# ALASKA REGIONAL FIRE TRAINING CENTER

## TRAINING EQUIPMENT REHABILITATION

## KENAI, ALASKA

PREPARED BY:



↑ 1 Engineering Place, Helena, MT 59602 • 406.442.3050 ⊕ www.m-m.net

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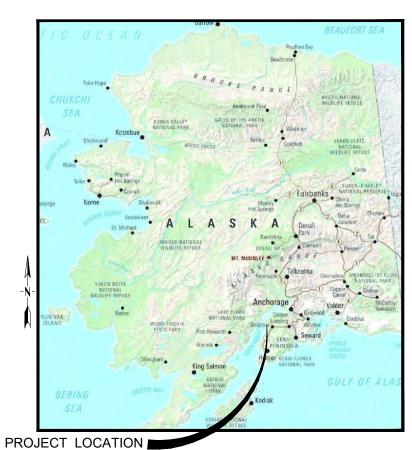


PROJECT LOCATION ■

# VICINITY MAP NOT TO SCALE

Morrison Maierle engineers * surveyors * planners * scientists						
QUALITY ASSURANCE						
PROJECT MANAGER Q.A. APPRO	VAL DATE					
OFFICE QUALITY ASSURANCE COORDINATOR Q.A. PROJEC	CT NUMBER					
PEER REVIEWER						

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LOCATION MAP

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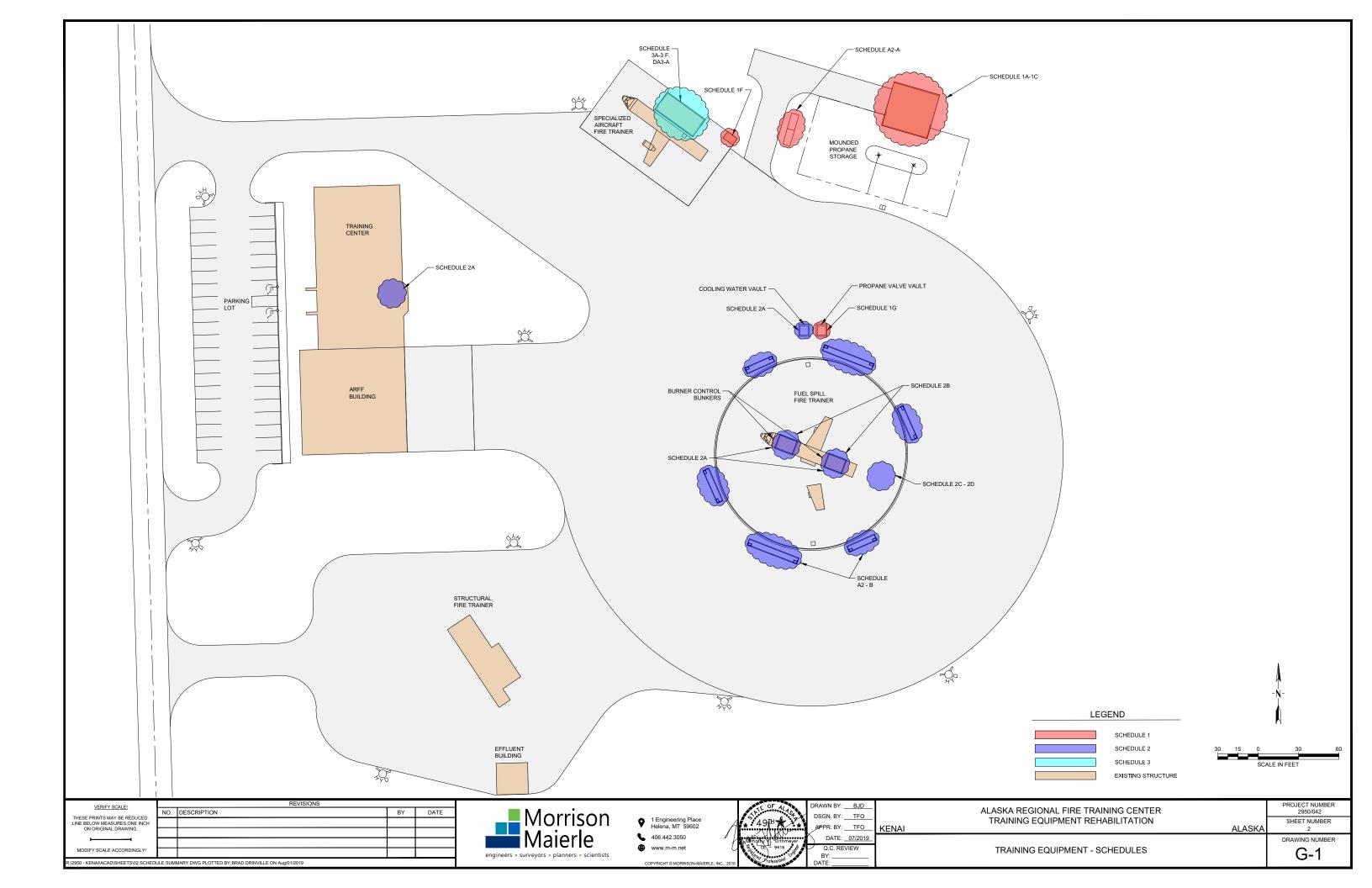
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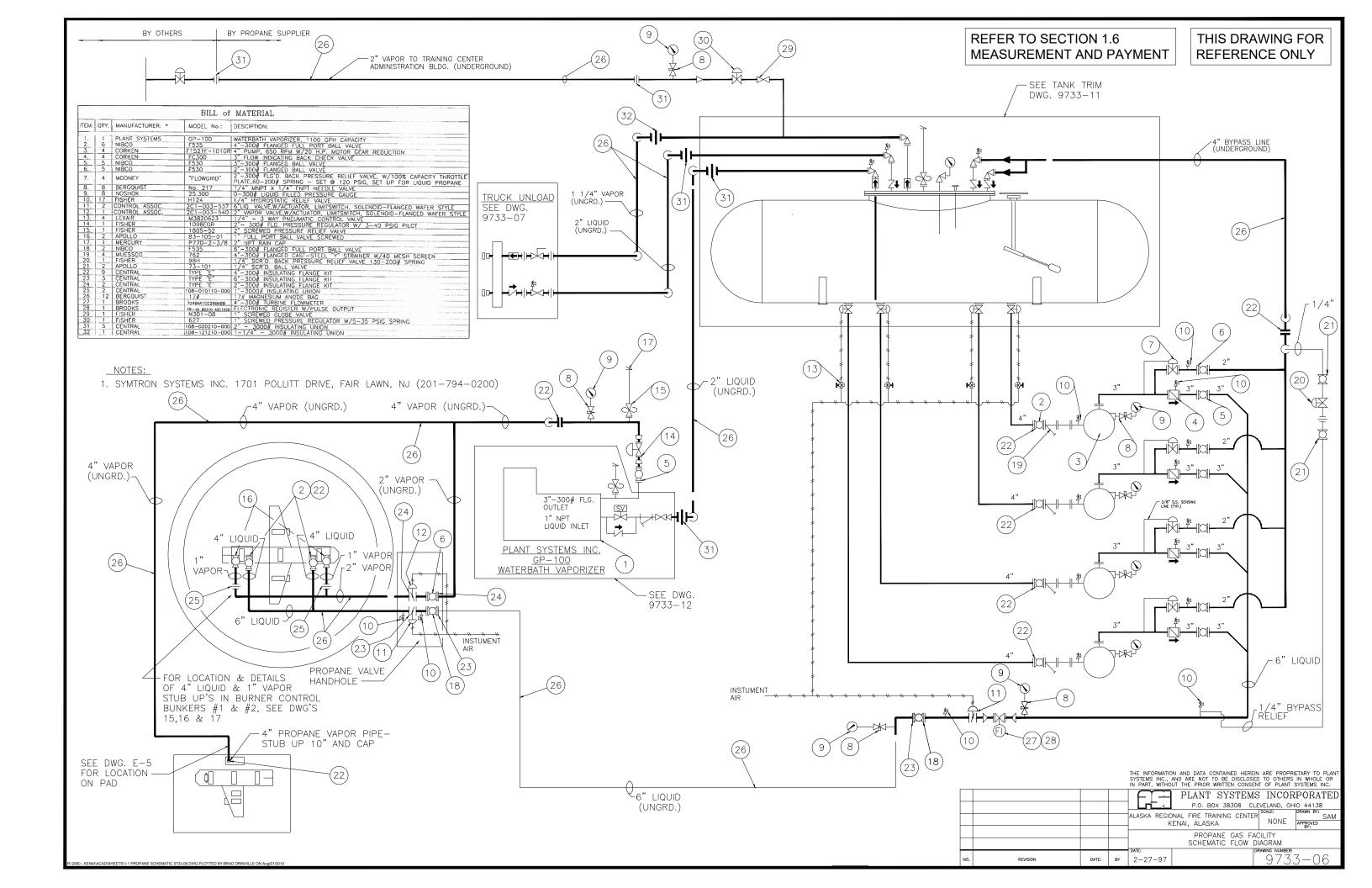


