

SANITARY SEWERAGE FACILITIES FOR CITY OF HARRIMAN, TENNESSEE

BLACK CROW AND EIDSNES, INC.

ENGINEERS

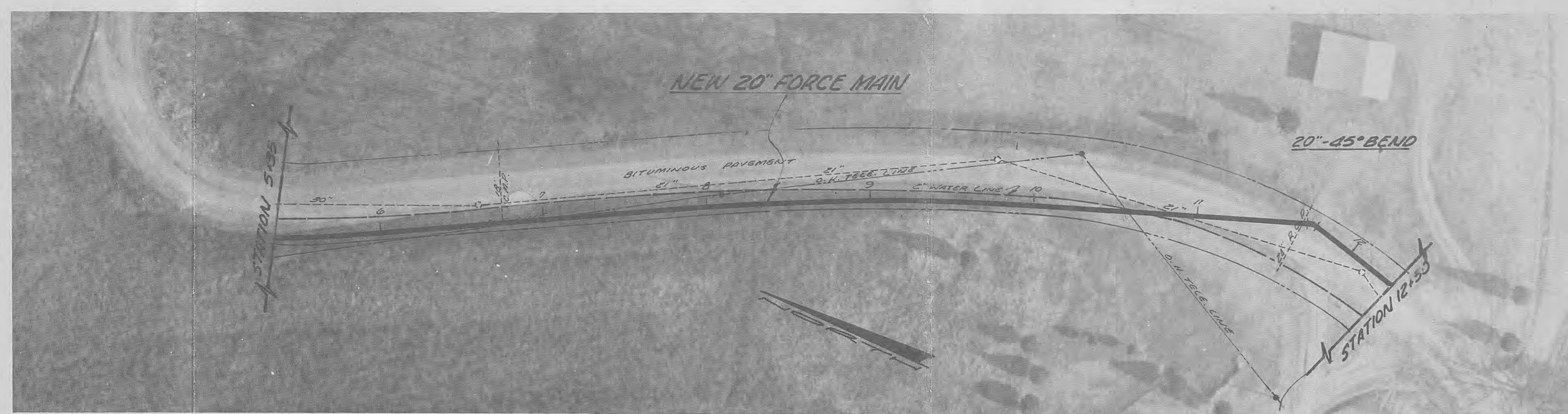
GAINESVILLE, FLORIDA
CLEARWATER, BOCA RATON, NAPLES, FLORIDA
ATLANTA, GEORGIA SAN JOSE, COSTA RICA



PHASE OF
MODIFICATIONS TO
EFFLUENT PUMPING SYSTEM
PROJECT NO. 4798

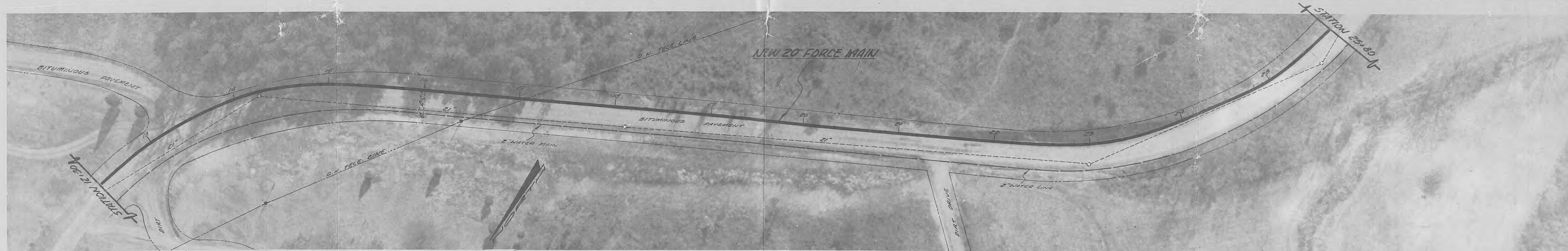
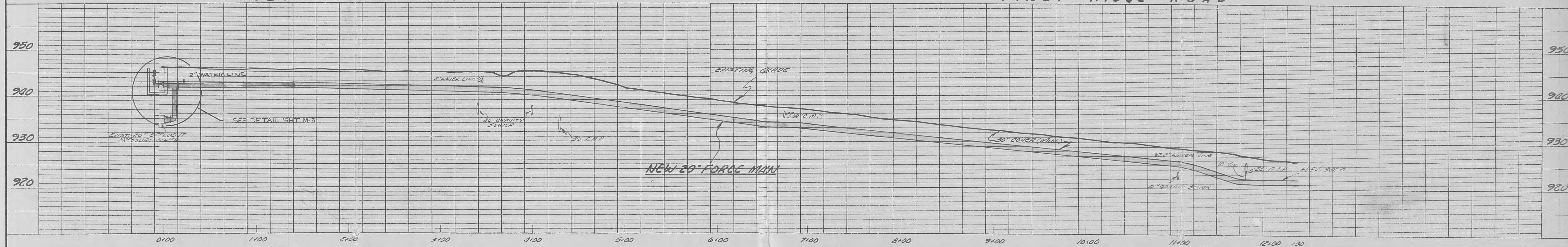
Jack Howard

2/12/1968

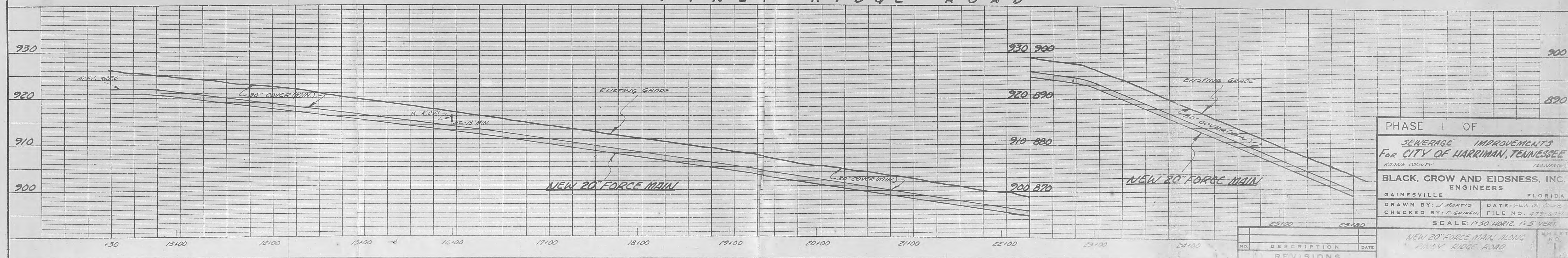


PINEY RIDGE ROAD

PINEY RIDGE ROAD



PINEY RIDGE ROAD



PHASE I OF

SEWERAGE IMPROVEMENTS

For CITY OF HARRIMAN, TENNESSEE

ROANE COUNTY

BLACK, CROW AND EIDSNES, INC.

ENGINEERS

GAINESVILLE FLORIDA

DRAWN BY: J. MARTIN DATE: FEB. 12, 1945

CHECKED BY: E. GARNER FILE NO. 473-64-1

SCALE: 1" = 50' HORIZ. 1" = 5' VERT.

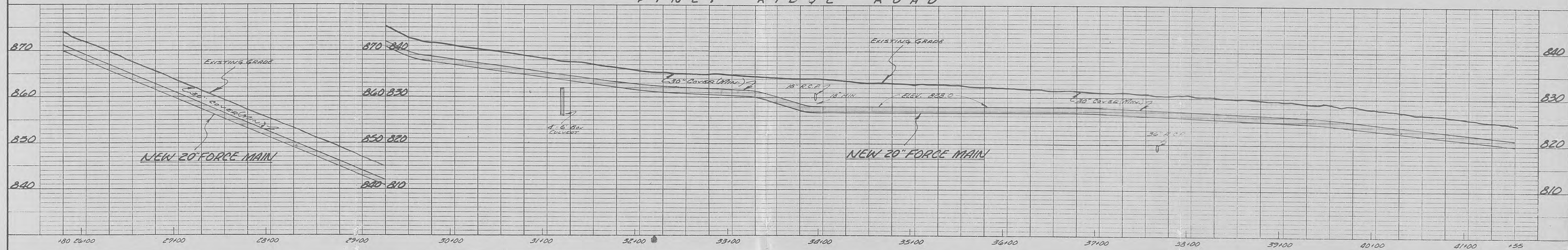
NEW 20" FORCE MAIN ALONG PINEY RIDGE ROAD

