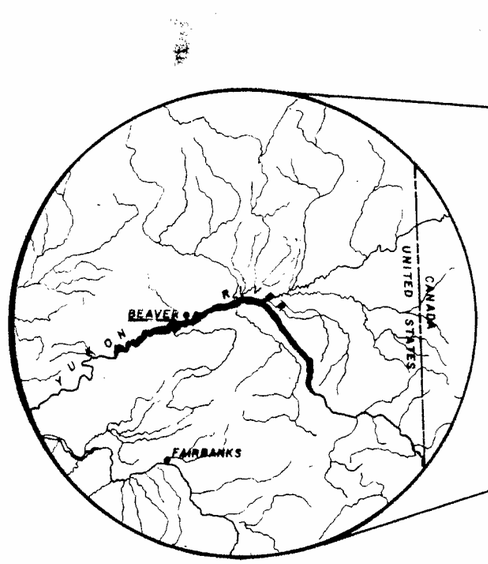
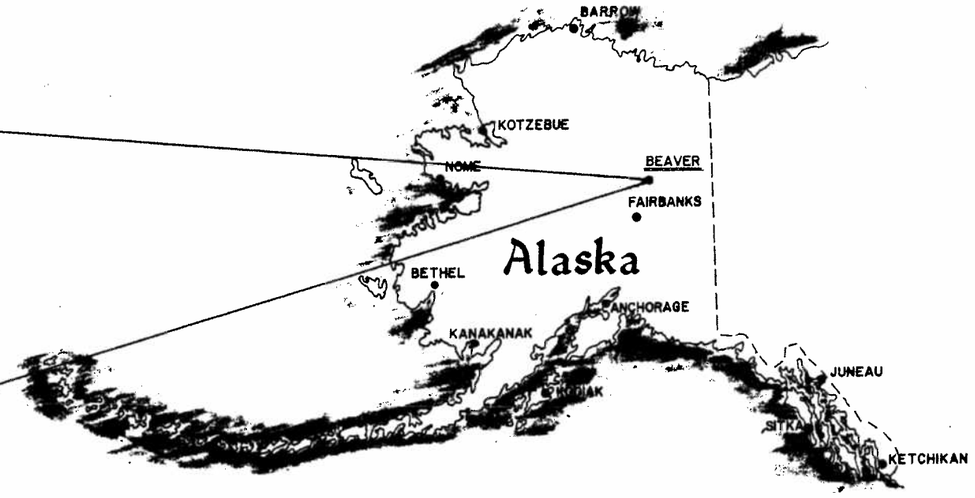
CONSTRUCTION PLANS

SANITATION FACILITIES

BEAVER , ALASKA





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RECORD DRAWINGS

STATE OF ALASKA 49TH DON A. MOORE No. CE 8279 REGISTERED PROFESSIONAL ENGINEER

THESE DRAWINGS REFLECT RECEIVED INFORMATION CONCERNING DURING CONSTRUCTION.

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

NAME _____ DATE _____

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

PUBLIC LAW 86-121 PROJECT

PROJECT NO. AN-89-996

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

STATE OF ALASKA 49TH STEVEN MARK WEAVER REGISTERED PROFESSIONAL ENGINEER

U.S. GOVERNMENT PRINTING OFFICE 1977-791

LEGEND AND GENERAL NOTES

SITE PLAN

EXISTING		PROPOSED THIS PROJECT
	STRUCTURES	
	ROADS (PAVED)	
	ROADS (UNPAVED)	
	PROPERTY LINE	
—C—	COMMUNICATIONS LINE	—C—
—P—	POWER LINE	—P—
—S—	SEWER SERVICE LINE	—S—
—W—	WATER SERVICE LINE	—W—
CO —S—	CLEANOUT	CO —S—
—S—	SEWER LINE	—S—
—W—	WATER LINE	—W—
—FM—	FORCE MAIN	—FM—
FH	FIRE HYDRANT, IN-LINE	FH
FH	FIRE HYDRANT, OFFSET	FH
MH	MANHOLE	MH
	VALVE	
POL	POL LINE (FUEL OIL)	POL
	LIFT STATION W/BUILDING	
	R.O.W. LINE	
	WELL	
—x—x—	FENCE	—x—x—
—U—	UTILIDOR	—U—
=R=	RACEWAY	=R=
	RAILROAD	
	BENCHMARK	
	TEST HOLE	
EL.	ELEVATION	
ST	SEPTIC TANK	ST
LF	LEACHFIELD	LF
—W—	CORPORATION STOP	—W—
BC	BRASS CAP	
—W—	WATERING POINT	—W—
PP	POWER POLE	PP
CS —W—	CURB STOP	CS —W—
DT REPS	RESIDENTIAL EFFLUENT PUMPING STATION (DOSING TANK)	DT REPS
△	PEDESTAL	▲
□	TRANSFORMER	■
WTP or WTB	WATER TREATMENT PLANT or WATER TREATMENT BUILDING	
WST	WATER STORAGE TANK	
WWTF	WASTE WATER TREATMENT FACILITY	
NFS	NON FROST SUSCEPTIBLE	

MECHANICAL

	PRIMARY SYSTEM
HW	HOT WATER LINES
HWR	HOT WATER RETURN LINES
D	DRAIN & OVERFLOW LINE
CWM	COLD WATER MAKE-UP LINE
BP	BY-PASS LINE
BW	BACK WASH LINE
CW	COLD WATER LINES
LWC	LOW WATER CUT-OFF
CP	CHEMICAL PUMP
C	CIRCULATING PUMP
M	WATER METER
	GATE VALVE
	CHECK VALVE
	UNION
DE	DIELECTRIC UNION
	AUTOMATIC AIR RELIEF
	PRESSURE RELIEF VALVE
	ADAPTOR
	FLEX PIPE
	FLEX COUPLING
A	AQUASTAT
FS	FLOW SWITCH
PS	PRESSURE SWITCH
T	THERMOMETER
	PRESSURE REDUCING VALVE
	PRESSURE GAUGE
device	FLOW INDICATOR
device	THERMOFLO INDICATOR
T	CIRCUIT SETTER
	DIRECTION OF FLOW
V	VACUUM BREAKER
VB	TANK LEVEL INDICATOR

PIPE FITTING & VALVE SYMBOLS

	ANGLE VALVE
	CAP
	CROSS
	ELBOW (ELL), 45°
	ELBOW, 90°
	LATERAL
	TEE
	STRAINER
DE	DIELECTRIC FLANGE PKG.
	FLANGE JOINT
	SCREWED JOINT
	WELDED JOINT
	SOLDERED JOINT
	SLEEVE
	DRESSER COUPLING
	EXPANSION JOINT
	REDUCER, CONCENTRIC
	REDUCER, ECCENTRIC
HB	HOSE BIBB W/BACKFLOW PREVENTER. MINITROL
	90° LONG RADIUS ELBOW
	VICTAULIC COUPLING
	VACUUM BREAKER
	FLOOR DRAIN
	BALL VALVE
	CHECK BALL VALVE
S	SOLENOID VALVE
	MOTORIZED VALVE
	MOTORIZED 3-WAY VALVE
	GLOBE VALVE
	BALANCING VALVE
2-WAY	AUTO. TEMP. CONTROL VALVE
3-WAY	AUTO. TEMP. CONTROL VALVE
	QUICK OPENING VALVE
	FUSIBLE VALVE
	BUTTERFLY VALVE
FC 3gpm	FLOW CONTROL VALVE
3gpm	PLUG VALVE
ELL - ELBOW	MJ - MECHANICAL JOINT

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
V	VAPOR TIGHT LIGHT FIXTURE
	HIGH PRESSURE SODIUM LIGHT FIXTURE
	INCANDESCENT FIXTURE, RECESSED
	FLUORESCENT FIXTURE, RECESSED
	DUPLEX RECEPTACLES
	QUADRAPLEX RECEPTACLES
	SPECIAL PURPOSE RECEPTACLES
S	SINGLE POLE SWITCH
S_3	3-WAY SWITCH
J	JUNCTION BOX
T	THERMOSTAT
T	TRANSFORMER
A	AQUASTAT
PC	PHOTO CELL
R	RELAY
M	MOTOR OPERATED VALVE (ZONE VALVE)
S	SOLENOID VALVE
	CONTROLLER
	MOTOR STARTER, MANUAL
	MOTOR STARTER, MAGNETIC
	SWITCHING PANEL
	CIRCUIT BREAKER PANEL
	ALARM PANEL
H	HEAT DETECTOR
S	SMOKE DETECTOR
B	BELL
	ALARM HORN
M	METER BASE
(2)	MOTOR W/HORSEPOWER INDICATED
FLS	FLOAT SWITCH
PS	PRESSURE SWITCH
FS	FLOW SWITCH
UH	UNIT HEATER
	EMERGENCY LIGHT
	EXIT LIGHT
T	SYSTEM GROUND THERMOSTAT
S_{PB}	SWITCHED RECEPTACLE PUSH-BUTTON SWITCH
F	FAN
PC	FIXTURE W/PULL CHAIN
S_T	SWITCH W/TIMER
	TELEPHONE OUTLET
CU	COPPER

NOTES

CIVIL

1. ~~MINIMUM VERTICAL SEPARATION BETWEEN WATER LINE & SEWER LINE AT THE CROSSING POINT SHALL BE 18".~~
2. ~~MINIMUM HORIZONTAL SEPARATION BETWEEN WATER LINE & SEWER LINE SHALL BE 10.0'.~~
3. ~~MINIMUM BURY ON WATER LINE SHALL BE~~
4. ~~LOCATION OF ALL WELLS, SEPTIC TANKS, MANHOLES, CLEANOUTS, VALVES, ETC. SHALL BE REFERENCED TO THREE PERMANENT ABOVE GROUND STRUCTURES.~~
5. ~~CLEANOUTS, LEACHFIELDS AND SEPTIC TANKS ARE NUMBERED ACCORDING TO CORRESPONDING MANHOLE, i.e., MH-1, ST-1A, LF-1A AND CO-1A.~~

MECHANICAL

1. 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
   YELLOW - WASTE HEAT RECOVERY
2. TYPE OF PAINT TO BE USED SHALL BE GARLOCK OR APPROVED EQUAL.
3. DIRECTION OF FLOW SHALL BE INDICATED BY ARROWS AND A NAME PLATE SHALL BE ATTACHED DESCRIBING MATERIAL BEING CARRIED.
4. ALL PIPING SHALL BE COPPER UNLESS OTHERWISE INDICATED.
5. ALL SOLDER CONNECTIONS SHALL BE MADE W/TIN-ANTIMONY 95-5 SOLDER.
6. ALL HOT WATER LINES SHALL BE INSULATED.
7. ALL PIPE SUPPORTS AND HANGERS SHALL HAVE 1/2" INSULATION BETWEEN COPPER PIPE AND SUPPORTS OR HANGERS.
8. PRESSURE TESTING REQUIREMENTS WATER MAINS AND SERVICES, SEWER MAINS AND SERVICES IN ACCORDANCE WITH SFS GUIDE-LINE C-39 .
9. DRAIN WATER AND VENT PLUMBING, WATER SUPPLY PIPING AND HYDRONICS PIPING IN ACCORDANCE WITH SECTION 318 OF UPC .

ELECTRICAL

1. 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
2. GROUND SYSTEM NEUTRAL AND ALL METALLIC SURFACES PER 1990 NATIONAL ELECTRICAL CODE (N. E. C.) .
3. ALL WIRING SHALL BE IN CONDUIT. UNLESS OTHERWISE SPECIFIED

DATE	REVISIONS	INITIALS
12-9-91	RECORD DRAWING	J.C

Design Engineer

Maintenance Review

Material Take-off

STATE OF ALASKA — 49TH — STEVEN MICHAEL WILLIAMS — REGISTERED PROFESSIONAL ENGINEER

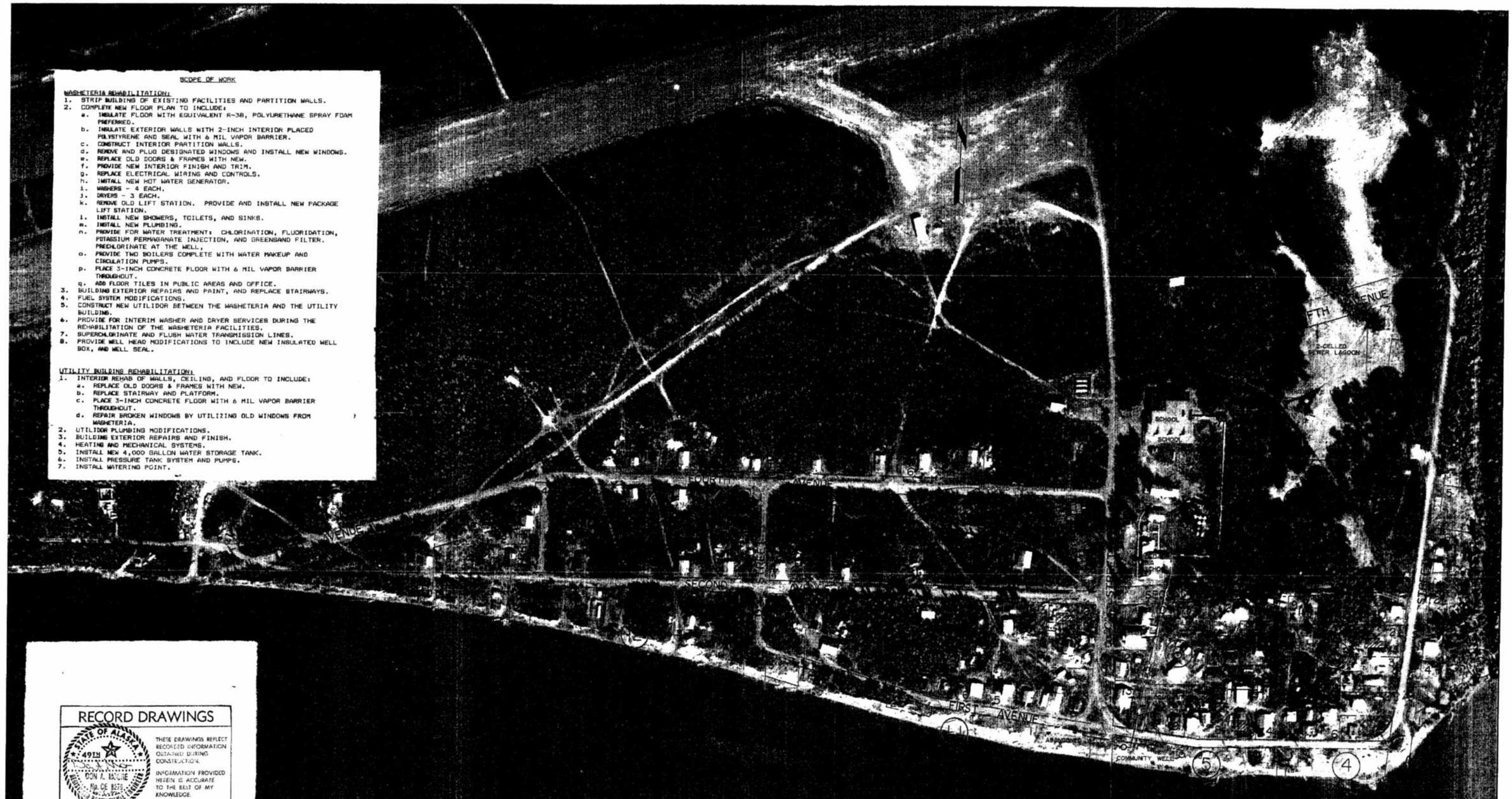
U. S. Department of Health & Human Services
Public Health Service
Indian Health Service

BEAVER, ALASKA
LEGEND & NOTES
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

SHEET NO. L-1 OF 1 TOTAL SHEETS

DRAWN BY: LOWDERMILK /D.C.G. DATE: 9/82 /1-12-90
CHECKED BY: DATE:

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



SCOPE OF WORK

WASHETERIA REHABILITATION:

1. STRIP BUILDING OF EXISTING FACILITIES AND PARTITION WALLS.
2. COMPLETE NEW FLOOR PLAN TO INCLUDE:
   a. INSULATE FLOOR WITH EQUIVALENT R-38, POLYURETHANE SPRAY FOAM PREFERRED.
   b. INSULATE EXTERIOR WALLS WITH 2-INCH INTERIOR PLACED POLYSTYRENE AND SEAL WITH 6 MIL VAPOR BARRIER.
   c. CONSTRUCT INTERIOR PARTITION WALLS.
   d. REMOVE AND PLUG DESIGNATED WINDOWS AND INSTALL NEW WINDOWS.
   e. REPLACE OLD DOORS & FRAMES WITH NEW.
   f. PROVIDE NEW INTERIOR FINISH AND TRIM.
   g. REPLACE ELECTRICAL WIRING AND CONTROLS.
   h. INSTALL NEW HOT WATER GENERATOR.
   i. WASHERS - 4 EACH.
   j. DRYERS - 3 EACH.
   k. REMOVE OLD LIFT STATION. PROVIDE AND INSTALL NEW PACKAGE LIFT STATION.
   l. INSTALL NEW SHOWERS, TOILETS, AND SINKS.
   m. INSTALL NEW PLUMBING.
   n. PROVIDE FOR WATER TREATMENT: CHLORINATION, FLUORIDATION, POTASSIUM PERMANGANATE INJECTION, AND GREENSAND FILTER. PRECHLORINATE AT THE WELL.
   o. PROVIDE TWO BOILERS COMPLETE WITH WATER MAKEUP AND CIRCULATION PUMPS.
   p. PLACE 3-INCH CONCRETE FLOOR WITH 6 MIL VAPOR BARRIER THROUGHOUT.
   q. ADD FLOOR TILES IN PUBLIC AREAS AND OFFICE.
3. BUILDING EXTERIOR REPAIRS AND PAINT, AND REPLACE STAIRWAYS.
4. FUEL SYSTEM MODIFICATIONS.
5. CONSTRUCT NEW UTILIDOR BETWEEN THE WASHETERIA AND THE UTILITY BUILDING.
6. PROVIDE FOR INTERIM WASHER AND DRYER SERVICES DURING THE REHABILITATION OF THE WASHETERIA FACILITIES.
7. SUPERCHLORINATE AND FLUSH WATER TRANSMISSION LINES.
8. PROVIDE WELL HEAD MODIFICATIONS TO INCLUDE NEW INSULATED WELL BOX, AND WELL SEAL.

UTILITY BUILDING REHABILITATION:

1. INTERIOR REHAB OF WALLS, CEILING, AND FLOOR TO INCLUDE:
   a. REPLACE OLD DOORS & FRAMES WITH NEW.
   b. REPLACE STAIRWAY AND PLATFORM.
   c. PLACE 3-INCH CONCRETE FLOOR WITH 6 MIL VAPOR BARRIER THROUGHOUT.
   d. REPAIR BROKEN WINDOWS BY UTILIZING OLD WINDOWS FROM WASHETERIA.
2. UTILIDOR PLUMBING MODIFICATIONS.
3. BUILDING EXTERIOR REPAIRS AND FINISH.
4. HEATING AND MECHANICAL SYSTEMS.
5. INSTALL NEW 4,000 GALLON WATER STORAGE TANK.
6. INSTALL PRESSURE TANK SYSTEM AND PUMPS.
7. INSTALL WATERING POINT.

RECORD DRAWINGS

STATE OF ALASKA 49TH — DON A. BACHE — No. OE 8272 — REGISTERED PROFESSIONAL ENGINEER

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

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

NAME _____ DATE _____

DATE	REVISIONS	INITIALS
12-7-91	RECORD DRAWING	J.C

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

BEAVER, ALASKA

AERIAL PHOTO
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

SHEET NO. D-1 OF 2 TOTAL SHEETS

Design Engineer

Maintenance Review

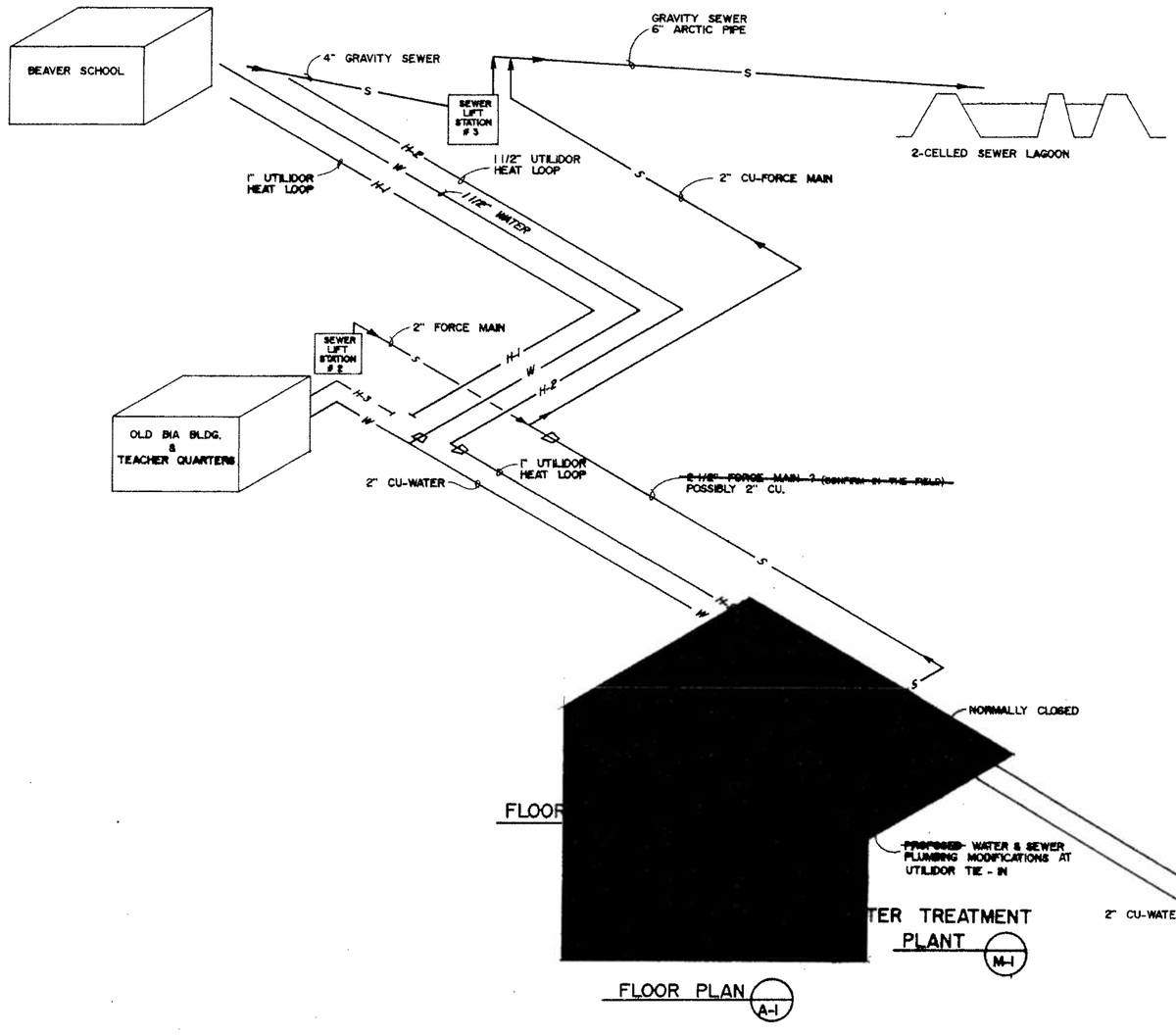
Material Take-off

STATE OF ALASKA 49TH — REGISTERED PROFESSIONAL ENGINEER — 1-90

DRAWN BY: TJM DATE: 1-90

CHECKED BY: DATE:

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



OPERATING PROCEDURE:

WATER TREATMENT - WATER IS SUPPLIED FROM THE WELL TO THE WATER TREATMENT PLANT LOCATED IN THE WASHETERIA. PRETREATMENT WILL CONSIST OF PRECHLORINATION OF THE WELL TO HELP OXIDIZE IRON AND REDUCE BACTERIAL GROWTHS. TREATMENT WILL INCLUDE THE ADDITION OF POTASSIUM PERMANGANATE TO OXIDIZE IRON AND MANGANESE, AND THEN FILTRATION WITH GREENSAND. THE FILTERED WATER IS THEN CHLORINATED AND FLUORIDATED.

THE TREATED WATER IS STORED IN THE 4,000 GALLON BOLTED STEEL TANK LOCATED IN THE UTILITY BUILDING. A PRESSURE PUMP SYSTEM THEN SUPPLIES TREATED WATER TO THE WASHETERIA, THE WATERING POINT, AND TO THE SCHOOL SUPPLY LINE.

WATER IS SUPPLIED TO THE WATERING POINT AND THE SCHOOL AT FIXED RATES OF 10 GPM BY FLOW CONTROL VALVES.

PRECHLORINATION: INITIALLY SET CHEMICAL PUMP TO FEED AT 32 ML/MIN. THE CHEMICAL PUMP SHOULD RUN FOR 3 MINUTES AFTER THE WELL PUMP SHUTS OFF. ADJUST CHEMICAL FEED RATES UP OR DOWN AS NEEDED, DEPENDING UPON VARYING WATER QUALITY AND WELL PUMP PRODUCTION.

POTASSIUM PERMANGANATE: INITIALLY SET CHEMICAL PUMP TO FEED AT 27 ML/MIN. CHECK IRON LEVEL AFTER WATER HAS RUN THROUGH THE GREENSAND FILTER, AND ADJUST CHEMICAL FEED RATE UP OR DOWN AS NEEDED.

WASTEWATER DISPOSAL - WASTEWATER FROM THE WASHETERIA IS COLLECTED IN A DUPLEX LIFT STATION LOCATED IN THE MECHANICAL ROOM OF THE WASHETERIA. THE LIFT STATION PUMPS SEWAGE THROUGH A FORCE MAIN TO A GRAVITY MAIN WHICH IS LOCATED NEAR THE SCHOOL. SEWAGE IS TREATED IN THE TWO-CELLED LAGOON.

UTILIDOR HEAT - THE UTILIDOR IS HEATED BY TWO SEPARATE HYDRONIC HEAT LOOPS SUPPLIED BY THE NEW CRUIKSHANK SCHOOL. ONE LOOP (H-1) HEATS THE LENGTH OF UTILIDOR BETWEEN THE SCHOOL AND THE OLD BIA SCHOOL, AND THE SECOND LOOP (H-2) HEATS THE UTILIDOR BETWEEN THE OLD BIA SCHOOL AND THE WELL.

LOOP H-2 ~~ALSO SERVES~~ AN OLD ABANDONED DRAINFIELD NEXT TO THE RIVER. THIS PROJECT ~~PROPOSES TO~~ ABANDON THIS LENGTH OF LOOP AS IT IS A WASTE OF ENERGY.

THE OLD BIA SCHOOL SUPPLIES A SHORT HYDRONICS HEAT LOOP (H-3) TO THE SERVICE UTILIDOR THAT BRANCHES BETWEEN THE BIA SCHOOL AND THE MAIN UTILIDOR.

WELL MAINTENANCE: - THE WELL ~~WILL~~ SHOULD BE SURGED AND FLUSHED ANNUALLY TO HELP CLEAN THE OXIDIZED IRON THAT HAS SETTLED TO THE BOTTOM OF THE WELL FROM THE PRECHLORINATION PROCESS. THE WELL MAY NEED ACID TREATMENT AT THE SAME TIME TO HELP MAINTAIN ADEQUATE WATER PRODUCTION.

DESIGN CRITERIA

DESIGN POPULATION	100
POPULATION TREND (VARIABLE)	70 - 85
NUMBER OF HOMES	40
DESIGN STUDENT POPULATION	20
DESIGN TEACHERS STAFF	5
HEATING DEGREE DAYS	16510
ANNUAL AVE. MEAN TEMP.	23 F
MAXIMUM LOW TEMPERATURE	-71 F
FREEZING DEGREE DAYS	8000
THAWING DEGREE DAYS	2500

WELL PRODUCTION:

DESIGN YIELD	6-10 GPM
MAXIMUM YIELD	14 GPM

WATER CONSUMPTION: GALLONS/MONTH

SCHOOL (900 GPD @ 200 DAYS)	18000
WASHETERIA	20000
WATERING POINT	10000
TOTAL	48000

SEWAGE COLLECTION: GALLONS/MONTH

SCHOOL	18000
WASHETERIA	20000
TOTAL	38000

LAGOON/PERCOLATION CELLS:

	AREA (ACRE)
ONE LINED STARTER CELL:	0.04
ONE UNLINED PERC. CELL:	0.70

BOD LOADING: 20 POUNDS/ACRE/DAY

WATER STORAGE: GALLONS

SCHOOL	1400
OLD BIA BUILDING	1400
WASHETERIA	4000

SYSTEM PRESSURE: MAXIMUM 50 PSI, MINIMUM 30 PSI

PRESSURE FILTER:

MEDIA	GREENSAND
CROSS SECTION AREA	4.9 SQ.ST.
LOADING RATE	10 GPM
BACKWASH RATE	50 GPM (10 GPM/SQ.FT.)

RECORD DRAWINGS

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

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

STATE OF ALASKA 49TH — DON A. MOORE No. CE 8279 — REGISTERED PROFESSIONAL ENGINEER

NAME _____ DATE _____

DATE	REVISIONS	INITIALS
12-9-91	RECORD DRAWING	J.C.

Design Engineer

Maintenance Review

Material Take-off

STATE OF ALASKA 49TH — STEVEN MARK WEAVER — REGISTERED PROFESSIONAL ENGINEER

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

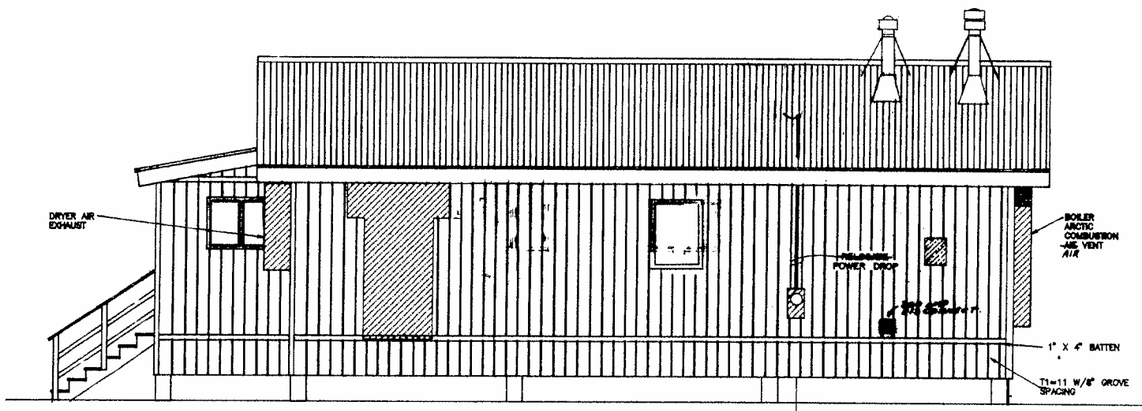
BEAVER, ALASKA

SCHEMATIC LAYOUT
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

SHEET NO. D-2 OF 2 TOTAL SHEETS

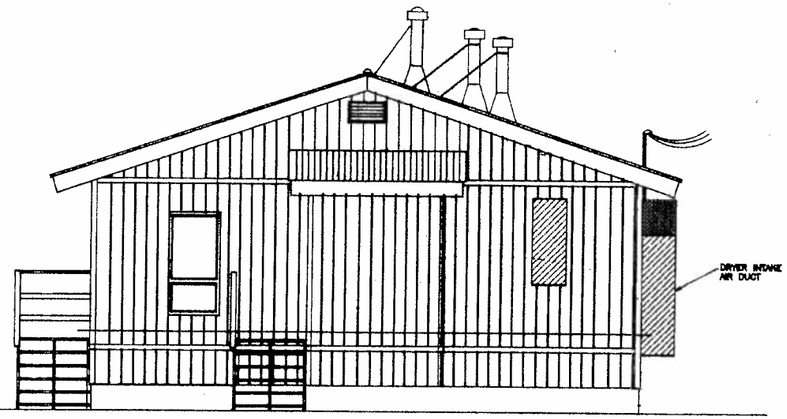
DRAWN BY: TJM / WKT DATE: 2-90 / 6-90
CHECKED BY: DATE:

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



RIGHT SIDE ELEVATION

SCALE 1/4" = 1'-0"



FRONT ELEVATION

SCALE 1/4" = 1'-0"

SCOPE OF WORK (√ INDICATES WORK COMPLETED)

DRAWN

√1. REMOVE BUILDING OF EXISTING FACILITIES AND PARTITION WALLS.

2. COMPLETE NEW FLOOR PLAN TO INCLUDE:

√A. INSULATE FLOOR TO EQUIVALENT R-38, POLYURETHANE SPRAY FOAM PREFERRED.

√B. INSULATE INTERIOR WALLS WITH 2-INCH POLYSTYRENE AND SEAL WITH 6 MIL VAPOR BARRIER.

√C. CONSTRUCT INTERIOR PARTITION WALLS.

√D. REMOVE AND PLUG DESIGNATED WINDOWS AND INSTALL NEW WINDOWS.

√E. REMOVE OLD DOORS AND INSTALL NEW DOORS.

√F. INTERIOR FINISH AND TRIM.

√G. ELECTRICAL WIRING AND CONTROLS.

√H. HOT WATER GENERATOR.

√I. WASHERS - 4 EACH

√J. DRYERS - 3 EACH

√K. LIFT STATION

√L. SHOWERS, TOILETS, AND SINKS.

√M. PLUMBING.

√N. WATER TREATMENT: CHLORINATOR, FLUORINATOR, POTASSIUM PERMAGANATE INJECTOR, AND FILTER. ALSO PRECLORINATE WELL.

√O. TWO BOILERS COMPLETE WITH WATER MAKEUP AND CIRCULATION PUMPS.

√P. 3-INCH CONCRETE FLOOR WITH 6 MIL VAPOR BARRIER.

√Q. ADD FLOOR TILES IN PUBLIC AREAS AND OFFICE.

√3. BUILDING EXTERIOR REPAIR AND PAINT, AND REPLACE STAIRWAYS.

√4. FUEL SYSTEM MODIFICATIONS.

√5. CONSTRUCT NEW UTILIDOR BETWEEN THE WASHETERIA AND UTILITY BUILDING.

√6. PROVIDE FOR INTERIM WASHER AND DRYER SERVICES DURING THE REHABILITATION OF THE WASHETERIA FACILITIES.

~~7. RELOCATE POWER DROP & WEATHER HEAD.~~

√8. ABANDON EXISTING WATERING POINT & SEAL ACCESS DOOR.

√9. LOCATE SEWER SUMP & LIFT STATION DURING CONSTRUCTION. CONTACT FIELD ENGINEER TO REVIEW FINAL PLACEMENT.

