



LINCOLN ELECTRIC PRODUCTS CO., INC.

EV-2S 2000A

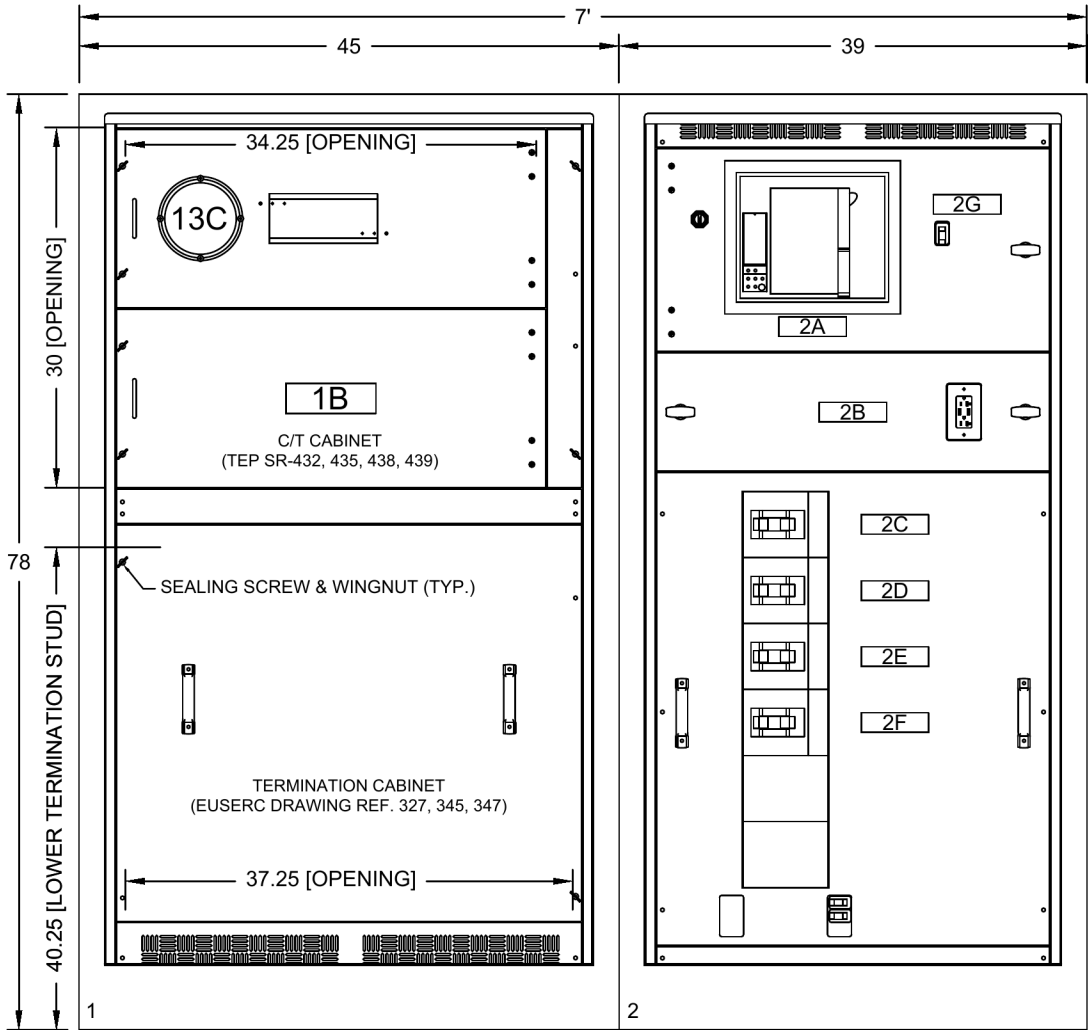
Inventory serial: 27323

Drawing/Part:		Qty.	Spec section:
Number	Rev.		Description of material being submitted:
	0	-	EV-2 Drawing
	0		Tuscon Electric Power Metering Section Detail Drawing

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.

TUCSON ELECTRIC POWER (TEP)		
DRAWING CONTENT	2023-ESRB	EUSERC REF.
C/T COMPARTMENT	SR-435	322
SERVICE SECTION	SR-432	326
BUS UNITS & C/T LINK	SR-439	330
COMPARTMENT DOORS	SR-438	332
TERMINATION CABINET	-	327
TERMINATION FACILITIES	-	347
OUTDOOR ENCLOSURE	SR-437	354



SECTION 1 WEIGHT
1300 lbs (APPROX.)

SECTION 2 WEIGHT
1300 lbs (APPROX.)

FRONT VIEW
(SHOWN WITHOUT DOORS)

PRODUCT DESCRIPTION & RATINGS:

- EV-2

UTILITY INFORMATION [TUCSON ELECTRIC POWER (EUSERC)]

- METER BEFORE DISCONNECT (HOT SEQUENCE).