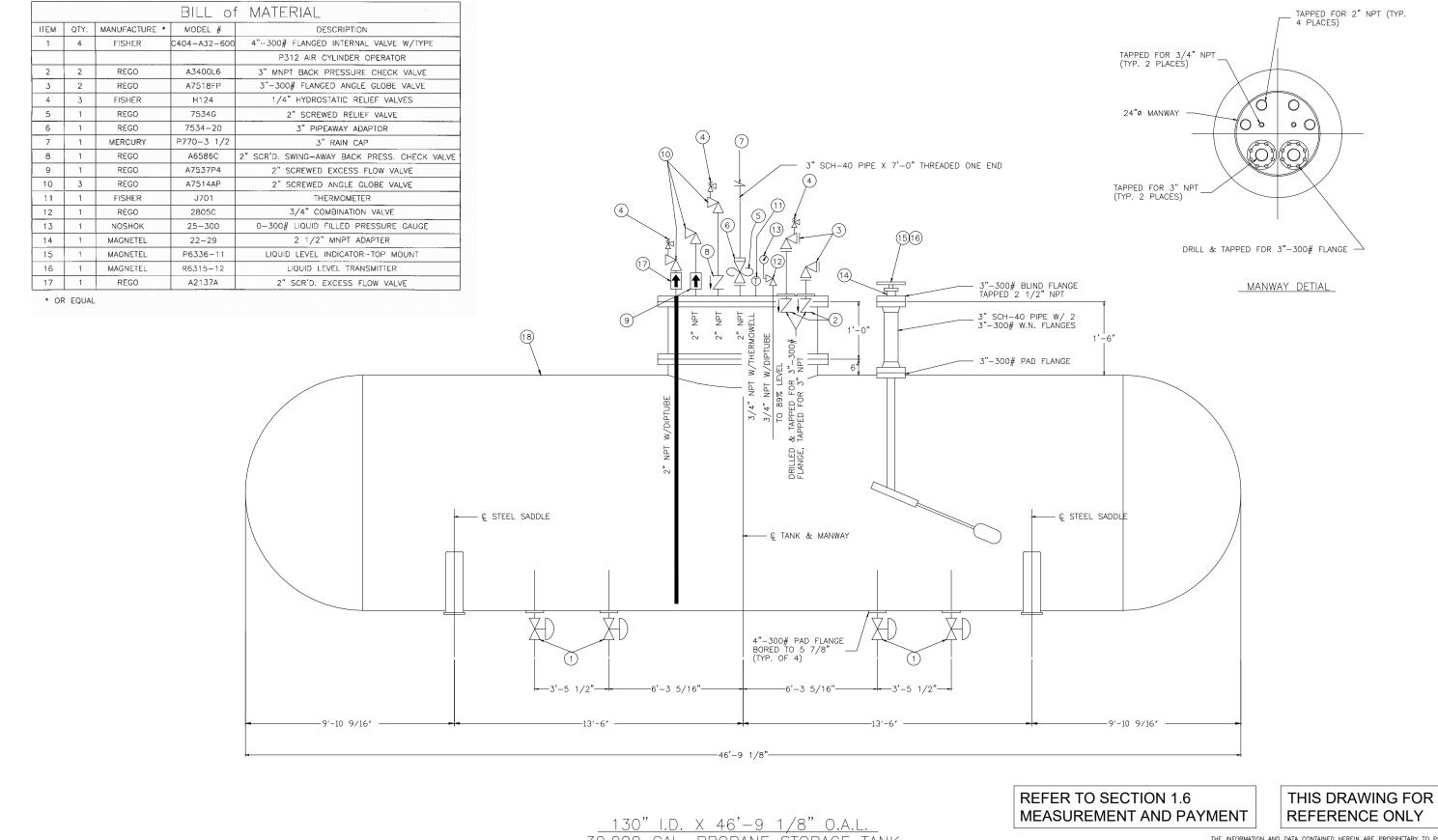


APPROVED BY: \_

PROJECT MANAGER NAME
Project Manager







30,000 GAL. PROPANE STORAGE TANK

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NO.	REVISION	DATE:	BY	2-27-97		073	<b>3</b> _11
				DATE:	TANK TRIM	RAWING NUMBER:	
					PROPANE-AIR GASS	FACILITY	•
-				K	ENAI, ALASKA	NONE	APPROVED BY:
					NAL FIRE TRAINING CENTER	SCALE:	DRAWN BY: SAM
					P.O. BOX 38308 CL		
					PLANT SYSTEMS	SINCOR	PORATED
					UT THE PRIOR WRITTEN CONSEI		

#### PIPING SPECIFICATIONS

#### SECTION I: PIPE AND FITTINGS

- 1. ALL ABOVE GROUND PIPING 2" & SMALLER SUBJECT TO TANK PRESSURE TO BE SCHEDULE 80 ERW OR SEAMLESS STEEL SCREWED PIPE, ASTM A53, GRADE B OR EQUAL, WITH MINIMUM 2000# FORGED STEEL SCREWED FITTINGS.
- 2. ABOVE GROUND WELDED PIPING TO BE SCHEDULE 80 ERW OR SEAMLESS STEEL PIPE, ASTM A53, GRADE B, WITH SCH. 80 (EXTRA STRONG) WELD FITTINGS.
- A) ALL UNDERGROUND VAPOR PIPING TO BE SCHEDULE 40 ERW OR SEAMLESS STEEL PIPE, ASTM A53, GRADE B OR EQUAL, FACTORY COATED AND WRAPPED. ALL UNDERGROUND JOINTS AND FITTINGS TO BE SCH. 40 (STD. WT.) WELDED.
- B) ALL UNDERGROUND LIQUID PIPING TO BE SCHEDULE 80 ERW OR SEAMLESS STEEL PIPE, ASTM A53, GRADE B OR EQUAL, FACTORY COATED AND WRAPPED. ALL UNDERGROUND JOINTS AND FITTINGS TO BE SCH. 80 (EXTRA STRONG) WELDED.
- 4. WELDED JOINTS ON UNDERGROUND PIPE LINES SHALL BE COATED AND WRAPPED A MINIMUM OF 6 INCHES OVER THE FACTORY COATING IN BOTH DIRECTIONS WITH MATERIALS EQUAL TO AND COMPATIBLE WITH THE FACTORY COATING.
- 5. UNDERGROUND PIPING SHALL BE BURIED A MINIMUM OF 48 INCHES BELOW FINISHED GRADE.
- 6. UNDERGROUND LINES SHALL BE WEATHER SEALED TO ONE FOOT ABOVE GRADE AND SEPARATE FROM ALL ABOVE GRADE PIPING BY INSULATING FLANGES OR UNIONS.
- 7. GASKETS FOR FLANGED JOINTS SHALL BE "FLEXITELLIC" SERIES CG, OR EQUAL. ALL SEALING COMPOUND USED FOR THREADED JOINTS SHALL BE APPROVED FOR LP-GAS SERVICE.
- 8. BEFORE FINAL TESTING, ALL PIPING TO BE CLEANED BY THE USE OF PIPE "PIGS" OR EQUIVALENT.
- 9. CONTRACTOR TO PRESSURE TEST ALL PIPING WITH DRY COMPRESSED AIR OR NITROGEN AS REQUIRED BY DESIGN, AT A MINIMUM OF 100 PSI OR 1-1/2 TIMES WORKING PRESSURE, WHICH EVER IS GREATER. THE TESTS SHALL BE CONDUCTED, WITNESSED AND CERTIFIED BY AN INDEPENDENT TESTING FIRM.
- 10. CONTRACTOR TO PROVIDE ALL GLYCOL ANTIFREEZE REQUIRED FOR SYSTEM.

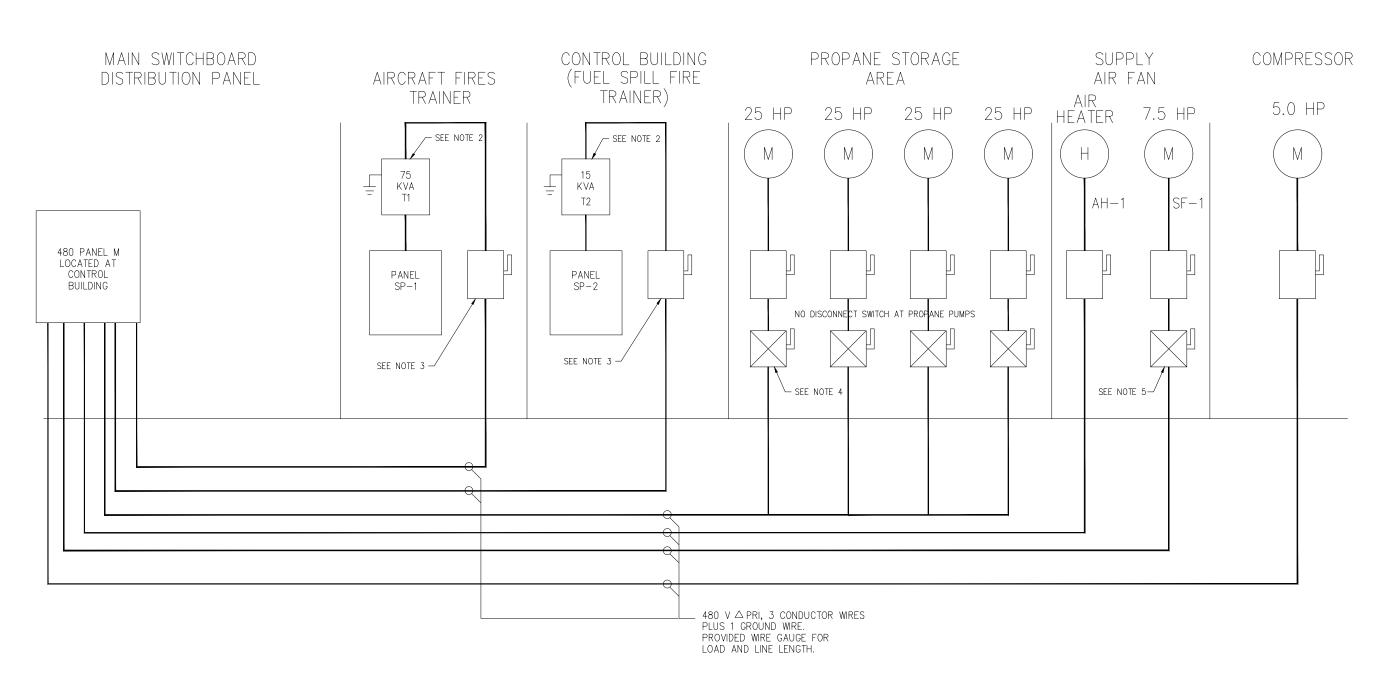
#### SECTION II: VALVES

1. ALL VALVES AND SPECIALS FOR PROPANE LIQUID OR VAPOR LINES SHALL BE MANUFACTURED WITH BODY, TRIM, SEAT, AND SEAL MATERIALS SUITABLE FOR LP-GAS SERVICE, AND BE RATED FOR 350 PSIG OPERATING SERVICE.

