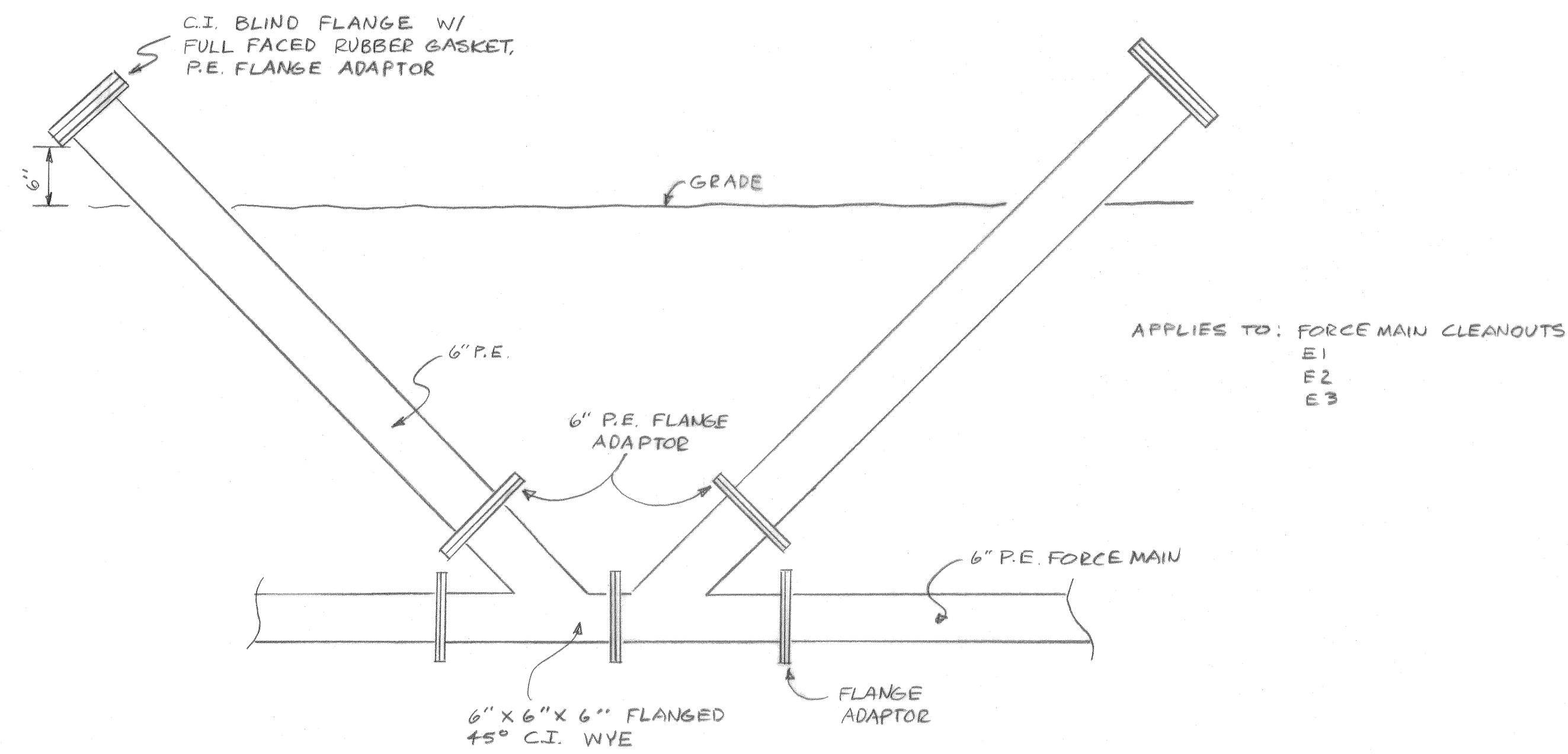
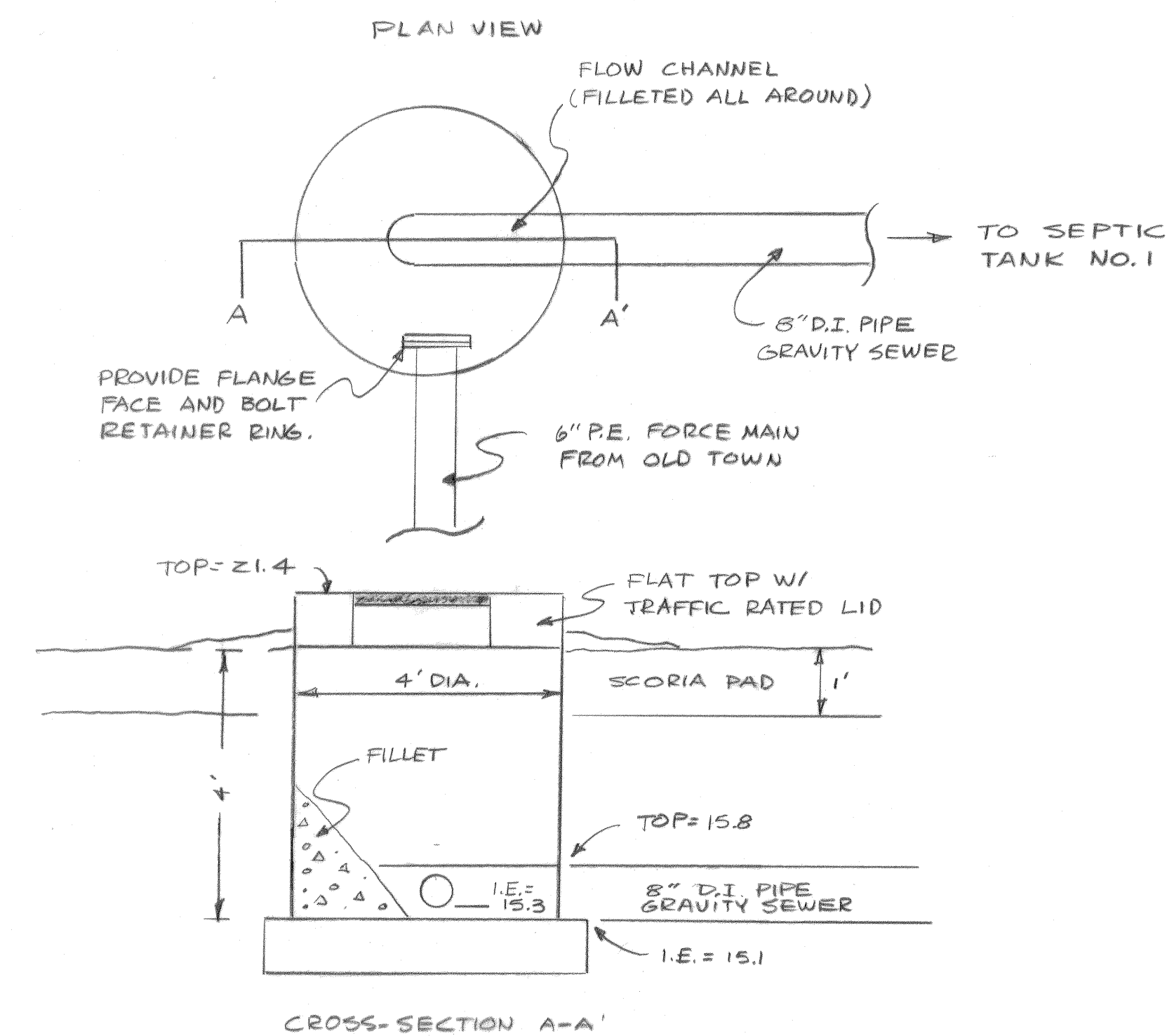


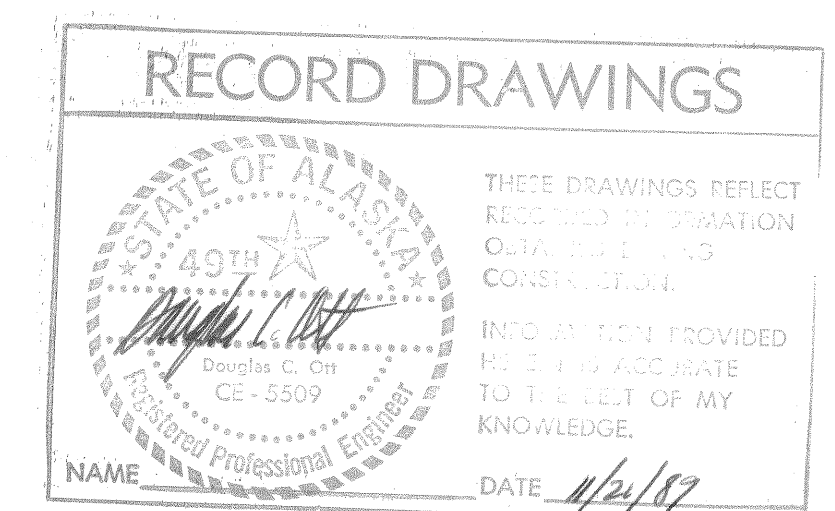


NOTE: PROVIDE 4" C.I. PIPE VEHICLE MARKERS/GUARDS 2' TO EITHER SIDE OF EACH CLEANOUT RISER. FILL MARKER POSTS W/CONCRETE. PAINT RED AND PROVIDE REFLECTORS. YELLOW

DOUBLE WYE CLEANOUT
DETAIL



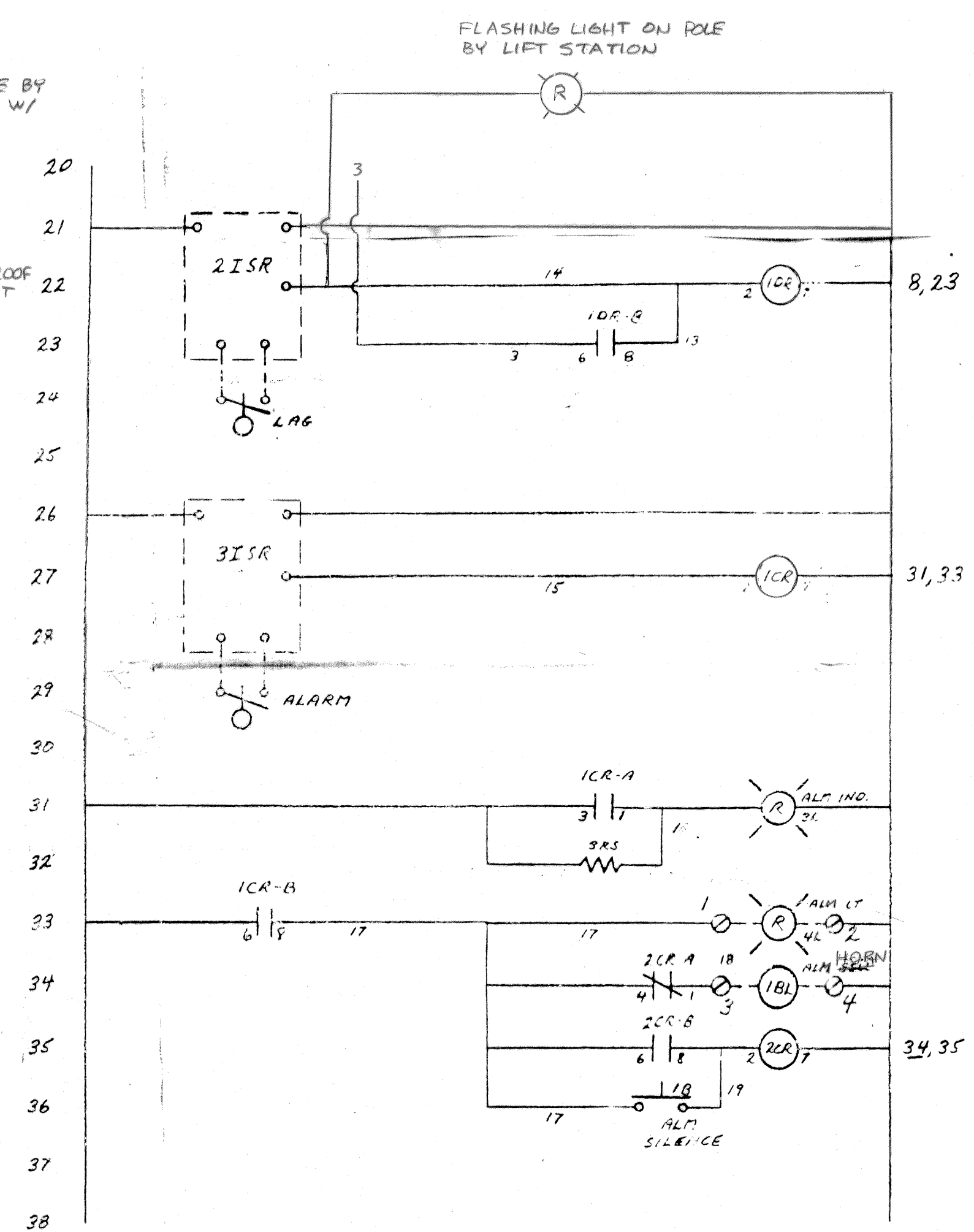
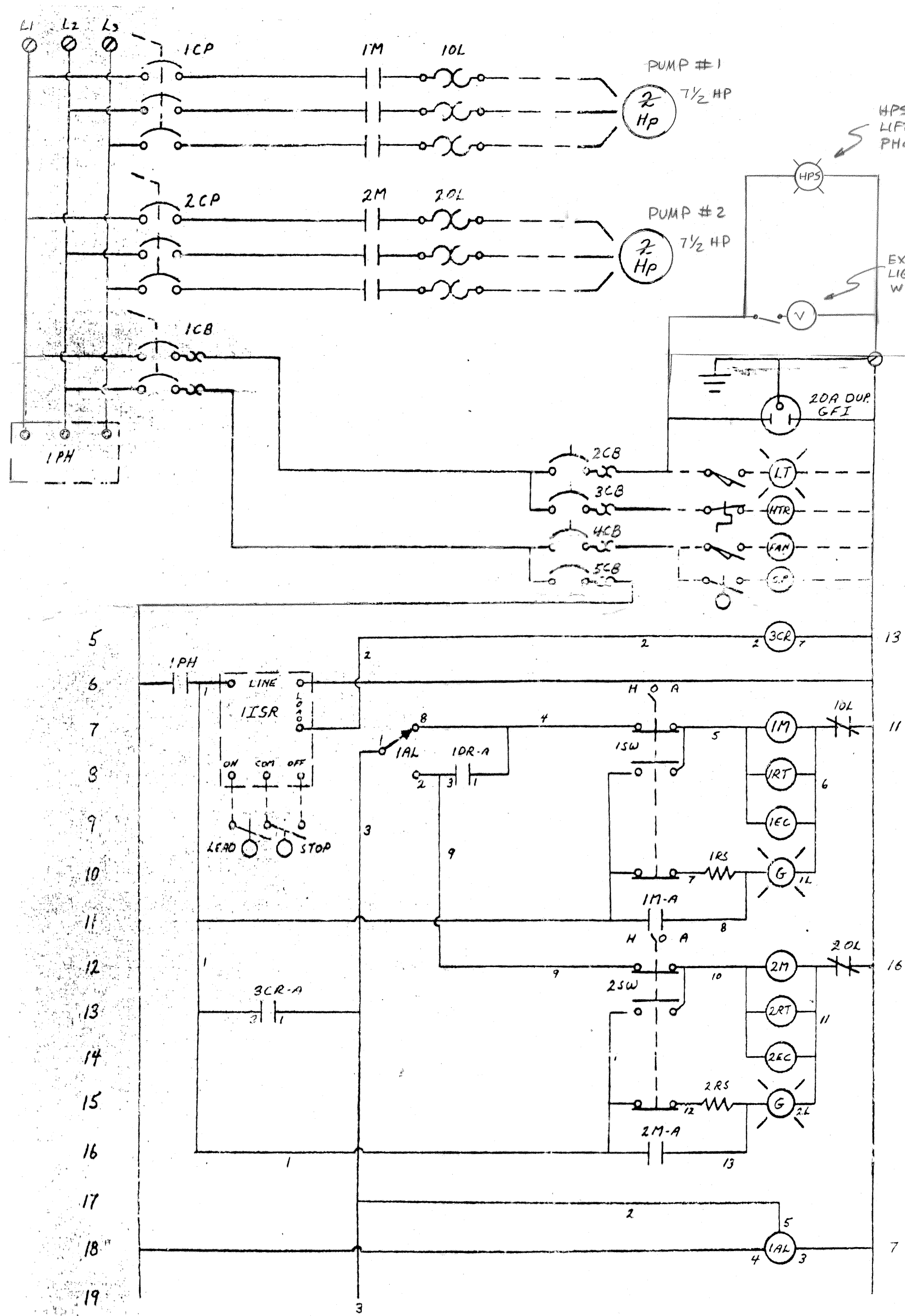
SEPTIC TANK MANHOLE
(E+)



3-22-89	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS
U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA OLD TOWN FORCE MAIN CLEAN- OUT AND MANHOLE DETAILS PUBLIC LAW 86-121 PROJECT PROJECT NO. AN-86-340		SHEET NO. C-18A OF TOTAL SHEETS
DRAWN BY: J. CURTIS DATE:		CHECKED BY: DATE:
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		

Design Engineer	
Maintenance Review	
Material Take-off	

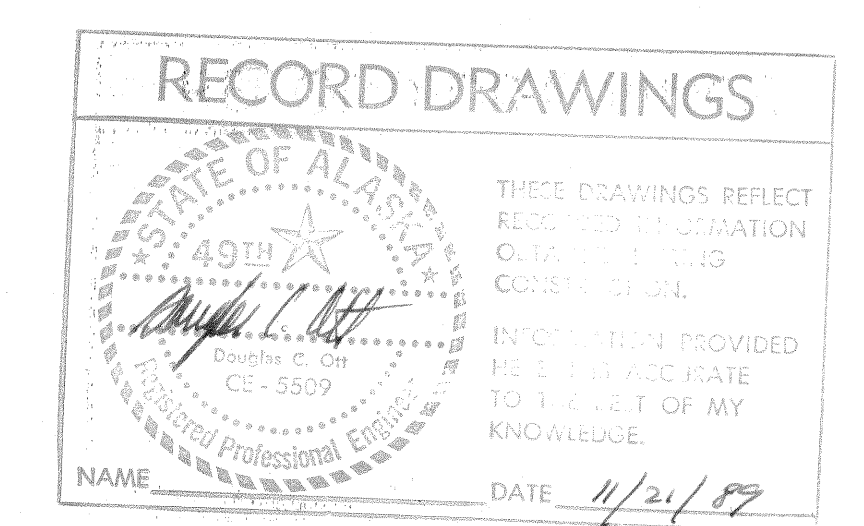
230V/3PH/60cy



CONTROL SCHEMATIC
OLD TOWN LIFT STATION

CASCADE/IDEAL PUMP, INC.
8625 - 219TH S.E.
WOODINVILLE, WA 98072
(206) 485-5050

DATE: 2-13-87 DRAWN BY: NRM
REVISION: 3-5-87 APP: 236100-E1



DATE	REVISIONS	INITIALS
11-16-88	RECORD DRAWING	J.C.

U. S. Department of Health & Human Services
Public Health Service
Indian Health Service

ST. PAUL, ALASKA
LIFT STATION/ELECTRICAL

PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-86-340

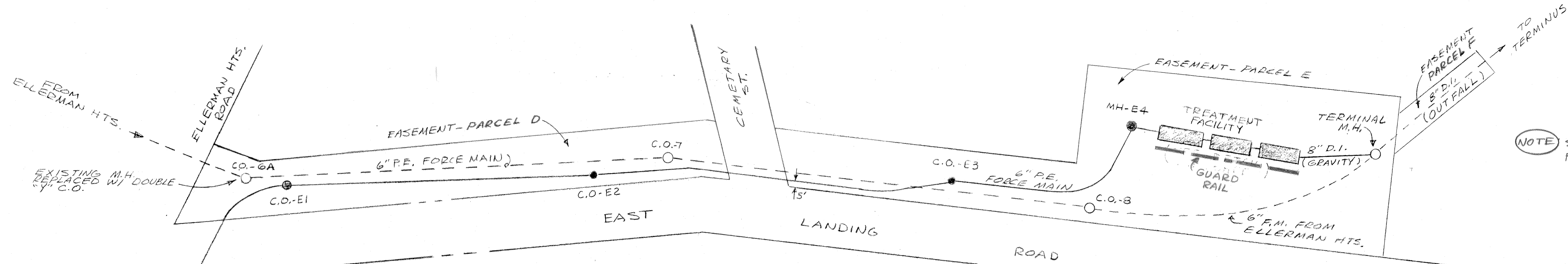
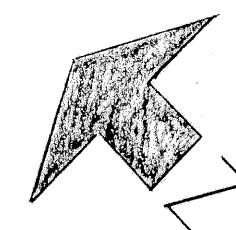
DRAWN BY: J. CURTIS
DATE: 11-16-88

CHECKED BY:
DATE:

SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA

SHEET NO. CBB
OF
TOTAL SHEETS

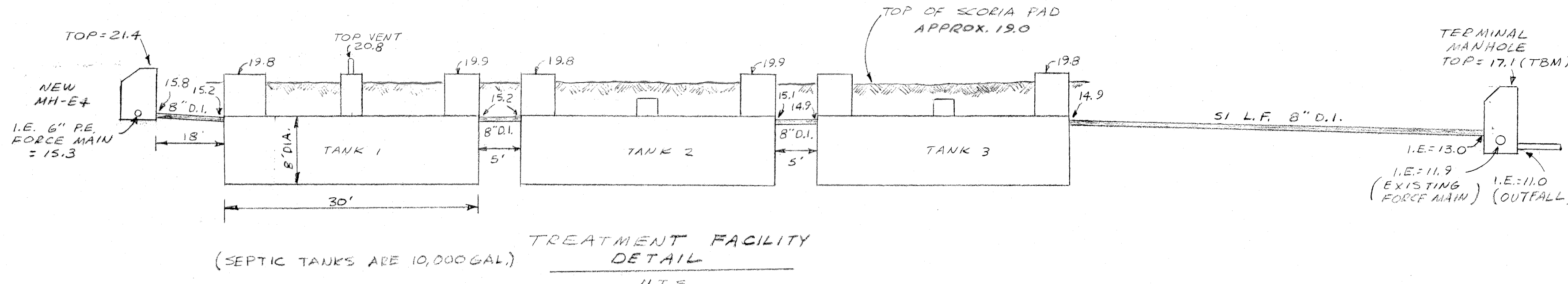
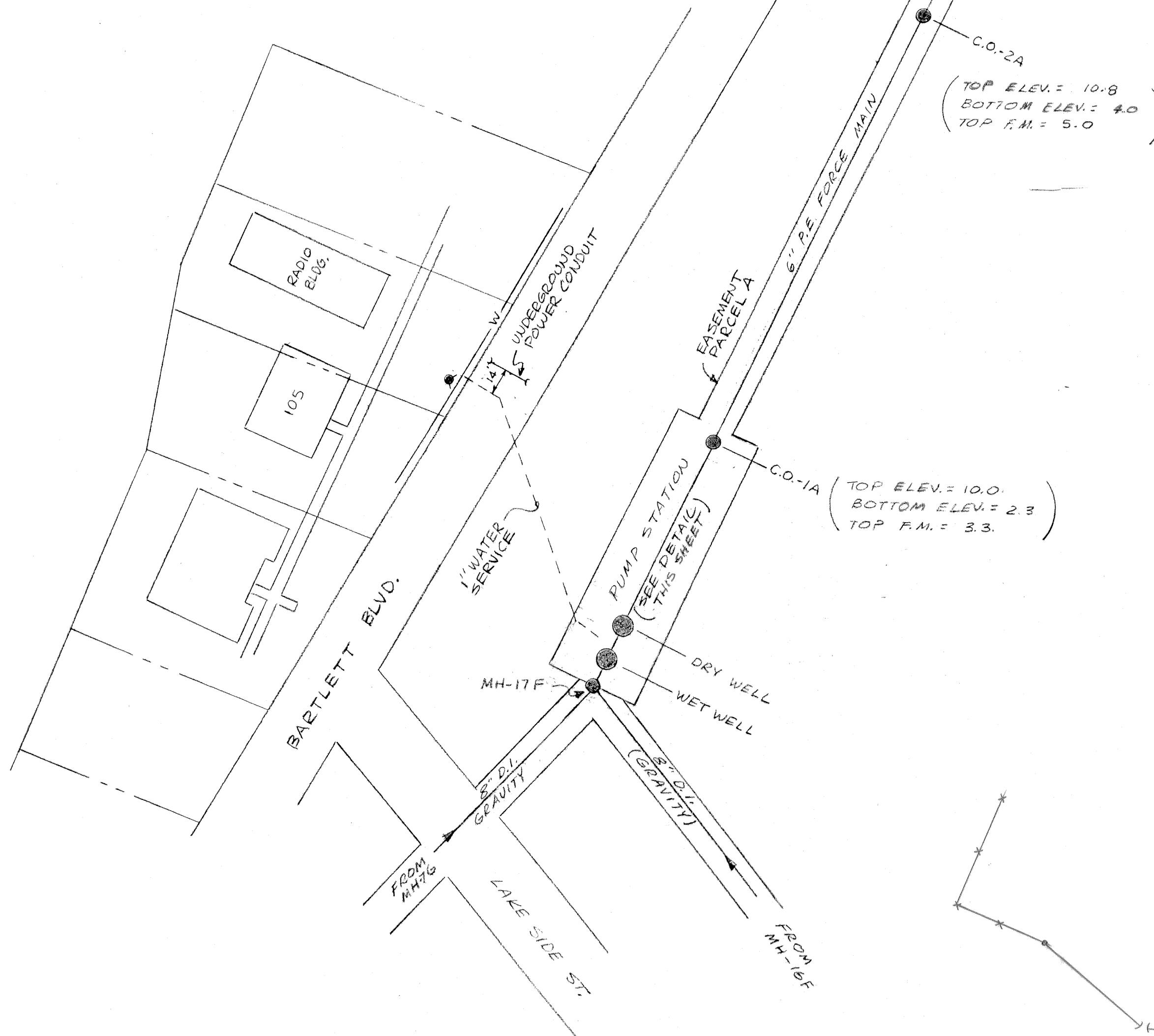
Design Engineer
Maintenance Review
Material Take-off



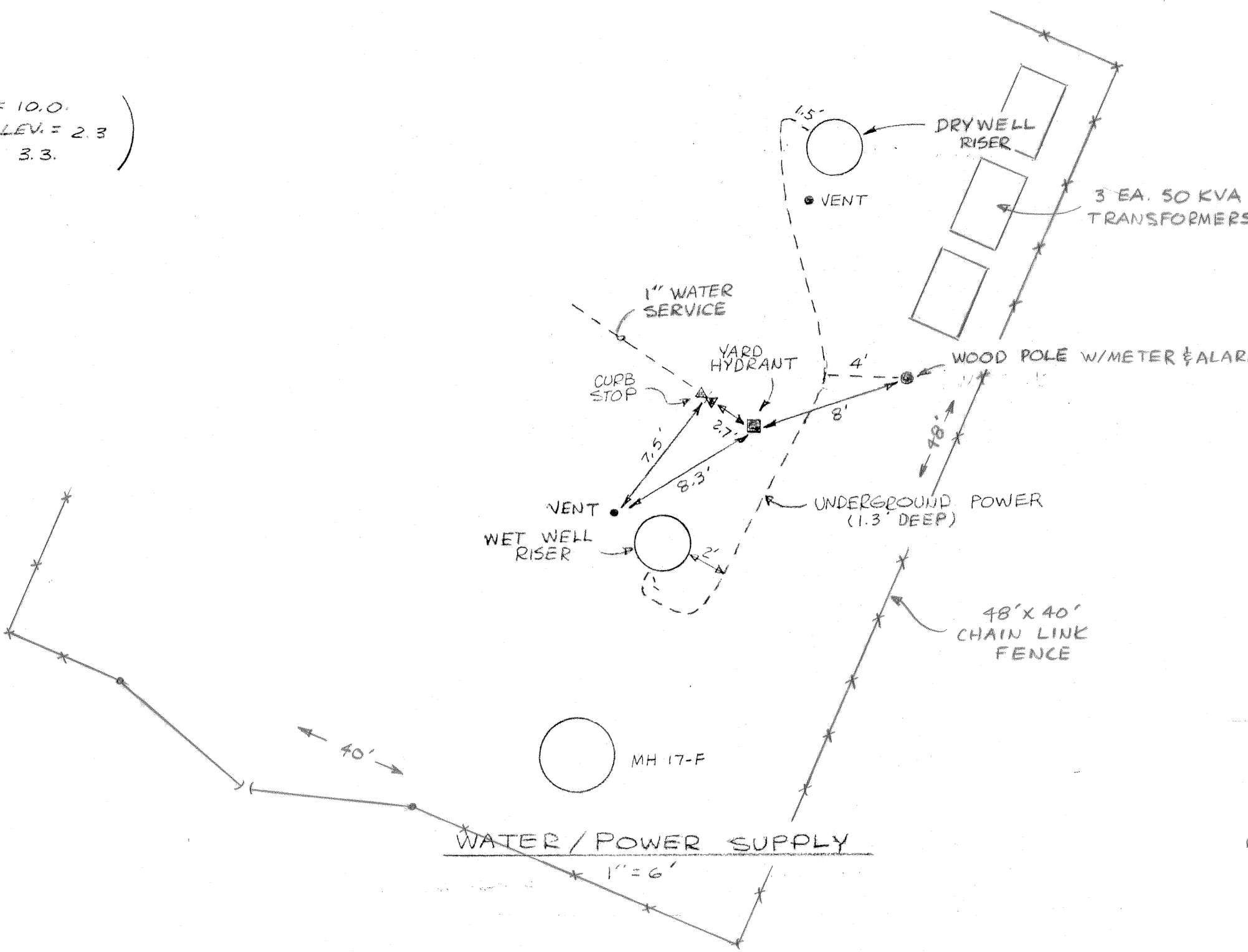
(NOTE) SEE SHT. 8 OF 13, PROJ. AN-85-285 FOR AS-BUILT INFO. ON OCEAN OUTFALL

- DOUBLE "Y" CLEANOUTS MARKED WITH YELLOW POSTS (NEW FORCE MAIN)
- MANHOLE CLEANOUTS MARKED WITH RED POSTS (ELLERMAN HTS. FORCE MAIN)

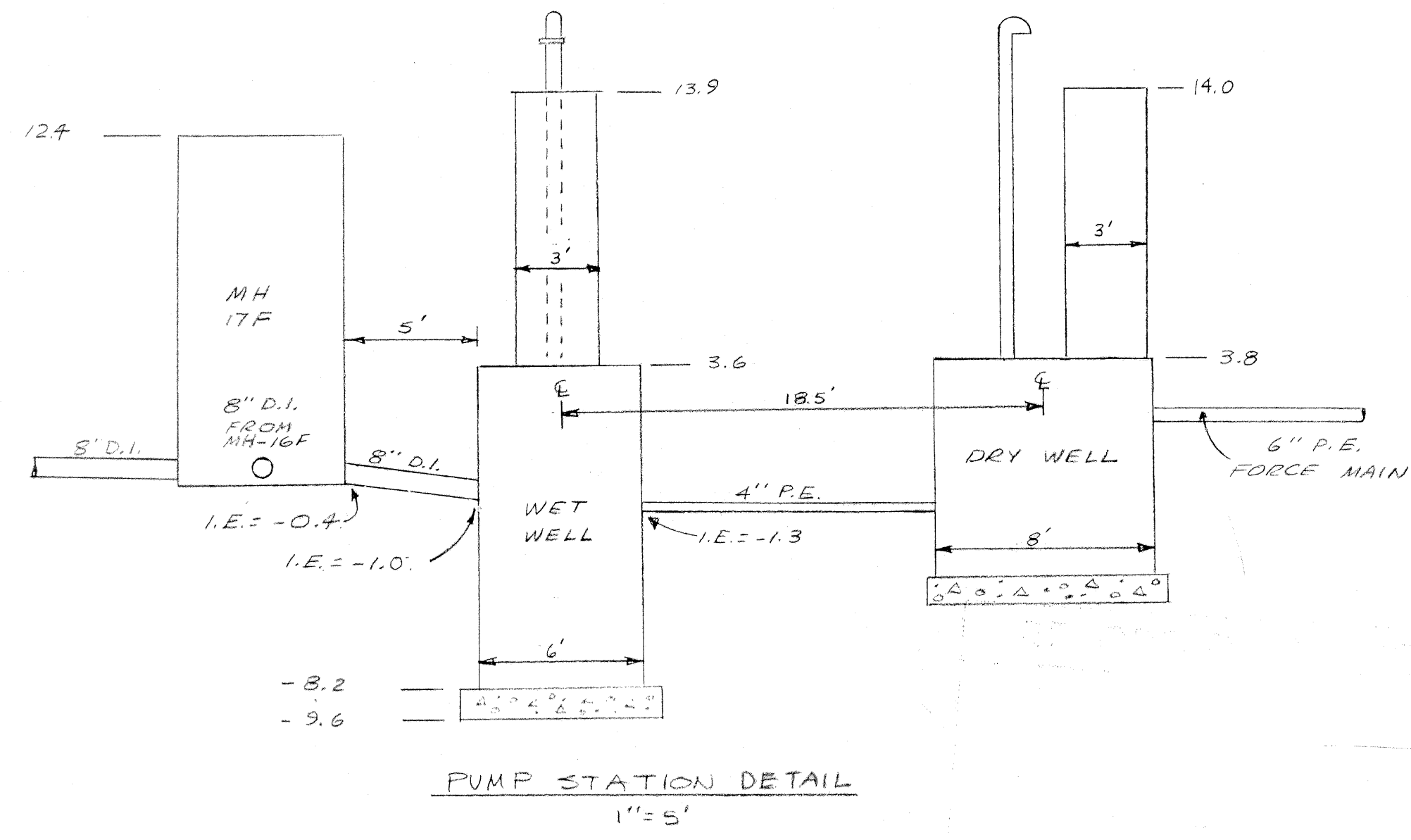
OLD TOWN SEWER PUMP STATION
FORCE MAIN AND TREATMENT
FACILITY LAYOUT
1"=50'



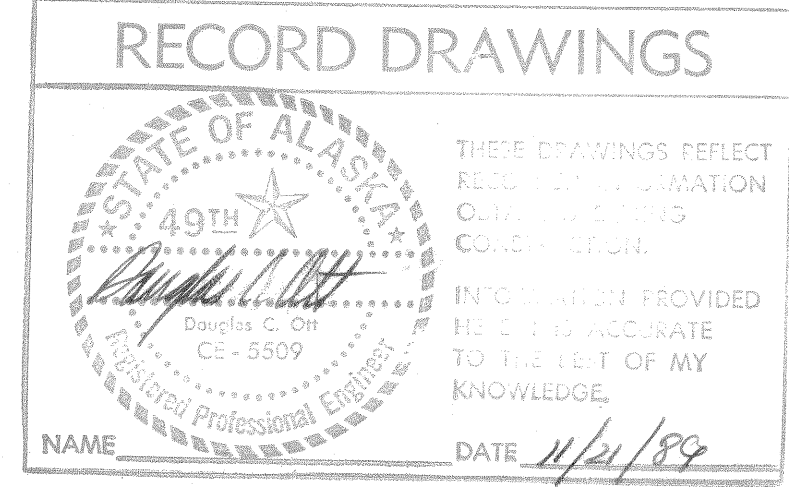
TREATMENT FACILITY
DETAIL
11 T.S.



NOTE: REF. ELEVATION IS U.S.C. & G.S. BENCH MARK ON FOUNDATION OF TAVERN. ELEV. = 32.96

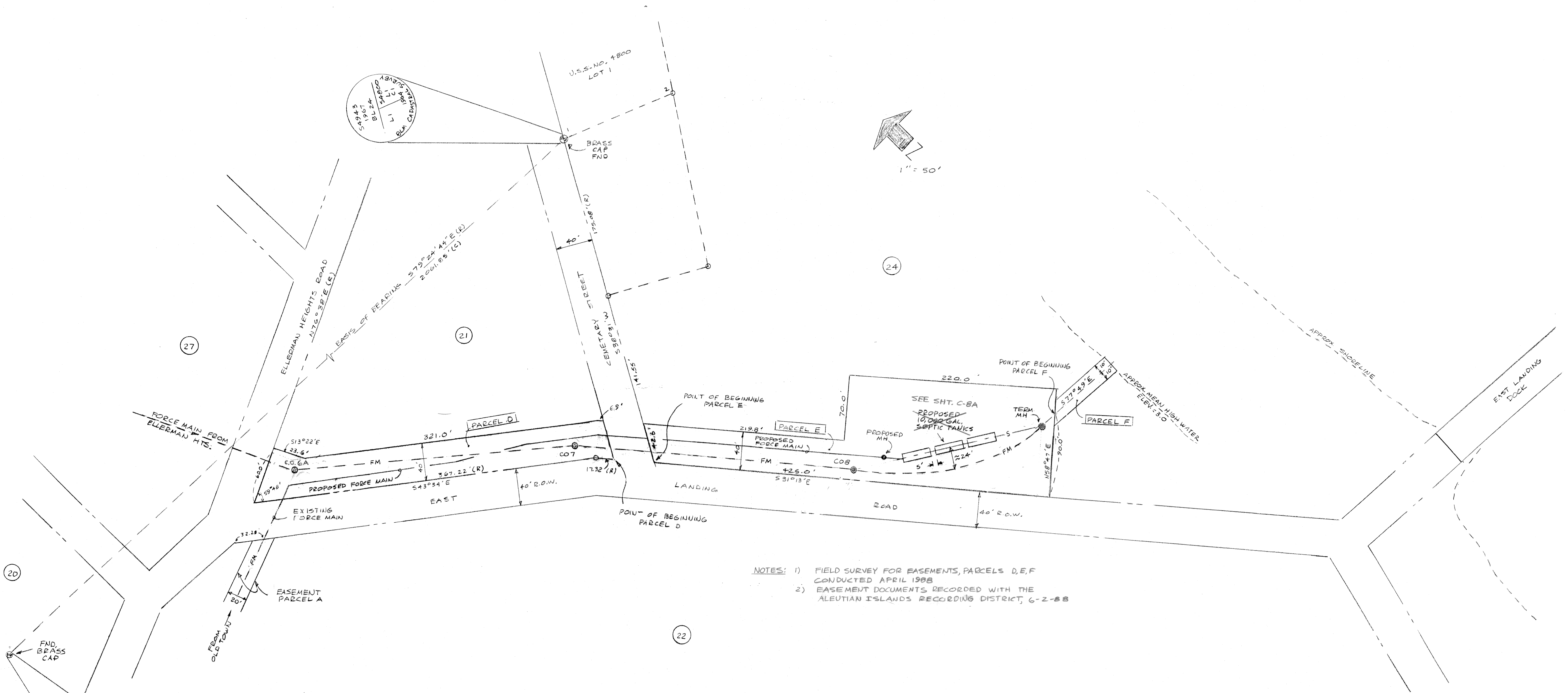


PUMP STATION DETAIL
1"=5'

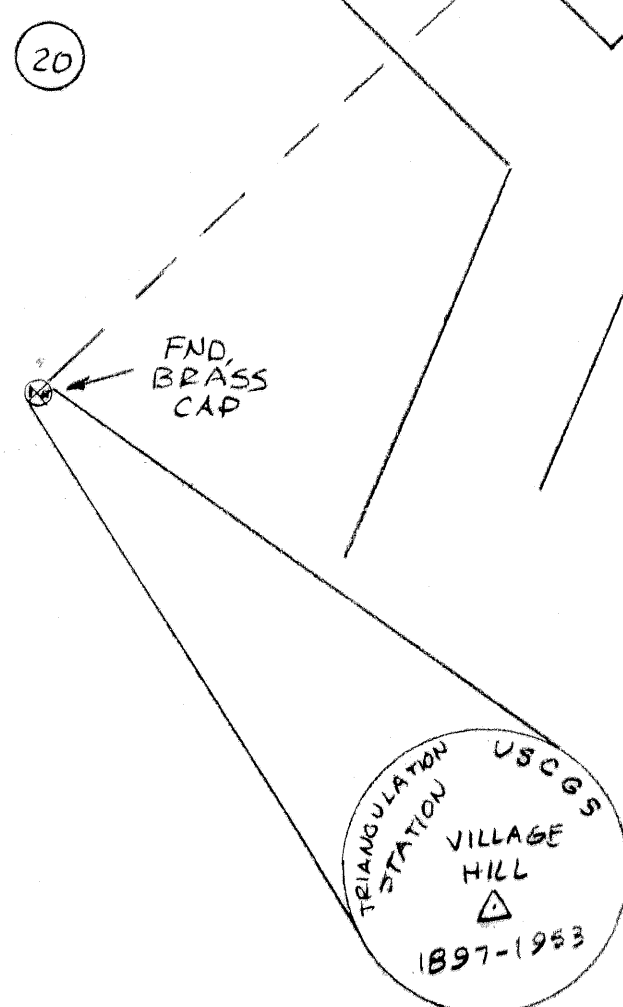


Design Engineer	
Maintenance Review	
Material Take-off	

11-2-88	RECORD DRAWING	J.C.
11-15-88	RECORD DRAWING (REVISED)	J.C.
DATE	REVISIONS	INITIALS
U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA		SHEET NO. C-8A
FORCE MAIN LAYOUT / DETAILS		OF
PUBLIC LAW 86-121 PROJECT		TOTAL SHEETS
PROJECT NO. AN-86-340		
DRAWN BY: J. CURTIS	CHECKED BY:	
DATE: 11-2-88	DATE:	
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		



NOTES: 1) FIELD SURVEY FOR EASEMENTS, PARCELS D, E, F
 CONDUCTED APRIL 1988
 2) EASEMENT DOCUMENTS RECORDED WITH THE
 ALEUTIAN ISLANDS RECORDING DISTRICT, 6-2-88



