SET NO. 4

REVISIONS:

CITY OF

PASADENA, TEXAS

SEWAGE SYSTEM IMPROVEMENTS

VINCE BAYOU PLANT

WPC-TEXAS-663
PROJECT NO. 16-4-69

CLYDE DOYAL
MAYOR

JOHN RAY HARRISON
COUNCILMAN

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COUNCILMAN

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CITY ATTORNEY

ROY T. HUFFMAN, P.E.
DIRECTOR OF PUBLIC WORKS

JOHNSON ENGINEERS, INC.
CONSULTING ENGINEERS
PASADENA, TEXAS

APPROVED:

SUBMITTED: DATE 1971
JOHNSON ENGINEERS, INC.

APPROVED: DATE 1971
DIRECTOR OF PUBLIC WORKS

Thursday, Mar 25
1993
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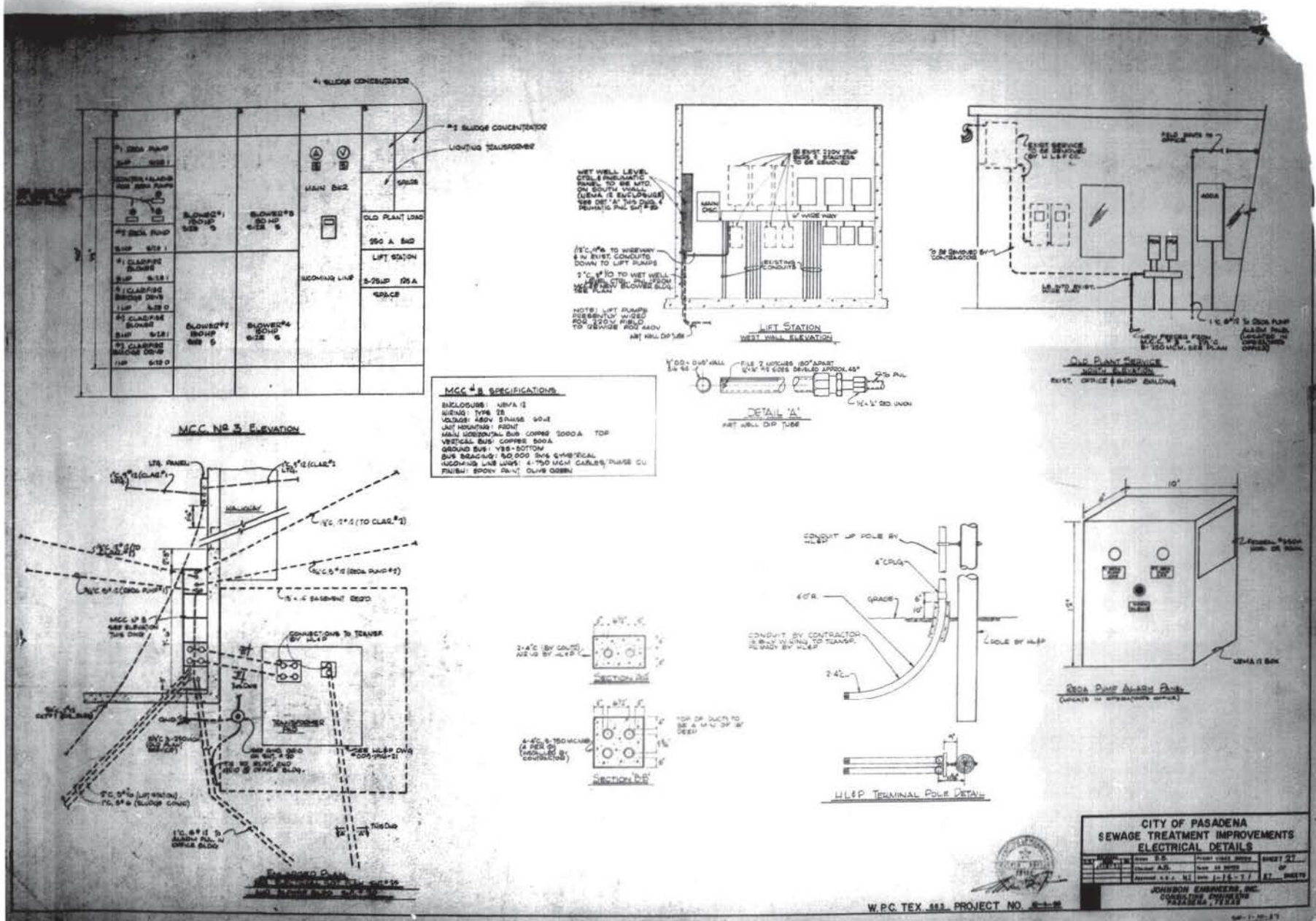

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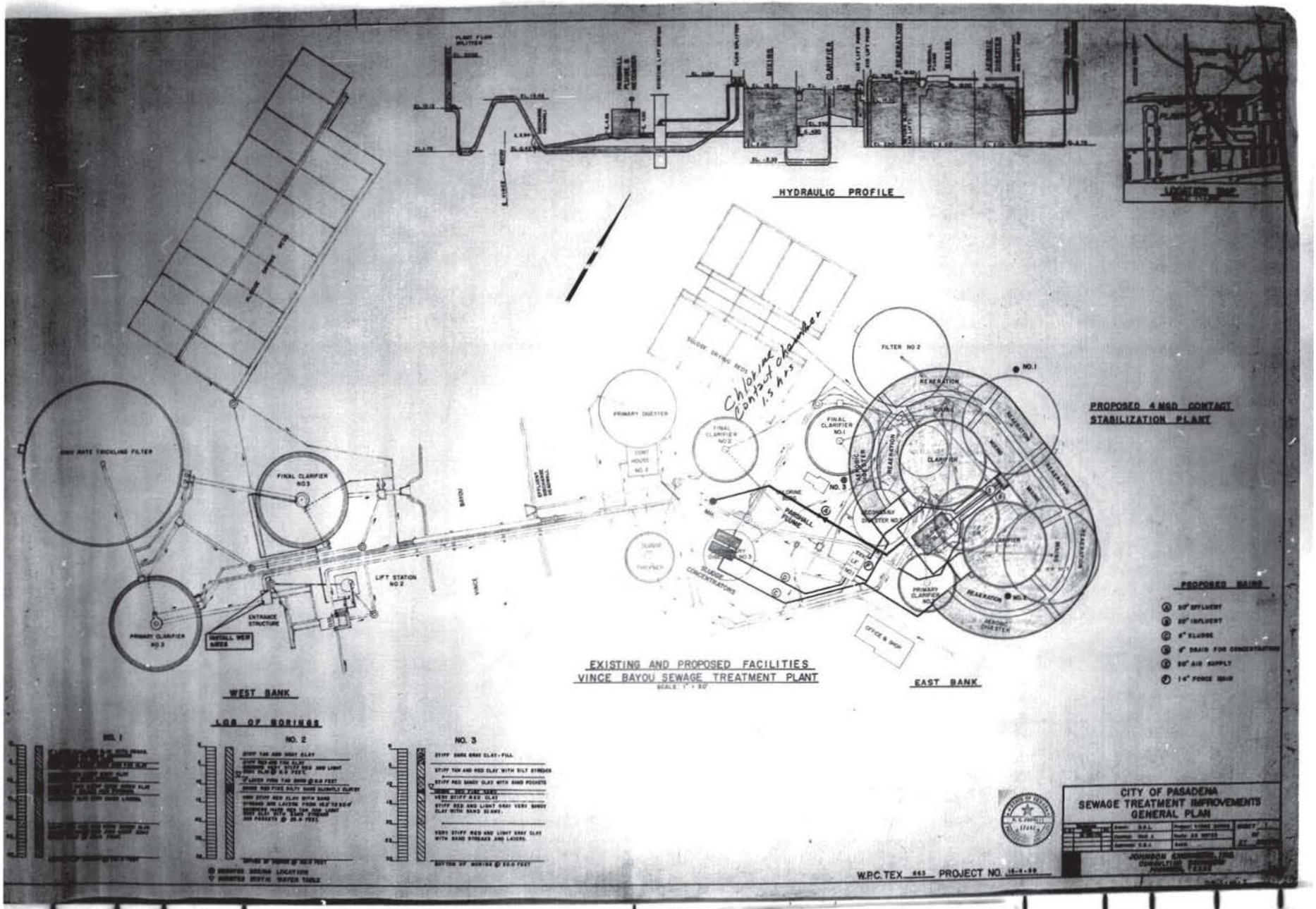

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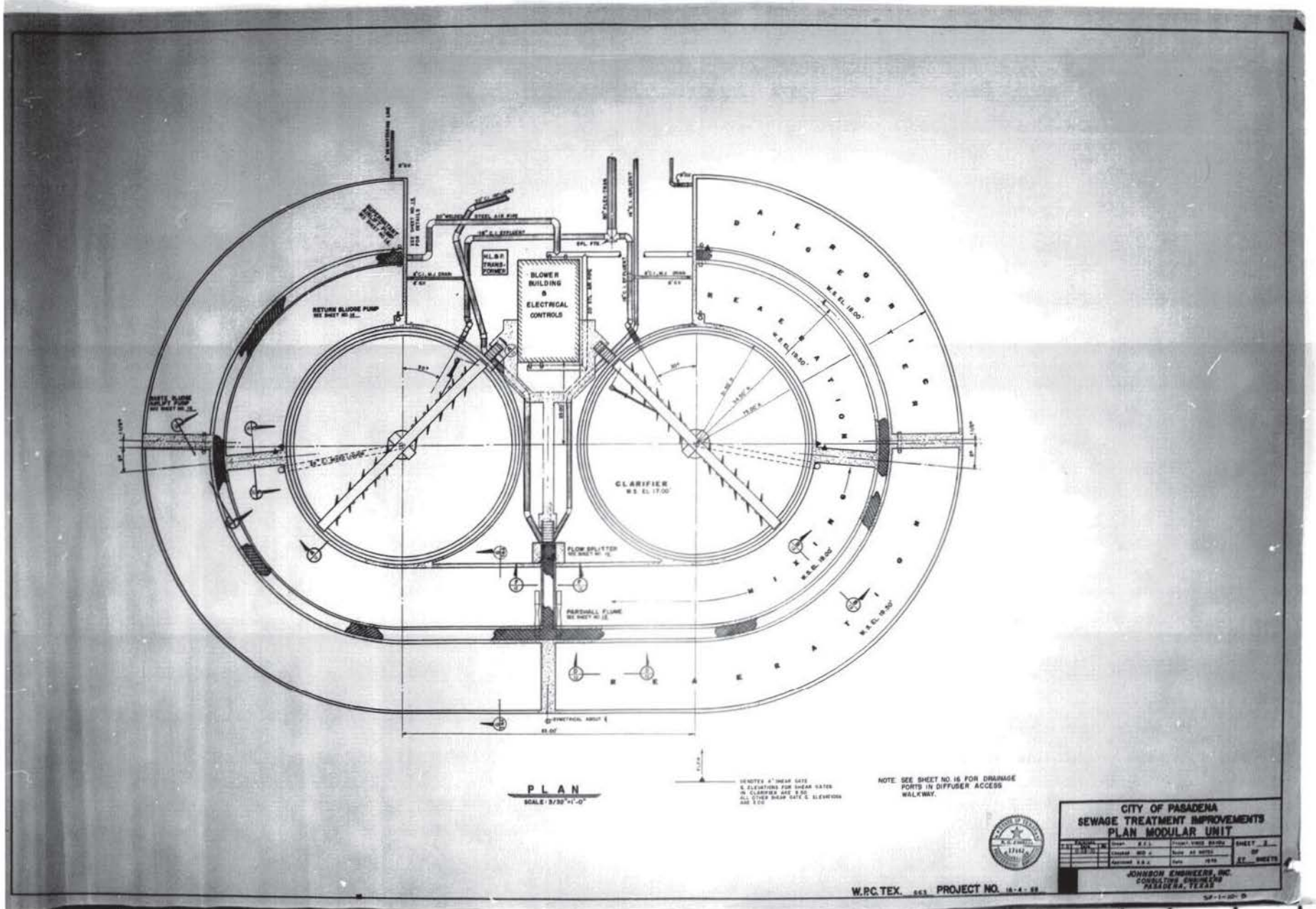

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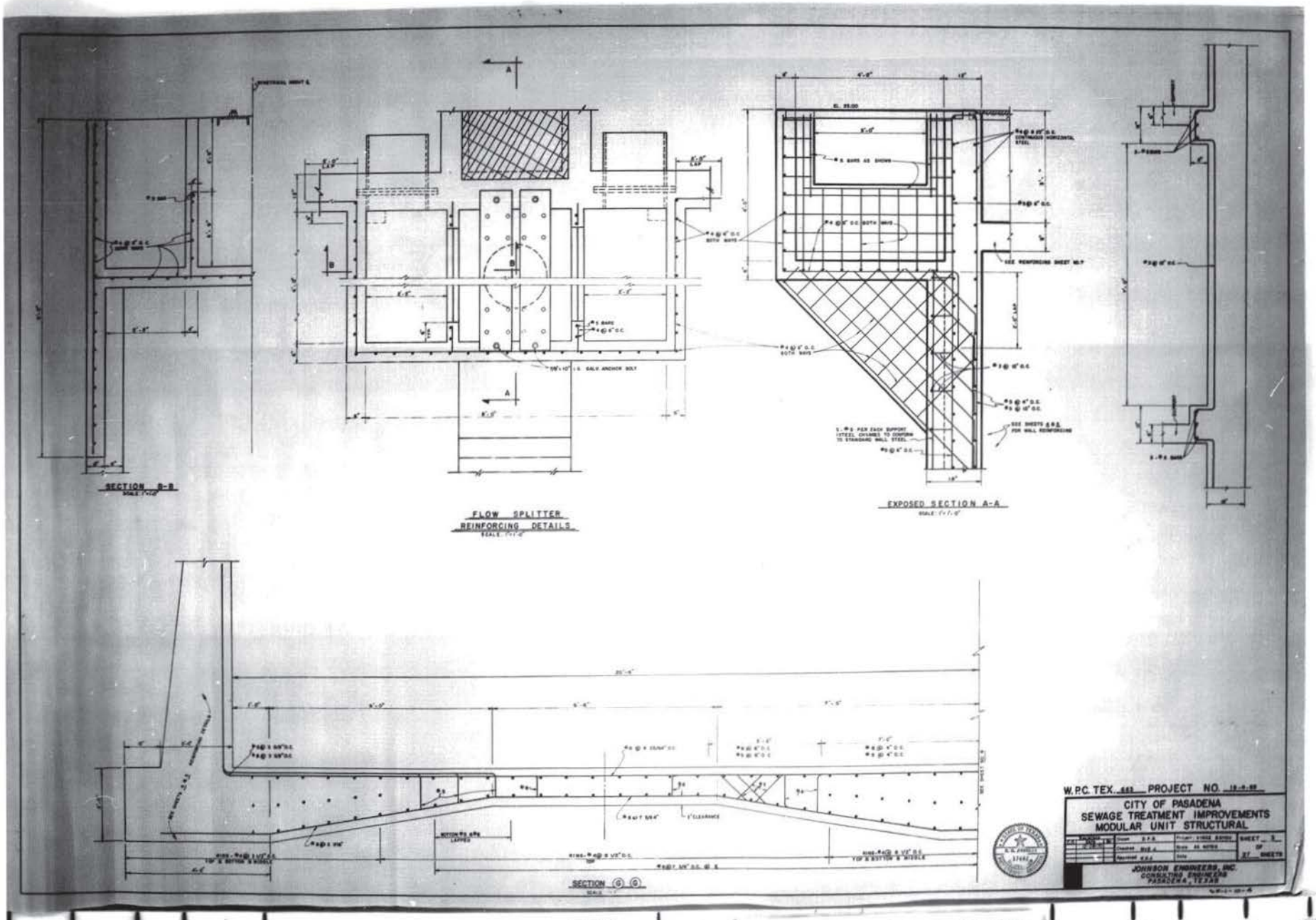

