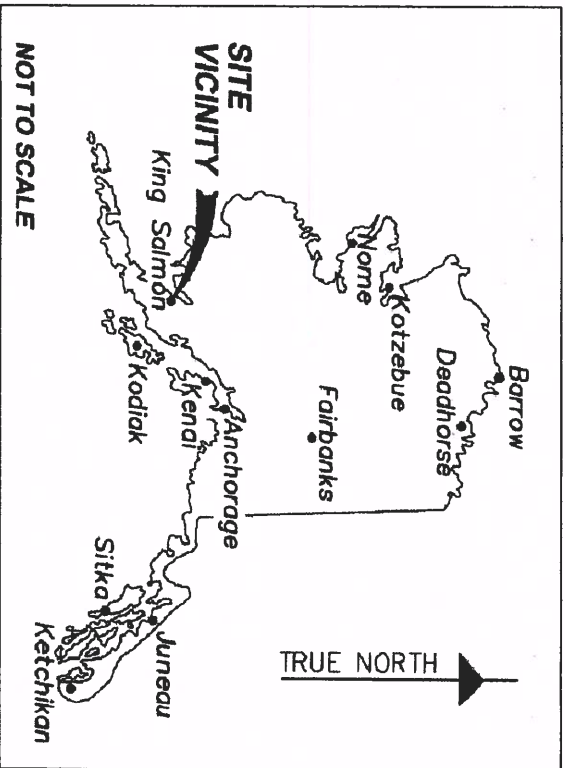


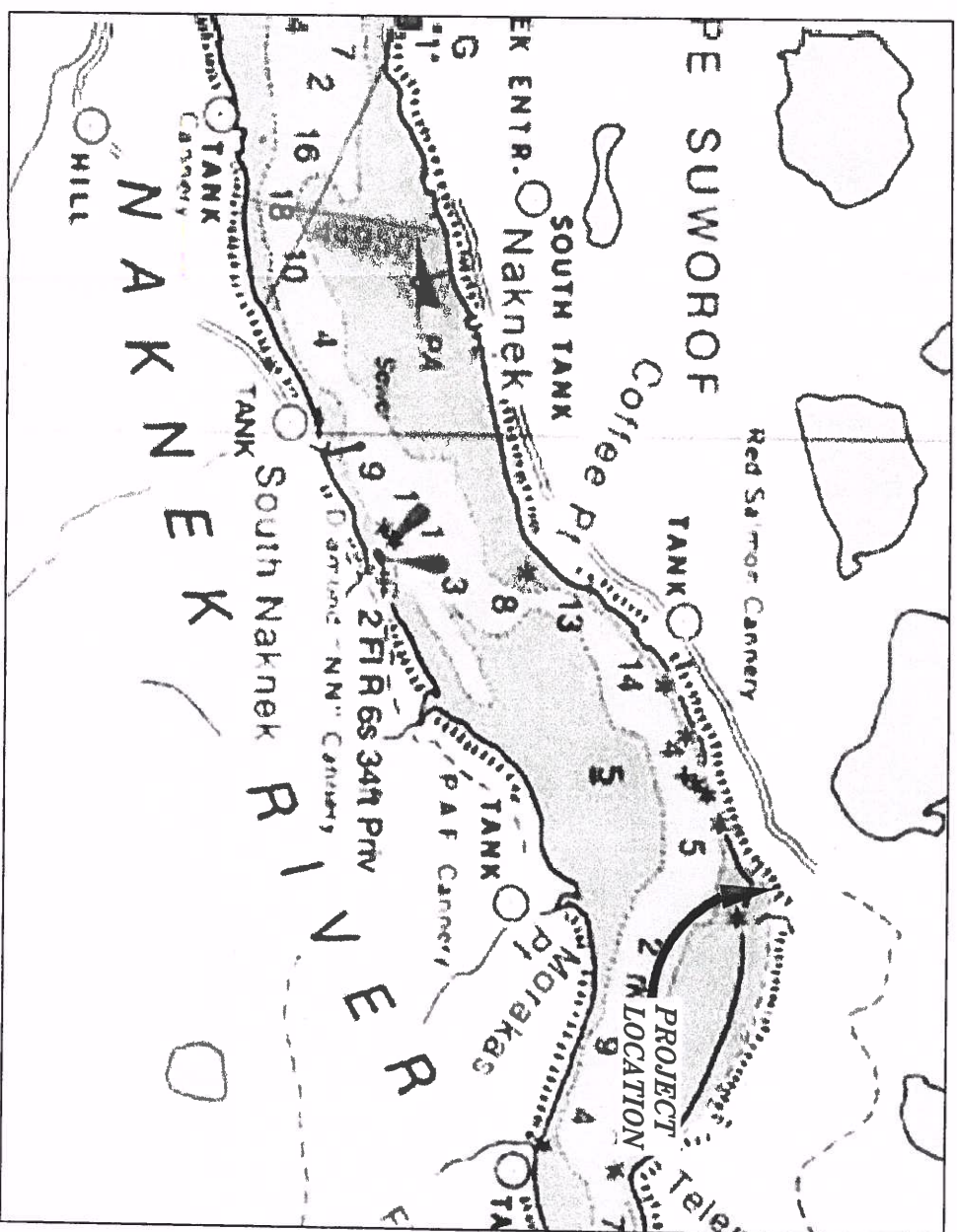
SILVER BAY SEAFOODS NAKNEK FACILITY

WATER AND SEWER PLAN

(ADEC REVIEW SET)



SHEET INDEX	
DRAWINGS	
G1	TITLE & VICINITY MAP
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Designed: RKB	Approved: TSS
Drawn: RKB	Date: JANUARY 2014
By: TSS	Checked: TSS
PROJECT #: 122378	

RAM
 R&M ENGINEERING-KETCHIKAN, INC.
 355 CARLIANNA LAKE ROAD
 KETCHIKAN, ALASKA 99901

Client: SILVER BAY SEAFOODS

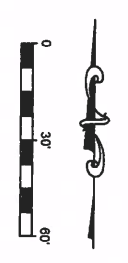
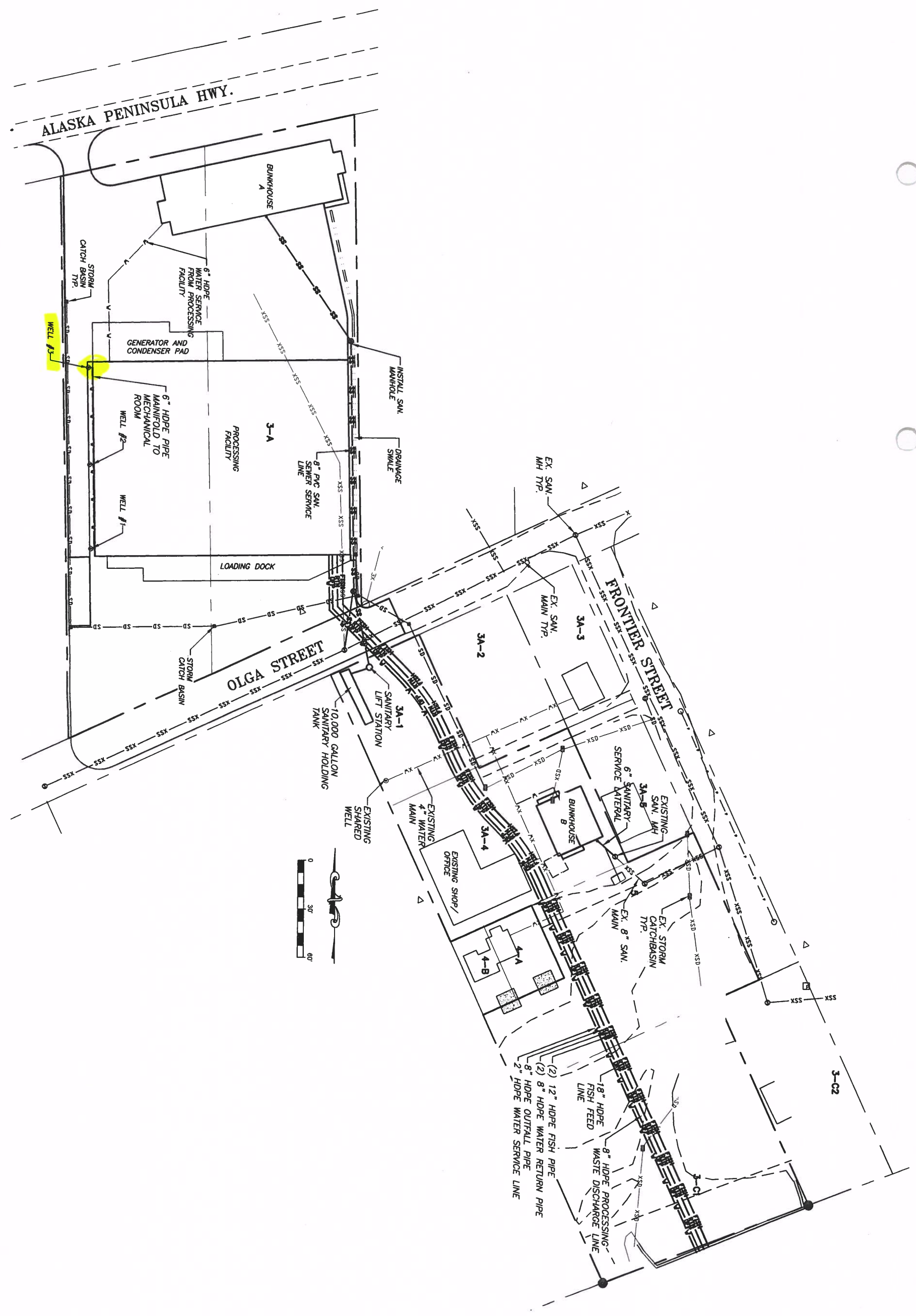
Project: NAKNEK FISH PROCESSING PLANT

