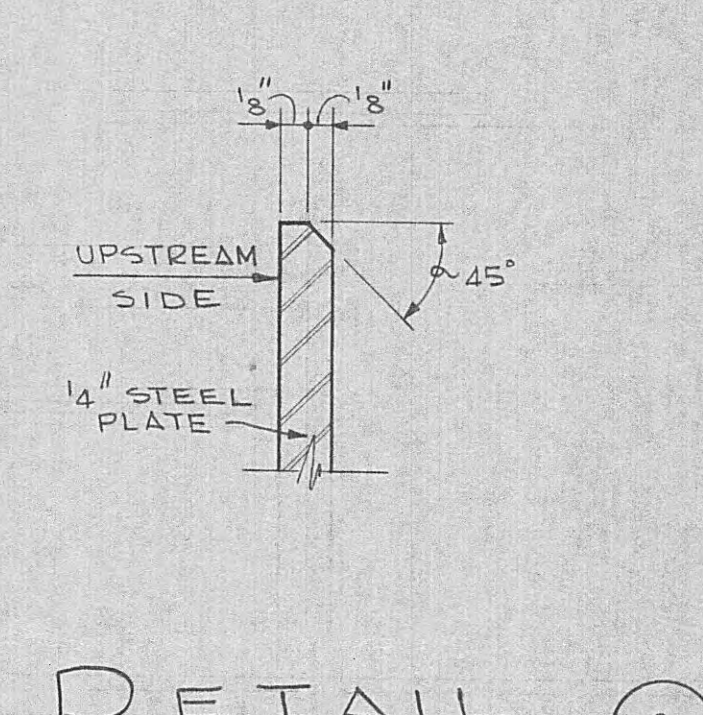
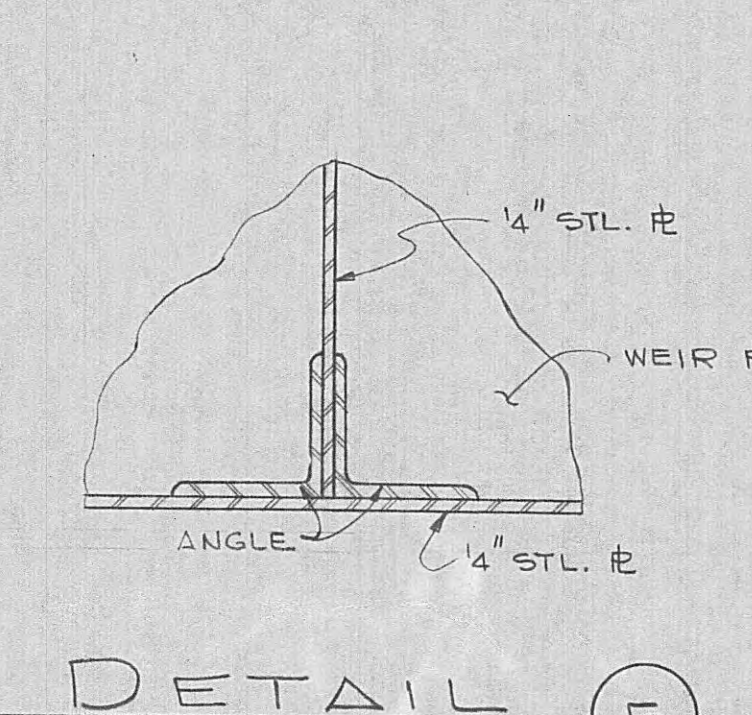
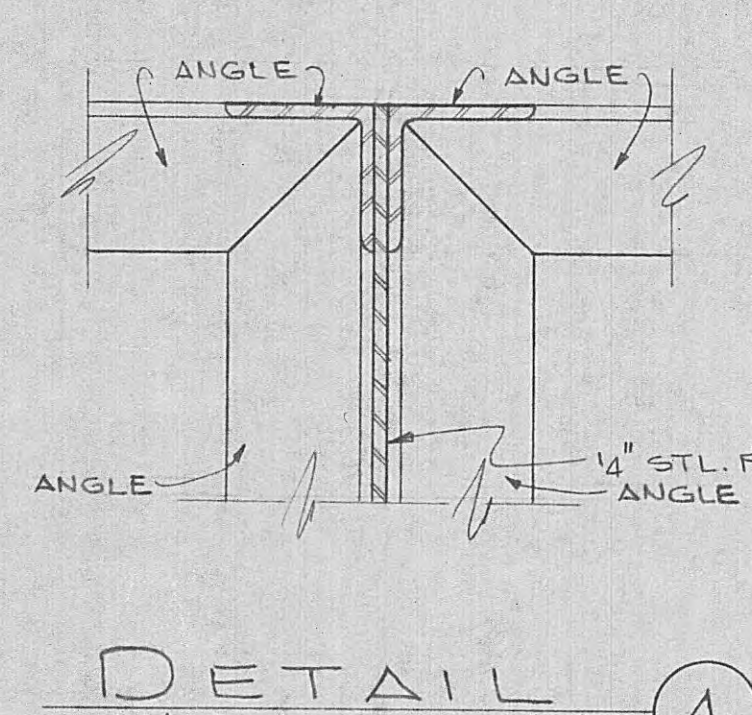
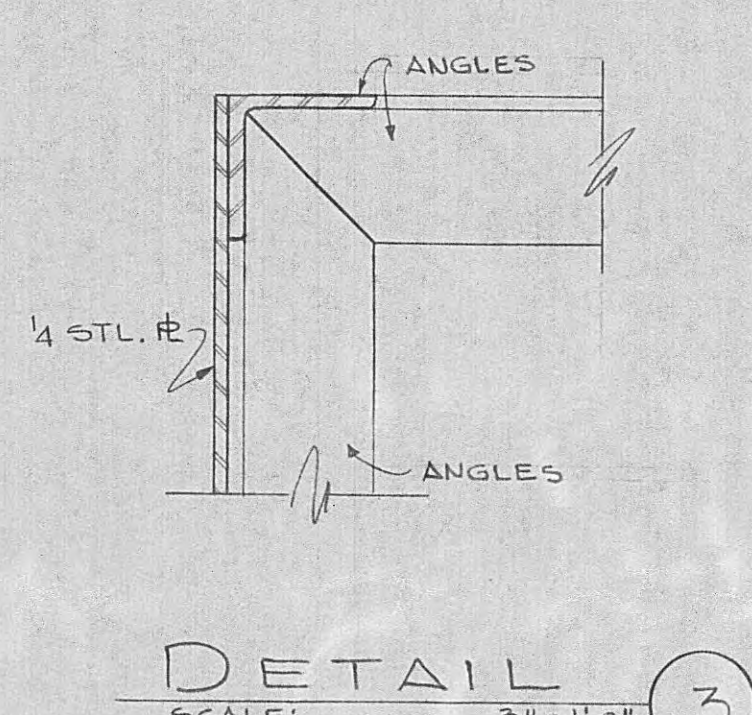
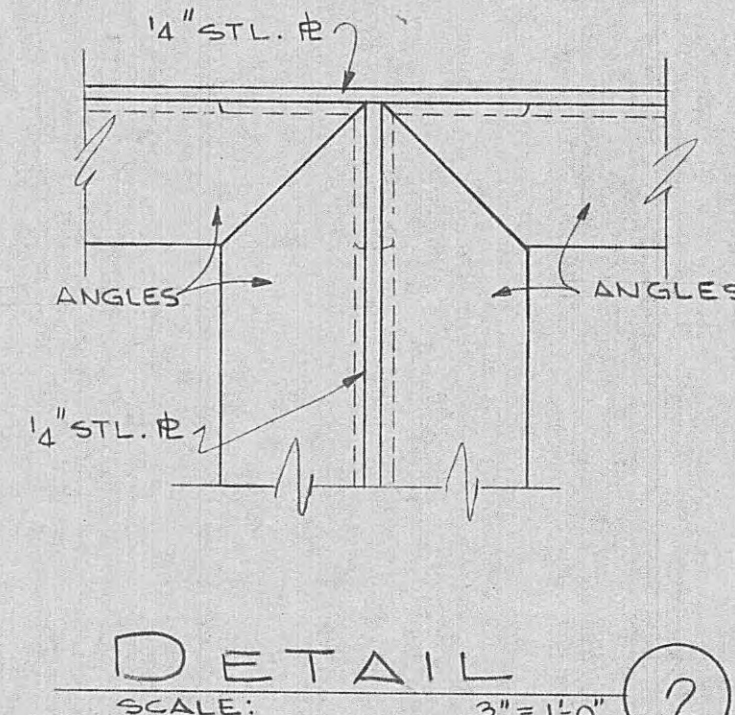
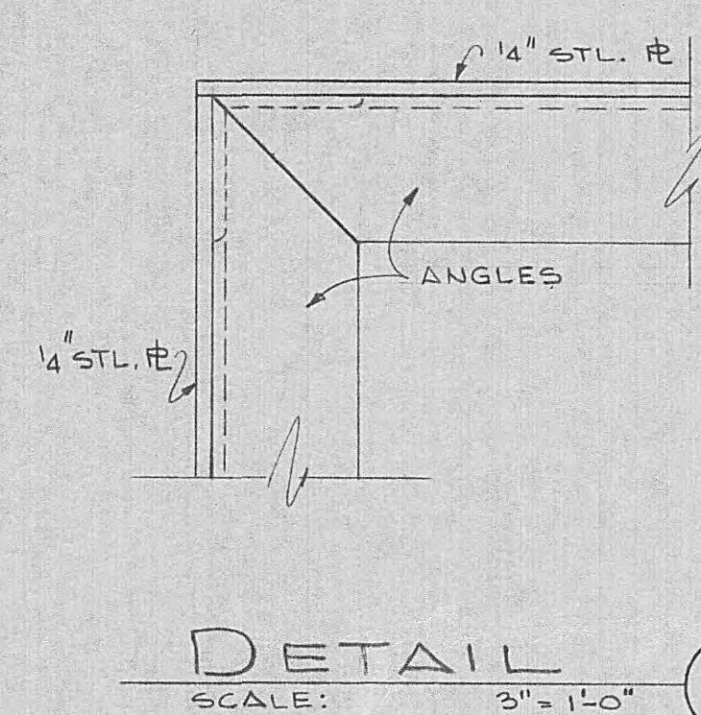
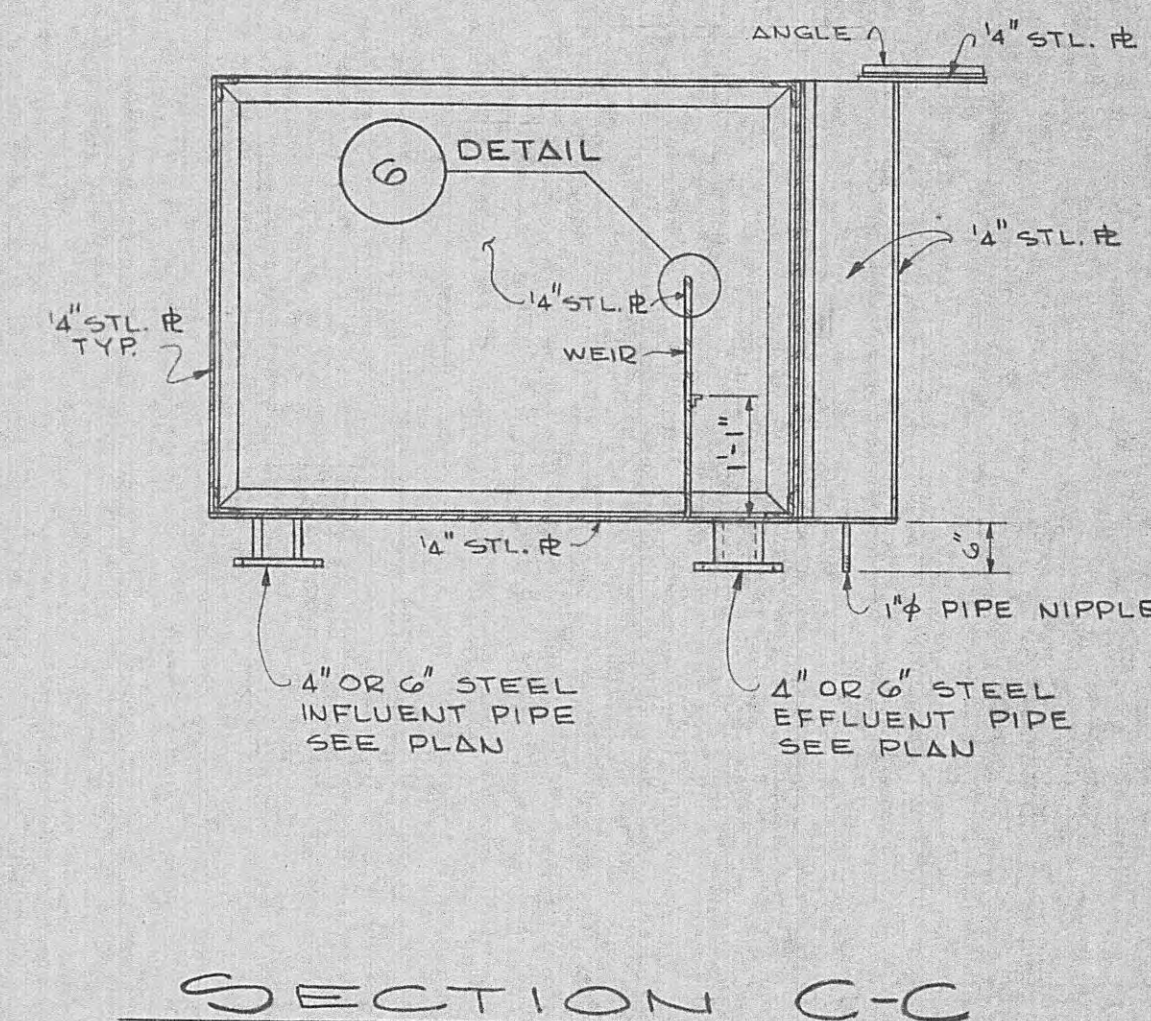
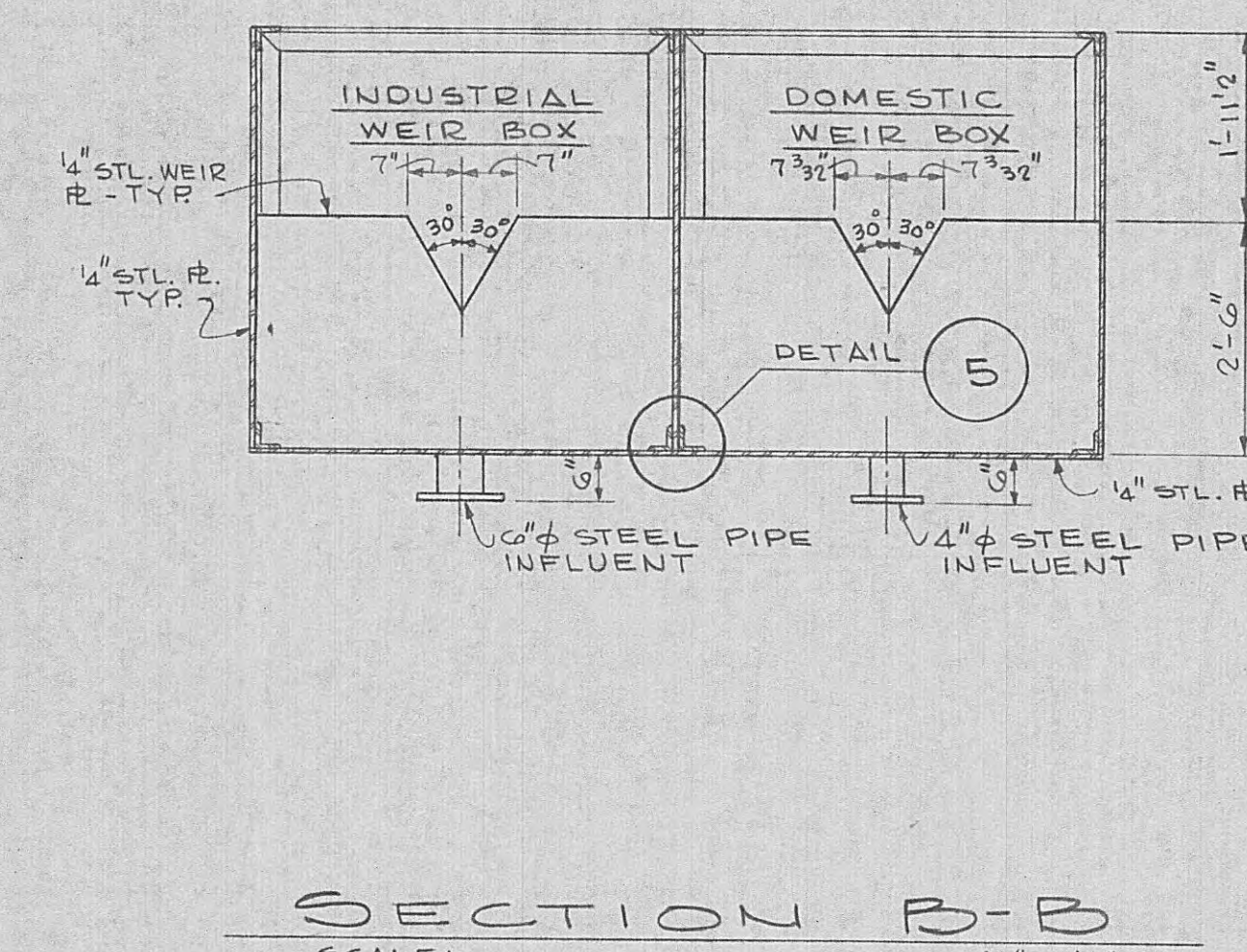
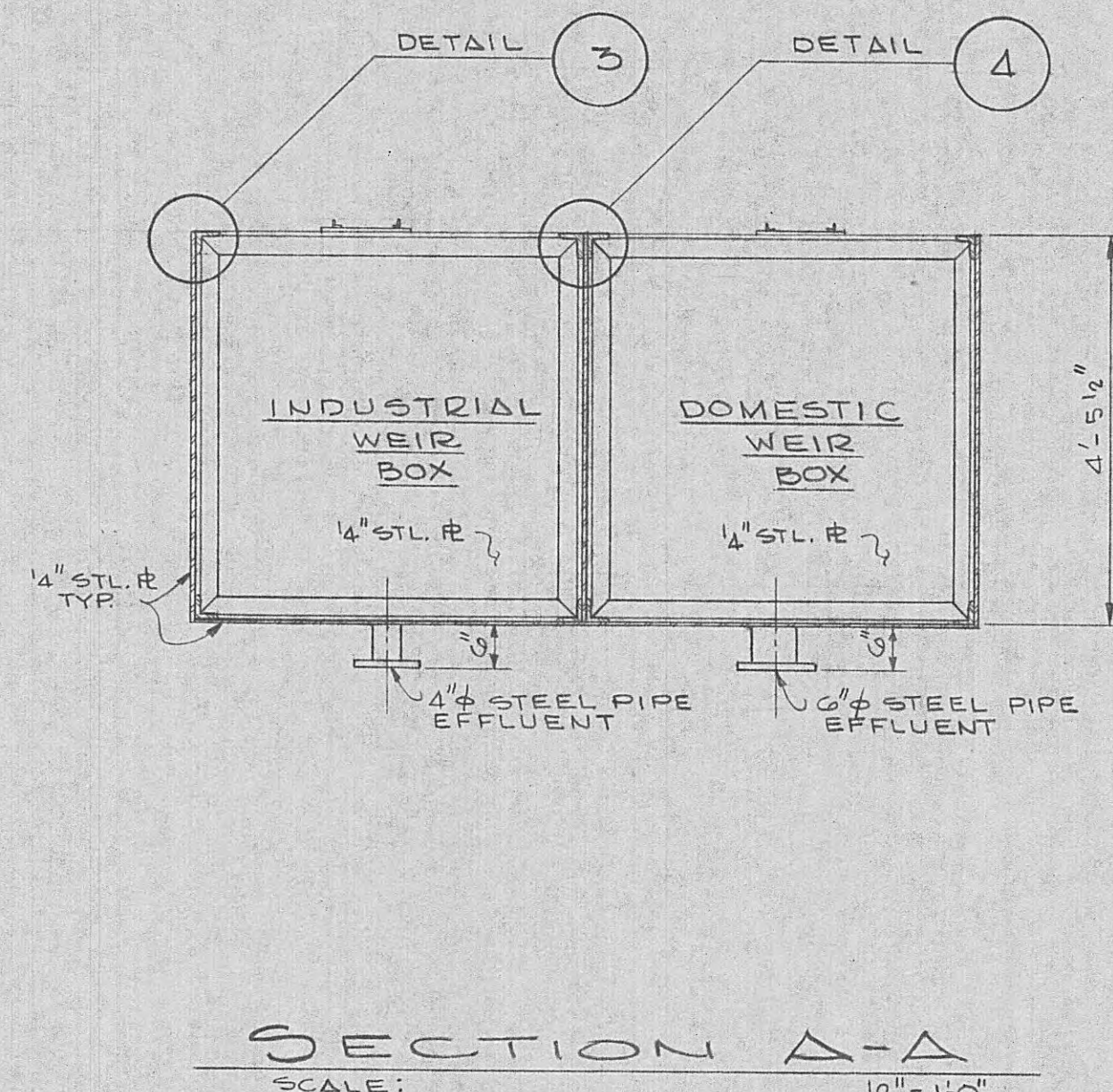
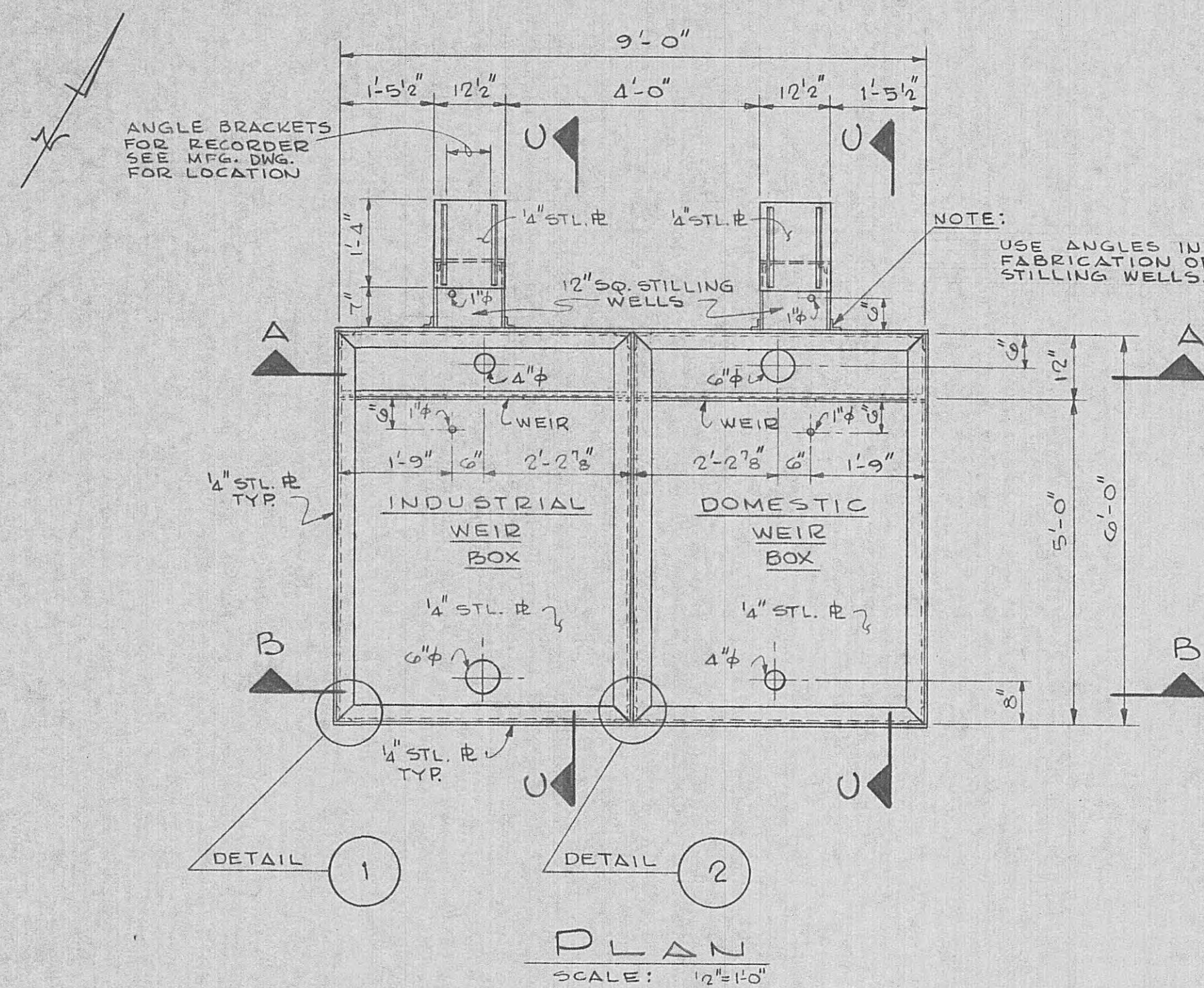
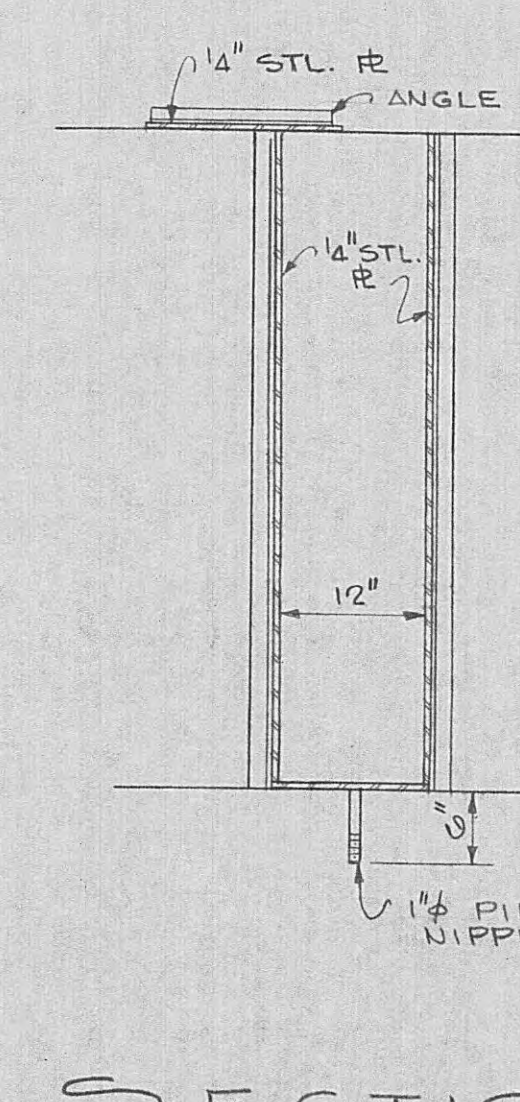
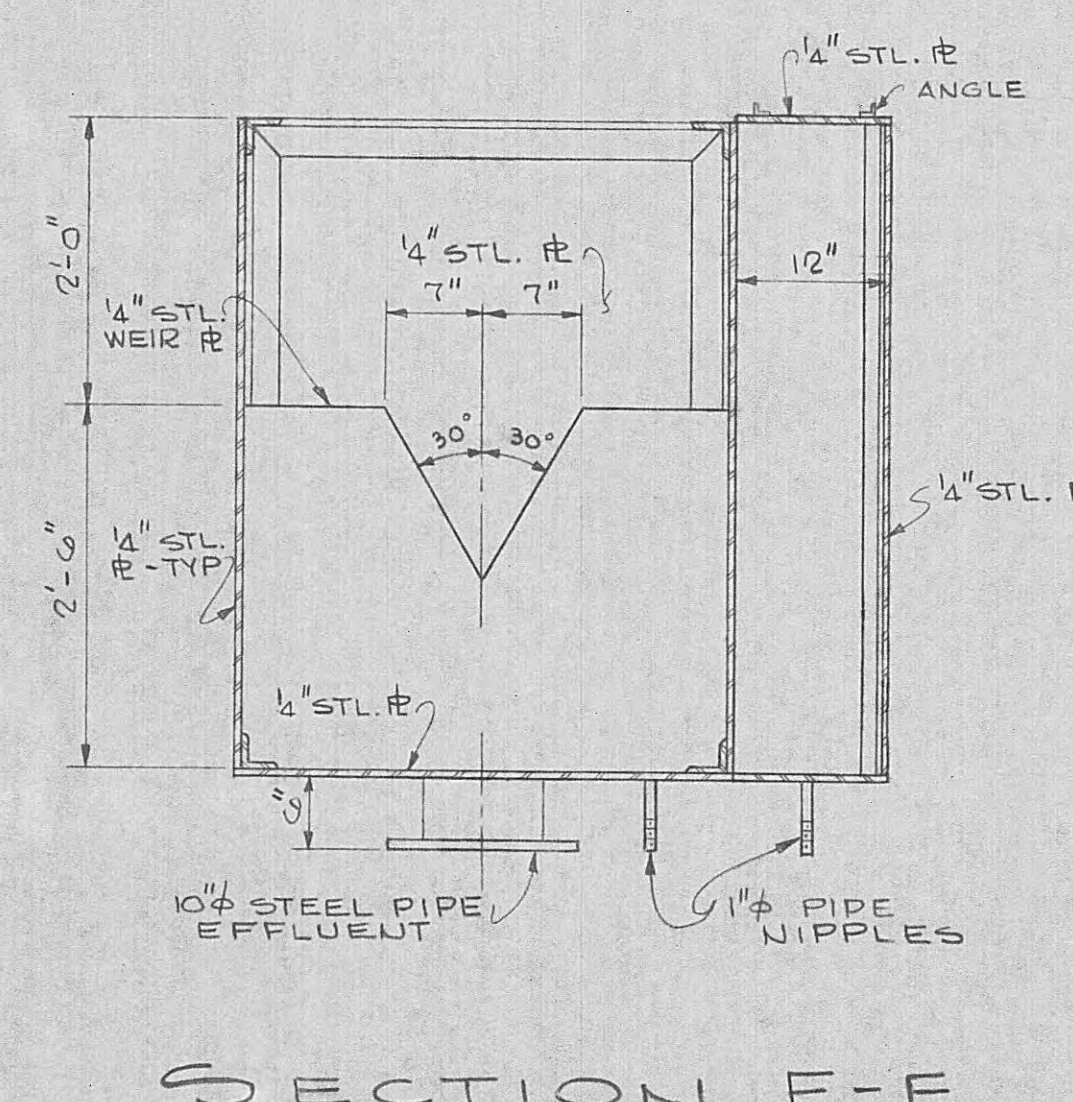
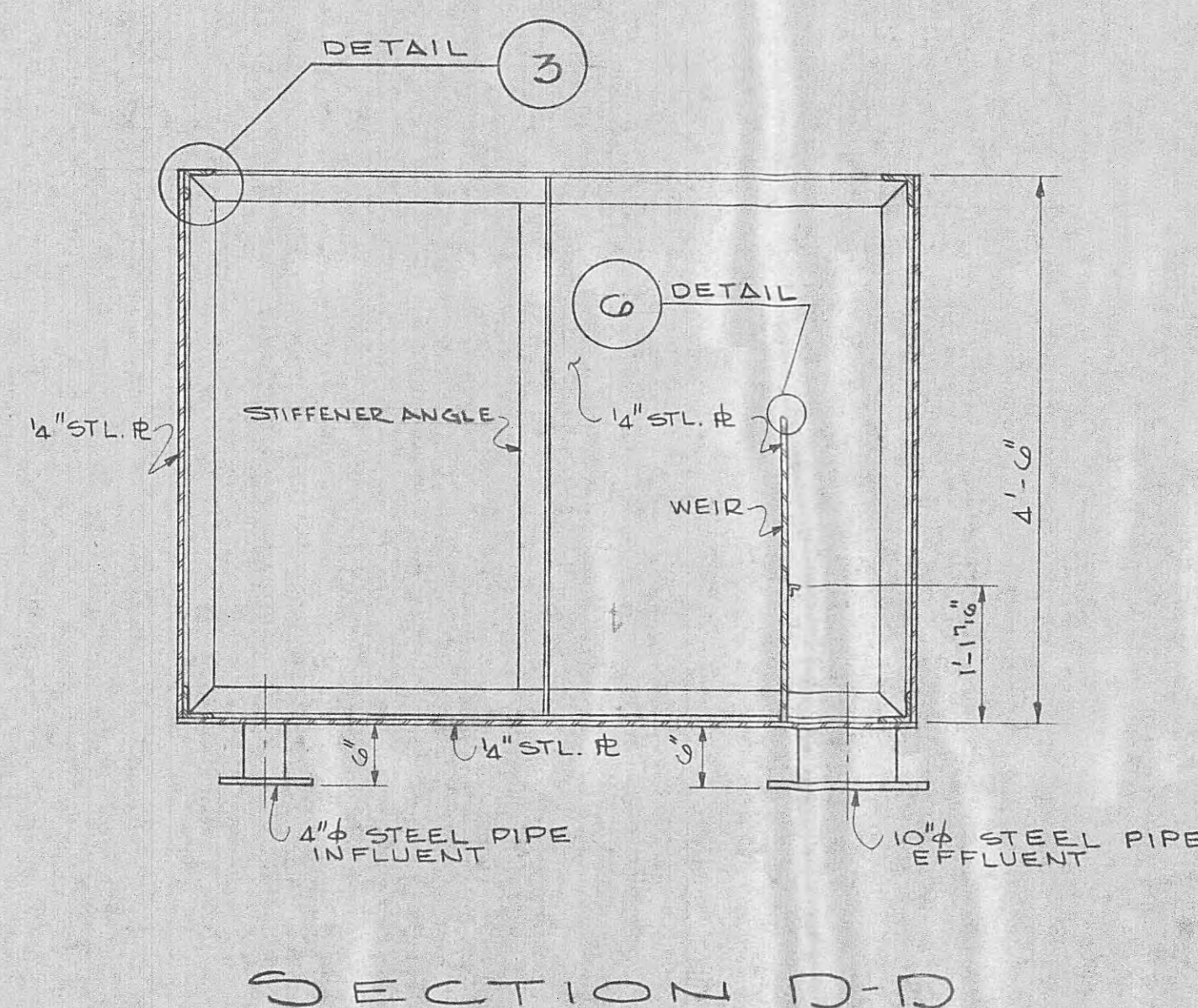
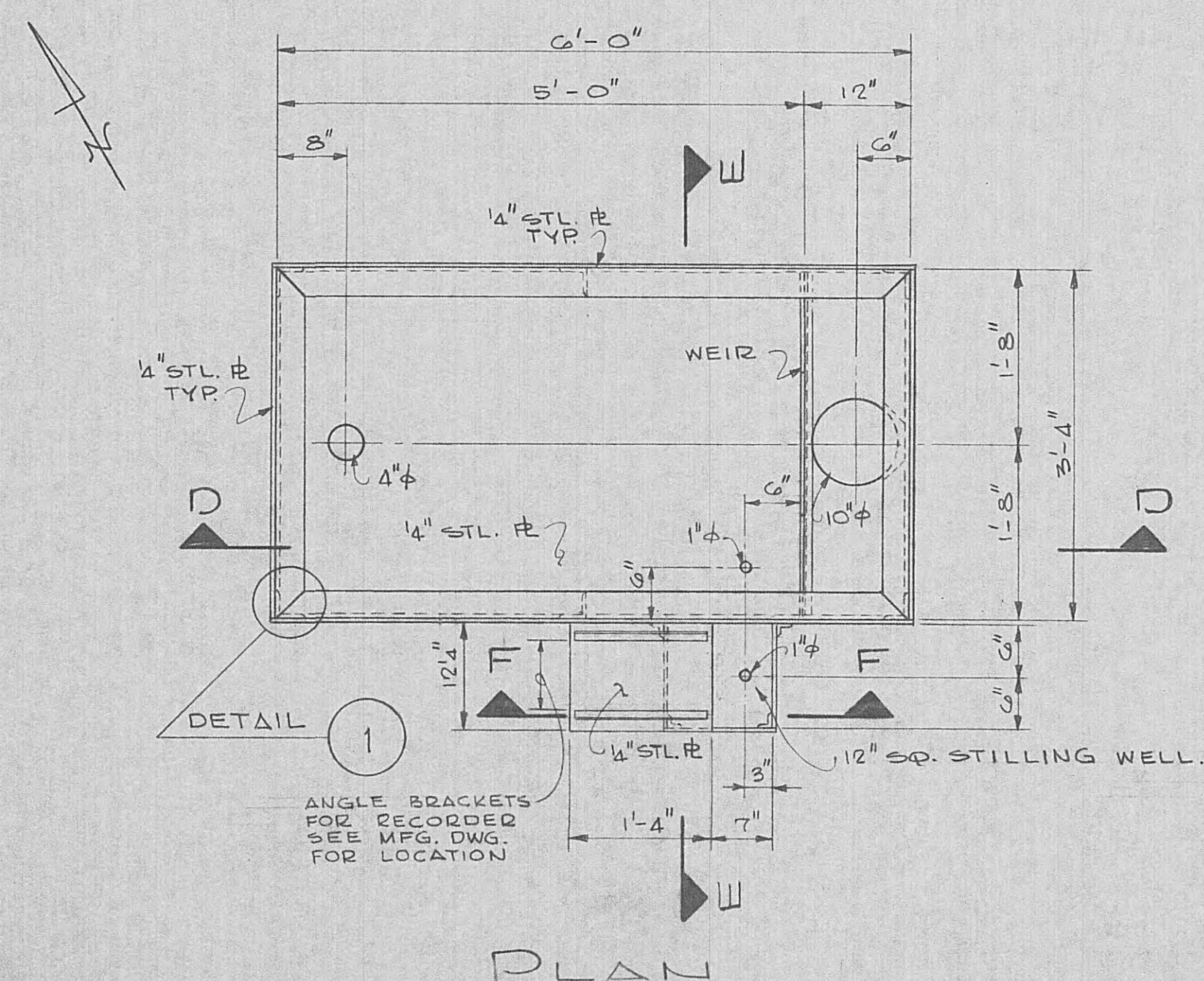
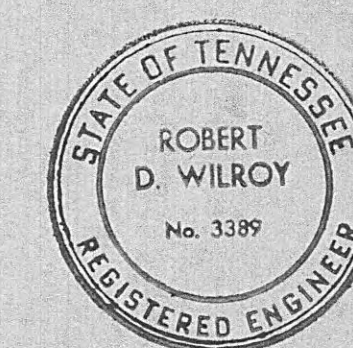




