

CONSTRUCTION PLANS

SANITATION FACILITIES

TUNTUTULIAK, ALASKA



ALASKA AREA NATIVE HEALTH SERVICE
ENVIRONMENTAL HEALTH BRANCH
701 C ST. BOX 65
ANCHORAGE, ALASKA 99513

PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-81-263

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

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LEGEND AND GENERAL NOTES

SITE PLAN

EXISTING



STRUCTURES

ROADS (PAVED)

ROADS (UNPAVED)

THIS PROJECT



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

UTIL/DOR

RACEWAY

RAILROAD

BENCHMARK

TEST HOLE

ELEVATION

SEPTIC TANK

LEACH FIELD

CORPORATION STOP

BRASS CAP

WATERING POINT

POWER POLE

CURB STOP

MECHANICAL

PRIMARY SYSTEM

HOT WATER LINES

HOT WATER RETURN 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

ELECTRICAL

CONDUIT, SURFACE MOUNTED

CONDUIT, BURIED OR IN-SLAB

HOMERUN TO CIRCUIT BREAKER PANEL

CONDUIT W/NO. OF WIRES INDICATED, ONE

NEUTRAL, TWO HOT, AWG 12, CU

INCANDESCENT FIXTURE

INCANDESCENT FIXTURE, WALL MOUNTED

FLUORESCENT FIXTURE

VAPOR TIGHT LIGHT FIXTURE

HIGH PRESSURE SODIUM LIGHT FIXTURE

EMERGENCY LIGHT, DOUBLE HEAD

EXIT LIGHT

DUPLEX RECEPTACLES

QUADRAPLEX RECEPTACLES

SPECIAL PURPOSE RECEPTACLES

SINGLE POLE SWITCH

3-WAY SWITCH

JUNCTION BOX

THERMOSTAT

TRANSFORMER

AQUASTAT

PHOTO CELL

RELAY

MOTOR OPERATED VALVE (ZONE VALVE)

SOLENOID VALVE

CONTROLLER

MOTOR STARTER, MANUAL

MOTOR STARTER, MAGNETIC

SWITCHING PANEL

CIRCUIT BREAKER PANEL

ALARM PANEL

HEAT DETECTOR

SMOKE DETECTOR

BELL

ALARM HORN

METER BASE

MOTOR W/HORSEPOWER INDICATED

FLOAT SWITCH

PRESSURE SWITCH

FLOW SWITCH

UNIT HEATER

TELEPHONE OUTLET

COPPER

SYSTEM GROUND

PUSH-BUTTON SWITCH

FAN

FIXTURE W/PULL CHAIN

SWITCH W/TIMER

NOTES

CIVIL

- MINIMUM VERTICAL SEPARATION BETWEEN WATER LINE & SEWER LINE AT THE CROSSING POINT SHALL BE 18".
- MINIMUM HORIZONTAL SEPARATION BETWEEN WATER LINE & SEWER LINE SHALL BE 10'.
- MINIMUM BURY ON WATER LINE SHALL BE

- LOCATION OF ALL WELLS, SEPTIC TANKS, MANHOLES, CLEANOUTS, VALVES, ETC. SHALL BE REFERENCED TO THREE PERMANENT ABOVE GROUND STRUCTURES.
- CLEANOUTS, LEACHFIELDS AND SEPTIC TANKS ARE NUMBERED ACCORDING TO CORRESPONDING MANHOLE, i.e., MH-1, ST-1A, LF-1A AND CO-1A.

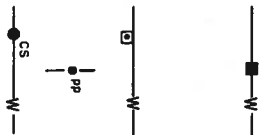
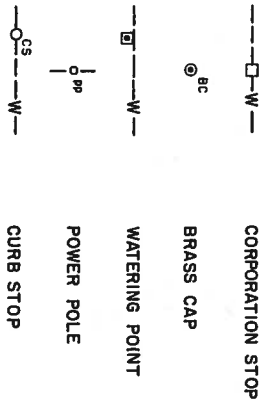
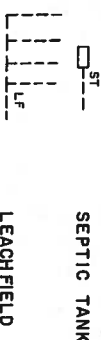
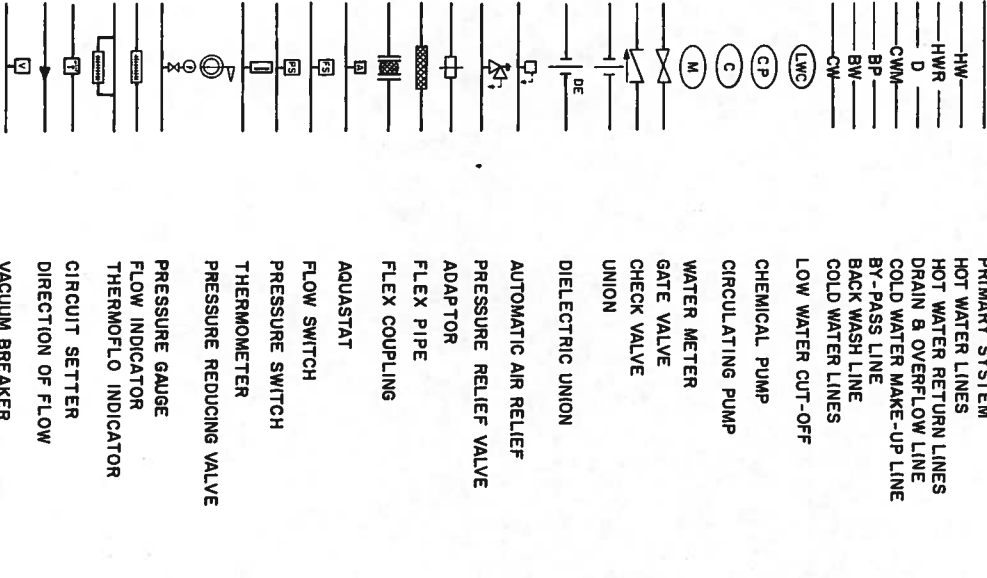
MECHANICAL

- ALL EXPOSED PIPING SHALL BE PAINTED USING THE FOLLOWING COLOR CODE:
GREEN - RAW WATER
BLUE - POTABLE WATER
BLACK - HEATING
RED - FIRE
BROWN - SEWAGE
GRAY - COMPRESSED AIR
ORANGE - FUEL
- TYPE OF PAINT TO BE USED SHALL BE GARLOCK OR APPROVED EQUAL.
- DIRECTION OF FLOW SHALL BE INDICATED BY ARROWS AND A NAME PLATE SHALL BE ATTACHED DESCRIBING MATERIAL BEING CARRIED.
- ALL PIPING SHALL BE COPPER UNLESS OTHERWISE INDICATED.
- ALL SOLDER CONNECTIONS SHALL BE MADE W/TH-ANTIMONY 95-5 SOLDER.
- ALL HOT WATER LINES SHALL BE INSULATED.

ELECTRICAL

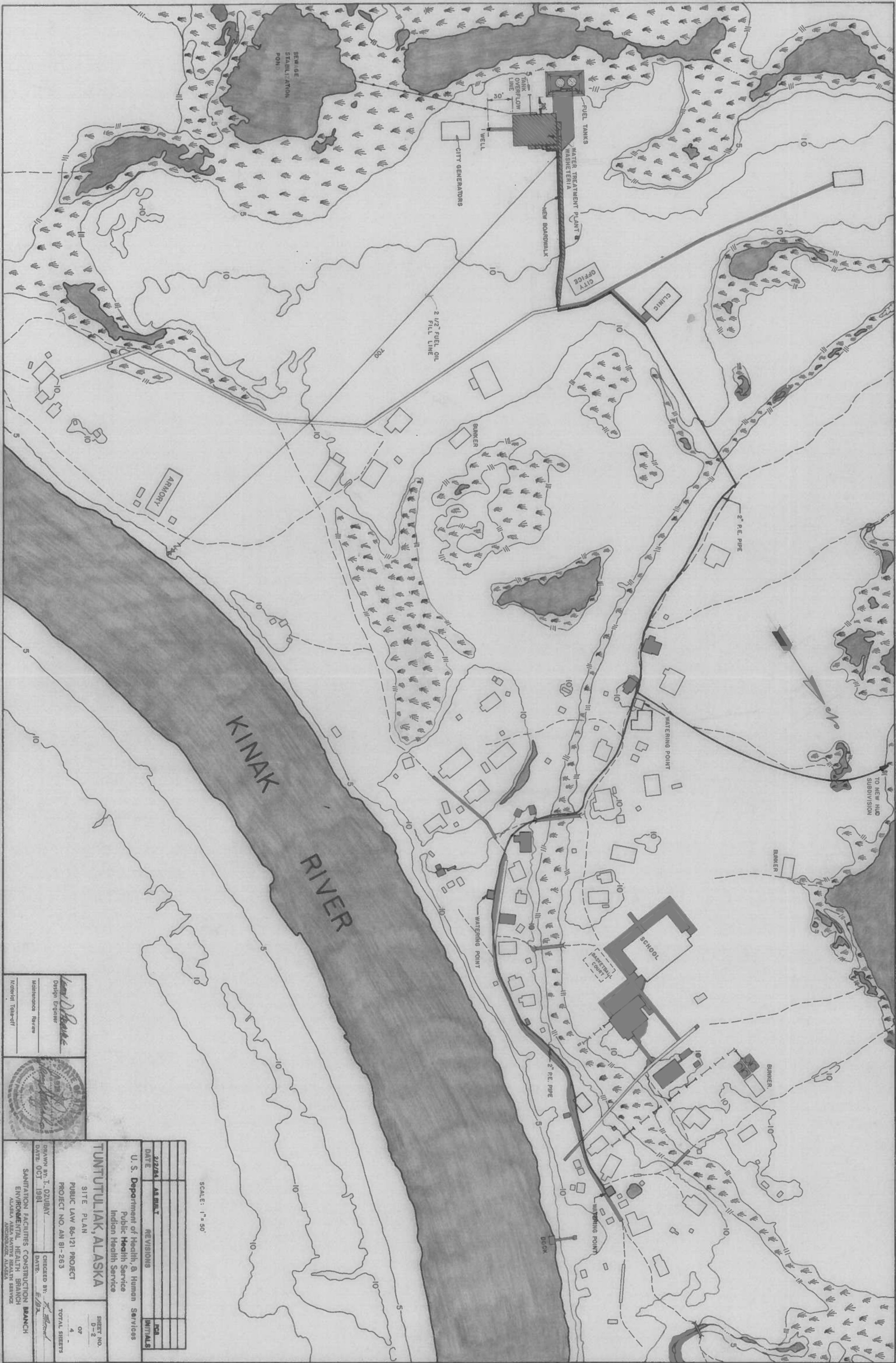
- CLEAR AREA REQUIRED FOR ELECTRICAL PANELS:
36" FROM FACE OF PANEL
75" FROM FLOOR UP TO FIRST OBSTRUCTION
15" CLEAR EACH SIDE FROM CENTER LINE OF PANEL
- GROUND SYSTEM NEUTRAL AND ALL METALLIC SURFACES PER 199 NATIONAL ELECTRICAL CODE (N.E.C.)
- ALL WIRING SHALL BE IN CONDUIT.

PIPE FITTING & VALVE SYMBOLS



Design Engineer	
Maintenance Review	
Material Take-off	

U. S. Department of Health, & Human Services Public Health Service Indian Health Service	SHEET NO. OF
TUNTUTULIAK, ALASKA LEGEND & NOTES PUBLIC LAW 86-121 PROJECT PROJECT NO. AN-81-263	TOTAL SHEETS
DRAWN BY LOWDERMILK DATE 9-1-82	CHECKED BY DATE
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA	

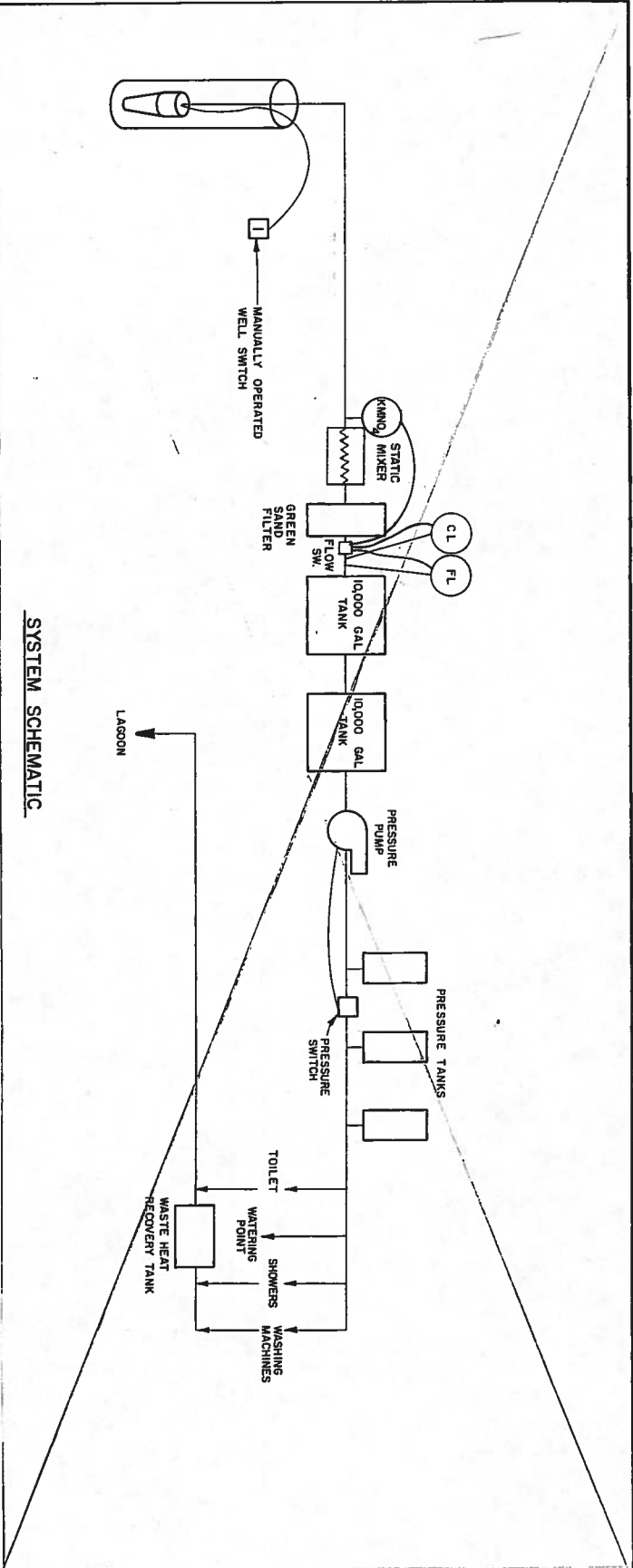


Design Engineer
Maintenance Review
Material Takeoff

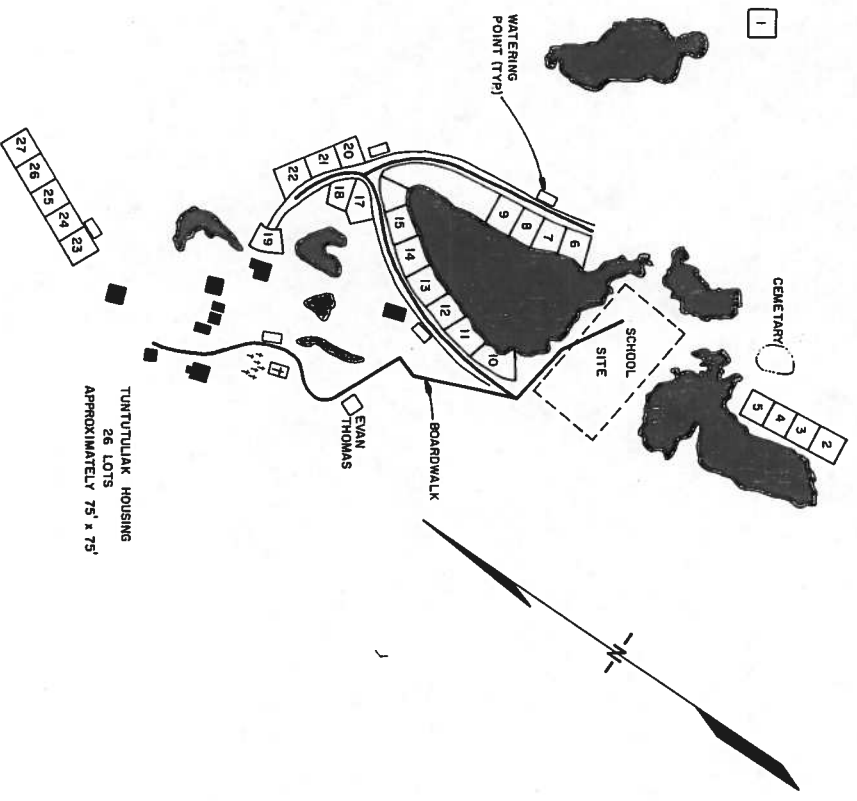


DATE	REVISIONS	INITIALS
2/22/81	AS BUILT	PCB

U. S. Department of Health & Human Services Public Health Service Indian Health Service	
TUNTUTULIAK, ALASKA	
SITE PLAN	SHEET NO. 0-2
PUBLIC LAW 94-121 PROJECT	OF 4
PROJECT NO. AN 91-263	TOTAL SHEETS
DRAWN BY: T. DZUBAY	CHECKED BY: [Signature]
DATE: OCT 1981	DATE: 8/82
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA	



SYSTEM SCHEMATIC

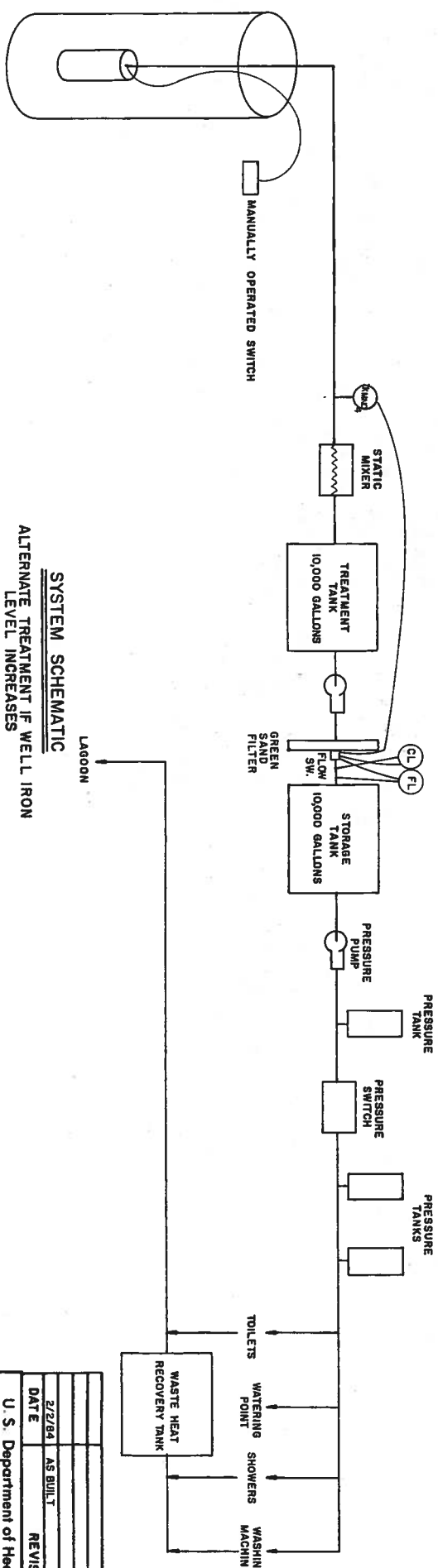


VICINITY MAP

DESIGN CRITERIA

POPULATION	223
NUMBER OF HOMES	51
WATER SOURCE	WELL
DEPTH	201 FT
SPECIFIC YIELD	0.2 GPM/FT
WATER STORAGE	20,000 GAL
WATER TREATMENT	0.2-0.4 PPM FREE CHLORINE RESIDUAL
CHLORINATION	1.2 PPM
FLUORIDATION	4-6 PPM KNO ₃ DOSAGE
IRON REMOVAL FILTER	40' x 56'
BUILDING	LAGOON
WASTE WATER TREATMENT	
EXPECTED MONTHLY WATER USAGE:	
WASHETERIA	
FIXTURES	GALLONS HOTGALLONS COLD TOTAL
4 WASHERS	7,000 7,000 14,000
4 SHOWERS	10,500 1,500 12,000
3 SINKS	500 800 1,300
TOILETS	0 3,000 3,000
TOTALS	18,000 12,000 30,300*
* ESTIMATED DISCHARGE TEMPERATURE 78°F	

SUMMER WATERING PONTS 2 GPCD



SYSTEM SCHEMATIC

ALTERNATE TREATMENT IF WELL IRON LEVEL INCREASES

WASHETERIA

FIXTURES	GALLONS HOTGALLONS COLD TOTAL
4 WASHERS	7,000 7,000 14,000
4 SHOWERS	10,500 1,500 12,000
3 SINKS	500 800 1,300
TOILETS	0 3,000 3,000
TOTALS	18,000 12,000 30,300*

* ESTIMATED DISCHARGE TEMPERATURE 78°F

WASHETERIA USER CHARGES (1982)

WASHING MACHINES	\$1.50/CYCLE
DRYERS	\$1.00/CYCLE
SHOWERS	\$1.50/CYCLE

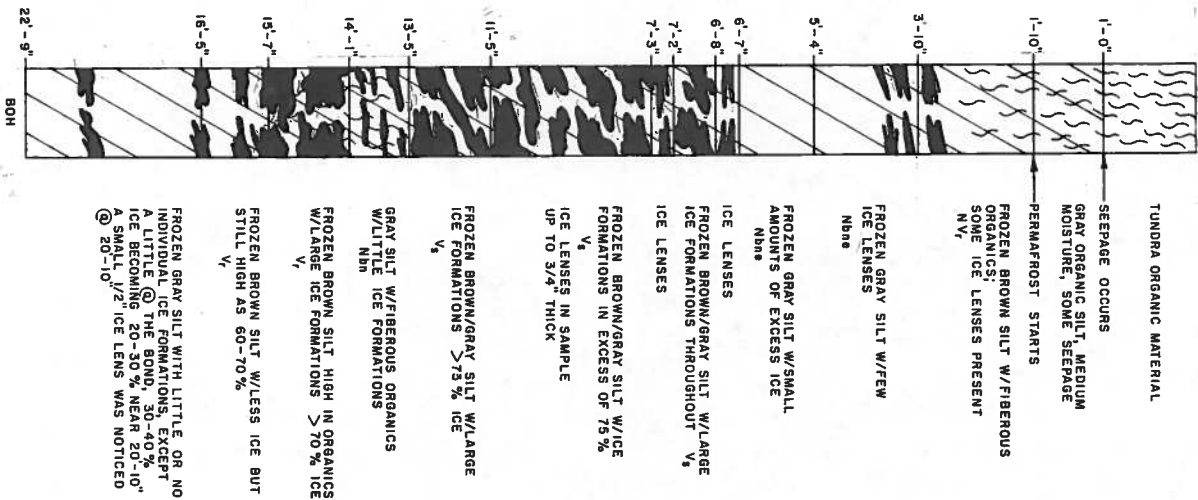
NOTE

TWO WELLS WERE DRILLED IN 1979, ONE WITH 2.4 PPM IRON (WASHETERIA WELL) AND ONE WITH 50 PPM IRON. BECAUSE THIS EXTREME DIFFERENCE EXISTS, AN ALTERNATE TREATMENT SYSTEM CAN BE USED WITH MINIMAL PUMPING AND EQUIPMENT CHANGE. SEE REPORT, "WATER WELL", PROJECT NO. AN-77-624P.

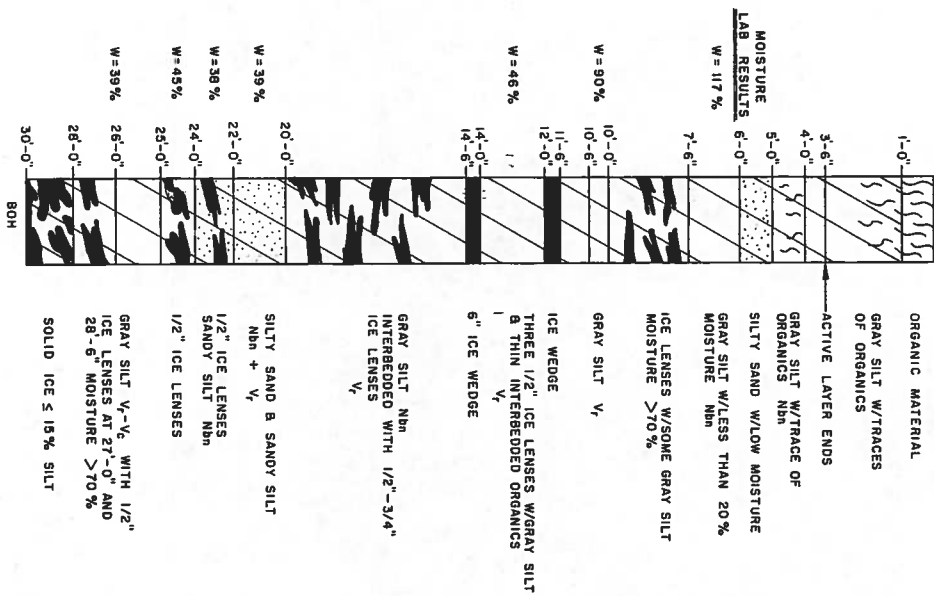
Lawrence D. Brown
Design Engineer
Maintenance Review
Morris Takoff

U. S. Department of Health, & Human Services
Public Health Service
Indian Health Service
TUNTUTULIAK, ALASKA
SYSTEM SCHEMATIC & DESIGN CRITERIA
PUBLIC LAW 96-121 PROJECT
PROJECT NO. AN-81-263
TOTAL SHEETS 4
DRAWN BY: [Signature] DATE: 6/10/82
CHECKED BY: [Signature] DATE: 6/18/82
SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA ANCHORAGE, ALASKA

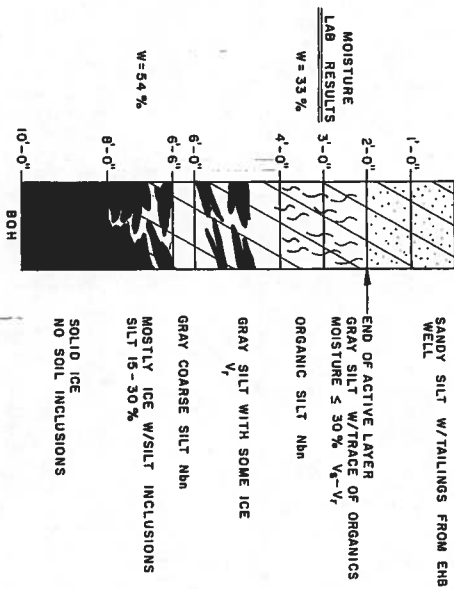
TEST HOLE #1
9-3-81
NTS



TEST HOLE #2
10-21-81
NTS



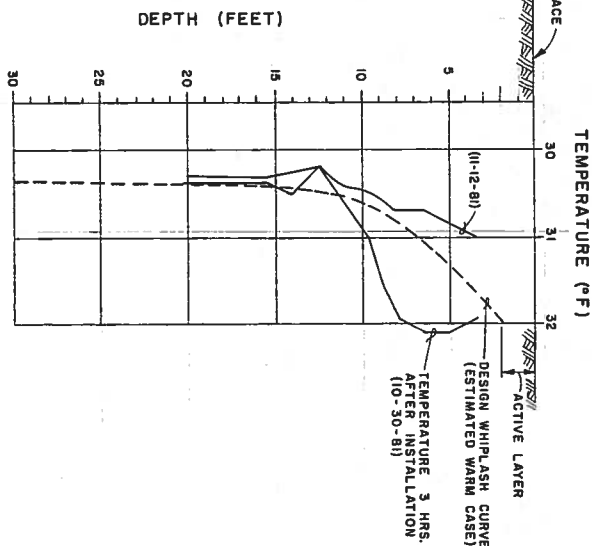
TEST HOLE #3
10-28-81
NTS



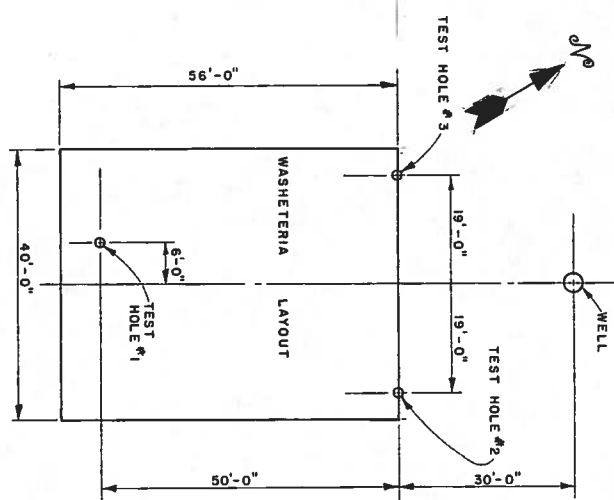
TEST HOLE NO.	DEPTH	SIEVE ANALYSIS (PERCENT PASSING)			MOISTURE CONTENT	% ORGANIC
		4	10	40	200	
2	6'-0" TO 7'-0"				117 %	
2	10'-0" TO 10'-6"				90 %	
2	12'-0" TO 13'-6"				46 %	
2	20'-6" TO 22'-0"	100	98	93	39 %	
2	22'-0" TO 23'-0"	(BETWEEN 22 & 23 FT.)			38 %	4.2
2	24'-0" TO 25'-0"				45 %	
2	25'-6" TO 27'-0"				39 %	
3	3'-0" TO 3'-6"		100	99	93.6	33 %
3	6'-0" TO 8'-0"		(ABOUT 4 FT.)		54 %	4.1

NOTE:
LAB RESULTS MOISTURE CONTENTS SEEM LOW. THIS MAY BE DUE TO THE FACT THAT MOISTURES SHOULD BE EXPECTED)

TEMPERATURE PROFILE
TEST HOLE #1



TEST HOLE LOCATION
NTS



SAMPLE	DEPTH	SALINITY (ppm)
TEST HOLE #2	10'-0" TO 10'-6"	107
TEST HOLE #2	22'-0" TO 23'-0"	135
TEST HOLE #3	3'-0" TO 5'-0"	68
TEST HOLE #3	6'-0" TO 8'-0"	170

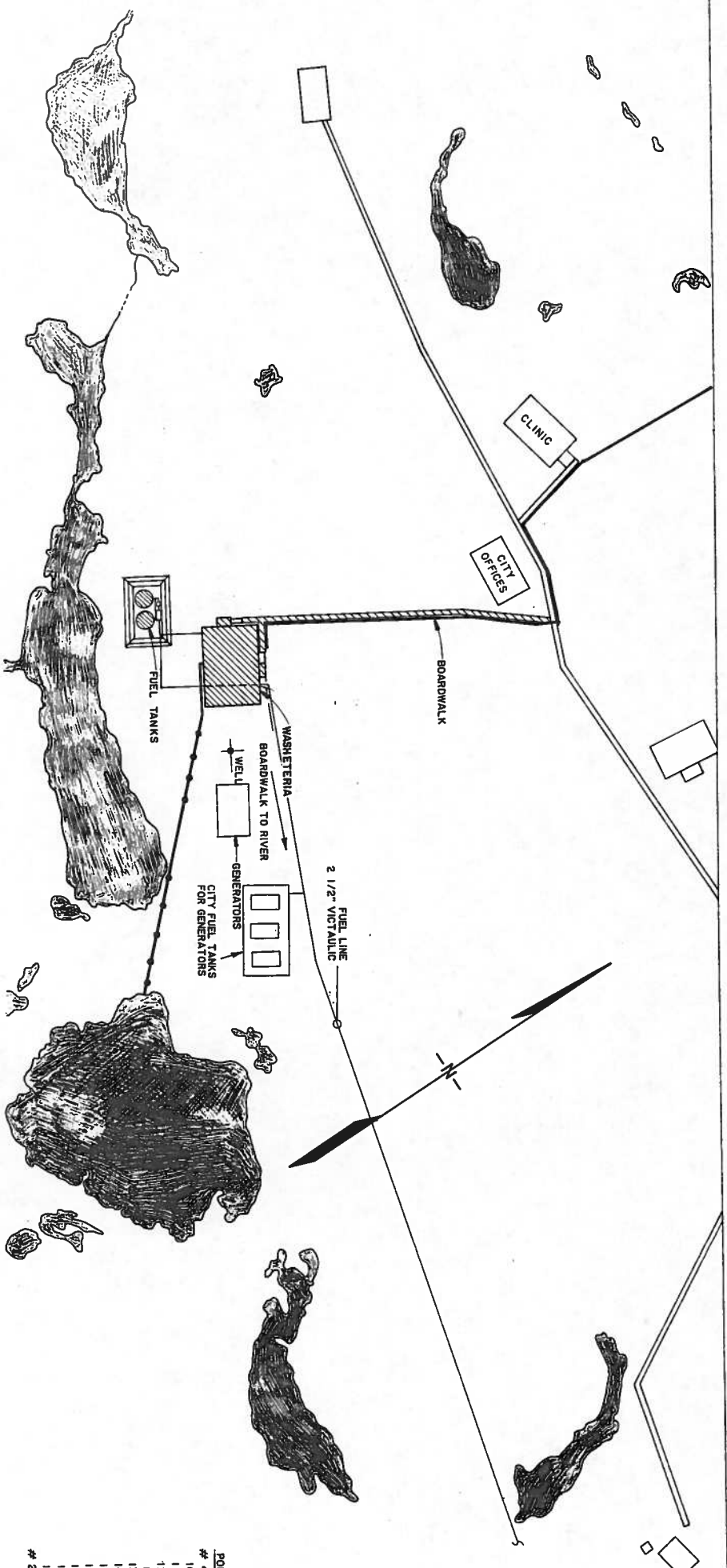
SOIL SALINITY
SAMPLES TAKEN ON 9-20-81

SUMMARY OF LABORATORY TEST DATA

DESIGN ENGINEER <i>Leon D. Brown</i>		CHECKED BY <i>R. Brown</i>	
DATE 2/2/84		DATE 8/82	
PROJECT NO. ANB-263		TOTAL SHEETS 4	
U.S. Department of Health, & Human Services Public Health Service Indian Health Service TUNTUTULIAK, ALASKA TEST HOLE LOGS AND RELATED INFORMATION PUBLIC LAW 86-121 PROJECT PROJECT NO. ANB-263			
DRAWN BY T.D.			
DATE FEB. 1982			
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA			

PLAN	SURVEYED	BY	DATE
	NOTED		
	ALIGNMENT CHECKED		
	ST. OF WAY CHECKED		

PROFILE	SURVEYED	BY	DATE
	NOTED		
	ALIGNMENT CHECKED		
	ST. OF WAY CHECKED		



POINT #	ELEV.	DISTANCE
4	7.0	0
10	8.0	20
11	8.7	40
12	8.6	60
9	7.6	69
13	4.0	79
14	3.7	110
15	4.6	119
16	5.1	129
17	5.3	149
18	5.3	169
19	5.4	189
20	4.2	203

NOMINAL SIZE	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
O.D.	1.900	2.015	2.075	2.300	2.400	2.500
I.D.	1.810	1.931	1.991	2.210	2.310	2.410
Coupling O.D.	2.200	2.180	2.250	2.400	2.500	2.600
Elbow, D.M.A.	4.000	3.900	4.000	4.200	4.300	4.400

NOTE: HEAT TAP SHALL BE INSTALLED IN THE LAST 10' OF DISCHARGE LINE. INSTALL REMAINDER OF ELECTRIC SUPPLY LINE IN CONDUIT. USE THERMION ELKAR EL-4 CONSTANT WATT, OR EQUAL, HEATING CABLE.