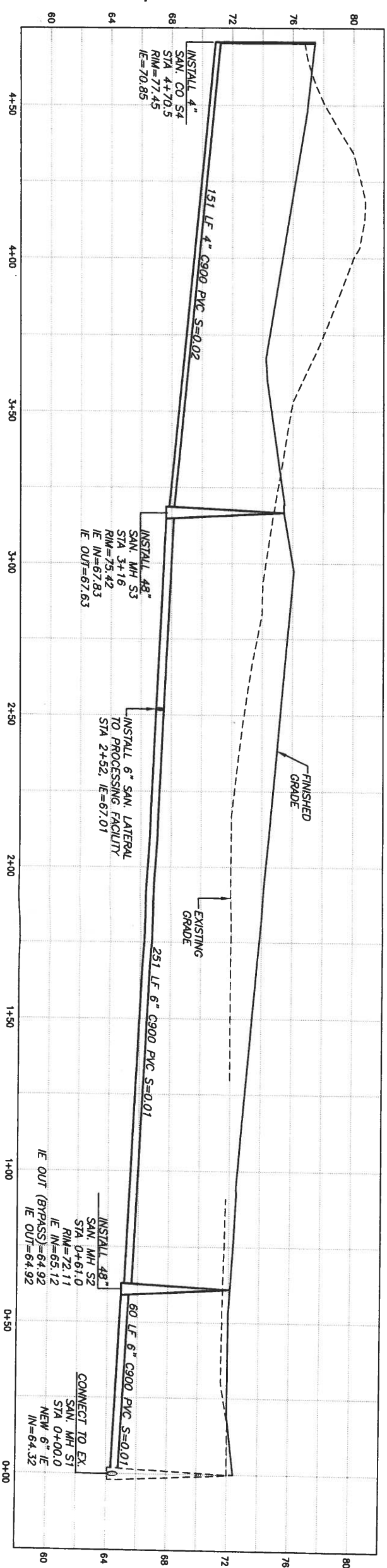
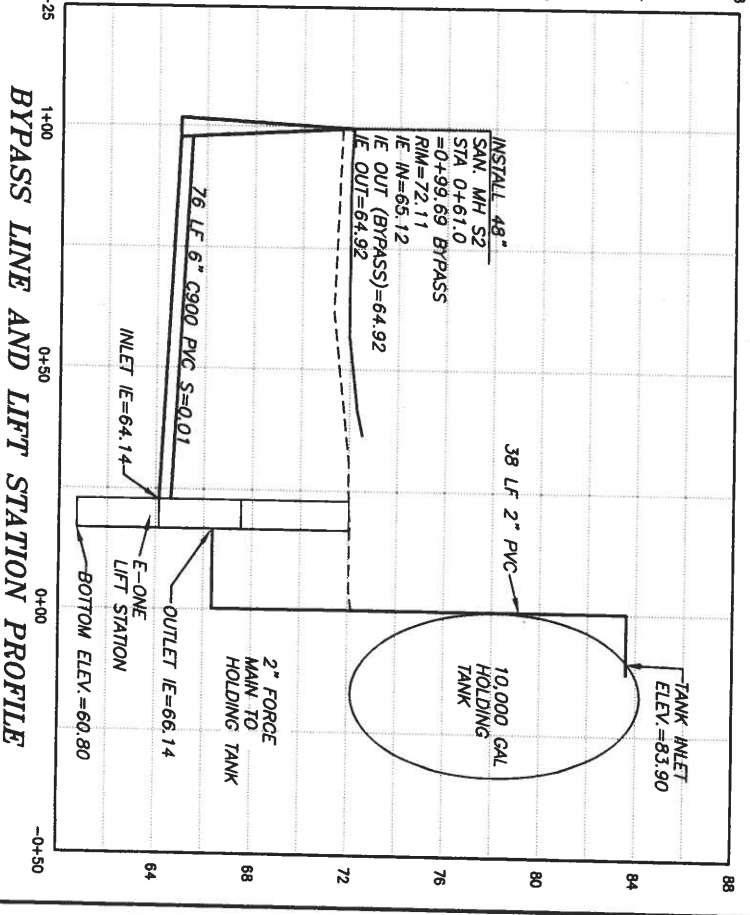
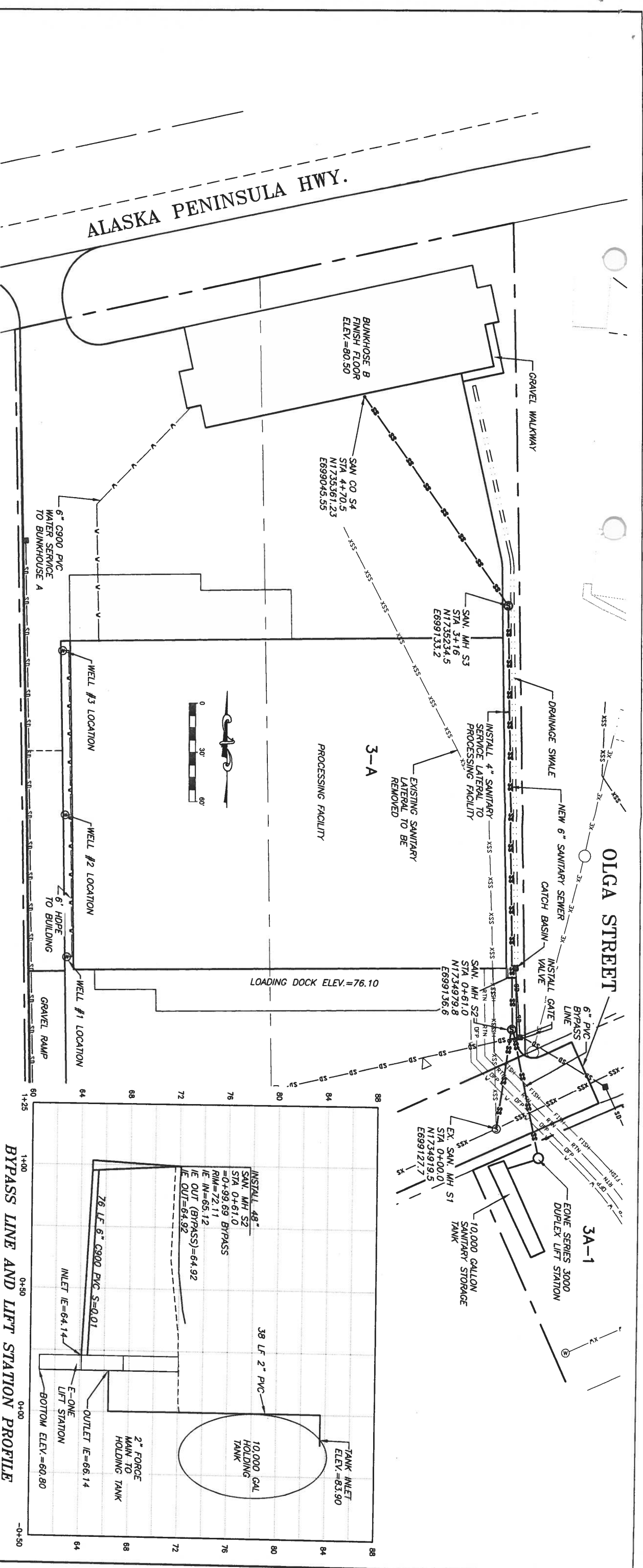
Sheet Description: TITLE AND VICINITY MAP

Sheet No. G1



Date		Description		By		Checked: TSS	
No.		Revision		Date: JANUARY 2014		PROJECT #: 122378	
Designed: RKB		Approved: TSS		Client: SILVER BAY SEAFOODS		Project: NAKNEK FISH PROCESSING PLANT	
Drawn: RKB		Date: JANUARY 2014		Sheet Description: COMPLETE SITE PLAN		Sheet No. C1	
RAM ENGINEERING-KETCHIKAN, INC. 355 CARLIANNA LAKE ROAD KETCHIKAN, ALASKA 99901							





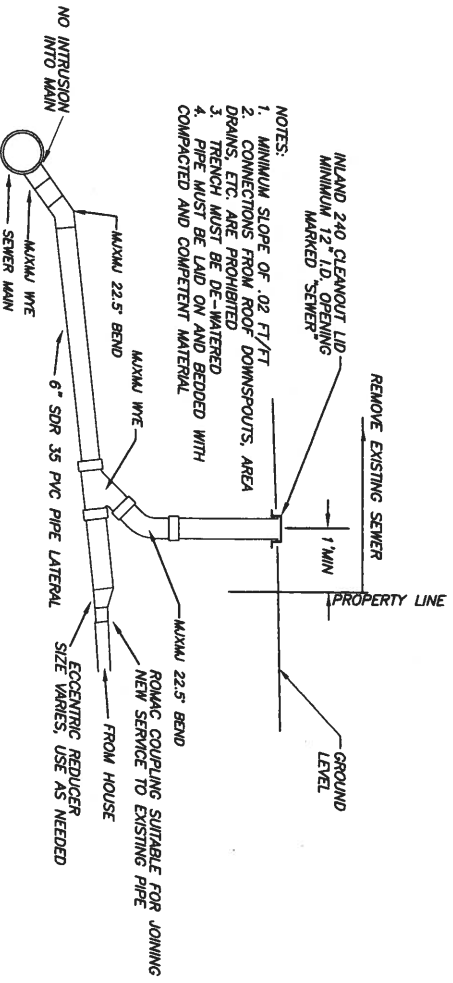
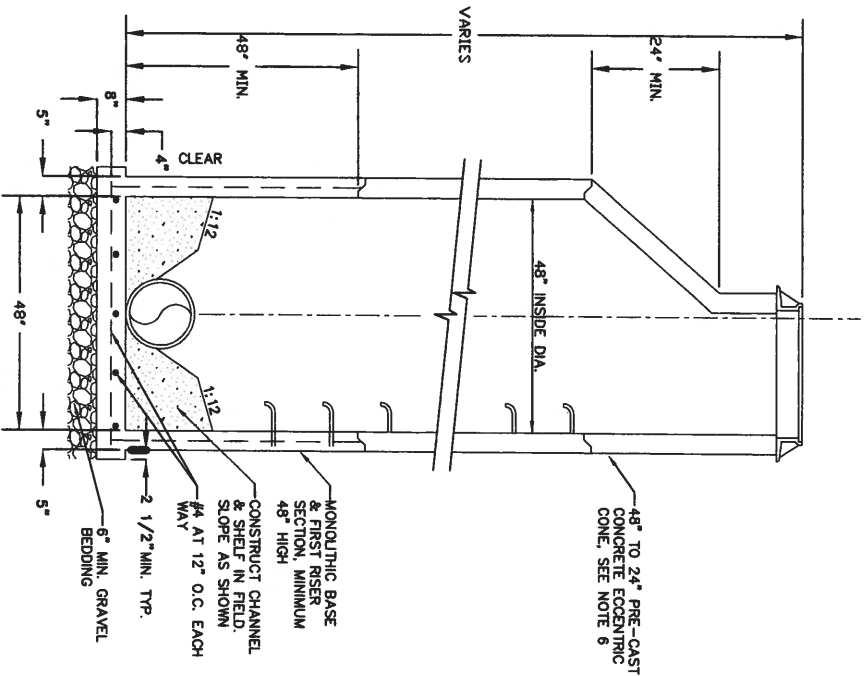
Date	No.	Description	By	Checked	TSS	PROJECT #	122378
Designed: RKB		Approved: TSS					
Drawn: RKB		Date: JANUARY 2014					
RAH ENGINEERING - KETCHIKAN, INC.							
355 CARLIANNA LAKE ROAD							
KETCHIKAN, ALASKA 99901							
Client:		SILVER BAY SEAFOODS					
Project:		NAKNEK FISH PROCESSING PLANT					
Sheet Description:		PROCESSING PLANT WATER AND SEWER PLAN					
Sheet No.:		C2					



SANITARY SEWER MANHOLE NOTES:

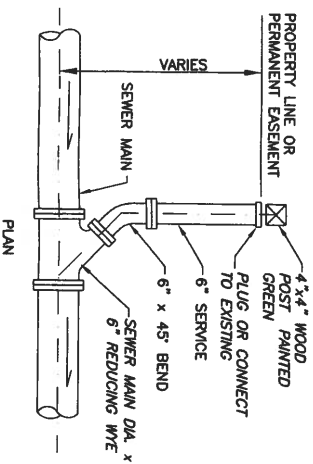
1. All manhole sections shall conform to ASTM C-478, latest edition, including minimum steel requirements. Steel shall be embedded in base so that first riser section is connected to base.
2. All joints shall include a pre-rolled rubber gasket such as "Rom-Nel" or equal. The exterior of all joints shall be plastered with at least 1" of portland cement sanding plaster.
3. Channel depth shall be equal to the pipe diameter or greater. Channel and shelf shall have a broom finish.
4. Ends of pipe shall extend between 1' and 3' into the manhole.
5. Seal manhole at pipe connections as shown in Detail 7/D1 and as recommended by the seal manufacturer. No steel reinforcement shall extend into pipe openings.
6. When manhole height is less than 7', replace concrete cone section with pre-cast reducing sds. See Detail 9/D1.
7. Install orange utility marker per Detail 8/D5.
8. Manhole riser rings shall be LADTEC plastic risers. Joints on riser shall be watertight using Butyl set in bed of mortar.
9. For manholes accepting a future riser, manholes shall be 60" inside diameter.

