APPENDIX C.13 CASE 10-T-0139 SITE PLANS AND CONSTRUCTION DRAWINGS ARCHITECTURAL DRAWINGS – AUXILIARY ENCLOSURES ASTORIA HVDC CONVERTER STATION - SEGMENT 22



ASTORIA HVDC CONVERTER STATION

AUXILIARY ENCLOSURES ARCHITECTURE PACKAGE

SCOPE OF WORK

THE ARCHITECTURAL SCOPE OF WORK FOR THE ASTORIA CONVERTER STATION INCLUDES THE ARCHITECTURAL DESIGN FOR THE AREAS BELOW:

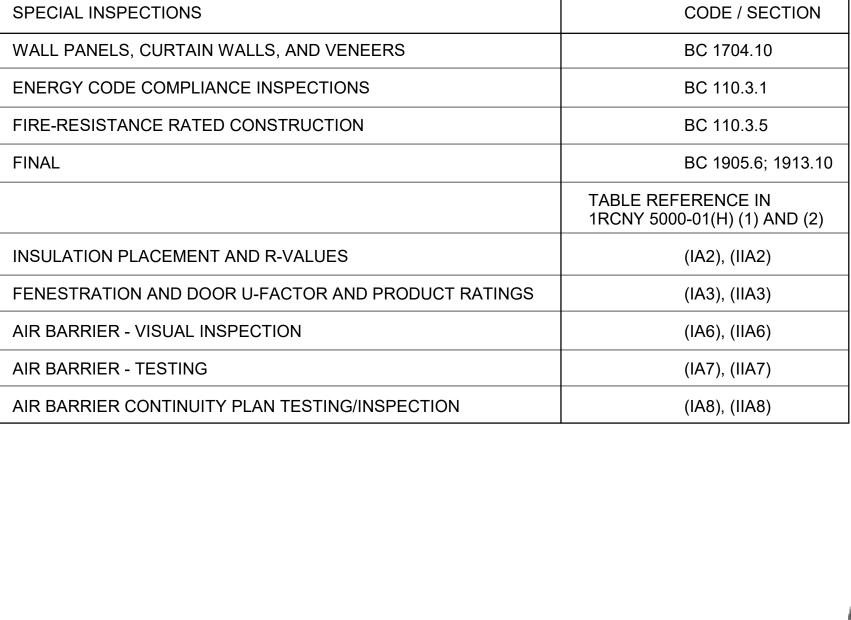
- 1. STORAGE ENCLOSURE 2. RELAY ENCLOSURE
- 3. MVS ENCLOSURE
- 4. AC FILTER YARD FENCE
- 5. SITE FENCE AND GATES

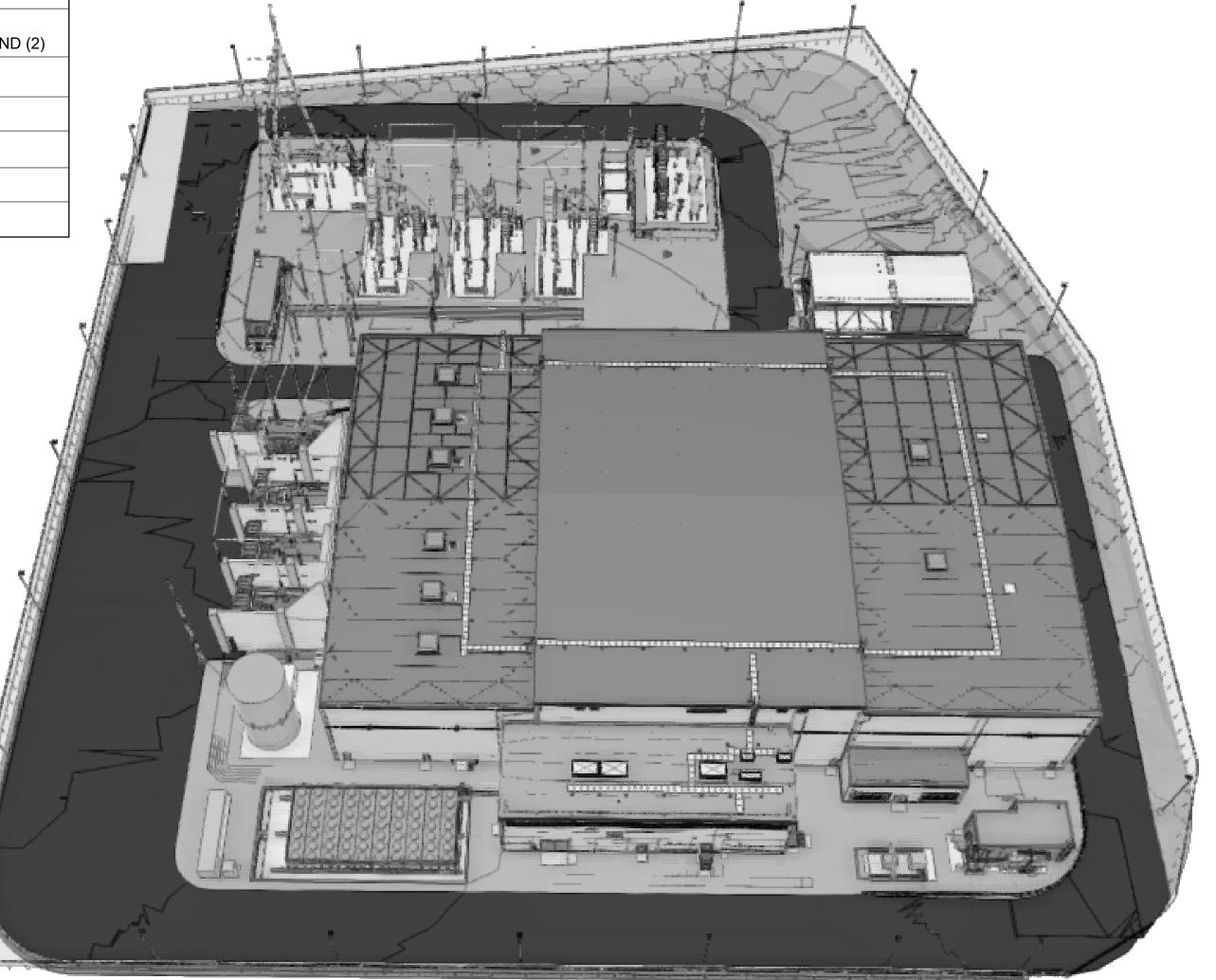
FLOOD ZONE DESIGN **CERTIFICATION:**

THE EXISTING PROPERTY IS IN THE SPECIAL FLOOD HAZARD AREA (SFHA), ZONE AE PER EFFECTIVE 2015 FLOOD INSURANCE RATE MAP(FIRM). THIS IS TO CONFIRM THAT THE PROPOSED INSTALLATION IS IN COMPLIANCE WITH THE REQUIREMENTS SET FORTH IN APPENDIX Q OF THE NYC BUILDING CODE.

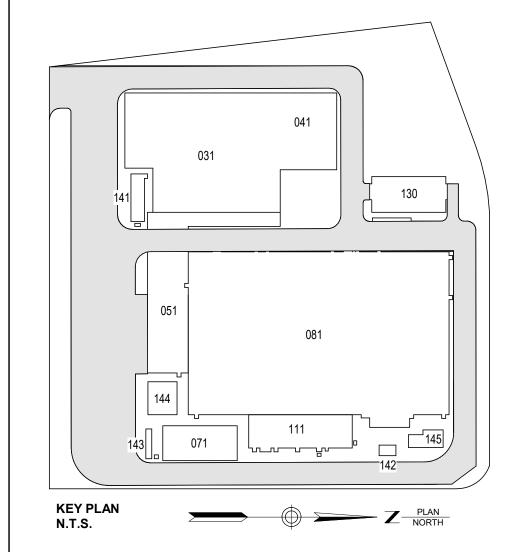
NYC ENERGY CODE COMPLIANCE:

STATEMENT: TO THE BEST OF MY KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK CITY ENERGY CONSERVATION CODE. PROPOSED WORK MEETS THE GUIDELINES AND INSTRUCTIONS OUTLINED IN THE 2020 NYC ECC CHAPTER 4.





ISSUED FOR PERMIT





SUITE 1604



25 Mohawk Avenue **Sparta, NJ 07871**

HESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL HALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE

В	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
Α	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022
REV	DESCRIPTION	DRW BY	CHK BY	DATE



@Hitachi Energy 901 Main Campus Drive Raleigh, North Carolina 27606



Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

COVER SHEET



DATE	12/12/2022
PROJECT NO	105121
DRAWING BY	S. WARYAH
CHECKED BY	J. STEPHENS
DRAWING NO	
T-00	01.00

GENERAL CONSTRUCTION NOTES

- ALL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE SPECIFICATIONS IN DETERMINING THE FULL PROJECT SCOPE.
- ALL BUILDING DEPARTMENT PERMITS SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF WORK.
- ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH STATE CODES, RULES AND REGULATIONS AND ALL OTHER STATE AGENCIES HAVING JURISDICTION OVER ANY PORTION OF WORK SPECIFIED IN THESE DOCUMENTS.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND JOB CONDITIONS PRIOR TO STARTING WORK AND SHALL REPORT TO THE ARCHITECT ANY DISCREPANCIES OR
- DIMENSIONS SHOWN ON FLOOR PLANS ARE TYPICALLY TO CENTER LINE OF COLUMNS OR FACE OF STUDS, CONCRETE OR MASONRY UNLESS NOTED OTHERWISE.

OMISSIONS WHICH WOULD INTERFERE WITH SATISFACTORY COMPLETION OF WORK.

- DO NOT SCALE DRAWINGS: WRITTEN DIMENSIONS GOVERN PARTITION LOCATIONS, DIMENSIONS AND TYPES. IN CASE OF CONFLICT, NOTIFY ARCHITECT FOR WRITTEN CLARIFICATIONS PRIOR TO PROCEEDING W/ CONSTRUCTION. CONSTRUCTION PLAN BY ARCHITECT SUPERCEDES OTHER PLANS.
- DIMENSIONS MARKED "CLEAR" OR "CLR" SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESS OF FINISHES INCLUDING CARPET, VCT, ETC. CONTRACTOR SHALL NOT ADJUST DIMENSIONS WITHOUT WRITTEN INSTRUCTIONS FROM THE ARCHITECT.
- DIMENSIONS SHOWN AS "VIF" SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD BY LAYING OUT THE PARTITIONS. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY DISCREPANCY IN DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK IN THE AREA.
- CONTRACTOR IS TO PROTECT ALL AREAS IN SUCH MANNER AS TO ELIMINATE HAZARDS TO PERSONS AND PROPERTY: TO MINIMIZE INTERFERENCE WITH USE OF ADJACENT AREAS, UTILITIES AND STRUCTURES OR INTERRUPTION OF USE OF SUCH UTILITIES.
- CONTRACTOR SHALL TAKE REASONABLE CARE TO MAINTAIN A SAFE AND SECURE WORK AREA AT ALL TIMES THROUGH THE USE OF, AMONG OTHER ITEMS, SAFETY EQUIPMENT AND FALL PROTECTION.
- THE DRAWINGS INDICATE A SPECIFIC DESIGN INTENT. THIS INTENT IS NOT SUBJECT. TO SUBSTITUTION. WHERE SPECIFIC MATERIALS ARE IDENTIFIED AND ARCHITECTURAL STYLES SHOWN, THESE SHALL BE PROVIDED UNLESS APPROVED OTHERWISE.
- ALL DISSIMILAR METALS SHALL BE EFFECTIVELY ISOLATED FROM EACH OTHER TO PREVENT GALVANIC ACTION.
- WHERE A SPECIFIC CONDITIONS IS DETAILED, IT SHALL BE UNDERSTOOD THAT ALL LIKE OR SIMILAR CONDITIONS ARE THE SAME UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE.
- ELEVATIONS NOTED ARE BASED ON TOP OF SLAB OF MAIN FLOOR LEVEL. ELEVATION 15'-0" IS EQUAL TO FINISHED FLOOR LEVEL.

ARCHITECTURAL ABBREVIATIONS

DEPT

DET

DIA

DMPF

DN

DEGREE

DETAIL

DIAGONAL

DIAMETER

DIVISION

DOWN

DOOR

DIMENSION

DEAD LOAD

DAMPPROOFING

MANUFACTURER

DOWNSPOUT

DISHWASHER

MATERIALS LEGEND

- CONCRETE

- GYP BD / GROUT

- BATT INSULATION

DEMOUNTABLE PARTITION

DEPARTMENT

NOT ALL ABBREVIATIONS DEPICTED ON THIS LEGEND ARE USED IN THE ARCHITECTURAL DRAWINGS

NOT ALI	ABBREVIATIONS DEPICTED ON THIS LEGENE	O ARE USED I	N THE ARCHITECTURAL DRAWING	SS.			
ABV	ABOVE	DWG	DRAWING	LPT	LOW POINT	SAPC	SUSPENDED ACOUSTICAL PANEL CEILING
AC	AIR CONDITIONER	Е	EAST	LT	LIGHT	SCHED	SCHEDULE
ACST	ACOUSTIC	EA	EACH	LWC	LIGHTWEIGHT CONCRETE	SDG	SIDING
ADDL	ADDITIONAL	EGEN	EMERGENCY GENERATOR	MAINT	MAINTENANCE	SDS	SELF DRILLING SCREW
ADJ	ADJACENT	EF	EXHAUST FAN	MAS	MASONRY	SEC	SECTION
AFF	ABOVE FINISH FLOOR	EIFS	EXTERIOR INSULATION &	MATL	MATERIAL	SF	SQUARE FOOT
AGGR	AGGREGATE		FINISH SYSTEM	MAX	MAXIMUM	SGFT	STRUCTURAL GLAZED
AL	ALUMINUM	EL	ELEVATION	MDC	MATERIAL DISTRIBUTION CENTER		FACING TILE
ALT	ALTERNATE	ELEC	ELECTRICAL	MECH	MECHANICAL	SH	SHOWER
ARCH	ARCHITECTURAL	ELEV	ELEVATOR	MEMB	MEMBRANE	SHT	SHEET
ASB	ASBESTOS	ENTR	ENTRANCE	MEZZ	MEZZANINE	SI	INTERNATIONAL SYSTEM
ASPH	ASPHALT	EQ	EQUAL	MFR	MANUFACTURER		OF UNITS
ASPHRS	ASPHALT ROOF SHINGLES	EQUIP	EQUIPMENT	MGR	MANAGER	SIM	SIMILAR
ASSN	ASSOCIATION	EWC	ELECTRIC WATER COOLER	MH	MANHOLE	SKY	SKYLIGHT
ASST	ASSISTANT	EXH	EXHAUST	MIL	MILITARY	SLDR	SLIDING DOOR
ASSY	ASSEMBLY	EXIST	EXISTING	MIN	MINIMUM	SMLS	SEAMLESS
AVE	AVENUE	EXP	EXPANSION	MISC	MISCELLANEOUS	SPEC	SPECIFICATION
AVG	AVERAGE	EXP JT	EXPANSION JOINT	MET	METAL	SPKLR	SPRINKLER
В	ВОТТОМ	EXT	EXTERIOR	ML	METAL LATH	SPKR	SPEAKER
BALC	BALCONY	FAB	FABRICATE	MLDG	MOLDING	SQ	SQUARE
BC	BOTTOM OF CURB	FBD	FIBERBOARD	MLP	METAL LATH AND PLASTER	SS	STAINLESS STEEL
BD	BOARD	FD	FLOOR DRAIN	MO	MASONRY OPENING	SSB	SUPPORT SHOP BUILDING
BETW	BETWEEN	FDN	FOUNDATION	MOD	MOTOR OPERATED DAMPER	STD	STANDARD
BLDG	BUILDING	FDR	FIRE DOOR		MACHINE ROOM LESS ELEVATOR	STL	STEEL
BLKG	BLOCKING	FE		MRL MTG	MOUNTING	STOR	STORAGE
BLR	BOILER	FEC	FIRE EXTINGUISHER			STRUCT	STRUCTURE/STRUCTURAL
BM	BEAM	FEC	FIRE EXTINGUISHER &	MVS	MULTI VOLTAGE SWITCHGEAR NORTH	STWY	STAIRWAY
BM	BENCHMARK	ELIV.	CABINET	N NA	NOT APPLICABLE	SUPT	SUPERINTENDENT
BP	BASE PLATE	FHY	FIRE HYDRANT		NOT AFFLICABLE NOT IN CONTRACT	SUPVR	SUPERVISOR
		FIN	FINISH	NIC		SURF	SURFACE
BRDG	BRIDGING	FL	FLASHING	NO	NUMBER	SUSP	SUSPENDED/SUSPENSION
BRG	BEARING BOTH SIDES	FLEX	FLEXIBLE	NRC	NOISE-REDUCTION	SYS	SYSTEM
BS	BOTH SIDES	FLG	FLANGE	NTO	COEFFICIENT		TREAD
BSMT	BASEMENT	FLR	FLOOR	NTS	NOT TO SCALE	T	TOP OF
CAB	CABACITY	FLRG	FLOORING	OA	OVERALL	T/ T&B	TOP AND BOTTOM
CAP	CAPACITY	FP	FIREPROOF	OC	ON CENTER	T&G	TONGUE AND GROOVE
CARP	CARPET	FRP	FIBERGLASS-REINFORCED	OD	OUTSIDE DIAMETER	TAN	TANGENT
CDR	COILING DOOR		PLASTICS	OFF	OFFICE	TC	TOP OF CURB
CER	CERAMIC	FT	FOOT	OH	OPPOSITE HAND	TDD	TELECOMMUNICATION
	CERAMIC TILE	FTG	FOOTING	OHDR	OVERHEAD DOOR	וטטו	DISPLAY DEVICE
CI	CAST IRON	FURN	FURNITURE	OPNG	OPPOSITE	TEI	
CIP	CAST-IRON PIPE	GA	GAUGE	OPP	OPPOSITE PROPERTY LINE	TEL	TEMPORARY
CJ	CONTROL JOINT	GALV	GALVANIZED	P/L	PROPERTY LINE	TEMP	TEMPORARY
CL	CENTERLINE	GAR	GARAGE	PASS	PASSENGER	THRU	THROUGH
CLG	CEILING	GEN	GENERATOR	PCC	PRECAST CONCRETE	TRTD	TREATED
CLO	CLOSET	GL	GLASS	PERF	PERFORATED	TYP	TYPICAL
CLR	CLEAR	GOVT	GOVERNMENT	PL	PLACE	UNO	UNLESS NOTED OTHERWISE
CMIU	CONCRETE MASONRY INSULATED UNIT	GR	GRADE	PLAS	PLASTER	VAT	VINYL ASBESTOS TILE
CMU	CONCRETE MASONRY UNIT	GRD	GROUND	PLBG	PLUMBING	VCT	VINYL COMPOSITION TILE
CNCL	CONCEALED	GVL	GRAVEL	PLYWD	PLYWOOD	VERT	VERTICAL
CO	CLEANOUT	GWB	GYPSUM WALLBOARD	PNL	PANEL	VLM	VERTICAL LIFT MACHINE
CO	COMPANY	GYP	GYPSUM	PNT	PAINT	VTR	VENT THRU ROOF
COL	COLUMN	Н	HIGH	PORC	PORCELAIN	W	WEST
COMP	COMPOSITION	HDWE	HARDWARE	PR	PAIR	W	WIDE
CONC	CONCRETE	HM	HOLLOW METAL	PREFAB	PREFABRICATED	W/	WITH
CONSTR	CONSTRUCTION	HMD	HOLLOW METAL DOOR	PROJ	PROJECT	W/O	WITHOUT
CONT	CONTINUOUS	HORIZ	HORIZONTAL	PSF	POUNDS PER SQUARE FOOT	WBD	WALLBOARD
CONTR	CONTRACTOR	HPT	HIGH POINT	PSI	POUNDS PER SQUARE INCH	WC	WATER CLOSET
CRV	CURVED	HT	HEIGHT	PT	POINT	WD	WOOD
CSK	COUNTERSINK	HTR	HEATER	PTD	PAINTED	WDR	WOOD DOOR
CTD	COATED	HVAC	HEATING, VENTILATING, &	PTN	PARTITION	WH	WATER HEATER
CTR	CENTER		AIR CONDITIONING	PVC	POLYVINYL CHLORIDE	WTRPRF	WATERPROOFING
CUH	CABINET UNIT HEATER	ID	INSIDE DIAMETER	PV	PHOTOVOLTAIC	WWF	WELDED WIRE FABRIC
D	DEPTH	ΙE	FOR EXAMPLE	QTF	QUARRY-TILE FLOOR	XFMR	TRANSFORMER
DBL	DOUBLE	IH	INTAKE HOOD	R	RADIUS		
_				п	DICED		

RISER

ROOF DRAIN

REINFORCE

REQUIRED

RETURN

REVISION

REGISTER ROOFING

RIGHT HAND

RAIN WATER CONDUCTOR

- PLYWOOD

- EARTH

ROOM

SOUTH

REINF

REFRIGERATOR

REFLECTIVE CEILING PLAN

ISSUED FOR PERMIT

Land Surveying, P.C.

370 7th Avenue **SUITE 1604** New York, NY 10001



25 Mohawk Avenue **Sparta, NJ 07871**

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SHEET INDEX, GENERAL NOTES, ABBREVIATIONS, **AND LEGEND**



12/12/2022 PROJECT NO DRAWING BY S. WARYAH CHECKED BY J. STEPHENS DRAWING NO

G-001.00 CADD FILE N0 Autodesk Docs://CHPE Astoria/CHA-KIE-141-ZZ-M3-A-001.rvt

SYMBOLS LEGEND

ROOM NUMBER REFERENCE 101 REVISION REFERENCE

- WALL TYPE REFERENCE

- ELEVATION REFERENCE

- NEW DOOR NUMBER REFERENCE

-SHEET ON WHICH DETAIL APPEARS - MULTIPLE ELEVATIONS REFERENCE

-DETAIL NUMBER

-SHEET ON WHICH DETAIL APPEARS

SECTION REFERENCE -SHEET ON WHICH DETAIL APPEARS

- LARGE SCALE REFERENCE -SHEET ON WHICH DETAIL APPEARS - DETAIL REFERENCE

—DETAIL NUMBER -SHEET ON WHICH DETAIL APPEARS

SECTION/DETAIL DRAWING TITLE REFERENCE -SHEET ON WHICH DETAIL APPEARS

- NEW DOOR - DETAIL REFERENCE -DETAIL NUMBER

SHEET ON WHICH DETAIL APPEARS 1/A100 ——— - SIGNAGE REFERENCE

- COLUMN REFERENCE

- CENTER LINE

- MATCH LINE

- REVISION CLOUD

- NORTH ARROW

- SPOT ELEVATION

—SIGNAGE TYPE, REFER TO SCHEDULE → SIGNAGE REFERENCE

- EGRESS TRAVEL ROUTE

X/A-XXX

X/A-XXX

EL. 000.00'

RIGID INSULATION

NOT ALL MATERIALS DEPICTED ON THIS LEGEND ARE USED IN THE ARCHITECTURAL DRAWINGS.

JOIST

JOINT

LAMINATE

LENGTH

LINEAR

LIVE LOAD

LONG LEG HORIZONTAL

- COARSE AGGREGATE / BALLAST

LONG LEG VERTICAL

USE GROUP CLASSIFICATION

CHAPTER 3: USE AND OCCUPANCY CLASSIFICATION THE FOLLOWING USES AND OCCUPANCY GROUPS ARE LOCATED IN THIS SITE: S2 OCCUPANCY FOR STORAGE ENCLOSURE

FACTORY AND INDUSTRIAL: GROUP F-1 (MODERATE HAZARD) RELAY ENCLOSURE

MVS ENCLOSURE

OCCUPANCY - STORAGE ENCLOSURE, MVS AND RELAY ENCLOSURE

DESIGN OCCUPANT LOAD PER TABLE 1004.1.3						
BUILDING/ROOM	FLOOR AREA PROVIDED	MAX FLOOR AREA PER OCCUPANT	POSTED PERMISSIBLE OCCUPANTS			
STORAGE ENCLOSURE	3867 SF	300 SF	12			
MVS ENCLOSURE	834 SF	300 SF	2			
RELAY ENCLOSURE	743 SF	300 SF	2			

EGRESS - STORAGE, MVS AND RELAY ENCLOSURES

FL.	ROOM	AREA	OCCUP.	EGRESS REQUIRED		EGRESS PROVIDED	
		(SF)		STAIR (0.3" PP)	OTHER (0.2" PP)	STAIR (0.3" PP)	OTHER (0.2" PP)
1ST	STORAGE	3867	12	N/A	N/A	N/A	N/A
1ST	ME 101	327	1	N/A	N/A	N/A	N/A
1ST	ME 102	507	1	N/A	N/A	N/A	N/A
1ST	RELAY ENCLOSURE	700	2	N/A	10.4"	44"	36"
NP	NP = NOT PERMITTED						

a. BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2. SEE SECTION 903 FOR OCCUPANCES WHERE AUTOMATIC SPRINKLER SYSTEMS ARE PERMITTED IN ACCORDANCE WITH SECTION 903.3.1.2.

TABLE 504.3 ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE

STORAGE ENCLOSURE- "S 2" OCCUPANCY CLASSIFICATIONS, TYPE IIB CONSTRUCTION,

ALLOWABLE HEIGHT: 3 STORY ALLOWABLE AREA: 7,500 SF

MVS ENCLOSURE- "F1 " OCCUPANCY - TYPE IIB CONSTRUCTION NON-SPRINKLERED

RELAY ENCLOSURE- "F1 " OCCUPANCY - TYPE IIB CONSTRUCTION NON-SPRINKLERED

SPECIAL INSPECTIONS LIST

INSPECTION NAME	CODE/SECTION
PANELS, CURTAIN WALLS AND VENEERS	BC 1704.10
SPRAY FIRE-RESISTANT MATERIALS	BC 1704.11
MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS	BC 1704.12
FIRE-RESISTANT PENETRATIONS AND JOINTS	BC 1704.27
PROGRESS INSPECTION	CODE/SECTION
PRELIMINARY	28-116.2.0, BC 110.2
ENERGY CODE COMPLIANCE INSPECTIONS	TR-8, BC 110.3.5
FIRE-RESISTANCE RATED CONSTRUCTION	BC 110.3.4
FINAL	28-116.2.4.2, BC 110.5, DIRECTIVE 14 OF 1975, AND 1 RCNY 101-10

BUILDING CODES

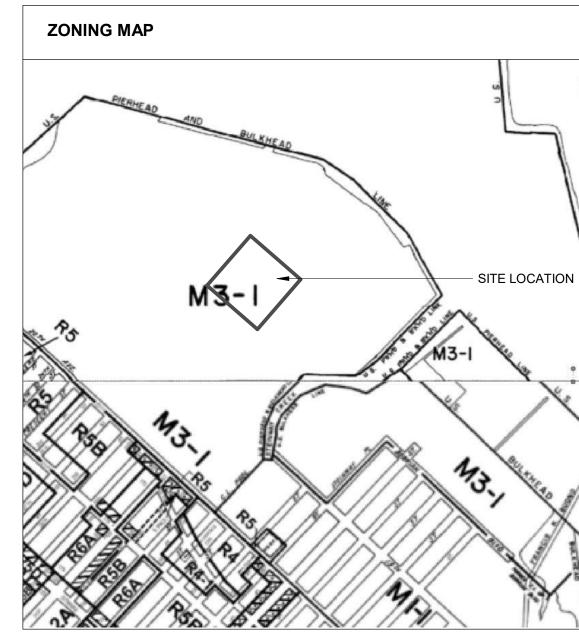
NEW YORK CITY BUILDING CODE, (NYCBC) 2022 BUILDING: NEW YORK CITY ENERGY CONSERVATION CODE (NYCECC) 2020 ENERGY: NEW YORK CITY FIRE CODE, (NYCFC) 2022 FIRE: MECHANICAL: NEW YORK CITY MECHANICAL CODE (NYCMC) 2022 PLUMBING: NEW YORK CITY PLUMBING CODE (NYCPC) 2022 NEW YORK CITY ELECTRICAL CODE (NYCEC) 2011 ELECTRICAL: ACCESSIBILITY: NEW YORK CITY BUILDING CODE (NYCBC) 2022, CHAPTER 11 ICC

OTHER STANDARDS AND REGULATIONS

ADA: OSHA: NYC ZONING RESOLUTION:	AMERICANS WITH DISABILITIES ACT (ADA) OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
WITHIN FIRE DIST	RICT PER 2022 NYCBC APPENDIX D, FIGURE D106.1 (2)
	NDED TO BE USED BY THE PUBLIC, SUCH AS DOORS TO
MECHANICAL OR	ELECTRICAL ROOMS, OR INTENDED SOLELY FOR EMPLOYEE USE.
	MMENDED PRACTICE FOR FIRE PROTECTION FOR ELECTRIC INTS AND HIGH VOLTAGE DIRECT CURRENT CONVERTER STATIONS

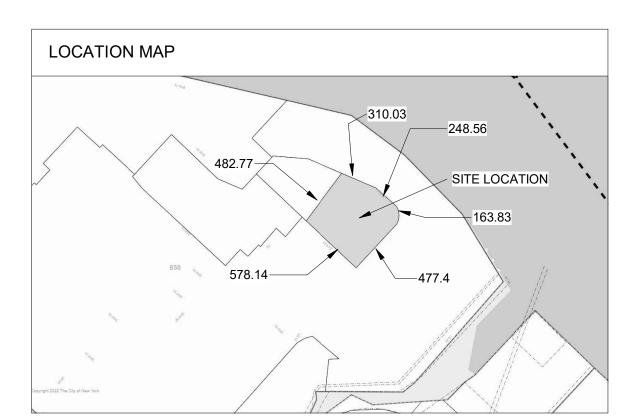
INSULATION REQUIREMENTS

NYCEC, 2022C TABLE C402.1.3 & TABLE C402.4 CLASSIFIED AS CLIMATE ZONE "4 EXCEPT MARINE", "ALL OTHER":	MINIMUM REQUIRED	PROVIDE
INSULATION ENTIRELY ABOVE ROOF DECK:	R-33CI	
WALLS, METAL FRAMED - ABOVE GRADE:	R-13 + R-8.5 CI	
WALLS, BELOW GRADE WALL - BELOW GRADE:	R-7.5 CI	R-25.27
UNHEATED SLABS - SLAB-ON-GRADE FLOORS:	R-15 FOR 24" BELOW	
NONSWINGING - OPAQUE DOORS:	R-4.75	R-6.60
OPAQUE SWINGING DOORS:	R-4.75	R-6.60
ENTRANCE DOORS:	U-0.77	



ZONING INFORMATION

BLOCK:	850
LOT:	310
LOT AREA:	341,093 SF
ZONING DISTRICT:	M3-1
ZONING MAP:	6D
SEISMIC ZONE:	2A



CONSTRUCTION CLASSIFICATION & FIRE PROTECTION

CHAPTER 6: TYPES OF CONSTRUCTION
TABLE 601, FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING
ELEMENTS (HOURS) TYPE IIB CONSTRUCTION (AUXILIARY ENCLOSURES) PRIMARY STRUCTURAL: WITH ROOF SUPPORTS FIRE-RESISTANCE RATINGS OF PRIMARY STRUCTURAL FRAME AND BEARING WALLS ARE PERMITTED TO BE REDUCED BY 1 HOUR WHERE SUPPORTING ROOF ONLY. BEARING WALLS, EXTERIOR WALLS, AND INTERIOR WALLS: 0 HR WITH ROOF SUPPORTS FIRE-RESISTANCE RATINGS OF PRIMARY STRUCTURAL FRAME AND BEARING WALLS ARE PERMITTED TO BE REDUCED BY 1 HOUR WHERE SUPPORTING ROOF ONLY. SEE TABLE 602 NONBEARING WALLS AND PARTITIONS EXTERIOR: NONBEARING WALLS AND PARTITIONS 0 HR INTERIOR: FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS: 0 HR 0 HR

ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS: TABLE 602, FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE FIRE SEPARATION DISTANCE < 5 FEET (TYPE IIB CONSTRUCTION) 2 HR OCCUPANCY GROUP F-1: FIRE SEPARATION DISTANCE < 5 FEET (TYPE IIB CONSTRUCTION) 1 HR OCCUPANCY GROUP S-2: FIRE SEPARATION DISTANCE 5 < X < 10 (TYPE IIB CONSTRUCTION) 1 HR OCCUPANCY GROUP F-1: FIRE SEPARATION DISTANCE 5 < X < 10 (TYPE IIB CONSTRUCTION) 1 HR OCCUPANCY GROUP S-2: FIRE SEPARATION DISTANCE 10<X<30 (TYPE IIB CONSTRUCTION) 1 HR OCCUPANCY GROUP F-1: FIRE SEPARATION DISTANCE 10<X<30 (TYPE IIB CONSTRUCTION) 1 HR OCCUPANCY GROUP S-2: FIRE SEPARATION DISTANCE X>30 (TYPE IIB CONSTRUCTION) 0 HR OCCUPANCY GROUP F-1: FIRE SEPARATION DISTANCE X>30 (TYPE IIB CONSTRUCTION) 0 HR OCCUPANCY GROUP S-2:

CHAPTER 7: FIRE AND SMOKE PROTECTION FEATURES 705.5 FIRE-RESISTANCE RATINGS

EXTERIOR WALLS SHALL BE FIRE-RESISTIVE-RATED IN ACCORDANCE WITH TABLES 601 AND 602 AND APPENDIX D WHERE APPLICABLE. THE REQUIRED FIRE-RESISTANCE RATING OF EXTERIOR WALLS WITH A FIRE SEPARATION DISTANCE OF GREATER THAN 10 FEET SHALL BE RATED FOR EXPOSURE TO FIRE FROM THE INSIDE. THE REQUIRED FIRE-RESISTANCE RATING OF EXTERIOR WALLS WITH A FIRE SEPARATION OF LESS THAN OR EQUAL TO 10 FEET SHALL BE RATED FOR EXPOSURE TO FIRE FROM BOTH SIDES.

BUILDING HEIGHT & AREA LIMITATIONS

CHAPTER 5: GENERAL BUILDING HEIGHT AND AREA LIMITATIONS, 503 SPECIAL INDUSTRIAL OCCUPANCIES, 503.1.1.

BUILDINGS AND STRUCTURES OF TYPE II AND II CONSTRUCTION DESIGNED TO HOUSE SPECIAL INDUSTRIAL PROCESSES THAT REQUIRE LARGE AREAS AND UNSUAL BUILDING HEIGHTS TO ACCOMODATE CRANEWAYS OR SPECIAL MACHINERY AND EQUIPMENT, INCLUDING AMONG OTHERS...THE PRODUCTION AND DISTRIBUTION OF ELECTRIC, GAS OR STEAM POWER, SHALL BE EXEMPT FROM THE BUILDING HEIGHT, NUMBER OF STORIES AND BUILDING AREA LIMITATIONS SPECIIED IN SECTIONS 504 AND 506.

MEZZANINES WITHIN SUCH BUILDINGS OR STRUCTURES SHALL COMPLY WITH SECTION 505.2. DOCUMENTS AND PLANS DESCRIBING THE SPECIAL INDUSTRIAL PROCESSES SHALL BE SUBMITTED TO THE COMMISSIONER FOR APPROVAL.

CLASSIFIED AS CATEGORY "IIB" (TABLE 504.3 NYC BUILDING CODE 2022) CONVERTER FACILITY (INCLUDES CONVERTER AND SERVCIE BUILDINGS) IS NOT REQUIRED TO MEET CODE REQUIREMENTS FOR FLOOR AREA REQUIREMENTS, DUE TO THIS BEING A BUILDING DESIGNED TO HOUSE SPECIAL INDUSTRIAL PROCESSES.

TABLE 504.3 ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE

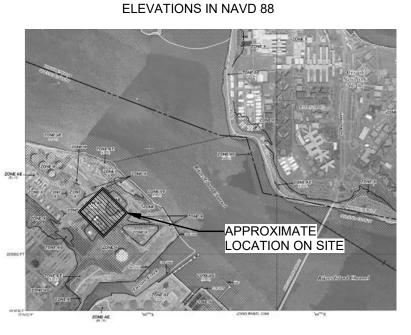
OCCUPANCY CLASSIFICATIONS, TYPE IIB CONSTRUCTION, PARITALLY SPRINKLERED: NOT REQUIRED TO MEET REQUIREMENTS FOR BULDING HEIGHT FLOOR AREA REQUIREMENTS, DUE TO THIS BEING A BUILDING DESIGNED TO HOUSE SPECIAL INDUSTRIAL PROCESSES.

ENCLOSURE	MINIMUM REQUIRED	PROVIDED
STORAGE ENCLOSURE S-2 OCCUPANCY TYPE IIB CONSTRUCTION SPRINKLERED	7 STORY HEIGHT MAX. FLOOR AREA 30,000 SF REFER TO NOTE 1*	1 STORY HEIGHT FLOOR AREA 3,867 SF
MVS ENCLOSURE F-1 OCCUPANCY TYPE IIB CONSTRUCTION NON-SPRINKLERED	3 STORY HEIGHT MAX. FLOOR AREA 7,500 SF MAX.	1 STORY HEIGHT FLOOR AREA 834 SF
RELAY ENCLOSURE F-1 OCCUPANCY TYPE IIB CONSTRUCTION NON-SPRINKLERED	7 STORY HEIGHT MAX. FLOOR AREA 30,000 SF MAX.	1 STORY HEIGHT FLOOR AREA 792 SF

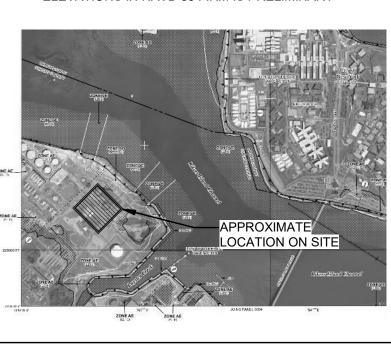
* NOTE 1. WHERE A BUILDING IS EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1, THE VALUE SPECIFIED IN TABLE 503 FOR MAXIMUM BUILDING HEIGHT IS INCREADE BY 20 FT AND THE MAXIMUM NUMBER OF STORIES IS INCREASED BY ONE STORY. THESE INCREASES ARE PERMITTED IN ADDITION TO THE BUILDING AREA INCREASE IN ACCORDANCE WITH SECTIONS 506.2 AND 506.3.

FEMA FIRM PANEL 3604970092:

FLOOD INSURANCE RATE MAP 2007



FLOOD INSURANCE RATE MAP 2015 ELEVATIONS IN NAVD 88 FIRM IS PRELIMINARY



REGIONAL LOCATION MAP



SITE LOCATION

370 7th Avenue **SUITE 1604** New York, NY 10001

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25 Mohawk Avenue **Sparta, NJ 07871**

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Raleigh, North Carolina 27606



Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105

Block #850 - Lot #310 - BIN #4624437

CODE DATA - MVS, RELAY AND STORAGE ENCLOSURES 1 0F 2



S. WARYAH CHECKED BY J. STEPHENS DRAWING NO

CADD FILE NO

CHAPTER 8 - INTERIOR FINISHES

803.1.1 INTERIOR WALL AND CEILING FINISH MATERIALS

INTERIOR WALL AND CEILING FINISH MATERIALS SHALL BE TESTED AND CLASSIFIED IN ACCORDANCE WITH ASTM E 84 OR UL 723. SUCH INTERIOR FINISH MATERIALS SHALL BE GROUPED IN THE FOLLOWING CLASSES IN ACCORDANCE WITH THEIR FLAME SPREAD AND SMOKE-DEVELOPED

CLASS A = FLAME SPREAD INDEX 0-25; SMOKE DEVELOPED INDEX 0-450.

CLASS B = FLAME SPREAD INDEX 26-75; SMOKE DEVELOPED INDEX 0-450.

CLASS C = FLAME SPREAD INDEX 76-200; SMOKE DEVELOPED INDEX 0-450.

EXCEPTION: MATERIALS TESTED IN ACCORDANCE WITH SECTION 803.1.2 NOT TO BE CLASSIFIED IN ACCORDANCE WITH SECTION 803.1.1.