NO.	DESCRIPTION	DATE
1	REVISIONS	

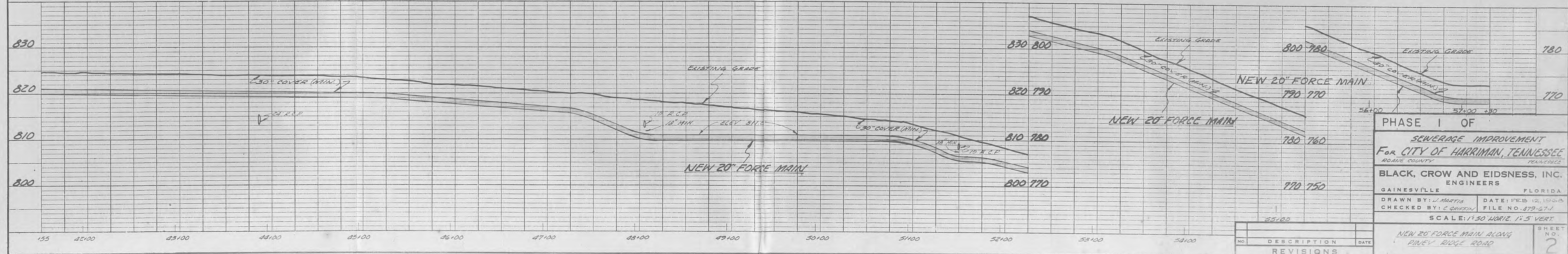
SHEET NO. 11



PINEY RIDGE ROAD



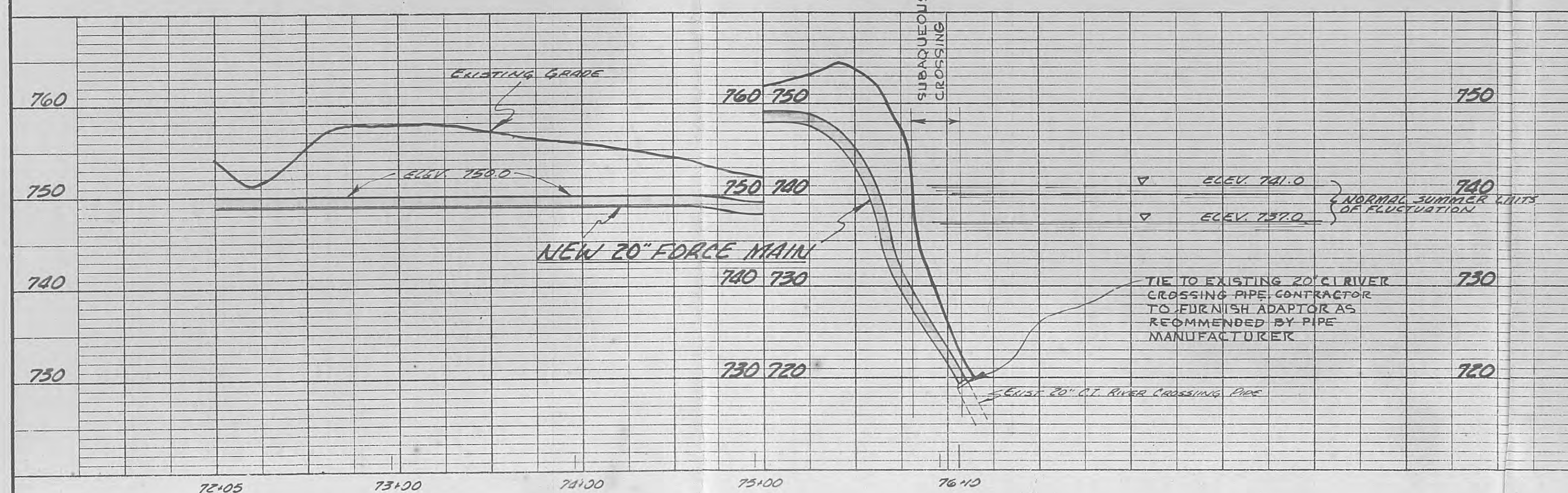
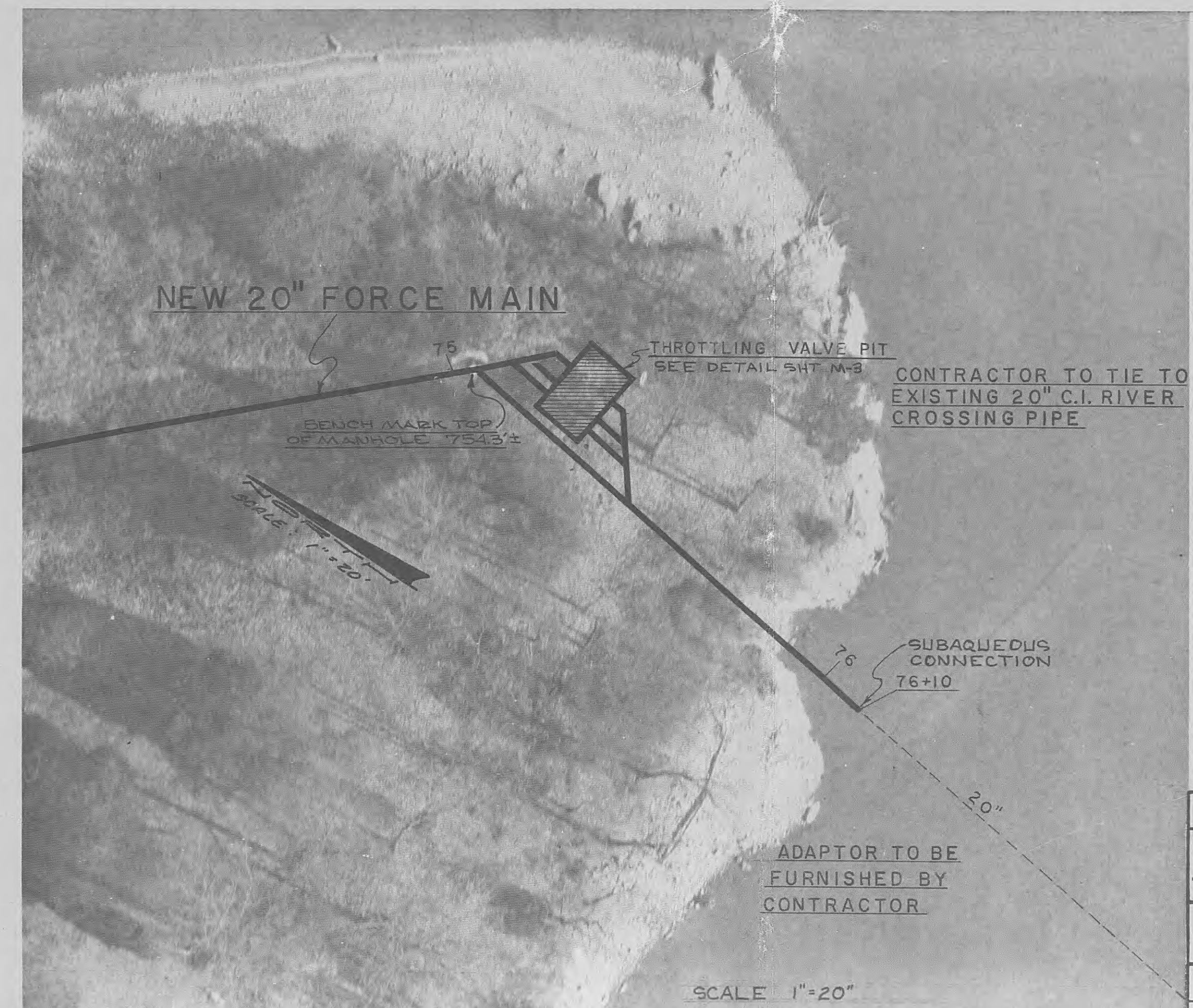
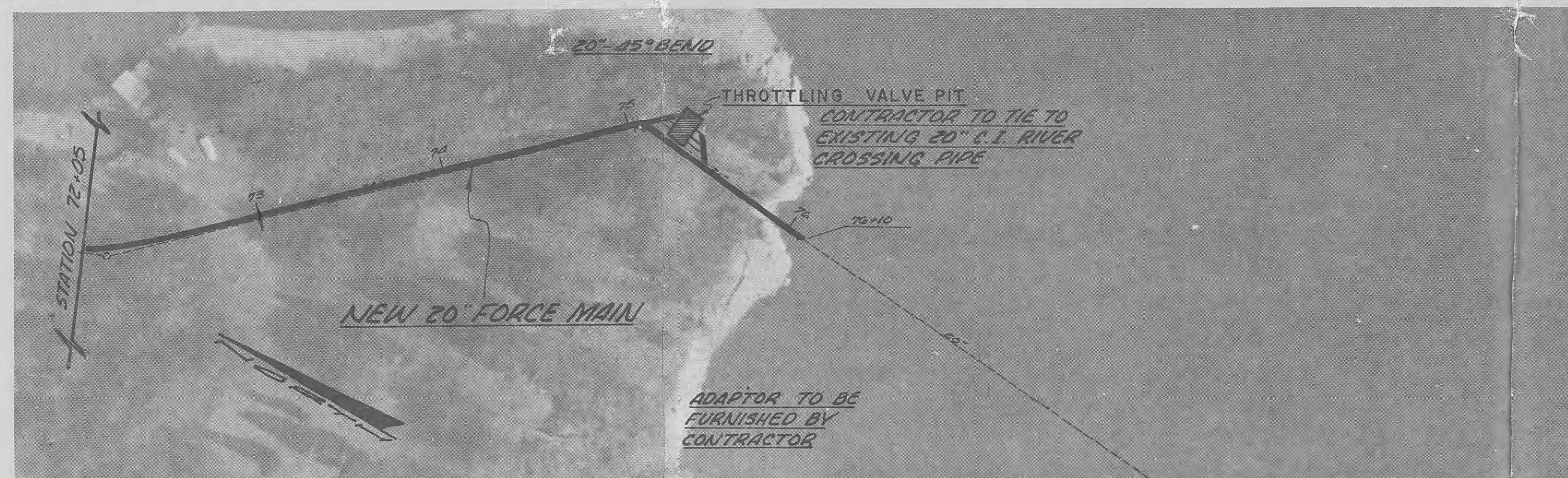
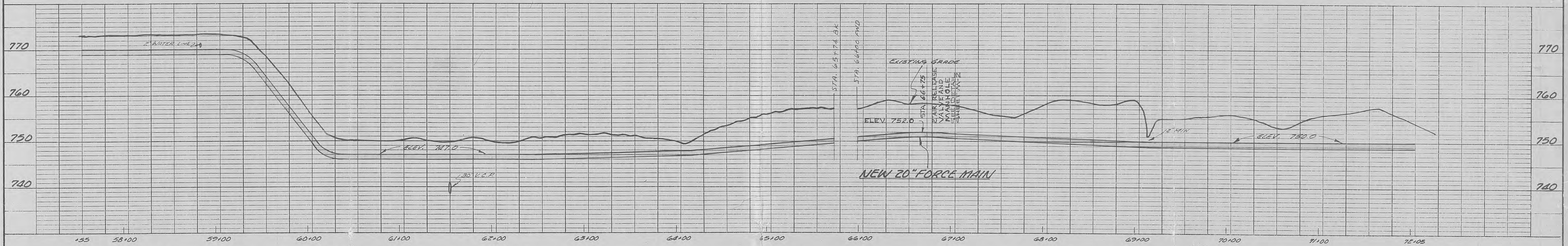
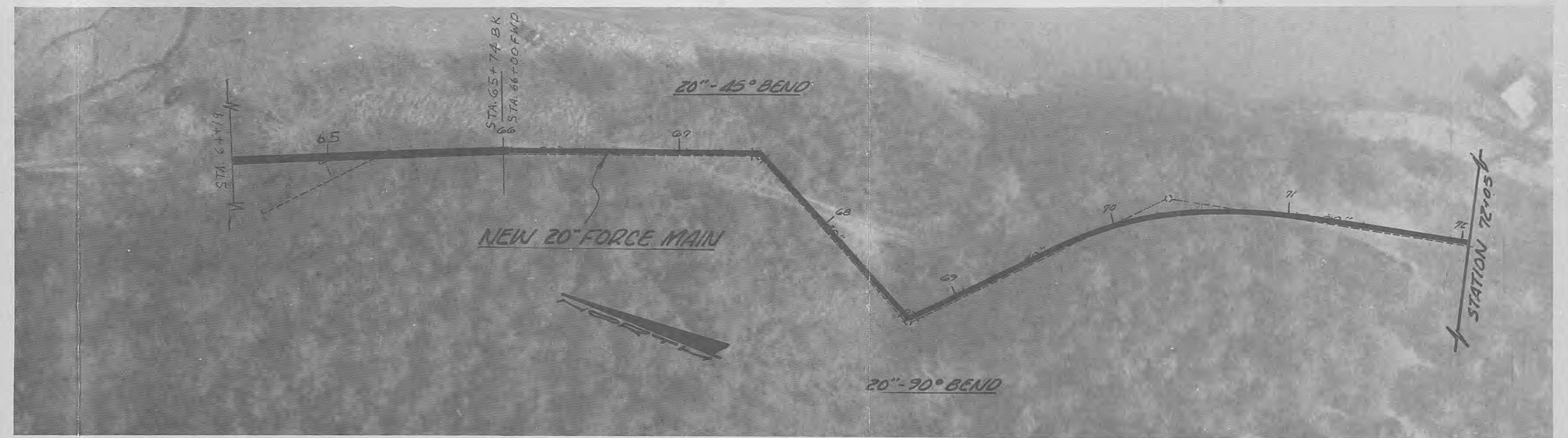
PINEY RIDGE ROAD



