



Office of General Services

DESIGN & CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242

ADDENDUM NO. 1 TO PROJECT NO. 47676

CONSTRUCTION WORK
FUEL TANK MODIFICATION & ENVIRONMENTAL REMEDIATION
– WESTERN REGION
SERVICE CONTRACT
GNARESP CORNING TOWER
ALBANY, NY 12242

May 21, 2025

NOTE: This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.
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DRAWINGS

1. Revised Drawings:
 - a. The drawing set that accompanies this Addendum, noted “ADDENDUM 01 C 5/21/25”, will replace the original contract drawing set in its entirety.

END OF ADDENDUM

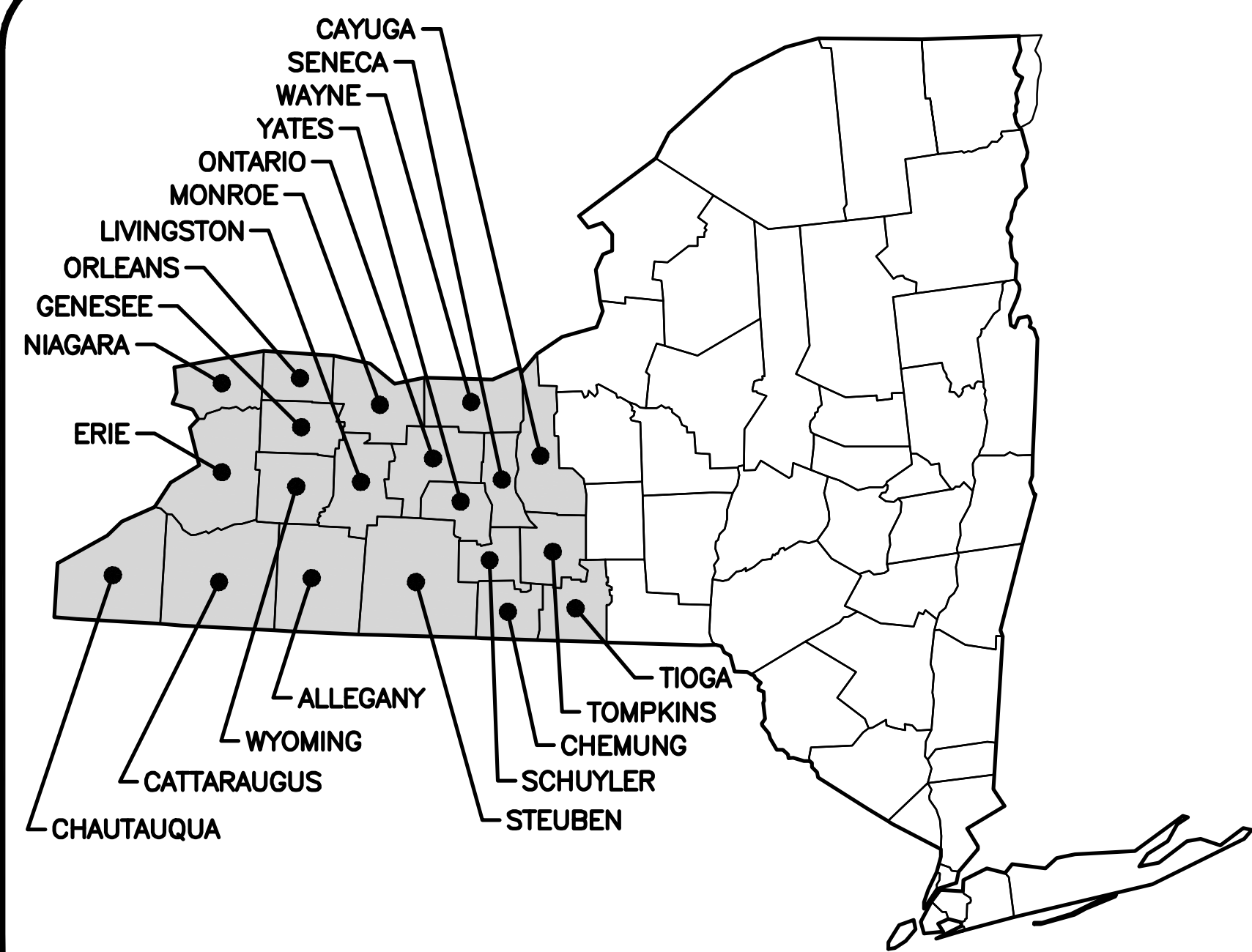
Brady M. Sherlock, P.E.
Director, Division of Design
Design & Construction

FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION

WESTERN REGION VARIOUS FACILITIES

O.G.S. PROJECT NO. 47676-C

FINAL SUBMISSION
1/31/2025



KEY PLAN

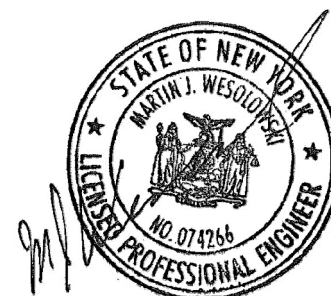
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Office of
General Services

DESIGN & CONSTRUCTION



CODE ITEM	CODE SECTION	REQUIRED/ALLOWED	ACTUAL	COMMENTS
<u>CHAPTER 3 – USE AND OCCUPANCY CLASSIFICATION</u>	SECTION 307			
OCCUPANCY H				
<u>CHAPTER 5 – GENERAL BUILDING HEIGHTS AND AREAS</u>				
ALLOWABLE BUILDING HEIGHT (FEET)	TABLE 504.3	65'		
ALLOWABLE NUMBER OF STORIES	TABLE 504.4	2		
ALLOWABLE AREA	TABLE 506.2	9,500 SF		
<u>CHAPTER 10 – MEANS OF EGRESS</u>				
MEANS OF EGRESS ILLUMINATION	SECTION 1008	REQUIRED WITH EMERGENCY POWER		
ACCEPTABLE MEANS OF EGRESS	SECTION 1009	REQUIRED		
COMMON PATH OF EGRESS TRAVEL	SECTION 1029.8	75' MAXIMUM TRAVEL DISTANCE		
<u>CHAPTER 11 – ACCESSIBILITY</u>				
ACCESSIBLE ROUTE	SECTION 1104	REQUIRED		
ACCESSIBLE ENTRANCES	SECTION 1105	REQUIRED		
<u>CHAPTER 12 – VENTILATION</u>	SECTION 1202	MECHANICAL OR NATURAL		
LIGHT: NATURAL/ARTIFICIAL	SECTION 1204.2/1204.3	ARTIFICIAL AND NATURAL		
<u>CHAPTER 27 – ELECTRICAL</u>				
MEANS OF EGRESS ILLUMINATION	SECTION 2702.2.13	REQUIRED		

2020 UNIFORM CODE

101.2 Scope. The provisions of the Uniform Code shall apply to all new and existing buildings, structures, systems and equipment as indicated in Sections 101.2.1 through 101.2.8.

302.2 Additional codes. Alterations, repairs, additions and changes of occupancy to, or relocation of, existing buildings and structures shall comply with the provisions for alterations, repairs, additions and changes of occupancy or relocation, respectively, in this code and the International Energy Conservation Code, International Fire Code, International Fuel Gas Code, International Mechanical Code, International Plumbing Code, International Property Maintenance Code, International Private Sewage Disposal Code, International Residential Code and NFPA 70. Where provisions of the other codes conflict with provisions of this code, the provisions of this code shall take precedence.

101.2.2 The Building Code. The provisions of the 2020 Building Code of New York State shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

REQUIRED CODES

1. Under the Uniform Code, all building projects must meet or exceed the following codes and applicable reference standards contained therein.

- a. 2020 Uniform Code, consisting of:
 - 2020 Building Code of New York State
 - 2020 Residential Code of New York State
 - 2020 Existing Building Code of New York State
 - 2020 Fire Code of New York State
 - 2020 Plumbing Code of New York State
 - 2020 Mechanical Code of New York State
 - 2020 Fuel Gas Code of New York State
 - 2020 Property Maintenance Code of New York State
 - 2017 National Electric Code NEPA 70, as referenced in the codes above.
- b. 2020 Energy Code, consisting of:
 - 2020 Energy Conservation Construction Code of New York State
 - 2019 ASHRAE 90.1
- c. 6NYCRR Part 613 Petroleum Bulk Storage
- d. NFPA 30 Flammable and Combustible Liquids Code
- e. NFPA 30A Code for Motor Fuel Dispensing Facilities and Repair Garages
- f. NFPA 110 Standard for Emergency and Standby Power Systems

THE PUBLICATIONS LISTED ABOVE ARE BASED ON THE FOLLOWING DOCUMENTS PUBLISHED BY THE INTERNATIONAL CODE COUNCIL AND ASHRAE INTERNATIONAL:

2018 International Residential Code (first printing w/ errata)
 2018 International Building Code (first printing w/ errata)
 2018 International Plumbing Code (first printing w/ errata)
 2018 International Mechanical Code (first printing w/ errata)
 2018 International Fuel Gas Code (first printing w/ errata)
 2018 International Fire Code (first printing w/ errata)
 2018 International Property Maintenance Code (first printing w/ errata)
 2018 International Existing Building Code (first printing w/ errata)
 2018 International Energy Conservation Code (first printing w/ errata)
 2016 Edition of the Energy Standard for Buildings Except Low-Rise Residential Buildings (""ASH RAE 90.1-2016"")

CONSTRUCTION SAFEGUARDS

1. SCOPE: THE SAFETY OF THE CONSTRUCTION AREA, AND ADJACENT PUBLIC AND PRIVATE PROPERTIES SAFETY, SHALL BE PROTECTED DURING CONSTRUCTION AND DEMOLITION IN ACCORDANCE WITH THE 2020 EXISTING BUILDING CODE OF NEW YORK STATE (EBCNYS) CHAPTER 15 AND THE 2020 FIRE CODE OF NEW YORK STATE (FCNYS) CHAPTER 33. COMPLIANCE WITH NFPA 241 IS REQUIRED FOR ITEMS NOT SPECIFICALLY ADDRESSED. THIS SPECIFICATION PROSCRIBES MINIMUM SAFEGUARDS FOR CONSTRUCTION TO PROVIDE REASONABLE SAFETY TO LIFE AND PROPERTY FROM FIRE DURING SUCH OPERATIONS.
2. CONSTRUCTION INCLUDES ANY NEW CONSTRUCTION, REMOVALS, REMODELING, ALTERATIONS, REPAIRS OR ADDITIONS TO ANY BUILDING OR STRUCTURE.
3. MAINTENANCE OF SAFE CONDITIONS: REQUIRED SAFETY ELEMENTS SUCH AS EXITS, EXISTING STRUCTURAL MEMBERS, FIRE PROTECTION DEVICES AND SANITARY SAFEGUARDS SHALL BE MAINTAINED AT ALL TIMES, EXCEPT WHERE THE BUILDING IS NOT OCCUPIED OR WHERE SUCH REQUIRED ELEMENTS ARE BEING ALTERED OR REPAIRED AND ADEQUATE SUBSTITUTE PROVISIONS ARE MADE.
4. MEAN OF EGRESS: AN APPROVED PERMANENT OR TEMPORARY MEANS OF EGRESS SHALL BE MAINTAINED. AN EGRESS COMPONENT SHALL NOT BE DESTROYED UNLESS AND UNTIL A SUBSTITUTE MEANS OF EGRESS HAS BEEN PROVIDED.
5. FIRE SAFETY DURING CONSTRUCTION AND REMOVALS: FIRE SAFETY SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF EBCNYS CHAPTER 15 AND FCNYS CHAPTER 33.

- A. FIRE EXTINGUISHERS: PROVIDE PORTABLE FIRE EXTINGUISHERS FOR PROTECTION DURING CONSTRUCTION AND REMOVALS AT EACH STAIRWAY, ON EACH FLOOR LEVEL, WHERE COMBUSTIBLE MATERIALS HAVE ACCUMULATED, AND IN EVERY STORAGE AND CONSTRUCTION SHED. EXTINGUISHERS SHALL COMPLY WITH FCNYS 906, SIZED FOR ORDINARY HAZARD UNLESS GREATER HAZARD IS SPECIFIED. ADDITIONAL PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED WHERE SPECIAL HAZARDS EXIST, SUCH AS THE STORAGE AND USE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS.
- B. ANY BURNING, CUTTING OR WELDING SHALL REQUIRE A HOT WORK PERMIT AND APPROVAL.

6. MATERIAL HANDLING: EQUIPMENT AND MATERIALS SHALL BE STORED AND PLACED, AND WASTE SHALL BE REMOVED, SO AS NOT TO ENDANGER THE PERSONS OR PROPERTY OR TO IMPEDE A MEANS OF EGRESS. PLACE MATERIAL AND WASTE SO AS NOT TO OBSTRUCT ACCESS TO FIRE HYDRANTS, STANDPIPES, FIRE EXTINGUISHERS, FIRE OR POLICE ALARMS BOXES, CATCH BASINS, MANHOLES, RELEVANT UTILITY STRUCTURES, TRAFFIC OR OBSERVATION OF TRAFFIC SIGNALS. COMBUSTION DEBRIS SHALL NOT BE ACCUMULATED ON SITE, AND SHALL BE REMOVED AT THE END OF EACH WORK SHIFT. RUBBISH CONTAINERS WITH A CAPACITY EXCEEDING 5.33 CUBIC FEET (40 GALLONS OR 0.15 CUBIC METERS) SHALL HAVE TIGHT FITTING OR SELF CLOSING LIDS, AND SHALL BE CONSTRUCTED OF NONCOMBUSTIBLE MATERIAL OR MATERIAL THAT MEETS FCNYS SECTION 3304.2.3 (2).

BUILDING INFORMATION (SPECIFIED ON A SITE BY SITE BASIS):

OCCUPANCY CLASSIFICATION:

CONSTRUCTION CLASSIFICATION:

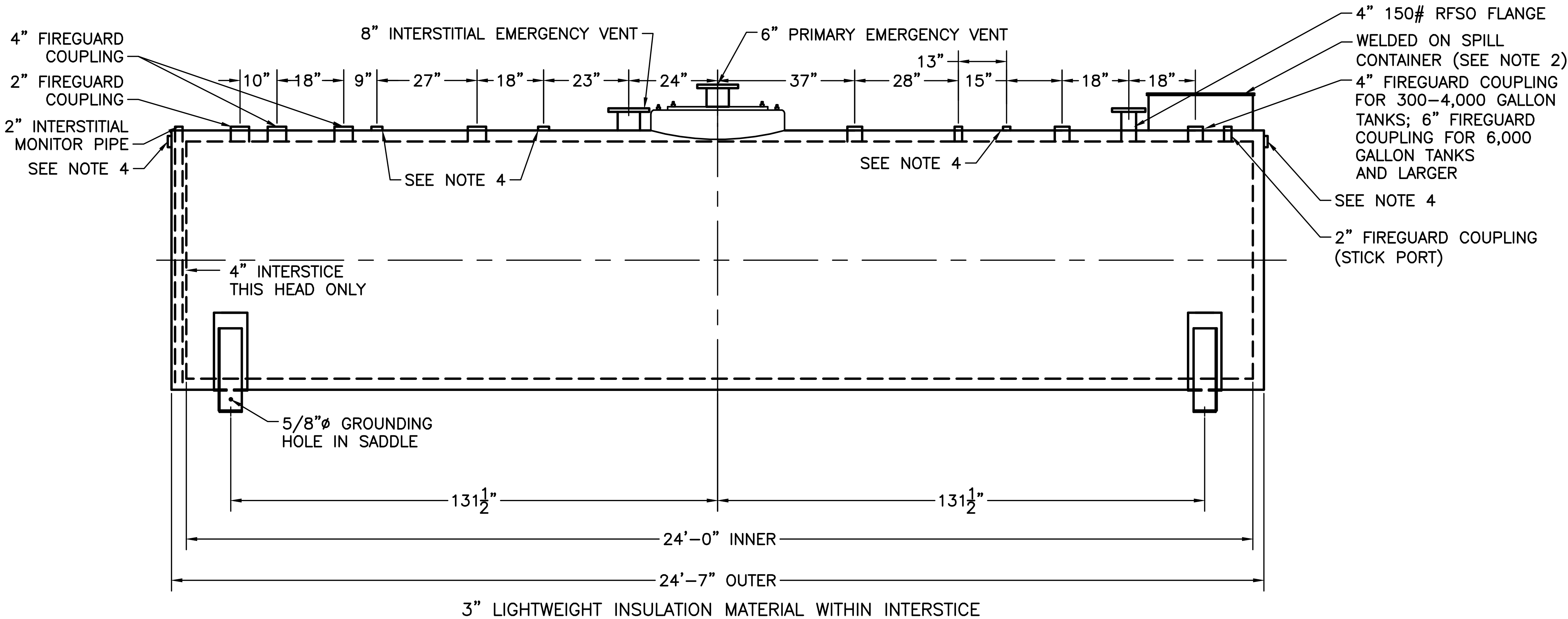
CLASSIFICATION OF WORK (SPECIFIED ON A SITE BY SITE BASIS):

ALTERATION LEVEL

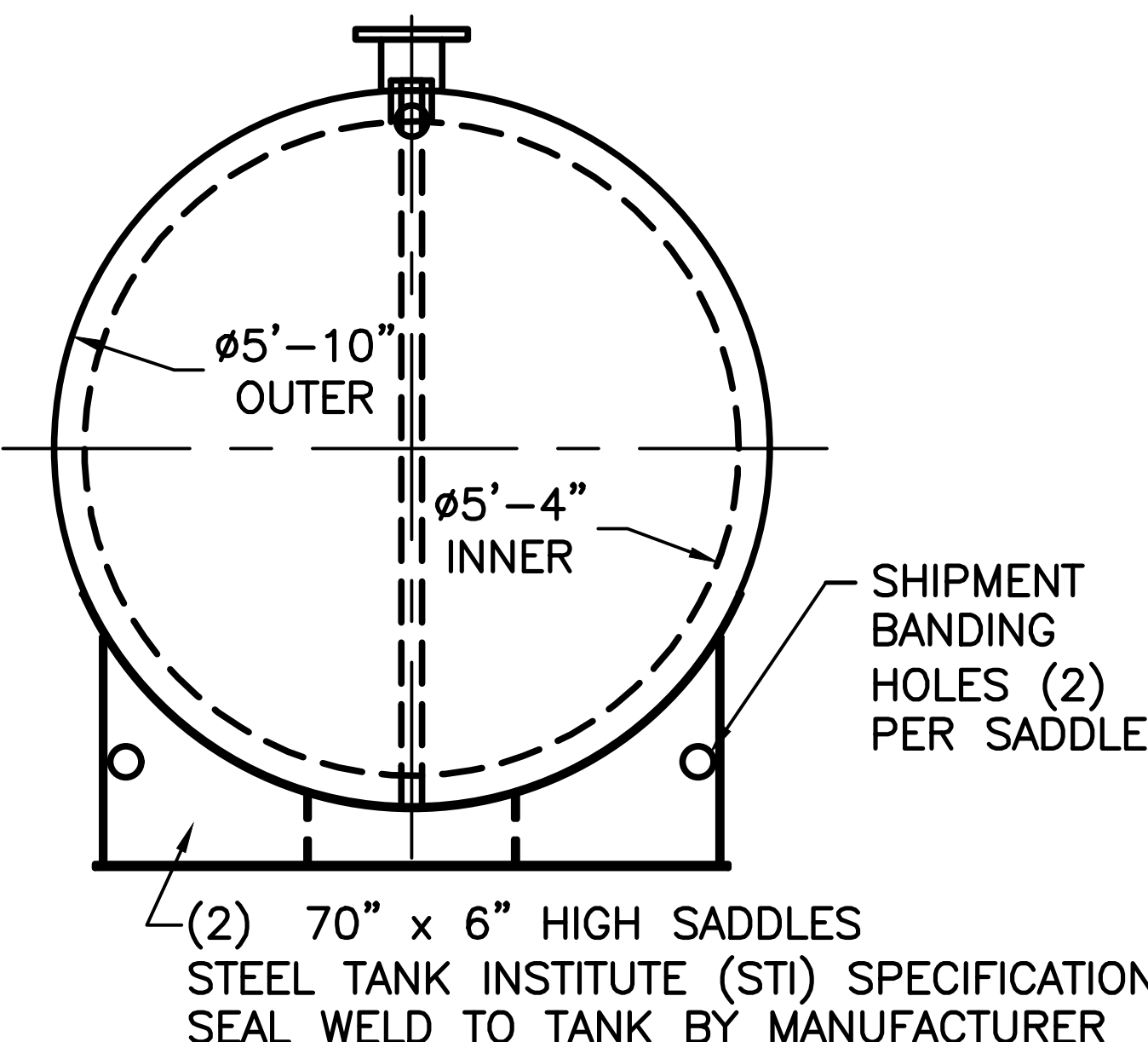
FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) COMPLIANCE

THE DESIGNER OF RECORD SHALL REVIEW FEMA FLOOD HAZARD DATA AND FLOOD INSURANCE RATE MAPS (FIRMS) AND PERFORM A FLOOD RISK ANALYSIS IN, ON A SITE BY SITE BASIS, ACCORDANCE WITH FEMA GUIDELINES AND STANDARDS TO DETERMINE IF THE PROPOSED INSTALLATION IS IN A FLOOD HAZARD AREA. LOCATIONS DETERMINED TO BE IN A AREA OF FLOOD RISK SHALL INCORPORATE FLOOD RESISTANT DESIGN AND CONSTRUCTION REQUIREMENTS IN ACCORDANCE WITH THE NYS BUILDING CODE, NATIONAL FLOOD INSURANCE PROGRAM (NFIP), FEMA, NFPA, AND ASCE REQUIREMENTS.

[illegible]



ELEVATION VIEW
SCALE: NONE



END VIEW
SCALE: NONE

- NOTES:
- 1. TANK SHOWN IS TYPICAL FOR 64" INNER DIAMETER 4,000 GALLON CAPACITY. THIS 4,000 GALLON TANK IS SHOWN REPRESENTATIVE OF THE 300-8,000 GALLON TANKS. TANK INNER DIAMETERS MAY VARY BETWEEN 48 INCHES AND 96 INCHES BASED ON SITE SPECIFIC REQUIREMENTS. CONSULT WITH MANUFACTURER FOR REQUIRED DIMENSIONS, FITTING ARRANGEMENT, SUPPORT SADDLES AND ANCILLARY EQUIPMENT FOR TANK CAPACITIES 300-8,000 GALLONS.
 - 2. PROVIDE WELDED ON SPILL CONTAINER APPROX. 24" DIA. X 13 1/2" HT. X 1/4" THICK (15 GALLON MINIMUM) WITH LOCKABLE LID FOR TANKS 1,000 GALLON AND LARGER. PROVIDE 10 GAL SPILL CONTAINER FOR 300-500 GALLON TANKS.
 - 3. SADDLE LOCATION AS PER TANK MANUFACTURER SPECIFICATIONS.
 - 4. 2" FITTING THROUGH OUTER SHELL ONLY WITH CAST IRON PLUG - FOR MFG USE ONLY.
 - 5. WHEN TANK INSULATION PACKAGE IS REQUIRED, EXTEND LENGTH OF FITTINGS TO ACCOUNT FOR INSULATION THICKNESS.
 - 6. TANKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH UL 2085 SPECIFICATIONS.
 - 7. QUANTITY, SIZE AND LOCATION OF TANK FITTINGS ARE SHOWN FOR GENERAL REFERENCE. REQUIRED FITTINGS WILL BE PROVIDED BASED ON SITE SPECIFIC REQUIREMENTS.



Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905



LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

ENERGY CONSERVATION CONSTRUCTION
CODE OF NEW YORK STATE:

TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S
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PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH
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WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY,
UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE
PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT,
ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT
FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE
NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS
AND IS A CLASS 'A' MISDEMEANOR.

STATE OF NEW YORK
JUDITH L. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
EXPIRATION DATE
12/31/2026

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER: 47676 - C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

FIELD CHECK: M. WESOLOWSKI

APPROVED: M. WESOLOWSKI

SHEET TITLE:
TYPICAL TYPE DWS-1
ABOVEGROUND FUEL STORAGE
TANK - CYLINDRICAL
4,000 GALLON REFERENCE

DRAWING NUMBER:
C-01

SHEET 3 OF 51

NEW YORK
STATE OF
CIVIL SERVICE

Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985

LiRo Engineers, Inc.

3 Aerial Way, Syosset, New York

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STATE OF NEW YORK
JUDITH L. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
12/31/2028

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER:

47676 - C

DESIGNED BY:

M. GUTMANN

DRAWN BY:

A. KELLY

FIELD CHECK:

M. WESOLOWSKI

APPROVED:

M. WESOLOWSKI

SHEET TITLE:

TYPICAL TYPE DWS-1
ABOVEGROUND FUEL
STORAGE TANK -
RECTANGULAR
4,000 GALLON REFERENCE

DRAWING NUMBER:

C-02

SHEET

4

OF

51

WELDED ON
SPILL CONTAINER
SEE NOTE 2

4" FIREGUARD COUPLING
4" FIREGUARD COUPLING
2" FIREGUARD COUPLING
(STICK PORT)
SEE NOTE 3

50 1/2"

32"

18"

14"

36"

50 1/2"

2" INTERSTITIAL
MONITOR PIPE

4" FIREGUARD COUPLING
4" FIREGUARD COUPLING
2" FIREGUARD COUPLING

SEE NOTE 3
(BEHIND INTERSTITIAL PIPE)

6'-0" OUTER
5'-5" INNER

SEE NOTE 3

SEE NOTE 3

67"

33"

33"

67"

18'-2" INNER
18'-9" OUTER

3" LIGHT WEIGHT INSULATION MATERIAL WITHIN INTERSTICE ON BOTTOM AND SIDES
EXCEPT MONITOR PIPE END; TOP AND MONITOR END TO BE 4"

2" COUPLING

8" PRIMARY
EMERGENCY VENT

8" INTERSTITIAL
EMERGENCY VENT

SEE NOTE 3

SEE NOTE 3

W4 x 13#
WELDED
TO TANK
BY TANK
MANUFACTURER

5"Ø GROUNDING
HOLE IN SUPPORT

FITTINGS NOT
SHOWN THIS VIEW

ELEVATION VIEW
SCALE: NONE

4" FIREGUARD COUPLING
FOR 300-4,000 GALLON
TANKS; 6" FIREGUARD
COUPLING FOR 6,000
GALLON TANKS
AND LARGER

4" FIREGUARD
COUPLING

8" PRIMARY
EMERGENCY VENT

2" INTERSTITIAL
MONITOR PIPE

SEE NOTE 3

26 1/2"

12"

12"

6'-0" OUTER
5'-5" INNER

SEE NOTE 3

2" FIREGUARD
COUPLING
(STICK PORT)

8" INTERSTITIAL
EMERGENCY VENT

2" FIREGUARD COUPLING

4" FIREGUARD COUPLING

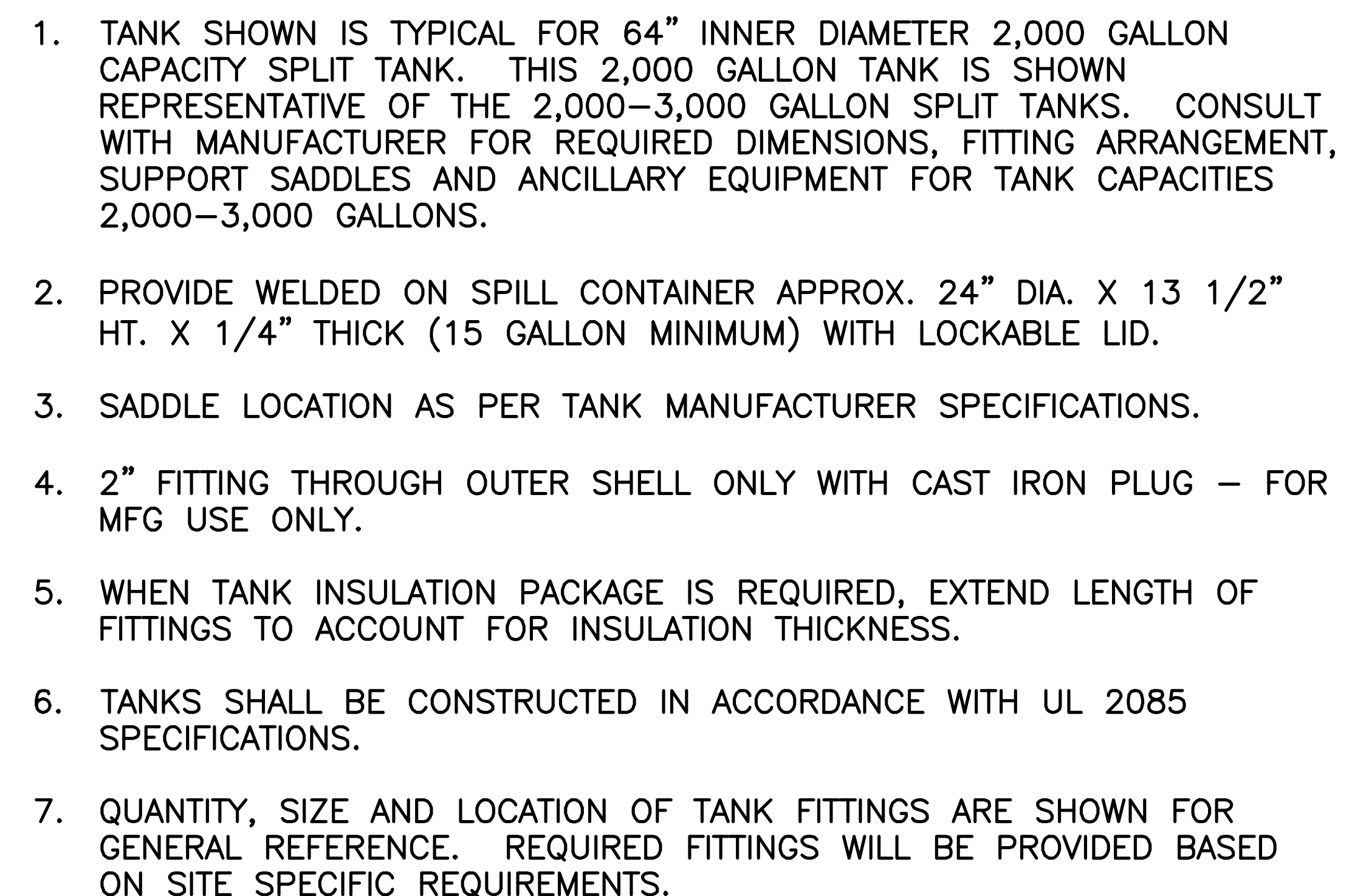
4" FIREGUARD COUPLING

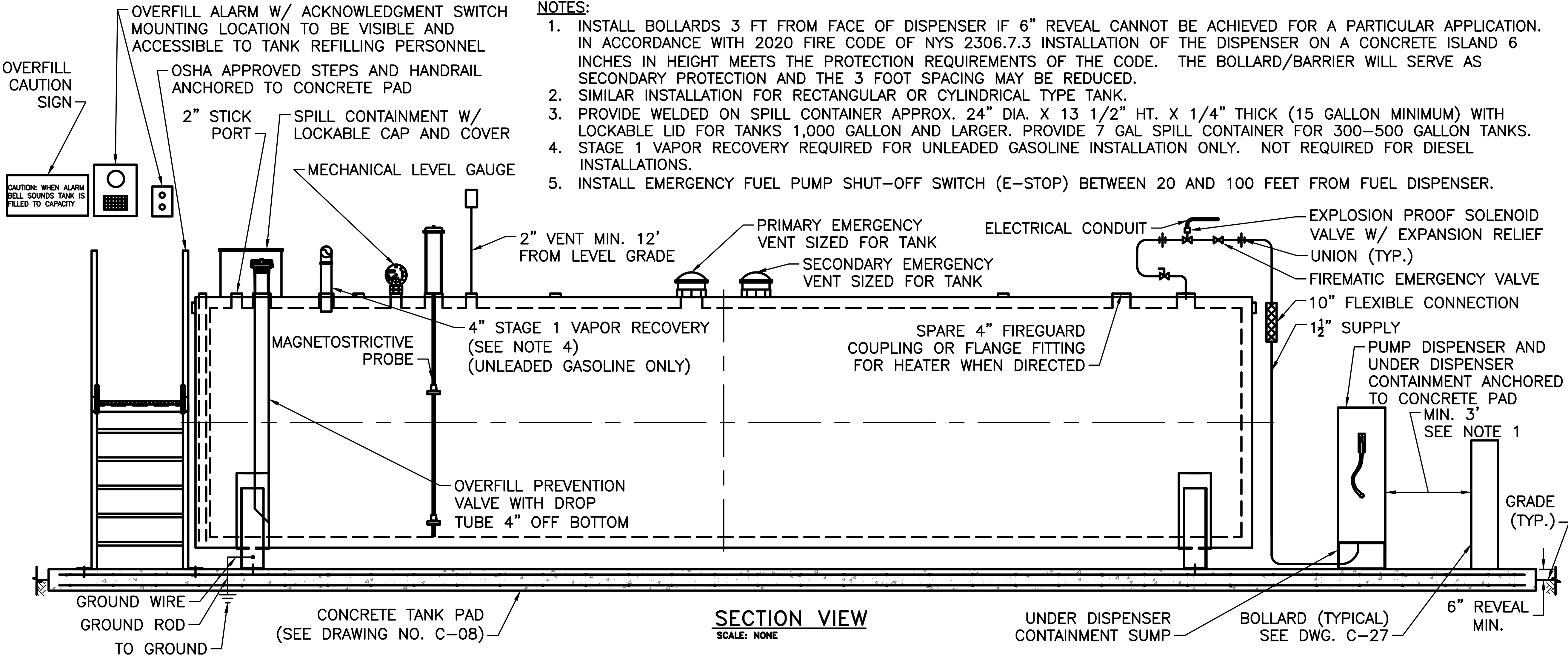
SEE NOTE 3

PLAN VIEW
SCALE: NONE

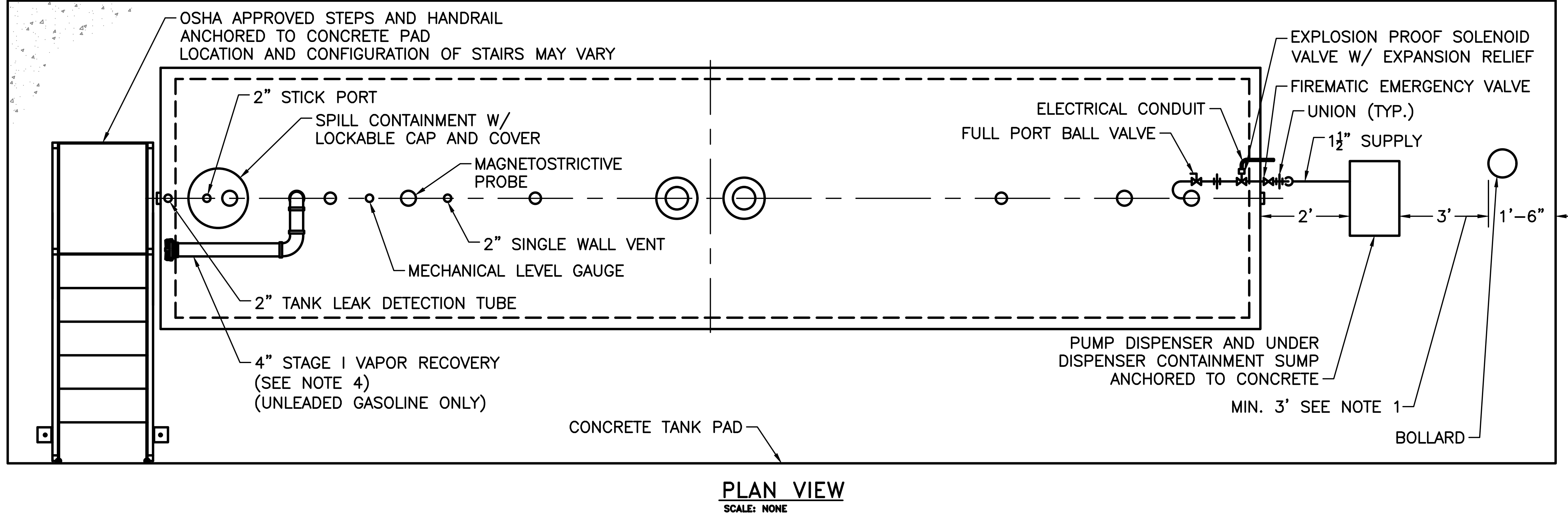
NOTES:

- TANK SHOWN IS TYPICAL FOR 4,000 GALLON CAPACITY. THIS 4,000 GALLON TANK IS SHOWN REPRESENTATIVE OF THE 300-8,000 GALLON TANKS. CONSULT WITH MANUFACTURER FOR REQUIRED DIMENSIONS, FITTING ARRANGEMENT, SUPPORT SADDLES AND ANCILLARY EQUIPMENT FOR TANK CAPACITIES 300-8,000 GALLONS.
- PROVIDE WELDED ON SPILL CONTAINER APPROX. 24" DIA. X 13 1/2" HT. X 1/4" THICK (15 GALLON MINIMUM) WITH LOCKABLE LID FOR TANKS 1,000 GALLON AND LARGER. PROVIDE 7 GALLON SPILL CONTAINER FOR 300-500 GALLON TANKS.
- 2" FITTING THROUGH OUTER SHELL ONLY WITH CAST IRON PLUG - FOR MFG USE ONLY.
- WHEN TANK INSULATION PACKAGE IS REQUIRED, EXTEND LENGTH OF FITTINGS TO ACCOUNT FOR INSULATION THICKNESS.
- TANKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH UL 2085 SPECIFICATIONS.
- QUANTITY, SIZE AND LOCATION OF TANK FITTINGS ARE SHOWN FOR GENERAL REFERENCE. REQUIRED FITTINGS WILL BE PROVIDED BASED ON SITE SPECIFIC REQUIREMENTS.





- NOTES:**
1. INSTALL BOLLARDS 3 FT FROM FACE OF DISPENSER IF 6" REVEAL CANNOT BE ACHIEVED FOR A PARTICULAR APPLICATION. IN ACCORDANCE WITH 2020 FIRE CODE OF NYS 2306.7.3 INSTALLATION OF THE DISPENSER ON A CONCRETE ISLAND 6 INCHES IN HEIGHT MEETS THE PROTECTION REQUIREMENTS OF THE CODE. THE BOLLARD/BARRIER WILL SERVE AS SECONDARY PROTECTION AND THE 3 FOOT SPACING MAY BE REDUCED.
 2. SIMILAR INSTALLATION FOR RECTANGULAR OR CYLINDRICAL TYPE TANK.
 3. PROVIDE WELDED ON SPILL CONTAINER APPROX. 24" DIA. X 13 1/2" HT. X 1/4" THICK (15 GALLON MINIMUM) WITH LOCKABLE LID FOR TANKS 1,000 GALLON AND LARGER. PROVIDE 7 GAL SPILL CONTAINER FOR 300-500 GALLON TANKS.
 4. STAGE 1 VAPOR RECOVERY REQUIRED FOR UNLEADED GASOLINE INSTALLATION ONLY. NOT REQUIRED FOR DIESEL INSTALLATIONS.
 5. INSTALL EMERGENCY FUEL PUMP SHUT-OFF SWITCH (E-STOP) BETWEEN 20 AND 100 FEET FROM FUEL DISPENSER.



NEW YORK STATE **Office of General Services**

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905

LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

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STATE OF NEW YORK
L. WEISBERG
REGISTERED PROFESSIONAL ENGINEER
12/31/2025

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION

LOCATION: WESTERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER: 47676 - C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

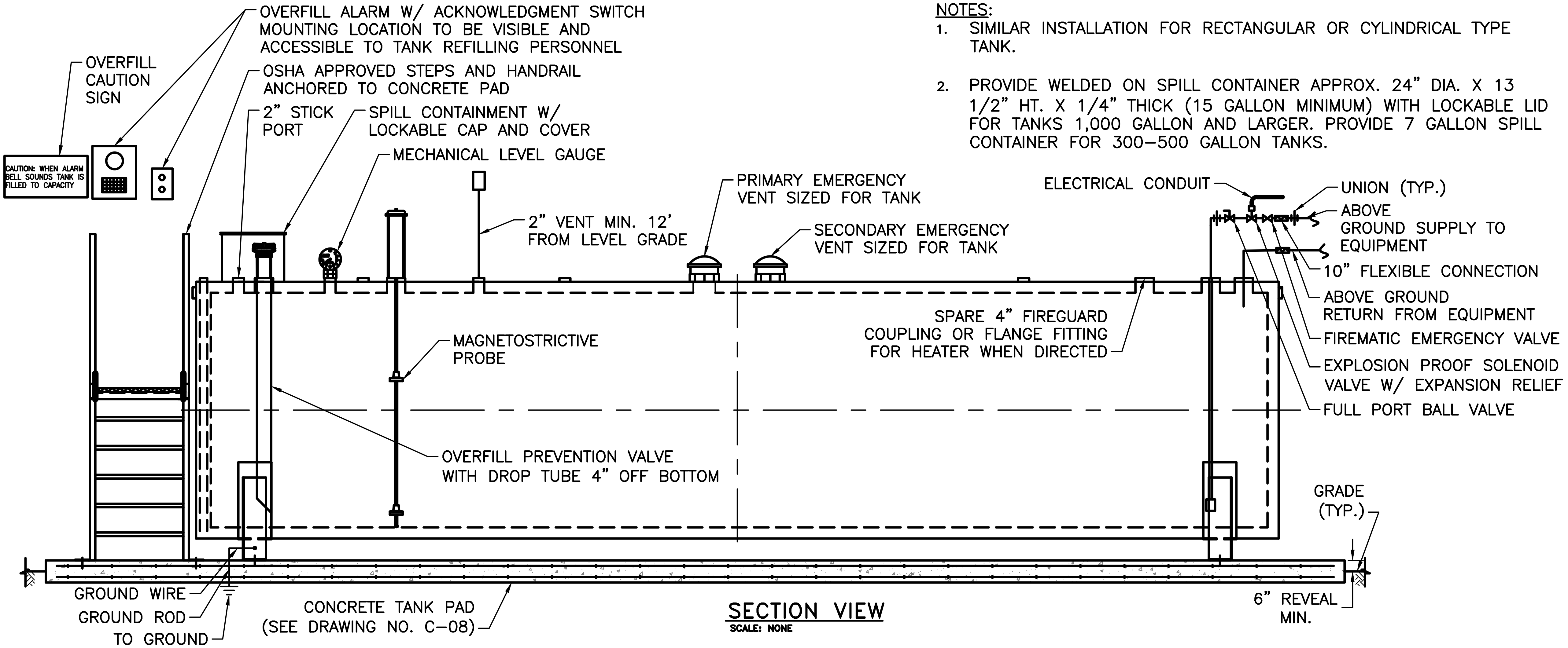
FIELD CHECK: M. WESOLOWSKI

APPROVED: M. WESOLOWSKI

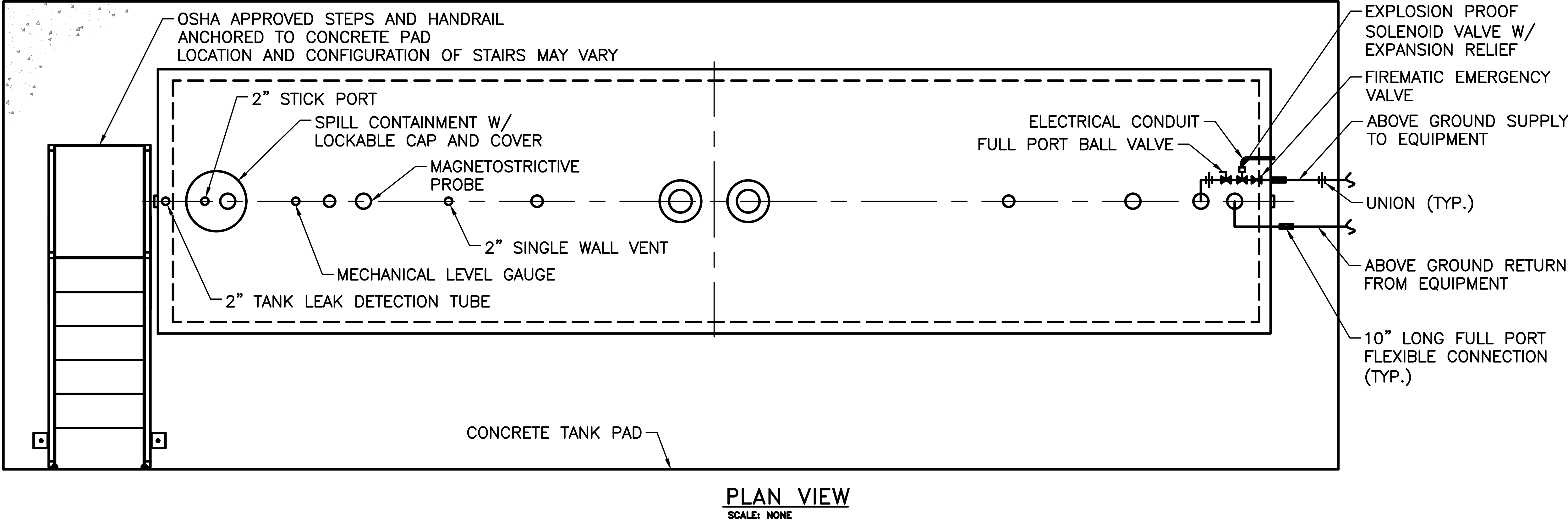
SHEET TITLE: TYPICAL TYPE DWS-1 ABOVEGROUND MOTOR FUEL STORAGE TANK WITH TYPE UG-1 OR D-1 INSTALLATION PACKAGE

DRAWING NUMBER: C-05

SHEET 7 OF 51



- NOTES:
1. SIMILAR INSTALLATION FOR RECTANGULAR OR CYLINDRICAL TYPE TANK.
 2. PROVIDE WELDED ON SPILL CONTAINER APPROX. 24" DIA. X 13 1/2" HT. X 1/4" THICK (15 GALLON MINIMUM) WITH LOCKABLE LID FOR TANKS 1,000 GALLON AND LARGER. PROVIDE 7 GALLON SPILL CONTAINER FOR 300-500 GALLON TANKS.





Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905



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3 Aerial Way, Syosset, New York

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STATE OF NEW YORK
WESTERN REGION
REGISTERED PROFESSIONAL ENGINEER
12/31/2025

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION

LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:

TYPICAL TYPE DWS-1 ABOVEGROUND FUEL OIL STORAGE TANK WITH TYPE FO-1 INSTALLATION PACKAGE

DRAWING NUMBER:

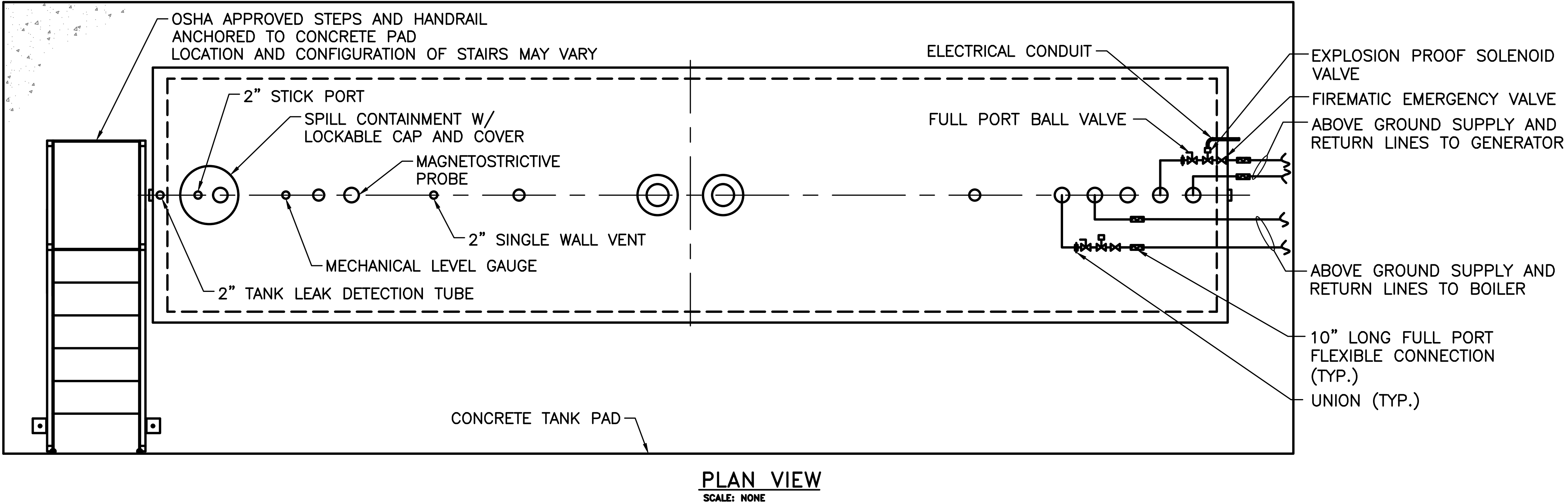
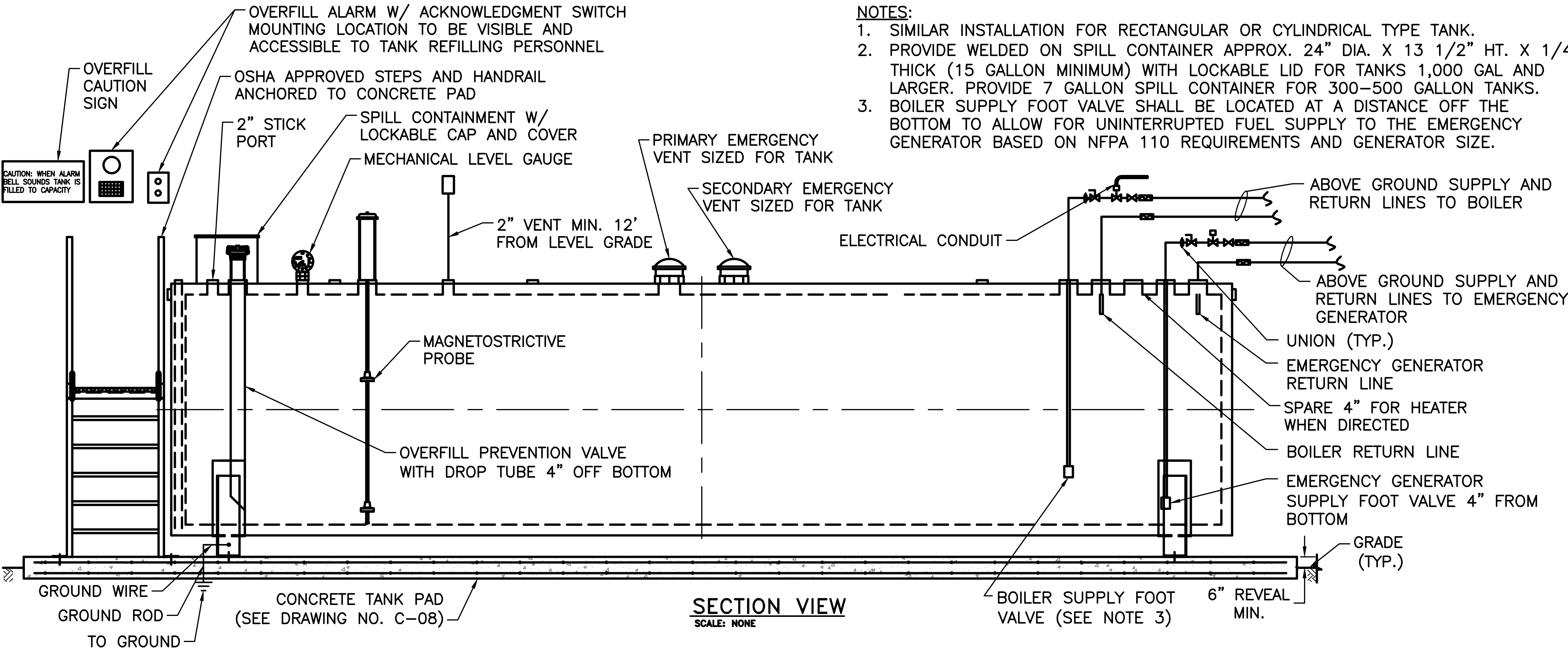
C-06

SHEET

8

OF

51



Office of General Services

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CONTRACT:

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION

LOCATION: WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676 - C	
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE:		
TYPE DWS-1 AST WITH TWO TYPE FO-1 INSTALLATION PACKAGES - BOILER & EMERGENCY GENERATOR		
DRAWING NUMBER:		
C-07		
SHEET 9 OF 51		



C = 8" FOR TANKS 250 GALLON THROUGH 2,000 GALLON,
12" FOR TANKS >2,000 GALLON THROUGH 15,000 GALLON,
18" FOR TANKS >15,000 GALLON (SEE NOTE 5)

NOTES:

1. CONCRETE PAD DIMENSIONS SHALL BE DETERMINED BY SITE-SPECIFIC CONDITIONS AND FUEL SYSTEM REQUIREMENTS.
2. PROVIDE A ½" CHAMFER AT ALL EXPOSED CORNERS AND EDGES OF CONCRETE SLABS.
3. PROVIDE REBAR WITH CORROSION-RESISTANT EPOXY COATING.
4. SLOPE TANK PAD 1 DEGREE TO PREVENT POOLING OF WATER. PROVIDE SHIM BENEATH TANK ON ONE SIDE TO ENSURE IT IS LEVEL.
5. DESIGN OF TANK SLABS FOR >15,000 GALLON TANKS SHALL BE ON A SITE BY SITE BASIS.
6. FOR STANDARD SLABS, THE LAP LENGTH FOR REBAR SPLICING SHALL BE 40X THE REBAR DIAMETER.