TABLE 803.11 INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY

	S	SPRINKLERED	NONSPRINKLERED			
GROUP	INTERIOR EXIT STAIRWAYS, INTERIOR EXIT RAMPS AND EXIT PASSAGEWAYS	CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND EXIT ACCESS RAMPS	ROOM AND ENCLOSED SPACES	INTERIOR EXIT STAIRWAYS, INTERIOR EXIT RAMPS AND EXIT PASSAGEWAYS	CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND EXIT ACCESS RAMPS	ROOM AND ENCLOSED SPACES
F	В	С	С	А	А	В
S	В	С	С	A	В	С

ALLOWABLE TRAVEL DISTANCES

SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY, TABLE 1006.2.1						
OCCUPANCY	MAXIMUM OCCUPANT	MAXIMUM COMMON	PATH OF EGRESS T	RAVEL DISTANCE (FEET)		
	LOAD OF SPACE	WITHOUT SPRINKLE				
		OCCUPAN	WITH SPRINKLER SYSTEM (FEET)			
		OL<30	OL>30			
F	49	75	75	¹⁰⁰ a		
S	29	100	75	100 a		
FOR SI: 1 FO	OR SI: 1 FOOT = 304.8 MM.					

a. BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2. SEE SECTION 903 FOR OCCUPANCES WHERE AUTOMATIC SPRINKLER SYSTEMS ARE PERMITTED IN ACCORDANCE WITH SECTION 903.3.1.2.

EXIT ACCESS TRAVEL DISTANCE, TABLE 1017.2

OCCUPANCY	WITHOUT SPRINKLER SYSTEM	WITH SPRINKLER SYSTEM
F-1	150	200 b
S-2	200	250 C

EGRESS CAPACITY

THE CAPACITY, IN INCHES, OF MEANS OF EGRESS STAIRWAYS SHALL BE CALCULATED BY MULTIPLYING THE OCCUPANT LOAD SERVED BY SUCH STAIRWAYS BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.3 INCH PER OCCUPANT.

1005.3.2 OTHER EGRESS COMPONENTS

THE CAPCITY, IN INCHES, OF MEANS OF EGRESS COMPONENETS OTHER THAN STAIRWAYS SHALL BE CALCULATED BY MULTIPYING THE OCCUPANT LOAD SERVED BY SUCH COMPONENT BY A MEANS OF EGRESS CAPACITY FACTOR OF 0.2 INCH PER OCCUPANT

EGRESS CAPACITY FACTOR OF 0.2 INCH PER OCCUPANT.	
SINGLE LEAF DOOR TYPICAL UNLESS NOTED OTHERWISE	
EGRESS CAPACITY 3'-0" DOOR = 32" BETWEEN FACE OF DOOR AND THE STOP	32" / .2 = 160 PEOPLE
DOUBLE LEAF DOOR TYPICAL UNLESS NOTED OTHERWISE	
EGRESS CAPACITY 6'-0" DOOR = 68" BETWEEN FACE OF DOOR AND THE STOP	68" / .2 = 340 PEOPLE

CHAPTER 16: OCCUPANCY/RISK CLASSIFICATION CLASSIFIED AS CATEGORY "II" (TABLE 1604.5 NYC BUILDING CODE 2022)

STRUCTURAL DESIGN CHAPTER 16

CHAPTER 16: OCCUPANCY/RISK CLASSIFICATION CLASSIFIED AS CATEGORY "IV" (TABLE 1604.5 NYC BUILDING CODE 2022)

1604.5.2. IMPORTANCE FACTOR

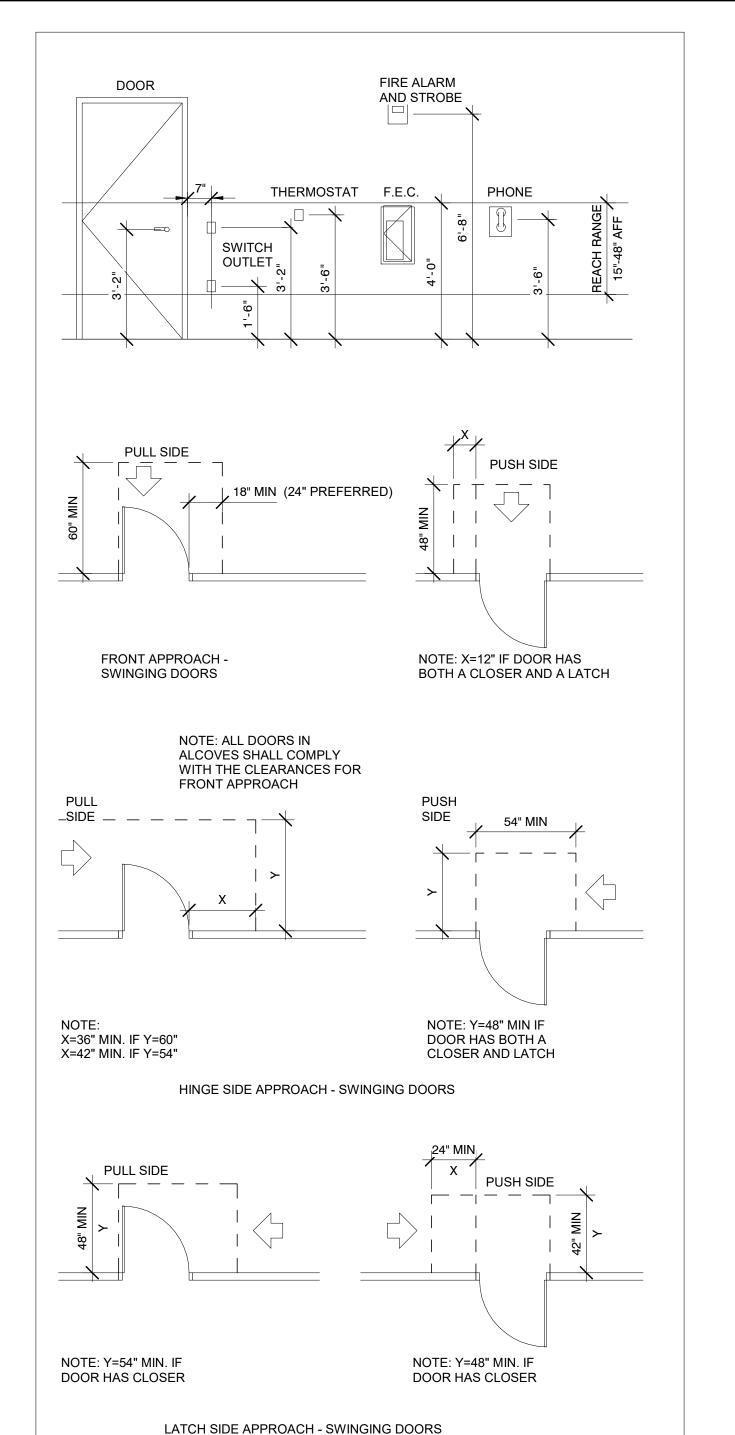
1613.3.5 - SEISMIC DESIGN CATEGORY

BUILDING DEPARTMENT NOTES

- 1. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE
- 2022. 2. ALL REFERENCES TO THE BUILDING CODE AND BUILDING DEPARTMENT SHALL BE CONSTRUED TO MEAN THE RULES AND REGULATIONS OF THE BUILDING DEPARTMENT FOR THE CITY OF NEW
- 3. THE CONTRACTOR SHALL TAKE ALL THE NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF
- THE PUBLIC AND SURROUNDING PROPERTY PER CHAPTER 33. 4. THE SAFETY OF PERSONS EMPLOYED IN CONSTRUCTION OPERATIONS. THIS INCLUDES BUT IS NOT LIMITED TO THE PROVISIONS FOR SAFETY BARRICADES AT ALL OPENINGS, EXISTING, NEW,
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND INCURRING THE COST OF ALL REQUIRED PERMITS AND CERTIFICATES REQUIRED BY BUILDING DEPARTMENT AND CITY
- 6. ALL MATERIALS, ASSEMBLIES, FORMS AND METHODS OF CONSTRUCTION, AND SERVICE EQUIPMENT SHALL HAVE BEEN ACCEPTED FOR USE UNDER THE PRESCRIBED TEST METHODS BY THE NEW YORK CITY BUILDING CODE.
- 7. PARTITIONS AND FURRING SHALL COMPLY WITH SECTION 2210 AND CHAPTER 25 OF THE NEW
- YORK CITY BUILDING CODE. 8. INTERIOR FINISHES AND SUSPENDED CEILINGS SHALL COMPLY WITH CHAPTER 8 OF THE NEW YORK CITY BUILDING CODE.
-). ALL PROPOSED WORK SHALL COMPLY WITH APPENDIX F FOR RODENT PROOFING. ALL OPENINGS INCLUDING BUT NOT LIMITED TO ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, AND CONDUITS, SHALL BE PROTECTED BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, METAL PLATES, OR SCREENING DESIGNED TO PREVENT THE PASSAGE OF RODENTS. OPENINGS FOR DOORS, WINDOWS, AND VENTS SHALL BE AS PROVIDED FOR IN SECTIONS F102.3, F102.4, F102.5 RESPECTIVELY.
- 10. FIRE TREATED WOOD SHALL COMPLY WITH SECTION 2303.2 OF THE NEW YORK CITY BUILDING
- 11. MECHANICAL APPLIANCES, EQUIPMENT AND SYSTEMS SHALL BE CONSTRUCTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE NEW YORK CITY MECHANICAL CODE. ALL INTERIOR
- ROOMS TO MECHANICALLY VENTILATE PER THE NEW YORK CITY MECHANICAL CODE. 12. LIGHTING AND POWER INSTALLATION SHALL CONFORM TO THE NEW YORK CITY ELECTRICAL CODE AND ANY PERTINENT REGULATIONS OF THE NEW YORK CITY DEPARTMENT OF WATER
- SUPPLY, ENVIRONMENTAL PROTECTION, GAS, AND ELECTRICAL SUPPLY. 13. FIRE DIVISIONS SHALL BE CONTINUOUS THROUGH CONCEALED SPACES IN FLOOR AND ROOF CONSTRUCTION PER CHAPTER 7. OPENINGS IN AND PENETRATIONS THROUGH FIRE
- SEPARATIONS/DIVISIONS SHALL COMPLY WITH SECTION 712. 14. OPENING PROTECTIVES INCLUDING FRAMES, CLOSURES, AND HARDWARE SHALL COMPLY WITH SECTION 715. ALL OPENINGS PROTECTIVES SHALL BE LABELED BY AN APPROVED TESTING
- 15. CONDUIT IN FIRE RATED PARTITIONS IS NOT TO EXCEED 3/4" DIAMETER. OPENINGS IN WALLS, PARTITIONS, OR FLOORS FOR PIPE SLEEVES, ELECTRICAL DEVICES, ETC. SHALL BE PACKED,
- SEALED OR LINED AS REQUIRED IN ORDER TO MAINTAIN THE REQUIRED FIRE AND UL RATINGS. 16. DUCTS, PIPES AND CONDUITS PASSING THROUGH RATED CONSTRUCTION SHALL HAVE SPACES NOT EXCEEDING 1/2", PACKED WITH MINERAL WOOL AND SHALL BE CLOSED OFF WITH CLOSE FITTING METAL ESCUTCHEONS OR PLATES. THE AGGREGATE AREA OF SUCH PENETRATIONS IS NOT TO EXCEED 25 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL OR FLOOR AREA UNLESS
- PROVIDED WITH AN OPENING PROTECTION DEVICE. 17. PER SECTION 1205.3 AVERAGE ILLUMINATION OF AT LEAST 10 FOOT CANDLES MEASURED 30" ABOVE THE FLOOR SHALL BE MAINTAINED CONTINUOUSLY DURING OCCUPANCY IN ALL ROOMS AND SPACES. PER 1006.1 MEANS OF EGRESS ILLUMINATION LEVEL SHALL NOT BE LESS THAN 2 FOOT-CANDLES AT THE FLOOR LEVEL. EXIT LIGHTING SHALL BE FROM CIRCUITS THAT ARE
- SEPARATE FROM OTHER CIRCUITS TAKEN AHEAD OF THE MAIN SWITCH. 18. EXIT DOORS SHALL BE READILY ACCESSIBLE AND UNOBSTRUCTED AT ALL TIMES FROM THE DIRECTION OF EGRESS.
- 19. ALL PROPOSED WORK SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF ICC A117.1 AND CHAPTER 11 OF THE NEW YORK CITY BUILDING CODE FOR ACCESSIBILITY.
- 20. ALL PROPOSED WORK SHALL COMPLY WITH APPLICABLE PROVISIONS OF NEW YORK CITY ENERGY CONSERVATION CODE. SEE EN-100 FOR EXTERIOR ENVELOPE COMPLIANCE
- REQUIREMENTS AND EN-101 FOR MECHANICAL AND LIGHTING COMPLIANCE REQUIREMENTS. 21. CONTRACTOR TO COMPLETE ALL SPECIAL AND PROGRESS INSPECTIONS AS WELL AS ENERGY CODE COMPLIANCE INSPECTIONS PER FORMS TR-1 AND TR-8 AND AS LISTED ON THE COVER SHEET. PROGRESS INSPECTION REFERENCE STANDARDS AND CITATIONS SHALL CONFORM TO THE REQUIREMENTS OF 2010 NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE.

CHAPTER 5 AS REFLECTED IN THE ENERGY CODE COMPLIANCE CERTIFICATES ON EN-100.00 AND

- 22. IN ACCORDANCE WITH ARTICLE 116 OF TITLE 28 AND SECTION 109, CONSTRUCTION SHALL BE SCHEDULED TO ALLOW REQUIRED SPECIAL INSPECTIONS TO TAKE PLACE. ROOFS, CEILINGS, EXTERIOR WALLS, INTERIOR WALLS, FLOORS, FOUNDATIONS, BASEMENTS, AND ANY OTHER CONSTRUCTION SHALL NOT BE COVERED OR ENCLOSED UNTIL REQUIRED SPECIAL INSPECTIONS ARE COMPLETED OR THE SPECIAL INSPECTOR INDICATES THAT SUCH COVERING OR
- ENCLOSURE MAY PROCEED, AT EACH STAGE OF CONSTRUCTION, AS APPLICABLE. 23. IN ACCORDANCE WITH SECTIONS 109.9 AND ECC 104.2.3 WHERE AN INSPECTION OR TEST FAILS, THE CONSTRUCTION SHALL BE CORRECTED AND MUST BE MADE AVAILABLE FOR REINSPECTION
- AND/OR RETESTING BY THE SPECIAL INSPECTOR UNTIL IT COMPLIES. 24. THE CONTRACTOR SHALL PROVIDE NOTIFICATION TO DOB 24-48 HOURS PRIOR TO COMMENCEMENT OF EARTHWORK AS PER BC 3304.3.1



THE CONDITIONS ILLUSTRATED ON THIS SHEET CONSTITUTE LEGAL STANDARDS FOR HANDICAPPED ACCESSIBILITY. THEY ARE NOT INTENDED TO DEPICT ACTUAL ARCHITECTURAL CONDITIONS FOR CONSTRUCTION IN THE COURSE OF THIS WORK. SEE ENCLOSED ARCHITECTURAL DRAWINGS FOR ACTUAL EXTENT OF WORK. NOT ALL CONDITIONS SHOWN HERE NECESSARILY OCCUR IN THIS

CONTRACTOR TO INFORM ARCHITECT WHEN DUE TO FIELD CONDITIONS, ETC. ACTUAL CONSTRUCTION WILL NOT CONFORM TO THESE STANDARDS.

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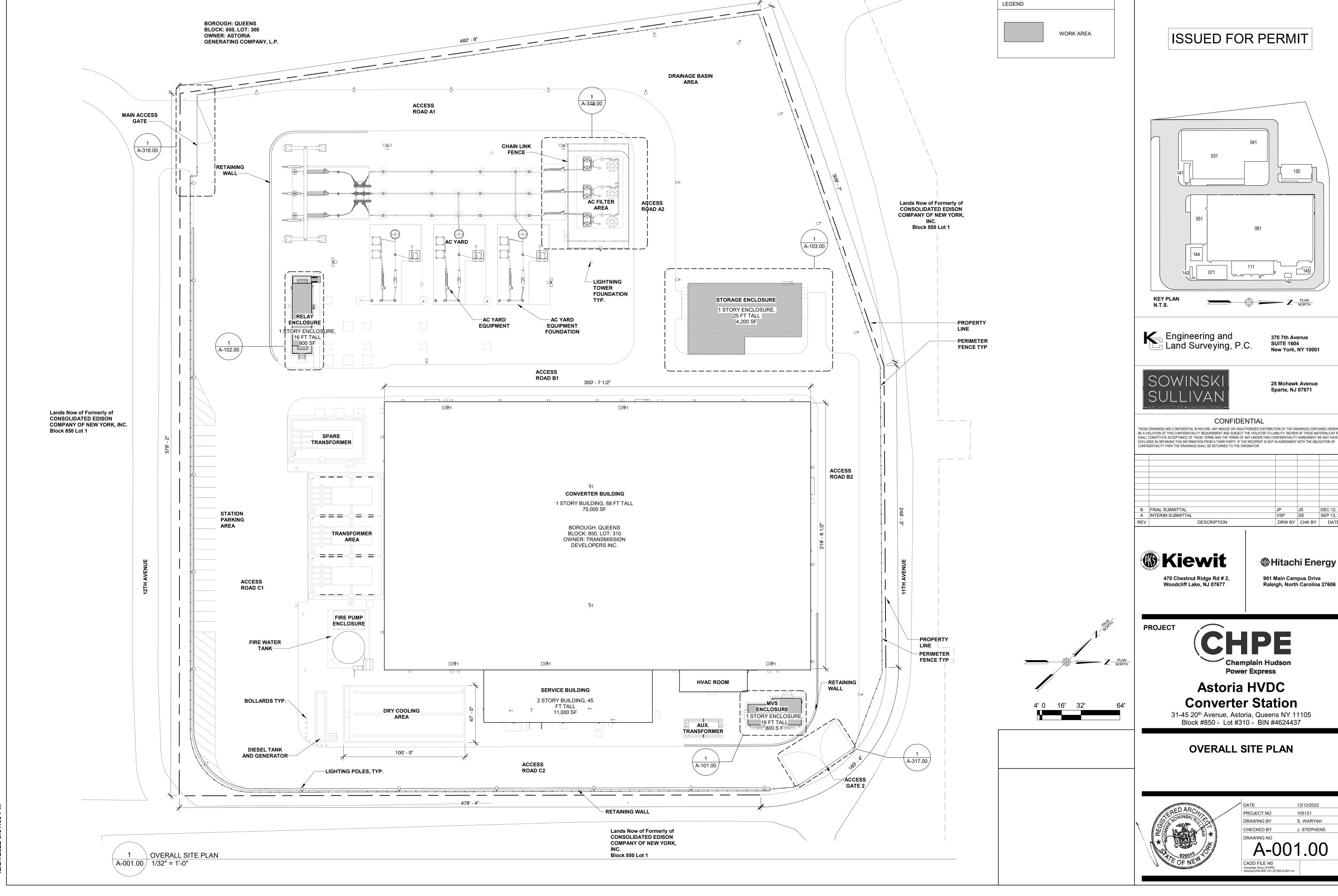
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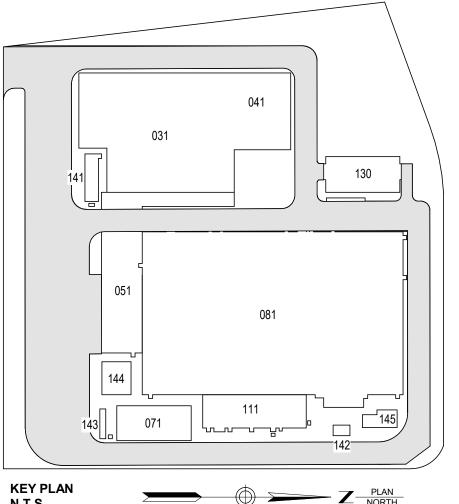
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ADA STANDARDS, CODE DATA - MVS, RELAY AND **STORAGE ENCLOSURES 2** OF 2



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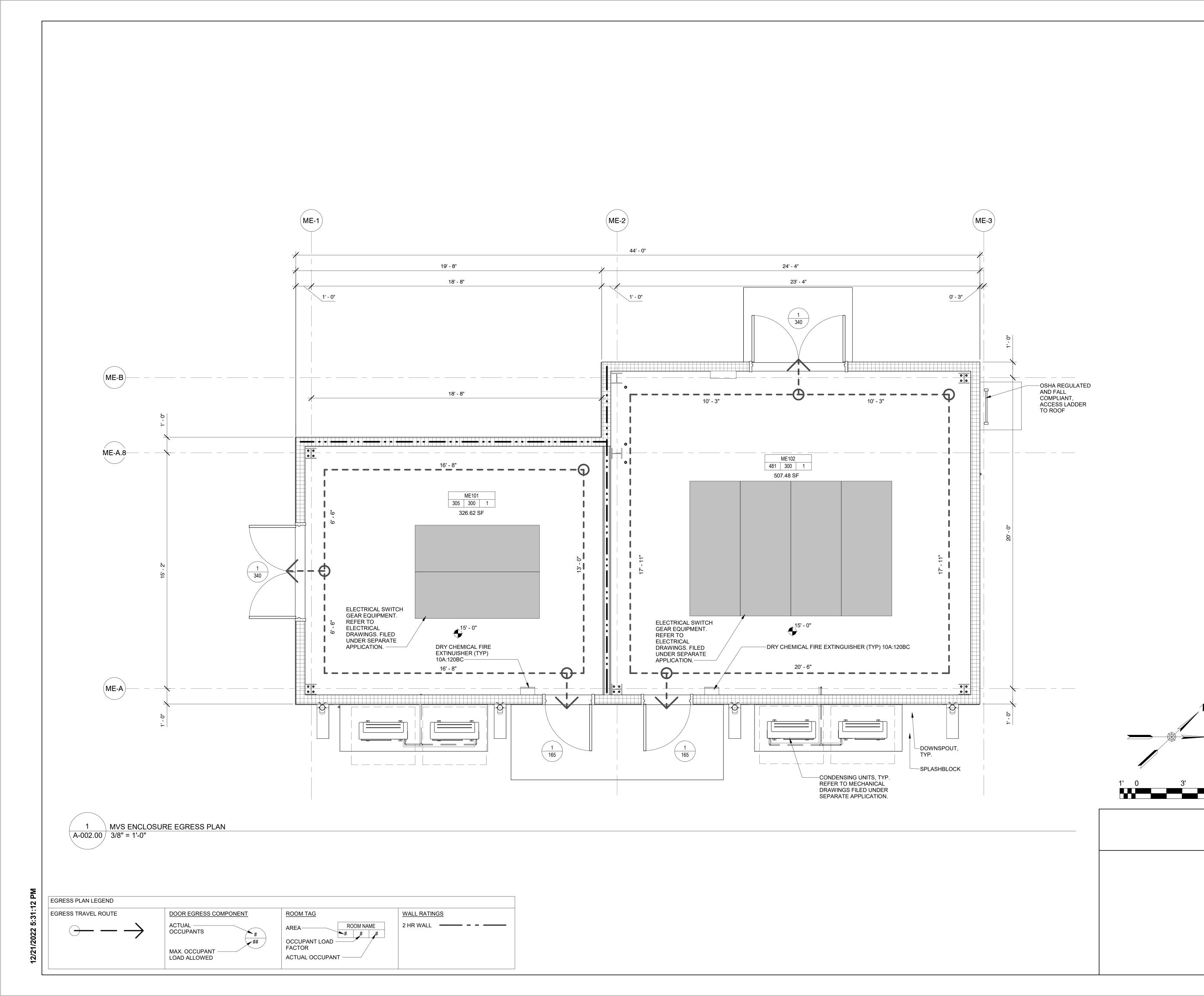


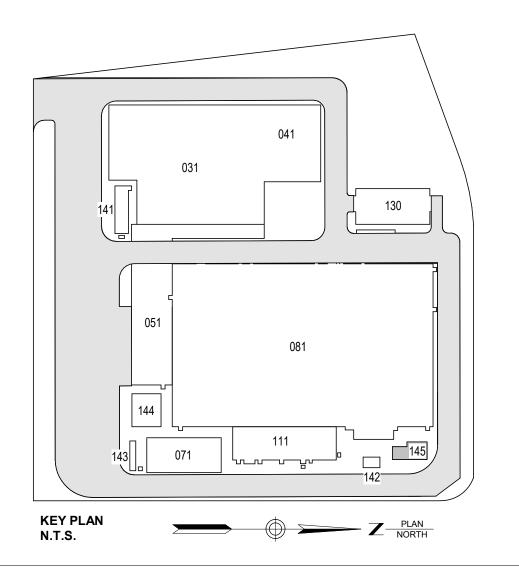


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PROJECT



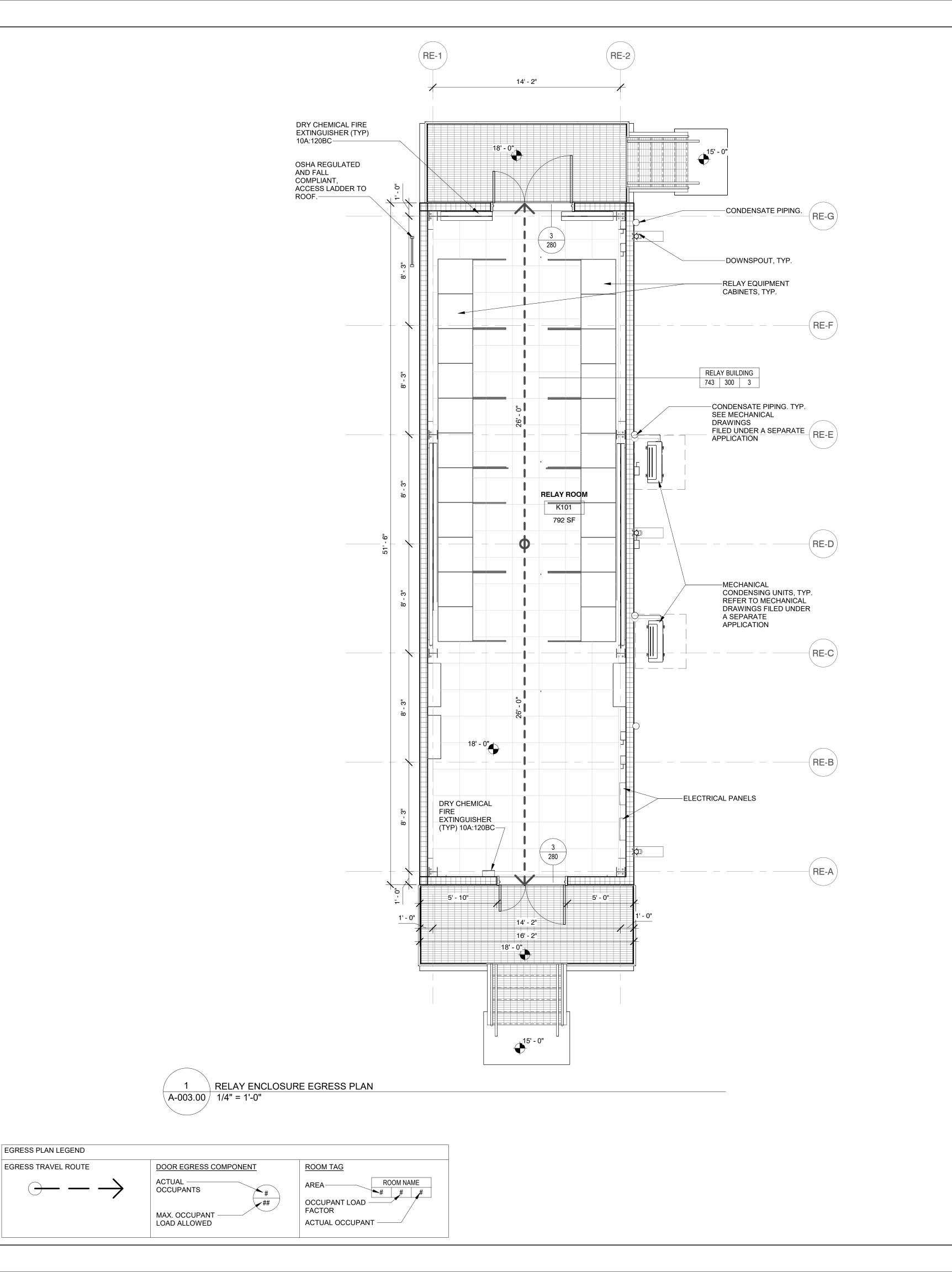
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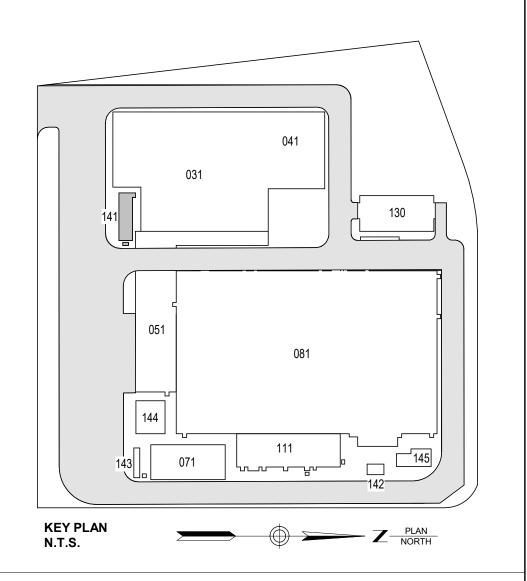
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MVS ENCLOSURE EGRESS PLAN



DATE 12/12/2022
PROJECT NO 105121
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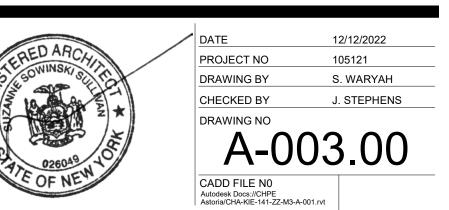


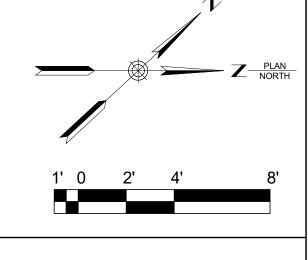
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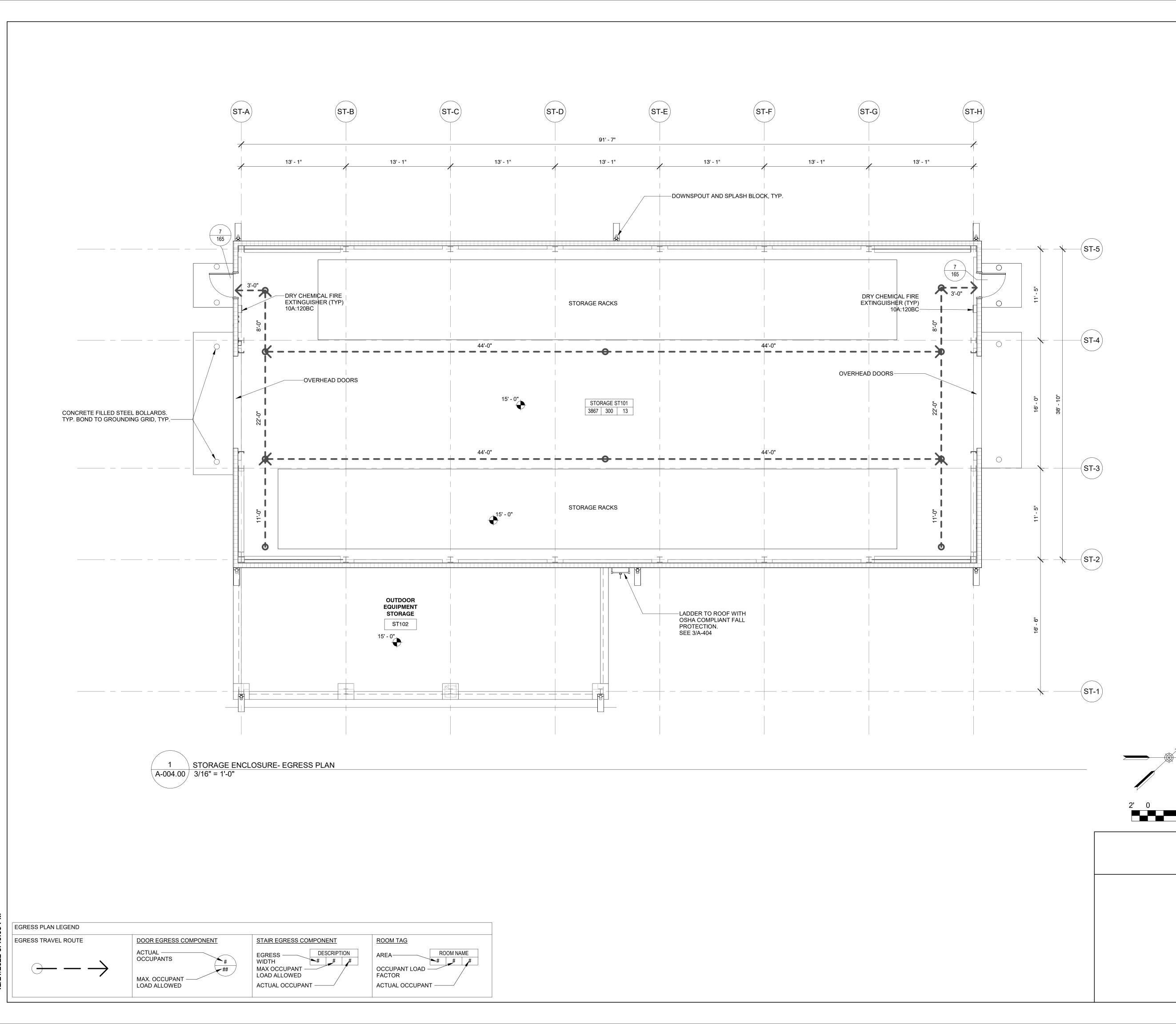
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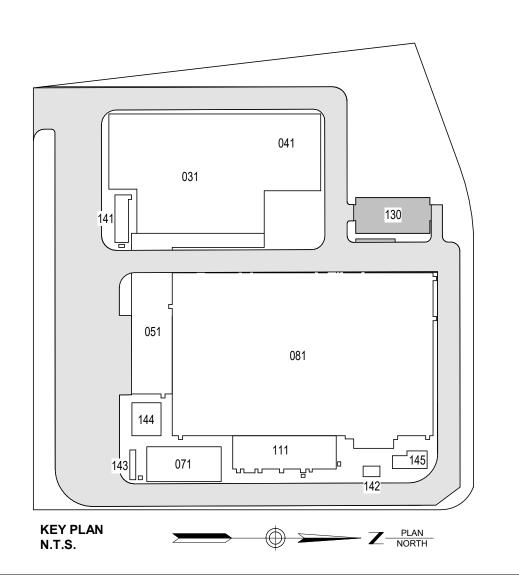
RELAY ENCLOSURE EGRESS PLAN











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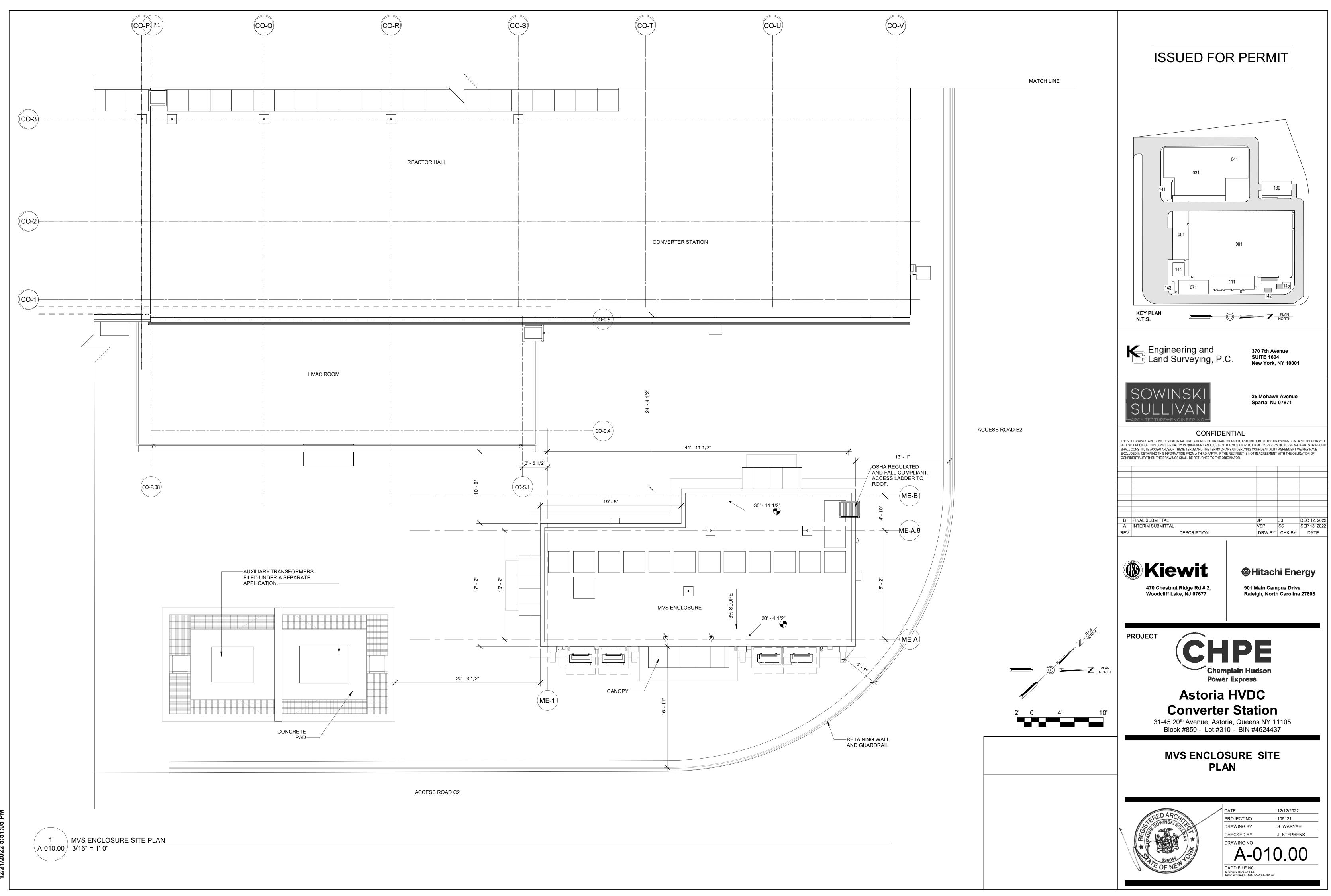
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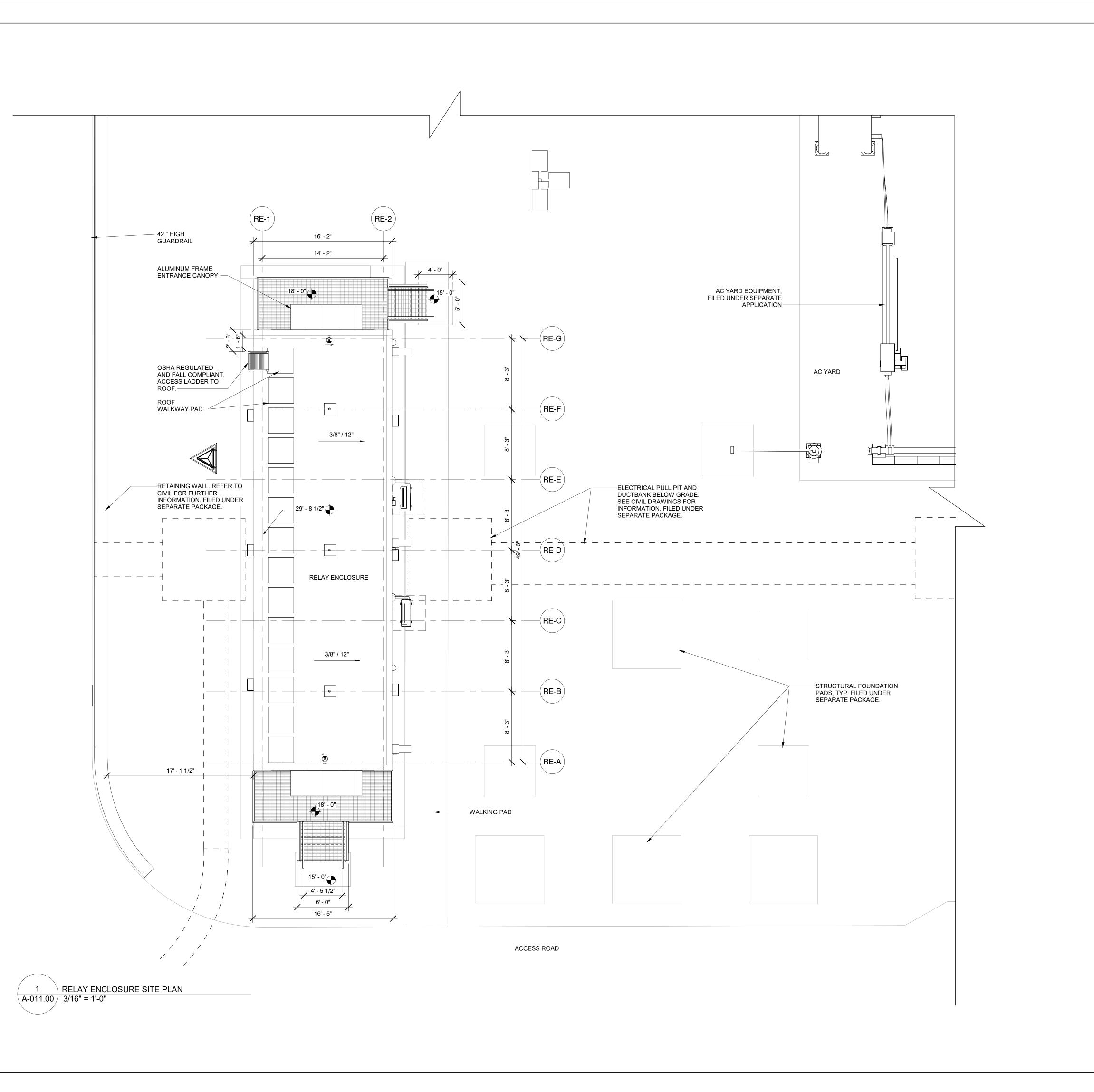
STORAGE ENCLOSURE EGRESS PLAN

