



EV-2S 600A

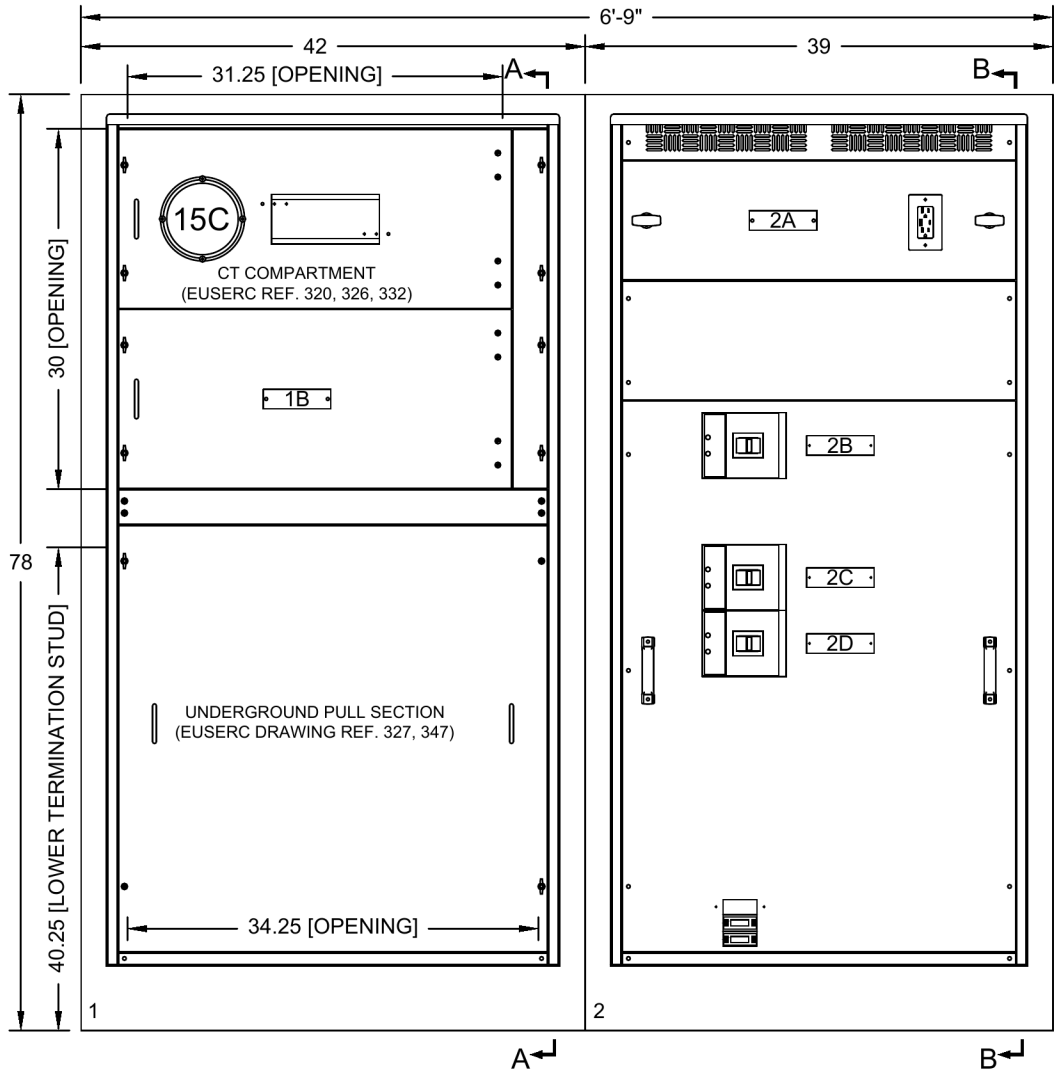
Inventory serial: 26355

Drawing/Part:			Spec section:
Number	Rev.	Part Qty.	Description of material being submitted:
	2		EV-2 Submittal Drawing
			<u>Components</u>
		1	Main Circuit Breaker
		2	Charging Cabinet Circuit Breaker

NOTES:

1. This submittal represents Lincoln Electric's interpretation of the contract drawings provided. It is the responsibility of the electrical contractor and consulting engineer to verify this submittal for accuracy. Any deviation not indicated on the contract drawings will incur additional charges.
2. The customer must return the approved submittal accompanied by a written release to proceed with manufacturing and delivery of the included equipment.

SOUTHERN CALIFORNIA EDISON (SCE)		
DRAWING CONTENT	SCE REF.	EUSERC REF.
CT COMPARTMENT	ESR-6-19	320
SERVICE SECTION	ESR-6-7	326
COMPARTMENT DOORS	ESR-6-24	332
TERMINATION CABINET	ESR-6-9	327
TERMINATION FACILITIES	ESR-6-12	347
OUTDOOR ENCLOSURE	ESR-6-10	354



FRONT VIEW - NEMA 3R
(SHOWN WITHOUT DOORS)

PRODUCT DESCRIPTION & RATINGS:

PRODUCT TYPE

- EV-2 (SERVICE SWITCHBOARD)
- LEVEL-2 CHARGING

UTILITY INFORMATION

- SOUTHERN CALIFORNIA EDISON (EUSERC)
- METER BEFORE DISCONNECT (HOT SEQUENCE)

POWER SYSTEM DATA

- INCOMING - SECTION 1, BOTTOM FEED

BUS SYSTEM DATA

- SILVER PLATED COPPER MAIN BUS
- DENSITY RATED AT 1000A PER SQUARE INCH
- 98% CONDUCTIVITY RATED IN ACCORDANCE w/ UL891

ENCLOSURE DATA

- CODE GAUGE, FORMED COVERS & DOORS
- ENCLOSURE SHALL CONFORM TO INGRESS PROTECTION REQUIREMENTS IN ACCORDANCE WITH NEMA 3R RATING.
- EXTERIOR HARDWARE TO BE TAMPER-RESISTANT S.S. SCREWS.
- DOOR HANDLES ARE EQUIPPED WITH PADLOCK HASP.
- FINISH SHALL BE: ☒ WHITE (STANDARD) ☐ GRAY ☐ GREEN
- FRONT ACCESSIBLE ONLY

CODE STANDARDS

- UL891
- SUITABLE FOR USE AS SERVICE EQUIPMENT.

