

AS-BUILT
~~CONSTRUCTION~~ PLANS FOR

DILLINGHAM AIRPORT

AIRPORT SEWER IMPROVEMENTS

SEWER MAIN, SERVICE CONNECTIONS, & LIFT STATION

57995

1990

SPONSORED BY THE CITY OF DILLINGHAM &
SPONSORED BY THE STATE OF ALASKA

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
DESIGN AND CONSTRUCTION CENTRAL REGION

AS-BUILT

APPROVED *Jerome R. George*
JEROME R. GEORGE/P.E.

DATE 3-27-92
CHIEF OF CONSTRUCTION

APPROVED
LYLE LARSON

Lyle Larson DATE May 29, 1990
CITY MANAGER, CITY OF DILLINGHAM

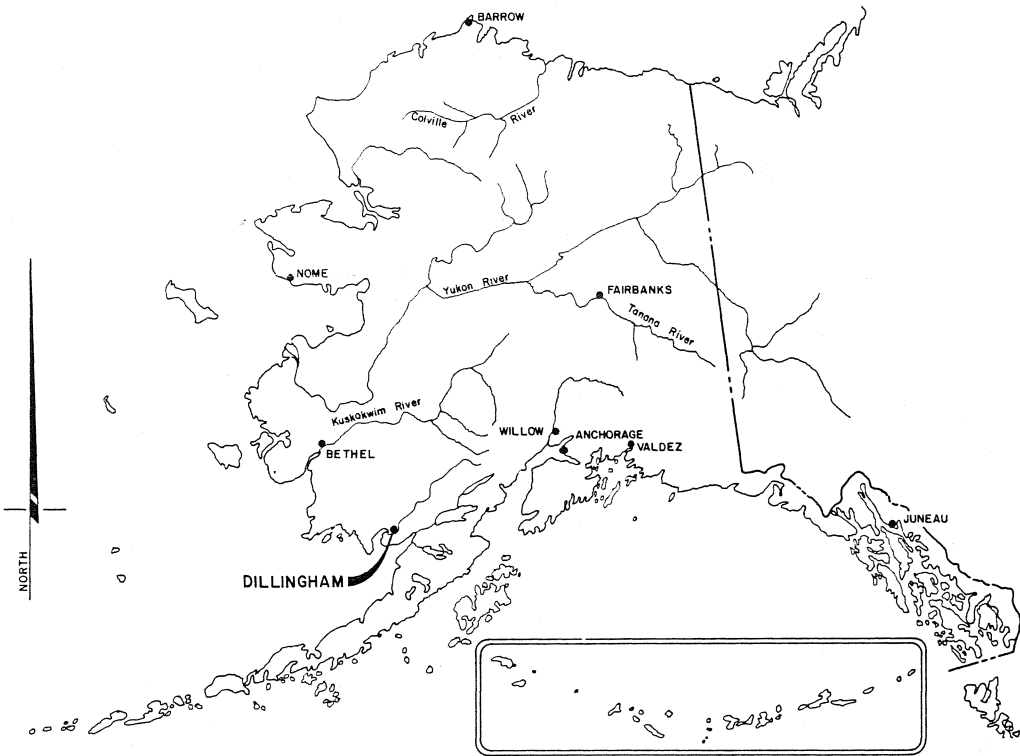
APPROVED *Tommy Gene Heinrich*
TOMMY GENE HEINRICH, P.E.

DATE 6-25-90
DIRECTOR, DESIGN AND CONSTRUCTION

CONSULTANT: WM. J. NELSON & ASSOCIATES KENAI, ALASKA

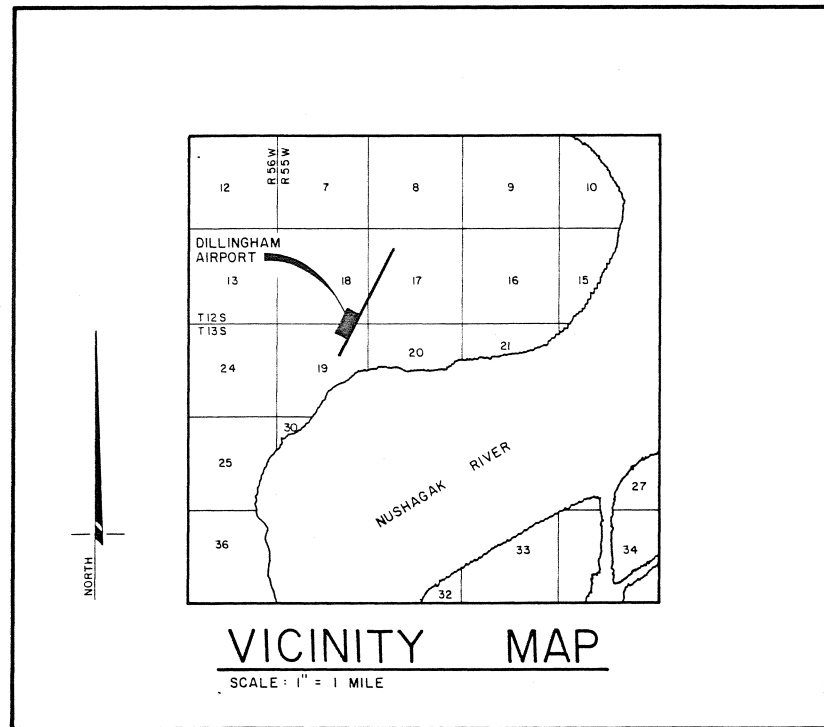
DILLINGHAM

SHT. 1 of 11 57995



LOCATION MAP

NO SCALE



VICINITY MAP

SCALE: 1" = 1 MILE

ESTIMATED QUANTITIES

BASIC BID SCHEDULE ESTIMATED QUANTITIES

ITEM	DESCRIPTION	ESTIMATED QUANTITY
20.02	Clearing and Grubbing	All Required
20.05	Type I Classified Fill and Backfill	755 cubic yards
20.07	Trench Excavation and Backfill	2256 linear feet
20.09	Furnish Trench Backfill	335 linear feet
20.11	Furnish Bedding Material (Class C)	2256 linear feet
20.13	Disposal of Unsuitable or Surplus Material	538 cubic yards
20.14	Mechanical Compaction	335 linear feet
20.19	Removal of Existing Pavement	103 square yards
30.03	PCC Pavement	(DELETED PER C.O. #2)
50.02(a)	Furnish and Install 8" Cl. 52 Sewer	1130 linear feet
50.02(b)	Furnish and Install 8" HDPE Sewer	164 linear feet
50.02(c)	Furnish and Install 4" HDPE Sewer	962 linear feet
50.03	Sanitary Sewer Manhole	7 each
50.10	Sanitary Sewer Service Connection	1 each
55.12	Furnish and Install Culvert (18"dx14ga.)	60 linear feet
70.14	Reset Fence	320 linear feet
70.18	Pipe Insulation	10640 board feet
75.05	Seeding	120 pounds
90.04	Traffic Maintenance	One Job Lump Sum
90.15	Existing Utilities in Construction Zone	One Job Lump Sum
90.20	Mobilization / Demobilization	One Job Lump Sum
122	D&E INCENTIVE	CONTINGENT SUM

ADDITIVE ALTERNATE BID SCHEDULE ESTIMATED QUANTITIES

ITEM	DESCRIPTION	QUANTITY
50.19	Lift Station and Enclosure Building	One Job

CHANGE ORDER NO. 1

ITEM	DESCRIPTION	ESTIMATED QUANTITIES
50.02 d	DRESSER COUPLERS	One Job LUMP SUM
55.12 d	INSTALL 24" CMP	One Job LUMP SUM
50.02 bb	INSTALL 8" HDPE	One Job LUMP SUM
20.14 d	REMOVE FENCE	One Job LUMP SUM

CHANGE ORDER NO. 2

660 d	ASPHALT CONCRETE	103 SQUARE YARDS
55.13	12" STEEL CASING	100 Linear Feet

CHANGE ORDER NO. 3

ABBREVIATIONS

ABS	ABESTOS	N	NORTH
ACMF	ALUMINUM CAP	NIC	NOT IN CONTRACT
	MONUMENT FOUND	NO	NUMBER
ADJ	ADJUST	NTS	NOT TO SCALE
APPROX	APPROXIMATE	OC	ON CENTER
ASTM	AMERICAN SOCIETY FOR TESTING MATERIAL	OD	OUTSIDE DIAMETER
BCMF	BRASS CAP MONUMENT FOUND	P	PHONE
BLDG	BUILDING	PC	POINT OF CURVATURE
BLM	BUREAU OF LAND MANAGEMENT	PCC	PORTLAND CEMENT CONCRETE, POINT OF COMPOUND CURVE
CI	CAST IRON or CIRCLE	PED	PEDISTAL
CL	CHAIN LINK or CENTER LINE or CLASS	PI	POINT OF INTERSECTION
CLR	CLEAR	PP	POWER POLE
CMP	CORRUGATED METAL PIPE	PR	PAIR
CLASS	CLASSIFIED	PRESS.TREAT	PRESSURE TREATED
C/O	CLEAN OUT	PT	POINT OF TANGENCY, POINT
CONC	CONCRETE	PVC	POLY VINYL CHLORIDE
CONN	CONNECT	R	RADIUS, RECORD
CONST	CONSTRUCT	RD	ROAD
CUL	CULVERT	RECOMM	RECOMMENDATION
DI	DUCTILE IRON	REF	REFERENCE
DIA	DIAMETER	REQD	REQUIRED
E	EAST, ELECTRIC LINE	ROW	RIGHT OF WAY
EA	EACH	RT	RIGHT
EL	ELEVATION	S	SOUTH, SLOPE
ELECT	ELECTRIC, ELECTRICAL	SD	STORM DRAIN
ELEV	ELEVATION	SDR	SIZE, DIMENSION, RANGE
EOP	END OF PAVEMENT	SHLD	SHOULDER
EQ	EQUAL	SPEC	SPECIFICATIONS
ESMT	EASEMENT	STA	STATION
EXIST	EXISTING	STD	STANDARD
EXP	EXPANSION	SY	SQUARE YARDS
F	FOUND	T	TELEPHONE CABLE,
FRP	FIBERGLAS REINFORCED POLYESTER	TEMP	TEMPORARY
GA	Gauge	TH	TEST HOLE
GALV	GALVANIZED	TYP	TYPICAL
HDPE	HIGH DENSITY POLYETHYLENE	USS	UNITED STATES SURVEY
ID	INSIDE DIAMETER	V	VOLTS
IE	INVERT ELEVATION	VER	VERIFY
INSUL	INSULATE	W	WEST, WATER
INV	INVERT		
L	LENGTH		
LF	LINEAR FEET		
LOC	LOCATION		
LT	LEFT		
MAX	MAXIMUM		
MFR	MANUFACTURER		
MH	MANHOLE		
MIN	MINIMUM		
MON	MONUMENT		

LEGEND

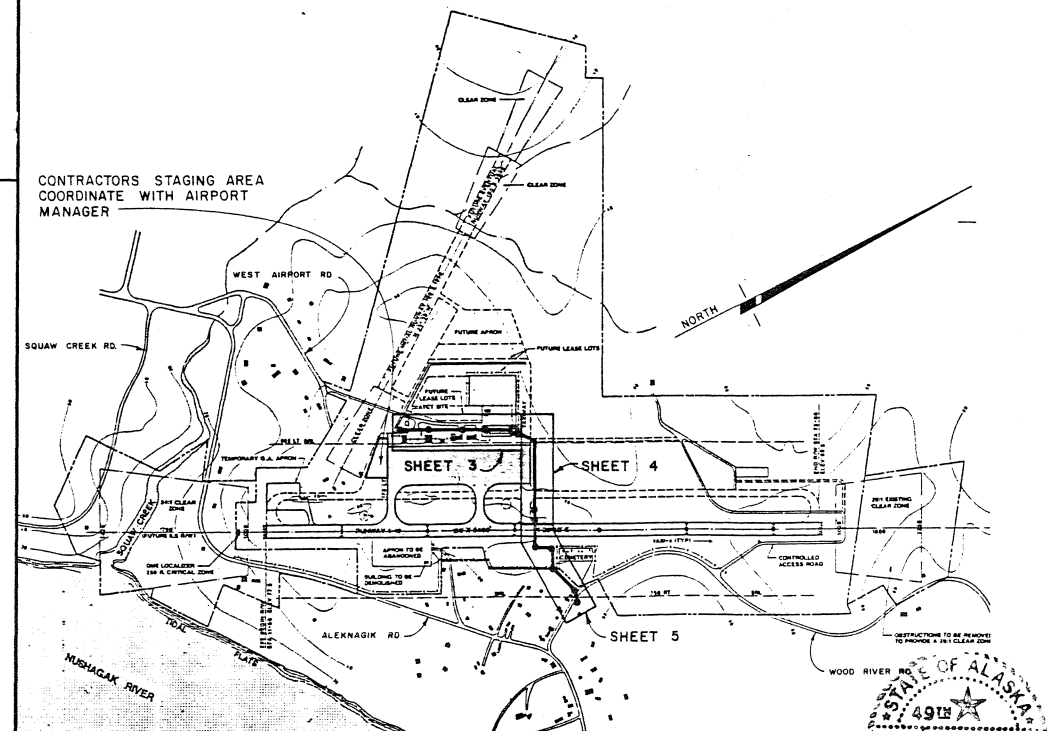
—	PROPERTY LINE
—	CENTERLINE
—	UNDERGROUND TELEPHONE
—	UNDERGROUND GAS
—	UNDERGROUND ELECTRIC
—	UNDERGROUND CABLE TELEVISION
—	CHAIN LINK FENCE
—	SOILS TEST HOLE
—	DRAINAGE PATTERN OR DITCH
—	PHONE PEDESTAL OR POWER BOX
—	POWER POLE
—	TREE LINE

