addendum #02

Client	Greater Dayton RTA	Date	June 24, 2025
Project	Paratransit Bus Garage	Project #	634-7069

This addendum provides information to clarify or adjust construction items which may affect any or all trade contractors. The original documents for the referenced project are amended as noted in this addendum and made part of said documents and shall govern the work covered by the Form of Proposal. All work to be in strict accordance with the terms, stipulations and conditions of contract documents.

SUMMARY OF ATTACHMENTS

1. **Specifications:**
   a. None.
2. **Drawings:**
   a. G002 – MATERIAL I.D. CODES.
   b. A422 – WALL SECTIONS.
   c. A440 – BUS GARAGE SECTION DETAILS.
   d. A441 – BUS GARAGE SECTION DETAILS.
   e. A442 – BUS GARAGE SECTION DETAILS.
   f. A444 – BUS WASH SECTION DETAILS.
   g. A445 – BUS WASH SECTION DETAILS.
   h. A450 – BUS GARAGE PLAN DETAILS.
   i. A451 – BUS GARAGE PLAN DETAILS.
   j. A452 – BUS GARAGE PLAN DETAILS.
   k. A453 – BUS WASH PLAN DETAILS.
   l. A480 – EXTERIOR WALL TYPES.
   m. P003 – GASOLINE DETAILS.
   n. E004 – GASOLINE DETAILS.
   o. E200 – POWER NEW WORK PLANS.
   p. E300 – FIRE ALARM NEW WORK PLANS.
   q. T002 – TECHNOLOGY DETAILS.
   r. T003 – TECHNOLOGY DETAILS AND SCHEDULES.
   s. T004 – TECHNOLOGY SITE PLAN.
   t. T100 – NEW WORK PLANS.
3. **Substitution Requests:**
   a. Elevate MAX PVC Membrane.
   b. Elevate ISOGARD GL Flat and Tapered Roof Insulation.
   c. Elevate V-Force Vapor Barrier Membrane.
   d. Georgia Pacific DensDeck Prime Roof Board.

PART 1 – SPECIFICATIONS

1. **033000** – revised section 3.8 D. 7. a, as follows:
   Slabs on Ground: Specified overall values of flatness, F_F 20; and of levelness, F_L 15; with minimum local values of flatness, F_F 14; and of levelness, F_L 10.
2. **033000** – deleted section 3.8 D. 7. b.

PART 2 – DRAWINGS

1. **G002** – revised description for SN GD-1.
2. **G002** – deleted STL FURG-1.
3. **A422** – revised base detail on wall section 2.
4. **A440** – revised detail 9.
5. **A440** – deleted STL FURG-1 from details 1, 2, 5 and 6.
6. **A441** – deleted STL FURG-1 from details 1, 2, 4 and 5.
7. **A442** – added missing keynote tag for TWF-1.
8. **A442** – deleted STL FURG-1 from details 1, 3, 4 and 5.
9. **A444** – revised snow guard on detail 6 to be 2-pipe system.
10. **A444** – added STL FURG-2 to detail 8.
11. **A444** – deleted STL FURG-1 from details 1, 4, 5, 6, 7, 8 and 9.
12. **A445** – added detail 3.
13. **A445** – added FRP FURG-1 to detail 1.
14. **A445** – deleted STL FURG-1 from details 1 and 2.
15. **A450** – deleted STL FURG-1 from details 2 and 3.
16. **A451** – deleted STL FURG-1 from details 1, 2, 3, 4 and 5.
17. **A452** – deleted STL FURG-1 from details 1, 2 and 4.
18. **A453** – deleted STL FURG-1 from details 1, 2, 3 and 4.
19. **A480** – deleted STL FURG-1 from wall types MS1, MM1 and MS3.
20. **P003** – Added clarification to fuel management system.
21. **E004** – Revised detail 1 to show fuel management system.
22. **E004** – Deleted gasoline return line from detail 3.
23. **E004** – Revised description from “diesel” to “gasoline” on details 4 and 5.
24. **E200** – Added note 14 and associated equipment panels.
25. **E300** – Revised smoke detectors in bus wash to heat detectors.
26. **T002** – added missing sheet from Addendum 01.
27. **T003** – added missing sheet from Addendum 01.
28. **T004** – added missing sheet from Addendum 01.
29. **T100** – Added data drops for Fleet Works System.

PART 3 – SUBSTIUTION REQUESTS

1. Elevate MAX PVC Membrane shall be added to spec section 075419, 2.2 as acceptable alternative to basis of design roof membrane.

2. Elevate ISOGARD GL Flat and Tapered Roof Insulation shall be added to spec section 075419, 2.6 as acceptable alternative to basis of design roof insulation.
3. Elevate V-Force Vapor Barrier Membrane shall be added to spec section 075419, 2.5 as acceptable alternative to basis of design roof insulation.
4. Georgia Pacific DensDeck Prime Roof Board shall be added to spec section 075419, 2.4 as acceptable alternative to basis of design roof insulation.

End of Addendum

Material Identification Codes

SPEC	CODE	DESCRIPTION
072726	**AB**	**AIR AND WATER BARRIER**
072726	AB-1	Henry Air-Bloc All Weather STPE, UV-resistant, vapor permeable
095113	**ACT**	**ACOUSTIC CEILING TILE**
095113	ACT-1	Armstrong 704 Cortega, Tegular Edge, 15/16" Grid, Size: 24" x 24", Color : White
102800	**CH**	**COAT HOOKS**
102800	CH-1	Rockwood RM811 Architectural Coat Hook, surface-mounted, material: Cast Brass, finish: Satin Chrome Plated, ADA compliant
083300	**CD**	**COILING DOORS**
083300	CD-1	Coiling door, bus garage, exterior, insulated, Overhead Door EverServe Model 625S, 16'W x 15'H, F-265i slat, face-of-wall mounted, curtain, bottom bar, hood and bracket finish: PowderGuard Premium, guide and headplate finish: PowderGuard Zinc, color: RAL 7022 Umbra Grey
083300	CD-2	Coiling door, bus wash, exterior, insulated, Overhead Door EverServe Model 625S, 15'W x 15'H, F-265i slat, face-of-wall mounted, curtain, bottom bar, hood and bracket finish: PowderGuard Premium, guide and headplate finish: PowderGuard Zinc, color: RAL 7022 Umbra Grey
042200	**CMU**	**CONCRETE MASONRY UNITS**
042200	CMU-1	Nom. 8", refer to structural drawings
093013	**CTW**	**CERAMIC TILE - WALL**
093013	CTW-1	Crossville Portugal, Color: Venho Verde (Cool Mid) UPS, Size: 12" x 24" Application: Wall Grout: Mapei, Kerapoxy CQ, Color: 107 Iron
093013	CTW-2	Crossville Portugal, color: Venho Verde (Cool Mid) UPS, Size: 6" x 24" Application: Base Grout: Mapei, Kerapoxy CQ, color: 107 Iron
071900	**CS**	**CONCRETE SEALERS**
071900	CS-1	Laticrete L&M AQUAPEL waterborne sealer
084413	**CW**	**CURTAIN WALL SYSTEMS**
084413	CW-1	Outside glazed curtain wall system, YKK YCW 750 OG, 7-1/2" deep, finish: Anodized, color: YSN1 - Clear Anodized Plus
224200	**DF**	**DRINKING FOUNTAINS**
224200	DF-1	Elkay LZSTL8WSSK Bottle Filling Station & Versatile Bi-Level ADA Cooler Refrigerated Stainless Lead Reduction Quick Filter Change
087100	**DR TH**	**DOOR THRESHOLDS**
087100	DR TH-1	Pemko 253x3_FG Series Thermal Barrier Threshold, finish: Stainless Steel
	DS	**MANUFACTURED GUTTERS AND DOWNSPOUTS**
074113.19	DS-1	Downspout, bus wash, rectangular, 6"W x 4"D, material: Galvalume, 20 gauge, formed from metal panel coil stock, finish: Fluropon PVDF-Kynar 500, color: Copper Penny
076200	DS-2	Downspout, bus garage, Exceptional Metals, rectangular, Closed-Face, A-Style Elbow, 24 gauge, 6"W x 4"D, color: Matte Black
104413	**FDKB**	**FIRE DEPARTMENT KEY BOX**
104413	FDKB-1	KnoxBox 3262NC, surface-mounted, color: Black
104416	**FE**	**FIRE EXTINGUISHERS**
104416	FE-1	Fire Extinguisher, 4A:60B:C, surface-mounted on bracket
104416	FE-2	Fire Extinguisher, 2A:20B:C, located in cabinet
104413	**FE CAB**	**FIRE EXTINGUISHER CABINETS**
104413	FE CAB-1	Exterior fire extinguisher cabinet, heavy-duty, stainless steel finish
070543.11	**FRP FURG**	**COMPOSITE METAL HYBRID (CMH) CONTINUOUS INSULATION SUB-FRAMING SUPPORT SYSTEMS**
070543.11	FRP FURG-1	GreenGirt SMARTci composite metal hybrid (CMH) z-girt
102800	**GB**	**GRAB BARS**
102800	GB-1	Bobrick B-6806, 36" Long, 1 1/2" diameter, finish: Satin, slip-resistant surface
102800	GB-2	Bobrick B-6806, 42" Long, 1 1/2" diameter, finish: Satin, slip-resistant surface
088000	**GL**	**GLAZING**
088000	GL-21T	Insulating vision glass, 1" thick, fully-tempered, Viracon VNE1-63
088000	GL-41	Insulated spandrel glass, 1" thick, heat strengthened, Harmony Gray spandrel
	GUT	**MANUFACTURED GUTTERS AND DOWNSPOUTS**
074113.19	GUT-1	Gutter, bus wash, 8-1/2"W x 6-1/2"H, material: Galvalume, 20 gauge, formed from metal panel coil stock, finish: Fluropon PVDF-Kynar 500, color: Copper Penny
076200	GUT-2	Gutter, bus garage, Exceptional Metals, LX-Style, 24 gauge, 8"W x 6"H, color: Matte Black
092900	**GYP BD**	**GYPSUM BOARD (INTERIOR)**
092900	GYP BD-1	5/8", Type X
092900	GYP BD-2	5/8", Type X, impact-resistant
061600	**GYP SHTG**	**GYPSUM SHEATHING (EXTERIOR)**
061600	GYP SHTG-1	5/8", Type X, fiberglass-faced
033000	**HTF**	**CONCRETE FINISHING**
033000	HTF-1	Hard trowel finish, bus garage restroom floor
074113.19	**HT RU**	**ROOF UNDERLAYMENTS**
074113.19	HT RU-1	Roof underlayment, bus wash, Exceptional Metals Exceptional HT (High Temperature) Self-adhesive Roof Underlayment
	INSUL	**INSULATION**
072100	INSUL-1	Extruded polystyrene board, 25 PSI, below grade, 2" thick UNO
072100	INSUL-15	Glass Fiber Mat faced polyisocyanurate, 2" thick
072100	INSUL-40	Unfaced fiberglass batt, 8" thick (bus garage exterior framed walls), 6" thick (bus garage clerestory exterior framed walls)
072100	INSUL-60	Mineral wool
072419	INSUL-70	Roof insulation, Duro-Last Duro-Guard ISO II, closed-cell polyisocyanurate foam core with integrally-laminated fiber-reinforced facer
074113.19	INSUL-80	Composite polyisocyanurate board insulation with factory-applied 3/4" CDX plywood facer
033000	**LBF**	**CONCRETE FINISHING**
033000	LBF-1	Light broom finish, bus garage and bus wash floors
055000	**MET FAB**	**METAL FABRICATIONS**
055000	MET FAB-1	Bollard, surface-mounted steel pipe, 4' tall, Schedule 40, finish: painted PT-8
055000	MET FAB-2	U-bollard, 36"W x 56"H, Schedule 40, finish: painted PT-8
055000	**MET LAD**	**METAL LADDERS**
055000	MET LAD-1	FS Industries IBC Design Flush Top Treads Ships Ladder - 60 Degree Steep Incline with Walk Thru Handrail, heavy-duty bar grating stair treads with nosing, factory welded handrails, finish: Galvanized with paint finish, color: PT-6
055000	MET LAD-2	Kattsafe RL35 vertical fixed ladder with 3' long walkway platform and 6' long Kattsafe GR34 non-penetrating guardrails, high grade aluminum, bus garage roof, finish: Mill
055000	MET LAD-3	Kattsafe RL31 vertical fixed ladder, bus wash, high grade aluminum, finish: Powder Coated, color: tbd
076200/042200	**MF**	**SHEET METAL FLASHING AND TRIM**
076200/042200	MF-1	Stainless steel flashing with drip edge and receiver, 20 gauge
076200/042200	MF-2	Stainless steel insert flashing with hemmed edge and back splices between sections, 20 gauge
102800	**MIR**	**MIRRORS**
102800	MIR-1	Bobrick B-2908, wall-mounted, 24"x36", welded frame, tempered glass mirror, finish: Satin
102800	**MOP**	**MOP AND BROOM HOLDERS**
102800	MOP-1	Bobrick B-223 x 24, wall-mounted, Type 304 Stainless Steel, finish: Satin
074113.19	**MR**	**METAL ROOF PANELS**
074113.19	MR-1	Morin Symmetry Series SYM-12-0, width: 12", height: 1-1/2", 22 gauge, finish: Fluropon PVDF-Kynar 500, color: Copper Penny
074213.13	**MP**	**METAL WALL PANELS**
074213.13	MP-1	Morin Pulse P-1, cover width: 12" nominal, installed vertically, material: Galvalume, 20 gauge, finish: Fluropon PVDF-Kynar 500, color: Copper Penny
074213.13	MP-2	Morin Pulse P-9, cover width: 12" nominal, installed vertically, material: Galvalume, 20 gauge, finish: Fluropon PVDF-Kynar 500, color: Copper Penny
074213.13	MP-3	Morin Matrix MX-6, cover width: 12" nominal, installed vertically, material: Galvalume, 20 gauge, finish: Fluropon PVDF-Kynar 500, color: Copper Penny
074213.13	MP-4	Morin Matrix MX-6, cover width: 12" nominal, installed vertically, material: Galvalume, 18 gauge, finish: Fluropon PVDF-Kynar 500, color: Dove Gray
074213.13	MP-5	Morin Matrix MX-6, cover width: 12" nominal, installed vertically, material: Galvalume, 20 gauge, finish: Fluropon PVDF-Kynar 500, color: Bristol Black
084413	**MWP**	**METAL WINDOW PANELS**
084413	MWP-1	Mapes R Panel, 1" thickness, exterior finish: Standard Kynar, exterior and interior substrates: Tempered Hardboard, core: Isocyanurate, interior finish: Smooth Mill Aluminum
055213	**ORN RAIL**	**ORNAMENTAL RAILING**
055213	ORN RAIL-1	Guardrail, 1/2" x 2" steel bar with 1/2" x 1/2" pickets, galvanized, finish: painted PT-8
	PT	**PAINT**
099600	PT-1	Location: Interior Items: Cast-in-place concrete curbs Products: Macropoxy 646 Fast Cure, two-component, high solids, fast drying polyamide epoxy mastic Sher-Loxanne 800, two-component, isocyanate-free polysiloxane finish Color: Sherwin Williams SW 9163 Tin Lizzie Sheen: Gloss
099600	PT-2	Location: Interior Items: Gypsum board Products: ProMar 200 Zero VOC Interior Latex Primer Macropoxy 646 Fast Cure, two-component, high solids, fast drying polyamide epoxy mastic Color: Sherwin Williams SW 9163 Tin Lizzie Sheen: Semi-gloss
099124	PT-3	Location: Interior Items: Gypsum board Products: ProMar 200 Zero VOC Interior Latex Primer ProMar 200 Zero VOC Interior Latex Color: Sherwin Williams SW 7005 Pure White Sheen: Eg-Shel
099600	PT-4	Location: Interior Items: CMU Products: Kem Cati-Coat HS, two-component, interior/exterior epoxy block filler Macropoxy 646 Fast Cure, two-component, high solids, fast drying polyamide epoxy mastic Sher-Loxanne 800, two-component, isocyanate-free polysiloxane finish Color: Sherwin Williams SW 9163 Tin Lizzie Sheen: Gloss
099124	PT-5	Location: Interior Items: CMU Products: LOXON Acrylic Block Surfacer Pro Industrial Pre-Catalyzed Waterbased Epoxy, K45 Series Color: Sherwin Williams SW 9163 Tin Lizzie Sheen: Semi-gloss
099600	PT-6	Location: Interior Items: Steel beams, X-bracing, underside of roof deck, roof trusses, plumbing piping, mechanical ductwork, electical and technology J-boxes and conduit, miscellaneous panels, ships ladders and landing Products: Macropoxy 646 Fast Cure, two-component, high solids, fast drying polyamide epoxy mastic Sher-Loxanne 800, two-component, isocyanate-free polysiloxane finish Color: Sherwin Williams SW 7645 Thunder Gray Sheen: Gloss
099600	PT-7	Location: Exterior Items: Hollow metal doors and frames Products: Macropoxy 646 Fast Cure, two-component, high solids, fast drying polyamide epoxy mastic Sher-Loxanne 800, two-component, isocyanate-free polysiloxane finish Color: Sherwin Williams SW 7645 Thunder Gray Sheen: Gloss
099600	PT-8	Location: Interior and Exterior Items: Stuctural steel columns, ships ladder support structure, pipe bollards, U-bollards Products: Macropoxy 646 Fast Cure, two-component, high solids, fast drying polyamide epoxy mastic Sher-Loxanne 800, two-component, isocyanate-free polysiloxane finish Color: Sherwin Williams SW 6925 Envy Sheen: Gloss
102800	**PT DSP**	**PAPER TOWEL DISPENSERS**
102800	PT DSP-1	Bobrick B-359033 Trimline Series Recessed Paper Towel Dispenser, Stainless Steel, finish: Satin, 400 multi-fold towels, ADA compliant
112424	**RF A**	**ROOF FALL PROTECTION**
112424	RF P-1	Pro-Bel PBE75-0000, weld to structure roof anchor
112424	RF P-2	Pro-Bel PBE75-0000, weld to structure roof anchor
112424	RF P-3	Pro-Bel HLL-DL3-PB horizontal lifeline system assembly, non-hands free (double lanyard) system, J-clamp
075419	**RF BD**	**ROOF BOARD**
075419	RF BD-1	Duro-Last Duro-Guard DEXcell Glass Mat Roof Board, 5/8" thick
075419	RF BD-2	Duro-Last Duro-Guard DEXcell FA Glass Mat Roof Board, 1/4" thick
077200	**RF H**	**ROOF HATCHES**
077200	RF H-1	Kattsafe KH3054 Roof Access Hatch, 30"W x 54"L
077200	**RF HG**	**ROOF HATCHES**
077200	RF HG-1	Kattsafe KG Roof Hatch Guardrail, to fit 30"W x 54"L hatch, color: Safety Yellow
075419	**RVB**	**ROOF VAPOR BARRIERS**
075419	RVB-1	Duro-Last Vapor Barrier (DL VB), self-adhesive
096513	**RB**	**RESILIENT BASE AND ACCESSORIES**
096513	RB-1	Tarkett Rubber base, 6" Tail Straight, Color: TG2 Shark Fin
075419	**PVC**	**SINGLE-PLY MEMBRANE ROOFING**
075419	PVC-1	Duro-Last Duro-Tuff PVC Roll Roofing Membrane, fully-adhered, 60-mil thick, color: White
	SIGN	**SIGNAGE**
101419	SIGN-1	RTA building sign, 6" deep letters with stand-offs, aluminum letter faces (Pantone # 7481), aluminum returns and backs (Mill finish)
101419	SIGN-2	Building address sign, 6" deep numbers with stand-offs, aluminum letter faces (Pantone # 7481), aluminum returns and backs (Mill finish)
101423.16	SIGN-3	Room identification sign, ELECTRIC, Brushed Aluminum dibond, with braille
101423.16	SIGN-4	Room identification sign, I.T., Brushed Aluminum dibond, with braille
101423.16	SIGN-5	Room identification sign, RESTROOM, Brushed Aluminum dibond, with braille
101423.16	SIGN-6	Room identification sign, JANITOR, Brushed Aluminum dibond, with braille
104416	SIGN-7	Fire extinguisher sign, v-shaped, color: Red / White
104416	SIGN-8	ADA Sign Factory Fire Extinguisher Sign EP5057-STEEL, 6"W x 9"H, 1/8" thick, ADA-compliant with braille, color: Steel / Black
077253	**SN GD**	**SNOW GUARDS**
077253	SN GD-1	S-5 X-Gard 2.0, 2-Pipe System with NEX 2.0, finish: Powder Coated to match roof, use with S-5 S-5-T Clamps
102800	**SP DSP**	**SOAP DISPENSERS**
102800	SP DSP-1	Bobrick B-2111 Classic Series Surface-Mounted Soap Dispenser, Stainless Steel, finish: Satin, ADA compliant
054000	**STL FURG**	**STEEL FURRING (STRUCTURAL)**
054000	STL FURG-2	Hat Channel, 7.8" deep, 16 gauge minimum, galvanized
054000	**STL STUD**	**STEEL STUD FRAMING (STRUCTURAL)**
054000	STL STUD-1	C-shaped, 18 gauge minimum (studs), 20 gauge minimum (track), galvanized G90
102800	**TP DSP**	**TOILET PAPER DISPENSERS**
102800	TP DSP-1	Bobrick B-3888 Recessed Multi-Roll Toilet Tissue Dispenser, Stainless Steel, finish: Satin, ADA compliant
042200	**TWF**	**THROUGH-WALL FLASHING**
042200	TWF-1	Termination bar, Stainless Steel
033000	**UVB**	**UNDER SLAB VAPOR BARRIER**
033000	UVB-1	Polyethylene sheet, 15-mil thick
061053	**WD BLKG**	**WOOD BLOCKING**
061053	WD BLKG-1	Solid lumber or plywood blocking, fire-retardent-treated
061053	WD BLKG-2	Solid lumber or plywood blocking, pressure-treated
061600	**WD SHTG**	**WOOD SHEATHING**
061600	WD SHTG-1	Plywood sheathing, 3/4" thick, pressure-treated
097720	**WP**	**WALL PROTECTION**
097720	WP-1	Marlite Pebbled FRP, Color: P 199 Bright White, Class A with coordinating trim pieces, full height
071326	**WPG**	**SELF-ADHERING SHEET WATERPROOFING**
071326	WPG-1	Carlisle CCW MiraDRI 860, 60-mil thick, Carlisle CCW MiraDRAIN 6000
084313	**WW**	**WINDOW WALL SYSTEMS**
084313	WW-1	Outside glazed window wall system, YKK YWW 45 TU, 4-1/2" deep, finish: Anodized, color: YKN1 - Black Anodized Plus

CHAMPLIN ARCHITECTURE

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GDRTA PARATRANSIT BUS GARAGE

rta it's time to ride

701 Longworth Street,
Dayton, OH 45402

ISSUANCES

No.	Description	Date
1	CONSTRUCTION SET	02/14/25
2	BID SET	04/28/25
3	ADDENDUM 01	06/11/25
4	ADDENDUM 02	06/24/25

Drawn By
Author

Checked By
Checker

Client No.
634

Project No.
7310

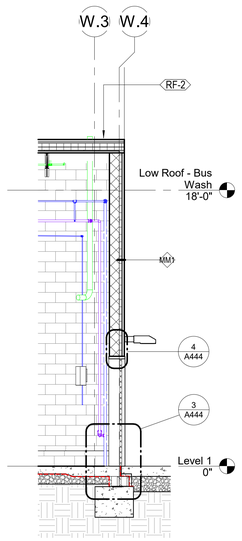
STATE OF OHIO · BRYAN J. GREENE 1115372 · REGISTERED ARCHITECT

BRYAN J. GREENE
LICENSE #1115372
EXPIRATION DATE 12/31/2025

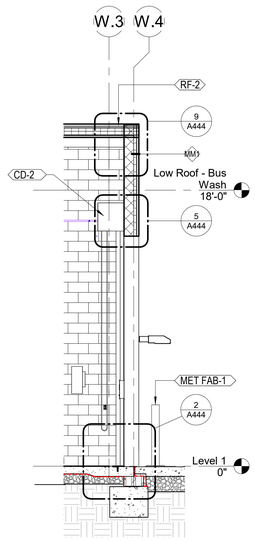
MATERIAL I.D. CODES

G002

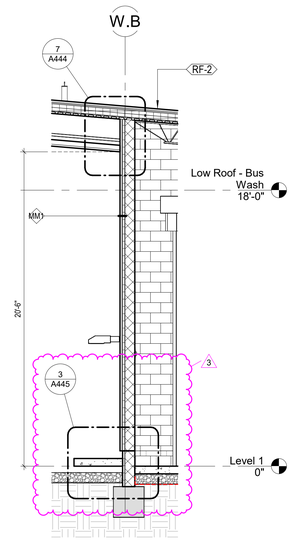
6/24/2025 12:21:46 PM



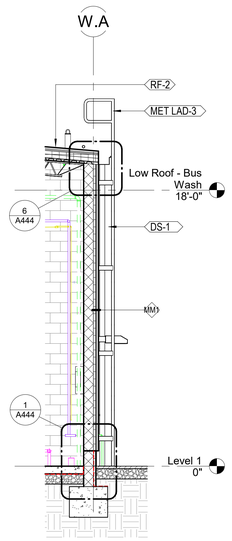
4 A422 BUS WASH WALL SECTION - HM DOOR
1/4" = 1'-0"



3 A422 BUS WASH WALL SECTION - COILING DOOR
1/4" = 1'-0"



2 A422 BUS WASH WALL SECTION - METAL CLADDING 2
1/4" = 1'-0"



1 A422 BUS WASH WALL SECTION - METAL CLADDING
1/4" = 1'-0"

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ISSUANCES

No.	Description	Date
1	CONSTRUCTION SET	02/14/25
2	BID SET	04/28/25
3	ADDENDUM 02	06/24/25

Drawn By
Author

Checked By
Checker

Client No.
634

Project No.
7310

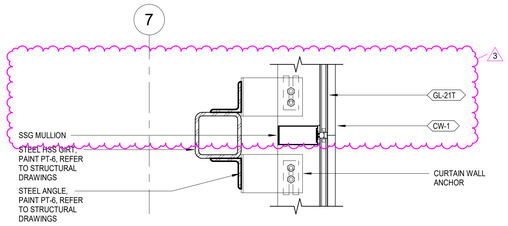
STATE OF OHIO BRYAN J. GREENE 111537 REGISTERED ARCHITECT

BRYAN J. GREENE
LICENSE #1115372
EXPIRATION DATE 12/31/2025

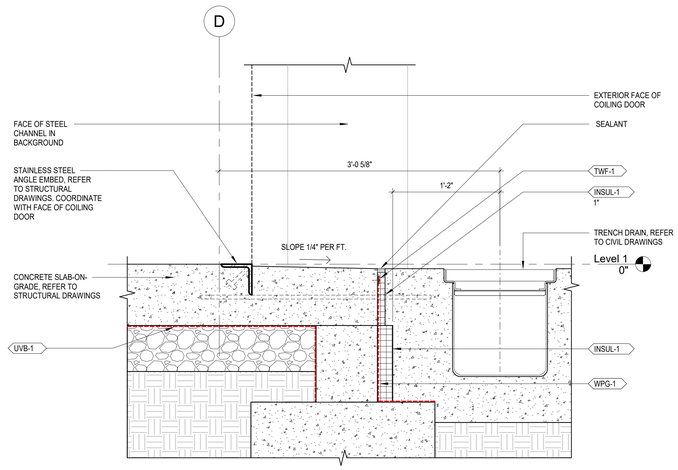
WALL SECTIONS

A422

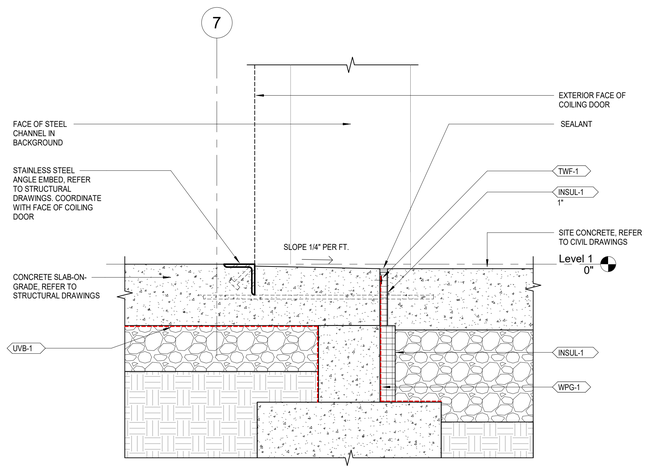
6/24/2025 12:21:32 PM



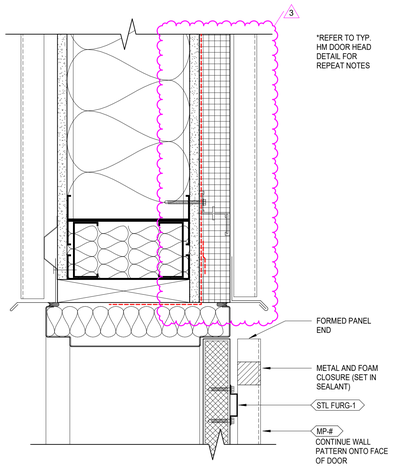
9 A440 BUS GARAGE SECTION DETAIL - TYP. CURTAIN WALL SSG INTERMEDIATE MULLION
1 1/2" = 1'-0"



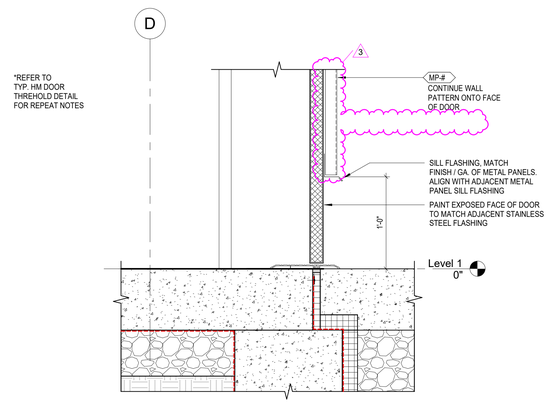
8 A440 BUS GARAGE SECTION DETAIL - TYP. COILING DOOR SILL AT TRENCH DRAIN
1 1/2" = 1'-0"



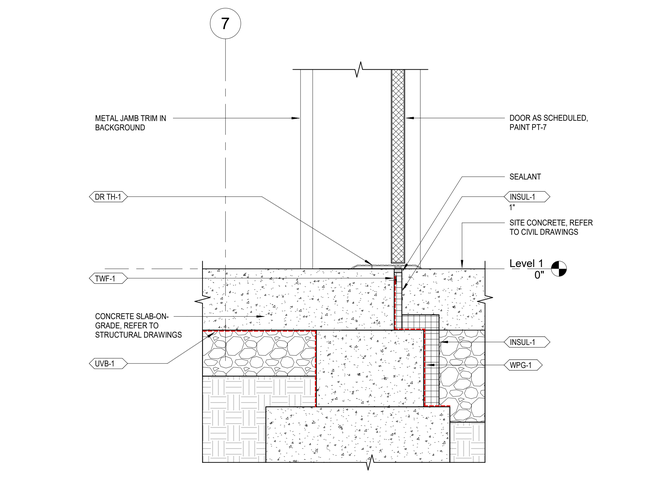
7 A440 BUS GARAGE SECTION DETAIL - TYP. COILING DOOR SILL AT APRON
1 1/2" = 1'-0"