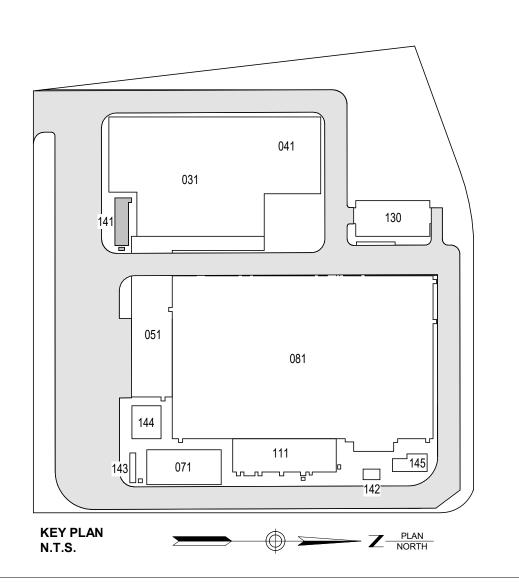


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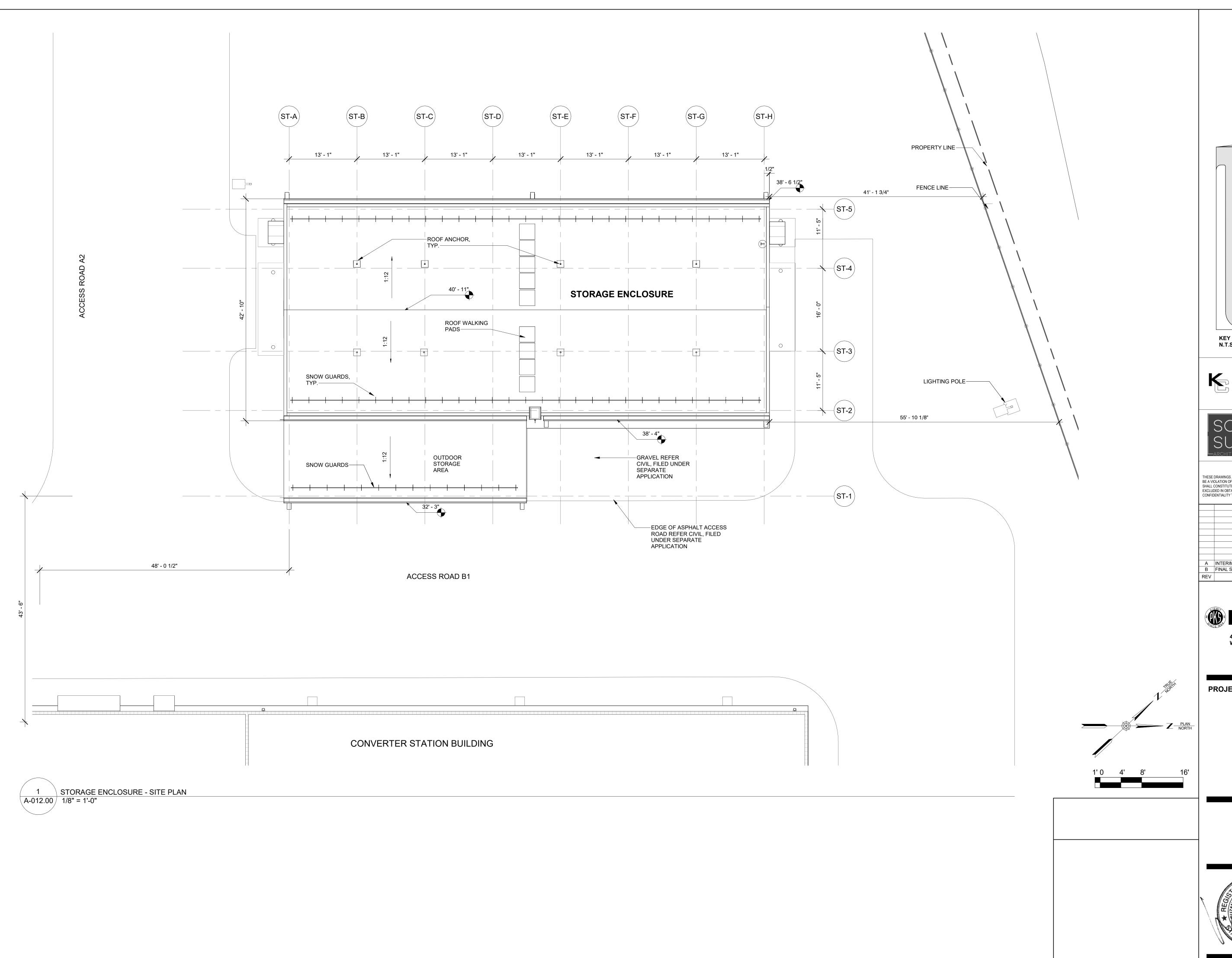
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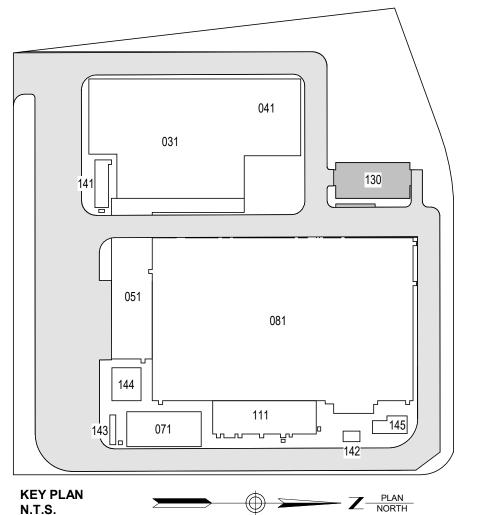
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RELAY ENCLOSURE SITE **PLAN**



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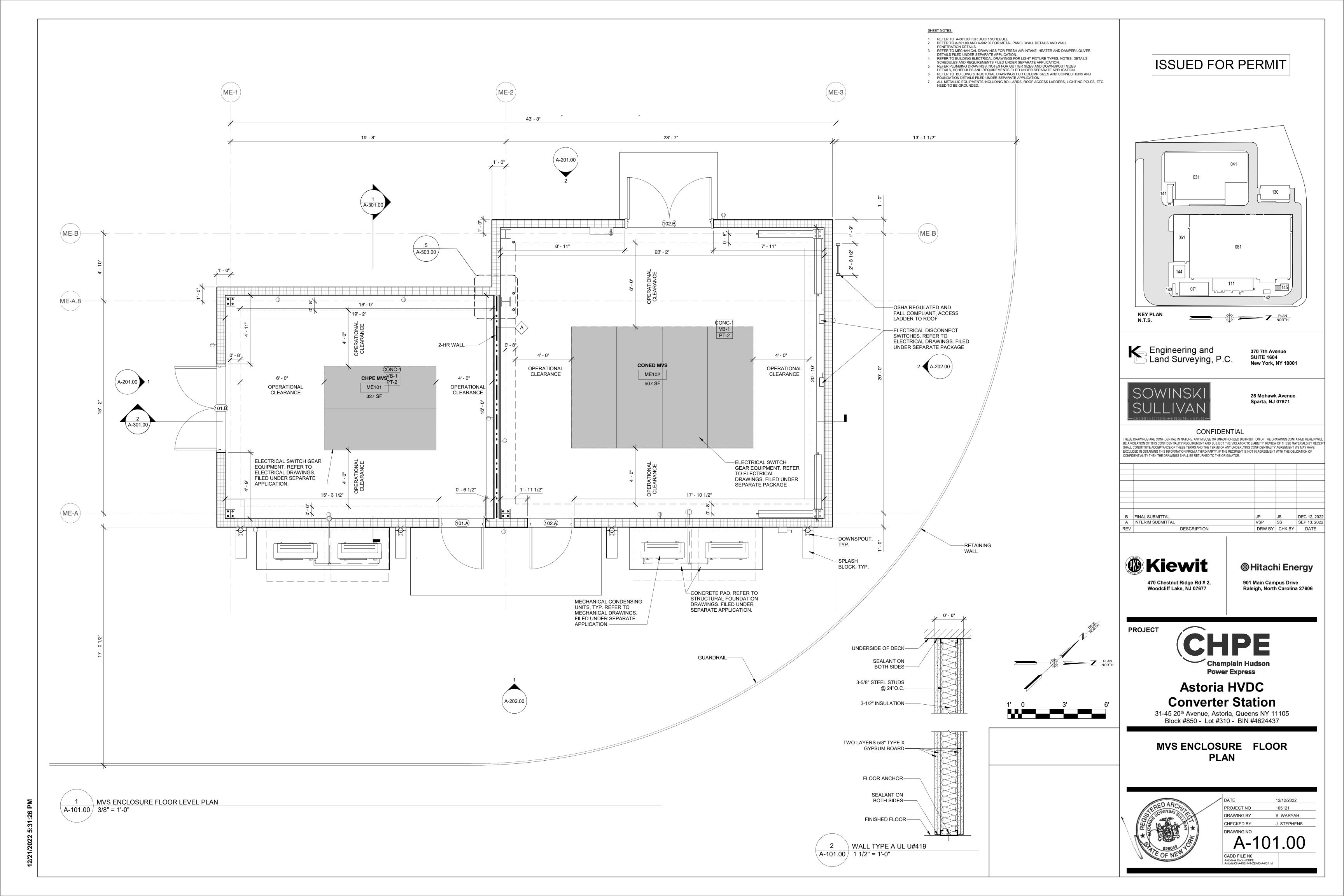
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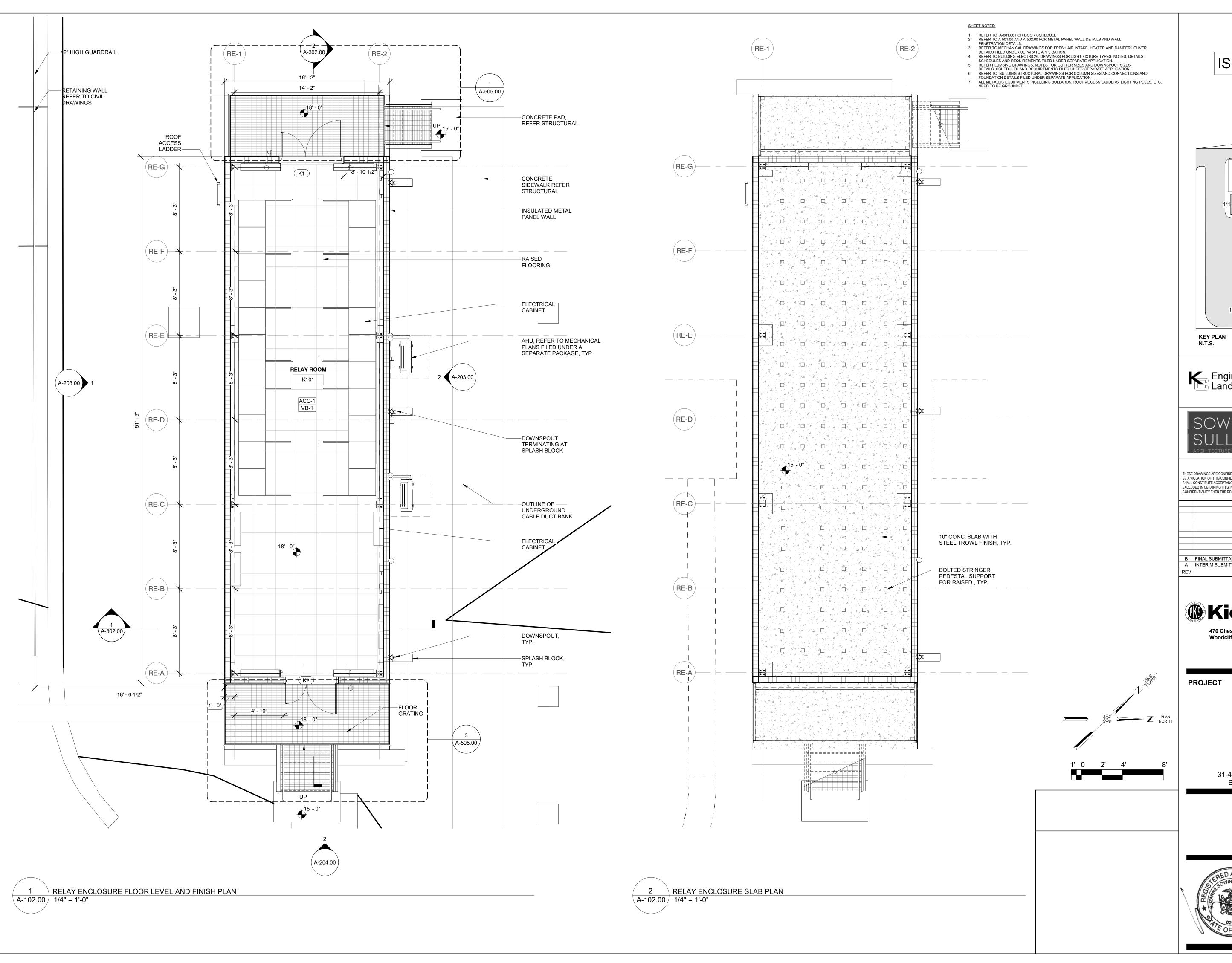
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STORAGE ENCLOSURE SITE PLAN

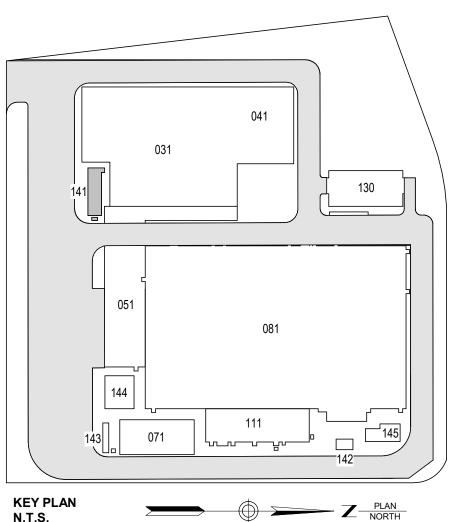


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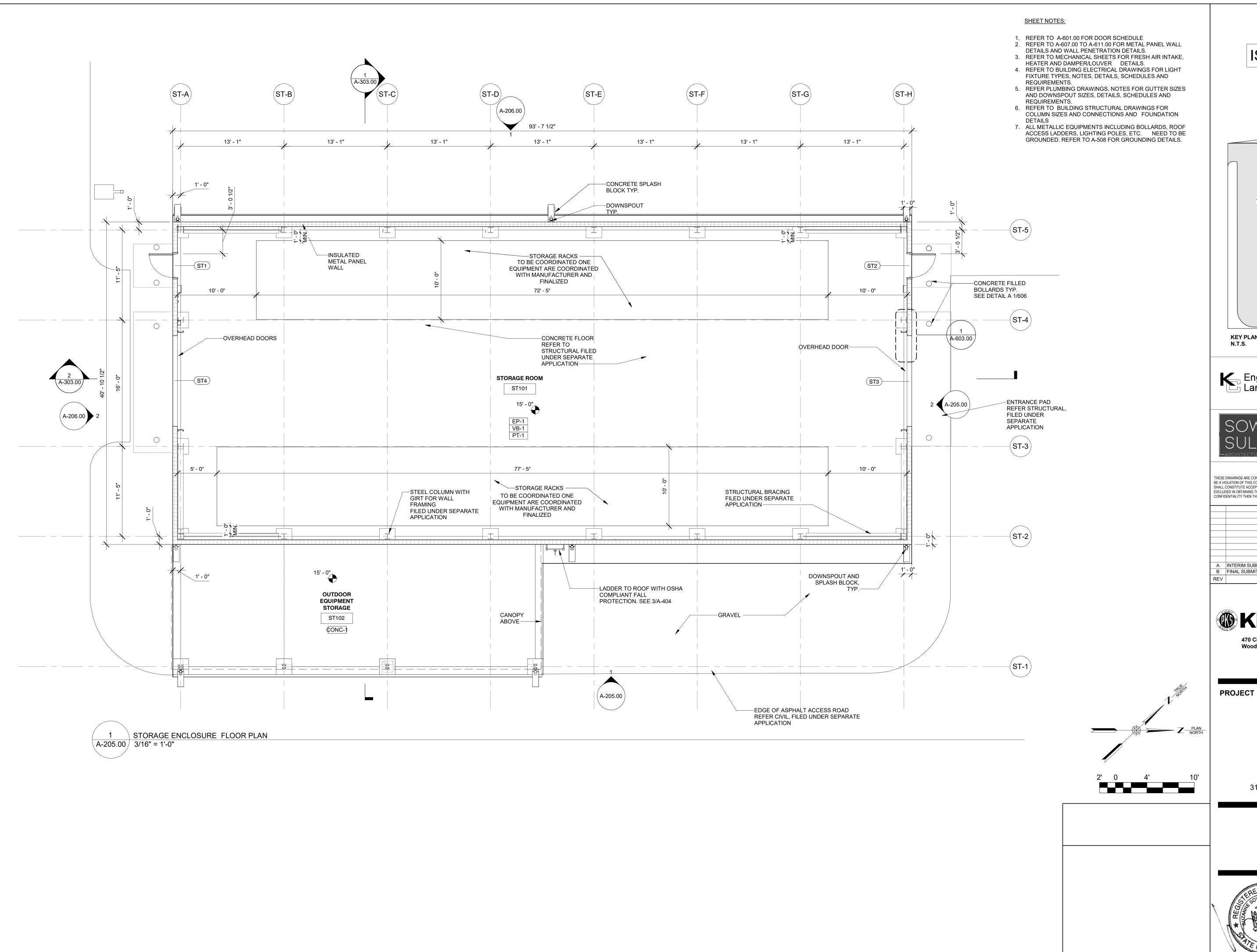
Astoria HVDC Converter Station

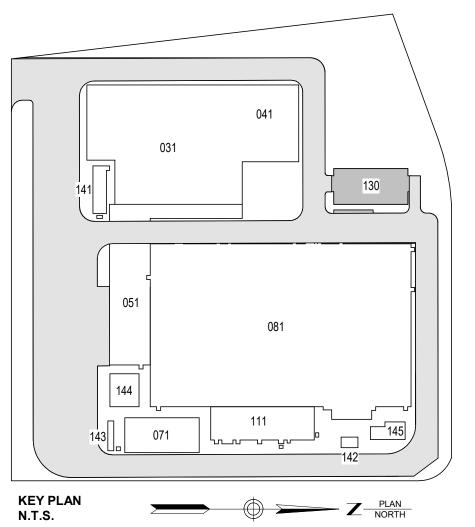
31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

> **RELAY ENCLOSURE FLOOR PLAN**



PROJECT NO S. WARYAH CHECKED BY J. STEPHENS DRAWING NO







370 7th Avenue **SUITE 1604** New York, NY 10001



25 Mohawk Avenue **Sparta, NJ 07871**

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В	FINAL SUBMITTAL	VSP	SS	SEP 13, 2022
REV	DESCRIPTION	DRW BY	CHK BY	DATE



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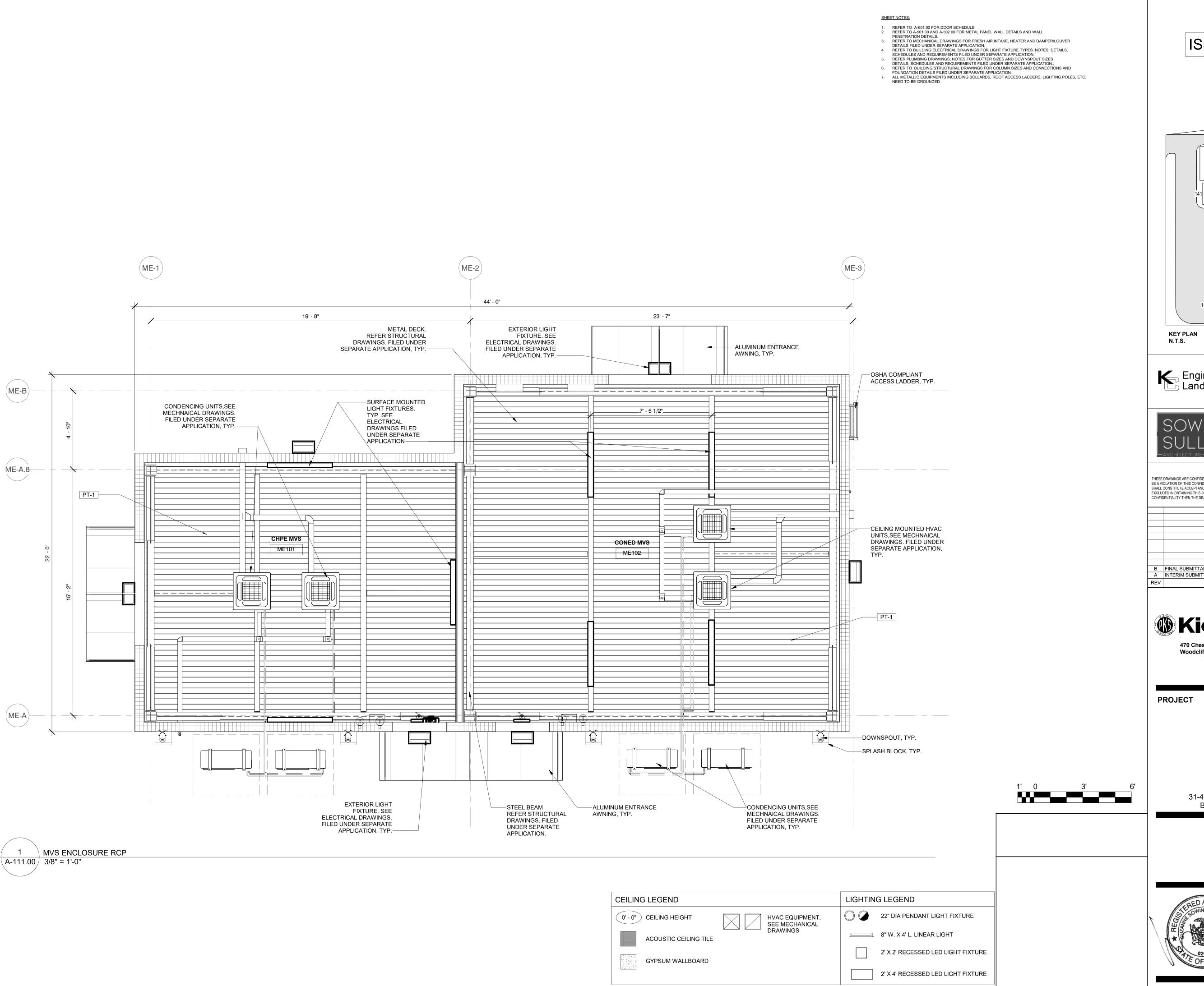
Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

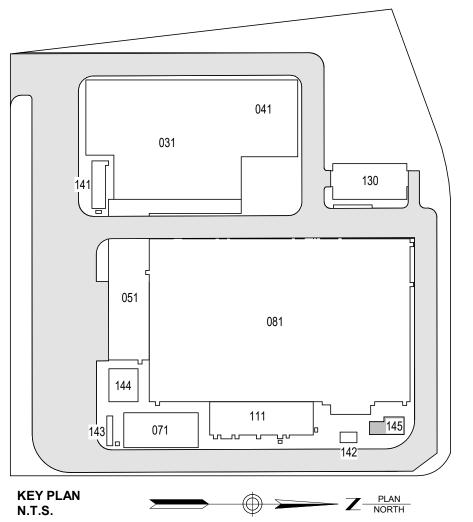
STORAGE ENCLOSURE **FLOOR PLAN**



PROJECT NO DRAWING BY S. WARYAH CHECKED BY J. STEPHENS DRAWING NO A-103.00









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Α	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022
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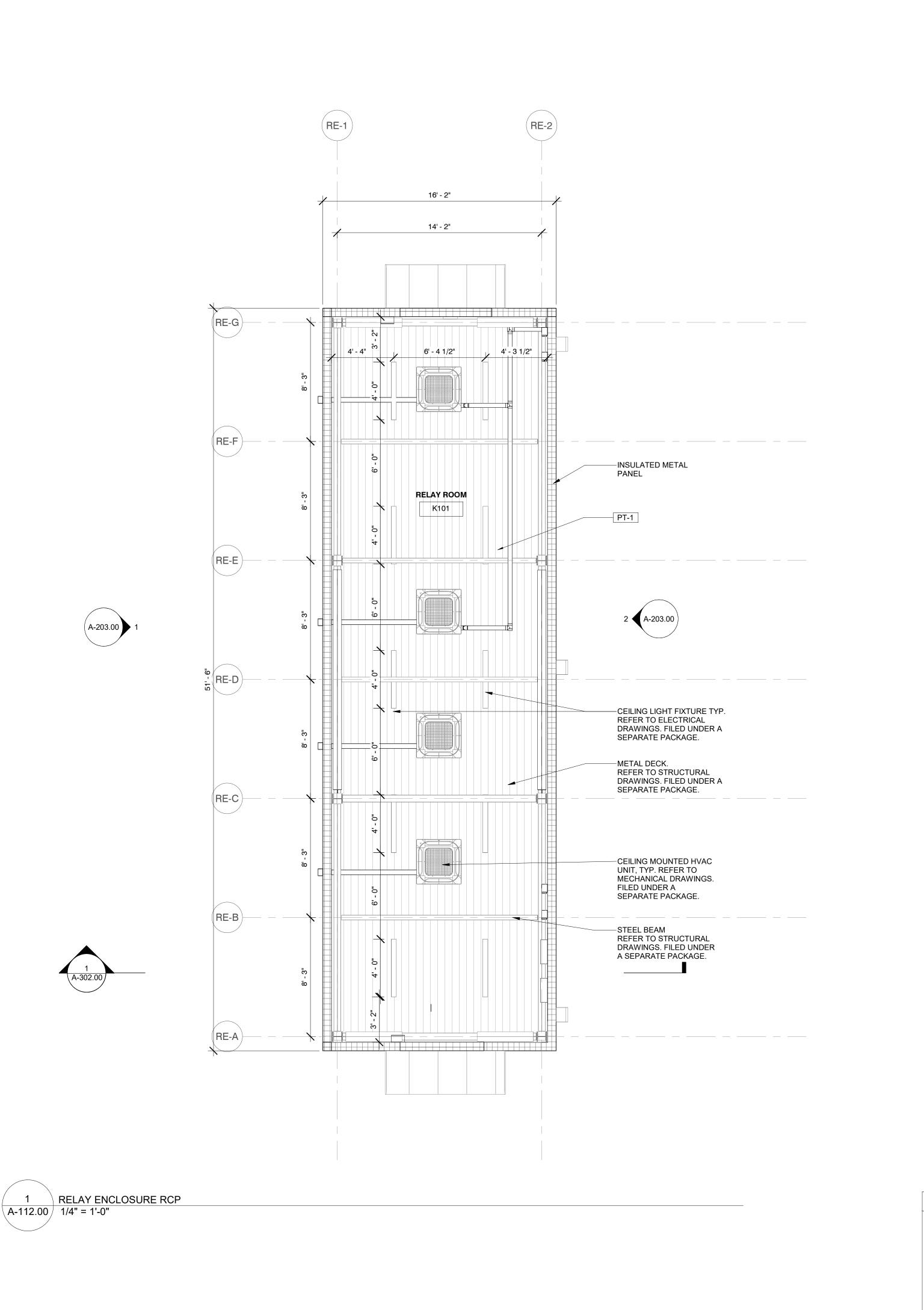
Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

MVS ENCLOSURE RCP



PROJECT NO DRAWING BY S. WARYAH CHECKED BY J. STEPHENS DRAWING NO



SHEET NOTES:

- 1. REFER TO A-601.00 FOR DOOR SCHEDULE REFER TO A-501.00 AND A-502.00 FOR METAL PANEL WALL DETAILS AND WALL PENETRATION DETAILS.
- PENETRATION DETAILS.

 3. REFER TO MECHANICAL DRAWINGS FOR FRESH AIR INTAKE, HEATER AND DAMPER/LOUVER DETAILS FILED UNDER SEPARATE APPLICATION.

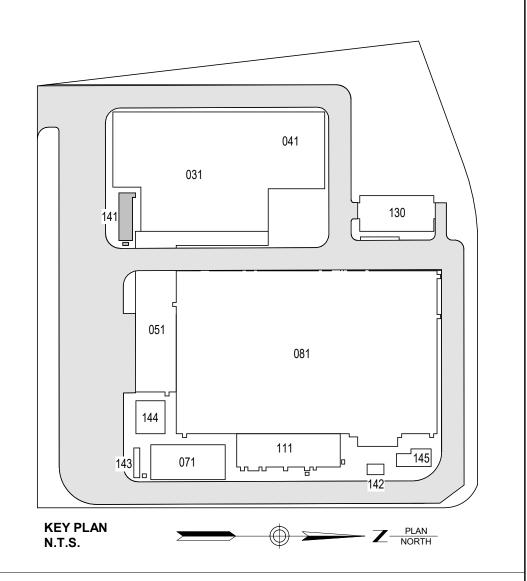
 4. REFER TO BUILDING ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES, NOTES, DETAILS, SCHEDULES AND REQUIREMENTS FILED UNDER SEPARATE APPLICATION.

 5. REFER PLUMBING DRAWINGS, NOTES FOR GUTTER SIZES AND DOWNSPOUT SIZES DETAILS, SCHEDULES AND REQUIREMENTS FILED UNDER SEPARATE APPLICATION.

 6. REFER TO BUILDING STRUCTURAL DRAWINGS FOR COLUMN SIZES AND CONNECTIONS AND FOUNDATION DETAILS FILED UNDER SEPARATE APPLICATION.

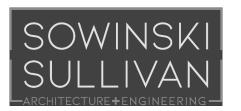
 7. ALL METALLIC EQUIPMENTS INCLUDING BOLLARDS, ROOF ACCESS LADDERS, LIGHTING POLES, ETC. NEED TO BE GROUNDED.

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EKiewit 470 Chestnut Ridge Rd # 2, Woodcliff Lake, NJ 07677

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Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

RELAY ENCLOSURE RCP



PROJECT NO DRAWING BY S. WARYAH CHECKED BY J. STEPHENS DRAWING NO

CADD FILE NO
Autodesk Docs://CHPE
Astoria/CHA-KIE-141-ZZ-M3-A-001.rvt

CEILING LEGEND

GYPSUM WALLBOARD

0' - 0" CEILING HEIGHT ACOUSTIC CEILING TILE

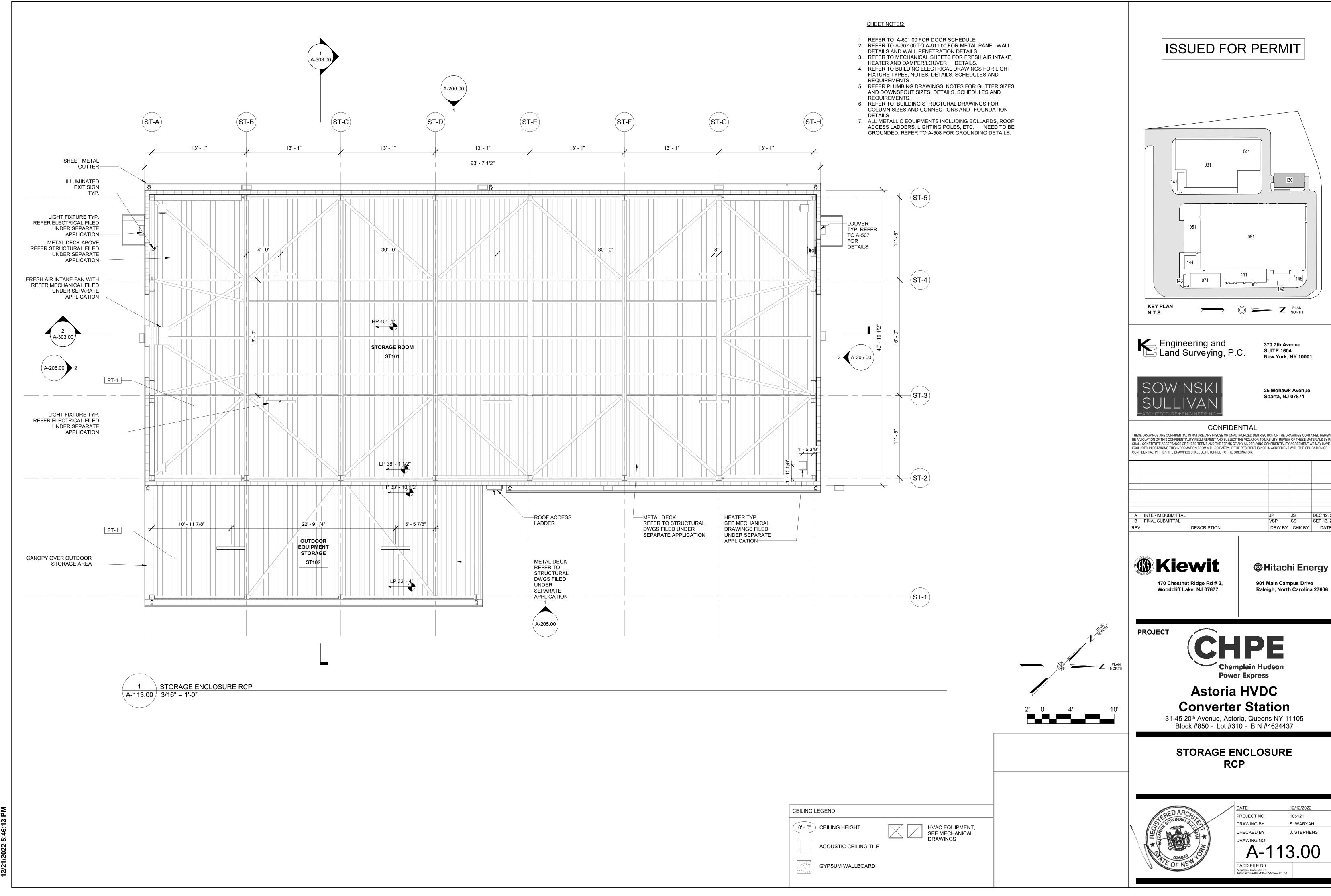
HVAC EQUIPMENT, SEE MECHANICAL DRAWINGS

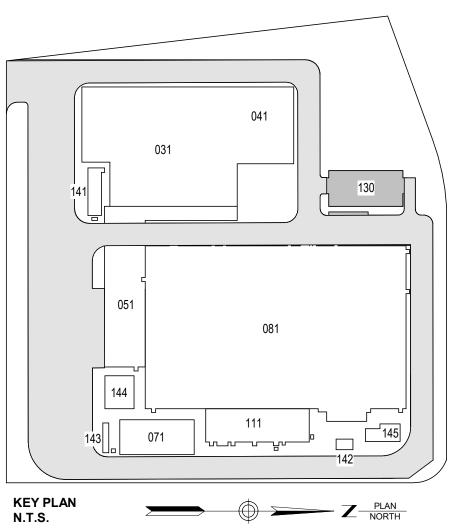
22" DIA PENDANT LIGHT FIXTURE

8" W. X 4' L. LINEAR LIGHT 2' X 2' RECESSED LED LIGHT FIXTURE

LIGHTING LEGEND

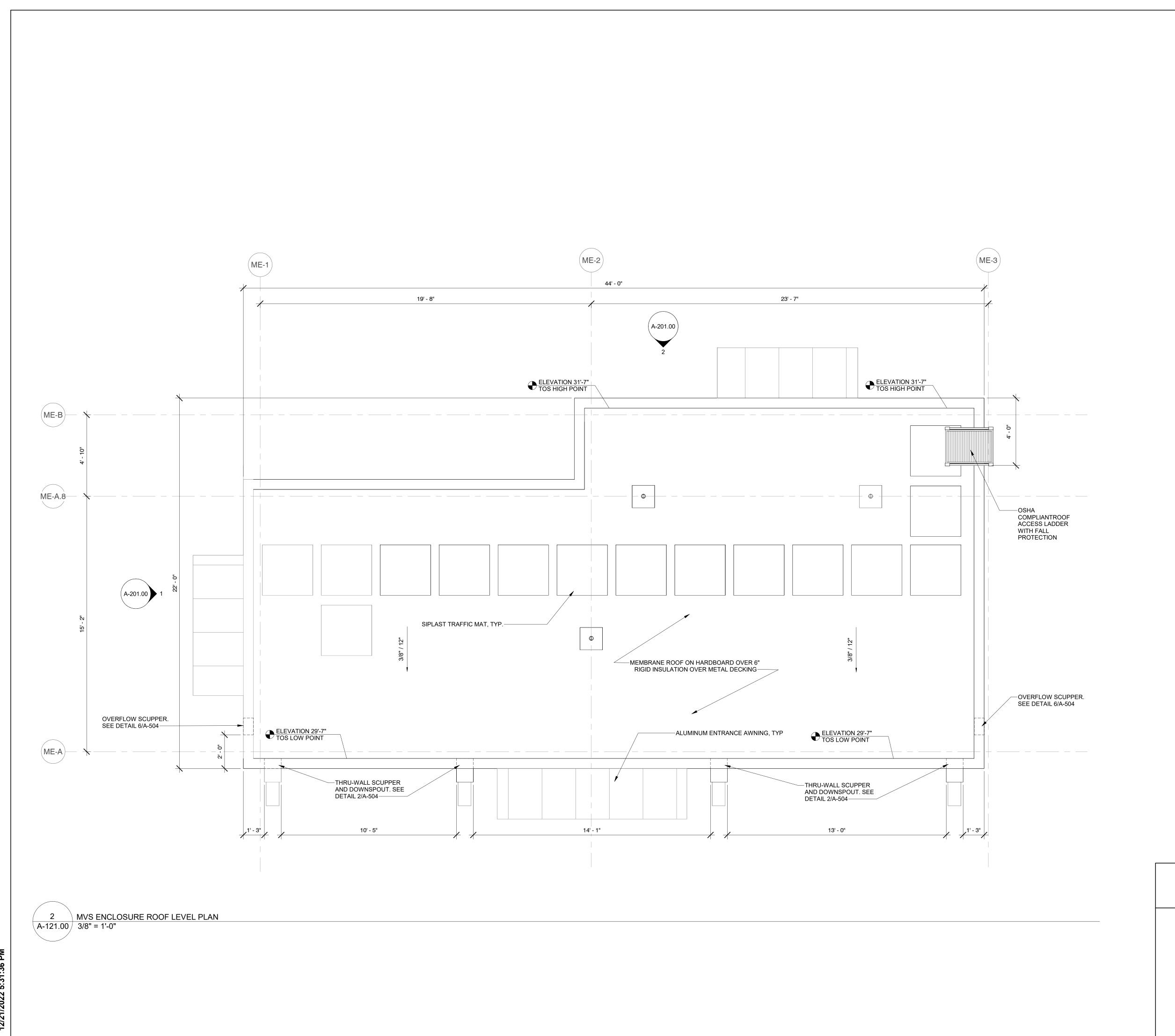
2' X 4' RECESSED LED LIGHT FIXTURE

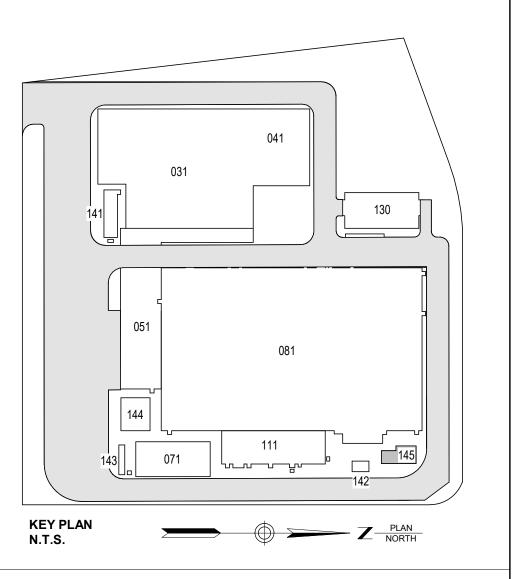


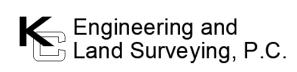


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В	FINAL SUBMITTAL	VSP	SS	SEP 13, 2022
REV	DESCRIPTION	DRW BY	CHK BY	DATE
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PROJECT



Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

MVS ENCLOSURE ROOF PLAN



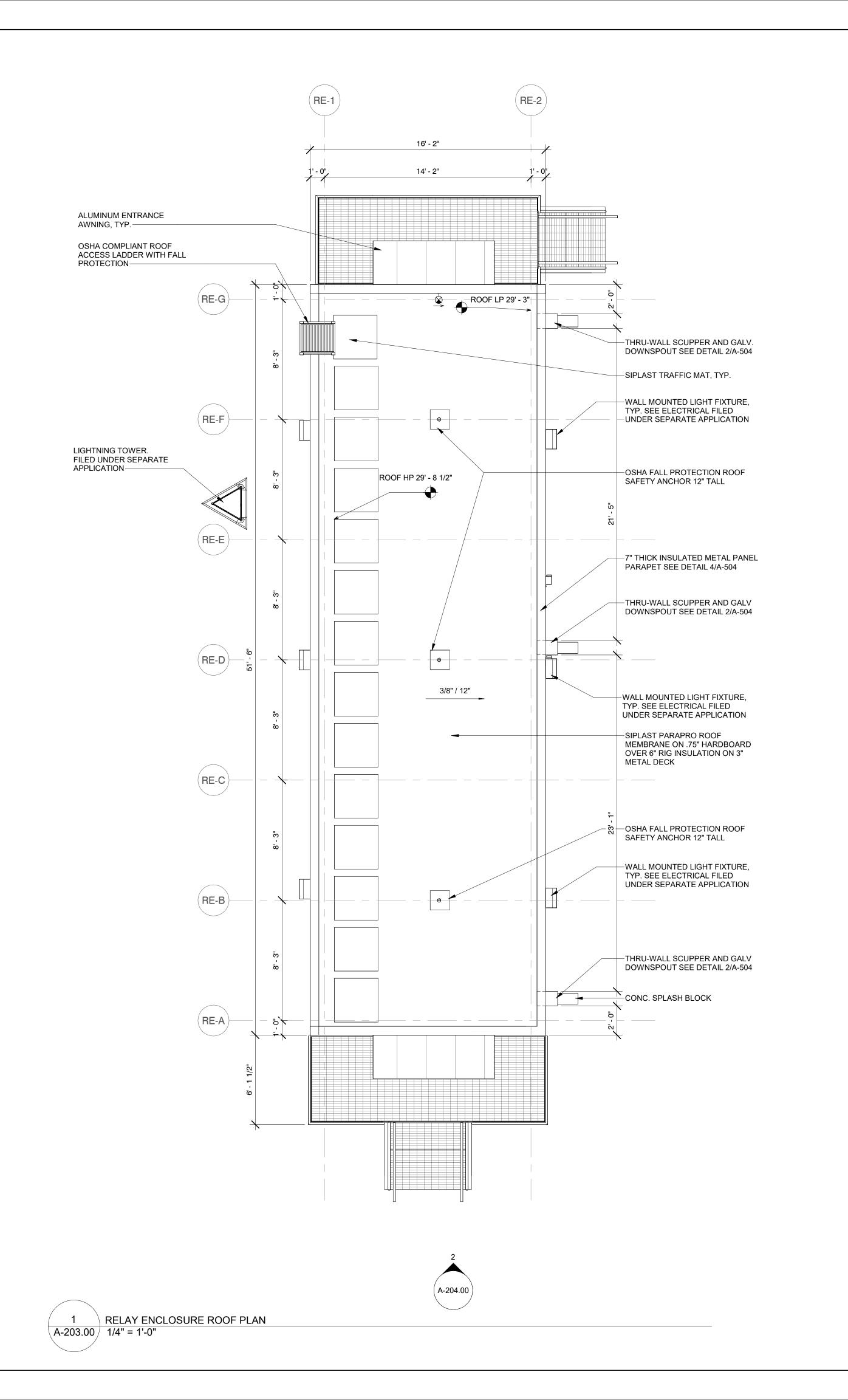
 DATE
 12/12/2022

 PROJECT NO
 105121

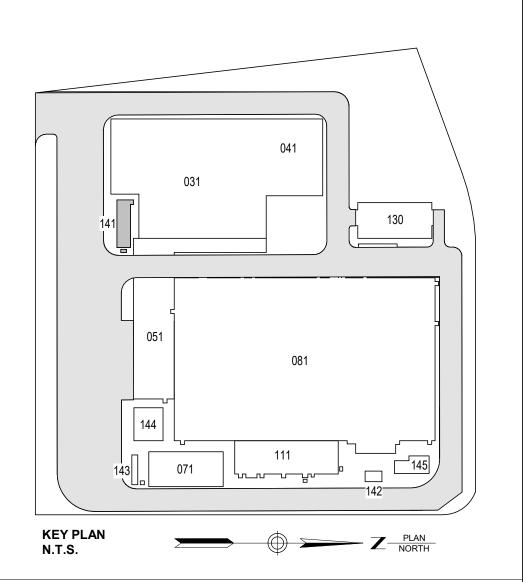
 DRAWING BY
 S. WARYAH

 CHECKED BY
 J. STEPHENS

 DRAWING NO







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REV	DESCRIPTION	DRW BY	CHK BY	DATE



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PROJECT



Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

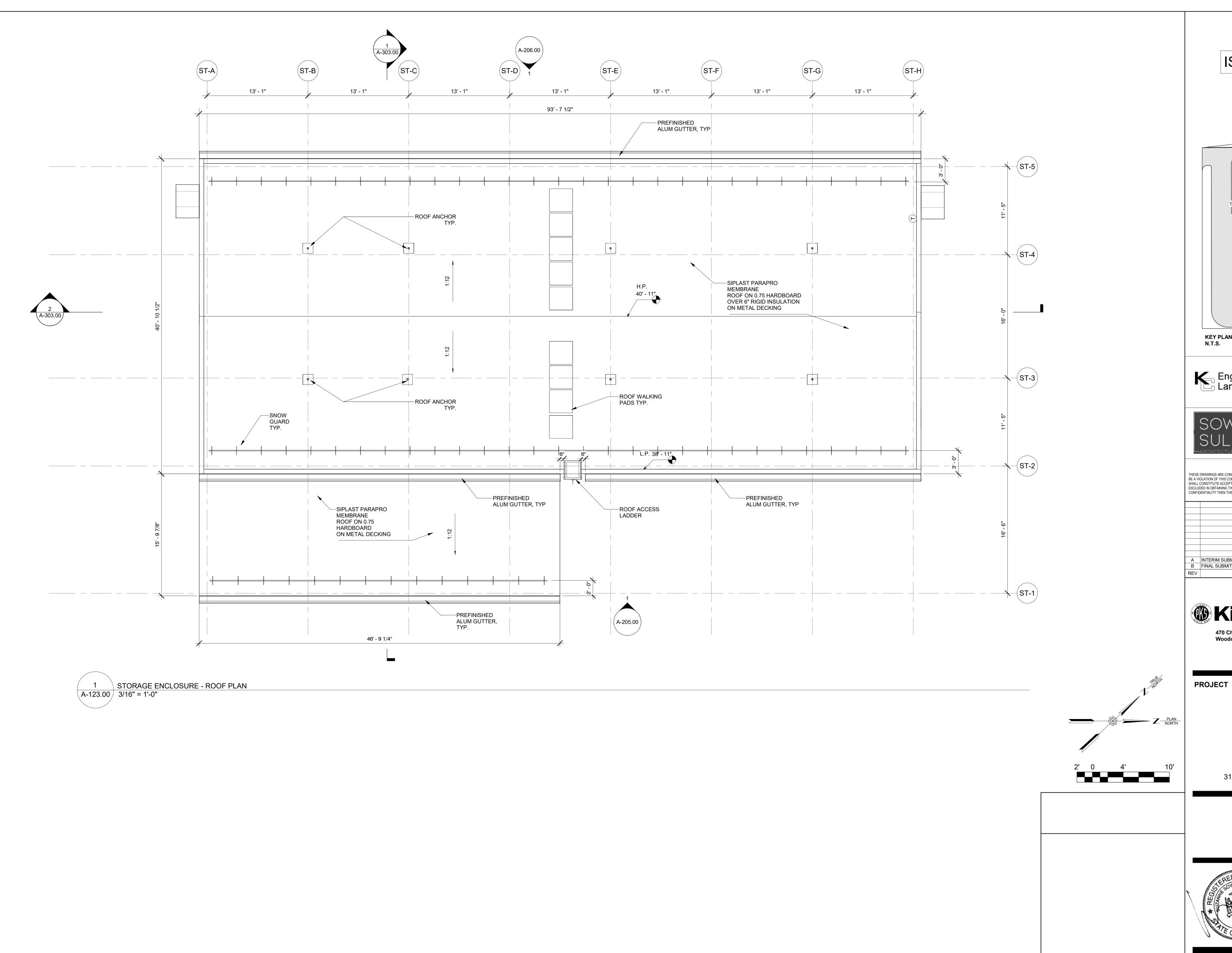
> RELAY ENCLOSURE -ROOF PLANS

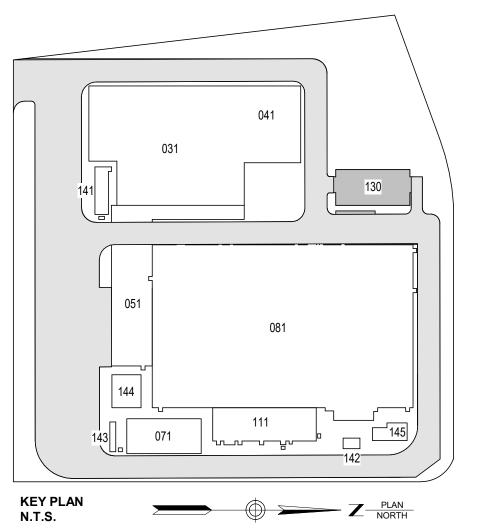


DATE 12/12/2022
PROJECT NO 105121
DRAWING BY S. WARYAH
CHECKED BY J. STEPHENS
DRAWING NO
A-122.00

CADD FILE NO
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В	FINAL SUBMITTAL	VSP	SS	SEP 13, 2022
REV	DESCRIPTION	DRW BY	CHK BY	DATE



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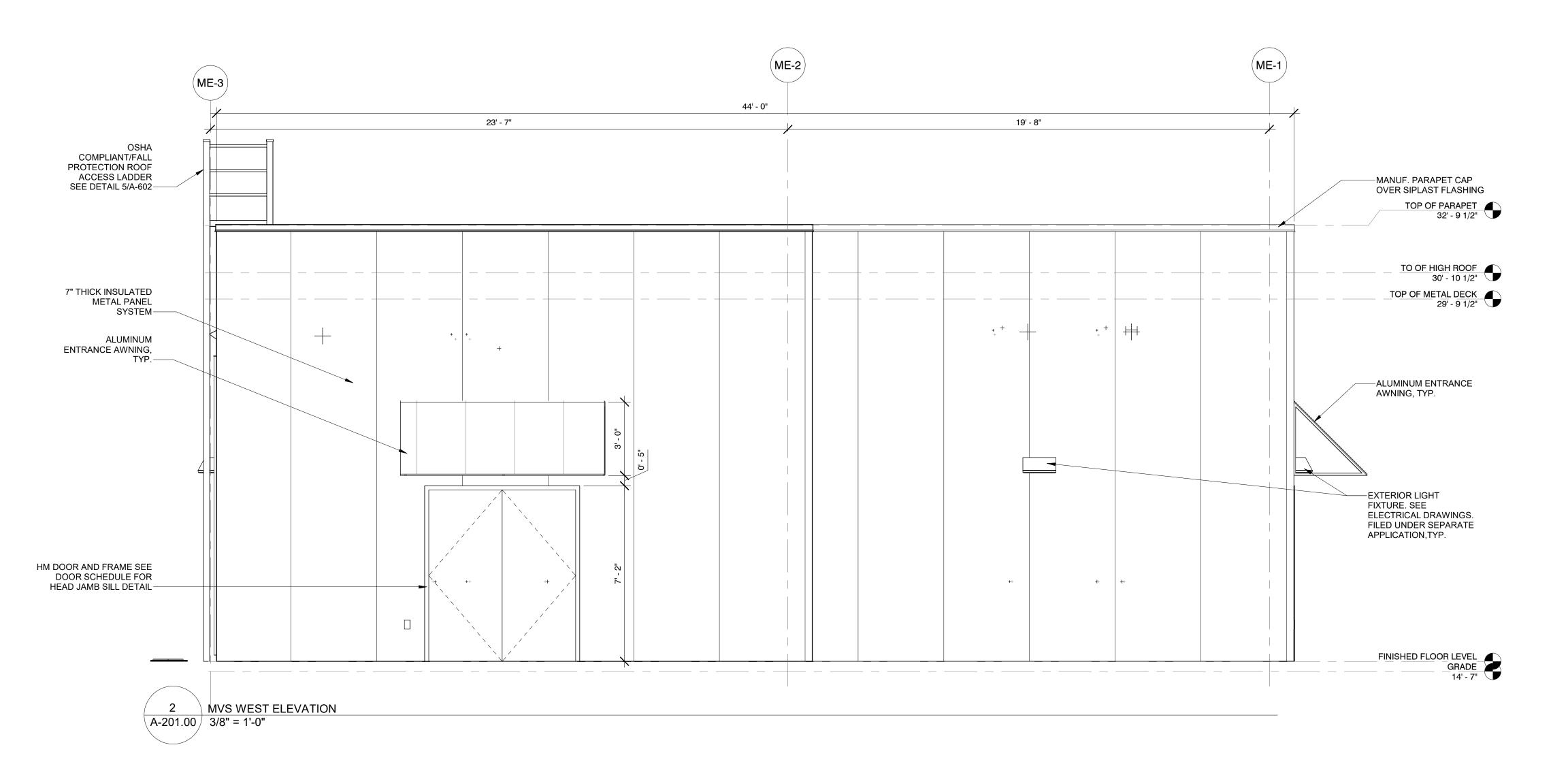
Astoria HVDC Converter Station

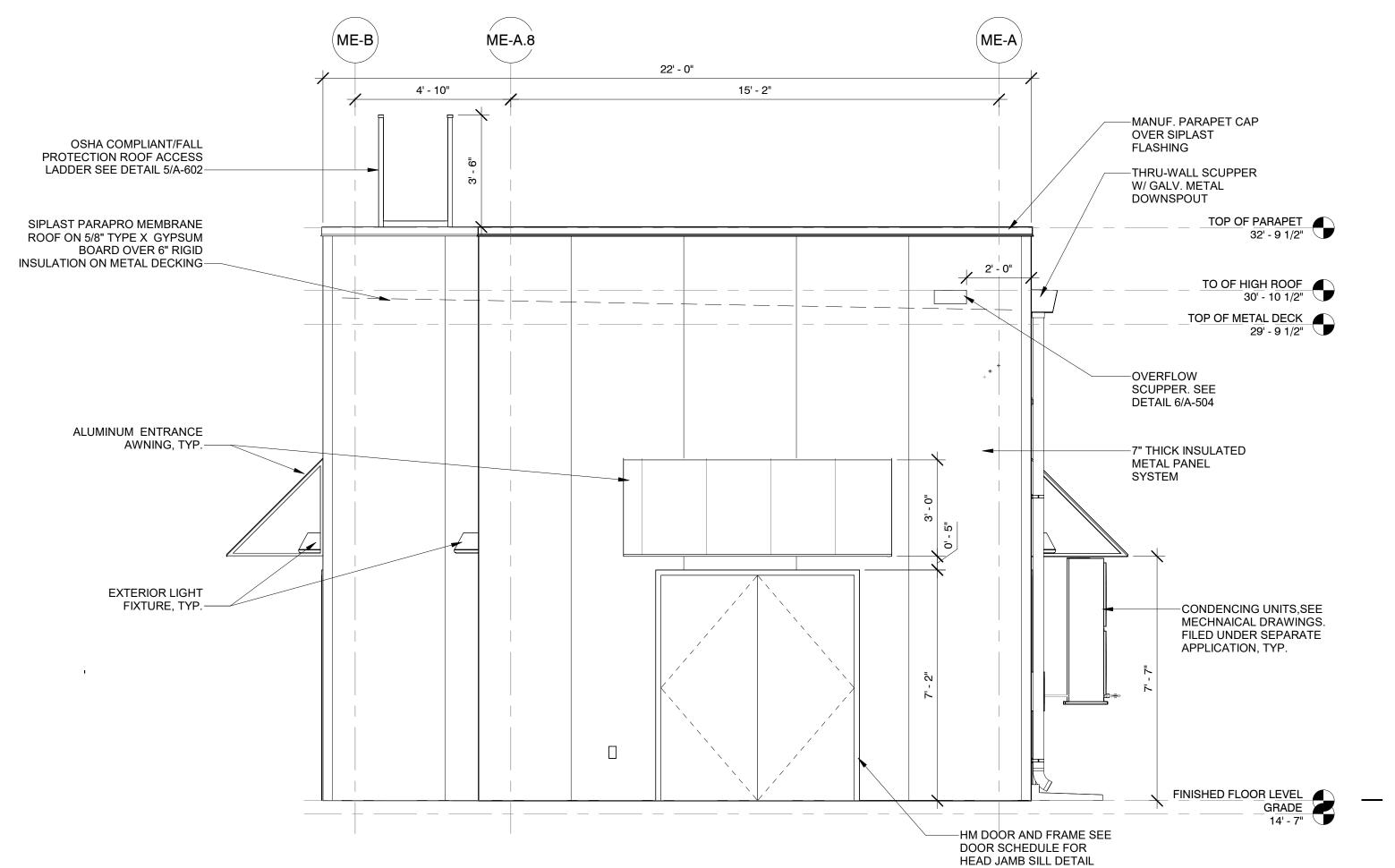
31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

STORAGE ENCLOSURE **ROOF PLAN**



PROJECT NO S. WARYAH CHECKED BY J. STEPHENS DRAWING NO A-123.00







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PROJECT



Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

MVS ENCLOSURE ELEVATIONS

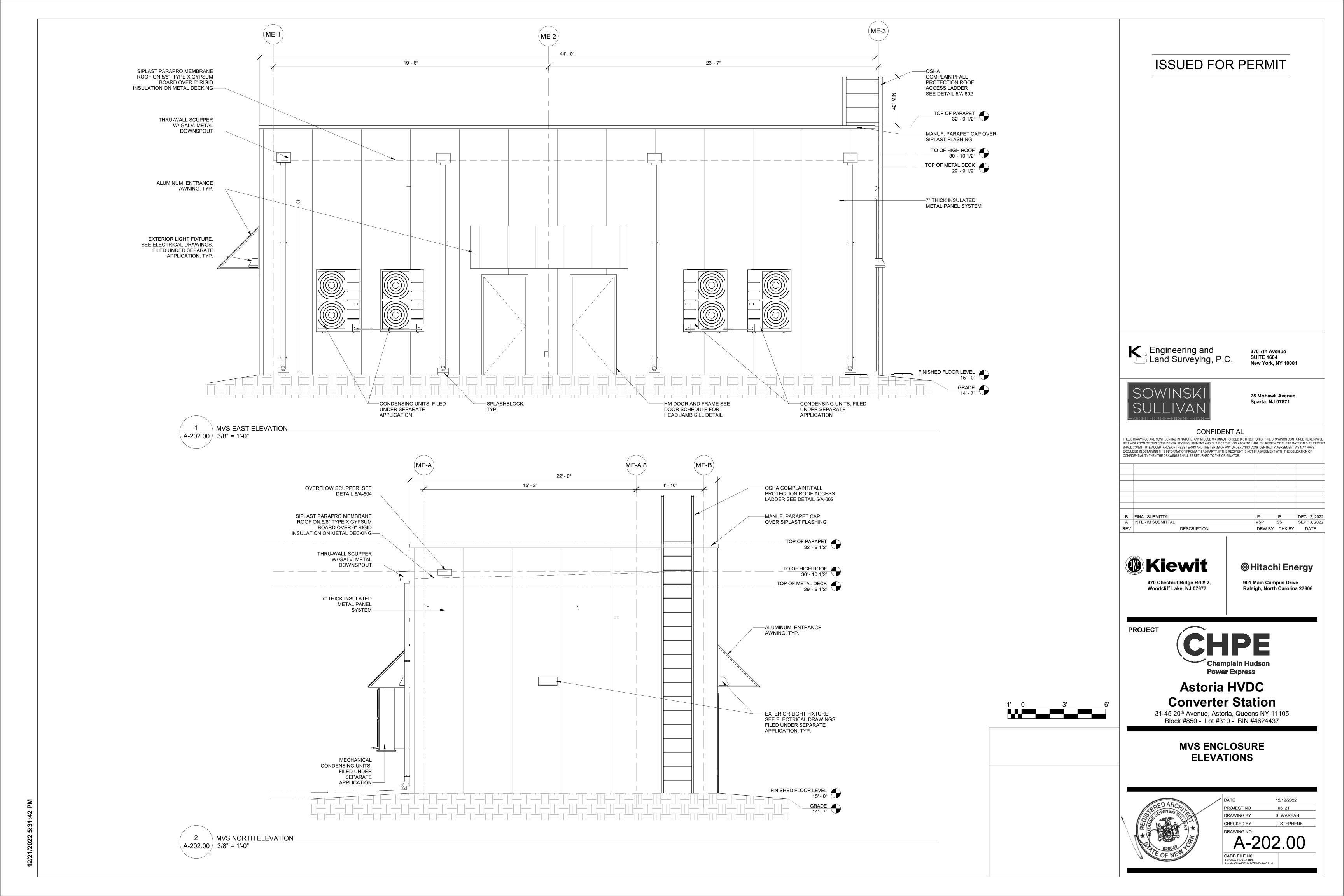


DATE 12/12/2022
PROJECT NO 105121
DRAWING BY S. WARYAH
CHECKED BY J. STEPHENS
DRAWING NO

CADD FILE NO
Autodesk Docs://CHPE
Astoria/CHA-KIE-141-ZZ-M3-A-001.rvt

11/2022 5:31:40

1 MVS SOUTH ELEVATION A-201.00 3/8" = 1'-0"

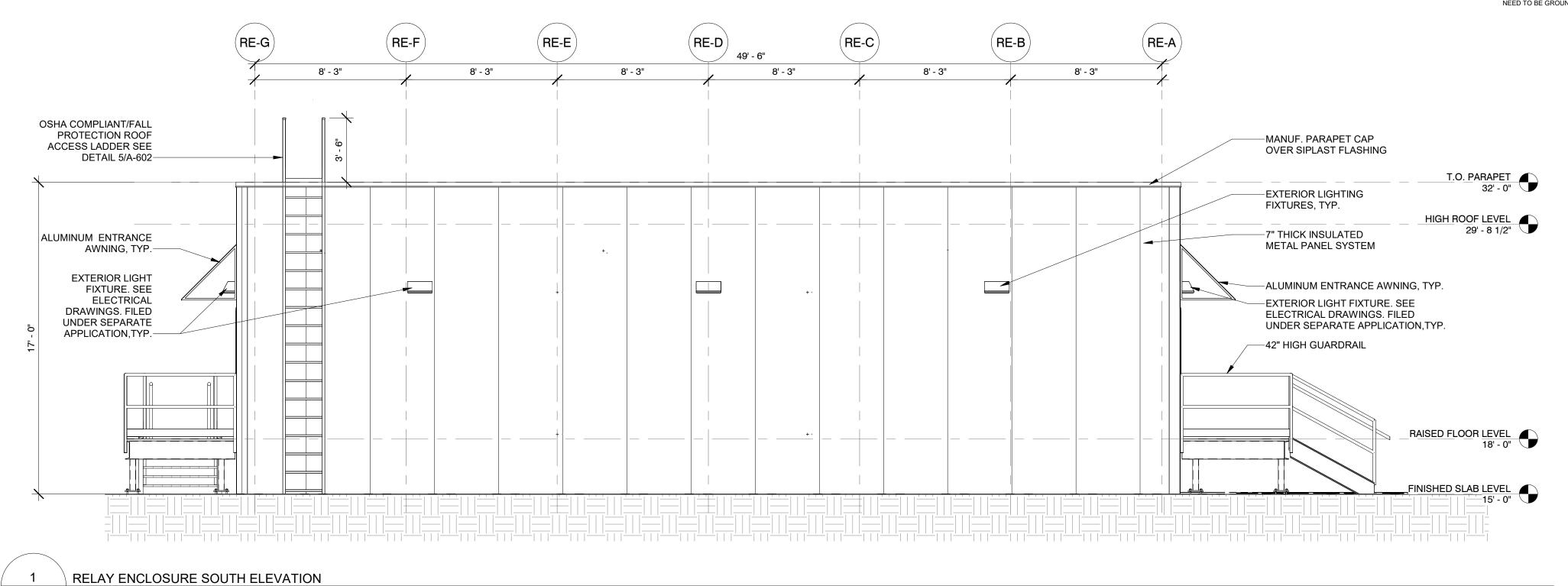


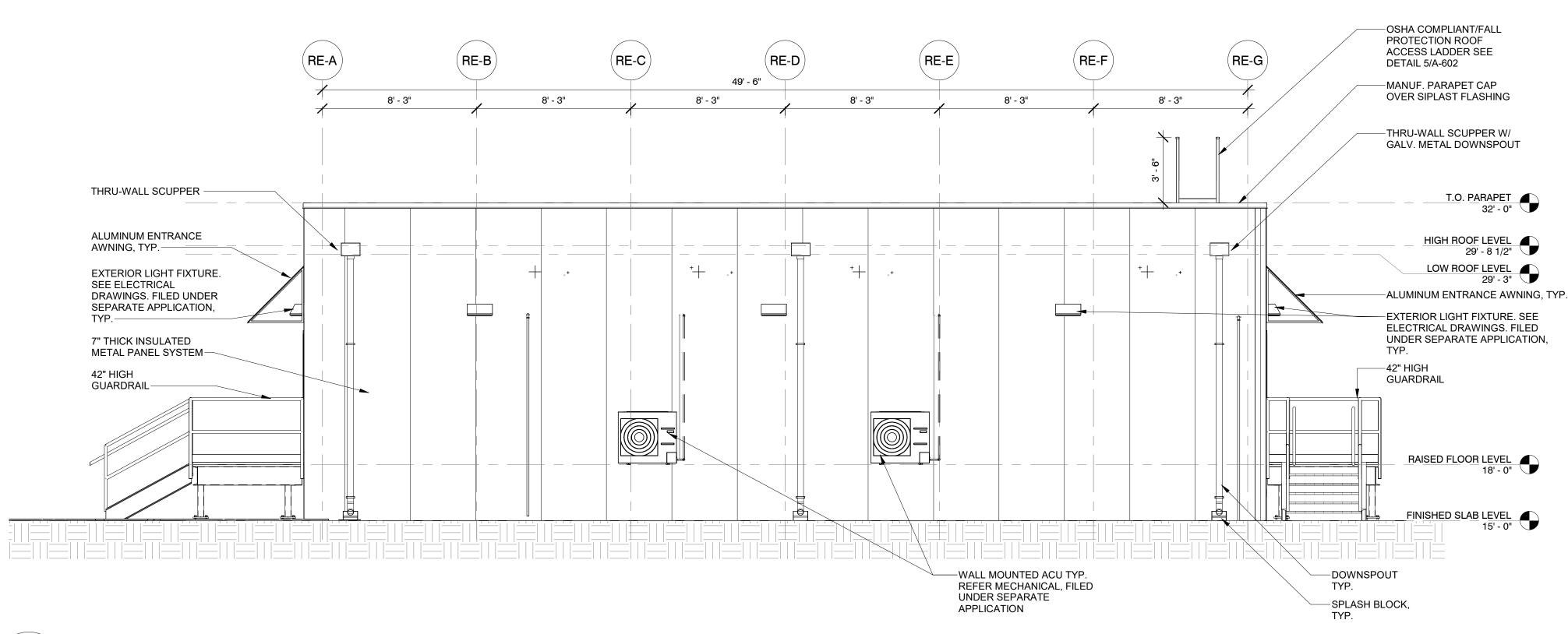


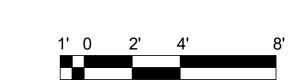
- REFER TO A-601.00 FOR DOOR SCHEDULE
 REFER TO A-501.00 AND A-502.00 FOR METAL PANEL WALL DETAILS AND WALL
 PENETRATION DETAILS.
 REFER TO MECHANICAL DRAWINGS FOR FRESH AIR INTAKE, HEATER AND DAMPER/LOUVER
 DETAILS FILED UNDER SEPARATE APPLICATION.
 REFER TO BUILDING ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES, NOTES, DETAILS,
 SCHEDULES AND REQUIREMENTS FILED UNDER SEPARATE APPLICATION.
 REFER PLUMBING DRAWINGS, NOTES FOR GUTTER SIZES AND DOWNSPOUT SIZES
 DETAILS SCHEDILLES AND PEOLIDEMENTS FILED LINDER SEPARATE APPLICATION
- REFER PLUMBING DRAWINGS, NOTES FOR GOTTER SIZES AND DOWNSPOUT SIZES
 DETAILS, SCHEDULES AND REQUIREMENTS FILED UNDER SEPARATE APPLICATION.
 REFER TO BUILDING STRUCTURAL DRAWINGS FOR COLUMN SIZES AND CONNECTIONS AND FOUNDATION DETAILS FILED UNDER SEPARATE APPLICATION.

 7. ALL METALLIC EQUIPMENTS INCLUDING BOLLARDS, ROOF ACCESS LADDERS, LIGHTING POLES, ETC.









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	В	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
	Α	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022
	REV	DESCRIPTION	DRW BY	CHK BY	DATE



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PROJECT



Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

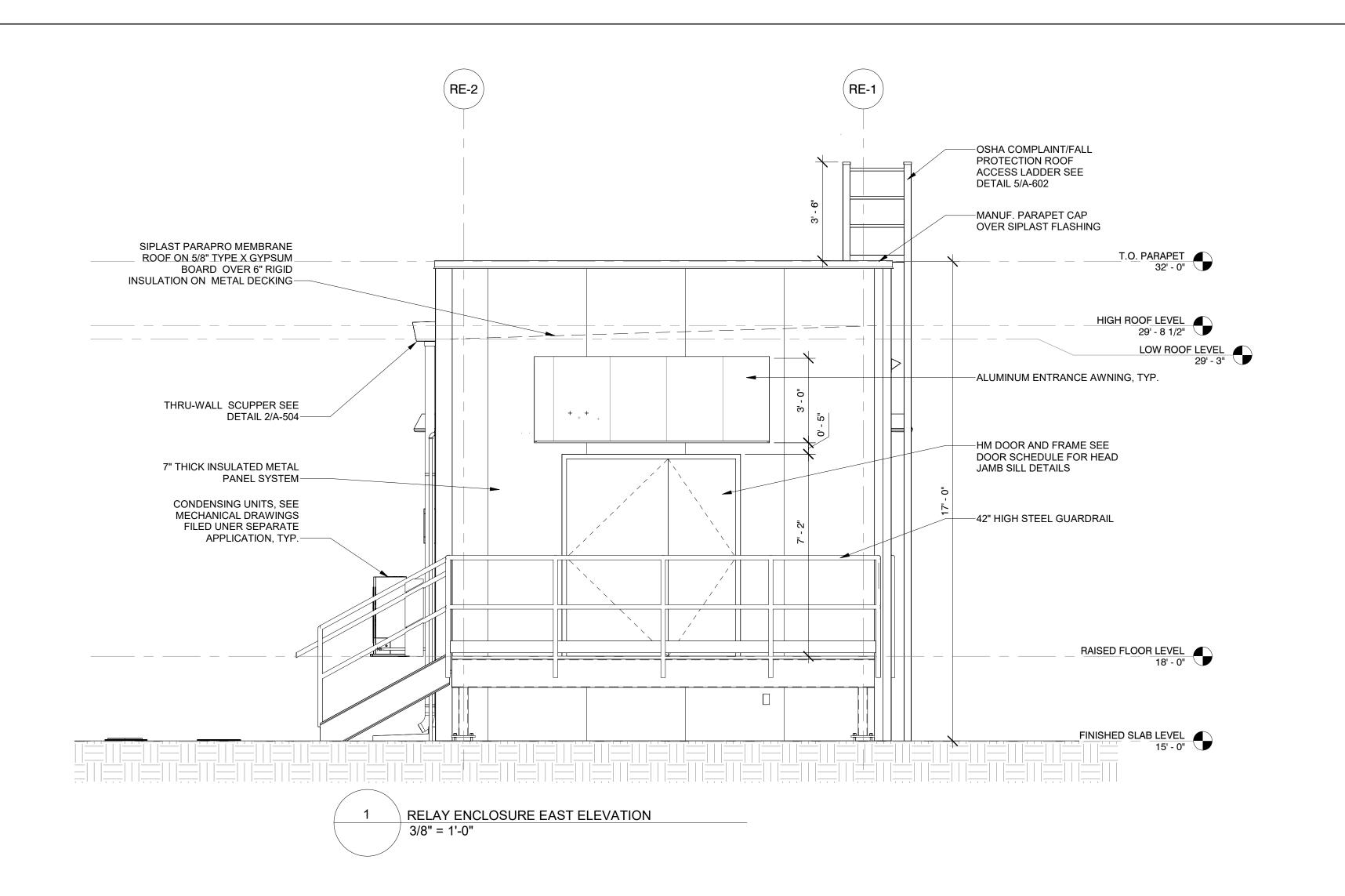
> **RELAY ENCLOSURE ELEVATIONS 1 0F 2**

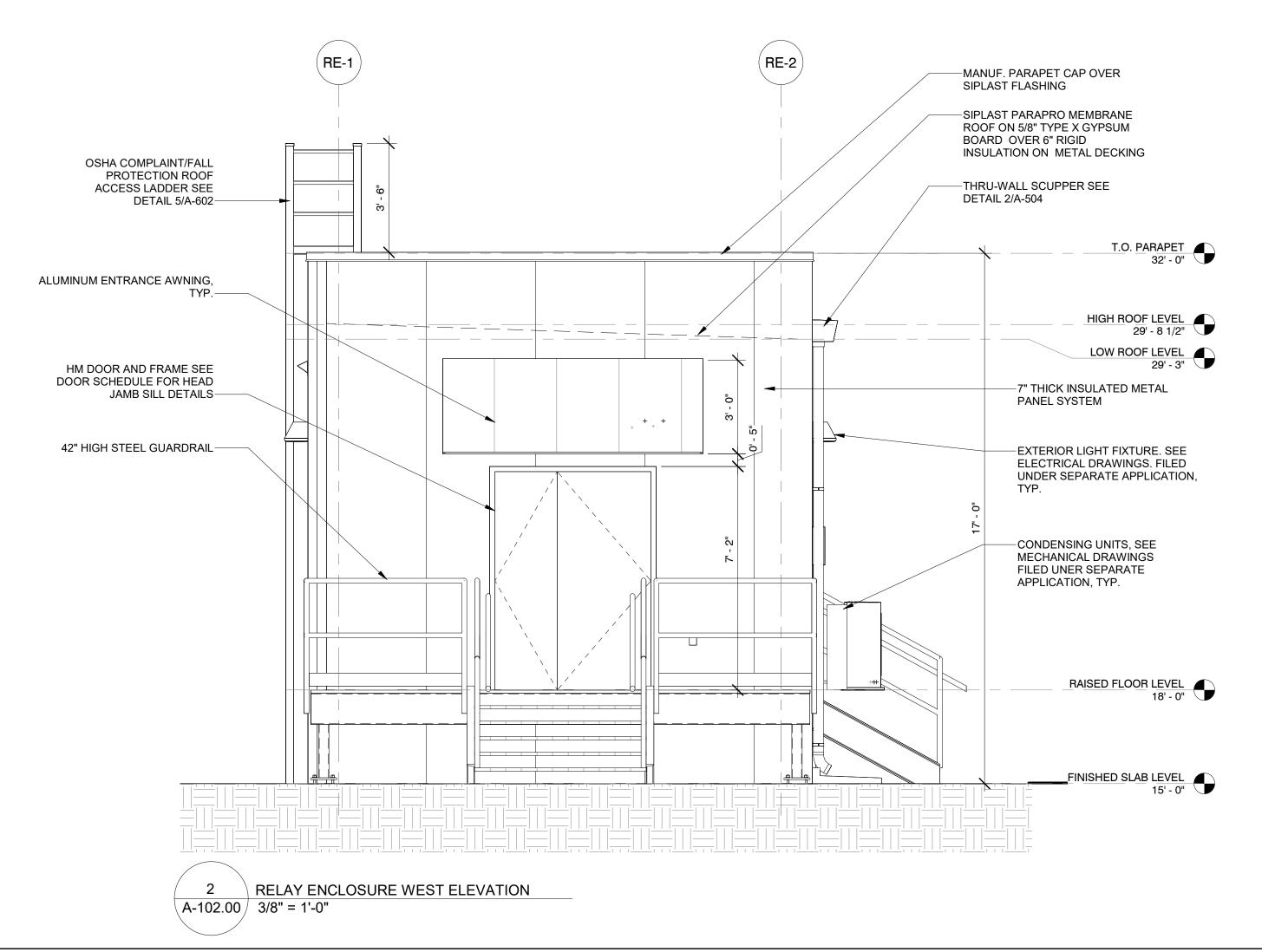


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OW WAS SELECTED ON THE SECOND OF THE SECOND	DRAWING BY	S. WARYAH
a 2 2 2 1	CHECKED BY	J. STEPHENS
ZX	DRAWING NO	
E E	A-203	$3 \cup 0$
026049	M-2U	J. 00
OF NEW	CADD FILE NO Autodesk Docs://CHPE Astoria/CHA-KIE-141-ZZ-M3-A-001.rvt	

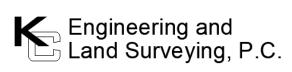
RELAY ENCLOSURE NORTH ELEVATION A-102.00 / 1/4" = 1'-0"