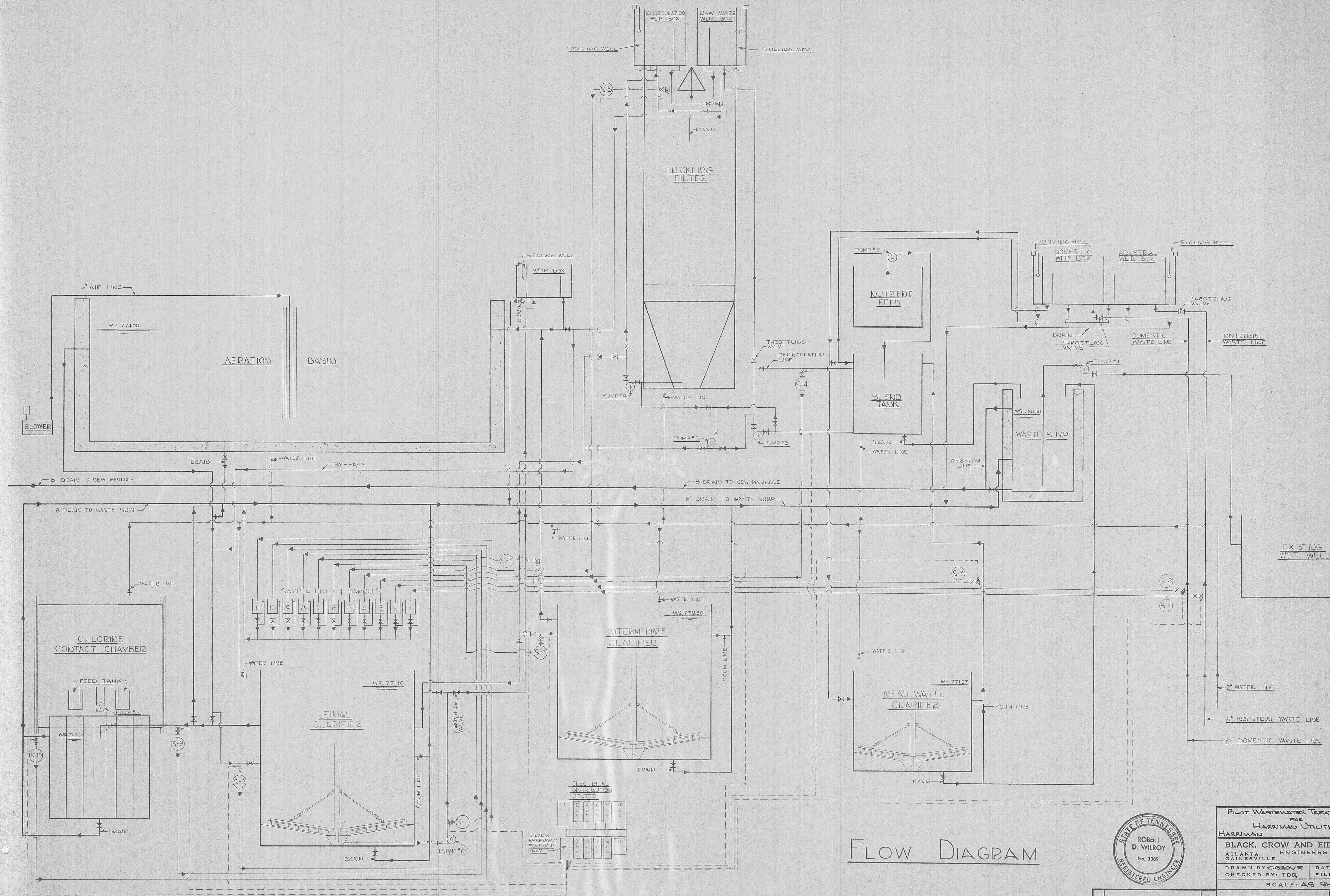
INDUSTRIAL & DOMESTIC WASTE WEIR BOX DETAILS SCALE: AS NOTED



SLUDGE RECIRCULATION WEIR BOX DETAILS SCALE: 1/2" = 1'-0"

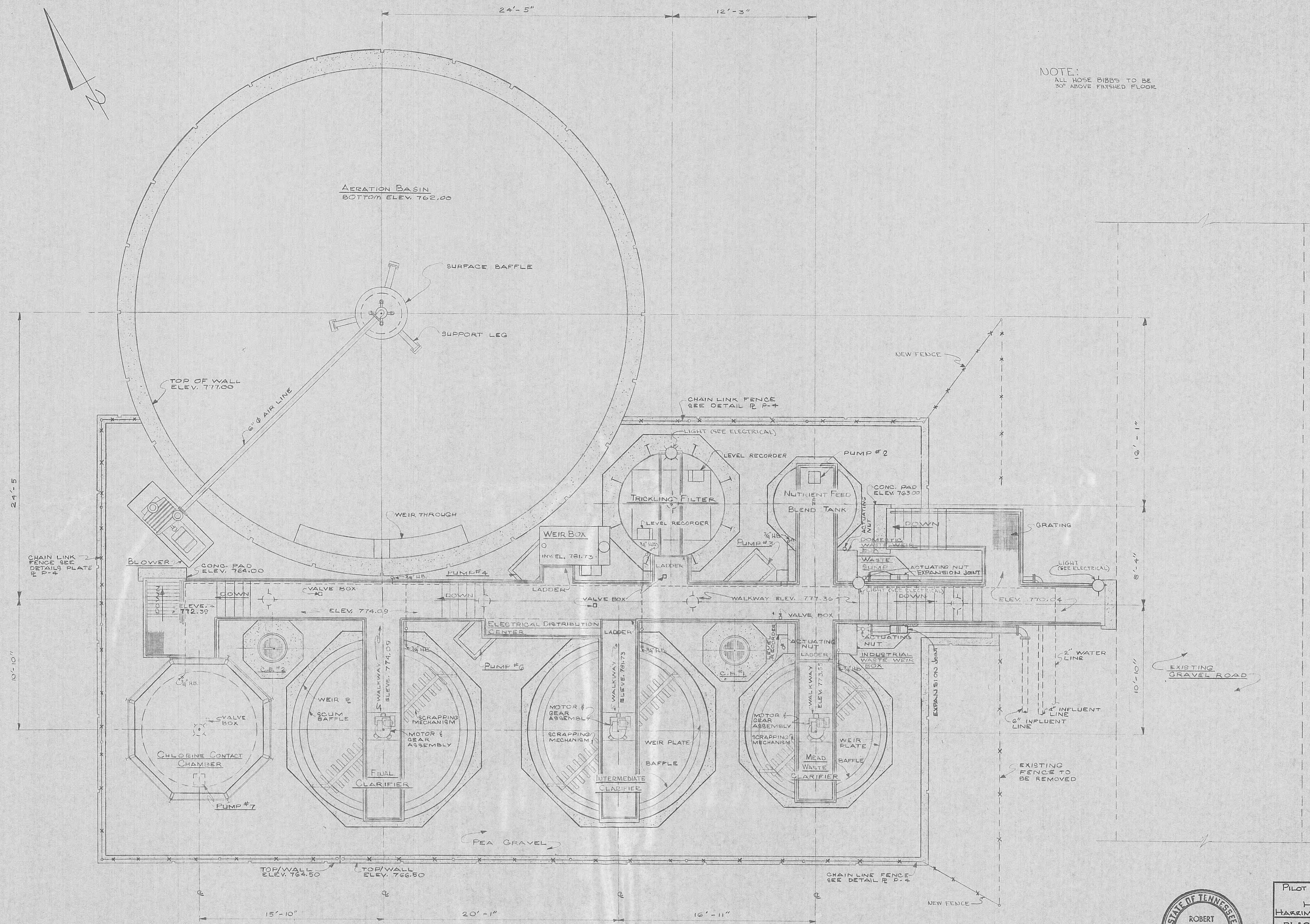


PILOT WASTEWATER TREATMENT PLANT FOR HAZIMAD UTILITY BOARD HAZIMAD TENNESSEE			
BLACK, CROW AND EIDNESS, INC. ATLANTA ENGINEERS GEORGIA GAINESVILLE FLORIDA			
DRAWN BY: MEXROW		DATE: JUNE '60	
CHECKED BY: TDR		FILE NO. 484-60-1	
SCALE: AS SHOWN			
INDUSTRIAL, DOMESTIC SLUDGE RECIRCULATION		PLATE NO. 5-6	SHEET NO. 10
WEIR BOX DETAILS		OF 6	OF 20



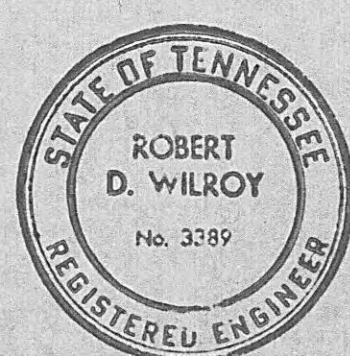
PILOT WASTEWATER TREATMENT PLANT
 FOR
 HARRIMAN UTILITY BOARD
 TENNESSEE
 BLACK, CROW AND EIDNESS, INC.
 ATLANTA ENGINEERS GEORGIA
 GAINESVILLE FLORIDA
 DRAWN BY: C. GROVE DATE: JUNE '68
 CHECKED BY: TDR FILE NO.: 484-68-1
 SCALE: AS SHOWN

NO.	DESCRIPTION	DATE
1	Flow Diagram	11/13/68
2		
3		
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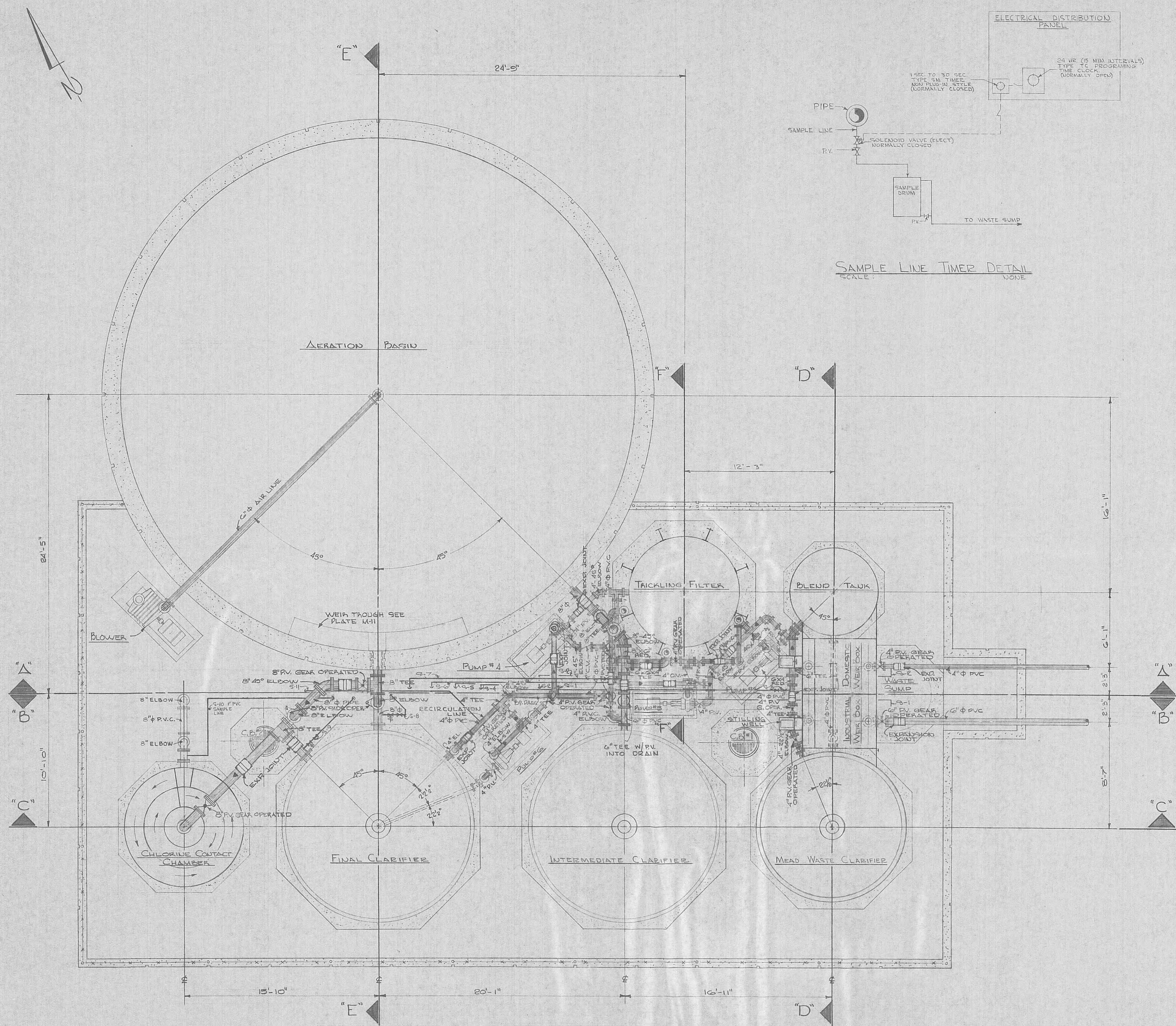
NOTE:
ALL ROSE BIBBS TO BE
30" ABOVE FINISHED FLOOR

PLANT LAYOUT PLAN
SCALE: 1/4" = 1'-0"

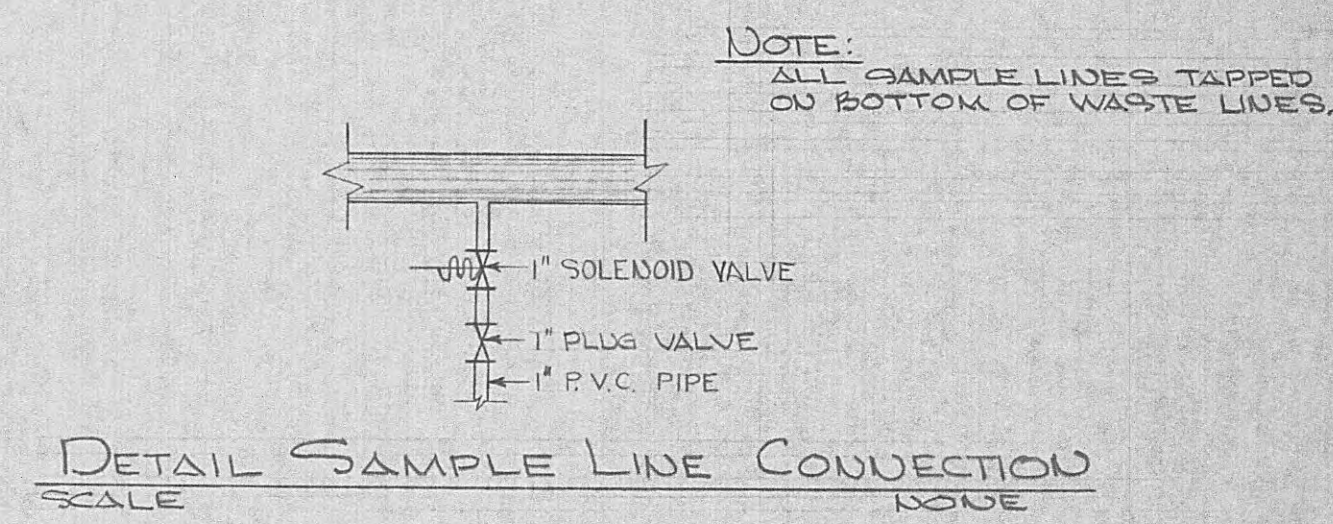
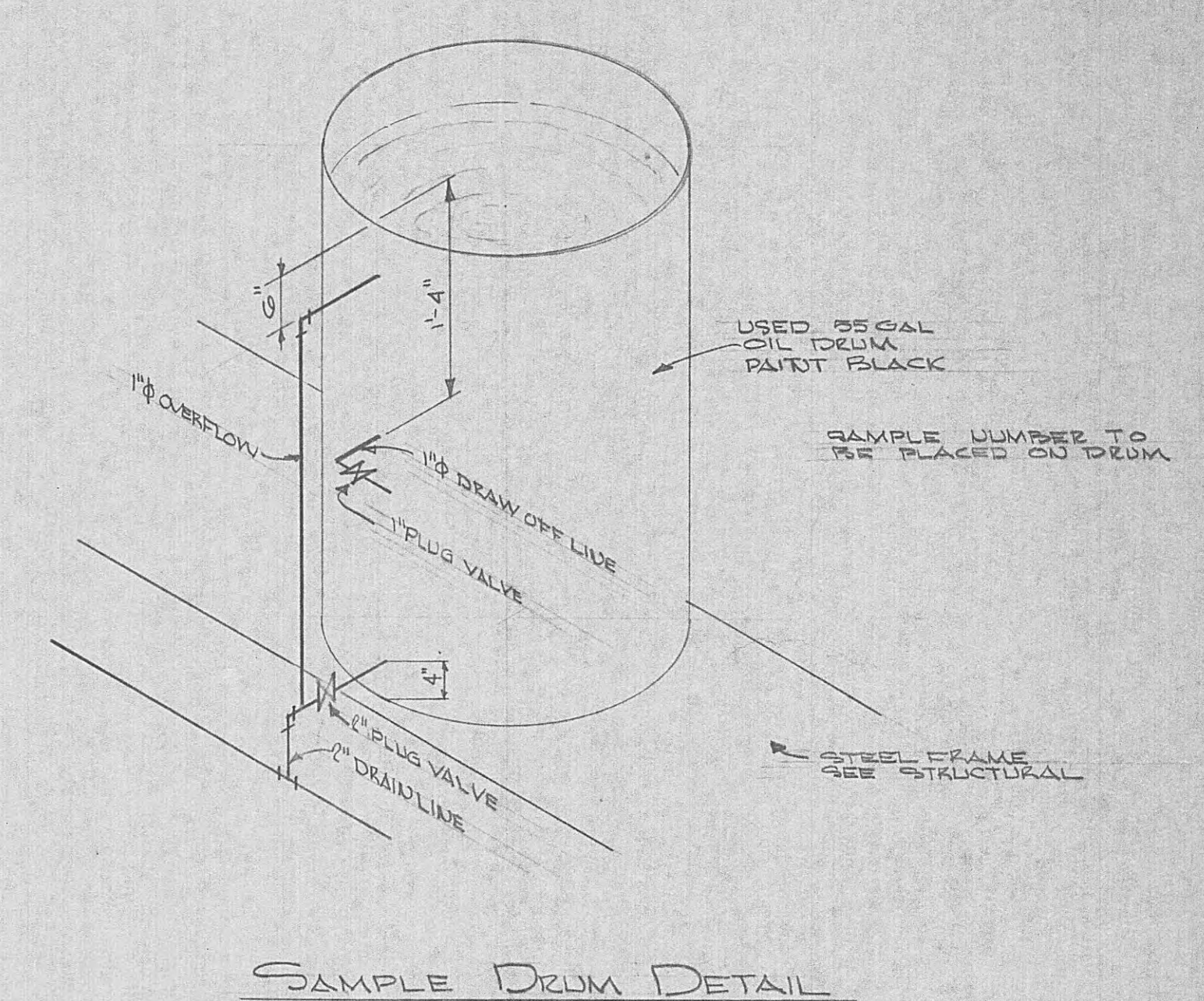
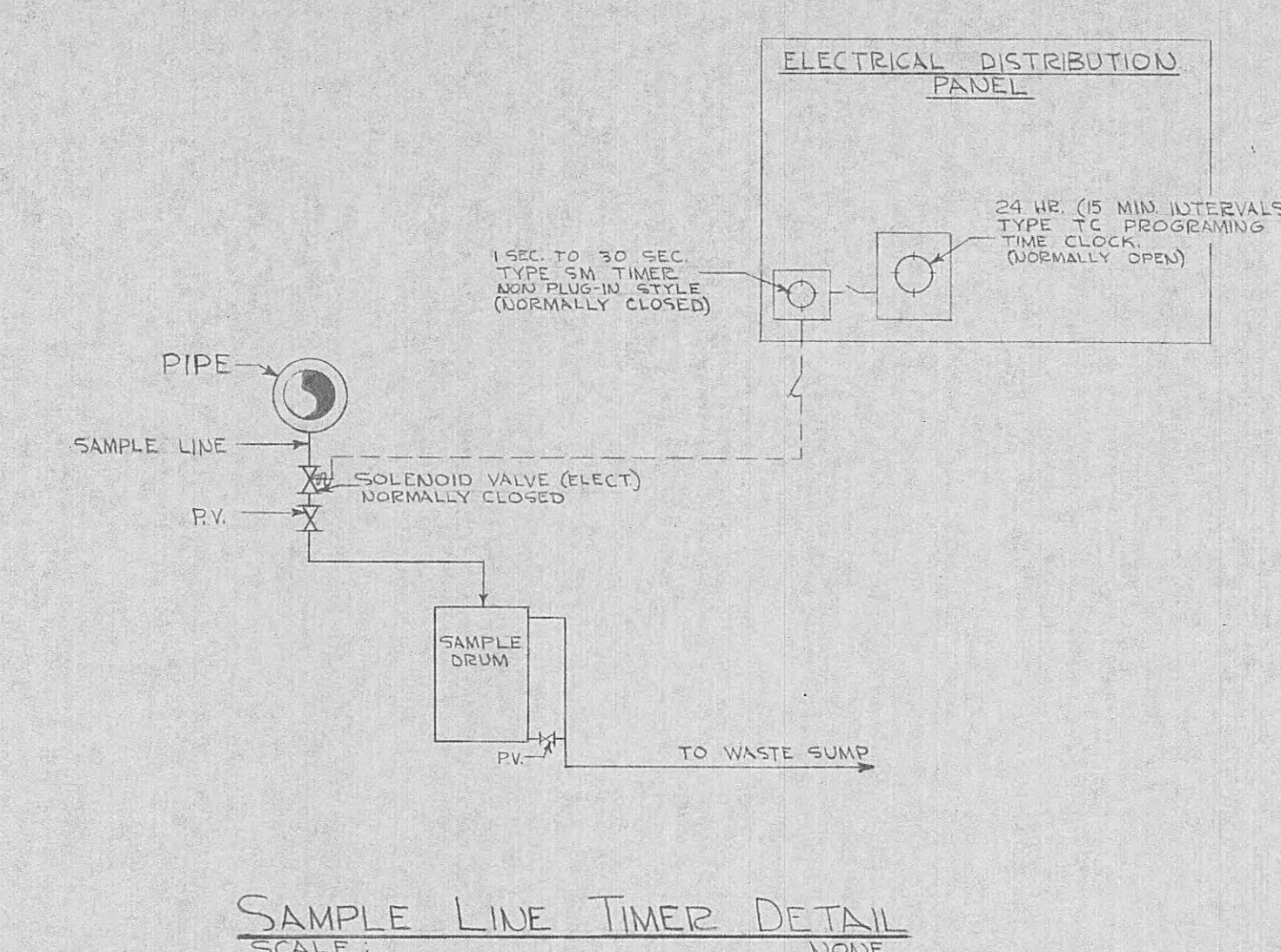