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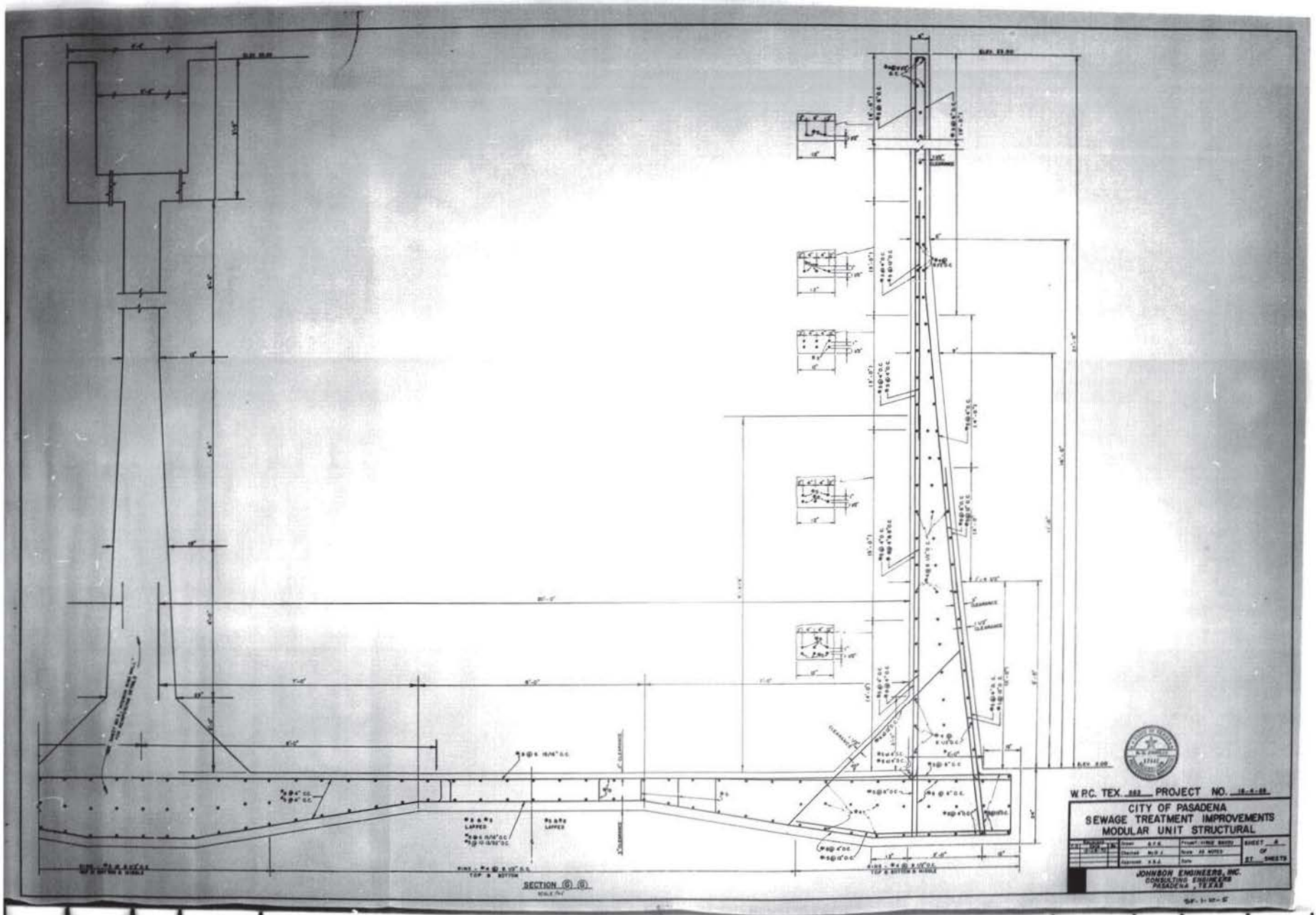

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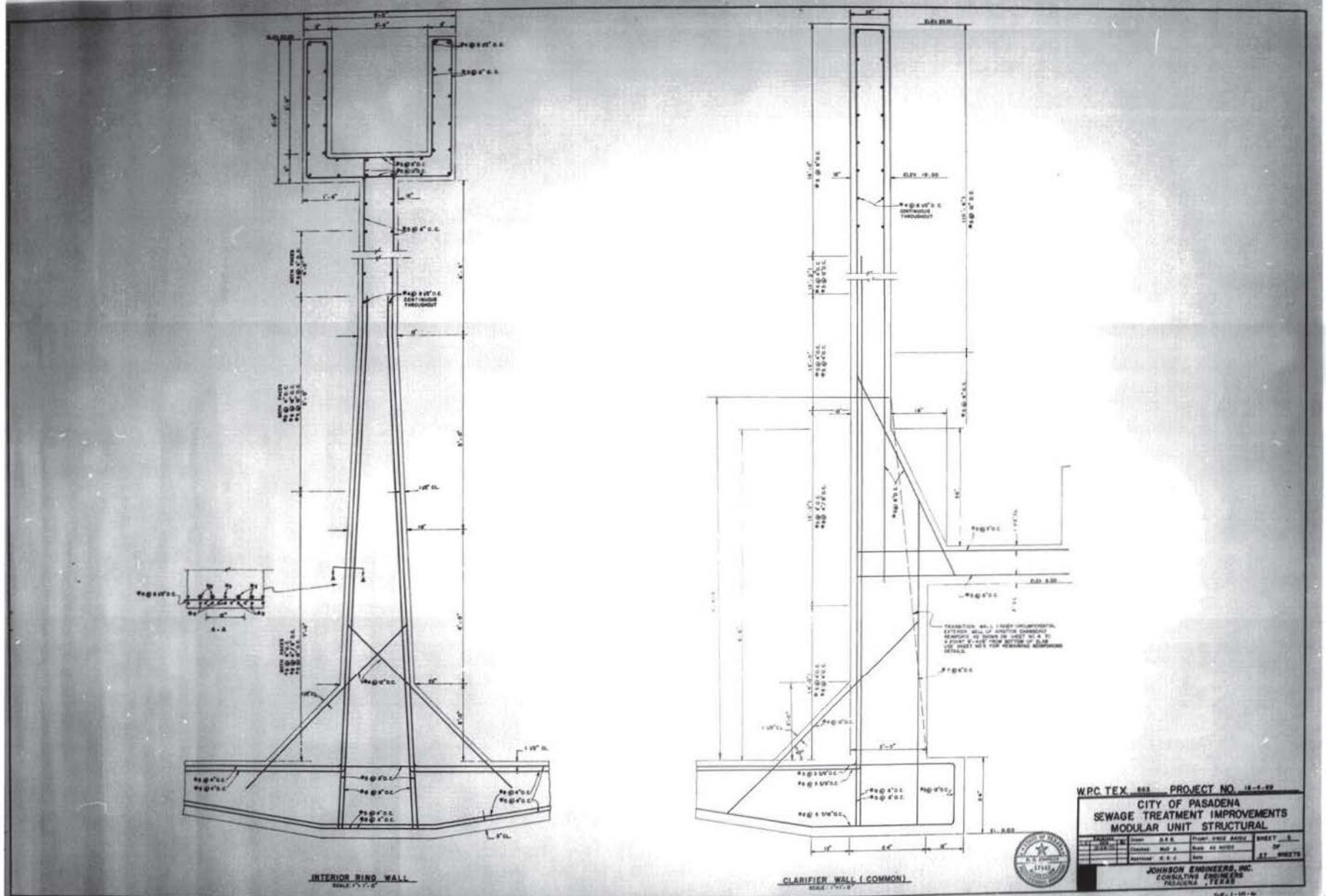

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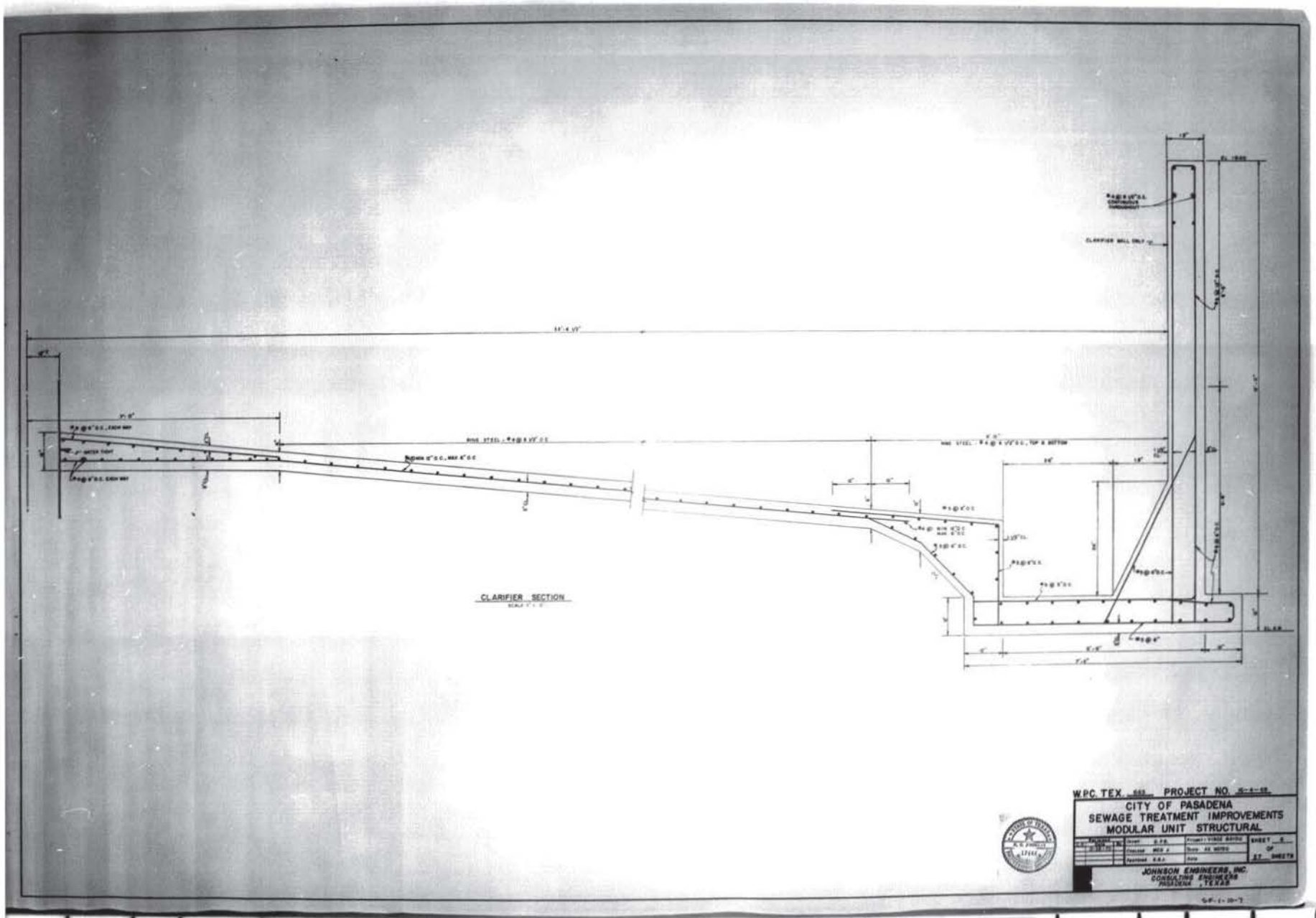