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					P.O. BOX 38308 CL	EVELAND, OHIO 44138
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				1	LIVII, NO OIM	BY:
					PROPANE SUPPLY	SYSTEM
					STANDARD PIPING SPE	
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#### NOTES:

- 1. POWER REQUIREMENTS PROVIDED FOR TRAINER DEVICE ONLY. LIGHTING, HVAC, ETC., FOR CONTROL BUILDING AND POWER FOR PROPANE PUMPS AND VENTILATION SHOWN FOR REFERENCE
- 2. DRY-TYPE, FILTERED, SHIELDED, ISOLATION TRANSFORMER,
- 3. NEMA 3R DISCONNECT SWITCH SIZE FOR SELECTED EQUIPMENT
- 4. USE AB STARTER P/N 513CHB44-6P-3 WITH W66 OVERLOAD RELAY HEATER ELEMENT. UNIT HAS A 120V CONTROL TRANSFORMER AND A REMOTE HOA SWITCH.—TYPICAL OF 4. ALL RATED NEMA 7".
- 5. USE AB STARTER P/N 513HB40-6P-3 WITH W54 OVERLOAD RELAY HEATER ELEMENT. UNIT HAS A 120V CONTROL TRANSFORMER AND A LOCAL HOA SWITCH. ALL RATED NEMA 7".

POWER RISER DIAGRAM-TRAINER DEVICES ONLY (SEE NOTE 1)

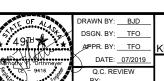
> **REFER TO SECTION 1.6** MEASUREMENT AND PAYMENT

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REVISIONS VERIFY SCALE! NO. DESCRIPTION BY DATE 950 - KENAI\ACAD\SHEETS\1-4 ELECTRICAL DIAGRAM.DWG PLOTTED BY:BRAD DRINVILLE ON Aug/01/2019

Morrison Maierle





ALASKA REGIONAL FIRE TRAINING CENTER

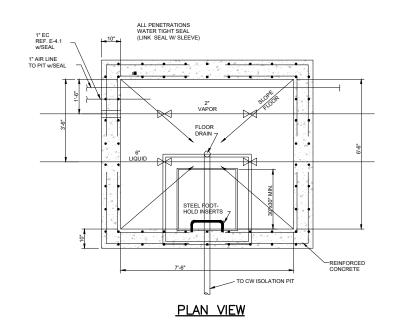
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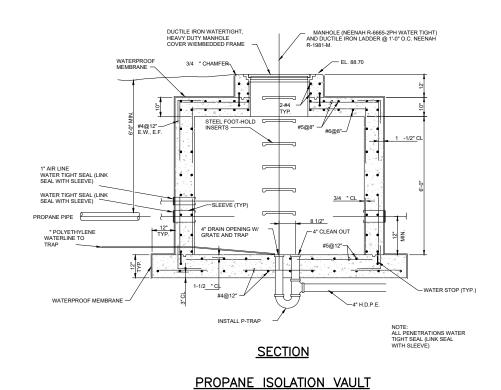
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**ELECTRICAL DIAGRAM** 

1-4

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SEE DRAWING NO. 9733-14 FOR PROPANE PIPING DETAILS.

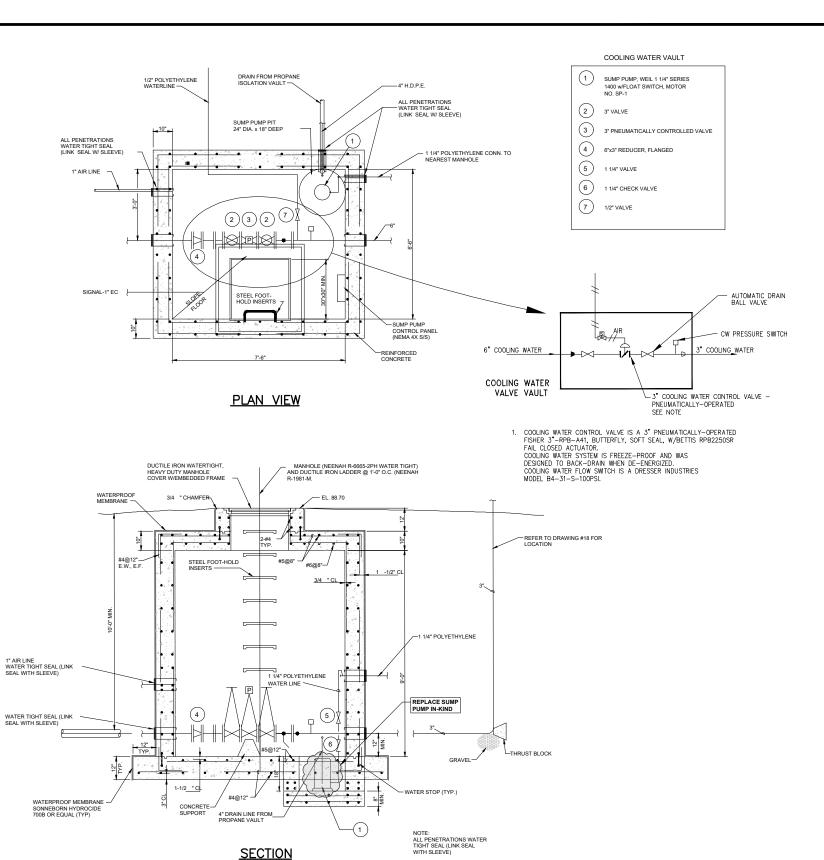
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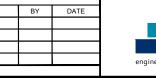
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50 - KENAI/ACAD/SHEETS/1-5 VAULT DETAILS.DWG PLOTTED BY:BRAD DRINVILLE ON Aug/01/201

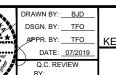


**COOLING WATER VAULT** 



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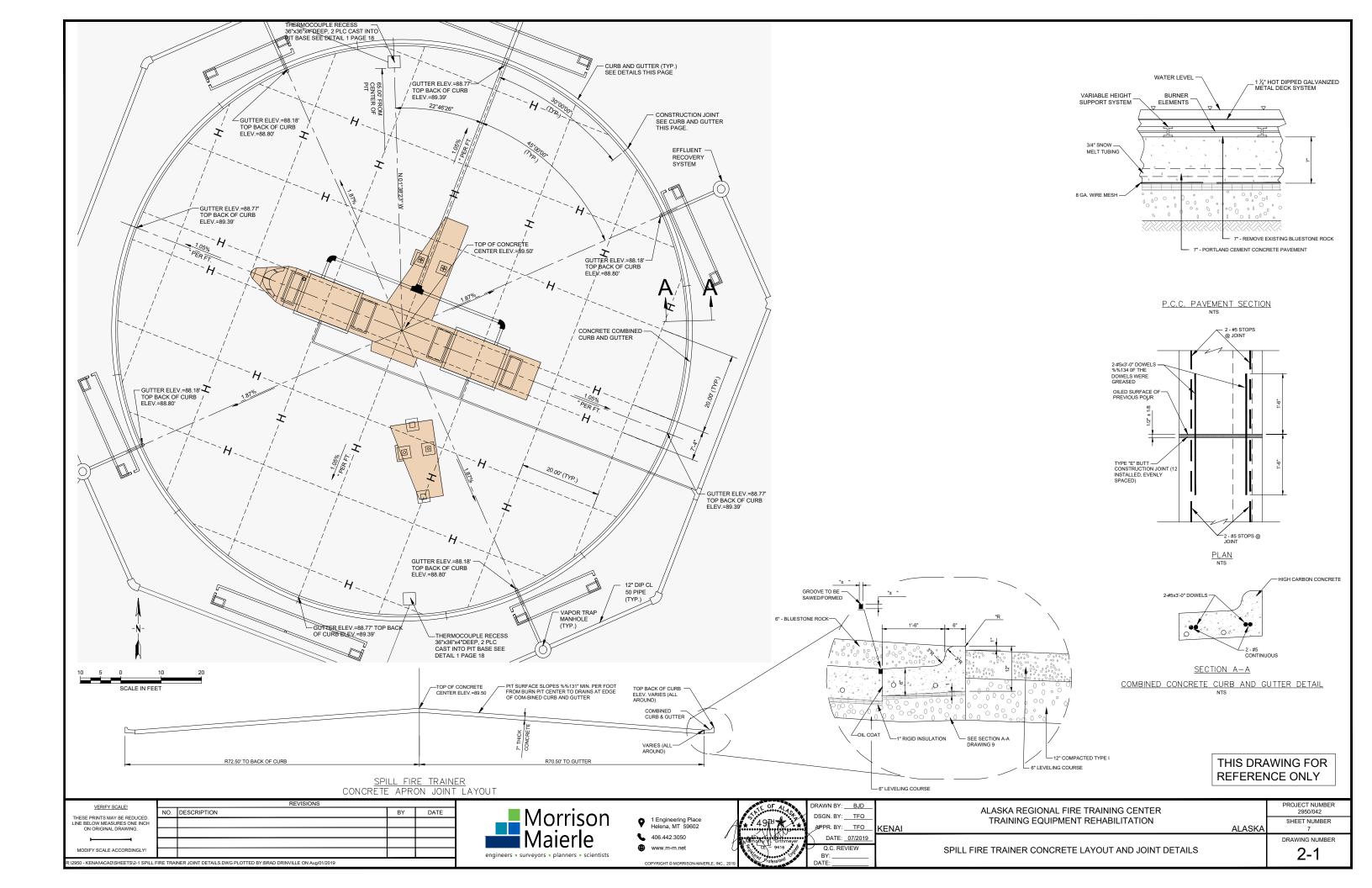


