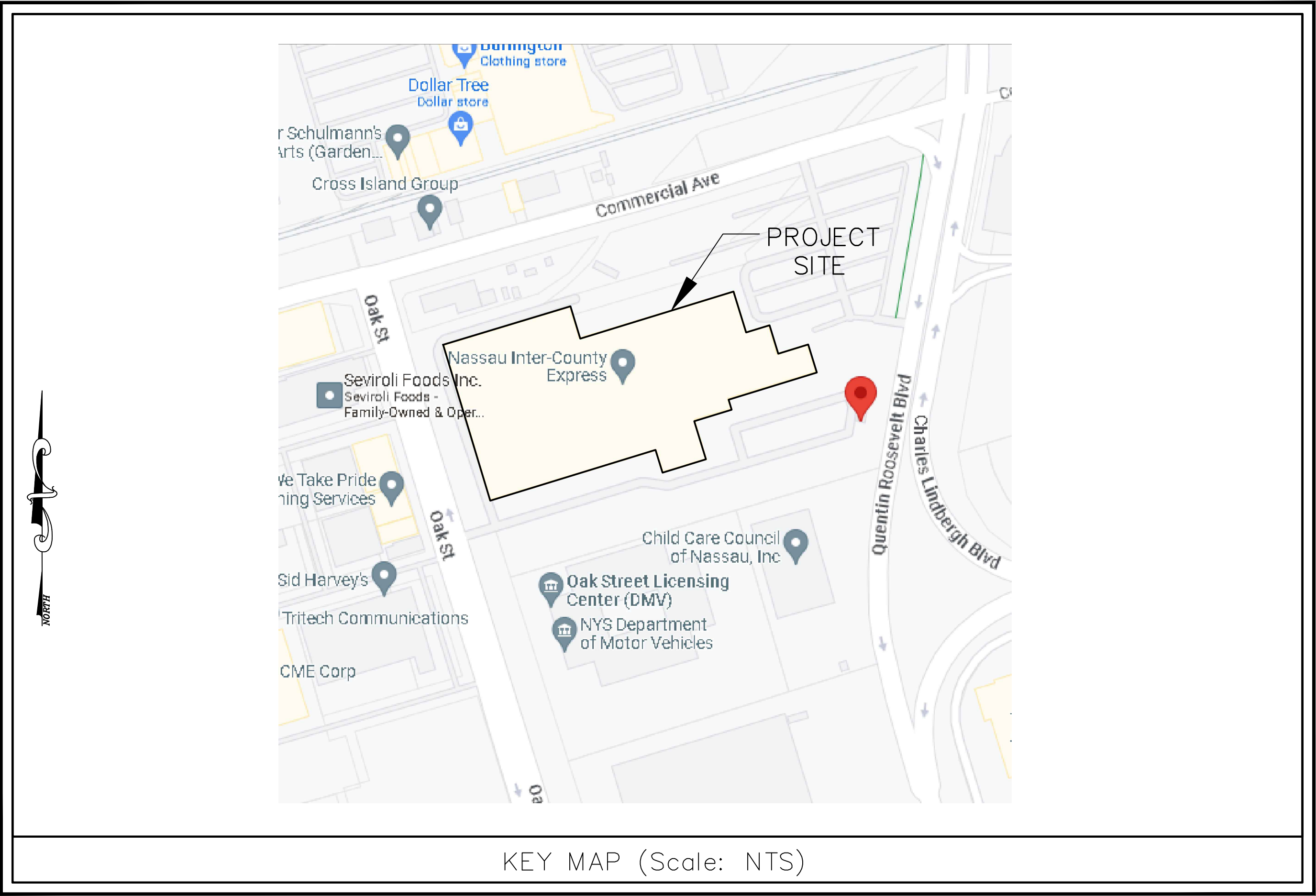


NASSAU INTER-COUNTY EXPRESS

Mitchell Field
700 Commercial Ave
Garden City, NY 11530

Methane Gas Monitoring System Upgrades

November, 2025



KEY MAP (Scale: NTS)

GENERAL DRAWING LIST

SHEET LIST	
Sheet Number	Sheet Title
T-001	TITLE SHEET
E-001	ELECTRICAL - GENERAL NOTES AND ABBREVIATIONS
E-002	DETAILS
E-003	OPEN PATH LASER MOUNTING DETAILS AND WIRING DIAGRAM
E-004	PURGE FAN CONTROLLER DIAGRAM
E-010	RISER DIAGRAM
E-011	SYSTEM INTERLOCK RISER
E-090	METHANE DETECTION REMOVAL PLAN AREA A
E-091	METHANE DETECTION REMOVAL PLAN AREA B, C, D & E
E-100	METHANE DETECTION PLAN AREA A
E-101	METHANE DETECTION PLAN AREA B, C, D & E
E-200	PURGE FAN ROOF PLAN AREA A
E-201	PURGE FAN ROOF PLAN AREA B,C,D&E



NASSAU INTER-COUNTY EXPRESS
700 COMMERCIAL AVENUE
GARDEN CITY, NY 11530

CAMERON
ENGINEERING
now
IMEG

177 CROSSWAYS PARK DRIVE
WOODBURY, NY 11797
516.827.4900 www.imegcorp.com

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REVISIONS			
No.	Date	Revision / Issue	
1	05/14/2025	75% SUBMISSION	
2	08/13/2025	100% SUBMISSION	
3	11/17/2025	FOR BID	
4	06/30/2026	ADDENDUM #1	

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Approved	

SHEET TITLE
TITLE SHEET

SCALE

SHEET NUMBER

T-001



CAMERON
ENGINEERING

now
IMEG

177 Crossways Park Drive, Woodbury, NY 11797
141 Broadway, Suite 403, New York, NY 10018
300 Turnpike Road, 1st Floor, White Plains, NY 10603
Corporate Seal Initiated 1996 State of New York
www.cameronengineering.com www.imegcorp.com

T: (516) 827-4900
T: (212) 324-4000
T: (914) 721-4300
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GENERAL NOTES:

1.

PROVIDE LABOR, MATERIALS, EQUIPMENT AND SERVICE FOR COMPLETE ELECTRICAL SYSTEMS AS SHOWN ON DRAWINGS SPECIFIED AND REQUIRED BY THE NATIONAL ELECTRICAL CODE, AND ANY OTHER LOCAL, STATE AND FEDERAL AUTHORITIES HAVING JURISDICTION. USE NEW, U.L APPROVED EQUIPMENT AND FIELD TEST EQUIPMENT.
2.

WORK PERFORMED SHALL BE UNDERTAKEN WITH ABSOLUTE PRECAUTION BEING MAINTAINED TO ENSURE SAFETY OF PERSONNEL AND EQUIPMENT IN AREA IN SUCH MANNER SO AS NOT TO DISTURB NORMAL WORK PROCEDURE. PROVIDE PROTECTIVE SCAFFOLDING, BARRIERS, SIGNS, ETC., SUBJECT TO APPROVAL OF OWNER.
2.

ALL MATERIALS AND INSTALLATION SHALL CONFORM WITH THE REQUIREMENTS OF THE LATEST AMENDMENTS TO THE NATIONAL ELECTRIC CODE, ANY APPLICABLE ENERGY CONSERVATION CODES, AND ALL AUTHORITIES HAVING JURISDICTION.
3.

ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY SHOW EXACT LOCATION AND DETAILS OF WORK TO BE INSTALLED. SIZES AND LOCATION OF EQUIPMENT AND WIRING MAY BE SHOWN TO SCALE WHERE POSSIBLE, BUT MAY BE DISTORTED FOR CLARITY ON DRAWINGS. FINAL LOCATION OF OUTLETS AND EQUIPMENT SHALL BE AS APPROVED BY ENGINEER. INSTALL WORK TO CONFORM TO STRUCTURE, PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR. DO NOT SCALE DRAWINGS, USE FIELD MEASUREMENTS.
4.

OBTAIN ALL PERMITS, FILE DOCUMENTS, PAY ALL FEES AND PERFORM ALL TESTING AS REQUIRED BY ALL AUTHORITIES HAVING JURISDICTION. PROVIDE OWNER WITH CERTIFICATES OF INSPECTION.
5.

PROPERLY SUPPORT CONDUIT WITH APPROVED CLAMPS OR FITTINGS. NO CONDUIT SHALL BE SECURED TO, SUPPORTED BY OR HUNG FROM DUCTWORK OR PIPING OR OTHER SUCH ITEMS.
6.

PASS RACEWAY OVER WATER OR OTHER PIPING WHEN PULL BOXES ARE NOT REQUIRED. INSTALL NO RACEWAY WITHIN 3" OF HOT WATER PIPES OR APPLIANCES, EXCEPT CROSSING WHERE RACEWAY SHALL BE AT LEAST 1" FROM PIPE COVER.
7.

EXACT LOCATION OF CONDUIT RUNS SHALL BE DETERMINED IN FIELD. LOCATE CONDUIT RUNS TO CLEAR, PIPING, DUCTWORK, ACCESS DOORS AND OTHER OBSTRUCTIONS. COORDINATE ROUTING WITH WORK OF OTHER TRADES AND ALTER WHERE NECESSARY TO AVOID INTERFERENCE. INSTALL CONDUIT CONCEALED TO MAXIMUM EXTENT POSSIBLE.
8.

PROVIDE IDENTIFICATION ON EACH WIRING DEVICE FACE PLATE, DISCONNECT SWITCH, PANEL, ETC. IDENTIFICATION OF WIRING DEVICE FACE PLATE SHALL CONSIST OF PANEL DESIGNATION AND CIRCUIT NUMBER OF DEVICE AS CONNECTED, TYPICAL IDENTIFICATION SHALL READ: "LP2-#4" IN PUBLIC SPACES AND GUESTROOMS. INSTALL LABEL ON INSIDE OF FACEPLATE.
9.

CIRCUIT NUMBERS ON DRAWINGS ARE FOR IDENTIFICATION ONLY AND DO NOT NECESSARILY INDICATE POSITION ON PANEL BOARD. CONNECT CIRCUITS WITH LIGHTEST LOADS AND RECEPTACLE CIRCUITS NEAR TOP OF PANEL AND MORE HEAVILY LOADED CIRCUITS NEAR BOTTOM. BALANCE CIRCUITS EVENLY BETWEEN PHASES SO THAT FEEDER WIRES CARRY APPROXIMATELY EQUAL CURRENT. REBALANCE IF NECESSARY. DOCUMENT AND SUBMIT RECORD AS SHOP DRAWING.
10.

PROVIDE BLANK COVERS ON ABANDONED OR UNUSED OUTLETS BOXES.
11.

ALL NEW CONDUIT INSTALLED IN BASEMENT, OR BUILDING EXTERIOR LOCATIONS SHALL BE RGS TYPE CONDUIT.
12.

PROVIDE MATERIALS AND EQUIPMENT LISTED BY UNDERWRITERS LABORATORIES, INC., COMPLY WITH THE LATEST APPLICABLE STANDARDS OF ANSI, ASTM, IEEE, AND NEMA.
13.

COORDINATION OF ELECTRICAL INFRASTRUCTURE: PROVIDE ALL PANELS, FEEDERS, BRANCH CIRCUIT WIRING AND ALL ACCESSORIES AND SUPPORTS AS REQUIRED TO CONNECT THE NEW EQUIPMENT AND DEVICES TO THE BUILDING DISTRIBUTION SYSTEM. VERIFY THAT ALL WIRING AND EQUIPMENT BASED ON SELECTED TYPE AND MANUFACTURER ARE SIZED PER CODE AND WILL FIT IN THE INFRASTRUCTURE AND SPACE AVAILABLE.
14.

ALL PARTS OF THE WORK AND ASSOCIATED EQUIPMENT SHALL BE TESTED AND ADJUSTED TO WORK PROPERLY AND BE LEFT IN PERFECT OPERATING CONDITION.
15.

CONTRACTOR SHALL VERIFY THE AVAILABLE UTILITY SHORT CIRCUIT FROM CONED AT THE SERVICE EQUIPMENT AND PROVIDE EQUIPMENT RATING EXCEEDING THE AVAILABLE SHORT CIRCUIT CURRENT.
16.

REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK MAY BE NECESSARY FOR THE PERFORMANCE OF GENERAL ELECTRICAL WORK. ALL EXISTING CONDITIONS ARE NOT COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND MAKE ALL NECESSARY MODIFICATIONS REQUIRED BASED ON EXISTING CONDITIONS, FOR DEMOLITION OF EXISTING WORK AND INCLUDE ALL MATERIALS AND LABOR IN HIS BID PRICE.
17.

COOPERATION WITH OTHER CONTRACTORS: THE CONTRACTOR SHALL EXAMINE ALL CONTRACT DRAWINGS AND COOPERATE WITH ALL OTHER CONTRACTORS PROVIDING LABOR, MATERIALS AND ALL WORK, SO THAT THE WORK AS A WHOLE SHALL BE EXECUTED AND COMPLETED WITHOUT CONFLICT OR DELAY. VERIFY WITH OTHER TRADES THE LOCATIONS OF MOTORS, EQUIPMENT, VOLTAGE AND PHASE, BEFORE COMMENCING ANY WORK. WORK INSTALLED IMPROPERLY DUE TO NON-COORDINATION SHALL BE CHANGED BY THIS CONTRACTOR AT HIS OWN EXPENSE.
18.

FURNISH AND INSTALL ALL NECESSARY PULLBOXES AND CONDUIT SUPPORTS, AS REQUIRED BY APPLICABLE CODES. ALL LOW TENSION CONDUIT WHICH HAVE RUNS IN EXCESS OF 200 FEET IN LENGTH AND/OR CONSTRAINING BENDS IN EXCESS OF 270 DEGREES SHALL BE PROVIDED WITH A PULLBOX. ALL PULLBOXES SHALL BE LABELED FOR THEIR INTENDED USE OR VOLTAGE LEVEL, AND ALL WIRE AND CABLE PROVIDED UNDER THIS SECTION SHALL BE TAGGED AT ALL PULLBOXES. PROVIDE ACCESS DOORS WHERE REQUIRED. COORDINATE WITH CONSTRUCTION WORK.
19.

SUBMIT SHOP DRAWINGS TO THE OWNER'S REPRESENTATIVE FOR REVIEW PRIOR TO START OF ANY WORK. ANY WORK OR EQUIPMENT INSTALLED PRIOR TO APPROVAL OF RELEVANT SHOP DRAWINGS FOUND TO BE UNACCEPTABLE SHALL BE REMOVED AND MODIFIED AT THE CONTRACTOR'S SOLE EXPENSE INCLUDING ANY RESULTANT SCHEDULING DELAYS EXPERIENCED BY ANY TRADE.
20.

