

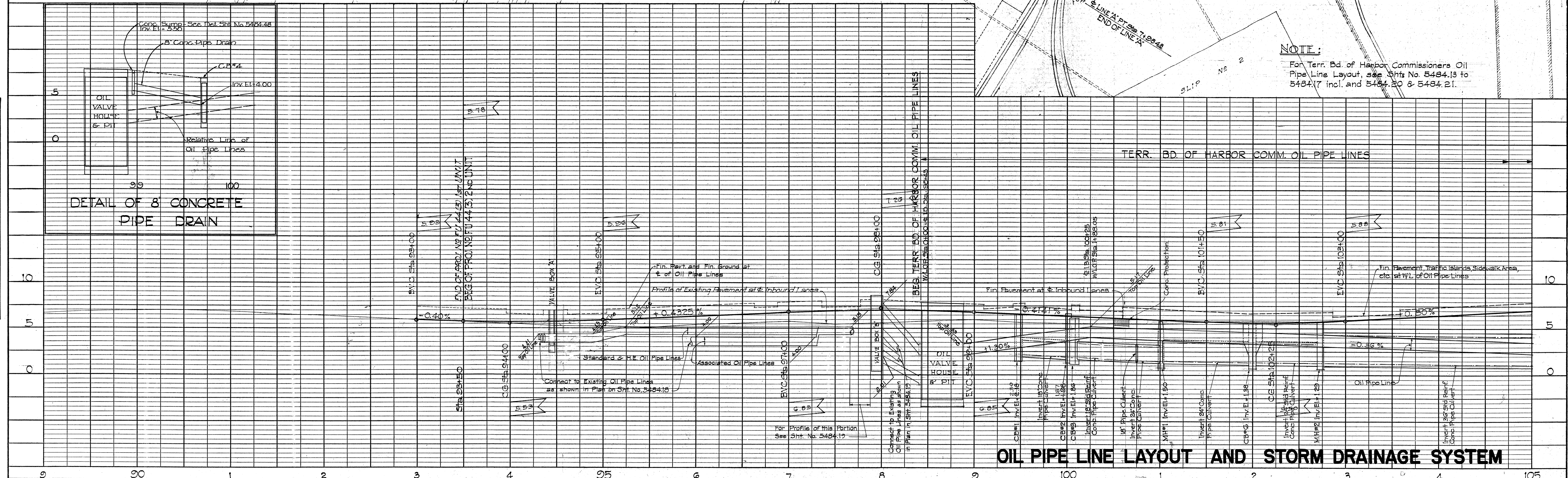
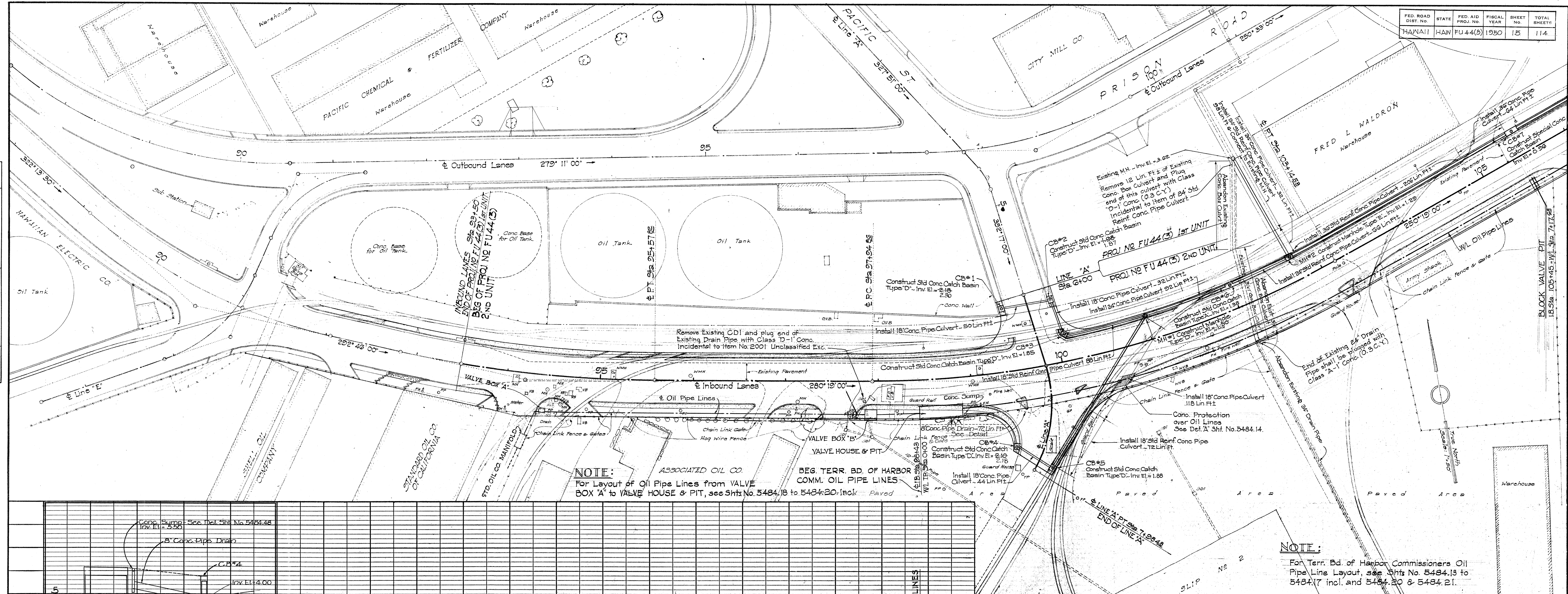
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU44(3)	1950	13	114



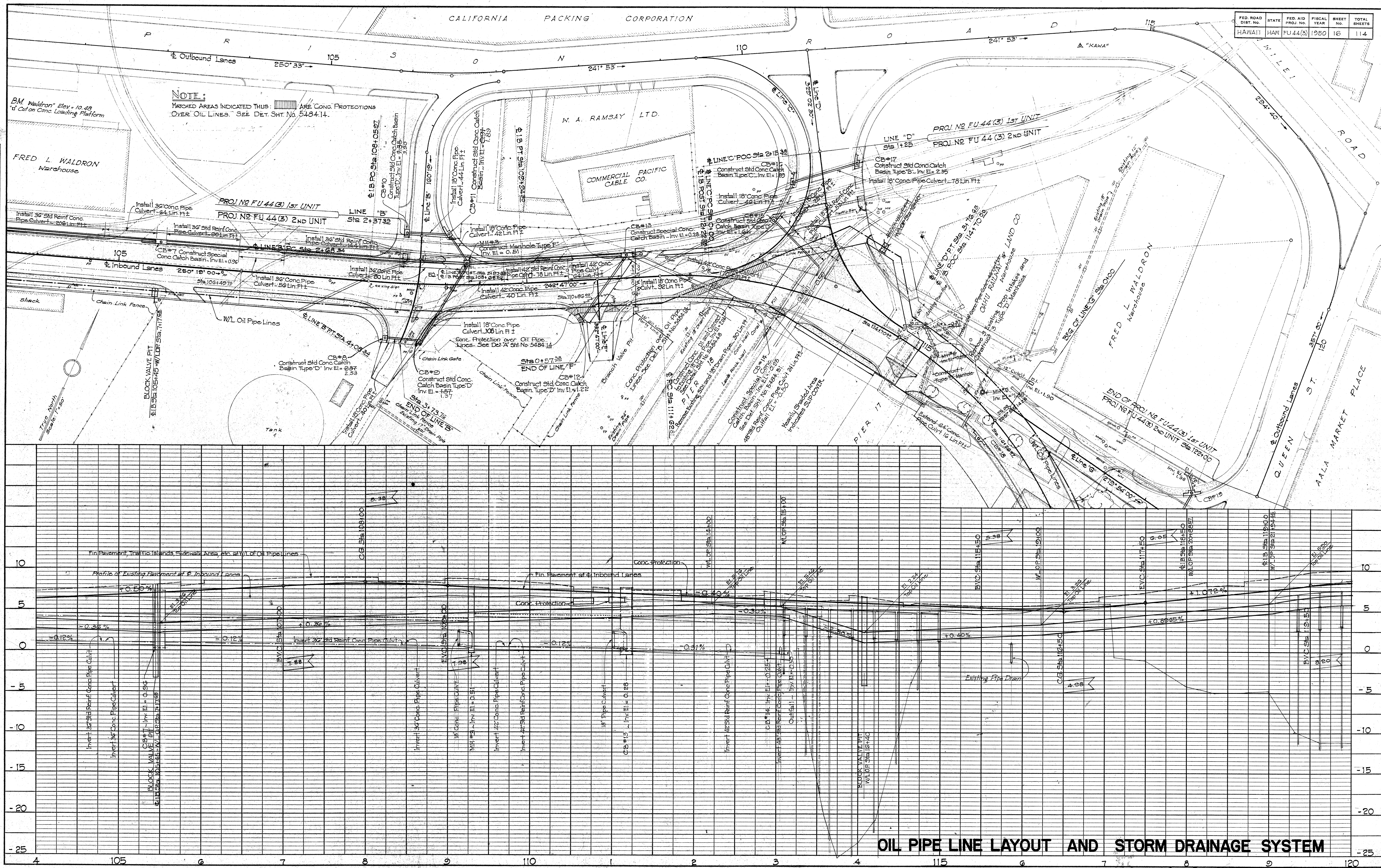
5484.13

PLAN	SURVEYED	BY	DATE
NOTED			
PLOTTED			
CHECKED			
RT. OF WAY CHECKED			
NO.			

PROFILE	SURVEYED	BY	DATE
NOTED			
PLOTTED			
CHECKED			
B. M. NOTED			
STRUCTURE NOTATION CHD.			
NO.			



PROFILE		SURVEYED	BY	DATE
NOTE BOOK NO. _____		PLOTTED		
		GRADES CHECKED		
		B. M.'S NOTED		
		STRUCTURE NOTATIONS CHECKED		



FITTINGS & VALVES REQUIRED IN VALVE BOX "A"
& STANDARD OIL CO. MANIFOLD

QUANT.	MATERIAL
1	16" I.B.B.M. Rising Stem Gate Valve
1	16" Lateral (Walworth #5410 or equal)
1	6" Slip-on Welding Flanges (TT #50 " "
1	16" 45° Welding Elbow " #5 " "
1	8"x6" Reducing Lateral " #26A " "
2	8" Slip-on Welding Flanges " #50 " "
8	10" Straight Flanged Tees (Walworth #5406 " "
10	10" Slip-on Welding Flanges (TT #50 " "
2	10" 90° Flanged Elbows (Walworth #5401 " "
8	12" Straight Flanged Tees " #5406 " "
1	16"x12" Eccentric Reducer " #5413 " "
4	12" I.B.B.M. Rising Stem Gate Valves
8	12" Slip-on Welding Flanges (TT #50 or Equal)
2	12"x10" Reducing Flanges " #120 " "
3	12" Blind Flanges " #70 " "
2	16" Slip-on Welding Flanges (TT #50 " ")

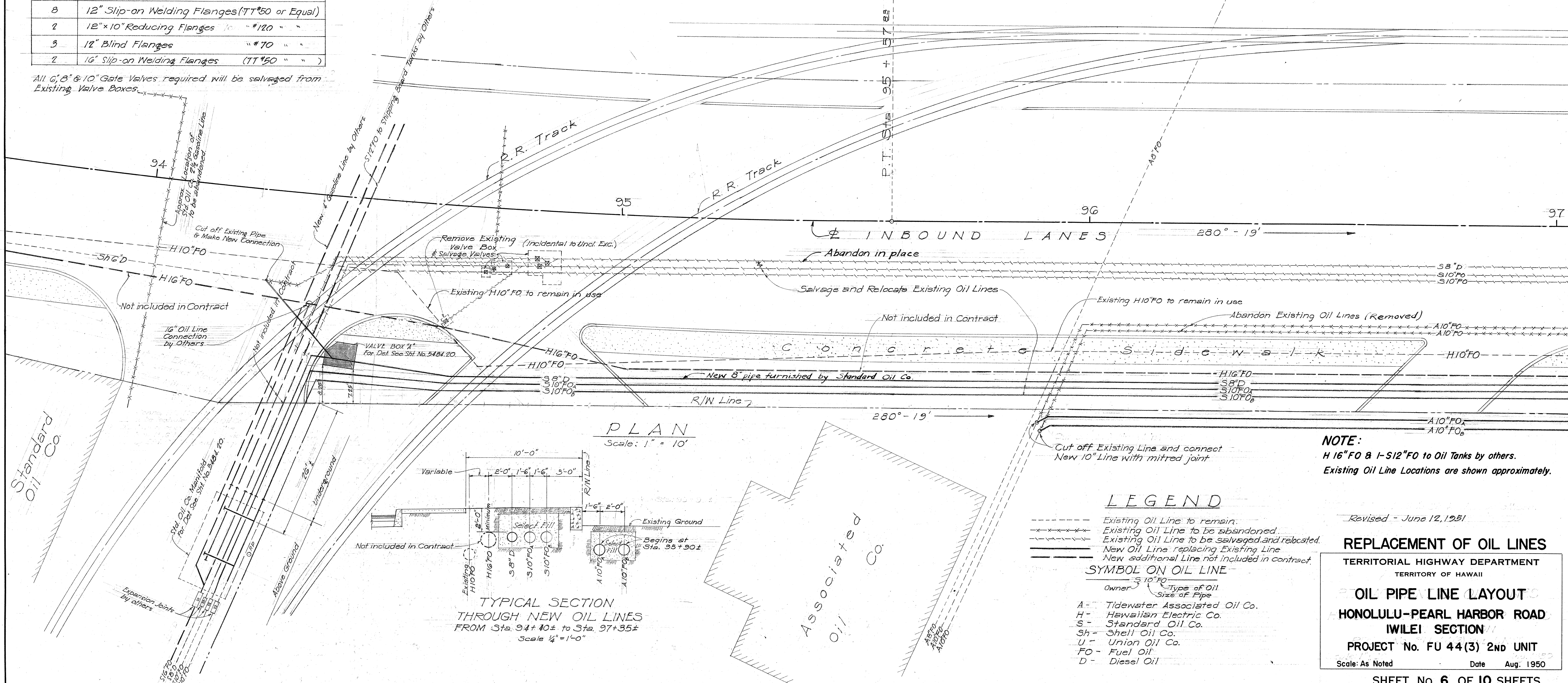
All 6", 8" & 10" Gate Valves required will be salvaged from Existing Valve Boxes.