ARCTIC PIPE HANGER

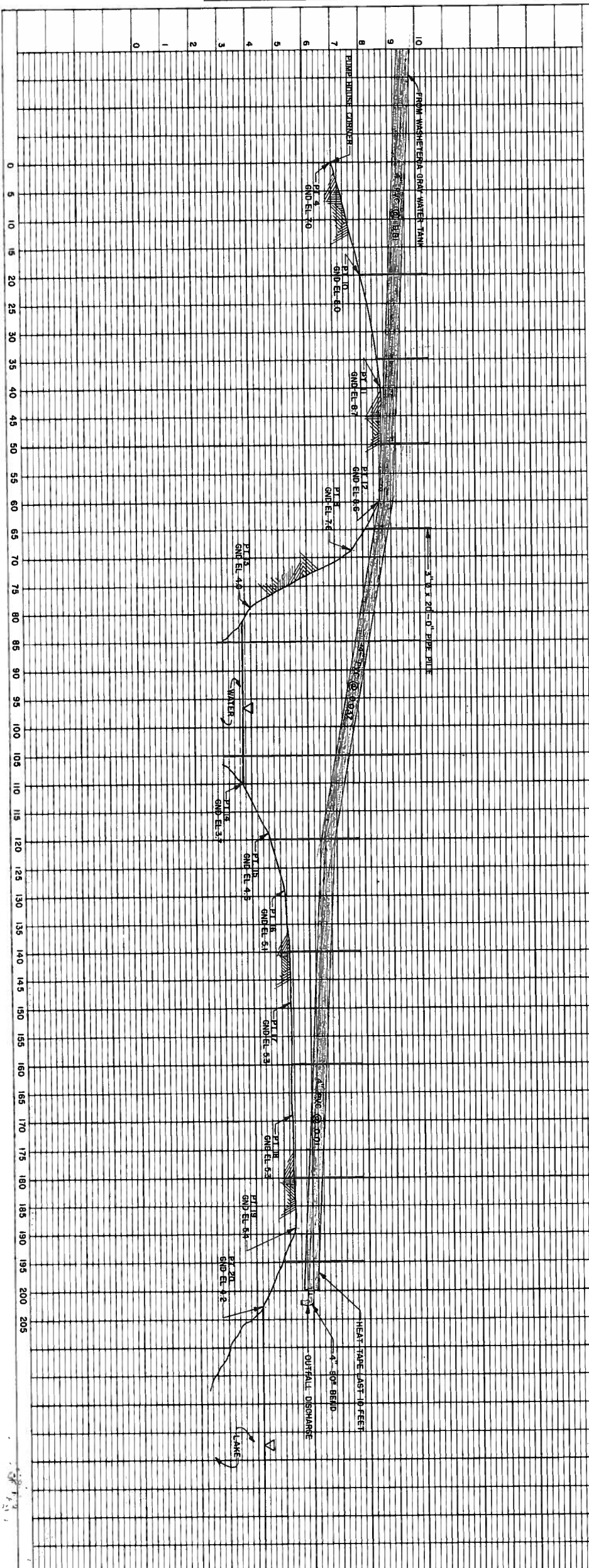
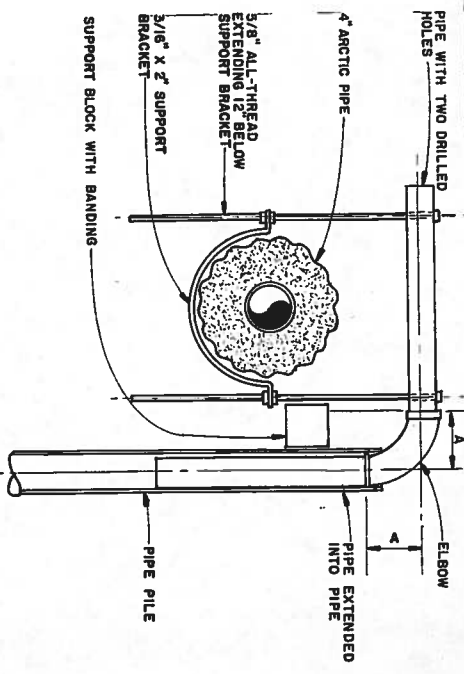
NTS

PLAN VIEW SCALE: 1" = 50'

PROFILE SCALE: 1" = 10'

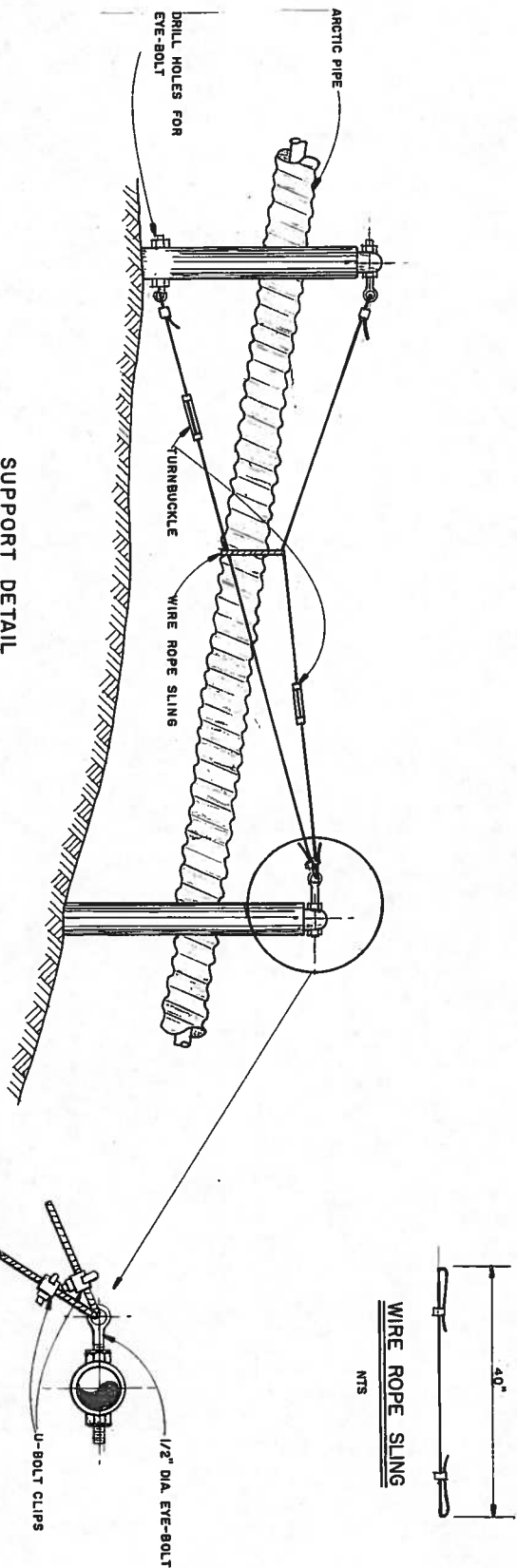
HORIZ. 1" = 10'

VERT. 1" = 2'

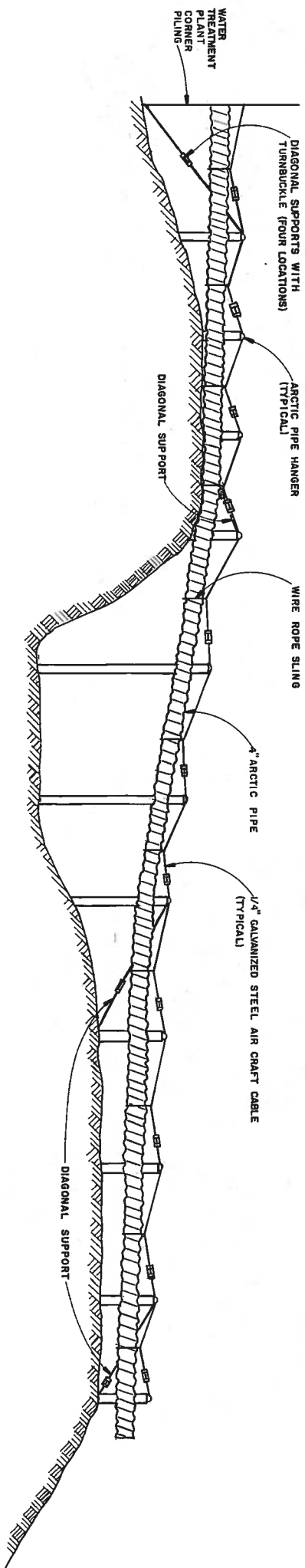


U.S. Department of Health & Human Services		SHEET NO. C-1
Public Health Service		
INDIAN HEALTH SERVICE		
TUNTUTULIAK, ALASKA		
SEWER LINE PLAN AND PROFILE		
PUBLIC LAW 86-121 PROJECT		
PROJECT NO. AN-81-263		
DATE: 5/21/82	CHECKED BY: [Signature]	DATE: 5/21/82
SANITATION FACILITIES CONSTRUCTION BRANCH		
ENVIRONMENTAL HEALTH BRANCH		
ALASKA NATIVE HEALTH AREA OFFICE		
ANCHORAGE, ALASKA		

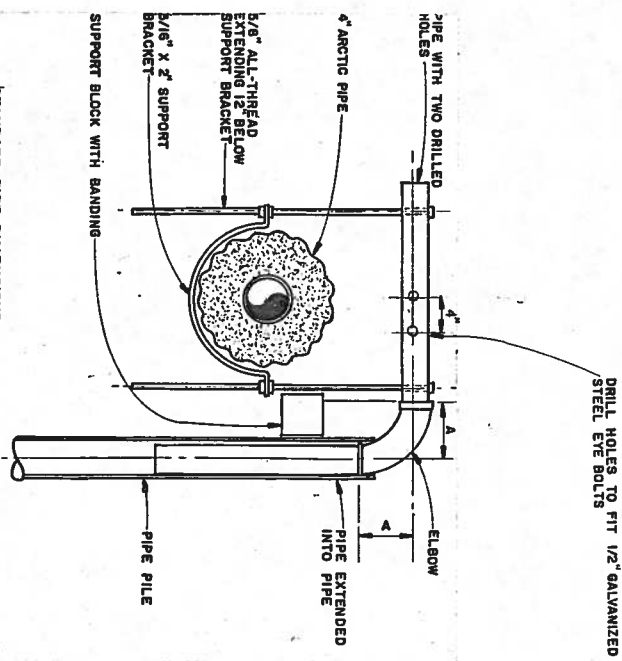
2/8/84 AS BUILT PCS



SUPPORT DETAIL
NTS



OUTFALL LINE DETAIL
NTS



STANDARD PIPE DIMENSIONS

NOMINAL SIZE	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
O.D.	1.900	2.815	2.876	3.500	4.000	4.500
I.D.	1.610	2.061	2.459	3.068	3.548	4.026
COUPLING O.D.	2.200	2.150	3.250	4.000	4.625	5.000
ELBOW, DIM. A	4.000	1.500	5.000	5.500	6.000	6.500

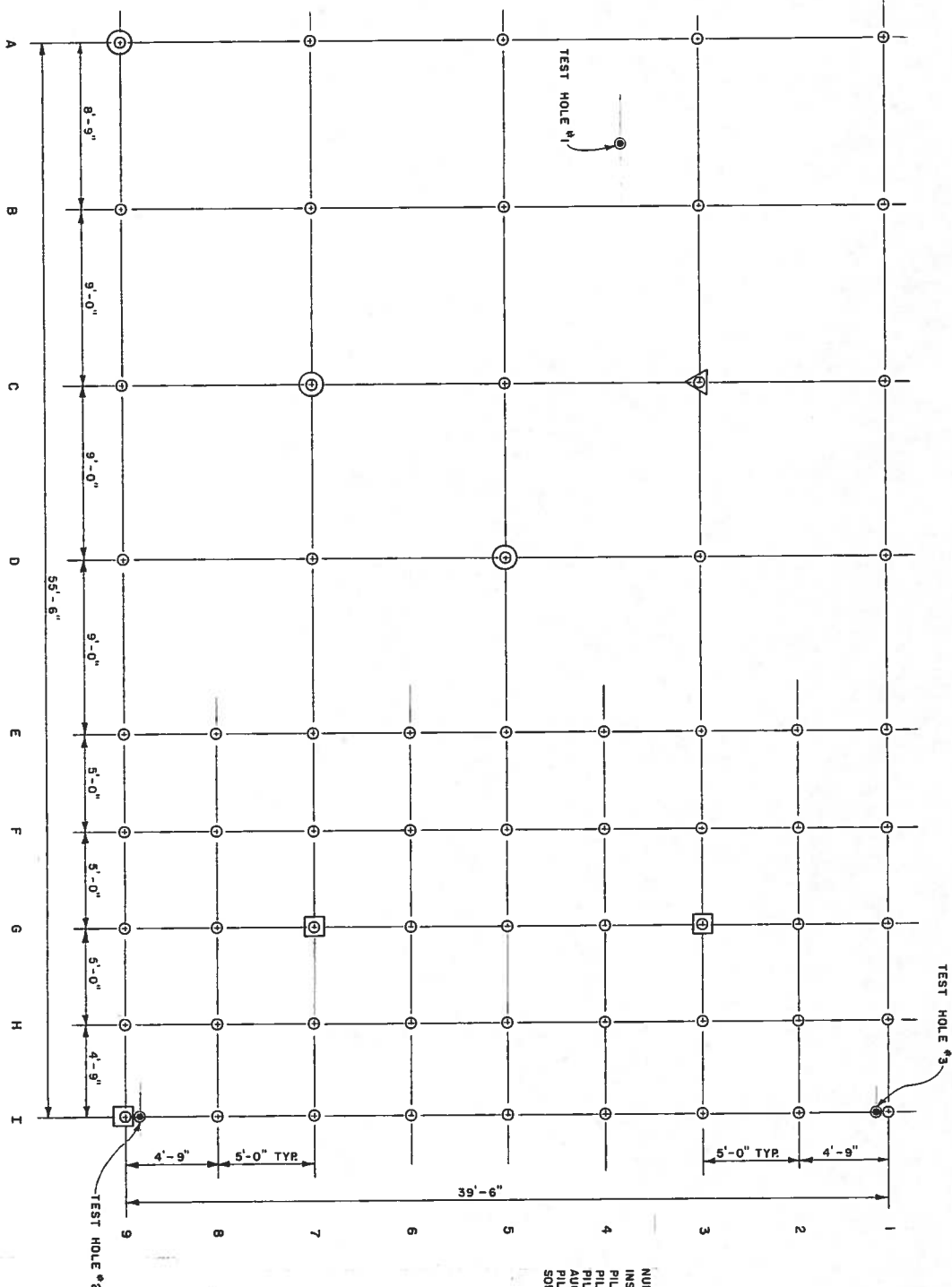
ARCTIC PIPE HANGER
NTS

Design Engineer Maintenance Review Material Take off		U. S. Department of Health, & Human Services Public Health Service Indian Health Service TUNTUTULIAK, ALASKA OUTFALL LINE DETAILS PUBLIC LAW 86-121 PROJECT PROJECT NO. AN-81-263 DRAWN BY: J. WIRSCHBAUM DATE: AUGUST, 1982 CHECKED BY: DATE:		SHEET NO. C-3 OF TOTAL SHEETS
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA				

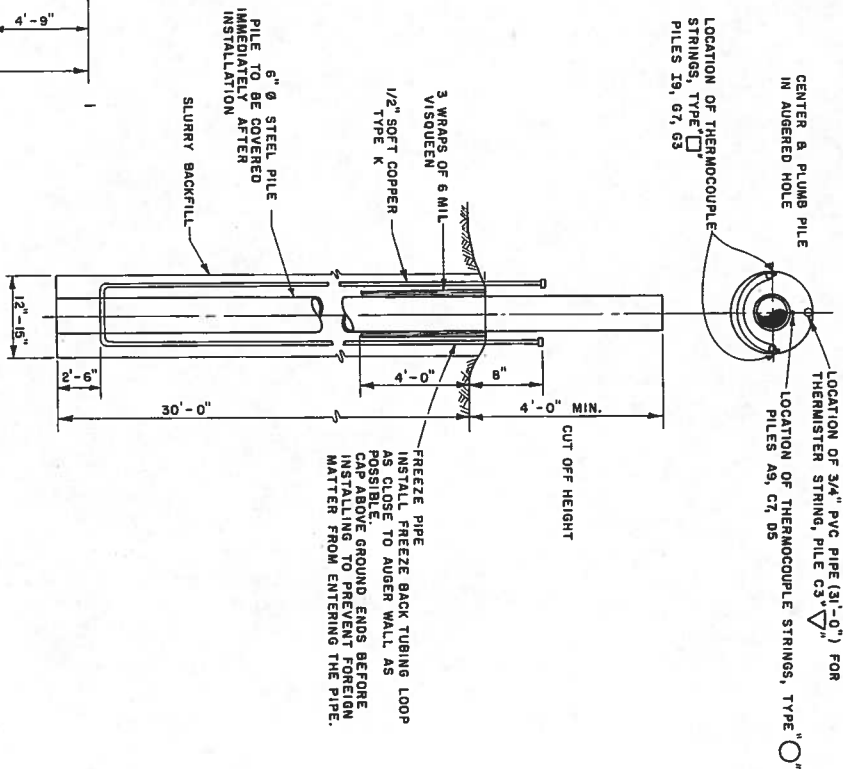
-
- Technical drawings of two mechanical assemblies, labeled 'a' and 'b', showing side and front views with dimensions.
- Assembly a:**
- Side View:** Shows a component with a total width of 1'-2". It has a central section 8" wide and two side sections 3" wide each. A 5/8" x 8" slotted hole is indicated. The component is made from 1/4" steel plate. Dimensions for the side view include 1'-2", 3", 8", 3", 1/2", 4", 1/4", and 3 1/4".
 - Front View:** Shows a component with a total width of 8". It has a central section 8" wide and two side sections 3" wide each. A 5/8" x 8" slotted hole is indicated. The component is made from 1/4" steel plate. Dimensions for the front view include 8", 3", 8", 3", 1/2", 4", 1/4", and 5 1/4".
- Assembly b:**
- Side View:** Shows a component with a total width of 1'-2". It has a central section 8" wide and two side sections 3" wide each. A 5/8" x 8" slotted hole is indicated. The component is made from 1/4" steel plate. Dimensions for the side view include 1'-2", 3", 8", 3", 1/2", 4", 1/4", and 3 1/4".
 - Front View:** Shows a component with a total width of 8". It has a central section 8" wide and two side sections 3" wide each. A 5/8" x 8" slotted hole is indicated. The component is made from 1/4" steel plate. Dimensions for the front view include 8", 3", 8", 3", 1/2", 4", 1/4", and 5 1/4".

(45 REQ'D)
SCALE: 1/2"=1'-0"

(20 REQ'D)
SCALE: 1 1/2"=1'-0"



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



NTS

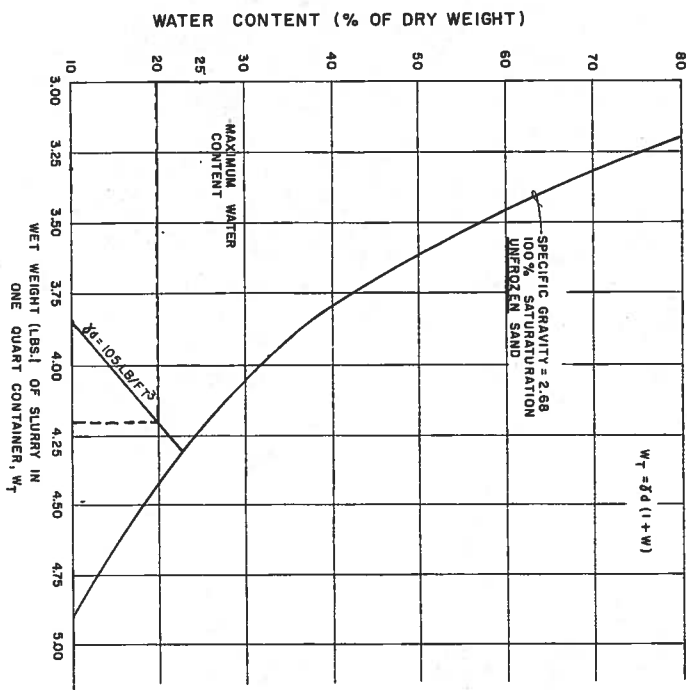
NUMBER OF PILES	INSTALLATION METHOD	65
PILE LENGTH		PRE-PAUGERED HOLE W/SLURRY BACKFILL
PILE DEPTH	35 FEET	
PILE DIAMETER	6 5/8" O.D., 6" I.D.	
AUGERED HOLE DIAMETER	12-15 INCHES	
PILE TYPE	STEEL PIPE	
SOIL TYPE	SEE SOIL LOG	

THE STRING SHALL CONSIST OF 7 THERMOCOUPLES WITH BURIED LENGTHS: 2'-6", 5 FT, 10 FT, 15 FT, 20 FT, 25 FT, 30 FT. THE THERMOCOUPLES SHALL HAVE 2 FT. OF LEAD LENGTH ABOVE GROUND LEVEL.

STRING TYPE ☐ SHALL CONSIST OF TWO SUB-STRINGS EACH ATTACHED TO THE 1/2" COPPER. THE SUB-STRINGS SHALL CONSIST OF THERMOCOUPLE BURIED LENGTHS AS FOLLOWS:

SUB-STRING "A", 2'-6", 10 FT, 20 FT, 30 FT

SUB-STRING "B", 5 FT, 15 FT, 25 FT



NOTE:
SLURRY INSTALLATION-
ADD SLURRY CONTINUOUSLY FOR EACH PILE & CONSOLIDATE
BY USE OF A SMALL DIAMETER CONCRETE VIBRATOR.
MAX. SLURRY TEMPERATURE - 40° F.

SLURRY WATER CONTENT—MAX. WATER CONTENT ALLOWABLE IS 20%. SAND & WATER MIXTURE SHOULD BE 2.5 LBS. (1.135 KG.) PER CUBIC FOOT (0.028 M³) OF MIXTURE. IMPORTANT: USE CONCRETE VIBRATOR TO CONSOLIDATE ONE QUART SAND SAMPLE BEFORE WEIGHING.

PILE DEPTHS—ALL PILES SHALL BE SLURIED A MINIMUM OF 30 FT. DEEP. IF THE TOTAL OF ICE LENSES IS 70 (21 FT.) OR SINGLE LENS ENCOUNTER ONE (1 FT.) OR GREATER, THE PILE DEPTH SHALL BE INCREASED AN AMOUNT EQUAL TO THE ICE LENSE(S) THICKNESS.

DATE	AS BUILT	REVISIONS	INITIALS
2/2/84			PCS

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

TUNTUTULIAK, ALASKA

PILE LAYOUT & INSTALLATION

PUBLIC LAW 86-121 PROJECT
PROJECT NO. - AN81-263

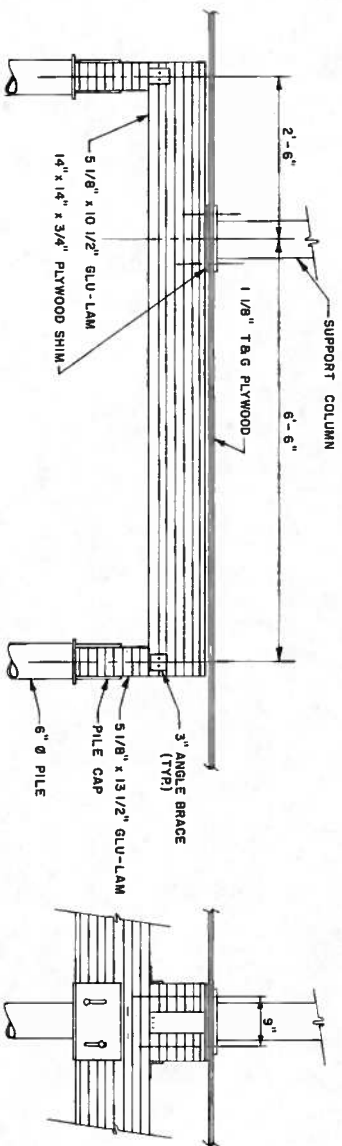
TOTAL.

DRAWN BY: J D
DATE: JAN. 1982

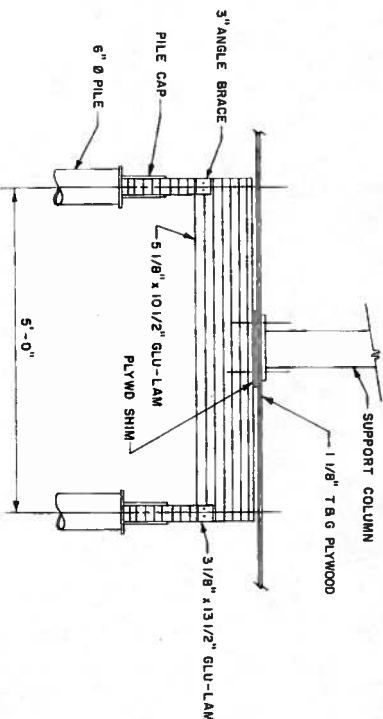
CHECKED BY
DATE _____

SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH

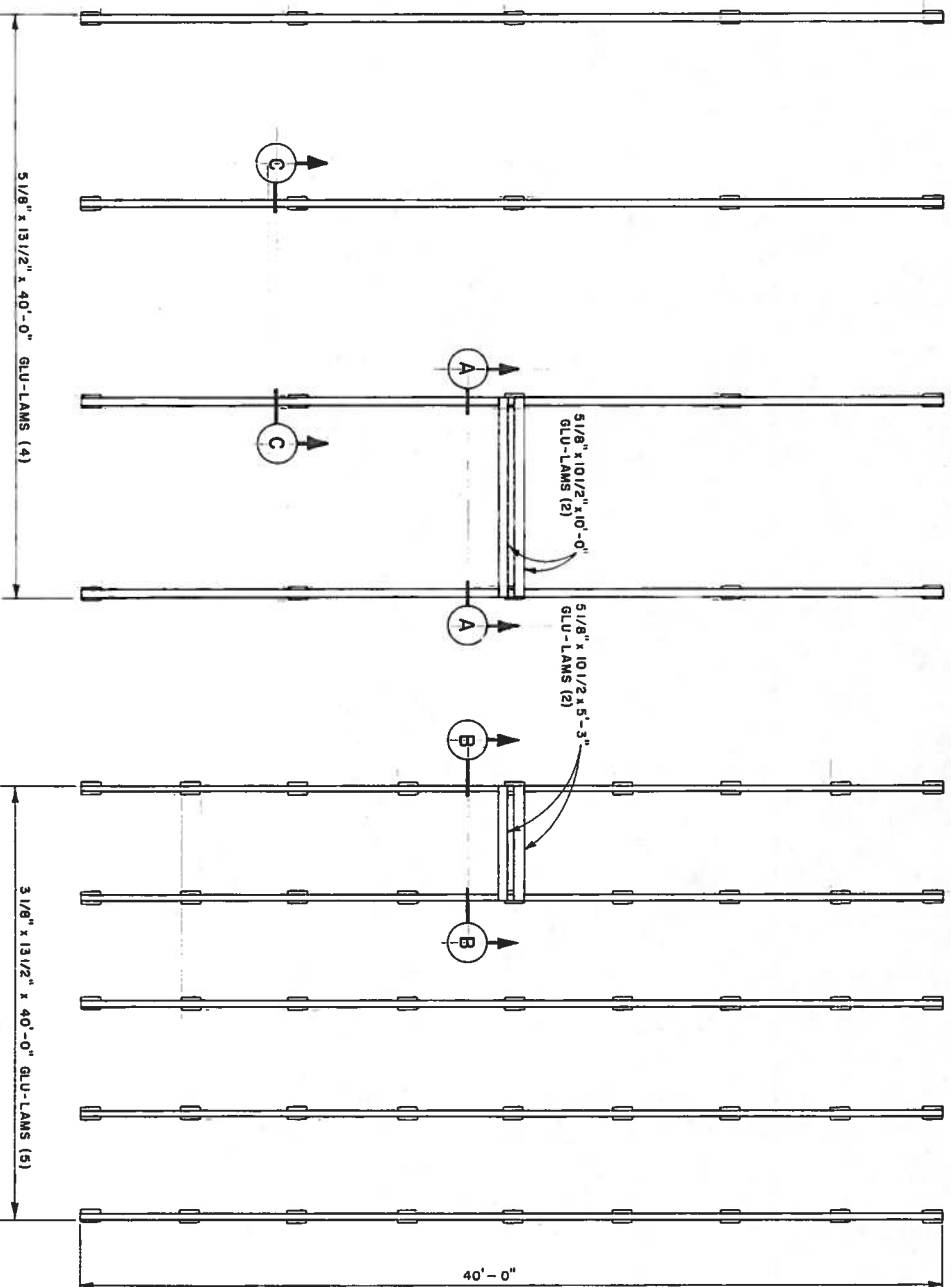
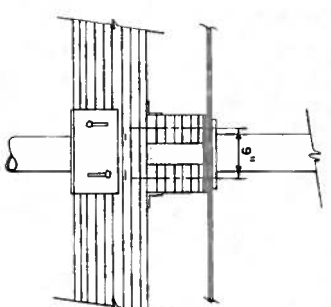
ALASKA AREA NATIVE HEALTH
ANCHORAGE, ALASKA



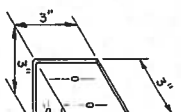
SECTION A-A
SCALE: 3/4" = 1'-0"



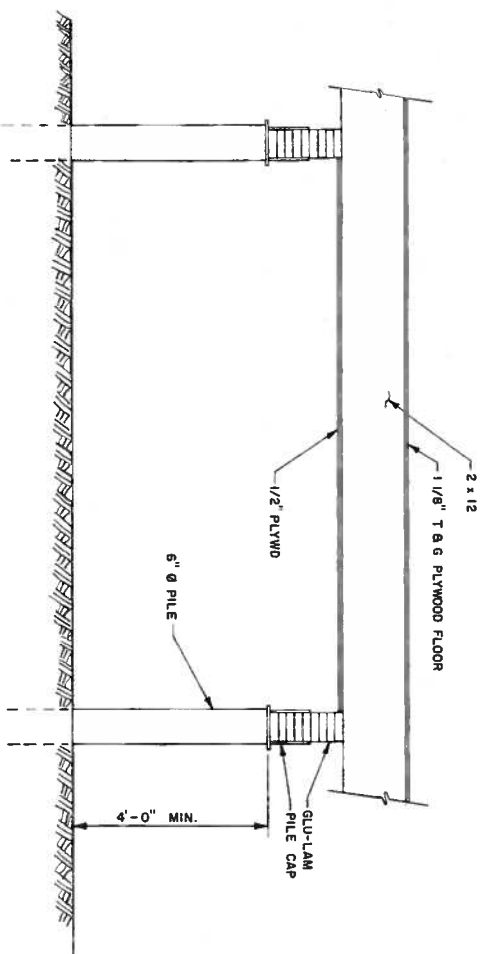
SECTION B-B
SCALE: 3/4" = 1'-0"



GLU-LAM PLACEMENT
SCALE: 1/4" = 1'-0"



ANGLE BRACE
NTS
(8 REQ'D)



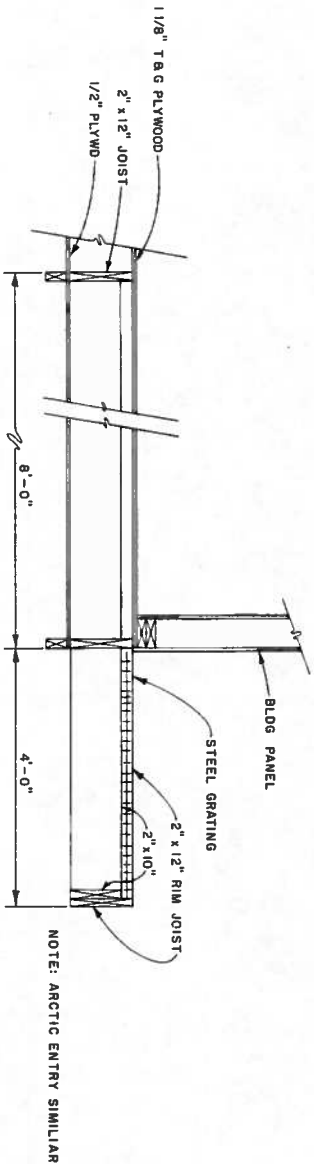
SECTION C-C
SCALE: 3/4" = 1'-0"

NOTE:
GLU-LAM BEAM WEIGHT
3 1/8" x 13 1/2" x 40'-0" — 410 LBS.
5 1/8" x 13 1/2" x 40'-0" — 675 LBS.