ALL INSTRUMENTS, APPARATUS AND EQUIPMENT SHALL BE TESTED AND PROVED TO BE ELECTRICALLY AND MECHANICALLY WITHOUT DEFECTS. THE ELECTRICAL SYSTEM SHALL BE TESTED FOR GROUNDS OR SHORTS. IF THERE IS TROUBLE WITHIN THE CIRCUIT WIRING, ALL SHORTED OR GROUNDED WIRES SHALL BE REPLACED AND THEN RETESTED. ALL METERS, CABLES, EQUIPMENT OR APPARATUS NECESSARY FOR MAKING ALL TESTS SHALL BE PROVIDED BY THE CONTRACTOR.
21.

NO HOLES OR RECESSES MAY BE CUT IN WALLS, FLOORS, CEILINGS, OR ANY PART OF THE BUILDING TO ADMIT CONDUIT OR OTHER WORK OF THIS CONTRACT WITHOUT PRIOR SUBMISSION TO AND REVIEW AND APPROVAL BY THE OWNER'S REPRESENTATIVE. ANY CUTTING, DRILLING, CORING, ETC. SHALL BE DONE WET TO MINIMIZE THE SPREAD OF DUST. PROVIDE DUST PROTECTION AS APPROVED BY OWNER'S REPRESENTATIVE. THE PORTIONS CUT MUST BE RESTORED TO THEIR ORIGINAL CONDITION AT THE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR SHALL INCLUDE ALL COSTS FOR ALL CUTTING AND PATCHING REQUIRED FOR THE ELECTRICAL WORK IN HIS BID. EXACT LOCATION OF CONDUIT PENETRATION(S) SHALL BE DETERMINED IN FIELD.
22.

ACCESS TO WORK AREAS, INCLUDING WORK SCHEDULED THEREIN, MUST HAVE PRIOR APPROVAL OF OWNER'S REPRESENTATIVE. ANY WORK REQUIRING EQUIPMENT SHUTDOWN MUST BE COORDINATED WITH THE OWNER'S REPRESENTATIVE PRIOR TO DEACTIVATION. ALL EXISTING EQUIPMENT IS TO REMAIN OPERATIONAL DURING THE CONSTRUCTION PERIOD. ANY TEMPORARY WIRING OR REROUTING OF CIRCUITRY TO ACHIEVE THIS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SHUT DOWN OF EXISTING SERVICES SHALL ONLY BE PERMITTED UPON APPROVAL FROM THE OWNERS REPRESENTATIVE AND THEN ONLY FOR THE DATE AND DURATION AGREED UPON.
23.

CUTTING AND PATCHING: THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING OF ROUGH OR FINISH WORK REQUIRED BY ELECTRICAL INSTALLATIONS. PATCHING SHALL BE OF THE SAME MATERIAL, FINISH, AND WORKMANSHIP AS THE ORIGINAL WORK.
24.

CLEANING AND CLEANUP: ALL MATERIAL INSTALLED UNDER THIS SECTION OF THE WORK SHALL BE CLEANED OF GREASE, OIL, PLASTER, DIRT/DUST AND THE LIKE. ALL GREASE AND OIL SHALL BE CLEANED FROM FLOORS, CEILINGS, AND WALLS AND ALL UNUSED CONSTRUCTION MATERIAL AND DEBRIS SHALL BE LEGALLY REMOVED, TRANSPORTED AND DISPOSED OF OFF-SITE.
25.

INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATING, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS, WITH NO MATERIAL COMPROMISE IN QUALITY, MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES OF MAGNITUDE AND/OR CHANGES HIGH RESULT IN EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL BY THE OWNER'S REPRESENTATIVE.
26.

ANY DAMAGE TO EXISTING STRUCTURES, UTILITIES, VEGETATION, ETC. NOT SCHEDULED FOR DEMOLITION OR REMOVAL, INCURRED DURING CONSTRUCTION, WHETHER INCIDENTAL OR ACCIDENTAL, SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER

ELECTRICAL ABBREVIATIONS

NOT ALL ABBREVIATIONS APPLY TO THIS PROJECT

ABBREVIATIONS	
SYMBOL	DESCRIPTION
A, AMP	AMPERE
AIC	AMPS INTERRUPTING CAPACITY
AFF	ABOVE FINISHED FLOOR
ATS	AUTOMATIC TRANSFER SWITCH
BFG	BELOW FINISHED GRADE
C, CDT	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CM	CONSTRUCTION MANAGER
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
ED	EXISTING TO BE DEMOLISHED
ELEC	ELECTRICAL
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ER	EXISTING TO BE RELOCATED
EX	EXISTING TO REMAIN
FA	FIRE ALARM
FLA	FULL LOAD AMPS
FT	FEET
FSD	FIRE SMOKE DAMPER
G, GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HP	HORSE POWER
JB, J	JUNCTION BOX
KVA	KILO VOLT- AMPERE
KW	KILO WATT
LTG	LIGHTING
LV	LOW VOLTAGE
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MSWBD	MAIN SWITCHBOARD
MSWGR	MAIN SWITCHBOARD
NA, N/A	NOT APPLICABLE
NTS	NOT TO SCALE
P	POLES
PB	PULL BOX
PH, ø	PHASE
PNL	PANEL
PVC	POLYVINYL CHLORIDE
PWR	POWER
RM	ROOM
SEB	SERVICE END BOX
SHT	SHEET
SPD	SURGE PROTECTIVE DEVICE
SW	SWITCH
SWBD	SWITCHBOARD
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLT
VA	VOLT AMP
W	WIRE
WP	WEATHER PROOF

SYMBOL AND ABBREVIATIONS LEGEND

SYMBOL	DESCRIPTION
	NEW OPEN PATH LASER TRANSMITTER METHANE SENSOR "XX" EQUALS DEVICE ID
	NEW OPEN PATH LASER RECEIVER METHANE SENSOR "XX" EQUALS DEVICE ID
	NEW HIGH MOUNT POINT METHANE SENSOR "XX" EQUALS DEVICE ID
	NEW POINT DETECTOR DEVICE
	NEW OPEN PATH LASER DEVICE
	NEW HORN STROBE
	EXISTING PURGE FAN
	PURGE FAN ADDRESSABLE MODULE
	SUPREMA HEAD END UNIT
	REMOTE MONITORING STATION
	DEMO
	EXISTING HIGH POINT DETECTOR "XX" EQUALS DEVICE ID
	EXISTING OPEN PATH INFRARED RECEIVER METHANE SENSOR "XX" EQUALS DEVICE ID
	EXISTING OPEN PATH INFRARED TRANSMITTER METHANE SENSOR "XX" EQUALS DEVICE ID
	EXISTING SENSOR FIELD CONTROL
	EXISTING RELAY FIELD CONTROL
	EXISTING METHANE SENSOR CABLE
	JUNCTION BOX

SUGGESTED CONSTRUCTION SEQUENCE:

1.

THE CONTRACTOR SHALL COMPLETE THE WORK IN TWO PHASES:
1.1. AREA A
1.2. AREA B, C, D & E
2.

DE-ENERGIZE ALL EXISTING GAS MONITORING EQUIPMENT AND CONTROLS.
3.

INSTALL NEW GAS MONITORING EQUIPMENT, CONTROLS, AND ASSOCIATED EQUIPMENT.
4.

COORDINATE WITH NICE BUS TO MINIMIZE OPERATION DISRUPTIONS AND FOLLOW SAFETY REQUIREMENTS
5.

CONTRACTOR SHALL NOTE WORK AREAS ARE ACTIVE BUS VEHICLE TRAFFIC AND SHALL FOLLOW NICE BUS SAFETY REQUIREMENTS.
6.

CONTRACTOR SHALL SUBMIT PHASING PLAN DESCRIBING DEMOLITION AND INSTALLATION WORK AND ASSOCIATED EQUIPMENT FOR THE CONSTRUCTION.

SERIES OF ACTIONS BASED ON THE TWO LEVELS OF DETECTION			
METHANE GAS CONCENTRATION LEVEL			
CONDITION	NORMAL	20% LEL	40% LEL
OPERATION LIGHTS - GREEN	ON	OFF	OFF
OPERATION LIGHTS - RED	OFF	ON	ON
HORN STROBES	OFF	ON	ON
SUPERVISORY ALARM	NO	YES	YES
PURGE FANS	MANUAL	ON	ON
ROLL UP DOORS	MANUAL	OPEN	OPEN
SHUNT TRIP TO BUILDING LOADS	NO	NO	YES
FIRE ALARM ANNUNCIATION	NO	NO	YES

SEQUENCE OF OPERATIONS

1.

UNDER NORMAL CONDITIONS, WHEN METHANE GAS CONCENTRATION IS BELOW 20% OF THE LOWER EXPLOSIVE LIMIT (LEL), THE SYSTEM MAINTAINS NORMAL OPERATION. THE GREEN OPERATION LIGHTS REMAIN ON, INDICATING SAFE CONDITIONS. RED LIGHTS ARE OFF, HORN STROBES ARE INACTIVE, AND THERE IS NO SUPERVISORY ALARM. PURGE FANS AND ROLL-UP DOORS REMAIN IN MANUAL MODE, AND THERE IS NO SHUNT TRIP TO BUILDING LOADS.
2.

WHEN METHANE GAS CONCENTRATION REACHES 20% LEL, THE SYSTEM ENTERS A WARNING STATE. AT THIS LEVEL, THE GREEN LIGHTS TURN OFF AND THE RED LIGHT TURNS ON TO INDICATE A CAUTIONARY STATUS. HORN STROBES ARE ACTIVATED TO PROVIDE AUDIBLE AND VISUAL ALERTS, AND THE SUPERVISORY ALARM IS TRIGGERED. PURGE FANS ARE AUTOMATICALLY TURNED ON TO BEGIN VENTILATION, AND THE ROLL-UP DOORS OPEN TO FACILITATE AIR EXCHANGE. DESPITE THESE ACTIONS, BUILDING LOADS REMAIN POWERED AS THE SHUNT TRIP IS NOT YET ACTIVATED.
3.

IF THE METHANE GAS CONCENTRATION INCREASES TO 40% LEL, THE SYSTEM ENTERS A CRITICAL STATE. THE GREEN LIGHTS ARE OFF, AND THE RED OPERATION LIGHTS ARE TURNED ON TO SIGNAL A HIGH DANGER LEVEL. HORN STROBES CONTINUE TO OPERATE, AND THE SUPERVISORY ALARM REMAINS ACTIVE. PURGE FANS STAY ON, AND ROLL-UP DOORS REMAIN OPEN TO MAXIMIZE VENTILATION. ADDITIONALLY, AT THIS CRITICAL LEVEL, THE SYSTEM INITIATES A SHUNT TRIP TO DISCONNECT BUILDING ELECTRICAL LOADS, REDUCING THE RISK OF IGNITION IN AN EXPLOSIVE ENVIRONMENT.



NASSAU INTER-COUNTY EXPRESS
700 COMMERCIAL AVENUE
GARDEN CITY, NY 11530

CAMERON
ENGINEERING
now
IMEG

177 CROSSWAYS PARK DRIVE
WOODBURY, NY 11797
616.827.4900 www.imegcorp.com

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REVISIONS

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1	05/14/2025	75% SUBMISSION
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Project #	24004241.00
Drawn	RC
Checked	RW
Approved	