POWER SYSTEM DATA

- INCOMING - 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 AND DOORS
- ENCLOSURE SHALL CONFORM TO INGRESS PROTECTION REQUIREMENTS IN ACCORDANCE WITH TYPE-3R.
- EXTERIOR HARDWARE SHALL BE TAMPER-RESISTANT.
- DOOR HANDLES ARE EQUIPPED WITH PADLOCK HASP.
- FINISH SHALL BE: **WHITE**.
- FRONT ACCESSIBLE ONLY.

CODE STANDARDS

- UL891
- CSA-C22.2 No. 244
- SUITABLE ONLY FOR USE AS SERVICE EQUIPMENT.

NAMEPLATES

- PHENOLIC TYPE, WHITE w/BLACK LETTERS.

ACCESSORIES

- ENCLOSURE HEATER W/ HYGROSTAT CONTROL
- SERVICE DISCONNECT PROVIDED WITH GROUND FAULT PROTECTION IN ACCORDANCE WITH NEC 230.95

REFERENCES:

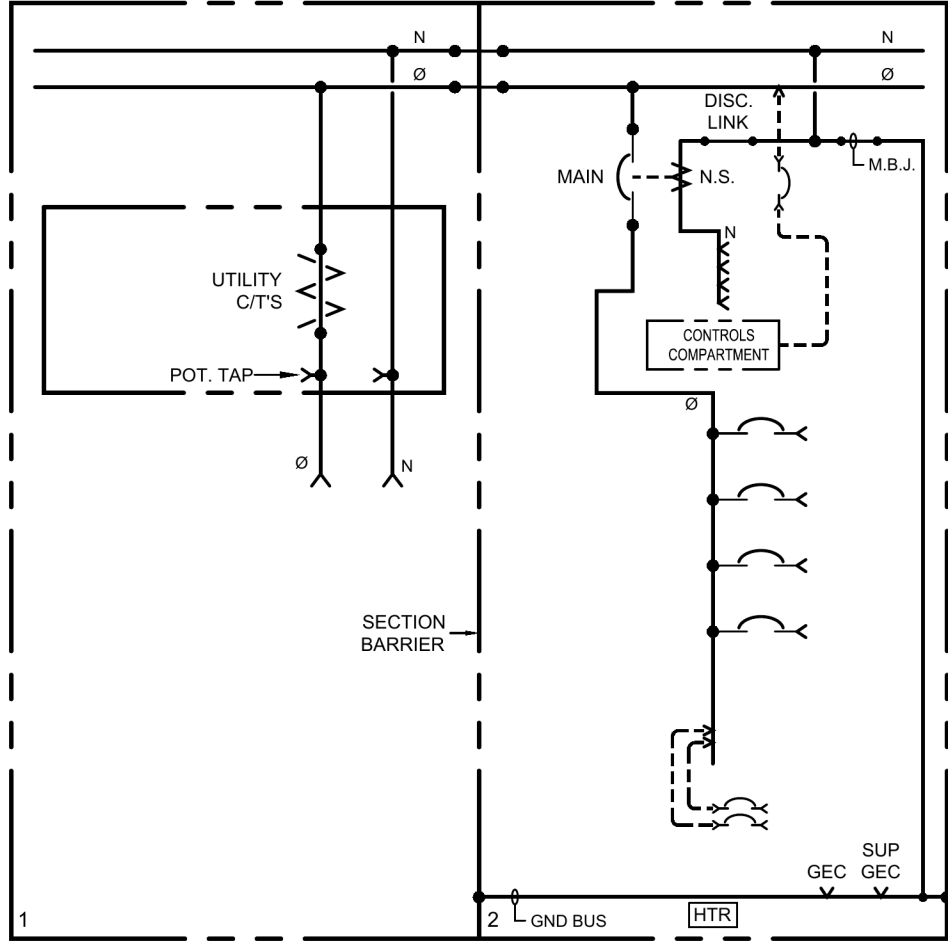
- FOR NAMEPLATE DESIGNATIONS SEE 'SWITCHBOARD SCHEDULE' SHT-03



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	2000A	3 ϕ , 4W	COPPER	TYPE-3R	0

SHEET NUMBER
1 OF 5



LEGEND:

