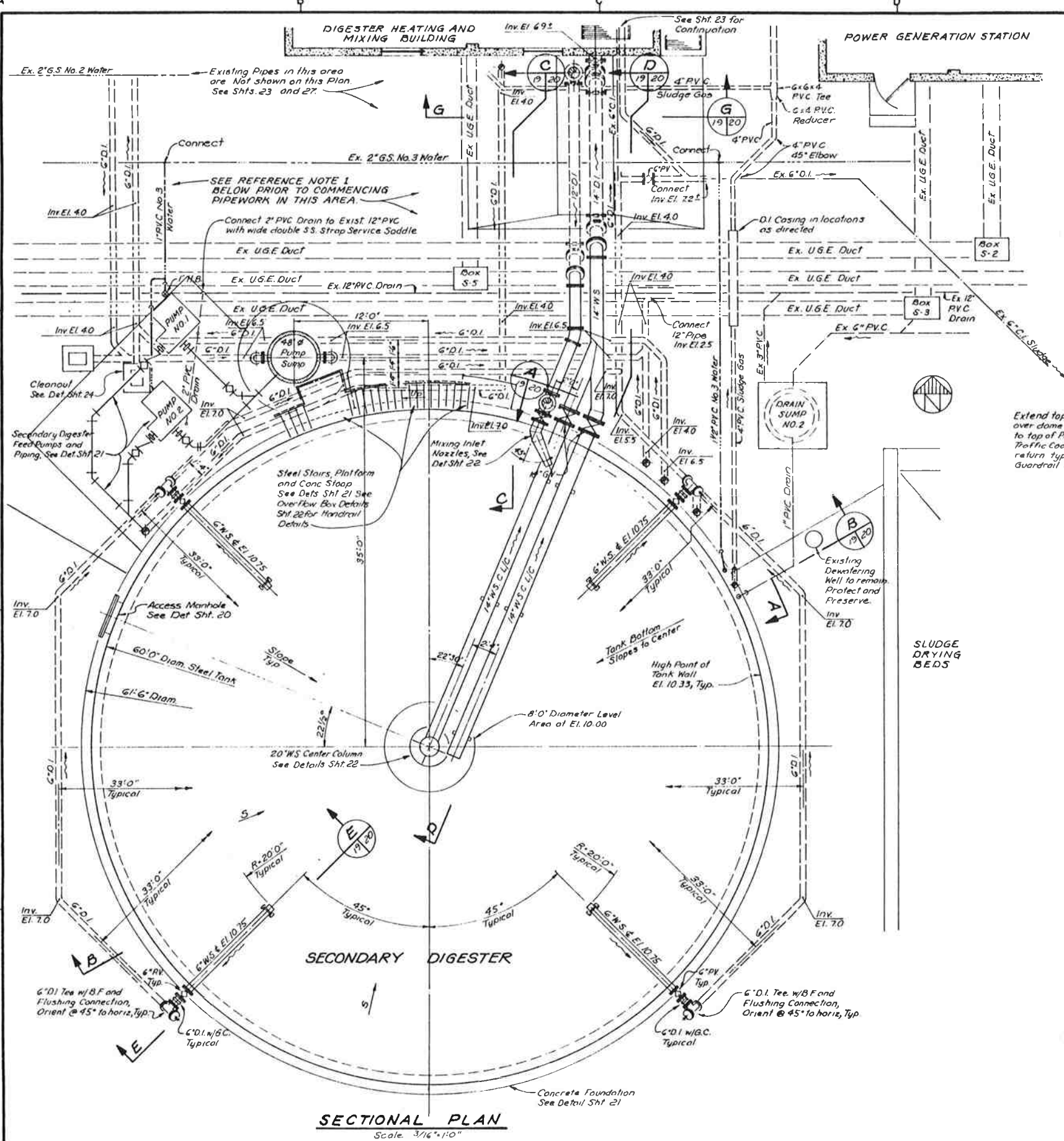
**CONCRETE WALL/STEEL DOME SKIRT JUNCTION
ANNULAR SPACE SEALANT DETAILS**

6" Ø SLUDGE GAS ASSEMBLY DETAILS

- NOTES**
1. The Contractor shall deliver up to 10 pint sized samples of the removed existing sealant material to the District for their use.
 2. The Contractor shall deliver a gallon sample of the proposed favorably reviewed sealant to the District for their use in testing the compatibility between the existing and proposed sealants.
 3. The sealant compound shall be a one part Urethane Sealant, Mameco "Vulkem" No. 116; Sika Sealant Division Sika Flex 1A, or equal.
 4. Prior to installation of the New Sealant Material the Contractor shall inspect the exposed Steel Dome Skirt for corrosion damage.

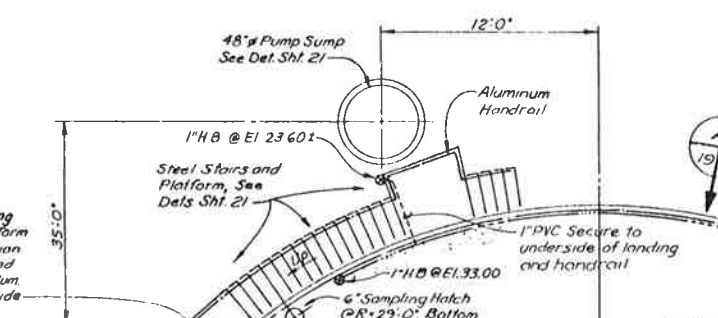


<p>REFERENCE INFORMATION AND NOTES:</p>				<p>GRAPHIC SCALES (In Feet)</p> <p>1/4" = 1'-0" 3/8" = 1'-0" 1" = 1'-0"</p>	<p>DESIGNED: DAB DRAWN: DCC CAJ CHECKED: RHC DATE: FEB. 1989</p>	<p>SO. SAN LUIS OBISPO CO. SANITATION DISTRICT SAN LUIS OBISPO COUNTY, CALIFORNIA WASTEWATER WORKS IMPROVEMENTS Kennedy/Jenks/Chilton Palo Alto</p>	<p>WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3 EXISTING SLUDGE DIGESTER MODIFICATIONS PRIMARY SLUDGE DIGESTER MISCELLANEOUS DETAILS</p>	<p>SCALE AS NOTED JOB NO. 885119.00 SHEET 18 OF 40</p>
REV	DESCRIPTION	SUB	APPR	DATE	<p>APPROVED: John L. Wallace JOHN L. WALLACE DISTRICT ADMINISTRATOR</p>			
<p>REFER TO TRACING FOR LATEST REVISION</p>								



- ### DIGESTER NOTES
- See Specifications for Welded Steel Tank requirements including materials, design, loadings, fabrication, erection, and inspection.
 - All openings in the Steel Tank shell and roof dome shall be reinforced. See Specs.
 - The outside spiral steel stairway and railing shall comply with API 650 and the State Division of Industrial Safety requirements. Terminate the spiral steel stairway railing adjacent to the Typical Tank Aluminum Guardrail of each side of the top stairway landing.
 - The entire exposed exterior surface of the steel Digester Tank shall have a 1" minimum thick insulating foam covering. See Specs.
 - The surfaces inside of the steel Digester Tank shall be coated. See Specs.

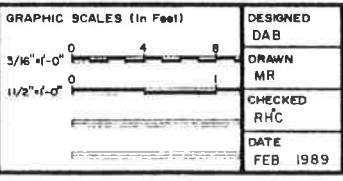
TYPICAL HANDRAIL TO TANK CONNECTION BRACKET DETAIL
Scale: 1/2" = 1'-0"



REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:
1. Prior to commencing pipe fabrication and for installation, expose and locate the existing pipes and underground ducts shown on this sheet and on Sheet 27 to permit site verification by the Engineer of the locations and inverts shown on this sheet and on Sheet 27. Revisions in pipe locations may be directed by the Engineer to conform to the existing conditions.



DESIGNED: DAB
DRAWN: MR
CHECKED: RHC
DATE: FEB 1989

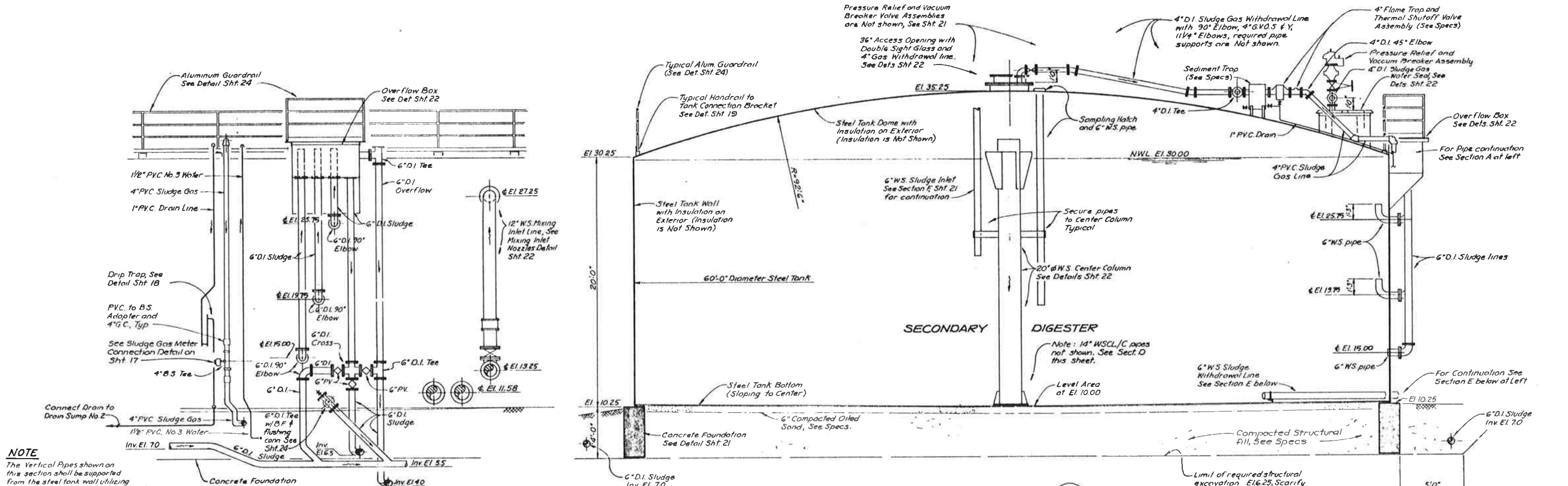
SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
SAN LUIS OBISPO COUNTY, CALIFORNIA
WASTEWATER WORKS IMPROVEMENTS
Kennedy/Jenks/Chilton Palo Alto

SUBMITTED: [Signature]
APPROVED: [Signature]
JOHN H. JENKS, R.E. NO. 8120
JOHN L. WALLACE, DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3

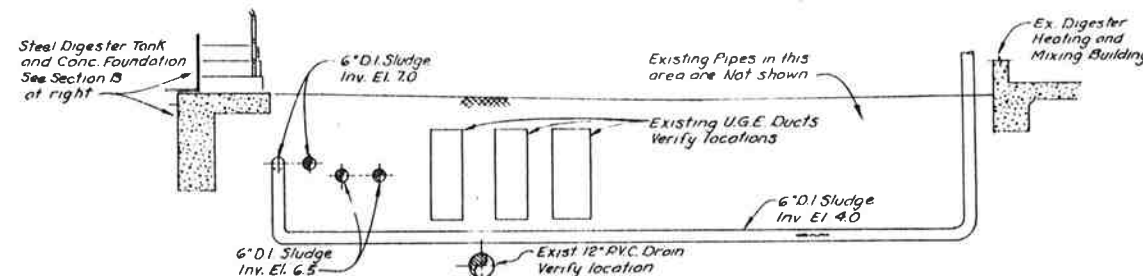
SECONDARY DIGESTER, GENERAL ROOF PLAN AND SECTIONAL PLAN

SCALE AS NOTED
JOB NO. 885119.00
SHEET 19 OF 40

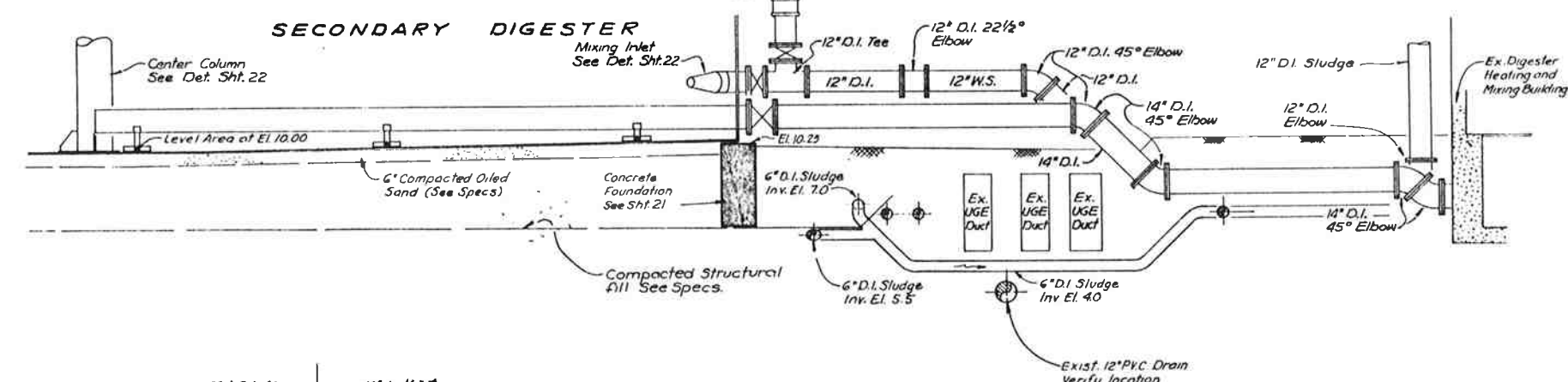


NOTE
The Vertical Pipes shown on this section shall be supported from the steel tank wall utilizing fabricated pipe supports. See Details and max. spacings on Sht. 24

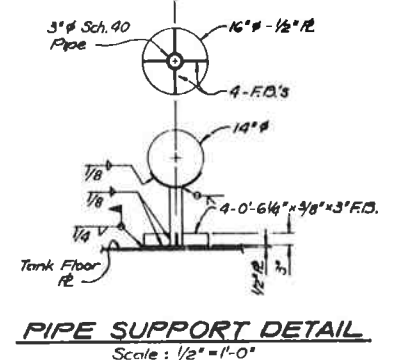
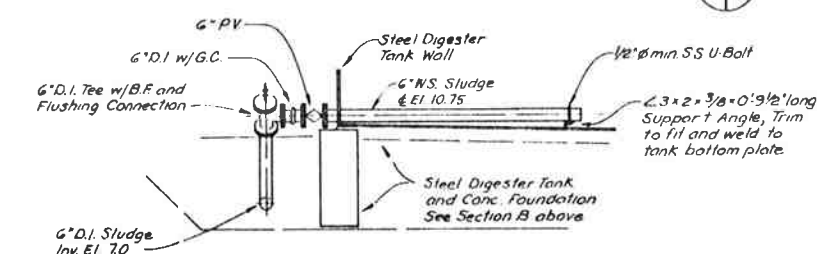
SECTION A
Scale: 1/4" = 1'-0"
19/20



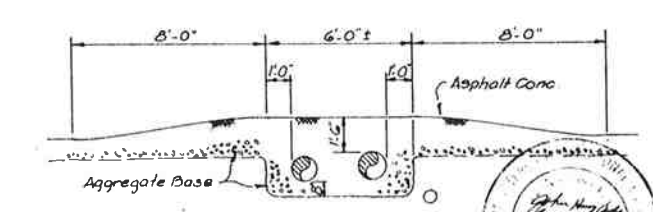
SECTION B
Scale: 1/4" = 1'-0"
19/20



SECTION C
Scale: 1/4" = 1'-0"
19/20

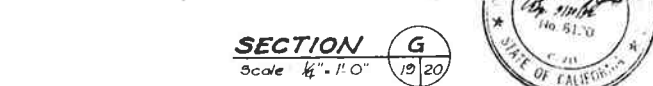


SECTION D
Scale: 1/4" = 1'-0"
19/20



36" ACCESS MANHOLE DETAIL
Scale: 1/4" = 1'-0"

SECTION G
Scale: 1/4" = 1'-0"
19/20



REV	DESCRIPTION	SUB	APPR	DATE

REFERENCE INFORMATION AND NOTES:

GRAPHIC SCALES (in Feet)

1/4" = 1'-0"
1/2" = 1'-0"

DESIGNED: DAB
DRAWN: CAJ, JKJ
CHECKED: RHC
DATE: FEB. 1989

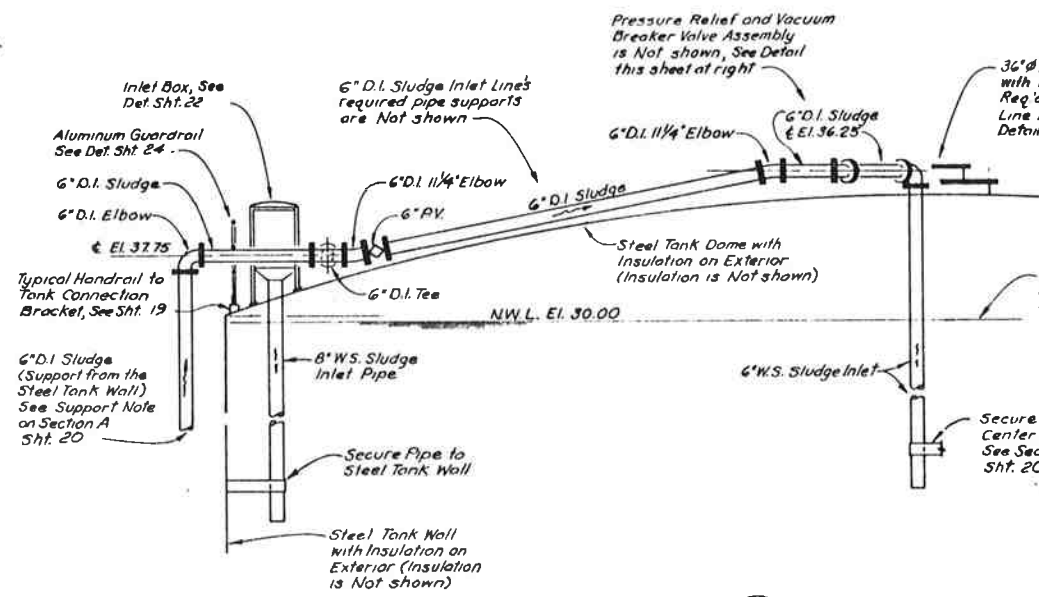
SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
SAN LUIS OBISPO COUNTY, CALIFORNIA
WASTEWATER WORKS IMPROVEMENTS
Kennedy/Jerka/Chilton
Palo Alto

SUBMITTED: [Signature]
APPROVED: [Signature] J. L. WALLACE, DISTRICT ADMINISTRATOR

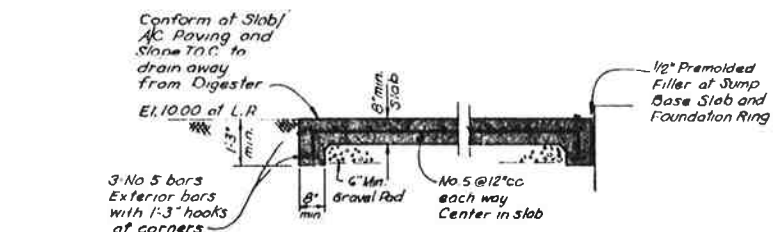
WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3

SECONDARY DIGESTER
GENERAL SECTIONS AND DETAILS

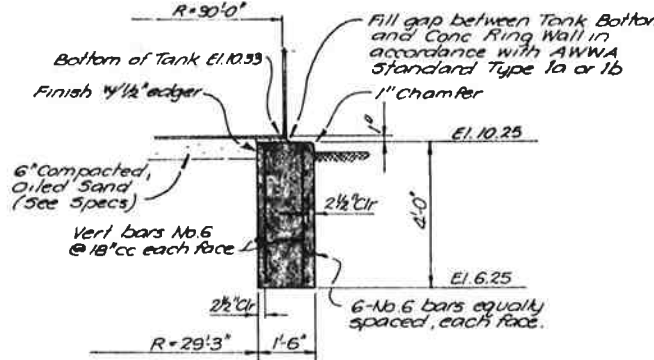
SCALE AS NOTED
JOB NO. 88519.00
SHEET 20 OF 40



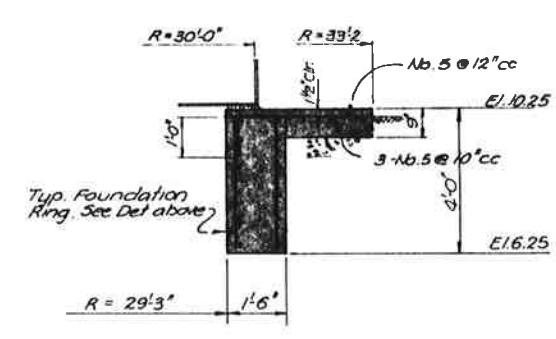
SECTION F
Scale: 1/4"=1'-0"



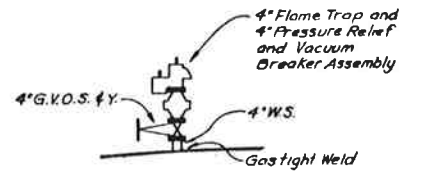
SLAB ON GRADE - TYR SECTION
Scale: 3/8"=1'-0"



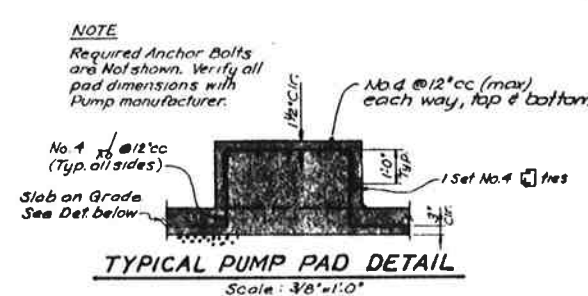
TYPICAL WALL RING CONCRETE FOUNDATION DETAIL
Scale: 3/8"=1'-0"



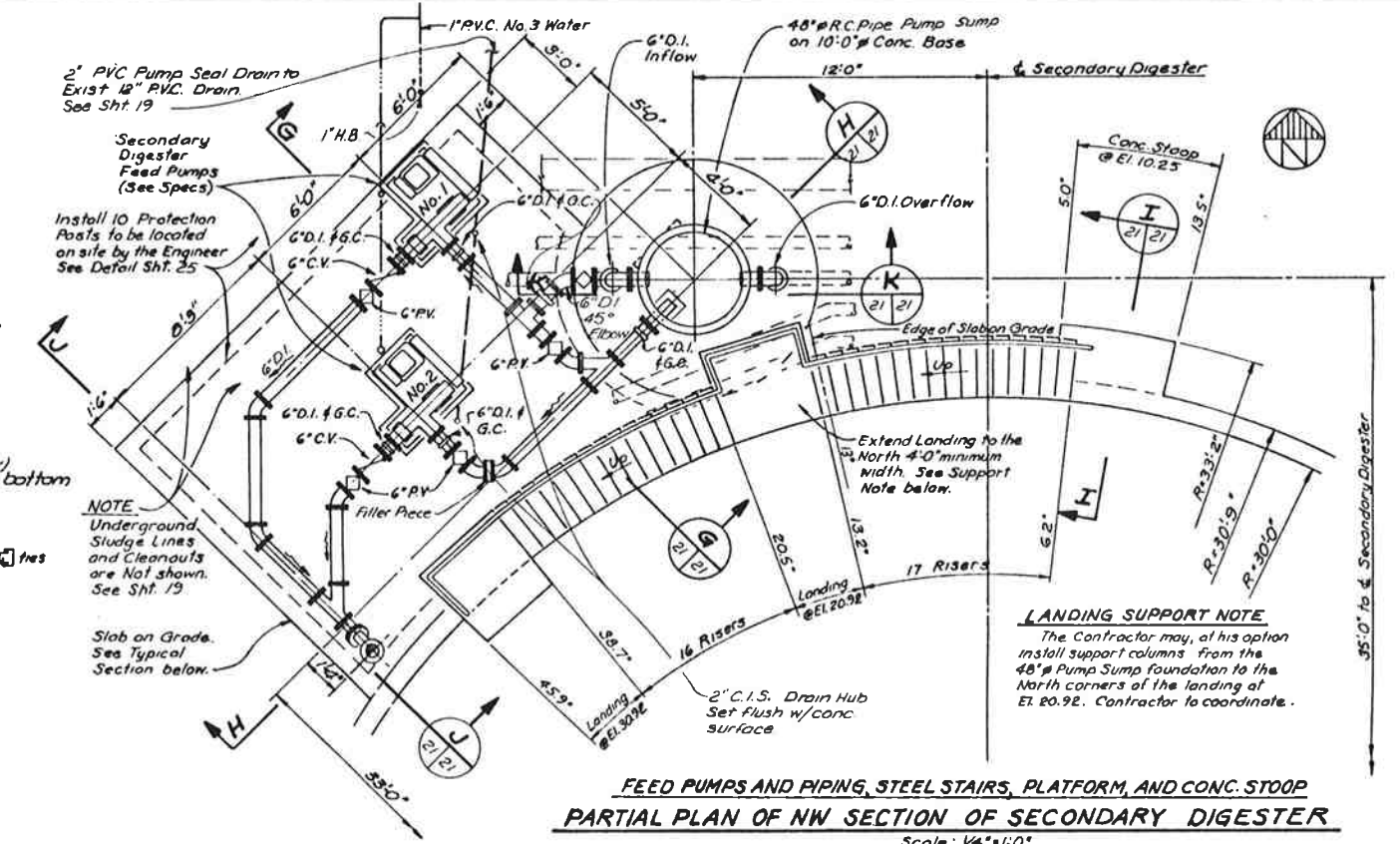
SECTION I
Scale: 3/8"=1'-0"



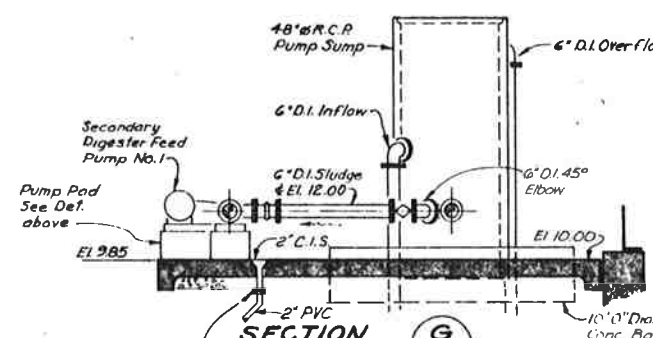
TYP. PRESSURE RELIEF AND VACUUM BREAKER ASSEMBLY DETAIL
Scale: 1/4"=1'-0"