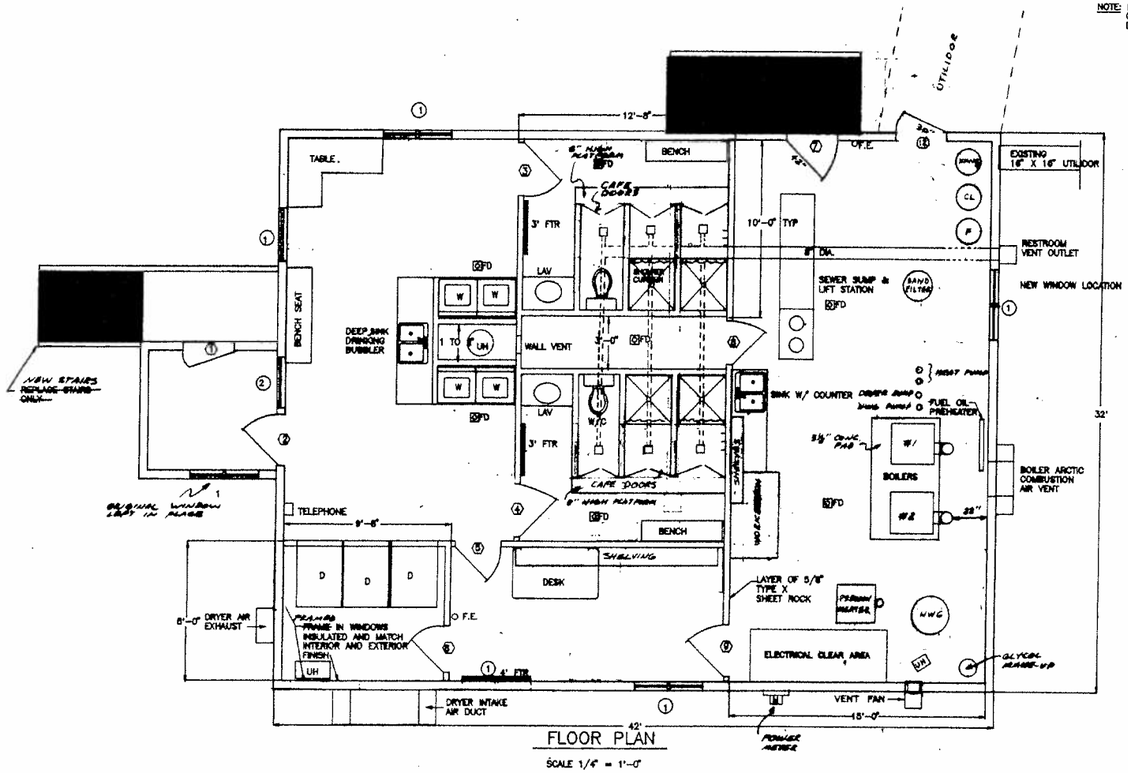
10. NOTES:

F.D. = FLOOR DRAIN

F.E. = FIRE EXTINGUISHER

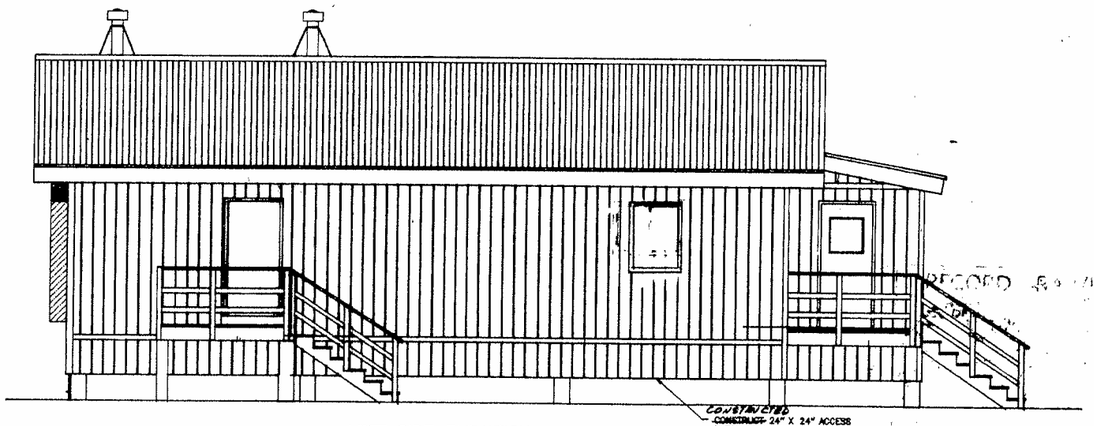
F.T.R. = FIN TUBE RADIATOR

NOTE: REFER TO R&M CONSTRUCTION DRAWINGS FOR THE ORIGINAL BUILDING LAYOUT AND CONSTRUCTION DETAILS.



FLOOR PLAN

SCALE 1/4" = 1'-0"



LEFT SIDE ELEVATION

SCALE 1/4" = 1'-0"

RECORD DRAWINGS

STATE OF ALASKA 49TH DON A. MOORE No. CE 8279 REGISTERED ENGINEER

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

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

NAME

DATE

Design Engineer

Maintenance Review

Material Take-off

STATE OF ALASKA 49TH STEVEN MARK WEAVER REGISTERED PROFESSIONAL ENGINEER

DATE	REVISIONS	INITIALS
10-23-91	RECORD DRAWING	J.C.
1-13-92	MODIFIED	J.C.

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

BEAVER, ALASKA

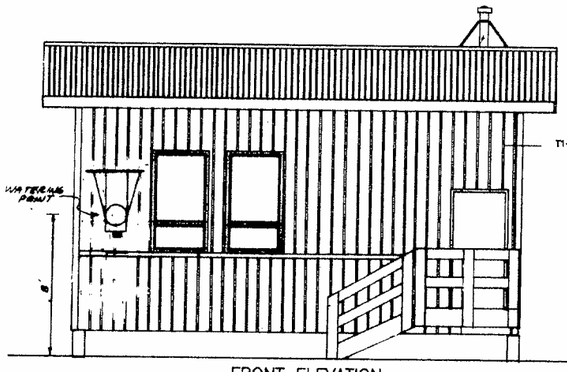
WTP / FLOOR PLAN AND ELEVATIONS
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

SHEET NO. A-1 OF 6 TOTAL SHEETS

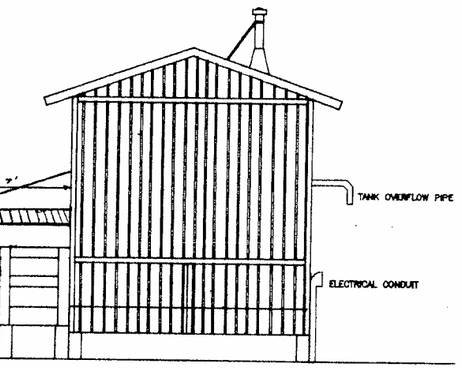
DRAWN BY: JAQ DATE: 3-90

CHECKED BY: DATE:

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



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



END ELEVATION
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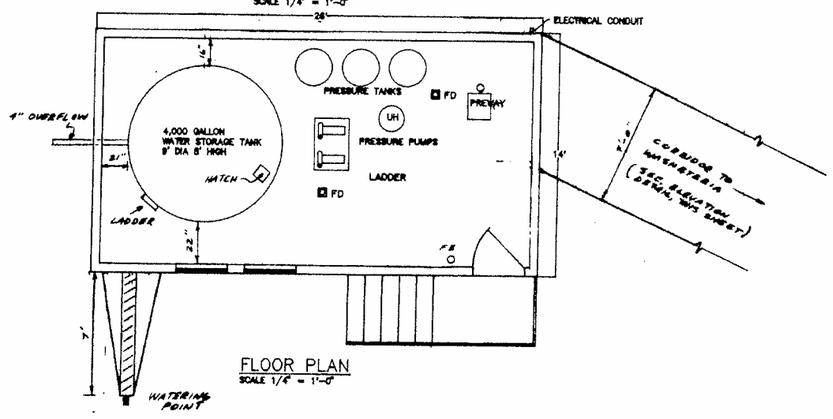


FLOOR PLAN
SCALE 1/4" = 1'-0"

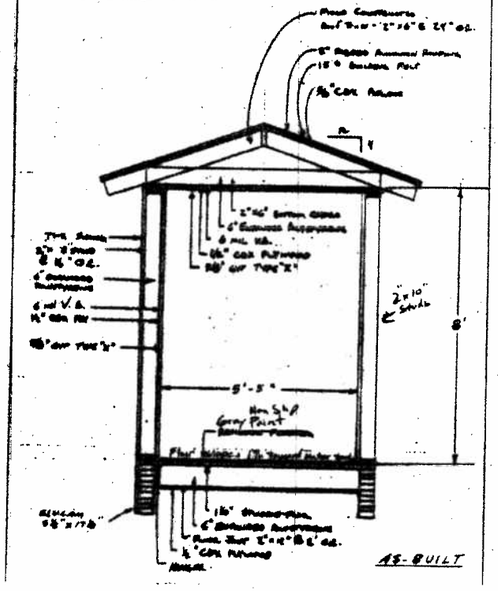
SCOPE OF WORK (√ INDICATES WORK COMPLETED)

√1. REMOVE AND REPLACE ROTTEN GYPSUM BOARD ON INTERIOR OF UTILITY BUILDING THIS IS GENERALLY LIMITED TO THE LOWER 4 FOOT PERIMETER OF THE BUILDING
√2. INSULATE MISCELLANEOUS HOLES IN THE STRUCTURE AND SEAL WITH 6 MIL VAPOR BARRIER. USE PLASTIC TAPE TO SEAL ALL VAPOR BARRIER JOINTS.
√3. REPAIR ALL HOLES WITH GYPSUM AND GROUT AFTER ITEM 2 IS COMPLETED.
√4. REFINISH FLOOR WITH 6 MIL VAPOR BARRIER AND 3-INCH CONCRETE SLAB WITH 6X6/10-10 WWM W/W) 2 REBAR 24-INCHES O.C. EACH DIRECTION.
√5. INSTALL NEW WATER STORAGE TANK WITH P.E. OVERFLOW PIPE.
√6. INSTALL PRESSURE PUMPS, PLUMBING, PRESSURE TANKS AND HYDRONIC LOOP.
√7. INSTALL PREWAY HEATER, FLUE STACK, AND FUEL OIL PIPING.
√8. REWIRE THE ELECTRICAL SYSTEM FOR NEW FLOOR PLAN.
√9. REPAINT INTERIOR AND EXTERIOR OF THE BUILDING.
√10. REPLACE ENTRANCE STAIRWAY AND DECK WITH THE IHS STANDARD STAIRWAY.
√11. REPAIR BROKEN WINDOW PANELS.
√12. REPLACE DOORS AND FRAMES.
√13. ADD SHELVING STORAGE CABINETS IN CLEAR AREAS.
√14. ~~ADD LADDER TO ACCESS STORAGE SPACE ABOVE ARCTIC ENTRY~~ ACCESS ABANDONED & HOLE INSULATED
√15. ADD FLOOR DRAINS.

AS-BUILT NOTES

1. 3½" CONCRETE SLAB POURED ON 40 PSI EXTRUDED STYROFOAM
2. INTERIOR WALLS AND CEILING RECEIVED VISQUEEN, 2" STYROFOAM INSULATION, ½" PLYWOOD AND ½" WATER-RESISTANT SHEETROCK.

BEAVER ALASKA | MECHANICAL ACCESS CHANGES | AMELANET 4/16/91 | 1/1



AS-BUILT

RECORD DRAWINGS

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

NAME DON A. MOORE No. CE 8279 DATE

DATE	REVISIONS	INITIALS
12-23-92	RECORD DRAWING	J.C.
1-13-93	MODIFIED	J.C.

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

BEAVER, ALASKA
UTILITY BUILDING FLOOR PLAN
PUBLIC LAW 86-121 PROJECT
PROJECT NO.

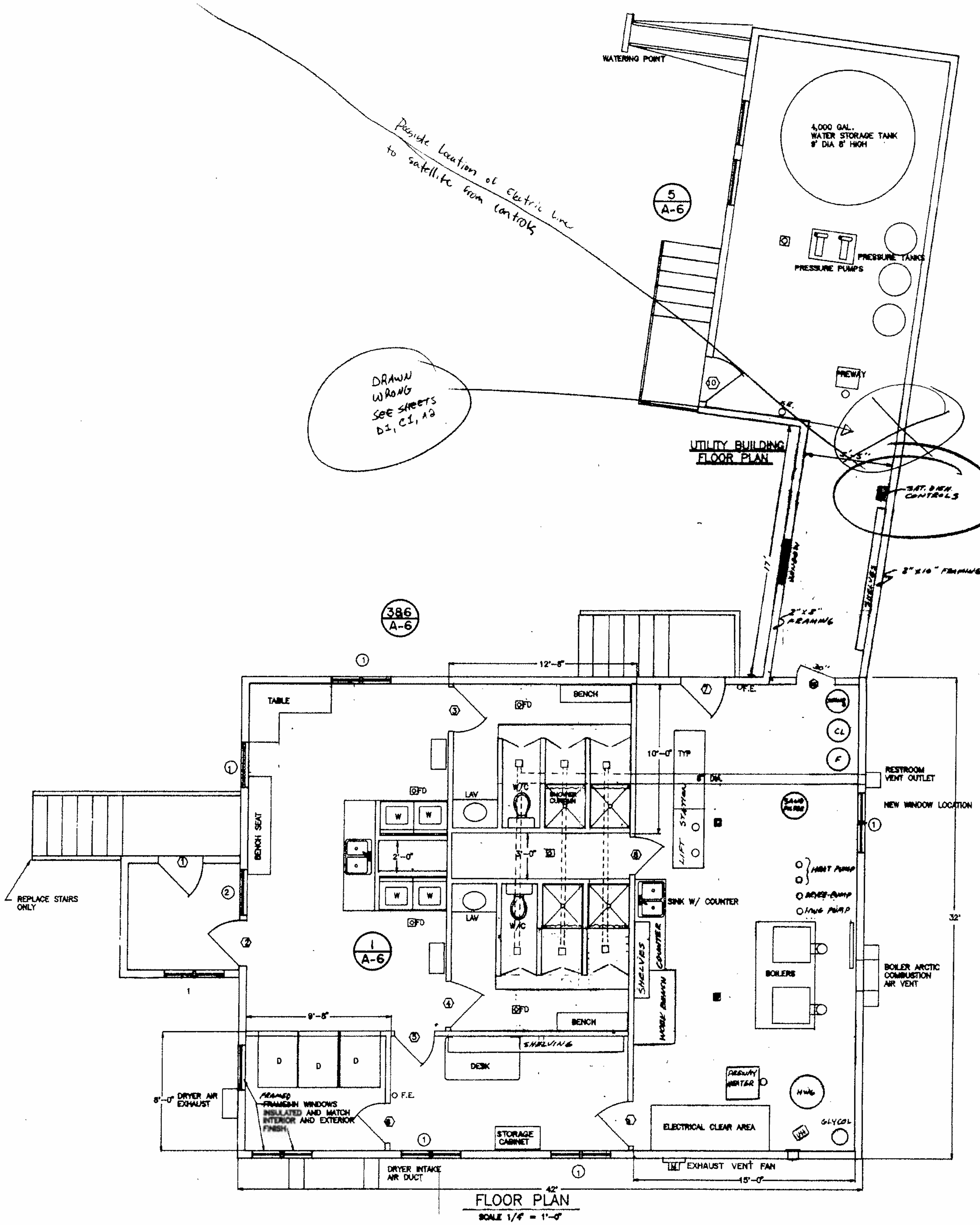
SHEET NO. A-2 OF 6 TOTAL SHEETS

Design Engineer
Maintenance Review
Material Take-off

STATE OF ALASKA 49TH STEVEN MARK VAN DUSEN P.E. REGISTERED PROFESSIONAL ENGINEER

DRAWN BY: JAQ CHECKED BY:
DATE: 3-90 DATE:

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



INTERIOR FINISH SCHEDULE

AREA DESIGNATION	FLOOR MATERIALS	FLOOR FINISH	FLOOR COLOR	BASE (TRIM) MATERIALS	BASE (TRIM) FINISH	BASE (TRIM) COLOR	WALLS MATERIALS	WALLS FINISH	WALLS COLOR	CEILING MATERIALS	CEILING FINISH	CEILING COLOR	REMARKS
ARCTIC ENTRY	CONCRETE	TILE	GRAY	VINYL	FACTORY	TAN BROWN	GYPSUM BRD	PAINT	WHITE ENAMEL	GYPSUM BRD	PAINT	WHITE ENAMEL	
LAUNDRY AREA	CONCRETE	TILE	GRAY	VINYL	FACTORY	TAN	3/8" CDX PLY	FORMICA	WHITE	GYPSUM BRD	PAINT	WHITE ENAMEL	
SHOWER ROOMS	CONCRETE	TILE	GRAY	VINYL	FACTORY	TAN	3/8" CDX PLY	FORMICA	WHITE	GYPSUM BRD	PAINT	WHITE ENAMEL	[illegible]
OFFICE	CONCRETE	TILE	GRAY	VINYL	FACTORY	TAN	GYPSUM BRD	PAINT	WHITE ENAMEL	GYPSUM BRD	PAINT	WHITE ENAMEL	
DRYER ACCESS	CONCRETE	TILE	GRAY	VINYL	FACTORY	TAN	GYPSUM BRD	PAINT	WHITE ENAMEL	GYPSUM BRD	PAINT	WHITE ENAMEL	
MECHANICAL ROOM	CONCRETE	PLAIN	GRAY	VINYL	FACTORY	TAN	GYPSUM BRD	PAINT	WHITE ENAMEL	GYPSUM BRD	PAINT	WHITE ENAMEL	
UTILITY BUILDING	CONCRETE	PLAIN	GRAY	VINYL	FACTORY	TAN	GYPSUM BRD	PAINT	WHITE ENAMEL	GYPSUM BRD	PAINT	WHITE ENAMEL	

NOTES:
1. FLOOR TILE: ARMSTRONG—STEP MASTER, SLIP-RETARDANT 80700 BUCKSKIN 12" X 12", GAUGE 1/8".
2. ALL PAINT SHALL BE ACRYLIC ENAMEL.
3. [illegible] ENDRE PANELS

DOOR SCHEDULE

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
1	EXTERIOR	METAL	EXTERIOR	ENTRANCE	YES	EXTERIOR IN-SWING	EXTERIOR	LH	3'-0" X 6'-8"
2	EXTERIOR	WOOD	EXTERIOR	ENTRANCE	YES	INTERIOR PANEL	EXTERIOR	RHR	3'-0" X 6'-8"
3	INTERIOR	METAL	INTERIOR	PASSAGE	YES	NONE	INTERIOR	LH	2'-8" X 6'-8"
4	INTERIOR	METAL	INTERIOR	PASSAGE	YES	NONE	INTERIOR	RH	2'-8" X 6'-8"
5	INTERIOR	WOOD	INTERIOR	ENTRANCE	NO	NONE	INTERIOR	RH	2'-8" X 6'-8" DUTCH DOOR
6	INTERIOR	WOOD	INTERIOR	PASSAGE	YES ~~NO~~	INTERIOR PANEL	INTERIOR	LH	2'-8" X 6'-8"
7	EXTERIOR	WOOD	EXTERIOR	ENTRANCE	YES	EXTERIOR IN-SWING	EXTERIOR	RH	3'-6" X 6'-6"
8	FIRE B	METAL	INTERIOR	PASSAGE	YES	INTERIOR PANEL	INTERIOR	LHR	2'-6" X 5'-0"
9	FIRE B	METAL	INTERIOR	ENTRANCE	YES	INTERIOR PANEL	INTERIOR	LH	2'-8" X 6'-8"
UTILITY BUILDING									
10	EXTERIOR	WOOD	EXTERIOR	ENTRANCE	YES	EXTERIOR IN-SWING	EXTERIOR	RH	3'-0" X 6'-8"
11	[illegible]	[illegible]	[illegible]	PASSAGE	NO	[illegible]	[illegible]	LH	[illegible]

NOTE: ALL DOORS 1 3/4" THICK.

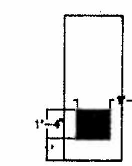
12 FIRE B (ADDED PER STATE FIRE MARSHALL REQUEST)

ALL DOORS AND DEADBOLTS KEYED ALIKE
LOCKSET: SCHLAGE (76979)

WINDOW SCHEDULE

WINDOW No	TYPE	APPROXIMATE R.O. SIZE (W X H)	FRAME	REMARKS
1	TILT—TURN	3'-0" X 4'-0"	PVC	NOTE 1.
2	FIXED	3'-0" X 4'-0"	WOOD	NOTE 2.

NOTES:
1. SELECT "ALASKA WINDOW", SCANDINAVIAN DESIGNED PVC WINDOW SYSTEM. SPECIFY COMMERCIAL APPLICATION AND LOCKABLE LATCH.
2. WINDOW SHALL HAVE THERMO—PANE INSULATED GLASS.
3. ADD LEXAN PANEL TO EXTERIOR WINDOW, FRAME & ATTACH WITH SCREEN CLIPS.



SHOWER ROOM DOORS
SUPPLY TWO DOORS WITH FACTORY INSTALLED DOOR VENT. IF UNATTAINABLE, THEN INSTALL STEEL DOOR GRILL (TITUS MODEL T-700-BF, WHITE 18" X 18").

NOTES (✓ INDICATES COMPLETED WORK)

✓1. SHOWER STALLS AND WATER CLOSETS ~~SHALL BE~~ ARE ELEVATED ON A ~~11-6"~~ 8" WOODEN PAD. STEPS WITH A 6" RISE SHALL BE CONSTRUCTED FOR SHOWER AND WATER CLOSET ENTRANCE.

✓2. INSTALL CEILING VENT FANS IN EACH SHOWER ROOM. FANS SHALL BE ~~GRAYSON-48844~~ CEILING VENTILATOR WITH BACKDRAFT DAMPER. 140 CFM, 1300 RPM, 108 WATTS, 1.41 AMPS, 1/38 HP, 115 VAC DISCHARGE FLANGE 3 1/4" X 10". INSULATE FAN HOUSING TO A MINIMUM VALUE OF R-19. NUTONE, MODEL 8663M COMBINATION FAN/LIGHT

✓3. ALL FLOOR DRAINS SHALL DRAIN TO DAYLIGHT BELOW BUILDING UNLESS OTHERWISE SPECIFIED. EXTEND POLYETHYLENE DRAIN PIPE PRIOR TO SPRAY FOAMING OF THE FLOOR.

✓4. INTERIOR PARTITION WALLS SHALL BE 2" X 4" S @16" O.C. DIMENSIONING IS FROM INSIDE OF EXTERIOR WALL (BEFORE FINISHING) TO FACE OF INTERIOR WALL.

✓5. CHEMICAL DUMP FIRE EXTINGUISHER PLACED ABOVE BOILERS. REFER TO SHEET M-6 BOILER PLUMBING DETAIL, FOR INSTALLATION RECOMMENDATIONS.

✓6. DO NOT INSTALL DOOR 7 UNTIL THE HOT WATER GENERATOR AND GREENSAND FILTER HAVE BEEN MOVED INTO BUILDING.

✓7. PROVIDE THE FOLLOWING SIGNS:

SIGN	CATALOG No	LOCATIONS
MEN		DOOR 4
WOMEN		DOOR 3
AUTHORIZED PERSONNEL ONLY		DOOR 6
NO TRASH IN TOILETS		ABOVE EACH TOILET

REFER TO CATALOGS FROM "STOREHOUSE SIGN INC", AND "ARVADA CO."

~~8. [illegible]~~

✓9. FLOORS OF BOTH THE UTILITY BUILDING AND WASHETERIA SHALL BE COVERED WITH NEW CONCRETE. LINE PERIMETER OF EXTERIOR WALL WITH 1/8" X 3" BITUMINOUS STRIP PRIOR TO POURING CONCRETE SLAB. THE NEW FLOOR WILL CONSIST OF 6 MIL VAPOR BARRIER COVERED BY 3½" CONCRETE SLAB WITH 6X6/10-10 WWM No 3 REBAR 24" O.C. EACH DIRECTION.

✓10. INSULATE BOTTOM OF FLOOR WITH POLYURETHANE FOAM TO EQUIVALENT OF R-30.

✓11. INSTALL 24" X 24" ACCESS WAY IN BOTTOM OF BELLY PAN.

✓12. INSTALL AIR VENTS IN BOTTOM OF BELLY PAN. PROVIDE AT LEAST FOUR VENTS, ON NEAR EACH CORNER. TOTAL COMBINED AREA OF VENTS SHALL BE GREATER THAN OR EQUAL TO NINE SQUARE (9 SQ FT). INCREASE NET AREA BY FACTOR LISTED FOR SCREENS AND LOUVERS.

✓13. ADD ~~STORAGE CABINETS AND~~ SHELVING IN CLEAR AREAS OF THE UTILITY BUILDING.

✓14. SLOPE SHOWER VENT DUCTING TOWARD VENT OUTLET.

RECORD DRAWINGS
STATE OF ALASKA 49TH DON A. MOORE No. CE 8279 REGISTERED PROFESSIONAL ENGINEER
THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.
INFORMATION PROVIDED HEREIN IS ACCURATE TO THE BEST OF MY KNOWLEDGE.
NAME ______ DATE ______

DATE	REVISIONS	INITIALS
11-12-91	RECORD DRAWING	J.C.
1-13-92	MODIFIED	J.C.

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

BEAVER, ALASKA
INTERIOR SCHEDULES
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

SHEET NO. A-3 OF 6 TOTAL SHEETS

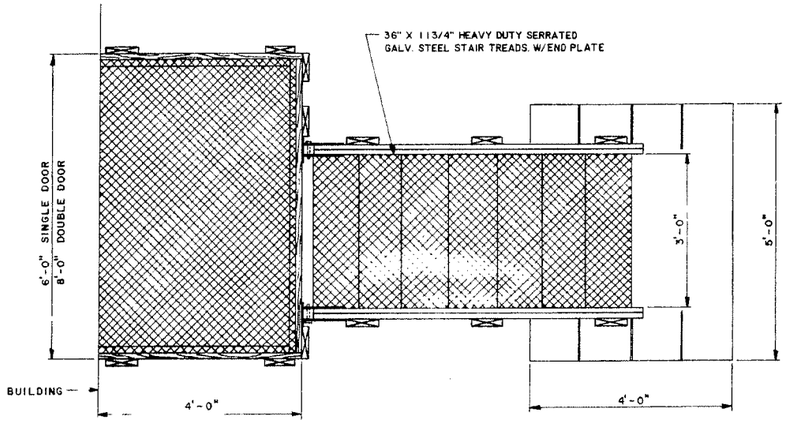
Design Engineer
Maintenance Review
Material Take-off

STATE OF ALASKA 49TH STEVEN MARK WEAVER CE 7397 REGISTERED PROFESSIONAL ENGINEER

DRAWN BY: JAQ
DATE: 3-90
CHECKED BY:
DATE:

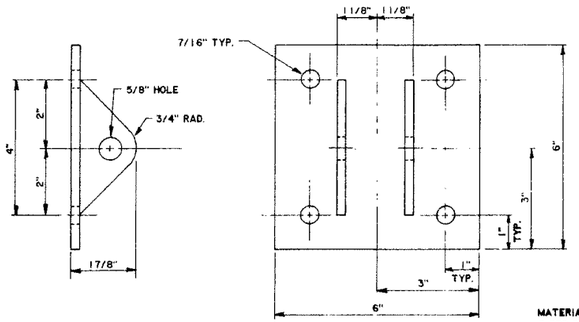
SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA

U.S. GOVERNMENT PRINTING OFFICE 1978-786-318



PLAN

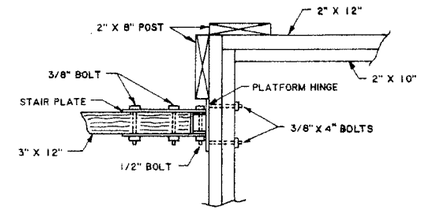
SCALE: 3/4" = 1'-0"

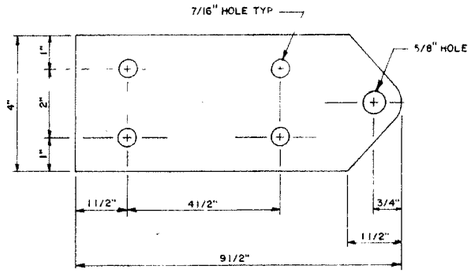


MATERIAL 1/4" STEEL PLATE
2 REQ D. PER PLATFORM

PLATFORM HINGE

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

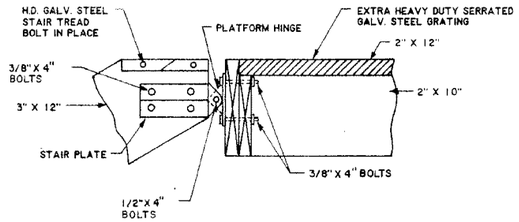




MATERIAL 1/4" STEEL PLATE
4 REQ D. PER STAIR

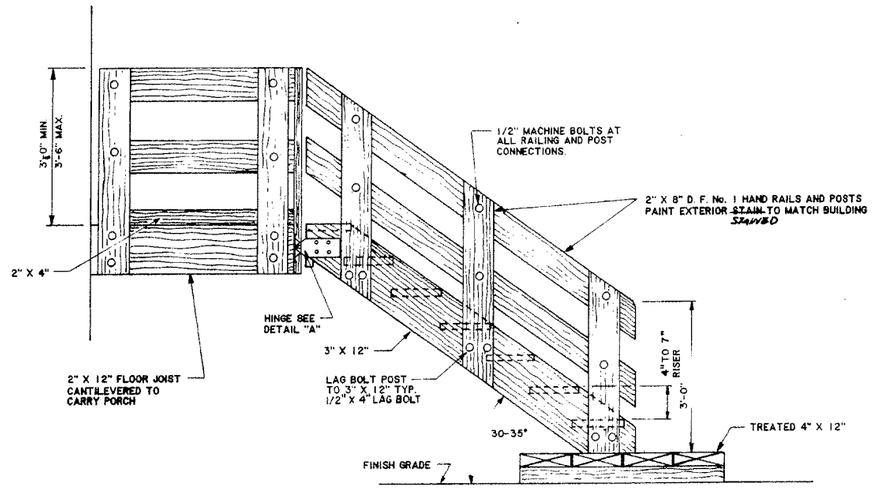
STAIR PLATE

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



HINGE DETAIL "A"

SCALE: 11/2" = 1'-0"



ELEVATION

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

SCOPE OF WORK

NOTES:

1. SEE FLOOR PLAN SHEETS A-1 AND A-2 FOR ORIENTATION OF STAIRS.
2. WASHETERIA: ~~REPLACE~~ REPLACED BOTH FRONT AND REAR STAIRWAYS, REPAIRED PORCHES WHERE NEEDED.
3. UTILITY BUILDING: ~~REPLACE~~ REPLACED THE PORCH AND THE STAIRWAY ASSEMBLY.
4. U.B.C., SECTION 3306 - "THE RISE ON EVERY STEP IN STAIRWAY ~~SHALL~~ IS ~~NOT BE~~ LESS THAN 4" OR GREATER THAN 7".

RECORD DRAWINGS

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

NAME DON A. MOORE No. CE 8279 DATE 6-5-91

DATE	REVISIONS	INITIALS
12-9-91	RECORD DRAWING	J.C.
1-18-93	MODIFIED	J.C.

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

BEAVER, ALASKA
BUILDING STAIRS DETAIL
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN- ~~89-096~~

SHEET NO. A-4 OF 6 TOTAL SHEETS

DRAWN BY: WKT TJM
DATE: NOV. 84 R-90
CHECKED BY:
DATE:

Design Engineer

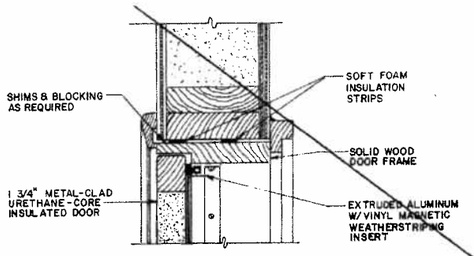
Maintenance Review

Material Take-off

STATE OF ALASKA 49TH STEVEN MARK WILLIAMS FOR THE GOVERNOR 15 Jan 93 REGISTERED PROFESSIONAL ENGINEER

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

A-12.01



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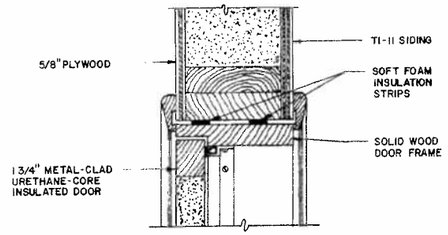

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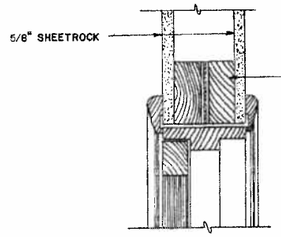

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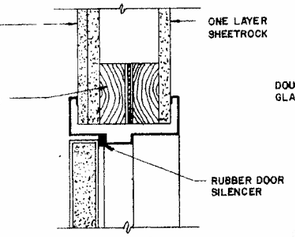

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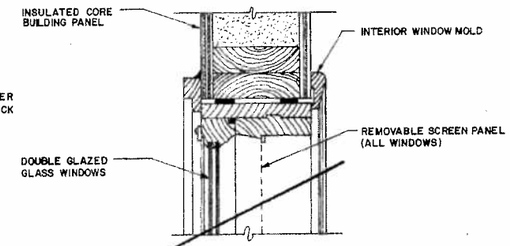

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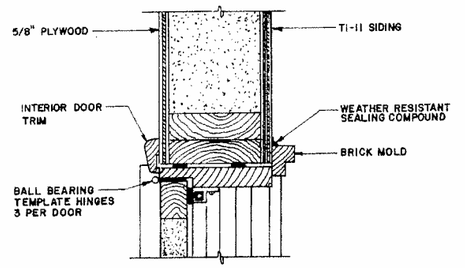

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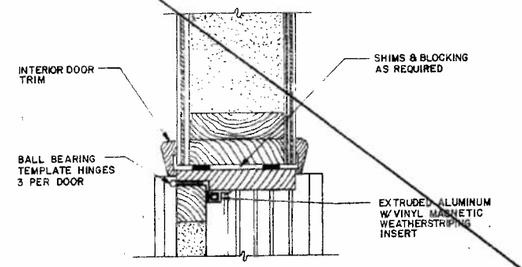

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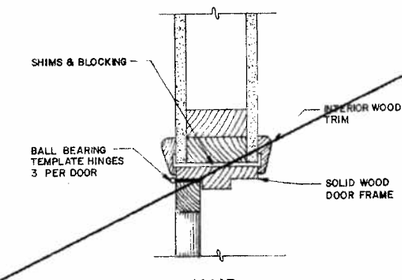

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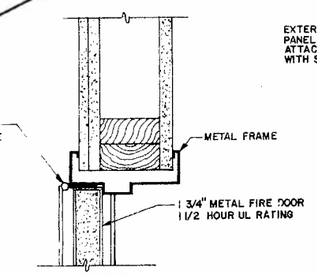

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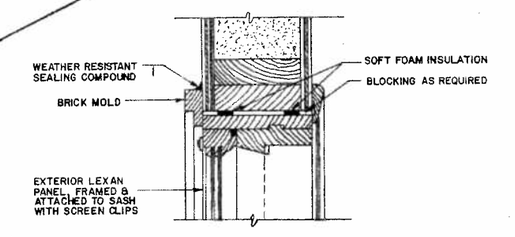

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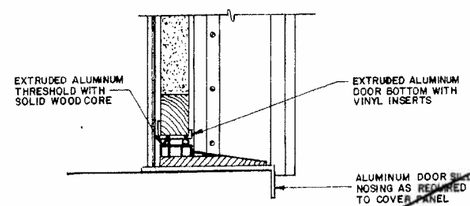
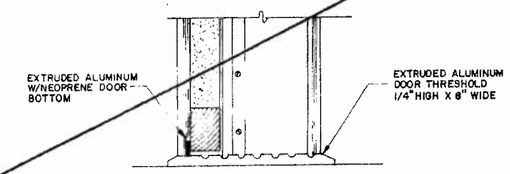


SILL

DETAIL (A)

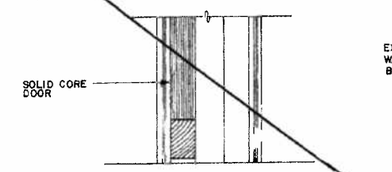


SILL

DETAIL (B)

EXTERIOR DOORS
SCALE 3"=1'-0"

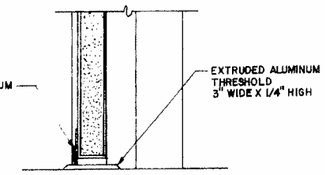
THIS SHEET NOT USED



SILL

DETAIL (C)

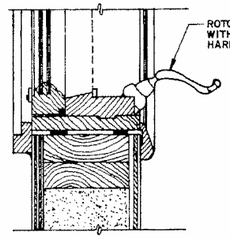
INTERIOR DOOR
SCALE 3"=1'-0"



SILL

DETAIL (D)

FIRE DOOR
SCALE 3"=1'-0"



SILL

TYPICAL WINDOW
NTS

NOTE:
"ALASKA WINDOW" TILT - TURN DESIGN SPECIFIED FOR THIS PROJECT.