HTR - STRIP HEATER

----- - FACTORY WIRED



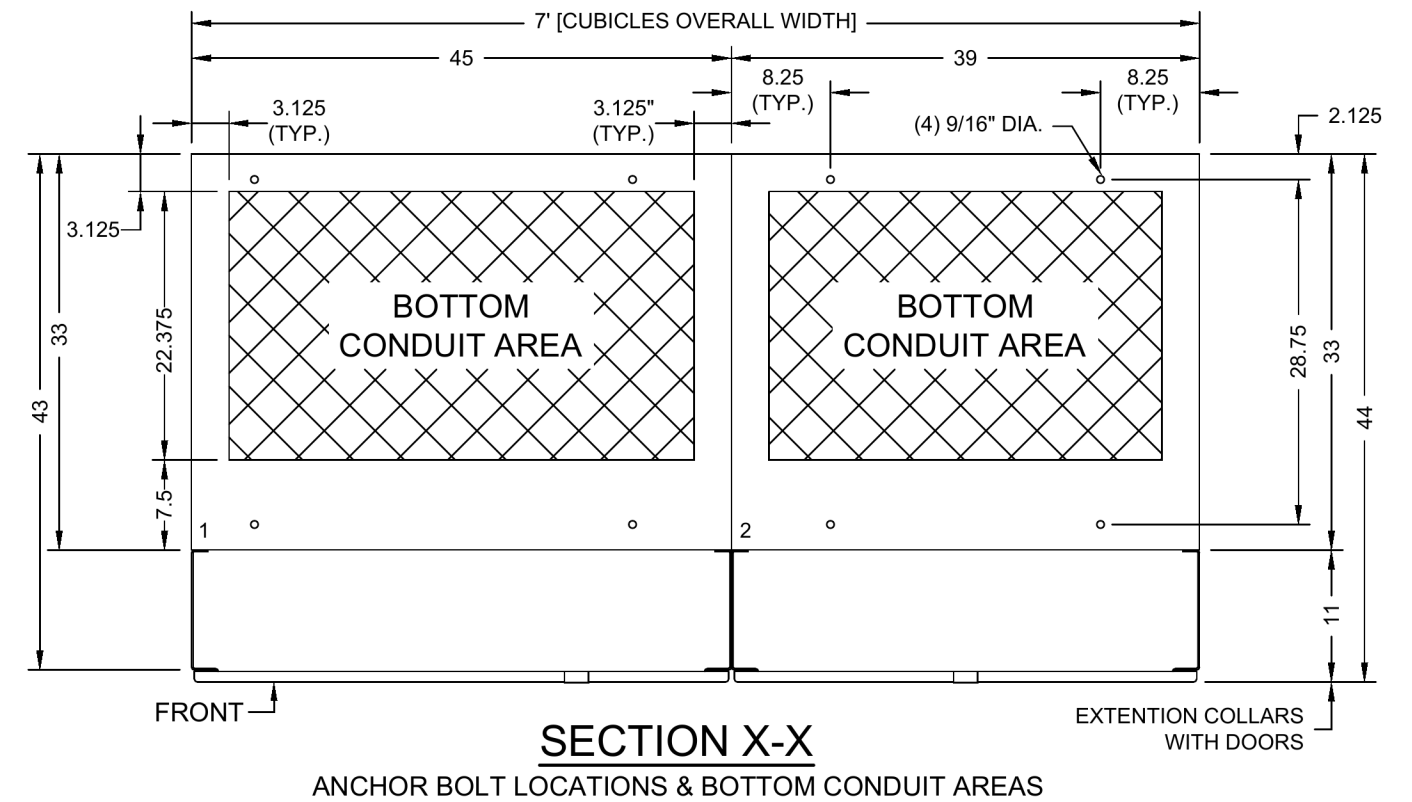