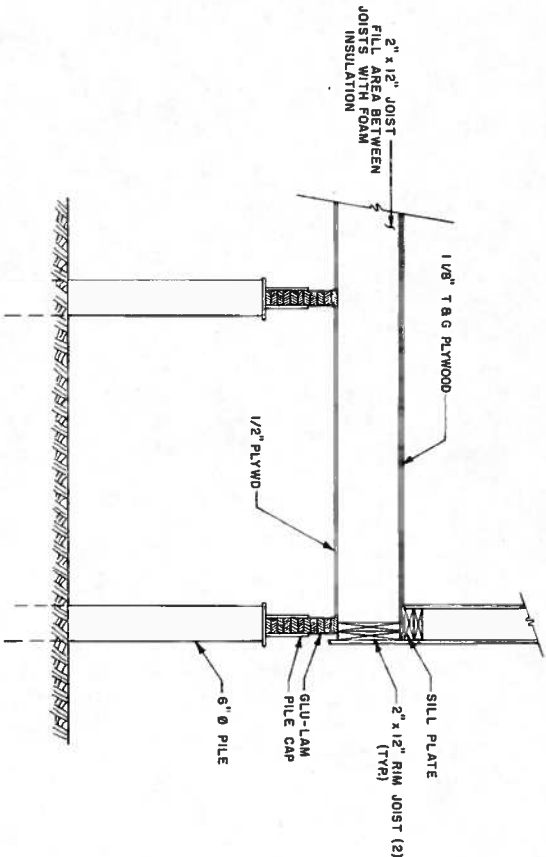
Design Engineer <i>Kevin J. Brown</i>	State of Alaska Professional Engineer No. 14597 Exp. 12/31/95
Maintenance Review	
Material Take-off	

DATE	2/2/84	AS BUILT	REVISIONS	INITIALS
DATE				
DATE				

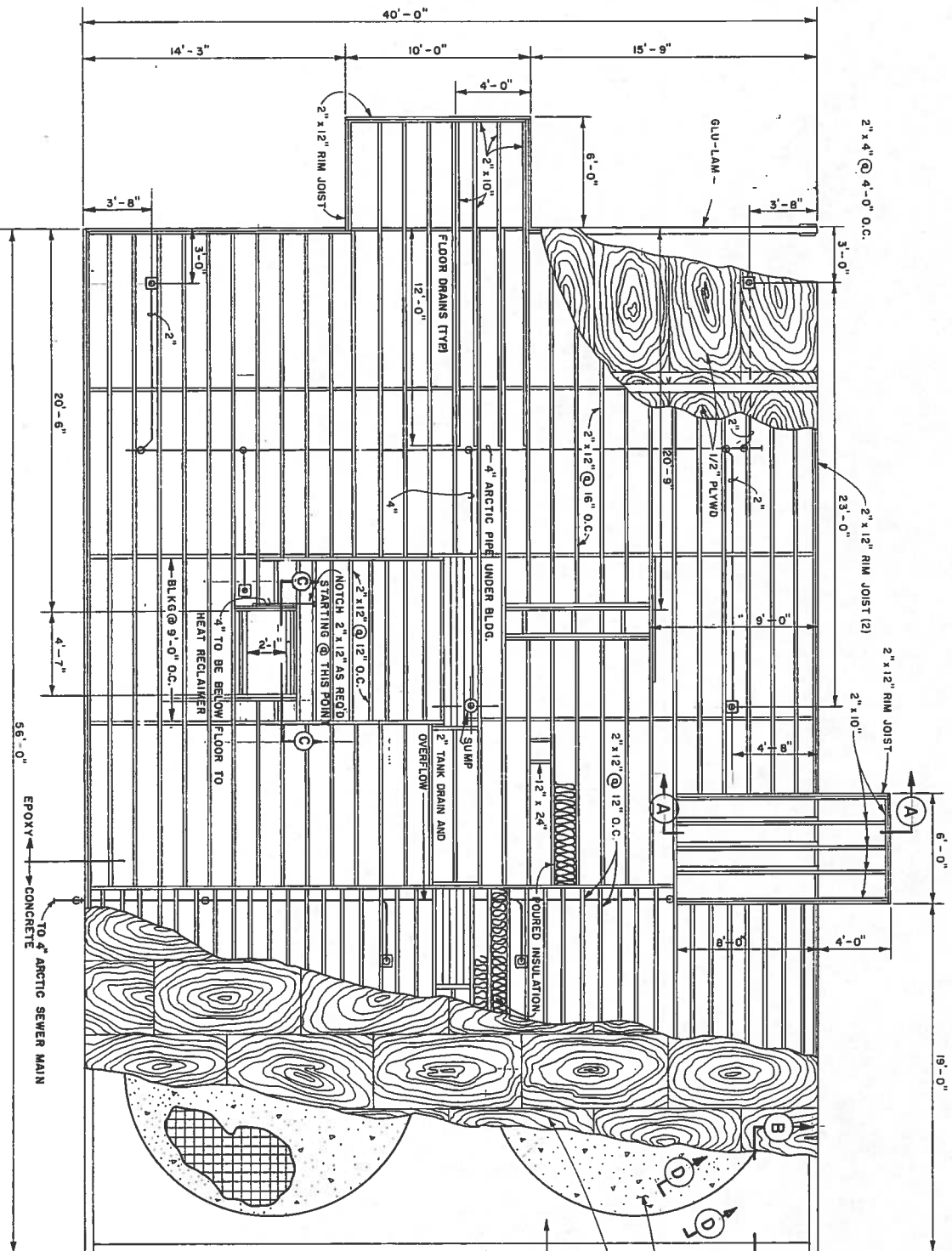
U. S. Department of Health, & Human Services Public Health Service Indian Health Service	SHEET NO. S-2 OF 3 TOTAL SHEETS
TUNTUTULIAK, ALASKA GLU-LAM PLACEMENT	
PUBLIC LAW 86-121 PROJECT PROJECT NO. - AN81-263	
DRAWN BY T.D.	CHECKED BY <i>8/82</i>
DATE FEB. 1982	DATE
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA	



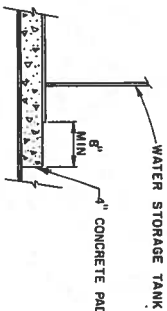
SECTION A-A
(ROTATED 90° CLOCKWISE)



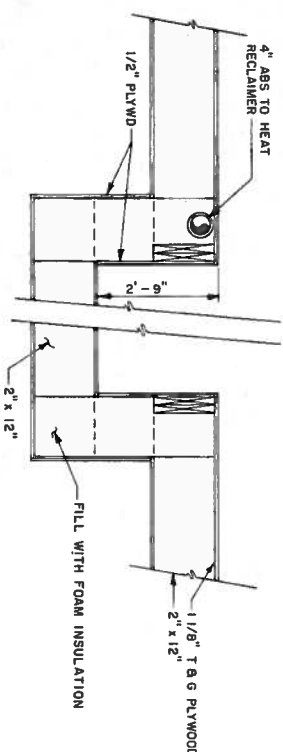
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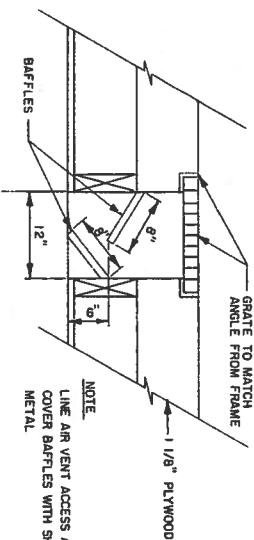
BUILDING DECK PLAN
SCALE: 1/4" = 1'-0"



SECTION D-D
NTS



SECTION C-C
NTS



BOILER INTAKE AIR VENT
NTS

NOTE:
SLOPE ALL WASTE WATER LINES 1/8" PER FT MAX

Design Engineer
Leah D. [Signature]

Supervision Review
[Signature]

Material Take-off
[Signature]

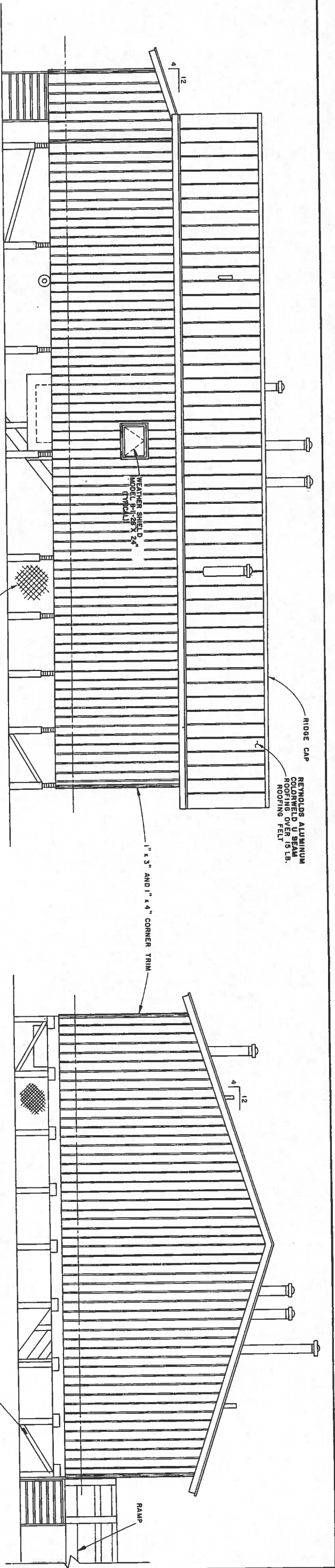
STATE OF ALASKA

1912

Professional Engineer

CE - 05

U. S. Department of Health & Human Services		SHEET NO. S-3	
Indian Health Service		OF 3	
TUNTUTULIAK, ALASKA		TOTAL SHEETS	
DECK PLAN		PROJECT NO. - ANBI - 263	
PUBLIC LAW 86-121 PROJECT		DATE JAN 1982	
SANITATION FACILITIES CONSTRUCTION BRANCH		CHECKED BY <i>[Signature]</i>	
ENVIRONMENTAL HEALTH BRANCH		DATE	
ALASKA AREA NATIVE HEALTH SERVICE		ANCHORAGE, ALASKA	

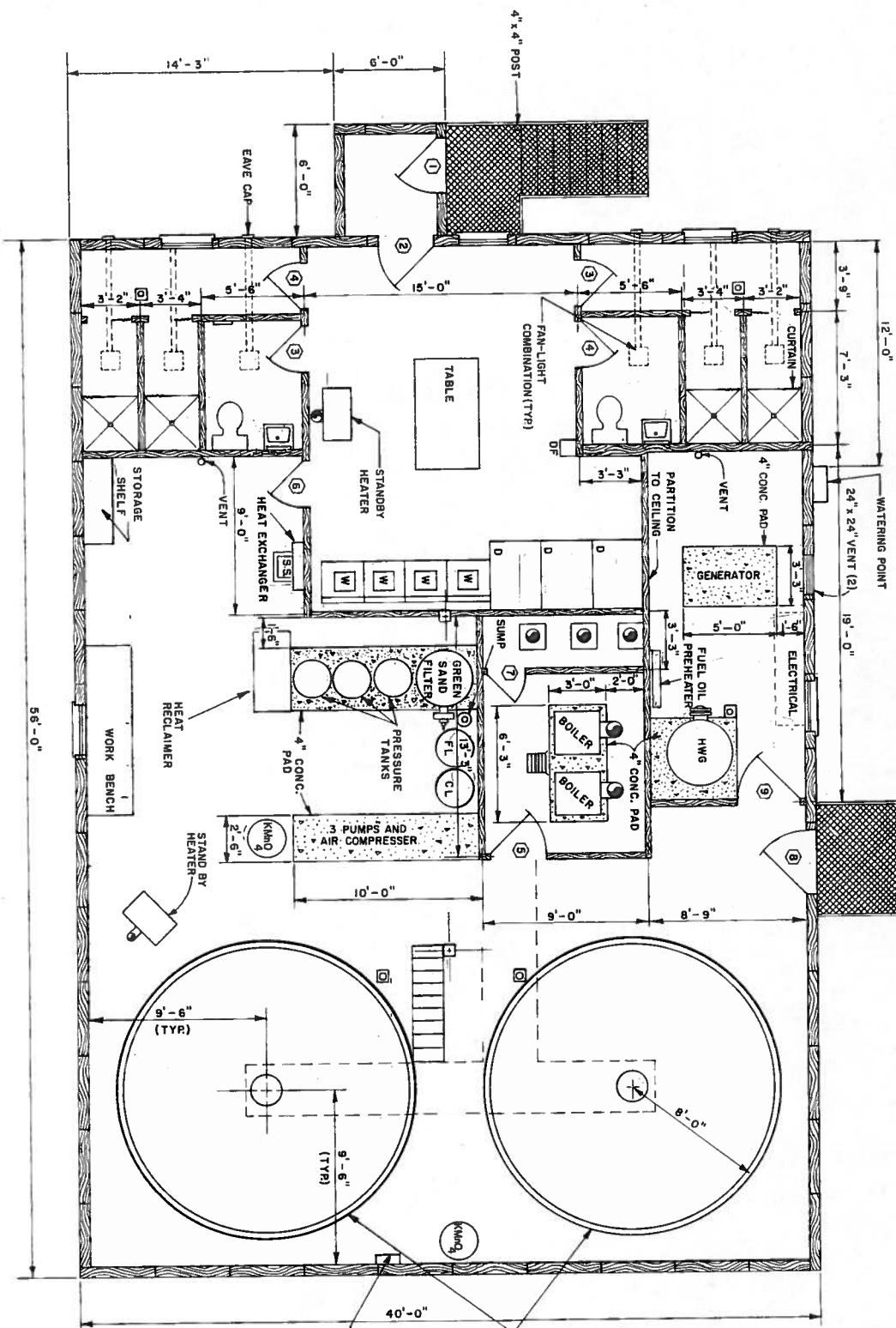


FRONT ELEVATION
SCALE 1/4" = 1'-0"

CHAIN LINK FENCE AROUND PERIMETER OF BLDG. (TYP)

RIGHT END ELEVATION
SCALE 1/4" = 1'-0"

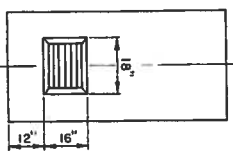
3" OR 4" PIPE DIAGONAL BRACING (TYP FOUR CORNERS ONLY)



FLOOR PLAN
SCALE 1/4" = 1'-0"

DOOR NO	TYPE OF DOOR	TYPE OF FRAME	TYPE OF HINGE	TYPE OF LOCKSET	DOOR CLOSER	TYPE OF THRESHOLD	TYPE OF DOOR BOTTOM	SWING	DOOR SIZE	SEE DETAIL
1	EXTERIOR	WOOD	EXTERIOR	PASSAGE	YES	EXTERIOR	EXTERIOR	L.H.	30' x 68'	A3-A
2	EXTERIOR	WOOD	EXTERIOR	PASSAGE	YES	EXTERIOR	EXTERIOR	R.H.	30' x 68'	A3-B
3	INTERIOR	WOOD	INTERIOR	PASSAGE	YES	NONE	INTERIOR	L.H.	25' x 68'	A3-C
4	INTERIOR	WOOD	INTERIOR	PASSAGE	YES	NONE	INTERIOR	R.H.	25' x 68'	A3-C
5	INTERIOR	METAL	INTERIOR	PASSAGE	NO	INTERIOR	INTERIOR	L.H.	30' x 68'	A3
6	INTERIOR	WOOD	INTERIOR	PASSAGE	NO	INTERIOR	INTERIOR	R.H.	30' x 68'	A3-C
7	FIRE	METAL	INTERIOR	PASSAGE	YES	INTERIOR	INTERIOR	L.H.	25' x 68'	A3-A
8	EXTERIOR	WOOD	EXTERIOR	ENTRANCE	NO	EXTERIOR	EXTERIOR	R.H.	20' x 68'	A3-A
9	FIRE	METAL	EXTERIOR	PASSAGE	YES	NONE	EXTERIOR	L.H.	35' x 68'	A3

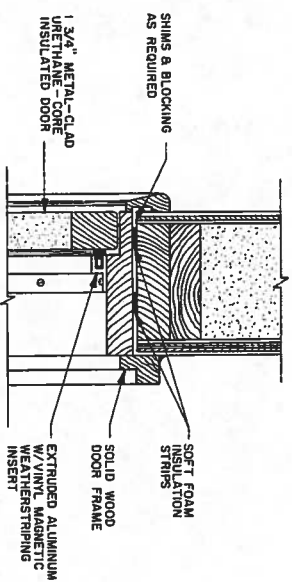
STEEL DOOR GRILL FOR BATHROOM AND SHOWER DOORS (TITUS MODEL 1-700-BF, WHITE, 16 x 18)



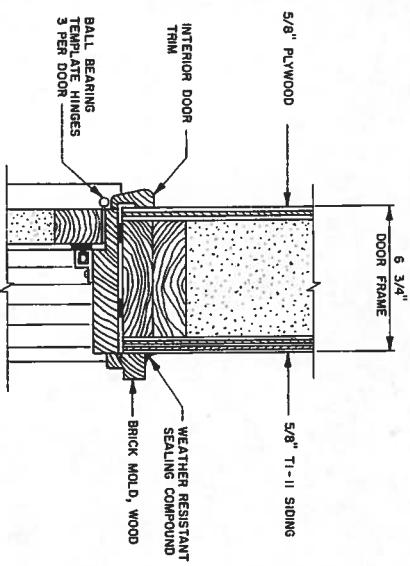
- NOTES:
1. SHOWER STALL, FLOOR SHALL BE BUILT UP 1'-0".
 2. BOILER ROOM SHALL HAVE 1 LAYER OF SHEET ROCK ON WALLS & CEILING ONLY.
 3. ALL PUBLIC AREAS TO RECEIVE 3/8" FORMICA PANELS.
 4. ALL PUBLIC AREAS & BOILER ROOM TO HAVE 8'-0" CEILINGS; ALL OTHER AREAS TO BE OPEN TO CEILING.
 5. ALL OTHER INTERIOR PARTITIONS SHALL RECEIVE ONE LAYER OF SHEET ROCK.
 6. NO SHEET ROCK ON BUILDING PANELS.

STEEL DOOR GRILL
NTS

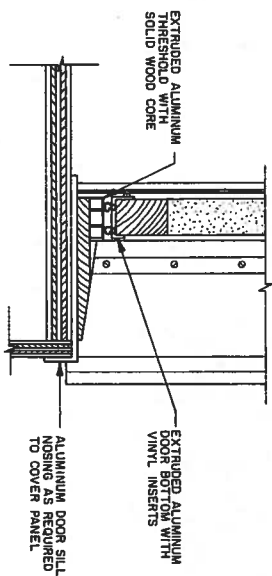
Design Engineer <i>Leah D. Hinkle</i>		STATE OF ALASKA Department of Health & Human Services Public Health Service Indian Health Service	
McIntire Review		TUNTUTULIAK, ALASKA	
Material Take-off		FLOOR PLAN AND ELEVATIONS	
DATE: 2/2/84		PUBLIC LAW 86-121 PROJECT	
PROJECT NO. - ANB1 - 263		TOTAL SHEETS 12	
DRAWN BY: JD		SHEET NO. 11	
DATE: JAN 1982		OF 12	
CHECKED BY: <i>K. Bond</i>		TOTAL SHEETS 12	
DATE: 8/82		SANITATION FACILITIES CONSTRUCTION BRANCH	
ALASKA AREA NATIVE HEALTH SERVICE		ANCHORAGE, ALASKA	



HEAD

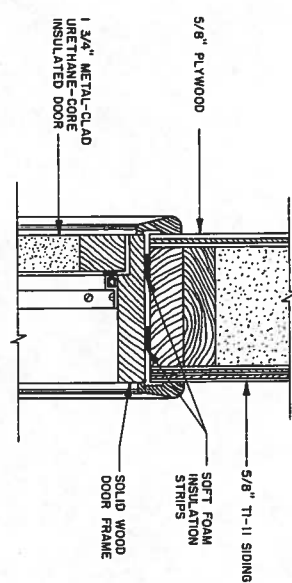


JAMB

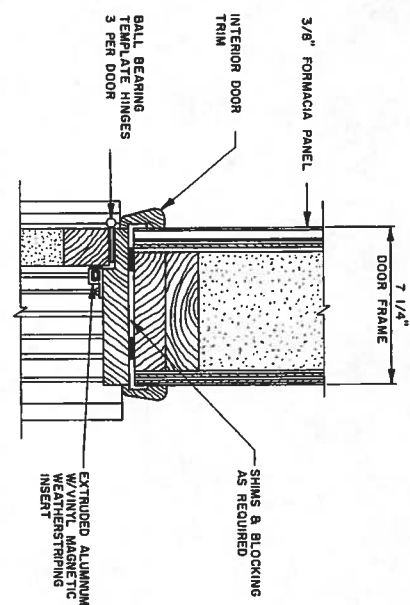


SILL

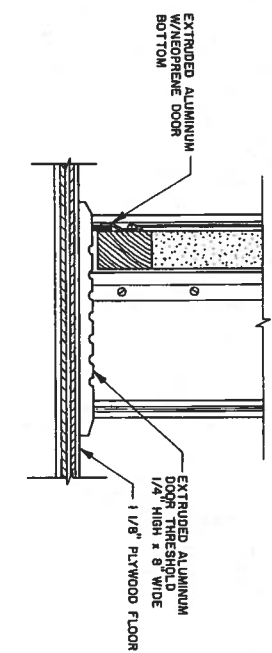
SECTION A
SCALE: 3" = 1'-0"



HEAD

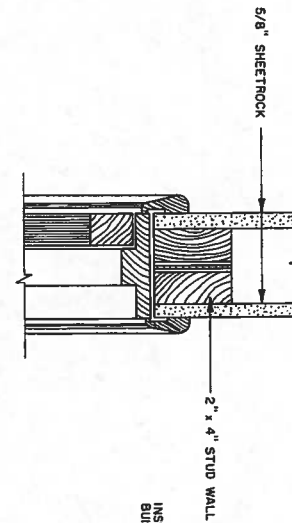


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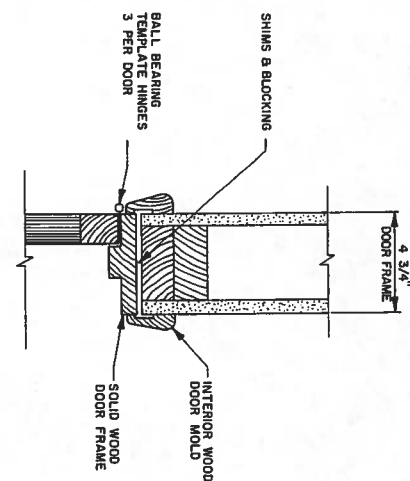


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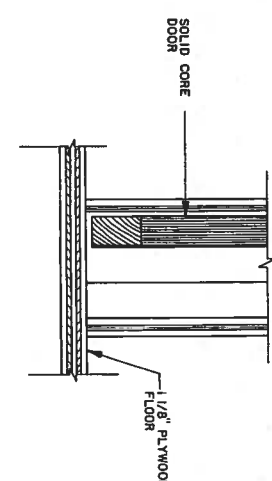
SECTION B
SCALE: 3" = 1'-0"



HEAD

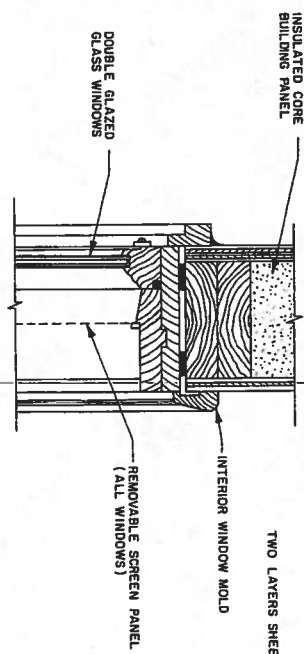


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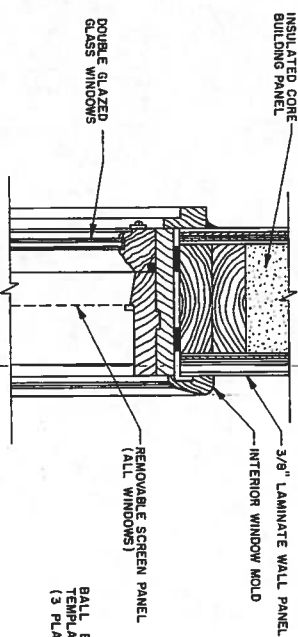


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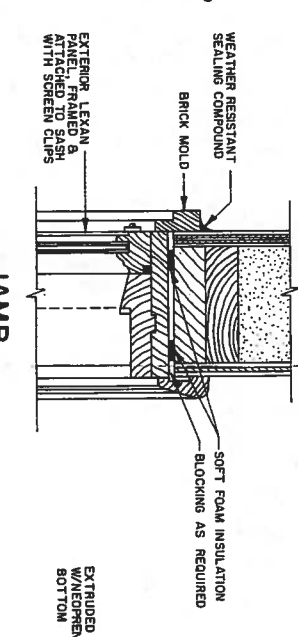
SECTION C
SCALE: 3" = 1'-0"



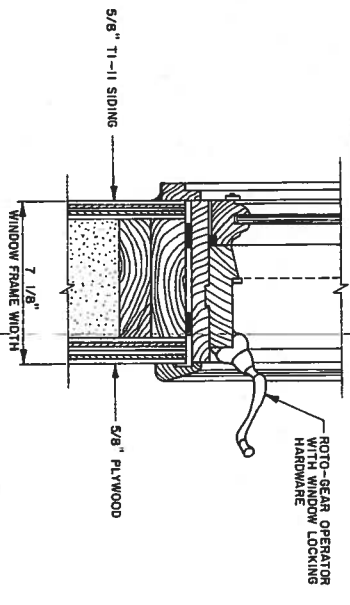
HEAD



HEAD

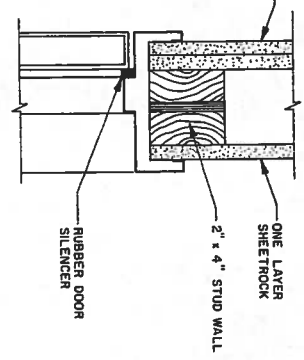


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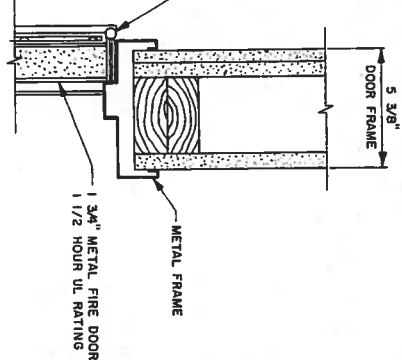


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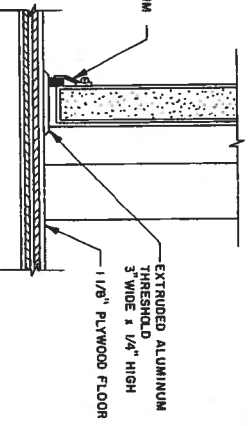
TYPICAL WINDOW
NTS



HEAD



JAMB



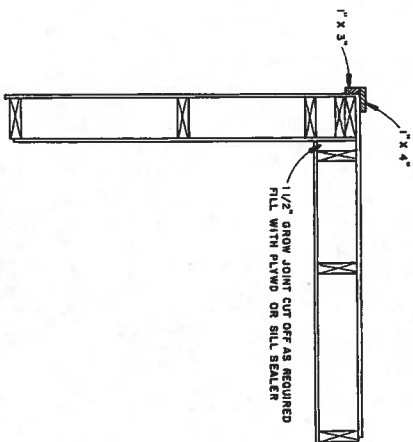
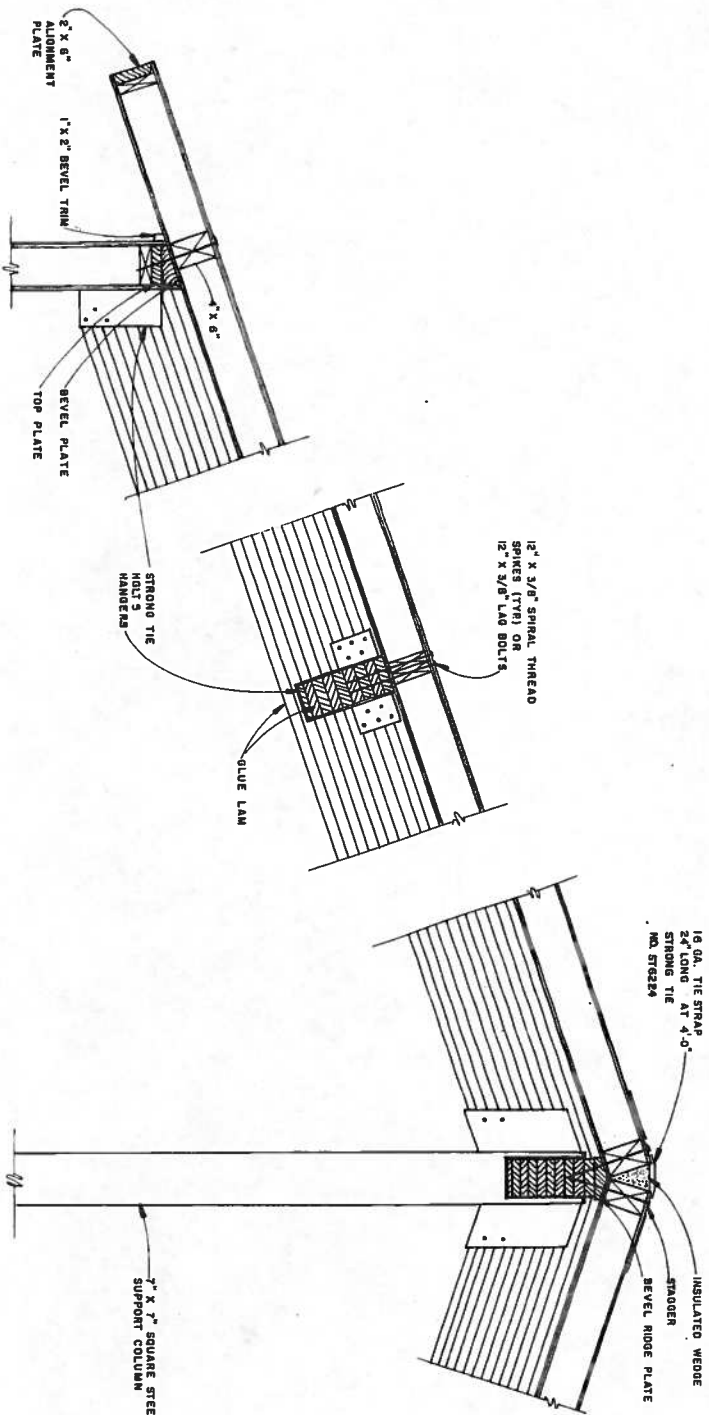
SILL

FIRE DOOR
NTS

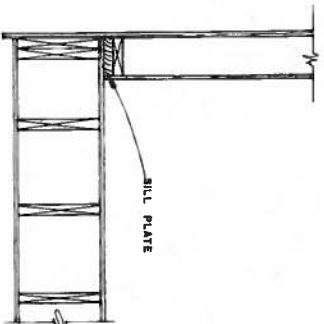
Design Engineer <i>Leon J. Williams</i>		
Check Engineer <i>W. Williams</i>		
Material Take-off 		

U. S. Department of Health, & Human Services Public Health Service Indian Health Service	
TUNTUTULIAK, ALASKA DOOR & WINDOW SECTIONS & DETAILS	
PUBLIC LAW 96-121 PROJECT PROJECT NO. AN-BI-263	SHEET NO. A-3 OF 12 TOTAL SHEETS
DRAWN BY: <i>W. Williams</i> DATE: 5/18/85	CHECKED BY: <i>W. Williams</i> DATE: 8/18/85

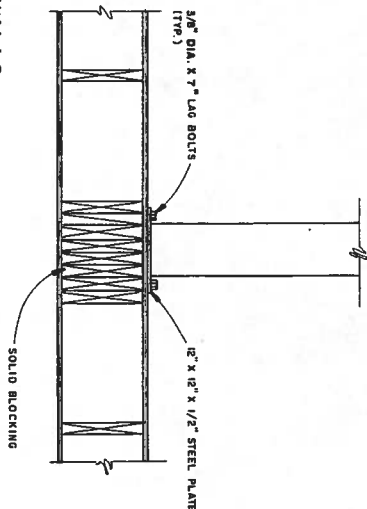
SANITATION FACILITIES CONSTRUCTION BRANCH
 ENVIRONMENTAL HEALTH BRANCH
 ALASKA AREA INDIAN HEALTH SERVICE
 ANCHORAGE, ALASKA



TYPICAL CORNER
SCALE: 1"=1'-0"



TYPICAL ROOF AND WALLS CONNECTIONS
SCALE: 1"=1'-0"

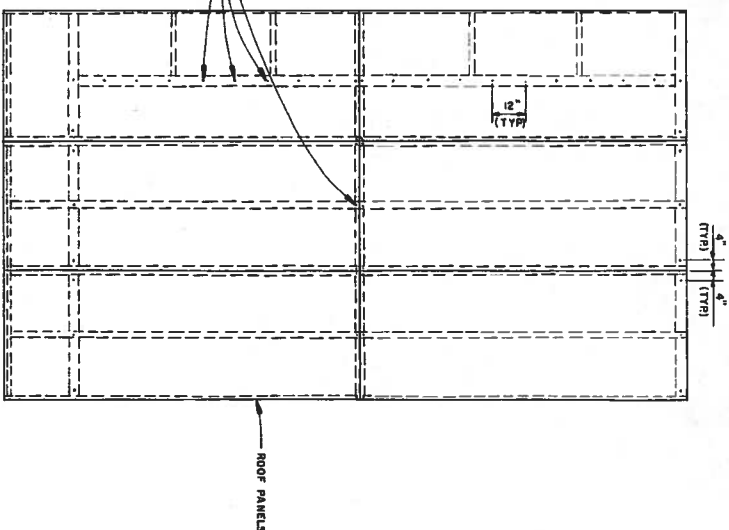


NAILING SCHEDULE

SILL PLATES WALL TOP PLATES PRE-CUT RIDGE TOP PLATE	16d GALVANIZED AT 16" O.C.
WALL AND ROOF PANEL EDGES (INSIDE AND OUT) TOP PLATES THROUGH PLYWOOD (INSIDE AND OUT) PLYWOOD TO RIM JOIST	8d GALVANIZED AT 6" O.C.
TIE STRAP	28-16d GALVANIZED EASTRAP
ROOF PANELS	3/8" X 12" SPIRAL THREADED SPIKES 12" O.C. RIDGE, PURLIN AND SIDEWALLS 24" O.C.