DATE	REVISIONS	INITIALS

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

BEAVER, ALASKA
DOORS AND WINDOW DETAILS
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

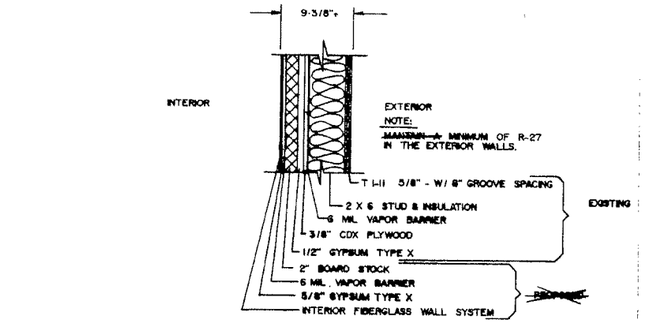
SHEET NO. A-5 OF 6 TOTAL SHEETS

DRAWN BY: TJM DATE: 2-90
CHECKED BY: DATE:

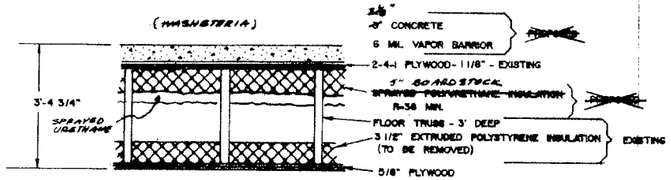
SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA

Design Engineer
Maintenance Review
Material Take-off

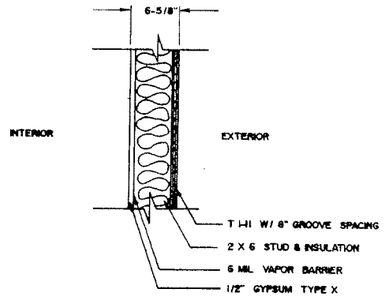
STATE OF ALASKA 49TH
STEVEN LANE HOLMES
REGISTERED PROFESSIONAL ENGINEER



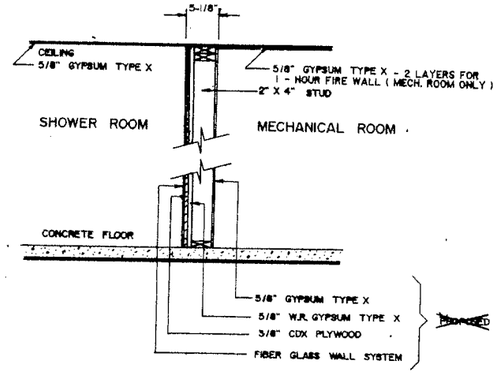
3. EXTERIOR WALL



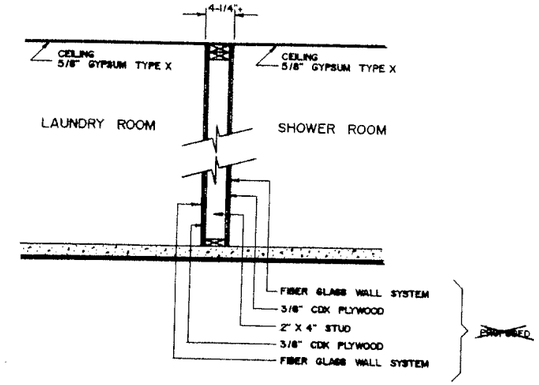
4. FLOOR INSULATED WITH SPRAY FOAM



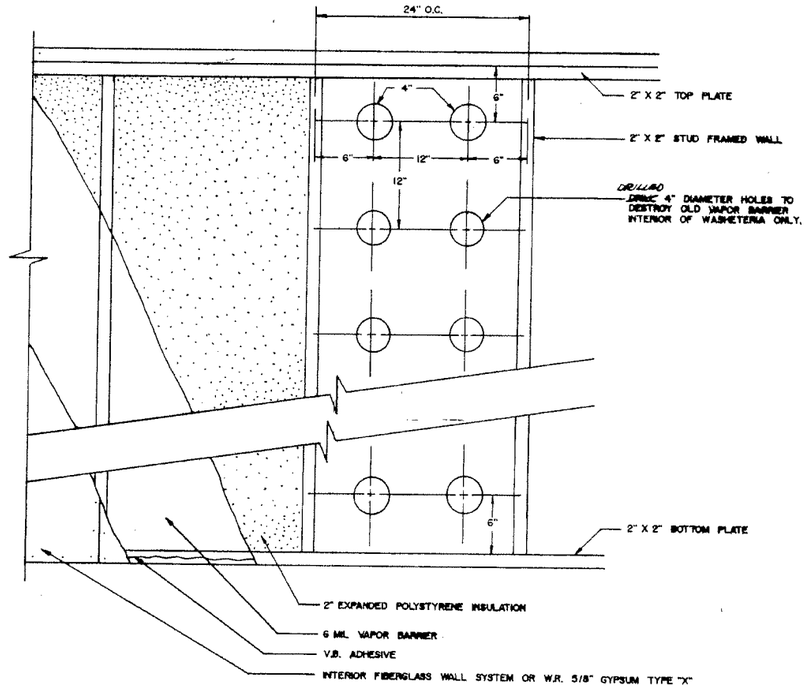
5 UTILITY BUILDING - EXTERIOR WALL



2. MECHANICAL ROOM 1-HOUR FIRE WALL



1. INTERIOR PARTITION WALLS



6 INTERIOR WALL RETROFIT FRAMING DETAIL

RETROFIT NOTES: (V INDICATES ITEMS COMPLETED)

1. Destroy old vapor barrier (VB) by drilling 4" diameter holes 12" OC through the interior of the existing walls.
2. Construct the new 2" X 2" stud walls.
3. COMPLETE THE ELECTRICAL INSTALLATION.
4. Install new 2" expanded polystyrene insulation.
5. Install vapor barrier with "TREMCO" acoustical sealant, or approved equal. Staple through the sealant into blocking.
6. Overlap all VB seams by one stud. Tape all VB seams with 3M "CONTRACTOR SHEATHING TAPE", No.8084, or approved equal.
7. Cut an "X" from corner to corner at window and door openings, pull the VB over opening and fasten. Trim excess material. Cut a strip the width of the openings and install it around open box. Seal the seams with acoustical sealant and staple through it. Tape the perimeter's edges with sheathing tape.
8. Seal all electrical outlets with separate VB sheets , sealant, and sheathing tape.
9. The VB must be inspected by the project engineer or his representative before it is covered with the interior wall system.

~~WATER TANK ROOM~~ FLOOR PROFILE

RECORD DRAWINGS

STATE OF ALASKA 49TH DON A. MOORE No. CE 8279 REGISTERED PROFESSIONAL ENGINEER

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

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

NAME

DATE 6-5-92

DATE	REVISIONS	INITIALS
12-6-91	RECORD DRAWING	J.C.
1-13-93	MODIFIED	J.C.

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

BEAVER, ALASKA
FLOOR & WALL SECTION DETAILS
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-86-996

SHEET NO. A-6
OF 6
TOTAL SHEETS

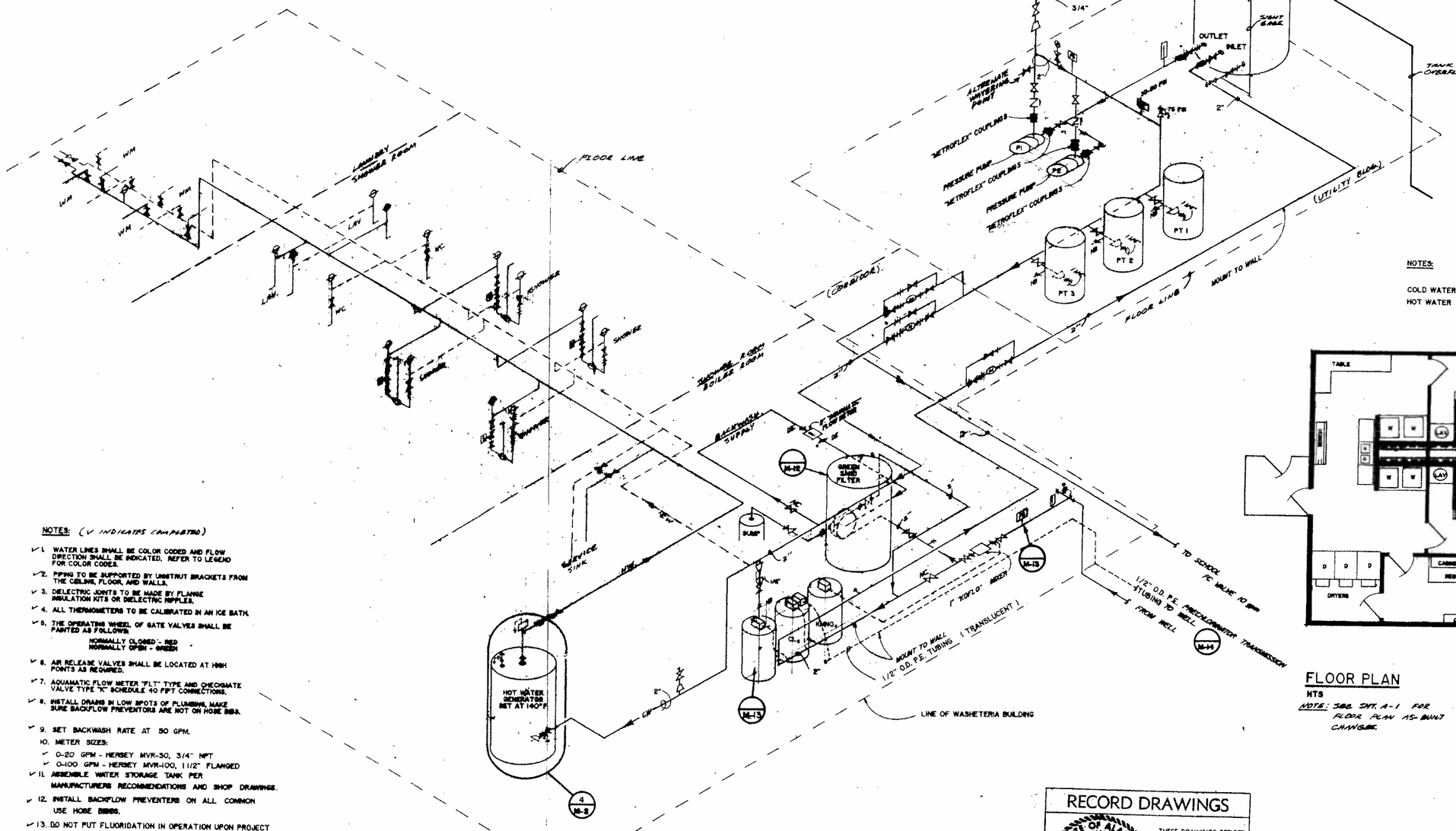
DRAWN BY: TJM
DATE: 2-90
CHECKED BY:
DATE:

SANITATION FACILITIES CONSTRUCTION BRANCH

Design Engineer

Maintenance Review

STATE OF ALASKA 49TH STEVEN WAYNE HEAVEN REGISTERED PROFESSIONAL ENGINEER



PLUMBING SCHEMATIC

NTS

NOTES: (✓ INDICATES COMPLETED)

✓ 1. WATER LINES SHALL BE COLOR CODED AND FLOW DIRECTION SHALL BE INDICATED. REFER TO LEGEND FOR COLOR CODES.

✓ 2. PIPING TO BE SUPPORTED BY UNISTRUT BRACKETS FROM THE CEILING, FLOOR, AND WALLS.

✓ 3. DIELECTRIC JOINTS TO BE MADE BY FLANGE INSULATION KITS OR DIELECTRIC NIPPLES.

✓ 4. ALL THERMOMETERS TO BE CALIBRATED IN AN ICE BATH.

✓ 5. THE OPERATING WHEEL OF GATE VALVES SHALL BE PAINTED AS FOLLOWS:
NORMALLY CLOSED - RED
NORMALLY OPEN - GREEN

✓ 6. AIR RELEASE VALVES SHALL BE LOCATED AT HIGH POINTS AS REQUIRED.

✓ 7. AQUAMATIC FLOW METER "FLT" TYPE AND CHECKMATE VALVE TYPE "K" SCHEDULE 40 FIPT CONNECTIONS.

✓ 8. INSTALL DRAINS IN LOW SPOTS OF PLUMBING, MAKE SURE BACKFLOW PREVENTORS ARE NOT ON HOSE BIBS.

✓ 9. SET BACKWASH RATE AT 50 GPM.

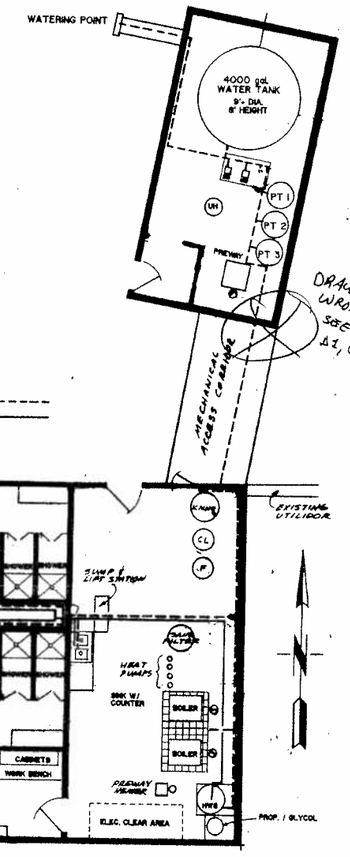
10. METER SIZES:
✓ 0-20 GPM - HERSEY MVR-30, 3/4" NPT
✓ 0-100 GPM - HERSEY MVR-100, 1 1/2" FLANGED

✓ 11. ASSEMBLE WATER STORAGE TANK PER MANUFACTURERS RECOMMENDATIONS AND SHOP DRAWINGS.

✓ 12. INSTALL BACKFLOW PREVENTERS ON ALL COMMON USE HOSE BIBBS.

✓ 13. DO NOT PUT FLUORIDATION IN OPERATION UPON PROJECT COMPLETION, BUT DO INSTALL TEE & INJECTOR.

14. SINK AND SHOWER ANTI SCALD MIXING VALVES SET AT 110°F.



FLOOR PLAN

NTS

NOTE: SEE SHT. A-1 FOR FLOOR PLAN AS-BUILT CHANGES.

NOTES:

COLD WATER ---------

HOT WATER ———

RECORD DRAWINGS

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

DATE 6-5-92

NAME

Design Engineer

Maintenance Review

Material Take-off

DATE	REVISIONS	INITIALS
10-29-81	RECORD DRAWING	J.C.
1-13-82	MODIFIED	J.C.

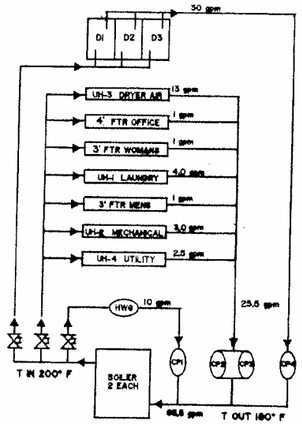
U. S. Department of Health & Human Services
Public Health Service
Indian Health Service

BEAVER, ALASKA
WASHETERIA & WTP
DOMESTIC PLUMBING SCHEMATIC
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-896

SHEET NO. M-1 OF 17 TOTAL SHEETS

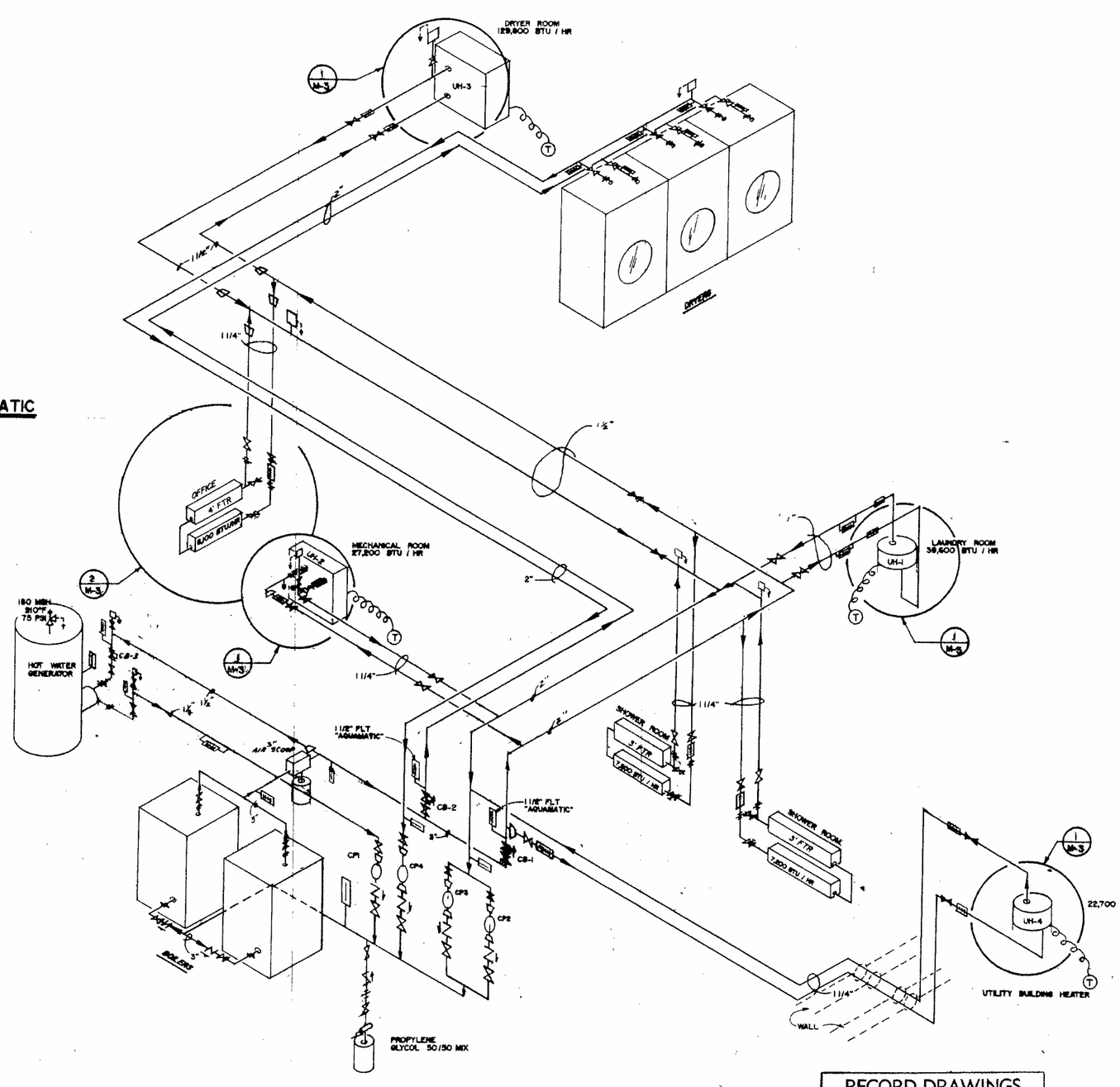
DRAWN BY: DCG TJM
DATE: 1-2-90
CHECKED BY:
DATE:

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



HYDRONIC SYSTEM LOOP SCHEMATIC

NTS



HYDRONIC SYSTEM SCHEMATIC

NTS

OPERATING SUMMARY:

1. SPACE HEAT: ONE OF THE TWO CIRCULATING PUMPS (CP) SMALL CONTINUOUSLY CIRCULATE BOILER WATER. (CP2 OR CP3)

   UNIT HEATER ZONES: WATER WILL ALWAYS FLOW THROUGH THE UNIT HEATERS - UPON DEMAND FROM THEIR RESPECTIVE THERMOSTATS, UNIT HEATER FANS WILL ACTIVATE FOR ZONE HEAT.

   FIN TUBE RADIATOR ZONES: WATER ONLY FLOWS THROUGH THESE LOOPS WHEN THE APPROPRIATE THERMOSTAT CALLS FOR HEAT AND OPENS THE THERMOSTATIC RADIATOR VALVE ON THAT PARTICULAR LOOP.

2. BALANCING THE HYDRONIC FLOWS:

   A. FIRST ADJUST THE CIRCUIT BALANCING (CB-1) VALVE TO DESIRED FLOW RATE.
   B. REPEAT STEP 6A FOR CB-2 AND CB-3.
   C. ADJUST THE THERMOFLO BALANCERS FOR THE PROPER FLOW RATES THROUGH THE INDIVIDUAL LOOPS.

3. REVERSAL: THE DRYER HOT WATER CIRCULATING PUMP IS ACTIVATED WHEN ANY ONE DRYER IS ACTIVATED. WHEN ONE DRYER IS ON, ALL COILS ARE SUPPLIED WITH HOT WATER.

4. HOT WATER GENERATOR: THE HWG CIRCULATING PUMP IS ACTIVATED UPON CALL FROM THE HWG LOW TEMPERATURE THERMOSTAT.

EQUIPMENT:

UNIT HEATER #1: TRANE UHPA644F4ABAC, 1550 RPM, LAUNDRY ROOM
UNIT HEATER #2: TRANE UHBA039-N2CAAC, 1890 RPM, MECHANICAL ROOM
UNIT HEATER #3: TRANE UHBA148-N2CAAF, 1160 RPM, DRYER AIR PREHEAT
UNIT HEATER #4: TRANE UHPA642F44BAB, 1550 RPM, UTILITY BUILDING
FIN TUBE RADIATOR: TRANE SERIES 50, 2 TIER, 20G ENCLOSURE, 6-INCH DEEP
CIRCULATING PUMPS:
CP-1, HOT WATER GENERATOR LOOP, GRUNFOS UPS 15-42F
CP-2 AND CP-3, SPACE HEATING LOOP, GRUNFOS UPS 26-99
CP-4, DRYER LOOP, GRUNFOS UPS 32-99
AQUASTATIC FLOW METERS:
TYPE "FLT" WITH 304SS AND METAL STRAINER CAP AND TEFLON O-RINGS, AND TYPE "K" CHECKRATE WITH 304SS AND TEFLON O-RINGS. ENTIRE ASSEMBLY TO BE RATED TO 302° F.
2 EACH: 1-1/2 INCH
1 EACH: 2 INCH

NOTES
(IN ADDITION TO MECHANICAL SPECIFICATIONS)

1. INSULATE HYDRONIC LINES WITH 1/2" ARMAFLEX OR EQUAL. INDICATE DIRECTION OF FLUID SUPPLY AND RETURN FLOWS.
2. PROVIDE THERMAL BREAK BETWEEN PIPE AND PIPE SUPPORTS. IF PIPE SUPPORTS ARE UNISTRUT FITTINGS, THEN USE EXTRA LARGE PIPE CLAMPS TO WRAP AROUND THE INSULATED PIPE.
3. NO WOOD FRAMING MEMBER SHALL BE IN CONTACT WITH UNINSULATED HEATING PIPE.
4. HYDRONIC DRAIN VALVES SHALL HAVE A SQUARE NUT, OR SIMILAR OPERATING DRIVE. WHEEL VALVES SHALL NOT BE USED.
5. AQUASTATIC FLOW METER (FLT) TYPE AND CHECKRATE VALVE (K) TYPE WITH HIGH TEMPERATURE CONVERSION FOR PERFORMANCE RATING TO 300° F, SCHEDULE 40 PIPT CONNECTIONS. THE FLT METER SHALL BE INSTALLED ON A LENGTH OF PIPE THAT IS THE SAME DIAMETER AS THE METER. VALVES AND FITTINGS SHALL BE AT LEAST 6 PIPE DIAMETERS UPSTREAM FROM THE METER AND AT LEAST 3 PIPE DIAMETERS DOWNSTREAM OF THE METER.
6. LOCATE THE B & B THERMOFLO BALANCER, THE ISOLATION VALVES, AND THE AAV's AT THE CEILING LEVEL.
7. HOSE BIBBS SHALL BE INSTALLED IN LOW AREAS IN THE PIPING FOR DRAINING PURPOSES.
8. PUMPS SHALL BE INSTALLED AT OR BELOW THE LEVEL OF THE BOILER LOW WATER CUTOFFS.
9. BOILERS SHALL BE OPERATED IN A LEAD/LAG MANNER. CIRCULATING PUMPS SHALL PUSH WATER THROUGH BOTH BOILERS IN PARALLEL FLOW ARRANGEMENT. THE LEAD BOILER SHALL OPERATE BETWEEN 180° AND 200° F. THE LAG BOILER SHALL OPERATE BETWEEN 160° AND 180° F. LEAD AND LAG STATUS MAY BE CHANGED BY ADJUSTING THE THERMOSTATS OF THE RESPECTIVE BOILERS.

RECORD DRAWINGS

STATE OF ALASKA 49TH DON A. MOORE No. CE 8279 REGISTERED PROFESSIONAL ENGINEER

NAME

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

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

DATE 6-5-92

/Design Engineer

Maintenance Review

Material Take-off

STATE OF ALASKA 49TH STEVEN MARK HEAVER 12-22-89 REGISTERED PROFESSIONAL ENGINEER

DATE	REVISIONS	INITIALS
11-12-91	RECORD DRAWING	T.C.

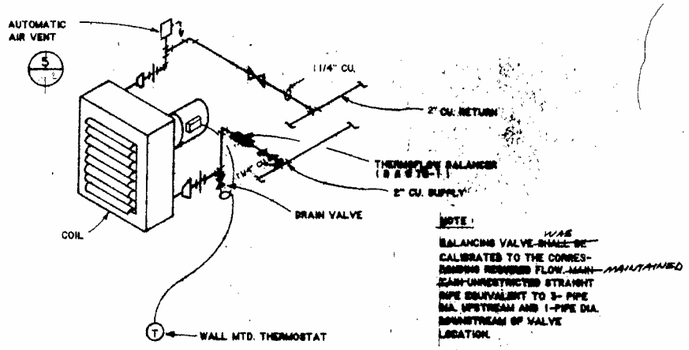
U. S. Department of Health & Human Services
Public Health Service
Indian Health Service

BEAVER, ALASKA
HYDRONIC SYSTEM
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

SHEET NO. M-2 OF 17 TOTAL SHEETS

DRAWN BY: DCG TVH DATE: 12-22-89 2-90
CHECKED BY: DATE:

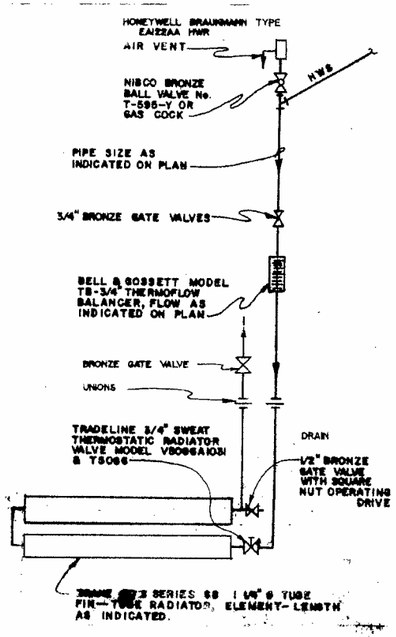
SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA



NOTE:
BALANCING VALVE ~~SHALL BE~~ WAS CALIBRATED TO THE CORRESPONDING REQUIRED FLOW. ~~MAIN~~ MAINTAINED CLEAR UNRESTRICTED STRAIGHT PIPE EQUIVALENT TO 3- PIPE DIA. UPSTREAM AND 1-PIPE DIA. DOWNSTREAM OF VALVE LOCATION.

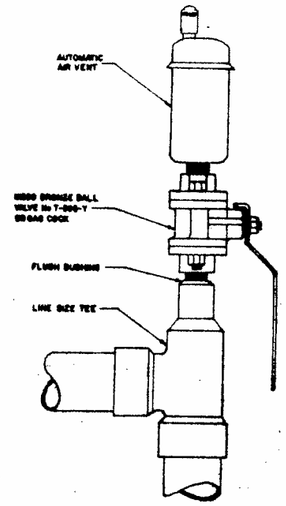
1 UNIT HEATER (UH-1 THRU 4) DETAIL

NOT TO SCALE



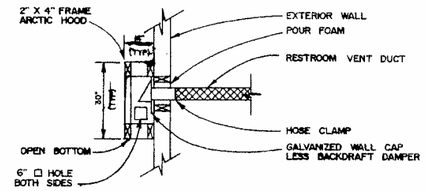
2 FINNED TUBE RADIATION PIPING(TYP)

NOT TO SCALE

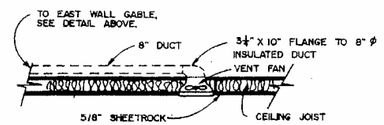


3 TYPICAL AUTOMATIC AIR VENT CONNECTION

ALTERNATE ASSEMBLY IS ~~BRAUKMANN~~ TYPE EA122AA WITH GENERAL ~~ELIMINATION~~ BALL VALVE.



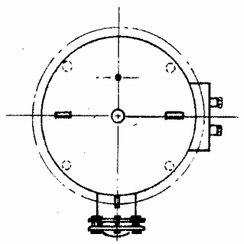
6 RESTROOM VENT OUTLET



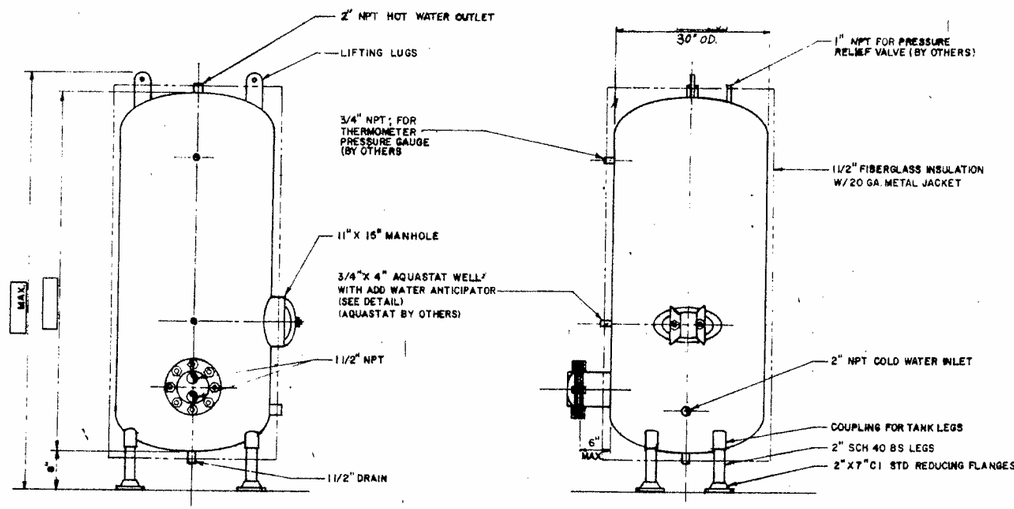
NOTE:
ONE CEILING VENT ~~SHALL BE~~ WAS INSTALLED IN EACH RESTROOM. VENT FANS ~~SHALL BE~~ AND OPERATED BY INDIVIDUAL HAND TIMERS. VENTS SHALL HAVE INTEGRAL BACK DRAFT DAMPER. FAN HOUSING ~~SHOULD BE~~ IS INSULATED W/ 1/2" FIBERGLASS.

5 RESTROOM CEILING FAN/VENT ASSEMBLY

NOT TO SCALE



TOP VIEW



FRONT VIEW

SIDE VIEW

4 HOT WATER GENERATOR

SCALE 3/4"=1'-0"

RECORD DRAWINGS

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

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

DON A. MOORE No. CE 8279 REGISTERED PROFESSIONAL ENGINEER

NAME

DATE 6-5-92

Design Engineer

Maintenance Review

Material Take-off

DATE	REVISIONS	INITIALS
12-9-91	RECORD DRAWING	J.C.