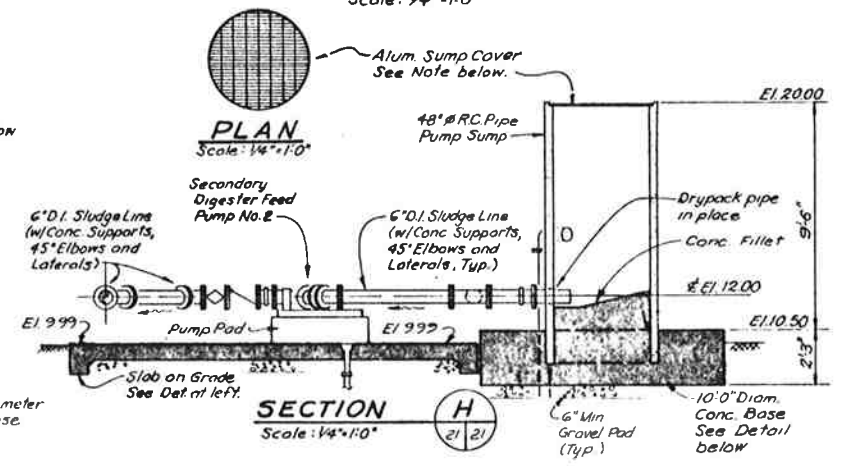
TYPICAL PUMP PAD DETAIL
Scale: 3/8"=1'-0"



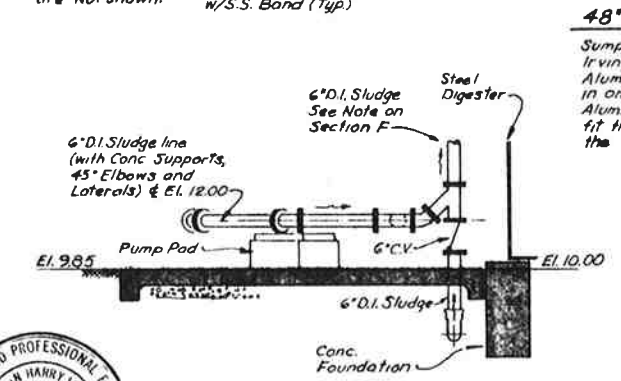
FEED PUMPS AND PIPING, STEEL STAIRS, PLATFORM, AND CONC. STOOP
PARTIAL PLAN OF NW SECTION OF SECONDARY DIGESTER
Scale: 1/4"=1'-0"



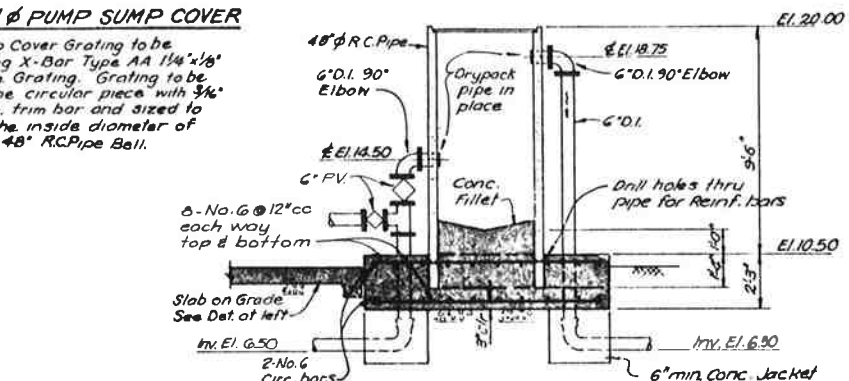
SECTION G
Scale: 1/4"=1'-0"



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



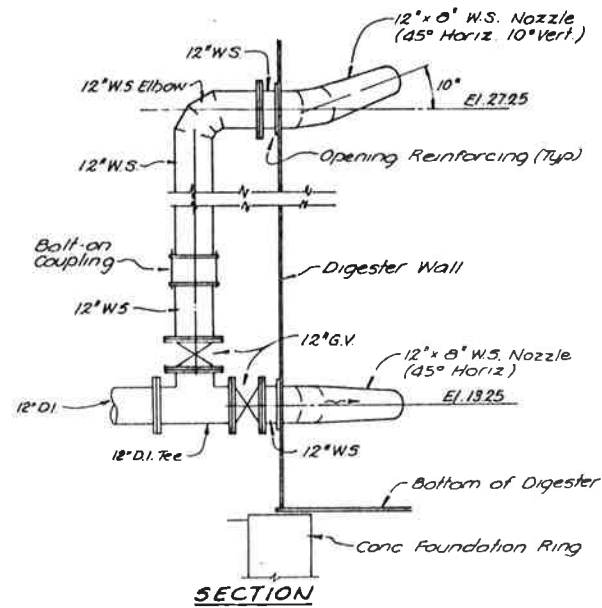
SECTION J
Scale: 1/4"=1'-0"



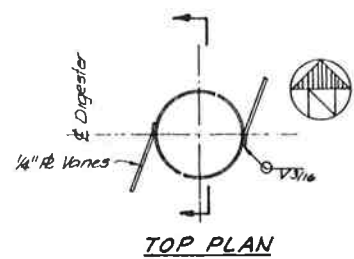
SECTION K
Scale: 1/4"=1'-0"



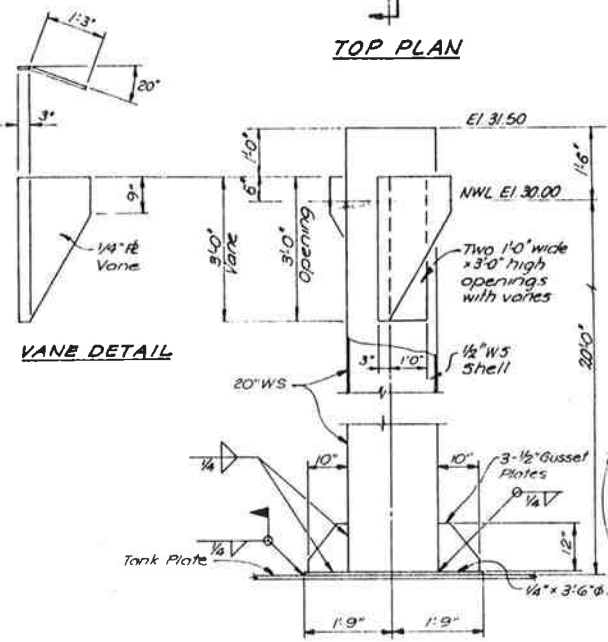
REFERENCE INFORMATION AND NOTES: REFER TO TRACING FOR LATEST REVISION				GRAPHIC SCALES (In Feet) 1/4"=1'-0" 3/8"=1'-0"	DESIGNED: DAB DRAWN: MR JC CHECKED: RHC DATE: FEB 1989	SO. SAN LUIS OBISPO CO. SANITATION DISTRICT SAN LUIS OBISPO COUNTY, CALIFORNIA WASTEWATER WORKS IMPROVEMENTS Kennedy/Jenks/Chilton Palo Alto SUBMITTED: [Signature] APPROVED: [Signature]	WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3 SECONDARY DIGESTER GENERAL PLANS, SECTIONS AND DETAILS	SCALE AS NOTED JOB NO. 885119.00 SHEET 21 OF 40
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MIXING INLET NOZZLE DETAIL
Scale 3/8"=1'-0"



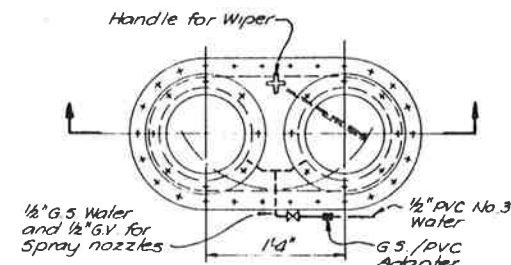
TOP PLAN



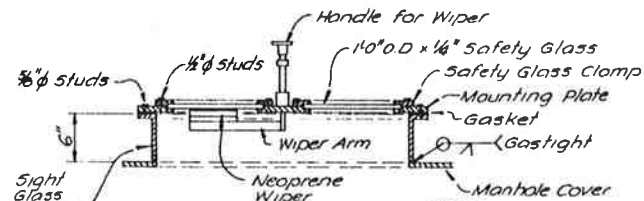
VANE DETAIL

ELEVATION
CENTER COLUMN DETAILS
Scale 1/2"=1'-0"

BOTTOM PLAN



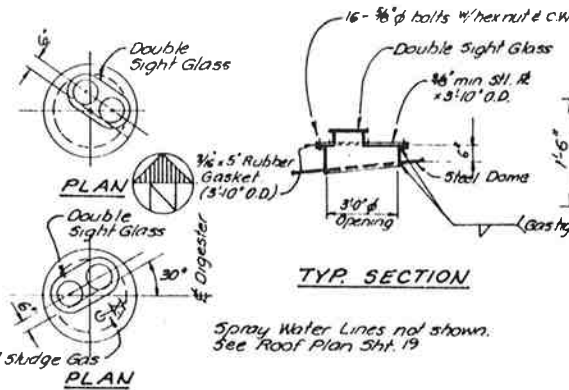
PLAN



SECTION

DOUBLE SIGHT GLASS DETAIL
No Scale

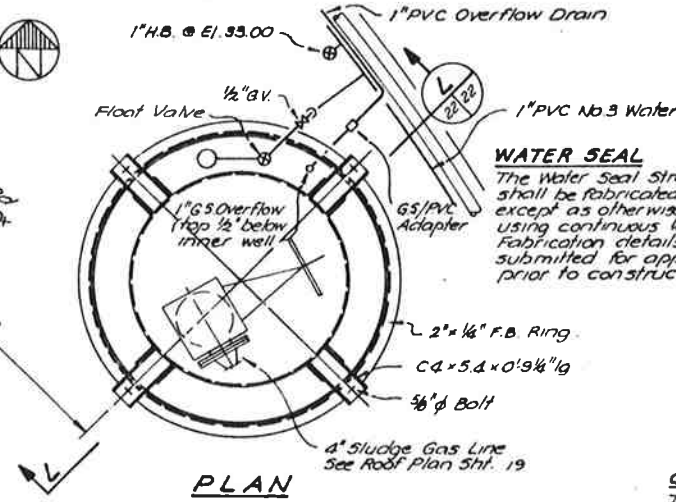
NOTE
The Double Sight Glasses are located on the 36" Access Openings on the Digester Dome. See Sht. 19 and Detail below.



36" ACCESS OPENING DETAIL
Scale 1/4"=1'-0"

NOTE
See Roof Plan Sht. 19 for Inlet Box location.

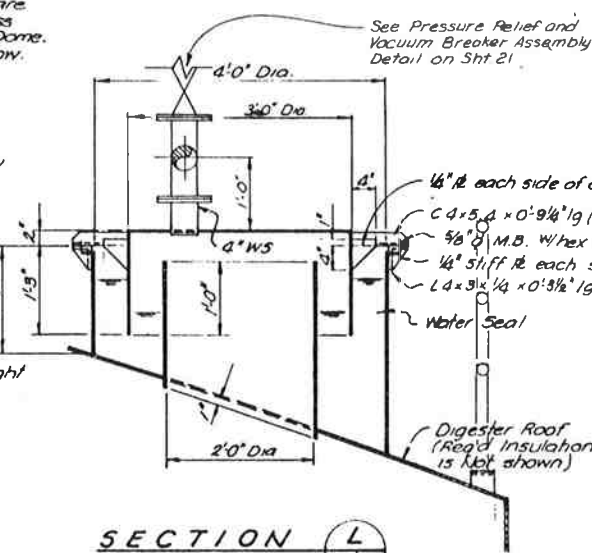
PLAN



PLAN

WATER SEAL

The Water Seal Structure shall be fabricated from 1/4" R (min) except as otherwise shown, using continuous 1/4" fillet welds. Fabrication details shall be submitted for approval prior to construction.

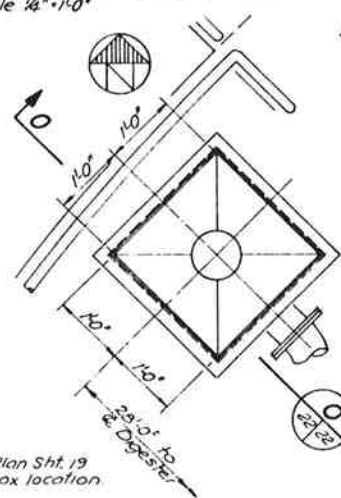


SECTION L

WATER SEAL DETAILS
Scale 3/8"=1'-0"

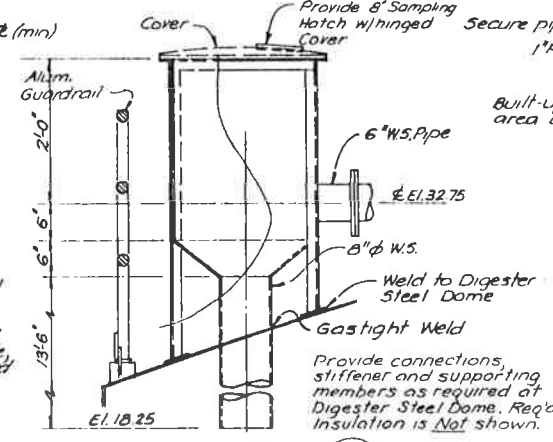
INLET BOX shall be fabricated from 1/4" R (min) (Welded Const) with angles, legs and braces of sufficient size to support the box and its contents. Fabrication details shall be submitted for approval prior to construction.

INLET BOX COVER shall be fabricated from 1/4" min thick fiberglass to fit on the Inlet Box. The cover shall be domed in the center for drainage and shall include a catch and trap on the NE side and hinges (connected to Inlet Box) on the SW side. Submit details for approval before fabrication.

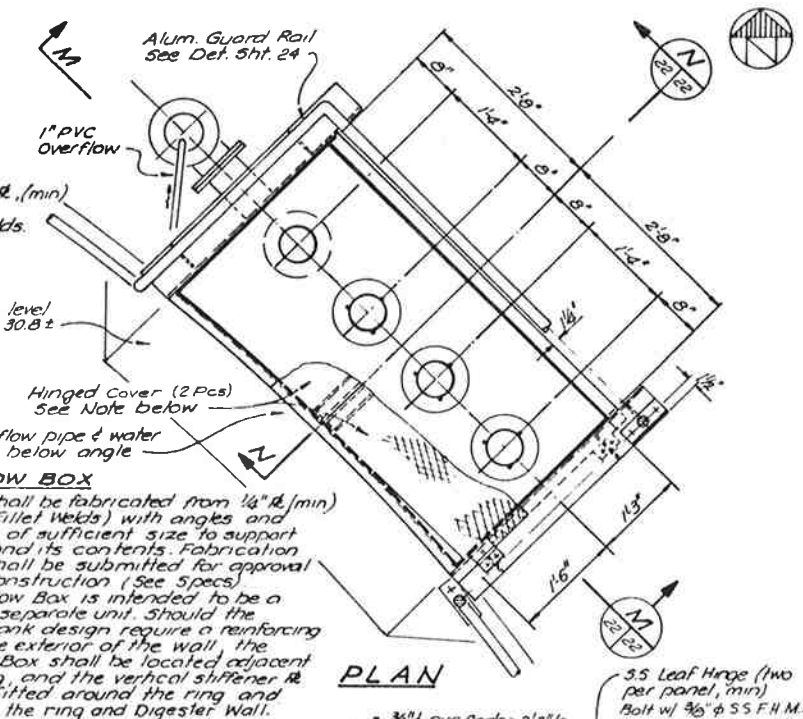


PLAN

INLET BOX DETAILS
Scale 3/4"=1'-0"



SECTION O



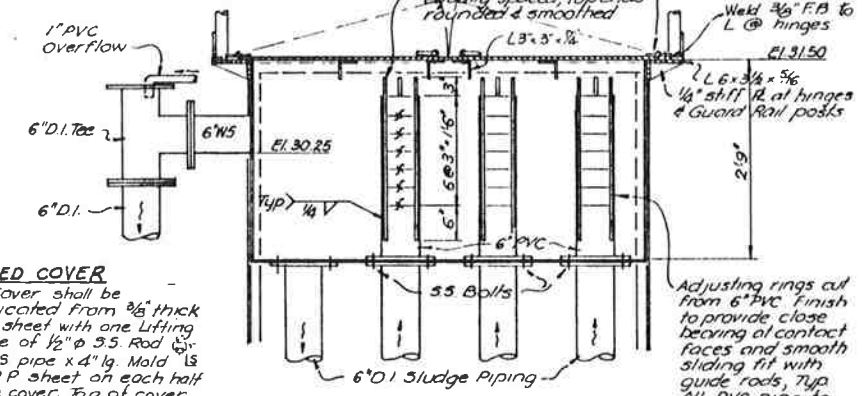
PLAN

OVERFLOW BOX

The Box shall be fabricated from 1/4" R (min) (Cont. 1/4" Fillet Welds) with angles and stiffeners of sufficient size to support the Box and its contents. Fabrication details shall be submitted for approval prior to construction (See Specs). The Overflow Box is intended to be a complete separate unit. Should the Digester tank design require a reinforcing ring on the exterior of the wall, the Overflow Box shall be located adjacent to this ring, and the vertical stiffener R shall be fitted around the ring and welded to the ring and Digester Wall.

HINGED COVER

The Cover shall be fabricated from 3/8" thick F.R.P. sheet with one lifting handle of 1/2" dia 35 Rod and 35 pipe x 4" lg. Mold to F.R.P. sheet on each half of the cover. Top of cover shall be rough non-slip surface, grey color, resistant to UV and digester gas fumes.



SECTION M

OVERFLOW BOX DETAILS
Scale 3/4"=1'-0"



REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:

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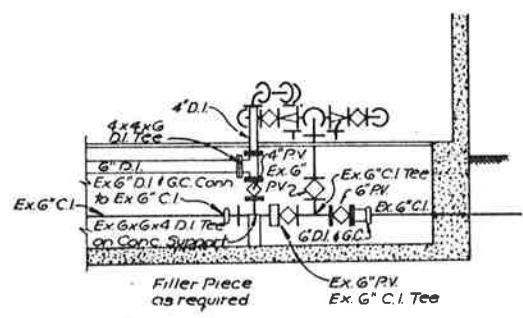
GRAPHIC SCALES (In Feet)

1/4"=1'-0"	
3/8"=1'-0"	
1/2"=1'-0"	
3/4"=1'-0"	

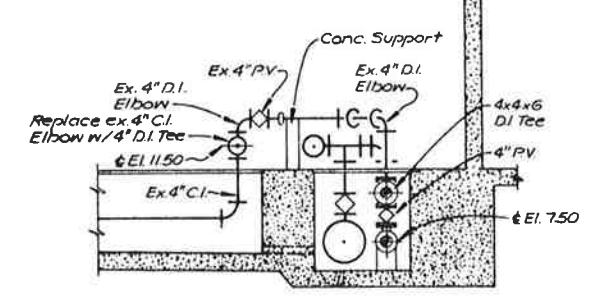
DESIGNED DAB	SO. SAN LUIS OBISPO CO. SANITATION DISTRICT SAN LUIS OBISPO COUNTY, CALIFORNIA WASTEWATER WORKS IMPROVEMENTS Kennedy/Jenks/Chilton Palo Alto
DRAWN MR JC	
CHECKED RHC	
DATE FEB 1989	

APPROVED: *Alan L. Wallace*
ALAN L. WALLACE DISTRICT ADMINISTRATOR

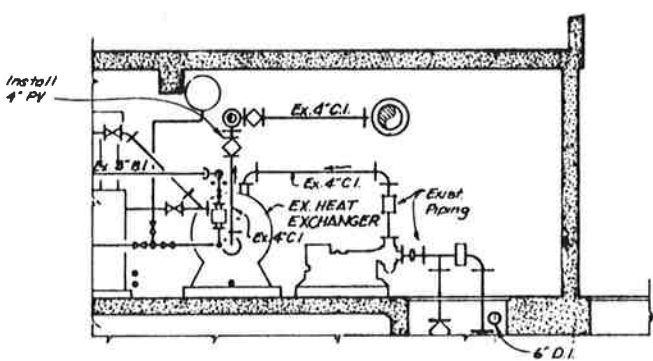
WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3 SECONDARY DIGESTER GENERAL MISCELLANEOUS DETAILS	SCALE AS NOTED JOB NO 885119.00 SHEET 22 OF 40
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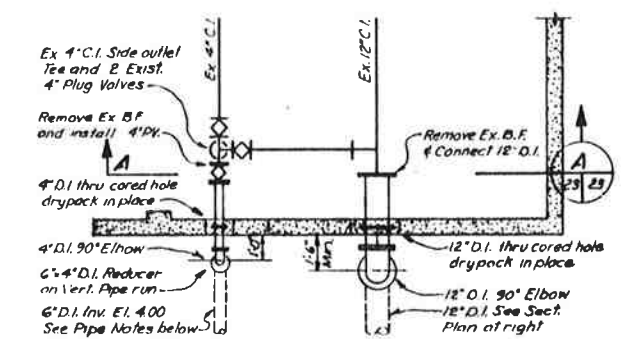
SECTION C
23 23



SECTION B
23 23



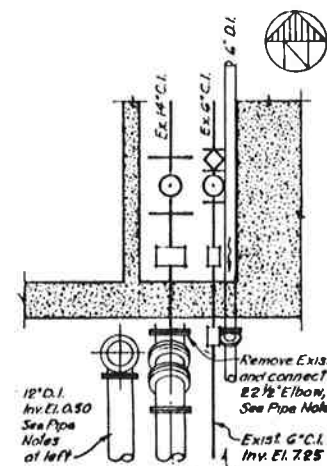
SECTION A
23 23



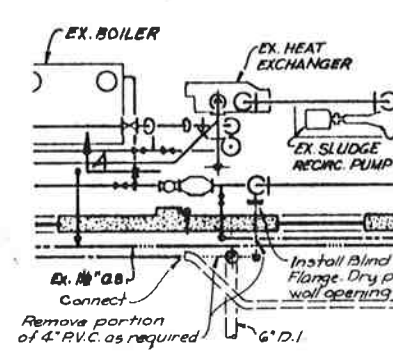
PART SECTIONAL PLAN AT ELEV. 19.0

PIPE NOTES

- Expose and locate existing pipes shown on Floor Plan of the right. Relocate small pipes as required and directed by the Engineer.
- Prior to commencing pipe fabrication and/or installation, expose and locate existing pipes and underground ducts shown on Sht. 27 to permit site verification by the Engineer of the locations and inverts shown on this sheet and on Sht. 27. Revisions in pipe locations may be directed by the Engineer to conform to the existing conditions.



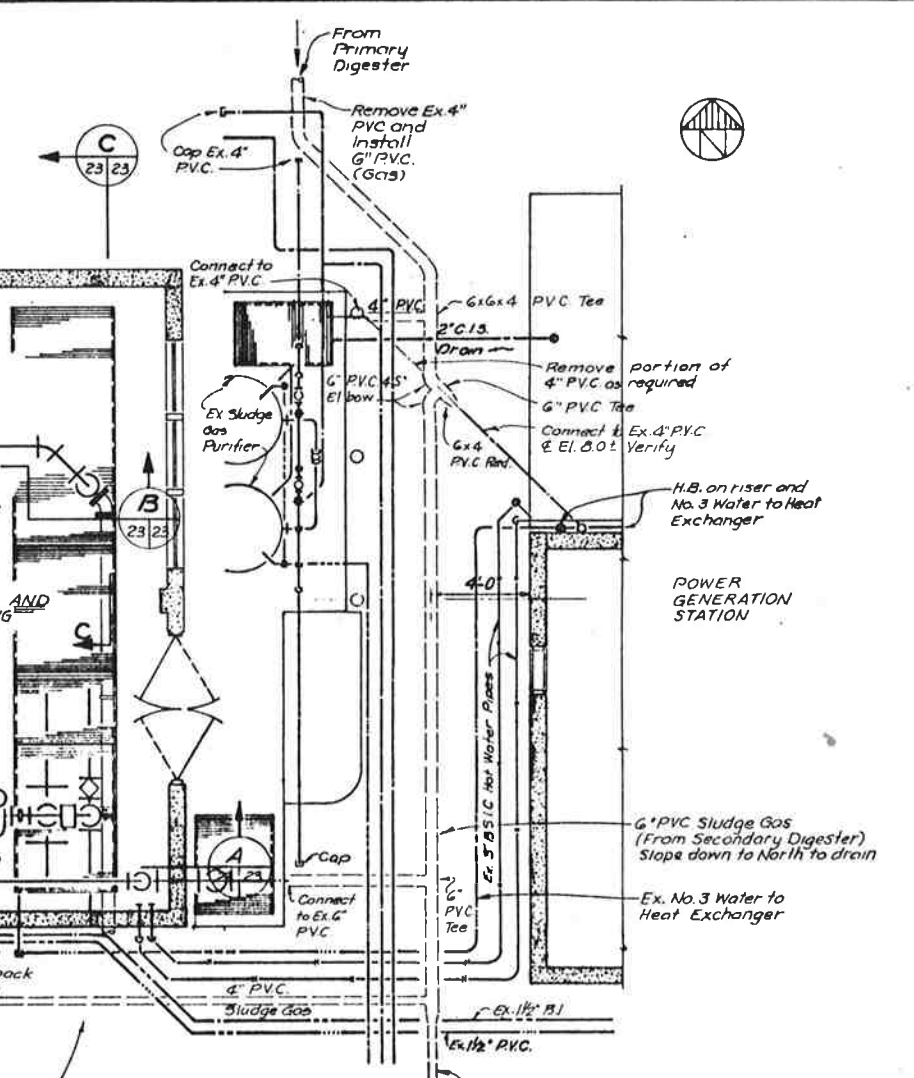
PART SECTIONAL PLAN AT ELEV. 9.0



NOTE: See Part Plans at left for sludge line extensions in this area which connect to the Secondary Digester and to existing 6\"/>

FOR PIPING IN THIS AREA SEE SEC. B/C THIS SHT

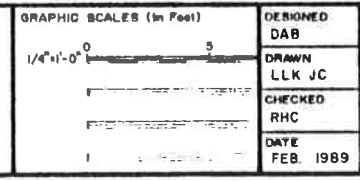
DIGESTER HEATING AND MIXING BUILDING



REV.	DESCRIPTION	SUB.	APPR.	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:



DESIGNED: DAB
 DRAWN: LLK/JC
 CHECKED: RHC
 DATE: FEB. 1989

SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
 WASTEWATER WORKS IMPROVEMENTS
 Kennedy/Jenks/Chilton Palo Alto

SUBMITTED: [Signature]
 APPROVED: [Signature] JOHN L. WALLACE DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3

EXISTING DIGESTER HEAT. AND MIX. BLDG. MODIFICATIONS

SCALE: 1/4" = 1'-0"
 JOB NO: 885119.00
 SHEET: 23 OF 40

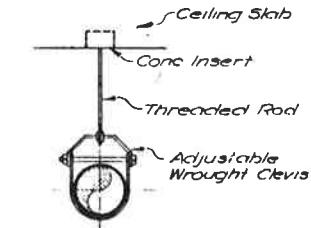
PIPE SUPPORT NOTE

All piping installed as part of this project shall be adequately supported. The elevated piping shall be supported on approved hangers, brackets, straps, brackets, frames and/or concrete piers which shall be securely connected to the reinforced concrete floor slabs, walls and/or roof slabs. The Support System shall be designed to adequately support the full weight of the pipe, pipe fittings and pipe contents as well as to provide lateral and longitudinal support for the complete elevated piping system. The pipe supports shall be located as shown and/or noted on these plans, and they shall also conform to the following maximum spacings and locations:

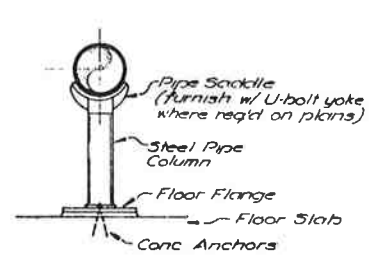
1. 30" to 14" pipes - - - 15'0" max spacing.
2. 12" to 8" pipes - - - 12'0" "
3. 6" CI or WS pipes - - - 10'0" "
4. 4" CI or WS pipes - - - 8'0" "
5. 3" to 2" metal pipes - - - 6'0" "
6. 1 1/2" to 1/2" metal pipes - - - 4'0" "
7. 6" to 2 1/2" PVC pipes - - - 4'0" "
8. 2" to 1/2" PVC pipes - - - 3'0" "
9. Locate a support at each end of each pipe.
10. Locate a support at each horizontal and each vertical angle point.