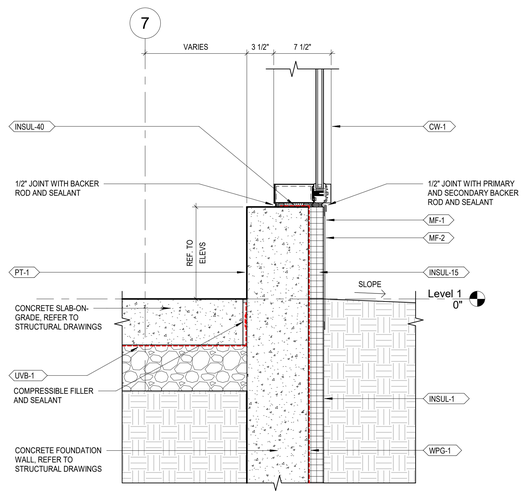
6 A440 BUS GARAGE SECTION DETAIL - CLAD HM DOOR HEAD
3" = 1'-0"



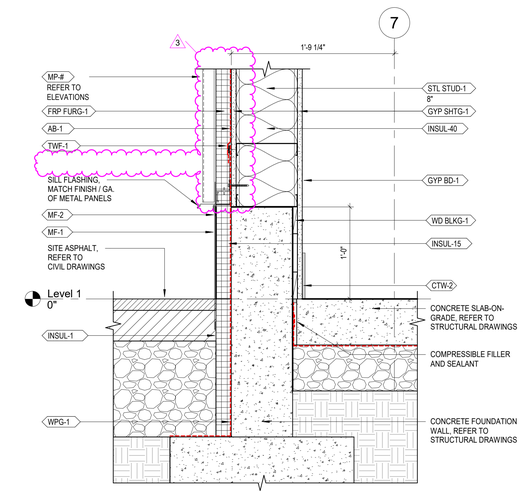
5 A440 BUS GARAGE SECTION DETAIL - CLAD HM DOOR THRESHOLD
1 1/2" = 1'-0"



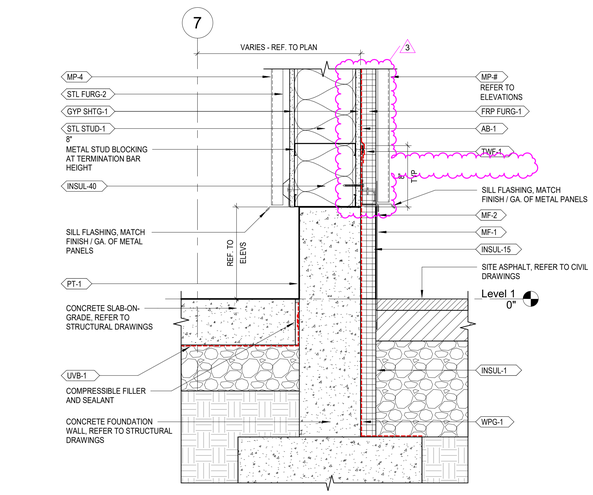
4 A440 BUS GARAGE SECTION DETAIL - TYP. HM DOOR THRESHOLD
1 1/2" = 1'-0"



3 A440 BUS GARAGE SECTION DETAIL - TYP. CURTAIN WALL SILL
1 1/2" = 1'-0"



2 A440 BUS GARAGE SECTION DETAIL - METAL CLADDING BASE (RESTROOM)
1 1/2" = 1'-0"



1 A440 BUS GARAGE SECTION DETAIL - TYP. METAL PANEL BASE
1 1/2" = 1'-0"

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ISSUANCES

No.	Description	Date
1	CONSTRUCTION SET	02/14/25
2	BID SET	04/28/25
3	ADDENDUM 02	06/24/25

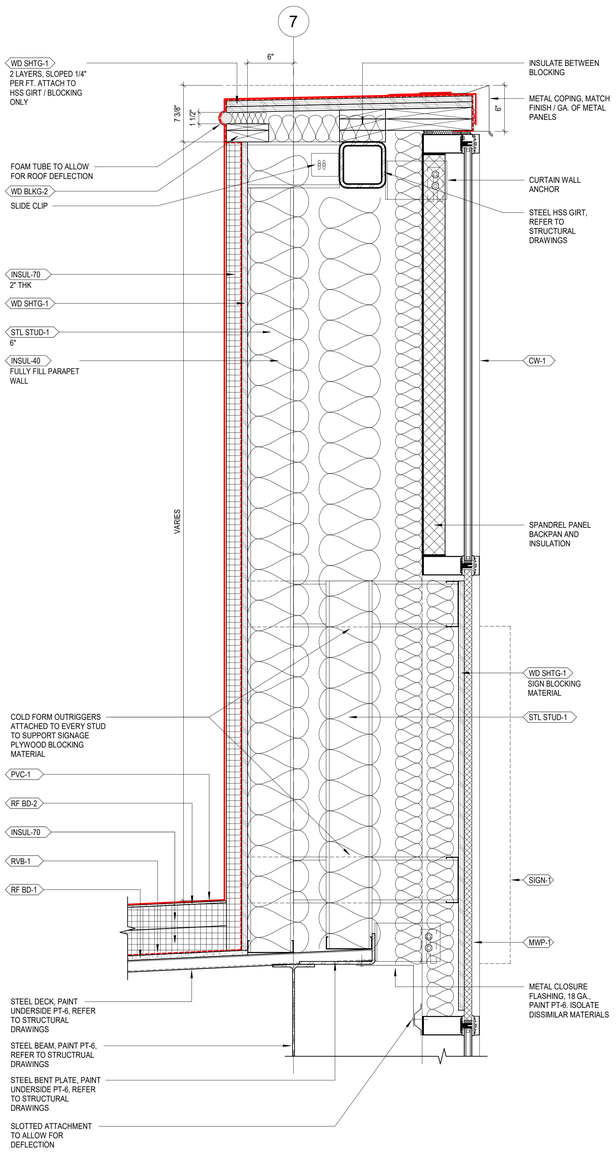
Drawn By
Author
Checked By
Checker
Client No.
634
Project No.
7310

STATE OF OHIO
BRYAN J. GREENE
1115372
REGISTERED ARCHITECT
BRYAN J. GREENE
LICENSE #1115372
EXPIRATION DATE 12/31/2025

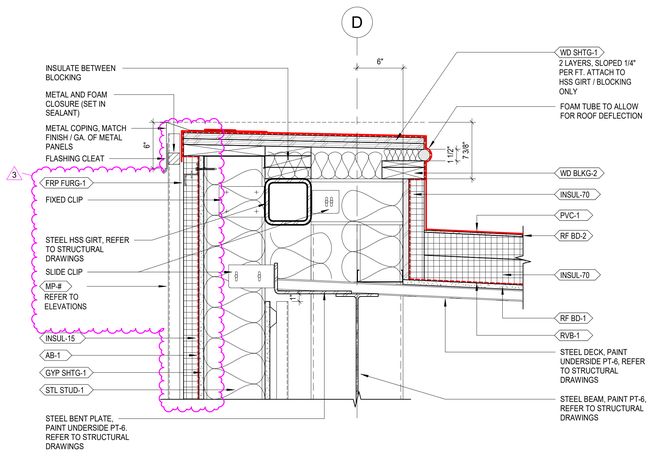
BUS GARAGE SECTION DETAILS

A440

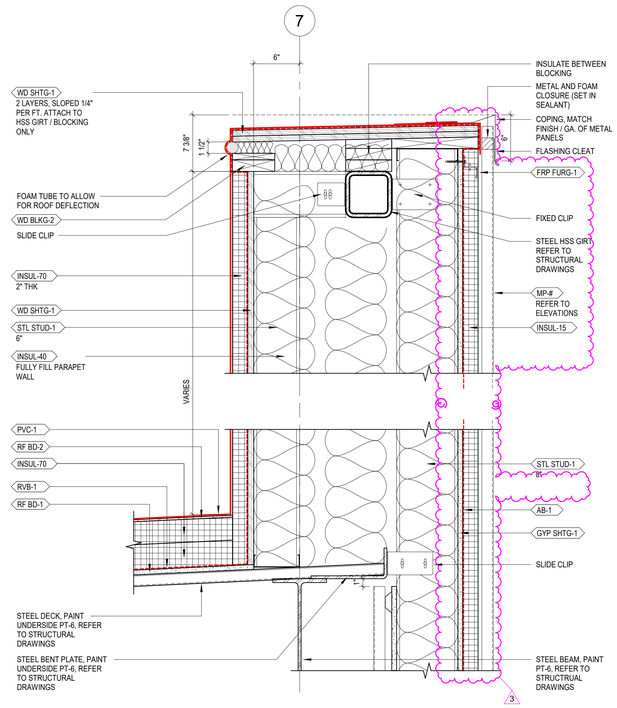
6/24/2025 12:21:34 PM



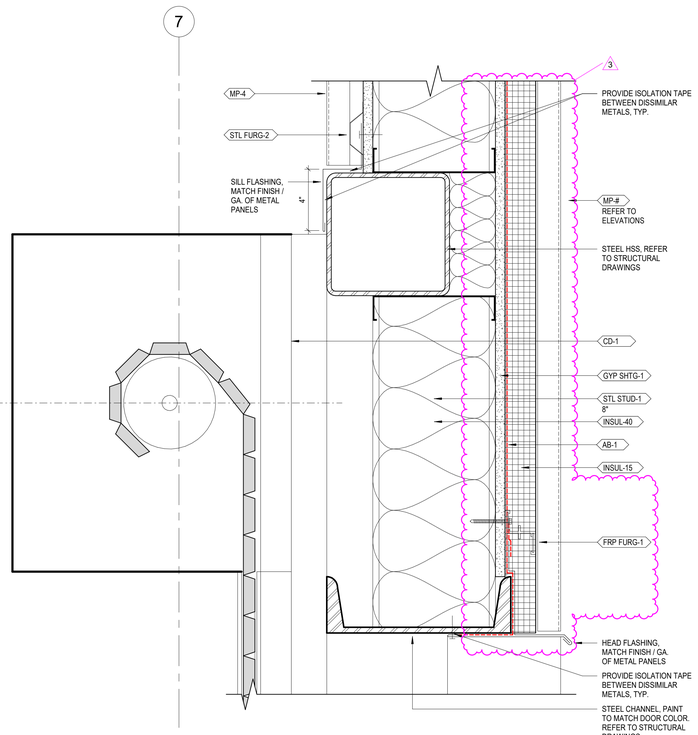
3 | A441 | BUS GARAGE SECTION DETAIL - TYP. CURTAIN WALL PARAPET
1 1/2" = 1'-0"



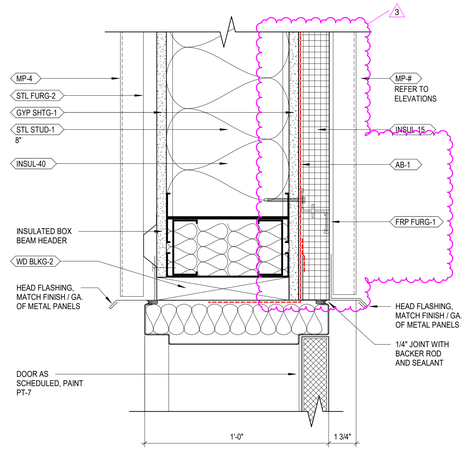
5 | A441 | BUS GARAGE SECTION DETAIL - TYP. LOW PARAPET
1 1/2" = 1'-0"



4 | A441 | BUS GARAGE SECTION DETAIL - TYP. PARAPET
1 1/2" = 1'-0"



2 | A441 | BUS GARAGE SECTION DETAIL - TYP. COILING DOOR HEAD
3" = 1'-0"



1 | A441 | BUS GARAGE SECTION DETAIL - TYP. HM DOOR HEAD
3" = 1'-0"

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Drawn By
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Checked By
Checker

Client No.
634

Project No.
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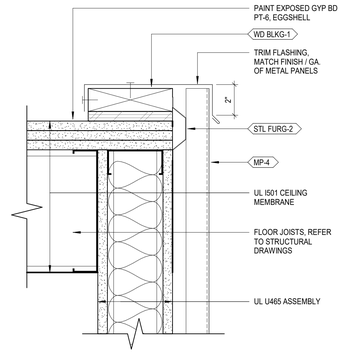
STATE OF OHIO
BRYAN J. GREENE
#1115372
REGISTERED ARCHITECT

BRYAN J. GREENE
LICENSE #1115372
EXPIRATION DATE 12/31/2025

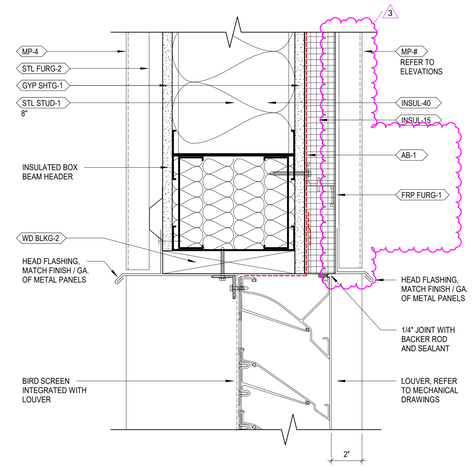
BUS GARAGE SECTION DETAILS

A441

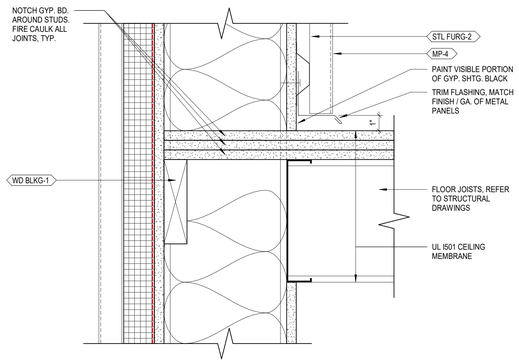
6/24/2025 12:38:02 PM



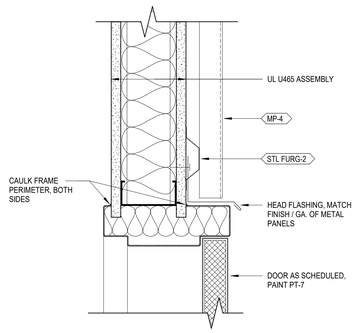
7 BUS GARAGE SECTION DETAIL - TYP. INT. WALL HEAD
A442 3" = 1'-0"



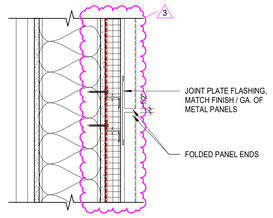
4 BUS GARAGE SECTION DETAIL - TYP. LOUVER HEAD
A442 3" = 1'-0"



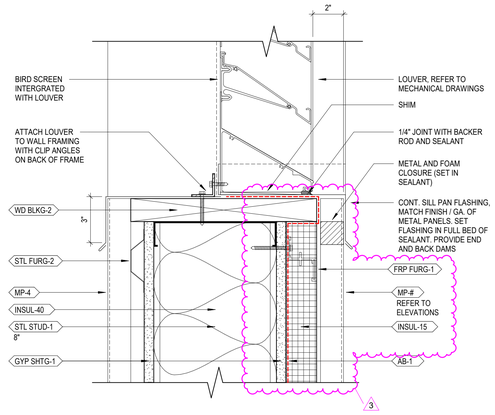
8 BUS GARAGE SECTION DETAIL - RATED CEILING MEMBRANE
A442 3" = 1'-0"



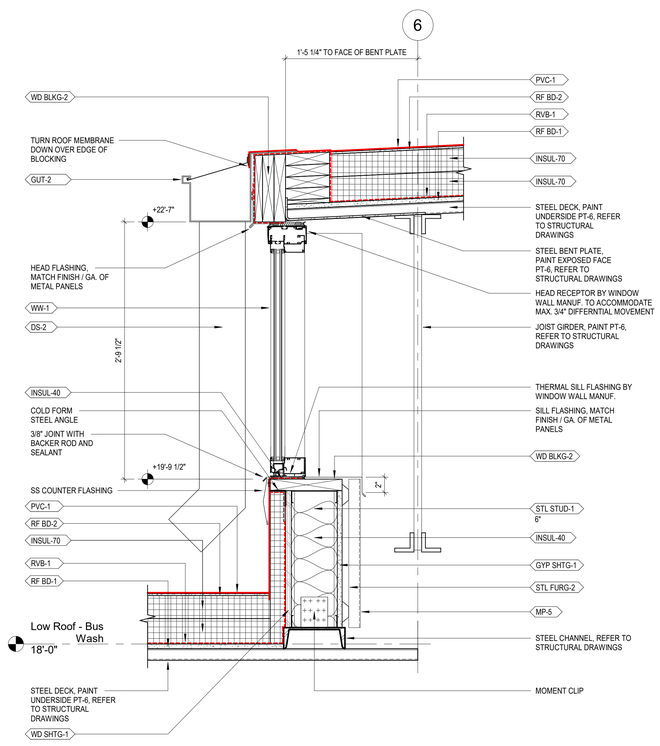
6 BUS GARAGE SECTION DETAIL - TYP. INT. DOOR HEAD
A442 3" = 1'-0"



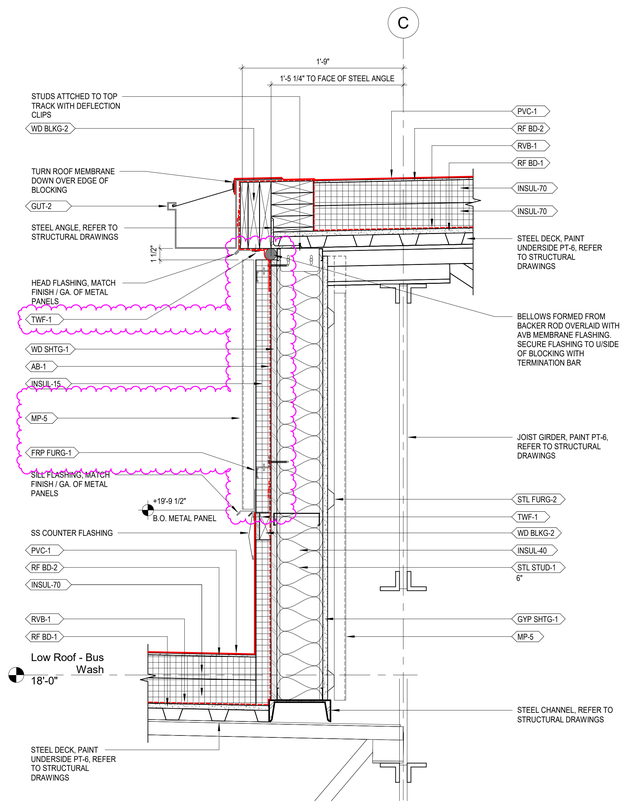
5 TYP. HORIZONTAL STACK JOINT DETAIL
A442 1 1/2" = 1'-0"



3 BUS GARAGE SECTION DETAIL - TYP. LOUVER SILL
A442 3" = 1'-0"



2 BUS GARAGE SECTION DETAIL - TYP. CLERESTORY WINDOW WALL
A442 1 1/2" = 1'-0"



1 BUS GARAGE SECTION DETAIL - TYP. CLERESTORY METAL PANEL
A442 1 1/2" = 1'-0"

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ISSUANCES

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3	ADDENDUM 02	06/24/25

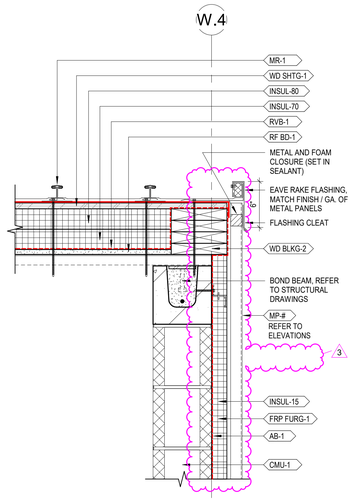
Drawn By
Author
Checked By
Checker
Client No.
634
Project No.
7310

STATE OF OHIO REGISTERED ARCHITECT BJ GREENE 1115372
BRYAN J. GREENE
LICENSE #1115372
EXPIRATION DATE 12/31/2025

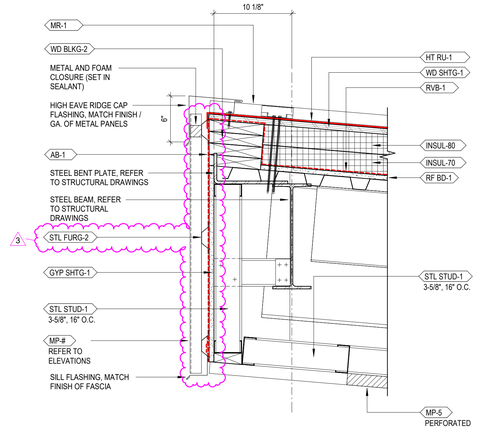
BUS GARAGE SECTION DETAILS

A442

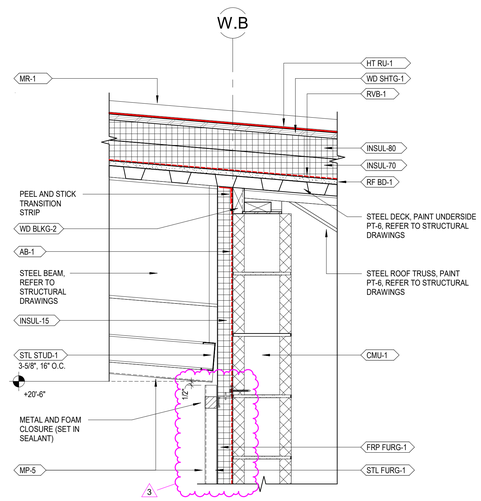
6/24/2025 12:35:32 PM



9 A444 BUS WASH SECTION DETAIL - TYP. EAVE RAKE
1 1/2" = 1'-0"

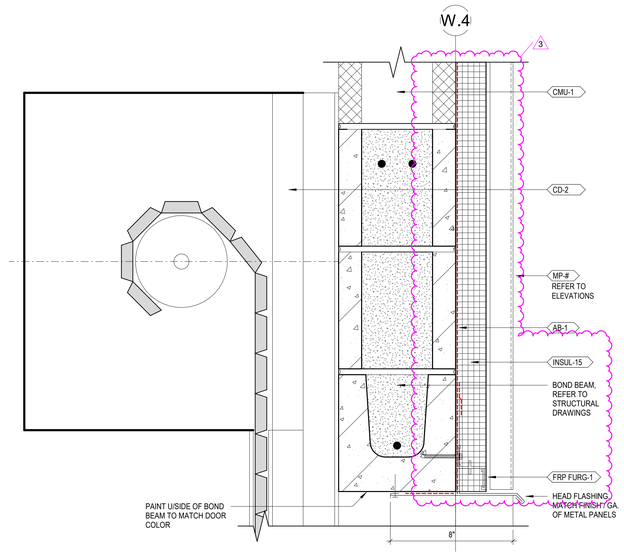


8 A444 FLEET VEHICLE MOTOR-FUEL DISPENSING FACILITY SECTION DETAIL - TYP. HIGH EAVE
1 1/2" = 1'-0"

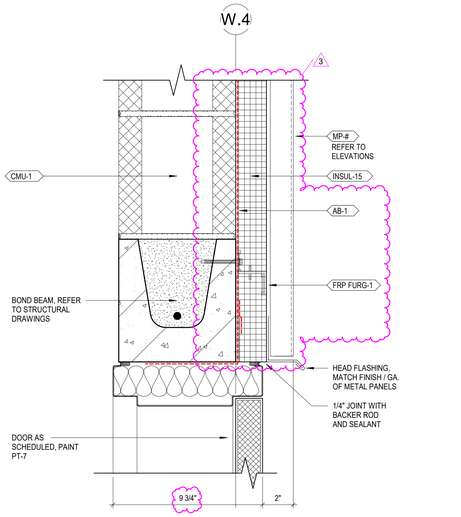


7 A444 BUS WASH SECTION DETAIL - TYP. SOFFIT INTERSECTION WITH BUS WASH
1 1/2" = 1'-0"

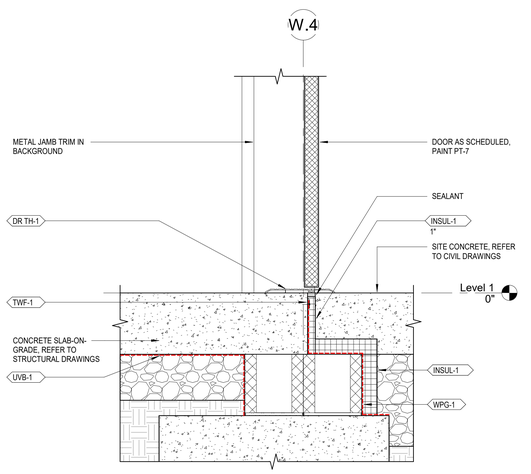
6 A444 BUS WASH SECTION DETAIL - TYP. LOW EAVE
1 1/2" = 1'-0"



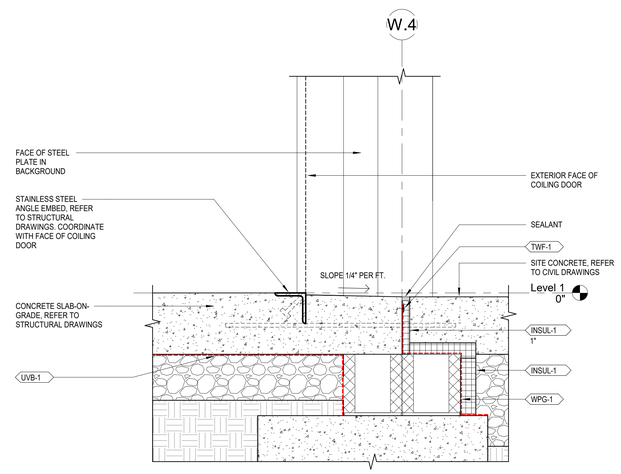
5 A444 BUS WASH SECTION DETAIL - TYP. COILING DOOR HEAD
3" = 1'-0"



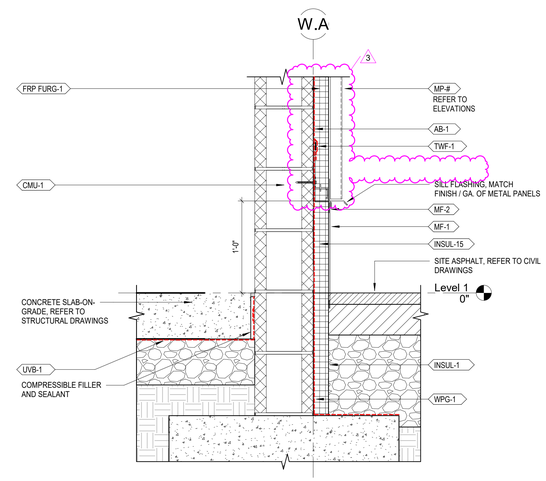
4 A444 BUS WASH SECTION DETAIL - TYP. HM DOOR HEAD
3" = 1'-0"



3 A444 BUS WASH SECTION DETAIL - TYP. HM DOOR THRESHOLD
1 1/2" = 1'-0"



2 A444 BUS WASH SECTION DETAIL - TYP. COILING DOOR SILL
1 1/2" = 1'-0"



1 A444 BUS WASH SECTION DETAIL - TYP. METAL PANEL BASE
1 1/2" = 1'-0"

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ISSUANCES

No.	Description	Date
1	CONSTRUCTION SET	02/14/25
2	BID SET	04/28/25
3	ADDENDUM 02	06/24/25

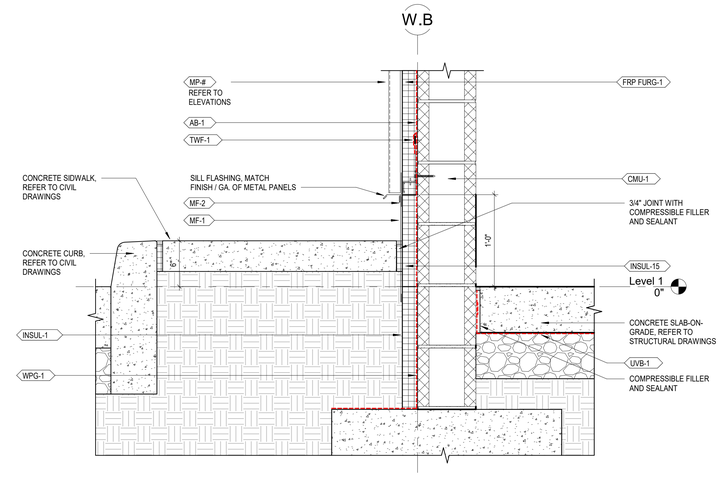
Drawn By: Author
Checked By: Checker
Client No.: 634
Project No.: 7310

STATE OF OHIO BRYAN J. GREENE 1115372 REGISTERED ARCHITECT
BRYAN J. GREENE
LICENSE #1115372
EXPIRATION DATE 12/31/2025

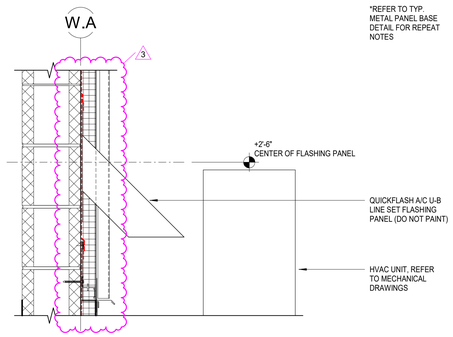
BUS WASH SECTION DETAILS

A444

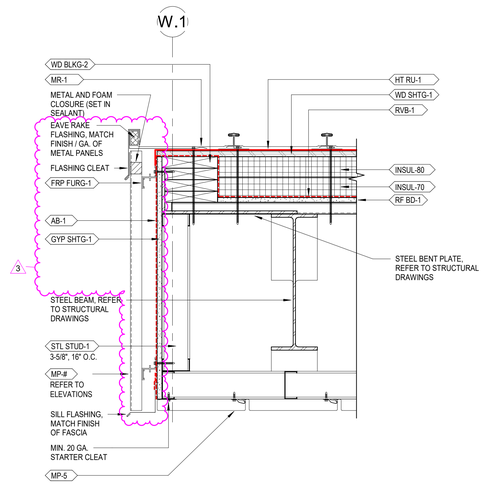
6/24/2025 12:43:56 PM



3 | A445 | BUS WASH SECTION DETAIL - METAL PANEL BASE (SOUTH SIDE) | 1 1/2" = 1'-0"



