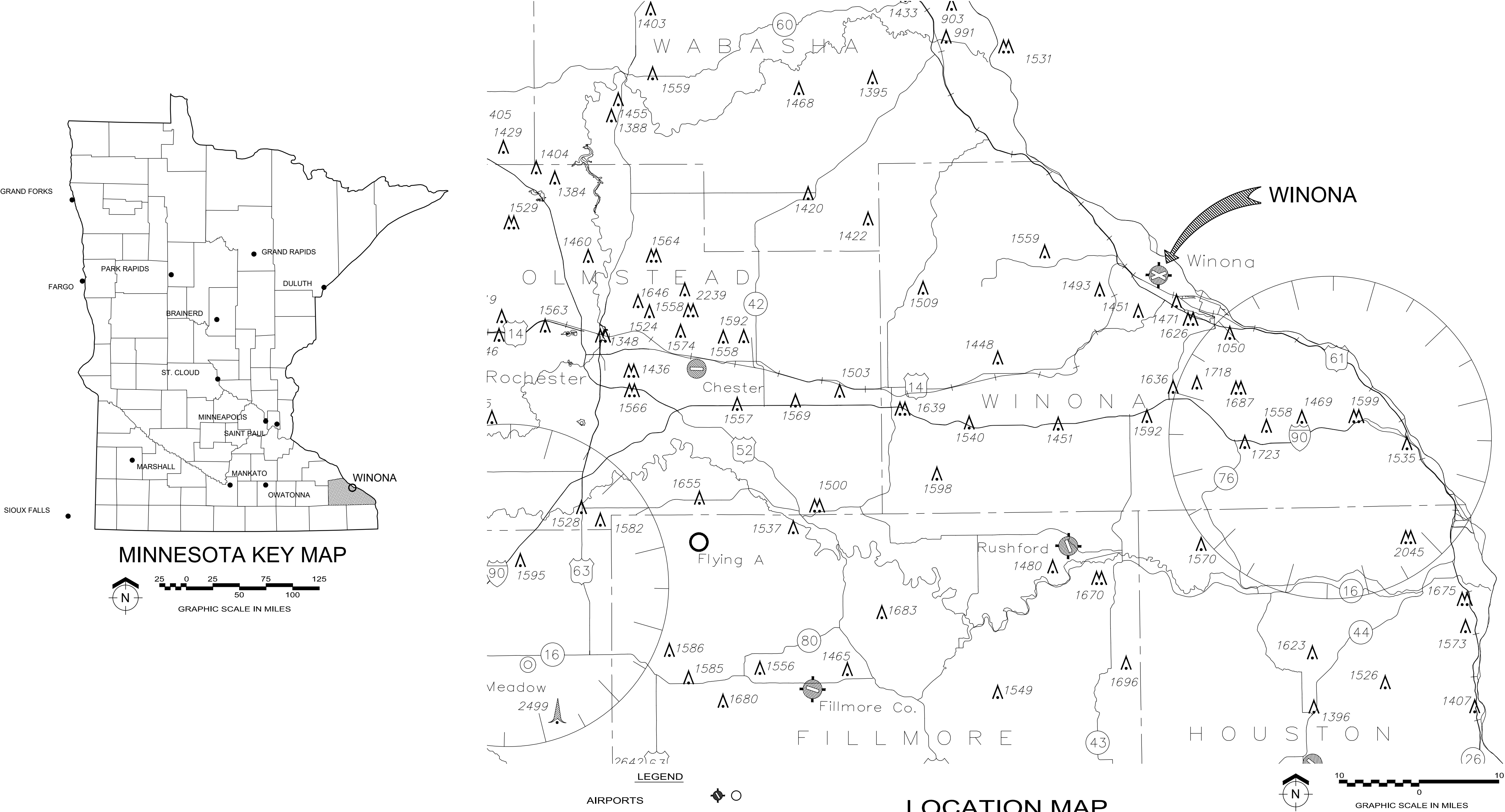


CONSTRUCTION PLANS FOR

AIRCRAFT FUELING FACILITY REPLACEMENT

WINONA MUNICIPAL AIRPORT

CITY OF WINONA, MINNESOTA



LIST OF DRAWINGS	
NO.	TITLE
c0.01	TITLE SHEET
c0.02	LOCATION PLAN
c0.03	QUANTITIES
c0.04	EXISTING CONDITIONS & REMOVALS PLAN
c1.61	EROSION CONTROL PLAN
c2.01	SITE LAYOUT PLAN
c4.01	GRADING PLAN
c5.01	FENCING PLAN
c6.01	PAVEMENT MARKING PLAN
s0.01	STRUCTURAL NOTES
s1.01	STRUCTURAL PLANS
s1.05	STRUCTURAL SECTION AND DETAILS
m0.01	MECH SYMBOLS AND ABBREVIATIONS
m0.02	PAINTING AND LABELING SCHEDULE
m0.05	MECHANICAL DETAILS - SHEET 1
m0.06	MECHANICAL DETAILS - SHEET 2
m0.10	MECHANICAL SCHEMATIC
m1.01	MECHANICAL SITE PLAN
m1.02	ENLARGED DEMOLITION PLAN
m1.03	ENLARGED MECHANICAL PLAN
m1.06	JET-A MECHANICAL PLAN AND SECTION
m1.07	AVGAS MECHANICAL PLAN AND SECTIONS
m1.08	MECHANICAL DETAILS
e0.01	ELECTRICAL NOTES
e0.02	ELECTRICAL AREA CLASSIFICATION
e0.03	ELECTRICAL SCHEDULES
e0.04	ELECTRICAL DETAILS
e1.01	ELECTRICAL REMOVAL PLAN
e1.02	ELECTRICAL PLAN
e1.03	ENLARGED ELECTRICAL PLAN
e1.04	ENLARGED ELECTRICAL PLAN



- LEGEND**
- AIRPORTS
VOR
OBSTRUCTION WITH TOP ELEV. (MSL)
HIGHWAYS
INTERSTATE
U.S.
STATE

LOCATION MAP
WINONA MUNICIPAL AIRPORT
WINONA COUNTY, MINNESOTA



S.A.P. NO. A8501-73



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

JEFFREY B. PEARSON, PE 10/07/2026 LIC. NO. 45087

ISSUED FOR:

BIDDING

10/07/2026

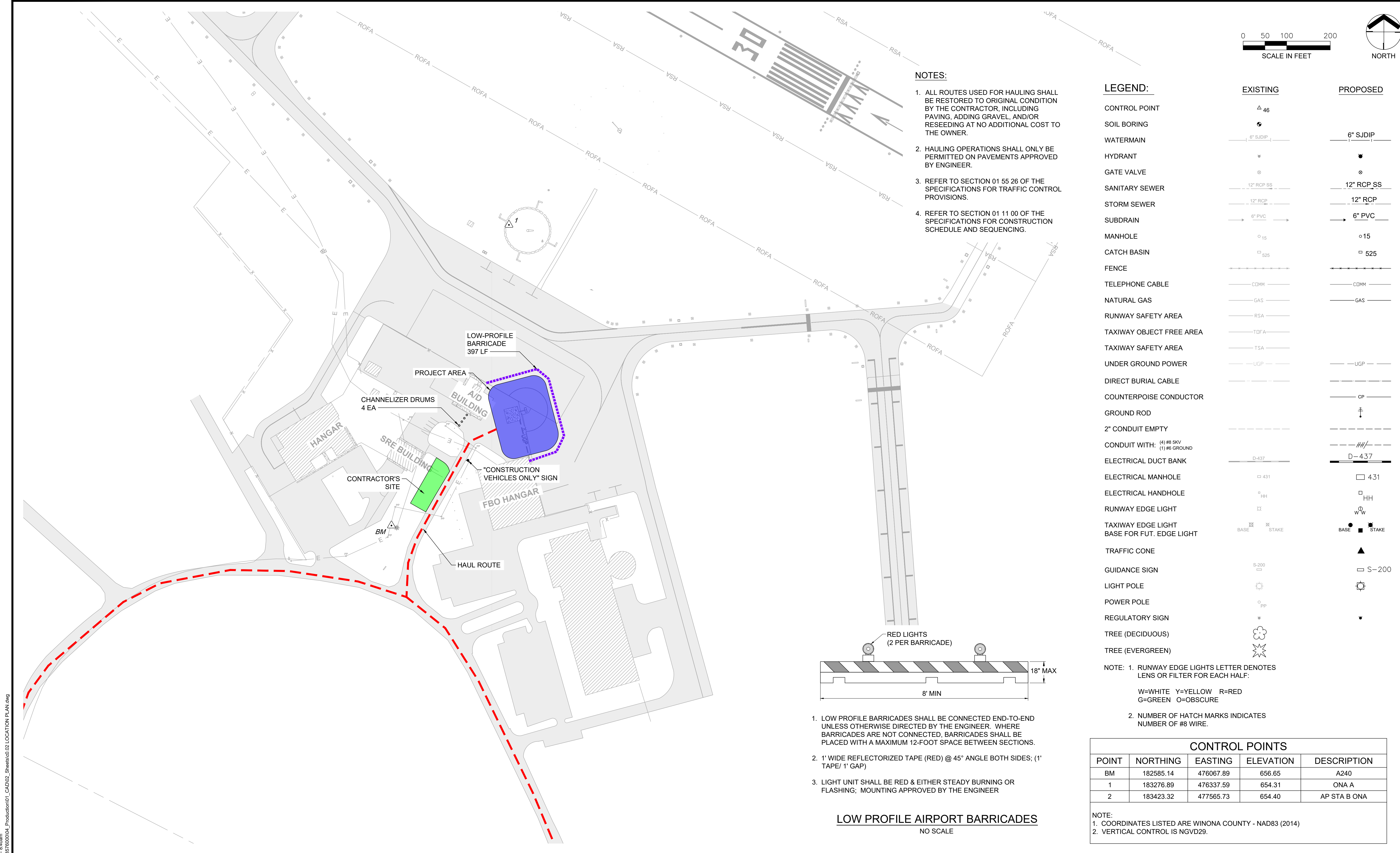
PROJ. NO.

23576

ONA

DRAWING NO.

c0.01



NOTES:

- 1. ALL ROUTES USED FOR HAULING SHALL BE RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR, INCLUDING PAVING, ADDING GRAVEL, AND/OR RESEEDING AT NO ADDITIONAL COST TO THE OWNER.
- 2. HAULING OPERATIONS SHALL ONLY BE PERMITTED ON PAVEMENTS APPROVED BY ENGINEER.
- 3. REFER TO SECTION 01 55 26 OF THE SPECIFICATIONS FOR TRAFFIC CONTROL PROVISIONS.
- 4. REFER TO SECTION 01 11 00 OF THE SPECIFICATIONS FOR CONSTRUCTION SCHEDULE AND SEQUENCING.

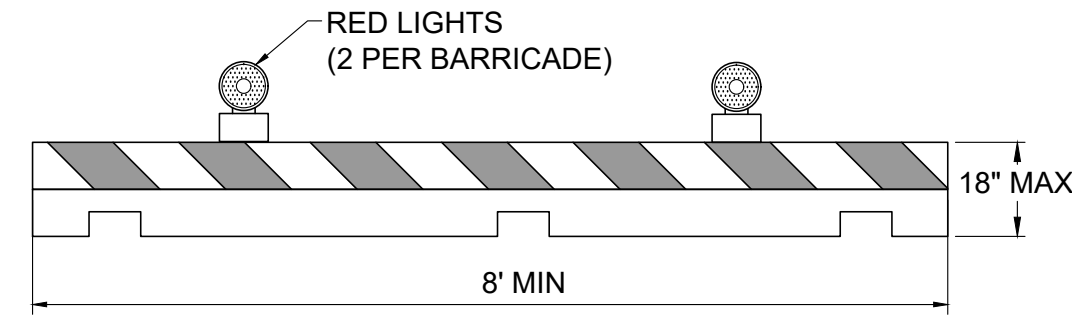
LEGEND:

CONTROL POINT		
SOIL BORING		
WATERMAIN		
HYDRANT		
GATE VALVE		
SANITARY SEWER		
STORM SEWER		
SUBDRAIN		
MANHOLE		
CATCH BASIN		
FENCE		
TELEPHONE CABLE		
NATURAL GAS		
RUNWAY SAFETY AREA		
TAXIWAY OBJECT FREE AREA		
TAXIWAY SAFETY AREA		
UNDER GROUND POWER		
DIRECT BURIAL CABLE		
COUNTERPOISE CONDUCTOR		
GROUND ROD		
2\"/>		
CONDUIT WITH: (4) #6 5KV (1) #6 GROUND		
ELECTRICAL DUCT BANK		
ELECTRICAL MANHOLE		
ELECTRICAL HANDHOLE		
RUNWAY EDGE LIGHT		
TAXIWAY EDGE LIGHT		
BASE FOR FUT. EDGE LIGHT		
STAKE		
TRAFFIC CONE		
GUIDANCE SIGN		
LIGHT POLE		
POWER POLE		
REGULATORY SIGN		
TREE (DECIDUOUS)		
TREE (EVERGREEN)		

NOTE: 1. RUNWAY EDGE LIGHTS LETTER DENOTES LENS OR FILTER FOR EACH HALF:
W=WHITE Y=YELLOW R=RED
G=GREEN O=OBSCURE
2. NUMBER OF HATCH MARKS INDICATES NUMBER OF #8 WIRE.

CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM	182585.14	476067.89	656.65	A240
1	183276.89	476337.59	654.31	ONA A
2	183423.32	477565.73	654.40	AP STA B ONA

NOTE:
1. COORDINATES LISTED ARE WINONA COUNTY - NAD83 (2014)
2. VERTICAL CONTROL IS NGVD29.



- 1. LOW PROFILE BARRICADES SHALL BE CONNECTED END-TO-END UNLESS OTHERWISE DIRECTED BY THE ENGINEER. WHERE BARRICADES ARE NOT CONNECTED, BARRICADES SHALL BE PLACED WITH A MAXIMUM 12-FOOT SPACE BETWEEN SECTIONS.
- 2. 1' WIDE REFLECTORIZED TAPE (RED) @ 45° ANGLE BOTH SIDES; (1' TAPE/ 1' GAP)
- 3. LIGHT UNIT SHALL BE RED & EITHER STEADY BURNING OR FLASHING; MOUNTING APPROVED BY THE ENGINEER

LOW PROFILE AIRPORT BARRICADES
NO SCALE

CURRENT: Oct 07, 2026 - 8:40am
DIR: K:\v\Winona_MN\23576000\04_Production\01_CAD\02_Sheets\0202_Location Plan.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED JWJ	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA _____ JEFFREY B. PEARSON, PE OCTOBER 7, 2026 LIC. NO. 45087
DRAWN JWJ	
CHECKED JBP	

WINONA
MUNICIPAL
AIRPORT

LOCATION PLAN
AIRCRAFT FUELING FACILITY REPLACEMENT

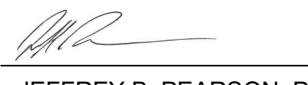
PROJ. NO. 23576
DRAWING NO. c0.02
ONA

CURRENT: Oct 07, 2026 - 9:48am
DIR: K:\u2192Winona_MN\2357500\04_Production\01_CAD\02_Sheets\c0.03_QUANTITIES.dwg

QUANTITIES				
NOTE	ITEM NO.	DESCRIPTION	UNIT	ESTIMATED
	01 55 26-1	TRAFFIC CONTROL	LUMP SUM	1
	01 71 13-1	MOBILIZATION	LUMP SUM	1
	02 41 00-1	REMOVE EXISTING FUEL SYSTEM	LUMP SUM	1
	02 41 13-1	REMOVE CONCRETE PAVEMENT	SQUARE YARD	117
	02 41 13-2	REMOVE ASPHALT PAVEMENT	SQUARE YARD	165
	02 41 13-3	REMOVE & SALVAGE CHAIN LINK FENCE	LINEAR FOOT	133
(1) (2)	02 41 13-4	MISCELLANEOUS REMOVALS	UNIT	500
	03 30 00-1	CONCRETE FOUNDATION - FUEL TANKS	LUMP SUM	1
	26 05 00-1	ELECTRICAL WORK	LUMP SUM	1
	31 23 00-1	GRANULAR MATERIAL (CV)	CUBIC YARD	435
(3)	31 23 00-2	WATER	MGAL	3.6
	31 25 00-1	SILT FENCE	LINEAR FOOT	550
	32 02 00-2	6" AGGREGATE BASE COURSE (MNDOT CLASS V)	SQUARE YARD	282
	32 02 00-3	TACK COAT	GALLON	14
	32 02 00-4	PLANT MIXED ASPHALT PAVEMENT (MNDOT 2360)	TON	64
(2)	32 17 23-3	PAVEMENT MARKING	SQUARE FOOT	62
(2)	32 17 23-4	OBLITERATE PAVEMENT MARKINGS	SQUARE FOOT	67
	32 31 00-1	INSTALL SALVAGED CHAIN LINK FENCE	LINEAR FOOT	123
	32 31 00-2	INSTALL SALVAGED GATE	EACH	1
	32 39 14-1	STEEL GUIDE POST	EACH	54
	40 05 00-1	10,000 GAL STORAGE TANK - AVGAS	UNIT	1
	40 05 00-2	10,000 GAL STORAGE TANK - JET-A	UNIT	1
	40 05 00-3	DISPENSING SYSTEM - AVGAS	LUMP SUM	1
	40 05 00-4	DISPENSING SYSTEM - JET-A	LUMP SUM	1
	40 05 00-5	TANK VALVES & MONITORING EQUIPMENT	LUMP SUM	1
	40 05 00-6	MECHANICAL PIPING	LUMP SUM	1
	40 05 00-7	AUTOMATIC TANK GAUGING SYSTEM EQUIPMENT & NSTALLATION	LUMP SUM	1
	40 05 00-8	PAYMENT TERMINAL EQUIPMENT & INSTALLATION	LUMP SUM	1
NOTES: (1) ALLOWANCE PROVIDED IN ACCORDANCE WITH THE CONTRACT. (2) AS DIRECTED BY THE ENGINEER. (3) INCLUDES 12 GALLONS/CUBIC YARD FOR GRANULAR MATERIAL, 6 GALLONS/SQUARE YARD FOR CRUSHED AGGREGATE BASE CONSTRUCTION PLUS AN ALLOWANCE FOR DUST CONTROL AND MAINTENANCE OF TURF, AS DIRECTED BY ENGINEER.				

NO.	DATE	BY	DESCRIPTION OF REVISIONS

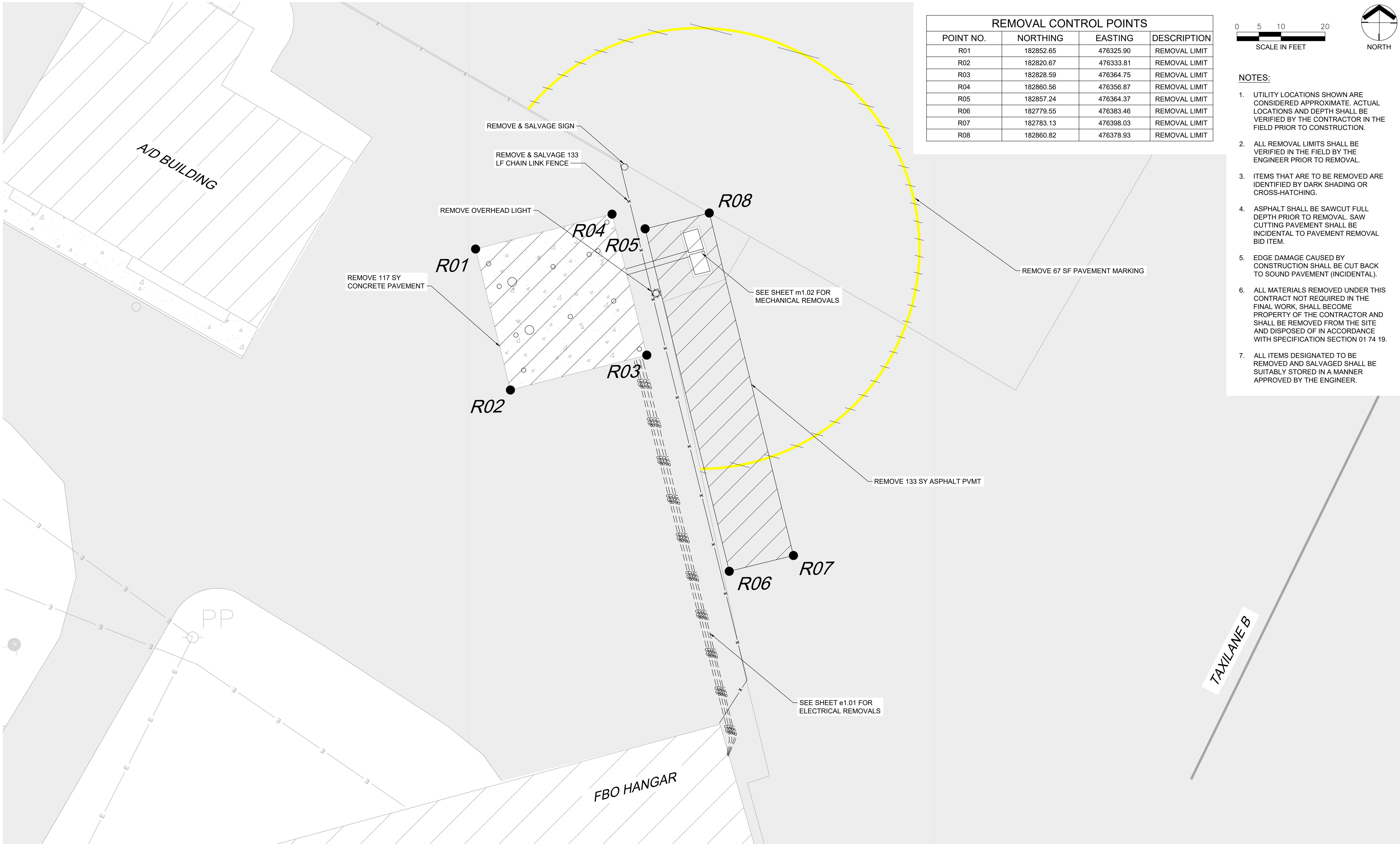
DESIGNED JWJ
DRAWN JWJ
CHECKED JBP

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
	OCTOBER 7, 2026
JEFFREY B. PEARSON, PE	LIC. NO. 45087



WINONA
MUNICIPAL
AIRPORT

QUANTITIES		PROJ. NO. 23576	ONA
AIRCRAFT FUELING FACILITY REPLACEMENT		DRAWING NO. c0.03	



REMOVAL CONTROL POINTS			
POINT NO.	NORTHING	EASTING	DESCRIPTION
R01	182852.65	476325.90	REMOVAL LIMIT
R02	182820.67	476333.81	REMOVAL LIMIT
R03	182828.59	476364.75	REMOVAL LIMIT
R04	182860.56	476356.87	REMOVAL LIMIT
R05	182857.24	476364.37	REMOVAL LIMIT
R06	182779.55	476383.46	REMOVAL LIMIT
R07	182783.13	476398.03	REMOVAL LIMIT
R08	182860.82	476378.93	REMOVAL LIMIT



- NOTES:
- UTILITY LOCATIONS SHOWN ARE CONSIDERED APPROXIMATE. ACTUAL LOCATIONS AND DEPTH SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD PRIOR TO CONSTRUCTION.
 - ALL REMOVAL LIMITS SHALL BE VERIFIED IN THE FIELD BY THE ENGINEER PRIOR TO REMOVAL.
 - ITEMS THAT ARE TO BE REMOVED ARE IDENTIFIED BY DARK SHADING OR CROSS-HATCHING.
 - ASPHALT SHALL BE SAWCUT FULL DEPTH PRIOR TO REMOVAL. SAW CUTTING PAVEMENT SHALL BE INCIDENTAL TO PAVEMENT REMOVAL BID ITEM.
 - EDGE DAMAGE CAUSED BY CONSTRUCTION SHALL BE CUT BACK TO SOUND PAVEMENT (INCIDENTAL).
 - ALL MATERIALS REMOVED UNDER THIS CONTRACT NOT REQUIRED IN THE FINAL WORK, SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH SPECIFICATION SECTION 01 74 19.
 - ALL ITEMS DESIGNATED TO BE REMOVED AND SALVAGED SHALL BE SUITABLY STORED IN A MANNER APPROVED BY THE ENGINEER.

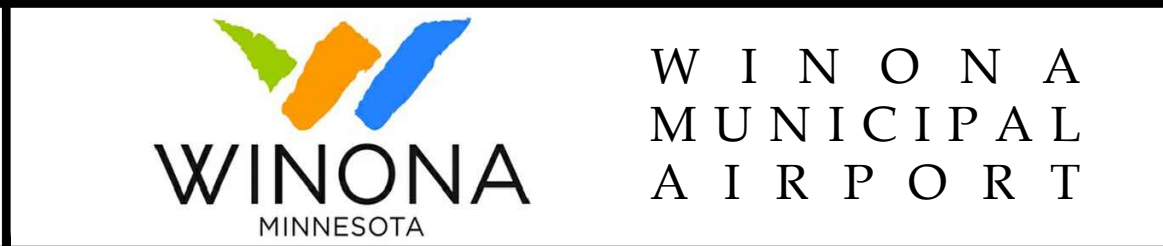
CURRENT: Oct 07, 2026 - 8:41am
DIR: K:\v\Winona_MN\2357600\04_Production\01_CAD\02_Sheets\04_EXISTING CONDITIONS & REMOVALS.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED JWJ
DRAWN JWJ
CHECKED JBP

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

 OCTOBER 7, 2026
JEFFREY B. PEARSON, PE LIC. NO. 45087



EXISTING CONDITIONS & REMOVALS PLAN
AIRCRAFT FUELING FACILITY REPLACEMENT

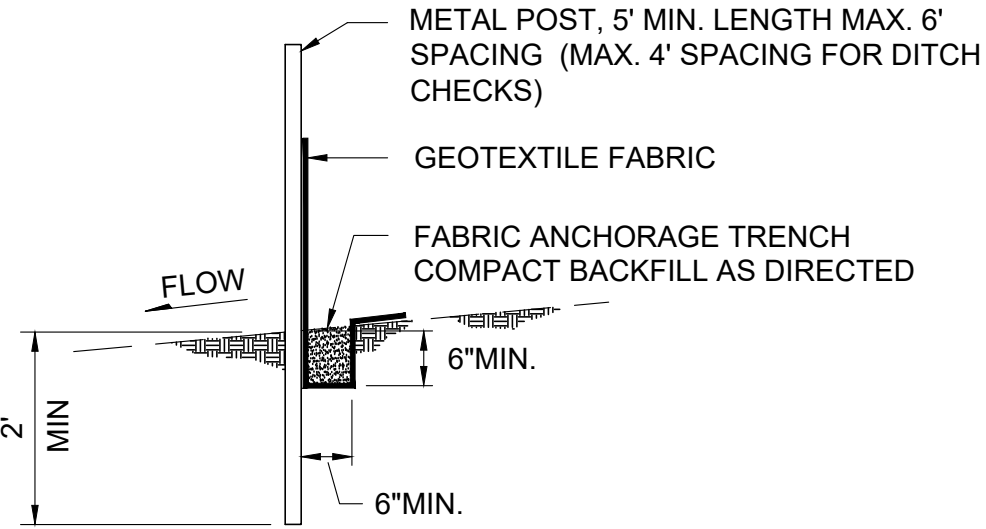
PROJ. NO. 23576	ONA
DRAWING NO. c0.04	



EROSION CONTROL POINTS			
POINT NO.	NORTHING	EASTING	DESCRIPTION
S01	182716.19	476686.31	SILT FENCE
S02	182895.54	476645.82	SILT FENCE
S03	182987.71	476701.39	SILT FENCE
S04	182991.24	476731.17	SILT FENCE
S05	183067.87	476717.92	SILT FENCE
S06	183062.39	476583.02	SILT FENCE
S07	183104.61	476498.79	SILT FENCE



- LEGEND**
- x— SILT FENCE
- NOTES:**
- ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY LAND-DISTURBING ACTIVITY, OR AS SOON AS FEASIBLE.
 - SCHEDULE AND CONDUCT OPERATIONS SO AS TO MINIMIZE ON SITE EROSION, PREVENT OFF SITE SEDIMENTATION, AND PREVENT SEDIMENT FROM ENTERING THE STORM SEWER SYSTEM.
 - ALL EXCAVATIONS AND EMBANKMENTS SHALL BE MAINTAINED IN A WELL DRAINED CONDITION AT ALL TIMES. THIS SHALL INCLUDE THE INSTALLATION OF PLANNED DRAINAGE FACILITIES CONCURRENTLY WITH THE EMBANKMENT CONSTRUCTION OR THE INSTALLATION OF TEMPORARY DRAINAGE FACILITIES AS APPROVED BY THE ENGINEER.
 - NO MATERIAL SHALL BE STOCKPILED IN A MANNER THAT WILL RESTRICT SURFACE DRAINAGE. STOCKPILED MATERIALS SUBJECT TO EROSION BY WIND OR WATER DUE TO THEIR SIZE OR DURATION OF STOCKPILING SHALL BE STABILIZED AND PROTECTED FROM EROSION.
 - CLEAN-UP OF THE CONSTRUCTION SITE AND HAUL ROUTES BOTH WITHIN AND OUTSIDE THE AIR OPERATIONS AREA SHALL BE PERFORMED ON A CONTINUOUS BASIS WHENEVER CONSTRUCTION OPERATIONS ARE IN PROGRESS.
 - ALL SILT FENCES AND INLET PROTECTION INSTALLATIONS SHALL BE INSPECTED AT LEAST ONCE A WEEK, AND WITHIN 24 HOURS AFTER EACH RUNOFF EVENT, UNTIL FINAL STABILIZATION OF THE SITE IS COMPLETED. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. WHEN SEDIMENT DEPOSITS REACH APPROXIMATELY ONE-THIRD THE HEIGHT OF SILT FENCE, OR WHEN SEDIMENT ACCUMULATES AT AN INLET SUCH AS TO INTERFERE WITH THE OPERATION OF THE INLET, THE SEDIMENT SHALL BE REMOVED.
 - WATER SHALL BE USED AS DUST PALLIATIVE AT LOCATIONS AND AMOUNTS AS DIRECTED BY THE ENGINEER.