RECORD DRAWINGS

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

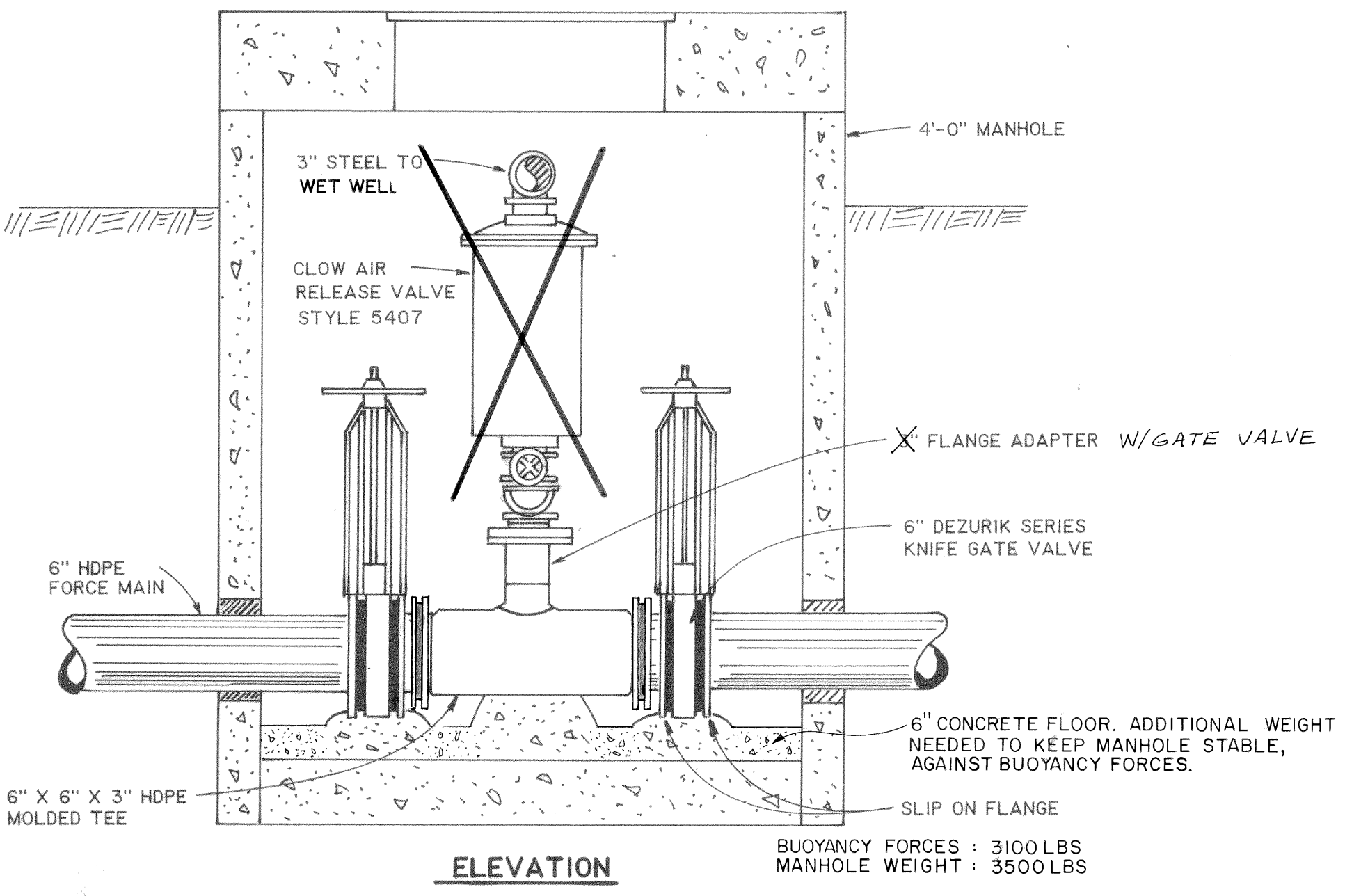
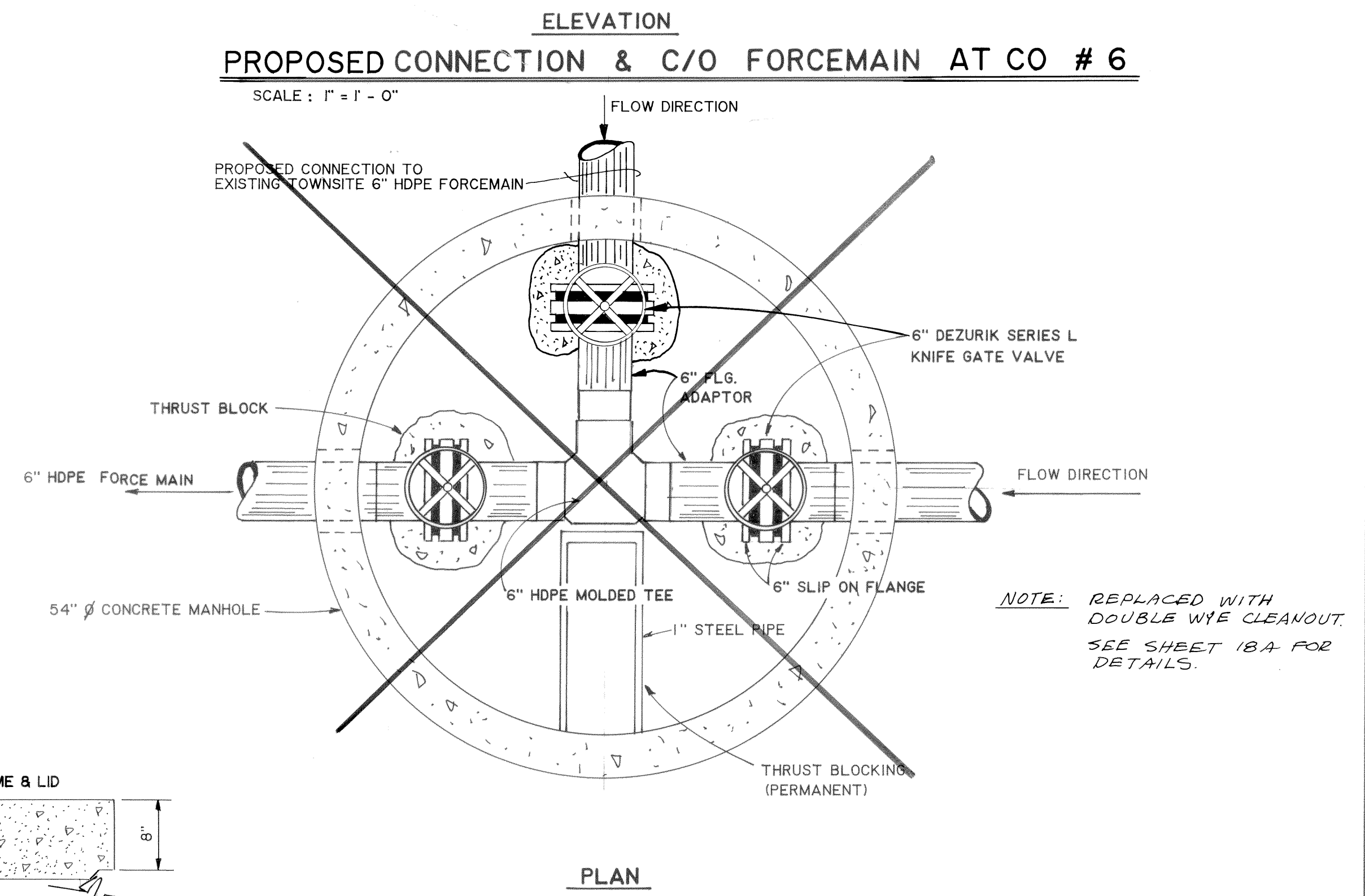
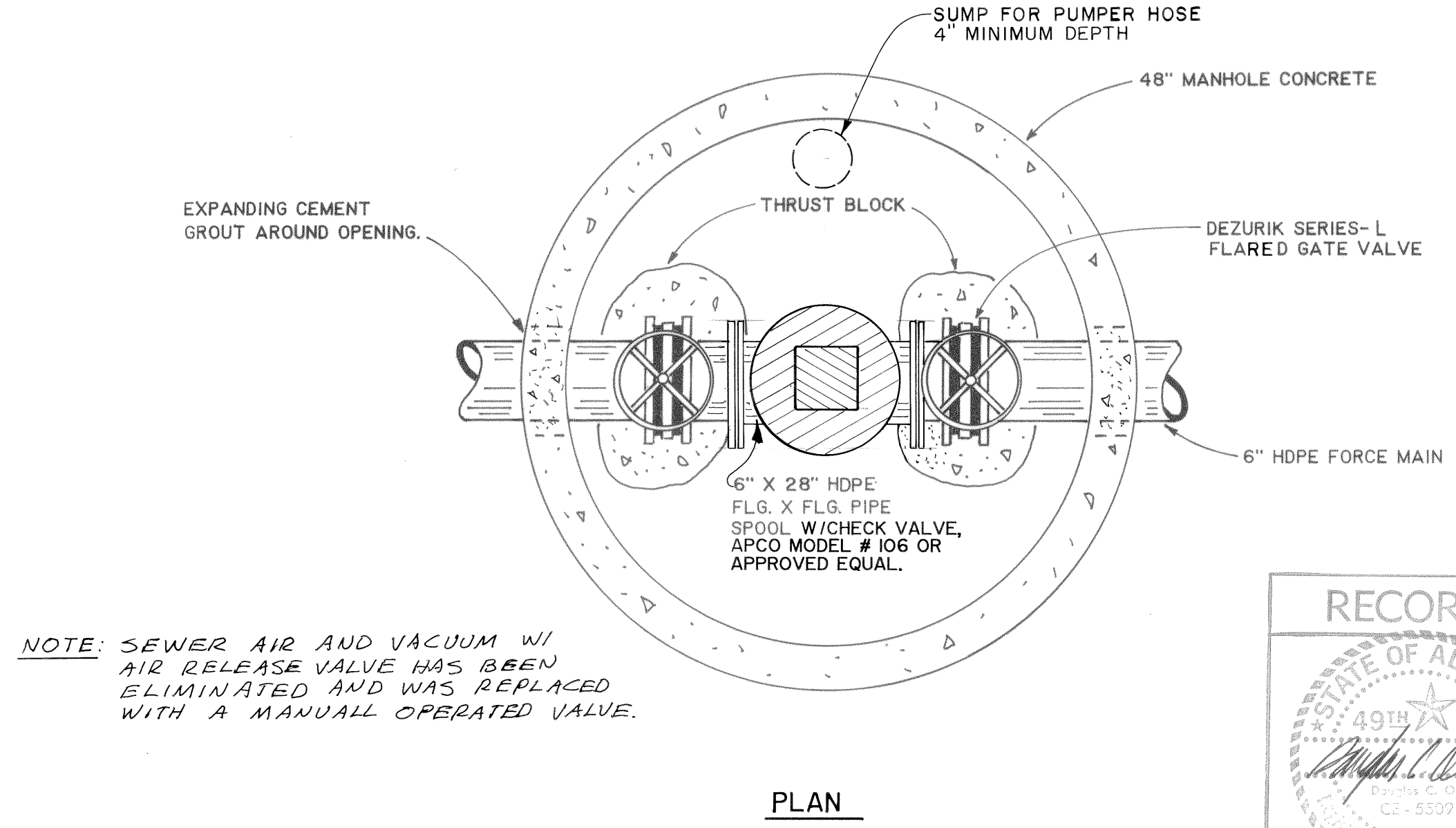
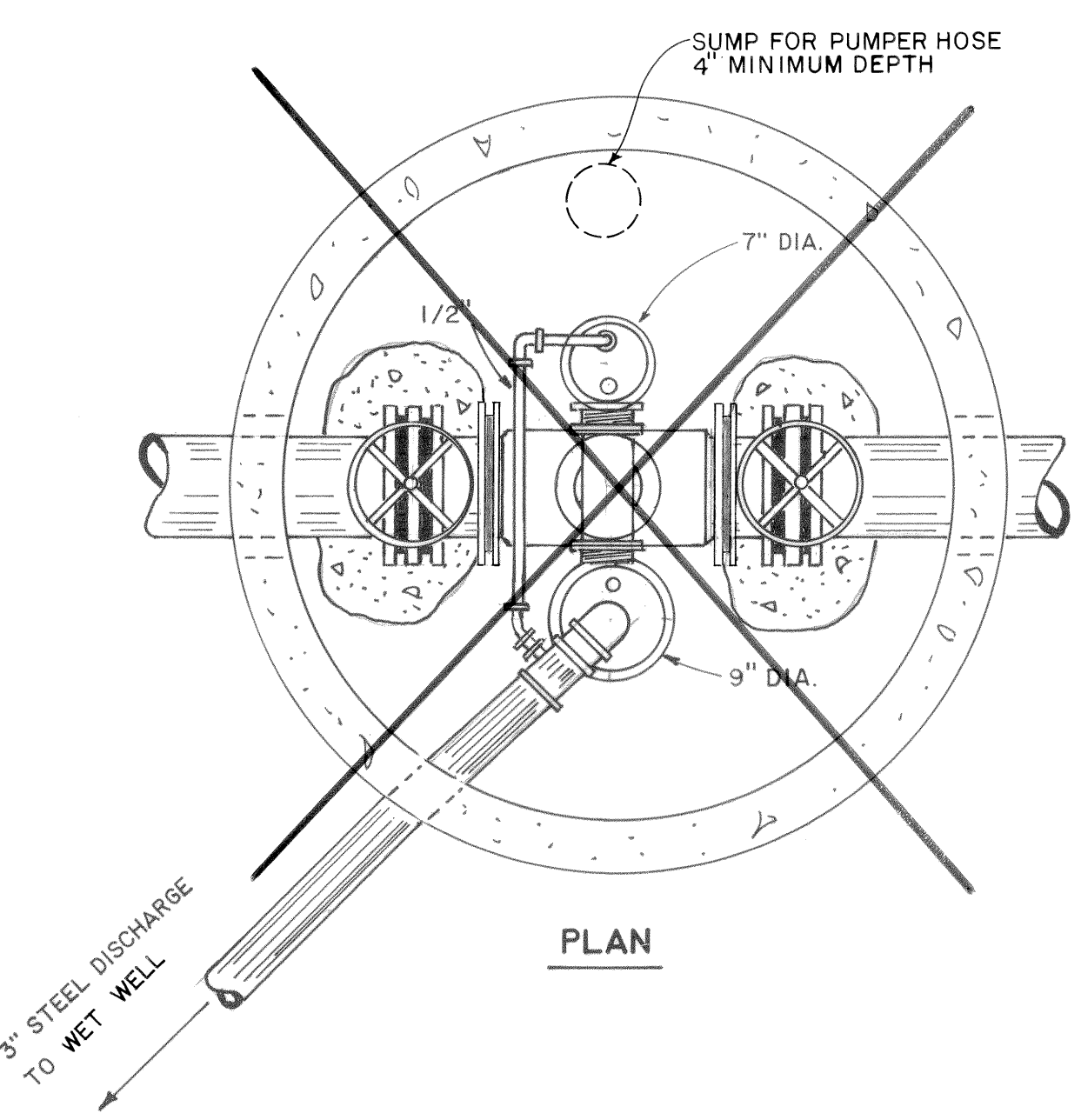
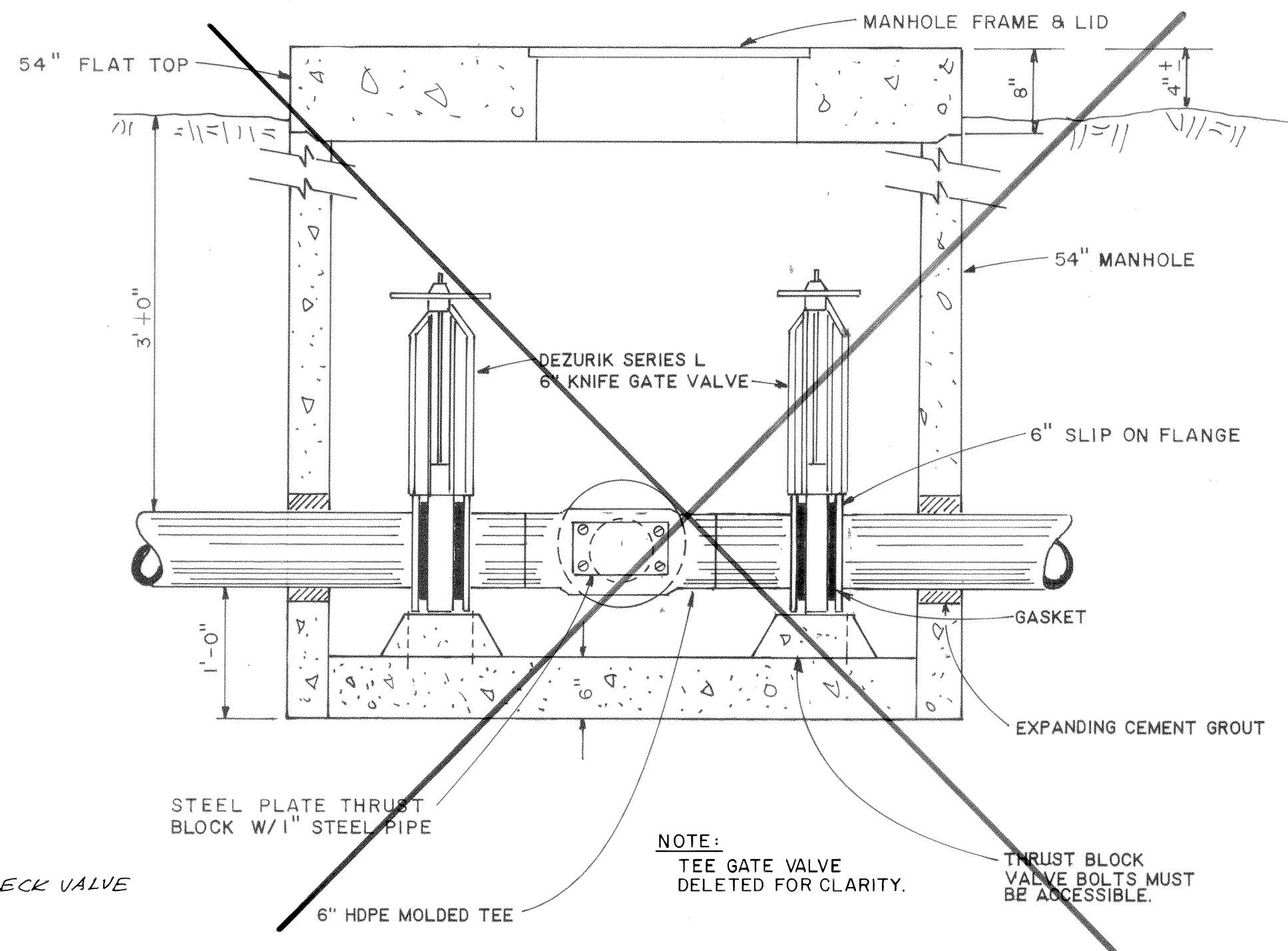
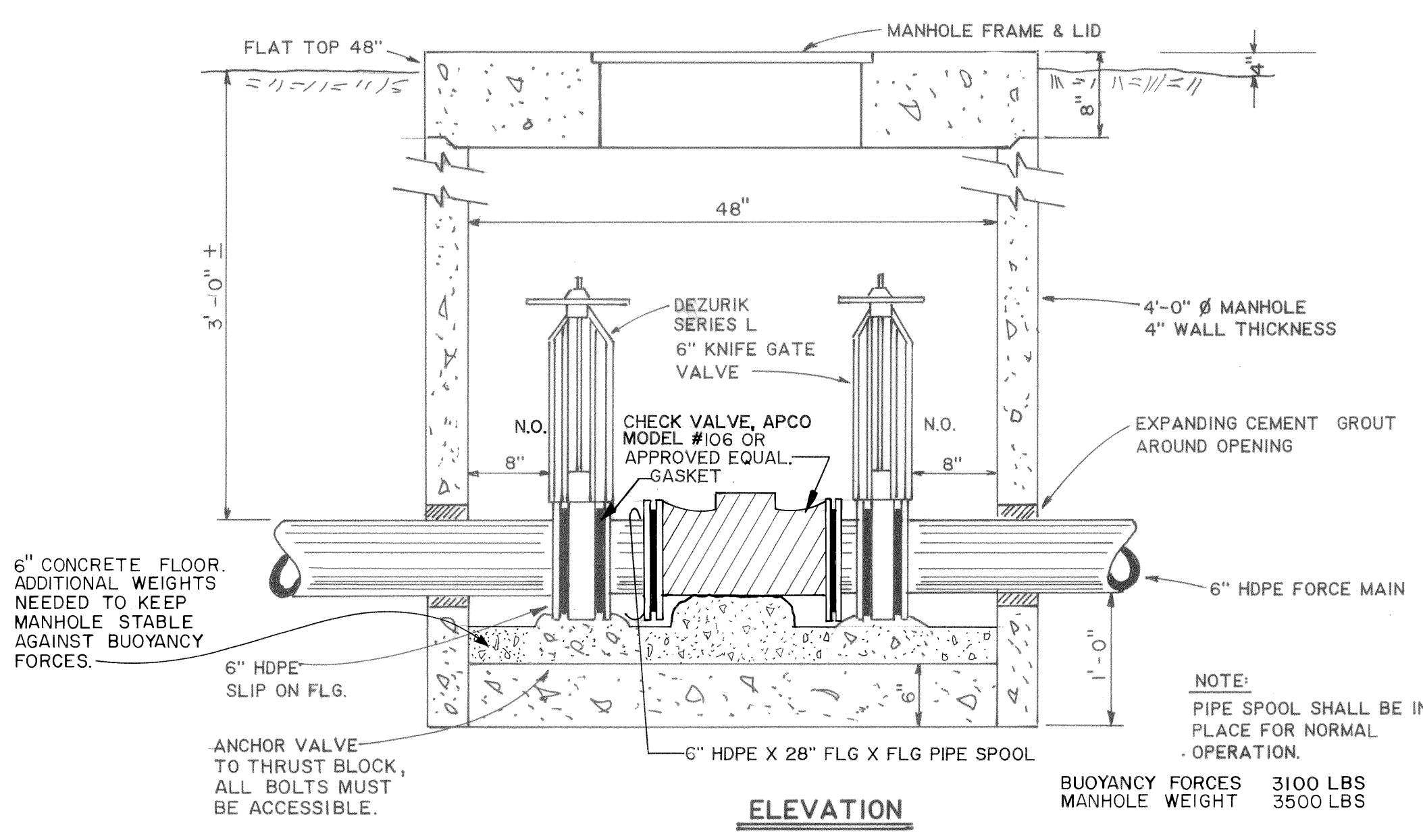
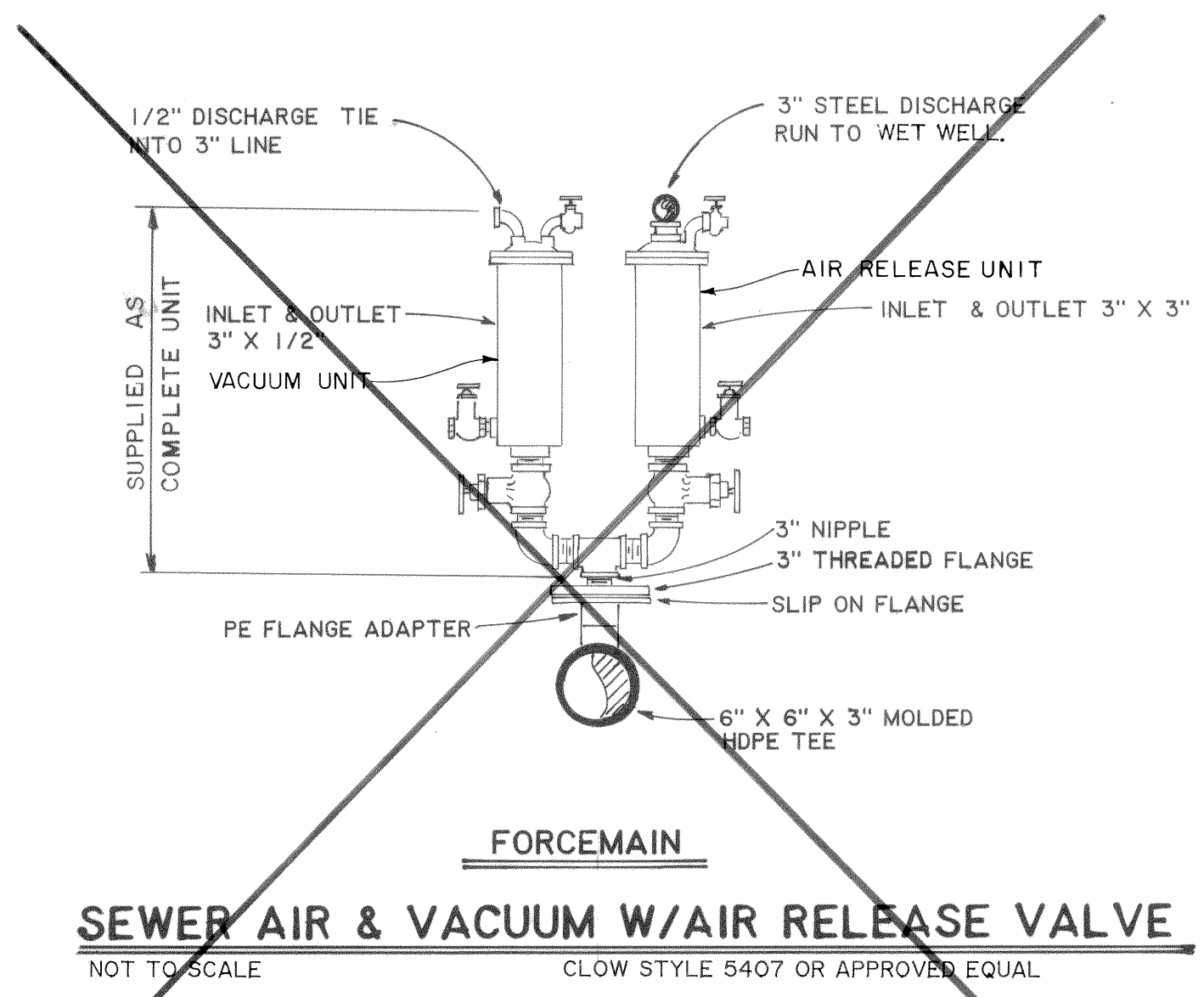
INFORMATION PROVIDED HEREON IS ACCURATE TO THE BEST OF MY KNOWLEDGE.

NAME: Douglas C. Ott DATE: 4/2/89

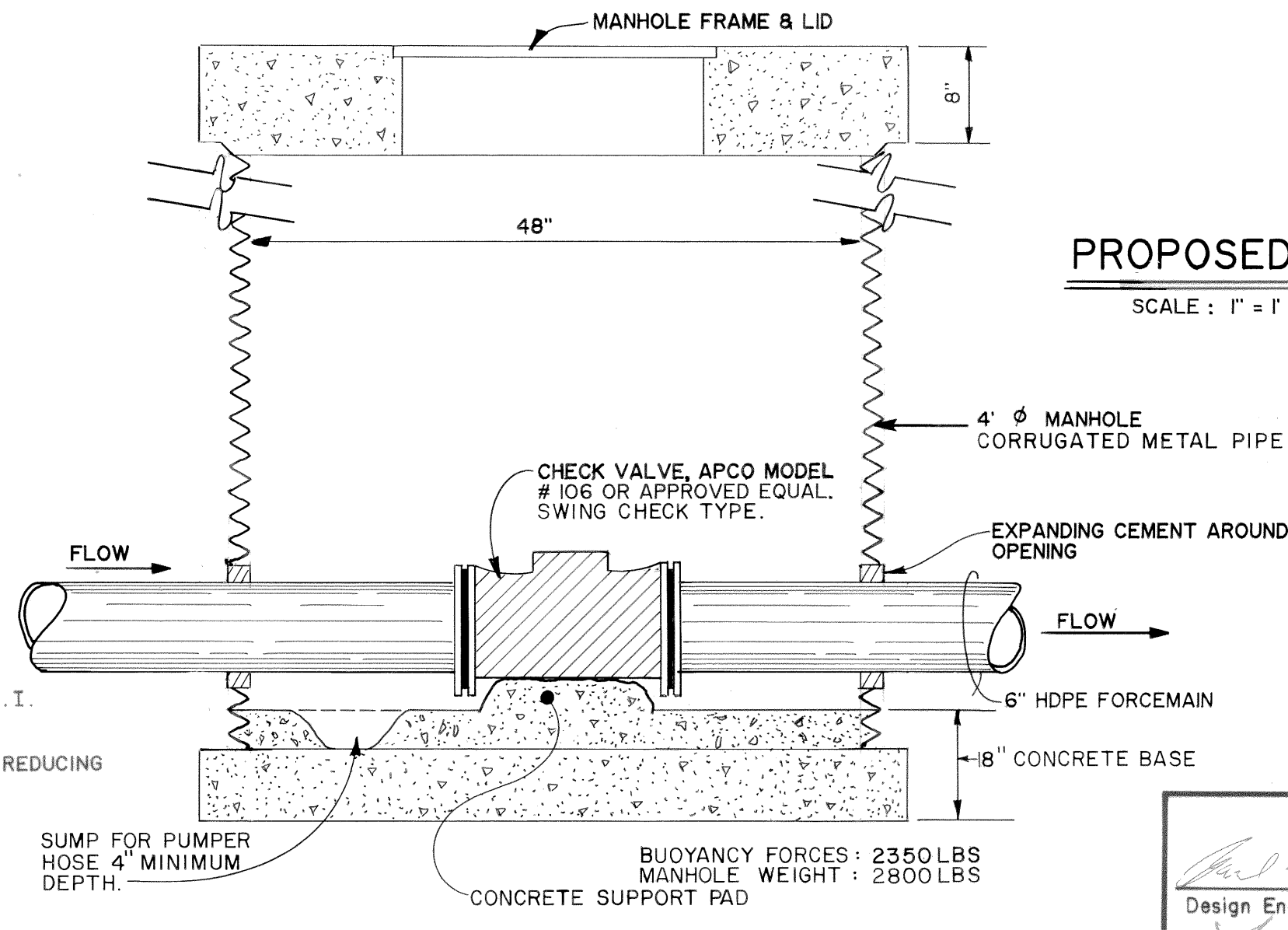
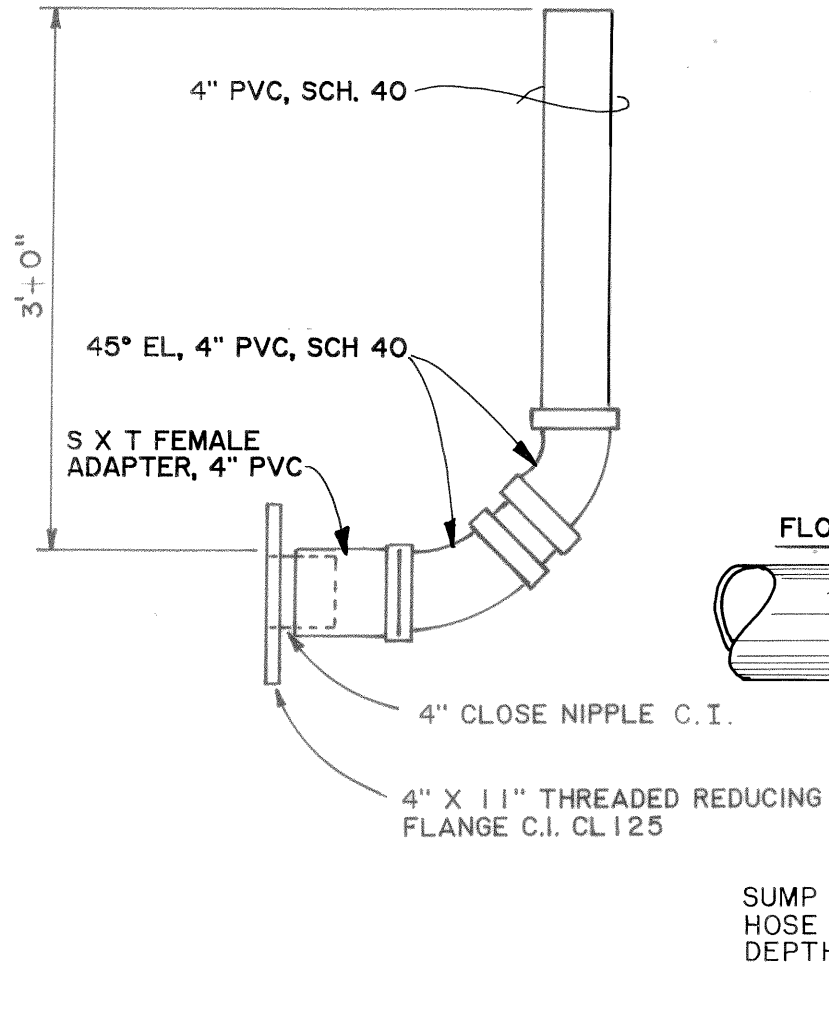
49TH STATE OF ALASKA
 Douglas C. Ott
 CE - 5509
 Registered Professional Engineer

11-2-88	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS
U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA EASEMENTS- PARCELS D, E, F PUBLIC LAW 86-121 PROJECT PROJECT NO. AN-86-340		SHEET NO. C-4A OF TOTAL SHEETS
DRAWN BY: <u>J. CURTIS</u> DATE: <u>APRIL 1988</u>		CHECKED BY: _____ DATE: _____
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		

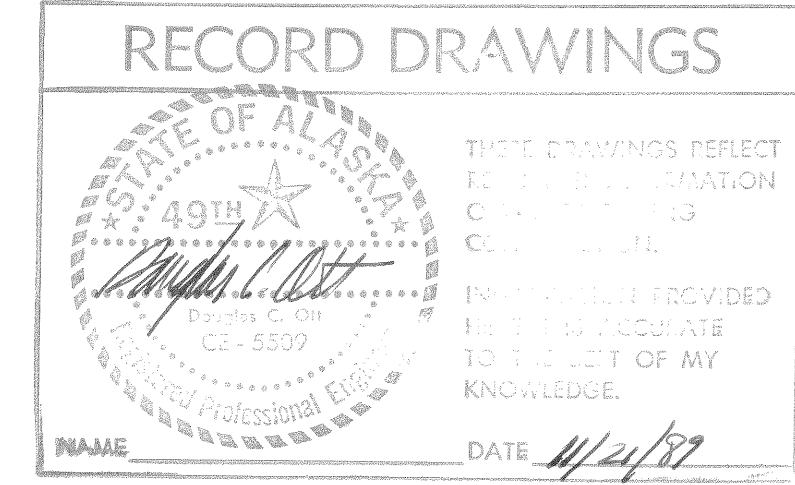
Design Engineer	
Maintenance Review	
Material Take-off	



- NOTES:
1. TO BE USED W/FORCE MAIN CLEANOUT 1 EA. TO BE SUPPLIED AT EA. CLEANOUT
 2. PROCEDURE: ISOLATION VALVES TO BE CLOSED, SPOOL REMOVED & STUB ATTACHED TO SIDE TO BE CLEARED.
 3. STUB SHALL BE STORED INSIDE MANHOLE WHEN NOT IN USE.



PROPOSED CONNECTION & C/O FORCEMAIN AT CO #6
SCALE: 1" = 1'-0"



3-22-89	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS

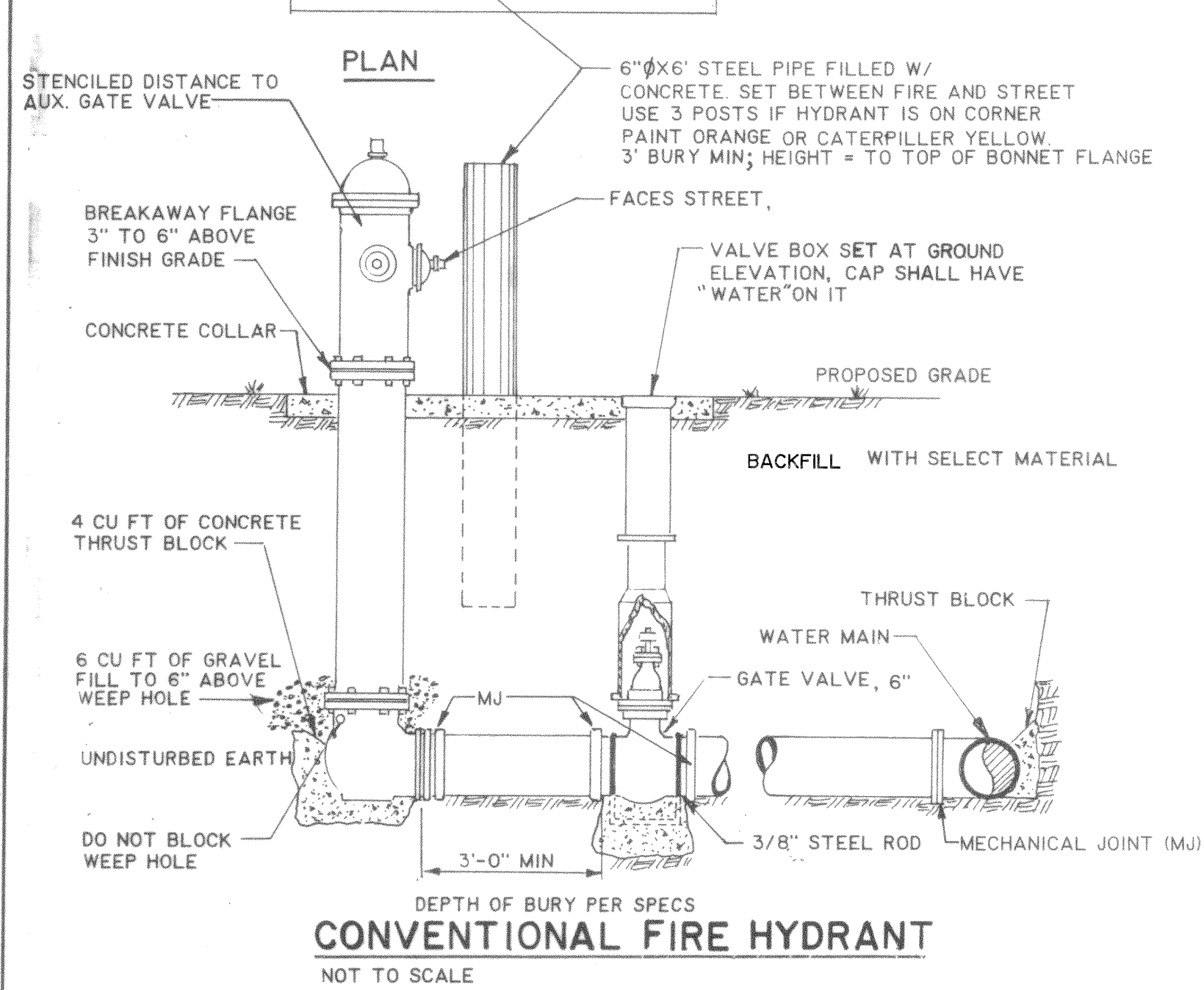
U. S. Department of Health & Human Services Public Health Service Indian Health Service		
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ST. PAUL, ALASKA FORCEMAIN CLEANOUT & AIR RELEASE DETAILS PUBLIC LAW 86-121 PROJECT PROJECT NO. AN-86-340	SHEET NO.
	C-18
	OF
	18
	TOTAL SHEETS

DRAWN BY: LOWDERMILK	CHECKED BY:
DATE: 2 - '87	DATE:

SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA	
--	--

MATERIALS	
ITEM	DESCRIPTION/MAKE /MODEL No.
FIRE HYDRANT	5 1/4" VALVE OPENING, 3-WAY WITH 6" FLANGED BASE FOR 4" BURIAL, MUELLER No. A-423 CENTURION OR APPROVED EQUAL.
6" AUXILIARY GATE VALVE	MECHANICAL JOINT (MJ) INLET X FLANGED OUTLET, MUELLER No. A-2380-16 OR APPROVED EQUAL.
VALVE BOX	BUFFALO SCREW TYPE, TWO PIECE, 5 1/4" SHAFT, C.I. W/LID, MUELLER No. H-10360-564-S WITH 10361 LID OR APPROVED EQUAL.

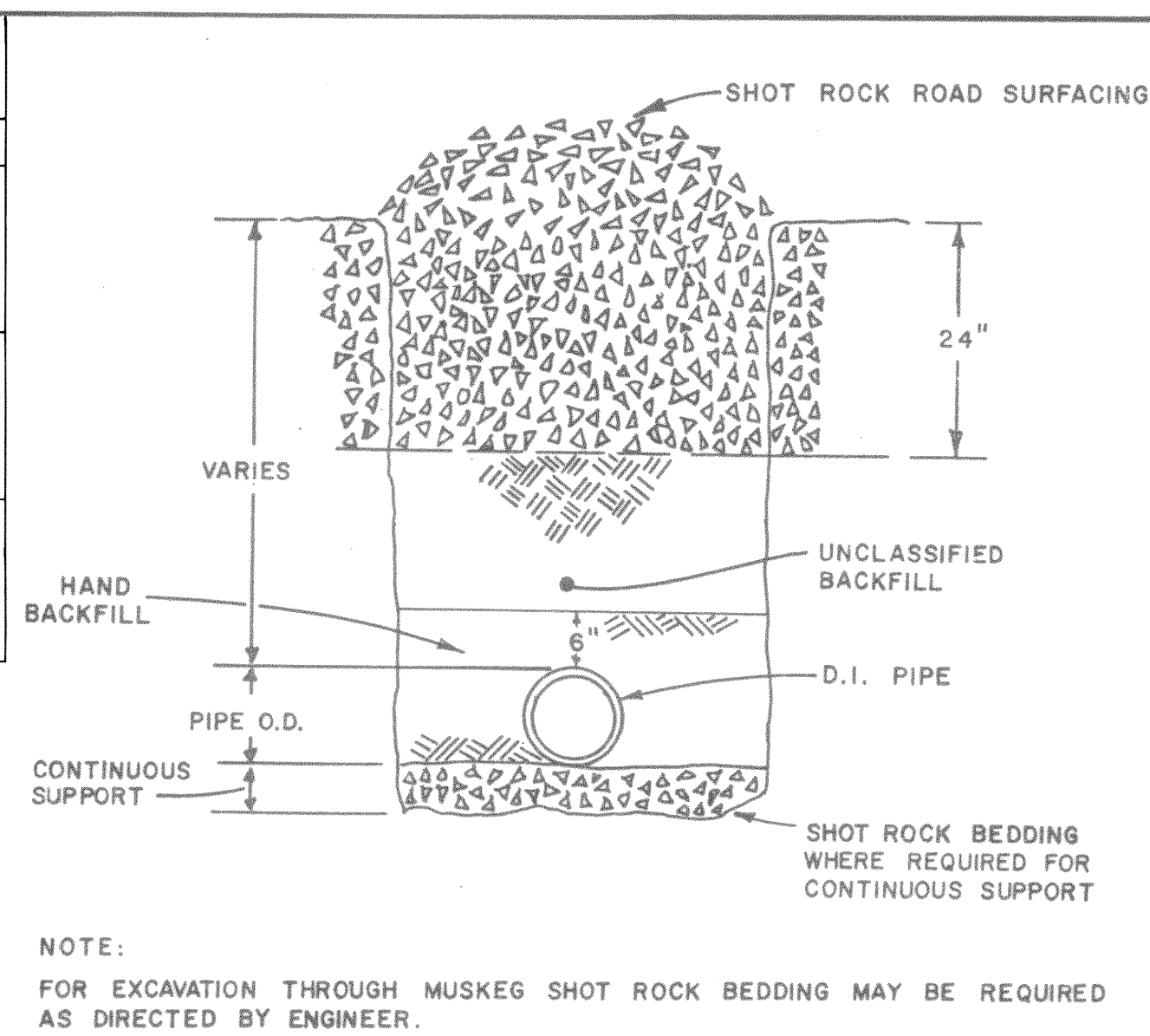
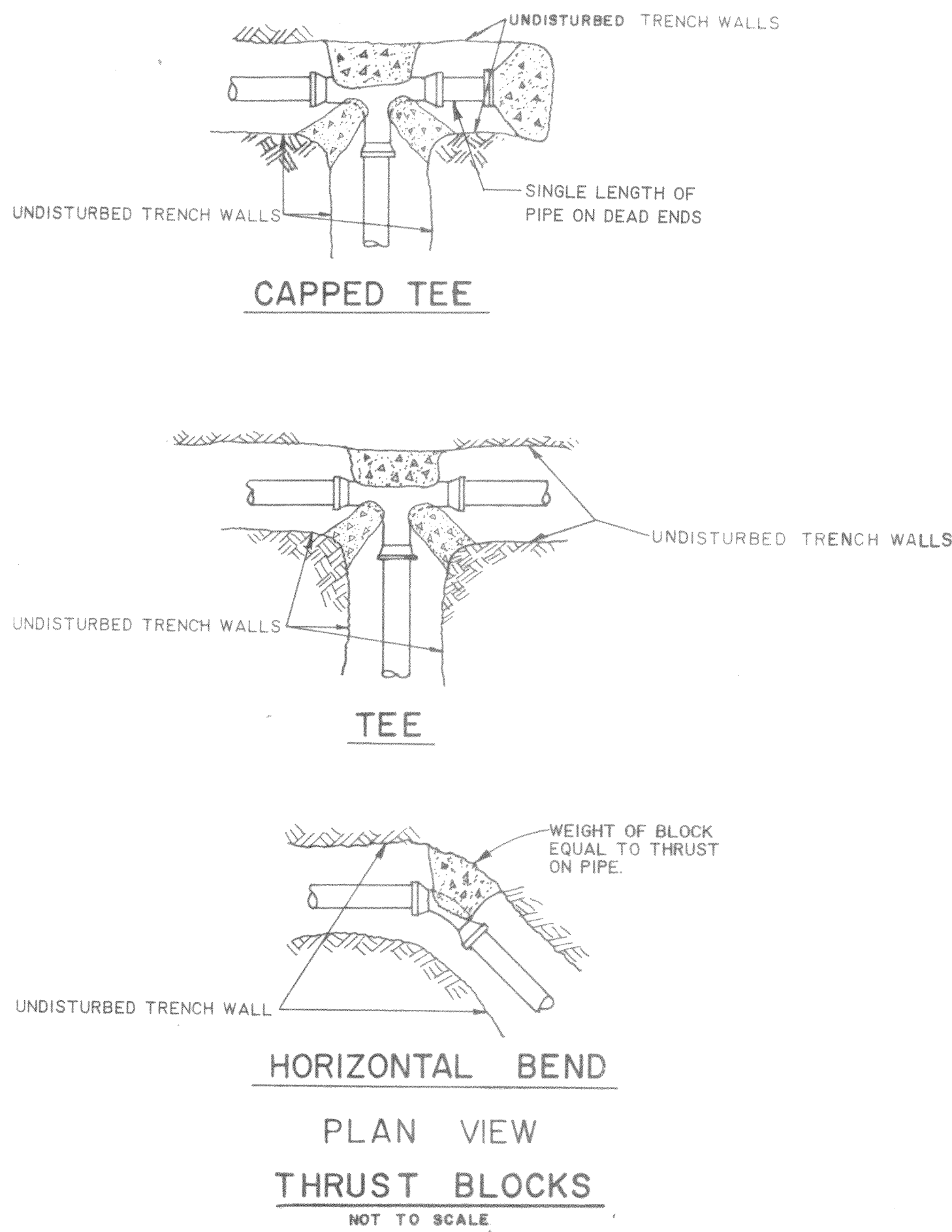
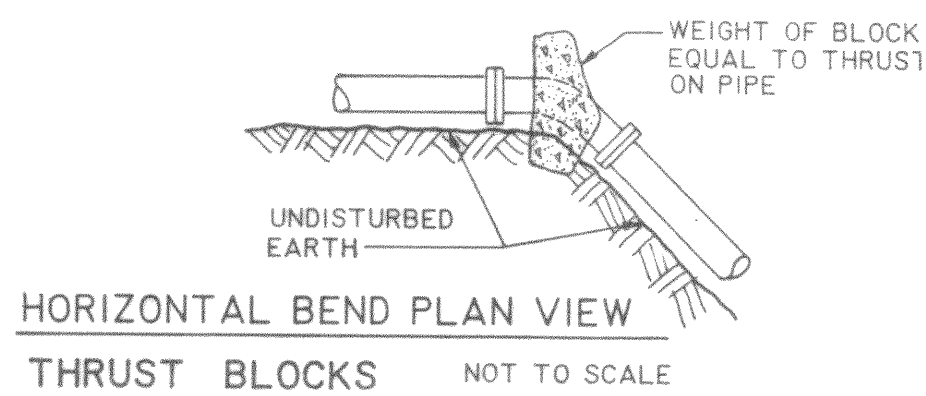