2 | A445 | BUS WASH SECTION DETAIL - REFRIGERANT LINE PENETRATION | 1 1/2" = 1'-0"



1 | A445 | FLEET VEHICLE MOTOR-FUEL DISPENSING FACILITY SECTION DETAIL - TYP. EAVE RAKE | 1 1/2" = 1'-0"

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Author

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Client No.
634

Project No.
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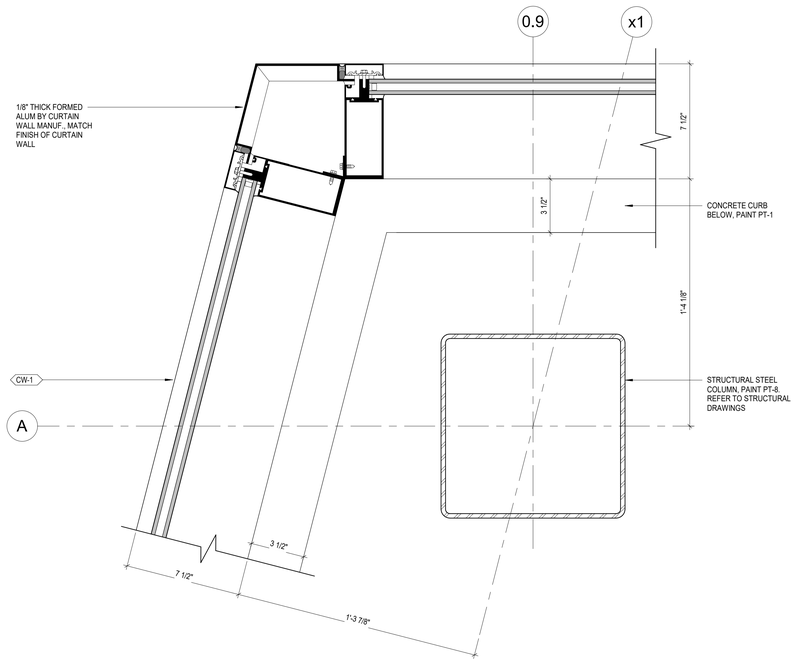
STATE OF OHIO BRYAN J. GREENE 1115372 REGISTERED ARCHITECT

BRYAN J. GREENE
LICENSE #1115372
EXPIRATION DATE 12/31/2025

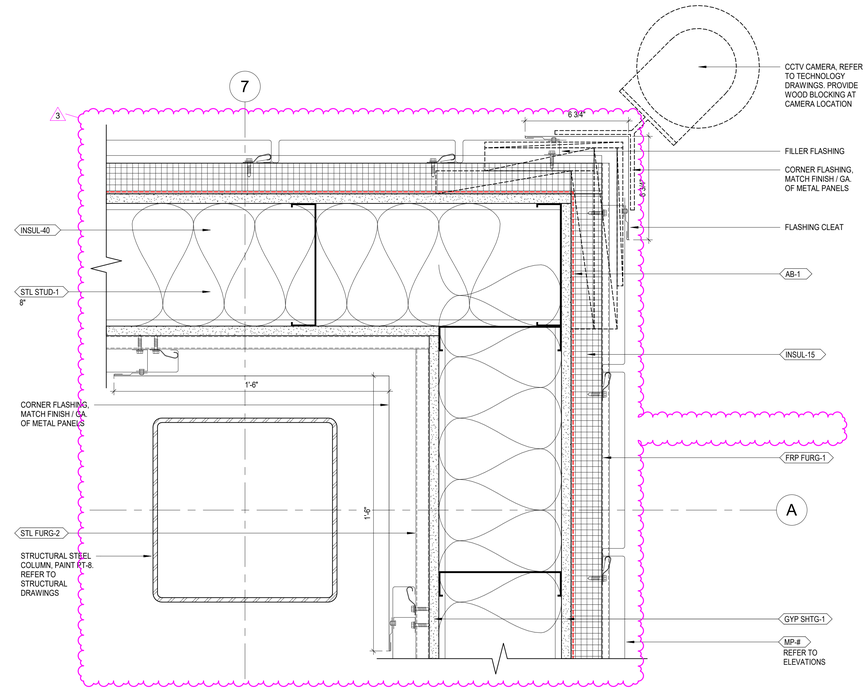
BUS WASH SECTION DETAILS

A445

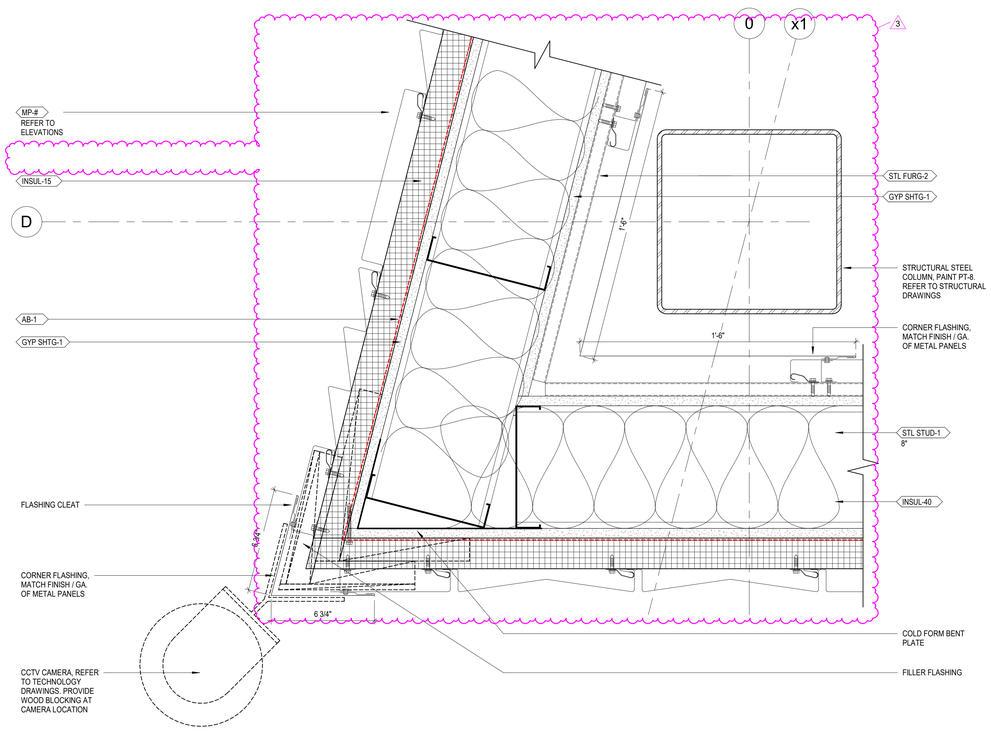
6/24/2025 12:54:05 PM



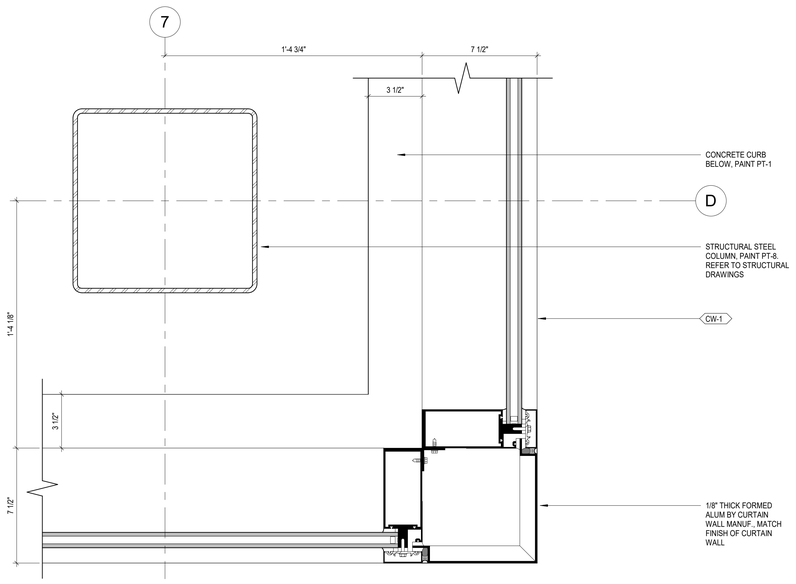
4 BUS GARAGE PLAN DETAIL - CURTAIN WALL CORNER
A450 3" = 1'-0"



3 BUS GARAGE PLAN DETAIL - 90-DEGREE OUTSIDE CORNER
A450 3" = 1'-0"



2 BUS GARAGE PLAN DETAIL - OUTSIDE CORNER
A450 3" = 1'-0"



1 BUS GARAGE PLAN DETAIL - 90-DEGREE CURTAIN WALL CORNER
A450 3" = 1'-0"

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ISSUANCES

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3	ADDENDUM 02	06/24/25

Drawn By
Author

Checked By
Checker

Client No.
634

Project No.
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STATE OF OHIO BRYAN J. GREENE 111372 REGISTERED ARCHITECT

BRYAN J. GREENE
LICENSE #111372
EXPIRATION DATE 12/31/2025

BUS GARAGE PLAN DETAILS

A450

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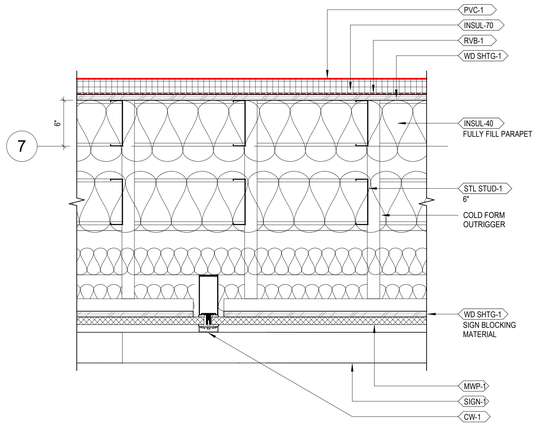
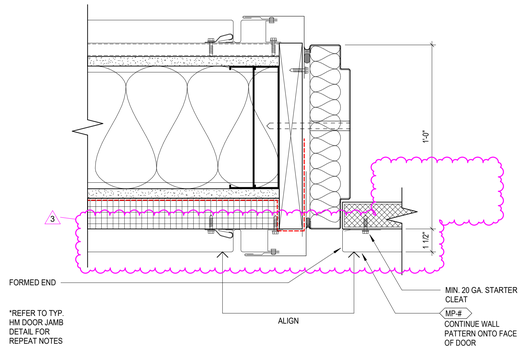
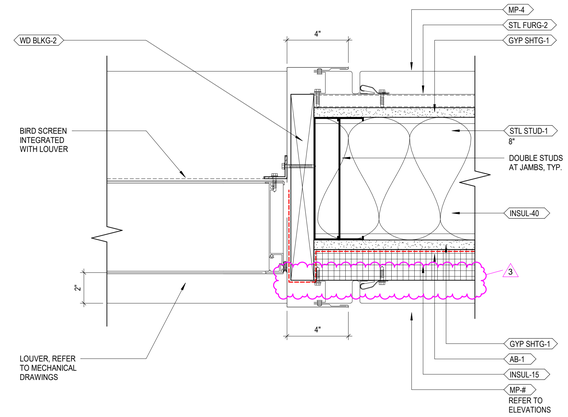


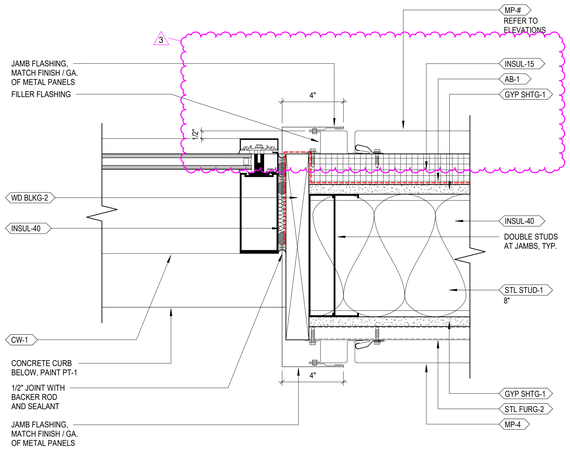
6 A451 BUS GARAGE PLAN DETAIL - RTA BRANDING SIGN SUPPORT
1 1/2" = 1'-0"



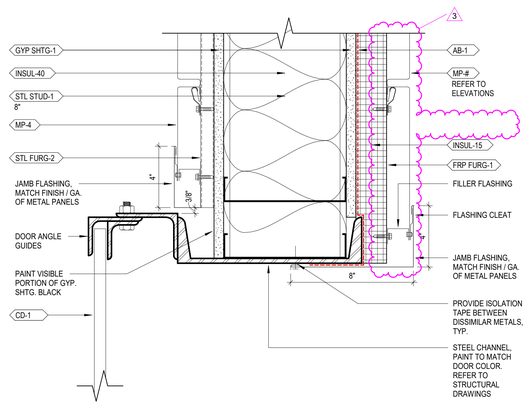
5 A451 BUS GARAGE PLAN DETAIL - CLAD HM DOOR JAMB
3" = 1'-0"



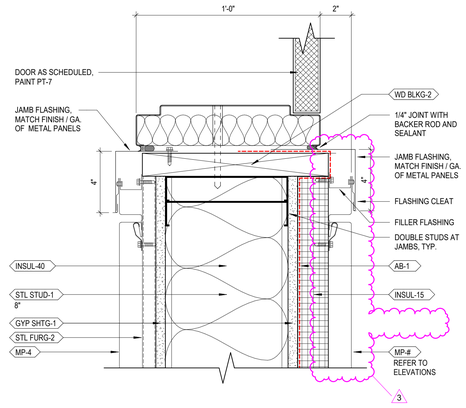
4 A451 BUS GARAGE PLAN DETAIL - TYP. LOUVER JAMB
3" = 1'-0"



3 A451 BUS GARAGE PLAN DETAIL - TYP. CURTAIN WALL JAMB
3" = 1'-0"



2 A451 BUS GARAGE PLAN DETAIL - TYP. COLING DOOR JAMB
3" = 1'-0"



1 A451 BUS GARAGE PLAN DETAIL - TYP. HM DOOR JAMB
3" = 1'-0"

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ISSUANCES

No.	Description	Date
1	CONSTRUCTION SET	02/14/25
2	BID SET	04/28/25
3	ADDENDUM 02	06/24/25

Drawn By
Author

Checked By
Checker

Client No.
634

Project No.
7310

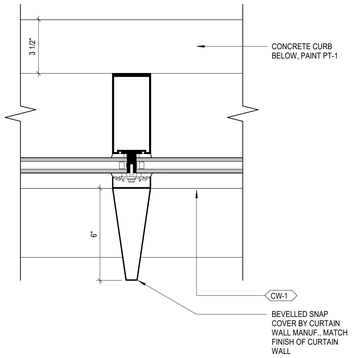
STATE OF OHIO BRYAN J. GREENE 115372 REGISTERED ARCHITECT

BRYAN J. GREENE
LICENSE #1115372
EXPIRATION DATE 12/31/2025

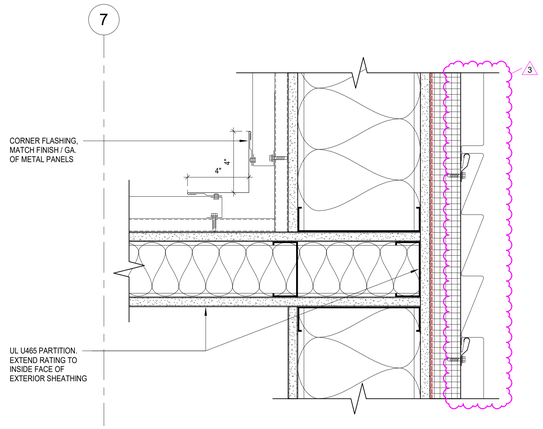
BUS GARAGE PLAN DETAILS

A451

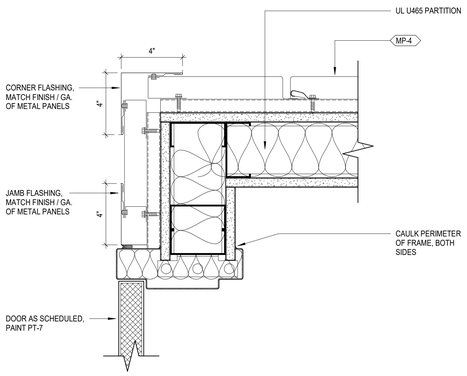
6/24/2025 12:21:43 PM



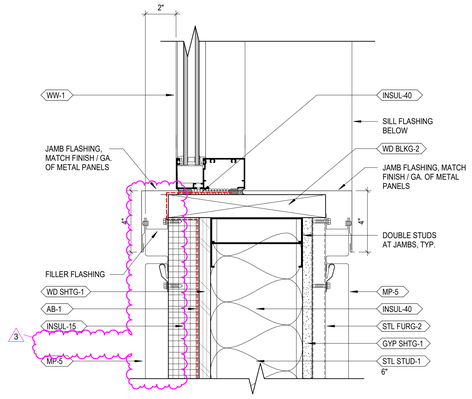
5 A452 BUS GARAGE PLAN DETAIL - TYP. INTERMEDIATE CURTAIN WALL MULLION
3" = 1'-0"



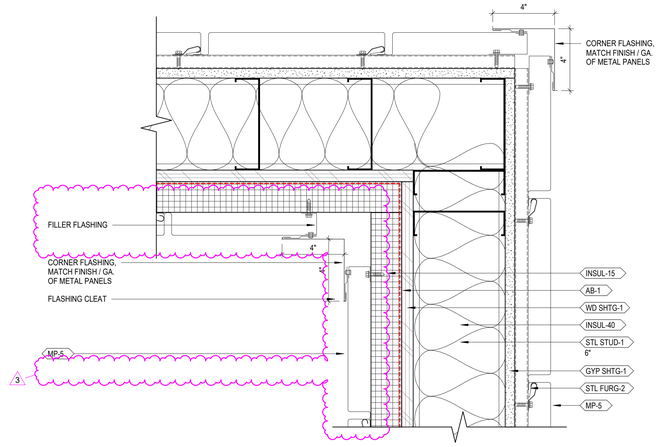
4 A452 BUS GARAGE PLAN DETAIL - RATED PARTITION WALL INTERSECTION WITH EXTERIOR WALL
3" = 1'-0"



3 A452 BUS GARAGE PLAN DETAIL - RATED PARTITION WALL OUTSIDE CORNER AND DOOR JAMB
3" = 1'-0"



2 A452 BUS GARAGE PLAN DETAIL - TYP. CLERESTORY WINDOW WALL JAMB
3" = 1'-0"



1 A452 BUS GARAGE PLAN DETAIL - TYP. CLERESTORY INSIDE CORNER
3" = 1'-0"

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Drawn By
Author

Checked By
Checker

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634

Project No.
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STATE OF OHIO BRYAN J. GREENE 1115372 REGISTERED ARCHITECT

BRYAN J. GREENE
LICENSE #1115372
EXPIRATION DATE 12/31/2025

BUS GARAGE PLAN DETAILS

A452

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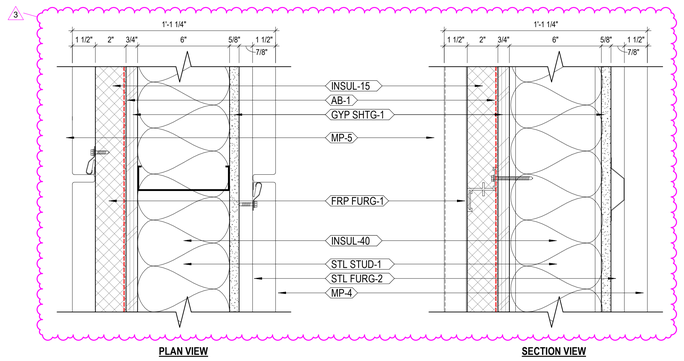
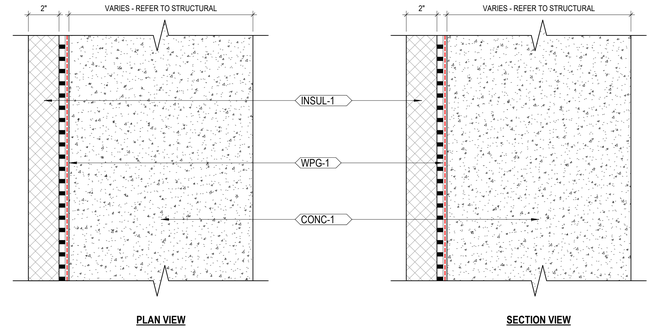


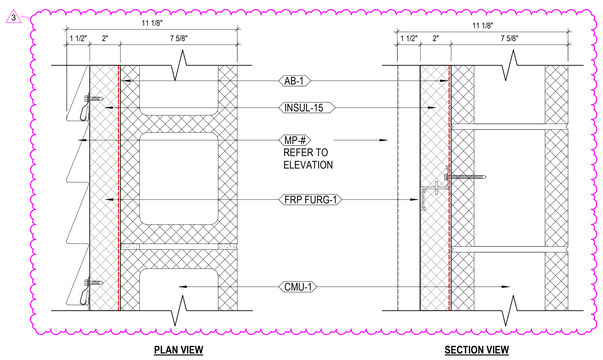
NOTES:
1. REFER TO BUILDING METAL PANEL LAYOUT ELEVATIONS FOR EXTERIOR PANEL LAYOUT.
2.
3.

4 WALL TYPE - MS3
A480 3" = 1'-0"



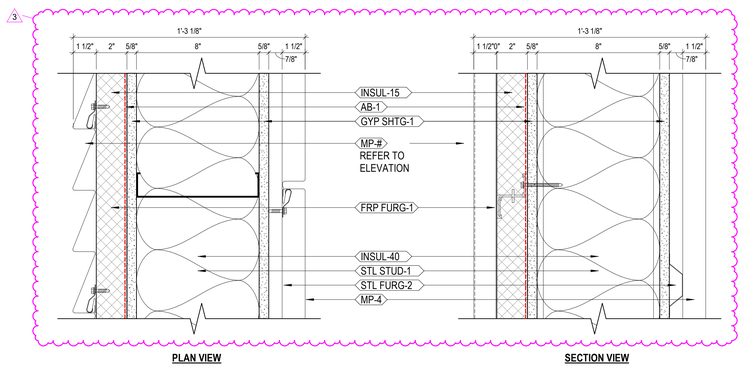
NOTES:
1. REFER TO STRUCTURAL DRAWINGS FOR INFORMATION REGARDING CONCRETE FOUNDATION WALLS.
2.
3.

3 WALL TYPE - CIP1
A480 3" = 1'-0"



NOTES:
1. REFER TO STRUCTURAL DRAWINGS FOR BACK-UP WALL REINFORCEMENT, WHERE APPLICABLE.
2. REFER TO BUILDING METAL PANEL LAYOUT ELEVATIONS FOR EXTERIOR PANEL LAYOUT.
3.

2 WALL TYPE - MM1
A480 3" = 1'-0"



NOTES:
1. . REFER TO BUILDING METAL PANEL LAYOUT ELEVATIONS FOR EXTERIOR PANEL LAYOUT.
2.
3.

1 WALL TYPE - MS1
A480 3" = 1'-0"

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Checked By
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Client No.
634

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STATE OF OHIO
BRYAN J. GREENE
1115372
REGISTERED ARCHITECT

BRYAN J. GREENE
LICENSE #1115372
EXPIRATION DATE 12/31/2025

EXTERIOR WALL TYPES

A480

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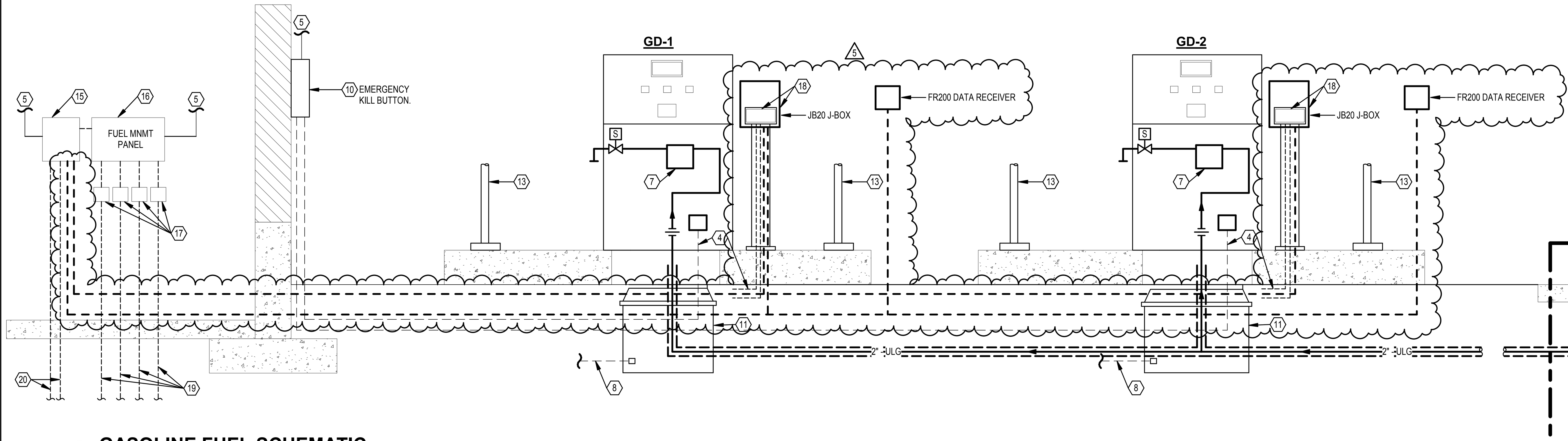
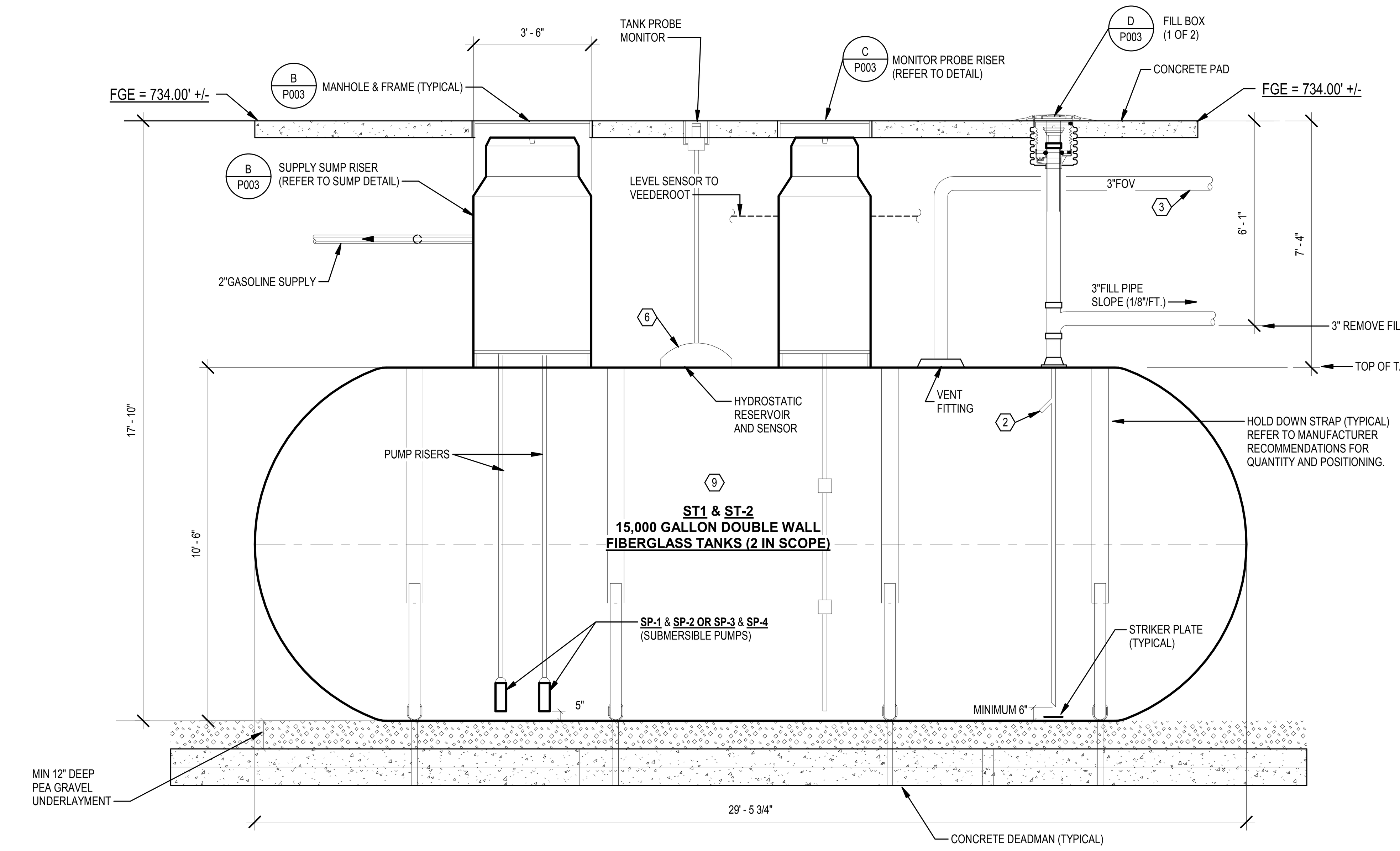
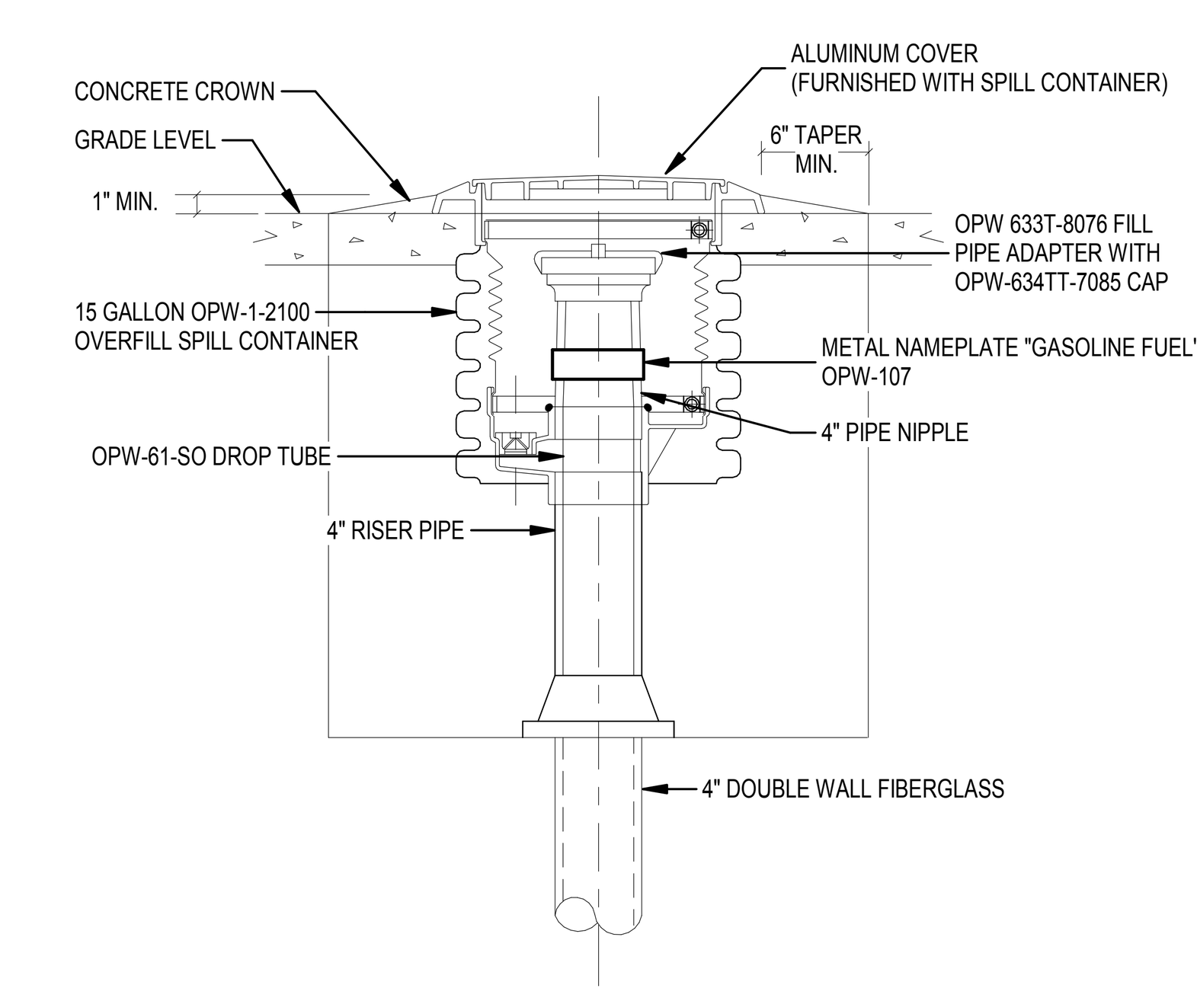