The proposed piping support system shall be submitted for approval prior to the pouring of the concrete structure.

Pipe support components shall be Grinnell, Elcen, Unistrut, Speedstrut or approved equal.



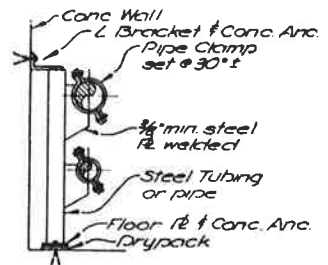
HANGER



SADDLE

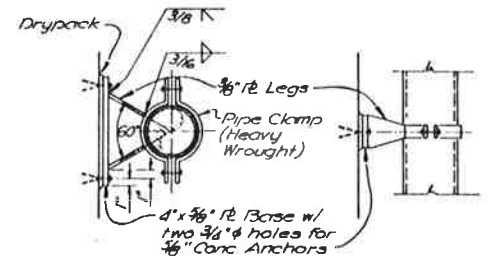
PIPE SUPPORT NOTE AND DETAILS

Scale 1"=1'0"



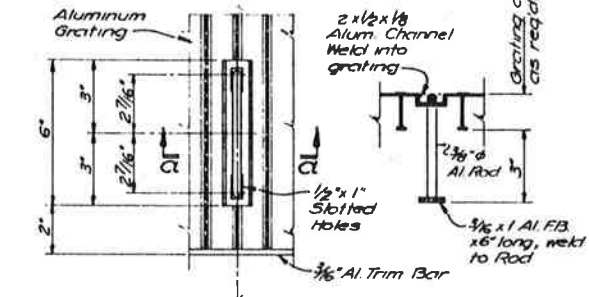
FABRICATED BRACKET

No Scale



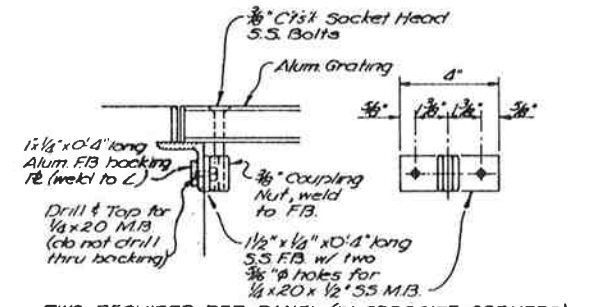
FABRICATED ELEVATION

MAY BE USED FOR VERTICAL SUPPORT AND/OR LATERAL SUPPORT (SHOWN)



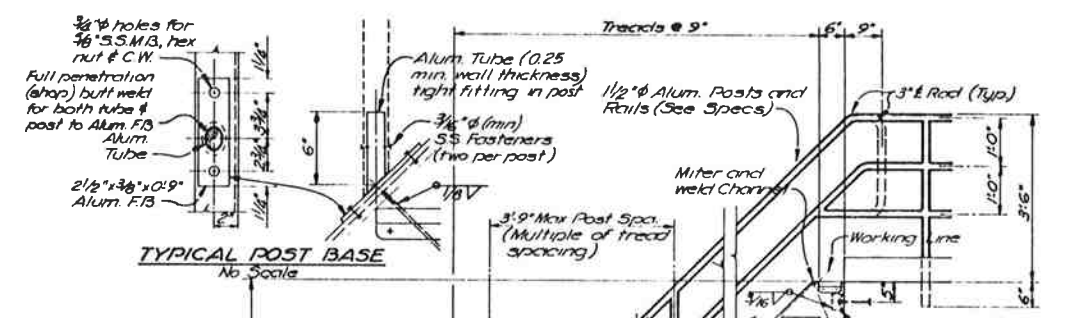
RETRACTABLE HANDLE DETAIL

Scale 3"=1'0"



GRATING ANCHORS

Scale 3"=1'0"

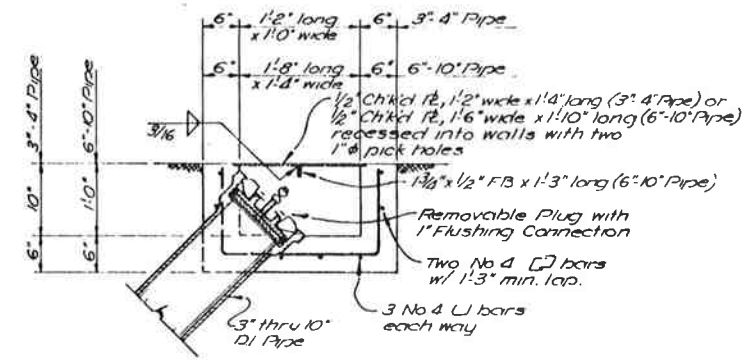


TYPICAL POST BASE

No Scale

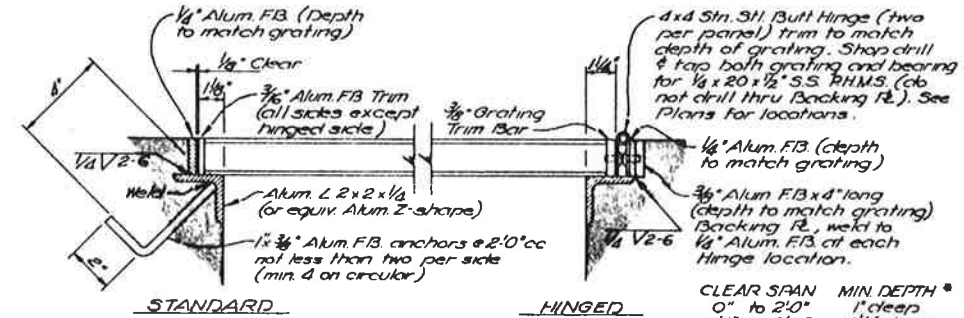
ALUMINUM STAIR DETAIL

Scale 1/2"=1'0"



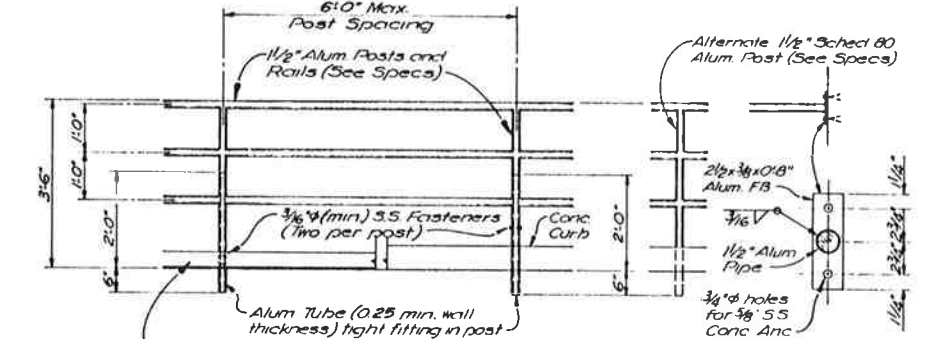
CLEANOUT

Scale 3/4"=1'0"



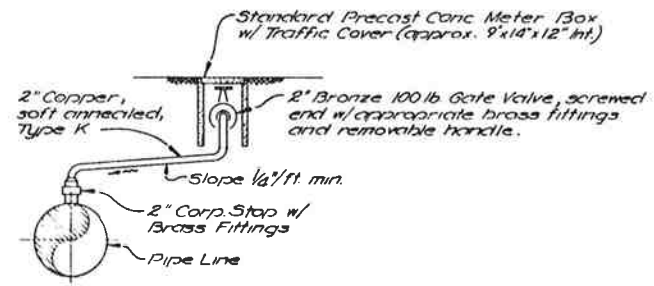
GRATING & BEARING DETAIL

Scale 3"=1'0"



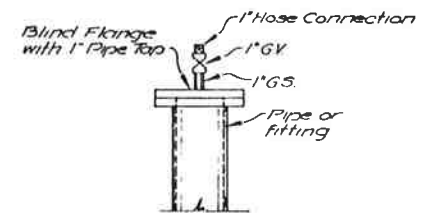
TYPICAL RAIL CONNECTION

No Scale



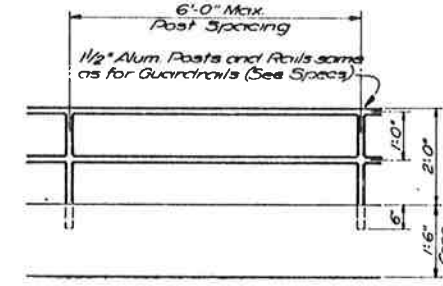
AIR RELIEF ASSEMBLY

No Scale



FLUSHING CONNECTION

No Scale



LOW PARAPET GUARDRAIL

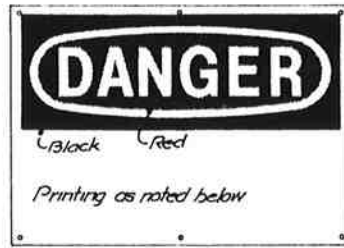
Scale 1/2"=1'0"

ALUMINUM GUARDRAIL DETAIL

Scale 1/2"=1'0"



<p>REFERENCE INFORMATION AND NOTES:</p>				<p>GRAPHIC SCALES (In Feet)</p> <p>1/2"=1'-0" 3</p> <p>3/4"=1'-0" 2</p> <p>1"=1'-0" 1</p> <p>3"=1'-0" 1/2</p>		<p>DESIGNED: DAB</p> <p>DRAWN: LLK, JJK</p> <p>CHECKED: RHC</p> <p>DATE: FEB 1989</p>		<p>SO. SAN LUIS OBISPO CO. SANITATION DISTRICT</p> <p>SAN LUIS OBISPO COUNTY, CALIFORNIA</p> <p>WASTEWATER WORKS IMPROVEMENTS</p> <p>Kennedy/Jenks/Chilton</p> <p>Palto Alto</p>		<p>WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3</p> <p>SCALE AS NOTED</p> <p>JOB NO. 88519.00</p> <p>SHEET 24 OF 40</p>	
<p>REV DESCRIPTION SUB APPR DATE</p> <p>REFER TO TRACING FOR LATEST REVISION</p>				<p>APPROVED: John C. Wallace</p> <p>JOHN C. WALLACE DISTRICT ADMINISTRATOR</p>		<p>APPROVED: John H. Jenks</p> <p>JOHN H. JENKS REGISTERED PROFESSIONAL ENGINEER</p>		<p>MISCELLANEOUS GENERAL DETAILS</p> <p>SHEET NO. 1</p>			

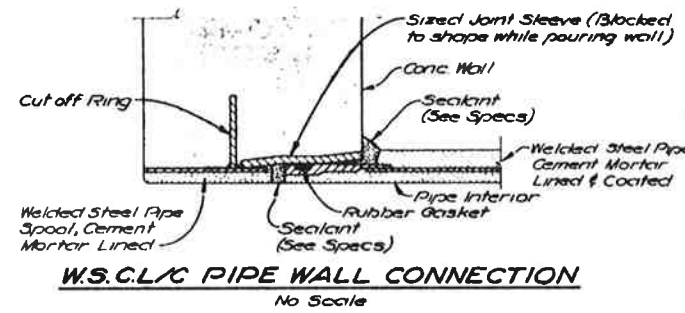


DO NOT DRINK THIS WATER
 Primary Clarifier 2 each
 Secondary Digester 2 each

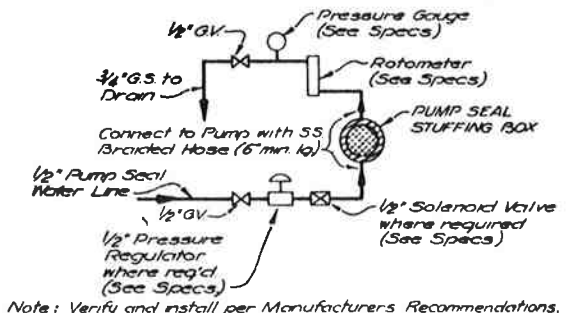
HAZARDOUS AREA- No Smoking
 Secondary Digester 2 each

MACHINE STARTS AUTOMATICALLY
 Primary Clarifier #2 2 each
 Secondary Digester 2 each

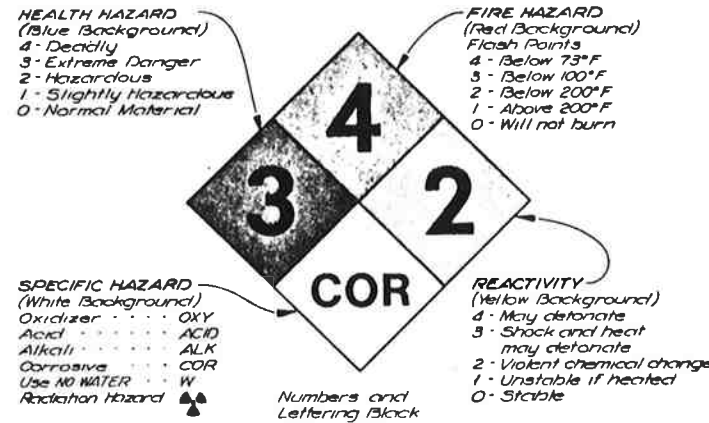
10" x 14" SIGN
 No Scale



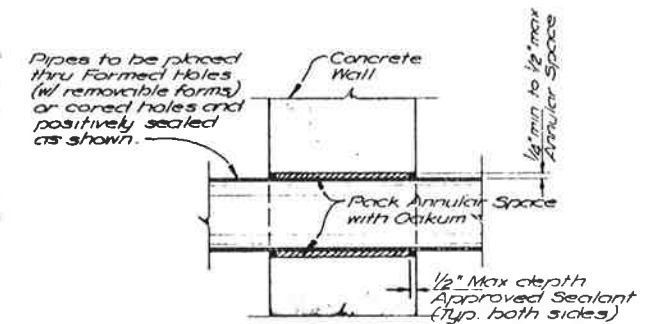
W.S.C./C PIPE WALL CONNECTION
 No Scale



Note: Verify and install per Manufacturers Recommendations.
PUMP SEAL WATER ASSEMBLY
 No Scale



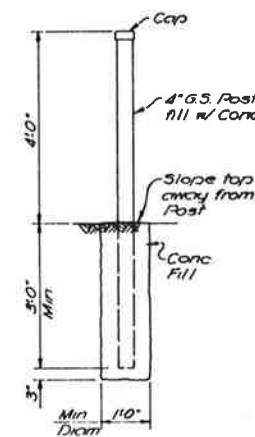
HAZARDOUS MATERIAL SIGNALS



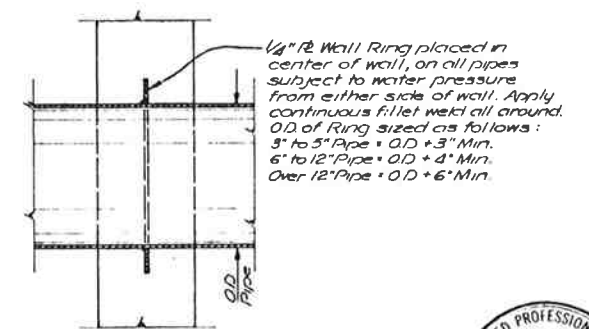
TYPICAL FOR ALL AC, CU, FRP & PVC PIPES UNLESS OTHERWISE DETAILED ON THE PLANS.

May also be used for all 2" and smaller piping.

TYPICAL PIPE-WALL PENETRATION
 NO SCALE



PROTECTION POST DETAIL
 Scale 1/2" = 1'-0"



CUT-OFF RING DETAIL
 No Scale



REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:

DESIGNED DAB	GRAPHIC SCALES (in Feet) 1/2" = 1'-0"
DRAWN LLK	
CHECKED RCH	
DATE FEB 1989	

SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
 WASTEWATER WORKS IMPROVEMENTS
 Kennedy/Jerks/Chilton Palo Alto

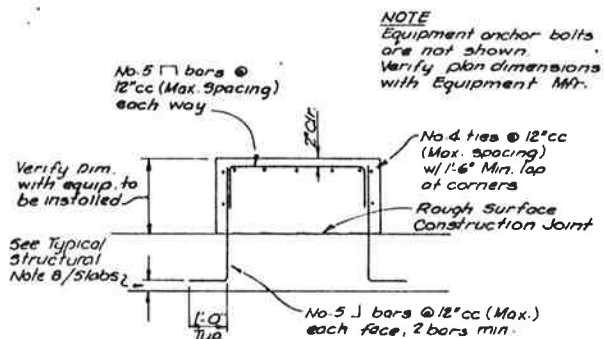
SUBMITTED: *John H. Wallace* APPROVED: *John L. Wallace*
 JOHN H. WALLACE R.E. NO. 820 JOHN L. WALLACE DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3
 MISCELLANEOUS GENERAL DETAILS
 SHEET NO. 2

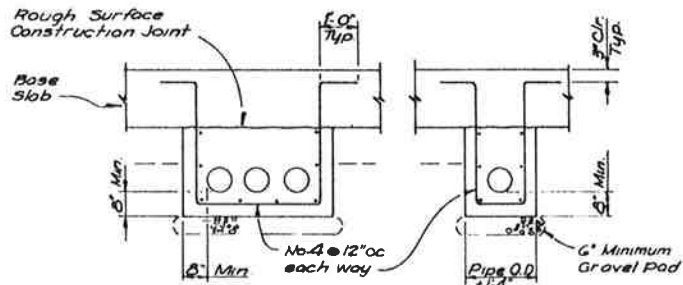
SCALE AS NOTED
JOB NO. 885119.00
SHEET 25
OF 40

CONCRETE JACKET NOTES

- ADDITIONAL LONGITUDINAL CONCRETE JACKET REINFORCEMENT REQUIREMENTS SHALL BE AS FOLLOWS:
 - ALL LONG BARS SHALL BE CONTINUOUS AND/OR HAVE 36 DIAMETER LAPS AT JUNCTIONS WITH OTHER PIPE JACKETS.
 - SIDE LONG BARS SHALL BE CONTINUOUS AROUND THE END OF THE JACKET
 - BOTTOM LONG BARS SHALL BEND UP INTO THE BASE SLAB AT THE ENDS OF THE JACKETS AND SHALL HAVE A 1'0" LONG 90° HOOK AT THE TOP.
- WHERE PIPE ALIGNMENT IS VERTICAL THE CONCRETE SECTION SHALL BE SQUARE WITH AN 8" MINIMUM CONCRETE DIMENSION AND SHALL BE REINFORCED WITH NO. 4 @ 12" CC (4-NO. 4 BARS MINIMUM) VERTICAL BARS AND NO. 4 TIES @ 12" CC.



TYP. EQUIP. PAD REINF. DET.



MULTIPLE PIES SINGLE PIPE
CONC. JACKET DETAILS

CONCRETE NOTES

- THESE NOTES SHALL APPLY TO ALL CONCRETE STRUCTURE CONSTRUCTION INCLUDED IN THIS PROJECT.
- ALL CONCRETE SHALL BE "CLASS A" DEVELOPING A COMPRESSIVE STRENGTH OF NOT LESS THAN 3500 P.S.I. IN 28 DAYS.
- REINFORCING STEEL SHALL BE ASTM DESIGNATION A-615, GRADE 60, DEFORMED BARS. ALL SLAB AND BEAM REINFORCING SHALL HAVE A MINIMUM EXTENSION INTO ITS SUPPORT STRUCTURE IN ACCORDANCE WITH THE LATEST EDITION OF THE ACI 301 SPECIFICATION. ALL ARRANGEMENTS, DETAILS, SPACERS AND SUPPORTS SHALL BE IN ACCORDANCE WITH THE LATEST ACI 315 DETAILING MANUAL. ALL SPLICES SHALL BE LAPPED A MINIMUM OF 1.7 , UNLESS OTHERWISE SHOWN. SPLICES SHALL BE STAGGERED AND SHALL NOT BE LOCATED AT POINTS OF MAXIMUM STRESS.
- CONCRETE FOR SLABS AND/OR WALLS BETWEEN CONSTRUCTION JOINTS SHALL BE PLACED IN ONE CONTINUOUS OPERATION. THE LOCATIONS OF PERMISSIBLE VERTICAL WALL CONSTRUCTION JOINTS ARE SHOWN ON THESE DRAWINGS. WALL REINFORCING SHALL BE CONTINUOUS THROUGH EACH VERTICAL CONSTRUCTION JOINT. THE LOCATIONS OF ALL CONSTRUCTION JOINTS SHALL BE SUBMITTED TO THE ENGINEER FOR FAVORABLE REVIEW PRIOR TO START OF WORK ON THE FORMS, REINFORCING STEEL OR CONCRETE PLACEMENT.
- CARE SHALL BE TAKEN TO ASSURE GOOD WATERTIGHT CONCRETE AT CONSTRUCTION JOINTS. CONCRETE SHALL BE WELL COMPACTED AT THE SURFACE OF JOINTS, SHALL BE CLEANED BY SANDBLASTING OR AS OTHERWISE APPROVED BY THE ENGINEER, TO EXPOSE CLEAN COARSE AGGREGATE FIRMLY EMBEDDED IN THE ORIGINAL MATRIX. JUST PRIOR TO THE PLACING OF THE FRESH CONCRETE, THE HARDENED CONCRETE SHALL BE DAMPENED AND THEN THOROUGHLY COVERED WITH A COAT OF 1:2 PORTLAND CEMENT MORTAR, OR A 2" MINIMUM THICKNESS OF MODIFIED CONCRETE MIX (DESIGNATED CONCRETE MIX WITH ONE-HALF OF THE COARSE AGGREGATE REMOVED). PLACE THE FRESH CONCRETE BEFORE THE MORTAR OR THE MODIFIED CONCRETE MIX HAS ATTAINED ITS INITIAL SET.
- CHAMFER ALL EXPOSED EDGES AND CORNERS 3/4-INCH, UNLESS OTHERWISE NOTED.
- REFER TO PIPEWORK AND EQUIPMENT DRAWINGS, TYPICAL DETAILS, EQUIPMENT MANUFACTURER'S DRAWINGS AND SPECIFICATIONS FOR REQUIRED OPENINGS, SLEEVES, PIPES, CONDUITS, MISCELLANEOUS ANCHORING DEVICES, PIPEWORK AND EQUIPMENT FORMED, CAST AND/OR EMBEDDED IN THE CONCRETE STRUCTURE.
- CONCRETE COVER FOR REINFORCING BARS, UNLESS OTHERWISE SHOWN OR NOTED, SHALL BE AS FOLLOWS:

SLABS:
 BOTTOM AND SIDE CAST AGAINST EARTH.....3"
 FORMED SIDE AND TOP EXPOSED TO EARTH.....2-1/2"
 TOP AND BOTTOM ALL OTHER EXPOSURES.....1-1/2"

WALLS:
 INTERIOR FACE.....1-1/2"
 FORMED EXTERIOR EXPOSED TO EARTH.....2"

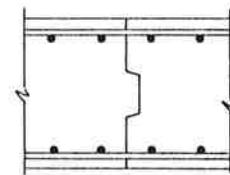
BEAMS:
 TOP, BOTTOM OR SIDE OF LONGITUDINAL REINFORCEMENT....2"
 TOP, BOTTOM OR SIDE OF STIRRUPS OR TIES.....1-1/2"
 FORMED BOTTOM AND SIDE OF STIRRUPS EXPOSED TO EARTH..2"
- THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT ALL STRUCTURES SUBJECT TO WATER PRESSURE FROM INTERNAL OR EXTERNAL SOURCES AND LOCATIONS SHALL BE WATERTIGHT AND THAT PROPER PRECAUTIONS AND CAREFUL WORKMANSHIP SHALL BE EXERCISED TO ASSURE THAT THIS RESULT IS OBTAINED BY HIM.

TYPICAL STRUCTURAL NOTES

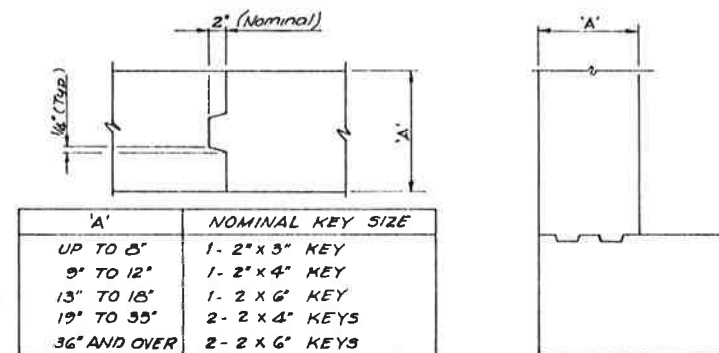
- THESE NOTES SHALL APPLY TO ALL CONSTRUCTION INCLUDED IN THIS PROJECT.
- THE DESIGN AND CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE UNIFORM BUILDING CODE AND APPLICABLE LOCAL CODES.
- THE CONSTRUCTION OF THE IMPROVEMENTS INCLUDED IN THIS PROJECT SHALL BE COORDINATED WITH FAVORABLY REVIEWED EQUIPMENT MANUFACTURER'S DRAWINGS. DIMENSIONS AND STRUCTURES SHALL CONFORM TO THE EQUIPMENT TO BE INSTALLED.
- TYPICAL STRUCTURAL DETAILS SHOWN ON THIS DRAWING SHALL APPLY TO ALL CONSTRUCTION UNLESS OTHERWISE SHOWN OR NOTED.