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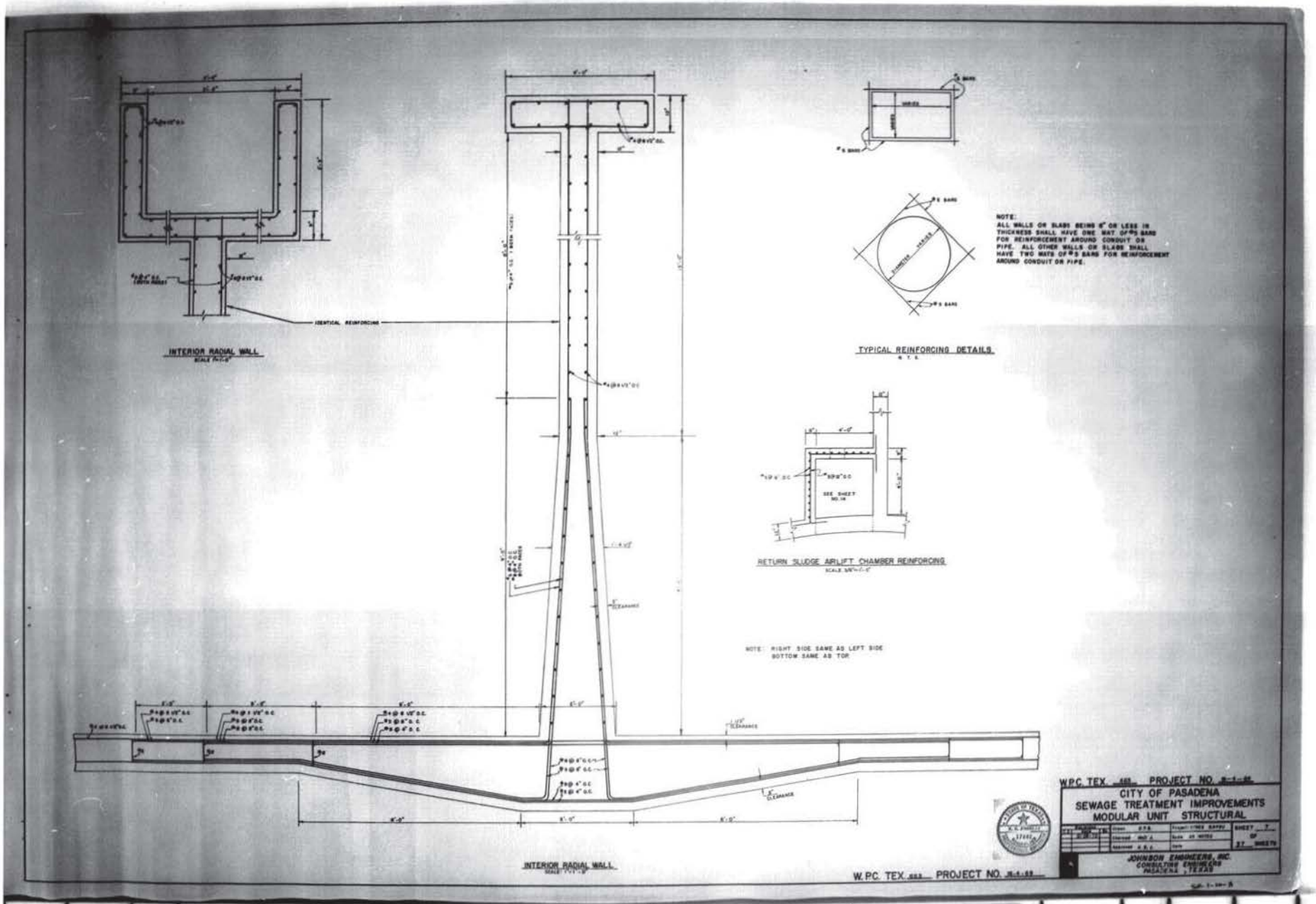

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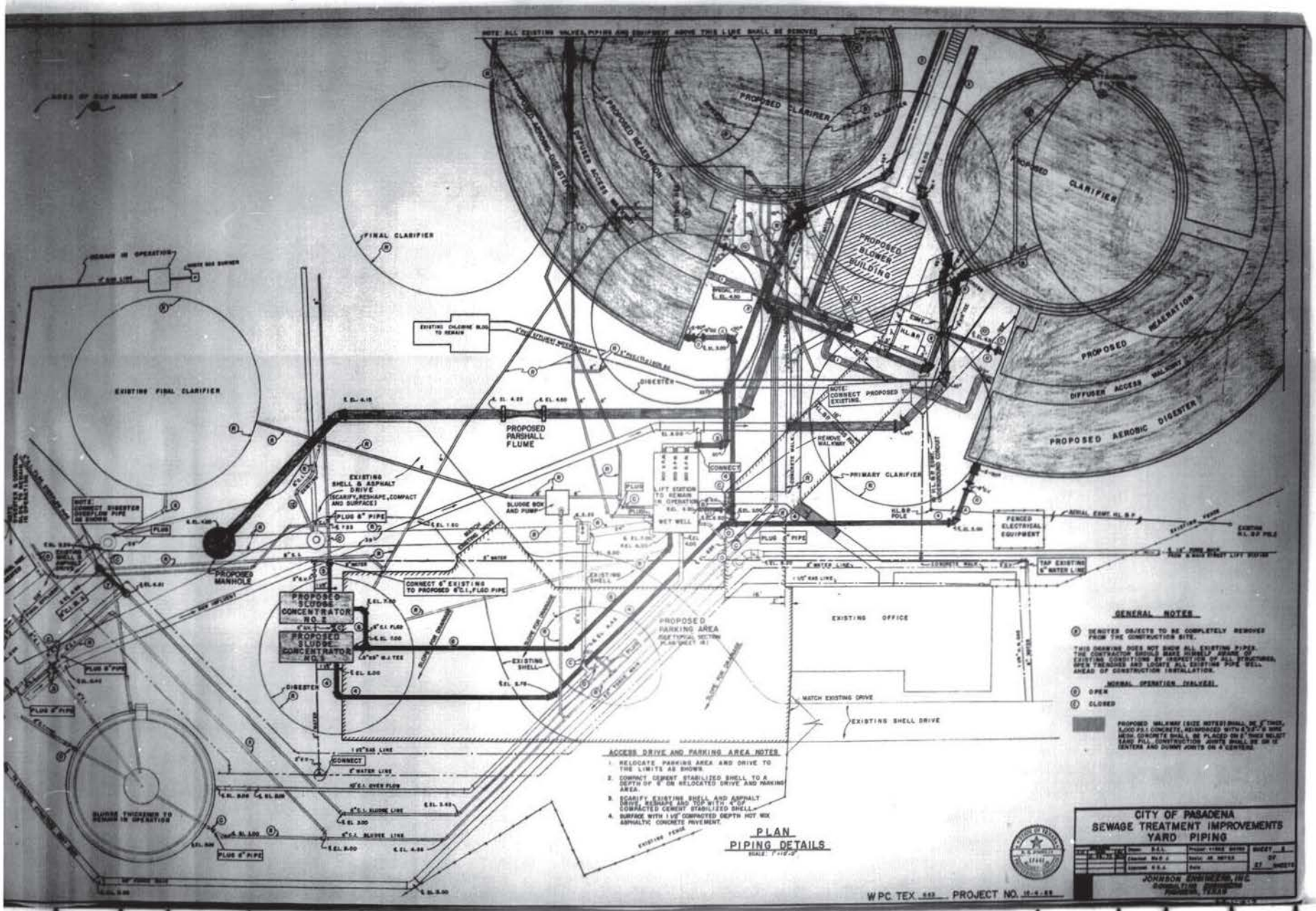

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YARD PIPING SCHEDULE

LINE NUMBER	LOCATION FROM	LOCATION TO	DIAMETER IN INCHES	TYPE OF MATERIAL	CLASS THICKNESS	CLASS INTERNAL PRESSURE	NORMAL TYPE OF JOINT	REMARKS
* 1	SLUDGE BUILDING - MODULAR TREATMENT UNIT		20" O.D.	STEEL	.250	—	WELDED	SPECIAL CONNECTIONS, WELDED FLANGES
2	EXISTING PRIMARY CLARIFIER - FLOW SPLITTER MODULAR UNIT		20"	C.I.	22	150	M.J.	FLANGE FITTING, FOR CONNECTION ONLY
3	EXISTING L.S., EAST BANK - MODULAR UNIT, MIXING		14"	C.I.	22	150	M.J.	FLANGE FITTING, FOR CONNECTION ONLY
4	MODULAR UNIT, AEROBIC DIGESTER - SLUDGE CONCENTRATOR NO.1		8"	C.I.	22	150	M.J.	SUPPLY TO CONCENTRATOR NO.1, VALVE CONNECTION TO CONCENTRATOR NO.2
5	EXISTING 6" SLUDGE PIPE - SLUDGE CONCENTRATOR NO. 2		6"	C.I.	22	150	M.J.	CONNECT EXIST. 6" SLUDGE LINE FROM EXIST. DIGESTER TO CONCENTRATOR NO. 2
6	CONCENTRATORS NO. 1 & 2 - EXISTING EAST BANK LIFT STA.		8"	C.I.	22	150	M.J.	LIQUID DRAIN LINE FROM CONCENTRATORS TO WET WELL EXISTING LIFT STA.
7	EXISTING 6" DIGESTER OVERFLOW - EXISTING 6" SLUDGE LINE		6"	C.I.	22	150	M.J.	LINE CONNECTION FOR EXIST. DIGESTER OVERFLOW TO WET WELL EXIST. LIFT STA.
8	MODULAR UNIT CLARIFIER - 30" FLEXTRAN EFFLUENT		18"	C.I.	22	150	M.J.	EFFLUENT PIPING FOR MODULAR UNIT
9	JUNCTION WITH LINES 2 - CHLORINE CONTACT CHAMBER		30" I.D.	FLEXTRAN	—	—	RUBBER RING	SPECIAL FLEXTRAN FITTINGS REQUIRED AND SPECIAL FLANGED FITTING
10	MODULAR UNIT - EFFLUENT LINES 2		8"	C.I.	22	150	M.J.	MAIN DRAIN FOR MODULAR UNIT
11	SLUDGE LINES 2 - EXISTING EAST BANK LIFT STA.		8"	C.I.	22	150	M.J.	PARTIAL MODULAR UNIT DRAIN LINE

* ALL PIPE AND FITTINGS SHALL BE WELDED IN ACCORDANCE WITH GOOD WELDING PRACTICES FOR PIPE WELDING. ALL WELDS SHALL BE THOROUGHLY CLEANED AND SLAG REMOVED BETWEEN BEADS. WELDS SHALL BE OF EQUAL OR GREATER STRENGTH THAN PIPE BEING WELDED.

VALVES :

ALL PROPOSED VALVES IN YARD PIPING SHALL BE MUELLER NO. H851, MECHANICAL JOINT, AWWA GATE VALVE. ALL VALVES SHALL HAVE A 2" OPERATING NUT WITH VALVE WRENCH SOCKET WELDED TO NUT. VALVE WRENCH ROD SHALL BE EXTENDED AS REQUIRED TO WITHIN 6" OF SURFACE. WRENCH ROD SHALL BE FABRICATED FROM 1" DIA. SMOOTH STEEL. WRENCH ROD AT SURFACE SHALL HAVE A 6" LONG TEE ENDING, FABRICATED FROM 1" DIA. SMOOTH STEEL. EACH VALVE AND OPERATING WRENCH SHALL BE ENCLOSED IN A VALVE BOX, EXTENDING FROM VALVE TO THE SURFACE. EACH VALVE BOX SHALL HAVE A REMOVABLE METAL LID. ALL VALVE BOXES SHALL BE MUELLER OR EQUAL.

FOR VALVES INSIDE BUILDING OR STRUCTURE, SEE APPLICABLE DRAWINGS.

PARTIAL DEWATERING AND DRAINING INSTRUCTIONS

PARTIAL DEWATERING

THE MODULAR UNIT IS CONSTRUCTED TO HAVE PARTIAL DEWATERING THROUGH THE AEROBIC DIGESTER. EACH CHAMBER OF THE MODULAR UNIT IS INNER CONNECTED BY A 6" SHEAR GATE. 50% OF THE MODULAR UNIT CAN REMAIN IN FULL OPERATION WHILE THE REMAINDER IS DEWATERED.

LISTED BELOW IS THE PROCEDURE FOR PARTIAL DEWATERING.
NORTH HALF PORTION OF MODULAR UNIT

1. OPEN ALL 6" SHEAR GATES, NORTH HALF PORTION
2. OPEN N. VALVE A, LINE 4
3. CLOSE S. VALVE A, LINE 4
4. OPEN VALVE B, LINE 11
5. LOWER S. WEIR PLATE FLOW SPLITTER
6. RAISE N. WEIR PLATE FLOW SPLITTER

TOTAL PLANT DEWATERING EMERGENCY CONDITIONS

1. OPEN ALL 6" SHEAR GATES IN MODULAR UNIT
2. CLOSE VALVES A, LINES 4
3. OPEN VALVES B, LINES 10

(SIDE NOTES) — DENOTES PROPOSED WATER LINE

(SIDE NOTES) — DENOTES PROPOSED VALVE

— DENOTES HOSE BIB

ALL PROPOSED FRESH WATER LINES 2" AND LARGER SHALL BE C.I., TYTON JOINT, 200 P.S.I.

BELOW 2" SHALL BE P.V.C. RING TYPE JOINT - 200 P.S.I.

(SIDE NOTES) — CHLORINE SOLUTION LINE, P.V.C. - SCH. 80 SOLVENT WELD TYPE JOINT

— EFFLUENT WATER LINE TO SUPPLY CHLORINATOR: 200 P.S.I. P.V.C., RING TYPE JOINT

PAINTING AND PROTECTIVE COATING

THE FOLLOWING PAINTING AND COATING SPECIFICATIONS SHALL APPLY FOR ALL PROPOSED FACILITIES ON THE EAST BANK PORTION OF VINCE BAYOU TREATMENT PLANT TOGETHER WITH REMAINING FACILITIES WITH THE EXCEPTION OF THE SLUDGE THICKENER.

EXISTING AND PROPOSED METAL SURFACES EXPOSED TO AIR, INCLUDING PIPING, PUMPS, PIPE SUPPORTS AND ELECTRICAL PANELS, SHALL BE THOROUGHLY CLEANED AND PAINTED WITH U.S. PAINT CO. NO. 305 OR EQUAL OLIVE GREEN EPOXY ENAMEL PAINT TO A DRY FILM THICKNESS OF 4 MILS.

ALL EXISTING BUILDINGS, WOOD OR CONCRETE TILE CONSTRUCTION SHALL BE PAINTED IN ACCORDANCE WITH TECHNICAL PROVISIONS [illegible] PAINTING. THE COLOR SHALL BE SELECTED BY THE OWNER.

ALL STEEL FABRICATED ITEMS SHALL BE THOROUGHLY CLEANSED USING A POWER WIRE BRUSH IN REMOVING WELD SPLATTER AND FLUX. SURFACES SHALL BE WASHED WITH EPOXY THINNER THEN PRIMED WITH A PRIMER COMPATIBLE WITH BOTH COAL TAR EPOXY AND EPOXY ENAMEL PAINT TO A DRY FILM THICKNESS OF 4 MILS. APPLY U.S. PAINT CO. NO. 305 OR EQUAL OLIVE GREEN EPOXY ENAMEL PAINT TO A DRY FILM THICKNESS OF 4 MILS. STEEL SURFACES, PIPES OR PLATES, UNDERGROUND OR IN CONTACT WITH SEWAGE SHALL BE COATED WITH COAL TAR EPOXY, 40% EPOXY RESIN, TO A DRY FILM THICKNESS OF 10 MILS.