SHEET TITLE

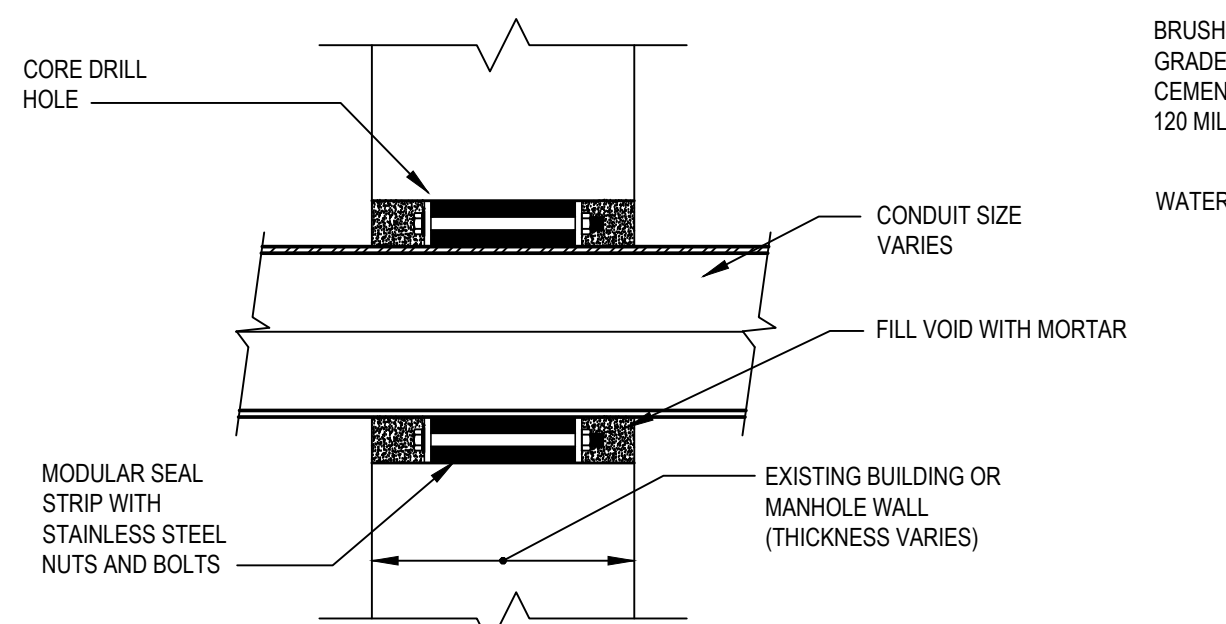
ELECTRICAL - GENERAL NOTES
LEGEND AND ABBREVIATIONS

SCALE

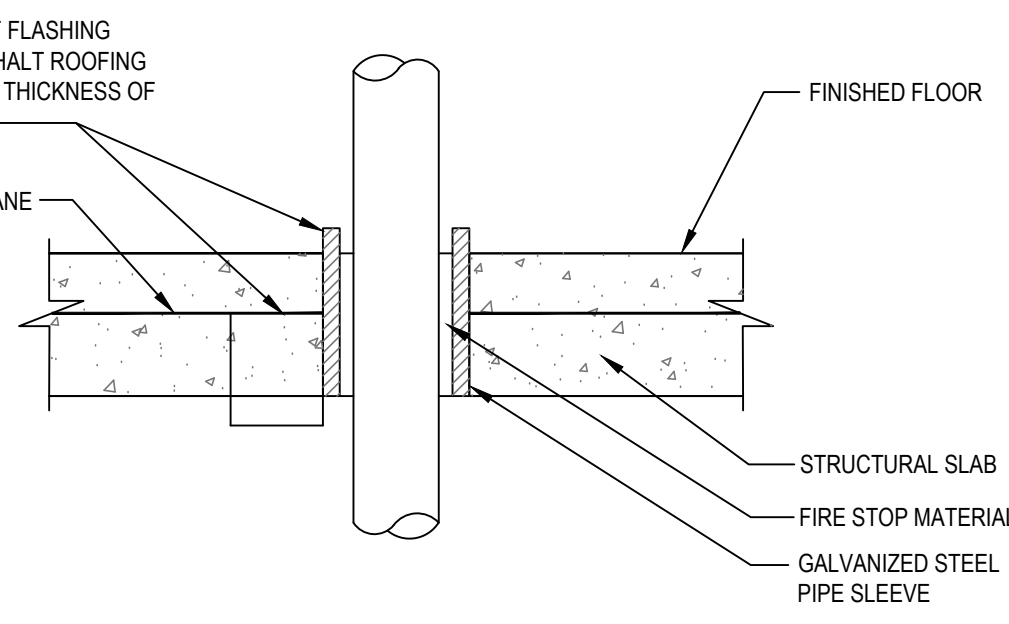
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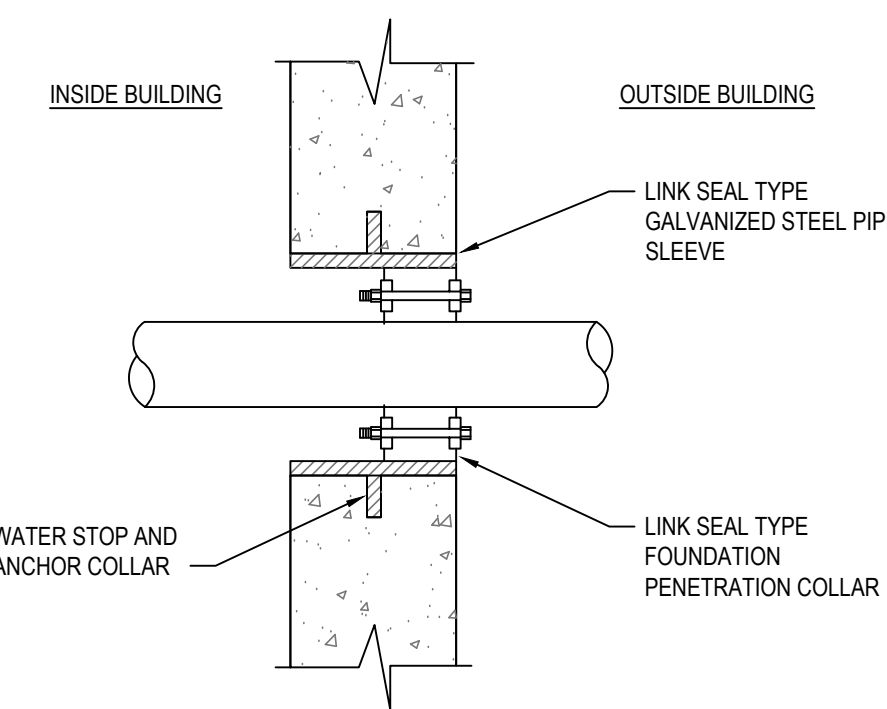
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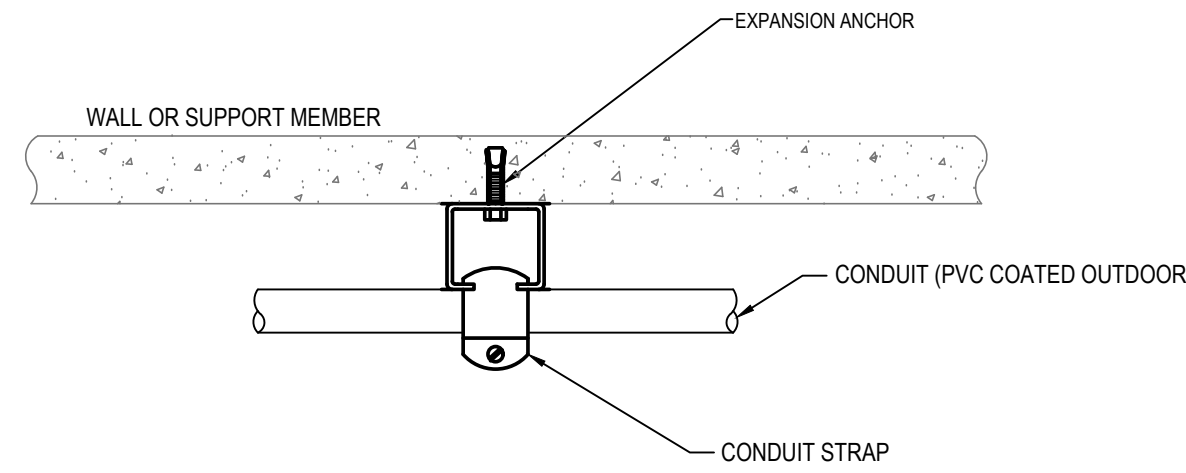
TYPICAL CONDUIT PENETRATION THROUGH EXISTING WALL
SCALE: NOT TO SCALE



WATERPROOF SLAB PENETRATION
SCALE: NOT TO SCALE

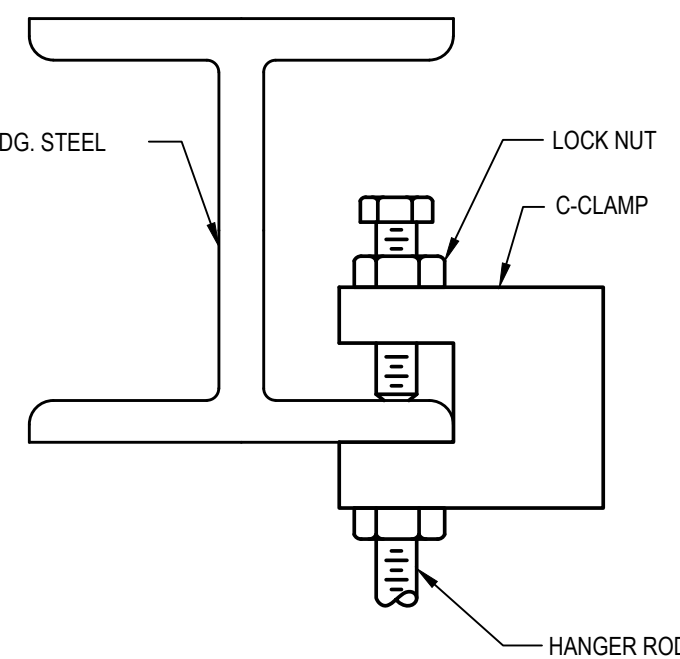


CONDUIT PENETRATION FOUNDATION WALL
SCALE: NOT TO SCALE

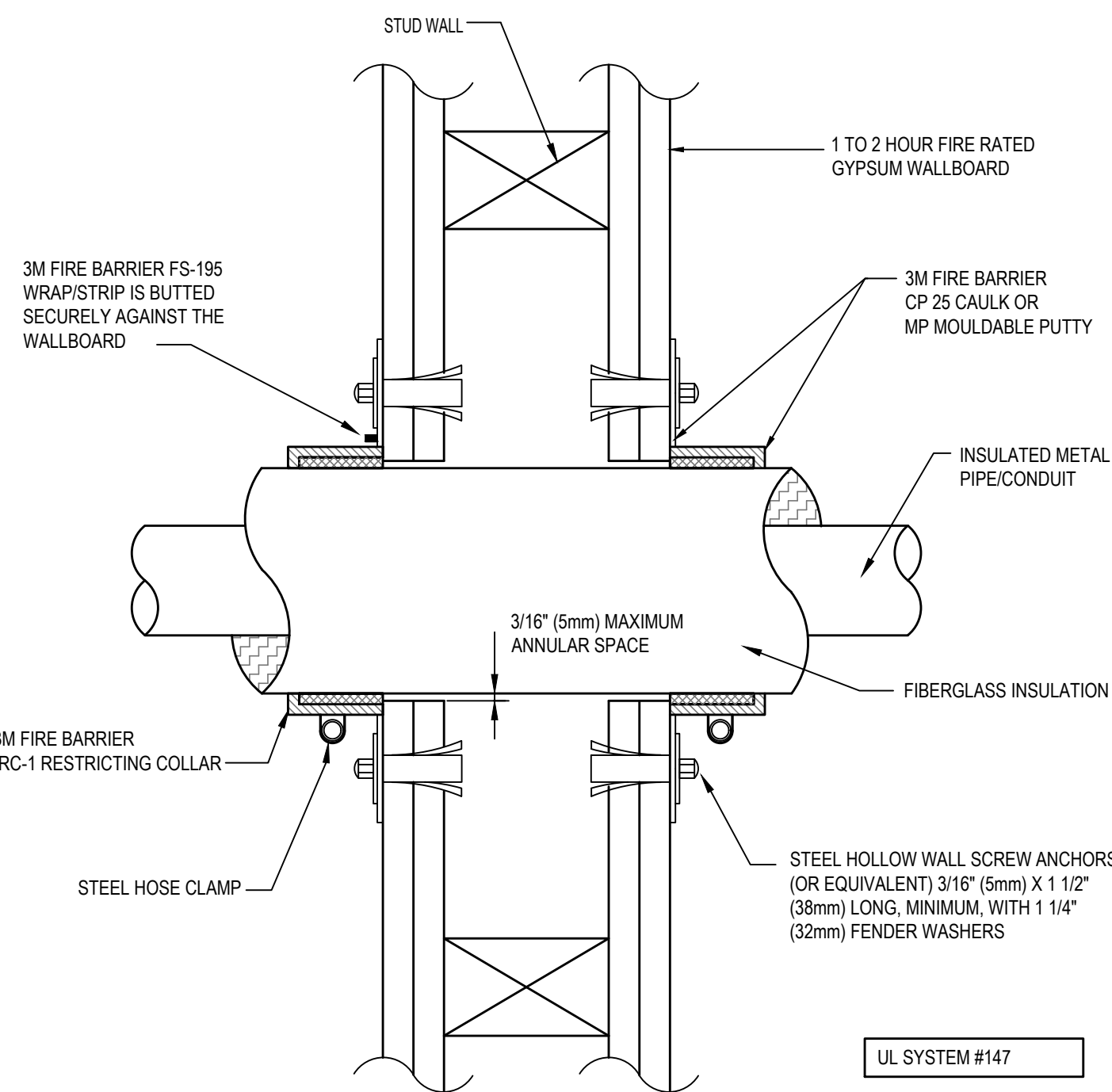


- NOTES:**
1. SPACE MOUNTING CHANNEL AT 4'-0" INTERVALS.
 2. MOUNT CONDUITS AT HEIGHT SPECIFIED OR SHOWN IN PLANS.
 3. USE FOR SURFACE MOUNT CONDUITS.
 4. SUBMIT CONDUIT AND DUCT SUPPORT DETAILS DESIGNED BY A PROFESSIONAL ENGINEER.