PHASE I OF
SEWERAGE IMPROVEMENT
FOR CITY OF HARRIMAN, TENNESSEE
ROANE COUNTY
BLACK, CROW AND EIDSNESS, INC.
ENGINEERS
GAINESVILLE FLORIDA
DRAWN BY: J. MARTIN DATE: FEB 12, 1968
CHECKED BY: C. GORDON FILE NO. 879-67-1
SCALE: 1"=50' HORIZ. 1"=5' VERT.
NEW 20" FORCE MAIN ALONG
PINEY RIDGE ROAD

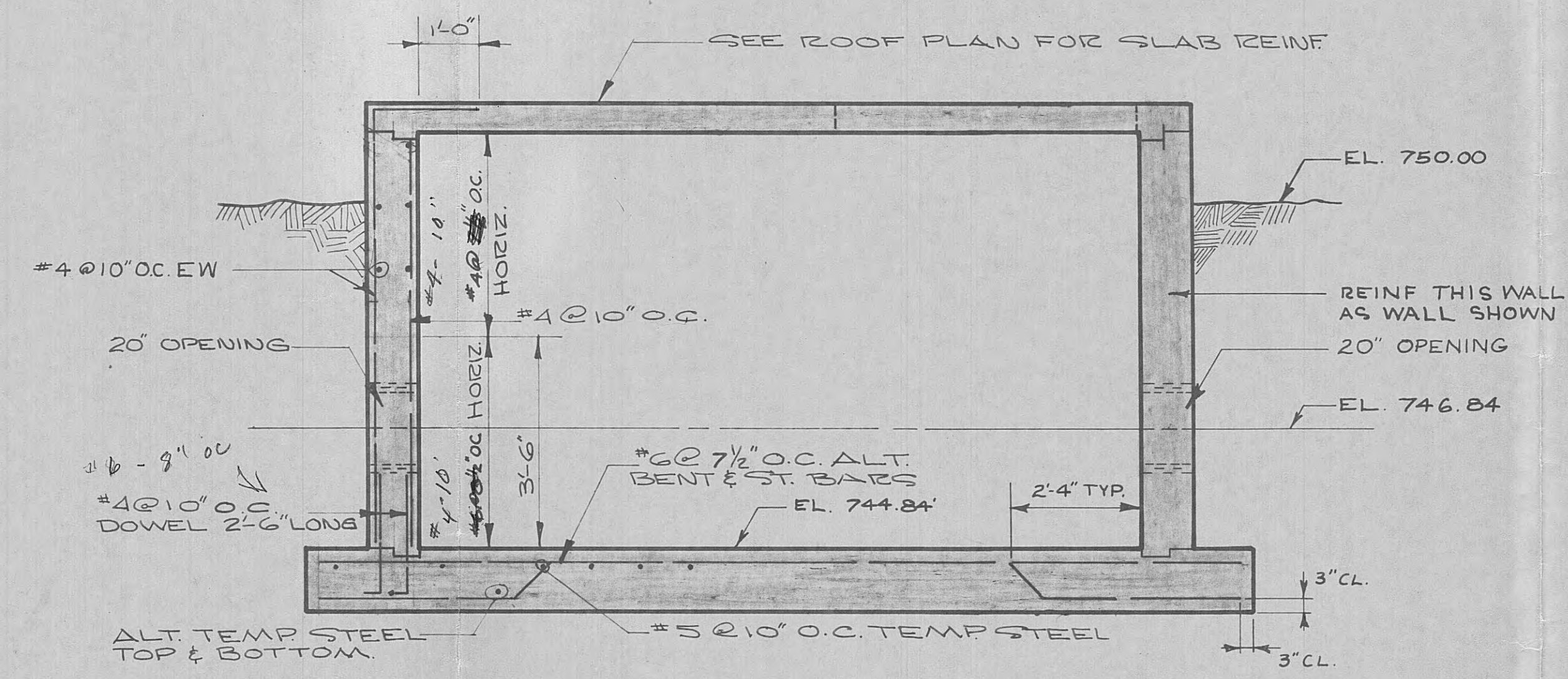
NO.	DESCRIPTION	DATE
1	REVISIONS	

SHEET NO. 2

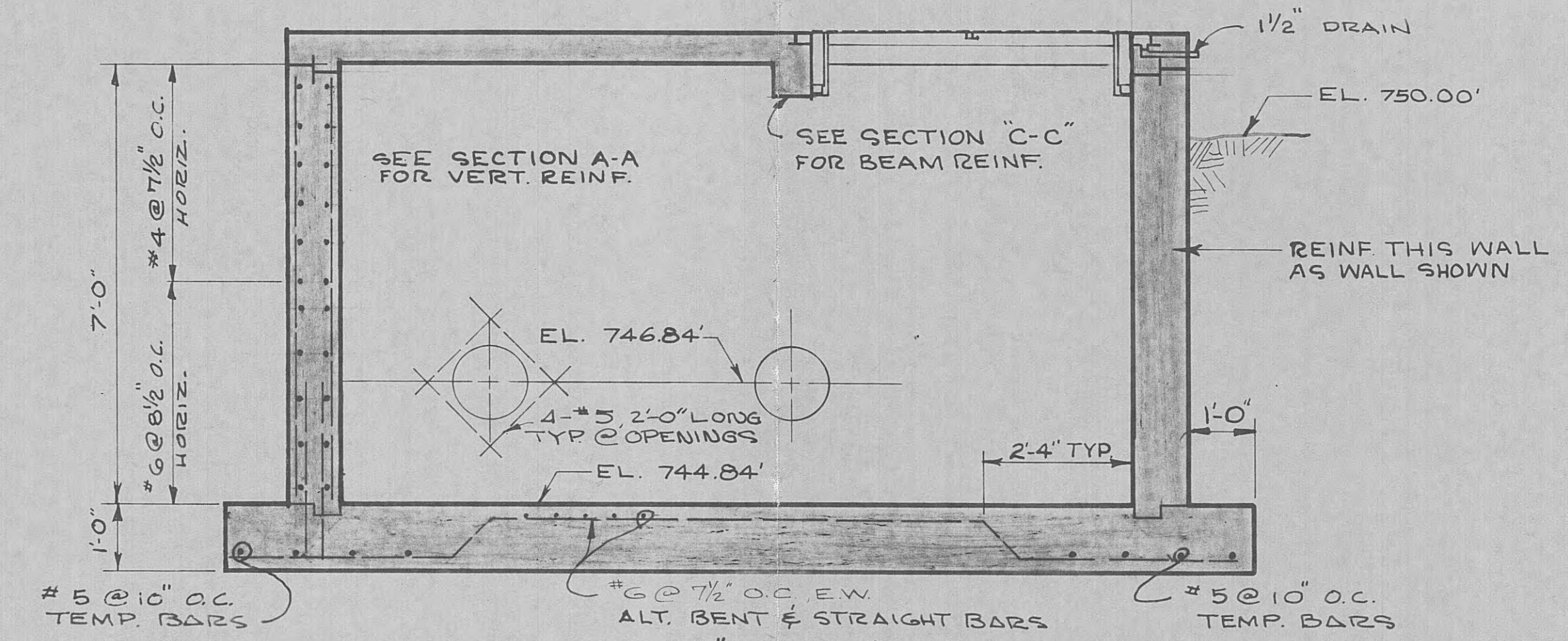


943
747
2.31 / 19600 85
1848
1120

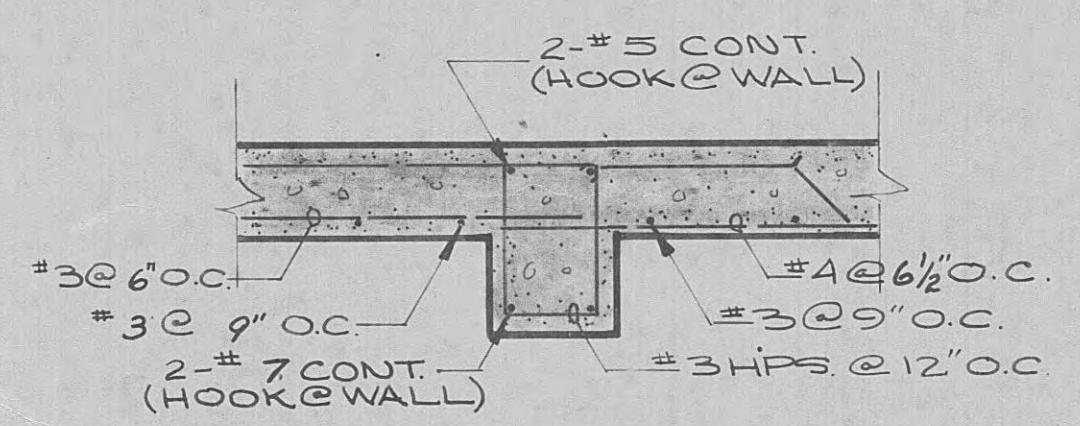
PHASE I OF	
SEWERAGE IMPROVEMENTS	
FOR CITY OF HARRIMAN, TENNESSEE	
ROANE COUNTY TENNESSEE	
BLACK, CROW AND EIDNESS, INC.	
ENGINEERS	
GAINESVILLE FLORIDA	
DRAWN BY: J. MARTIS	DATE: FEB. 12, 1960
CHECKED BY: C. GRIFFIN	FILE NO. 479-67-1
SCALE: AS NOTED	
NEW 20" FORCE MAIN ALONG	
PINEY RIDGE ROAD TO TENNESSEE	
RIVER	