CITY OF PASADENA
SEWAGE TREATMENT IMPROVEMENTS
PIPING, VALVES AND PAINTING

REVISIONS	Drawn	S.E.B.	Project Index Number	SHEET 2 OF 27 SHEETS
	Checked	W.P.C.	Date 28 APR 93	
	Approved	A.R.C.	Date	

JOHNSON ENGINEERS, INC.
CONSULTING ENGINEERS
PASADENA, TEXAS

W.P.C. TEX. 693 PROJECT NO. 15-6-65

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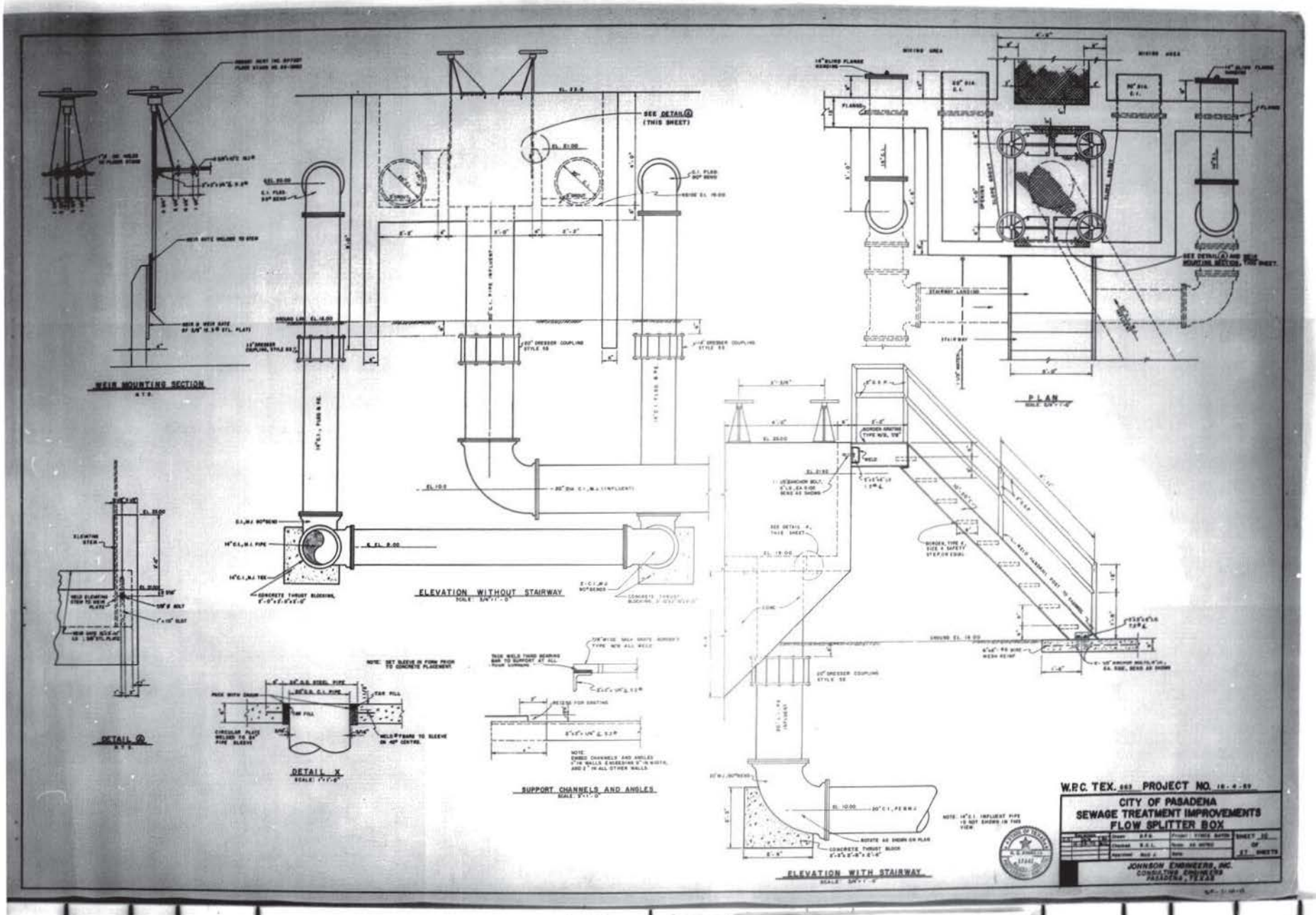

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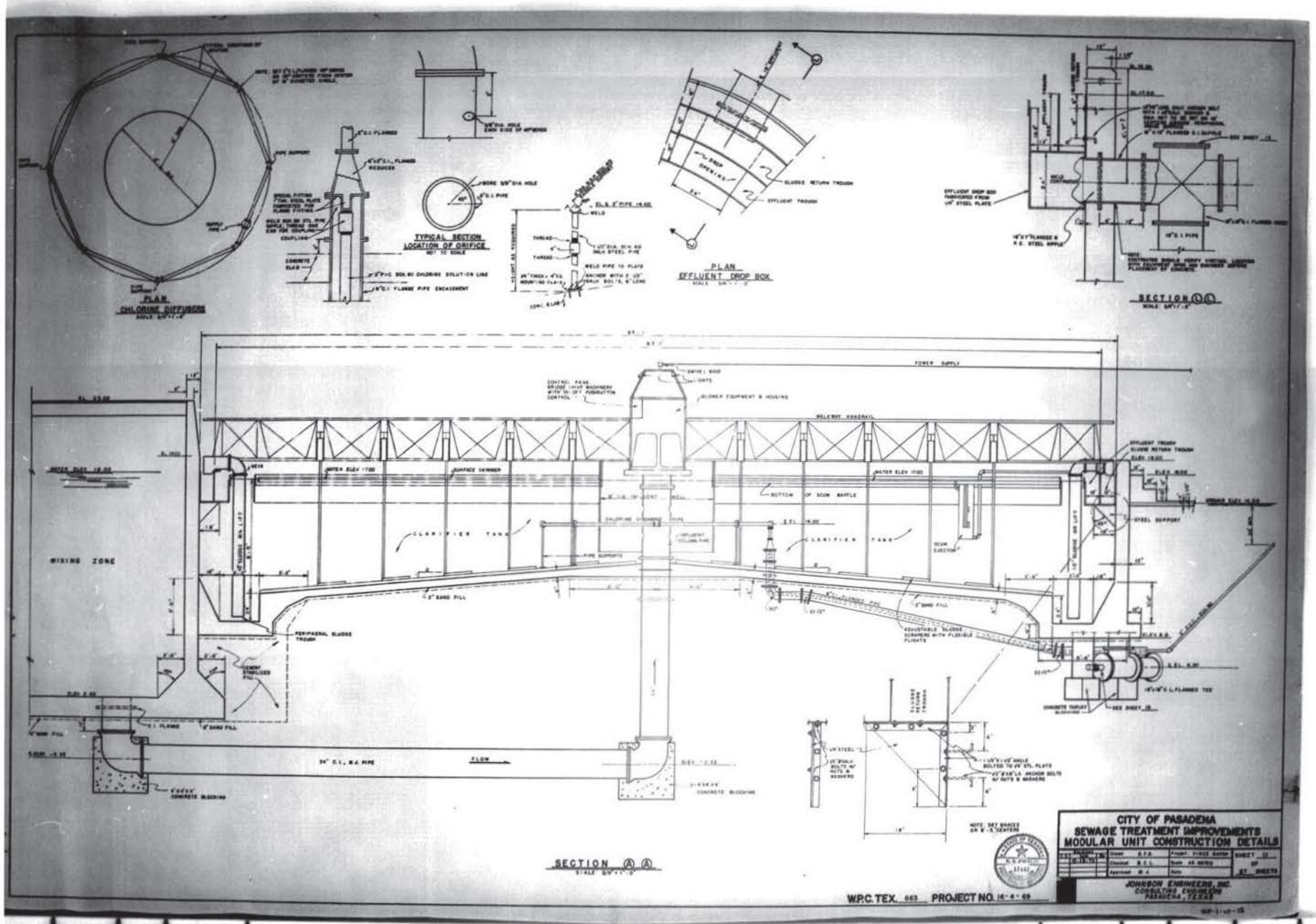

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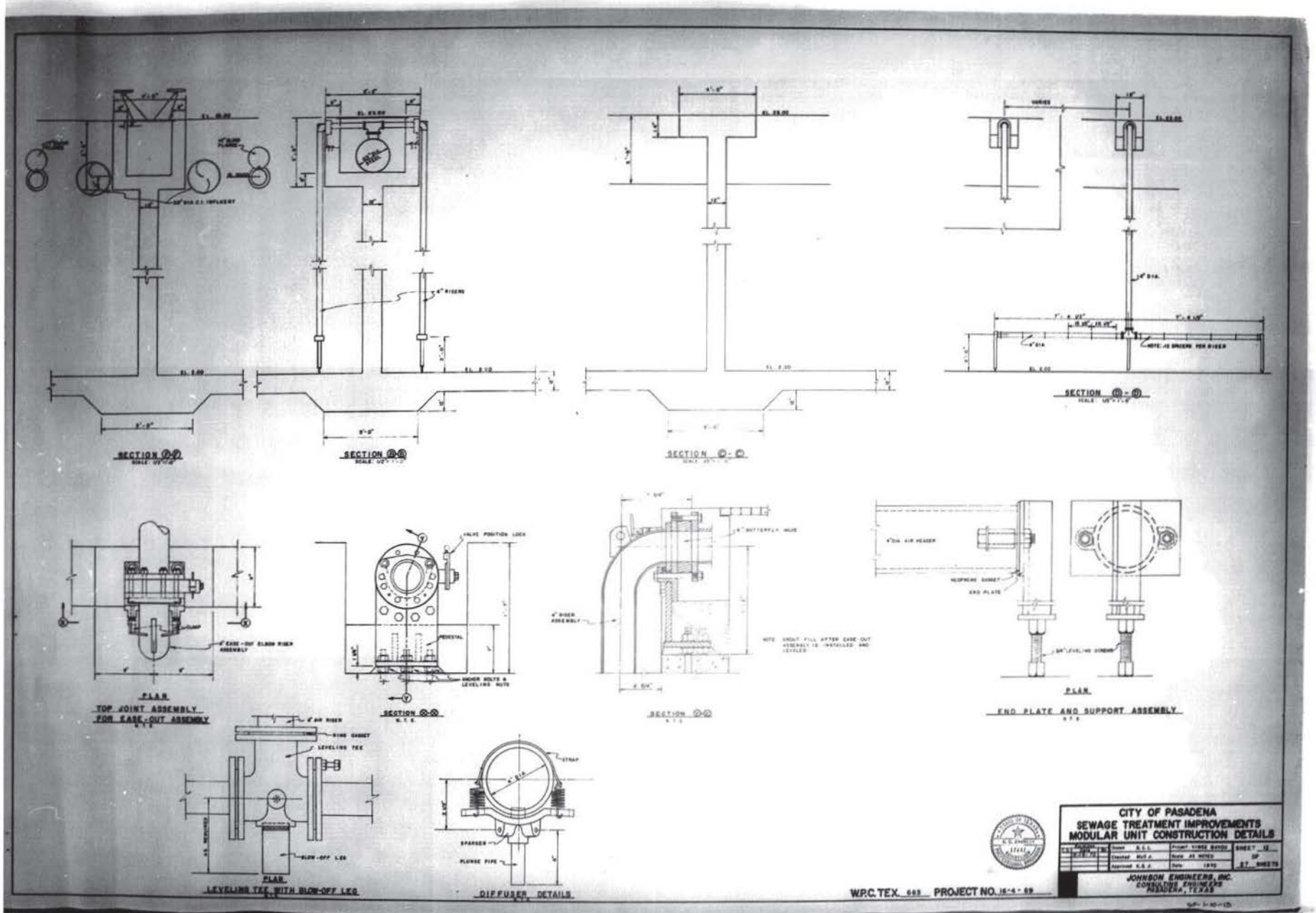

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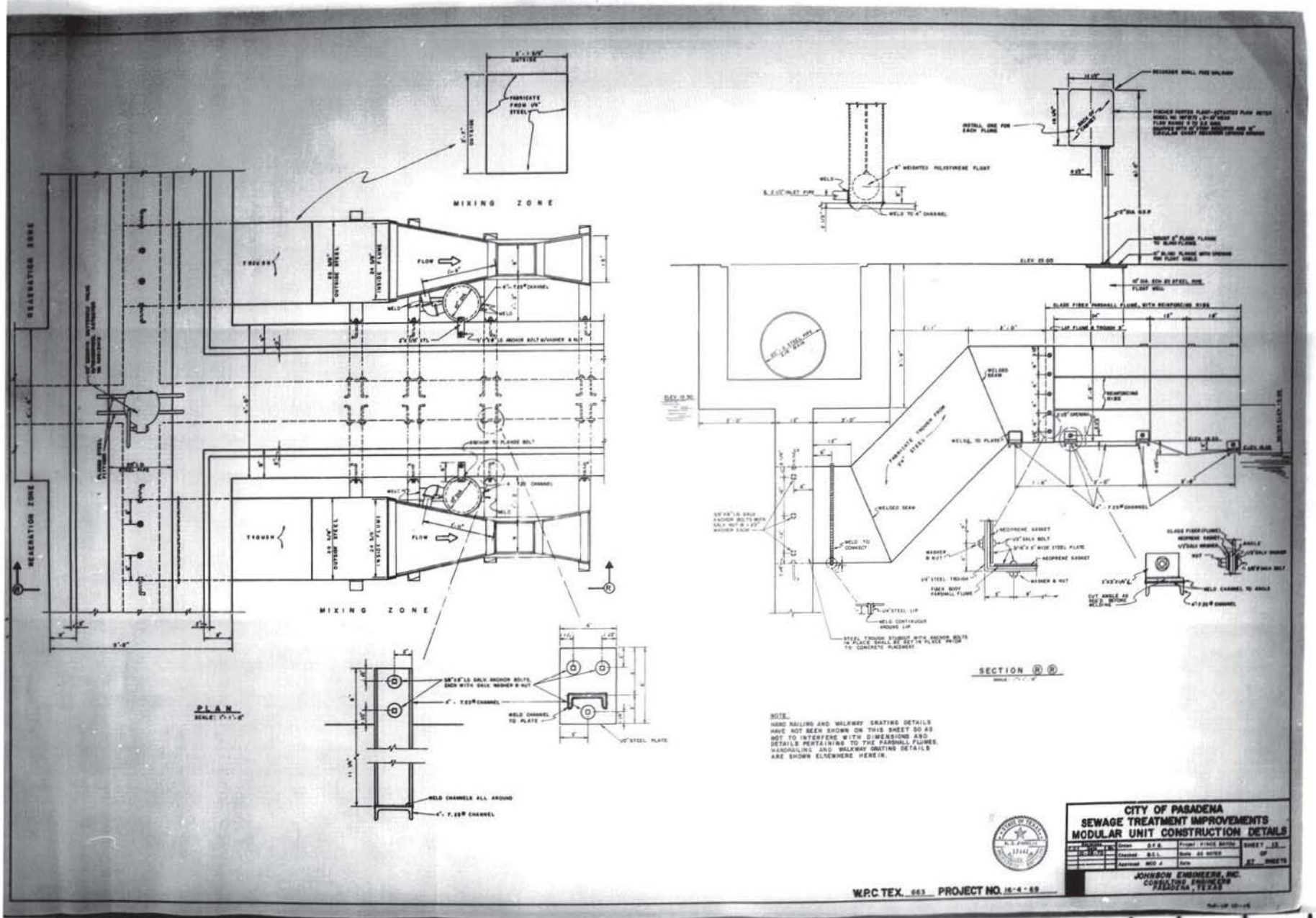