CONSTRUCTION NOTES

- THE CONTRACTOR, FOLLOWING IMPLEMENTATION OF THE NECESSARY PROVISIONS TO MINIMIZE INTERRUPTIONS OF NORMAL OPERATION, SHALL COMMENCE THE MODIFICATIONS AND ADDITIONS TO THE EXISTING UTILITIES AFTER FAVORABLE REVIEW BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT AND ACCESSORIES AS REQUIRED FOR THE CONSTRUCTION OF THESE IMPROVEMENTS. THE CONSTRUCTION SCHEDULE SHALL BE AS DESCRIBED IN DIVISION ONE (1) OF THE SPECIFICATIONS.
- THE CONTRACTOR SHALL VERIFY ALL FEATURES (INCLUDING DIMENSIONS) OF THE EXISTING UTILITIES AT THE JOB SITE PRIOR TO THE FABRICATION OR CONSTRUCTION REQUIRED BY THE ALTERATIONS AND ADDITIONS INDICATED.
- THE CONTRACTOR SHALL REMOVE EQUIPMENT, EXCAVATION, PIPEWORK, CONCRETE AND PAVEMENT AS REQUIRED IN LOCATIONS INDICATED. THIS WORK SHALL BE DONE IN SUCH A MANNER THAT THE REMAINING UTILITIES SHALL NOT BE DAMAGED AND SHALL BE TO THE SATISFACTION OF THE ENGINEER.
- THE CONTRACTOR SHALL PATCH AND REPAIR THE EXISTING UTILITIES AS REQUIRED BY THE CONSTRUCTION OF THE MODIFICATIONS USING SUITABLE AND APPROPRIATE BUILDING MATERIALS ALL TO THE SATISFACTION OF THE ENGINEER.
- WHERE REQUIRED BY CONTRACT PLANS, REMOVE SURFACE OF EXISTING STRUCTURE, BY CHIPPING, DRILL DOWELS AS SHOWN INTO EXISTING CONCRETE AND APPLY A FAVORABLY REVIEWED EPOXY ADHESIVE COMPOUND. SEE NOTES 6 AND 7.
- THE SURFACE OF EXISTING CONCRETE AT ALL JUNCTIONS OF NEW AND EXISTING CONCRETE SHALL BE THOROUGHLY CLEANED AND FREE FROM SURFACE CONTAMINATION, DUST AND/OR LOOSE PARTICLES. COAT THESE SURFACES OF EXISTING CONCRETE WITH A FAVORABLY REVIEWED EPOXY ADHESIVE COMPOUND: "CONCRESE 1001-LPL" (ADHESIVE ENGINEERING CO.), "SIKADUR HI-MOD" (SIKA CHEMICAL CORP.), OR EQUAL, IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. NEW CONCRETE SHALL BE PLACED AGAINST THIS COATING, BEFORE THE COATING SETS; IF THE COATING SHOULD SET, APPLY A SECOND COATING BEFORE POURING CONCRETE.
- THE CONTRACTOR SHALL DRILL REINFORCING STEEL DOWELS OR BARS AS SHOWN INTO THE EXISTING CONCRETE STRUCTURE. GROUT THESE BARS SECURELY IN PLACE WITH A FAVORABLY REVIEWED EPOXY ADHESIVE COMPOUND: "CONCRESE 1180 OR 1148" (ADHESIVE ENGINEERING CO.), "SIKADUR HI-MOD" (SIKA CHEMICAL CORP.) OR EQUAL. "HORIZONTAL" DOWEL HOLES MAY BE SLOPED DOWN AT BETWEEN 5° AND 10° WITH DOWELS BENT DOWN ACCORDINGLY.
- THESE ALTERATIONS MAY REQUIRE THE REMOVAL OF CERTAIN SPECIFIED STRUCTURE SUPPORTING WALLS. WHERE SUCH REMOVAL IS REQUIRED, THE CONTRACTOR SHALL INSTALL ADEQUATE SHORING AND FALSEWORK FOR THE SUPPORT OF THE REMAINING STRUCTURE PRIOR TO THE REMOVAL OF THIS EXISTING REINFORCED CONCRETE.



NOTE:
REINFORCING STEEL IS CONTINUOUS THROUGH CONSTRUCTION JOINTS

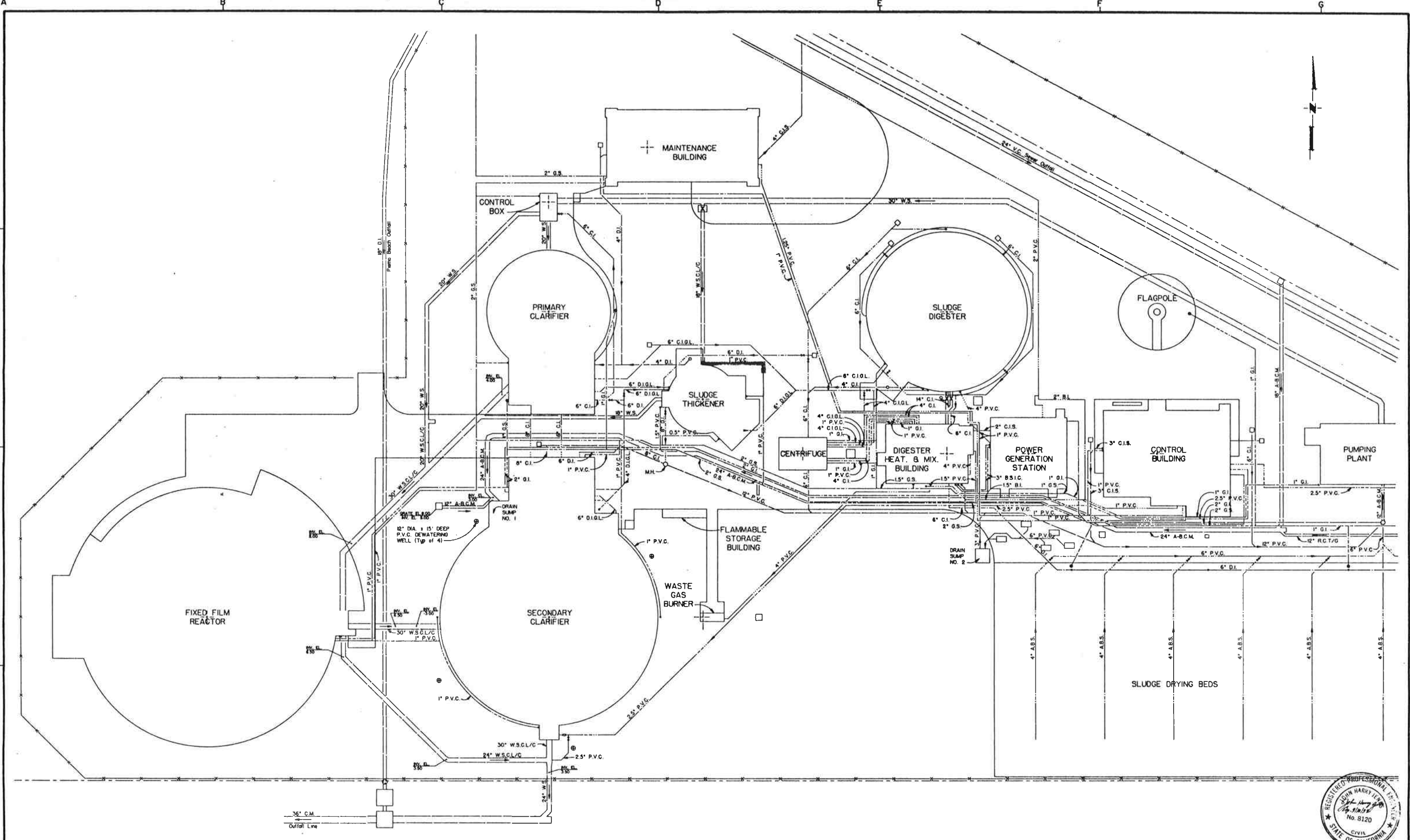


NOTE:
NUMBER AND SIZE OF KEYS SHOWN APPLY TO BOTH VERTICAL AND HORIZONTAL JOINTS.

LONGITUDINAL KEYS



REFERENCE INFORMATION AND NOTES: REFER TO TRACING FOR LATEST REVISION				GRAPHIC SCALE (in Feet) _____ _____ _____	DESIGNED: DAB DRAWN: MR DCC CHECKED: RHC DATE: FEB 1989	SO. SAN LUIS OBISPO CO. SANITATION DISTRICT SAN LUIS OBISPO COUNTY, CALIFORNIA WASTEWATER WORKS IMPROVEMENTS Kennedy/Jerde/Chilton Palo Alto	WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3 MISCELLANEOUS STRUCTURAL DETAILS	SCALE: NONE JOB NO: 885119.00 SHEET: 26 OF: 40
REV	DESCRIPTION	SUB	APPR	DATE	SUBMITTED: [Signature] APPROVED: [Signature] J. H. [Signature] R.E. NO. 8480 JOHN L. WALLACE DISTRICT ADMINISTRATOR			



REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:

GRAPHIC SCALES (in Feet)

DESIGNED: DAB
 DRAWN: JKJ
 CHECKED: RHC
 DATE: FEB 1989

SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
 WASTEWATER WORKS IMPROVEMENTS

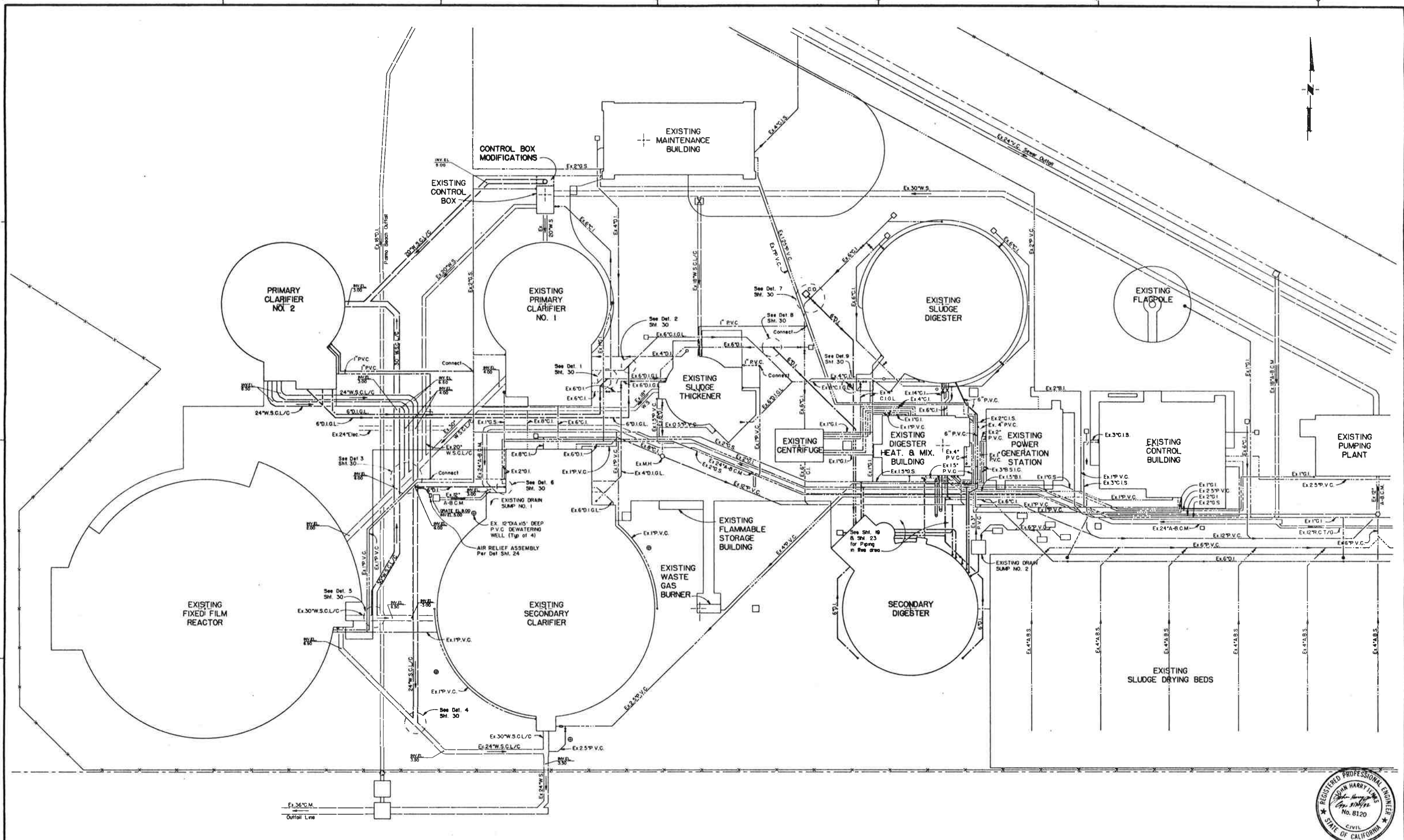
Kennedy/Jenks/Chilton Palo Alto

SUBMITTED: [Signature]
 APPROVED: *John L. Wallace*
 JOHN L. WALLACE DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3

EXISTING PLANT PROCESS PIPEWORK YARD PIPING LAYOUT

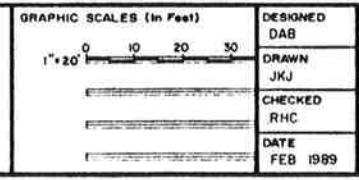
SCALE: 1" = 20'
 JOB NO: 885119.00
 SHEET: 27 OF 40



REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:



DESIGNED: DAB
 DRAWN: JKJ
 CHECKED: RHC
 DATE: FEB 1989

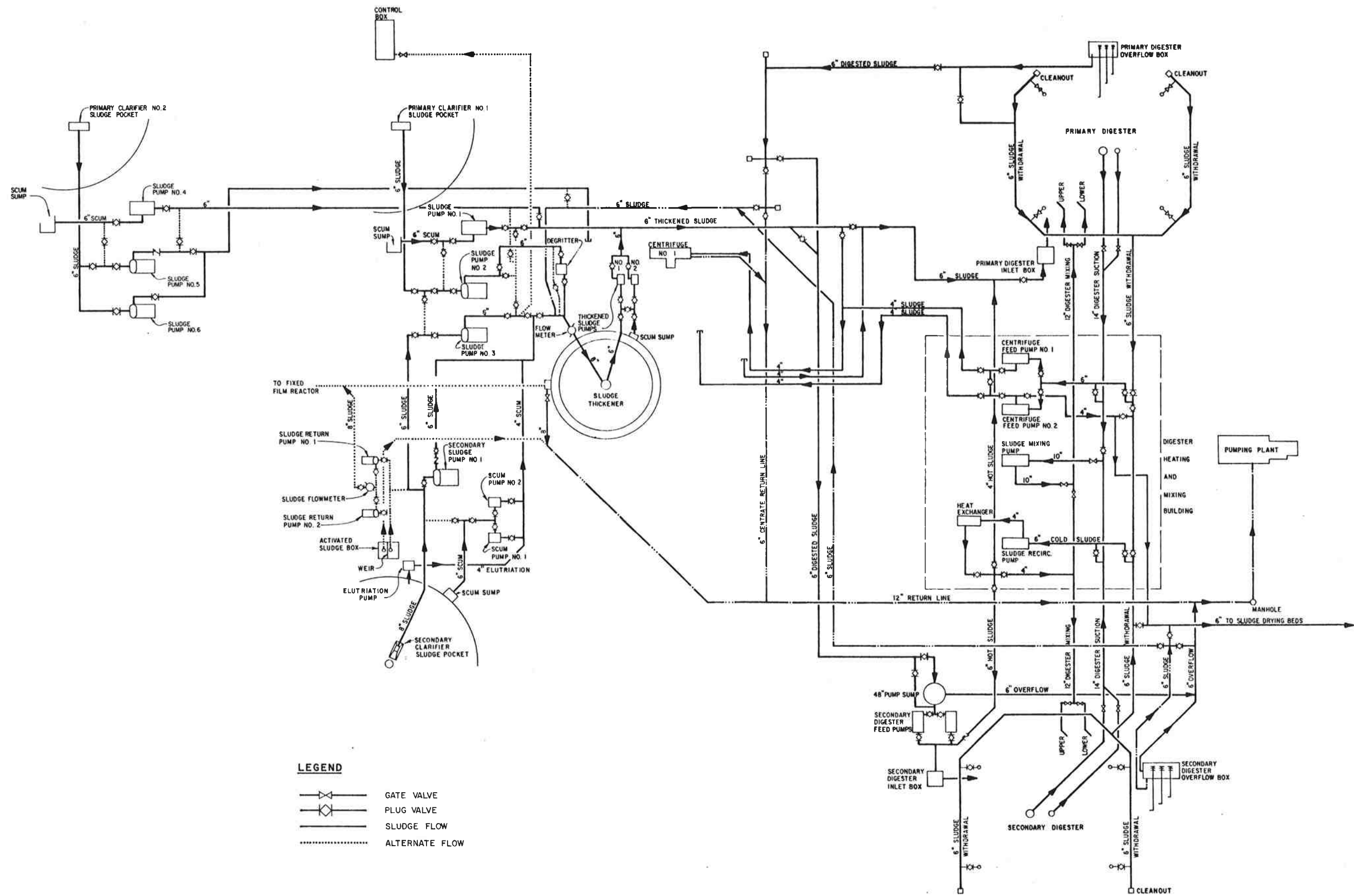
SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
 WASTEWATER WORKS IMPROVEMENTS
 Kennedy/Jenks/Chilton

SUBMITTED: [Signature]
 APPROVED: [Signature] JERRY L. WALLACE, DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3

**PLANT PROCESS PIPEWORK
 YARD PIPING LAYOUT**

SCALE: 1" = 20'
 JOB NO: 885119.00
 SHEET: 28 OF 40



LEGEND

- GATE VALVE
- PLUG VALVE
- SLUDGE FLOW
- ALTERNATE FLOW



REV.	DESCRIPTION	SUB.	APPR.	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:

GRAPHIC SCALES (in Feet)	
	1" = 10'
	1" = 20'

DESIGNED: DAB
 DRAWN: CAJ
 CHECKED: RHC
 DATE: FEB 1989

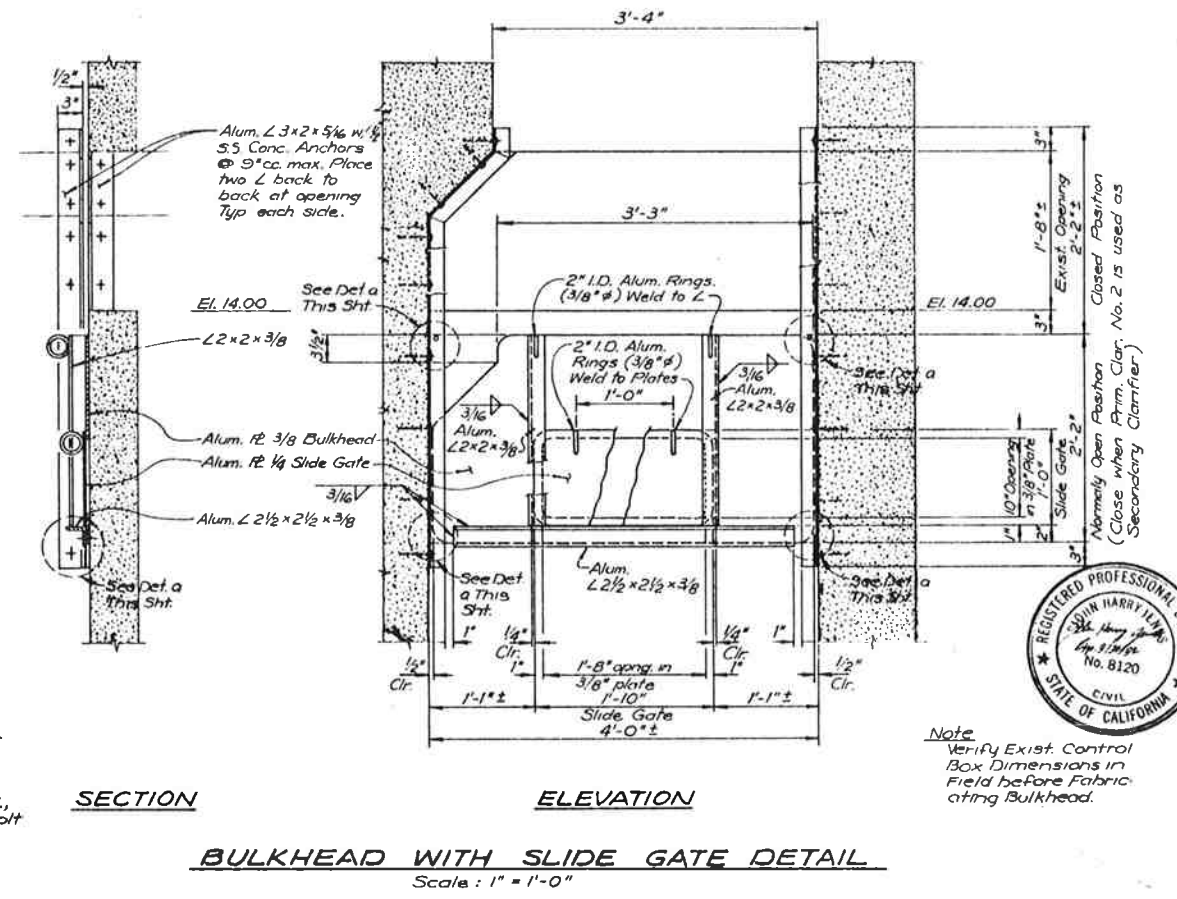
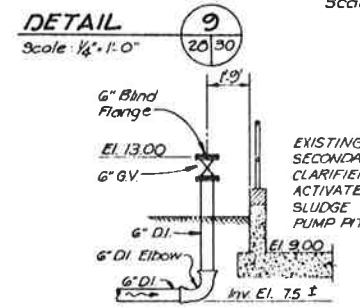
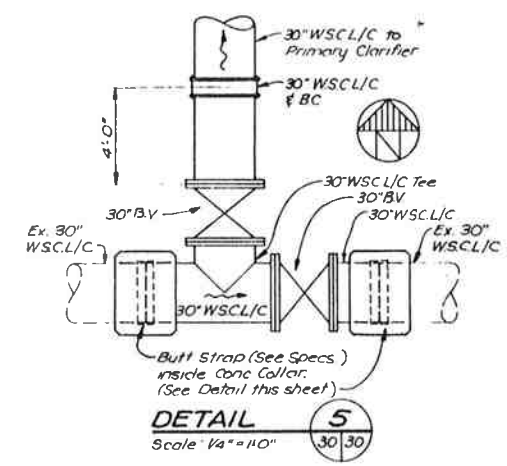
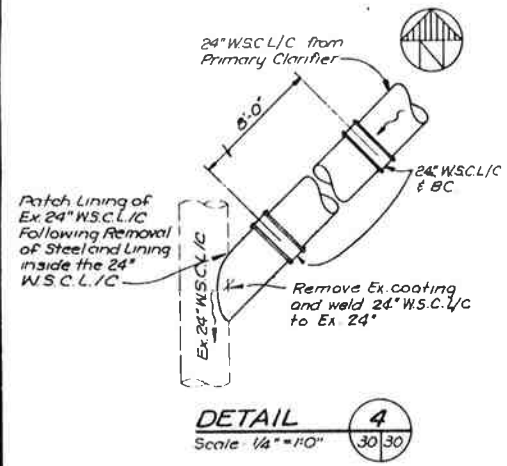
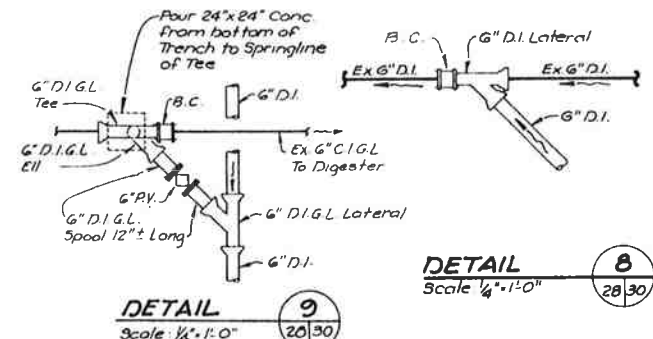
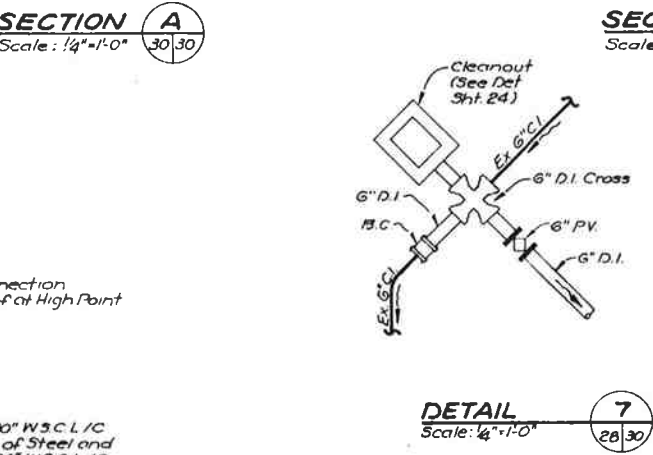
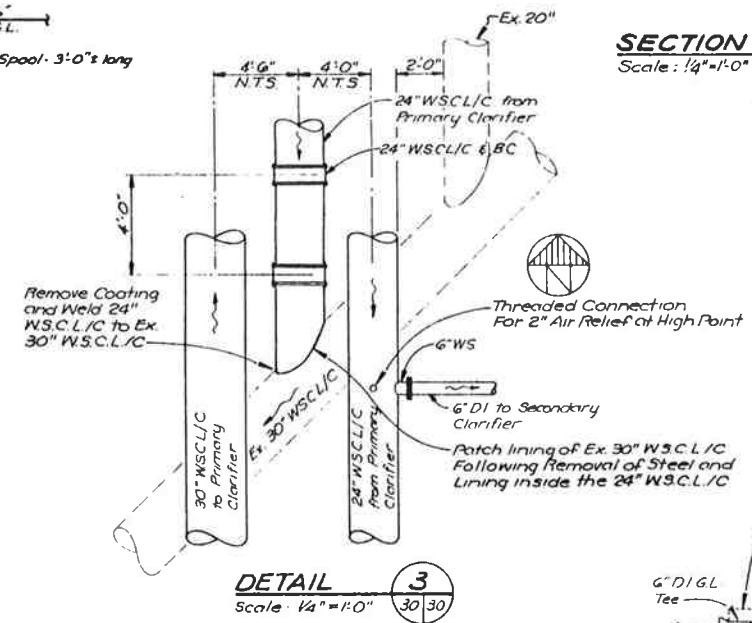
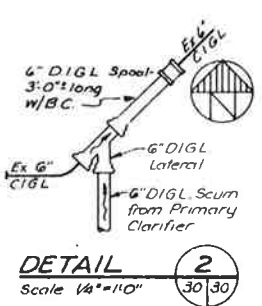
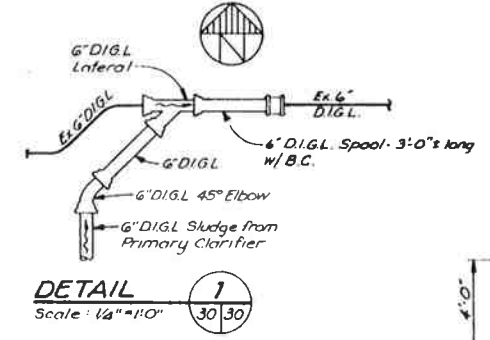
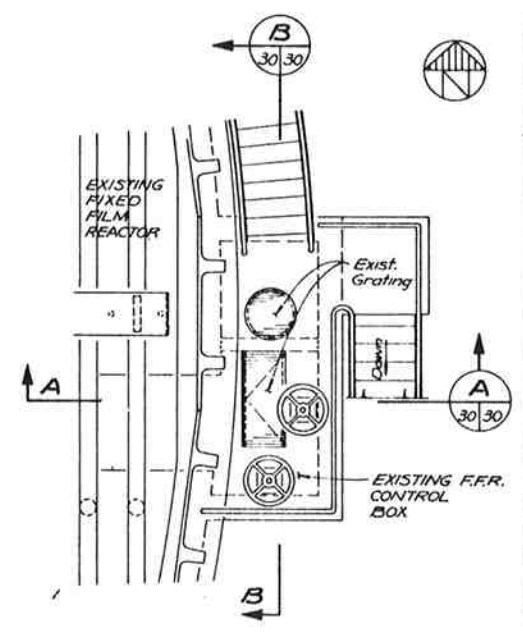
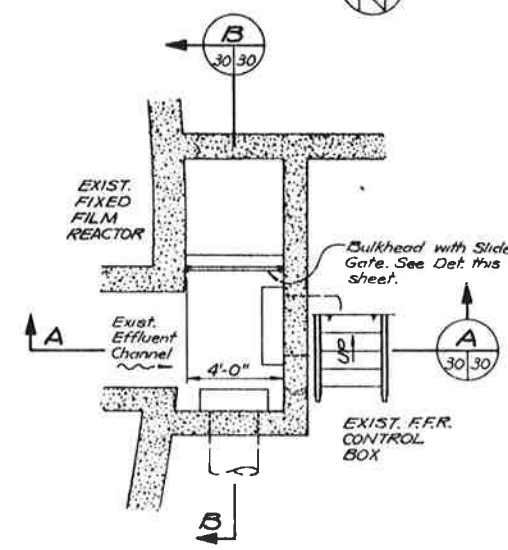
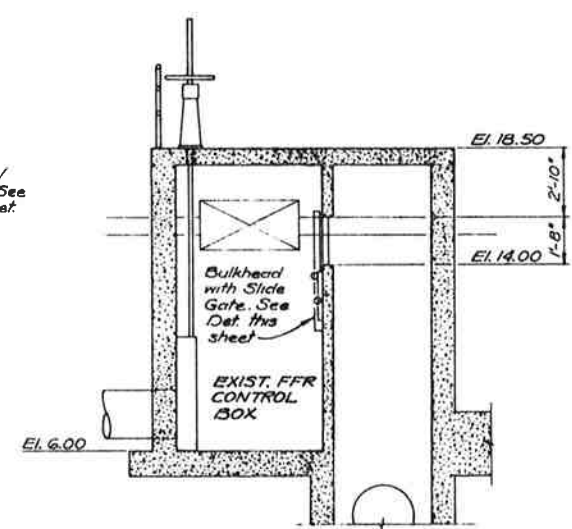
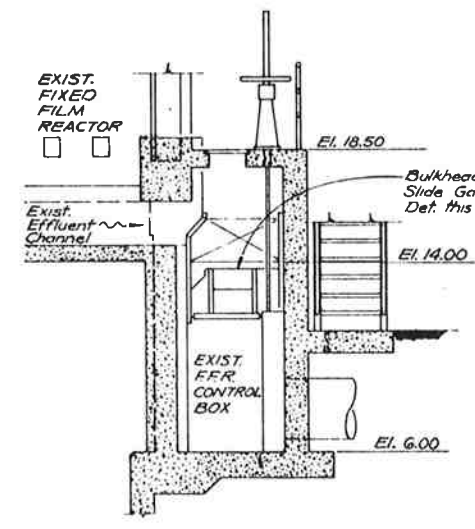
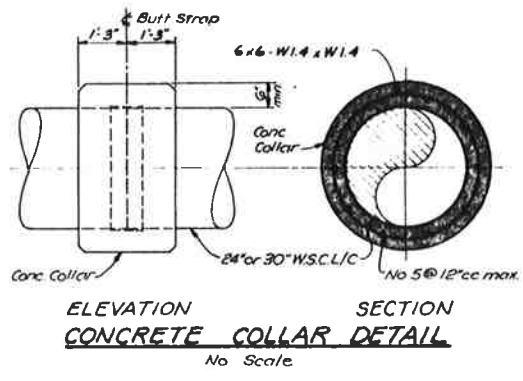
S.O. SAN LUIS OBISPO CO. SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
 WASTEWATER WORKS IMPROVEMENTS
 Kennedy/Jenks/Chilton Palo Alto