OIL TANKS

NOTE:

Location of Pipe Lines and other underground Structures shown on this sheet and on Sht. No. 5484.19 are approximate only. Contractor shall check and verify the exact location of same.

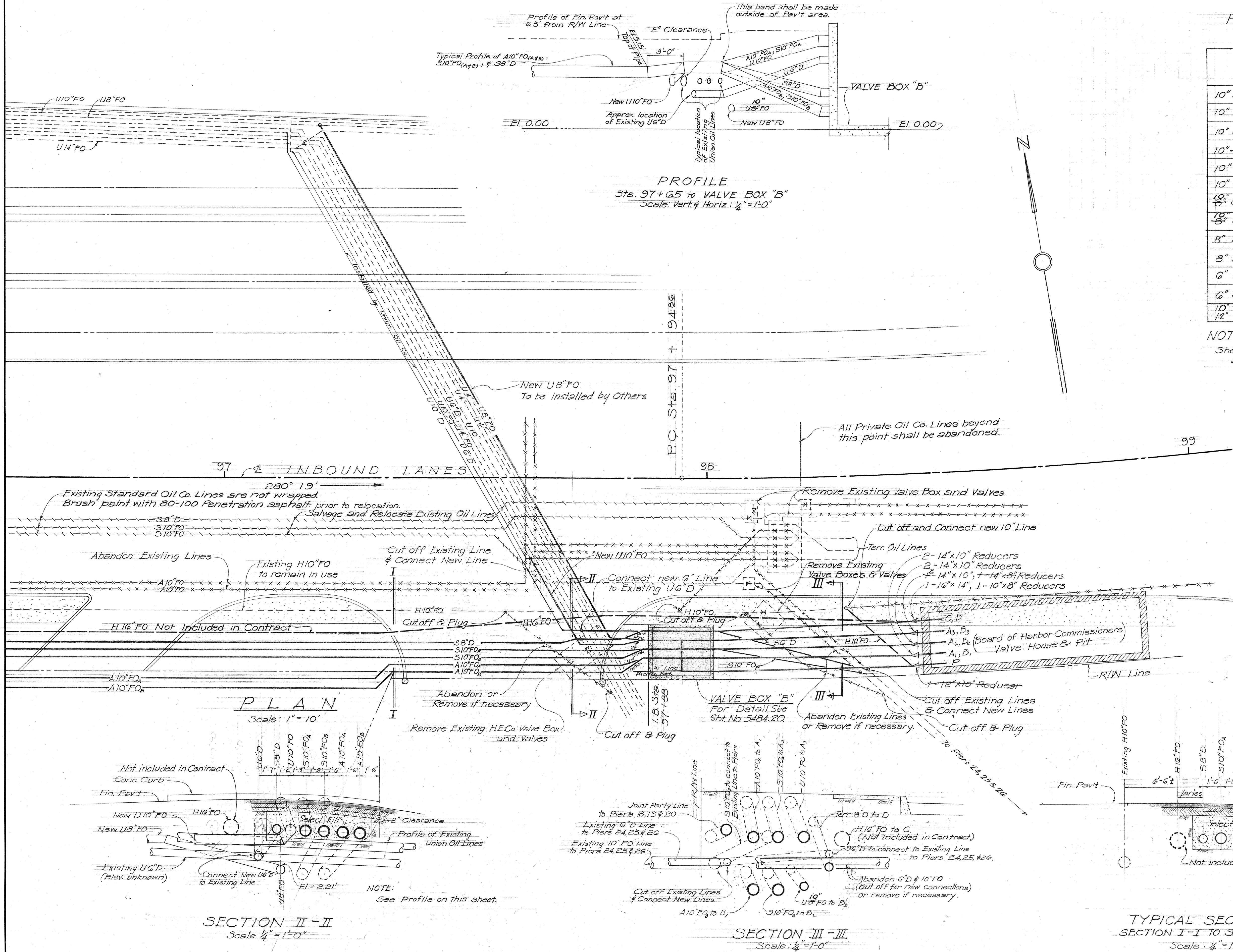
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FU 44(3)	1950	18	114



FITTINGS & VALVES REQUIRED IN VALVE BOX "B"
FOUR COMPANY MANIFOLD

Material	Tide Water Associated Oil Co.	Standard Oil Co.	Union Oil Co.	Joint Party FO Line
10" Steel Flanged Cross	1	1	-	-
10" C.I. Straight Tee	2	5	1	-
10" Gate Valve, I.B.B.M. OS & Y	2	4	1	1
10" Reducing Tee (10"x10"x8")	-	-	1	-
10" Slip-on Welding Flange	4	9	-	1
10" C.I. 90° Elbow	-	-	-	1
8" C.I. Straight Tee	-	-	1	-
8" Gate Valve, I.B.B.M. OS & Y	-	1	1	-
8" Reducing Lateral (8"x6"x6")	-	2	-	-
8" Slip-on Welding Flange	-	2	-	-
6" Gate Valve, I.B.B.M. OS & Y	-	1	1	-
6" Slip-on Welding Flange	-	1	1	-
10" Oil Line Pipe				1305 ft
12" " " "				50 ft.

NOTE:
Shell Oil Co. FO connection is made via Union Oil Co. FO Line.
" " " Diesel " " " Standard Oil Co. 8" D Line.



NOTE:
H16"FO is not included in this contract but will be installed by others.
Existing Oil Line Location are shown approximately.

Revised - June 12, 1951

REPLACEMENT OF OIL LINES

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

OIL PIPE LINE LAYOUT

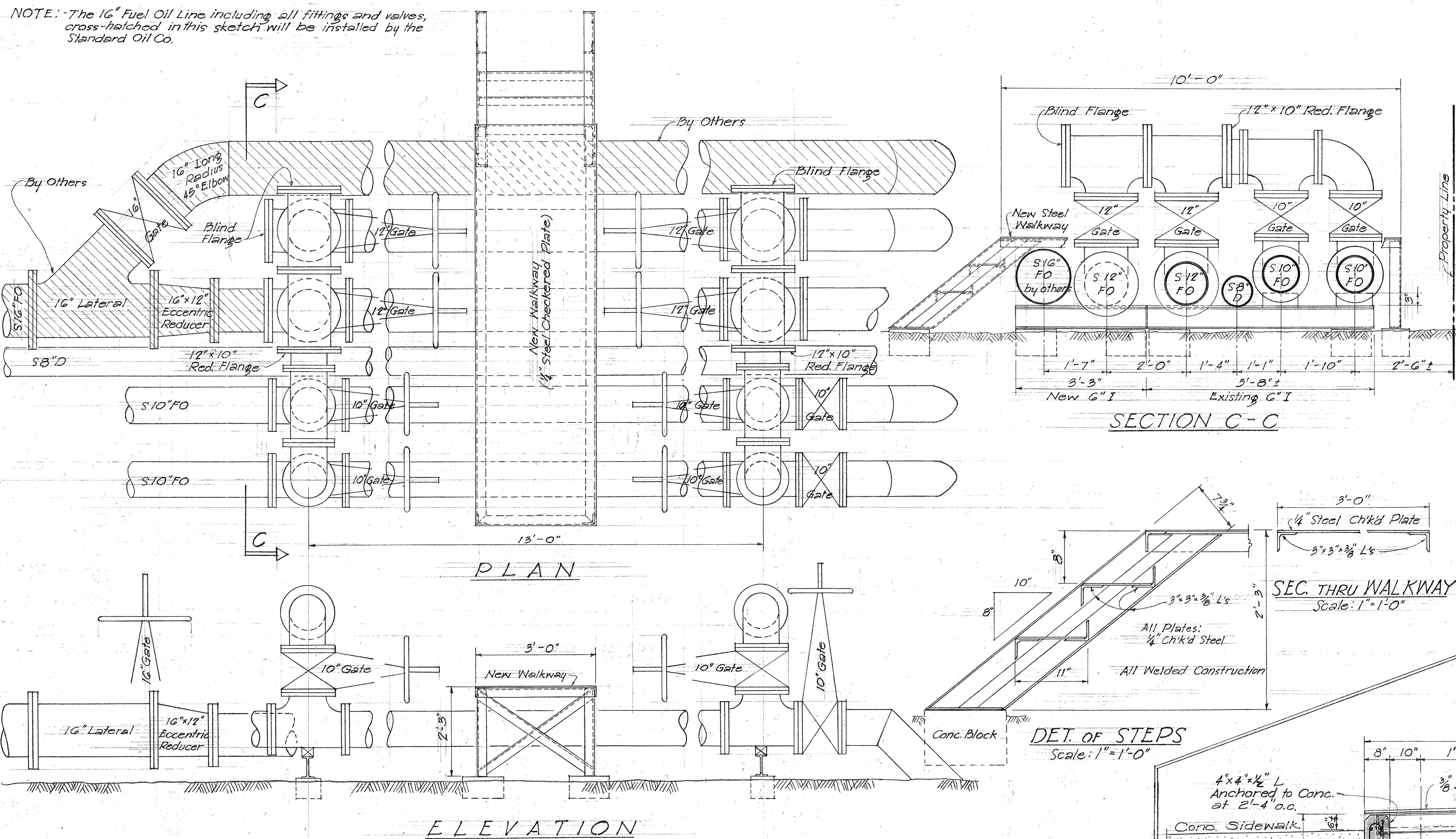
HONOLULU-PEARL HARBOR ROAD
IWILEI SECTION

PROJECT No. FU 44(3) 2ND UNIT
Scale: As Noted Date Aug. 1950

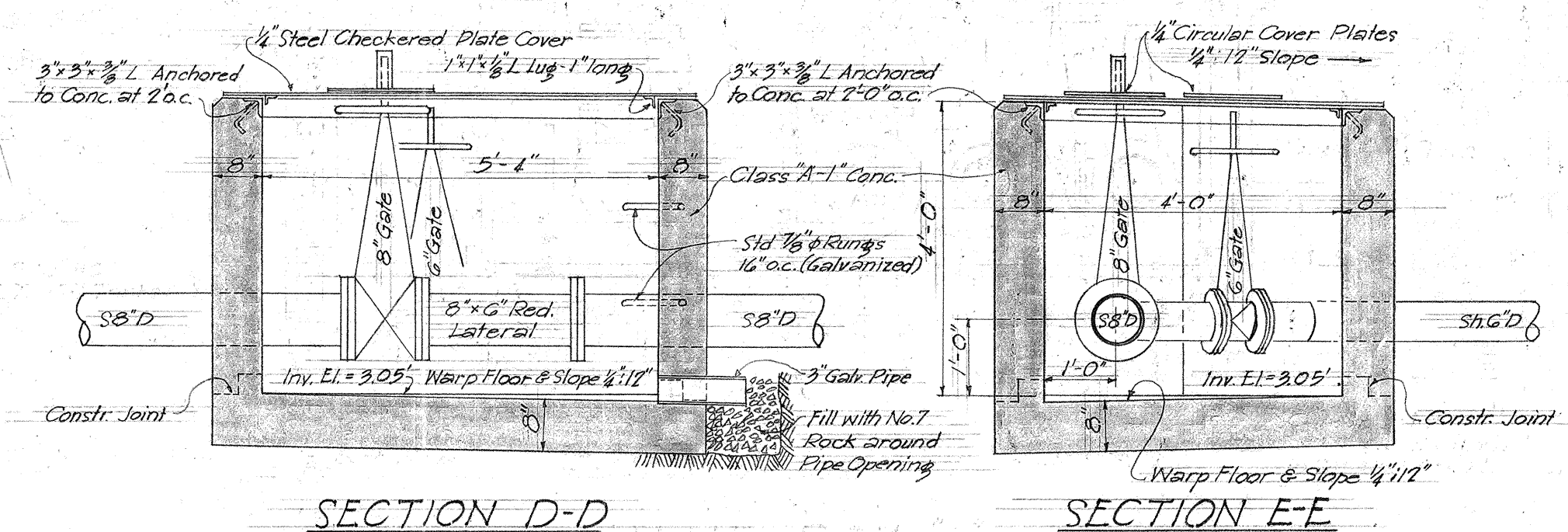
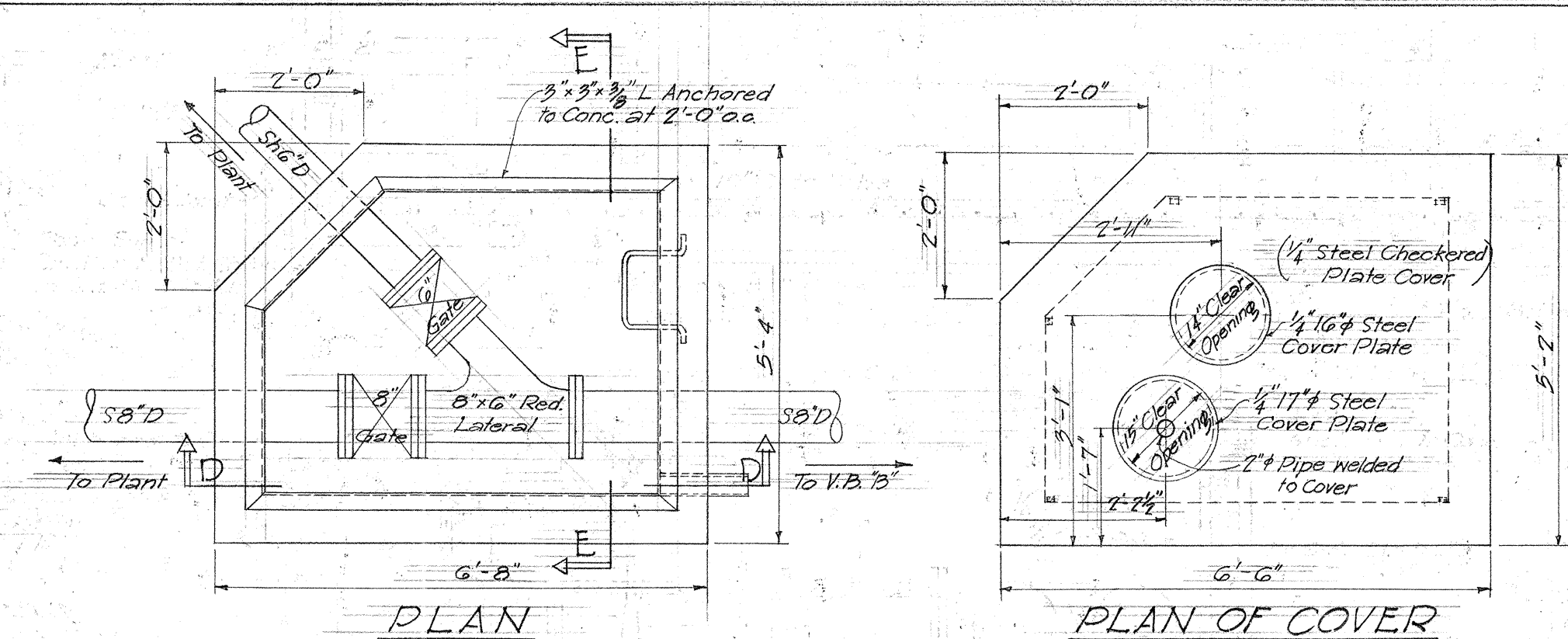
SHEET No. 7 OF 10 SHEETS