SILT FENCE DETAIL
TYPE HEAVY DUTY
LOCATION AS SHOWN OR DIRECTED BY ENGINEER

CURRENT: Oct 07, 2026 - 8:41am
DIR: K:\v\Winona_MN\2357600\04_Production\01_CAD\02_Sheets\c1.61 EROSION CONTROL PLAN.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED	JWJ
DRAWN	JWJ
CHECKED	JBP

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

JEFFREY B. PEARSON OCTOBER 7, 2026
JEFFREY B. PEARSON, PE LIC. NO. 45087



WINONA
MUNICIPAL
AIRPORT

EROSION CONTROL PLAN
AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO.	23576	ONA
DRAWING NO.	c1.61	



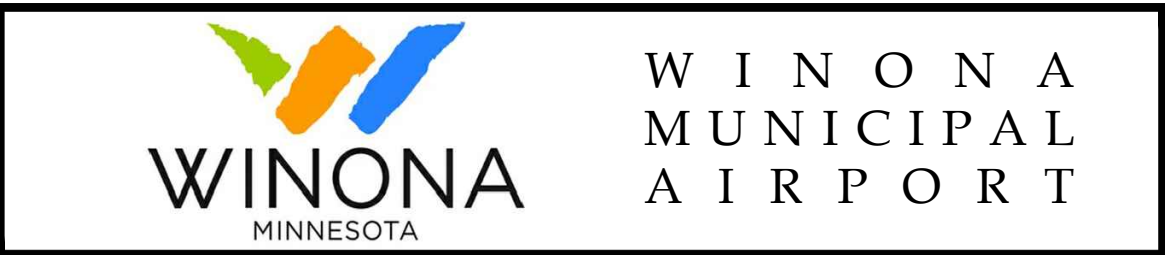
CURRENT: Oct 07, 2026 - 8:41am
DIR: K:\v\Winona_MN\235760004_Production\01_CAD\02_Sheets\c2.01 SITE LAYOUT PLAN.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED JWJ
DRAWN JWJ
CHECKED JBP

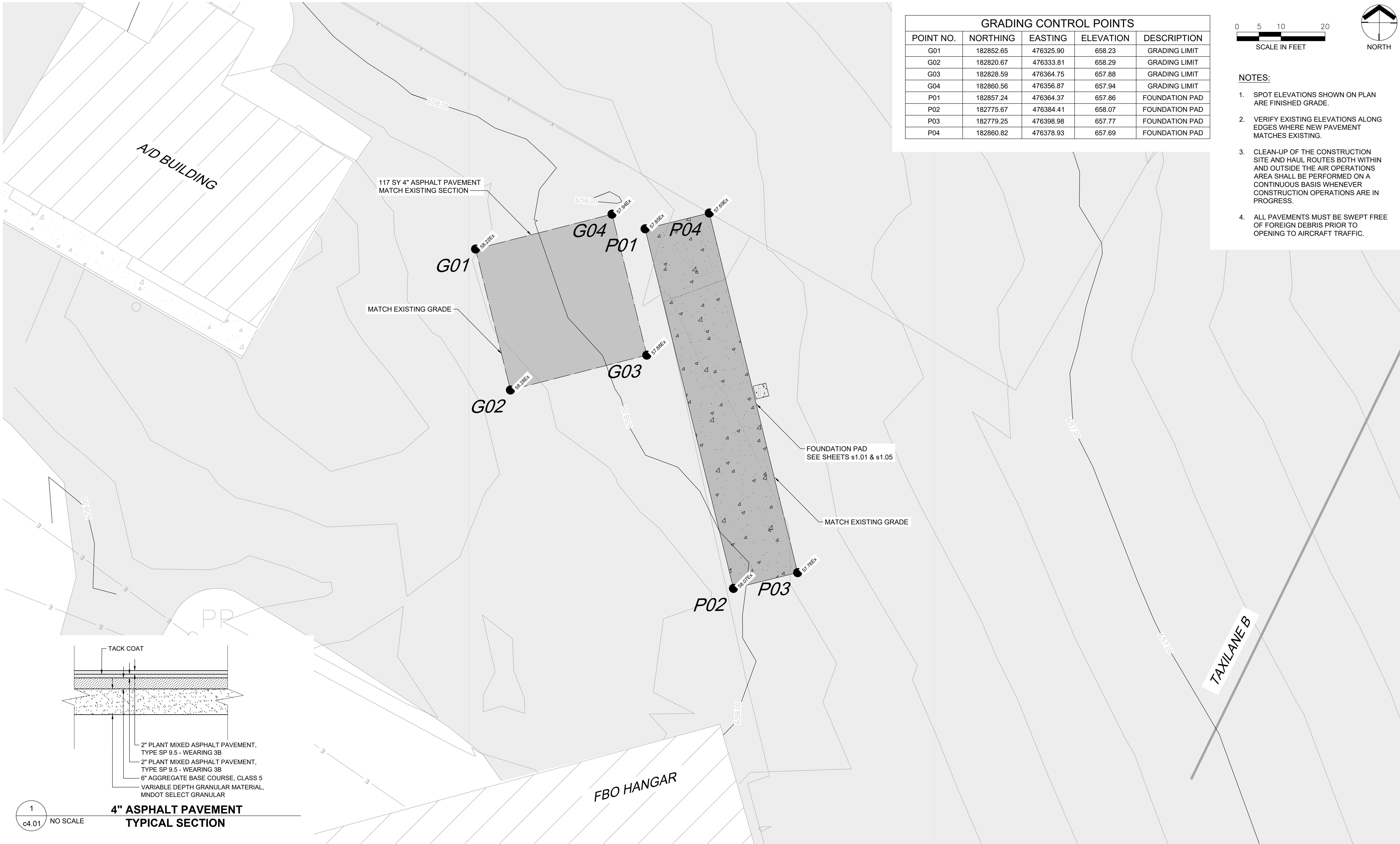
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME
OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY
LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF
THE STATE OF MINNESOTA

 OCTOBER 7, 2026
JEFFREY B. PEARSON, PE LIC. NO. 45087

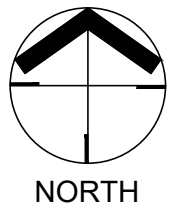
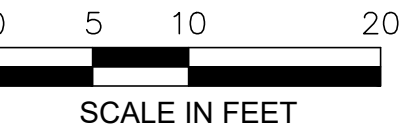


SITE LAYOUT PLAN
AIRCRAFT FUELING FACILITY REPLACEMENT

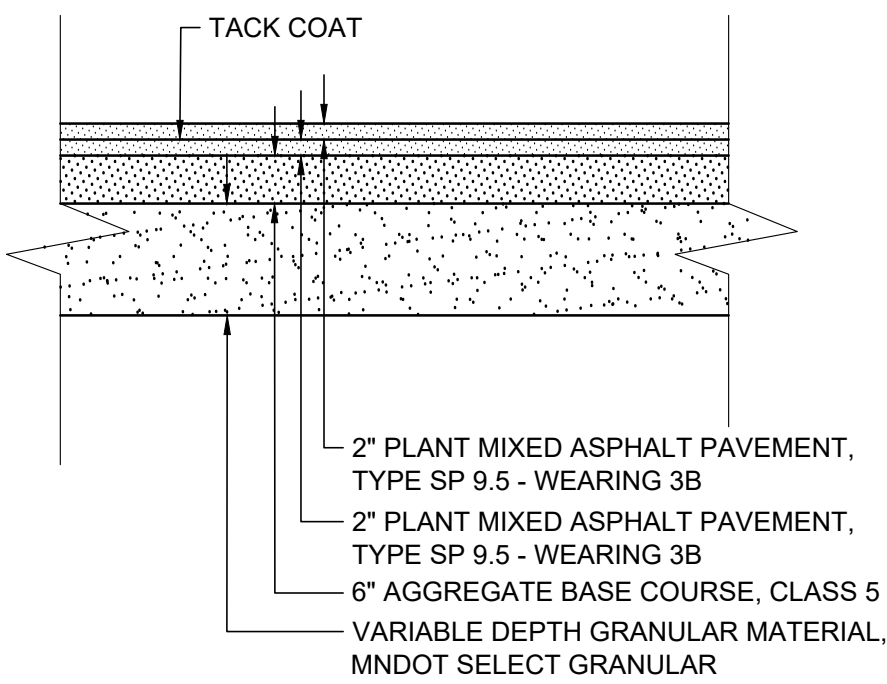
PROJ. NO. 23576	ONA
DRAWING NO. c2.01	



Grading Control Points				
Point No.	Northing	Easting	Elevation	Description
G01	182852.65	476325.90	658.23	Grading Limit
G02	182820.67	476333.81	658.29	Grading Limit
G03	182828.59	476364.75	657.88	Grading Limit
G04	182860.56	476356.87	657.94	Grading Limit
P01	182857.24	476364.37	657.86	Foundation Pad
P02	182775.67	476384.41	658.07	Foundation Pad
P03	182779.25	476398.98	657.77	Foundation Pad
P04	182860.82	476378.93	657.69	Foundation Pad



- NOTES:
- SPOT ELEVATIONS SHOWN ON PLAN ARE FINISHED GRADE.
 - VERIFY EXISTING ELEVATIONS ALONG EDGES WHERE NEW PAVEMENT MATCHES EXISTING.
 - CLEAN-UP OF THE CONSTRUCTION SITE AND HAUL ROUTES BOTH WITHIN AND OUTSIDE THE AIR OPERATIONS AREA SHALL BE PERFORMED ON A CONTINUOUS BASIS WHENEVER CONSTRUCTION OPERATIONS ARE IN PROGRESS.
 - ALL PAVEMENTS MUST BE SWEEPED FREE OF FOREIGN DEBRIS PRIOR TO OPENING TO AIRCRAFT TRAFFIC.



4" ASPHALT PAVEMENT
TYPICAL SECTION

1
c4.01 NO SCALE

CURRENT: Oct 07, 2026 - 8:41am
DIR: K:\v\Winona_MN\23576\0004_Production\01_CAD\02_Sheets\c4.01_Grading\PLAN.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED JWJ
DRAWN JWJ
CHECKED JBP

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

Jeffrey B. Pearson OCTOBER 7, 2026
JEFFREY B. PEARSON, PE LIC. NO. 45087



WINONA
MUNICIPAL
AIRPORT

GRADING PLAN
AIRCRAFT FUELING FACILITY REPLACEMENT

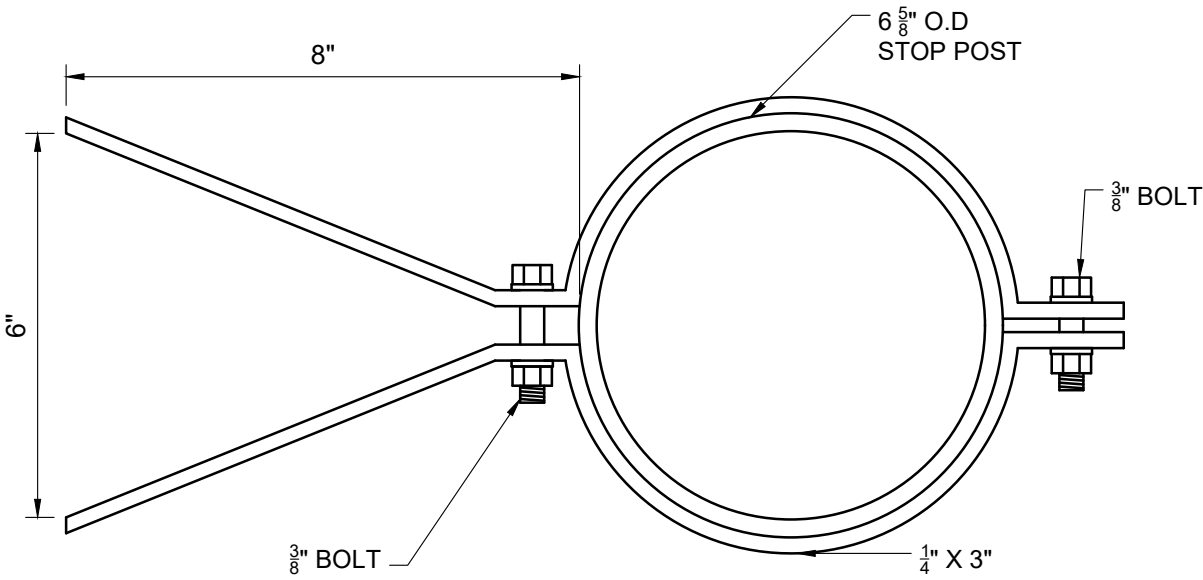
PROJ. NO. 23576	ONA
DRAWING NO. c4.01	



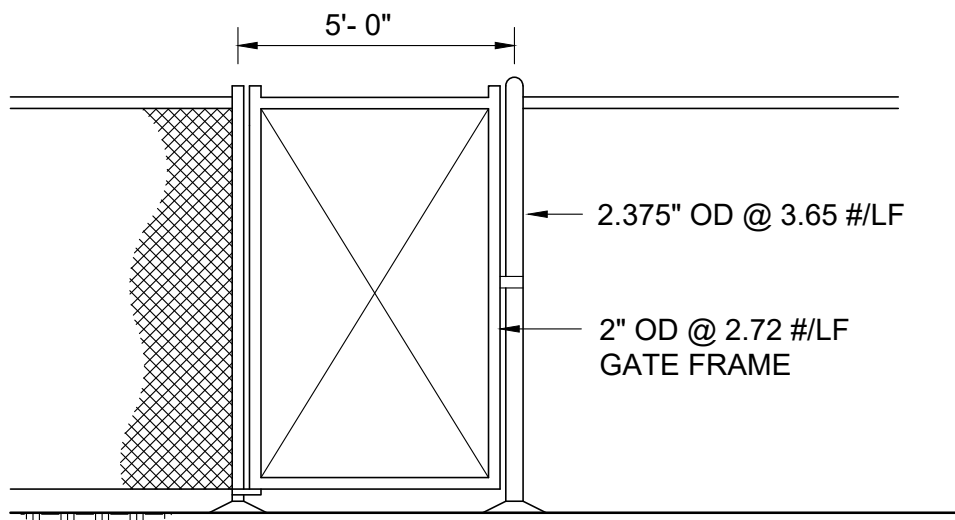
CONTROL POINTS			
POINT NO.	NORTHING	EASTING	DESCRIPTION
B01	182858.45	476365.10	STEEL GUIDE POST
B02	182857.00	476363.39	STEEL GUIDE POST
B03	182775.43	476383.44	STEEL GUIDE POST
B04	182774.93	476385.62	STEEL GUIDE POST
B05	182778.04	476398.25	STEEL GUIDE POST
B06	182779.49	476399.95	STEEL GUIDE POST
B07	182861.06	476379.90	STEEL GUIDE POST
B08	182861.55	476377.72	STEEL GUIDE POST
F01	182754.88	476387.50	CHAIN LINK FENCE
F01	182872.12	476358.69	CHAIN LINK FENCE
F03	182745.10	476381.22	CHAIN LINK FENCE



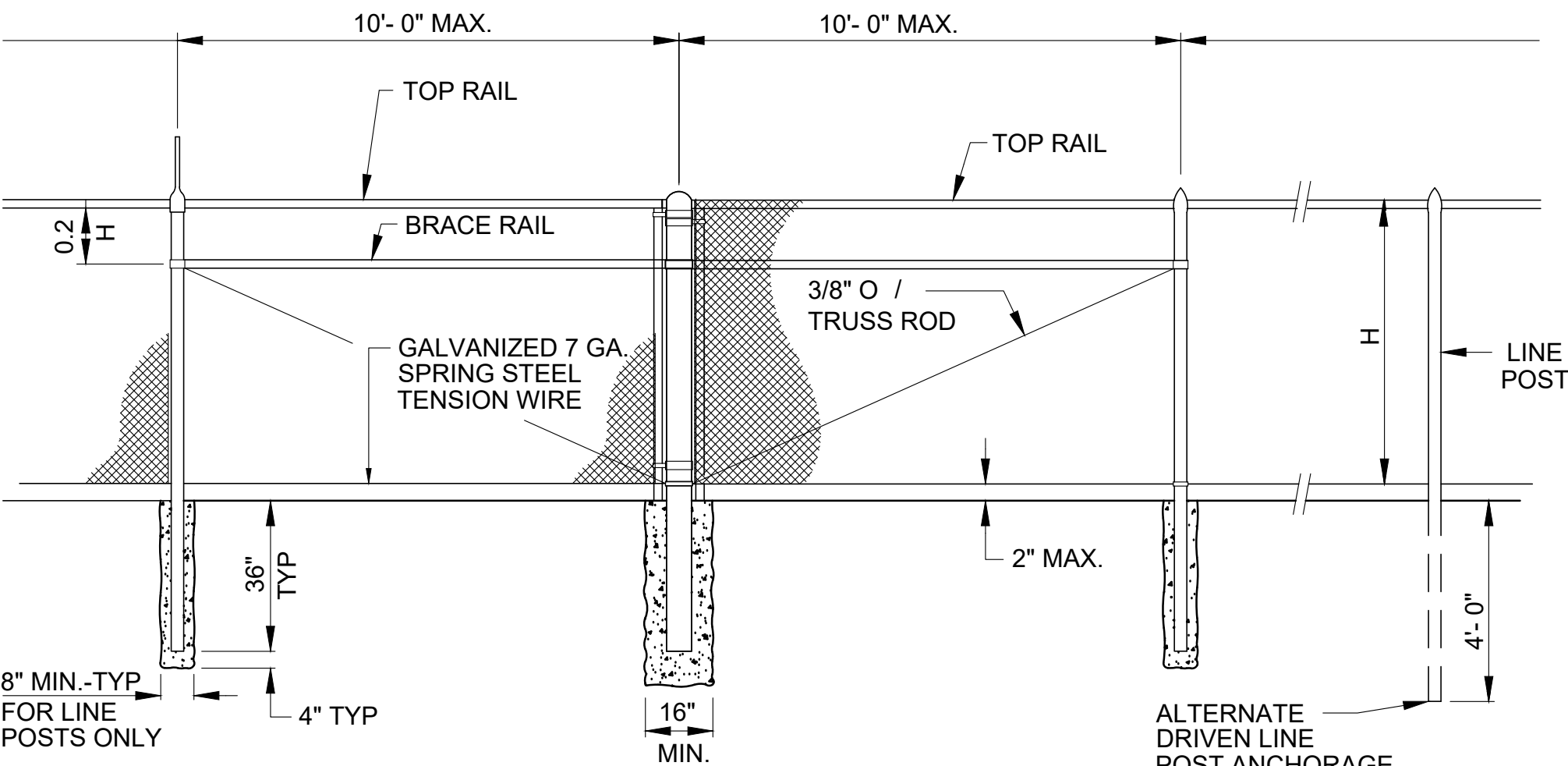
- NOTES:
1. INSTALL STEEL GUIDE POSTS AFTER COMPLETION OF FOUNDATION SLAB. COORDINATE LOCATIONS WITH PLACEMENT OF ELECTRICAL EQUIPMENT. CONTRACTOR TO VERIFY FIELD LOCATIONS WITH THE ENGINEER. STEEL GUIDE POSTS TO BE SPACED 3.25' E-W, 4' N-S.
 2. STEEL GUIDE POST CONTROL POINT IS CENTER OF POST. STEEL GUIDE POST SPACING IS FROM CENTER TO CENTER.
 3. CLEAN-UP OF THE CONSTRUCTION SITE AND HAUL ROUTES BOTH WITHIN AND OUTSIDE THE AIR OPERATIONS AREA SHALL BE PERFORMED ON A CONTINUOUS BASIS WHENEVER CONSTRUCTION OPERATIONS ARE IN PROGRESS.
 4. FENCE INSTALLATION SHALL BE COMPLETED AND APPROVED BY ENGINEER AFTER SLAB INSTALLATION AND PRIOR TO PAVEMENT RESTORATION OPERATIONS.
 5. ALL PAVEMENTS MUST BE SWEEPED FREE OF FOREIGN DEBRIS PRIOR TO OPENING TO AIRCRAFT TRAFFIC.



2 **STEEL GUIDE**
c5.01 NO SCALE

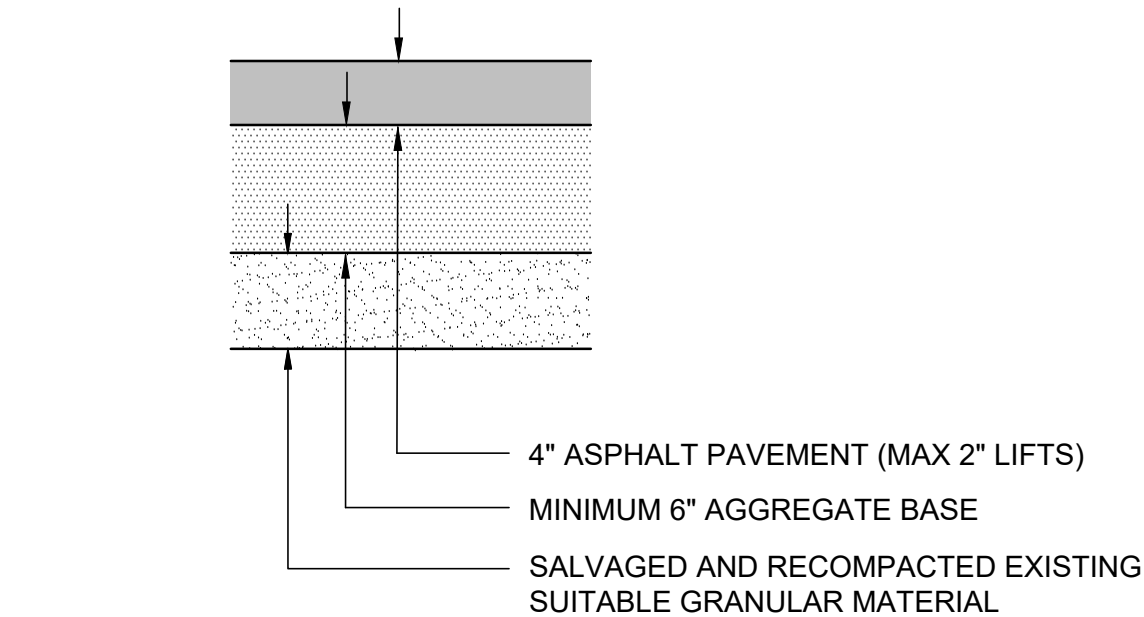


3 **WALK GATE, 5' WIDTH**
c5.01 NO SCALE



4 **CHAIN LINK FENCE, TYPE A**
c5.01 NO SCALE

- NOTES:
1. HEIGHT (H) AS SHOWN ON PLANS AND LISTED IN PROPOSAL.



1 **BITUMINOUS RESTORATION**
c5.01 NO SCALE



WINONA
MUNICIPAL
AIRPORT

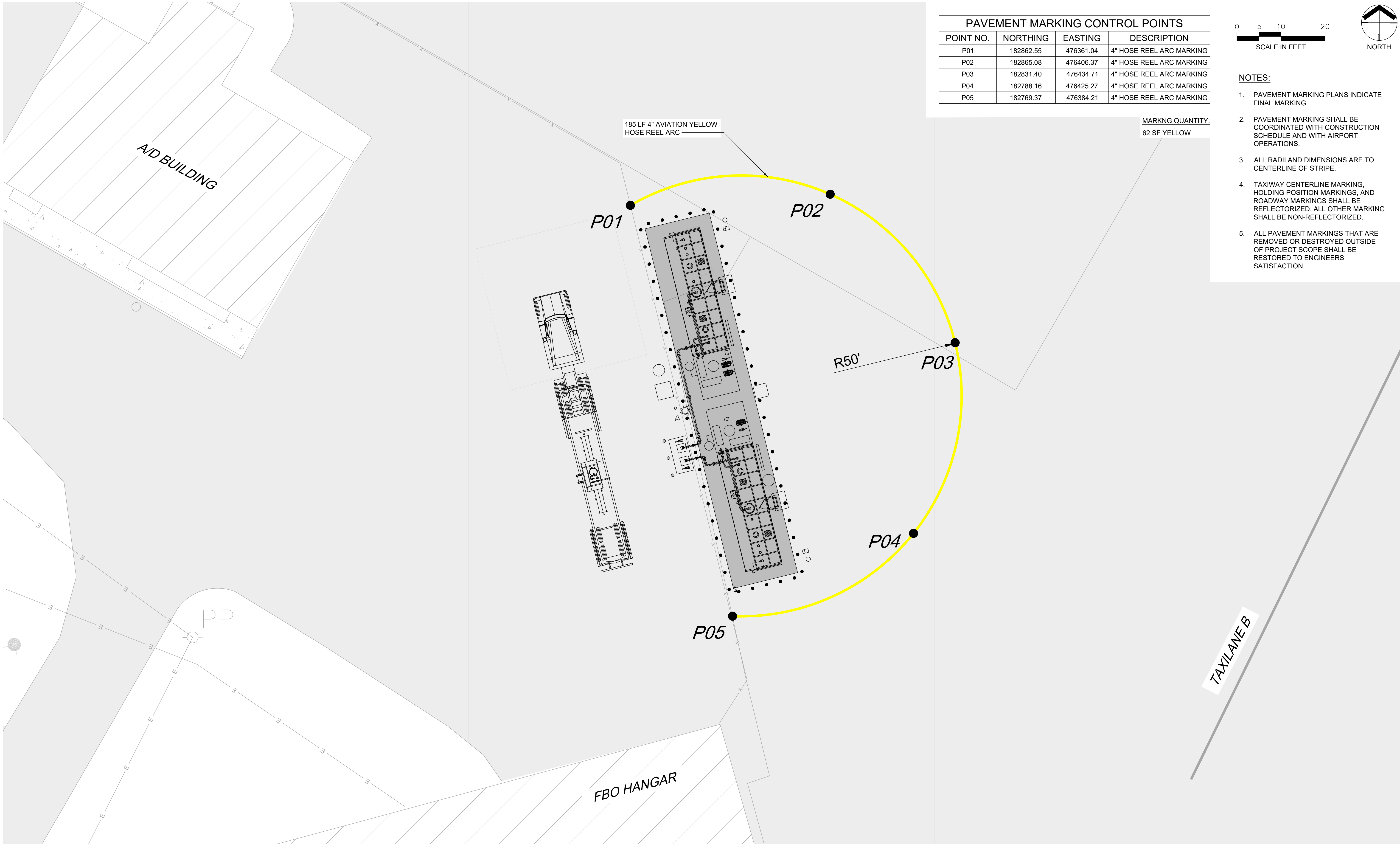
FENCING PLAN
AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO. 23576
DRAWING NO. c5.01
ONA

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
JEFFREY B. PEARSON, PE
OCTOBER 7, 2026
LIC. NO. 45087

DESIGNED JWJ
DRAWN JWJ
CHECKED JBP

NO.	DATE	BY	DESCRIPTION OF REVISIONS



PAVEMENT MARKING CONTROL POINTS			
POINT NO.	NORTHING	EASTING	DESCRIPTION
P01	182862.55	476361.04	4" HOSE REEL ARC MARKING
P02	182865.08	476406.37	4" HOSE REEL ARC MARKING
P03	182831.40	476434.71	4" HOSE REEL ARC MARKING
P04	182788.16	476425.27	4" HOSE REEL ARC MARKING
P05	182769.37	476384.21	4" HOSE REEL ARC MARKING

MARKING QUANTITY:
62 SF YELLOW



- NOTES:
- PAVEMENT MARKING PLANS INDICATE FINAL MARKING.
 - PAVEMENT MARKING SHALL BE COORDINATED WITH CONSTRUCTION SCHEDULE AND WITH AIRPORT OPERATIONS.
 - ALL RADII AND DIMENSIONS ARE TO CENTERLINE OF STRIPE.
 - TAXIWAY CENTERLINE MARKING, HOLDING POSITION MARKINGS, AND ROADWAY MARKINGS SHALL BE REFLECTORIZED, ALL OTHER MARKING SHALL BE NON-REFLECTORIZED.
 - ALL PAVEMENT MARKINGS THAT ARE REMOVED OR DESTROYED OUTSIDE OF PROJECT SCOPE SHALL BE RESTORED TO ENGINEERS SATISFACTION.

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED JWJ
DRAWN JWJ
CHECKED JBP

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

JEFFREY B. PEARSON OCTOBER 7, 2026
JEFFREY B. PEARSON, PE LIC. NO. 45087



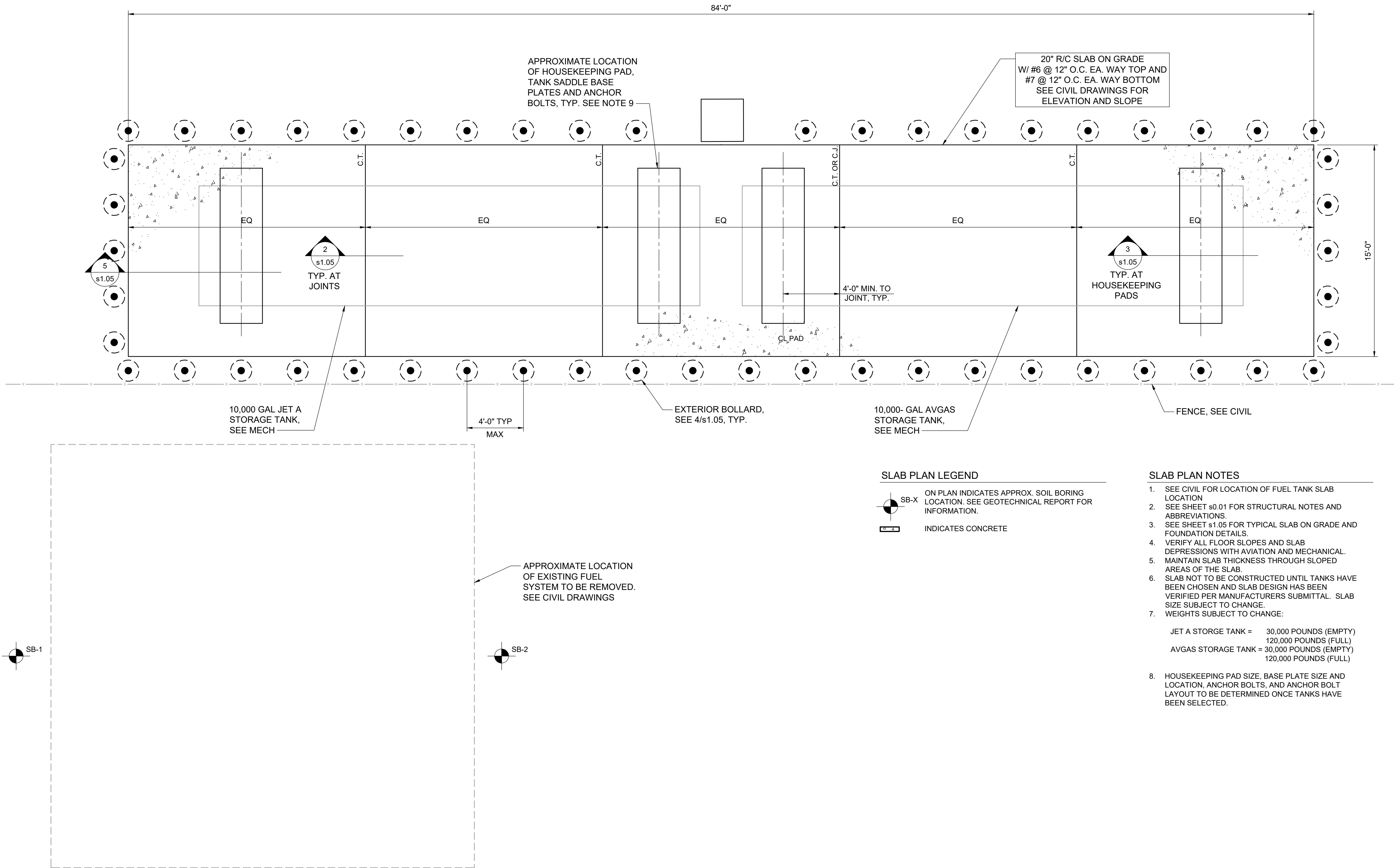
WINONA
MUNICIPAL
AIRPORT

PAVEMENT MARKING PLAN
AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO. 23576	ONA
DRAWING NO. c6.01	

CURRENT: Oct 07, 2026 - 8:42am
DIR: K:\v\Winona_MN\23576\000\04_Production\01_CAD\02_Sheets\c6.01_PAVEMENT MARKING PLAN.dwg

CURRENT: Oct 07, 2026 - 9:33am
DIR: K:\In\Winona_MN\23576000\04_Production\01_CAD\02_Sheets\1.01_STRUCTURAL PLANS.dwg



SLAB PLAN LEGEND

- SB-X ON PLAN INDICATES APPROX. SOIL BORING LOCATION. SEE GEOTECHNICAL REPORT FOR INFORMATION.
- INDICATES CONCRETE

SLAB PLAN NOTES

- SEE CIVIL FOR LOCATION OF FUEL TANK SLAB LOCATION
- SEE SHEET s0.01 FOR STRUCTURAL NOTES AND ABBREVIATIONS.
- SEE SHEET s1.05 FOR TYPICAL SLAB ON GRADE AND FOUNDATION DETAILS.
- VERIFY ALL FLOOR SLOPES AND SLAB DEPRESSIONS WITH AVIATION AND MECHANICAL.
- MAINTAIN SLAB THICKNESS THROUGH SLOPED AREAS OF THE SLAB.
- SLAB NOT TO BE CONSTRUCTED UNTIL TANKS HAVE BEEN CHOSEN AND SLAB DESIGN HAS BEEN VERIFIED PER MANUFACTURERS SUBMITTAL. SLAB SIZE SUBJECT TO CHANGE.
- WEIGHTS SUBJECT TO CHANGE:

JET A STORGE TANK = 30,000 POUNDS (EMPTY)
120,000 POUNDS (FULL)
AVGAS STORAGE TANK = 30,000 POUNDS (EMPTY)
120,000 POUNDS (FULL)
- HOUSEKEEPING PAD SIZE, BASE PLATE SIZE AND LOCATION, ANCHOR BOLTS, AND ANCHOR BOLT LAYOUT TO BE DETERMINED ONCE TANKS HAVE BEEN SELECTED.