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

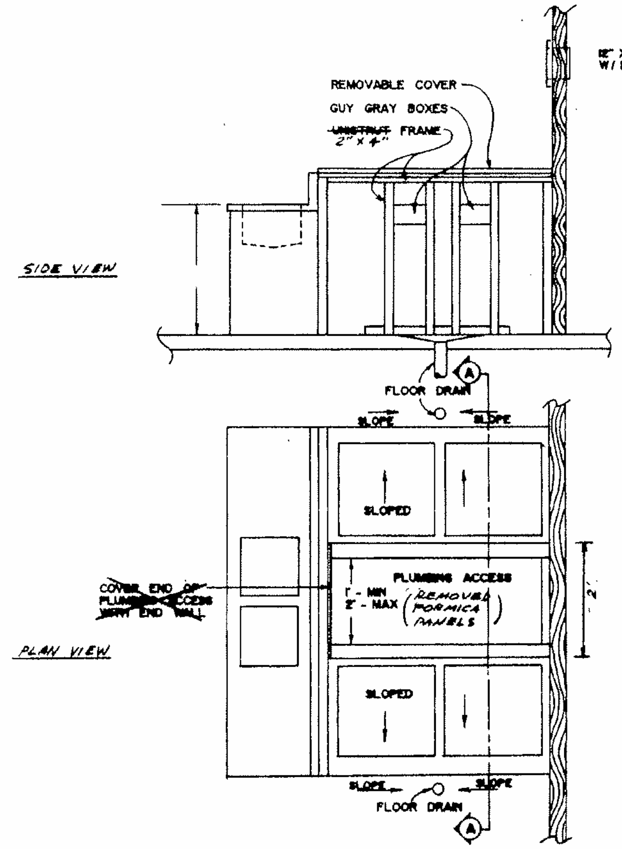
BEAVER, ALASKA
MISC. DETAILS
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

SHEET NO. M-3 OF 17 TOTAL SHEETS

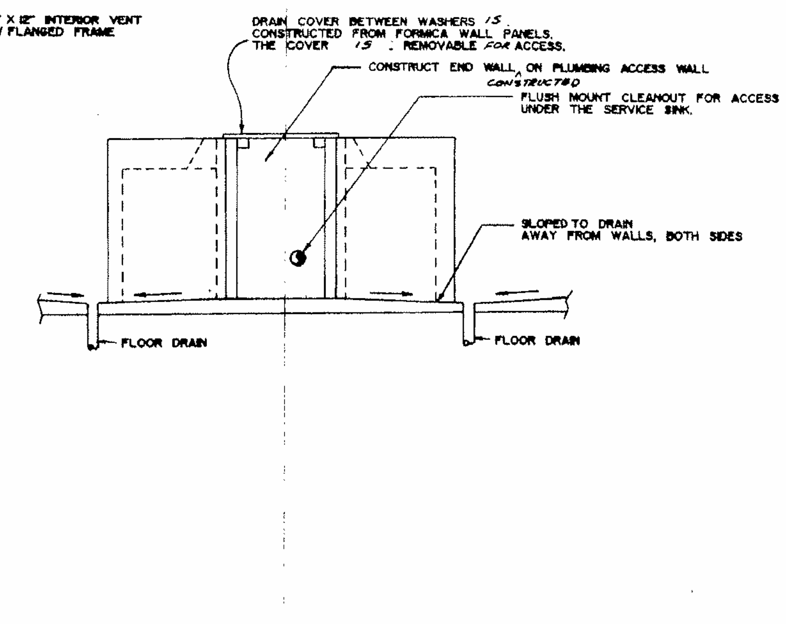
DRAWN BY: DCG TJM
DATE: 12-22-89 2-90

CHECKED BY:
DATE:

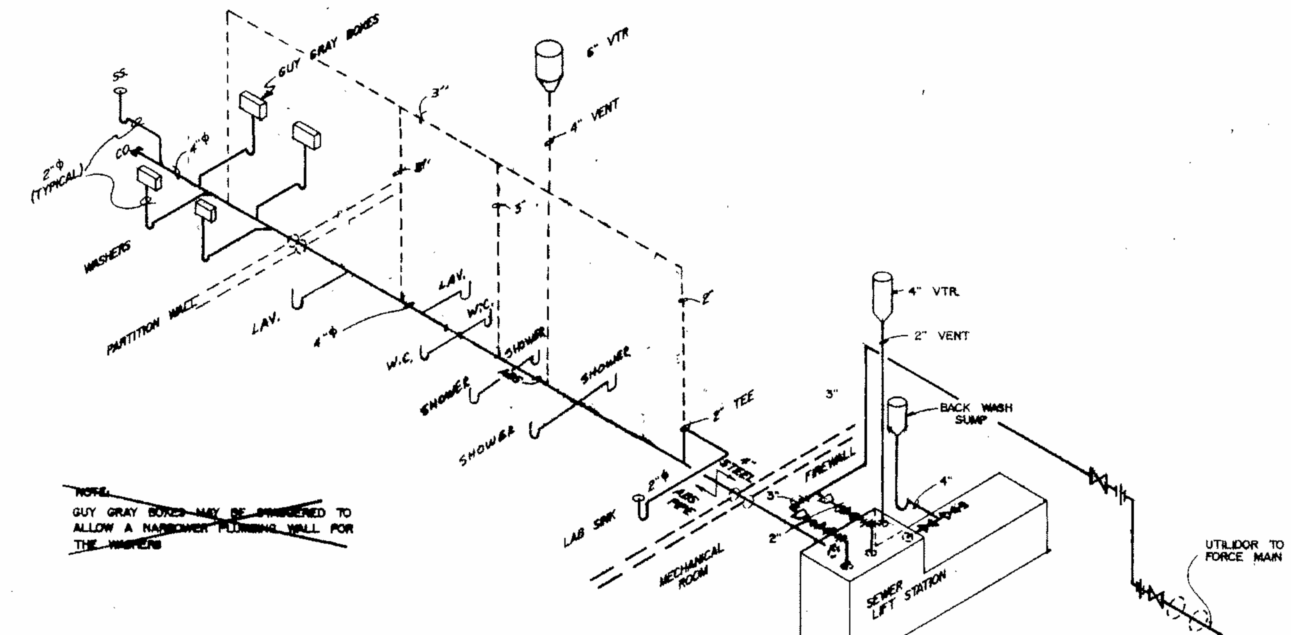
SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA



(1) WASHER PLUMBING WALL WITH SINK
NOT TO SCALE



SECTION (A)



(2) DWV PIPING SCHEMATIC
NOT TO SCALE

NOTES: (✓ INDICATES WORK COMPLETED)

✓1. DWV PLUMBING ~~SHALL~~ SLOPES 1/4" PER FOOT GRADE.

✓2. DWV PIPING ~~SHALL~~ DRAINS TO THE SEWER LIFT STATION LOCATED IN THE MECHANICAL ROOM. THE 4-INCH INFLUENT LINE ~~SHALL BE~~ IS LOCATED ABOVE THE FLOOR OF THE BUILDING AT ALL TIMES. THE INVERT ELEVATION OF THE INFLUENT LINE AT THE INLET HUB OF THE LIFT STATION ~~SHALL BE~~ IS APPROXIMATELY 4-INCHES ABOVE THE FINISH FLOOR. THE LIFT STATION ~~SHOULD BE~~ WAS INSTALLED PRIOR TO THE CONSTRUCTION OF THE INFLUENT LINE.

✓3. THE INFLUENT LINE SHALL MAKES A TRANSITION FROM ABS TO STEEL PRIOR TO PENETRATING THE FIREWALL. USED STEEL PIPE WITH INTERIOR BITUMASTIC COATING. THE ACCESS DOOR TO THE PLUMBING CHASE ~~SHALL BE~~ WAS RAISED ABOVE THE FLOOR LEVEL TO ACCOMMODATE THE INFLUENT LINE AS IT PASSES THROUGH THE FIREWALL.

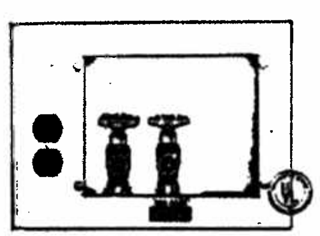
✓4. FLOOR DRAINS: ~~ENSURE THAT~~ DRAINS HAVE INTEGRAL ~~HINGED~~ CAPS TO SEAL OUT EXTERIOR AIR FLOW. DRAINS TO DAYLIGHT BELOW BUILDING. ~~SLOPE~~ CONCRETE FLOOR AND WASHER PAD SLOPED TOWARDS FLOOR DRAINS.

✓5. ~~CONSTRUCT~~ PLUMBING WALL FRAME FOR WASHERS & SERVICE SINK CONSTRUCTED WITH UNISTRUT CHANNEL. ~~LEAVE~~ SIDEWALLS UNCOVERED FOR EASY ACCESS. SHOULD SIDEWALLS BE REQUIRED, CONSTRUCT THEM WITH ~~THE FIBERGLASS~~ WALL SYSTEM AND MAKE THEM EASILY REMOVABLE FOR ACCESS. ~~INSTALL~~ REMOVAL COVER ON TOP OF THE PLUMBING WALL. THE PLUMBING WALL COVER ~~SHOULD BE~~ WAS MADE WITH THE ~~FIBERGLASS~~ FORMICA WALL SYSTEM.

✓6. ~~INSTALL~~ INSTALLED END WALL COVER ON THE PLUMBING WALL FRAME BEHIND SINK. ~~BE SURE THAT~~ 4" DWV CLEAN OUT IS MOUNTED THROUGH WALL FOR EASY ACCESS BELOW THE SINK.

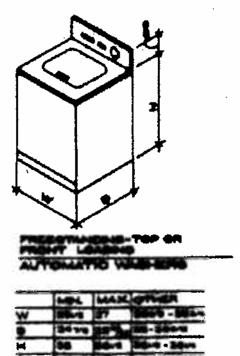
✓7. ~~INSTALL~~ INSTALLED PACKAGE SEWER LIFT STATION PER MANUFACTURERS INSTRUCTIONS.

✗8. ~~SUPPLY A 4-INCH [illegible] TO THE [illegible] SUMP [illegible] DRAIN LOCATED [illegible] WITH [illegible] NEEDED FOR EMERGENCY DRAINING OUT OF THE SEWER SUMP.~~



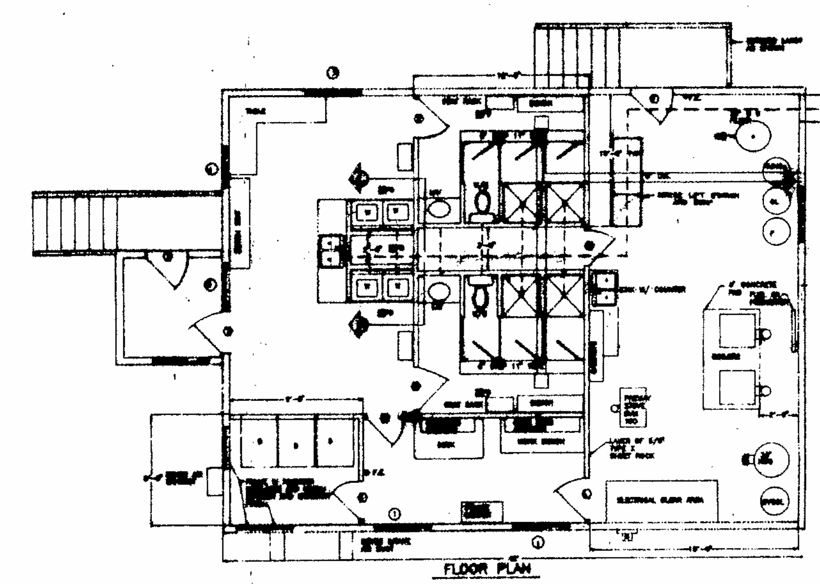
Model No. F66-000 for 2" DRAIN PIPE
1/2" combination NPT hose bibb connection. Duplex electric grounding receptacle. Box 9" x 12¾", rough wall opening 9¼" x 11¼" x 3⅞". Weight 7 lbs.

(3) GUY GRAY BOX 4 EA.



FREESTANDING-TOP OR FRONT LOADING AUTOMATIC WASHERS

(4) WASHER DIMENSIONS



(5) DWV PIPING LAYOUT
NOT TO SCALE
NOTE: SEE SHEETS A-1 & A-2 FOR AS-BUILT CHANGES TO FLOOR PLAN

RECORD DRAWINGS

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

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

STATE OF ALASKA 49TH DON A. MOORE No. CE 8279 REGISTERED PROFESSIONAL ENGINEER

NAME ____ DATE ____

DATE	REVISIONS	INITIALS
10-24-91	RECORD DRAWING	J.C.

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

BEAVER, ALASKA
DWV PLUMBING SCHEMATIC AND WASHER PAD DETAILS
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

SHEET NO. M-4 OF 17 TOTAL SHEETS

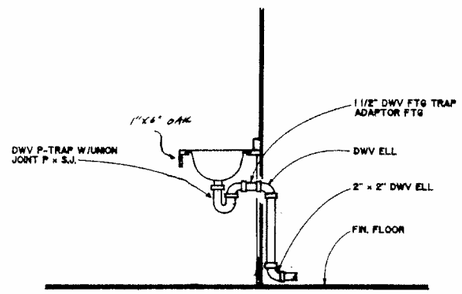
Design Engineer
Maintenance Review
Material Take-off

STATE OF ALASKA 49TH STEVEN MARK WEAVER REGISTERED PROFESSIONAL ENGINEER

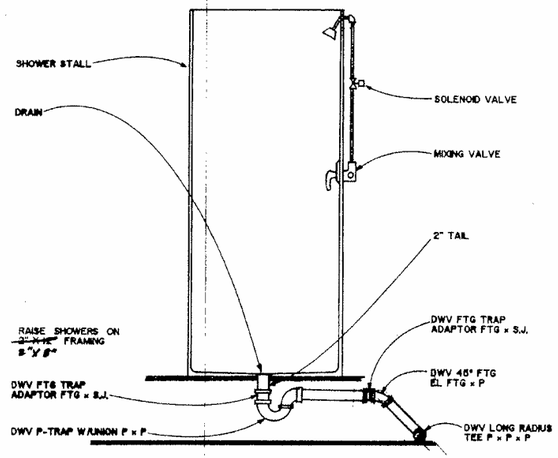
DRAWN BY: TJM
DATE: 2-90
CHECKED BY:
DATE:

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

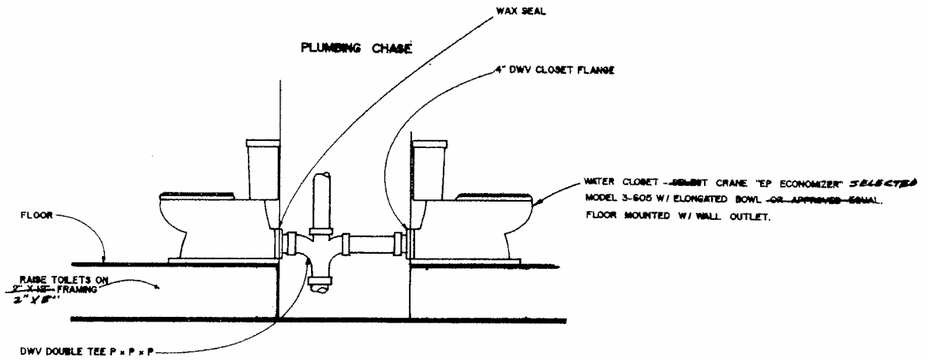
U.S. GOVERNMENT PRINTING OFFICE 1978-786-318



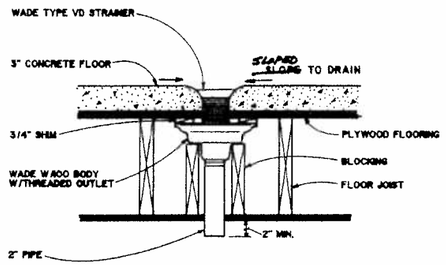
1 TYPICAL LAVATORIES DWV PIPING
NTS



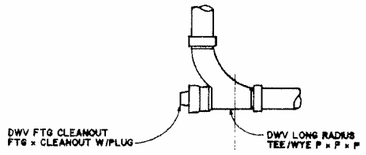
2 TYPICAL SHOWER CONNECTION
NTS



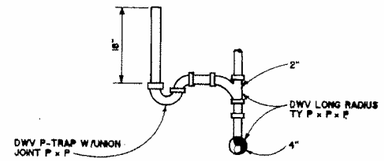
3 TYPICAL WATER CLOSET
NTS



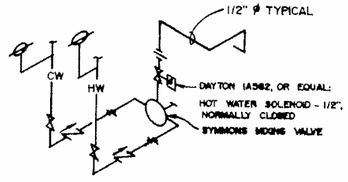
4 TYPICAL FLOOR DRAIN
NTS



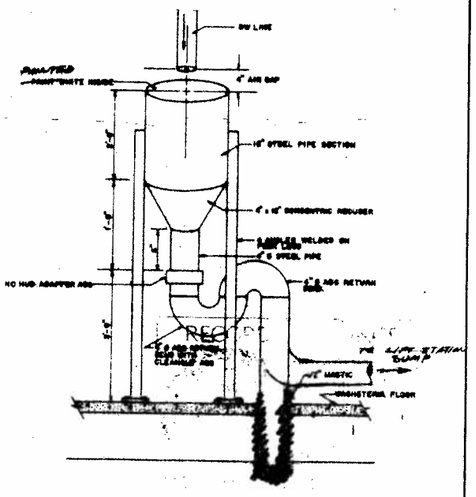
5 TYPICAL CLEANOUT
NTS



6 TYPICAL WASHER DRAIN
NTS



7 SHOWER PLUMBING DETAIL
NOT TO SCALE



8 BACKWASH SUMP DETAIL

RECORD DRAWINGS

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STATE OF ALASKA 49TH — DON A. MOORE No. CE 8279 REGISTERED PROFESSIONAL ENGINEER

NAME _____ DATE _____

Design Engineer

Maintenance Review

Material Take-off

STATE OF ALASKA 49TH — STEVEN MARK WEAVER No. 9811 REGISTERED PROFESSIONAL ENGINEER

DATE	REVISIONS	INITIALS
12-3-91	RECORD DRAWING	J.C.

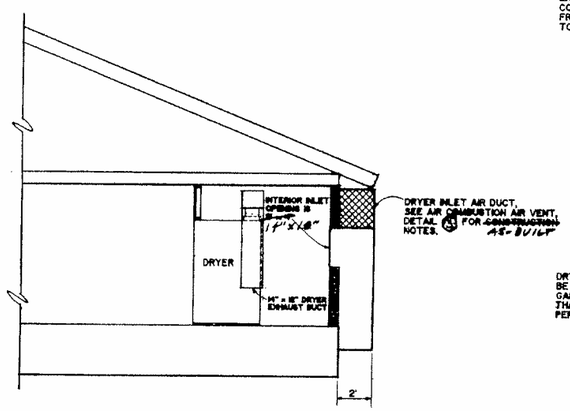
U. S. Department of Health & Human Services
Public Health Service
Indian Health Service

BEAVER, ALASKA
MISC. PLUMBING DETAILS
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

SHEET NO. M-5 OF 17 TOTAL SHEETS

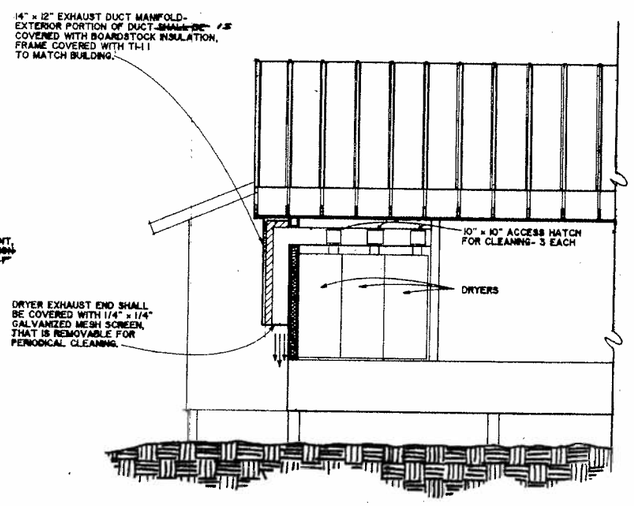
DRAWN BY: DCG DATE: 1-3-90
CHECKED BY: DATE:

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



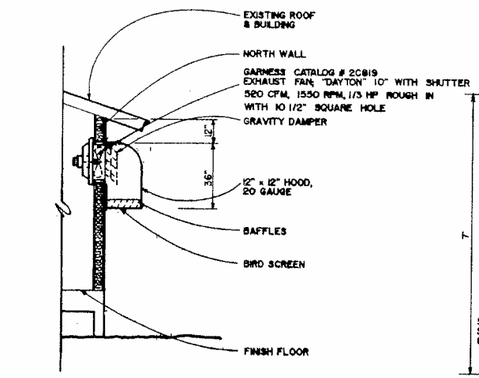
SECTION B-B

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



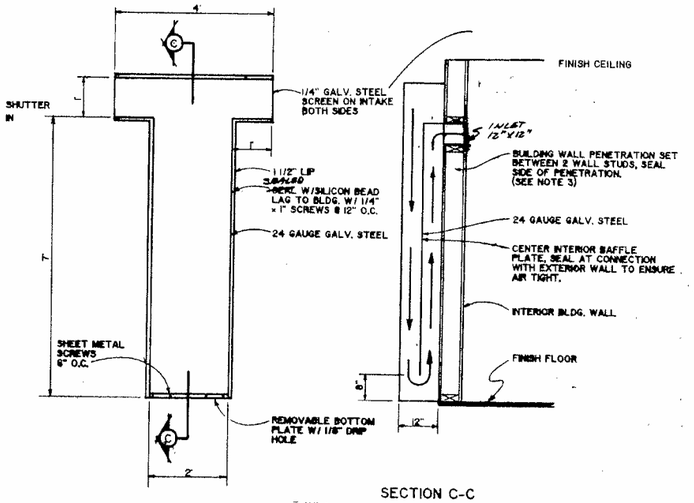
SECTION A-A

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



① EXHAUST FAN & HOOD DETAIL

NTS



FRONT VIEW

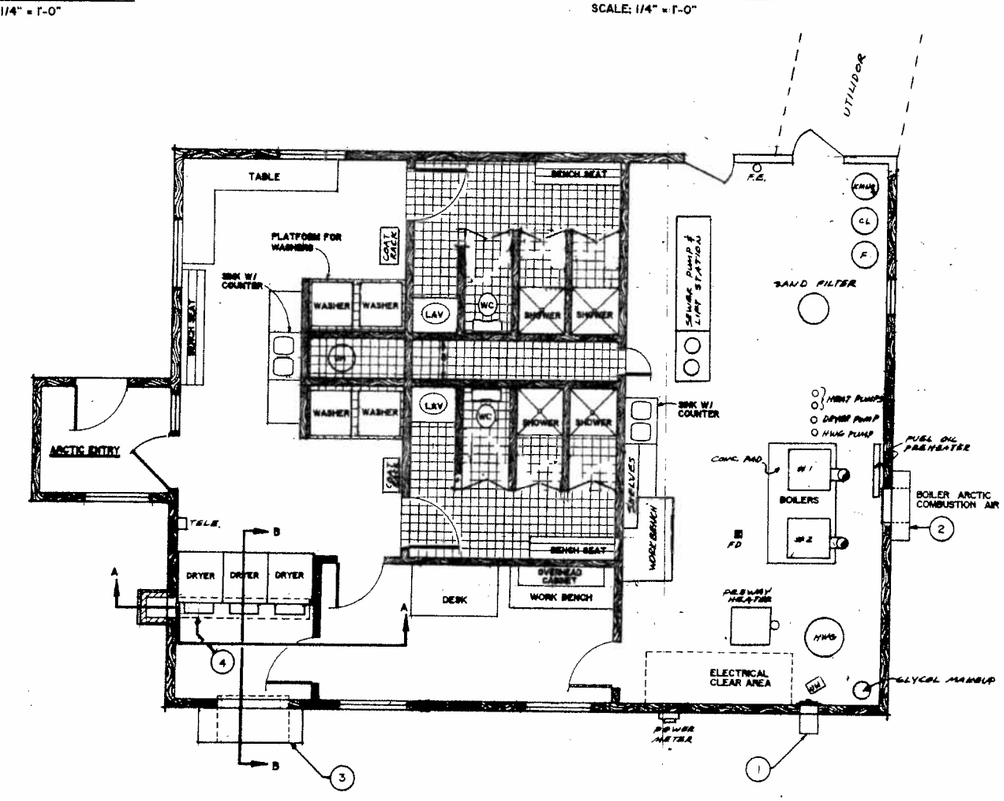
SECTION C-C

② ARCTIC COMBUSTION AIR VENT

NTS

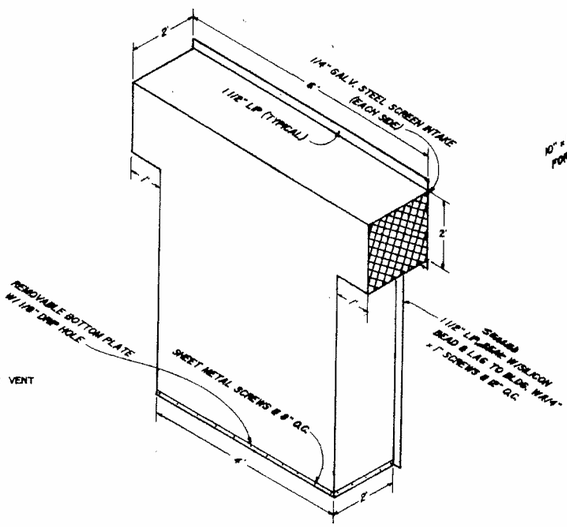
NOTES:

1. VENT RATED FOR 720,000 BTU/hr MAX.
2. APPLICABLE FOR APPLIANCES IN CONFINED SPACES (LESS THAN 50 CU. FT. PER 1000 BTU/hr AGGREGATE INPUT RATING OF ALL FUEL BURNING APPLIANCE) COMBUSTION AIR VENT COVER SHALL BE SIZED FOR A FREE AREA OF AT LEAST 1 SQUARE INCH PER 5000 BTU/hr OF TOTAL INPUT OF ALL APPLIANCE IN THE ENCLOSURE UNLESS THE COMBUSTION VENT IS ENGINEERED AND A LESSER VALUE JUSTIFIED.
3. SIZE BUILDING PENETRATION FOR SPECIFIC REQUIREMENT. MAXIMUM ALLOWABLE SIZE 144 SQUARE INCHES.



FLOOR PLAN

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

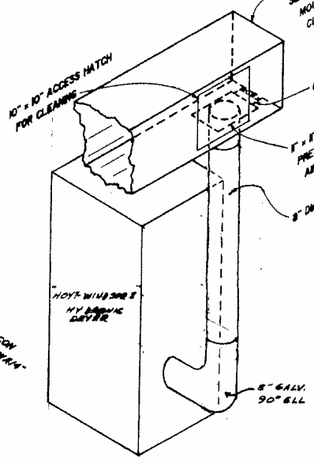


③ DRYER INLET AIR VENT

NTS

NOTES:

1. THE DRYER INLET AIR VENT IS CONSTRUCTED LIKE THE COMBUSTION AIR VENT.
2. INTERIOR OPENING ~~TO HAVE 0.5 SQUARE FEET~~ 1.75 SQ FT OF FREE UNRESTRICTED AREA.
3. SELECT BACKDRAFT DAMPER W/ DIMENSIONS OF WIDTH ~~24"~~ 12" & HEIGHT ~~24"~~ 18"
CESCO BDA MODEL 102 W/ RETARDER OR APPROVED EQUAL.



④ DRYER EXHAUST DUCT

NTS

RECORD DRAWINGS

STATE OF ALASKA 49TH DON A. MOORE No. CE 8279 REGISTERED PROFESSIONAL ENGINEER

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

NAME _____ DATE _____

DRYER EXHAUST DUCTING NOTES: (W INDICATES WORK IS BOARD)

1. ALL DUCTING SHALL BE FABRICATED USING 26 GAUGE GALVANIZED SHEET STEEL (GAL) UNLESS NOTED OTHERWISE.
2. ALL OUTSIDE DUCTING SHALL BE INSULATED WITH 2" EXTRUDED POLYSTYRENE BOARDSTOCK AND FINISHED WITH T1-11 SIDING PAINTED TO MATCH BUILDING EXTERIOR.
3. PROVIDE 6" W x 6" HEADER IN WASHETERIA WALL PANELS WHERE INTAKE/EXHAUST DUCTING IS REQUIRED THROUGH WALL.
4. SUPPORT ALL DUCT WORK SECURELY TO WALLS AND HANG FROM CEILING AS NECESSARY.
5. IF NECESSARY, DUCTING CROSS-SECTIONAL AREA MAY BE VARIED (NOT REDUCED) SUCH THAT CONSTRUCTION IS SIMPLIFIED WHEN DUCTING PENETRATES EXISTING WASHETERIA WALLS.

DATE	REVISIONS	INITIALS
11-13-91	RECORD DRAWINGS	J.C.

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

BEAVER, ALASKA
DRYER INTAKE/EXHAUST DUCT, COMBUSTABLE AIR DUCT AND MECH. ROOM EXHAUST FAN DETAILS
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

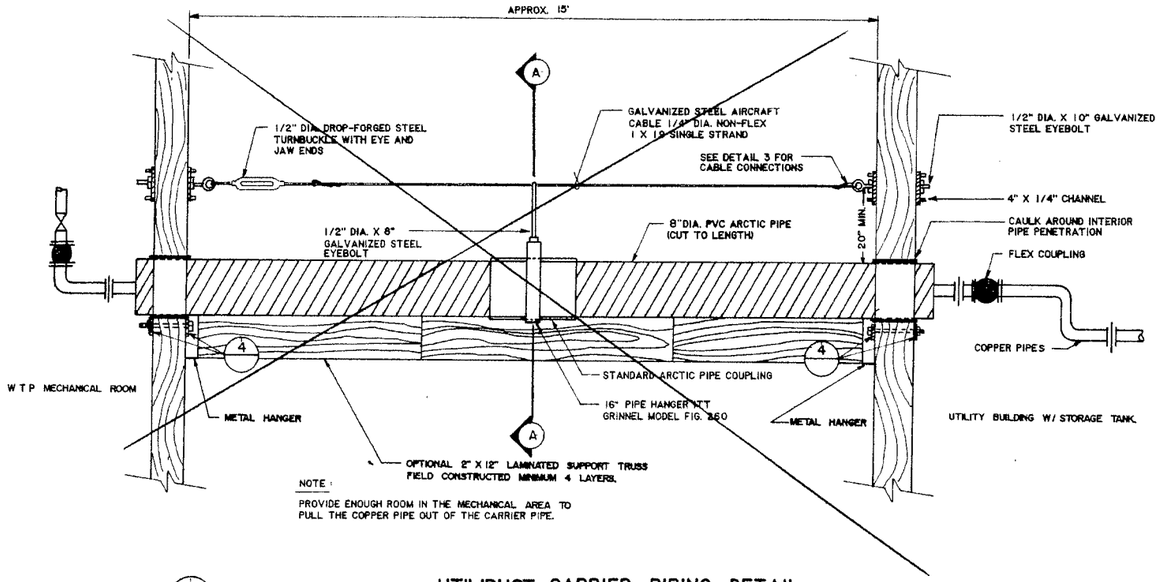
SHEET NO. M-6 OF 17 TOTAL SHEETS

DRAWN BY: DGG DATE: 1-10-90
CHECKED BY: DATE:

Design Engineer
Maintenance Review
Material Take-off

STATE OF ALASKA 49TH DON A. MOORE No. CE 8279 REGISTERED PROFESSIONAL ENGINEER

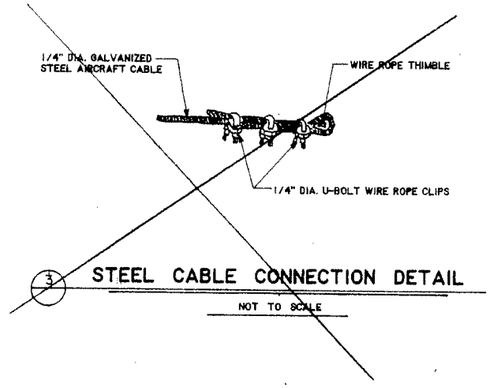
SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA



NOTE:
PROVIDE ENOUGH ROOM IN THE MECHANICAL AREA TO PULL THE COPPER PIPE OUT OF THE CARRIER PIPE.

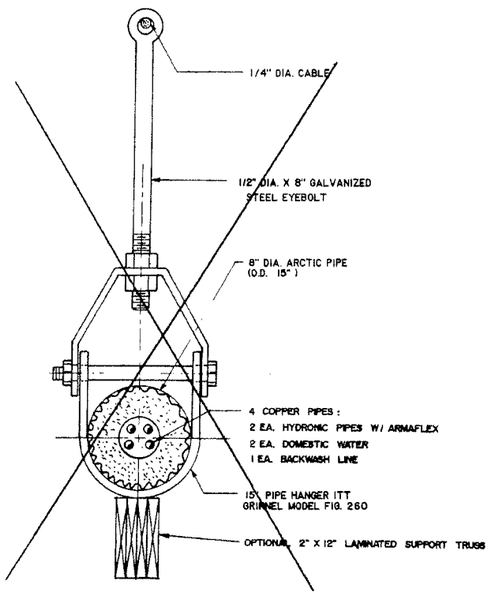
1 **UTILIDUCT CARRIER PIPING DETAIL**

NOT TO SCALE



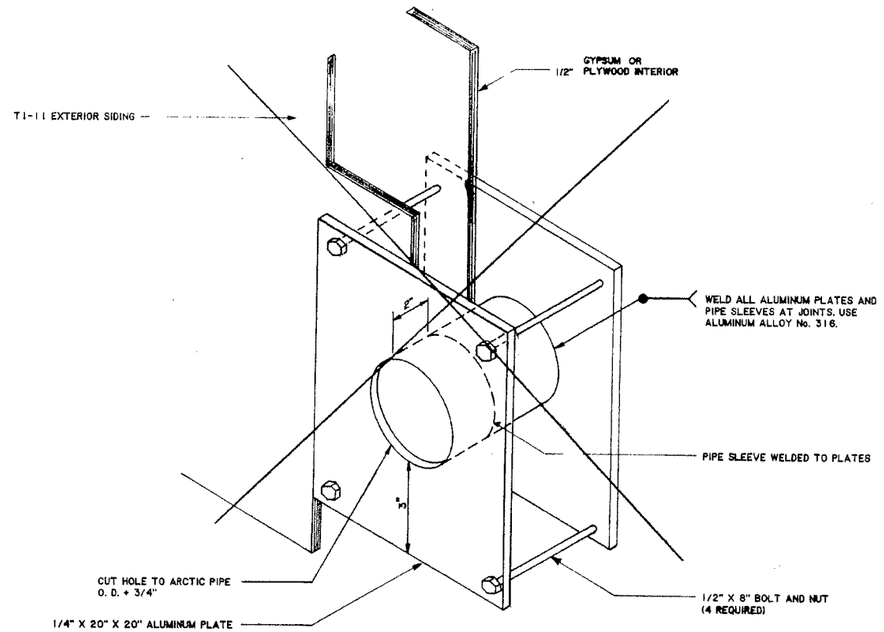
3 **STEEL CABLE CONNECTION DETAIL**

NOT TO SCALE



A **SECTION A-A**

NOT TO SCALE



4 **CARRIER PIPE ANCHOR DETAIL**

NOT TO SCALE

NOTE: DUE TO DESIGN CHANGES, THESE DETAILS WERE NOT USED.

RECORD DRAWINGS

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

NAME DON A. MOORE DATE 6-5-92

STATE OF ALASKA 49TH DON A. MOORE No. CE 8279 REGISTERED PROFESSIONAL ENGINEER

DATE	REVISIONS	INITIALS
12-3-91	RECORD DRAWING	J.C.