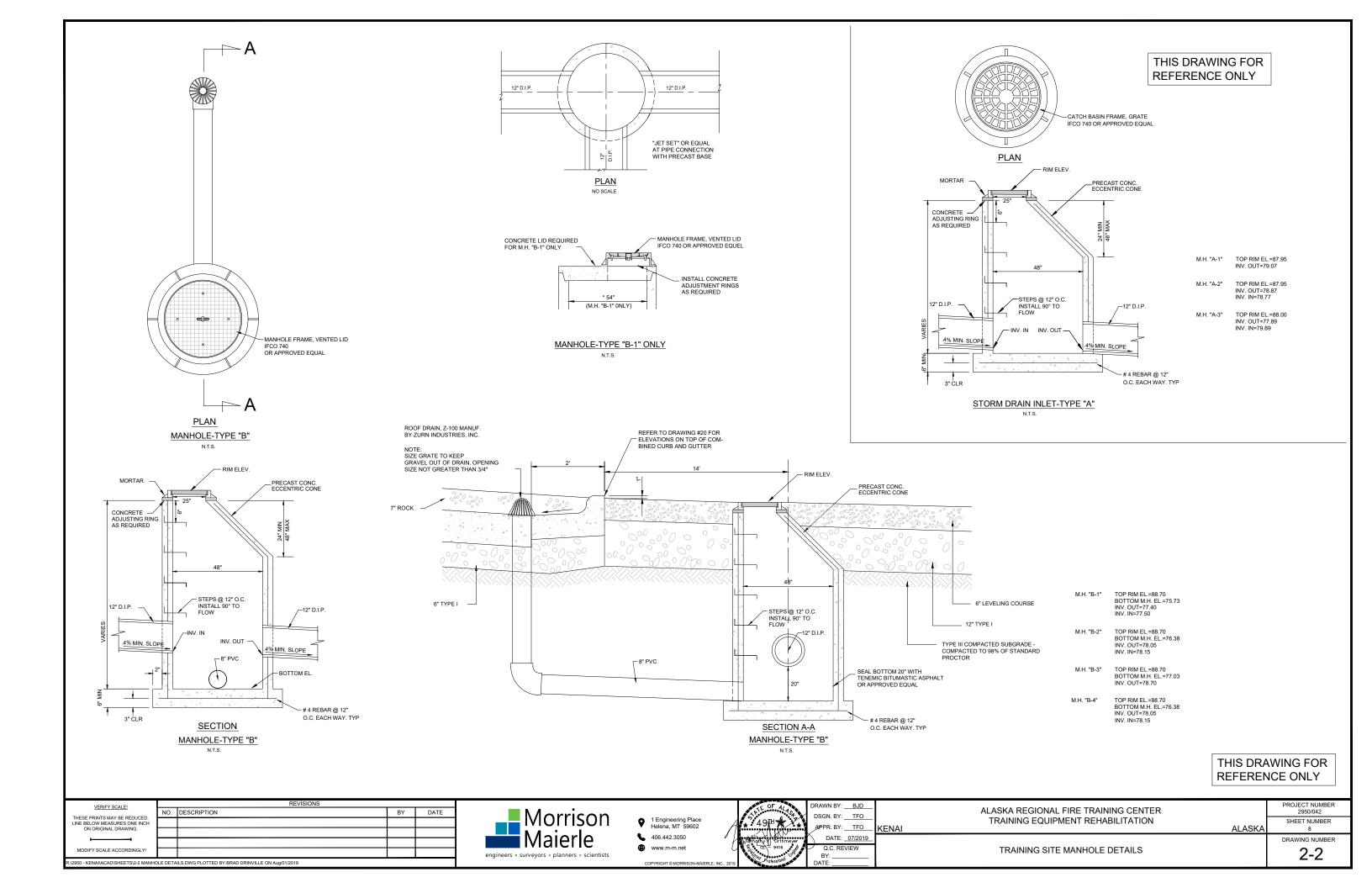
ALASKA REGIONAL FIRE TRAINING CENTER **EQUIPMENT REHABILITATION** 

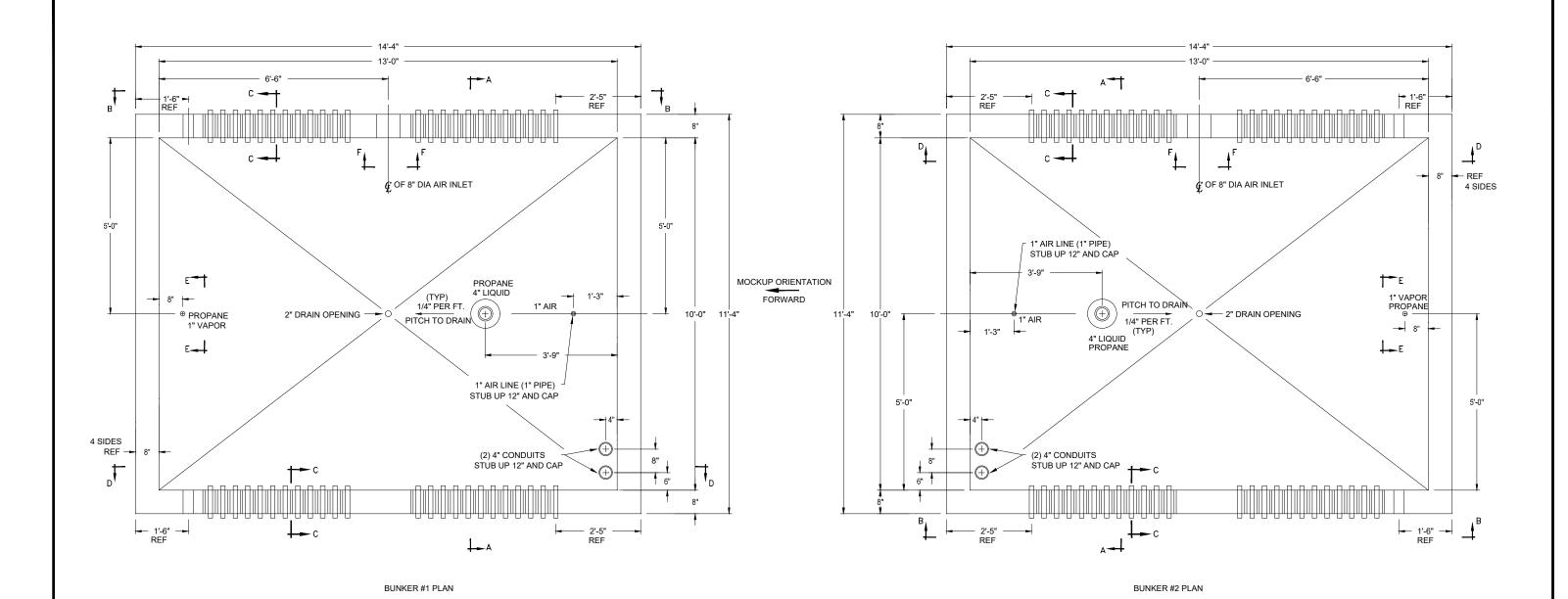
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COOLING WATER AND PROPANE ISOLATION PIT DETAILS

1-5







#### NOTES:

- 1. CONCRETE FOR BUNKERS IS HIGH-TEMPERATURE CONCRETE, 4000 PSI.
- 2. REMOVE ALL IN-WALL EXISTING PROPANE PIPING.
- 3. REPLACE WITH STAINLESS STEEL PIPING.
- 4. SEAL ALL NEW LOCATIONS WITH WATER PROOF SEALANT.

**REFER TO SECTION 1.6** MEASUREMENT AND PAYMENT

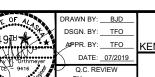
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2-3

NO. DESCRIPTION BY DATE THESE PRINTS MAY BE REDUCED LINE BELOW MEASURES ONE INCH ON ORIGINAL DRAWING. 50 - KENAI/ACAD/SHEETS/2-3 BURNER CONTROL BUNKER, DWG PLOTTED BY:BRAD DRINVILLE ON Aug/01/20