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

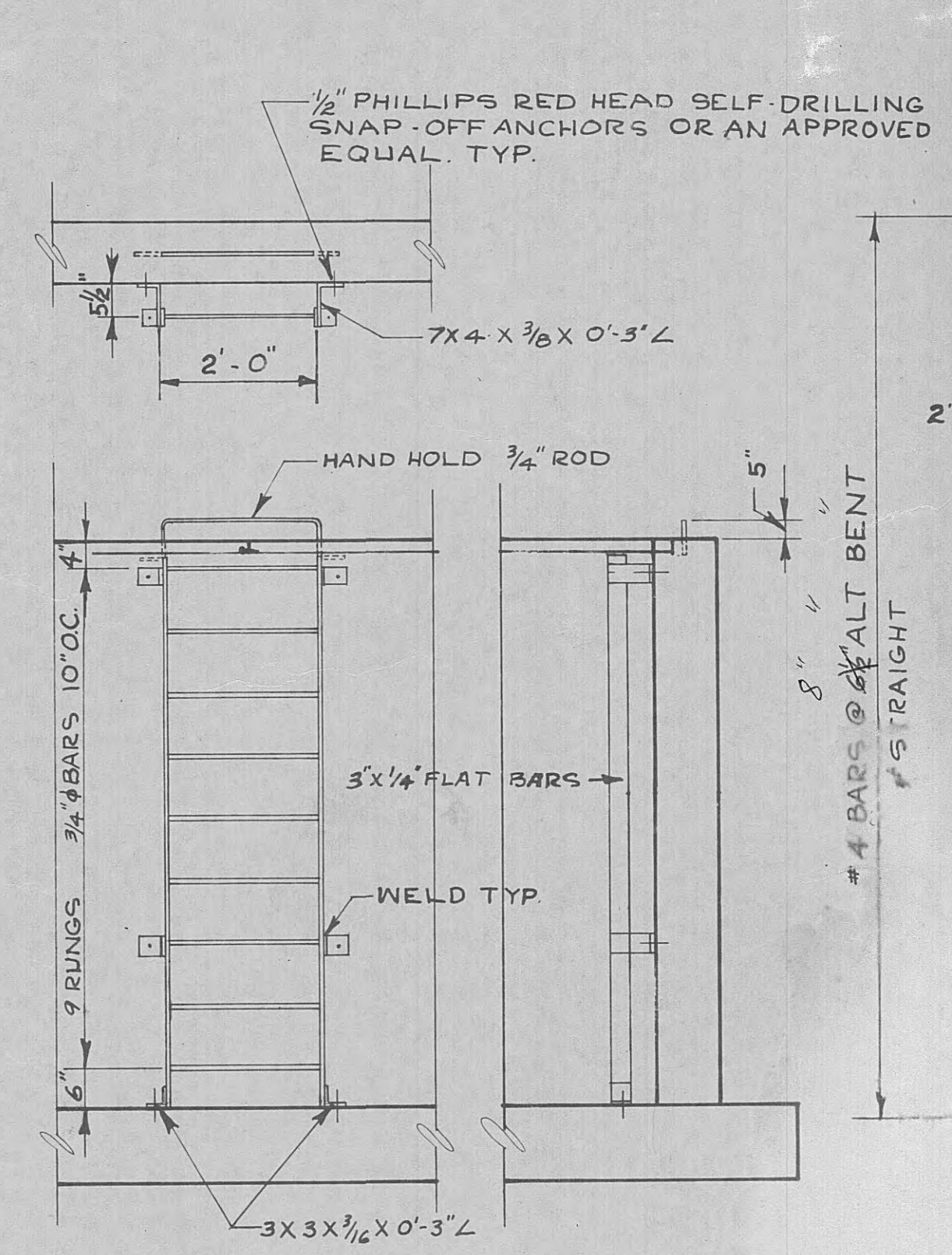


SECTION "B-B"
SCALE 1/2"=1'-0"

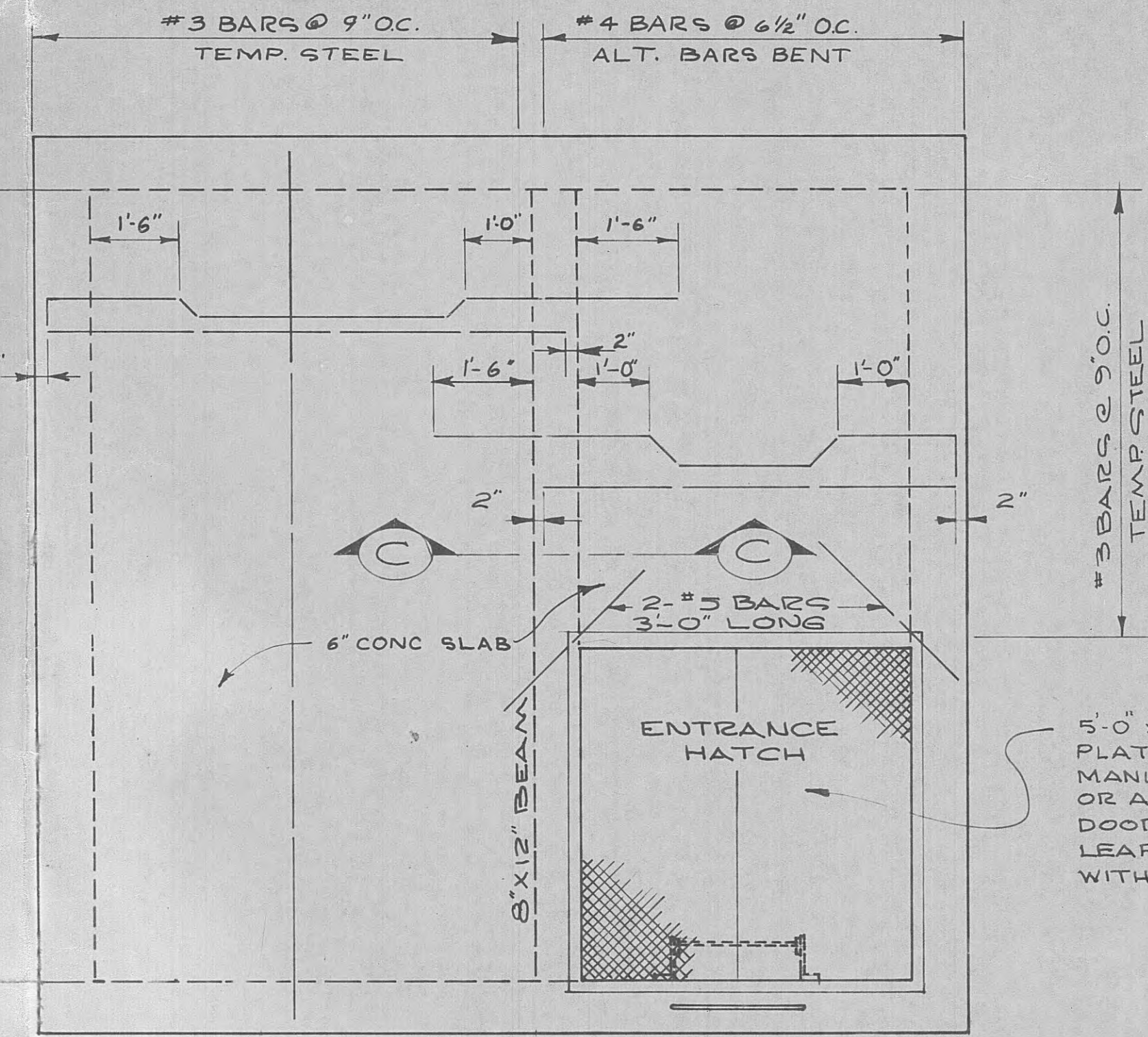


SECTION "C-C"
SCALE 1"=1'-0"

- NOTES:**
1. ALL CLEARANCES FOR BEAM STEEL ARE 1/2"
 2. ALL CLEARANCES FOR SLAB BOTTOM STEEL ARE 3/4"
 3. ALL CLEARANCES FOR SLAB TOP STEEL ARE 1/2"
 4. RETURN ALL HORIZ. BARS IN WALLS 1'-0" @ CORNERS
 5. ALL CONC. TO BE 3000 PSI BUILDING CODE CONC.

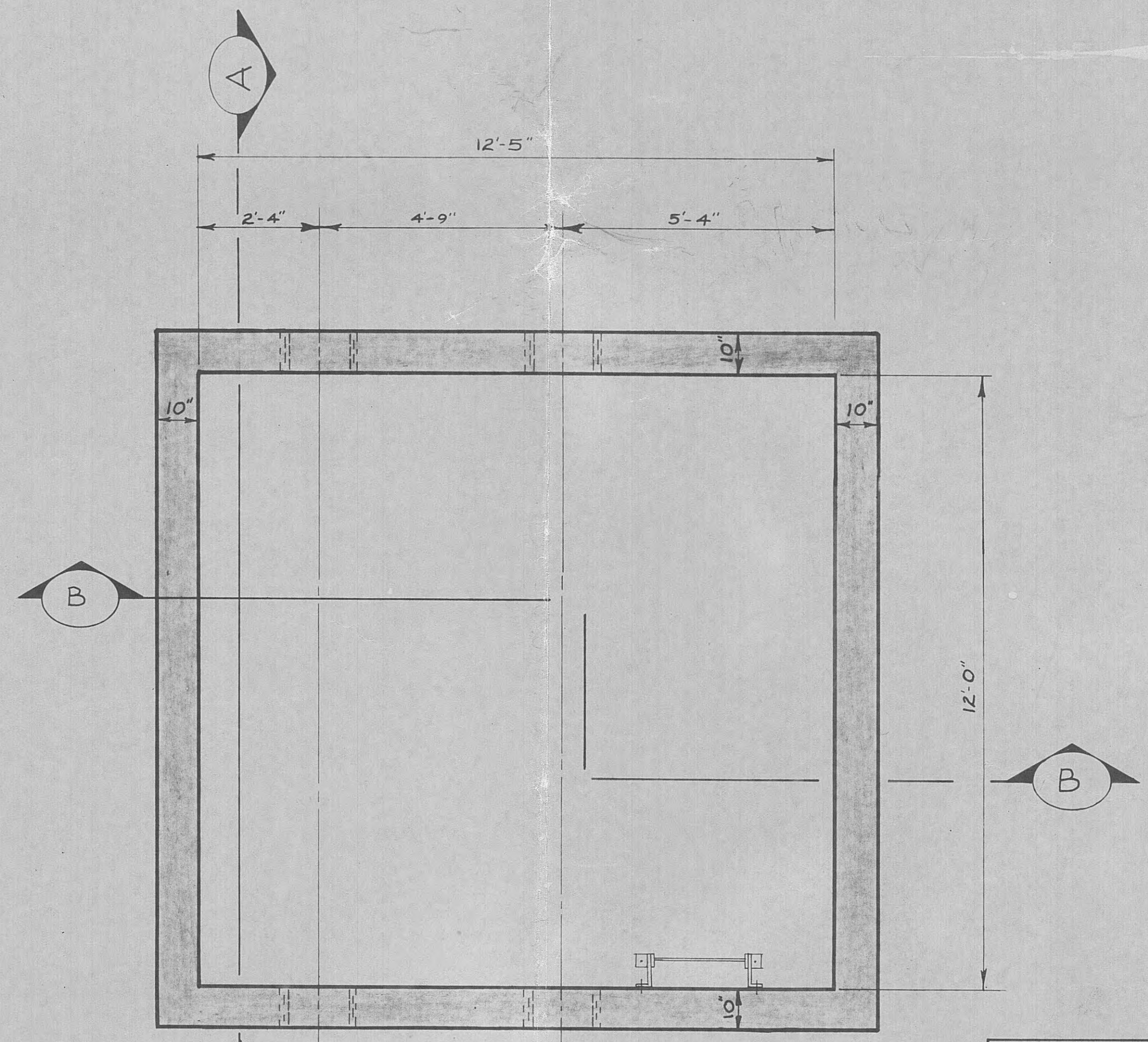


LADDER DETAIL
SCALE 1/2"=1'-0"



ROOF PLAN
SCALE 1/2"=1'-0"

5'-0" x 5'-5 1/4" ALUM. DIAMOND PLATE ACCESS DOOR, AS MANUFACTURED BY "BILCO" OR AN APPROVED EQUAL. DOOR TO BE OF DOUBLE LEAF DESIGN, WATERTIGHT & WITH STAND A 300# LIVE LOAD



PLAN
SCALE 1/2"=1'-0"