INDEX

SHEET TITLE

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SHEET INDEX MAP

NO SCALE

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

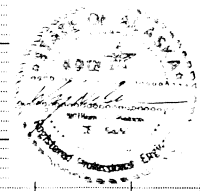
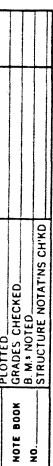
DILLINGHAM AIRPORT 57995

ESTIMATED QUANTITIES, INDEX, LOCATION, VICINITY AND SHEET INDEX MAPS

			APPROVED			
				STEVE VAN HORN		DESIGN GROUP CHIEF
<i>WJD</i>	3/20/92	AS-BUILT	APPROVED			
D.A.C.	6-14-90	ESTIMATED QUANTITIES		WILLIAM KESTER PE		PROJECT MANAGER
BY	DATE	CHANGE	SCALE	DESIGNED	W.J.N.	DRAWN D.A.C.
		REVISIONS	AS SHOWN	CHECKED	W.J.N.	DATE 4-19-90
						SHEET 2 OF 11

AS-BUILT 3/92

SHEET 2 OF 11

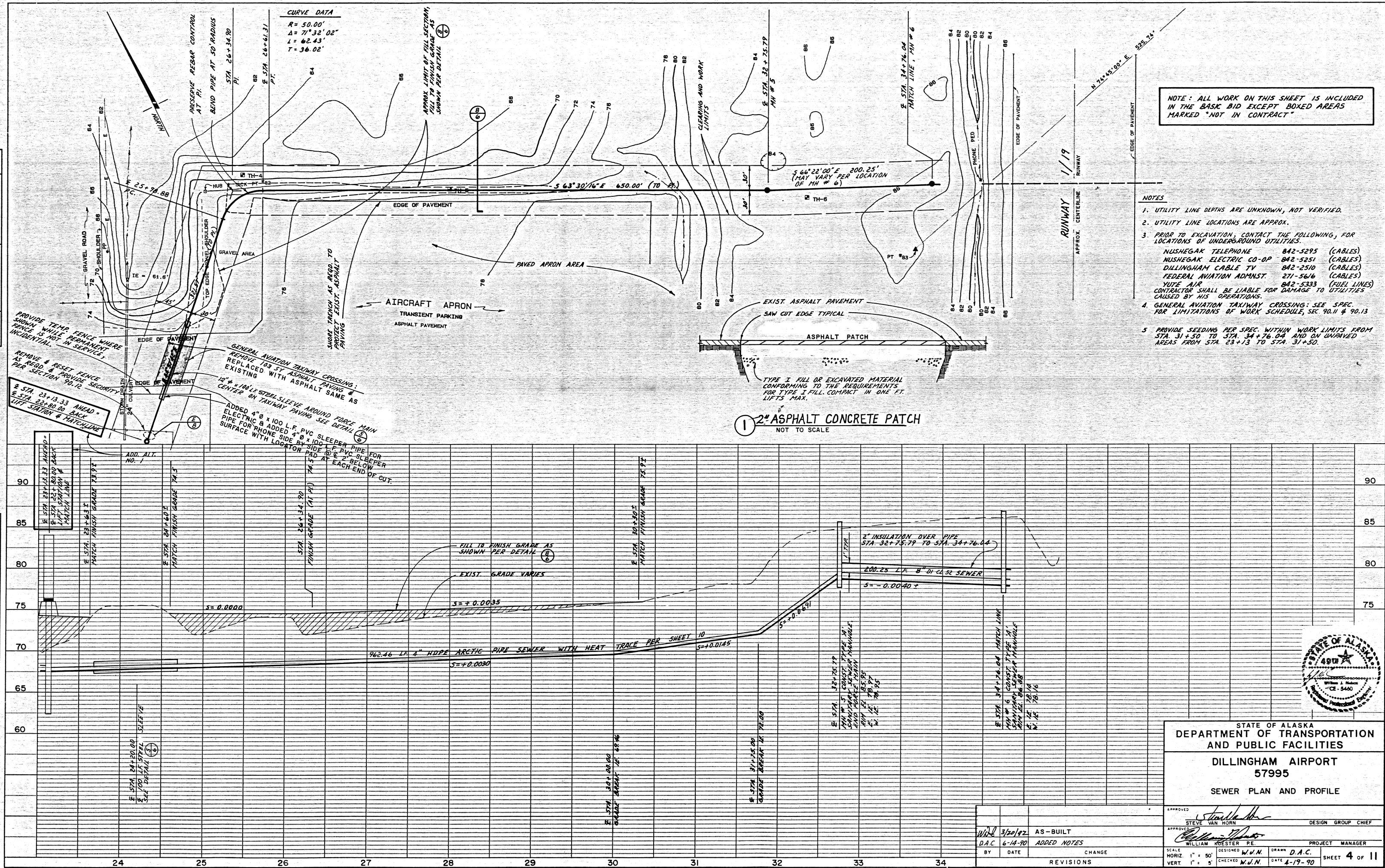


DESIGNED		DRAWN		PROJECT	
STEVE VAN HORN		D.A.C.		MANAGER	
DESIGNED		DRAWN		PROJECT	
WILLIAM KOESTER P.E.		D.A.C.		MANAGER	
HORIZ. 1" = 50'		VERT. 1" = 6'		SHEET 3 OF 11	

NOTE BOOK
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ALIGNED CHECKED
BY: _____
DATE: _____

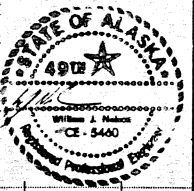
NOTE BOOK
NO. _____
STRUCTURE NOTATION CHKD
BY: _____
DATE: _____

NOTE BOOK
NO. _____
STRUCTURE NOTATION CHKD
BY: _____
DATE: _____



NOTE: ALL WORK ON THIS SHEET IS INCLUDED IN THE BASIC BID EXCEPT BOXED AREAS MARKED "NOT IN CONTRACT"

- NOTES
- UTILITY LINE DEPTHS ARE UNKNOWN, NOT VERIFIED.
 - UTILITY LINE LOCATIONS ARE APPROX.
 - PRIOR TO EXCAVATION, CONTACT THE FOLLOWING, FOR LOCATIONS OF UNDERGROUND UTILITIES.
NUSHEGAK TELEPHONE 842-5295 (CABLES)
NUSHEGAK ELECTRIC CO-OP 842-5251 (CABLES)
DILLINGHAM CABLE TV 842-2510 (CABLES)
FEDERAL AVIATION ADMNST. 271-5616 (CABLES)
YUTE AIR 842-5333 (FUEL LINES)
CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO UTILITIES CAUSED BY HIS OPERATIONS.
 - GENERAL AVIATION TAXIWAY CROSSING: SEE SPEC. FOR LIMITATIONS OF WORK SCHEDULE, SEC. 90.11 & 90.13.
 - PROVIDE SEEDING PER SPEC. WITHIN WORK LIMITS FROM STA. 31+50 TO STA. 34+76.04 AND ON UNPAVED AREAS FROM STA. 23+13 TO STA. 31+50.



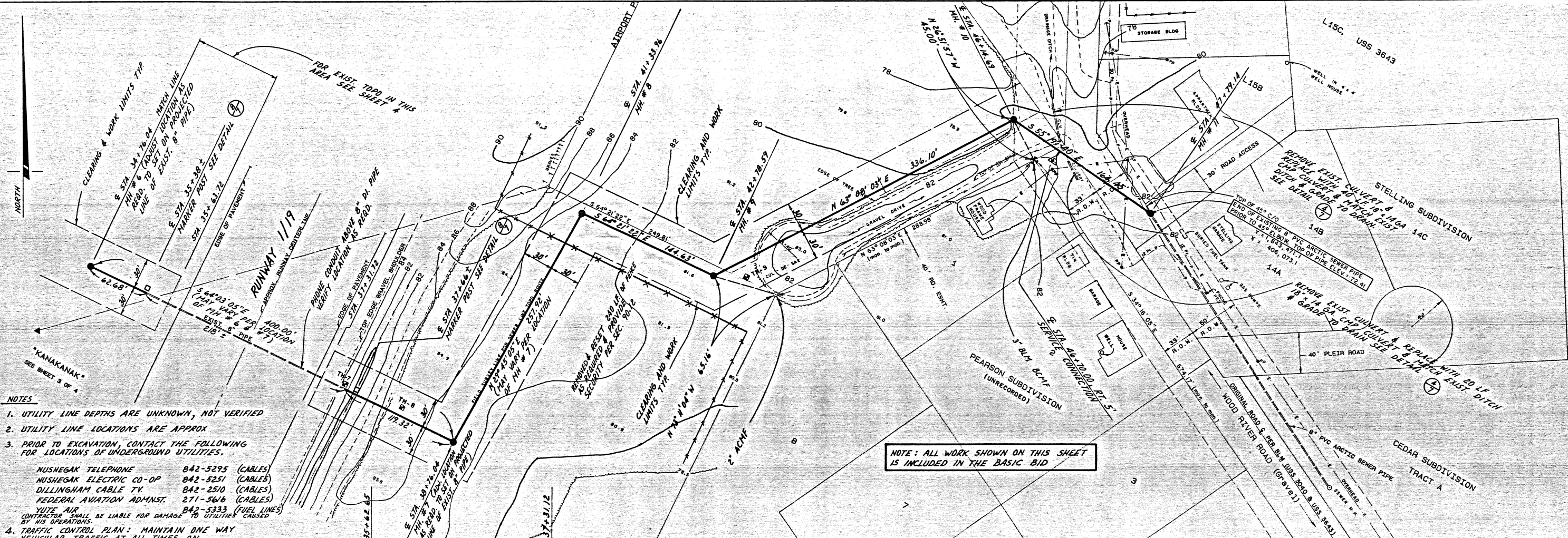
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
DILLINGHAM AIRPORT
57995
SEWER PLAN AND PROFILE

APPROVED: *Steve Van Horn*
STEVE VAN HORN
DESIGN GROUP CHIEF
APPROVED: *William J. Nester*
WILLIAM J. NESTER
PROJECT MANAGER
SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'
DESIGNED: W.J.N.
DRAWN: D.A.C.
CHECKED: W.J.N.
DATE: 4-19-90
SHEET 4 OF 11

SURVEYED	ALIGNED	CHECKED	RT. OF WAY
NO.	NO.	NO.	NO.

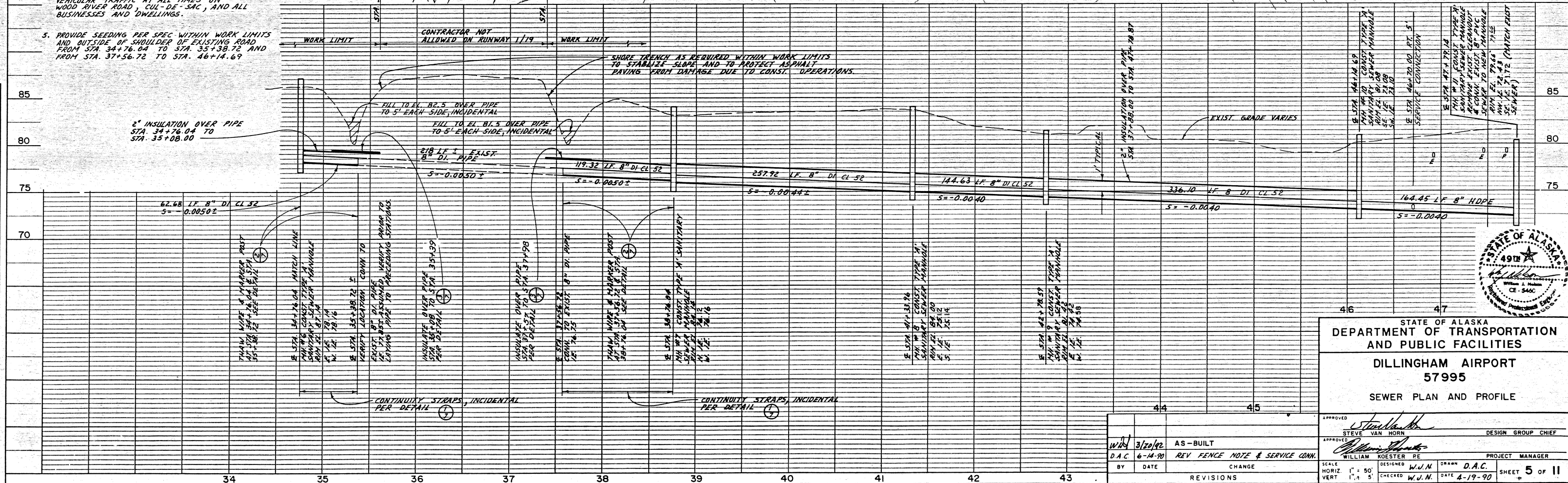
PLAN	GRADES	CHECKED	BY	NOTES
NO.	NO.	NO.	NO.	NO.