5484.19

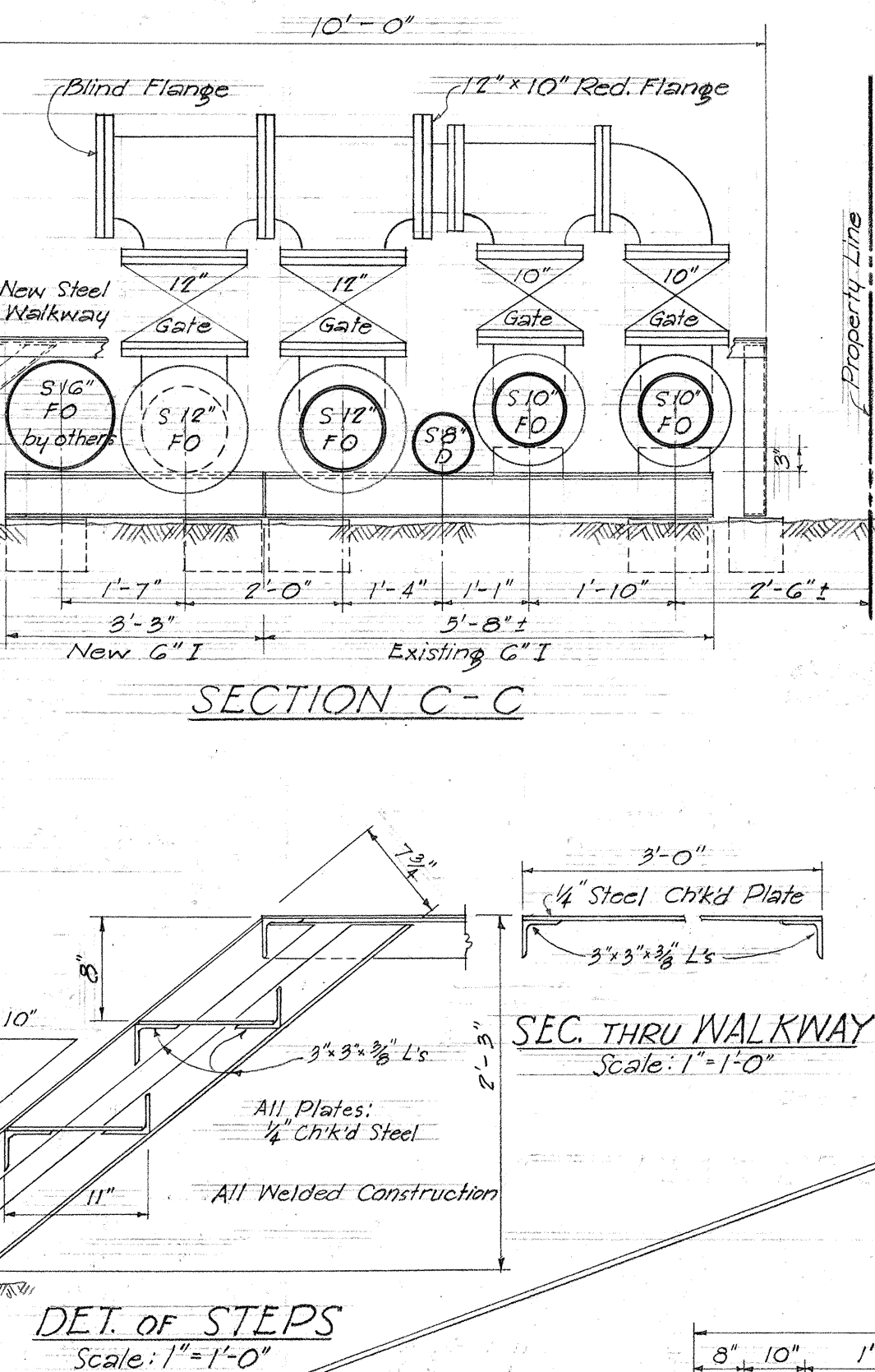
NOTE: The 16" Fuel Oil Line including all fittings and valves, cross-hatched in this sketch, will be installed by the Standard Oil Co.



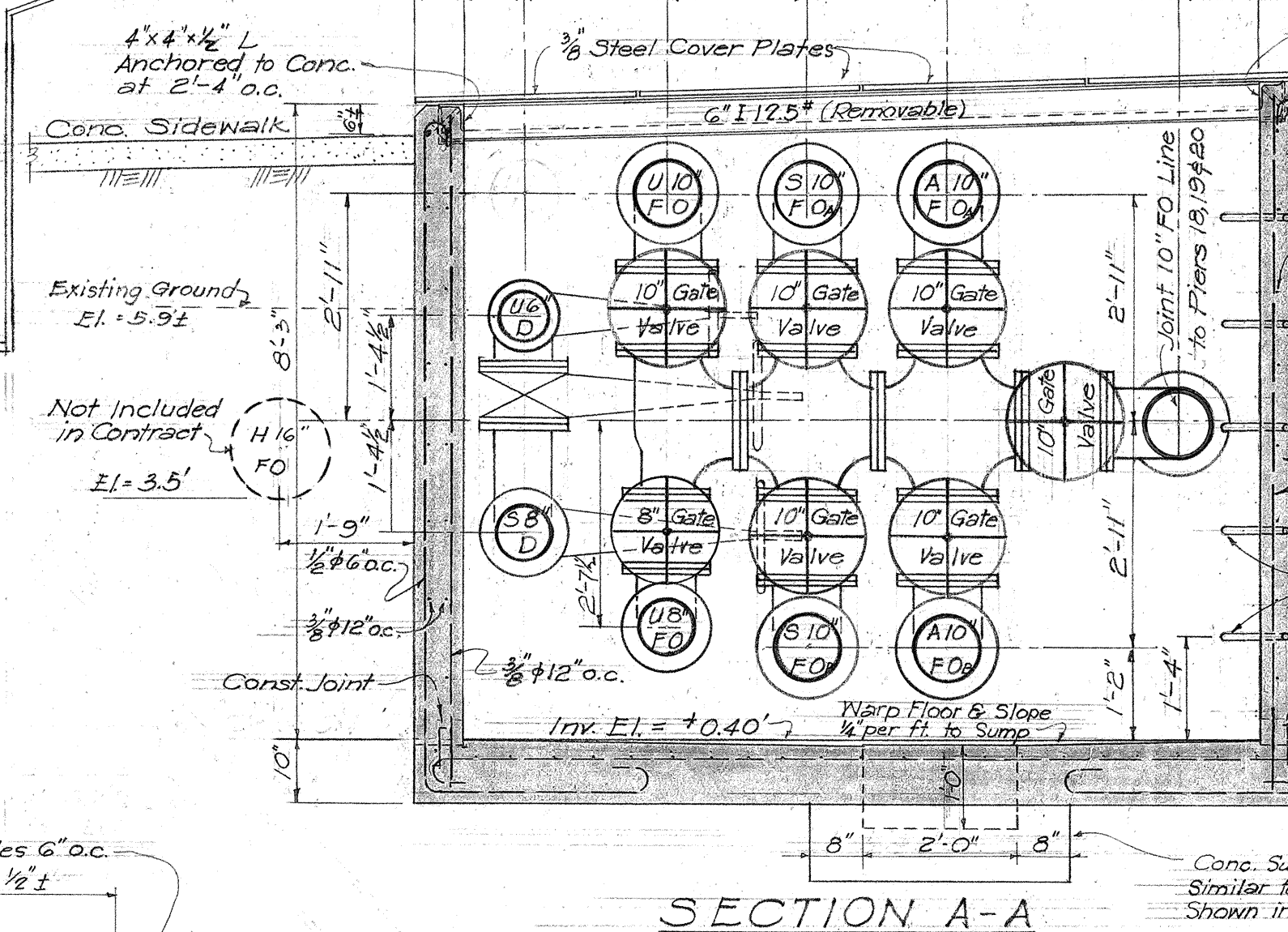
STANDARD OIL CO'S MANIFOLD IN ACCESS ROAD AT STA. 94+25±
Scale: 1/2" = 1'-0"



VALVE BOX "A"
STANDARD OIL - SHELL OIL CONNECTION AT STA 94+43±
Scale: 1/2" = 1'-0"



DET. OF STEPS
Scale: 1" = 1'-0"



VALVE BOX "B"
OIL COMPANIES' OIL VALVE BOX AT STA 97+90±
Scale: 1/2" = 1'-0"

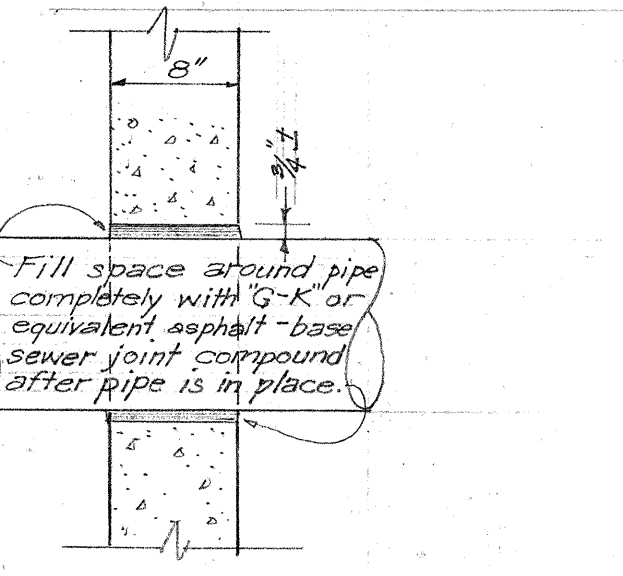
SIZE OF PIPE OPENINGS
IN CONC. WALLS

6" Pipe	8" dia.
8" "	10" "
10" "	12 1/4" "

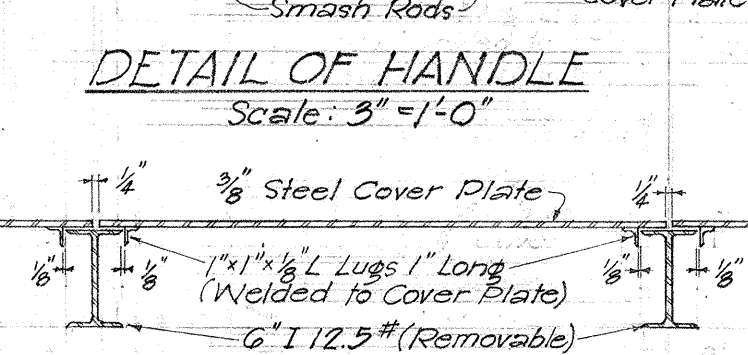
ESTIMATED QUANTITIES

	V.B. "A"	V.B. "B"
Struct. Exc.	7.0 CY	48.0 CY
Class "A-1" Concrete	2.9 CY	14.3 CY
Reinf. Steel	10 Lbs	1780 Lbs

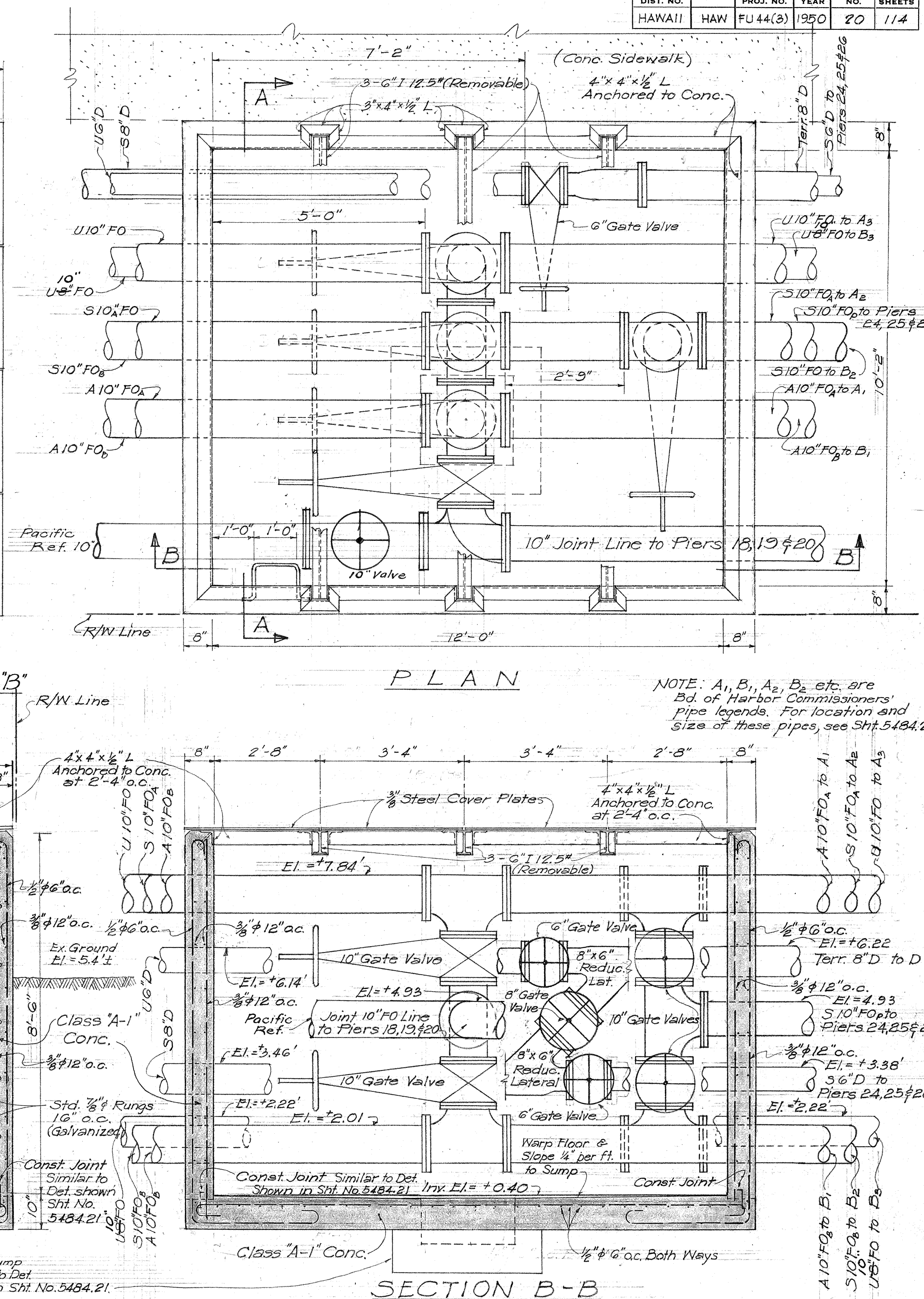
All structural steel shapes and plates shall be incidental to concrete and shall not be paid for separately.