A-203.00 1/4" = 1'-0"









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	REV	DESCRIPTION	DRW BY	CHK BY	DATE



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PROJECT



Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

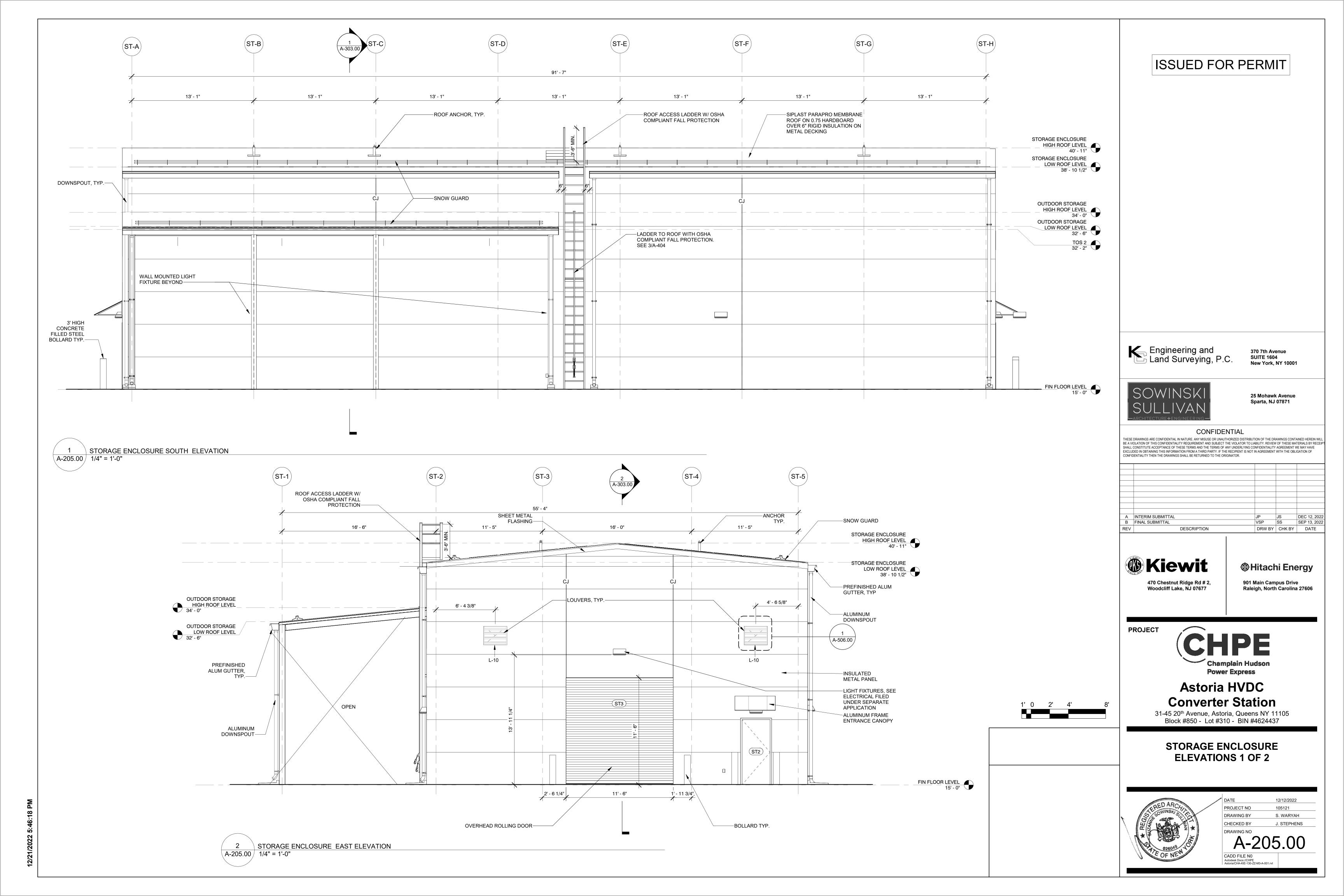
RELAY ENCLOSURE ELEVATIONS 2 OF 2

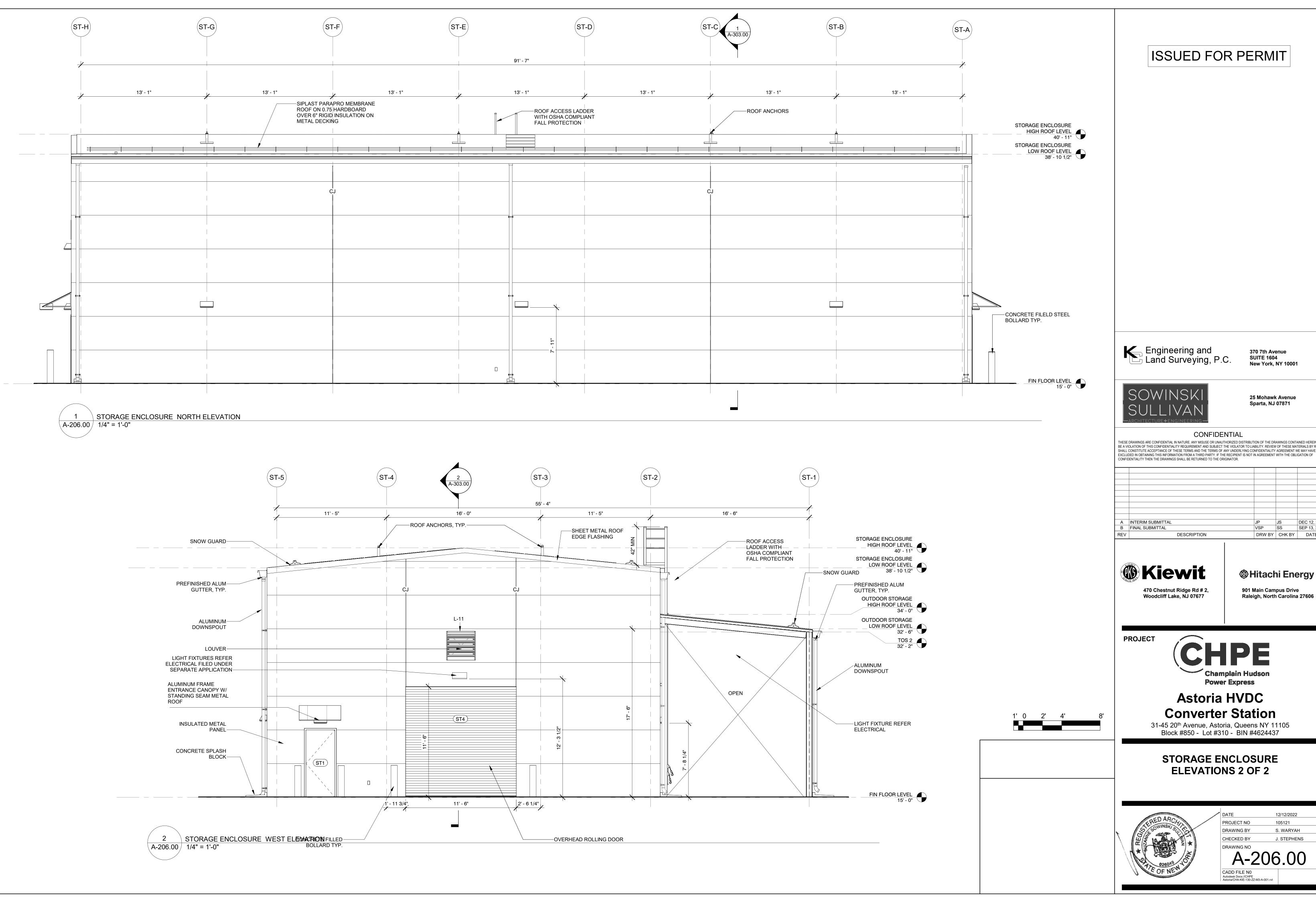


DATE 12/12/2022
PROJECT NO 105121
DRAWING BY S. WARYAH
CHECKED BY J. STEPHENS
DRAWING NO

CADD FILE NO Autodesk Docs://CHPE Astoria/CHA-KIE-141-ZZ-M3-A-001.rvt

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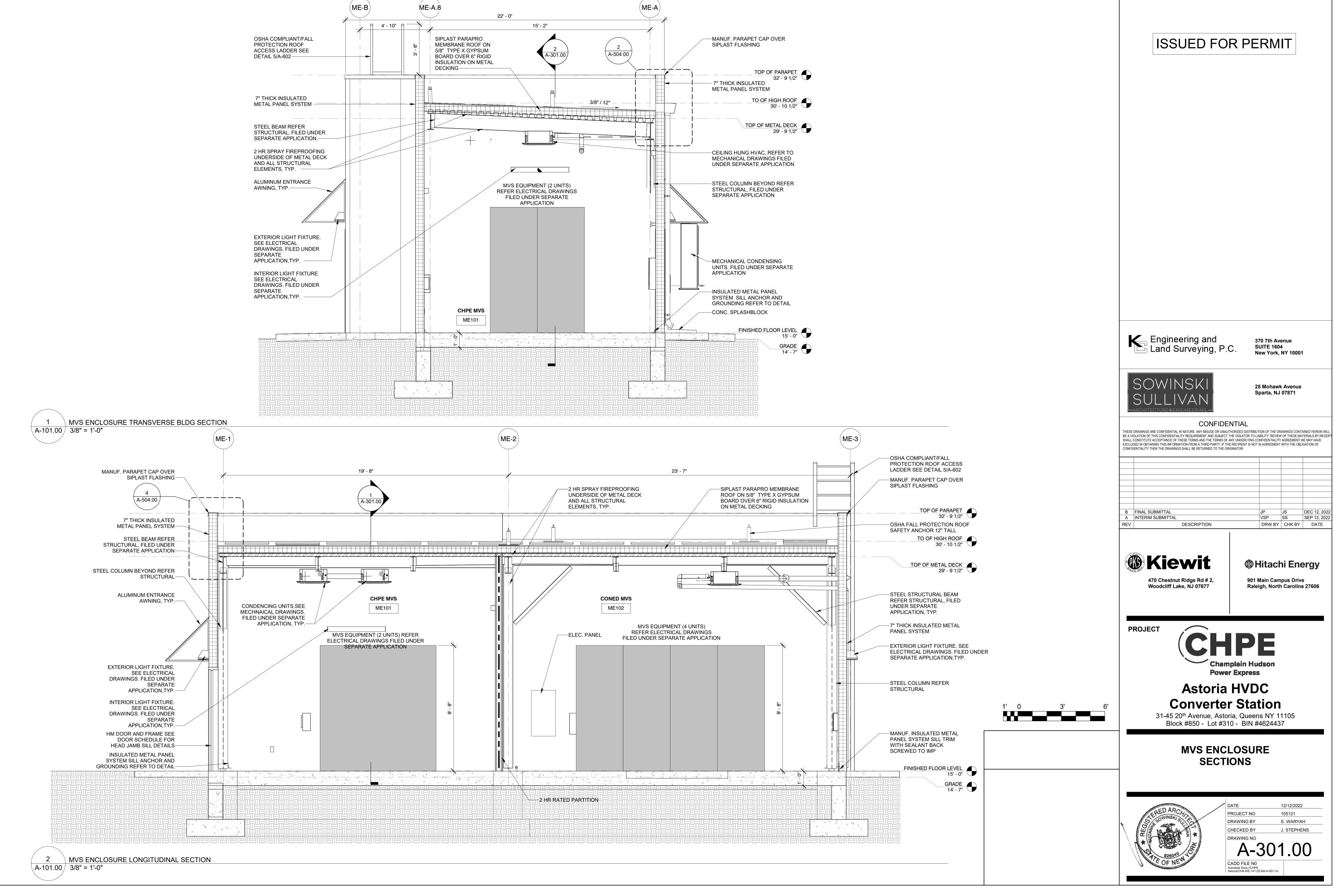


Converter Station

Block #850 - Lot #310 - BIN #4624437

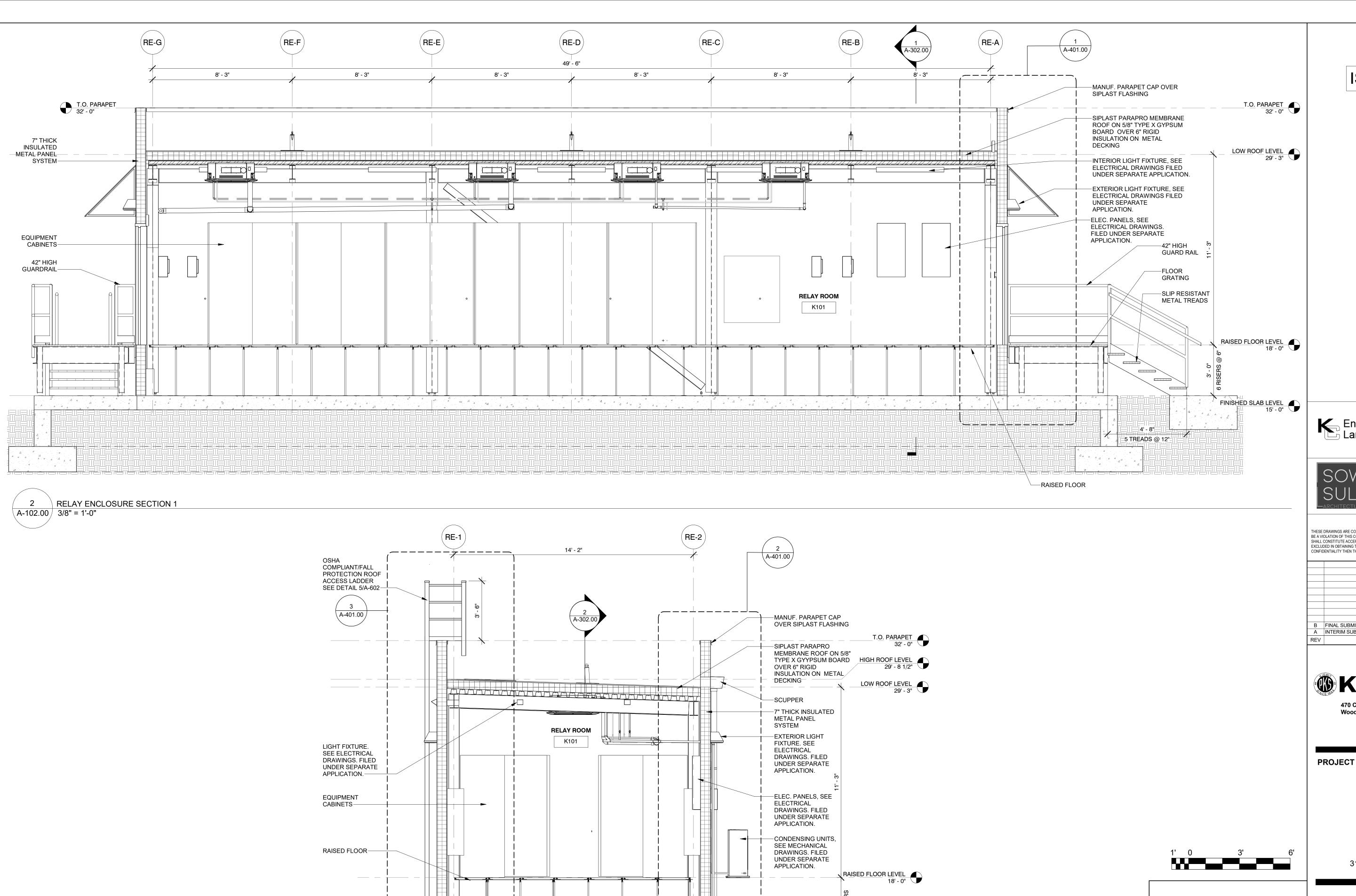
STORAGE ENCLOSURE

12/12/2022 PROJECT NO S. WARYAH CHECKED BY J. STEPHENS DRAWING NO A-206.00



BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECEIPT SHALL CONSTITUTE ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXCLUDED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF

В	FINAL SUBMITTAL	JP	JS	DEC 12, 2022
Α	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022
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FINISHED SLAB LEVEL 15' - 0"

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12/12/2022

S. WARYAH

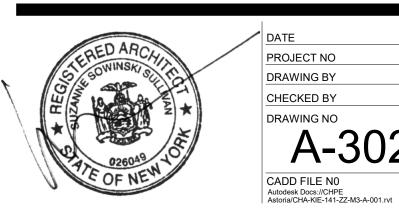
J. STEPHENS

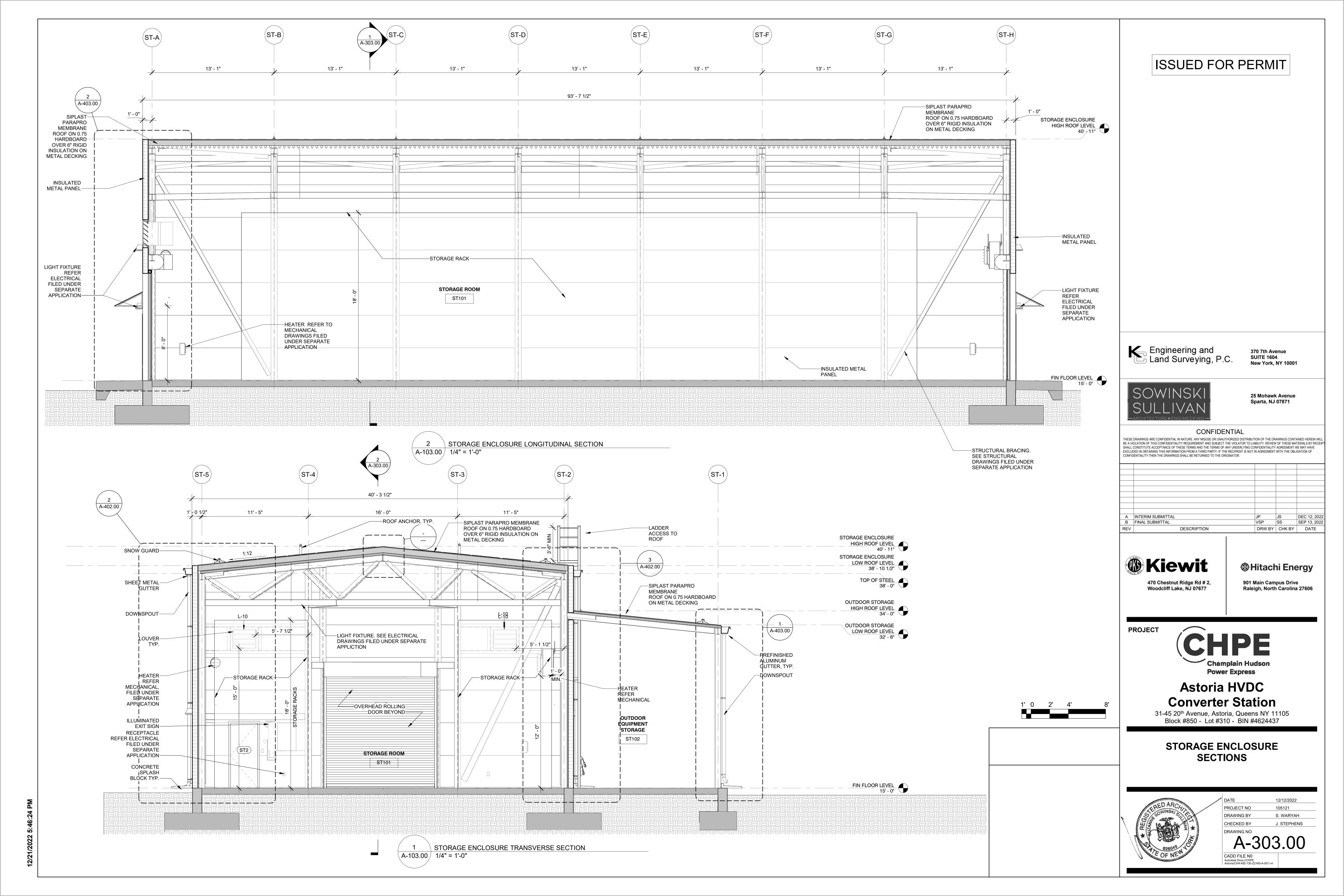


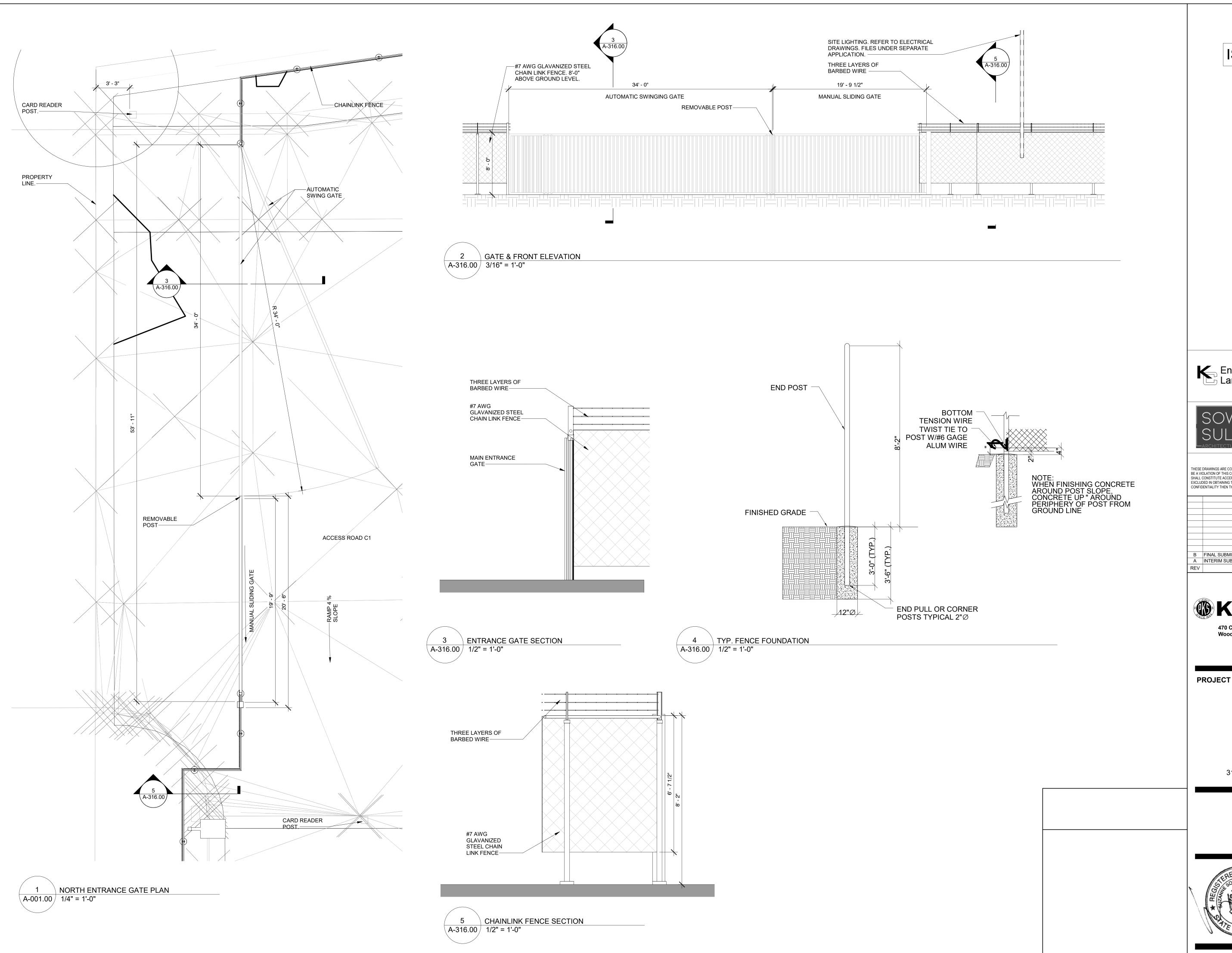
Astoria HVDC Converter Station 31-45 20th Avenue, Astoria, Queens NY 11105

Block #850 - Lot #310 - BIN #4624437

RELAY ENCLOSURE SECTIONS







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Α	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022
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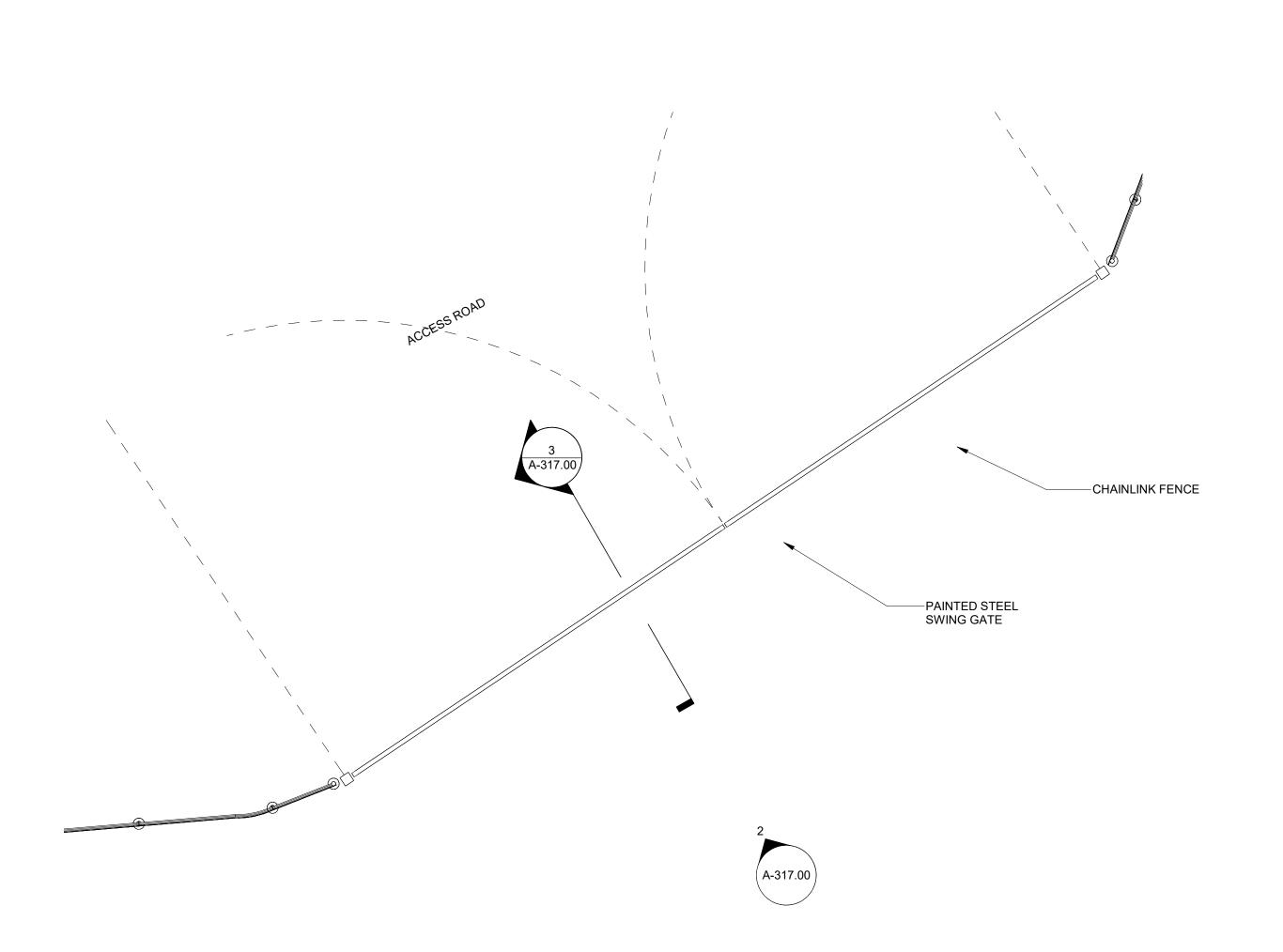
Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

NORTH ENTRANCE GATE **PLAN, ELEVATION AND SECTION**



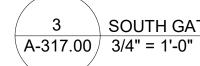
PROJECT NO S. WARYAH CHECKED BY J. STEPHENS DRAWING NO A-316.00



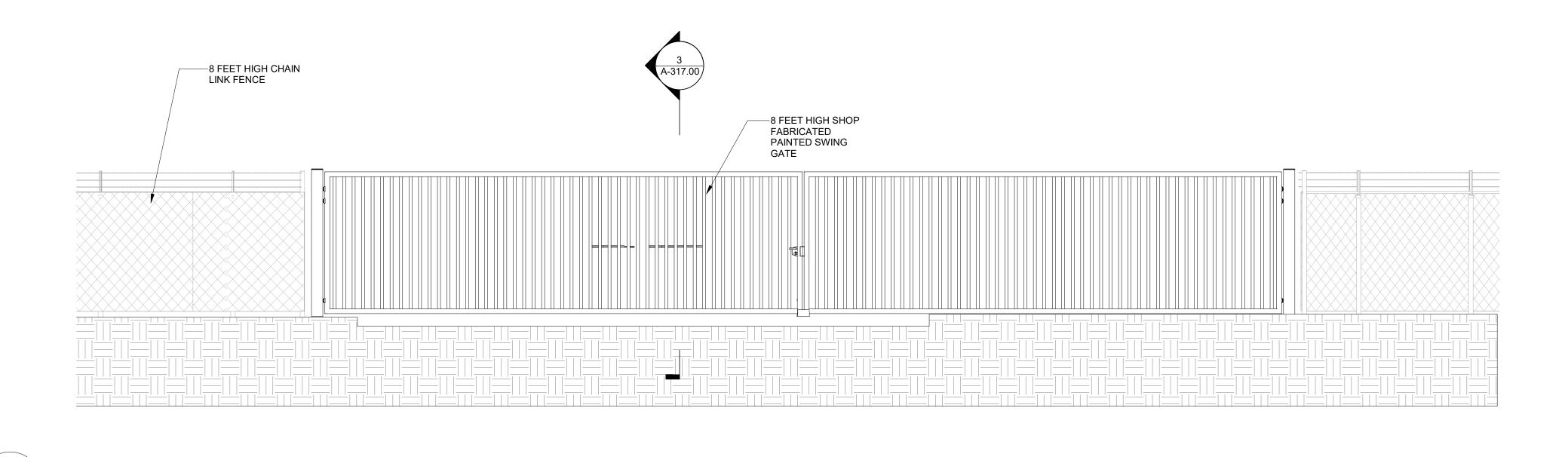
NORTHEAST ENTRANCE GATE PLAN A-001.00 3/16" = 1'-0"

GATE FRONT ELEVATION

A-317.00 1/4" = 1'-0"



SOUTH GATE CROSS SECTION







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PROJECT



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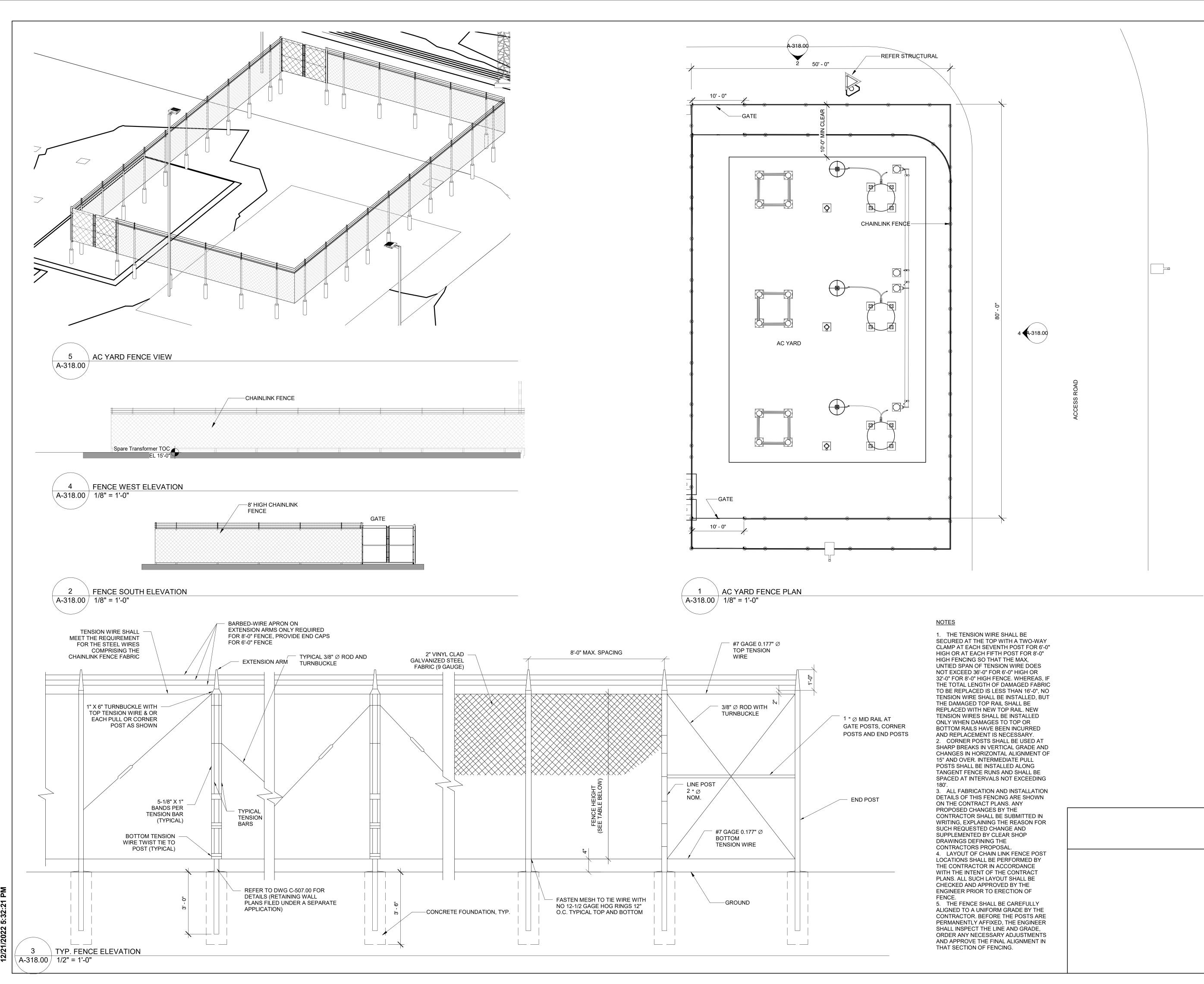
31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

SOUTH ENTRANCE GATE PLAN, ELEVATION AND **SECTION**



PROJECT NO S. WARYAH CHECKED BY J. STEPHENS DRAWING NO

A-317.00



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REV	DESCRIPTION	DRW BY	CHK BY	DATE



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PROJECT



Astoria HVDC Converter Station

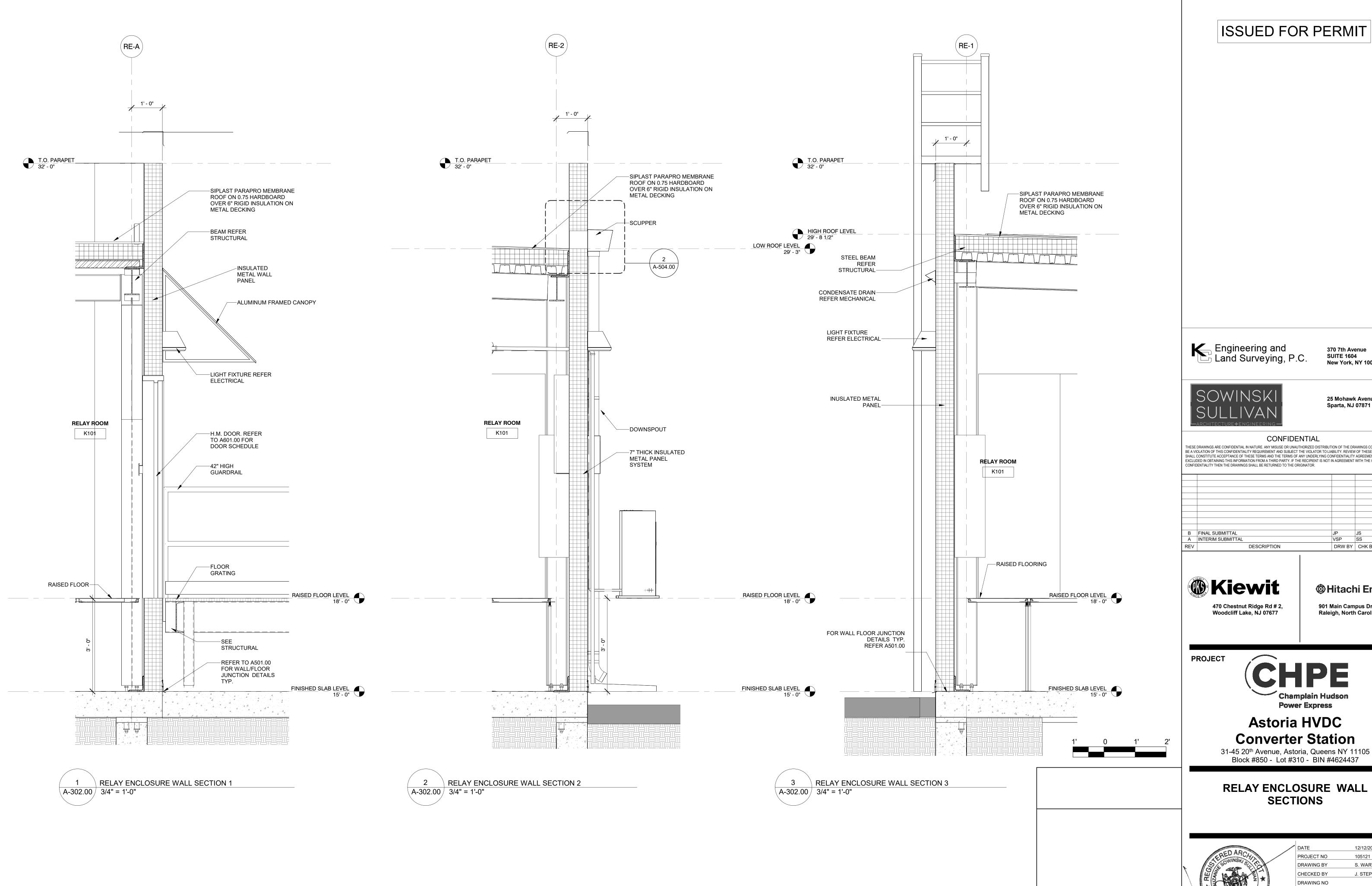
31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