1 FUEL TANK PAD SLAB - PLAN
SCALE: 1/4"=1'-0"



NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED CWB
DRAWN MHM
CHECKED CWB

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

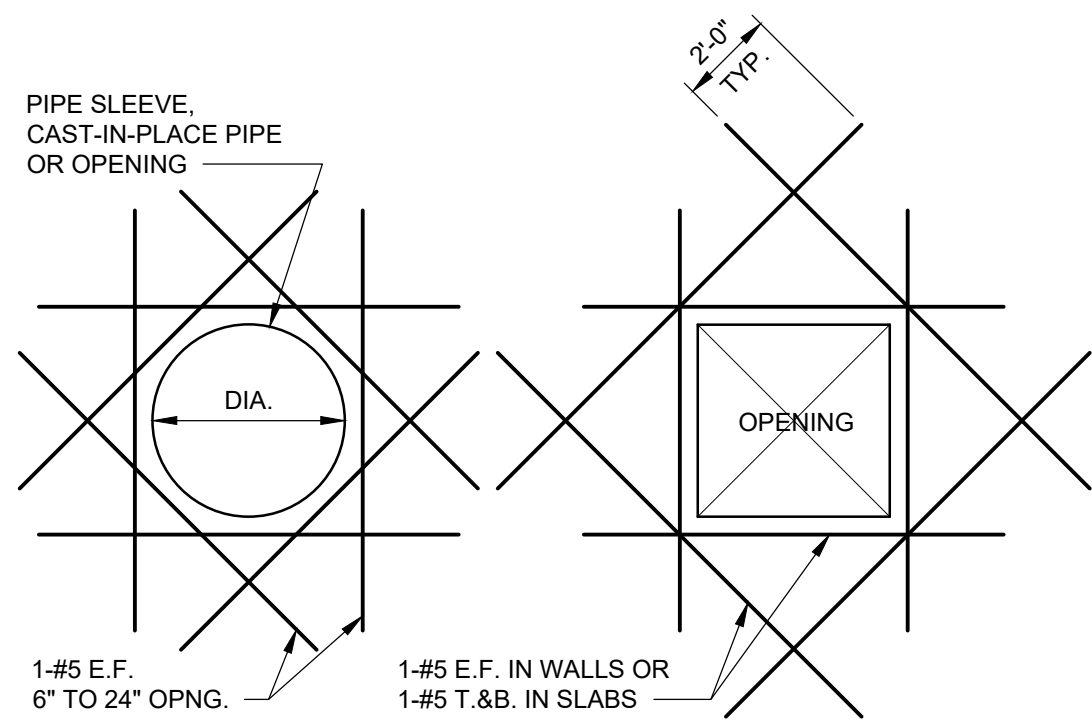
Craig W. Bursch
OCTOBER 7, 2026
CRAIG W. BURSCH LIC. NO. 40415



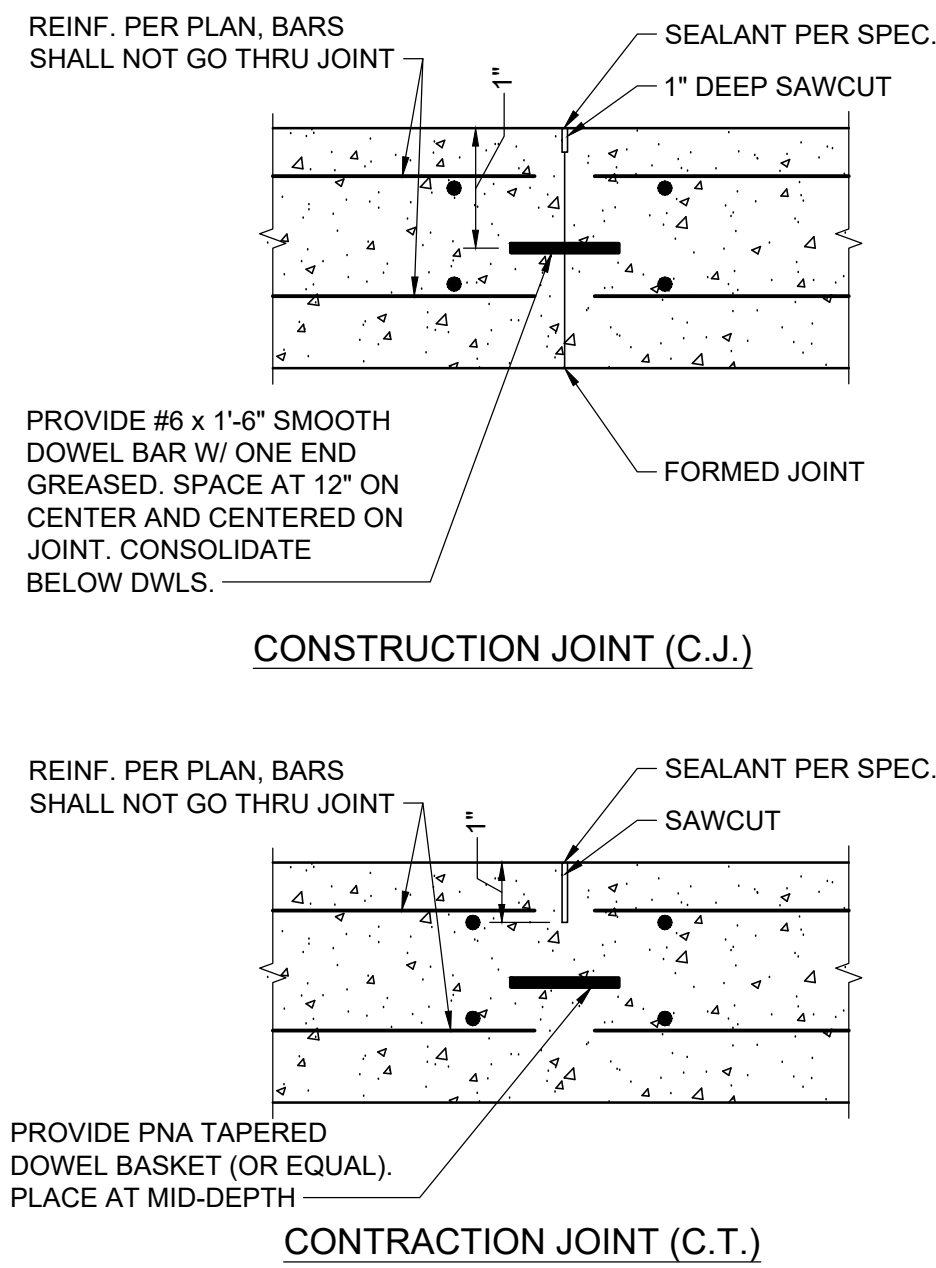
WINONA
MUNICIPAL
AIRPORT

STRUCTURAL PLANS
AIRCRAFT FUELING FACILITY REPLACEMENT

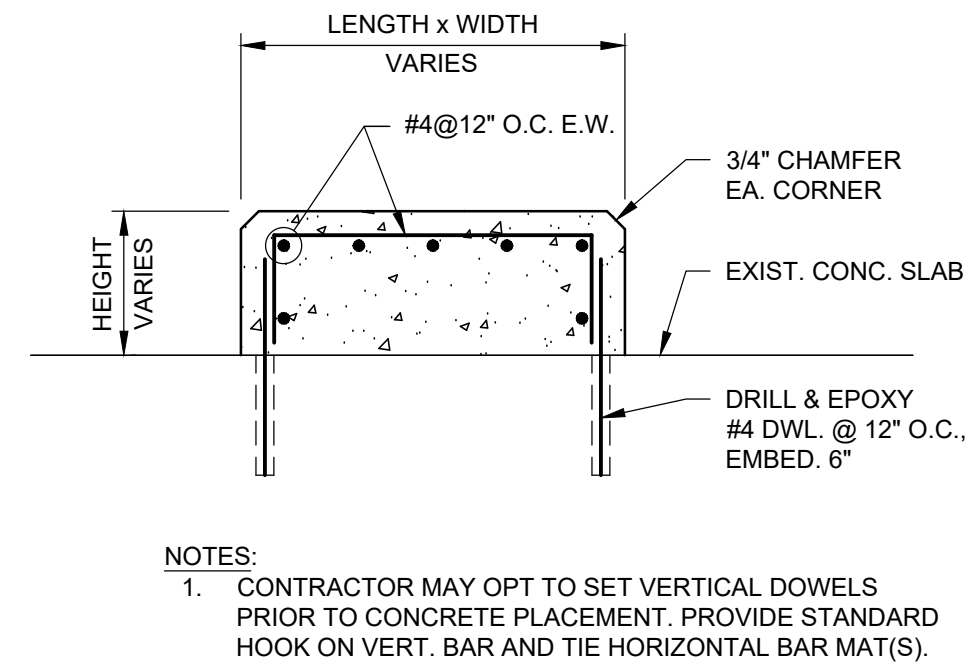
PROJ. NO. 23576	ONA
DRAWING NO. s1.01	



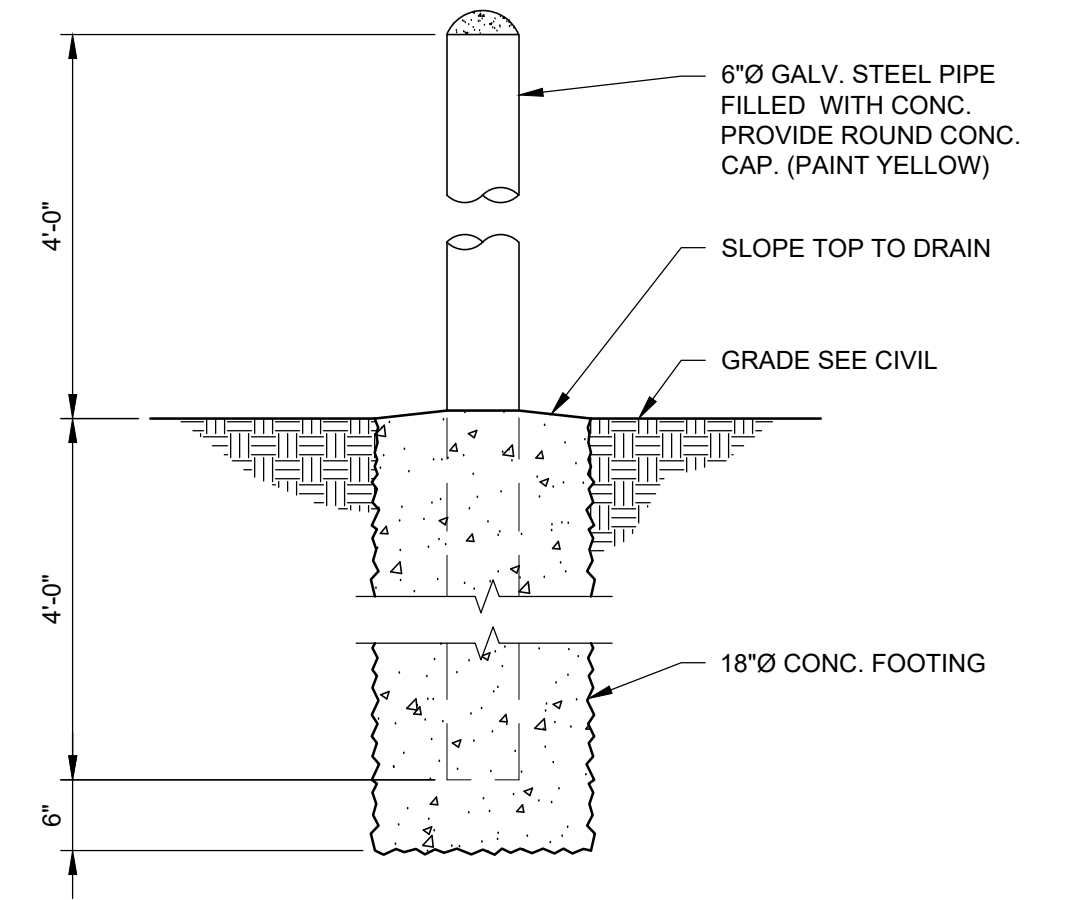
1 ADDITIONAL OPENING REINFORCMENT
s1.05 NO SCALE



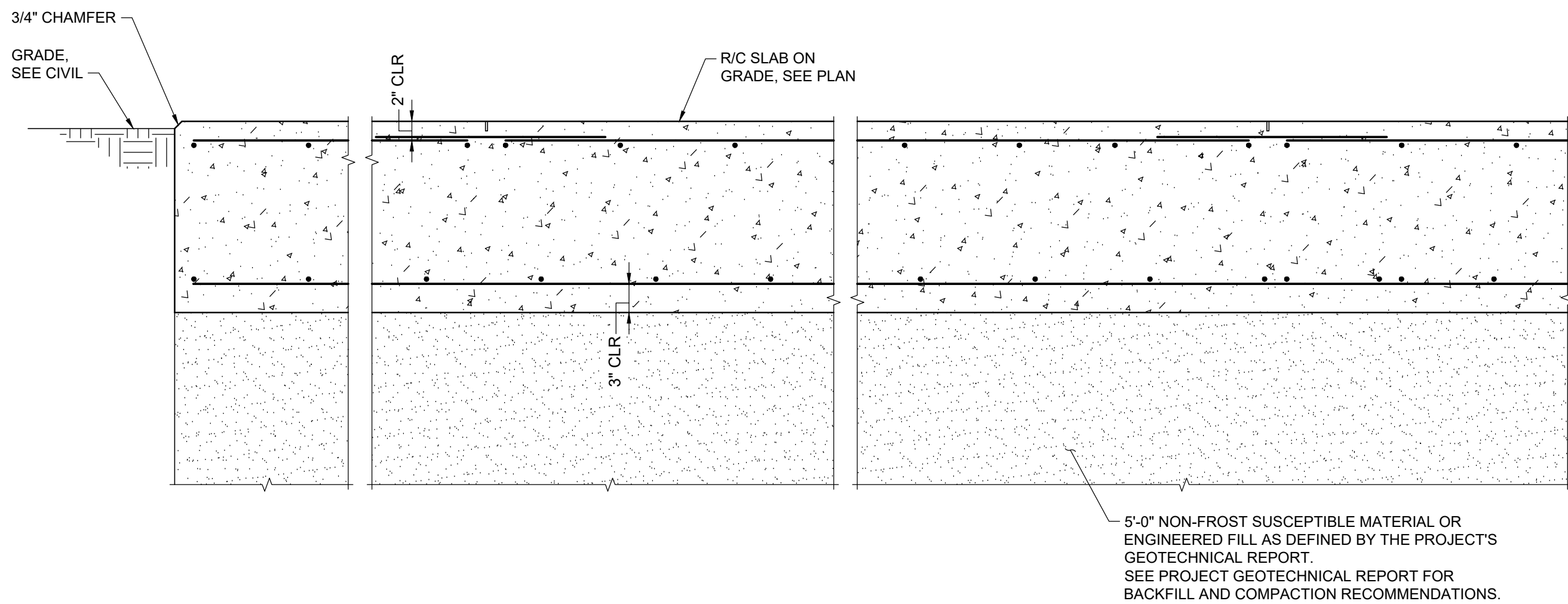
2 SLAB JOINT DETAILS
s1.05 NO SCALE



3 EQUIPMENT BASE DETAIL
s1.05 NO SCALE



4 EXTERIOR PIPE BOLLARD DETAIL
s1.05 NO SCALE



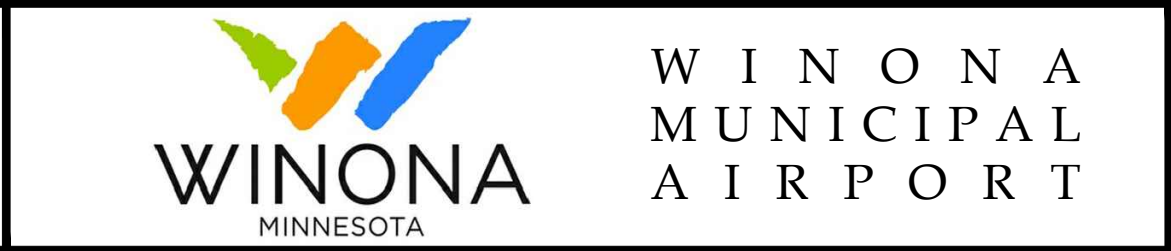
5 SLAB SECTION
s1.05 SCALE: 1\"/>

CURRENT: Oct 07, 2026 - 9:32am
DIR: K:\u2013Winona_MN\235760004_Production\01_CAD\02_Sheets\1.05 STRUCTURAL SECTION AND DETAILS.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED CWB
DRAWN MHM
CHECKED CWB

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
<i>Craig W. Bursch</i>	OCTOBER 7, 2026
CRAIG W. BURSCH	LIC. NO. 40415



STRUCTURAL SECTION AND DETAILS
AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO. 23576	ONA
DRAWING NO. s1.05	

CURRENT: Oct 07, 2026 - 9:26am
DIR: K:\v\Winona_MN\23575000\04_Production\01_CAD\02_Sheets\m0.01_MECH_SYMBOLS_AND_ABBREVIATIONS.dwg

EQUIPMENT						PIPE AND EQUIPMENT ACCESSORIES				PROCESS FLOW INSTRUMENTATION						PIPING			
EQUIPMENT & PRODUCT IDENTIFICATION ABBREVIATIONS										INSTRUMENTATION IDENTIFICATION LETTERS						LINE CODING			
EQUIPMENT IDENTIFICATION				PRODUCT IDENTIFICATION						FIRST LETTER		SUCCEEDING LETTERS				LINE CODING			
EQUIP ID	DESCRIPTION	EQUIP ID	DESCRIPTION	SERIES	DESCRIPTION						MEASURED OR INITIATED VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER	LINE CODING			
AD	AIR DRYER	LDS	LEAK DETECTION STATION	1000	AVGAS											— DFO — DIESEL FUEL OIL			
AE	AIR ELIMINATOR	M	MOTOR	2000	JET-A											— LOS — LUBE OIL SUPPLY			
AV	AIR VENT	OD	OVERHEAD DOOR							A	ANALYSIS		ALARM			— LOR — LUBE OIL RETURN			
BFP	BACKFLOW PREVENTER	P	PUMP							B	BURNER, COMBUSTION		CLOSE OR DECREASE	USERS CHOICE	USERS CHOICE	— UO — USED OIL			
CA	AIR COMPRESSOR	PL	PIPELINE							C	CONDUCTIVITY			CONTROL		— JOS — JOURNAL OIL SUPPLY			
CO	CLEANOUT	S	STRAINER							D	DENSITY	DIFFERENTIAL	OPEN OR INCREASE			— JOR — JOURNAL OIL RETURN			
ES	EMERGENCY STOP	SA	SURGE ACCUMULATOR							E	VOLTAGE		SENSOR (PRIMARY ELEMENT)			— GLY — GLYCOL			
ET	EXPANSION TANK	SV	SOLENOID VALVE							F	FLOW RATE	RATIO (FRACTION)	FAILURE			— METH — METHANOL			
EWS	EMERGENCY EYEWASH/SHOWER	T	THERMOSTAT							G	GAUGING		GLASS VIEWING DEVICE			— UO — USED OIL			
F	FILTER	TK	TANK							H	HAND (MANUAL)				HIGH	— G — NATURAL GAS			
FC	FUEL CRANE	UH	UNIT HEATER							I	CURRENT (ELECTRICAL)		INDICATE			— CW — COLD WATER			
FD	FLOOR DRAIN	V	VALVE							L	LEVEL		LIGHT		LOW	— HW — HOT WATER			
FL	FLOW LIMITER	WS	WATER SOFTENER							M	MOTOR	MOMENTARY	OPERATOR ON/OFF		MIDDLE, INTERMEDIATE	— V — VENT			
FM	FLOW METER	YH	YARD HYDRANT							O	OPERATOR		ORIFICE, RESTRICTION			— W — WATER MAIN			
FX	FLEXIBLE METAL HOSE									P	PRESSURE, VACUUM		POINT (TEST) CONNECTION			— F — FIRE MAIN			
HB	HOSE BIBB									S	SPEED, FREQUENCY SOLENOID	SAFETY	SWITCH			— SS — SANITARY SEWER/ABOVEGROUND			
HT	HEAT TRACE									T	TEMPERATURE OR THERMOSTAT			TRANSMIT		— SS — SANITARY SEWER/UNDERGROUND			
HYD	FIRE HYDRANT									V	VALVE			VALVE, DAMPER, LOUVER		— ST — STORM SEWER/ABOVEGROUND			
L	LOUVER															— ST — STORM SEWER/UNDERGROUND			
										XX X-X XX X-X XX X-X DI DO AI AO INSTRUMENT OR VALVE-LOCAL/FIELD MOUNTED NORMALLY ACCESSIBLE INSTRUMENT-BEHIND THE PANEL NORMALLY ACCESSIBLE INSTRUMENT-NORMALLY INACCESSIBLE BEHIND THE PANEL DIGITAL IN DIGITAL OUT ANALOG IN ANALOG OUT PROGRAMMABLE LOGIC CONTROL-NORMALLY ACCESSIBLE (HMI) HUMAN MACHINE INTERFACE CONTROL OR INDICATION PANEL MOUNTED OR LOCAL CONTROL SWITCH PANEL MOUNTED OR LOCAL PILOT LIGHT EXAMPLE: MEASURED OR INITIATED VARIABLE INSTRUMENT OR VALVE TYPE/FUNCTION INSTRUMENT OR VALVE NO.						— IW — INDUSTRIAL WASTE/ABOVEGROUND			
																— VAC — VACUUM			
																— CA — COMPRESSED AIR			
																— — — — — DIRECTION OF FLOW			
																○ — ○ — ○ DATA LINK CONNECTION			
																— — — — — ELECTRICAL SIGNAL			
																- - - - - EQUIPMENT BOUNDARIES			
VALVE TYPES						VALVE OPERATOR TYPES													
	BALL VALVE						FLOAT OPERATED VALVE												
	THREE-WAY VALVE						SOLENOID OPERATED VALVE												
	SPRING HANDLE BALL VALVE						MOTOR OPERATED VALVE												
	BUTTERFLY VALVE						MANUAL GEAR OPERATED VALVE												
	GLOBE VALVE						MANUAL VALVE WITH LIMIT SWITCH												
	GATE VALVE						PRESSURE REDUCING REGULATOR												
	ANGLE VALVE						BACK-PRESSURE REGULATOR												
	CHECK VALVE						BALL CHECK VALVE												
	PRESSURE RELIEF VALVE						PINCH VALVE												
	PLUG VALVE																		
	DOUBLE BLOCK AND BLEED VALVE																		
	FIRE SAFE VALVE																		
	YARD POST INDICATOR VALVE																		

EQUIPMENT IDENTIFICATION

- GENERAL: LABELS AND SIGNS SHALL BE OBTAINED THROUGH COMPANIES SPECIALIZING IN THE MANUFACTURE OF SUCH EQUIPMENT RELATED TO IDENTIFICATION FOR PROTECTION OF THE ENVIRONMENT, HEALTH, AND SAFETY.
- TANKS: AST'S AND EQUIPMENT ENCLOSURES SHALL BE MARKED TO SHOW CONTENTS AND CAPACITY USING HIGH BLACK LETTERING. MARKINGS SHALL BE PLACED FOR MAXIMUM VISIBILITY. IN ADDITION, TANKS SHALL BE MARKED FOR HEALTH, FLAMMABILITY, AND REACTIVITY HAZARD PER THE NFPA 704 STANDARD SYSTEM (SEE FIGURE 1), AND HAVE COLORS PER TABLE 1. MARKINGS SHALL BE SIZED AND LOCATED SO AS TO BE CONSPICUOUS (SEE FIGURE 2) AND SHALL BE LABELED PER TABLE 3. LOCAL CONDITIONS MAY AFFECT IMPLEMENTATION AND APPROVAL OF FIRE MARSHAL OR LOCAL AUTHORITY HAVING JURISDICTION MAY BE REQUIRED.
- PIPING: EACH PIPING SYSTEM SHALL BE LABELED IN ACCORDANCE WITH APPLICABLE OSHA STANDARDS AND ANSI A13.1 GUIDELINES.
- FUNCTIONAL MARKINGS SIZED PER TABLE 2, AND HAVING LEGEND AND FIELD COLORS PER TABLE 3, SHOULD BE PLACED FOR MAXIMUM VISIBILITY. FUNCTIONAL MARKINGS MAY BE PREPARED IN THE FIELD OR MANUFACTURED STANDARD PIPE IDENTIFICATION PRODUCTS MAY BE USED. LEGENDS SUCH AS "JET A FUEL", "JET A FUEL TO STORAGE", "AVGAS UNLOADING" ETC. ARE APPROPRIATE.
- ALL ABOVE GRADE PIPING SHALL BE IDENTIFIED WITH LEGENDS APPLIED TO PIPING AT EACH PASSAGE THROUGH A WALL, CEILING OR FLOOR, ADJACENT TO EACH VALVE, AT EACH CHANGE IN DIRECTION, AND AT NOT MORE THAN 50 FEET SPACING ON STRAIGHT PIPE RUNS (SEE FIGURE 3). SEE ALSO THE SIGNS AND TRAFFIC SECTION OF THE SAFETY AND HEALTH EQUIPMENT CATALOG.
- ARROWS SHALL BE PLACED ADJACENT TO LEGENDS TO INDICATE THE DIRECTION OF FLOW UNDER NORMAL OPERATING CONDITIONS.
- WHERE PIPELINES ARE LOCATED ABOVE OR BELOW THE NORMAL LINE OF VISION, THE LEGEND SHALL BE PLACED BELOW OR ABOVE THE HORIZONTAL CENTERLINE OF THE PIPE (SEE FIGURE 4).

PIPING AND EQUIPMENT PAINTING

ALL EQUIPMENT, TANKS, STRUCTURAL SUPPORTS/BASES, VALVES, PIPING, AND PIPE SLEEVES SHALL BE PAINTED. INSULATED EQUIPMENT, TANKS, VALVES, AND PIPING SHALL BE PAINTED PRIOR TO INSULATION BEING APPLIED. DO NOT PAINT CONCRETE FLOORS, CONCRETE WORK, ALUMINUM, GALVANIZED, OR STAINLESS STEEL ITEMS AND THE LIKE. STEEL SURFACES EXPOSED TO THE WEATHER SHALL HAVE ALL RUST AND MILL SCALE REMOVED BY ABRASIVE BLASTING, SHALL BE PRIME COATED, AND FINISH PAINTED WHITE. GALVANIZED SURFACES SHALL BE TOUCHED UP AFTER INSTALLATION PER MANUFACTURERS' RECOMMENDATIONS. PRIME COAT AND FINISH PAINTS SHALL BE APPLIED IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURERS' DIRECTIONS.

PAINT SHALL BE BRUSH APPLIED OR ROLLED ON SUPPORTS, PIPING, SLEEVES, TANKS, APPURTENANCES AND EQUIPMENT SURFACES. SPRAY APPLICATIONS WILL NOT BE ALLOWED.

THE OWNER MAY CHOOSE TO SELECT A DIFFERENT PAINT COLOR FROM THE PAINT MANUFACTURER'S STANDARD COLORS. COORDINATE ON SITE PRIOR TO PURCHASING PAINT OR APPROVING PAINTING SUBCONTRACT AGREEMENT.

STEEL EQUIPMENT, STRUCTURAL SUPPORTS/BASES, PIPING, AND PIPE SLEEVES SURFACE SHALL BE SOLVENT CLEANED PER SSPC-SP1, FOLLOWED BY COMMERCIAL BLAST PER SSPC-SP6, ASSUMING ALL STEEL FURNISHED DOES NOT EXCEED SSPC RUST GRADE B. BLAST CLEAN USING A SHARP ANGULAR ABRASIVE TO PROVIDE A 2 MIL MINIMUM SURFACE PROFILE AS MEASURED BY ASTM D4417 AND NACE RP0287-87. ABRASIVE MATERIAL SHALL BE NON-TOXIC (E.G. BLACK BEAUTY) AND SHALL REQUIRE ENGINEER APPROVAL PRIOR TO USE. BLAST CLEANED SURFACES SHALL BE PRIME COATED THE SAME DAY TO PREVENT FLASH RUSTING. PROVIDE PRODUCT SUBMITTAL FOR ENGINEER REVIEW, COLOR SELECTION, AND APPROVAL:

NOTE: THE NUMBER OF COATS AND DRY FILM THICKNESS INDICATED ABOVE ARE MINIMUM REQUIREMENTS. IF REQUIRED BY ENGINEER, CONTRACTOR SHALL APPLY ADDITIONAL FINISH COATS NECESSARY FOR GOOD COVERAGE AND HIDING.

ALL PIPING SHALL BE IDENTIFIED WITH LEGENDS AND DIRECTION OF FLOW ARROWS, SEE DRAWING m0.01.

PIPE SYSTEM FLUSHING

PIPING SYSTEMS SHALL BE FLUSHED AFTER SAID PIPES ARE READY FOR SERVICE. SAID PIPELINES SHALL UNDER NO CIRCUMSTANCES BE FLUSHED USING WATER. PIPING SYSTEMS SHALL BE FLUSHED TO HOLDING TANKS AT A MINIMUM OF 12 FPS FOR TWO COMPLETE VOLUMETRIC CHANGES OR UNTIL CLEAR OF DEBRIS, UNLESS OTHERWISE DETERMINED BY ENGINEER. IN LIEU OF USING LIQUID TO REMOVE DEBRIS FROM THE INSTALLED PIPES, THE CONTRACTOR MAY PIG THE LINES. PIGS SHALL BE PASSED THRU PIPES UNTIL CLEAR OF DEBRIS AS DETERMINED BY THE ENGINEER OR OWNER'S DESIGNATED REPRESENTATIVE.

FLUSHING LIQUID AND/OR DEBRIS REMOVED FROM THE PIPING SYSTEM SHALL BE DISPOSED OF IN AN ENVIRONMENTALLY FRIENDLY MANNER. THE CONTRACTOR SHALL INCLUDE STARTUP STRAINERS AT SEVERAL POINTS TO BE DETERMINED IN THE FIELD BASED ON FINAL PIPING LAYOUT. AS A MINIMUM, STARTUP STRAINERS SHALL BE INCLUDED UPSTREAM OF ALL EQUIPMENT THAT COULD BE DAMAGED OR ADVERSELY AFFECTED BY DEBRIS AS DETERMINED BY THE OWNER AND ENGINEER. AFTER FLUSHING, ALL STARTUP STRAINERS AND DEBRIS SHALL BE REMOVED FROM THE SYSTEM. PERMANENT STRAINERS SHALL BE INSPECTED AND CLEANED AFTER SYSTEM FLUSHING.

FLUSHING LIQUID REMOVED FROM THE PIPING SYSTEM SHALL BE FILTERED AND RETURNED TO STORAGE. IF APPROVED BY THE CITY OF WINONA AND THE FIXED BASED OPERATOR (FBO), FILTERING SHALL REMOVE 100% OF PARTICLE SIZES 20 MESH AND LARGER. IF APPROVED BY THE CITY OF WINONA AND THE FIXED BASED OPERATOR (FBO).

AVIATION/ FUEL

- EQUIPMENT SIZES IDENTIFIED ARE PRELIMINARY. THE DESIGN OF THE AVIATION FUEL DISPENSING SYSTEMS SHALL BE FINALIZED BY DETERMAN BROWNE OR A FIRM WITH EQUIVALENT EXPERIENCE AND QUALIFICATIONS IN THE DESIGN AND INSTALLATION OF AVIATION FUELING SYSTEMS.
- THE CONTRACTOR SHALL INCLUDE FIELD SUPERVISION AS REQUIRED IN HIS SUBCONTRACT WITH THE AVIATION FUEL SYSTEM DESIGNER/SUPPLIER. THE SUPERVISION SHALL INCLUDE AN ADEQUATE NUMBER OF TRIPS TO ALLOW A PRELIMINARY SITE VISIT PROVIDING GENERAL INSTALLATION PROCEDURES TO THE INSTALLER; INSPECTION OF SUPPLIED MATERIALS TO ENSURE THAT THEY MEET THE MINIMUM INDUSTRY STANDARD; AND A FINAL VISIT AFTER THE INSTALLATION IS COMPLETE TO PRECHECK, STARTUP, TEST AND CERTIFY THE SYSTEM AND INSTALLATION.
- EQUIPMENT FURNISHED SHALL COMPLY WITH ALL FEDERAL AVIATION ADMINISTRATION REGULATIONS RELATED TO FUEL STORAGE.
- TANK INTERIOR SHALL BE INCLUDE A SHOP APPLIED PAINT SYSTEM APPROVED FOR AVIATION FUEL STORAGE APPLICATIONS.

PRESSURE TESTING OF PETROLEUM PIPING

THIS GUIDELINE COVERS PIPE, VALVES, FITTINGS, AND OTHER EQUIPMENT CONTAINING LIQUID PETROLEUM UNDER PRESSURE. UNLESS NOTED OTHERWISE BY THE EQUIPMENT MANUFACTURER, THIS EQUIPMENT SHALL MEET PRESSURE AND TEMPERATURE LIMITATIONS OF ANSI B31.3 "PROCESS PIPING". BEFORE INITIAL OPERATION, PIPING MUST BE PRESSURE TESTED TO ASSURE LEAK TIGHTNESS. IF REPAIRS OR ADDITIONS ARE MADE FOLLOWING THE PRESSURE TESTS, THE AFFECTED PIPING IS RETESTED. EXCEPT IN THE CASE SEAL WELDING OR ATTACHMENT OF OTHER NON-PRESSURE RETAINING COMPONENTS, SEAL WELDS SHALL BE EXAMINED FOR LEAKAGE AFTER SYSTEM START-UP AND REPAIRED AS NECESSARY. LOCAL CODES MUST BE REVIEWED IN ORDER TO FOLLOW ANY ADDITIONAL REQUIREMENT OF THE LOCAL JURISDICTION.

CAUTION: SYSTEM EQUIPMENT AND COMPONENTS (E.G. METERS) SHALL NOT BE TESTED AT PRESSURES ABOVE THE SUPPLIERS ALLOWABLE OR RECOMMENDED TEST PRESSURES.

1. GENERAL

- WHERE POSSIBLE, TESTS SHALL BE HYDROSTATIC AND CONDUCTED BEFORE THE SYSTEMS ARE FLUSHED. TEST PRESSURE SHALL BE 1.5 TIMES THE DESIGN PRESSURE FOR A MINIMUM OF 60 MINUTES. UNLESS NOTED OTHERWISE, THE MINIMUM INTERNAL DESIGN TEST PRESSURE IS 150 PSIG.
- TESTS SHALL BE MADE IN THE PRESENCE OF THE ENGINEER OR AUTHORIZED REPRESENTATIVE NOT EMPLOYED BY THE CONTRACTOR.
- THE HYDROSTATIC TEST SHALL BE CONDUCTED WITH WATER ONLY IF THE PIPING IS INSTALLED TO ALLOW COMPLETE DRAINAGE OF THE WATER AFTER TESTING. PETROLEUM PRODUCTS MAY BE USED AS THE TEST MEDIUM, BUT CONSIDERATION SHALL BE MADE OF THE TEST ENVIRONMENT. WHERE THE PIPING CANNOT BE COMPLETELY DRAINED, A PNEUMATIC TEST MAY BE PERFORMED AT 1.1 TIMES THE DESIGN PRESSURE WITH A 25 PSIG PRELIMINARY TEST FOR LOCATION OF MAJOR LEAKS.
- PRESSURE TEST EQUIPMENT, PLAN, AND PROCEDURE SHALL BE AS PRESENTED IN API RECOMMENDED PRACTICE 1110 "PRESSURE TESTING OF STEEL PIPELINES FOR TRANSPORT OF HAZARDOUS LIQUIDS".
- EXPANSION JOINTS AND STAINLESS STEEL FLEXIBLE FITTINGS SHALL BE BLANKED OFF BEFORE THE TEST.
- CONTROL VALVES AND FUEL NOZZLES SHALL NOT BE USED TO BLOCK THE TEST PRESSURE.
- OUTDOOR PIPING SHALL NOT BE TESTED BELOW -20°F AMBIENT TEMPERATURE.
- REPAIR OF LEAKS SHALL BE DONE IN A WORKMANSHIP MANNER, WHEN FLANGED OR UNION JOINTS ARE THE SOURCE OF LEAK, THEY SHALL BE CHECKED FOR MISALIGNMENT.
- TEST RECORDS SHALL BE PREPARED, A COPY OF THE RECORD SHALL BE FURNISHED TO THE OWNER AND MAINTAINED BY THE OPERATOR.
- VENTS AND OTHER HIGH POINT CONNECTIONS WHICH CAN SERVE AS VENTS SHALL BE OPENED DURING FILLING SO AIR IS VENTED PRIOR TO APPLYING THE TEST PRESSURE.
- ISOLATE EQUIPMENT, CONTROL VALVES, FLOW METERS, AND OTHER SENSITIVE EQUIPMENT FROM DAMAGE DURING PRESSURE TESTING.