NAMEPLATES

- LAMICOID TYPE, WHITE w/BLACK LETTERS.

ACCESSORIES

- ENCLOSURE HEATERS W/ HYGROSTAT CONTROL
- METER SOCKET - 15 CLIP - COOPER B LINE (CAT.# 10015CT-B OR EQL)

REFERENCES:

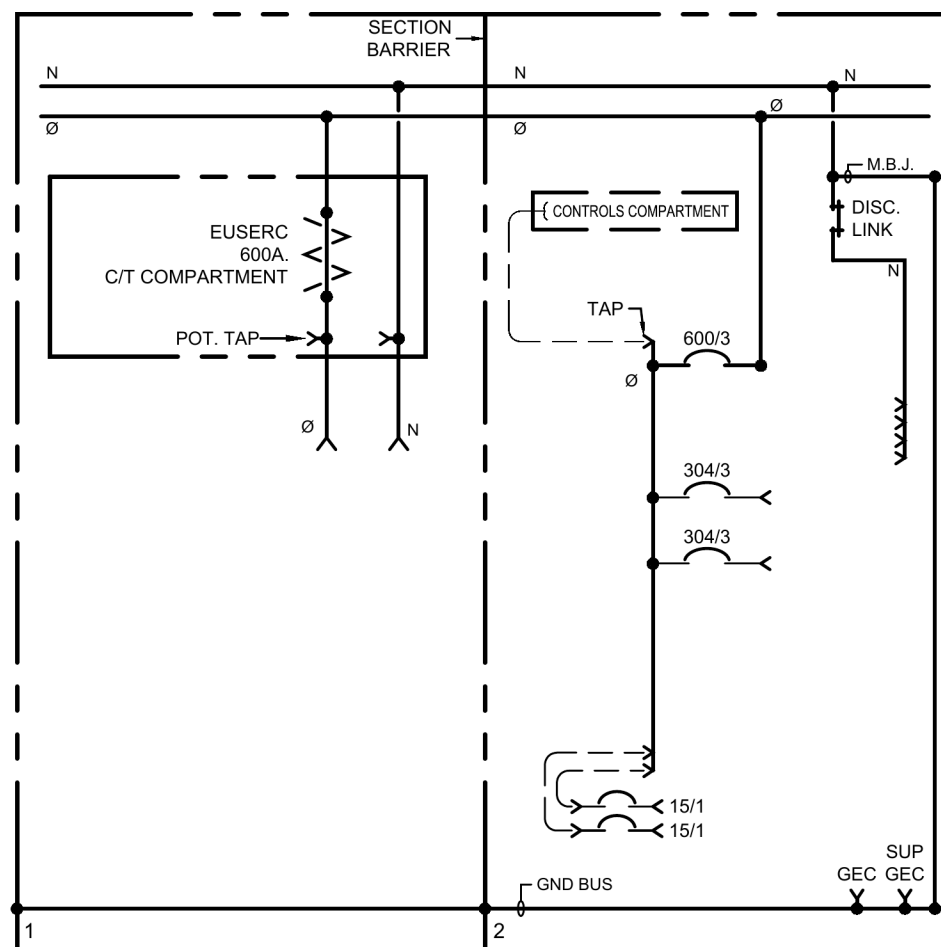
- SECTION VIEWS SEE SHT-06
- FOR NAMEPLATE DESIGNATIONS SEE 'SWITCHBOARD SCHEDULE' SHT-03



LINCOLN ELECTRIC
PRODUCTS CO., INC.

DRAWING TITLE		EQUIPMENT DESIGNATION				
FRONT VIEW		EV-2				
SHORT CIRCUIT RATING	VOLTAGE	AMPERAGE	SYSTEM	BUS MATERIAL	ENCLOSURE	REV
65kA. SYM. RMS	480Y/277V AC	600A.	3 ϕ , 4W	COPPER	NEMA-3R	2

SHEET NUMBER
1 OF 7



SERVICE SWITCHBOARD

REFERENCES:

- FOR CONTROLS COMPARTMENT & 120/240V. SUB-PANEL DETAILS SEE SHT-07



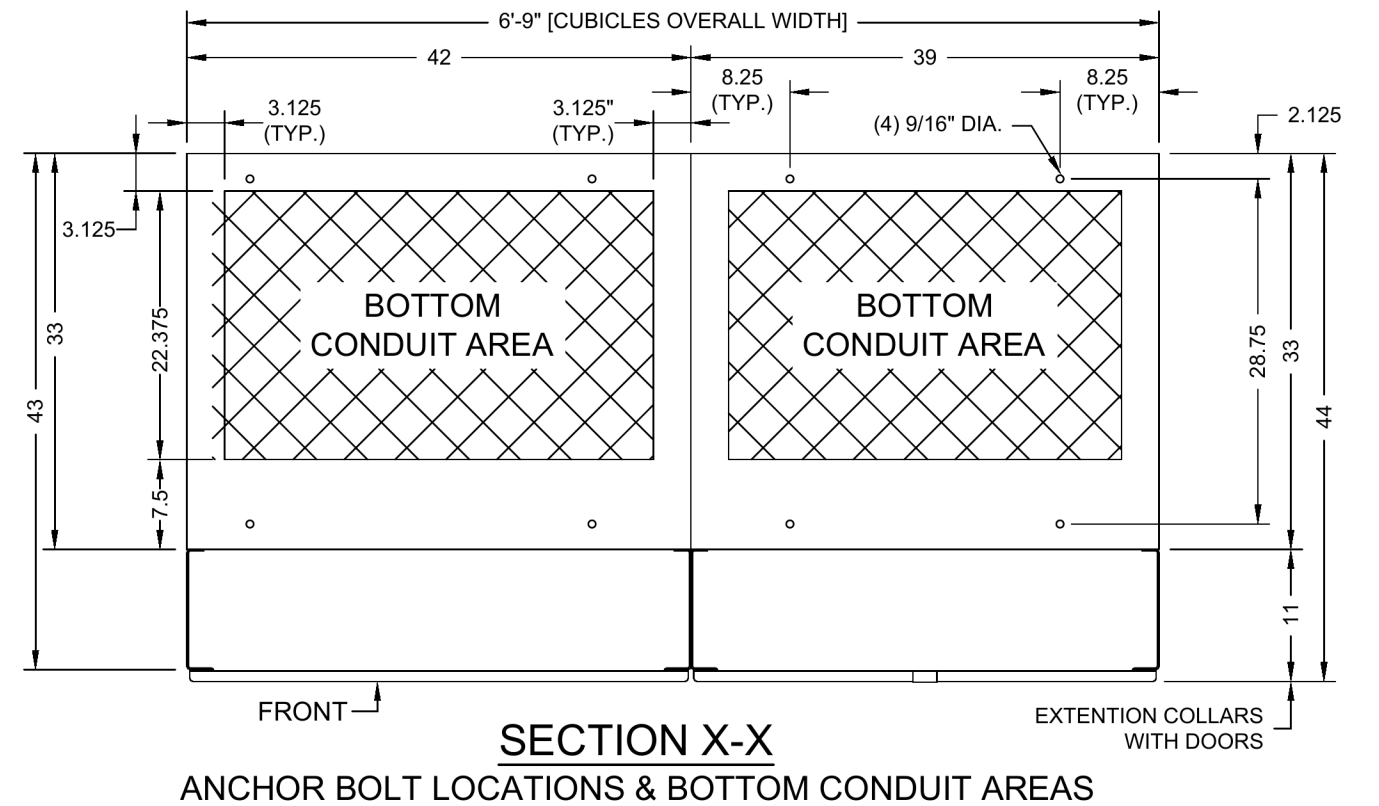
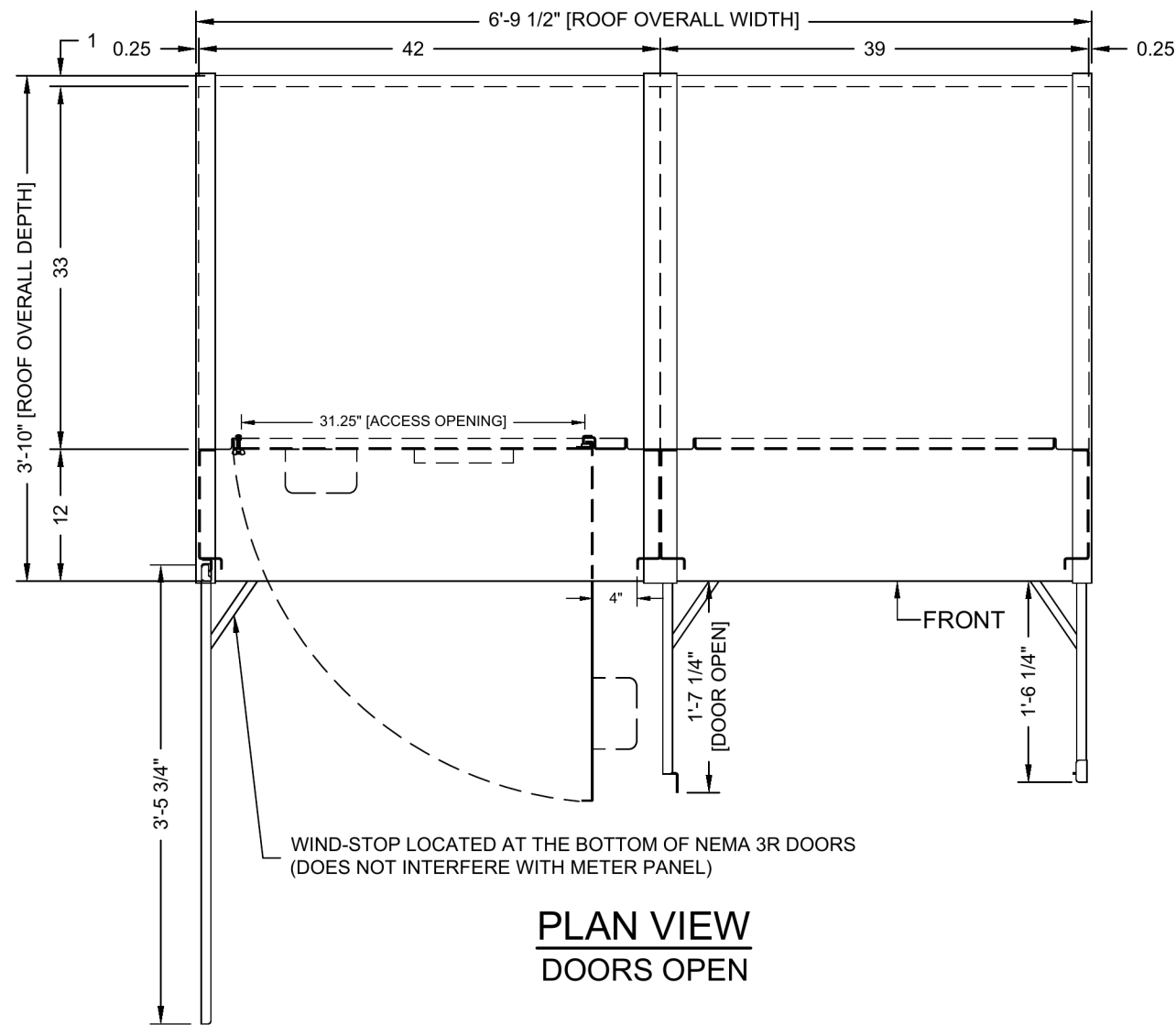
LINCOLN ELECTRIC
PRODUCTS CO., INC.