FENCE- AC YARD



DATE 12/12/2022
PROJECT NO 105121
DRAWING BY S. WARYAH
CHECKED BY J. STEPHENS
DRAWING NO

A-318.00



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Converter Station

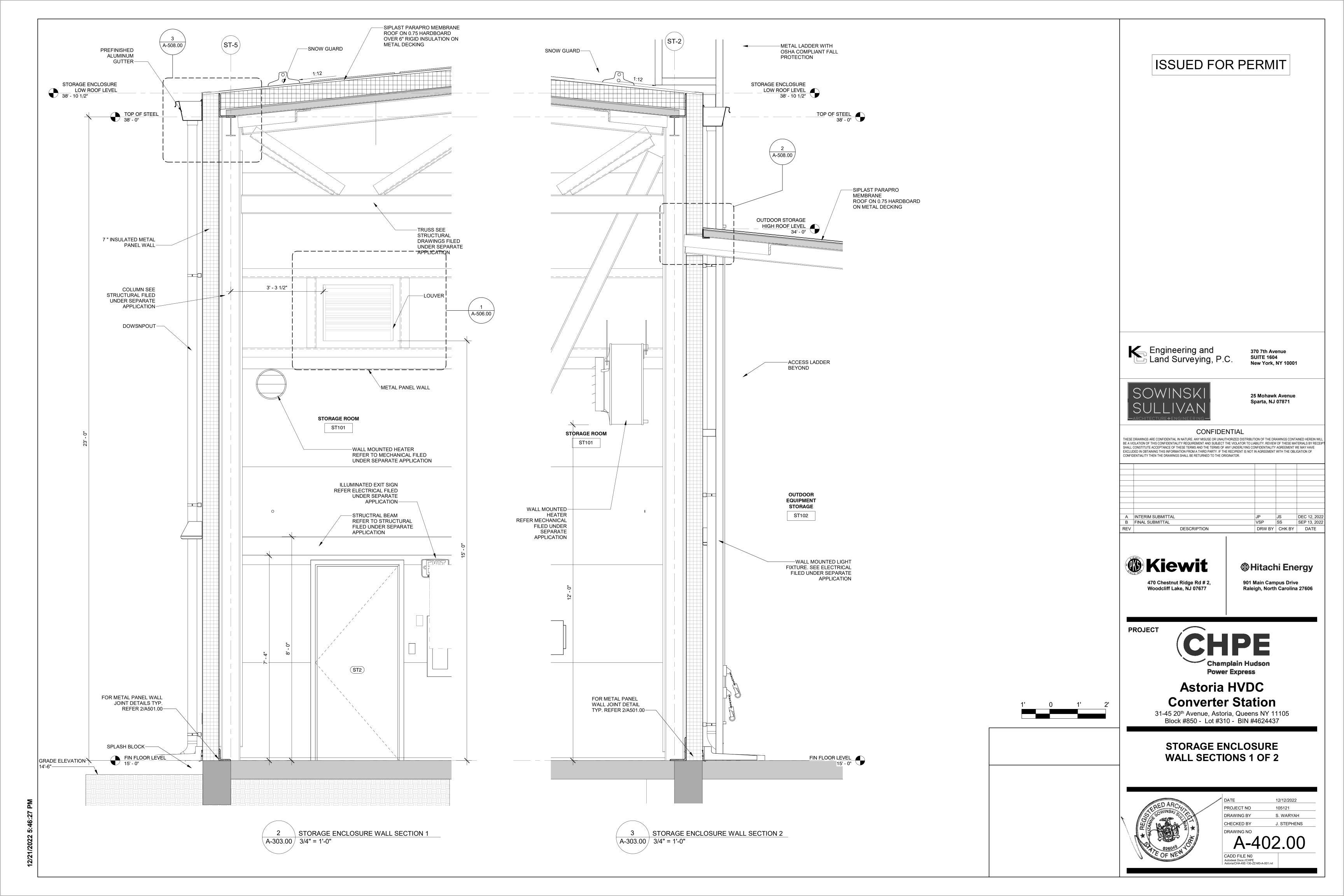
Block #850 - Lot #310 - BIN #4624437

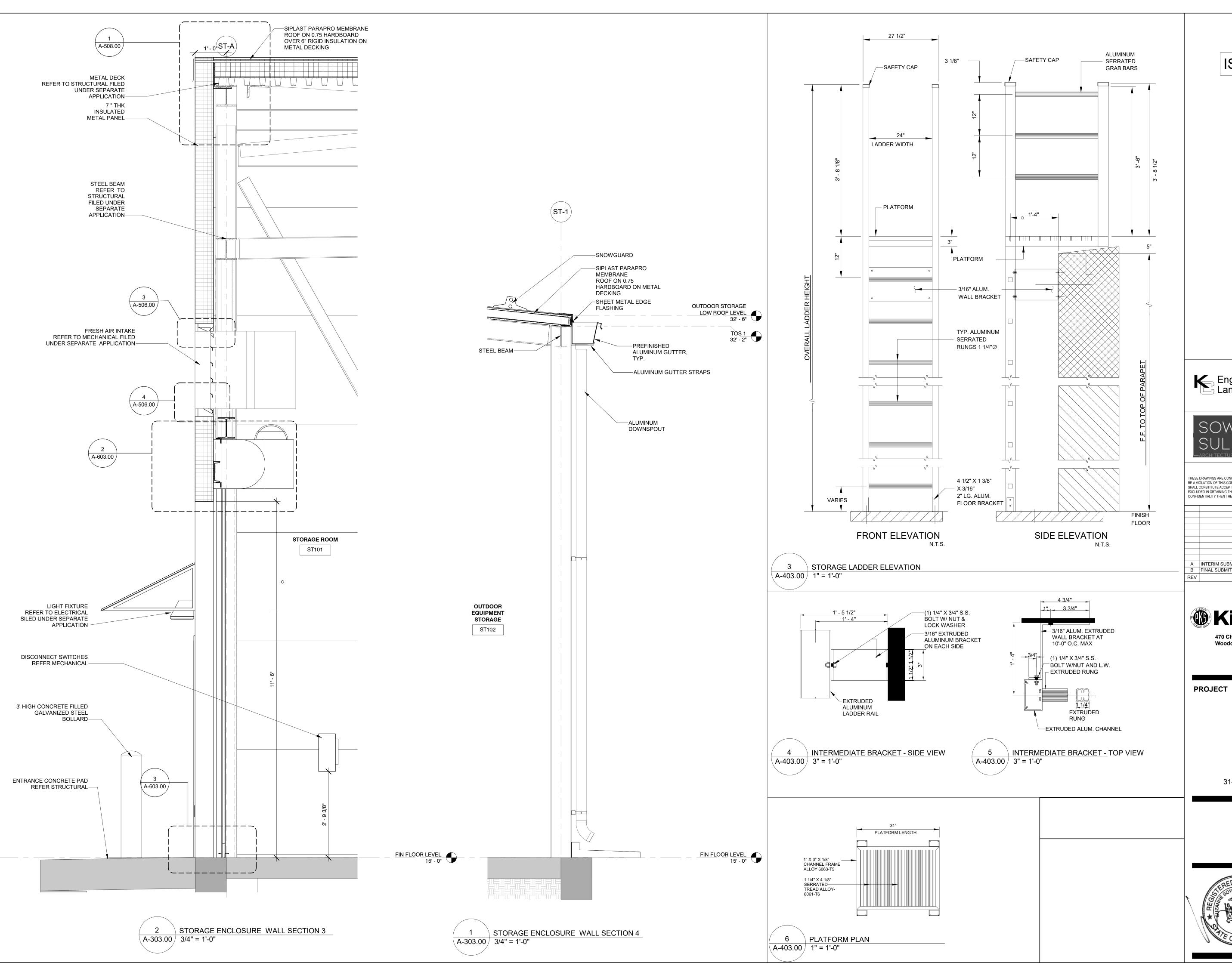
RELAY ENCLOSURE WALL SECTIONS



PROJECT NO S. WARYAH CHECKED BY J. STEPHENS DRAWING NO

A-401.00





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Astoria HVDC Converter Station 31-45 20th Avenue, Astoria, Queens NY 11105

Block #850 - Lot #310 - BIN #4624437

STORAGE ENCLOSURE WALL SECTIONS 2 OF 2



PROJECT NO DRAWING BY S. WARYAH CHECKED BY J. STEPHENS DRAWING NO A-403.00

METL-SPAN -INTERIOR SIDE THERMALSAFE PANEL-(FACE 2) -WALL FRAMING 1/8" Ø RIVETS @ 8" O.C. SEALANT TAPE -INTERIOR PERIMETER SEALANT PIGTAIL WITH PANEL SIDELAP SEALANT-#14 THRU-PANEL SCREW * -CONC. SLAB WITH SEALING WASHER (SEE FASTENER PATTERN DETAIL FOR SPACING)-EDGE COVER TRIM -CONC. FASTENERS BASE TRIM (SEE CHART)-SILL SEALANT 1. FIRE PROTECTION OF THE STRUCTURAL MEMEBERS MAY BE REQUIRED PER THE BUILDING CODE AND IS NOT BY "METL-SPAN". 2. * FASTENER TYPE IS SUBJECT TO BASE

-STEEL LINE

STRUCTURAL MATERIAL AND THE PANEL THICKNESS. 3. THIS DETAIL PROVIDES FOR THE WALL ASSEMBLY

TO BE SELF DRAINING TO THE EXTERIOR.

0' - 7"

EXTERIOR SIDE

(FACE 1)—

A-501.00 / 3" = 1'-0"

BASE DETAIL HORIZONTAL THERMALSAFE PANEL

BASE DETAIL-BASE ANGLE VERTICAL THERMALSAFE PANEL A-501.00 / 3" = 1'-0"

-STEEL LINE 0' - 7" INTERIOR CORNER TRIM -1/8" Ø RIVETS @ 8" O.C. METL-SPAN THERMALSAFE PANEL -#14 THRU-PANEL SCREW* **EXTERIOR SIDE** WITH SEALING WASHER @ SUPPORTS (FACE 1)— -INTERIOR PERIMETER SEALANT SEALANT TAPE -STRUCTURAL SUPPORTS 1/8" Ø RIVETS @ 8" O.C.--INTERIOR SIDE (FACE 2) -STEEL LINE MINERAL FIBER FILLER INSULATION-EXTERIOR CORNER (SEE CHART)-FACTORY OR FIELD CUT PANEL EDGE-

> THERMALSAFE PANEL NOTES: 1. FIRE PROTECTION OF THE STRUCTURAL SUPPORTS MAY BE REQUIRED PER THE BUILDING CODE AND IS NOT BY "METL-SPAN". 2. TO CONFORM TO THE REQUIREMENTS OF THE ASTM E - 119 FIRE RESISTANCE RATING, THE FILLER INSULATION MUST HAVE AN APPROVED CLASSIFICATION MARKING FOR SURFACE BURNING CHARACTERISTICS OR FIRE RESISTANCE. 3. * FASTENER TYPR IS SUBJECT TO THE CORNER STRUCTURAL MATERIAL AND THE PANEL THICKNESS.

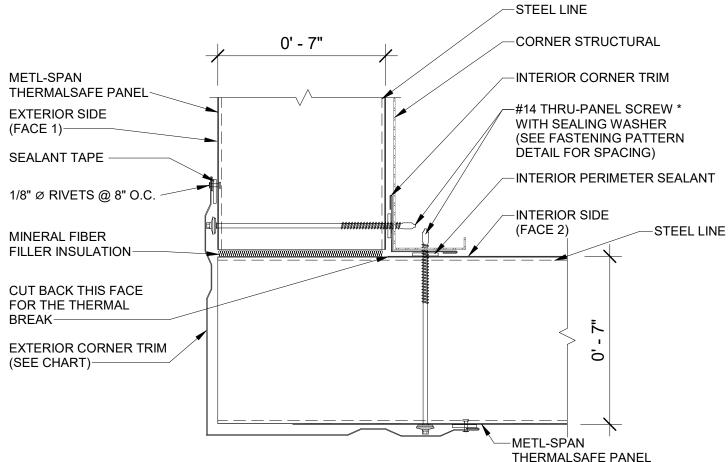
-METL-SPAN

OUTSIDE CORNER VERTICAL THERMALSAFE PANEL A-501.00 / 3" = 1'-0"

CUT BACK THIS

BREAK-

FACE FOR THERMAL



NOT BY "METL-SPAN". 2. TO CONFORM TO THE REQUIREMENTS OF THE INSULATION MUST HAVE AN APPROVED CLASSIFICATION MARKING FOR SURFACE BURNING CHARACTERISTICS OR FIRE RESISTANCE. 3. * FASTENER TYPR IS SUBJECT TO THE CORNER STRUCTURAL MATERIAL AND THE PANEL THICKNESS.

> OUTSIDE CORNER - MITERED HORIZONTAL THERMALSAFE PANEL (A-501.00 / 3" = 1'-0"

-STEEL LINE -INTERIOR CORNER TRIM 0' - 7" -1/8" Ø RIVETS @ 8" O.C. METL-SPAN THERMALSAFE PANEL -#14 THRU-PANEL SCREW* **EXTERIOR SIDE** WITH SEALING WASHER @ SUPPORTS (FACE 1)— -INTERIOR PERIMETER SEALANT SEALANT TAPE -SUPPORTS 1/8" Ø RIVETS @ 8" O.C.— -INTERIOR SIDE (FACE 2) -STEEL LINE MINERAL FIBER INSULATION (NOT BY METL-SPAN) PANELS FIELD CUT AT 45° MITER--METL-SPAN EXTERIOR CORNER THERMALSAFE PANEL TRIM (SEE CHART)-1. FIRE PROTECTION OF THE CORNER STRUCTURAL MAY BE REQUIRED PER THE BUILDING CODE AND IS NOT BY "METL-SPAN".

2. TO CONFORM TO THE REQUIREMENTS OF THE

INSULATION MUST HAVE AN APPROVED

CHARACTERISTICS OR FIRE RESISTANCE.

ASTM E - 119 FIRE RESISTANCE RATING, THE FILLER

CLASSIFICATION MARKING FOR SURFACE BURNING

STRUCTURAL MATERIAL AND THE PANEL THICKNESS.

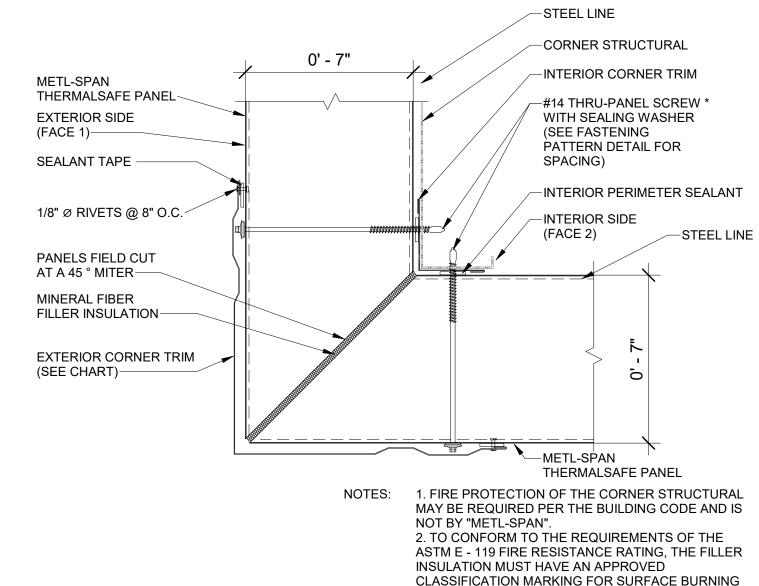
3. * FASTENER TYPR IS SUBJECT TO THE CORNER

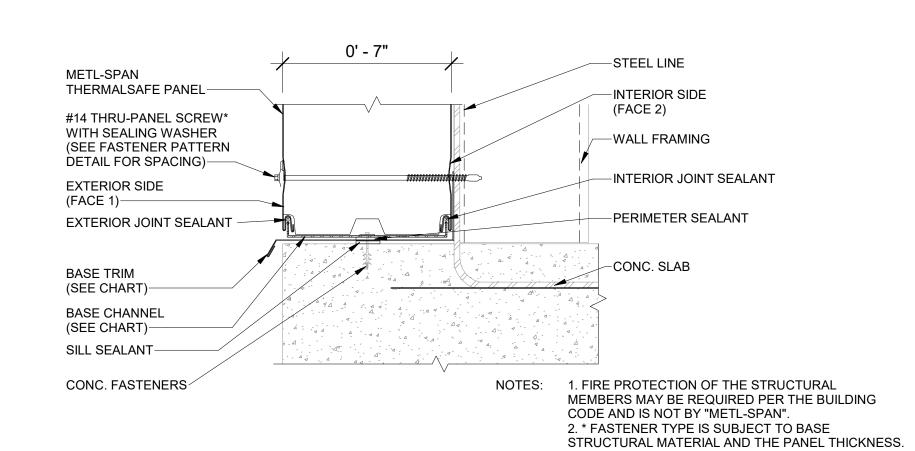
CHARACTERISTICS OR FIRE RESISTANCE.

3. * FASTENER TYPR IS SUBJECT TO THE CORNER

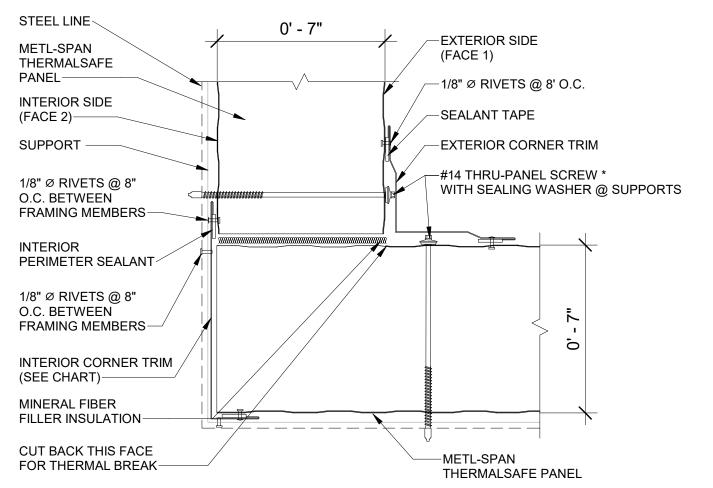
STRUCTURAL MATERIAL AND THE PANEL THICKNESS.

OUTSIDE CORNER - MITERED VERTICAL THERMALSAFE PANEL A-501.00 / 3" = 1'-0"



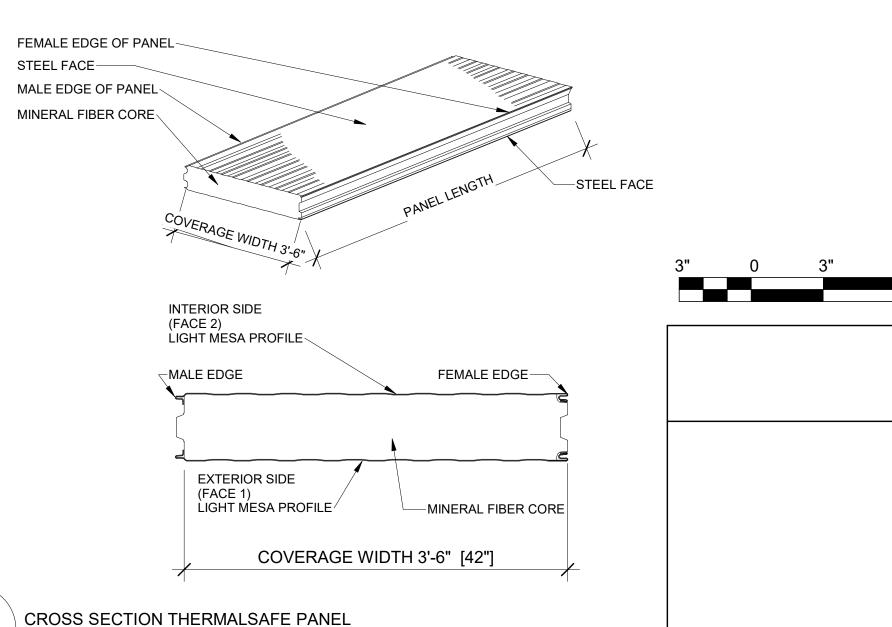


BASE DETAIL- BASE CHANNEL HORIZONTAL THERMALSAFE PANEL A-501.00 / 3" = 1'-0"



1. FIRE PROTECTION OF THE CORNER STRUCTURAL MAY BE REQUIRED PER THE BUILDING CODE AND IS NOT BY "METL-SPAN". 2. TO CONFORM TO THE REQUIREMENTS OF THE ASTM E-119 FIRE RESISTANCE RATING, THE FILLER INSULATION MUST HAVE AN APPROVED CLASSIFICATION MARKING FOR SURFACE BURNING CHARACTERISTICS OF FIRE RESISTANCE. 3. * FASTENER TYPE IS SUBJECT TO THE CORNER STRUCTURAL MATERIAL AND THE PANEL THICKNESS.

INSIDE CORNER VERTICAL THERMALSAFE PANEL A-501.00 / 3" = 1'-0"



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PROJECT



Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

INSULATED METAL PANEL DETAILS 1 OF 2



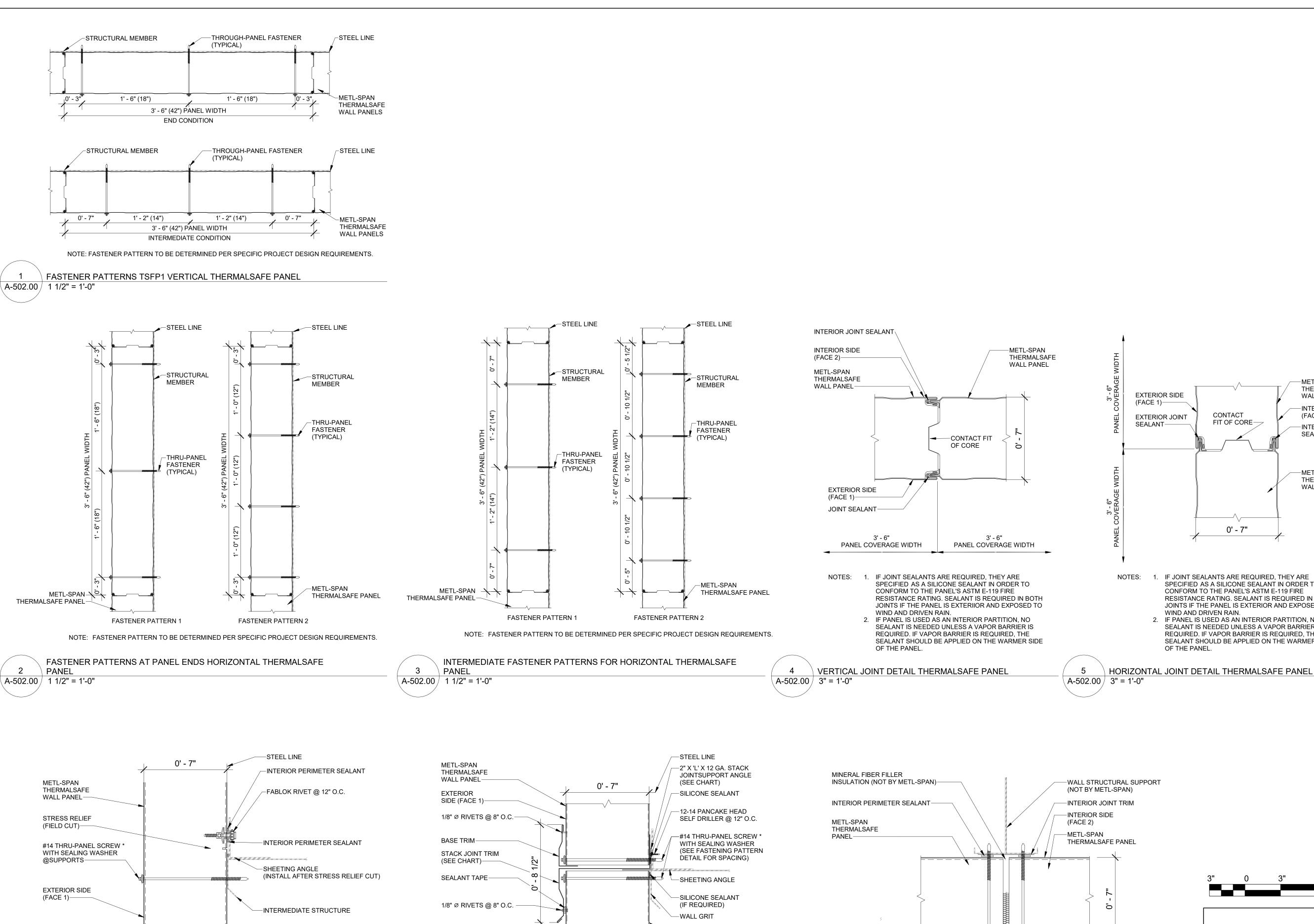
12/12/2022 PROJECT NO 105121 S. WARYAH DRAWING BY CHECKED BY J. STEPHENS DRAWING NO

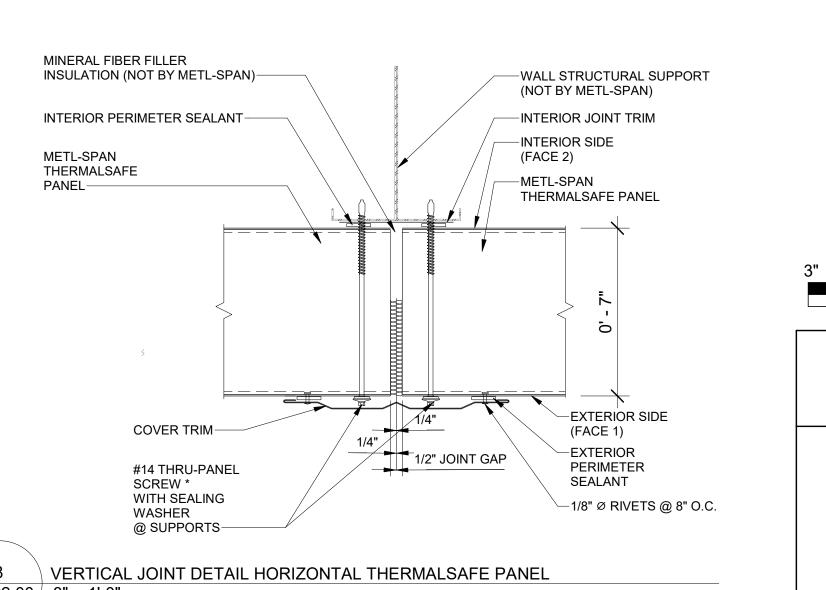
CADD FILE N0 Autodesk Docs://CHPE Astoria/CHA-KIE-141-ZZ-M3-A-001.rvt

OUTSIDE CORNER HORIZONTAL THERMALSAFE PANEL (A-501.00 / 3" = 1'-0"

THERMALSAFE PANEL NOTES: 1. FIRE PROTECTION OF THE CORNER STRUCTURAL MAY BE REQUIRED PER THE BUILDING CODE AND IS ASTM E - 119 FIRE RESISTANCE RATING, THE FILLER

A-501.00 / 3" = 1'-0"









370 7th Avenue **SUITE 1604** New York, NY 10001



METL-SPAN

---INTERIOR SIDE

-INTERIOR JOINT

(FACE 2)

SEALANT

-METL-SPAN THERMALSAFE

WALL PANEL

CONTACT

FIT OF CORE-

0' - 7"

SPECIFIED AS A SILICONE SEALANT IN ORDER TO

RESISTANCE RATING. SEALANT IS REQUIRED IN BOTH

JOINTS IF THE PANEL IS EXTERIOR AND EXPOSED TO

SEALANT IS NEEDED UNLESS A VAPOR BARRIER IS REQUIRED. IF VAPOR BARRIER IS REQUIRED. THE

SEALANT SHOULD BE APPLIED ON THE WARMER SIDE

CONFORM TO THE PANEL'S ASTM E-119 FIRE

2. IF PANEL IS USED AS AN INTERIOR PARTITION, NO

WIND AND DRIVEN RAIN.

OF THE PANEL.

THERMALSAFE WALL PANEL

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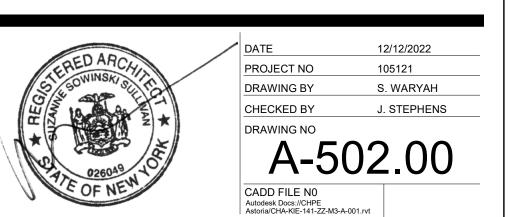
PROJECT

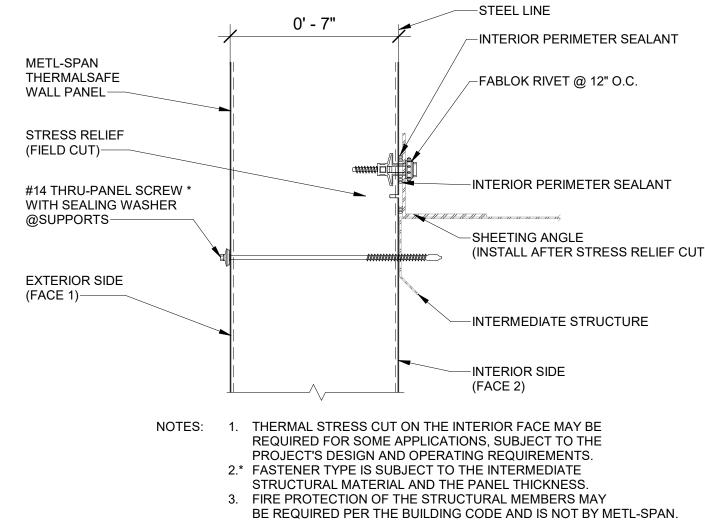


Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

INSULATED METAL PANEL DETAILS 2 OF 2

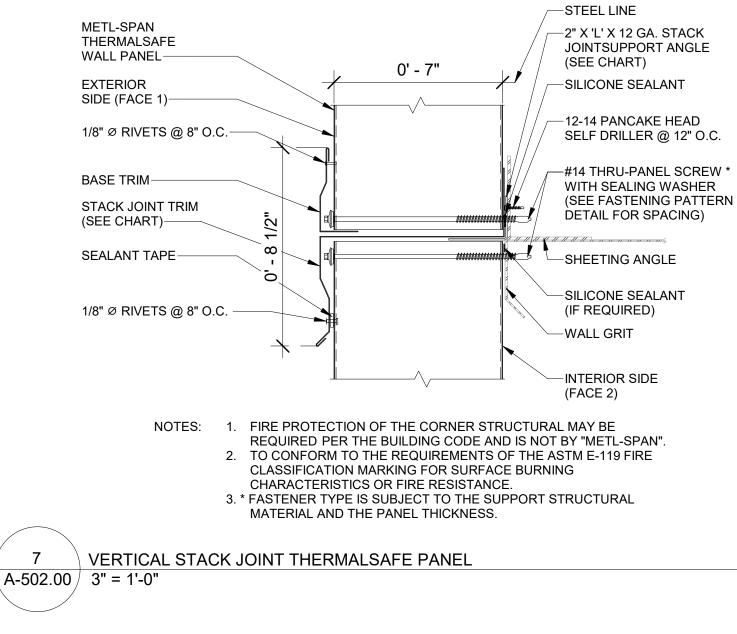


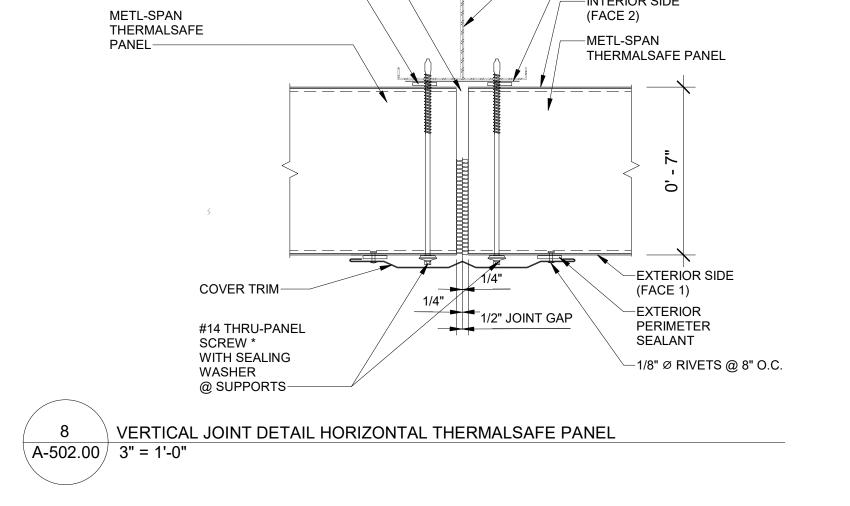


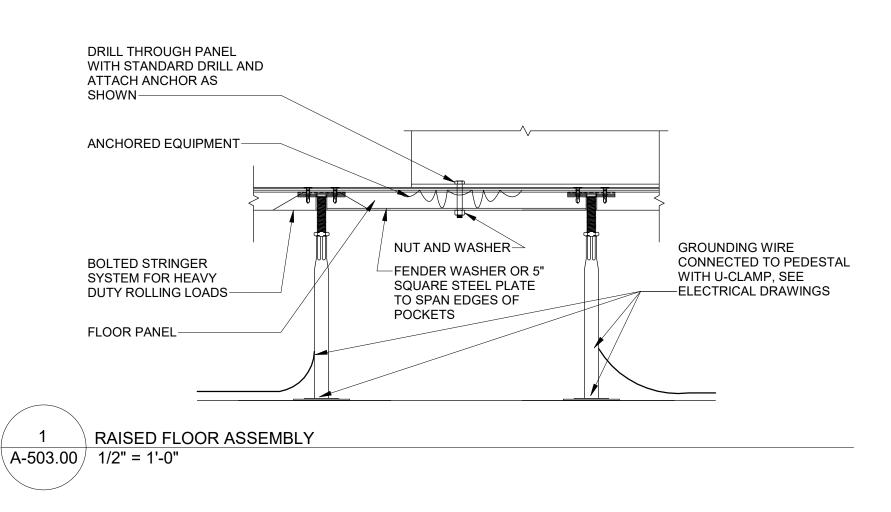
INTERMEDIATE FASTENER ATTACHMENT THERMAL STRESS RELIEF

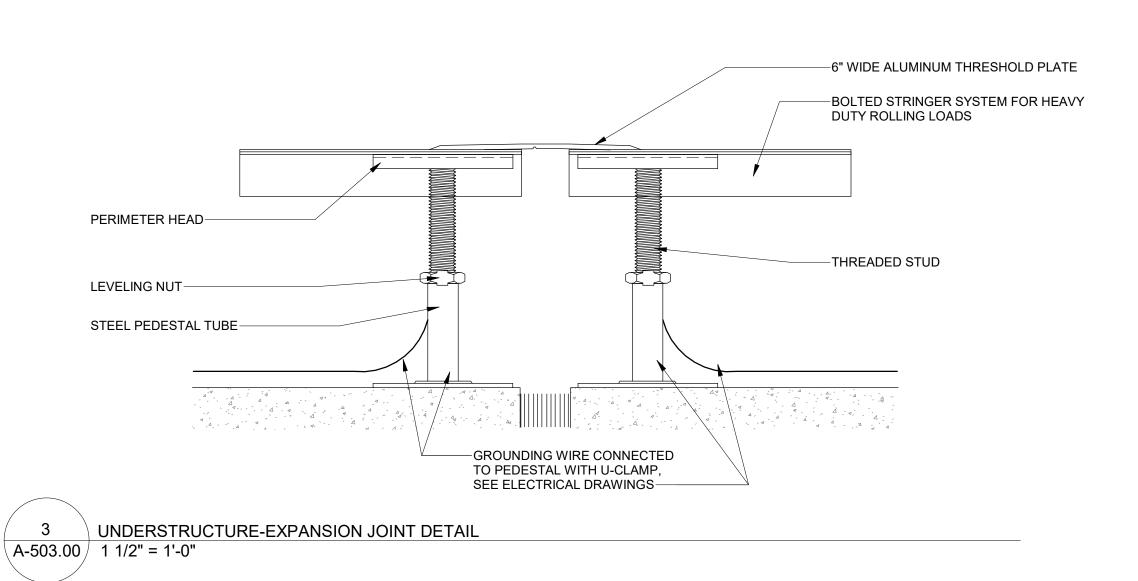
VERTICAL THERMALSAFE PANEL

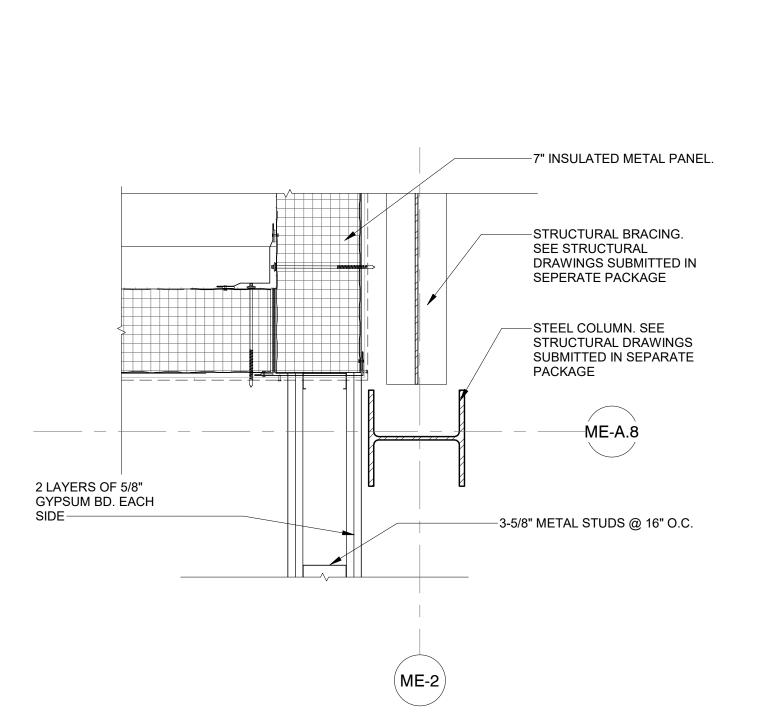
A-502.00 / 3" = 1'-0"





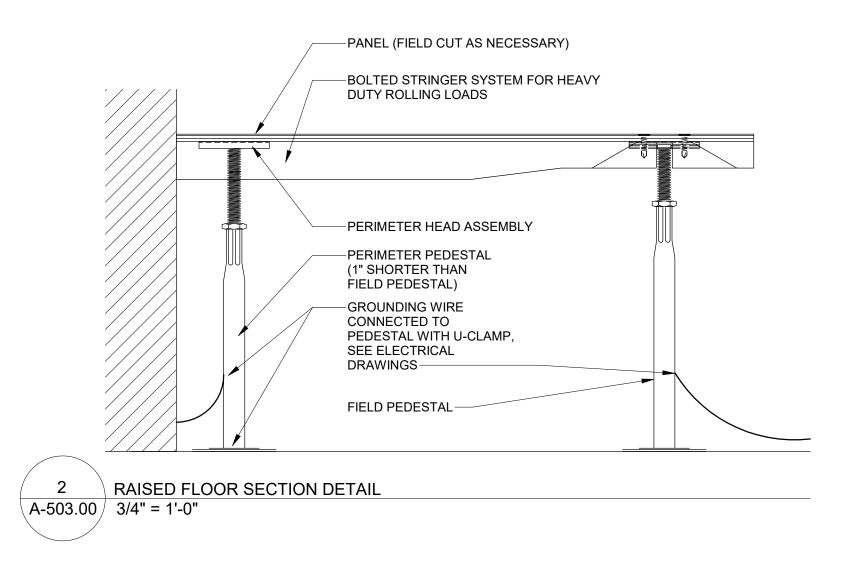


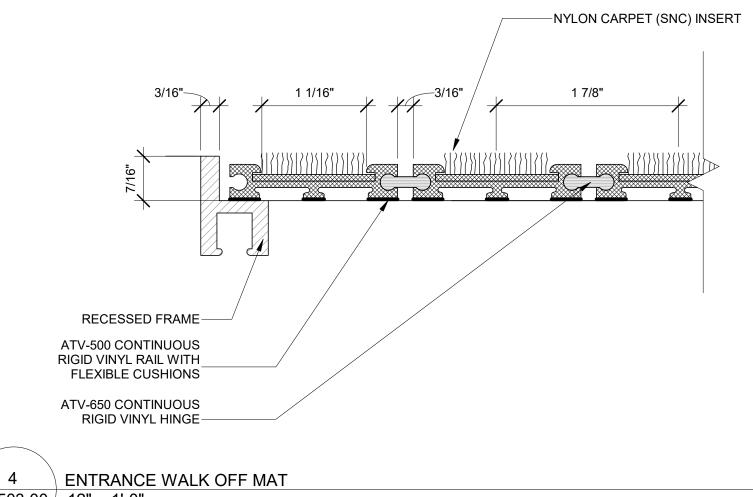


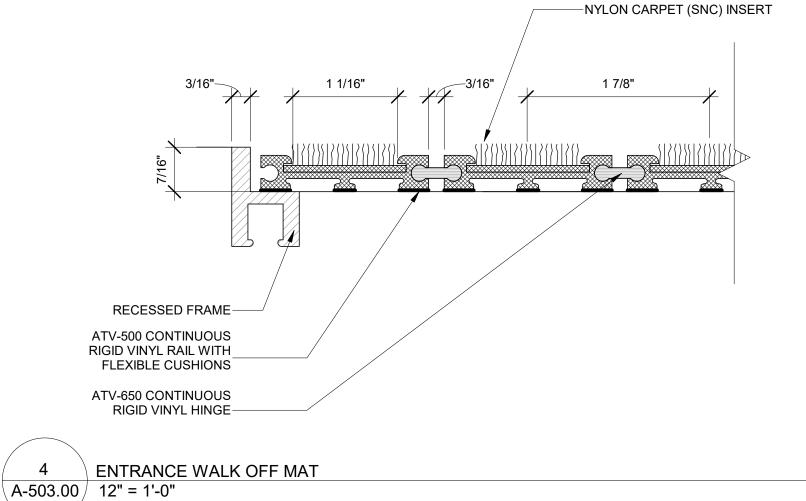


PLAN DETAIL

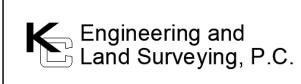
A-503.00 1 1/2" = 1'-0"