BEAM HANGER SCHEDULE

RAFTER BEAM TO PURLIN BEAM SADDLE (HGLS 5)	1/4" X 2 1/2" HIGH STRENGTH NAIL
SIDE WALL TO RAFTER BEAM (HGLT 5)	3/8" X 6" BOLTS - WALL BEAMS AND RIDGE BEAMS (HGLS 5)
SQUARE STEEL SUPPORT COLUMN	3/8" X 7" BOLTS
SEE PANEL BUILDING ERECTION INSTRUCTIONS FOR INSTALLATION PROCEDURE	



ROOF PANELS TIE DOWN
SCALE: 3/8"=1'-0"

David J. Smith
Design Engineer

Maintenance Review

Material Take-off

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

TUNTUTULIAK, ALASKA

DETAILS
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-81-263

DRAWN BY: APRIL, 82
DATE: 8/82

CHECKED BY: *[Signature]*
DATE: 8/82

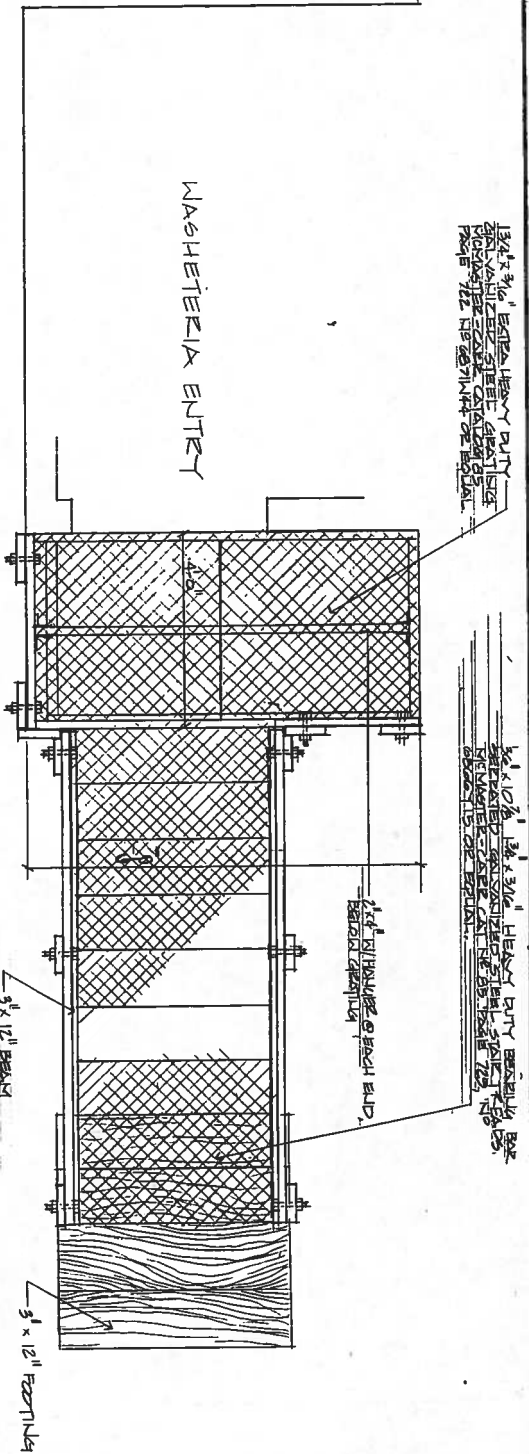
SANTATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA

SHEET NO. A-4
OF 12
TOTAL SHEETS

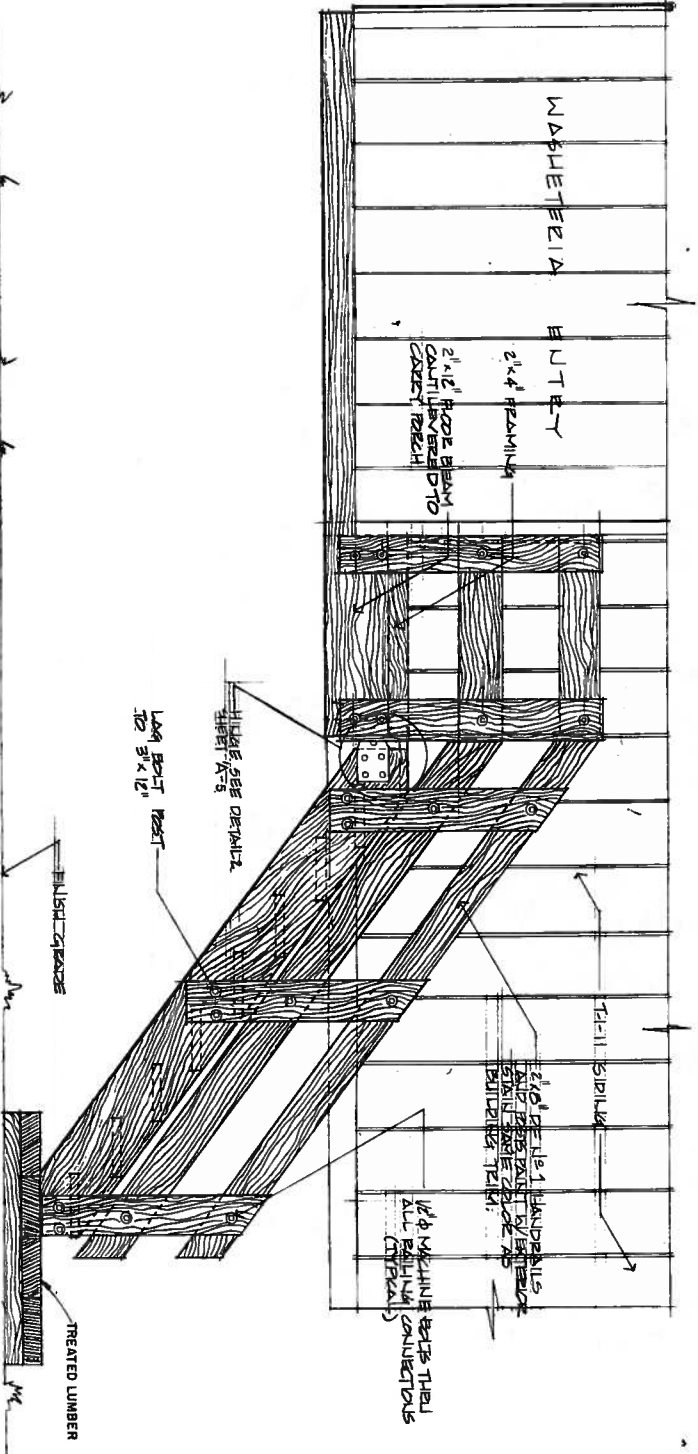
REVISIONS

DATE 2/2/84 AS BUILT

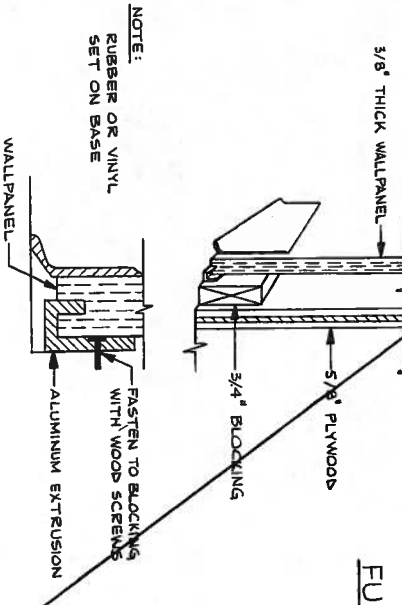
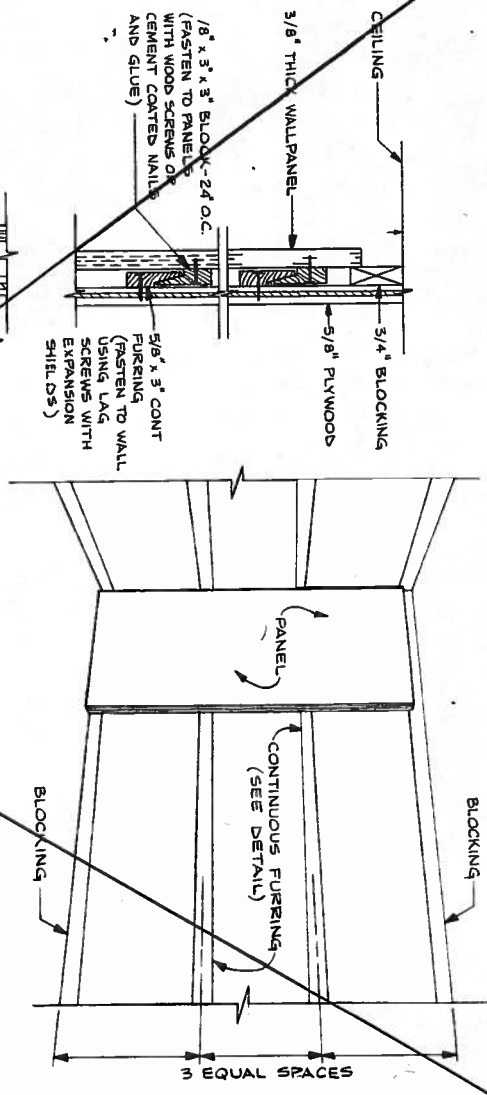
INITIALS



WASHETERIA ENTRY STAIRWELL - PLAN
SCALE: 3/4" = 1'-0"

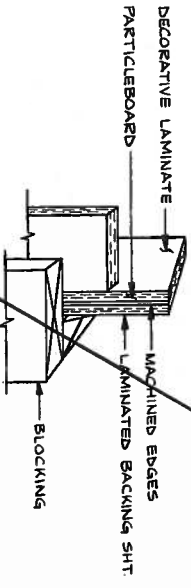


WASHETERIA ENTRY STAIRWELL - SIDE
SCALE: 3/4" = 1'-0"



FURRING AND BLOCKING DETAILS
NTS

PANEL SPLICE
NTS

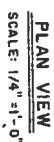
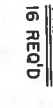
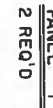


INSIDE CORNER
NTS

OUTSIDE CORNER
NTS

PANEL ATTACHMENT DETAILS

Sign Engineer	Conference Review	detail Take-off
DRAWN BY: <i>Paul J. Hansen</i> CHECKED BY: <i>R. Hansen</i>		
DATE: 5/19/82	PROJECT NO. AN-81-263	TOTAL SHEETS 12
SHEET NO. A-6		
WASHETERIA STAIRWAY & PANEL ATTACHMENT DETAILS		
PUBLIC LAW 86-121 PROJECT		
U. S. Department of Health, & Human Services		
Indian Health Service		
TUNTUTULIAK, ALASKA		
SANITATION FACILITIES CONSTRUCTION BRANCH		
ENVIRONMENTAL HEALTH BRANCH		
ALASKA NATIVE HEALTH SERVICE		
ANCHORAGE, ALASKA		



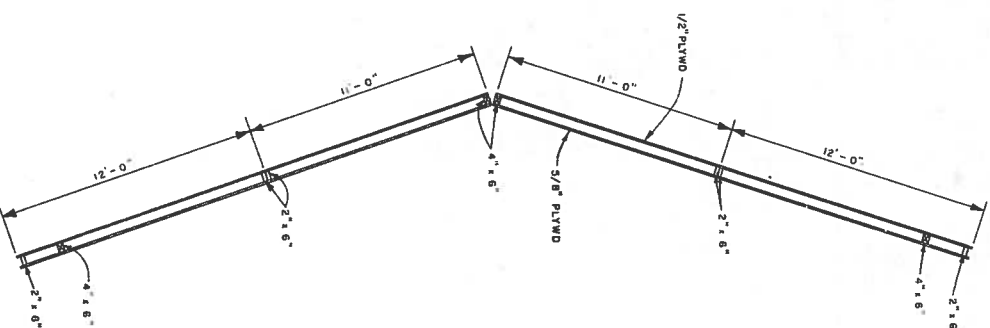
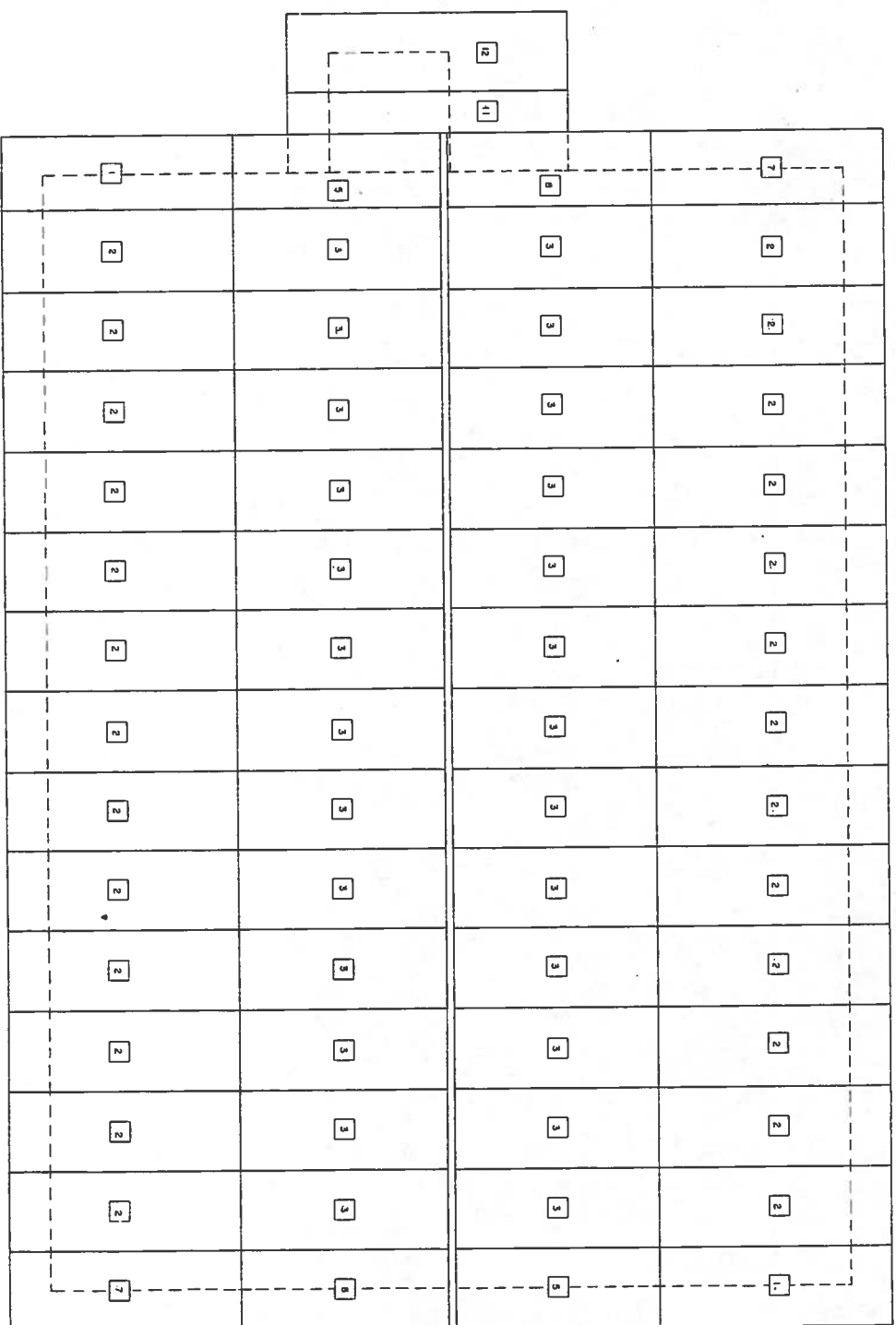
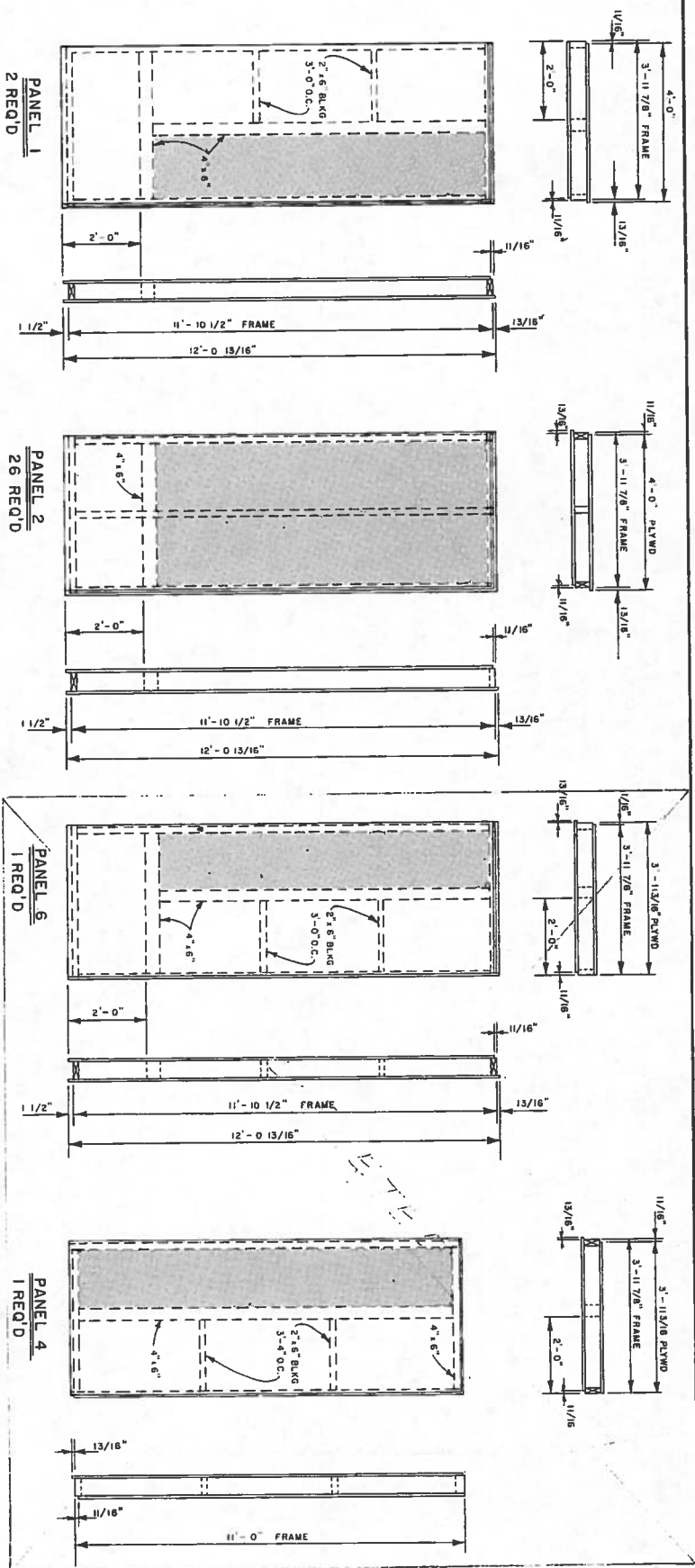
2/2/84	AS BUILT	PCS
DATE	REVISIONS	INITIAL

PLAN & SIDEWALL PANEL
PUBLIC LAW 86-121 PROJECT
PROJECT NO. 81-263

DRAWN BY: T. DUBRAY	CHECKED BY: <i>[Signature]</i>
DATE: NOVEMBER 1991	DATE: 11/18/91

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

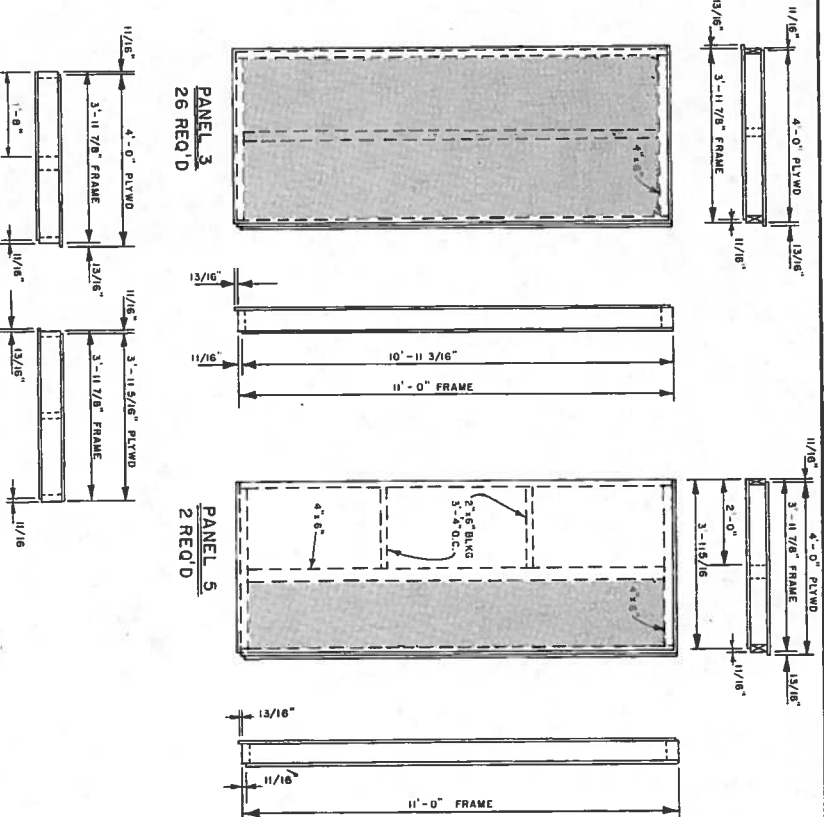
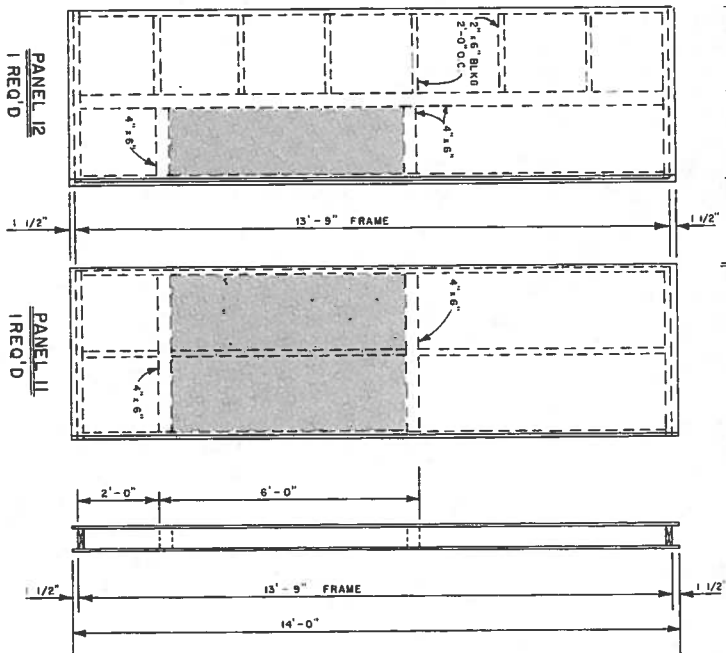
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LEGEND

INSULATED AREA

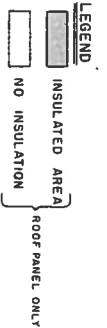
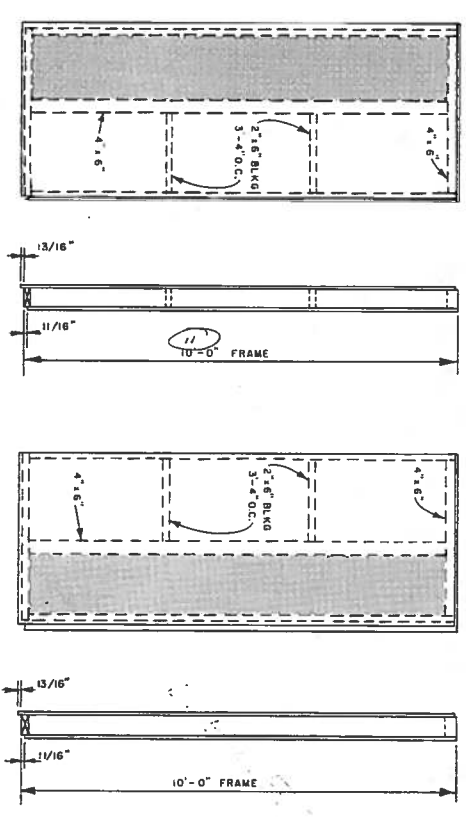
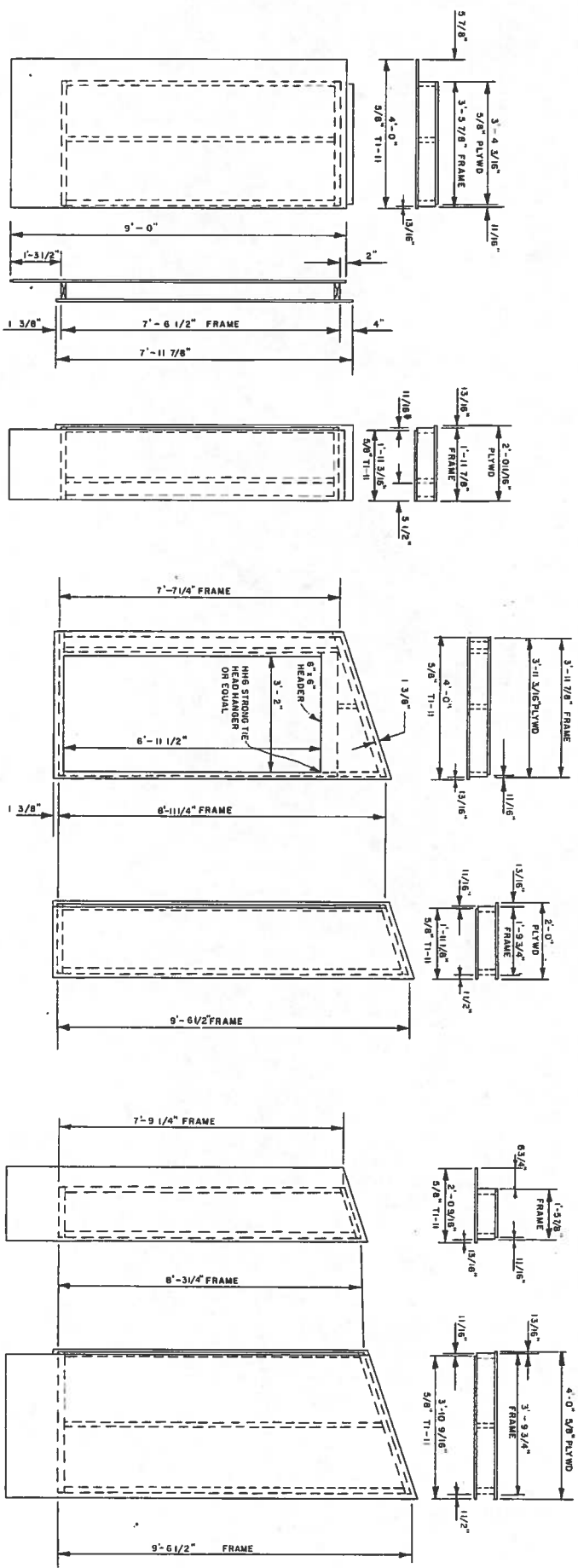
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Design Engineer
Maintenance Review
Material Take-off



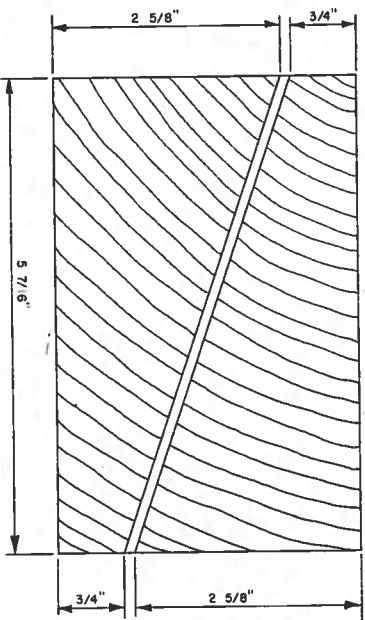
TUNTUTULAK, ALASKA		SHEET NO. A-9
ROOF PANELS		OF 12
PUBLIC LAW 86-121 PROJECT		TOTAL SHEETS
PROJECT NO. 81-263		
DRAWN BY: T. OZUBAY		CHECKED BY: T. OZUBAY
DATE: NOVEMBER 1981		DATE: 8/82
SANTATION FACILITIES CONSTRUCTION BRANCH		
ENVIRONMENTAL HEALTH BRANCH		
ALASKA AREA NATIVE HEALTH SERVICE		
ANCHORAGE, ALASKA		



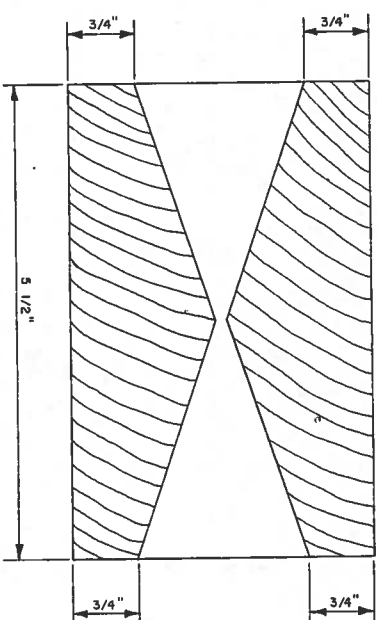
Design Engineer
 Maintenance Review
 Material Take-off



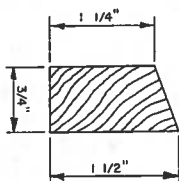
TUNTUTULIAK, ALASKA ARCTIC ENTRY PANELS & ROOF PANELS PUBLIC LAW 86-121 PROJECT PROJECT NO. 81-263		SHEET NO. A-10 OF 12 TOTAL SHEETS
U. S. Department of Health, & Human Services Public Health Service Indian Health Service		
DRAWN BY: I. DUBRAY DATE: NOVEMBER 1981	CHECKED BY: J. Bond DATE: 8/82	SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA



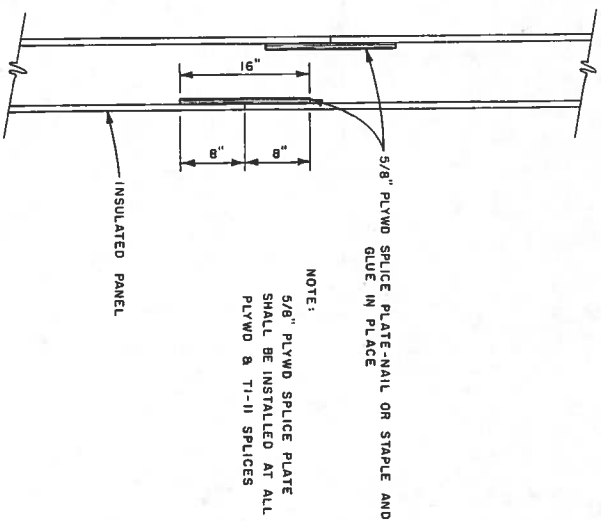
BEVEL TOP PLATE
128 L.F. REQ'D
CUT FROM 4" x 6"
SCALE: 1" = 1'



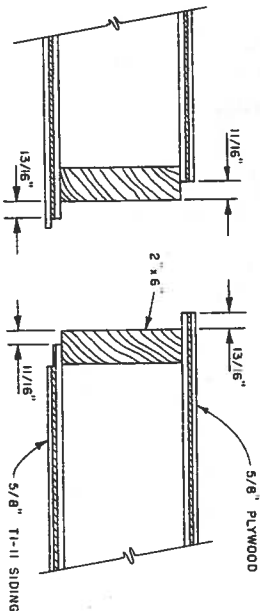
GLU-LAM RIDGE PLATE
64 L.F. REQ'D
CUT FROM 4" x 6"
SCALE: 1" = 1'



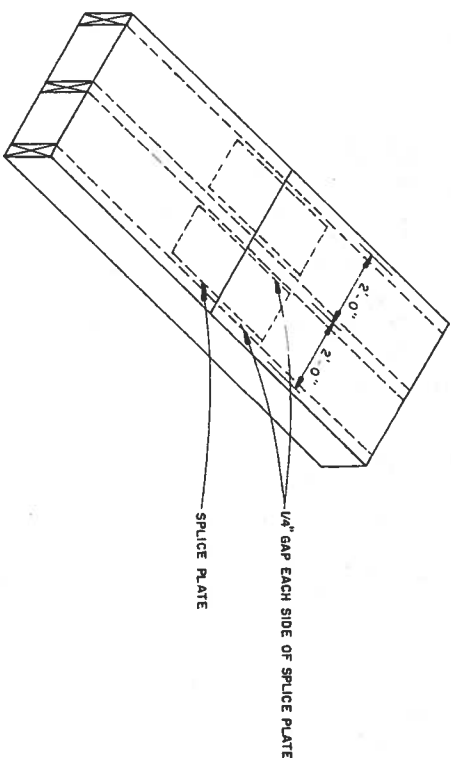
BEVEL TRIM
256 L.F. REQ'D
BEVEL FROM 1" x 2"
SCALE: 1" = 1'



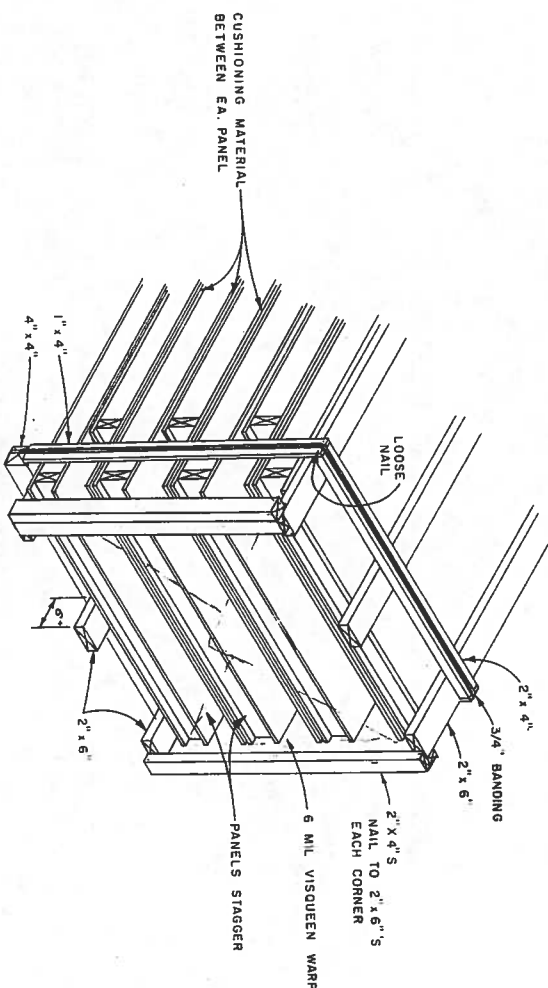
**SPICES PLATE
INSTALLATION**
5/8" PLYWD SPICE PLATE
SHALL BE INSTALLED AT ALL
PLYWD & TI-II SPLICES
SCALE: 1 1/2" = 1'-0"



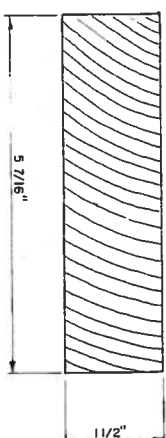
TYPICAL SHIP LAP JOINT
SCALE: 3" = 1'-0"



SPICE PLATE
NTS

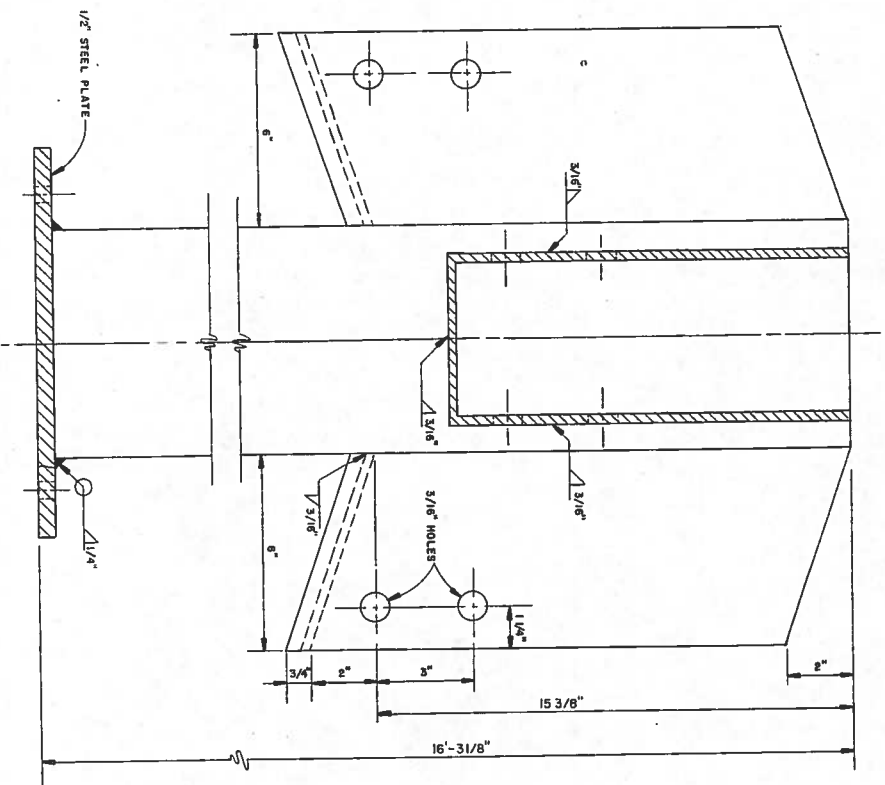


**TYPICAL PALLET CONSTRUCTION
FOR SHIPMENT**
NTS

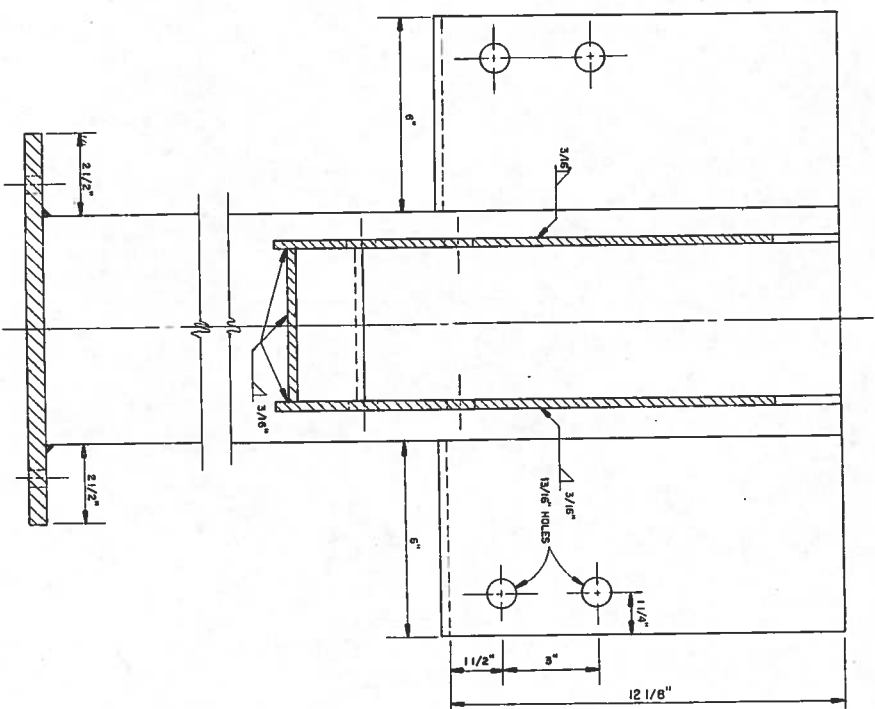


2" x 6" PLATES
NTS

Design Engineer <i>LeRoy D. Haskins</i>		Check By <i>T. Dzubay</i>	
Maintenance Review		DATE NOVEMBER 1981	
Material Take-off		DATE 8/82	
U.S. Department of Health, & Human Services Public Health Service Indian Health Service			
TUNTUTLIAK, ALASKA			
MISCELLANEOUS DETAILS PUBLIC LAW 86-121 PROJECT PROJECT NO. AN-81-263		SHEET NO. A-11 OF 12 TOTAL SHEETS	
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA			