1 TYPICAL SANITARY SEWER MANHOLE
D1 NOT TO SCALE



2 SEWER LATERAL PROFILE - CONNECT TO EXISTING
D1 NOT TO SCALE

3 SEWER CLEANOUT DETAIL
D1 NOT TO SCALE



Date	No.	Description	By	Checked:	TSS	Project #:	12378
		Revision					

Designed: RKB
Approved: TSS
Drawn: RKB
Date: JANUARY 2014

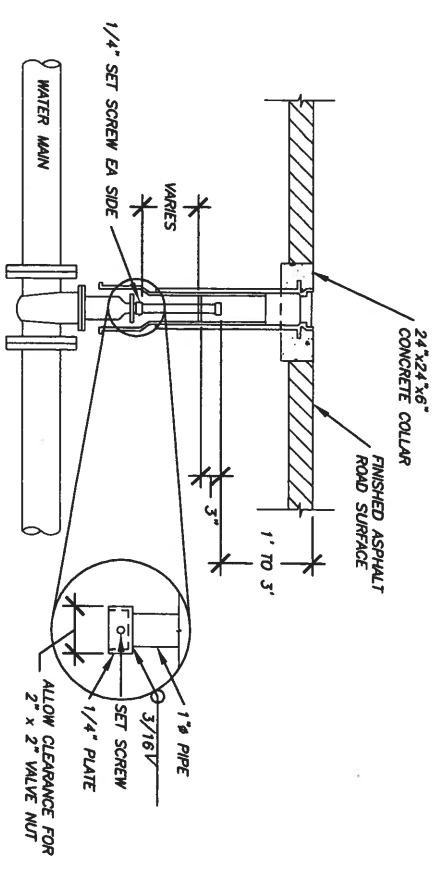
Client: SILVER BAY SEAFOODS

Project: NAKNEK FISH PROCESSING PLANT

Sheet Description: PROCESSING PLANT SITE SANITARY SEWER DETAILS

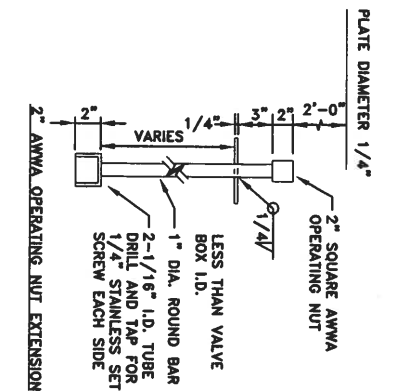
Sheet No. D1



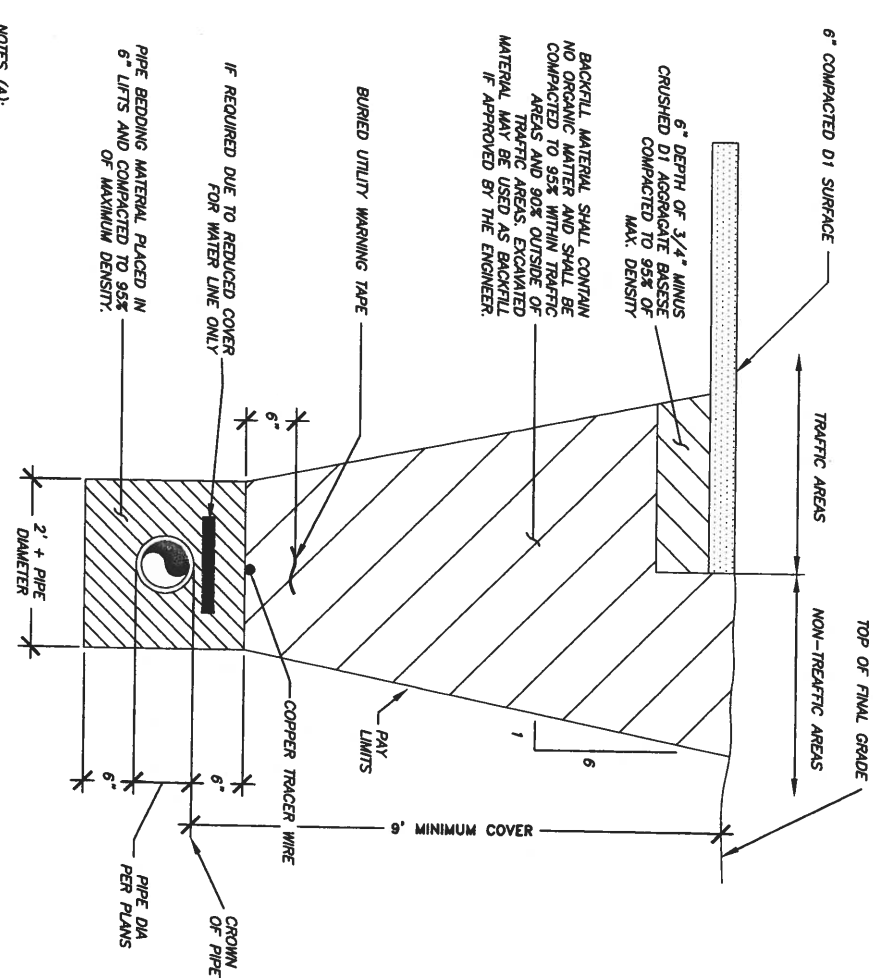


- NOTES:
1. NEW VALVE BOX TO ALLOW FOR 12" MINIMUM VERTICAL ADJUSTMENT
 2. THREADED VALVE BOX SECTIONS ARE NOT ALLOWED. CONTRACTOR SHALL REMOVE THREADED PORTIONS OF THE VALVE BOX WITH CUT-OFF SAW
 3. CONTRACTOR SHALL APPLY GREASE TO ALL INTERFACES BETWEEN VALVE BOX SECTIONS.
 4. COMPACTION AROUND VALVE BOX INSTALLATION IS CRITICAL. CONTRACTOR SHALL EMPLOY MECHANICAL TAMPING METHODS TO ENSURE THAT MATERIAL AROUND VALVE BOX REACHES 95% OF MAXIMUM COMPACTION.
 5. CONTRACTOR SHALL INSTALL A 6" MINIMUM THICKNESS OF D-1 BEDDING AROUND VALVE BOX DURING BACKFILL.
 6. EXTENSION IS REQUIRED ON ALL VALVES WHERE OPERATING NUT IS 6.0' OR MORE BELOW FINISHED SURFACE.

1 MAIN LINE VALVE W/ OPERATING ROD TYP. NOT TO SCALE



2 VALVE EXTENSION NOT TO SCALE

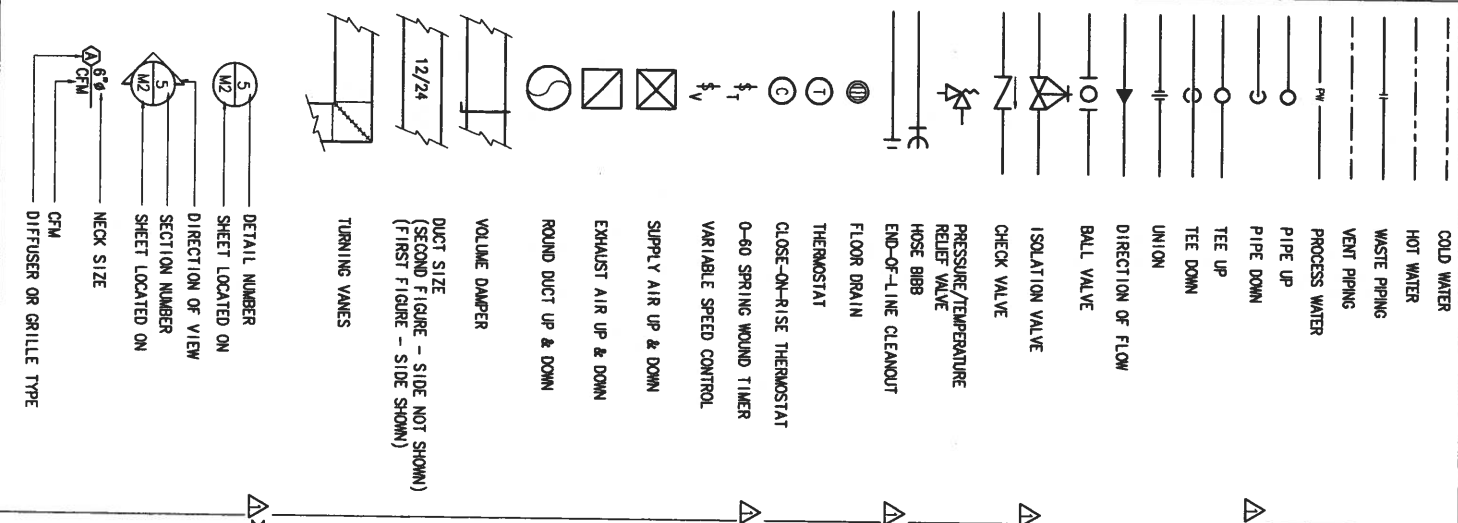


- NOTES (A):
1. BACKFILL MATERIAL SHALL BE PLACED IN 12" MAXIMUM LIFTS AS STATED IN SPECIFICATIONS.
 2. PIPE BEDDING MATERIAL MUST BE PLACED IN 6" MAX LIFTS BETWEEN COMPACTION.
 3. TRENCH EXCAVATION AND SHORING SHALL COMPLY WITH LOCAL, STATE AND OSHA REGULATIONS AND REQUIREMENTS. INDICATED SLOPE IS FOR PAY QUANTITY DETERMINATION ONLY FOR IMPORTED BACKFILL GRAVEL AND RESURFACING REQUIREMENTS.
 4. IF UNSUITABLE PIPE FOUNDATION MATERIAL IS ENCOUNTERED DURING EXCAVATION, ENGINEER MAY DIRECT THE CONTRACTOR TO OVER-EXCAVATE AND BACKFILL WITH SUITABLE MATERIAL.
 5. THE DITCHLINE, IF ONE EXISTS, SHALL BE RESHAPED IN SUCH A MANNER TO ALLOW POSITIVE DRAINAGE TO MATCH PRE-CONSTRUCTION CONDITIONS.
 6. TRENCH SECTION APPLICABLE FOR BOTH SEWER, WATER PIPE AND STORM.
- NOTES (B):
- | DEPTH OF COVER | INSULATION THICKNESS |
|------------------|----------------------|
| 3'-0" OR GREATER | NONE REQUIRED |
| 2'-0" OR GREATER | 2 INCHES |
| 6'-0" OR GREATER | 4 INCHES |
3. ALL INSULATION SHALL BE DOW HI-60 EXTRUDED POLYSTYRENE (BLUE BOARD) OR APPROVED EQUAL.