NEW YORK

STATE OF

CIVIL ENGINEER

Office of
General Services

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CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985

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STATE OF NEW YORK

SEAL OF THE STATE ENGINEER

12/31/2025

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER:

47676 - C

DESIGNED BY:

M. GUTMANN

DRAWN BY:

A. KELLY

FIELD CHECK:

M. WESOLOWSKI

APPROVED:

M. WESOLOWSKI

SHEET TITLE:

ABOVEGROUND FUEL
STORAGE TANK
DISPENSER & ISLAND
CONCRETE PAD DETAIL

DRAWING NUMBER:

C-09

SHEET

11

OF

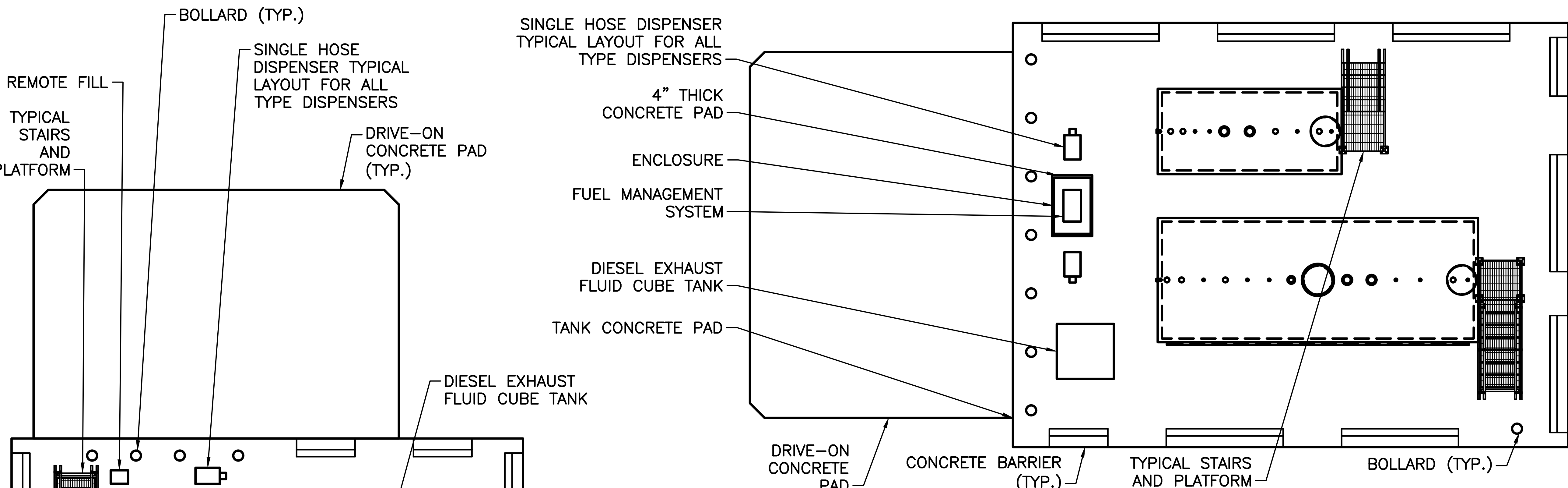
51

DRIVE-ON PAD FOUNDATION DETAIL

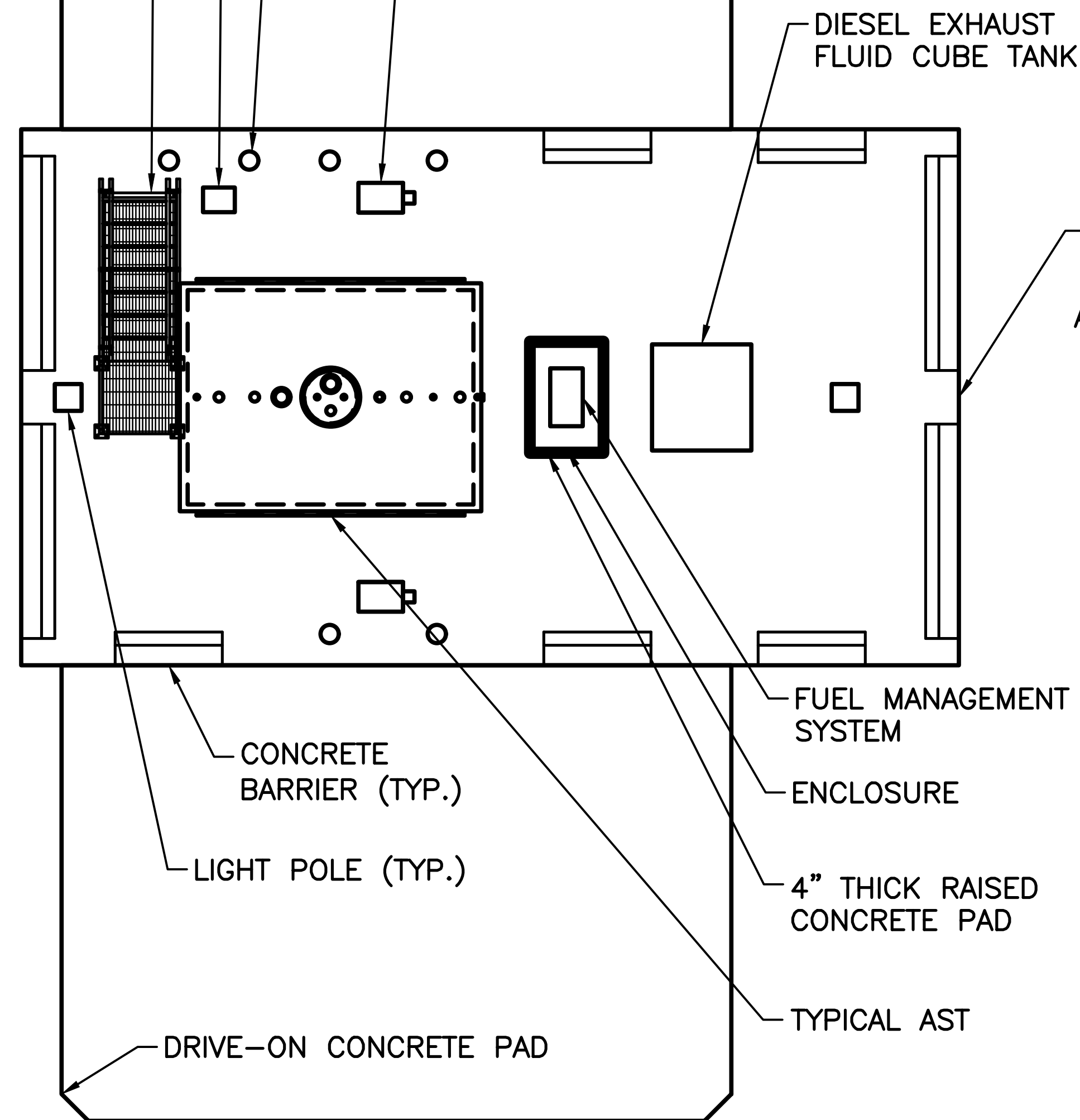
SCALE: NONE

NOTES:

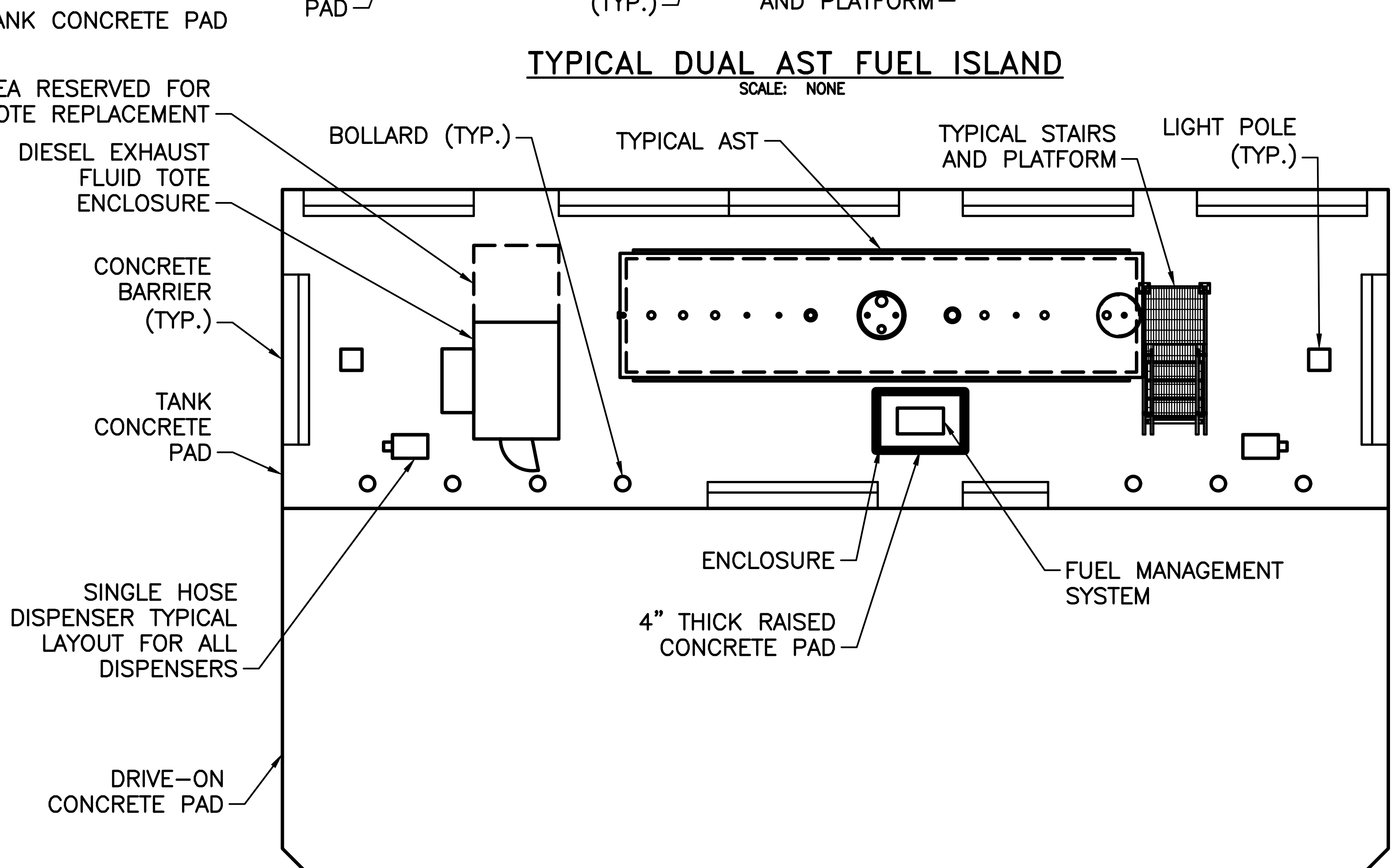
1. SEE DRAWING C-23, C-24, AND C-25 FOR FIRE SUPPRESSION IF REQUIRED.
2. INSTALL BOLLARDS 3 FT FROM FACE OF DISPENSER IF 6" CURB CANNOT BE ACHIEVED FOR A PARTICULAR APPLICATION. IN ACCORDANCE WITH 2020 FIRE CODE OF NYS 2306.7.3 INSTALLATION OF THE DISPENSER ON A CONCRETE ISLAND 6 INCHES IN HEIGHT MEETS THE PROTECTION REQUIREMENTS OF THE CODE. THE BOLLARD/BARRIER WILL SERVE AS SECONDARY PROTECTION AND THE 3 FOOT SPACING MAY BE REDUCED.
3. CONTROL JOINT PLACEMENT AT MAXIMUM OF 20FT ON CENTER OR MIDPOINT OF ALL CONCRETE PADS.
4. PROVIDE A 1/2" CHAMFER AT ALL EXPOSED CORNERS AND EDGES OF CONCRETE SLABS.
5. INSTALL EMERGENCY FUEL PUMP SHUT-OFF SWITCH (E-STOP) BETWEEN 20 AND 100 FEET FROM FUEL DISPENSER.
6. BOLLARD PROTECTION IN FRONT OF DISPENSERS AND FUEL MANAGEMENT SYSTEM IS REQUIRED.
7. PROVIDE A 20-POUND ABC-RATED (MINIMUM 40-B:C) FIRE EXTINGUISHER NOT MORE THAN 75 FEET FROM STORAGE TANK.
8. PROVIDE MINIMUM 3 FOOT DISTANCE BETWEEN THE TANK AND BOLLARD/BARRIER FOR NON IMPACT RESISTANT TANKS. IN ACCORDANCE WITH 2020 FIRE CODE OF NYS 2306.4 PHYSICAL PROTECTION, BOLLARDS/BARRIERS ARE NOT REQUIRED FOR UL-2085 IMPACT RESISTANT TANKS. THE BOLLARDS/BARRIERS WILL SERVE AS SECONDARY PROTECTION AND THE 3 FOOT DISTANCE MAY BE REDUCED.
9. FOR ASSET WORKS FUEL MANAGEMENT SYSTEMS, STUB UP ALL REQUIRED CONDUIT IN AN 11" X 11" AREA.



TYPICAL DUAL AST FUEL ISLAND
SCALE: NONE



TYPICAL DUAL DISPENSER/DUAL SIDED FUEL ISLAND
SCALE: NONE



TYPICAL DUAL DISPENSER/SINGLE SIDED FUEL ISLAND
SCALE: NONE

NOTE:
1. LAYOUTS SHOWN ARE TYPICAL. LOCATION OF EQUIPMENT AND SIZE OF PADS VARY BASED ON SITE SPECIFIC REQUIREMENTS.

NEW YORK
STATE
OF
CIVIL
ENGINEERING

Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985

LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

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STATE OF NEW YORK
JUDITH A. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
12/31/2025

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

LOCATION:
WESTERN REGION
VARIOUS FACILITIES

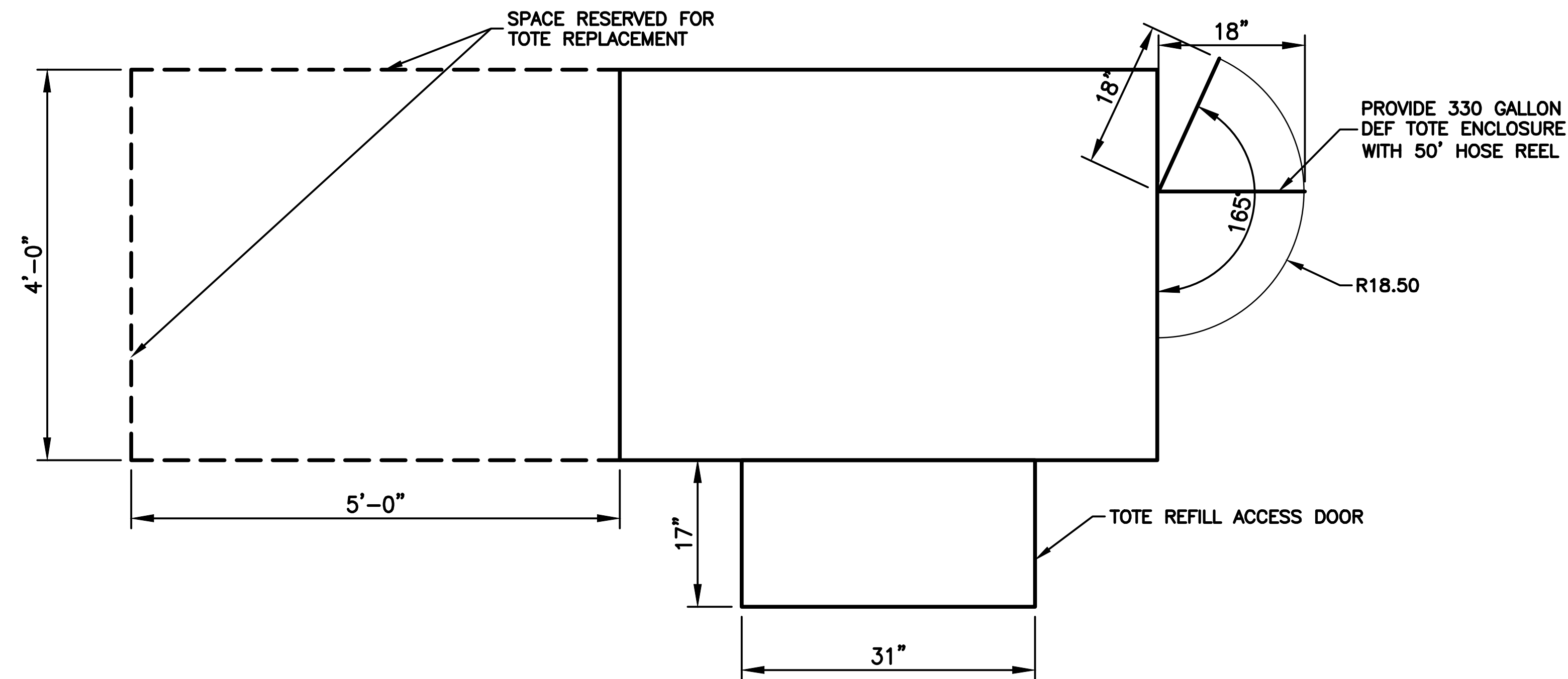
MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:

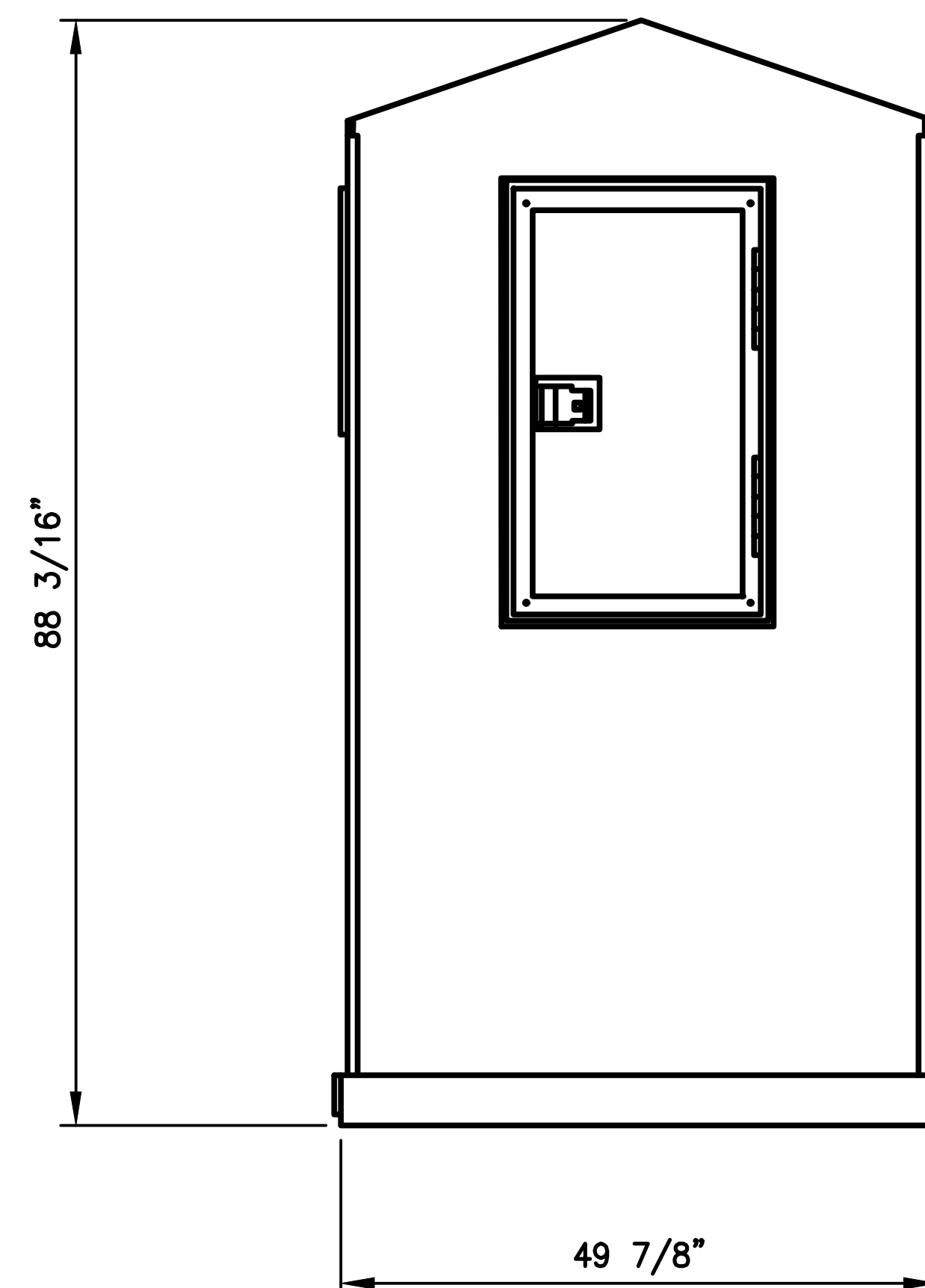
ABOVEGROUND FUEL
STORAGE TANK TYPICAL
LAYOUTS

DRAWING NUMBER:
C-10

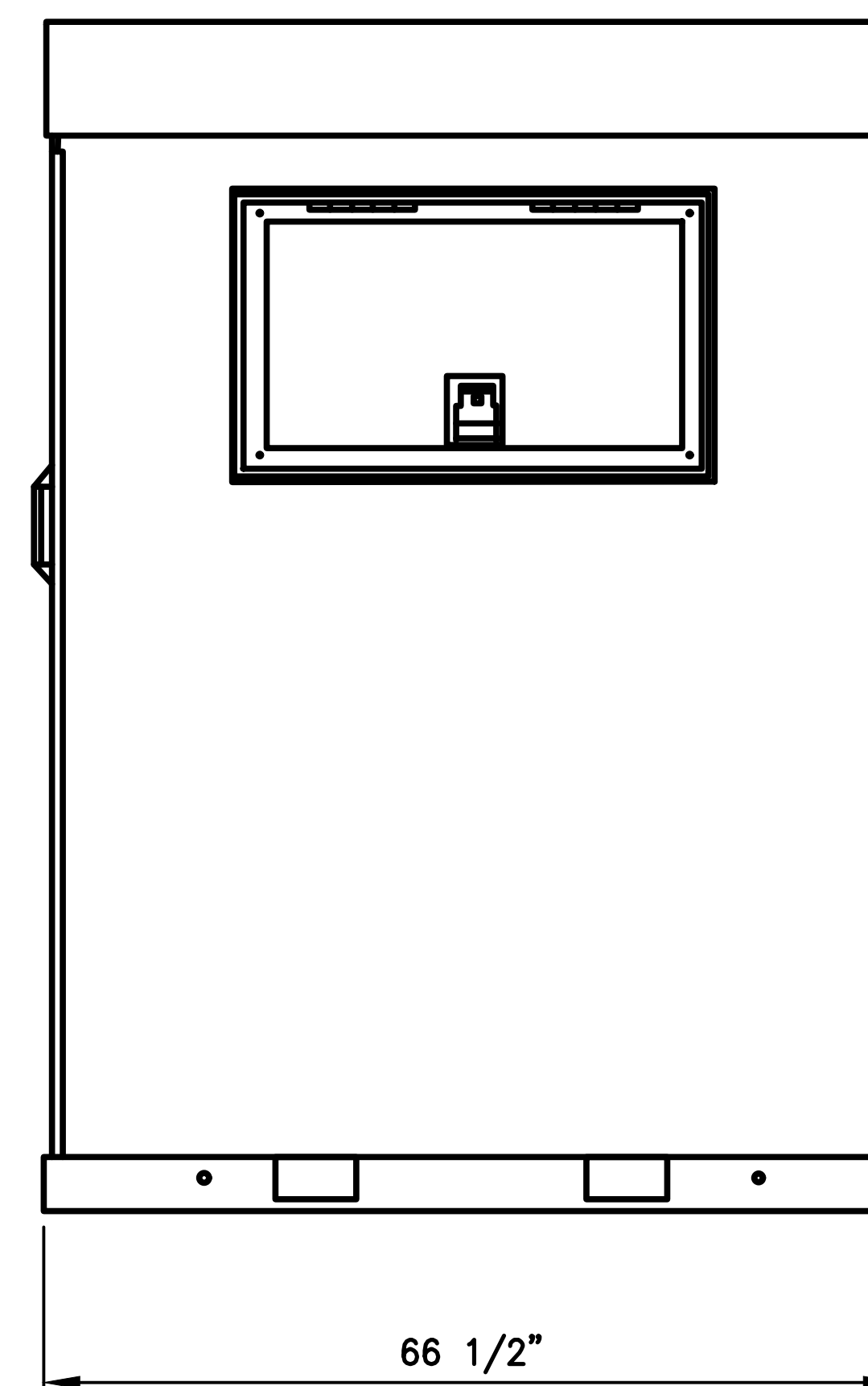
SHEET 12 OF 51



PLAN VIEW
SCALE: NONE



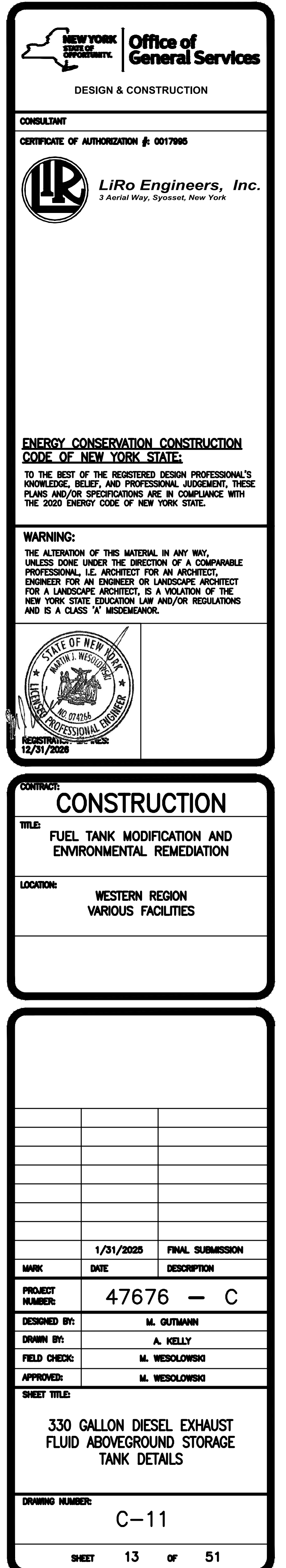
END VIEW
SCALE: NONE



ELEVATION VIEW
SCALE: NONE

DEF TANK SHALL INCLUDE:

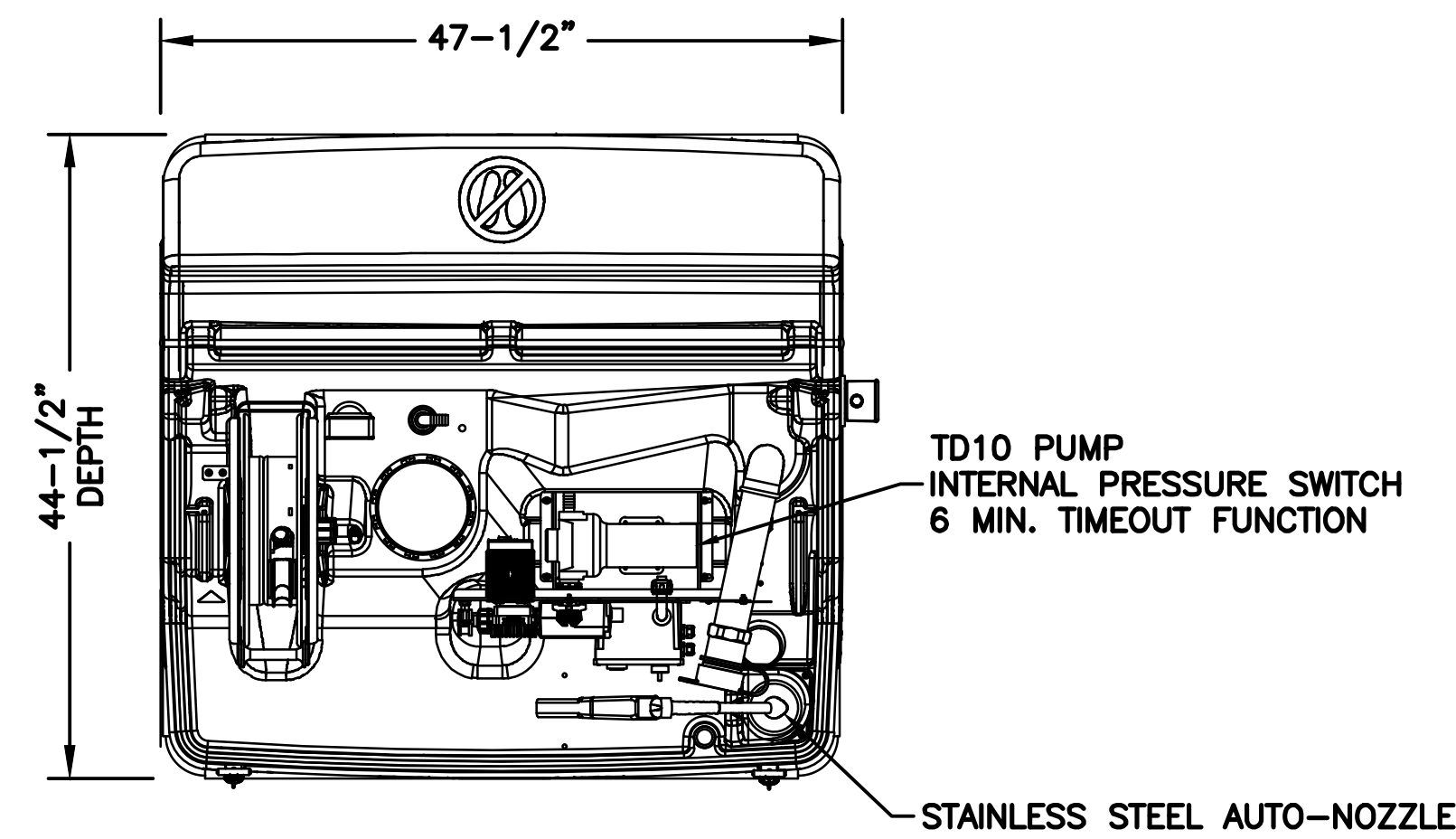
1. COLD WEATHER PACKAGE WITH LIGHTED, INSULATED AND HEATED ENCLOSURE.
2. DISPENSER SETUP WITH 50' HOSE REEL AND HOSE.
3. 110V TOTE PUMP.
4. IN-LINE PULSE METER FOR TIE-IN TO FUEL MANAGEMENT SYSTEM.
5. 330 GALLON TOTE WITH FITTING AND FILL COUPLER.
6. PRE-WIRED AND PRE-PIPED ENCLOSURE. 120 VOLT 20 AMP SERVICE REQUIRED.



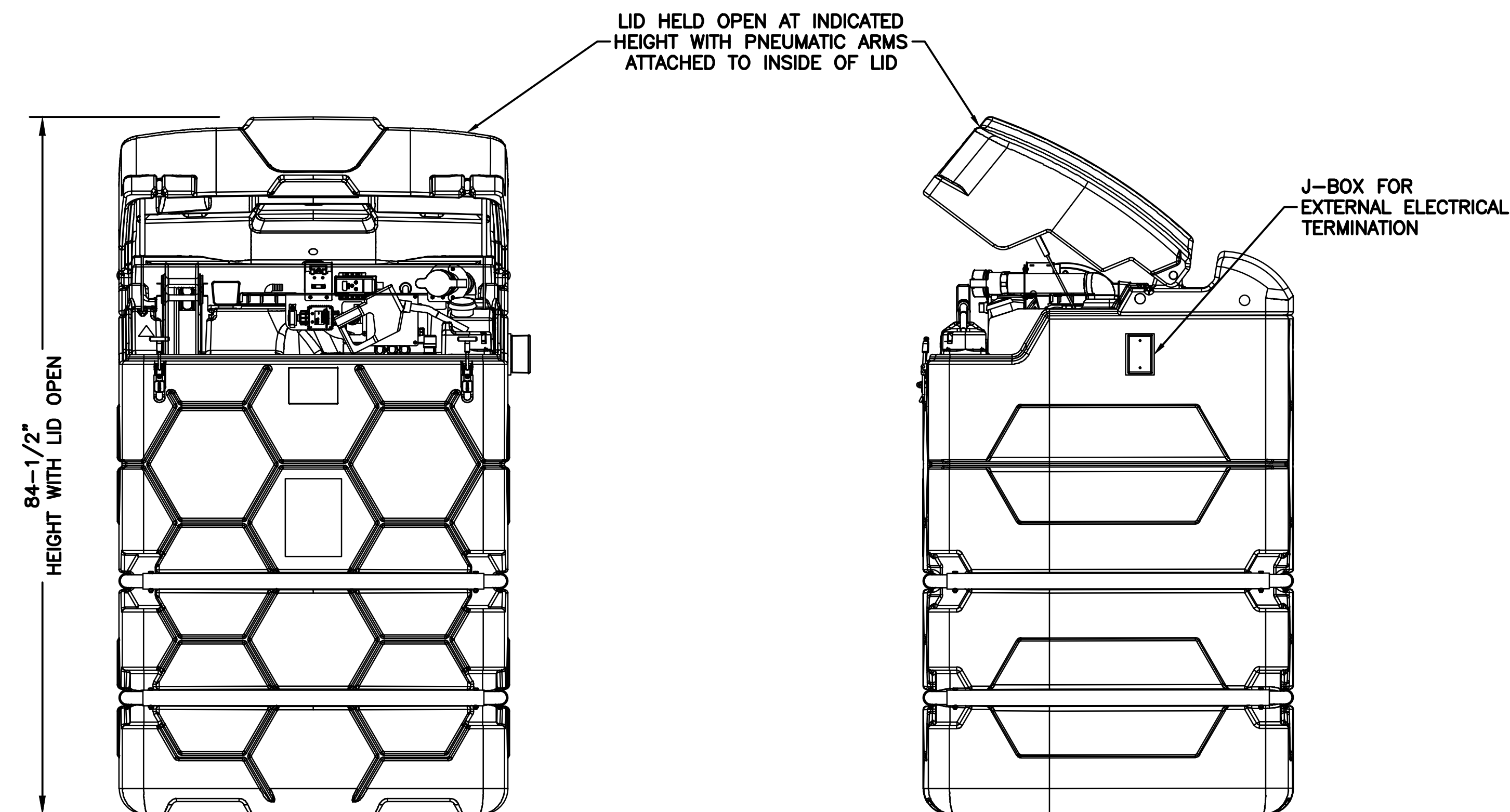
TANK SIZE	DEPTH
396-GALLON	44-1/2"
660-GALLON	70-1/2"

DEF TANK SHALL INCLUDE:

1. COLD WEATHER PACKAGE WITH 500W INTERNAL PROBE HEATER.
2. DISPENSER SETUP WITH 35' HOSE REEL AND HOSE.
3. 6 GPM 120V PUMP.
4. IN-LINE PULSE METER FOR TIE-IN TO FUEL MANAGEMENT SYSTEM.
5. 396 OR 660 GALLON TOTE WITH FITTING AND FILL COUPLER.
6. PRE-WIRED AND PRE-PIPED ENCLOSURE. 120 VOLT 20 AMP SERVICE REQUIRED.



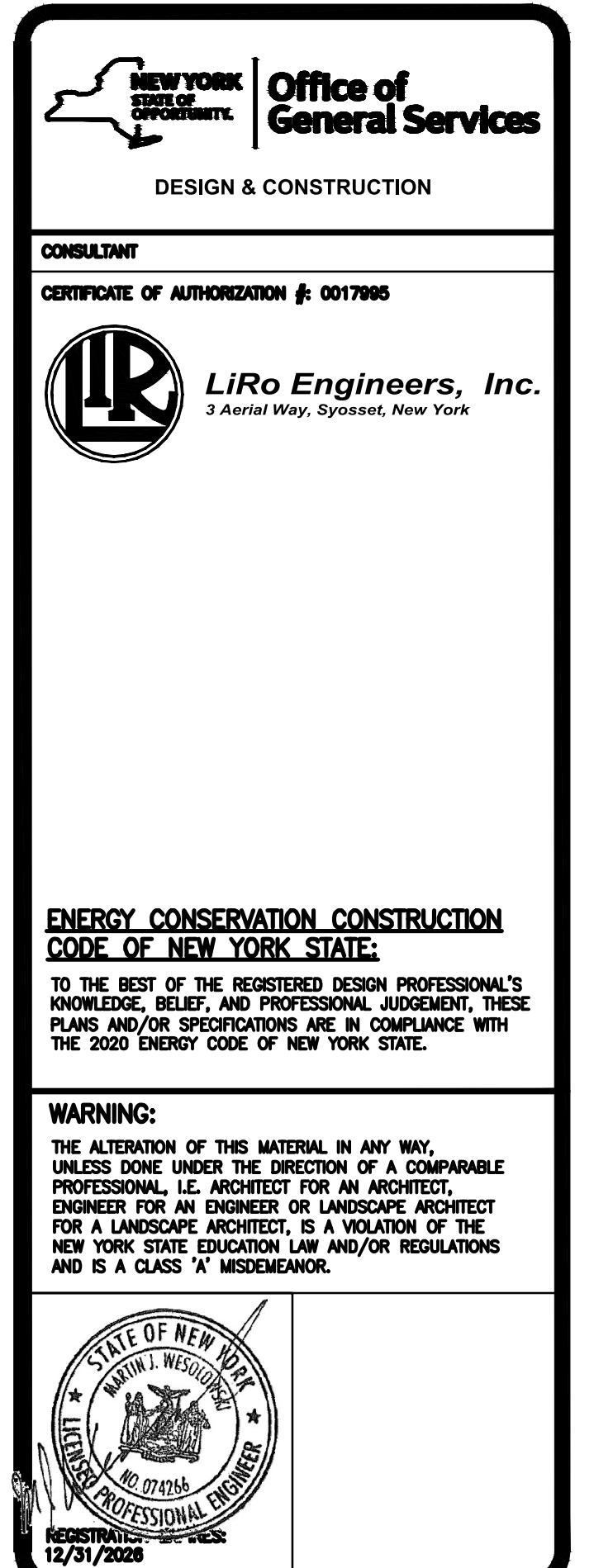
PLAN VIEW
SCALE: NONE



FRONT ELEVATION VIEW (LID OPEN)
SCALE: NONE

SIDE ELEVATION VIEW (LID OPEN)
SCALE: NONE

SIDE ELEVATION VIEW (LID CLOSED)
SCALE: NONE



CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION

LOCATION: WESTERN REGION
VARIOUS FACILITIES

[illegible]

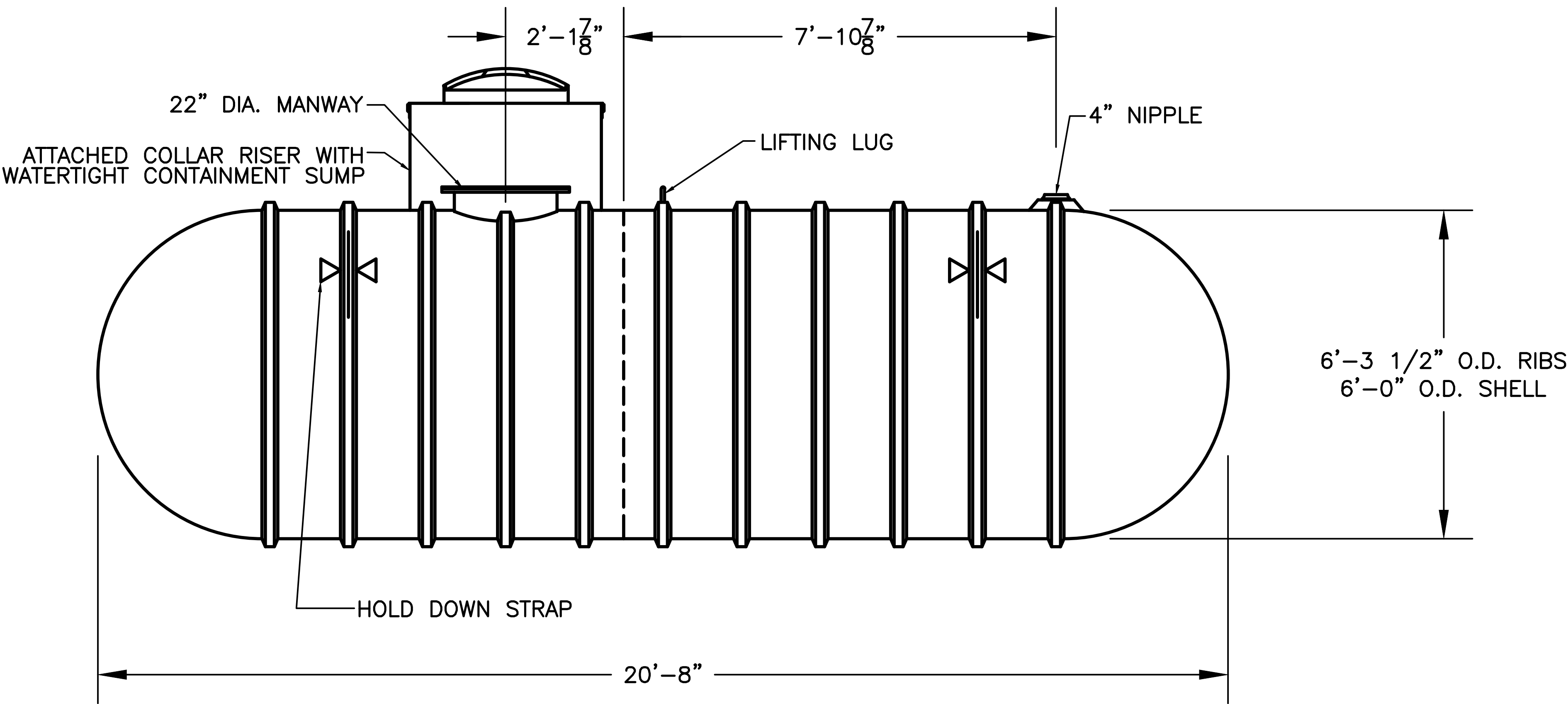
SHEET TITLE:

**396 AND 660 GALLON DIESEL
EXHAUST FLUID ABOVEGROUND
STORAGE TANK DETAILS**

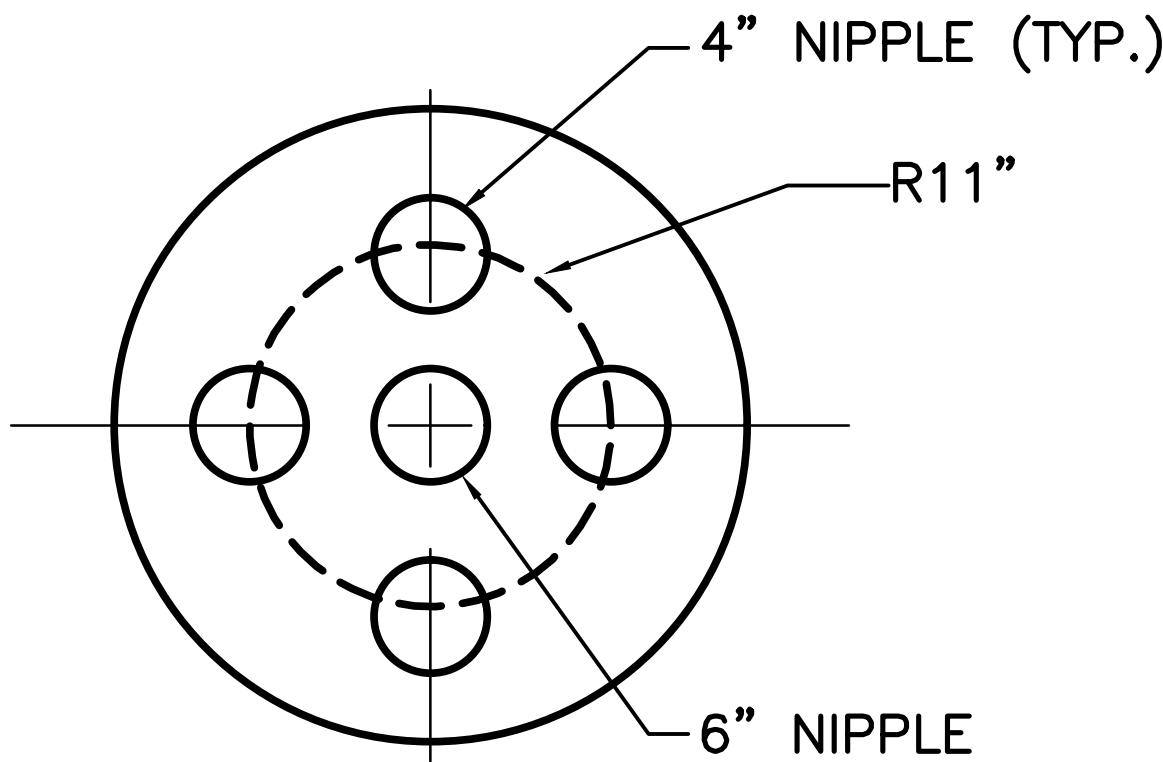
DRAWING NUMBER: C-12



	1/31/2025	FINAL SUBMISSION
MARK	DATE	DESCRIPTION
PROJECT NUMBER:	47676 - C	
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE: DOUBLE WALL STEEL ACT-100-U UNDERGROUND FUEL STORAGE TANK 4,000 GALLON REFERENCE		
DRAWING NUMBER: C-13		
SHEET	15	OF 51



ELEVATION VIEW
SCALE: NONE



22" MANWAY PLAN VIEW
SCALE: NONE

- NOTE:
1. TANK SHOWN IS TYPICAL FOR DOUBLEWALL FIBERGLASS 4,000 GALLON CAPACITY. THIS 4,000 GALLON TANK IS SHOWN REPRESENTATIVE OF THE 500-8,000 GALLON TANKS. CONSULT WITH MANUFACTURER FOR CAPACITIES OF 500-8,000 GALLONS AND SPECIFIC FITTING ARRANGEMENT.



Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985



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STATE OF NEW YORK
MELVIN I. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
EX-12345
12/31/2028

CONTRACT:

CONSTRUCTION

TITLE:

FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION

LOCATION:

WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER: 47676 - C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

FIELD CHECK: M. WESOLOWSKI

APPROVED: M. WESOLOWSKI

SHEET TITLE:

DOUBLE WALL FIBERGLASS UNDERGROUND FUEL STORAGE TANK
4,000 GALLON REFERENCE

DRAWING NUMBER:

C-14

SHEET 16 OF 51

PROVIDED EQUIPMENT

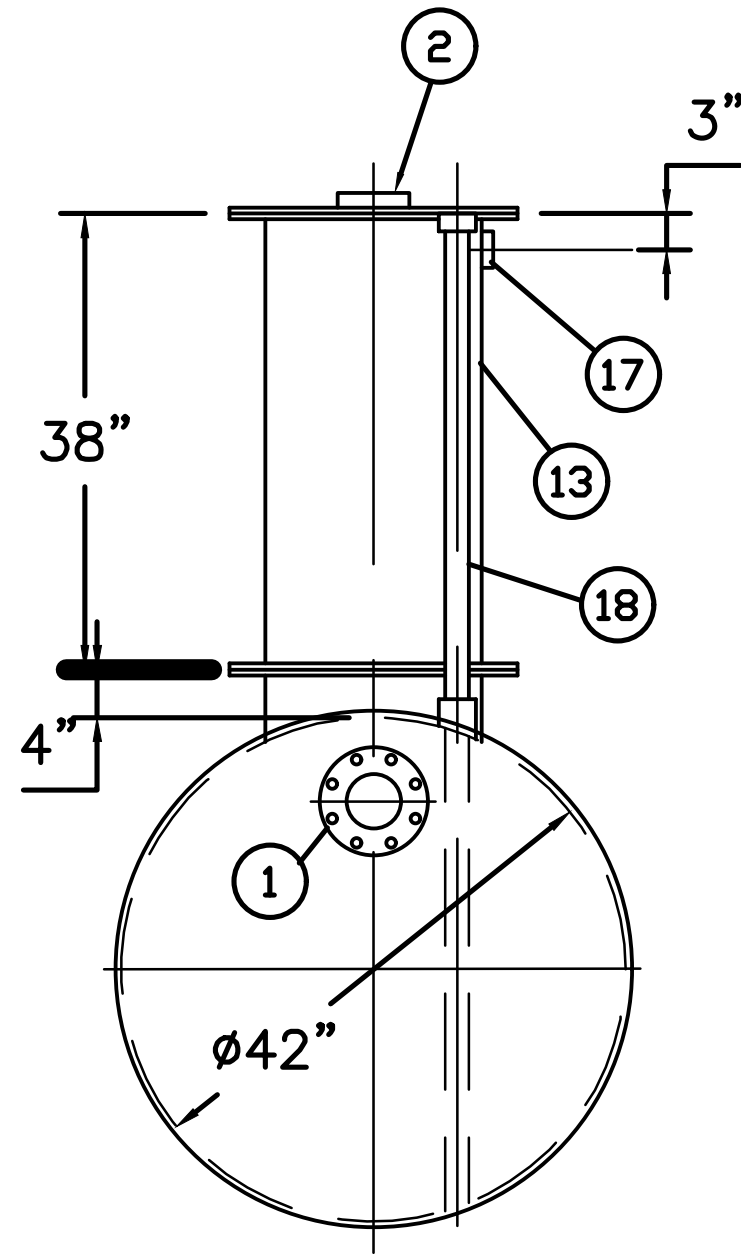
1. 150# R.F.S.O. FLANGE W/ 2" FNPT FOR VENT
2. 4"Ø FNPT FOR GAUGE WITH PLUG
3. VELOCITY HEAD DIFFUSION BAFFLE
4. WEAR PLATE
5. SEDIMENT CHAMBER
6. UNDERFLOW BAFFLE (REMOVABLE)
7. SLUDGE BAFFLE
8. STRIKER PLATES
9. PARALLEL CORRUGATED PLATE COALESCER. CORELLA PVC PLATES (3" PLATE SPACING)
10. OIL/WATER SEPARATOR CHAMBER
11. 6" THICK PETROSCREEN COALESCER MATERIAL INSTALLED W/ PULL ROD SHIPPED LOOSE
12. STEEL OUTLET DOWNCOMER
13. 18"Ø MANWAY WITH NEO-CORK GASKETS. BOLT-ON EXTENSION SHIPPED LOOSE
14. 4"Ø FNPT FOR OIL PUMP-OUT WITH INTERNAL PVC PIPE INSTALLED & RISER PIPE SHIPPED LOOSE
15. 2"Ø FNPT FOR LEVEL SENSOR WITH RISER PIPE SHIPPED LOOSE
16. LIFTING LUG
17. 2"Ø FNPT FOR VENT
18. 2"Ø FNPT FOR LEAK SENSOR WITH RISER PIPE SHIPPED LOOSE

ANCILLARY PROVIDED EQUIPMENT

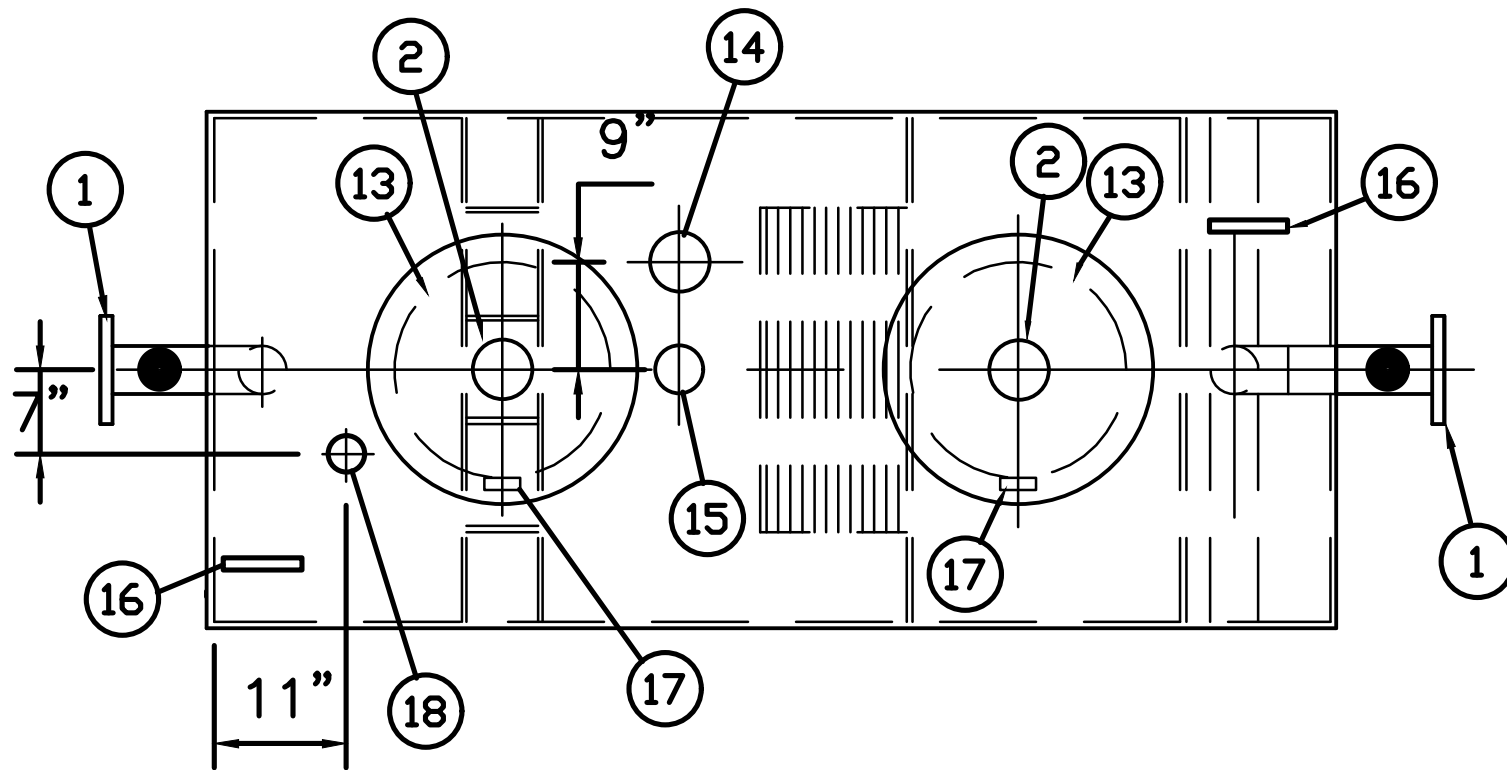
- (4) 18" NEO-CORK MANWAY GASKETS
- (4) SETS OF NUTS/BOLTS/WASHERS FOR 18" MANWAY

NOTES

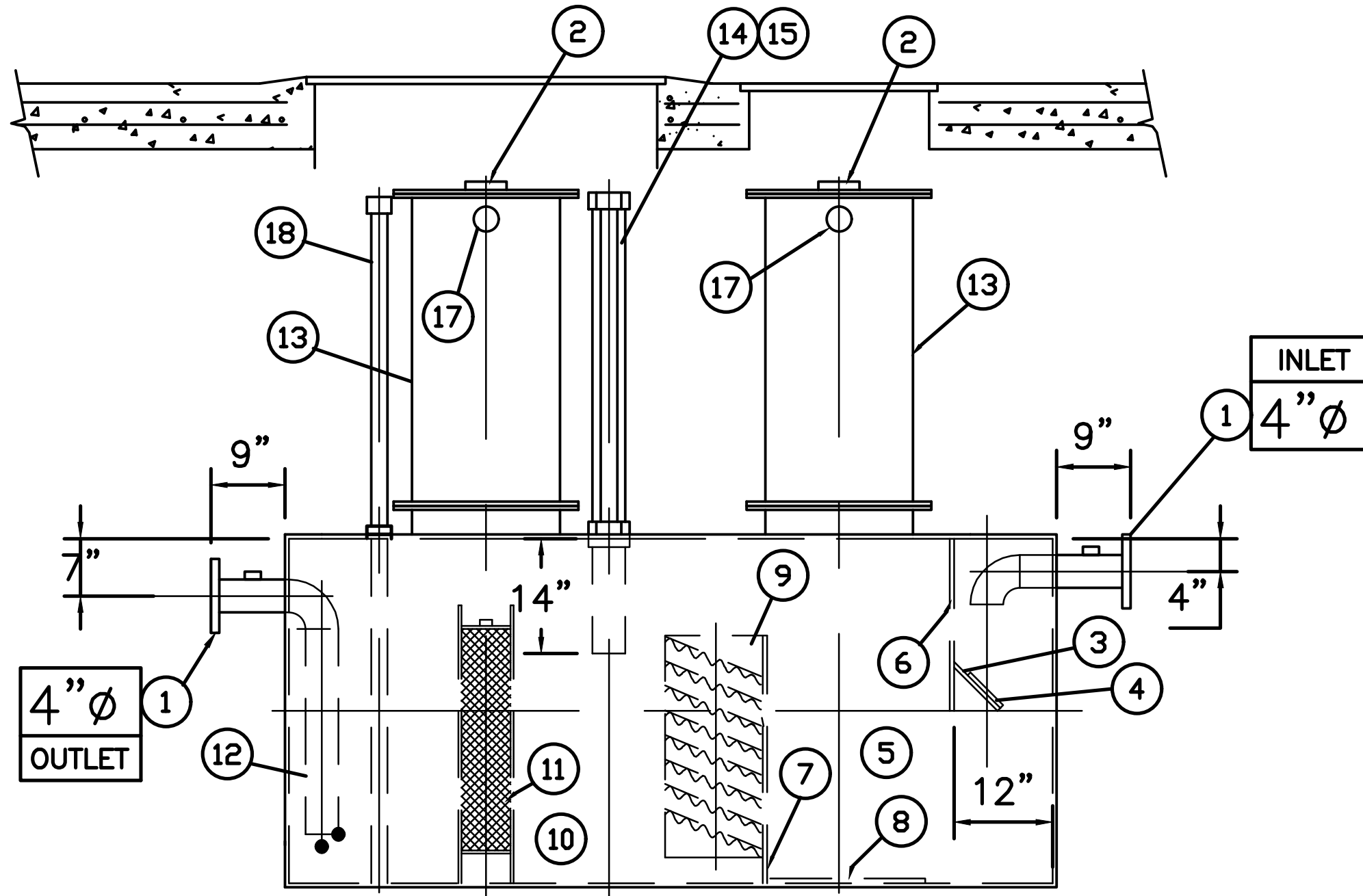
1. POLYURETHANE HIGHGUARD TANK IS NOT APPROVED FOR THE STORAGE OF HEATED PRODUCTS
2. ALL VENT PIPING BY INSTALLER
3. 15000 VOLT SPARK TEST PROVIDED AT FACTORY



END VIEW
SCALE: NONE



PLAN VIEW
SCALE: NONE



ELEVATION VIEW
SCALE: NONE

NOTE:

1. SEPARATOR SHOWN IS TYPICAL FOR JACKETED DOUBLE-WALL STEEL 550-GALLON CAPACITY. CONSULT WITH MANUFACTURER FOR CAPACITIES OTHER THAN 550 GALLONS AND SPECIFIC FITTING AND MANWAY ARRANGEMENTS.