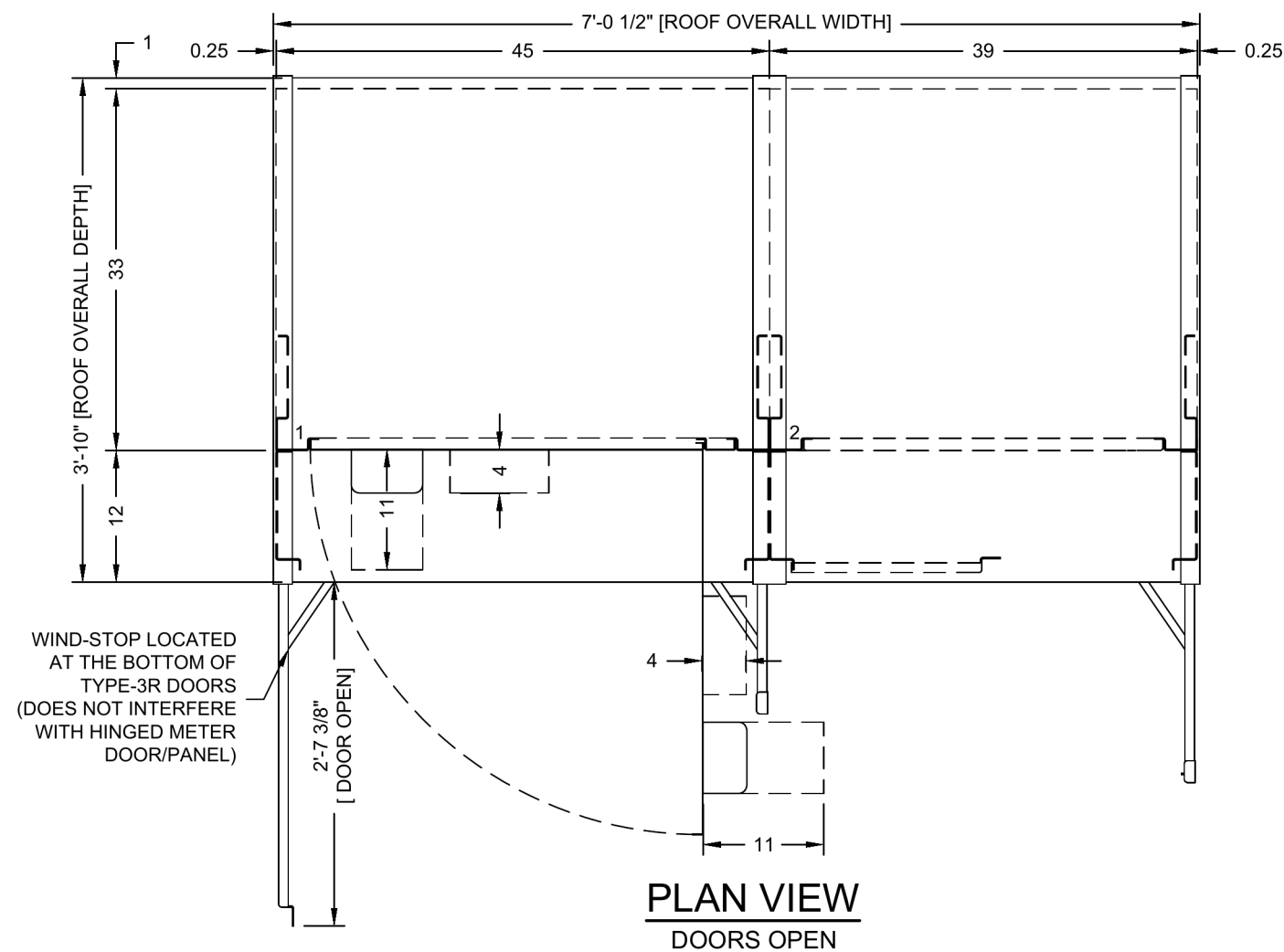
LINCOLN ELECTRIC
PRODUCTS CO., INC.