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PROJECT



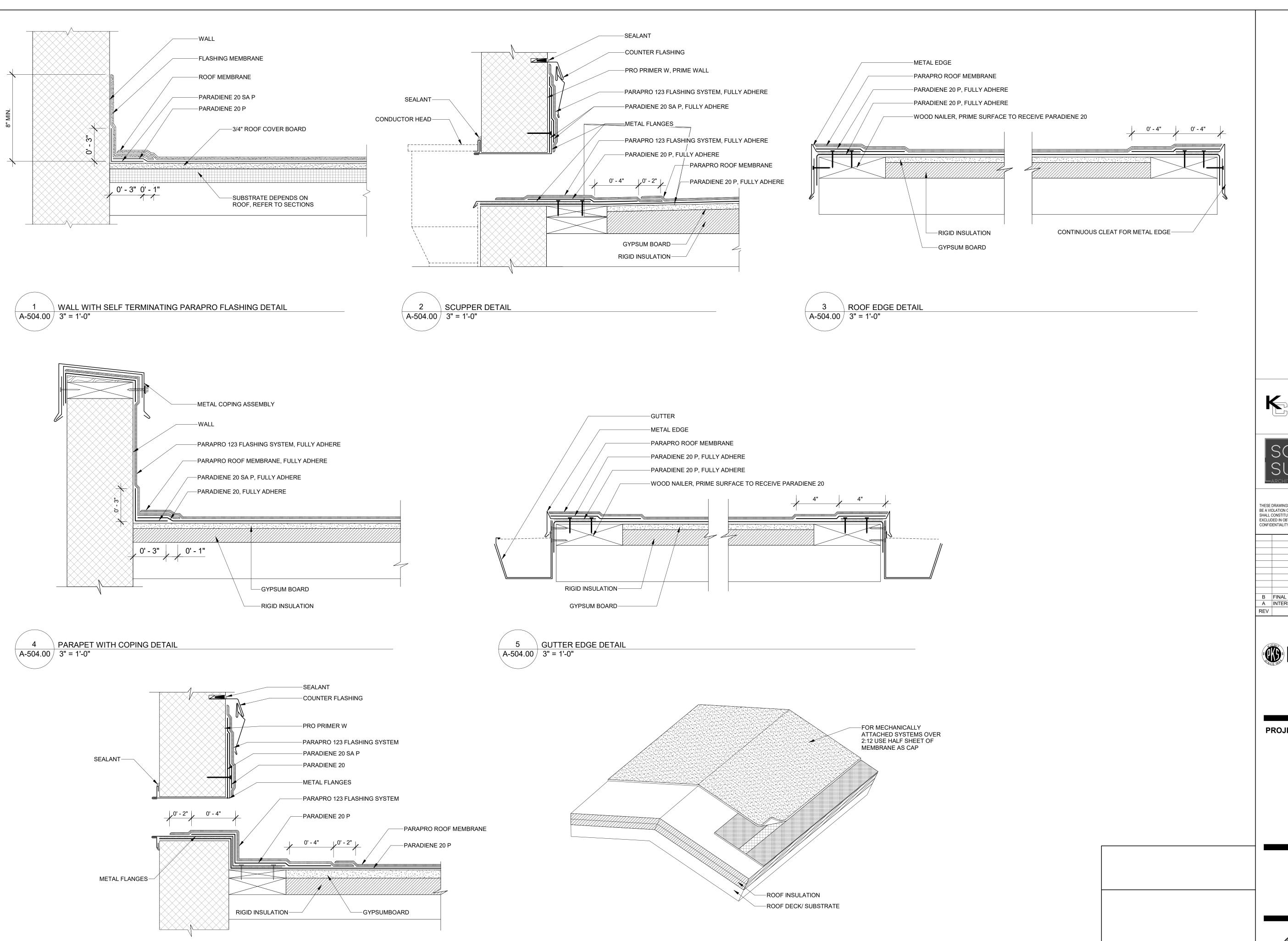
Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

FLOOR TYPE AND DETAILS



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RIDGE DETAIL

A-504.00 / 1 1/2" = 1'-0"

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Block #850 - Lot #310 - BIN #4624437

ROOF TYPE AND DETAILS

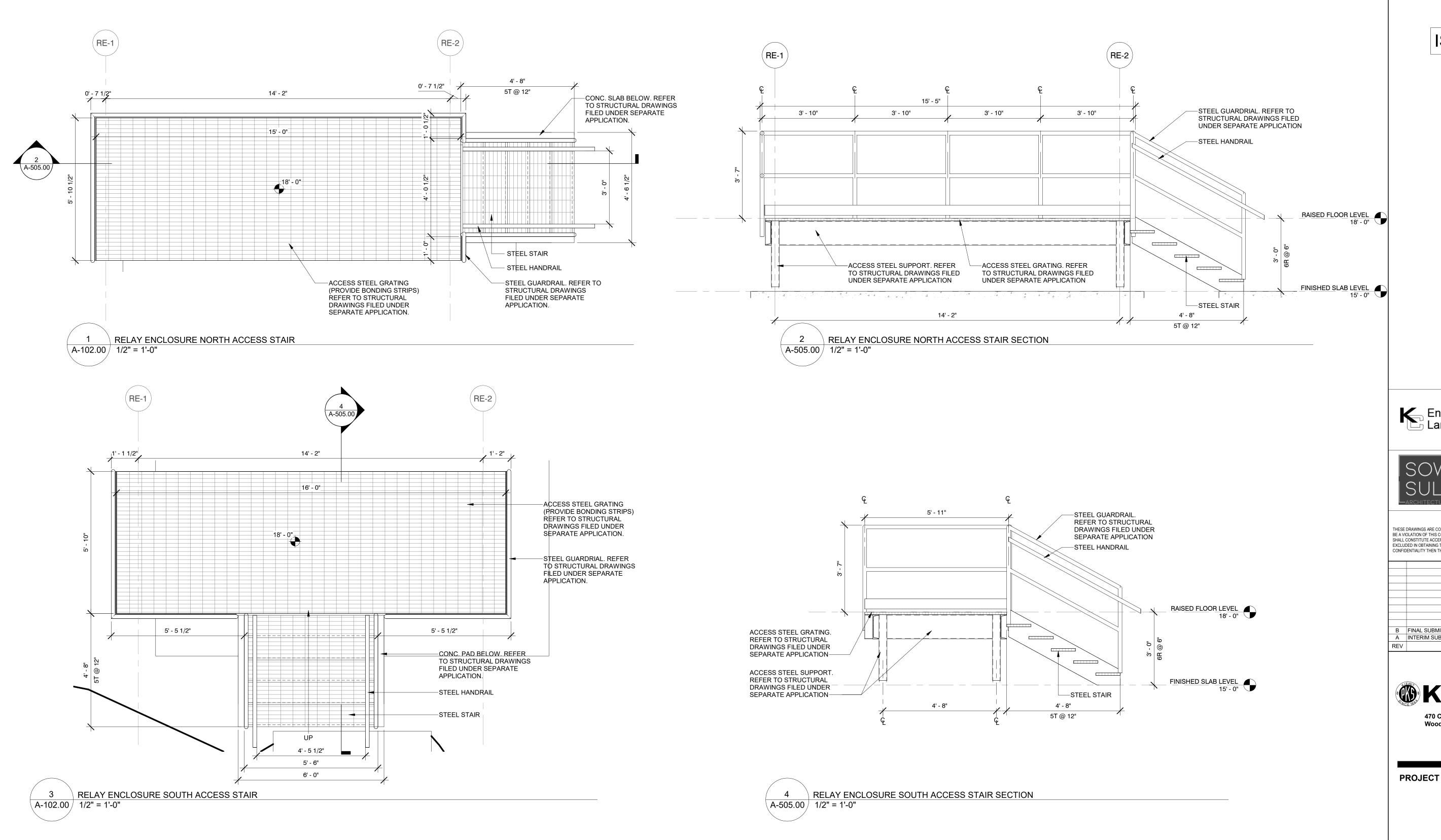


12/12/2022 PROJECT NO DRAWING BY S. WARYAH CHECKED BY J. STEPHENS DRAWING NO A-504.00

CADD FILE NO
Autodesk Docs://CHPE
Astoria/CHA-KIE-141-ZZ-M3-A-001.rvt

OVERFLOW SCUPPER

A-504.00 3" = 1'-0"



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Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

> STAIR, GUARDRAIL **DETAILS**



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CADD FILE NO
Autodesk Docs://CHPE
Astoria/CHA-KIE-141-ZZ-M3-A-001.rvt

A-505.00



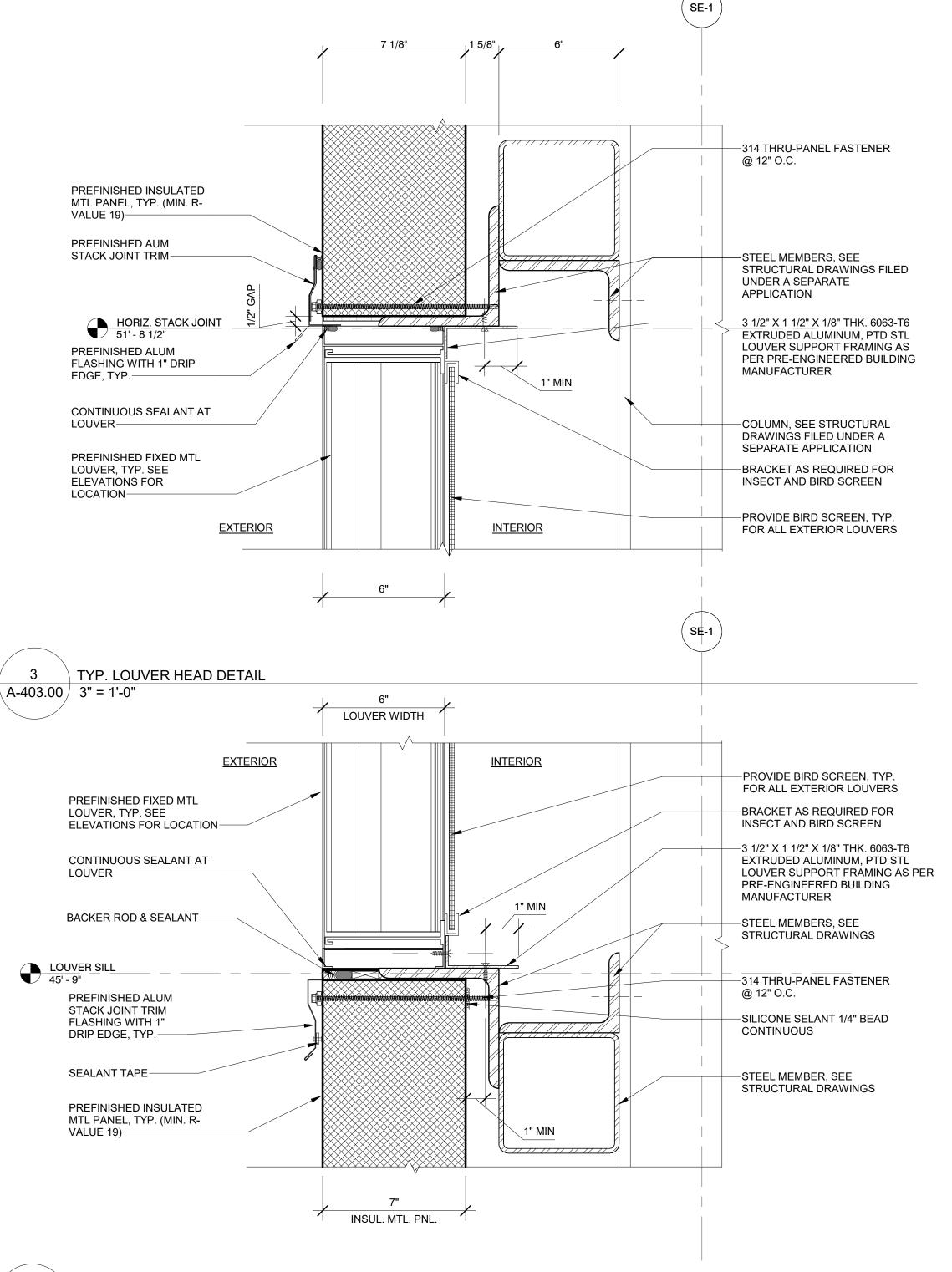


EQUIPMENT TAG, SEE

MECHANICAL DWGS

LVR-130-01 + LVR-130-02

LVR-130-03



LOUVER SCHEDULE1

2/A-506.00 2/A-506.00

4/A-506.00

HEAD/SILL

3/A-506.00

HEIGHT



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Α	INTERIM SUBMITTAL	JP	JS	DEC 12, 2022
В	FINAL SUBMITTAL	VSP	SS	SEP 13, 2022
REV	DESCRIPTION	DRW BY	CHK BY	DATE



Hitachi Energy901 Main Campus Drive

Raleigh, North Carolina 27606

PROJECT



Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

LOUVER DETAILS



DATE 12/12/2022
PROJECT NO 105121
DRAWING BY S. WARYAH
CHECKED BY J. STEPHENS
DRAWING NO

A-506.00

CADD FILE NO
Autodesk Docs://CHPE
Astoria/CHA-KIE-130-ZZ-M3-A-001.rvt

LOUVER ELEVATION

EXTERIOR

DETAIL @ LOUVER

INSUL. MTL PANEL

A-205.00 1 1/2" = 1'-0"

PREFINISHED INSULATED

MTL PANEL, TYP. (MIN. R-

PREFINISHED AUM

STACK JOINT TRIM-

PREFINISHED ALUM FLASHING WITH 1" DRIP

CONTINUOUS SEALANT AT

PREFINISHED FIXED MTL

ELEVATIONS FOR LOCATION-

CONTINUOUS SEALANT AT

LOUVER, TYP. SEE

PREFINISHED ALUM

STACK JOINT TRIM

FLASHING WITH 1"

DRIP EDGE, TYP.-

SEALANT TAPE-

VALUE 19)

PREFINISHED INSULATED MTL PANEL, TYP. (MIN. R- $^-$

A-506.00 3" = 1'-0"

LOUVER-

VALUE 19)—

EDGE, TYP.-

LOUVER-

4 TYP. LOUVER SILL DETAIL A-403.00 3" = 1'-0"

-314 THRU-PANEL FASTENER

−3 1/2" X 1 1/2" X 1/8" THK. 6063-T6

EXTRUDED ALUMINUM, PTD STL

LOUVER SUPPORT FRAMING AS

BRACKET AS REQUIRED FOR

—PROVIDE BIRD SCREEN, TYP. FOR ALL EXTERIOR LOUVERS

−3 1/2" X 1 1/2" X 1/8" THK. 6063-T6

EXTRUDED ALUMINUM, PTD STL

PRE-ENGINEERED BUILDING

—STEEL MEMBERS, SEE STRUCTURAL DRAWINGS

FILED UNDER SEPARATE

-314 THRU-PANEL FASTENER

-SILICONE SELANT 1/4" BEAD

MANUFACTURER

APPLICATION

@ 12" O.C.

CONTINUOUS

LOUVER SUPPORT FRAMING AS PER

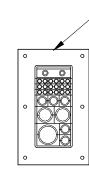
INSECT AND BIRD SCREEN

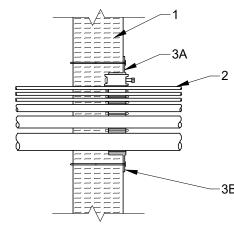
MANUFACTURER

<u>INTERIOR</u>

PER PRE-ENGINEERED BUILDING

@ 12" O.C.



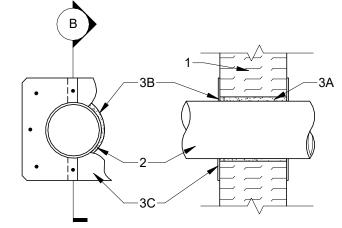


FIRE STOPPING DETAIL THROUGH-PENETRATION FIRESTOP SYSTEMS

UL SYSTEM NO. W-N-8002, 2 HR. RATING

1. 2- HR RATED WALL ASSEMBLY

- 2. THROUGH-PENETRANTS WITHIN THE LOADING AREA FOR THE FIRESTOP DEVICE, THE PENETRANTS MAY REPRESENT A 0 TO 100 PERCENT VISUAL FILL. PENETRANTS TO BE INSTALLED THROUGH THE FIRESTOP DEVICE AND THE INSULATION CORE OF THE PARTITION PANEL TO PASS THROUGH THE OPENING. PENETRANTS TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY
- A. CABLES THE FOLLOWING CABLE TYPES MAY BE USED:
- A1. MAX 750 KCMIL (OR SMALLER) COPPER CONDUCTOR SHIELDED OR UNSHIELDED POWER CABLE WITH POLYVINYL CHLORIDE (PVC) JACKET AND ETHYLENE-PROPYLENE RUBBER (EPR) INSULATION. WHEN THIS CABLE IS USED. THE T. FT AND FTH RATINGS ARE 1 HR.
- A2. MAX 24 PAIR NO. 16 AWG (OR SMALLER) COPPER CONDUCTOR SHIELDED OR UNSHIELDED INSTRUMENTATION CABLE WITH POLYVINYL CHLORIDE INSULATION AND JACKET MATERIALS. WHEN THIS CABLE IS USED, THE T, FT AND FTH RATINGS ARE 1-1/4 HR.
- A3. MAX 8 PAIR NO. 16 AWG (OR SMALLER) COPPER CONDUCTOR SHIELDED OR UNSHIELDED INSTRUMENTATION CABLE WITH POLYVINYL CHLORIDE INSULATION AND JACKET MATERIALS. WHEN THIS CABLE IS USED, THE T, FT AND FTH RATINGS ARE 1 HR.
- A4. MAX 24 FIBER, FIBER OPTIC CABLE WITH POLYVINYL CHLORIDE JACKET AND INSULATION. WHEN THIS CABLE IS USED, THE T, FT AND FTH
- RATINGS ARE 1-1/4 HR. A5. MAX 4 PAIR NO. 24 AWG (OR SMALLER) CAT 5E CABLES WITH PVC JACKET AND INSULATION. WHEN THIS CABLE IS USED, THE F, FT AND FTH
- RATINGS ARE 1-1/4 HR A6. MAX 4 PAIR NO. 23 AWG (OR SMALLER) CAT 6 CABLES WITH PVC JACKET AND INSULATION. WHEN THIS CABLE IS USED, THE F, FT AND FTH RATINGS ARE 1-1/4 HR.
- A7. MAX 24 FIBER INTERLOCKING ARMORED FIBER OPTIC CABLE WITH POLYVINYL CHLORIDE JACKET AND INSULATION. WHEN THIS CABLE IS USED, THE T, FT AND FTH RATINGS ARE 1-1/4 HR.
- B. METALLIC PENETRANTS —THE FOLLOWING TYPES AND SIZES OF METALLIC PENETRANTS MAY BE USED:
- B1. NOM 2 IN. (51 MM) DIAM (OR SMALLER) SCH 40 STEEL CONDUIT. WHEN THIS CONDUIT IS USED, THE T, FT AND FTH RATINGS ARE 3/4 HR
- 3. FIRESTOP SYSTEM THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING: A. FIRESTOP DEVICES — FIRESTOP DEVICES EACH CONSIST OF A RECTANGULAR STEEL FRAME WITH INTEGRAL FLANGE, MULTI DIAMETER ELASTOMERIC SEALING MODULES, STEEL STAY PLATES AND A COMPRESSION UNIT CONSISTING OF A ROXTEC WEDGE (OR OTHER APPROVED MATERIAL). FIRESTOP DEVICE FRAME SHALL BE INSTALLED INTO THE PANEL CUTOUT AT ONE SIDE OF WALL WITH THE FLANGE OF DEVICE INSTALLED FLUSH AGAINST STEEL SKIN OF PARTITION PANEL. THE RECTANGULAR PACKING AREA OF EACH FRAME SHALL BE FILLED WITH MULTIPLE ROWS OF MULTI DIAMETER ELASTOMERIC SEALING MODULES WITH A MAX OF ONE CABLE IN EACH SEALING MODULE. THE LAYERS OF THE MULTI DIAMETER SEALING MODULE HALVES ARE REMOVED ONE BY ONE UNTIL A MAX GAP OF 0.04" IS FORMED BETWEEN THE TWO MODULE HALVES. WHEN THE NUMBER OF SEALING MODULES EXCEEDS THE NUMBER OF CABLES, THE SOLID CYLINDRICAL CORES OF THE UNPENETRATED SEALING MODULES SHALL BE LEFT IN PLACE OR "BLANK" (SOLID) SEALING MODULES SHALL BE USED. DURING INSTALLATION OF THE ELASTOMERIC SEALING MODULES, THIN STEEL STAY PLATES SHALL BE USED TO SEPARATE THE ROWS OF SEALING MODULES AND TO RETAIN THE SEALING MODULES WITHIN THE STEEL FRAME. AFTER INSTALLATION OF THE MODULES, THE BOLTS OF THE COMPRESSION UNIT ARI TIGHTENED TO FORM AN EFFECTIVE SEAL AROUND THE THROUGH PENETRANTS AND INSERT MODULES. FIRESTOP DEVICE SECURED IN PLACE WITH MIN 1/4" DIAM BY MIN 6-1/2" LONG WASHER HEAD LAG SCREWS WITHIN EACH PREFORMED HOLE IN DEVICE FLANGE AROUND PERIPHERY OF OPENING AND EXTENDING THROUGH FULL THICKNESS OF PARTITION PANEL. THE FIRESTOP DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE ACCOMPANYING
- INSTALLATION INSTRUCTIONS. B. FILL, VOID OR CAVITY MATERIAL — SEALANT — NOM 3/8" BEAD OF FILL MATERIAL APPLIED AROUND THE PERIPHERY OF THE FIRESTOP DEVICE FRAME FLANGE AT THE INTERFACE WITH THE STEEL SKIN OF THE PARTITION PANEL. IN ADDITION, FOR L RATING, SEALANT SHALL BE APPLIED ON THE DEVICE FRAME FLANGE TO SEAL EACH SCREW HEAD LOCATION AND AT THE PANEL SEAM.

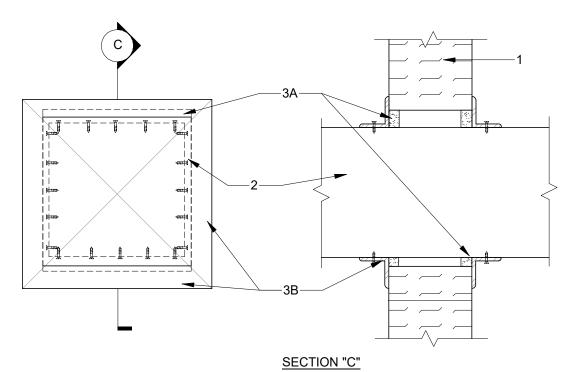


SECTION "B'

FIRE STOPPING DETAIL, THROUGH PENETRATION FIRESTOP SYSTEMS

UL SYSTEM NO. W-N-1001 FOR, 2 HR. RATING

- 1. WALL ASSEMBLY THE 1 OR 2 HR FIRE RATED COMPOSITE WALL ASSEMBLY SHALL BE CONSTRUCTED OF NOM 4" OR 7" THICK, RESPECTIVELY, GALVANIZED STEEL OR PAINTED GALVANIZED STEEL FACED PARTITION PANEL UNITS (CJMR) INSTALLED IN THE MANNER SPECIFIED IN WALL AND PARTITION DESIGN NO. U050 IN THE FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 20-1/4". OPENING CAN BE LOCATED ON OR OFF PANEL UNIT JOINTS.
- 2. THROUGH-PENETRANTS ONE METALLIC PIPE, CONDUIT OR TUBE TO BE INSTALLED ECCENTRICALLY OR CONCENTRICALLY WITHIN THE OPENING. AN ANNULAR SPACE OF MIN 1/4 IN. (6 MM) TO MAX 1/2 IN. (13 MM) IS REQUIRED WITHIN THE FIRESTOP SYSTEM. PIPE. CONDUIT OR TUBE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF
- METALLIC PIPES, CONDUIT OR TUBING MAY BE USED: A. STEEL PIPE — NOM 18" DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
- B. IRON PIPE NOM 18" DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE. C. CONDUIT — NOM 6" DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOM 4 IN. DIAM (OR SMALLER) STEEL CONDUIT.
- D. COPPER TUBING NOM 6" DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING. E. COPPER PIPE — NOM 6" DIAM (OR SMALLER) RÉGULAR (OR HEAVIER) COPPER PIPE.
- 3. FIRESTOP SYSTEM THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
- A. PACKING MATERIAL MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. MIN 3-1/4" AND MIN 6-1/4" THICKNESS REQUIRED FOR 1 HR AND 2 HR FIRE RATED WALLS, RESPECTIVELY. PACKING MATERIAL MAY BE RECESSED FROM ONE OR BOTH SURFACES OF WALL TO ACCOMMODATE THE
- THICKNESS OF THE OPTIONAL FILL MATERIAL (ITEM 3B). B. FILL, VOID OR CAVITY MATERIAL* — SEALANT — (OPTIONAL) - NOM 3/8" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH ONE OR BOTH WALL SURFACES. SEE FILL, VOID OR CAVITY MATERIAL (XHHW) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR THE NAMES OF MANUFACTURERS. ANY SEALANT OR CAULK MATERIAL MEETING THE ABOVE SPECIFICATION AND BEARING THE UL CLASSIFICATION MARKING MAY BE USED.
- C. COVER PLATE COVER PLATE AVAILABLE FROM THE WALL PANEL MANUFACTURER OR FIELD PROVIDED. COVER PLATE FABRICATED FROM TWO PIECES OF MIN 0.019" THICK GALV OR PAINTED GALV SHEET STEEL, CUT TO THE SHAPE AS SHOWN IN DETAIL ABOVE. INSIDE DIAMETER OF COVER PLATE TO EQUAL OUTSIDE DIAMETER OF PENETRANT. OUTSIDE DIMENSION OF COVER PLATE TO BE 4" GREATER THAN OUTER DIAM OF PENETRANT, WITH A RADIUS 2" GREATER THAN OUTER RADIUS OF METALLIC PENETRANT. TWO HALVES OF COVER PLATE INSTALLED AROUND THROUGH PENETRANT WITH NOM 1" OVERLAP AT THE MATING ENDS. COVER PLATE TO BE INSTALLED ON BOTH SIDES OF WALL AND SECURED TO STEEL WALL PANEL SKINS WITH MIN 1/8" DIAM STAINLESS STEEL RIVETS OR NO. 12 BY MIN 1/2" LONG HEX WASHER HEAD (HWH) STEEL SCREWS. ONE FASTENER TO BE LOCATED AT EACH OVERLAP WITH INTERMEDIATE FASTENERS LOCATED MAX 4" ON CENTER AROUND PERIPHERY OF OPENING. FASTENERS LOCATED MIN 3/8" FROM CUT OPENING IN WALL PANEL.



FIRE STOPPING DETAIL, THROUGH PENETRATION FIRESTOP SYSTEMS

REQUIRED THICKNESS OF THE FILL MATERIAL (ITEM 3B).

UL SYSTEM NO. W-N-7001 FOR. 2 HR. RATING

- 1. WALL ASSEMBLY THE 1 OR 2 HR FIRE RATED COMPOSITE WALL ASSEMBLY SHALL BE CONSTRUCTED OF NOM 4" OR 7" THICK, RESPECTIVELY, GALVANIZED STEEL OR PAINTED GALVANIZED STEEL FACED PARTITION PANEL UNITS* (CJMR) INSTALLED IN THE MANNER SPECIFIED IN WALL AND PARTITION DESIGN NO. U050 IN THE FIRE RESISTANCE DIRECTORY. MAX AREA OF OPENING IS 564 SQ IN. WITH A MAX DIMENSION OF 23-3/4". OPENING CAN BE LOCATED ON OR OFF PANEL UNIT JOINTS.
- 2. STEEL DUCT NOM 23" BY 23", OR NOM 23" DIAM, (OR SMALLER) NO. 24 GAUGE (OR HEAVIER) GALV STEEL DUCT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE STEEL DUCT AND THE PERIPHERY OF THE OPENING SHALL BE MIN 1/4" TO MAX 1/2". STEEL DUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE WALL ASSEMBLY.
- 3. FIRESTOP SYSTEM THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING: A. PACKING MATERIAL — MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. MIN 3-1/4" AND MIN 6-1/4" THICKNESS REQUIRED FOR 1 HR AND 2 HR FIRE RATED WALLS, RESPECTIVELY. PACKING MATERIAL SHALL BE RECESSED FROM BOTH SURFACES OF WALL TO ACCOMMODATE THE
- B. FILL, VOID OR CAVITY MATERIAL* CAULK MIN 5/8" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH
- C. STEEL RETAINING ANGLES MIN NO. 20 GA, 2" BY 2" GALV STEEL ANGLES. FOR CIRCULAR DUCTS, ANGLES TO BE ROLL FORMED TO FIT THE OD OF THE DUCT. ANGLES ATTACHED TO DUCT ONLY ON BOTH SIDES OF WALL WITH MIN NO. 10 BY 3/4" LONG STEEL SHEET METAL SCREWS SPACED A MAX OF 1-1/2" FROM EACH END OF STEEL DUCT AND SPACED MAX 6" OC. ANGLES INSTALLED SUCH THAT THEY TIGHTLY ABUT THE WALL SURFACE ON BOTH SIDES OF WALL.

ISSUED FOR PERMIT



370 7th Avenue **SUITE 1604** New York, NY 10001



25 Mohawk Avenue **Sparta, NJ 07871**

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	Α	INTERIM SUBMITTAL	VSP	SS	SEP 13, 2022
Γ	RFV	DESCRIPTION	DRW BY	CHK BY	DATE



@Hitachi Energy 901 Main Campus Drive

Raleigh, North Carolina 27606

PROJECT



Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

FIRESTOPPING DETAILS

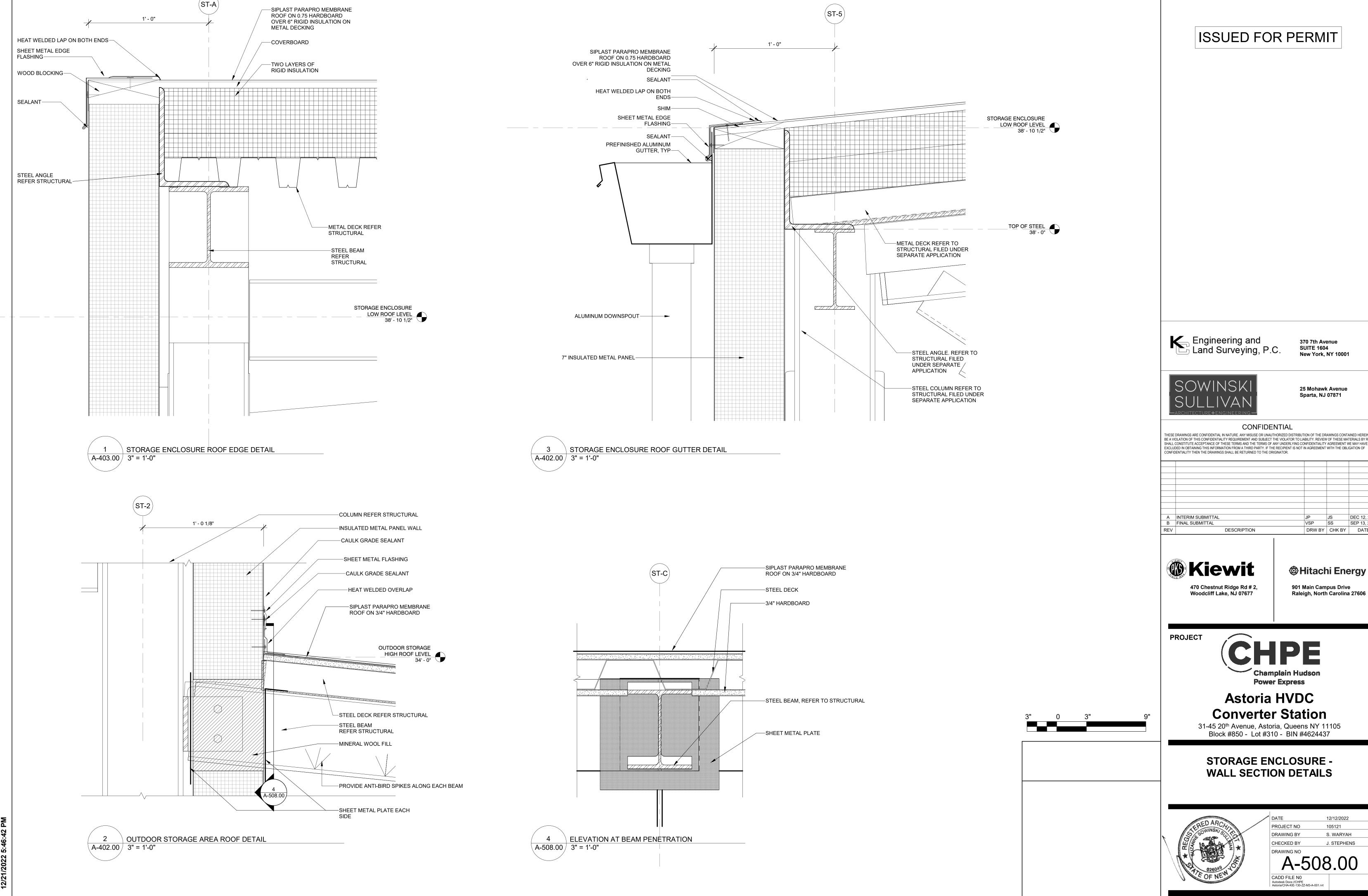


12/12/2022 PROJECT NO DRAWING BY S. WARYAH CHECKED BY J. STEPHENS DRAWING NO A-507.00

THROUGH-PENETRATION FIRESTOPPING N.T.S.

THROUGH-PENETRATION FIRESTOP SYSTEM - PIPING

THROUGH-PENETRATION FIRESTOP SYSTEM - DUCTWORK N.T.S.



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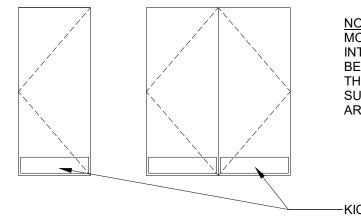
	RELAY, MVS AND STORAGE ENCLOSURE DOOR SCHEDULE												
Mark	Door Finish	Door Type	Width	Height	Frame Type	Frame Finish	Head Detail	Jamb Detail	Threshold Detail	Fire Rating	Comments		
101.A	SST	D.1	3' - 0"	7' - 0"	F.1	SST	3/A-602.00	4/A-602.00	1/A-602.00		ELECTRIFIED LOCKSET AND CARD READER		
101.B	SST	D.2	6' - 0"	7' - 0"	F.3	SST	3/A-602.00	4/A-602.00	1/A-602.00		ELECTRIFIED LOCKSET AND CARD READER		
102.A	SST	D.1	3' - 0"	7' - 0"	F.1	SST	3/A-602.00	4/A-602.00	1/A-602.00		ELECTRIFIED LOCKSET AND CARD READER		
102.B	SST	D.2	6' - 0"	7' - 0"	F.3	SST	3/A-602.00	4/A-602.00	1/A-602.00		ELECTRIFIED LOCKSET AND CARD READER		
K1	SST	D.3	6' - 0"	7' - 0"	F.3	SST	3/A-602.00	4/A-602.00	1/A-602.00		ELECTRIFIED LOCKSET AND CARD READER		
K2	SST	D.3	5' - 0"	7' - 0"	F.3	SST	3/A-602.00	4/A-602.00	1/A-602.00		ELECTRIFIED LOCKSET AND CARD READER		

	FINISH LEGEND							
TAG	FINISH TYPE	MANUFACTURER OR APPROVED EQUAL	COLOR / FINISH	NOTES				

	ROOM FINISH SCHEDULE											
ROOM NUMBER	ROOM NAME	WALL BASE	FLOOR FINISH	WALL FINISH	CEILING FINISH	REMARKS						
K101	RELAY ROOM	VINYL	ACC-1		PT-1							
ME101	CHPE MVS	VINYL	CONC-1	PT-2	PT-1							
ME102	CONED MVS	VINYL	CONC-1	PT-2	PT-1							
	EQUIPMENT PLATFORM 1	-	EP-1		PT-1							
	EQUIPMENT PLATFORM 1	-	EP-1		PT-1							
	EQUIPMENT PLATFORM 2	_	EP-1		PT-1							

	Co	DATING FINISH S	CHEDULE			
ROOM NUMBER	ROOM NAME	COLUMNS	SECONDARY FRAMING	TRUSSES	ROOF DECK	ROOF FRAMING
Finish		,			1	I.
	<varies></varies>					
K101	RELAY ROOM					
ME101	CHPE MVS					
ME102	CONED MVS					

DOOR TYPE LEGEND



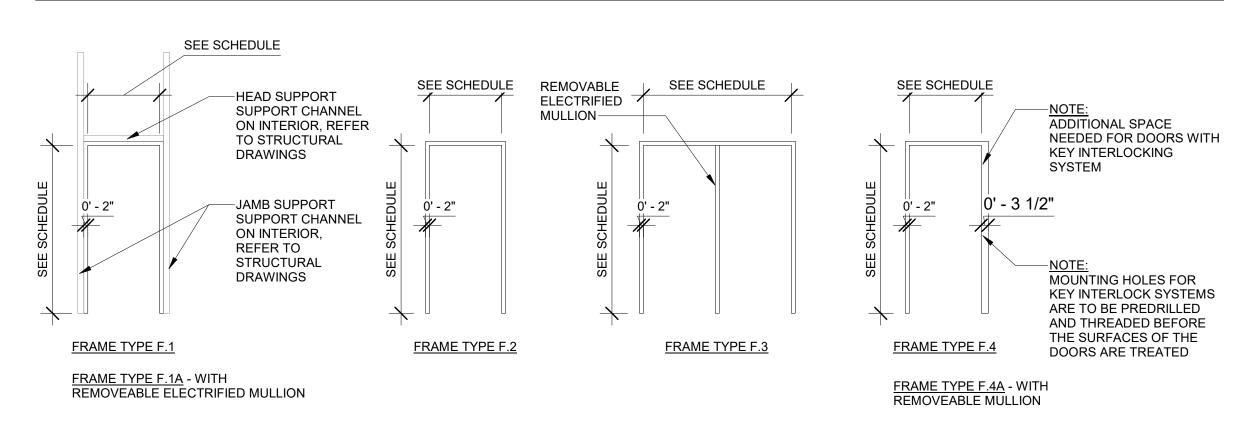
NOTE:
MOUNTING HOLES FOR KEY
INTERLOCK SYSTEMS ARE TO BE PREDRILLED AND THREADED BEFORE THE SURFACES OF THE DOORS ARE TREATED

-KICKPLATE, TYP.