2. ABOVEGROUND PIPING

- PIPING SYSTEMS, EQUIPMENT, AND COMPONENTS LOCATED OUTSIDE AND ABOVEGROUND HANDLING CLASS I, II, OR IIIA LIQUIDS AS DEFINED BY NFPA 30 "FLAMMABLE AND COMBUSTIBLE LIQUIDS CODE" OR INSIDE BUILDINGS LOCATED WHERE LEAKAGE CAN READILY BE CONTROLLED BY OPERATION, SHALL BE PRESSURE TESTED IN ACCORDANCE WITH ASME B31.3 "PROCESS PIPING" PARA 345.4 HYDROSTATIC LEAK TEST, AND SHALL NOT BE LESS THAN 1.5 TIMES THE DESIGN PRESSURE.
- THE TEST SHALL BE MAINTAINED FOR AT LEAST 60 MINUTES AND ALL JOINTS AND ALL FITTINGS EXAMINED FOR LEAKS IN ACCORDANCE WITH PARA 345.2 GENERAL REQUIREMENTS FOR LEAK TESTS.

EQUIPMENT STARTUP

THE CONTRACTOR SHALL PROVIDE THE SERVICES OF A TRAINED SERVICE TECHNICIAN TO STARTUP ALL EQUIPMENT FURNISHED. STARTUP SHALL BE COORDINATED WITH AND INCLUDE ON SITE TRAINING, FOR THE OWNER'S DESIGNATED PERSONNEL, IN THE PROPER OPERATION AND TROUBLESHOOTING OF THE FURNISHED EQUIPMENT. STARTUP AND TRAINING SERVICES INCLUDED SHALL PROVIDE AMPLE ON SITE TIME FOR THE FIELD SERVICE TECHNICIAN BUT IN NO CASE LESS THAN EIGHT HOURS.

AT A MINIMUM, THE FIELD SERVICE TECHNICIAN SHALL PERFORM THE FOLLOWING FUNCTIONS: INSTALLATION REVIEW, FIELD ADJUST MEASURING RANGES, AND TEST ALL EQUIPMENT FURNISHED FOR PROPER OPERATION. TESTING SHALL INCLUDE FLOW METERS, PRESSURE TRANSMITTERS, TEMPERATURE TRANSMITTERS, LEVEL TRANSMITTERS, OR ANY OTHER DEVICE WHICH PROVIDES A MEASURED VARIABLE, DIGITAL OR ANALOG SIGNAL TO THE CONTROL SYSTEM. EACH INSTRUMENT SHALL BE PROVIDED WITH A WRITTEN STARTUP REPORT, ON THE MANUFACTURER'S STANDARD FORM, WHICH CERTIFIES ALL OF THE MANUFACTURER'S REQUIREMENTS HAVE BEEN MET AND THAT THE DEVICE IS READY TO BE PLACED INTO AUTOMATIC SERVICE. PROVIDE DOCUMENTATION OF ALL CONTROL SET POINTS AND INCLUDE THIS INFORMATION IN AN ELECTRONIC FILE IF EQUIPMENT HAS DOWNLOAD CAPABILITIES, FOR THE OWNER'S AND ENGINEER'S RECORDS.

EQUIPMENT MANUALS

THE CONTRACTOR SHALL PROVIDE THREE COMPACT DISKS LABELED WITH THE OWNERS NAME, PROJECT NAME, PROJECT LOCATION, AND DATE; THE CONTRACTORS NAME, ADDRESS, AND PHONE NUMBER; THE EQUIPMENT SUPPLIERS NAME, ADDRESS, AND PHONE NUMBER; AND THE DISK CONTENTS. EACH DISK SHALL HAVE A COPY OF A SINGLE ADOBE ACROBAT READER FILE CONTAINING AN ELECTRONIC VERSION OF ALL THE MANUFACTURERS INSTALLATION AND OPERATION MANUALS (IOM'S) FOR ALL FURNISHED EQUIPMENT AND SYSTEMS. THESE IOM'S SHALL BE ORGANIZED IN A LOGICAL MANNER BY EQUIPMENT TYPE; SHALL INCLUDE A COVER PAGE SPECIFYING THE SAME INFORMATION REQUIRED ON THE LABEL; AND SHALL ALSO INCLUDE DESIGN BASIS, MAJOR EQUIPMENT SIZES AND CAPACITIES; E.G., FLOW RATE, VESSEL CAPACITIES, ETC.

THE FILE SHALL ALSO INCLUDE BOOKMARKS OR A TABLE OF CONTENTS SEPARATING THE EQUIPMENT AND ALLOWING THE USER, WITH A SINGLE MOUSE CLICK, TO ADVANCE TO THE DIFFERENT SECTIONS OF THE DOCUMENT WITHOUT HAVING TO SCROLL THROUGH AN EXCESSIVE AMOUNT OF PAGES. THE CONTRACTOR SHALL INDICATE IN THE IOM'S, OR ON THE MANUFACTURER'S STANDARD EQUIPMENT SPECIFICATION SHEETS PROVIDED, THE SIZES AND/OR MODELS FURNISHED, WARRANTY INFORMATION, AND ALL OTHER RELATED DOCUMENTS.

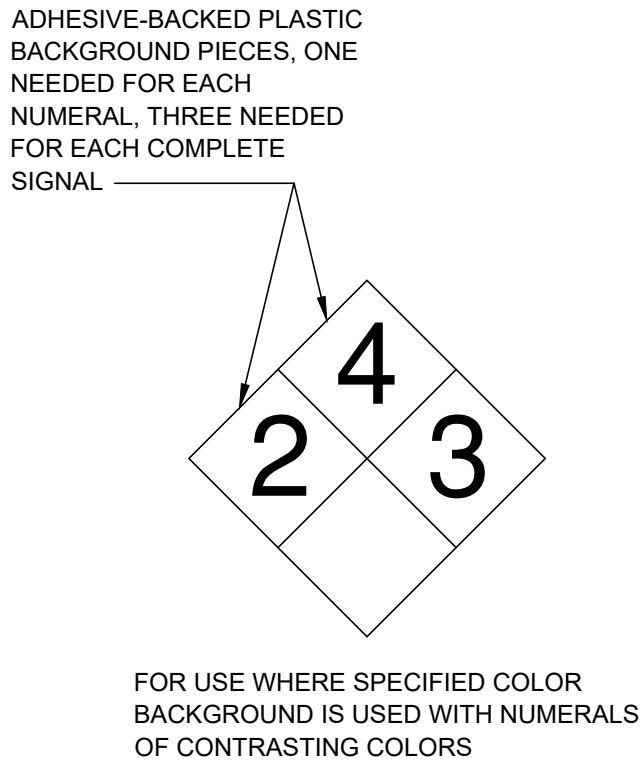


FIGURE 1: TYPICAL NFPA 704 HAZARD IDENTIFICATION SYSTEM

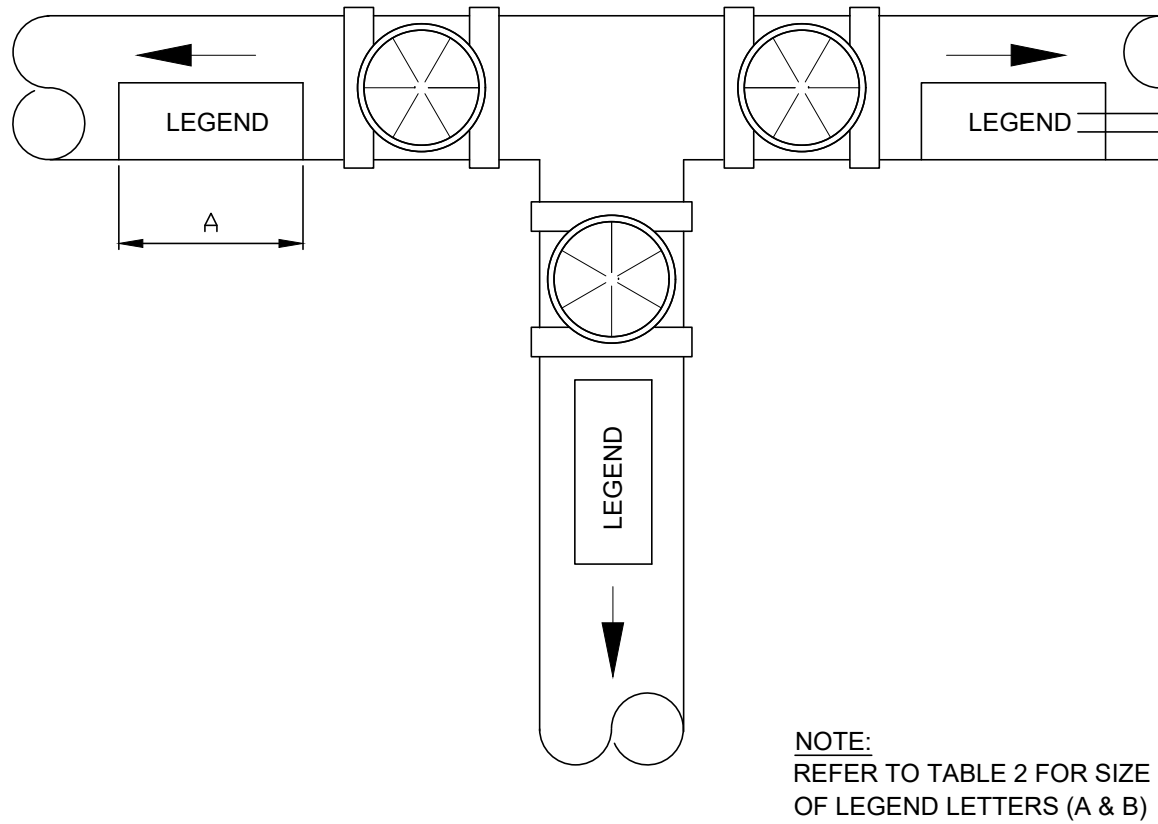


FIGURE 3: TYPICAL LEGEND LABELING DETAIL

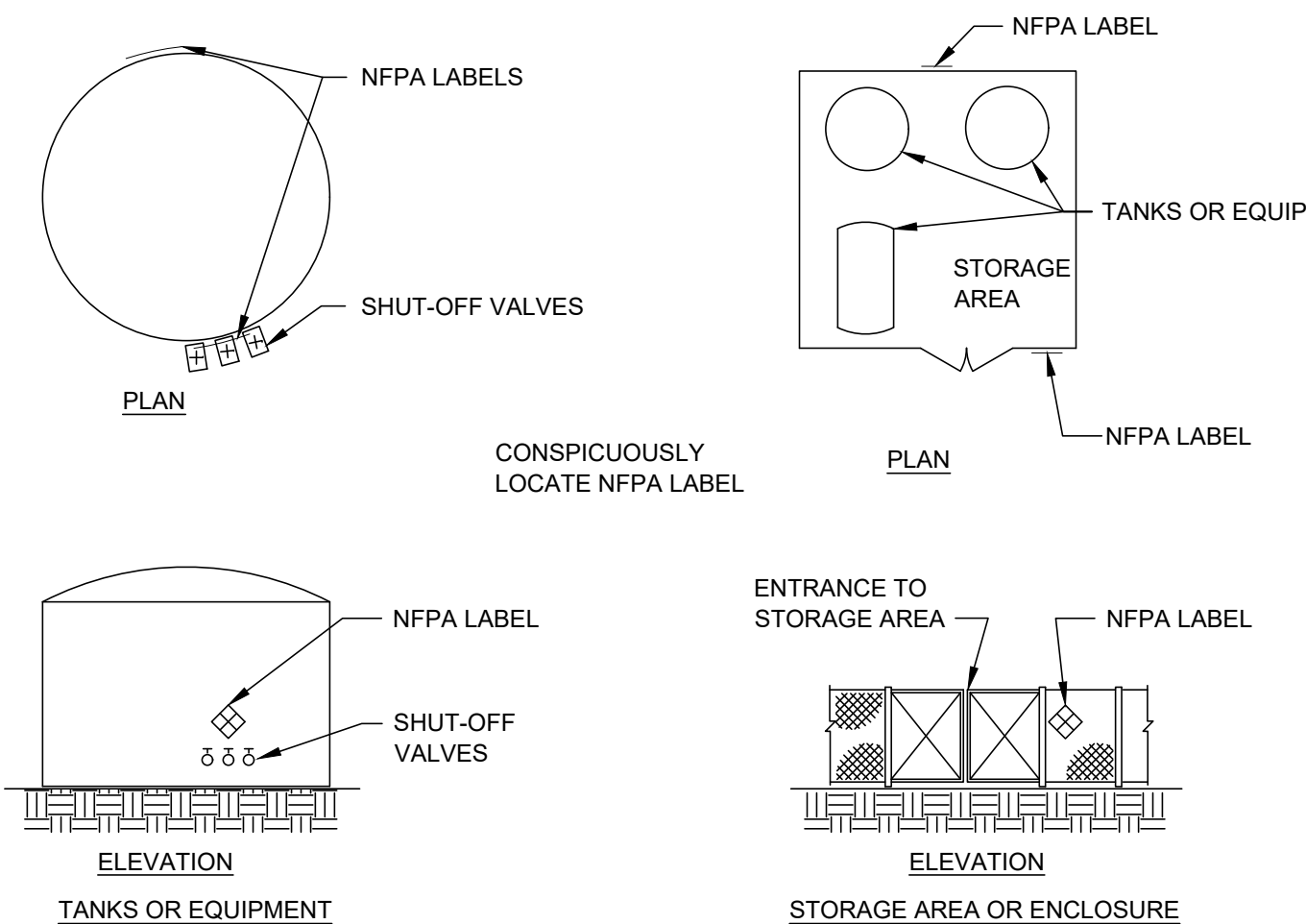


FIGURE 2: TYPICAL NFPA LABELING DETAIL

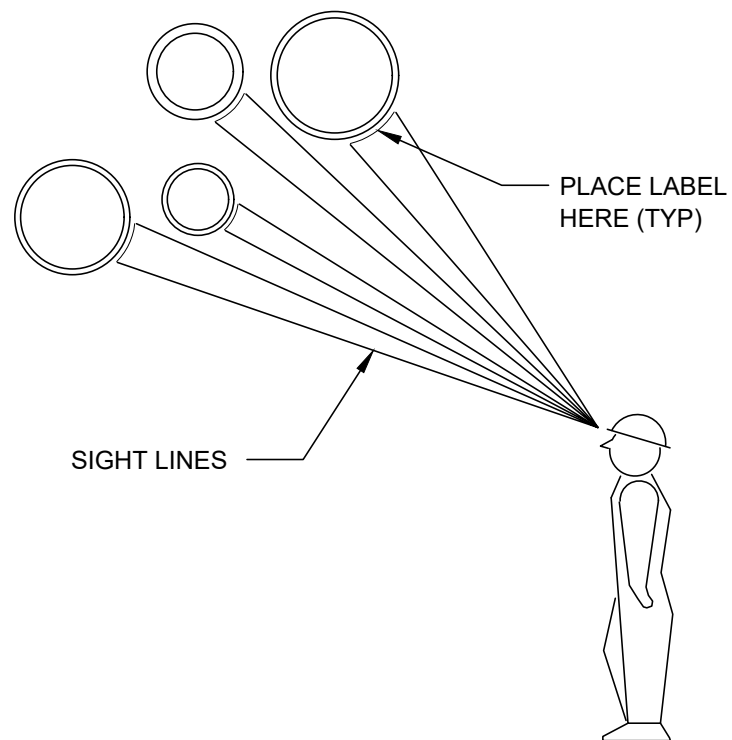


FIGURE 4: SIGHT LINE DETAIL

TABLE 1: NFPA 704 COLOR DESIGNATIONS

HAZARD CATEGORY	COLOR DESIGNATION
HEALTH	BLUE
FLAMMABILITY	RED
REACTIVITY	YELLOW
SPECIAL HAZARD	WHITE

TABLE 2: SIZE OF FIELD LEGEND FOR PIPE ID

OUTSIDE DIAMETER OF PIPE OR PIPE COVERING	MINIMUM LENGTH COLOR FIELD (A)	SIZE OF LEGEND LETTERS AND NUMERALS (B)
3/4" TO 1 1/4"	8"	1/2"
1 1/2" TO 2"	8"	3/4"
2 1/2" TO 6"	12"	1 1/4"

TABLE 3: HAZARD IDENTIFICATION LIST FOR PIPED AND TANKED PRODUCTS

PRODUCT NAME (SEE NOTE 3)	NFPA 704 HAZARD CLASSIFICATIONS FOR TANKED PRODUCTS				PIPED PRODUCTS ANSI A13.1 LABELING REQ'S	
	HEALTH	FLAMMABILITY	REACTIVITY	SPECIAL HAZARD	LABEL COLOR	LETTER COLOR
AVGAS	1	3	0		YELLOW	BLACK
JET A	2	2	0		YELLOW	BLACK

NOTES:

- CONFIRM INFORMATION ON MATERIALS LISTED IN TABLE 3 BY CONTACTING THE LOCAL MATERIAL SUPPLIER FOR MSDS INFORMATION. ALSO PROVIDE LABELS FOR OTHER PRODUCTS NOT LISTED BUT PROVIDED IN THE SCOPE OF WORK.
- NFPA RATINGS MAY VARY SLIGHTLY FOR SOME MATERIALS FROM THE HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS) RATINGS. NFPA RATINGS APPLY TO EMERGENCY RELEASE SITUATIONS. HMIS RATINGS ADDRESS POSSIBLE EXPOSURE HAZARDS TO PEOPLE UNDER ROUTINE WORKING CONDITIONS.
- MIXED STORAGE AREAS SHOULD BE LABELED BY NFPA STANDARDS TO THE HIGHEST HAZARD MATERIAL AT THAT LOCATION. FOR EXAMPLE, IF AN ALKALINE CLEANER AND JET A FUEL ARE PRESENT IN THE SAME AREA, THEN THE NFPA LABEL(S) ON THE BUILDING SHOULD READ 2/2/0 FOR HEALTH-1, FLAMMABILITY-2, REACTIVITY-0, I.E. MATCHING JET A.

NO.	DATE	BY	DESCRIPTION OF REVISIONS		

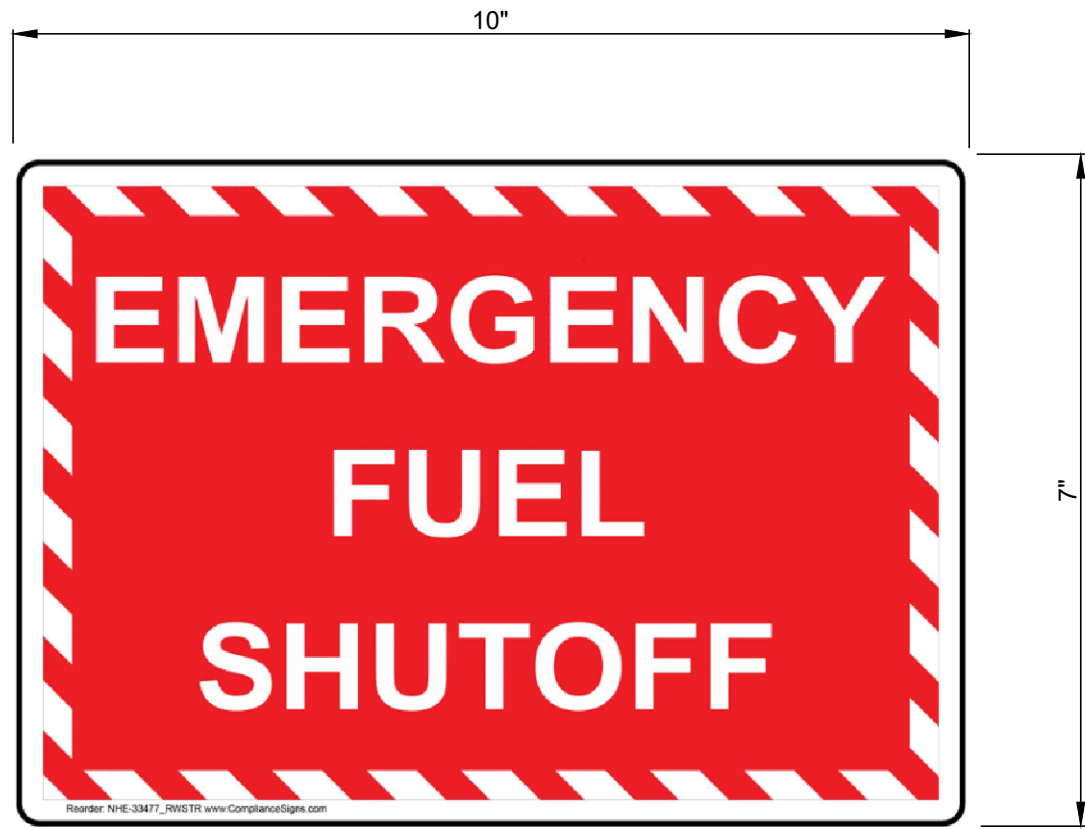
DESIGNED	GAG
DRAWN	RJE
CHECKED	DAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
<i>David A. Lund</i>	OCTOBER 7, 2026
DAVID A. LUND	LIC. NO. 58146



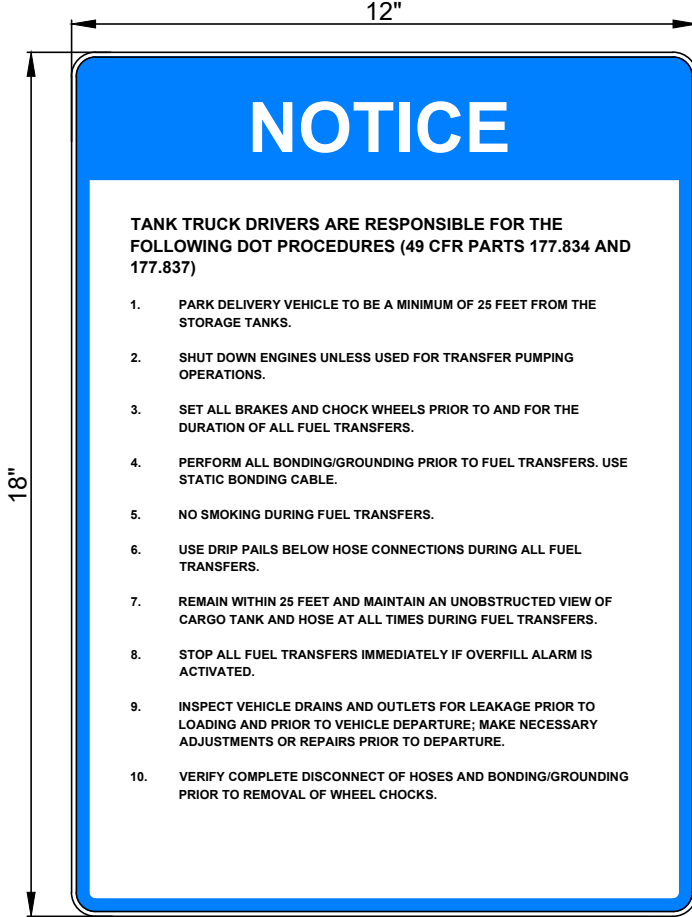
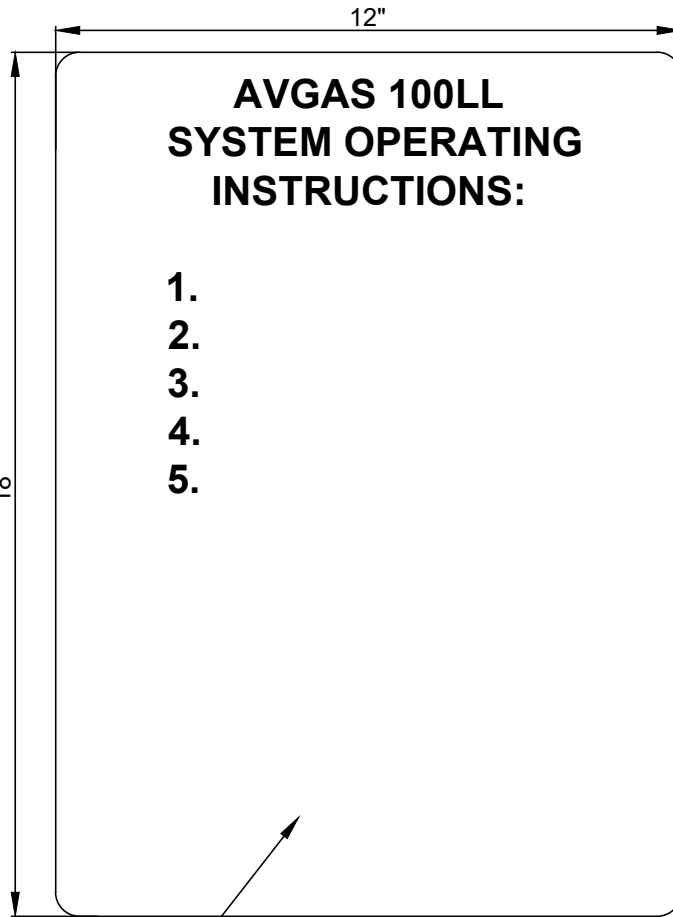
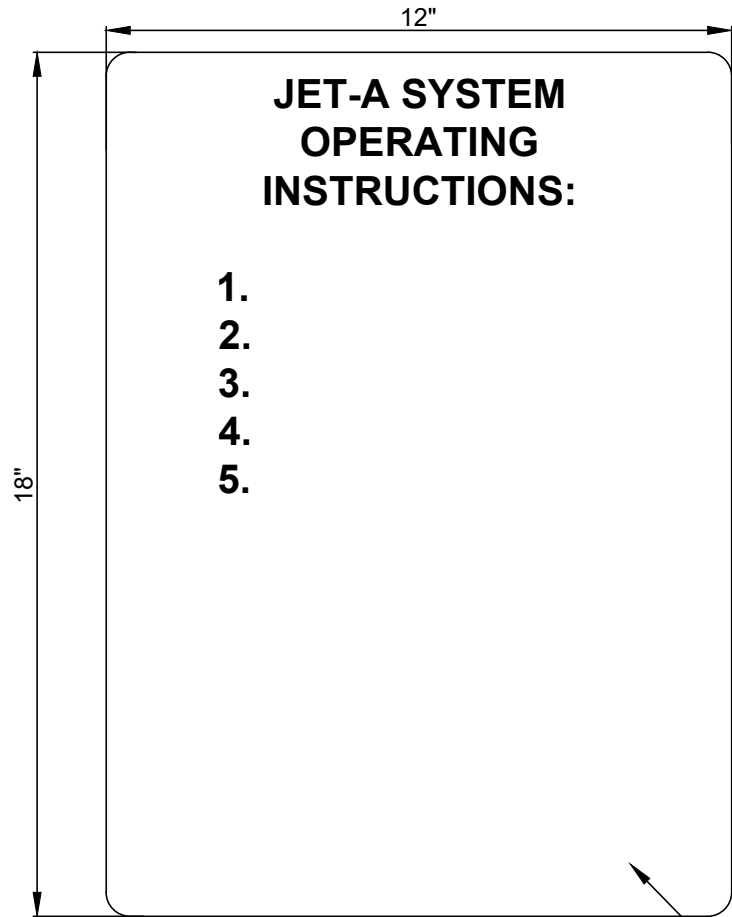
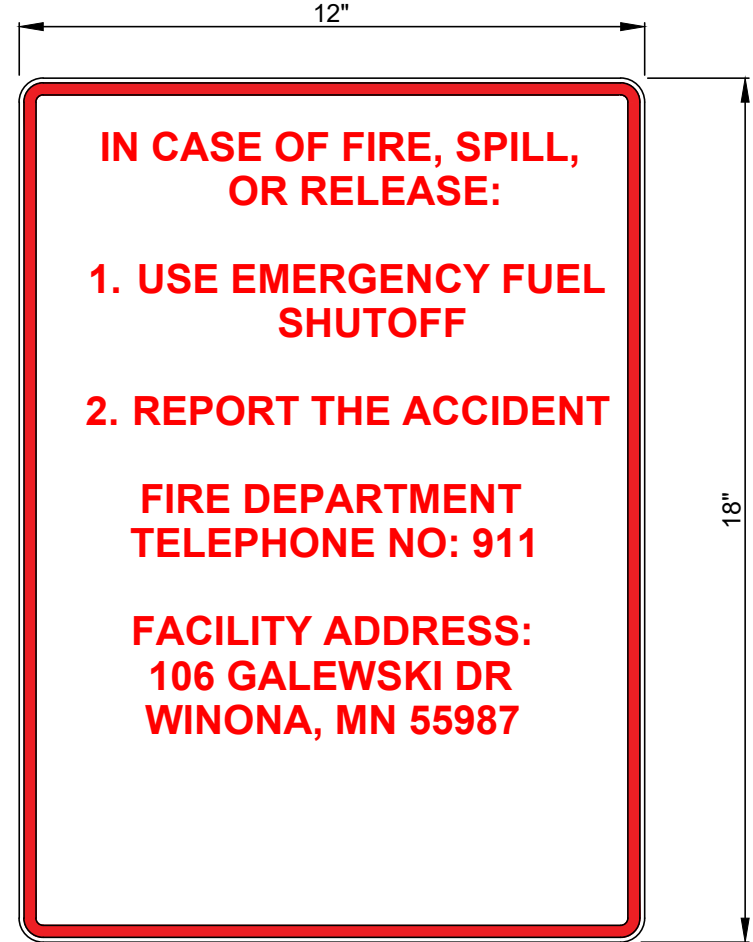
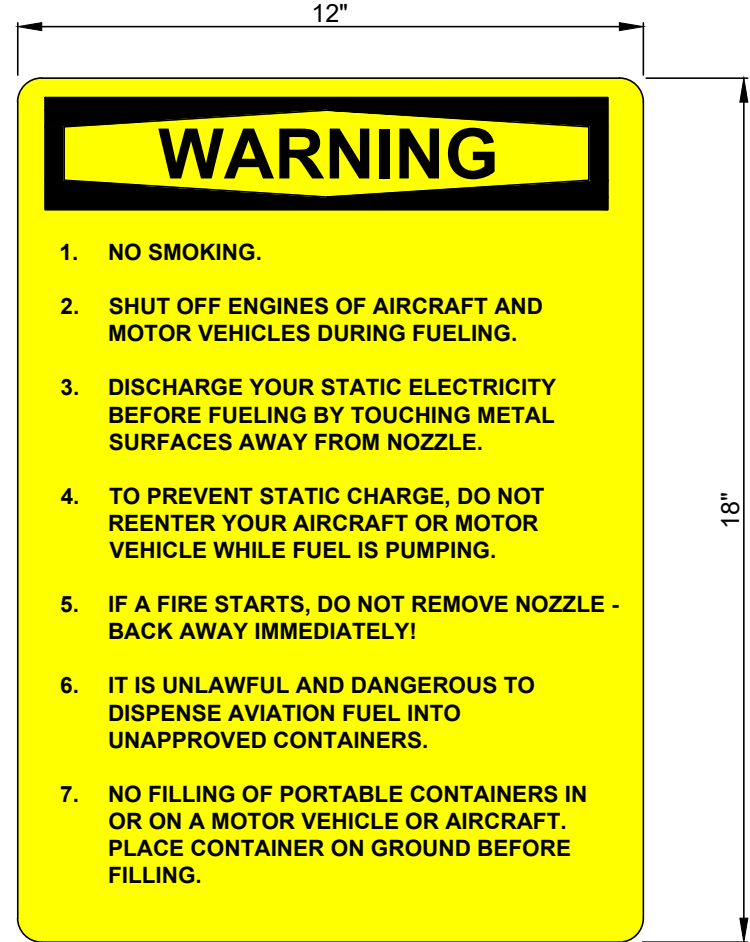
WINONA
MUNICIPAL
AIRPORT

PAINTING AND LABELING SCHEDULE		PROJ. NO. 23576	ONA
AIRCRAFT FUELING FACILITY REPLACEMENT		DRAWING NO. m0.02	



NOTES:

1. ALL SIGNAGE SHALL BE MADE OUT OF .040" ENGINEERING GRADE REFLECTIVE ALUMINUM.



CONTRACTOR TO SUBMIT OPERATING INSTRUCTIONS SIGN FROM FUELING SYSTEM EQUIPMENT MANUFACTURER FOR REVIEW AND APPROVAL

1 SIGN DETAILS
m0.05 NO SCALE

CURRENT: Oct 07, 2026 - 9:26am
DIR: K:\v\Winona_MN\2357560004_Production\01_CAD\02_Sheets\m0.05_MECHANICAL DETAILS.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED GAG
DRAWN RJE
CHECKED DAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