Design Engineer

Maintenance Review

Material Take-off

STATE OF ALASKA 49TH CHARLES MARK HEARD No. CE 7897 REGISTERED PROFESSIONAL ENGINEER

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

BEAVER, ALASKA

HYDRONICS UTILIDOR DETAILS

PUBLIC LAW 86-121 PROJECT

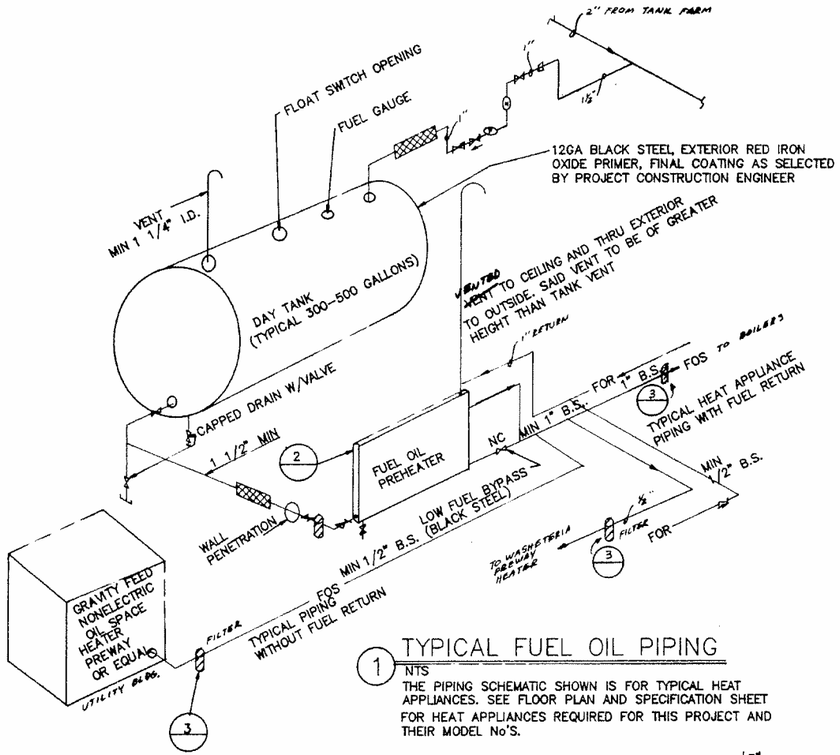
PROJECT NO. AN-89-996

SHEET NO. M-7 OF 17 TOTAL SHEETS

DRAWN BY: TJM DATE: 2-90

CHECKED BY: DATE:

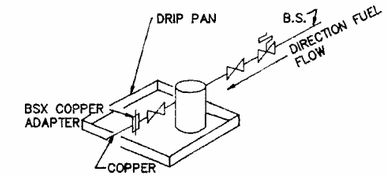
SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA



1 TYPICAL FUEL OIL PIPING

NTS

THE PIPING SCHEMATIC SHOWN IS FOR TYPICAL HEAT APPLIANCES. SEE FLOOR PLAN AND SPECIFICATION SHEET FOR HEAT APPLIANCES REQUIRED FOR THIS PROJECT AND THEIR MODEL No'S.



3 TYPICAL FUEL FILTER INSTALLATION

NTS

FUEL FILTER NOTES

1. WHEN AN EXTERIOR WALL PENETRATION IS MADE SET ISOLATION VALVE AS CLOSE TO INTERIOR WALL SURFACE AS POSSIBLE.
2. APPLIANCE FUEL FILTER INSTALLATION: USE GENERAL 1A25A OR EQUAL (TYP) AT EACH FUEL USING APPLIANCE.
3. DAY TANK FUEL FILTER INSTALLATION: USE GOLDENROD #496 FUEL FILTER W/496-5 ELEMENT OR EQUAL.
4. PROVIDE DRIP PANS UNDER ALL FUEL FILTER INSTALLATIONS.

NOTES ON FUEL PIPING (√ INDICATES WORK DONE)

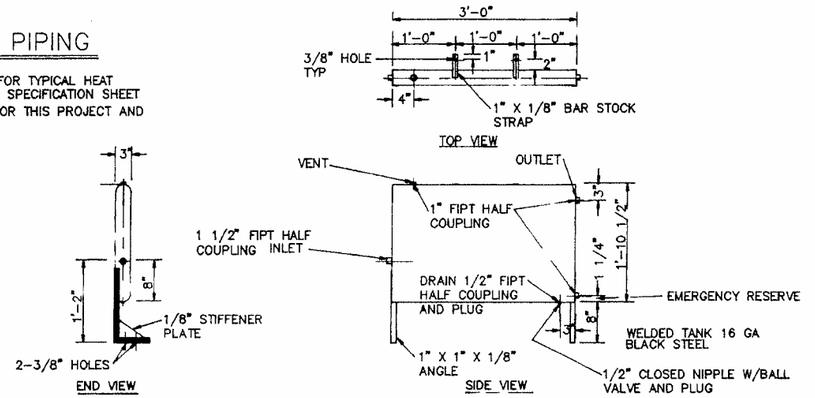
- √1. FUEL FILTERS SHALL BE LOCATED PRIOR TO EACH FUEL USING UNIT AND SHALL ALL BE THE SAME TYPE AND SIZE
- √2. ISOLATION VALVES ARE REQUIRED ON EACH SIDE OF FILTER.
- √3. B.S. PIPE SHALL BE RUN TO EACH FUEL FILTER.
- √4. FIRE ISOLATION VALVES ARE REQUIRED PRIOR TO EACH FUEL FILTER.
- √5. FIRE ISOLATION VALVES ARE NOT TO BE USED AS GATE VALVES.
- √6. FIRE ISOLATION VALVES ARE NOT REQUIRED ON FUEL RETURN LINES WHEN THEY RETURN TO THE PRE-HEATER.
- √7. SOFT COPPER TUBING SHALL BE USED TO BRING THE FUEL OIL INTO AND OUT OF THE HEAT APPLIANCE.
- √8. VIBRATION LOOPS IN COPPER ARE NOT REQUIRED. IF INSTALLED THEY SHALL BE A SINGLE LOOP IN A HORIZONAL ORIENTATION TO PREVENT AIR TRAPS.
- √9. ONLY THE STANDARD FUEL OIL PRE-HEATER SHOWN SHALL BE USED.
- √10. IF A SUCTION LIFT EXISTS IN THE FUEL SYSTEM, A FUEL SUCTION GAUGE WITH SHUT OFF SHALL BE INSTALLED ON THE FUEL OIL SUPPLY PORT OF THE FUEL PUMP.
- √11. THE DAY TANK INSTALLATION IS MADE WITH B.S. PIPE ONLY. NO COPPER FITTINGS OR PIPING IS REQUIRED.

SCOPE OF WORK THIS PROJECT

1. ABANDON EXISTING FUEL SUPPLY & RETURN LINES, AND WOODEN ENCLOSURES.
2. ELEVATE FUEL TANK ON METAL STAND.
3. REINSTALL FUEL TRANSFER PUMP IN MECHANICAL ROOM.
4. INSTALL FUEL LEVEL FLOAT SWITCHES TO CONTROL FUEL TRANSFER PUMP.
5. ROUTE FUEL SUPPPLY LINES TO BOTH THE MECHANICAL ROOM & THE UTILITY BUILDING.

FUEL STORAGE TANK NOTES: (√ INDICATES WORK DONE)

- √1. IDENTIFY TANK WITH 3" HIGH x 1/2" STROKE LETTERS "DIESEL" AFTER APPLYING FINIAL TANK COATING.
- √2. LOCATE DAY TANK A MINIMUM OF 5 ft FROM THE CLOSEST EXTERIOR BUILDING WALL (TO INCLUDE EAVES) AND 20ft FROM ANY PROPERTY LINE ON WHICH STRUCTURES MAY BE BUILT.
- √3. A STORAGE TANK IN EXCESS OF 660 GALLONS OR MULTIPLE TANKS IN EXCESS OF 1320 GALLONS REQUIRE SECONDARY CONTAINMENT AND SPILL PREVENTION CONTROL AND COUNTER MEASURE PLAN CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER.
- √4. SLOPE FOUNDATION UNDER TANK TO ENSURE ANY SPILLED FUEL DOES NOT POND UNDER BUILDING.
- √5. IF BULK STORAGE CONNECTION NOT ALREADY METERED INSTALL TUTHILL FILL RITE DN. M/N 807A 1" OR EQUAL WITH TALLY AND TOTALIZER RESET (GRAVITY FLOW) PROVIDE ISOLATION VALVES AND UNIONS WITH INSTALLATION.
- √6. INVERT OUTLET ELEVATION OF DAY TANK SHOULD BE NOT LESS THAN THE ELEVATION OF THE PREHEATER FUEL RETURN LINE.
- √7. BULK FUEL STORAGE SUPPLY AND RETURN LINES MINIMUM 1-INCH DIA. USE SCH 80 PIPE WITH VICTAULIC COUPLINGS FOR BURIED LINES AND SCH 40 PIPE WITH THREADED COUPLINGS FOR ABOVE GRADE APPLICATIONS.



2 FUEL OIL PRE-HEATER

NTS

NOTE: THIS DRAWING WAS DEVELOPED AS A STANDARD DETAIL FOR AANHS SANITATION FACILITIES CONSTRUCTION PROGRAM PROJECT SPECIFIC MODIFICATIONS ~~SHALL BE~~ HIGHLIGHTED AND ARE THE RESPONSIBILITY OF THE PROJECT DESIGN ENGINEER.

RECORD DRAWINGS

STATE OF ALASKA 49TH — REGISTERED PROFESSIONAL ENGINEER — DON A. MOORE No. CE 8279

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

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

NAME — DATE 6-5-92

DATE	REVISIONS	INITIALS
11-12-91	RECORD DRAWING	J.C.

Design Engineer

Maintenance Review

Material Take-off

STATE OF ALASKA 49TH — REGISTERED PROFESSIONAL ENGINEER — STEVEN MARK MEAKER

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

BEAVER, ALASKA

TYPICAL FUEL OIL PIPING.
PUBLIC LAW 86-121 PROJECT
PROJECT NO.

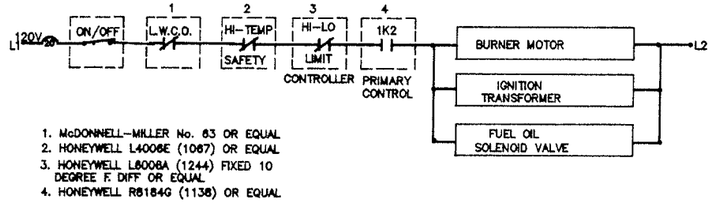
SHEET NO. M-8
OF 17 TOTAL SHEETS

DRAWN BY: JAQ
DATE: 2-90

CHECKED BY:
DATE:

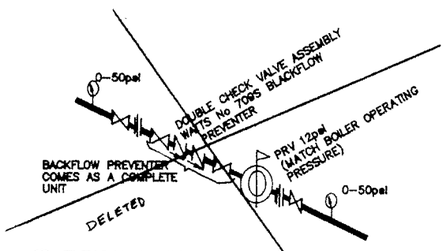
SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA

80158



1. McDONNELL-MILLER No. 63 OR EQUAL
2. HONEYWELL L4006E (1067) OR EQUAL
3. HONEYWELL L8008A (1244) FIXED 10 DEGREE F. DIFF OR EQUAL
4. HONEYWELL R8184G (1138) OR EQUAL

(5) TYPICAL BOILER CONTROL COMPONENTS SCHEMATIC LAYOUT
NTS

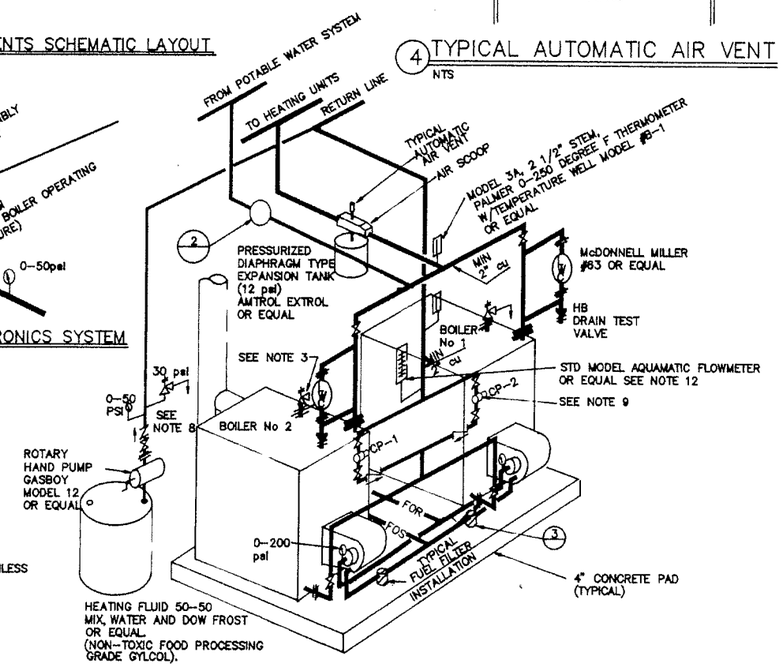


(2) TYPICAL WATER SYSTEM/HYDRONICS SYSTEM INTERFACE
NTS

NOTES:
1. PROVIDE GYLCOL HYDROMETER FOR OPERATOR.
2. THE OPERATING PRESSURE FOR THE POTABLE WATER SUPPLY SHOULD BE GREATER THAN THAT OF THE HYDRONICS SYSTEM

BOILER OPERATING CHARACTERISTICS
1. STACK TEMP 400 TO 550 DEGREE F
2. OIL PRESSURE 100 psi UNLESS OTHERWISE SPECIFIED BY BURNER MANUFACTURER
3. SMOKE DOT: 0-1
4. STACK DRAFT: .02-.04" WATER COLUMN
5. H_2O OVERFIRE DRAFT: 0.01-0.02" WATER COLUMN UNLESS OTHERWISE SPECIFIED BY BOILER MANUFACTURER
6. 12-20 psi BOILER OPERATING PRESSURE
7. 160 TO 190 DEGREE OPERATING TEMP

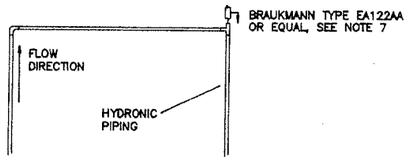
TEST KITS ~~REQUIRED~~ PROVIDED
BACHARACH KIT #10-5022 OR EQUAL



(1) TYPICAL BOILER PIPING
NTS

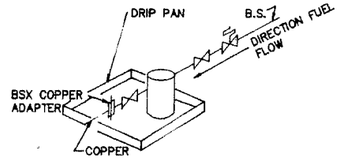
FIRE EXTINGUISHER REQUIREMENTS (✓ INDICATES ITEM COMPLETED)
✓1. SET PORTABLE FIRE EXTINGUISHERS PER REQUIREMENTS OF CHAPTER 10, 1988 NATIONAL FIRE CODE. WASHETERIA PUBLIC ROOMS ARE CONSIDERED A "LIGHT HAZARD" WITH CLASS A COMBUSTIBLES. WATER TREATMENT PLANTS OR MECHANICAL ROOMS ARE AN ORDINARY HAZARD" WITH CLASS A COMBUSTIBLES AND CLASS B FLAMMABLES.
✓2. USE 5-6 POUNDS PORTABLE FIRE EXTINGUISHERS IN LIGHT HAZARD AND ORDINARY HAZARD LOCATIONS. "AMEREX MODEL No 443, UL RATING 3-A40BC OR APPROVED EQUAL, WITH MULTIPURPOSE ABC DRY CHEMICAL (NONOAMONIUM PHOSPHATE) POWDER. INSTALL THE UNIT(S) IN ACCESSIBLE AREAS (MAX STRAIGHT WALKING DIST. =70') OR AS REQUIRED BY FIRE MARSHAL IN ANY CASE, PROVIDE A MINIMUM OF 2 UNITS IN EACH TREATMENT PLANT OR WASHETERIA.
✓3. IN ADDITION, USE AUTOMATIC FIRE EXTINGUISHERS IN ORDINARY HAZARD LOCATIONS. AD-X FIRE SYSTEMS, INC. MODEL No 103-, 20 SQ FOOT COVERAGE OR APPROVED EQUAL, WITH MULTIPURPOSE ABC DRY CHEMICAL POWDER. INSTALL ONE UNIT OVER EACH HEAT APPLIANCE BURNER. SET BETWEEN 3 FEET AND 7.5 FEET ABOVE THE BURNER.

SPARE PARTS ~~TO BE~~ PROVIDED FOR EACH TYPE BOILER/BURNER INSTALLATION
1. ONE EACH COMPLETE BURNER UNIT
2. ELECTRODE ASSEMBLY 1 EACH
3. IGNITION TRANSFORMER, 1 EACH
4. CAD CELL FLAME DETECTION WITH HONEYWELL R8184G PRIMARY CONTROL OR EQUAL
5. FUEL PUMP, 1 EACH
6. HI-TEMPERATURE SAFETY CONTROL WITH MANUAL RESET HONEYWELL L4008E OR EQUAL
7. HI-LO OPERATING CONTROLLER, HONEYWELL L8008A (1244) WITH 10 DEGREE FIXED OPERATING DIFFERENTIAL OR EQUAL



(4) TYPICAL AUTOMATIC AIR VENT
NTS

NOTES ON BOILER PIPING (✓ = ITEMS COMPLETED)
✓1. HYDRONIC PIPING SHOWN IS FOR REPRESENTATION OF REQUIRED FITTINGS ONLY. ACTUAL LOCATION OF TAPS WILL VARY BY BOILER MANUFACTURER.
✓2. BOILERS SHALL BE PLUMBED IN PARALLEL.
✓3. BOILER HOT WATER SAFETY RELIEF VALVES SHALL BE RATED FOR 30 psi. A RIGID PIPE WITH THREADED CONNECTIONS SHALL BE ATTACHED TO BRING THE BLOW-OFF DISCHARGE WITHIN 6 INCHES OF THE FLOOR.
✓4. THE EXPANSION TANK SHALL BE INDIVIDUALLY SIZED FOR EACH HYDRONIC SYSTEM, BASED ON OPERATING TEMPERATURES, VOLUME OF SYSTEM, AND TANK MANUFACTURES RECOMMENDATIONS.
✓5. DIELECTRIC JOINTS SHALL BE MADE BY ISOLATION KITS. (NIPPLES AND NOT UNIONS) AT ALL CONNECTIONS OF DISSIMILAR METALS.
✓6. MINIMUM CLEARANCE REQUIRED BY UNIFORM CODE IS 18 INCHES ON ALL SIDES. FOR REAR EXIT BOILERS A REAR CLEARANCE OF 36 INCHES IS REQUIRED TO MAINTAIN ADEQUATE SEPARATION BETWEEN STACK AND WALL. FOR EASY O&M ACCESS 24-INCHES BETWEEN BOILERS, 36-INCHES SIDE CLEARANCE AND 48-INCHES FRONT CLEARANCE IS RECOMMENDED. THESE DISTANCES ARE AS MEASURED FROM THE BOILER BOX. ALLOWANCE FOR PROTRUDING PIPING AND APPURTENANCES ARE INCORPORATED INTO THE RECOMMENDED VALUES.
✓7. INSTALL AUTOMATIC AIR VENT AT DOWNSTREAM END OF ANY HYDRONICS PIPING HIGH POINT. INSTALL AN ISOLATION BALL VALVE WITH EACH VENT IF NOT PART AN INTERGAL PART OF THE VENT ASSEMBLY (ie HONEYWELL BRAUKMANN TYPE EA122AA)
✓8. A HEATING FLUID ADD LINE 30 psi RELIEF VALVE IS ONLY REQUIRED WHEN MIX VAT IS LOCATED OUT OF SIGHT OF BOILER RELIEF VALVES. WHEN UTILIZED, POSITION HEATING FLUID ADD LINE 30 psi RELIEF VALVE AND ATTACH HOSE SUCH THAT ANY DISCHARGE DRAINS INTO GYLCOL MIXING VAT
✓9. CIRCULATION PUMPS ARE TYPICALLY PLUMBED IN PARALLEL ON THE RETURN LINE AT AN ELEVATION BELOW THE LOW WATER CUTFF. PUMPS ARE SHOWN IN A TYPICAL CONFIGURATION. SEE HYDRONICS SCHEMATIC FOR LOCATION.
✓10. PROVIDE 2 EACH 10' WASHER HOSES FOR DRAINING SYSTEMS AND GENERAL HOUSEKEEPING.
✓11. PROVIDE PETCOCK TYPE ISOLATION VALVE ON ALL PRESSURE GAUGES.
✓12. PROVIDE THE STANDARD MODEL FLOW CELL FLOWMETER WITH NEOPRENE "O" RINGS AND METAL STRAINER CAP RATED FOR OPERATION TO A MAXIMUM 194 DEGREE F. PROVIDE THE "K" TYPE NICKEL PLATED BRASS "CHECKMATE" ISOLATION VALVE RATED FOR OPERATION TO A MAXIMUM 194 DEGREE F. SIZE THE METER PER MANUFACTURER'S RECOMMENDATION. IF BOILER OPERATION IN EXCESS OF 190 DEGREE F IS DESIRED PROVIDE TEFLON "O" RINGS TO BRING MAXIMUM TEMPERATURE RATING TO 302 DEGREES F.
✓13. CALIBRATE ALL THERMOMETERS IN BOILING WATER PRIOR TO INSTALLATION.



(3) TYPICAL FUEL FILTER INSTALLATION
NTS

FUEL FILTER NOTES
1. APPLIANCE FUEL FILTER INSTALLATION: USE GENERAL 1A25A OR EQUAL (TYP) AT EACH FUEL USING APPLIANCE.
2. ~~PROVIDE~~ DRIP PANS UNDER ALL FUEL FILTER INSTALLATIONS. PROVIDED

NOTE: THIS DRAWING WAS DEVELOPED AS A STANDARD DETAIL FOR AANHS SANITATION FACILITIES CONSTRUCTION PROGRAM PROJECT SPECIFIC MODIFICATIONS SHALL BE HIGHLIGHTED AND ARE THE RESPONSIBILITY OF THE PROJECT DESIGN ENGINEER.

DATE	REVISIONS	INITIALS
12-9-91	RECORD DRAWING	J.C.

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

BEAVER, ALASKA
TYPICAL BOILER PIPING
PUBLIC LAW 86-121 PROJECT
PROJECT NO.

SHEET NO. M-9 OF 17 TOTAL SHEETS

Design Engineer
Maintenance Review
Material Take-off

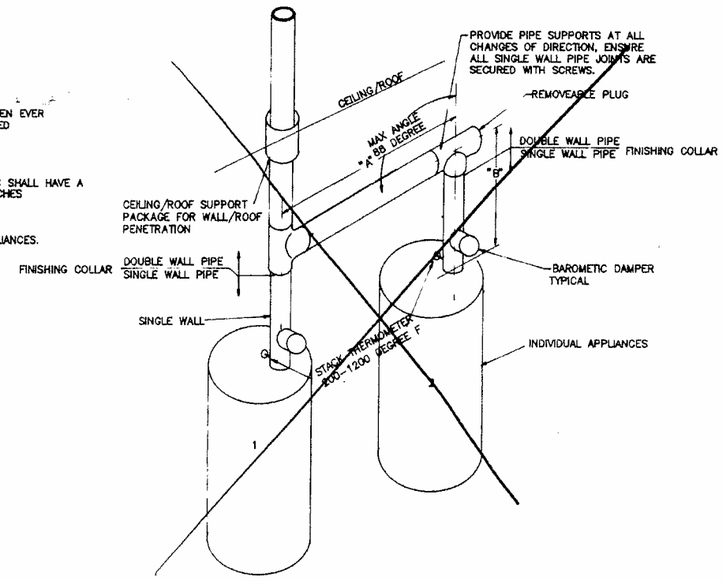
STATE OF ALASKA — 49TH — REGISTERED PROFESSIONAL ENGINEER

DRAWN BY: JAQ DATE: 2-90
CHECKED BY: DATE:

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

GENERAL METAL CHIMNEY NOTES: (V= ITEMS COMPLETED)

1. ~~ALL CHIMNEYS SHALL BE SINGLE WALL STAINLESS STEEL TO A POINT NOT HIGHER THAN 4 FEET ABOVE THE APPLIANCE ABOVE THAT POINT.~~ ALL CHIMNEYS SHALL BE STAINLESS STEEL, DOUBLE WALL INSULATED PIPE. IN ANY CASE, DOUBLE WALL PIPE IS REQUIRED FOR ANY WALL/CEILING PENETRATION.
2. INDIVIDUAL CHIMNEYS SHALL BE PROVIDED FOR APPLIANCES PROVIDING BUILDING/SYSTEM HEAT.
3. MANIFOLDED CHIMNEYS ARE ALLOWABLE FOR HEAT APPLIANCES UTILIZED FOR OTHER THAN BUILDING HEAT (ie DRYERS,HOT WATER GENERATOR, ETC) NOT MORE THAN THREE APPLIANCES OF SIMILAR TYPE AND CAPACITY MAY BE CONNECTED TO ONE CHIMNEY.
4. EACH CHIMNEY SHALL BE PROPERLY SIZED FOR NATURAL DRAFT BASED ON THE AVERAGE YEARLY TEMPERATURE (SEE WEIL-McLAIN ENGINEER'S REFERENCE OR EQUIVALENT DOCUMENT FOR SIZING PROCEDURE.)
5. EACH STACK OR VENT SHALL HAVE A STACK THERMOMETER MOUNTED 12-INCHES ABOVE THE BREECH AND 6-INCHES BELOW THE BAROMETIC DAMPER IN PLAN VIEW. THE RANGE ON THE THERMOMETER SHALL BE 200 DEGREES F TO 1200 DEGREES F.
6. EACH STACK SHALL HAVE A BAROMETRIC DRAFT CORRECTOR FOR NATURAL DRAFT.
7. FOR NEW INSTALLATIONS REAR BREECH BOILER UNITS SHALL BE UTILIZED WHEN EVER POSSIBLE. FOR SAID INSTALLATION EACH STACK SHALL HAVE A "TEE" INSTALLED AT THE BREECH TO PREVENT RAIN WATER FROM ENTERING THE COMBUSTION CHAMBER AND FOR EASE OF STACK CLEANING.
8. IN BUILDING INTERIORS, METAL CHIMNEYS 18- INCHES IN DIAMETER OR LESS SHALL HAVE A MINIMUM CLEARANCE OF 18-INCHES FROM COMBUSTIBLE MATERIAL AND 2 INCHES FROM NONCOMBUSTIBLE MATERIAL.
9. THIS STANDARD DETAIL BASED ON CHAPTERS 5 AND 9 OF 1985 UNIFORM MECHANICAL CODE (UMC) FOR SIMGLE STORY BUILDING WITH LOW HEAT APPLIANCES.



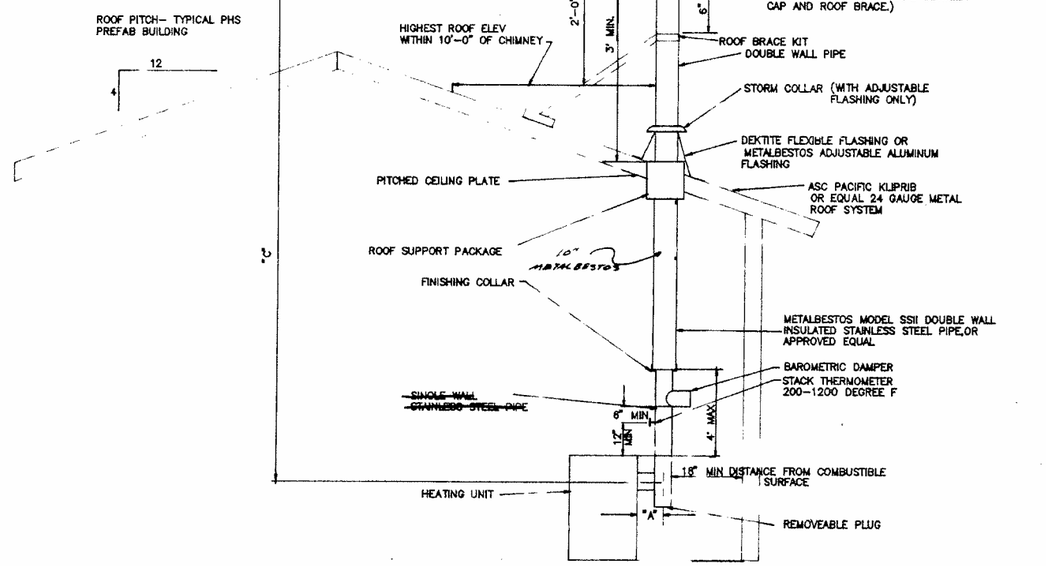
MULTIPLE HEATING UNIT (V= ITEMS COMPLETED)

NTS

1. WHEN 2 OR MORE APPLIANCES UTILIZE A COMMON EXHAUST STACK, EACH APPLIANCE INLET SHALL BE OFFSET IN SUCH A MANNER THAT NO PORTION OF ANY OUTLET IS OPPOSITE OTHER INLET .
2. WHERE 2 OR MORE APPLIANCES ARE CONNECTED INTO A COMMON EXHAUST STACK. THE STACK CROSS SECTIONAL AREA SHALL BE NOT LESS THAN THE AREA OF THE LARGEST INDIVIDUAL APPLIANCE STACK CONNECTOR PLUS 50 PERCENT OF THE AREA OF ADDITIONAL APPLIANCE STACK CONNECTORS.
3. EACH INDIVIDUAL APPLIANCE STACK SHALL HAVE THE GREATEST POSSIBLE RISE CONSISTENT WITH THE HEAD ROOM AVAILABLE BETWEEN THE BAROMETRIC DAMPER AND THE POINT OF CONNECTION TO A MANIFOLD OR COMMON CHIMNEY.
4. ALL VENT STACKS SHALL HAVE A CONTINUOUS RISE. MINIMUM ALLOWABLE RISE 1/4 INCH PER FOOT.
5. HORIZONTAL DISTANCE ("A") SHALL BE LESS THAN 75 PERCENT OF THE TOTAL VERTICAL HEIGHT OF THE CONNECTOR VENT ("B"). ANY ANGLE FROM VERTICAL GREATER THAN 45 DEGREES IS CONSIDERED HORIZONTAL. THE MINIMUM RECOMMENDED VALUE FOR "B" IS 5 FEET.
6. "TYPICAL HEATING UNIT STACK INSTALLATION" DETAIL NOTES ALSO APPLY TO THIS DETAIL

NOTE: THIS DRAWING WAS DEVELOPED AS A STANDARD DETAIL FOR AANHS SANITATION FACILITIES CONSTRUCTION PROGRAM PROJECT SPECIFIC MODIFICATIONS SHALL BE HIGHLIGHTED AND ARE THE RESPONSIBILITY OF THE PROJECT DESIGN ENGINEER.

[redacted]



TYPICAL HEATING UNIT STACK INSTALLATION

NTS (V= ITEMS COMPLETED)

NOTES:

1. OVERALL CHIMNEY HEIGHT IS BASED ON APPLIANCE DRAFT REQUIREMENTS. HOWEVER THE CHIMNEY SHOULD EXTEND AT LEAST5 FEET ABOVE THE POINT WHERE IT PASSES THROUGH THE ROOF OF THE BUILDING AND AT LEAST 2' HIGHER THAN ANY PORTION OF THE BUILDING WITHIN 10'.
2. SWITCH FROM SINGLE TO DOUBLE WALL PIPE PRIOR TO ANY WALL/CEILING PENETRATION.
3. FOR COLD ROOF PENETRATION INSTALL ISULATION SHIELD AND OFFSET CEILING SUPPORT PACKAGE IN LIEU OF ROOF SUPPORT PACKAGE.
4. WHERE A METAL CHIMNEY PASSES THROUGH A ROOF CONSTRUCTED OF COMBUSTIBLE MATERIAL, IT SHALL BE GUARDED BY A VENTILATING THIMBLE OF GALVANIZED STEEL OR APPROVED CORROSION-RESISTANT METAL EXTENDING NOT LESS THAN 9 INCHES ABOVE THE ROOF CONSTRUCTION, AND OF A SIZE TO PROVIDE NOT LESS THAN 6 INCHES CLEARANCE ON ALL SIDES OF THE CHIMNEY.
5. WHERE POSSIBLE SET APPLIANCE NEAR/AT BUILDING RIDGELINE TO MAXIMIZE LENGTH OF CHIMNEY HEATED SPACE.
6. THE RATO OF "A"/"C" SHOULD ALWAYS BE LESS THAN 0.4 WHERE "A" IS THE LENGTH OF UNINSULATED HORIZONTAL CONNECTOR. ANY ANGLE FROM VERTICAL GREATER THAN 45 DEGREES IS CONSIDERED HORIZONTAL.
7. WHEN AN 18 INCH SEPARATION BETWEEN AND A COMBUSTIBLE SURFACE CANNOT BE MET, PIPING CAN BE SET AS CLOSE AS 9-INCHES FROM A COMBUSTIBLE SURFACE WHEN SAID SURFACES ARE COVERED WITH A 22 GAUGE (0.027) STEEL SHEET SPACED OUT 1-INCH FROM COMBUSTIBLE SURFACE WITH SAID SPACERS MADE OF NON COMBUSTIBLE MATERIAL. STEEL SHEET TO BE PLACED TO ALLOW NATURAL FLOW OF CIRCULATING AIR BETWEEN THE WALL AND THE SHEET WITH SAID AIR ENTERING AT THE BOTTOM AND EXITING AT TOP OF THE SHEET. COMBUSTIBLE SURFACES TO BE COVERED, AS A MINIMUM IN ALL AREAS WITHIN 18-INCHES OF THE SINGLE WALL PIPE. SEE TABLE 5-B, UMC FOR OTHER INSTALLATION OPTIONS.

RECORD DRAWINGS

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

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

NAME DON A. MOORE DATE 6-5-92

STATE OF ALASKA 49TH DON A. MOORE No. CE 8279 REGISTERED PROFESSIONAL ENGINEER

DATE	REVISIONS	INITIALS
12-2-91	RECORD DRAWING	J.C.

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

BEAVER, ALASKA

HEATING UNIT STACK INSTALLATION
PUBLIC LAW 86-121 PROJECT
PROJECT NO.