3 TYPICAL TRENCH DETAIL NOT TO SCALE



LEGEND



PLUMBING FIXTURES

SYMBOL	DESCRIPTION	DESIGN	MODEL	FLOW	FLOW @ 20 PSI	MATERIAL	LISTING	REMARKS
P-1	TOILET	GERBER	20-007	FLOOR	1/2	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.
P-2	TOILET	GERBER	20-007	FLOOR	1/2	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.
P-3	LAVATORY	GERBER	12-314	WALL	1/2	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.
P-4	LAVATORY	GERBER	12-834	COUNTER	1/2	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.
P-5	URINAL	GERBER	27-750	WALL	3/4	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.
P-6	WASH-UP SINK	BRADLEY	598-051	WALL	3/4	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.
P-7	JANITOR SINK	MUSTIE	63M	FLOOR	1/2	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.
P-8	WASHER BOX	SIQUY CHIEF	686 SERIES	WALL	1/2	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.
P-9	LAB SINK	SILVER CAST	151-2300	COUNTER	1/2	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.
P-10	BREAKROOM SINK	SILVER CAST	151-2300	COUNTER	1/2	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.
P-11	SHOWER/ETW WASH	HAMS	8320-8325	FLOOR	1/2	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.
ED-1	FLOOR DRAIN	SIQUY CHIEF	833 SERIES	FLOOR	1-1/4	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.
ED-2	FLOOR DRAIN	JR SMITH	2110Y	FLOOR	4	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.
HB-1	HOSE BIBB	WOODWARD	821	FLOOR	3/4	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.
HB-2	HOSE BIBB	WOODWARD	821	FLOOR	3/4	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.

WATER HEATER SCHEDULE

SYMBOL	BASIS OF DESIGN	MODEL	FUEL	STORAGE CAPACITY	1ST HOUR RECOVERY	DIMENSIONS	WATTS	POWER	REMARKS
WH-1	BRADFORD WHITE	M-2-3059S	ELECTRIC	50	21	22" DIA. x 48" HIGH	4,000	480/60/3	NON-STAINLESS ELEMENTS.
WH-2	BRADFORD WHITE	WR200-12	ELECTRIC	200	49	32" DIA. x 78" HIGH	12,000	480/60/3	NON-STAINLESS ELEMENTS.

EXPANSION TANK SCHEDULE

SYMBOL	MANUFACTURER	MODEL	FUNCTION	WATER	MATERIAL	TANK VOLUME	ACCEPTANCE	DIMENSIONS	LABEL	REMARKS
E-1	AMTRON	ST-5	HOT WATER	WATER	STEEL/PROPYLENE/BUTYL	2.0	0.45 FACTOR	8" DIA. x 13"	NSF	PRE-CHARGE TO INCOMING WATER PRESSURE.
E-2	AMTRON	ST-12	HOT WATER	WATER	STEEL/PROPYLENE/BUTYL	4.4	0.73 FACTOR	8" DIA. x 13"	NSF	PRE-CHARGE TO INCOMING WATER PRESSURE.

TEMPERING VALVE

SYMBOL	BASIS OF DESIGN	MODEL	MIN FLOW	MAX FLOW	MATERIAL	LISTING	REMARKS
TV-1	WATTS REGULATOR	1" LFH170-M3	1.0 GPM	32 GPM	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, HIGH/LOW THERMOSTATIC MIXING VALVE, UNION END STOP AND CHECK INLETS, DIAL THERMOMETER, SET DISCHARGE TO 110 DEG. F.
TV-2	HAMS	9201H	4.0 GPM	95 GPM	BRONZE	ASSE 1017	LEAD FREE, 1" INLET/OUTLET, CHECK STOPS, SET TO 80 DEG. F.

EXHAUST FAN SCHEDULE

SYMBOL	BASIS OF DESIGN	MODEL	CFM	TOTAL S.P.	SONES	HP	DRIVE	POWER	REMARKS
EF-1	GREENHECK	BCF-107-5	925	0.375	11.0	1/2	BELT	120/60/1	SUSPENDED FROM STRUCTURE. BACKDRAFT DAMPER.
EF-2	GREENHECK	CSP-42150	2,000	0.375	3.9	7/8 A	BELT	120/60/1	SUSPENDED FROM STRUCTURE. BACKDRAFT DAMPER.
EF-3	GREENHECK	27-AFSM-4	22,335	0.5	11.0	25	BELT	480/60/3	WELDED STEEL CONST., TFC PREMIUM EFFICIENCY MOTOR, VFD CONTROLLED, COORDINATE WITH ELECTRICAL.
EF-4	GREENHECK	27-AFSM-4	22,335	0.5	11.0	25	BELT	480/60/3	WELDED STEEL CONST., TFC PREMIUM EFFICIENCY MOTOR, VFD CONTROLLED, COORDINATE WITH ELECTRICAL.
EF-5	GREENHECK	27-AFSM-4	22,335	0.5	11.0	25	BELT	480/60/3	WELDED STEEL CONST., TFC PREMIUM EFFICIENCY MOTOR, VFD CONTROLLED, COORDINATE WITH ELECTRICAL.
TEF-1	PANASONIC	FV-20V3	100	0.375	<1.0	42 W	DIRECT	120/60/1	CEILING MOUNTS. ALUMINUM WALL CAP WITH BACKDRAFT DAMPER.
TEF-2	PANASONIC	FV-20V3	100	0.375	<1.0	42 W	DIRECT	120/60/1	CEILING MOUNTS. ALUMINUM WALL CAP WITH BACKDRAFT DAMPER.
DBF-1	FANTECH	DBF-110	167	0.25	—	83 W	DIRECT	120/60/1	PROVIDE WALL MOUNTING BRACKET, DUCT STATIC PRESSURE SENSOR SWITCH.

AIR INLET/OUTLETS

SYMBOL	BASIS OF DESIGN	MODEL	TYPE	USE	MATERIAL	FINISH	CFM	FACE SIZE	CONNECTION	NC	THROW	REMARKS
A	TITUS	SOF	EGGGRATE	E/A T/A	ALUMINUM	WHITE	—	PER PLANS	PER PLANS	<30	N/A	1/2" x 12" x 12" EGGGRATE GRILLE.
B	TITUS	T-700L	DOOR	T/A	STEEL	WHITE	—	PER PLANS	PER PLANS	<30	N/A	FRAME TYPE 1, PROVIDE AUXILIARY FRAME, BLADES PARALLEL WITH LONG DIMENSION.

PUMPS

SYMBOL	BASIS OF DESIGN	MODEL	FUNCTION	FLUID	GPM	HEAD FT.	HP	POWER	REMARKS
CP-1	TAOS	0010-RF-3	TEMPERED WATER RECIRC	WATER	2.0	10	1/8	120/60/1	BRONZE VOLUME, FLANGED CONNECTIONS.

REVISIONS:
07/15/2013
OWNER REVISIONS CHANGES

DRAWN BY: WLW
CHECKED BY: MVB
DATE: 06/04/2013
JOB NUMBER: L3037.00
DWG FILE: MSERIES

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stephen peters architects
spa



Naknek Facility Development
Silver Bay Seafoods, LLC
Naknek, Alaska
Mechanical Equipment Schedules

Processing Plant

MO.1

SPECIFICATIONS:

- PLANS - THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM. THE DRAWINGS ARE PARTLY DIMENSIONAL, NOT NECESSARILY SHOWING ALL OFFSETS OR EXACT LOCATIONS OF PIPING AND DUCTS UNLESS SPECIFICALLY DIMENSIONED.
- PERMITS - THE CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS AND FEES.
- CODE - ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), INTERNATIONAL MECHANICAL CODE (IMC) AND UNIFORM PLUMBING CODE (UPC) AND THE NATIONAL ELECTRICAL CODE (NEC) AS AMENDED BY THE STATE OF ALASKA AND LOCAL JURISDICTIONS. SHEET METAL WORK SHALL BE DONE IN ACCORDANCE WITH SMACNA STANDARDS.
- INSURANCE - WORKER'S COMPENSATION INSURANCE, AND GENERAL LIABILITY INSURANCE AT ALL TIMES WHILE WORKING ON THIS PROJECT.
- EQUIPMENT SUBSTITUTIONS - ALL EQUIPMENT LISTED IS REPRESENTATIVE OF THE STANDARD OF QUALITY AND PERFORMANCE REQUIRED, OR EQUAL. SUBSTITUTIONS WILL BE CONSIDERED IF THE SUBSTITUTE CATALOG CUTS ARE SUBMITTED AND ARE SHOWN TO BE EQUAL OR BETTER QUALITY, INCLUDING EFFICIENCY OF PERFORMANCE, SIZE AND WEIGHT.
- WARRANTY - ALL WORK PERFORMED UNDER THIS CONTRACT TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM ACCEPTANCE. ANY FLUITY MATERIALS OR WORKMANSHIP SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER DURING THE GUARANTEE PERIOD.
- ELECTRICAL WORK - ALL ELECTRICAL WORK IS TO BE PERFORMED BY A LICENSED ELECTRICIAN, IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, NEC.
- MATERIALS - ALL MATERIALS OTHER THAN OWNER SUPPLIED SHALL BE NEW AND UNUSED, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND IN THE BEST PRACTICE OF THE CRAFT. OBTAIN OWNER'S APPROVAL OF ALL PRODUCTS PRIOR TO ORDERING OR INSTALLING ANY PART OF ANY SYSTEM.
- OPERATION AND MAINTENANCE MANUAL - PROVIDE THE OWNER WITH AN OPERATING AND MAINTENANCE MANUAL, TO INCLUDE MANUFACTURER'S SPECIFICATIONS, OPERATING AND MAINTENANCE INSTRUCTIONS, WARRANTY INFORMATION ON EACH PIECE OF EQUIPMENT, AND SCHEMATIC DIAGRAMS OF CONTROL SYSTEMS AS-BUILT AS WELL AS A SOURCE OF SUPPLY FOR SPARE PARTS AND SERVICE. PROVIDE 3 COPIES.
- ACCESS - PROVIDE WORKABLE ACCESS TO ALL SERVICEABLE AND/OR OPERABLE EQUIPMENT.
- TEST AND START-UP - TEST ALL PLUMBING AND PIPING SYSTEMS WITH 60 PSIG FOR ONE HOUR BEFORE FILING AND IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE.
- BALANCE - THE CONTRACTOR SHALL BALANCE THE AIRFLOWS TO THE SATISFACTION OF THE OWNER. AIRFLOWS ARE TO BE BALANCED TO WITHIN 10% OF INDICATED FLOWS, PER AISC RECOMMENDED METHODS.
- EQUIPMENT INSTALLATION - INSTALL ALL EQUIPMENT WHERE NOTED ON THE DRAWINGS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. PROVIDE MISCELLANEOUS APPURTENANCES, ACCESSORIES, SUPPORTS AND CONTROL CONNECTIONS REQUIRED FOR COMPLETE AND OPERATING SYSTEMS. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES.
- INSULATION:
- PIPING INSULATION - 1" THICK GLASS FIBER, RIGID, MOLDED, NON-COMBUSTIBLE INSULATION; THERMAL CONDUCTIVITY K EQUAL 0.24 AT 100 DEGREES F. MEAN TEMPERATURE; ASTM C335; FACTORY APPLIED VAPOR BARRIER, FLAME RESISTANT ALL SERVICE JACKET AND TAPE, WITH PERMEABILITY RATING EQUALS 0.02 PERMS, ASTM 96.
 - ADA LAVATORY - CELLULAR FOAM, PREFORMED FOR TAILPIECE, P-TAP, ANGLE STOPS AND SUPPLY TUBES. LAV GUARDZ AS MANUFACTURED BY TRUBERO OR EQUAL.
- WASTE PIPING:
- CAST IRON PIPE - CSPI 301, HUBLESS, SERVICE WEIGHT, FITTINGS: CAST IRON JOINTS: CSPI 310, NEOPRENE GASKETS AND STAINLESS STEEL CLAMP-AND-SHIELD ASSEMBLIES.
 - ABS PIPE ASTM D2751, FITTINGS: ABS JOINTS: ASTM D2235, SOLVENT WELD.
 - COPPER PIPE - ASTM B306, DWV, FITTINGS: ASME B16.3, CAST BRONZE, OR ASME B16.28, WROUGHT COPPER (DWV), JOINTS: AMS/ASTM B32, SOLDER: GRADE 951R, FLUX: ASTM B813.
 - ABS PIPE (ABOVE GRADE ONLY) - ASTM D2751, FITTINGS: ABS JOINTS: ASTM D2235, SOLVENT WELD. (NOT ALLOWED FOR PLENUM AREAS AND AT RATED WALL PENETRATIONS.