CAULKING AT PIPE OPENINGS



SECTION THROUGH
STEEL COVER PLATE
Scale: 1" = 1'-0"

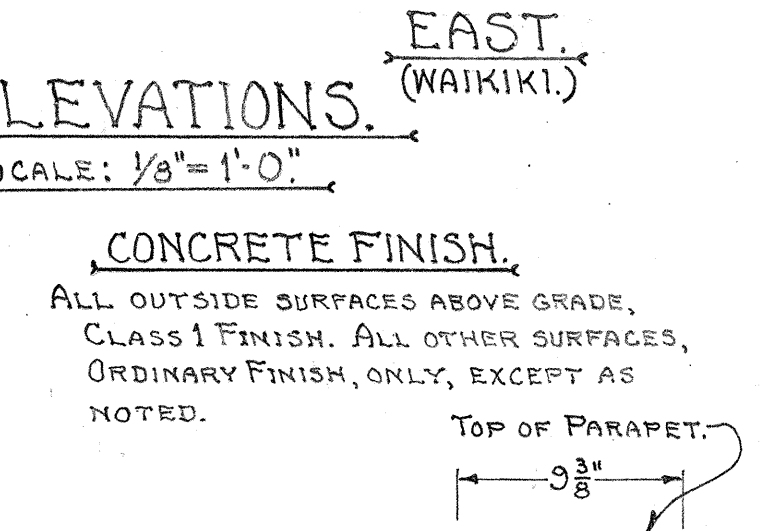
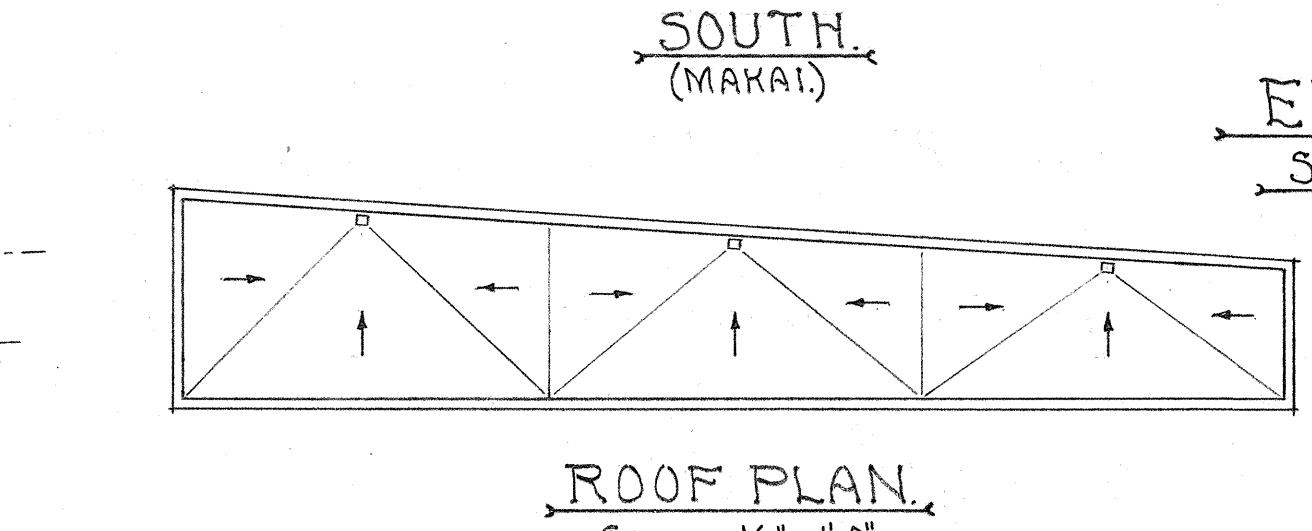
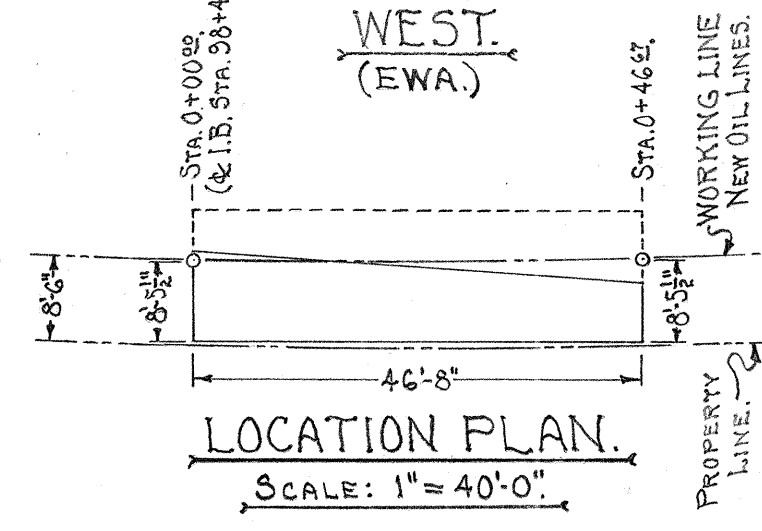
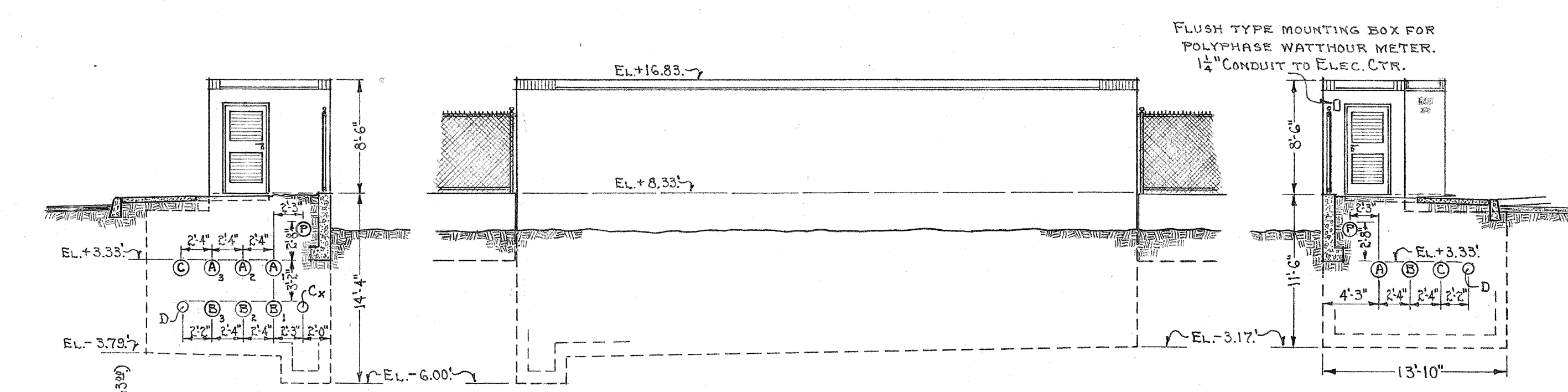


NOTE: A1, B1, A2, B2 etc. are Bd. of Harbor Commissioners' pipe legends. For location and size of these pipes, see Sht. 5484.21.

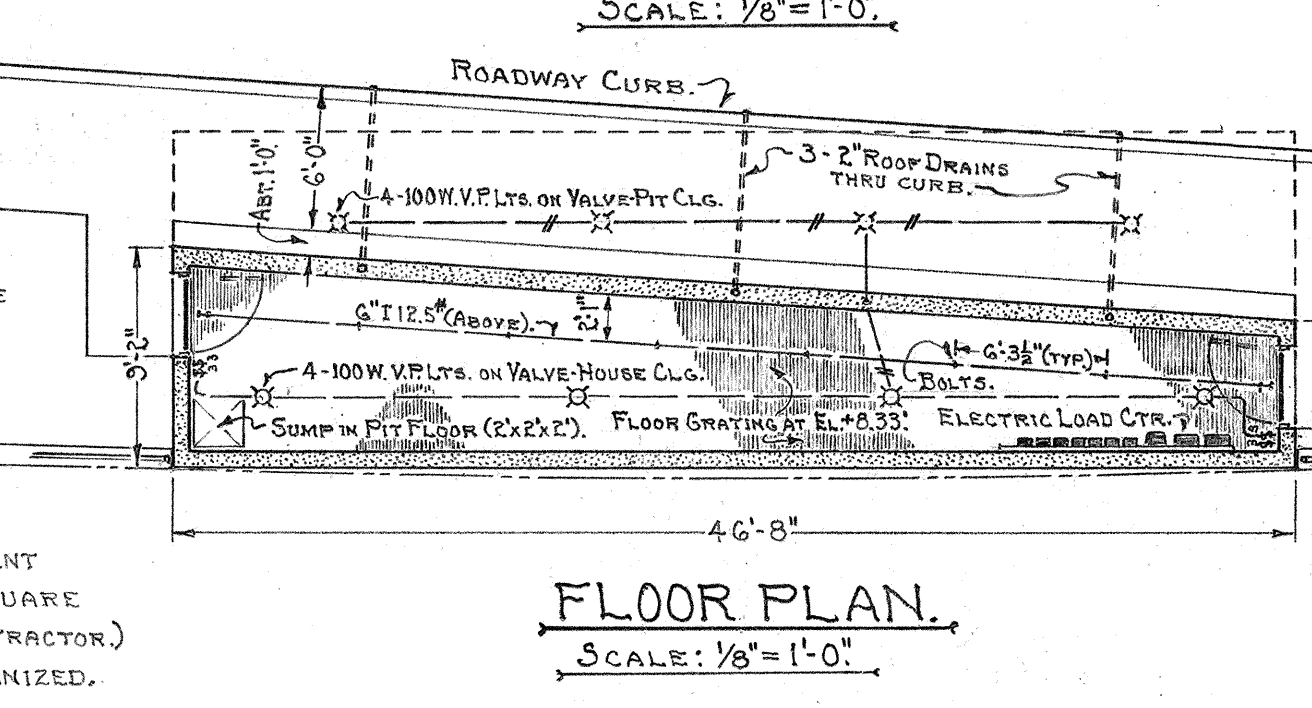
STANDARD OIL CO. MANIFOLD
VALVE BOXES "A" & "B"
TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
OIL PIPE LINE LAYOUT
HONOLULU-PEARL HARBOR ROAD
IWILEI SECTION
PROJECT No. FU 44(3) 2ND UNIT
Scale: As Noted Date Aug. 1950