SHEET NO. M-10 OF 17 TOTAL SHEETS

DRAWN BY: JAQ DATE 2-90 CHECKED BY: DATE:

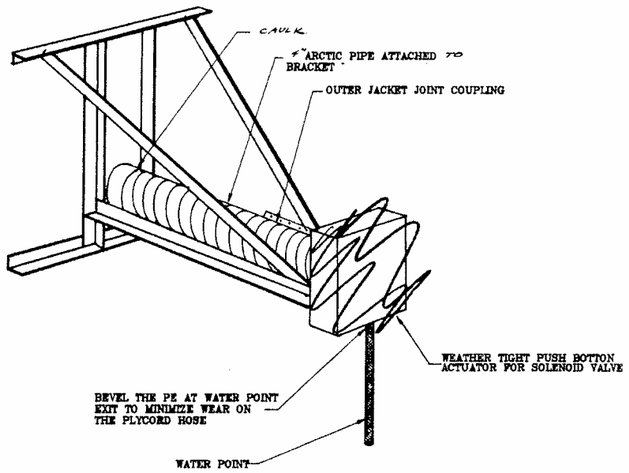
Design Engineer

Maintenance Review

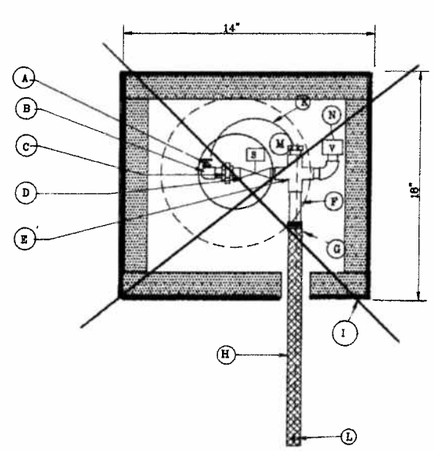
Material Take-off

STATE OF ALASKA 49TH STEVEN MARC WEAVER No. CE 7967 REGISTERED PROFESSIONAL ENGINEER

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

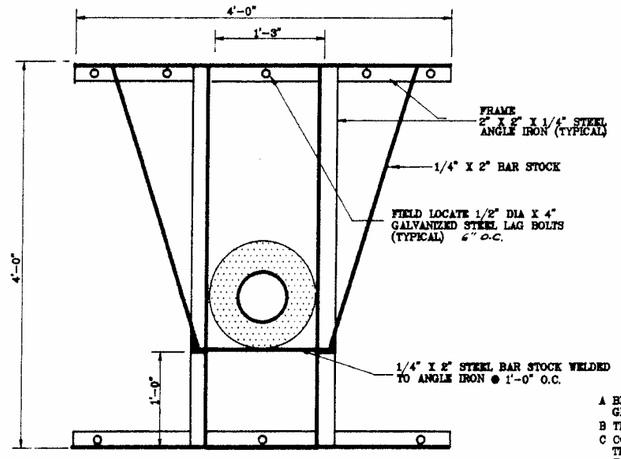


1 WATER POINT INSTALLATION DETAIL
NTS

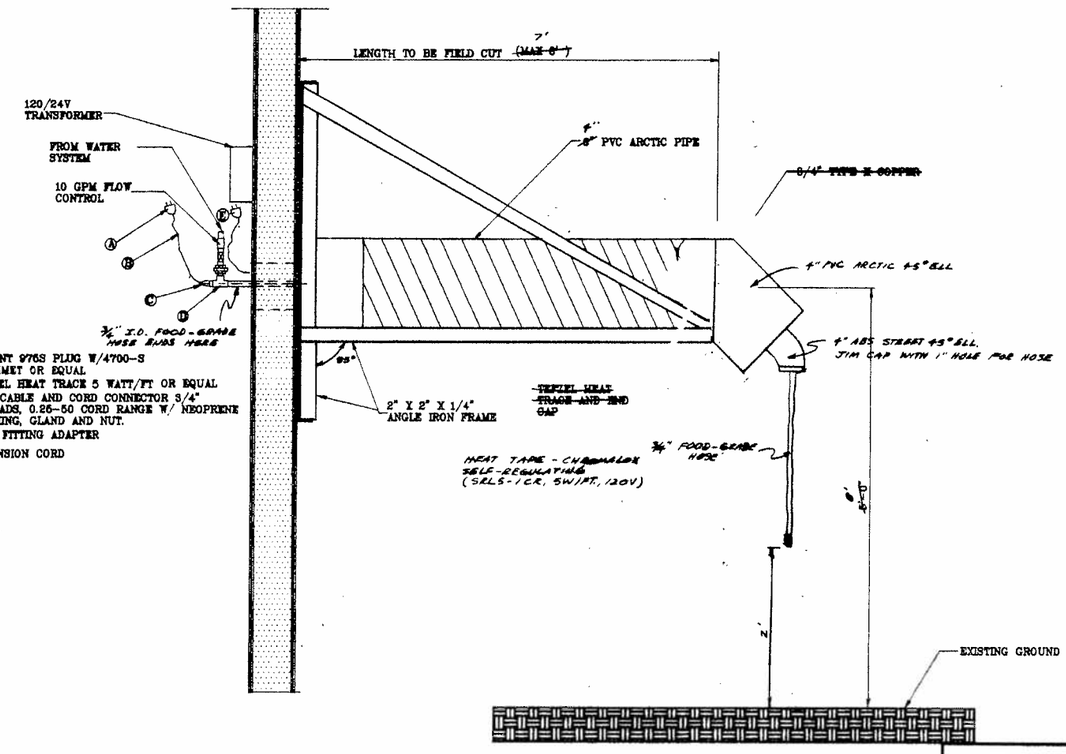


A 3/4" GATE VALVE
B 3/4" 90 DEGREE ELBOW
C 3/4" D.E. UNION
D 3/4" SOLENOID VALVE
E 3/4" CROSS
F SWEAT X MALE IPT 3/4" ADAPTER
G 3/4" SWIVEL JOINT CRIMPED TO 3/4' HOSE
H 3/4" ID PLYCORD FOOD GRADE HOSE
I WEATHER TIGHT PUSH BUTTON ACTUATOR FOR SOLENOID VALVE
K TEFZEL HEAT TRACE W/METALLIC BRAID 2.5 WATTS PER FT. WRAP AROUND FITTING AND PLUG TO THISTOCK OUTLET WITHH THERMOSTAT CONTROL AT 40 DEGREE F
L HEAT TRACE END CAP
M CGB CABLE AND CORD CONNECTOR 3/4" THREATS TO 26-50 RANGE W/NEOPERNE BUSHING GLAND AND NUT
N 3/4" VACUUM BREAKER

2 WATER POINT HEAD DETAIL
NTS



3 WATER POINT BRACKET DETAIL
NTS



A BRYANT 976S PLUG W/4700-S GROMMET OR EQUAL
B TEFZEL HEAT TRACE 5 WATT/FT OR EQUAL
C CGB CABLE AND CORD CONNECTOR 3/4" THREADS, 0.26-50 CORD RANGE W/ NEOPRIENE BUSHING, GLAND AND NUT.
D 3/4" FITTING ADAPTER
E EXTENSION CORD

4 WATER POINT SIDE VIEW
NTS

RECORD DRAWINGS

STATE OF ALASKA 49TH — REGISTERED PROFESSIONAL ENGINEER

THESE DRAWINGS REFLECT RECEIVED INFORMATION OBTAINED DURING CONSTRUCTION

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

NAME _____ DATE 6-5-98

DATE	REVISIONS	INITIALS
10-23-97	RECORD DRAWING	J.C.

Design Engineer

Maintenance Review

Material Take-off

STATE OF ALASKA 49TH — REGISTERED PROFESSIONAL ENGINEER — 15 Jun 98

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

BEAVER, ALASKA
WATERING POINT DETAILS
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

SHEET NO. M-11 OF 17 TOTAL SHEETS

DRAWN BY: JAG DATE: 9/97
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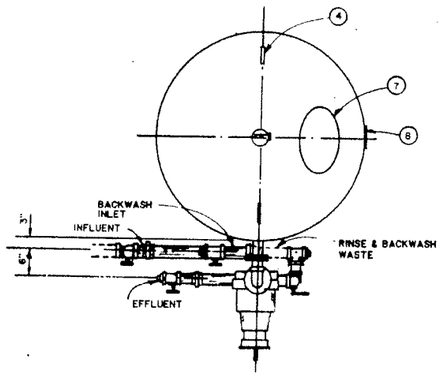
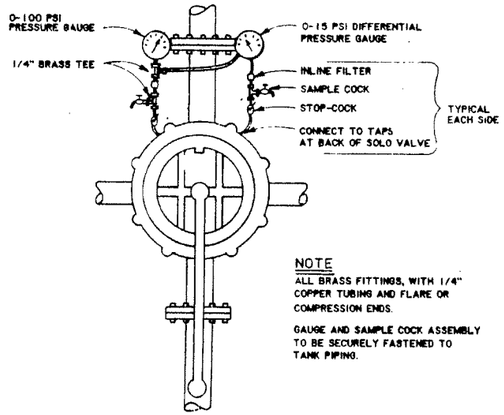
SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA

U.S. GOVERNMENT PRINTING OFFICE: 1978-746-318



PLAN VIEW
NTS



NOTE
ALL BRASS FITTINGS, WITH 1/4" COPPER TUBING AND FLARE OR COMPRESSION ENDS.

GAUGE AND SAMPLE COCK ASSEMBLY TO BE SECURELY FASTENED TO TANK PIPING.

PRESSURE GAUGE ASSEMBLY
NTS

NOTES:

A. INTERIOR SURFACES- SANDBLASTED TO "NEAR WHITE" AND COATED WITH 2-PART HIGH SOLIDS EPOXY, 2 COATS, 4-6 MIL EA., 10 MIL MINIMUM TOTAL.

B. EXTERIOR SURFACES- SANDBLASTED TO "NEAR WHITE" AND COATED WITH ONE COAT OF RUST-INHIBITIVE INORGANIC ZINC PRIMER, 2.0 MIL MINIMUM THICKNESS.

C. FRONT PIPING- SCHEDULE 40 GALVANIZED STEEL, WITH 150 PSI THREADED GALVANIZED MALLEABLE FITTINGS IN SIZES 3" AND SMALLER, AND 125 PSI FLANGES FOR 4" AND LARGER.

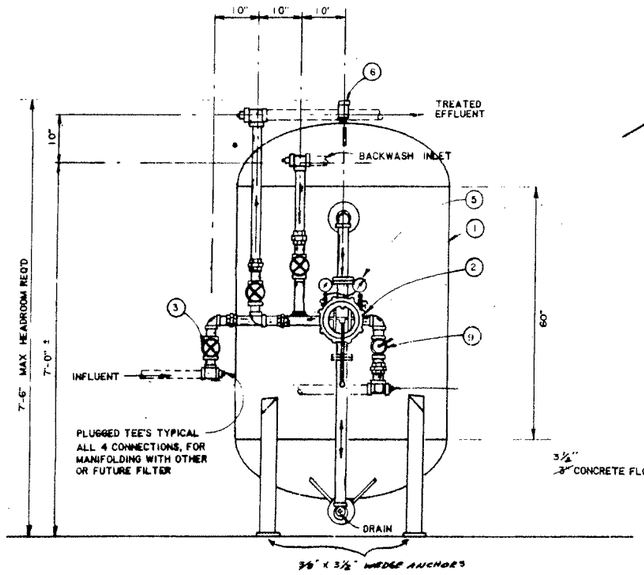
D. DASH LINE PIPING BY OTHERS.

E. SET BACKWASH RATE TO 20 GPM PER SQUARE FOOT.

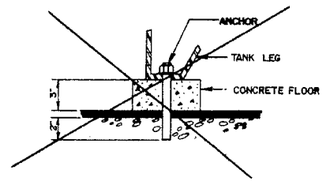
ITEM No.	DESCRIPTION
1	FILTER TANK- 100 psi ASME CODE - STAMPED
2	MULTIPORT VALVE- AQUAMATIC SOLO VALVE, PER SPECS.
3	GATE VALVE- 125 LB. BRONZE NRS, 3 EACH
4	LIFTING LUGS- 2 EACH
5	PRESSURE GAUGE/SAMPLE COCK ASSEMBLY (PER DETAILS & SPECS.)
6	AIR RELEASE VALVE, VAL-MATIC #5 OR EQUAL
7	11"X15" MANHOLE
8	4"X6" MANHOLE
9	BALLCENTRIC VALVE- BACKWASH WASTE CONTROL, 1 EACH

SUPPLY CONTRACT SCHEDULE

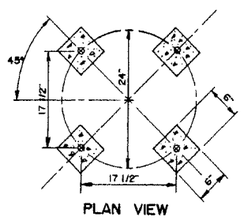
VILLAGE		BEAVER				
No. OF FILTERS		1				
FILTER DIAMETER		30"				
SIDE WALL HT.		60"				
PIPE AND VALVE SIZE		2 1/2"				
SOLO VALVE SERIES		105 DR				
TOP FILL MEDIA		B				



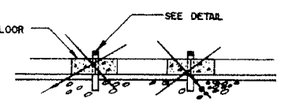
FRONT VIEW
NTS



DETAIL A



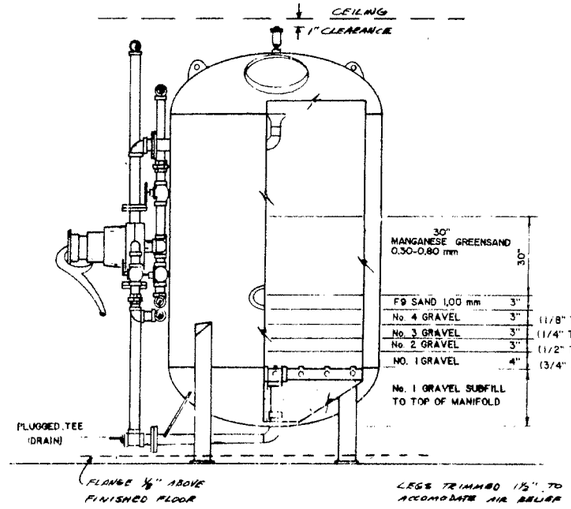
PLAN VIEW



ELEVATION - SECTION

PRESSURE FILTER SUPPORT BLOCKS

* DIMENSIONS ARE APPROXIMATE AND MAY VARY FROM TANK TO TANK.



SIDE VIEW
NTS

BACKWASH PROCEDURE
30-INCH DIAMETER GREEN SAND FILTER
WITH SERIES 105 DR AQUAMATIC SOLO VALVE.

An increase of 7 to 10 psi over the normal pressure differential across the filter would indicate the need for backwash. The differential pressure gages are located on the Solo Valve.

INITIAL START UP PROCEDURE:

1. Close effluent valve.
2. Close influent valve.
3. Rotate Solo Valve Index lever from the normal SERVICE position to the BACKWASH position.
4. Set the Waste Control Valve to closed position, and slowly open the Backwash Supply Valve.
5. Slowly open the Waste Control Valve to a flow not exceeding 30 gpm as read on the Aquamatic flow meter located on backwash inlet line. When proper flow rate is achieved, lock the Waste Control Valve with its stop ring. (Steps 4 & 5 are only required during initial plant start-up, and they can be skipped after the Waste Control Valve is set).
6. Backwash for a period of about 10 minutes. Make sure that the sewer lift station pumps are in proper working order, so that backwash water is pumped to the sewer lagoon.
7. Close the Backwash Supply Valve.
8. Rotate the solo valve index lever to Rinse position.
9. Open influent valve.
10. Slowly open Rinse Control Valve. Rinse at a rate of approximately 8 gpm for 2-3 minutes.
11. Close Rinse Control Valve. (When using treated water for backwash the rinse cycle is optional which includes steps 8, 10, and 11).
12. Rotate the Solo Valve Index Lever to SERVICE position.
13. Open effluent valve. Filter is now back in service.

REFERENCE DRAWING

RECORD DRAWINGS

STATE OF ALASKA 49TH DON A. MOORE No. CE 8279 REGISTERED PROFESSIONAL ENGINEER

THESE DRAWINGS REFLECT RECEIVED INFORMATION OBTAINED DURING CONSTRUCTION.

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

NAME

DATE 6-5-92

Design Engineer

Maintenance Review

Material Take-off

STATE OF ALASKA 49TH STEVEN WAYNE WEAVER REGISTERED PROFESSIONAL ENGINEER

DATE	REVISIONS	INITIALS
12-6-91	RECORD DRAWING	J.C.

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

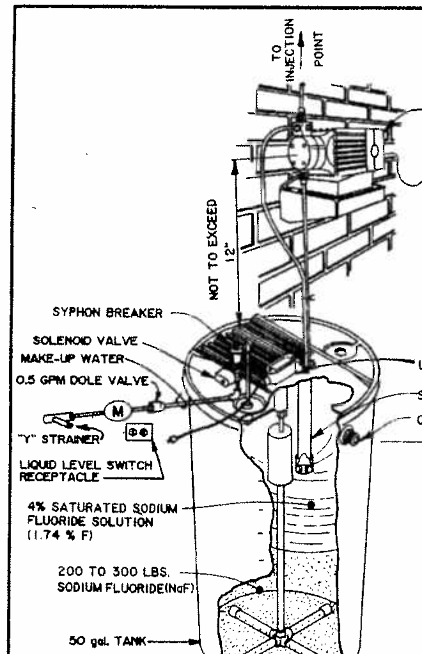
BEAVER, ALASKA
PRESSURE FILTER DETAILS
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

SHEET NO. M-12 OF 17 TOTAL SHEETS

DRAWN BY: JSP / TJM
DATE: DECEMBER, 84 / 1-90

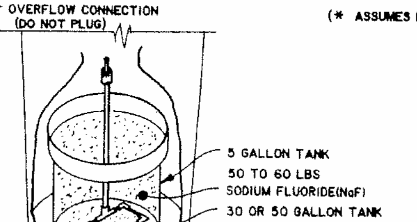
CHECKED BY:
DATE:

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



UPFLOW FLUORIDE SATURATOR

NOT TO SCALE



OPTIONAL DISTRIBUTOR ASSEMBLY

(LOW FLOW AND FILL-AND-DRAW SYSTEMS)

OPERATION NOTES

1. WATER FLOW 14 GPM
2. NATURAL FLUORIDE LEVEL 0.06 PPM
3. DESIRED FLUORIDE LEVEL, 1.5 PPM (RANGE 1.1 TO 1.7 PPM)
4. SODIUM FLUORIDE (NaF) SOLUTION 4% (1.74% F)
5. DOSAGE RATE OF SOLUTION: 9.12 ML/MIN.

FLUORIDE PUMP SELECTION

MAXIMUM CHEMICAL PUMP CAPACITY

$$\left(\frac{0.378 \times 1.5^{*} \text{ PPM} \times 14 \text{ GPM}}{1.74\% \text{ F}}\right) \times 2 = 9.12 \text{ ML/MIN}$$

WHERE: 0.378 = CONVERSION FROM GAL. TO LITERS

* 1.5 PPM = DESIRED CONCENTRATION IN WATER

14 GPM = FLOW AT INJECTION POINT

1.74%F = STRENGTH OF SATURATED NaF SOLUTION

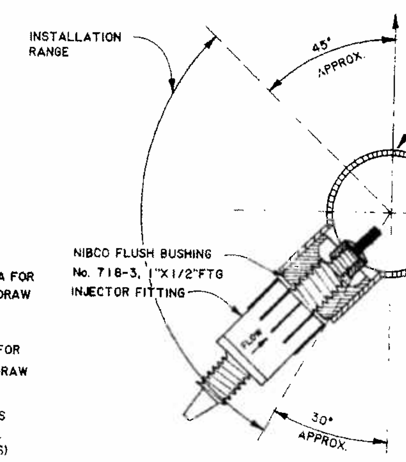
(* ASSUMES NO NATURAL F)

TYPICAL PARTS LIST

TWIST-LOCK RECEPTACLE & 3 TWIST-LOCK PLUGS
SATURATOR FEED WATER LINE, INJECTOR, FLOW SWITCH

QTY	ITEM	NOTE
4 EA	LINE SIZE X 1" TEE SWEAT	ADD 2 EA FOR FILL AND DRAW SYSTEMS
4 EA	1" X 1/2" FLUSH BUSHING, SWEAT X FIPT	
3 EA	1/2" X 3" BRASS NIPPLE	
1 EA	1/2" TEE, IPT	
3 EA	1/2" HOSE BIB	
1 EA	1/2" Y-STRAINER	
1 EA	1/2" X 3/8" BRASS BUSHING	
1 EA	3/8" X 3" BRASS NIPPLE	
1 EA	3/8" 0.5 GPM DOLE VALVE	
1 EA	3/8" MIPT X 3/8" TUBING ADAPTER, PVC (COLE-PARMER T-6385-50)	
1 EA	1/4" MIPT X 3/8" TUBING, ADAPTER, PVC (COLE-PARMER, T-6385-40)	
2 EA	1/4" MIPT X 3/8" TUBING, ELBOW, PVC (COLE-PARMER, T-6386-40)	
2 EA	1/2" G.V.	
1 EA	McDONNELL, FS 8W FLOW SWITCH	ADD 1 EA FOR FILL & DRAW
1 EA	LINE SIZE X 1 1/2", C X C X SWEAT, TEE	
1 EA	1 1/2"X1" FLUSH BUSHING, SWEAT X FIPT NIBCO 718-3	
1 EA	STATIC MIXER, CHEMINEER-KENICS 2-KME-PVC 4 (2-INCH) OR, CHEMINEER-KENICS 4-KME-PVC 2 (4-INCH)	ADD 1 EA FOR FILL AND DRAW
2 EA	LINE SIZE X 1" TEE, C X C X SWEAT	FOR NON-FLUSH BUSHING CONDITIONS (ADD 2 EA FOR FILL AND DRAW SYSTEMS)
2 EA	1"X3/4" FLUSH BUSHING, SWEAT X FIPT	
2 EA	LMI CORPORATION STOP AND NOZZLE ASSEMBLY (CAT. No. 10998, 3/4" NPT)	
1 EA	METER, MODEL C-700*	
1 EA	PUMP REPAIR KIT	

*METER SHALL BE ACCURATE ± 1% @ 1/4 GPM

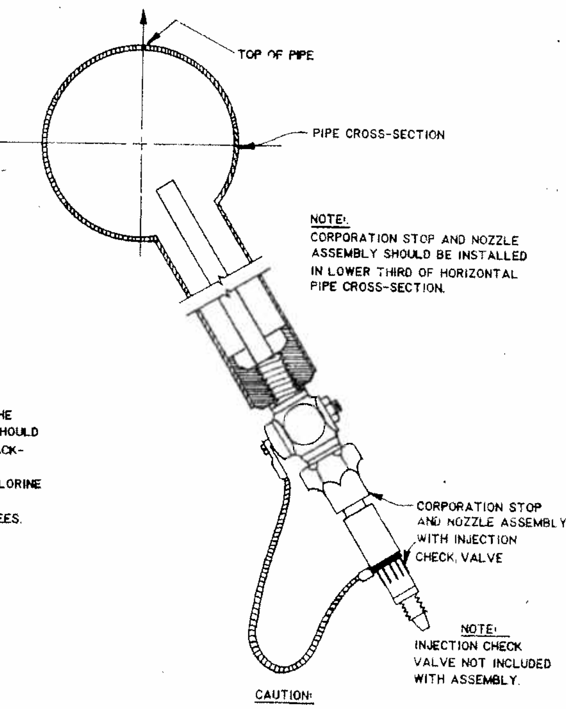


NOTES:

1. THE TYPE OF FITTING DEPENDS ON THE PUMP MFG. HOWEVER ALL FITTINGS SHOULD HAVE A BALL CHECK TO PREVENT BACK-FLOW.
2. MAINTAIN 18" OR MORE BETWEEN CHLORINE AND FLUORIDE INJECTORS.
3. STAGGER ALIGNMENT OF INJECTOR TEES.

INJECTOR INSTALLATION (FLUSH)

NOT TO SCALE



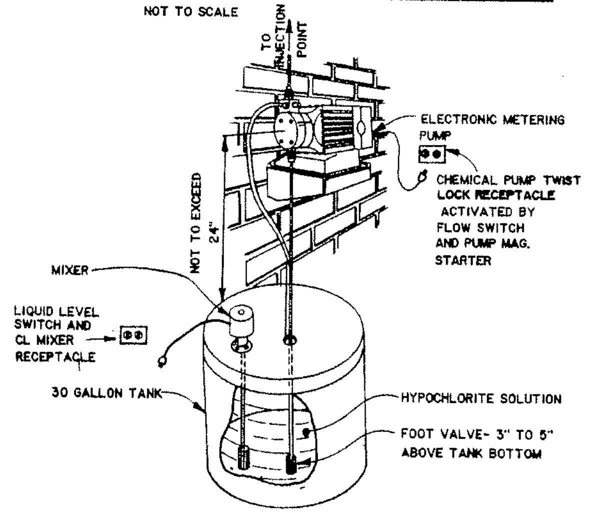
NOTE: CORPORATION STOP AND NOZZLE ASSEMBLY SHOULD BE INSTALLED IN LOWER THIRD OF HORIZONTAL PIPE CROSS-SECTION.

NOTE: INJECTION CHECK VALVE NOT INCLUDED WITH ASSEMBLY.

CAUTION: MAKE CERTAIN THAT THE COUPLING NUT IS TIGHTENED SECURELY WHEN NOZZLE ASSEMBLY IS EXTENDED INTO TREATED LINE. MAXIMUM LINE PRESSURE = 150 PSI.

INJECTOR INSTALLATION (NON-FLUSH)

NOT TO SCALE (ONLY FOR PIPE DIAMETER 4" OR GREATER)



CHLORINATION SYSTEM

NOT TO SCALE

OPERATION NOTES

1. WATER FLOW 14 GPM
2. DOSAGE RATE:
   1-3PPM WELL SOURCE
   3-5PPM RIVER OR LAKE SOURCE
3. 0.2 TO 0.4PPM FREE CHLORINE RESIDUAL
4. HYPOCHLORITE SOLUTION 1/2% (1/2 TO 2%)
5. MIXTURE
   FOR 25 GALLON SOLUTION

HTH	%/SOLUTION
1.5lbs	1/2%
3.0lbs	1% (TYP)
4.5lbs	1 1/2%
6.0lbs	2%

CHLORINE PUMP SELECTION

MAXIMUM CHEMICAL PUMP CAPACITY

$$\left(\frac{0.378 \times \text{DOSAGE RATE, PPM} \times 14 \text{ GPM}}{1/2\% \text{ SOLUTION}}\right) \times 2 = 21.20 \text{ ML/MIN}$$

WHERE: 0.378 = CONVERSION GAL. TO LITERS

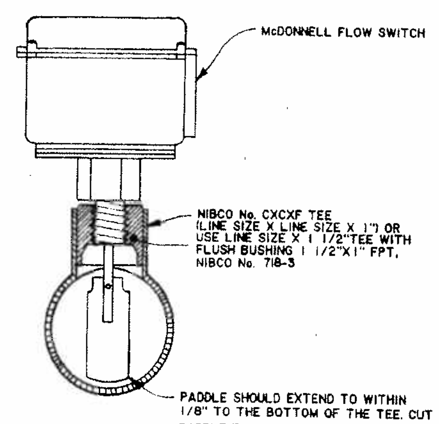
DOSAGE RATE = FREE RESIDUAL DESIRED & CHLORINE DEMAND

14 GPM = FLOW AT INJECTION POINT

% SOLUTION = STRENGTH OF CHLORINE SOLUTION

SOLDERING NOTES:

1. ALWAYS SOLDER THE BUSHING IN THE TEE BEFORE SOLDERING THE TEE INTO THE LINE.
2. IF POSSIBLE, SCREW FLOW SWITCH INTO BUSHING AND MEASURE AND CUT PADDLE TO LENGTH, BEFORE SOLDERING TEE INTO THE LINE. REMOVE THE FLOW SWITCH BEFORE SOLDERING.



STANDARD FLOW SWITCH INSTALLATION

NOT TO SCALE

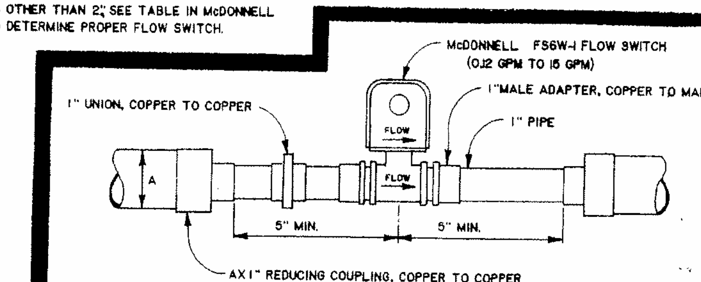
STANDARD FLOW SWITCH SELECTION

MODEL	PIPE SIZE	FLOW RANGE
FS 8W	2"	15 TO 60 GPM
FS 7-4W	2"	9 GPM
FS 7-4W	1½"	6 GPM
FS 7-4W	1¼"	5 GPM
[redacted]		

NOTE: THREADED 1¼" N.P.T. (FS 7-4W)

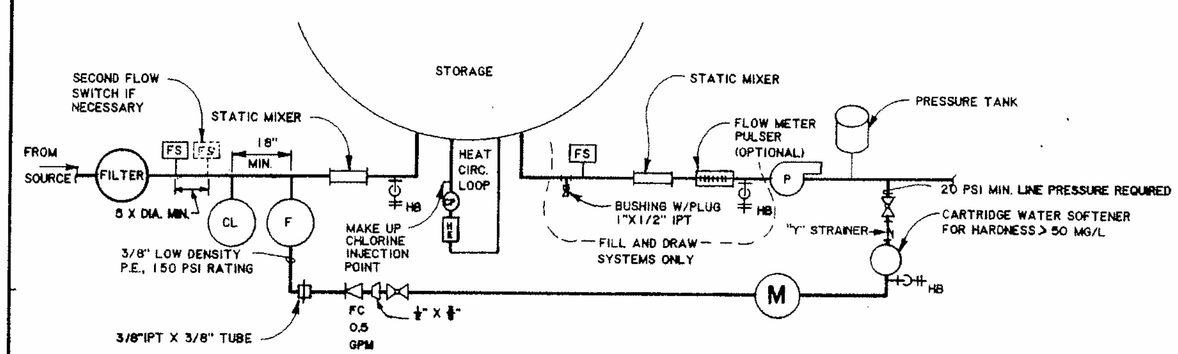
NOTES:

1. IF FLOW IS LESS THAN 15GPM, SEE DETAIL DRAWING FOR LOW FLOW SWITCH.
2. IF PIPE SIZE IS OTHER THAN 2", SEE TABLE IN McDONNELL CATALOGUE TO DETERMINE PROPER FLOW SWITCH.



FLOW SWITCH FOR LOW FLOWS

NOT TO SCALE



TYPICAL SYSTEM

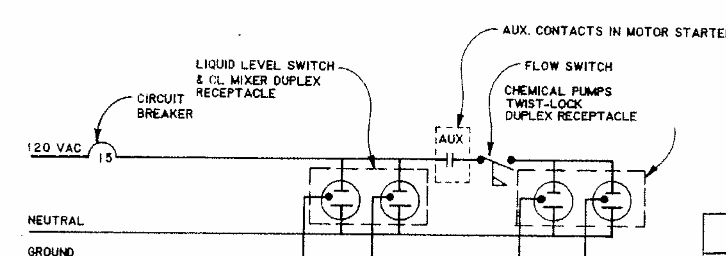
NOT TO SCALE

NOTES:

1. THE 0.5 GPM FLOW CONTROL VALVE DOES NOT COME WITH THE SATURATOR. THIS SHOULD BE INSTALLED TO MAINTAIN A SLOW UPFLOW MOVEMENT THROUGH THE NaF IN ORDER TO DEVELOP A SATURATED SOLUTION.
2. THE CARTRIDGE TYPE SOFTENER IS REQ'D. IF HARDNESS IS GREATER THAN 75PPM. USE Mac GUARD WATER SOFTENER, MODEL 30H OR EQUAL. AVAILABLE AT MacDONALD & FILS, 5608 CHARLEMAGNE, MONTREAL H1X2H9, CANADA (514)374-0450 CCRC, RFD # 3, SALMON RIVER RD., PLATTSBURGH, N.Y. 12901

VARIABLE FLOW SYSTEMS

1. VARIABLE FLOW SYSTEMS REQUIRE THE USE OF PROPORTIONAL FLOW MEASUREMENT DEVICES LIKE THE LMI FLOW-METER PULSER UNIT & CHEMICAL PUMPS WITH EXTERNAL CONTROL CAPABILITY.



FLOW SWITCH ELECTRICAL

NOT TO SCALE

NOTES:

1. LIQUID LEVEL SWITCH AND CHLORINE MIXER DUPLEX RECEPTACLE SHALL BE SEPARATE FROM DUPLEX RECEPTACLE FOR CHEMICAL PUMPS.
2. IF MOTOR STARTER FOR WATER SOURCE PUMP IS IN THE PUMPHOUSE, ROUTE CIRCUIT THROUGH AUX. CONTACTS AS SHOWN. IF NOT, ANALIZE THE SYSTEM HYDRAULICS TO DETERMINE IF TWO FLOW SWITCHES OR PRESSURE SWITCH, WIRED IN SERIES, CAN BE USED.

RECORD DRAWINGS

STATE OF ALASKA 49TH

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

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

NAME / DATE 6-5-92

Design Engineer

Maintenance Review

Material Take-off

STATE OF ALASKA 49TH REGISTERED PROFESSIONAL ENGINEER

DATE	REVISIONS	INITIALS
12-9-91	RECORD DRAWING	J.C.
4-89	UP DATED	JG/pml
9-86	UP DATED	

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

BEAVER, ALASKA

FLUORIDATION & CHLORINATION SYSTEMS

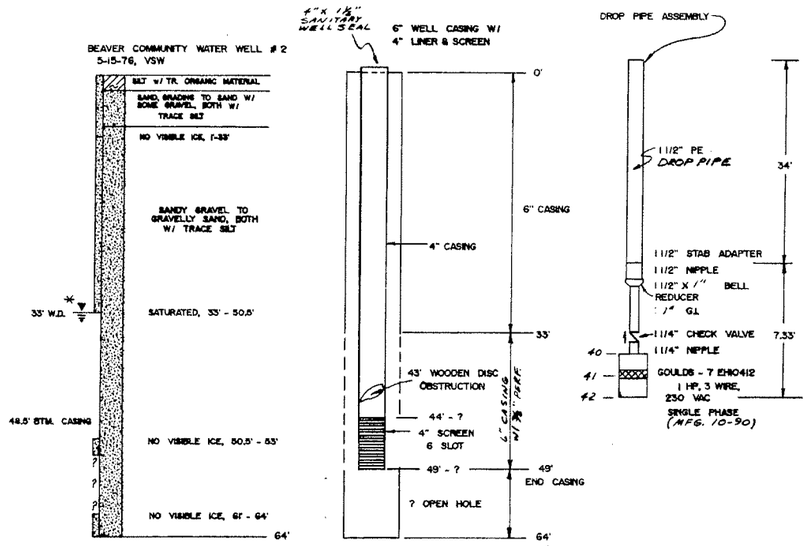
PUBLIC LAW 86-121 PROJECT

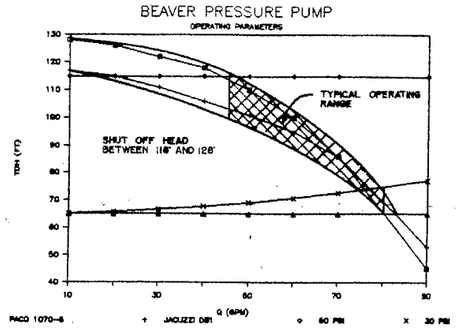
PROJECT NO.

SHEET NO. M-13 OF 17 TOTAL SHEETS

DRAWN BY: J. PARKER
DATE:
CHECKED BY:
DATE:

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

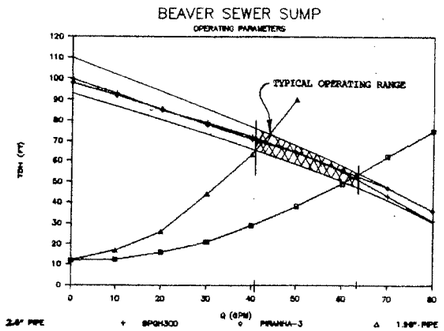




THE ENTIRE PUMP CURVE SHALL FALL WITHIN THE ENVELOPE AS SHOWN WHEN RATED AT ACTUAL PUMP SPEED. PEAK EFFICIENCY SHALL BE A MINIMUM OF 46% AND FALL BETWEEN 45 AND 90 GPM.

THE PUMP SHALL BE EQUAL TO:

1. [illegible]
2. JACUZZI D81, 5-11/16" IMPELLER, 3 HP, 3500 RPM, 208 V, 3 PHASE



THE ENTIRE PUMP CURVE SHALL FALL WITHIN THE ENVELOPE AS SHOWN WHEN RATED AT ACTUAL PUMP SPEED.