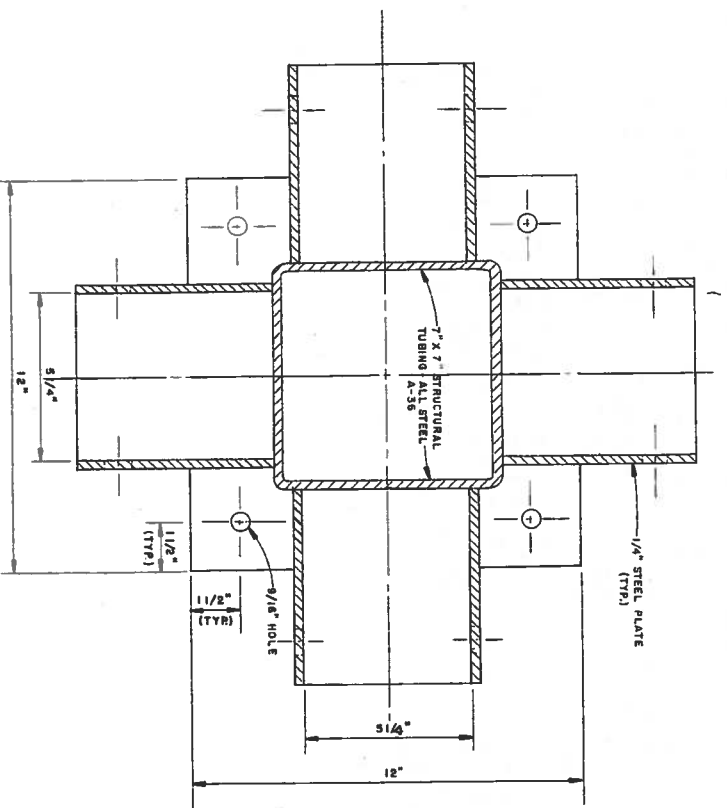


ELEVATION
NTS

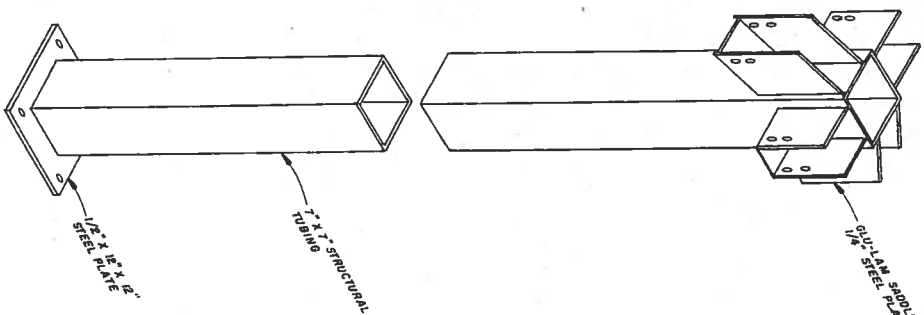


ELEVATION
NTS

2 REQUIRED



PLAN
NTS



ASSEMBLY
NTS

Design Engineer
Leah Williams

Supervising Engineer
James L. Hahn

Material Take-off

TUNTITULIAK, ALASKA

GLU-LAM SUPPORT POST ASS'Y
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-81-263

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

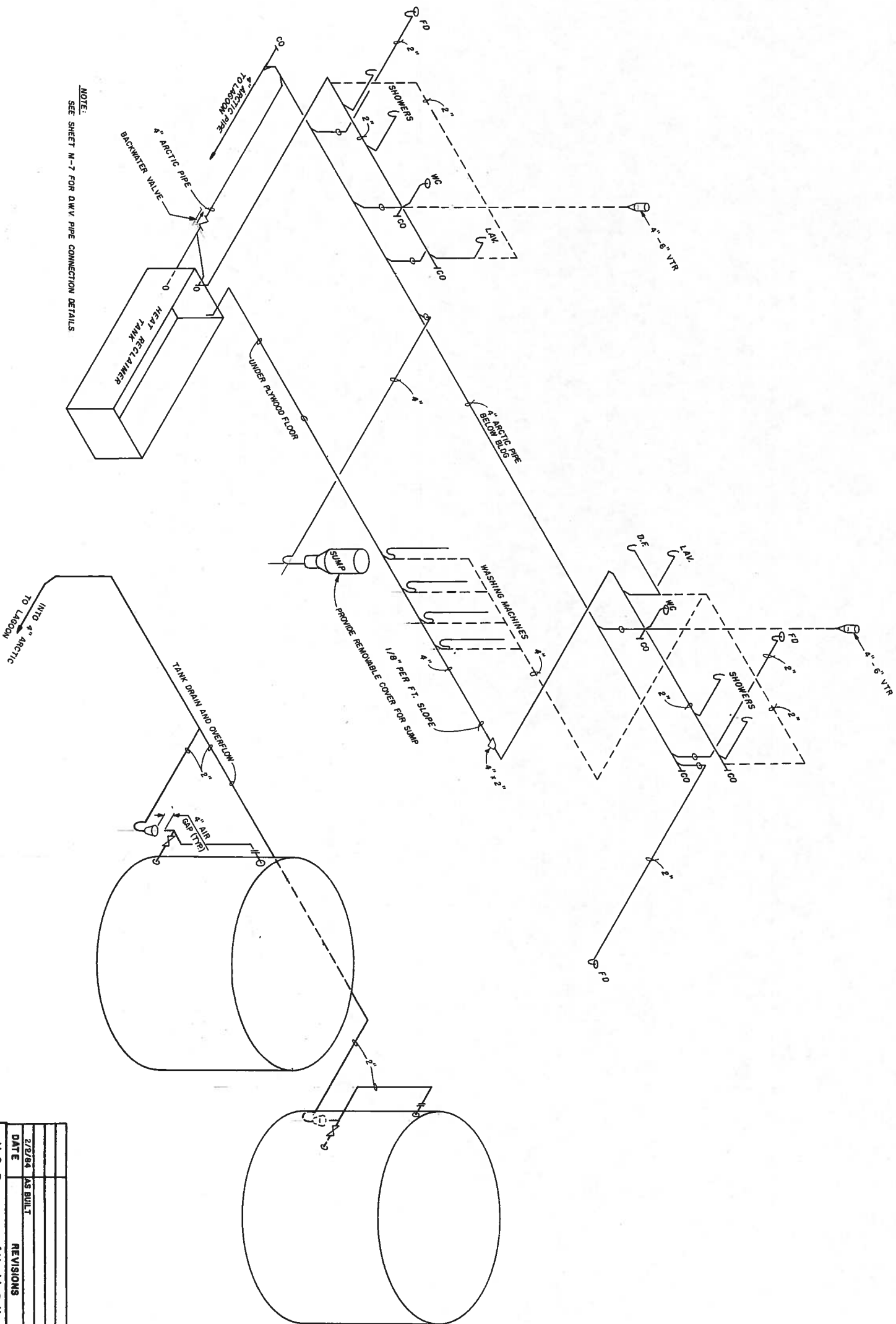
REVISIONS

DATE	BY	REVISIONS	INITIALS
2/2/83	AB	BUILT	

SHEET NO.
A-12
OF
12
TOTAL SHEETS

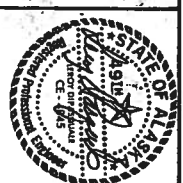
DRAWN BY: B. KIRSCHBAUM
CHECKED BY: J. Hahn
DATE: NOVEMBER, 1981

SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AND TERRITORY HEALTH SERVICE
ANCHORAGE, ALASKA

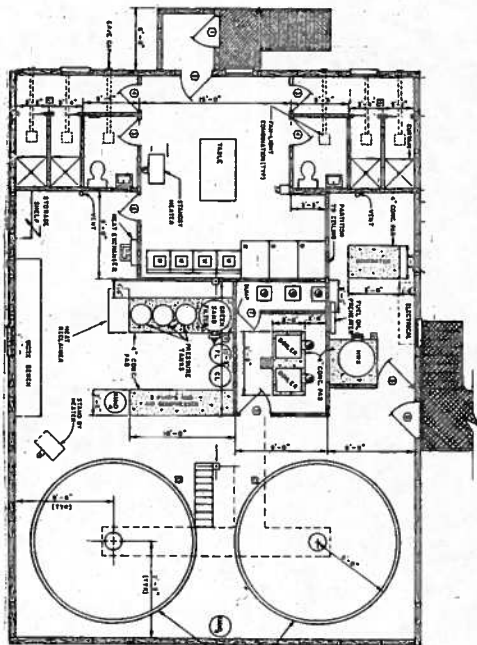


NOTE:
SEE SHEET M-7 FOR DWV PIPE CONNECTION DETAILS

Design Engineer
Maintenance Review
Material Take-off



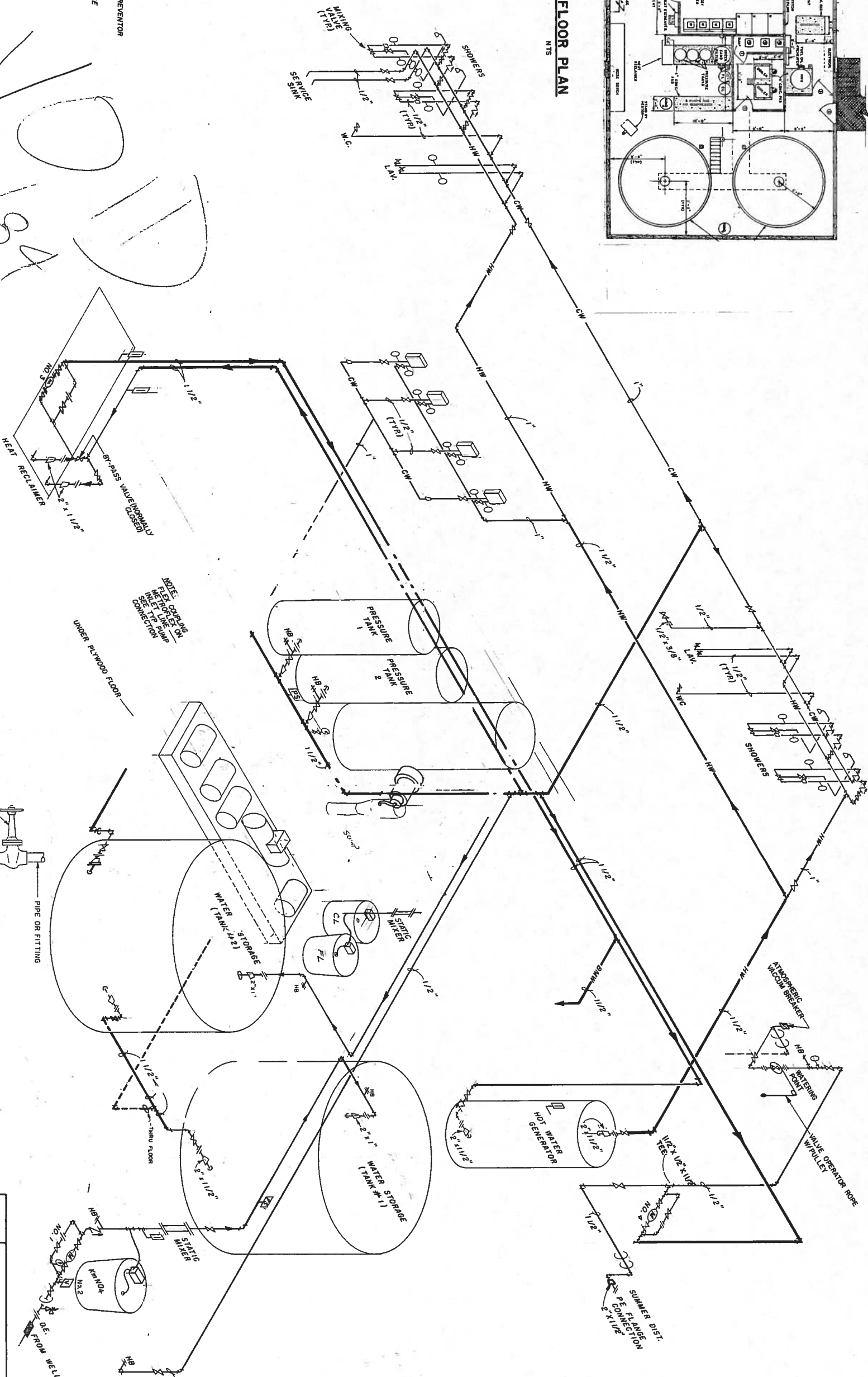
TUNTUTULIAK, ALASKA		SHEET NO. M-1	
DWV PLUMBING SCHEMATIC		OF 14	
PUBLIC LAW 86-121 PROJECT		TOTAL SHEETS	
PROJECT NO. - AN 81-253			
DRAWN BY: TD		CHECKED BY: J. J. J.	
DATE: MARCH 1982		DATE: 8/82	
SANITATION FACILITIES CONSTRUCTION BRANCH			
ENVIRONMENTAL, HEALTH, BRANCH			
ALASKA AREA NATIVE HEALTH SERVICE			
ANCHORAGE, ALASKA			
U.S. Department of Health, & Human Services		Indian Health Service	
Public Health Service		Indian Health Service	
DATE: 2/8/84		AS BUILT	
DATE: 2/8/84		REVISIONS	
DATE: 2/8/84		INITIALS	



FLOOR PLAN
NTS

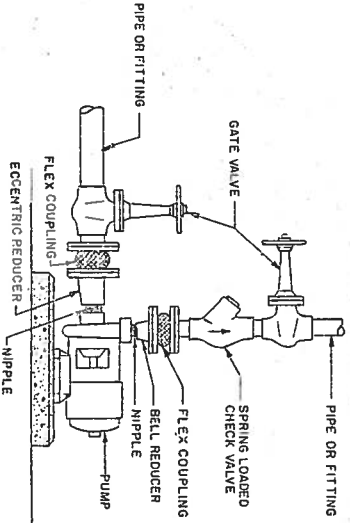
LEGEND

- CW COLD WATER LINES
- HW HOT WATER LINES
- BW BACK WASH LINES
- BWV BOILER MAKE-UP WATER
- GV GATE VALVE
- CV CHECK VALVE
- SV SOLENOID VALVE
- UNION
- DE DIELECTRIC UNION
- HB HOSE BIB - BACK FLOW PREVENTOR
- PRV PRESSURE RELIEF VALVE
- PG PRESSURE GAUGE
- PS PRESSURE SWITCH
- TM THERMOMETER
- FC FLEX COUPLING
- WP WATER PIPE
- WM WATER METER
- R REDUCER
- MA MINI-TROL WATER HAMMER ARRESTOR
- VV VACUUM VALVE & AIR RELEASE
- FS FLOW SWITCH



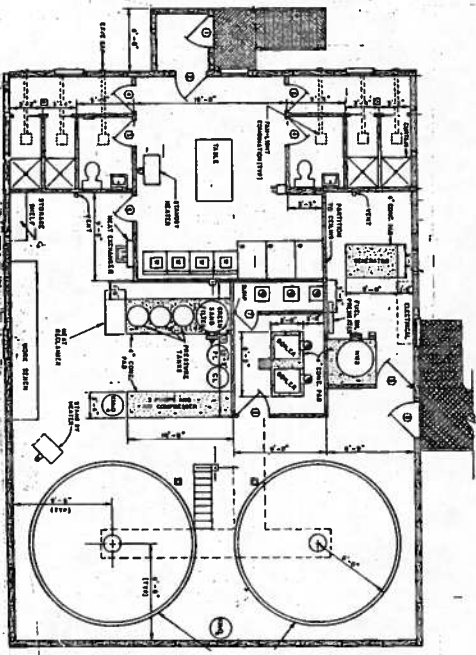
NOTE:

1. ALL EXPOSED PIPING SHALL BE PAINTED USING THE FOLLOWING COLOR CODE:
GREEN RAW WATER
BLUE POTABLE WATER
BLACK FUEL
RED FIRE
BROWN SEWAGE
GRAY COMPRESSED AIR
ORANGE FUEL
2. TYPE OF PAINT TO BE USED, "GARLOCK" OR EQUAL.
3. DIRECTION OF FLOW TO BE INDICATED BY ARROWS, & NAME PLATES FOR MATERIAL BEING CARRIED.
4. ALL LINES SHALL BE COPPER UNLESS OTHERWISE SPECIFIED.
5. ALL HW PIPING TO RECEIVE MINIMUM OF 1/2" OF INSULATING JACKET.
6. SEPARATE CHEMICAL FEED CONNECTIONS A MINIMUM OF 18".
7. APPROXIMATE WELL PUMPING RATE 12 GPM.
8. BACK FLOW PREVENTERS SHALL BE INSTALLED ON ALL HOSE BIBS.

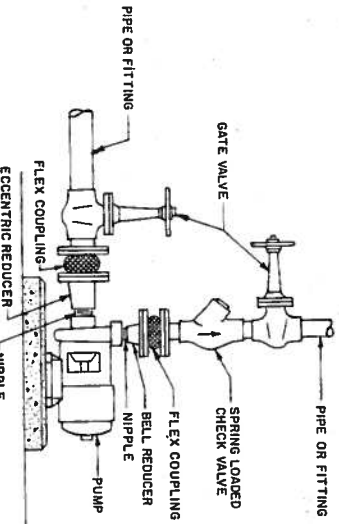
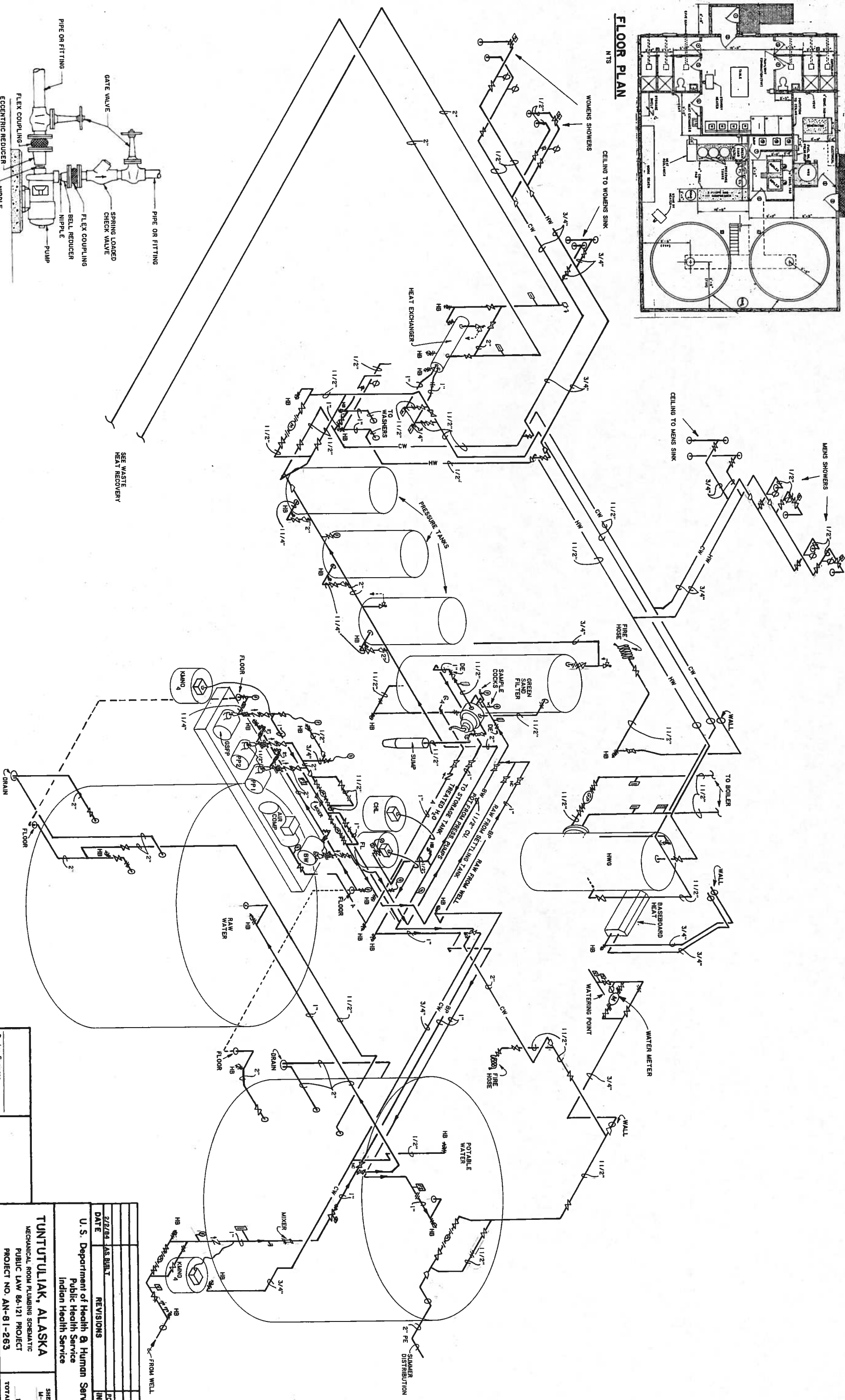


NOTE:
PLACE CHEMICAL INJECTION POINTS AS CLOSE TO CHEMICAL TANK AS POSSIBLE

U. S. Department of Health, & Human Services Public Health Service Indian Health Service		SHEET NO. M-2 OF 19 TOTAL SHEETS
TUNTUTULIAK, ALASKA MECHANICAL ROOM PIPING SCHEMATIC PUBLIC LAW 86-121 PROJECT PROJECT NO. - ANB-263		
DRAWN BY: TD DATE: MARCH 1982	CHECKED BY: J. J. [Signature] DATE: 8/8/82	SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA



FLOOR PLAN
NTS

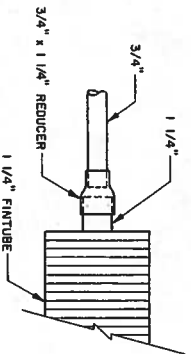


TYPICAL PUMP CONNECTION
NTS

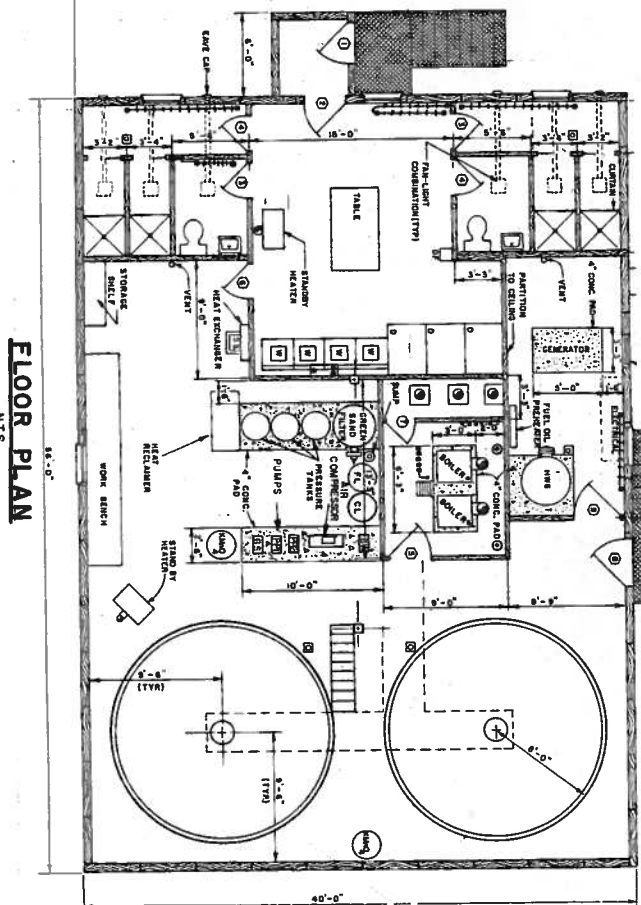
Design Engineer	
McGinnis Review	
Harold Tom-off	

TUNTUTULIAK, ALASKA	
MECHANICAL ROOM PLUMBING SCHEMATIC	
PUBLIC LAW 86-121 PROJECT	
PROJECT NO. AN-61-263	
U. S. Department of Health & Human Services	
Public Health Service	
Indian Health Service	
SHEET NO. M-2	
OF 14	
TOTAL SHEETS	
Drawn by: PCS	Checked by:
Date: 2/1/84	Date:
SANITATION FACILITIES CONSTRUCTION BRANCH	
ENVIRONMENTAL HEALTH BRANCH	
ALASKA AREA NATIVE HEALTH SERVICE	
ANCHORAGE, ALASKA	

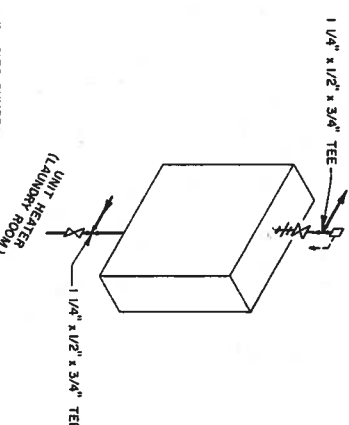
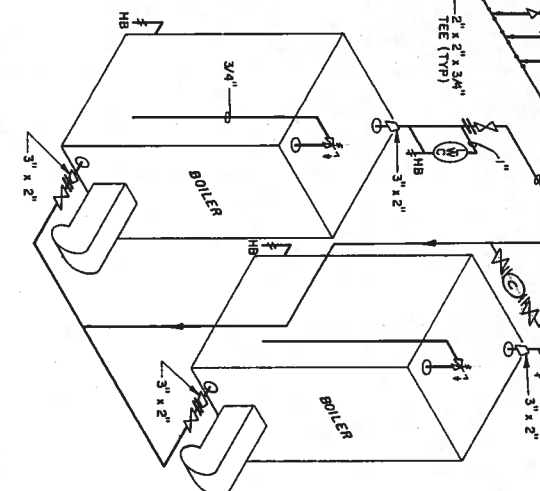
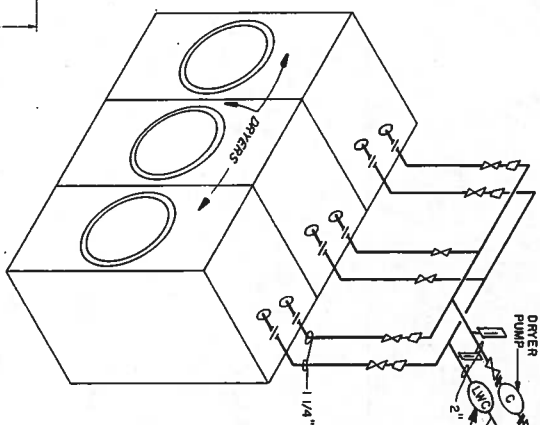
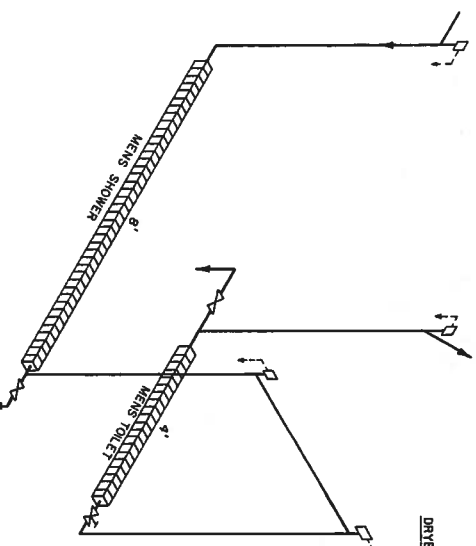
- LEGEND:
- CIRCUIT SETTER
 - GATE VALVE
 - CIRCULATING PUMP
 - REDUCER
 - LOW WATER CUT OFF
 - SOLENOID VALVE
 - HOSE BIBB
 - FLOW INDICATOR
 - AUTOMATIC AIR RELIEF
 - PRESSURE REDUCING VALVE
 - SOLENOID VALVE
 - PRESSURE RELIEF VALVE
 - THERMOMETER
 - AUTO TEMPERATURE CONTROL VALVE



TYPICAL FINPIPE CONNECTION
NTS



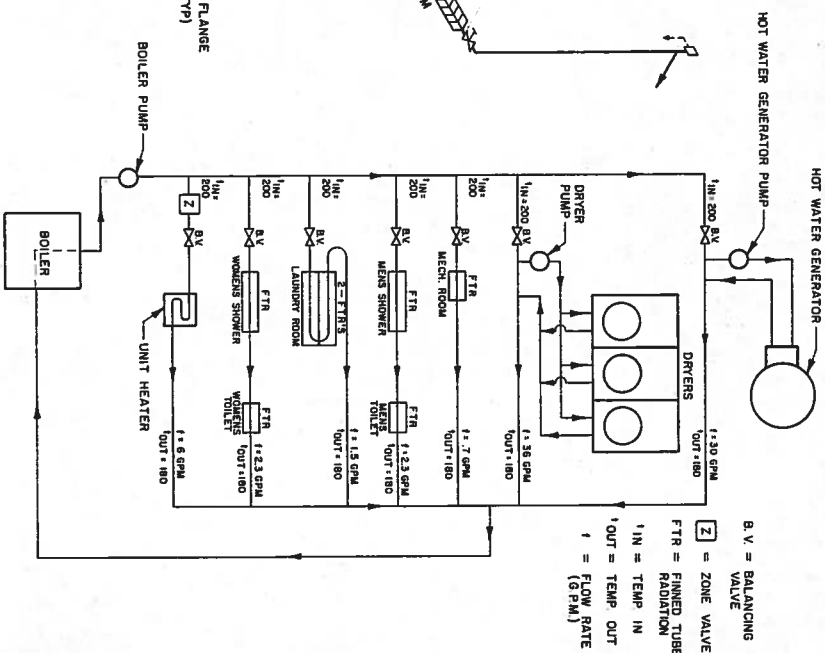
FLOOR PLAN
NTS



DRYER, HWG, & BOILER CIRC PUMPS:

SHALL BE INSTALLED SO THAT THEY SET BELOW THE LOW WATER CUTOFF.

HYDRONICS FLOW SCHEMATIC



B. V. = BALANCING VALVE
FTR = FINNED TUBE RADIATION
IN = TEMP IN
OUT = TEMP OUT
F = FLOW RATE (G.P.M.)

NOTES:

BOILERS:

ONE BOILER IS SIZED TO HEAT ALL OF THE FACILITY HOT WATER. VALVE-OFF THE SECOND BOILER AND USE IT FOR STAND-BY OPERATION ONLY. IT IS RECOMMENDED THAT THE PRIMARY USE BOILER BE SWITCHED ANNUALLY.

BOILER PUMP:

ONE PUMP OPERATES CONTINUOUSLY AND THE OTHER PUMP IS VALVED OFF FOR STAND-BY USE ONLY. IT IS RECOMMENDED THAT THE OPERATING PUMP BE SWITCHED EVERY 3 MONTHS.

DRYER & HOT WATER GENERATOR PUMPS:

EACH PUMP OPERATES ON DEMAND. THE DRYER PUMP IS ACTIVATED WHEN ONE OR MORE DRYERS ARE STARTED AND SHUTS-OFF WHEN THE DRYERS STOP. THE HWG PUMP STARTS WHEN THE WATER TEMPERATURE REACHES 120° F.

CIRCUIT SETTER (B.B.G.)

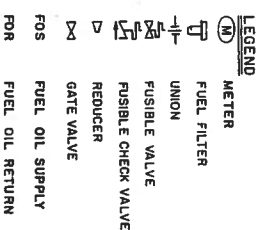
LOCATION NO.	VALVE	TYPE	VALVE PRESETTING*
1	MECHANICAL RM.	3/4"	40°
2	WOMEN'S SHOWER	3/4"	10°
3	LAUNDRY	3/4"	25°
4	MEN'S SHOWER	3/4"	10°
5	UNIT HEATER	"	0°
6	HOT WATER GEN.	2"	20°
7	DRYERS	2"	25°

*PRESETTING FOR THREADED CIRCUIT SETTER ONLY. PLACE THE INSULATING SHIPPING BOX AROUND THE CIRCUIT SETTER AND MAKE THE NECESSARY ADJUSTMENT MADE.

Design Engineer: *Leah Williams*
Maintenance Review: *Leah Williams*
Material Take-off: *Leah Williams*



DATE	7/27/84	AS BUILT	REVISIONS	INITIALS
U. S. Department of Health & Human Services Public Health Service Indian Health Service				
TUNTUTULIAK, ALASKA				
HEATING SYSTEM				
PUBLIC LAW 86-121 PROJECT				
PROJECT NO. AN-81-263				
TOTAL SHEETS				
M-3				
OF 14				
DRAWN BY: <i>Leah Williams</i>				
CHECKED BY: <i>Leah Williams</i>				
DATE: 5/2/82				
SANITATION FACILITIES CONSTRUCTION BRANCH				
ENVIRONMENTAL HEALTH BRANCH				
ALASKA AREA NATIVE HEALTH SERVICE				
ANCHORAGE, ALASKA				



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

Lee J. Hinkle

Design Engineer

Maintenance Review

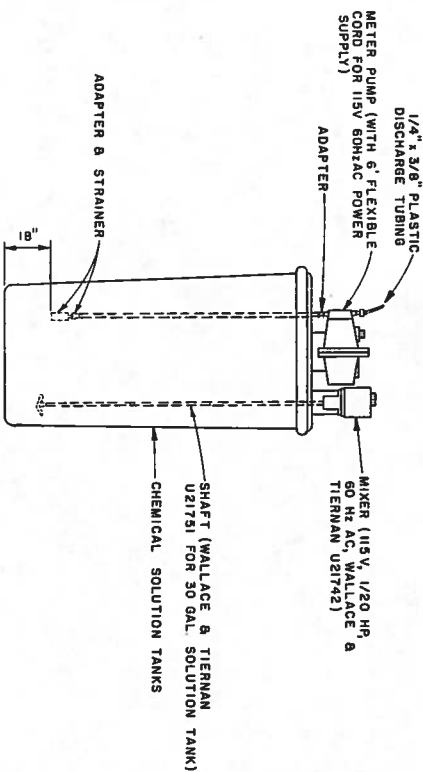
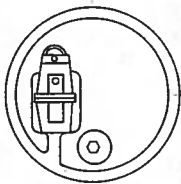
Material Take-off

U.S. DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

Lee J. Hinkle

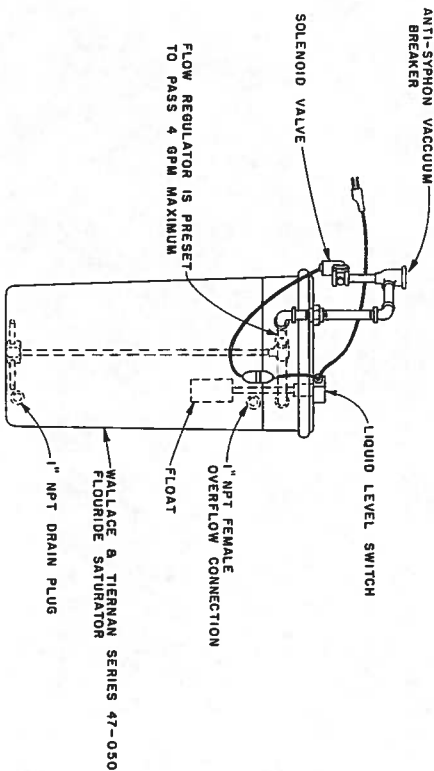
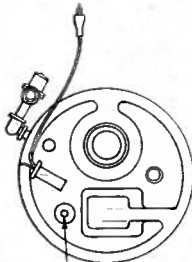
Chief Clerk

U.S. DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.