DRAWING TITLE		EQUIPMENT DESIGNATION					
ONE-LINE DIAGRAM		EV-2					
SHORT CIRCUIT RATING	VOLTAGE	AMPERAGE	SYSTEM	BUS MATERIAL	ENCLOSURE	REV	
65kA. SYM. RMS	480Y/277V AC	600A.	3 ϕ , 4W	COPPER	NEMA-3R	2	

SHEET NUMBER
2 OF 7

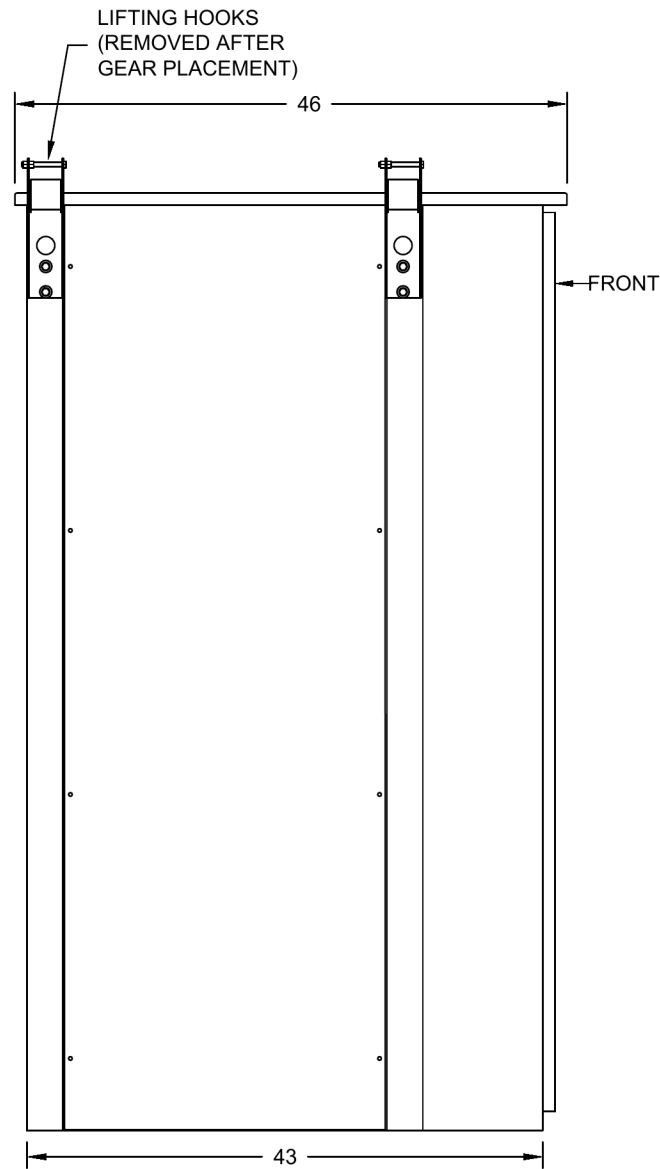
SWITCHBOARD SCHEDULE															
CUB. LOCN.	DESIGNATION	DEVICE MANUFACTURER	FRAME RATING	TRIP RATING/ TYPE	# OF POLES	DEVICE CAT. NO.	LUG INFORMATION						CONDUCTOR MATERIAL	CABLE ENTRY	NOTES
							QTY	PHASES	QTY	NEUTRAL	QTY	GROUND			
1	INCOMING	-	-	-	-	-	6	(1) #2-600 KCMIL	6	(1) #2-600 KCMIL	-	-	ALUMINUM	BOTTOM	-
1A	SERVICE SWITCHBOARD 600A., 3Ø, 4W., 480Y/277V														- DOUBLE PADLOCK HASP ON EXTERIOR DOOR [SQ-D CAT. NO. SS-2-PL OR EQUAL]
1B	UTILITY METERING CABINET 600A., 3Ø, 4W., 480Y/277V.	-	-	-	-	-	-	-	-	-	-	-	BUS CONNECTED	-	- C.T.'S SUPPLIED & WIRED BY UTILITY
2A	CONTROLS COMPARTMENT	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2B	MAIN SERVICE DISCONNECT	ABB	600/3 'XT5'	600A TMA TRIP	3	XT5HU360BBFN00HXXX	-	-	-	-	-	-	BUS CONNECTED	-	- 100% RATED - PADLOCK HASP
2C	CHARGING CABINET #1	ABB	400/3 'XT5'	304A LSI	3	XT5HU340AEFN00HXXX	1	(2) #2/0-500 KCMIL	1	(1) #2-600 KCMIL	1	(1) #6-350 KCMIL	ALUMINUM [CU GND]	BOTTOM	- PADLOCK HASP - MECHANICAL LUGS
2D	CHARGING CABINET #2	ABB	400/3 'XT5'	304A LSI	3	XT5HU340AEFN00HXXX	1	(2) #2/0-500 KCMIL	1	(1) #2-600 KCMIL	1	(1) #6-350 KCMIL	ALUMINUM [CU GND]	BOTTOM	
2	SPARE	ABB	15/1 'THED'	15A	1	THED113015WL	1	#14-2/0 AWG	1	#14 - 1/0 AWG	1	#14 - 1/0 AWG	ALUMINUM [CU GND]	BOTTOM	-
2	SPARE	ABB	15/1 'THED'	15A	1	THED113015WL	1	#14-2/0 AWG	1	#14 - 1/0 AWG	1	#14 - 1/0 AWG	ALUMINUM [CU GND]	BOTTOM	-
2	G.E.C.	-	-	-	-	-	-	-	-	-	2	(1) #6-350 KCMIL	COPPER	BOTTOM	-