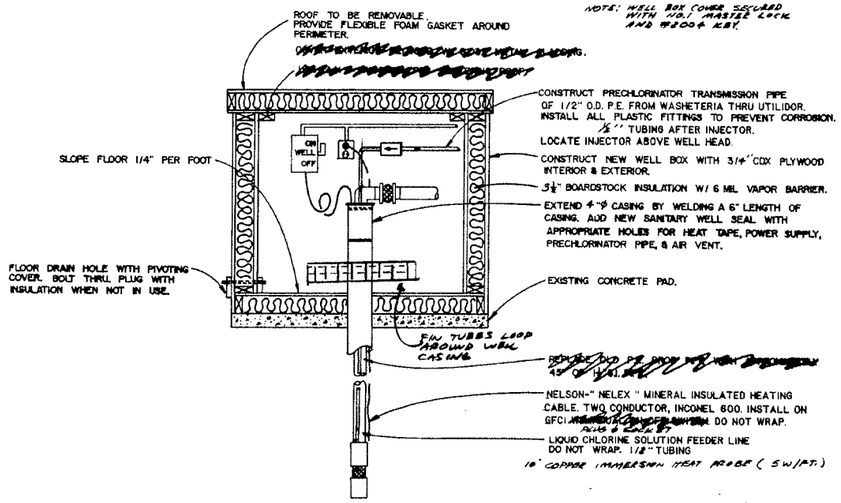
THE PUMP SHALL BE EQUAL TO:

1. HYDROMATIC SPGH300, 5.25" IMPELLER, 3 HP, 3450 RPM, 208 V, 3 PHASE
2. [illegible]

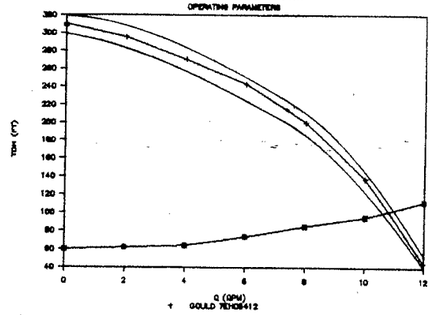
(SEE SECTION: "QUESTION THE MOTOR VOLTAGE")

WATER QUALITY

PARAMETER	7/14/89 MG/L	DATE SAMPLED 5/3/89 MG/L	10/21/88 MG/L	8/18/88 MG/L
IRON	2.900	8.670	11.000	1.030
MANGANESE	0.483	0.942	0.540	0.220
ODOR (TON)	35	4	17	
SODIUM	5.610	3.100	6.400	
SULFATE	24.000	22.000		
CORROSIVITY (LANGELIER)	-0.12	NONCORR.		
CALCIUM AS CaCO3	276.000	310.000		
HARDNESS AS CaCO3	330.000			308.000
ALKALINITY AS CaCO3	298.000	280.000		
TOTAL DISSOLVED SOLIDS	339.000	276.000		
CONDUCTIVITY	-	-		
pH @ C	7@16.8 C	6.7@17.6 C		



WELL BOX (PROPOSED)
NTS



THE ENTIRE PUMP CURVE SHALL FALL WITHIN THE ENVELOPE AS SHOWN WHEN RATED AT ACTUAL PUMP SPEED.

THE PUMP SHALL BE EQUAL TO:

1. GOULDS 7EH05411, 11 STAGE, 1/2 HP, 208 V, 1 PHASE (SPARE)
2. CURRENT PUMP IS 1/2 HP.

RECORD DRAWINGS

STATE OF ALASKA 49TH

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

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

NAME DON A. [illegible]

DATE 6-5-92

DATE	REVISIONS	INITIALS
12-6-91	RECORD DRAWING	J.C.

Design Engineer

Maintenance Review

Material Take-off

STATE OF ALASKA 49TH REGISTERED PROFESSIONAL ENGINEER

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

BEAVER, ALASKA

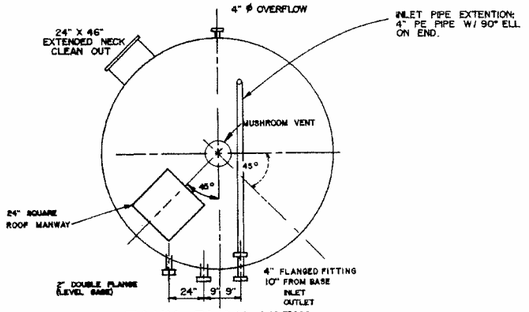
PUMP CURVE & WELL LOG
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

SHEET NO. M-14 OF 17 TOTAL SHEETS

DRAWN BY: TJM DATE: 2-90

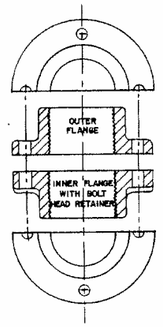
CHECKED BY: DATE:

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



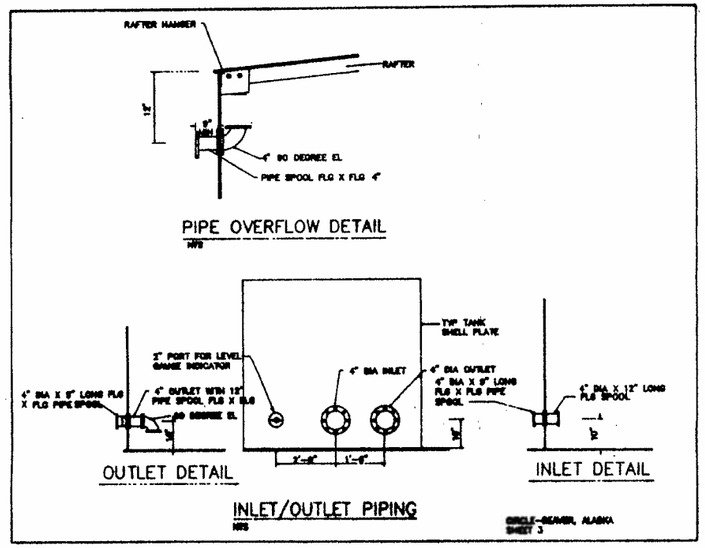
TANK-PLAN VIEW

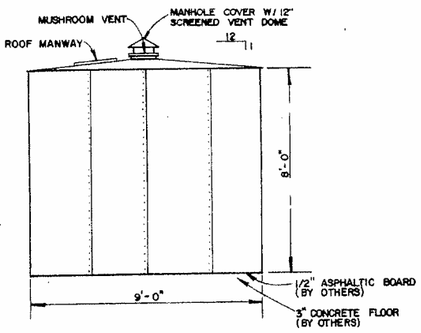
SCALE: 3/8" = 1'-0"



BOLTED PIPING FLANGE

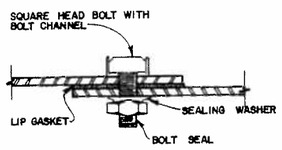
NTS





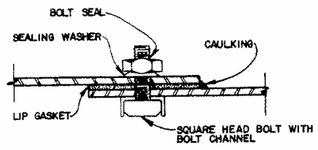
BOLTED STEEL TANK

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



VERTICAL SEAM DETAIL

NTS



BOTTOM SEAM DETAIL

NTS

RECORD DRAWINGS

STATE OF ALASKA 49TH
DON A. MOORE No. CE 8270 REGISTERED PROFESSIONAL ENGINEER

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

NAME

DATE 6-5-92

DATE	REVISIONS	INITIALS
12-9-91	RECORD DRAWING	J.C.

Design Engineer

Maintenance Review

Material Take-off

STATE OF ALASKA 49TH

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

BEAVER, ALASKA

WATER STORAGE TANK
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

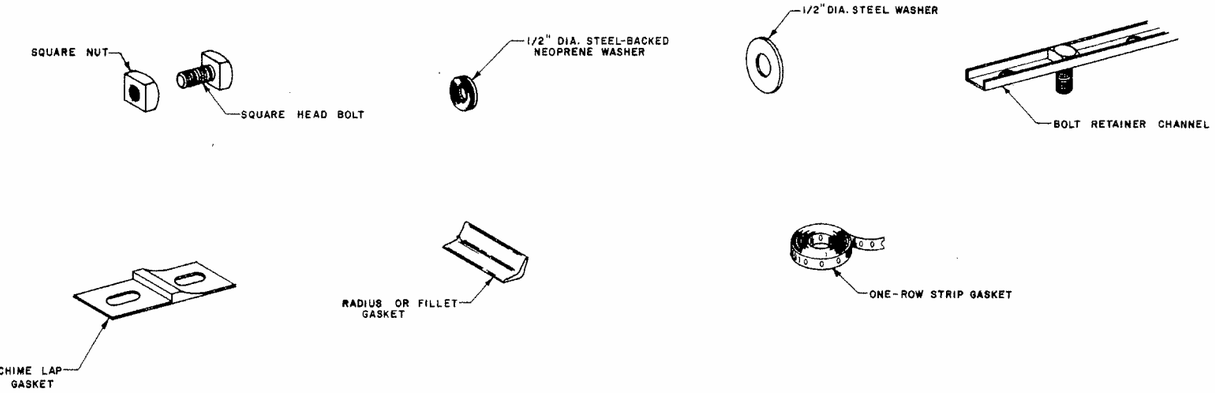
SHEET NO. M-15
OF 17
TOTAL SHEETS

DRAWN BY: TJM
DATE: 2-90

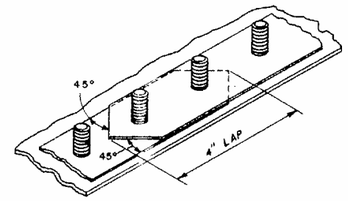
CHECKED BY:
DATE:

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

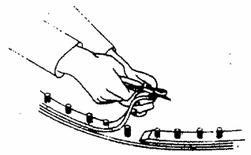
U.S. GOVERNMENT PRINTING OFFICE 1979—281 71



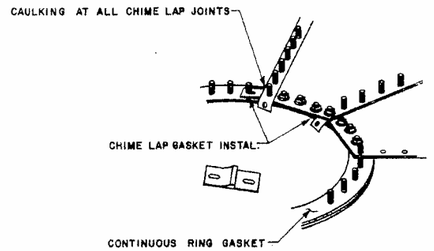
BOLTS & GASKETS

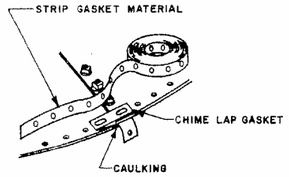


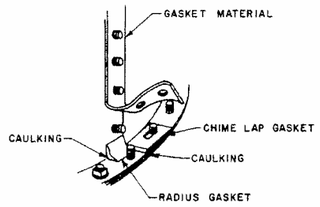
PACKING SPLICE



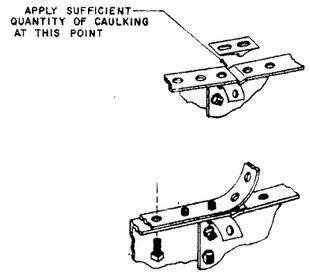
TYPICAL SPLICE







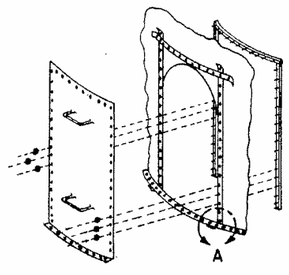
GASKET PLACEMENT- BOTTOM ASSEMBLY

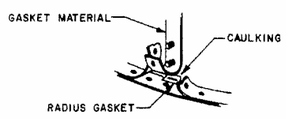


GASKET PLACEMENT- TOP STAVE

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





DETAIL A

GASKET PLACEMENT- CLEANOUT

RECORD DRAWINGS

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

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

NAME Scott A. Moore

DATE 6-5-92

DATE	REVISIONS	INITIALS
12-8-81	RECORD DRAWINGS	J.C.

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

BEAVER, ALASKA
DETAILS- BOLTED STEEL TANK
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

SHEET NO. M-16 OF 17 TOTAL SHEETS

DRAWN BY: TD
DATE: DEC. 1981

CHECKED BY:
DATE:

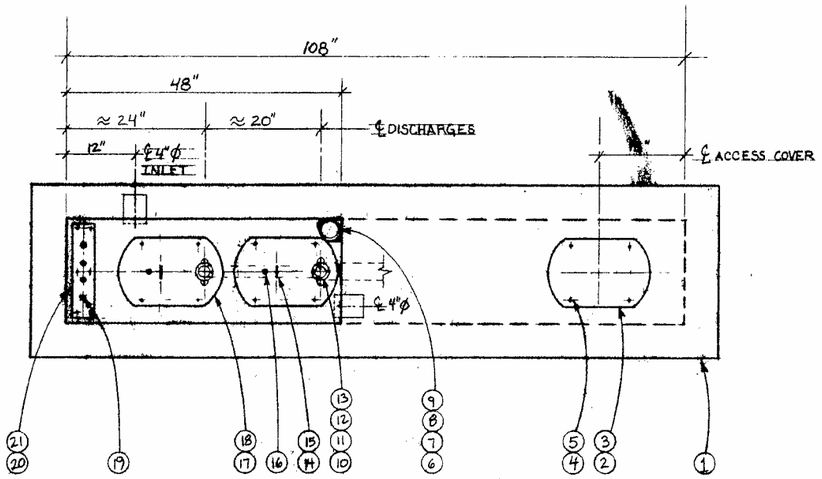
SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA

Design Engineer

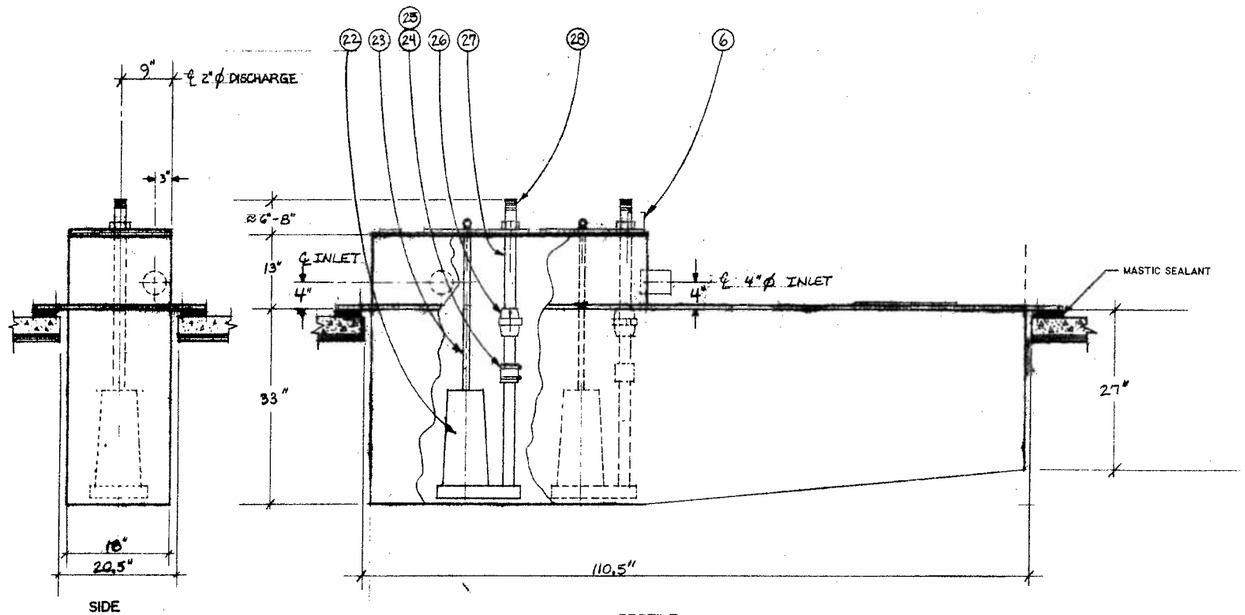
Maintenance Review

Material Take-off

BEAVER WATER & SEWER
M-17



PLAN



SIDE

PROFILE

ITEM NO.	QTY EACH	DESCRIPTION	ITEM SIZE OR DWG. NO.
1	1	CUSTOM TANK	DIMENSION PER THIS SHEET
2	1	ACCESS COVER	SAME SIZE AS PUMP COVERS
3	1	GASKET - ACCESS COVER	
4		HEX HEAD BOLT	3/8" x 1 1/2", SS SERIES 300
5		FLAT WASHER	3/8" NOMINAL
6	1	VENT FLANGE	3" DIA.
7	1	VENT GASKET	3" DIA.
8	2	HEX HEAD BOLT	1/2" x 2", SS
9	2	FLAT WASHER	1/2" NOMINAL
10	1	DISCHARGE FLANGE	2" DIA. NOMINAL
11	1	DISCHARGE GASKET	2" DIA. NOMINAL
12	2	HEX HEAD BOLT	1/2" x 2", SS SERIES 300
13	2	FLAT WASHER	1/2" NOMINAL
14	2	EYE BOLT	1/2"
15	2	LOCK NUT	1/2"
16	2	POWER CORD GRIP	3/4" DIA.
17	2	PUMP COVER	SHOP STD. OR APPROX. 12" x 18" x 1/4"
18	2	GASKET - PUMP COVER	
19	4	CONTROL CORD GRIP	1/2" DIA.
20	1	FLOAT COVER	
21	1	GASKET - FLOAT COVER	
22	2	SUBMERSIBLE GRINDER PUMP	HYDROMATIC SPBH300 OR EQUAL
23	2	SUSPENSION ASSEMBLY	
24	2	RUBBER SLEEVE	2" x 6"
25	4	HOSE CLAMP	3", SS
26	2	CHECK VALVE	2" DIA.
27	2	PLUMBING	2" DIA. NOMINAL, GI
28	2	MALE NPT	2" DIA. NOMINAL, GI

NOTES:

1. THE LIFT STATION SHOULD BE TEST FITTED INTO THE FLOOR PRIOR TO POURING THE 3 - INCH CONCRETE SLAB TO HELP ENSURE A PROPER FIT.
2. THE LIFT STATION SHALL BE ENCLOSED WITHIN AN INSULATED SHELL CONSISTING 6 - INCHES OF BOARD STOCK INSULATION. THE INSULATED SHELL SHALL BE CONSTRUCTED IN THE BELLY PAN OF THE BUILDING PRIOR TO FINAL INSTALLATION OF THE LIFT STATION.
3. THE LIFT STATION SUPPORT RIM SHALL BE SEALED WITH A MASTIC STRIP.

RECORD DRAWINGS

STATE OF ALASKA 49TH — CON A. MOORE No. CE 8279 — REGISTERED PROFESSIONAL ENGINEER

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

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

NAME _____ DATE 6-5-91

DATE	REVISIONS	INITIALS
12-3-91	RECORD DRAWING	JC

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

BEAVER, ALASKA
WASHETERIA LIFT STATION
PUBLIC LAW 86-121 PROJECT
PROJECT NO.

SHEET NO. M-17 OF 17 TOTAL SHEETS

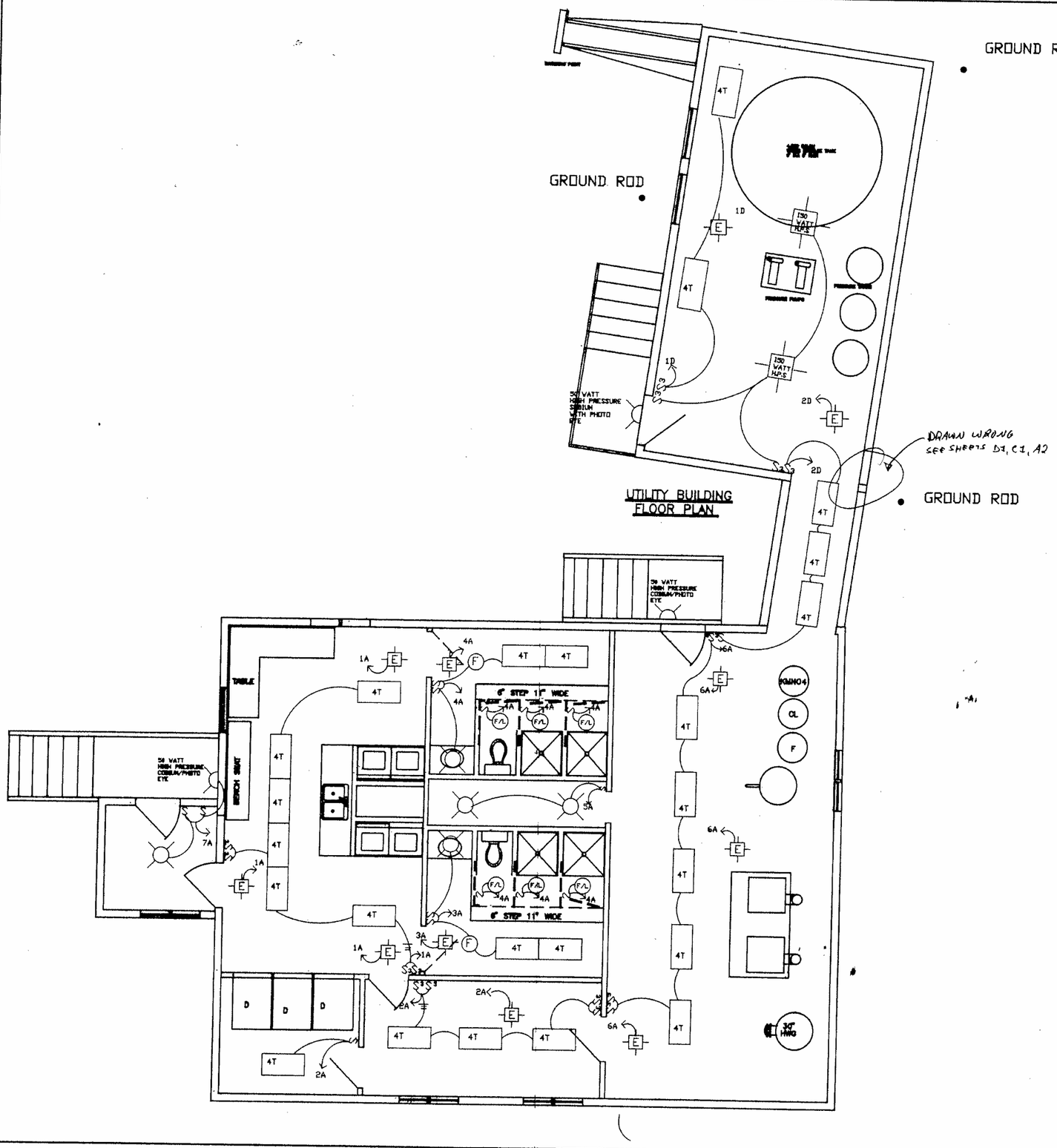
DRAWN BY: BJD DATE: 4-90 CHECKED BY: DATE:

Design Engineer
Maintenance Review
Material Take-off

STATE OF ALASKA 49TH — CHAS. L. MCKINNEY — REGISTERED PROFESSIONAL ENGINEER

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

WATER & SEWER



EMERGENCY LIGHTING-BATTERY OPERATED-1.5 HOURS

4T — FOUR TUBE FLUORESCENT FIXTURE

THREE WAY 115 VOLT LIGHT SWITCH (PILOT LIGHT ON IN OFF POSITION)

SINGLE POLE LIGHT SWITCH (PILOT LIGHT ON IN OFF POSITION)

CIRCUIT DESIGNATION

50 WATT HIGH PRESSURE SODIUM LIGHT FIXTURE WITH PHOTO EYE

200 WATT VAPOR PROOF LIGHT FIXTURE

F/L — FAN/LIGHT COMBINATION FIXTURE

RECORD DRAWINGS

STATE OF ALASKA 49TH

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NAME _____ DATE 6-5-91

DATE	REVISIONS	INIT
10/2/90	AS-BUILT	TB

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

BEAVER
LIGHTING

PUBLIC LAW 86-121 PROJECT
PROJECT NO. 89-996

SHEET NO. E-1 OF 10 SHEETS

DRAWN BY: BDHATCH DATE: 3/25/90

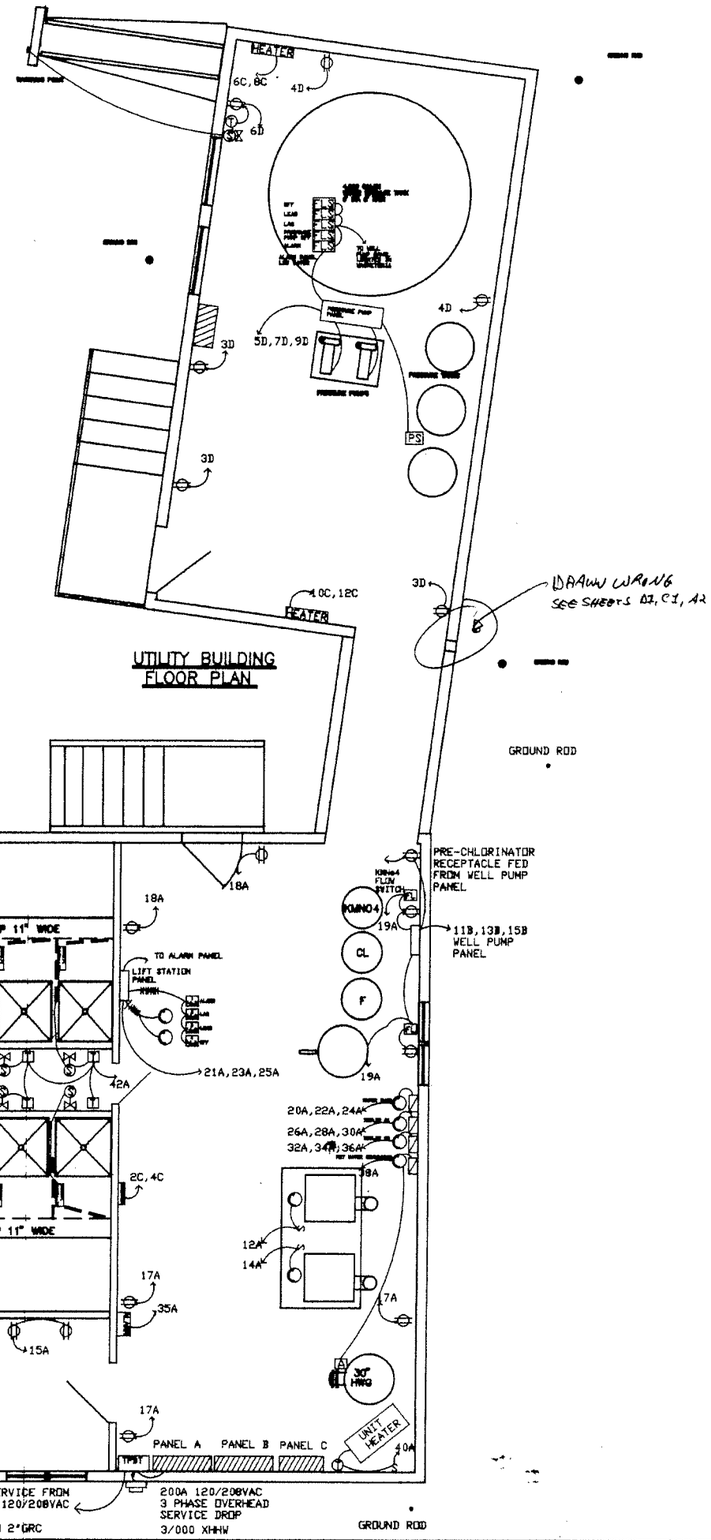
CHECKED BY: _____ DATE: _____

Design Engineer

Maintenance Review

Materials Technician

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



FLS WATER TANK FLOAT CONTROL (NORMALLY CLOSED)
TOP FLOAT-PUMP OFF TANK FULL

FLS WATER TANK FLOAT CONTROL (NORMALLY CLOSED)
SECOND FLOAT FROM TOP-LEAD WELL PUMP ON

FLS WATER TANK FLOAT CONTROL (NORMALLY CLOSED)
THIRD FLOAT FROM TOP-(FUTURE LAG PUMP ON)

FLS WATER TANK FLOAT CONTROL (NORMALLY CLOSED)
FORTH FLOAT FROM TOP-TANK 3/4 EMPTY

FLS WATER TANK FLOAT CONTROL (NORMALLY OPEN)
FIFTH FLOAT FROM TOP-TANK EMPTY-PRESSURE PUMPS OFF

120 VAC DUPLEX GENERAL PURPOSE RECEPTACLE-SPEC. GRADE

PS 120/24 VAC STEP DOWN TRANSFORMER

SK 24 VAC SOLENOID VALVE-NORMALLY CLOSED

CIRCUIT BREAKER PANEL-DISTRIBUTION CENTER

TPST TRIPLE POLE-DOUBLE POLE SAFETY DISCONNECT-NON FUSIBLE

SERVICE ENTRANCE METER COMBO-200A, 3 PHASE, 208 VAC

NON-MAGNETIC MOTOR STARTER

A.C. MOTOR

24 VAC COIN BOX

GROUND ROD 5/8"x8'

PS PRESSURE SWITCH

FS FLOW SWITCH

A AQUASTAT TEMPERATURE CONTROLLER

T THERMOSTAT (HONEYWELL AIR TEMP)

RECORD DRAWINGS

STATE OF ALASKA 49TH

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

NAME DAVID A. MOORE No CE 7079 REGISTERED PROFESSIONAL ENGINEER

DATE 6-5-92

DATE	REVISIONS	INIT
10/2/92	AS-BUILT	TH

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

BEAVER
MECHANICAL-120/208VAC
PUBLIC LAW 86-121 PROJECT
PROJECT NO. 89-996

SHEET NO. E-2 OF 10 SHEETS

DRAWN BY: BDHATCH DATE: 3/25/90

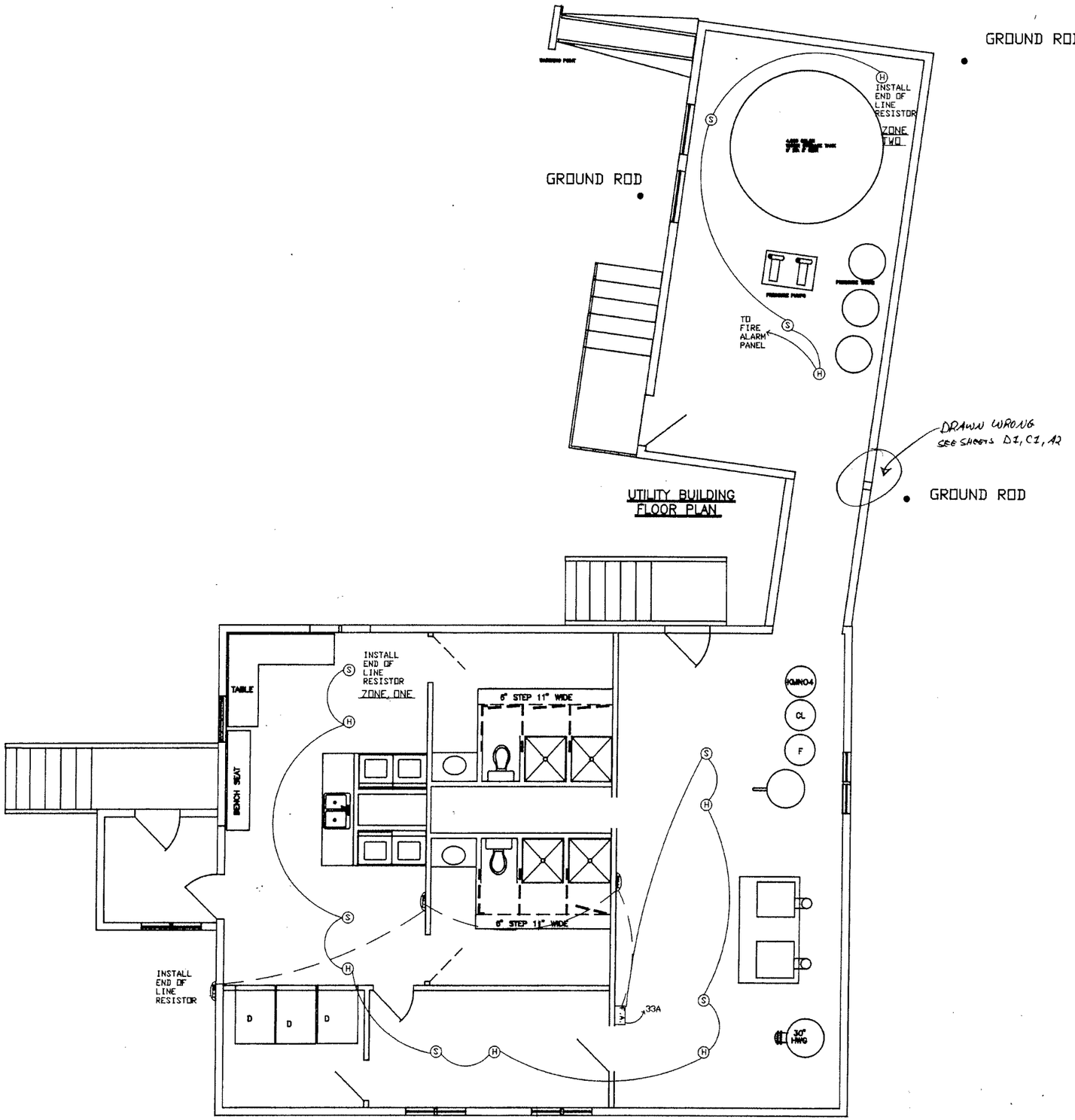
CHECKED BY: DATE:

Design Engineer

Maintenance Review

Material Take-off

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



Ⓢ SMOKE DETECTOR

Ⓗ HEAT DETECTOR-200 DEG.F.