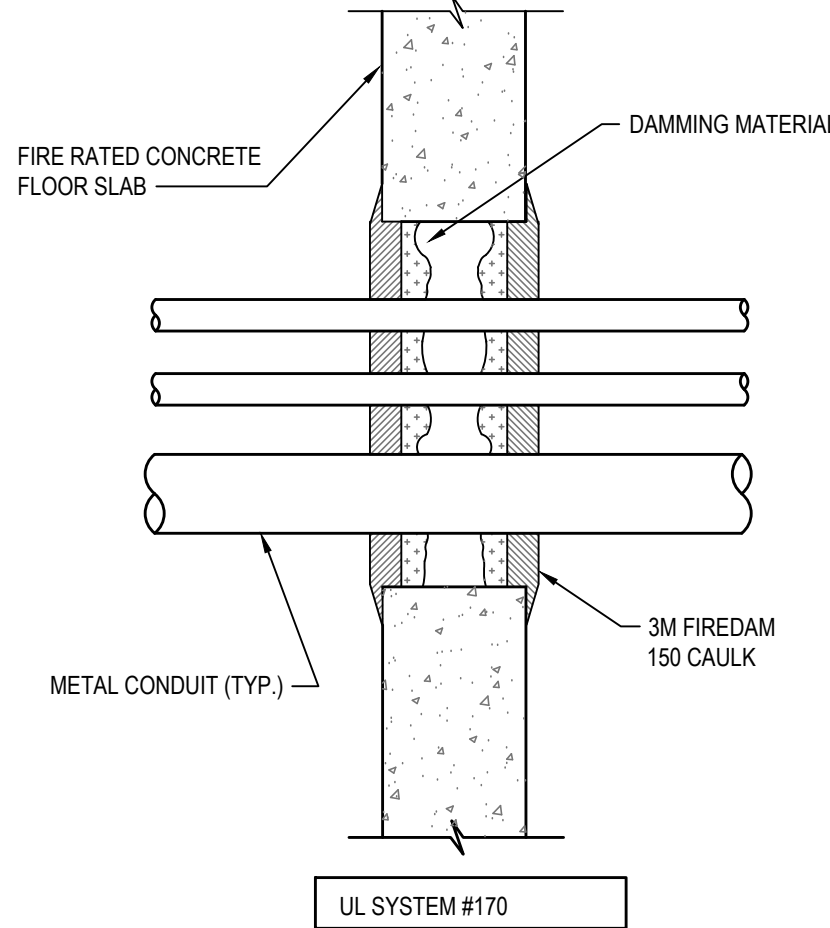
TYPICAL MULTIPLE CONDUIT SUPPORT DETAIL
SCALE: NOT TO SCALE



C-CLAMP WITH RETAINING CLIP
SCALE: NOT TO SCALE

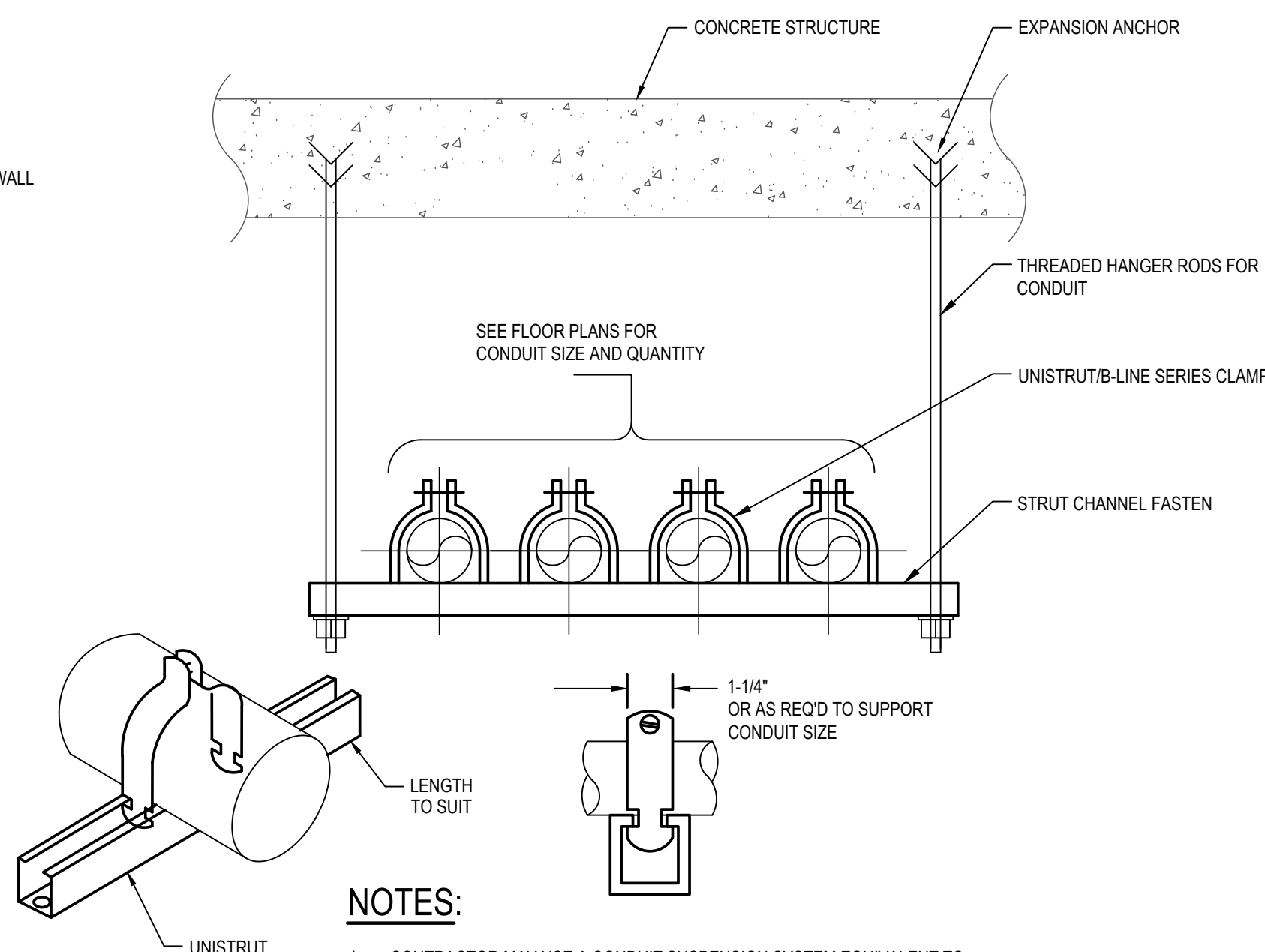


FIRESTOPPING FOR CONDUIT THROUGH GYPSUM BOARD
SCALE: NOT TO SCALE



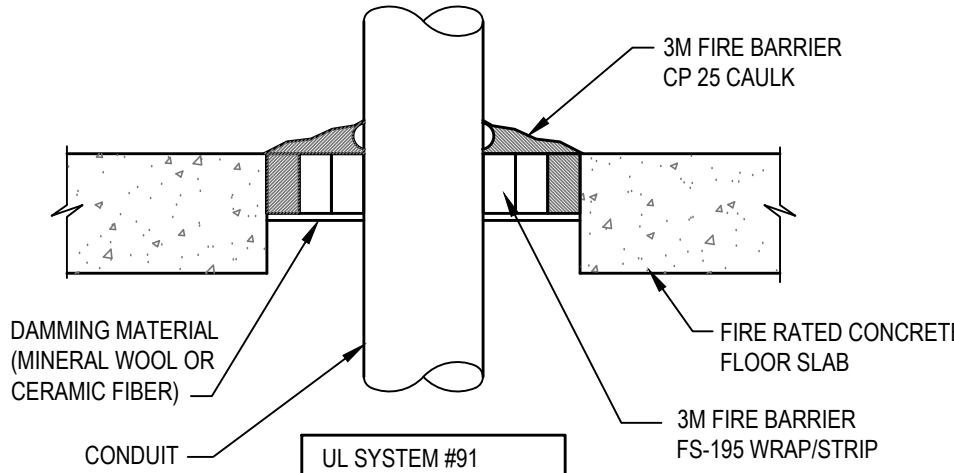
- NOTES:**
1. A 1" (25mm) MIN. THICKNESS OF 3M FIREDAM 150 CAULK SHALL BE INSTALLED AROUND THE CONDUIT ON BOTH SIDES OF THE WALL. AN ADDITIONAL 1/2" (6mm) BEAD SHALL BE PLACED AROUND THE PERIMETER OF THE OPENING OVERLAPPING THE WALL 1/2" (6mm) MINIMUM.
 2. A 1-1/2" (2mm) MIN. THICKNESS OF MINERAL WOOL DAMMING OR CERAMIC FIBER INSULATION IS REQUIRED IN THE PENETRATION AROUND THE CONDUIT AND RECESSED 2" (50mm) MIN. FROM EACH SIDE OF THE WALL.
 3. A 1" (25mm) MIN. CLEARANCE IS REQUIRED BETWEEN ADJACENT CONDUIT AND THE PERIMETER OF THE THROUGH OPENING.
 4. THESE RECOMMENDATIONS ARE BASED ON PRODUCT PERFORMANCE PER ASTM E-814 (UL 1479) FIRE TEST AND UL THROUGH-PENETRATION FIRESTOP SYSTEM #170.

FIRESTOPPING FOR CONDUIT THROUGH CONCRETE/BLOCK WALL
SCALE: NOT TO SCALE



- NOTES:**
1. CONTRACTOR MAY USE A CONDUIT SUSPENSION SYSTEM EQUIVALENT TO THAT WHICH IS DETAILED, HAVING SIMILAR FEATURES SHOWN AND APPROVED IN ADVANCE BY THE ENGINEER.
 2. CONDUIT SUSPENSION SYSTEM SHALL BE INDEPENDENT OF ANY OTHER SUSPENSION SYSTEM SHOP DRAWINGS DETAILING.
 3. THE INSTALLATION AND LAYOUT OF CONDUIT SUPPORTING SYSTEM SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO START OF WORK.

TYPICAL CONDUIT SUPPORT DETAIL
SCALE: NOT TO SCALE

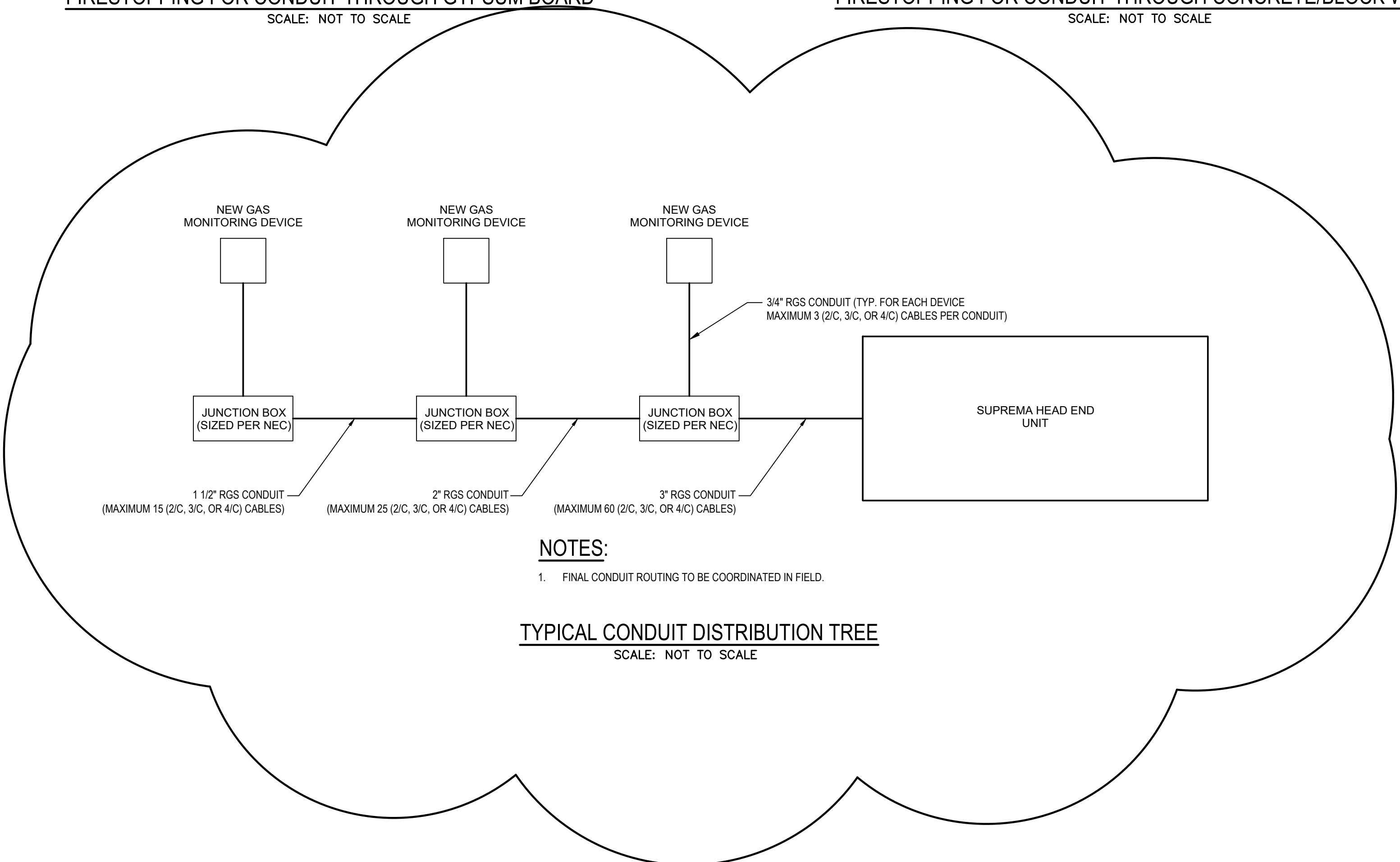


- NOTE:**
1. THE MAXIMUM ANNULAR SPACE TO BE FILLED IS 3", AND THE MINIMUM ANNULAR SPACE IS 3/4".
 2. FS-195 WRAP/STRIPS ARE FRICITION FIT INTO THE OPENING OR SECURED WITH 16 GAUGE STEEL TIE WIRE OR ALUMINUM FOIL TAPE AND SLID INTO THE OPENING WITH A MINIMUM 1/4" BEAD OF CP 25 CAULK.
 3. THE MINIMUM ANNULAR SPACE MUST ACCOMMODATE THE MINIMUM NUMBER OF FS-195 WRAP/STRIPS REQUIRED PER INSULATION THICKNESS. SEE TABLE 1 BELOW.

TABLE 1		
WRAP	CAULK	INSULATION
1 WRAP	1" DEPTH	1" THICK
2 WRAP	2" DEPTH	2" THICK
3 WRAP	3" DEPTH	3" THICK

4. REFER TO SPECIFICATION SECTION 07270-FIRESTOPPING

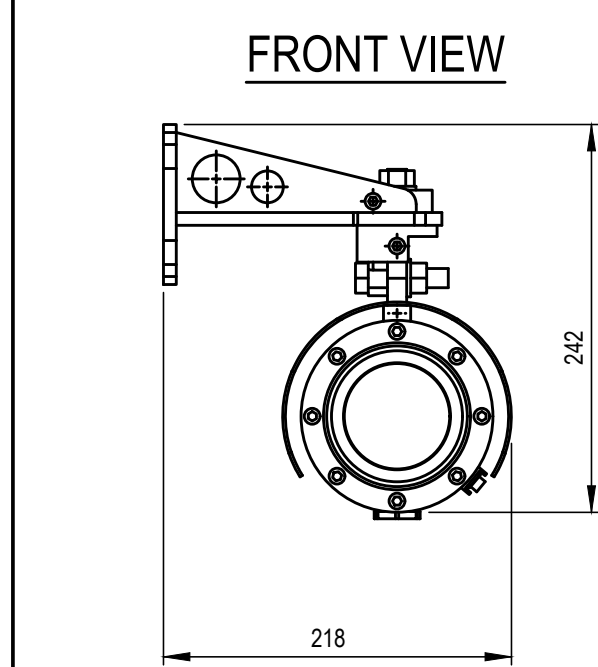
FIRESTOPPING FOR CONDUIT THROUGH FIRE RATED FLOOR SLAB
SCALE: NOT TO SCALE



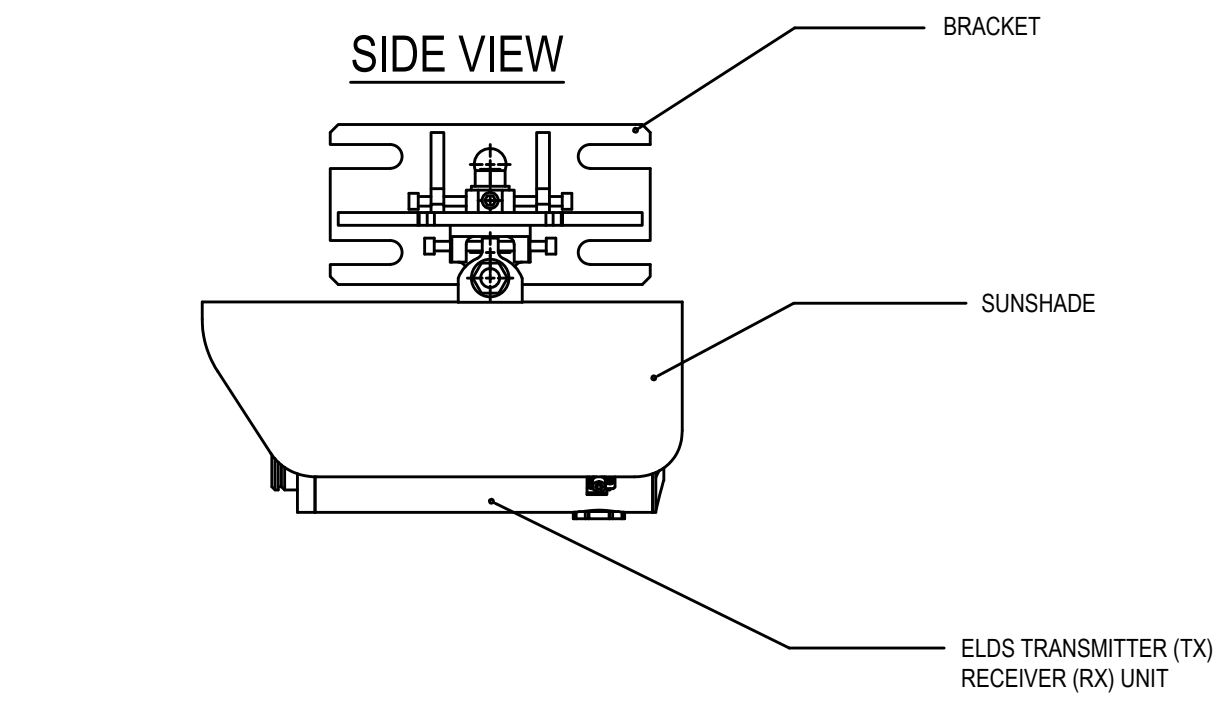
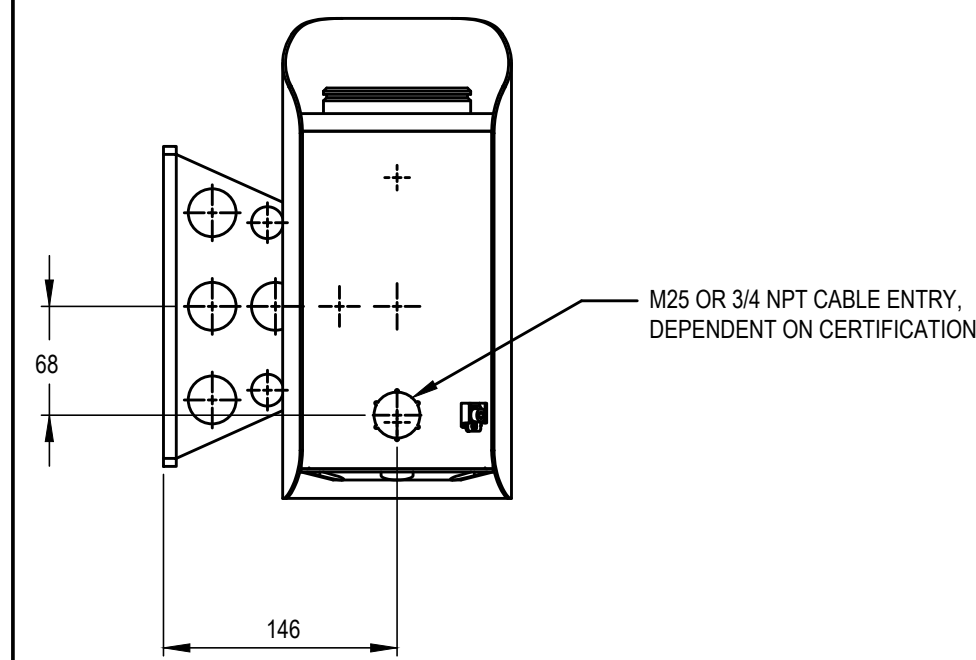
- NOTES:**
1. FINAL CONDUIT ROUTING TO BE COORDINATED IN FIELD.