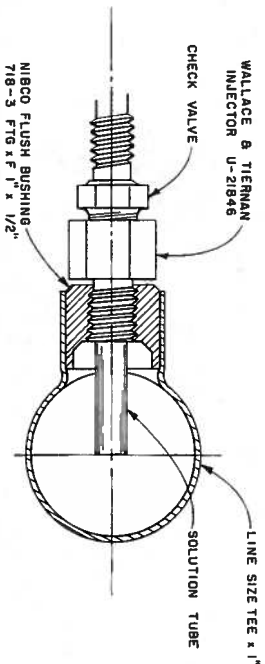
30 or 50 GAL. CHLORINATION
SOLUTION TANK

NTS



FLOURIDE SATURATOR

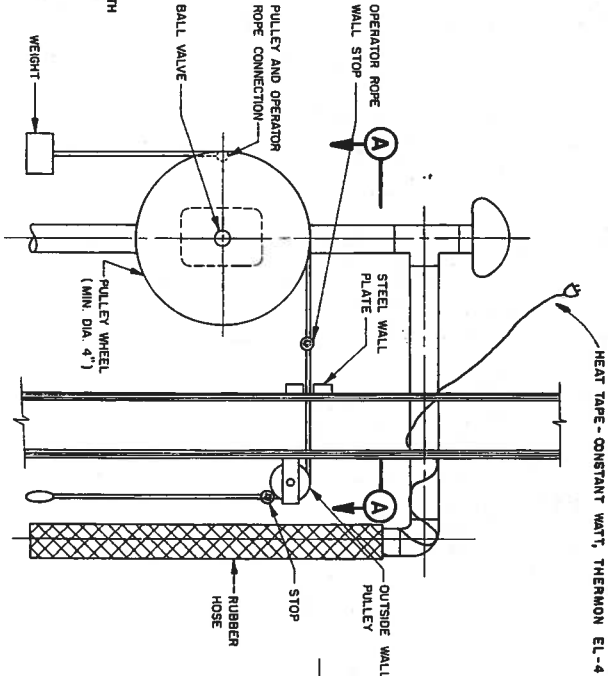
NTS



CHEMICAL FEEDER CONNECTION

DESCRIPTION	CHEMICAL FEED PUMPS	
	CHLORINATION SODIUM HYDROCHLORIDE	IRON TREATMENT POTASSIUM PERMANGANATE
CHEMICAL FEED PUMP MAKE & MODEL	PRECISION 10611-321	PRECISION 10611-321
MAX. OUTPUT (GPH)	.14	.57
MIN. OUTPUT (GPH)	.002	.007
MATERIALS		
FITTINGS	PVC	PVC
HEAD	ACRYLIC	ACRYLIC
VALVE BALLS	CERAMIC	CERAMIC
"O" RING	HYPALON	HYPALON
OILTON	HYPALON	HYPALON
WATER LINE FLOW RATE (GPH)	12	12
SOLUTION CONCENTRATION (PPM)	1	4
REQUIRED DOSAGE (PPM)	1	1.2
REQUIRED PUMPING RATE (ML/MIN.)	3.6	2.6
SOLUTION TANK (GALLONS)	30	50

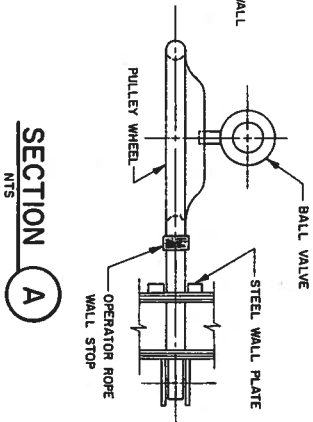
NOTE:
REMOVE BALL VALVE HAND
OPERATOR AND REPLACE WITH
OFF-SET PULLEY WHEEL AS
SHOWN



ELEVATION

WATERING POINT VALVE OPERATOR

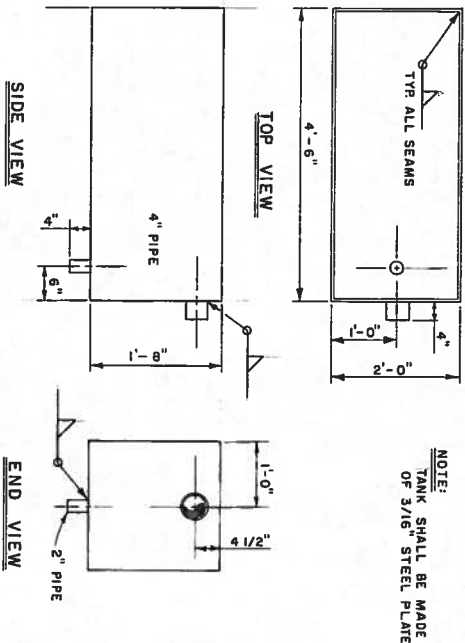
NTS



SECTION A

NTS

Design Engineer <i>Leah Williams</i>	Reviewed <i>[Signature]</i>
Maintenance Review <i>[Signature]</i>	Material Take-off <i>[Signature]</i>
DRAWN BY: TD DATE: FEB. 1992	
CHECKED BY: <i>[Signature]</i> DATE: 8/02	
TUNTUTULIAK, ALASKA CHLORINATION & FLOURIDATION TANKS PUBLIC LAW 86-121 PROJECT PROJECT NO. - AN81-263	
SHEET NO. M-5 OF 14 TOTAL SHEETS	
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA DEPARTMENT OF HEALTH & SOCIAL SERVICES ANCHORAGE, ALASKA	



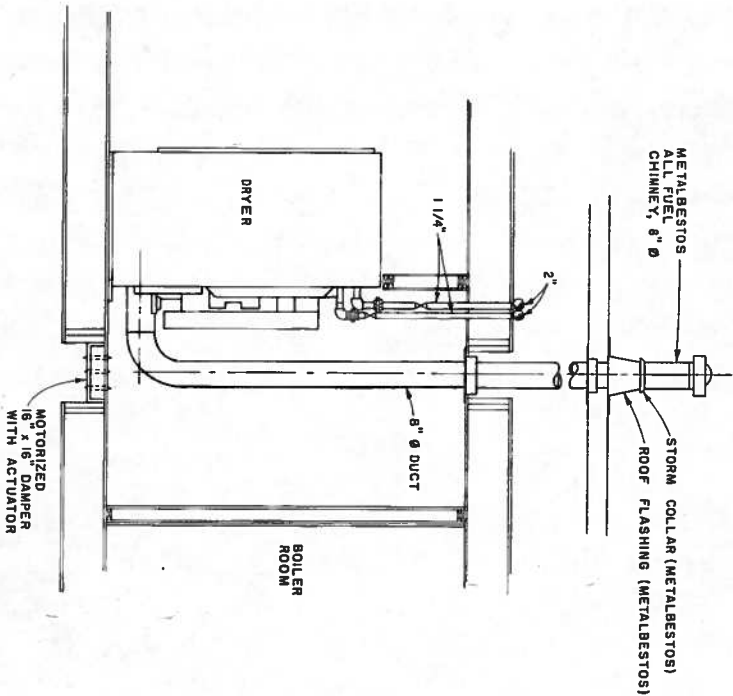
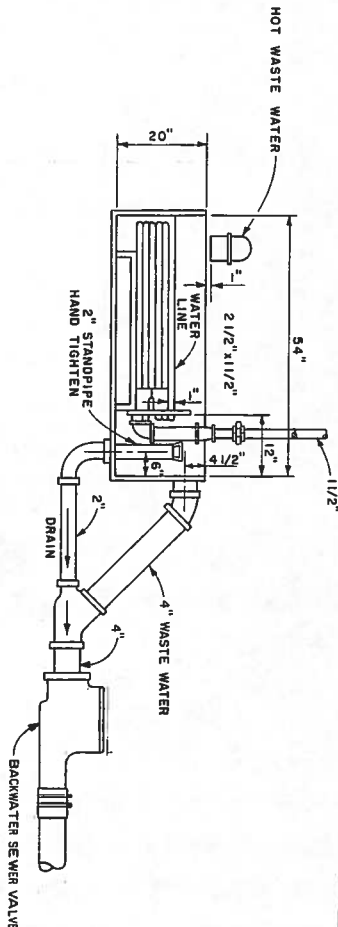
NOTE:
TANK SHALL BE MADE
OF 3/16" STEEL PLATE

HEAT RECLAIMER TANK

NTS

HEAT RECLAIMER

NTS

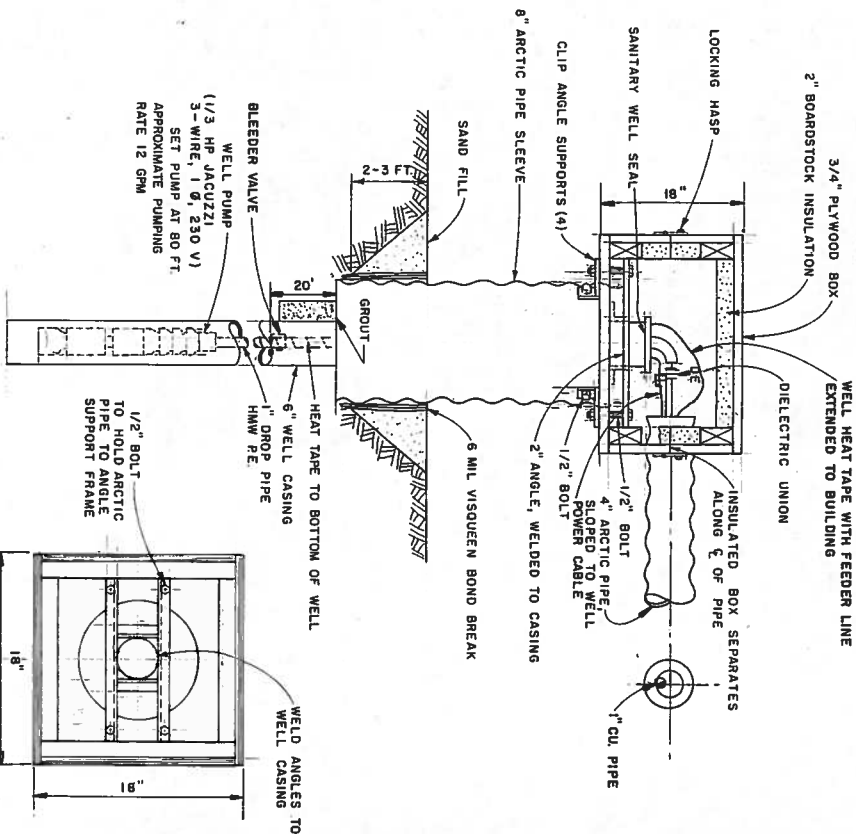
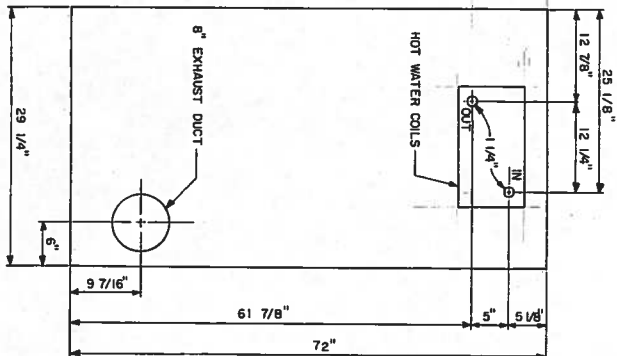


TYPICAL DRYER INSTALLATION

NTS

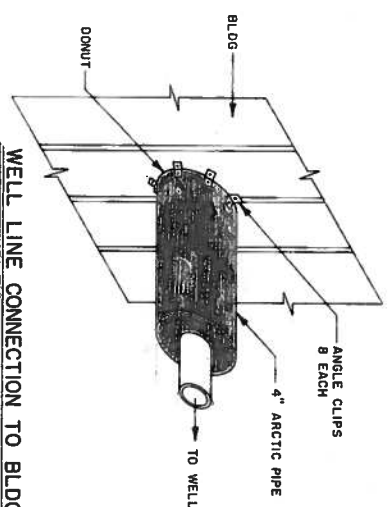
DRYER REAR VIEW

NTS



WELL HEAD BOX

NTS



WELL LINE CONNECTION TO BLDG

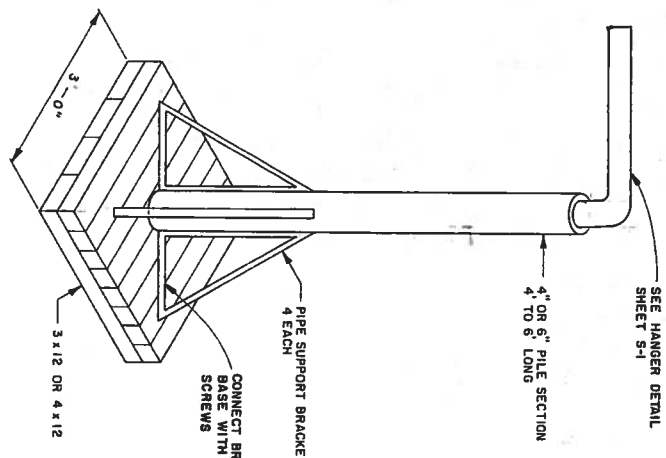
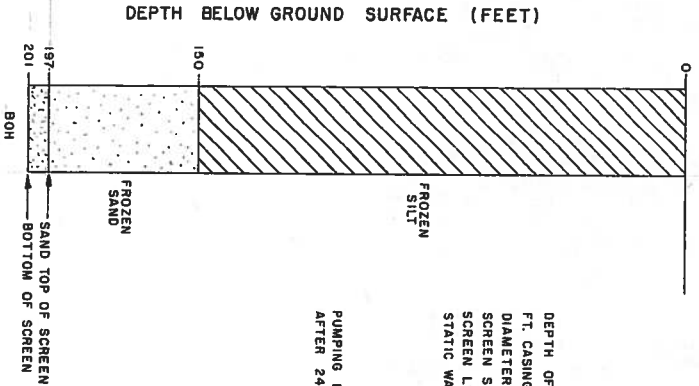
NTS

DEPTH OF WELL 201 FEET
FT. CASING INSTALLED 197 FEET
DIAMETER 6 INCHES
SCREEN SIZE 6 INCHES, .010
SCREEN LENGTH 5 FEET 9 INCHES
STATIC WATER LEVEL 8 FEET

PUMP TEST
PUMPING LEVEL - 62 FEET @ 10 GPM
AFTER 24 HOURS

WELL LOG

3-23-79



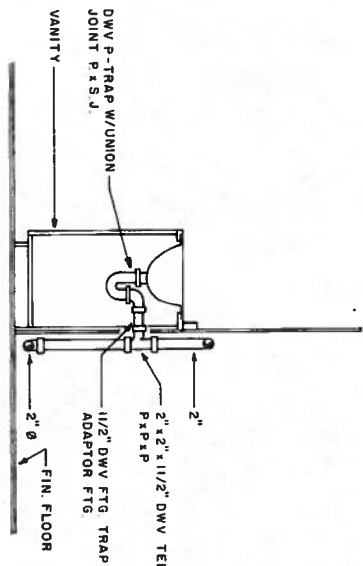
WELL LINE SUPPORT

NTS

	mg/l
CALCIUM	41
IRON	2.4
MANGANESE	0.06
SODIUM	7.5
LEAD	< 0.05
CHLORIDE	10
SULFATE	< 3
TOTAL DISSOLVED SOLIDS	205
HARDNESS AS CaCO ₃	168
ALKALINITY AS CaCO ₃	188
mmhos CONDUCTIVITY	360
PH UNITS	6.7

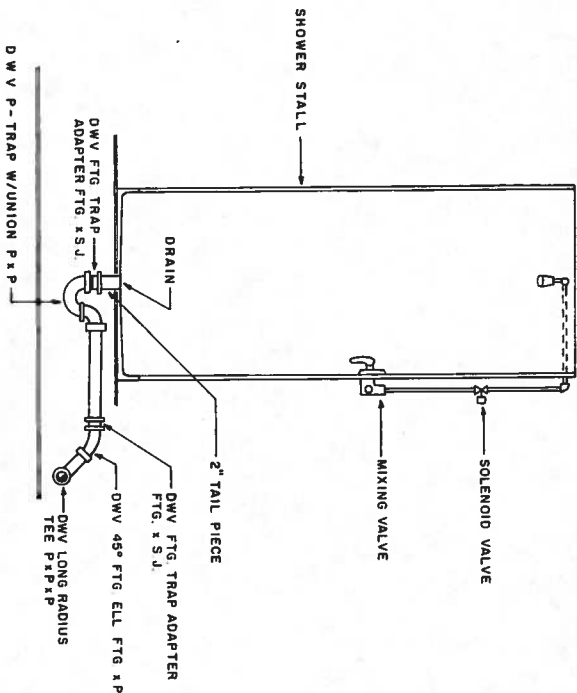
WATER QUALITY - 7/79

Design Engineer <i>Levy D. Brink</i>		State of Alaska Department of Health, & Human Services Public Health Service Indian Health Service	
Maintenance Review Material Take-off		SHEET NO. M-6 OF 14 TOTAL SHEETS	
DRAWN BY: TD DATE: MARCH 1982		CHECKED BY: <i>P. Bond</i> DATE:	
PROJECT NO. - ANB1-263		SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA	



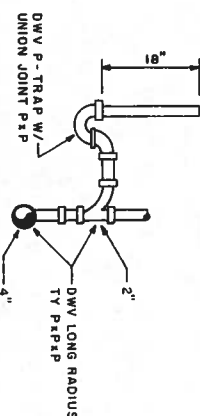
TYPICAL LAVATORIES DWV

NTS



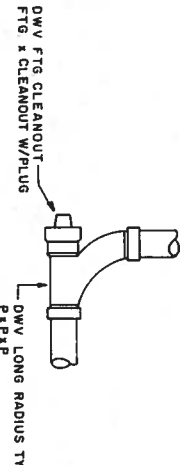
TYPICAL SHOWER CONNECTIONS

NTS



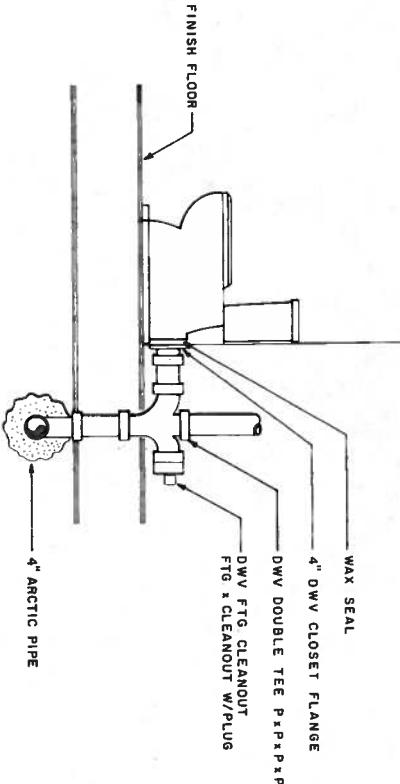
TYPICAL WASHER DRAIN

NTS



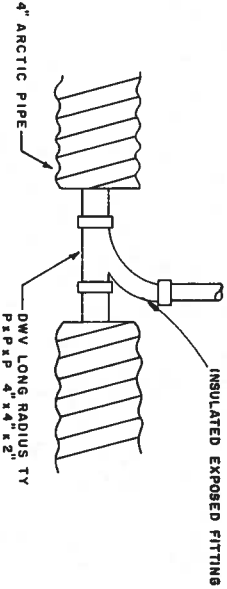
TYPICAL CLEANOUT

NTS



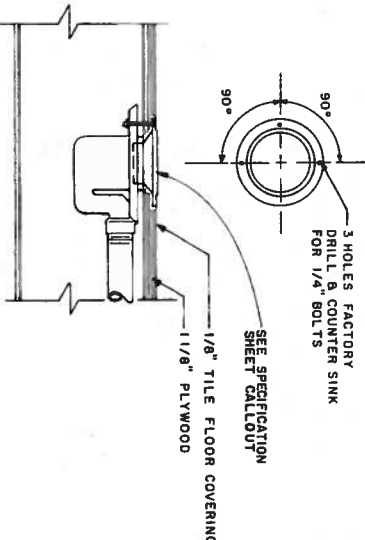
TYPICAL WATER CLOSET

NTS



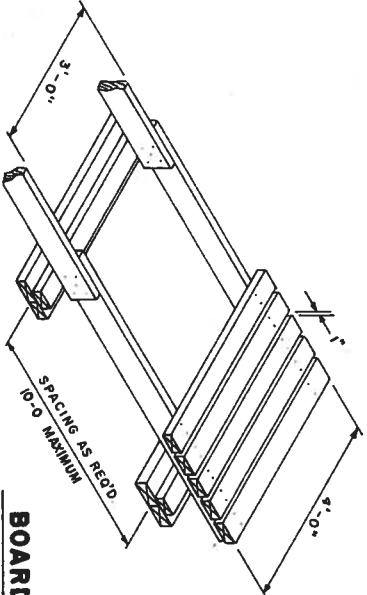
TYPICAL ARCTIC PIPE DWV CONNECTION

NTS



TYPICAL FLOOR DRAIN

NTS



BOARDWALK

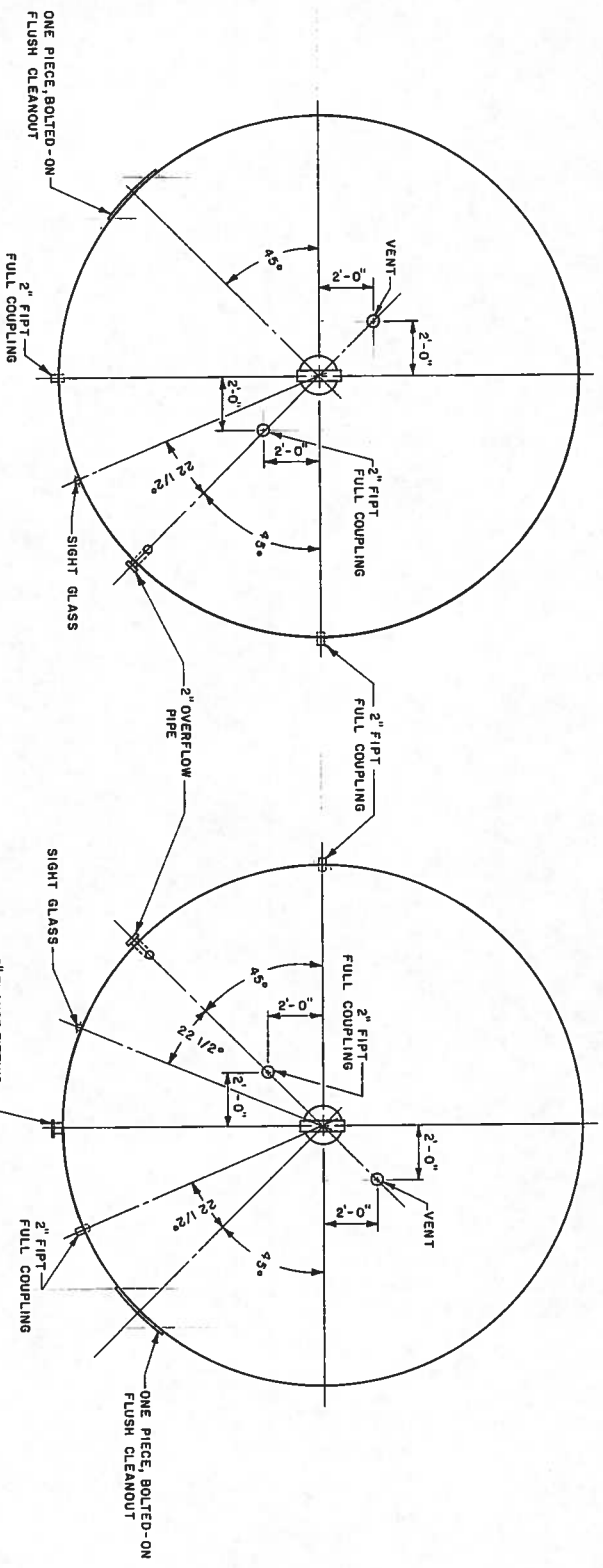
NTS

MATERIAL: 2x6 No. 2 OR BETTER
PRESSURE TREATED
NAILS: 16d GALVANIZED
PRESERVATIVE: CCA OR ACA (CHEMONITE)

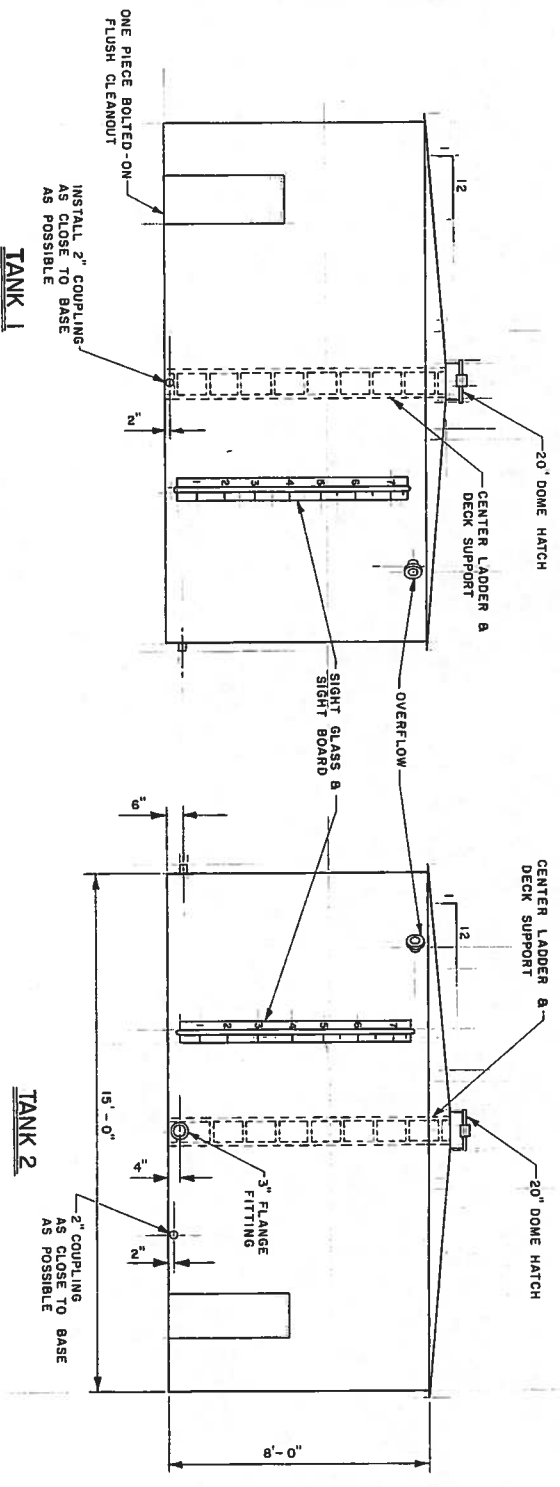
Design Engineer: *LEON D. PRINCE*
 Draftsman: *W. K. T.*
 Date: *APRIL 1, 82*
 Project No.: *AN-81-263*
 Total Sheets: *14*

DATE	REVISIONS	INITIALS
2/2/84	AS BUILT	PCS
DATE	REVISIONS	INITIALS
2/2/84	AS BUILT	PCS
DATE	REVISIONS	INITIALS
2/2/84	AS BUILT	PCS

U. S. Department of Health & Human Services
 Public Health Service
 Indian Health Service
 TUNTUTULIAK, ALASKA
 D.W.V. PIPE CONNECTION DETAILS
 PUBLIC LAW 86-121 PROJECT
 PROJECT NO. AN-81-263
 TOTAL SHEETS: 14
 SHEET NO. M-7
 DRAWN BY: W. K. T.
 DATE: APRIL 1, 82
 CHECKED BY: *W. K. T.*
 SANITATION FACILITIES CONSTRUCTION BRANCH
 ENVIRONMENTAL HEALTH SERVICE
 ALASKA, ANCHORAGE, ALASKA

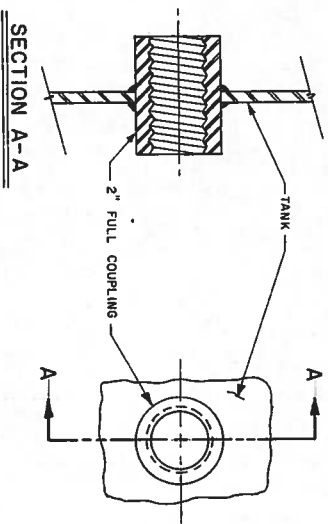


PLAN VIEW
N T S

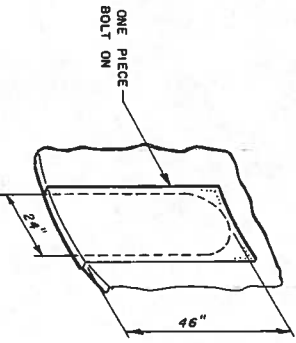


ELEVATION
N T S

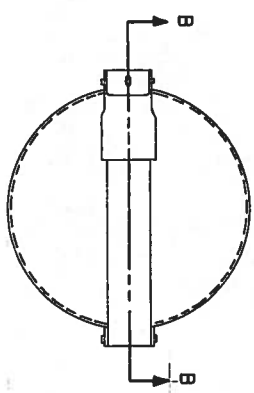
BOLTED STEEL TANKS



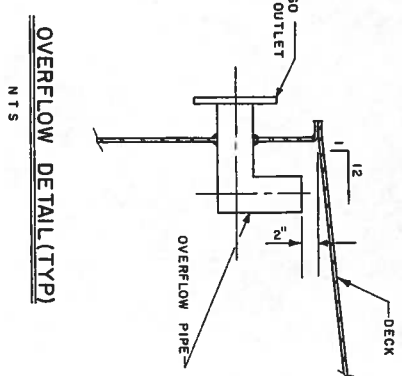
FULL COUPLING DETAIL (TYP)
N T S



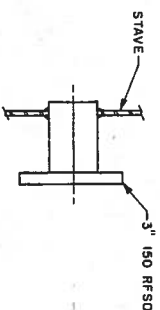
FLUSH CLEANOUT (TYP)
N T S



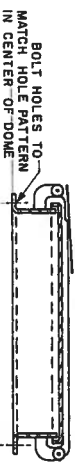
SIGHT GLASS DETAIL (TYP)
N T S



OVERFLOW DETAIL (TYP)
N T S



FLANGED OUTLET (TYP)
N T S



SECTION B-B

DOMES HATCH (TYP)
N T S

- NOTES
1. VENT SIZE SHALL BE AT LEAST THE SIZE OF THE INLET OR OUTLET PIPING.
 2. TANKS WILL SET ON A CONCRETE FLOOR AND 1/2\"/>

NOTE:
SIGHT BOARD WITH TANK CONNECTION & 3/4\"/>

Design Engineer: *Leon D. D'Amore*
 Draftsman: *John J. D'Amore*
 Date: DEC. 1981
 Project: PUBLIC LAW 96-121 PROJECT
 Project No.: AN 81-263

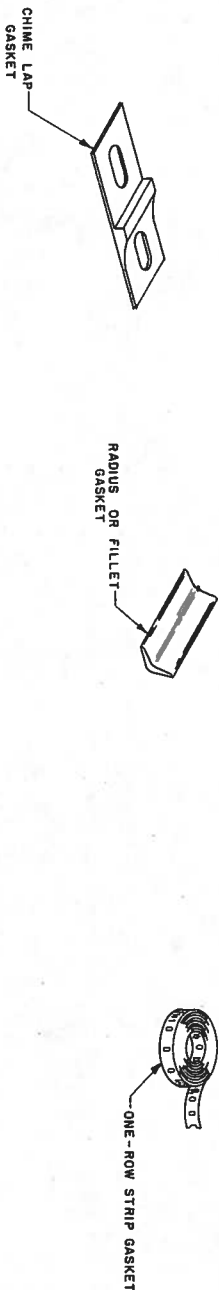
DATE	AS BUILT	REVISIONS	INITIALS
2/22/84			

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

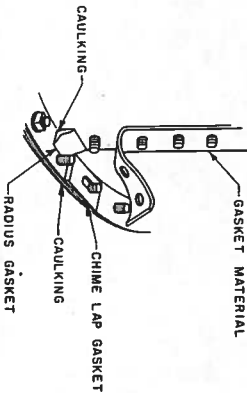
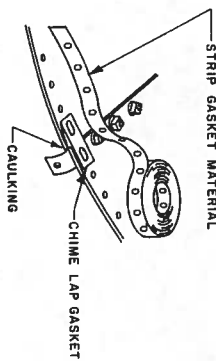
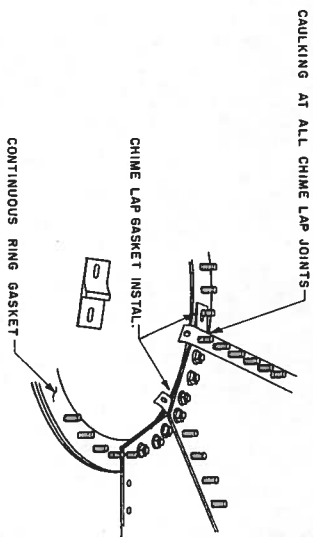
TUNTUTULIAK, ALASKA
 BOLTED STEEL TANKS & DETAILS
 PUBLIC LAW 96-121 PROJECT
 PROJECT NO. AN 81-263

SHEET NO. M-8
 OF 07
 TOTAL SHEETS 14

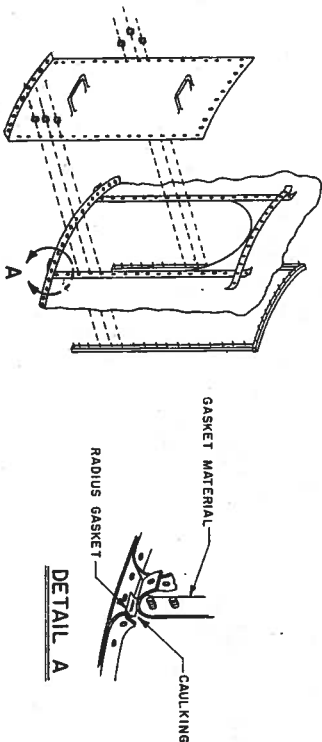
DRAWN BY: TD
 DATE: DEC. 1981
 CHECKED BY: *John J. D'Amore*
 SANITATION FACILITIES CONSTRUCTION BRANCH
 ENVIRONMENTAL HEALTH BRANCH
 ALASKA AREA NATIVE HEALTH SERVICE
 ANCHORAGE, ALASKA