REFERENCES:
- FOR CONTROLS COMPARTMENT & 120/240V. SUB-PANEL DETAILS SEE SHT-07

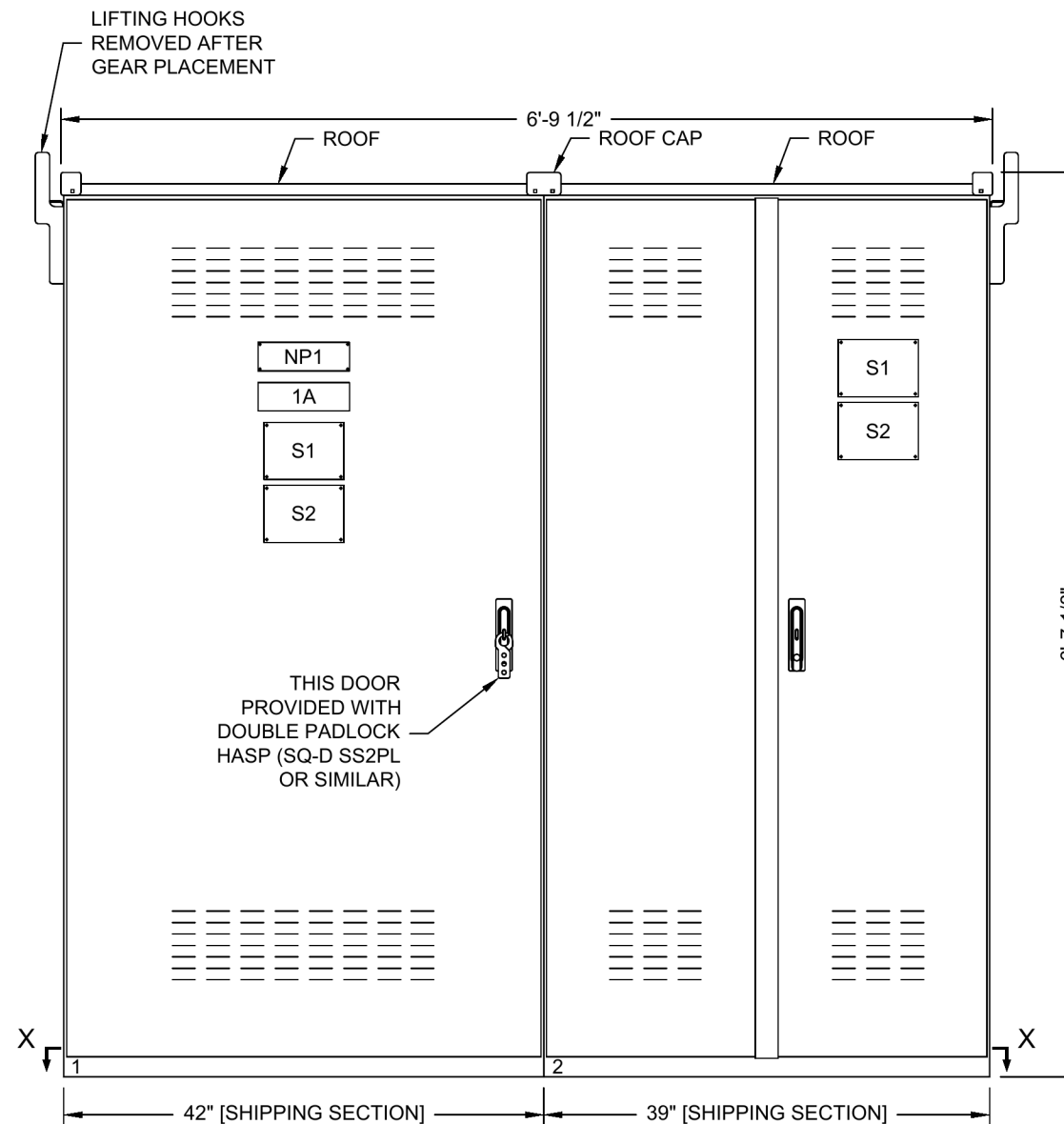


LINCOLN ELECTRIC
PRODUCTS CO., INC.