TYPICAL CONDUIT DISTRIBUTION TREE
SCALE: NOT TO SCALE

\\nasdaq\p\proj\2024\04241\00\mouting\mouting.dwg, Date: June 30, 2025, Project: —, Plotted by: IMEG, A, C:\Users\imeg

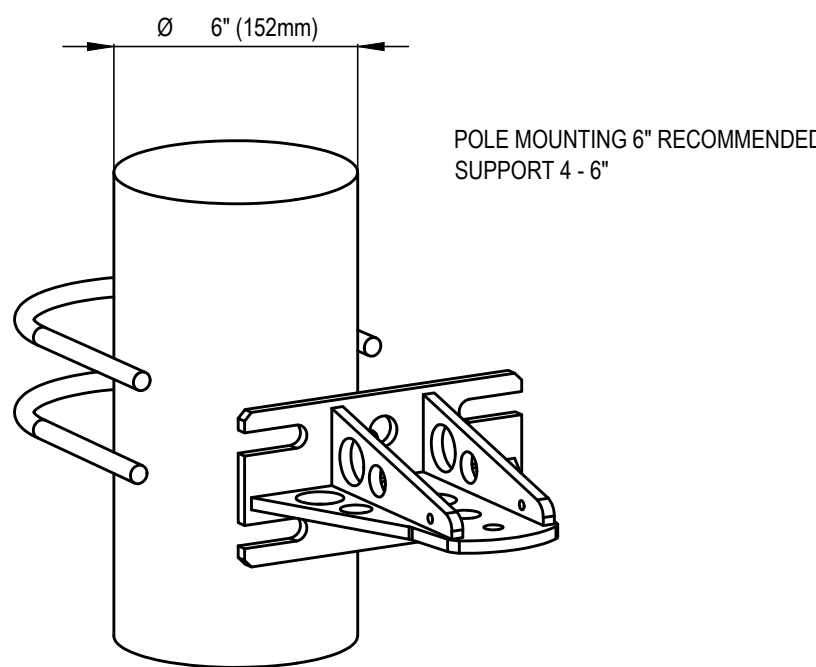


FRONT VIEW
(UNDERSIDE)

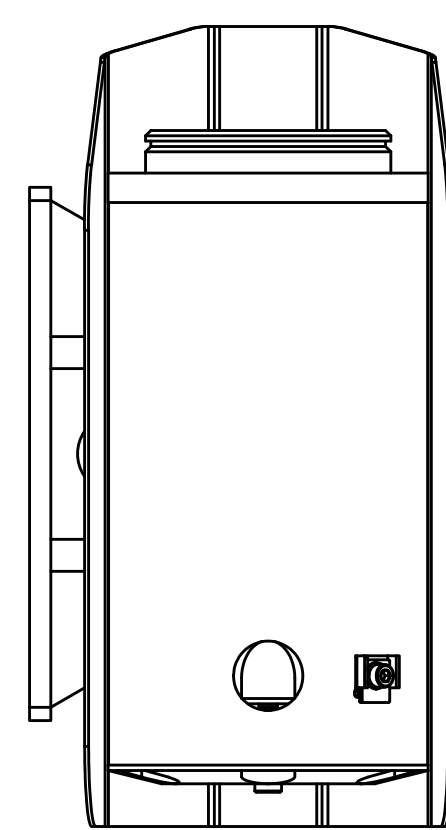
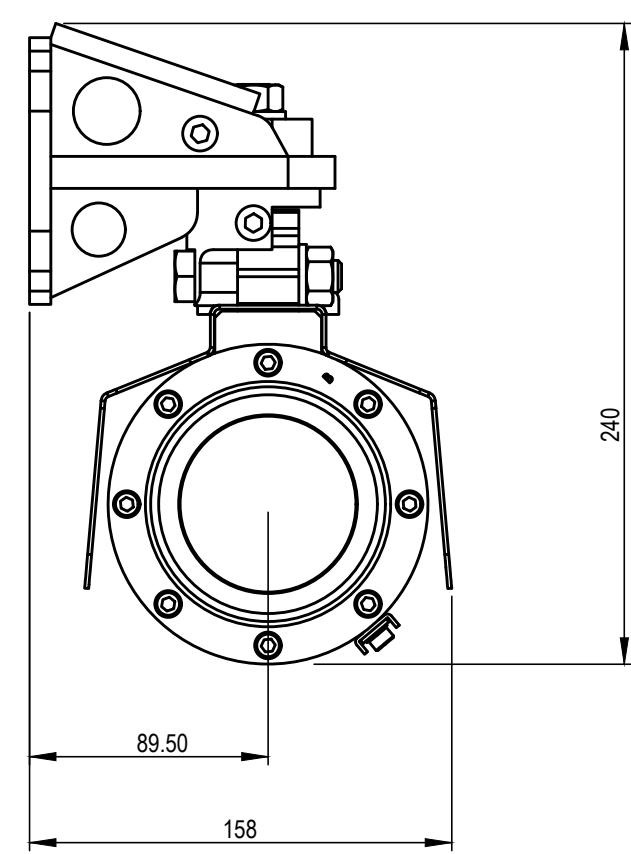


UNIT	WEIGHT (KG)	MATERIAL
BRACKET	3.05	SS 316
SUNSHADE	1.0	SS 316
RX (UNIT ONLY)	7.4	SS 316
TX (UNIT ONLY)	6.2	SS 316
RX (COMPLETE)	11.45	SS 316
TX (COMPLETE)	12.24	SS 316

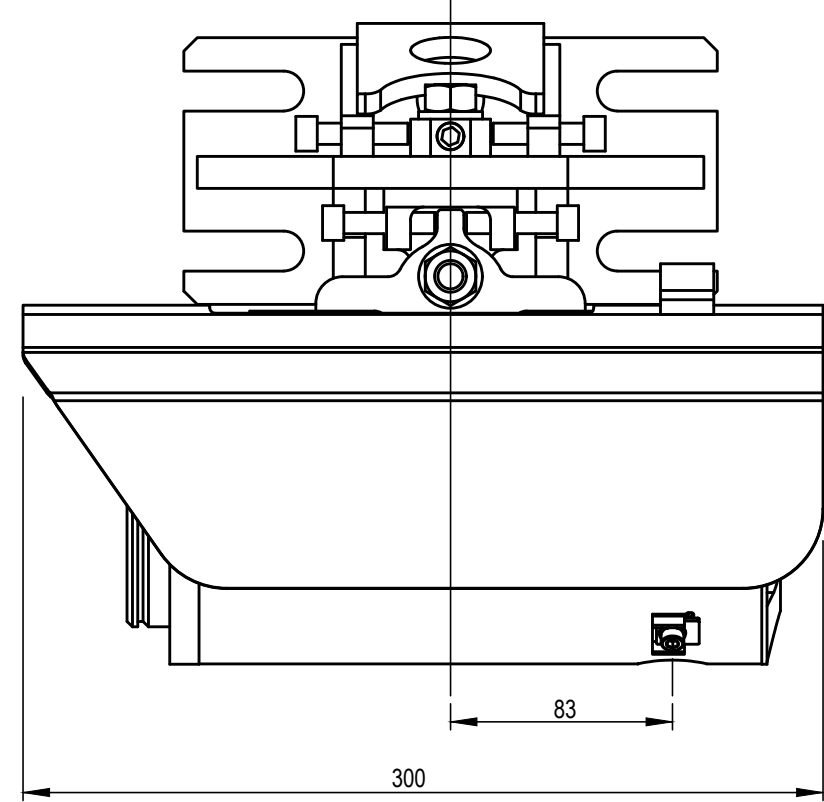
MOUNTING
SCALE: NTS



FRONT VIEW

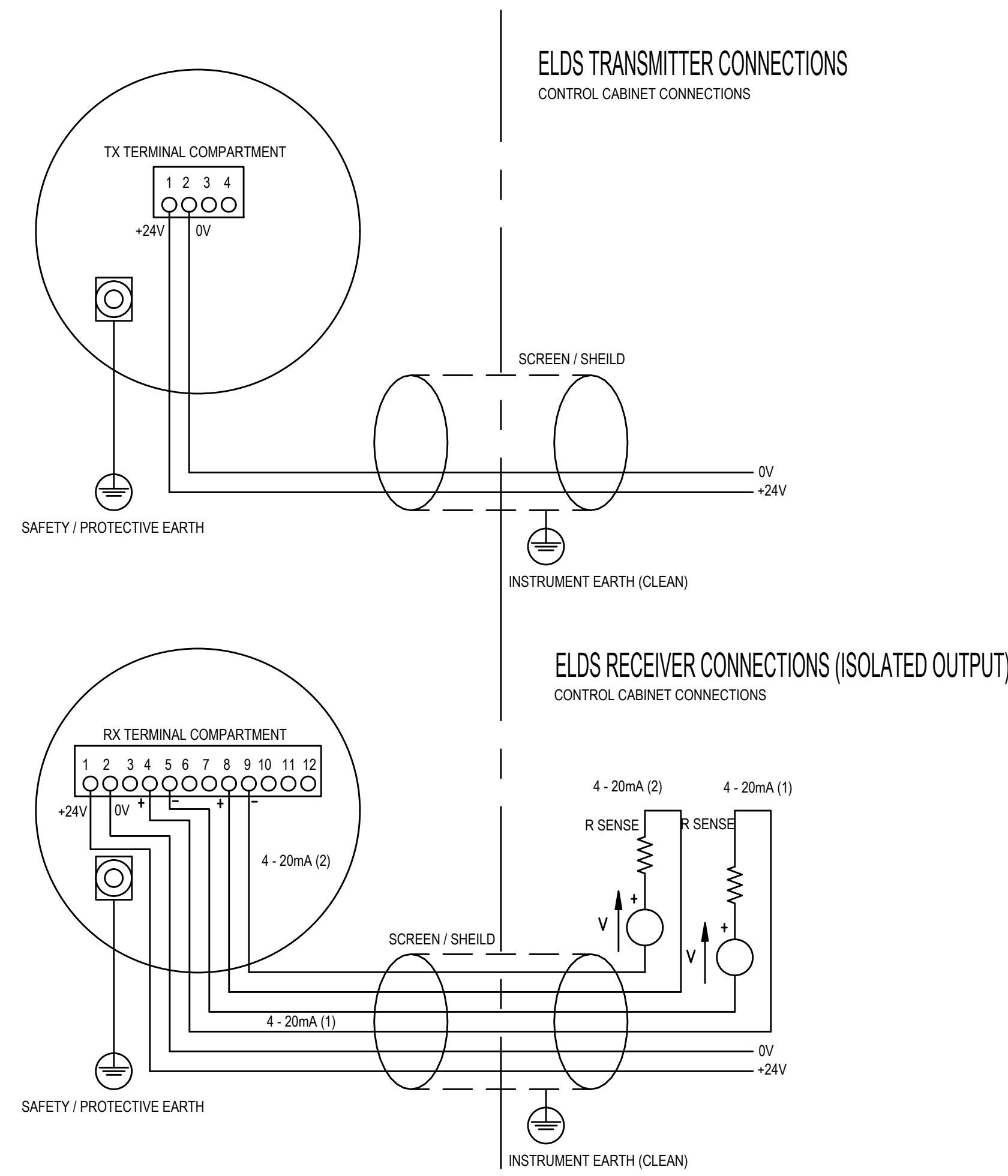
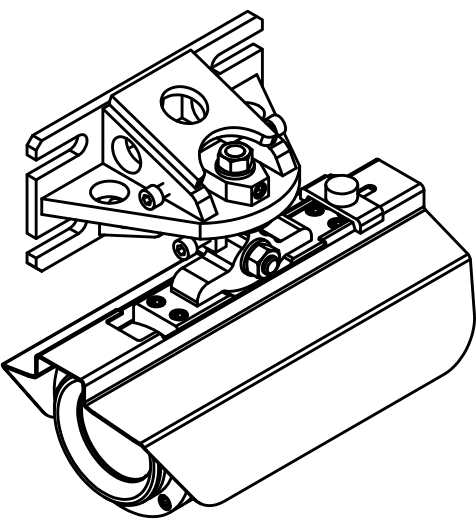