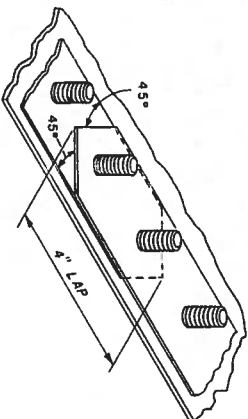
BOLTS & GASKETS



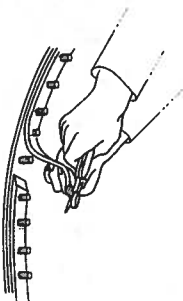
GASKET PLACEMENT- BOTTOM ASSEMBLY



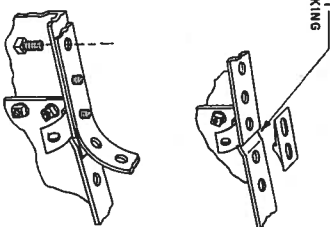
GASKET PLACEMENT- CLEANOUT



PACKING SPLICE



TYPICAL SPLICE

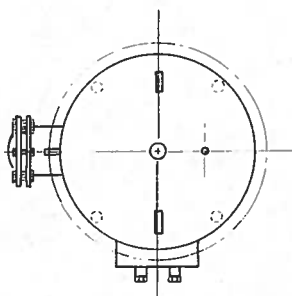


GASKET PLACEMENT- TOP STAVE

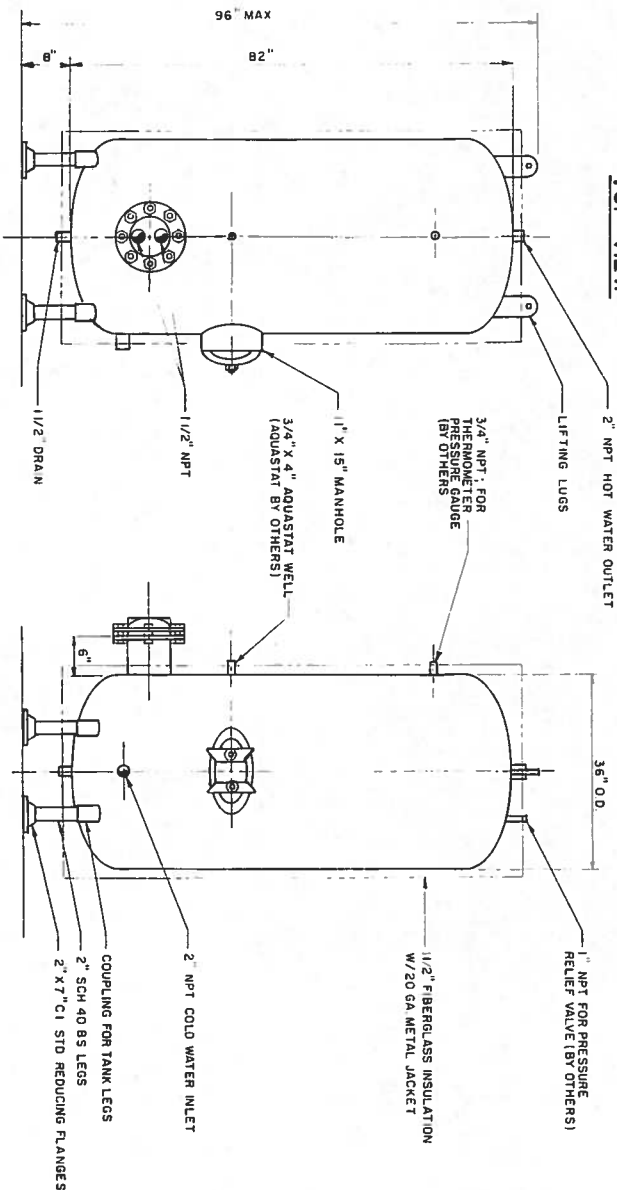
NOTE:
THESE ADDITIONAL TOOLS ARE REQUIRED
(2)-PULLER HOIST (COME ALONG)
(3)-#6 SLEDGE HAMMERS
(4)-#3 HAMMERS
(4)- ONE FOOT DRIFT PINS
(3)- IMPACT WRENCHES

Design Engineer <i>Leon D. Hildebrand</i>	1981 DEC 1	RECEIVED U.S. DEPARTMENT OF HEALTH, & HUMAN SERVICES INDIAN HEALTH SERVICE
Maintenance Review		
Material Take-off		

TUNTUTULIAK, ALASKA		SHEET NO. M-9
DETAILS - BOLTED STEEL TANK		OF 14
PUBLIC LAW 86-121 PROJECT		TOTAL SHEETS
PROJECT NO. - AN 81-263		
DRAWN BY: JD	CHECKED BY: <i>JD</i>	
DATE: DEC. 1981	DATE:	
SANTATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		



TOP VIEW



FRONT VIEW

SIDE VIEW

HOT WATER GENERATOR

SCALE 3/4\"/>

- NOTES
1. ASME PRESSURE RATED TO 125 PSI
 2. APPROXIMATE STORAGE CAPACITY 329 GALLONS
 3. ALL TAPS SHALL BE EXTRA STRONG COUPLINGS
 4. EXTERIOR OF TANK SHALL BE PAINTED WITH ZINC PRIMER
MINIMUM DRY FILM THICKNESS 2 MIL
 5. TANK INTERIOR SHALL HAVE CATALYTIC SET PHENOLIC COATING
MINIMUM DRY FILM THICKNESS 6 MIL
 6. HEAT EXCHANGER TUBE BUNDLE 1/2\"/>

2/2/84	AS BUILT		RCS
DATE	REVISIONS		INITIALS

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

TUNTUTULIAK, ALASKA

HOT WATER GENERATOR
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-81-263

SHEET NO. M-10
OF 14
TOTAL SHEETS

DRAWN BY WMT
DATE APRIL, 82
CHECKED BY
DATE 6/82

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

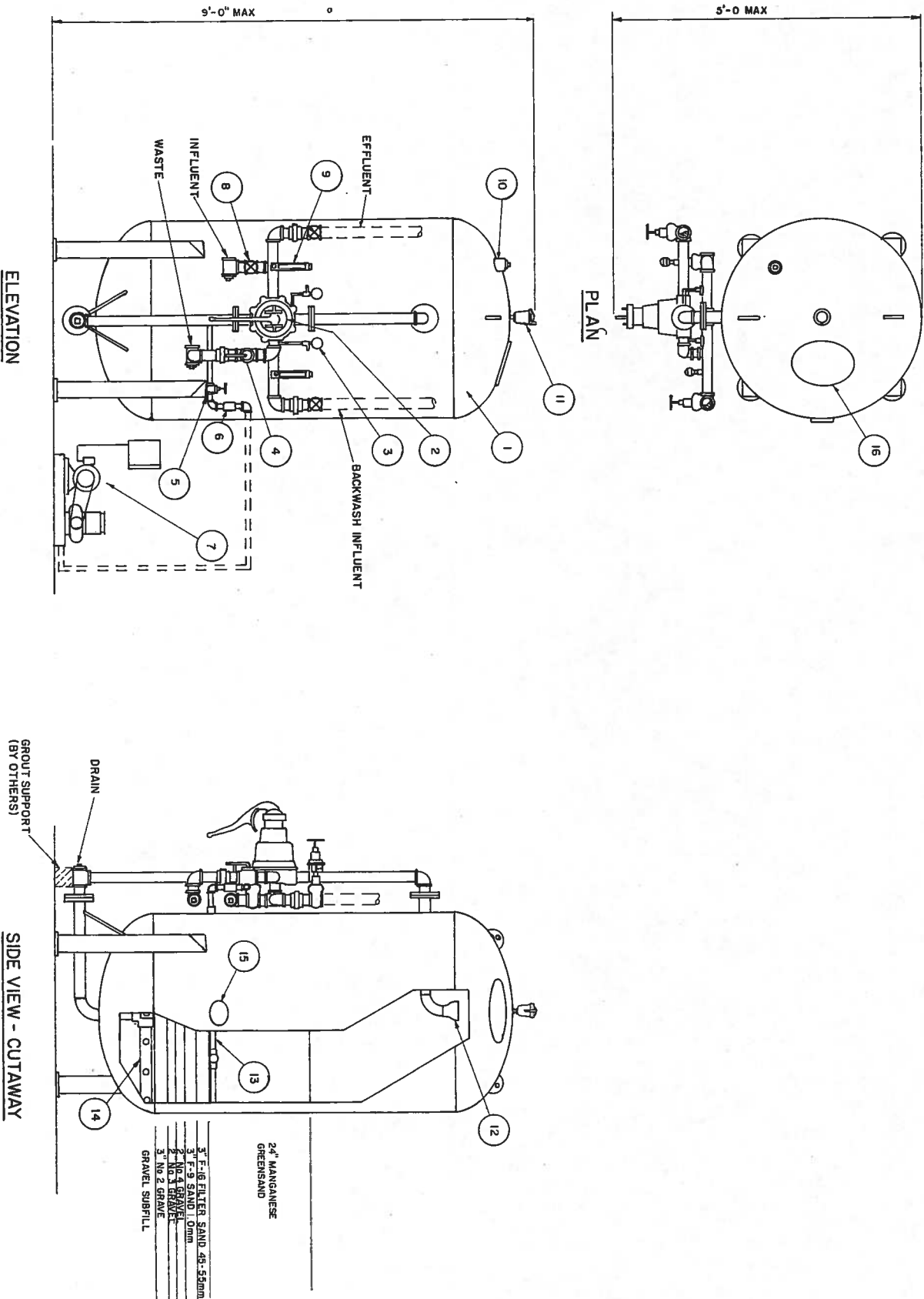
Design Engineer

Maintenance Review

Material Control

ITEM No	DESCRIPTION
1	FILTER TANK 30"x72" SIDE SHELL, 100 LB ASME CODE STAMPED
2	1/2" MULTI-PORT VALVE - AQUAMATIC SOLO VALVE SERIES 404CCR
3	INFLUENT / EFFLUENT PRESSURE GAUGES - SAMPLE COCKS
4	1/2" BALLCENTRIC VALVE - BACKWASH WASTE CONTROL, 1 EA
5	1" AIR REGULATING VALVE
6	1" CHECK VALVE
7	AIR BLOWER: ROOTS AF, COMPLETE W/STARTER & ACCESSORIES
8	1/2" GATE VALVES - 125 LB BRONZED SCHD NMS 3EA
9	IMPACT FLOW METER, 2 EA
10	2" INLET COUPLING FOR MANUAL REGENERATION
11	AUTO AIR RELEASE
12	UPPER DISTRIBUTOR-COLLECTOR
13	AIR WASH DISTRIBUTION
14	HEADER - LATERAL UNDERDRAIN SYSTEM
15	4"x6" HANDHOLE
16	11"x15" MANHOLE

- NOTES**
1. INTERIOR SURFACES - SANDBLASTED AND COATED WITH COAL TAR EPOXY, 2 COATS 8-10 MIL EACH, 16 MIL MIN TOTAL.
 2. EXTERIOR SURFACES - SANDBLASTED AND COATED WITH ONE COAT RUST INHIBITIVE ZINC PRIMER 2.5 MIL MIN THICKNESS.
 3. FRONT PIPING SCH. 40 BLACK STEEL WITH 125 LB FITTING
 4. AIR WASH PIPING SCH. 40 BLACK STEEL WITH 125 LB FITTING
 5. DASH LINE PIPING BY OTHERS



NOT TO SCALE

DATE	2/2/84	AS BUILT	PCB	INITIALS
DATE		REVISIONS		

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

TUNTITULIAK, ALASKA

MANGANESE GREENSAND FILTER
PUBLIC LAW 96-121 PROJECT
PROJECT NO. AN-81-263

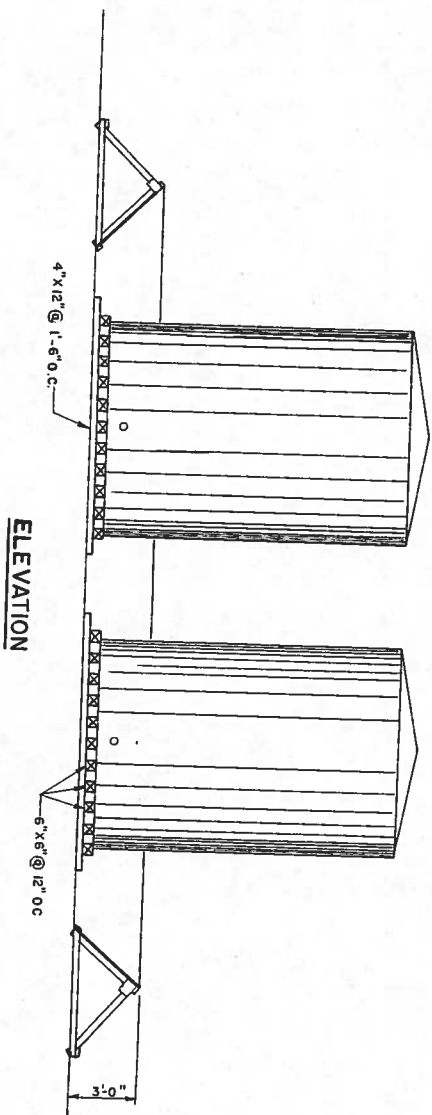
SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH SERVICE
ALASKA
ANCHORAGE, ALASKA

DRAWN BY: JAG
DATE: JAN 81
CHECKED BY: JAG
DATE: 2/2/84

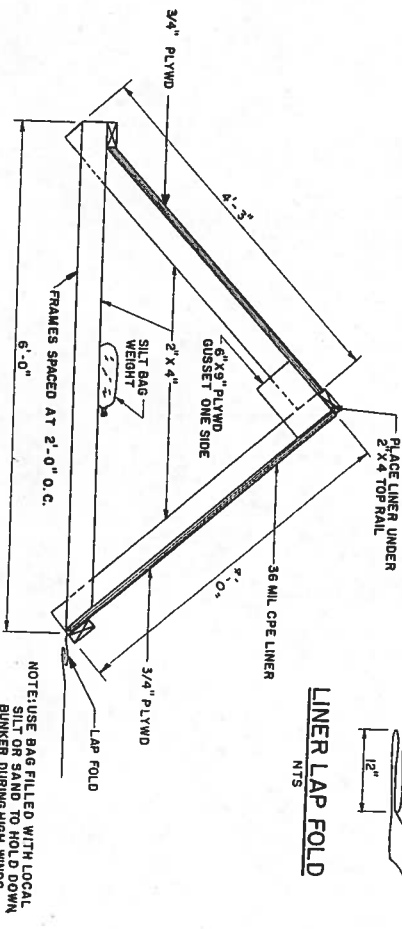
SHEET NO. M-11
OF 14
TOTAL SHEETS

Design Engineer
Review
Material Take-off



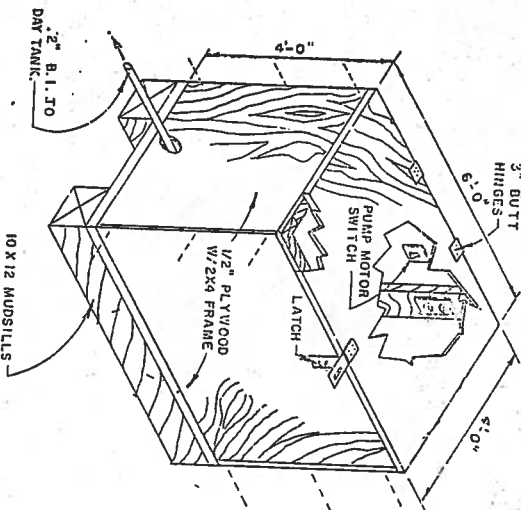


ELEVATION



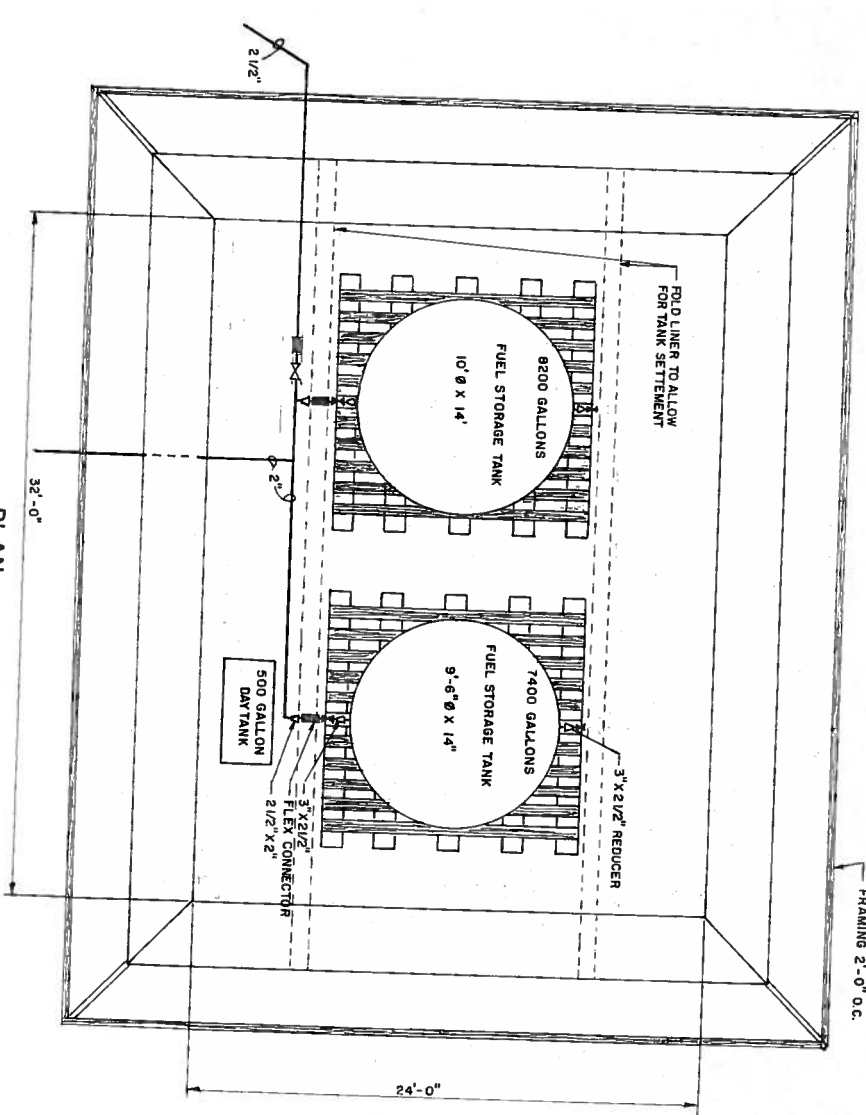
BUNKER FRAMING
SCALE 1/4"=1'-0"

LINER LAP FOLD
NTS



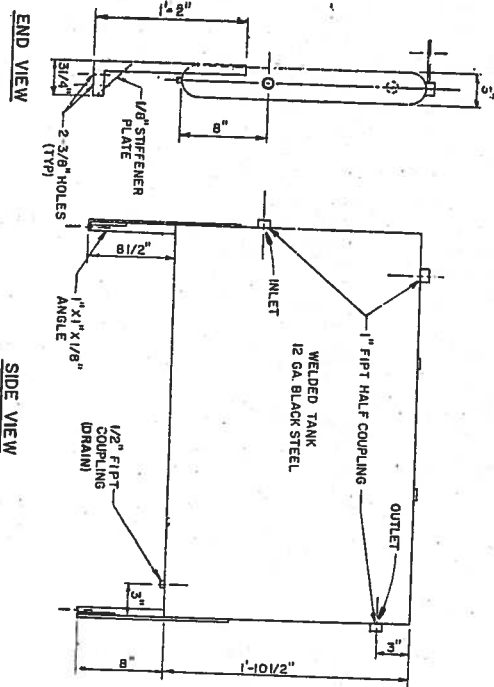
FUEL TRANSFER BUILDING
NOT TO SCALE

NOTE: 1. AUXILIARY FUEL PUMP SWITCH TO BE LOCATED ON OUTSIDE OF WATER TREATMENT BUILDING NEAR 500 GAL. DAY TANK.



PLAN

FUEL STORAGE BUNKER
SCALE 1/4"=1'-0"



END VIEW

SIDE VIEW

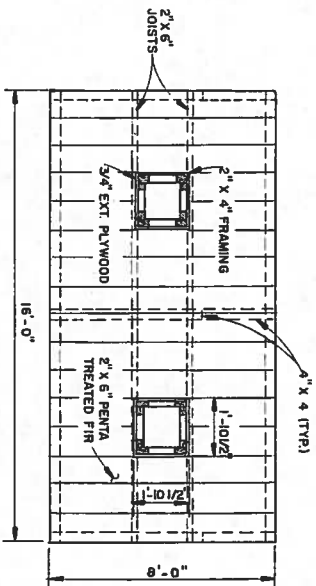
TOP VIEW

FUEL OIL PRE-HEATER
NTS

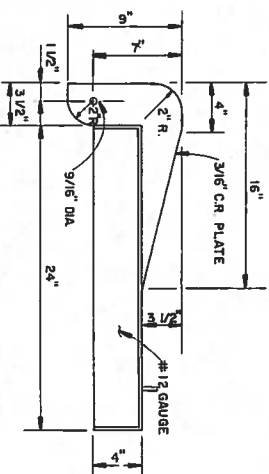
Design Engineer	Material Take-off
Supervisor Review	



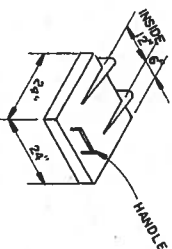
TUNTUTULIAK, ALASKA FUEL OIL BUNKER AND DETAILS PUBLIC LAW 96-121 PROJECT PROJECT NO. AN-81-263		SHEET NO. M-12 OF 14 TOTAL SHEETS
DRAWN BY: JAO DATE: MAR 82	CHECKED BY: JAO DATE: 3/82	
U. S. Department of Health, & Human Services Public Health Service Indian Health Service		
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		



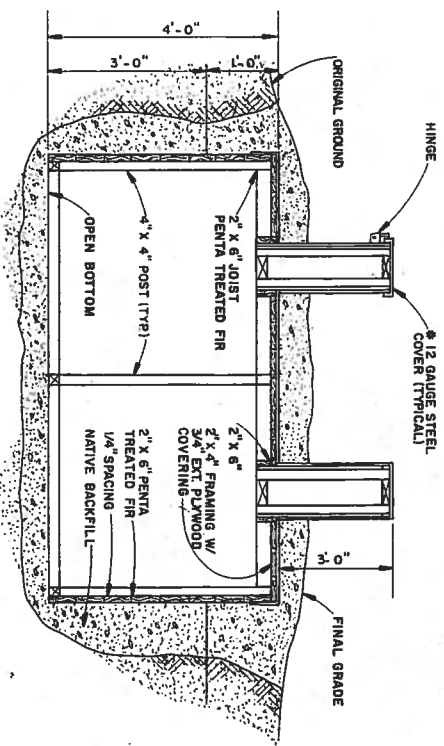
PLAN
NTS



HINGE LID
NTS

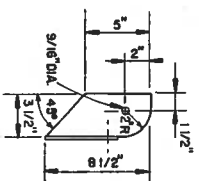


NOTE:
PRIME COAT WITH RED
OXIDE OR EQUAL

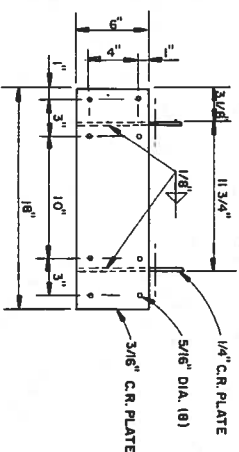


ELEVATION
NTS

SEWAGE DISPOSAL BUNKER



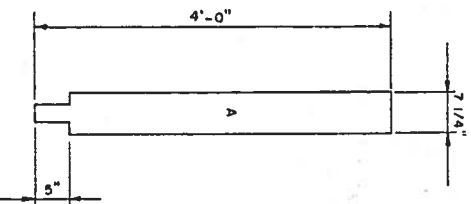
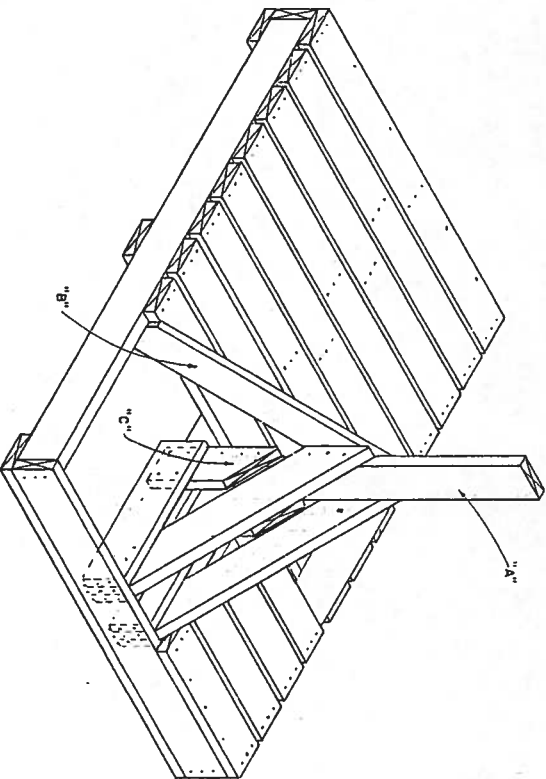
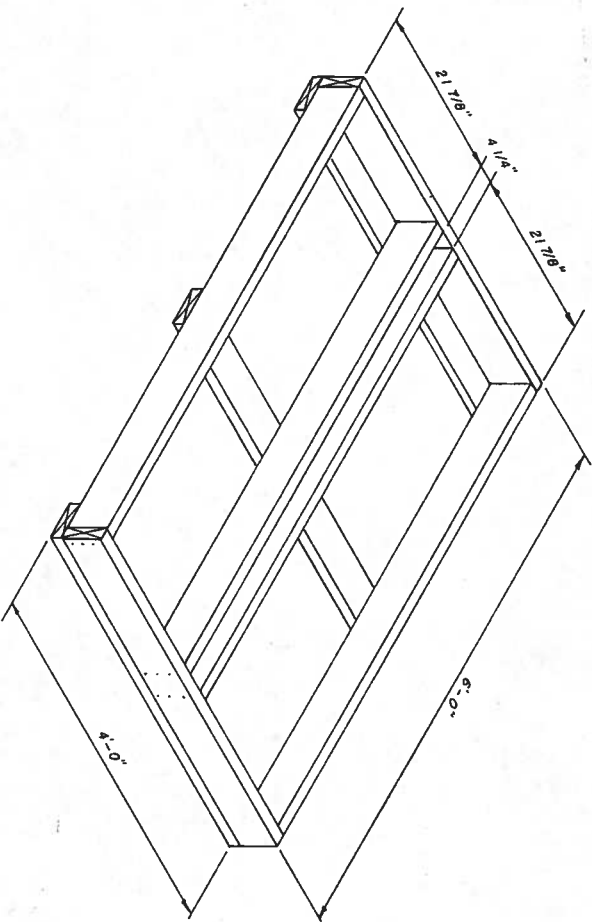
HINGE PLATE
NTS



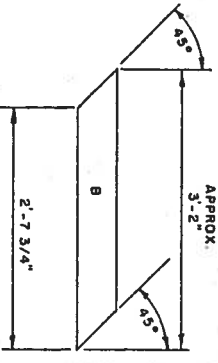
NOTE:
INSTALL 4 BUNKERS AT LOCATIONS SELECTED BY THE
CITY COUNCIL AND PROJECT ENGINEER.

Design Engineer <i>Leslie D. [Signature]</i>	
Maintenance Review	
Material Take-off	

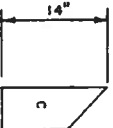
U. S. Department of Health & Human Services Public Health Service Indian Health Service		SHEET NO. M-13
TUNTUTULIAK, ALASKA SEWAGE DISPOSAL BUNKER DETAILS PUBLIC LAW 86-121 PROJECT PROJECT NO. AN-81-263		OF 14 TOTAL SHEETS
DRAWN BY: <i>B. KIRSCHBAUM</i> DATE: <i>JULY 1981</i>	CHECKED BY: <i>[Signature]</i> DATE: <i>8/82</i>	
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA		



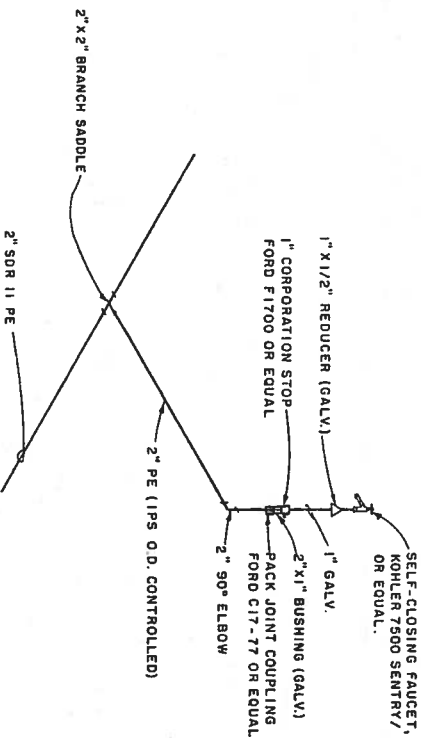
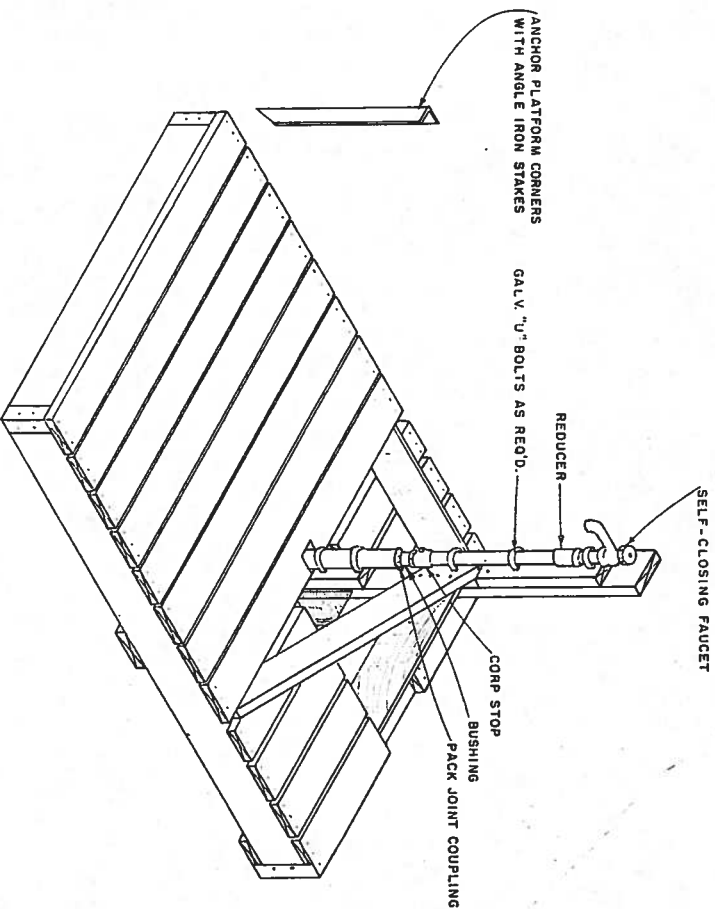
RISER SUPPORT "A"
NTS