PILOT WASTEWATER TREATMENT PLANT FOR HARRIMAN UTILITY BOARD TENNESSEE	
BLACK, CROW AND EIDNESS, INC. ATLANTA, GEORGIA	
DRAWN BY: BORELLA	DATE: JUNE '69
CHECKED BY: TDR	FILE NO. 484-69-1
SCALE: AS SHOWN	
PLANT LAYOUT PLAN	PLATE NO. 12 SHEET NO. 12 OF 13

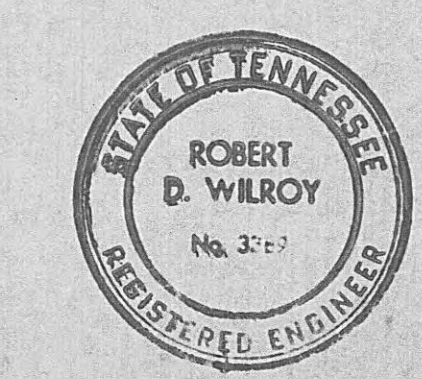
NO.	DESCRIPTION	DATE



PLANT PIPING PLAN - FLOW LINES
SCALE: 1/4" = 1'-0"

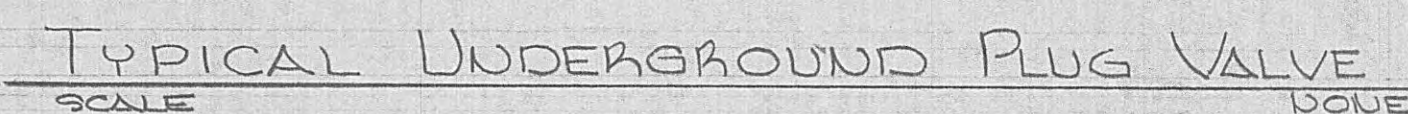


NOTE:
ALL EXPANSION JOINTS SHALL BE INSTALLED TO ALLOW FOR BOTH EXPANSION AND CONTRACTION IN A TEMP RANGE OF 0°F TO 150°F.



PILOT WASTEWATER TREATMENT PLANT
FOR
HARRIMAN UTILITY BOARD
TENNESSEE
BLACK, CROW AND EIDSNES, INC.
ATLANTA ENGINEERS GEORGIA
GAINESVILLE FLORIDA
DRAWN BY: EDWARDS DATE: JUNE '69
CHECKED BY: TDR FILE NO.: 484-69-1
SCALE: AS SHOWN

NO.	DESCRIPTION	DATE
1	PLANT PIPING PLAN FLOW LINES	MAY 1969
2		
3		
4		
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SECTION "Δ-Δ"
SCALE 3/8" = 1'-0"



STATE OF TENNESSEE
ROBERT
D. WILROY
No. 3399
REGISTERED ENGINEER

PILOT WASTEWATER TREATMENT PLANT
FOR
HARRISMAN UTILITY BOARD
HARRISMAN TENNESSEE

BLACK, CROW AND EIDSSNESS, INC.
ATLANTA ENGINEERS GEORGIA
GAINESVILLE FLORIDA

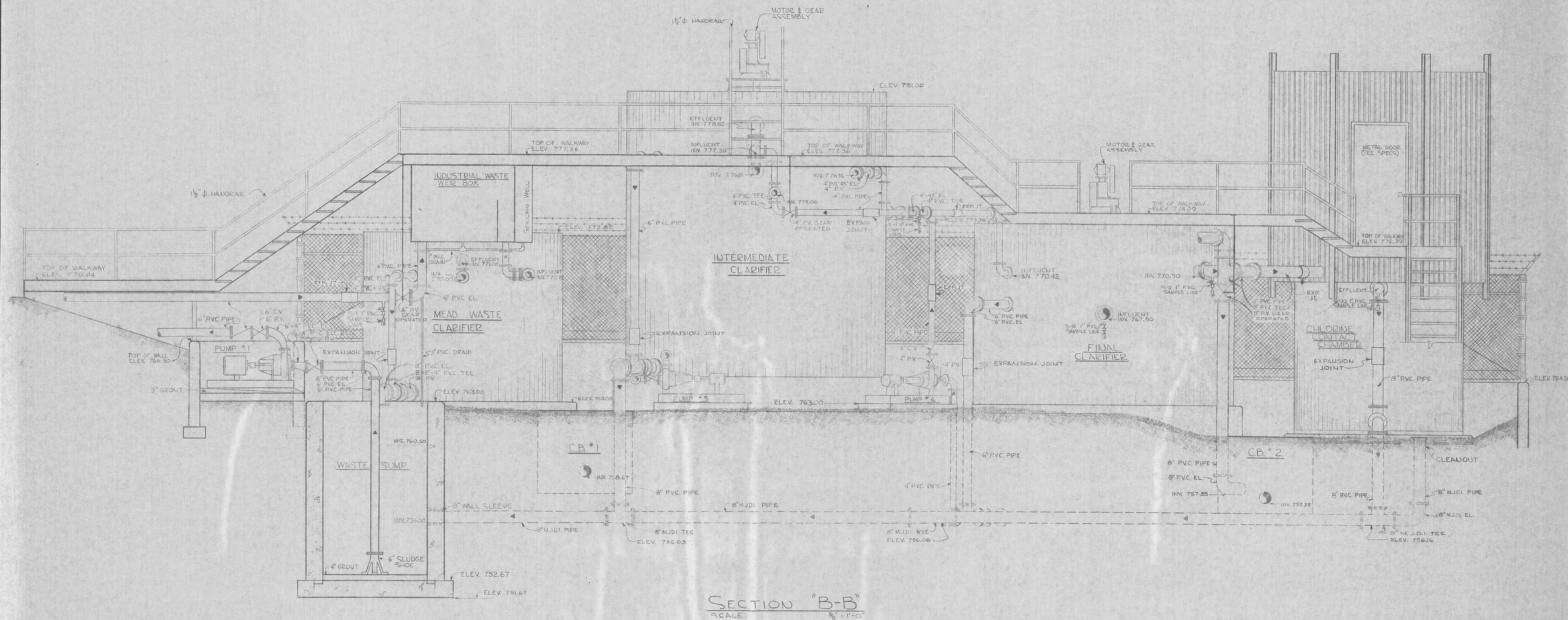
DRAWN BY: EDWARDS DATE: JUNE 1968
CHECKED BY: T.D.R. FILE NO: 484-69-1

SCALE: AS SHOWN

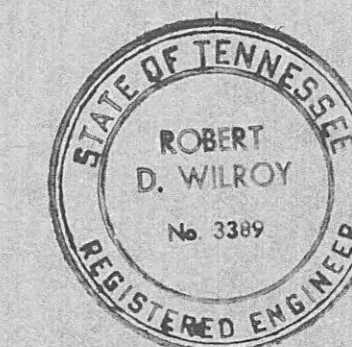
LONGITUDINAL SECTION	PLATE NO.	SHEET NO.
	M-5 OF 13	15 OF 26

NO.	DESCRIPTION	DATE
REVISIONS		

NOTE:
 1. ALL THROTTLING VALVES
 ARE GEAR OPERATED.
 2. ALL EXPANSION JOINTS
 SHALL BE INSTALLED TO
 ALLOW FOR BOTH EXPANSION
 AND CONTRACTION IN A TEMP
 RANGE OF 0°F. TO 150°F.

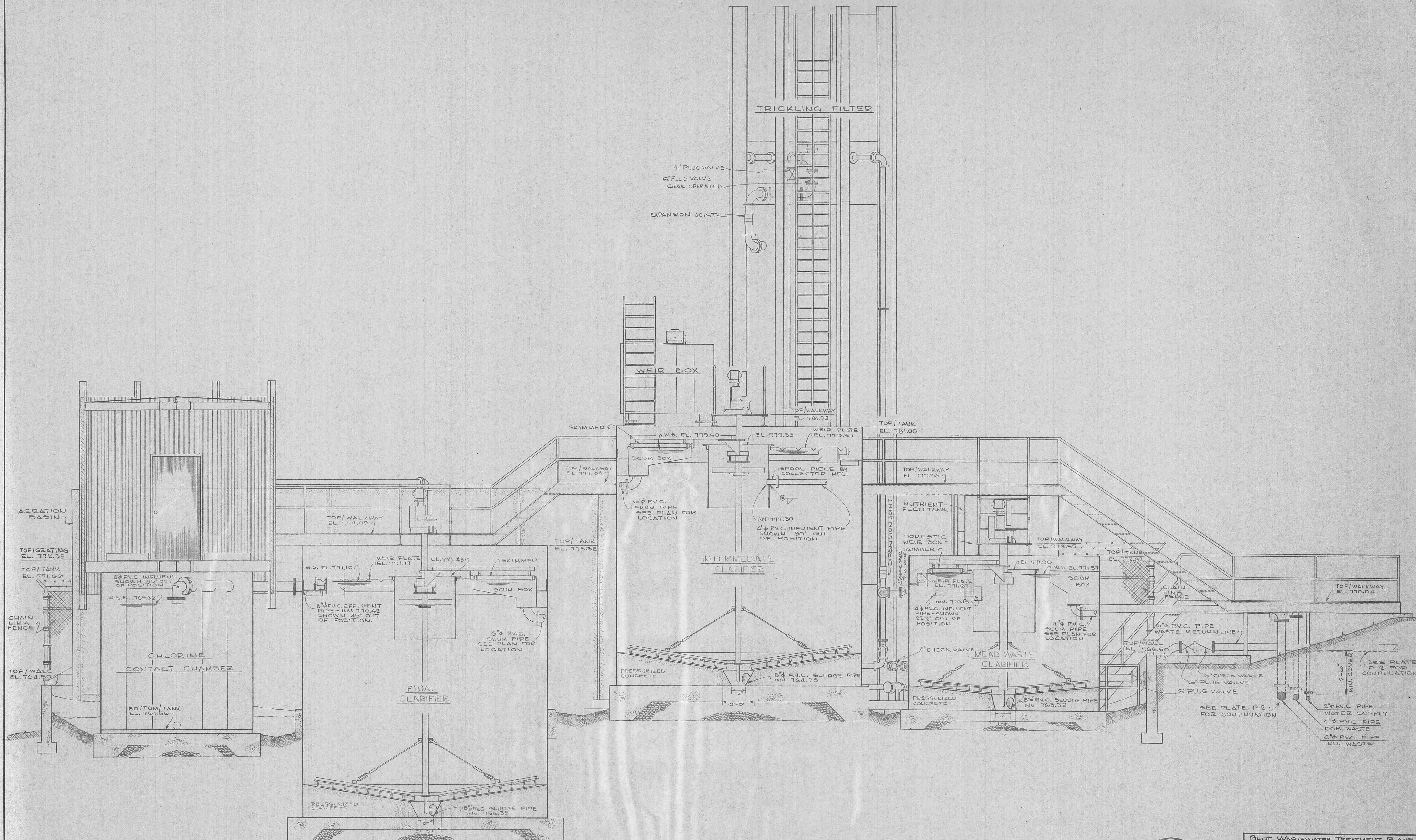


SECTION "B-B"
 SCALE: 3/8" = 1'-0"

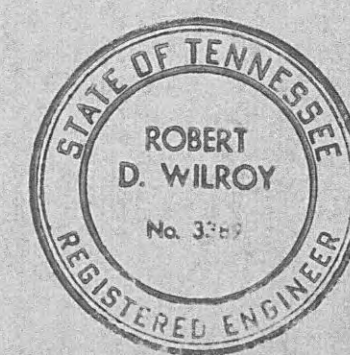


Pilot Wastewater Treatment Plant for HARRIMAN UTILITY BOARD HARRIMAN, TENNESSEE	
BLACK, CROW AND EIDNESS, INC. ATLANTA, GEORGIA ENGINEERS	
DRAWN BY: GROVE	DATE: JUNE '69
CHECKED BY: TDR	FILE NO.: 489-65-1
SCALE: AS SHOWN	
LONGITUDINAL SECTION	PLATE NO. 16 SHEET NO. 16 of 16

NO.	DESCRIPTION	DATE
	REVISIONS	



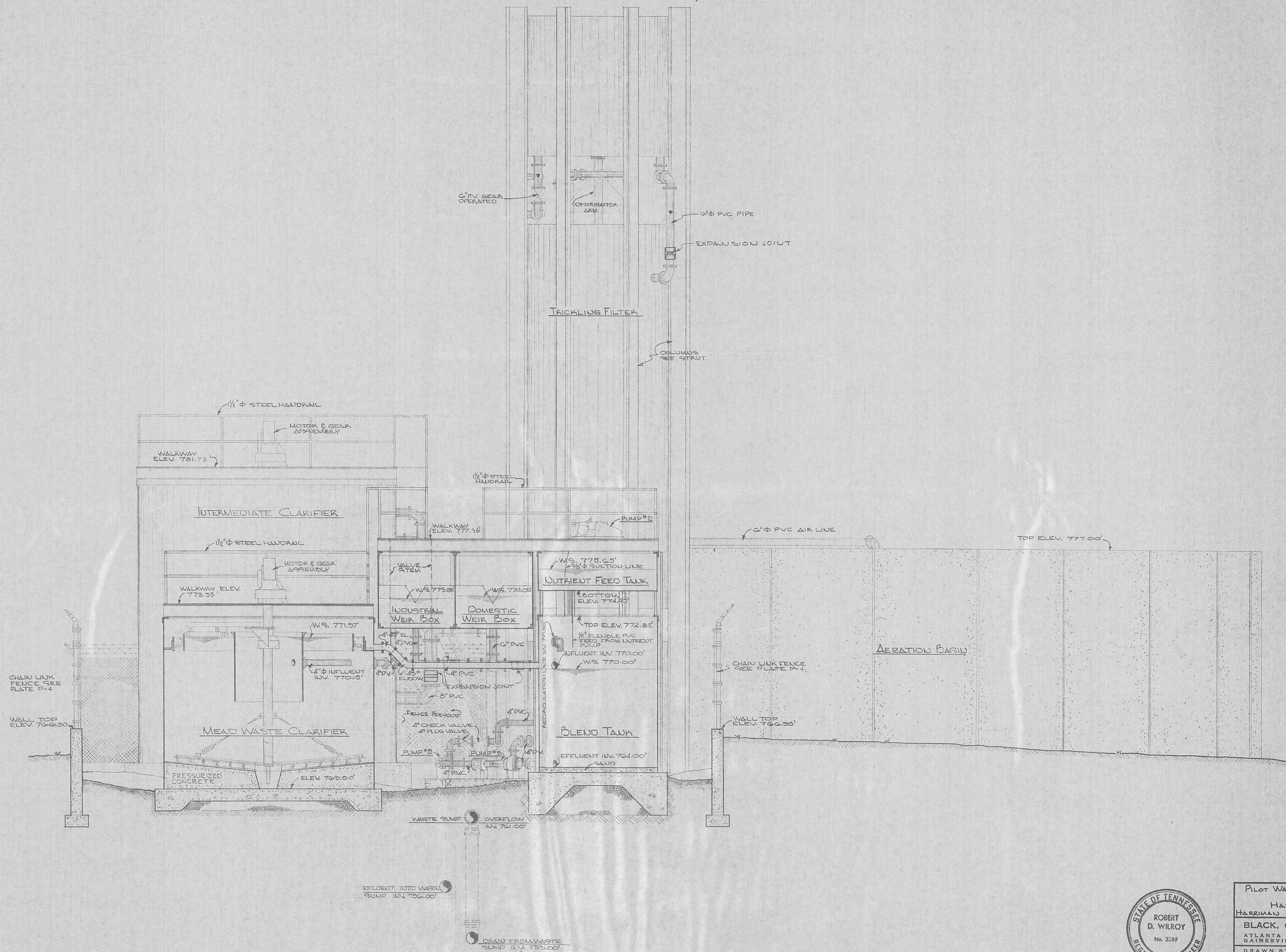
SECTION C-C
SCALE: 3/8" = 1'-0"



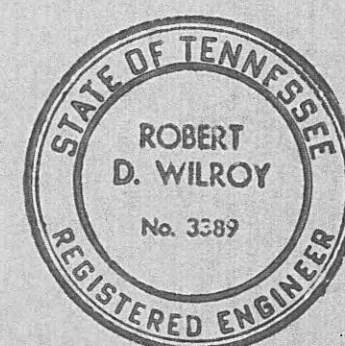
PILOT WASTEWATER TREATMENT PLANT
FOR
HARRIMAN UTILITY BOARD
HARRIMAN, TENNESSEE
BLACK, CROW AND EIDNESS, INC.
ATLANTA, GEORGIA
GAINESVILLE, FLORIDA
DRAWN BY: MERRON DATE: JUNE '63
CHECKED BY: TDR FILE NO.: 484-63-1
SCALE: AS SHOWN

NO.	DESCRIPTION	DATE
1	LONGITUDINAL SECTION	
2	REVISIONS	

PLATE NO. 17
SHEET NO. 17
OF 13 OF 26



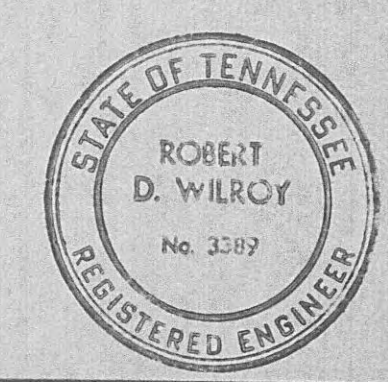
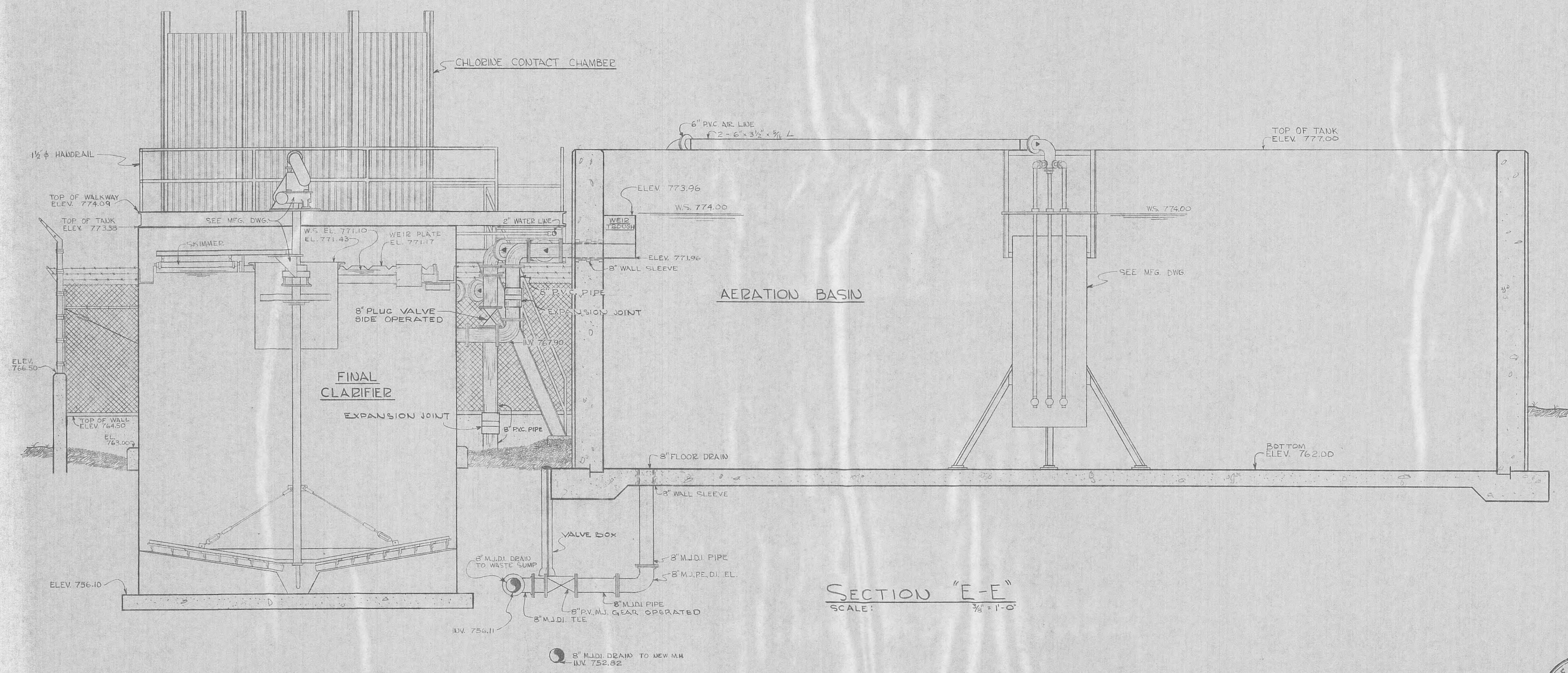
SECTION "D-D"
SCALE 1/8" = 1'-0"



PILOT WASTEWATER TREATMENT PLANT
FOR
HARRIMAN UTILITY BOARD
TENNESSEE
BLACK, CROW AND EIDNESS, INC.
ATLANTA GAINESVILLE ENGINEERS GEORGIA FLORIDA
DRAWN BY: EDWARDS DATE: JUNE '69
CHECKED BY: TDR FILE NO.: 484-69-1
SCALE: AS SHOWN

NO.	DESCRIPTION	DATE

TRANSVERSE SECTION
PLATE NO. M-8
SHEET NO. 13
OF 13 OF 26



PLANT WASTEWATER TREATMENT PLANT
FOR
HARRIMAN UTILITY BOARD
HARRIMAN, TENNESSEE

BLACK, CROW AND EIDNESS, INC.
ATLANTA, GEORGIA
ENGINEERS
GAINESVILLE, FLORIDA

DRAWN BY: GROVE
CHECKED BY: TOR

DATE: JUNE '69
FILE NO.: 484-60-1

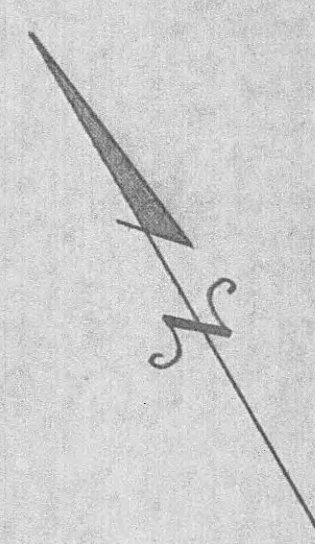
SCALE: AS SHOWN

NO.	DESCRIPTION	DATE

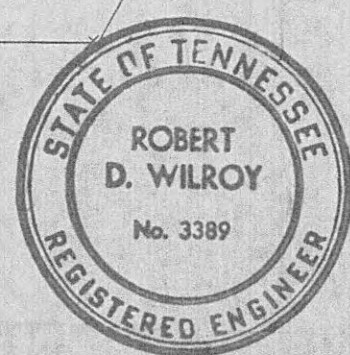
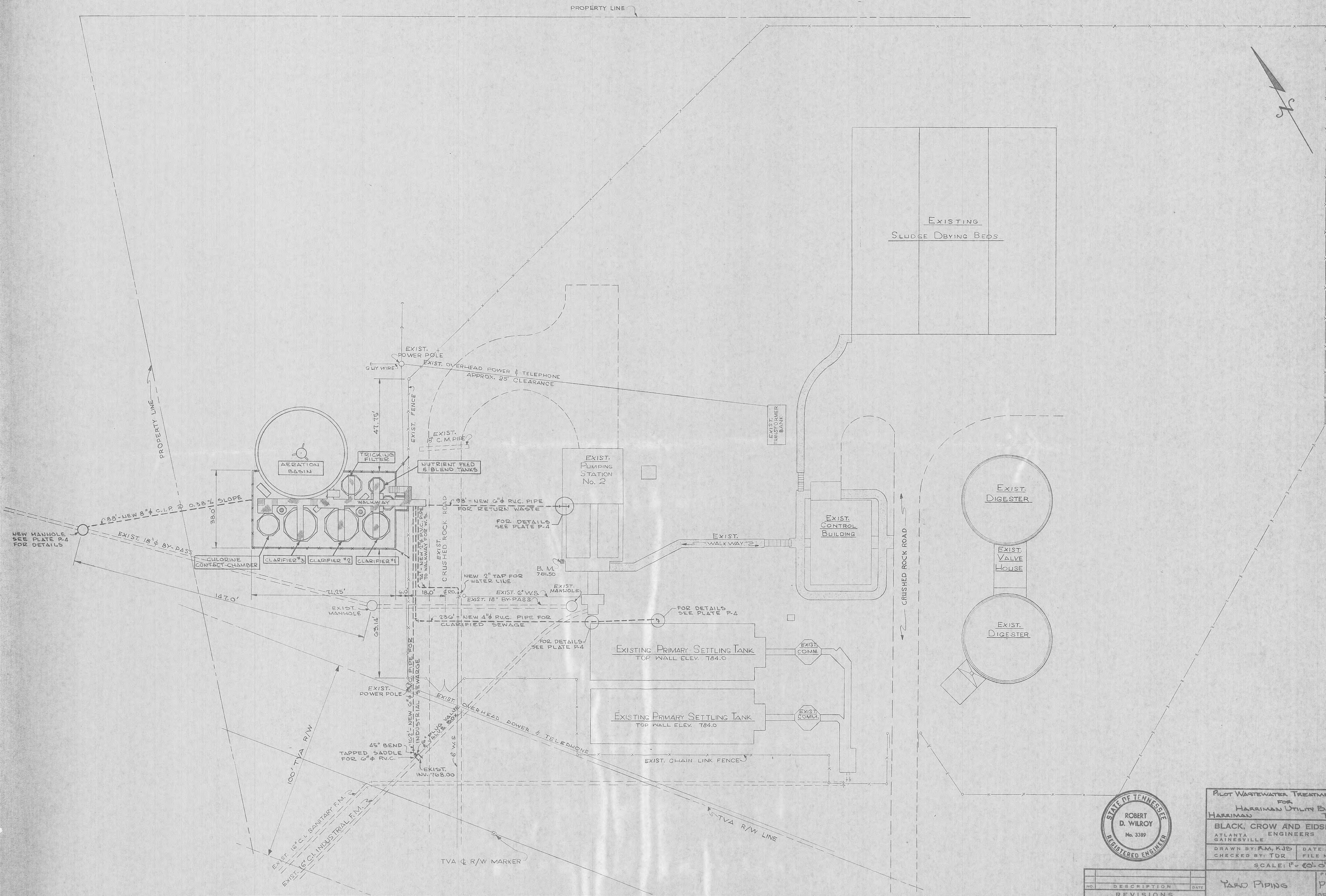
TRANSVERSE SECTION