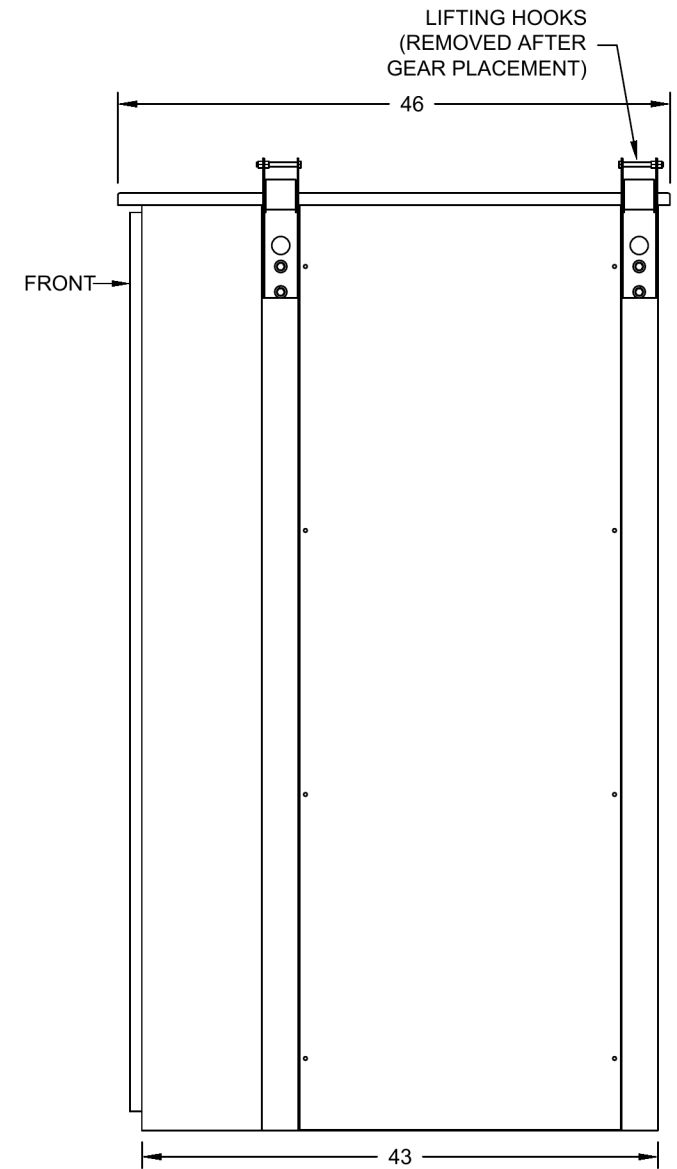
DRAWING TITLE		EQUIPMENT DESIGNATION					SHEET NUMBER
PLAN VIEW		EV-2					4 OF 7
SHORT CIRCUIT RATING	VOLTAGE	AMPERAGE	SYSTEM	BUS MATERIAL	ENCLOSURE	REV	
65kA. SYM. RMS	480Y/277V AC	600A.	3 ϕ , 4W	COPPER	NEMA-3R	2	



LEFT-SIDE VIEW
(END SECTION)



FRONT VIEW
(EXTERIOR DOORS SHOWN)



RIGHT-SIDE VIEW
(END SECTION)

SIGNAGE:

NP1 -LINCOLN NAMEPLATE (2.5" x 8" ALUMINUM)
S1 -DANGER 480 VOLTS (BI-LINGUAL)
S2 -DANGER ARC FLASH (BI-LINGUAL)

REFERENCES:

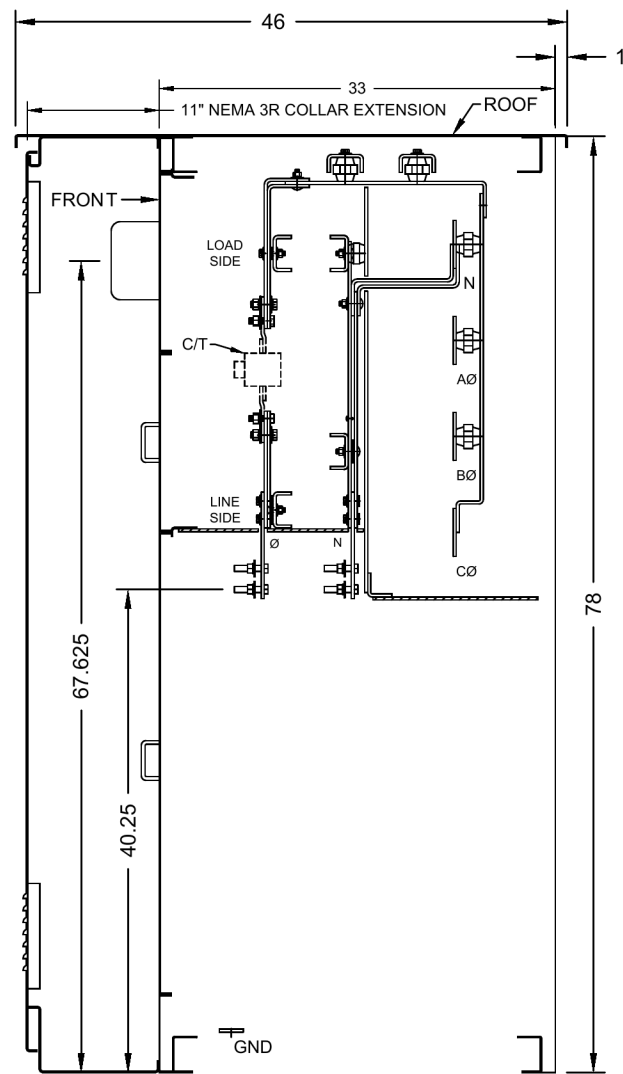
- FOR NAMEPLATE DESIGNATIONS SEE 'SWITCHBOARD SCHEDULE' SHT-03
- FOR SECTION VIEW 'X-X' SEE SHT-04