COMPRESSED AIR PIPING:

- STEEL PIPE: ASTM A53/AS3M, SCHEDULE 40 BLACK, FITTINGS: ASME B16.3, WELDABLE IRON, OR ASTM A234/A234M, FORGED STEEL WELDING TYPE JOINTS: THREADED FOR PIPE 2 INCH AND SMALLER.
- DOMESTIC WATER PIPING:

THE 1/2" HARD DRAWN COPPER TUBING, FITTINGS: ASME B32 CAST COPPER ALLOY OR WROUGHT COPPER AND BRONZE, JOINTS: ASTM B32, LEAD FREE SOLDER, GRADE 951A, WATER SOLUBLE FLUX OR OR VEGA, PRO-PRESS SYSTEM.

CPVC PIPE - ASTM D2846/D2846M, ASTM F441/F441M, OR ASTM F442/F442M, CHLORINATED POLYVINYL CHLORIDE (CPVC) MATERIAL, FITTINGS: ASTM D2846/D2846M, ASTM F437, ASTM F438, ASTM F439, OR ASTM F441/F441M, CPVC JOINTS: ASTM D2846/D2846M, SOLVENT WELD WITH ASTM F493 SOLVENT CEMENT.

PEX TUBING: TUBING SHALL BE CROSS-LINKED HIGH-DENSITY POLYETHYLENE TUBING SHALL BE PRODUCED USING SALINE METHOD OF CROSS-LINKING AND SHALL MEET THE DIMENSION AND PERFORMANCE SPECIFICATIONS OF ASTM F876/F877 AND CSA B137.5. TUBING SHALL ALSO COMPLY WITH ANSI/ASPE 61 AS SUITABLE FOR USE WITH POTABLE WATER. TEMPERATURE AND PRESSURE RATINGS SHALL BE 180 PSI AT 73 DEGREES F, 100 PSI AT 180 DEGREES F, AND 90 PSI AT 200 DEGREES F.

WATER HAMMER ARRESTORS - ANSI A112.26.1; SIZED IN ACCORDANCE WITH PD WH-201, PRE-CHARGED SUITABLE FOR OPERATION IN TEMPERATURE RANGE -100F TO 300 DEG F AND MAXIMUM 250 PSIG WORKING PRESSURE; SERIES 5000 MANUFACTURED BY J.R. SMITH OR APPROVED EQUAL.

PIPING SUPPORTS AND HANGERS - SIZED AND SPACED IN ACCORDANCE WITH THE UPC. INSTALLED AS PER THE MANUFACTURER'S INSTRUCTIONS.

DISINFECTION OF POTABLE WATER SYSTEM - THE DOMESTIC WATER PIPING SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH SECTION 609.9 OF THE UPC.

BALL VALVES - CLASS 150, BRONZE TWO PIECE BODY, FULL PORT, FORGED BRASS, CHROME PLATED BALL, TEFLOM SEALS AND STOPPING BOX RING, BLOW-OUT PROOF STEM, LEVER HANDLE, SOLDER ENDS OR PRO-PRESS.

SWING CHECK VALVES - CLASS 125, BRONZE SWING DISC, SOLDER, SCREWED OR PRO-PRESS ENDS.

SPRING LOADED CHECK VALVES - IRON BODY, BRONZE TRIM, STAINLESS STEEL SPRING, RENEWABLE COMPOSITION DISC, SCREWED SOLDER, SCREWED OR PRO-PRESS ENDS.

DIELECTRIC CONNECTIONS - UNION WITH GALVANIZED OR PLATED STEEL, THREADED END, COPPER SOLDER END, WATER IMPERVIOUS ISOLATION BARRIER.

DIAHRAGM-TYPE COMPRESSION TANKS - DOMESTIC WATER - WELDED STEEL CONSTRUCTION, RATED FOR WORKING PRESSURE OF 125 PSIG, WITH FLEXIBLE EPDM DIAHRAGM SEALED INTO TANK. NSF APPROVED LINER FOR DOMESTIC WATER EXPANSION TANK.

DIAHRAGM-TYPE COMPRESSION TANKS - HYDRONIC HEATING - CONSTRUCTION: WELDED STEEL, RATED FOR WORKING PRESSURE OF 125 PSIG, WITH FLEXIBLE BUTL DIAHRAGM SEALED INTO TANK. ACCESSORIES: PRESSURE GAUGE AND AIR-CHARGING FITTING, TANK DRAWN: PRE-CHARGE TO 12 PSIG.

STRAINERS:

UP TO 2 INCH - SCREWED BRASS OR IRON BODY FOR 175 PSIG WORKING PRESSURE, Y PATTERN WITH 1/32 INCH STAINLESS STEEL PERFORATED SCREEN.

2-1/2 INCH TO 4 INCH: FLANGED IRON BODY FOR 175 PSIG WORKING PRESSURE, Y PATTERN WITH 3/64 INCH STAINLESS STEEL PERFORATED SCREEN.

PRESSURE GAUGES - 3-1/2 INCH DIAMETER CAST ALUMINUM CASE, PHOSPHOR BRONZE BOUFRON TUBE, ROTARY BRONZE MOUNT, BRASS SOCKET, BLACK GRADUATION AND MARKS ON WHITE BACKGROUND, ONE PERCENT MID-SCALE ACCURACY, SCALE CALIBRATED IN PSI, GLASS WINDOW, MODEL 6000B AS MANUFACTURED BY THERCE OR APPROVED EQUAL.

PRESSURE GAUGE ISOLATION VALVES - GAUGE ISOLATION VALVE: LEVER HANDLE BALL VALVE, BRASS BODY, CHROME PLATED BRASS BALL, TEFLOM SEAT FOR MAXIMUM 800 PSIG. MODEL 886 AS MANUFACTURED BY THERCE OR APPROVED EQUAL.

SEQUENCE OF OPERATION:

ELECTRIC WATER HEATER - WH-1 - THE ELECTRIC WATER HEATER SHALL BE CONTROLLED BY THE PACKAGED ADJUSTABLE CONTROLLER. SET DISCHARGE TEMPERATURE TO 140 DEG. F. SET TEMPERING VALVE DISCHARGE TO 110 DEG. F.

EXHAUST FAN - EE-1 - THE MAIN TOILET EXHAUST FAN SHALL RUN CONTINUOUSLY DURING PLANT OPERATING HOURS. A WALL MOUNTED PILOT LIGHT SWITCH IN THE SHOP SHALL BE PROVIDED TO START AND STOP FAN. MAKEUP AIR SHALL VA BE THE GENERAL PLANT.

EXHAUST FAN - EE-2 - THE ENTRY AND GUNGEAR ROOM EXHAUST FAN SHALL BE CYCLED ON AND OFF BY A WALL MOUNTED PILOT LIGHT WALL SWITCH. ADDITIONALLY THE FAN MAY BE CYCLED ON AND OFF BY MEANS OF 0-60 MINUTE SPRING WOUND TIMER. ON ACTIVATION OF EITHER OF THE SWITCH OR TIMER THE FAN SHALL START. MAKEUP AIR SHALL BE VA THE GENERAL PLANT.

PRIMARY REFRIGERATION EXHAUST FAN - EE-3 - WHEN THE REFRIGERATION PLANT IS IN OPERATION THE PRIMARY EXHAUST FAN SHALL RUN CONTINUOUSLY. MAKE UP AIR SHALL BE PROVIDED BY COUNTER BALANCED BACKDRAFT DAMPERS SET TO OPEN FULLY AT 0.05" STATIC PRESSURE.

EMERGENCY REFRIGERATION EXHAUST FANS - EE-4 AND EE-5 - ON CALL FROM THE REFRIGERATION LEAK DETECTOR THE FANS SHALL START AND RUN CONTINUOUSLY UNTIL CLEARED AT THE LEAK DETECTION PANEL. MAKE UP AIR SHALL BE PROVIDED BY COUNTER BALANCED BACKDRAFT DAMPERS SET TO OPEN FULLY AT 0.05" STATIC PRESSURE.

TOILET EXHAUST FANS - TE-1 & TE-2 - THE TOILET EXHAUST FANS SHALL BE SWITCHED ON AND OFF WITH THE LOCAL LIGHTING CIRCUIT.

DRYER EXHAUST BOOSTER FANS - DBE-1 - THE DRYER BOOSTER FAN SHALL BE CYCLED ON AND OFF BY MEANS OF THE PACKAGED, DUCT MOUNTED PRESSURE SENSOR. ON SENSING DRYER AIR FLOW THE FAN SHALL START.

SQUARE POWERED DIGITAL THERMOMETER - HI-IMPACT ABS CASE: -50/ 300 DEG F

MEASURABLE RANGE: 1/2" LCD DIGITS, WIDE AMBIENT FORMULA DISPLAY, 1% ACCURACY; 1/10 DEG BETWEEN -19.9/199.9 DEG F RESOLUTION; 10 LUX (ONE FOOT-CANDED) LUX RATING; 10 SECOND UPDATE RATE; -30/140 DEG F AMBIENT OPERATING RANGE; GLASS PASSIVATED THERMISTOR; NTC SENSOR; MODEL DIGITAL VAR-ANGLE AS MANUFACTURED BY WESS PRODUCTS.

TEMPERING VALVE - MASTER WATER MIXING CONTROL VALVE SHALL BE OF THE THERMOSTATIC TYPE WITH LIQUID-FILLED MOTOR. IT SHALL HAVE BRONZE BODY CONSTRUCTION WITH REPLACEABLE CORROSION-RESISTANT COMPONENTS. VALVE CONSTRUCTION SHALL EMPLOY SLIDING PISTON CONTROL MECHANISM. PISTON AND LINER SHALL BE OF STAINLESS STEEL MATERIAL. VALVE SHALL COME EQUIPPED WITH REMOVABLE UNION END STOP AND CHECK INLETS WITH STAINLESS STEEL STRAINERS. VALVE SHALL PROVIDE PROTECTION AGAINST HOT OR COLD SUPPLY LINE FAILURE AND THERMOSTATIC FAILURE.