PLATE NO.	SHEET NO.
M-9	19
OF 13	OF 26

PROPERTY LINE



EXISTING
SLUDGE DRYING BEDS

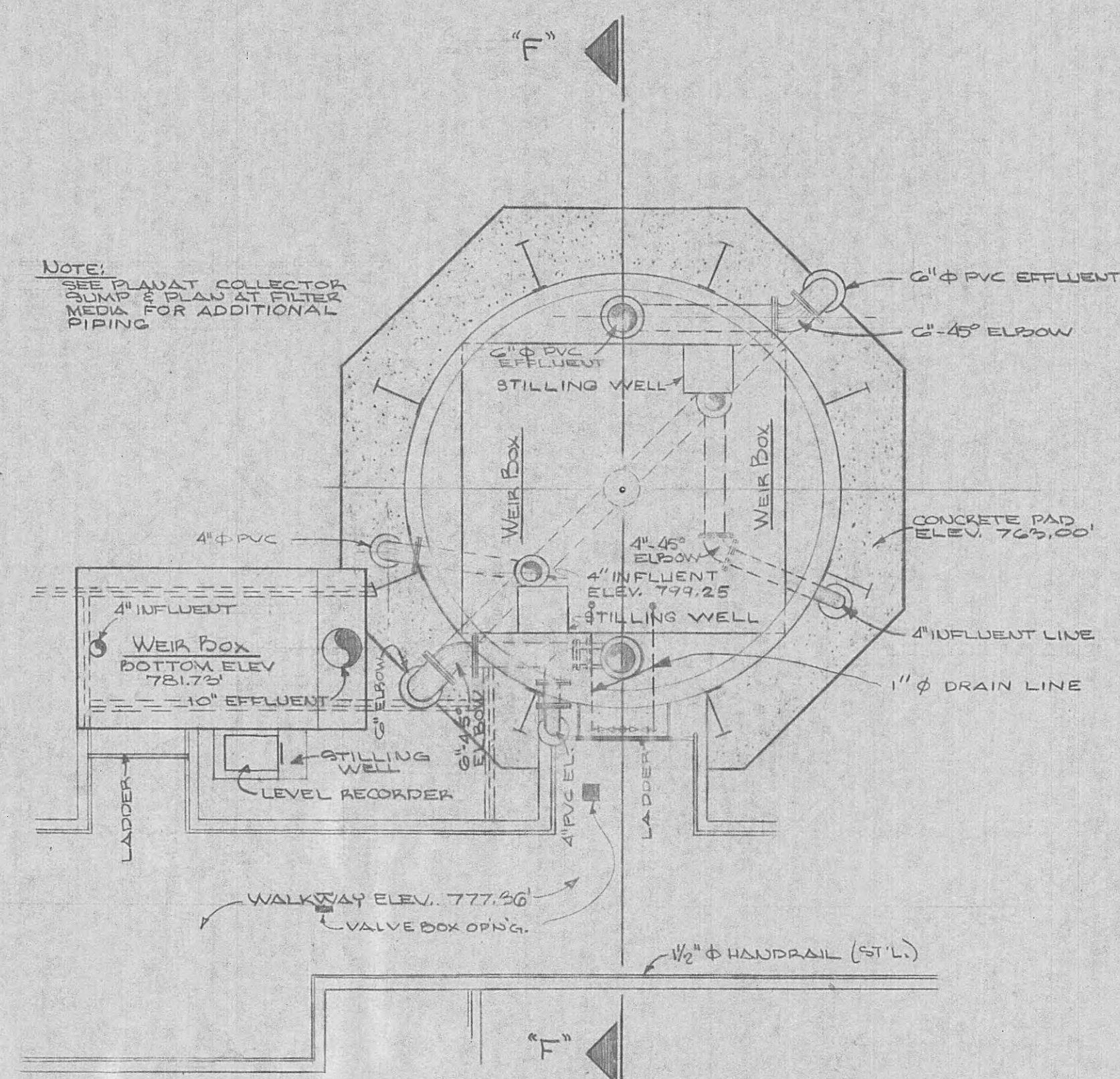


PILOT WASTEWATER TREATMENT PLANT
FOR
HARRIMAN UTILITY BOARD
TENNESSEE
BLACK, CROW AND EIDSNES, INC.
ATLANTA ENGINEERS GEORGIA
GAINESVILLE FLORIDA
DRAWN BY: F.M. KJB DATE: JUNE '65
CHECKED BY: TDR FILE NO. 484-65-1
SCALE: 1" = 60'-0"

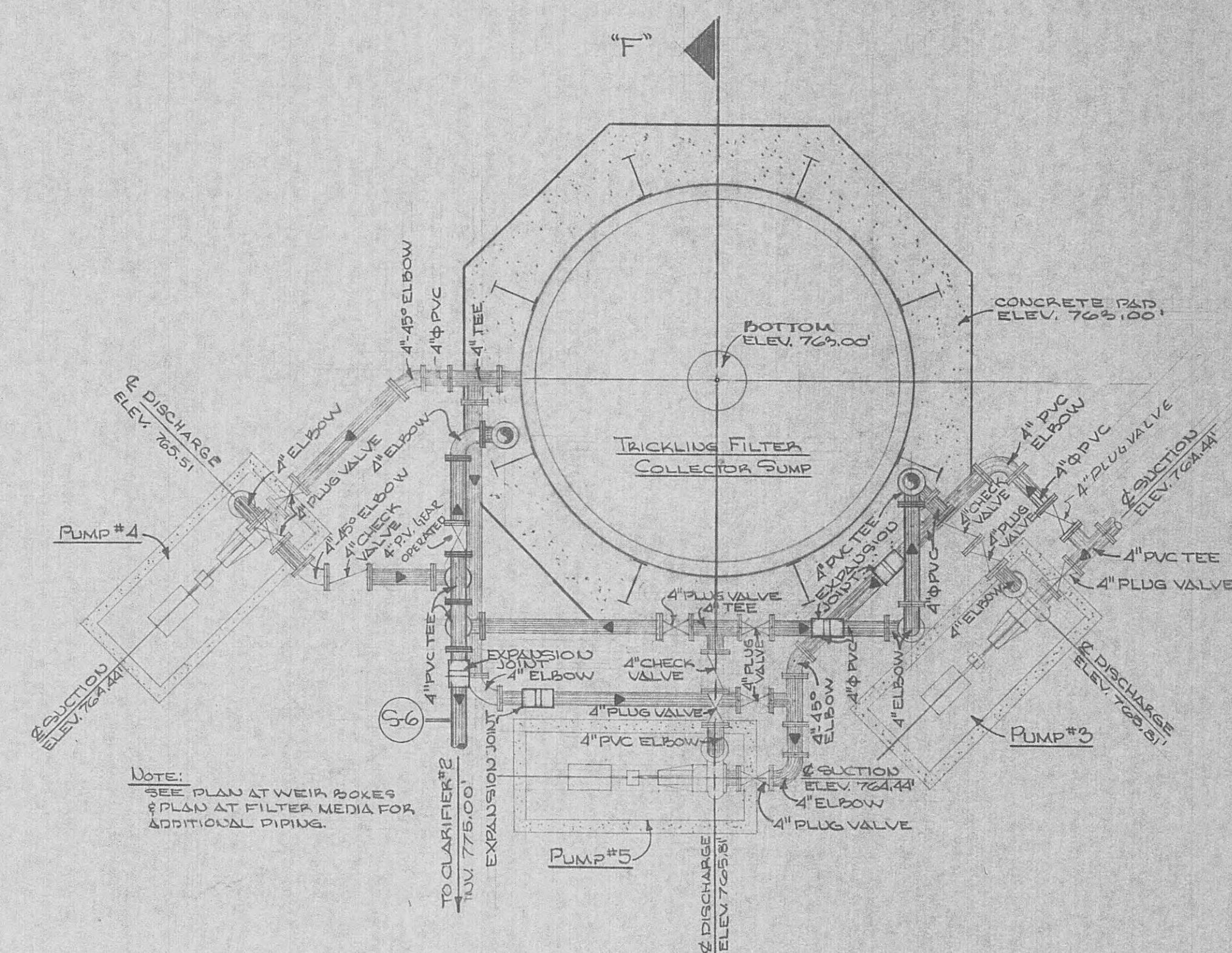
NO.	DESCRIPTION	DATE

YARD PIPING

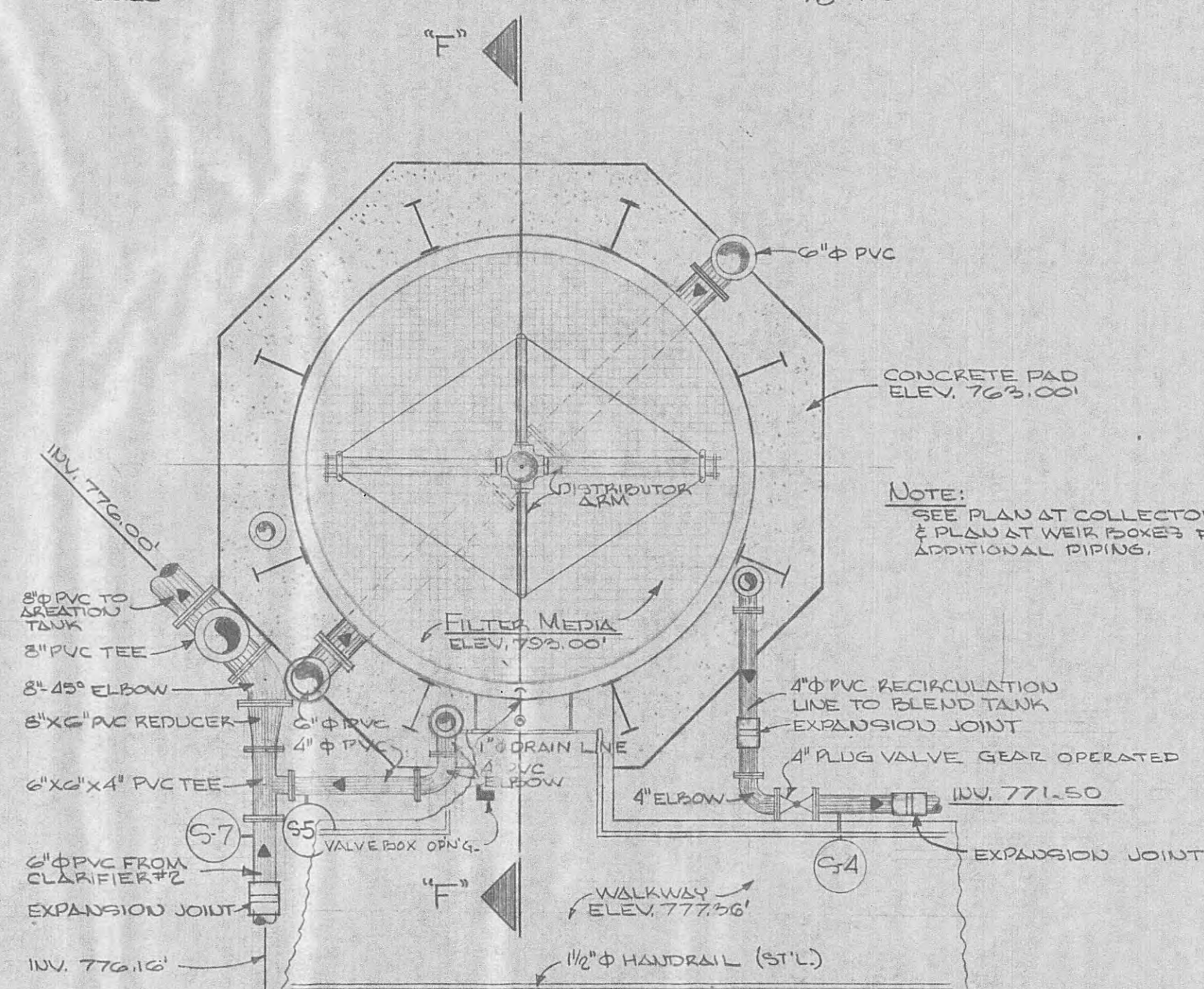
PLATE NO. 2
SHEET NO. 2
OF 4 OF 26



PLAN TRICKLING FILTER AT WEIR BOXES



PLAN TRICKLING FILTER AT COLLECTOR SUMP

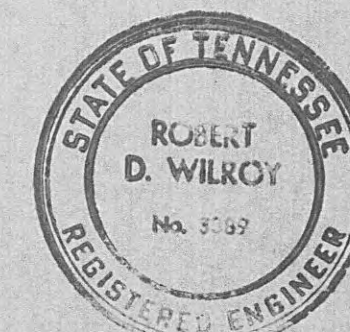


PLAN TRICKLING FILTER AT TOP OF FILTER MEDIA

NOTE:
ALL EXPANSION JOINTS SHALL BE
INSTALLED TO ALLOW FOR BOTH EXPANSION
AND CONTRACTION IN A TEMPERATURE RANGE
OF 0°F TO 150°F.

SECTION "F-F"

SCALE $\frac{3}{8}'' = 10'$

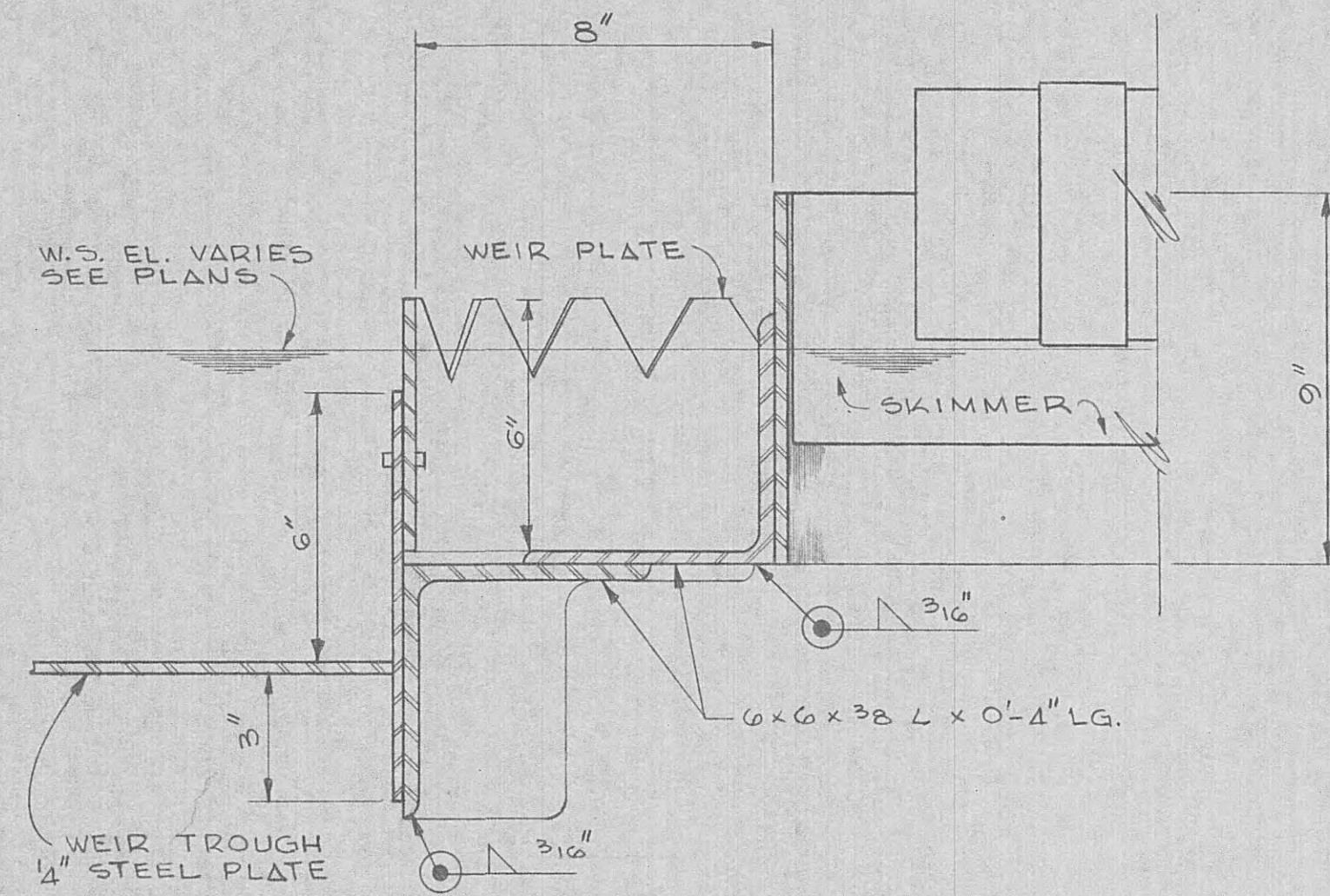


PILOT WASTEWATER TREATMENT PLANT	
FOR	
HARRIMAN UTILITY BOARD	
HARRIMAN	TENNESSEE
BLACK, CROW AND EIDNSON, INC.	
ATLANTA ENGINEERS	
ATLANTA	GEORGIA
GAINESVILLE	FLORIDA
DRAWN BY: KJB, TGE	DATE: JUNE '69
CHECKED BY: TDR	FILE NO. 484-69-1
SCALE: AS SHOWN	

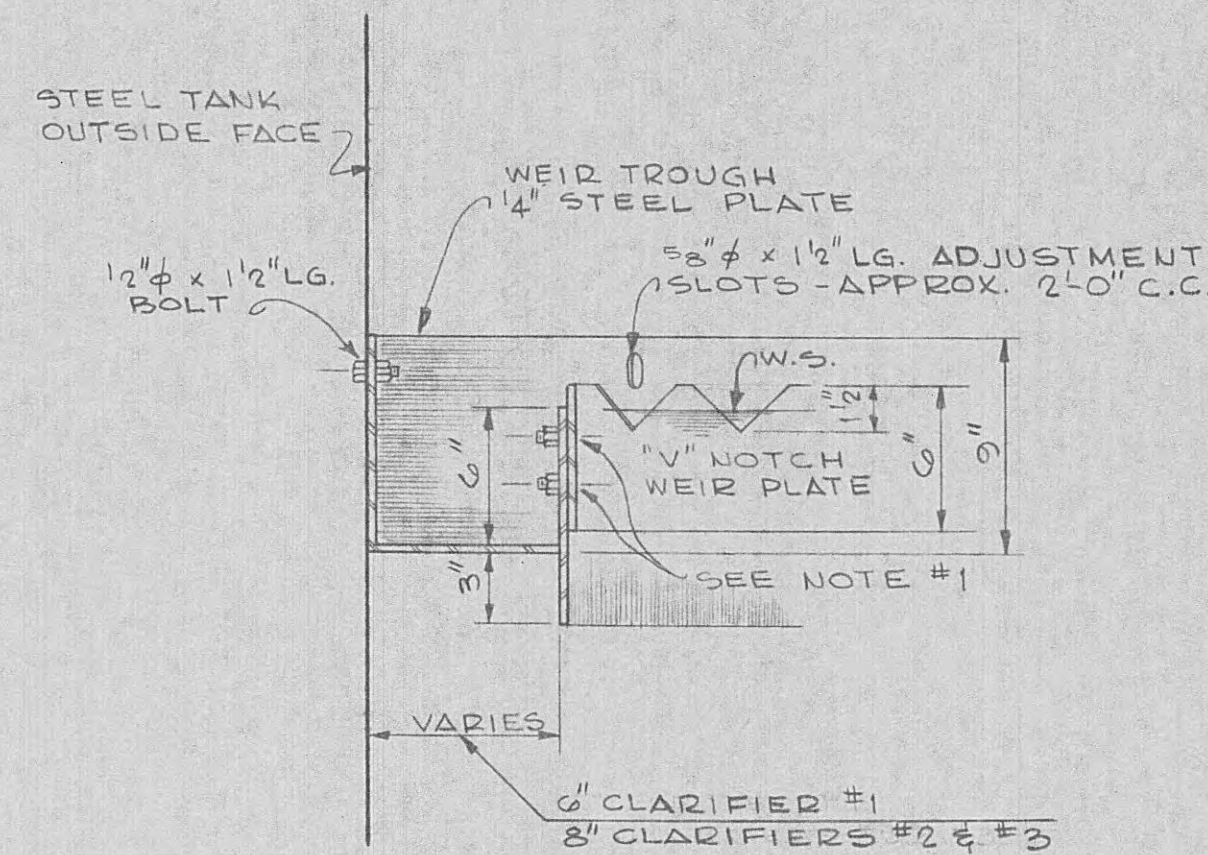
NO.	DESCRIPTION	DATE
REVISIONS		

DATE	TRANSVERSE SECTION	PLATE NO. M-10 OF 13	SHEET NO. 20 OF 26
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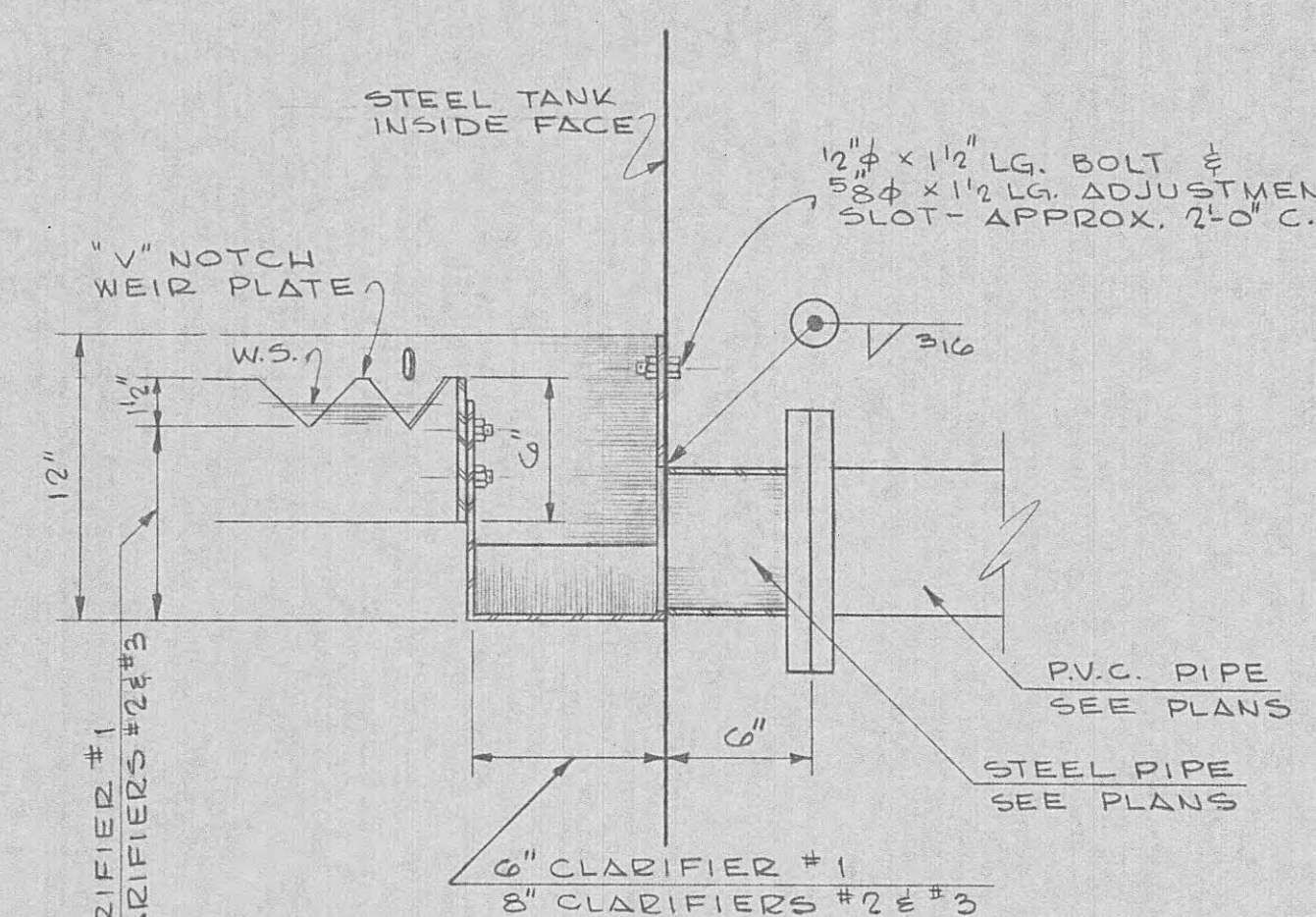
NOTES:
1. $\frac{5}{8}$ " ϕ $\times$ $1\frac{1}{2}$ " FLAT HEAD BOLTS
COUNTERSUNK IN WEIR
PLATE, W/ NUTS AND
WASHERS.