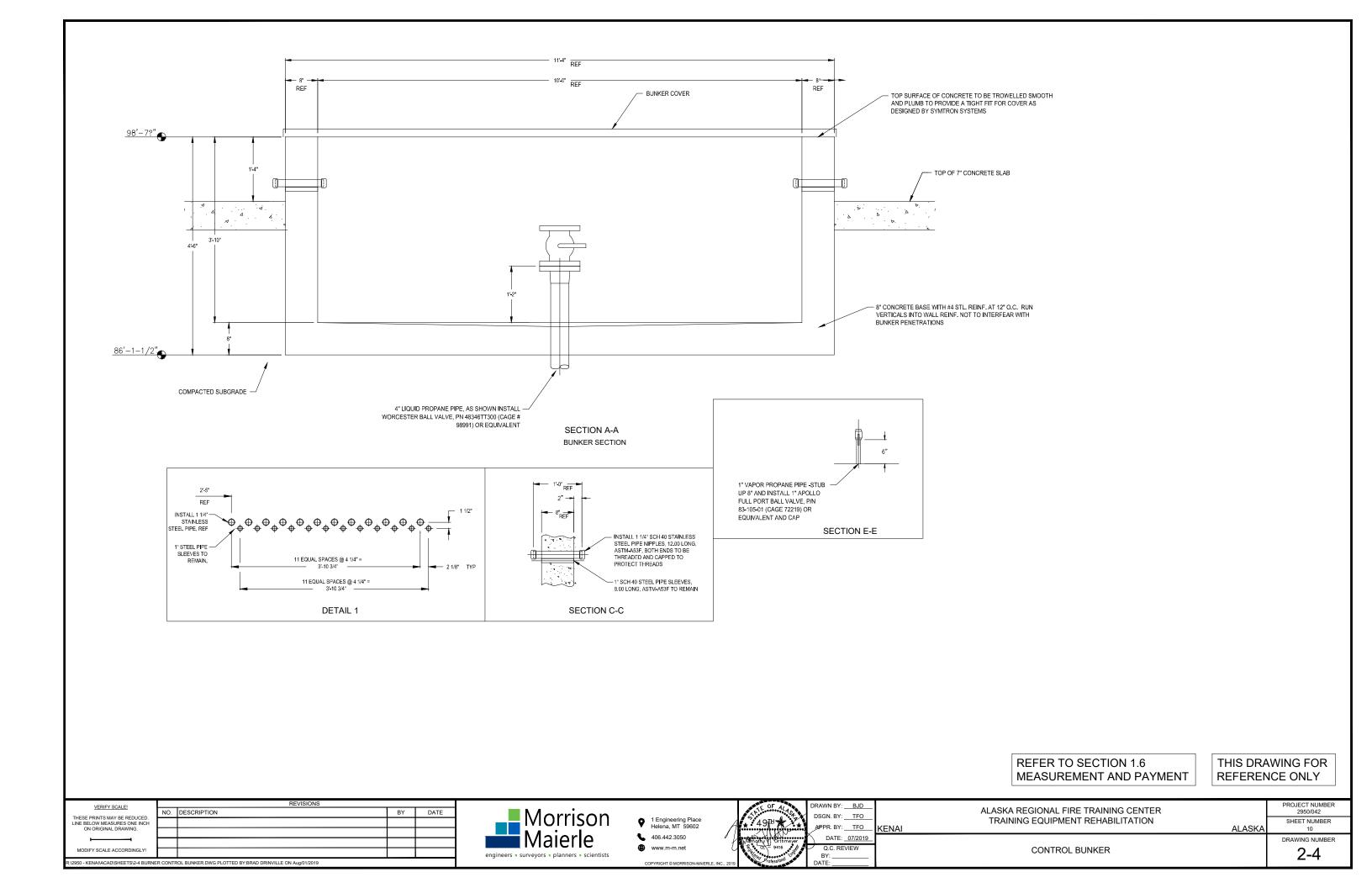
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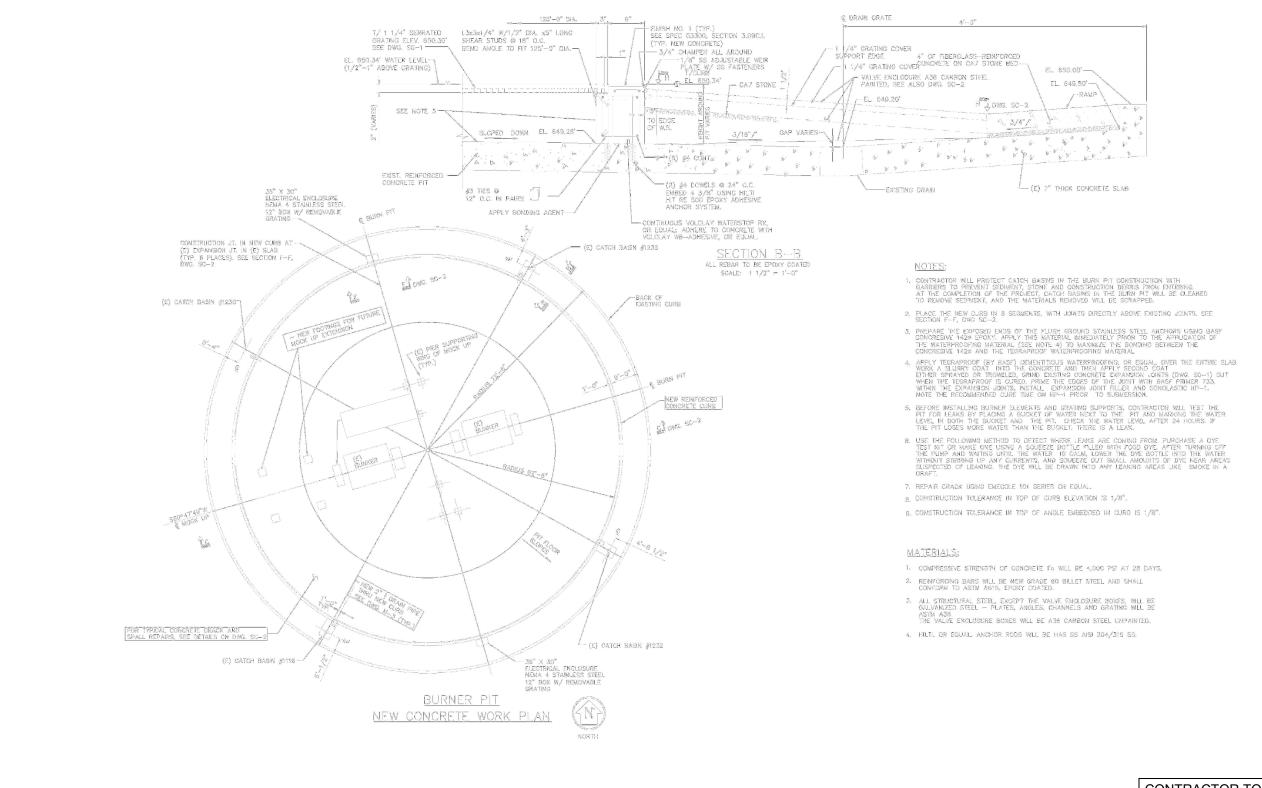




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SHEET NUMBER DRAWING NUMBER FACILITY INTERFACE BURNER CONTROL BUNKER





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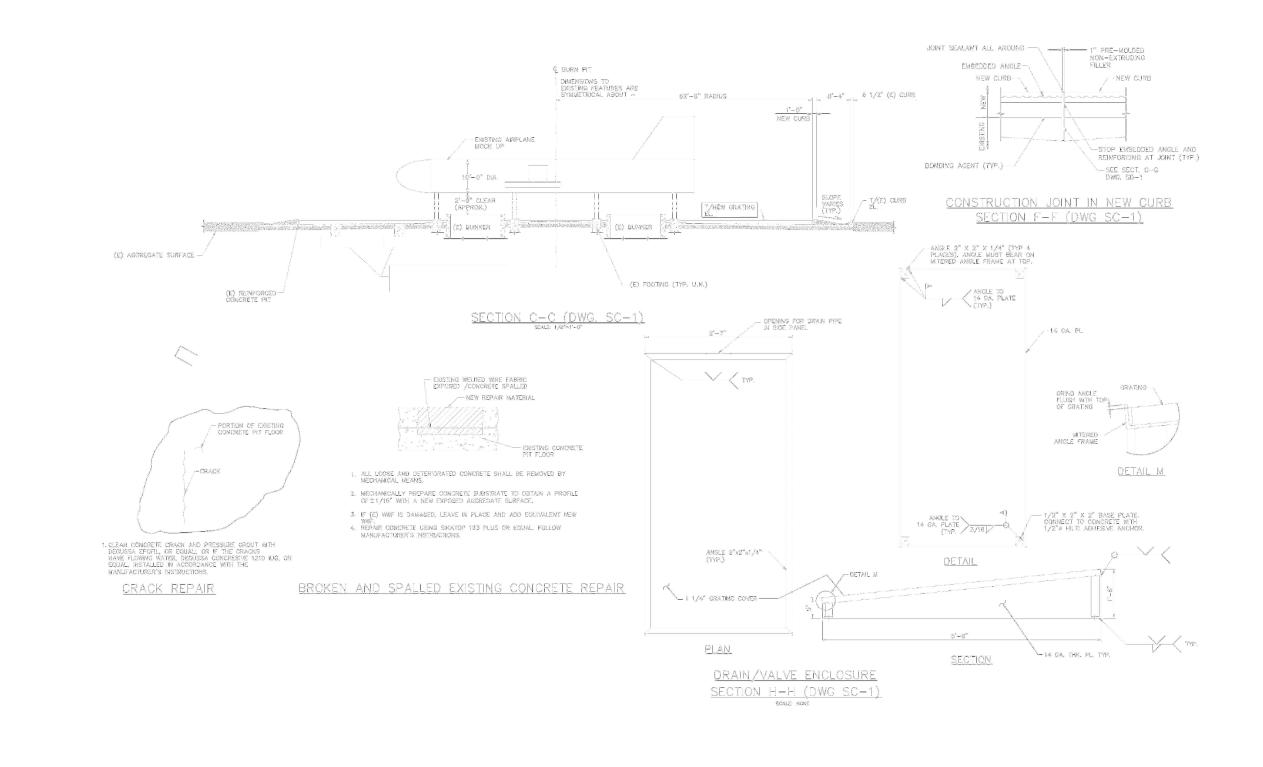
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SPILL FIRE TRAINER BURN PIT PLAN

SHEET NUMBER 11 DRAWING NUMBER

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SC-1



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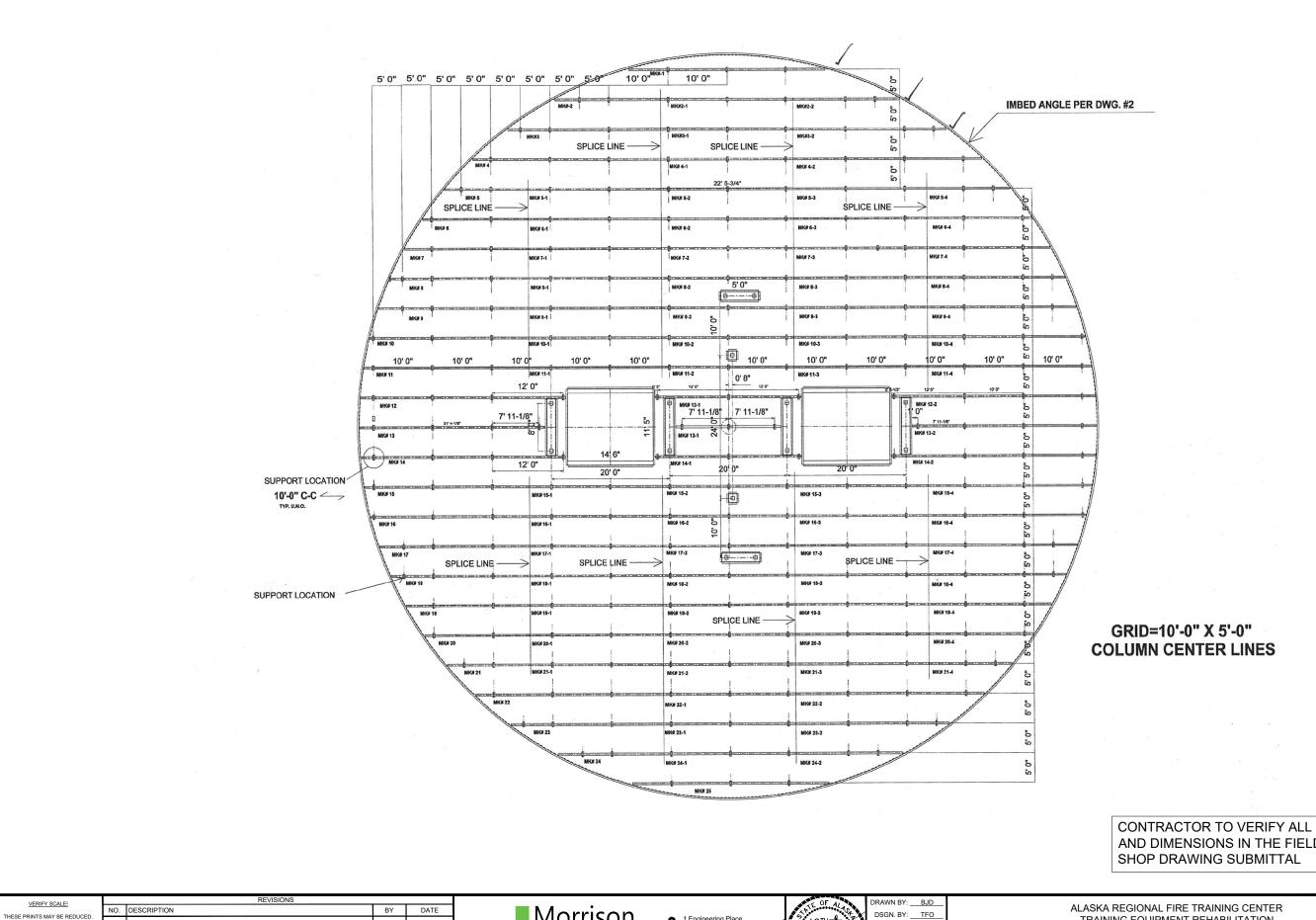