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	2000A	3φ, 4W	COPPER	TYPE-3R	0

SHEET NUMBER
2 OF 5

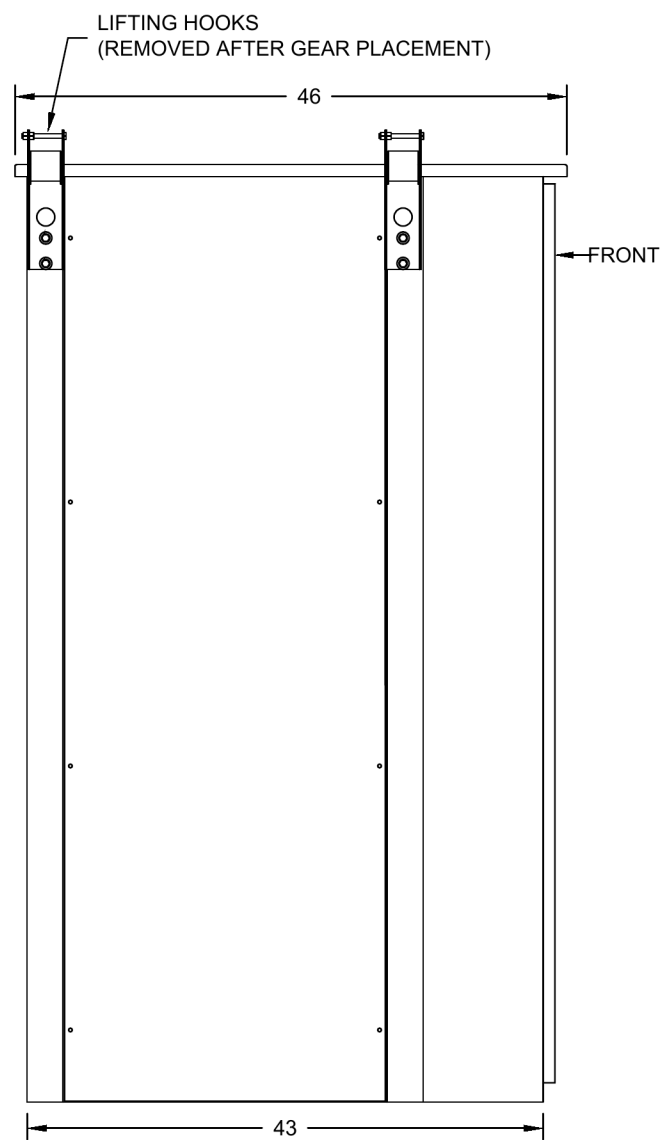
SWITCHBOARD SCHEDULE																	
ID		DESIGNATION	DEVICE MANF.	FRAME RATING	TRIP RATING/ TYPE	# OF POLES	DEVICE CAT. NO.	LUG INFORMATION						CABLE CONDUCTOR MATERIAL	CABLE ENTRY	NOTES	
SECT	DESG							QTY.	PHASES	QTY.	NEUTRAL	QTY.	GROUND				TYPE
1	-	INCOMING	-	-	-	-	-	5	TERMINATION STUDS	5	TERMINATION STUDS			COMPRESSION	-	BOTTOM	- PROVISIONS FOR SERVICE TERMINATIONS - LUGS PROVIDED BY OTHERS
	A	SERVICE SWITCHBOARD 2000A., 3Ø, 4W., 480Y/277V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B	2000A. EUSERC (TUCSON ELECTRIC POWER) C/T COMPARTMENT	-	-	-	-	LEPCO-FRX-HS	BUS CONNECTED						-		- C/T'S PROVIDED AND WIRED BY UTILITY	
2	-	G.E.C.	-	-	-	-	-	-	-	-	-	2	#6-350 KCMIL	MECHANICAL	COPPER	BOTTOM	-
	A	MAIN SERVICE DISCONNECT	SCHNEIDER ELECTRIC	2000A	1200A** LSIG w/ ERMS	3	EBGKGABABNNNNNNN NNNNNNNNWNNNEN	BUS CONNECTED						-		- 100% RATED - INTEGRAL GROUND FAULT PROTECTION - NEUTRAL SENSOR (CAT. # LV834035SP) - MICROLOGIC 6.0X TRIP UNIT - PADLOCK ATTACHMENT - ERMS (ENERGY REDUCTION MAINTENANCE SETTINGS)	
	B	CONTROLS COMPARTMENT	-	-	-	-	SEE SCHEDULE (SHT-02)	-	-	-	-	-	-	-	-	-	- FACTORY WIRED
	C	CHARGING CABINET	SCHNEIDER ELECTRIC	600A	300A LI	3	LJP36600U31XYP	1	(2) #2/0-500 KCMIL	2	(1) #2-600 KCMIL	2	(1) #6-350 KCMIL	MECHANICAL	COPPER	BOTTOM	- PADLOCK HASPS (CAT. # S32631) - MECHANICAL LUGS (CAT. # AL600LS52K3)
	D	CHARGING CABINET	SCHNEIDER ELECTRIC	600A	300A LI	3	LJP36600U31XYP	1	(2) #2/0-500 KCMIL	2	(1) #2-600 KCMIL	2	(1) #6-350 KCMIL	MECHANICAL	COPPER	BOTTOM	
	E	CHARGING CABINET	SCHNEIDER ELECTRIC	600A	300A LI	3	LJP36600U31XYP	1	(2) #2/0-500 KCMIL	2	(1) #2-600 KCMIL	2	(1) #6-350 KCMIL	MECHANICAL	COPPER	BOTTOM	
	F	CHARGING CABINET	SCHNEIDER ELECTRIC	600A	300A LI	3	LJP36600U31XYP	1	(2) #2/0-500 KCMIL	2	(1) #2-600 KCMIL	2	(1) #6-350 KCMIL	MECHANICAL	COPPER	BOTTOM	
	-	SPACE	SCHNEIDER ELECTRIC	600A	-	3	L-FRAME	-	-	-	-	-	-	-	-	-	-
	-	SPACE	SCHNEIDER ELECTRIC	600A	-	3	L-FRAME	-	-	-	-	-	-	-	-	-	-
	G	CONTROLS COMPARTMENT DISCONNECT	SCHNEIDER ELECTRIC	15A	15A THERMAL-MAG	2	BJL26015	-	-	-	-	-	-	-	-	-	- FACTORY WIRED
	-	ACCESSORY / SPARE (277V.)	SCHNEIDER ELECTRIC	15A	15A THERMAL-MAG	1	BJL16015	1	(1) #14-3/0 KCMIL	1	(1) #14-1/0 KCMIL	1	(1) #14-1/0 KCMIL	MECHANICAL	COPPER	BOTTOM	-
	-	ACCESSORY / SPARE (277V.)	SCHNEIDER ELECTRIC	15A	15A THERMAL-MAG	1	BJL16015	1	(1) #14-3/0 KCMIL	1	(1) #14-1/0 KCMIL	1	(1) #14-1/0 KCMIL	MECHANICAL	COPPER	BOTTOM	-
	-	(4) SPACES (277V.)	SCHNEIDER ELECTRIC	-	-	1	B-FRAME	-	-	-	-	-	-	-	-	-	-