GENERAL SPECIFICATIONS

NO. REQ'D: (1)
CAPACITY: 550 GALLONS
TYPE: HTC, HIGHGUARD, DW TYPE I 360
MATERIAL: MILD CARBON STEEL
FLOW RATE: 55 GPM
GAUGE: BASED ON 60" MAX BURIAL
INNER
OUTER
SHELL- 7 GA. 10 GA.
HEADS- 7 GA. 10 GA.
SURFACE PREP:
SSPC NO.6 BLAST ALL EXTERIOR SURFACES

COATING: MATERIAL THICKNESS
EXTERIOR- HIGHGUARD (75 MILS)
INTERIOR- NONE
CONSTRUCTION :
LAP FIT & WELD ALL EXTERIOR SEAMS
OPERATING PRESSURE : ATMOSPHERIC

MARK	DATE	DESCRIPTION
PROJECT NUMBER:	1/31/2025	FINAL SUBMISSION
DESIGNED BY:	47676 - C	
DRAWN BY:	M. GUTMANN	
FIELD CHECK:	A. KELLY	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:
TYPICAL DOUBLE-WALL STEEL
JACKETED 2 COMPARTMENT
OIL/WATER SEPARATOR

DRAWING NUMBER:
C-15

NEW YORK
STATE OF
ENGINEERING

Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905

LiRo Engineers, Inc.

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STATE OF NEW YORK
JAMES J. WESOLOWSKI
NO. 07454
LICENSED PROFESSIONAL ENGINEER
REGISTERED 12/31/2025

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER:

47676 - C

DESIGNED BY:

M. GUTMANN

DRAWN BY:

A. KELLY

FIELD CHECK:

M. WESOLOWSKI

APPROVED:

M. WESOLOWSKI

SHEET TITLE:

TYPICAL DOUBLE-WALL STEEL
JACKETED 3 COMPARTMENT
OIL/WATER SEPARATOR

DRAWING NUMBER:

C-16

SHEET

18

OF

51

PLAN VIEW
SCALE: NONE

ELEVATION VIEW
SCALE: NONE

CONTROL PANEL DETAIL
SCALE: NONE

NOTE:
1. CONTROL PANEL SHOWN IS TYPICAL.
CONTROL PANEL LAYOUT MAY VARY
BASED ON SITE SPECIFIC REQUIREMENTS.

END VIEW
SCALE: NONE

PROVIDED EQUIPMENT

- 150# R.F.S.O. FLANGE W/ 2" FNPT FOR VENT
- 4" FNPT FOR GAUGE WITH PLUG
- VELOCITY HEAD DIFFUSION BAFFLE
- WEAR PLATE
- SEDIMENT CHAMBER
- UNDERFLOW BAFFLE (REMOVABLE)
- SLUDGE BAFFLE
- STRIKER PLATES
- PARALLEL CORRUGATED PLATE COALESCER. CORELLA PVC PLATES (3" PLATE SPACING)
- OIL/WATER SEPARATOR CHAMBER
- 6" THICK PETROSCREEN COALESCER MATERIAL INSTALLED W/ PULL ROD SHIPPED LOOSE
- STEEL TRANSFER PIPE W/ DOWNCOMER
- 24" MANWAY WITH NEO-CORK GASKETS. BOLT-ON EXTENSION SHIPPED LOOSE
- 4" FNPT FOR OIL PUMP-OUT WITH INTERNAL PVC PIPE INSTALLED & RISER PIPE SHIPPED LOOSE
- 2" FNPT FOR LEVEL SENSOR WITH RISER PIPE SHIPPED LOOSE
- LIFTING LUG
- 2" FNPT FOR VENT
- 2" FNPT FOR LEAK SENSOR WITH RISER PIPE SHIPPED LOOSE
- 7 GA. BULKHEAD
- EFFLUENT WATER CHAMBER
- PUMP MOUNT
- 4" FNPT FOR EFFLUENT PUMP CONDUIT AND WIRING
- 2" FNPT FOR EFFLUENT LEVEL SENSOR CONDUIT AND WIRING
- RECTANGULAR MANWAY WITH CLOSED CELL SPONGE GASKET. BOLT-ON EXTENSION SHIPPED LOOSE

ANCILLARY PROVIDED EQUIPMENT

- 24" NEO-CORK MANWAY GASKETS
- SETS OF NUTS/BOLTS/WASHERS FOR 24" MANWAY
- 24"x30" CLOSED CELL FOAM MANWAY GASKET
- 24"x30" RUBBER RIBBON MANWAY GASKET
- SETS OF NUTS/BOLTS/WASHERS FOR 24"x30" MANWAY

NOTES

- POLYURETHANE HIGHGUARD TANK IS NOT APPROVED FOR THE STORAGE OF HEATED PRODUCTS
- ALL VENT PIPING BY INSTALLER
- 15000 VOLT SPARK TEST PROVIDED AT FACTORY
- DESIGNER TO PROVIDE EFFLUENT PUMPING INFORMATION FOR PROPER PUMP SIZING & PUMPOUT DESIGN

NOTE:

- SEPARATOR SHOWN IS TYPICAL FOR JACKETED DOUBLE-WALL STEEL 1,000-GALLON CAPACITY. CONSULT WITH MANUFACTURER FOR CAPACITIES OTHER THAN 1,000 GALLONS AND SPECIFIC FITTING AND MANWAY ARRANGEMENTS.

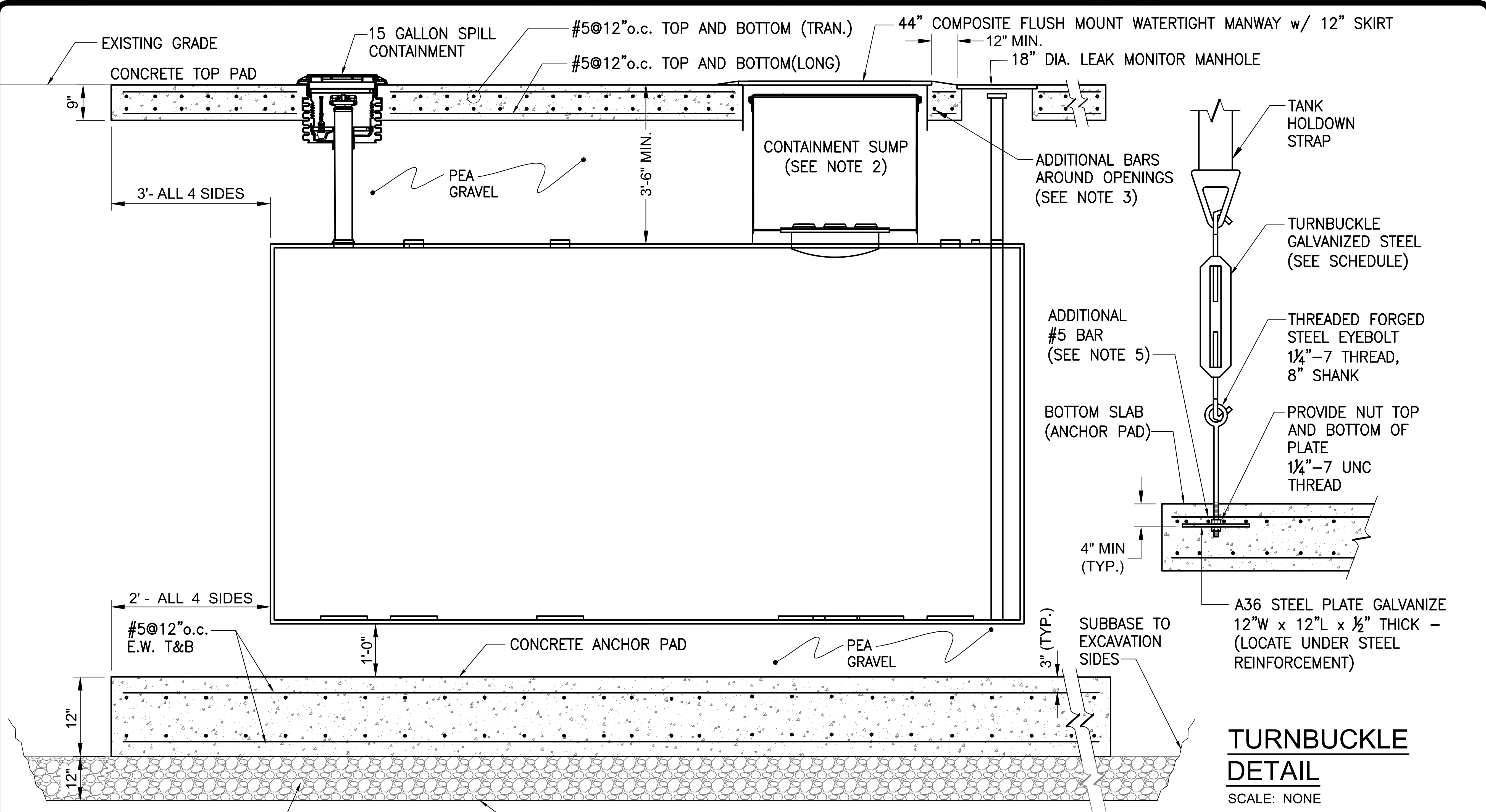
GENERAL SPECIFICATIONS

NO. REQ'D: (1)
CAPACITY: 1000 GALLONS
TYPE: HTC-J, HIGHGUARD, DW TYPE I 360
MATERIAL: MILD CARBON STEEL
FLOW RATE: 100 GPM
GAUGE: BASED ON 60" MAX BURIAL
INNER
SHELL- 7 GA. 10 GA.
HEADS- 7 GA. 10 GA.

SURFACE PREP:
SSPC NO.6 BLAST ALL EXTERIOR SURFACES
SSPC NO.10 BLAST ALL INTERIOR OF WATER CHAMBER ONLY

COATING:	MATERIAL	THICKNESS
EXTERIOR-	HIGHGUARD	(75 MILS)
INTERIOR-	POLYURETHANE	(15 MILS)
	INTERIOR OF WATER CHAMBER	

CONSTRUCTION :
LAP FIT & WELD ALL EXTERIOR SEAMS
OPERATING PRESSURE : ATMOSPHERIC



TURNBUCKLE
DETAIL

SCALE: NONE

NOTES:

1. TANK DRAWING IS A SCHEMATIC DIAGRAM ONLY, AND CAN BE FIBERGLASS OR STEEL AS DIRECTED.
2. 45" SUMPS FOR JACKETED SECONDARY CONTAINMENT TANK AND 42" SUMPS FOR FIBERGLASS TANKS.
3. PROVIDE ADDITIONAL #5 BAR TO FRAME AROUND SLAB PENETRATIONS. EXTEND BAR 2'-0" PAST PENETRATIONS.
4. FOR EXCAVATIONS SUBJECT TO GROUNDWATER INFILTRATION THE CONTRACTOR SHALL INSTALL FILTER FABRIC ON EXCAVATION BOTTOM AND ALL SIDEWALLS UP TO A MINIMUM OF TWO FEET BELOW GRADE SURFACE.
5. PROVIDE ADDITIONAL #5 BAR MINIMUM 3 FEET LONG ON EACH SIDE OF ANCHOR PLATE.

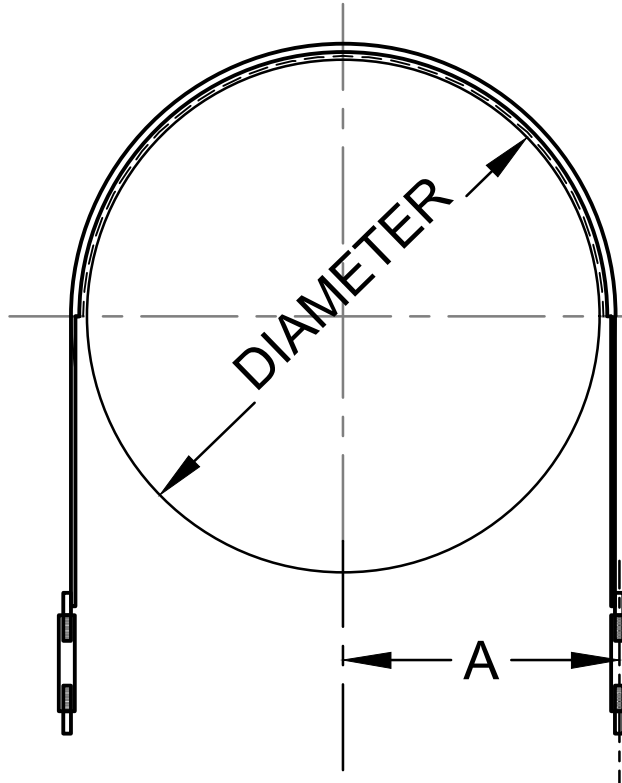
CONCRETE ANCHOR PAD DETAIL

SCALE: NONE

HOLDDOWN STRAP AND TURNBUCKLE SCHEDULE

TANK DIAMETER	STRAP	TURNBUCKLE	HOLE SIZE	"A" DIMENSION
48"	3" X 1/4"	3/4"	7/8"	27"
64"	3" X 1/4"	3/4"	7/8"	35"
72"	3" X 3/8"	1"	1-1/8"	39"
96"	3" X 3/8"	1-1/8"	1-1/4"	51"
120"	4" X 1/2"	1-1/2"	1-5/8"	63"

NOTE: NUMBER OF TANK STRAPS IS AS PER TANK MANUFACTURER RECOMMENDATIONS.



NEW YORK
STATE OF
DESIGN & CONSTRUCTION

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CONSULTANT

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STATE OF NEW YORK
JUDITH L. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
EXPIRATION DATE
12/31/2026

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:

TYPICAL UNDERGROUND
STORAGE TANK
CONCRETE ANCHOR PAD

DRAWING NUMBER:

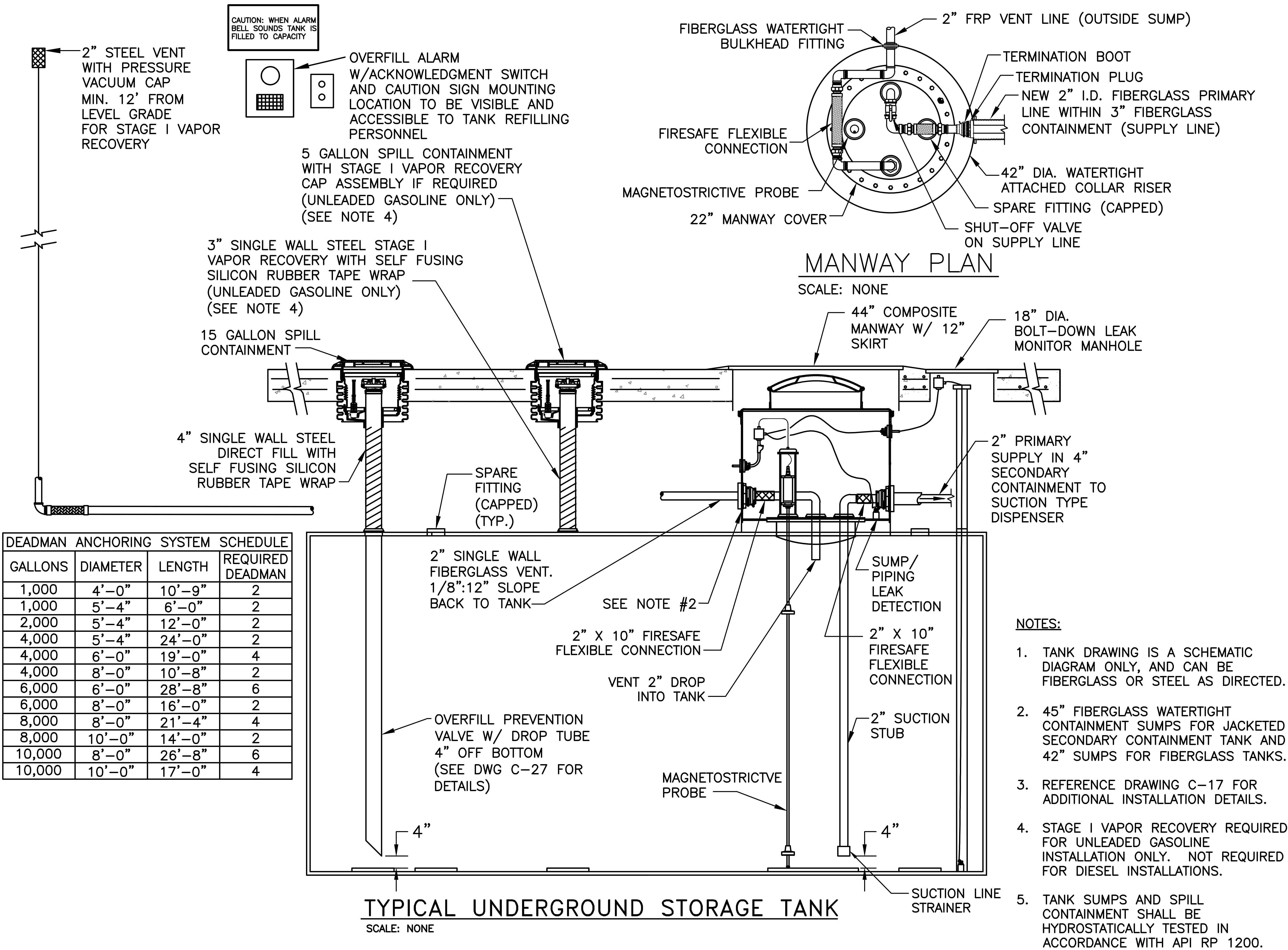
C-17

SHEET

19

OF

51



Office of General Services

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CONSULTANT

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CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION

LOCATION: WESTERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
1/31/2025	FINAL SUBMISSION	

PROJECT NUMBER: 47676 - C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

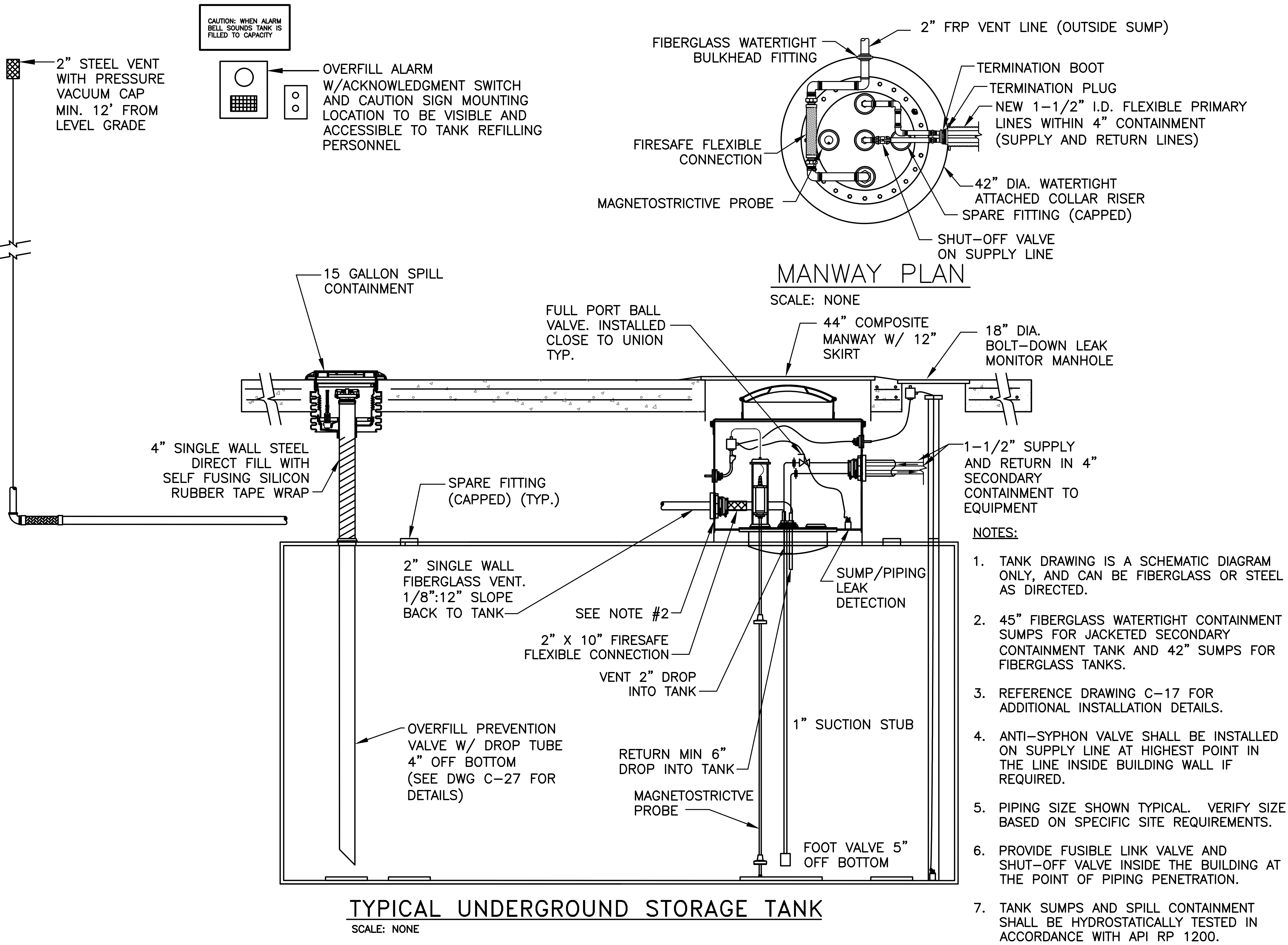
FIELD CHECK: M. WESOLOWSKI

APPROVED: M. WESOLOWSKI

SHEET TITLE: TYPICAL UNDERGROUND FUEL STORAGE TANK UNLEADED GASOLINE OR DIESEL MOTOR FUEL INSTALLATION PACKAGE

DRAWING NUMBER: C-18

SHEET 20 OF 51





Office of
General Services

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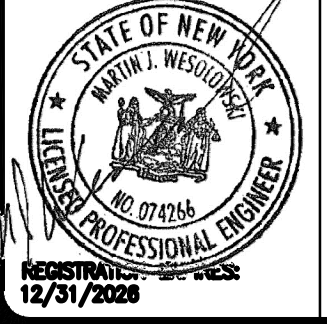
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3 Aerial Way, Syosset, New York

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STATE OF NEW YORK
JEROME L. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
12/31/2025

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

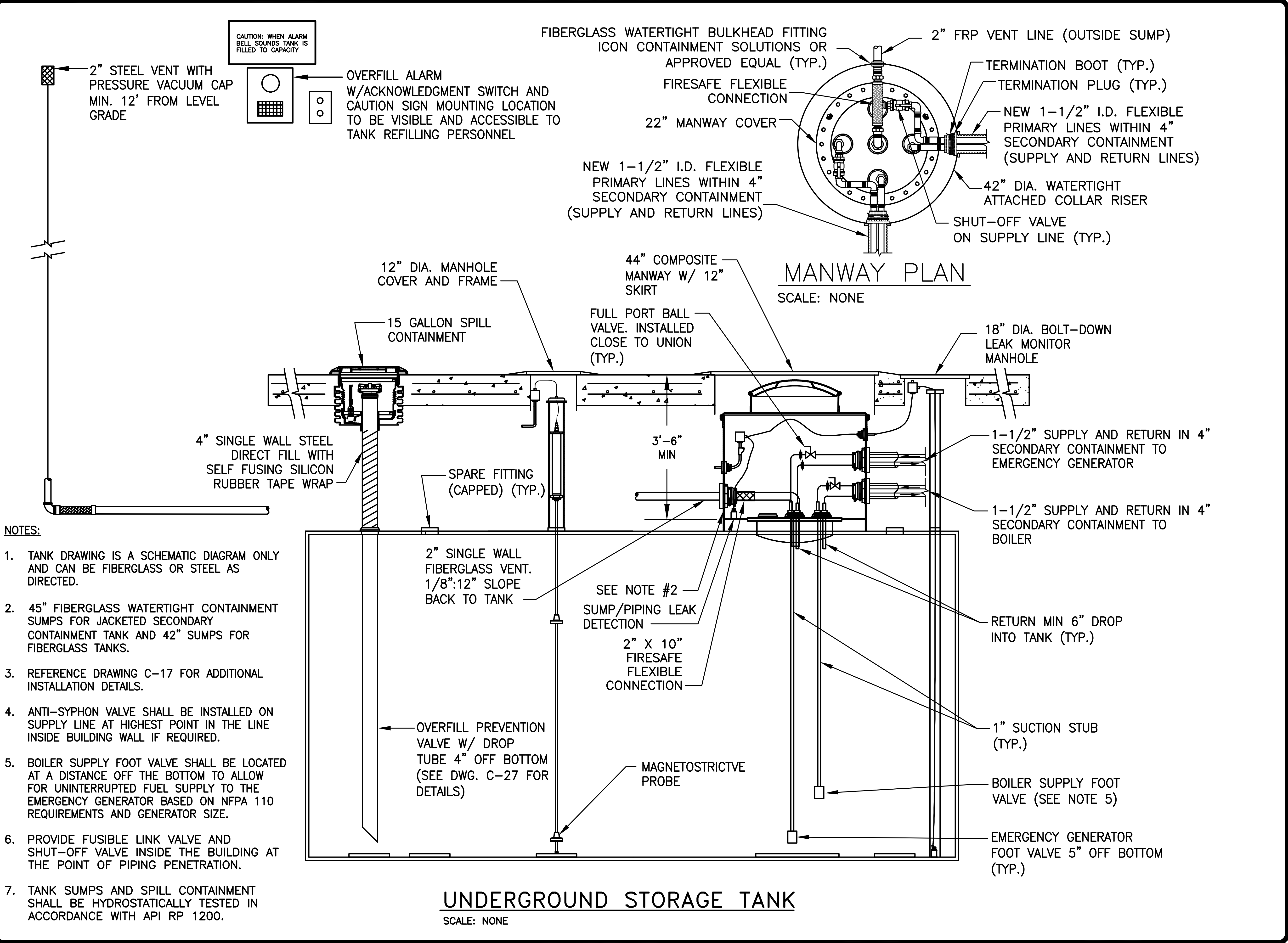
LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:
TYPICAL UNDERGROUND STORAGE
TANK FUEL OIL OR GENERATOR
INSTALLATION PACKAGE

DRAWING NUMBER:
C-19

SHEET 21 OF 51



NEW YORK
STATE
OFFICE OF
GENERAL SERVICES

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905

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M. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
12/31/2026

CONTRACT:

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION

LOCATION: WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

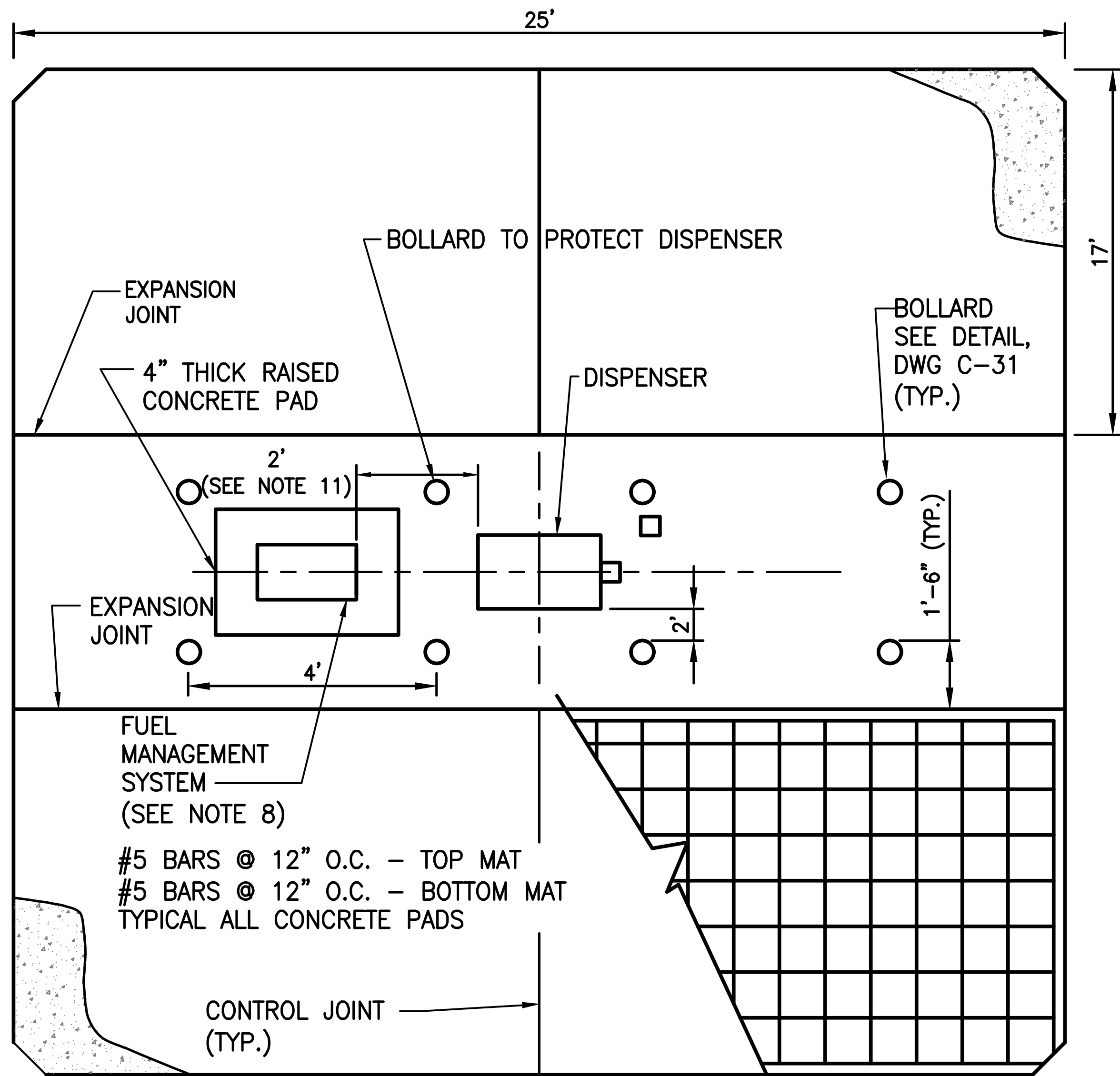
SHEET TITLE:

TYPICAL UNDERGROUND STORAGE TANK BOILER AND DUAL FEED FUEL OIL - EMERGENCY GENERATOR

DRAWING NUMBER:

C-20

SHEET 22 OF 51

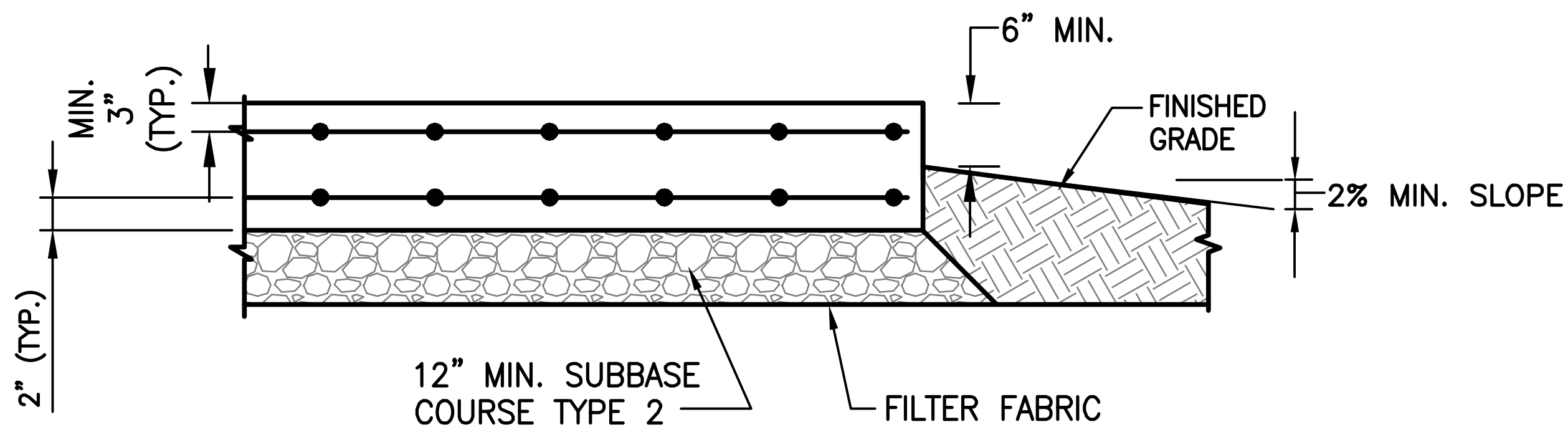


TYPICAL SINGLE HOSE DISPENSER ISLAND PLAN

SCALE: NONE

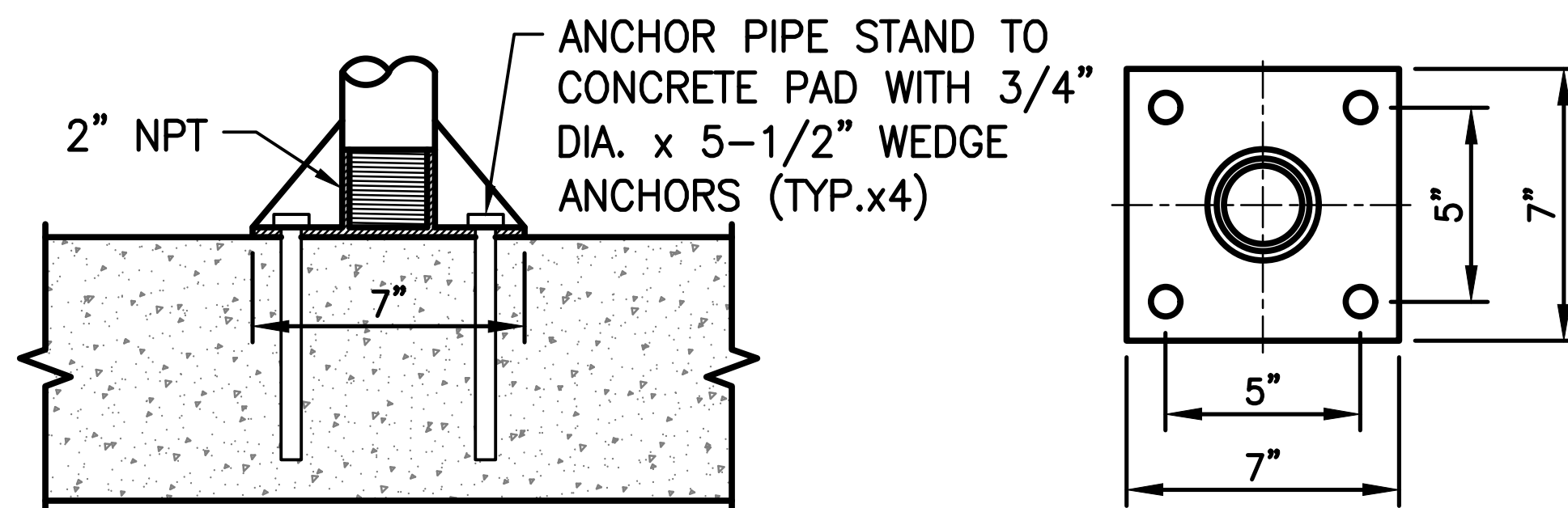
NOTES:

1. FOR FLEXIBLE DOUBLE-WALL PIPE USE 1-1/2" SUPPLY WITH 4" SECONDARY CARRIER PIPE.
2. CHECK FOR UTILITY INTERFERENCE AND LOCATE BOLLARDS ACCORDINGLY.
3. MIN. 6" REVEAL AT DISPENSER LOCATION.
4. DRIVE-ON PAD TO BE MINIMUM 12" THICK.
5. PROVIDE A 1/2" CHAMFER AT ALL EXPOSED CORNERS AND EDGES OF CONCRETE SLABS.
6. INSTALL EMERGENCY FUEL PUMP SHUT-OFF SWITCH BETWEEN 20 AND 100 FEET FROM FUEL DISPENSER.
7. PROVIDE A 20-POUND ABC-RATED (MINIMUM 40-B:C) FIRE EXTINGUISHER NOT MORE THAN 75 FEET FROM STORAGE TANK.
8. FOR ASSET WORKS FUEL MANAGEMENT SYSTEMS, STUB UP ALL REQUIRED CONDUIT IN AN 11" X 11" AREA (SEE DWG. C-41).
9. GASOLINE DISPENSER HOSE SHALL BE 15' IN LENGTH (ONE 5' HOSE AND 10' HOSE WITH A DISCONNECT IN BETWEEN).
10. DIESEL DISPENSER HOSE SHALL BE 18' IN LENGTH (TWO 9' HOSES).
11. DISPENSER SHALL BE 2' FROM THE FUEL MANAGEMENT SYSTEM OR THE FUEL MANAGEMENT SYSTEM ENCLOSURE.



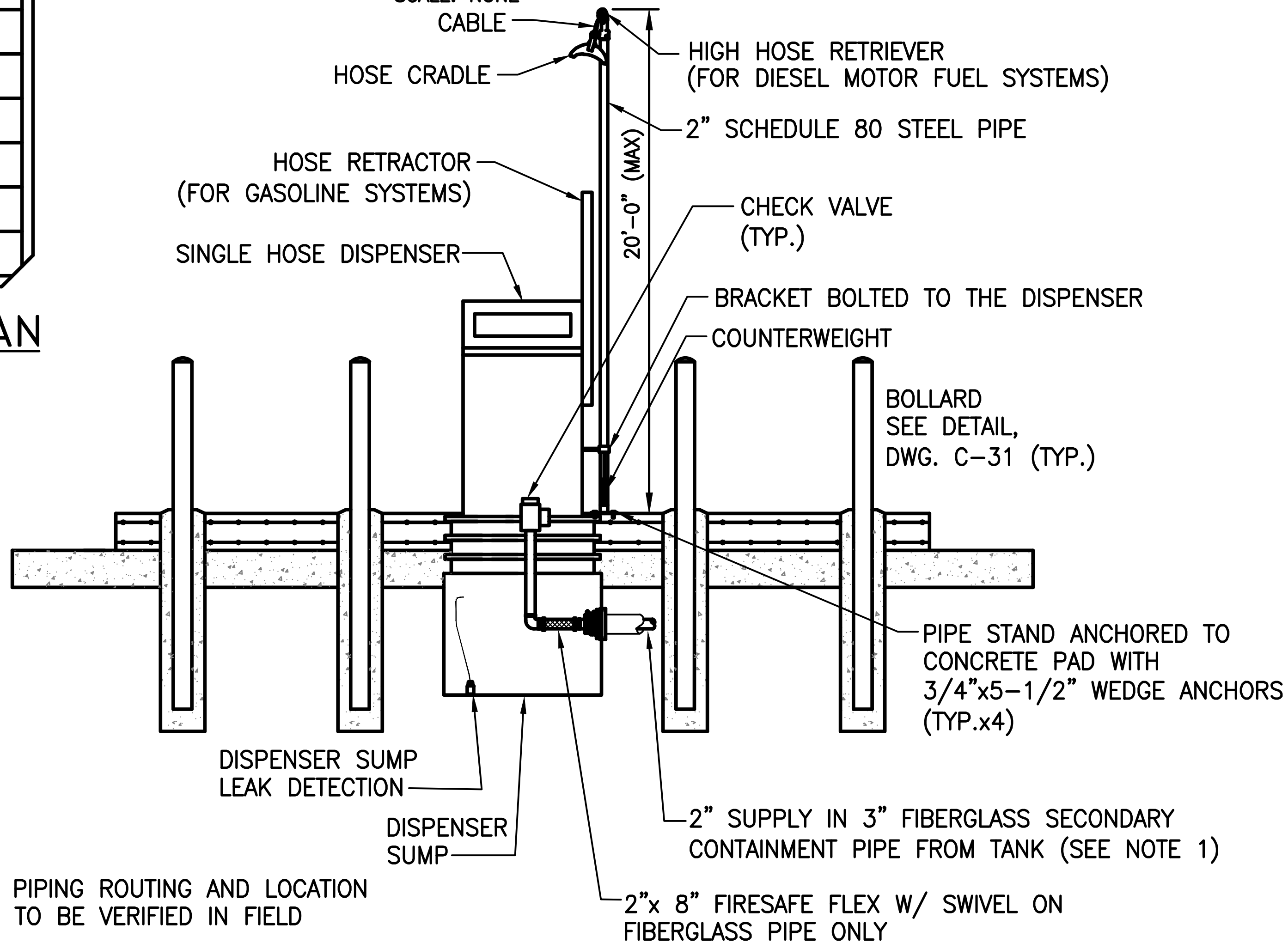
DISPENSER FOUNDATION DETAIL

SCALE: NONE



PIPE STAND DETAIL

SCALE: NONE



PIPING ROUTING AND LOCATION TO BE VERIFIED IN FIELD

TYPICAL SINGLE HOSE ISLAND ELEVATION

SCALE: NONE

NEW YORK STATE OF COURTESY. Office of General Services
DESIGN & CONSTRUCTION

CONSULTANT
CERTIFICATE OF AUTHORIZATION #: 0017985
LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

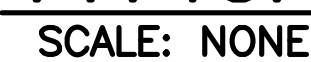
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STATE OF NEW YORK
LARRY J. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
12/31/2025

CONTRACT
CONSTRUCTION
TITLE:
FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION
LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE:	SINGLE HOSE DISPENSER ISLAND AND CONCRETE PAD DETAIL	
DRAWING NUMBER:	C-21	
SHEET	23	OF 51



1. FOR FLEXIBLE DOUBLE-WALL PIPE USE 1-1/2" SUPPLY WITH 4" SECONDARY CARRIER PIPE.
2. CHECK FOR UTILITY INTERFERENCE AND LOCATE BOLLARDS ACCORDINGLY.
3. MIN. 6" REVEAL AT DISPENSER LOCATION.
4. DRIVE-ON PAD TO BE MINIMUM 12" THICK.
5. PROVIDE A 1/2" CHAMFER AT ALL EXPOSED CORNERS AND EDGES OF CONCRETE SLABS.
6. INSTALL EMERGENCY FUEL PUMP SHUT-OFF SWITCH BETWEEN 20 AND 100 FEET FROM FUEL DISPENSER.
7. PROVIDE A 20-POUND ABC-RATED (MINIMUM 40-B:C) FIRE EXTINGUISHER NOT MORE THAN 75 FEET FROM STORAGE TANK.
8. FOR ASSET WORKS FUEL MANAGEMENT SYSTEMS, STUB UP ALL REQUIRED CONDUIT IN AN 11" X 11" AREA (SEE DWG. C-41).
9. GASOLINE DISPENSER HOSE SHALL BE 15' IN LENGTH (ONE 5' HOSE AND ONE 10' HOSE WITH A DISCONNECT IN BETWEEN).
10. DIESEL DISPENSER HOSE SHALL BE 18' IN LENGTH (TWO 9' HOSES).
11. DISPENSER SHALL BE 2' FROM THE FUEL MANAGEMENT SYSTEM OR THE FUEL MANAGEMENT SYSTEM ENCLOSURE.



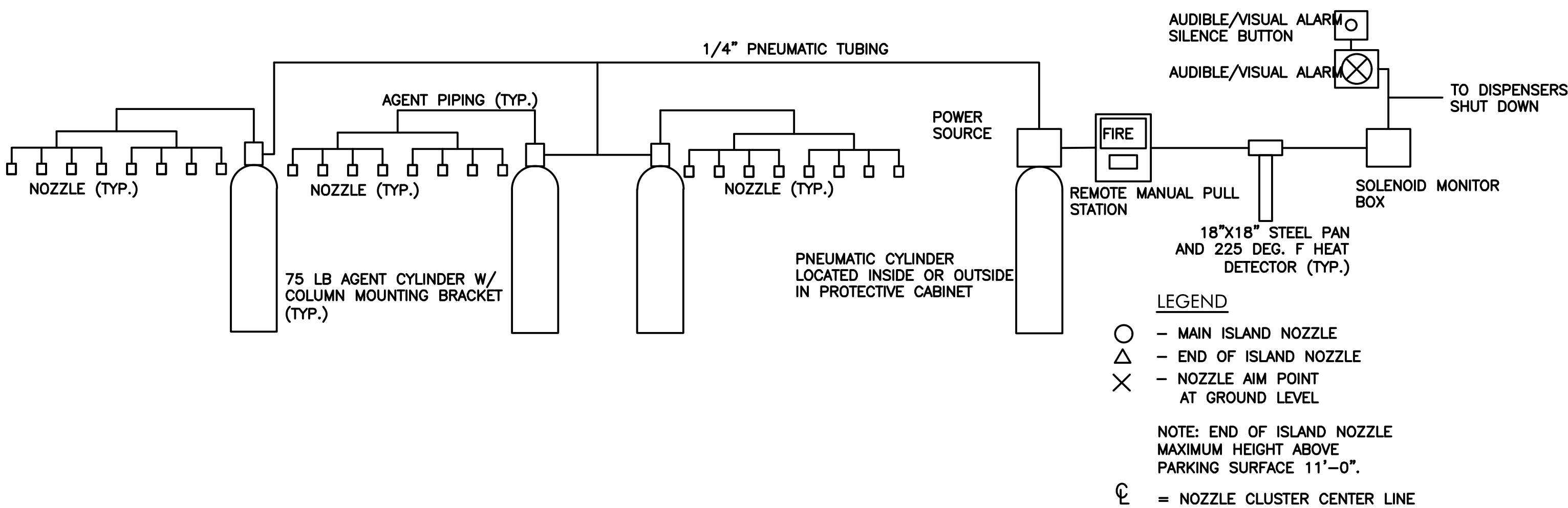
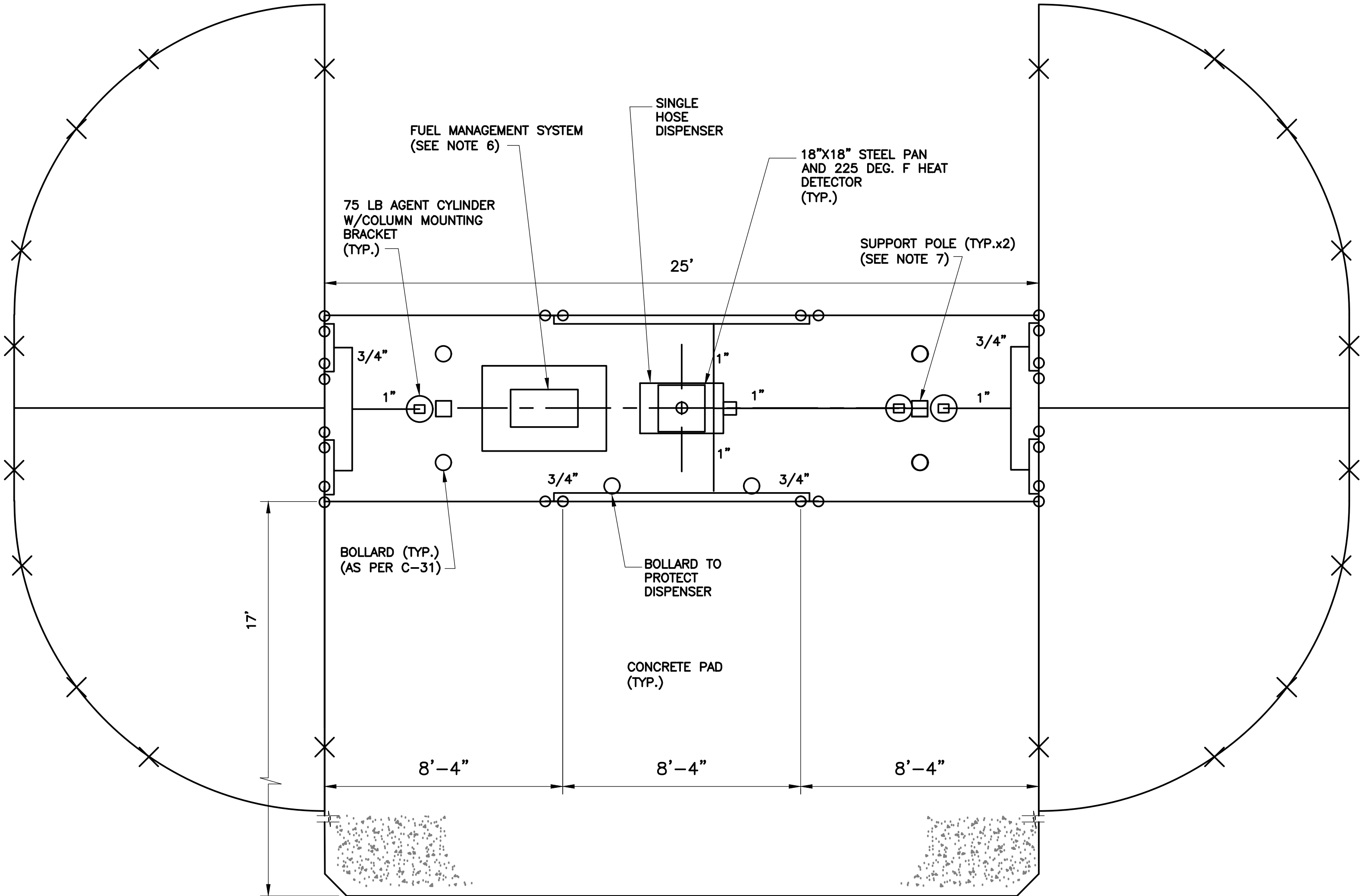
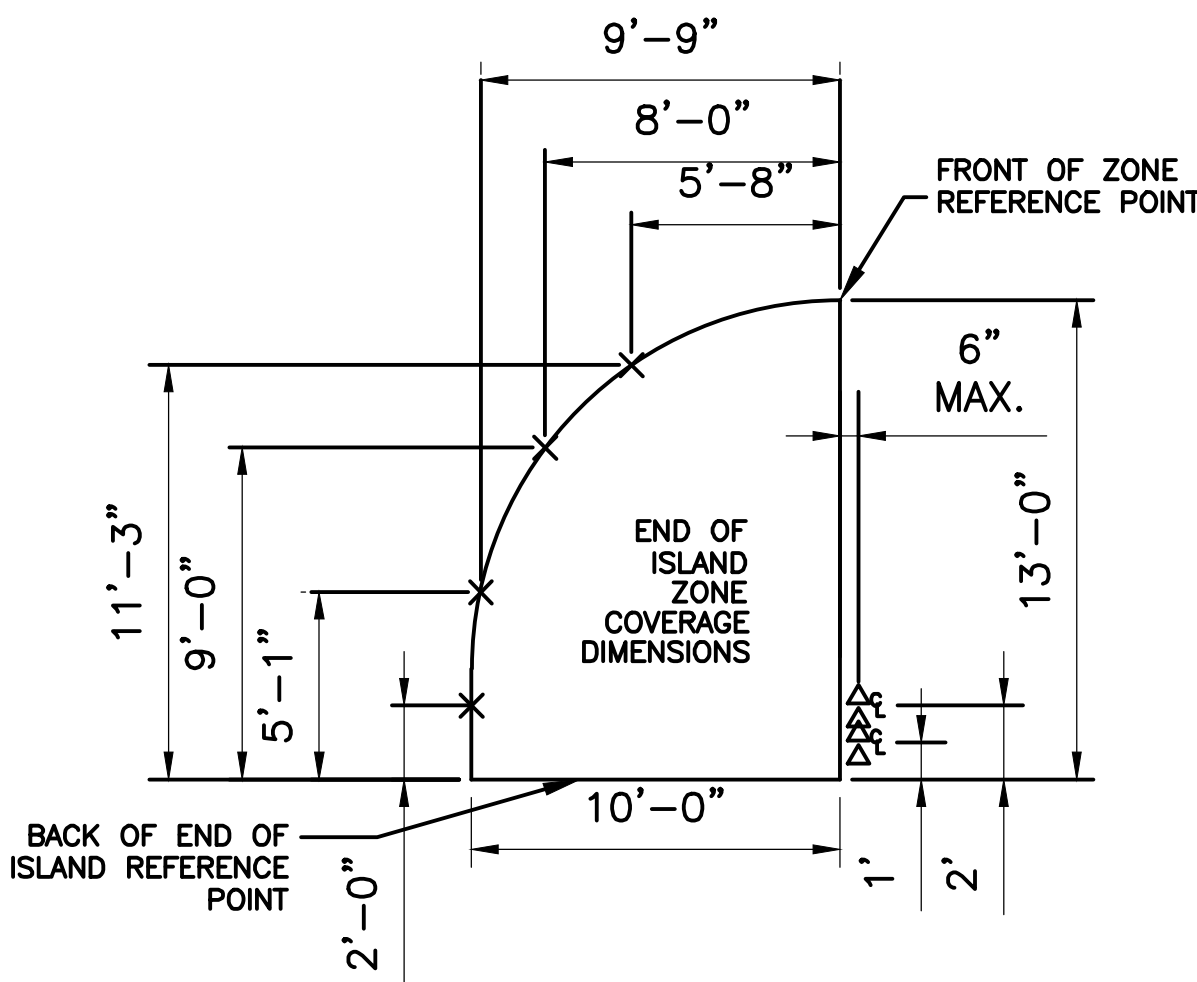
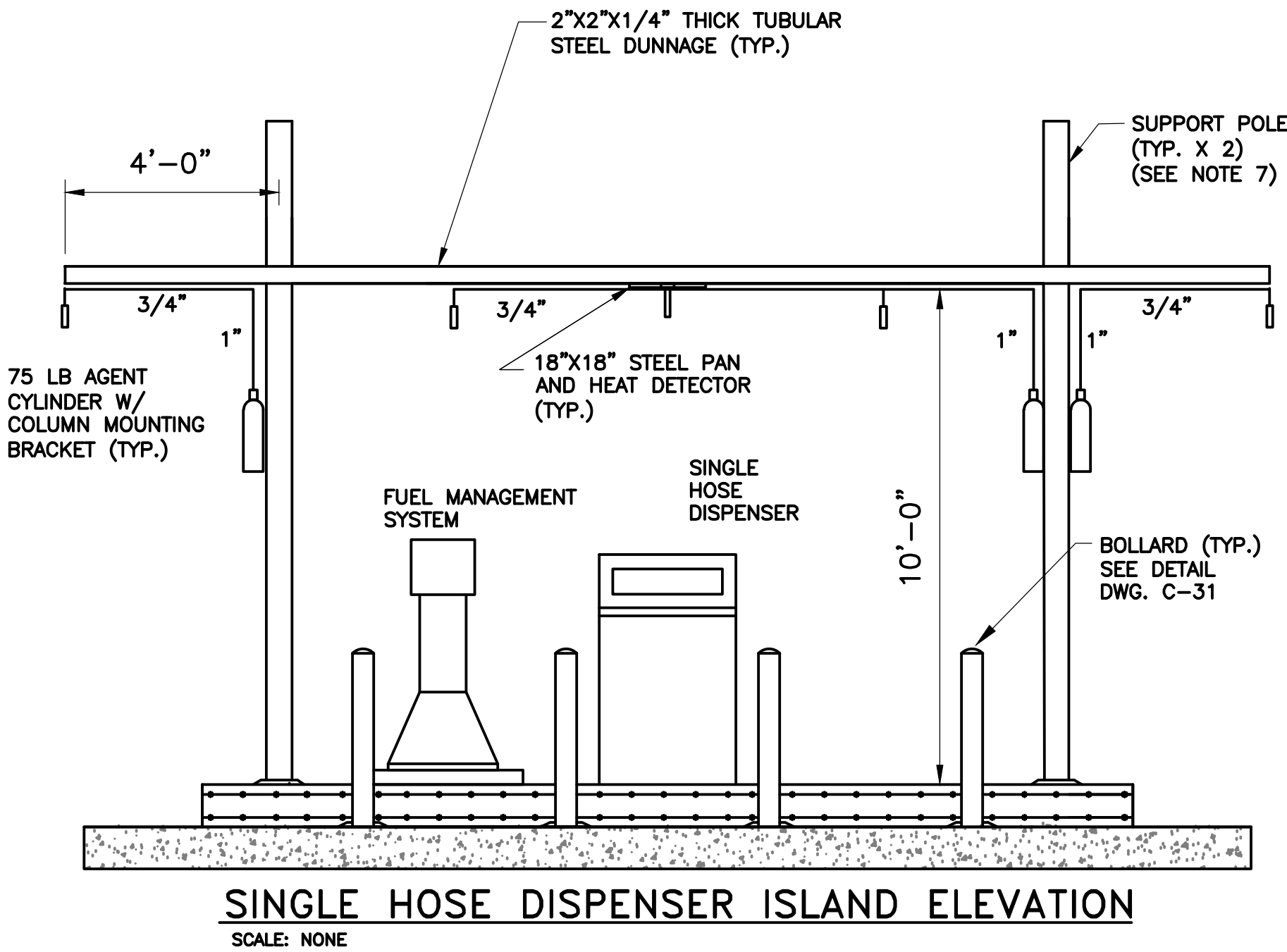
MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676 - C	
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:
SINGLE HOSE
DISPENSER ISLAND
FIRE SUPPRESSION
DETAILS