THRUST BLOCK MINIMUM SIZE TABLE

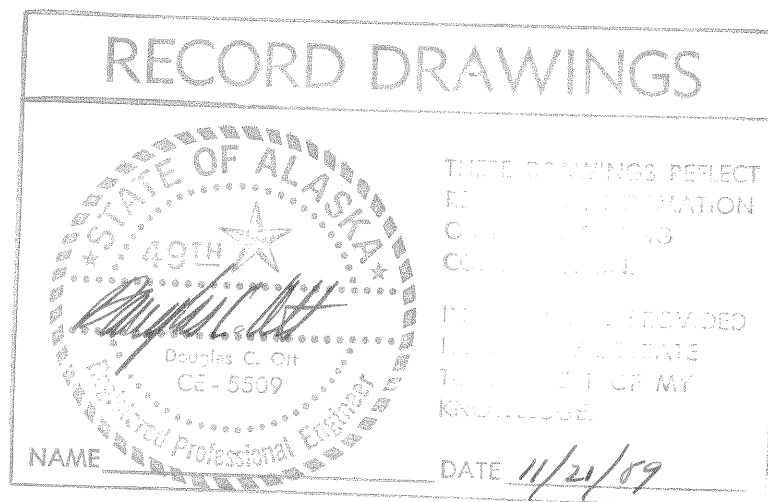
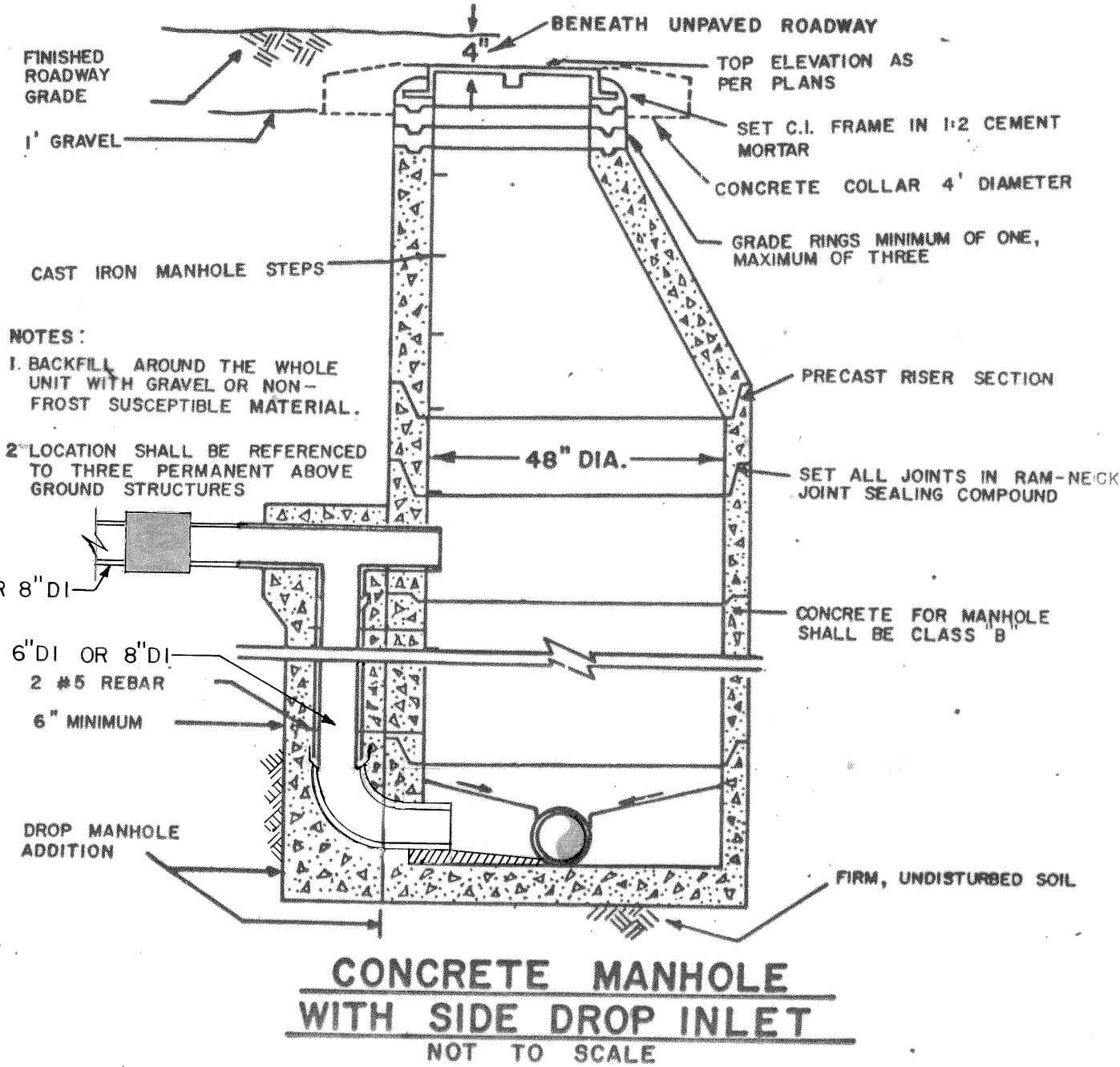
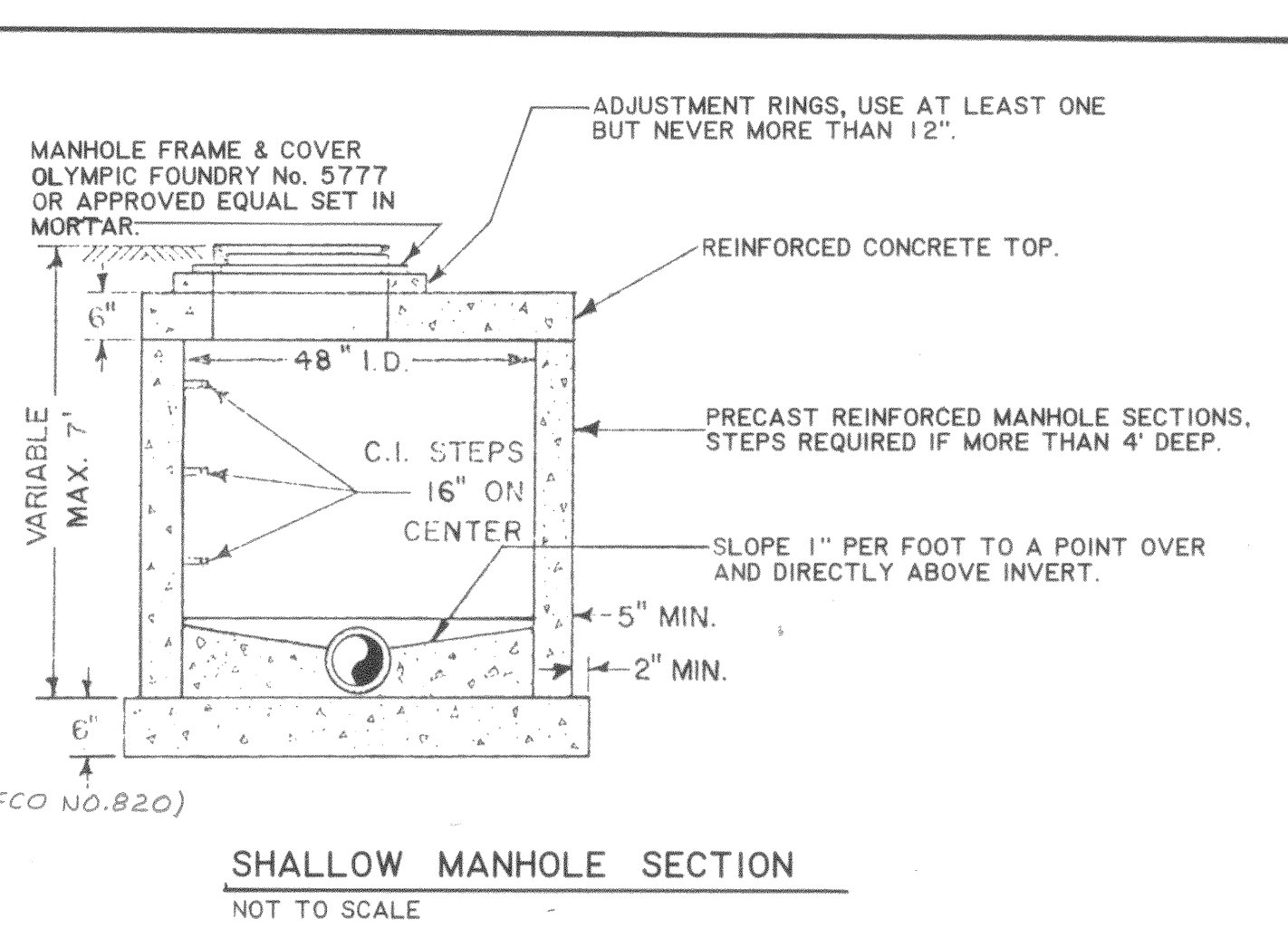
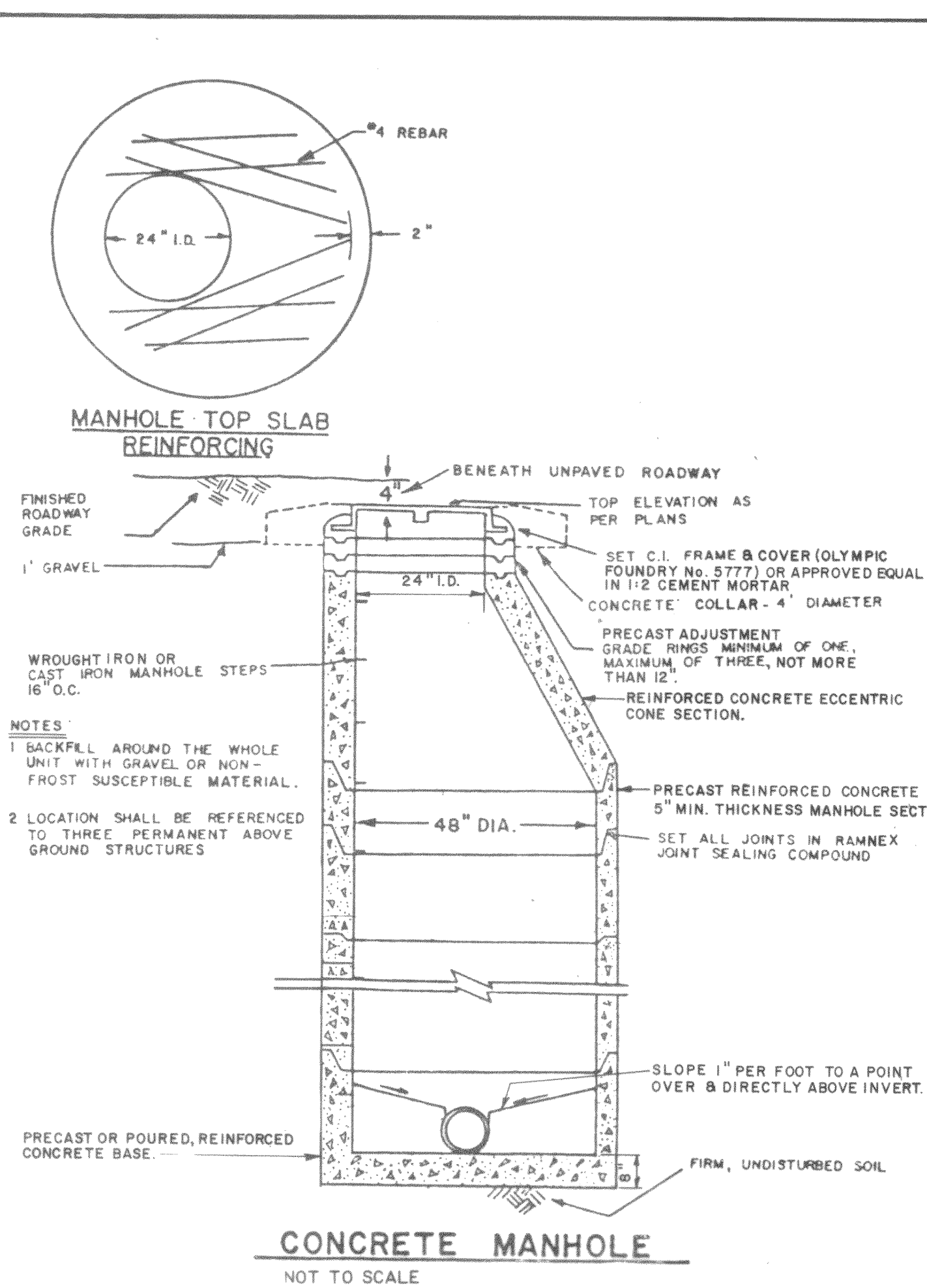
FOR BENDS GREATER THAN 45°, TEE BRANCHES & CROSSES				
PIPE DIAM. (in.)	WATER PRESSURE IN PIPE (p.s.i.)			
	50	100	150	200
2	0.5	0.5	0.8	1.0
4	0.8	1.0	1.6	3.1
6	1.0	1.3	1.9	4.0
8	1.1	1.5	3.2	7.0
10	1.7	3.2	4.9	10.0
FOR BENDS 45° OR LESS				
2	0.5	0.5	0.5	0.5
4	0.5	0.5	0.9	1.1
6	0.6	0.8	1.2	2.0
8	0.8	1.0	1.8	3.6
10	1.0	1.3	2.7	5.8

- NOTES:
- THRUST BLOCKS ARE TO BE POURED IN PLACE BETWEEN THE FITTING AND UNDISTURBED TRENCH WALL.
 - CONCRETE SHALL BE KEPT BEHIND BELL OF FITTING SO AS NOT TO OBSTRUCT THE JOINT.
 - THRUST BLOCKS ARE REQUIRED WHENEVER PIPE-LINE CHANGES DIRECTION, CHANGES SIZE, DEAD ENDS, OR DEVELOPS THRUST AT VALVES.
 - MATERIAL BEHIND THE THRUST BLOCKS, DEEMED INADEQUATE BY THE ENGINEER SHALL BE REMOVED AND REPLACED BY A BALLAST MATERIAL, THE EXTENT AND QUALITY OF REPLACEMENT MATERIAL TO BE DETERMINED BY THE ENGINEER.
 - IN IMPERVIOUS SOILS, A HOLE SHALL BE DUG BENEATH THE HYDRANT THRUST BLOCK TO A MINIMUM VOLUME OF 7 CUBIC FEET. THE HOLE SHALL BE BACKFILLED AND COMPACTED WITH A POROUS MATERIAL ACCEPTABLE TO THE ENGINEER.

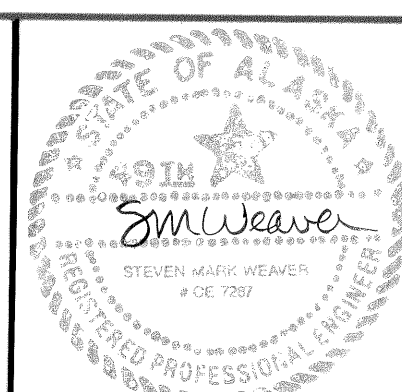
PIPE SIZE	THRUST (lb.)
4"	35
6"	72
8"	122
10"	197



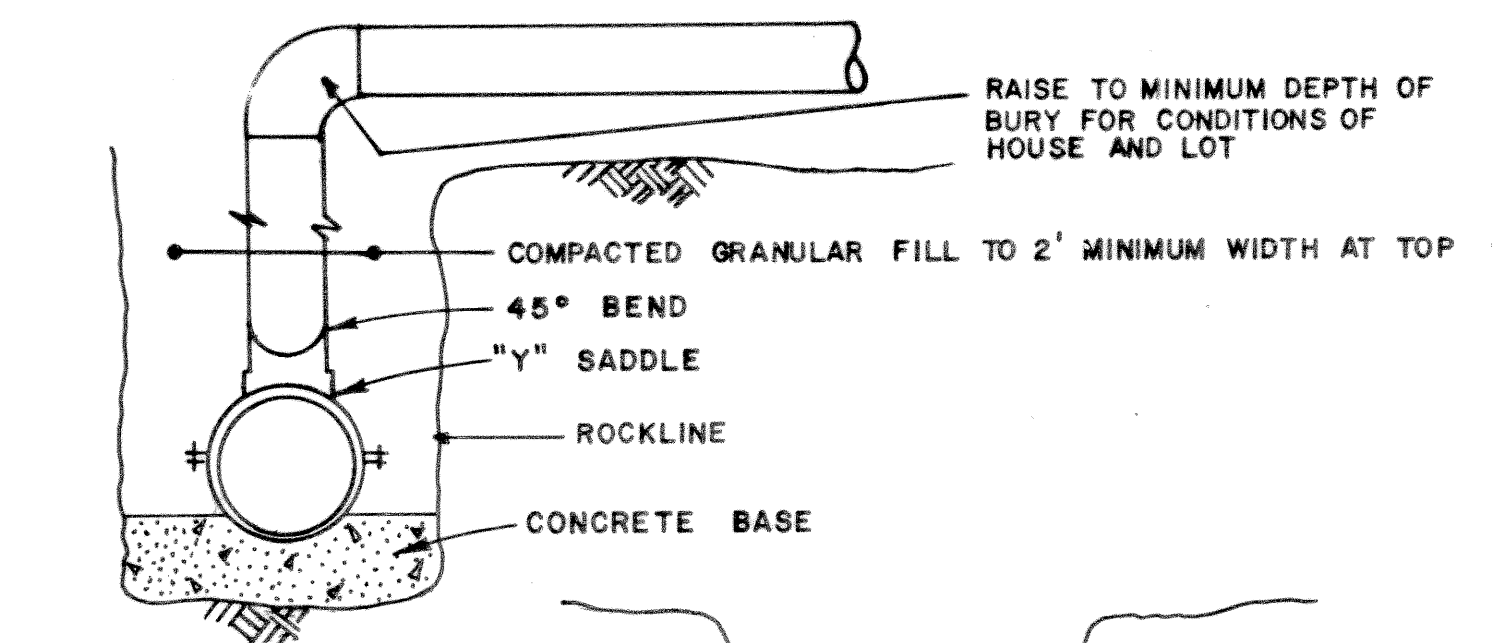
CONVENTIONAL TRENCH SECTION THROUGH ROCK EXCAVATION FOR DUCTILE IRON PIPE



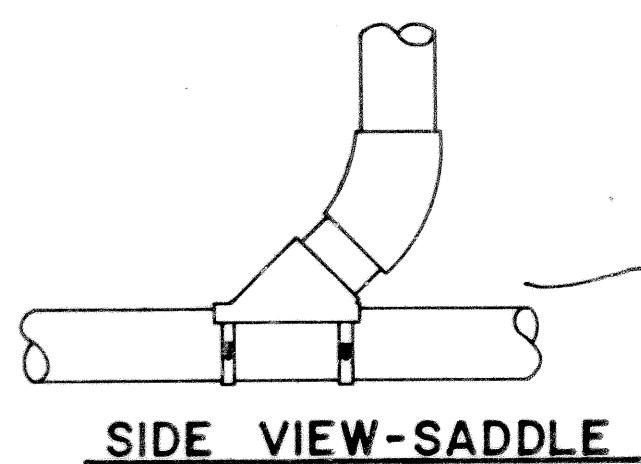
Design Engineer	Material Take-off
Maintenance Review	



11-15-88	RECORD DRAWING	J. C.
DATE	REVISIONS	INITIALS
U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA WATER & SEWER STANDARD DETAILS PUBLIC LAW 86-121 PROJECT PROJECT NO. AN-86-340		SHEET NO. C-17 OF 18 TOTAL SHEETS
DRAWN BY: LOWDERMILK DATE: 2 - 87	CHECKED BY: _____ DATE: _____	
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		



ROCK DITCH SECTION

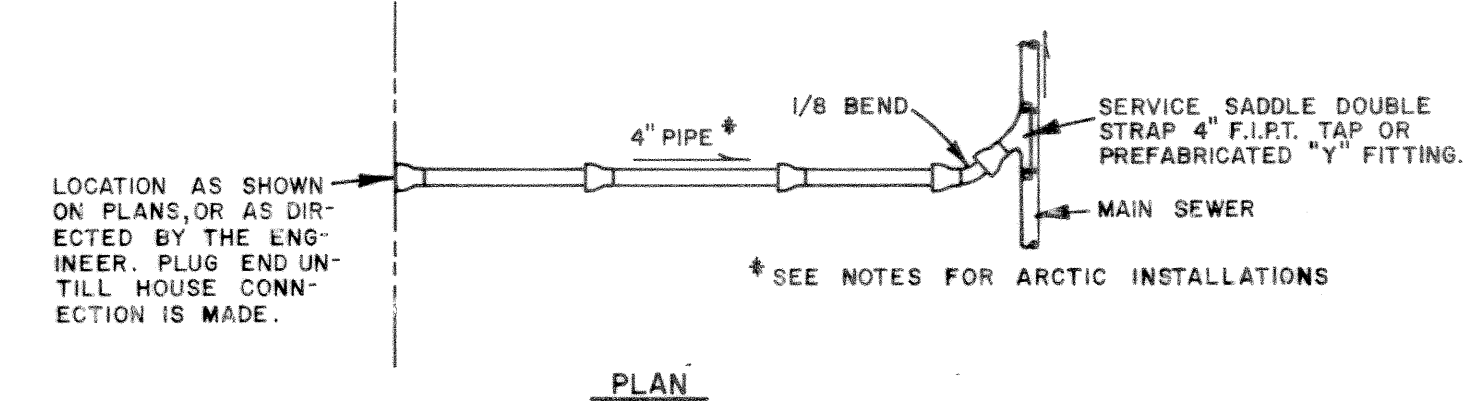
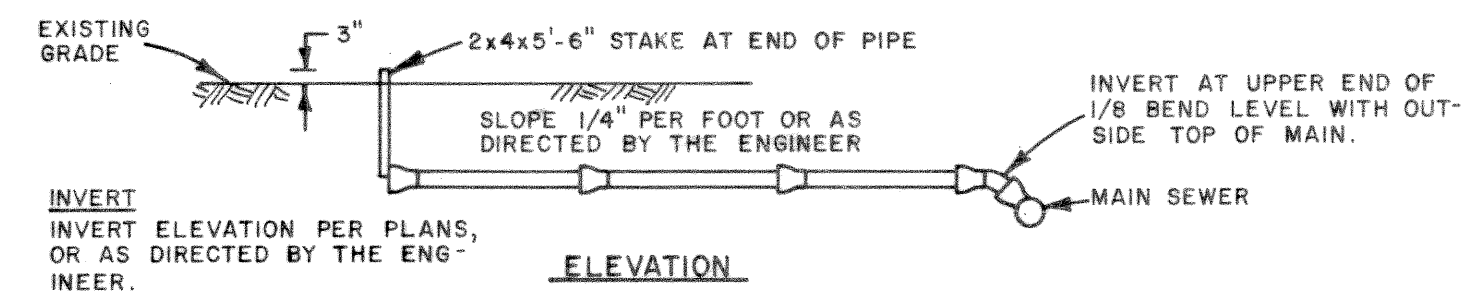
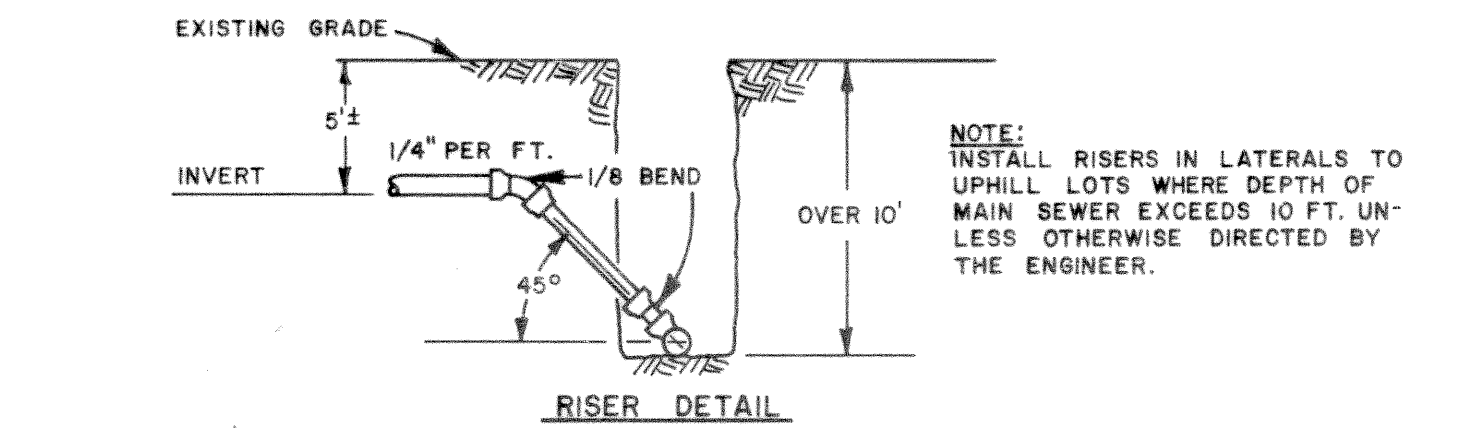


SIDE VIEW-SADDLE

EARTH DITCH SECTION

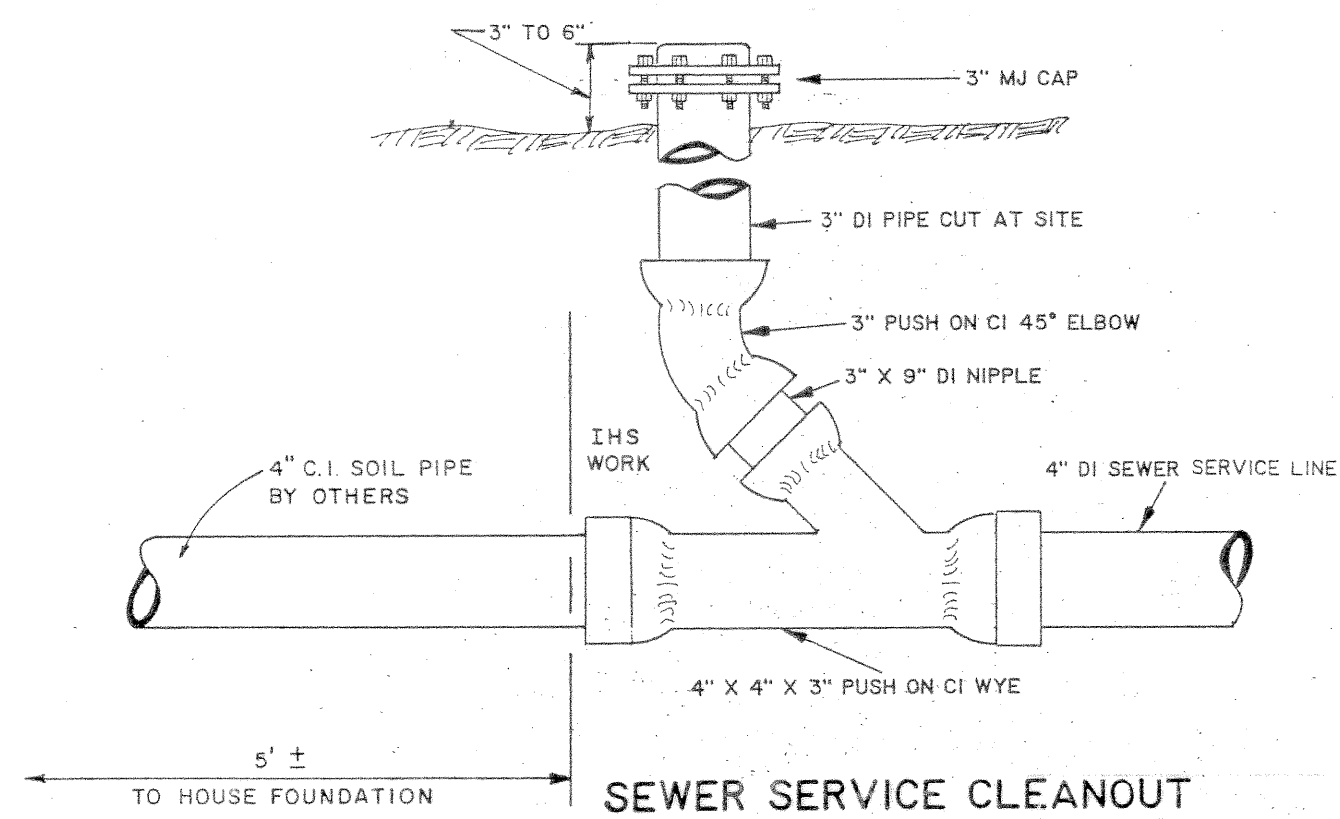
NOTE:
LOCATION SHALL BE REFERENCED TO THREE PERMANENT ABOVE-GROUND STRUCTURES

CONVENTIONAL DROP SEWER SERVICE CONNECTION
NOT TO SCALE

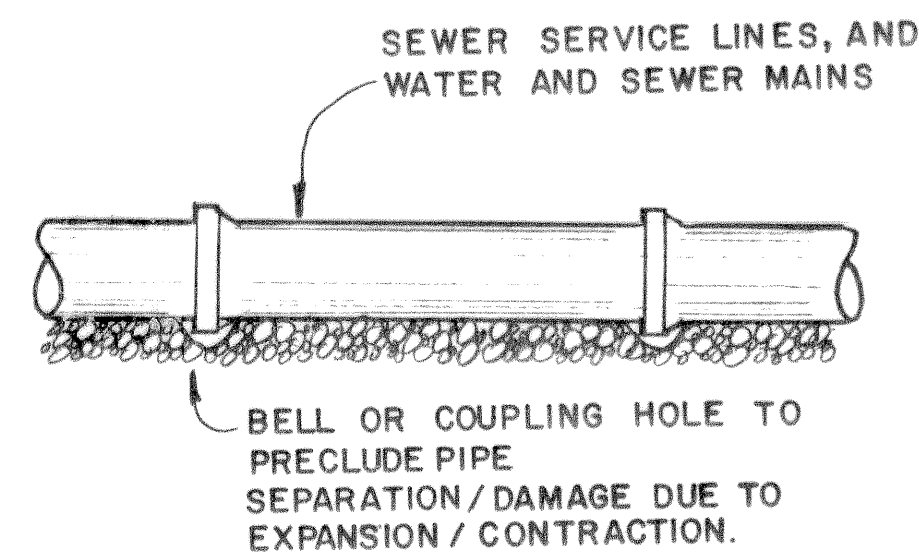


- NOTES:
1. MINIMUM COVER ON SEWER SERVICE LINE AT HOUSE WILL BE 2' BEDFILL.
 2. FOR ARCTIC INSTALLATIONS ALL SERVICE LINE PIPE TO BE INSULATED ARCTIC CONDUIT WITH ALL JOINTS OR FITTINGS JOINED WITH DONNET OR FIELD FOAM.
 3. ALL SERVICE SADDLE LOCATIONS SHALL BE REFERENCED IN FIELD WITH THREE EACH SWING TIES.
 4. ALL SERVICE SADDLES SHALL BE BACKFILLED WITH GRANULAR MATERIAL AND COMPACTED.

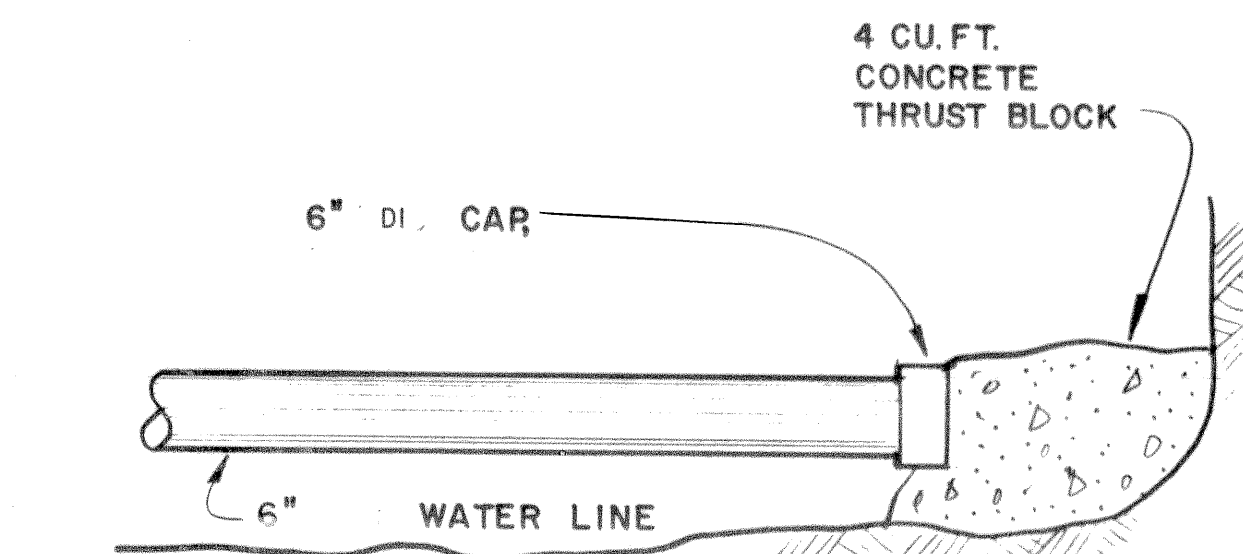
LATERAL SEWER DETAILS
NOT TO SCALE



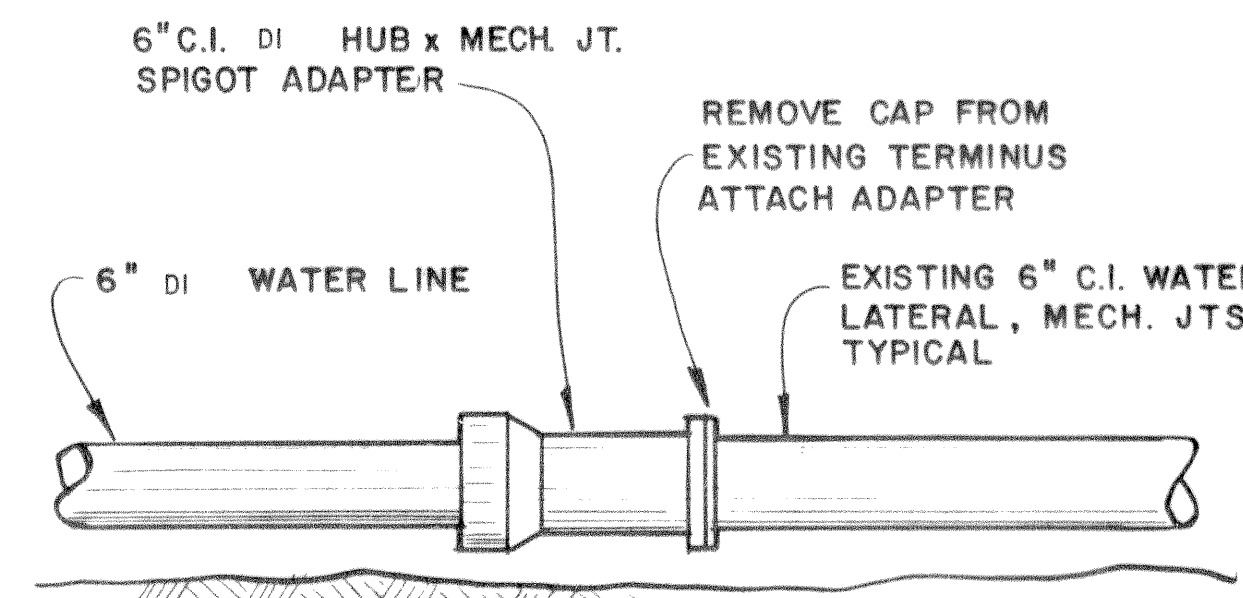
SEWER SERVICE CLEANOUT
NTS



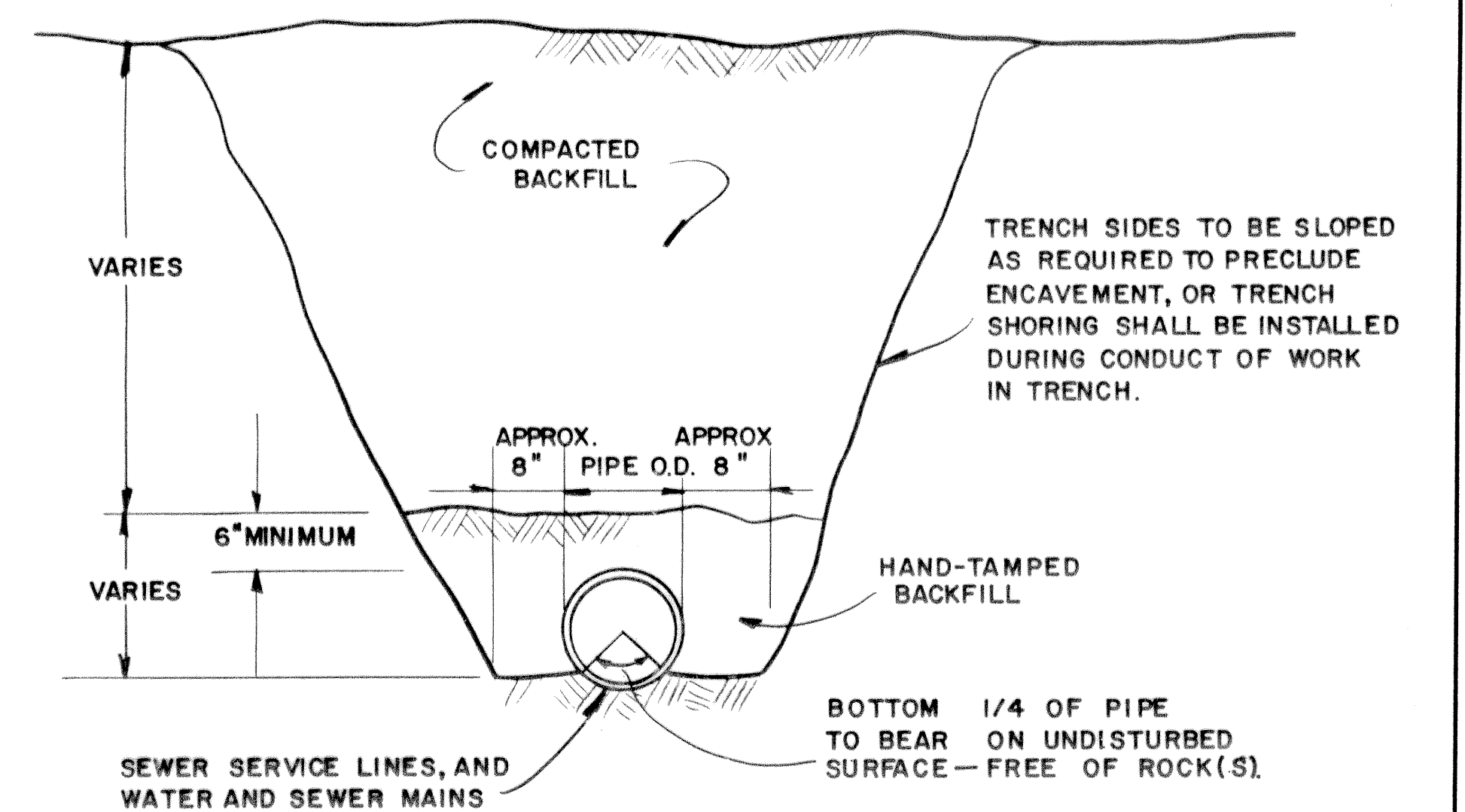
JOINT BEDDING



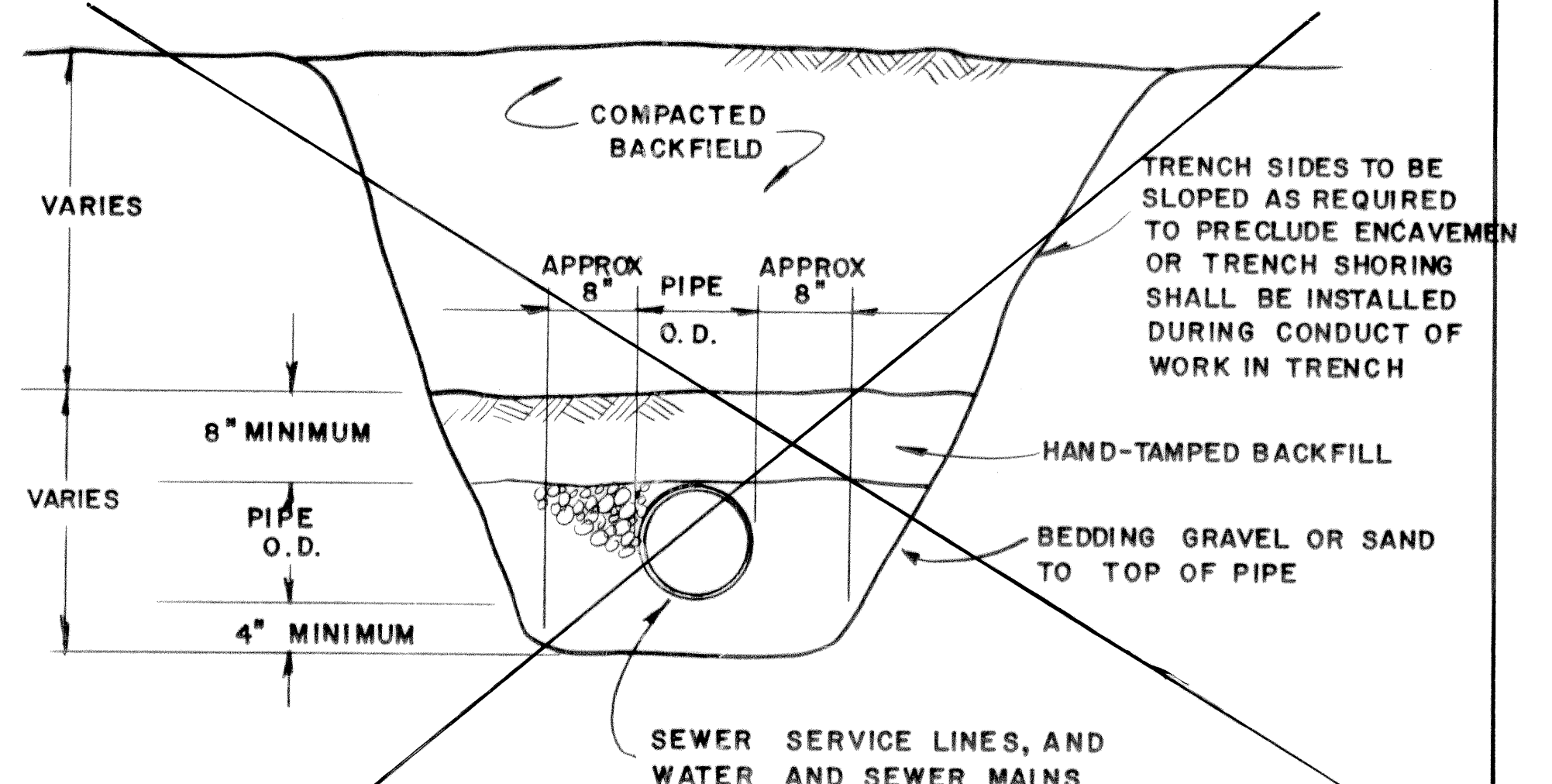
TYPICAL END-CAP INSTALLATION
NOT TO SCALE



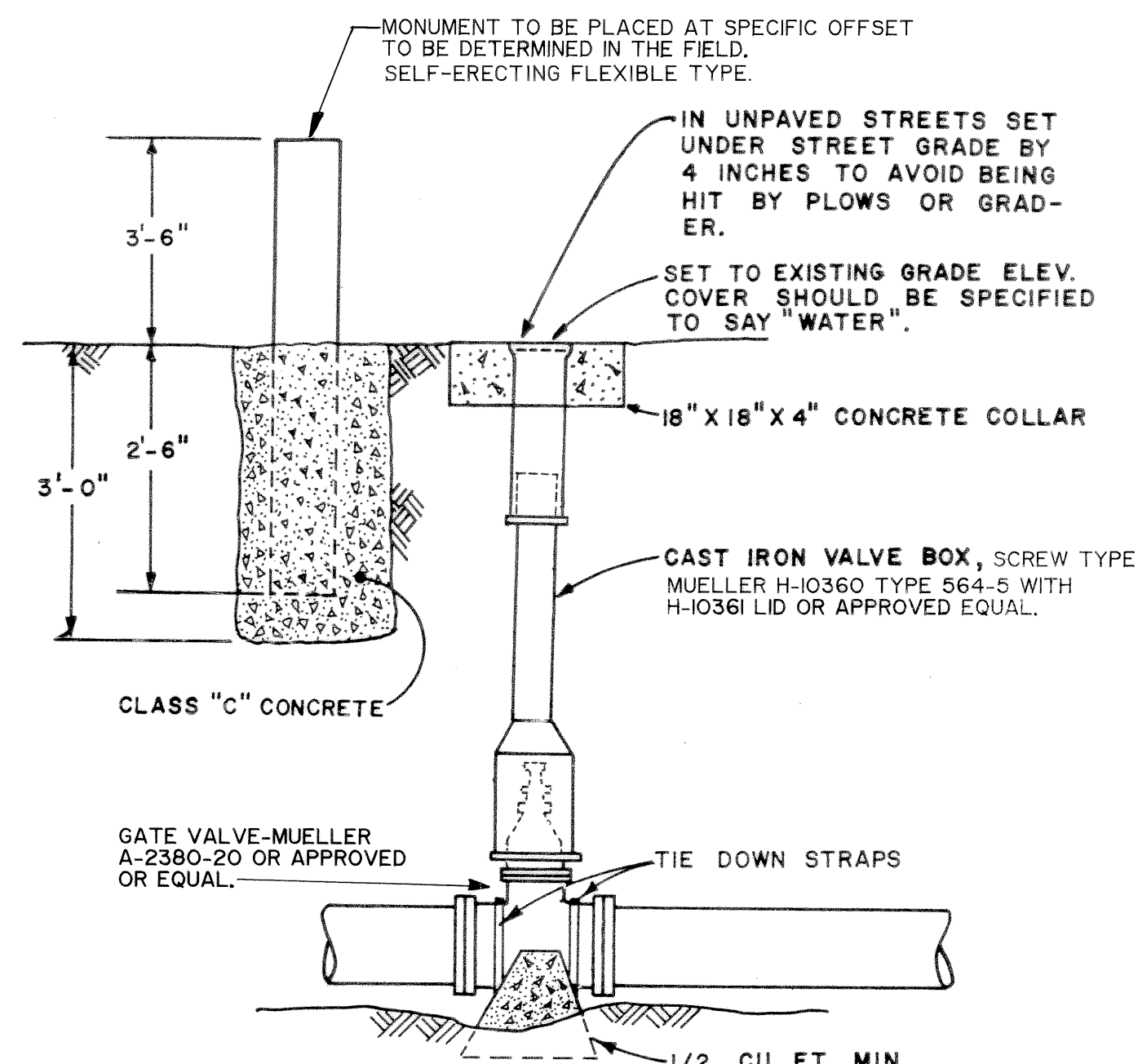
TYPICAL HOOK-UP TO EXISTING WATER SYSTEM LATERAL
NOT TO SCALE



CONDITIONS REQUIRING NO BEDDING

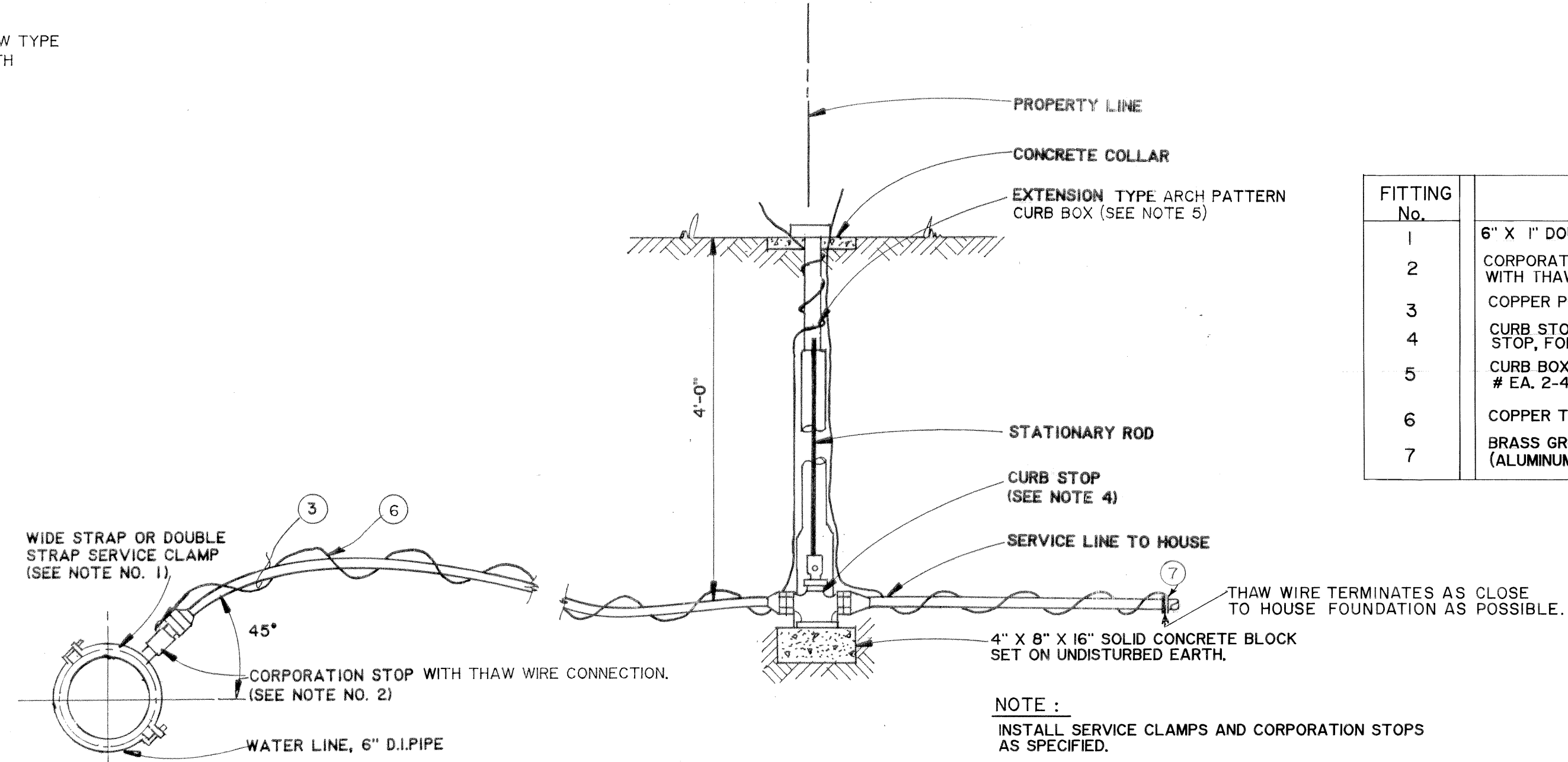


CONDITIONS REQUIRING BEDDING MATERIAL
WATER AND SEWER BEDDING DETAILS



CONVENTIONAL VALVE CONNECTION AND MARKER
NOT TO SCALE

NOTE:
LOCATION SHALL BE REFERENCED TO THREE PERMANENT ABOVE GROUND STRUCTURES.