SUBMITTED:
 APPROVED:
 JOHN L. WALLACE DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3

**PLANT PROCESS PIPEWORK
 SLUDGE AND SCUM HANDLING SCHEMATIC**

SCALE: NONE
 JOB NO: 885119.00
 SHEET: 29
 OF: 40



FIXED FILM REACTOR CONTROL BOX DETAILS



REFERENCE INFORMATION AND NOTES:

GRAPHIC SCALES (in Feet)

DESIGNED: DAB

S.O. SAN LUIS OBISPO CO. SANITATION DISTRICT
SAN LUIS OBISPO COUNTY, CALIFORNIA
WASTEWATER WORKS IMPROVEMENTS

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3

SCALE AS NOTED

#	DESCRIPTION	SUB	APPR.	DATE

REFER TO TRACING FOR LATEST REVISION

1/4" = 1'-0"	1" = 1'-0"	5" = 1'-0"
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DRAWN: JKJ CAJ	CHECKED: RHC	DATE: FEB 1969
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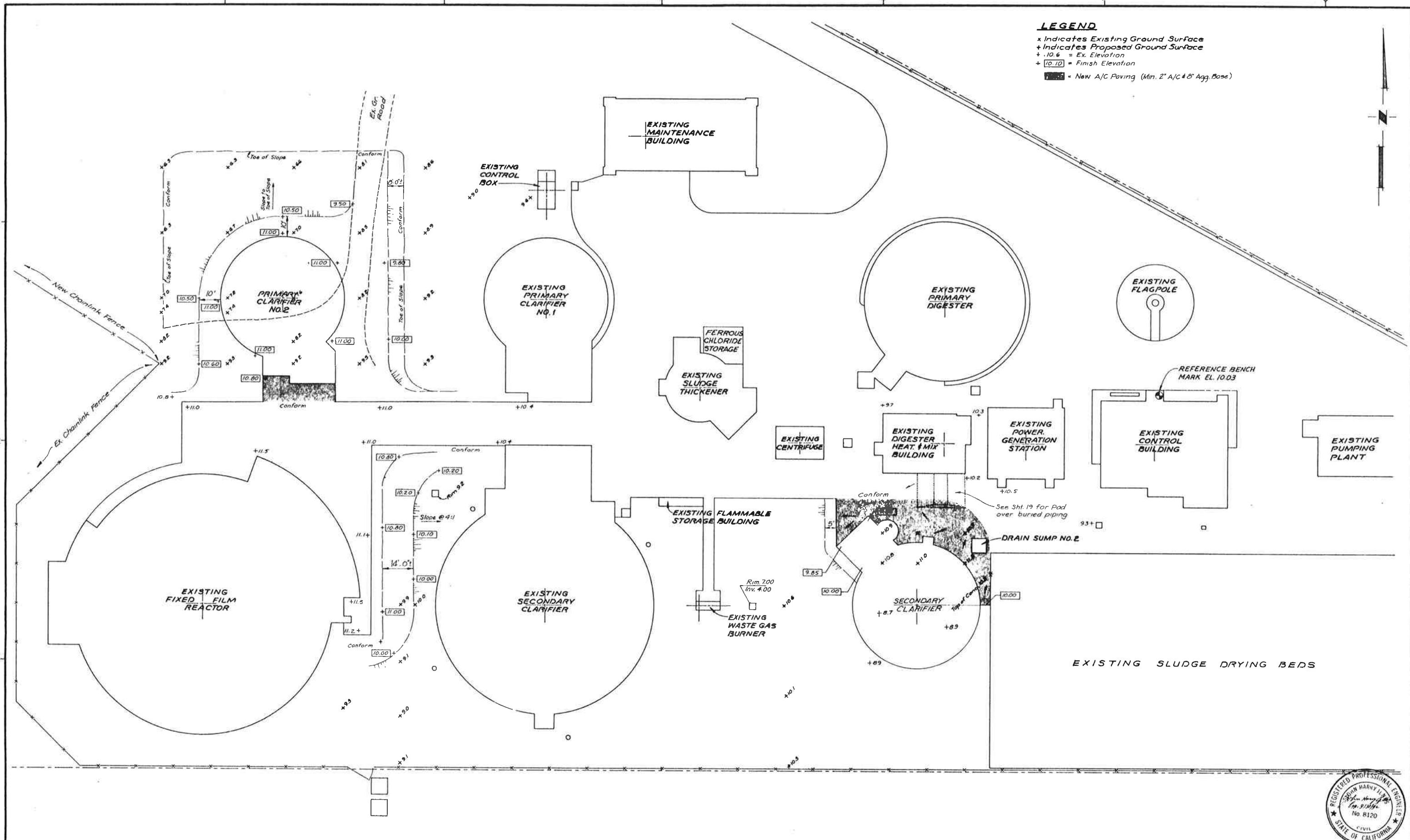
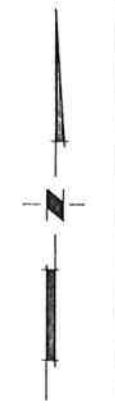
DESIGNED BY: Kennedy/Jenks/Chilton	APPROVED: John L. Wallace
PROJECT: WASTEWATER WORKS IMPROVEMENTS	LOCATION: Palo Alto

JOB NO: 885119.00	SHEET: 30
OF: 40	

SCALE AS NOTED
JOB NO: 885119.00
SHEET: 30
OF: 40

LEGEND

- x Indicates Existing Ground Surface
- + Indicates Proposed Ground Surface
- + .10 6 = Ex. Elevation
- + 10.10 = Finish Elevation
- [Hatched Box] = New A/C Paving (Min. 2" A/C #8" Agg. Base)



REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:

GRAPHIC SCALES (In Feet)

1" = 20'

0 10 20 30

DESIGNED: DAB
DRAWN: KCH
CHECKED: RHC
DATE: FEB 1989

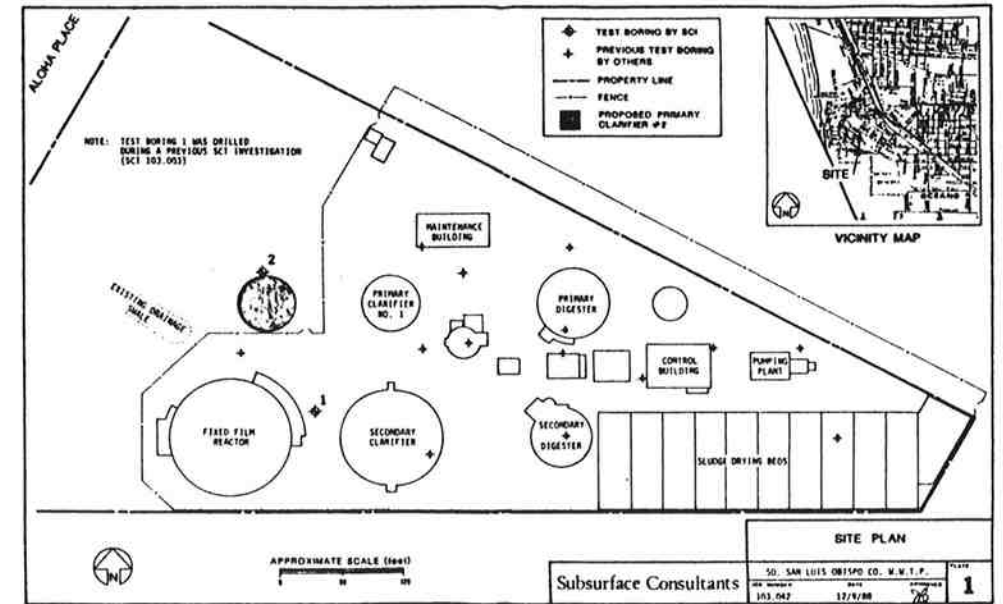
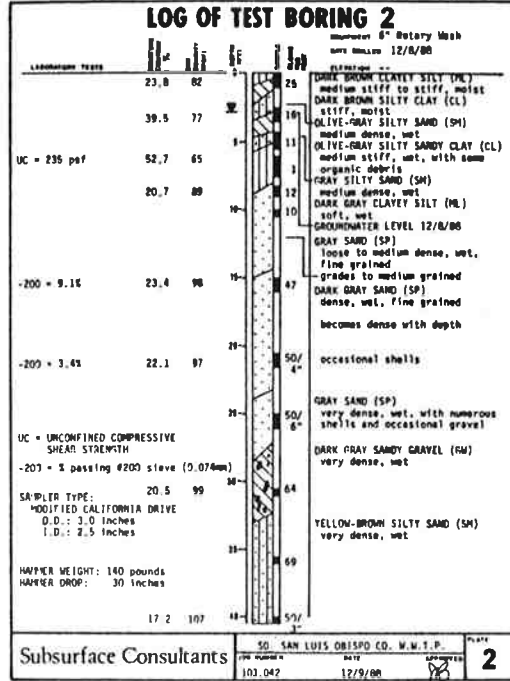
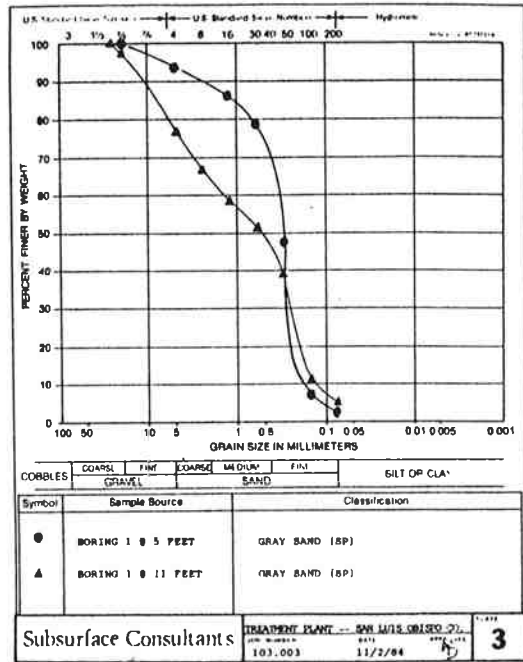
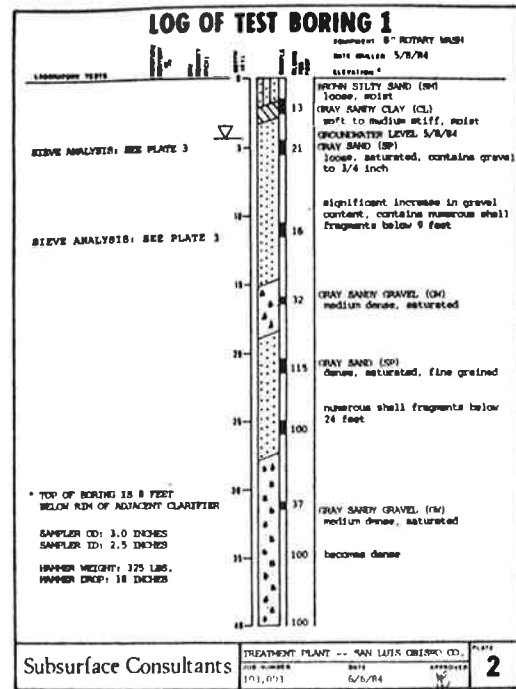
SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
SAN LUIS OBISPO COUNTY, CALIFORNIA
WASTEWATER WORKS IMPROVEMENTS
Kennedy/Jenks/Chilton
Palo Alto

SUBMITTED: [Signature]
APPROVED: John L. Wallace
JOHN L. WALLACE DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3

SITWORK
GRADING, PAVING AND FENCING

SCALE: 1" = 20'
JOB NO: 885119.00
SHEET: 31 OF 40

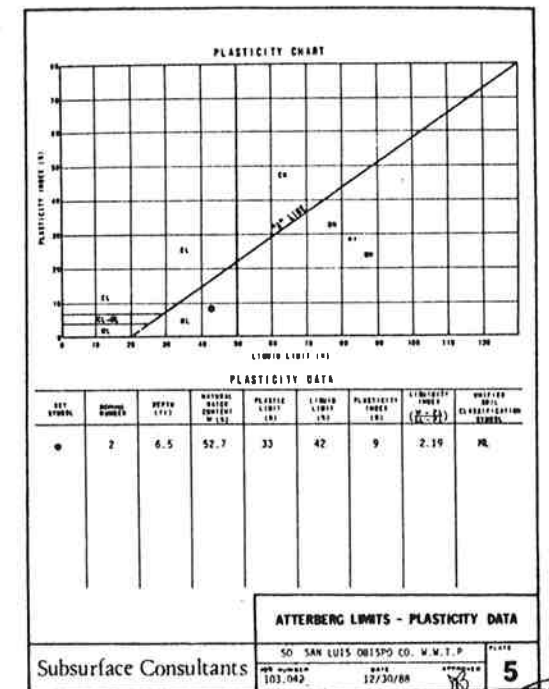
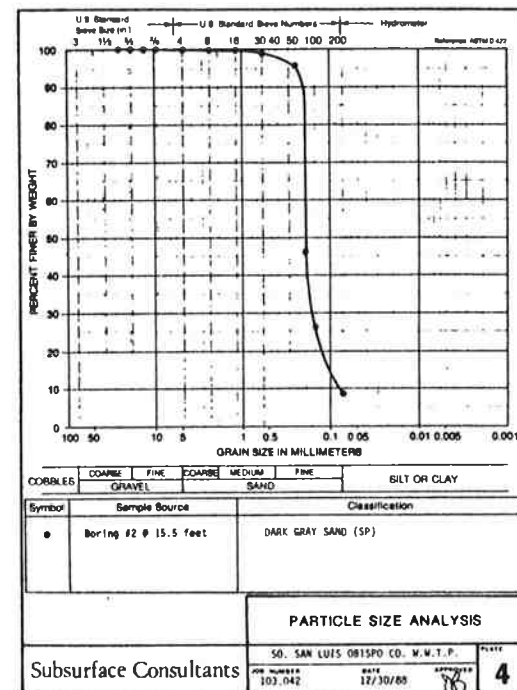


TOP OF BORING 1 IS 8 FT. BELOW CONC. WALKWAY OF SECONDARY CLARIFIER

TOP OF BORING 2 IS APPROX. @ EL. 7.0

GENERAL SOIL CATEGORIES	SYMBOLS	TYPICAL SOIL TYPES
GRAVEL More than half coarse fraction is larger than No. 4 sieve size	GW, GP, GM, GC, GW, GP, GM, GC	Well Graded Gravel, Good Sand Mixtures, Poorly Graded Gravel, Gravel Sand Mixtures, Silty Gravel, Poorly Graded Gravel Sand Mixtures, Clayey Gravel, Poorly Graded Gravel Sand Clay Mixtures
COARSE GRAINED SOILS More than half coarse fraction is larger than No. 20 sieve size	GW, GP, GM, GC, GW, GP, GM, GC	Well Graded Sand, Gravelly Sand, Poorly Graded Sand, Gravelly Sand, Silty Sand, Poorly Graded Sand Mixtures, Clayey Sand, Poorly Graded Sand Clay Mixtures
SILT AND CLAY Liquid Limit Less than 50%	ML, CL, OL, MH, CH, OH	Inorganic: Silty and Very Fine Sand, Thick Floor Silty or Clayey Fine Sand or Clayey Silty with Slight Plasticity, Organic: Clay of Low to Medium Plasticity, Gravelly Clay, Sandy Clay, Silty Clay, Lean Clay, Organic Clay and Organic Silty Clay of Low Plasticity
SILT AND CLAY Liquid Limit Greater than 50%	MH, CH, OH	Inorganic: SA, Mixtures of Doleritic Sand or Silty Sand, Silty Sand, Organic: Clay of High Plasticity, Fat Clay, Organic Clay of Medium to High Plasticity, Organic Silty
HIGHLY ORGANIC SOILS	PT	Peat and Other Highly Organic Soils

UNIFIED SOIL CLASSIFICATION SYSTEM
 SO. SAN LUIS OBISPO CO. W.M.T.P. PLATE 3
 JOB NUMBER: 103.042 DATE: 12/9/88



<p>REFERENCE INFORMATION AND NOTES: The information shown on this sheet is from Soil Investigations performed by Subsurface Consultants, Inc. in 1984 and 1989. Soil Investigation Reports, dated November 5, 1984 and January 9, 1989 are available for inspection at the office of Kennedy/Jenks/Chilton and the office of the District.</p>	<p>GRAPHIC SCALES (In Feet)</p>	<p>DESIGNED: DAB DRAWN: DCC CHECKED: RHC DATE: FEB 1989</p>	<p>SO. SAN LUIS OBISPO CO. SANITATION DISTRICT SAN LUIS OBISPO COUNTY, CALIFORNIA WASTEWATER WORKS IMPROVEMENTS Kennedy/Jenks/Chilton Palo Alto</p>	<p>WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3 SITE WORK LOG OF BORINGS</p>	<p>SCALE: NONE JOB NO: 88519.00 SHEET: 32 OF 40</p>
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ABBREVIATIONS

A, AMP AFD AUX.	AMPERES ADJUSTABLE FREQUENCY DRIVE AUXILIARY
BCG	BARE COPPER GROUND
CKT C CR	CIRCUIT CONDUIT CURRENT RELAY
EL, ELEV ETM (E), EXIST. EQUIP.	ELEVATION ELAPSED TIME METER EXISTING EQUIPMENT
FLEX	FLEXIBLE
G GEN	GREEN GENERATOR
HI HOA	HIGH HAND-OFF-AUTOMATIC
INC	INCANDESCENT
J	JUNCTION BOX
KW	KILOWATT
LS L L1X, L2X LOS	LIMIT SWITCH, LEVEL SENSOR LINE CONTROL POWER SOURCE LOCKOUT STOP
M MCC MS MCP	MOTOR MOTOR CONTROL CENTER MOTOR STARTER MOTOR CIRCUIT PROTECTOR
N, (N) NEMA NO.#	NEUTRAL, NEW NATIONAL ELECTRICAL MANUFACTURER'S ASSOC NUMBER
OL	THERMAL OVERLOAD RELAY
P PB PNL PS PG&E	POLE PULLBOX PANEL PRESSURE SWITCH PACIFIC GAS & ELECTRIC
R	RED
SH, SHT. SPEC, SPECS SV SP SEC.	SHEET SPECIFICATIONS SOLENOID VALVE SPARE SECONDS, SECONDARY
TR TYP TSP TOL	TIMING RELAY TYPICAL TWISTED SHIELDED PAIR TORQUE OVERLOAD SWITCH
V	VOLTS
W WHD	WIRE WATT HOUR DEMAND METER

GENERAL NOTES

- LOWER CASE LETTER ADJACENT TO A FIXTURE INDICATES SWITCH CIRCUIT. ADJACENT NO. INDICATES CIRCUIT NO.
- LOWER CASE LETTER ADJACENT TO SWITCH INDICATES SWITCH CIRCUIT.
- "NORMAL" STATUS OF SWITCHES OR VALVES IS THE SHELF POSITION.
- NUMBER AND/OR LETTERS IDENTIFY CONTACTS OPERATING COIL.
- NUMBER AND/OR LETTERS IDENTIFY DEVICE.
- CONDUIT SIZE & FILL SHALL BE AS INDICATED. WHERE NO SIZE IS SHOWN, THE CONDUIT SHALL BE SIZED IN ACCORDANCE WITH THE RECENT EDITION OF THE NATIONAL ELECTRICAL CODE. WHERE NO FILL IS INDICATED, THE FILL SHALL BE 2 #12.
- UNDERLINED WORDS SHOWN AT PUSHBUTTONS, LIGHTS, SELECTOR SWITCHES, ETC., INDICATE THE LEGEND PLATE REQUIREMENT FOR THAT PARTICULAR DEVICE. ANY ADDITIONAL NAMEPLATES ARE INDICATED ON ELEVATIONS WITH THE REQUIRED NAMEPLATE INSCRIPTIONS.
- EXCEPT AS NOTED, EQUIP. MOUNTING HEIGHTS ABOVE FLOOR SHALL BE AS FOLLOWS:
 PANELBOARD 6'-6" (TOP OF ENCLOSURE)
 SWITCHES 4'-0"
 RECEPTACLES 2'-0"
 CONTROL STATIONS 4'-2"
- TRIP SETTING SHALL BE ADJUSTED TO SUIT ACTUAL MOTOR INSTALLED. SETTING SHALL BE 10x NAMEPLATE FLA.