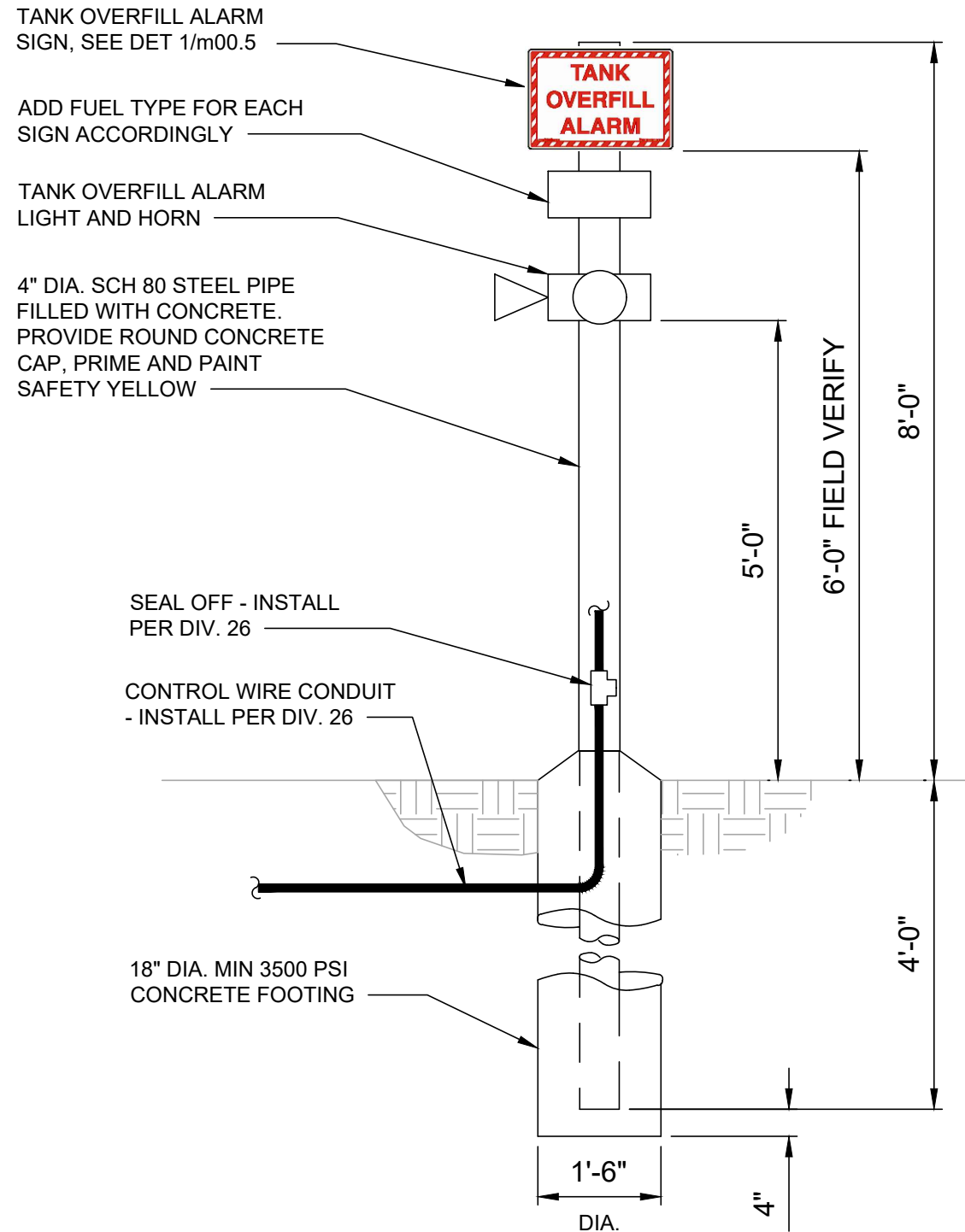
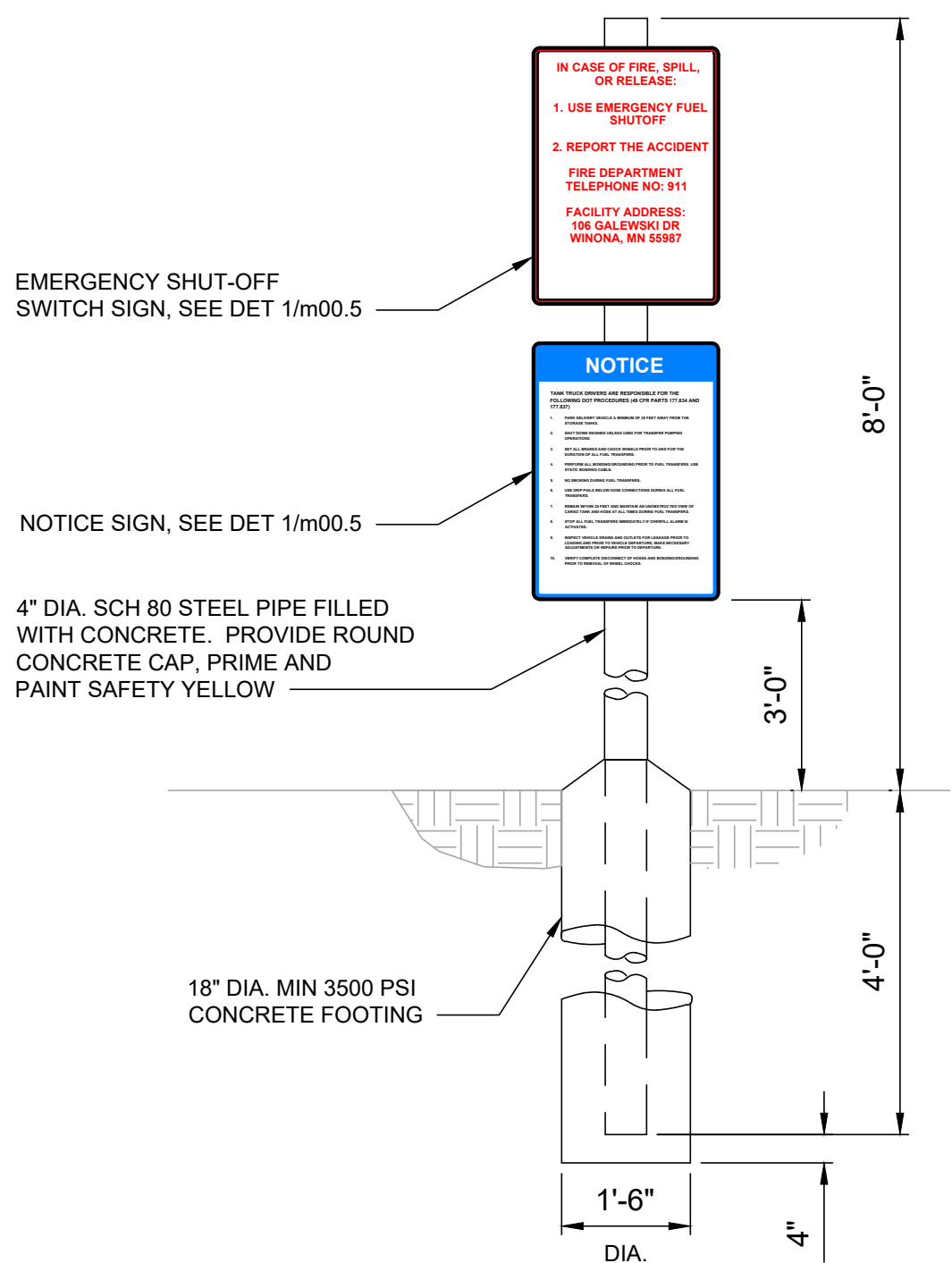
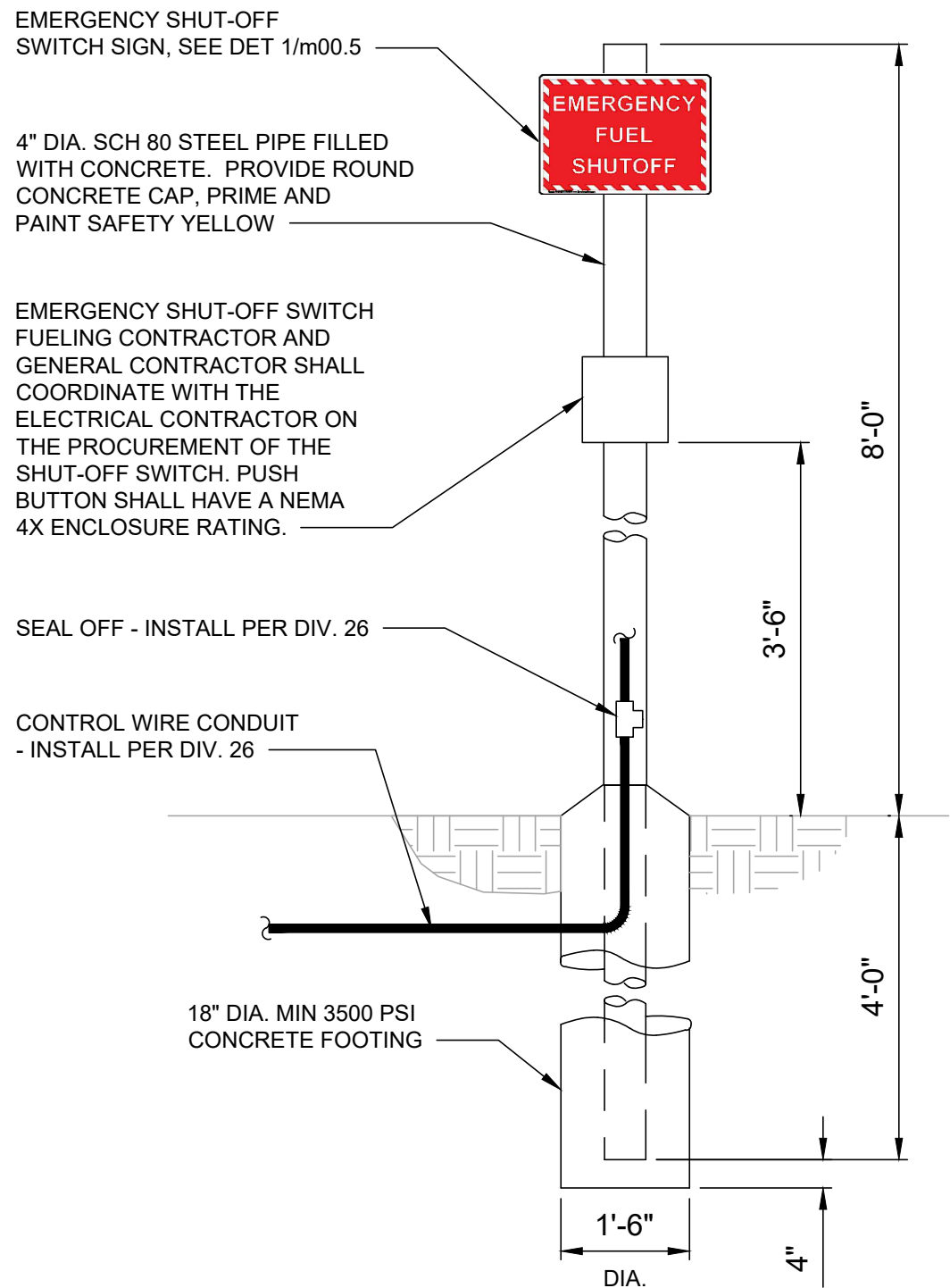
David A. Lund OCTOBER 7, 2026
DAVID A. LUND LIC. NO. 58146



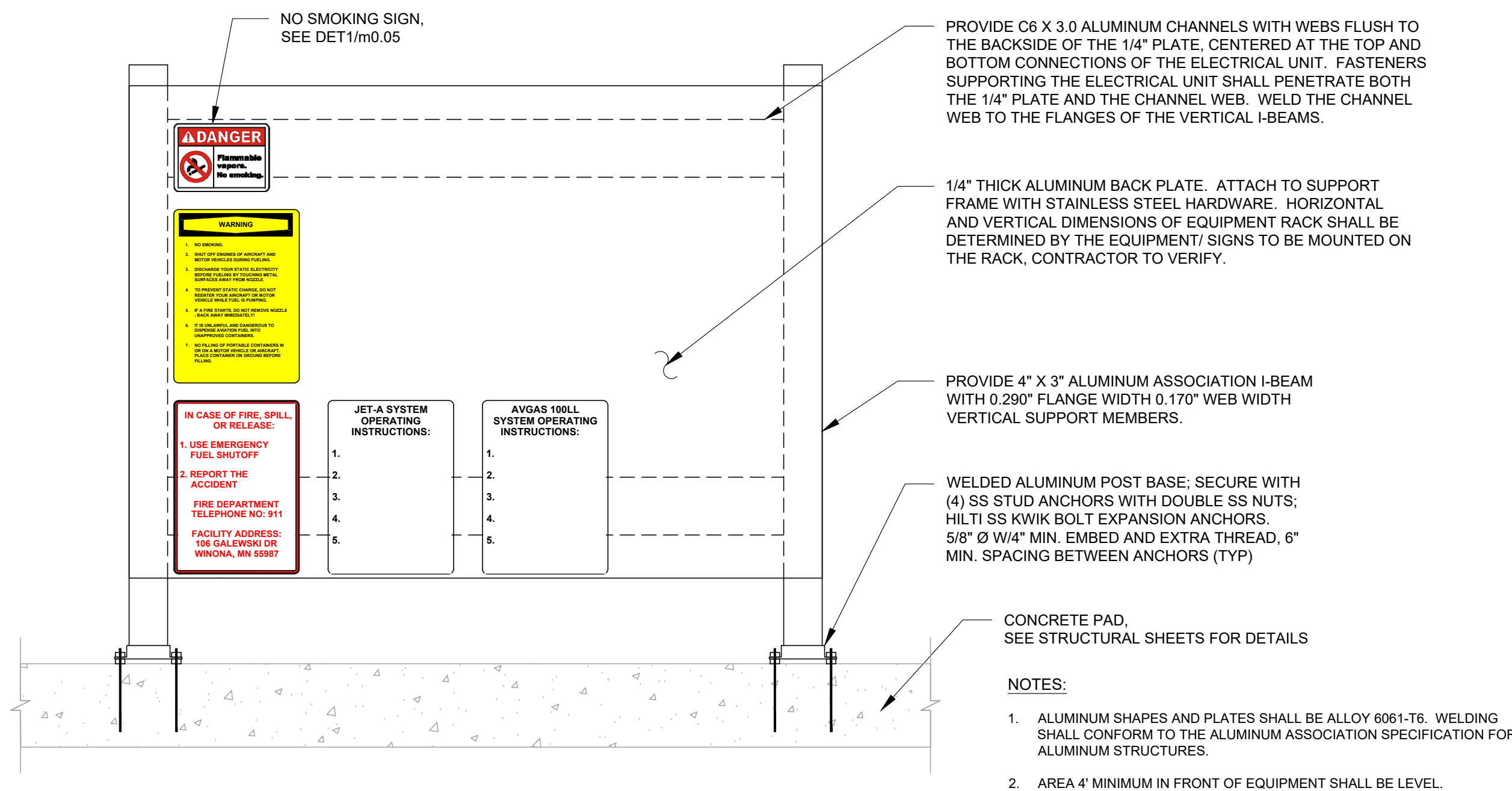
WINONA
MUNICIPAL
AIRPORT

MECHANICAL DETAILS - SHEET 1
AIRCRAFT FUELING FACILITY REPLACEMENT

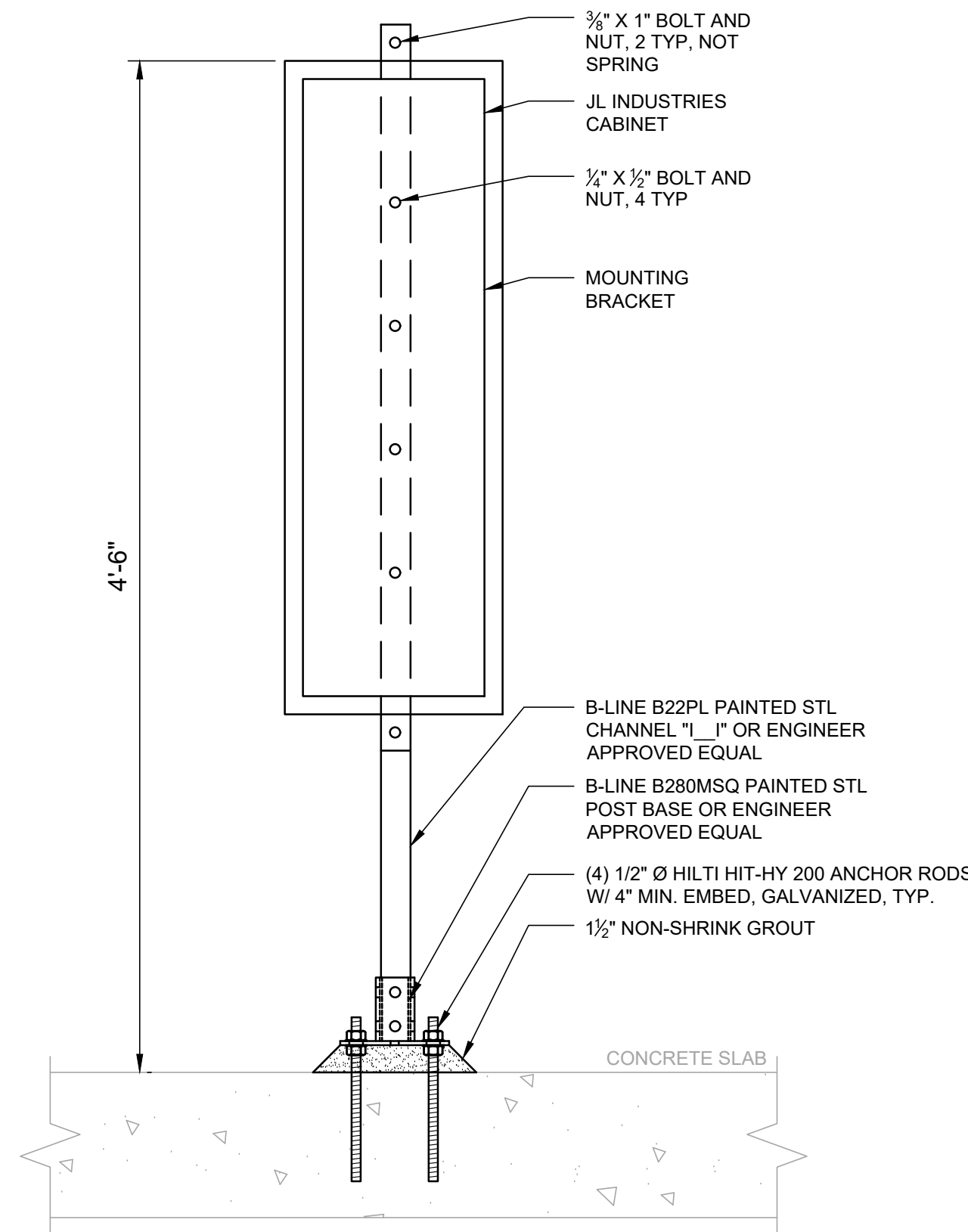
PROJ. NO. 23576	ONA
DRAWING NO. m0.05	



1 E-STOP STAND DETAILS
m0.06 NO SCALE



2 SIGN POST DETAILS
m0.06 NO SCALE



3 FIRE EXTINGUISHING MOUNT DETAIL
m0.06 NO SCALE

CURRENT: Oct 07, 2026 - 9:26am
DIR: K:\v\Winona_MN\23575000\04_Production\01_CAD\02_Sheets\m0.06 MECHANICAL DETAILS.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED GAG
DRAWN RJE
CHECKED DAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

David A. Lund OCTOBER 7, 2026
DAVID A. LUND LIC. NO. 58146

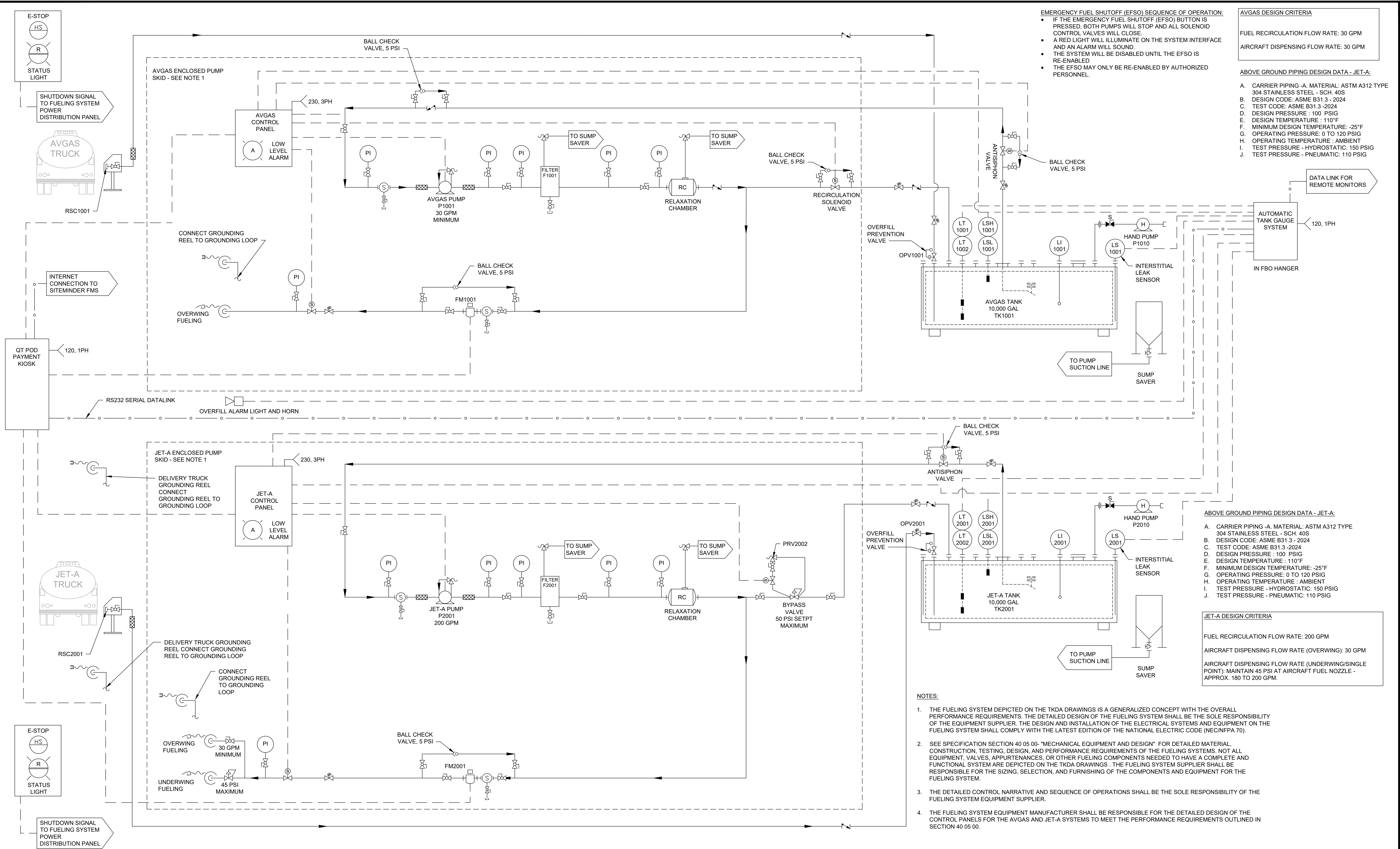


WINONA
MUNICIPAL
AIRPORT

MECHANICAL DETAILS - SHEET 2
AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO. 23576	ONA
DRAWING NO. m0.06	

CURRENT: Oct 07, 2026 - 9:26am
DIR: K:\v\Winona_MN\235760004_Production\01_CAD\02_Sheets\m0.10_MECHANICAL SCHEMATIC.dwg



NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED GAG
DRAWN RJE
CHECKED DAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

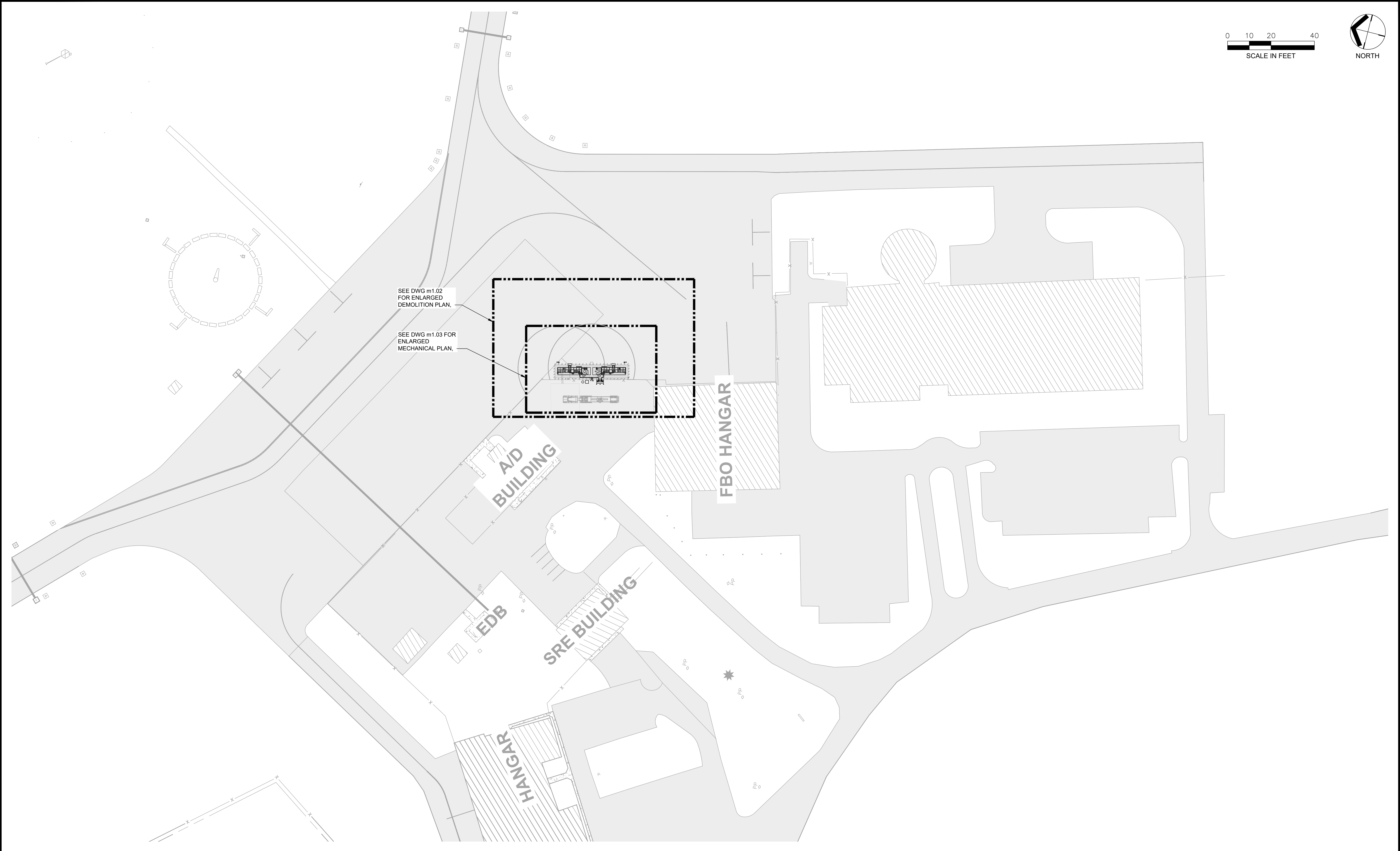
David A. Lund OCTOBER 7, 2026
DAVID A. LUND LIC. NO. 58146



WINONA
MUNICIPAL
AIRPORT

MECHANICAL SCHEMATIC
AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO. 23576	ONA
DRAWING NO. m0.10	



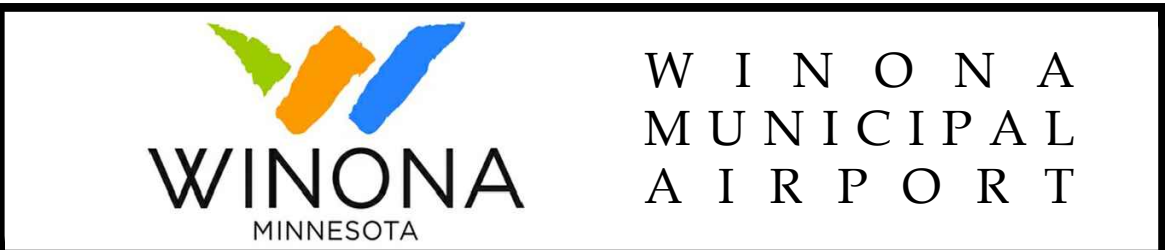
CURRENT: Oct 07, 2026 - 9:26am
DIR: K:\v\Winona_MN\23576000\4_Production\01_CAD\02_Sheets\m1.01_MECHANICAL SITE PLAN.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED	GAG
DRAWN	RJE
CHECKED	DAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

David A. Lund OCTOBER 7, 2026
DAVID A. LUND LIC. NO. 58146



MECHANICAL SITE PLAN
AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO.	23576	ONA
DRAWING NO.	m1.01	



EXISTING CONCRETE PAD,
EQUIPMENT AND PIPING TO BE
REMOVED



EXISTING UNDERGROUND
JET-A STORAGE TANK, TO
BE REMOVED

EXISTING CONCRETE PAD,
EQUIPMENT AND PIPING TO BE
REMOVED

EXISTING UNDERGROUND
AVGAS STORAGE TANK TO
BE REMOVED

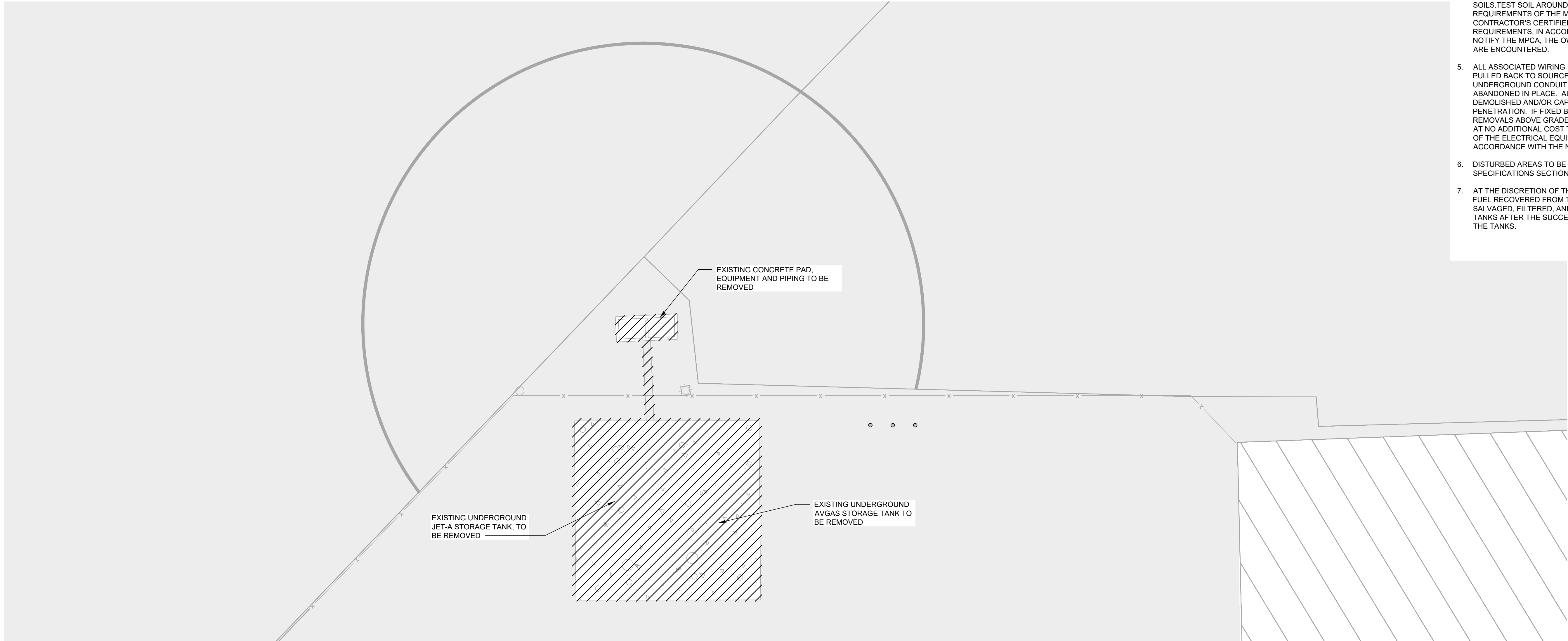


1 DEMOLITION DETAIL 1
m1.02 NO SCALE

2 DEMOLITION DETAIL 2
m1.02 NO SCALE

DEMOLITION NOTES:

- ALL DEMOLITION WORK SHALL BE COORDINATED WITH AND COMPLY WITH APPLICABLE STATE AND LOCAL AUTHORITIES, CODES AND REGULATORY AUTHORITIES, INCLUDING BUT NOT LIMITED TO THE MINNESOTA POLLUTION CONTROL AGENCY (MPCA) AND THE LOCAL FIRE MARSHAL.
- CONTRACTOR SHALL INFORM THE MPCA REGULATIONS SET BY THE MPCA AND THE ENVIRONMENTAL PROTECTION AGENCY (EPA) FOR UNDERGROUND STORAGE TANKS ALONG WITH THE REQUIREMENTS OF 40 CFR 280 SUBPART G, AND LOCAL FIRE MARSHAL AT LEAST 10 DAYS PRIOR TO BEGINNING DEMOLITION WORK. THE CONTRACTOR SHALL ALSO COORDINATE WITH THE OWNER ON THE PRE-NOTIFICATION AND THE MPCA 30 DAY NOTIFICATION FOR THE REMOVAL OF THE EXISTING STORAGE TANKS AND THE INSTALLATION OF THE NEW TANKS.
- ALL TANKS, PIPING AND VENT LINES SHALL BE REMOVED IN ACCORDANCE WITH THE REGULATIONS SET BY THE MPCA AND THE ENVIRONMENTAL PROTECTION AGENCY (EPA) FOR UNDERGROUND STORAGE TANKS ALONG WITH THE REQUIREMENTS OF 40 CFR 280 SUBPART G. AND AS DIRECTED BY THE LOCAL FIRE MARSHAL. TANK REMOVAL SHALL BE DONE IN ACCORDANCE WITH SPECIFICATIONS SECTION 02 41 00 - DEMOLITION AND THE OTHER SPECIFICATIONS IN DIVISION 02 IN THE PROJECT MANUAL. CONTRACTORS SHALL FOLLOW THE BEST PRACTICES FOR REMOVAL OF THE STORAGE TANKS OUTLINED IN API 1604 AND PEI 1700. UNDERGROUND STORAGE TANKS SHALL BE CLEANED OF THEIR CONTENTS PRIOR TO THEIR REMOVAL.
- DEMOLITION ACTIVITIES SHALL BE PERFORMED BY AN MPCA CERTIFIED CONTRACTOR. PROOF OF CERTIFICATION TO BE PROVIDED TO ENGINEER PRIOR TO STARTING WORK.
- THE PROJECT SITE MAY CONTAIN ISOLATED CONTAMINATED OR IMPACTED SOILS. TEST SOIL AROUND THE UNDERGROUND STORAGE TANKS PER THE REQUIREMENTS OF THE MPCA. SOIL SAMPLES MUST BE TESTED BY CONTRACTOR'S CERTIFIED TESTING LABORATORY TO DETERMINE DISPOSAL REQUIREMENTS, IN ACCORDANCE WITH SPECIFICATIONS SECTION 31 23 00. NOTIFY THE MPCA, THE OWNER, AND THE ENGINEER IF CONTAMINATED SOILS ARE ENCOUNTERED.
- ALL ASSOCIATED WIRING FOR DEMOLISHED TANKS AND TANK DEVICES WILL BE PULLED BACK TO SOURCE PANEL AND DEMOLISHED. ALL ASSOCIATED UNDERGROUND CONDUIT WILL BE CAPPED FLUSH WITH GRADE AND ABANDONED IN PLACE. ALL ASSOCIATED ABOVE GRADE CONDUIT WILL BE DEMOLISHED AND/OR CAPPED FLUSH WITH BUILDING ENTRY OR EQUIPMENT PENETRATION. IF FIXED BASE OPERATOR REQUIRES ADDITIONAL CONDUIT REMOVALS ABOVE GRADE AT THE FUELING AREA, THEY WILL BE PERFORMED AT NO ADDITIONAL COST TO OWNER. ALL WORK RELATED TO THE DEMOLITION OF THE ELECTRICAL EQUIPMENT, CONDUIT AND WIRING SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC/NFPA 70).
- DISTURBED AREAS TO BE RESTORED TO EXISTING GRADES PER THE SPECIFICATIONS SECTIONS IN DIVISIONS 31 AND 32 OF THE PROJECT MANUAL.
- AT THE DISCRETION OF THE FIXED BASE OPERATOR (FBO) AND THE OWNER, FUEL RECOVERED FROM THE UNDERGROUND STORAGE TANKS SHALL BE SALVAGED, FILTERED, AND PLACED INTO THE NEW ABOVEGROUND STORAGE TANKS AFTER THE SUCCESSFUL COMPLETION OF THE INITIAL SOAK TEST OF THE TANKS.