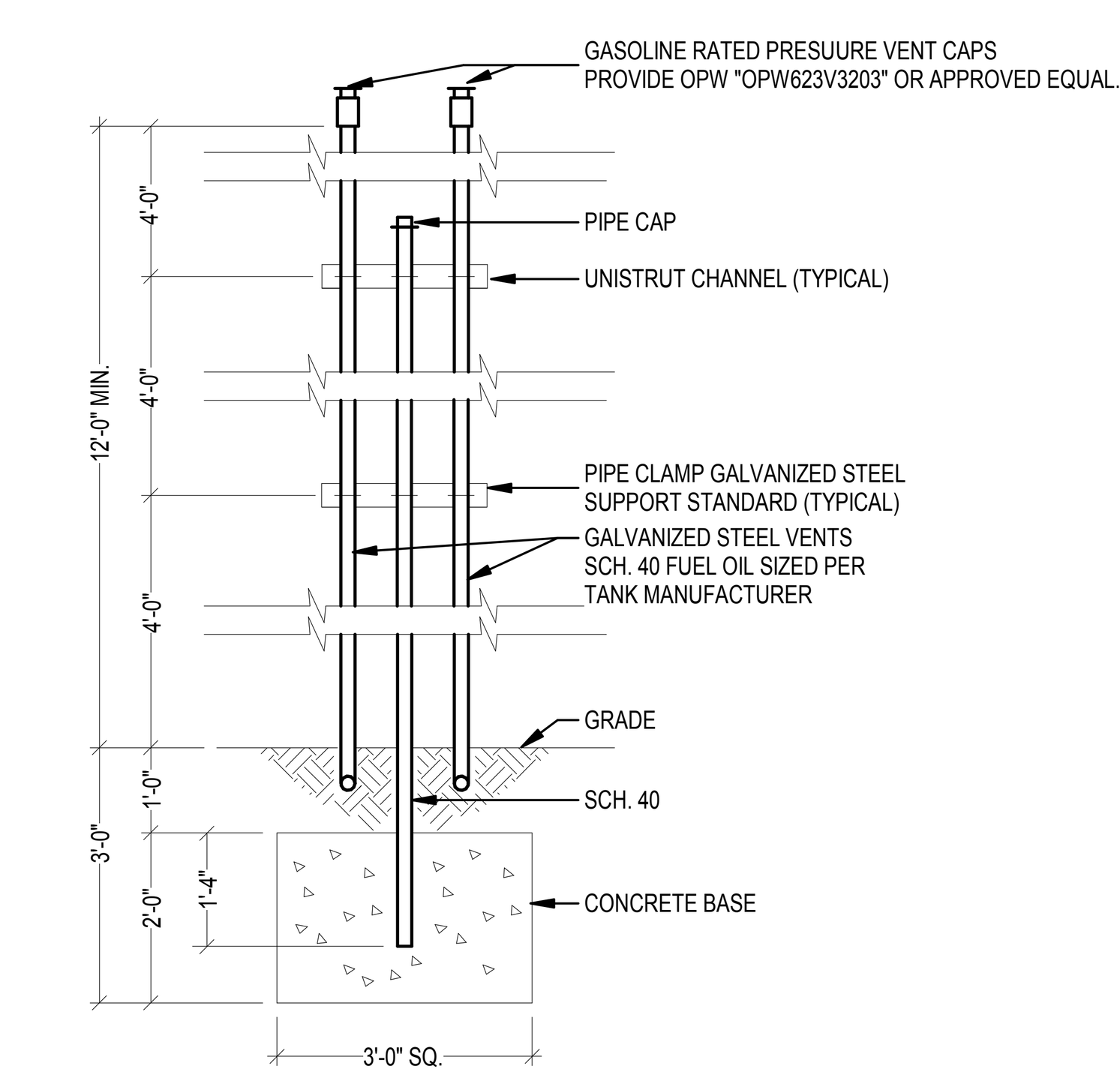
A-A GASOLINE FUEL SCHEMATIC
SCALE: NONE



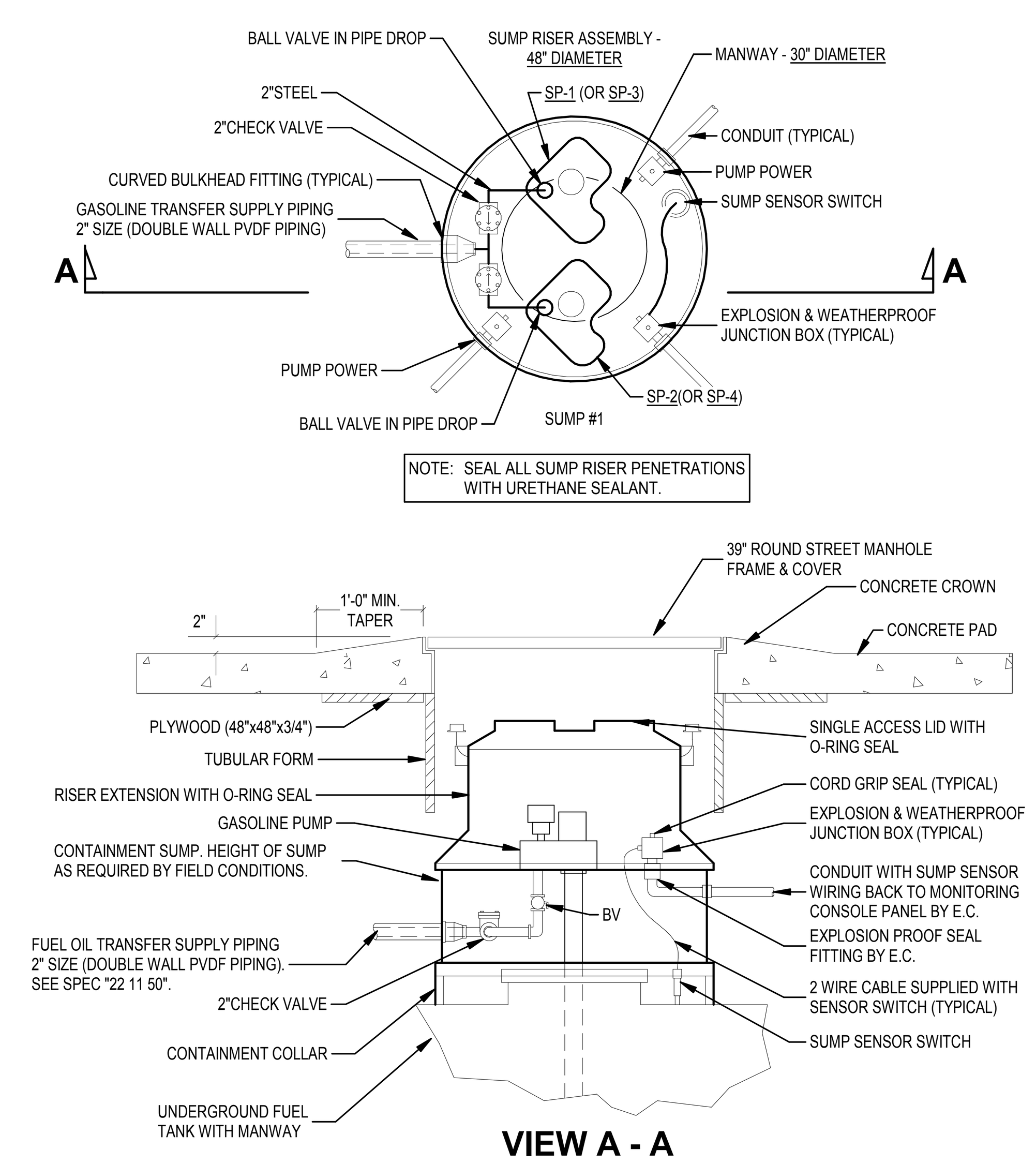
A GASOLINE - UNDERGROUND TANK (SINGLE PUMP TURBINE WITH DUAL PUMPS)
SCALE: 3/8" = 1'-0"



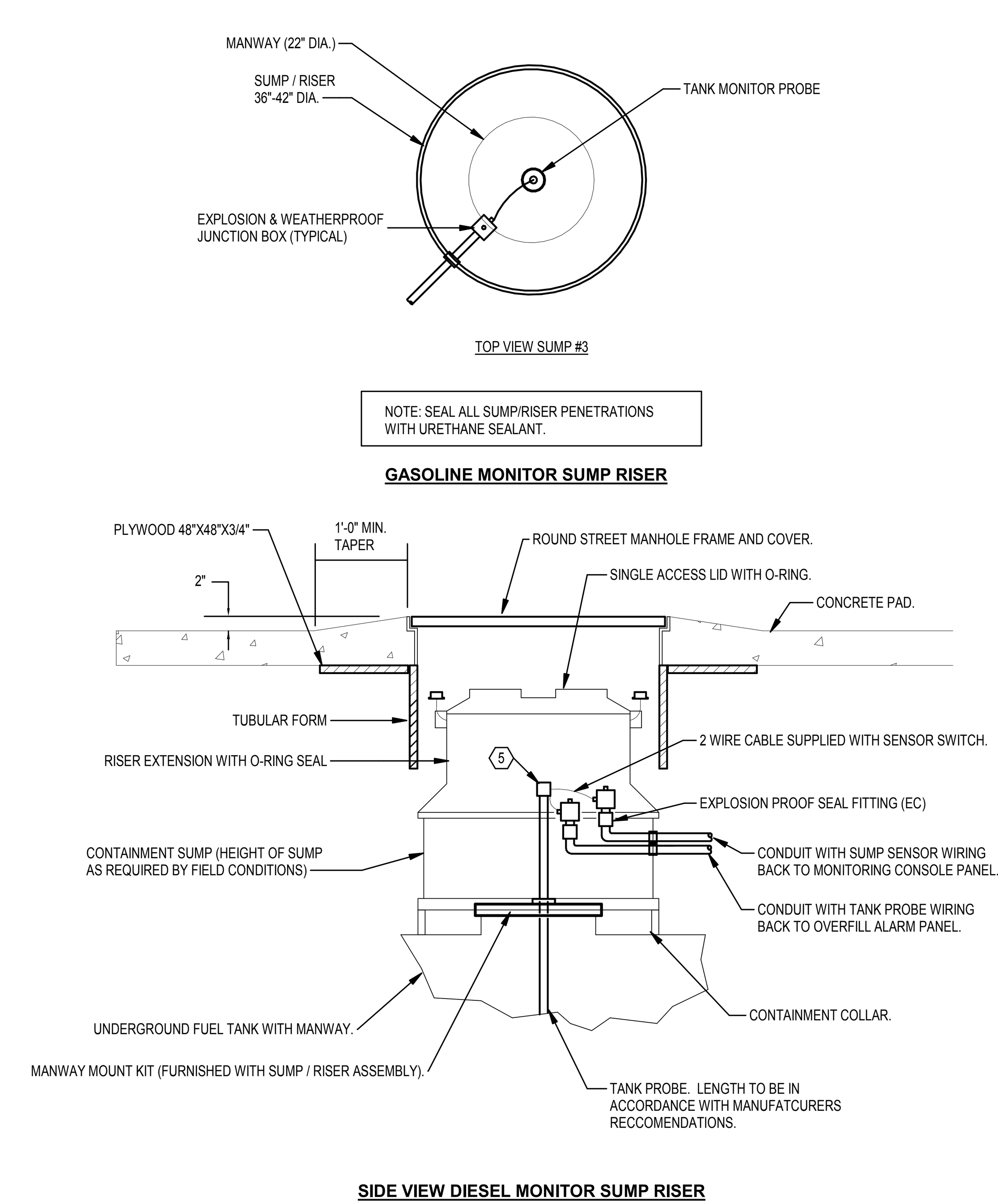
D TANK MOUNTED FILL BOX
SCALE: NONE



E GASOLINE - DETAILS TANK VENTS
SCALE: NONE



B GASOLINE - DETAIL SUPPLY SUMP RISER
SCALE: NONE



C GASOLINE - DETAIL MONITOR PROBE SUMP #3
SCALE: NONE

⬡ DETAIL NOTES

1. WEATHER PROOF REMOTE OVER FILL FUEL OIL MONITORING PANEL MOUNTED ON PLATFORM, WIRED TO BAS PANEL FOR REMOTE MONITORING BY DIVISION 23.
2. OVERFILL PREVENTION VALVE.
3. EXTEND TO VENT RACK PER PLAN AND DETAIL.
4. 120 V, 1 PHASE/60 HZ POWER SUPPLY BY DIVISION 26.
5. 4" CONNECTION WITH GASOLINE LEVEL MONITORING PROBE AND HIGH LIQUID LEVEL ALARM SWITCH.
6. HYDROSTATIC INTERSTIIAL SENSOR ASSEMBLY. INTERSTITAL SPACE OF DOUBLE WALL TANK IS BRINE FILLED PER SPECS.
7. DISPENSER SHALL HAVE INTEGRAL FLOW SWITCH WIRED TO FUEL OIL MANAGEMENT SYSTEM AND CONTROL PANEL (TYP).
8. DISCRIMINATING TRANSITION SUMP BASIN LEAK SENSOR. EXTEND TO VEEDEROOT PANEL IN BUS WASH BUILDING.
9. 15,000 GALLON, BELOW GRADE DOUBLE WALL GASLINE STORAGE TANK.
10. GASOLINE EMERGENCY STOP PUSH BUTTON. CONNECT EMERGENCY STOP BUTTON TO GASOLINE SUPPLY PUMP CONTROL PANEL. BUTTON SHALL DE-ENERGIZE GASOILINE PUMPS UPON ACTIVATION.
11. PROVIDE TRANSITION SUMP BASIN COMPATIBLE WITH SPECIFICED DISPENSER. COORDINATE INSTALLATION WITH FUEL ISLAND CONTRACTOR.
12. PROVIDE WATER TIGHT ENTRY FITTINGS AT ALL TRANSITION SUMPS.
13. PROVIDE BOLLARD PROTECTION. REFER TO ARCHITECTURAL DRAWINGS FOR MORE DETAILS.
14. PROVIDE FUEL CONTROL PANEL EQUAL TO RED JACKET
15. PROVIDE MAIN FUEL CONTROL PANEL (RED JACKET ""ISOTROL 1-8").
16. PROVIDE FUEL MANAGMENT PANEL (VEEDEROOT "TLS-450 PLUS"). PROVIDE POWER AND LOW VOLTAGE COMMUNCATION WIRING TO ALL ASSOCIATED CONTROL BOXES, BULK TANK ACCESORIES, ETC.
17. PROVIDE PUMP SMART CONTROL BOX (RED JACKET "IQ"). EXTEND WIRING FROM VEEDEROOT PANEL TO BOX AND TO EACH PUMP.
18. PROVIDE FLEET WATCH PANEL (MODEL "3000R") AND JB20 BOX MOUNTED TO A BLACK POWDER COATED STEEL TUBE PEDESTAL WITH MOUNTING FLANGE AT BASE (BOLT TO ISLAND WITH EXPANSION INSERTS). EXTEND WIRING/CONDUITS TO/FROM ADJACENT FUEL DISPENSER AND FUEL CONTROL PANELS INSIDE BUS WASH BUILDING. (5)
19. EXTEND WIRING FROM PUMP CONTROLLER TO EACH GASOLINE PUMP LOCATED IN BULK GASOLINE TANKS.
20. EXTEND WIRING TO/FROM GAS DISPENSERS AND MAIN FUEL CONTROL PANEL.

EQUIPMENT DATA

ST-1 & ST-2	UNLEADED GASOLINE STORAGE TANK; BELOW GRADE, DOUBLE-WALL, FIBERGLASS WITH PUMP RISER (WITH 4" SUPPLY TAPPINGS), LEVEL CONTROL MONTIORING RISER, FILL RISER, TANK PROBE MONITOR, HYDROSTATIC INTERSTITIAL MONITORING. 15,000 GALLON CAPACITY DINENSIONS: 36' LONG x 10.5' DIAMETER SEE SPEC "22 11 50" FOR FURTHER DETAILS. BASIS OF DESIGN PER SPEC "22 11 50".
SP-1 - SP-4	DUPLEX GASOLINE SUPPLY PUMPS (IN SUMP RISER) (4 PUMPS TOTAL) SUBMERSIBLE, INCLUDED WITH BULK GASOLINE TANK (ST1 AND ST2) PACKAGE. CAPACITY: 22 GPM @ 25 PSI ELECTRICAL: 3/4 HP-220V-1 PH BASIS OF DESIGN: RED JACKET STP, 4"
GD-1 & GD-2	GASOLINE DISPENSER (2 UNITS TOTAL) 22 GPM, SINGLE DISPENSER, FRONT FACING WITH FLOW METER, BREAKAWAY HOSE, 15', 1.5" SUPPLY INLET, 1" AC, 0.75" DC.. BASIS OF DESIGN: GASBOY ATLASX "9853GX "

GENERAL NOTES

1. NOT ALL PIPING, VALVING, ACCESSORIES, AND COMPONENTS SHOWN ON DIAGRAM. REFER TO SPEC SECTION 22 11 50 FOR ADDITIONAL REQUIREMENTS.
2. LOCATE MAIN FUEL MONITORING PANEL IN IT ROOM. PANEL SHALL BE CAPABLE OF MONITORING ABOVE GROUND STORAGE TANK, UNDERGROUND PIPING TRANSITION SUMPS, FUEL FILTRATION UNIT, AND ASSOCIATED CONTROLS.
3. ALL GASOLINE COMPONENT AND ACCESSORY INTERCONNECTING WIRING AND CONDUIT SHALL BE PROVIDED BY THE EQUIPMENT SUPPLIER UNLESS OTHERWISE SPECIFICALLY SHOWN OR NOTED.
4. MAKE ALL CONNECTIONS TO GASOLINE DISPENSERS AND PUMPING SYSTEMS. VERIFY EXACT CONDITIONS AND REQUIREMENTS WITH GASOLINE PUMPING AND DISPENSER MANUFACTURER. INSTALL ALL "LOOSE" COMPONENTS AS REQUIRED.
5. GASOLINE PUMP SETS, BULK TANK LEVEL CONTROLLERS, GASOLINE FUEL MANAGEMENT SYSTEM/CONTROL PANELS, REMOTE GASOLINE MONITORING PANEL, SHALL BE SUPPLIED FROM THE SAME FUEL VENDOR FOR A COMPLETE INTEGRATED SYSTEM FOR FIELD INSTALLATION.
6. PITCH ALL GASOLINE AND VENT PIPING BACK TO THE GASOLINE UNDERGROUND STORAGE TANK UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE.

BELOW GROUND STORAGE TANK

1. GASOLINE OVERFILL PANEL: A LEVEL TRANSMITTER IN THE ABOVE GROUND STORAGE TANK WILL SEND A SIGNAL TO THE OVERFILL PANEL TO SOUND AN ALARM AND ACTIVATE A LIGHT WHEN TANK IS 90% FULL DURING FILLING OPERATIONS. A RESET/SILENCE BUTTON WILL ALLOW FOR THE TANK TO CONTINUE TO FILL UNTIL THEY ARE 95% FULL WHEN ANOTHER VISUAL AND TROUBLE ALARM WILL SOUND.

SAFETY SHUT DOWNS:

A. ACTIVATION OF LEAK DETECTION SWITCH IN THE BELOW GROUND INTERSTITIAL SPACE (5% FULL)
B. ACTIVATION OF LEAK DETECTION SWITCH ON ANY GASOLINE TRANSFER SUMP SENSOR.
C. ACTIVATION OF ANY EMERGENCY STOP BUTTON SHALL SHUT DOWN ALL GASOLINE TRANSFER PUMP(S).

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ISSUANCES

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1	CONSTRUCTION SET	02/14/25
3	BID SET	04/28/25
5	ADDENDUM 2	06/23/25

Drawn By: RRM
Checked By: DJT
Client No.: 634
Project No.: 7310

2/14/25

GASOLINE DETAILS

P003

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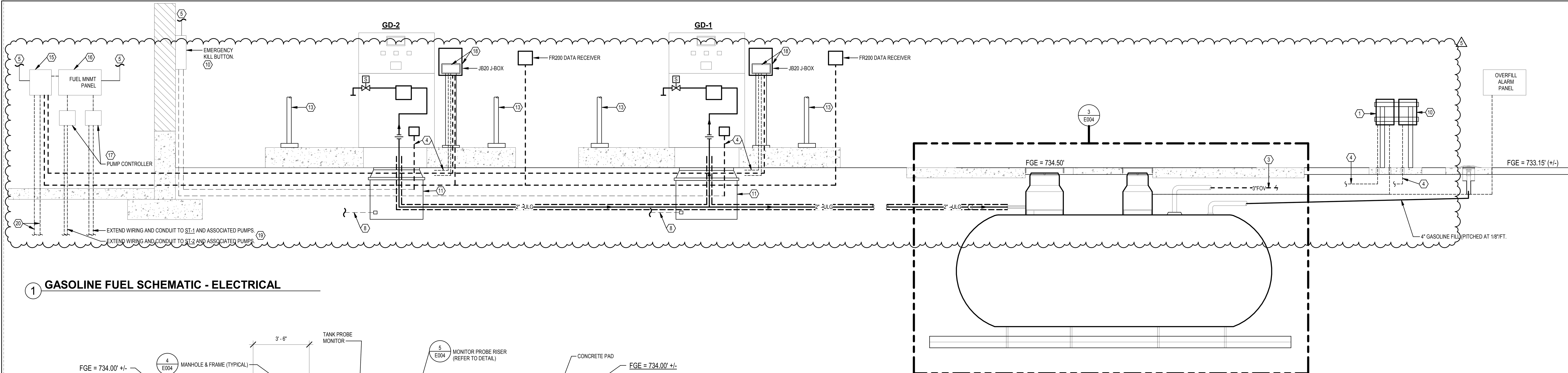
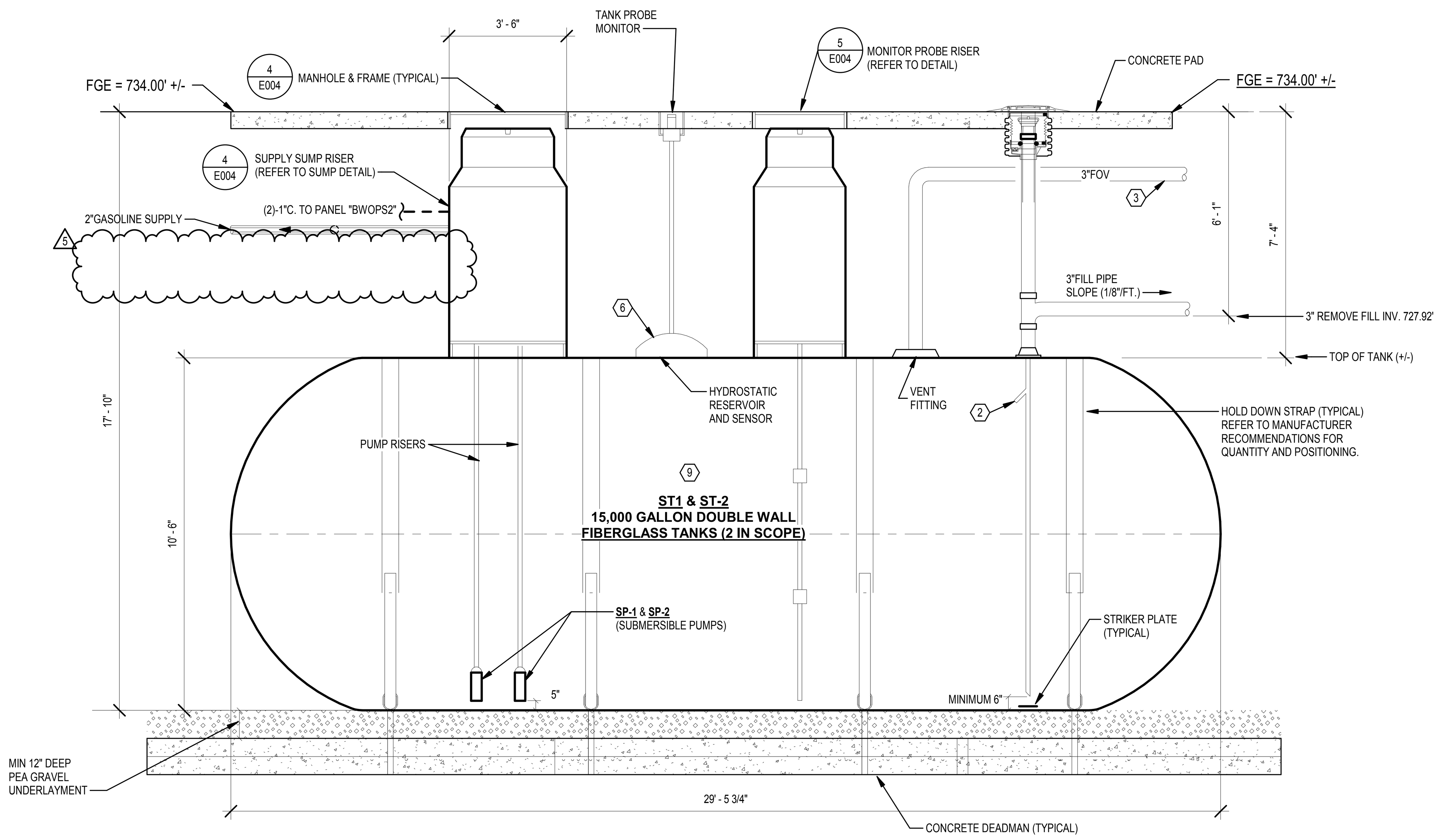


1 GASOLINE FUEL SCHEMATIC - ELECTRICAL



3 GASOLINE - UNDERGROUND TANK (SINGLE PUMP TURBINE WITH DUAL PUMPS) - ELECTRICAL

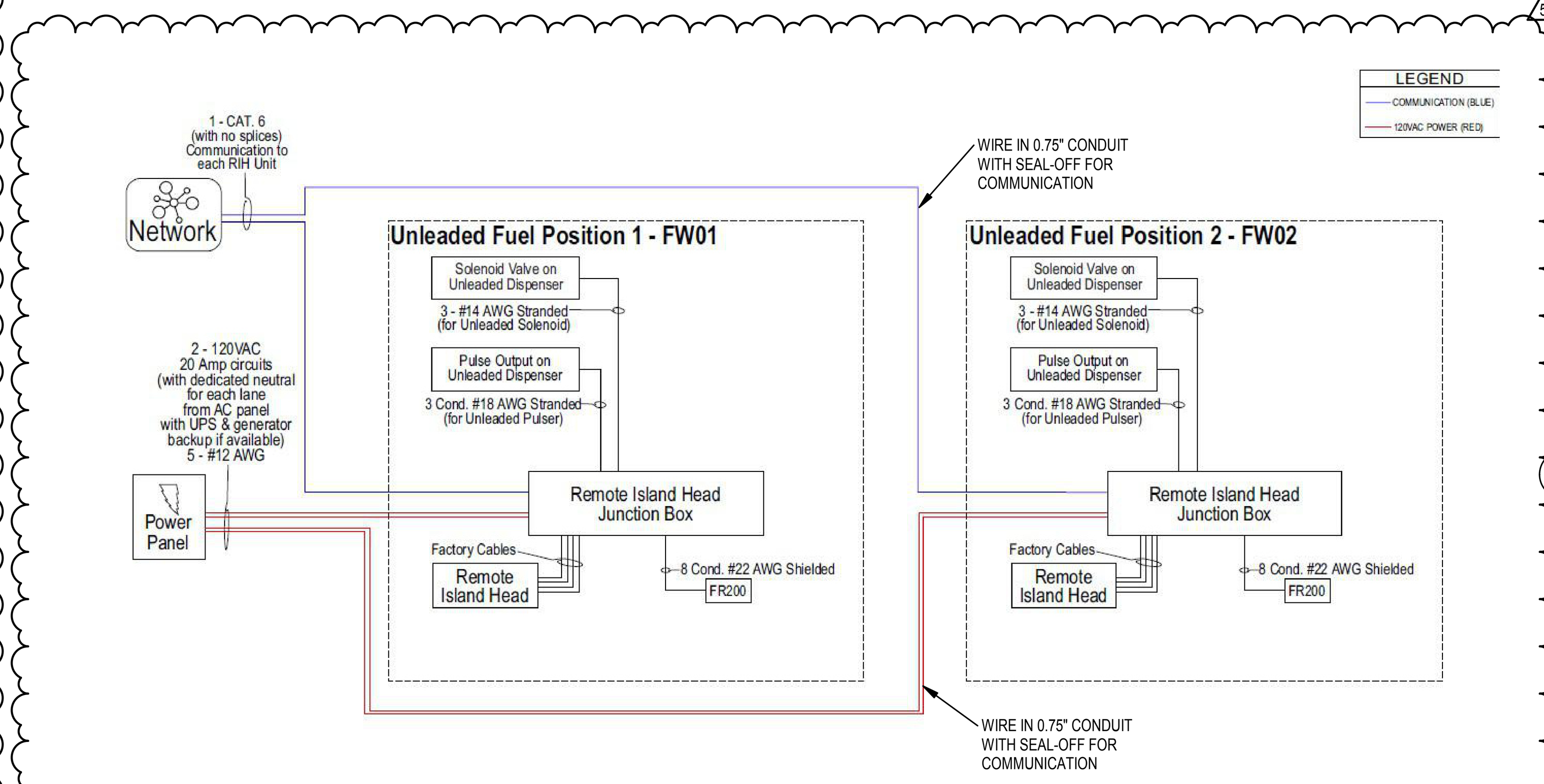
NOTE

1. WEATHER PROOF REMOTE OVER FILL FUEL OIL MONITORING PANEL MOUNTED ON PLATFORM, WIRED TO BAS PANEL FOR REMOTE MONITORING BY DIVISION 23.
2. OVERFILL PREVENTION VALVE.
3. EXTEND TO VENT RACK PER PLAN AND DETAIL.
4. 120 V, 1 PHASE/60 HZ POWER SUPPLY BY DIVISION 26.
5. 4" CONNECTION WITH GASOLINE LEVEL MONITORING PROBE AND HIGH LIQUID LEVEL ALARM SWITCH.
6. HYDROSTATIC INTERSTIIAL SENSOR ASSEMBLY. INTERSTITAL SPACE OF DOUBLE WALL TANK IS BRINE FILLED PER SPECS.
7. DISPENSER SHALL HAVE INTEGRAL FLOW SWITCH WIRED TO FUEL OIL MANAGEMENT SYSTEM AND CONTROL PANEL (TYP).
8. DISCRIMINATING TRANSITION SUMP BASIN LEAK SENSOR. EXTEND TO VEEDEROOT PANEL IN BUS WASH BUILDING.
9. 15,000 GALLON, BELOW GRADE DOUBLE WALL GASLINE STORAGE TANK.
10. GASOLINE EMERGENCY STOP PUSH BUTTON. CONNECT EMERGENCY STOP BUTTON TO GASOLINE SUPPLY PUMP CONTROL PANEL. BUTTON SHALL DE-ENERGIZE GASOILINE PUMPS UPON ACTIVATION.
11. PROVIDE TRANSITION SUMP BASIN COMPATIBLE WITH SPECIFICED DISPENSER. COORDINATE INSTALLATION WITH FUEL ISLAND CONTRACTOR.
12. PROVIDE WATER TIGHT ENTRY FITTINGS AT ALL TRANSITION SUMPS.
13. PROVIDE BOLLARD PROTECTION. REFER TO ARCHITECTURAL DRAWINGS FOR MORE DETAILS.
14. PROVIDE FUEL CONTROL PANEL EQUAL TO RED JACKET
15. PROVIDE MAIN FUEL CONTROL PANEL (RED JACKET ""ISOTROL 1-8").
16. PROVIDE FUEL MANAGMENT PANEL (VEEDEROOT "TLS-450 PLUS"). PROVIDE POWER AND LOW VOLTAGE COMMUNCATION WIRING TO ALL ASSOCIATED CONTROL BOXES, BULK TANK ACCESORIES, ETC.
17. PROVIDE PUMP SMART CONTROL BOX (RED JACKET "IQ"). EXTEND WIRING FROM VEEDEROOT PANEL TO BOX AND TO EACH PUMP.
18. PROVIDE FLEET WATCH PANEL (MODEL "3000R") AND JB20 BOX MOUNTED TO A BLACK POWDER COATED STEEL TUBE PEDESTAL WITH MOUNTING FLANGE AT BASE (BOLT TO ISLAND WITH EXPANSION INSERTS). EXTEND WIRING/CONDUITS TO/FROM ADJACENT FUEL DISPENSER AND FUEL CONTROL PANELS INSIDE BUS WASH BUILDING.
19. EXTEND WIRING FROM PUMP CONTROLLER TO EACH GASOLINE PUMP LOCATED IN BULK GASOLINE TANKS.
20. EXTEND WIRING TO/FROM GAS DISPENSERS AND MAIN FUEL CONTROL PANEL.