PHASE I OF
MODIFICATIONS TO
EFFLUENT PUMPING SYSTEM
FOR CITY OF HARRIMAN TENNESSEE
ROANE COUNTY

BLACK, CROW AND EIDSNES, INC.
ENGINEERS
GAINESVILLE FLORIDA

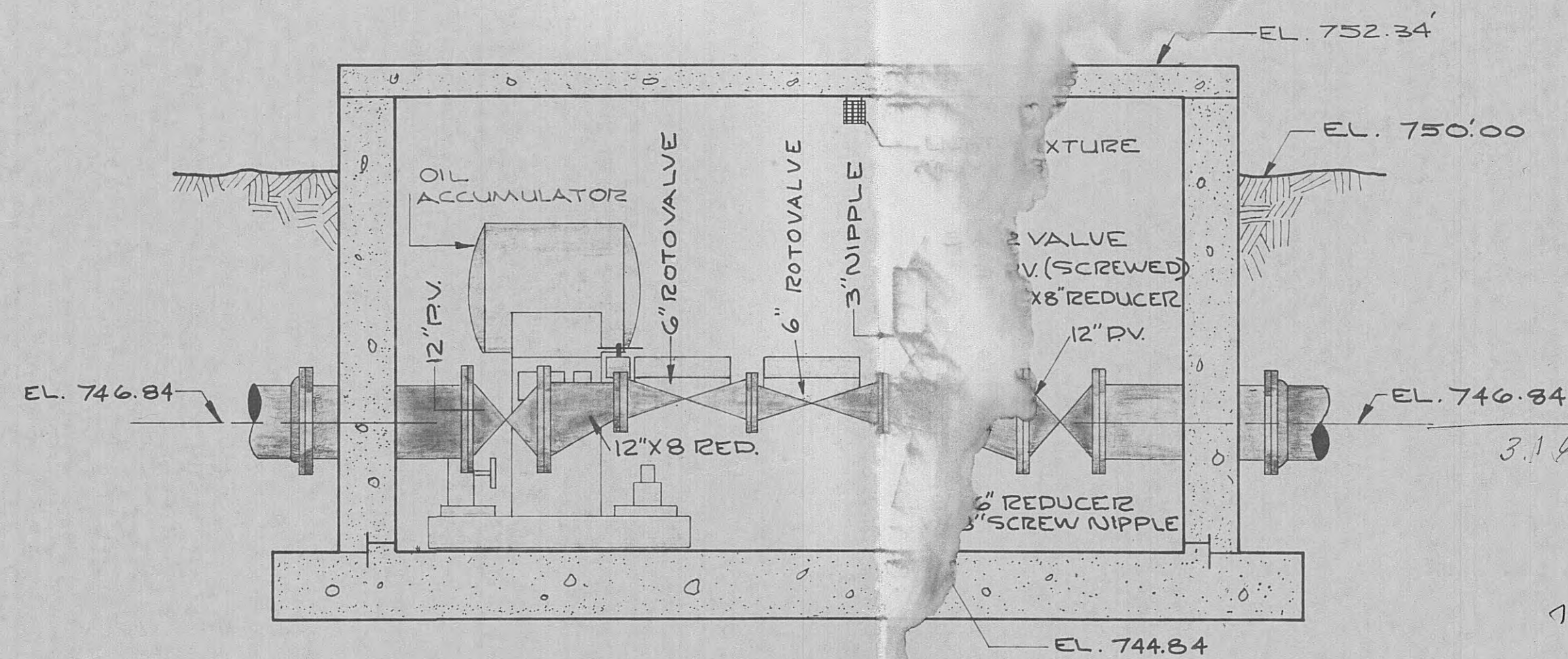
DRAWN BY: T.G.E. DATE: FEB. 12, 1968
CHECKED BY: R.D.W. FILE NO.: 479-C-7-1

SCALE AS NOTED

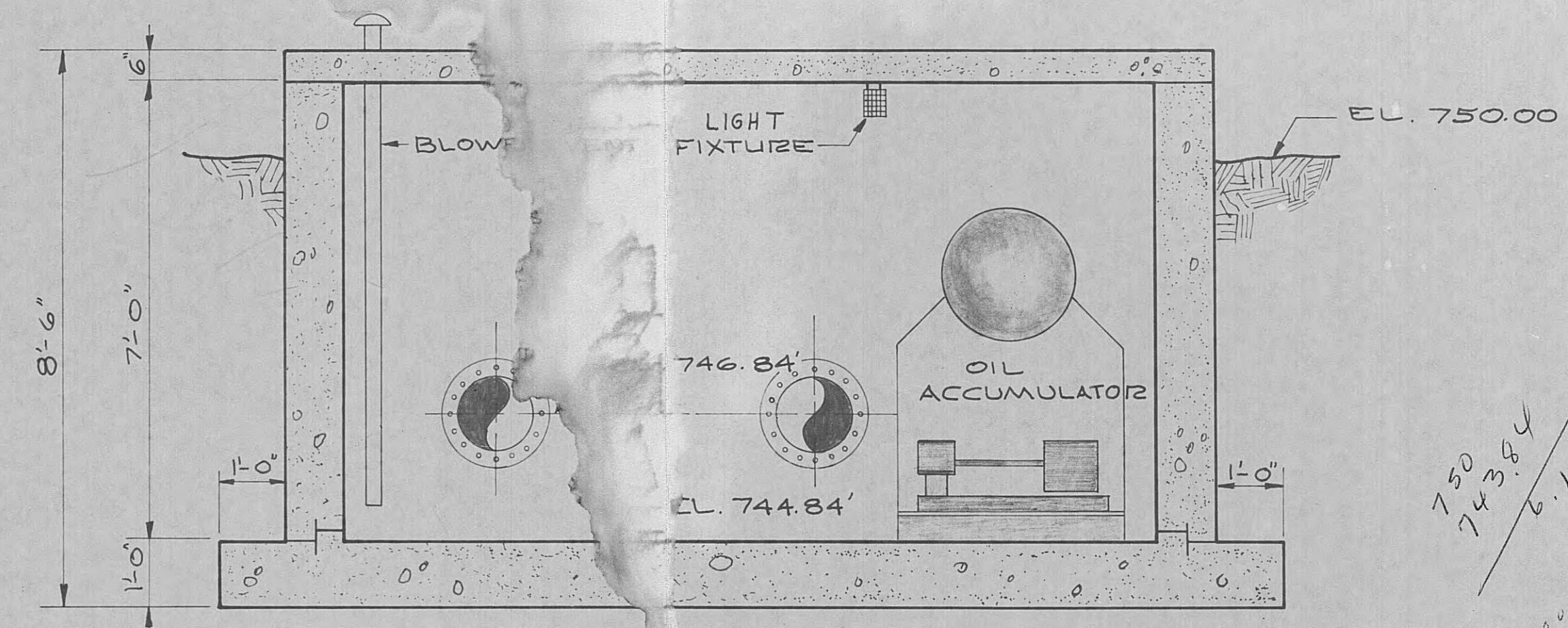
NO.	DESCRIPTION	DATE
1	ADDENDUM #1	2-25
2	REVISIONS	