WATER SERVICE CONNECTION

FITTING No.	DESCRIPTION
1	6" X 1" DOUBLE STRAP SADDLE, FORD # F202-760 X IP4
2	CORPORATION STOP, 1" MIPT X 1" FLARE, FORD # 1" F700, WITH THAWING NUT GROUNDING WIRE ATTACHMENT.
3	COPPER PIPE, 1" TYPE "K".
4	CURB STOP, 1" FLARE X 1" FLARE, COPPER BALL VALVE CURB STOP, FORD # B22-444.
5	CURB BOX, 1 1/4" UPPER SECTION, WITHOUT ROD, MODEL # EA. 2-40-50, 4' EXTENSION.
6	COPPER THAW WIRE, 2 AWG, RUBBER COATED.
7	BRASS GROUNDING CLAMP FOR 1" COPPER AND # 2 WIRE (ALUMINUM GROUNDING CLAMPS ARE NOT ACCEPTABLE).

RECORD DRAWINGS

THESE DRAWINGS REFLECT THE DESIGNER'S BEST ESTIMATION OF THE PROJECT. THE DESIGNER DOES NOT WARRANT THE ACCURACY OF THE INFORMATION PROVIDED HEREIN. THE USER SHALL BE RESPONSIBLE FOR THE VERIFICATION OF ALL INFORMATION AND THE RESULTS OF ANY KNOWLEDGE.

NAME: *Stephen Mark Weaver* DATE: *4/24/87*

3-24-89	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS
U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA		SHEET NO. C-16 OF 18 TOTAL SHEETS
WATER SYSTEM DETAILS PUBLIC LAW 86-121 PROJECT PROJECT NO. AN-86-340		
DRAWN BY: LOWDERMILK	CHECKED BY:	
DATE: 2-87	DATE:	
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		

Design Engineer: *Stephen Mark Weaver*

Maintenance Review: *Lowdermilk*

Material Take-off: *Lowdermilk*

STATE OF ALASKA
REGISTERED PROFESSIONAL ENGINEER
STEVEN MARK WEAVER
01728

LIFT STATION CONCRETE PAD DESIGN

DESIGN DATA

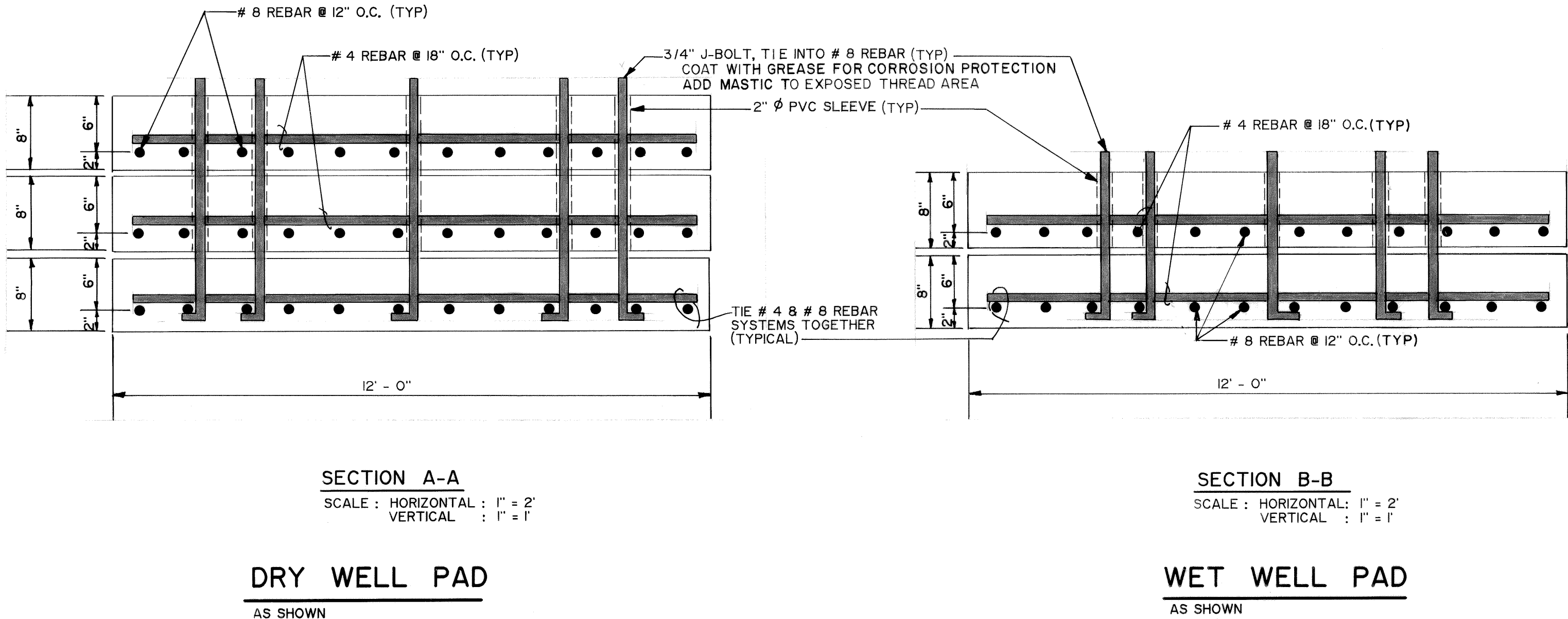
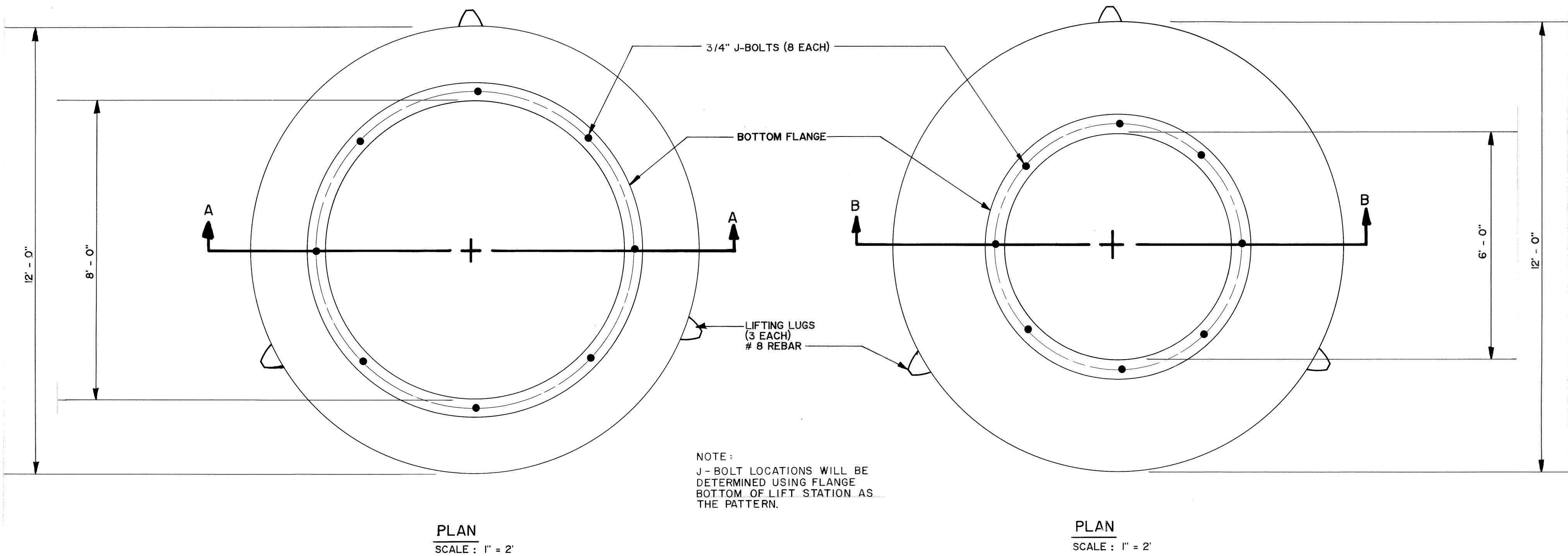
DIAMETER
WEIGHT
CONCRETE PAD SIZE REQUIRED
CONCRETE PAD WEIGHT (ESTIMATED)
SOIL WEIGHT (ESTIMATED)
TOTAL WEIGHT
TOTAL BUOYANCY FORCES
SAFETY FACTOR
f'c CONCRETE
f y REBAR

DRY WELL

8 ft.
4300 lbs.
12' 6" X 2' THICK
34,000 lbs.
7,500 lbs.
45,000 lbs.
42,000 lbs.
1.08
3000 psi
40,000 psi

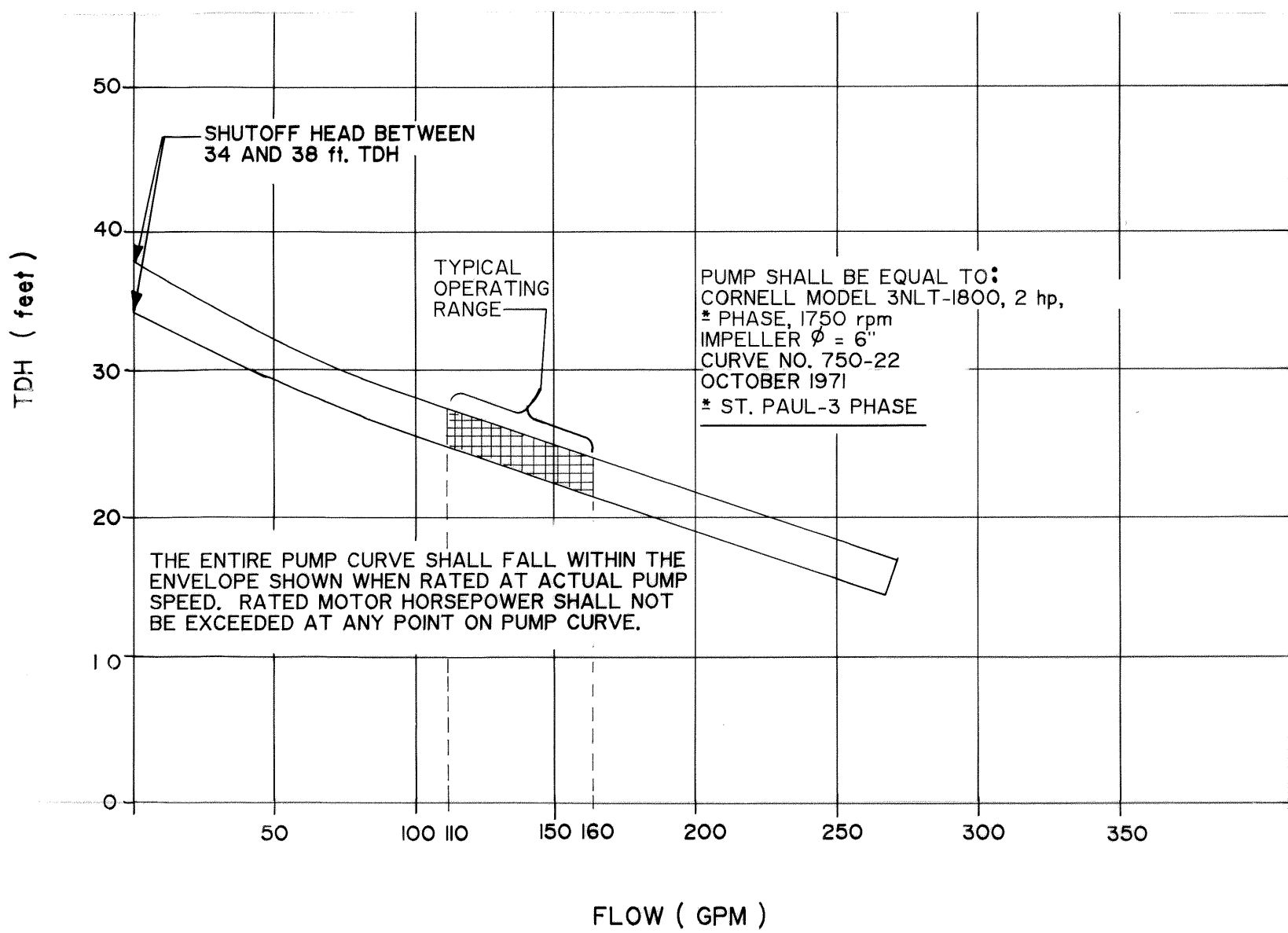
WET WELL

6 ft.
6800 lbs. (INCLUDES 3000 lb. CONCRETE FLOOR)
12' 6" X 16" THICK
22,600 lbs.
7,500 lbs.
36,900 lbs.
34,400 lbs.
1.07
3000 psi
40,000 psi



LIFT STATION OPERATION CURVE - (1 PUMP OPERATION.)

PEAK EFFICIENCY SHALL BE A MINIMUM OF 55% @ 110 GPM



DESIGN CRITERIA

CONDITION	WASTEWATER FLOW ASSUMED GPM	FILL TIME TO LEAD PUMP ON
AVERAGE DAILY	33	26 MIN.
MINIMUM	12	71 MIN.
MAXIMUM	82.5	10 MIN.

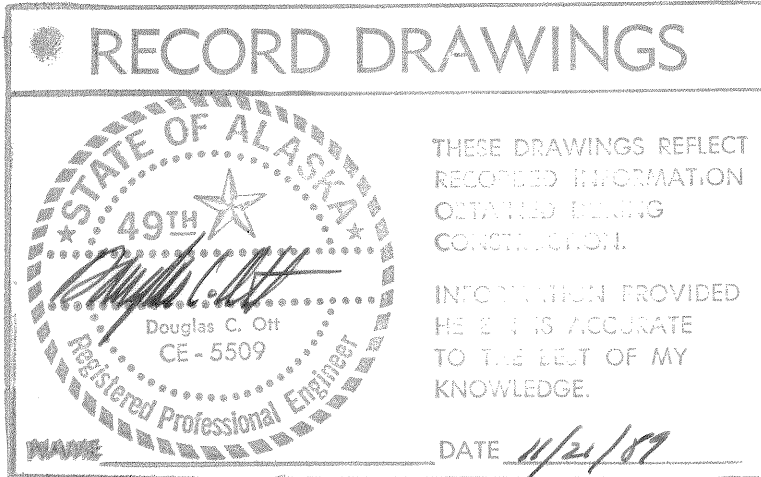
PARALLEL LIFT STATION OPERATION - ELLERMAN HTS. & PROPOSED

SINGLE PUMP OPERATION

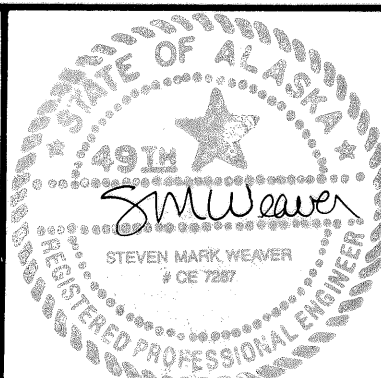
ELLERMAN HEIGHTS	70 - 100 GPM
PROPOSED SITE	120 - 140 GPM
TOTAL FLOW THROUGH CO6	190 - 240 GPM

DUAL PUMP OPERATION

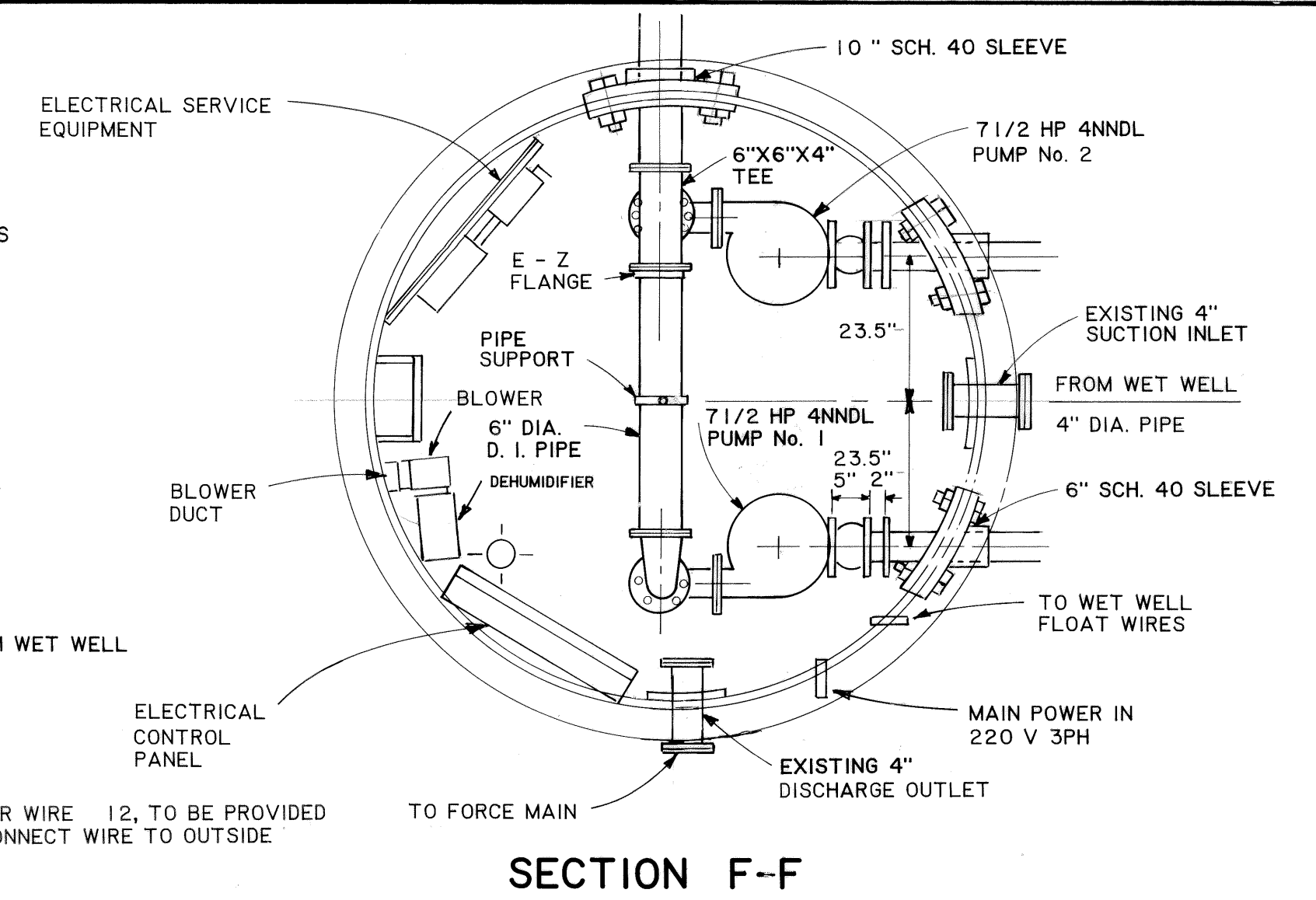
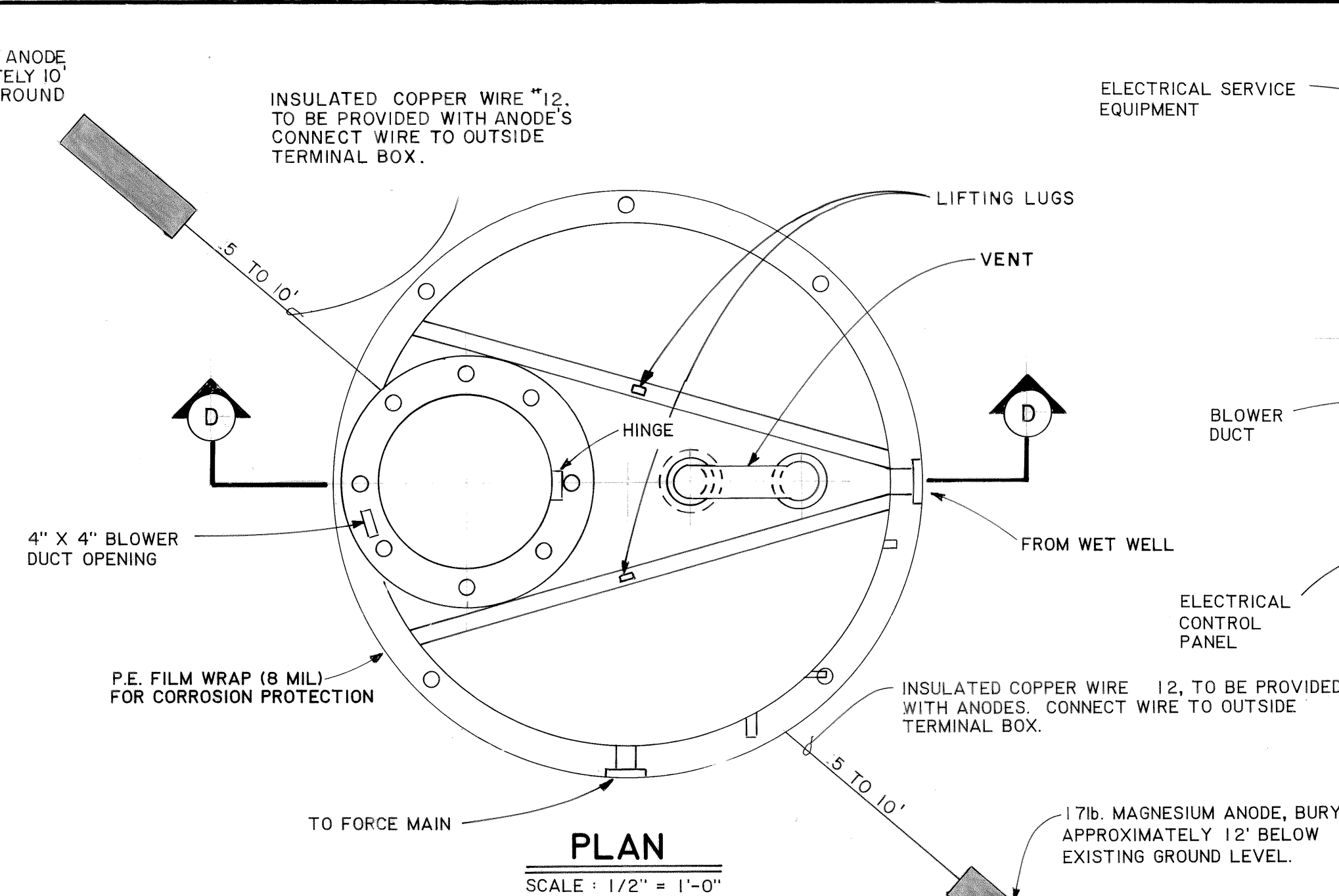
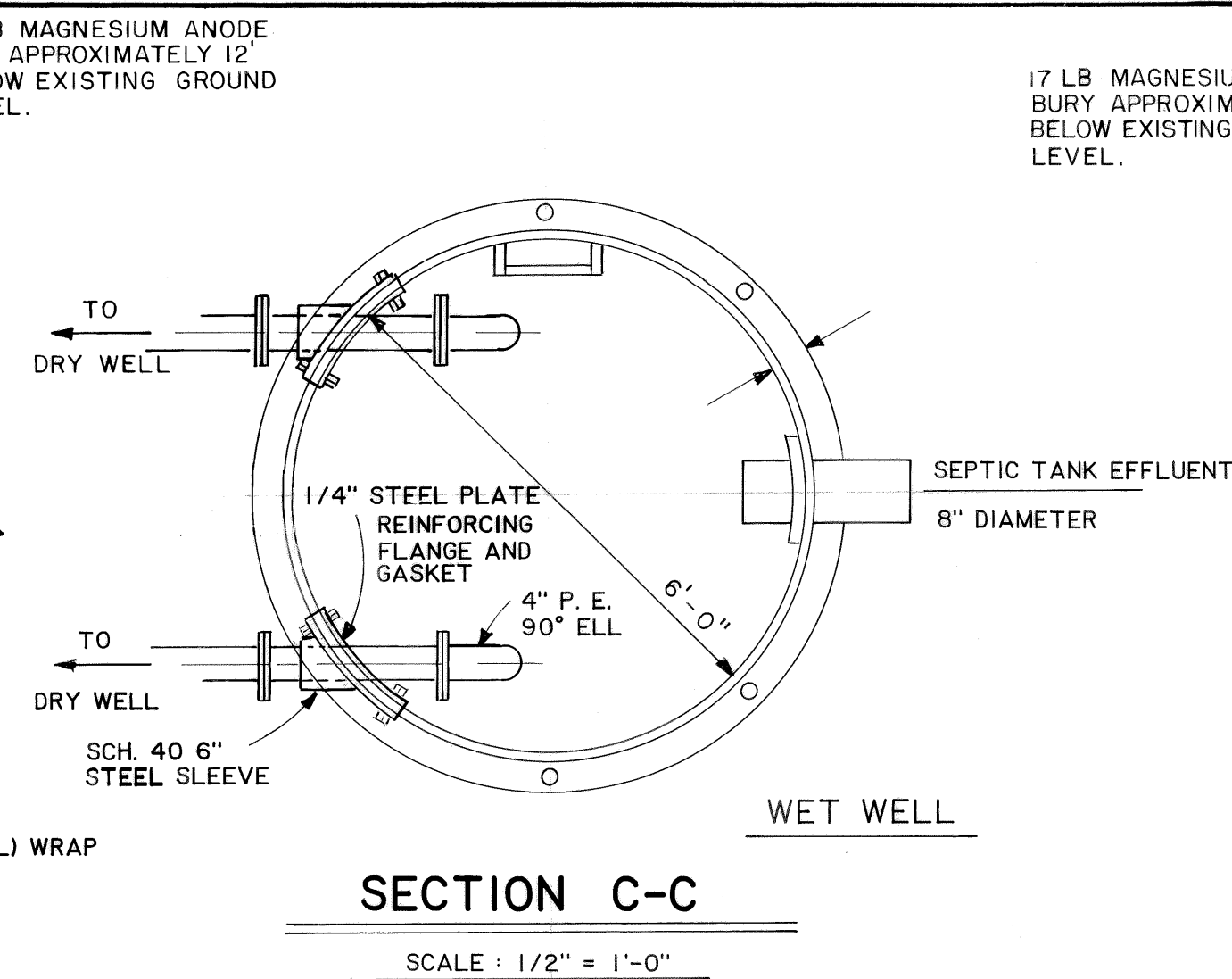
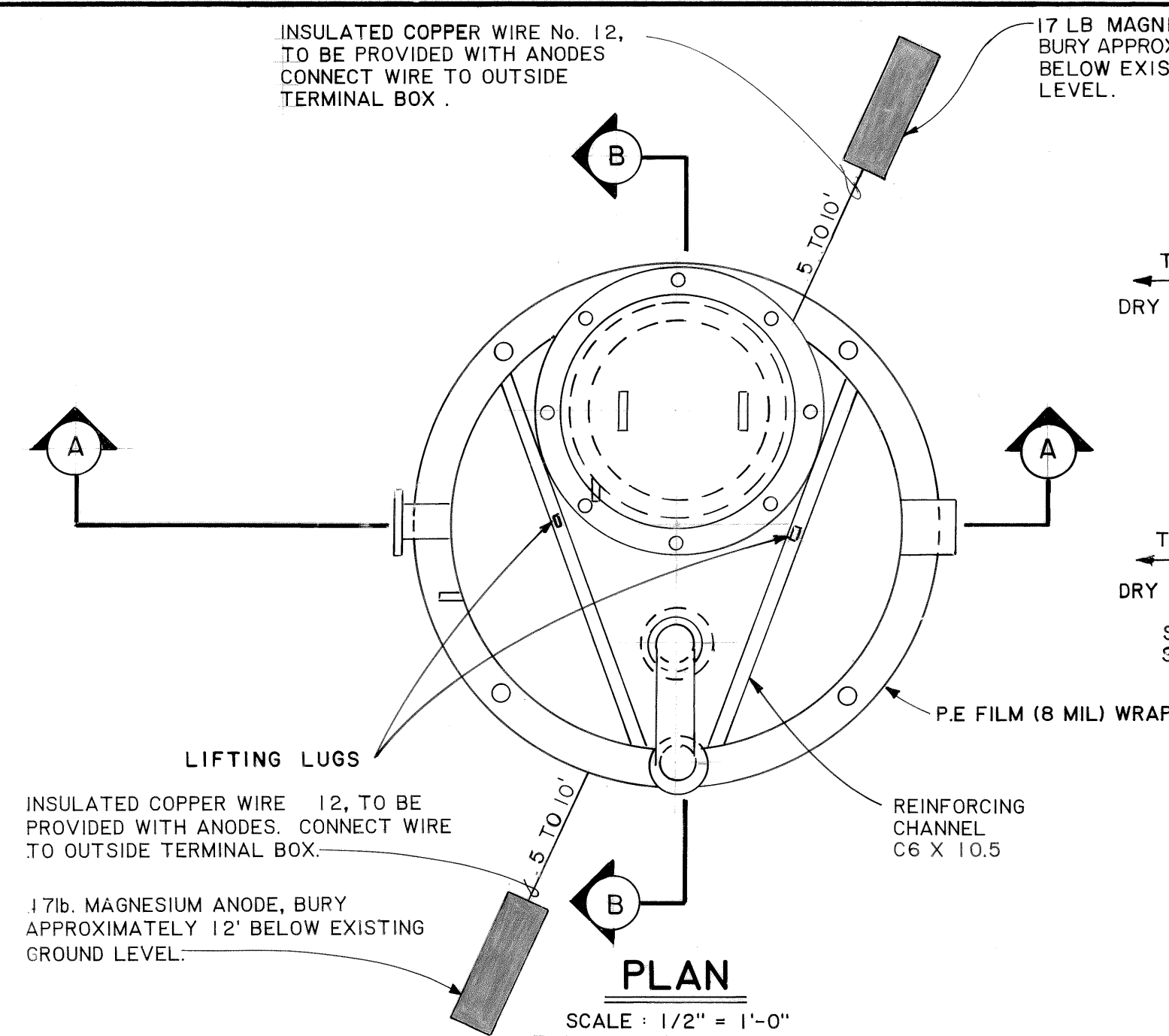
ELLERMAN HEIGHTS	140 - 200 GPM
PROPOSED SITE	240 - 280 GPM
TOTAL FLOW THROUGH CO6	380 - 480 GPM



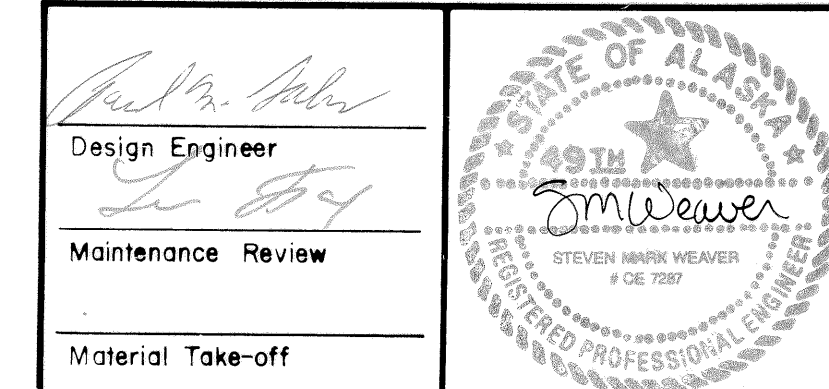
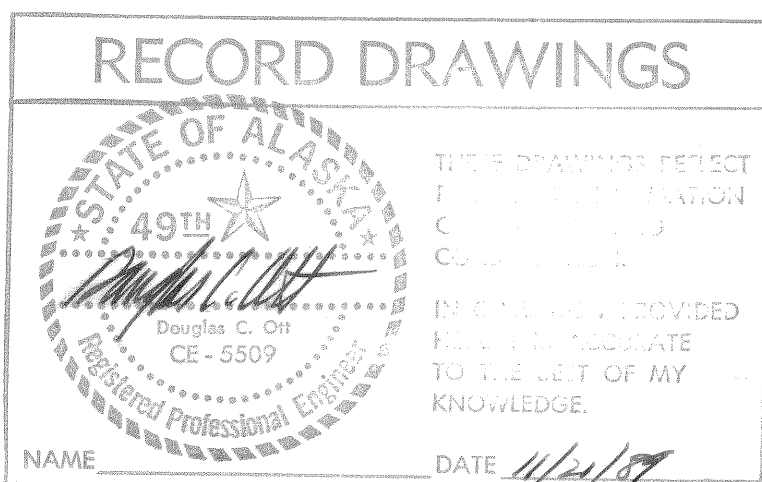
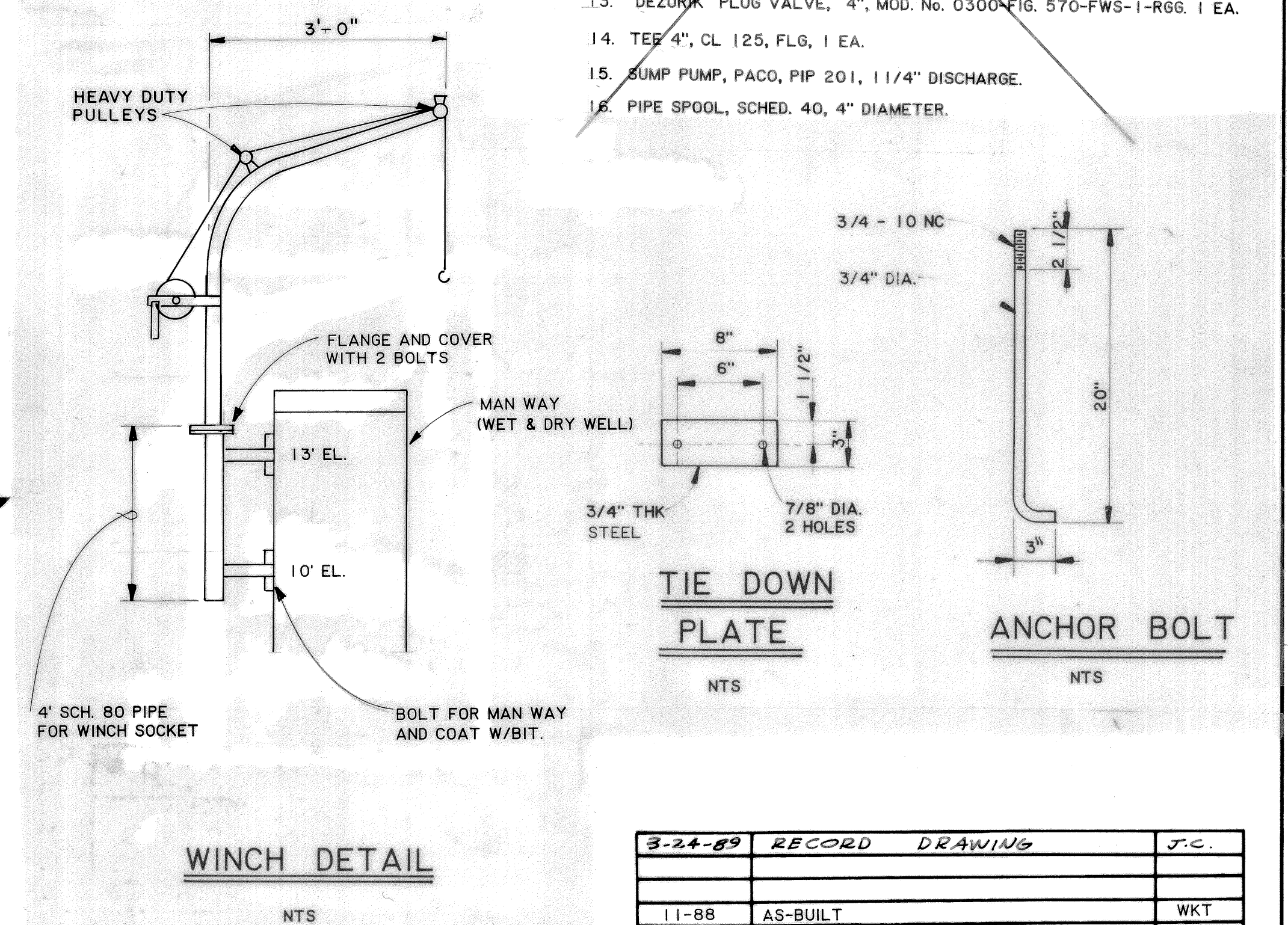
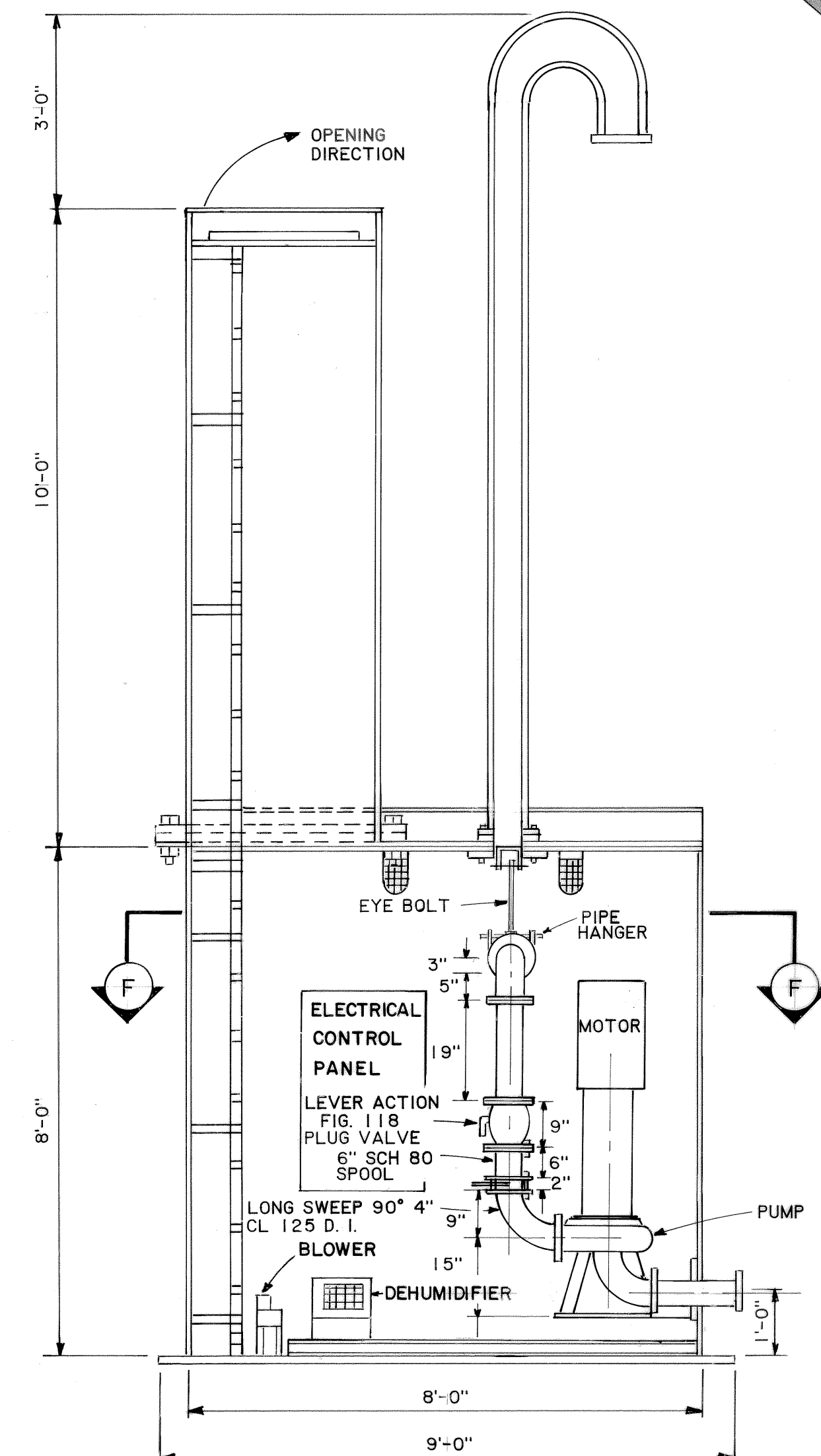
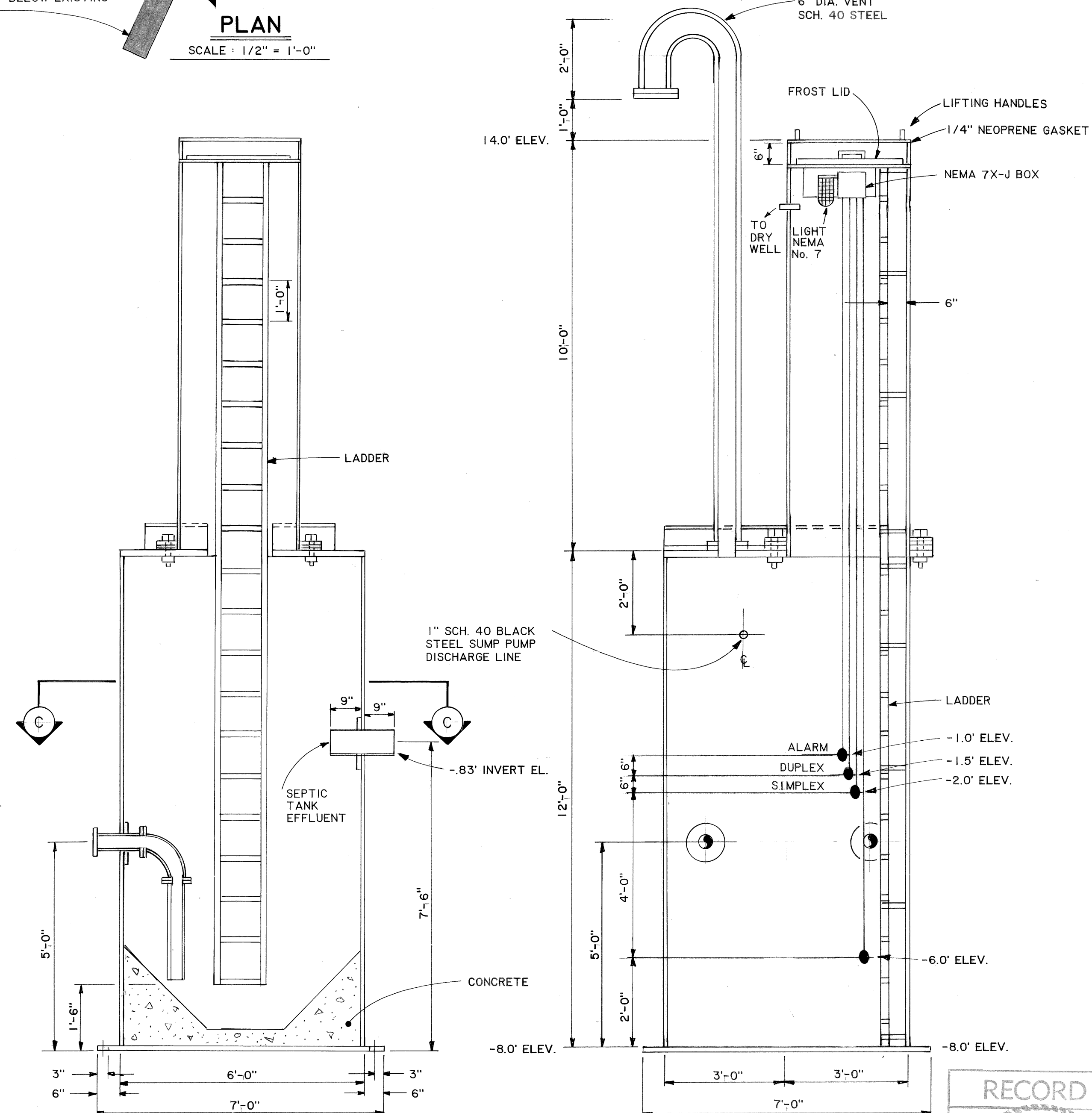
Design Engineer
Maintenance Review
Material Take-off