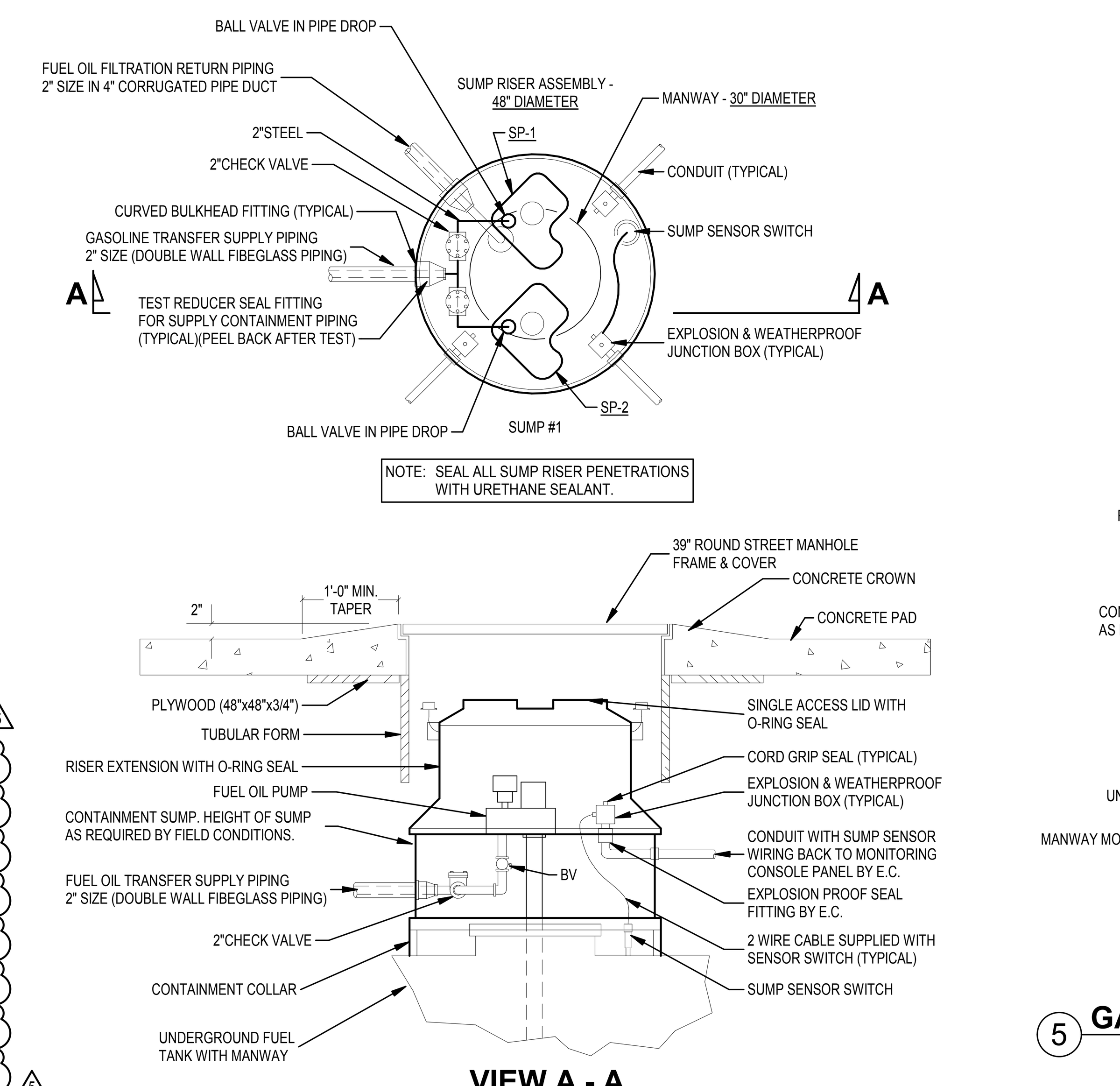
FUEL DELIVERY SYSTEM SEQUENCE OF OPERATION:

GASOLINE DISPENSERS:

1. WHEN PROPER BADGING AND EMPLOYEE LOGON IS PROVIDED AT FUEL DISPENSER, SUBMERSIBLE PUMP SHALL BE ENERGIZED WITH BULK TANKS ALONG WITH SOLENOID VALVE ENERGIZED TO OPEN POSITION AT FUEL DISPENSER.
2. IF/WHEN 2ND GASOLINE DISPENSER IS UTILIZED SIMULTANEOUSLY, SOLENOID VALVE SHALL BE ENERGIZED TO OPEN. 2ND SUBMERSIBLE PUMP SHALL ENERGIZE TO MAINTAIN MINIMUM 50 GPM FLOW RATES.
3. THE LEAD PUMP SHALL AUTOMATICALLY ALTERNATE BETWEEN EACH CALL FOR FUEL.
4. UPON DETECTION OF LOSS OF FLOW OR LEAD PUMP THERMAL OVERLOAD, THE CONTROL SYSTEM SHALL AUTOMATICALLY ENERGIZE THE BACKUP PUMP AND DE-ENERGIZE THE LEAD PUMP.



2 FLEET WATCH FUEL MANAGEMENT SYSTEM



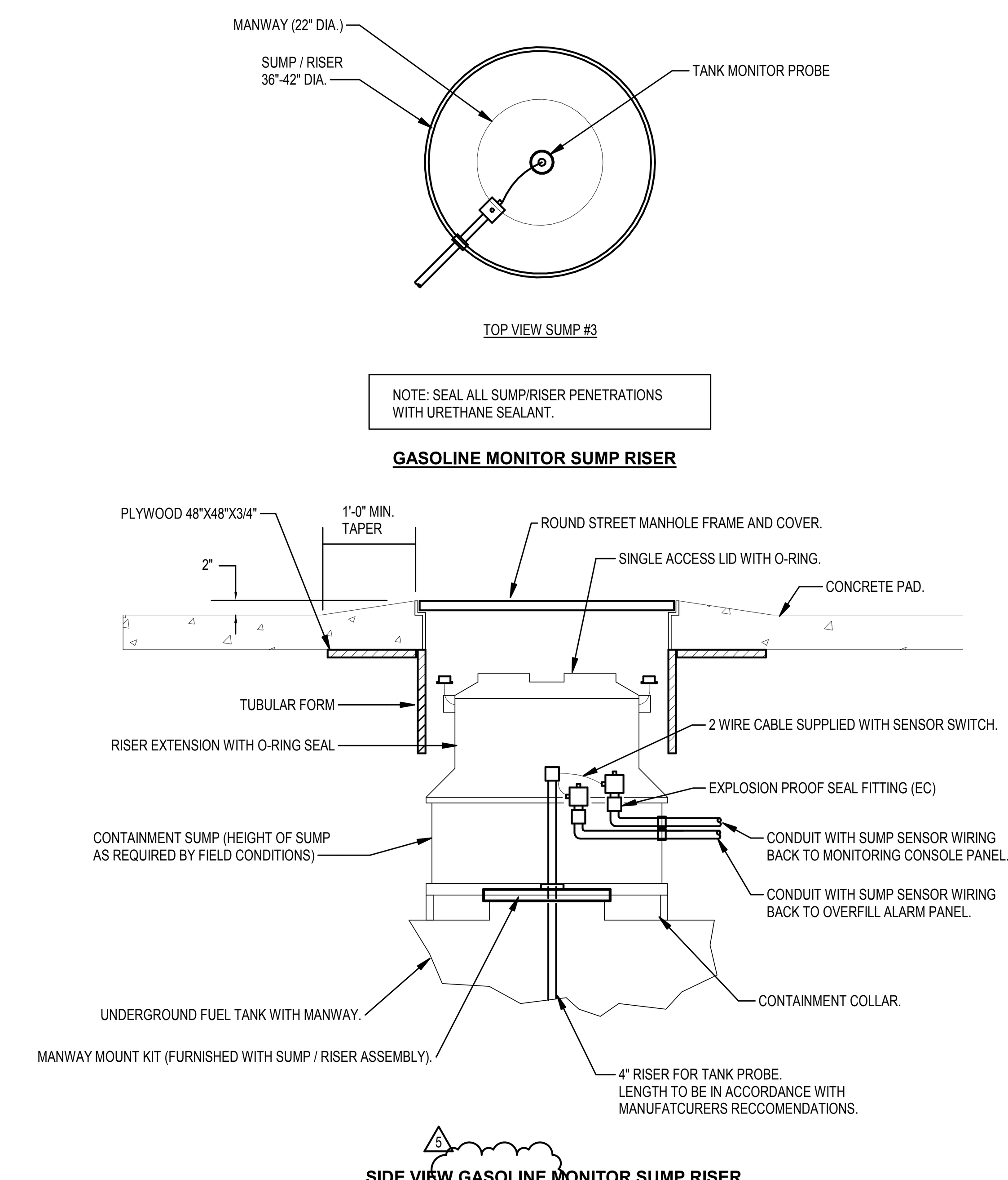
4 GASOLINE - DETAIL SUPPLY SUMP RISER - ELECTRICAL

BELOW GROUND STORAGE TANK

1. BGST FUEL OVERFILL PANEL: A LEVEL TRANSMITTER IN THE ABOVE GROUND STORAGE TANK WILL SEND A SIGNAL TO THE OVERFILL PANEL TO SOUND AN ALARM AND ACTIVATE A LIGHT WHEN TANK IS 90% FULL DURING FILLING OPERATIONS. A RESET/SILENCE BUTTON WILL ALLOW FOR THE TANK TO CONTINUE TO FILL UNTIL THEY ARE 95% FULL WHEN ANOTHER VISUAL AND TROUBLE ALARM WILL SOUND.

SAFETY SHUT DOWNS:

A. ACTIVATION OF LEAK DETECTION SWITCH IN THE BELOW GROUND INTERSTITIAL SPACE (5% FULL)
B. ACTIVATION OF LEAK DETECTION SWITCH ON ANY GASOLINE TRANSFER SUMP SENSOR.
C. ACTIVATION OF THE FIRE SAFETY SWITCH SHALL SHUT DOWN ANY OPERATING GASOLINE TRANSFER PUMP(S), SHALL SIGNAL A VISUAL AND AUDIBLE COMMON ALARM AND SEND A TROUBLE ALARM SIGNAL TO THE BUILDING AUTOMATION SYSTEM.
D. ACTIVATION OF ANY EMERGENCY STOP BUTTON SHALL SHUT DOWN ALL GASOLINE TRANSFER PUMP(S).



5 GASOLINE - DETAIL MONITOR PROBE SUMP #3 - ELECTRICAL

GENERAL NOTES

1. NOT ALL PIPING, VALVING, ACCESSORIES, AND COMPONENTS SHOWN ON DIAGRAM. REFER TO SPEC SECTION 22 11 50A AND 22 11 51 FOR ADDITIONAL REQUIREMENTS.
2. LOCATE MAIN FUEL MONITORING PANEL IN NEW ADDITION MECHANICAL ROOM. PANEL SHALL BE CAPABLE OF MONITORING ABOVE GROUND STORAGE TANK, UNDERGROUND PIPING TRANSITION SUMPS, FUEL FILTRATION UNIT, AND ASSOCIATED CONTROLS.
3. ALL FUEL OIL COMPONENT AND ACCESSORY INTERCONNECTING WIRING AND CONDUIT SHALL BE PROVIDED BY THE EQUIPMENT SUPPLIER UNLESS OTHERWISE SPECIFICALLY SHOWN OR NOTED.
4. MAKE ALL CONNECTIONS TO EMERGENCY GENERATOR(S), BOILER(S), AND WATER HEATER. VERIFY EXACT CONDITIONS AND REQUIREMENTS WITH GENERATOR AND BOILER MANUFACTURER. INSTALL ALL "LOOSE" COMPONENTS AS REQUIRED.
5. FUEL OIL TRANSFER PUMP SET, RETURN PUMP, DAY TANK WITH LEVEL CONTROLLERS, FUEL OIL MANAGEMENT SYSTEM AND CONTROL PANELS, REMOTE FUEL OIL MONITORING PANEL, AND FUEL OIL FILTRATION SET SHALL BE SUPPLIED FROM THE SAME MANUFACTURER FOR A COMPLETE INTEGRATED SYSTEM FOR FIELD INSTALLATION.
6. PITCH ALL FUEL OIL AND VENT PIPING ABOVE AND DOWNSTREAM OF THE FUEL OIL STORAGE TANK AND DAY TANK BACK TO THE FUEL OIL STORAGETANK AND DAY TANK UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE.
7. THE BOILER PIPING SUCTION AND RETURN LINES SHALL ENTER THE BOILER PUMP FROM THE SAME HEIGHT. REFER TO BOILER MANUFACTURER'S WRITTEN INSTRUCTIONS AND INSTALL FUEL OIL PIPING PER INSTALLATION REQUIREMENTS.

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GDRTA PARATRANSIT BUS GARAGE

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701 Longworth Street, Dayton, OH 45402

ISSUANCES

No.	Description	Date
1	CONSTRUCTION SET	02/14/25
3	BID SET	04/28/25
5	ADDENDUM 2	06/23/25

Drawn By: JRW
Checked By: ASA
Client No.: 634
Project No.: 7310

2/14/25

GASOLINE DETAILS

E004

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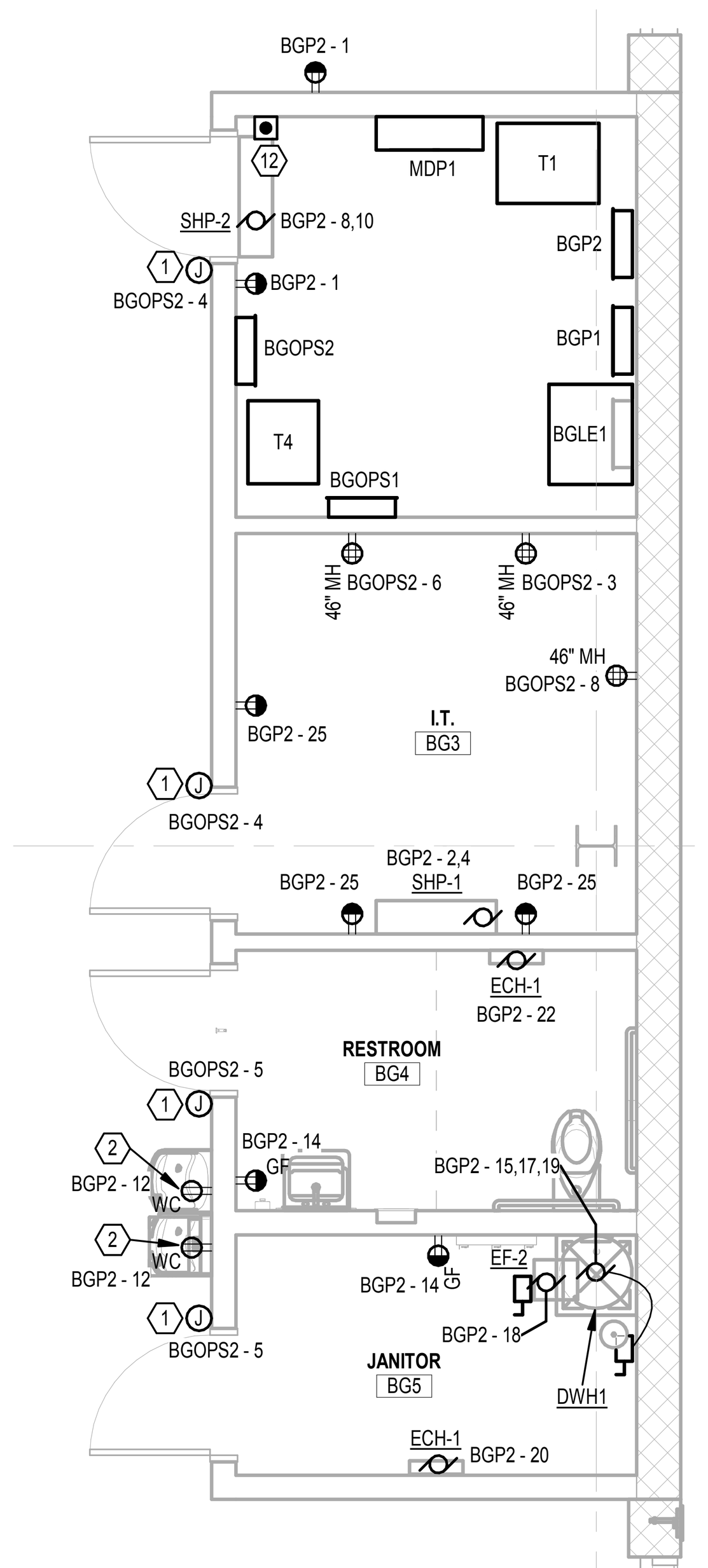
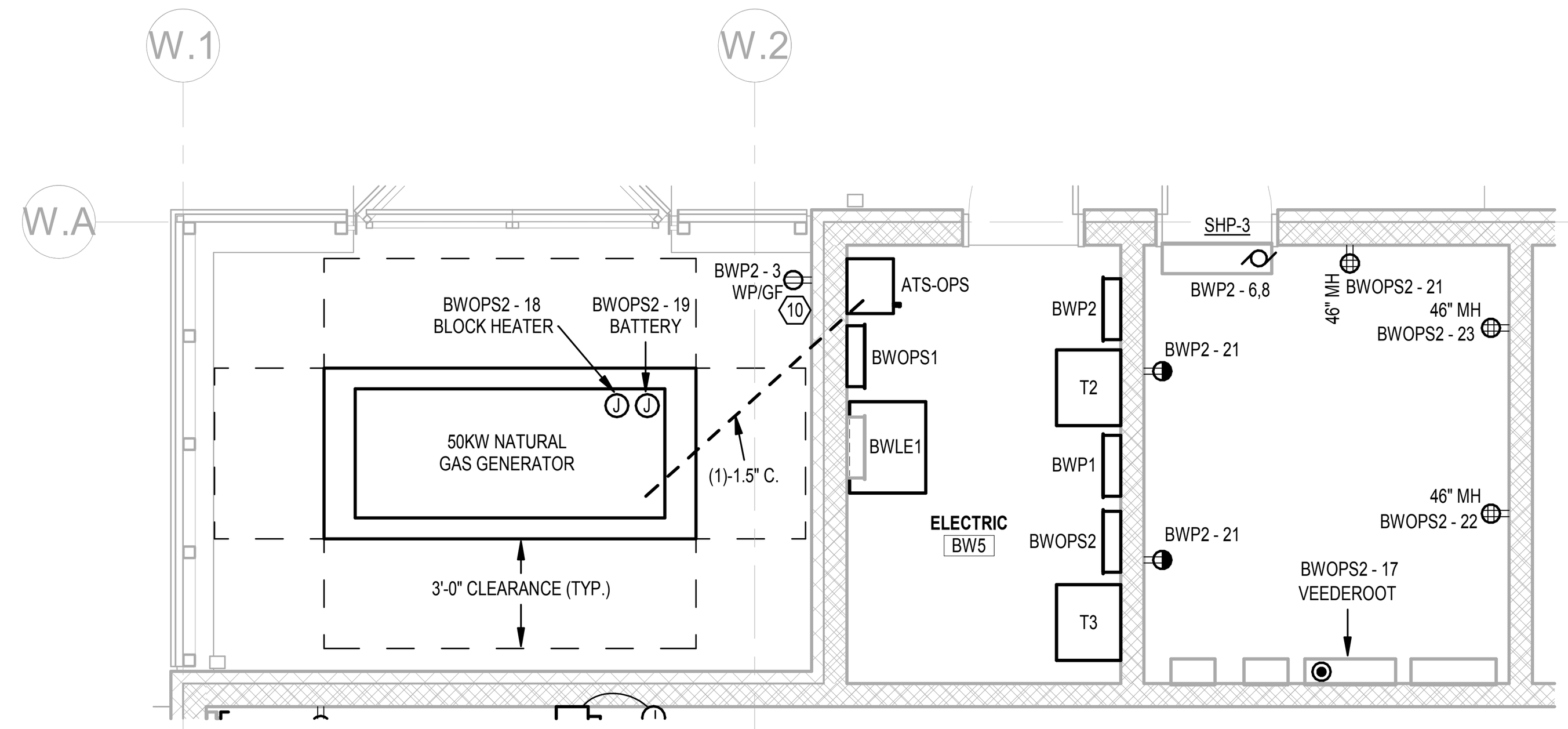
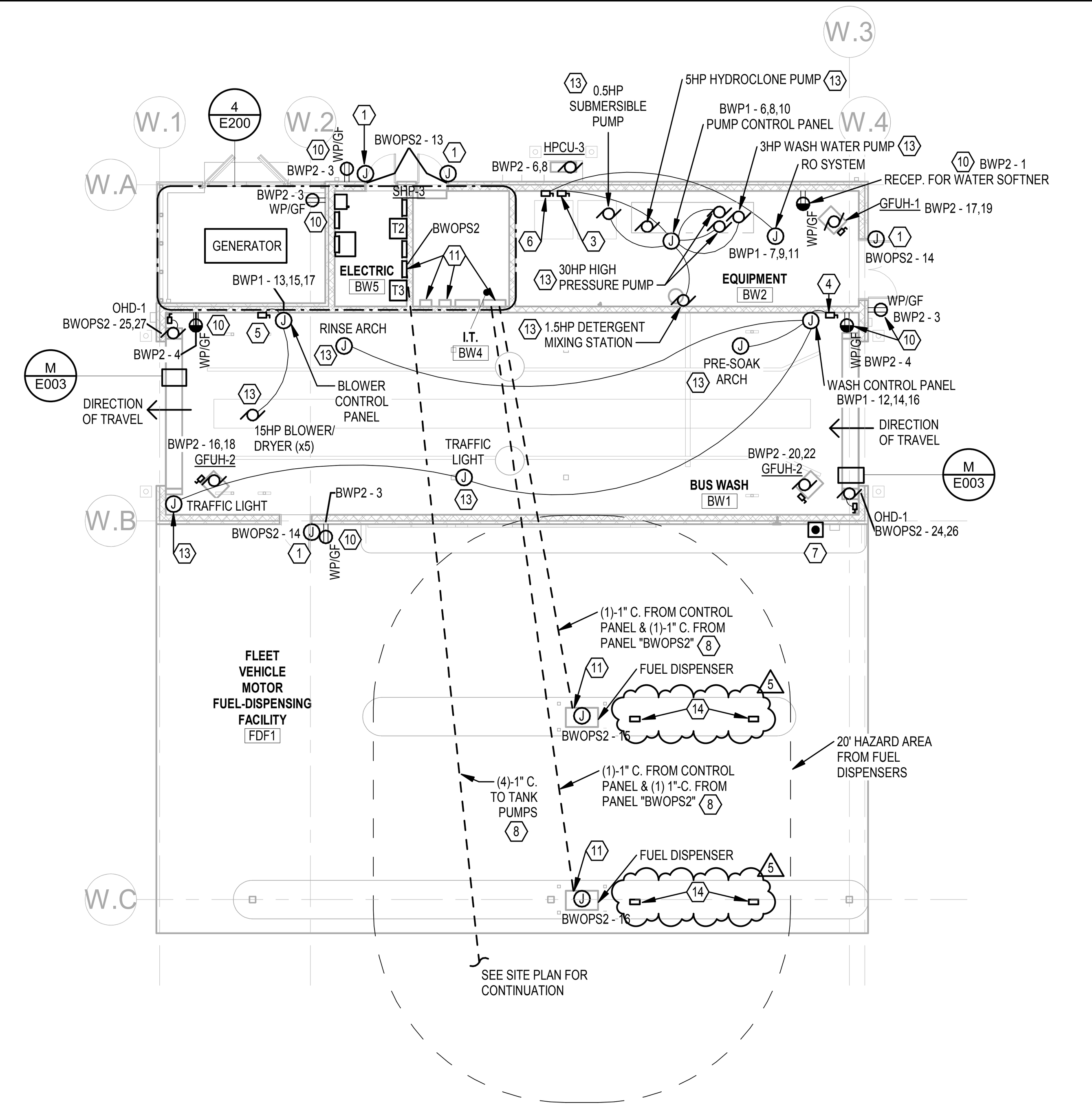


3 ENLARGED FLOOR PLAN - POWER
SCALE: 1/4" = 1'-0"



4 ENLARGED GENERATOR FLOOR PLAN - POWER
SCALE: 1/4" = 1'-0"



1 BUS WASH AND FLEET VEHICLE MOTOR-FUEL DISPENSING FACILITY NEW WORK PLAN - POWER
SCALE: 3/32" = 1'-0"

GENERAL NOTES

A. VERIFY ALL LOCATIONS OF EQUIPMENT, MOTORS, JUNCTION BOXES, ELECTRICAL BOXES, ETC... WITH OTHERS PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY.

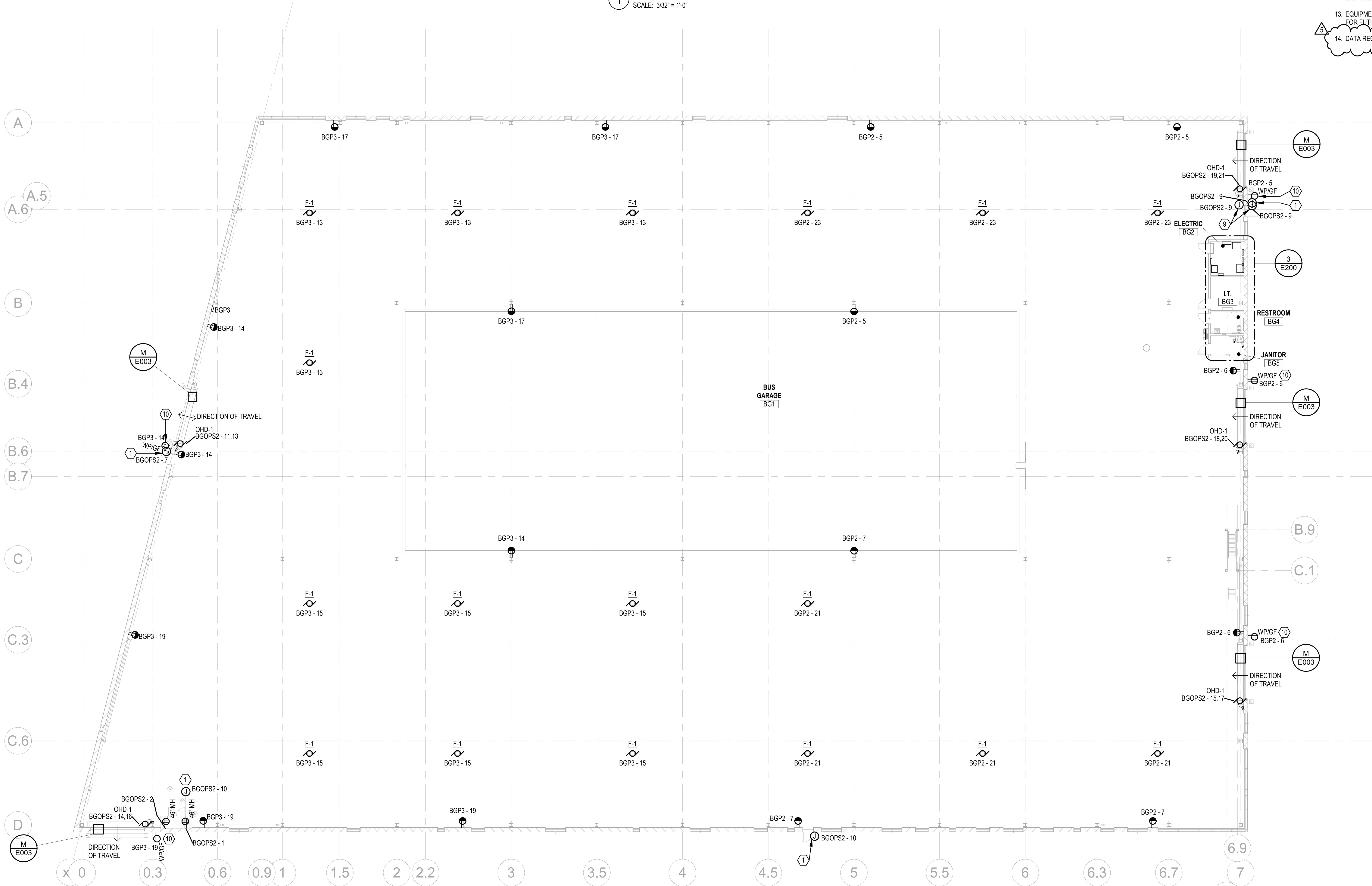
B. ANY INTERIOR ELECTRICAL DEVICES LOCATED ON METAL PANELLING WALL SHALL BE CENTERED ON THE METAL PANEL. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF METAL PANELLING.