SIDE VIEW

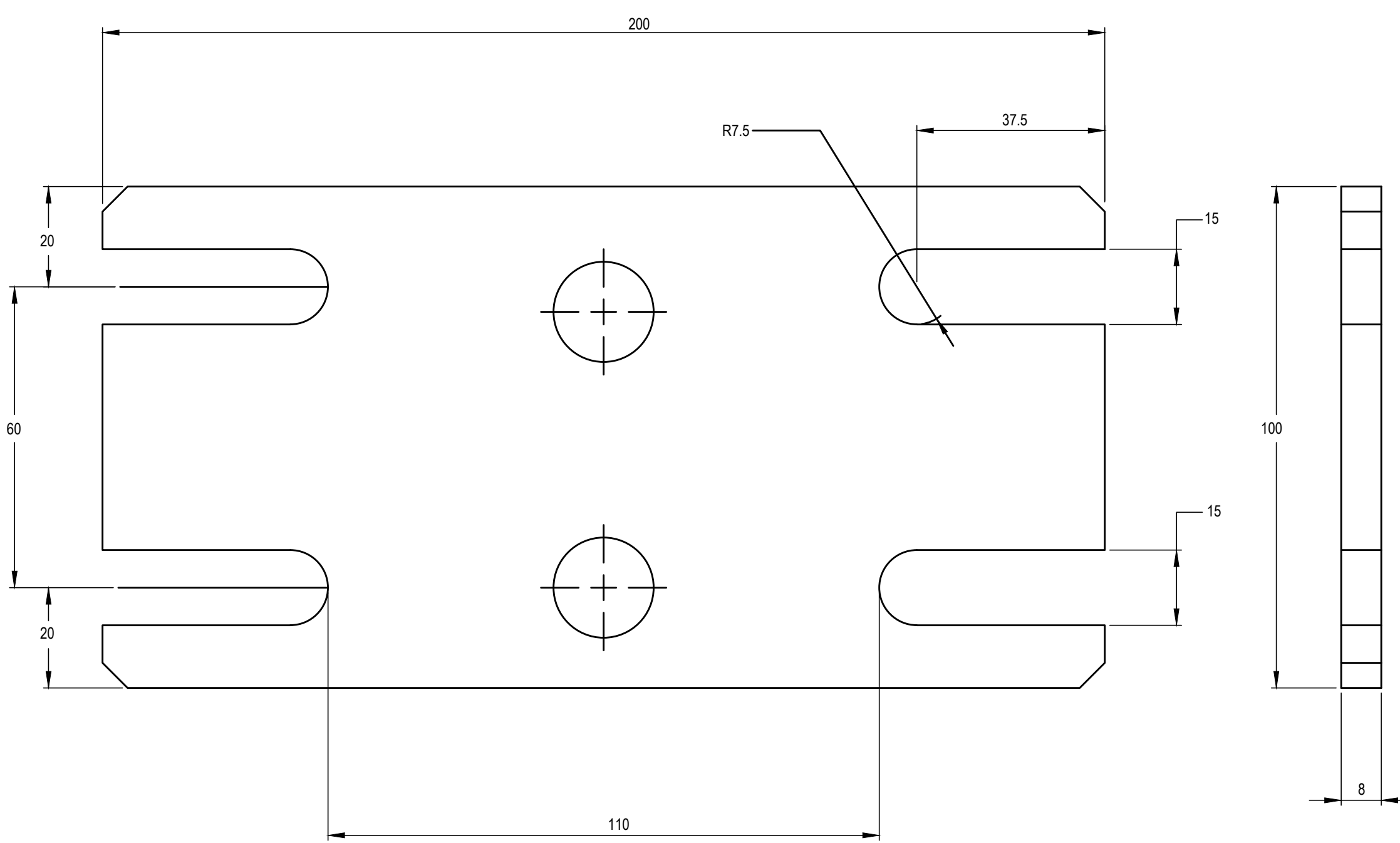


UNIT	WEIGHT (KG)	MATERIAL
BRACKET (FM)	3.7	SS 316
SUNSHADE (FM)	0.9	SS 316
RX (UNIT ONLY)	8.0	SS 316
TX (UNIT ONLY)	8.9	SS 316
RX (COMPLETE)	12.6	SS 316
TX (COMPLETE)	17.2	SS 316

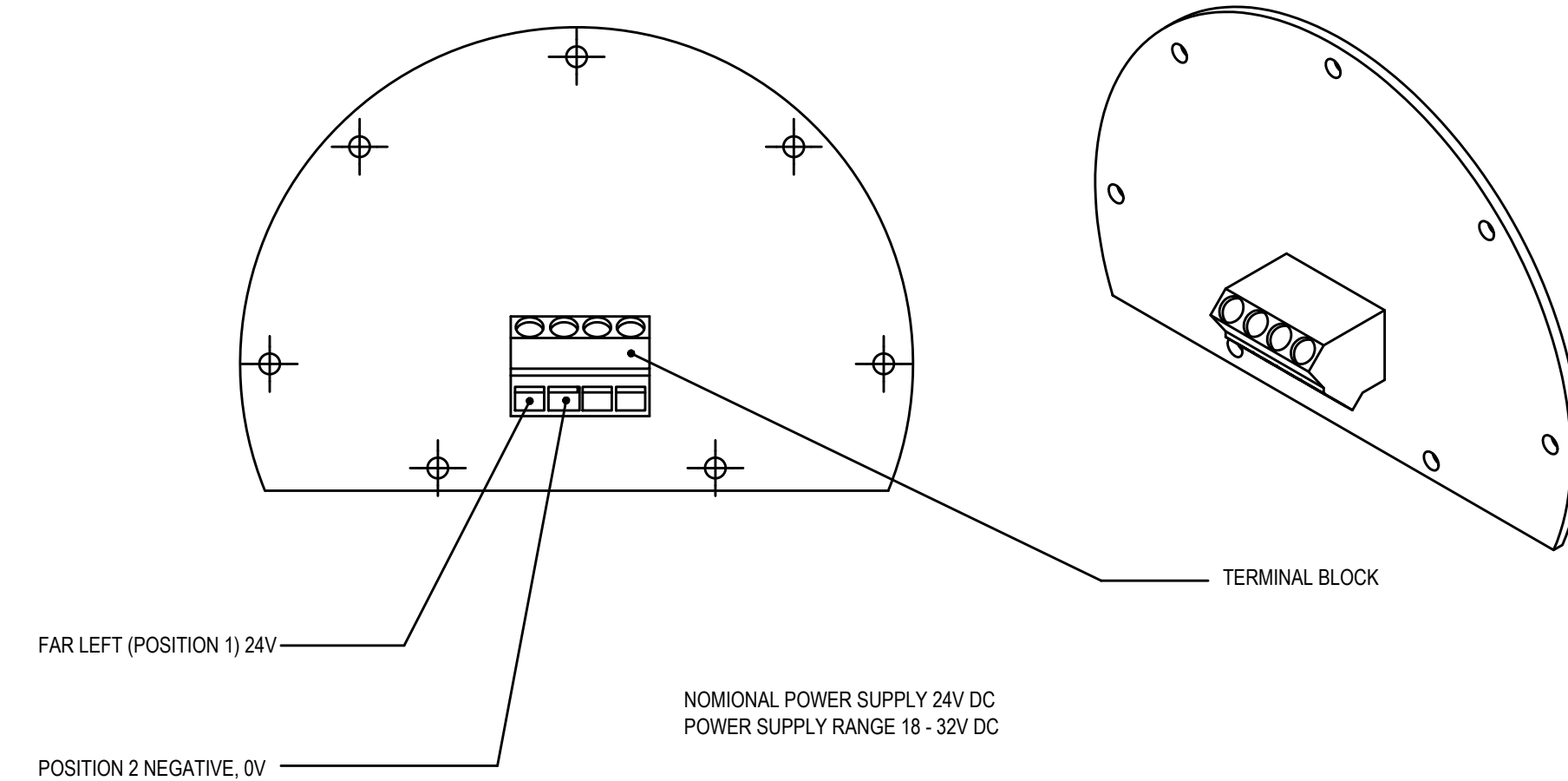
FM
SCALE: NTS



ISOLATED OUTPUT
SCALE: NTS



BRACKET
SCALE: NTS



POWER SUPPLY CONNECTIONS, WIRING, AND FUSE

COMPONENT	MAXIMUM POWER CONSUMPTION	MAXIMUM CABLE LENGTH WITH 1.5mm ² CONDUCTORS (12 DRAWS/M AND 24VDC SUPPLY)	MAXIMUM CABLE LENGTH WITH 1.5mm ² CONDUCTORS (7.6 DRAWS/M AND 24VDC SUPPLY)	TERMINAL SIZES	MINIMUM FUSE RATING	RECOMMENDED FUSE RATING
TRANSMITTER	12W	450m (1476 ft)	710m (2329 ft)	0.5mm ² - 25mm ² (28 AWG - 14 AWG)	1 A	1.5 A
RECEIVER	10W	375m (1230 ft)	1936m (1936 ft)	0.5mm ² - 25mm ² (28 AWG - 14 AWG)	0.75 A	1 A
SYSTEM (TX+RX)	12W	-	-	-	1.75 A	2.0 A

WIRING OVERVIEW
SCALE: NTS

NOTES

1. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING EQUIPMENT TO REPLACE. CONTRACTOR SHALL PROVIDE ALL NEW BRACKETS / SUPPORTS



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REF. SCALE IN INCHES
PROJECT #24004241.00

No.	Date	Revision / Issue
1	05/14/2025	75% SUBMISSION
2	08/13/2025	100% SUBMISSION
3	11/17/2025	FOR BID
4	06/30/2026	ADDENDUM #1

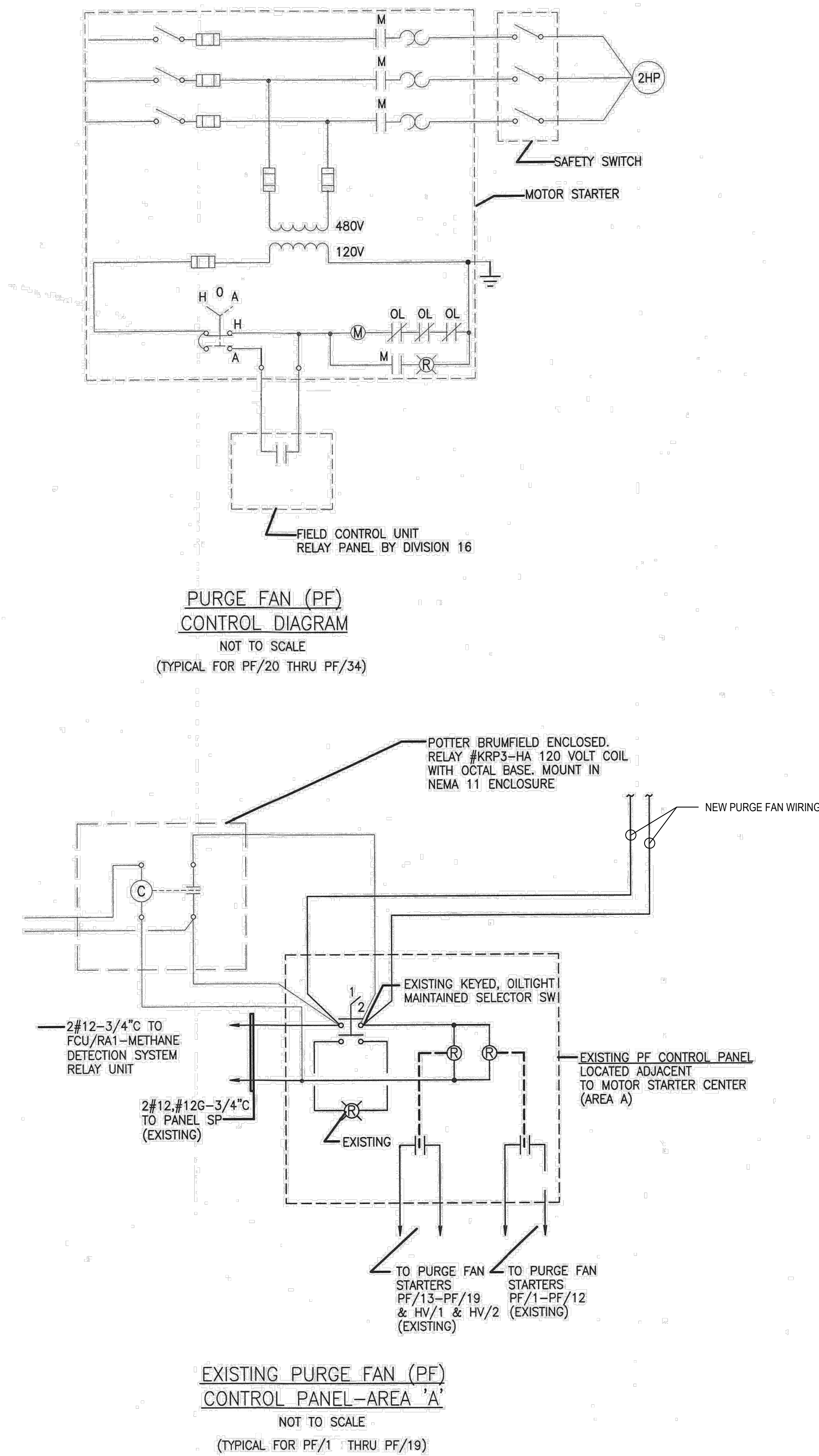
Issue	Date	Project #	Drawn	Checked	Approved
		24004241.00	RC	RW	

OPEN PATH LASER MOUTNING DETAILS
AND WIRING DIAGRAM

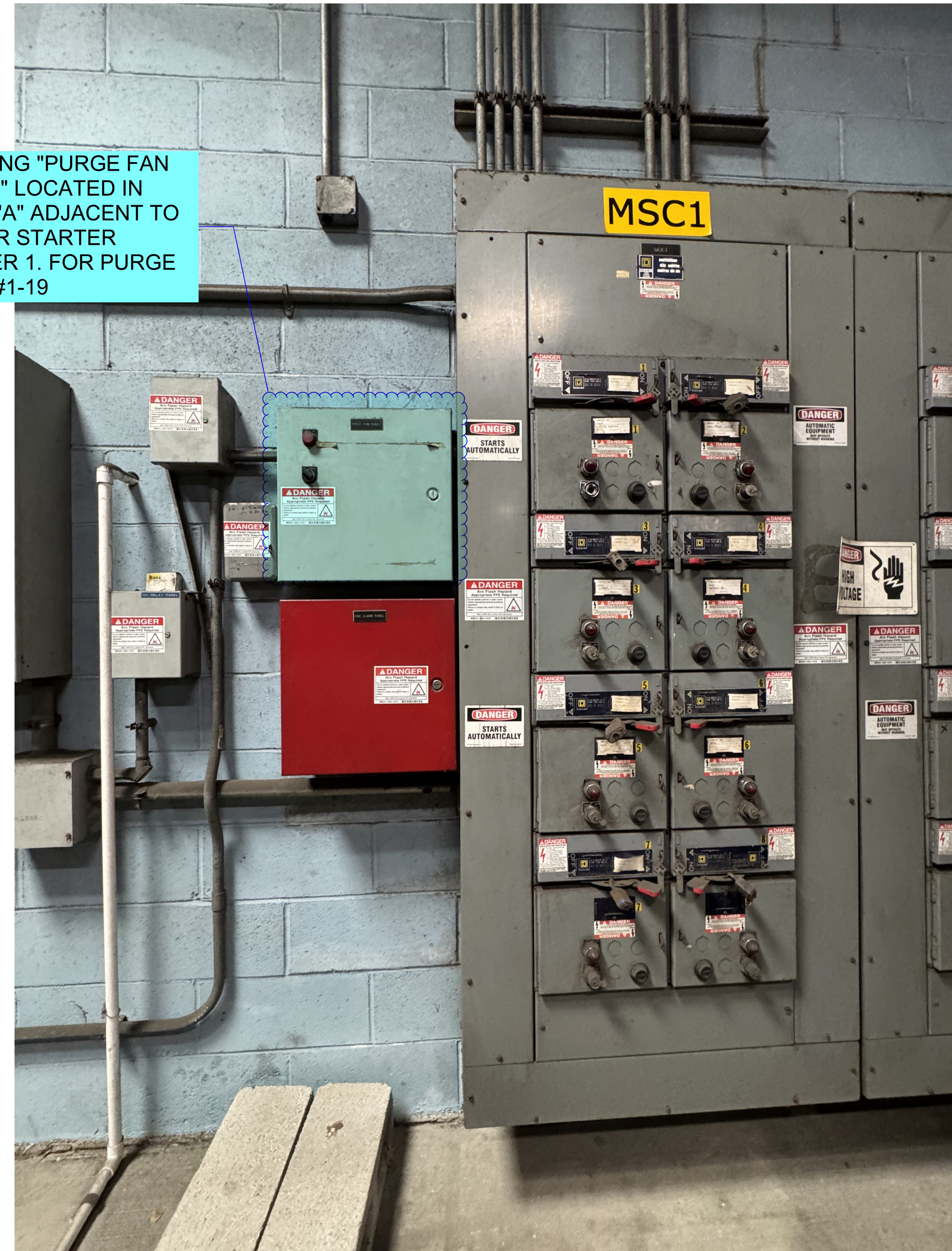
Scale:

SHEET NUMBER

E-003



EXISTING "PURGE FAN PANEL" LOCATED IN AREA "A" ADJACENT TO MOTOR STARTER CENTER 1. FOR PURGE FANS #1-19





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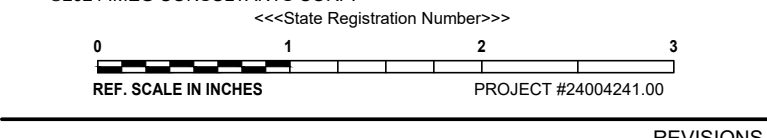
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4	06/30/2026	ADDENDUM #1

SHEET INFORMATION

Issue _____

Date _____

Project # **24004241.00**

Drawn **RC**

Checked **RW**

Approved _____

SHEET TITLE

RISER DIAGRAM

Scale: _____

SHEET NUMBER

E-010

REMOTE MONITORING
STATION IN
MAINTENANCE AREA

SEE NOTE 3

AREA E

AREA D

AREA D

AREA C

AREA C

AREA B

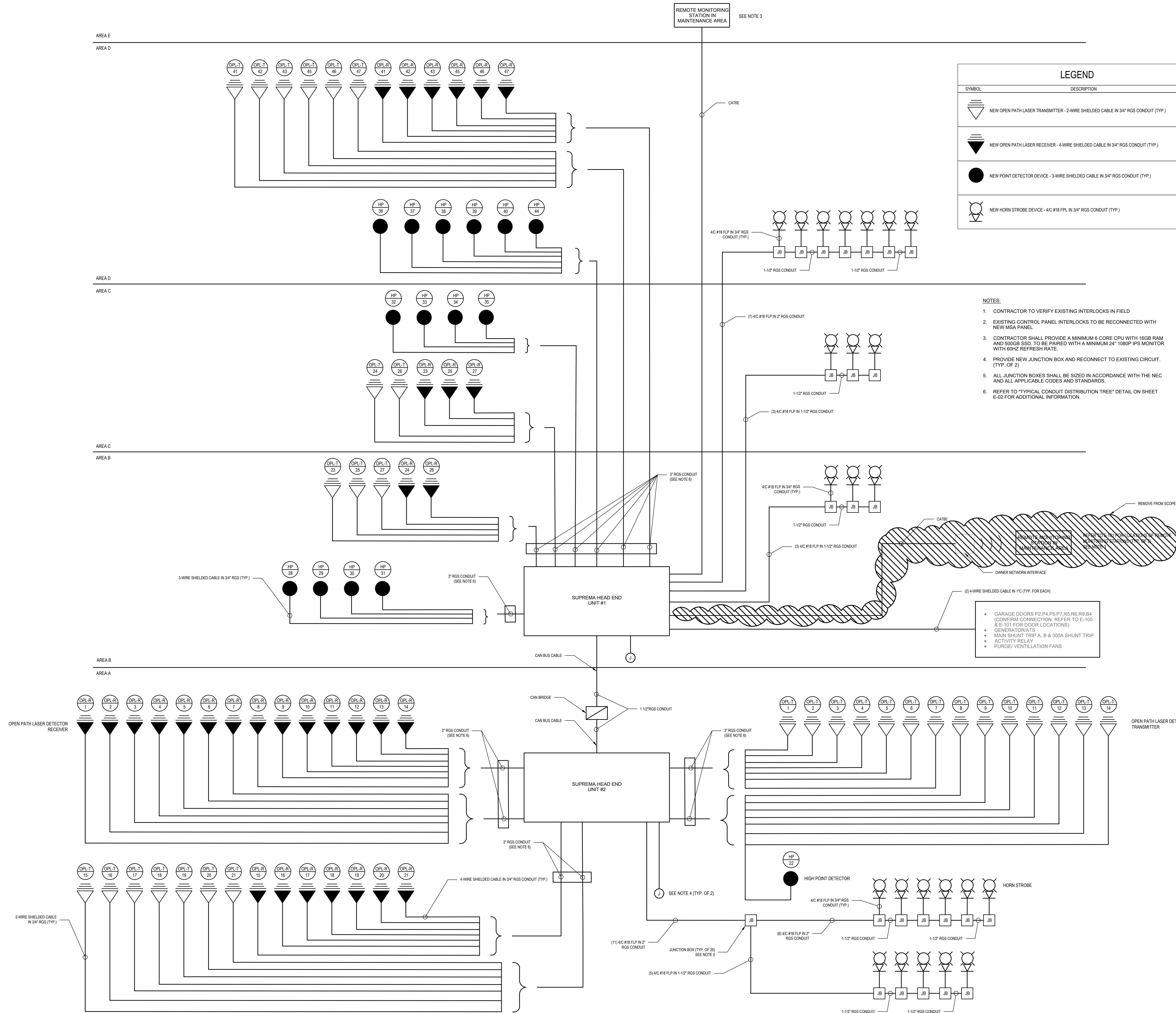
AREA B

AREA A

LEGEND	
SYMBOL	DESCRIPTION
	NEW OPEN PATH LASER TRANSMITTER - 2-WIRE SHIELDED CABLE IN 3/4" RGS CONDUIT (TYP.)
	NEW OPEN PATH LASER RECEIVER - 4-WIRE SHIELDED CABLE IN 3/4" RGS CONDUIT (TYP.)
	NEW POINT DETECTOR DEVICE - 3-WIRE SHIELDED CABLE IN 3/4" RGS CONDUIT (TYP.)
	NEW HORN STROBE DEVICE - 4-C #18 FPL IN 3/4" RGS CONDUIT (TYP.)

NOTES:

- CONTRACTOR TO VERIFY EXISTING INTERLOCKS IN FIELD
- EXISTING CONTROL PANEL INTERLOCKS TO BE RECONNECTED WITH NEW MSA PANEL
- CONTRACTOR SHALL PROVIDE A MINIMUM 6 CORE CPU WITH 16GB RAM AND 500GB SSD. TO BE PAIRED WITH A MINIMUM 24" 1080P IPS MONITOR WITH 60HZ REFRESH RATE.
- PROVIDE NEW JUNCTION BOX AND RECONNECT TO EXISTING CIRCUIT. (TYP. OF 2)
- ALL JUNCTION BOXES SHALL BE SIZED IN ACCORDANCE WITH THE NEC AND ALL APPLICABLE CODES AND STANDARDS.
- REFER TO "TYPICAL CONDUIT DISTRIBUTION TREE" DETAIL ON SHEET E-02 FOR ADDITIONAL INFORMATION.

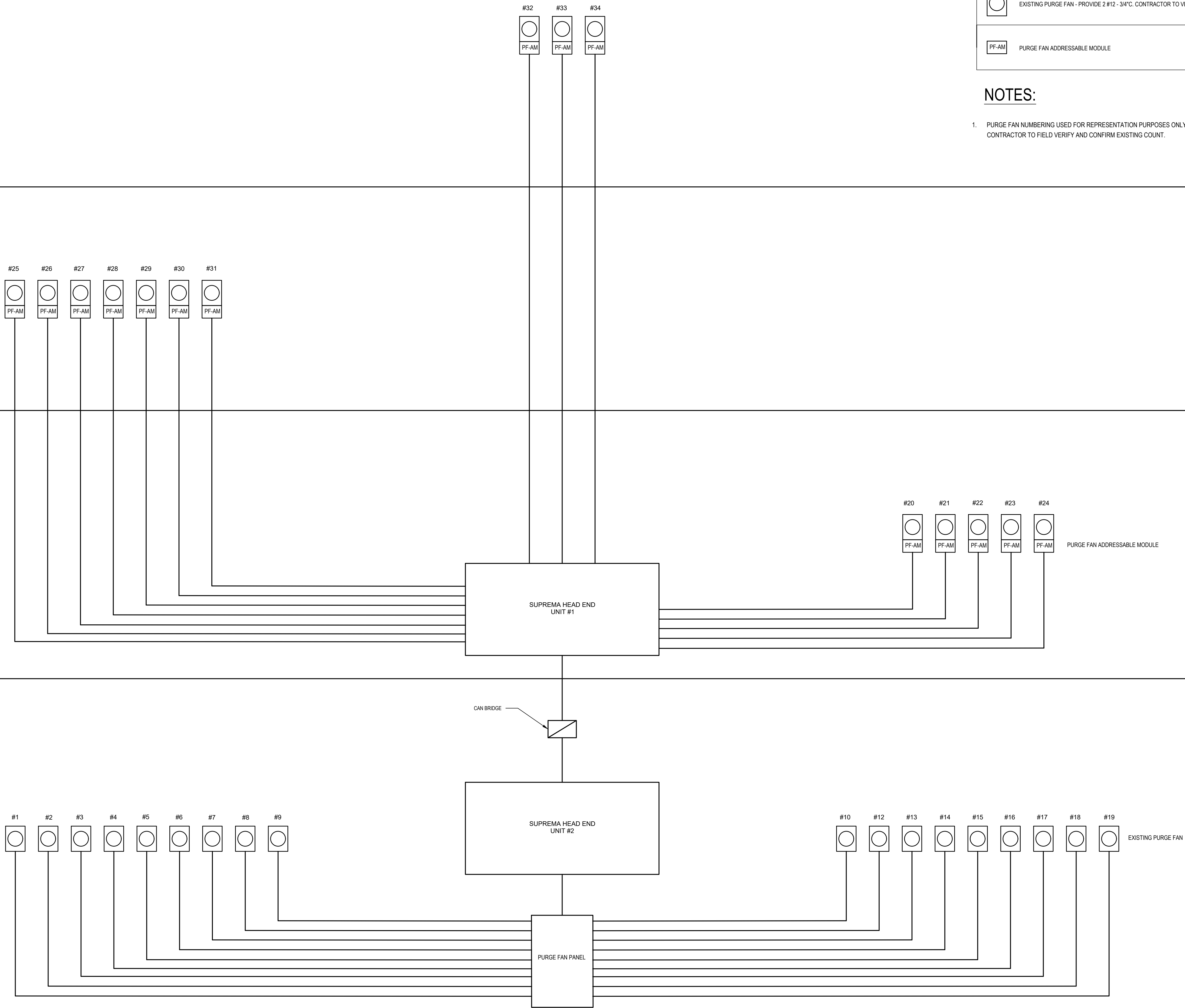


AREA E
AREA D

AREA D
AREA C

AREA C
AREA B

AREA B
AREA A



LEGEND	
SYMBOL	DESCRIPTION
	EXISTING PURGE FAN - PROVIDE 2 #12 - 34" C. CONTRACTOR TO VERIFY WIRE SIZE
	PURGE FAN ADDRESSABLE MODULE

NOTES:

1. PURGE FAN NUMBERING USED FOR REPRESENTATION PURPOSES ONLY.
CONTRACTOR TO FIELD VERIFY AND CONFIRM EXISTING COUNT.



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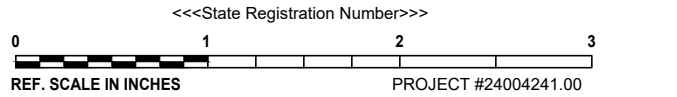
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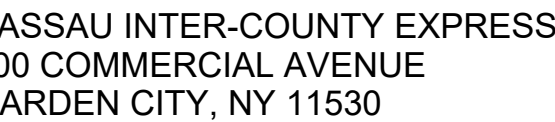
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No.	Date	Revision / Issue
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SHEET INFORMATION	
Issue	
Date	
Project #	24004241.00
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SHEET TITLE
SYSTEM INTERLOCK RISER

SCALE

SHEET NUMBER
E-011



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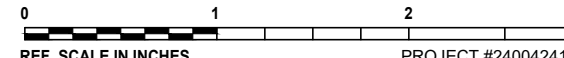
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SHEET INFORMATION