LEGEND

- EXISTING
- DENOTES ITEMS TO BE DEMOLISHED

CURRENT: Oct 07, 2026 - 9:26am
DIR: K:\v\Winona, MN\23575000\04_Production\01_CAD\02_Sheets\m1.02 ENLARGED MECHANICAL SITE PLAN.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED GAG
DRAWN RJE
CHECKED DAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

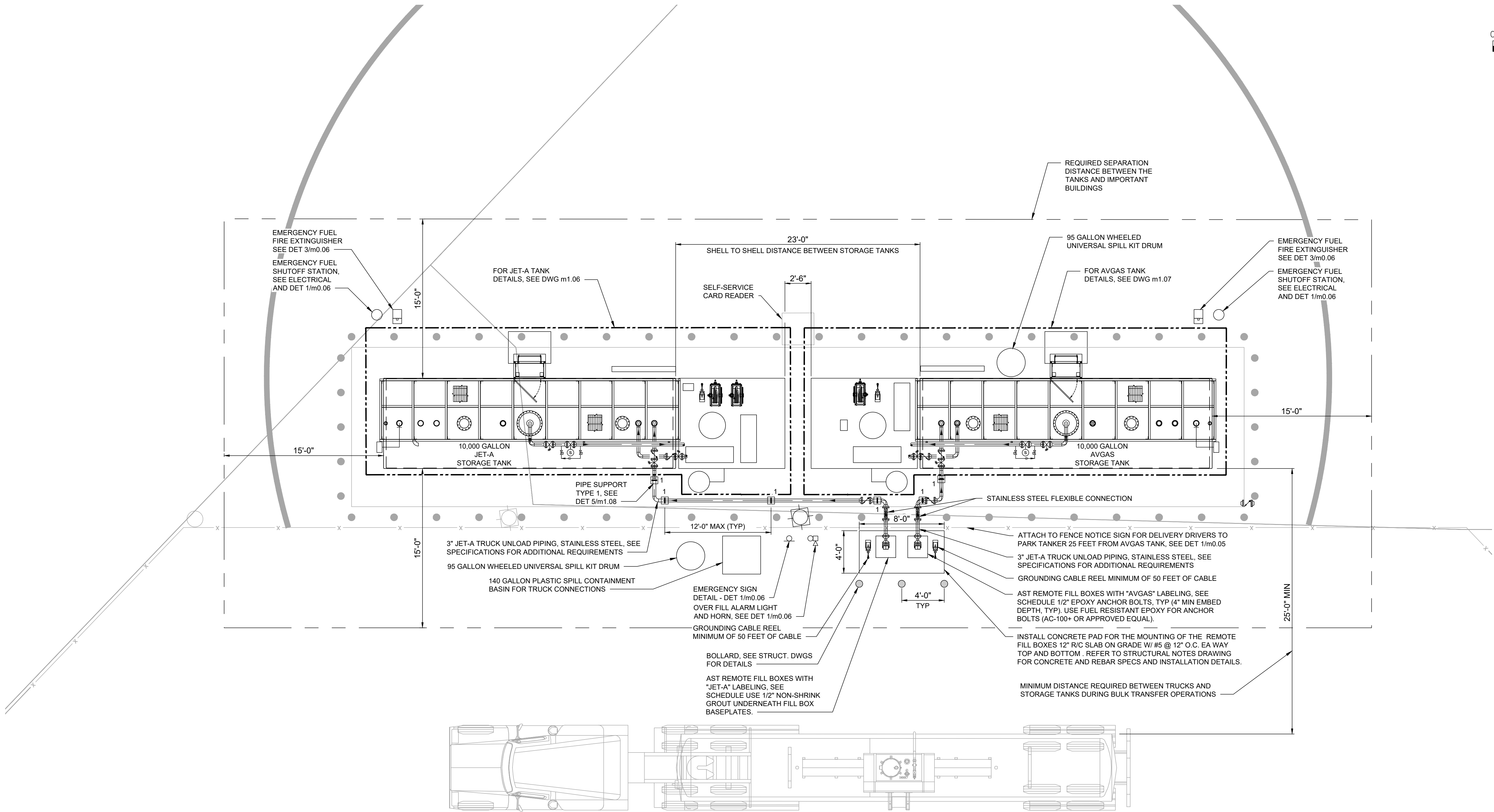
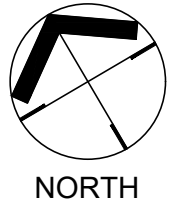
David A. Lund OCTOBER 7, 2026
DAVID A. LUND LIC. NO. 58146



WINONA
MUNICIPAL
AIRPORT

ENLARGED DEMOLITION PLAN
AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO. 23576	ONA
DRAWING NO. m1.02	



AST REMOTE FILL BOXES SCHEDULE				
ITEM #	MANUFACTURER MODEL #	DESCRIPTION	SIZE, IN	END CONNECTIONS
RSC1001	MORRISON BROS. FIG. 515SD	15 GAL CAPACITY, 22-1/2"Wx24"Dx24-1/2"H W/ADJ HT 28-40" SINGLE COLUMN BASE SUPPORT, ANCHOR BASE PLATE, STAINLESS STEEL CONST. WEATERTIGHT, HINGED LOCKABLE LID W/GAS OR HYDRAULIC SPRING ASSIST CYLINDER TO HOLD LID OPEN DURING USE, SINGLE PORT, 1" NPT LOCKABLE DRAIN BALL VALVE	3	FNPT
				REMARKS
				INCLUDE 3" FEMALE CAMLOCK AND 3" AVIATION FUEL RATED BALL VALVE. SEE SPECIFICATION SECTION 40 05 00 FOR ADDITIONAL REQUIREMENTS

- NOTES:
- SEE SPEC 40 05 00 FOR PERFORMANCE, EQUIPMENT, AND CODE REQUIREMENTS.
 - TANK SIZES SHOWN ARE APPROXIMATED BASED ON STANDARD STI SIZING CHARTS. IF PROVIDED TANKS WILL DIFFER FROM STANDARD SIZES, PROVIDE PROVISIONS TO ADJUST TANK LOCATION AS REQUIRED TO MEET APPLICABLE CODES AND REGULATIONS

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED GAG
DRAWN RJE
CHECKED DAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

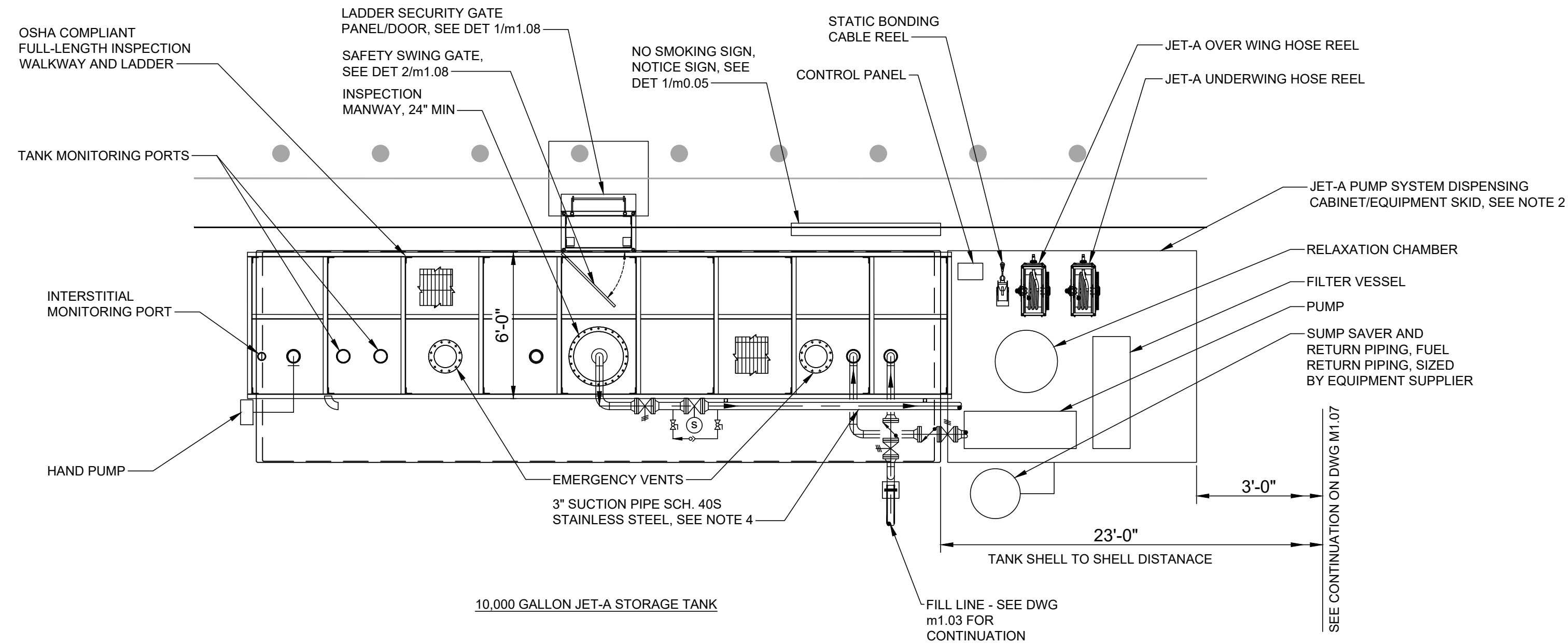
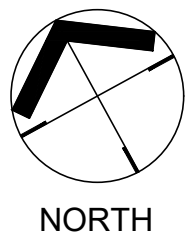
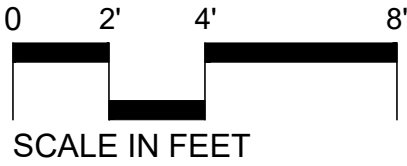
David A. Lund OCTOBER 7, 2026
DAVID A. LUND LIC. NO. 58146



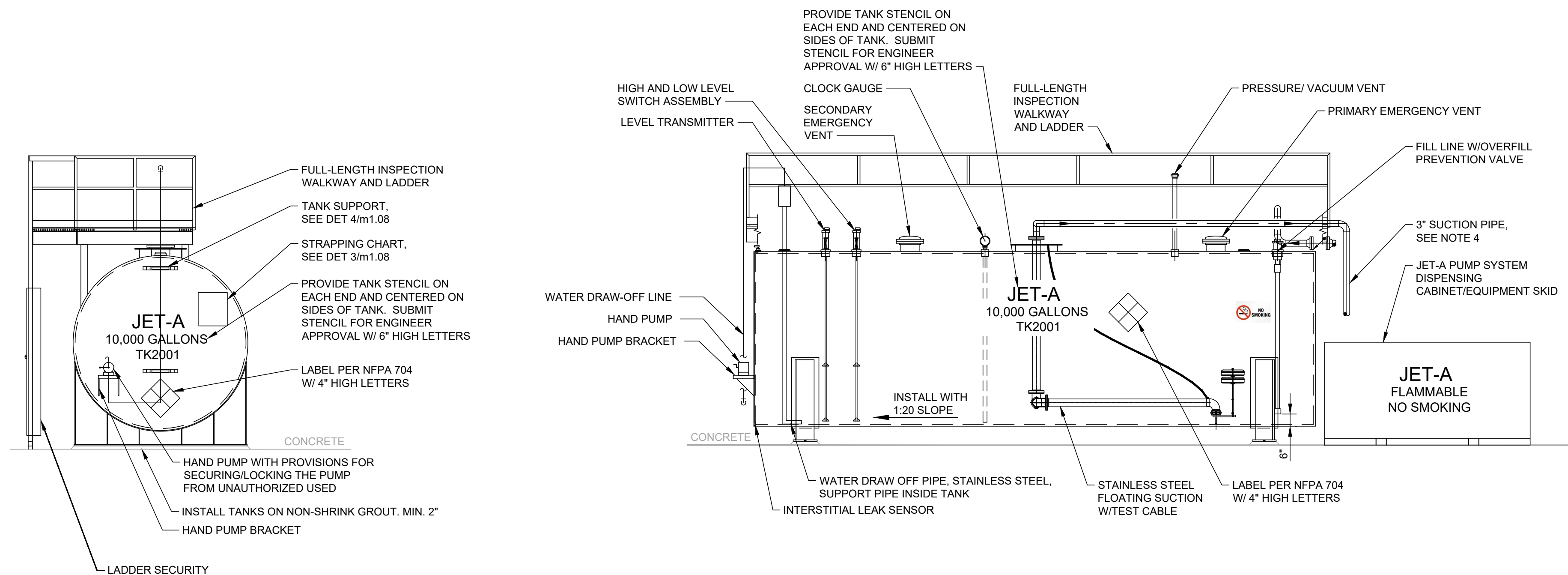
WINONA
MUNICIPAL
AIRPORT

ENLARGED MECHANICAL PLAN
AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO. 23576	ONA
DRAWING NO. m1.03	



1 TANK PLAN
m1.06 SCALE: 1/4"=1'-0"



2 TANK ELEVATIONS
m1.06 SCALE: 1/4"=1'-0"

NOTES:

- SEE SPECIFICATION SECTION 40 05 00 - MECHANICAL EQUIPMENT AND DESIGN FOR DETAILED MATERIAL, CONSTRUCTION, TESTING, DESIGN, AND PERFORMANCE REQUIREMENTS OF THE FUELING SYSTEMS.
- THE FUELING SYSTEM DEPICTED ON THE TKDA DRAWINGS IS A GENERALIZED CONCEPT WITH THE OVERALL PERFORMANCE REQUIREMENTS. THE DETAILED DESIGN OF THE FUELING SYSTEM SHALL BE THE SOLE RESPONSIBILITY OF THE EQUIPMENT SUPPLIER. THE DESIGN AND INSTALLATION OF THE ELECTRICAL SYSTEMS AND EQUIPMENT ON THE FUELING SYSTEM SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (NEC/NFPA 70). NOT ALL EQUIPMENT, VALVES, APPURTENANCES, OR OTHER FUELING COMPONENTS NEEDED TO HAVE A COMPLETE AND FUNCTIONAL SYSTEM ARE DEPICTED ON THE TKDA DRAWINGS. THE FUELING SYSTEM SUPPLIER SHALL BE RESPONSIBLE FOR THE ARRANGEMENT, SIZING, SELECTION, AND FURNISHING OF THE COMPONENTS AND EQUIPMENT FOR THE FUELING SYSTEM.
- THE FINAL/COMPLETE CONTROL NARRATIVE AND SEQUENCE OF OPERATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE FUELING SYSTEM EQUIPMENT SUPPLIER.
- CONTRACTOR SHALL FIELD ROUTE TANK SUCTION PIPING FROM FLOATING SUCTION TO DISPENSING EQUIPMENT. PIPING SHALL BE SUPPORTED AT 12 FOOT MINIMUM SPACING AND AT ALL VERTICAL PIPE SECTIONS.

CURRENT: Oct 07, 2026 - 9:26am
DIR: K:\v\Winona_MN\23575000\04_Production\01_CAD\02_Sheets\m1.06_JET-A MECHANICAL PLAN AND SECTION.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED GAG
DRAWN RJE
CHECKED DAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

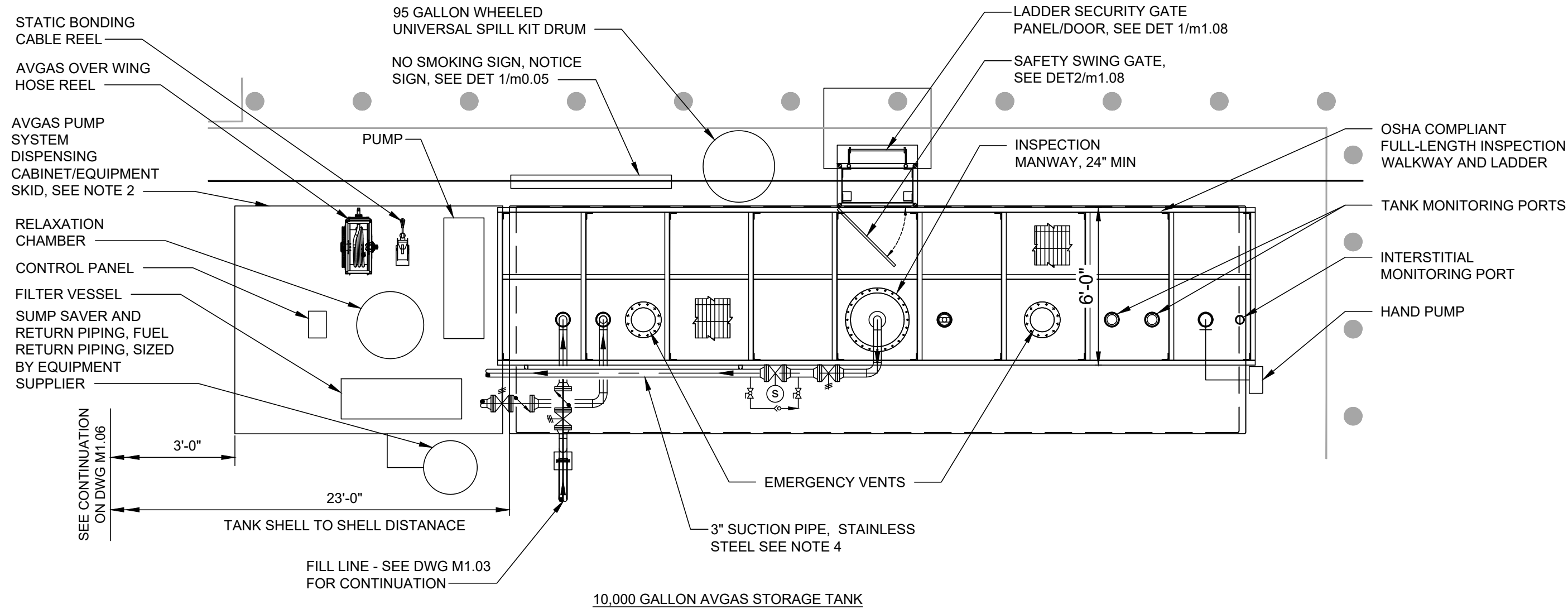
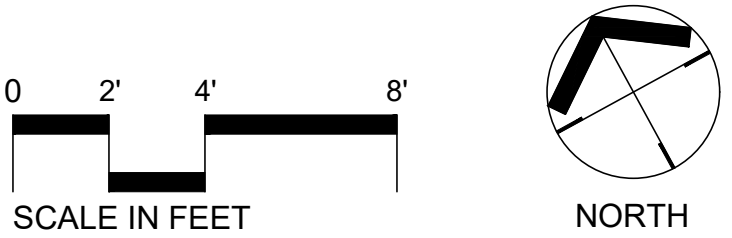
David A. Lund OCTOBER 7, 2026
DAVID A. LUND LIC. NO. 58146



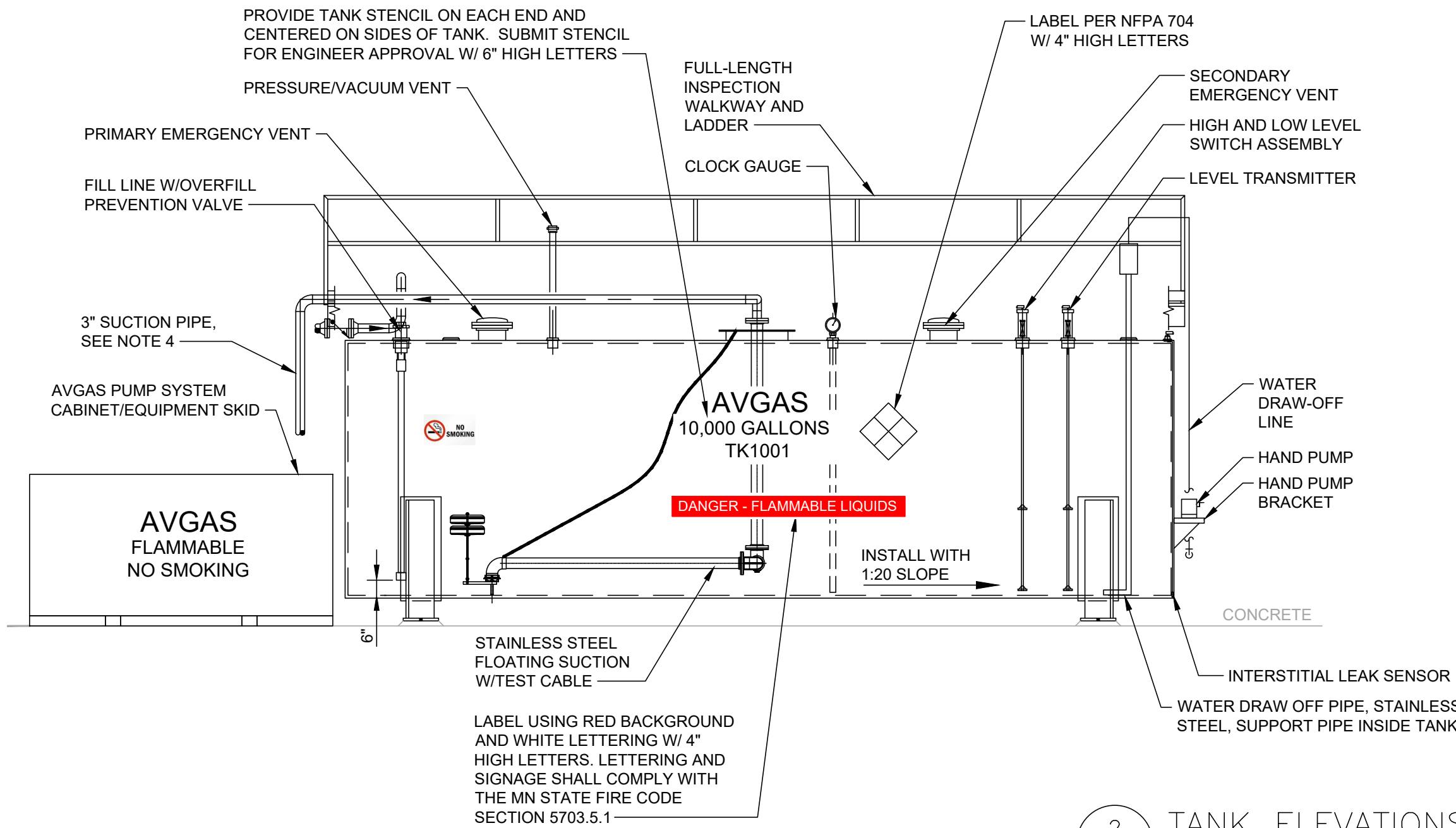
WINONA
MUNICIPAL
AIRPORT

JET-A MECHANICAL PLAN AND SECTION
AIRCRAFT FUELING FACILITY REPLACEMENT

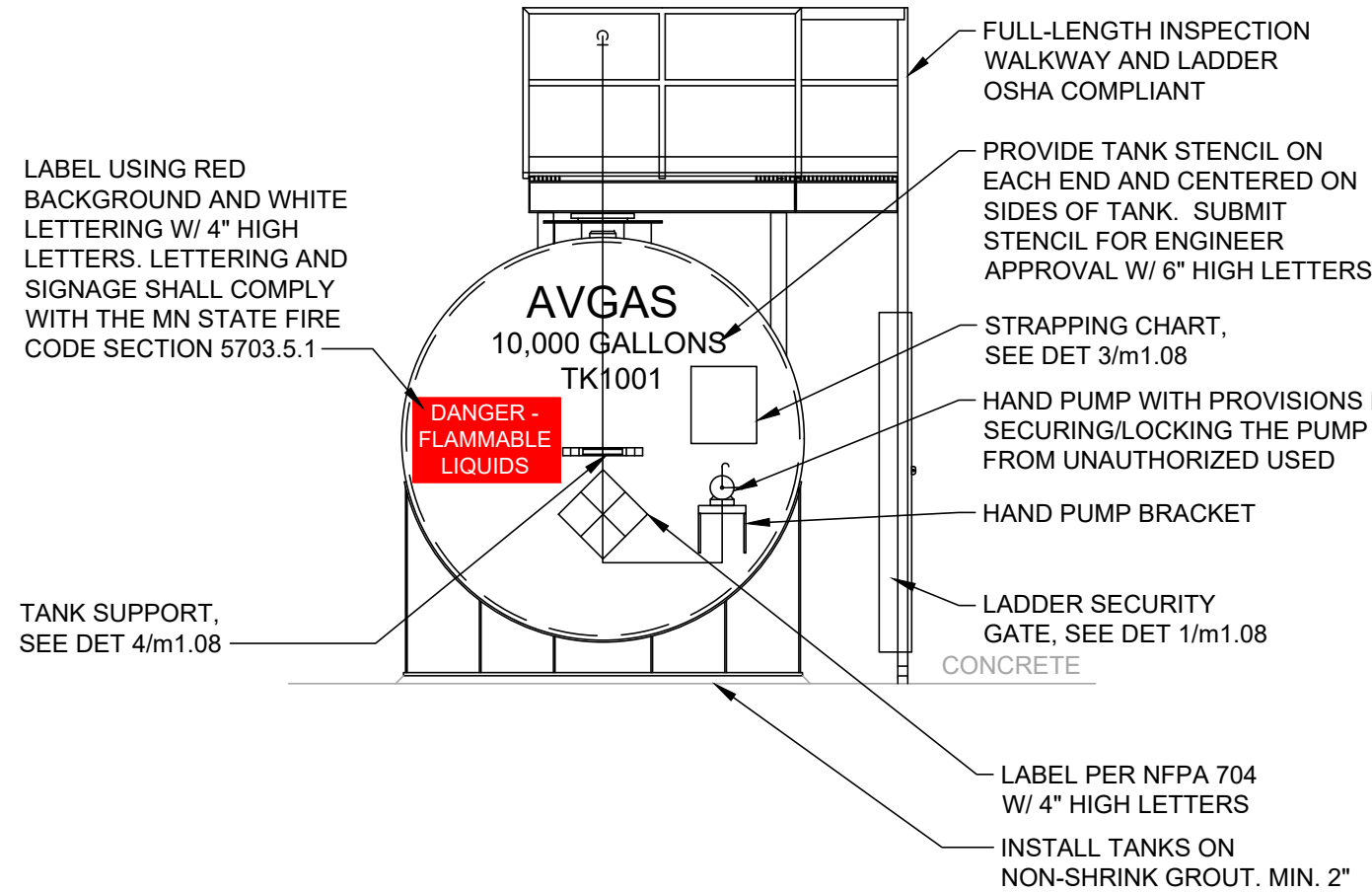
PROJ. NO. 23576	ONA
DRAWING NO. m1.06	



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



2 TANK ELEVATIONS
SCALE: 1/4"=1'-0"



- NOTES:
- SEE SPECIFICATION SECTION 40 05 00 - MECHANICAL EQUIPMENT AND DESIGN FOR DETAILED MATERIAL, CONSTRUCTION, TESTING, DESIGN, AND PERFORMANCE REQUIREMENTS OF THE FUELING SYSTEMS.
 - THE FUELING SYSTEM DEPICTED ON THE TKDA DRAWINGS IS A GENERALIZED CONCEPT WITH THE OVERALL PERFORMANCE REQUIREMENTS. THE DETAILED DESIGN OF THE FUELING SYSTEM SHALL BE THE SOLE RESPONSIBILITY OF THE EQUIPMENT SUPPLIER. THE DESIGN AND INSTALLATION OF THE ELECTRICAL SYSTEMS AND EQUIPMENT ON THE FUELING SYSTEM SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (NEC/NFPA 70). NOT ALL EQUIPMENT, VALVES, APPURTENANCES, OR OTHER FUELING COMPONENTS NEEDED TO HAVE A COMPLETE AND FUNCTIONAL SYSTEM ARE DEPICTED ON THE TKDA DRAWINGS. THE FUELING SYSTEM SUPPLIER SHALL BE RESPONSIBLE FOR THE ARRANGEMENT, SIZING, SELECTION, AND FURNISHING OF THE COMPONENTS AND EQUIPMENT FOR THE FUELING SYSTEM.
 - THE FINAL/COMPLETE CONTROL NARRATIVE AND SEQUENCE OF OPERATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE FUELING SYSTEM EQUIPMENT SUPPLIER.
 - CONTRACTOR SHALL FIELD ROUTE TANK SUCTION PIPING FROM FLOATING SUCTION TO DISPENSING EQUIPMENT. PIPING SHALL BE SUPPORTED AT 12 FOOT MINIMUM SPACING AND AT ALL VERTICAL PIPE SECTIONS.