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SPILL FIRE TRAINER BURN PIT SECTION

SC-2



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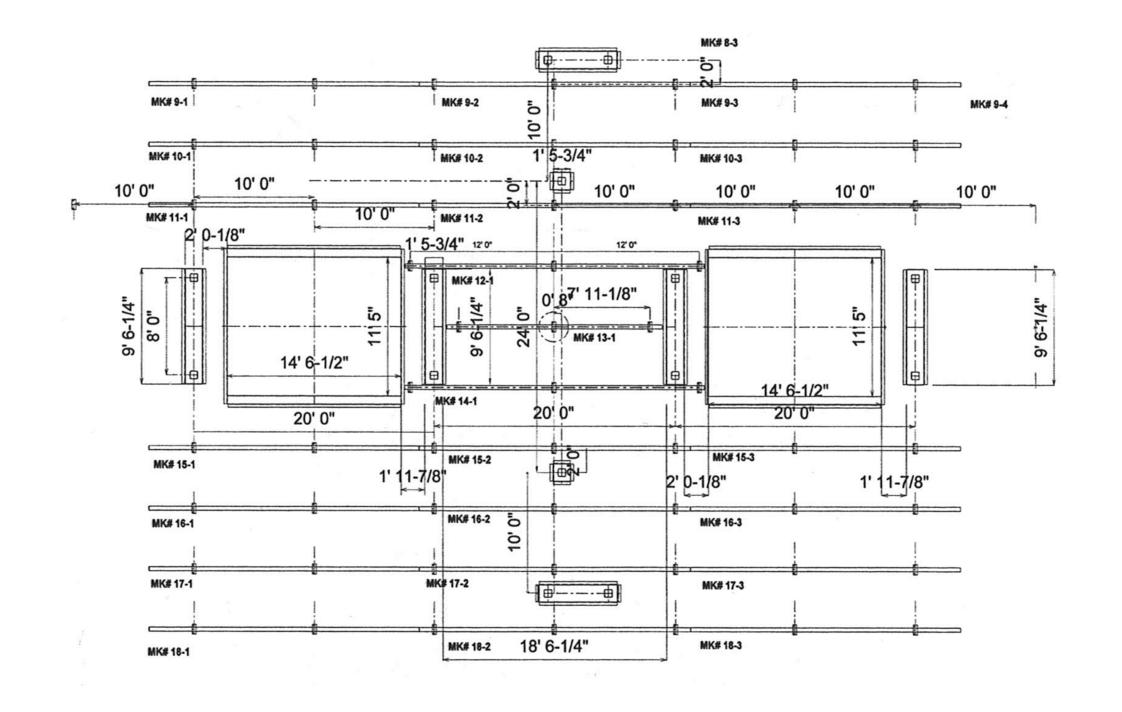
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TRAINING EQUIPMENT REHABILITATION

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SPILL FIRE TRAINER GRATING SUPPORT PLAN SG-1



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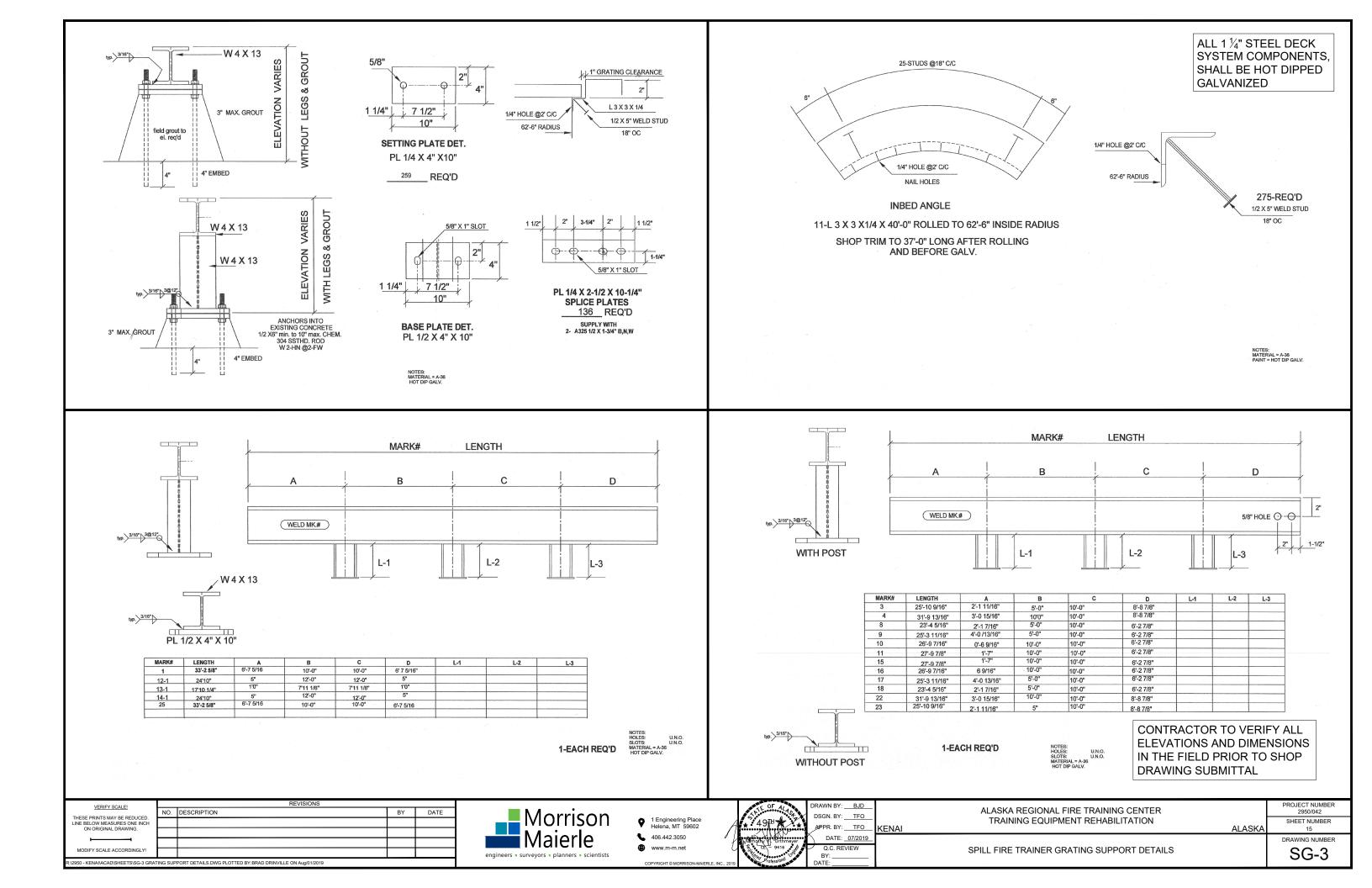
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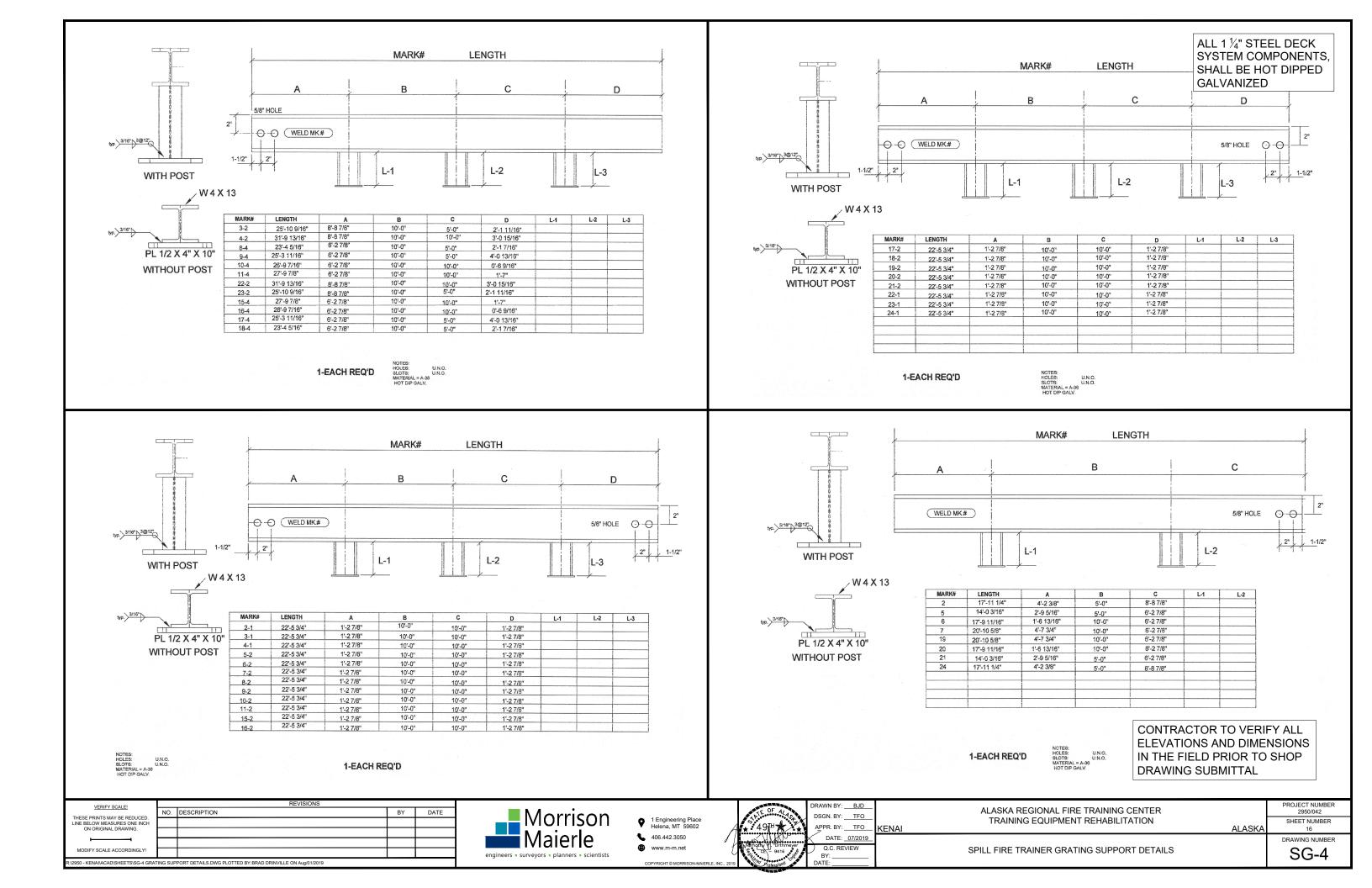
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TRAINING EQUIPMENT REHABILITATION