THROTTLING VALVE PIT
STRUCTURAL

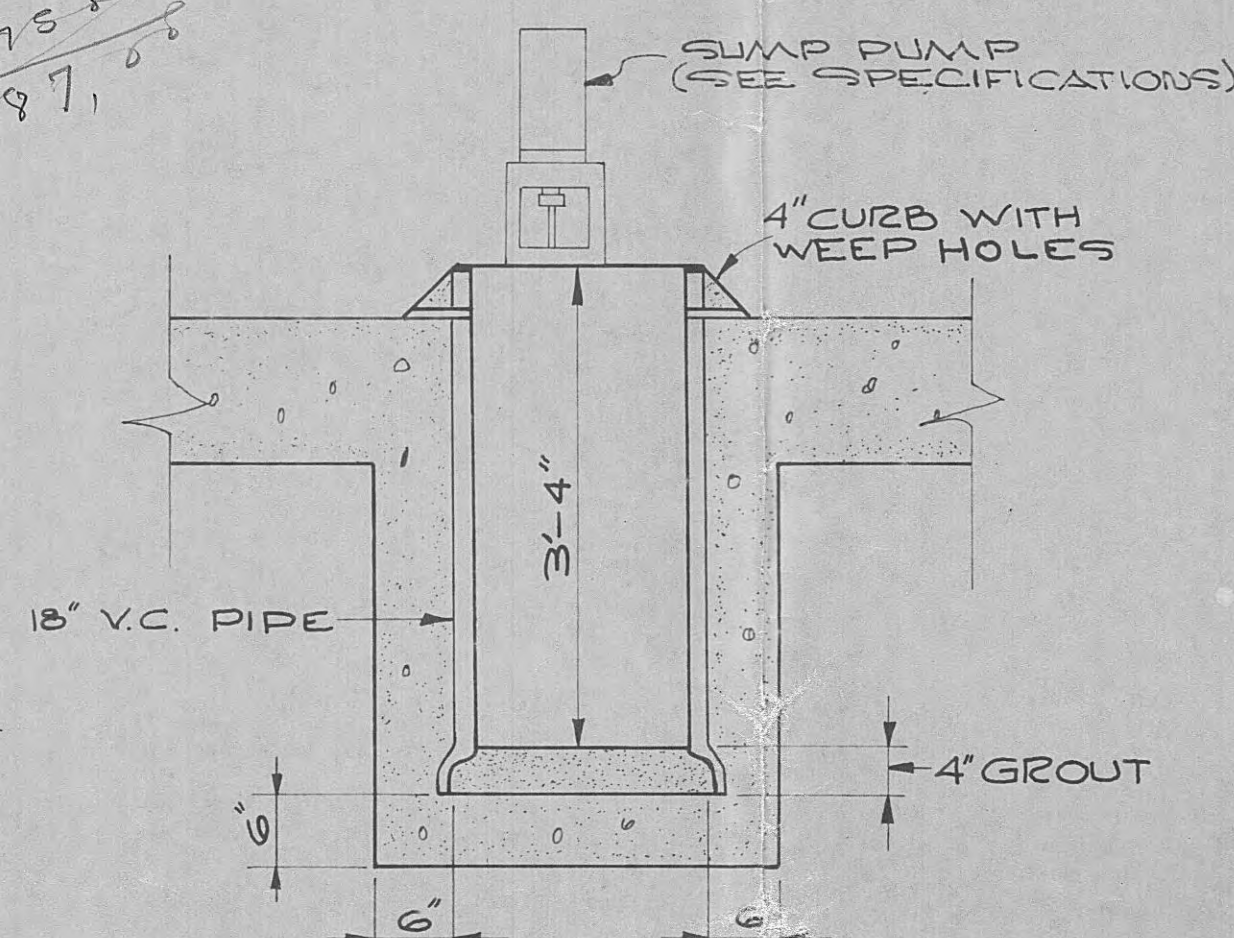
SHEET NO. 54



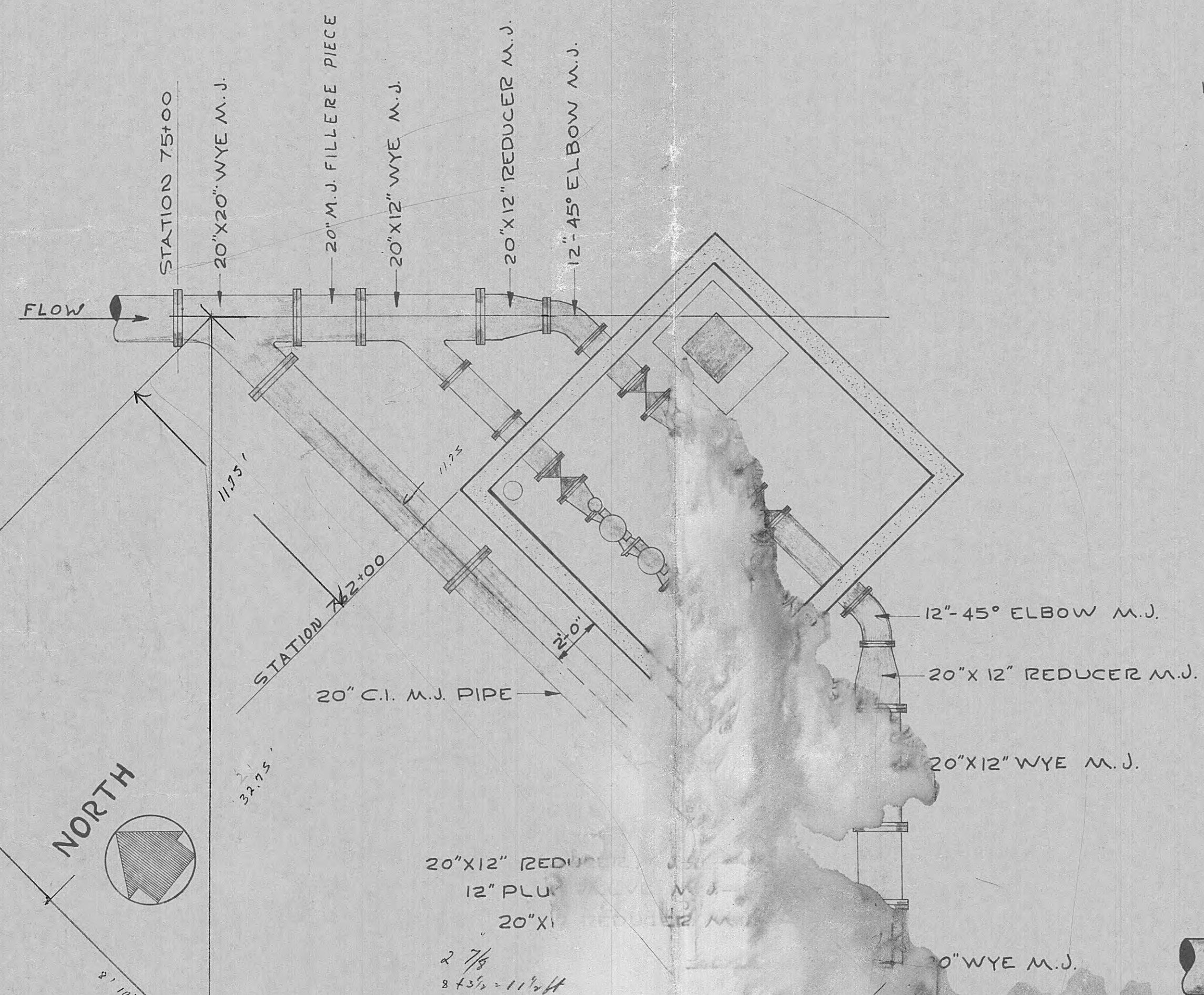
SECTION "A-A"
SCALE 1/2"=1'-0"



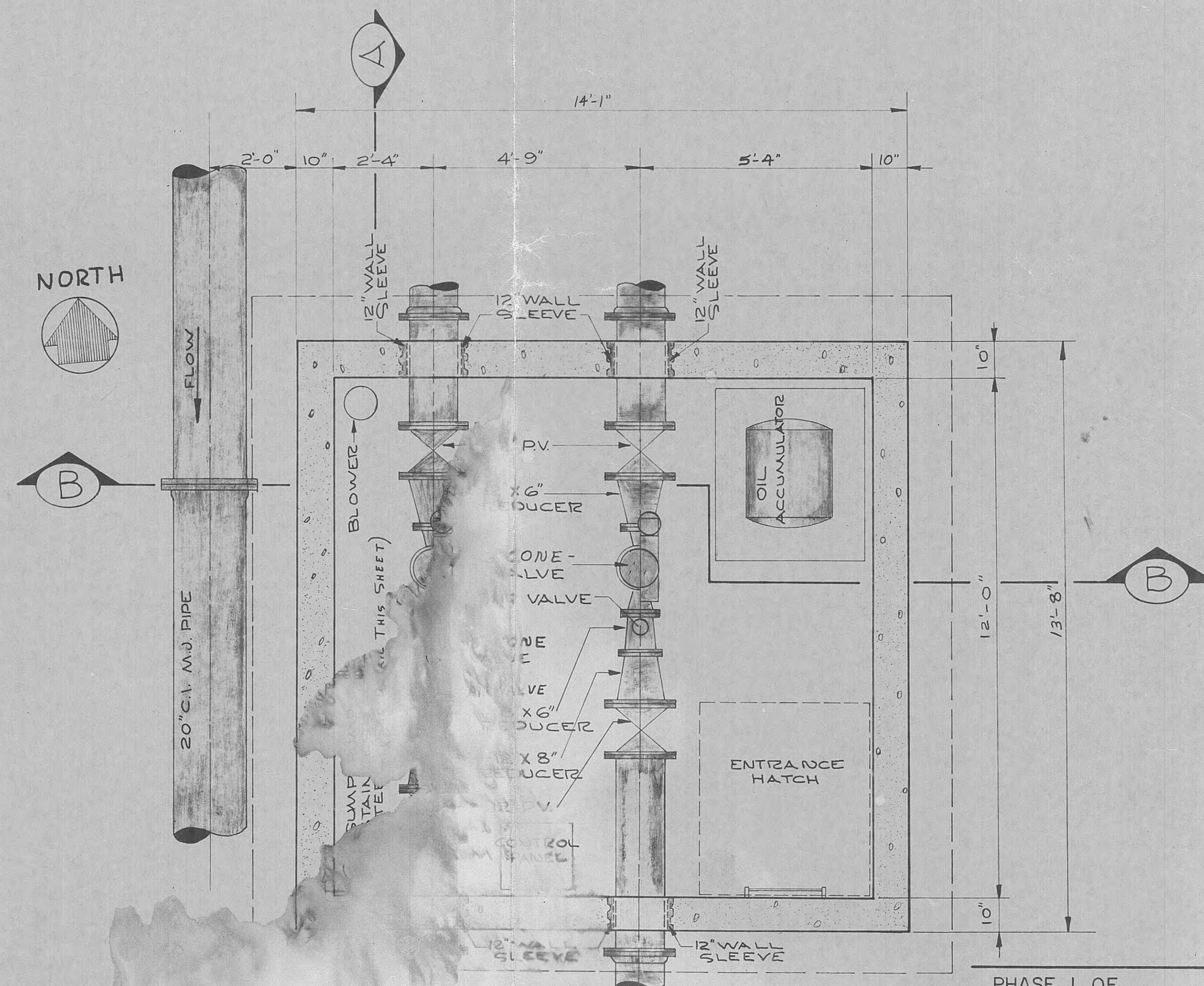
SECTION "B-B"
SCALE 1/2"=1'-0"



DETAIL OF SUMP PUMP
SCALE 3/4"=1'-0"



PIPING PLAN
SCALE 1/2"=1'-0"