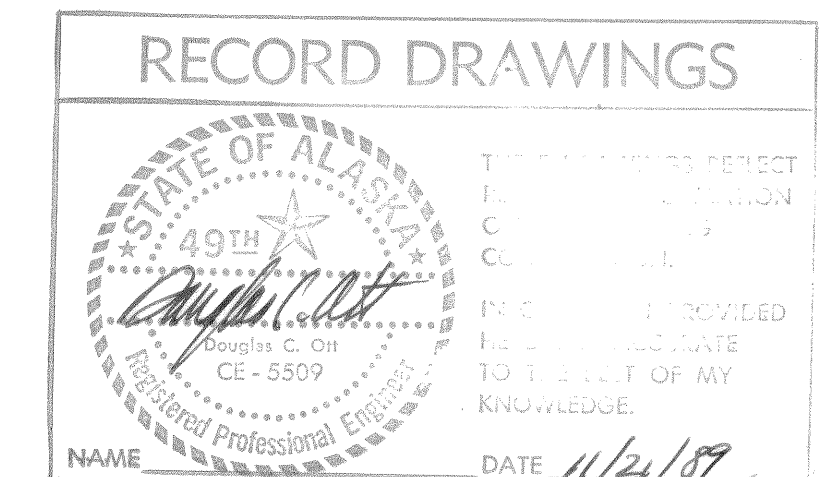
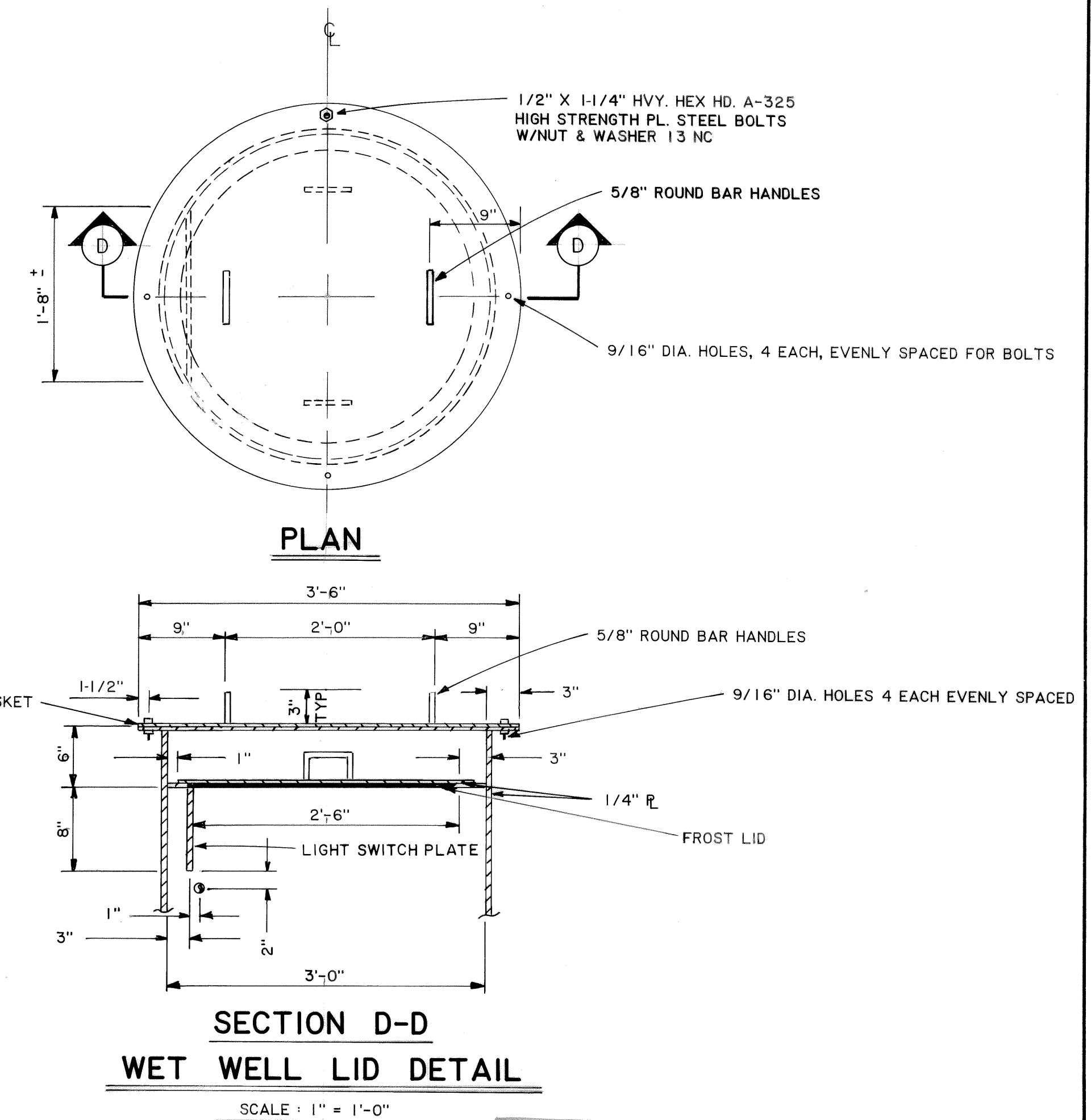
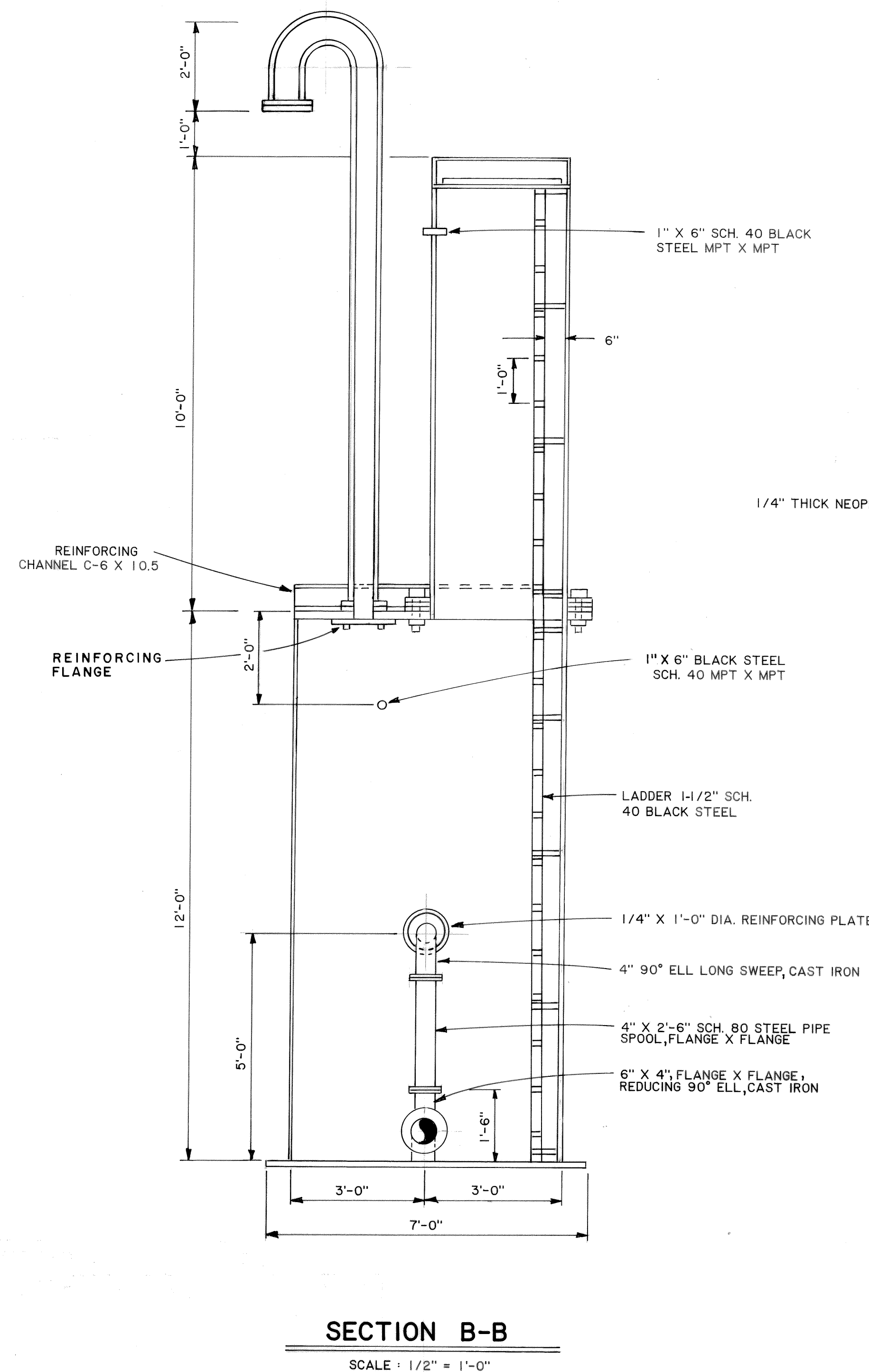
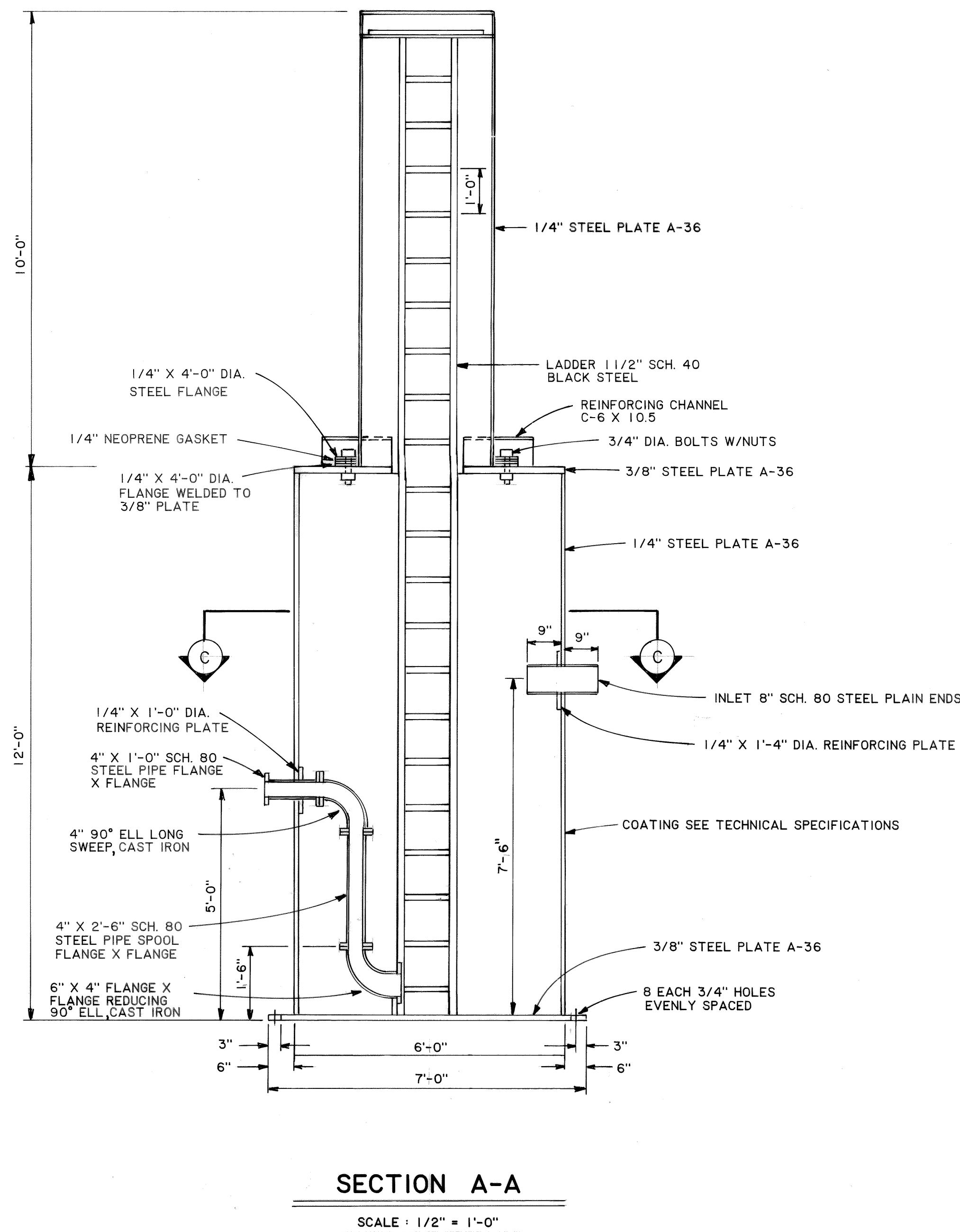
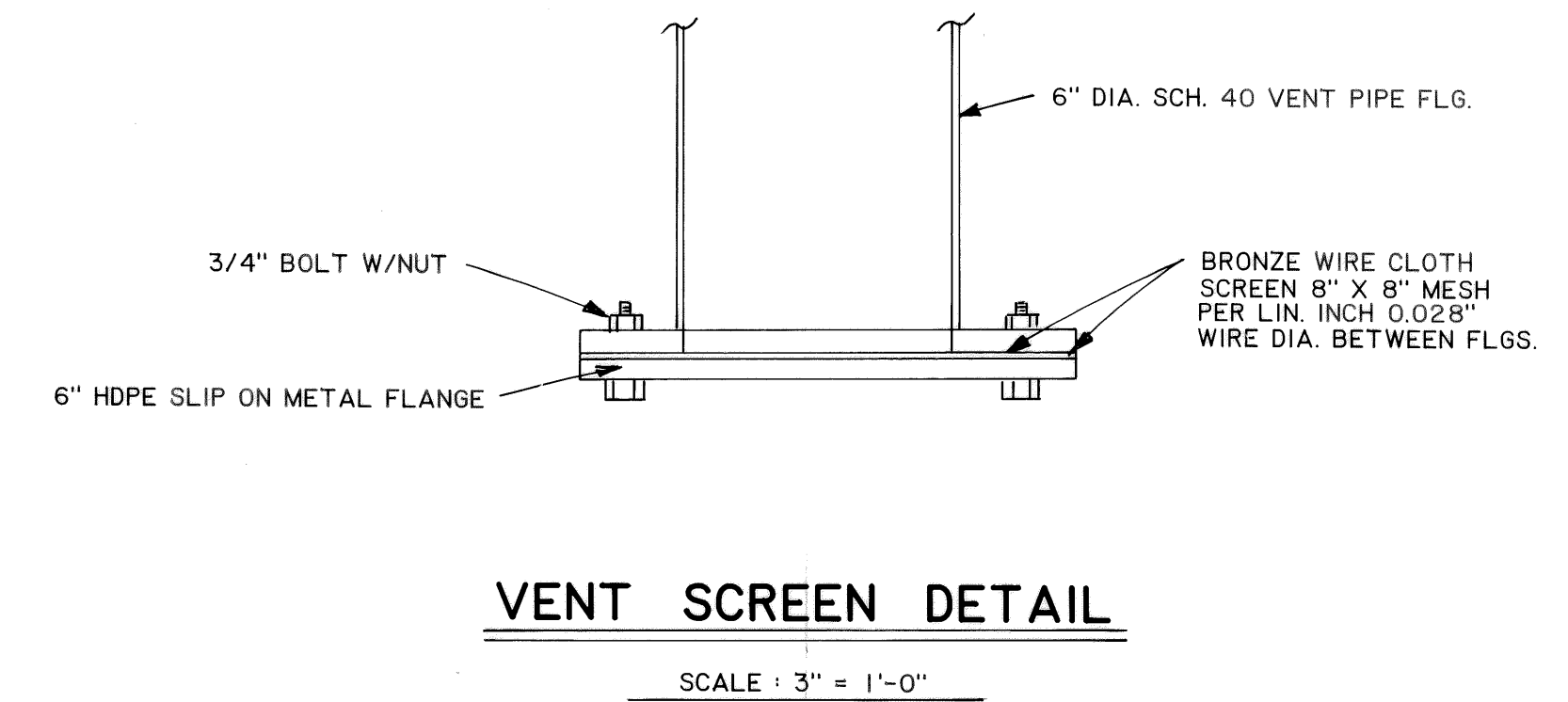
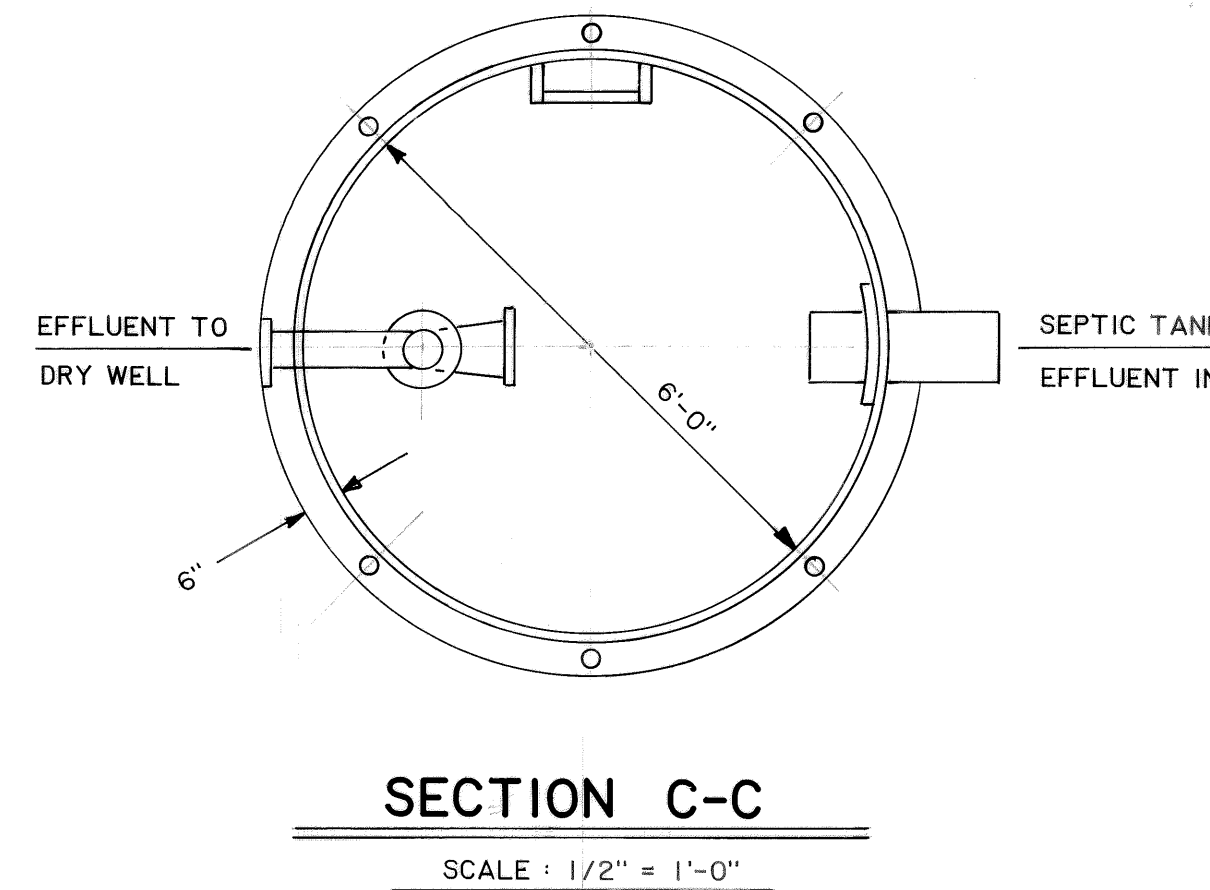
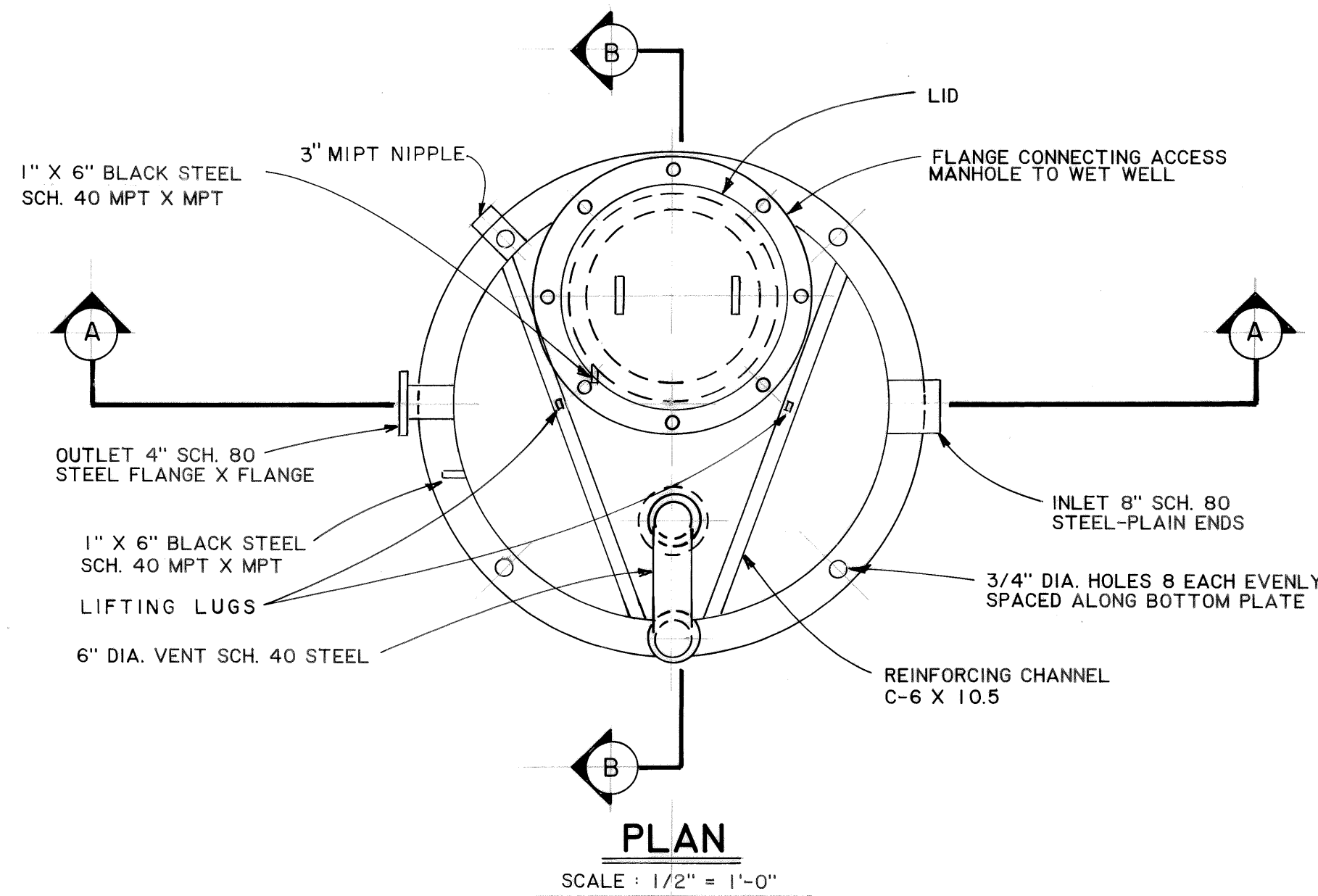
3-24-89	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS
U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA LIFT STATION PAD & PUMP SYSTEM INFORMATION PUBLIC LAW 86-121 PROJECT PROJECT NO. AN-86-340		SHEET NO. C-15 OF 18 TOTAL SHEETS
DRAWN BY: LOWDERMILK DATE: 2 - '87		CHECKED BY: DATE:
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		



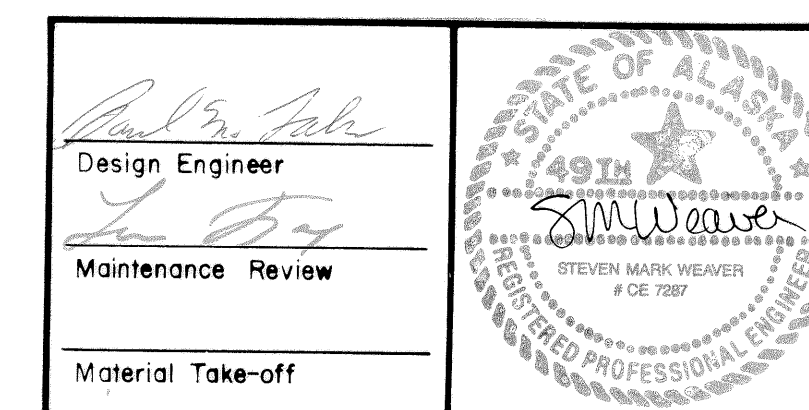
- NOTES:
1. DEZURIK SERIES "L" KNIFE GATE VALVE, 4" FLG., 3 EA.
 2. DEZURIK SERIES "L" KNIFE GATE VALVE, 3" FLG., 2 EA.
 3. METRASPHERE STYLE "R", 4" FLG., 3 EA.
 4. METRASPHERE STYLE "R", 3" FLG., 2 EA.
 5. CL 125 IRON CHECK VALVE W/LEVER & WGT, 3", FLG., 2 EA.
 6. "CORNELL" NONLOG SEWAGE PUMP, 3 NLT-VM, 2 HP, 6" IMPELLER, 2 EA. (NOTE: ROTATE DISCHARGE FLG. TO POSITION SHOWN)
 7. 90° LONG RADIUS ELL, 3", CL 125, FLG., 2 EA.
 8. 90° LONG RADIUS REDUCING ELL, 3" X 4", CL 125, FLG., 1 EA.
 9. PIPE SPOOL, SCHED. 40, 3" DIA., FLG., 1 EA.
 10. PIPE SPOOL, SCHED. 40, 4" DIA., FLG., 1 EA.
 11. PIPE SPOOL, SCHED. 40, 3" DIA., FLG., 1 EA.
 12. TEE, 4" X 4" X 3", CL 125 FLG., 1 EA.
 13. "DEZURIK" PLUG VALVE, 4", MOD. No. 0300-FIG. 570-FWS-I-R66, 1 EA.
 14. TEE 4", CL 125, FLG., 1 EA.
 15. PUMP PUMP, PACO, PIP 201, 1 1/4" DISCHARGE.
 16. PIPE SPOOL, SCHED. 40, 4" DIAMETER.

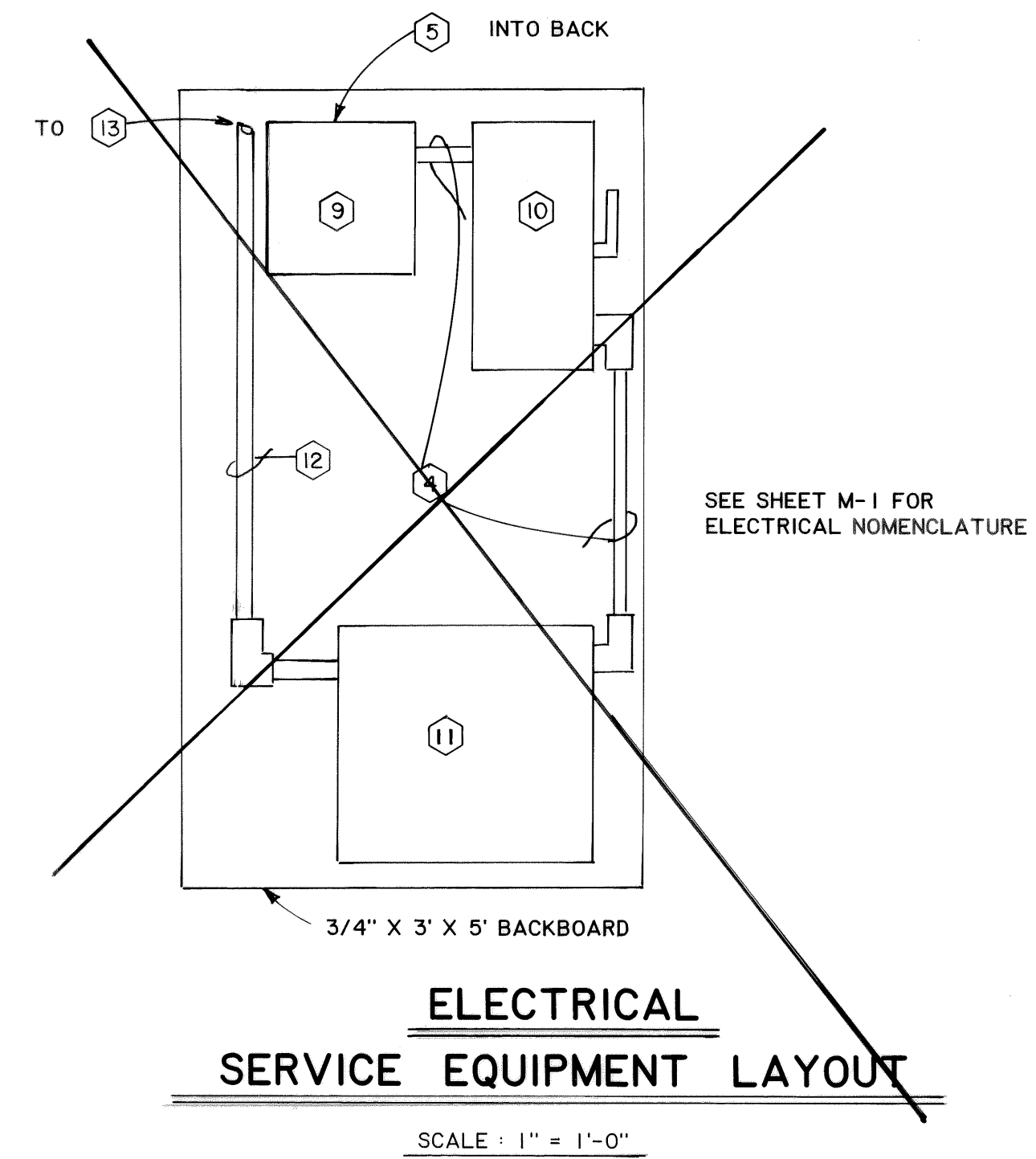
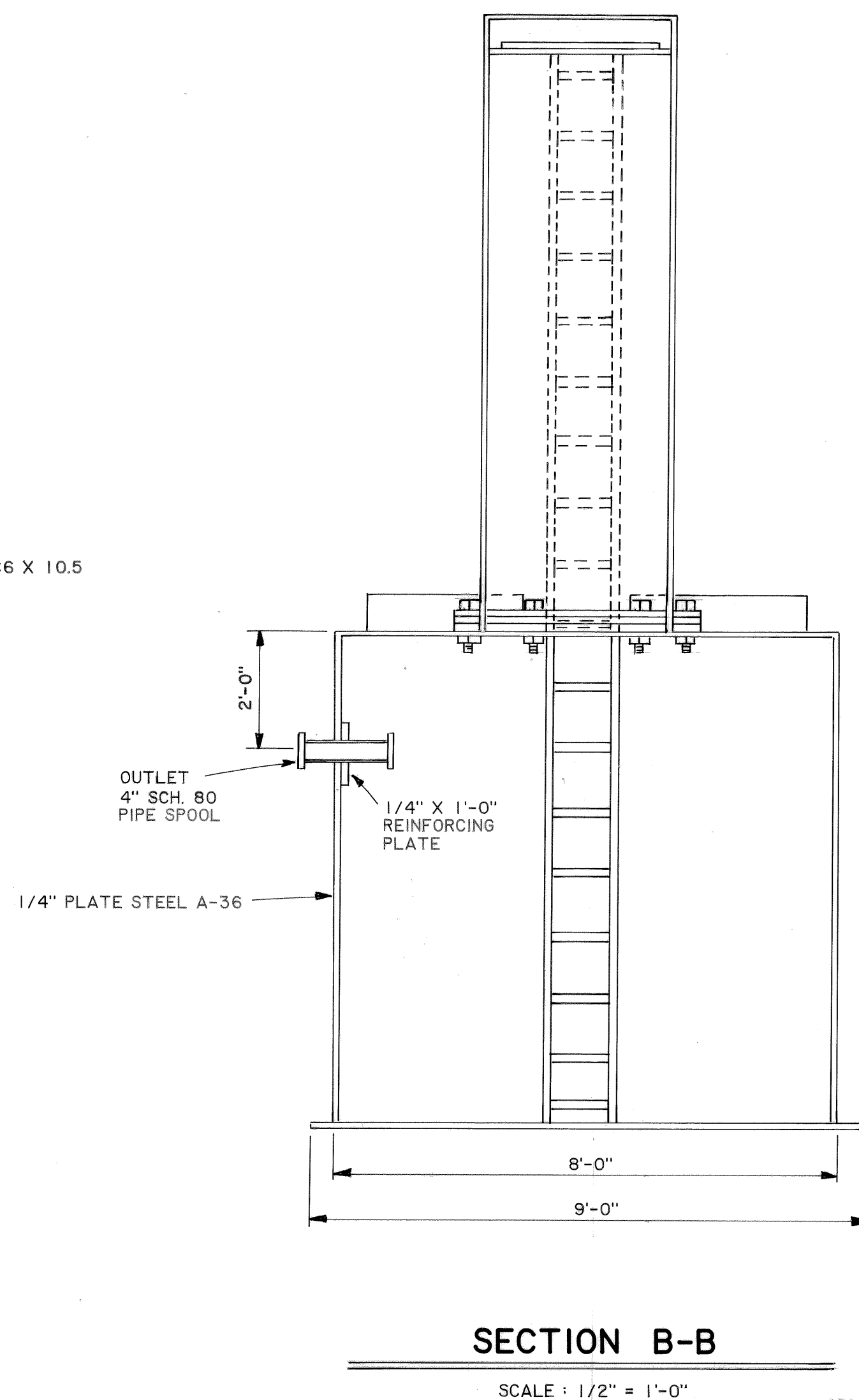
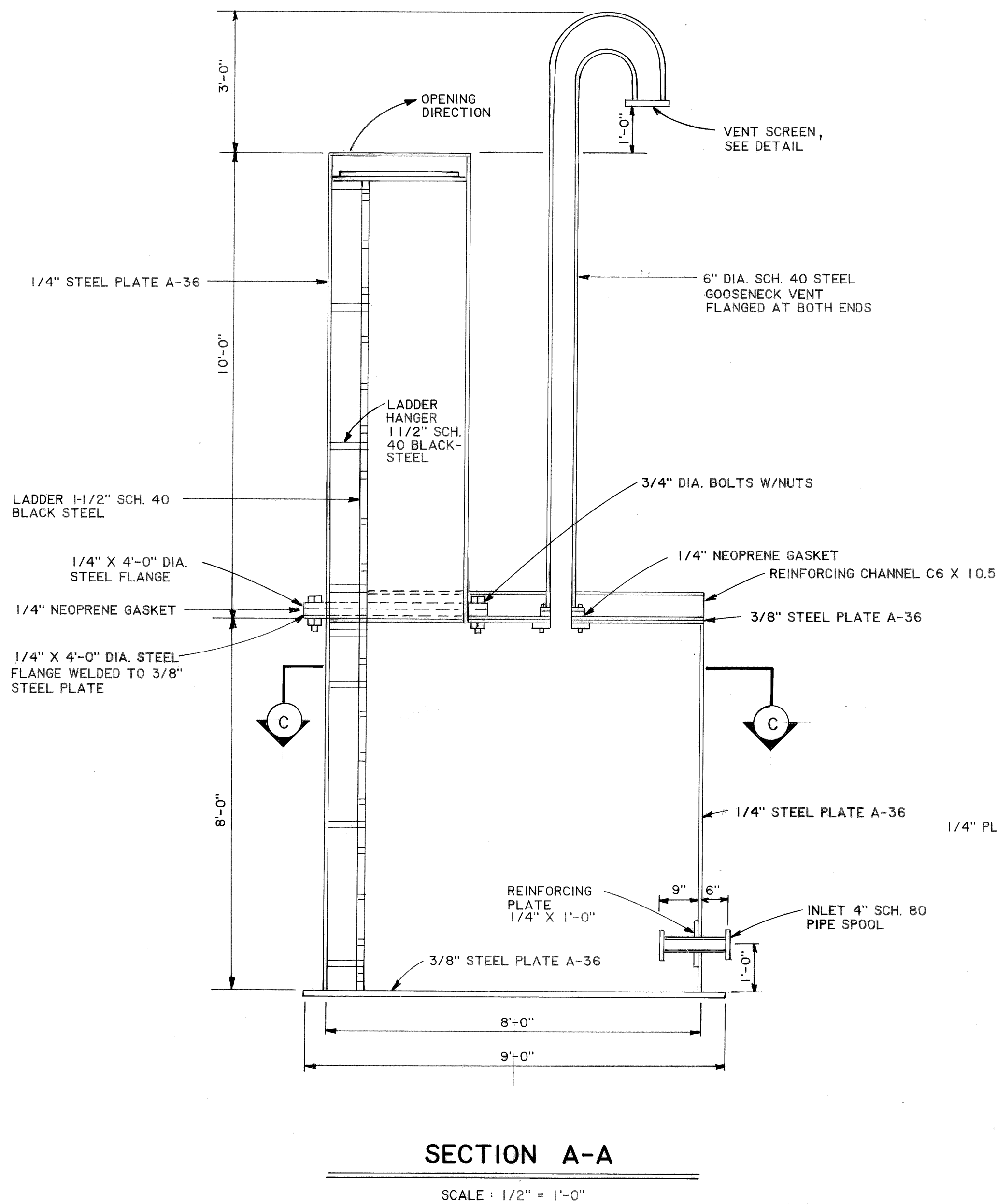
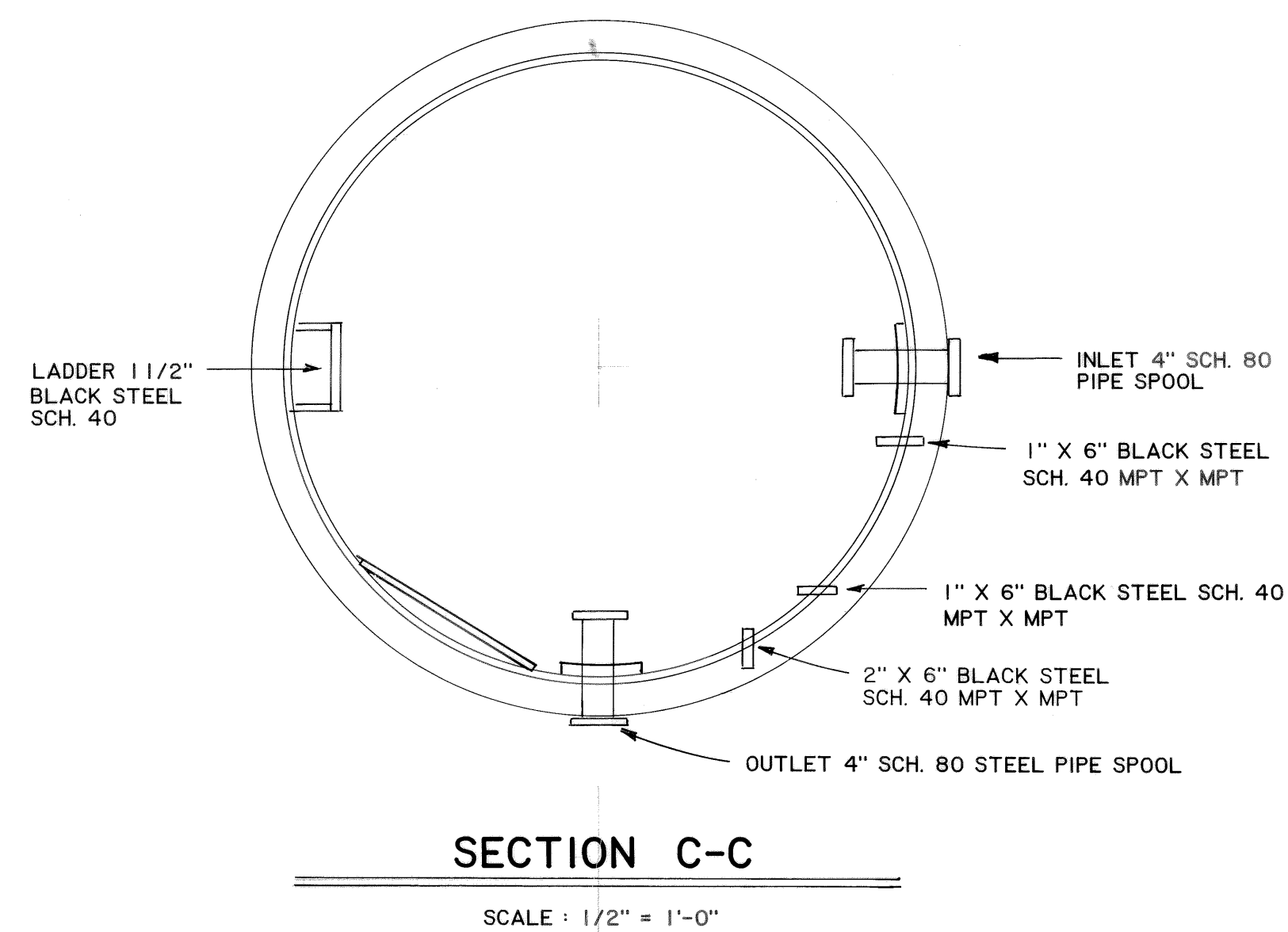
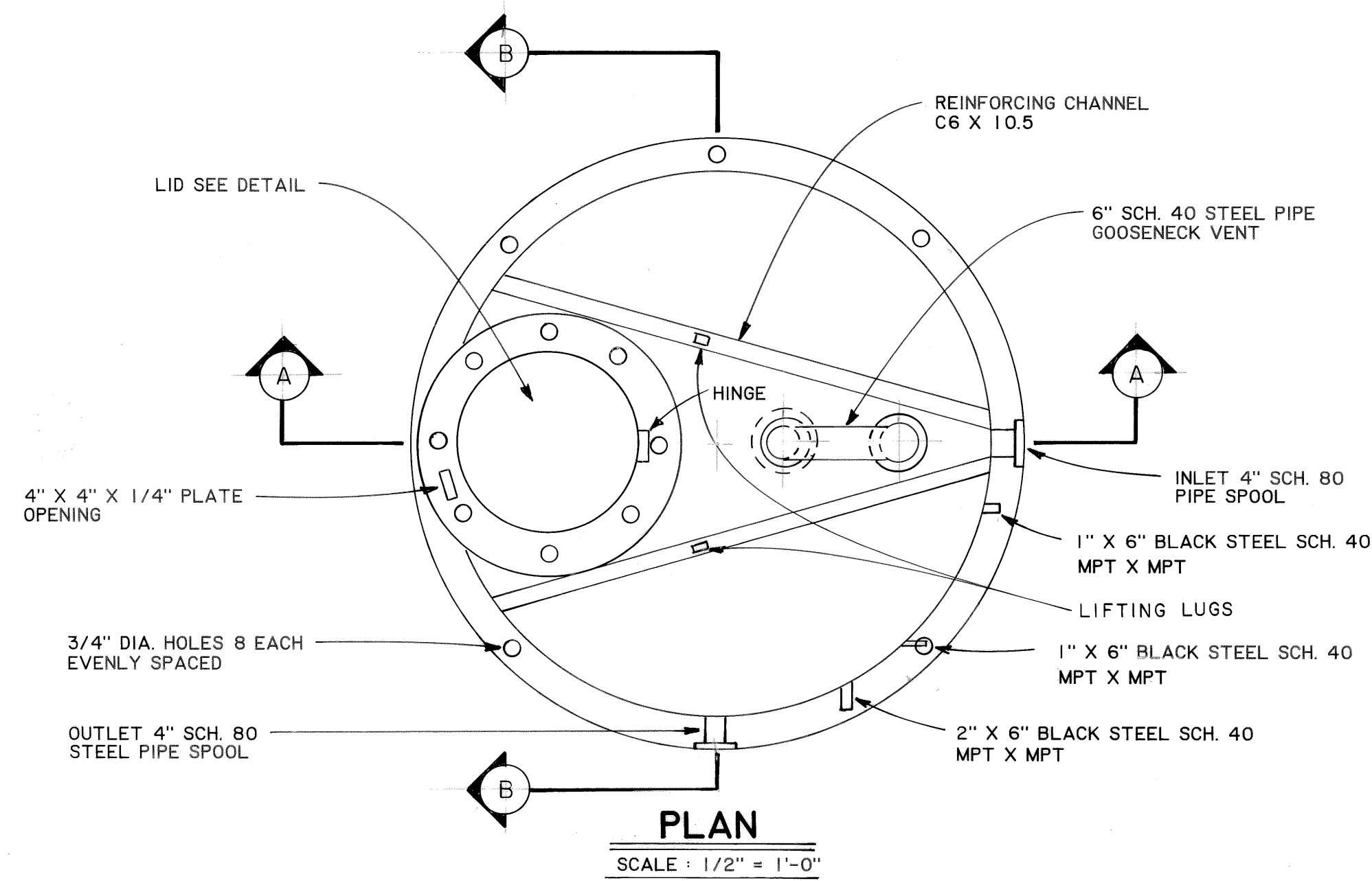