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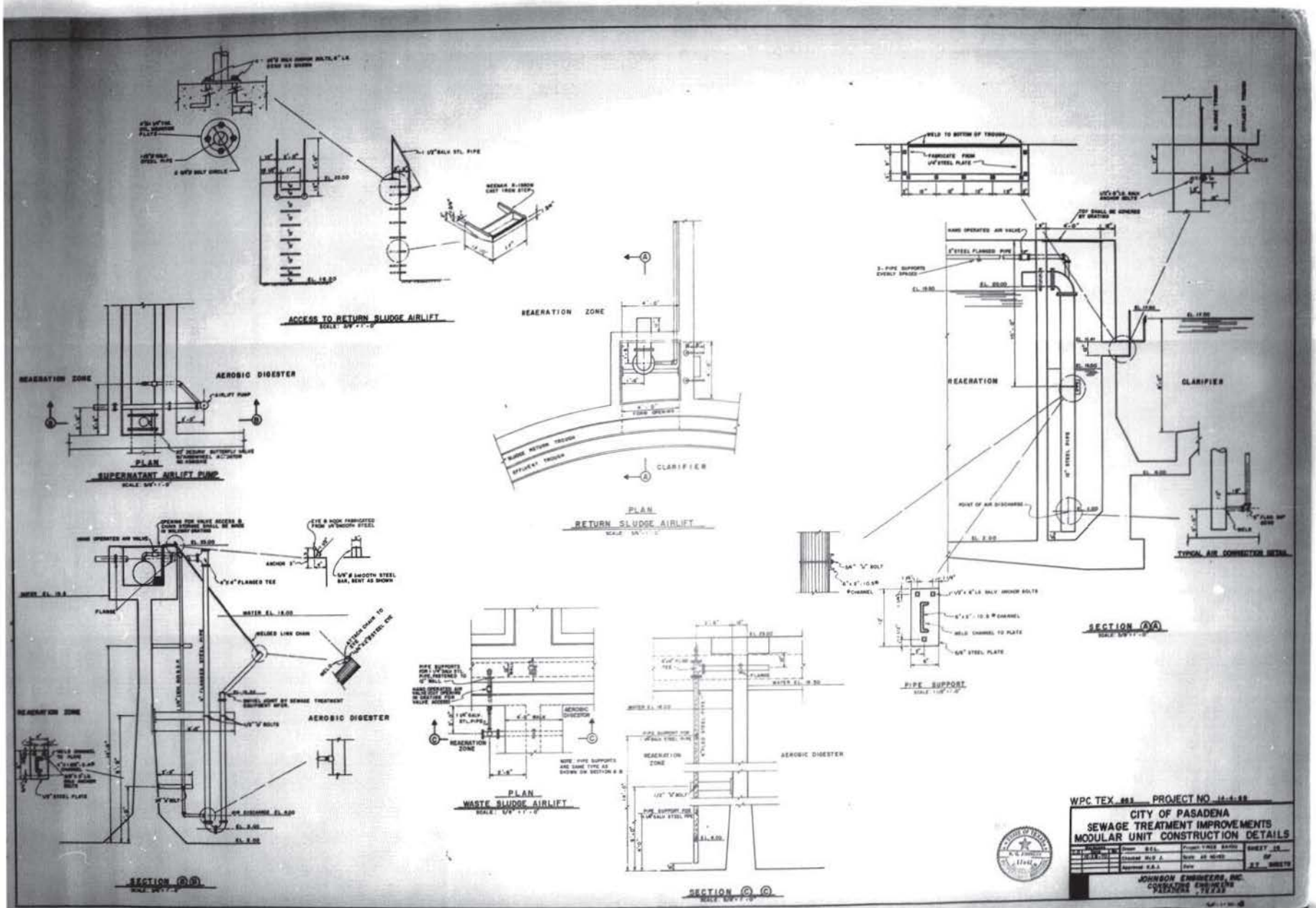

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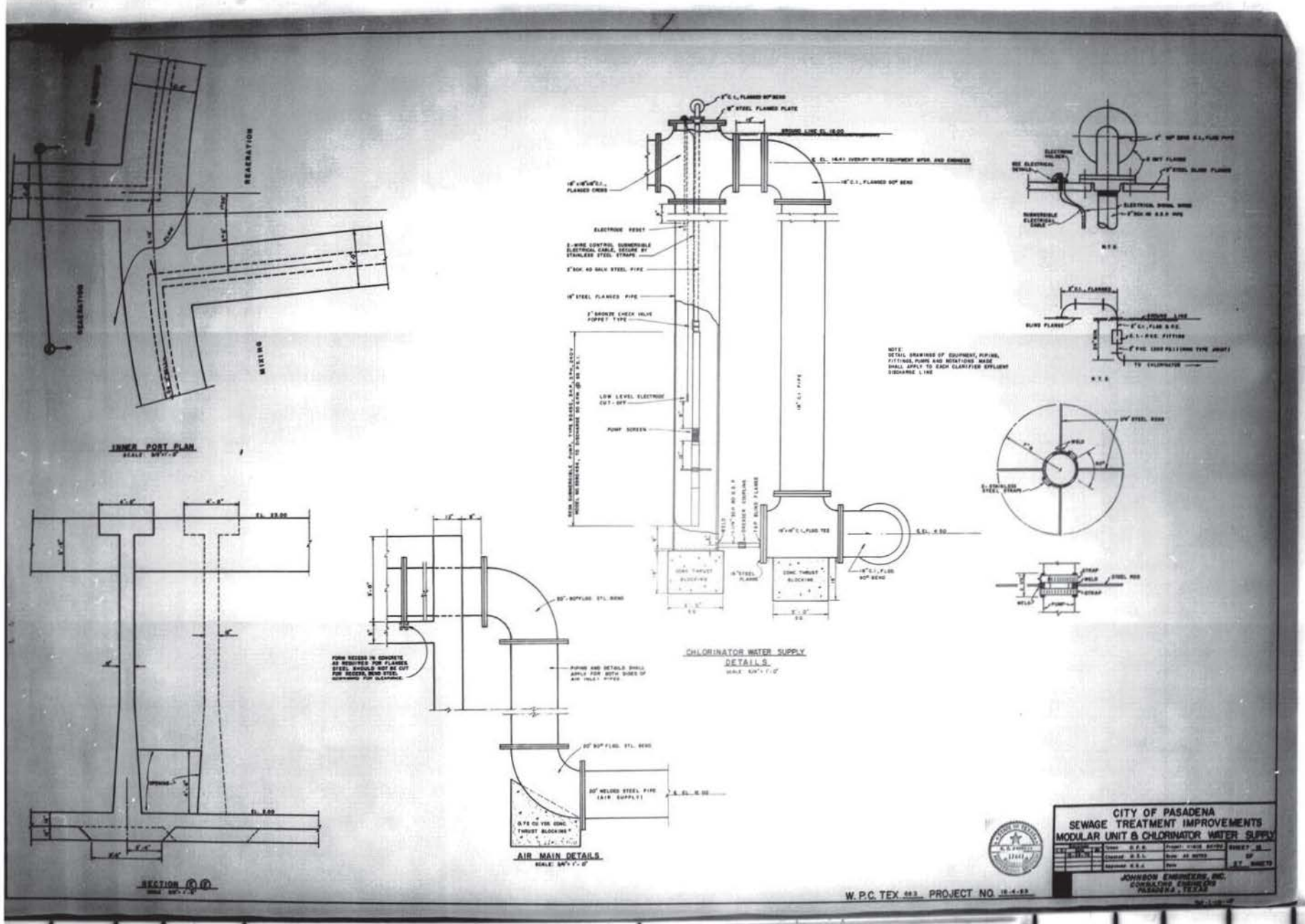

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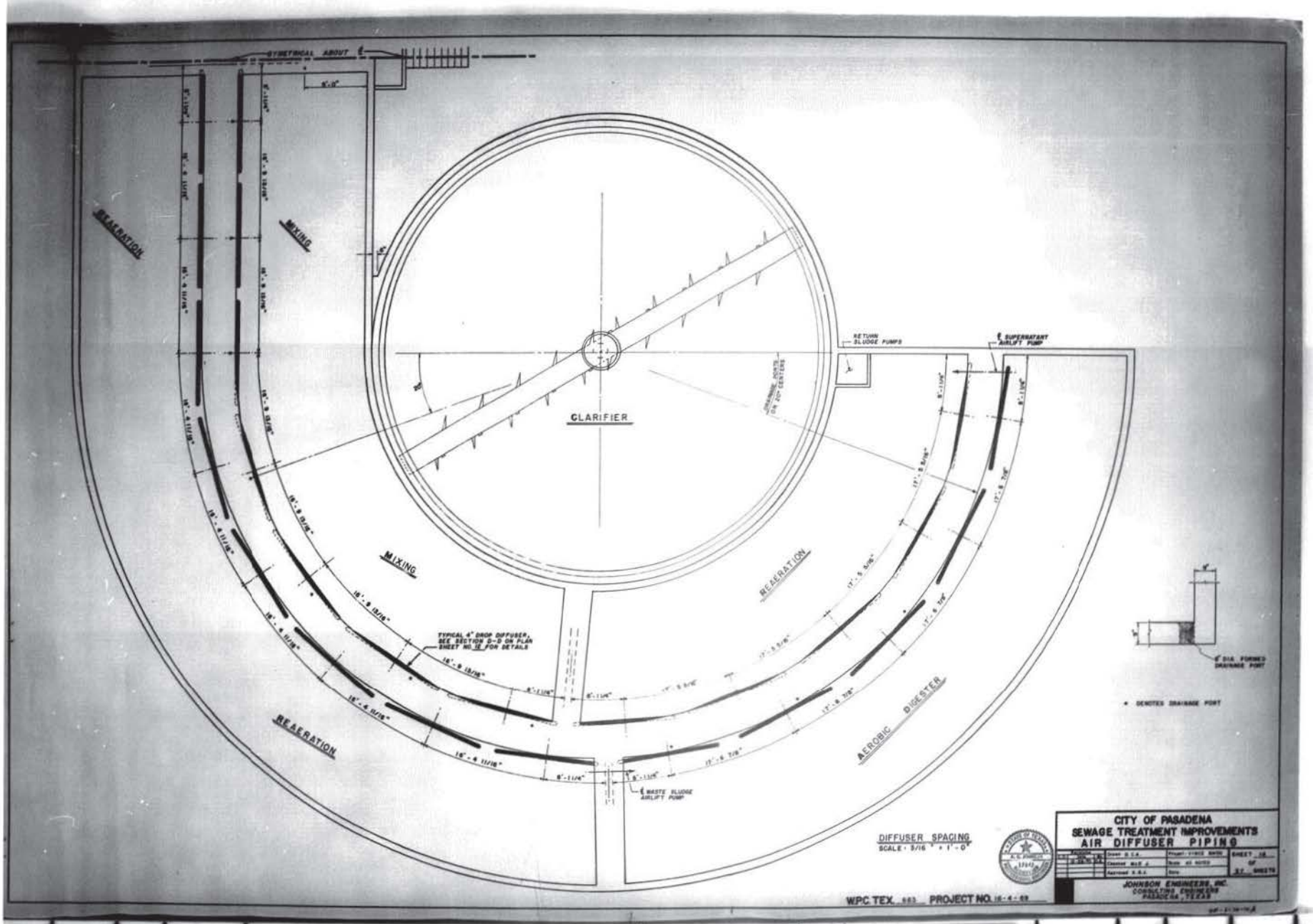