SHEET No. 8 OF 10 SHEETS

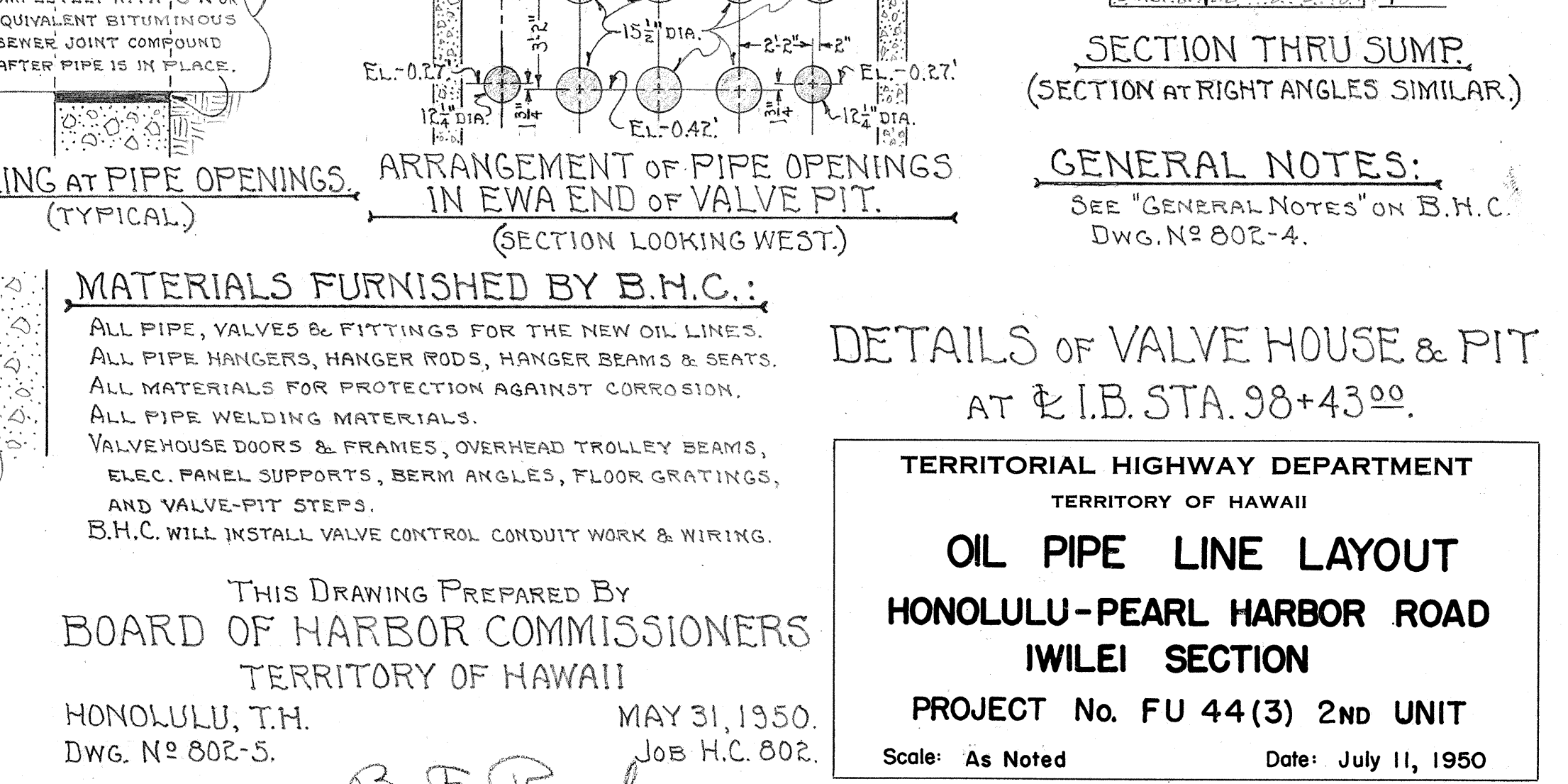
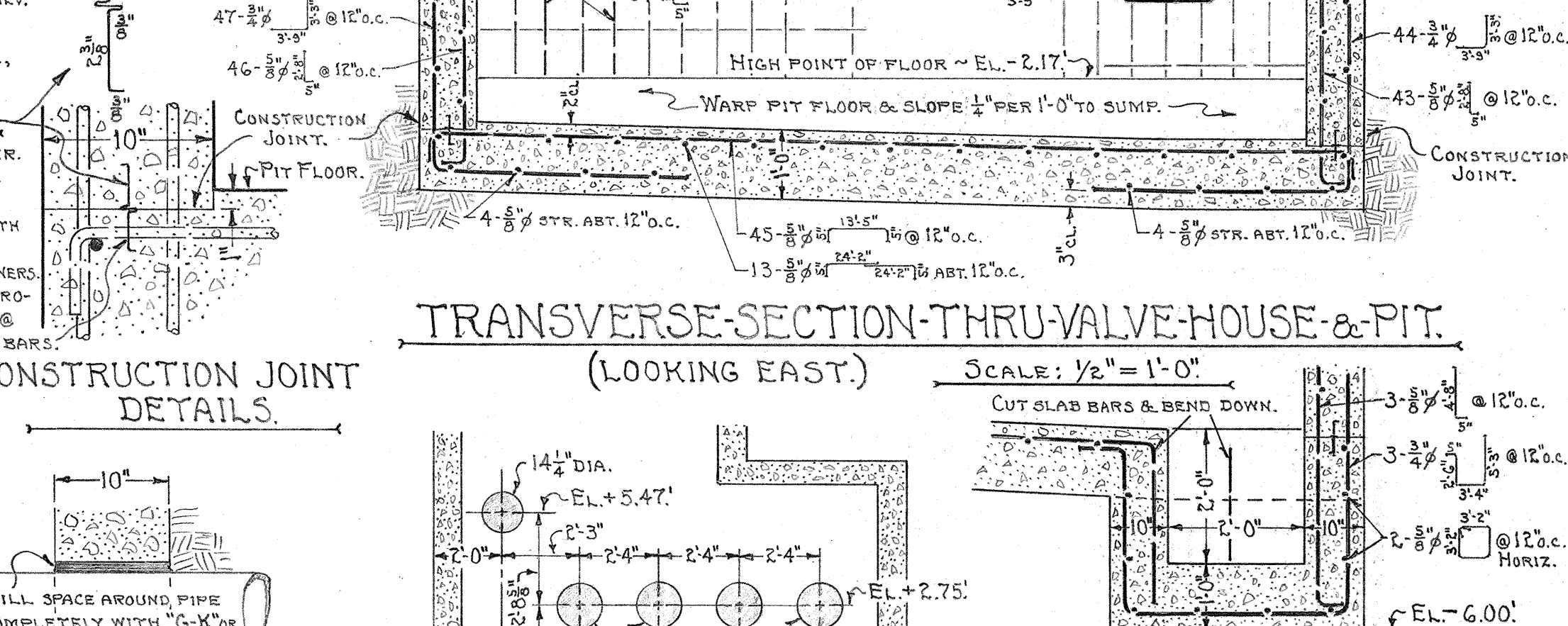
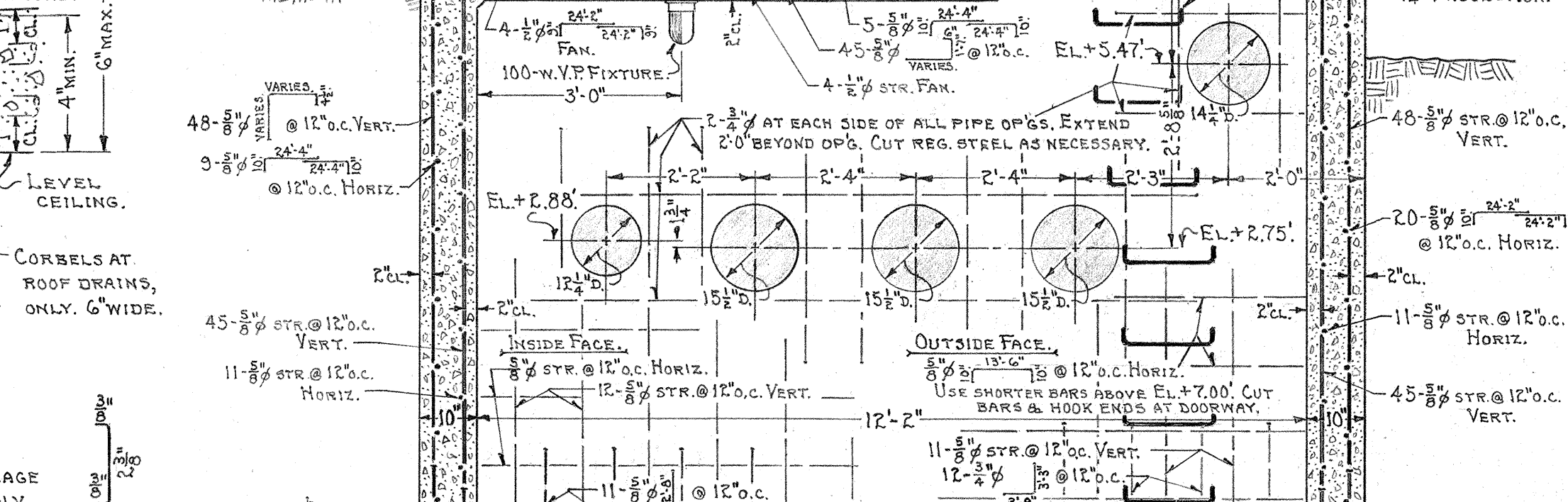
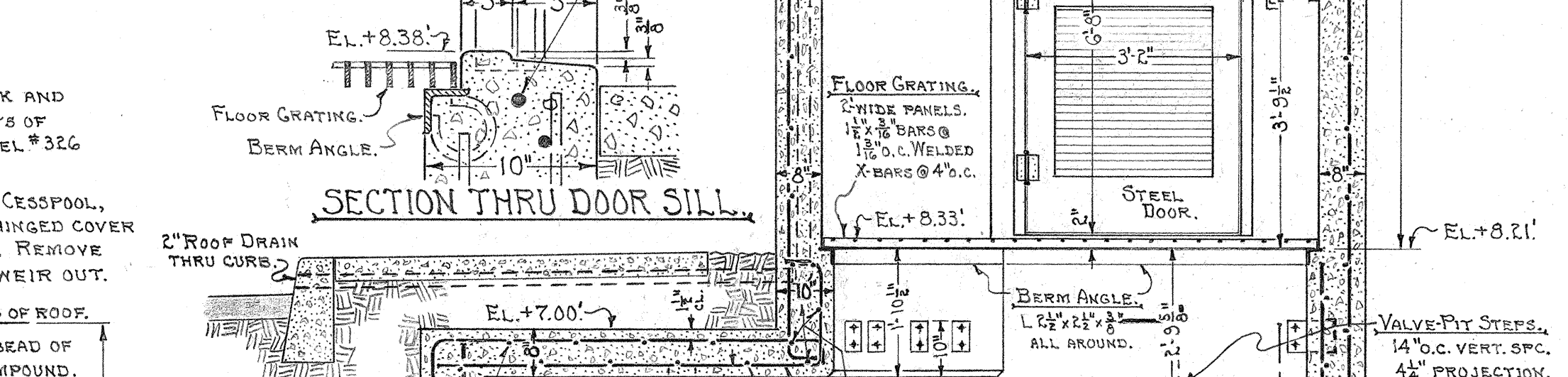
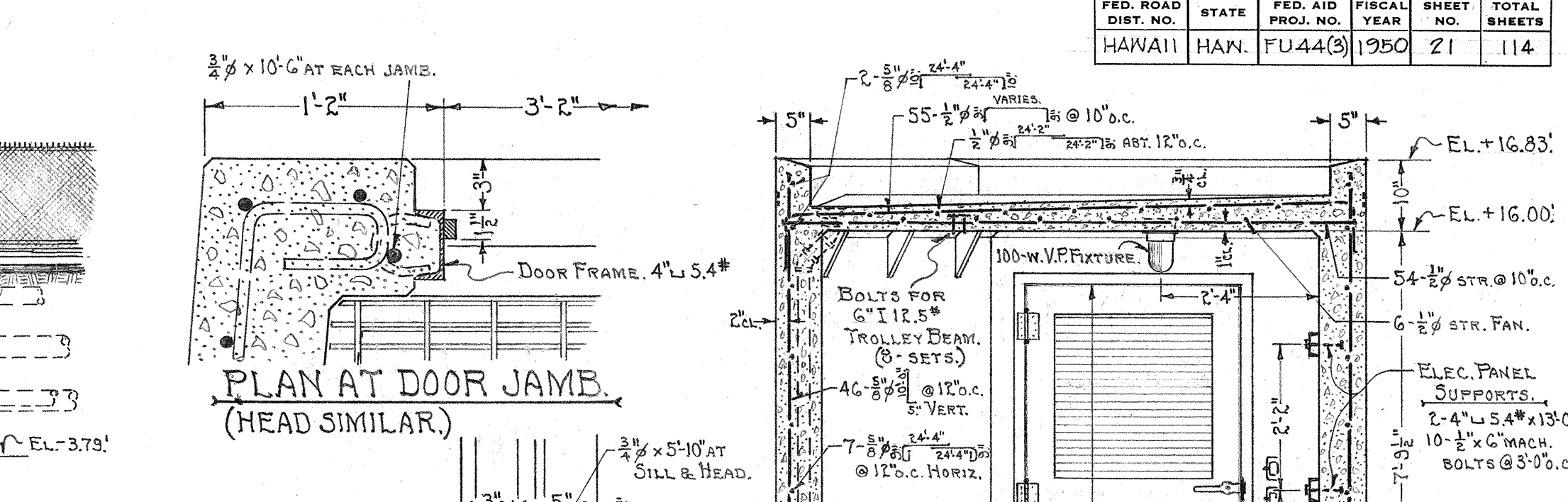