CURRENT: Oct 07 2026 - 9:26am
DIR: K:\v2\Winona_MN\23575000\04_Production\01_CAD\02_Sheets\m1.07_AVGAS_MECHANICAL_PLAN_AND_SECTIONS.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED GAG
DRAWN RJE
CHECKED DAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

David A. Lund OCTOBER 7, 2026
DAVID A. LUND LIC. NO. 58146

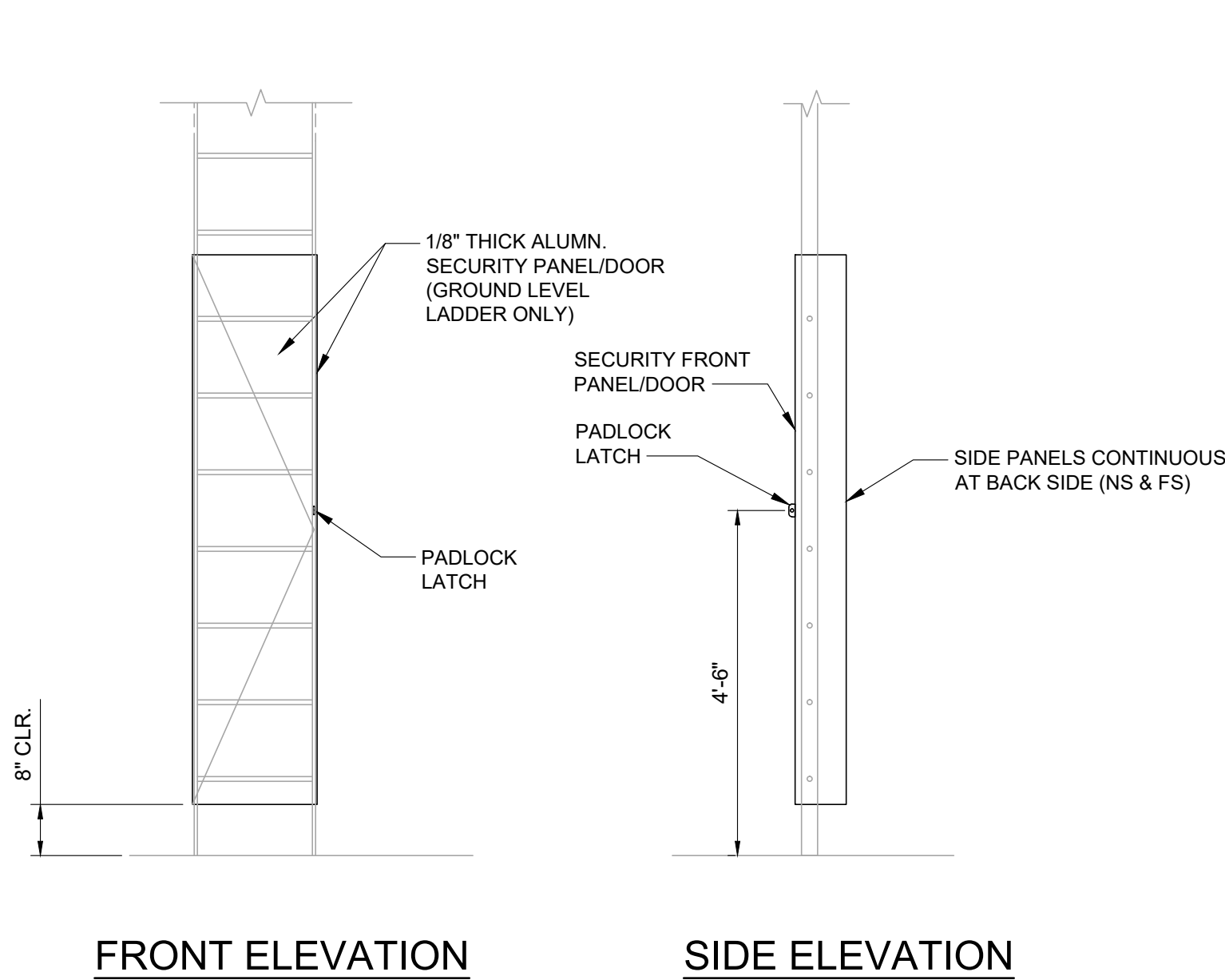


WINONA
MUNICIPAL
AIRPORT

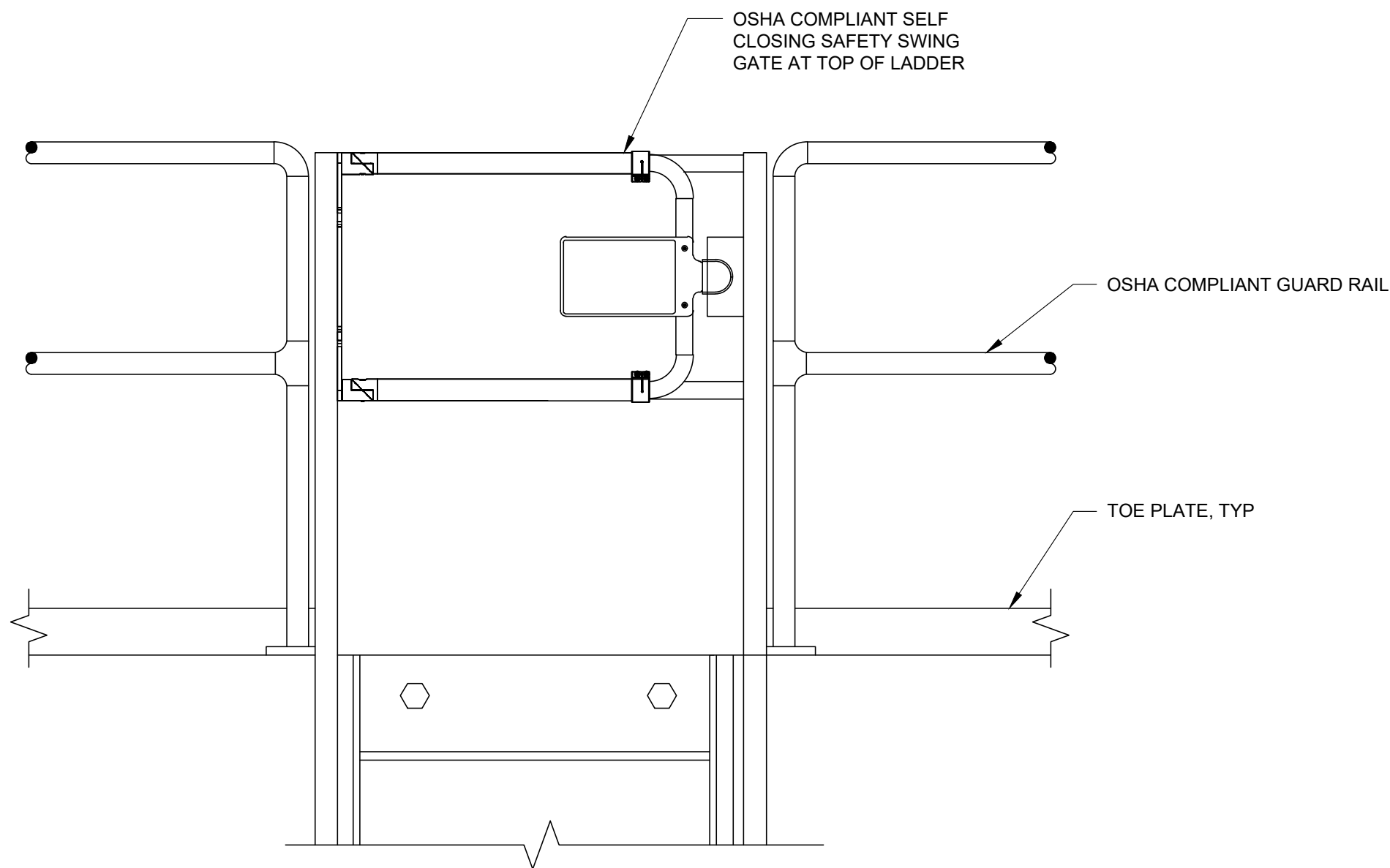
AVGAS MECHANICAL PLAN AND SECTIONS

AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO. 23576	ONA
DRAWING NO. m1.07	



1 ACCESS LADDER SECURITY PANEL/DOOR
m1.08 SCALE: NONE

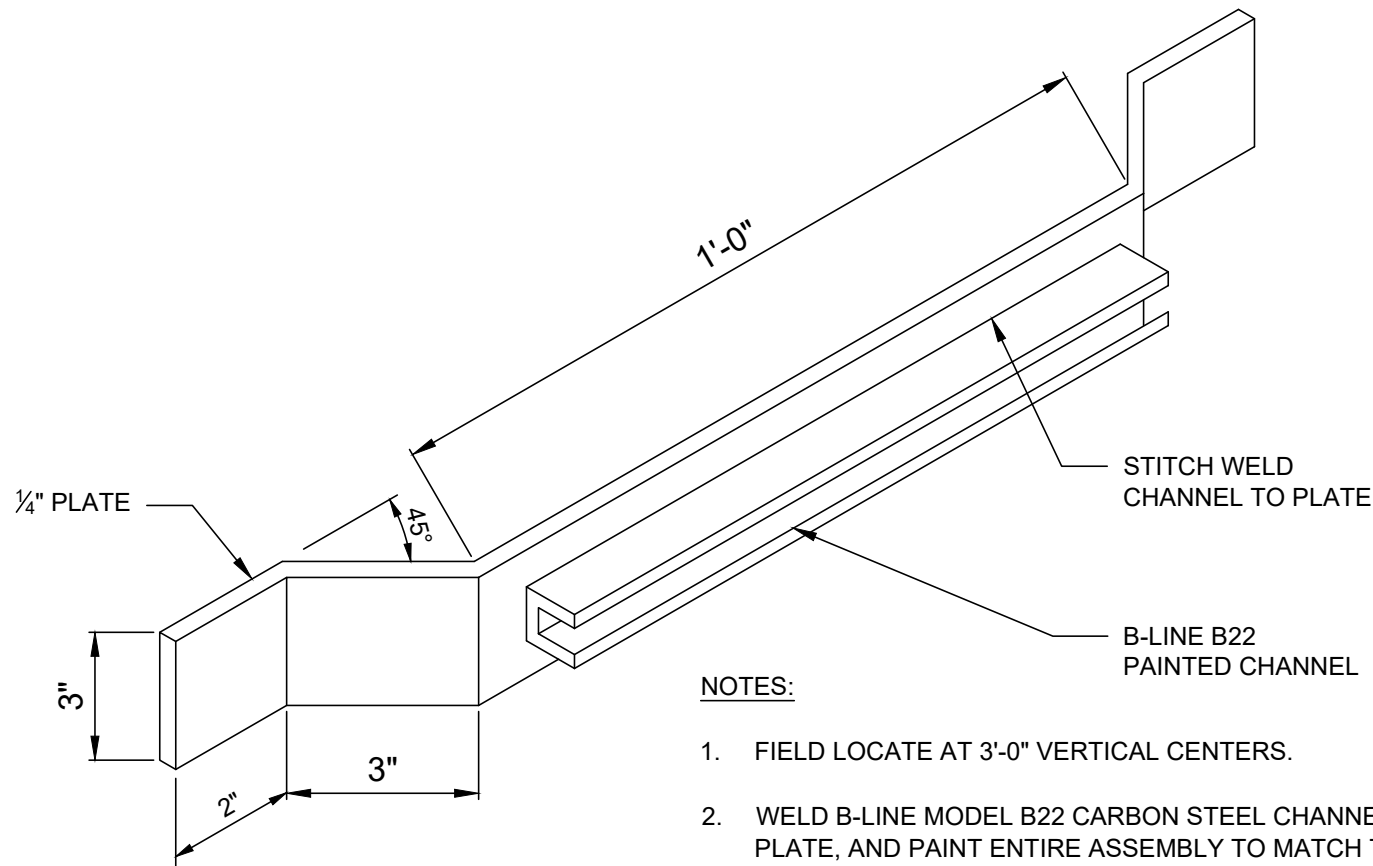


2 SAFETY SWING GATE DETAIL
m1.08 SCALE: NONE

TANK VOLUME CONVERSION TABLE	
LEVEL (FT-IN")	VOLUME (GAL)

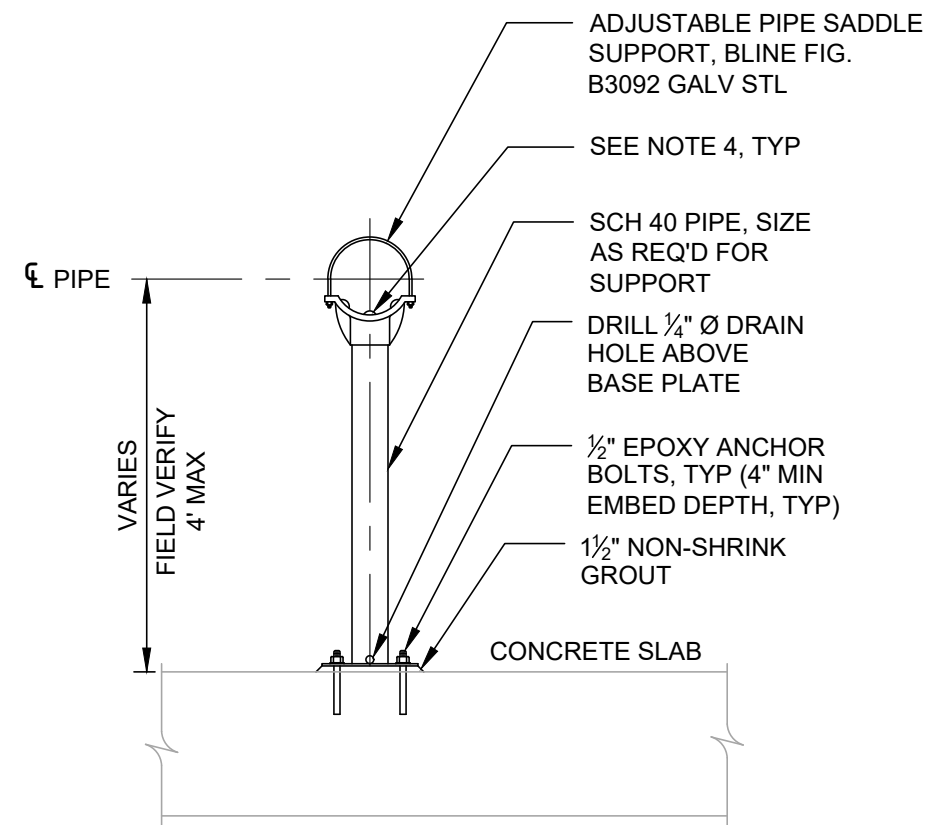
- NOTES:
- TANK MANUFACTURER RESPONSIBLE FOR STRAPPING, COMPUTING AND PROVIDING TABLE PER STI STANDARDS.

3 STRAPPING TABLE DETAIL
m1.08 NO SCALE



- NOTES:
- FIELD LOCATE AT 3'-0" VERTICAL CENTERS.
 - WELD B-LINE MODEL B22 CARBON STEEL CHANNEL TO SUPPORT PLATE, AND PAINT ENTIRE ASSEMBLY TO MATCH TANK PER m0.02.
 - INSTALL SUPPORTS ON TANK PRIOR TO FINISH PAINTING.

4 TANK SUPPORT DETAIL
m1.08 NO SCALE



- NOTES:
- LENGTHEN GALV. STL CHANNEL AS REQ'D TO FIT PIPING AND CONDUIT ON SUPPORT.
 - PROVIDE END CAPS FOR UNI-STRUT.
 - EPOXY ADHESIVE SHALL BE POWERS FASTENERS AC100+ GOLD OR FUEL RESISTANT EQUAL.
 - INCLUDE I-ROD CLIPS FOR ALL PIPE SUPPORTS WHERE PIPE IS IN DIRECT CONTACT WITH STEEL.

5 PIPE SUPPORT TYPE 1
m1.08 NO SCALE

CURRENT: Oct 07, 2026 - 9:26am
DIR: K:\v\Winona_MN\235760004_Production\01_CAD\02_Sheets\m1.08 AVGAS MECHANICAL PLAN AND SECTIONS.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED GAG
DRAWN RJE
CHECKED DAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	
<i>David A. Lund</i>	OCTOBER 7, 2026
DAVID A. LUND	LIC. NO. 58146



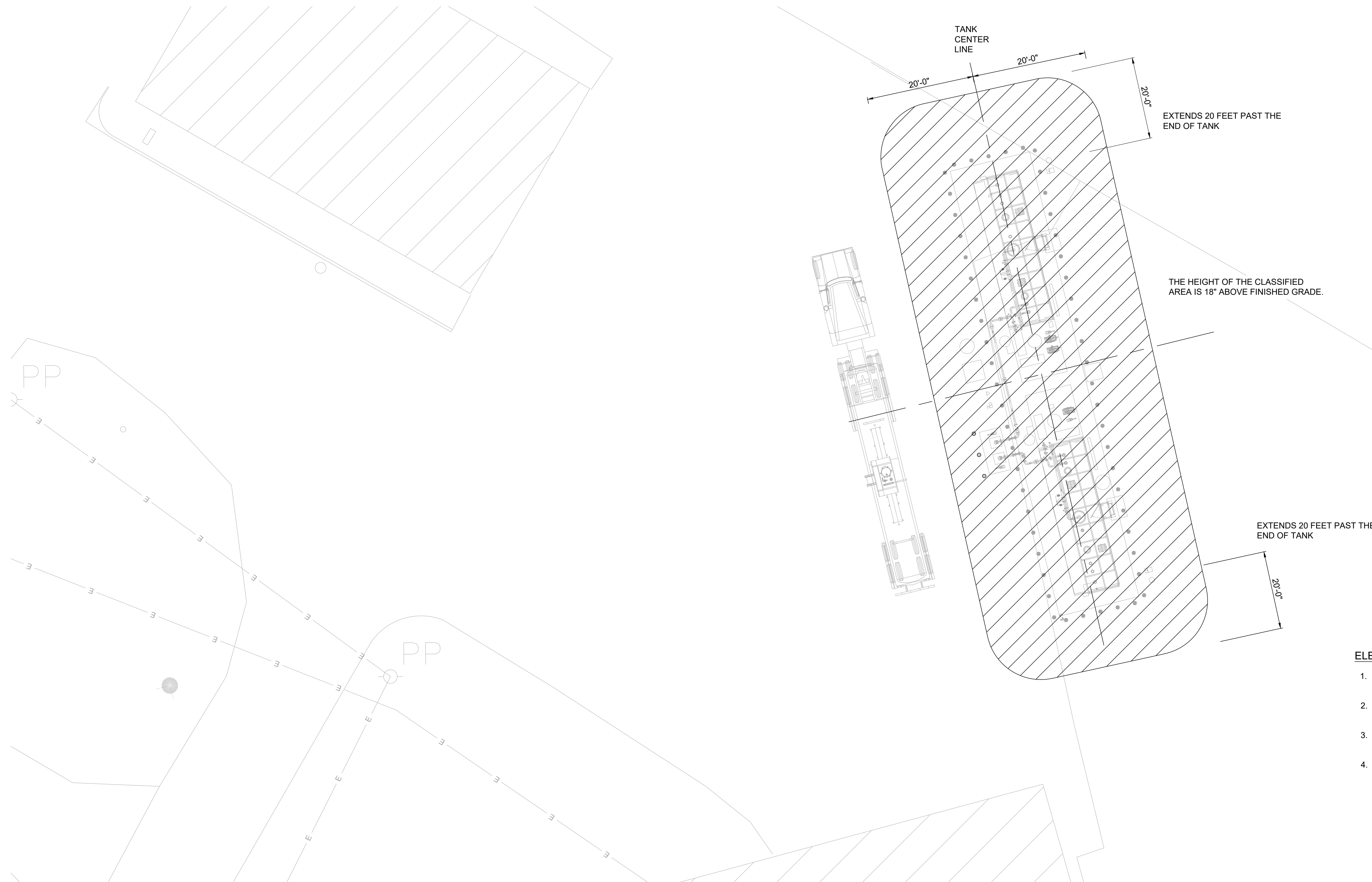
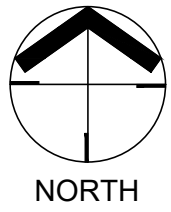
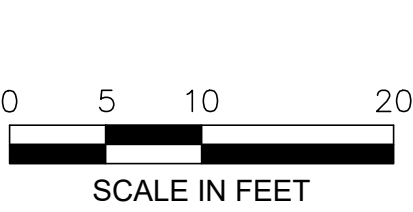
WINONA
MUNICIPAL
AIRPORT

MECHANICAL DETAILS
AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO. 23576	ONA
DRAWING NO. m1.08	

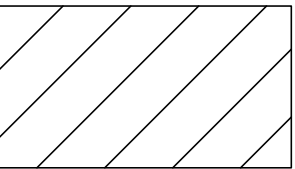
[illegible]

					DESIGNED KSW	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA  OCTOBER 7, 2026 KYLE S. WEST LIC. NO. 60559		 WINONA MINNESOTA W I N O N A M U N I C I P A L A I R P O R T	ELECTRICAL NOTES		PROJ. NO. 23576	ONA
				DRAWN KSW	CHECKED ETV				AIRCRAFT FUELING FACILITY REPLACEMENT		DRAWING NO. e0.01	
NO.	DATE	BY	DESCRIPTION OF REVISIONS									



ELECTRICAL AREA CLASSIFICATION NOTES:

1. AREAS NEAR THE TANKS ARE CLASSIFIED AREA PER THE NFPA 70 (N.E.C.) ARTICLE 514.
2. ALL UNDERGROUND CONDUITS SHALL BE CONSIDERED INSIDE THE CLASSIFIED AREA.
3. ALL AREAS WITHIN THE CLASSIFIED AREA MUST FOLLOW EXPLOSION PROOF WIRING METHODS.
4. PROVIDE CONDUIT SEALS AT ACCESSIBLE FITTINGS OUTSIDE THE BOUNDARY.



CLASS 1, DIVISION 2, GAS GROUPS C, D

CURRENT: Oct 07, 2026 - 8:45am
DIR: K:\v\Winona_MN\23576\0004_Production\01_CAD\02_Sheets\00200004_ELECTRICAL AREA CLASSIFICATION.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED KSW
DRAWN KSW
CHECKED ETV

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA		
	OCTOBER 7, 2026	
KYLE S. WEST	LIC. NO. 60559	



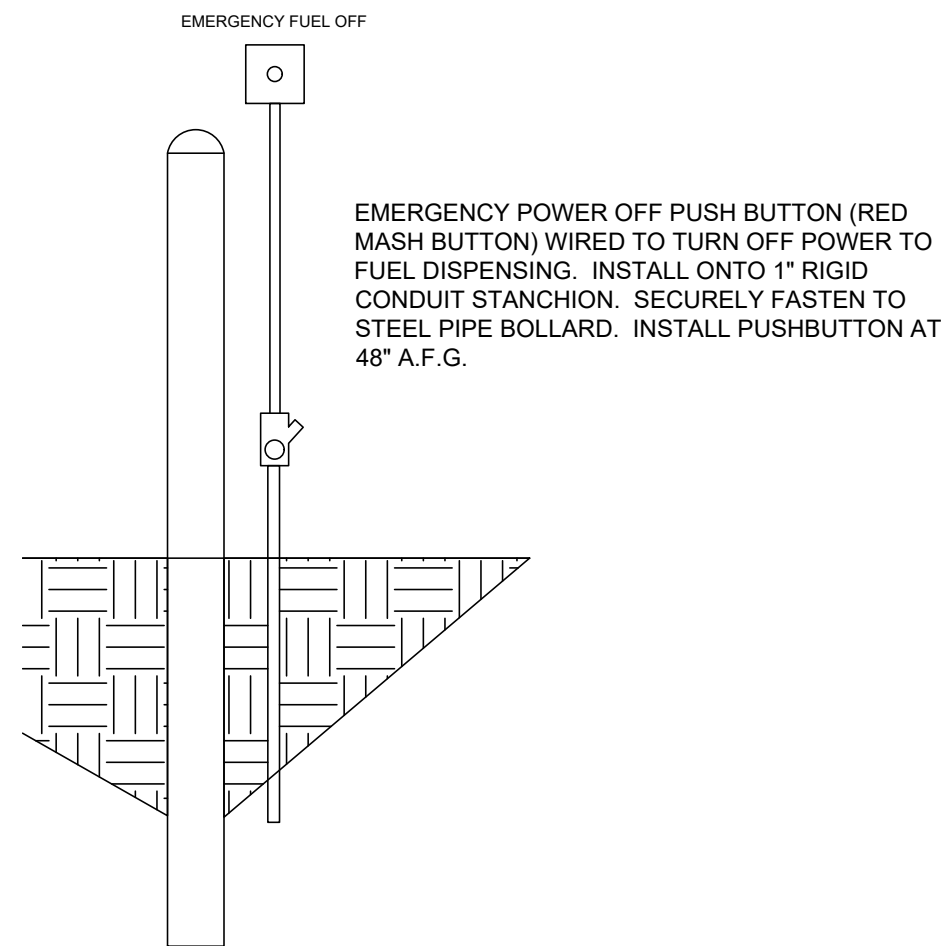
WINONA
MUNICIPAL
AIRPORT

ELECTRICAL AREA CLASSIFICATION
AIRCRAFT FUELING FACILITY REPLACEMENT

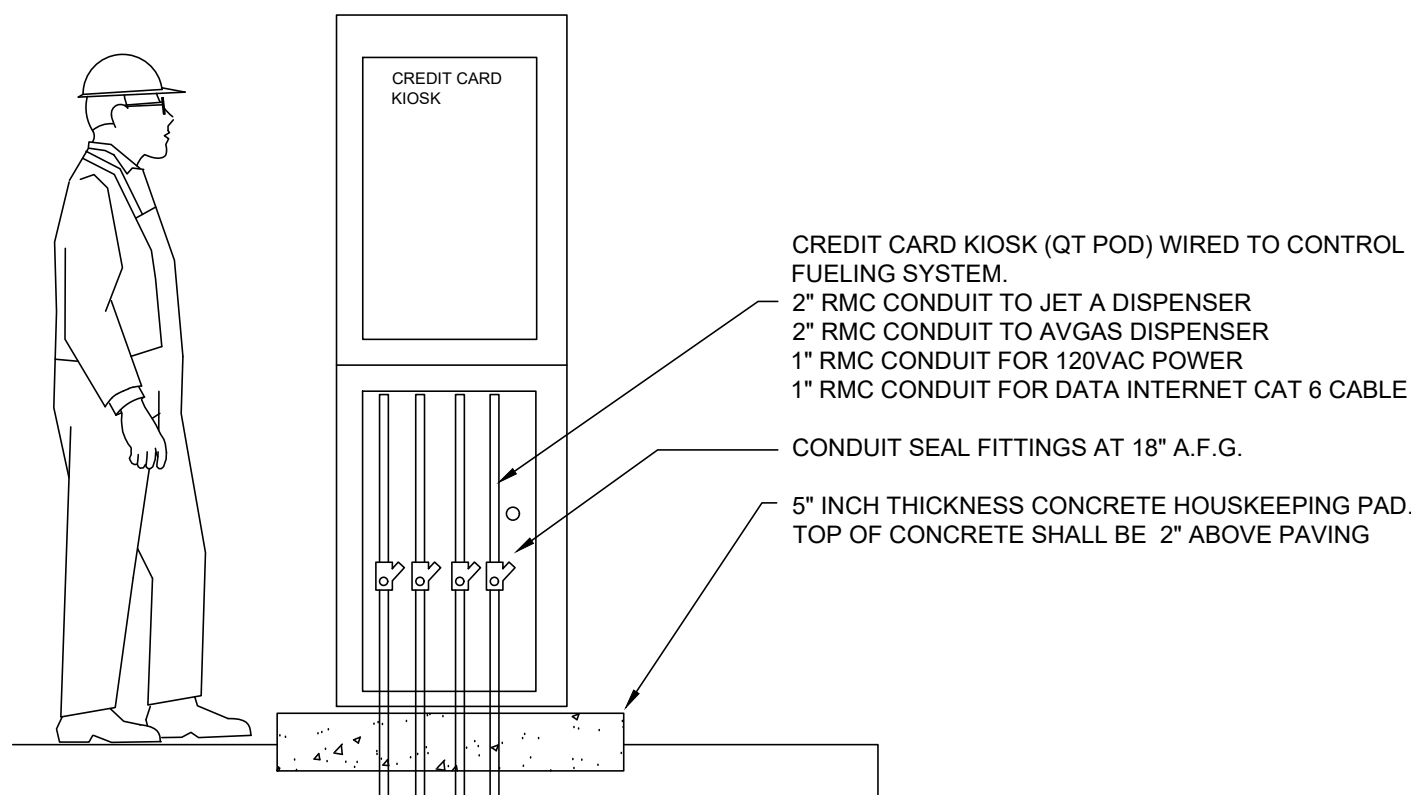
PROJ. NO. 23576	ONA
DRAWING NO. e0.02	

LUMINAIRE SCHEDULE								
TYPE	DESCRIPTION	MOUNTING	LENS/REFLECTOR	LAMP	VOLTAGE	WATTS	MANUFACTURER & CATALOG NUMBER	NOTES
AA1	LED AREA LIGHT - 2 HEADS, DARK BRONZE PAINTED, DIE CAST ALUMINUM HOUSING, INTEGRAL 30% BI-LEVEL MOTION SENSOR AND PHOTOCELL FOR STANDALONE CONTROL .	FLAT POLE MOUNT	TYPE 4 FORWARD THROW MEDIUM DISTRIBUTION	LED 28,000 LUMENS 4000K, 70 CRI	MVOLT	216W	LITHONIA DSX1 SERIES	1
AA1 POLE	5 INCH, SQUARE STRAIGHT STEEL, 25 FEET TALL, 11 ga THICKNESS, PAINTED STEEL DARK BRONZE COLOR, SECURITY CAMERA HUB AT 15 FEET ABOVE BASE.	CONCRETE FOUNDATION					LITHONIA SSS-25-5C SERIES	
Notes								
1. PRODUCTS MUST MEET BUY AMERICAN/BABA REQUIREMENTS OR APPROVED EQUAL.								

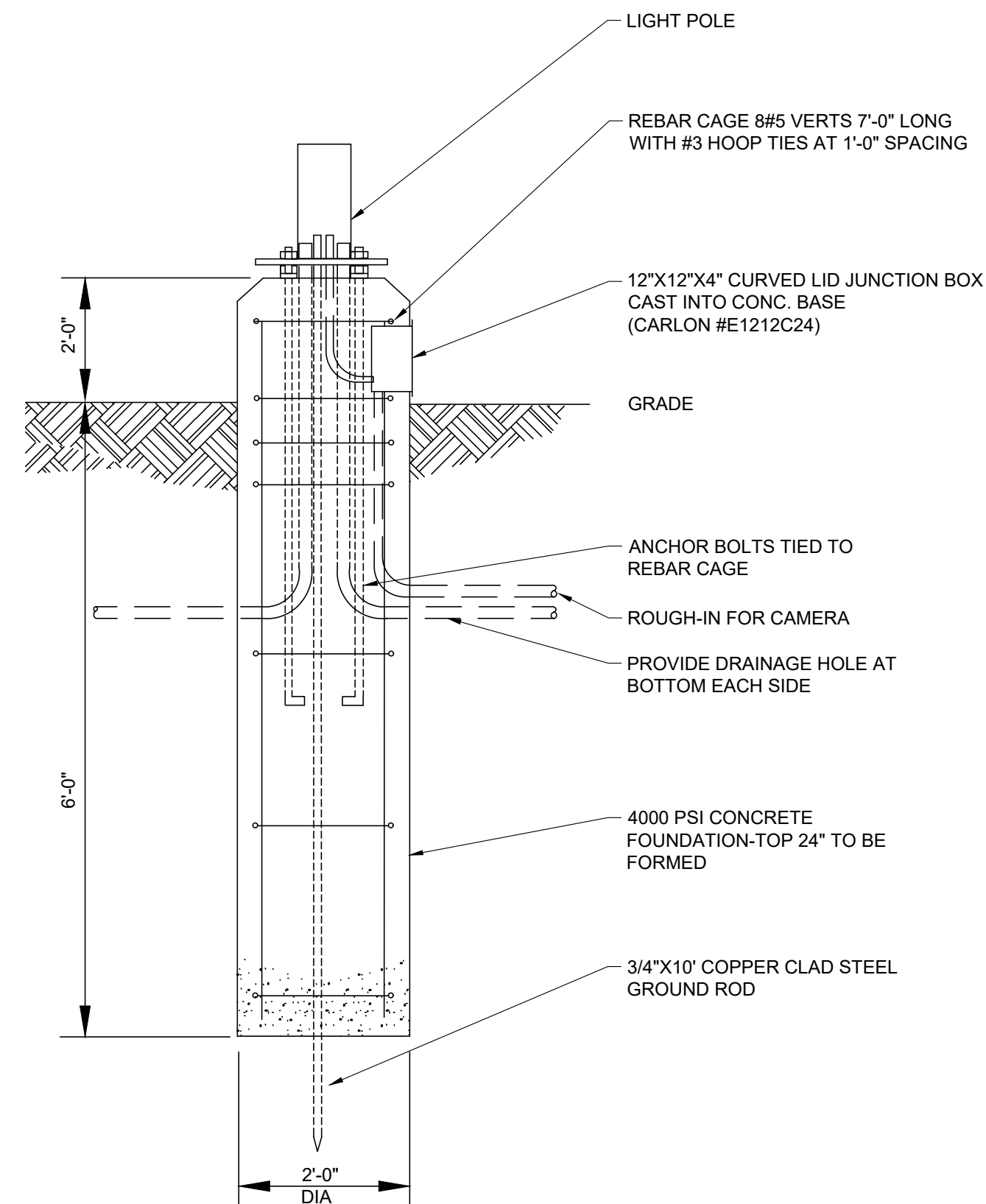
PANELBOARD SCHEDULE									
PANEL NAME LP-1									
☒ SURFACE ☐ FLUSH		HIGH LEG - PHASE B (208V TO GROUND)			☐ MAIN LUGS ☒ MAIN BREAKER		AMPS: 100		
☒ WALL MOUNT ☐ FLOOR MOUNT					BUS 100		VOLTAGE 240Y/120V	PHASE 3	WIRE 4
☐ FEED-THRU LUGS ☒ SPD									
CKT NO.	CIRCUIT DESIGNATION	AMPS	POLES	LOAD-KVA		POLES	AMPS	CIRCUIT DESIGNATION	
1	QT POD PAYMENT KIOSK	20	1	0.5	A 7.5	3	80	FUEL PUMP SKID JET A	2
3	SPARE	20	1		B 7.5				4
5	CONTROL PANEL JET A	20	1	0.2	C 7.5				6
7	CONTROL PANEL AVGAS	20	1	0.2	A			SHUNT TRIP	8
9	SPARE	20	1		B 1.4	3	20	FUEL PUMP SKID AVGAS	10
11	FUEL TANK AREA LIGHTS	20	1	0.5	C 1.4				12
13	FUEL GAUGING PANEL	20	1	0.2	A 1.4				14
15	SPARE	20	1		B			SHUNT TRIP	16
17	SPARE	20	1		C 1.1	3	15	HANGER DOOR	18
19	SPARE	20	1		A 1.1				20
21	SPARE	20	1		B 1.1				22
23	SPARE	20	1		C	1	20	SPARE	24
25	SPARE	20	1		A	1	20	SPARE	26
27	SPARE	20	1		B	1	20	SPARE	28
29	SPARE	20	1		C	1	20	SPARE	30
SUBTOTAL KVA SUBTOTAL AMPS A 10.90 A 90.83 B 10.00 B 83.33 C 10.70 C 89.17 NEMA 1									
THE ENTIRE SYSTEM SHALL BE ☒ FULLY ☐ SERIES RATED									
AVAILABLE SHORT CIRCUIT CURRENT = 10 KAIC.									
KVA TOTAL AMPS TOTAL = 31.6 76.0 KVA A									