DUCTWORK - PROVIDE GALVANIZED SHEET METAL RECTANGULAR OR ROUND DUCT WHERE CALLED OUT ON THE PLANS. SEAL ALL DUCT SEAMS AND JOINTS AIRTIGHT. USE TURNING VANES IN ALL SQUARE ELBOWS AND FLAT OVAL ELBOWS. INSTALL VOLUME DAMPERS AND EXTRACTORS WHERE SHOWN ON THE DRAWINGS. ALL SHEET METAL WORK TO BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS. SUPPORT DUCTWORK PER SMACNA GUIDELINES.

VOLUME DAMPER - FABRICATE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS.

FLEXIBLE DUCT CONNECTIONS - UL LISTED FIRE-RETARDANT NEOPRENE COATED WOVEN GLASS FIBER FABRIC TO NFPA 90A, MINIMUM DENSITY 20 OZ. PER SQ. YD., APPROXIMATELY 3 INCHES WIDE CRIMPED INTO METAL ENDING STRIP. DURO-DOME METAL FAB OR EQUAL.

SEISMIC RESTRAINT REQUIREMENTS SHALL BE IN ACCORDANCE WITH ASCE 7.

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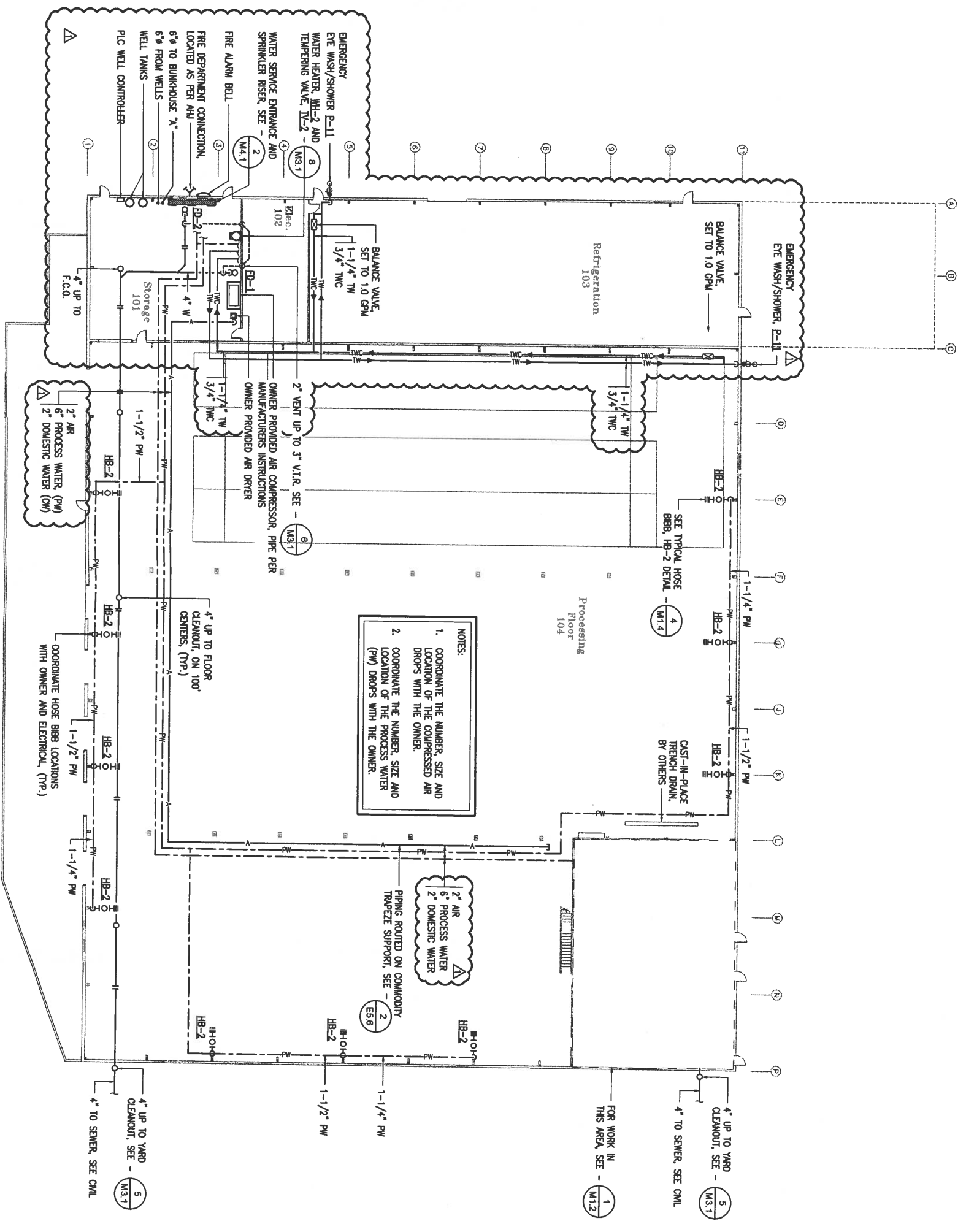


Naknek Facility Development
Silver Bay Seafoods, LLC
Naknek, Alaska
Specifications

Processing Plant

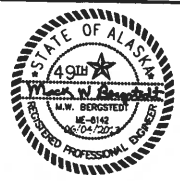
M0.2

1 GROUND FLOOR PLUMBING PLAN
1/16" = 1'-0"



NOTES:
 1. COORDINATE THE NUMBER, SIZE AND LOCATION OF THE COMPRESSED AIR DROPS WITH THE OWNER.
 2. COORDINATE THE NUMBER, SIZE AND LOCATION OF THE PROCESS WATER (PW) DROPS WITH THE OWNER.

Naknek Facility Development
 Silver Bay Seafoods, LLC
 Naknek, Alaska
 Ground Floor Plumbing Plan

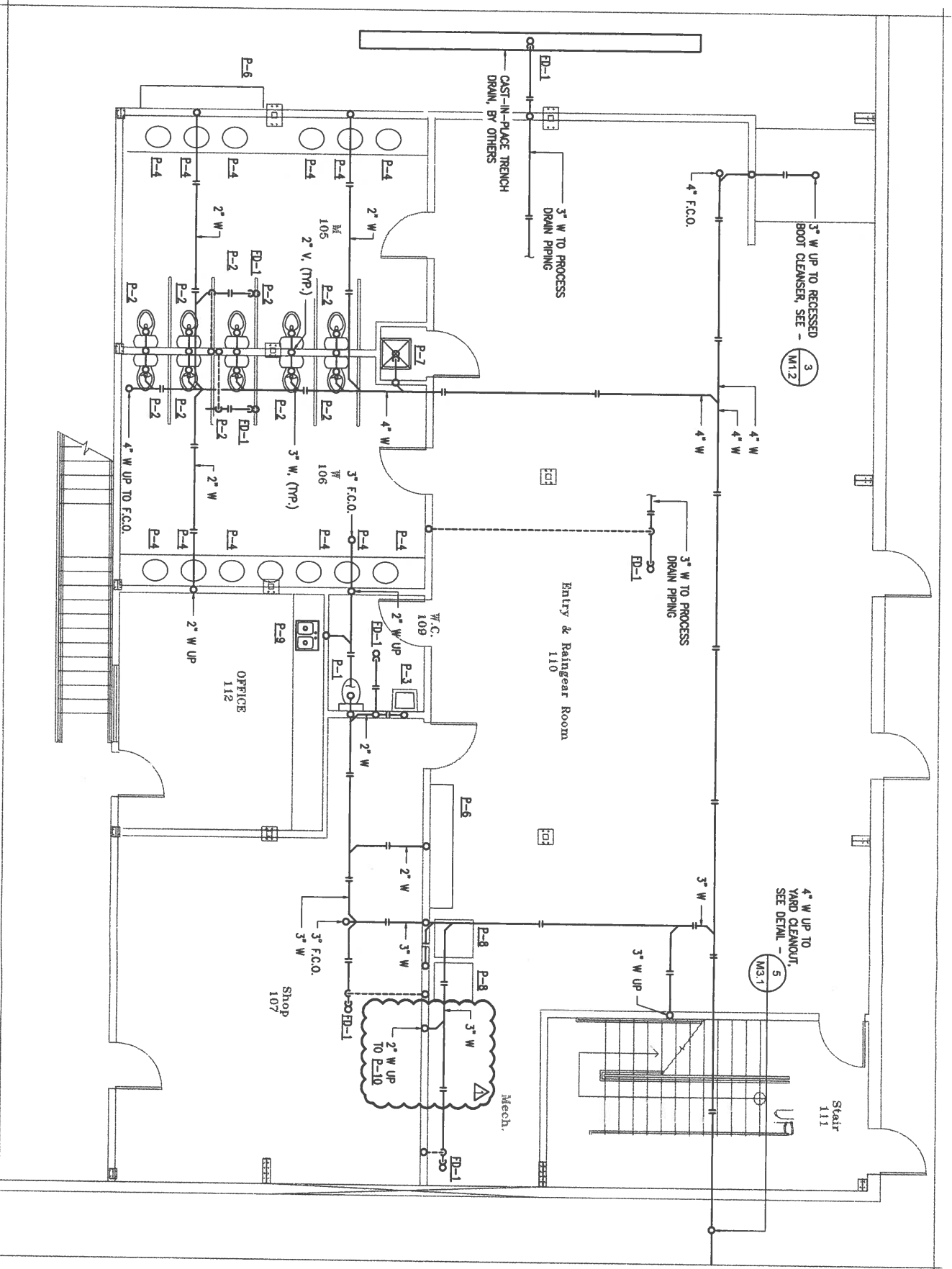


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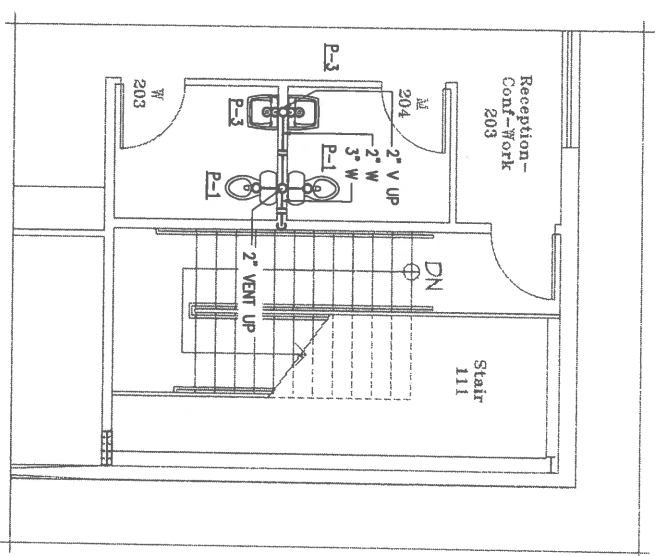
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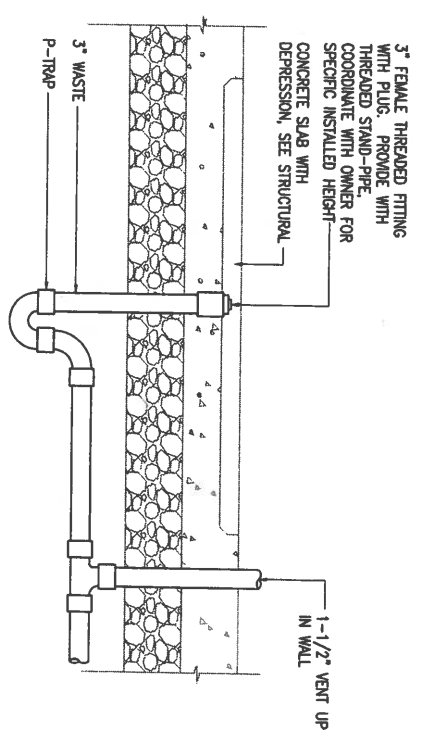
M1.1
 Processing Plant