3-24-89	RECORD DRAWING	J.C.
11-88	AS-BUILT	WKT
DATE	REVISIONS	INITIALS
U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA		SHEET NO. C-14
LIFT STATION & WET WELL		OF 18
PUBLIC LAW 86-121 PROJECT		TOTAL SHEETS
PROJECT NO. AN-86-340		
DRAWN BY: WKT	CHECKED BY:	
DATE: 12-86	DATE:	
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		

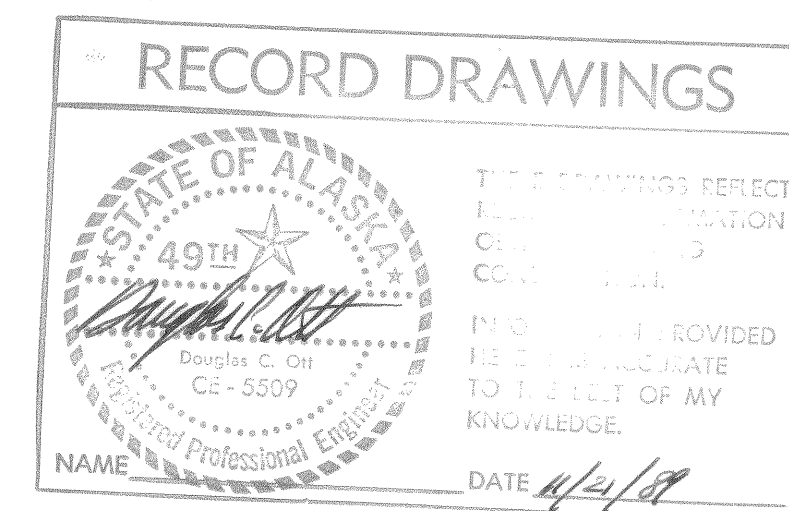
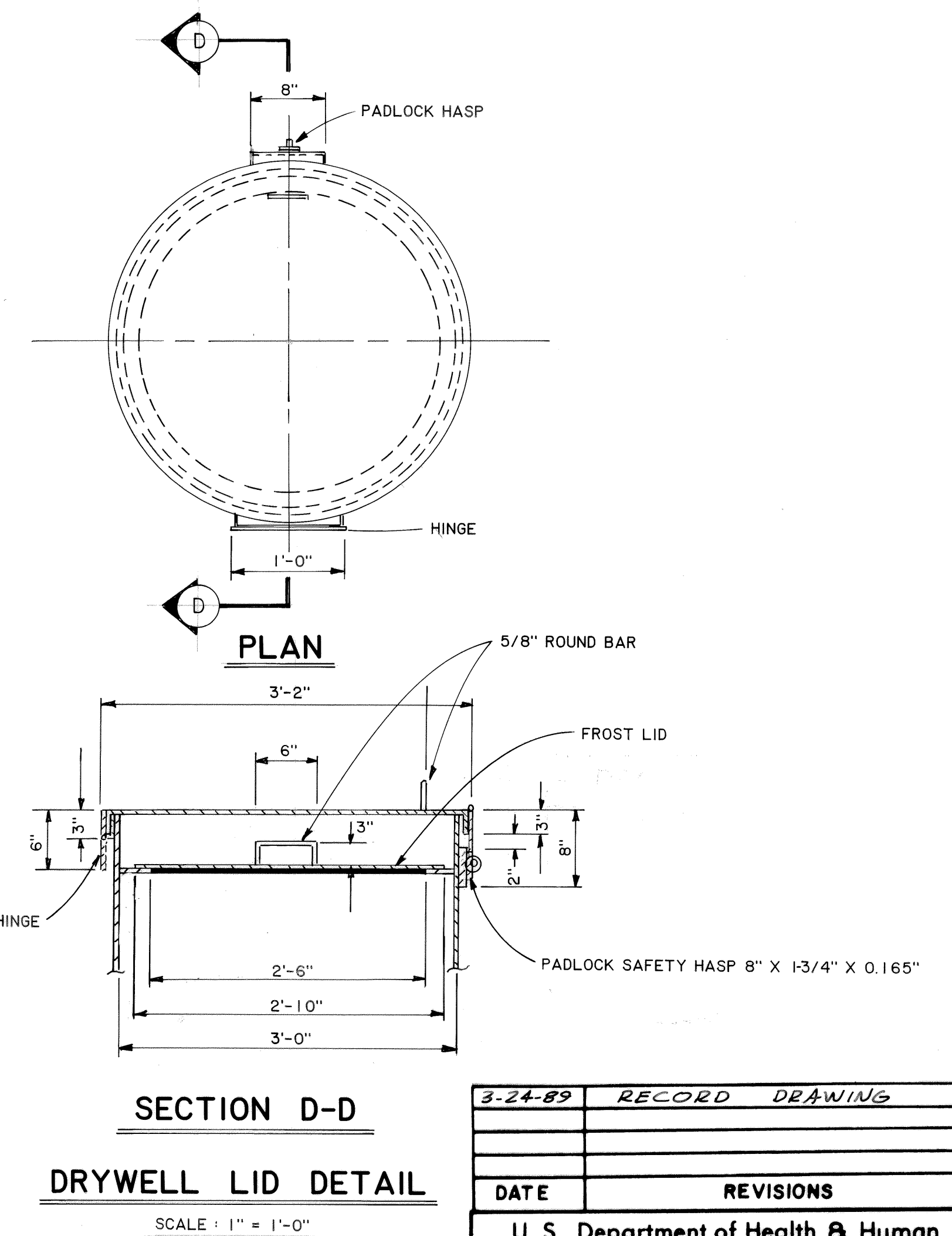


3-24-89	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS
U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA		SHEET NO. C-13
CONTRACT SUPPLY DRAWING 'WET WELL'		OF
PUBLIC LAW 86-121 PROJECT		19
PROJECT NO. AN-84-340		TOTAL SHEETS
DRAWN BY: WKT	CHECKED BY:	
DATE: 12-86	DATE:	
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		





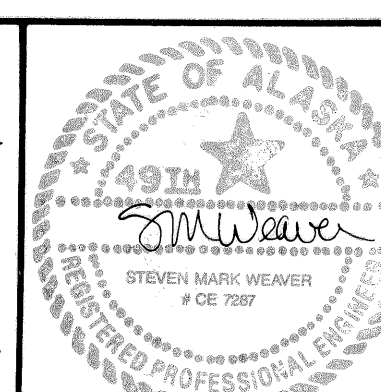
- NOTES:
1. THIS IS A CONTRACT SUPPLY DRAWING, TECH. SPECS. ENTITLED ST. PAUL DRYWELL, APPLY.
 2. COATINGS REQ'D. AS PER TECH. SPECS. ST. PAUL DRYWELL.



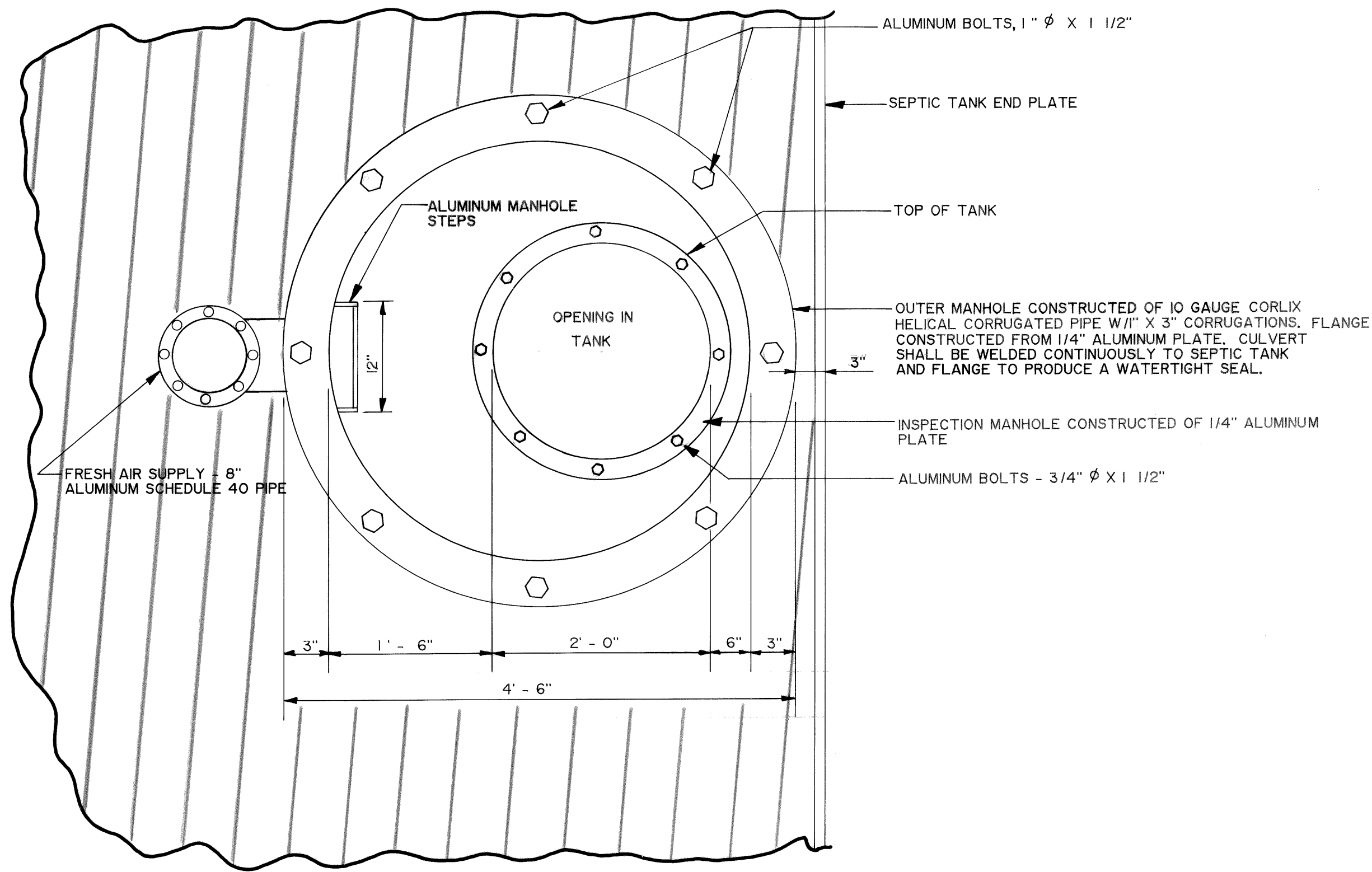
Design Engineer

Maintenance Review

Material Take-off

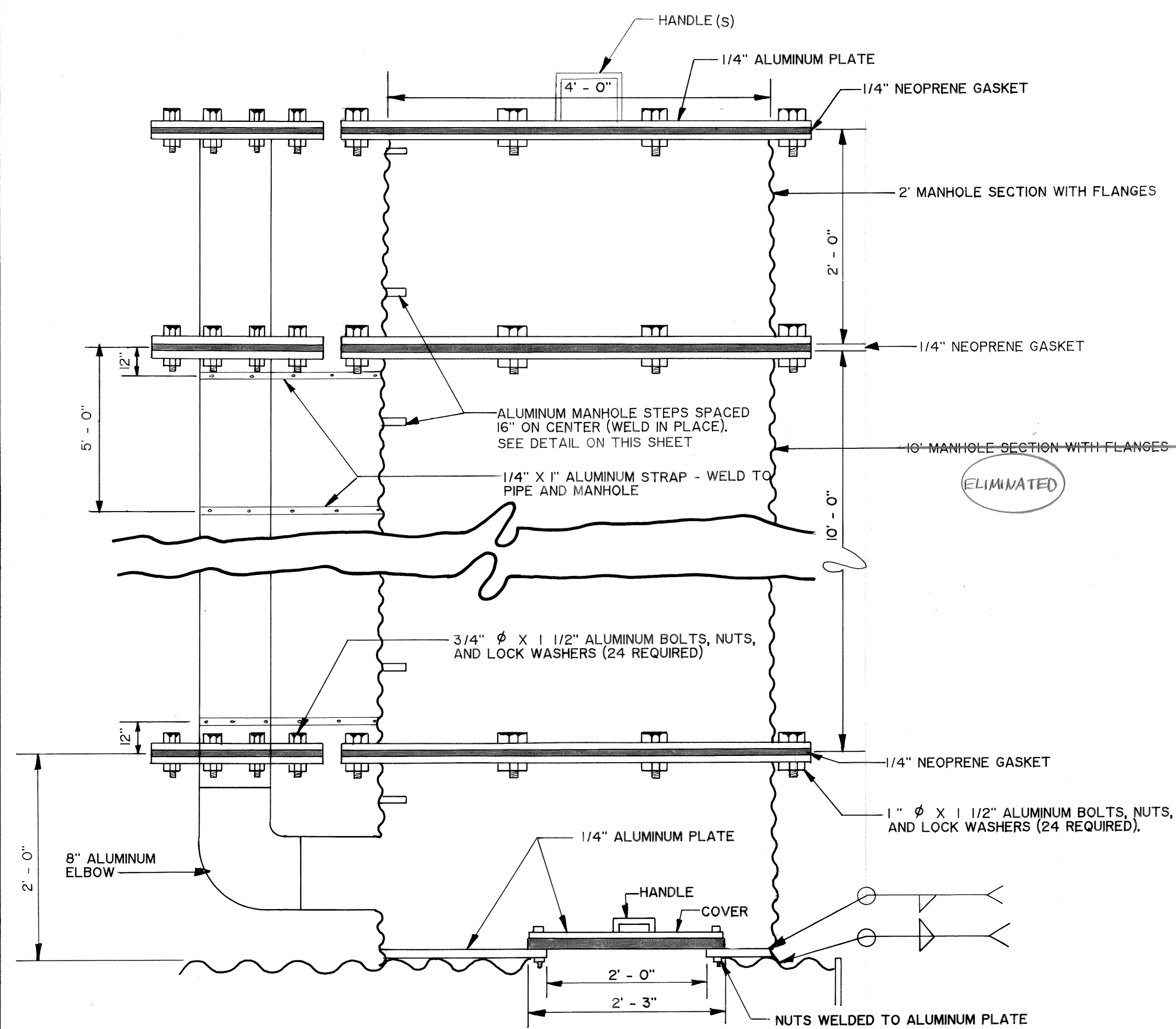


3-24-89	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS
U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA		SHEET NO. C-12
CONTRACT SUPPLY DRAWING DRYWELL		OF 18
PUBLIC LAW 86-121 PROJECT		TOTAL SHEETS
PROJECT NO. AN-86-340		
DRAWN BY: WKT	CHECKED BY:	
DATE: 12-86	DATE:	
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		



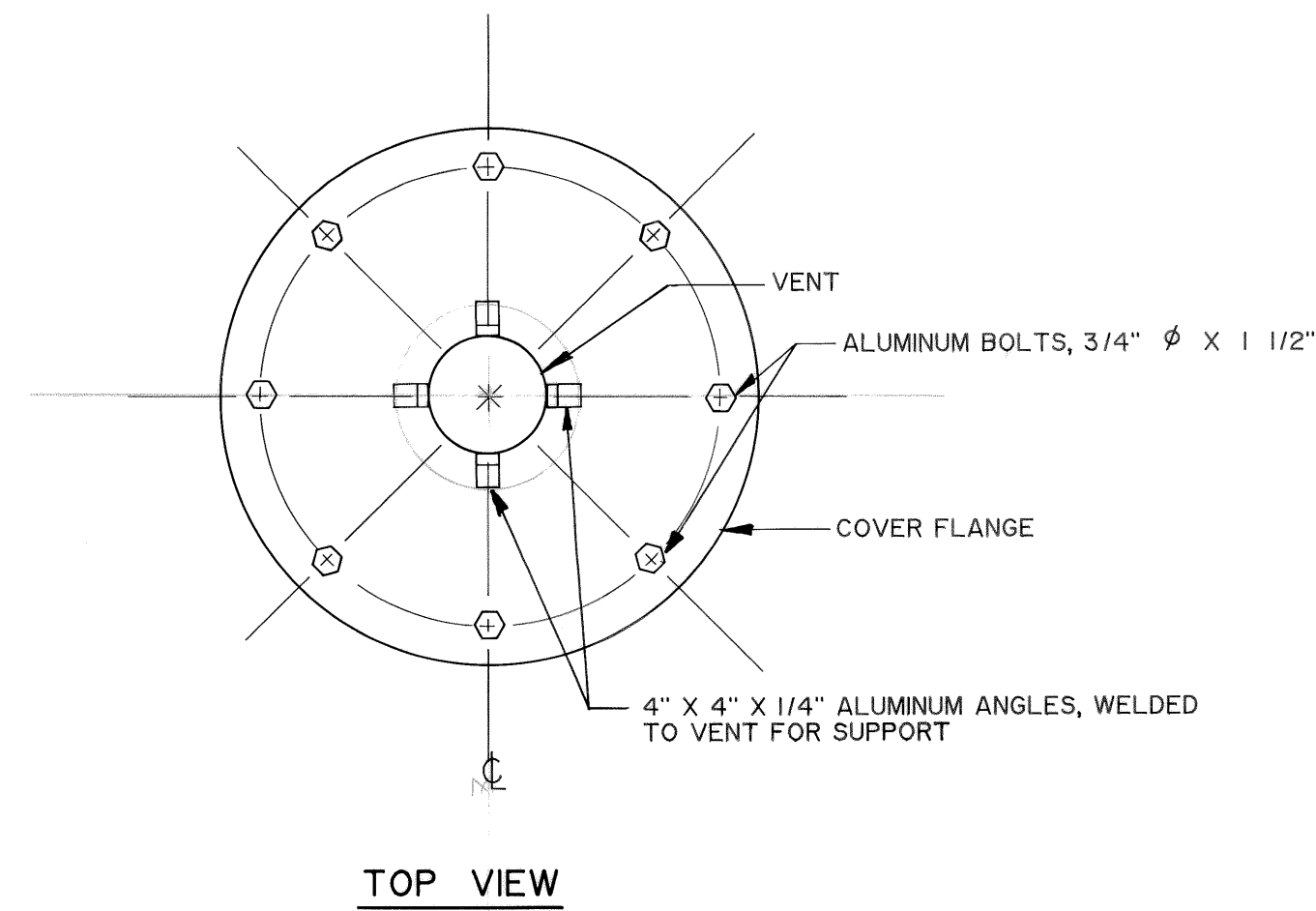
AIR SUPPLY / MANHOLE TOP VIEW

NOT TO SCALE

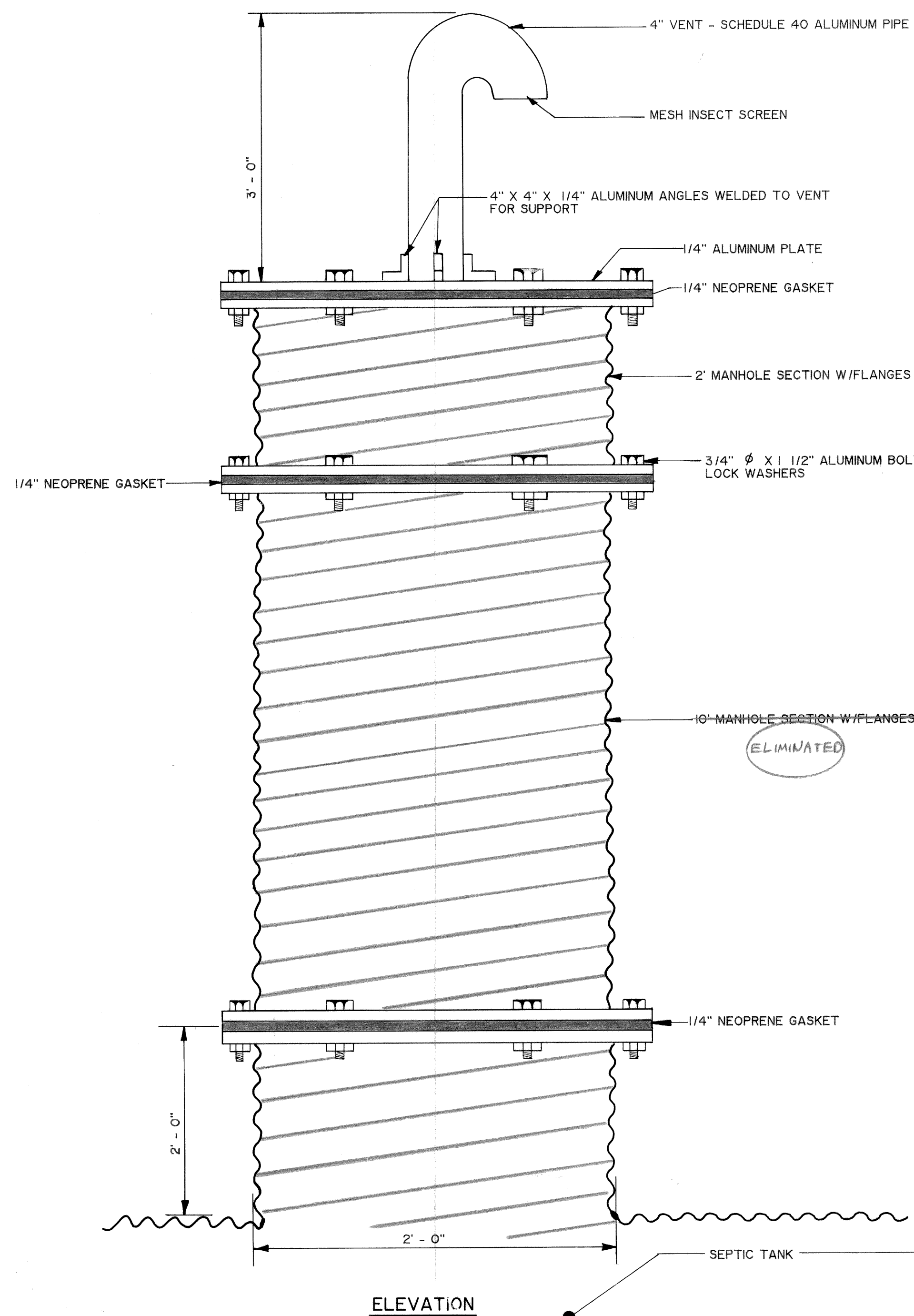


AIR SUPPLY / MANHOLE ELEVATION (6 REQUIRED)

NOT TO SCALE



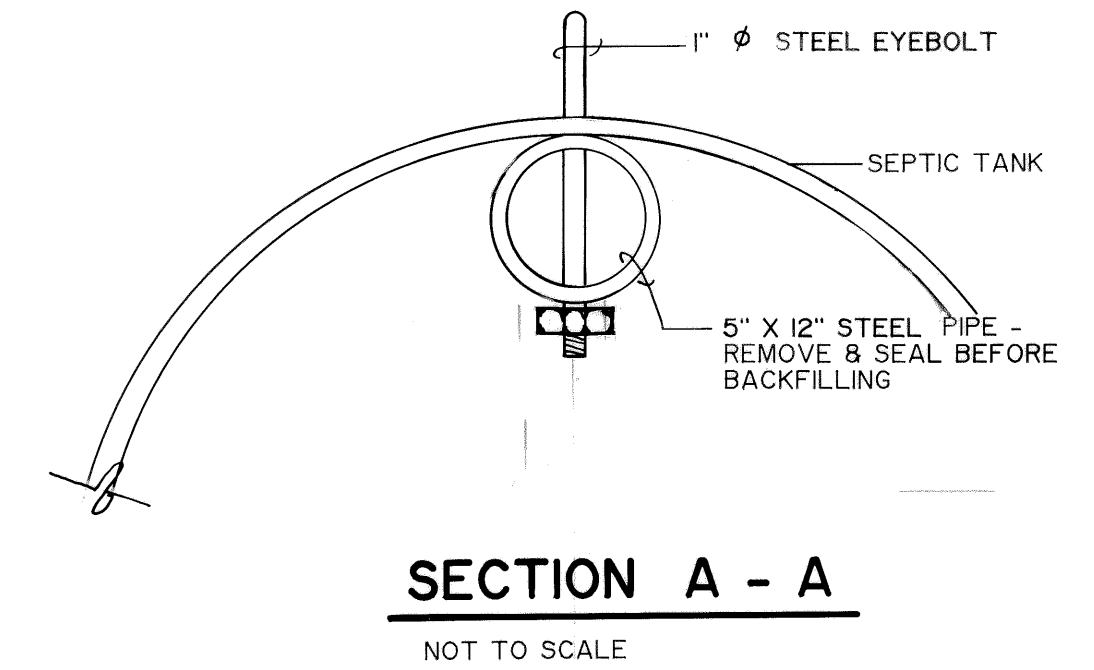
TOP VIEW



ELEVATION

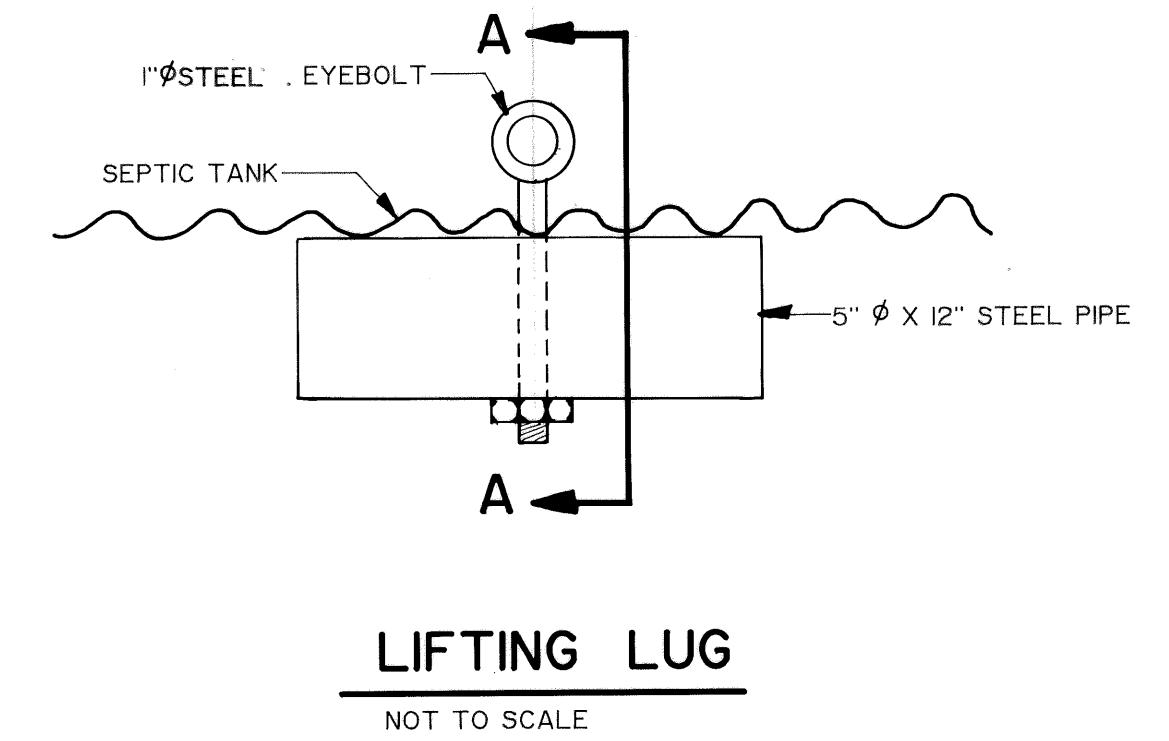
VENT / SLUDGE PUMPER ACCESS DETAIL (3 REQUIRED)

NOT TO SCALE



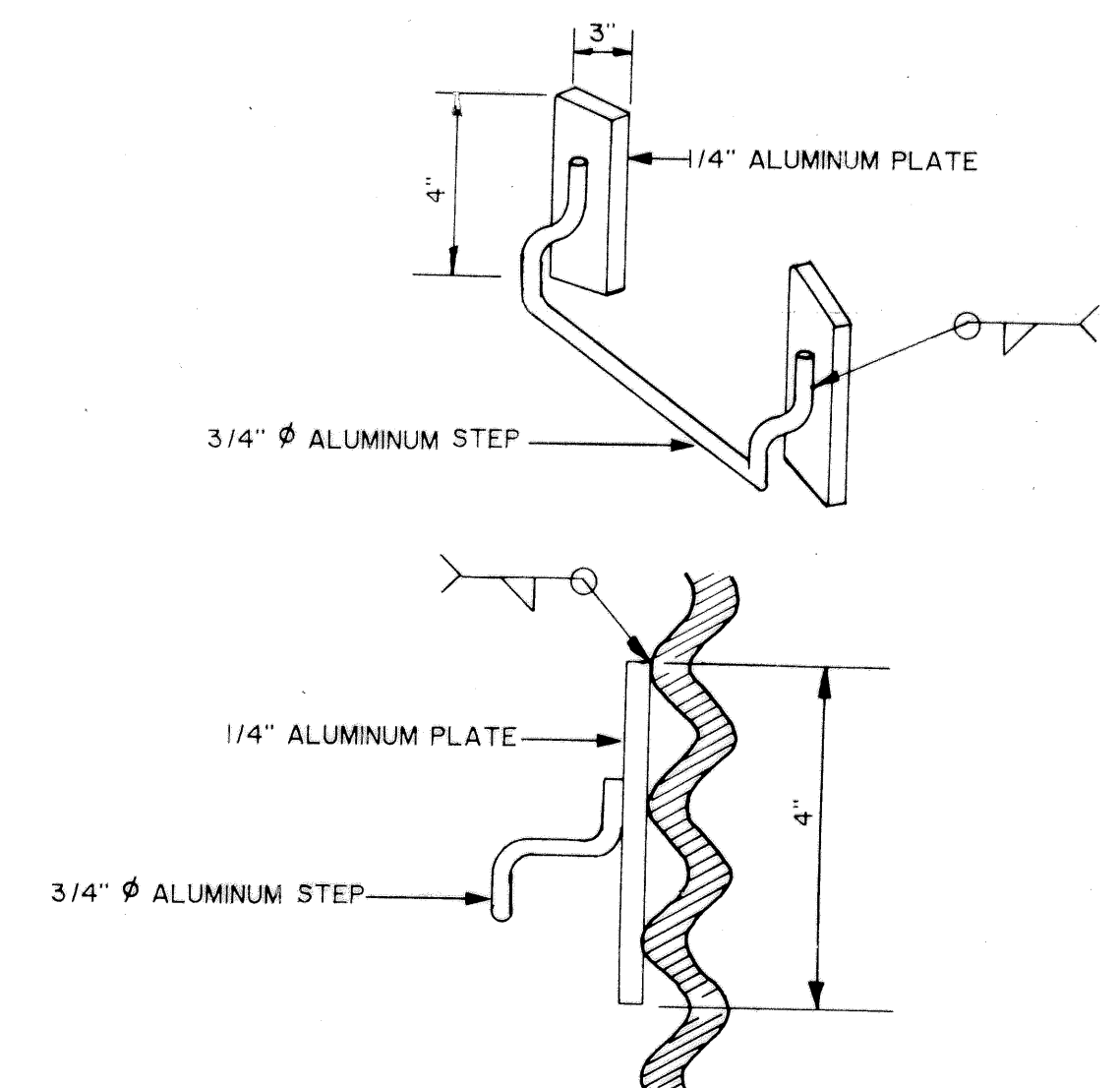
SECTION A - A

NOT TO SCALE



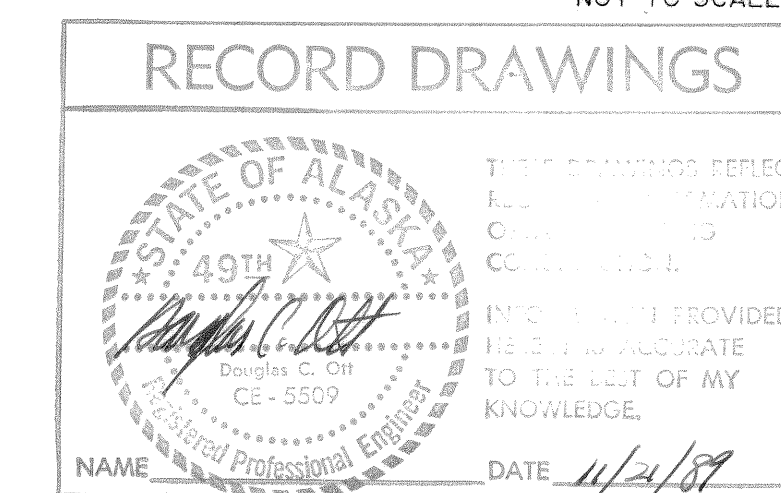
LIFTING LUG

NOT TO SCALE



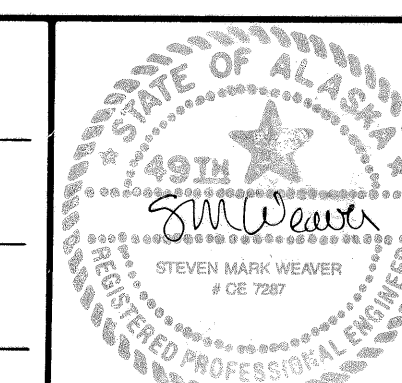
ALUMINUM MANHOLE STEP DETAIL

NOT TO SCALE



AS-BUILT NOTES

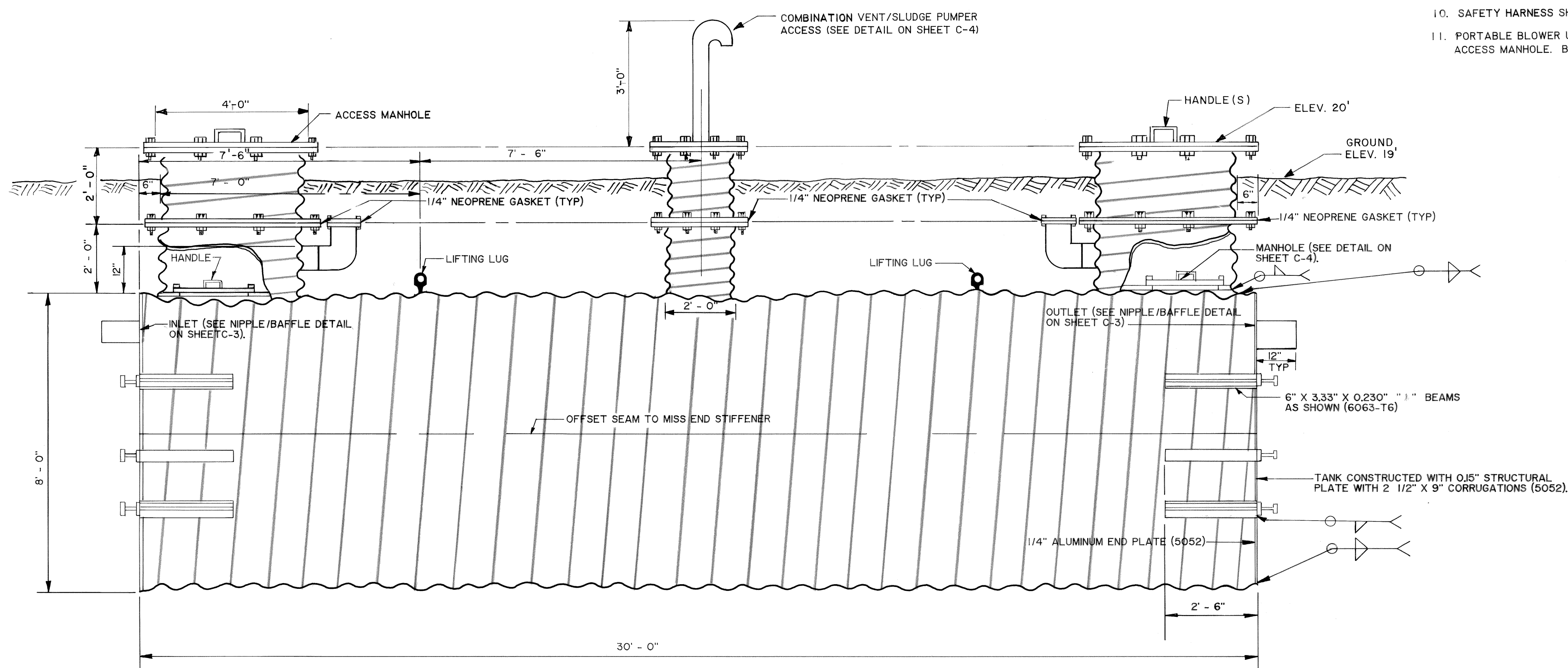
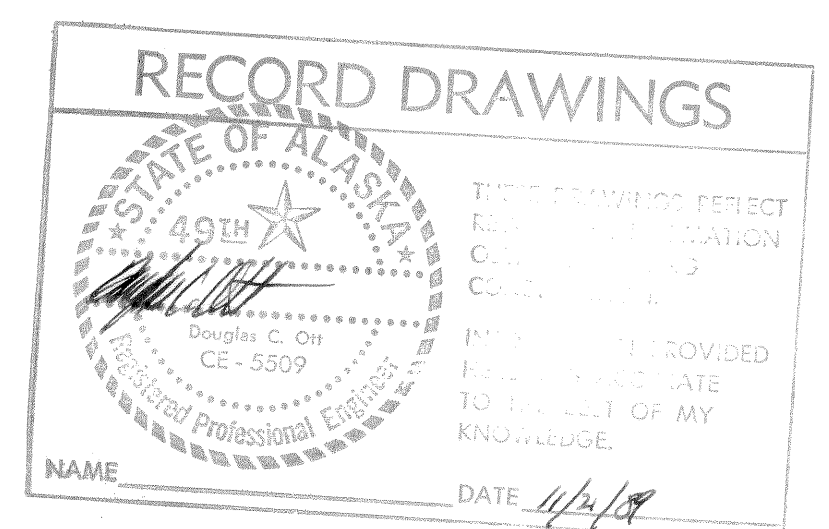
Design Engineer
Maintenance Review
Material Take-off



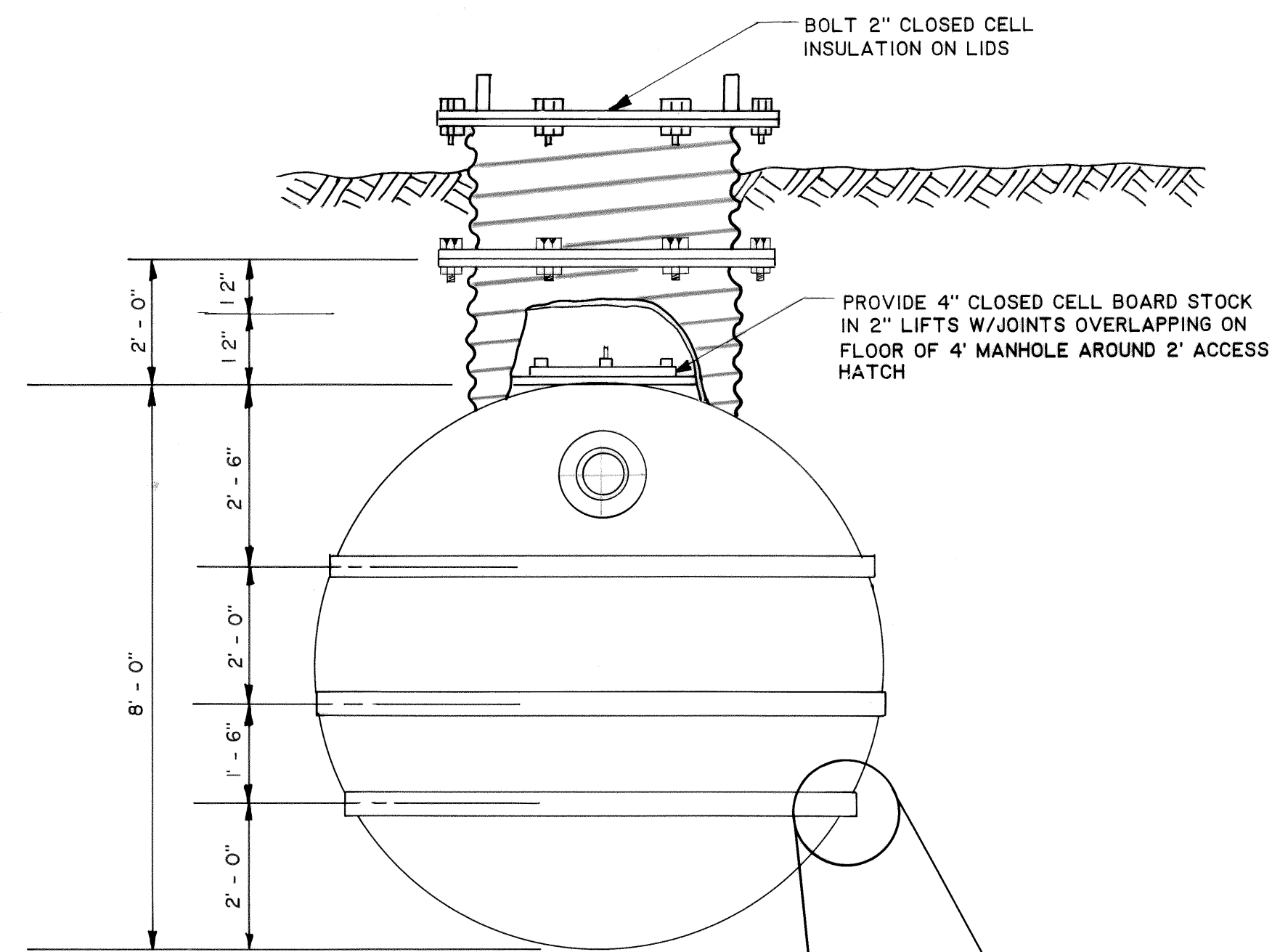
3-24-89	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS
U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA		SHEET NO.
SEPTIC TANK DETAILS		C-11
PUBLIC LAW 86-121 PROJECT		OF
PROJECT NO. AN - 86 - 340		18
DRAWN BY: LOWDERMILK		TOTAL SHEETS
DATE: 11-86		
SANITATION FACILITIES CONSTRUCTION BRANCH		
ENVIRONMENTAL HEALTH BRANCH		
ALASKA AREA NATIVE HEALTH SERVICE		
ANCHORAGE, ALASKA		

NOTES :

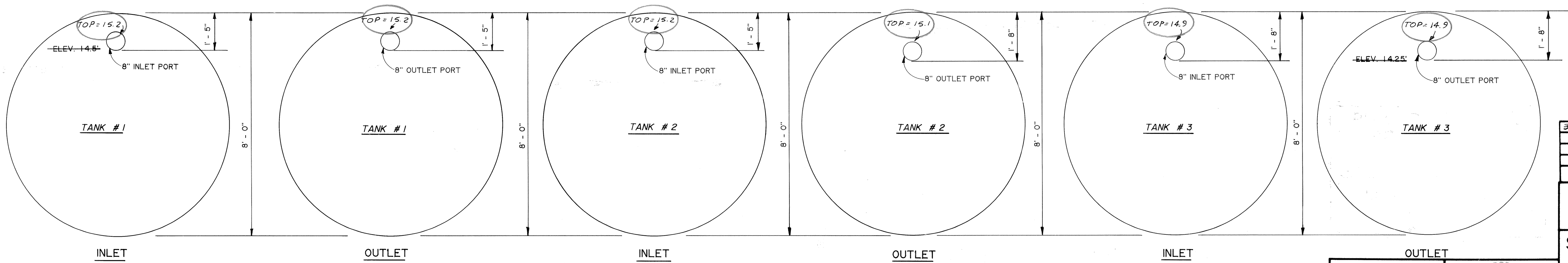
1. THE CULVERT MATERIAL SHALL MEET REQUIREMENTS OF FEDERAL SPECIFICATIONS
WW-P-402A
SHAPE 1 - FULL CIRCULAR CROSS SECTION
CLASS 2 - HELICAL
TYPE A - UNCOATED
2. THE TANK SHALL BE WATER TIGHT. THIS CAN BE DONE EITHER DURING MANUFACTURING WITH A NEOPRENE OR MASTIC SEAL OR BY A CONTINUOUS WELD, TIG OR MIG, ALONG THE SEAM AFTER PIPE MANUFACTURING.
3. THE END PLATES SHALL BE WELDED FOR A WATERTIGHT SEAL USING A CONTINUOUS WELD.
4. TANK SHALL BE IDENTIFIED BY STENCILING THE NAME OR TRADE NAME OF MATERIAL AND THE NORMAL THICKNESS (GAGE).
5. THE TANK SHALL HAVE TRUE DIMENSIONAL SHAPE, SMOOTH EDGES AND ENDS, GOOD WELDS, AND FREE OF OTHER DEFECTS WHICH, DUE TO THEIR NATURE, DEGREE OR EXTENT, DETRIMENTALLY AFFECT THE SERVICABILITY OF THE PRODUCT.
6. THESE MATERIALS SHALL BE PACKAGED AND CRATED FOR OCEAN TRANSPORT AND ROUGH HANDLING.
7. THE WORDS "INLET" AND "OUTLET" SHALL BE STENCILED ON THE APPROPRIATE END PLATE JUST ABOVE THE INLET/OUTLET NIPPLES.
8. CONTRACTOR SHALL PROVIDE ALL HARDWARE FOR FIELD INSTALLATION (ie., BOLTS, NUTS, WASHERS, GASKETS AND ETC.).
9. THE ENTIRE TANK INTERIOR SHALL BE COATED WITH A COAL TAR OR SIMILAR COMPOUND TO MINIMIZE CORROSION.
10. SAFETY HARNESS SHALL BE WORN WHEN ENTERING ACCESS MANHOLE.
11. PORTABLE BLOWER UNIT SHALL BE TURNED ON BEFORE ENTERING ACCESS MANHOLE. BLOWER SHALL PRODUCE 44ft.3/MIN. OF AIR.