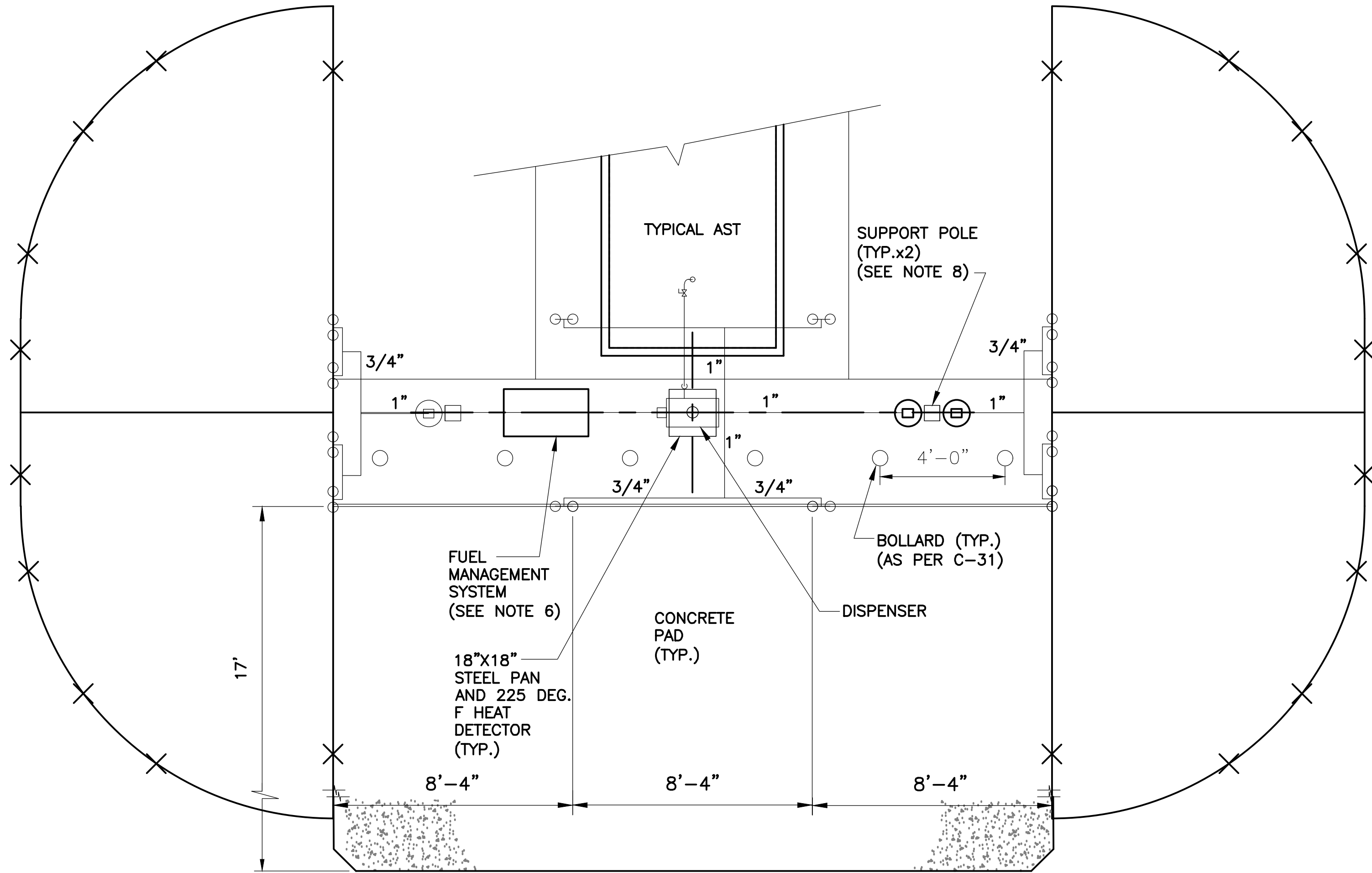
DRAWING NUMBER:
C-23

NOTES:

1. NUMBER OF NOZZLES AND PIPE SIZES ARE DIAGRAM ONLY. ACTUAL PIPE SIZE AND ROUTING TO BE VENDER CERTIFIED AND DESIGNED FOR HAZARD AREA.
2. SYSTEM TO BE UL1254 AND AS PER NFPA-17.
3. DUNNAGE LAYOUT TO BE SUBMITTED FOR DIRECTOR APPROVAL.
4. INSTALL EMERGENCY FUEL PUMP SHUT-OFF SWITCH BETWEEN 20 AND 100 FEET FROM FUEL DISPENSER.
5. FIRE SUPPRESSION SYSTEM MAY BE TIED INTO THE FACILITY'S CENTRAL ALARM SYSTEM. TIE-IN LOCATION AND ARRANGEMENT SHALL BE DETERMINED ON A SITE BY SITE BASIS. CONTRACTOR TO PROVIDE WIRE AND CONDUIT TO ALARM PANEL. FACILITY TO PROVIDE FINAL CONNECTION TO CENTRAL PANEL.
6. FOR ASSET WORKS FUEL MANAGEMENT SYSTEMS, STUB UP ALL REQUIRED CONDUIT IN AN 11" X 11" AREA.
7. FIRE SUPPRESSION SYSTEM SUPPORT POLES ARE PROHIBITED FROM BEING USED AS LIGHTING SUPPORT POLES. PROVIDE LIGHT POLES SEPARATELY.



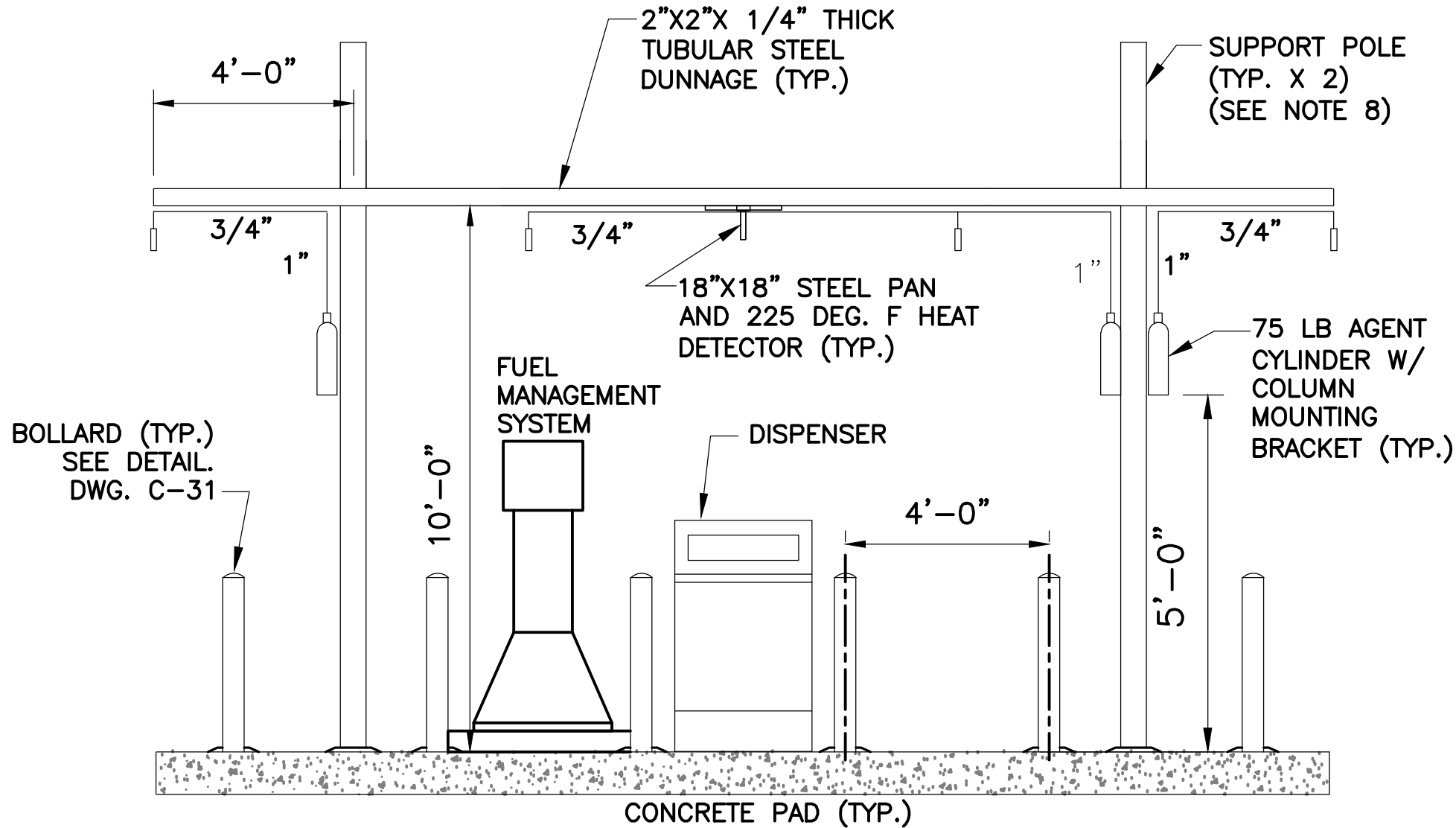
FIRE SUPPRESSION SCHEMATIC DIAGRAM
SCALE: NONE



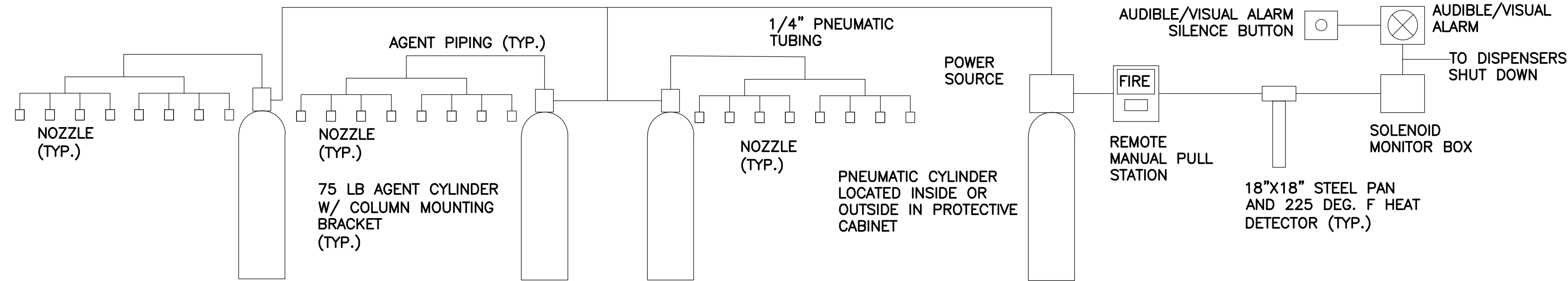
DUAL HOSE DISPENSER ISLAND PLAN
SCALE: NONE

NOTES:

1. NUMBER OF NOZZLES AND PIPE SIZES ARE DIAGRAM ONLY. ACTUAL PIPE SIZE AND ROUTING TO BE VENDER CERTIFIED AND DESIGNED FOR HAZARD AREA.
2. SYSTEM TO BE UL1254 AND AS PER NFPA-17.
3. DUNNAGE LAYOUT TO BE SUBMITTED FOR DIRECTOR APPROVAL.
4. INSTALL EMERGENCY FUEL PUMP SHUT-OFF SWITCH BETWEEN 20 AND 100 FEET FROM FUEL DISPENSER.
5. FIRE SUPPRESSION SYSTEM MAY BE TIED INTO THE FACILITY'S CENTRAL ALARM SYSTEM. TIE-IN LOCATION AND ARRANGEMENT SHALL BE DETERMINED ON A SITE BY SITE BASIS. CONTRACTOR TO PROVIDE WIRE AND CONDUIT TO ALARM PANEL. FACILITY TO PROVIDE FINAL CONNECTION TO CENTRAL PANEL.
6. AVOID HOSE ARCS INTERSECTING TO MINIMIZE AREA COVERED BY FIRE SUPPRESSION SYSTEM.
7. FOR ASSET WORKS FUEL MANAGEMENT SYSTEMS, STUB UP ALL REQUIRED CONDUIT IN AN 11" X 11" AREA.
8. FIRE SUPPRESSION SYSTEM SUPPORT POLES ARE PROHIBITED FROM BEING USED AS LIGHTING SUPPORT POLES. PROVIDE LIGHT POLES SEPARATELY.



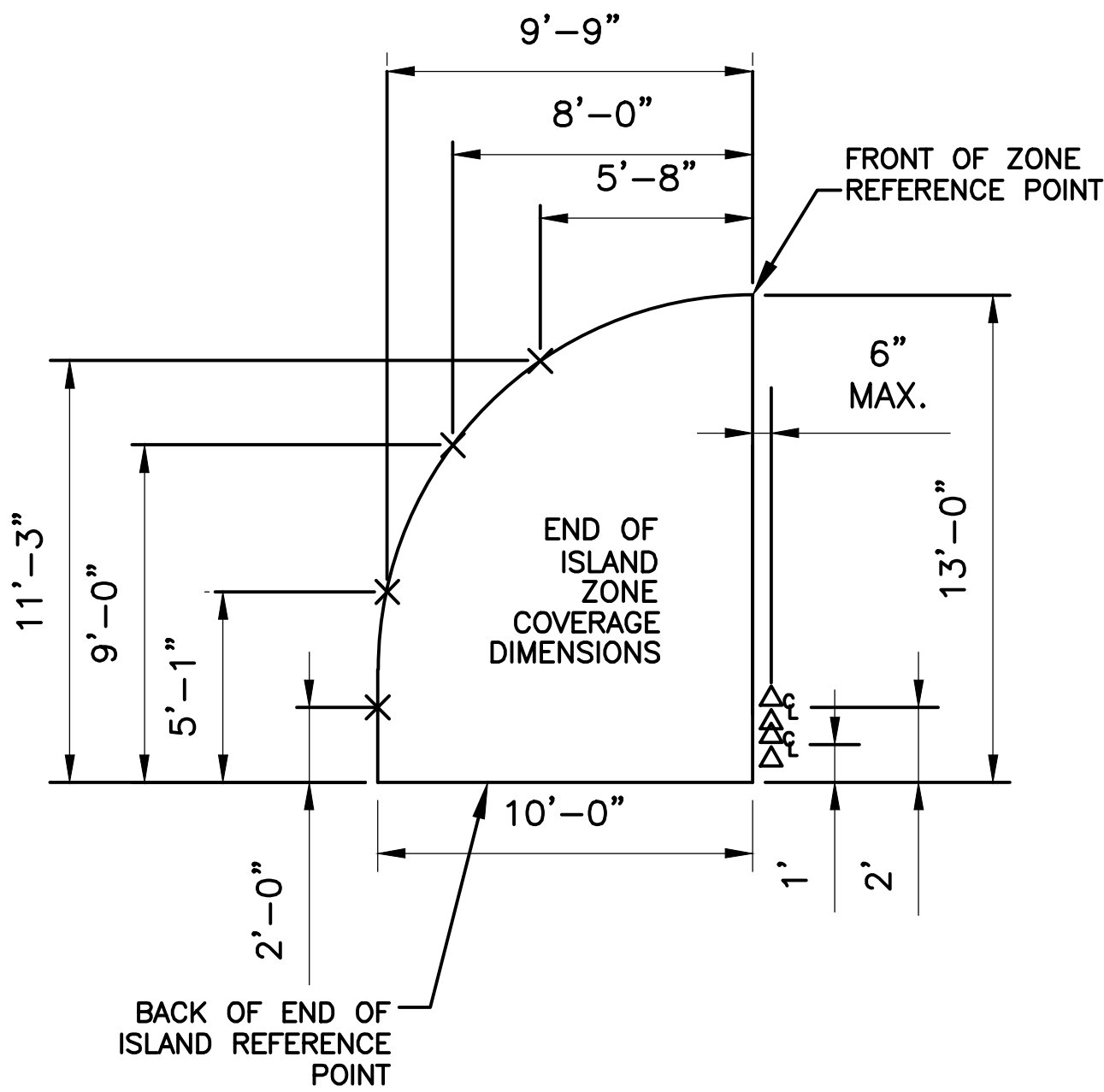
DUAL HOSE DISPENSER ISLAND ELEVATION
SCALE: NONE



FIRE SUPPRESSION SCHEMATIC DIAGRAM
SCALE: NONE

LEGEND

- - MAIN ISLAND NOZZLE
 - △ - END OF ISLAND NOZZLE
 - × - NOZZLE AIM POINT AT GROUND LEVEL
 - ⊕ = NOZZLE CLUSTER CENTER LINE
- NOTE: END OF ISLAND NOZZLE MAXIMUM HEIGHT ABOVE PARKING SURFACE 11'-0".



TYPICAL NOZZLE AIMING POINTS DETAIL
SCALE: NONE



Office of
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CERTIFICATE OF AUTHORIZATION #: 0017905



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STATE OF NEW YORK
JEROME L. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
12/31/2025

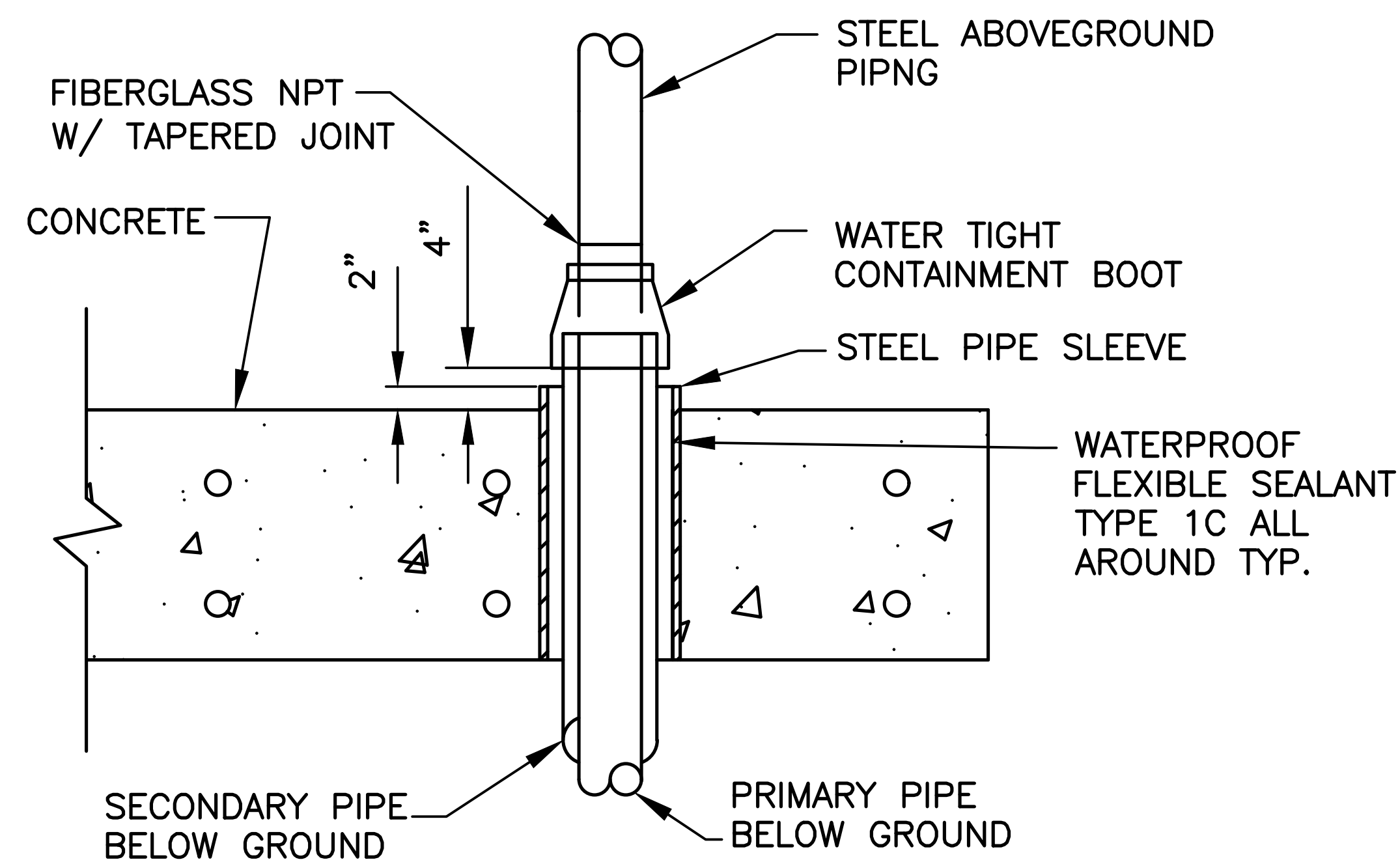
CONTRACT:

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

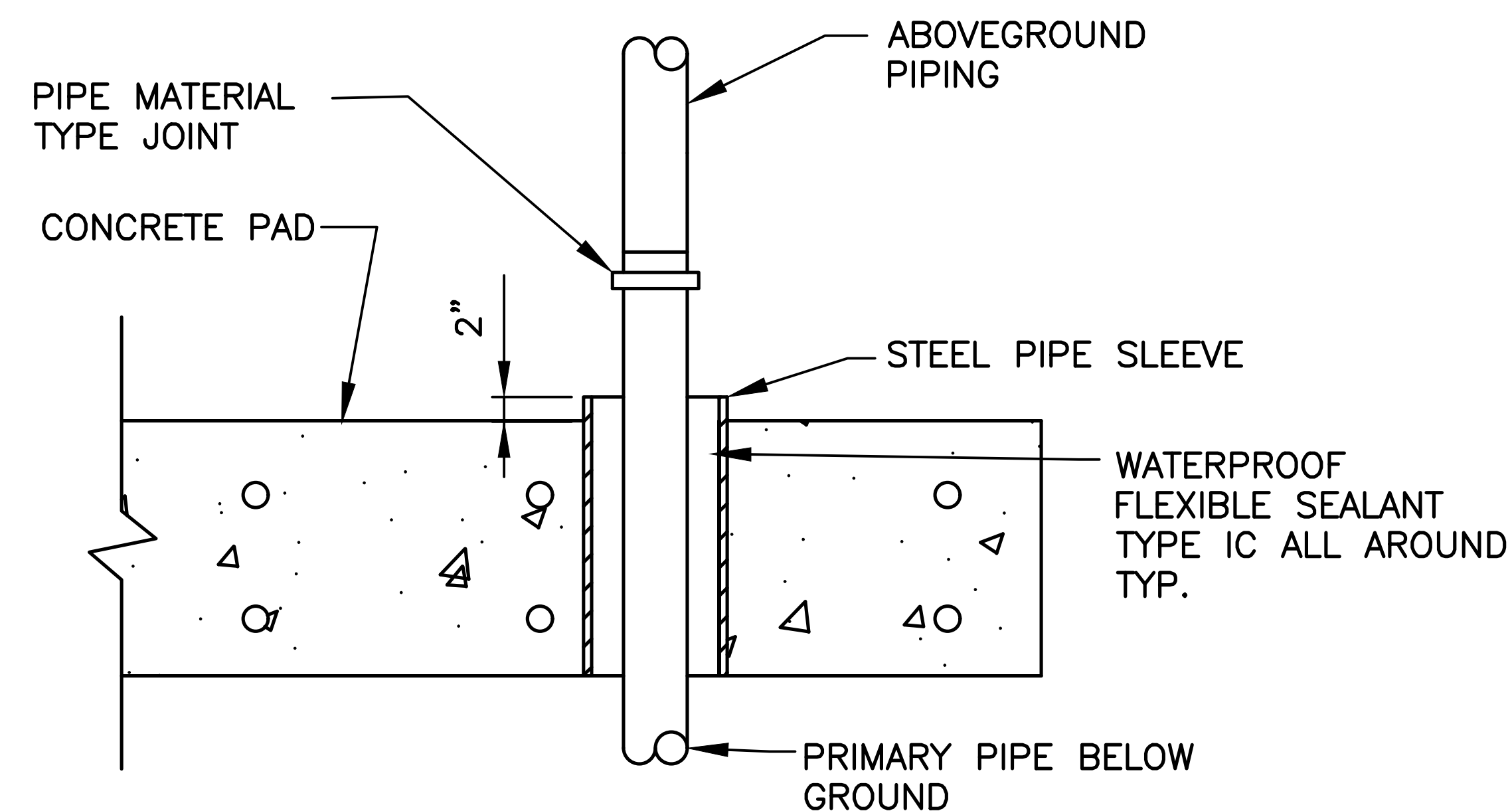
LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE:	ABOVEGROUND FUEL STORAGE TANK SINGLE AND DUAL HOSE DISPENSER AND ISLAND DETAILS	
DRAWING NUMBER:	C-25	
SHEET	27	OF 51



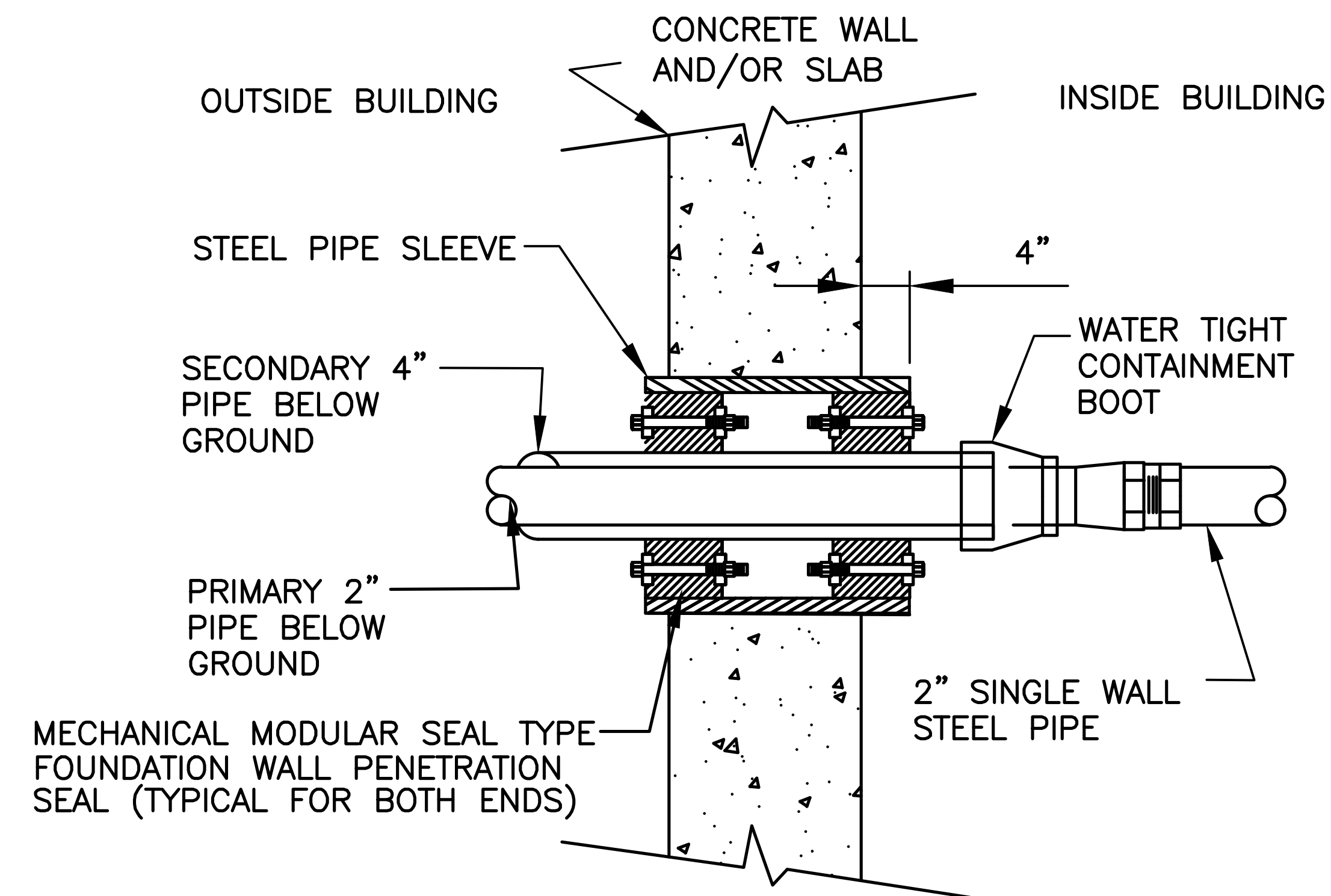
DOUBLEWALL PIPING SLAB PENETRATION DETAIL

SCALE: NONE



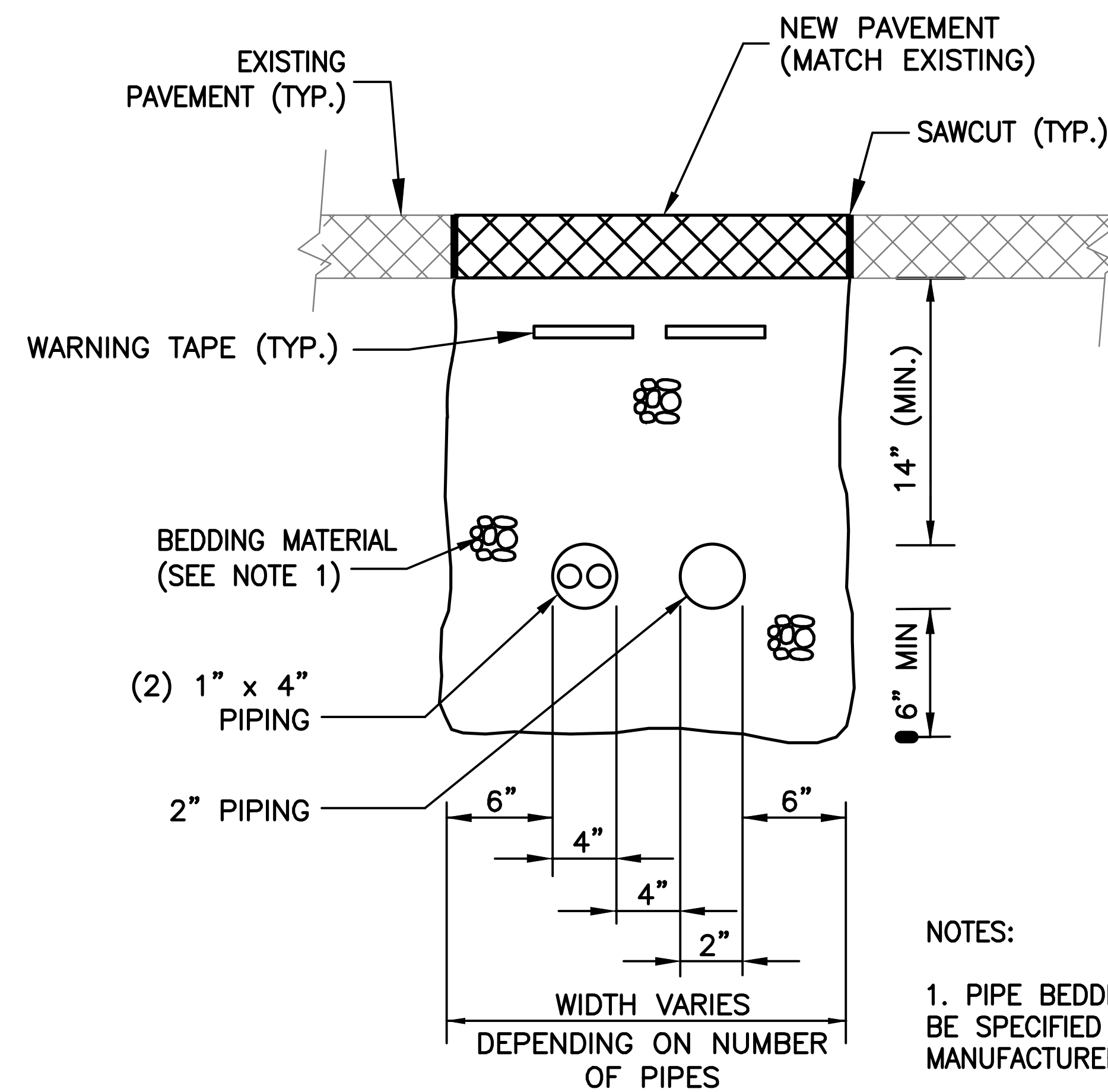
SINGLEWALL SLAB PENETRATION DETAIL

SCALE: NONE



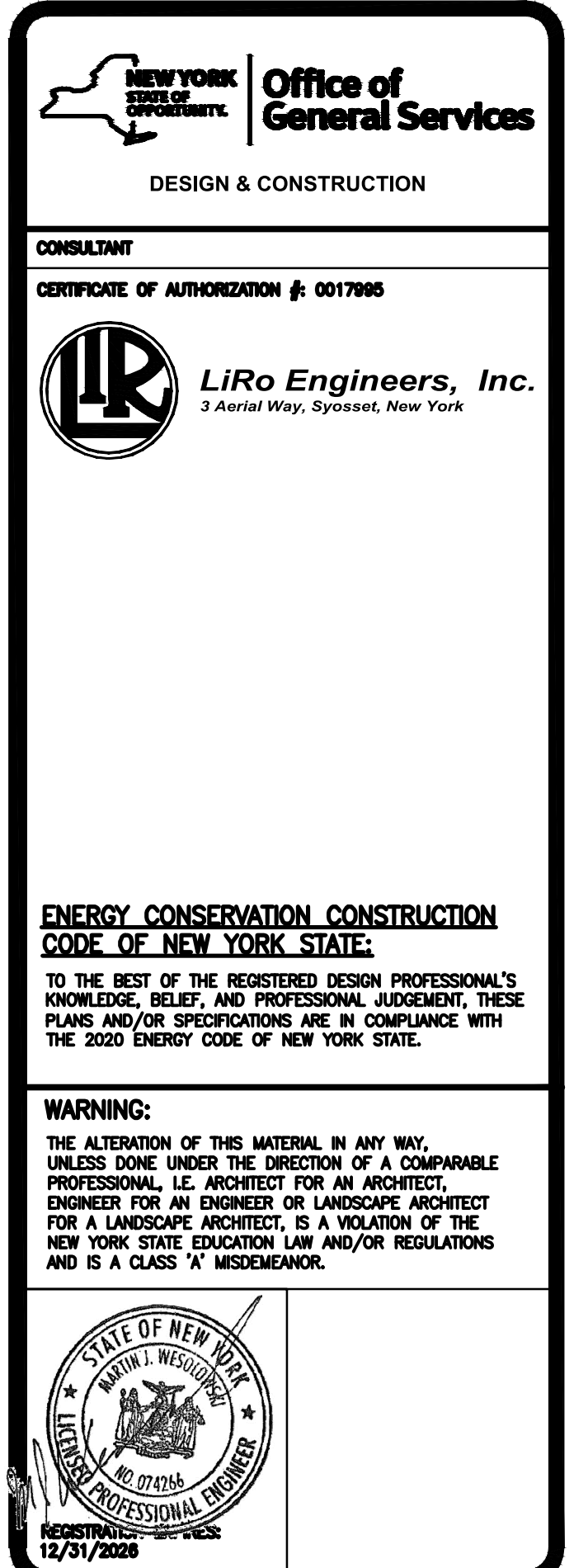
WATER TIGHT PENETRATION DETAIL

SCALE: NONE



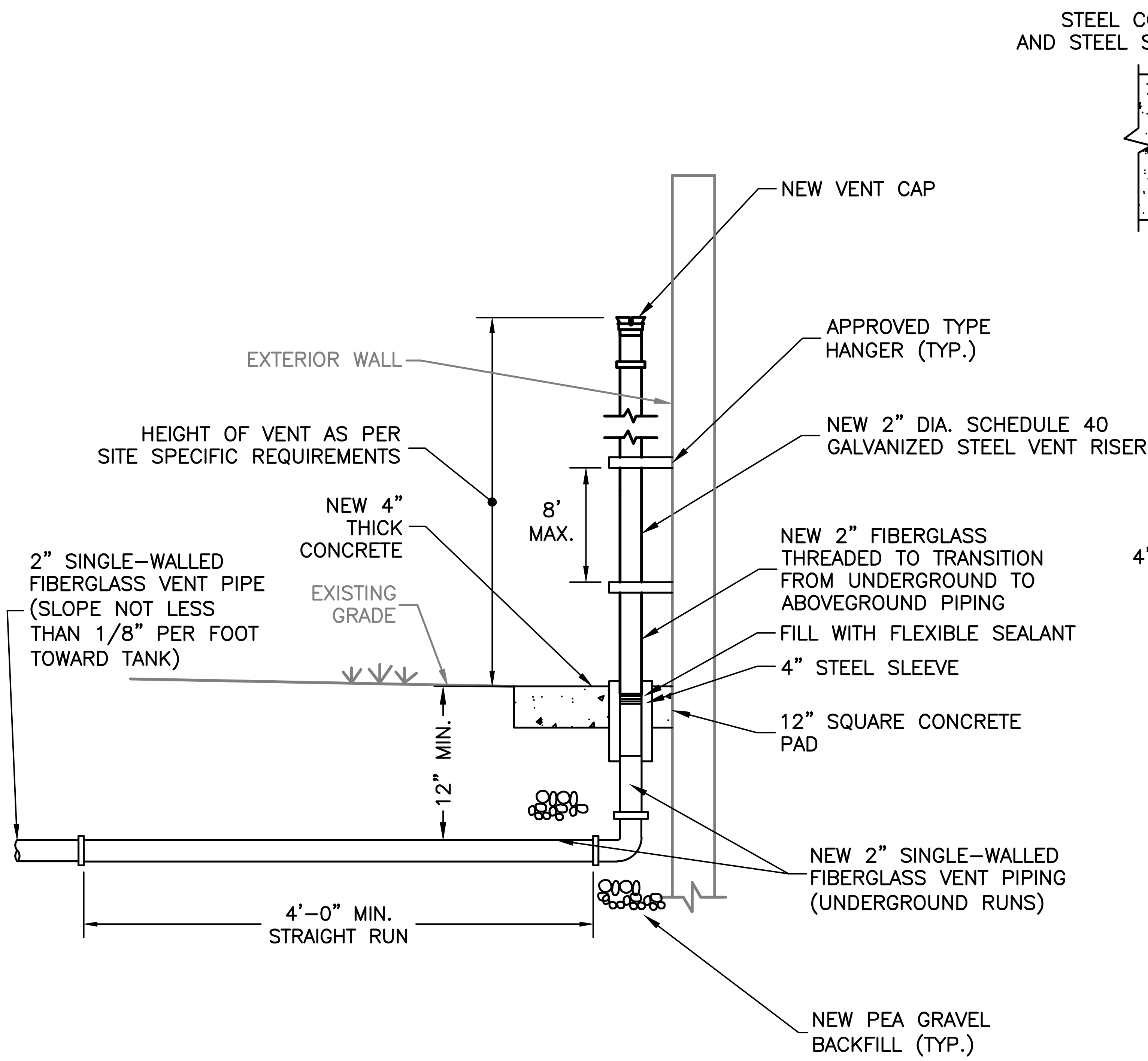
PIPING TRENCH DETAIL

SCALE: NONE

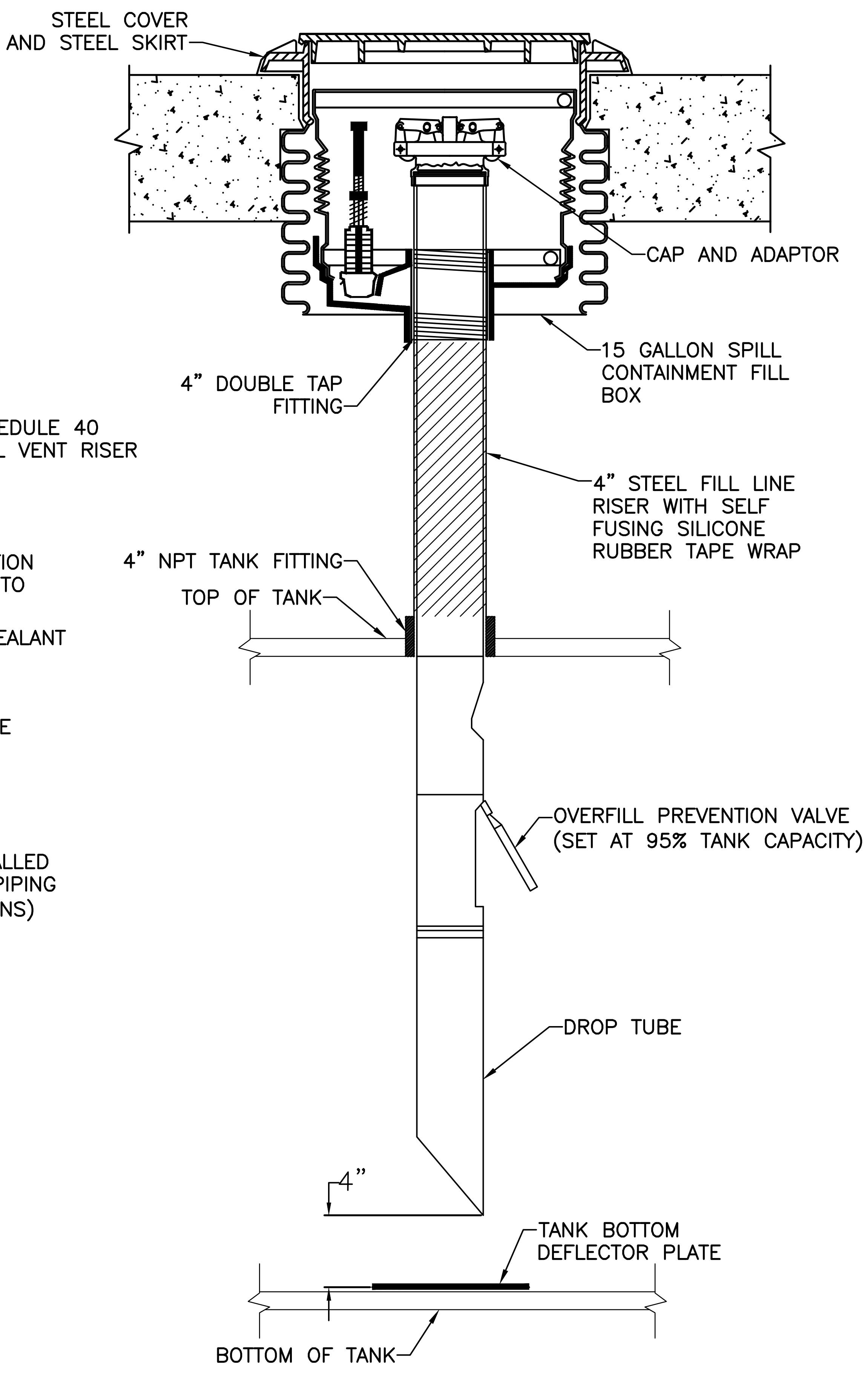


CONTRACT:	
CONSTRUCTION	
TITLE:	FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION
LOCATION:	WESTERN REGION VARIOUS FACILITIES

	1/31/2025	FINAL SUBMISSION
MARK	DATE	DESCRIPTION
PROJECT NUMBER:	47676 — C	
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE:		
PIPING PENETRATION & TRENCH DETAILS		
DRAWING NUMBER:		
C-26		
SHEET	28	OF 51



VENT PIPING
SCALE: NONE



OVERFILL VALVE DETAIL
SCALE: NONE



Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985



LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

ENERGY CONSERVATION CONSTRUCTION
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STATE OF NEW YORK
JULIAN I. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
12/31/2028

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER: 47676 - C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

FIELD CHECK: M. WESOLOWSKI

APPROVED: M. WESOLOWSKI

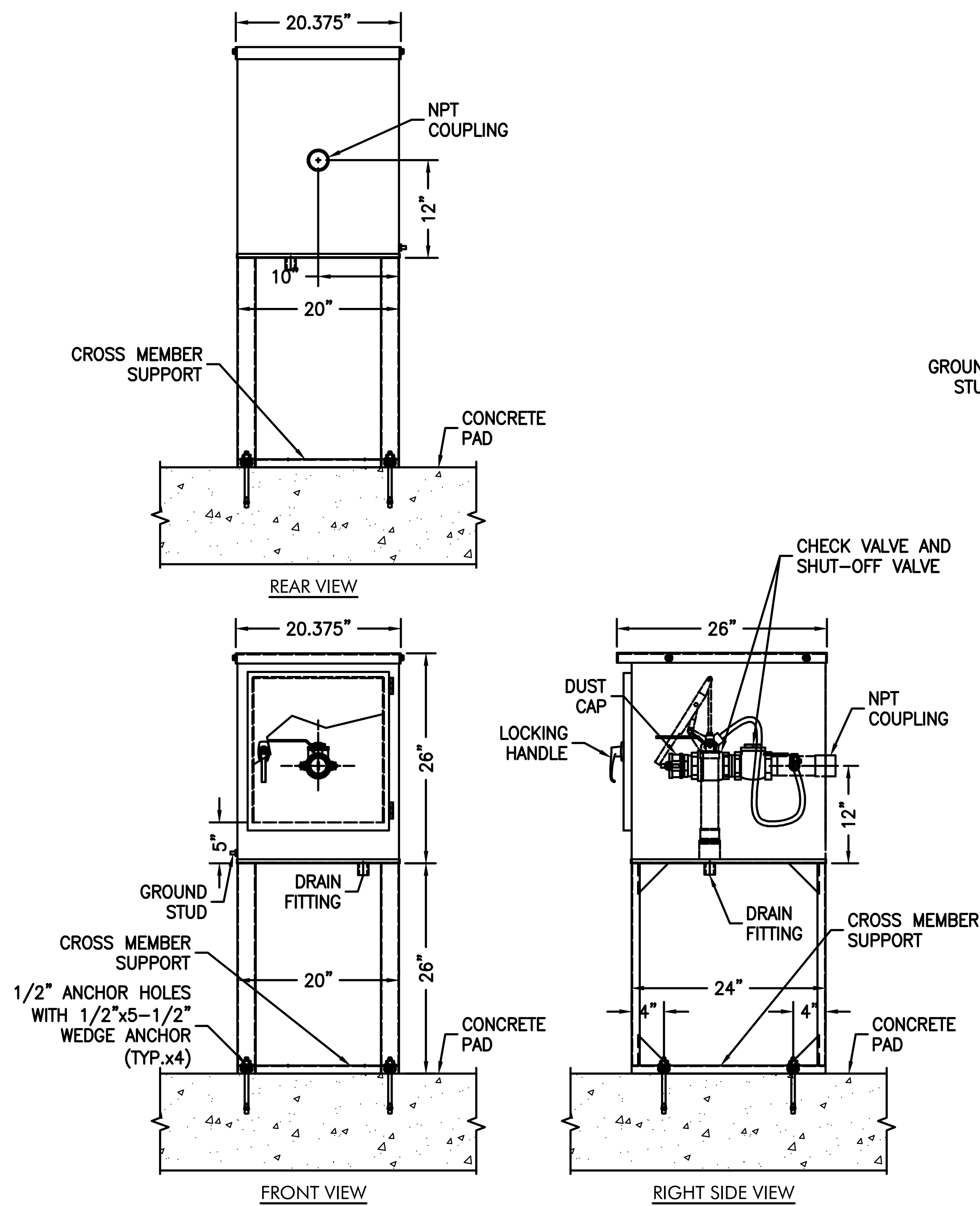
SHEET TITLE:

UST
OVERFILL VALVE AND
VENT PIPING
DETAIL

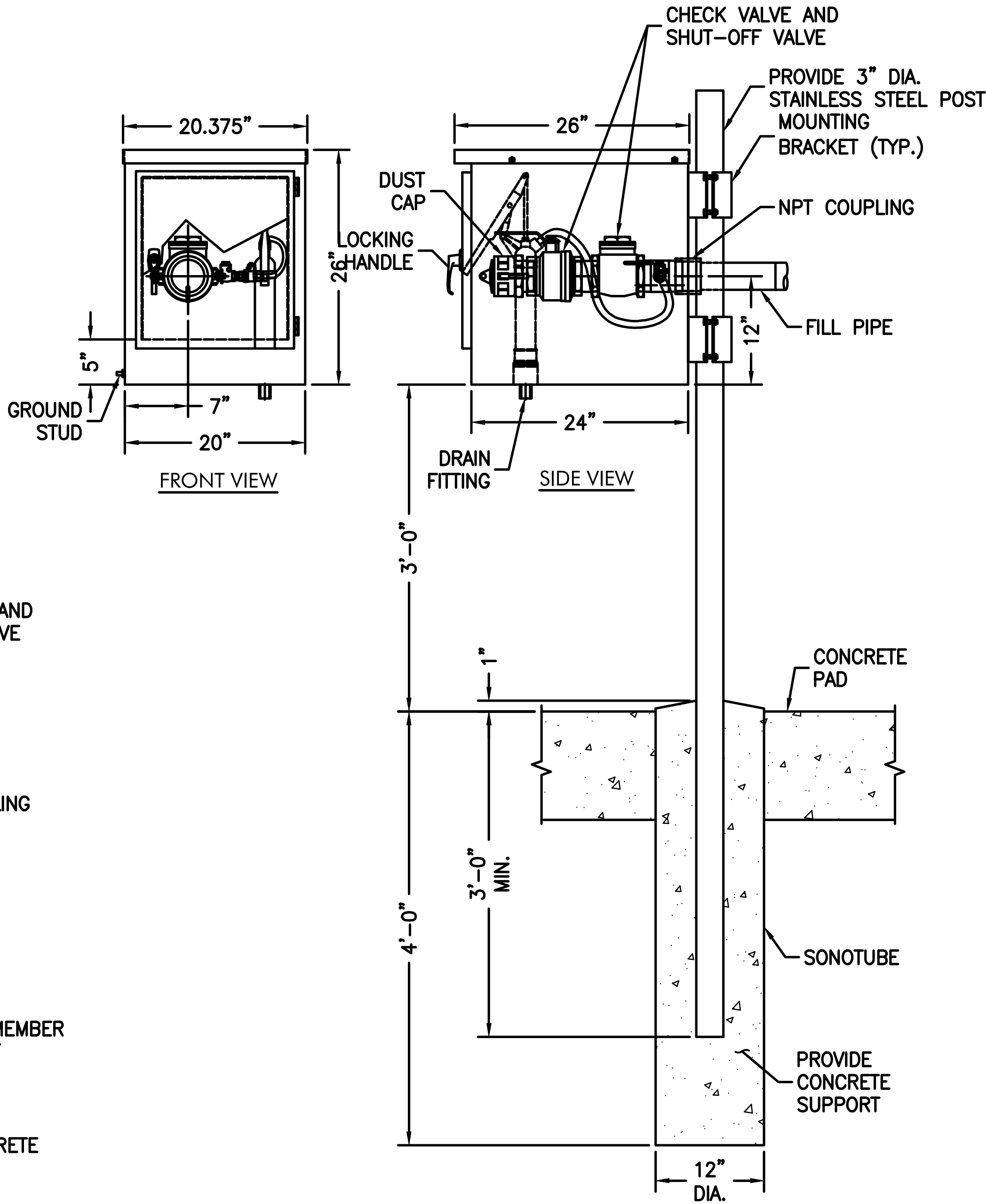
DRAWING NUMBER:

C-27

SHEET 29 OF 51



TYPICAL SPILL CONTAINMENT STAND MOUNT DETAIL
SCALE: NONE



TYPICAL SPILL CONTAINMENT POST MOUNT DETAIL
SCALE: NONE

10-GALLON SPILL CONTAINMENT
FAIRFIELD INDUSTRIES ARFP SERIES OR EQUAL



DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985



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STATE OF NEW YORK
JEROME L. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
12/31/2026

CONTRACT:

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER: 47676 — C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

FIELD CHECK: M. WESOLOWSKI

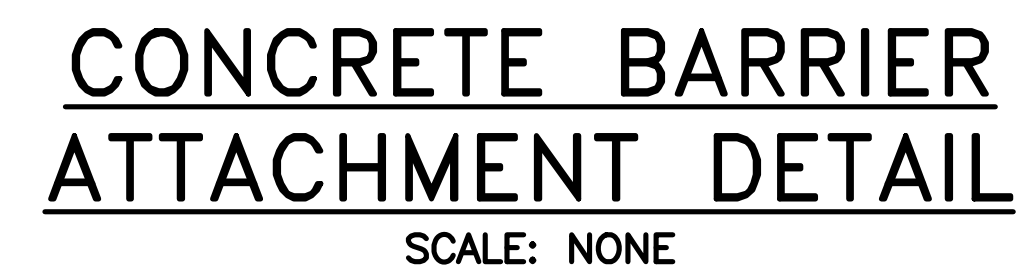
APPROVED: M. WESOLOWSKI

SHEET TITLE:

SPILL CONTAINMENT
MOUNTING DETAILS

DRAWING NUMBER: C-28

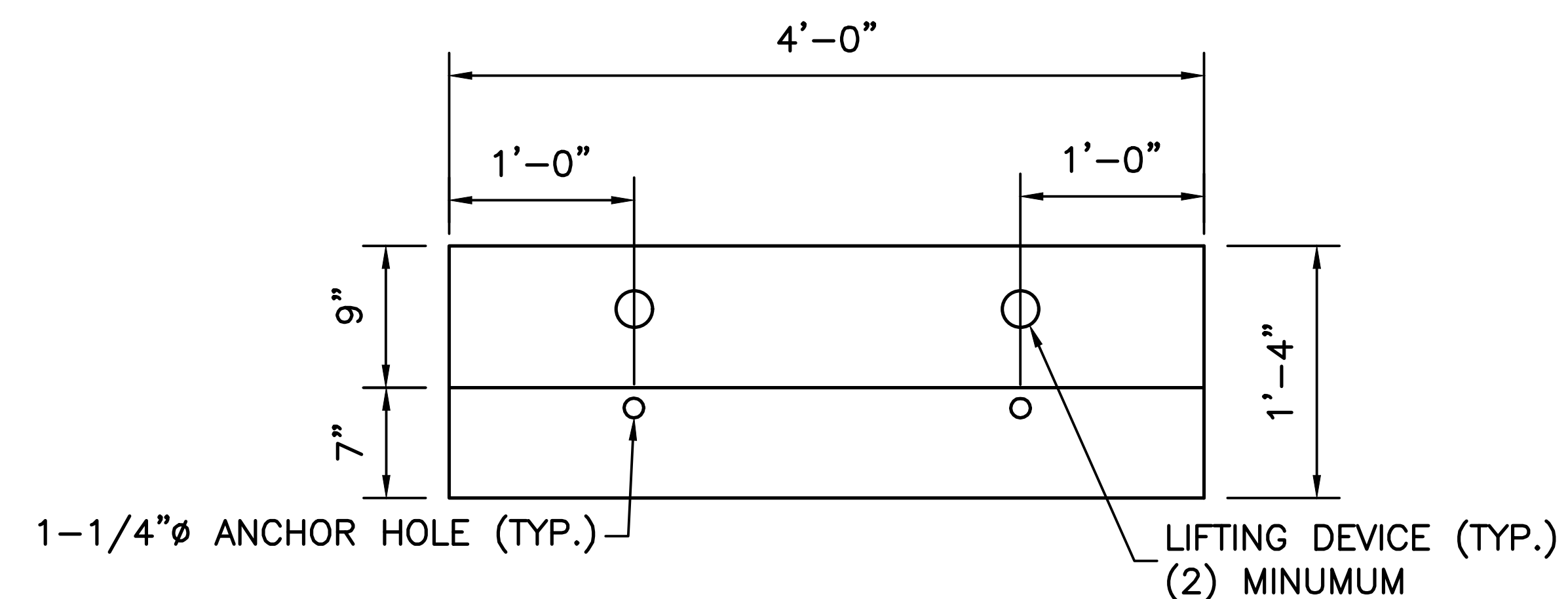
SHEET 30 OF 51

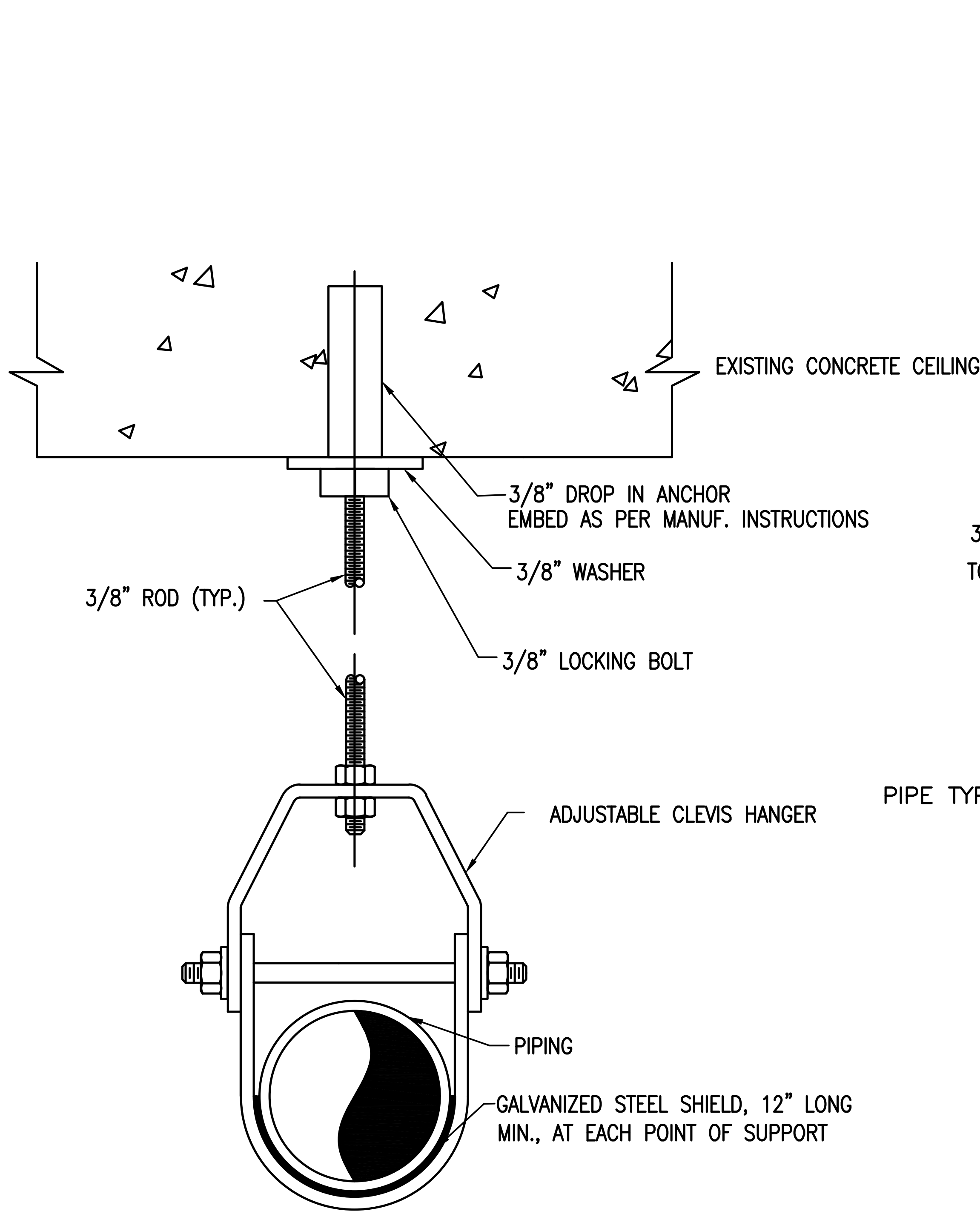


1. CONCRETE FOR THE SLAB-ON-GRADE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
2. CONCRETE FOR THE PRECAST CONCRETE BARRIER SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5,000 PSI.
3. ANCHOR RODS SHALL BE 7/8" DIAMETER AND HAVE AN ULTIMATE TENSILE STRENGTH OF 60 KSI.
4. THE 4"x4"x1/2" STEEL PLATE SHALL HAVE A MINIMUM YIELD STRENGTH OF 36 KSI.
5. ANCHOR RODS SHALL BE DRILLED AND GROUTED INTO CONCRETE SLAB USING HILTI HVU CAPSULE ADHESIVE ANCHORING SYSTEM OR APPROVED EQUAL. ULTIMATE BOND/CONCRETE CAPACITY IN TENSION SHALL BE 36 KIPS.
6. AFTER ANCHOR RODS ARE INSTALLED IN CONCRETE SLAB, SET PRECAST BARRIER AND GROUT ANCHOR ROD HOLES IN BARRIER WITH NON-SHRINK GROUT FROM NYSDOT APPROVED MATERIALS LIST.
7. AFTER ANCHOR ROD HOLES ARE GROUTED, INSTALL 4"x4"x1/2" STEEL PLATE AND HEX NUT. TIGHTEN HEX NUT AND GROUT BLOCK-OUTS IN BARRIER WITH NON-SHRINK GROUT.
8. PROVIDE MINIMUM 3 FOOT DISTANCE BETWEEN THE TANK AND BOLLARD/BARRIER FOR NON IMPACT RESISTANT TANKS. IN ACCORDANCE WITH 2020 FIRE CODE OF NYS 2306.4 PHYSICAL PROTECTION, BOLLARDS/BARRIERS ARE NOT REQUIRED FOR UL-2085 IMPACT RESISTANT TANKS. THE BOLLARDS/BARRIERS WILL SERVE AS SECONDARY PROTECTION AND THE 3 FOOT DISTANCE MAY BE REDUCED.
9. PROVIDE BARRIERS THAT ARE A MINIMUM 36" IN HEIGHT RELATIVE TO SURROUNDING GRADE. BARRIERS MAY BE REDUCED IN HEIGHT IF PLACED ON RAISED PAD.

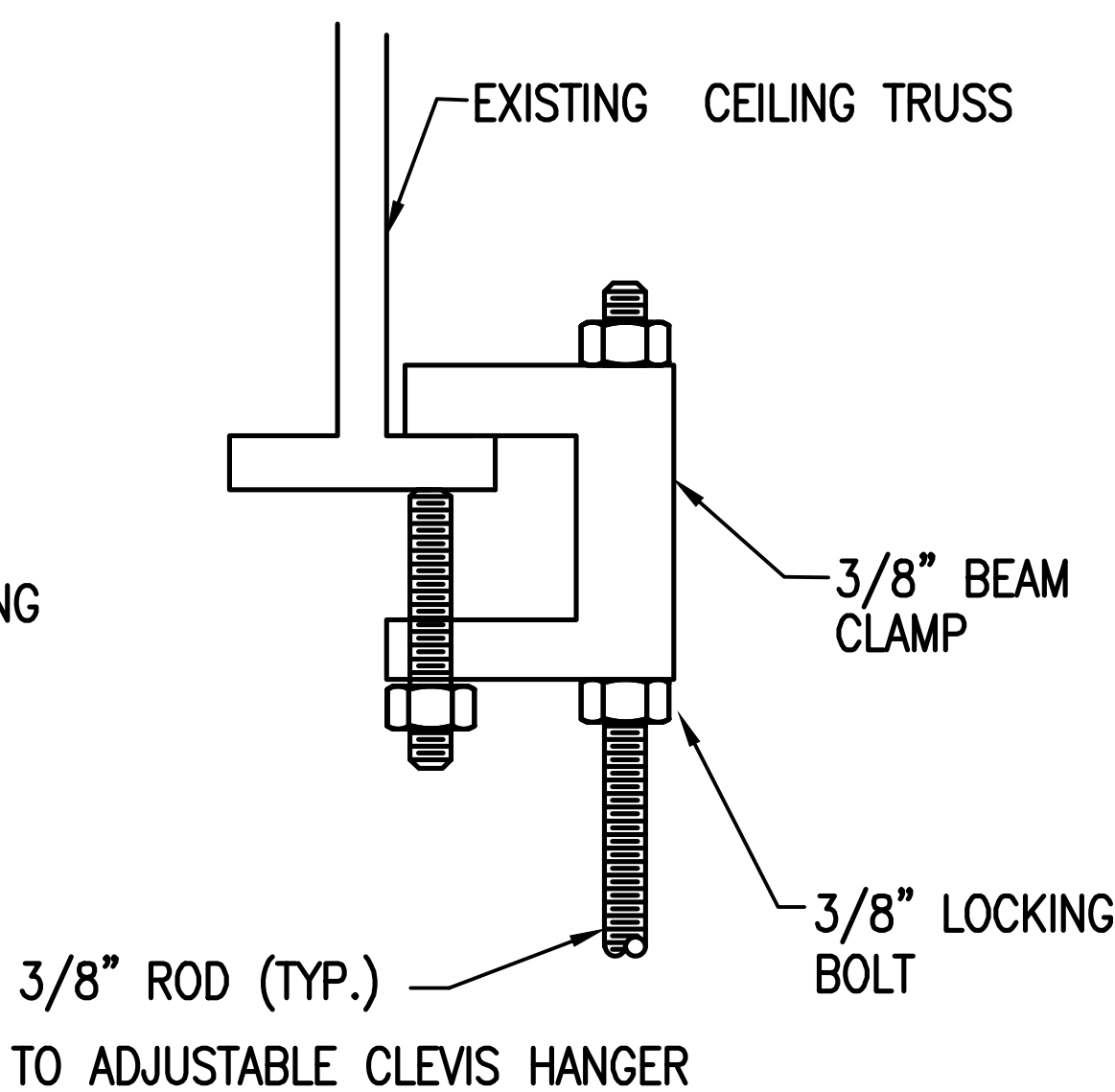


1. FOR 4'-0" BARRIER A MINIMUM OF TWO (2) ANCHOR HOLES ARE REQUIRED.
2. FOR 8'-0" BARRIER A MINIMUM OF THREE (3) ANCHOR HOLES ARE REQUIRED.

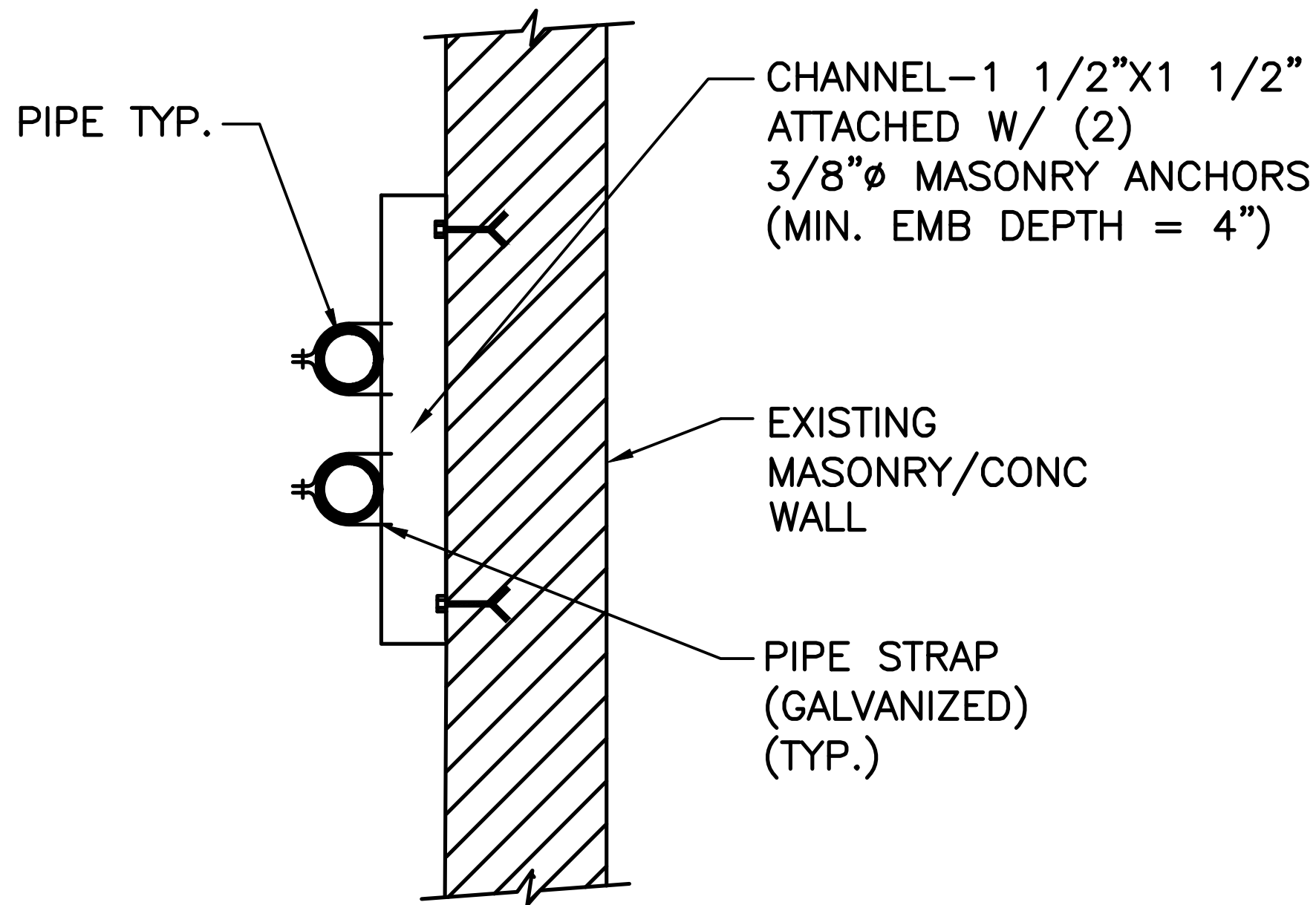




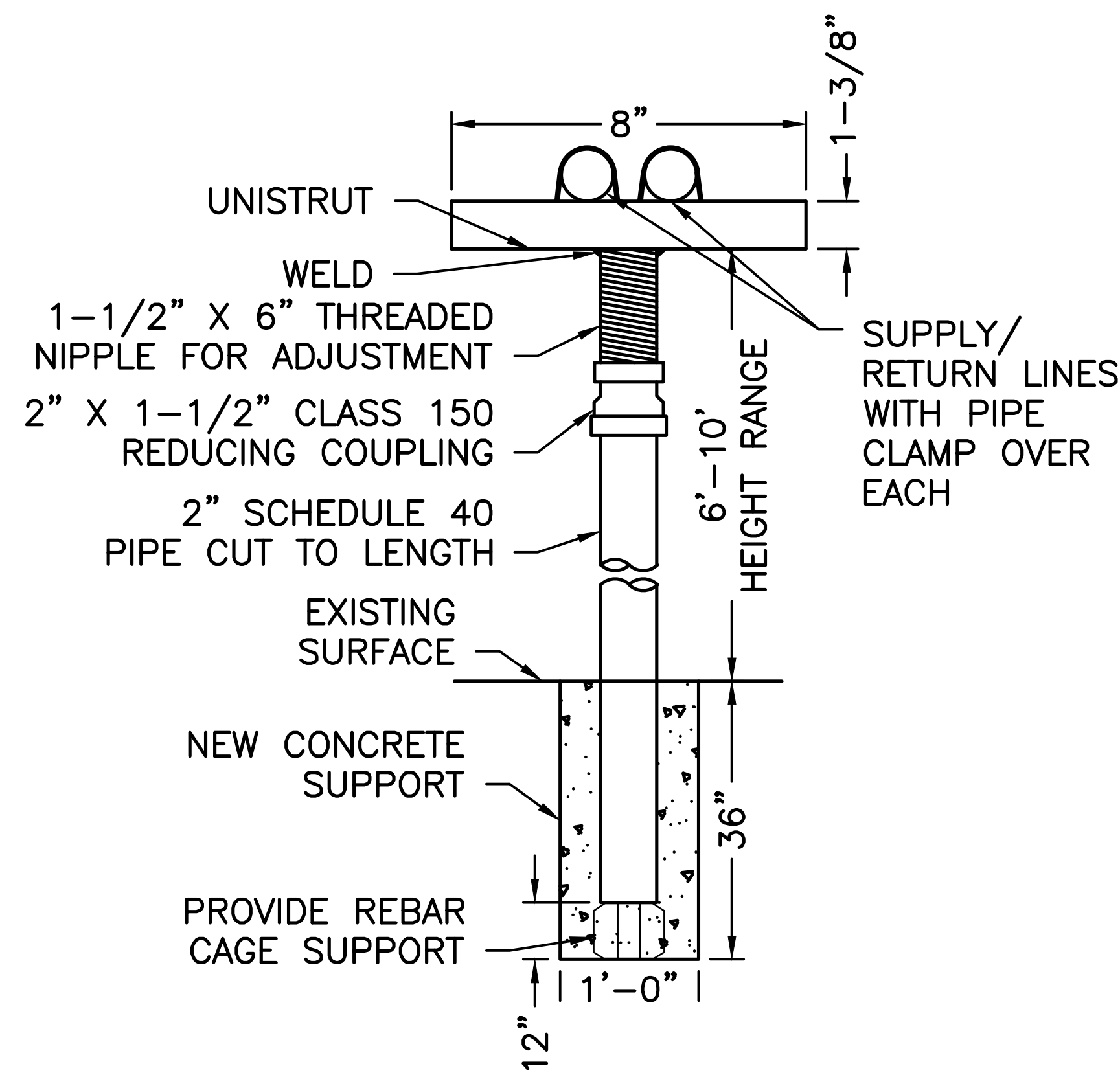
HANGER
SCALE: NONE



BEAM CLAMP
SCALE: NONE



WALL SUPPORT
SCALE: NONE



TYPICAL PIPE SUPPORT
SCALE: NONE

Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985

LiRo Engineers, Inc.
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CONTRACT:

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER: 47676 - C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

FIELD CHECK: M. WESOLOWSKI

APPROVED: M. WESOLOWSKI

SHEET TITLE:

HANGER AND SUPPORT
DETAILS

DRAWING NUMBER:
C-30

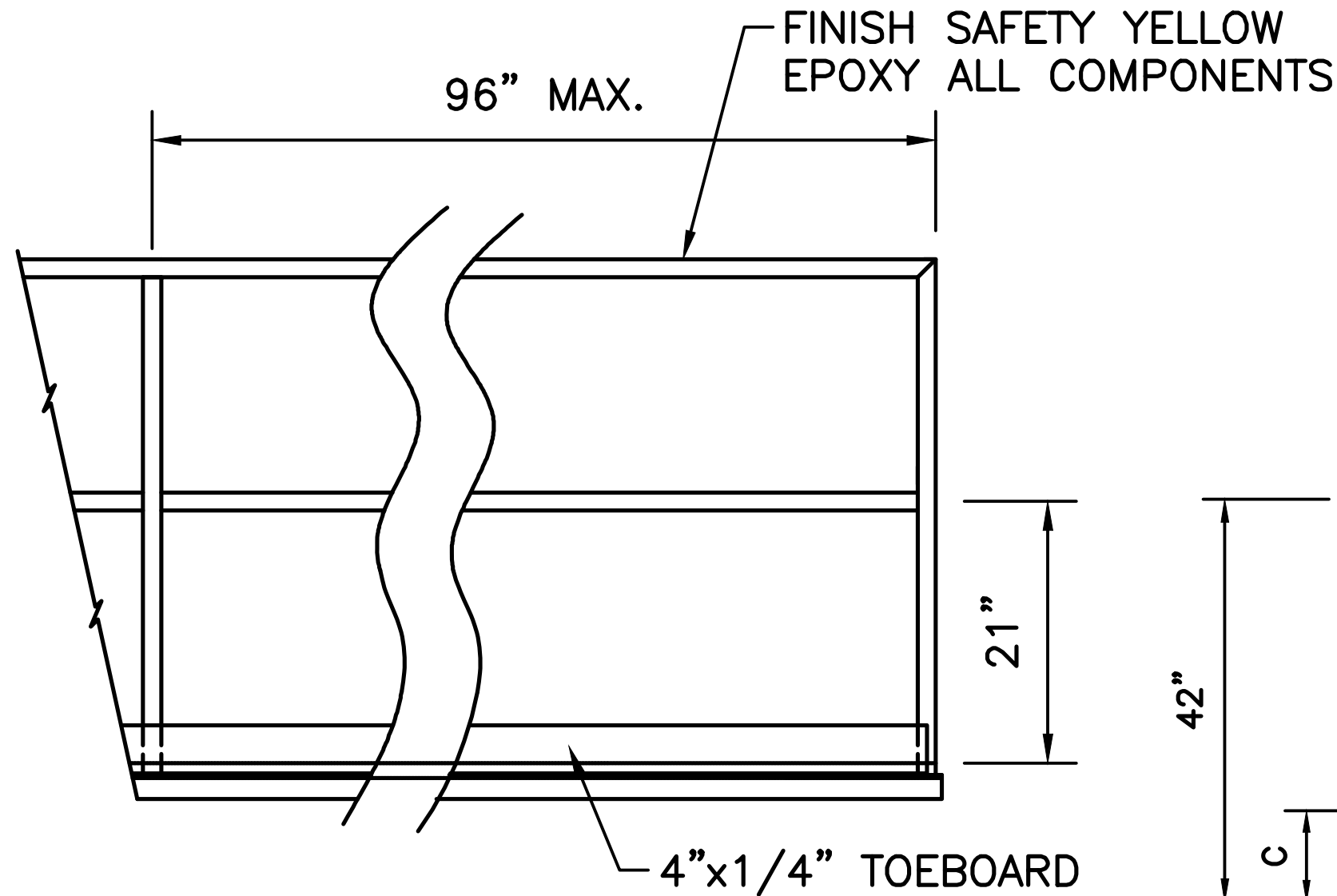
SHEET 32 OF 51

NOTES:

- 1. CONFIRM OSHA COMPLIANT STAIRS, PLATFORM AND HANDRAILS WITH MANUFACTURER PRIOR TO ORDERING ASSOCIATED TANK.
- 2. CONSULT WITH MANUFACTURER FOR STAIRS FOR TANKS LARGER THAN 96" DIAMETER.

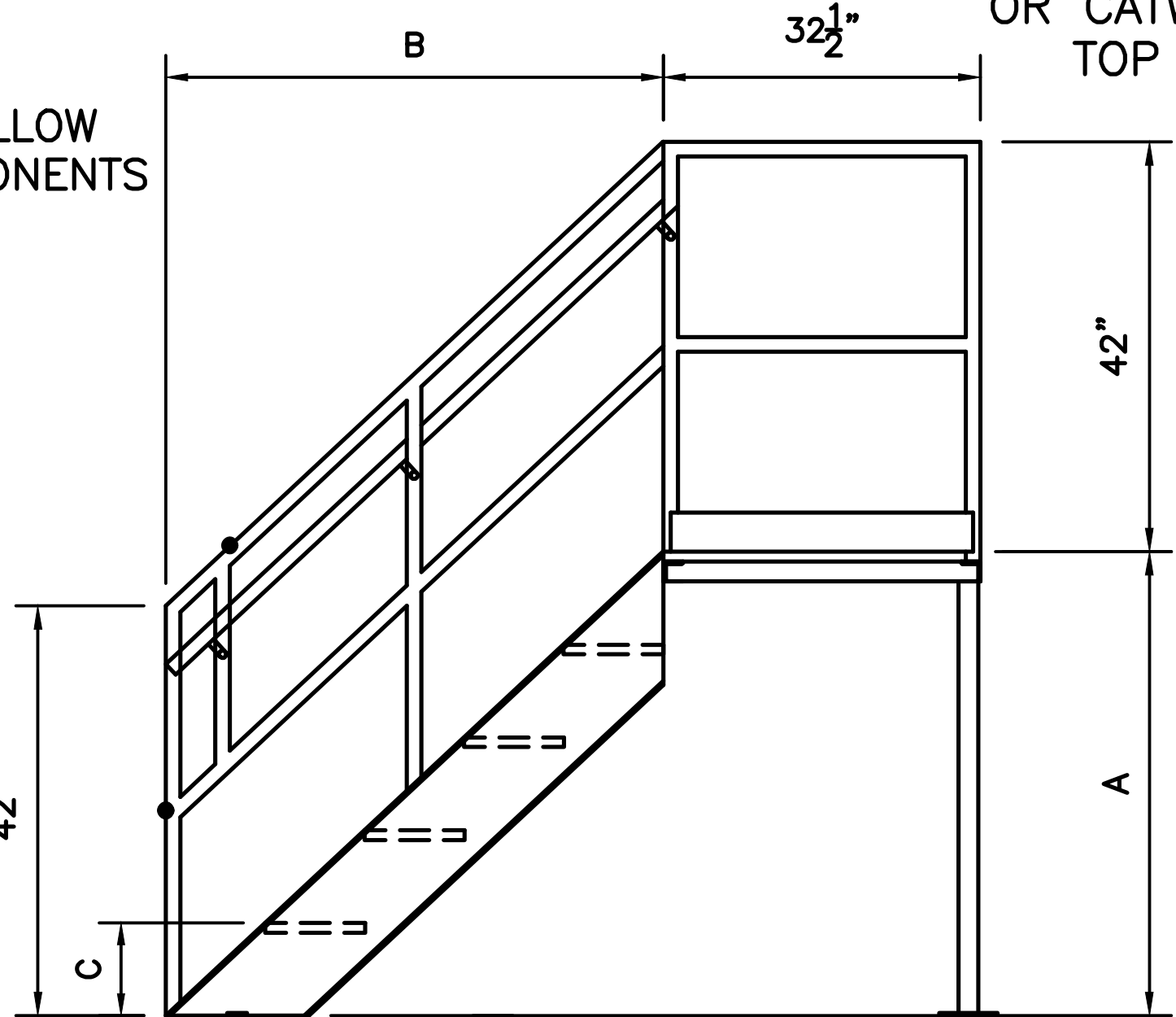
STAIR AND HANDRAILS SCHEDULE			
TANK SIZE (DIAMETER)	48"	64"	96"
A	30"	47"	72"
B	29 11/16"	47 1/4"	72 5/8"
C	10"	9 3/8"	9"

SAFETY CHAIN AT
TANK SIDE PLATFORM
OR CATWALK AND
TOP OF STAIR



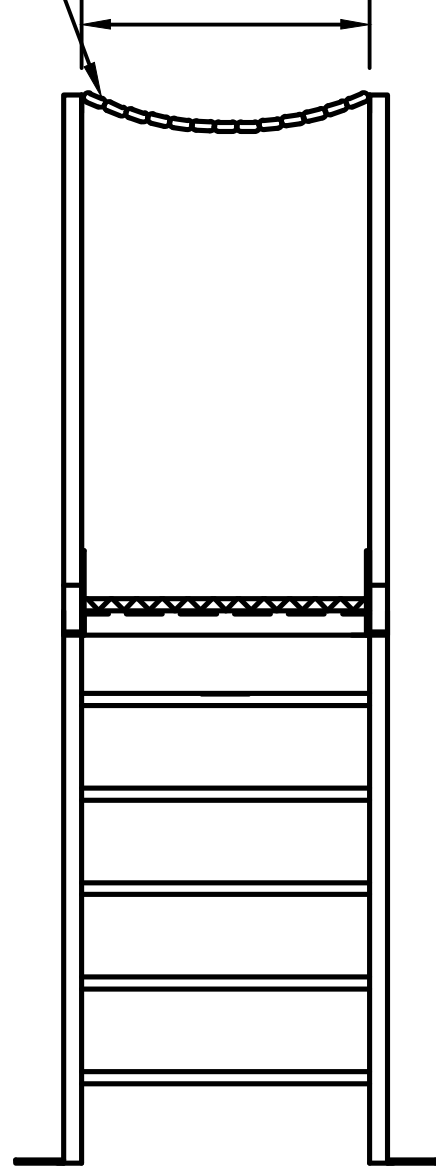
POST AND HANDRAIL DETAIL

SCALE: NONE

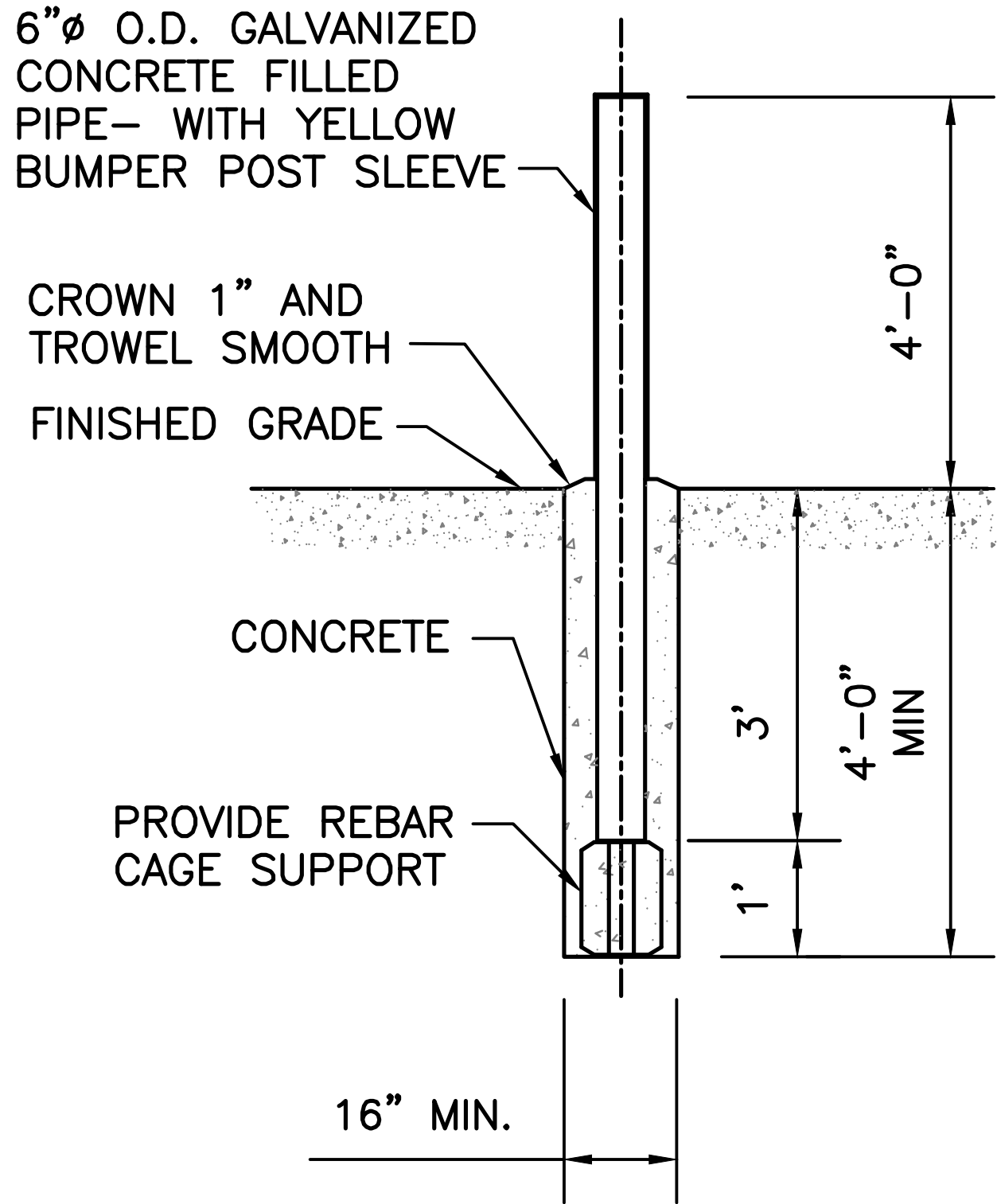


STAIR DETAIL

SCALE: NONE

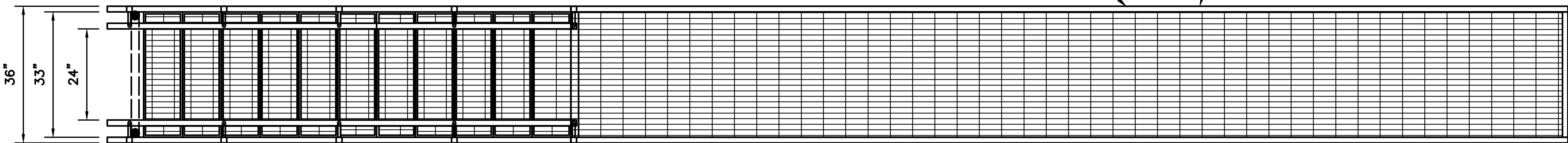


END VIEW



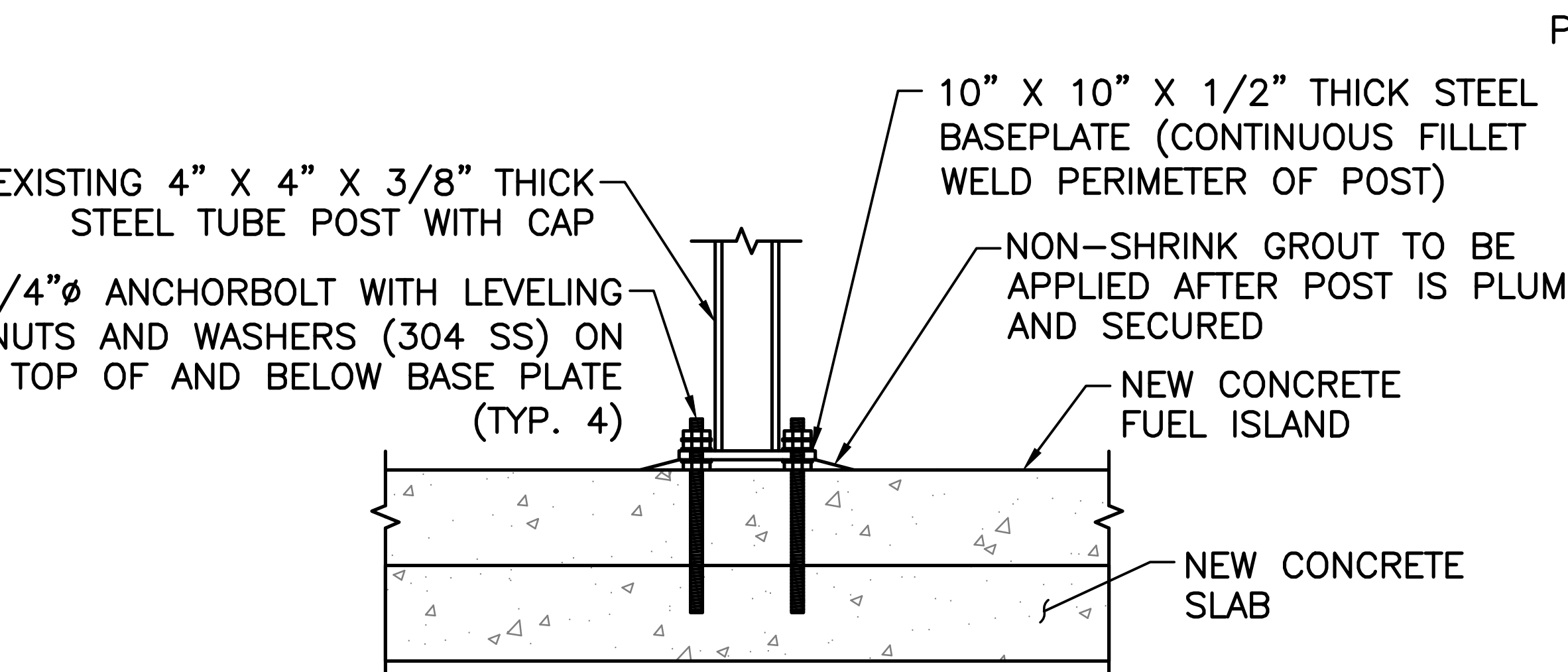
BOLLARD DETAIL

SCALE: NONE



POST AND CHAIN (TYP.)

BOLT TO TANK CATWALK ASSEMBLY WITH
1' THICK FIBERGLASS GRATING, FINISH
SAFETY YELLOW EPOXY ALL COMPONENTS

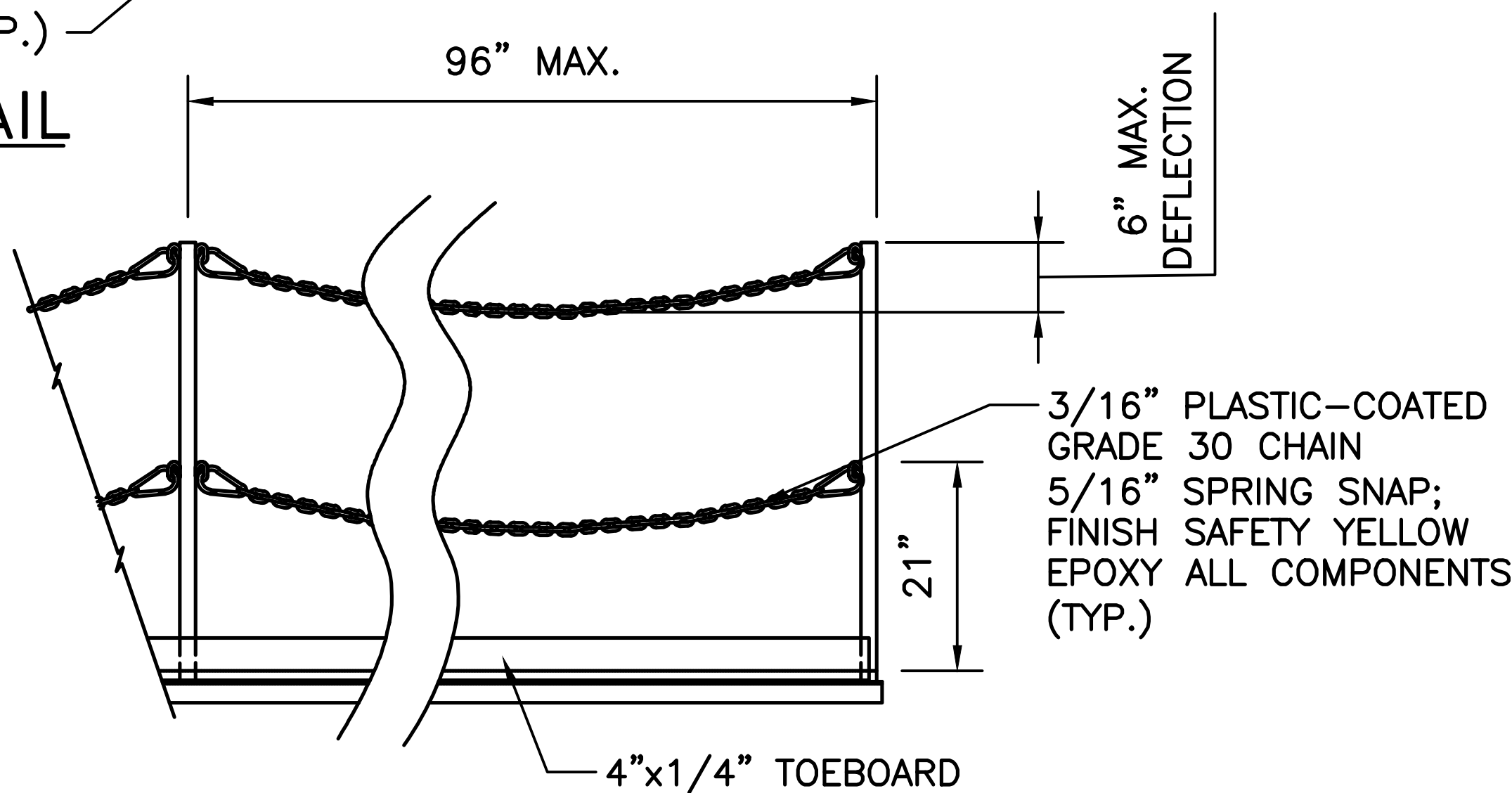


FIRE SUPPRESSION SYSTEM SUPPORT
POST PLATE ANCHOR DETAIL

SCALE: NONE

CATWALK DETAIL

SCALE: NONE



POST AND CHAIN DETAIL

SCALE: NONE

NEW YORK
STATE
OF
ENGINEERING

Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905

LiRo Engineers, Inc.

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STATE OF NEW YORK
JUDITH L. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
12/31/2025

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

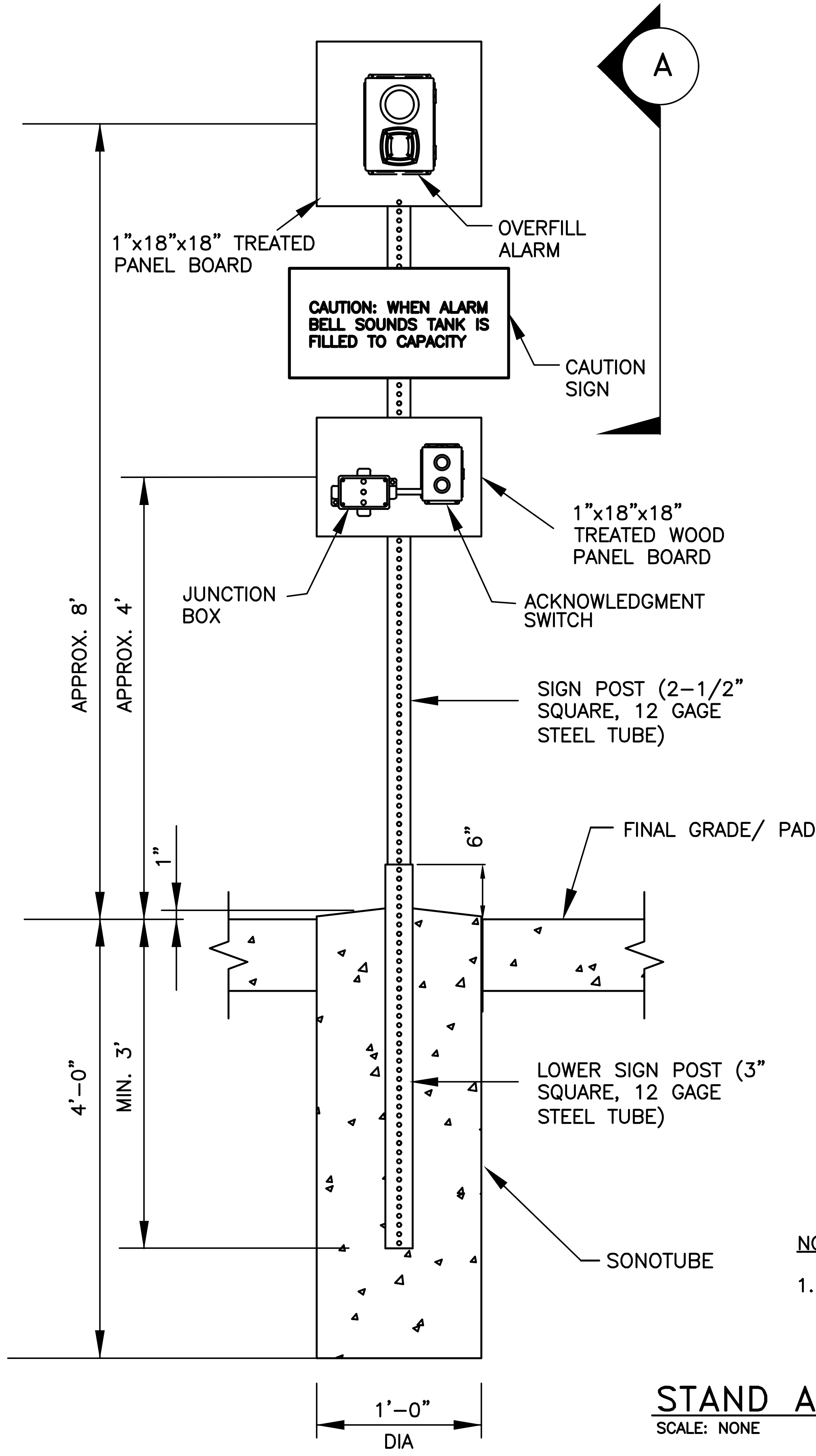
LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
1/31/2025	FINAL SUBMISSION	
PROJECT NUMBER:	47676	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:
STAIR, BOLLARD
AND FIRE SUPPRESSION
POST MOUNTING DETAILS

DRAWING NUMBER:
C-31

SHEET 33 OF 51

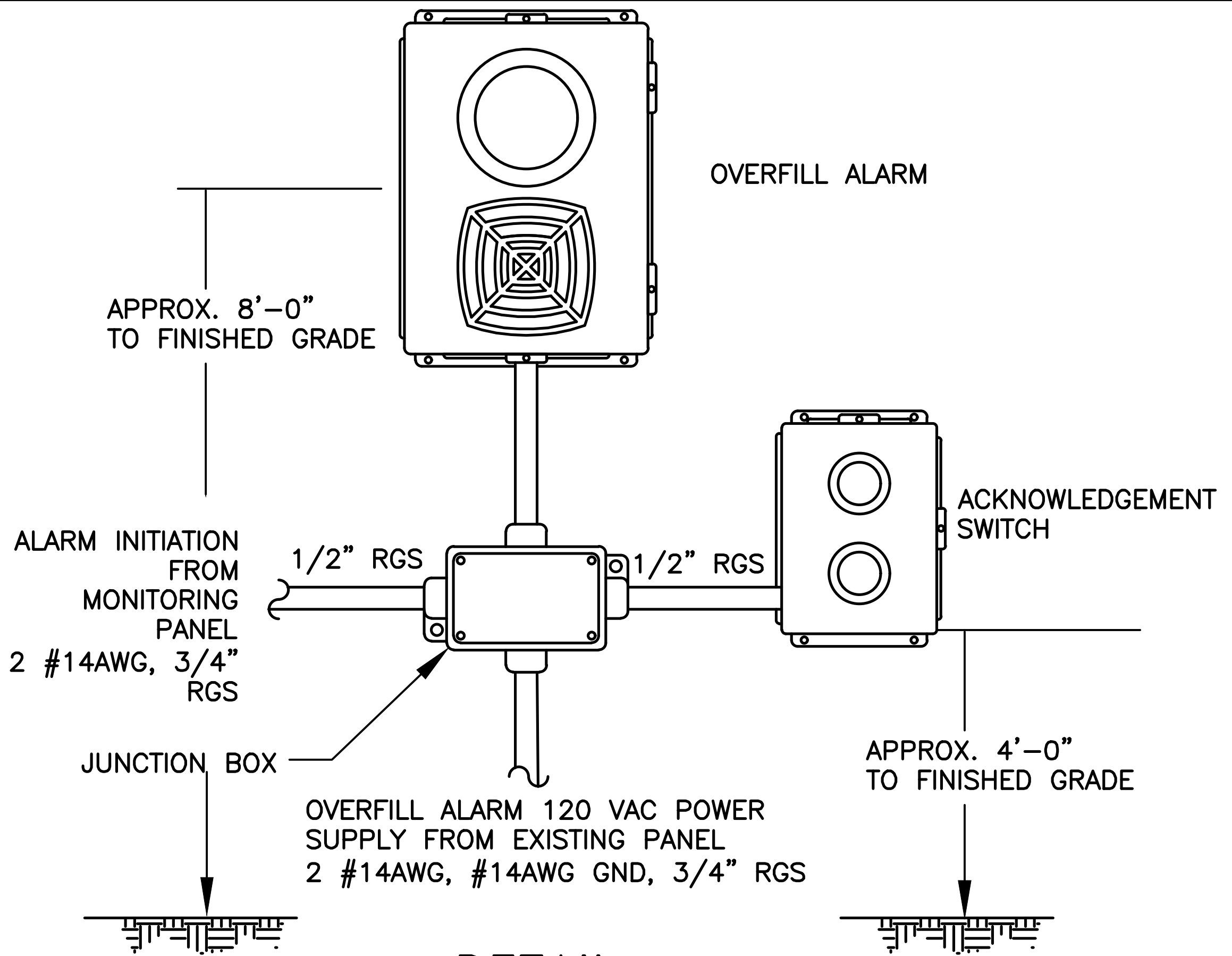


NOTE:

1. ALARM TO BE POSITIONED IN CLOSE PROXIMITY AND IN CLEAR VIEW OF FILL PORT.

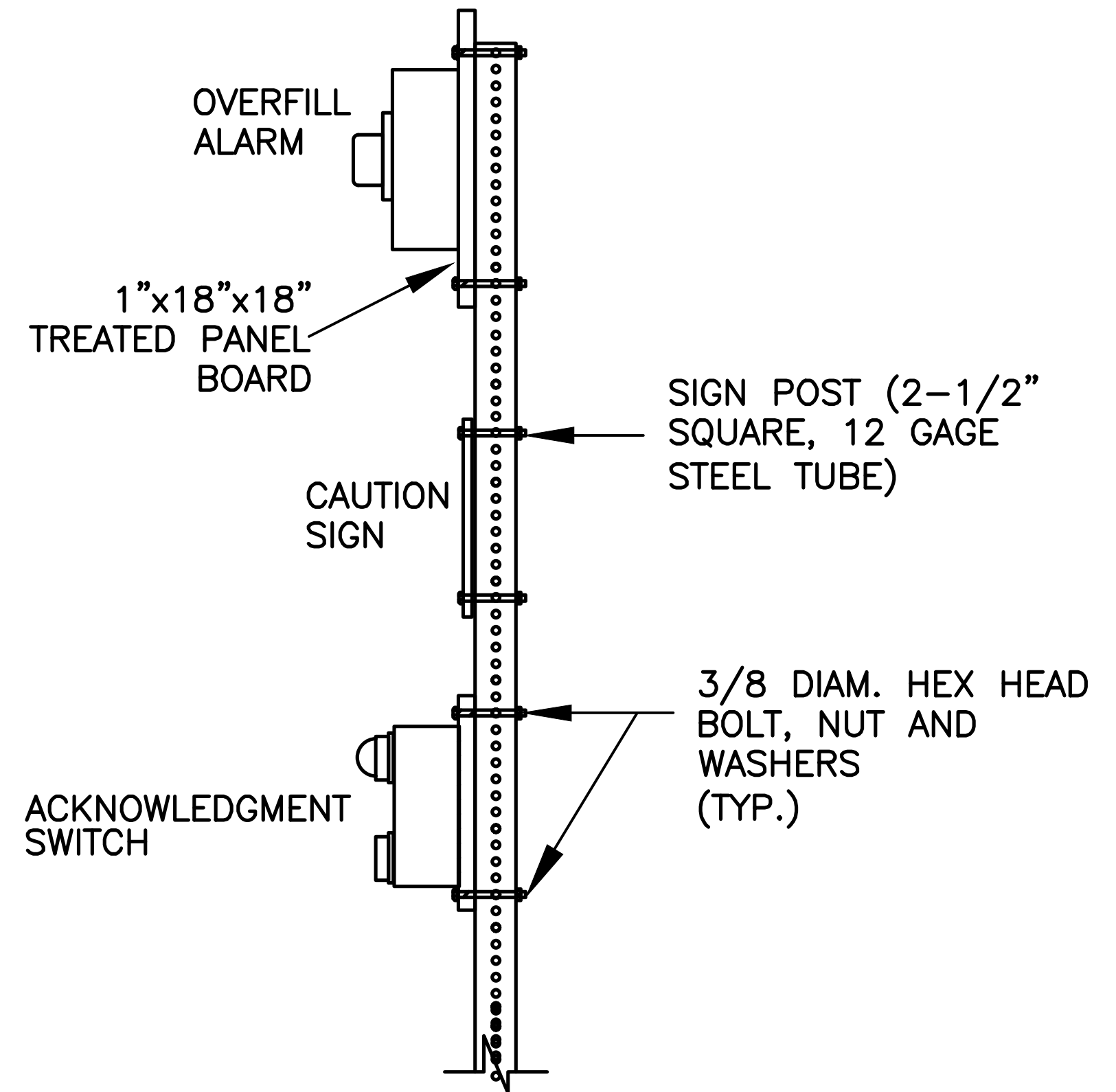
STAND ALONE ALARM AND DETAIL

SCALE: NONE



DETAIL

SCALE: NONE



VIEW A

SCALE: NONE

NEW YORK
STATE
OF
CONSULTANT

Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905

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STATE OF NEW YORK
JAMES J. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
12/31/2025

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER: 47676 - C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

FIELD CHECK: M. WESOLOWSKI

APPROVED: M. WESOLOWSKI

SHEET TITLE:
OVERFILL ACKNOWLEDGMENT
ALARM DETAILS

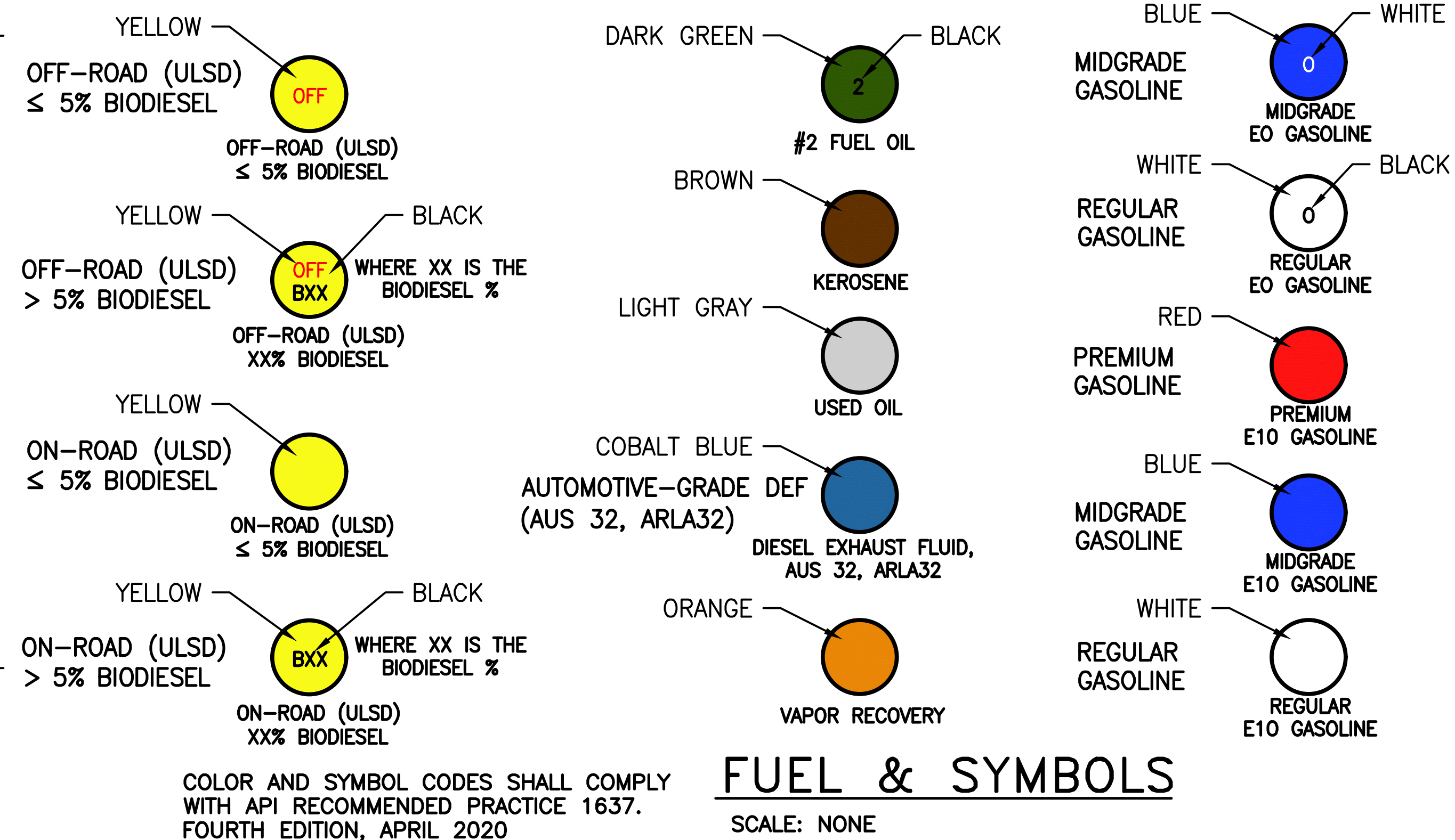
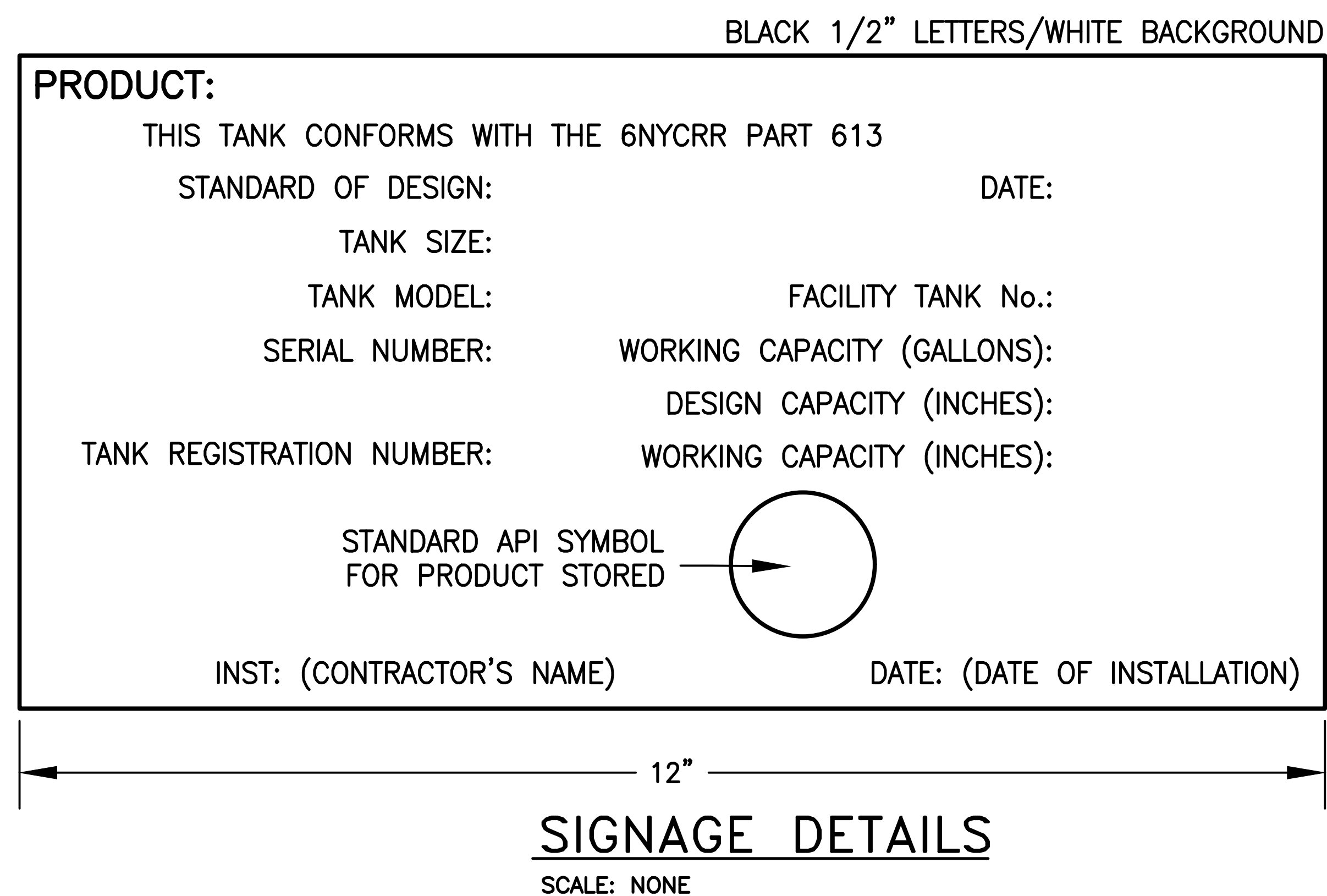
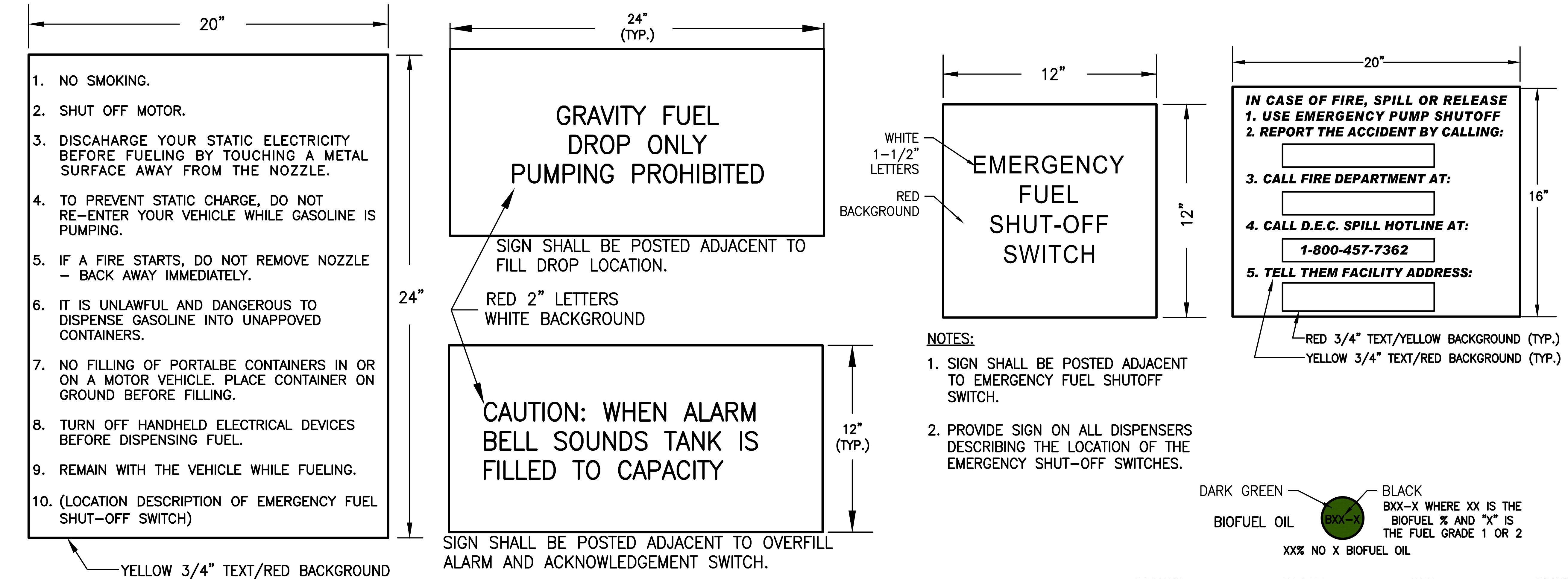
DRAWING NUMBER:
C-32

SHEET 34 OF 51

CONTRACT:	
CONSTRUCTION	
TITLE:	FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION
LOCATION:	WESTERN REGION VARIOUS FACILITIES

	1/31/2025	FINAL SUBMISSION
MARK	DATE	DESCRIPTION
PROJECT NUMBER:	47676 — C	
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:			
SIGNAGE DETAILS & FUEL COLOR CODING DETAILS			
DRAWING NUMBER:			
C-33			
SHEET	35	OF	51



WALL MOUNT FIRE
EXTINGUISHER SIGNAGE DETAIL
SCALE: NONE

POST MOUNT FIRE
EXTINGUISHER SIGNAGE DETAIL
SCALE: NONE

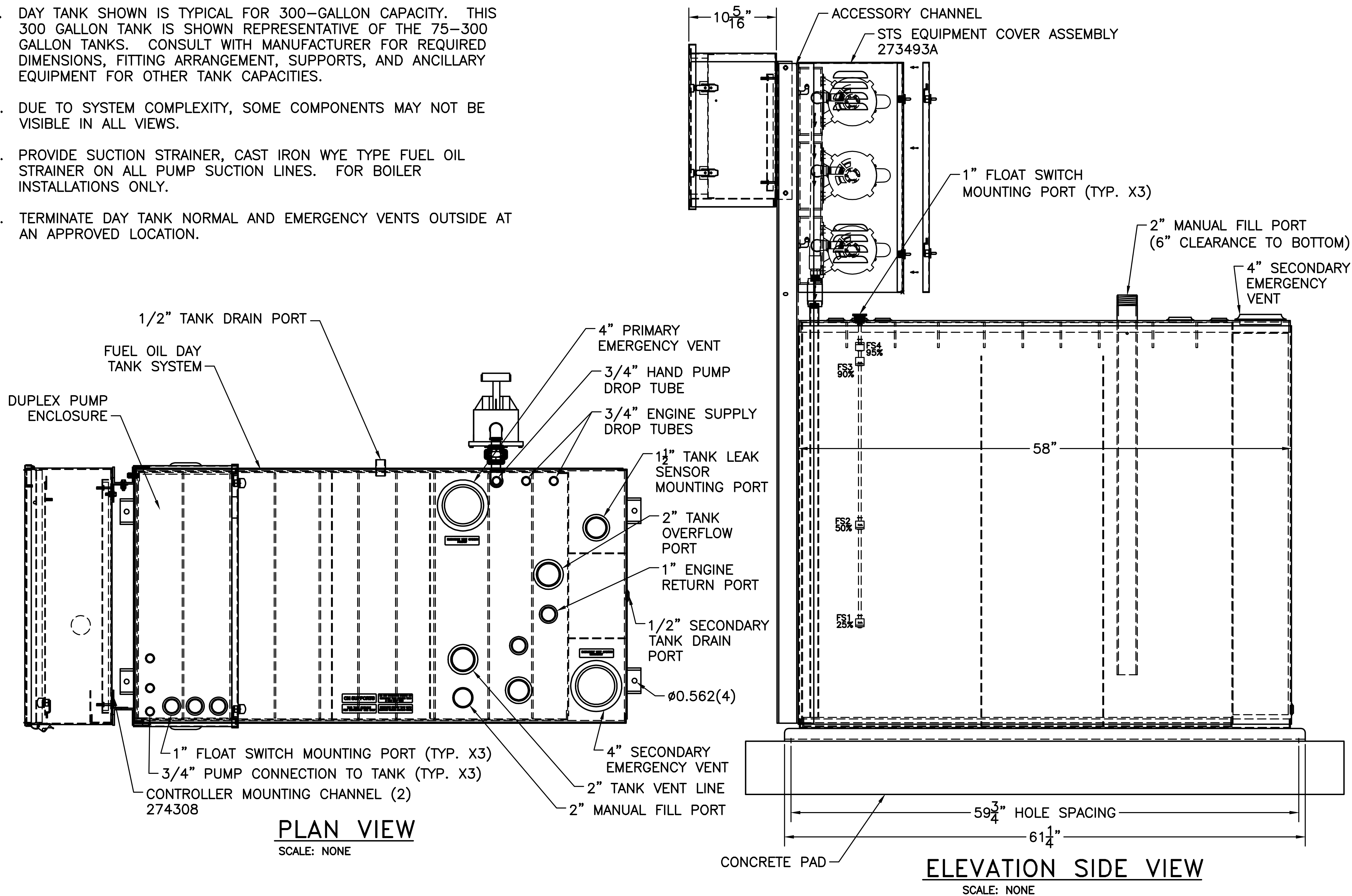
NFPA 704 STANDARD SYSTEM FOR THE
IDENTIFICATION OF THE HAZARDS OF
MATERIALS FOR EMERGENCY RESPONSE
SCALE: NONE

NOTES:

1. INSTALL LABEL ON ALL TANKS. LABEL SHALL BE SPECIFIC TO THE MATERIAL STORED IN ACCORDANCE WITH NFPA 704.
2. LABEL SHALL BE VINYL WITH SELF-ADHESIVE BACKING

NOTES:

- 1. DAY TANK SHOWN IS TYPICAL FOR 300-GALLON CAPACITY. THIS 300 GALLON TANK IS SHOWN REPRESENTATIVE OF THE 75-300 GALLON TANKS. CONSULT WITH MANUFACTURER FOR REQUIRED DIMENSIONS, FITTING ARRANGEMENT, SUPPORTS, AND ANCILLARY EQUIPMENT FOR OTHER TANK CAPACITIES.
- 2. DUE TO SYSTEM COMPLEXITY, SOME COMPONENTS MAY NOT BE VISIBLE IN ALL VIEWS.
- 3. PROVIDE SUCTION STRAINER, CAST IRON WYE TYPE FUEL OIL STRAINER ON ALL PUMP SUCTION LINES. FOR BOILER INSTALLATIONS ONLY.
- 4. TERMINATE DAY TANK NORMAL AND EMERGENCY VENTS OUTSIDE AT AN APPROVED LOCATION.



NEW YORK

STATE OF

CITY OF NEW YORK

Office of

General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905

LiRo Engineers, Inc.

3 Aerial Way, Syosset, New York

ENERGY CONSERVATION CONSTRUCTION

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STATE OF NEW YORK

SEAL

REGISTERED PROFESSIONAL ENGINEER

12/31/2025

CONTRACT

CONSTRUCTION

TITLE:

FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION

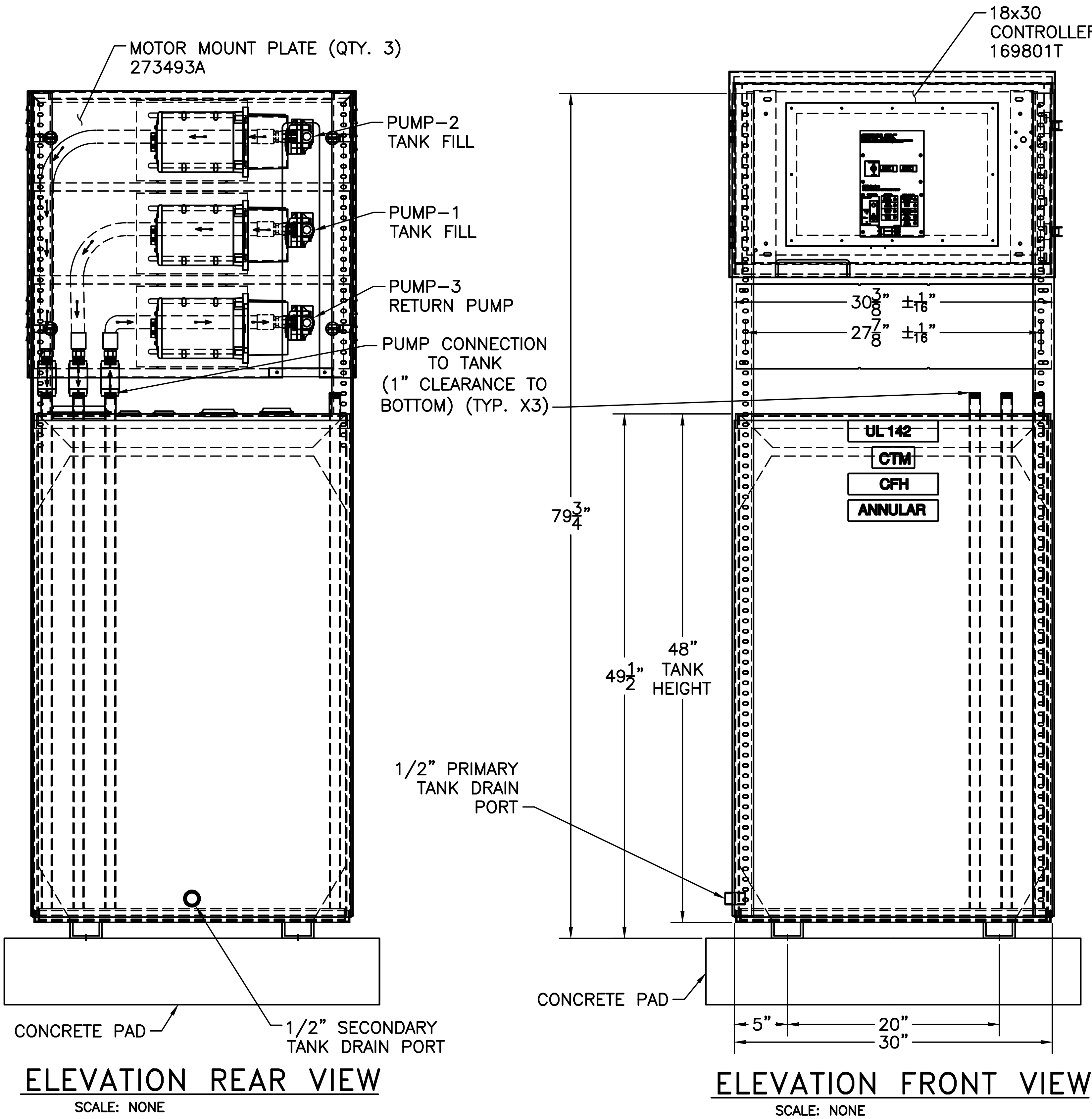
LOCATION:

WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE:	DAY TANK SHEET #1	
DRAWING NUMBER:	C-35	
SHEET	37	OF 51

NOTES:

1. DAY TANK SHOWN IS TYPICAL FOR 300-GALLON CAPACITY. THIS 300 GALLON TANK IS SHOWN REPRESENTATIVE OF THE 75-300 GALLON TANKS. CONSULT WITH MANUFACTURER FOR REQUIRED DIMENSIONS, FITTING ARRANGEMENT, SUPPORTS, AND ANCILLARY EQUIPMENT FOR OTHER TANK CAPACITIES.
2. PROVIDE SUCTION STRAINER, CAST IRON WYE TYPE FUEL OIL STRAINER ON ALL PUMP SUCTION LINES. FOR BOILER INSTALLATION ONLY.
3. TERMINATE TANK NORMAL AND EMERGENCY VENTS OUTSIDE AT AN APPROVED LOCATION.



Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985

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CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION

LOCATION: WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER: 47676 - C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

FIELD CHECK: M. WESOLOWSKI

APPROVED: M. WESOLOWSKI

SHEET TITLE:

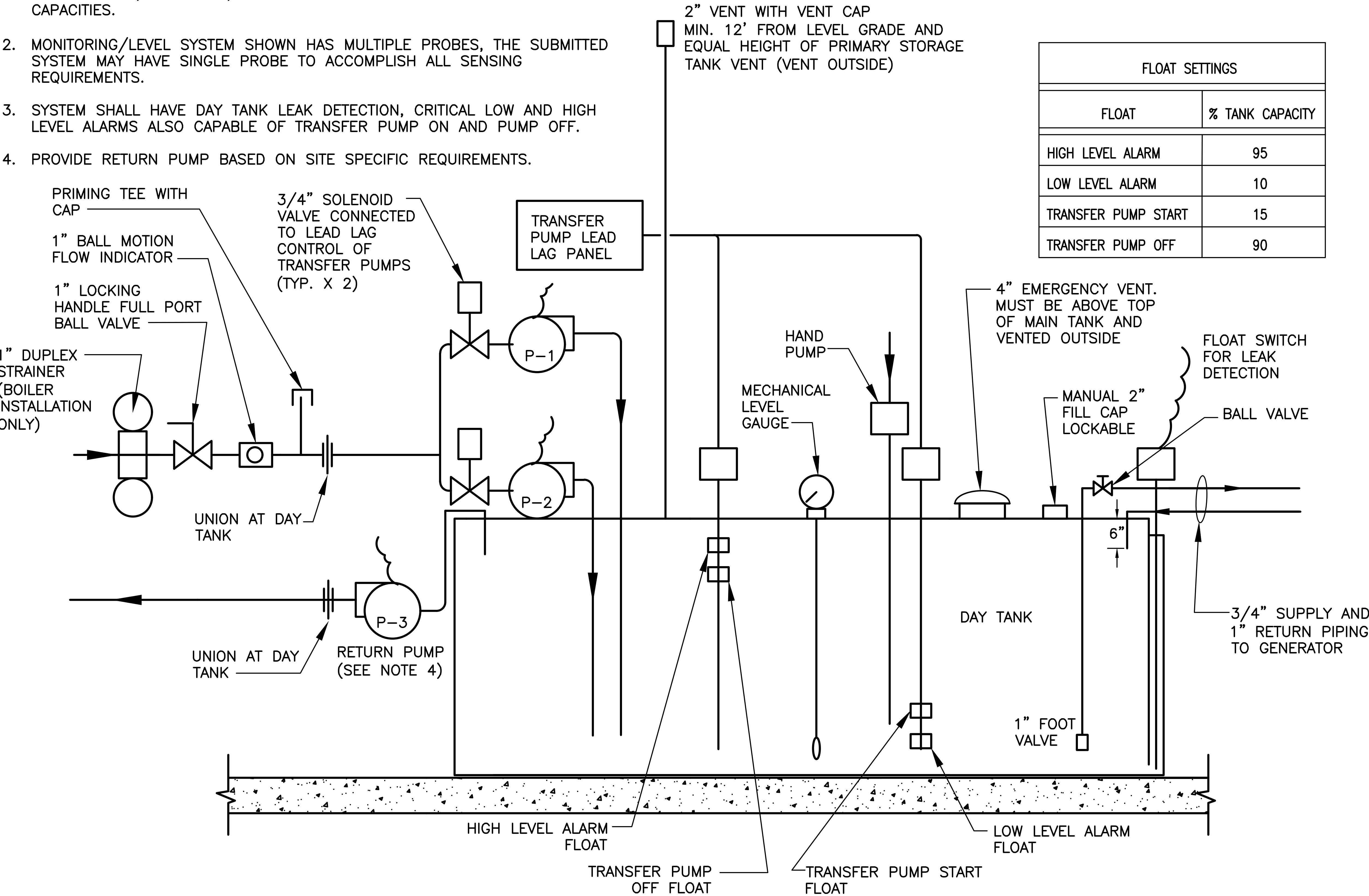
DAY TANK SHEET #2

DRAWING NUMBER: C-36

SHEET 38 OF 51

NOTES:

- 1. DAY TANK SHOWN IS TYPICAL FOR 300-GALLON CAPACITY. THIS 300 GALLON TANK IS SHOWN REPRESENTATIVE OF THE 75-300 GALLON TANKS. CONSULT WITH MANUFACTURER FOR REQUIRED DIMENSIONS, FITTING ARRANGEMENT, SUPPORTS, AND ANCILLARY EQUIPMENT FOR OTHER TANK CAPACITIES.
- 2. MONITORING/LEVEL SYSTEM SHOWN HAS MULTIPLE PROBES, THE SUBMITTED SYSTEM MAY HAVE SINGLE PROBE TO ACCOMPLISH ALL SENSING REQUIREMENTS.
- 3. SYSTEM SHALL HAVE DAY TANK LEAK DETECTION, CRITICAL LOW AND HIGH LEVEL ALARMS ALSO CAPABLE OF TRANSFER PUMP ON AND PUMP OFF.
- 4. PROVIDE RETURN PUMP BASED ON SITE SPECIFIC REQUIREMENTS.



DAY TANK DIAGRAM
SCALE: NONE

NEW YORK

STATE OF

DESIGN & CONSTRUCTION

Office of

General Services

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017995

LiRo Engineers, Inc.

3 Aerial Way, Syosset, New York

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STATE OF NEW YORK

WESTERN REGION

REGISTERED PROFESSIONAL ENGINEER

12/31/2025

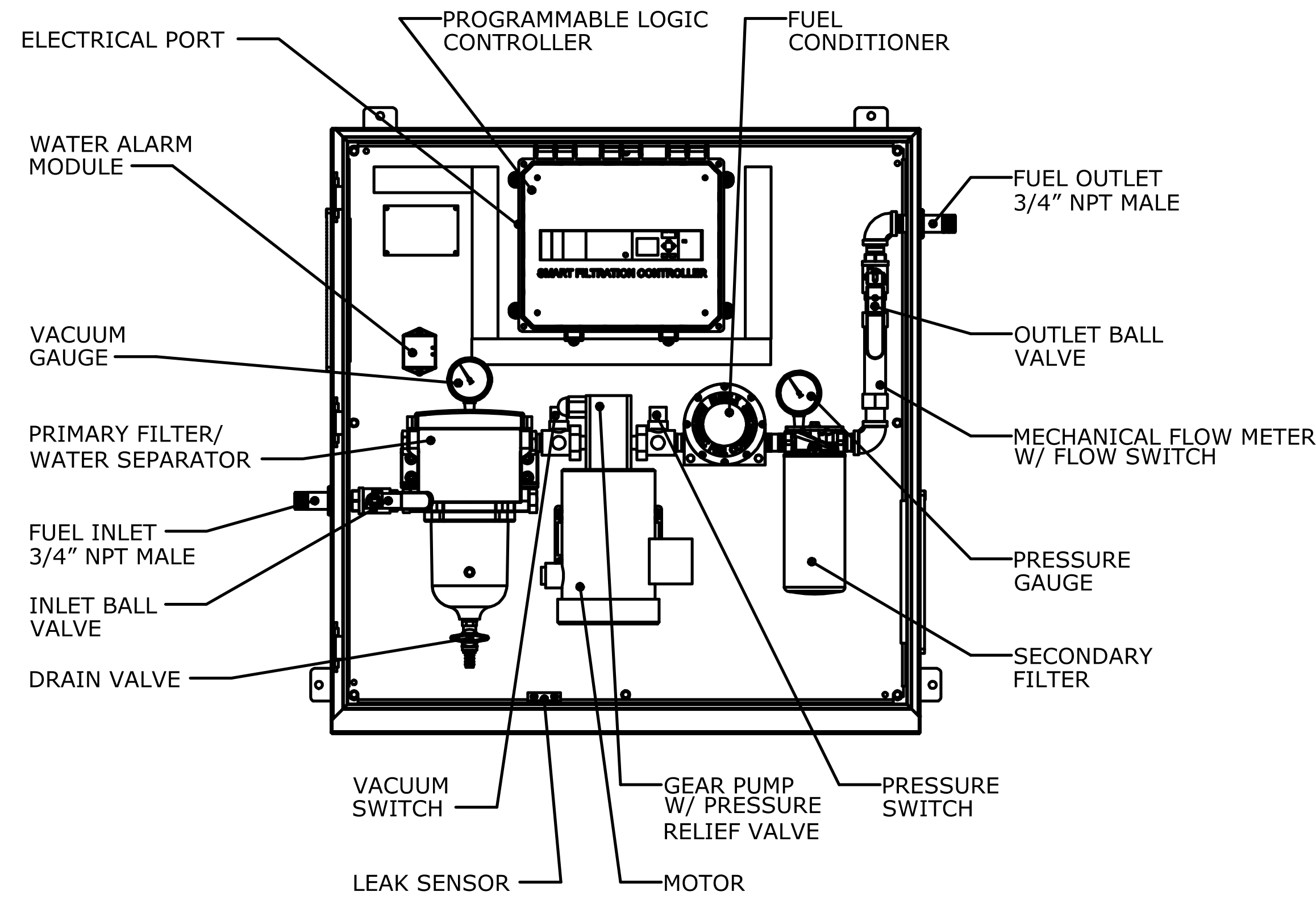
CONTRACT:

CONSTRUCTION

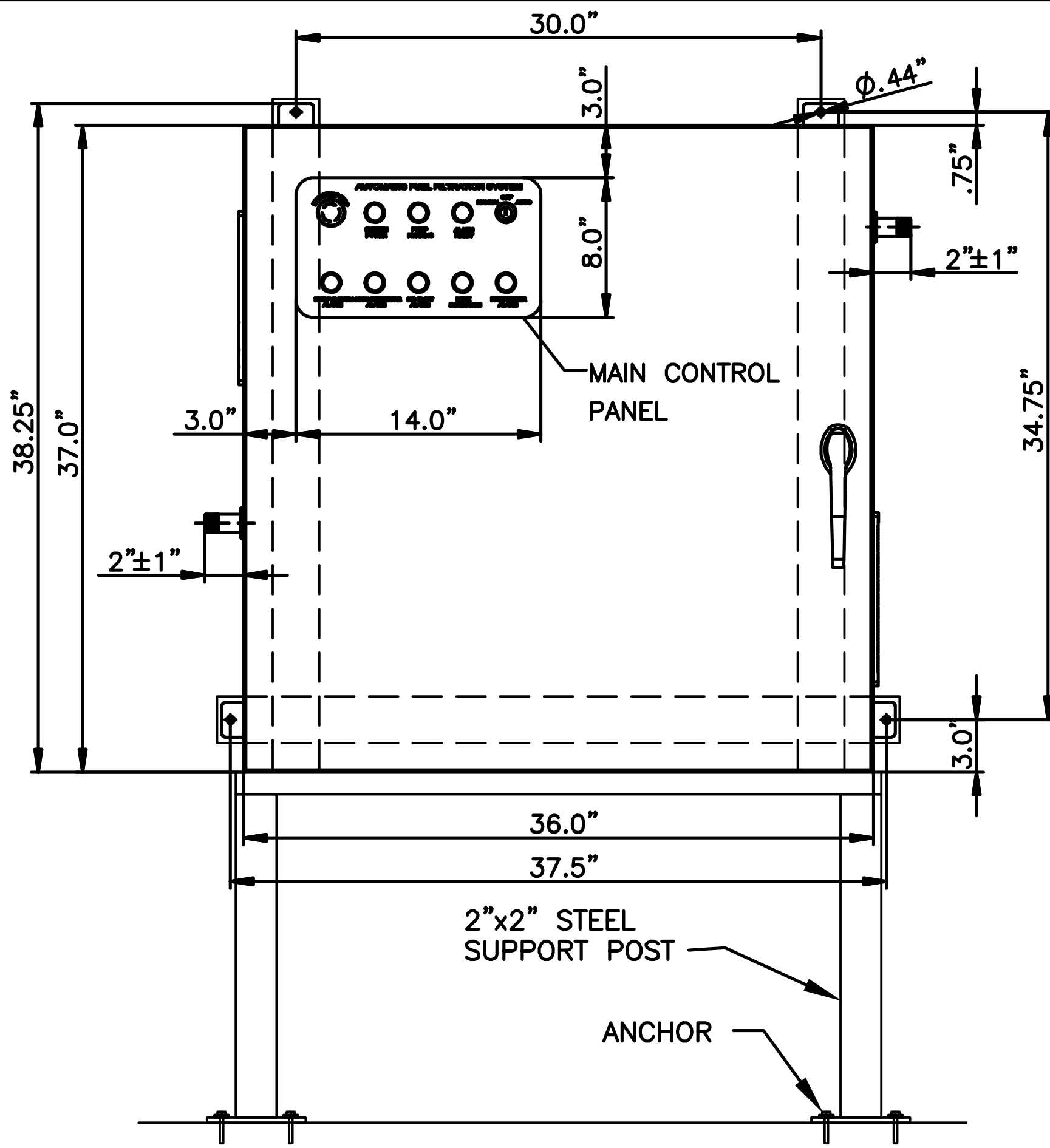
TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION

LOCATION: WESTERN REGION VARIOUS FACILITIES

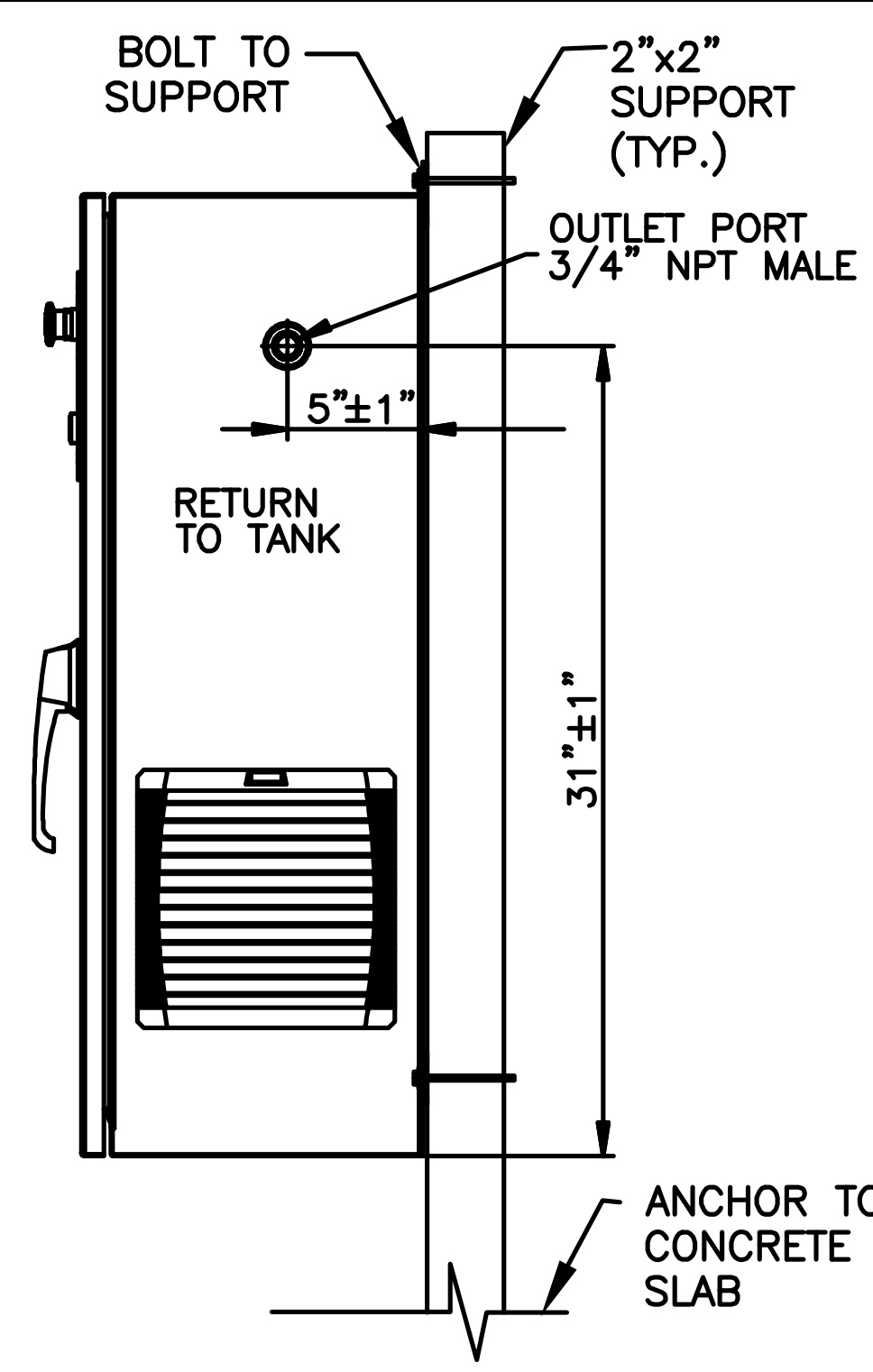
MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676 - C	
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE:		
DOUBLEWALL ABOVEGROUND DAY TANK PIPING DIAGRAM		
DRAWING NUMBER:		
C-37		
SHEET 39 OF 51		



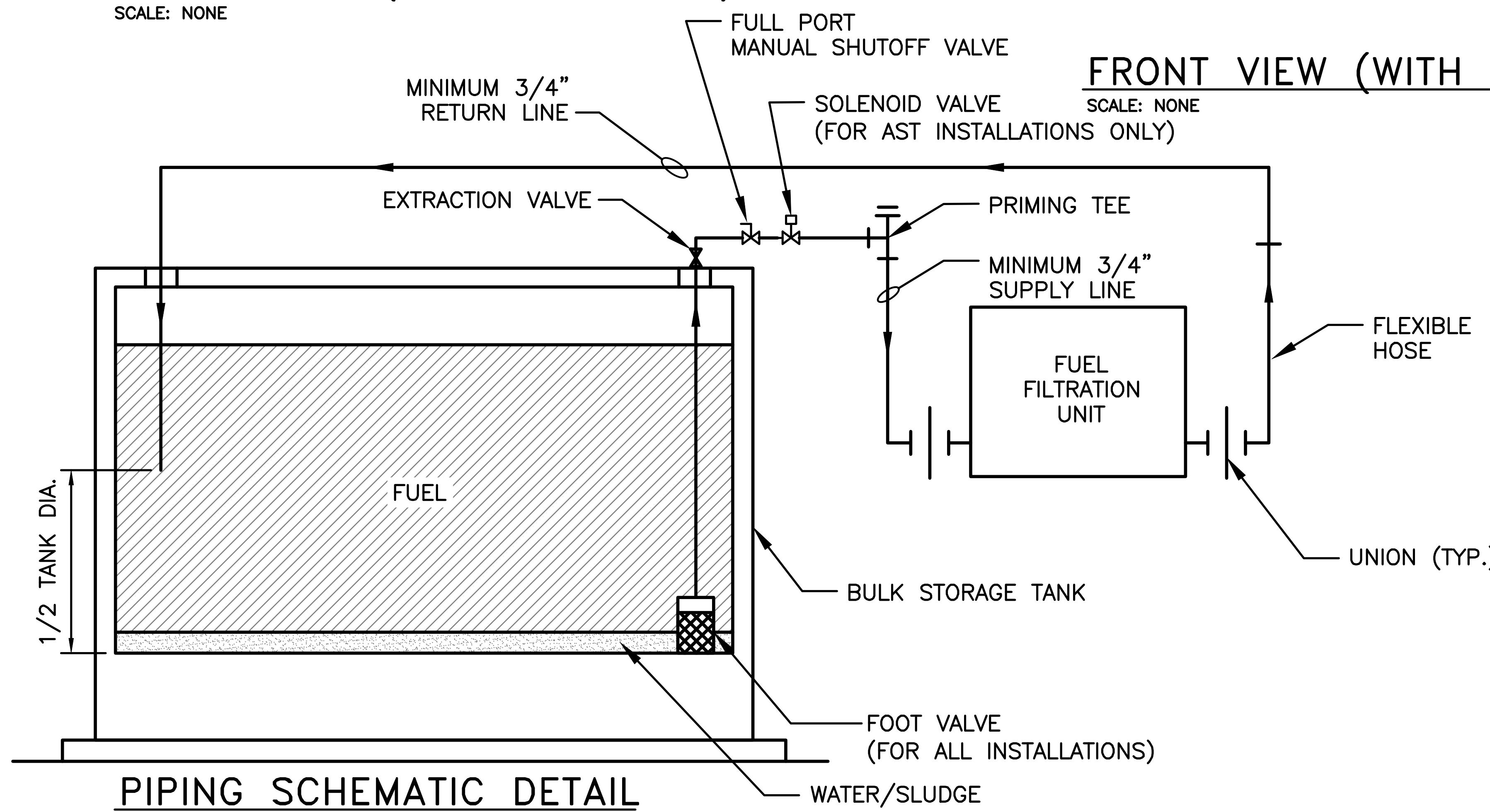
FRONT VIEW (WITHOUT COVER)
SCALE: NONE



FRONT VIEW (WITH COVER)
SCALE: NONE



SIDE VIEW
SCALE: NONE



PIPING SCHEMATIC DETAIL
SCALE: NONE

- NOTES:
1. PIPING TO BE SIZED PER INSTALLATION AND TO RUN AS STRAIGHT AS POSSIBLE WITH MINIMUM NUMBER OF FITTINGS.
 2. SUCTION LINES AND RETURN LINES ARE TO BE INSTALLED ON OPPOSITE ENDS OF PETROLEUM BULK STORAGE TANK, WITH THE SUCTION LINE AT THE LOWEST POINT OF THE TANK.
 3. FLEXIBLE HOSE LENGTH TO BE DETERMINED FOR EACH INSTALLATION
 4. FILTRATION SYSTEM IS TYPICALLY INSTALLED OUTDOOR AT THE TANK LOCATION. PROVIDE FILTRATION SYSTEM WITH WEATHERTIGHT ENCLOSURE AND HEATER OPTION FOR OUTDOOR INSTALLATIONS.
 5. FILTRATION SYSTEM SUPPORT SHALL BE PROVIDED FOR ALL INSTALLATIONS.

Office of General Services

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CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905

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CONTRACT:

CONSTRUCTION

TITLE: FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION

LOCATION: WESTERN REGION VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION

PROJECT NUMBER: 47676 - C

DESIGNED BY: M. GUTMANN

DRAWN BY: A. KELLY

FIELD CHECK: M. WESOLOWSKI

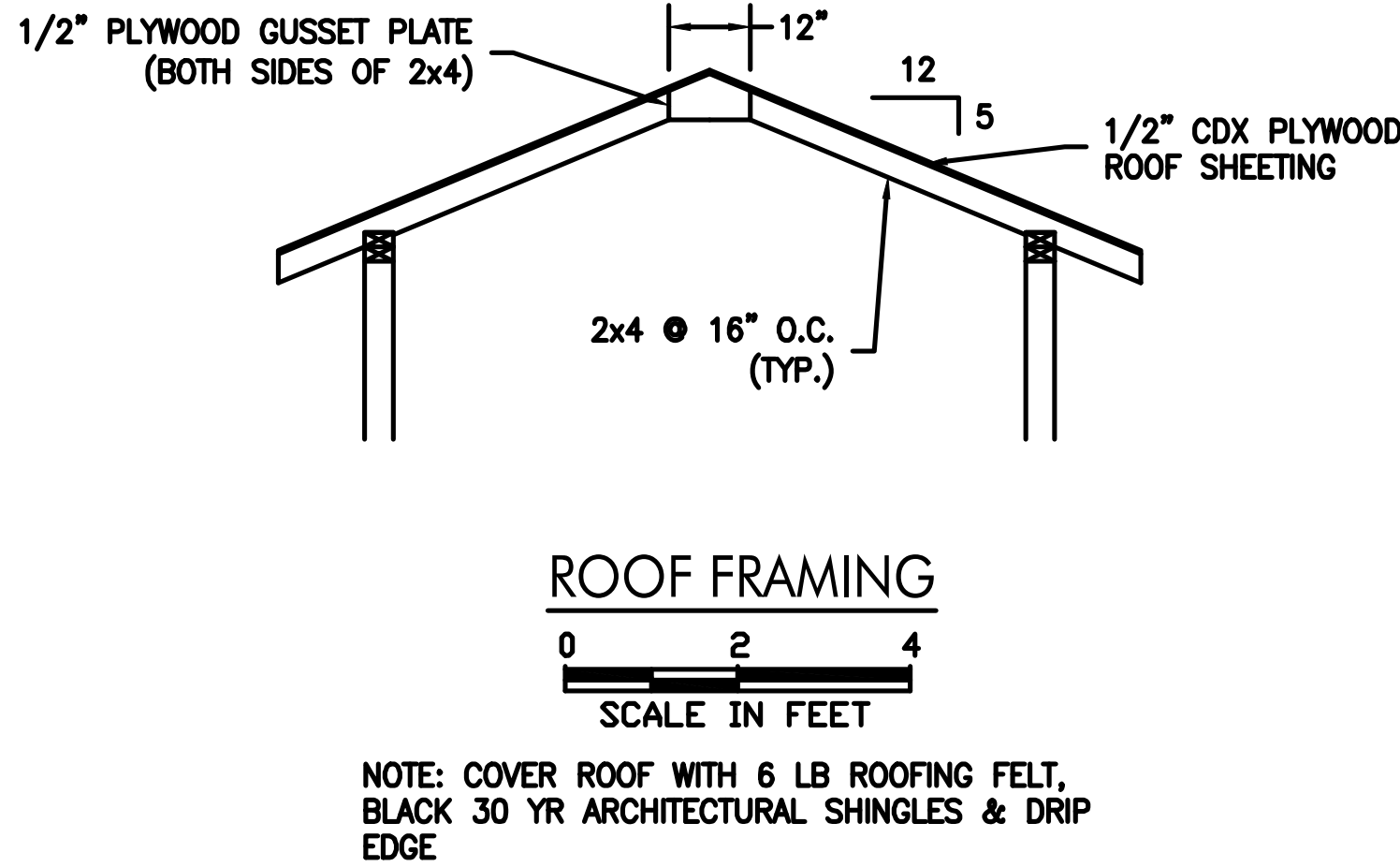
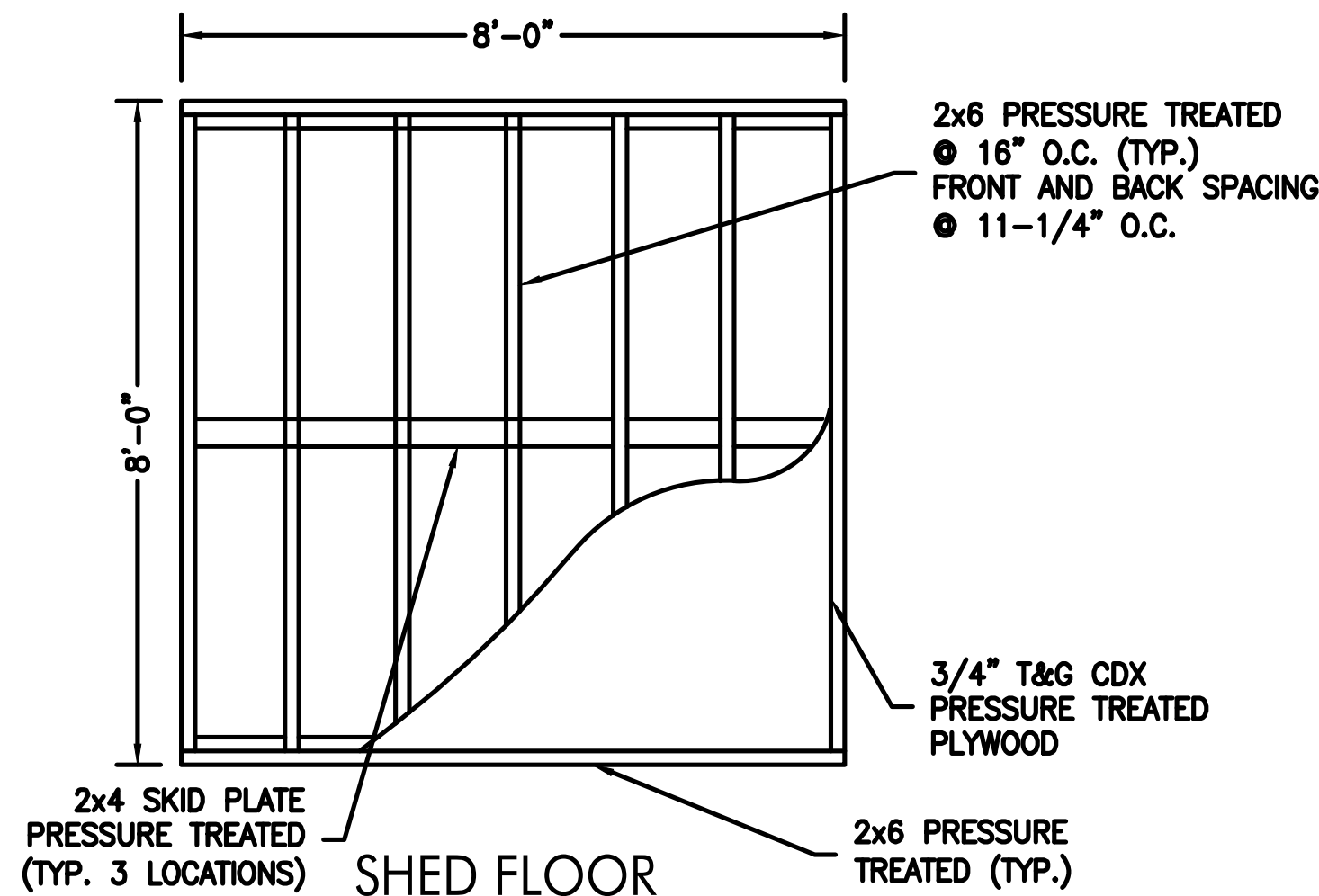
APPROVED: M. WESOLOWSKI

SHEET TITLE:

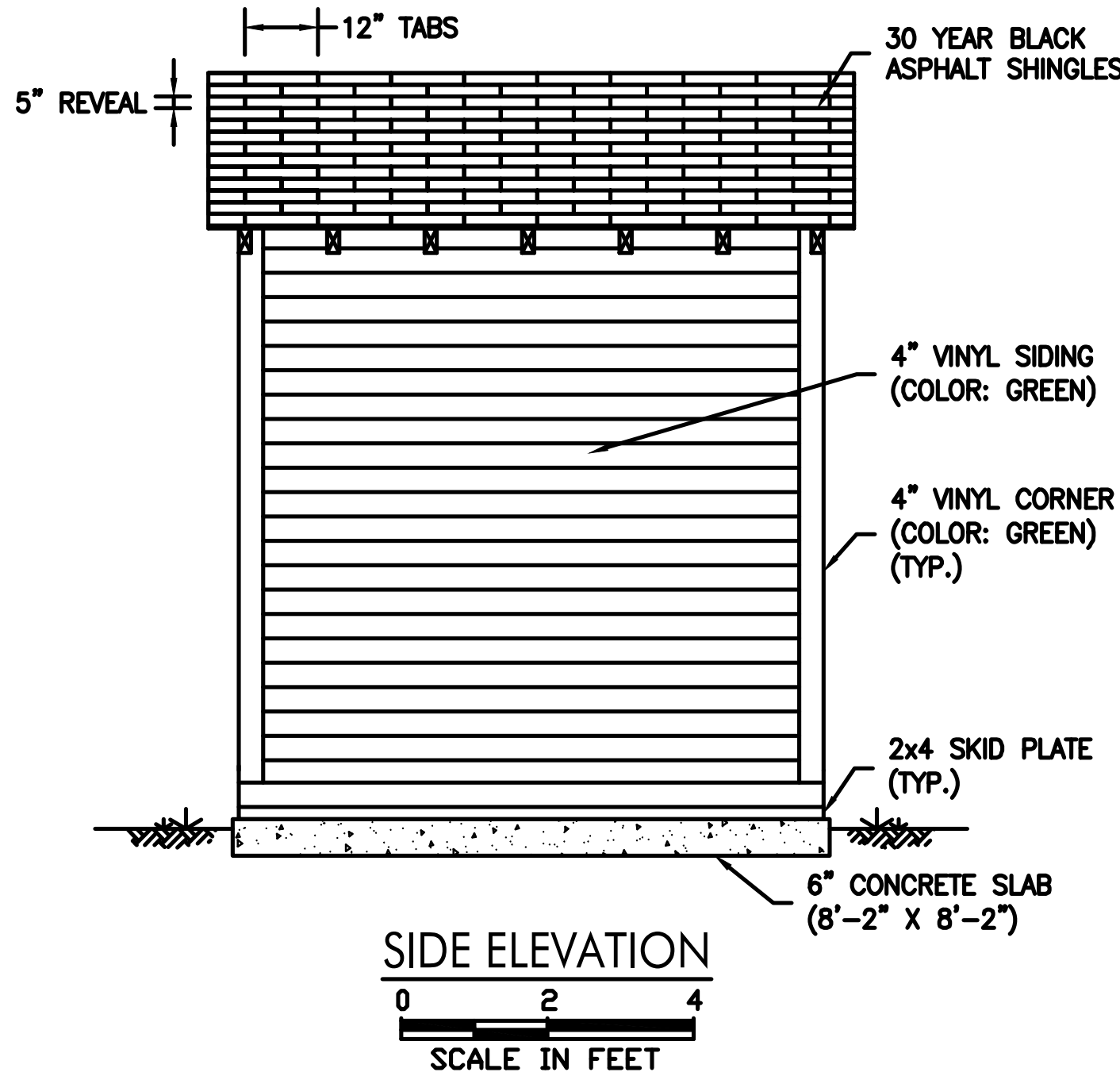
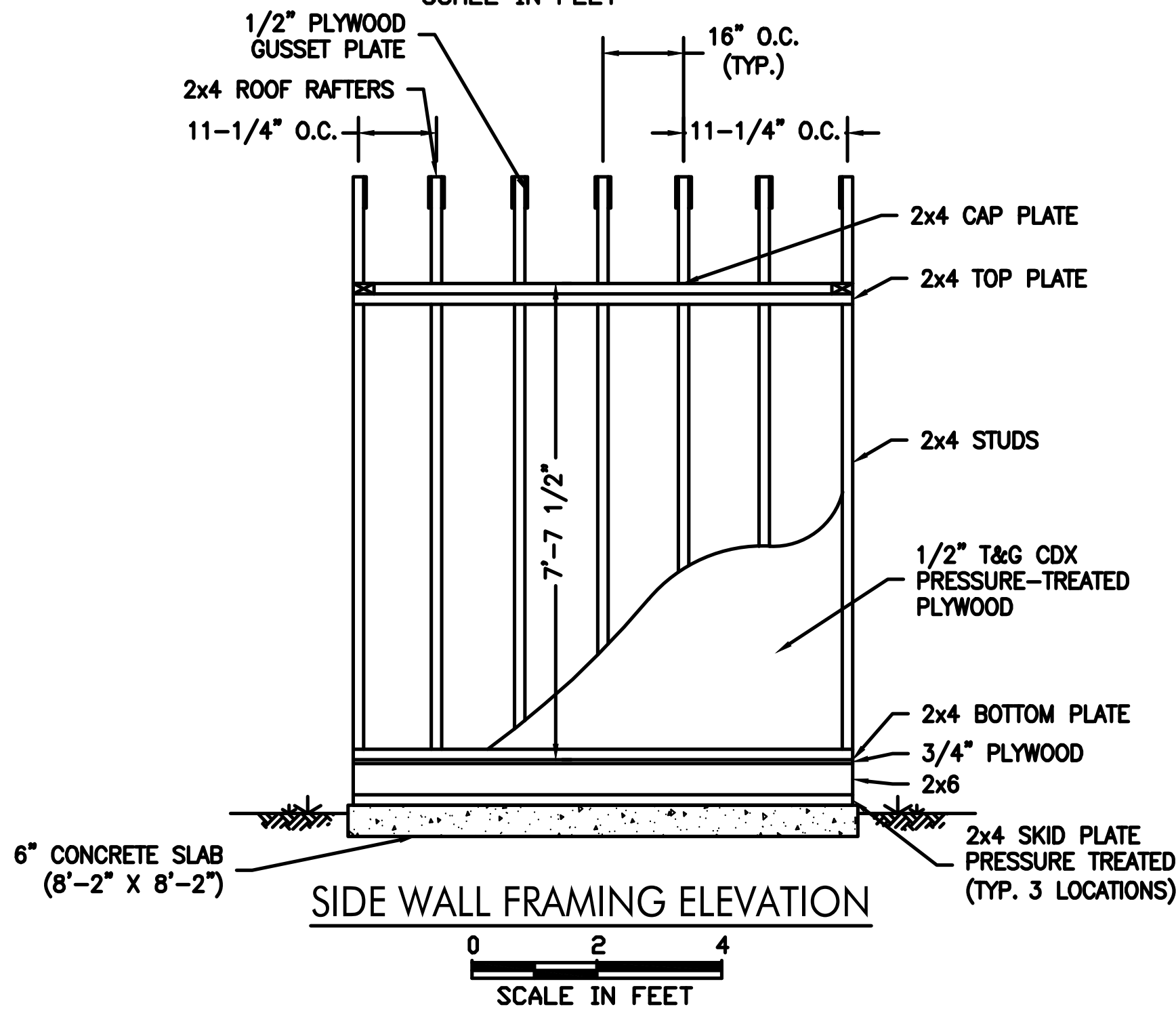
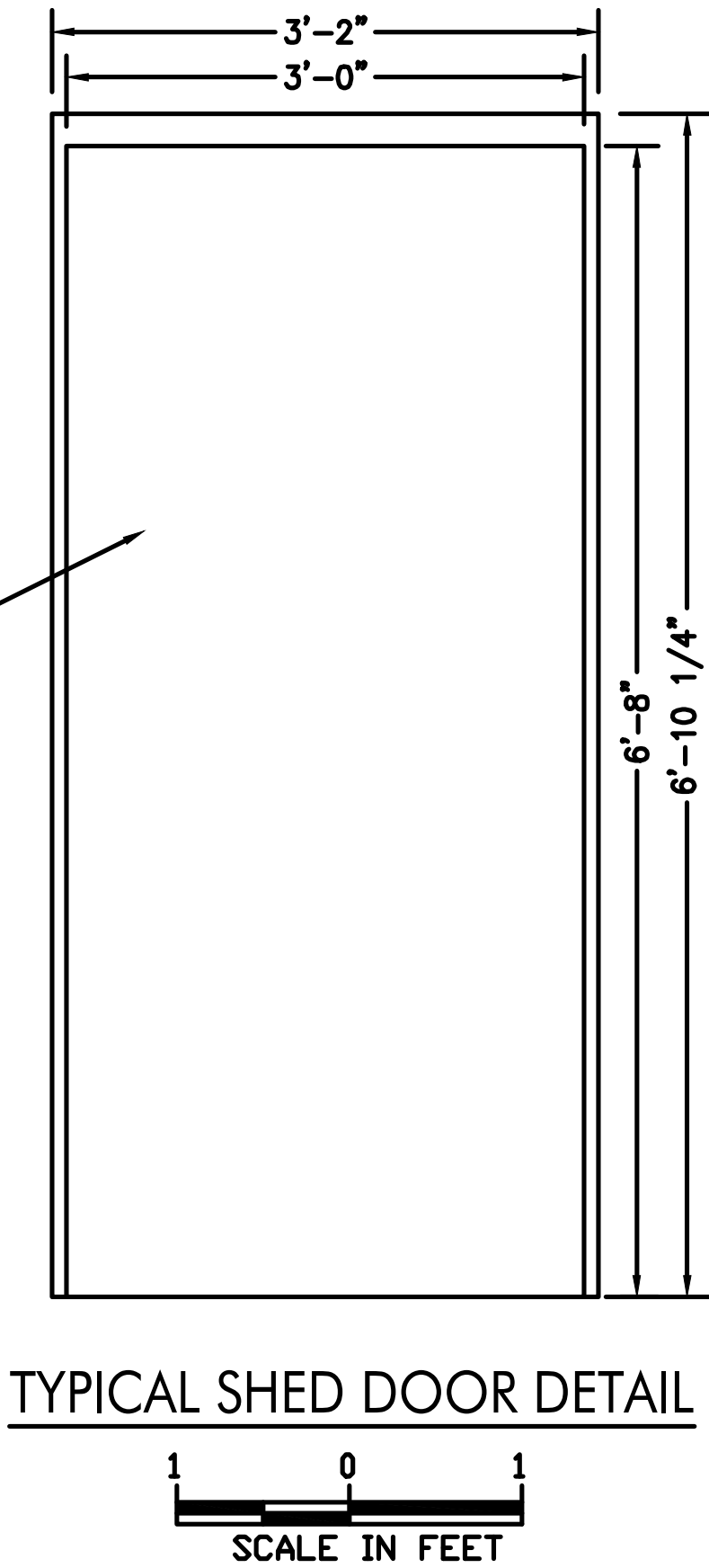
FUEL FILTRATION SYSTEM DETAIL

DRAWING NUMBER: C-38

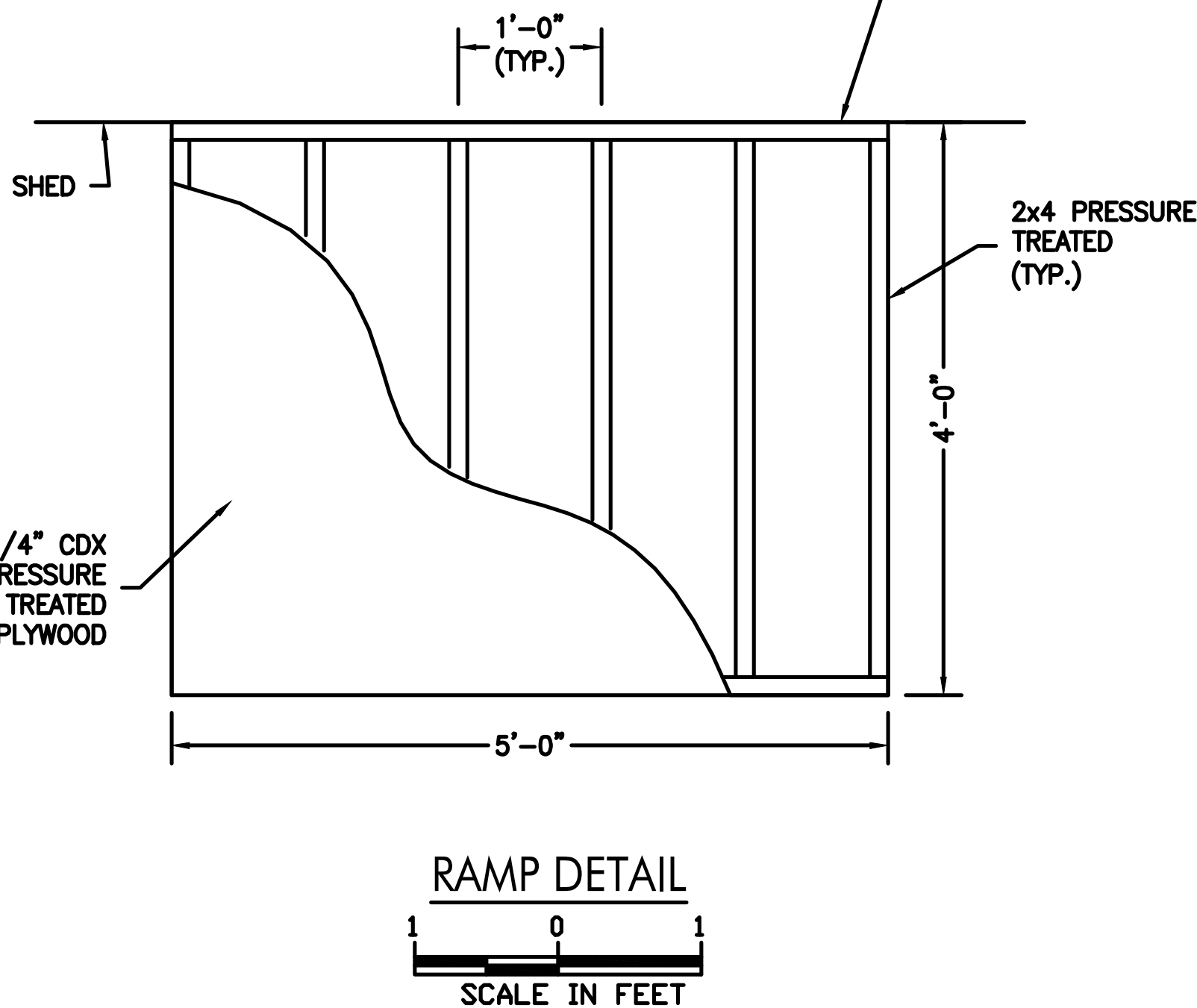
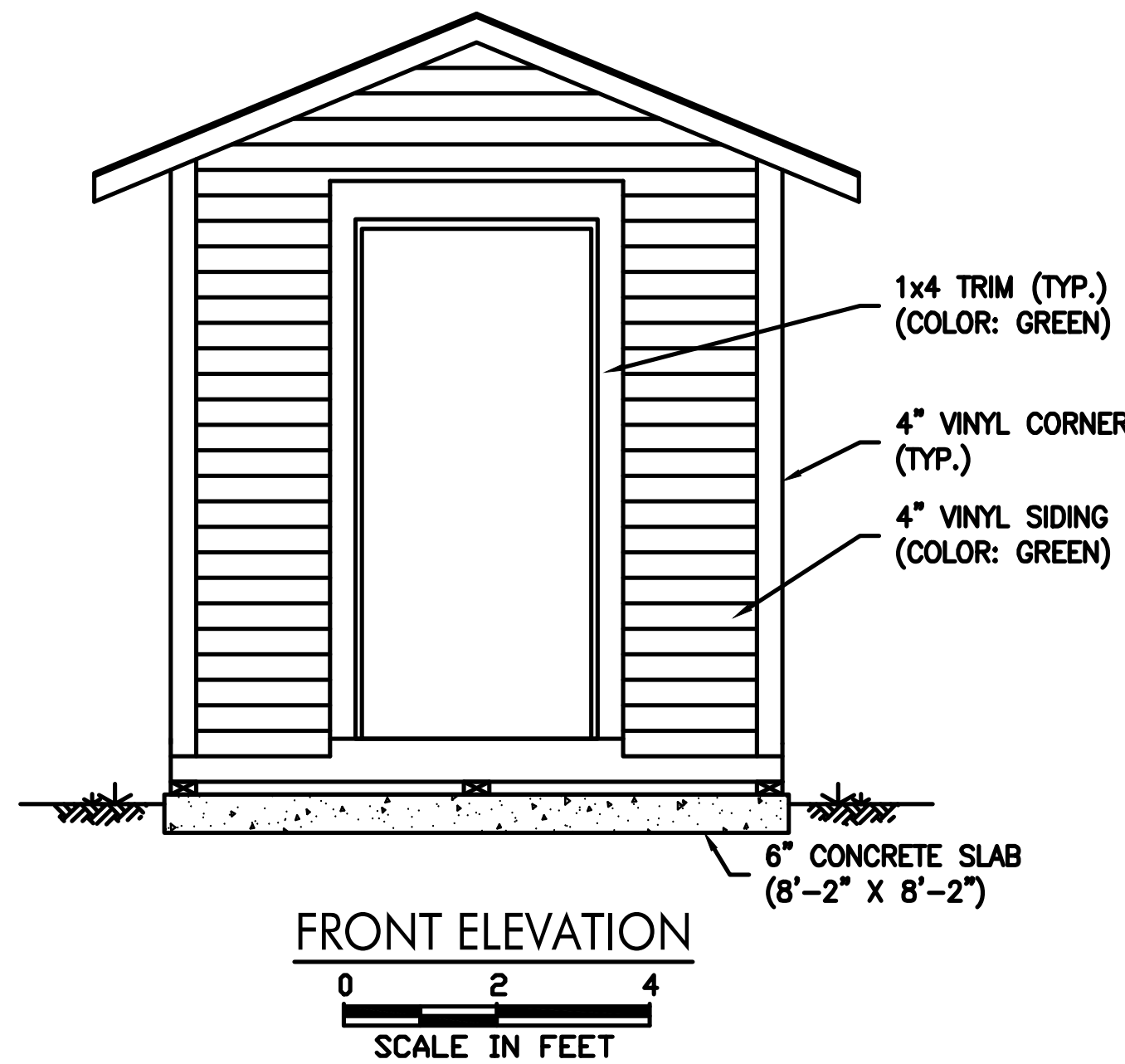
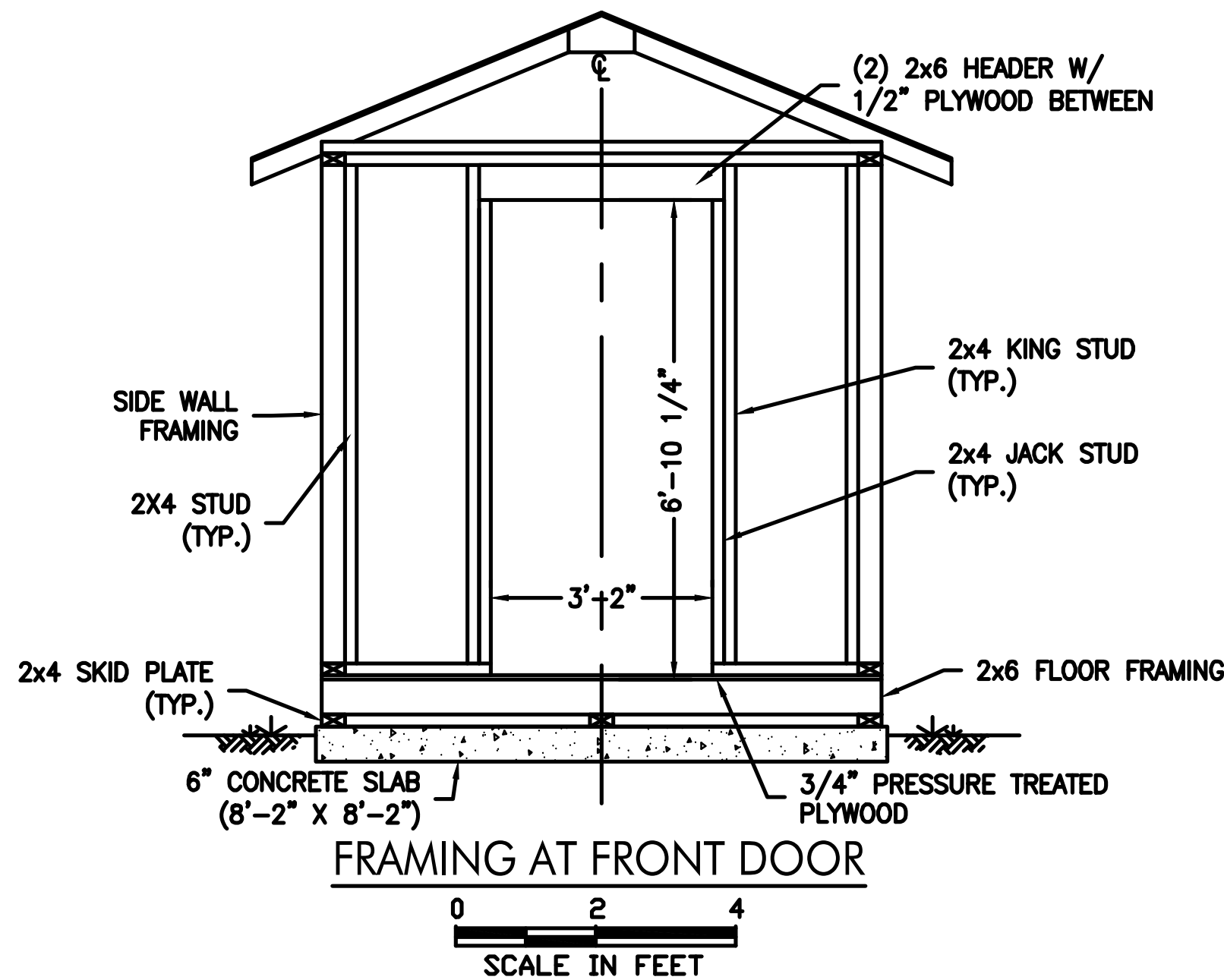
SHEET 40 OF 51



PROVIDE PRE-HUNG STEEL MANDOOK WITH ALL REQUIRED HARDWARE



ATTACH TO SHED WITH (4) 2-1/2" LAG SCREWS



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STATE OF NEW YORK
M. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
12/31/2025

CONTRACT:

CONSTRUCTION

TITLE:

FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION

LOCATION:

WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

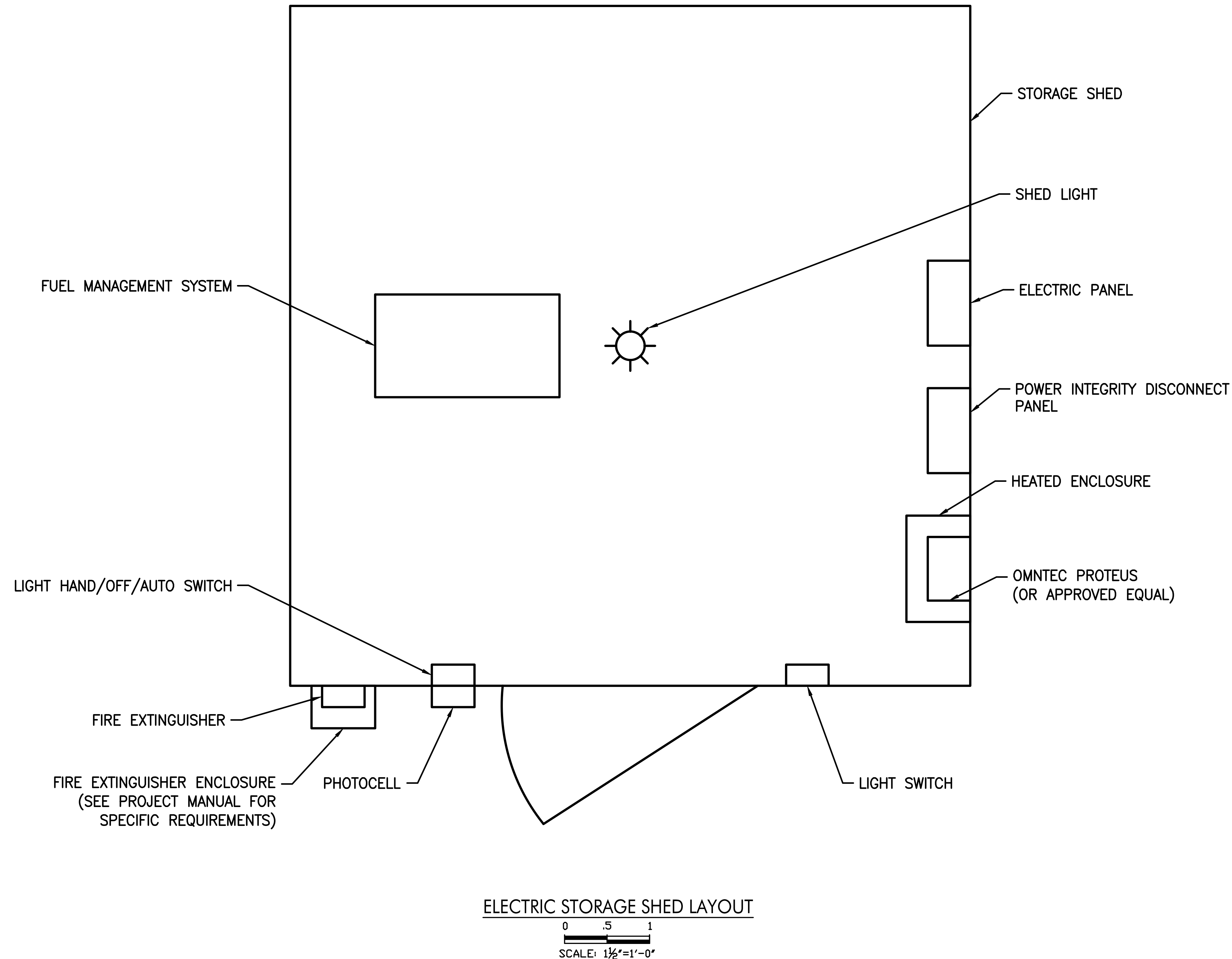
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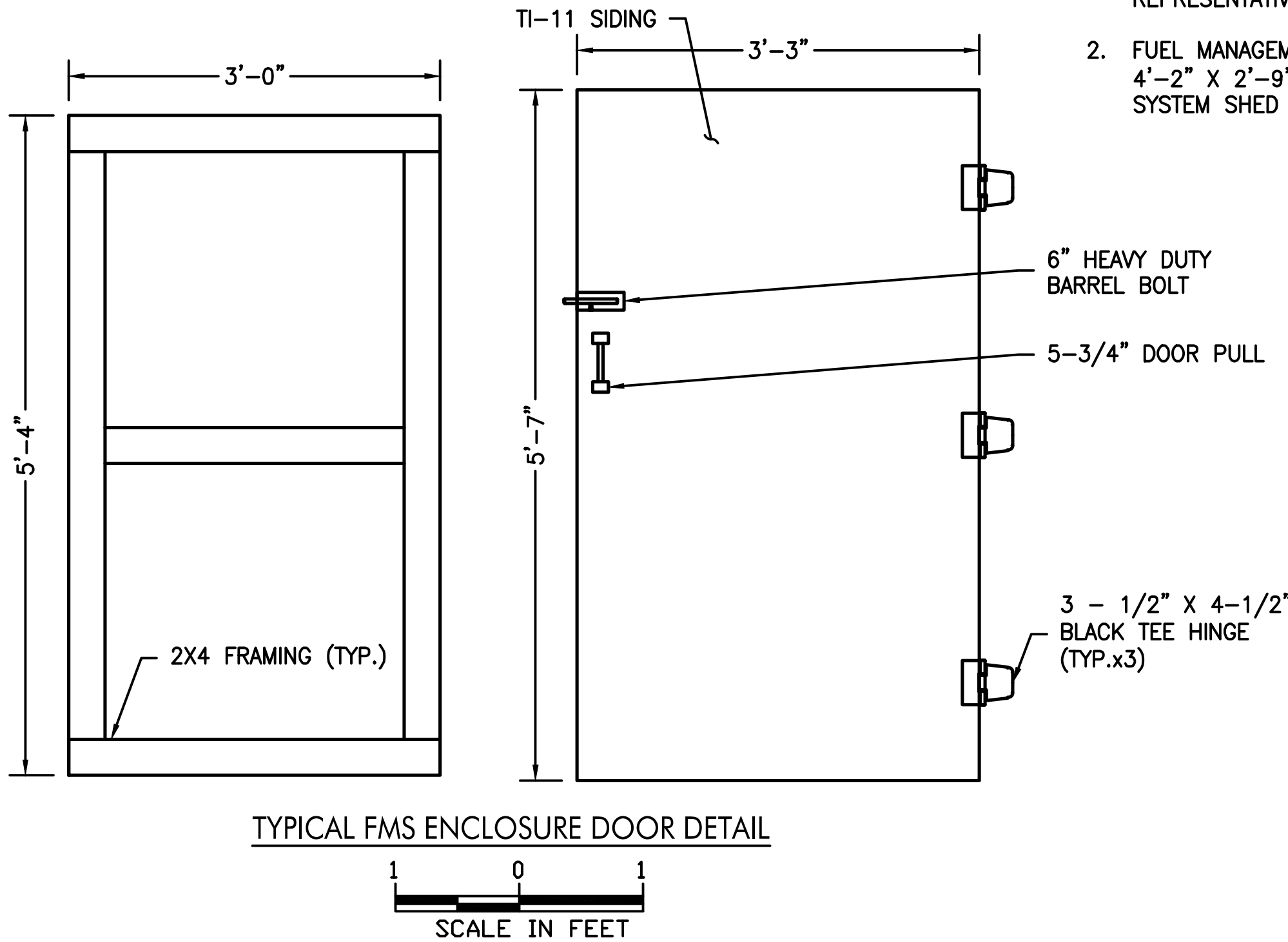
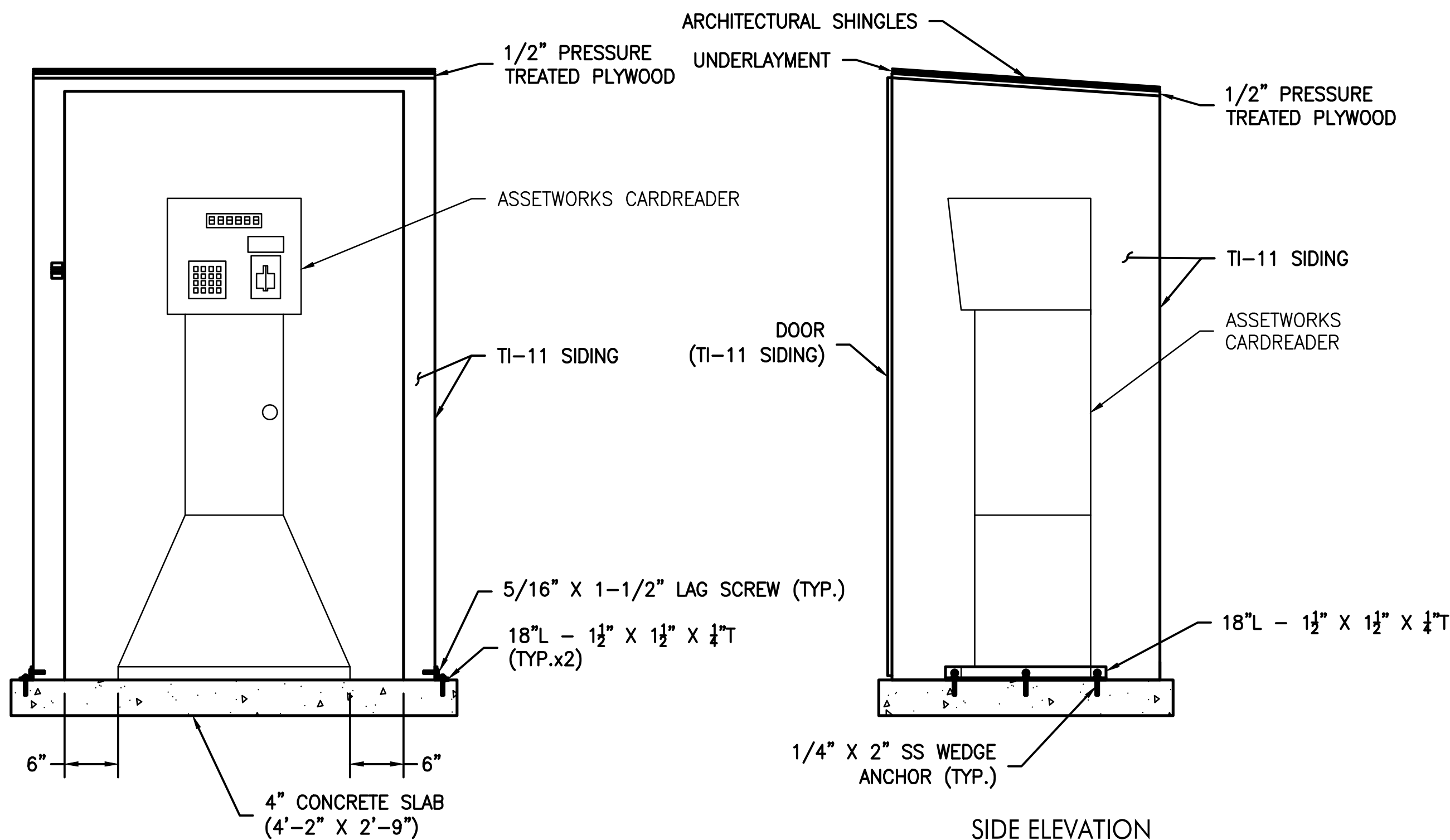
STORAGE SHED DETAILS AND ELEVATIONS

DRAWING NUMBER:

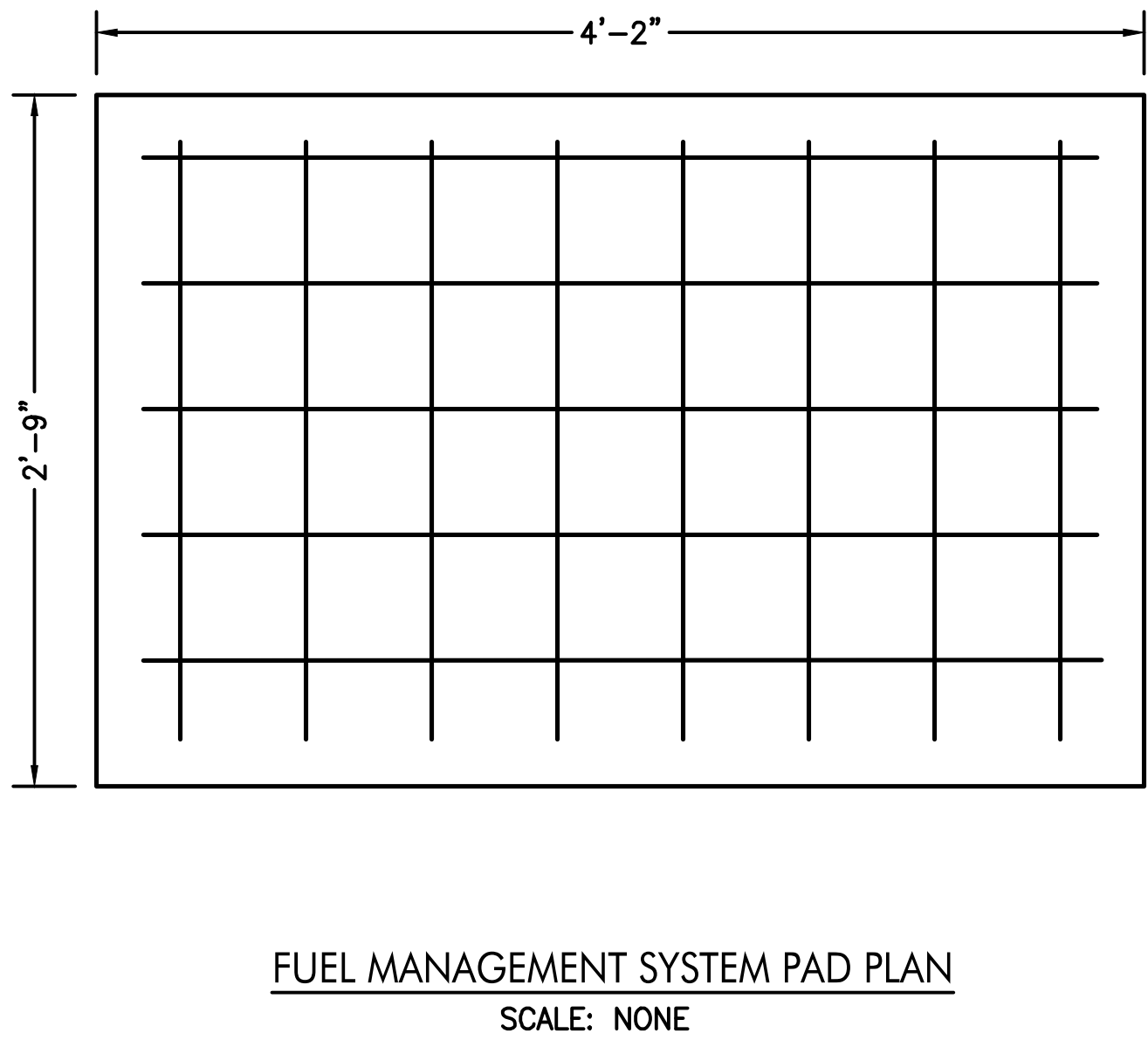
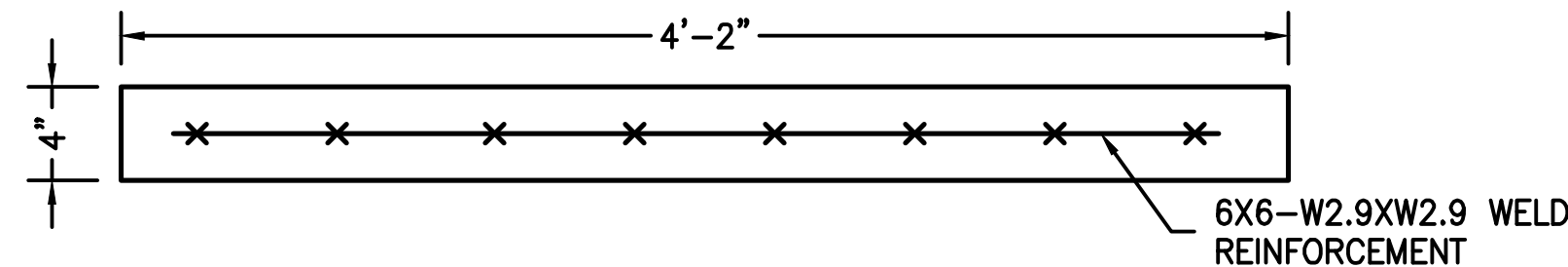
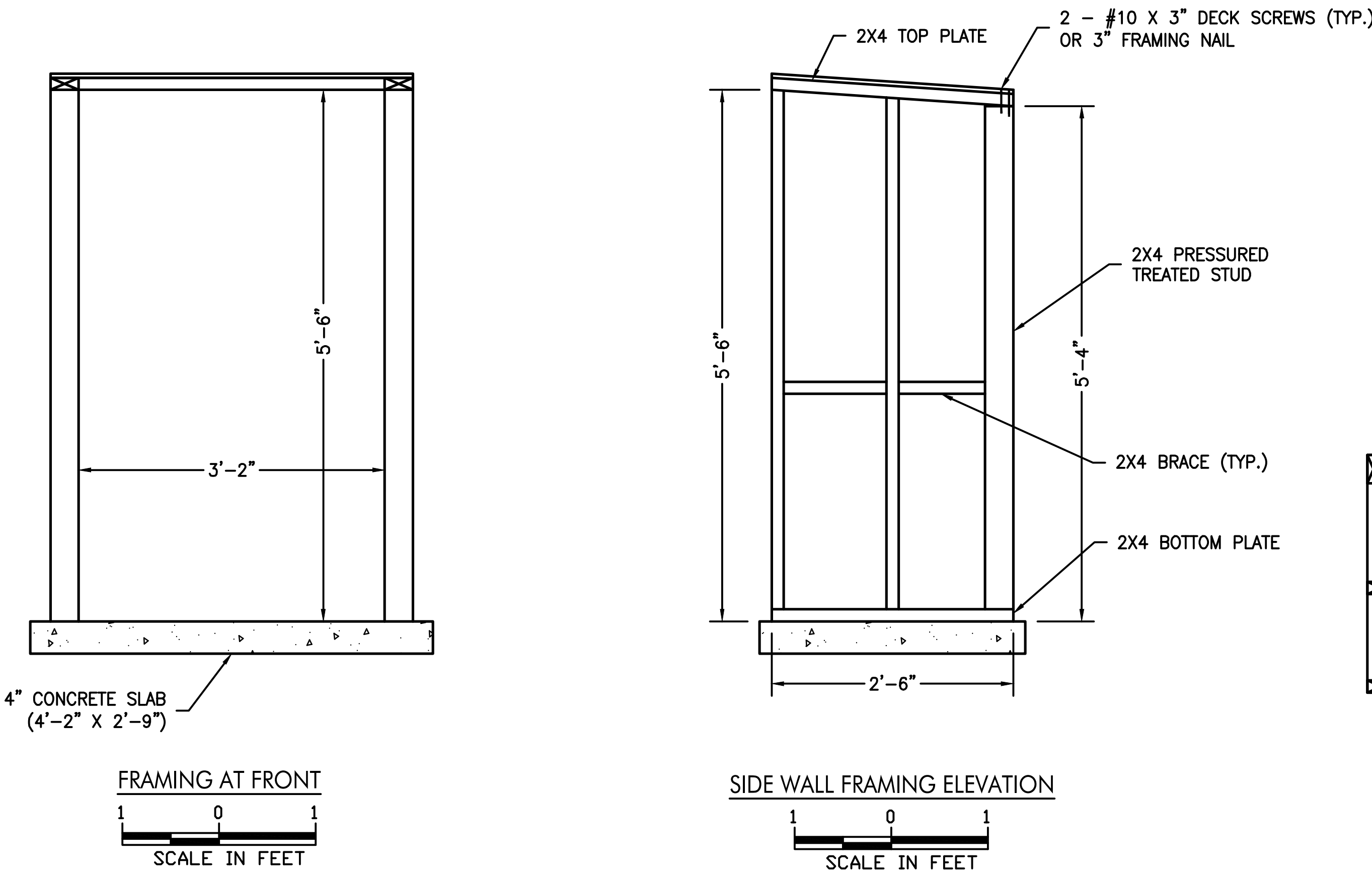
C-39

SHEET 41 OF 51





- NOTES:
- ENCLOSURE SHALL BE PAINTED GREEN UNLESS OTHERWISE DIRECTED BY THE OGS DIRECTOR'S REPRESENTATIVE.
 - FUEL MANAGEMENT SYSTEM PAD SHALL BE 4'-2" X 2'-9" WHEN A FUEL MANAGEMENT SYSTEM SHED IS REQUIRED.



Office of General Services

DESIGN & CONSTRUCTION

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CONTRACT:

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND ENVIRONMENTAL REMEDIATION

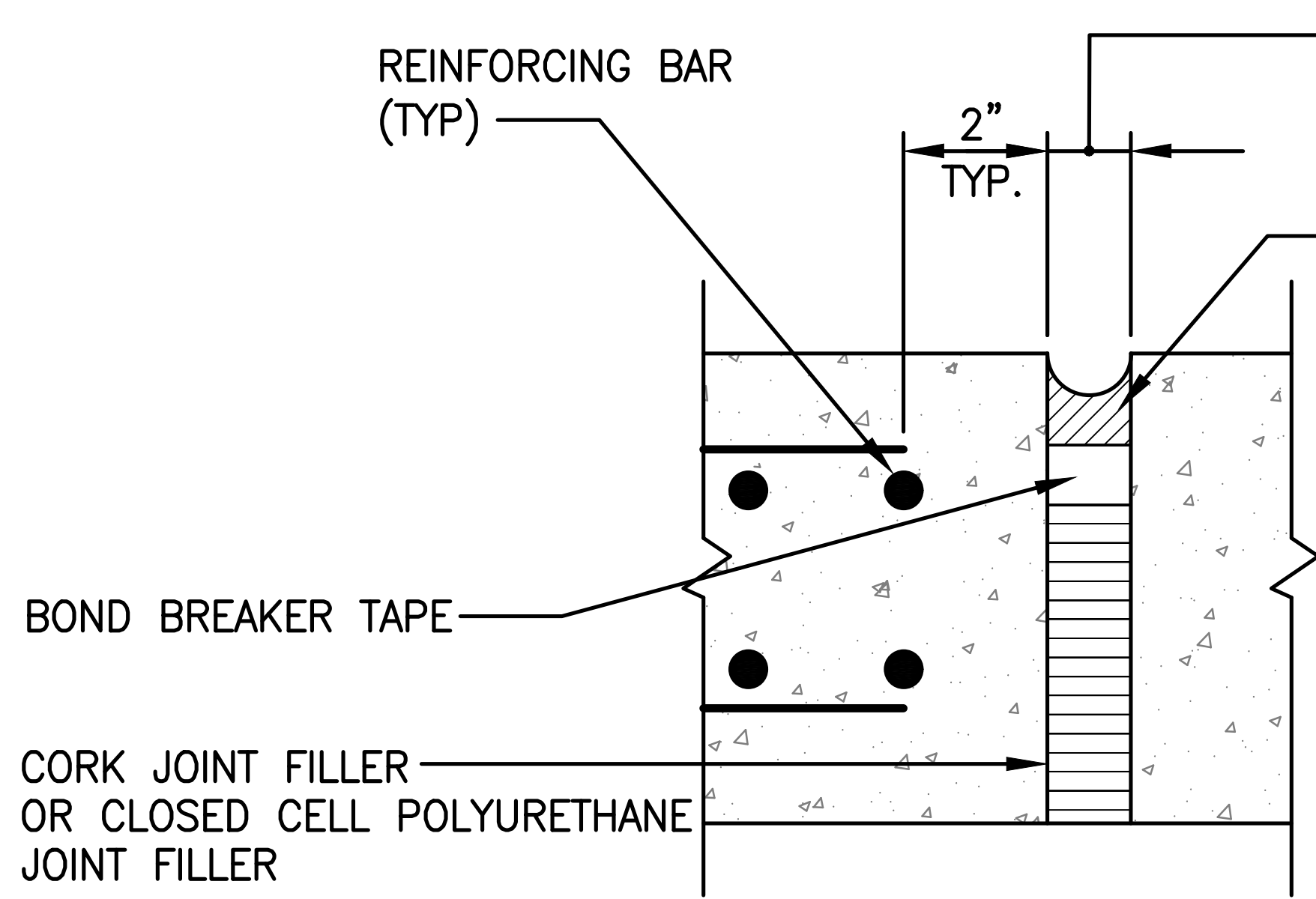
LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

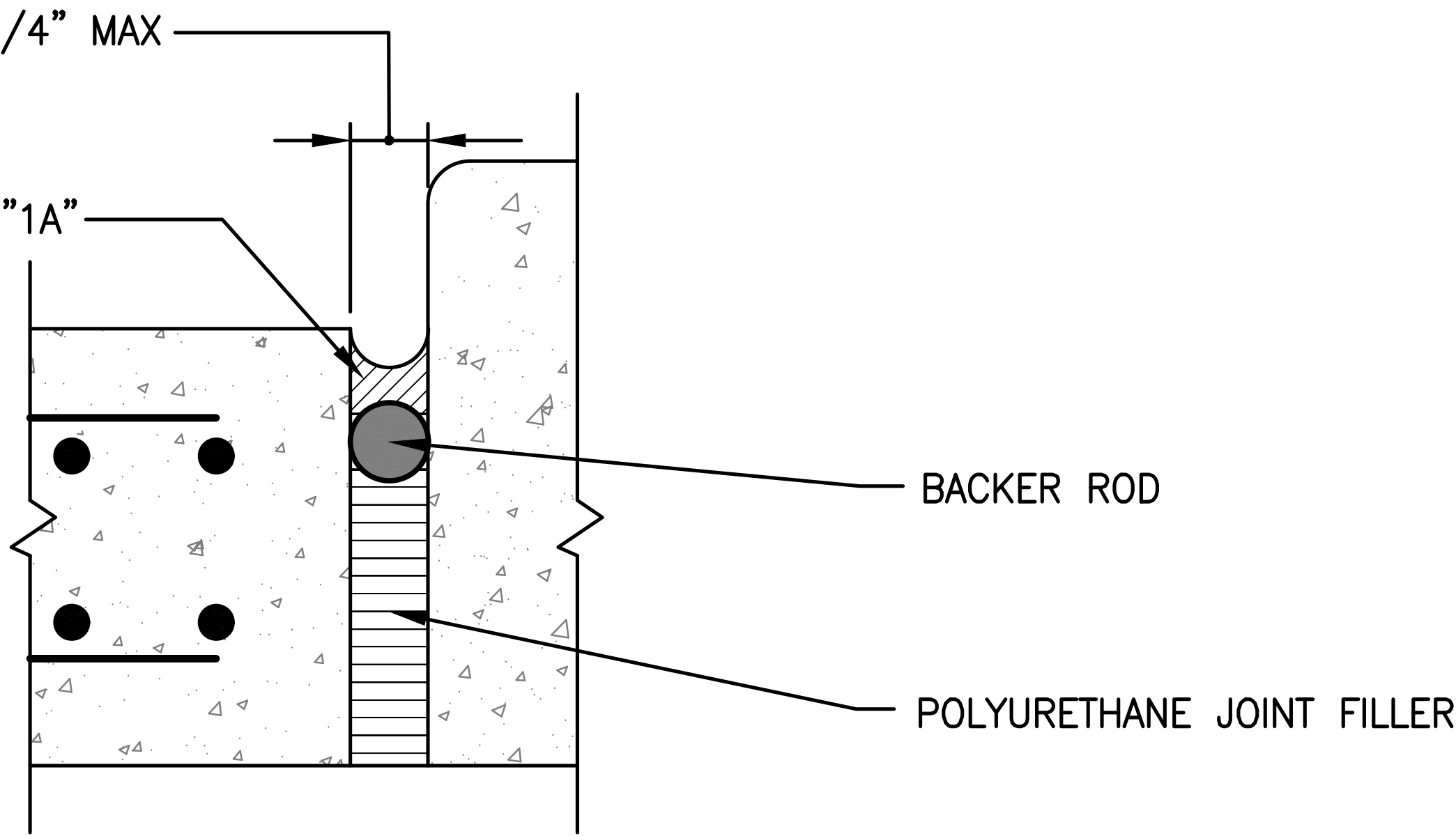
SHEET TITLE:
FUEL MANAGEMENT SYSTEM ENCLOSURE DETAILS AND ELEVATIONS

DRAWING NUMBER:
C-41

SHEET 43 OF 51

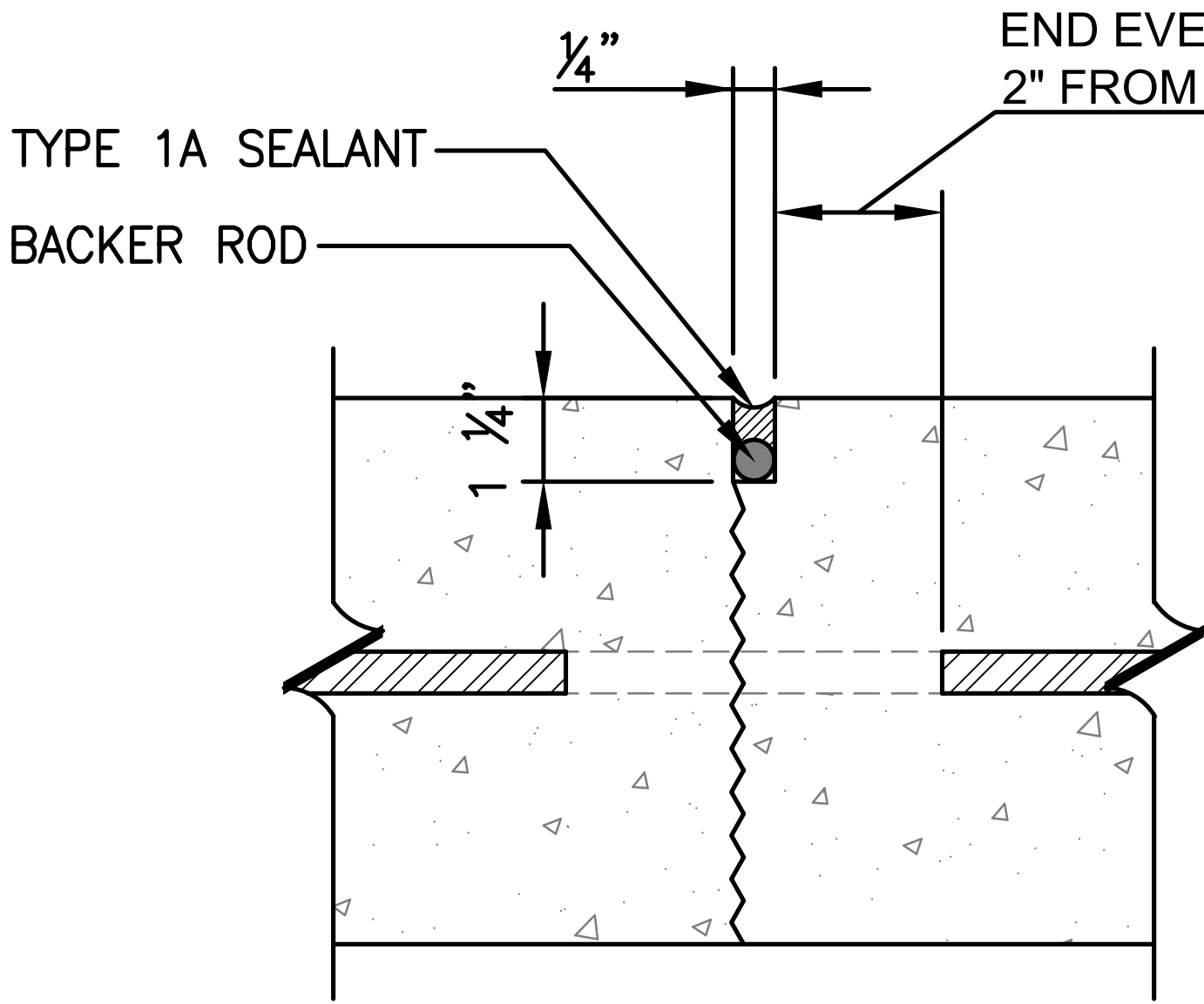


TYPICAL FORMED
EXPANSION JOINT
SCALE: NONE

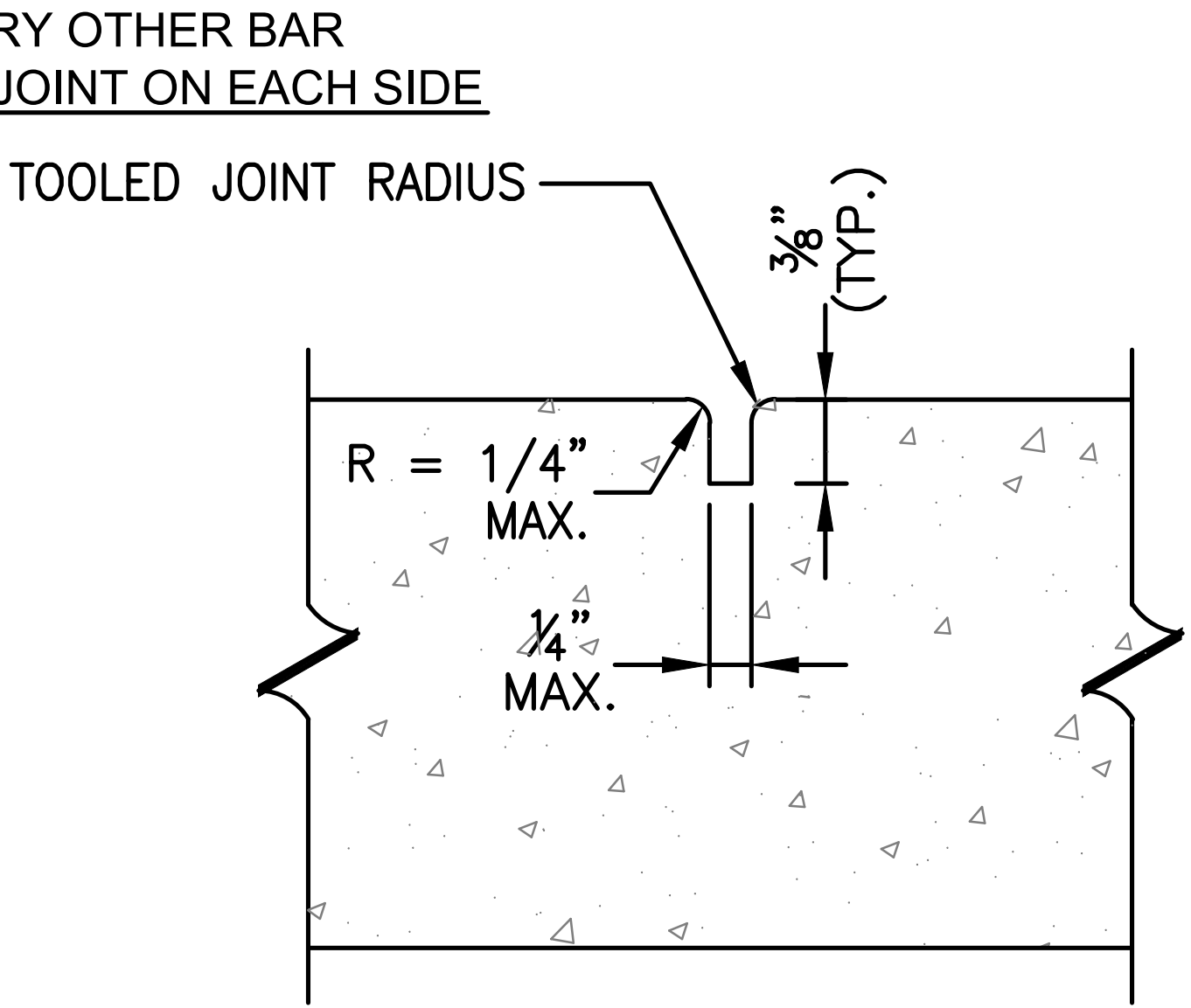


TYPICAL EXPANSION JOINT FOR
IRREGULAR SURFACES
SCALE: NONE

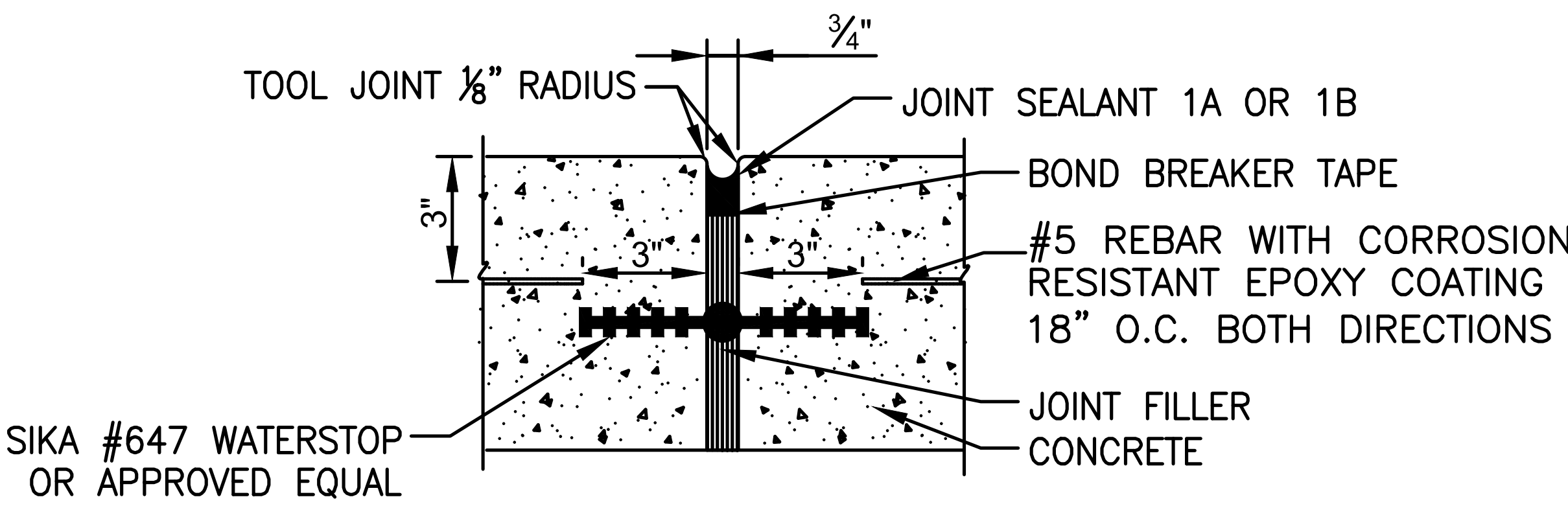
USE THIS JOINT BETWEEN ALL TANK PADS AND VEHICLE PADS