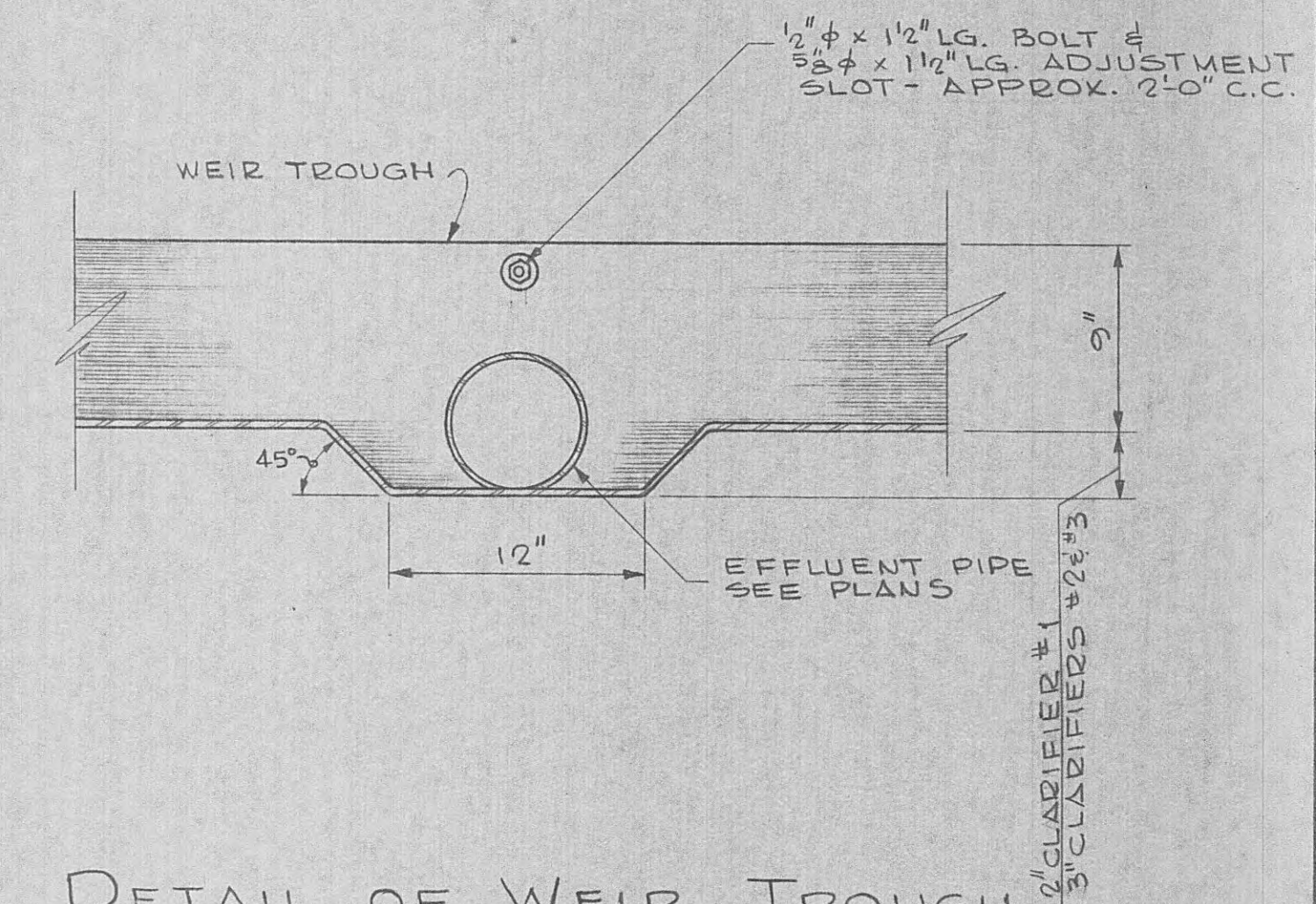
TYPICAL SCUM
BAFFLE BRACKET DETAIL
SCALE: $\frac{3}{4}$ " = 1'-0"



TYPICAL DETAIL OF
WEIR TROUGH
SCALE: $\frac{1}{2}$ " = 1'-0"



DETAIL AT WEIR TROUGH
EFFLUENT
SCALE: $\frac{1}{2}$ " = 1'-0"



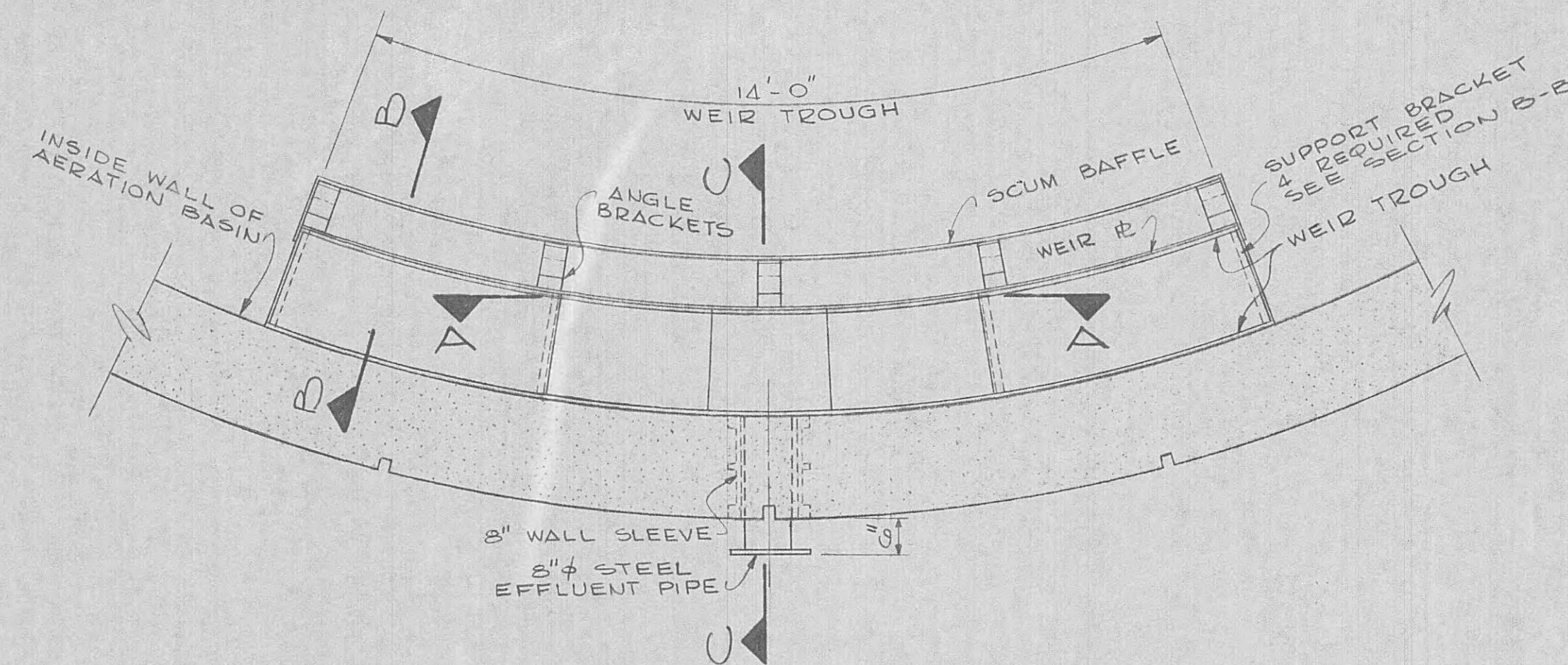
DETAIL OF WEIR TROUGH
AT EFFLUENT OPENING
SCALE: $\frac{1}{2}$ " = 1'-0"

WEIR DETAILS FOR CLARIFIERS #1, #2 & #3

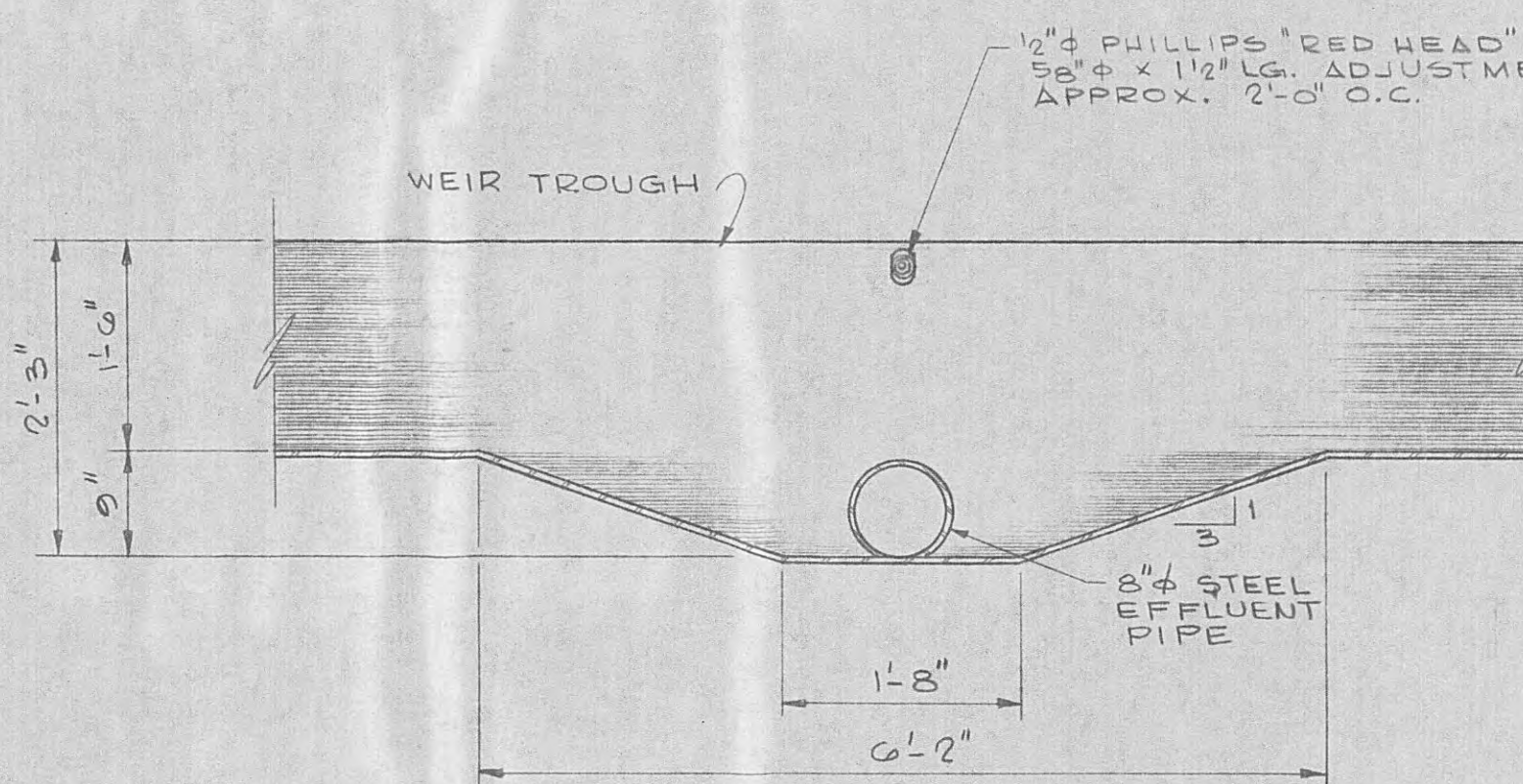
SCALE:

AS NOTED

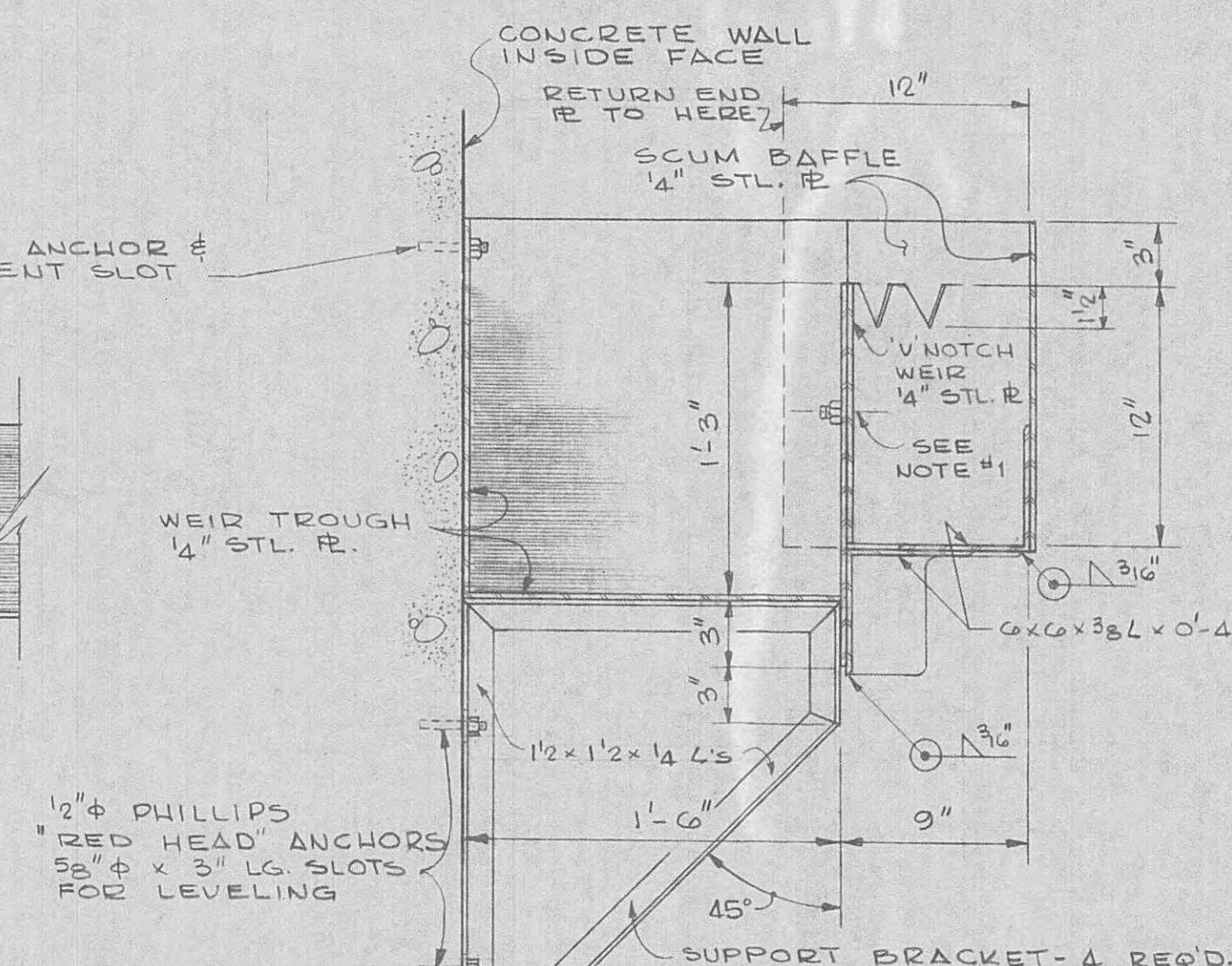
NOTES:
1. $\frac{5}{8}$ " ϕ $\times$ $1\frac{1}{2}$ " FLAT HEAD BOLT,
COUNTERSUNK IN WEIR
PLATE, WITH NUT & WASHER.



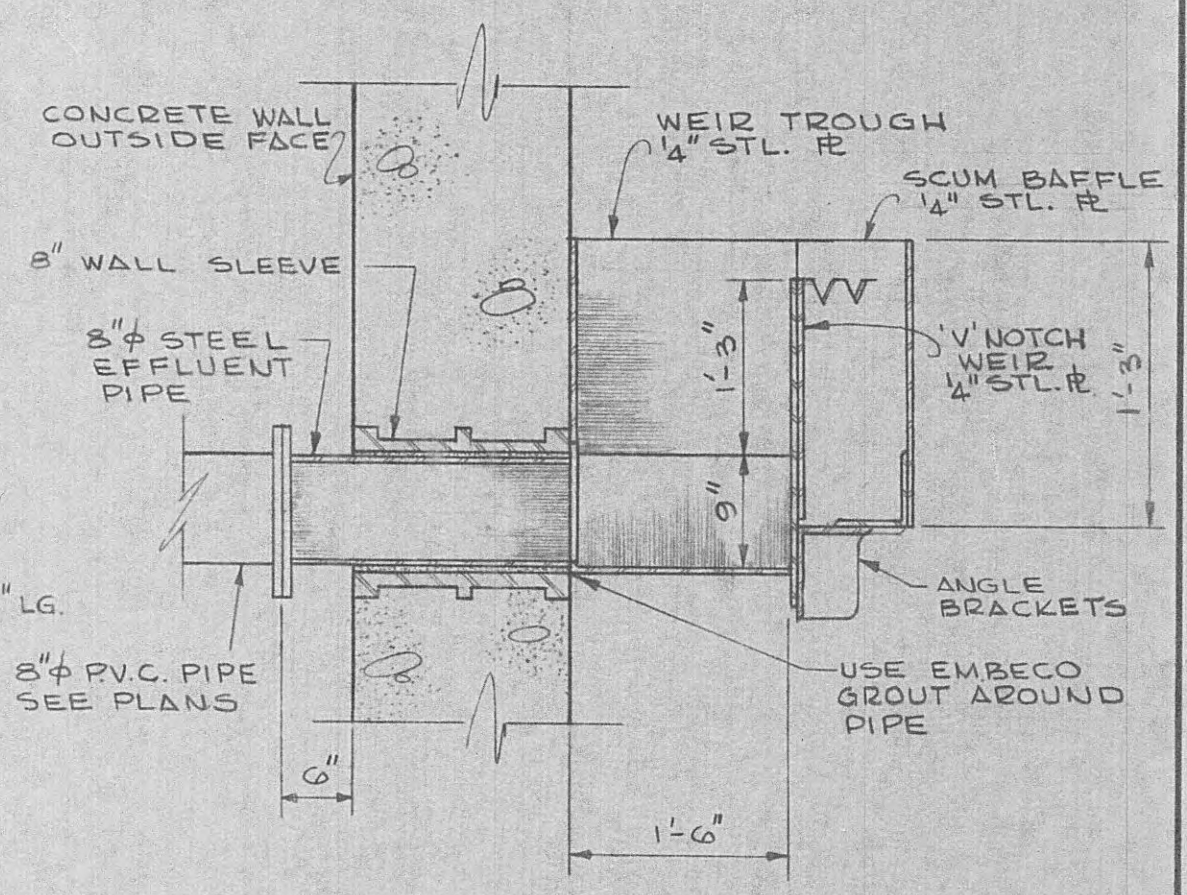
PLAN
SCALE: $\frac{1}{2}$ " = 1'-0"



SECTION A-A
SCALE: $\frac{3}{4}$ " = 1'-0"



SECTION B-B
SCALE: $\frac{1}{2}$ " = 1'-0"

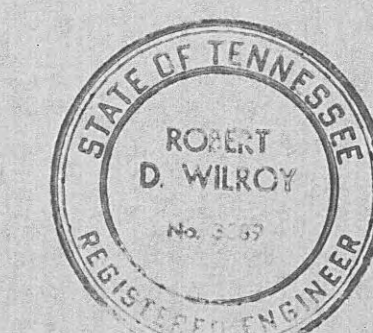


SECTION C-C
SCALE: $\frac{3}{4}$ " = 1'-0"

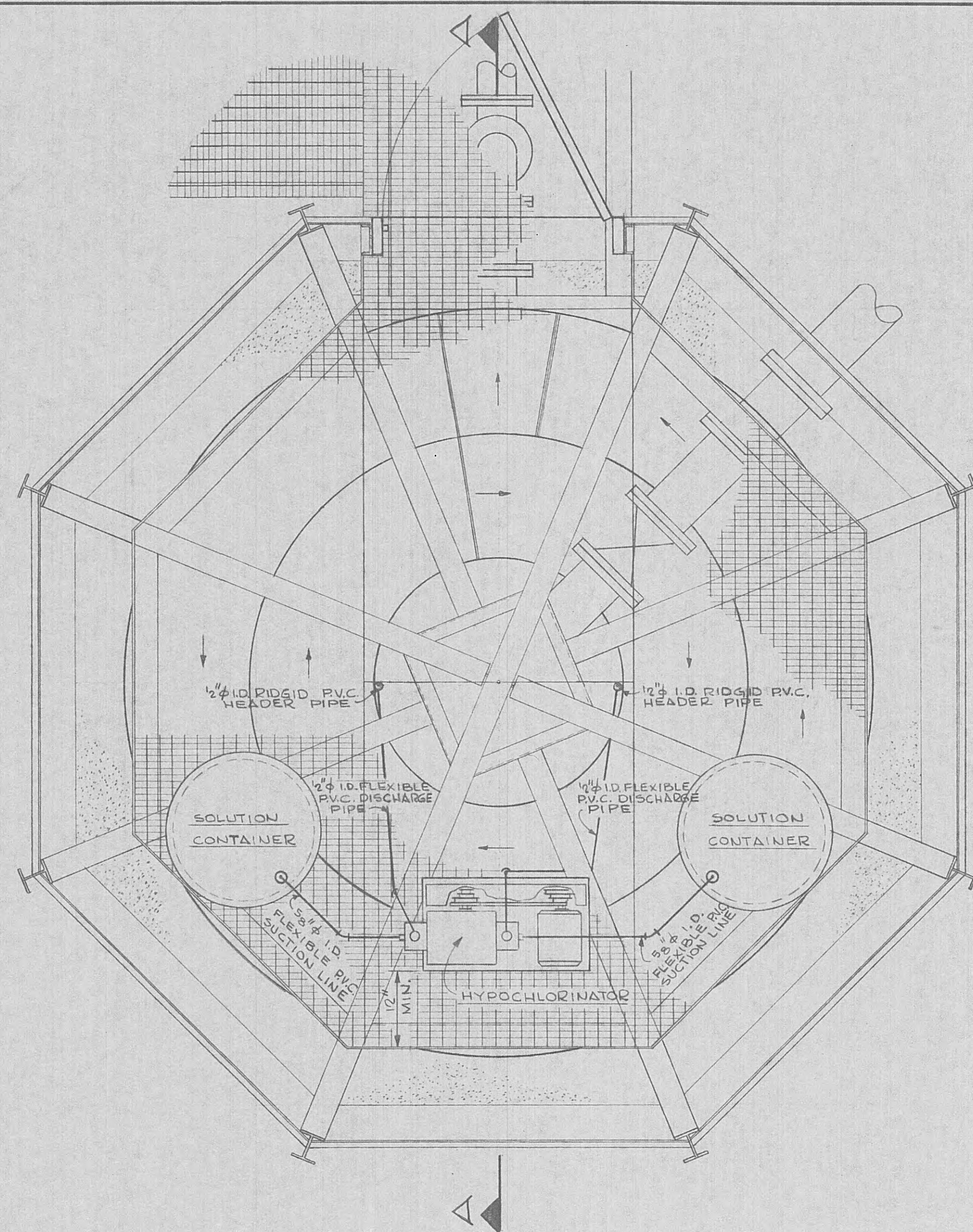
WEIR DETAILS FOR AERATION BASIN

SCALE:

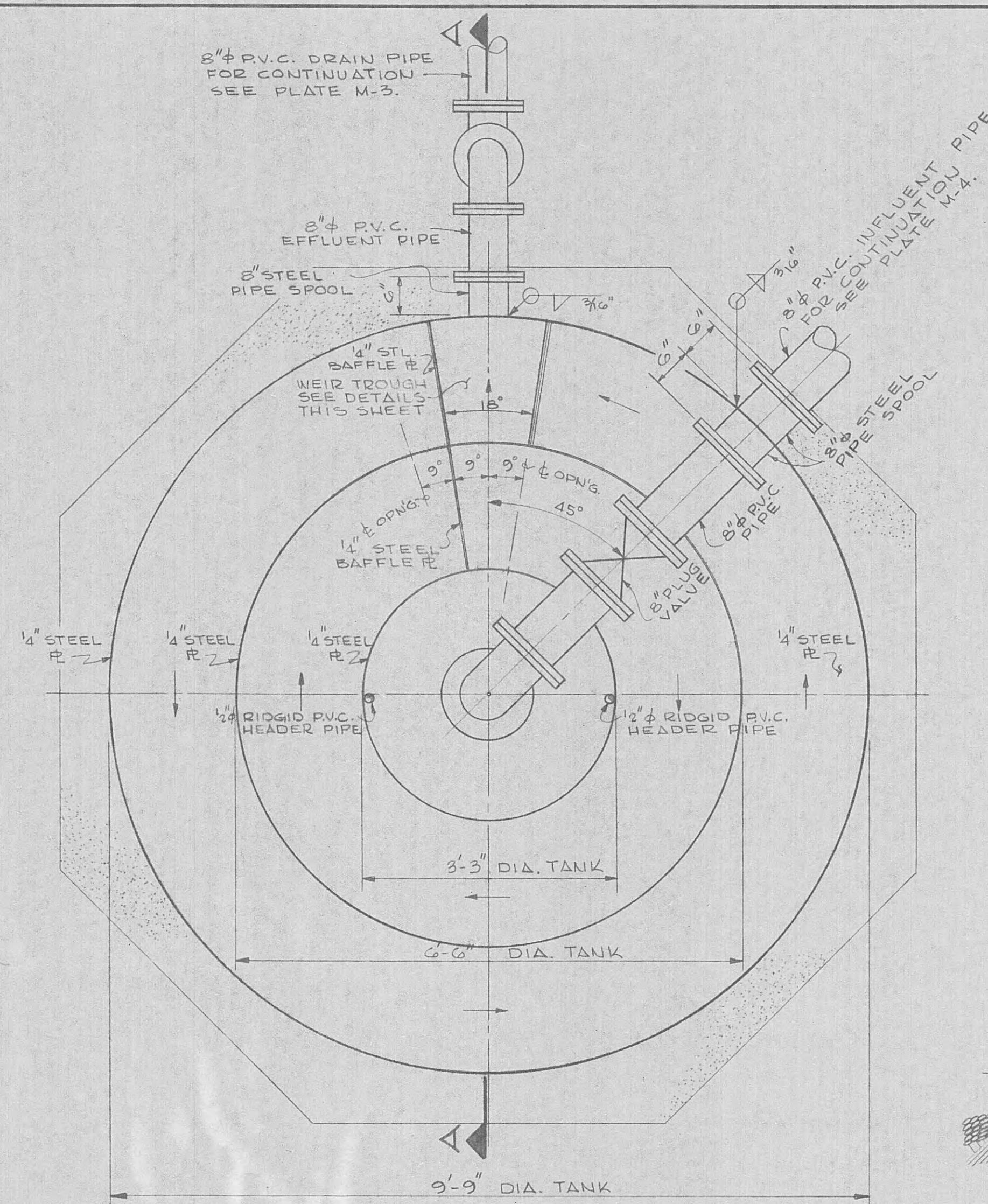
AS NOTED



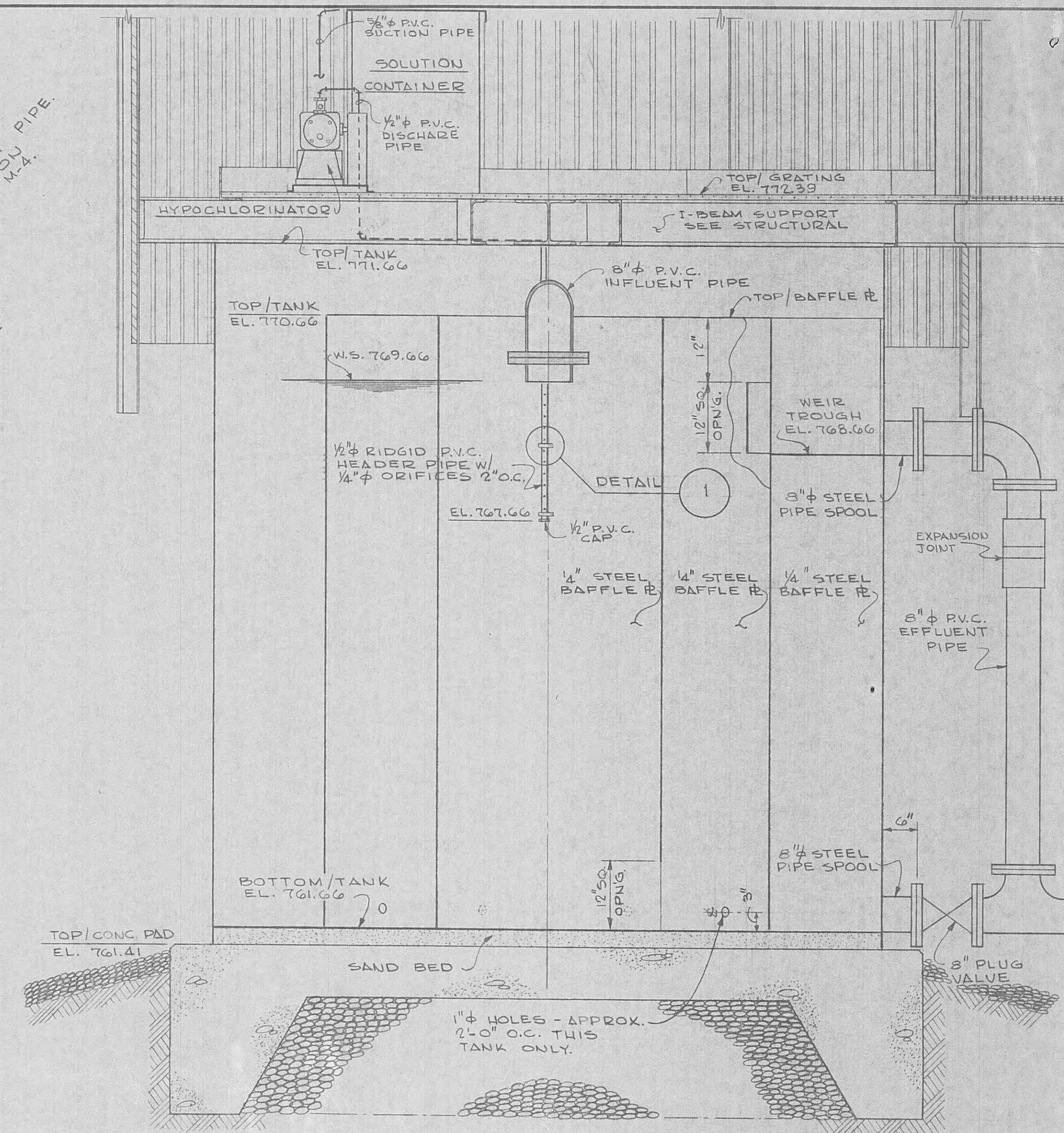
PILOT WASTEWATER TREATMENT PLANT FOR HARRIMAN UTILITY BOARD TENNESSEE	
BLACK, CROW AND EIDNESS, INC. ATLANTA ENGINEERS GAINESVILLE FLORIDA	
DRAWN BY: MURROW	DATE: JUNE '69
CHECKED BY: TDR	FILE NO. 484-63-1
SCALE: AS SHOWN	
NO.	DESCRIPTION
REVISIONS	
PLATE NO. M-11	SHEET NO. 21
OF 13	OF 26



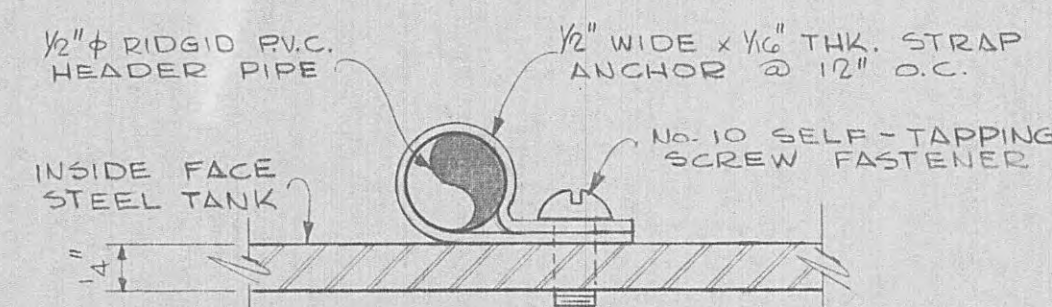
PLAN AT FLOOR LEVEL
SCALE: 3/4" = 1'-0"