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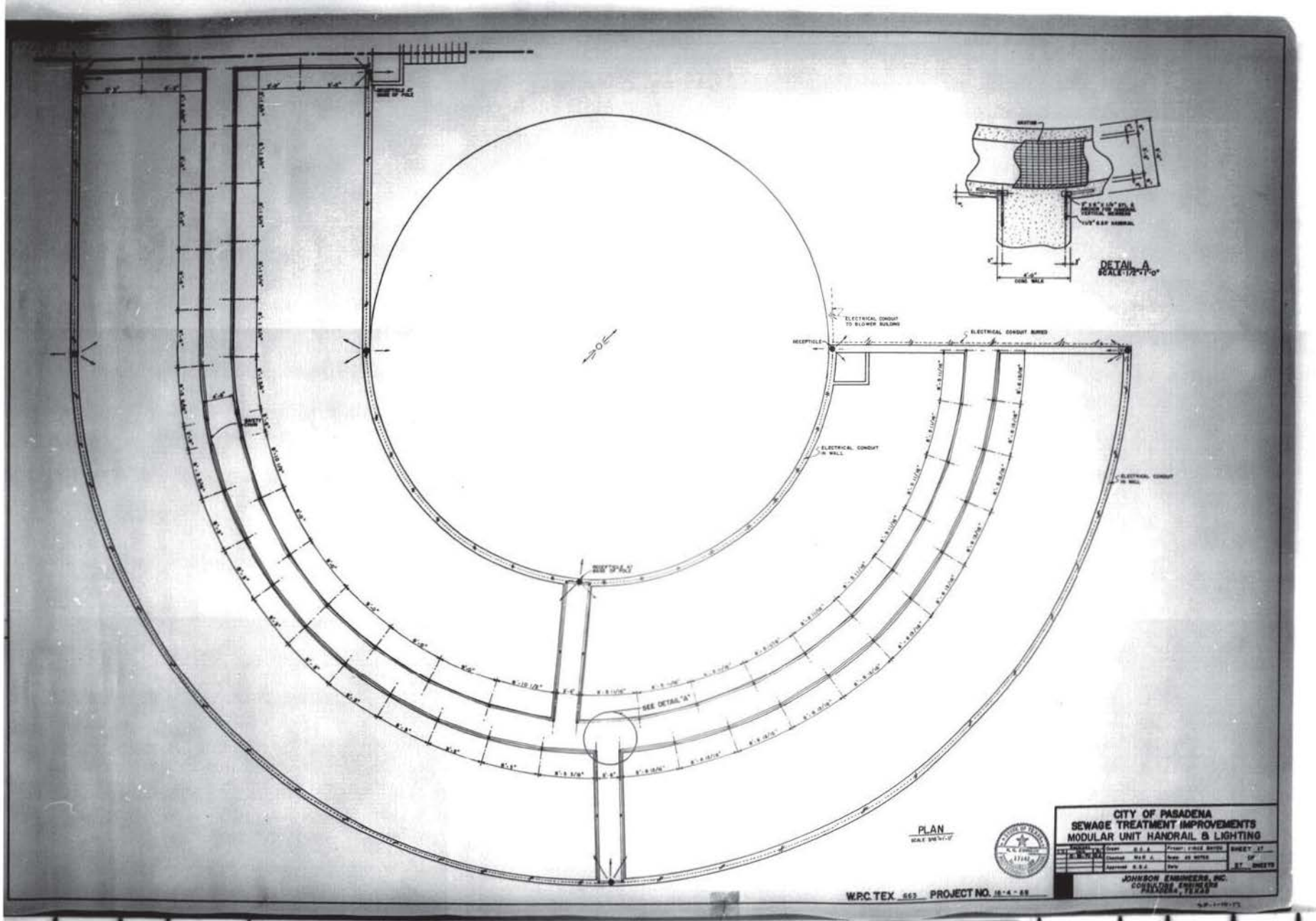

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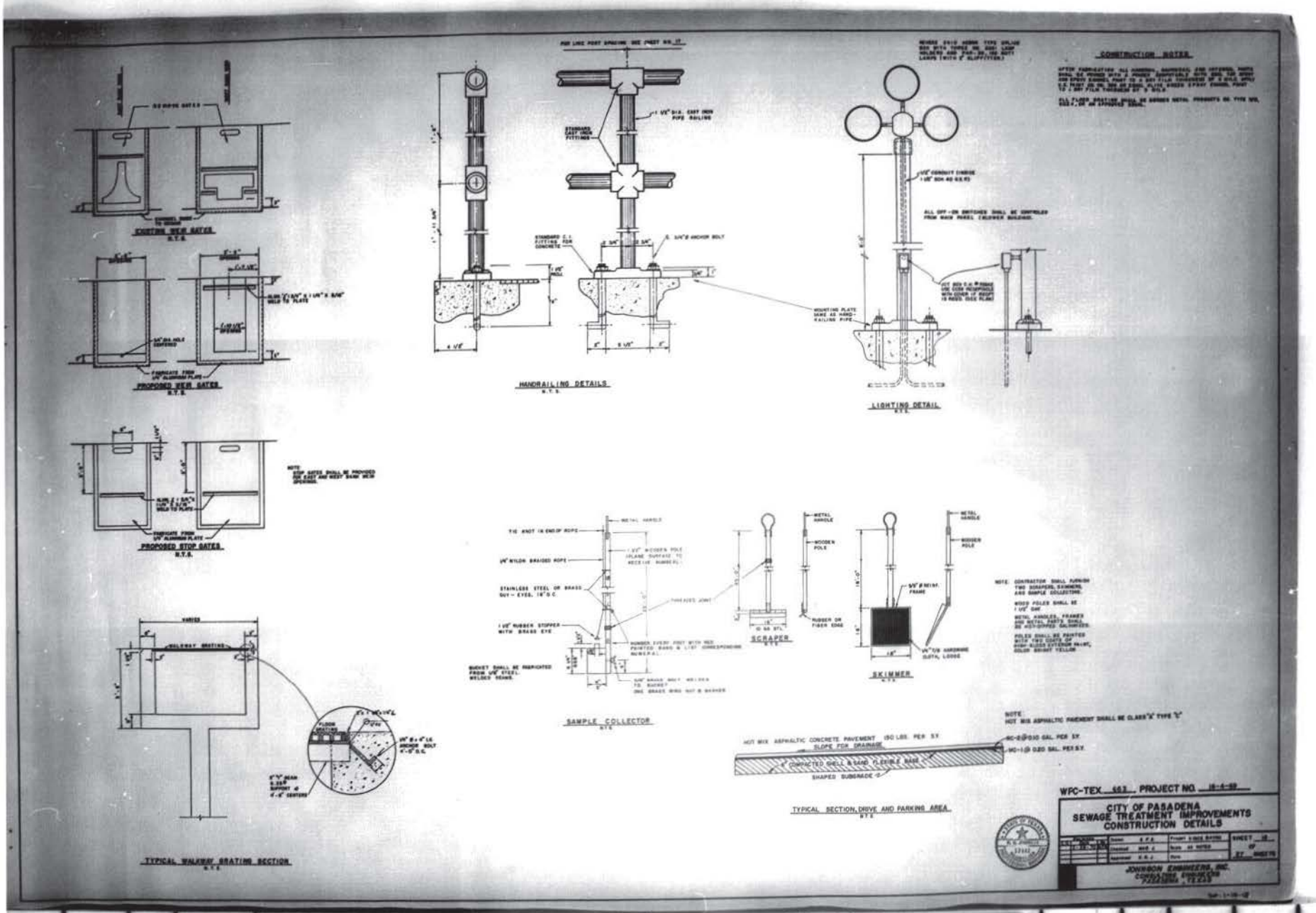

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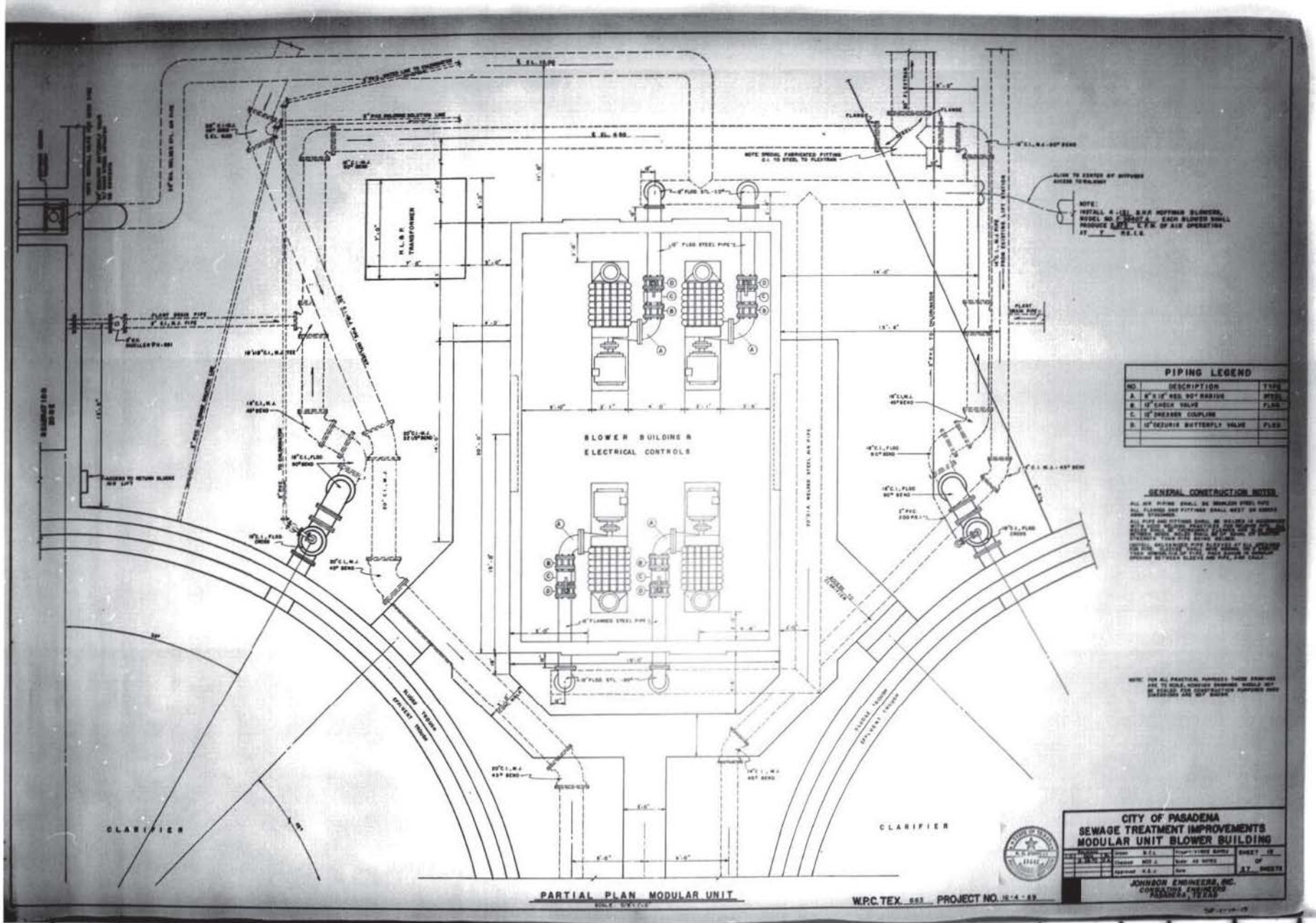

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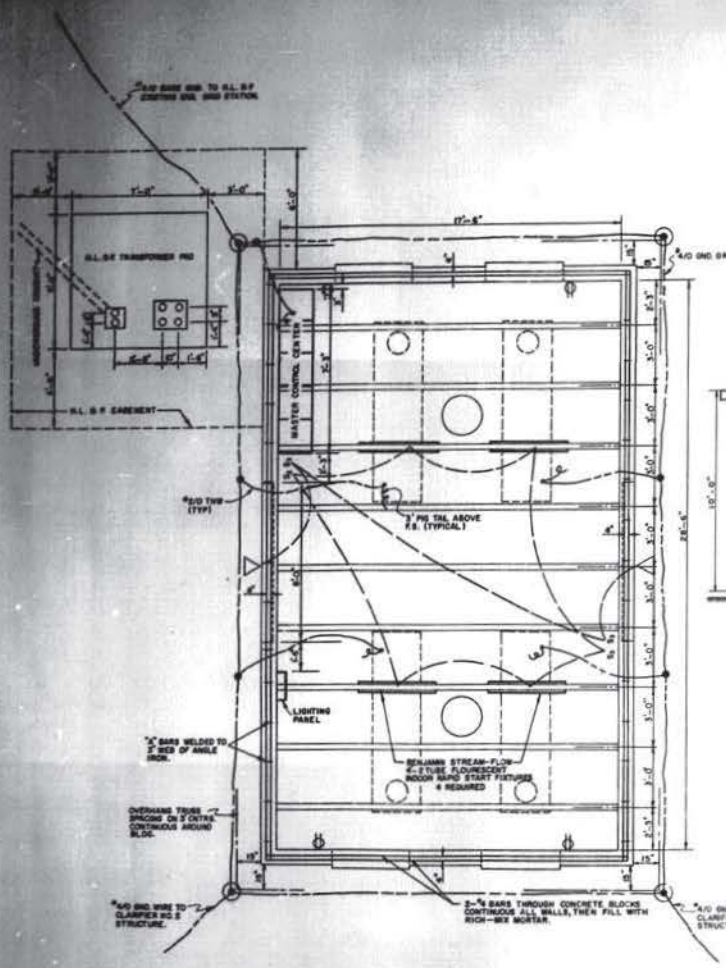
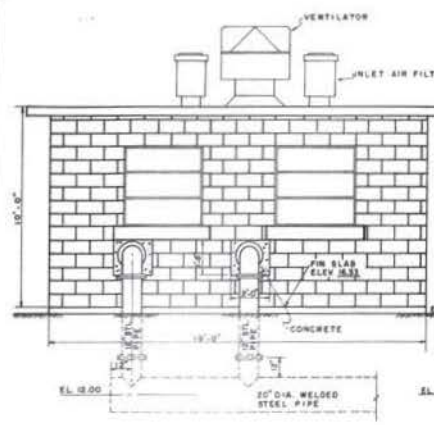


TRUSS SPACING PLAN & ELECTRICAL
SCALE 3/8"=1'-0"



FRONT ELEVATION
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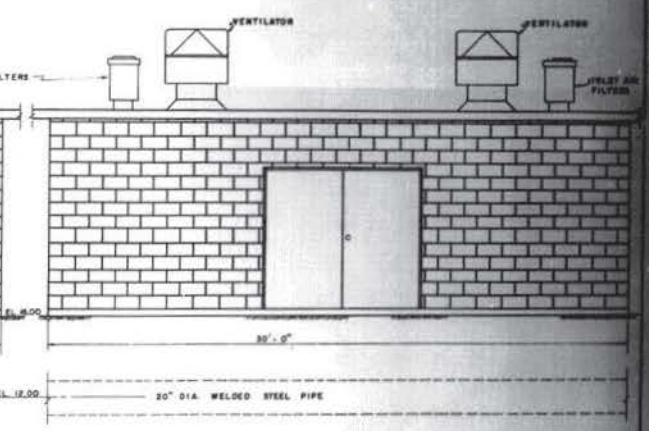

RIGHT ELEVATION
SCALE 3/8"=1'-0"

NOTE: FOR ALL PRACTICAL PURPOSES THESE DRAWINGS ARE TO "SCALE" BUT DRAWINGS SHOULD NOT BE SCALED FOR CONSTRUCTION PURPOSES WHEN DIMENSIONS ARE NOT SHOWN.