TYPICAL CONTROL JOINT
SCALE: NONE



TYPICAL TOOLED CONTROL
JOINT DETAIL
SCALE: NONE



EXPANSION JOINT WITH WATERSTOP
SCALE: NONE



Office of
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STATE OF NEW YORK
JEROME J. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
12/31/2025

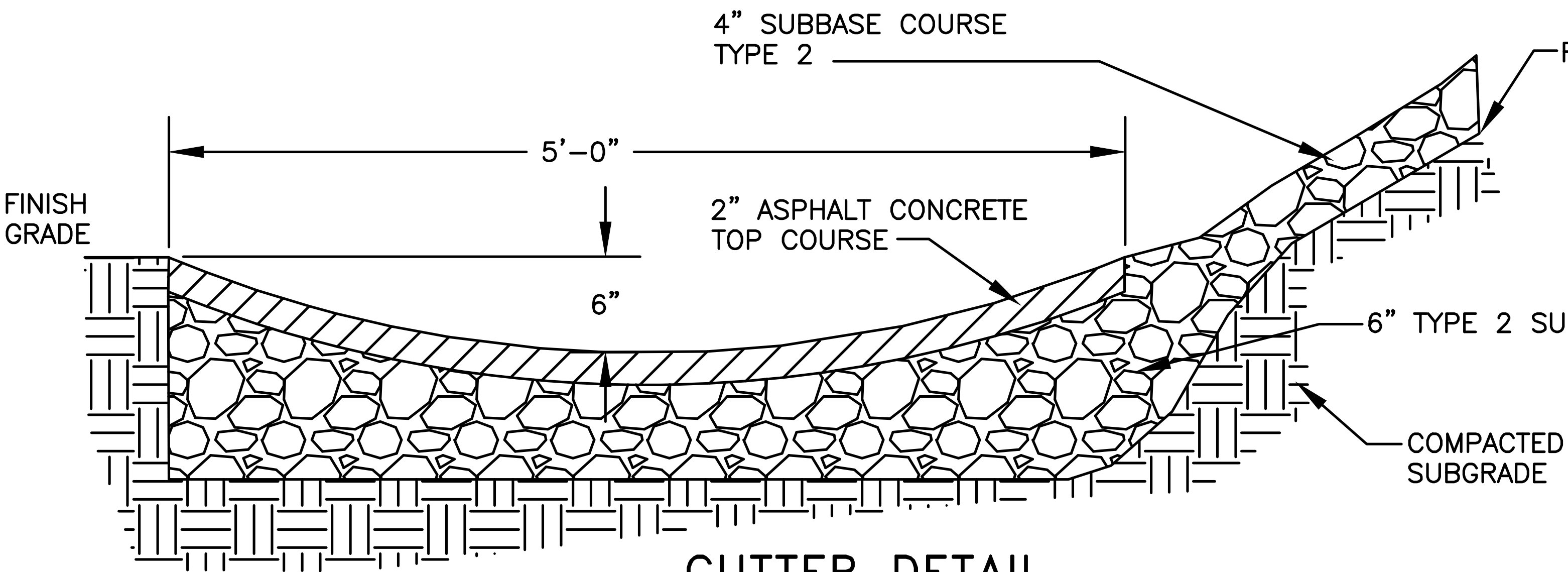
CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
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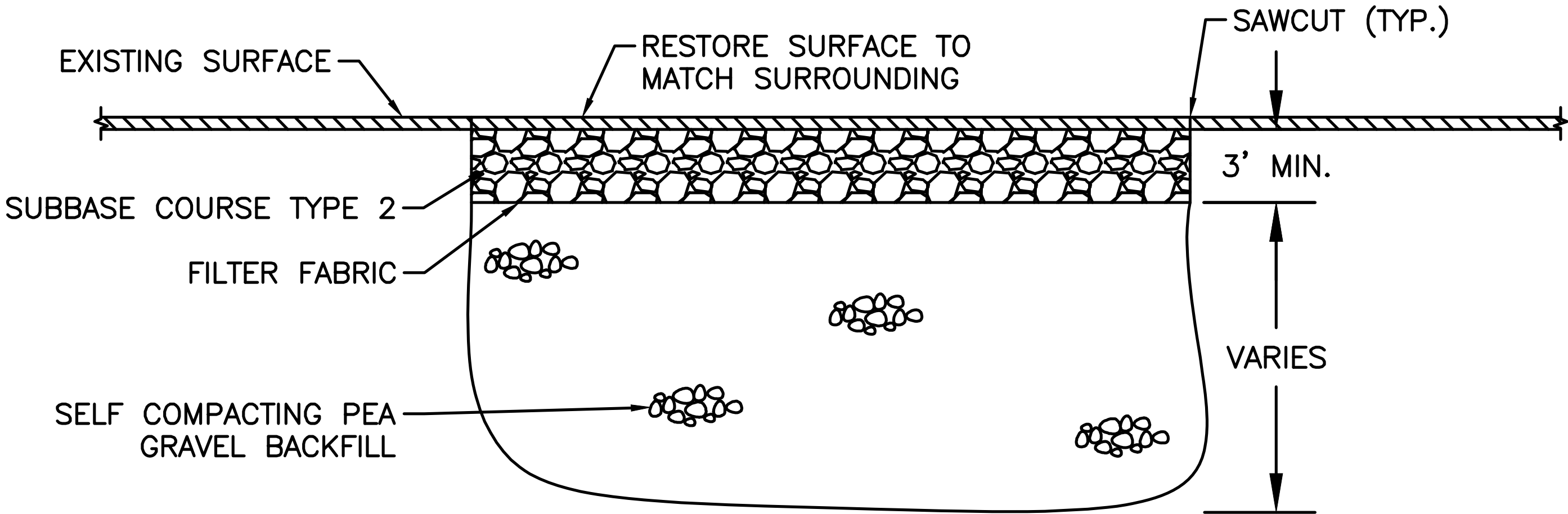
LOCATION:
WESTERN REGION
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MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	
SHEET TITLE:	CONCRETE JOINT DETAILS	
DRAWING NUMBER:	C-42	
SHEET	44	OF 51



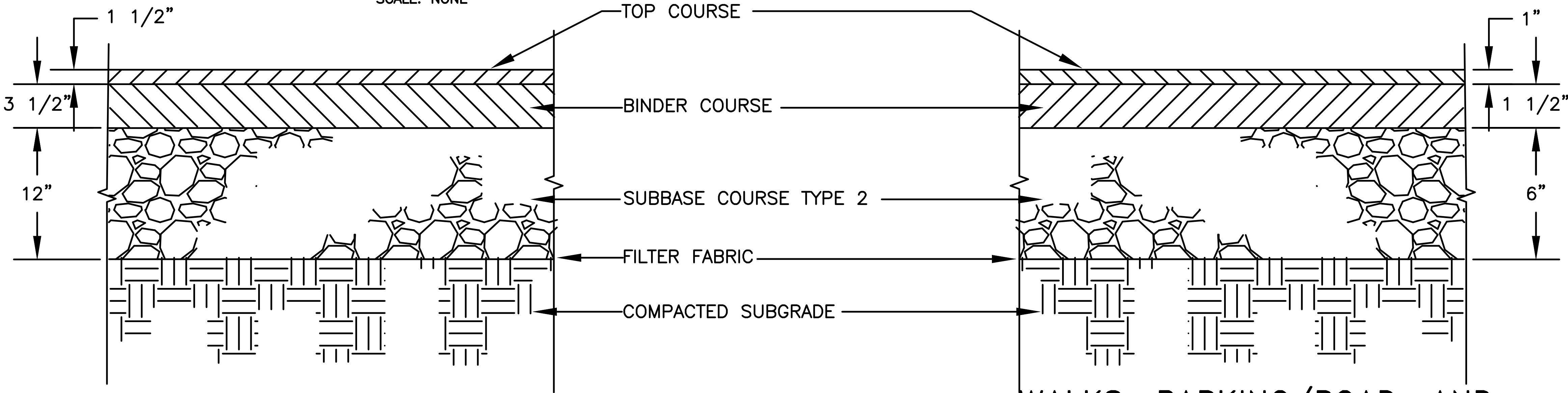
GUTTER DETAIL

SCALE: NONE



FORMER TANK EXCAVATION BACKFILL DETAIL

SCALE: NONE

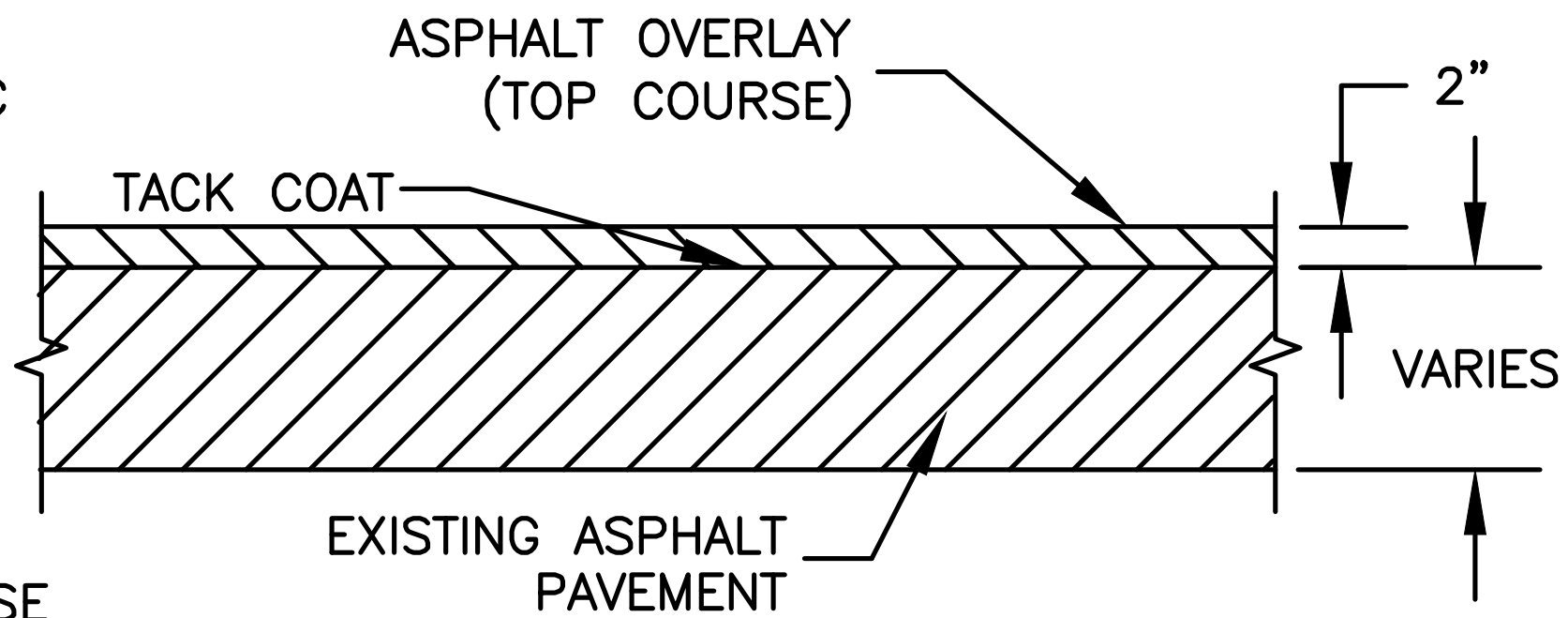


PARKING/ROAD AREA (HEAVY DUTY)

SCALE: NONE

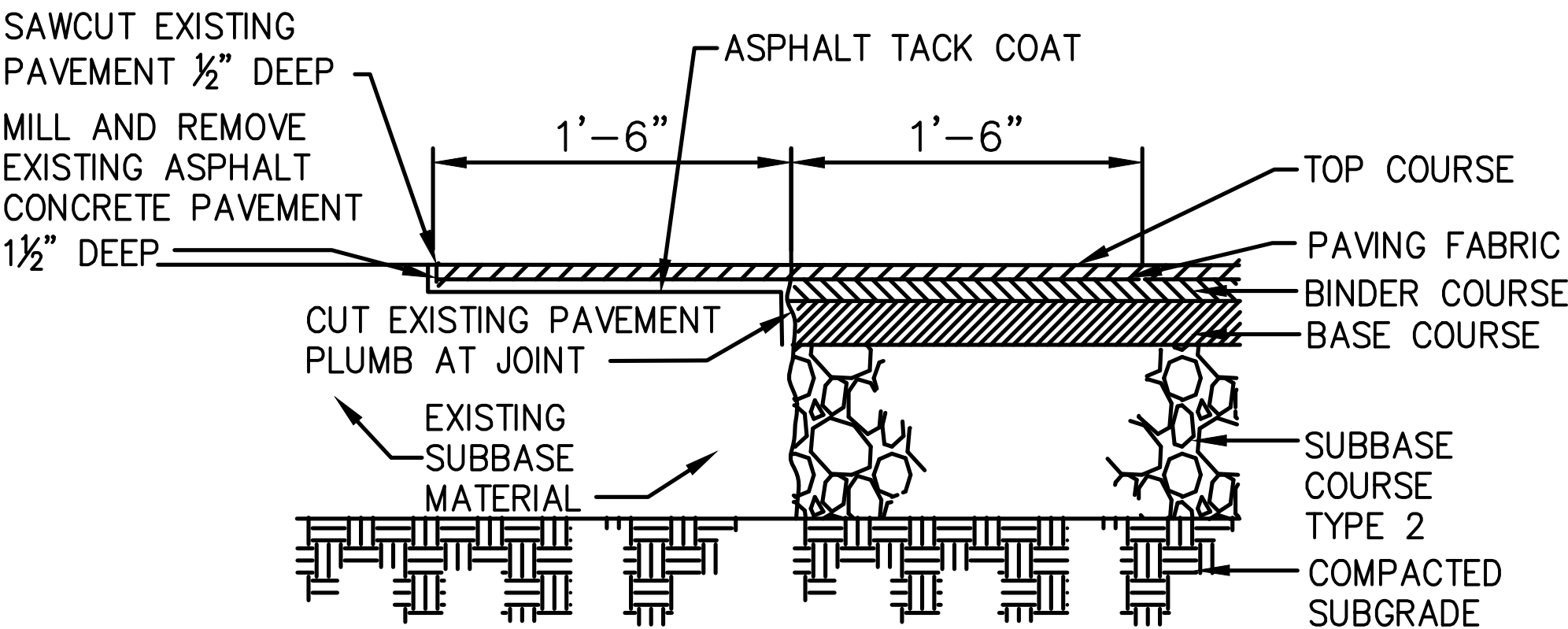
WALKS, PARKING/ROAD, AND
PLAY AREAS (LIGHT DUTY)

SCALE: NONE



ASPHALT PAVEMENT OVERLAY DETAIL

SCALE: NONE



ASPHALT TRANSITION DETAIL

SCALE: NONE



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STATE OF NEW YORK
JULIAN I. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
EXPIRATION DATE
12/31/2026

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
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DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:

ASPHALT CONCRETE
PAVEMENT &
EXCAVATION BACKFILL
DETAILS

DRAWING NUMBER:

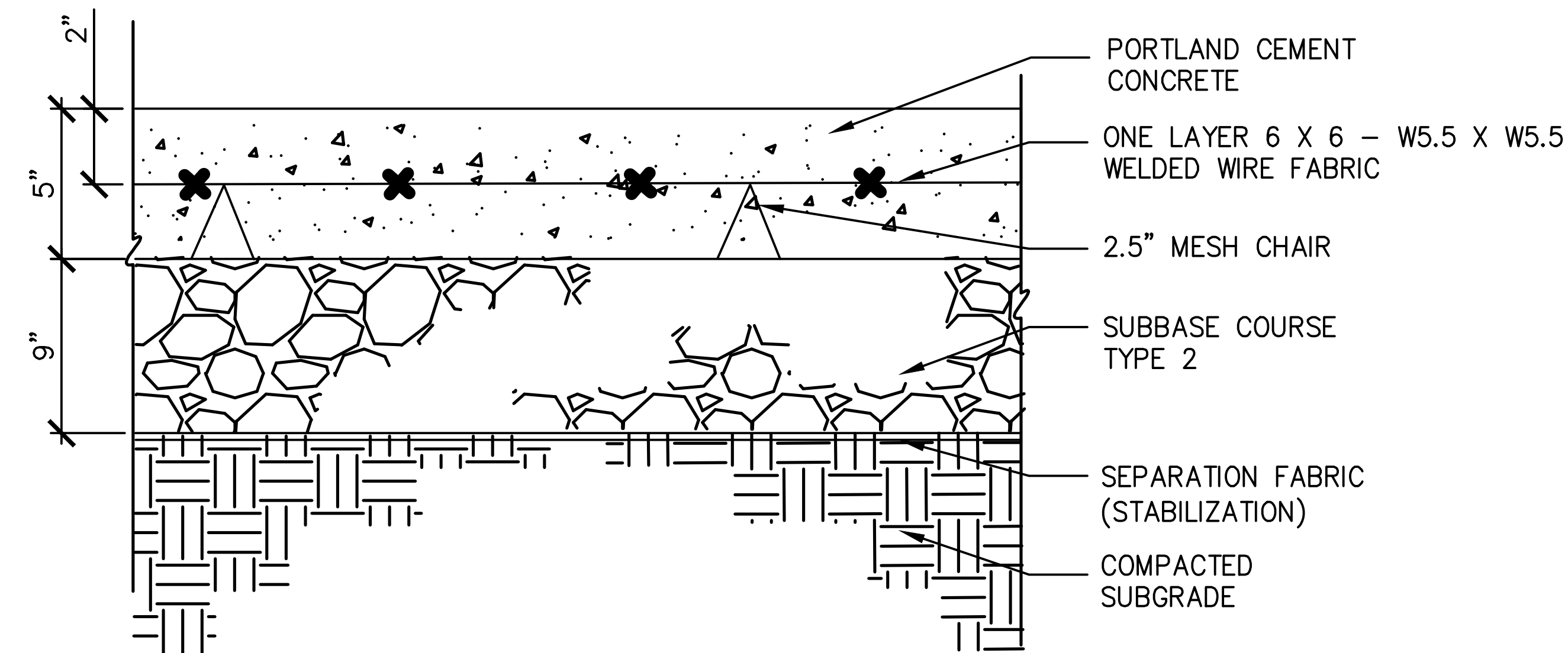
C-43

SHEET

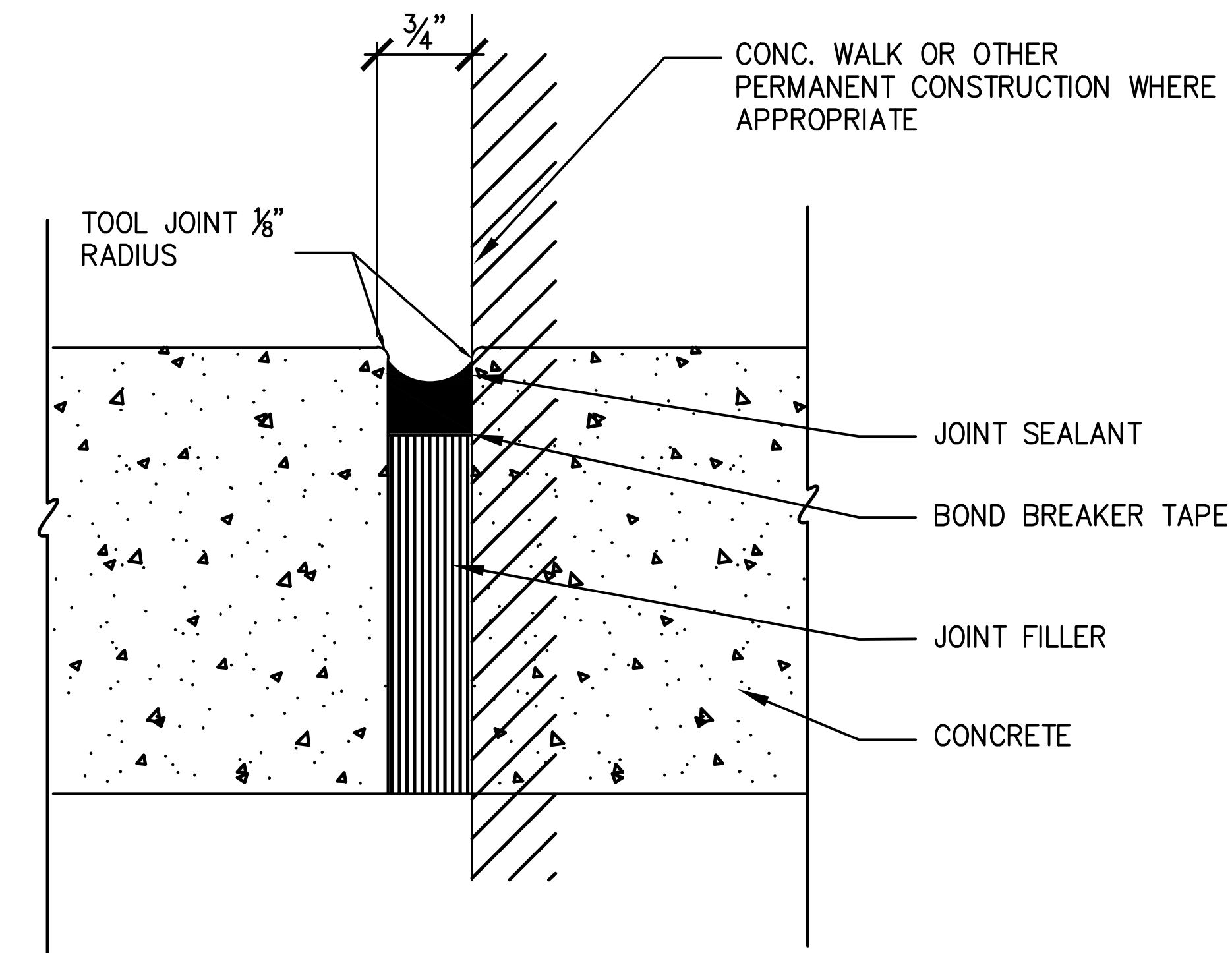
45

OF

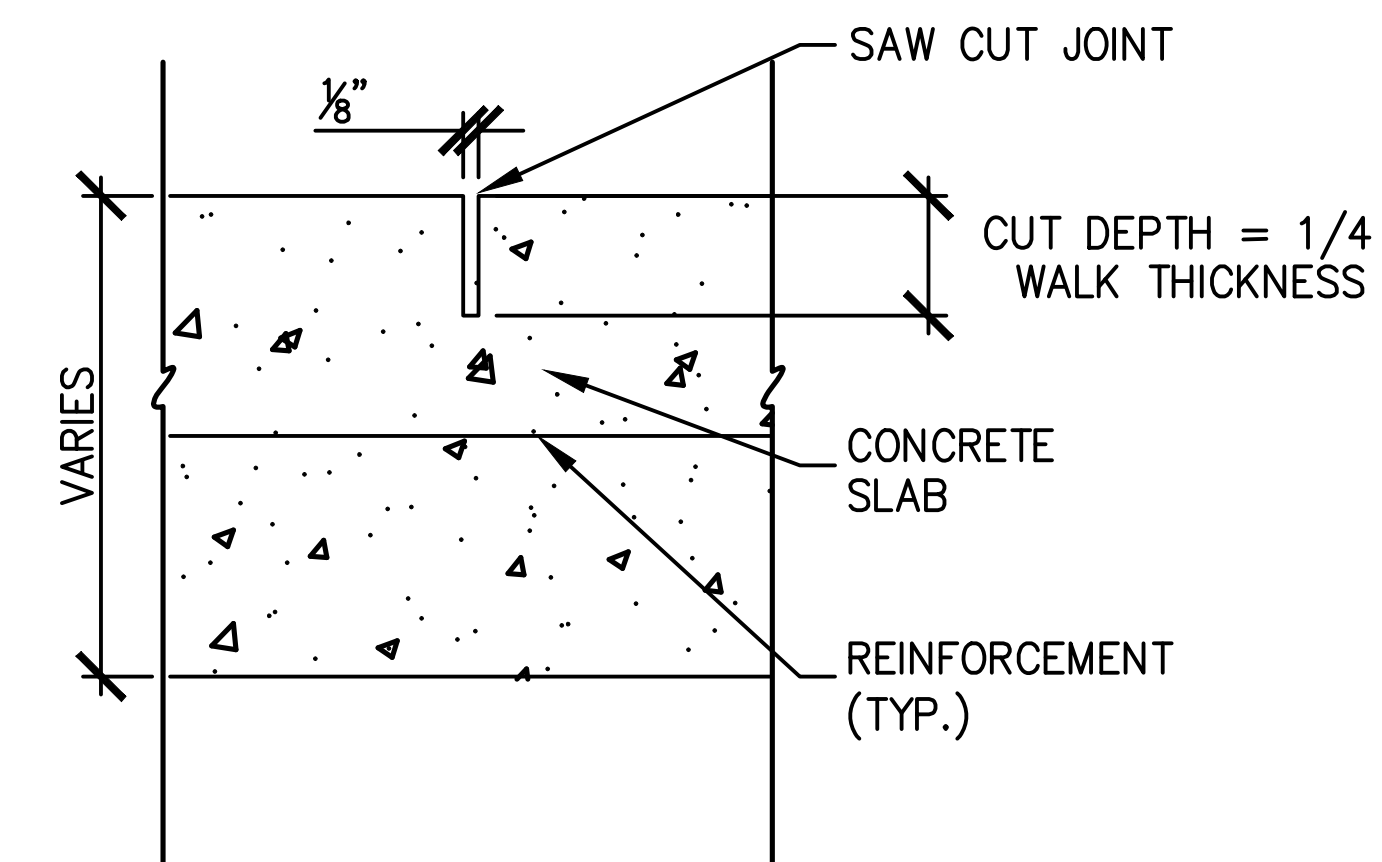
51



CONCRETE WALK – WWF REINFORCED



EXPANSION JOINT

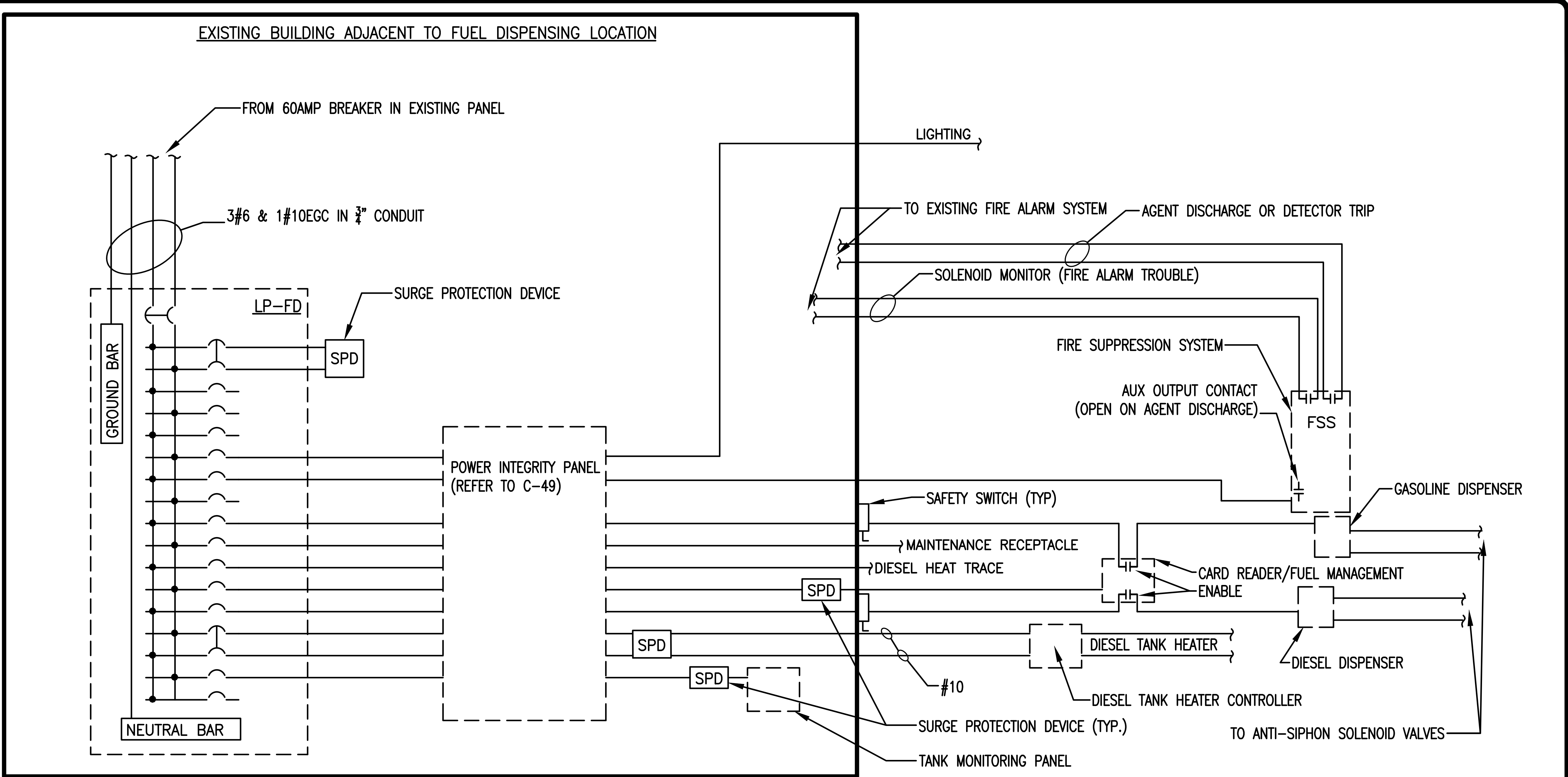


SAWED CONTROL JOINT

NOTES:

1. PROVIDE EXPANSION JOINT WHERE THE ASPHALT SIDEWALK ABUTS THE CONCRETE SLAB FOR THE FUEL TANK AND AT THE CHANGE IN DIRECTION AND EVERY 50'.
2. VERTICAL EXPANSION JOINTS:
 - W.R. MEADOWS, INC. ASPHALT FIBRE EXPANSION JOINT, OR APPROVED EQUAL.
 - W.R. MEADOWS SNAP-CAP EXPANSION JOINT CAP (KEEPS THE FIBRE BOARD CLEAN DURING CONCRETE PLACEMENT), OR APPROVED EQUAL.
 - 3M BOND BREAKER TAPE OR APPROVED EQUAL.
 - A SINGLE COMPONENT, SELF-LEVELING, NON-SAG POLYURETHANE SEALANT - SIKAFLEX-1C SL OR APPROVED EQUAL.
3. EDGES AND EXPANSION JOINTS SHOULD TROWELED WITH A RADIUS EDGE.
4. SAW CONTROL JOINTS (CJ) AFTER THE CONCRETE HAS SET. COMPLETE SAWCUTS WITHIN 18 HOURS AFTER SLAB IS PLACED. SPACE CONTROL JOINTS EQUALLY BETWEEN EXPANSION JOINTS AT APPROXIMATELY 5'-0" ON CENTER OR MATCH EXISTING WALKS IN AREA, EXCEPT WHERE A DIFFERENT SPACING IS SHOWN ON THE DRAWINGS.
5. APPLY CURING IMMEDIATELY AFTER FINAL FINISH. KURE-N-SEAL OR APPROVED EQUAL.
6. CONCRETE SIDEWALK SHALL HAVE A BROOM FINISH.

[illegible]



GENERAL NOTES:

- (THIS DRAWING ONLY)

A. CONDUIT LAYOUT IS SHOWN DIAGRAMMATICALLY. CONDUITS SHALL BE CONSOLIDATED TO REDUCE THE NUMBER OF CONDUITS REQUIRED ON A SITE BY SITE BASIS. CONTRACTOR SHALL SUBMIT CONDUIT CONSOLIDATION PLAN AS A FIELD SUBMITTAL ON ELECTRIC SUBMITTAL PLATFORM.

B. PROVIDE A 2 POLE 60 AMPERE TRIP ELEMENT BREAKER IN AN EXISTING PANEL AS DIRECTED. OR IF SUFFICIENT SPACE EXISTS IN AN EXISTING BREAKER, PROVIDE BRANCH BREAKERS IN THAT PANEL AS DIRECTED.

C. GROUNDING CONDUCTORS ARE TO BE PROVIDED IN ALL CONDUITS REGARDLESS OF WHAT IS DEPICTED ON THIS DIAGRAM.

D. PROVIDE ALL WIRING IN CONDUIT. CONDUITS PENETRATING SLABS OR AREAS EXPOSED TO SALT SHALL BE PVC-COATED RIGID METAL CONDUIT. PVC-COATED CONDUIT SHALL EXTEND FROM BENEATH SLAB TO 2 FEET ABOVE SLAB.
- E. THE MAINTENANCE RECEPTACLE CONDUCTORS SHALL NOT BE ROUTED THROUGH THE CONTACTOR.

F. MOUNT THE PHOTOCELL ON THE EXTERIOR OF THE BUILDING AT APPROXIMATELY 10 FEET ABOVE GRADE AS DIRECTED.

G. MOUNT SAFETY SWITCHES OUTDOORS, IN SIGHT OF THE DISPENSING LOCATION, OUTSIDE OF THE HAZARDOUS AREA, AS DIRECTED. BREAK NEUTRAL CONDUCTORS IN SAFETY SWITCHES AS WELL.

H. COMPONENTS SHOWN ON THE DIAGRAM ARE TYPICAL, NOT ALL INSTALLATIONS WILL REQUIRE ALL OF THE COMPONENTS SHOWN.
- I. PROVIDE THE NUMBER OF CONTACTORS AS REQUIRED TO OPEN ALL LINE AND NEUTRAL CONDUCTORS SHOWN ON THE DIAGRAM.

J. THE EMERGENCY POWER SWITCH SHALL BE LOCATED A MINIMUM OF 20 FEET FROM ALL DISPENSERS AND A MAXIMUM OF 100 FEET FROM ALL DISPENSERS AS DIRECTED.

K. SEALING FITTINGS ARE NOT SHOWN. PROVIDE SEALING FITTINGS AT LOCATIONS INDICATED BY AND DEPICTED IN ARTICLES: 500, 501, 511, 514 AND 515 OF THE 2014 NEC.
- L. ABOVE GROUND TANKS: UNLESS SPECIFIED BY THE TANK MANUFACTURER, PROVIDE A GROUND ROD FOR EACH TANK WITH A MINIMUM OF A #2 GROUNDING CONDUCTOR BETWEEN THE TANK AND THE ROD.

M. ALL COMPLETED RACEWAY SYSTEMS SHALL BE INSPECTED AND APPROVED PRIOR TO CONDUCTORS BEING INSTALLED.

N. MINIMUM CONDUCTOR SIZE #12 UNLESS OTHERWISE NOTED.

O. LOCATE THE MAINTENANCE RECEPTACLE AS DIRECTED OUTSIDE OF THE HAZARDOUS AREA.

P. SURGE PROTECTION DEVICE SHALL BE PROVIDED FOR INDIVIDUAL EQUIPMENT. THE USE OF A BRANCH PANEL BOARD SUPPRESSOR IN PLACE OF INDIVIDUAL EQUIPMENT SURGE PROTECTION DEVICES SHALL BE DETERMINED ON A SITE BY SITE BASIS.



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General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985



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STATE OF NEW YORK
JEROME L. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
12/31/2026

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:

POWER ONE LINE
DIAGRAM

DRAWING NUMBER:

C-45

SHEET 47 OF 51

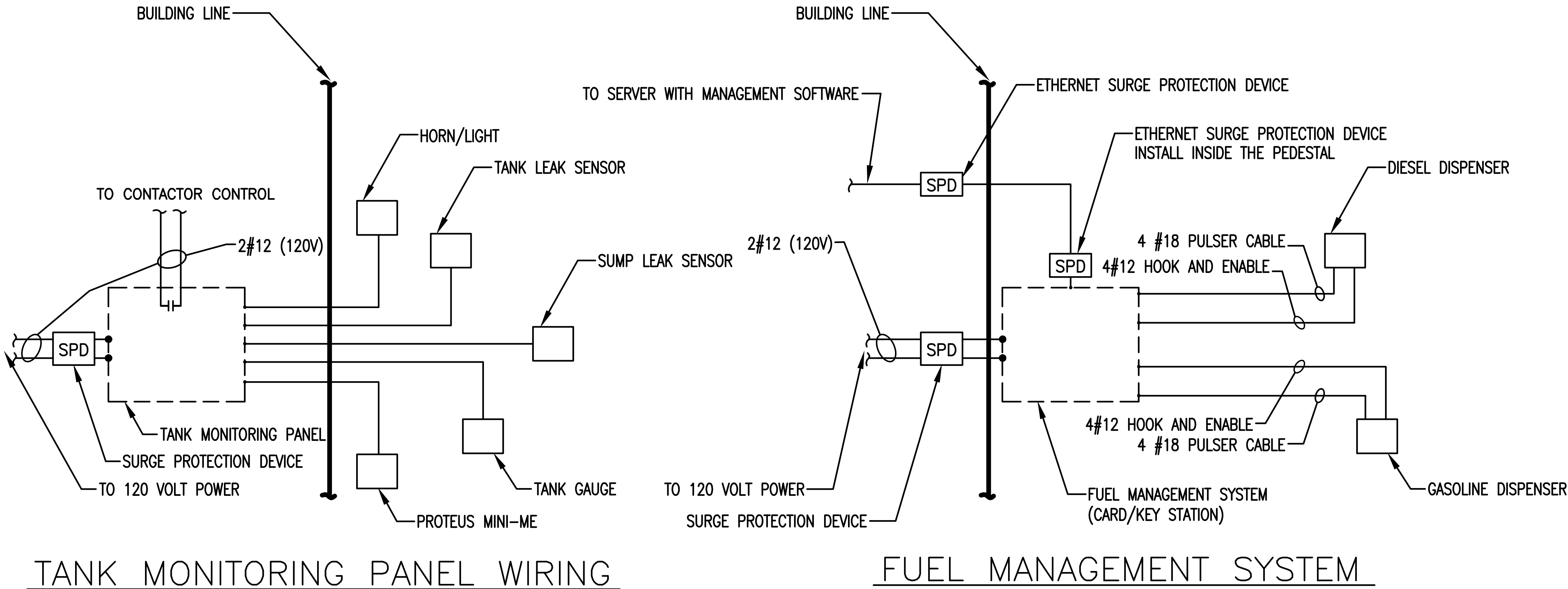
GENERAL NOTES:

(THIS DRAWING ONLY)

- A. WIRING FOR EQUIPMENT CONNECTED TANK MONITORING PANEL IS UNDER 120 VOLTS UNLESS OTHERWISE NOTED. WIRING OTHER THAN 120 VOLTS MAY BE COMBINED IN COMMON CONDUITS.
- B. WIRING FOR DEVICES CONNECTED TO THE TANK MONITORING PANEL IS A MINIMUM OF #22 UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER.
- C. SEALING FITTINGS ARE NOT SHOWN. PROVIDE SEALING FITTINGS AT LOCATIONS INDICATED BY AND DEPICTED IN ARTICLES: 500, 501, 511, 514, AND 515 OF THE 2014 NEC.
- D. PROVIDE ALL WIRING IN CONDUIT. CONDUITS PENETRATING SLABS OR AREAS EXPOSED TO SALT SHALL BE PVC-COATED RIGID METAL CONDUIT. PVC-COATED CONDUIT SHALL EXTEND FROM BENEATH SLAB TO 2 FEET ABOVE SLAB.
- E. PULSER AND POWER CABLES SHALL NOT BE COMBINED IN COMMON RACEWAYS.
- F. CIRCUITS FROM TANK MONITORING PANEL OUTSIDE TO THE TANK LOCATION ARE INTRINSICALLY SAFE AND NEED TO BE RUN IN CONDUITS SEPARATE FROM ANY NON-INTRINSICALLY SAFE CIRCUITS.
- G. SURGE PROTECTION DEVICE SHALL BE PROVIDED FOR INDIVIDUAL EQUIPMENT. THE USE OF A BRANCH PANEL BOARD SUPPRESSOR IN PLACE OF INDIVIDUAL EQUIPMENT SURGE PROTECTION DEVICES SHALL BE DETERMINED ON A SITE BY SITE BASIS.

PANELBOARD SCHEDULE									
DESIGNATION: <u>LP-FD</u>	☒	FULLY RATED EQUIPMENT RATING IS REQUIRED FOR THIS PANELBOARD	PANELBOARD SHORT CIRCUIT RATING <u>10,000</u> RMS SYMMETRICAL AMPERES						
	☐	UL LISTED INTEGRATED EQUIPMENT SHORT CIRCUIT RATING IS ACCEPTABLE FOR THIS PANELBOARD	MAIN LUG ONLY ☐						
			MAIN CIRCUIT BREAKER ☒						
	1 ☒ 3R ☐ 4 ☐ 4X ☐ 12 ☐	☐	UL LABEL 'SUITABLE FOR USE AS SERVICE EQUIPMENT'	FRAME	POLES	ATE	COMPONENTS (SEE BELOW)		
				100	26	60	-		
MOUNTING: <u>SURFACE</u>									
MAIN: <u>100</u>	BRANCH/FEEDER CIRCUIT BREAKERS								
VOLTAGE: <u>120/208 OR 240</u>	DESCRIPTION		ATE	NO.	A	B	NO.	ATE	DESCRIPTION
PHASE: <u>SINGLE</u>	GASOLINE DISPENSER		20	1			2	20	DIESEL DISPENSER
NO. WIRES: <u>3</u>	DIESEL TANK HEATER (NOTE 2)		30	3			4	20	DIESEL HEAT TRACE (NOTE 2)
				5			6	15	CARD READER/FUEL MANAGEMENT
OTHER REQ: _____	LIGHTING		15	7			8	20	FIRE SUPPRESSION SYSTEM (NOTE 1)
	MAINTENANCE RECEPTACLE		20	9			10	20	CONTACTOR COIL VOLTAGE (NOTE 1)
FULL CAPACITY NEUTRAL BUS ☒	CONTACTOR CONTROL POWER		15	11			12	15	LEAK DETECTION PANEL
				13			14	20	PROTEUS MINI-ME
EQUIPMENT GROUNDING BUS ☒				15			16		
				17			18		

PANELBOARD SCHEDULE NOTES: 1. PROVISIONS FOR LOCKING BREAKER ON.
2. GROUND FAULT PROTECTION FOR EQUIPMENT TYPE.



NEW YORK
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General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017985

LiRo Engineers, Inc.
3 Aerial Way, Syosset, New York

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STATE OF NEW YORK
JULIAN I. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
12/31/2025

CONTRACT

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

LOCATION:
WESTERN REGION
VARIOUS FACILITIES

MARK	DATE	DESCRIPTION
	1/31/2025	FINAL SUBMISSION
PROJECT NUMBER:	47676	- C
DESIGNED BY:	M. GUTMANN	
DRAWN BY:	A. KELLY	
FIELD CHECK:	M. WESOLOWSKI	
APPROVED:	M. WESOLOWSKI	

SHEET TITLE:

PANEL SCHEDULE &
LOW VOLTAGE ONE
LINES

DRAWING NUMBER:

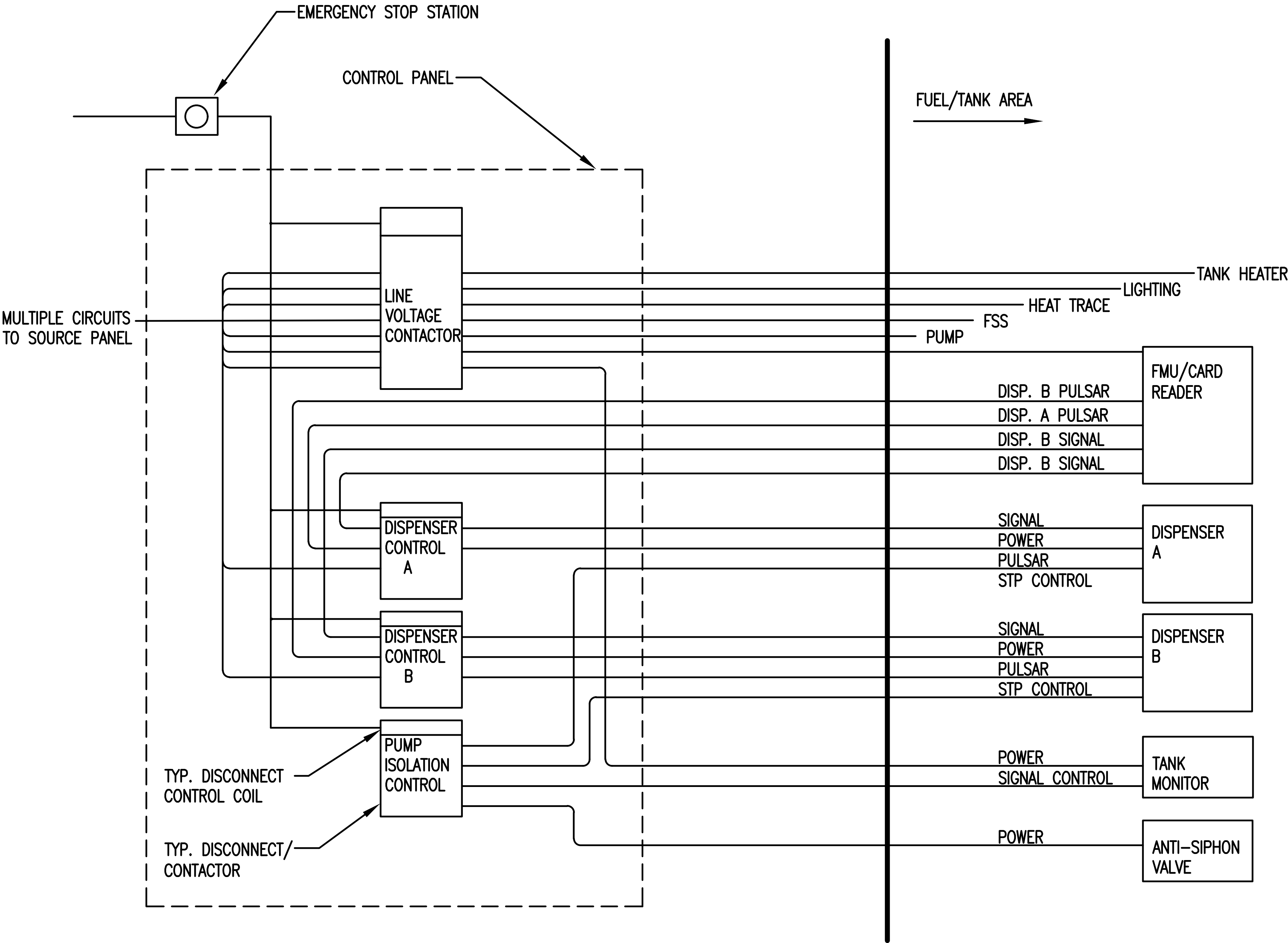
C-46

SHEET 48 OF 51

GENERAL NOTES:

(THIS DRAWING ONLY)

- A. COMPONENTS SHOWN ON THE DETAIL ARE TYPICAL. NOT ALL INSTALLATIONS WILL REQUIRE ALL COMPONENTS SHOWN.
- B. DETAIL IS DIAGRAMMATIC ONLY, REFER TO MANUFACTURERS INSTALLATION REQUIREMENTS FOR EXACT REQUIREMENTS.
- C. SEALING FITTINGS ARE NOT SHOWN. PROVIDE SEALING FITTINGS AT LOCATIONS INDICATED BY AND DEPICTED IN ARTICLES: 500, 501, 511, 514, AND 515 OF THE 2017 NEC.
- D. PROVIDE ALL WIRING IN CONDUIT. CONDUITS PENETRATING SLABS OR AREAS EXPOSED TO SALT SHALL BE PVC-COATED RIGID METAL CONDUIT. PVC-COATED CONDUIT SHALL EXTEND FROM BENEATH SLAB TO 2 FEET ABOVE SLAB.
- E. PULSAR AND POWER CABLES SHALL NOT BE COMBINED IN COMMON RACEWAYS.
- F. CIRCUITS FROM TANK MONITORING PANEL OUTSIDE TO THE TANK LOCATION ARE INTRINSICALLY SAFE AND NEED TO BE RUN IN CONDUITS SEPARATE FROM ANY NON-INTRINSICALLY SAFE CIRCUITS.



CONTROL OVERVIEW DETAIL



Office of
General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION #: 0017905



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STATE OF NEW YORK
JEROME L. WESOLOWSKI
REGISTERED PROFESSIONAL ENGINEER
12/31/2025

CONTRACT:

CONSTRUCTION

TITLE:
FUEL TANK MODIFICATION AND
ENVIRONMENTAL REMEDIATION

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APPROVED:	M. WESOLOWSKI	

SHEET TITLE:

CONTROL OVERVIEW
DETAIL

DRAWING NUMBER:

C-49

SHEET 51 OF 51