Issue	
Date	
Project #	24004241.00
Drawn	RC
Checked	RW
Approved	

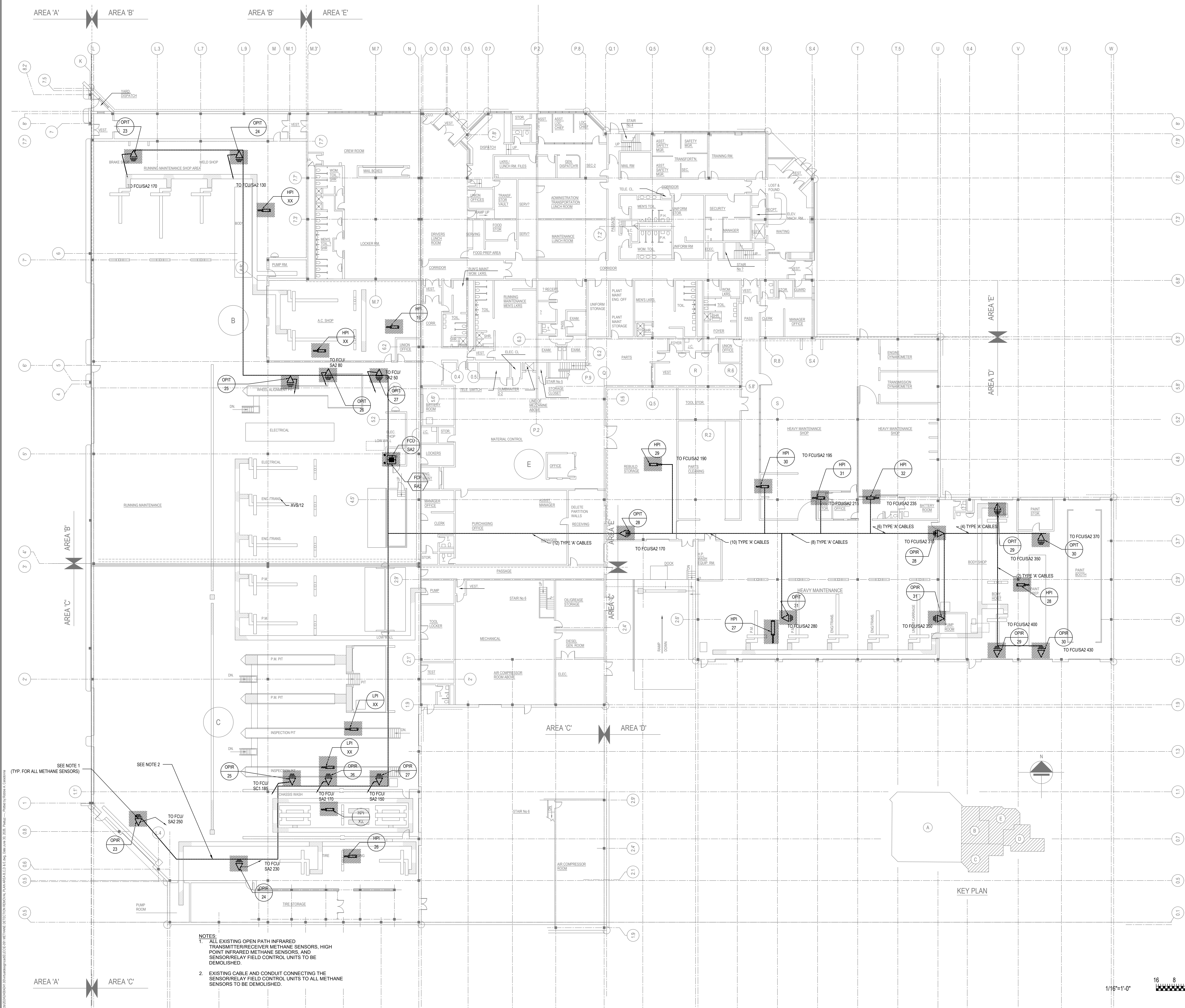
SHEET TITLE

**METHANE DETECTION REMOVAL
PLAN AREA B,C,D & E**

Scale: _____

SHEET NUMBER

E-091





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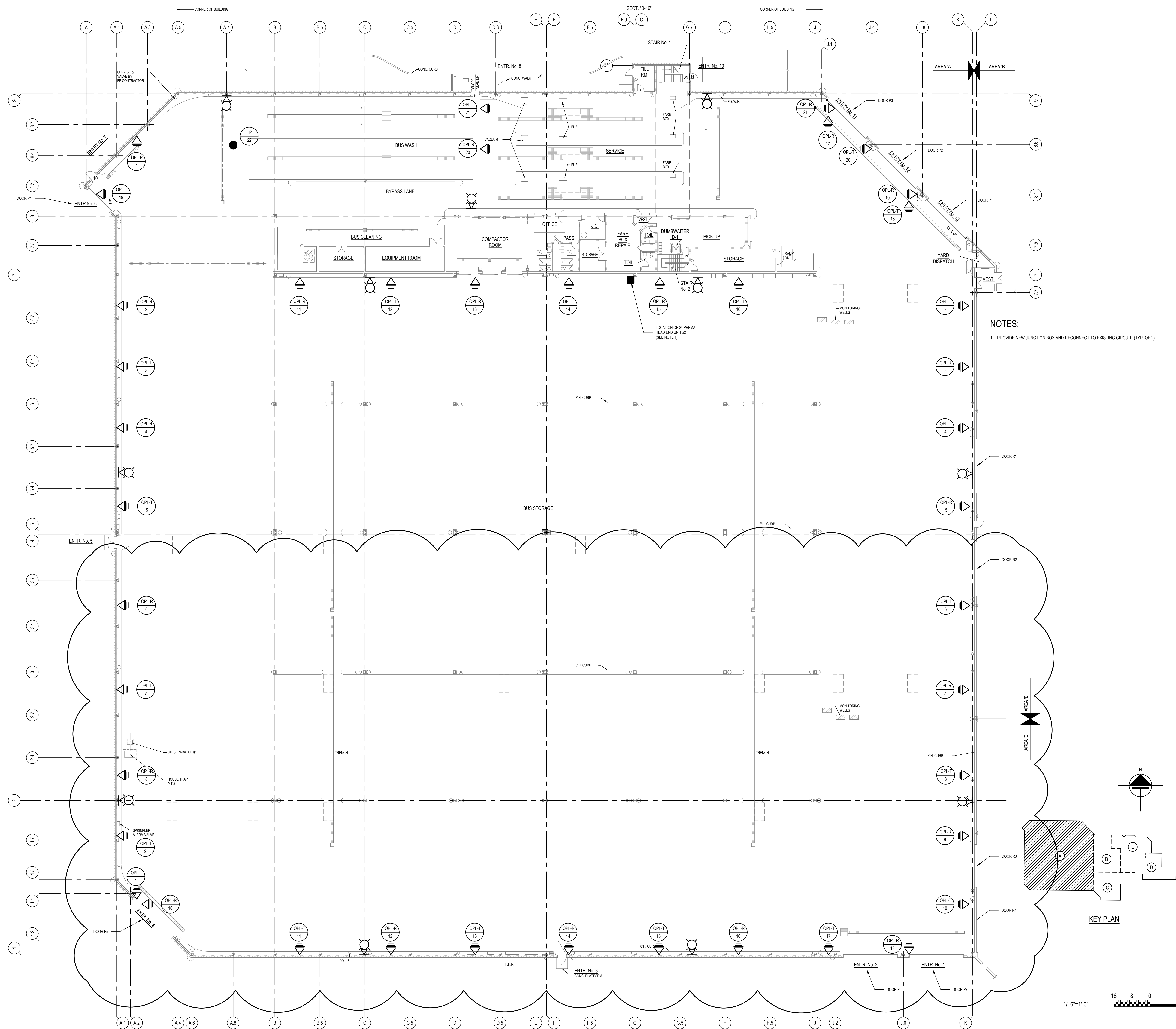
SHEET TITLE

METHANE DETECTION PLAN AREA A

Scale:

SHEET NUMBER

E-100





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11/17/2025	FOR BID
06/30/2026	ADDENDUM #1

SHEET INFORMATION

Job _____
 Date _____
 Project # _____ 24004
 With _____
 Checked _____
 Approved _____

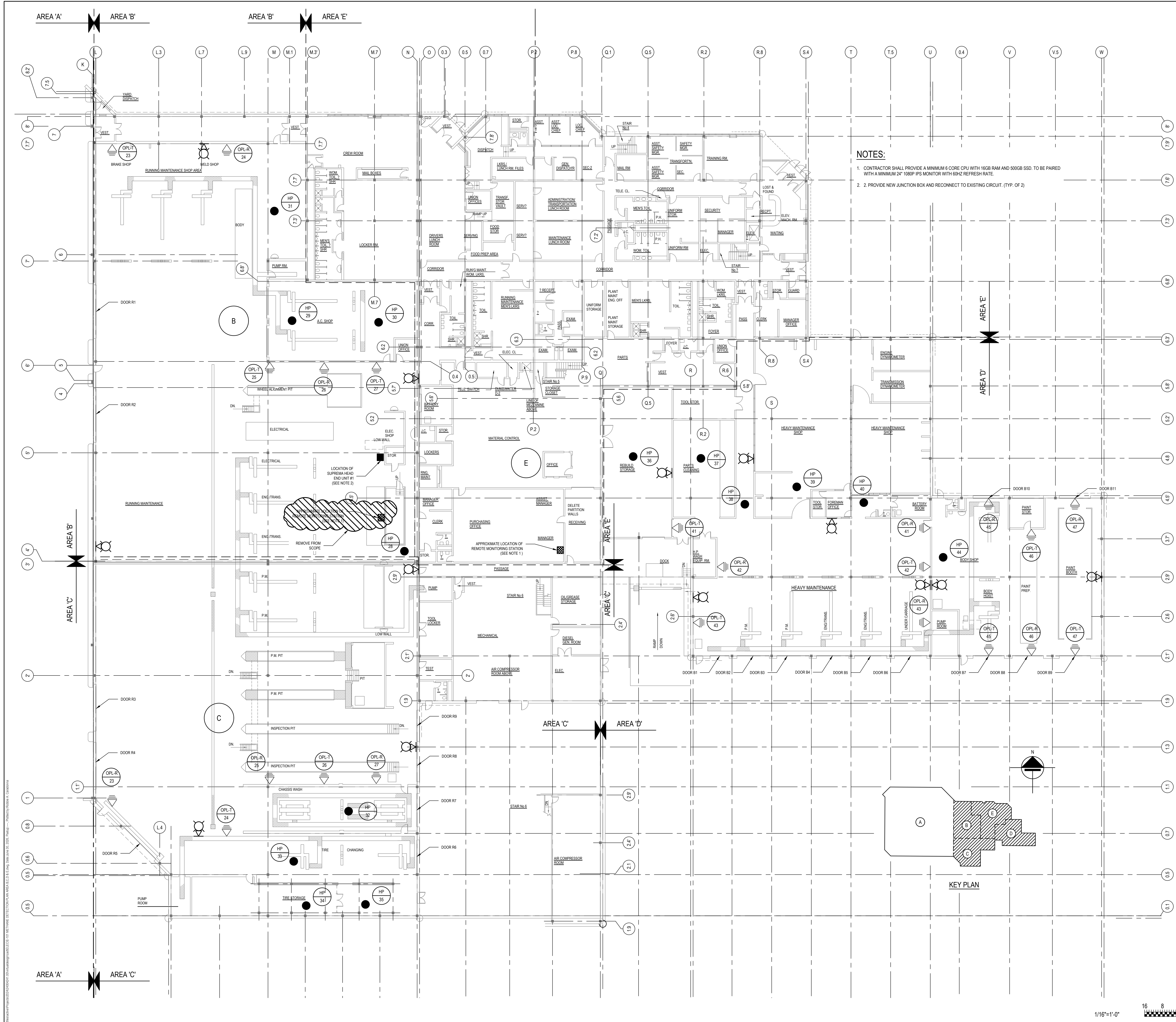
SHEET

METHANE DETECTION PLAN AND

B.C.D.

SHEET NUMBER

E-101





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SHEET INFORMATION

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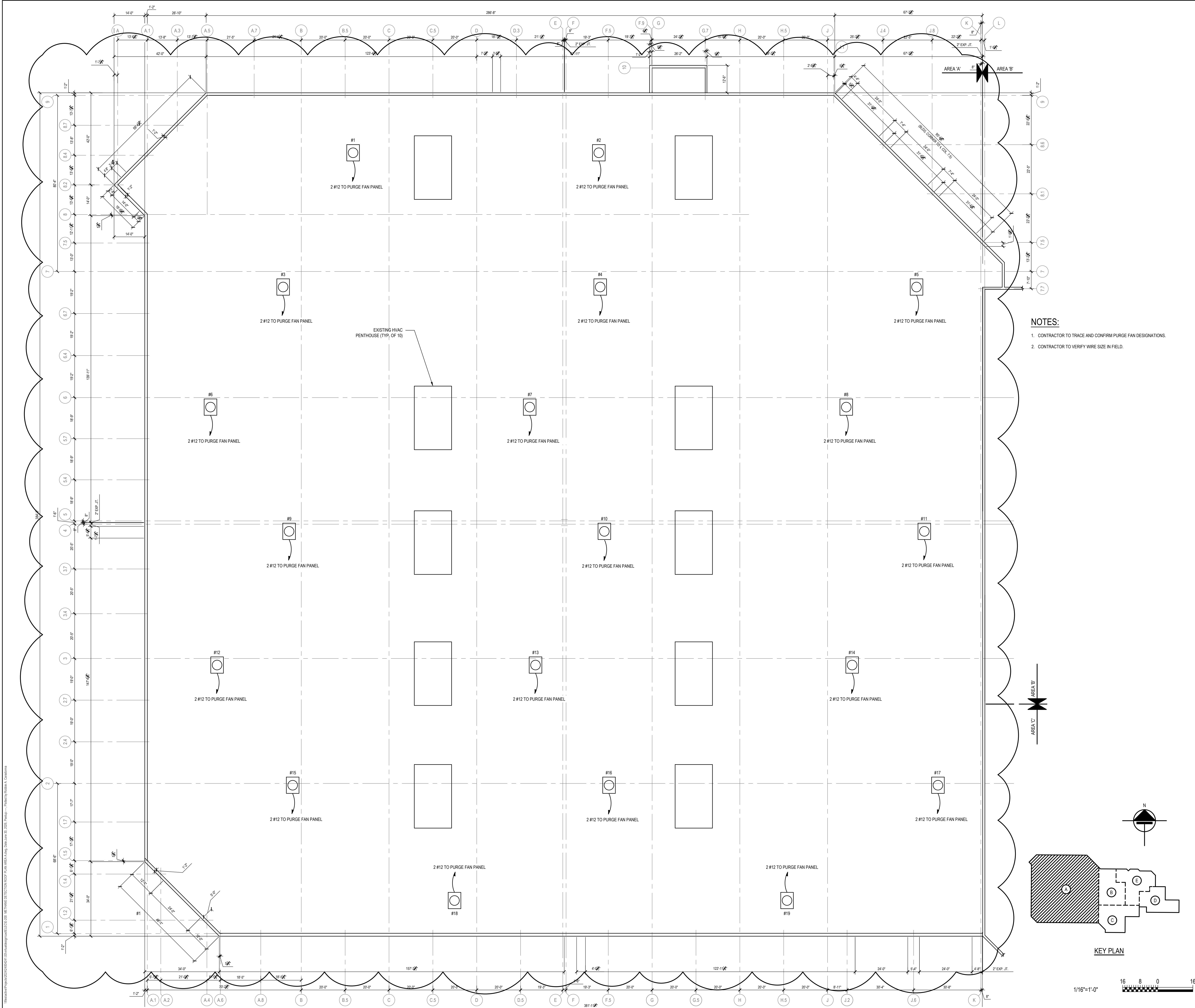
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PURGE FAN ROOF PLAN AREA A

Scale:

SHEET NUMBER

E-200





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SHEET INFORMATION

Issue
Date
Project #
Drawn
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Approved

SHEET TITLE

PURGE FAN ROOF PLAN AREA B,C,D & E

SCALE

Scale:

SHEET NUMBER

E-201