NO.	DATE	REVISIONS
1	3/20/92	AS-BUILT



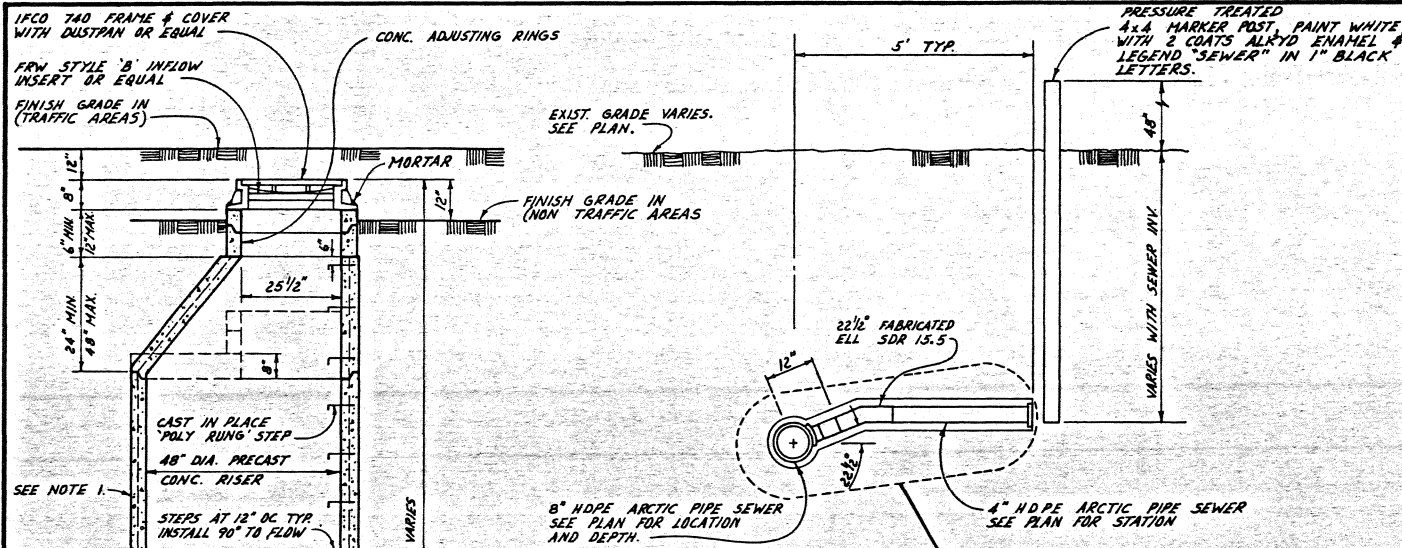
- NOTES**
- UTILITY LINE DEPTHS ARE UNKNOWN, NOT VERIFIED
 - UTILITY LINE LOCATIONS ARE APPROX
 - PRIOR TO EXCAVATION, CONTACT THE FOLLOWING FOR LOCATIONS OF UNDERGROUND UTILITIES.
 NUSHEGAK TELEPHONE 842-5295 (CABLES)
 NUSHEGAK ELECTRIC CO-OP 842-5251 (CABLES)
 DILLINGHAM CABLE TV 842-2510 (CABLES)
 FEDERAL AVIATION ADMIN. 271-5616 (CABLES)
 YUTE AIR 842-5333 (FUEL LINES)
 CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO UTILITIES CAUSED BY HIS OPERATIONS.
 - TRAFFIC CONTROL PLAN: MAINTAIN ONE WAY VEHICULAR TRAFFIC AT ALL TIMES ON WOOD RIVER ROAD, CUL-DE-SAC, AND ALL BUSINESSES AND DWELLINGS.
 - PROVIDE SEEDING PER SPEC WITHIN WORK LIMITS AND OUTSIDE OF SHOULDER OF EXISTING ROAD FROM STA. 34+76.04 TO STA. 35+58.72 AND FROM STA. 37+56.72 TO STA. 46+14.69

NOTE: ALL WORK SHOWN ON THIS SHEET IS INCLUDED IN THE BASIC BID



STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
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 DILLINGHAM AIRPORT
 57995
 SEWER PLAN AND PROFILE

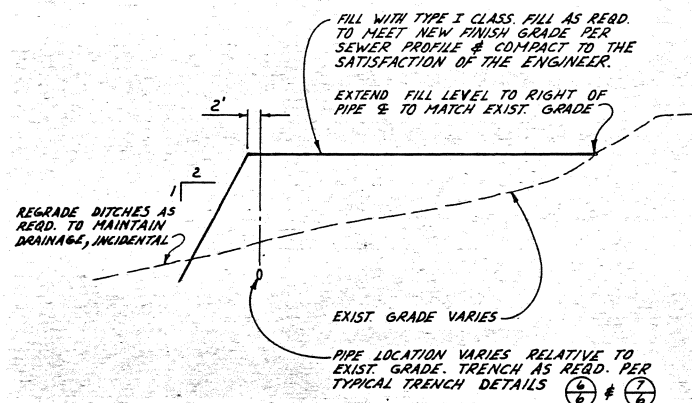
APPROVED	STEVE VAN HORN	DESIGN GROUP CHIEF
APPROVED	WILLIAM KOESTER RE	PROJECT MANAGER
SCALE	HORIZ. 1" = 50'	VERT. 1" = 5'
CHECKED	W.U.N.	DATE 4-19-90
BY	DATE	REVISIONS



1 TYPICAL SEWER SERVICE CONNECTION
SCALE: 1/2" = 1'-0"

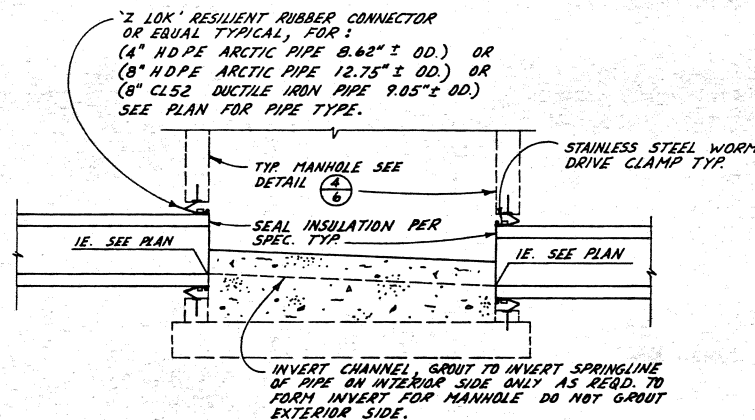
- MAHOLE NOTES**
1. MANHOLE BASE SECTION, RISERS SECTIONS, SLAB, COVER AND APPURTENANCES SHALL CONFORM TO ASTM C-478.
 2. BASE SLAB SHALL BE CAST MONOLITHICALLY WITH BASE RISER.
 3. ALL JOINTS BETWEEN PRECAST SECTIONS SHALL BE SEALED WITH 'RAMNEK' OR EQUAL BITUMINOUS GASKETS.
 4. PIPE CONNECTIONS TO MANHOLE SHALL BE MADE WITH RESILIENT RUBBER CONNECTORS CONFORMING TO ASTM C-923, 2 LOC, OR EQUAL AND SHALL PROVIDE A POSITIVE WATERTIGHT CONNECTION CAPABLE OF A 1" MOVEMENT HORIZONTAL AND VERTICAL WITHOUT LOSS OF SEAL.
 5. EXTERIOR OF MANHOLE SHALL BE COATED WITH A WATERPROOF BITUMASTIC COATING.

4 TYPICAL SANITARY SEWER MANHOLE TYPE 'A'
NOT TO SCALE

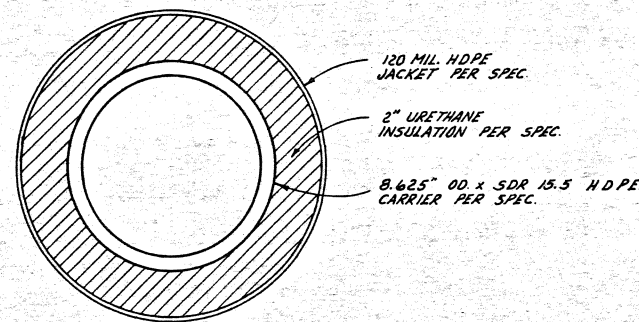


8 TYPICAL FILL SECTION
NOT TO SCALE

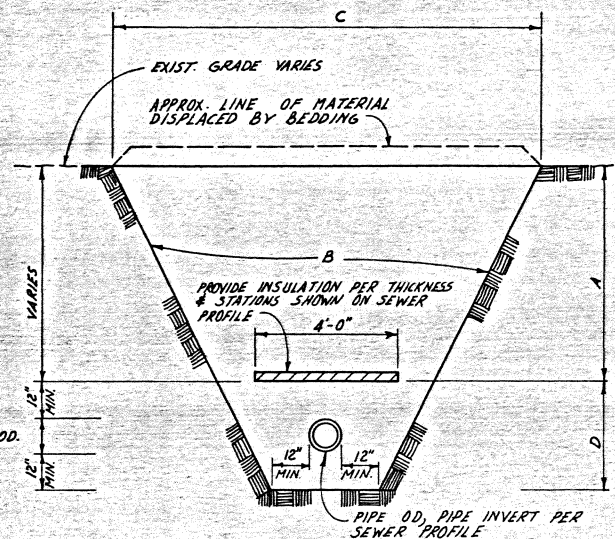
5 SLEEVE
SCALE: 3" = 1'-0"



9 PIPE CONNECTION TO MANHOLE
SCALE: 3/4" = 1'-0"



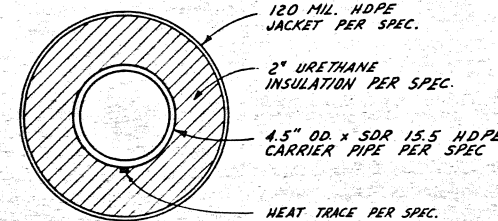
2 TYPICAL 8" HDPE ARCTIC PIPE
SCALE: 3" = 1'-0"



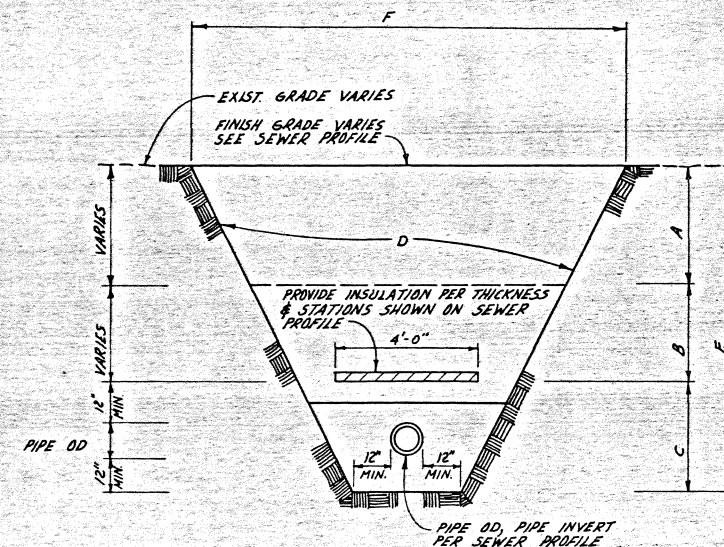
6 TYPICAL TRENCH SECTION
STA. 24 + 75 TO STA. 46 + 14.76
NOT TO SCALE

- NOTES**
- A. USE EXCAVATED SOILS FOR BACKFILL, NO FROZEN CHUNKS LARGER THAN 12" IN THEIR GREATEST DIMENSIONS SHALL BE PLACED WITHIN 24" OF THE PIPE LINE. SEGREGATE GRAVELLY SOIL FROM SILTY SOIL AS DIRECTED BY THE ENGINEER & PLACE SILTY SOILS IN LOWER AREAS, INCIDENTAL TO TRENCH EXCAVATION & BACKFILL (ITEM 20.07)
 - B. TRENCH WALL SLOPE WILL VARY WITH SOIL STRENGTH, MOISTURE CONTENT, TEMPERATURE, AND OTHER VARIABLE FIELD CONDITIONS, CONFORM TO APPLICABLE SAFETY STANDARDS, SHORE TRENCH AND DEWATER AS REQD. INCIDENTAL TO TRENCH EXCAVATION & BACKFILL (ITEM 20.07)
 - C. VARIES, SHORE TRENCH AS REQD. TO PROTECT EXIST. ASPHALT PAVEMENT.
 - D. *FURNISH BEDDING MATERIAL, CLASS C* (ITEM 20.11) PER LINEAR FOOT & COMPACT TO THE SATISFACTION OF THE ENGINEER.

NOTE: ALL WORK SHOWN ON THIS SHEET IS INCLUDED IN THE BASIC BID

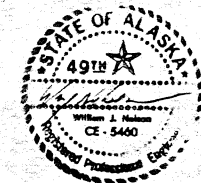


3 TYPICAL 4" HDPE ARCTIC PIPE
SCALE: 3" = 1'-0"



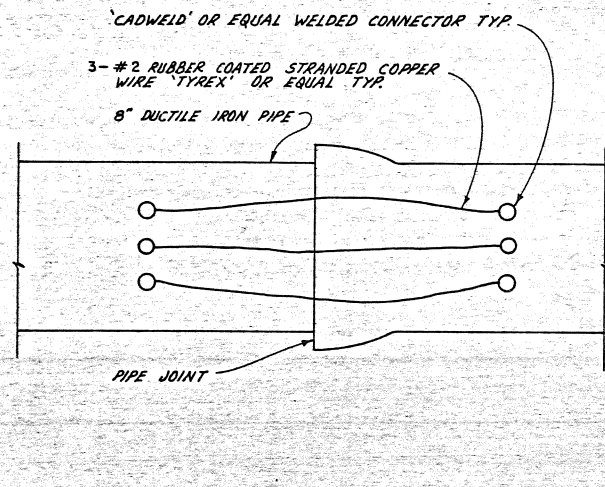
- NOTES**
- A. EXISTING GRAVELLY SOIL TO BE SEGREGATED, STOCKPILED AND USED FOR BACKFILL, AS DIRECTED BY THE ENGINEER, INCIDENTAL TO TRENCH EXCAVATION, BACKFILL AND COMPACTION, (ITEM 20.07)
 - B. DISPOSE OF UNSUITABLE MATERIAL (ITEM 20.13) PER CUBIC YARD AS DIRECTED BY THE ENGINEER. FURNISH TRENCH BACKFILL, TYPE I (ITEM 20.07), PER LINEAR FOOT.
 - C. DISPOSE OF UNSUITABLE MATERIAL (ITEM 20.13) PER CUBIC YARD AS DIRECTED BY THE ENGINEER. FURNISH BEDDING MATERIAL, CLASS C, (ITEM 20.11) PER LINEAR FOOT OF TRENCH.
 - D. TRENCH WALL SLOPES WILL VARY WITH SOIL STRENGTH, MOISTURE CONTENT, TEMPERATURE AND OTHER VARIABLE FIELD CONDITIONS, CONFORM TO APPLICABLE SAFETY STANDARDS, SHORE TRENCH & DEWATER AS REQD, INCIDENTAL TO TRENCH EXCAVATION & BACKFILL, (ITEM 20.07)
 - E. COMPACT TRENCH BACKFILL TO THE SATISFACTION OF THE ENGINEER.
 - F. 20' MAX. FROM STA. 8+80 TO STA. 24+75, SHORE TRENCH AS REQD TO STAY WITHIN LIMITS.