C. NOT ALL DISCONNECTS SHOWN ARE TO BE PROVIDED BY THE E.C. COORDINATE WITH OTHERS FOR DISCONNECTS TO BE PROVIDED BY E.C.

D. E.C. TO PROVIDE INTERCONNECTING CONDUIT, WIRING, AND JUNCTION BOXES BETWEEN CONTROL PANELS AND EQUIPMENT FOR BUS WASH EQUIPMENT.

PLAN NOTES

1. E.C. TO PROVIDE 120V-1PH, 20A WITH WIRING ROUTED TO FRAME MOUNTED CARD READER MOUNTED 4'-0" AFF TO CENTER OF READER. COORDINATE EXACT LOCATION WITH OTHERS PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY.
2. PROVIDE DEDICATED 120V-1PH, 20A CIRCUIT TO BOTTLE FILLER / DRINKING FOUNTAIN. CIRCUIT SHALL BE FED FROM GFCI BREAKER IN PANELBOARD.
3. E.C. TO PROVIDE 480V-3PH, 125A CIRCUIT TO PUMP CONTROL PANEL DISCONNECT (NEMA 4X). PROVIDE WIRING (3-#1/0, 1-#6 GND IN 2"C.) FROM BREAKER TO DISCONNECT / PUMP CONTROL PANEL.
4. E.C. TO PROVIDE 480V-3PH, 20A CIRCUIT TO WASH CONTROL PANEL DISCONNECT (NEMA 4X). PROVIDE WIRING (3-#12, 1-#12 GND IN 0.75"C.) FROM BREAKER TO DISCONNECT / WASH CONTROL PANEL.
5. E.C. TO PROVIDE 480V-3PH, 125A CIRCUIT TO BLOWER CONTROL PANEL DISCONNECT (NEMA 4X). PROVIDE WIRING (3-#1/0, 1-#6 GND IN 2"C.) FROM BREAKER TO DISCONNECT / BLOWER CONTROL PANEL.
6. E.C. TO PROVIDE 480V-3PH, 20A CIRCUIT TO RO SYSTEM DISCONNECT (NEMA 4X). PROVIDE WIRING (3-#12, 1-#12 GND IN 0.75"C.) FROM BREAKER TO DISCONNECT / RO SYSTEM.
7. EMERGENCY FUEL DISPENSING SHUT OFF SWITCH. COORDINATE EXACT LOCATION WITH OTHERS PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY.
8. E.C. TO PROVIDE RIGID CONDUIT FROM LOCAL ELECTRICAL PANEL UNDER FUELING HAZARD AREA AND AT SEAL OFFS.
9. E.C. TO PROVIDE 120V-1PH, 20A TO ADA DOOR ACTUATOR. COORDINATE EXACT LOCATION AND HEIGHT WITH OTHERS PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY.
10. WEATHERPROOF RECEPTACLE TO HAVE BELL 5103-2 (BRONZE) COVER FOR BUS GARAGE AND BUS WASH. BUS GARAGE CLERESTORY TO HAVE BELL 5103-0 (GRAY) COVER.
11. E.C. TO PROVIDE SEAL-OFFS ON CONDUITS AT PANELS AND EQUIPMENT FEEDING THE FUELING EQUIPMENT.
12. EMERGENCY GENERATOR SHUT OFF SWITCH. COORDINATE EXACT LOCATION WITH OTHERS PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY. SWITCH SHALL BE RUN IN PARALLEL WITH SWITCH ON GENERATOR.
13. EQUIPMENT FED FROM LOCAL CONTROL PANEL. REFER TO WESTMATIC DRAWINGS FOR FUTHER INFORMATION.
14. DATA RECEIVER, JB20 J-BOX, AND FLEET WATCH PANEL PER DETAIL 1, SHEET E004.



2 BUS GARAGE NEW WORK PLAN - POWER
SCALE: 1/16" = 1'-0"

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ISSUANCES

No.	Description	Date
1	CONSTRUCTION SET	02/14/25
3	BID SET	04/28/25
5	ADDENDUM 2	06/23/25

Drawn By
JRW
Checked By
ASA
Client No.
634
Project No.
7310

2/14/25

POWER NEW WORK PLANS

E200

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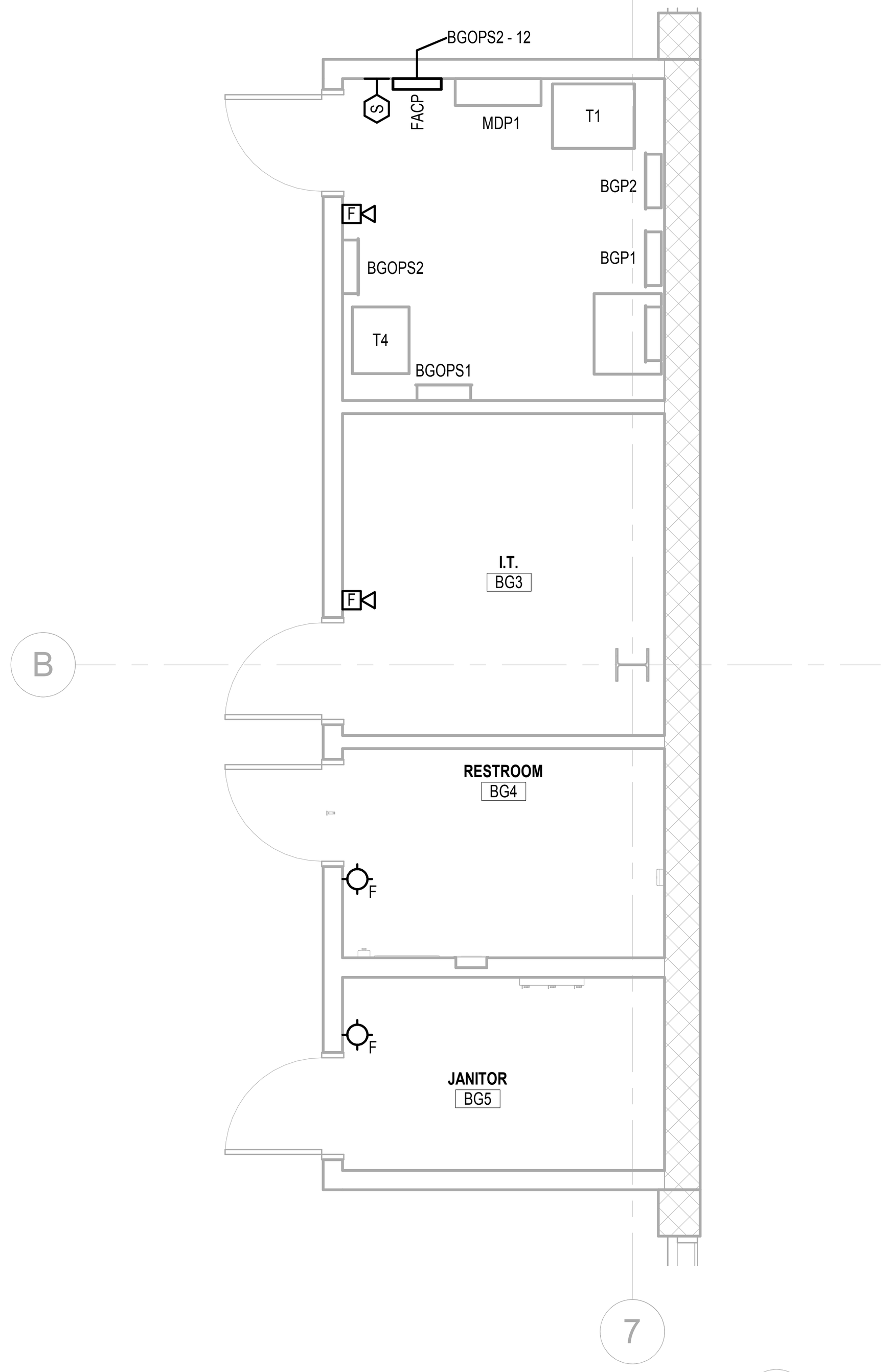
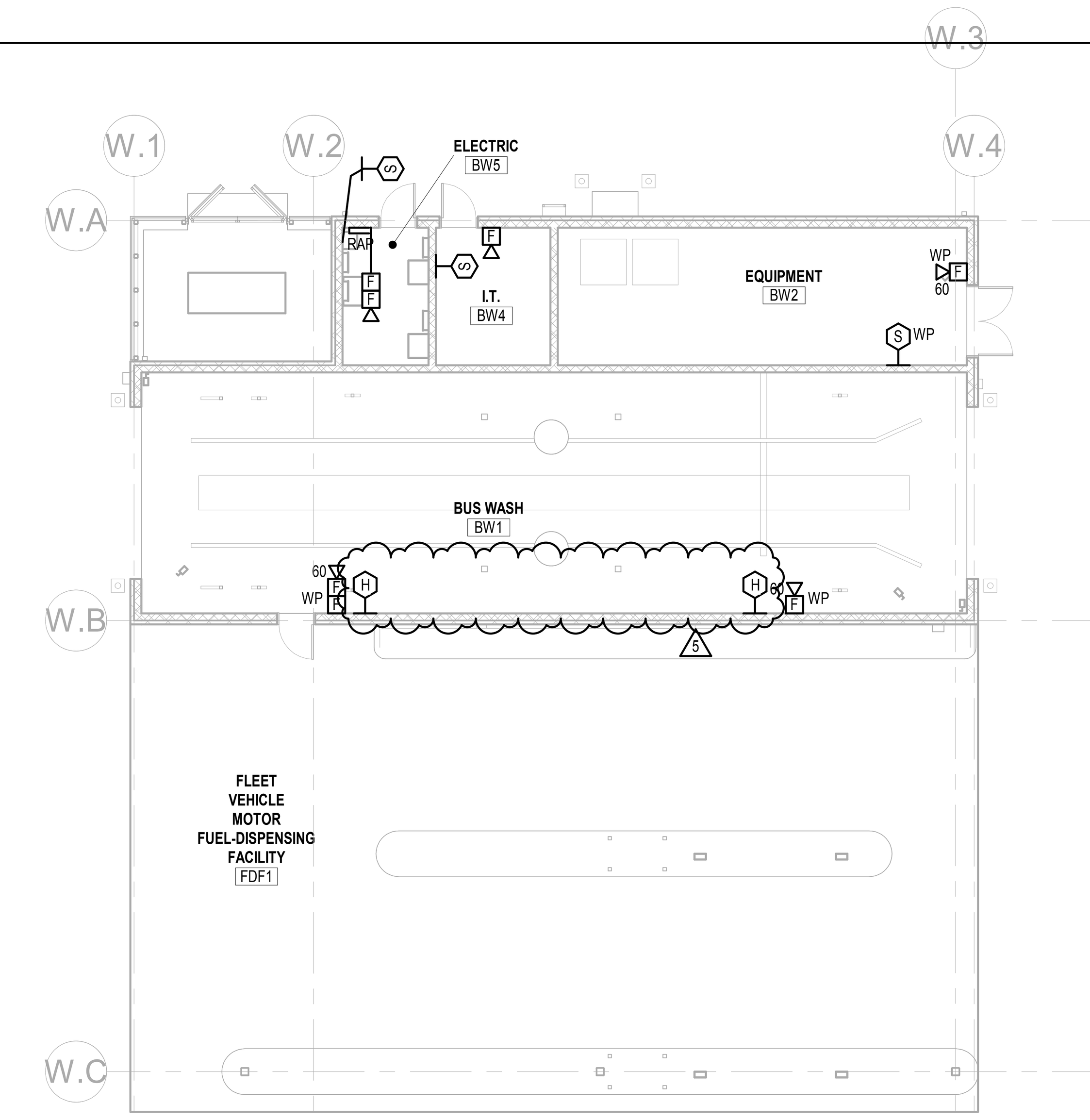


3 **ENLARGED FLOOR PLAN - FIRE ALARM**
SCALE: 1/4" = 1'-0"



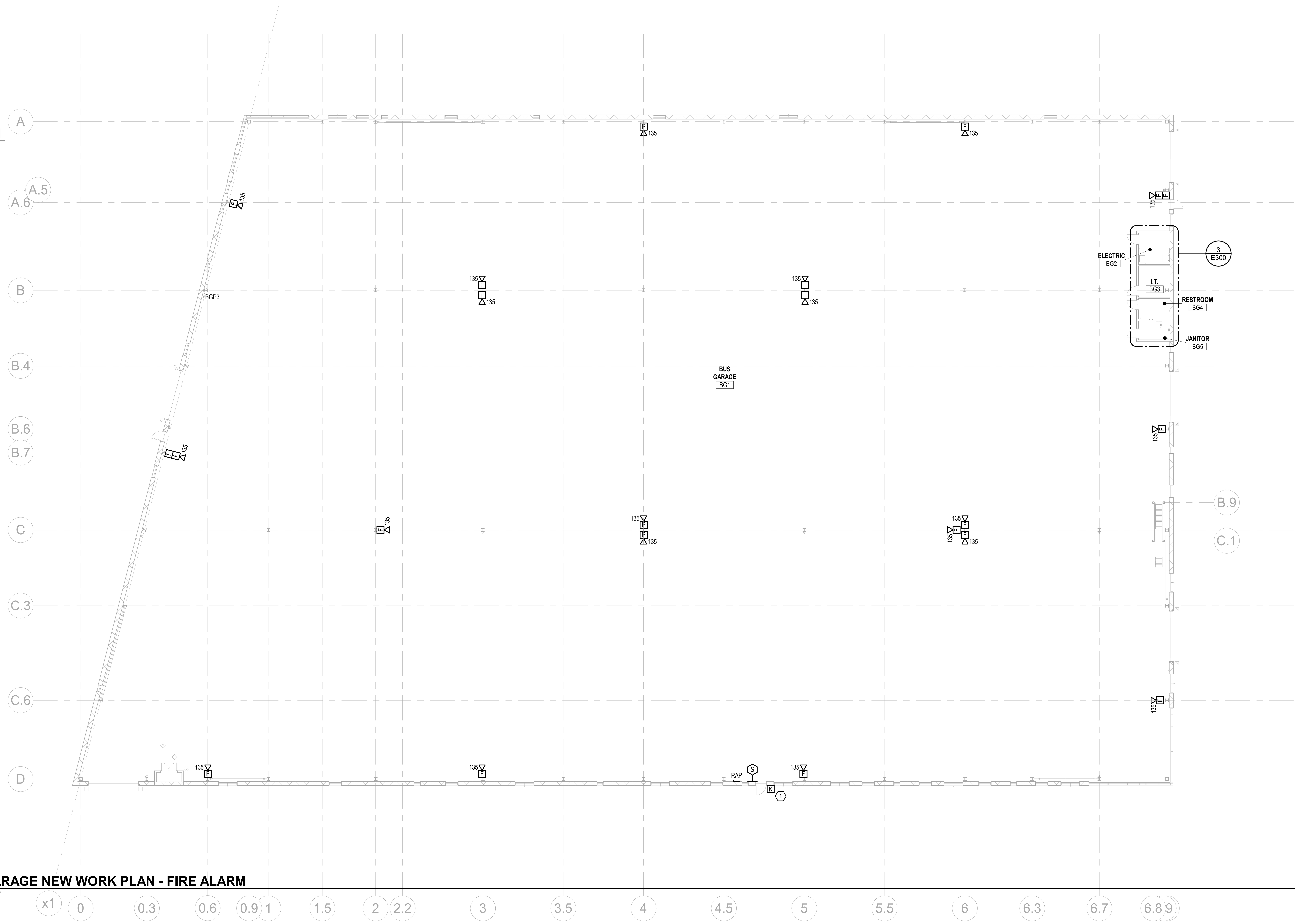
2 **BUS WASH AND FLEET VEHICLE MOTOR-FUEL DISPENSING FACILITY NEW WORK PLAN - FIRE ALARM**
SCALE: 3/32" = 1'-0"

GENERAL NOTES

A. ANY INTERIOR ELECTRICAL DEVICE LOCATED ON METAL PANELLING WALL SHALL BE CENTERED ON THE METAL PANEL. REFER TO ARCHITETURAL DRAWINGS FOR EXACT LOCATIONS OF METAL PANELLING.

PLAN NOTES

1. COORDINATE EXACT LOCATION AND HEIGHT OF KNOX BOX WITH OWNER / FIRE DEPARTMENT PRIOR TO ROUGH-IN AND PROVIDE ACCORDINGLY.



1 **BUS GARAGE NEW WORK PLAN - FIRE ALARM**
SCALE: 1/16" = 1'-0"

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ISSUANCES

No.	Description	Date
1	CONSTRUCTION SET	02/14/25
3	BID SET	04/28/25
5	ADDENDUM 2	06/23/25

Drawn By
JRW
Checked By
ASA
Client No.
634
Project No.
7310

2/14/25

FIRE ALARM NEW WORK PLANS

E300

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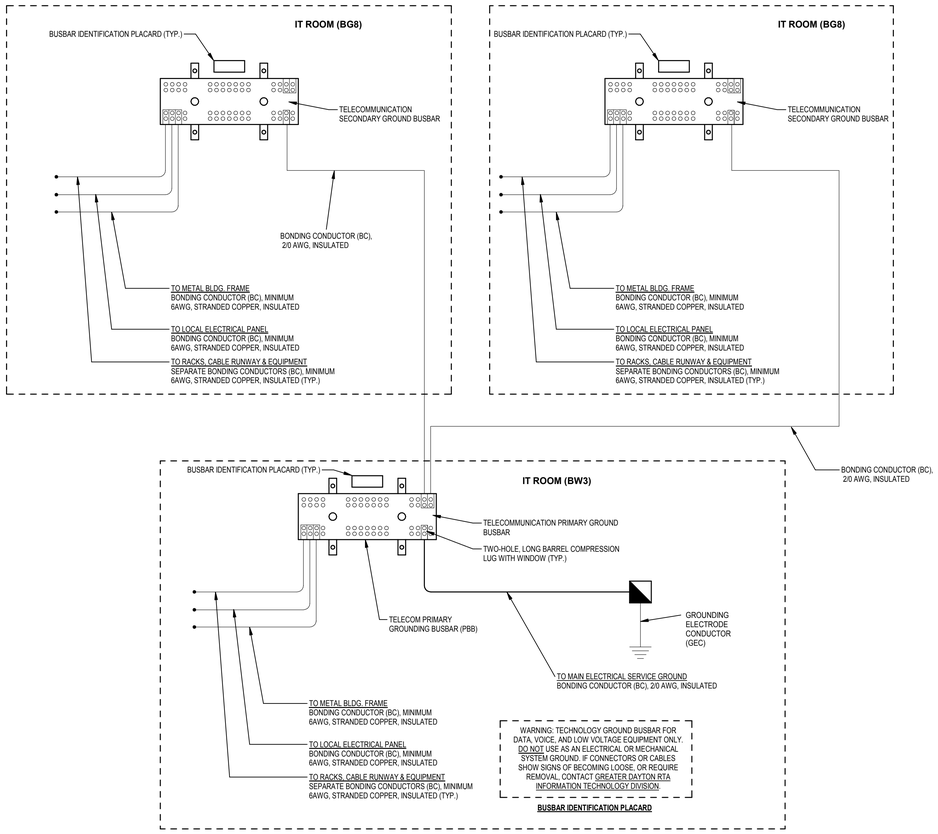
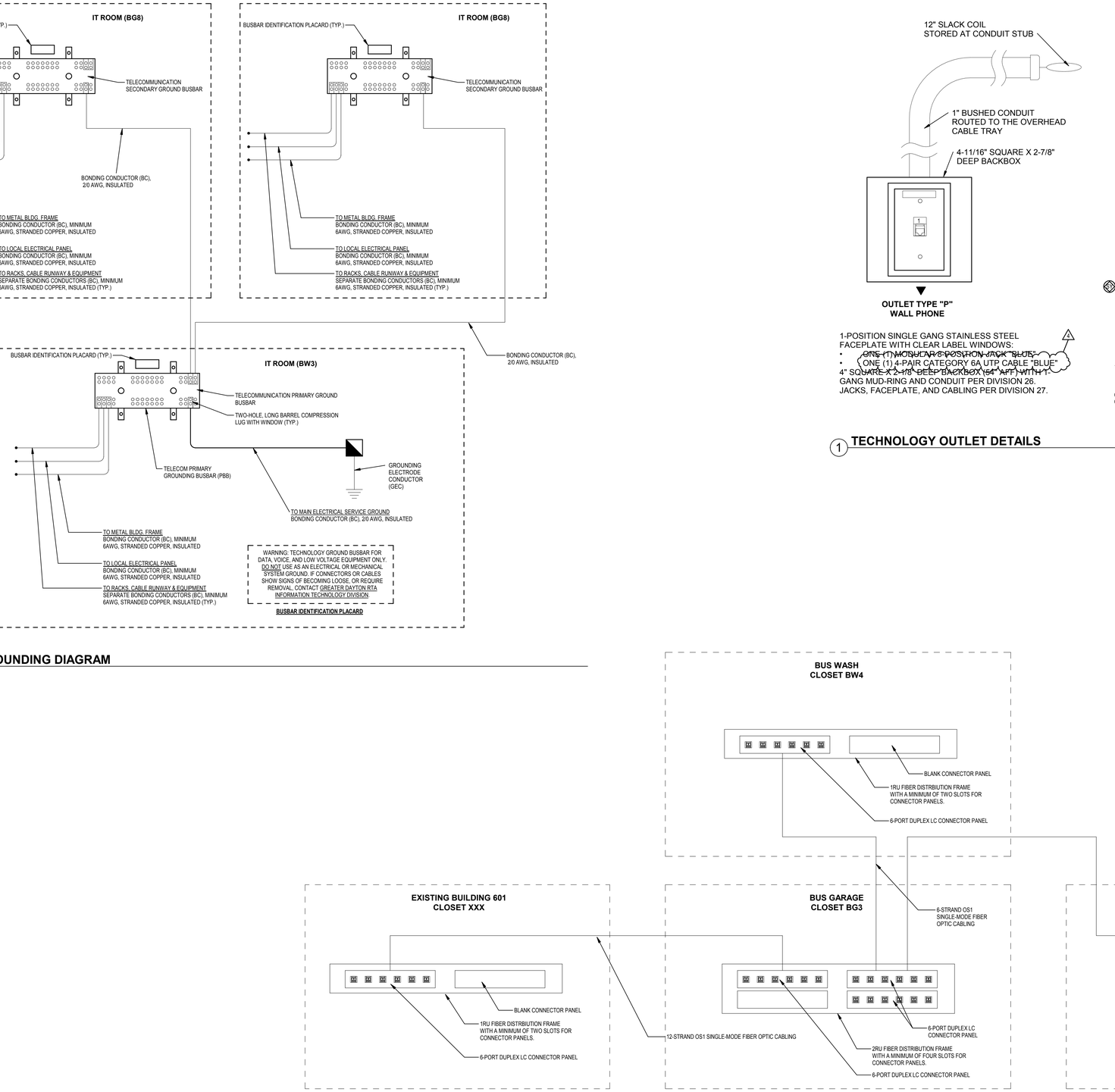
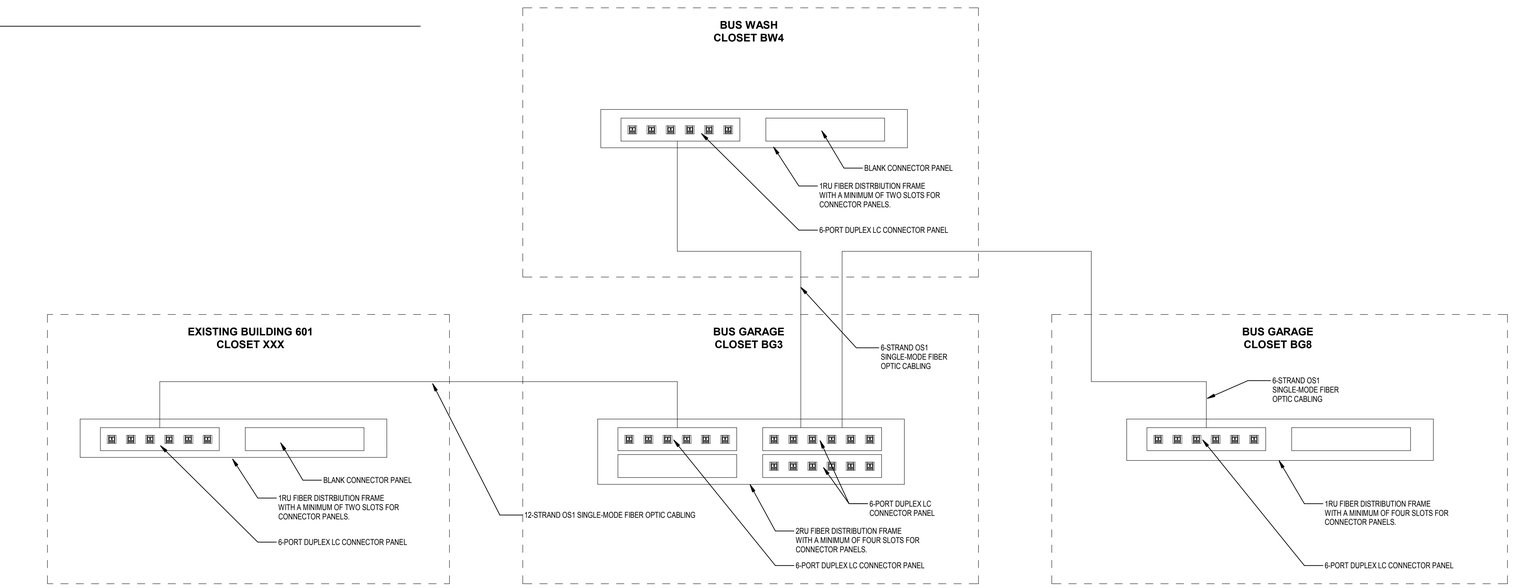


2 TECHNOLOGY GROUNDING DIAGRAM



1 TECHNOLOGY OUTLET DETAILS



3 BACKBONE CABLING DIAGRAMS

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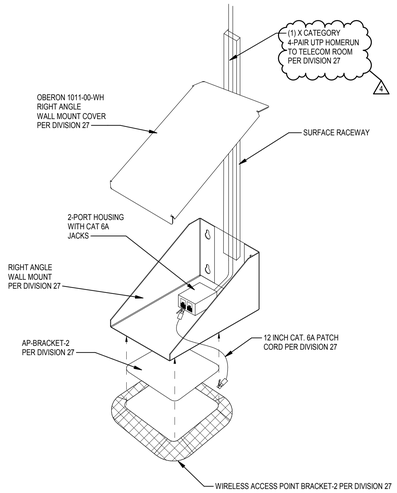
1	CONSTRUCTION SET	02/14/25
3	BID SET	04/28/25
4	ADDENDUM 1	06/09/25

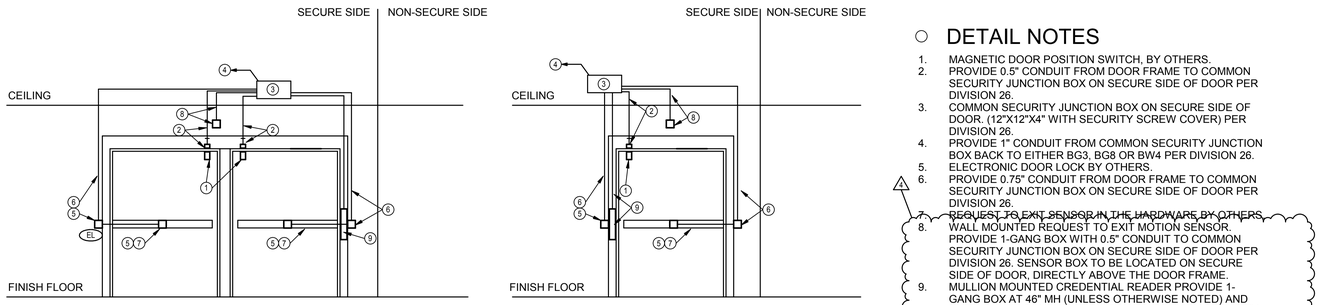
Drawn By: JHH
Checked By: JDK
Client No.: 634
Project No.: 7310
2/14/25

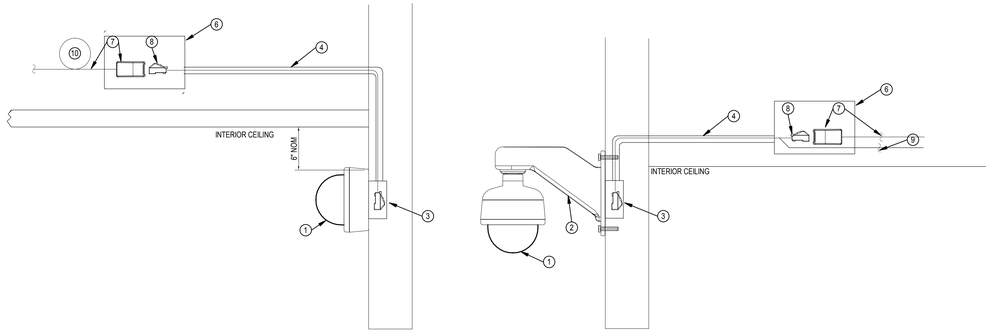
TECHNOLOGY DETAILS

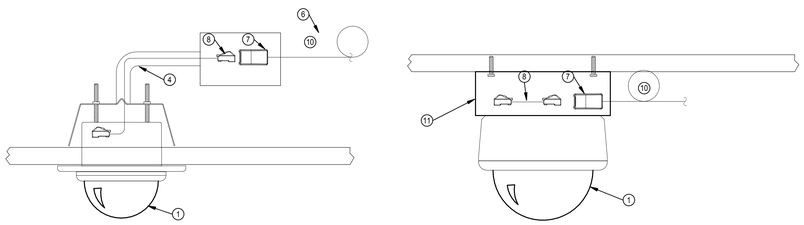
T002

6/10/2025 2:35:35 PM









GENERAL NOTES

A. LOW VOLTAGE CABLING SHALL BE EXTENDED FROM THE OUTLET BOX THROUGH THE CONDUIT EMERGING INTO OPEN ARCHITECTURE J-HOOK SUPPORTS PLACED AT REGULAR INTERVALS FOR THE ENTIRE DISTANCE REQUIRED TO REACH THE NEAREST CABLE TRAY.