CITY OF PASADENA
SEWAGE TREATMENT IMPROVEMENTS
MODULAR UNIT BLOWER BUILDING

JOHNSON ENGINEERS, INC.
CONSULTING ENGINEERS
PASADENA, TEXAS

W.P.C. TEX. 663 PROJECT NO. 16-4-59

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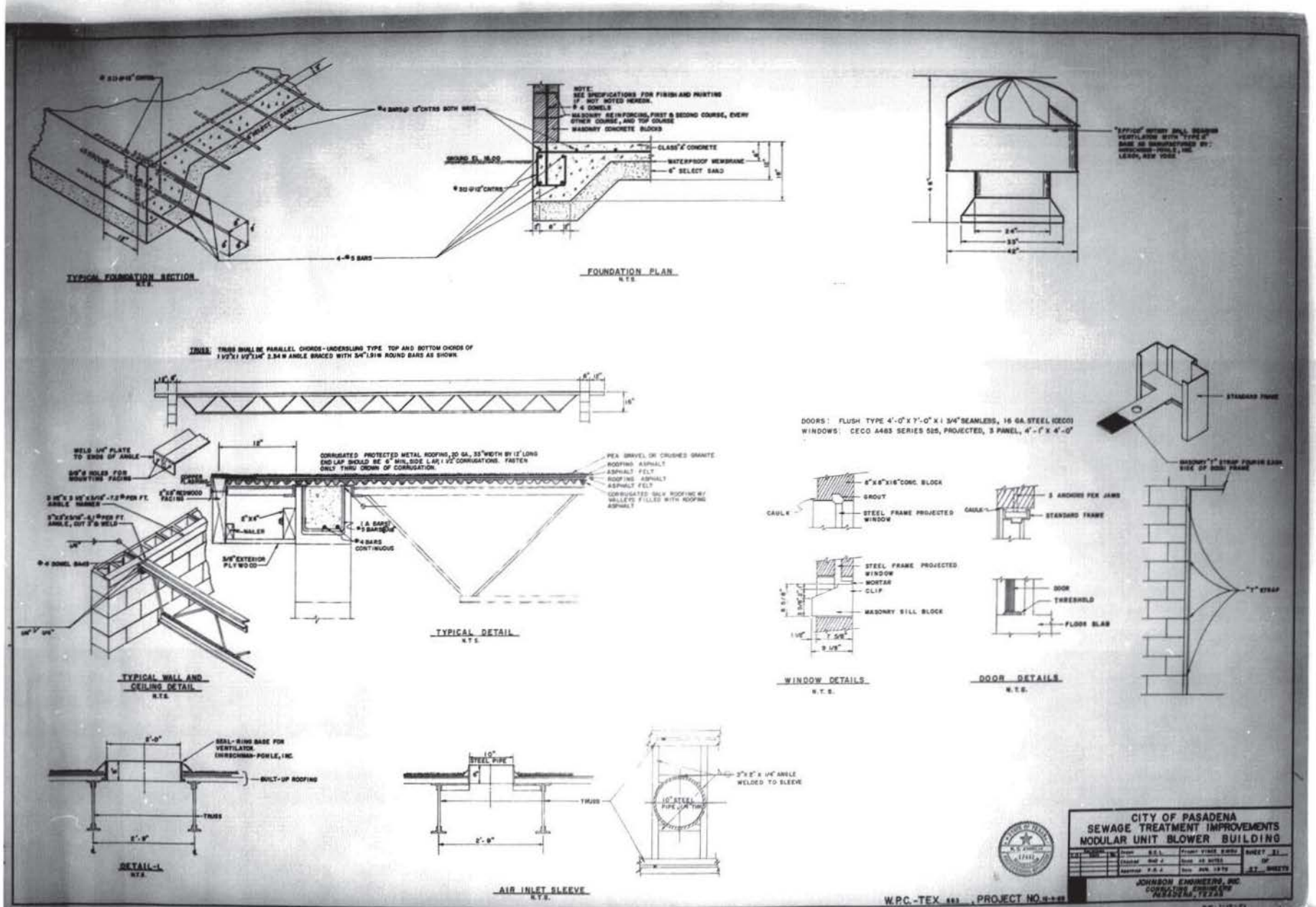

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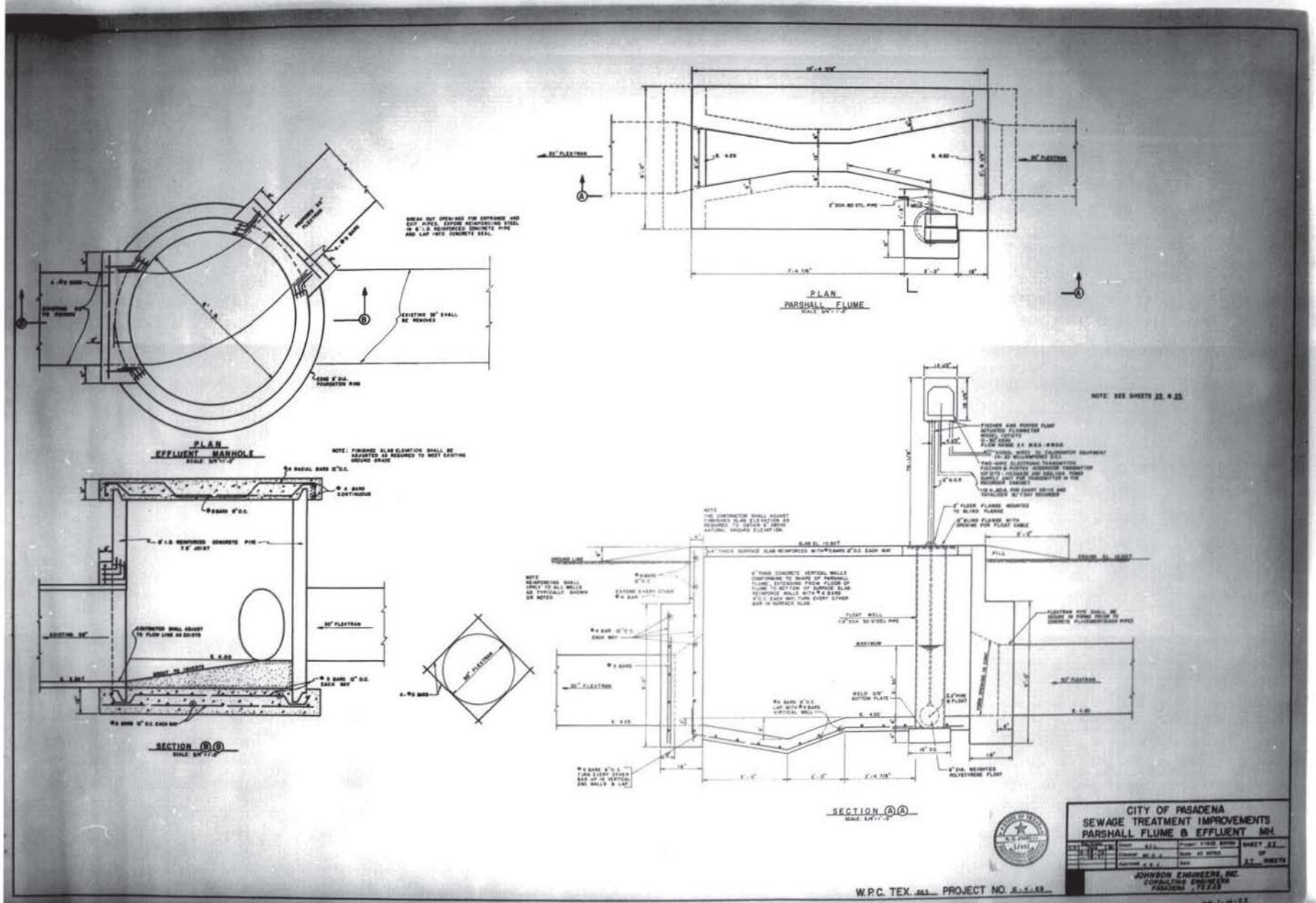

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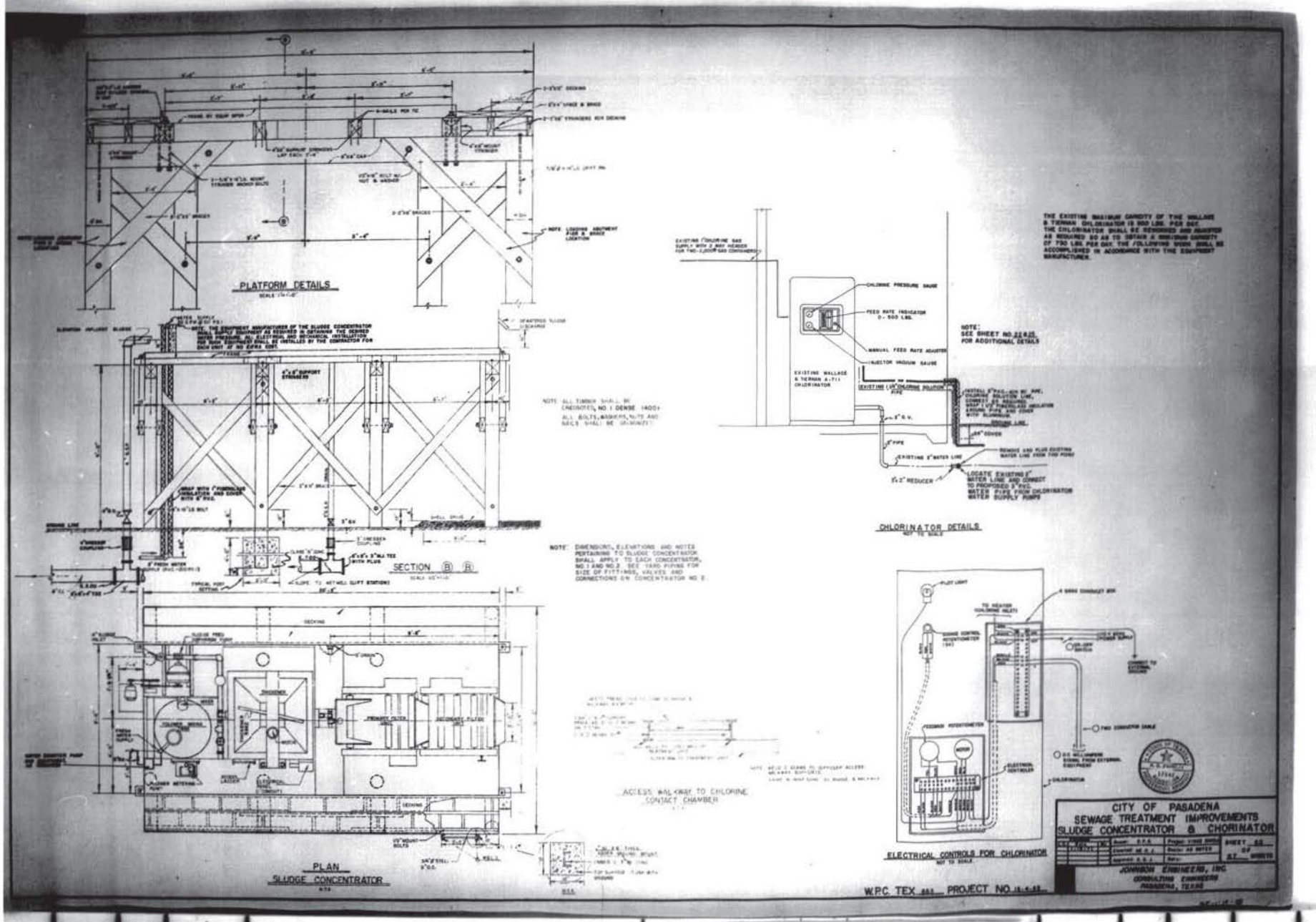

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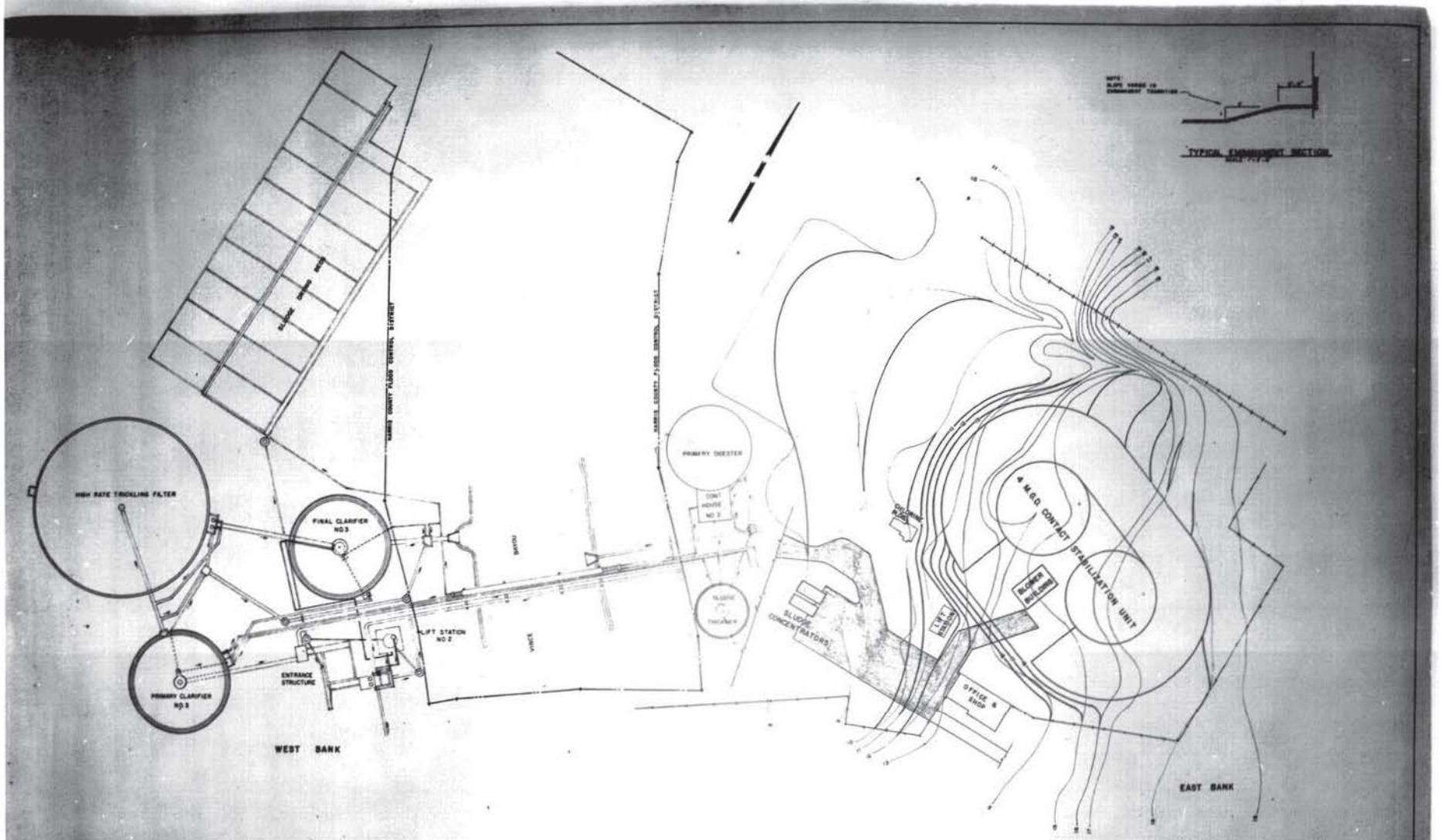

ALL EARTH EXPOSED DURING CONSTRUCTION SHALL HAVE THE FOLLOWING APPLICATIONS OF SEED AND FERTILIZER.