7 TYPICAL TRENCH SECTION
STA. 8+80 TO STA. 24+75 AND
STA. 46 + 14.76 TO STA. 47 + 79.14 AND SERVICE CONN.
NOT TO SCALE

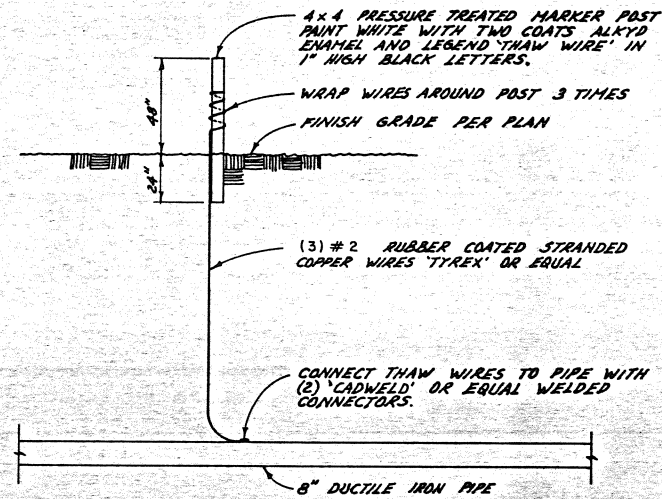


STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
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DILLINGHAM AIRPORT
57995
DETAILS

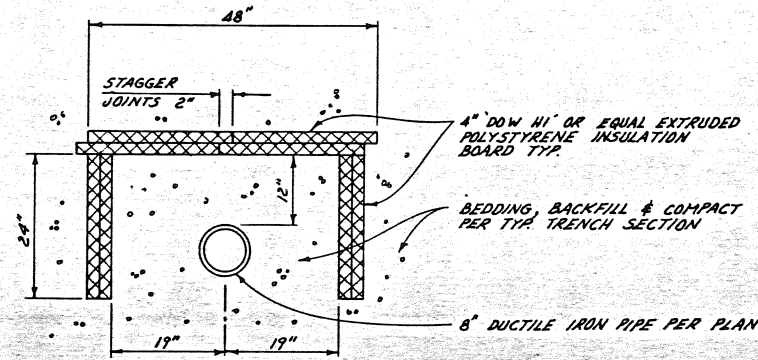
APPROVED	STEVE VAN HORN	DESIGN GROUP CHIEF
APPROVED	WILLIAM HOESTER	PROJECT MANAGER
BY	DATE	CHANGE
WJH	3/20/92	AS-BUILT
D.A.C.	6-14-90	REVISED NOTES
AS SHOWN	CHECKED	DATE
	W.J.N.	4-19-90



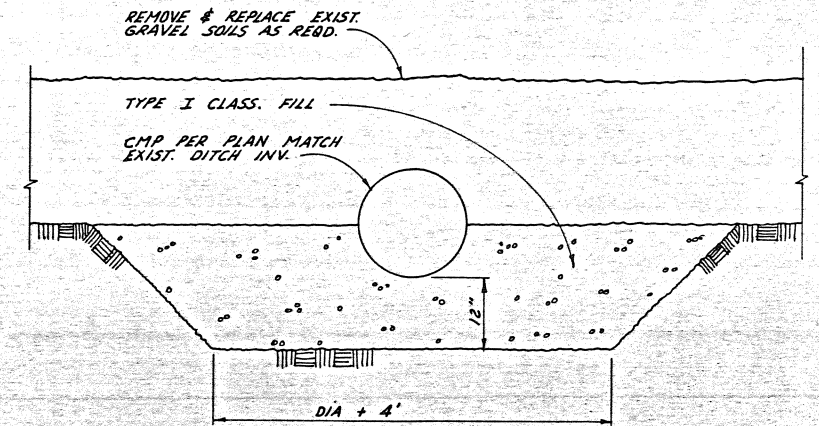
1 CONTINUITY STRAP
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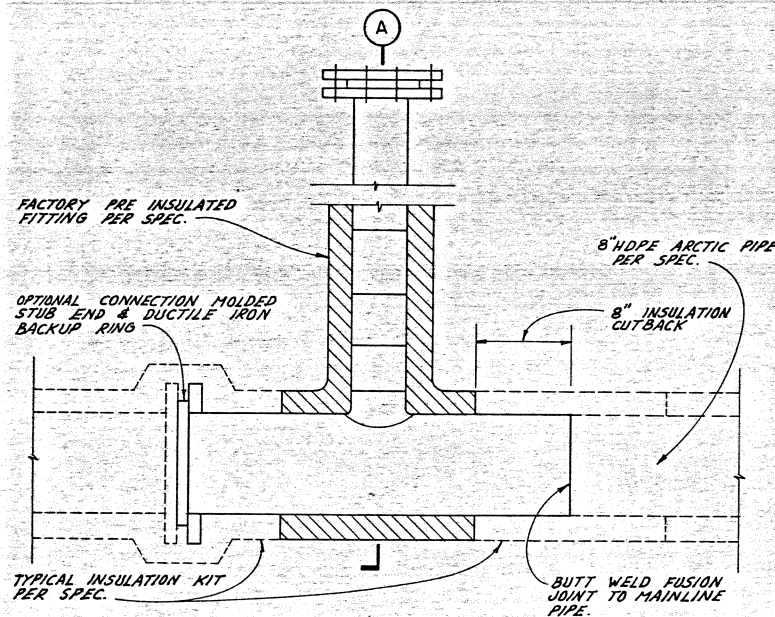
2 THAW WIRE & MARKER POST
NOT TO SCALE



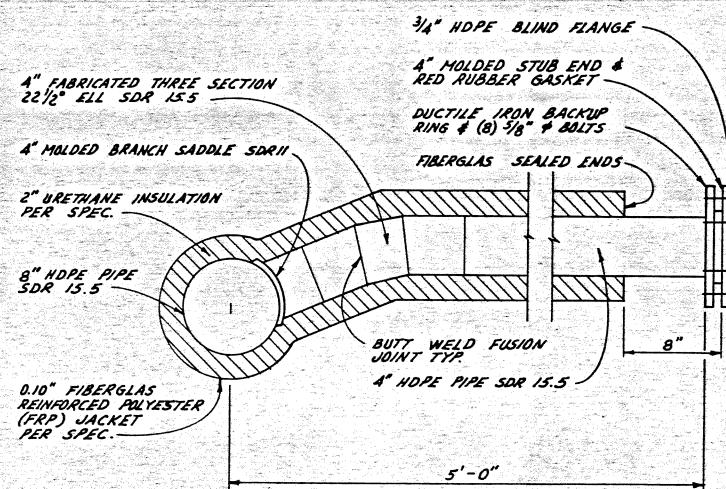
3 PIPE INSULATION
STA. 35 + 08 TO STA. 35 + 58 AND
STA. 37 + 38 TO STA. 37 + 88
SCALE: 3/4" = 1'-0"



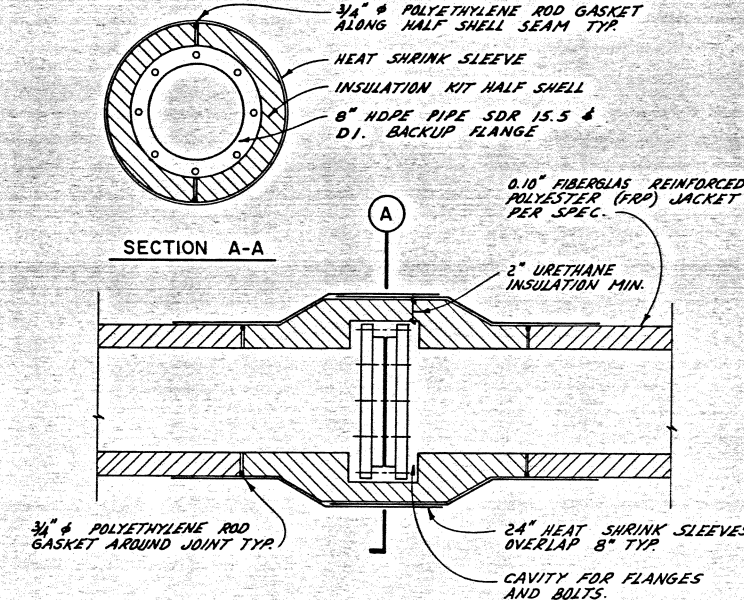
4 STANDARD CMP INSTALLATION
SCALE: 3/4" = 1'-0"



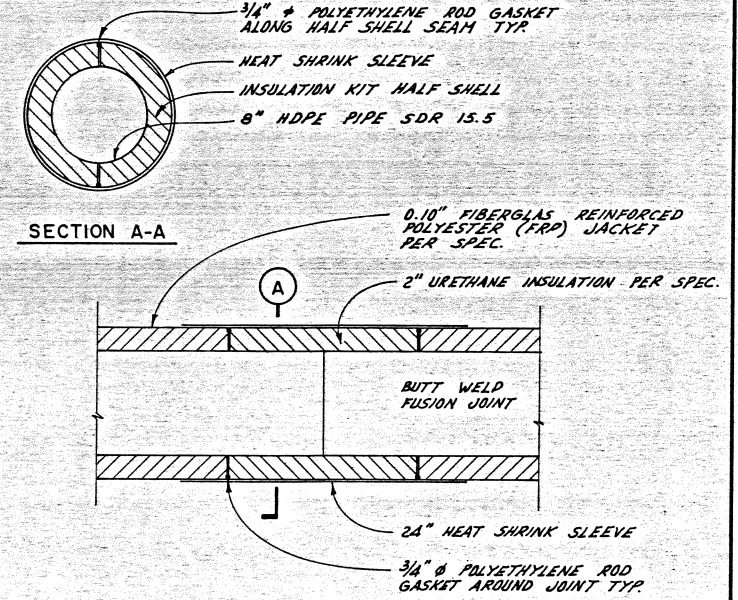
PLAN



SECTION A-A



PLAN

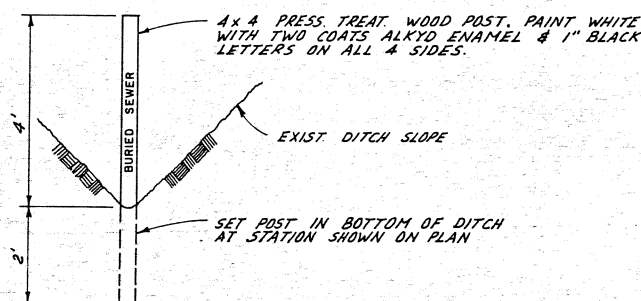


PLAN

5 TYPICAL SEWER SERVICE
SCALE: 1 1/2" = 1'-0"

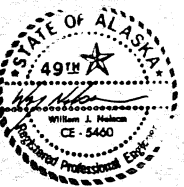
6 TYPICAL FLANGE JOINT INSULATION KIT
SCALE: 1 1/2" = 1'-0"

7 TYPICAL BUTT WELD FUSION JOINT INSULATION KIT
SCALE: 1 1/2" = 1'-0"



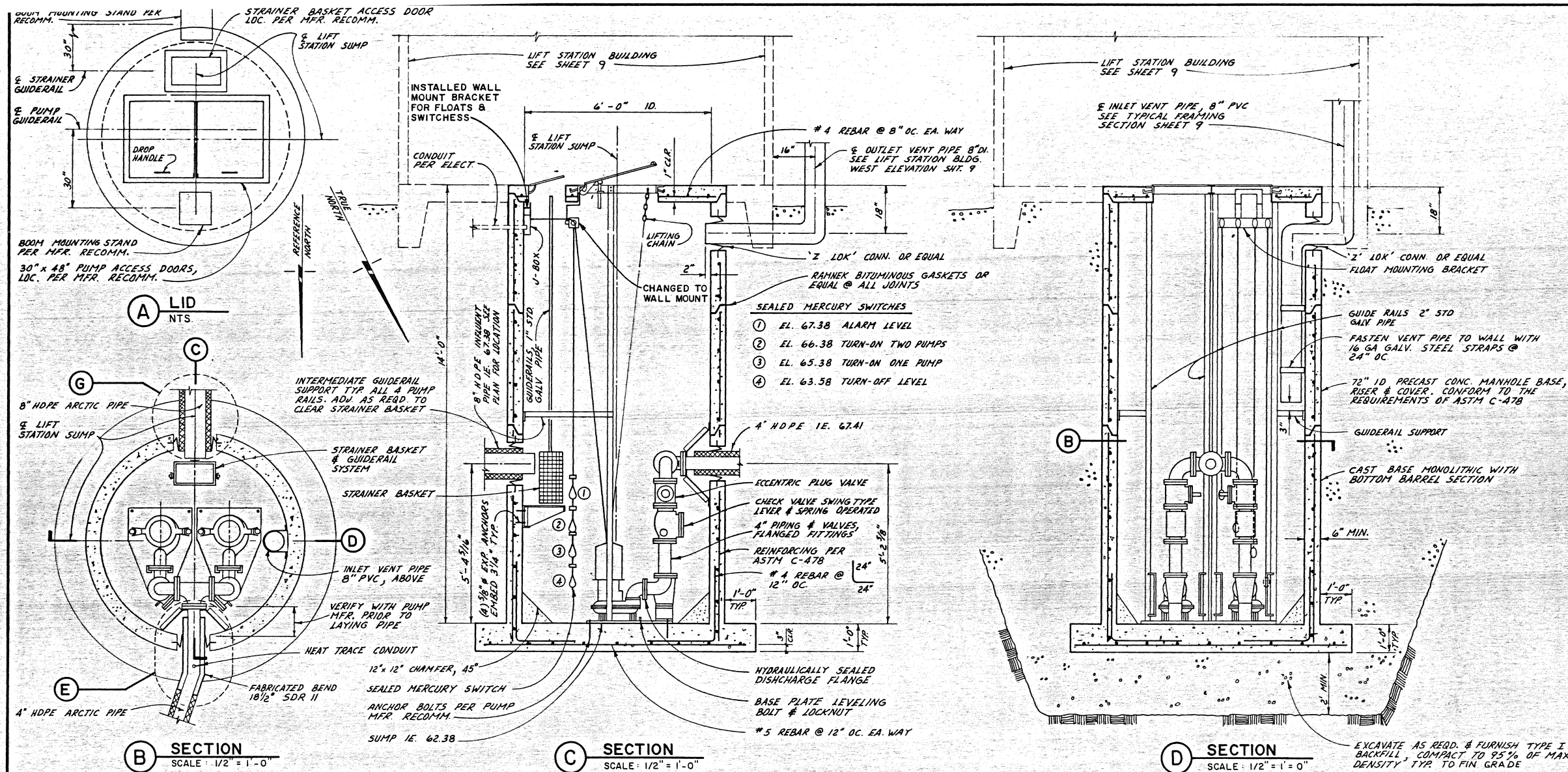
8 SEWER MARKER POST
SCALE: 1 1/2" = 1'-0"

NOTE: ALL WORK SHOWN ON THIS SHEET IS INCLUDED IN THE BASIC BID.