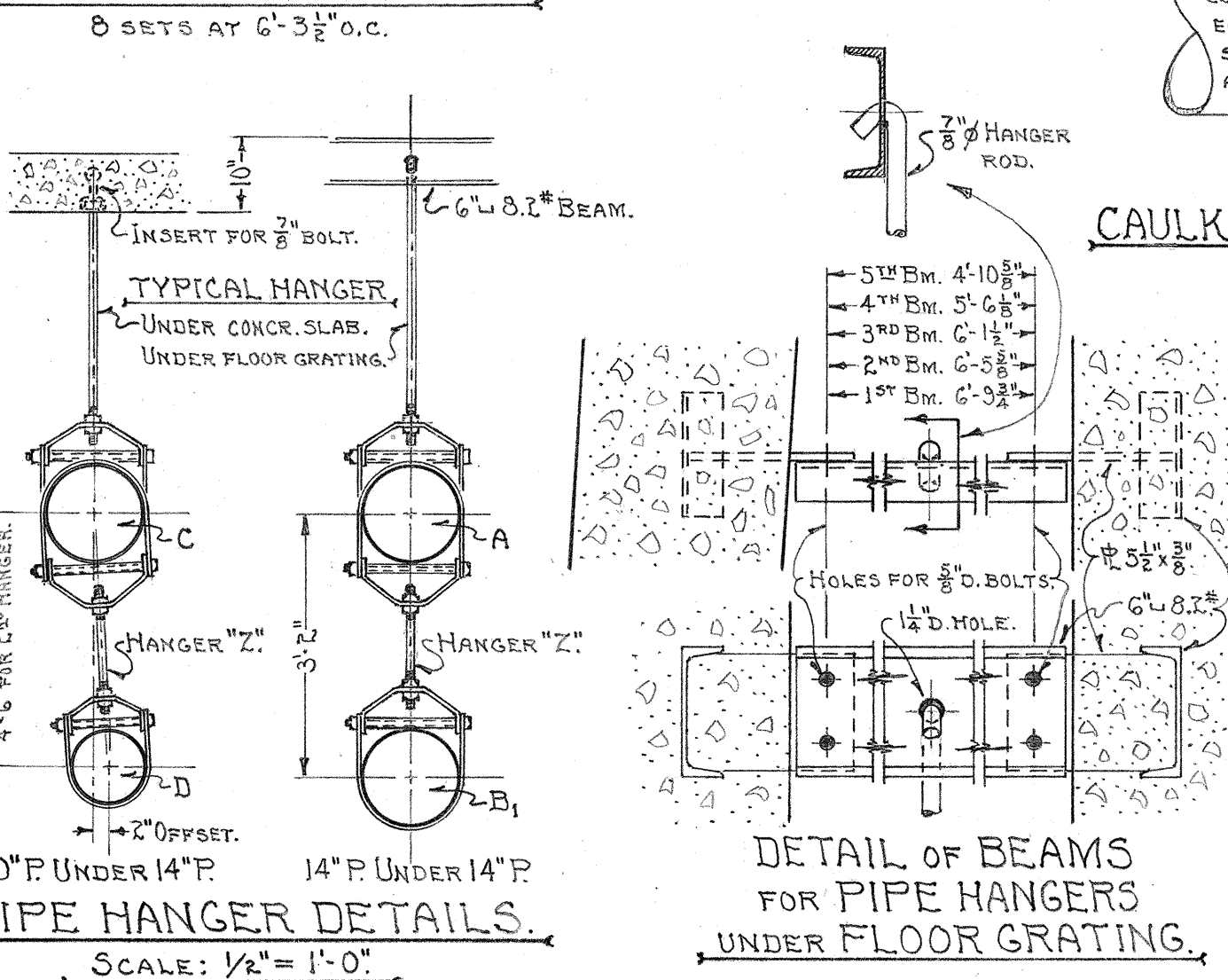
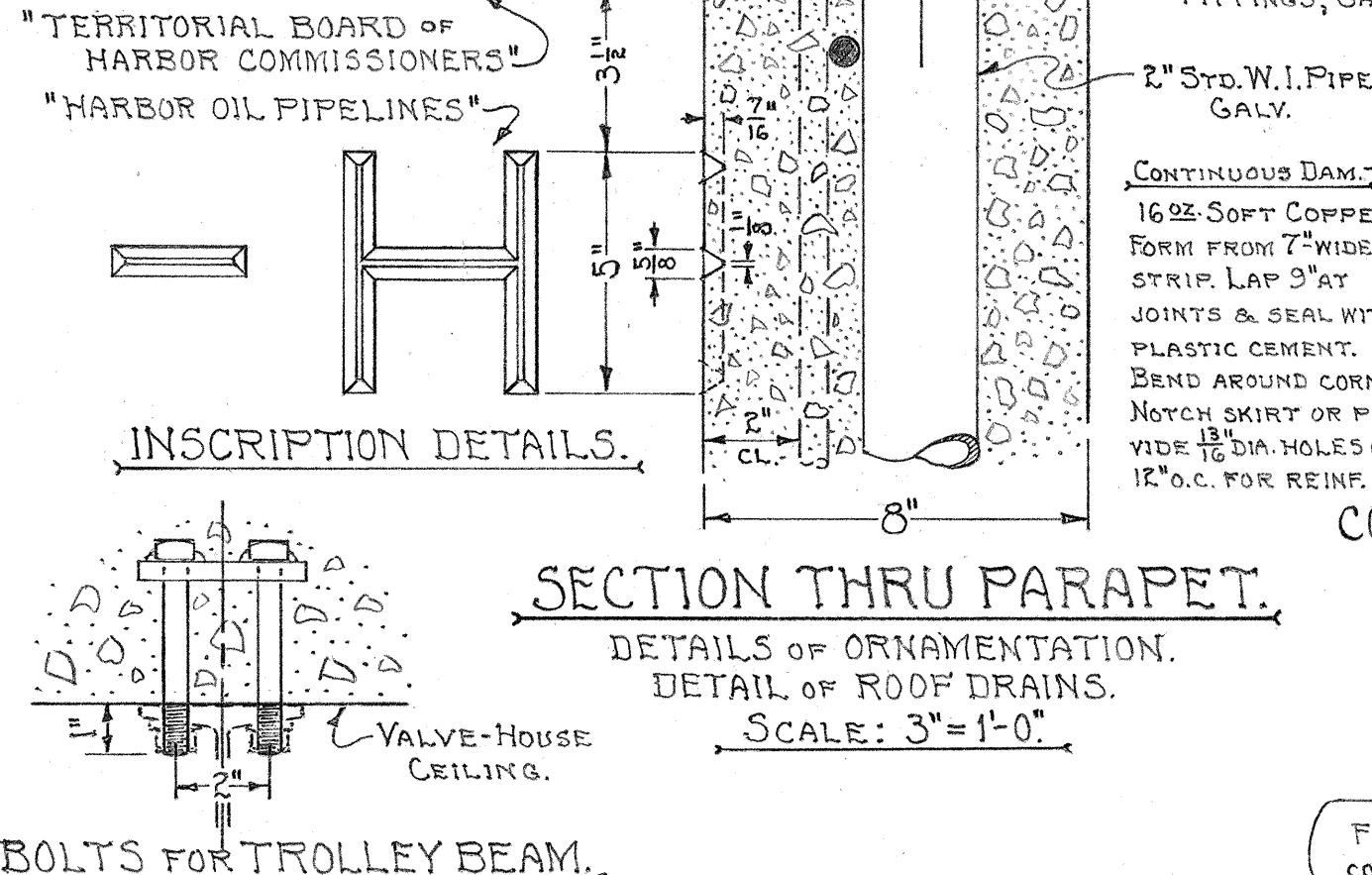
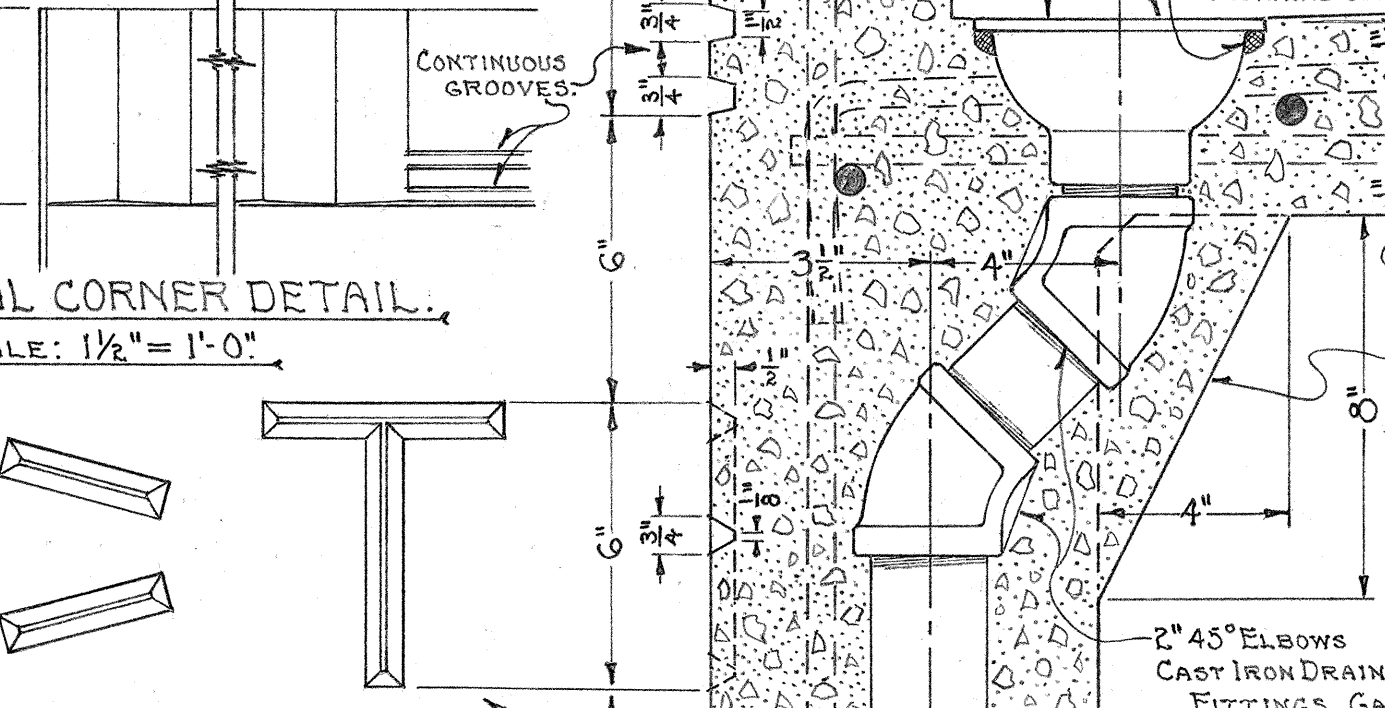
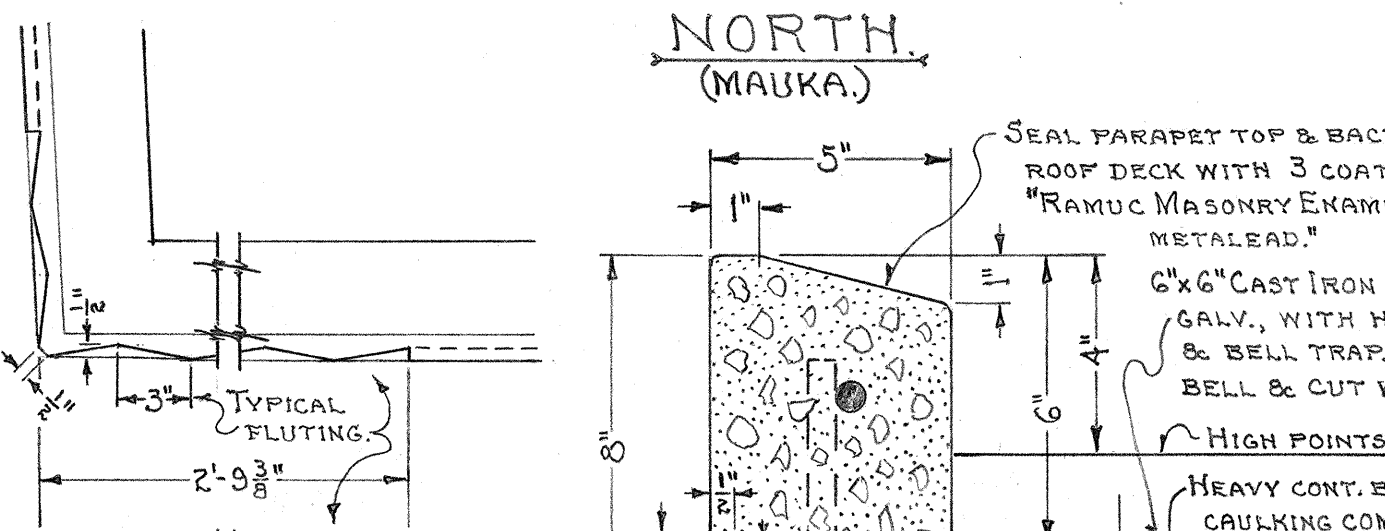
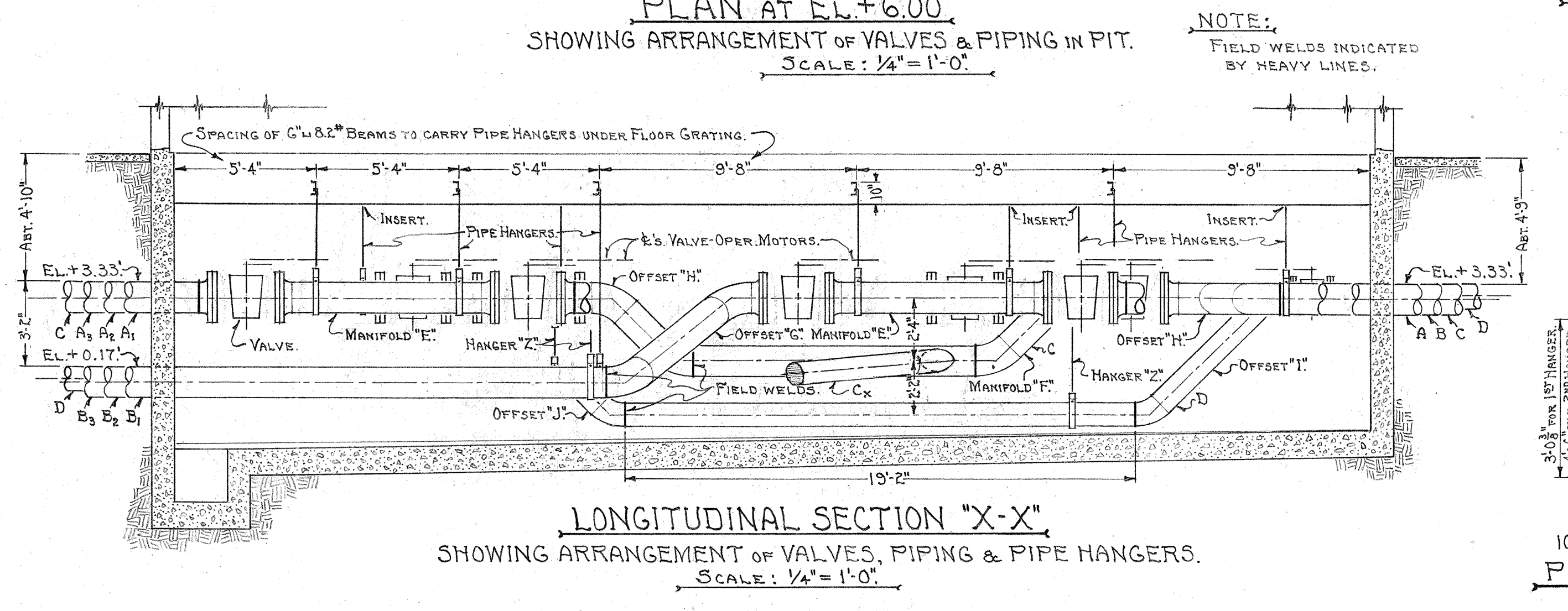
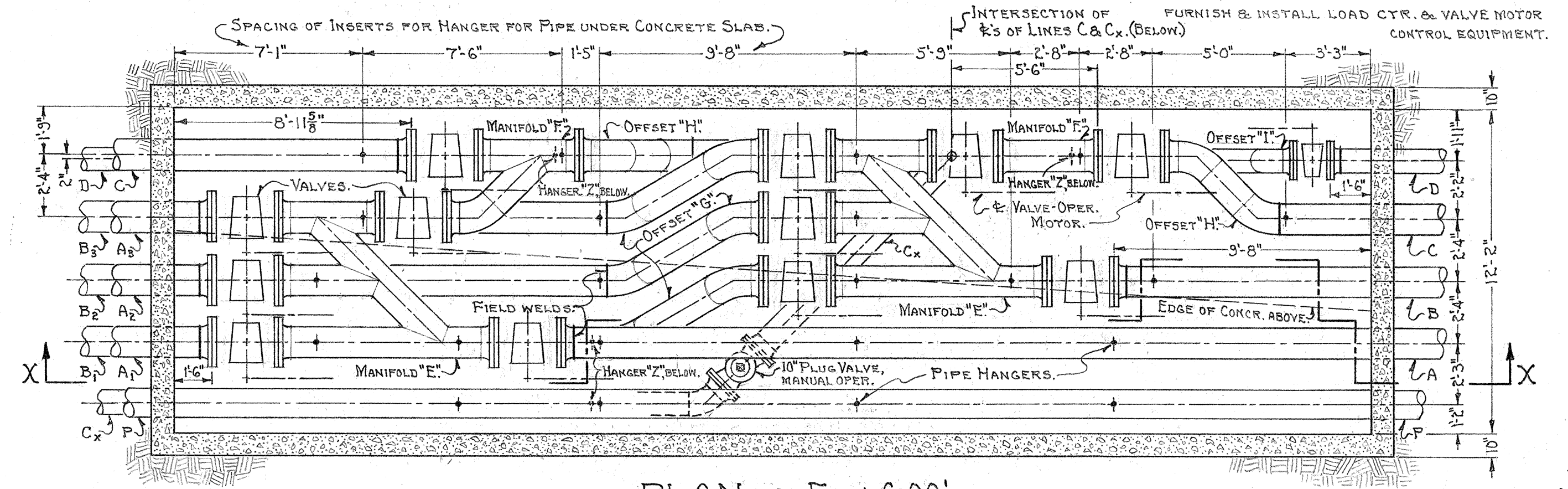
5484.20