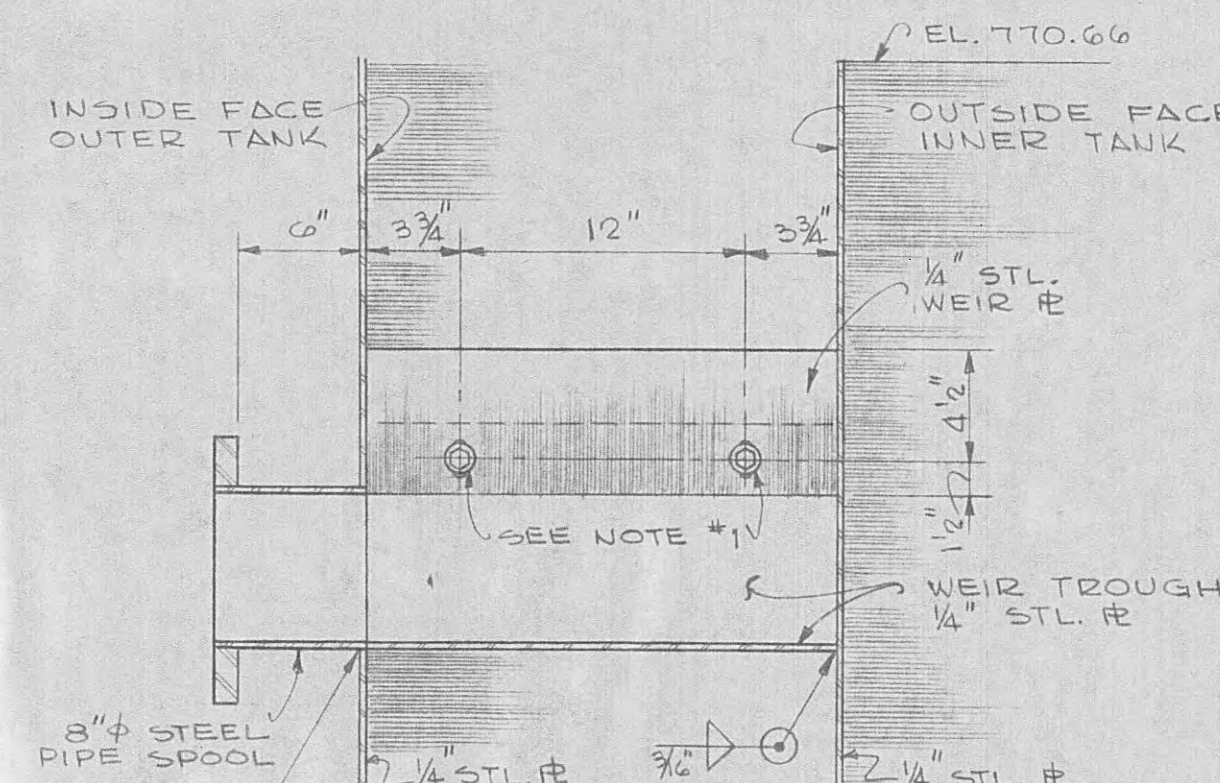
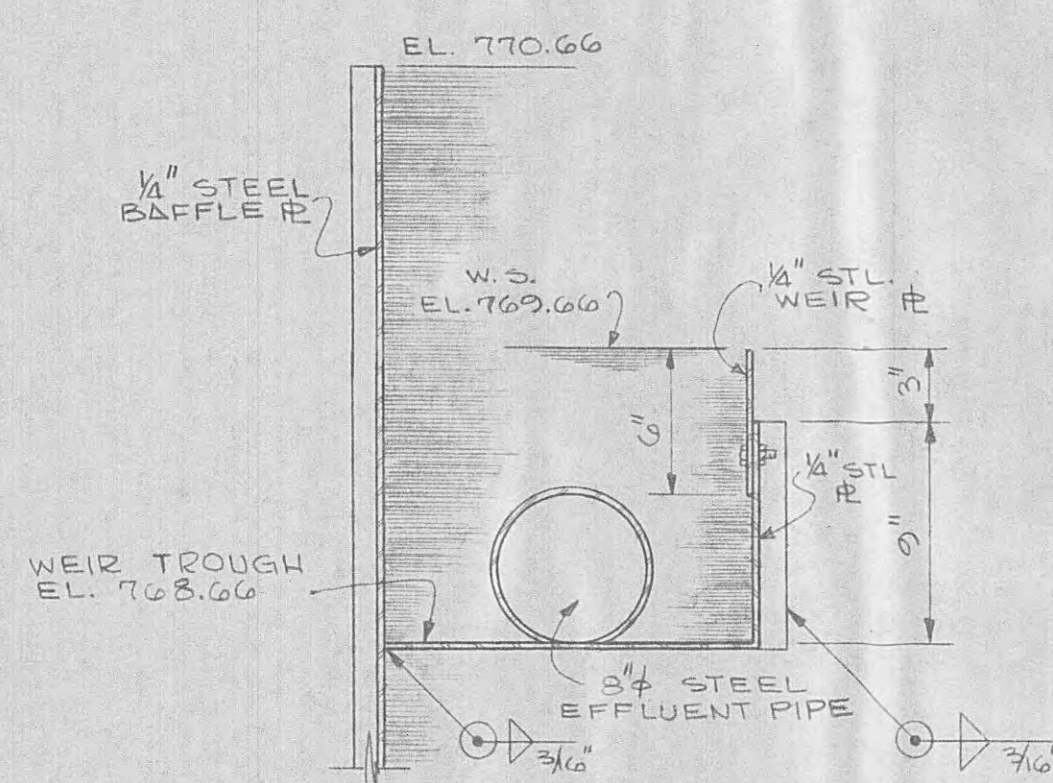
PLAN AT TOP OF TANKS
SCALE: 3/4" = 1'-0"



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



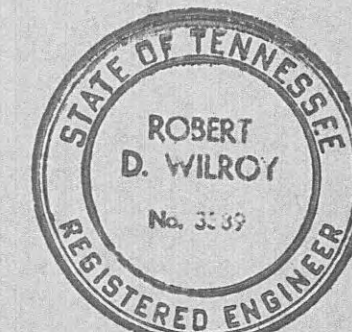
DETAIL 1
SCALE: FULL SIZE



ELEVATION OF WEIR TROUGH AT EFFLUENT OPENING
ELEVATION OF WEIR TROUGH AT WEIR PLATE

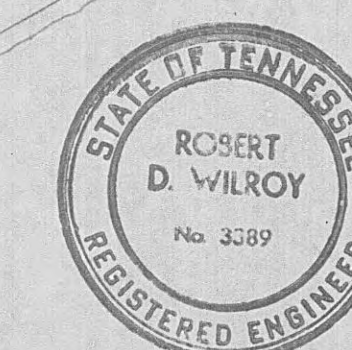
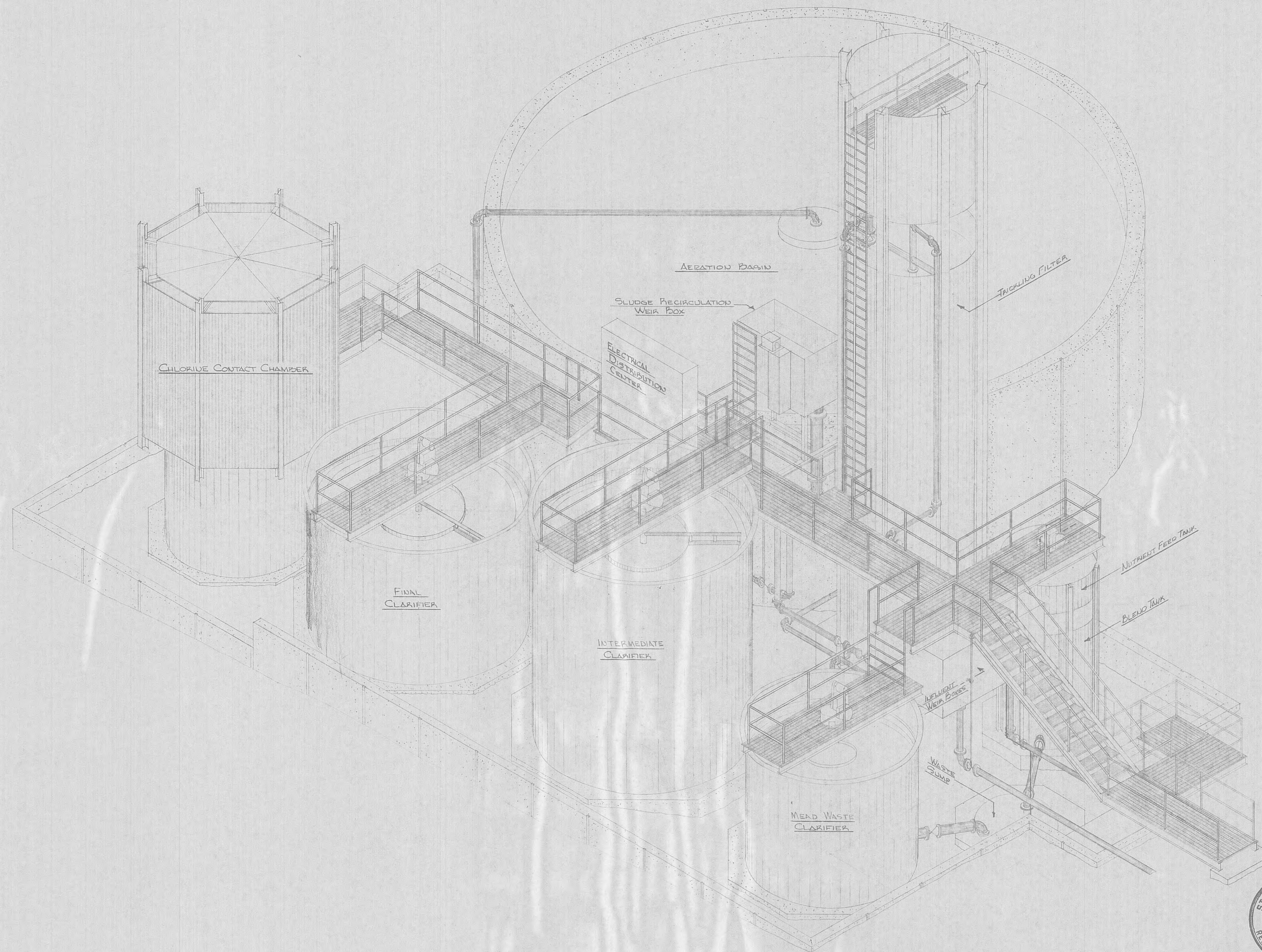
WEIR TROUGH DETAILS
SCALE: 1 1/2" = 1'-0"

NOTES:
1. 1/2" ϕ x 1 1/2" LG. BOLT W/ NUTS AND WASHERS PROVIDE 3/8" ϕ x 1 1/2" LG. ADJUSTMENT SLOT AT EACH CONNECTION.



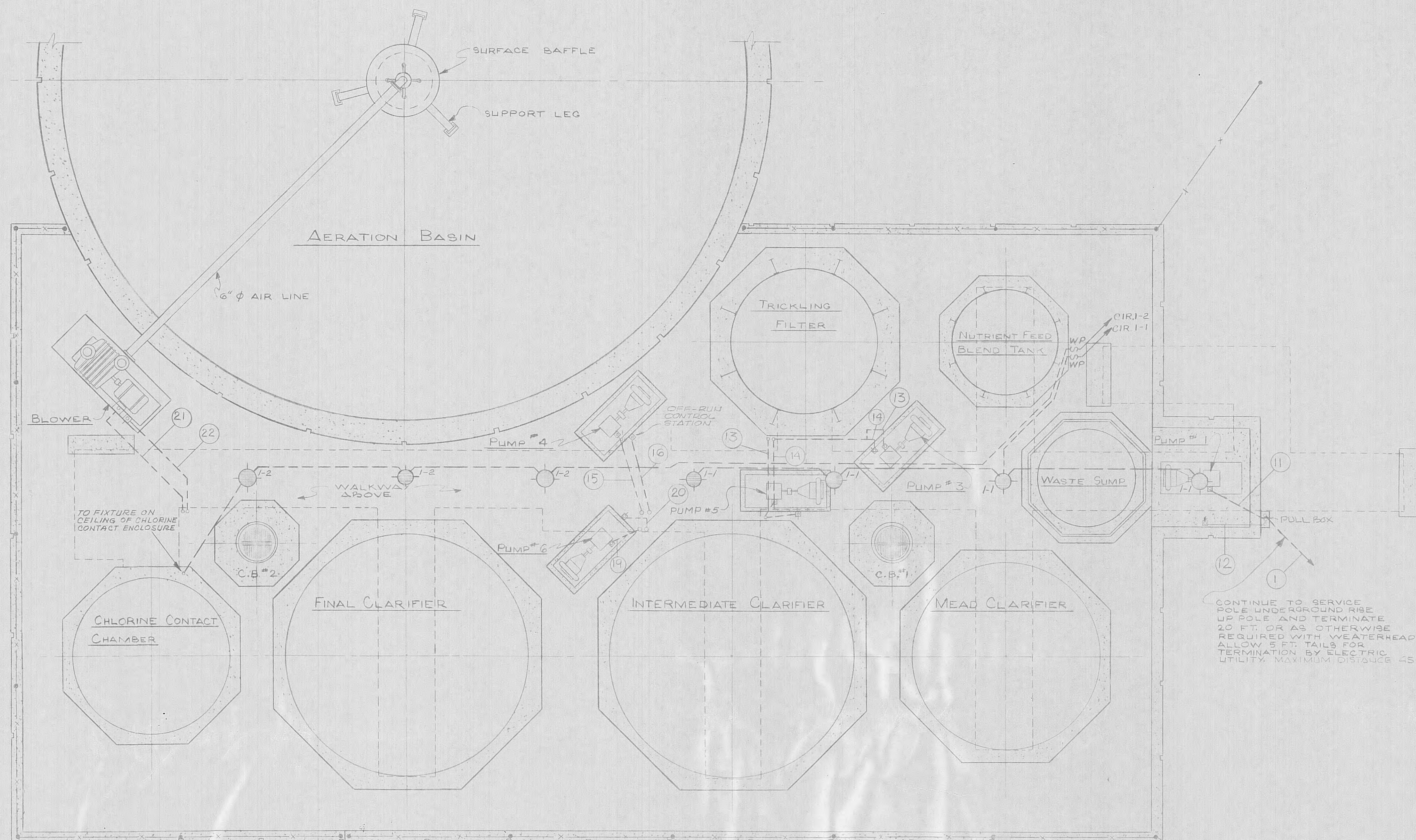
PILOT WASTEWATER TREATMENT PLANT
FOR
HARRIMAN UTILITY BOARD
TENNESSEE
BLACK, CROW AND EIDNESS, INC.
ATLANTA ENGINEERS GEORGIA
GAINESVILLE FLORIDA
DRAWN BY: MERRLOW DATE: JUNE '69
CHECKED BY: TDR FILE NO. 484-69-1

REVISIONS			SCALE: AS SHOWN	
NO.	DESCRIPTION	DATE	PLATE NO.	SHEET NO.
1	CHLORINE CONTACT CHAMBER DETAILS		M-12	22
			OF 13	OF 26



PILOT WASTEWATER TREATMENT PLANT FOR HARRIMAN UTILITY BOARD HARRIMAN, TENNESSEE		
BLACK, CROW AND EIDNESS, INC. ATLANTA, GEORGIA GAINESVILLE, FLORIDA		
DRAWN BY: EDWARDS	DATE: JUNE '60	FILE NO.: 404-621
CHECKED BY: TDR	DATE: JUNE '60	FILE NO.: 404-621
SCALE: 1/4" = 1'-0"		
PLANT ISOMETRIC		PLATE NO. M-13 SHEET NO. 25 OF 13 OF 26

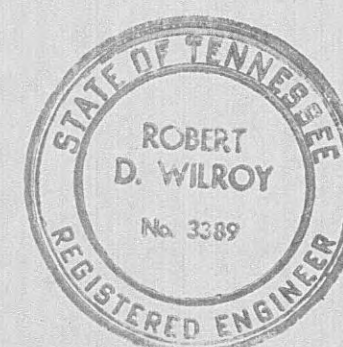
NO.	DESCRIPTION	DATE
REVISIONS		



NOTE: FIXTURES INSTALLED UNDER WALKWAY SHALL BE FYLE-NATIONAL 200 WATT AO SERIES NO. AORF-22110.

WIRING DIAGRAM BELOW OPERATING PLATFORM
SCALE 1/4"=1'-0"

- ELECTRICAL LEGEND**
- CIRCUIT BREAKER (SCHEMATIC)
 - MOTOR CONTROLLER (SCHEMATIC)
 - RED "RUN" INDICATING LIGHT (SCHEMATIC)
 - OFF-RUN CONTROL SWITCH (SCHEMATIC)
 - OFF-RUN CONTROL AT MOTOR
 - INCANDESCENT LIGHTING FIXTURE
 - WP—○— WEATHERPROOF SINGLE CONVENIENCE OUTLET WITH GROUND.
 - — — ELECTRICAL CONDUIT.

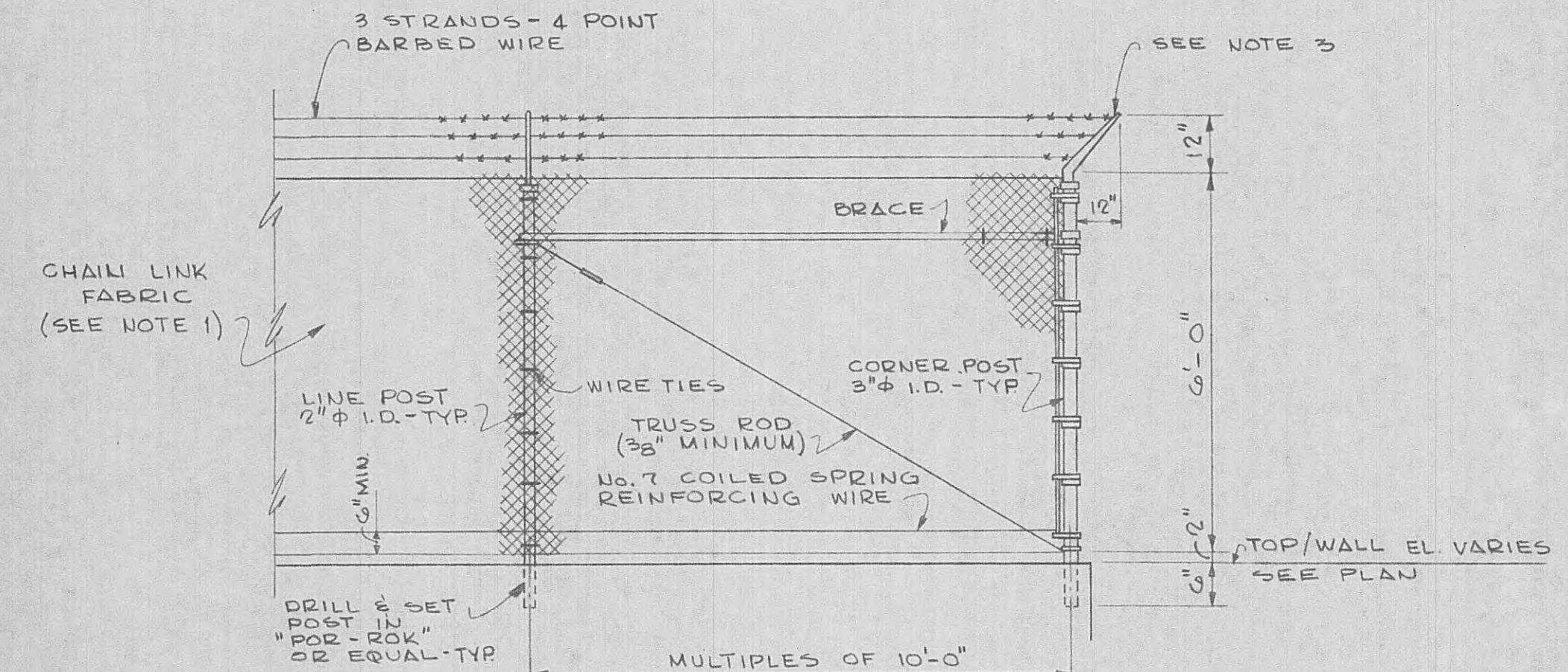
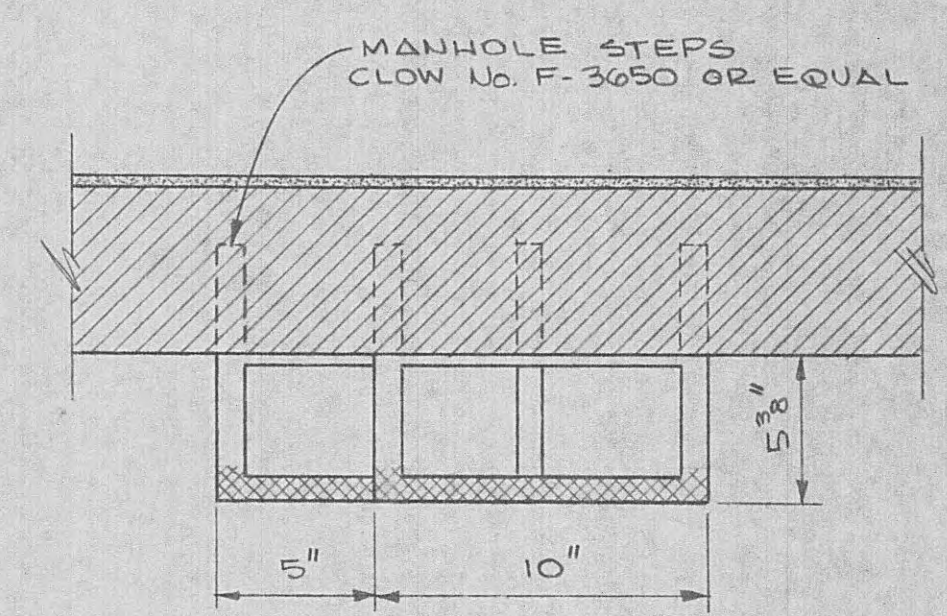
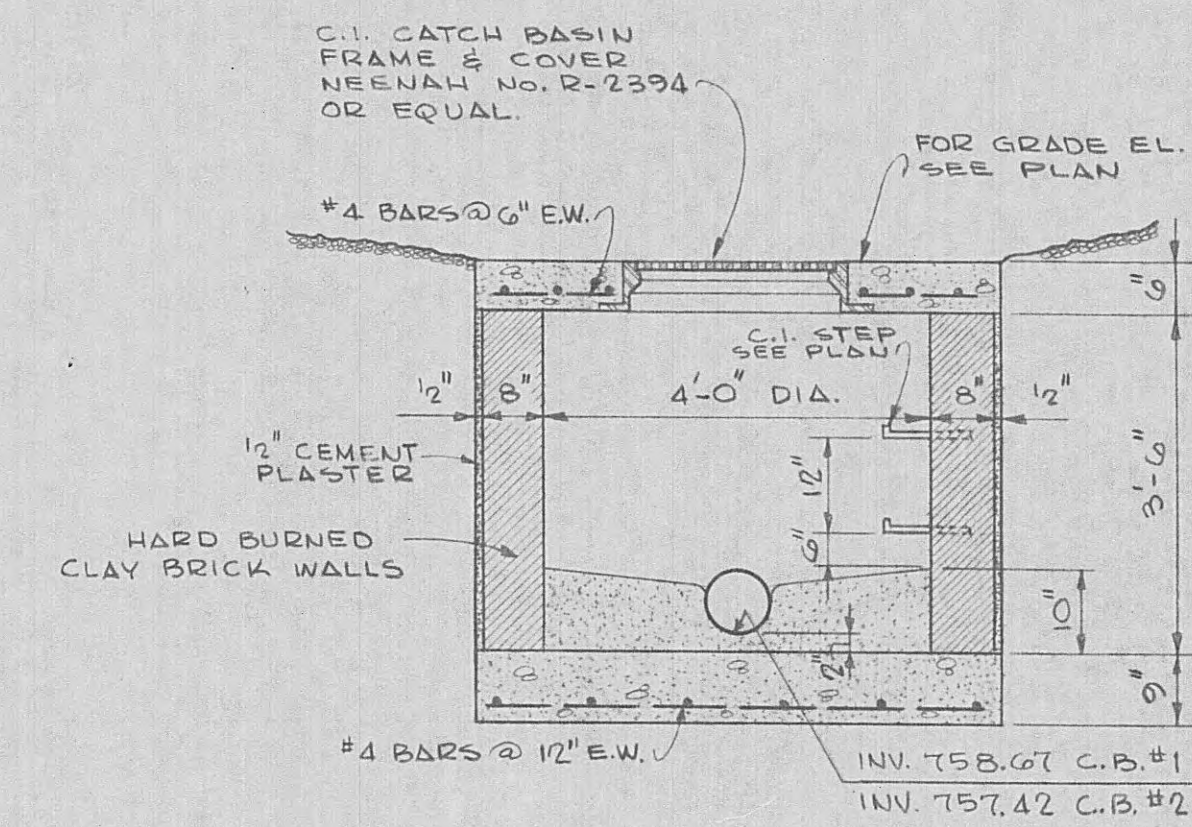
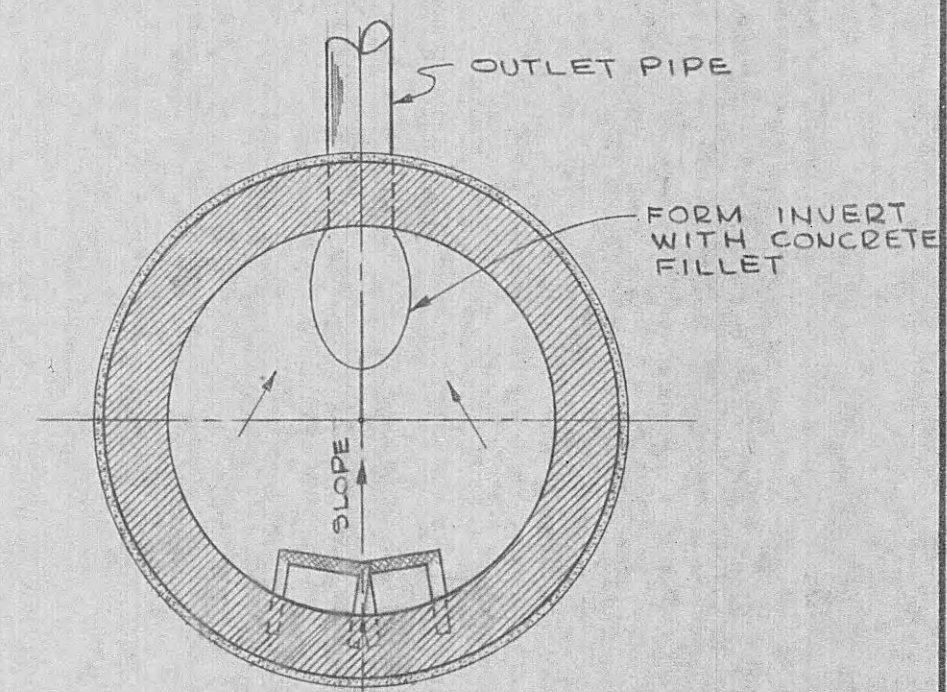
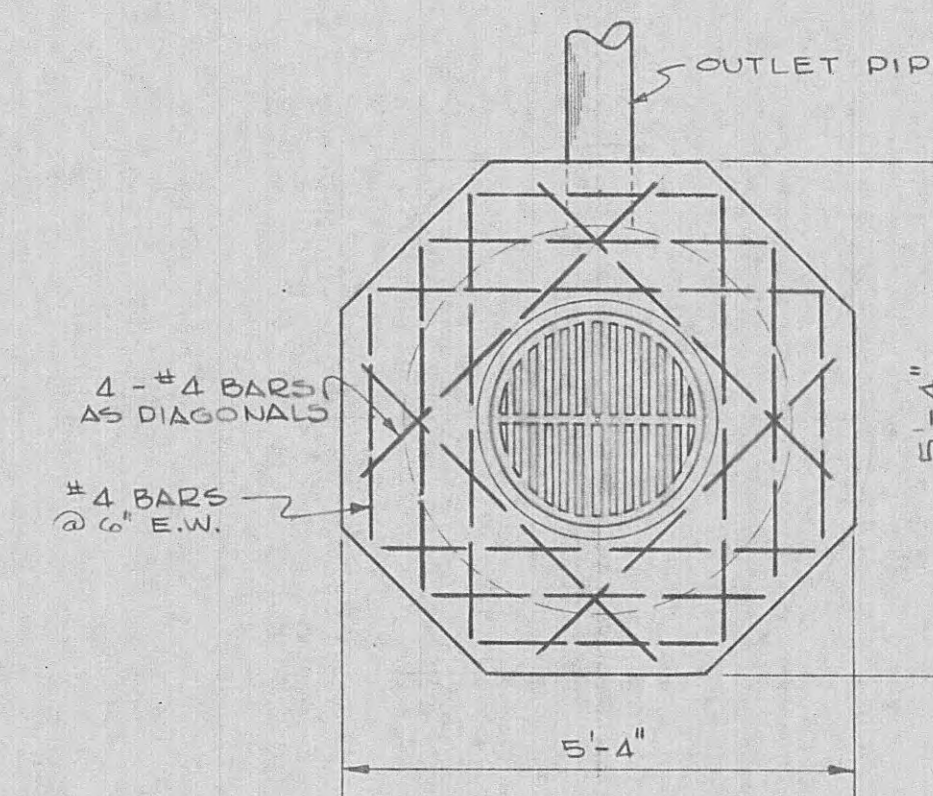
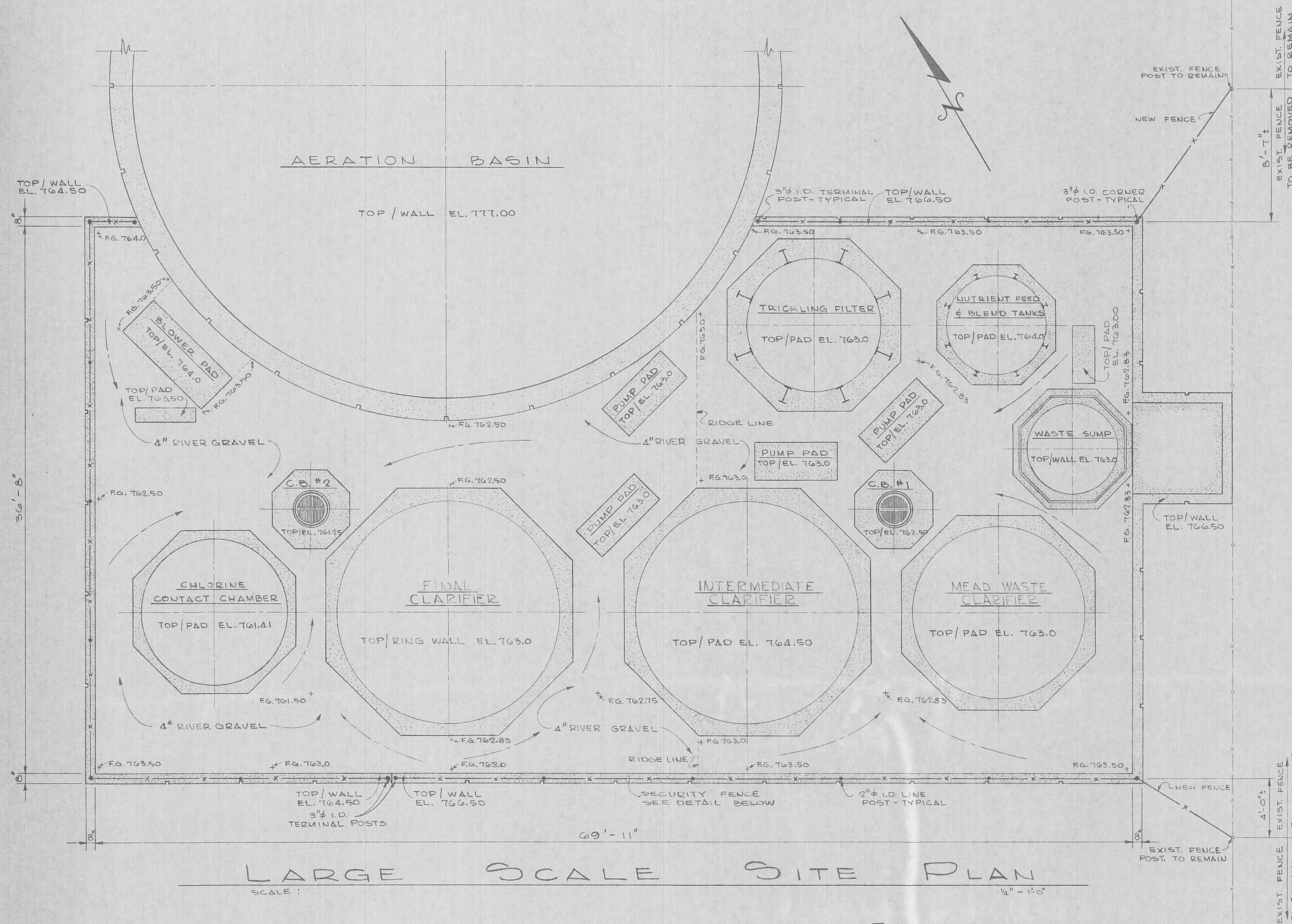