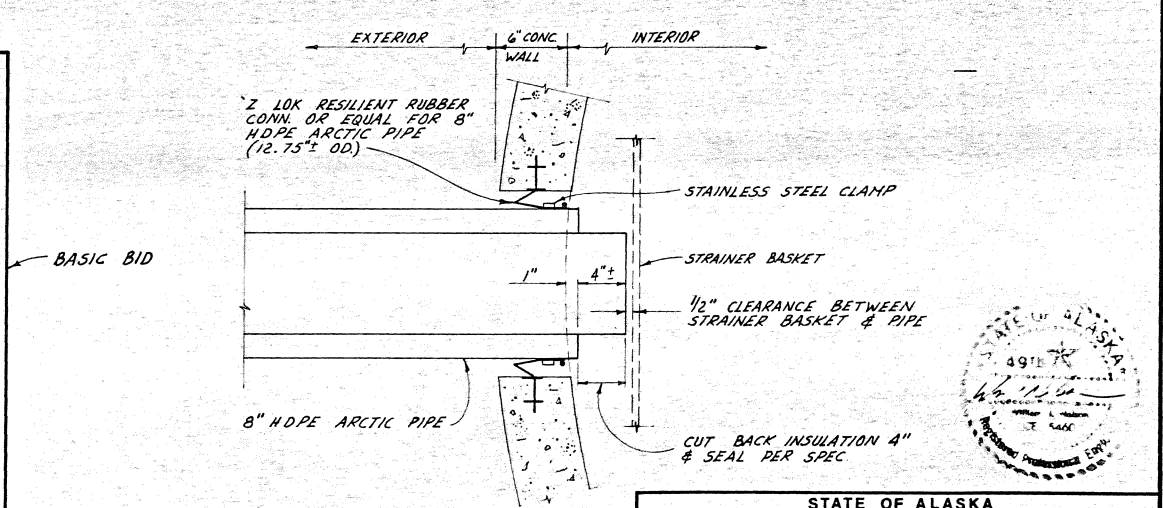
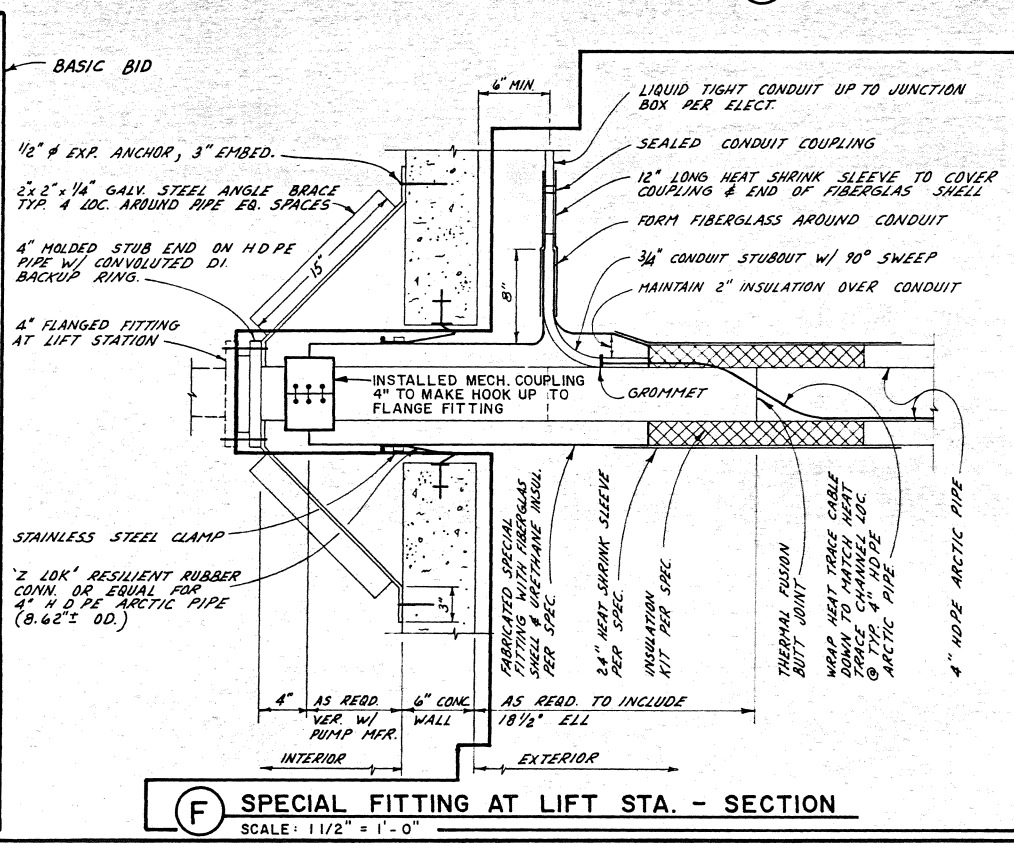
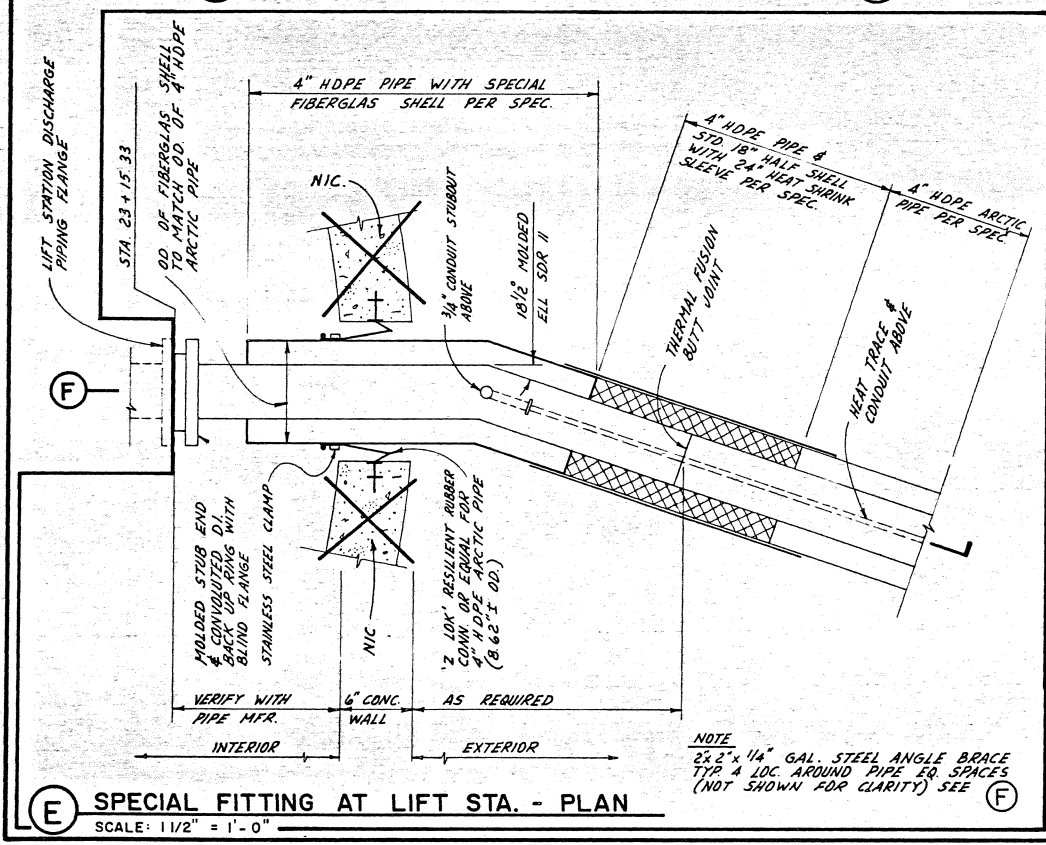
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
DILLINGHAM AIRPORT
57995
DETAILS

APPROVED		STEVE VAN HORN		DESIGN GROUP CHIEF	
APPROVED		WILLIAM KOESTER		PROJECT MANAGER	
BY	DATE	CHANGE	SCALE	DESIGNED	DRAWN
W.J.N.	3/20/92	AS-BUILT	AS SHOWN	W.J.N.	D.A.C.
CHECKED		DATE		SHEET 7 OF 11	
REVISIONS		3/92		SHEET 7 OF 11	



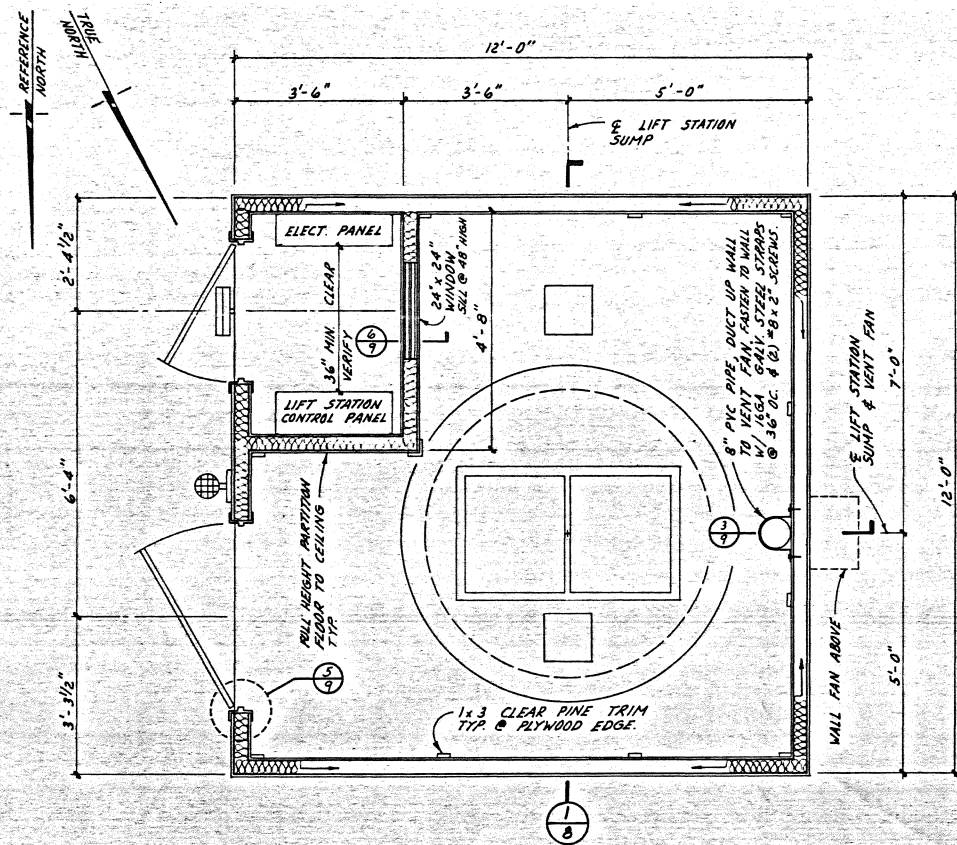
- NOTES**
- MANHOLE BASE SECTION, RISER SECTIONS, SLAB, COVER AND APPURTENANCES SHALL CONFORM TO ASTM C-478.
 - BASE SLAB SHALL BE CAST MONOLITHICALLY WITH BASE RISER.
 - ALL JOINTS BETWEEN PRECAST SECTIONS SHALL BE SEALED WITH "RAMNEK" OR EQUAL BITUMINOUS GASKETS.
 - PIPE CONNECTIONS TO MANHOLE SHALL BE MADE WITH RESILIENT RUBBER CONNECTORS CONFORMING TO ASTM C-923, 2 LOK' OR EQUAL AND SHALL PROVIDE A POSITIVE WATERTIGHT CONNECTION CAPABLE OF 4 INCH MOVEMENT HORIZONTAL AND VERTICAL WITHOUT LOSS OF SEAL.
 - EXTERIOR OF MANHOLE SHALL BE COATED WITH A WATERPROOF BITUMASTIC COATING.