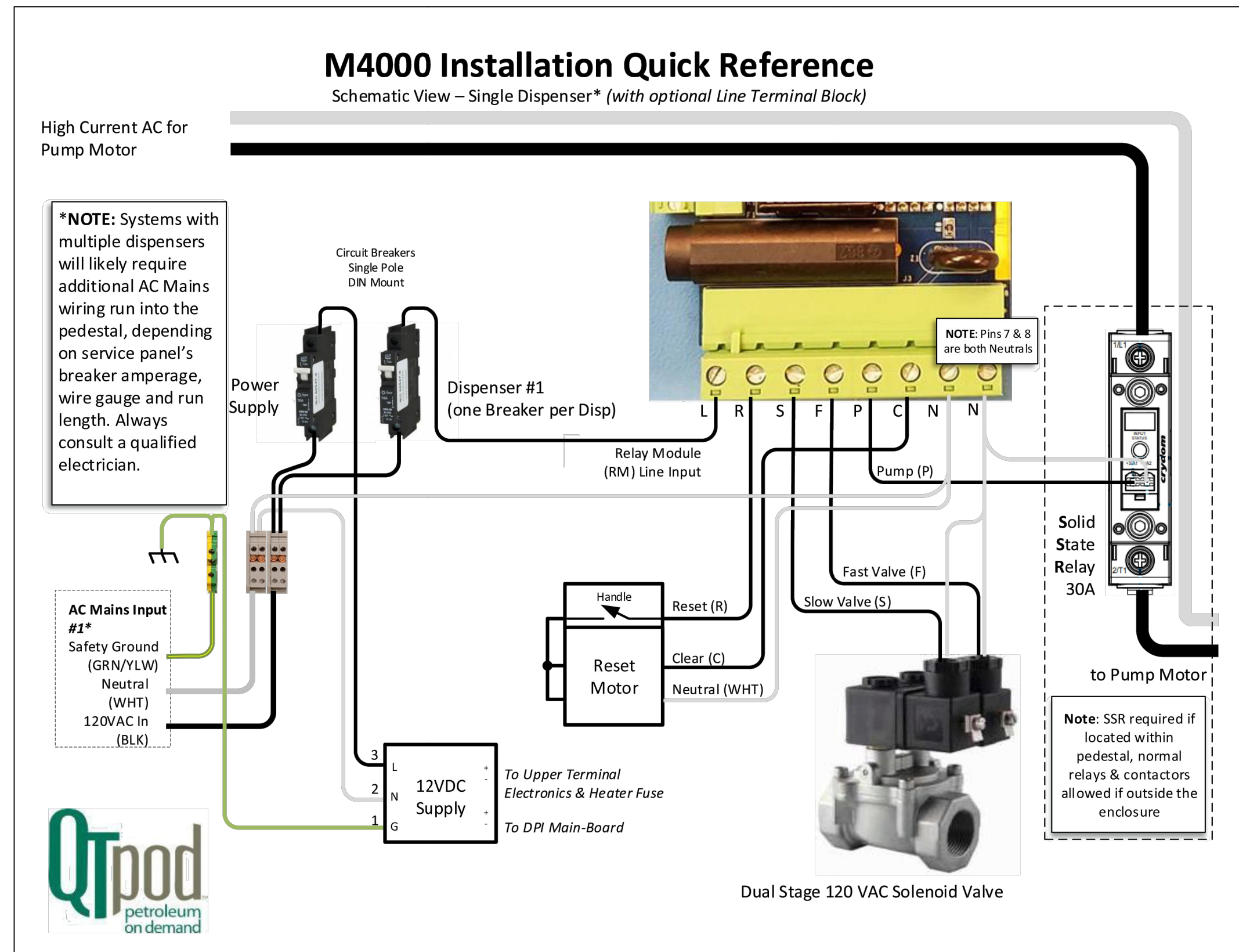
1 ESTOP DETAIL
e0.04 SCALE: 3/4"=1'-0"



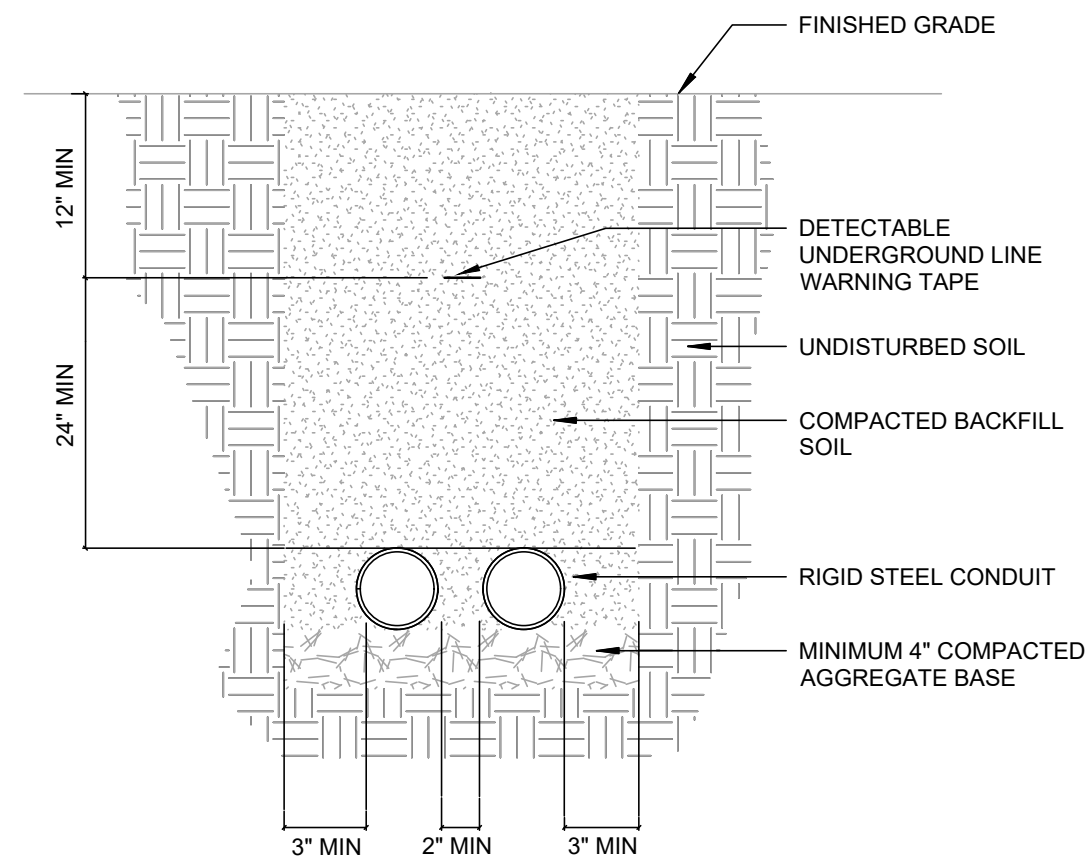
2 PAYMENT KIOSK
e0.04 SCALE: 3/4"=1'-0"



3 LIGHT POLE FOUNDATION
e0.04 SCALE: NONE



4 WIRING DETAIL FOR PAYMENT KIOSK (FOR REFERENCE ONLY)
e0.04 NO SCALE



NOTES:
1. NOT ALL CONDUITS ARE SHOWN IN THIS DETAIL. REFER TO FLOOR PLANS FOR CONDUIT SIZES AND QUANTITIES.

5 UNDERGROUND CONDUIT DETAIL
e0.04 SCALE: NONE

CURRENT: Oct 07 2026 8:45am
DIR: K:\v\Winona_MN\23576000\04_ELECTRICAL DETAILS.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED KSW
DRAWN KSW
CHECKED ETV

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME
OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY
LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF
THE STATE OF MINNESOTA

KYLE S. WEST
OCTOBER 7, 2026
LIC. NO. 60559



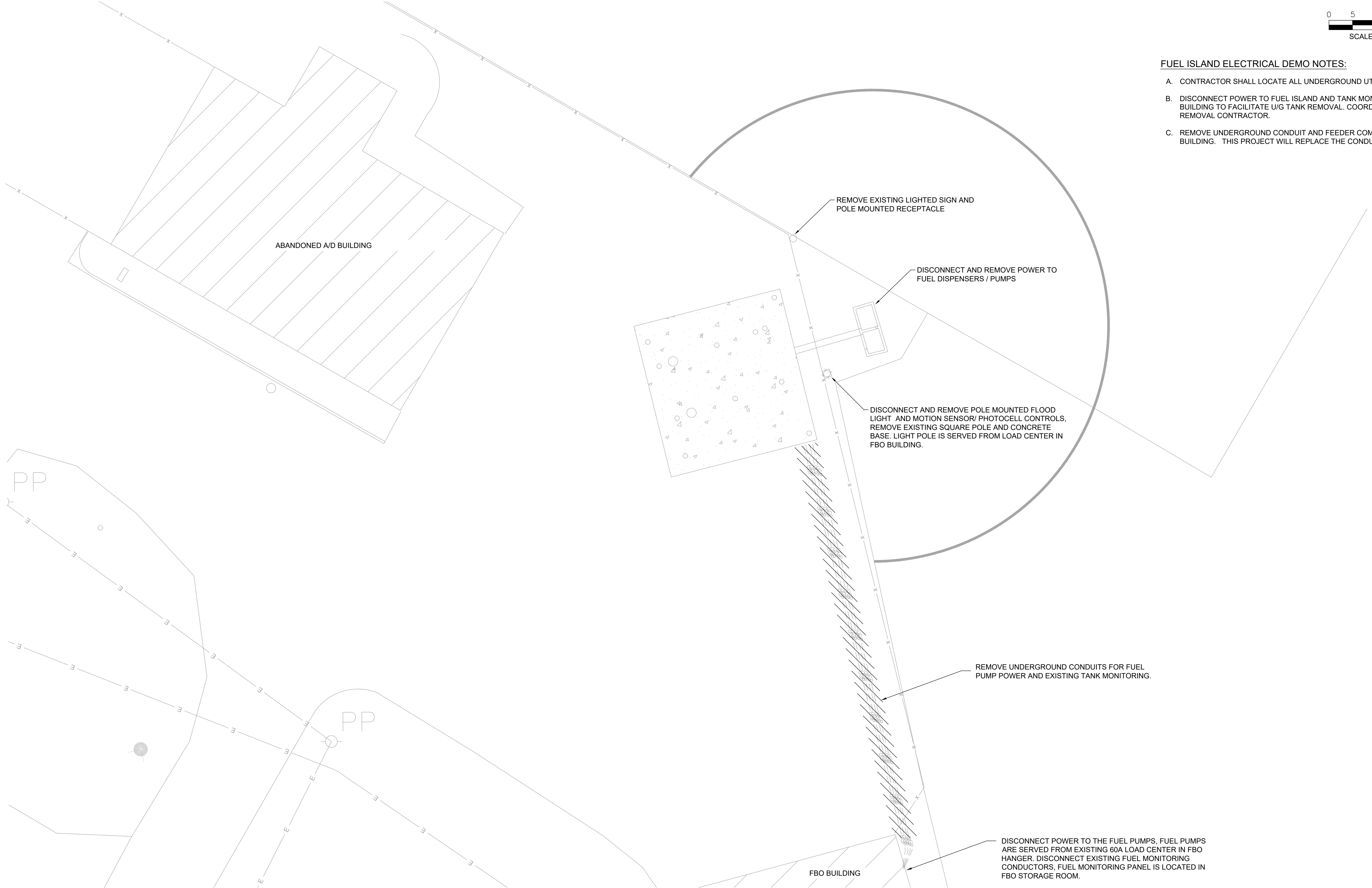
WINONA
MUNICIPAL
AIRPORT

ELECTRICAL DETAILS
AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO. 23576	ONA
DRAWING NO. e0.04	



- FUEL ISLAND ELECTRICAL DEMO NOTES:**
- A. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO THE WORK.
 - B. DISCONNECT POWER TO FUEL ISLAND AND TANK MONITORING AT THE FBO BUILDING TO FACILITATE U/G TANK REMOVAL. COORDINATE ALL WORK WITH TANK REMOVAL CONTRACTOR.
 - C. REMOVE UNDERGROUND CONDUIT AND FEEDER COMPLETE BACK TO THE FBO BUILDING. THIS PROJECT WILL REPLACE THE CONDUITS.



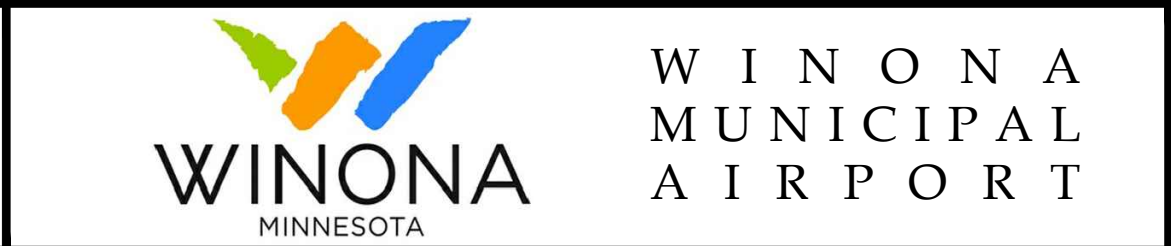
CURRENT: Oct 07, 2026 - 8:45am
DIR: K:\v\Winona_MN\23576\0004_Production\01_CAD\02_Sheet\01.01 ELECTRICAL REMOVAL PLAN.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED KSW
DRAWN KSW
CHECKED ETV

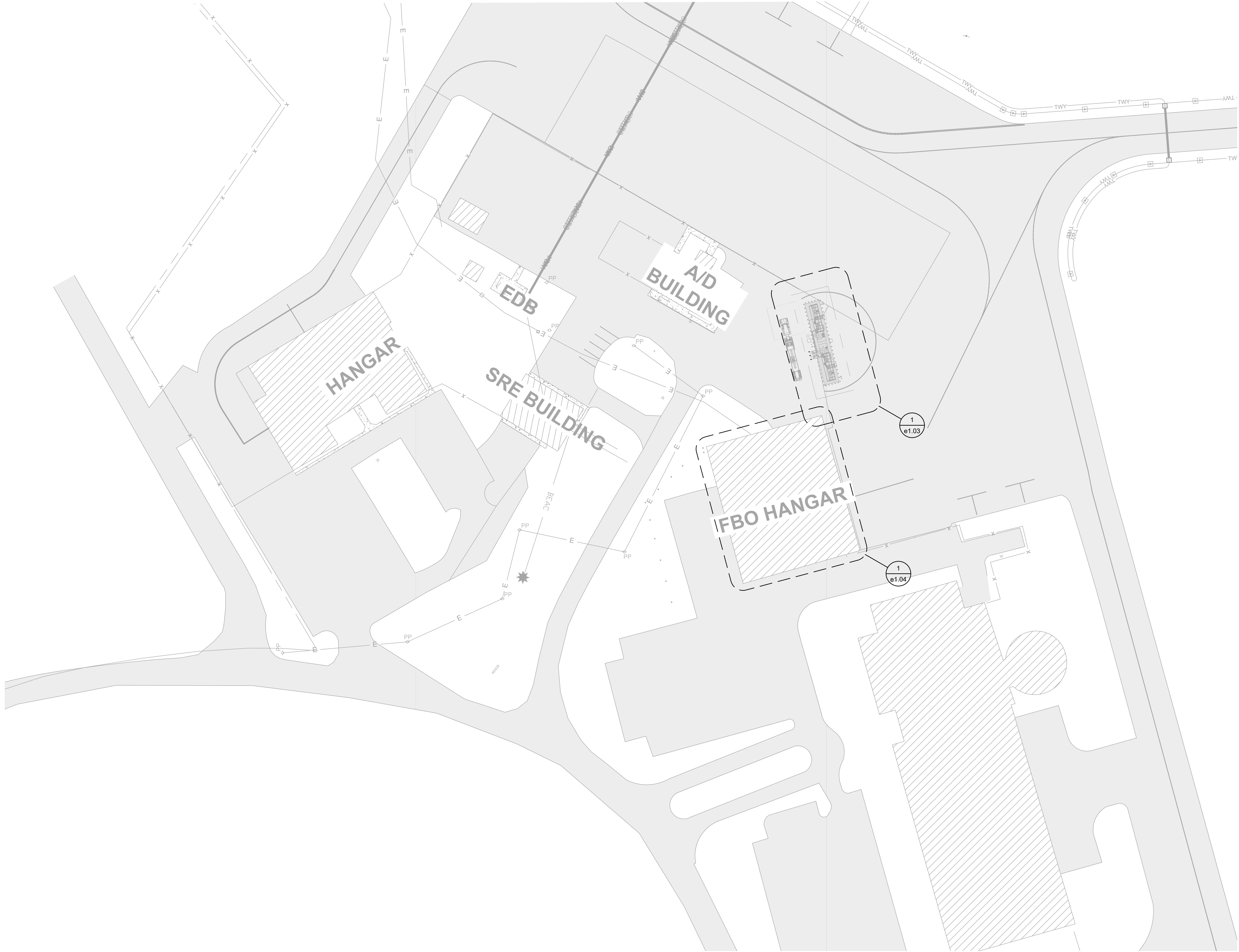
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

Kyle S. West
KYLE S. WEST
OCTOBER 7, 2026
LIC. NO. 60559



ELECTRICAL REMOVAL PLAN
AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO. 23576	ONA
DRAWING NO. e1.01	



CURRENT: Oct 07, 2026: 8:45am
DIR: K:\v\Winona_MN\2357600\04_Production\01_CAD\02_Sheet\01_02 ELECTRICAL PLAN.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED KSW
DRAWN KSW
CHECKED ETV

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME
OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY
LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF
THE STATE OF MINNESOTA

Kyle West OCTOBER 7, 2026
KYLE S. WEST LIC. NO. 60559



WINONA
MUNICIPAL
AIRPORT

ELECTRICAL PLAN
AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO. 23576	ONA
DRAWING NO. e1.02	

FUELING SYSTEM KEYNOTES:

- 9 PROVIDE (2) COPPER CAT 6, OSP, UTP DATA HORIZONTAL CABLES TO QT POD CREDIT CARD KIOSK FED FROM EXTERIOR ISP DEMARC CABINET FOR INTERNET CONNECTIVITY TO QT POD.
- 10 PROVIDE INTERCONNECT AND CONTROL WIRING FROM QT POD CREDIT CARD KIOSK TO THE FUELING PUMP SKIDS. SEE DETAIL SHEET e0.04 AND VENDOR WIRING DIAGRAMS.
- 11 PROVIDE TANK GAUGING SYSTEM WIRING FROM EACH TANK TO THE TANK GAUGING PANEL LOCATED INSIDE FBO BUILDING.

INFORMATIONAL NOTES REGARDING SIGNAL WIRING:

1. CONNECT RS-232 CABLE BETWEEN TANK GAUGING PANEL AND QT POD PAYMENT KIOSK.
2. CONNECT SIGNAL CABLE FROM TANK GAUGING PANEL TO ALARM / HORN AT TANKS.
3. CONNECT 120VAC POWER TO ALARM / HORN TANKS.

LIGHTING KEYNOTES:

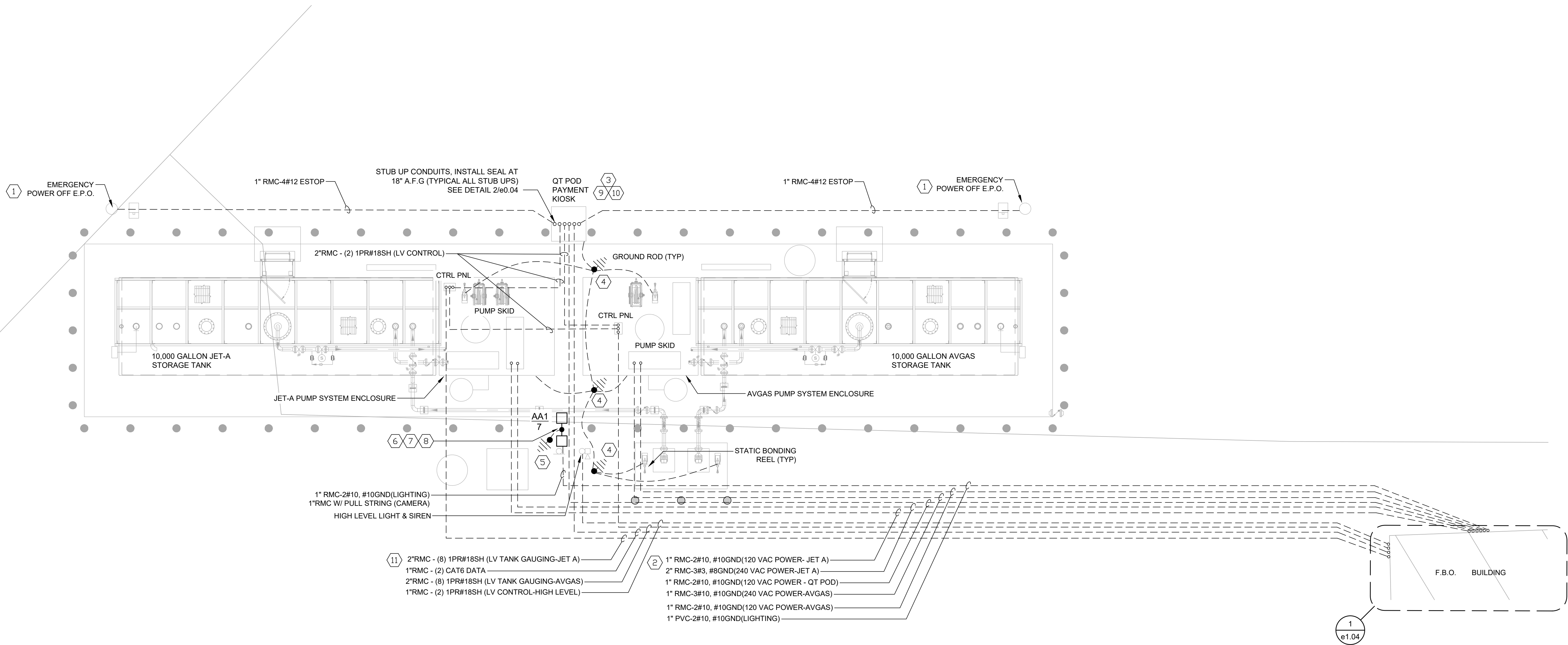
- 6 PROVIDE POLE MOUNTED AREA LIGHT, PROVIDE NEW BRANCH CIRCUIT FROM FBO PANELBOARD.
- 7 PROVIDE CONCRETE LIGHT POLE BASE, SEE DETAIL ON 3/e0.04.
- 8 PROVIDE INTEGRAL 30% BI-LEVEL MOTION SENSOR AND PHOTOCELL FOR STANDALONE CONTROL OF AREA LIGHTS.

POWER KEYNOTES:

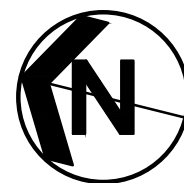
- 1 PROVIDE EMERGENCY STOP PUSHBUTTON RATED FOR CLASS 1 DIV 2. WIRED TO SHUT DOWN ALL POWER TO ALL PUMPS. SEE DETAIL ON 1/e0.04.
- 2 PROVIDE UNDERGROUND FEEDS TO FUEL PUMP SKIDS FED FROM PANELBOARD IN F.B.O. BUILDING.
- 3 PROVIDE 120VAC UNDERGROUND POWER FEED TO CREDIT CARD KIOSK.
- 4 PROVIDE QTY (3) GROUND RODS. PROVIDE #4/0 BARE COPPER GROUND CONNECTIONS TO GROUND RODS. BOND CONCRETE ENCASED REBAR TO GROUND RODS. PROVIDE CONNECTIONS TO SCULLY GROUND HOG SYSTEM FOR EACH FUEL DISPENSING PUMP UNIT AND TO GROUNDING CABLE REELS.
- 5 PROVIDE DEDICATED GROUND ROD AND #10 BARE COPPER CONNECTION TO LIGHT POLE.

GENERAL ELECTRICAL NOTES:

- A. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO THE WORK.
- B. REFER TO ELECTRICAL AREA CLASSIFICATION SHEET FOR EXPLOSION PROOF AREAS. ALL WIRING METHODS IN CLASSIFIED AREAS SHALL USE LISTED CONDUITS AND FITTINGS FOR CLASSIFIED AREAS.
- C. ALL CONDUITS SHALL BE RIGID METAL CONDUITS.
- D. ALL UNDERGROUND WIRING SHALL BE XHHW-2 FOR POWER CIRCUITS.
- E. ALL SIGNAL CABLE TYPES FOR TANK GAUGING PANEL SHALL BE COORDINATED WITH THE FUELING SYSTEM INSTALLER.
- F. ALL NEW HORIZONTAL CABLING SHALL BE OUTSIDE PLANT RATED CAT 6.



1 ENLARGED ELECTRICAL PLAN - FUEL TANKS
e1.03 SCALE: 1" = 5'-0"



CURRENT: Oct 07, 2026 - 8:46am
DIR: K:\v\Winona_MN\235760004_Production\01_CAD\02_Sheet\01_03 ENLARGED ELECTRICAL PLAN.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED KSW
DRAWN KSW
CHECKED ETV

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

Kyle S. West OCTOBER 7, 2026
KYLE S. WEST LIC. NO. 60559



WINONA
MUNICIPAL
AIRPORT

ENLARGED ELECTRICAL PLAN
AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO. 23576	ONA
DRAWING NO. e1.03	

KEYNOTES:

- 1
- REMOVE EXISTING 60A LOAD CENTER AND PROVIDE NEW 100A, MCB, 120/240V, 3 PHASE, 4 WIRE PANELBOARD. CIRCUIT BREAKERS SERVING FUEL PUMP SKIDS SHALL BE PROVIDED WITH SHUNT TRIP UNITS FOR OPERATION WITH EPO SWITCHES.
- 2
- ROUTE RMC CONDUIT FOR NEW DATA CABLING ON EXTERIOR FACE OF FBO BUILDING, KEEP CONDUIT TIGHT TO ROOF EAVES ABOVE.
- 3
- COORDINATE ADDITION OF NEW DATA CABLING WITH INTERNET SERVICE PROVIDER - HBC.
- 4
- EXISTING 120V BRANCH CIRCUIT AND DATA CABLING SERVING FUEL TANK GAUGING SYSTEM PANEL SHALL REMAIN.
- 5
- PROVIDE LV CABLING FROM TANK GAUGING PANEL OUT TO FUEL TANKS TO MONITOR THE FOLLOWING:

5.1. TANK HIGH LEVEL ALARM

5.2. TANK LOW LEVEL ALARM

5.3. TANK ANALOG LEVEL TRANSMITTER

5.4. TANK LEAK DETECTOR INTERSTITIAL SPACE.
- 6
- REMOVE EXISTING 60A 3 POLE CIRCUIT BREAKER IN MAIN PANELBOARD SERVING EXISTING FUEL SYSTEM LOAD CENTER AND REPLACE WITH NEW 100A, 3 POLE MOLDED CASE CIRCUIT BREAKER.
- 7
- PROVIDE PERMANENT ENGRAVED PHENOLIC NAMEPLATE ON PANEL FACE STATING: "CAUTION PHASE B HAS 208 VOLTS TO GROUND".

GENERAL ELECTRICAL NOTES:

- A. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO THE WORK.
- B. REFER TO ELECTRICAL AREA CLASSIFICATION SHEET FOR EXPLOSION PROOF AREAS. ALL WIRING METHODS IN CLASSIFIED AREAS SHALL USE LISTED CONDUITS AND FITTINGS FOR CLASSIFIED AREAS.
- C. ALL CONDUITS SHALL BE RIGID METAL CONDUITS.
- D. ALL UNDERGROUND WIRING SHALL BE XHHW-2 FOR POWER CIRCUITS.
- E. ALL SIGNAL CABLE TYPES FOR TANK GAUGING PANEL SHALL BE COORDINATED WITH THE FUELING SYSTEM INSTALLER.
- F. ALL NEW HORIZONTAL CABLING SHALL BE OUTSIDE PLANT RATED CAT 6.
- G. EQUIPMENT LOCATIONS SHOWN IN FBO BUILDING ARE APPROXIMATE, VERIFY ACTUAL LOCATIONS OF EQUIPMENT.
- H. COORDINATE PLANNED OUTAGES WITH AIRPORT OPERATIONS WHEN REPLACING FUEL SYSTEM LOAD CENTER.
- I. THE FBO BUILDING IS POWERED BY A 200A, 120/240V, 3 PHASE, 4 WIRE, DELTA CONNECTED MAIN PANELBOARD. THE DISTRIBUTION SYSTEM CONTAINS A HIGH LEG ON PHASE B WITH 208V TO GROUND. THE MAIN PANELBOARD POWERS THE EXISTING FUEL SYSTEM LOAD CENTER FROM A 60 3 POLE CIRCUIT BREAKER AND 60A FEEDER.
- J. PERMANENTLY MARK ALL PHASE B CONDUCTORS PER NEC TO INDICATE HIGH LEG.



2

EXISTING LOAD CENTER

e1.04

NO SCALE



3

FUEL TANK GAUGING PANEL

e1.04

NO SCALE

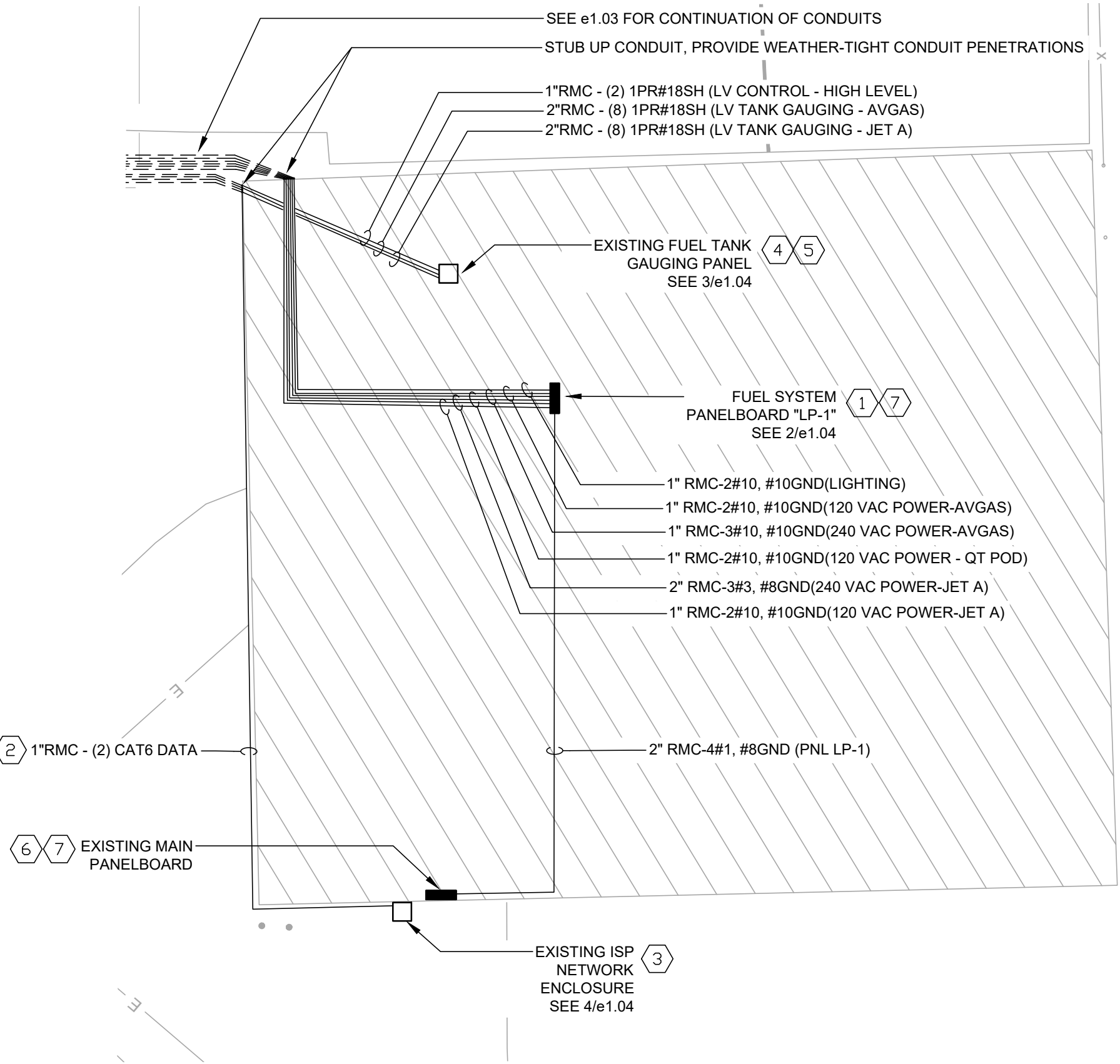


4

ISP NETWORK ENCLOSURE

e1.04

NO SCALE

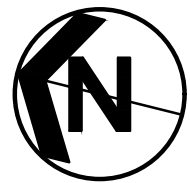


1

ENLARGED ELECTRICAL PLAN - FBO BUILDING

e1.04

SCALE: 1"=20'



NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED	KSW
DRAWN	KSW
CHECKED	ETV

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA	
	OCTOBER 7, 2026
KYLE S. WEST	LIC. NO. 60559



WINONA
MUNICIPAL
AIRPORT

ENLARGED ELECTRICAL PLAN
AIRCRAFT FUELING FACILITY REPLACEMENT

PROJ. NO.	23576	ONA
DRAWING NO.	e1.04	