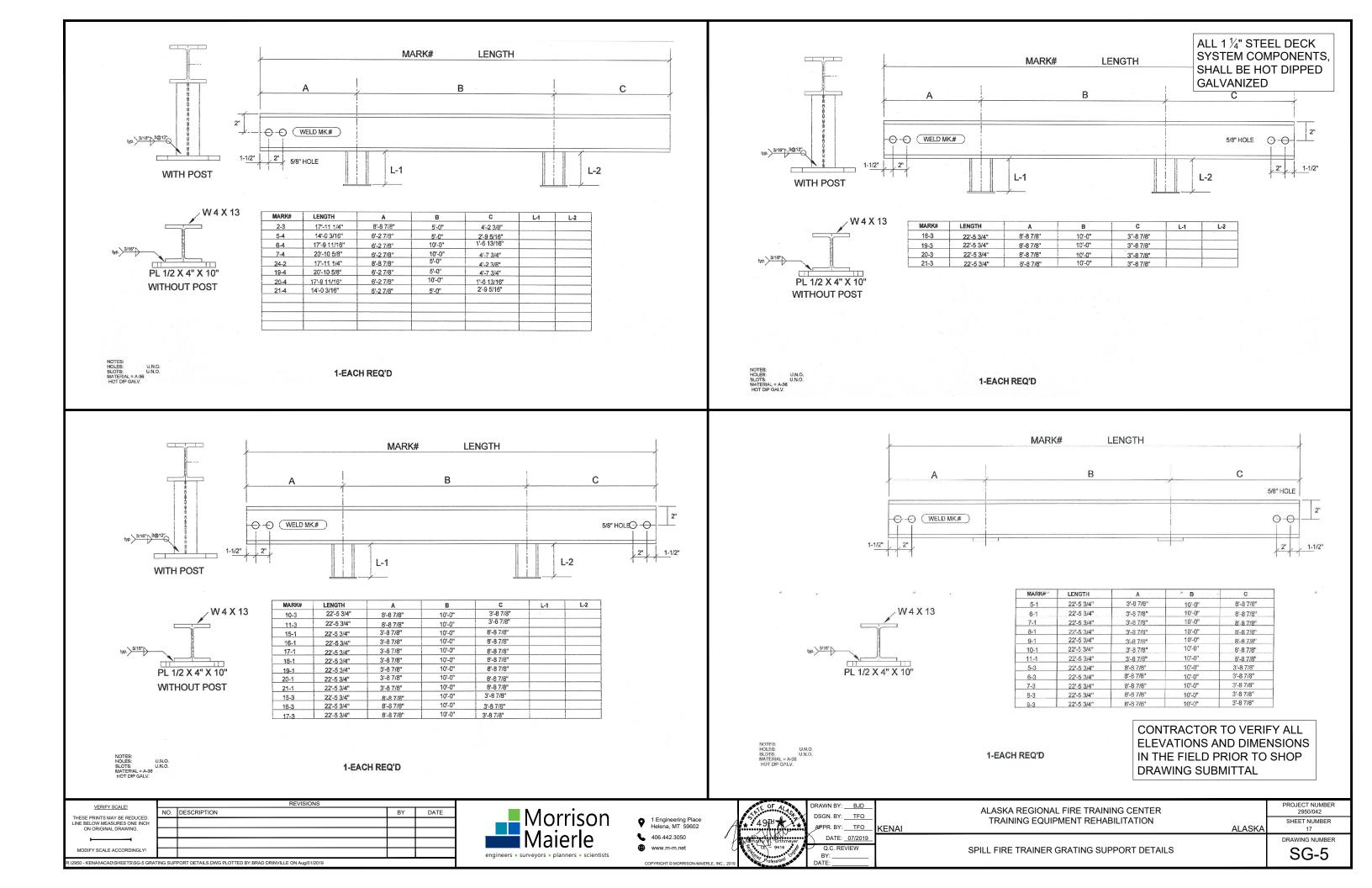
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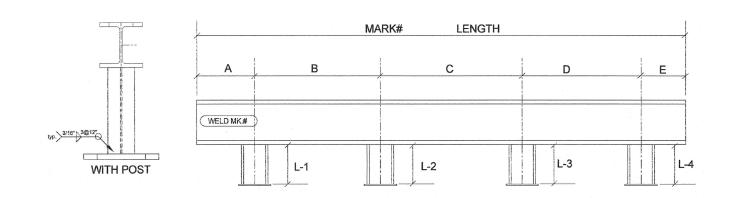
SPILL FIRE TRAINER GRATING SUPPORT DETAILS

SG-2

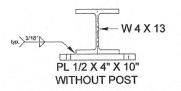


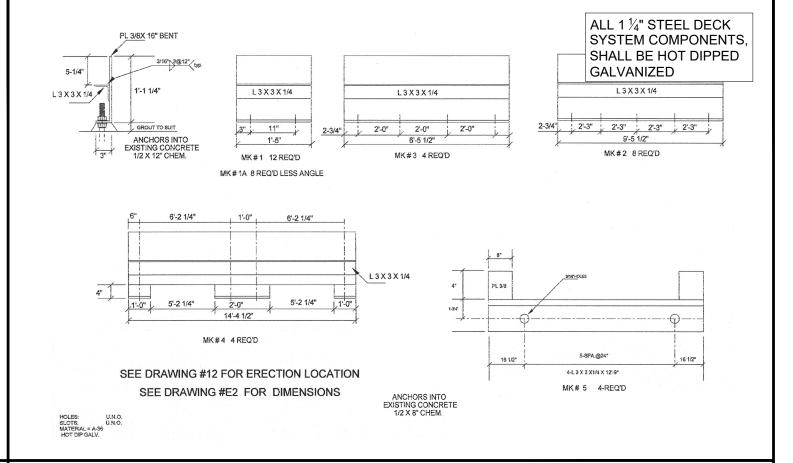


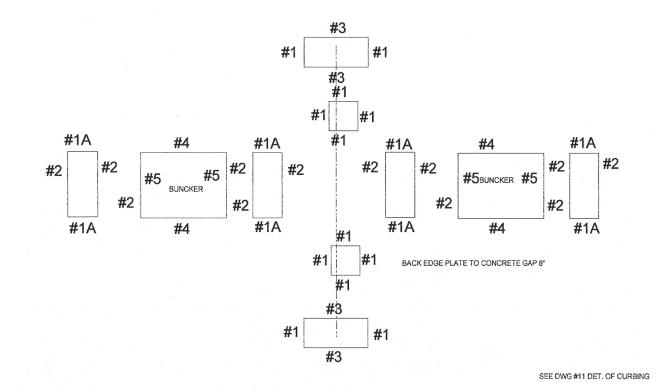




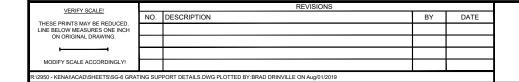
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12	34'-7 15/16"	2'-2 7/16"	10'-0"	10'-0"	12'-0"	5 1/2"				
13	31'-4 1/8"	2'-5"	10'-0"	10'-0"	7'-11 1/8"	1'-0"			10, 10	22
12-2	34'-7 15/16"	5 1/2"	12'-0"	10'-0"	10'-0"	2'2 7/16"				11.
13-2	31'-4 1/8"	1'-0"	7'-11 1/8"	10'-0"	10'-0"	2'-5"				
14	34'-7 15/16"	2'-2 7/16"	10'-0"	10'-0"	12'-0"	5 1/2"				
14-2	34'-7 15/16"	5 1/2"	12'-0"	10'-0"	10'-0"	2'-2 7/16"				