NOTE: ALL WORK SHOWN ON THIS SHEET IS "ADD. ALT. NO. 1" EXCEPT BOXED AREAS MARKED "BASIC BID"

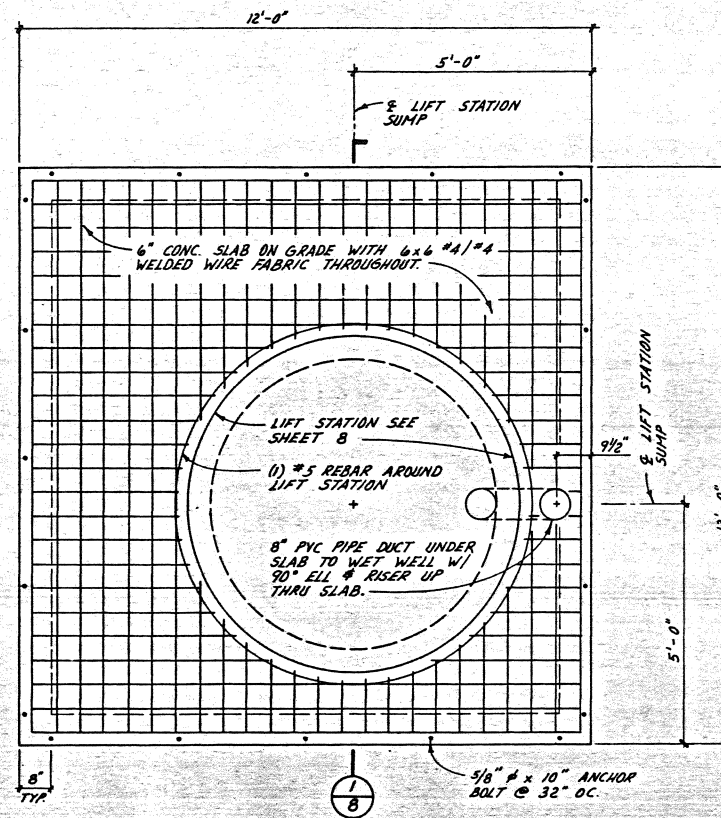


(G) PIPE CONNECTION TO LIFT STA.
SCALE: 1/2" = 1'-0"

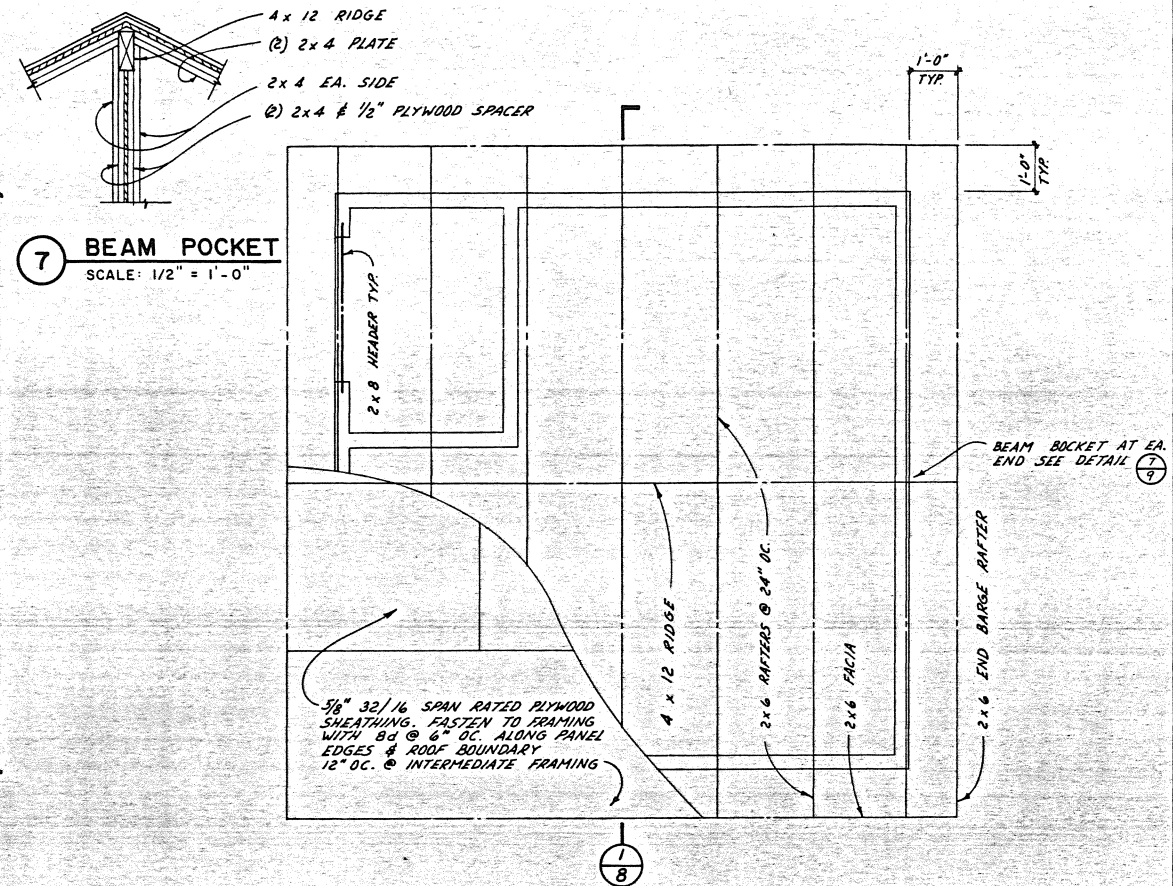
APPROVED		STEVE VAN HORN		DESIGN GROUP CHIEF	
APPROVED		WILLIAM KOESTER		PROJECT MANAGER	
BY	DATE	CHANGE	SCALE	DESIGNED	DRAWN
WJN	3/20/92	AS - BUILT	AS SHOWN	W.J.N.	D.A.C.
CHECKED		DATE		SHEET	
W.J.N.		4-19-90		8 OF 11	



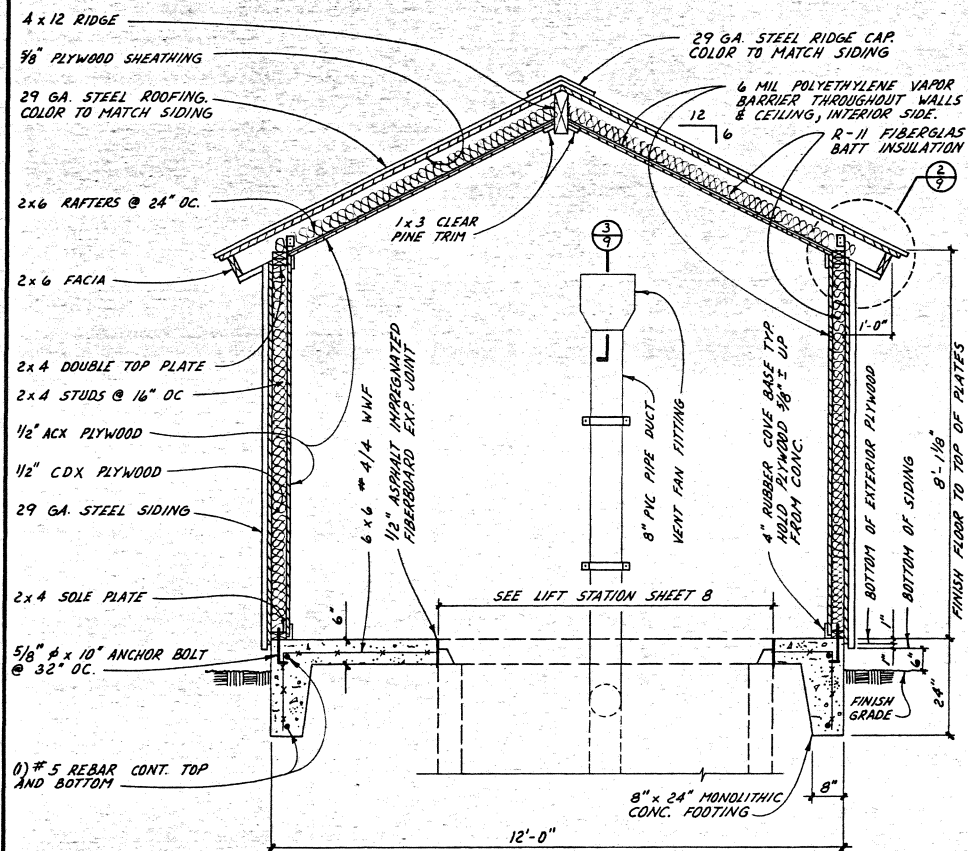
FLOOR PLAN
SCALE: 1/2" = 1'-0"



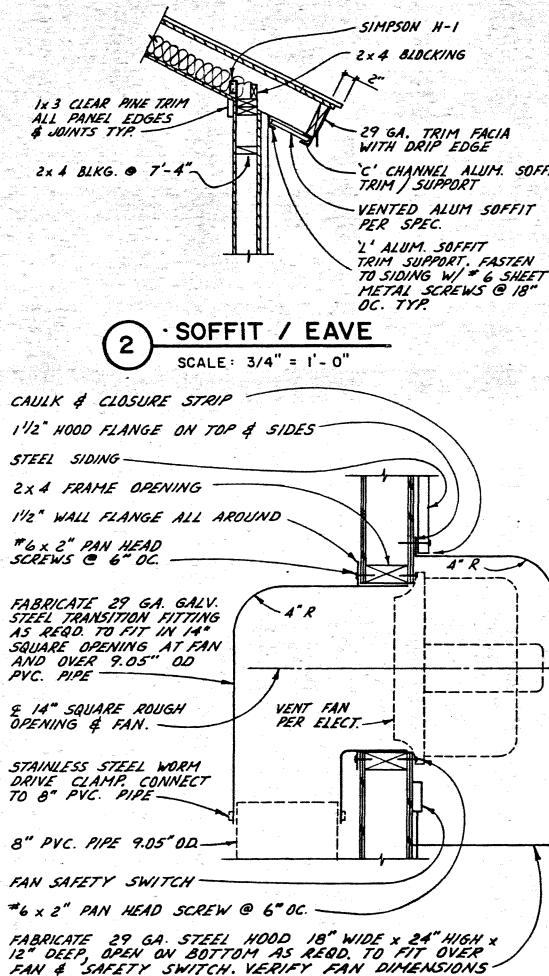
FOUNDATION PLAN
SCALE: 1/2" = 1'-0"



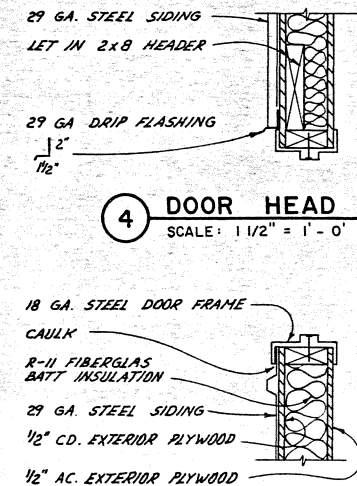
ROOF FRAMING PLAN
SCALE: 1/2" = 1'-0"



1 TYPICAL FRAMING SECTION
SCALE: 1/2" = 1'-0"

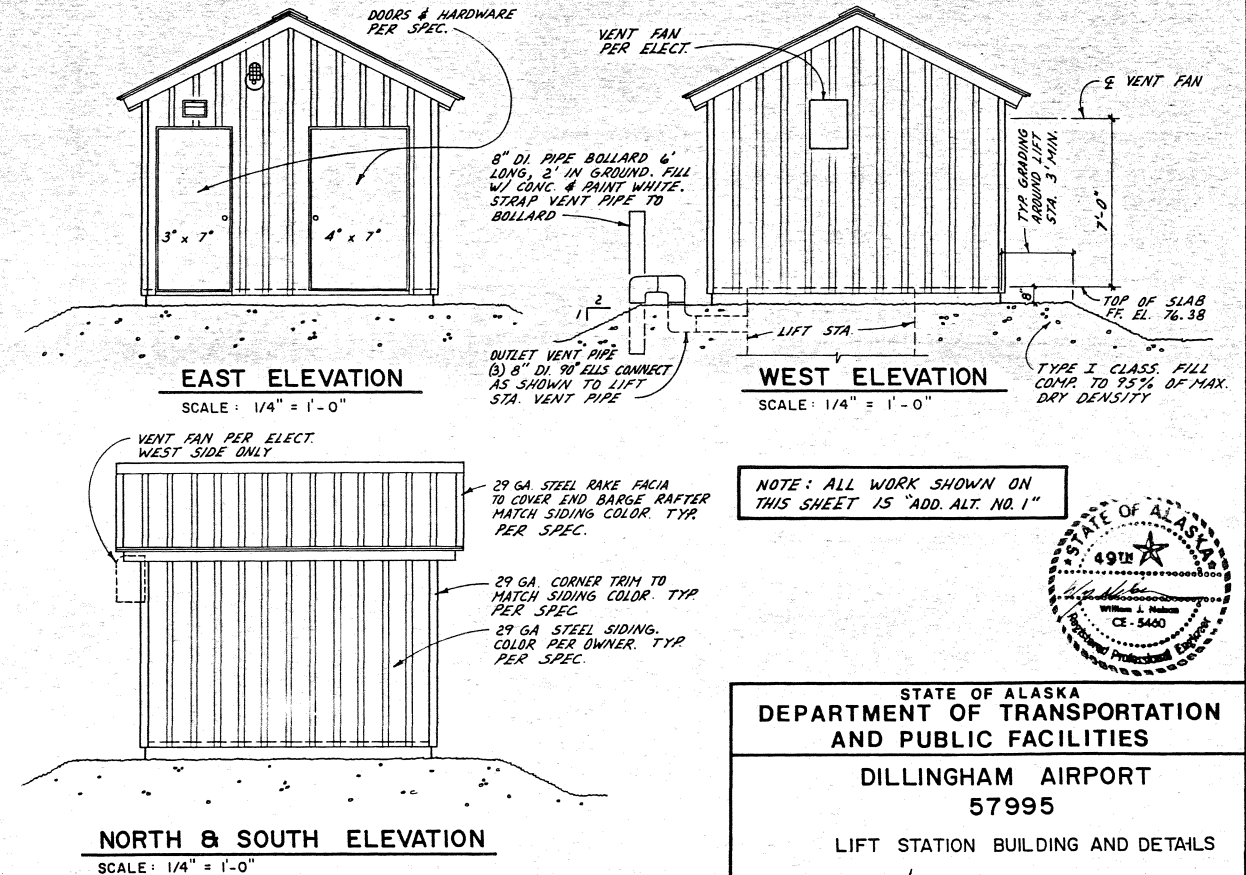


3 VENT FAN
SCALE: 1 1/2" = 1'-0"



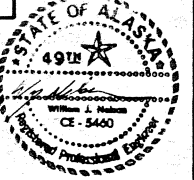
5 DOOR JAMB
SCALE: 1 1/2" = 1'-0"