PILOT WASTEWATER TREATMENT PLANT
FOR
HARRIMAN UTILITY BOARD
Tennessee

BLACK, CROW AND EIDNESS, INC.
ATLANTA, GEORGIA
GAINESVILLE, FLORIDA

DRAWN BY: BORELLA DATE: JUNE '65
CHECKED BY: FILE NO.: 484-60-1

REVISIONS		DATE	DESCRIPTION
NO.	DESCRIPTION	DATE	REVISIONS
1	WIRING DIAGRAM BELOW OPERATING PLATFORM	E-1	24
2			OF 26

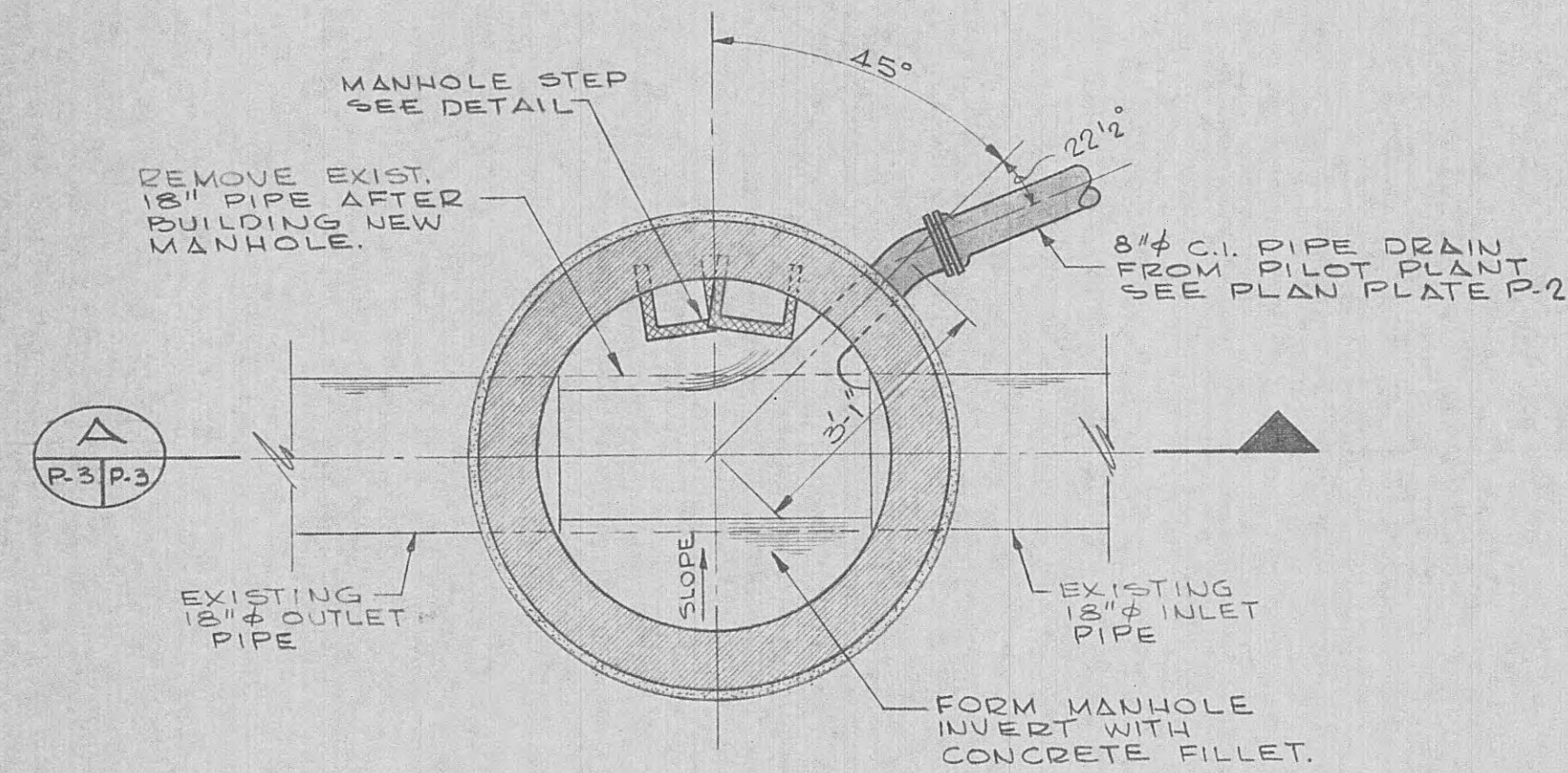


- FENCE NOTES**
1. ALL FABRIC TO BE #6 GAGE WIRE (0.192") WOVEN IN A 2" MESH. TOP AND BOTTOM EDGES TO BE TWISTED AND BARBED.
 2. HEIGHT OF FENCE TO BE 6'-0" WITH 3 STRANDS OF 4 POINT BARBED WIRE SECURELY ATTACHED TO SINGLE EXTENSION ARMS ALONG TOP OF FENCE, TOP STRAND TO BE 12" ABOVE.
 3. SINGLE EXTENSION ARM SHALL POINT OUTWARD AT AN ANGLE OF 45°. ALL EXTENSION ARMS TO BE 1/2 GAGE PRESSED STEEL.
 4. IN EARTH AREA THE CONTRACTOR SHALL PROVIDE NECESSARY GRADING AT LEAST 4" EACH SIDE OF FENCE TO INSURE GRADE LINE MEETING THE REQUIREMENTS FOR A 2" CLEARANCE.

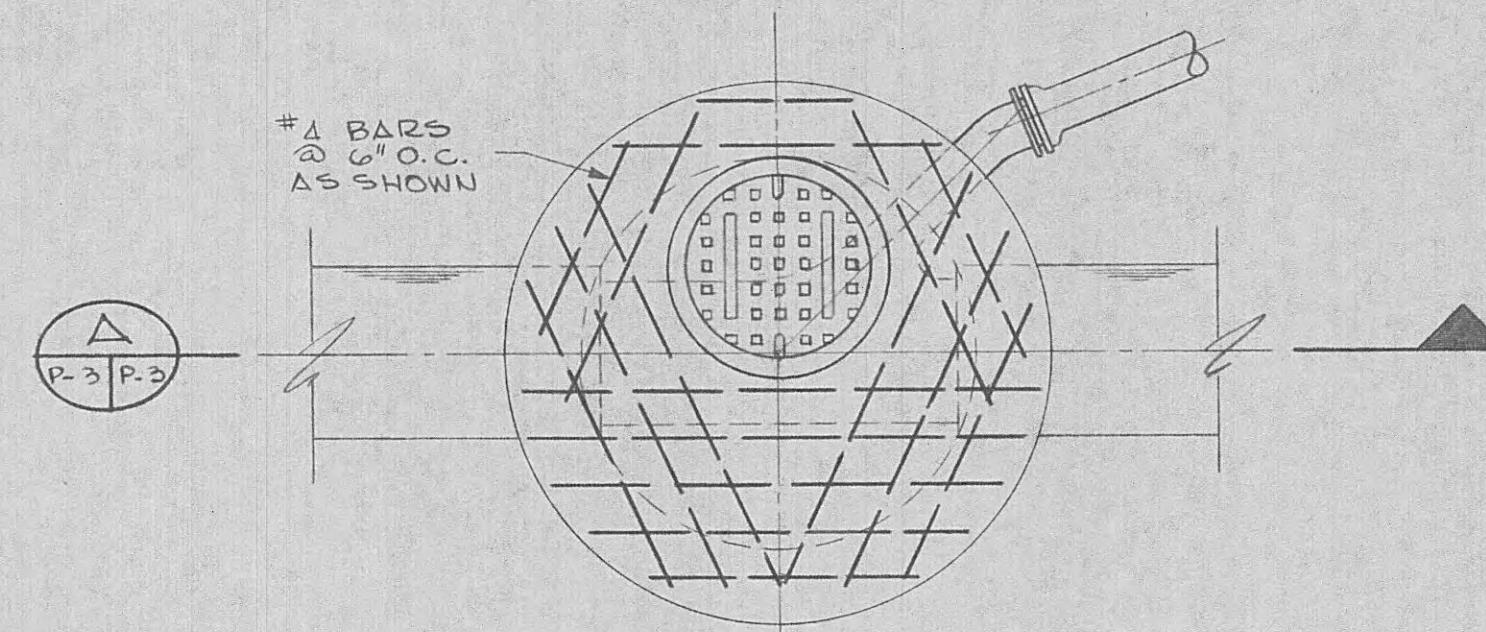


PILOT WASTEWATER TREATMENT PLANT FOR HARRIMAN UTILITY BOARD	
TENNESSEE	
BLACK, CROW AND EIDNESS, INC. ENGINEERS	
ATLANTA GAINESVILLE GEORGIA FLORIDA	
DRAWN BY: MEARROW	DATE: JUNE '69
CHECKED BY: TDR	FILE NO.: 484-69-1
SCALE: AS SHOWN	
LARGE SCALE SITE PLAN & DETAILS	PLATE NO. 3 OF 1 SHEET NO. 3 OF 26

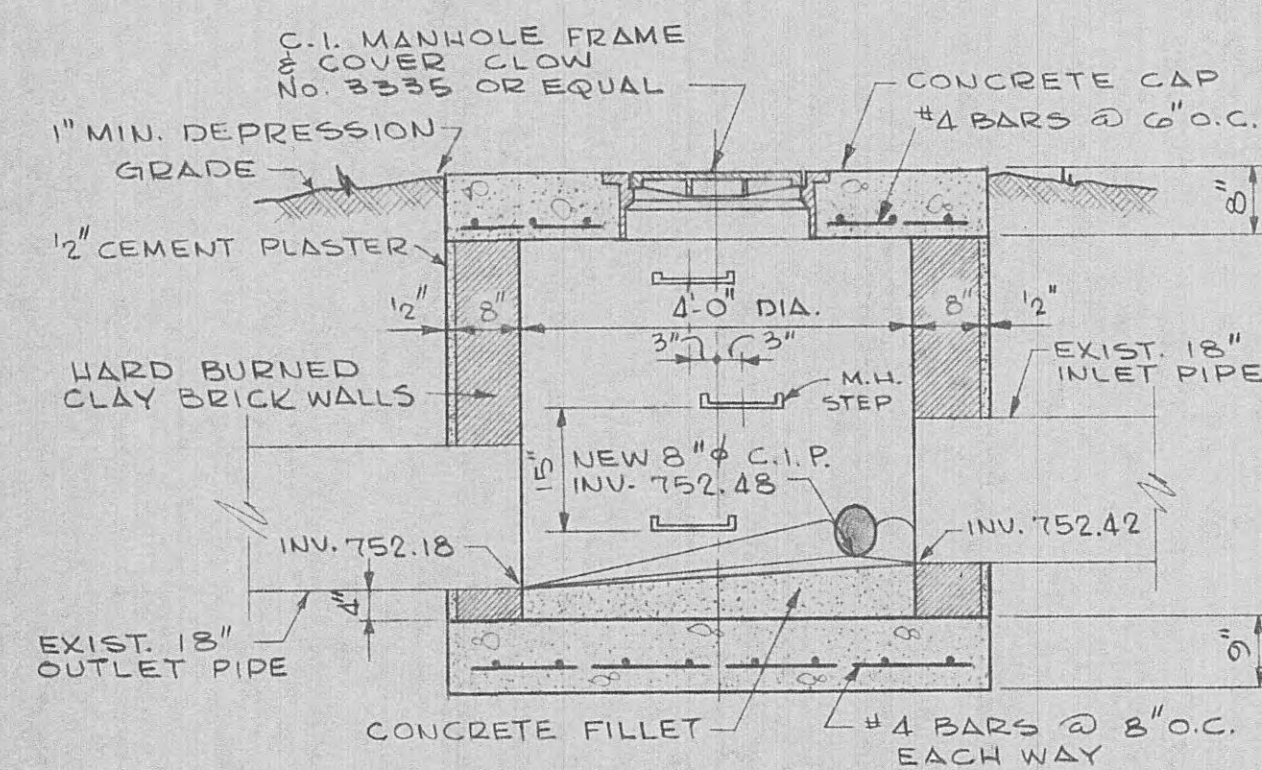
NO.	DESCRIPTION	DATE
	REVISIONS	



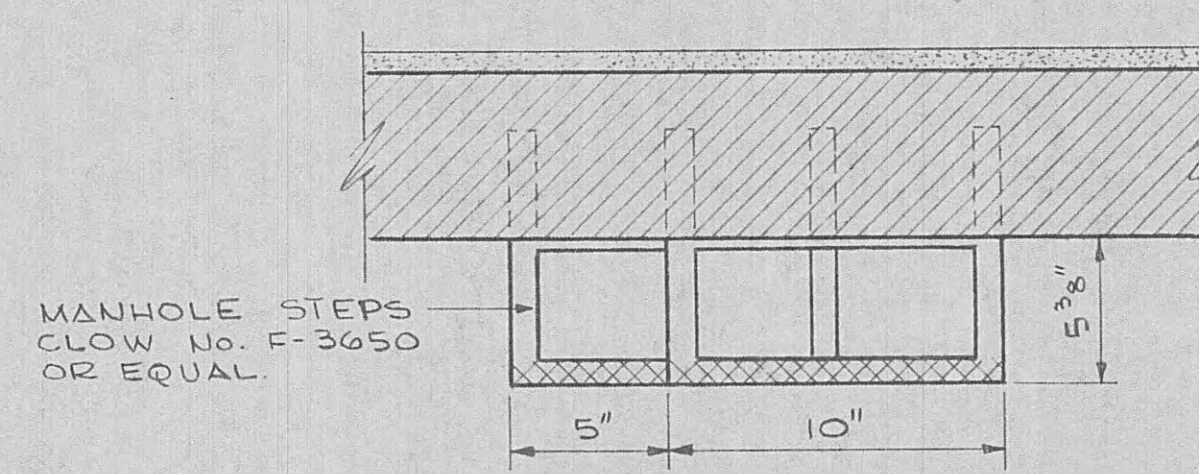
PLAN BELOW CORBEL



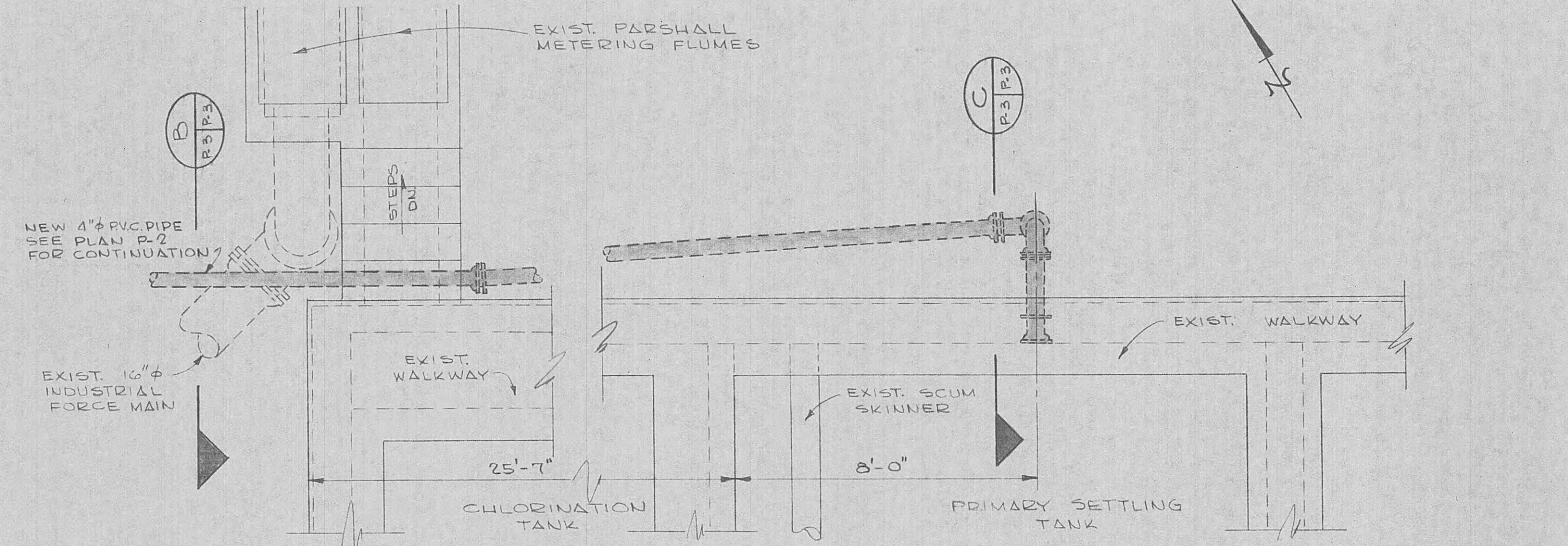
PLAN



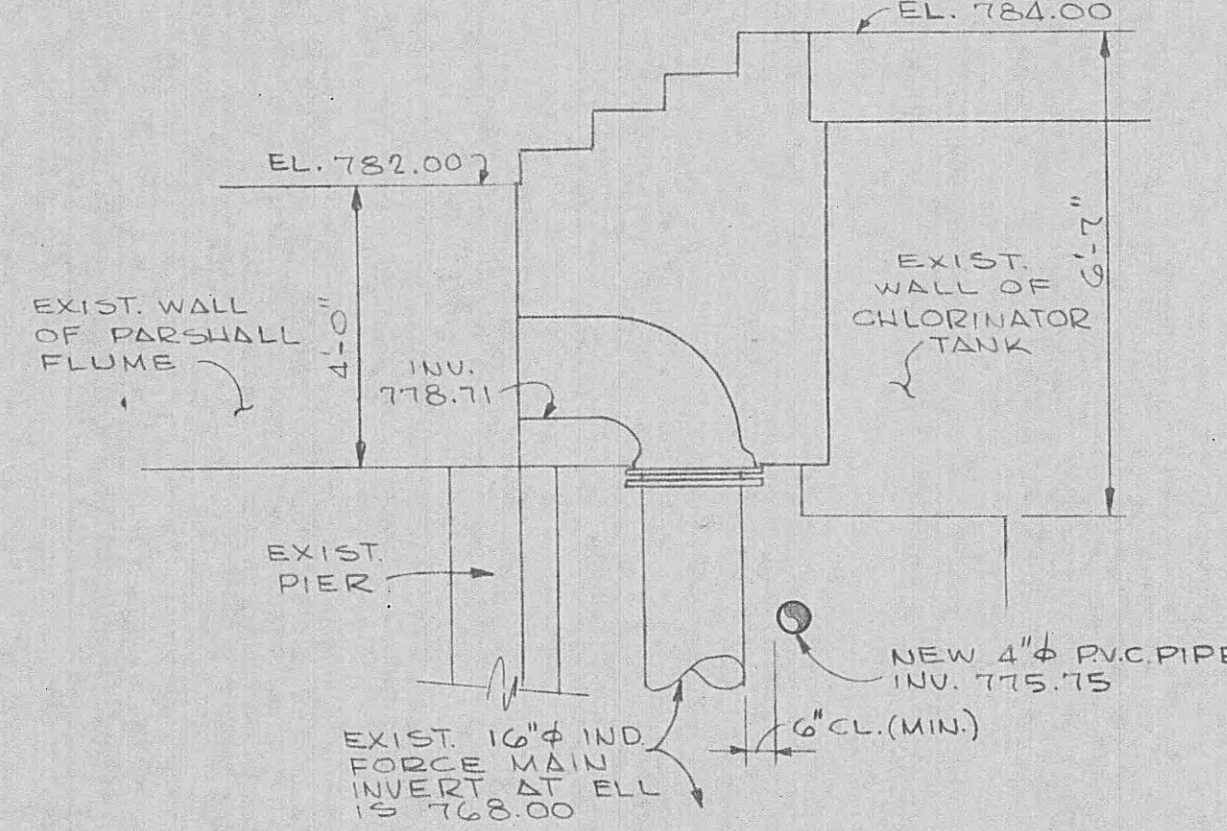
SECTION



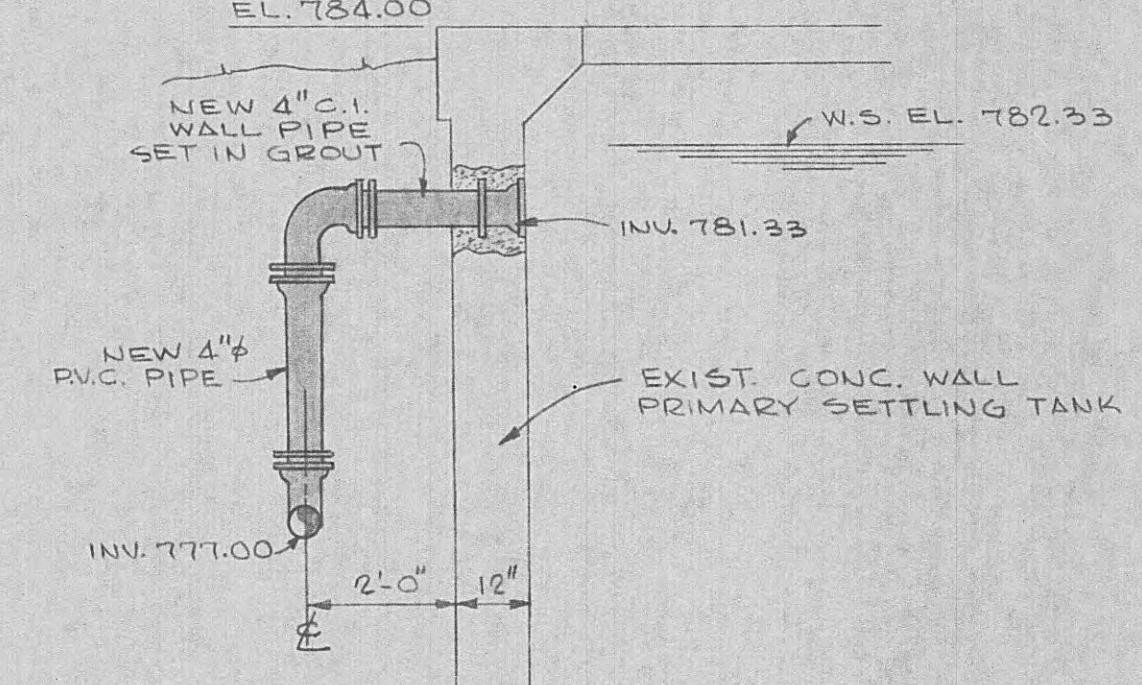
MANHOLE STEP DETAIL



PLAN



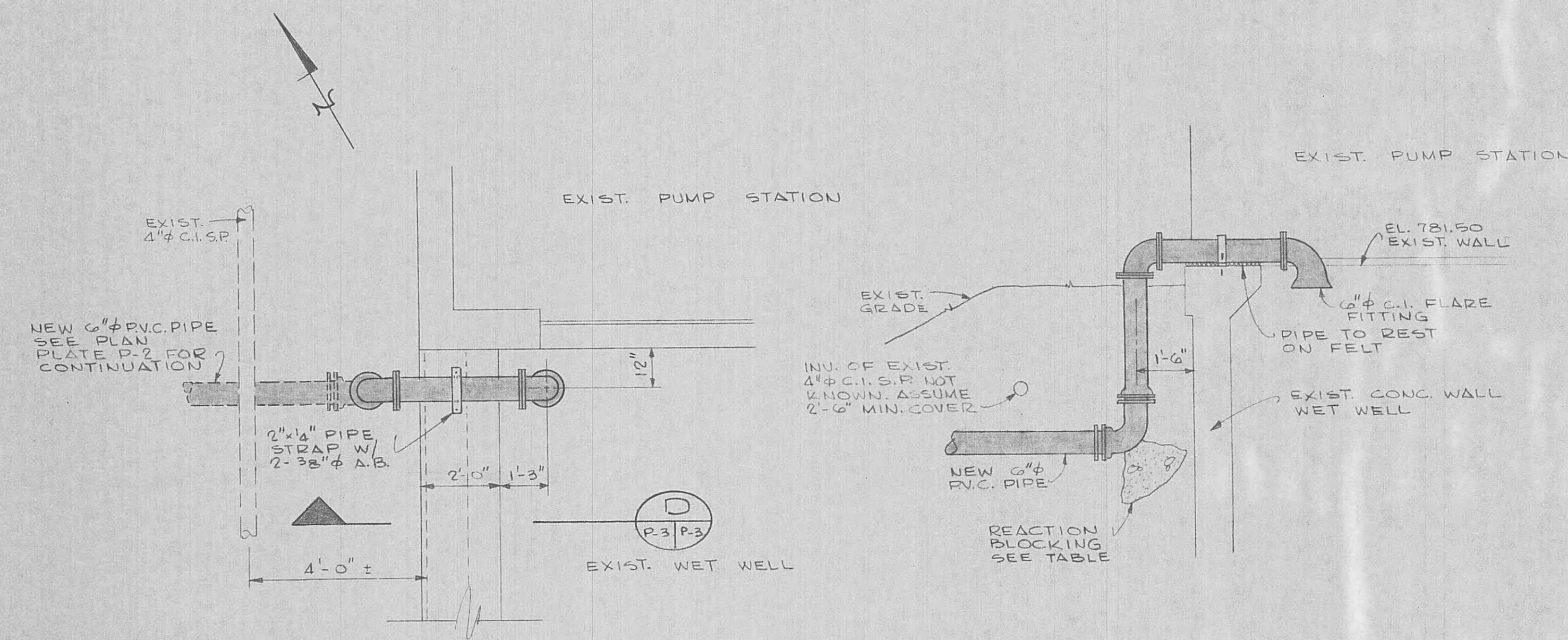
SECTION



SECTION

MANHOLE DETAILS

CLARIFIED SEWAGE TAP DETAIL



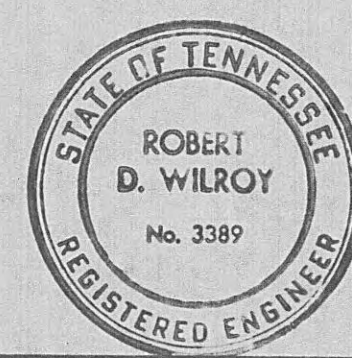
PLAN

SECTION

RETURN WASTE LINE DISCHARGE DETAIL

BEARING AREA TABLE (SQUARE FEET)			
PIPE SIZE	90° BEND	45° BEND	TEE
2" x 4"	1.6	1.0	1.6
6"	3.6	2.0	3.6

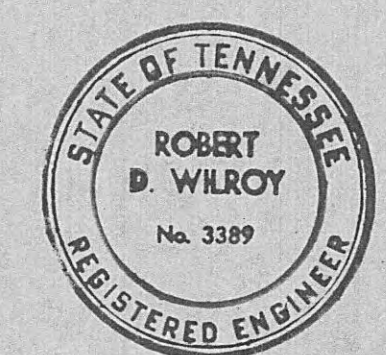
THE FIGURES IN THIS TABLE ARE BASED ON 3000 POUNDS PER SQUARE FOOT SOIL BEARING AGAINST UNDISTURBED TRENCH WALL AND ARE TO REPRESENT THE MINIMUM VERTICAL PROJECTED AREA OF THE REACTION BLOCK IN A PLANE PERPENDICULAR TO A LINE BISECTING THE INCLUDED ANGLE OF THE FITTING.