PIPING LEGEND.
 LINES A, A₁, A₂, A₃ FUEL OIL ~ A.P.I. SEAMLESS PIPE, GRADE A, 14" O.D.
 LINES B, B₁, B₂, B₃ 375" WALL THICKNESS.
 LINE C DIESEL OIL ~ A.P.I. SEAMLESS PIPE, GRADE C, 4" O.D.
 LINE D A, STD. 10" NOM., 365" WALL THICKNESS.
 LINE E PARTY LINE ~ A.P.I. SEAMLESS PIPE, GRADE C, 4" O.D.
 LINE F A, EX. HEAVY 12" NOM., 500" WALL THICKNESS.
 VALVES ~ NORDSTROM, LUBRICATED FLUG TYPE, VENTURI PATTERN, SEMI-STEEL, 400# FLANGED, MOTOR OPERATED.
 FITTINGS & FLANGES ~ SHOP FABRICATED, WELDING TYPE.
 INSERTS ~ TERRITORIAL HIGHWAY DEPARTMENT STANDARD, CAST IRON, FOR 3" STD. SQUARE BOLT HEAD. (TO BE FURNISHED BY CONTRACTOR.)
 PIPE HANGERS ~ GRINNELL, FIG. 260, GALVANIZED.

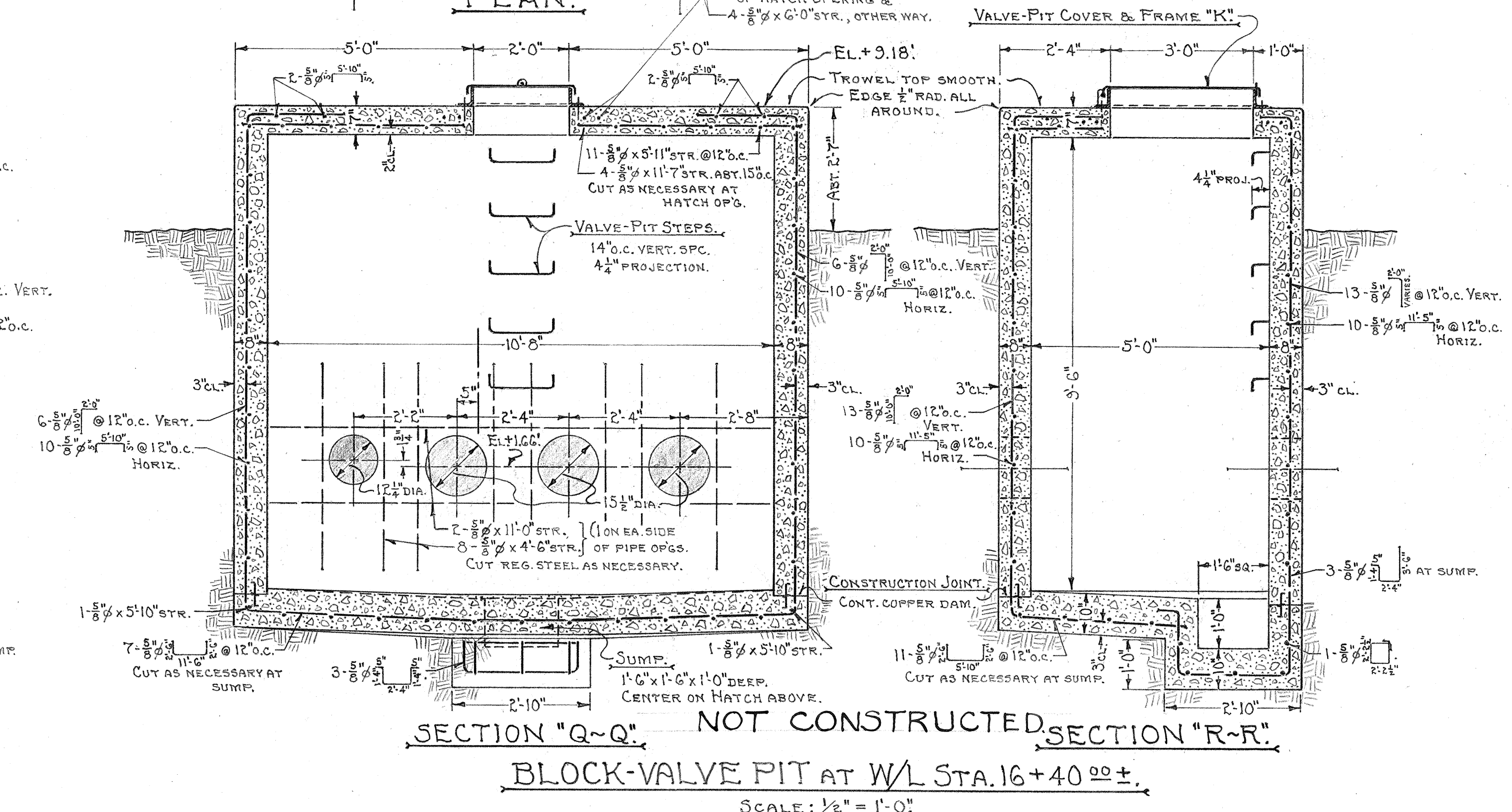
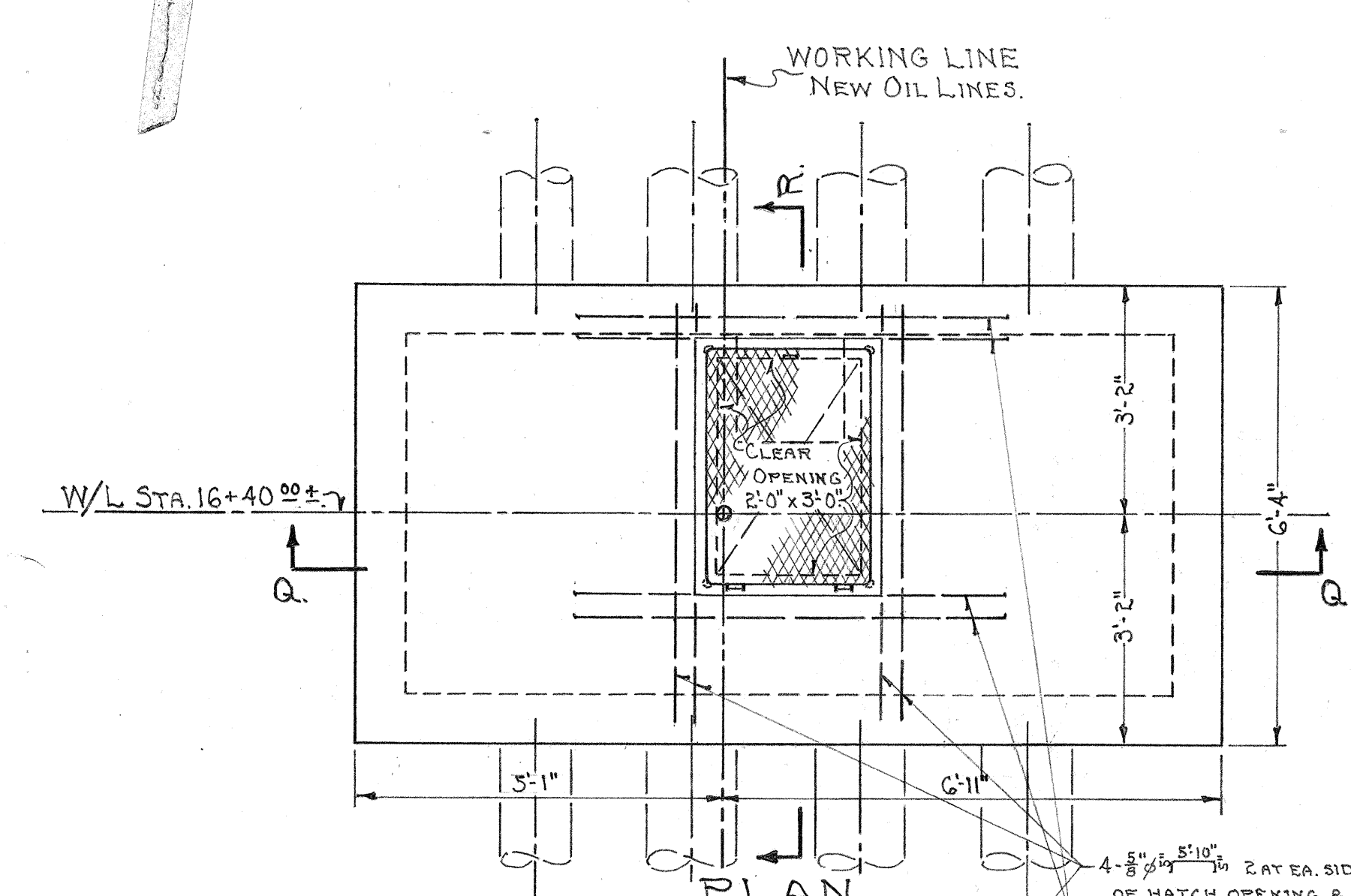
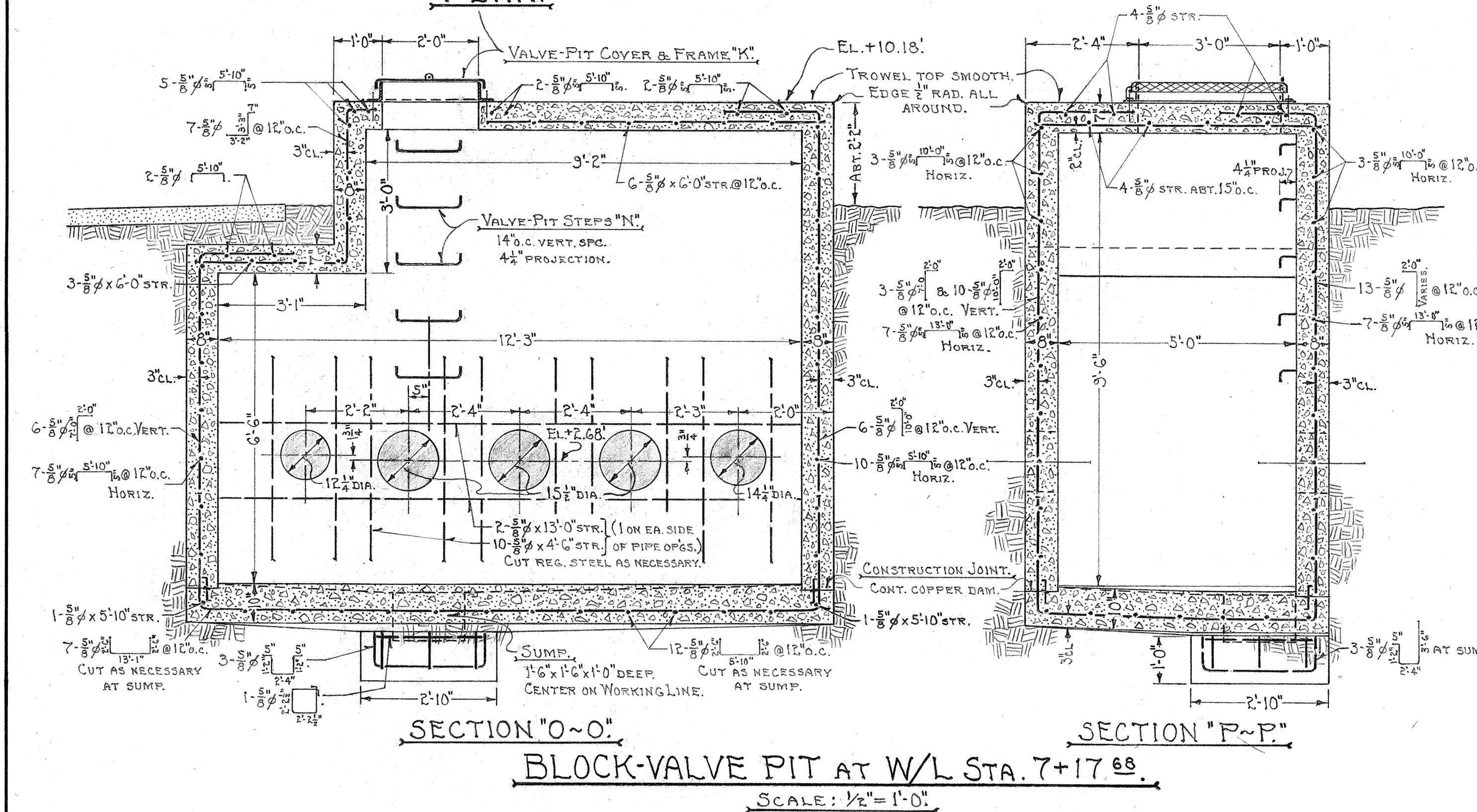
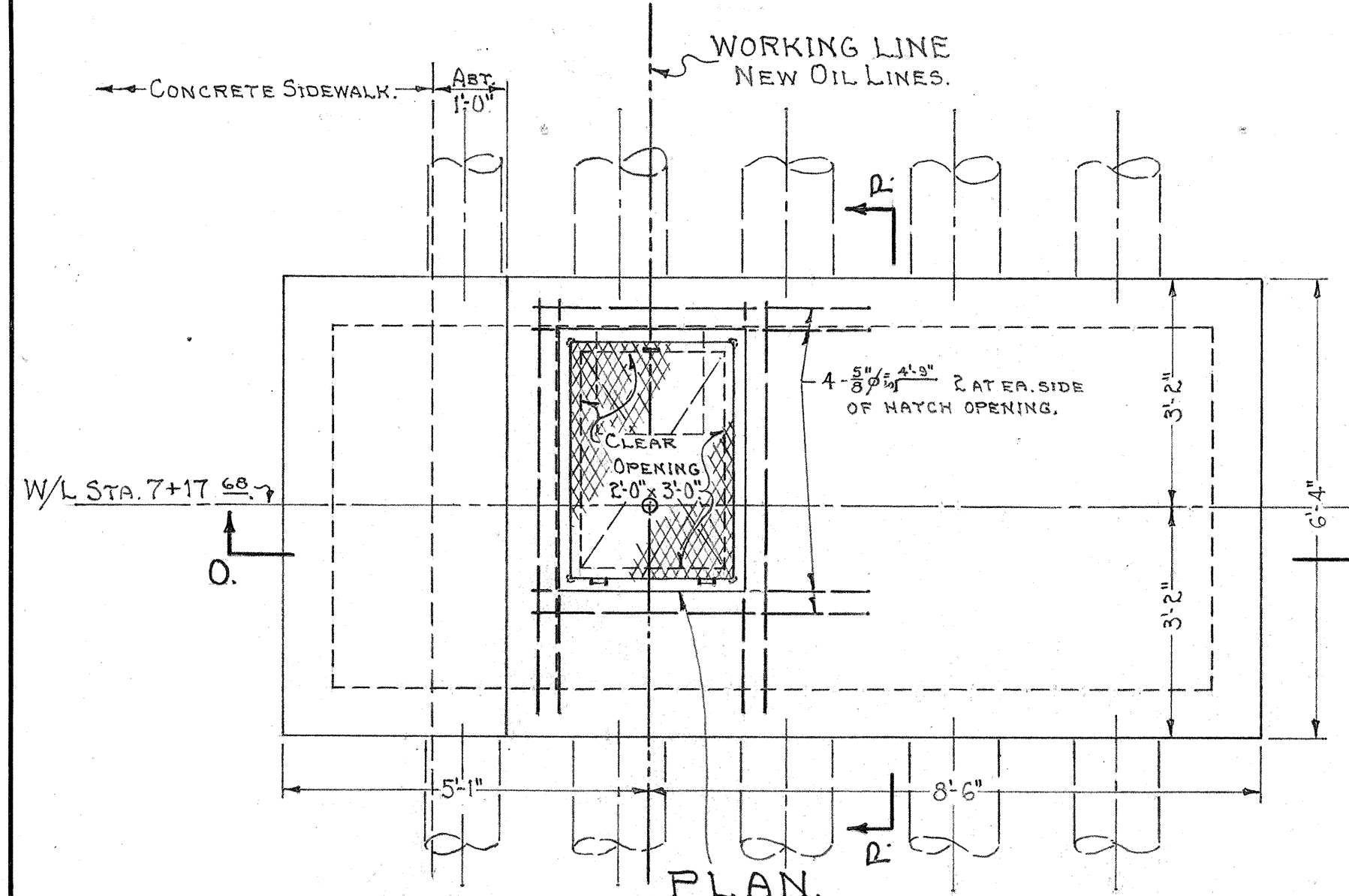