6 WINDOW JAMB
SCALE: 1 1/2" = 1'-0"



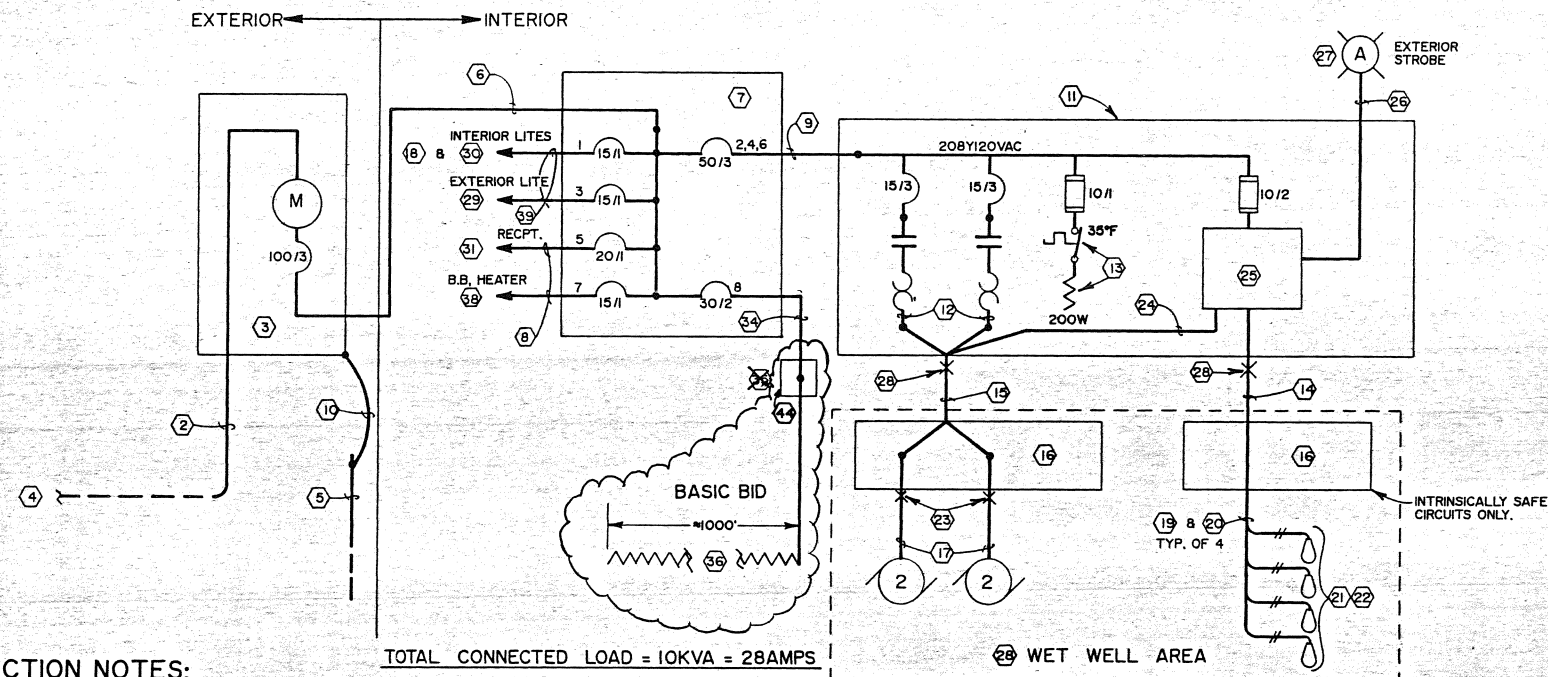
NORTH & SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

NOTE: ALL WORK SHOWN ON THIS SHEET IS "ADD. ALT. NO. 1"



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
DILLINGHAM AIRPORT
57995
LIFT STATION BUILDING AND DETAILS

APPROVED		STEVE VAN HORN		DESIGN GROUP CHIEF	
APPROVED		WILLIAM KOESTER		PROJECT MANAGER	
BY	DATE	AS-BUILT	CHANGE	SCALE	DESIGNED
WJN	3/20/92	AS-BUILT		AS SHOWN	W.J.N.
REVISIONS			DATE	DRAWN	D.A.C.
			4-19-90		

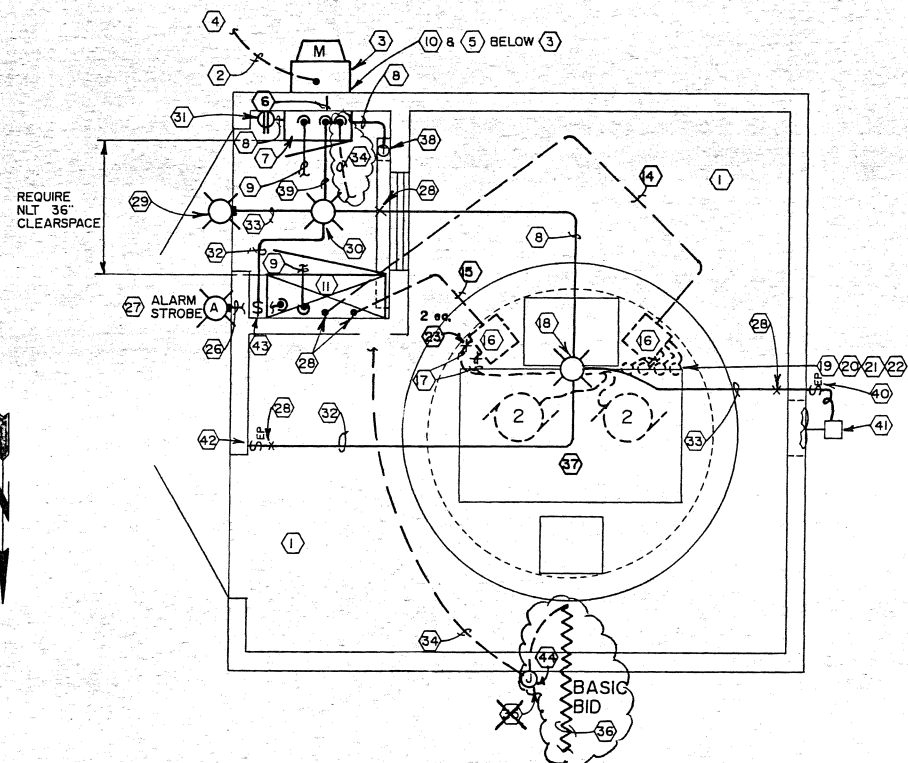


CONSTRUCTION NOTES:

- ALL WIRING SHALL BE PERFORMED BY STATE OF ALASKA LICENSED JOURNEMEN ELECTRICIANS, IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND ANY LOCALLY ADOPTED AMENDMENTS.
- ALL WIRING SHALL BE COPPER, 600V, XHHW INSULATION. ENCLOSED IN GALVANIZED RIGID CONDUIT.
- ALL COMPONENTS USED ON THIS PROJECT SHALL BE LISTED OR LABELED BY A NATIONALLY RECOGNIZED TESTING LABORATORIES AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
- BOND GROUND TO METER BASE AND EQUIPMENT ENCLOSURES, JUNCTION BOXES AND SUPPORT STRUCTURES INCLUDING RAILS AND HATCHES.

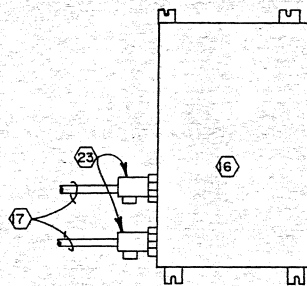
POWER ONE-LINE

NOT TO SCALE

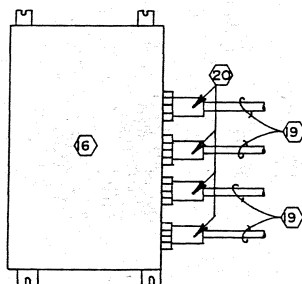


ELECTRICAL PLAN

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



PUMP CORD J-BX DETAIL



FLOAT CORDS J-BX DETAIL

NOTES:

- ROOM ABOVE CLASSIFIED WET WELL IS CLASS I, DIVISION 2, GROUP D LOCATION.
- 2°C, 4-#2 Cu, XHHW.
- CONTINUOUS DUTY 100A, 7-JAW, 600V RATED, 3 PHASE METERBASE/MAIN COMBO IN NEMA 3R ENCLOSURE WITH 100A, 3P MAIN CB RATED AT 10,000 AIC AND DIGITAL FACE CLASS 100 SELF-CONTAINED METER. EQUAL TO CIRCLE AW U217MBHMS-45 BASE WITH DUNCAN BMT-145-9502-2608 METER (WITH POLYCARBONATE COVER AND CYCLOMETER REGISTER).
- COORDINATE ELECTRICAL SERVICE WITH UTILITY. POWER SUPPLY IS 3 PHASE, 4 WIRE, 208Y/120VAC.
- 5/8" X 8' CU CLAD STEEL GROUND ROD. DRIVE GROUND ROD WITH TOP OF ROD NOT LESS THAN 12" BELOW GRADE.
- 2" C, 3-#2 (3 HOT "H"), 2-#6 (NEUTRAL "N", GROUND "G").
- CIRCUIT BREAKER PANELBOARD, 3 PHASE, 4 WIRE, 208Y/120VAC, 100 AMP RATED M.L.O., SURFACE MOUNT NEMA 1 ENCLOSURE, 6" DEEP MAXIMUM, W/10,000 AIC CIRCUIT BREAKERS (ALL U.L. LISTED AS SWITCHING DUTY RATED).
- 1/2°C, 3-#12 (H,N,G).
- 1" C, 3-#6 (3H) & 2#10 (N,GND).
- #6 ECU.
- DUPLEX PUMP CONTROL PANEL WITH THE FOLLOWING FEATURES:
 - NEMA 1 STEEL ENCLOSURE. SEE NOTE 2, SHEET 11 "LIFT STATION CONTROL PANEL".
 - INCOMING POWER TERMINAL BLOCKS FOR 208Y/120VAC, 100A SERVICE.
 - INCOMING POWER LIGHTNING ARRESTOR.
 - TWO INDIVIDUALLY LOCKABLE COMBINATION CIRCUIT BREAKER TYPE MOTOR STARTERS WITH QUICK TRIP/AMBIENT COMPENSATED OVERLOAD PROTECTION FOR SUBMERSIBLE PUMP MOTORS, DOOR MOUNTED.
 - TWO OILTIGHT, HEAVY DUTY, HAND-OFF-AUTO, 3 POSITION SELECTOR SWITCHES, DOOR MOUNTED.
 - TWO, THROUGH THE DOOR, OVERLOAD RESET PUSH BUTTONS.
 - TWO GREEN LENS RUNNING LIGHTS DOOR MOUNTED.
 - PUMP MOTOR ELAPSED RUNNING TIME METERS, DOOR MOUNTED.
 - SEAL FAILURE CIRCUITS WITH ALARM RELAY CONTACTS AND LABELED AMBER LENS ALARM LIGHTS FOR EACH PUMP, DOOR MOUNTED.
 - THREE 250VAC, 10 AMP RATED DUAL - ELEMENT TIME DELAY FUSES (EQUAL TO BUSS TYPE MDA-10), INSTALLED IN DOOR MOUNTED BAYONET TYPE RMB FUSE HOLDERS, THESE PROVIDE CONTROL ALARM AND ENCLOSURE HEAT CIRCUITS. BREAKERS AS SHOWN.
 - LEAD PUMP ALTERNATOR RELAY.
 - WET WELL LIQUID LEVEL CONTROL SYSTEM CONSISTING OF 4 INTRINSICALLY SAFE RELAYS CONTROLLED BY 4 INCAPSULATED FLOAT SWITCHES (LEVEL SENSORS), FLOATS ARE USED TO PROVIDE:
 - HIGH LEVEL ALARM
 - LAG "ON"
 - LEAD "ON"
 - PUMPS "OFF"
 - LOCAL WEATHERPROOF 120 VAC STROBE ALARM LIGHT WITH AMBER LENS, (FOR WELL HIGH LEVEL AND CONTROL VOLTAGE LOSS ALARMS), PROVIDE ALARM TEST BUTTON ON PANEL DOOR.
 - PROTECTIVE HEATER AND 35°F THERMOSTAT, AS INDICATED.
 - THE ENTIRE PACKAGED PUMP CONTROL SYSTEM SHALL BE CAPABLE OF OPERATION IN ANY ENVIRONMENT OF -40°F TO +90°F AND SHALL BE LISTED OR LABELED BY A NATIONALLY RECOGNIZED TESTING LABORATORY
- 3-#12 (3H).
- THERMOSTAT AND HEATER MAINTAINS ENCLOSURE ENVIRONMENT.
- 1" C, 8-#14 (4 INTRINSICALLY SAFE FLOAT SWITCH SIGNAL PAIRS).
- 1" C, 7-#12 (6H, G) & 8-#14 (SEAL FAIL, 4 THERMAL DETECTOR).
- NEMA 7 JUNCTION BOX, EQUAL TO KILLARK XB SERIES. MOUNT HIGH ON WALL, 6" BELOW LID.
- EXTRA HARD USAGE CORDS TO PUMPS. CORD SUPPLIED WITH PUMP.
- 150W, HPS, CEILING MOUNTED, FACTORY SEALED AND RATED FOR CLASS I, DIVISION 2, GROUP D LOCATION. KILLARK P/N VMPX-2-90GS.
- 18/2 TYPE SO FLOAT SWITCH CORD.
- PROVIDE CORROSION RESISTENT NYLON CGB TYPE CORD GRIP SIZED TO FLOAT CABLE.
- FLOAT SWITCH, AND CORD ASSEMBLY. FLOAT SWITCH IS NORMALLY OPEN, MERCURY WETTED SPST, (SWITCH CLOSING ON LIQUID RISE), IN MOLDED POLYETHYLENE BODY, W/CORD MOUNTED WEIGHT KIT.
- MOUNT FLOATS TO ACTUATE AT ELEVATIONS GIVEN ON LIFT STATION SECTION C SHEET 8.
- CORD GRIP RATED FOR CLASS I, DIVISION 1, GROUP D LOCATION. EQUAL TO KILLARK ZE-2XX WHERE XX DETERMINED BY CORD DIAMETER.
- 8-#14 (4 SEAL FAIL, 4 THERMAL DETECTOR).
- LIFT STATION PUMP CONTROL AND ALARM SECTION. SEE NOTE 11.
- 1/2°C, 3-#14 (1 SWITCHED, N, G) ALARM LIGHT POWER.
- ALARM LIGHT. MOUNT JUST BELOW ROOF EAVES.
- PROVIDE TYPE EYS CONDUIT SEAL.
- 50W, HPS ON PHOTOCCELL, WALL MOUNTED, EXTERIOR FLOOD. LITHONIA P/N T50 GLA120-SF-TYPE-NG MOUNT CENTERED OVER ENTRY. PROVIDE FLUSH MOUNT OUTLET BOX.
- 150W INCANDESCENT INDUSTRIAL FIXTURE WITH REFLECTOR DOME AND GLOBE GUARD, CEILING FOR BOX MOUNTING. HUBBELL LIGHTING P/N VX-151 W/DOME AND GUARD.
- NEMA 5-20R DUPLEX RECEPTACLE. LEVITON 5362 IN HANDY BOX. MOUNT +48" AFF.
- 1/2°C, 3#12 (SWITCHED,H,G).
- 1/2°C, 4#12 (SWITCHED,H,N,G).
- 3/4" C, 3#6 (2H,G).
- WEATHERPROOF JUNCTION BOX WITH SPLICE FOR HEAT TAPE FEEDER.
- HEATING CABLE, 208VAC, 4W/FT. @ 1000FT. LENGTH. BASIC BID
- WET WELL INTERIOR IS A CLASS I, DIVISION 1, GROUP D CLASSIFIED LOCATION, AS DETERMINED BY STATE OF ALASKA DEPARTMENT OF LABOR, DIVISION OF MECHANICAL INSPECTIONS.
- ELECTRIC BASEBOARD HEATER W/INTEGRAL T'STAT, 3FT UNIT RATED @ 750 WATT @ 240VAC. EQUAL TO CHROMALOX BB-C-31 W/ BB-S-K-5 T'STAT MOUNT 3" AFF TO BOTTOM.
- 1/2", 4#12 (2H, N, G).
- SINGLE TOGGLE SWITCH, EXPLOSION PROOF, MOUNT IN HOOD +76" AFF AS FAN SAFETY SWITCH.
- EXHAUST FAN, EXPLOSION PROOF, 1/4 HP, 120 VAC, EQUAL TO DAYTON TYPE 7F448. MOUNT IN WEATHER-PROOF HOOD 84" AFF.
- SINGLE TOGGLE SWITCH, EXPLOSION PROOF, MOUNT +48" AFF.
- SINGLE TOGGLE SWITCH IN HANDY BOX MOUNT +48" AFF.
- TYPE 1A JUNCTION BOX, WITH 6' OF HEAT TAPE FEEDER COILED AND STORED FOR FUTURE USE. BASIC BID