SEPTIC TANK ELEVATION (3 TANKS REQUIRED)
SCALE : 1" = 2' - 0"



SEPTIC TANK END VIEW
SCALE : 1" = 2' - 0"

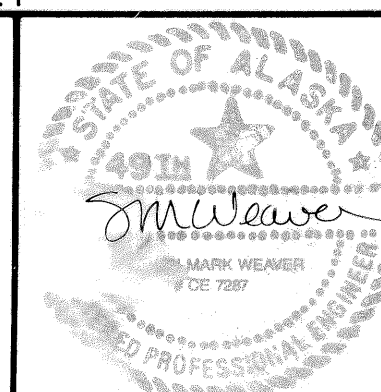


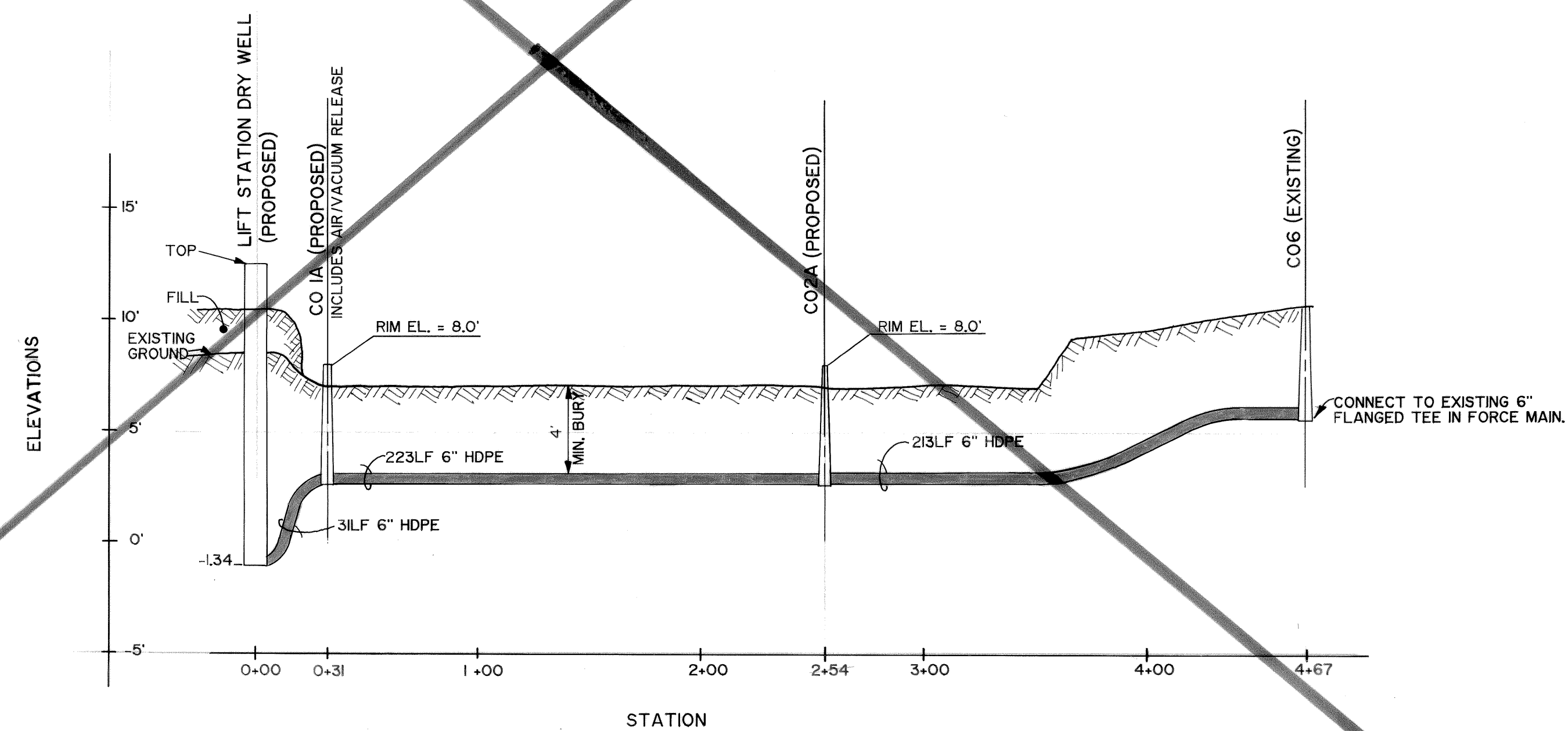
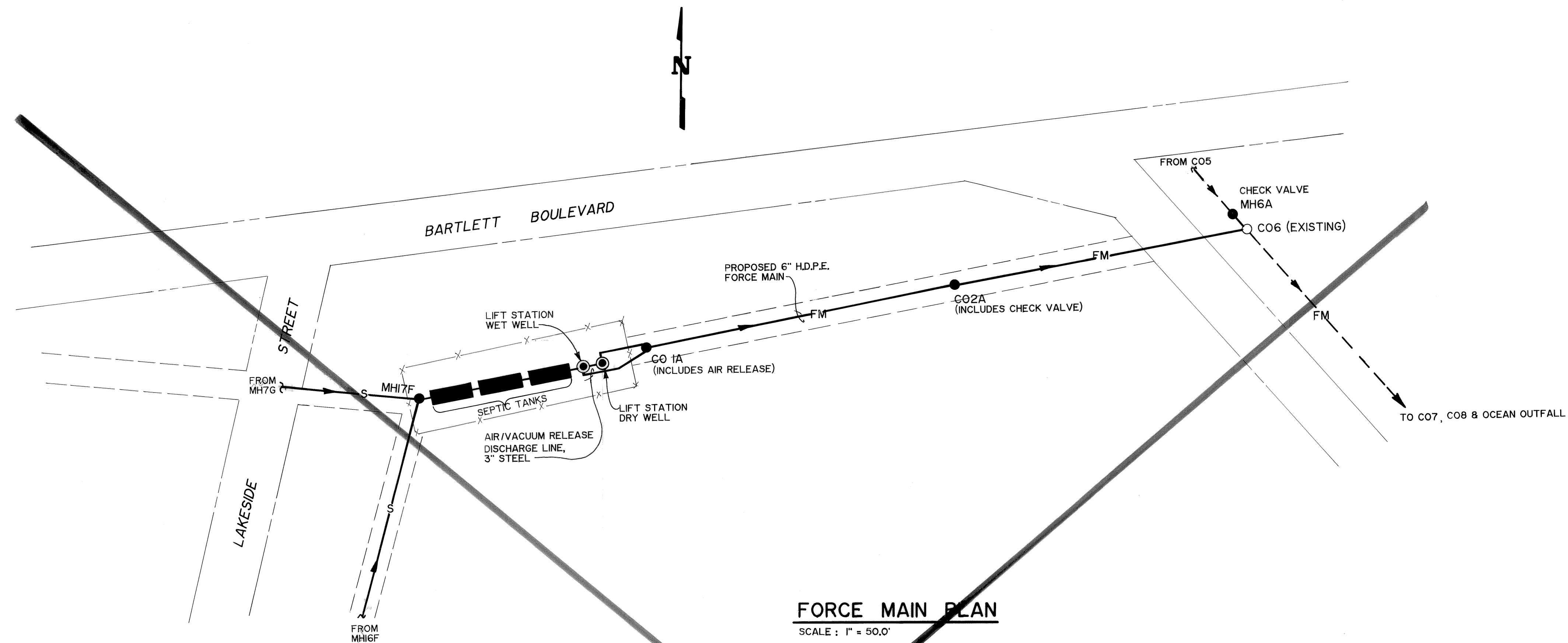
SEPTIC TANK INLET / OUTLET LOCATIONS
SCALE : 1" = 2' - 0"

AS-BUILT NOTES

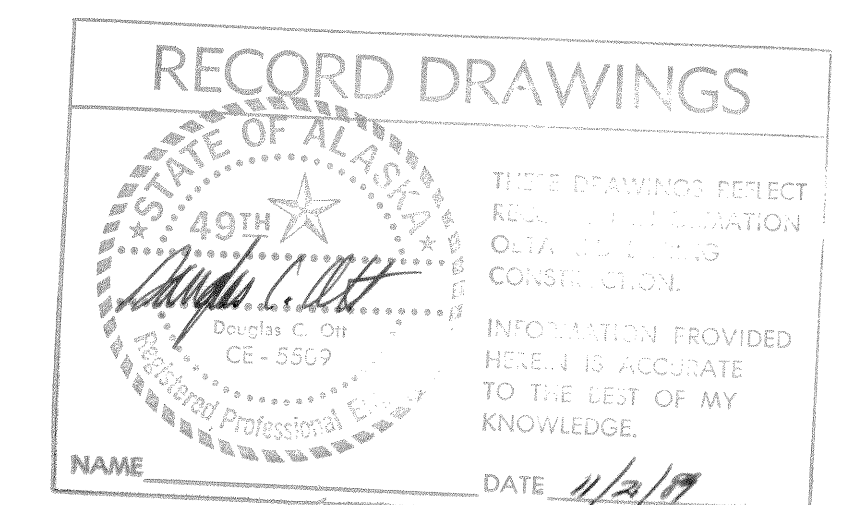
3-24-89	RECORD DRAWING	J.C.
11-88	AS - BUILT	WKT
DATE	REVISIONS	INITIALS
U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA		SHEET NO. C-9
10,000 gal. SEPTIC TANK		OF 18
PUBLIC LAW 86-121 PROJECT		TOTAL SHEETS
PROJECT NO. AN - 86 - 340		
DRAWN BY: LOWDERMILK /WKT	CHECKED BY:	
DATE: 11-86 / 11-88	DATE:	
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		

PAUL LAHR
Design Engineer
Maintenance Review
Material Take-off



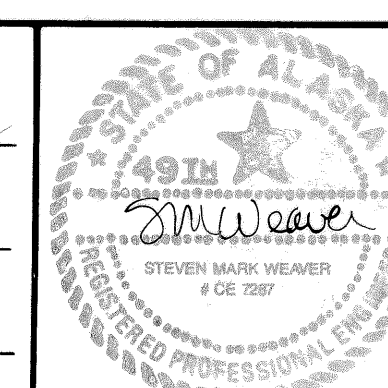


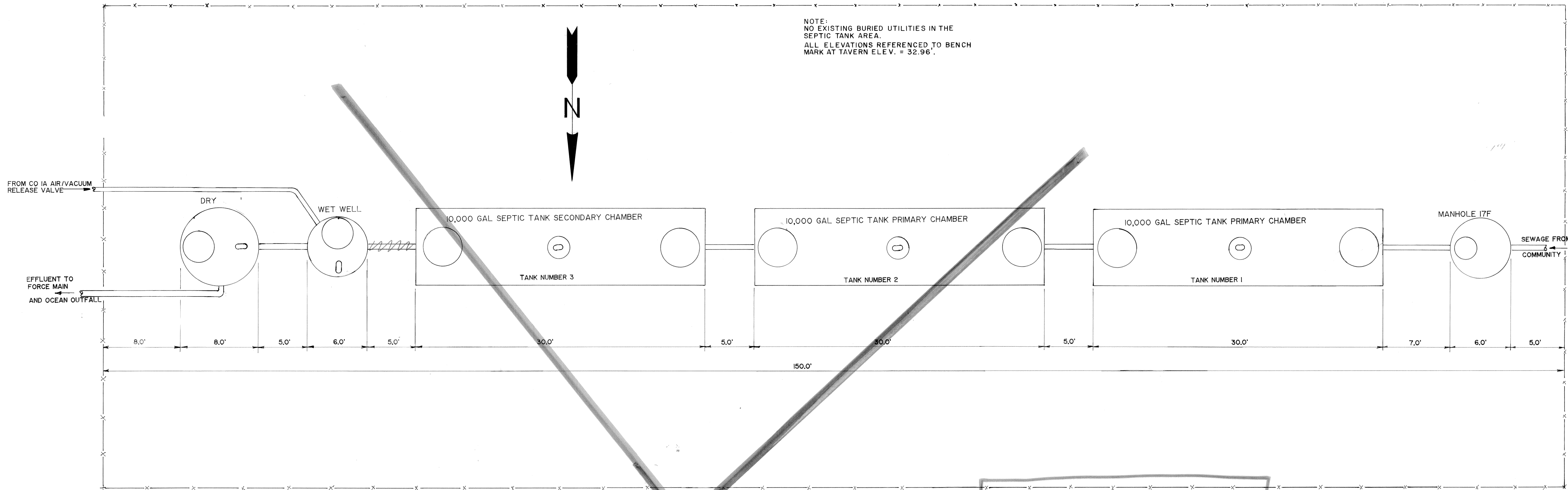
NOTE: SEE SHEET C-84 FOR AS-BUILT INFORMATION



3-24-89	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS
U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA		SHEET NO. C-8
PLAN & PROFILE FORCE MAIN PUBLIC LAW 86-121 PROJECT PROJECT NO. AN-86-340		OF 18 TOTAL SHEETS
DRAWN BY: LOWDERMILK DATE: 2-87		CHECKED BY: DATE:
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		

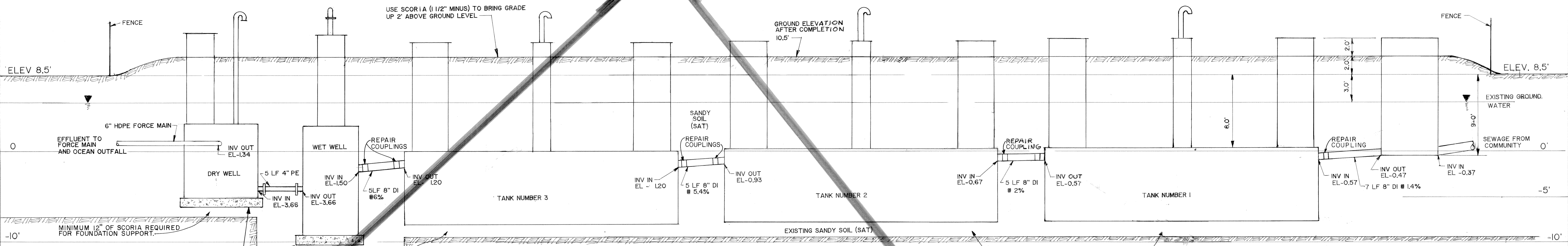
Design Engineer
Maintenance Review
Material Take-off





PLAN
SCALE 1"=5'

NOTE: SEE SHT. C-4A FOR AS-BUILT INFORMATION



ELEVATION
SCALE 1"=5'

NOTE:
SEE SHEET C-15 FOR LIFT STATION PUMP AND SYSTEM CURVES.

RECORD DRAWINGS

STATE OF ALASKA
49TH
Douglas C. Orr
CE-5509
Professional Engineer

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.
INFORMATION PROVIDED HEREIN IS ACCURATE TO THE BEST OF MY KNOWLEDGE.

NAME: DATE: 11/2/88

Design Engineer
Maintenance Review
Material Take-off

STATE OF ALASKA
49TH
Steven Mark Weaver
CE-7087
Professional Engineer

3-24-89	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS

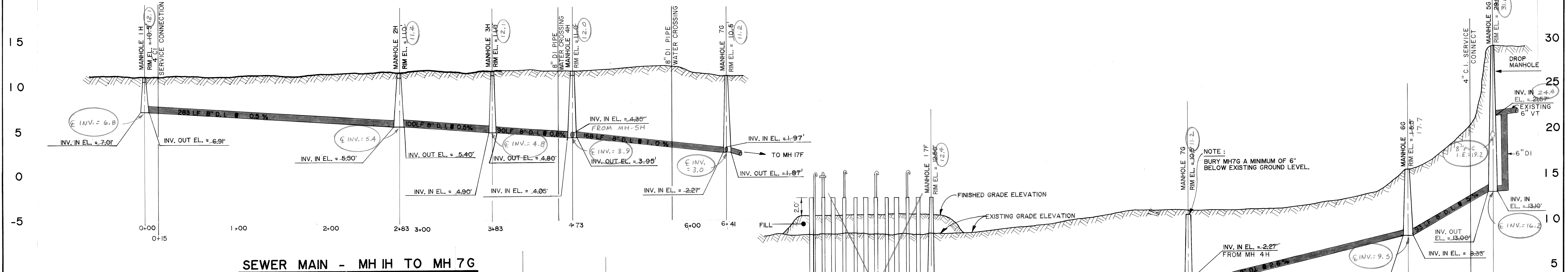
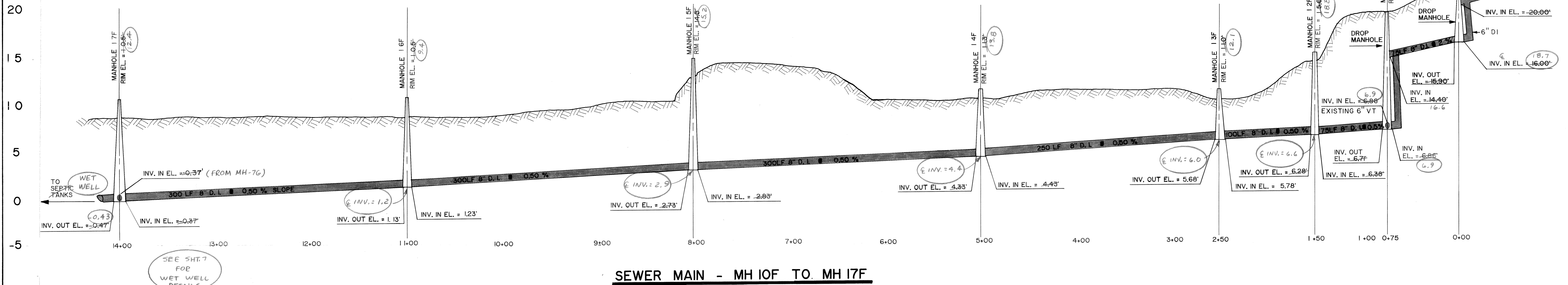
U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST PAUL, ALASKA LIFT STATION AND SEPTIC TANKS SITE PLAN AND ELEVATION PUBLIC LAW 86-121 PROJECT PROJECT NO. AN-86-340		SHEET NO. C-7 OF 18 TOTAL SHEETS

DRAWN BY: JAQ	CHECKED BY:
DATE: JAN 87	DATE:

SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA	
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NOTES:

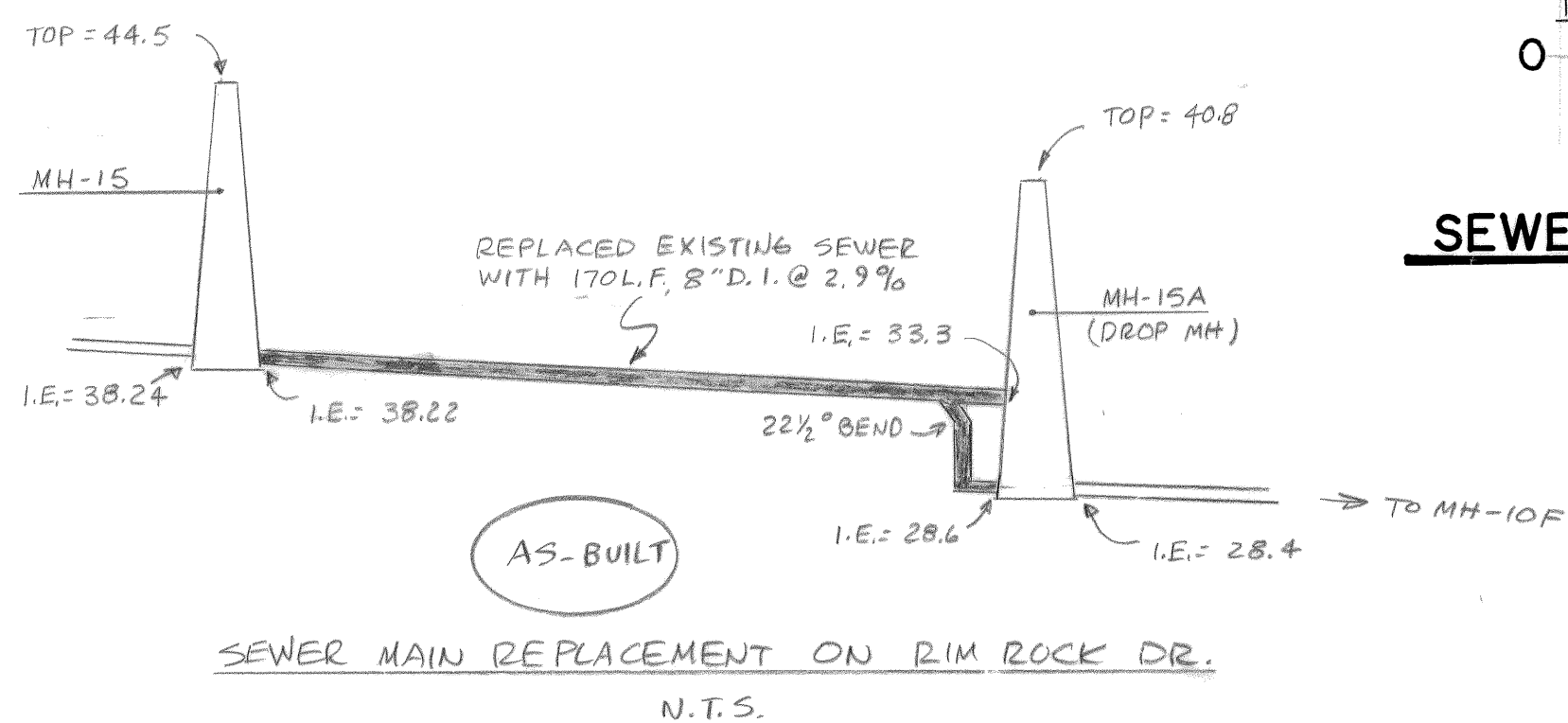
- ALL ELEVATIONS REFERENCED TO BENCH MARK ON SIDE OF TAVERN
ELEV. = 32.96'
- RECOMMEND PIPE BE LAID THRU MANHOLES 14F, 15F, & 16F TO
IMPROVE FLOW CHARACTERISTICS.



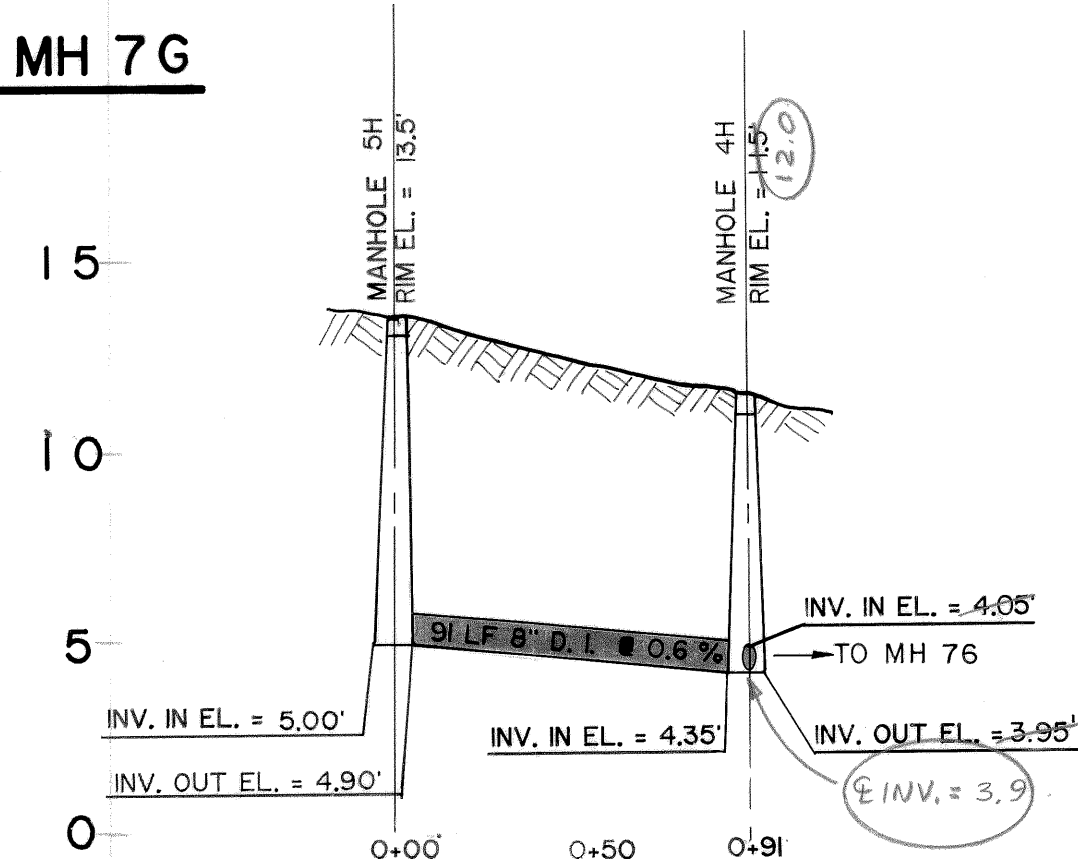
NOTE:

- BURY MH 1H, 2H, 3H, 4H, 5H, 6" BELOW ROADWAY ELEVATION.

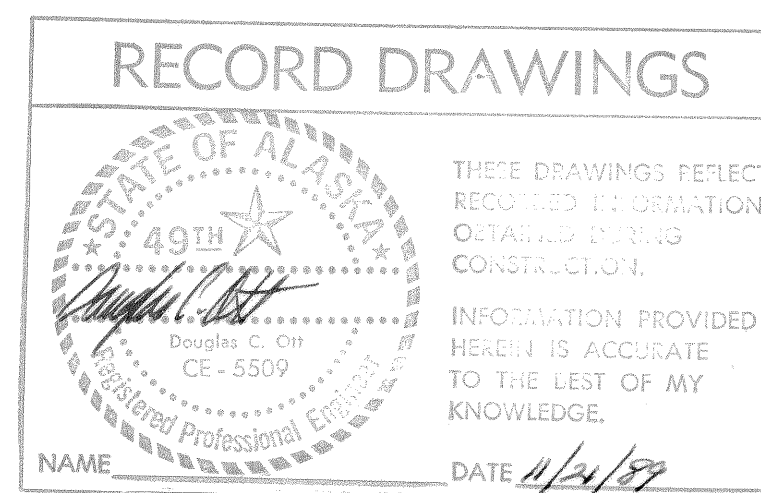
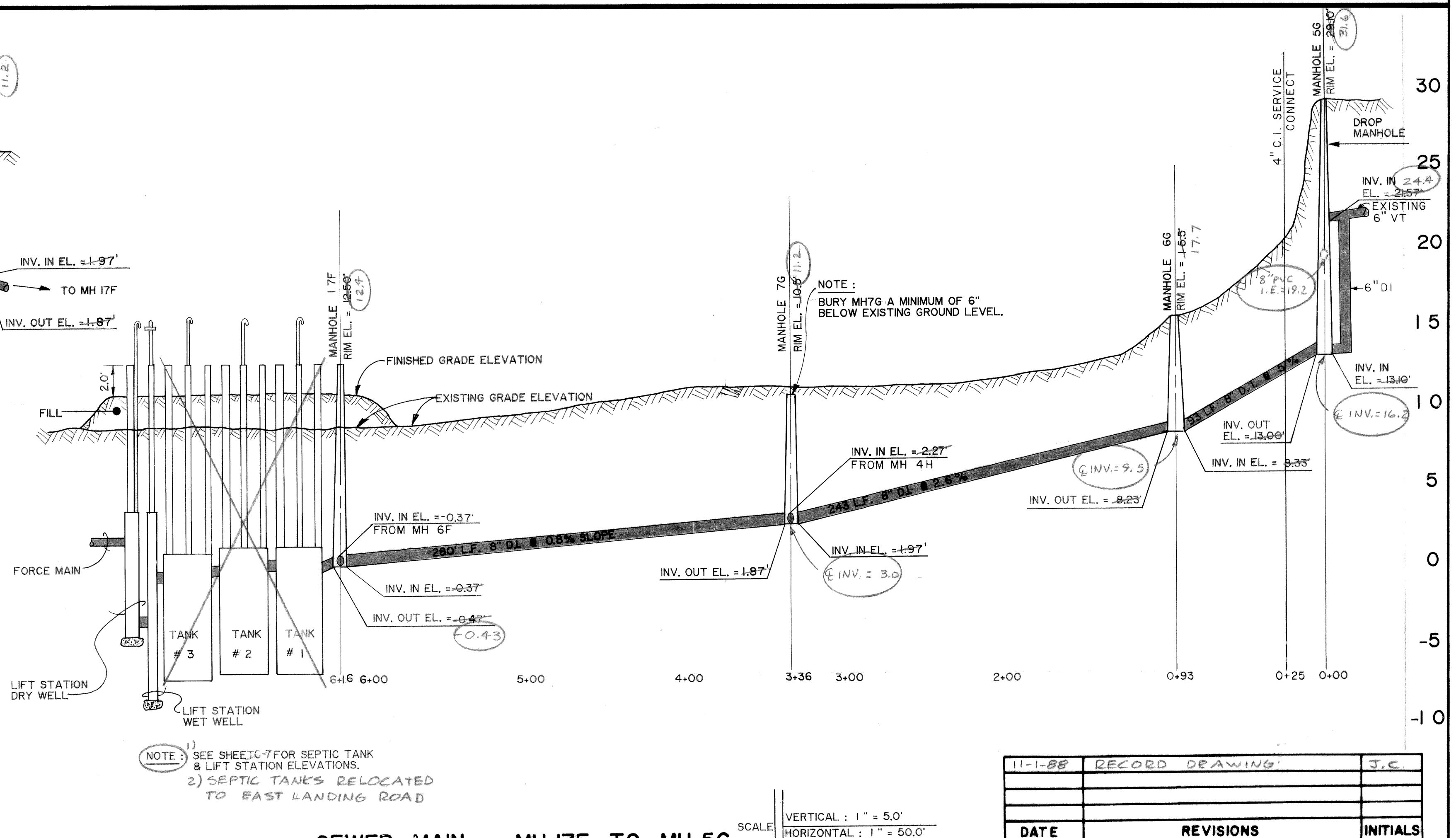
1H - 0.5' BELOW
2H - 1.2' BELOW
3H - 0.9' BELOW



SEWER MAIN - MH 5H TO MH 4H

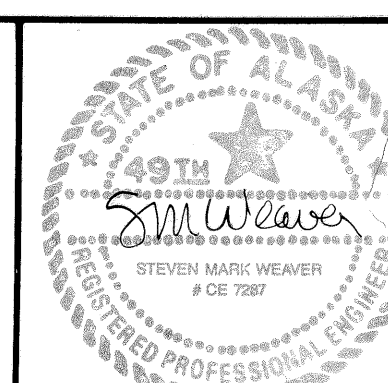


SEWER MAIN - MH 17F TO MH 5G



AS-BUILT NOTES

Design Engineer
Maintenance Review
Material Take-off

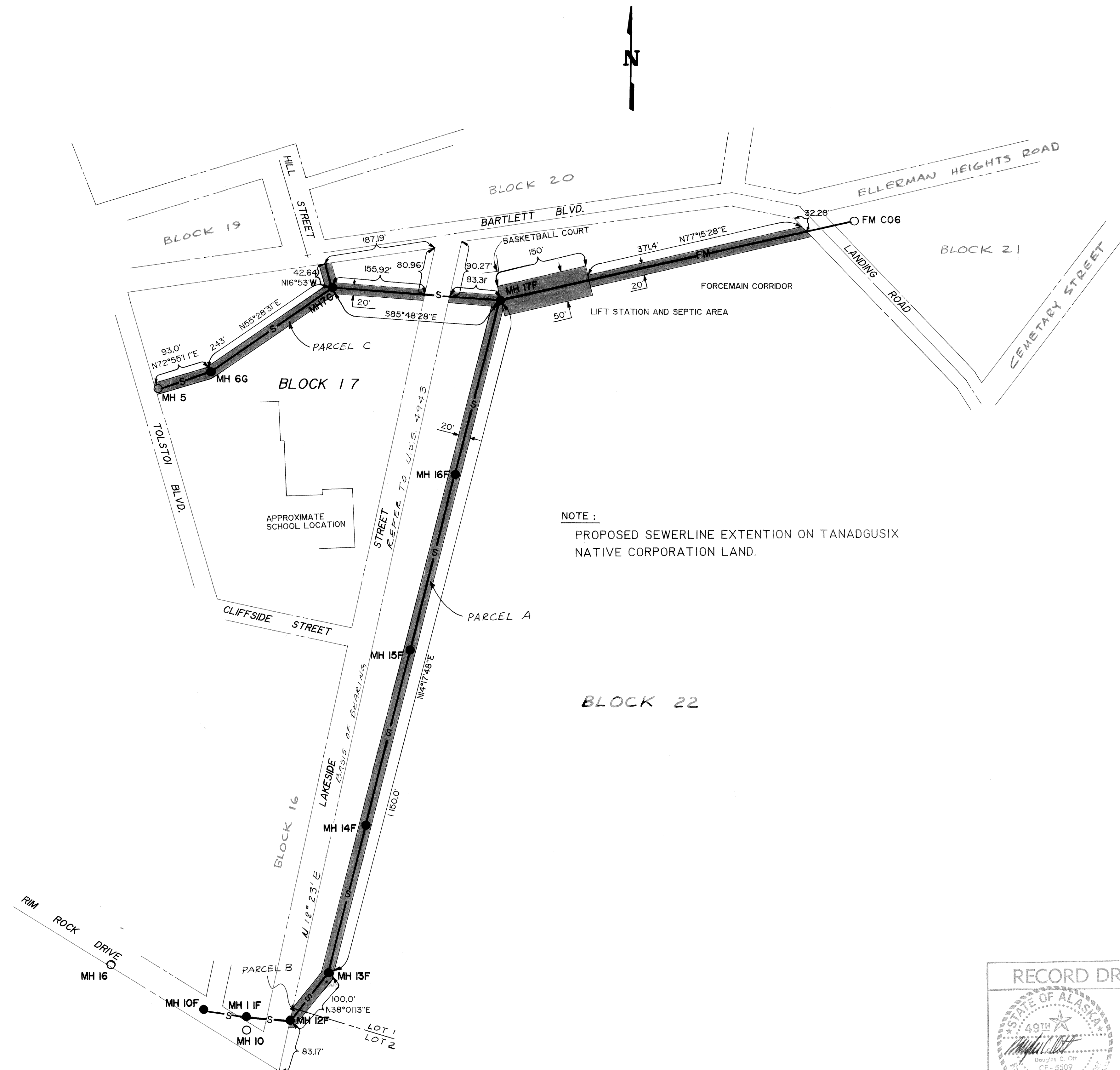


11-1-88	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS

U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA		SHEET NO. C-6
SEWER MAIN PROFILES PUBLIC LAW 86-121 PROJECT PROJECT NO. AN-86-340		OF 18 TOTAL SHEETS

DRAWN BY: LOWDERMILK	CHECKED BY:
DATE: 1 - '87	DATE:

SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA	
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REF: U.S.SURVEY 4943, ALASKA
TRACT A, ST. PAUL TOWNSITE

RECORD DRAWINGS

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

INFORMATION PROVIDED HEREON IS ACCURATE TO THE BEST OF MY KNOWLEDGE.

NAME: *Stan Brown* DATE: *11/2/87*

49TH STATE OF ALASKA
REGISTERED PROFESSIONAL ENGINEER
Douglas C. Ott
CE-5509

SCALE IS APPROXIMATELY 1" = 100.0'
DRAWN FOR DRAFTING FROM NOV. 1986
SURVEY BY STAN BROWN/ 23 JAN 1987

Stan Brown
Design Engineer

Lowdermilk
Maintenance Review

Material Take-off

49TH STATE OF ALASKA
REGISTERED PROFESSIONAL ENGINEER
STEVEN MARK WEAVER
CE 7287

11-3-88	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS
U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA EASEMENTS FOR GRAVITY SEWER, SEPTIC TANKS, LIFT STATION & FORCE MAIN PUBLIC LAW 86-121 PROJECT PROJECT NO. AN-86-340		SHEET NO. C-4 OF 18 TOTAL SHEETS
DRAWN BY: LOWDERMILK DATE: 2-87	CHECKED BY: DATE:	
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		

DETAIL 1
NOT TO SCALE

DETAIL 2
NOT TO SCALE

DETAIL 3
NOT TO SCALE

DETAIL 4

NOT TO SCALE

DETAIL 5
NOT TO SCALE

INSULATION DETAIL
REF. DETAIL 5 NOTE 2

(NOTE) SEE C-1 FOR SWING TIE INFORMATION ON GATE VALUES

10-28-88	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS

U. S. Department of Health & Human Services
Public Health Service
Indian Health Service

ST. PAUL, ALASKA

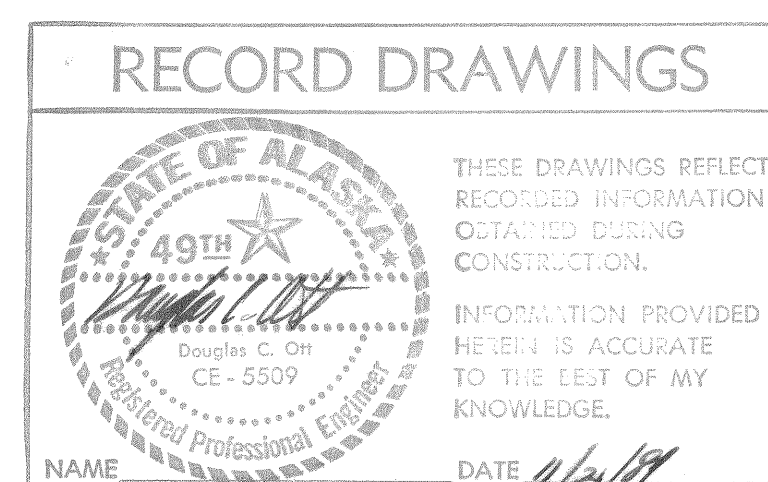
WATER SYSTEM DETAILS
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-86-340

SHEET NO.
C-3
OF
18
TOTAL SHEET

DRAWN BY: LOWDERMILK
DATE: 1 - '87

CHECKED BY:
DATE:

SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA



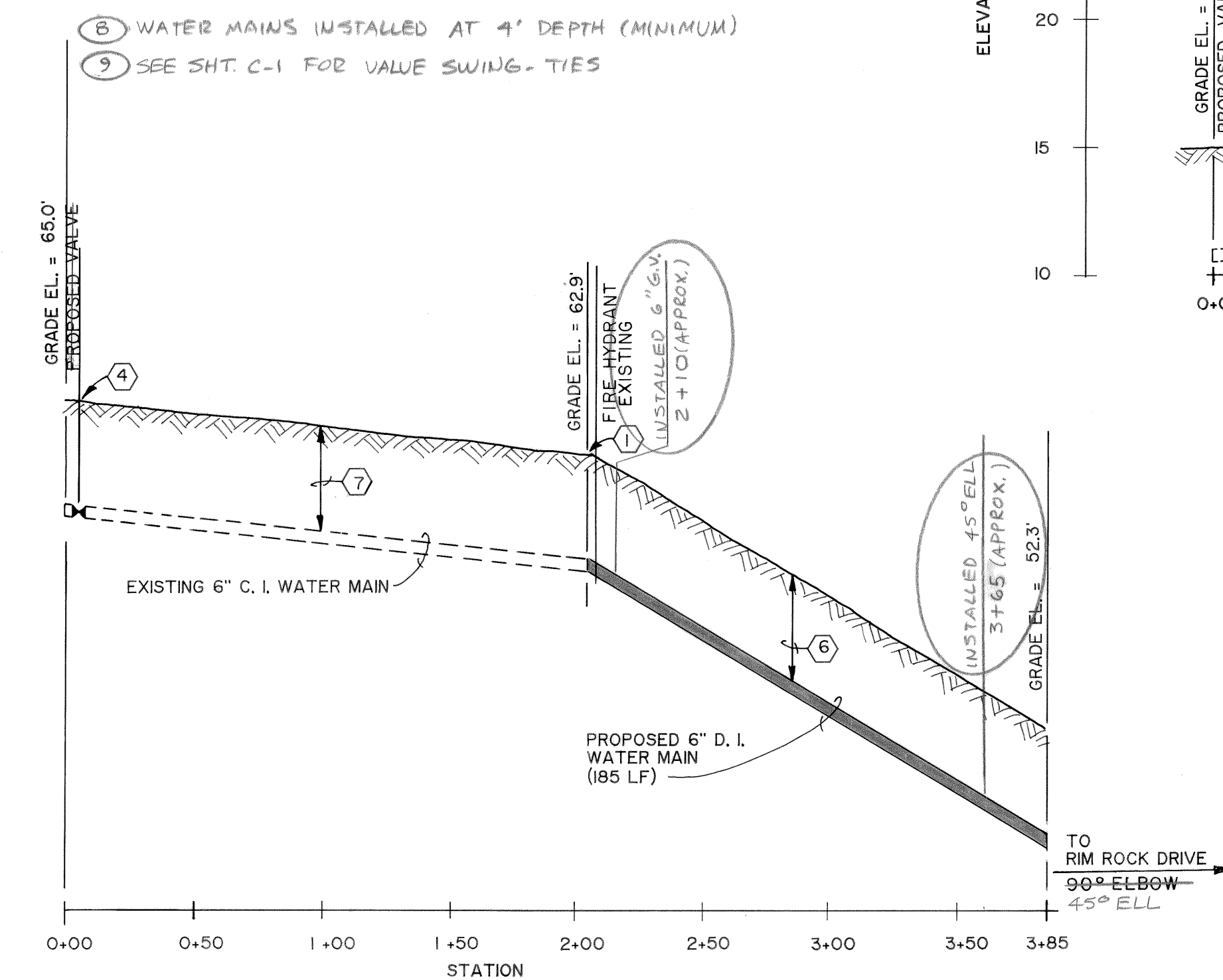
PROPOSED WORK :

1. REPLACE ALL THE EXISTING WATER STORAGE TANKS GATE VALVES WITH PROPOSED GATE VALVES AS FOLLOWS :
- | | |
|----------------------|------------------------------------|
| 6" SUPPLY LINE | 3 EA. - 6" FLANGED GATE VALVES |
| 8" DISTRIBUTION LINE | 3 EA. - 8" FLANGED GATE VALVES |
| 6" DRAIN LINE | 3 EA. - 6" MECHANICAL JOINT VALVES |
2. REMOVE EXISTING WOODEN BOXES AND INSTALL C.I. VALVE BOXES WITH LIDS. PROPOSED VALVE BOXES SHALL EXTEND APPROXIMATELY ONE FOOT ABOVE EXISTING GROUND. ANY WATER LINE WHICH HAS LESS THAN 42" OF SOIL COVER SHALL BE INSULATED WITH A MINIMUM OF 2" OF EXTRUDED POLYSTYRENE BOARD/STOCK INSULATION.