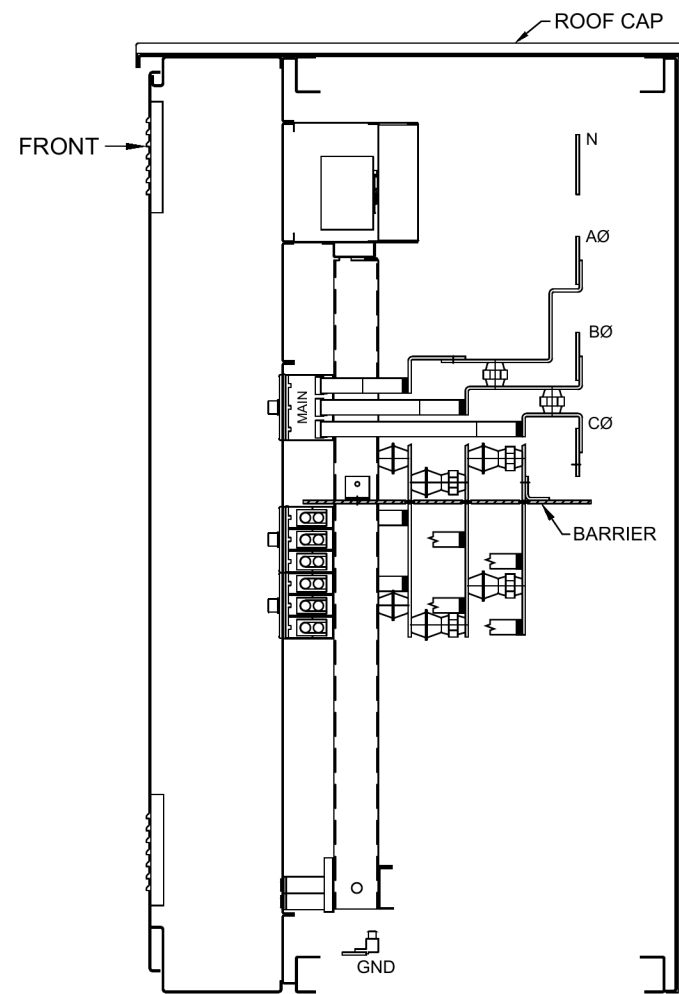
LINCOLN ELECTRIC
PRODUCTS CO., INC.

DRAWING TITLE		EQUIPMENT DESIGNATION					
EXTERIOR VIEWS		EV-2					
SHORT CIRCUIT RATING	VOLTAGE	AMPERAGE	SYSTEM	BUS MATERIAL	ENCLOSURE	REV	
65kA. SYM. RMS	480Y/277V AC	600A.	3 ϕ , 4W	COPPER	NEMA-3R	2	

SHEET NUMBER
5 OF 7



SECTION A-A



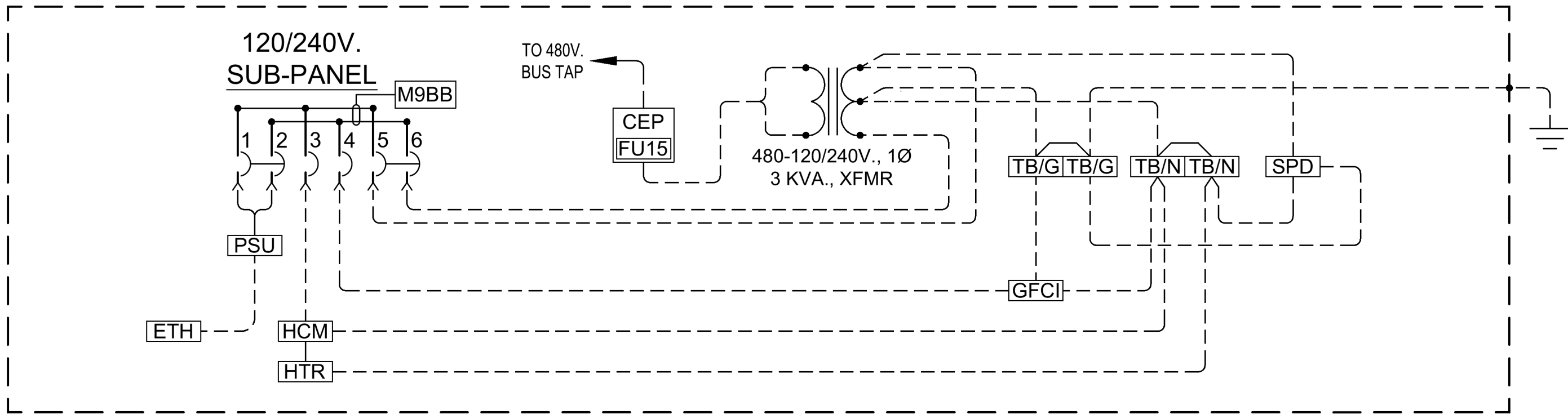
SECTION B-B



LINCOLN ELECTRIC
PRODUCTS CO., INC.