WARNING!

ALL WORK SHOWN ON THIS SHEET IS "ADD. ALT. NO. 1" EXCEPT CLOUDED AREAS MARKED "BASIC BID".

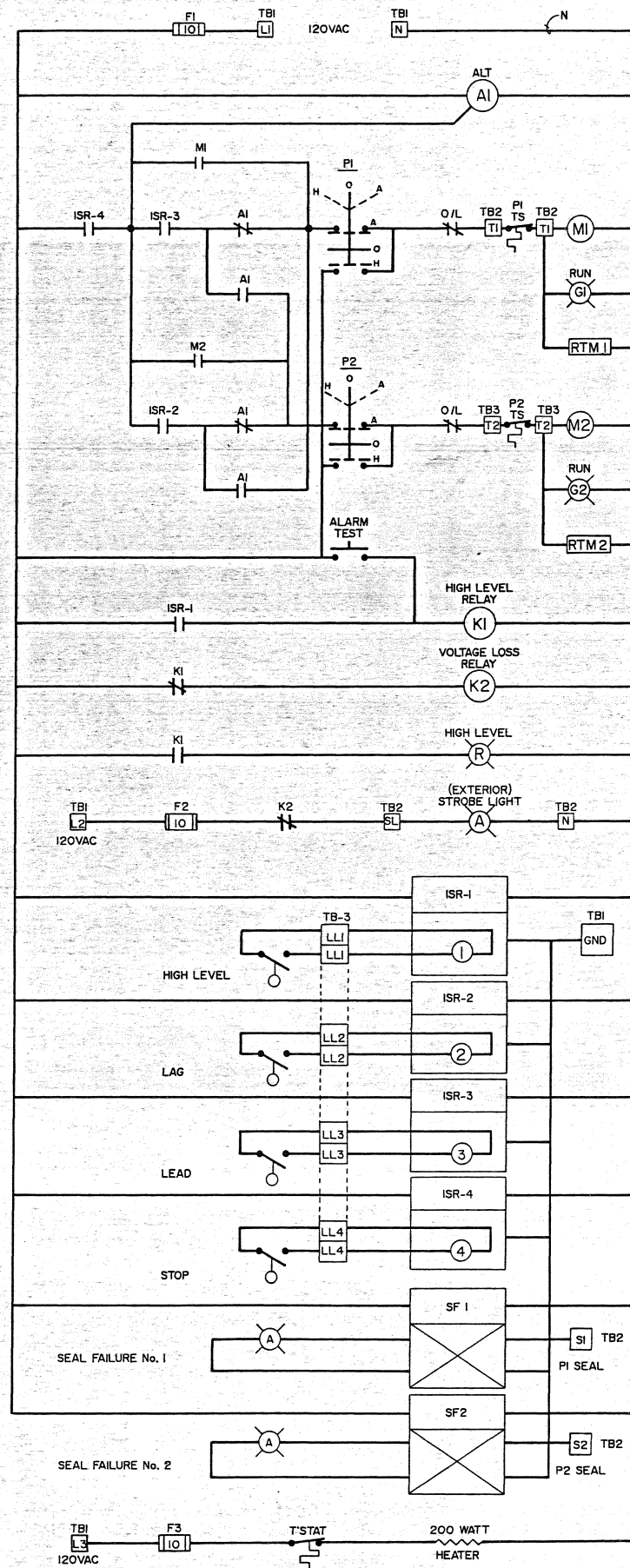


STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

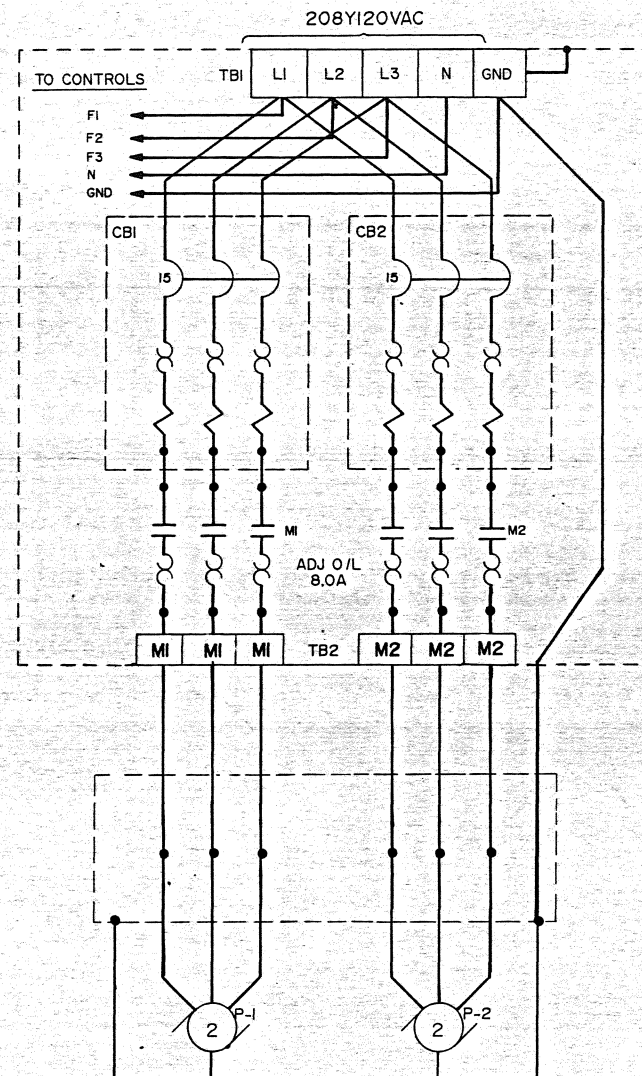
DILLINGHAM AIRPORT
57995
ELECTRICAL
LIFT STATION

APPROVED	<i>Steve Van Horn</i>	DESIGN GROUP CHIEF	
APPROVED	<i>William Koester</i>	PROJECT MANAGER	
SCALE	DESIGNED T. LONGSTAFF	DRAWN K. HAVE	SHEET 10 OF 11
AS SHOWN	CHECKED W. LONGSTAFF	DATE 2/16/90	

AS-BUILT 3/92 SHEET 10 OF 11



CONTROLS LADDER DIAGRAM

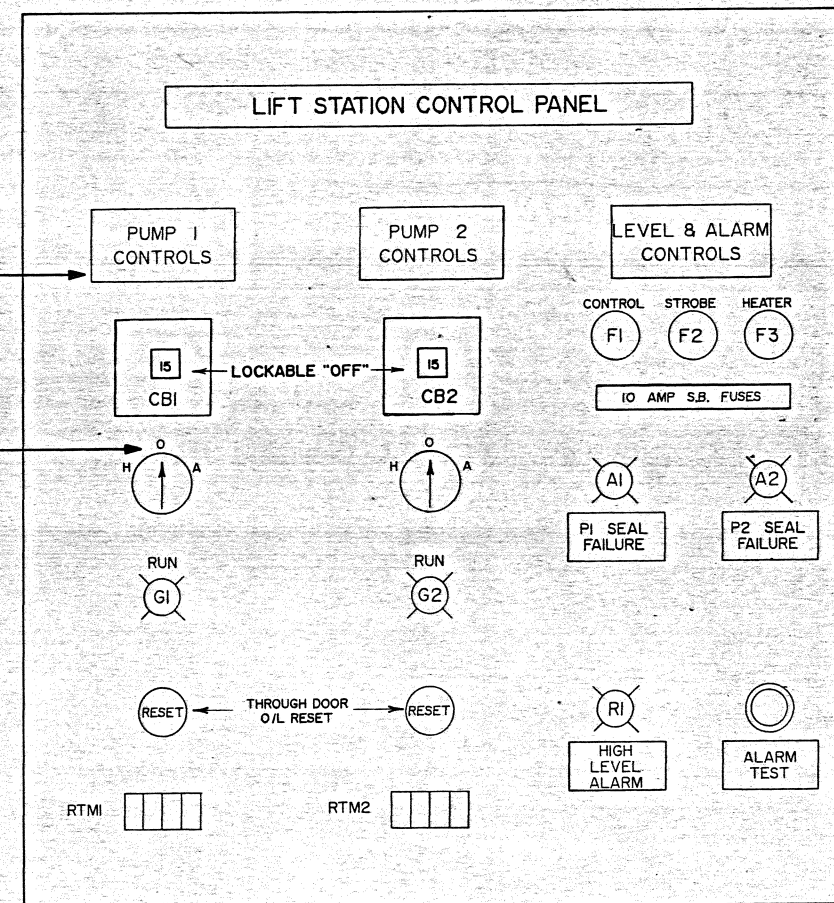


MOTOR POWER WIRING

NOTES:

ALL WIRING No. 14

- NO CONNECTION
- CONNECTION
- ISR — INTRINSICALLY SAFE RELAY
- SF — SEAL FAILURE RELAY



ENCLOSURE DOOR FRONT LAYOUT

NOTES:

1. SEE PREVIOUS SHEET FOR COMPONENT DESCRIPTION.
2. IN ORDER TO PROVIDE REQUIRED ELECTRICAL CLEAR SPACE IN CONTROL ROOM, THE MAXIMUM PANEL WIDTH CAN BE 30" THE MAXIMUM PANEL DEPTH CAN BE 12"

WARNING!

ALL OF THE WORK SHOWN ON THIS SHEET IS "ADDITIVE ALTERNATE NO. 1"



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
DILLINGHAM AIRPORT
57995
ELECTRICAL
LIFT STATION CONTROL PANEL

APPROVED		STEVE VAN HORN		DESIGN GROUP CHIEF	
APPROVED		WILLIAM KOESTER		PROJECT MANAGER	
BY	DATE	AS - BUILT	CHANGE	SCALE	DESIGNED
				AS SHOWN	T. LONGSTAFF
					DRAWN
					K. HAVE
					DATE
					2/16/90
					SHEET 11 OF 11