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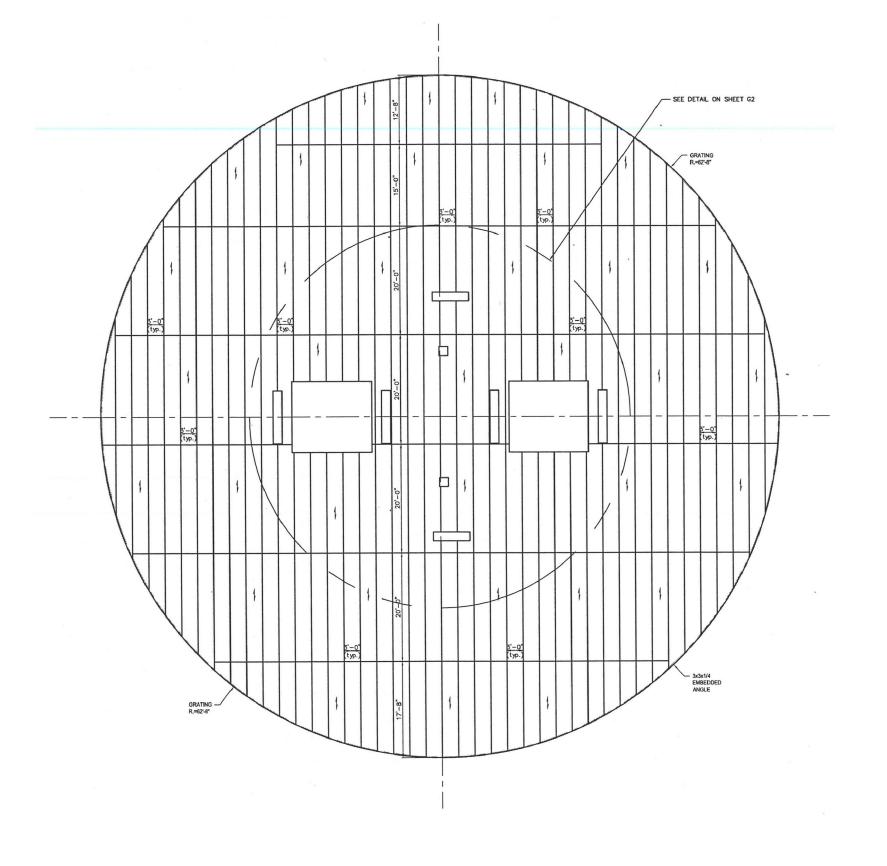
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SPILL FIRE TRAINER GRATING SUPPORT DETAILS

DRAWING NUMBER SG-6

SHEET NUMBER

ALL 1 ¼" STEEL DECK SYSTEM COMPONENTS, SHALL BE HOT DIPPED GALVANIZED



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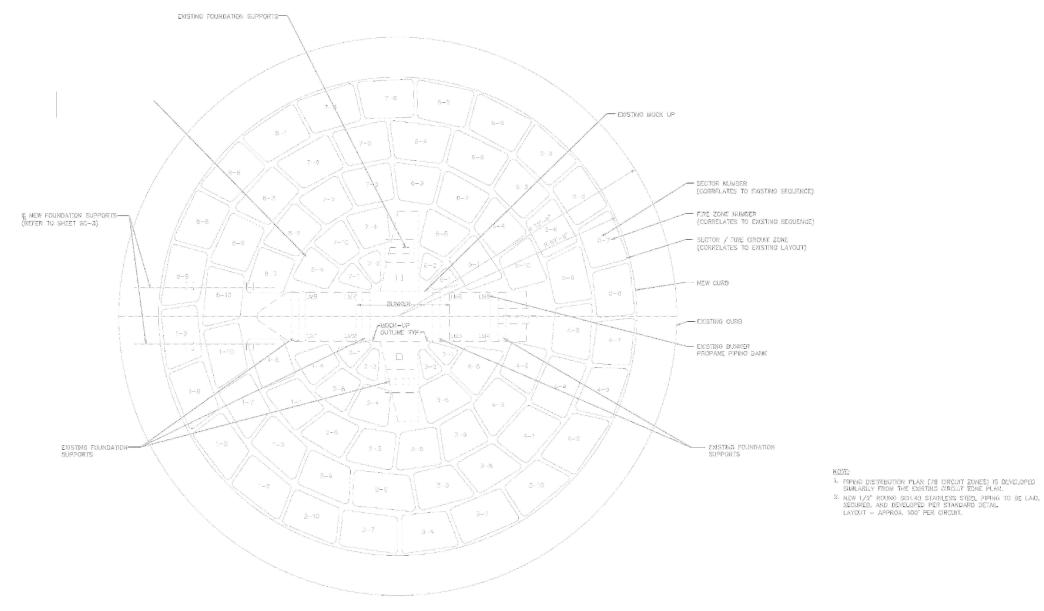
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2950/042
SHEET NUMBER
ALASKA 19

FIRE PIT GRATING PLAN

SG-7



PROPANE PIPING CIRCUITING PLAN

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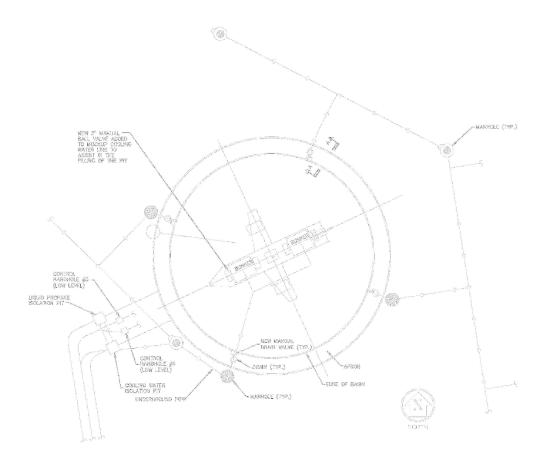
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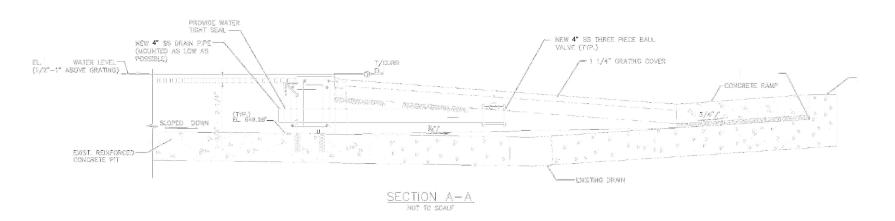
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SPILL FIRE TRAINER PROPANE PIPING CIRCUITING

DRAWING NUMBER M-1



### EXISTING DRAINAGE PIPING PLAN NOT TO SCALE



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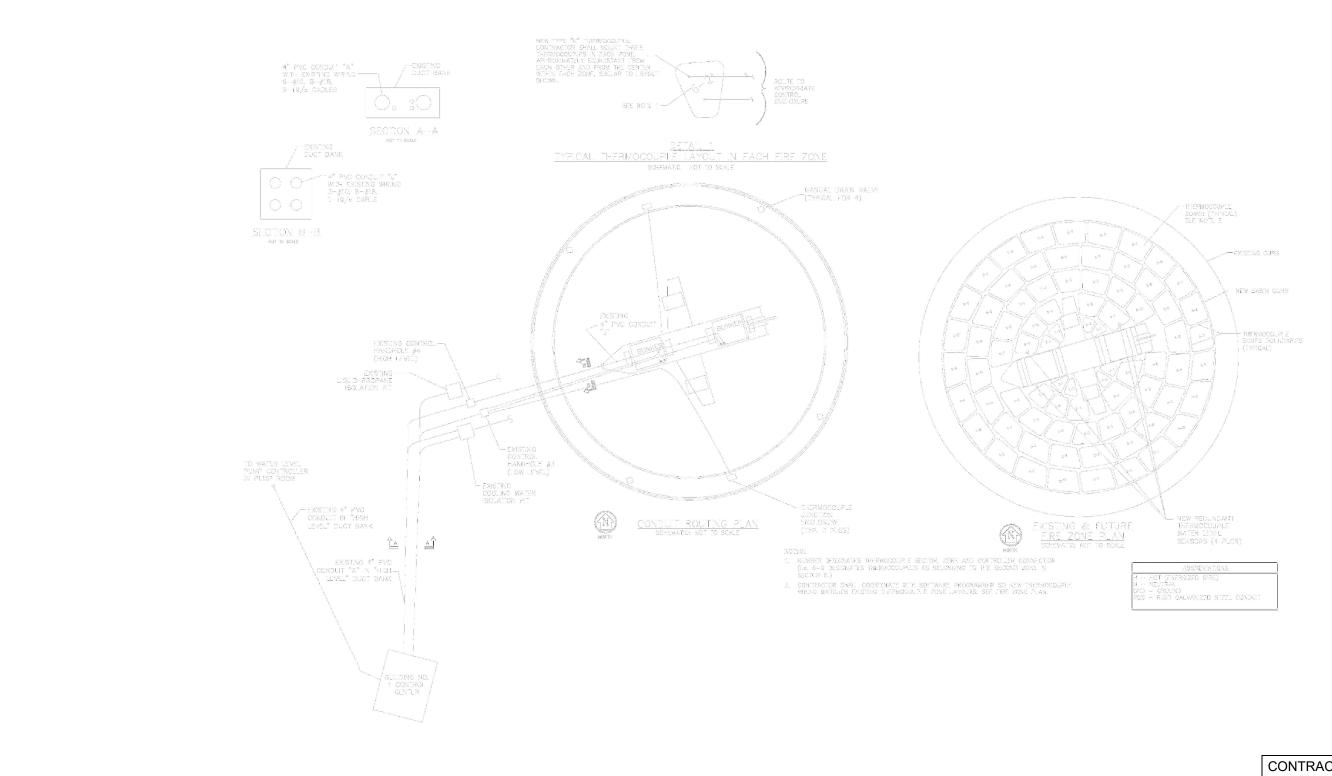
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NAI	TRAINING EQUIPMENT REHABILITATION

SHEET NUMBER 21 DRAWING NUMBER

SPILL FIRE TRAINER DRAINAGE PIPING PLAN

M-3



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ALASKA REGIONAL FIRE TRAINING CENTER TRAINING EQUIPMENT REHABILITATION

ALASKA

DRAWING NUMBER

SPILL FIRE TRAINER CONDUIT ROUTING AND FIRE ZONE PLANS AND DETAIL

E-1

PROJECT NUMBER 2950/042

SHEET NUMBER 22