B. ALL OPEN ARCHITECTURE J-HOOK SUPPORTS AND CABLE MANAGEMENT SHALL BE THE RESPONSIBILITY OF THE DIVISION 27 CONTRACTOR.

3 AP MOUNTING DETAILS

○ DETAIL NOTES

1. MAGNETIC DOOR POSITION SWITCH, BY OTHERS.
2. PROVIDE 0.5" CONDUIT FROM DOOR FRAME TO COMMON SECURITY JUNCTION BOX ON SECURE SIDE OF DOOR PER DIVISION 26.
3. COMMON SECURITY JUNCTION BOX ON SECURE SIDE OF DOOR. (12"X12"X4" WITH SECURITY SCREW COVER) PER DIVISION 26.
4. PROVIDE 1" CONDUIT FROM COMMON SECURITY JUNCTION BOX BACK TO EITHER BG3, BG8 OR BW4 PER DIVISION 26.
5. ELECTRONIC DOOR LOCK BY OTHERS.
6. PROVIDE 0.75" CONDUIT FROM DOOR FRAME TO COMMON SECURITY JUNCTION BOX ON SECURE SIDE OF DOOR PER DIVISION 26.
7. ~~REQUEST TO EXIT SENSOR IN THE HARDWARE BY OTHERS.~~
8. WALL MOUNTED REQUEST TO EXIT MOTION SENSOR. PROVIDE 1-GANG BOX WITH 0.5" CONDUIT TO COMMON SECURITY JUNCTION BOX ON SECURE SIDE OF DOOR PER DIVISION 26. SENSOR BOX TO BE LOCATED ON SECURE SIDE OF DOOR, DIRECTLY ABOVE THE DOOR FRAME.
9. MULLION MOUNTED CREDENTIAL READER PROVIDE 1-GANG BOX AT 46" MH (UNLESS OTHERWISE NOTED) AND EXTEND 0.75" CONDUIT FROM BOX TO COMMON SECURITY JUNCTION BOX ON SECURE SIDE OF DOOR PER DIVISION 26.

4

AEC - Technology Access Control

1 AEC - Technology Access Control

INTERIOR - WALL MOUNTED

EXTERIOR - WALL MOUNTED

INTERIOR - CEILING RECESSED

INTERIOR - CEILING SURFACE

○ CAMERA MOUNTING DETAIL NOTES

4

1. CAMERA AS SHOWN ON THE PLANS.
2. WALL MOUNTED PENDANT ARM FOR CAMERA.
3. 1-GANG BOX, SEALED FOR MOUNTING OF CAMERA.
4. 0.75" CONDUIT TO BE ROUTED TO ACCESSIBLE INTERIOR JUNCTION BOX.
5. WIRING TO BE TAGGED AND COILED IN JUNCTION BOX. PROVIDE 24" TAIL.
6. PROVIDE JUNCTION BOX ABOVE ACCESSIBLE CEILING.
7. PROVIDE 1-DATA OUTLET UTILIZING SURFACE MOUNT "BISCUIT" FOR TERMINATION OF DATA DROP INTO RJ-45 OUTLET.
8. PATCH CABLE.
9. LOW VOLTAGE POWER WIRING (2-#14AWG) BACK TO MDF ROOM AND LEAVE 20' COIL AT BACKBOARD FOR FUTURE CONNECTION.
10. PROVIDE 20' COIL OF CABLE MANAGED ABOVE CEILING (F&IBO).
11. SURFACE CEILING MOUNTED JUNCTION BOX FOR CAMERA.

CCTV MOUNTING DETAILS_CAMERA FUTURE

2 CCTV MOUNTING DETAILS_CAMERA FUTURE

CAMERA SCHEDULE

NOTES:
1.
2.
3.
4.

OPTIONS LEGEND: W - WIDE DYNAMIC RANGE; L - LOW LIGHT; D - DAY/NIGHT

	GENERAL			SPECIFICATIONS												TYPE AND MOUNTING															
	LOCATION		TECH CLOSET NO.	CAMERA TYPE				ANALYTICS		POWER			CABLE			INDOOR					OUTDOOR						MOUNTING HEIGHT				
CAMERA NUMBER	ROOM NAME	ROOM NO.		OPTION	LENS (mm)	PTZ	IP	CAM	SERV	POE	24V	120V	UTP	FIBER	COAX	CLG RECESSED	CLG SURFACE	CLG STEM	WALL SURFACE	WALL ARM	CLG RECESSED	CLG SURFACE	CLG STEM	WALL SURFACE	WALL ARM	POLE MOUNTED		Manufacturer	Model	Comments	SEE NOTE
1	EXTERIOR	EXT	IT-BG8		3-8		●			●			●												●		12' - 0"			180 Degree	
2	EXTERIOR	EXT	IT-BG3		3-8		●			●			●												●		12' - 0"			180 Degree	
3	EXTERIOR	EXT	IT-BG3		3-8		●			●			●												●		12' - 0"			360 Degree	
4	EXTERIOR	EXT	IT-BG3		3-8		●			●			●												●		12' - 0"			180 Degree	
5	EXTERIOR	EXT	IT-BG3		3-8		●			●			●												●		12' - 0"			180 Degree	
6	EXTERIOR	EXT	IT-BG8		3-8		●			●			●												●		12' - 0"			180 Degree	
7	EXTERIOR	EXT	IT-BG8		3-8		●			●			●												●		12' - 0"			360 Degree	
8	EXTERIOR	EXT	IT-BG8		3-8		●			●			●												●		12' - 0"			180 Degree	
9	EXTERIOR	EXT	IT-BW4		3-8		●			●			●												●		12' - 0"			360 Degree	
10	EXTERIOR	EXT	IT-BW4		3-8		●			●			●												●		12' - 0"			360 Degree	
11	EXTERIOR	EXT	IT-BW4		3-8		●			●			●												●		12' - 0"			360 Degree	
12	BUS GARAGE	BG1	IT-BG3		3-8		●			●			●					●									14' - 0"			180 Degree	
13	BUS GARAGE	BG1	IT-BG3		3-8		●			●			●					●									13' - 0"			360 Degree	
14	BUS GARAGE	BG1	IT-BG8		3-8		●			●			●					●									15' - 0"			180 Degree	
15	BUS GARAGE	BG1	IT-BG8		3-8		●			●			●					●									15' - 0"			180 Degree	
16	BUS GARAGE	BG1	IT-BG8		3-8		●			●			●						●								14' - 0"			180 Degree	
17	BUS GARAGE	BG1	IT-BG8		3-8		●			●			●						●								14' - 0"			180 Degree	
18	BUS GARAGE	BG1	IT-BG3		3-8		●			●			●						●								14' - 0"			180 Degree	
19	BUS GARAGE	BG1	IT-BG3		3-8		●			●			●					●									14' - 0"			180 Degree	
20	BUS GARAGE	BG1	IT-BG3		3-8		●			●			●					●									14' - 0"			180 Degree	
21	BUS GARAGE	BG1	IT-BG3		3-8		●			●			●						●								14' - 0"			180 Degree	
22	BUS GARAGE	BG1	IT-BG3		3-8		●			●			●						●								14' - 0"			180 Degree	
23	BUS GARAGE	BG1	IT-BG3		3-8		●			●			●					●									15' - 0"			180 Degree	
24	EXTERIOR	EXT	IT-BW4		3-8		●			●			●												●		16' - 0"			360 Degree	
25	EXTERIOR	EXT	IT-BW4		3-8		●			●			●												●		12' - 0"			180 Degree	
26	EXTERIOR	EXT	IT-BG8		3-8		●			●			●												●		12' - 0"			180 Degree	
27	EXTERIOR	EXT	IT-BG3		3-8		●			●			●												●		12' - 0"			180 Degree	

ELECTRONIC DOOR CONTROLS SCHEDULE

NOTES:
1.
2.
3.
4.

			CONTROL						LOCKS											REQUEST TO EXIT								DOOR MONITOR								AUTOMATIC DOOR OPERATOR				
			EAC		INTERFACE				POWER						TYPE						FUNCTION			LOCATION				POSITION SWITCH						L BOLT	BOND SENSOR	MOTOR		PUSHPLATE		
EDC NUMBER	DOOR OPENING NUMBER	Level	READER	TOD	FIRE ALARM	INTERCOM	PUSH BUTTON	INTRUSION ALARM	POE / POE+	VOLTAGE	LOCAL	REMOTE	LOCATION	NOTE	EP	EL	ES	ML	WL	QTY	ALARM SHUNT	UNLOCK	NOTE	HARDWARE	MOTION	WALL SWITCH	NOTE	QTY	#P#T	BALANCED	HIGH SECURITY	RECESSED	SURFACE	QTY	QTY	QTY	EAC INTERFACE	QTY	WIRELESS	SPECIAL DOOR NOTES
DBG1	DBG1	Level 1	●	●						24		●								0	●			●				0	DPDT	●		●		0	0	0		0		
DBG2	DBG2	Level 1	●	●						24		●								0	●			●				0	DPDT	●		●		0	0	0		0		
DBG3	DBG3	Level 1	●	●						24		●								0	●			●				0	DPDT	●		●		0	0	0		0		
DBG4	DBG4	Level 1	●	●						24		●								0	●			●				0	DPDT	●		●		0	0	0		0		
DBG5	DBG5	Level 1	●	●						24		●								0	●			●				0	DPDT	●		●		0	0	0		0		
DBG6	DBG6	Level 1	●	●						24		●								0	●			●				0	DPDT	●		●		0	0	0		0		
DBG7	DBG7	Level 1	●	●						24		●								0	●			●				0	DPDT	●		●		0	0	0		0		
DBG8	DBG8	Level 1	●	●						24		●								0	●			●				0	DPDT	●		●		0	0	0		0		
DBW1	DBW1	Level 1	●	●						24		●								0	●			●				0	DPDT	●		●		0	0	0		0		
DBW2	DBW2	Level 1	●	●						24		●								0	●			●				0	DPDT	●		●		0	0	0		0		
DBW3	DBW3	Level 1	●	●						24		●								0	●			●				0	DPDT	●		●		0	0	0		0		
DBW4	DBW4	Level 1	●	●						24		●								0	●			●				0	DPDT	●		●		0	0	0		0		

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T: 513.542.3300

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www.heapy.com
PROJECT NO. 2023-07202
1400 W Dorothy Lane, Dayton, OH 45409
T: 937.224.0861

GDRTA
PARATRANSIT
BUS GARAGE

rta
it's time to ride

701 Longworth Street,
Dayton, OH 45402

ISSUANCES

No.	Description	Date
1	CONSTRUCTION SET	02/14/25
3	BID SET	04/28/25
4	ADDENDUM 1	06/09/25

Drawn By
JHH
Checked By
JDK
Client No.
634
Project No.
7310

STATE OF OHIO
DONALD H. TIMMER
E-72431
REGISTERED PROFESSIONAL ENGINEER
2/14/25

TECHNOLOGY
DETAILS AND
SCHEDULES

T003

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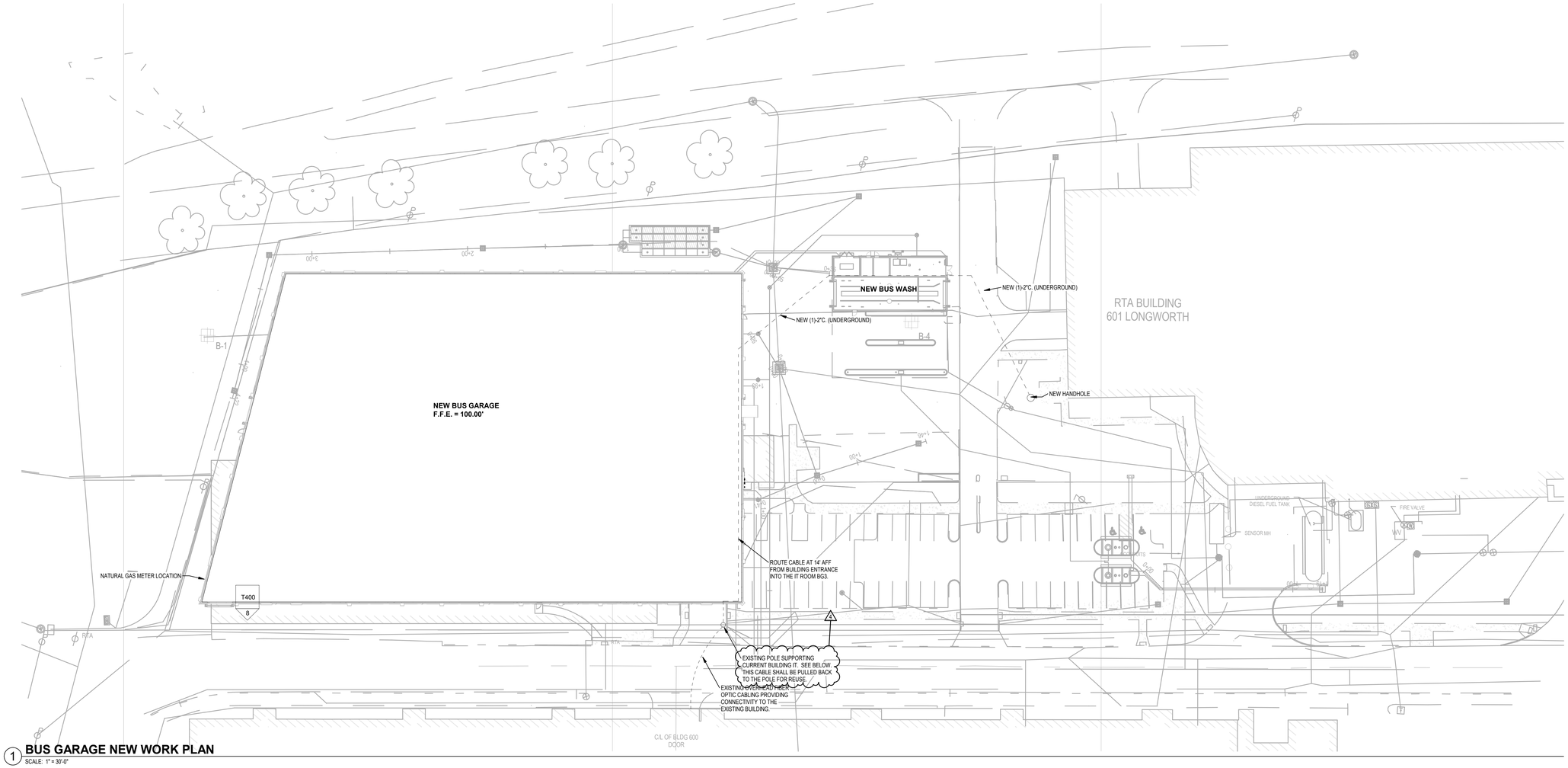

1 **BUS GARAGE NEW WORK PLAN**
SCALE: 1" = 30'-0"

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GDRTA PARATRANSIT BUS GARAGE

rta it's time to ride

701 Longworth Street,
Dayton, OH 45402

ISSUANCES

No.	Description	Date
1	CONSTRUCTION SET	02/14/25
3	BID SET	04/28/25
4	ADDENDUM 1	06/09/25

Drawn By JHH
Checked By JDK
Client No. 634
Project No. 7310

STATE OF OHIO — DONALD H. TUMMER — E-73351 — REGISTERED PROFESSIONAL ENGINEER
2/14/25

TECHNOLOGY SITE PLAN

T004

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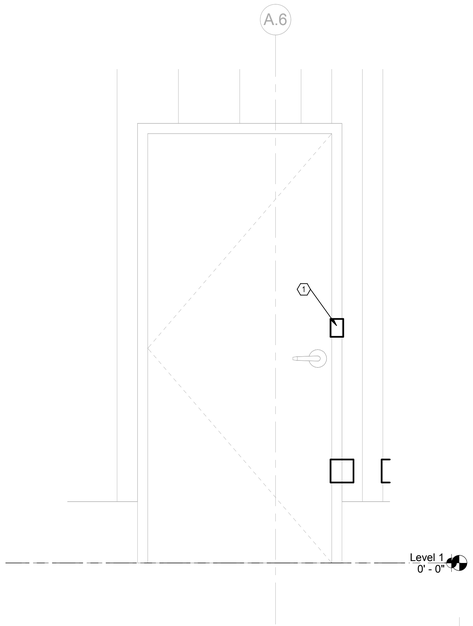
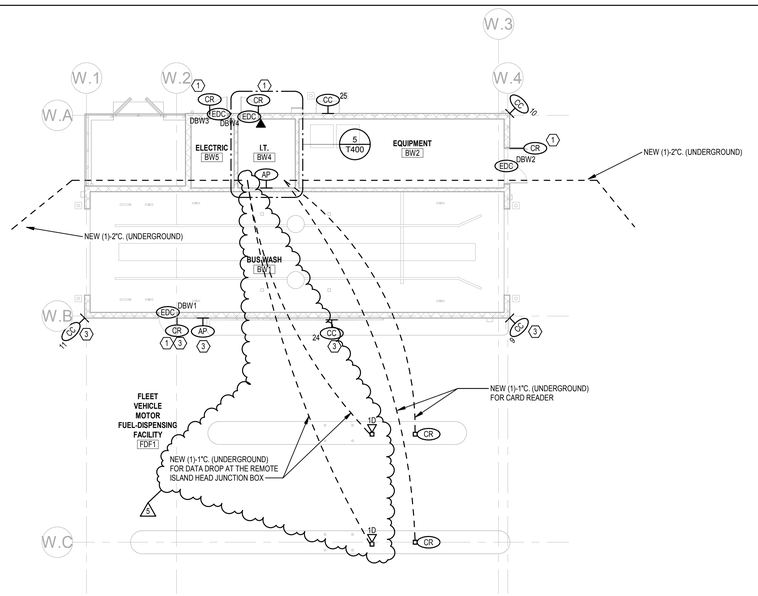
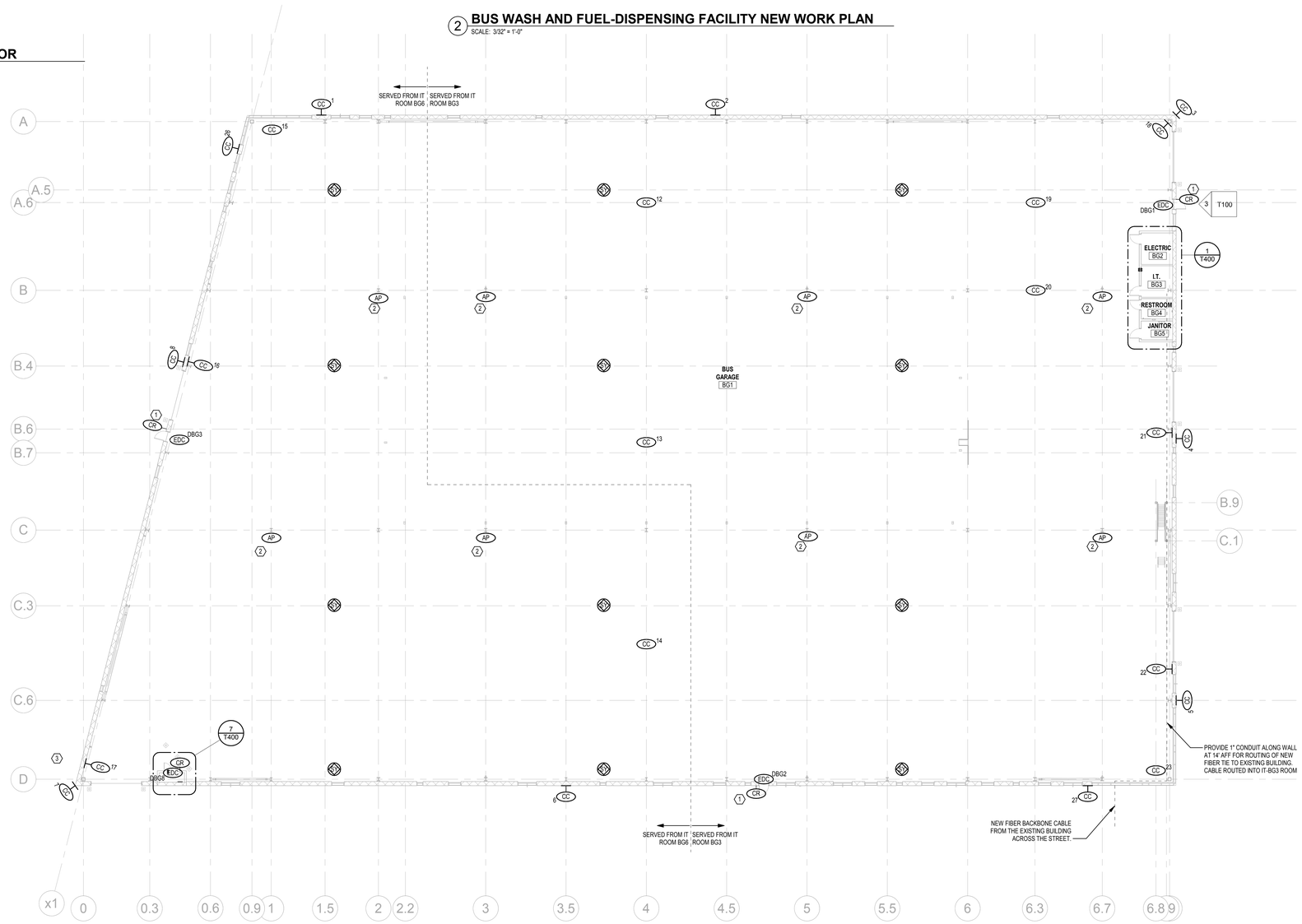


3 ELEVATION - TYPICAL EXTERIOR DOOR
SCALE: 1" = 1'-0"



2 BUS WASH AND FUEL-DISPENSING FACILITY NEW WORK PLAN
SCALE: 3/32" = 1'-0"



1 BUS GARAGE NEW WORK PLAN
SCALE: 1/16" = 1'-0"

GENERAL NOTES

PLAN NOTES
1. DOOR FRAME MOUNTED SLIM-LINE CARD READER.
2. MOUNT WIRELESS ACCESS POINTS PER T003, DETAIL 3 AT 14' AFF
3. PROVIDE 1" CONDUIT UNDERNEATH ROOF FROM IT ROOM BW4 TO THE DEVICE. CABLING INSTALLED SHALL BE OUTDOOR RATED.

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GDRTA PARATRANSIT BUS GARAGE

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Dayton, OH 45402

ISSUANCES

No.	Description	Date
1	CONSTRUCTION SET	02/14/25
3	BID SET	04/28/25
5	ADDENDUM 2	06/23/25

Drawn By: JHH	STATE OF OHIO DONALD H. JUNGER E-79431 REGISTERED PROFESSIONAL ENGINEER
Checked By: JDK	
Client No.: 634	2/14/25
Project No.: 7310	

NEW WORK PLANS

T100

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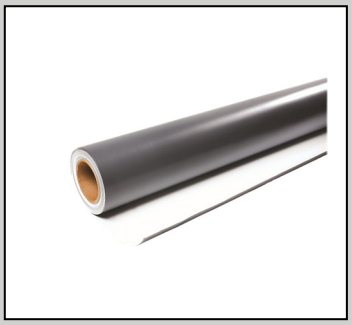
Technical Information Sheet



Elevate™ MAX PVC Membrane

Item Description	Item Number
Roll - 50 mil: 10' (3 m) x 100' (30.48 m) Roll - 60 mil: 10' (3 m) x 100' (30.48 m) Roll - 80 mil: 10' (3 m) x 65' (19.8 m) Roll - 50 mil: 5' (1.52 m) x 100' (30.48 m) Roll - 60 mil: 5' (1.52 m) x 100' (30.48 m) Roll - 80 mil: 5' (1.52 m) x 65' (19.8 m)	See Table Below

Description

Elevate MAX PVC Membrane is a flexible Thermoplastic Polyvinyl Chloride roofing membrane that is produced with polyester weft-inserted reinforcement. Elevate MAX PVC membrane meets or exceeds all requirements for ASTM D 4434, Type III Specification. This heat weldable Elevate MAX PVC membrane is available in 50 mil (1.27 mm), 60 mil (1.52 mm) and 80 mil (2.03 mm) thicknesses and is suitable for a variety of low-slope applications. The Elevate MAX PVC membrane may be adhered, mechanically fastened, or Induction Welded to an appropriate substrate. The Elevate MAX PVC Membrane is not compatible with Elevate PVC, PVC XR, PVC KEE, PVC KEE XR or PVC KEE XRT membranes.

Method of Application

1. Substrates must be clean, dry, smooth, and free of sharp edges, fins, loose or foreign materials, oil, grease, and other materials that may damage the membrane.
2. All rough surfaces that can damage the membrane shall be repaired as specified to offer a smooth substrate.
3. All surface voids greater than ¼" (6.3 mm) wide shall be properly filled with an acceptable fill material.
4. Elevate MAX PVC membrane is installed as continuous roofing or waterproofing layer on the roof. Rolls are overlapped (side laps and end laps) prior to heat welding the seam areas.
5. Elevate MAX PVC membrane may be mechanically attached, Induction Welded, or adhered using Elevate PVC LVOC Bonding Adhesive, Elevate PVC Water Based Bonding Adhesive or Elevate Jet Bond PVC Spray Adhesive. A line, 6" (152.4 mm) from one edge of the sheet, is factory-applied to the top of the sheet to assist in maintaining proper overlap between sheets. “X”s are placed at 6" (152.4 mm) intervals along one edge of the sheet to assist in maintaining proper spacing between fasteners. Install fasteners so the outside edge of the seam place is flush with the edge of the sheet. Keep laps where welds will occur free of adhesives.
6. Install the Elevate MAX PVC Roofing System in accordance with current Elevate MAX PVC specifications, details, and workmanship requirements.

Storage

- Store rolls lengthwise on pallets.
- Use tarps to keep rolls dry.
- Store material away from direct sunlight, sources of physical damage or chemical contamination.
- Assure that structural decking will support the loads incurred by material when stored on rooftop. The deck load limitations should be specified by the project designer.
- Store away from ignition sources as membrane will burn when exposed to open flame.

Precautions

- DO NOT mix with Elevate PVC and PVC KEE membrane.
- Exercise caution when lifting, moving, transporting, storing, or handling membrane rolls to avoid sources of punctures and possible physical damage.
- Contact a Regional Technical Coordinator at 1-800-428-4511 for specific recommendations regarding chemical or waste product compatibility with Elevate MAX PVC membrane.
- Refer to Safety Data Sheets (SDS) for additional safety information.

Energy Efficiency

White Elevate MAX PVC is an excellent product for complying with California Title 24, LEED and other energy efficiency programs requiring the use of a highly reflective roof membrane.

Manufacturing Location: Saginaw, MI

FM APPROVED

CLASSIFIED C UL US

CRRC COOL ROOF RATING COUNCIL CHARTER MEMBER

CCMC EVALUATION 14437-L

LEED® Information	
LEED-NC Credit Category	**Attribute**
Sustainable Sites - Heat Island Reduction	Solar Reflective Index (SRI) = 108
LEED-EB Credit Category	**Attribute**
Sustainable Sites - Heat Island Reduction	Solar Reflective Index (SRI) = 108
NOTE: White Elevate MAX PVC alone can obtain 1 credit in either U.S. Green Building Council's LEED-NC or LEED-EB programs. In combination with other design criteria the membrane may help attain other credits.	

Cool Roof Rating Council (CRRC)							
Color	CRRC ID	Solar Reflectance		Thermal Emittance		Solar Reflective Index (SRI)	
		Initial	3-Year	Initial	3-Year	Initial	3-Year
White	0608-0119	0.86	0.74*	0.87	0.87*	108	91*
Tan	0608-0120	0.72	0.58	0.85	0.88	88	68
Gray	0608-0121	0.46	0.38	0.89	0.89	53	43
Charcoal	0608-0122	0.09	0.10	0.86	0.89	3	5

Typical Properties

Property	Test Method	ASTM D4434 Requirement	Result	Typical Performance
Overall Thickness	ASTM D751	≥ 0.045" and ≤ 0.055" (≥ 45 and ≤ 55 mil)	PASS	0.050" (50 mil), nominal
		≥ 0.054" and ≤ 0.066" (≥ 54 and ≤ 66 mil)		0.060" (60 mil), nominal
		≥ 0.072" and ≤ 0.088" (≥ 72 and ≤ 88 mil)		0.080" (80 mil), nominal
Thickness Over Scrim	ASTM D7635	≥ 0.016"	PASS	0.026" (26 mil)
				0.031" (31 mil)
				0.041" (41 mil)
Breaking Strength[1]	ASTM D751 Grab Method	≥ 200 lbf/in	PASS	423 x 278 lbf/in
				437 x 304 lbf/in
				481 x 341 lbf/in
Elongation[1]	ASTM D751 Grab Method	≥ 15%	PASS	31% x 30%
				29% x 30%
				33% x 33%
Seam Strength	ASTM D751 Grab Method (75% of Breaking Strength)	≥ 317 lbf	PASS	423 lbf
		≥ 327 lbf		463 lbf
		≥ 360 lbf		452 lbf
Tearing Strength[1]	ASTM D751 Procedure B	≥ 45 lbf	PASS	90 x 143 lbf
				78 x 190 lbf
				53 x 196 lbf
Low Temperature Bend	ASTM D2136	Must pass at -40 °F	PASS	PASS
Heat Aging	ASTM D3045	Conditioned for 56 days in over maintained at 176 °F (80 °C).	PASS	PASS
Accelerated Weathering	ASTM G155	10,000 hours total test time. Irradiance level of 0.35 W/M^2-340nm. Cycle: 102 minutes light, 18 minutes light + H_2O spray, 63±2.5 °C black panel, 30±5% RH	PASS	PASS
Dimensional Stability[1]	ASTM D1204	Conditioned for 6 hours in oven maintained at 176 °F (80 °C). Allowable change: ≤ 0.5%	PASS	0.20% x 0.10%
				0.30% x 0.10%
				-0.10% x -0.10%
Water Absorption	ASTM D570	Immersed in water at 158 °F for 168 hours. Allowable weight change: ≤ 3%	PASS	2.60%
				2.29%
				0.10%
Static Puncture	ASTM D5602	≥ 33 lbf	PASS	≥ 33 lbf
Dynamic Puncture	ASTM D5635	≥ 14.7 ft-lbf (20 J)	PASS	≥ 14.7 ft-lbf (20 J)

[1] Typical values are shown for both machine and cross machine directions. The machine direction results are listed first.