ADDITIONAL ABBREVIATIONS

- @ AT
- Y WYE CONNECTED
- Δ DELTA CONNECTED
- ∩ AND
- ∅ PHASE
- " TO CIRCUIT
- " INCHES
- " FEET

PLANS

- INDICATES EQUIPMENT REMOVAL
- EXPOSED CONDUIT, SEE NOTE 6
- UNDERGROUND CONDUIT, SEE NOTE 6
- CONDUIT CONCEALED IN WALL OR CEILING, SEE NOTE 6
- CONDUIT CONCEALED IN SLAB, FLOOR, SEE NOTE 6
- CALL OUT, INDICATING CONDUIT SIZE, NUMBER OF WIRES & WIRE SIZE
- LIGHTING CONDUIT RUN. HATCH MARKS INDICATE NO. OF #12 CONDUCTORS. NO HATCH MARKS IS 2 #12.
- HOMERUN TO PANELBOARD OR AS INDICATED
- FLEXIBLE CONDUIT
- CONDUIT RUN, BROKEN & CONTINUED ON SAME SHEET, EXCEPT AS NOTED.
- CAP ON CONDUIT STUB
- OPEN CIRCLE DENOTES UPWARD RISER
- SOLID CIRCLE DENOTES DOWNWARD RISER
- FIXTURE, SEE NOTE 1.
- SINGLE POLE SWITCH, SEE NOTE 2
- POST MOUNTED EQUIP.
- CONTROL STATION
- DEVICE PER ABBREVIATION
- INDICATES INSTRUMENTATION EQUIP. PROVIDED BY INST. SUB-CONTRACTOR
- CONDUIT TRANSITION FITTING

SINGLE LINE

- INDICATES EQUIPMENT REMOVAL
- AUTOMATIC TRANSFER SWITCH
- SWITCH - 3P EXCEPT WHERE NOTED. RATING AS NOTED.
- CIRCUIT BREAKER - 3P EXCEPT WHERE NOTED. RATING IN AMPS AS NOTED.
- 3P MOTOR CIRCUIT PROTECTOR. UPPER NO. INDICATES FRAME SIZE IN AMPS. SEE NOTE 9.
- TRANSFORMER, RATING AS NOTED.
- MOTOR NO. INDICATES HORSEPOWER.
- FULL VOLTAGE, NON-REVERSING MAGNETIC STARTER, SIZE AS NOTED.
- OVERLOAD THERMAL ELEMENT
- ADJUSTABLE FREQUENCY DRIVE W/FULL SPEED BACKUP
- CURRENT TRANSFORMER, RATIO AS NOTED
- ELEMENTARY DIAGRAMS REFERENCE NO.
- ENCLOSURE

ELEMENTARY DIAGRAMS
SEE NOTES 3, 4, 7

- MOTOR STARTER
- ENCLOSURE AS INDICATED
- DIAGRAM NO. REFERENCE
- CONTROL DEVICE COIL, PREFIX NO. WHEN USED DISTINGUISHES BETWEEN DEVICES OF THE SAME TYPE. DEVICE TYPE PER ABBREVIATIONS.
- PUSH-TO-TEST, INDICATING LIGHT, COLOR PER ABBREVIATION
- 2-POSITION SELECTOR SWITCH
- 3-POSITION SELECTOR SWITCH
- NORMALLY OPEN PUSHBUTTON
- NORMALLY CLOSED PUSHBUTTON
- DISCONNECTING TYPE TERMINALS
- TERMINALS
- PROCESS CONTROL WIRING
- CONTACT NORMALLY OPEN - SEE NOTES 3 & 4
- CONTACT NORMALLY CLOSED - SEE NOTES 3 & 4

SYMBOL	TYPE	CLOSED ON
	LEVEL	RIISING LEVEL
	LEVEL	FALLING LEVEL
	PRESSURE	RIISING PRESSURE
	PRESSURE	FALLING PRESSURE

SYMBOL	NORMAL	OPEN TO CLOSE	CLOSE TO OPEN
	OPEN	DELAY	INST.
	CLOSED	INST.	DELAY

FIXTURE SCHEDULE

FIXT. TYPE	LAMP		1Ø VOLTS	MOUNTING ARRGT	DESCRIPTION	CATALOG NO.
	NO.	TYPE				
1	2	INC.	300	120	STANCHION	HUBBELL QL805 QUARTZLITER
2	1	INC.	200	120	STANCHION	HOLOPHANE PETL 200IN 1254PD ST FI CR CROUSE-HINDS VMVSJ150 GP/120GP OR EQUAL.
3	1	HPS	150	277	STANCHION	HOLOPHANE-PETL 15 AHP 1254I ST FI CR CROUSE-HINDS VMVSJ150 GP/120GP OR EQUAL
4	2	HPS	150	277	STANCHION	HOLOPHANE - PETL 15 AHP 1254I ST FI CR CROUSE-HINDS VMVSJ150 GP/120GP OR EQUAL

REV	DESCRIPTION	SUB	APPR	DATE

REFERENCE INFORMATION AND NOTES:

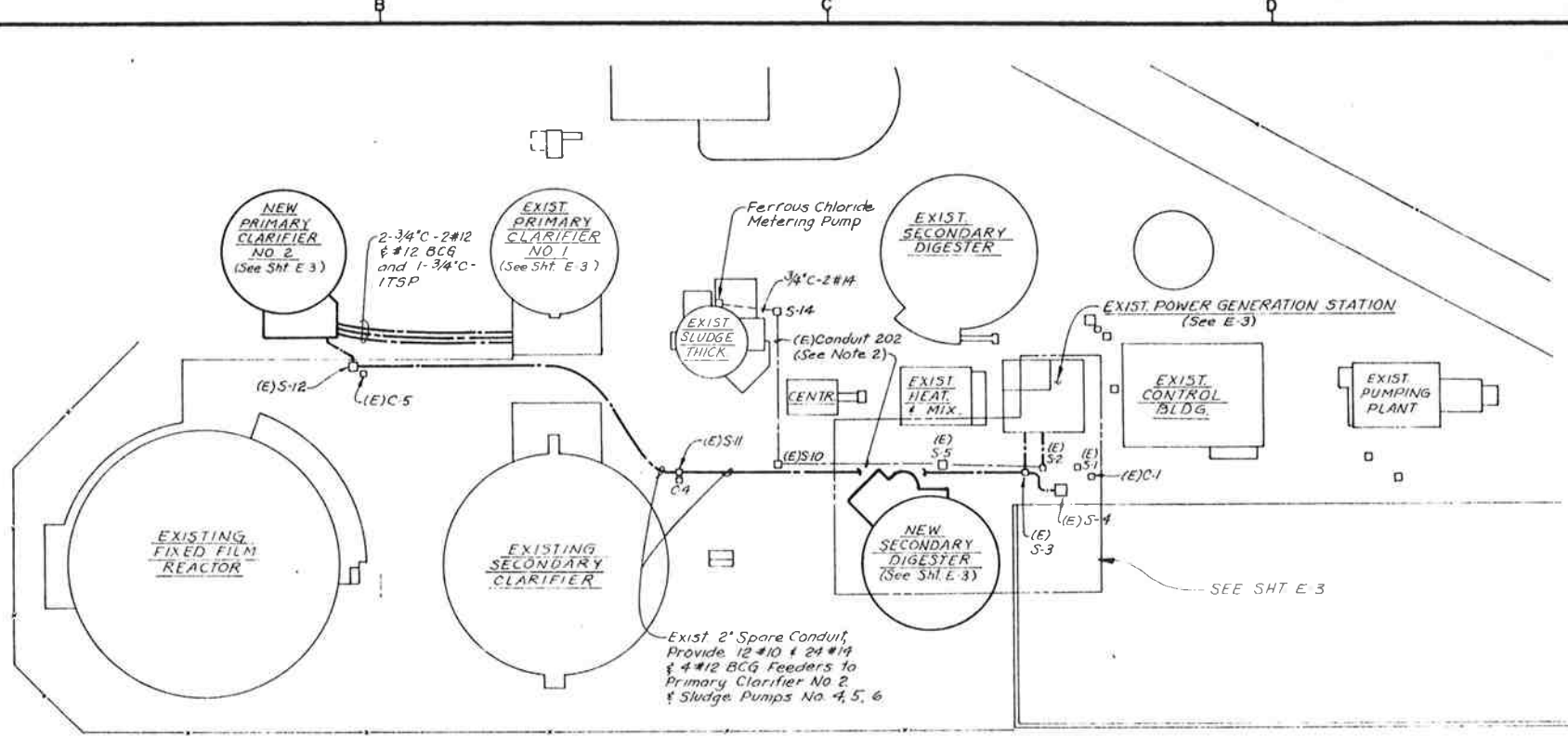
DESIGNED TIW	DRAWN JC	CHECKED RCH	DATE FEB. 1989
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SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
WASTEWATER WORKS IMPROVEMENTS
 Palo Alto
 SUBMITTED: *John H. Jenkins* APPROVED: *John L. Wallace*
 JOHN H. JENKINS R.E. NO. 8120 JOHN L. WALLACE DISTRICT ADMINISTRATOR

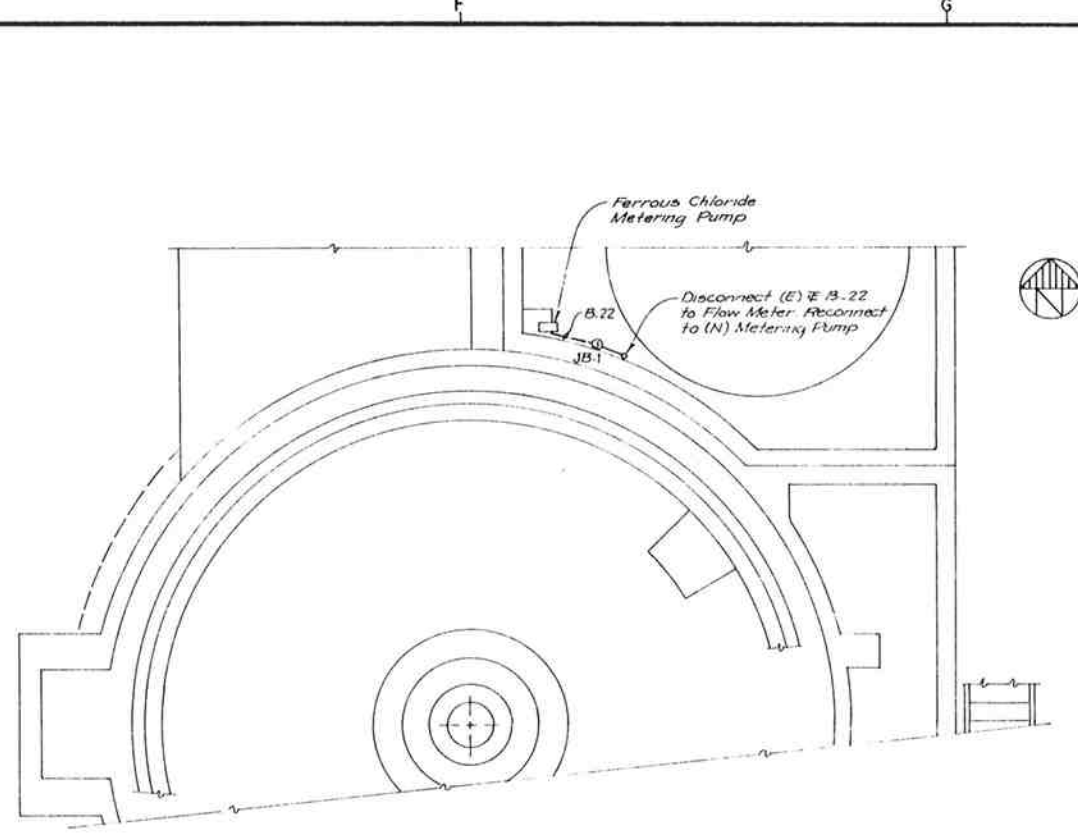
WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3
ELECTRICAL ABBREVIATIONS, LEGENDS AND GENERAL NOTES

SCALE NONE
 JOB NO 885119.00
 SHEET 33
 OF 40

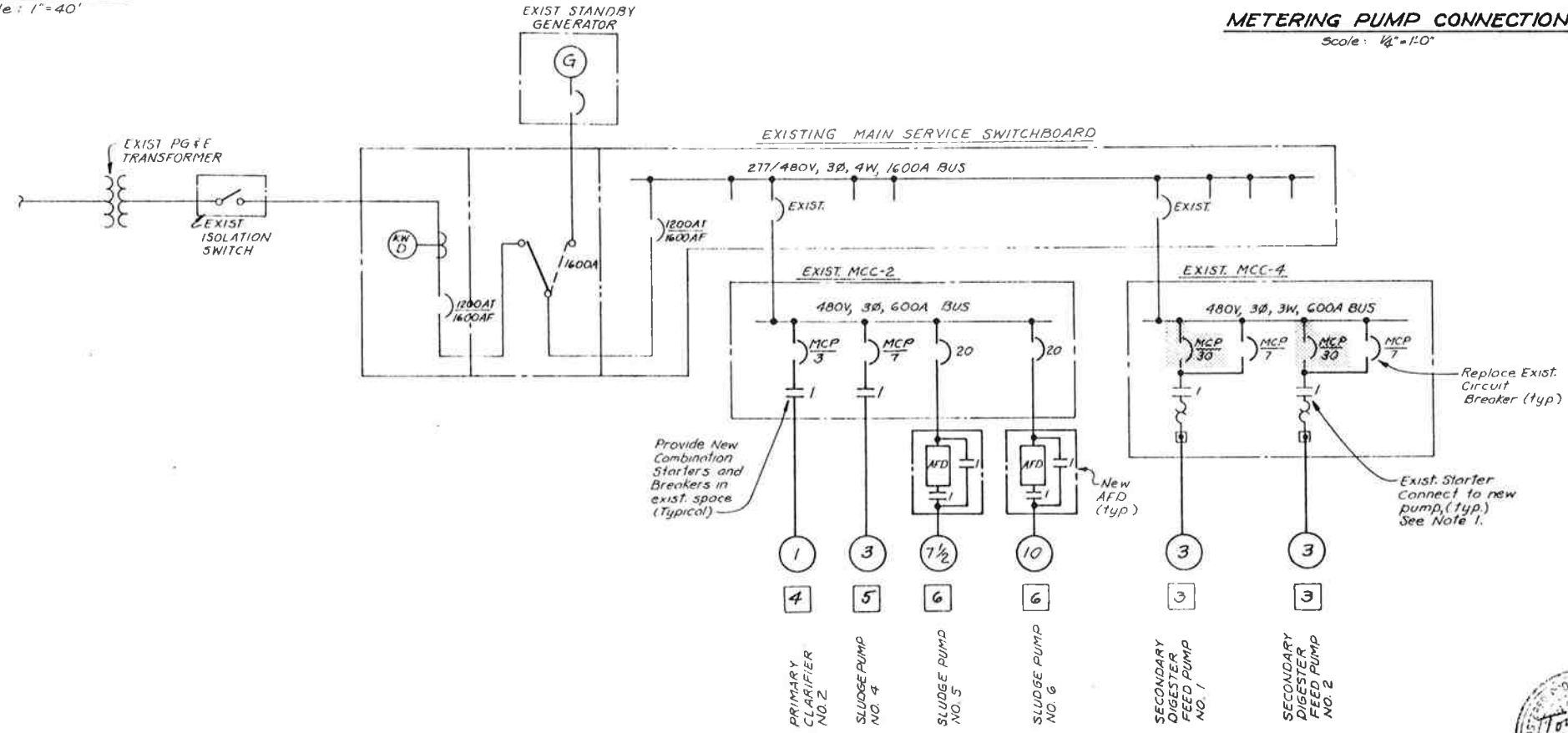




SITE PLAN
Scale: 1"=40'



METERING PUMP CONNECTION
Scale: 1/4"=1'-0"



SINGLE LINE DIAGRAM



REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:
 1. Replace Existing overload heaters to suit the installed motor.
 2. Existing Conduit 202 extending from exist. Thickener to pullboxes S-14, S-10, S-2 to MCC-2 and serves exist. Classifier. Repull the entire run and add 2#14 status signal for Ferrous Chloride Metering Pump.

DESIGNED TIW	DATE FEB. 1989
DRAWN JC	
CHECKED RCH	

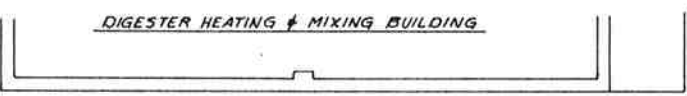
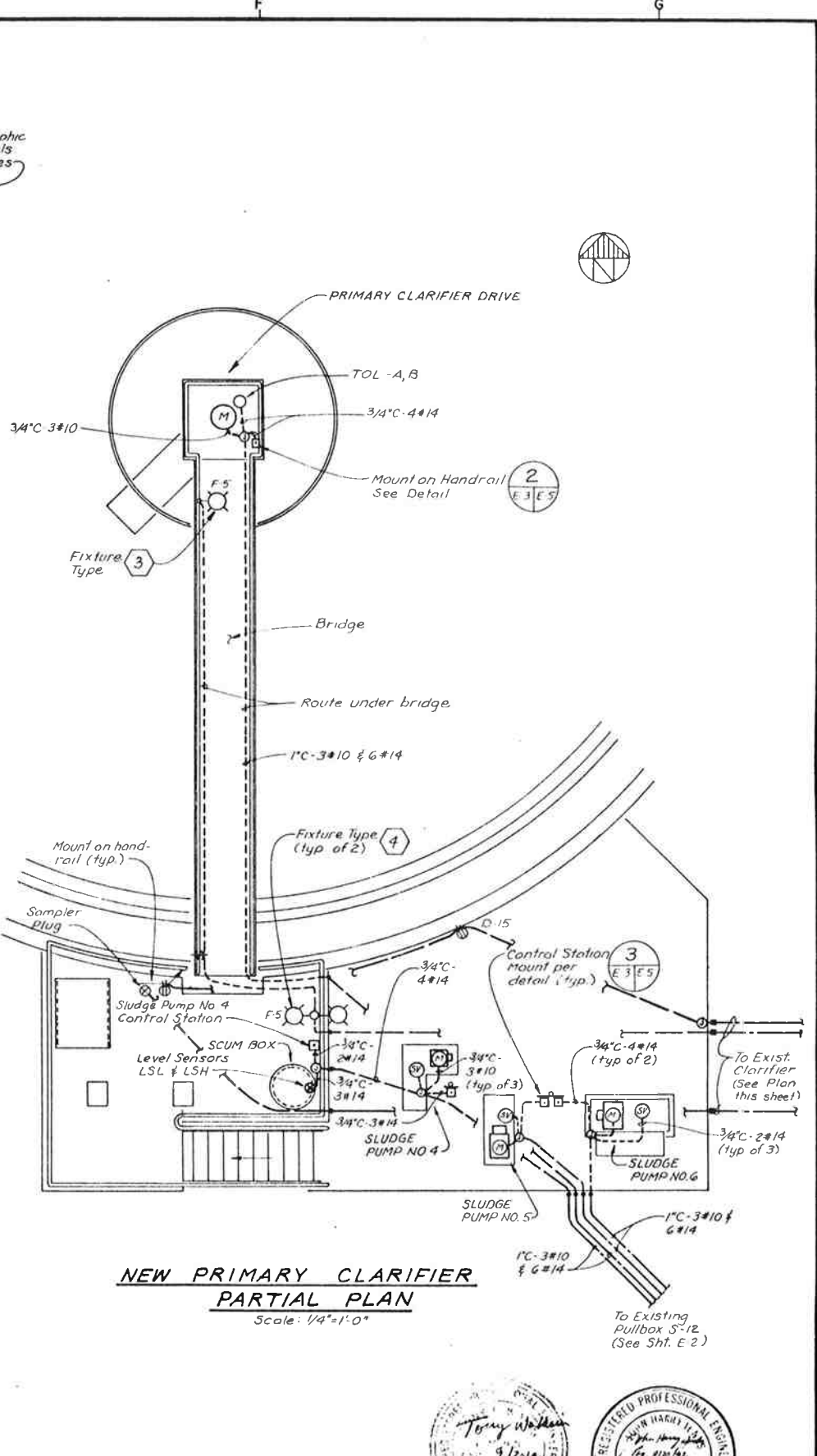
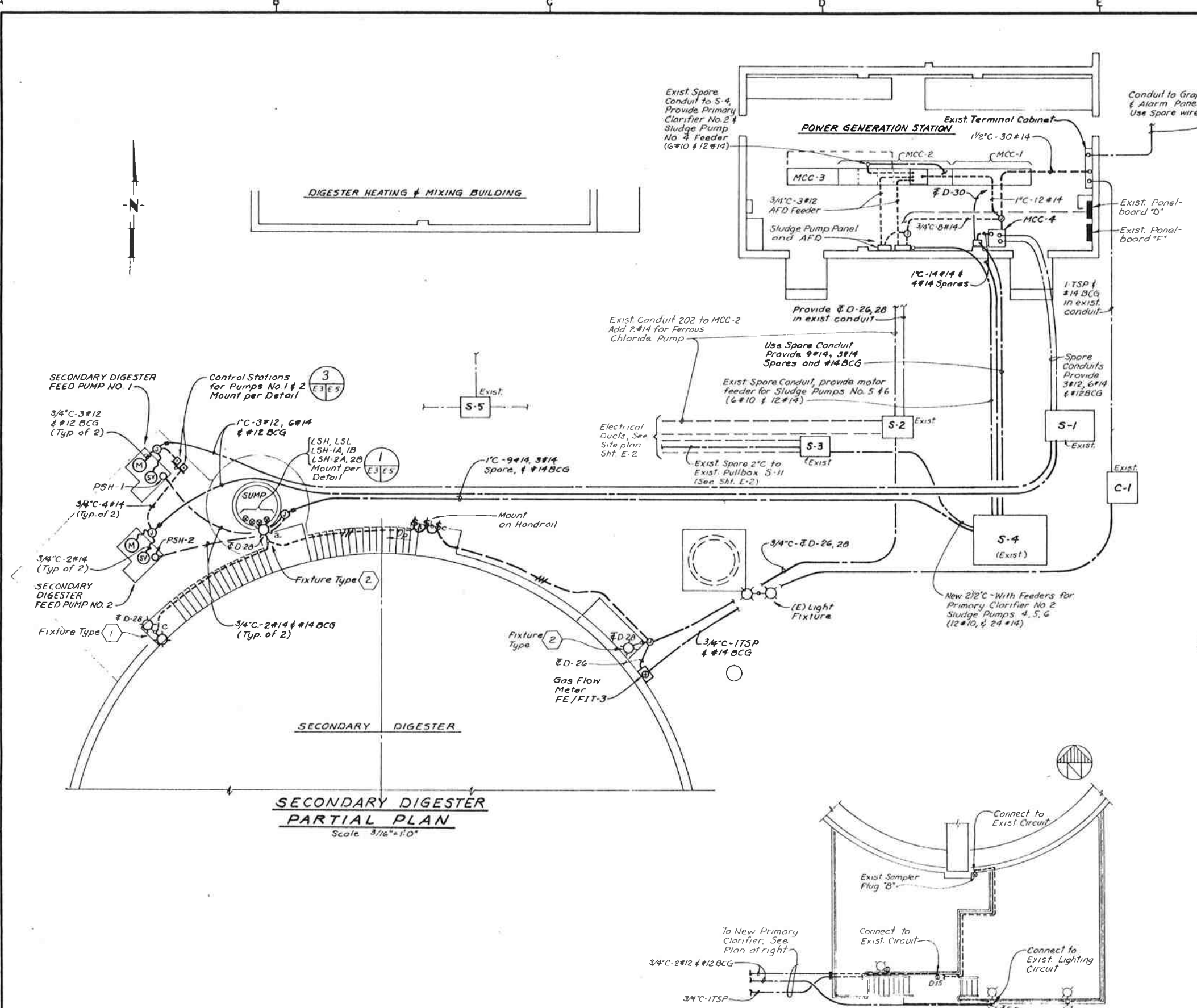
SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
WASTEWATER WORKS IMPROVEMENTS
 Kennedy/Jenks/Chilton Palo Alto

SUBMITTED: [Signature]
 APPROVED: John L. Wallace, DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3

ELECTRICAL
SITE PLAN AND SINGLE LINE DIAGRAM

SCALE AS NOTED	JOB NO. 885119.00
SHEET 34	OF 40



SECONDARY DIGESTER PARTIAL PLAN
Scale: 3/16"=1'-0"

NEW PRIMARY CLARIFIER PARTIAL PLAN
Scale: 1/4"=1'-0"

EXIST. PRIMARY CLARIFIER PART. PLAN
Scale: 1/8"=1'-0"

REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:
1. At MCC-2 connect Grinder run/fail signals to new Graphic/Alarm Panel Signals.

GRAPHIC SCALES (In Feet)

DESIGNED TIW
DRAWN JC
CHECKED RCH
DATE FEB. 1989

SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
SAN LUIS OBISPO COUNTY, CALIFORNIA
WASTEWATER WORKS IMPROVEMENTS
Kennedy/Jenka/Chilton
Palo Alto

SUBMITTED: [Signature]
APPROVED: [Signature]
JOHN H. WALLACE DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3
ELECTRICAL
SECONDARY DIGESTER AND
PRIMARY CLARIFIER PLANS