DRAWING TITLE		EQUIPMENT DESIGNATION				
SECTION VIEWS		EV-2				
SHORT CIRCUIT RATING	VOLTAGE	AMPERAGE	SYSTEM	BUS MATERIAL	ENCLOSURE	REV
65kA. SYM. RMS	480Y/277V AC	600A.	3 ϕ , 4W	COPPER	NEMA-3R	2

SHEET NUMBER
6 OF 7



CONTROLS COMPARTMENT

THE ENCLOSED ASSEMBLY WILL BE LISTED UNDER UL891

120/240V. SUB-PANEL DEVICE LIST

CKT	DEVICE
1-2	SCHNEIDER TYPE 'MULTI-9' MINATURE CIRCUIT BREAKER: 3A. TRIP, 2-POLE, 10k A.I.C. @ 240VAC [CAT. #: M9F42203]
3	SCHNEIDER TYPE 'MULTI-9' MINATURE CIRCUIT BREAKER: 8A. TRIP, 1-POLE, 10k A.I.C. @ 240VAC [CAT. #: M9F421008]
4	SCHNEIDER TYPE 'MULTI-9' MINATURE CIRCUIT BREAKER: 15A. TRIP, 1-POLE, 10k A.I.C. @ 240VAC [CAT. #: M9F42115]
5-6	SCHNEIDER TYPE 'MULTI-9' MINATURE CIRCUIT BREAKER: 15A. TRIP, 2-POLE, 10k A.I.C. @ 240VAC [CAT. #: M9F42215]

LEGEND:

CEP	-COMPACT FUSED DISCONNECT SWITCH [MFR: MERSEN CAT. #CEP-2-30CC]
FU15	-FUSE TYPE 'FNQ-R' [MFR: BUSSMANN CAT. #FNQ-R-15]
ETH	-ETHERNET SWITCH
GFCI	-15A., 120V., GROUND FAULT CIRCUIT INTERRUPTER, DUPLEX RECEPTACLE, WITH USB-C & QC3.0 CHARGING PORTS.
HCM	-HYGROSTAT [MFR: STEGO CAT. # EFR-012]
HTR	-FINNED STRIP HEATER 250W @ 120V. [MFR: VULCAN CAT. #OSF1310-250A]
M9BB	-MULTI-9 BUSBAR [MFR: SCHNEIDER CAT. # M9XUP212]
PSU	-24VDC POWER SUPPLY UNIT [MFR: MEANWELL 120W. DC [CAT. # WDR-120-24]
SPD	-SURGE PROTECTION DEVICE [MFR: CITEL CAT. # DS240S-400]
TB/G	-TERMINAL BLOCK: GROUND (GREEN) [MFR: PHOENIX CONTACT CAT. # 3209582]
TB/N	-TERMINAL BLOCK: NEUTRAL (WHITE) [MFR: PHOENIX CONTACT CAT. # 3209579]



LINCOLN ELECTRIC
PRODUCTS CO., INC.

DRAWING TITLE CONTROLS COMPARTMENT		EQUIPMENT DESIGNATION EV-2					SHEET NUMBER 7 OF 7	
SHORT CIRCUIT RATING 65kA. SYM. RMS	VOLTAGE 480Y/277V AC	AMPERAGE 600A.	SYSTEM 3 ϕ , 4W	BUS MATERIAL COPPER	ENCLOSURE NEMA-3R	REV 2		

DATA SHEET

SACE® Tmax® XT Molded Case Circuit Breakers

XT5 – 400A/600A Frame Sizes



600 A frame available up to 600 V UL. Thermal-magnetic, MCS, MCP basic and advanced trip units. Max interrupt rating of 200 kA at 480 V, 100 kA at 600 V. Advanced electronic trip units are future-ready with the ability to download additional measurements and logic in the field.

Molded Case Circuit Breaker (MCCB)			XT5					
Frame Size		[A]	400-600					
Poles		[No.]	3, 4					
Rated Voltage	(AC) 50-60 Hz	[V]	600					
	(DC)	[V]	600					
Versions			Fixed, Plug-in, Withdrawable					
Interrupting Ratings			N	S	H	L	V	X
240 VAC		[kA]	65	100	150	200	200	200
480 VAC		[kA]	35	50	65	100	150	200
600Y/347 VAC		[kA]	-	-	-	-	-	-
600 VAC		[kA]	18	25	35	65	100	100
250 VDC 2p in series		[kA]	35	50	70	100	100	100
500 VDC 2p in series		[kA]	25	35	50	70	100	100
500 VDC 3p in series		[kA]	-	-	-	-	-	-
500 VDC 4p in series		[kA]	-	-	-	-	-	-
600 VDC 3p in series		[kA]	16	25	35	50	70	70
Mechanical Life			[No. Operations]	20,000				
			[No. Hourly Operations]	120 (AC), 60 (DC)				
Dimensions - Fixed (W x D x H)	3p	[mm]/[in.]	[140 x 103 x 205]/[5.51 x 4.05 x 8.07]					
	4p	[mm]/[in.]	[186 x 103 x 205]/[7.32 x 4.05 x 8.07]					
Weight	Fixed 3p/4p	[kg - lb]	[3.25 - 7.17]/[4.15 - 9.15]					
	Plug-in (EF) 3p/4p	[kg - lb]	[5.15 - 11.35]/[6.65 - 14.66]					
	Withdrawable (EF) 3p/4p	[kg - lb]	[5.4 - 11.9]/[6.9 - 15.21]					