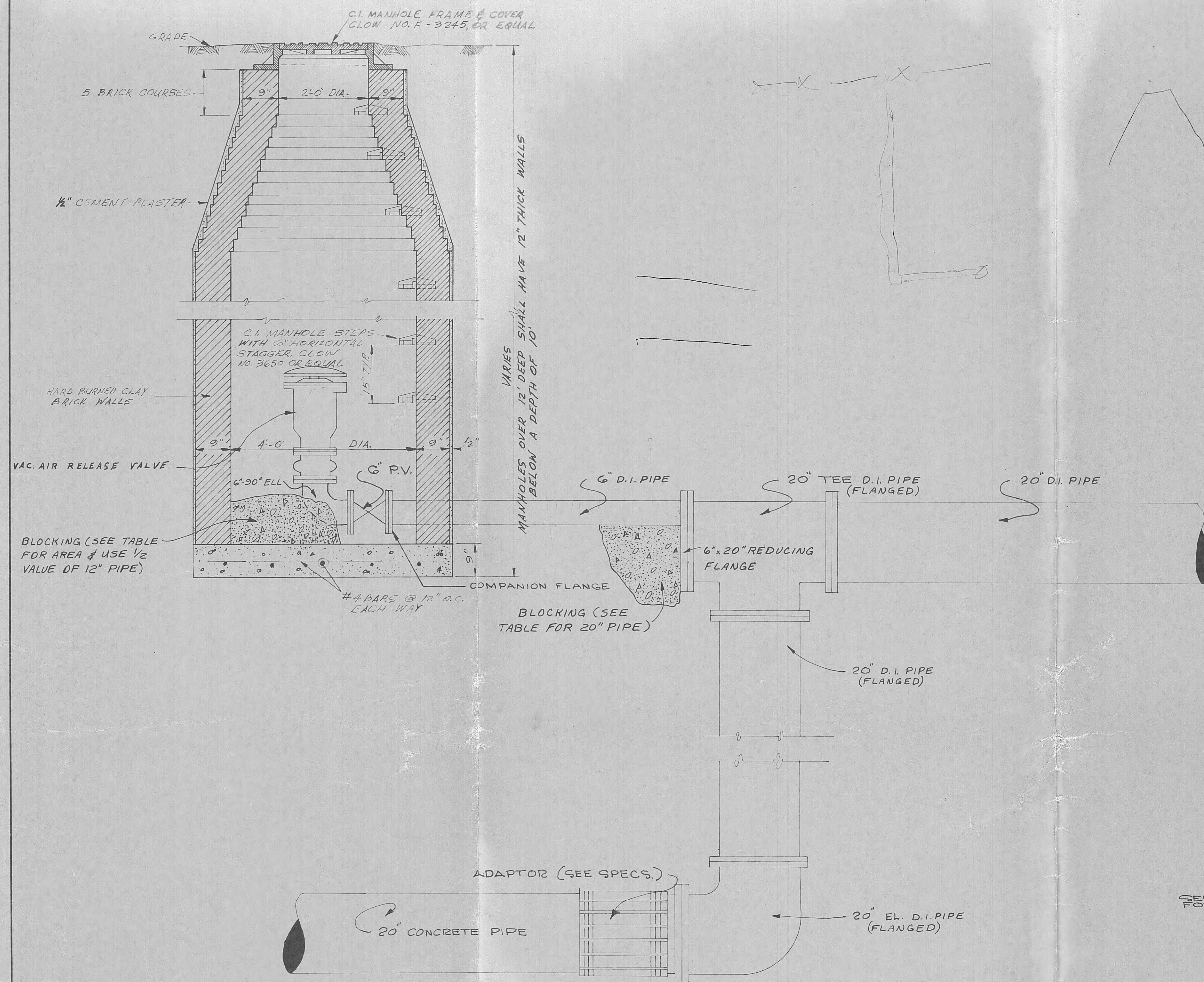


LEGEND

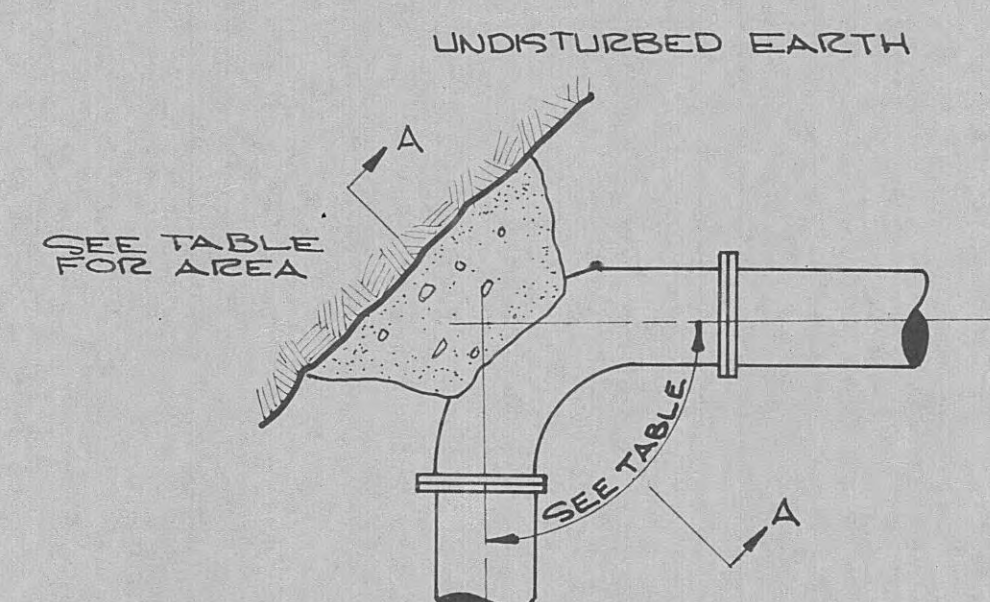
TO BE FURNISHED BY THE OWNER
AND INSTALLED BY THE CONTRACTOR

PHASE I OF
MODIFICATIONS TO EFFLUENT
PUMPING SYSTEM FOR
CITY OF HARRIMAN TENNESSEE
ROANE COUNTY TENNESSEE
BLACK, CROW AND EIDNESS, INC.
ENGINEERS
GAINESVILLE FLORIDA
DRAWN BY: G.P. DATE: FEB. 19, 1968
CHECKED BY: R.D.W. FILE NO.: 479-67-1
SCALE: AS NOTED

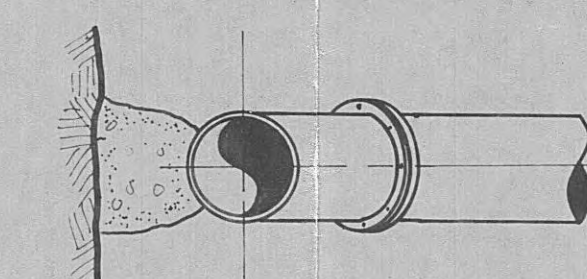
SHEET NO. 1
M-1



AIR RELEASE VALVE PIT
SCALE 3/4" = 1'-0"



PLAN

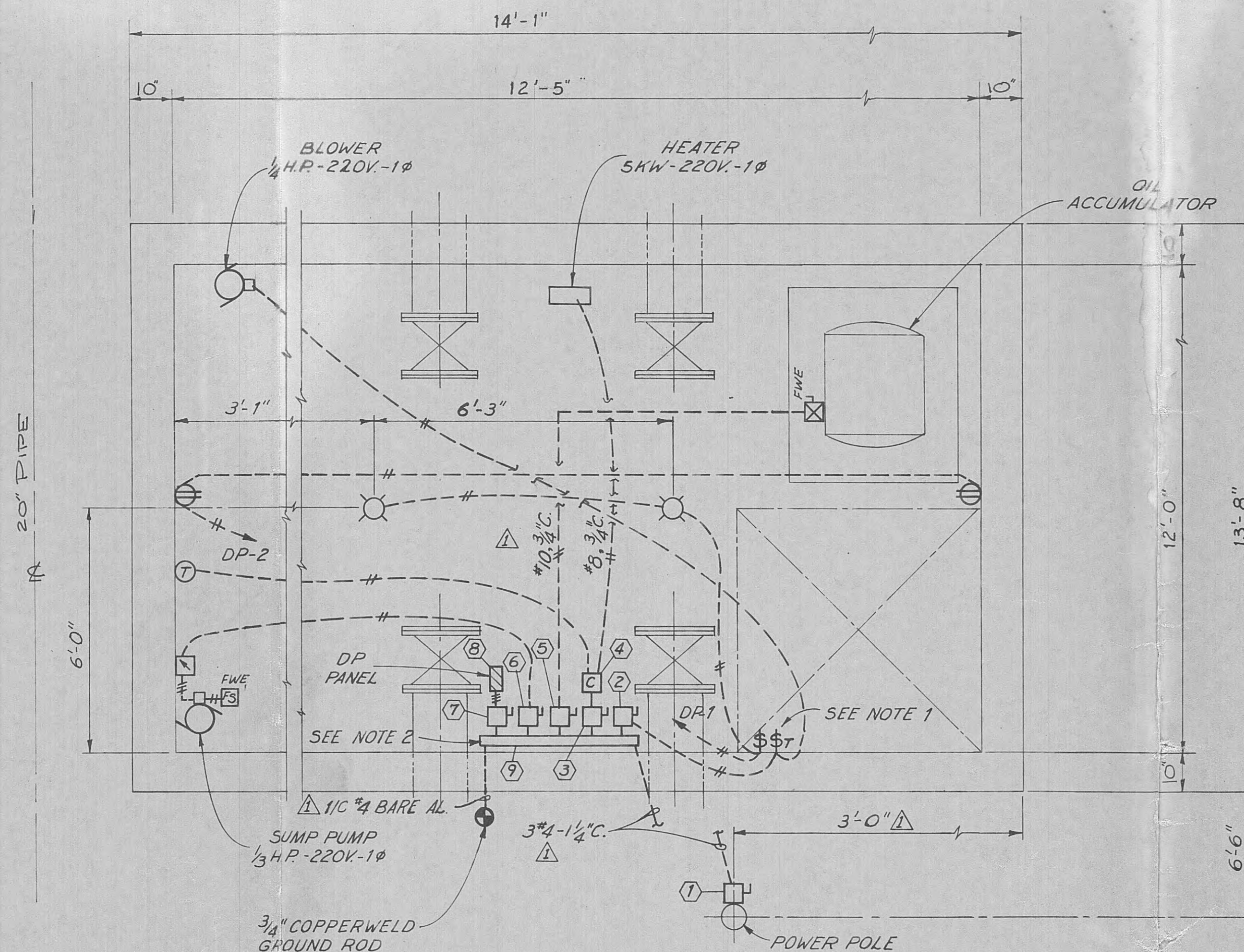


SECTION A-A

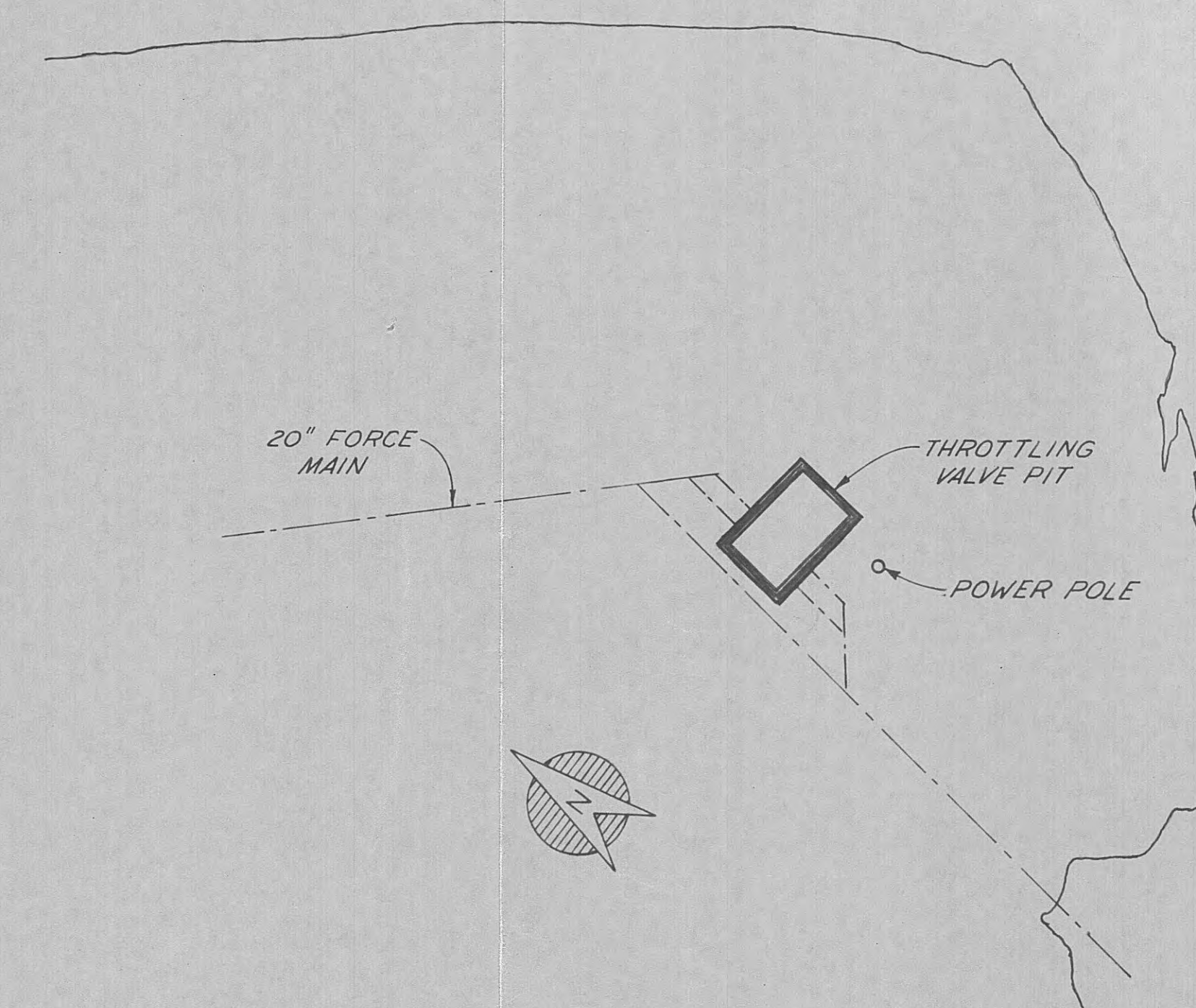
BEARING AREA TABLE (SQUARE FEET)					
PIPE SIZE	90° BEND	45° BEND	22 1/2° BEND	1 1/4° BEND	WYE (45°)
20"	33.3	20.0	9.0	4.7	20.0
12"		7.0			