Typical Properties (Continued)

Additional Tests	Test Method	Results
Fungi Resistance	ASTM G21	No sustained growth or discoloration
Moisture Vapor Transmission	ASTM E96, Proc. B, Method A	< 0.35 U.S. perms
R-Value	---	0.1 R (0.1 ft^{2}·°F·hr/Btu)
Additional Information		
Scrim	Weft-Inserted Scrim – 18 x 9 polyester fabric construction with weft insertion, composed of 840 x 1000 denier threads. Polyester thread is treated to prevent wicking.	
Color	Top Surface: White Bottom Surface: Light Gray	
Weight	50 mil: 0.28 lb/ft^2 60 mil: 0.35 lb/ft^2 80 mil: 0.51 lb/ft^2	

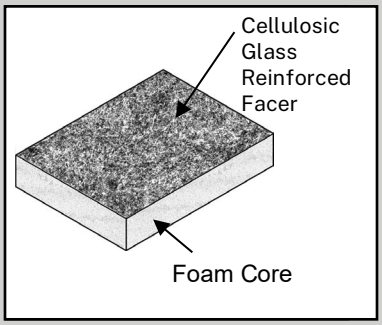
Packaging and Roll Dimensions

Packaging	Full pallet contains 10 rolls.			
Membrane Thickness	**Dimensions**	**Approximate Coverage**		**Approximate Weight**
		6" Overlap	**4" Overlap**	
50 mil	10' x 100' (3.048 m x 30.48 m)	950 ft^2	967 ft^2	280 lb
50 mil	5' x 100' (1.52 m x 30.48 m)	450 ft^2	467 ft^2	140 lb
60 mil	10' x 100' (3.048 m x 30.48 m)	950 ft^2	967 ft^2	350 lb
60 mil	5' x 100' (1.52 m x 30.48 m)	450 ft^2	467 ft^2	175 lb
80 mil	10' x 65' (3.048 m x 19.81 m)	617 ft^2	628 ft^2	335 lb
80 mil	5' x 65' (1.52 m x 19.81 m)	292 ft^2	303 ft^2	170 lb

Item Numbers			
Membrane **Thickness**	**Dimensions**	**Color**	**Item Number**
50 mil	10' x 100' (3.048 m x 30.48 m)	White	W56PVW51010
		Gray	W56PVG51010
		Tan	W56PVT51010
		Charcoal	W56PVC51010
50 mil	5' x 100' (1.52 m x 30.48 m)	White	W56PVW50510
		Gray	W56PVG50510
		Tan	W56PVT50510
		Charcoal	W56PVC50510
60 mil	10' x 100' (3.048 m x 30.48 m)	White	W56PVW61010
		Gray	W56PVG61010
		Tan	W56PVT61010
		Charcoal	W56PVC61010
60 mil	5' x 100' (1.52 m x 30.48 m)	White	W56PVW60510
		Gray	W56PVG60510
		Tan	W56PVT60510
		Charcoal	W56PVC60510
80 mil	10' x 65' (3.048 m x 19.81 m)	White	W56PVW81065
		Gray	W56PVG81065
		Tan	W56PVT81065
		Charcoal	W56PVC81065
80 mil	5' x 65' (1.52 m x 19.81 m)	White	W56PVW80565
		Gray	W56PVG80565
		Tan	W56PVT80565
		Charcoal	W56PVC80565

Please contact Holcim Technical Services at 800-428-4511 for further information.

Technical Information Sheet



ISOGARD™ GL Insulation

Item Description
Flat and Tapered Polyiso Boards
Flat Boards: 4' x 4' (1.22 m x 1.22 m), 4' x 8' (1.22 m x 2.44 m)
Tapered Boards: 4' x 4' (1.22 m x 1.22 m)
Slope Range: 1/16" per foot (.5%) to ½" per foot (4%)
Thickness Range: 0.5" (12.7 mm) to 4.5" (114.3 mm)
Other options available include: 4' x 7'4" (1.22 m x 2.25m). Export cut for international shipments and scored ISO for metal retrofits.
Meets or exceeds performance requirements of ASTM C 1289, Type II, Class 1

Description

Elevate ISOGARD GL flat and tapered roof insulation consists of a closed cell polyiso foam core laminated to a glass reinforced mat facer on both major surfaces. Flat and tapered ISOGARD insulation provides outstanding thermal performance on commercial roofing applications, while providing positive rooftop drainage to help eliminate ponding water when tapered ISOGARD GL insulation is used.

All Elevate polyisocyanurate foam insulations use EPA accepted blowing agents. Elevate ISOGARD GL incorporates a HCFC-free blowing agent that does not contribute to the depletion of the ozone layer (ODP-free).

Method of Application

1. Insulation shall be neatly fitted to all roof penetrations, projections, and nailers.
2. No more insulation shall be installed than can be covered with membrane and completed before the end of each day's work or before the onset of inclement weather.
3. Elevate ISOGARD GL board may be installed using:
   - Elevate fasteners and plates

   NOTE: For ballasted systems, the top layer of Elevate insulation may not be mechanically attached.
   - Hot asphalt (requires a cover board)
   - Elevate approved insulation adhesives
     - I.S.O. Twin Pack™
     - I.S.O.Stick™
     - Twin Jet
     - I.S.O. Spray™ R
     - I.S.O. FIX™ II

Acceptable Immediate Substrates

- 3,000 psi Structural concrete (must be clean, dry, and properly cured)
- Steel deck (min 22 ga)
- Plywood and OSB (min ½")
- Lightweight concrete
- Gypsum deck (min 2")

NOTE: Please consult the Design Guides and QuickSpecs online at www.holcimelevate.com to review specific information regarding the assembly.

Storage

- Keep insulation dry at all times.
- Elevate insulation above the deck or ground.
- Cover insulation with waterproof tarps.

Precautions

- Polyiso foam will burn if exposed to a flame of sufficient heat and intensity. Keep away from heat, sparks, and open flames.
- Protect against dust that may be generated during installation.
- Refer to Safety Data Sheet (SDS) for additional information.
- Take care when transporting and handling Elevate insulation to avoid physical damage.

Specification Compliance

ASTM C1289, Type II, Class 1
UL Classified _ UL1256
FM 4470 Class 1 Approved
Manufactured in an ISO 9001 Registered Facility
CAN/ULC-S704-11, Type 2, Class 2. Type 3 available upon Request.

LEED® Information

See Recycled Content in Typical Properties table.

Manufacturing Locations: Bristol, CT
De Forest, WI
Salt Lake City, UT
Youngwood, PA
Florence, KY

NOTE: LEED® is a registered trademark of the U.S. Green Building Council

Typical Properties (Meets ASTM C 1289, Type II, Class 1)

Property	ASTM Test Method	Elevate Typical Performance
Thermal Resistance	C518	40 °F (4.4 °C) 6.2 R/in 75 °F (23.9 °C) 5.7 R/in 110 °F (43.3 °C) 5.0 R/in
Compressive Strength	D1621	Grade 2: 20 psi (138 kPa) Grade 3: 25 psi (172 kPa) *
Density	D1622	2 pcf (32 kg/m^3)
Dimensional Stability	D2126	<2%
Moisture Vapor Transmission	E96	<1 perm (<57.5 ng/(Pa•s•m^2))
Water Absorption	C209	<1% by volume
Service Temperature	---	-100 to 250 °F (-73 to 121 °C)
Flame Spread	E84	Index 50
Smoke Development	E84	Index 160 - 180

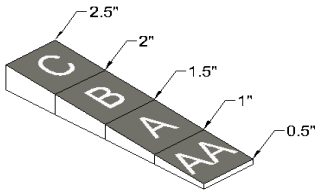
**25 psi (172 kPa) available upon request.*

Product Information

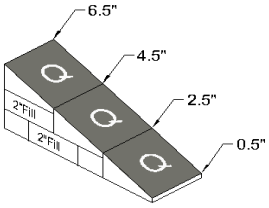
Thickness*		R-Value	Max Flute Span		Approximate Recycled Content		
inches	mm	**	inches	mm	Post-Consumer	Post Industrial	Total
0.5	12.70	2.9	1.50	38.10	52%	15%	67%
1.0	25.40	5.7	2.62	66.67	37%	15%	52%
1.1	27.94	6.3	2.62	66.67	36%	15%	51%
1.2	30.48	6.8	2.62	66.67	34%	15%	49%
1.3	33.02	7.4	3.67	93.34	32%	15%	47%
1.4	35.56	8.0	3.67	93.34	30%	15%	45%
1.5	38.10	8.6	4.37	111.12	29%	15%	44%
1.6	40.64	9.1	4.37	111.12	27%	15%	42%
1.7	43.18	9.7	4.37	111.12	26%	15%	41%
1.75	44.45	10.0	4.37	111.12	26%	15%	41%
1.8	45.72	10.3	4.37	111.12	25%	15%	40%
1.9	48.26	10.8	4.37	111.12	24%	15%	39%
2.0	50.80	11.4	4.37	111.12	24%	15%	39%
2.1	53.34	12.0	4.37	111.12	22%	15%	37%
2.2	55.88	12.6	4.37	111.12	21%	15%	36%
2.25	57.15	12.9	4.37	111.12	21%	15%	36%
2.3	58.42	13.2	4.37	111.12	21%	15%	36%
2.4	60.96	13.8	4.37	111.12	20%	15%	35%
2.5	63.50	14.4	4.37	111.12	20%	15%	35%
2.6	66.04	15.0	4.37	111.12	19%	15%	34%
2.7	68.58	15.6	4.37	111.12	18%	15%	33%
2.75	69.85	15.9	4.37	111.12	18%	15%	33%
2.8	71.12	16.2	4.37	111.12	18%	15%	33%
2.9	73.66	16.8	4.37	111.12	17%	15%	32%
3.0	76.20	17.4	4.37	111.12	17%	15%	32%
3.1	78.74	18.0	4.37	111.12	16%	15%	31%
3.2	81.28	18.6	4.37	111.12	16%	15%	31%
3.25	82.55	18.9	4.37	111.12	16%	15%	31%
3.3	83.82	19.2	4.37	111.12	16%	15%	31%
3.4	86.36	19.9	4.37	111.12	15%	15%	30%
3.5	88.90	20.5	4.37	111.12	15%	15%	30%
3.6	91.44	21.1	4.37	111.12	14%	15%	29%
3.7	93.98	21.7	4.37	111.12	14%	15%	29%
3.75	95.25	22.0	4.37	111.12	14%	15%	29%
3.8	96.52	22.3	4.37	111.12	14%	15%	29%
3.9	99.06	23.0	4.37	111.12	14%	15%	29%
4.0	101.60	23.6	4.50	114.30	14%	15%	29%
4.1	104.14	24.2	4.50	114.30	13%	15%	28%
4.2	106.58	24.9	4.50	114.30	13%	15%	28%
4.25	107.95	25.2	4.50	114.30	13%	15%	28%
4.3	109.22	25.5	4.50	114.30	13%	15%	28%
4.4	111.76	26.1	4.50	114.30	13%	15%	28%
4.5	114.3	26.8	4.50	114.30	13%	15%	28%

**Other thicknesses available upon request.*
***R- values provide a 15-year time-weighted average in accordance with CAN/ULC-S770.*

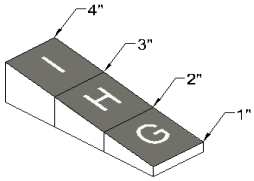
Tapered ISO 95+ GL (available sizes)				
Panel Code	**Min-Max Thickness** Inches	mm	**Slope**	
AA	0.5 – 1.0	13 – 25	⅛"/ft	1%
A	1.0 – 1.5	25 – 38	⅛"/ft	1%
B	1.5 – 2.0	38 – 51	⅛"/ft	1%
C	2.5 – 2.5	51 – 64	⅛"/ft	1%
G	1.0 – 2.0	25 – 51	¼"/ft	2%
H	2.0 – 3.0	51 – 76	¼"/ft	2%
I	3.0 – 4.0	76 - 102	¼"/ft	2%
X	0.5 – 1.5	13 - 38	¼"/ft	2%
Y	1.5 – 2.5	38 - 64	¼"/ft	2%
Z	2.5 – 3.5	64 - 89	¼"/ft	2%
Q	0.5 – 2.5	13 - 64	½"/ft	4%



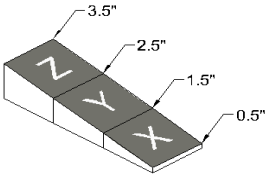
1/8"/ft. Tapered Section



1/2"/ft. Tapered Section



1/4"/ft. Tapered Section



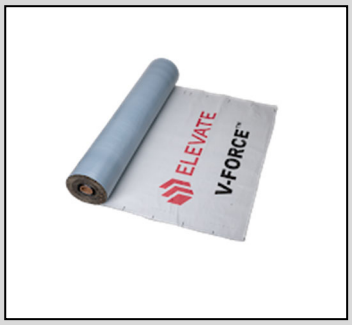
1/4"/ft. Tapered Section

Please contact Holcim Technical Services at 800-428-4511 for further information.

Firestone, the brand of premier roofing, wall, and lining systems you know and trust, will be coming to you under a new name: Elevate. During our transition, products carrying the brand name **Firestone** will change to **Elevate** on product labels and packaging, Technical Information Sheets, and elsewhere. Only the brand name is changing. Our products remain the same.

For further information on our brand transition to Elevate, scan the code below with your smartphone, or visit our website: www.holcimelevate.com

Technical Information Sheet



V-Force™ Vapor Barrier Membrane

Item Description	Item Number
1 Roll (5 Squares)	W56358900V25

Description

V-Force Vapor Barrier Membrane is a vapor barrier comprised of SBS modified bitumen adhesive, factory-laminated to a tri-laminate woven, high-density polyethylene top surface. A polymeric release liner protects the adhesive. V-Force membrane is intended for use as a vapor retarder in Elevate roofing systems and may be used as a temporary roof membrane for up to ninety (90) days.

Method of Application

1. V-Force membrane can be applied at ambient temperatures as low as 25 °F (-4 °C) if it has been stored in a heated area so that it will be between 50 °F (10 °C) and 100 °F (38 °C) at the time of application.
2. All substrates except metal decks must be primed with either SA-Water Based Primer (W563587091), SA-LVOC Primer (W563587092), or SA-Solvent Based Primer (W563587090).
3. V-Force membrane must be installed with minimum 3" (76 mm) side laps and 6" (152 mm) end laps. At the end of each roll, install a 6" x 42" (152 mm x 1.07 m) sheet metal plate to support the end lap between deck ribs. Stagger the end laps 12" (305 mm).
4. V-Force membrane must be rolled in with a 75 lb (34 kg) roller to fully mate each roll to substrate, including all lap areas.

Acceptable Immediate Substrates for Self-Adhered Application

NOTE: All substrates except metal decks must be primed with either SA Water Based Primer (W563587091), SA-LVOC Primer (W563587092), or SA Solvent Based Primer (W563587090).

- Structural Concrete (must be clean, dry, and properly cured)
- Steel Deck (processing oils must be removed)

NOTE: Single-Ply membranes are not to adhered directly to V-Force.

NOTE: Factory Mutual (FM) does not recognize direct to steel deck attachment of this product.

- Plywood or OSB
- Existing Smooth Surface BUR, SBS, or APP Modified Bitumen (must be clean and smooth)
- DensDeck® Prime, SECUROCK® Gypsum Fiber, STRUCTODEK® HD
- ISOGARD™ HD Composite or Cover Board, RESISTA™ / ISOGARD CG Insulation

NOTE: Please consult the Elevate Asphalt Roofing Systems Guide for Applicators and Designers and QuickSpecs found on the Elevate website to review specific information regarding the type of deck and insulation in use.

Storage

- All material should be stored out of the weather in a clean, dry area in its original unopened packaging at a minimum of 50 °F (10 °C) and a maximum of 140 °F (60 °C).
- If material must be stored temporarily on the roof prior to application, it must be elevated from the roof surface on a pallet, stored on end, and protected from the weather with a light colored, opaque tarp in a neat, safe manner that does not exceed the allowable load limit of the storage area.

Shelf Life

Shelf life of one year (12 months) can be expected when kept dry and stored in the original, unopened packaging between 60 °F and 80 °F (16 °C and 27 °C)

Precautions

- For safety information, refer to the Safety Data Sheet (SDS) for SBS Membranes and Flashing.
- Hot asphalt cannot be used to adhere roofing materials to V-Force Vapor Barrier membrane.
- Not suitable for use as a temporary roof under ponding water conditions.
- Take care when transporting and handling Elevate Modified Bitumen rolls to avoid punctures and other types of physical damage.
- Isolate waste products, petroleum products, grease, oil (mineral and vegetable) and animal fats from all Elevate Modified Bitumen membranes.

LEED® Information

Post-Consumer Recycled Content: 0%
Post Industrial Recycled Content: 0%
Manufacturing Location: Quebec, Canada

NOTE: LEED® is a registered trademark of the U.S. Green Building Council

Product Data	
Property	**Value**
Roll Width	3' 9" (1.14 m)
Roll Length	133' 9" (40.8 m)
Net Coverage	468 ft^2 (43.5 m^2)
Roll Weight	80 lb (36.5 kg)
Weight Per Pallet	2,125 lb (964 kg)
Rolls per Pallet	25
Pallet Size	43" x 43" (1.1 m x 1.1 m)
Coverage Per Pallet	11,700 ft^2 (1,087 m^2)

Typical Properties

Property	ASTM Standard	Typical Performance
Thickness	D 5147	30 mil (0.762 mm)
Tensile Strength	D 5147	54 lbf/in (9.5 kN/m), MD 68 lbf/in (12 kN/m), XMD
Ultimate Elongation, Bitumen Portion, at 73 °F (23 °C)	D 5147	33%, MD 20%, XMD
Low Temperature Flexibility (Cold Bending)	D 5147	-30 °F (-35 °C)
Dynamic Puncture	E 154	152 lbf (675 N)
Tear Strength at 73 °F (23 °C)	D 5601	79 lbf (350 N), MD 90 lbf (400 N), XMD
Lap Adhesion at 73 °F (23 °C)	D 1876	6 lbf/in (0.95 kN/m)
Water Absorption, % by Weight	D 5147, D 95	<0.1 %
Peel Resistance	D 903	5.6 lbf/in (1 kN/m)
Water Vapor Permeance, max.	E 96 Procedure B	0.04 perms (2.5 Ng/Pa•s•m^2)
Air Permeability	D 1970	0.001 L/sec• m^2
	E 2178	< 0.0002 ft^3/min·ft^2 (< 0.0011 L/sec·m^2)
Sealability around Nail	D 1970	Pass

Please contact Holcim Technical Services at 800-428-4511 for further information.

Georgia-Pacific

DensDeck®

Prime Roof Board with EONIC™ TECHNOLOGY

Technical Service Hotline 1.800.225.6119 or
www.densdeck.com

Manufacturer

Georgia-Pacific Gypsum
133 Peachtree Street
Atlanta, GA 30303

Georgia-Pacific Canada
2180 Meadowvale Boulevard, Suite 200
Mississauga, ON L5N 5S3

Technical Service Hotline: 1-800-225-6119

Description

DensDeck® Prime Roof Board has been enhanced to provide a broader compatibility and higher performance with roofing adhesives. Face mat enhancements allow adhesives to be applied more uniformly and consistently. In adhered, single ply membrane testing, enhanced DensDeck Prime demonstrated an average of 24% better bond than the original products, when using solvent based adhesives. (Average based on 60 sq.ft./gal coverage rates.)* Choose DensDeck Prime Roof Boards for adhered and self-adhered "peel & stick" roofing systems, as well as hot mopped, cold mastic and torch-applied modified bitumen roofs. Enhanced DensDeck Prime Roof Boards create a stronger and more economical installation by reducing the amounts of mastic or adhesive used and potentially eliminates the field primer. Consult with membrane manufacturer for actual priming requirements.

DensDeck Prime Roof Boards are the first and only fiberglass mat gypsum roof boards with a 90-day weather exposure limited warranty when applied vertically on a parapet wall.** (Limited to 1/2″ and 5/8″ products only.)

Primary Uses

Roof system manufacturers and designers have found DensDeck Prime Roof Board to be compatible with many types of roofing systems, including: modified asphalt, single-ply, metal systems, recover board, as well as an overlayment for polyisocyanurate and polystyrene insulation. DensDeck Prime Roof Board can also be used as a form board for poured gypsum concrete deck in roof applications as well as a substrate for spray foam roofing systems. 1/2″ (12.7 mm) and 5/8″ (15.9 mm) DensDeck Prime Roof Board may also be used in vertical applications as a backer board or liner for the roof side of parapet walls.

DensDeck Prime Roof Board may allow the bonding of cold mastic modified bitumen and torching directly to the surface. *Consult with the system manufacturer for recommendations on this application.*

DensDeck Prime Roof Board is the preferred substrate for vapor retarders.

Standards and Code Approvals

DensDeck Prime Roof Boards are manufactured to meet ASTM C1177 and have the following approvals:

- Florida Product Approved
- Miami-Dade County Product Control Approved

Recommendations and Limitations

DensDeck Prime Roof Boards are manufactured to act with a properly designed roof system following good roofing practices. The actual use of DensDeck Prime Roof Board as a roofing component in any system or assembly is the responsibility of the roofing system's design authority. Consult with the appropriate system manufacturer and/or design authority for system and assembly specifications and instructions on applying other products to DensDeck Prime Roof Board. Georgia-Pacific does not warrant and is not responsible for any systems or assemblies utilizing DensDeck Prime Roof Board or any component in such systems or assemblies other than DensDeck Prime Roof Board.

The need for a separator sheet between the DensDeck Prime Roof Board and the roofing membrane must be determined by the roof membrane manufacturer or roofing system designer.

* Testing was done in accordance with FM approvals 4470, Appendix C: Small Scale Tests, Membrane Delamination Tests for Roofing Membranes and Substrates Using Tensile Loading.

** For complete warranty details, visit www.DensDeck.com. (Limited to 1/2″ and 5/8″ products only.)

Confirm any priming requirements with the membrane manufacturer. When applying solvent-based adhesives or primers, allow sufficient time for the solvent to flash off to avoid damage to roofing components.

DensDeck Prime Roof Boards should not be subjected to abnormal or excessive loads or foot traffic, such as, but not limited to, use on plaza decks or under steel-wheeled equipment that may fracture or damage the panels. Provide suitable roofing system protection when required.

When using DensDeck Prime Roof Boards for hot-mopped applications, Georgia-Pacific recommends maximum asphalt application temperatures of 425°F (218°C) to 450°F (232°C). Application temperatures above these recommended temperatures may adversely affect roof system performance. Consult and follow the roofing system manufacturer's specifications for full mopping applications and temperature requirements.

When using DensDeck Prime Roof Board as a substrate for torch applications, ensure that the product is dry and that the proper torching technique is used. Limit the heat to the DensDeck Prime Roof Board. Maintain a majority of the torch flame directly on the roll.

Conditions beyond the control of Georgia-Pacific, such as weather conditions, dew, leaks, application temperatures and techniques may cause adverse effects with roofing systems.

Handling and Use–CAUTION

This product contains fiberglass facings which may cause skin irritation. Dust and fibers produced during the handling and installation of the product may cause skin, eye and respiratory tract irritation. Avoid breathing dust and minimize contact with skin and eyes. Wear long sleeve shirts, long pants and eye protection. Always maintain adequate ventilation. Use a dust mask or NIOSH/MSHA approved respirator as appropriate in dusty or poorly ventilated areas.

Moisture Management

DensDeck Prime Roof Boards, like other components used in roofing systems, must be protected from exposure to moisture before, during and after installation.

Remove the plastic packaging from all DensDeck Prime Roof Board immediately upon receipt of delivery. Failure to remove the plastic packaging may result in entrapment of condensation or moisture. DensDeck Prime Roof Board stored outside must be stored level and off the ground and protected by a breathable waterproof covering. Provide means for air circulation around and under stored bundles of DensDeck Prime Roof Board. DensDeck Prime Roof Board must be covered the same day as installed.

Avoid application of DensDeck Prime Roof Boards during rain, heavy fog and any other conditions that may deposit moisture on the surface, and avoid the overuse of non-vented, direct-fired heaters during winter months. When roofing systems are installed on new poured concrete or light weight concrete decks or when re-roofing over an existing concrete deck, a vapor barrier should be installed above the concrete to retard the migration of water from the concrete into the roof assembly. Always consult the roofing system manufacturer or design authority for specific instructions for applying other products to DensDeck Prime Roof Boards.

Moisture vapor movement by convection must be eliminated, and the flow of water by gravity through imperfections in the roof system must be controlled. After a leak has occurred, no condensation on the upper surface of the system should be tolerated, and the water introduced by the leak must be dissipated to the building interior in a minimum amount of time.

Although DensDeck Prime Roof Boards are engineered with fiberglass facings and high density gypsum cores, the presence of free moisture can have a detrimental effect on the performance of the product and the installation of roofing membranes. For example, hot asphalt applications can blister; torched modified bitumen may not properly bond; and adhesives for single ply membranes may not dry properly.

Submittal Approvals

Job Name _____

Contractor _____

Date _____

continued→

Stamps / Signatures

Moisture accumulation may also significantly decrease wind uplift and vertical pull resistance in the system or assembly. DensDeck® Prime Roof Boards containing excessive free moisture content may need to be evaluated for structural stability to assure wind uplift performance.

Fire Resistance Classifications

DensDeck Prime Roof Boards are excellent fire barriers over combustible and noncombustible roof decks, including steel decks.

UL 790 Classification. DensDeck Prime Roof Boards have been classified by Underwriters Laboratories LLC (UL) for use as a fire barrier over combustible and noncombustible decks in accordance with the ANSI/UL 790 test standard. The UL classification includes a comprehensive Class A, B or C rating. For additional information concerning the UL 790 classification, consult the UL Certification Directory.

UL 1256 Classification. DensDeck Prime Roof Boards have also been classified by UL in roof deck constructions for internal (under deck) fire exposure in accordance with the ANSI/UL 1256 Steiner Tunnel test. For additional information concerning the UL 1256 classification, consult the UL Certification Directory.

FM Class 1 Approvals. DensDeck Prime Roof Boards are included in numerous roofing assemblies with a Factory Mutual (FM) Class 1 fire rating. 1/4″ (6.4 mm) DensDeck Prime Roof Boards have passed testing under the FM Calorimeter Standard 4450 and have been approved by FM as such for insulated steel deck roofs when installed according to the conditions identified by FM. For more information concerning FM Approvals and FM Class 1 assemblies with DensDeck Prime Roof Boards, consult FM or RoofNav®.

Type X. 5/8″ (15.9 mm) DensDeck® Prime Fireguard® Roof Boards are manufactured to meet the "Type X" requirements of ASTM C1177 for increased fire resistance beyond regular gypsum board.

UL Fire Resistance Ratings. 5/8″ (15.9 mm) DensDeck Prime Fireguard Roof Boards are designated as **Type DD** by UL and included in assembly designs investigated by UL for hourly fire resistance ratings. 5/8″ (15.9 mm) DensDeck Prime Fireguard Roof Boards may also replace any unclassified 5/8″ (15.9 mm) gypsum board in an assembly in the UL Fire Resistance Directory under the prefix "P".

Flame Spread and Smoke Developed. When tested in accordance with ASTM E84, DensDeck Prime Roof Boards had Flame Spread 0, Smoke Developed 0.

Wind Uplift

DensDeck Prime Roof Boards are included in numerous assemblies evaluated by FM or other independent laboratories for wind uplift performance. For information concerning such assemblies, please visit www.roofnav.com.

Physical Properties

Properties	1/4″ (6.4 mm)	1/2″ (12.7mm)	5/8″ (15.9 mm)
Thickness, nominal	1/4″ (6.4 mm) ± 1/16″ (1.6 mm)	1/2″ (12.7 mm) ± 1/32″ (.8 mm)	5/8″ (15.9 mm) ± 1/32″ (.8 mm)
Width, standard	4′ (1219 mm) ± 1/8″ (3 mm)	4′ (1219 mm) ± 1/8″ (3 mm)	4′ (1219 mm) ± 1/8″ (3 mm)
Length, standard	4′ (1219 mm) and 8′ (2438 mm) ± 1/4″ (6.4 mm)	4′ (1219 mm) and 8′ (2438 mm) ± 1/4″ (6.4 mm)	4′ (1219 mm) and 8′ (2438 mm) ± 1/4″ (6.4 mm)
Weight, nominal, lbs./sq. ft. (Kg/m^2)	1.2 (5.9)	2.0 (9.8)	2.5 (12.2)
Surfacing	Fiberglass mat with non-asphaltic coating	Fiberglass mat with non-asphaltic coating	Fiberglass mat with non-asphaltic coating
Flexural Strength[1], parallel, lbf. min. (N)	≥40 (178)	≥80 (356)	≥100 (444)
Flute Spanability[2]	2-5/8″ (66.7 mm)	5″ (127 mm)	8″ (203 mm)
Permeance[3], Perms (ng/Pa•S•m^2)	>30 (>1710)	>23 (>1300)	>17 (>970)
R Value[4], ft^2•°F•hr/BTU (m^2•K/W)	.28	.56	.67
Linear Variation with Change in Temp., in/in °F (mm/mm/C°)	8.5 x 10^{-6} (15.3 x 10^{-6})	8.5 x 10^{-6} (15.3 x 10^{-6})	8.5 x 10^{-6} (15.3 x 10^{-6})
Linear Variation with Change in Moisture	6.25 x 10^{-6}	6.25 x 10^{-6}	6.25 x 10^{-6}
Water Absorption[5], % max	5	5	5
Compressive Strength[6], psi nominal	900	900	900
Surface Water Absorption, grams, nominal	1.0	1.0	1.0
Flame Spread, Smoke Developed (ASTM E84)	0/0	0/0	0/0
Bending Radius	4′ (1219 mm)	6′ (1829 mm)	8′ (2438 mm)

1. Tested in accordance with ASTM C473 method B.
2. Tested in accordance with ASTM E661.
3. Tested in accordance with ASTM E96 (dry cup method).
4. Tested in accordance with ASTM C518 (heat flow meter).
5. Specified values per ASTM C1177.
6. Tested in accordance with ASTM C473.

Georgia-Pacific Gypsum

U.S.A. Georgia-Pacific Gypsum LLC
Georgia-Pacific Gypsum II LLC
Canada Georgia-Pacific Canada LP

SALES INFORMATION AND ORDER PLACEMENT

U.S.A. West: **1-800-824-7503**
Midwest: **1-800-876-4746**
South Central: **1-800-231-6060**
Southeast: **1-800-327-2344**
Northeast: **1-800-947-4497**

CANADA Canada Toll Free: **1-800-387-6823**
Quebec Toll Free: **1-800-361-0486**

TECHNICAL INFORMATION

U.S.A. and Canada: **1-800-225-6119,** www.gpgypsum.com