** NOTE: RESTRICTED ACCESS ADJUSTABLE-TRIP CIRCUIT BREAKER
IN ACCORDANCE WITH NEC 240.6 (C)(3).

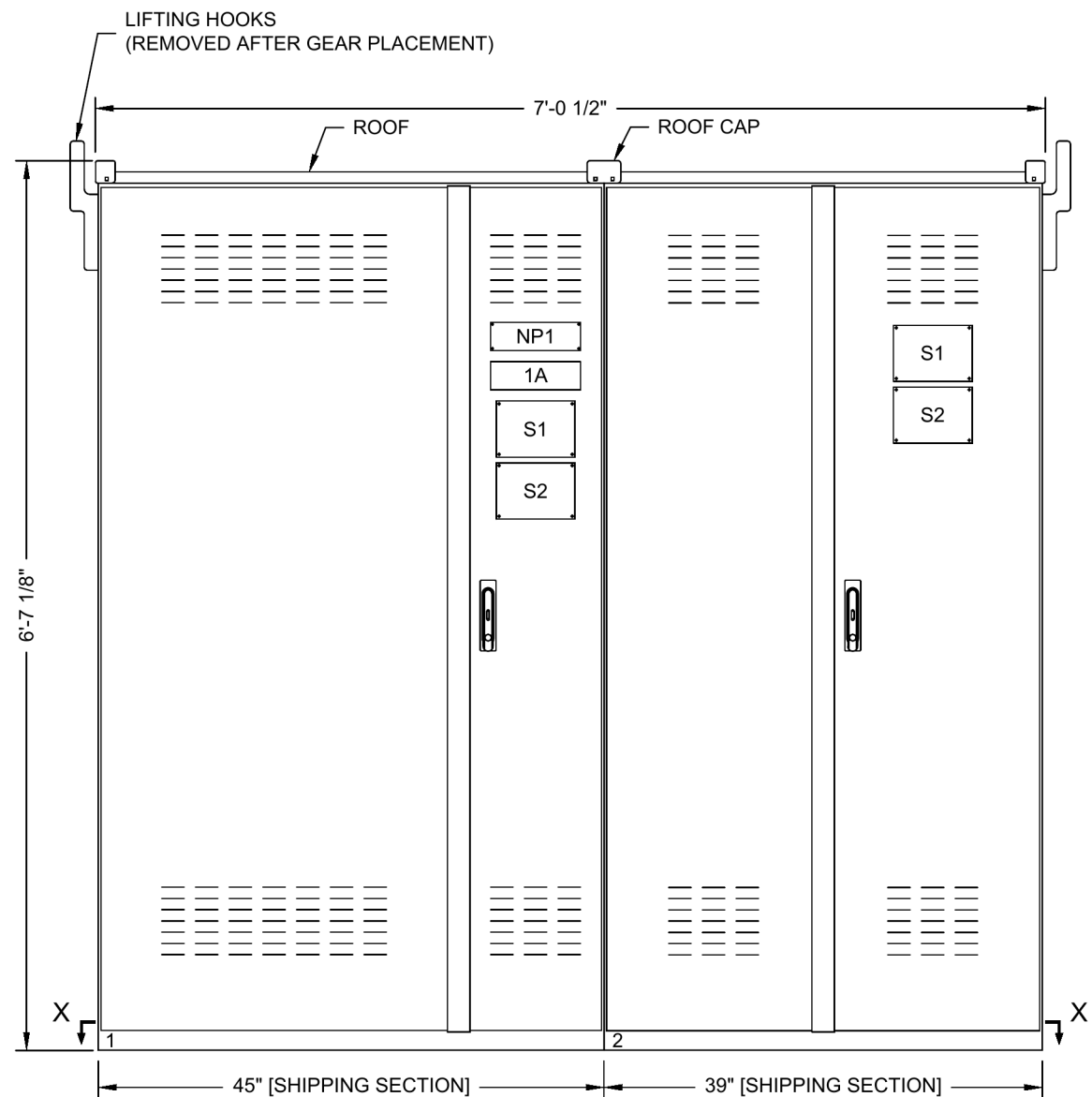


LINCOLN ELECTRIC
PRODUCTS CO., INC.

DRAWING TITLE		EQUIPMENT DESIGNATION					SHEET NUMBER
PLAN VIEW		EV-2					4 OF 5
SHORT CIRCUIT RATING	VOLTAGE	AMPERAGE	SYSTEM	BUS MATERIAL	ENCLOSURE	REV	
65kA. SYM. RMS	480Y/277V AC	2000A	3ϕ, 4W	COPPER	TYPE-3R	0	



LEFT-SIDE VIEW
(END SECTION)



FRONT VIEW
(EXTERIOR DOORS SHOWN)

SIGNAGE:

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

REFERENCES:

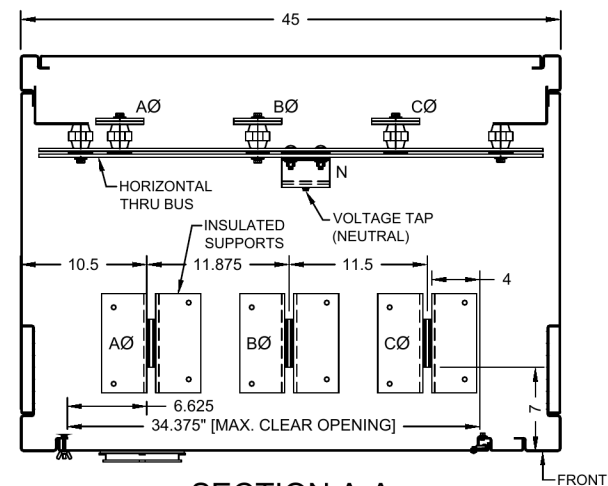
- FOR NAMEPLATE DESIGNATIONS SEE 'SWITCHBOARD SCHEDULE' SHT-03
- FOR SECTION VIEW 'X-X' SEE SHT-04



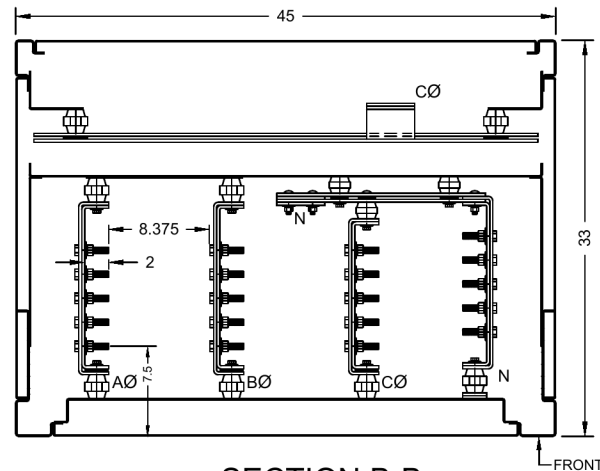
LINCOLN ELECTRIC
PRODUCTS CO., INC.

DRAWING TITLE		EQUIPMENT DESIGNATION					
EXTERIOR VIEWS		EV-2					
SHORT CIRCUIT RATING	VOLTAGE	AMPERAGE	SYSTEM	BUS MATERIAL	ENCLOSURE	REV	
65kA. SYM. RMS	480Y/277V AC	2000A	3 ϕ , 4W	COPPER	TYPE-3R	0	