1 ENLARGED TOILET ROOM WASTE PIPING PLAN
1/4" = 1'-0"



2 MEZZANINE WASTE PIPING PLAN
1/4" = 1'-0"



3 BOOT CLEANSER
NO SCALE

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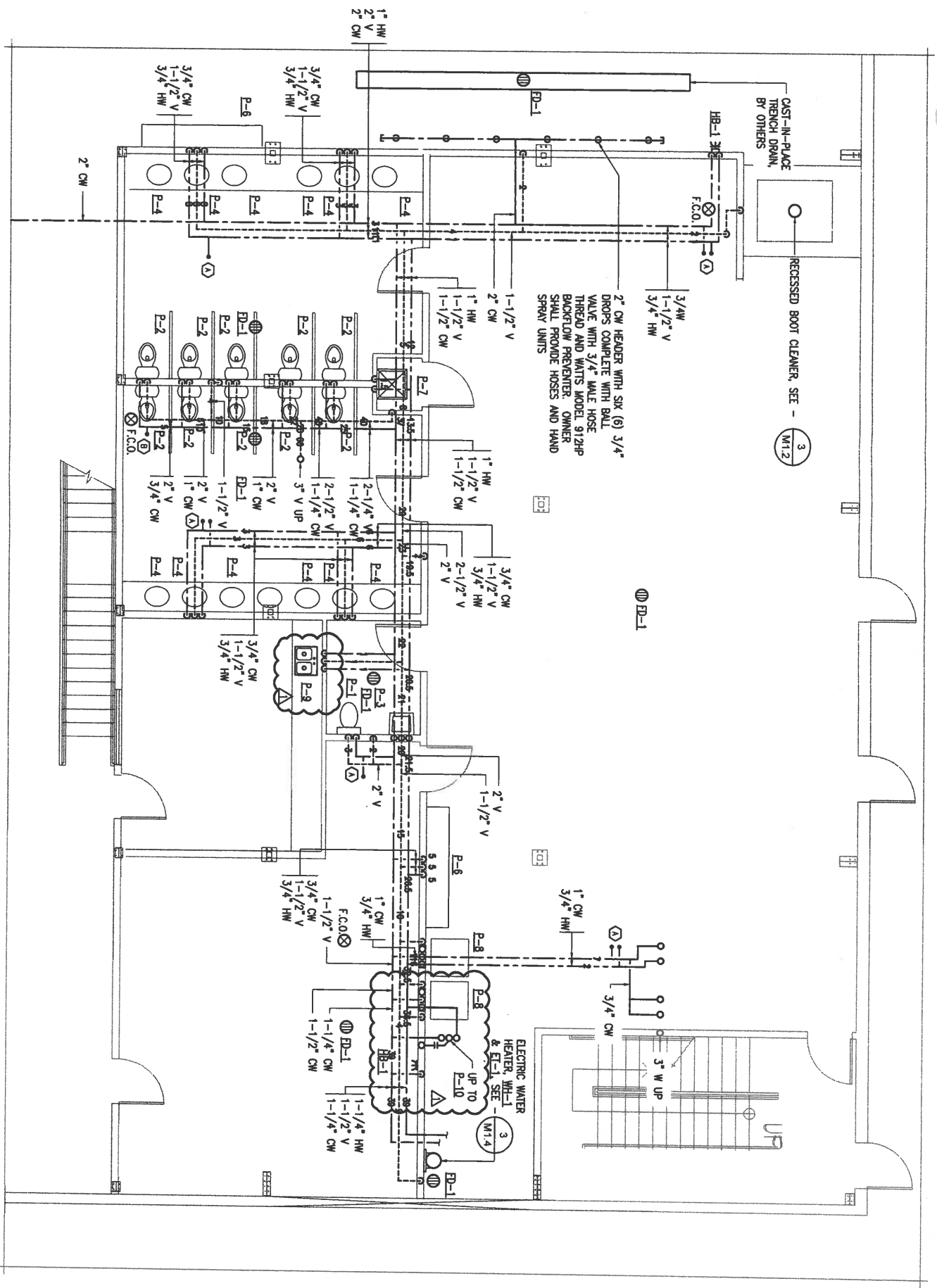
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Naknek Facility Development
Silver Bay Seafoods, LLC
Naknek, Alaska
Enlarged Toilet Room Piping Plan

Processing
Plant

M1.2



1 ENLARGED TOILET ROOM PLUMBING PIPING PLAN
1/4" = 1'-0"

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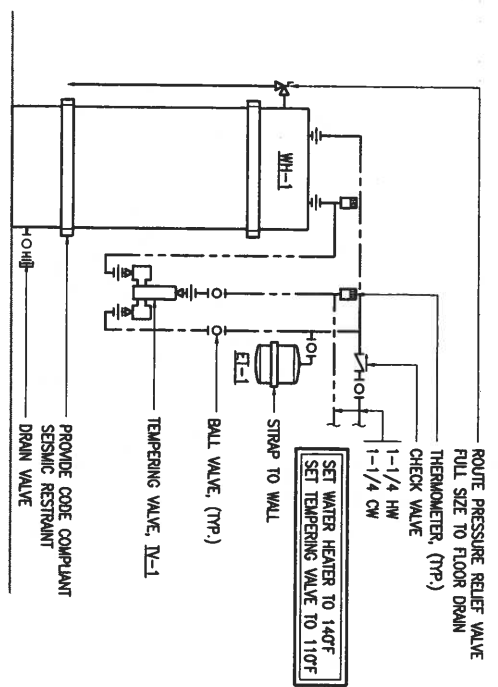


Naknek Facility Development
 Silver Bay Seafoods, LLC
 Naknek, Alaska
 Enlarged Toilet Room Plan

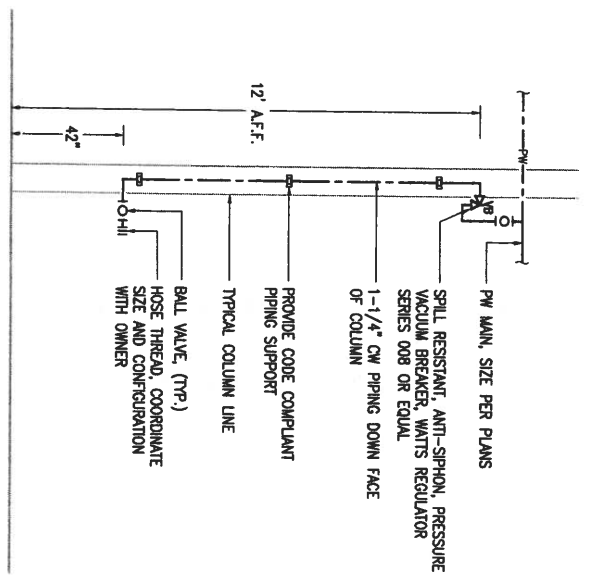
Processing
 Plant

M1.3

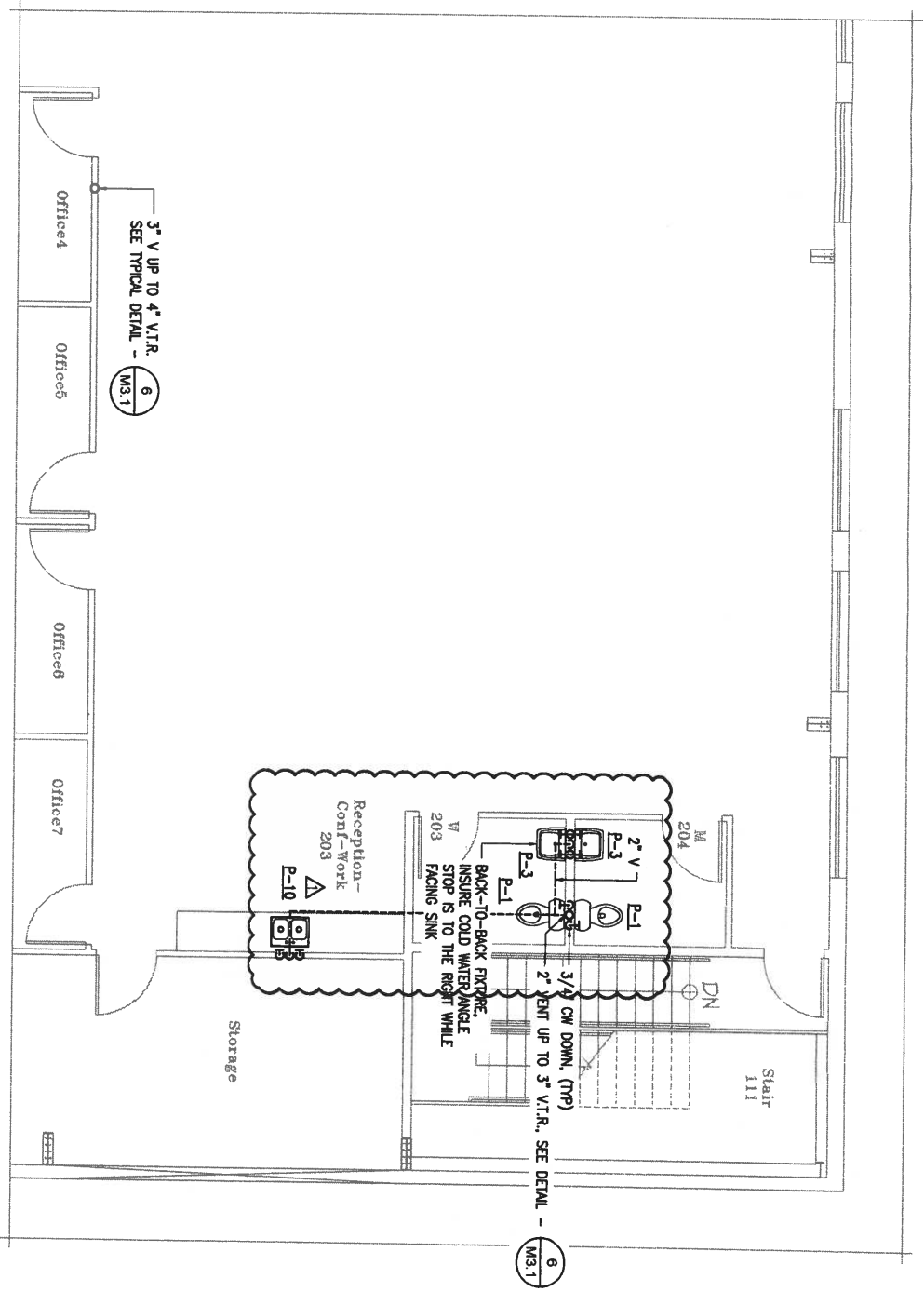
2 NOT USED
NO SCALE



3 WATER HEATER PIPING
NO SCALE



4 TYPICAL HOSE BIBB - HB-2 PIPING DETAIL
NO SCALE



1 SECOND FLOOR PLUMBING PLAN
1/4" = 1'-0"

Naknek Facility Development
Silver Bay Seafoods, LLC
Naknek, Alaska
Second Floor Plumbing Plan