24 VAC FIRE ALARM PANEL
TWO ZONE

24 VDC FIRE ALARM BELL

RECORD DRAWINGS

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NAME _____ DATE 6-5-92

DATE	REVISIONS	INIT
10/2/92	AS-BUILT	TB

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

BEAVER
FIRE ALARM CIRCUITS

PUBLIC LAW 86-121 PROJECT
PROJECT NO. 89-996

SHEET NO. E-3 OF 10 SHEETS

DRAWN BY: BOHAICH DATE: 3/25/90
CHECKED BY: DATE:

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

Design Engineer

Mechanical Review

Material Take-off

PANEL A

		L1 A	L2 B	L3 C		L1 A	L2 B	L3 C			
LIGHTS, WASHETERIA	15	1	1.33			.95			2	15	LIGHTS, HALL
LIGHTS, BATHROOM	15	3		.68			.68		4	15	LIGHTS, BATHROOM
LIGHTS, PLUMBING WALL	15	5			.4			1.14	6	15	LIGHTS, MECH. ROOM
LIGHTS, OUTSIDE	15	7	.56			.36			8	20	RECEPTACLE-WASHETERIA
BATHROOM, RECEPTACLE	20	9		.18			.36		10	20	RECEPTACLE-WASHETERIA
BATHROOM, RECEPTACLE	20	11			.28			.18	12	15	BOILER #1
DRYER RM RECEPTACLE	20	13	.36			1.04			14	15	BOILER #2
WORK BENCH RECEPTACLE	20	15		.36			1.04		16	20	RECEPTACLE, DESK
RECEPTACLES, MECH. RM	20	17			.36			.36	18	20	RECEPTACLE, MECH RM
RECEPTACLES, CHEMICAL	20	19	1.4			.36			20		DRYER
LIFT		21		6.9			1.4		22		CIRCULATING
STATION		23			6.9			1.4	24	15	PUMP
PANEL	40	25	6.9			1.4			26		BOILER #1
UTILITY		27		28			1.4		28		CIRCULATING
BUILDING		29			28			1.4	30	15	PUMP
SERVICE	100	31	28			1.4			32		BOILER #2
FIRE ALARM PANEL	15	33		.2			1.4		34		CIRCULATING
BUILDING ALARM PANEL	15	35			.2			1.4	36	15	PUMP
PANEL		37	28			1.4			38	15	H.W.G. CIRC. PUMP
B		39		28			.69		40	15	UNIT HEATERS
	100	41			1.4			.4	42	15	SOLENOIDS, SHOWERS

PANEL B

		L1 A	L2 B	L3 C		L1 A	L2 B	L3 C			
DRYER		1	.83			.83			2		DRYER
#1	15	3		.83			.83		4	15	#2
DRYER		5			.83			1.4	6	20	WASHER #1
#3	15	7	.83			1.4			8	20	WASHER #2
WATERING POINT	20	9		1.4			1.4		10	20	WASHER #3
		11						1.4	12	20	WASHER #4
		13							14		
		15							16		
		17							18		
		19							20		
		21							22		
		23							24		

PANEL C

		L1 A	L2 B	L3 C		L1 A	L2 B	L3 C			
HEATER		1	3.12			3.12			2		HEATER
#1	20	3		3.12			3.12		4	20	#2
HEATER		5			3.12			3.12	6		HEATER
#3	20	7	3.12			3.12			8	20	#4
HEATER		9		3.12			3.12		10		HEATER
#5	20	11			3.12			3.12	12	20	#6
		13							14		
		15							16		
		17							18		
		19							20		
		21							22		
		23							24		

PANEL D

		L1 A	L2 B	L3 C			
MAIN LIGHTNING	15	1	1.2		2	15	OUTSIDE LIGHTS
RECEPTACLES	20	3		1.4	4	20	RECEPTACLE
PRESSURE		5			8.3	6	20	WATERING POINT
PUMP		7	6.9			8		
PANEL	40	9		6.9		10		
AREA.		11				12		
		13				14		
		15				16		
		17				18		
		19				20		
		21				22		
		23				24		
		25				26		
		27				28		
		29				30		

1. ALL ELECTRICAL INSTALLATIONS TO BE INSTALLED IN ACCORDANCE WITH 1990 NEC SPECIFICATIONS.
2. CLEAR AREA REQUIRED FOR ALL ELECTRICAL PANELS:
   36" FROM FACE OC PANEL
   75" FROM FLOOR UP TO FIRST OBSTRUCTION
   15" CLEAR EACH SIDE FROM CENTER LINE OF PANEL
3. ALL CIRCUIT INSTALLATIONS WILL BE INSTALLED IN GALVANIZED E.M.T. CONDUIT WITH THE EXCEPTION - MOTORS, FANS AND BOILERS - SEALTIGHT WITH FLEXIBLE METAL CORE WILL BE USED.
4. ALL CIRCUITS WILL BE GROUNDED TO THE CONDUIT PLUS A SEPARATE GROUNDING WIRE WILL BE INSTALLED (GREEN).
5. CIRCUITS TO BE GFCI DESIGNATED - BATHROOMS (LIGHTING AND RECEPTACLES), RECEPTACLES IN WATER STORAGE TANK ROOM, AND GENERAL PURPOSE RECEPTACLES IN AREA SUBJECT TO MINOR FLOODING (BOILER ROOMS, PLUMBING WALLS, ETC.).
6. MINIMUM OF FOUR GROUND RODS TO BE INSTALLED, ONE IN EACH CORNER OF BUILDING TO FORM A SCREEN GRID. #6 BARE SOLID COPPER WIRE WILL BE USED FOR BONDING FROM GROUND RODS TO LOAD CENTERS. IN AREAS WERE SALT WATER IS CONCENTRATED OR A HIGH SALT-SILT SOIL IS EVIDENT GROUND WIRE BONDING TO GROUND RODS WILL BE MADE WITH CAD WELL FUSION AS PRIMARY CHOICE OR SILVER SOLDER AS SECONDARY CHOICE.
7. ALL ELECTRICAL INSTALLATIONS SHALL BE INSTALLED BY LICENSED ELECTRICIAN. IN THE CASE WHERE ELECTRICAL TRAINEES ARE ASSISTING WITH THE ELECTRICAL WORK, ALL ELECTRICAL WORK SHALL BE PHYSICALLY INSPECTED BY LICENSED PERSONNEL PRIOR TO ENERGIZING THE CIRCUITS.
8. TEMPORARY WIRING USED DURING CONSTRUCTION PHASE OF PROJECTS TO BE WIRED TO GFCI BREAKERS AND INSTALLED BY LICENSED ELECTRICIAN. TEMPORARY WIRING TO BE CONSIDERED AS PERMANENT.
9. HIGH PRESSURE SODIUM FIXTURES WILL BE MARKED INDICATING WATTAGE AMD BULB SIZE WITH A 1"x3" TAG MOUNTED NEAR THE BASE OF THE FIXTURE.
10. J-BOXES MOUNTED IN ENCLOSED AREAS (SUSPENDED CEILINGS) WILL BE MARKED ON THE FRONT COVER INDICATING CIRCUIT NUMBERS AND PURPOSE.
11. DURING CONSTRUCTION PHASE WHEN ELECTRICAL PANELS AND CIRCUITS ARE EXPOSED WARNING SIGNS WILL BE POSTED INDICATING - DANGER HIGH VOLTAGE, ELECTRICAL CIRCUITS ENERGIZED, DO NOT TOUCH. CONSTRUCTION FOREMAN WILL BE ASKED TO INCLUDED THESE WARNINGS DURING WEEKLY SAFETY MEETINGS. ALL ELECTRICAL PANELS AND CIRCUITS WILL BE COVERED PRIOR TO LICENSED ELECTRICIAN DEPARTING THE
12. CIRCUITS WILL BE WIRED ACCORDINGLY:
    LIGHTING CIRCUITS-BLACK THHN STRANDED
    CARRIER SIDE OF SWITCH-YELLOW THHN STRANDED
    GENERAL PURPOSE RECEPTACLES-RED THHN STRANDED
    ALARM CIRCUITS-BROWN THHN STRANDED
    ALARM CIRCUITS SUPPLY-BLUE THHN STRANDED
    208/240 V CIRCUITS-PURPLE THHN STRANDED
13. WIRE SIZES ARE AS FOLLOWS:
    #14 THHN-15A BREAKER
    #12 THHN-20A BREAKER
    #10 THHN-30A BREAKER
    #8 THHN-50A BREAKER
    #6 THHN-70A BREAKER
    #4 THHN-80A BREAKER
    #1/0THHN-150ABREAKER
    #3/0THHN-200ABREAKER

RECORD DRAWINGS

STATE OF ALASKA 49TH

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

NAME

DATE 6-5-92

DATE	REVISIONS	INIT
10/2/92	AS-BUILT	TB

Design Engineer

Maintenance Review

Material Take-off

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

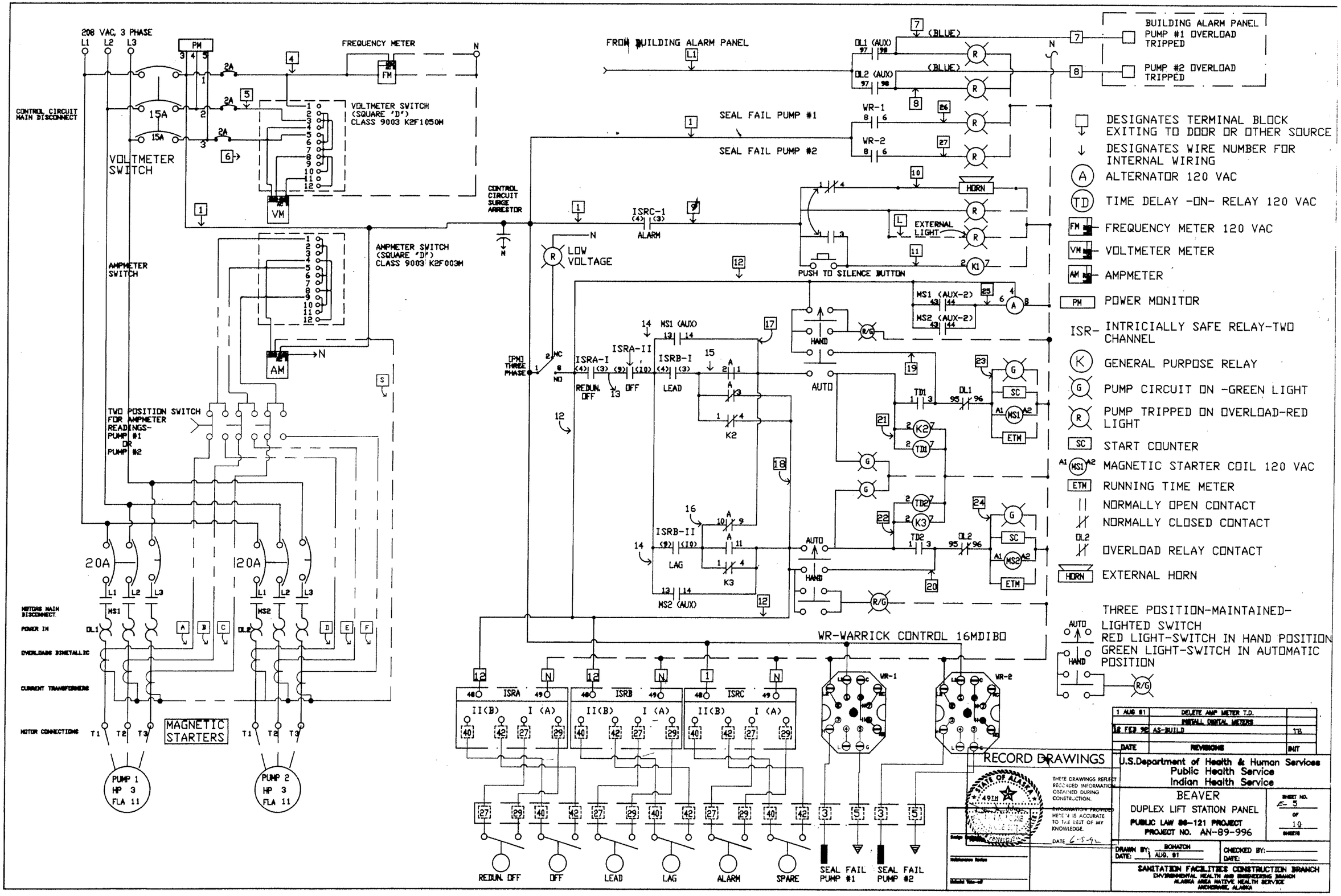
BEAVER
CIRCUIT BREAKER PANELS
PUBLIC LAW 86-121 PROJECT
PROJECT NO. 89-996

SHEET NO. E-4 OF 10 SHEETS

DRAWN BY: BOHATCH DATE: 3/25/90

CHECKED BY: DATE:

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


208 VAC, 3 PHASE
L1 L2 L3
PM
FREQUENCY METER
FM
CONTROL CIRCUIT MAIN DISCONNECT
15A
VOLTMETER SWITCH
VOLTMETER SWITCH (SQUARE 'D') CLASS 9003 K2F1050M
VM
AMPMETER SWITCH
AMPMETER SWITCH (SQUARE 'D') CLASS 9003 K2F003M
AM
TWO POSITION SWITCH FOR AMPMETER READINGS- PUMP #1 OR PUMP #2
CONTROL CIRCUIT SURGE ARRESTOR
FROM BUILDING ALARM PANEL
SEAL FAIL PUMP #1
SEAL FAIL PUMP #2
LOW VOLTAGE
ISRC-1
ALARM
HORN
EXTERNAL LIGHT
PUSH TO SILENCE BUTTON
DL1 (AUX)
DL2 (AUX)
WR-1
WR-2
MS1 (AUX-2)
MS2 (AUX-2)
BUILDING ALARM PANEL
PUMP #1 OVERLOAD TRIPPED
PUMP #2 OVERLOAD TRIPPED
[PM] THREE PHASE
ISRA-I
ISRA-II
ISRB-I
ISRB-II
REDUN. OFF
OFF
LEAD
LAG
HAND
AUTO
R/G
TD1
TD2
DL1
DL2
K1
K2
K3
SC
ETM
MS1
MS2
20A
20A
MOTORS MAIN DISCONNECT
POWER IN
OVERLOADS BIMETALLIC
CURRENT TRANSFORMERS
MOTOR CONNECTIONS
MAGNETIC STARTERS
PUMP 1 HP 3 FLA 11
PUMP 2 HP 3 FLA 11
WR-WARRICK CONTROL 16MDIBO
ISRA
ISRB
ISRC
REDUN. OFF
OFF
LEAD
LAG
ALARM
SPARE
SEAL FAIL PUMP #1
SEAL FAIL PUMP #2
DESIGNATES TERMINAL BLOCK EXITING TO DOOR OR OTHER SOURCE
DESIGNATES WIRE NUMBER FOR INTERNAL WIRING
ALTERNATOR 120 VAC
TIME DELAY -ON- RELAY 120 VAC
FREQUENCY METER 120 VAC
VOLTMETER METER
AMPMETER
POWER MONITOR
INTRICIALLY SAFE RELAY-TWO CHANNEL
GENERAL PURPOSE RELAY
PUMP CIRCUIT ON -GREEN LIGHT
PUMP TRIPPED ON OVERLOAD-RED LIGHT
START COUNTER
MAGNETIC STARTER COIL 120 VAC
RUNNING TIME METER
NORMALLY OPEN CONTACT
NORMALLY CLOSED CONTACT
OVERLOAD RELAY CONTACT
EXTERNAL HORN
THREE POSITION-MAINTAINED-LIGHTED SWITCH
RED LIGHT-SWITCH IN HAND POSITION
GREEN LIGHT-SWITCH IN AUTOMATIC POSITION
RECORD DRAWINGS
THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.
INFORMATION PROVIDED HEREIN IS ACCURATE TO THE BEST OF MY KNOWLEDGE.
DATE 6-5-92
1 AUG 91 DELETE AMP METER T.D.
INSTALL DIGITAL METERS
12 FEB 90 AS-BUILD TB
DATE REVISIONS INIT
U.S.Department of Health & Human Services
Public Health Service
Indian Health Service
BEAVER
DUPLEX LIFT STATION PANEL
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996
SHEET NO. 5 OF 10 SHEETS
DRAWN BY: BOMATCH DATE: 1 AUG. 91
CHECKED BY: DATE:
SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH AND ENGINEERING BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA

208 VAC, 3 PHASE
L1 L2 L3
PM
FREQUENCY METER
FM
N
CONTROL CIRCUIT MAIN DISCONNECT
15A
VOLTMETER SWITCH
VM
CONTROL CIRCUIT SURGE ARRESTOR
AMPMETER SWITCH
AM
TWO POSITION SWITCH FOR AMPMETER READINGS-
PUMP #1
OR
PUMP #2
MOTORS MAIN DISCONNECT
20A
20A
POWER IN
MS1
MS2
OL1
OL2
OVERLOADS BIMETALLIC
CURRENT TRANSFORMERS
MOTOR CONNECTIONS
T1 T2 T3
MAGNETIC STARTERS
PUMP 1
HP 3
FLA 11A
PUMP 2
HP 3
FLA 11A

FROM BUILDING ALARM PANEL
(BLUE)
L1
OL1 (AUX)
OL2 (AUX)
97 98
(BLUE)
TO BUILDING ALARM PANEL
#1 PUMP OVERLOAD TRIPPED
#2 PUMP OVERLOAD TRIPPED
LOW VOLTAGE
R
PM THREE PHASE
LOW WATER CUT OFF
LEAD
HAND
AUTO
R/G
TD1
OL1
SC
MS1
ETM
G
TD2
OL2
LAG
MS2
WARRICK CONTROL
TURNS PUMPS OFF
WHEN STORAGE TANK IS EMPTY
120 VAC PRIMARY
24 VAC SECONDARY
TANK EMPTY

DESIGNATES TERMINAL BLOCK EXITING TO DOOR OR OTHER SOURCE
DESIGNATES WIRE NUMBER FOR INTERNAL WIRING
(A) ALTERNATOR 120 VAC
(TD) TIME DELAY -ON- RELAY 120 VAC
FM FREQUENCY METER 120 VAC
VM VOLTMETER METER
AM AMPMETER
PM **POWER MONITOR**
ISR- INTRICIALLY SAFE RELAY-TWO CHANNEL
PRESSURE SWITCH
(G) PUMP CIRCUIT ON -GREEN LIGHT
(R) PUMP TRIPPED ON OVERLOAD-RED LIGHT
SC START COUNTER
(MS1) MAGNETIC STARTER COIL 120 VAC
ETM RUNNING TIME METER
NORMALLY OPEN CONTACT
NORMALLY CLOSED CONTACT
OL2 OVERLOAD RELAY CONTACT

AUTO
HAND
THREE POSITION-MAINTAINED-LIGHTED SWITCH
RED LIGHT-SWITCH IN HAND POSITION
GREEN LIGHT-SWITCH IN AUTOMATIC POSITION

RECORD DRAWINGS
STATE OF ALASKA
49TH
DON A. MOORE
No. CE 8279
REGISTERED PROFESSIONAL ENGINEER
THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.
INFORMATION PROVIDED HERE IS AS ACCURATE TO THE BEST OF MY KNOWLEDGE.
NAME
DATE 6-5-92

DATE	REVISIONS	INIT
1 AUG 91	DELETE AMP METER T.D.	
	INSTALL DIGITAL METERS	
12 FEB 92	AS-BUILT	KE

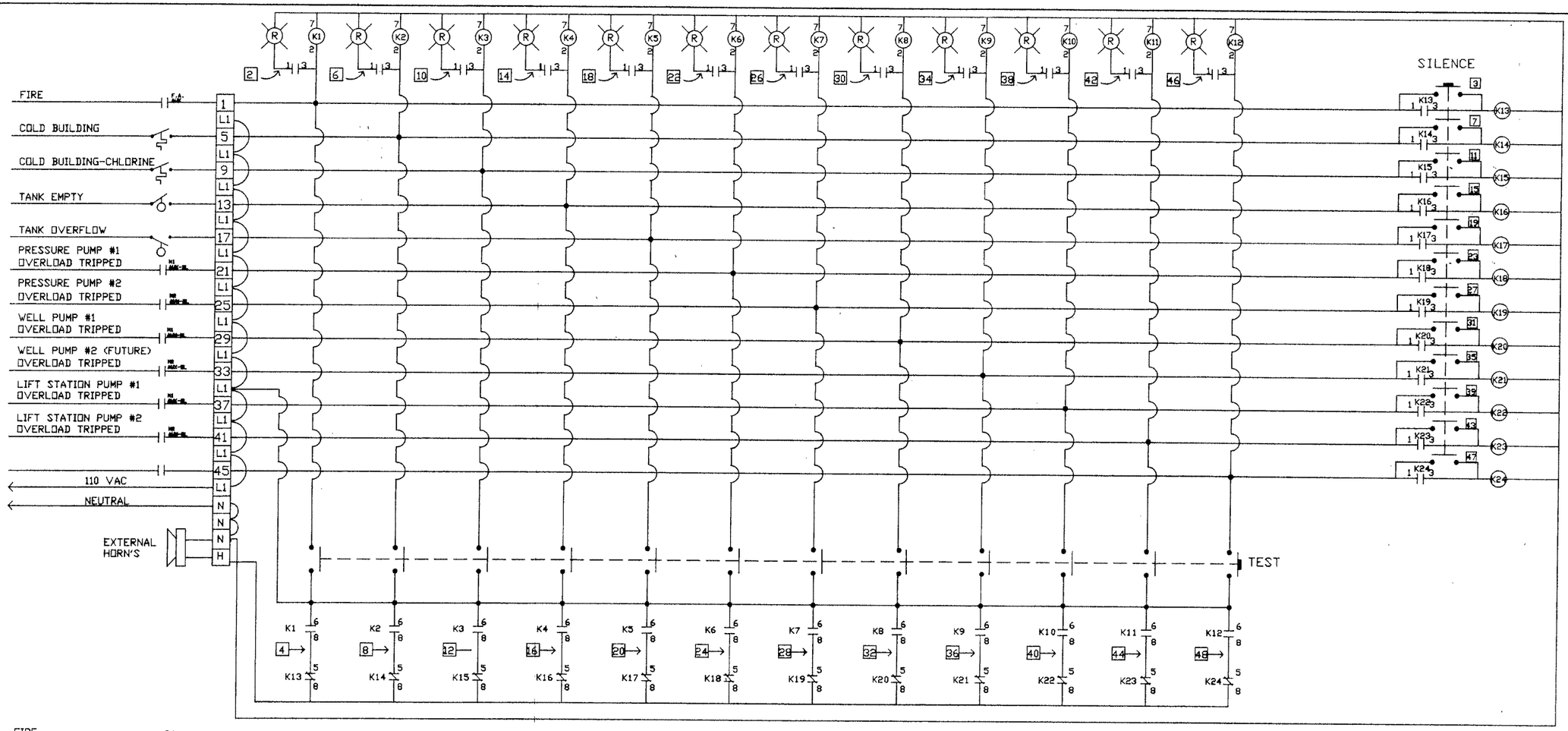
U.S.Department of Health & Human Services
Public Health Service
Indian Health Service

BEAVER
BUPLEX PRESSURE PUMPS PANEL
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

SHEET NO. E-6 OF 10 SHEETS

DRAWN BY: BOHATCH DATE: 1 AUG 91
CHECKED BY: EVANS DATE:

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



FIRE —— FIRE ALARM AUXILLARY CONTACTS

COLD BUILDING —— HONEYWELL AIR THERMOSTAT

COLD BUILDING-CHLORINE —— HONEYWELL AIR THERMOSTAT

TANK EMPTY —— NORMALLY CLOSED CONTACTS (FLOAT)

TANK OVERFLOW —— NORMALLY OPEN CONTACTS (FLOAT)

PRESSURE PUMP #1 OVERLOAD TRIPPED —— MOTOR STARTER NO.1 OVERLOAD AUXILLARY CONTACTS

PRESSURE PUMP #2 OVERLOAD TRIPPED —— MOTOR STARTER NO.2 OVERLOAD AUXILLARY CONTACTS

WELL PUMP #1 OVERLOAD TRIPPED —— MOTOR STARTER NO.1 OVERLOAD AUXILLARY CONTACTS

WELL PUMP #2 (FUTURE) OVERLOAD TRIPPED —— MOTOR STARTER NO.2 OVERLOAD AUXILLARY CONTACTS

LIFT STATION PUMP #1 OVERLOAD TRIPPED —— MOTOR STARTER NO.1 OVERLOAD AUXILLARY CONTACTS

LIFT STATION PUMP #2 OVERLOAD TRIPPED —— MOTOR STARTER NO.2 OVERLOAD AUXILLARY CONTACTS

RECORD DRAWINGS

STATE OF ALASKA — 49TH — DON A. MOORE No. CE 8279 PROFESSIONAL ENGINEER

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

NAME _____ DATE 6-5-98

DATE	REVISIONS	INIT
12 FEB 97	AS-BUILT	KE

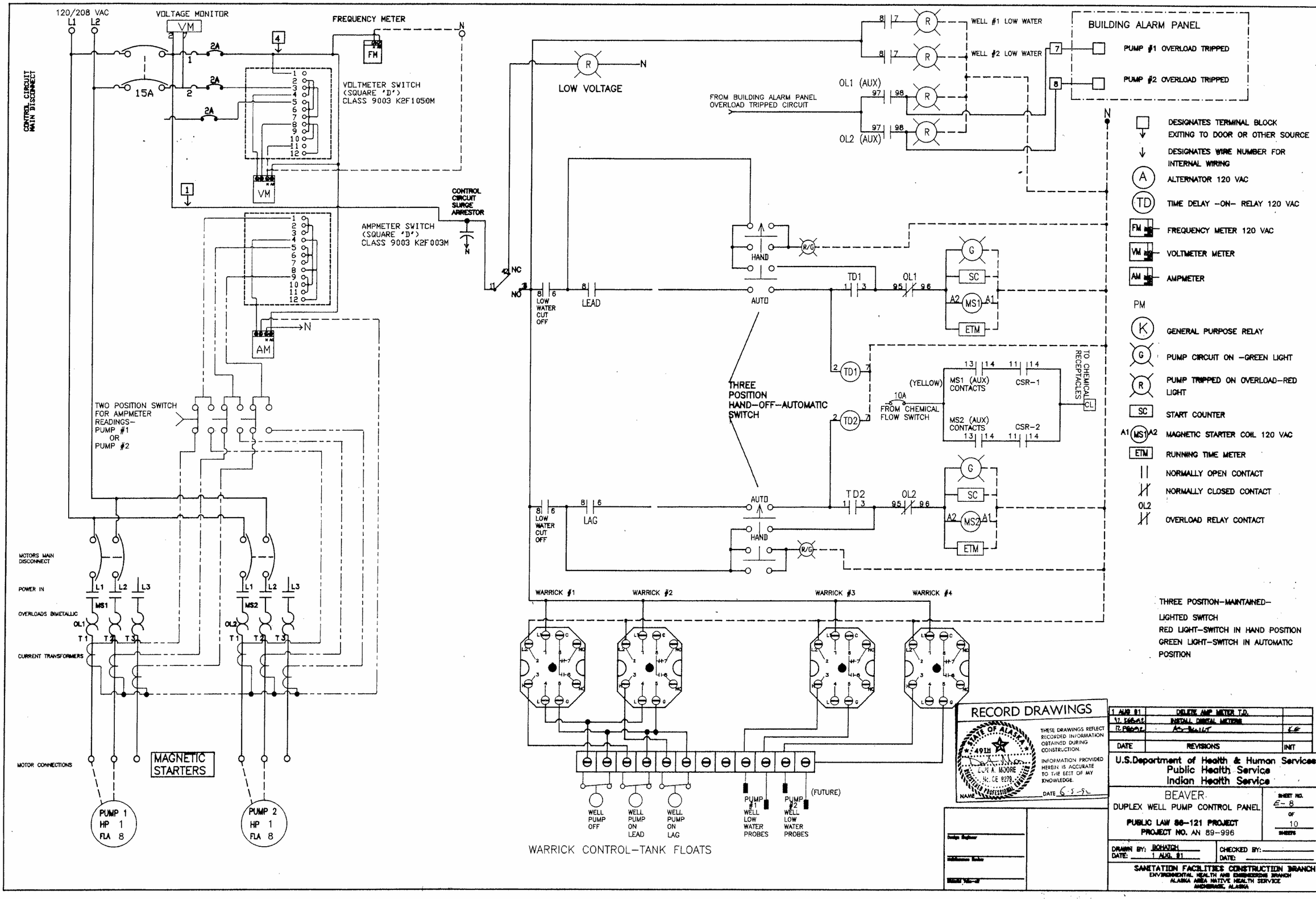
U.S. Department of Health & Human Services
Public Health Service
Indian Health Service

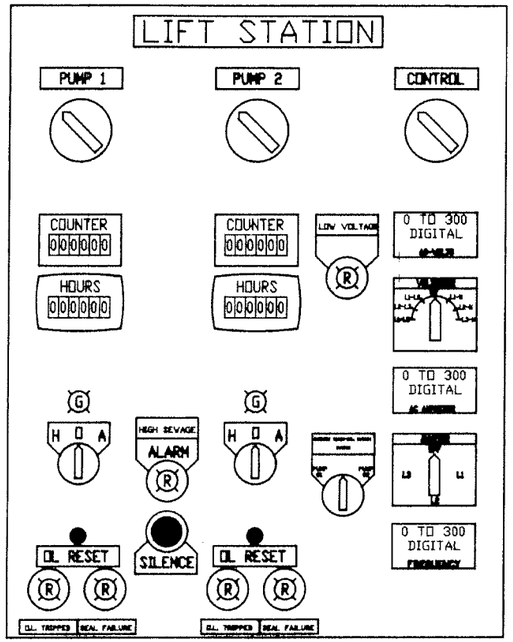
BEAVER
12 CIRCUIT ALARM PANEL
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN-89-996

SHEET NO. E-7 OF 10 SHEETS

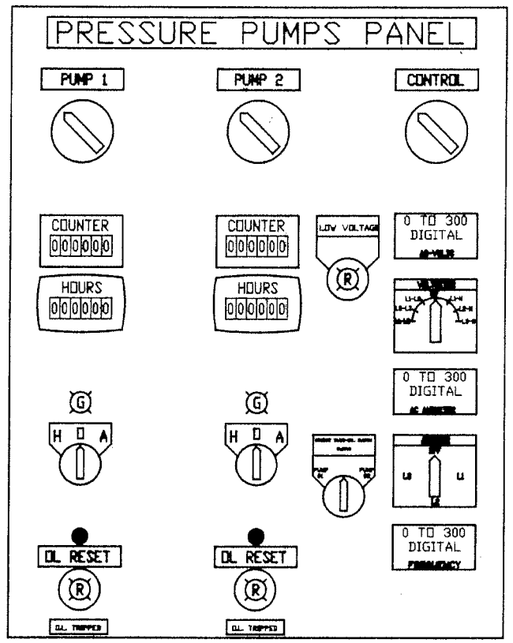
DRAWN BY: BOHATCH DATE: FEBRUARY 1994
CHECKED BY: EVANS DATE:

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

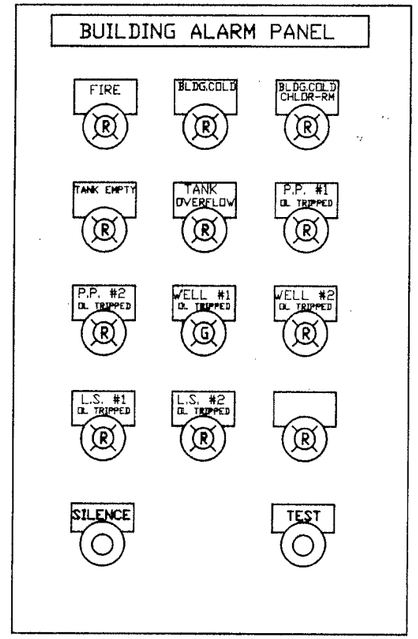

120/208 VAC
L1
L2
VOLTAGE MONITOR
VM
FREQUENCY METER
FM
N
CONTROL CIRCUIT MAIN DISCONNECT
15A
2A
VOLTMETER SWITCH (SQUARE 'D') CLASS 9003 K2F1050M
AMPMETER SWITCH (SQUARE 'D') CLASS 9003 K2F003M
CONTROL CIRCUIT SURGE ARRESTOR
AM
TWO POSITION SWITCH FOR AMPMETER READINGS— PUMP #1 OR PUMP #2
MOTORS MAIN DISCONNECT
POWER IN
L1
L2
L3
MS1
MS2
OVERLOADS BIMETALLIC
OL1
OL2
T1
T2
T3
CURRENT TRANSFORMERS
MOTOR CONNECTIONS
MAGNETIC STARTERS
PUMP 1
HP 1
FLA 8
PUMP 2
HP 1
FLA 8
LOW VOLTAGE
FROM BUILDING ALARM PANEL OVERLOAD TRIPPED CIRCUIT
WELL #1 LOW WATER
WELL #2 LOW WATER
OL1 (AUX)
OL2 (AUX)
BUILDING ALARM PANEL
PUMP #1 OVERLOAD TRIPPED
PUMP #2 OVERLOAD TRIPPED
NC
NO
LOW WATER CUT OFF
LEAD
LAG
HAND
AUTO
R/G
TD1
TD2
OL1
OL2
SC
ETM
A1
A2
MS1
MS2
THREE POSITION HAND—OFF—AUTOMATIC SWITCH
(YELLOW)
10A
FROM CHEMICAL FLOW SWITCH
MS1 (AUX) CONTACTS
MS2 (AUX) CONTACTS
CSR-1
CSR-2
TO CHEMICAL RECEPTACLES
CL
WARRICK #1
WARRICK #2
WARRICK #3
WARRICK #4
WELL PUMP OFF
WELL PUMP ON LEAD
WELL PUMP ON LAG
PUMP #1 WELL LOW WATER PROBES
PUMP #2 WELL LOW WATER PROBES
(FUTURE)
WARRICK CONTROL—TANK FLOATS
DESIGNATES TERMINAL BLOCK EXITING TO DOOR OR OTHER SOURCE
DESIGNATES WIRE NUMBER FOR INTERNAL WIRING
ALTERNATOR 120 VAC
TIME DELAY —ON— RELAY 120 VAC
FREQUENCY METER 120 VAC
VOLTMETER METER
AMPMETER
PM
GENERAL PURPOSE RELAY
PUMP CIRCUIT ON —GREEN LIGHT
PUMP TRIPPED ON OVERLOAD—RED LIGHT
START COUNTER
MAGNETIC STARTER COIL 120 VAC
RUNNING TIME METER
NORMALLY OPEN CONTACT
NORMALLY CLOSED CONTACT
OVERLOAD RELAY CONTACT
THREE POSITION—MAINTAINED—LIGHTED SWITCH
RED LIGHT—SWITCH IN HAND POSITION
GREEN LIGHT—SWITCH IN AUTOMATIC POSITION
RECORD DRAWINGS
STATE OF ALASKA
49TH
EDIE A. MOORE
No. CE 9279
REGISTERED ENGINEER
THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.
INFORMATION PROVIDED HEREIN IS ACCURATE TO THE BEST OF MY KNOWLEDGE.
NAME
DATE 6-5-92
1 AUG 91 DELETE AMP METER T.D.
12 FEB 92 INSTALL DIGITAL METERS
DATE REVISIONS INIT
U.S. Department of Health & Human Services
Public Health Service
Indian Health Service
BEAVER
DUPLEX WELL PUMP CONTROL PANEL
PUBLIC LAW 86—121 PROJECT
PROJECT NO. AN 89—996
SHEET NO. E-8
OF 10 SHEETS
DRAWN BY: BOHATCH
DATE: 1 AUG 91
CHECKED BY:
DATE:
SANITATION FACILITIES CONSTRUCTION BRANCH
ENVIRONMENTAL HEALTH AND ENGINEERING BRANCH
ALASKA AREA NATIVE HEALTH SERVICE
ANCHORAGE, ALASKA

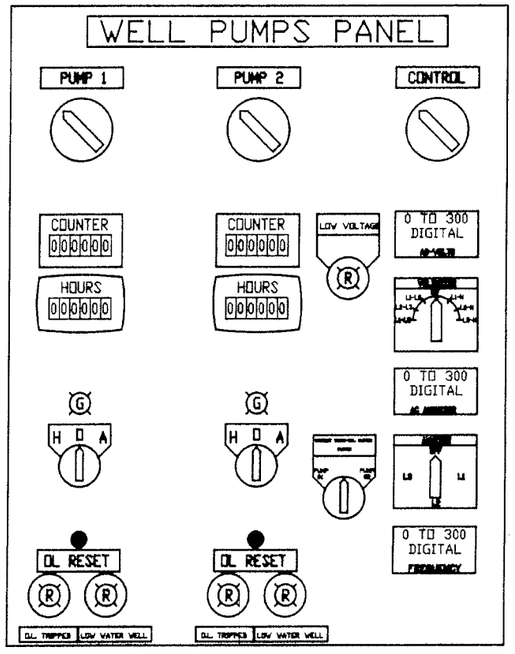


LIFT STATION PUMPS
3 HP
208 VAC
11 FLA



PRESSURE PUMPS
3 HP
208 VAC
11 FLA





WELL PUMPS
3 HP
208 VAC
11 FLA

RECORD DRAWINGS

STATE OF ALASKA
49TH
DON A. MOORE
REGISTERED PROFESSIONAL ENGINEER

THESE DRAWINGS REFLECT RECORDED INFORMATION OBTAINED DURING CONSTRUCTION.

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

NAME _____ DATE 6-5-92

DATE	REVISIONS	INIT
12 FEB 92	AS BUILT	FE

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

BEAVER
PANEL FACES
PUBLIC LAW 86-121 PROJECT
PROJECT NO. AN 89-996

SHEET NO. E-9 OF 10 SHEETS

DRAWN BY: BDHATCH DATE: 1989
CHECKED BY: _____ DATE: _____

Design Engineer _____
Maintenance Review _____
Initiated Tabs—off _____

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