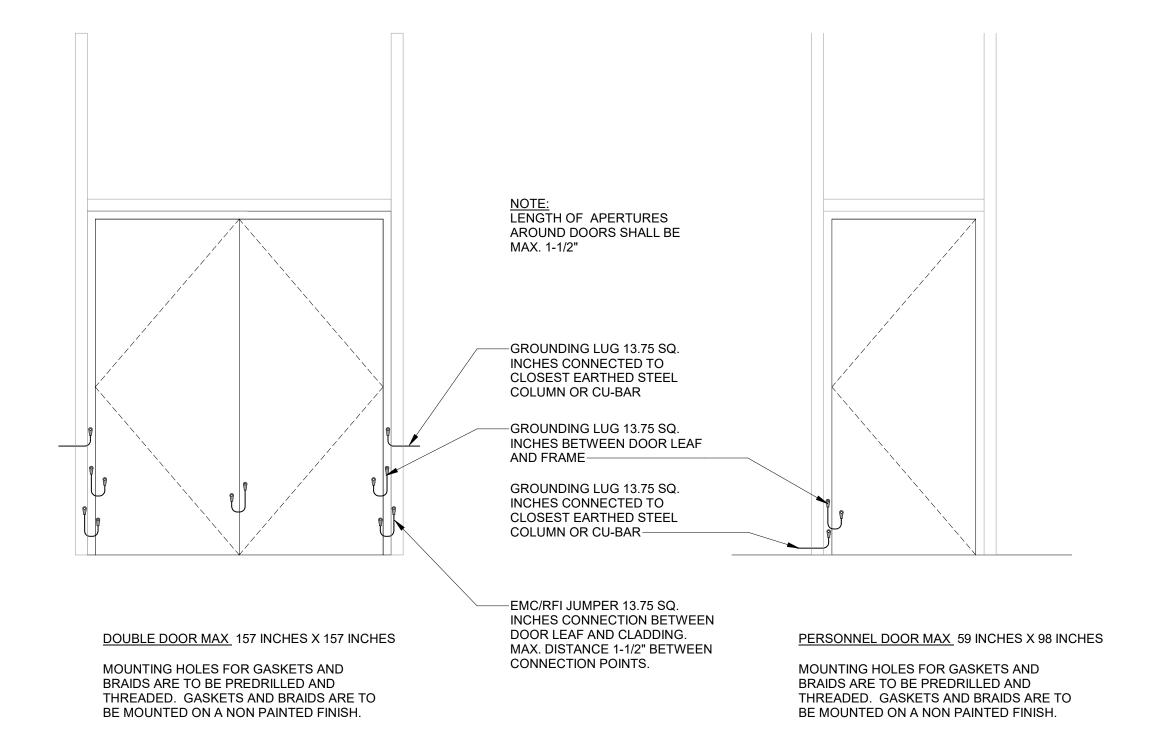
MAN DOORS
*ASSA ABLOY/CURRIES - 747 TEMP RISE 450 F TYPE, STEEL STIFFENED, MINERAL WOOL INFILL. HEAVY DUTY INDUSTRIAL DOOR, 14 GAUGE STAINLESS STEEL.

RADIO FREQUENCY INTERFERENCE DOORS
*KRIEGER PRODUCTS - CUSTOM OVERSIZED DOOR, STAINLESS STEEL FINISH, ASSUME RFI-60 UNTIL CAN BE CONFIRMED. LARGE DOORS AND LARGE OPENINGS SHALL BE RFI SCREENED. KRIEGER CAN MAKE RATED RFI DOORS (CURRIES CAN NOT MAKE BOTH)

FRAME TYPE LEGEND



TYP. GROUNDING AND FRI PROTECTION



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PROJECT



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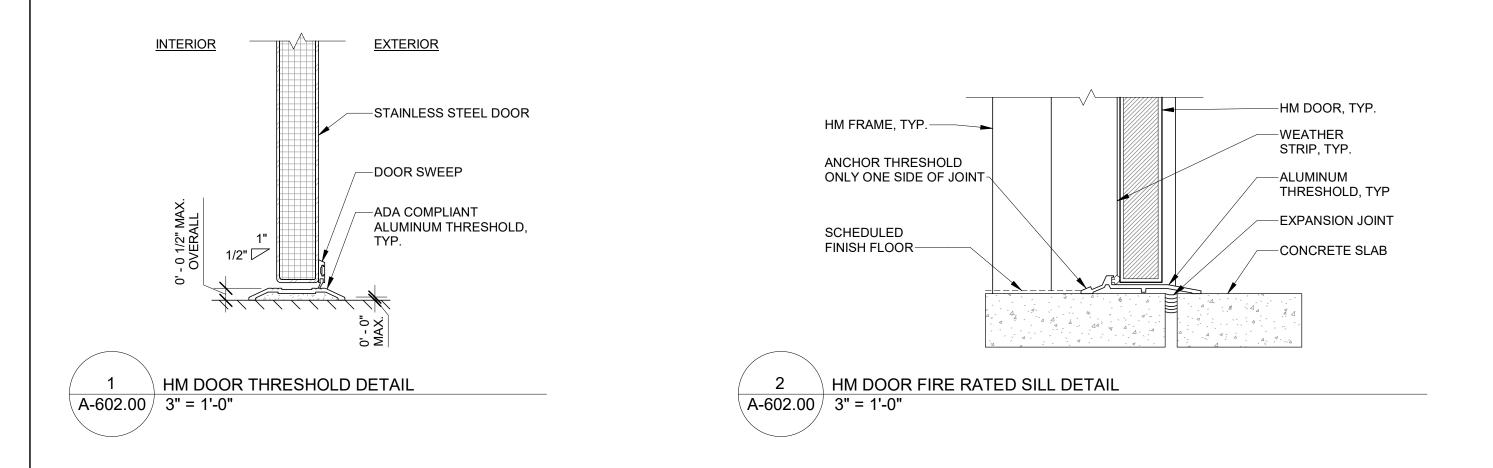
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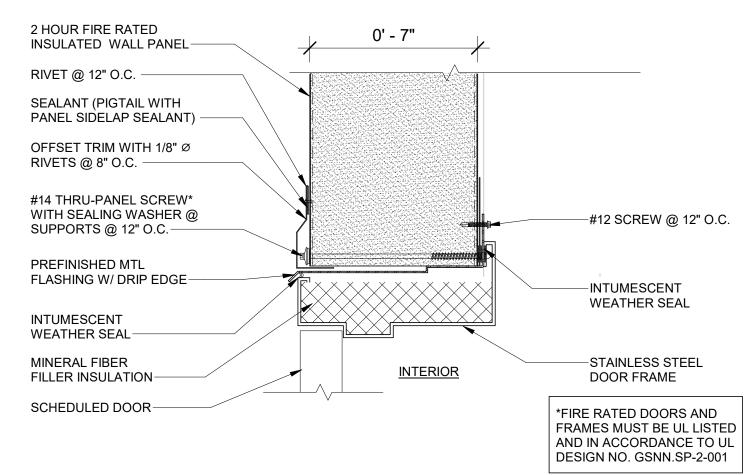
> **DOOR AND FINISH SCHEDULE**



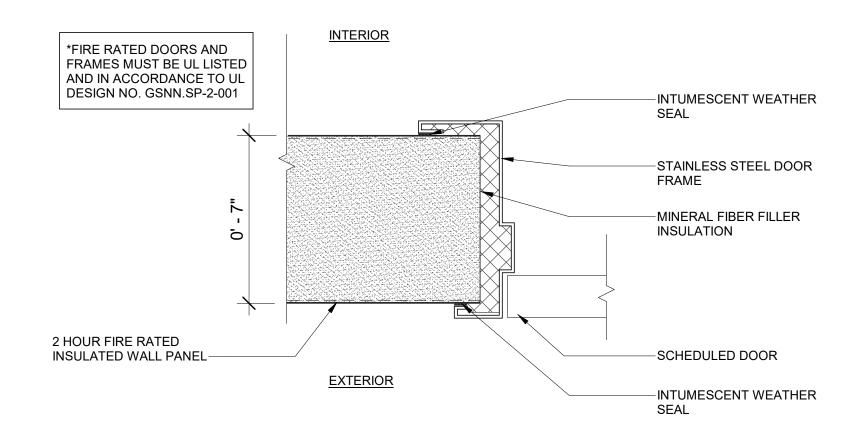
12/12/2022 PROJECT NO DRAWING BY S. WARYAH CHECKED BY J. STEPHENS DRAWING NO

A-601.00

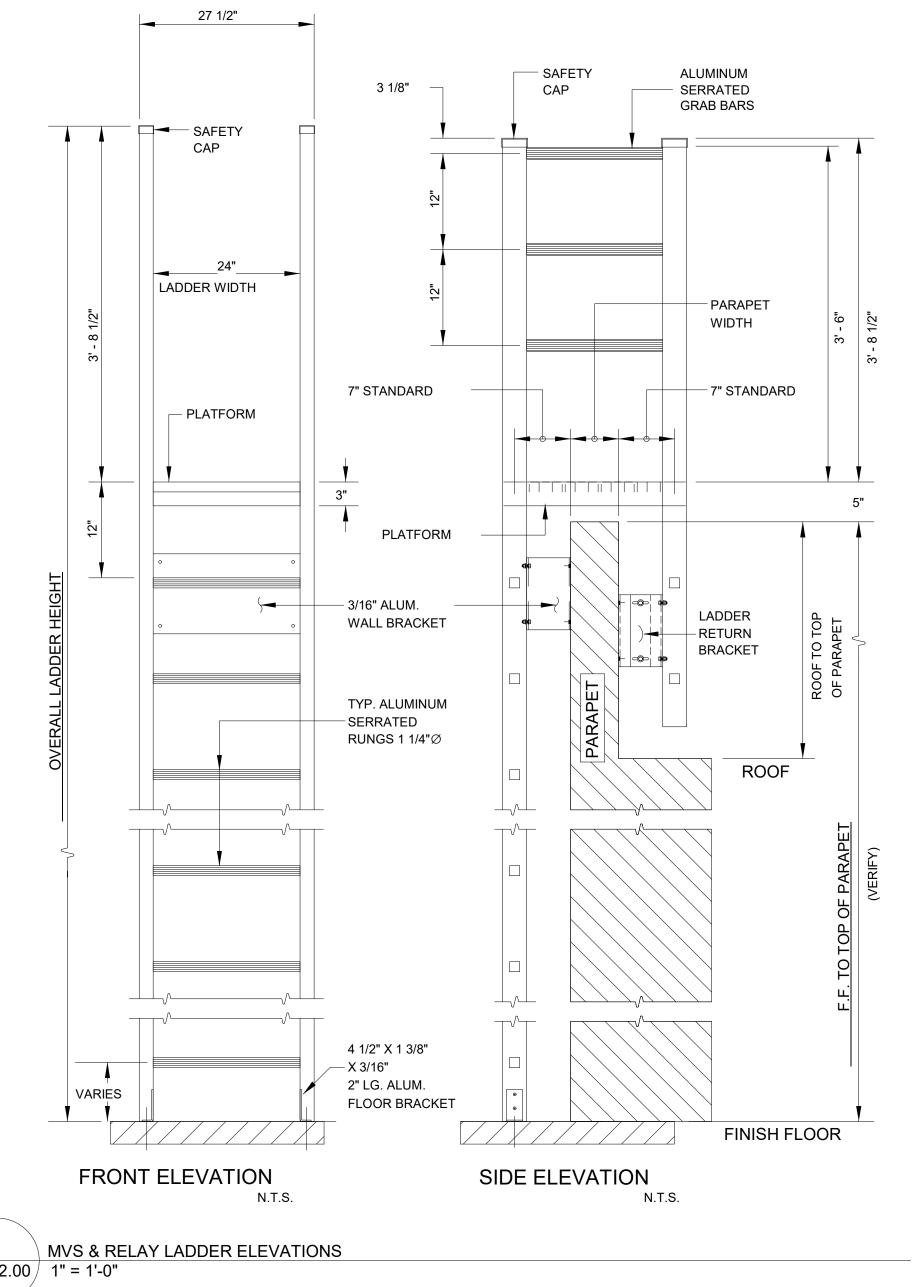




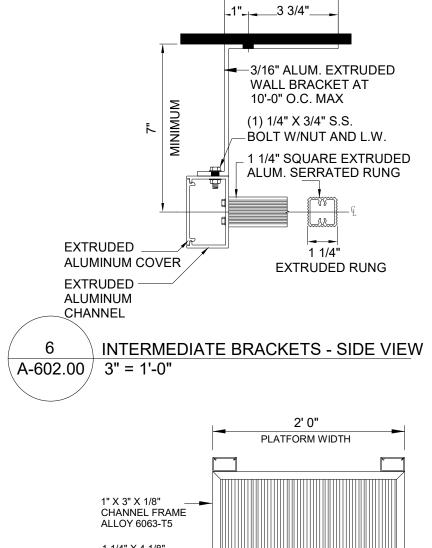


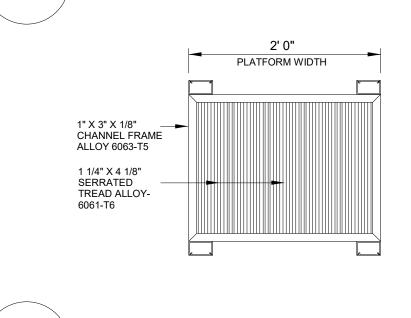


TYPICAL EXTERIOR DOOR JAMB DETAIL A-602.00 3" = 1'-0"



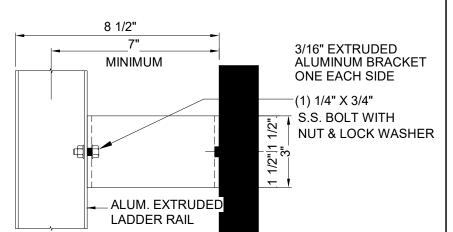
A-602.00 1" = 1'-0"





PLATFORM PLAN

A-602.00 | 1" = 1'-0"





PROJECT

ISSUED FOR PERMIT

Engineering and Land Surveying, P.C.

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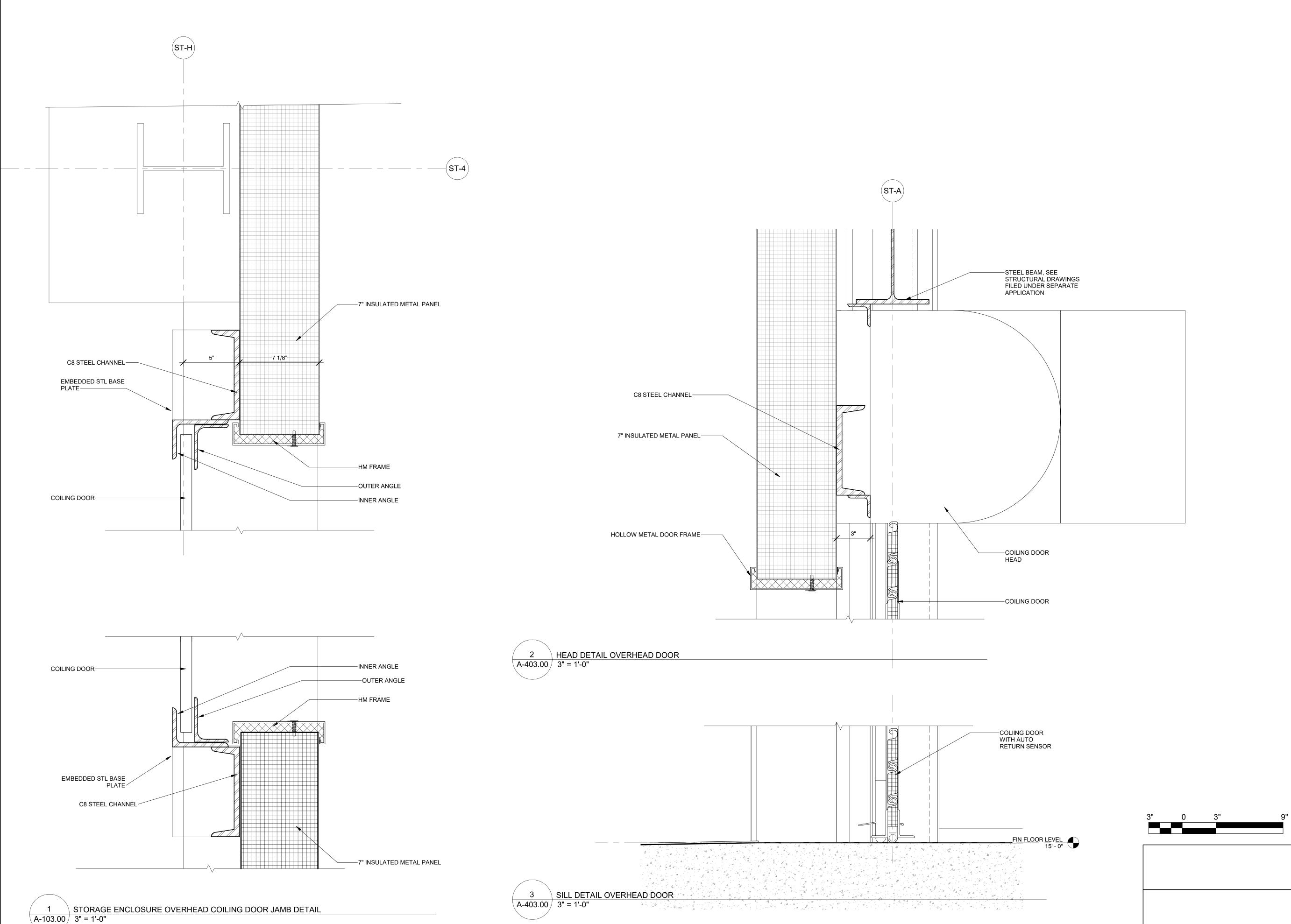
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31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

> DOOR AND LADDER **DETAILS**



12/12/2022 PROJECT NO 105121 DRAWING BY S. WARYAH CHECKED BY J. STEPHENS DRAWING NO A-602.00



ISSUED FOR PERMIT

370 7th Avenue **SUITE 1604** New York, NY 10001



25 Mohawk Avenue **Sparta, NJ 07871**

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Α	INTERIM SUBMITTAL	JP	JS	DEC 12, 2022
В	FINAL SUBMITTAL	VSP	SS	SEP 13, 2022
REV	DESCRIPTION	DRW BY	CHK BY	DATE



@Hitachi Energy 901 Main Campus Drive Raleigh, North Carolina 27606



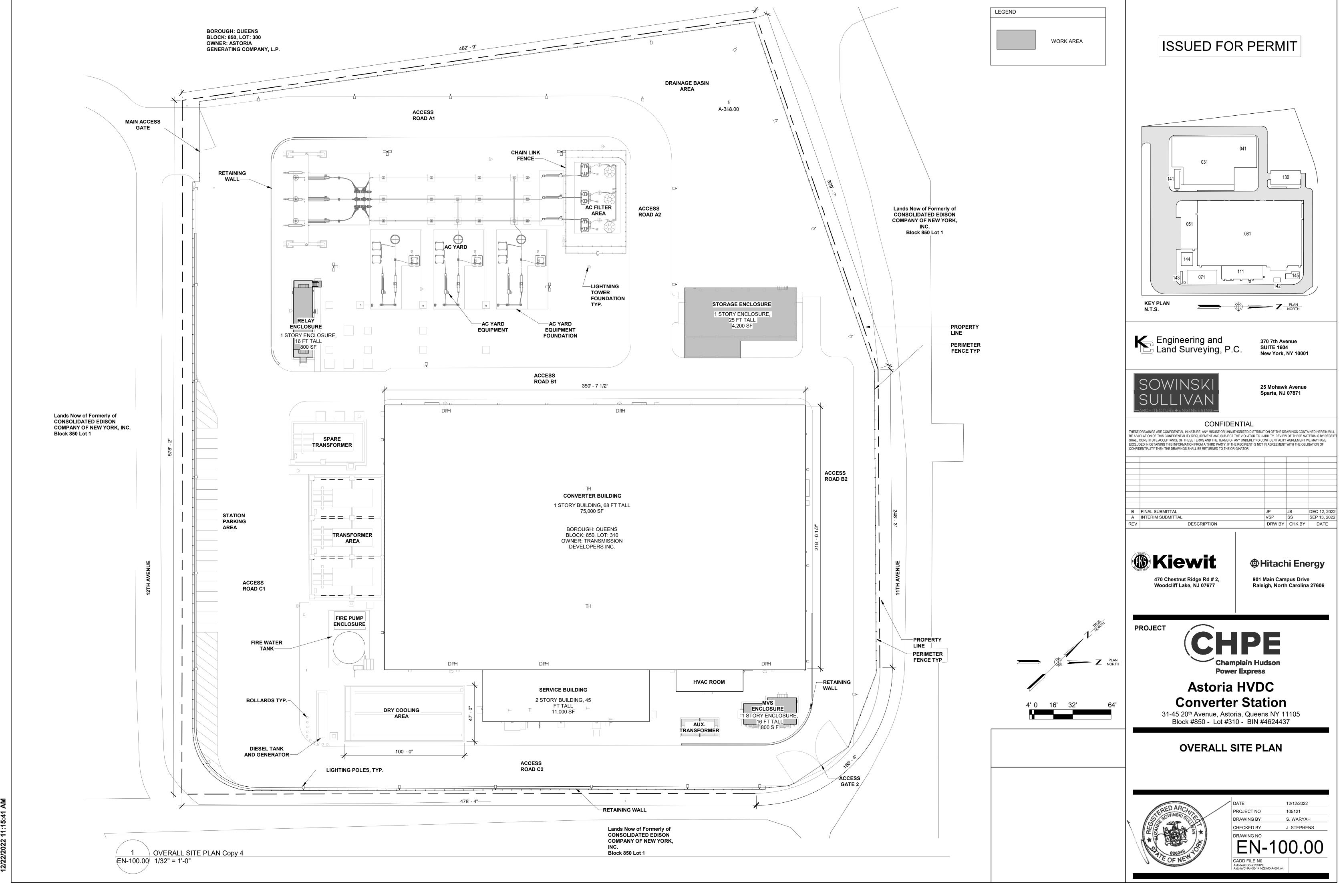
Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

OVERHEAD COILING DOOR DETAILS



S. WARYAH CHECKED BY J. STEPHENS





▲ COMcheck Software Version COMcheckWeb

Project Information

Energy Code: 90.1 (2016) Standard CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2 Project Title:

New York, New York Location: Climate Zone: Project Type: **New Construction**

EnergyPlus 8.1.0.009 (EPW: USA_NY_New.York-Performance Sim. Specs: LaGuardia.AP.725030_TMY3.epw)

Construction Site: Designer/Contractor: Owner/Agent: 21-45 20th Avenue, Astoria, Queens NY 11105 Astoria, Queens, New York 11105 **Building Area** Floor Area

1-Storage Enclosure (Manufacturing Facility) : Nonresidential 2-Relay Enclosure (Manufacturing Facility): Nonresidential 820 3-MVS Enclosure (Manufacturing Facility) : Nonresidential

Envelope Assemblies

Project Information

21-45 20th Avenue, Astoria, Queens

Allowed Exterior Lighting Power

Proposed Exterior Lighting Power

Area/Surface Category

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.

Exterior Lighting TBD: Exterior lighting zone not specified (see project screen)

Astoria, Queens, New York 11105

Energy Code:

Project Title:

Project Type:

Exterior Lighting Zone

Construction Site:

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U- Factor _(a)
Roof: Insulation Entirely Above Deck, [Bldg. Use 1 - Storage Enclosure]	4486		35.0	0.028	0.032
Floor: Unheated Slab-On-Grade, [Bldg. Use 1 - Storage Enclosure] (c)	540			0.730	0.520
Roof: Insulation Entirely Above Deck, [Bldg. Use 2 - Relay Enclosure]	820		35.0	0.028	0.032
Floor: Unheated Slab-On-Grade, [Bldg. Use 2 - Relay Enclosure] (c)	182			0.730	0.520
Roof: Insulation Entirely Above Deck, [Bldg. Use 3 - MVS Enclosure]	831		35.0	0.028	0.032
Floor: Unheated Slab-On-Grade, [Bldg. Use 3 - MVS Enclosure] (c)	540			0.730	0.520
IORTH Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 1 - Storage Enclosure] (b)	2124			0.038	0.064
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 2 - Relay Enclosure] (b)	657			0.038	0.064
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 3 - WVS Enclosure] (b)	331			0.038	0.064
AST Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 1 - Storage Enclosure] (b)	839			0.038	0.064
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 2 - Relay Enclosure] (b)	215			0.038	0.064
Ext. Wall: Other Exterior Wall, Heat capacity 0.0, [Bldg. Use 3 - MVS Enclosure] (b)	735			0.038	0.064
<u>OUTH</u>					
roject Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2	!			Report o	date: 12/08/

▲ COM*check* Software Version COMcheckWeb

90.1 (2016) Standard

New Construction

Owner/Agent:

0 (Unspecified)

Exterior Lighting Compliance Certificate

CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2

(b) A supplemental allowance equal to 350 watts may be applied toward compliance of both non-tradable and tradable

Designer/Contractor:

Total Tradable Watts (a) =

Total Allowed Supplemental Watts (b) =

Total Allowed Watts =

Wattage

A	ssembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budg Fact
Ext. Wall: Other Exterior Was	II, Heat capacity 0.0, [Bldg. Use 1 -	2124			0.038	0.
	ıll, Heat capacity 0.0, [Bldg. Use 2 -	657			0.038	0.
Ext. Wall: Other Exterior Wa MVS Enclosure] (b)	ll, Heat capacity 0.0, [Bldg. Use 3 -	331			0.038	0.
<u>WEST</u> Ext. Wall: Other Exterior Wa Storage Enclosure] (b)	ll, Heat capacity 0.0, [Bldg. Use 1 -	839			0.038	0.
	Swinging, [Bldg. Use 1 - Storage	295			0.570	0.
•	ıll, Heat capacity 0.0, [Bldg. Use 2 -	216			0.038	0.
-	Swinging, [Bldg. Use 2 - Relay	84			0.570	0.
-	ll, Heat capacity 0.0, [Bldg. Use 3 -	735			0.038	0.
Door: Insulated Metal, Non- Enclosure]	Swinging, [Bldg. Use 3 - MVS	126			0.570	0.
(o) slab on Grade propos	ed and budget U-factors shown in ta	ore are r ractor.	J.			
specifications, and other cal designed to meet the 90.1 (application. The	proposed	envelope sy	ystems have Ī	oeen
Envelope Compliance Compliance Statement: The specifications, and other cal designed to meet the 90.1 (e Statement e proposed envelope design represen culations submitted with this permit 2016) Standard requirements in COM	application. The	proposed	envelope sy	ystems have Ī	oeen
Envelope Compliance Compliance Statement: The specifications, and other cal designed to meet the 90.1 (mandatory requirements list	e Statement e proposed envelope design represenculations submitted with this permit 2016) Standard requirements in COM red in the Inspection Checklist.	application. The	proposed	envelope sy	ystems have I comply with a	oeen
Envelope Compliance Compliance Statement: The specifications, and other cal designed to meet the 90.1 (mandatory requirements list	e Statement e proposed envelope design represenculations submitted with this permit 2016) Standard requirements in COM red in the Inspection Checklist.	application. The	proposed	envelope sy	ystems have I comply with a	oeen
Envelope Compliance Compliance Statement: The specifications, and other cal designed to meet the 90.1 (mandatory requirements list	e Statement e proposed envelope design represenculations submitted with this permit 2016) Standard requirements in COM red in the Inspection Checklist.	application. The	proposed	envelope sy	ystems have I comply with a	oeen
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Envelope Compliance Compliance Statement: The specifications, and other cal designed to meet the 90.1 (mandatory requirements list	e Statement e proposed envelope design represenculations submitted with this permit 2016) Standard requirements in COM red in the Inspection Checklist.	application. The	proposed	envelope sy	ystems have I comply with a	oeen
Envelope Compliance Compliance Statement: The specifications, and other cal designed to meet the 90.1 (mandatory requirements list	e Statement e proposed envelope design represenculations submitted with this permit 2016) Standard requirements in COM red in the Inspection Checklist.	application. The	proposed	envelope sy	ystems have I comply with a	oeen
Envelope Compliance Compliance Statement: The specifications, and other cal designed to meet the 90.1 (mandatory requirements list	e Statement e proposed envelope design represenculations submitted with this permit 2016) Standard requirements in COM red in the Inspection Checklist.	application. The	proposed	envelope sy	ystems have I comply with a	oeen
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Envelope Compliance Compliance Statement: The specifications, and other cal designed to meet the 90.1 (mandatory requirements list	e Statement e proposed envelope design represenculations submitted with this permit 2016) Standard requirements in COM red in the Inspection Checklist.	application. The	proposed	envelope sy	ystems have I comply with a	oeen
Envelope Compliance Compliance Statement: The specifications, and other cal designed to meet the 90.1 (mandatory requirements list	e Statement e proposed envelope design represenculations submitted with this permit 2016) Standard requirements in COM red in the Inspection Checklist.	application. The	proposed	envelope sy	ystems have I comply with a	oeen
Envelope Compliance Compliance Statement: The specifications, and other cal designed to meet the 90.1 (mandatory requirements list	e Statement e proposed envelope design represenculations submitted with this permit 2016) Standard requirements in COM red in the Inspection Checklist.	application. The	proposed	envelope sy	ystems have I comply with a	oeen
Envelope Compliance Compliance Statement: The specifications, and other cal designed to meet the 90.1 (mandatory requirements list	e Statement e proposed envelope design represenculations submitted with this permit 2016) Standard requirements in COM red in the Inspection Checklist.	application. The	proposed	envelope sy	ystems have I comply with a	oeen



Project Information

Data filename:

90.1 (2016) Standard Energy Code: Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2 New York, New York Location:

Climate Zone: Project Type: New Construction

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2

Construction Site: Owner/Agent: Designer/Contractor: 21-45 20th Avenue, Astoria, Queens

Astoria, Queens, New York 11105 Mechanical Systems List Quantity System Type & Description

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 90.1 (2016) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Signature

Name - Title

NY 11105

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2 Data filename:

Report date: 12/08/22 Page 5 of 12

Report date: 12/08/22

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▲ COM*check* Software Version COM*checkWeb*

Project Information

90.1 (2016) Standard Energy Code: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2 Project Title: Project Type: **New Construction**

Construction Site: Owner/Agent: Designer/Contractor: 21-45 20th Avenue, Astoria, Queens Astoria, Queens, New York 11105

Proposed Interior Lighting Power

Allowed Interior Lighting Power

Interior Lighting TBD: No lighting fixtures specified

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2

Data filename:

Report date: 12/08/22

Page 3 of 12

ISSUED FOR PERMIT

Land Surveying, P.C.

370 7th Avenue **SUITE 1604** New York, NY 10001



25 Mohawk Avenue **Sparta, NJ 07871**

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В	FINAL SUBMISSION	VSP	EK	12/12/20
Α	INTERIM SUBMISSION	VSP	EK	09/13/20
RFV	DESCRIPTION	DRW BY	CHK BY	DATE



@Hitachi Energy

901 Main Campus Drive Raleigh, North Carolina 27606



Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

ENERGY COMPLIANCE ARCHITECTURE - 1



PROJECT NO DRAWING BY CHECKED BY DRAWING NO

CADD FILE NO
Autodesk Docs://CHPE
Astoria/CHA-KIE-141-ZZ-M3-A-001.rvt

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2 Data filename:

Report date: 12/08/22 Page 4 of 12

Allowed Watts

(B X C)

▲ COMcheck Software Version COMcheckWeb

Requirements: 100.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
4.2.2, 5.4.3.1.1, 5.7 [PR1] ¹	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
4.2.2, 8.4.1.1, 8.4.1.2, 8.7 [PR6] ²	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions are claimed. Feeder connectors sized in accordance with approved plans and branch circuits sized for maximum drop of 3%.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
5.5.4.2.3 [PR7] ²	In buildings > 2,500 ft2, any enclosed spaces directly under a roof with ceiling heights > 15 ft. and used as an office, lobby, atrium, concourse, corridor, storage (including nonrefrigerated warehouse), gymnasium, fitness/exercise area, playing area, gymnasium seating area, convention exhibit/event space, courtroom, automotive service, fire station engine room, manufacturing corridor/transition and bay areas, retail, library reading and stack areas, distribution/sorting area, transportation baggage and seating areas, or workshop, the following requirements apply: The daylight zone under skylights is >= half the floor area and (a) the skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40 or (b) the minimum skylight effective aperture >= 1 percent. The skylights have a measured haze value > 90 percent.	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2

Additional Comments/Assumptions:

Data filename:

Report date: 12/08/22 Page 6 of 12

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
8.4.2 [EL10] ²	At least 50% of all 125 volt 15- and 20-Amp receptacles are controlled by	□Complies □Does Not	
	an automatic control device.	□Not Observable □Not Applicable	
8.4.3 [EL11] ²	New buildings have electrical energy use measurement devices installed.	□Complies □Does Not	
	Where tenant spaces exist, each tenant is monitored separately. In buildings with a digital control system the energy use is transmitted to to control system and displayed graphically.	□Not Observable □Not Applicable	

Additional Comments/Assumptions:

Data filename:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2 Report date: 12/08/22 Page 9 of 12

Section # & Req.ID	Footing / Foundation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
4.2.4 [FO1] ²	Installed below-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R	R	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
4.2.4 [FO3] ²	Installed slab-on-grade insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R Unheated Heated	R Unheated Heated	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
5.8.1.2 [FO4] ²	Slab edge insulation installed per manufacturer's instructions.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
5.5.3.5 [FO5] ²	Slab edge insulation depth/length.	ft	ft	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
5.8.1.7 [FO6] ¹	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
5.8.1.7.3 [FO7] ¹	Insulation in contact with the ground has <=0.3% water absorption rate per ASTM C272.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
6.4.4.1.5 [FO11] ³	Bottom surface of floor structures incorporating radiant heating insulated to >=R-3.5.	R	R	□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply. See the Envelope Assemblies table for values.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2 Report date: 12/08/22 Data filename: Page 7 of 12

Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
4.2.4 [IN2] ¹	Installed roof insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. For some ceiling systems, verification may need to occur during Framing Inspection.	R Above deck Metal Attic	R Above deck Metal Attic	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
5.8.1.2, 5.8.1.3 [IN3] ¹	Roof insulation installed per manufacturer's instructions. Blown or poured loose-fill insulation is installed only where the ceiling slope is <= 3:12.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
4.2.4 [IN6] ¹	Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	R Mass Metal Steel Wood	R Mass Metal Steel Wood	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
5.8.1.2 [IN7] ¹	Above-grade wall insulation installed per manufacturer's instructions.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
4.2.4 [IN8] ²	Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.		R Mass Steel Wood	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
5.8.1.1 [IN10] ²	Building envelope insulation is labeled with R-value or insulation certificate has been provided listing R-value and other relevant data.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
5.8.1.9 [IN18] ²	Building envelope insulation extends over the full area of the component at the proposed rated R or U value.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
5.8.1.4 [IN11] ²	Eaves are baffled to deflect air to above the insulation.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
5.8.1.5 [IN12] ²	Insulation is installed in substantial contact with the inside surface separating conditioned space from unconditional space.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
5.8.1.6 [IN13] ²	Recessed equipment installed in building envelope assemblies does not compress the adjacent insulation.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
5.8.1.7.1 [IN15] ²	Attics and mechanical rooms have insulation protected where adjacent to attic or equipment access.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met. Location on plans/spec: requirement does not apply

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2

Data filename:

Report date: 12/08/22 Page 10 of 12

Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
5.4.3.2 [FR1] ³	Factory-built and site-assembled fenestration and doors are labeled or certified as meeting air			□Complies □Does Not	Exception: Metal coiling doors in semiheated spaces in zones 1-6 when leakage is
	leakage requirements.			□Not Observable □Not Applicable	= 1.0 CFM/ft2.
5.4.3.4 [FR4] ³	Vestibules are installed where building entrances separate conditioned space from the exterior, and meet exterior envelope requirements. Doors have self-closing devices, and are >=7 ft apart (>= 16 ft apart for adjoinging floor area >= 40000			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement does not apply.
	sq.ft.). Vestibule floor area <=7 50 sq.ft. or 2 percent of the adjoining conditioned floor area.				
5.5.4.3a [FR8] ¹	Vertical fenestration U-Factor.	U	U	□Complies □Does Not	See the Envelope Assemblies table for values.
				□Not Observable □Not Applicable	
5.5.4.3b [FR9] ¹	Skylight fenestration U-Factor.	U	U	□Complies □Does Not	See the Envelope Assemblies table for values.
			 	□Not Observable □Not Applicable	
5.5.4.4.1 [FR10] ¹	Vertical fenestration SHGC value.	SHGC:	SHGC:	□Complies □Does Not	See the Envelope Assemblies table for values.
			 	□Not Observable □Not Applicable	
5.5.4.4.2 [FR11] ¹	Skylight SHGC value.	SHGC:	SHGC:	□Complies □Does Not	See the Envelope Assemblies table for values.
			 	□Not Observable □Not Applicable	
5.8.2.1, 5.8.2.3,	Fenestration products rated (U-factor, SHGC, and VT) in			□Complies □Does Not	Requirement will be met.
5.8.2.4, 5.8.2.5 [FR12] ²	accordance with NFRC or energy code defaults are used.			□Not Observable □Not Applicable	
5.8.2.2 [FR13] ¹	Fenestration and door products are labeled, or a signed and			□Complies □Does Not	Requirement will be met.
	dated certificate listing the U- factor, SHGC, VT, and air leakage rate has been provided by the manufacturer.			□Not Observable □Not Applicable	
5.5.3.6 [FR14] ²	U-factor of opaque doors associated with the building	U Swinging	U Swinging	□Complies □Does Not	See the Envelope Assemblies table for values.
	thermal envelope meets requirements.	Nonswinging	Nonswinging	□Not Observable □Not Applicable	
5.4.3.1 [FR15] ¹	Continuous air barrier is wrapped, sealed, caulked, gasketed, and/or taped in an approved manner, except in semiheated spaces in climate zones 1-6.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2 Report date: 12/08/22 Data filename: Page 8 of 12

370 7th Avenue **SUITE 1604** New York, NY 10001



25 Mohawk Avenue **Sparta, NJ 07871**

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ISSUED FOR PERMIT

В	FINAL SUBMISSION	VSP	EK	12/12/2022
Α	INTERIM SUBMISSION	VSP	EK	09/13/2022
REV	DESCRIPTION	DRW BY	CHK BY	DATE



@Hitachi Energy

901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT



Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

ENERGY COMPLIANCE ARCHITECTURE - 2



CHECKED BY

DRAWING NO

Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
5.8.1.7.2 [IN16] ²	Foundation vents do not interfere with insulation.			□Complies □Does Not □Not Observable	Requirement will be met.
5.8.1.8 [IN17] ³	Insulation intended to meet the roof insulation requirements cannot be installed on top of a suspended ceiling. Mark this requirement compliant if insulation is installed accordingly.			□Not Applicable □Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2

Data filename: Report date: 12/08/22

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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
	Weatherseals installed on all loading dock cargo doors in Climate Zones 4-8.	□Complies □Does Not	Exception: Requirement does not apply.
		□Not Observable □Not Applicable	

Additional Comments/Assumptions:

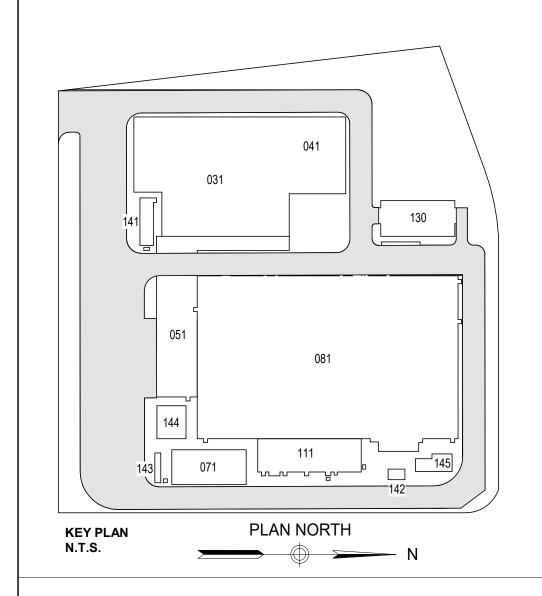
1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: CHPE Astoria Auxiliary Enclosures Copy 2 Copy 2

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Report date: 12/08/22 Page 12 of 12

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Engineering and Land Surveying, P.C.

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В	FINAL SUBMISSION	VSP	EK	12/12/2022
Α	INTERIM SUBMISSION	VSP	EK	09/13/2022
REV	DESCRIPTION	DRW BY	CHK BY	DATE



901 Main Campus Drive Raleigh, North Carolina 27606

PROJECT



Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

ENERGY COMPLIANCE ARCHITECTURE - 3



DATE 12/12/2022
PROJECT NO 105121
DRAWING BY Author
CHECKED BY Designer
DRAWING NO
EN-103.00

CADD FILE NO
Autodesk Docs://CHPE
Astoria/CHA-KIE-141-ZZ-M3-A-001.rvt

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