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Processing Plant
M1.4

REVISIONS:
 07/15/2013
 OWNER REQUEST CHANGES

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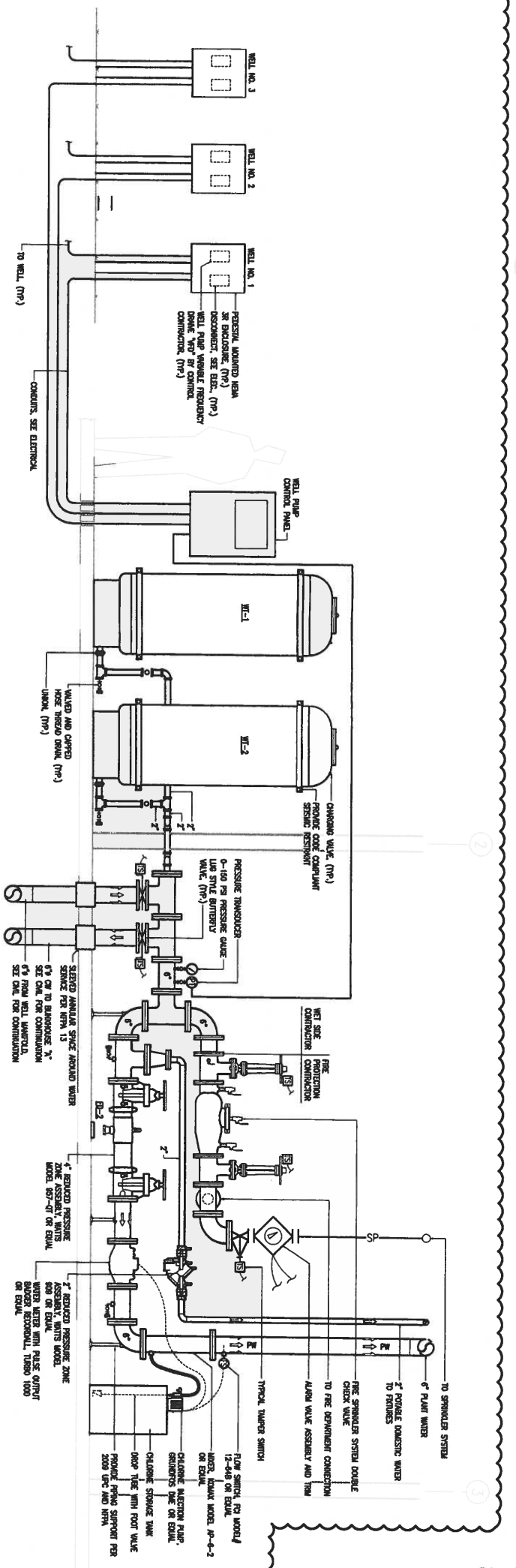
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 architects
 spa



Naknek Facility Development
 Silver Bay Seafoods, LLC
 Naknek, Alaska
WELL PIPING DETAILS

Processing
 Plant

M4.1



1 PIPING SCHEMATIC
 1/4" = 1'-0"

EXPANSION TANK SCHEDULE			
SYMBOL	W/GR/MODEL	MEDIUM	MATERIAL
WT-1	AMTROL-WX-452	WATER	STEEL SHELL, BUTYL DIAPHRAGM, POLYPROPYLENE LINER
WT-2	AMTROL-WX-452	WATER	STEEL SHELL, BUTYL DIAPHRAGM, POLYPROPYLENE LINER

TANK TANK	VOLUME	ACCEPTANCE FACTOR	DIMENSIONS	REMARKS
WT-1	211 GALLONS	0.65	30" DIA x 91" HIGH	17.5 PSIG WORKING PRESSURE, NF'S STANDARD 81 LISTED, PRECHARGE TO 80 PSIG.
WT-2	211 GALLONS	0.65	30" DIA x 91" HIGH	17.5 PSIG WORKING PRESSURE, NF'S STANDARD 81 LISTED, PRECHARGE TO 80 PSIG.

BOOSTER PUMP SPECIFICATIONS:

PROGRAMMABLE CONTROLLER: THE PLC SHALL CONTROL AND MONITOR THE WELL PUMPS. THE PLC SHALL CONTAIN ALL RELAYS, HAND-OFF-AUTO SWITCHES FOR THE WELL PUMPS, PUMP RUNNING PILOT LIGHTS, A GENERAL ALARM LIGHT, RESET PUSH BUTTON, PLC AND IO MODULES (ALLEN-BRADLEY MICROLOGIX 1500), GRAPHICAL USER INTERFACE SCREEN (ALLEN-BRADLEY PANELVIEW 300), ENCLOSURE SHALL BE NEMA 3R. THE PLC CONTROL PANEL SHALL BE BY BORGAL CONTROLS INC.

PROGRAMMING: THE FACTORY-PROGRAMMED PROGRAMMABLE CONTROLLER SHALL BE CAPABLE OF BEING FIELD-PROGRAMMED. PROVIDE ONE LICENSED COPY OF THE PLC PROGRAMMING SOFTWARE. RECOMMEND SOFTWARE RESOURCES 500 STANDARD EDITION. CONTRACTOR SHALL PROVIDE FOR 40 HOURS MINIMUM TIME ON-SITE FOR THE PLC PROGRAMMING. THE PLC PROGRAMMER SHALL BE RESPONSIBLE FOR PROVIDING ALL PROGRAMMING FOR CONTROL AND MONITORING OF THE WELL PUMPS.

USER INTERFACE: CONTROL PANEL SHALL CONTAIN A DISPLAY AND KEYBOARD TO SET VALUES OR CONTROL PARAMETERS. THE TWO-LINED DISPLAY SHALL INDICATE SET VALUES, ACTUAL VALUES, OPERATING HOURS, SPEED, CONTROL PARAMETERS, AND FAULT SIGNALS IN CLEAR ANALOG READINGS PROGRAMMABLE WITH THREE COLORED DIODES TO SIGNAL POWER ON, PUMP RUNNING, AND FAULT. SETTING OF PARAMETERS MAY BE COMPLETELY OR PARTIALLY LOCKED BY PASSWORD. UNIT SHALL BE CAPABLE OF SPECIFIC PROGRAMMING FOR:

- LACK OF SUCTION PRESSURE
- RUN-OUT AND DEAD HEAD PROTECTION
- CONSTANT PRESSURE
- CONSTANT FLOW
- FOLLOWING A SETPOINT CURVE
- MULTI-PUMP OPERATION

EXTERNAL INTERFACE: THE CONTROL UNIT SHALL CONTAIN TERMINALS WHICH CAN BE CONNECTED TO EXTERNAL DEVICES FOR:

- REMOTE START AND STOP
- LOW WATER PROTECTION SWITCH
- PUMP RUN SIGNAL
- MOTOR CONNECTION
- PUMP FAULT SIGNAL
- POWER SUPPLY

THE PLC SHALL BE CAPABLE OF AUTOMATIC START AND STOP OF MORE THAN ONE WELL PUMP (UP TO THREE) AND CAN PROVIDE AUTOMATIC CHANGEOVER AND LEAD LAG SEQUENCING BASED ON EACH UNIT'S RUN TIME.

FAULT SIGNALS SHALL BE STORED FOR USER RETRIEVAL, AND THE CAPABILITY SHALL BE PROVIDED TO PROGRAM AN AUTOMATIC TEST RUN AFTER PERIODS OF SHUTDOWN.

PRESSURE CONTROL: A PRESSURE CONTROL SHALL ASSURE THAT THE PUMP STOPS AT ZERO DEMAND.

PRESSURE TRANSDUCER - PROVIDE PRESSURE TRANSDUCERS AS REQUIRED.

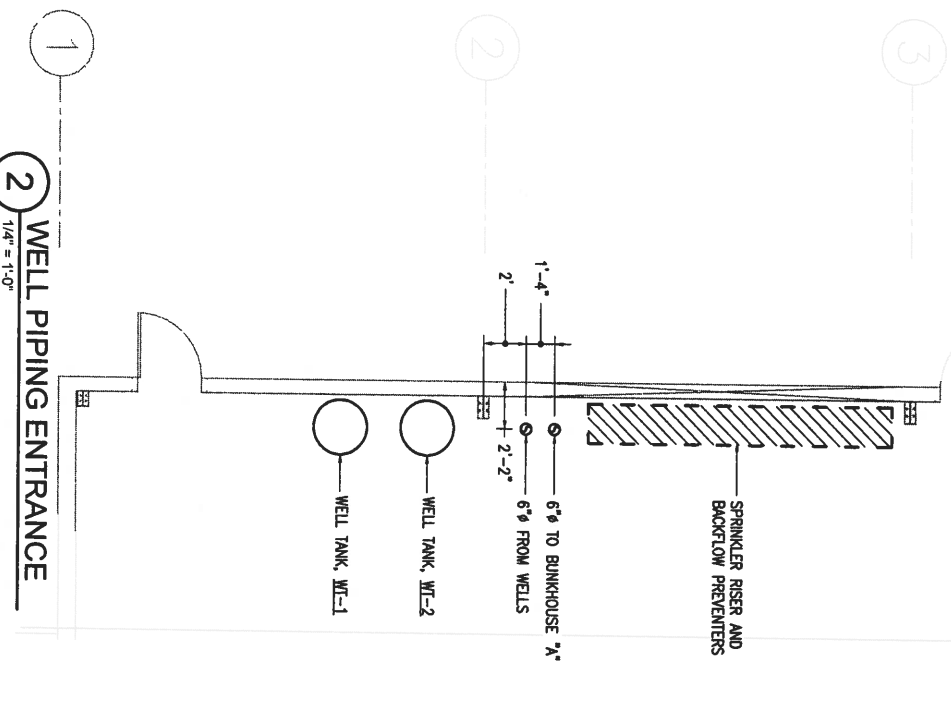
PRESSURE TRANSDUCERS SHALL BE ROSEMOUNT MODEL 3051T WITH 4 TO 20MA OUTPUT AND LCD DISPLAY. TRANSDUCERS SHALL BE WIRED TO PLC PANEL BY CONTROL PANEL SUPPLIER.

- DISPLAY:
- GRAPHICAL LCD DISPLAY
 - ON, RUN AND FAULT DISPLAY LIGHTS
- PROTECTION:
- SHORT CIRCUIT
 - GROUND FAULT
 - UNDER-VOLTAGE
 - OVERHEATING
 - OVER-LOAD
 - OVER-VOLTAGE
 - MOTOR OVER-TEMPERATURE
 - LOW/NO WATER
 - FLOOD EMISSION

CONTROL WITH PID:

CONTROLS: INPUT LINE REACTOR DRIVES SHALL BE PROVIDED WITH A SEPARATE AC LINE REACTOR WITH 1.5% IMPEDANCE, LOCATED BETWEEN DISCONNECT AND VFD MOUNTED INSIDE SEPARATE NEMA 1 ENCLOSURE. EACH UNIT TO HAVE SEPARATE DISCONNECT, NEMA 1 OR 12.

CONTRACTOR SHALL PROVIDE A FACTORY AUTHORIZED REPRESENTATIVE TO APPROVE INSTALLATION AND TO PROVIDE 4 (FOUR) HOURS OF START-UP AND MAINTENANCE INSTRUCTION TO THE OWNER'S PERSONNEL. INSTRUCTION SHALL BE PROVIDED AFTER ALL UNITS HAVE BEEN FIELD TESTED AND ACCEPTED.



2 WELL PIPING ENTRANCE
 1/4" = 1'-0"