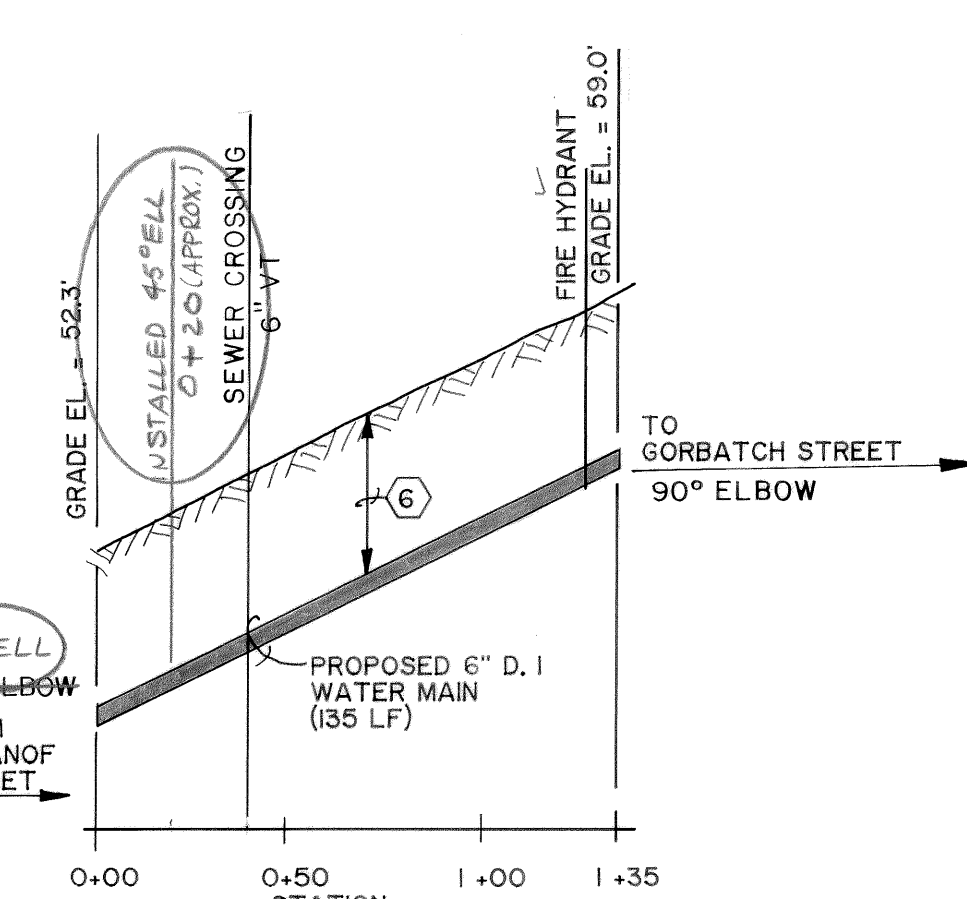
NOTES :

- 1 START OF PROPOSED WATER MAIN
- 2 END OF PROPOSED WATER MAIN
- 3 CONNECTION TO EXISTING WATER MAIN
- 4 START OF EXISTING WATER MAIN
- 5 END OF EXISTING WATER MAIN
- 6 48" MINIMUM BURY DEPTH TO TOP OF PIPE
- 7 EXACT DEPTH UNKNOWN

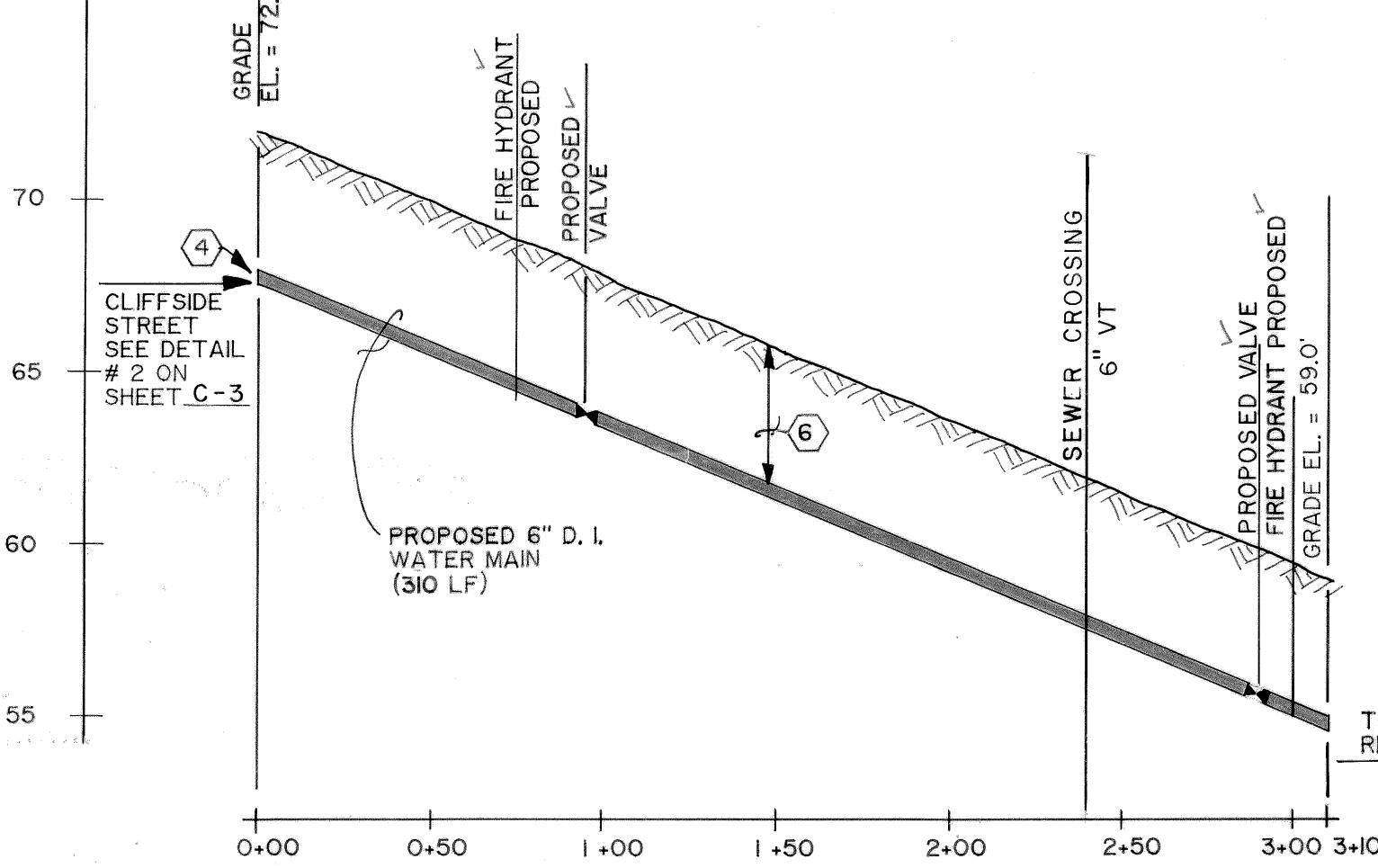
- 8 WATER MAINS INSTALLED AT 4' DEPTH (MINIMUM)
- 9 SEE SHT. C-1 FOR VALVE SWING-TIES



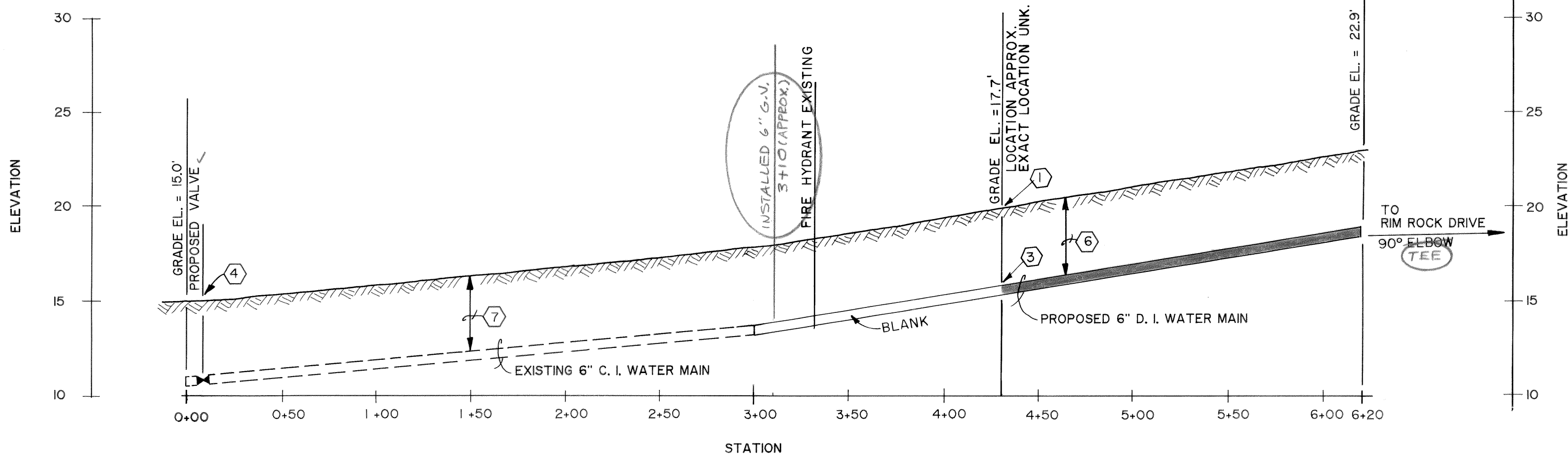
BARANOF STREET PROFILE



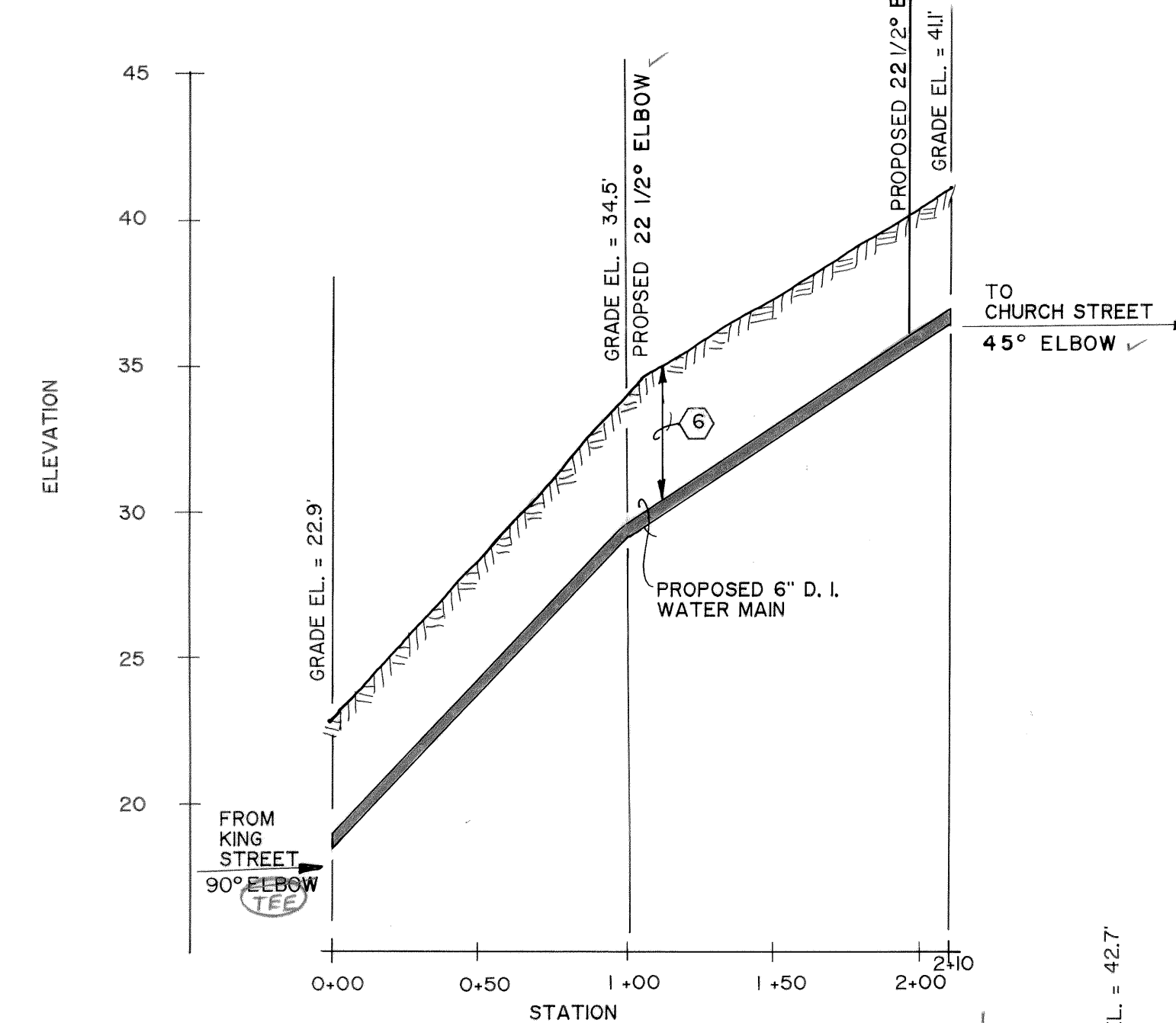
RIM ROCK DRIVE (BETWEEN BARANOF & GORBATCH STS.)



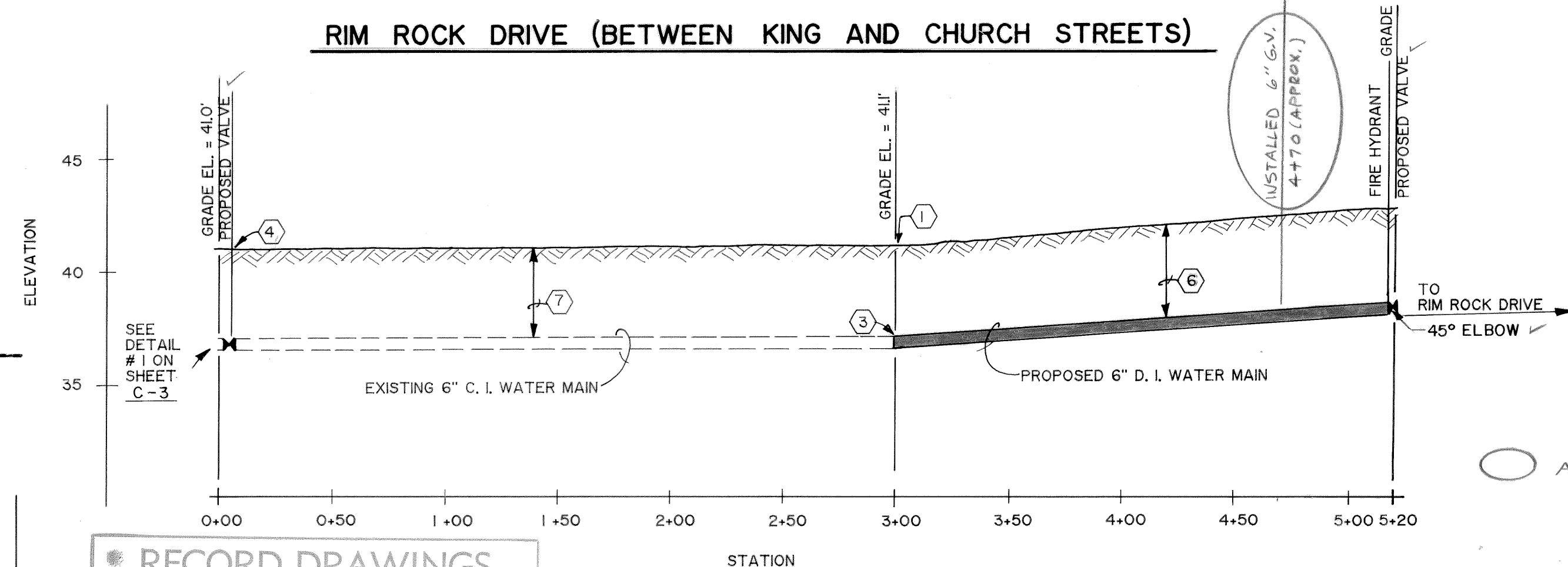
GORBATCH STREET PROFILE



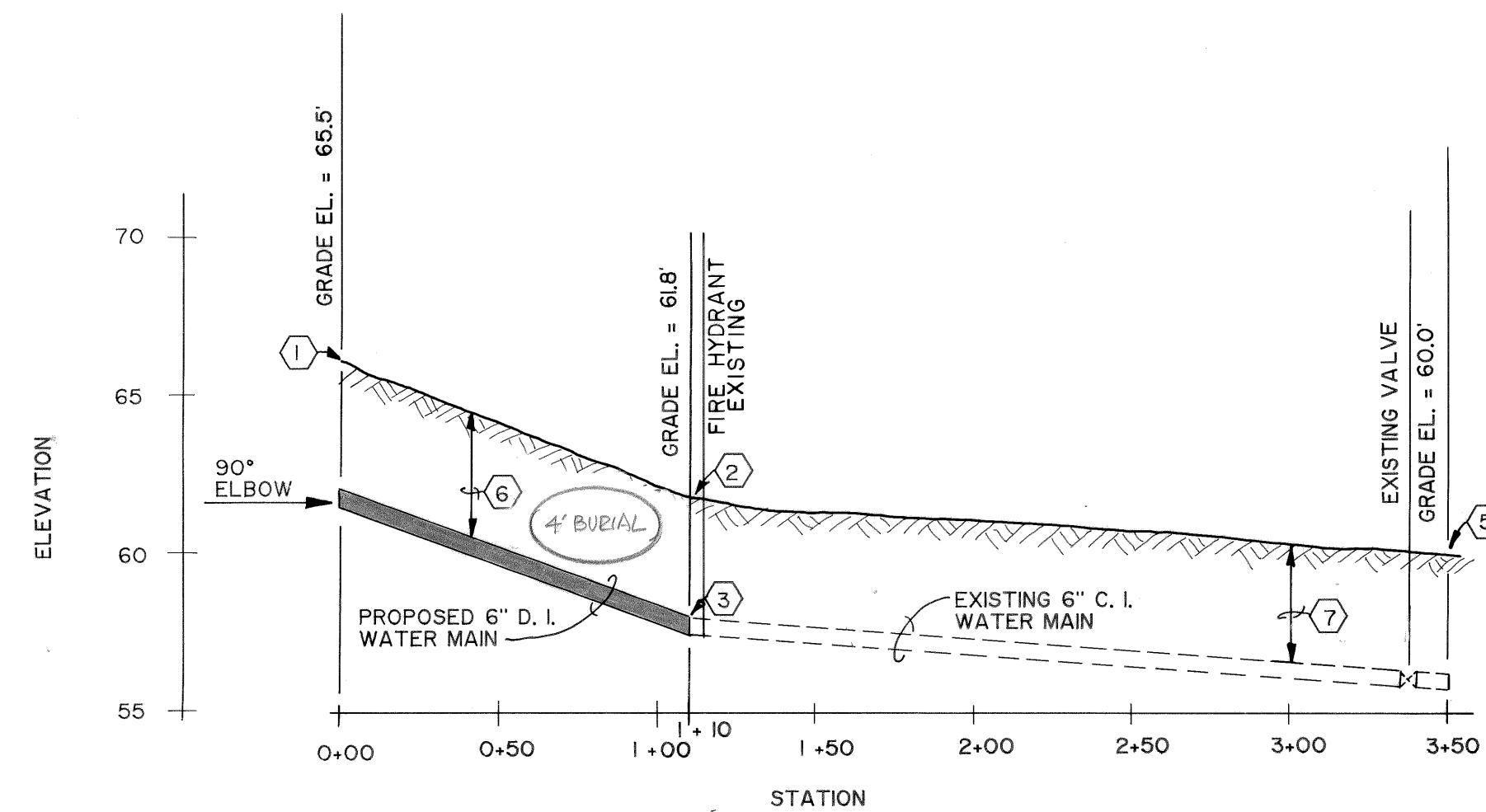
KING STREET PROFILE



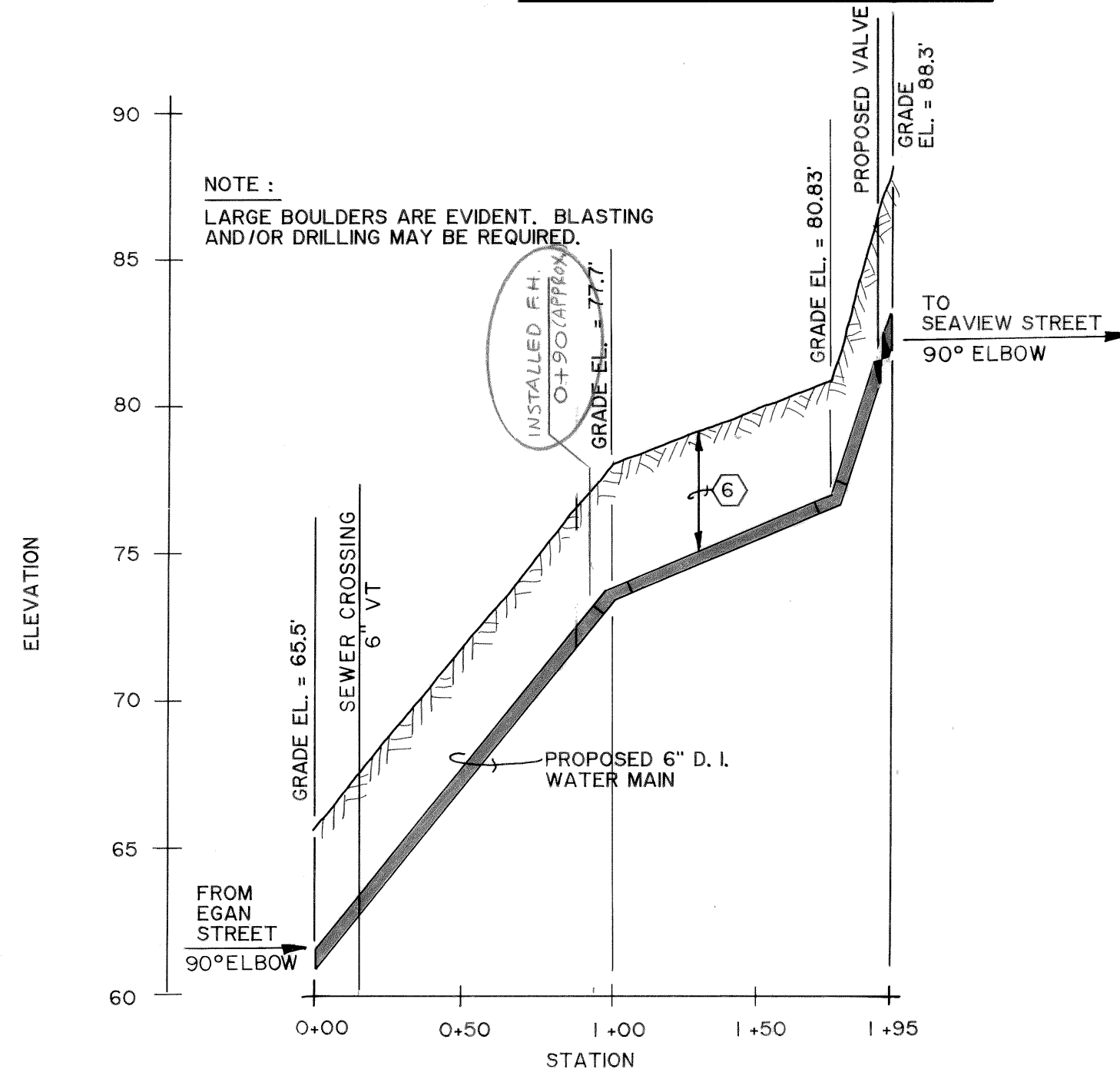
CHURCH STREET PROFILE



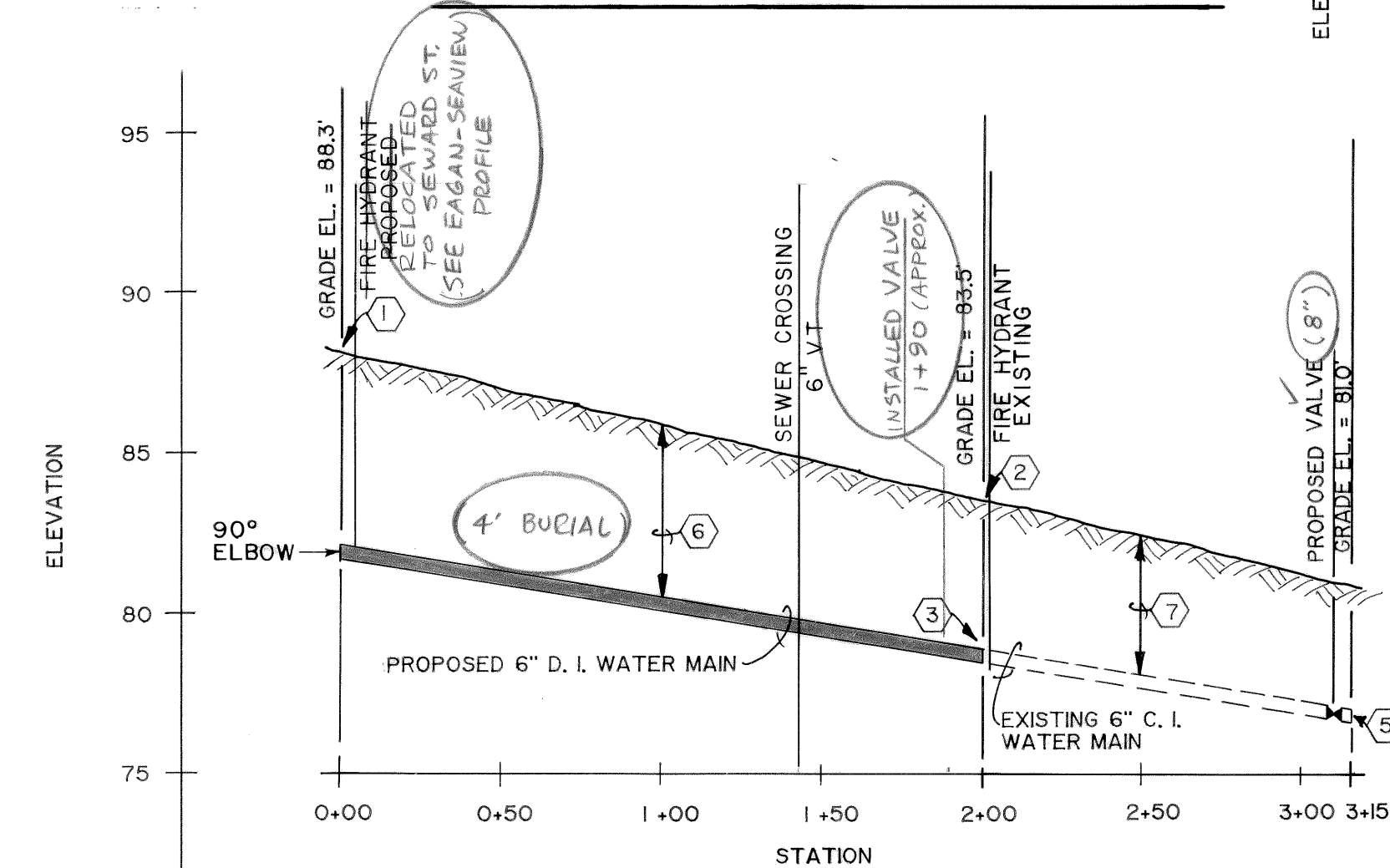
RIM ROCK DRIVE (BETWEEN KING AND CHURCH STREETS)



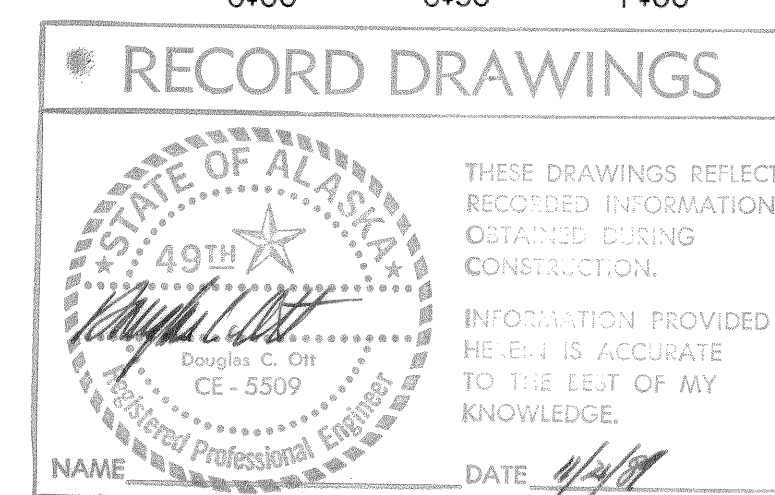
EGAN STREET PROFILE



FROM EGAN TO SEAVIEW STREET

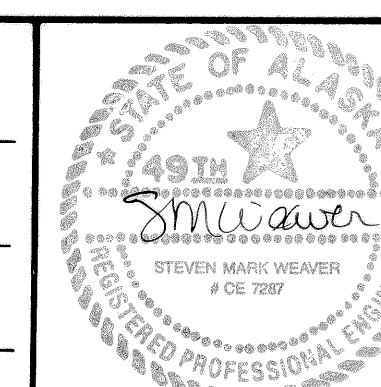


SEAVIEW STREET PROFILE

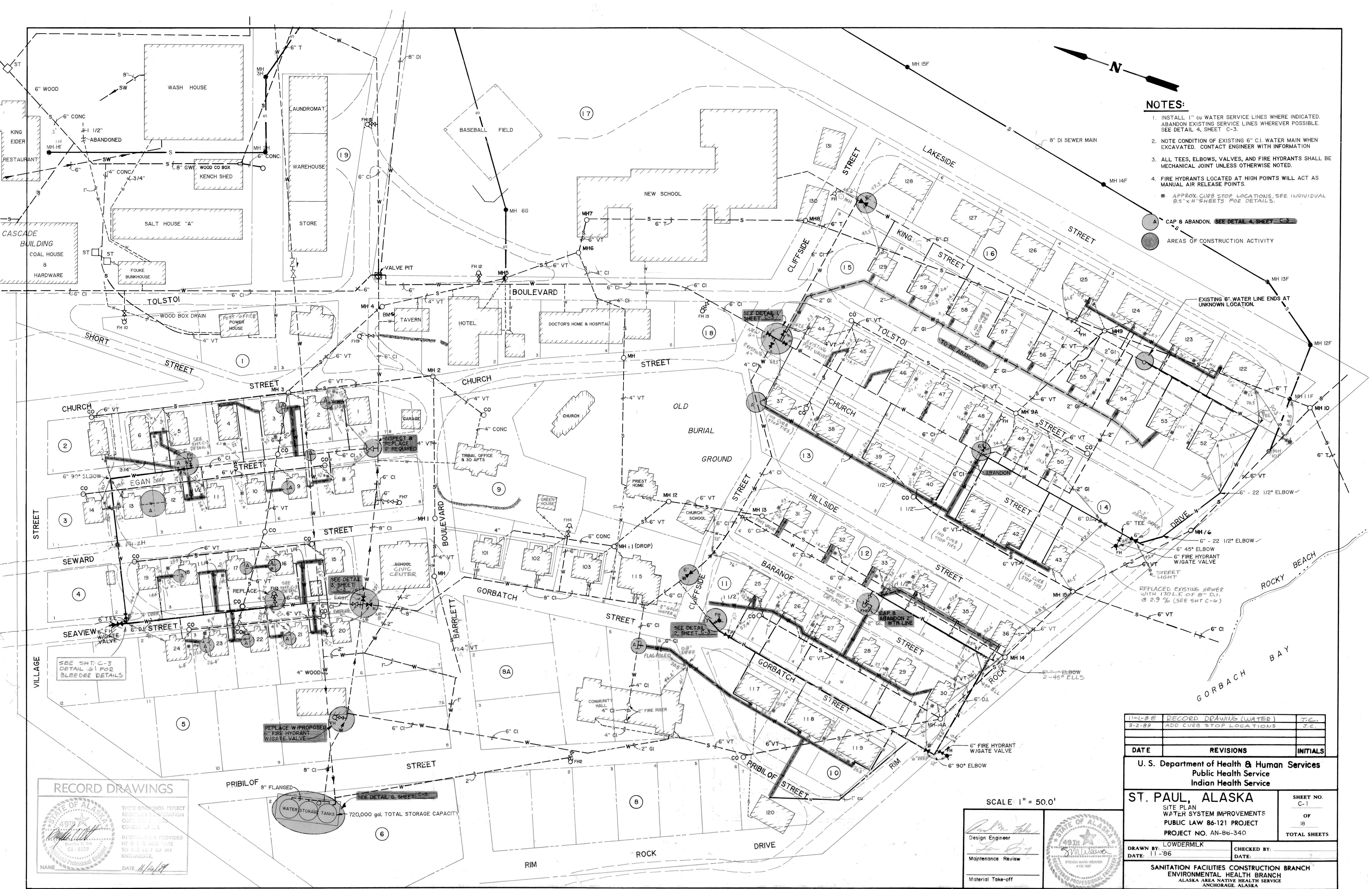


11-1-86	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS

Design Engineer
Maintenance Review
Material Take-off



U. S. Department of Health & Human Services Public Health Service Indian Health Service	
ST. PAUL, ALASKA	
WATER MAIN PROFILES	
PUBLIC LAW 86-121 PROJECT	
PROJECT NO. AN-86-340	
DRAWN BY: LOWDERMILK	CHECKED BY:
DATE: 1-86	DATE:
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA	
SHEET NO. C-2	OF 18 TOTAL SHEETS



- NOTES:**
1. INSTALL 1" cu WATER SERVICE LINES WHERE INDICATED. ABANDON EXISTING SERVICE LINES WHEREVER POSSIBLE. SEE DETAIL 4, SHEET C-3.
 2. NOTE CONDITION OF EXISTING 6" C.I. WATER MAIN WHEN EXCAVATED. CONTACT ENGINEER WITH INFORMATION.
 3. ALL TEES, ELBOWS, VALVES, AND FIRE HYDRANTS SHALL BE MECHANICAL JOINT UNLESS OTHERWISE NOTED.
 4. FIRE HYDRANTS LOCATED AT HIGH POINTS WILL ACT AS MANUAL AIR RELEASE POINTS.
- APPROX. CURB STOP LOCATIONS, SEE INDIVIDUAL 8.5" x 11" SHEETS FOR DETAILS.
- CAP & ABANDON. SEE DETAIL 4, SHEET C-3
- AREAS OF CONSTRUCTION ACTIVITY

RECORD DRAWINGS

THESE DRAWINGS PERFECTLY REPRODUCE THE INFORMATION CONTAINED HEREIN.

INFORMATION PROVIDED HEREIN IS NOT TO BE USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

NAME: *[Signature]* DATE: 11/1/79

SCALE: 1" = 50.0'

Design Engineer: *[Signature]*

Maintenance Review: *[Signature]*

Material Take-off: *[Signature]*

11-1-88	RECORD DRAWING (WATER)	J.C.
3-2-89	ADD CURB STOP LOCATIONS	J.C.
DATE	REVISIONS	INITIALS

U. S. Department of Health & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA		SHEET NO. C-1
SITE PLAN WATER SYSTEM IMPROVEMENTS PUBLIC LAW 86-121 PROJECT		OF 18
PROJECT NO. AN-86-340		TOTAL SHEETS

DRAWN BY: LOWDERMILK	CHECKED BY:
DATE: 11-86	DATE:

SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA	
--	--



SCOPE OF WORK

- THIS PROJECT WILL UNIFY THE SEWER SYSTEMS OF THE COMMUNITY INTO A COMMON DISCHARGE POINT THROUGH THE OCEAN OUTFALL. IN ADDITION, THE WATER SYSTEM WILL BE UPGRADED BY LOOPING WATER MAINS TO PROVIDE BETTER WATER SERVICE TO THE HOMES IN THE COMMUNITY. THE MAJOR ITEMS OF CONSTRUCTION ARE AS FOLLOWS:
1. INSTALL APPROXIMATELY 2650 FEET OF 6" D.I. WATER MAIN WITH FIRE HYDRANTS ON KING STREET, CHURCH STREET, BARANOFF STREET, GORBATCH STREET, RIM ROCK DRIVE, SEAVIEW STREET AND EGAN STREET.
 2. INSTALL NEW WATER SERVICE LINES FOR 68 HOMES.
 3. INSTALL APPROXIMATELY 2670 FEET OF 8" D.I. SEWER MAIN WITH MANHOLES.
 4. INSTALL 3 COMMUNITY SEPTIC TANKS.
 5. INSTALL WET WELL/DRY WELL LIFT STATION.
 6. EXISTING LIFT STATIONS AND SEPTIC TANKS (WHERE NOTED) TO BE PUMPED, FILLED WITH DIRT AND ABANDONED.
 7. REPLACE VALVES AT WATER STORAGE TANK.

DESIGN CRITERIA

DOWNTOWN AREA :

POPULATION	551 RESIDENTS (1980 CENSUS)
EXISTING HOMES	88 EACH

WATER - EXISTING

WATER SOURCE	2 EXISTING WELLS
WATER STORAGE	3 CONCRETE TANKS @ 240,000 gallons EACH

TOTAL STORAGE 720,000 gallons

AVERAGE DAILY TOTAL WATER USE	33,000 gallons
MAXIMUM DAILY USE	66,000 gallons

SEPTIC TANK DESIGN DATA

88 HOMES
1 OFFICE BUILDING
1 HOTEL
1 RESTAURANT
2 MISCELLANEOUS BUILDINGS
SCHOOL
COMMUNITY BUILDING
3 FUTURE SITES

DAILY ESTIMATED SEWAGE FLOW @ 28,900 gallons

SEPTIC TANKS - 3 @ 10,000 gallons EACH

RECORD DRAWINGS

STATE OF ALASKA
49th
Douglas C. Orr
CE - 5509
Professional Engineer

THESE DRAWINGS REFLECT THE DESIGN INFORMATION CONTAINED HEREIN. INFORMATION PROVIDED HEREIN IS ACCURATE TO THE BEST OF MY KNOWLEDGE.

NAME _____ DATE 7/1/86

3-20-89	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS

U. S. Department of Health, & Human Services
Public Health Service
Indian Health Service

ST. PAUL, ALASKA AERIAL PHOTO PUBLIC LAW 86-121 PROJECT PROJECT NO. AN - 86 - 340	SHEET NO. <u>D-2</u>
	OF
	<u>2</u>
	TOTAL SHEETS

DRAWN BY: <u>JAO / LOWDERMLK</u>	CHECKED BY: _____
DATE: <u>JULY 86 / 11 - 86</u>	DATE: _____

SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA

Design Engineer
Maintenance Review
Material Take-off

STATE OF ALASKA
49th
STEVEN MAURY WEAVER
P.E. 7001
Professional Engineer

NOTE:
SEE SHEET D-2 FOR PROJECT SCOPE OF WORK.



RECORD DRAWINGS

STATE OF ALASKA

49th

Douglas C. Orr

REGISTERED PROFESSIONAL ENGINEER

NAME: *Douglas C. Orr*

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

INFORMATION PROVIDED HEREIN IS ACCURATE TO THE BEST OF MY KNOWLEDGE.

DATE: *4/4/85*

Paul M. Ahl
Design Engineer
Le Jay
Maintenance Review
Material Take-off

STATE OF ALASKA

49th

Steven Mark Weaver

REGISTERED PROFESSIONAL ENGINEER

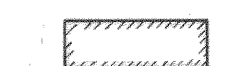
NAME: *Steven Mark Weaver*

3-20-89	RECORD DRAWING	J.C.
DATE	REVISIONS	INITIALS
U.S. Department of Health, & Human Services Public Health Service Indian Health Service		
ST. PAUL, ALASKA AERIAL PHOTO		SHEET NO. D-1
PUBLIC LAW 86-121 PROJECT PROJECT NO. AN - 86 - 340		OF 2 TOTAL SHEETS
DRAWN BY: PCS / LOWDERMILK DATE: 8/30/85 / 11 - '86		CHECKED BY: DATE:
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		

LEGEND AND GENERAL NOTES

SITE PLAN

EXISTING



STRUCTURES



ROADS (PAVED)



ROADS (UNPAVED)



POWER LINE



R.O.W. & PROPERTY LINE



COMMUNICATIONS LINE



CLEANOUT



SEWER LINE



WATER LINE



FORCE MAIN



FIRE HYDRANT, IN-LINE



FIRE HYDRANT, OFFSET



MANHOLE



VALVE



POL LINE (FUEL OIL)



LIFT STATION W/BUILDING



WELL



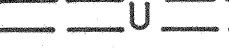
FENCE



UTILIDOR



RACEWAY



RAILROAD



BENCHMARK



TEST HOLE



ELEVATION



SEPTIC TANK



LEACHFIELD



CORPORATION STOP



BRASS CAP



WATERING POINT



POWER POLE



CURB STOP



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



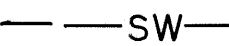
SALT WATER



SALT WATER



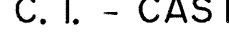
SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



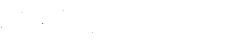
SALT WATER



SALT WATER



SALT WATER



SALT WATER



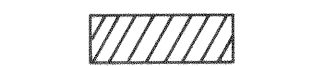
SALT WATER



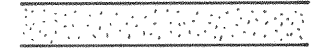
SALT WATER

C. I. - CAST IRON
G. I. - GALVANIZED IRON
VT - CLAY
TRANSTE - CONCRETE

PROPOSED THIS PROJECT



STRUCTURES



ROADS (PAVED)



ROADS (UNPAVED)



POWER LINE



R.O.W. & PROPERTY LINE



COMMUNICATIONS LINE



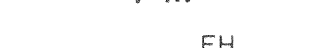
CLEANOUT



SEWER LINE



WATER LINE



FORCE MAIN



FIRE HYDRANT, IN-LINE



FIRE HYDRANT, OFFSET



MANHOLE



VALVE



POL LINE (FUEL OIL)



LIFT STATION W/BUILDING



WELL



FENCE



UTILIDOR



RACEWAY



RAILROAD



BENCHMARK



TEST HOLE



ELEVATION



SEPTIC TANK



LEACHFIELD



CORPORATION STOP



BRASS CAP



WATERING POINT



POWER POLE



CURB STOP



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER



SALT WATER

MECHANICAL

EXISTING



PRIMARY SYSTEM



HOT WATER LINES



DRAIN & OVERFLOW LINE



COLD WATER MAKE-UP LINE



BY-PASS LINE



BACK WASH LINE



COLD WATER LINES



LOW WATER CUT-OFF



CHEMICAL PUMP



CIRCULATING PUMP



WATER METER



GATE VALVE



CHECK VALVE



UNION



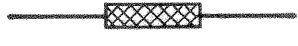
DIELECTRIC UNION



AUTOMATIC AIR RELIEF



PRESSURE RELIEF VALVE



ADAPTOR



FLEX PIPE



FLEX COUPLING



AQUASTAT



FLOW SWITCH



PRESSURE SWITCH



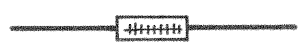
THERMOMETER



PRESSURE REDUCING VALVE



PRESSURE GAUGE



FLOW INDICATOR



THERMOFLO INDICATOR



CIRCUIT SETTER



DIRECTION OF FLOW



VACUUM BREAKER



TANK LEVEL INDICATOR

PIPE FITTING & VALVE SYMBOLS



ANGLE VALVE



CAP



CROSS



ELBOW (ELL), 45°



ELBOW, 90°



LATERAL

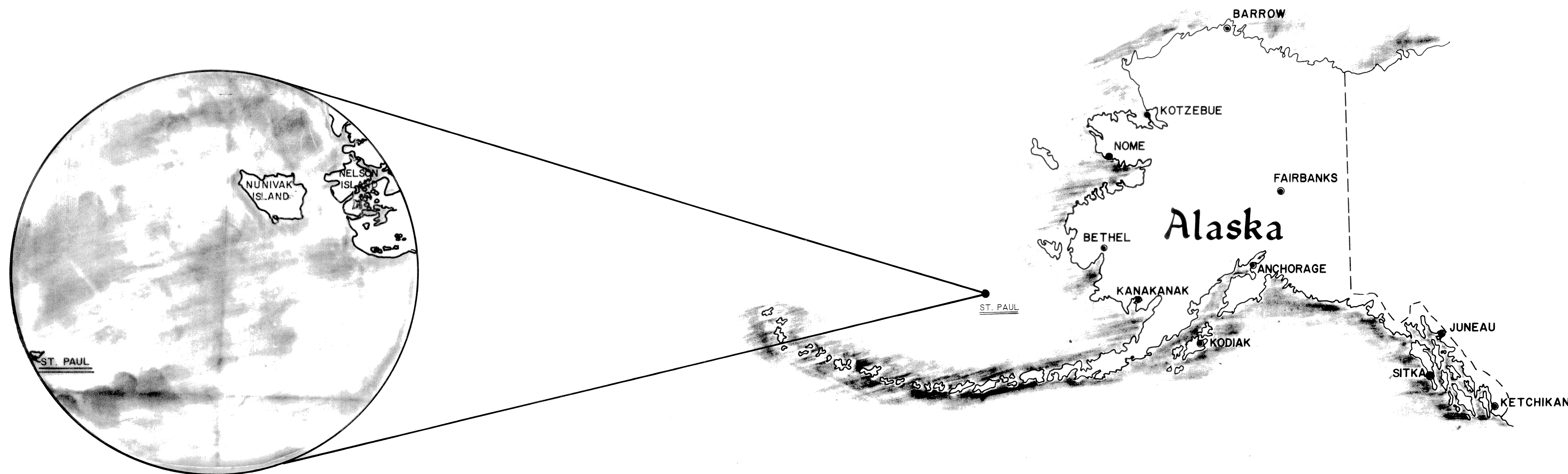


TEE

CONSTRUCTION PLANS

SANITATION FACILITIES

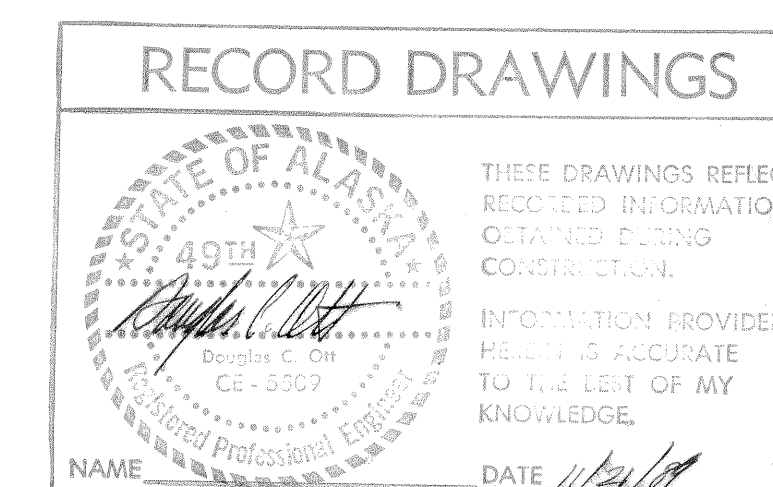
ST. PAUL, ALASKA

[illegible]

ALASKA AREA NATIVE HEALTH SERVICE
ENVIRONMENTAL HEALTH BRANCH
701 C STREET BOX 65
ANCHORAGE, ALASKA 99510

PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-86-340

U. S. DEPT. OF HEALTH & HUMAN SERVICES
PUBLIC HEALTH SERVICE
INDIAN HEALTH SERVICE



Design Engineer

Maintenance Review

Material Take-off

U. S. Department of Health & Human Services

Public Health Service

Indian Health Service

ST. PAUL, ALASKA

WATER & SEWER SYSTEM

SITE PLAN

PUBLIC LAW 86-121 PROJECT

PROJECT NO. AN-86-340

SHEET NO.

C-5

OF

18

TOTAL SHEETS

LOWDERMILK

CHECKED BY:

DRAWN BY:

DATE: 11-86

SANITATION FACILITIES CONSTRUCTION BRANCH

ENVIRONMENTAL HEALTH BRANCH

ALASKA AREA NATIVE HEALTH SERVICE

ANCHORAGE, ALASKA

DATE	REVISIONS	INITIALS

- NOTES:
1. EXACT LOCATION OF UTILITY LINES UNKNOWN. EXERCISE EXTREME CAUTION DURING SEWER MAIN INSTALLATION.
 2. FROM MH 1H TO MH 7G BE AWARE OF POWER LINES. FROM MH 5G TO MH 7G THERE IS A HEAT RECOVERY PIPE THAT IS CONNECTED TO THE SCHOOL. EXACT LOCATIONS ARE UNKNOWN.
 3. SEWER SERVICE LINES TO BE INSTALLED NEAR MH 5G ARE TO BE CONNECTED TO THE NEW SEWER MAIN. DO NOT INSTALL THE SERVICE LINES INTO THE NEW MANHOLE, 5G.
 4. VERIFY INVERT ELEVATION OF THE SEWER SERVICE LINE AT THE KING EIDER RESTAURANT. CONTACT THE ENGINEER.
 5. EXISTING BURIED UTILITY AS-BUILTS ARE BEING PURSUED. CONTACT THE ENGINEER.
- BASIS OF ELEVATIONS IS BRASS CAP ON N.E. SIDE OF TAVERN FOUNDATION ELEVATION 32.96'.