PLOT WASTEWATER TREATMENT PLANT FOR HARRIMAN UTILITY BOARD TENNESSEE	
BLACK, CROW AND EIDNESS, INC. ATLANTA GAINESVILLE ENGINEERS GEORGIA FLORIDA	
DRAWN BY: MERRAW	DATE: JUNE '60
CHECKED BY: TDR	FILE NO.: 484-65-1
SCALE: AS SHOWN	
MISCELLANEOUS DETAILS	PLATE NO. P-4 SHEET NO. 4 OF 26

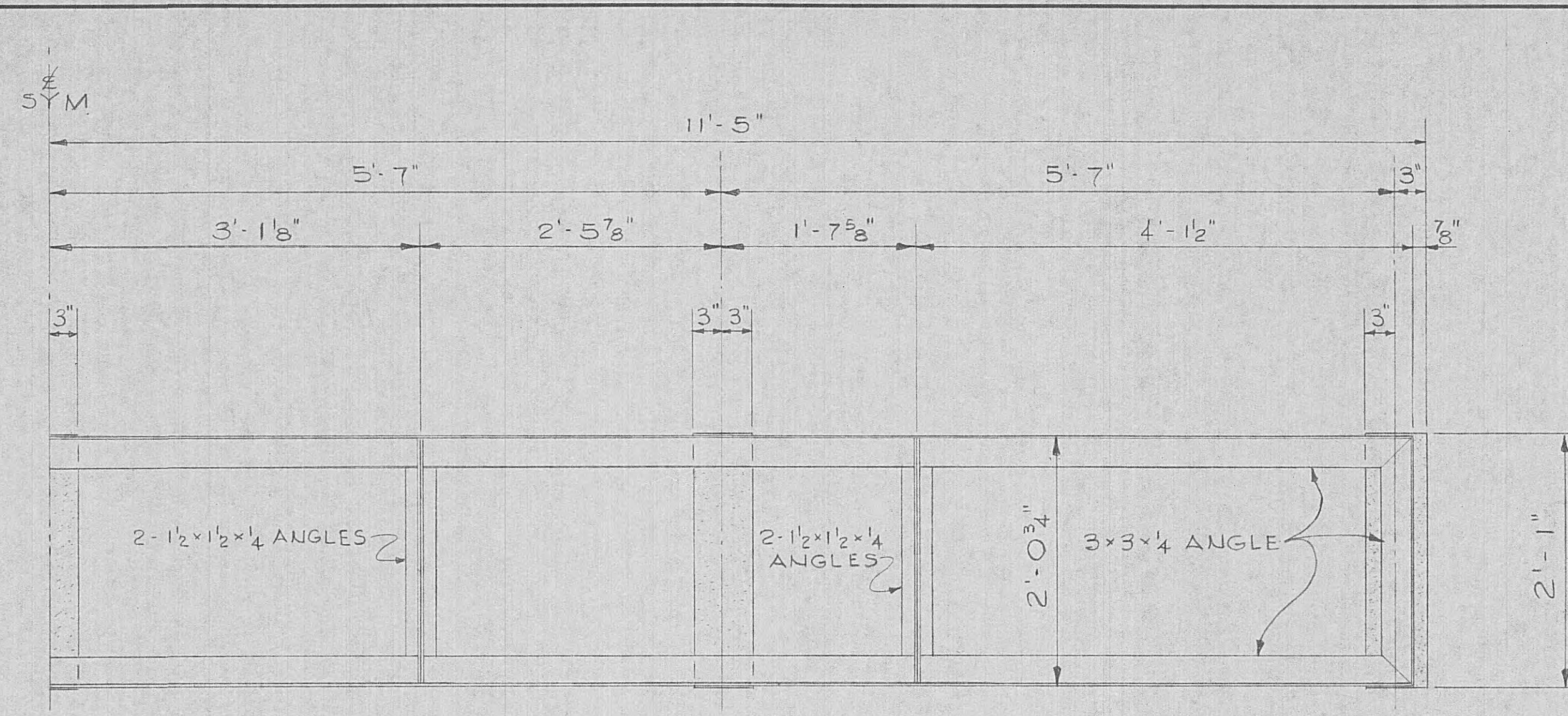
NO.	DESCRIPTION	DATE

1. CONCRETE MIX DESIGN & VERIFICATION TESTS SHALL BE CONDUCTED AT CONTRACTORS EXPENSE BY AN APPROVED INDEPENDENT LABORATORY IN ACCORDANCE WITH ACI STANDARD G13-54. ALL CONCRETE SHALL BE 3000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS
2. MIX DESIGN AND VERIFICATION TESTS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL.
3. REINFORCING STEEL SHALL BE DEFORMED BARS MEETING ASTM A-305-567, NEW RILLIT STEEL OR RAIL STEEL CONFORMING TO ASTM STANDARD A615. MIN. YIELD STRENGTH SHALL BE 60,000 P.S.I.
4. ALL REINFORCING STEEL SHALL BE LAPPED 32 BAR DIAMETERS.
5. AT WALL INTERSECTIONS, HORIZONTAL BARS SHALL BE PLACED TO PROVIDE A 32 BAR DIAMETER RETURN.
6. ALL WATERSTOPS SHALL BE 8"x8" CONT. STEEL PLATE.
7. ALL REINFORCEMENT SHALL BE PLACED IN ACCORDANCE WITH ACI 318-65 DETAILING MANUAL.
8. NO CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THE DRAWINGS WILL BE PERMITTED WITHOUT ENGINEERS APPROVAL.
9. ALL WALL AND SLAB OPENINGS TO HAVE 2"-5"x3'-0" DIAGONAL BARS EACH SIDE OF OPENING.
10. ALL CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ACI 318-65 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
11. ALL STRUCTURAL STEEL SHALL BE FABRICATED, DESIGNED AND ERRECTED IN ACCORDANCE WITH THE LATEST AISC. "SPECIFICATION FOR THE DESIGN, FABRICATION & ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
12. ALL STRUCTURAL STEEL SHALL MEET THE REQUIREMENTS OF ASTM. A-36.
13. ALL BOLTS SHALL MEET REQUIREMENTS OF ASTM. A 325.
14. UNLESS NOTED OTHERWISE ALL CONNECTIONS SHALL BE FARMED BEAM CONNECTION PER TABLE I OF AISC SPECIFICATIONS.

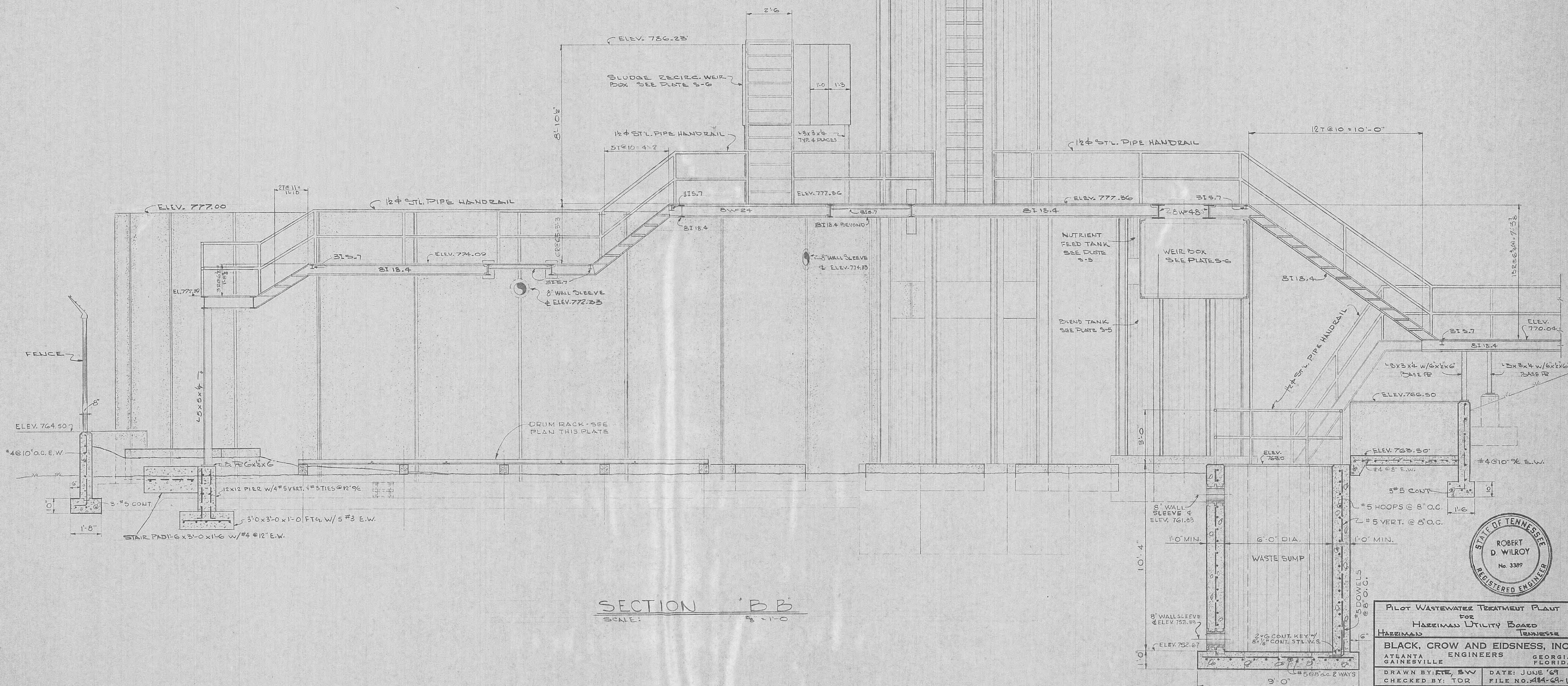


TE	FOUNDATION PLAN	PLATE NO.	SHEET NO.
		S-1	5
		OF 6	OF 26

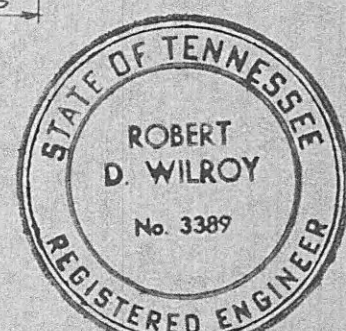
NO.	DESCRIPTION	DATE
REVISIONS		



PLAN OF DRUM RACK
SCALE: 1" = 1'-0"

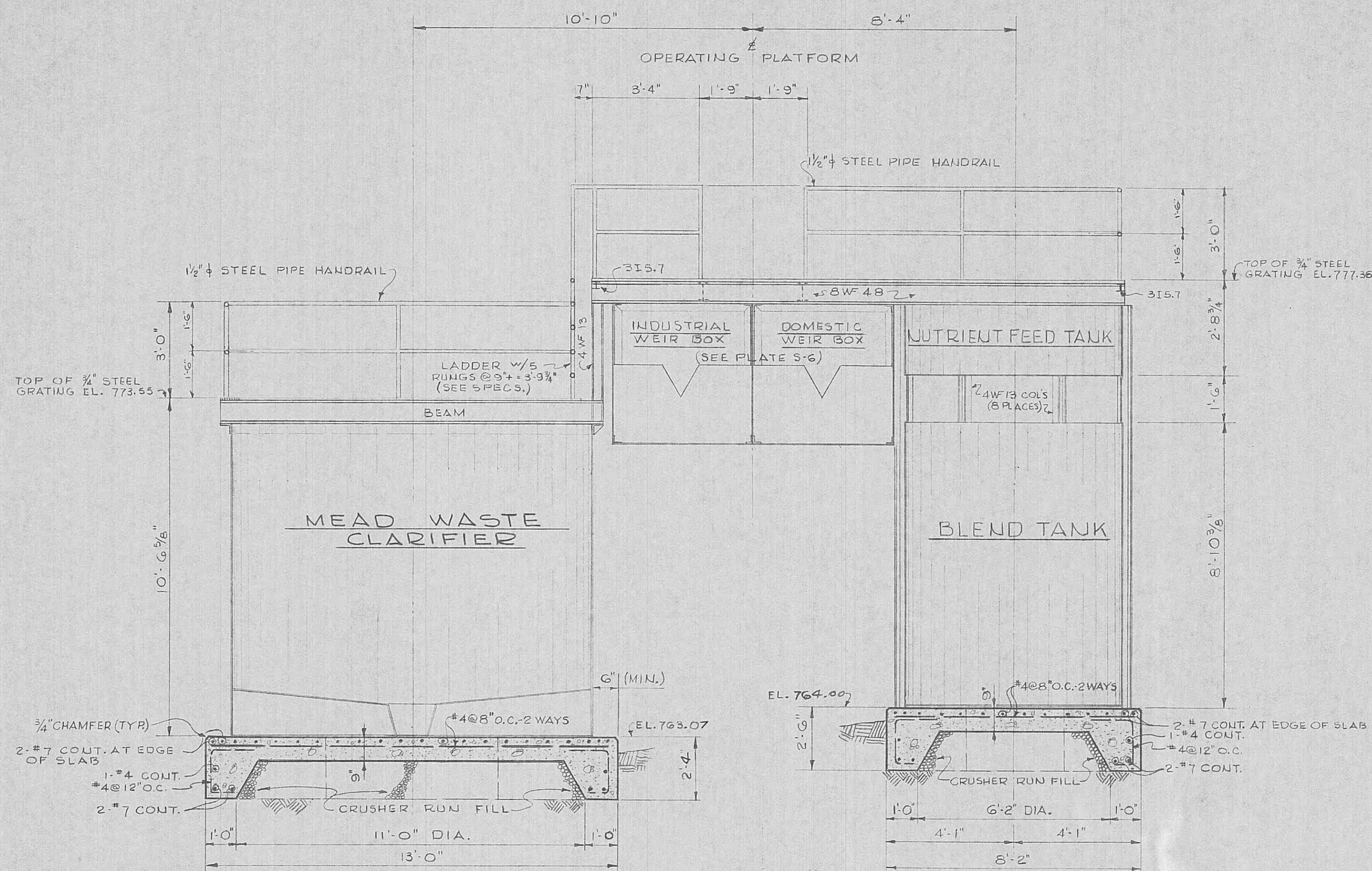


SECTION BB
SCALE: 1" = 1'-0"

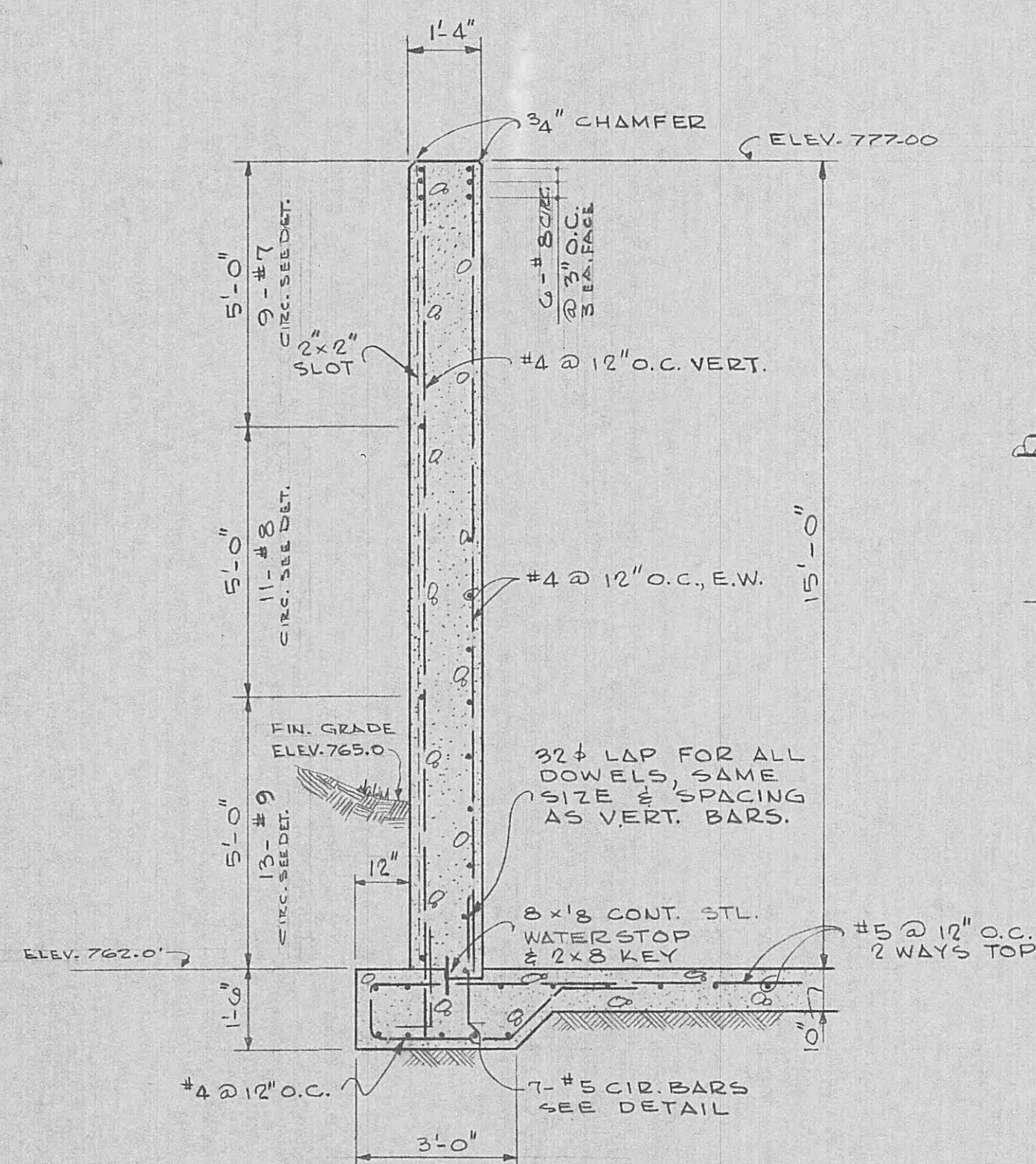


PILOT WASTEWATER TREATMENT PLANT
FOR
HARRIMAN UTILITY BOARD
TENNESSEE
BLACK, CROW AND EIDNESS, INC.
ENGINEERS
ATLANTA GEORGIA
GAINESVILLE FLORIDA
DRAWN BY: ETE, BW DATE: JUNE '69
CHECKED BY: TOR FILE NO. 484-69-1
SCALE: AS SHOWN

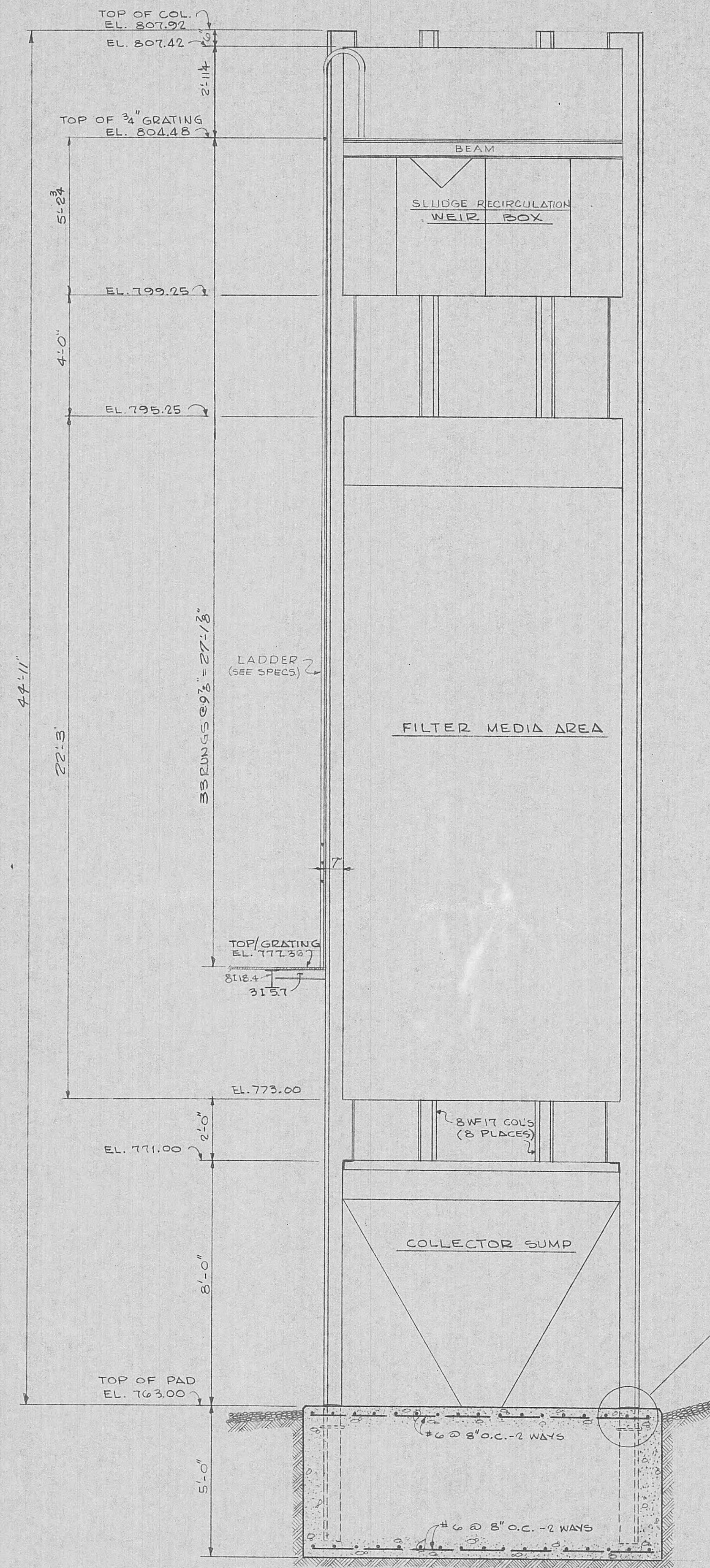
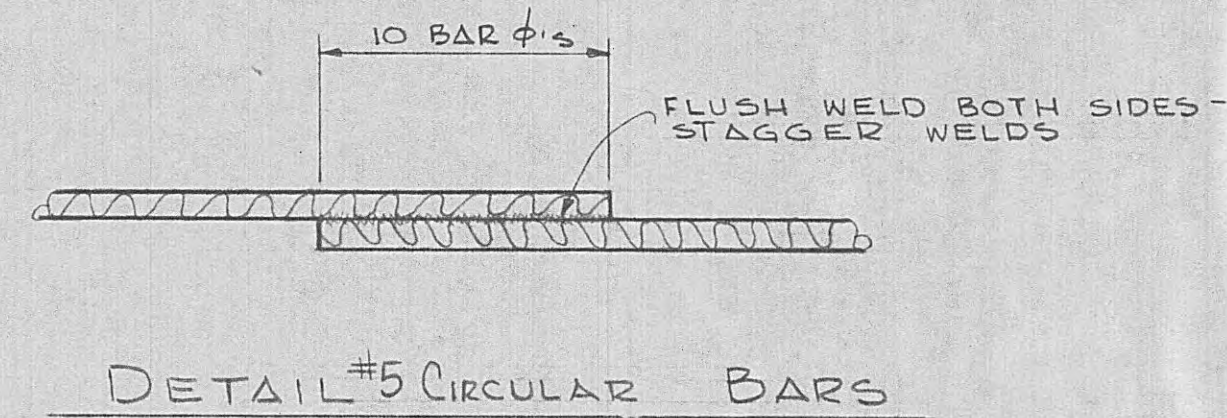
NO.	DESCRIPTION	DATE
1	LONGITUDINAL SECTION	5-4
2	REVISIONS	8



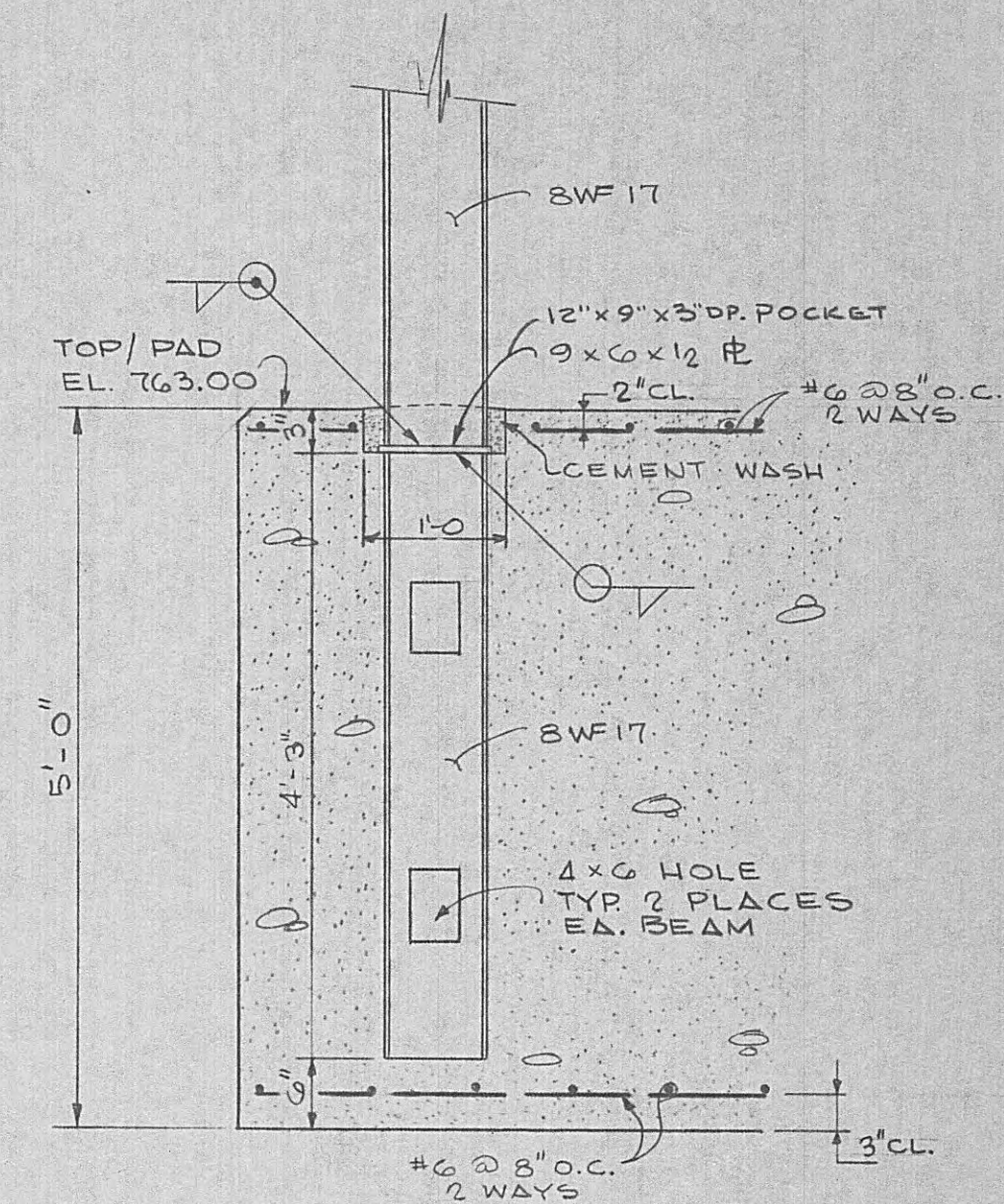
SECTION C-C
SCALE: 3/8" = 1'-0"



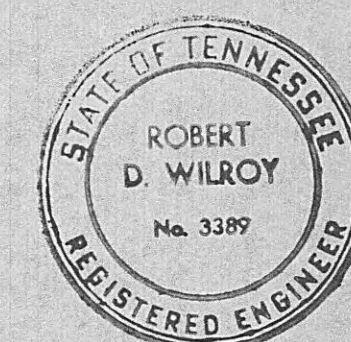
SECTION D-D
SCALE: 3/8" = 1'-0"



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



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



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BLACK, CROW AND EIDNESS, INC. ATLANTA, GEORGIA ENGINEERS GAINESVILLE, FLORIDA	
DRAWN BY: RM, BW	DATE: JUNE 69
CHECKED BY: TDR	FILE NO.: 484-69-1
SCALE: AS SHOWN	
TRANSVERSE SECTIONS	PLATE NO. 5-5
REVISIONS	SHEET NO. 9
	OF 6 OF 20