SCALE AS NOTED
JOB NO. 885119.00
SHEET 35 OF 40



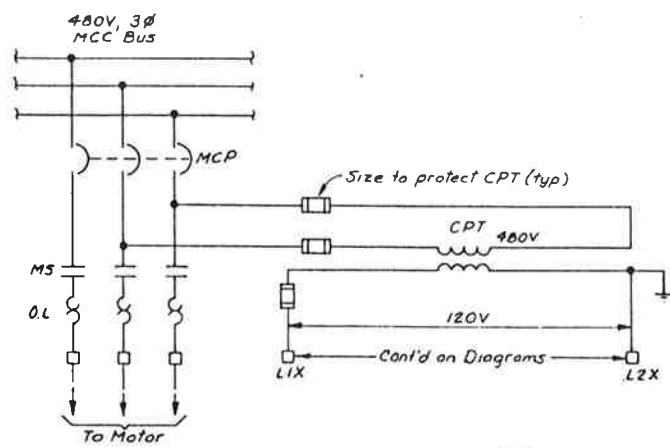


DIAGRAM 1
TYPICAL CONTROL POWER SOURCE

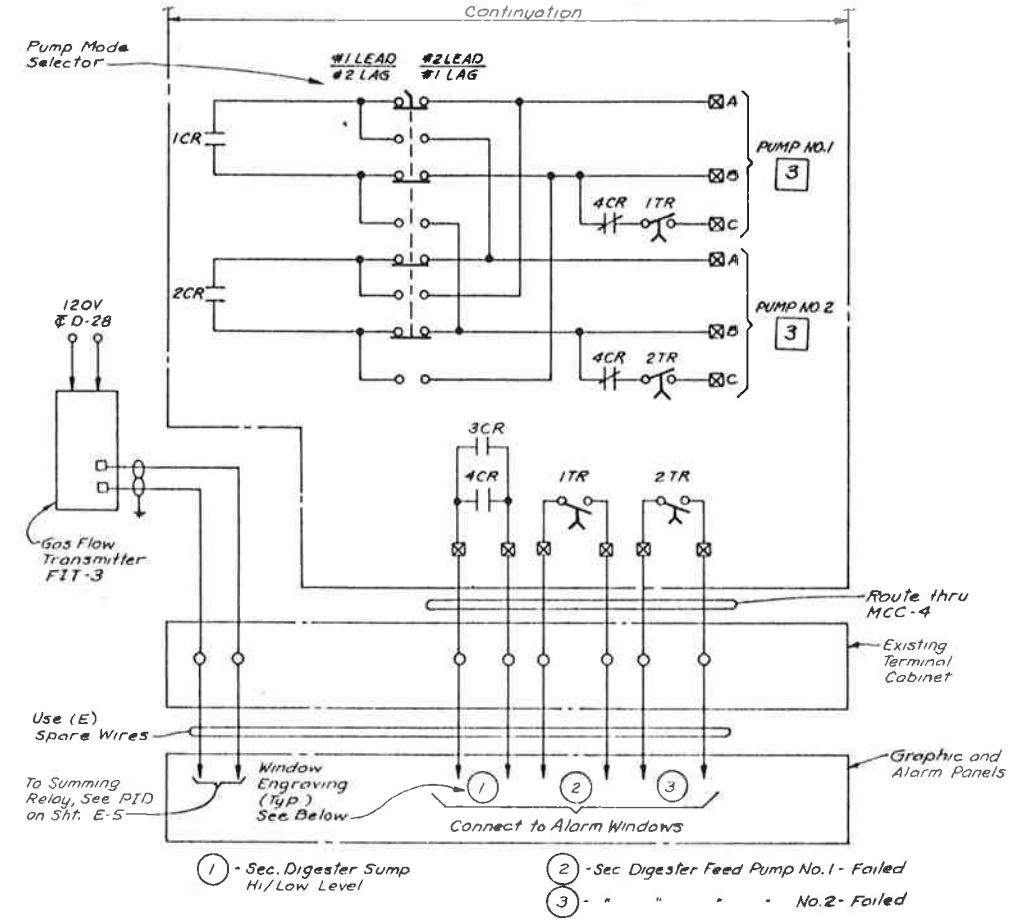


DIAGRAM 2
SECONDARY DIGESTER CONTROL PANEL

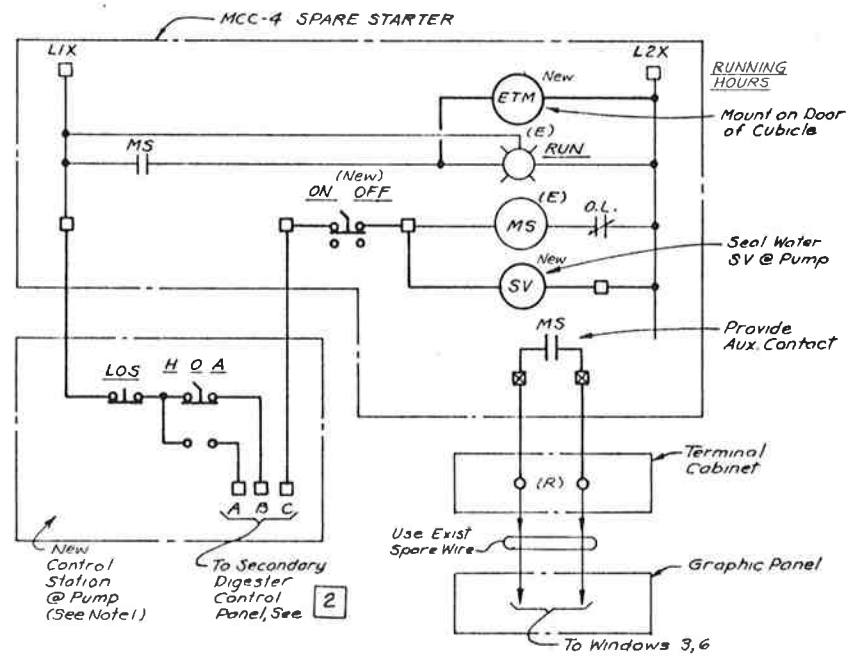


DIAGRAM 3
SECONDARY FEED PUMPS NO. 1 & 2

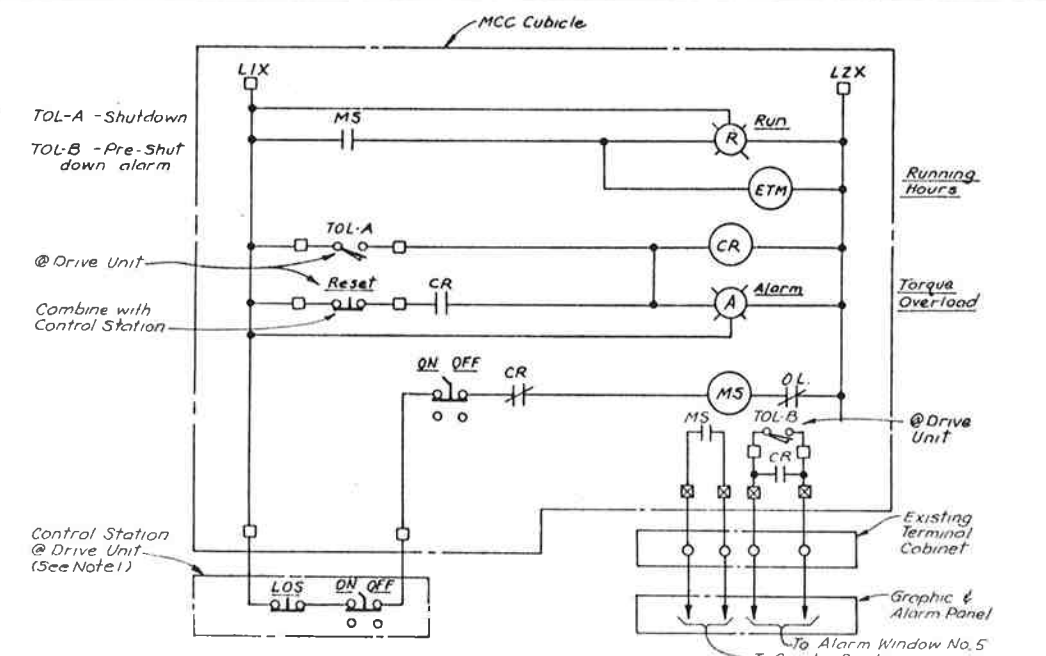


DIAGRAM 4
PRIMARY CLARIFIER NO. 2

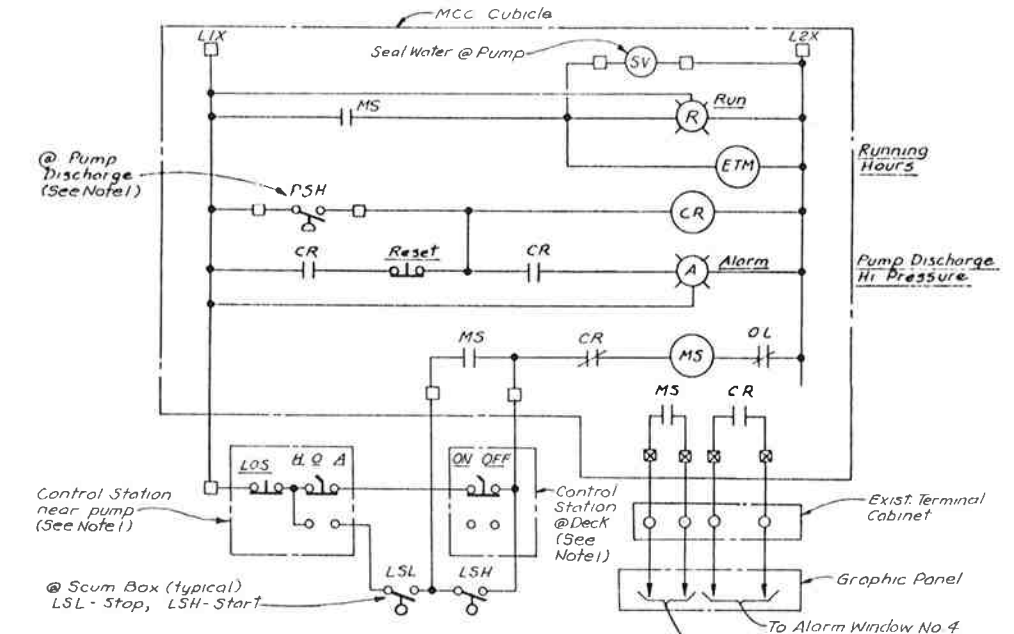


DIAGRAM 5
SLUDGE PUMP NO. 4

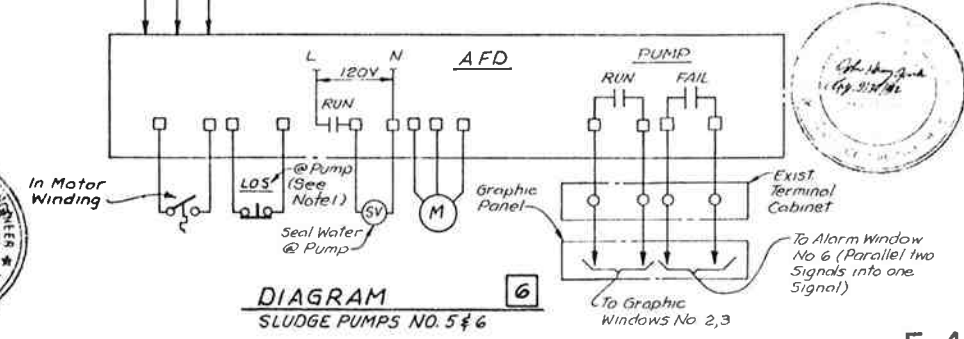
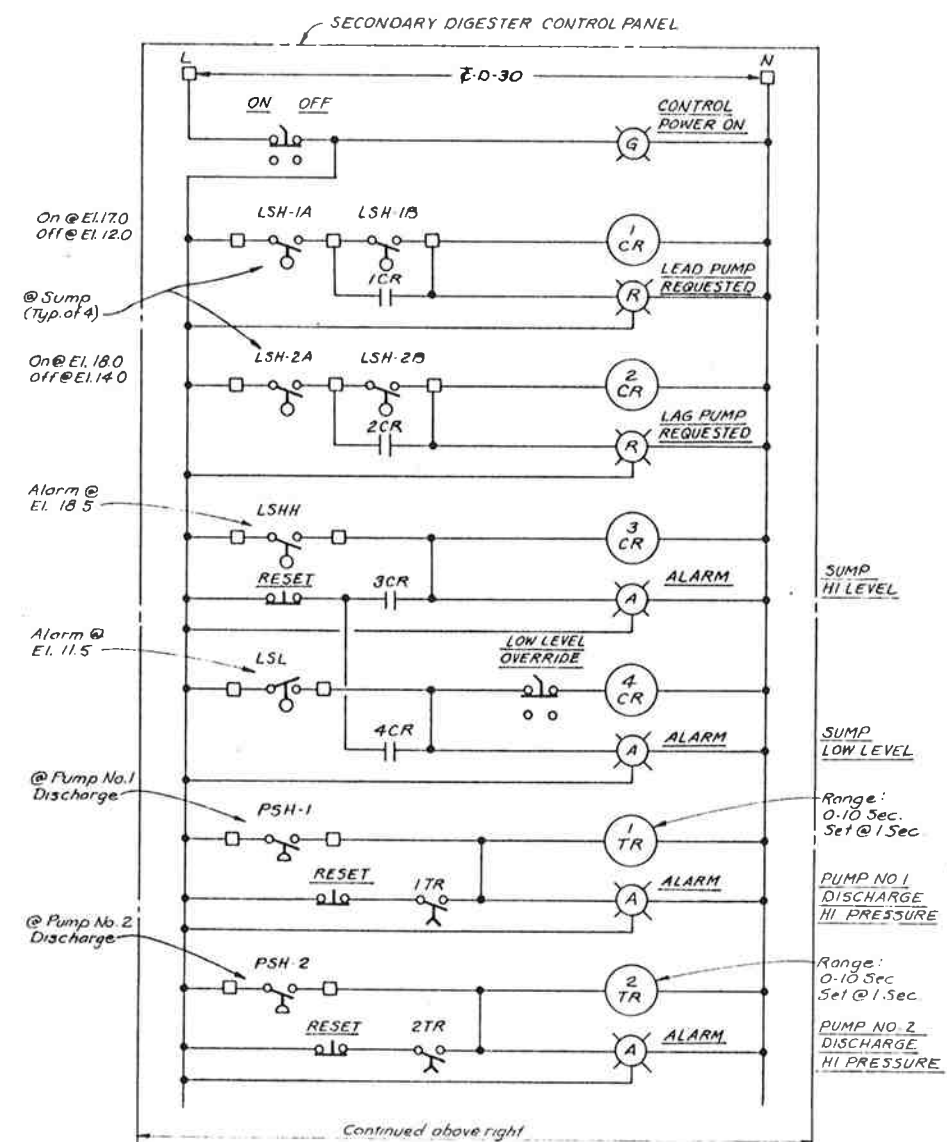


DIAGRAM 6
SLUDGE PUMPS NO. 5 & 6



REFERENCE INFORMATION AND NOTES:
1. Control Station shall be corrosion resistant and stainless steel or fiberglass hardware.

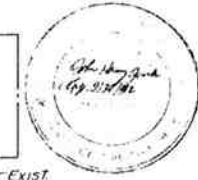
GRAPHIC SCALES (In Feet)	DESIGNED TIW
	DRAWN JC
	CHECKED RCH
	DATE FEB. 1989

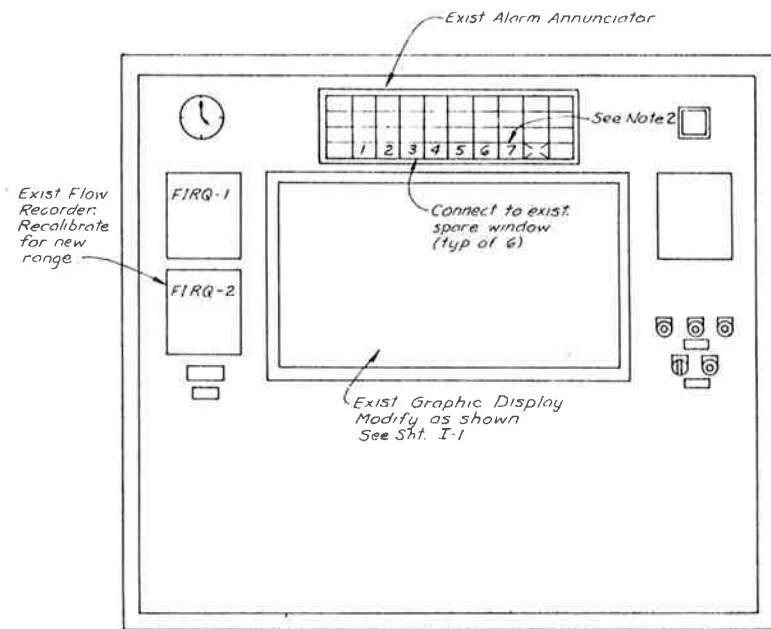
SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
SAN LUIS OBISPO COUNTY, CALIFORNIA
WASTEWATER WORKS IMPROVEMENTS
Kennedy/Jenks/Chilton
Palo Alto
SUBMITTED BY: *John H. Jenks*
APPROVED BY: *John L. Wallace*
DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3
ELECTRICAL ELEMENTARY DIAGRAMS
SCALE NONE
JOB NO. 885119.00
SHEET 36 OF 40

REV	DESCRIPTION	SUB	APPR	DATE

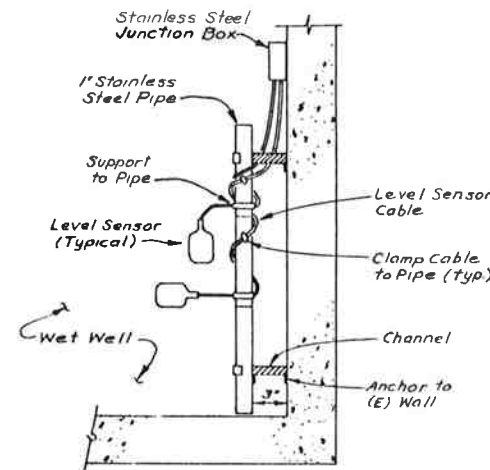
REFER TO TRACING FOR LATEST REVISION



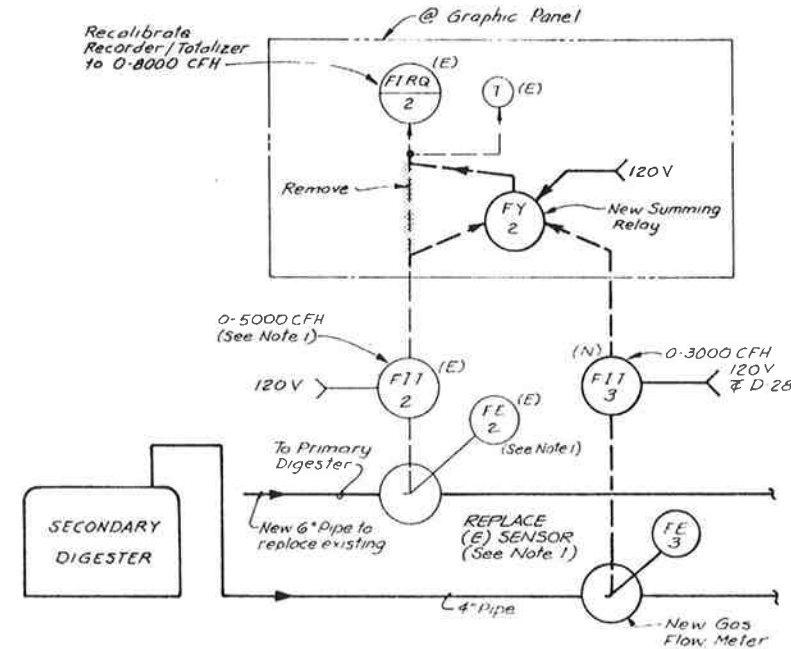


EXIST. GRAPHIC PANEL ELEVATION
No Scale

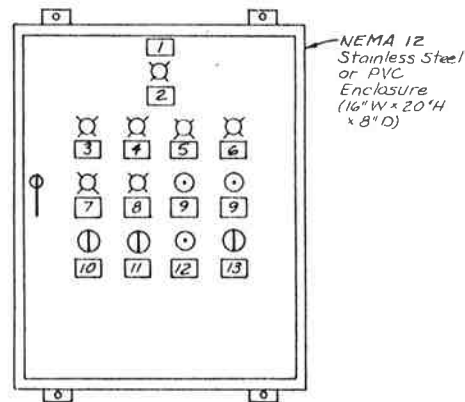
WINDOW NO.	FIRST LINE	SECOND LINE	THIRD LINE
1	SEC DIGESTER SUMP	HI/LOW LEVEL	
2	SEC DIGESTER	FEED PUMP NO.1	FAILED
3	SEC. DIGESTER	FEED PUMP NO.2	FAILED
4	SLUDGE PUMP NO.4	FAILED	
5	PRIMARY CLARIFIER NO.2	FAILED	
6	SLUDGE PUMP	NO 5 / 6	FAILED
7	SLUDGE GRINDER	FAILED	



DETAIL
No Scale

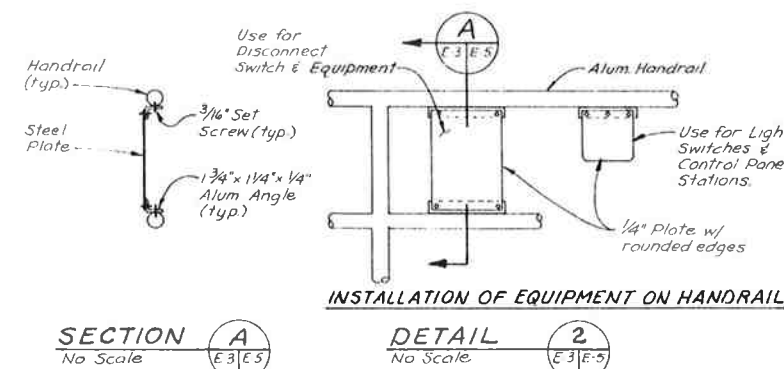


DIGESTER GAS FLOW PIPING
No Scale



ELEVATION
No Scale
SECONDARY DIGESTER CONTROL PANEL
No Scale

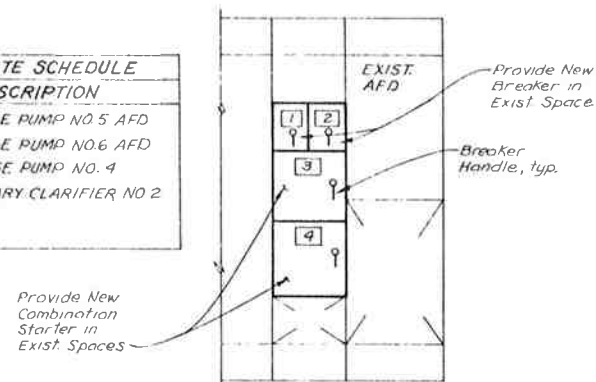
NO.	INSCRIPTION
1	SECONDARY DIGESTER CONTROL PANEL
2	CONTROL POWER ON
3	WET WELL HIGH LEVEL
4	WET WELL LOW LEVEL
5	PUMP NO.1 HI DISCHARGE PRESSURE
6	PUMP NO.2 HI DISCHARGE PRESSURE
7	LEAD PUMP REQUESTED
8	LAG PUMP REQUESTED
9	PUMP RESET
10	PUMP MODE SELECTOR
11	CONTROL POWER (ON-OFF)
12	LEVEL RESET
13	LOW LEVEL CUTOFF OVERRIDE



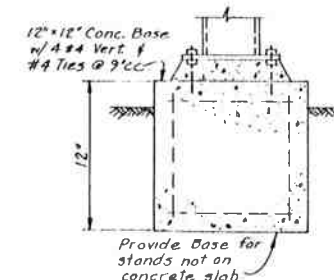
SECTION A
No Scale

DETAIL 2
No Scale

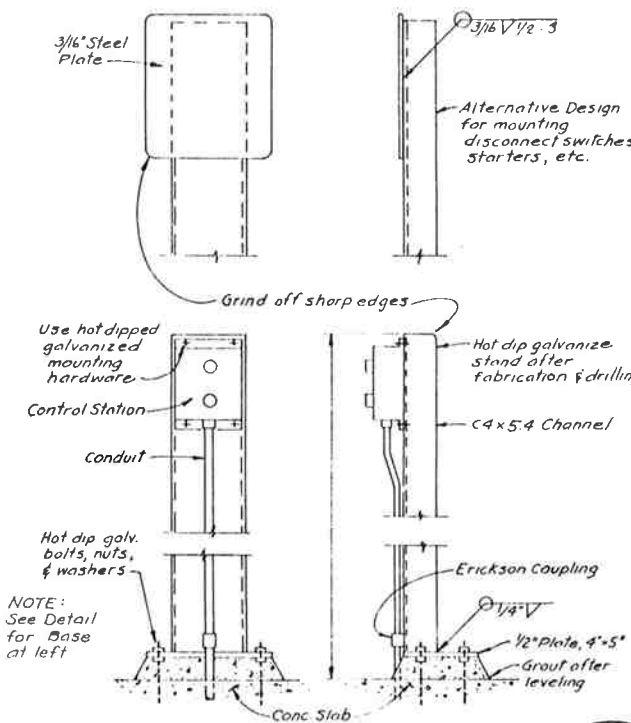
NO.	INSCRIPTION
1	SLUDGE PUMP NO.5 AFD
2	SLUDGE PUMP NO.6 AFD
3	SLUDGE PUMP NO.4
4	PRIMARY CLARIFIER NO.2



MCC-2 PARTIAL ELEVATION
No Scale



BASE DETAIL
No Scale



EQUIPMENT MOUNTING STAND
No Scale



REFERENCE INFORMATION AND NOTES: 1. Recalibrate existing flowmeter for New 6" Pipe to measure the indicated flow. Existing flowmeter shall be reinstalled on the new pipe. Replace existing flow sensor element to fit the new 6" pipe. 2. Connect to Grinder fail signal at MCC-2 in Power Generator Building.				GRAPHIC SCALES (In Feet) 		DESIGNED: TIW DRAWN: JC CHECKED: RCH DATE: FEB. 1989		SO. SAN LUIS OBISPO CO. SANITATION DISTRICT SAN LUIS OBISPO COUNTY, CALIFORNIA WASTEWATER WORKS IMPROVEMENTS Kennedy/Jenks/Chilton Palo Alto		WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3 ELECTRICAL MISCELLANEOUS DETAILS AND PANELS		SCALE: NONE JOB NO: 885119.00 SHEET: 37 OF 40	
APPROVED: <i>John L. Wallace</i> JOHN L. WALLACE DISTRICT ADMINISTRATOR				APPROVED: <i>John L. Wallace</i> JOHN L. WALLACE DISTRICT ADMINISTRATOR		APPROVED: <i>John L. Wallace</i> JOHN L. WALLACE DISTRICT ADMINISTRATOR		APPROVED: <i>John L. Wallace</i> JOHN L. WALLACE DISTRICT ADMINISTRATOR		APPROVED: <i>John L. Wallace</i> JOHN L. WALLACE DISTRICT ADMINISTRATOR			

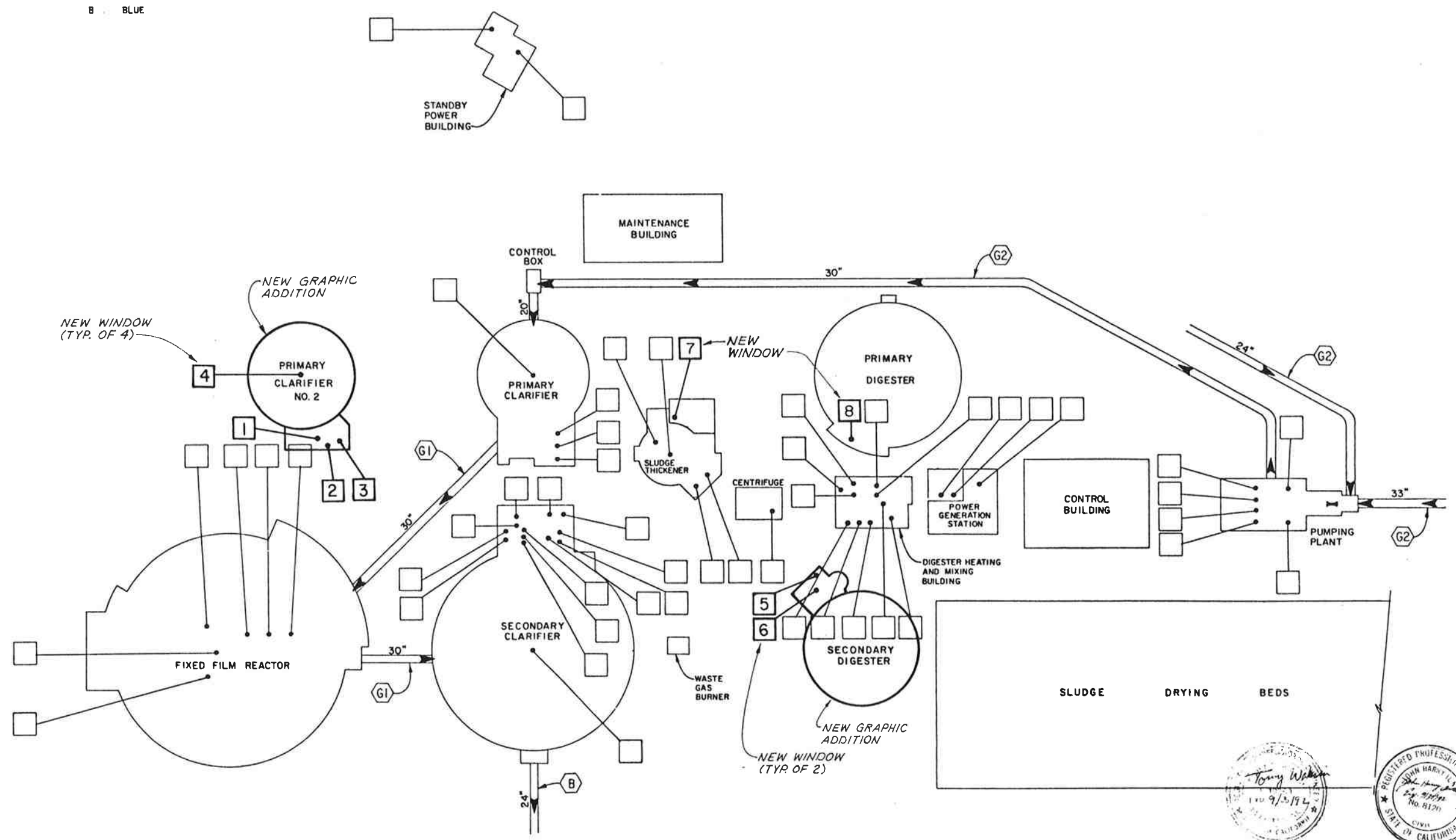
NEW INDICATOR LIGHT SCHEDULE

ITEM	INSCRIPTION
1	SLUDGE PUMP NO. 4
2	SLUDGE PUMP NO. 5
3	SLUDGE PUMP NO. 6
4	PRIMARY CLARIFIER NO. 2
5	SEC. DIGESTER FEED PUMP NO. 1
6	SEC. DIGESTER FEED PUMP NO. 2
7	FERRIC CHLORIDE PUMP (SEE NOTE 2)
8	SLUDGE GRINDER (SEE NOTE 2)

NOTES

- 25 INDICATES TYPICAL INDICATING LIGHT. REFER TO INDICATOR SCHEDULE FOR LENS INSCRIPTIONS.
- INDICATES MOTOR OR EQUIP. LOCATION.
- ⊗ FLOW METER
- G1 LIGHT GREEN
- G2 DARK GREEN
- B BLUE

SOUTH SAN LUIS OBISPO COUNTY SANITATION DISTRICT WATER POLLUTION CONTROL PLANT



REFERENCE INFORMATION AND NOTES:
 1. At the exist pump controller, provide an interposing relay to indicate pump "run" signal.
 2. At exist MCC-2 connect to Grinder "run" signal.

REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

GRAPHIC SCALES (in Feet)

DESIGNED: TIW
 DRAWN: JC
 CHECKED: RCH
 DATE: FEB. 1989

SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
 WASTEWATER WORKS IMPROVEMENTS
 Kennedy/Jenks/Chilton
 Palo Alto

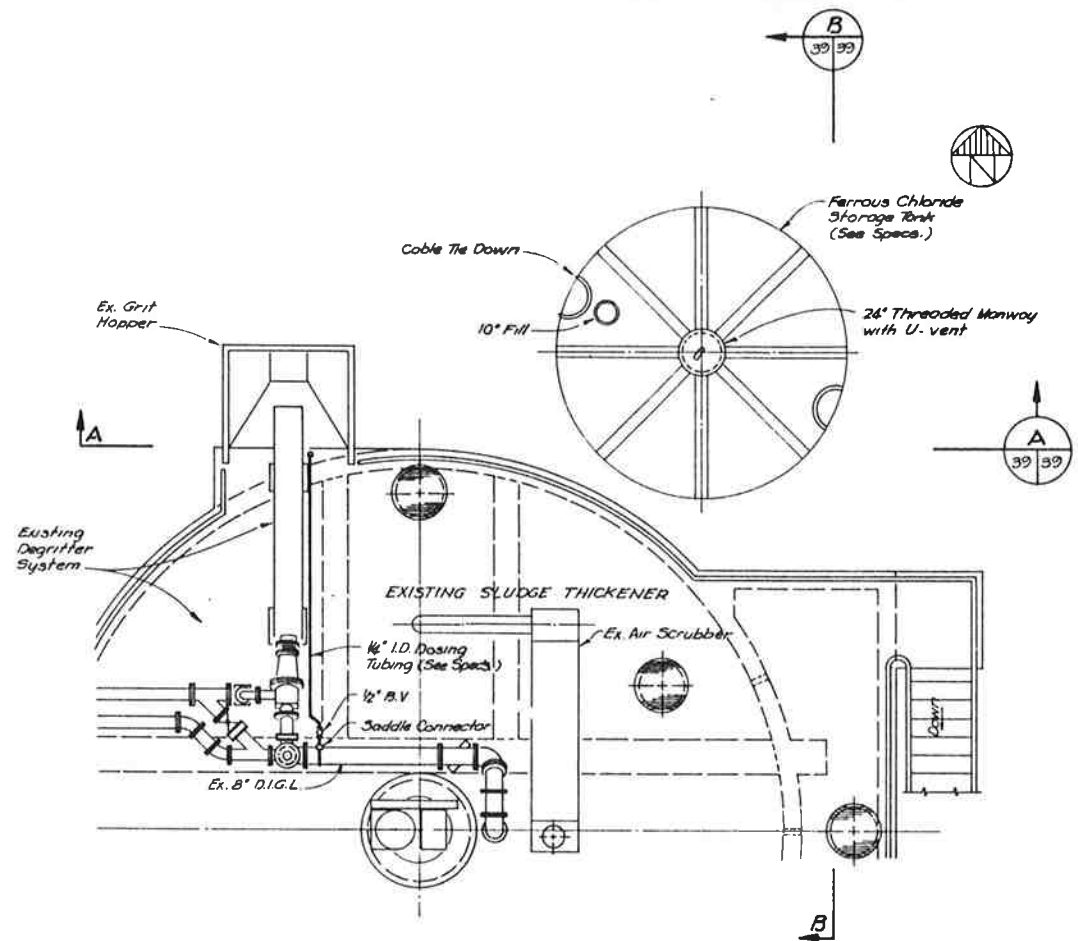
SUBMITTED: [Signature]
 APPROVED: John L. Wallace
 DISTRICT ADMINISTRATOR

WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3

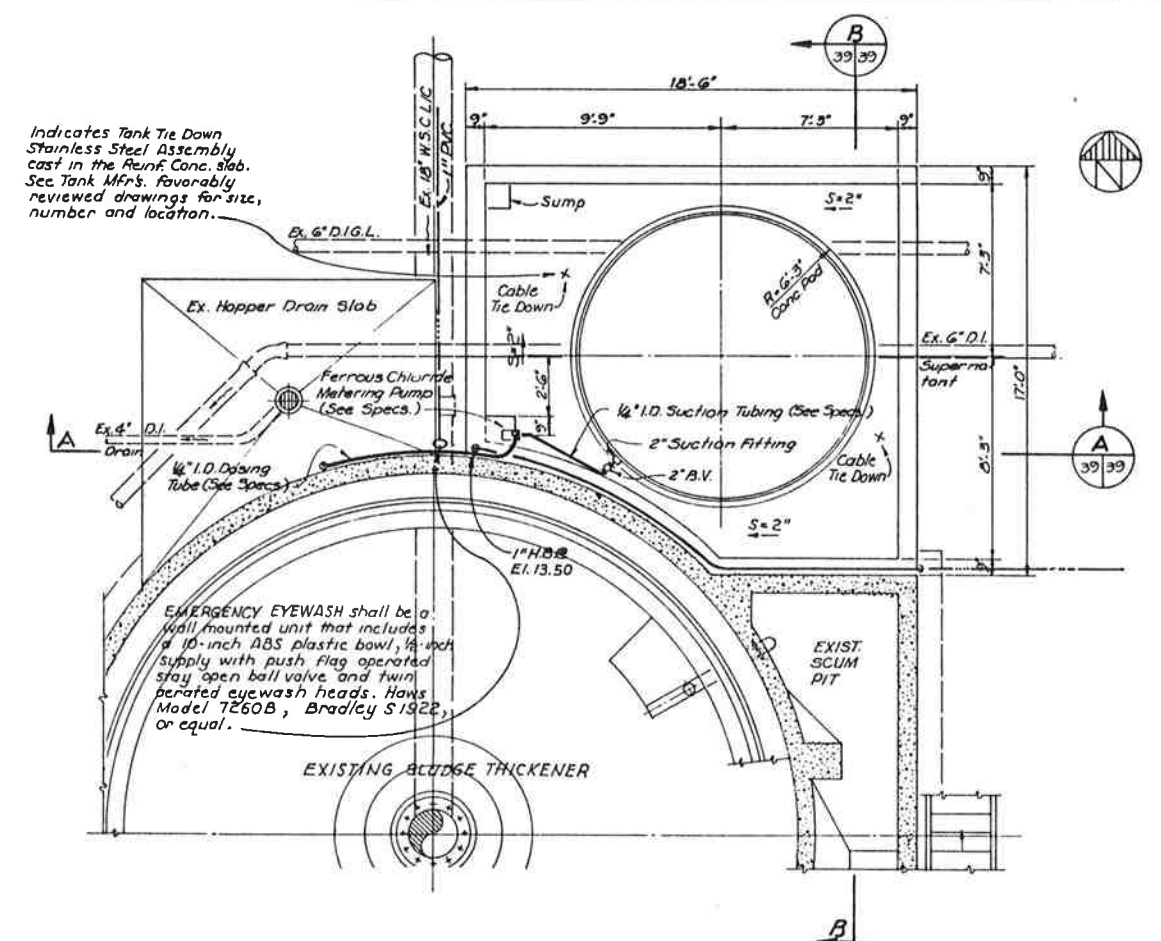
INSTRUMENTATION
 GRAPHIC PANEL MODIFICATION

SCALE: NONE
 JOB NO: 885119.00
 SHEET: 38
 OF: 40

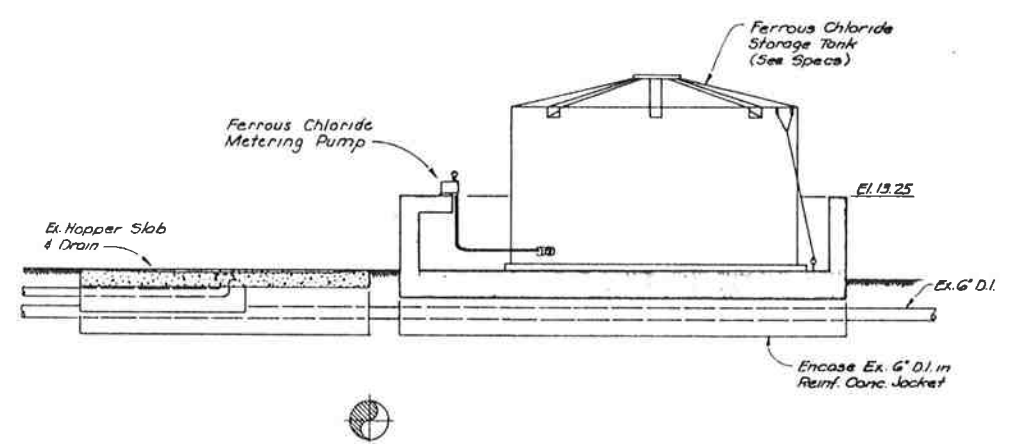
REGISTERED PROFESSIONAL ENGINEER
 JOHN HARTLEY, JR.
 No. 81271
 CIVIL
 STATE OF CALIFORNIA



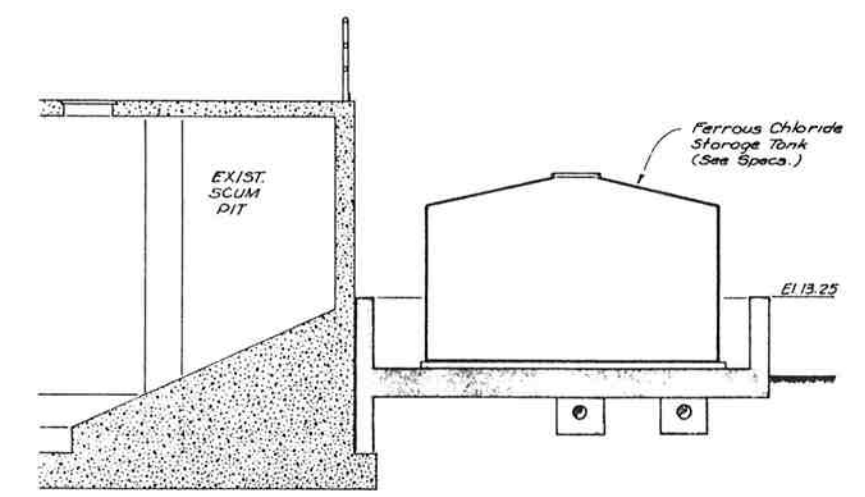
DECK PLAN



SECTIONAL PLAN



SECTION A



SECTION B



REV	DESCRIPTION	SUB	APPR	DATE

REFER TO TRACING FOR LATEST REVISION

REFERENCE INFORMATION AND NOTES:

GRAPHIC SCALES (in Feet)	DESIGNED DAB
1/4" = 1'-0"	DRAWN DCC
	CHECKED DAB
	GATE JAN. 1986

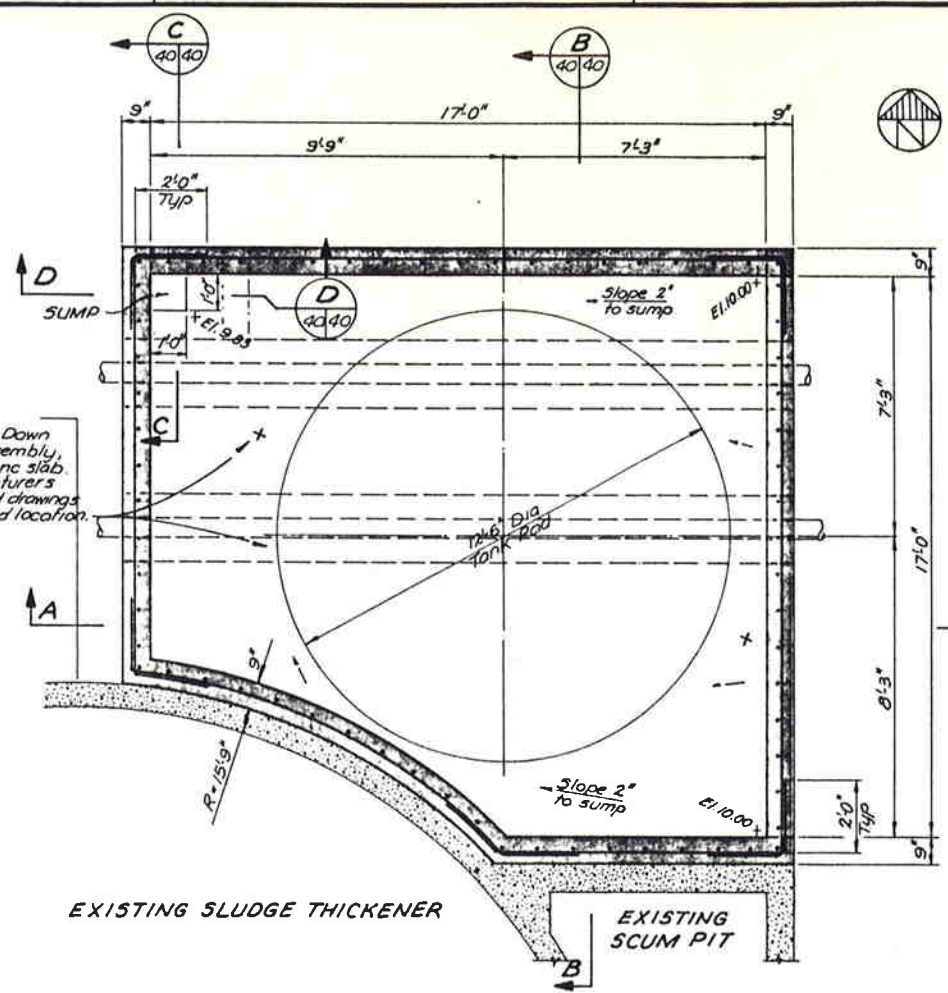
SO. SAN LUIS OBISPO CO. SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
 WASTEWATER WORKS IMPROVEMENTS
 Kennedy/Jenke/Chilton Palo Alto

SUBMITTED: *John H. Wallage*
 APPROVED: *John H. Wallage*
 JOHN H. WALLAGE DISTRICT ADMINISTRATOR

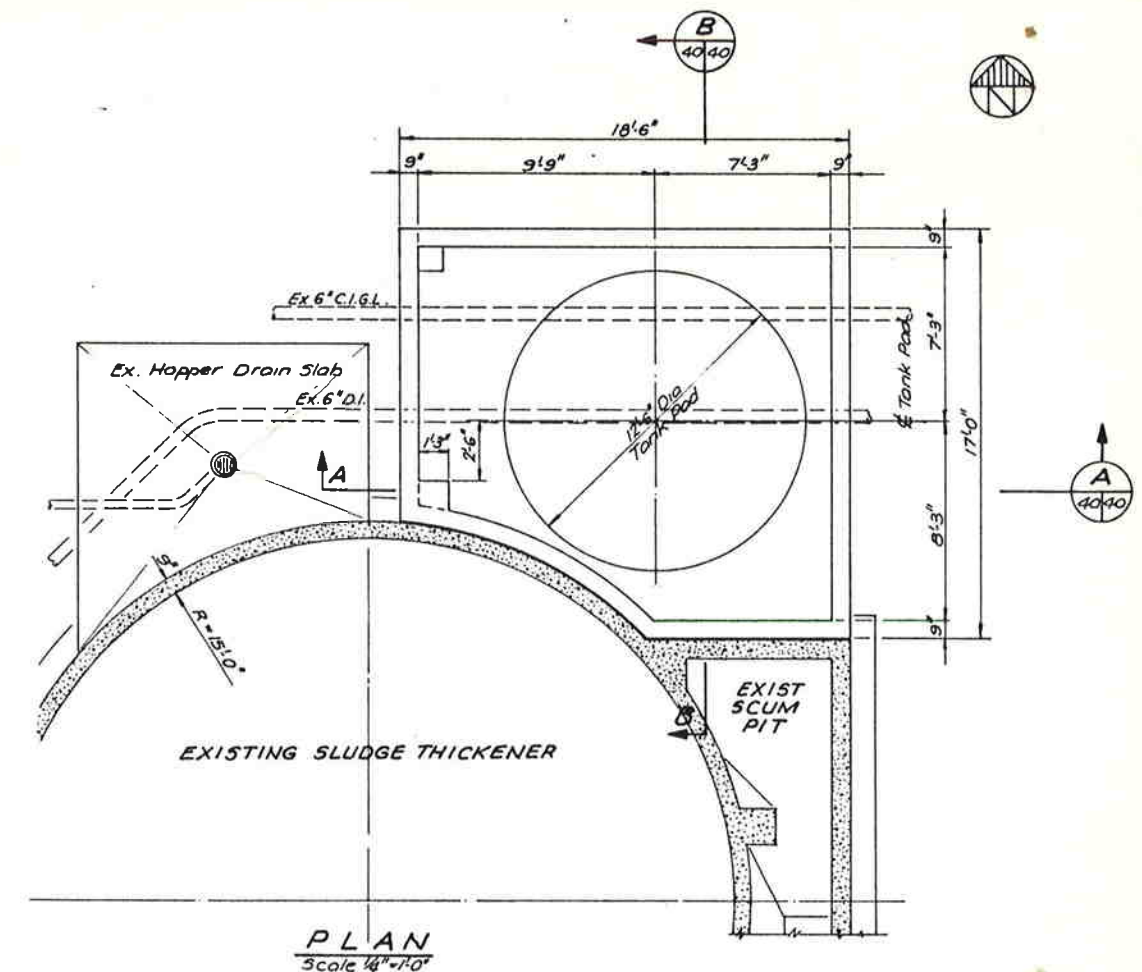
WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3
 FERROUS CHLORIDE STORAGE AND FEEDING SYSTEM
 AT EXISTING SLUDGE THICKENER
 GENERAL

SCALE
1/4" = 1'-0"
 JOB NO.
885119.00
 SHEET
39
 OF
40

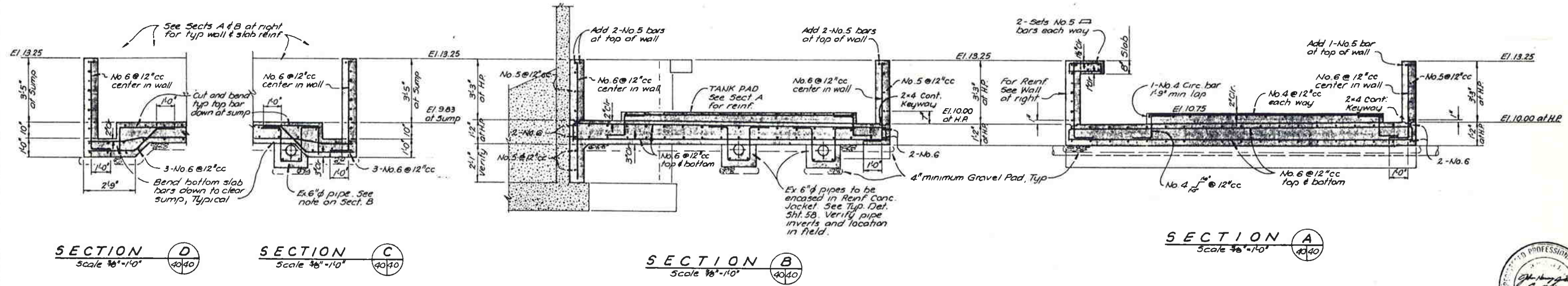
Indicates Tank Tie Down
Stainless Steel Assembly,
cast in the reinf conc slab.
See Tank Manufacturer's
favorably reviewed drawings
for size, number and location.



SECTIONAL PLAN
Scale 3/8" = 1'-0"



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



SECTION A
Scale 3/8" = 1'-0"



REFERENCE INFORMATION AND NOTES: REV. DESCRIPTION SUB APPR. DATE REFER TO TRACING FOR LATEST REVISION				GRAPHIC SCALES (in Feet) 1/4" = 1'-0" 3/8" = 1'-0"		DESIGNED AGE DRAWN MR CHECKED AGE DATE JAN 1988		SO. SAN LUIS OBISPO CO. SANITATION DISTRICT SAN LUIS OBISPO COUNTY, CALIFORNIA WASTEWATER WORKS IMPROVEMENTS Kennedy/Jenks/Chilton Palo Alto		WATER POLLUTION CONTROL PLANT IMPROVEMENTS STAGE 2 & 3 FERROUS CHLORIDE STORAGE AND FEEDING SYSTEM STRUCTURAL		SCALE AS NOTED JOB NO. 885119.00 SHEET 40 OF 40
APPROVED: <i>John H. Jenks</i> JOHN H. JENKS R.E. No. 8180						APPROVED: <i>John H. Jenks</i> JOHN H. JENKS DISTRICT ADMINISTRATOR						



SOUTH SAN LUIS OBISPO COUNTY SANITATION DISTRICT

Post Office Box 339 Oceano, California 93475-0339

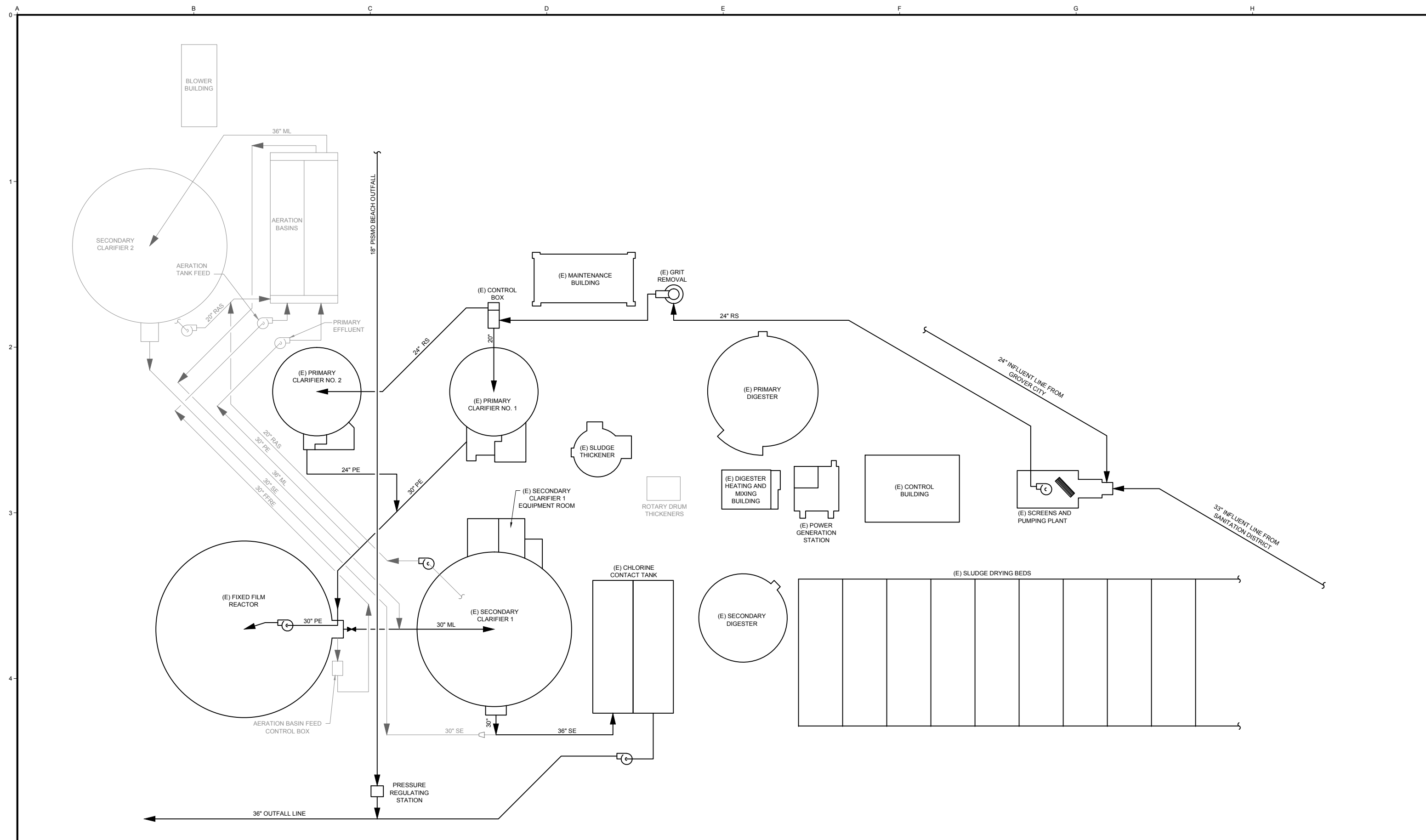
1600 Aloha Oceano, California 93445-9735

Telephone (805) 489-6666 Fax (805) 489-2765

www.sslocsd.org

Exhibit

2



USE OF DOCUMENTS
 THIS DOCUMENT, INCLUDING THE INCORPORATED DESIGNS, IS AN INSTRUMENT OF SERVICE FOR THIS PROJECT AND SHALL NOT BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF KENNEDY/JENKS CONSULTANTS.

NO.	REVISION	DATE	BY

SCALES
 0 1"
 0 25mm
 IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGLY.



DESIGNED
CLW
 DRAWN
DWM
 CHECKED
JMW

SOUTH SAN LUIS OBISPO COUNTY SANITATION DISTRICT
 SAN LUIS OBISPO COUNTY, CALIFORNIA
WWTP REDUNDANCY PROJECT
 Kennedy/Jenks Consultants
 SANTA CLARA, CALIFORNIA

PLANT FLOW SCHEMATIC
 90% SUBMITTAL

FILE NAME
1668009.00-G-007a.dwg
 JOB NO.
1668009*00
 DATE
DECEMBER 2018
 SHEET OF
G007a #