ELECTRICAL WORK.
 ALL CONDUIT WORK, RIGID STEEL CONCEALED IN CONCRETE. SPACE FIXTURES AS SHOWN TO SCALE. STUB CONDUITS OUT AT LOAD CTR. AND LEAVE 8" WIRE PIGTAILS. B.H.C. WILL FURNISH & INSTALL LOAD CTR. & VALVE MOTOR CONTROL EQUIPMENT.

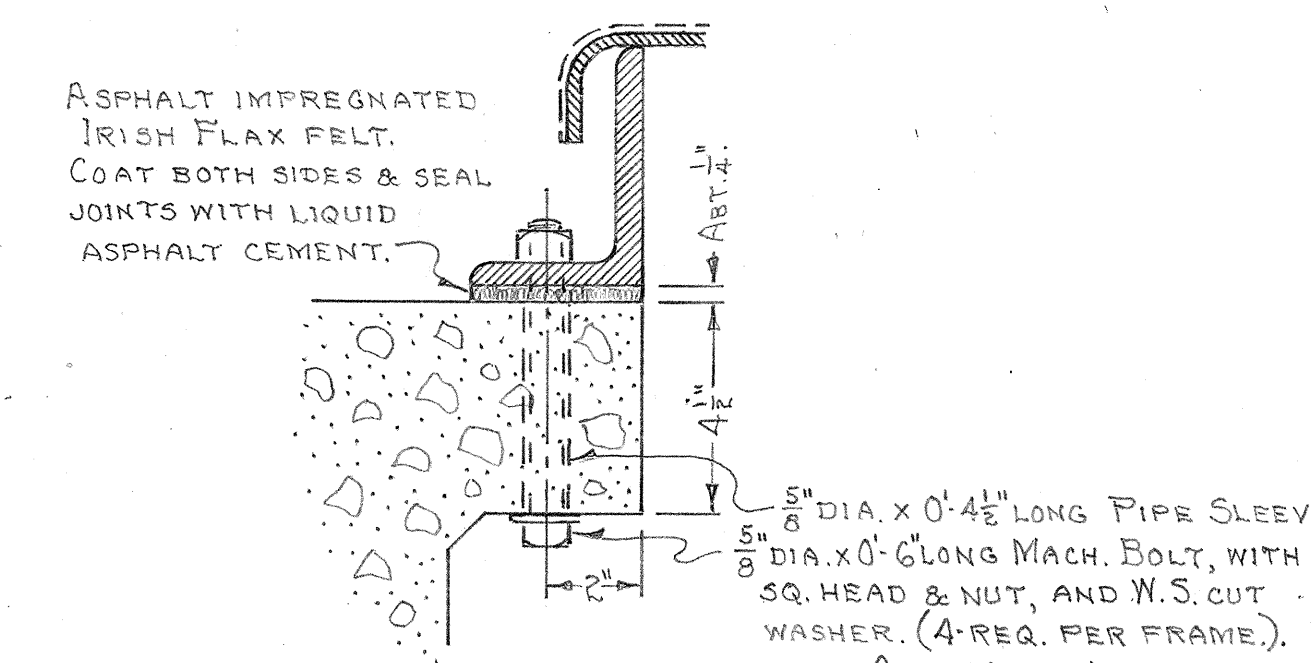
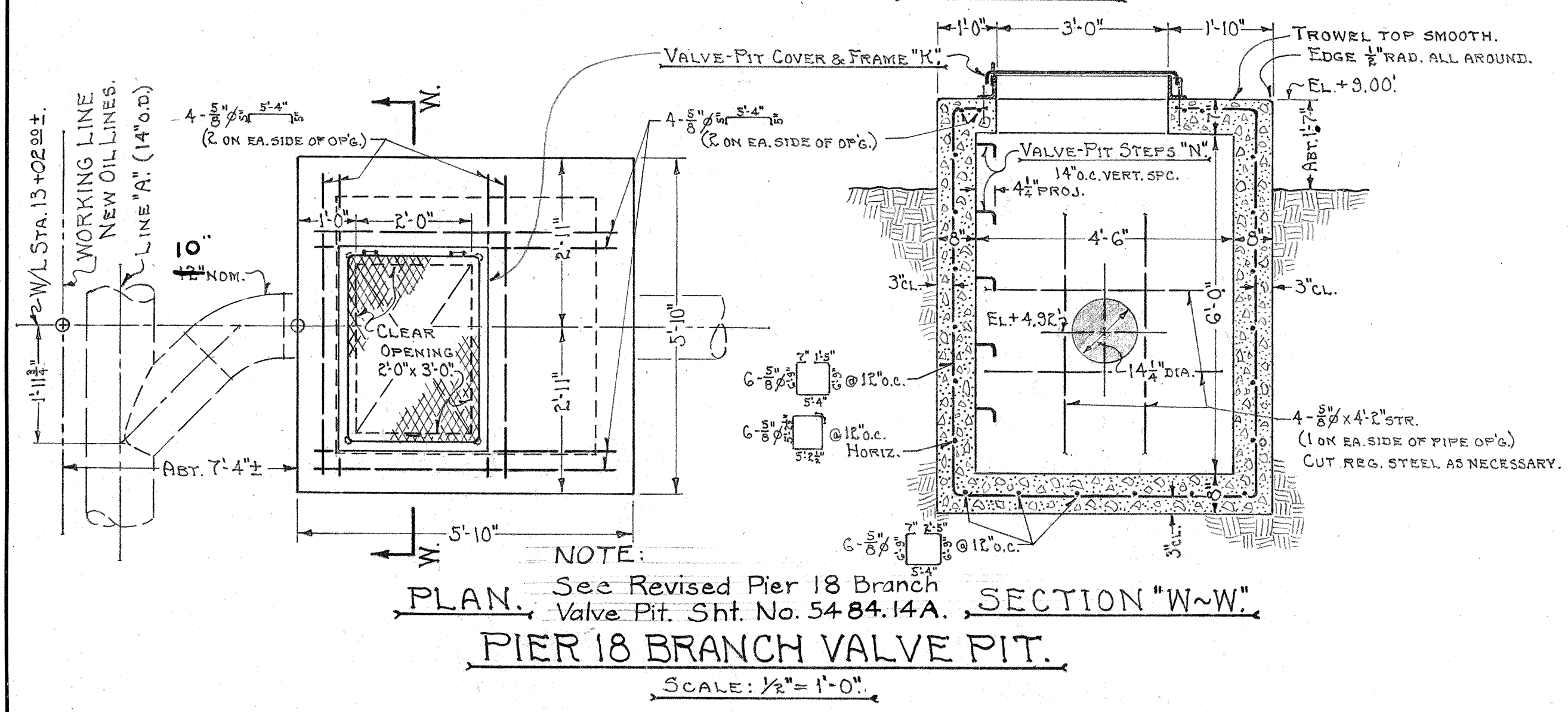


DETAILS OF VALVE HOUSE & PIT AT I.B. STA. 98+43.00.
 TERRITORIAL HIGHWAY DEPARTMENT
 TERRITORY OF HAWAII
OIL PIPE LINE LAYOUT
HONOLULU-PEARL HARBOR ROAD
IWILEI SECTION
 PROJECT No. FU 44(3) 2ND UNIT
 Scale: As Noted Date: July 11, 1950
 SHEET No. 9 OF 10 SHEETS

5484.21



MATERIALS FURNISHED BY B.H.C.:
 ALL PIPE, VALVES & FITTINGS FOR THE NEW OIL LINES.
 ALL MATERIALS FOR PROTECTION AGAINST CORROSION.
 ALL PIPE WELDING MATERIALS.
 VALVE-PIT COVERS & FRAMES "K".
 VALVE-PIT STEPS "N".



GENERAL NOTES:
 SEE "CONSTRUCTION JOINT DETAILS" AND DETAIL OF "CAULKING AT PIPE OPENINGS" ON DWG. NO. 802-5.
 ALL CONCRETE ~ CLASS A-1 PORTLAND CEMENT WITH 2# "TRICOL NORMAL" PER CUBIC YARD & NOT MORE THAN 5 1/2 GALLONS OF WATER PER SACK (34#) OF CEMENT.
 SURFACE FINISH ~ ORDINARY FINISH, ONLY, UNLESS NOTED OTHERWISE ON THE DETAILS.
 REINFORCING STEEL ~ INTERMEDIATE GRADE DEFORMED BAR, A.S.T.M. SERIAL DESIGNATION "A15".

DETAILS OF VALVE PITS AT
 W/L STA. 7+17.68
 W/L STA. 13+02.00
 W/L STA. 16+40.00

TERRITORIAL HIGHWAY DEPARTMENT
 TERRITORY OF HAWAII
OIL PIPE LINE LAYOUT
HONOLULU-PEARL HARBOR ROAD
IWILEI SECTION
PROJECT No. FU 44(3) 2ND UNIT
 Scale: As Noted Date: Aug. 15, 1950

THIS DRAWING PREPARED BY
BOARD OF HARBOR COMMISSIONERS
 TERRITORY OF HAWAII
 HONOLULU, T.H.
 DWG. NO. 802-4
 AUG. 15, 1950.
 JOB H.C. 802.

APPROVED: *B.F. Pugh*
 MANAGER & CHIEF ENGINEER, BOARD OF HARBOR COMMISSIONERS

SHEET No. 10 OF 10 SHEETS

5484.22

SURVEY PLOTTED BY: *[Signature]*
 DATE: 8-13-50
 ORIGINAL PLAN: *[Signature]*
 TRACED BY: *[Signature]*
 NO. 1007 K&C CO., N.Y.