RISER SUPPORT "B"
NTS



RISER SUPPORT "C"
NTS

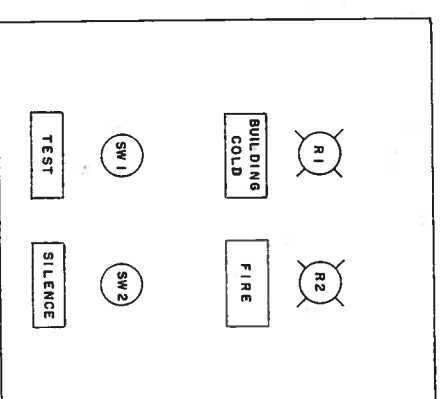
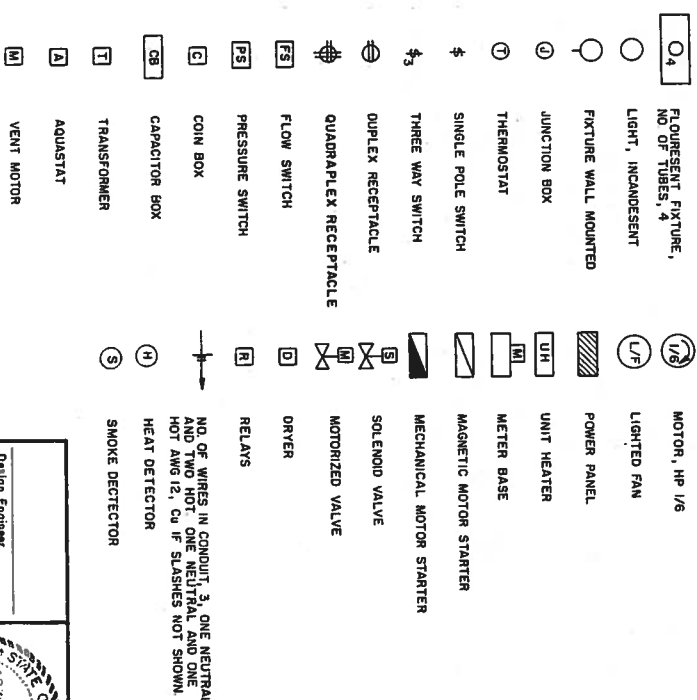
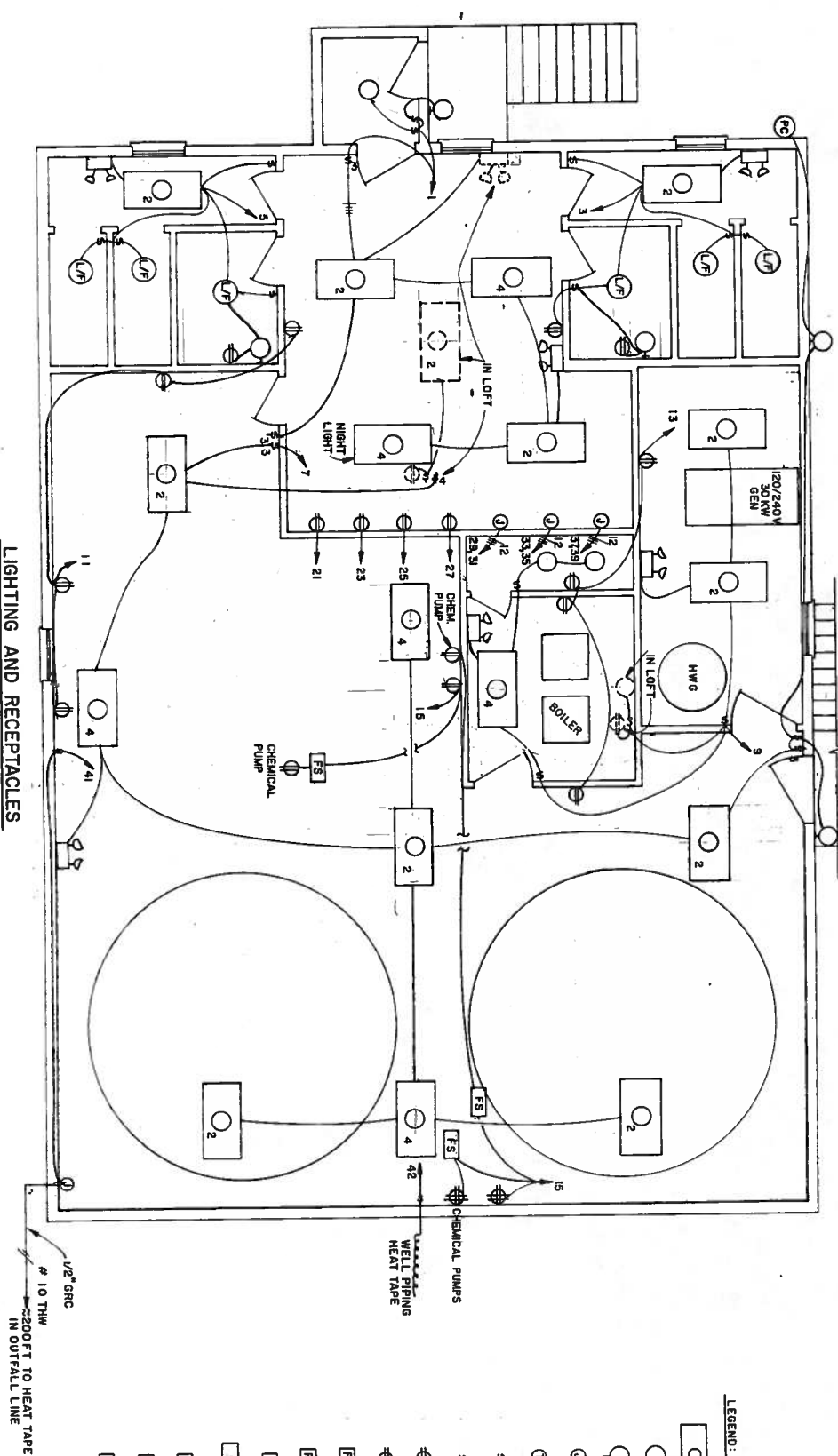
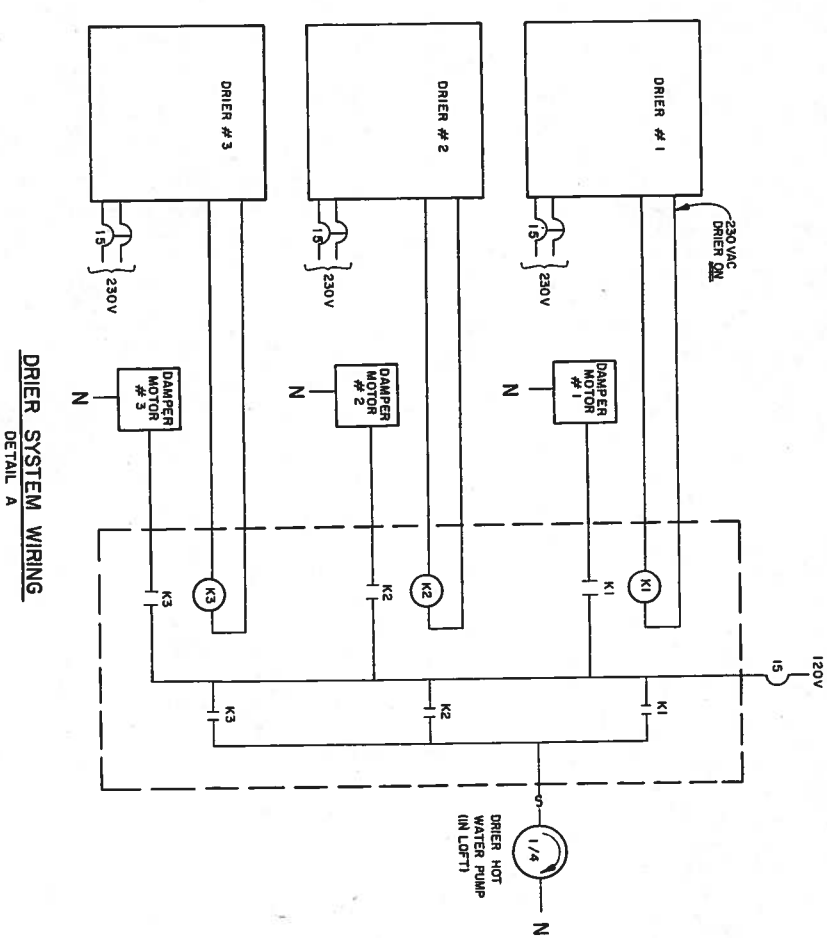
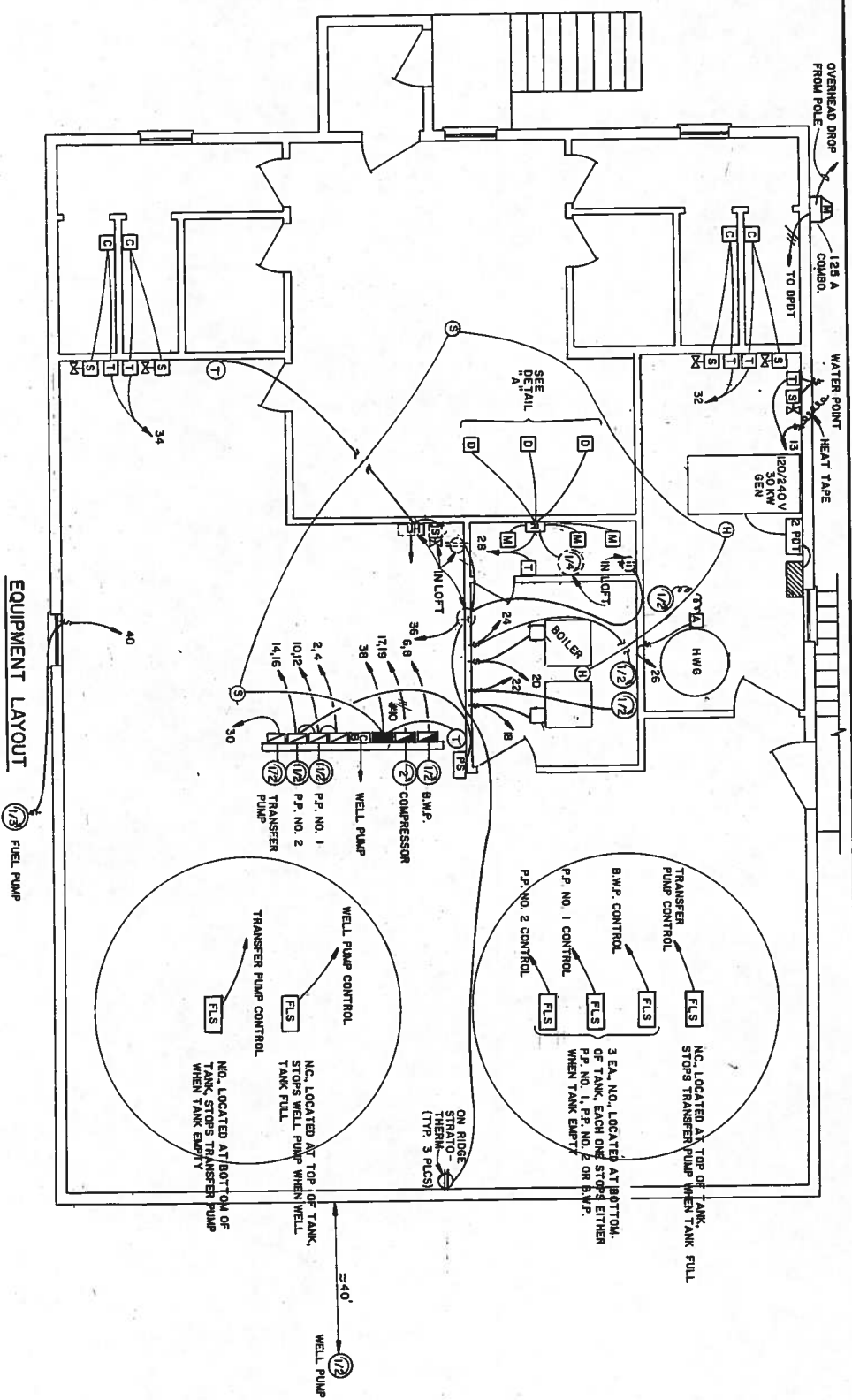


PIPING DETAIL
NTS

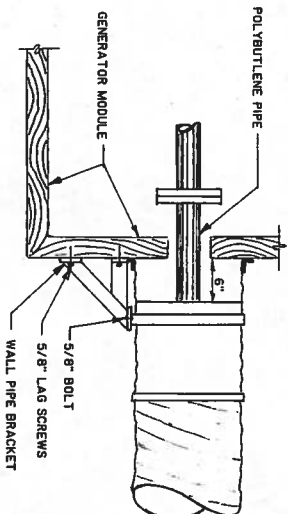
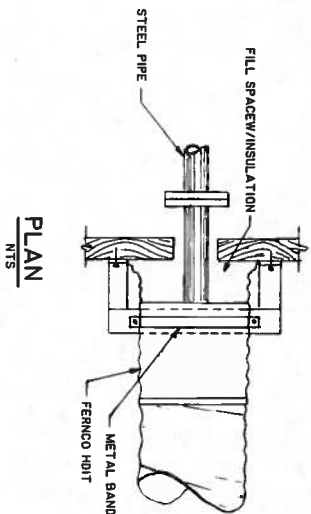
- NOTE:
1. USE 16 D HOT DIP GALVANIZED COMMON ALL CONNECTIONS
 2. ALL MEMBERS 2"x6" EXCEPT VERTICAL RISER SUPPORT "A" WHICH IS 2"x8" ALL LUMBER TO BE PRESSURE TREATED, ACA OR CGA WITH 0.40 LB / FT³ RETENTION (MINIMUM).
 3. FIELD LOCATE 8 WATERING POINT ASSEMBLIES, APPROXIMATELY 120 BF/ASSEMBLY.

Design Engineer
Leon D. Brown
Professional Engineer
No. 1927
State of Alaska
Mechanical
Material Take-off

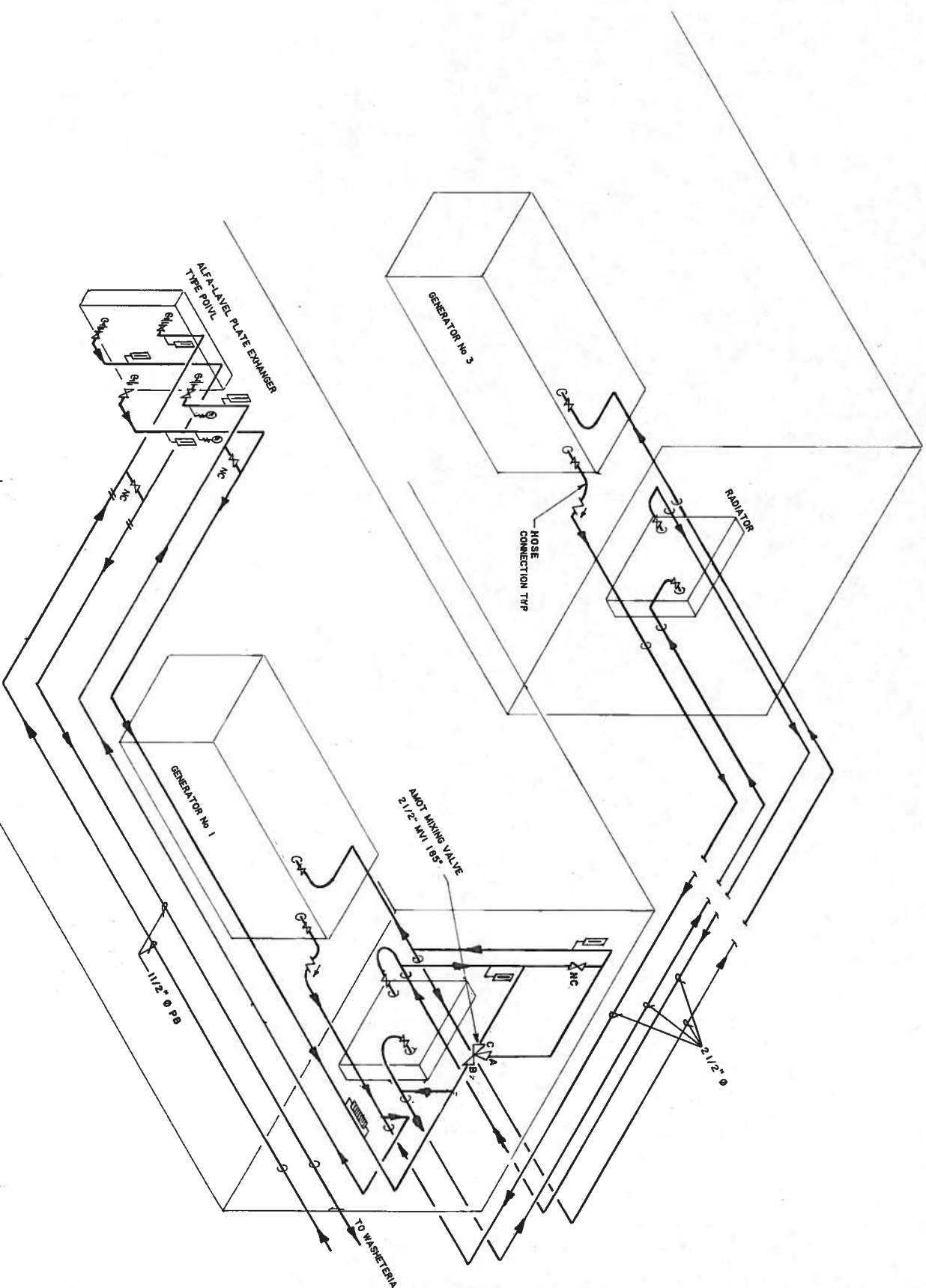
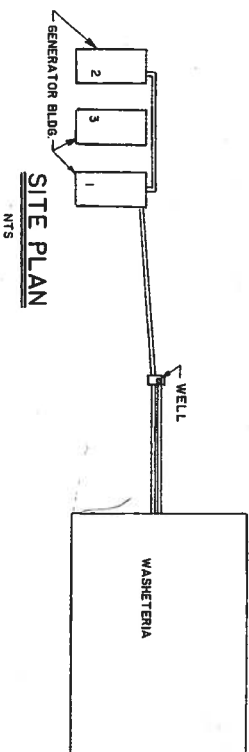
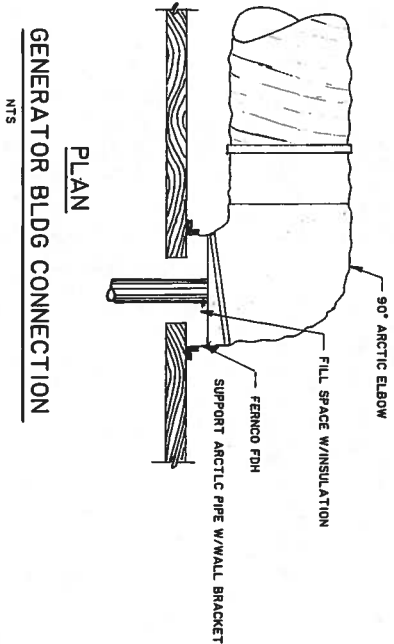
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RYER																	
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0. OF WIRES IN CONDUIT, 3, ONE NEUTRAL, AND TWO HOT. ONE NEUTRAL AND ONE HOT AWG 12, Cu IF SLASHES NOT SHOWN.																	
HEAT DETECTOR																	
SMOKE DETECTOR																	
Design Engineer																	
Maintenance Review																	
Material Take-off																	
																	
<table border="1"><tr><td>DATE</td><td>5-17-83</td><td>AS-BUILT</td><td></td><td></td><td></td></tr><tr><td>DATE</td><td colspan="3">REVISIONS</td><td></td><td></td></tr></table>						DATE	5-17-83	AS-BUILT				DATE	REVISIONS				
DATE	5-17-83	AS-BUILT															
DATE	REVISIONS																
U. S. Department of Health, & Human Services Public Health Service Indian Health Service																	
TUNTUTULIAK, ALASKA ELECTRICAL PLAN PUBLIC LAW 96-121 PROJECT PROJECT NO. AN-81-263																	
DRAWN BY <i>Gerald J. Johnson</i> DATE: 5/14/82 CHECKED BY <i>W. J. [Signature]</i> DATE: <i>6/12</i>																	
SANITATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA																	
SHEET NO. _____ E-1 OF _____ TOTAL SHEETS _____																	



GENERATOR BLDG WASHETERIA CONNECTION
NTS

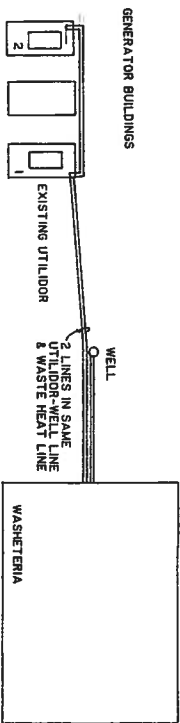


WASTE HEAT SCHEMATIC
NTS

Design Engineer	
Minimums Review	
Modified Take-off	

DATE	2/2/84	AS BUILT	REVISIONS	DATE	INITIALS
U. S. Department of Health, & Human Services Public Health Service Indian Health Service					
TUNTUTULIAK, ALASKA WASTE HEAT RECOVER PUBLIC LAW 86-121 PROJECT PROJECT NO. 4N-82-263					
DRAWN BY: JAG				CHECKED BY:	
DATE: 7/29/81				DATE:	
SANTATION FACILITIES CONSTRUCTION BRANCH ENVIRONMENTAL HEALTH BRANCH ALASKA AREA NATIVE HEALTH SERVICE ANCHORAGE, ALASKA				SHEET NO. 2 OF 2 TOTAL SHEETS	

SCOPE OF WORK
REMOVE OLD PLUMBING REPLACE PLUMBING AS SHOWN IN DRAWING.
MAKE RUNS AS DIRECT AS POSSIBLE MINIMIZE BENDS AS MUCH AS
POSSIBLE PLUMBING FOR GENERATOR 2 WILL BE THE SAME AS GENERATOR 1
BUT ON OPPOSITE SIDE OF UNIT
REPAIR BROKEN PIPES IN UTILITY ROOM BETWEEN GENERATOR BLODS.
AND WASHETERIA



SITE PLAN

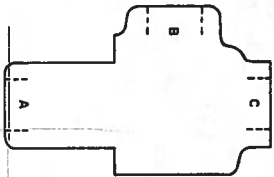
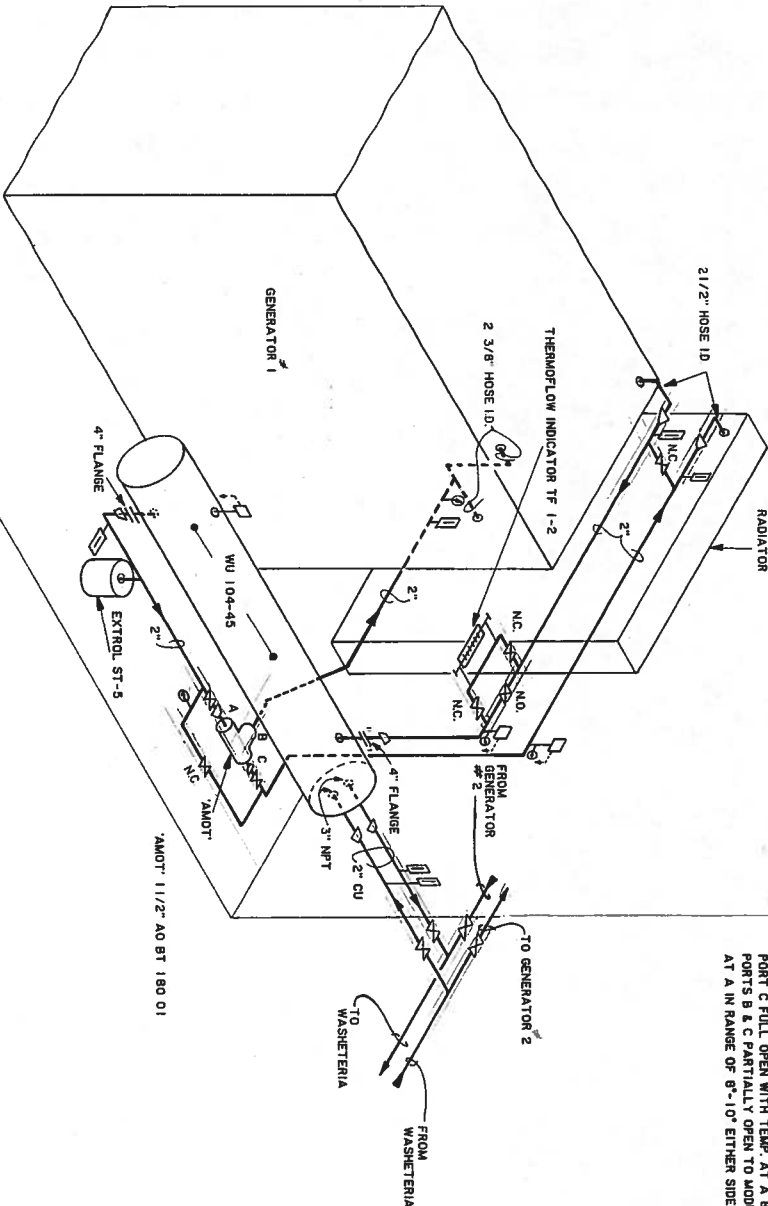
SCALE 1" = 20 0'



NOTE:
ISOLATION VALVES SHALL BE INSTALLED
ON PRESSURE LINES.

GENERATOR LOOP WASTE HEAT PIPING

NTS



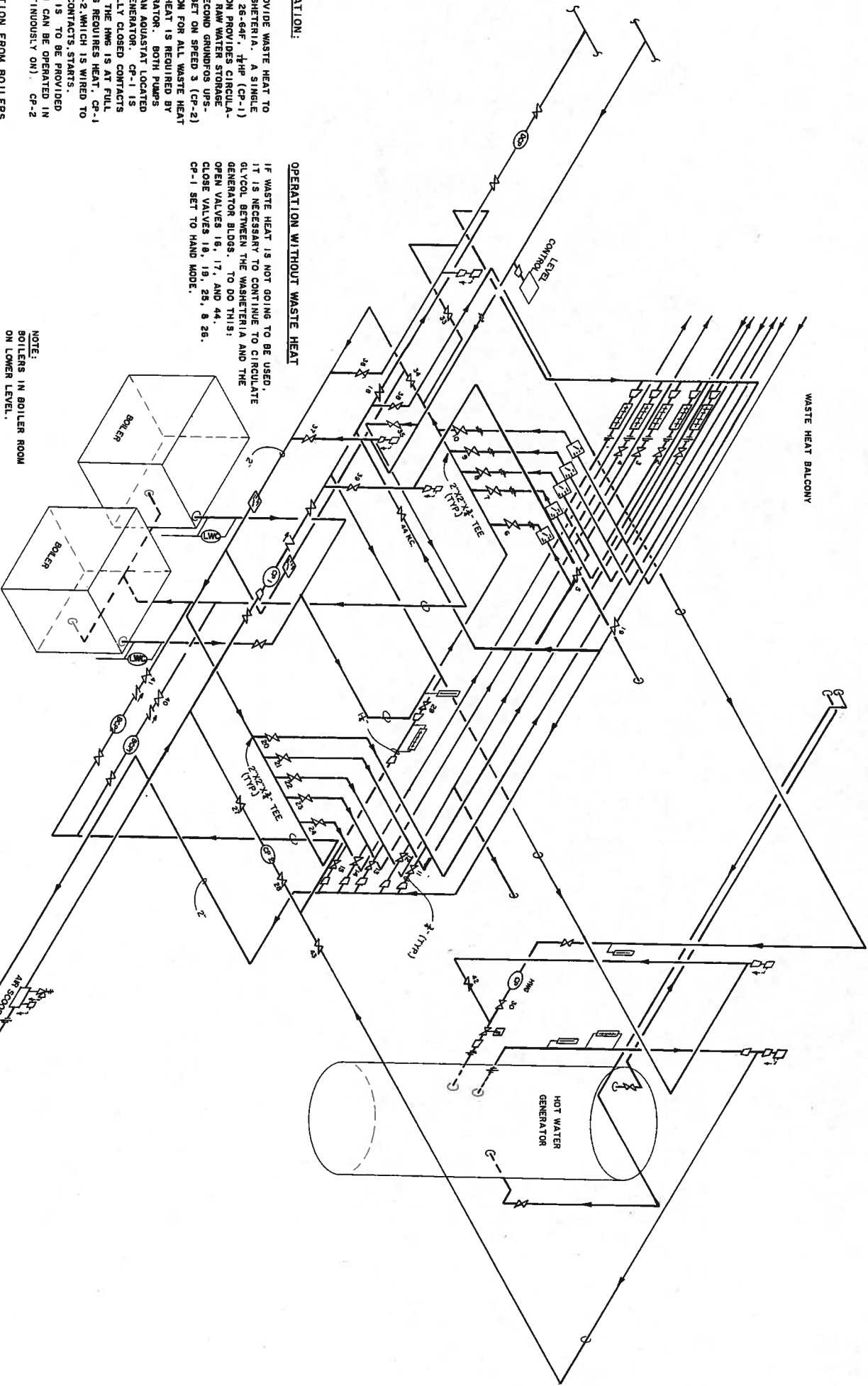
" AMOT " THERMOSTATIC VALVES

TEMPERATURE AT A CONTROLS PORTS B AND C
PORT A ALWAYS OPEN
PORT B FULL OPEN WITH TEMP. AT A 8'-10" BELOW "SET" TEMP.
PORT B FULL CLOSED WITH TEMP. AT A 8'-10" ABOVE "SET" TEMP.
PORT C FULL OPEN WITH TEMP. AT A 8'-10" ABOVE "SET" TEMP.
PORT C FULL CLOSED WITH TEMP. AT A 8'-10" BELOW "SET" TEMP.
PORTS B & C PARTIALLY OPEN TO MODULATE FLOW WITH TEMP.
AT A IN RANGE OF 8'-10" EITHER SIDE OF "SET" TEMP.

Design Engineer	
Modifications Review	
Material Take-off	

TUNTUTULIAK, ALASKA	SHEET NO.
GENERATOR LOOP WASTE HEAT PIPING	01
PUBLIC LAW 86-121 PROJECT	TOTAL SHEETS
PROJECT NO. AN-81-263	
SANITATION FACILITIES CONSTRUCTION BRANCH	
ENVIRONMENTAL HEALTH BRANCH	
ALASKA DEPARTMENT OF HEALTH & HUMAN SERVICES	
ANCHORAGE, ALASKA	

DRAWN BY: PCS	CHECKED BY:
DATE: 5/2/85	DATE:



OPERATION WITHOUT WASTE HEAT

IF WASTE HEAT IS NOT GOING TO BE USED, IT IS NECESSARY TO CONTINUE TO CIRCULATE GLYCOL BETWEEN THE WASHETRIA AND THE GENERATOR BLDGS. TO DO THIS:

OPEN VALVES 18, 17, AND 44.
CLOSE VALVES 18, 19, 25, 8, 26.
CP-1 SET TO HAND MODE.

NOTE:
BOILERS IN BOILER ROOM
ON LOWER LEVEL.

SCOPE OF WORK

PUMPS & ELECTRICAL

CP-1-GRUNDOS UPS 26-64F. 1/2 HP. PRIMARY WASTE HEAT CIR. PUMP. WIRE TO NORMALLY CLOSED CONTACTS IN AQUASTAT 2. PROVIDE A HAND, OFF, AUTO, MODE SWITCH.

CP-2-GRUNDOS UPS 50-160. 3 SPD. 1/2 HP. HWG WASTE HEAT PUMP. WIRE TO NORMALLY OPEN CONTACTS IN AQUASTAT 2. PROVIDE AN OFF, AUTO, MODE SWITCH.

HWGP - REWIRE TO PROVIDE OFF, AUTO SWITCH. WIRE INTO NEW AQUASTAT NUMBER 1.

DCP - NO CHANGES.

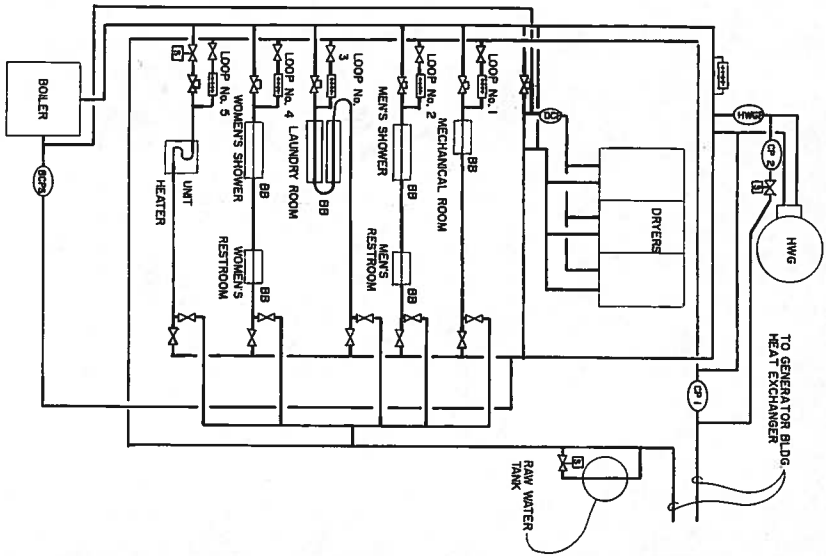
BC-1, BC-2, REWIRE TO PROVIDE OFF, AUTO SWITCH.

REPLACE EXISTING AQUASTAT ON HWG WITH TWO (2) NEW ONES. USE TWO REMOTE TEMPERATURE BULBS IN THE SAME 1/2" WELL ON THE HOT WATER GENERATOR.

PLUMBING

REPLACE EXISTING WASTE HEAT PLUMBING. MAKE THE INTO EXISTING PLUMBING AS SHOWN ON THE DRAWING. MAKE PLUMBING RUNS AS DIRECT AS POSSIBLE.

FLOW RATES (GPM)		BOILERS		WASTE HEAT	
	AV. TEMP.		AV. TEMP.		AV. TEMP.
HOT WATER GENERATOR	30	210°	30	160°	
RAW WATER TANK	36	210°	15	160°	
DRYERS	0.7	210°	0.9	160°	
MECHANICAL ROOM	2.3	210°	3.0	160°	
MEN'S ROOM	1.5	210°	2.0	160°	
LAUNDRY ROOM	2.3	210°	3.0	160°	
WOMEN'S ROOM	0.6	210°	0.9	160°	
UNIT HEATER					



WASTE HEAT OPERATION:

PUMPS:

TWO CIR. PUMPS PROVIDE WASTE HEAT TO THE TUNTUTULIAK WASHETRIA. A SINGLE SPEED GRUNDOS UPS 26-64F. 1/2 HP (CP-1) IN PRIMARY OPERATION PROVIDES CIRCULATION FOR BLDG. AND RAW WATER STORAGE TANK HEATING. A SECOND GRUNDOS UPS-50-160 1/2 HP PUMP SET ON SPEED 3 (CP-2) PROVIDES CIRCULATION FOR ALL WASTE HEAT APPLICATIONS WHEN HEAT IS REQUIRED BY THE HOT WATER GENERATOR. BOTH PUMPS ARE CONTROLLED BY AN AQUASTAT LOCATED ON THE HOT WATER GENERATOR. CP-1 IS WIRED TO THE NORMALLY CLOSED CONTACTS AND OPERATES WHILE THE HWG IS AT FULL TEMP. WHEN THE HWG REQUIRES HEAT, CP-1 IS SHUT OFF AND CP-2, WHICH IS WIRED TO THE NORMALLY OPEN CONTACTS, STARTS. IF ONLY BLDG. HEAT IS TO BE PROVIDED BY WASTE HEAT, CP-1 CAN BE OPERATED IN THE HAND MODE (CONTINUOUSLY ON). CP-2 WOULD NOT OPERATE.

TO CHANGE OPERATION FROM BOILERS TO WASTE HEAT:

BUILDING HEAT LOOP:

OPEN VALVES 1 THRU 6 AND VAVES 11 THRU 19 ON THE PRIMARY WASTE HEAT LOOP.
CLOSE VALVES 6 THRU 10 AND 20 THRU 24 ON THE BOILER HEAT LOOP.

HOT WATER GENERATOR LOOP:

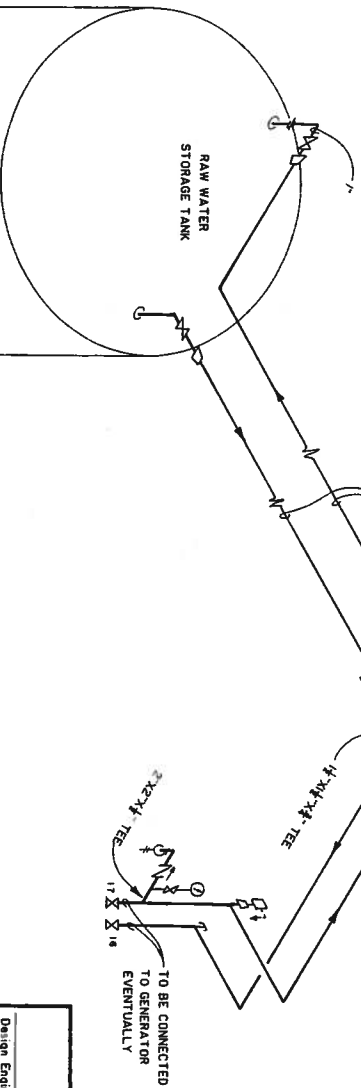
OPEN VALVES 27, 28, 29, 38, 42, AND 43 ON HWG WASTE HEAT LOOP.
CLOSE VALVES 30 AND 39 ON HWG BOILER LOOP AND SET HWG PUMP TO OFF.
CP-1 AND CP-2 SET TO AUTO. MODE. SWITCH HWGP TO OFF.

RAW WATER HEAT LOOP:

OPEN VALVES 25 AND 26 ON RAW WATER WASTE HEAT LOOP.

DRYER HEAT LOOP:

NO WASTE HEAT IS PROVIDED FOR THE DRYERS. TO SAVE ENERGY WHILE WASTE HEAT IS BEING USED FOR THE BLDG. & HOT WATER REQUIREMENTS, THE BOILER CIR. PUMPS (CP-1 & CP-2) CAN BE SHUT OFF & THE DRYER CIR. PUMPS (CP-3) WILL CIRCULATE WATER THROUGH THE BOILERS BY: OPEN VALVES 33 AND 35.
CLOSE VALVES 34, 36, 37, 40 AND 41.
BC-1 AND BC-2 SET TO OFF.



Design Engineer	
Mountings Review	
Material Take-off	

DATE	7/21/86	AS-BUILT	INITIALS
DATE	7/21/86	AS-BUILT	INITIALS

U.S. Department of Health & Human Services	
Public Health Service	
Indian Health Service	
TUNTUTULIAK, ALASKA	
WASTE HEAT SYSTEM	
PUBLIC LAW 86-121 PROJECT	
PROJECT NO. AN-BI-263	
SHEET NO.	07
TOTAL SHEETS	

DRAWN BY: JSP	CHECKED BY:
DATE: JULY 86	DATE:

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