TYPICAL REACTION BLOCKING
SCALE NONE

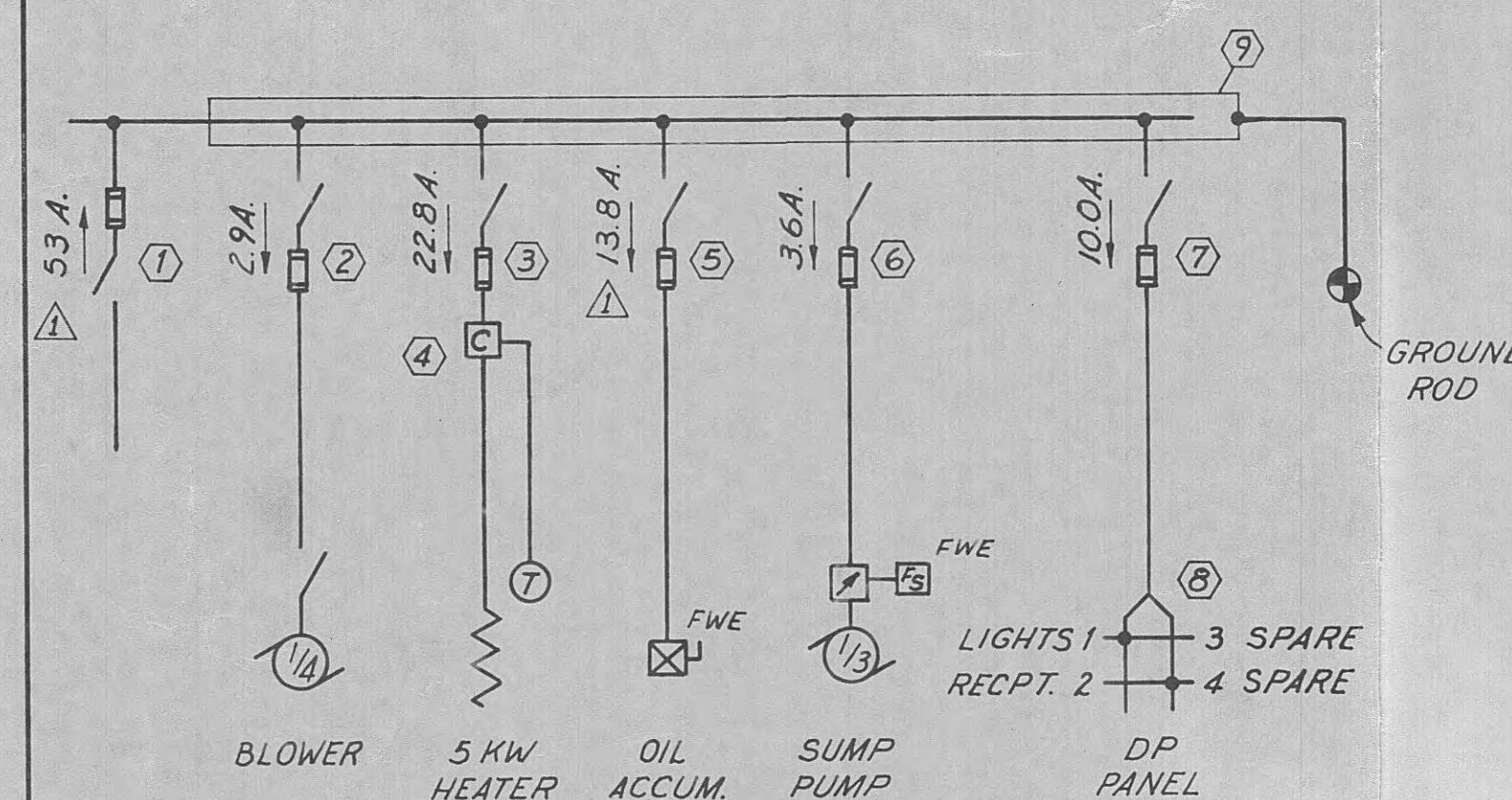
MODIFICATIONS TO
EFFLUENT PUMPING SYSTEM
FOR CITY OF HARRIMAN TENNESSEE
ROANE COUNTY TENNESSEE
BLACK, CROW AND EIDSNESS, INC.
ENGINEERS
KANSAS CITY MISSOURI
DESIGNED BY: V.P. DATE: FEB. 12, 1968
DRAWN BY: R.D.W. FILE NO.: 479-67
SCALE: AS NOTED
E. ALVE



- △ NOTES:
1. MOUNT SWITCHES 1'-0" TO THE LEFT OF LADDER AND 1'-0" BELOW CEILING.
 2. MOUNT WEATHER EQUIPMENT ON $\frac{3}{4}$ " THICK WEATHERPROOF PLYWOOD BACKBOARD. PAINT BACKBOARD WITH 2 COATS OF WEATHERPROOF PAINT.



SITE PLAN
SCALE: NONE



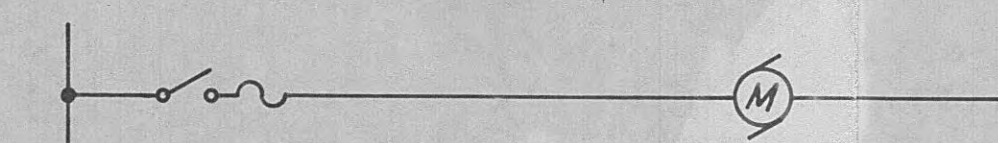
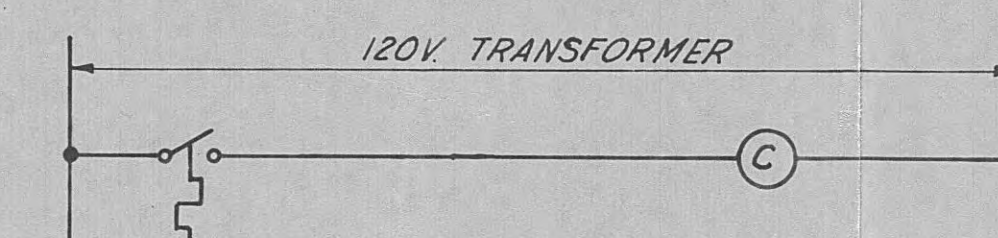
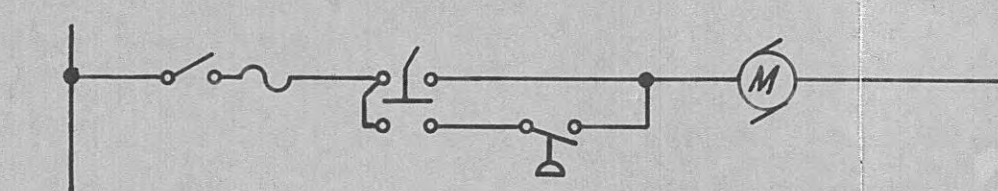
- ① FUSED DISCONNECT SWITCH; HEAVY DUTY, SQUARE "D"
CAT. NO. H223NDS 240V-100A-1 ϕ WITH SOLID NEUTRAL.
- ② FUSED DISCONNECT SWITCH; HEAVY DUTY, SQUARE "D"
CAT. NO. H221DS 240V-30A-1 ϕ .
- ③ SAME AS MARK NO. 2.
- ④ CONTACTOR- NEMA SIZE 1, SQUARE "D" CLASS 8502,
TYPE CW-11
- ⑤ SAME AS MARK NO. 2.
- ⑥ SAME AS MARK NO. 2.
- ⑦ SAME AS MARK NO. 2.
- ⑧ DISTRIBUTION PANELBOARD-120/240V-1 ϕ -3W WITH
CROUSE-HINDS CAT.NO. DHP404-20.
- ⑨ 4" x 4" JIC WIREWAY.

ELECTRICAL SCHEMATIC AND DEVICE LIST

ELECTRICAL PLAN
SCALE: 1/2" = 1' - 0"

L E G E N D

- #6, 1" C.
- - - - -
- CONDUIT RUN CONCEALED IN CEILING OR WALL. HASH MARKS INDICATE QUANTITY OF #12 ALUMINUM THWN CONDUCTORS IN $\frac{3}{4}$ " RIGID STEEL CONDUIT. NUMERALS INDICATE CONDUCTOR AND CONDUIT SIZE WHEN DIFFERENT FROM #12 CONDUCTS AND $\frac{3}{4}$ " CONDUIT.
- CONDUIT RUN CONCEALED IN FLOOR SLAB. SAME NOTATIONS AS ABOVE.
- Ⓛ DUPLEX CONVENIENCE OUTLET. MOUNT 1'-6" ABOVE FINISHED FLOOR.
- Ⓢ INCANDESCENT LIGHTING FIXTURE; CEILING MOUNTED WITH 1EA 200W. I.F. LAMP. CROUSE-HINDS CAT. NO. EVA285. LAMP NO. A-23.
- \$ SINGLE POLE TUMBLER SWITCH, 15A-120V. HUBBELL CAT. NO. 17CM5.
- \$ T MANUAL STARTER; FRACTIONAL HORSE POWER WITH THERMAL OVERLOAD PROTECTION. SQUARE "D" CLASS 2510, TYPE AR-2.
- ⓐ MANUAL STARTER AND H-O-A SELECTOR SWITCH; FRACTIONAL HORSE POWER WITH THERMAL OVERLOAD PROTECTION. SQUARE "D" CLASS 2510 TYPE AF-31.
- ⓐ CONTACTOR; 240V-1 ϕ -2P. SIZE AND TYPE AS NOTED.
- ⓐ FUSED DISCONNECT SWITCH; SIZE AND TYPE AS NOTED.
- ⓐ SAFETY DISCONNECT SWITCH.
- ⓐ DISTRIBUTION PANEL -120/240V-1 ϕ -3W. CROUSE-HINDS CAT. NO. DIP404-20.
- ⓐ ELECTRIC UNIT HEATER-5KW-240V-1 ϕ . CHROMALOX CAT. NO. LUH-50.
- ⓐ THERMOSTAT.
- ⓐ 1/3 MOTOR-240V-1 ϕ . NUMERAL DENOTES HORSEPOWER.
- FWE FURNISHED WITH EQUIPMENT.
- ⓐ FLOAT SWITCH.
- ⓐ MARK NUMBER.



PHASE I OF

**MODIFICATIONS TO
EFFLUENT PUMPING SYSTEM
FOR CITY OF HARRIMAN TENNESSEE**
ROANE COUNTY TENNESSEE

BLACK, CROW AND EIDSNESS, INC.
ENGINEERS

GAINESVILLE		FLORIDA
DRAWN BY: HSP	DATE: FEB. 12, 1967	
CHECKED BY: R.D.W.	FILE NO. 479-67	

SCALE: AS NOTED

THROTTLING VALVE PIT ELECTRICAL PLANS AND DETAILS	SHEET NO. E-1
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