SEED	LBS./ACRE
[illegible]	20
[illegible]	30
FERTILIZER	
N	40
P	20
K	20

TOPSOIL STRIPPED IN PREPARATION OF EXCAVATION/EMBANKMENT SHALL BE STOCKPILED FOR USE IN PREPARING A SEED BED FOR THE GRASS.

GRADING PLAN

VINCE BAYOU SEWAGE TREATMENT PLANT

SCALE: 1" = 30'

W.P.C. TEX. [illegible] PROJECT NO. [illegible]

CITY OF PASADENA
SEWAGE TREATMENT IMPROVEMENTS
GRADING AND DRAINAGE

JOHNSON ENGINEERS, INC.
CONSULTING ENGINEERS
PASADENA, TEXAS

Thursday, Mar 25 1993

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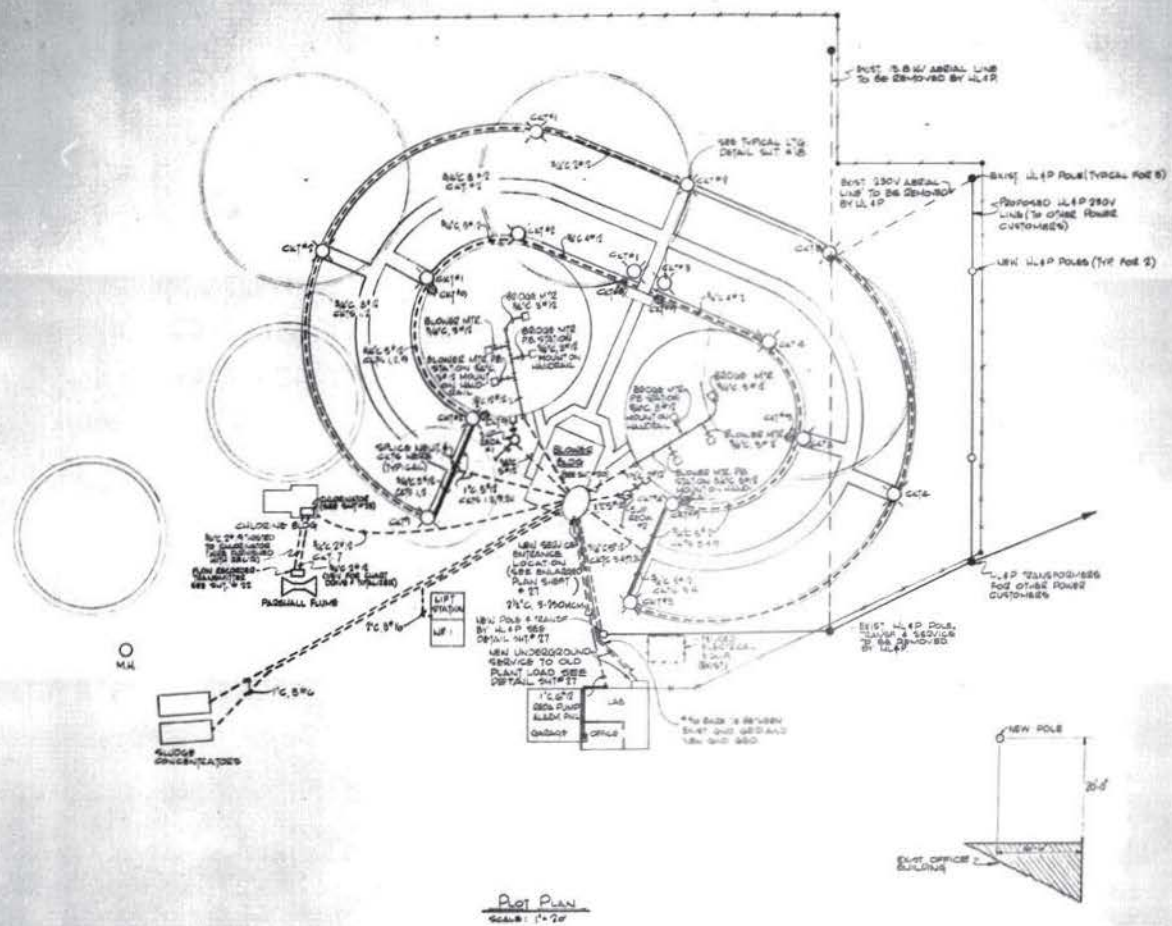

PLOT PLAN

SCALE: 1"=20'

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH NATIONAL ELECTRICAL CODE.
2. ALL CONDUIT INSTALLED ABOVE GROUND SHALL BE RIGID HOT DIP GALVANIZED. ALL FITTINGS, GROUND ENCLOSURES, ETC. SHALL BE CAST IRON OR CAST ALUMINUM.
3. ALL EXPOSED CONDUIT SHALL BE SUPPORTED TO PROVIDE JOINTS ON BUILDING WALLS AND FOR SHORT LENGTHS OVER INTERMITTENT OBSTRUCTIONS. IN INSTANCES WHERE IT MAY BE DIFFICULT TO INSTALL FLEXIBLE CONDUIT FOR A MINIMUM DISTANCE OF 6".
4. ALL UNDERGROUND CONDUIT SHALL BE GALVANIZED RIGID STEEL ENCASED WITH A MINIMUM THICKNESS OF 3" OF DRY CONCRETE. ALL STEEL CONDUIT FOR DRY AIR LIGHT SHAFT SHALL BE SWABBED OR BLOWN OUT WITH COMPRESSED AIR TO REMOVE THEM AND PRESS OF DIRT. CONDUITS ARE CAPPED AND THEN CAPPED AT EACH TERMINATION.
5. LIGHTING PANELS AND OTHER EQUIPMENT ENCLOSURES LOCATED INSIDE BUILDINGS SHALL BE NEMA-1 TYPE WITH ALL METAL SURFACES PAINTED WITH HIGH-QUALITY ENAMEL PAINT. LIGHTING PANELS SHALL BE 1-1/2 TYPE MADE WITH BOLT-ON BRANCHES ARRANGED AS SHOWN ON PANEL SCHEDULE.
6. DISTRIBUTION EQUIPMENT AND MOTOR CONTROL CENTERS LOCATED OUTDOORS SHALL HAVE NEMA-3R ENCLOSURES WITH ALL METAL SURFACES PAINTED WITH HIGH-QUALITY ENAMEL PAINT. LIGHTING PANELS WITH THESE ENCLOSURES SHALL BE 1-1/2 TYPE MADE WITH BOLT-ON BRANCHES. DISTRIBUTION CIRCUIT BRANCHES SHALL BE 1-1/2 OF FRAME SIZES AND TRIP RATINGS AS SHOWN.
7. ALL WIRE USED SHALL BE OF THE SIZE REQUIRED AND SHALL BE STRANDED COPPER, SINGLE CONDUCTOR, WITH NON-NYLON TYPE PVC INSULATION. MINIMUM WIRE SIZE TO BE #12. ALL CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND NO SPLICES SHALL BE MADE EXCEPT AT OUTLETS OR JUNCTION BOXES. ALL SPLICES SHALL BE MADE WITH APPROVED MECHANICAL CONNECTORS. SPLICES AND TAPS SHALL BE INSULATED WITH RUBBER OR PLASTIC TAPE. WIRING SYSTEMS SHALL BE POTTED COLD-COOKED THERMOSET.
8. GROUND CODE SHALL BE PROVIDED AT EACH MAJOR PIECE OF ELECTRICAL EQUIPMENT AND INTERCONNECTED WITH A TOTAL BARE STRANDED COPPER WIRE. ALL BUILDING STEEL SHALL ALSO BE CONNECTED TO THE GROUND SYSTEM. ALL DISTRIBUTION EQUIPMENT AND MOTOR CENTERS SHALL BE PROVIDED WITH A GROUND BUS. GROUNDING TYPE CONDUIT CONNECTORS SHALL BE USED AT ELECTRICAL ENCLOSURES.
9. ALL RECEPTACLES SHALL BE #5-15R 3-PRONG TYPE HUBBELL NR5352 OR EQUAL. OUTDOOR RECEPTACLES SHALL BE PROVIDED WITH SPRING LOADED WEATHERPROOF COVERS.
10. DEFINITE CONTRACTUAL ARRANGEMENTS ARE TO BE MADE WITH LOCATION LIGHTING AND POWER CO. FOR SERVICE FROM EXISTING POLE. CONTACT ULEP COMMERCIAL SALES DEPARTMENT (626-7211) PRIOR TO SERVICE TO BE ARRANGED WITH ULEP.

CITY OF PASADENA
SEWAGE TREATMENT IMPROVEMENTS
ELECTRICAL PLAN

JOHNSON ENGINEERING, INC.
CONSULTING ENGINEERS
PASADENA, TEXAS

W.P.C. TEX. 553. PROJECT NO. 6-1-88

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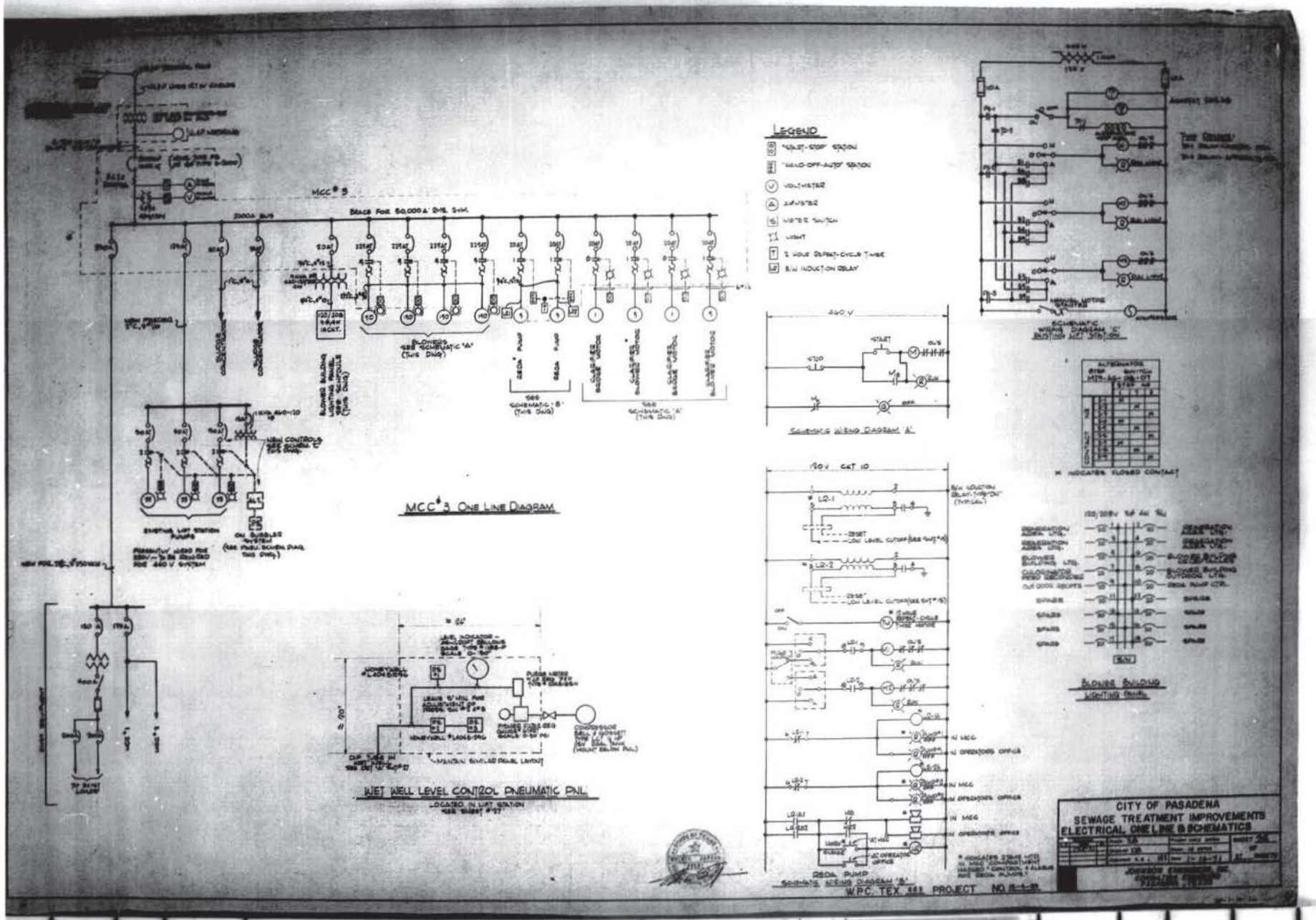

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