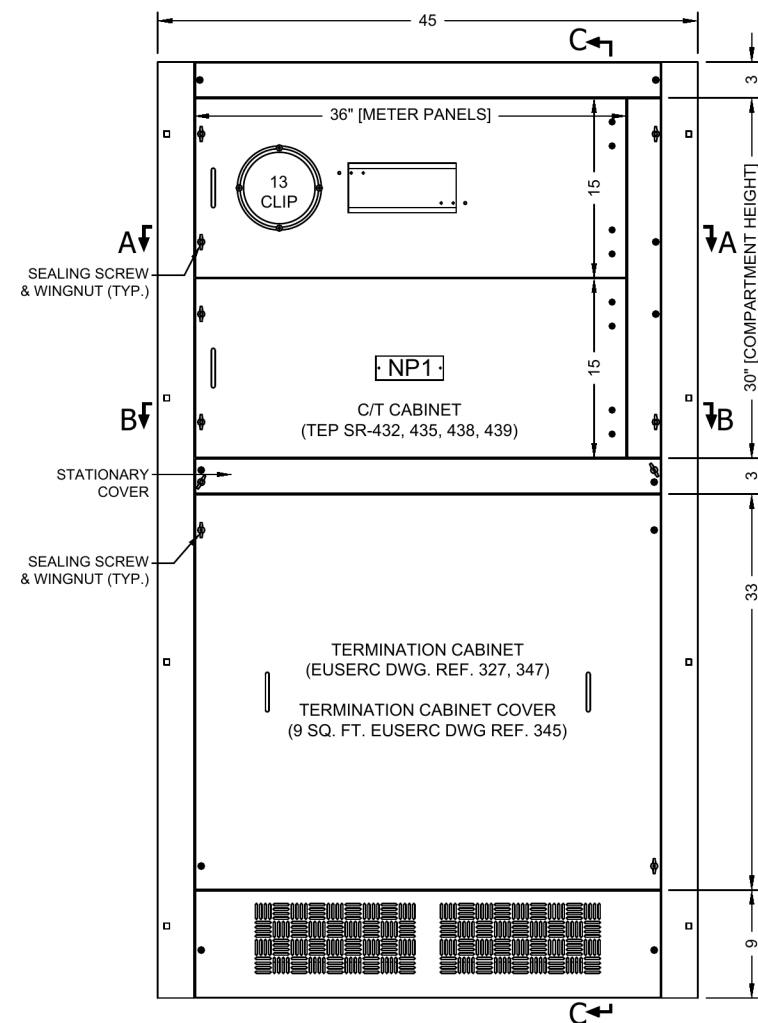
SHEET NUMBER
5 OF 5



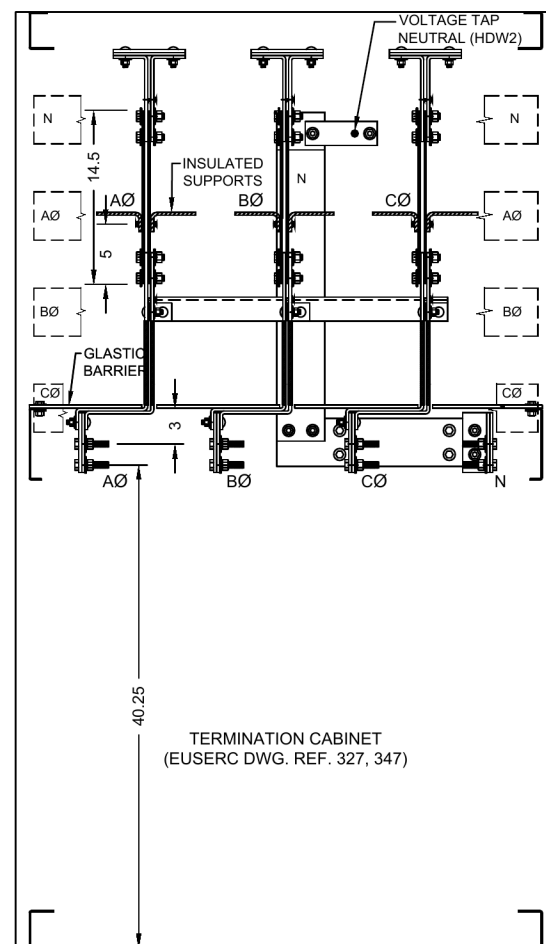
SECTION A-A
(C/T MOUNTING)



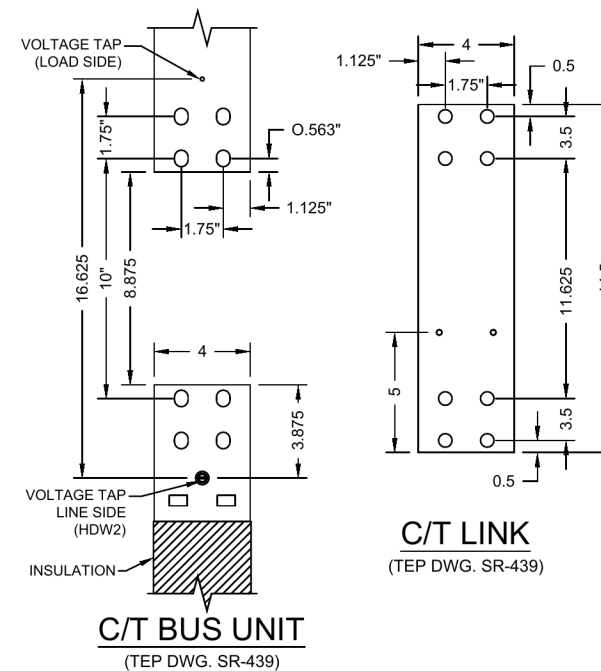
SECTION B-B
(TERMINATION LUG LANDINGS)



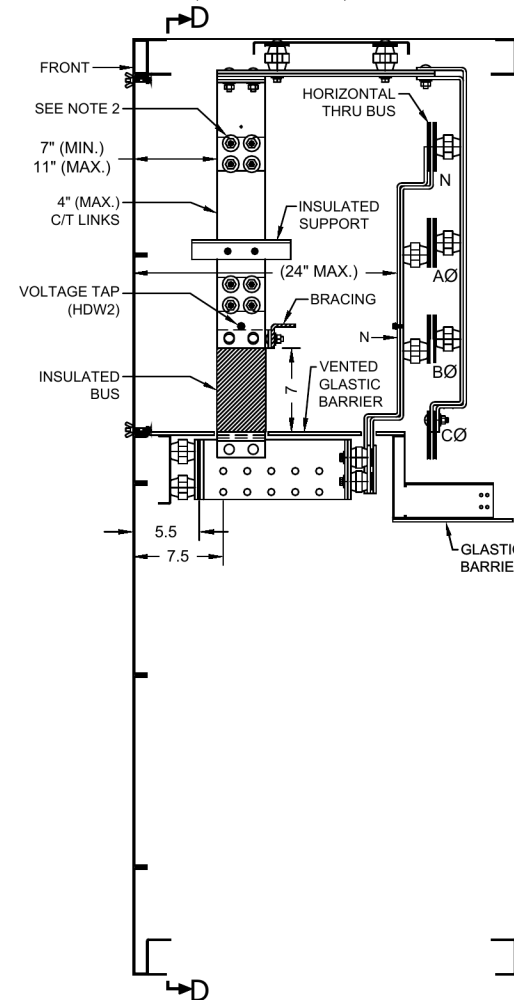
SECTION D-D



SECTION D-D



SECTION C-C



SECTION C-C

NOTES: (REF. TEP ESR SECTION 400 & EUSERC MANUAL SECTION 300)

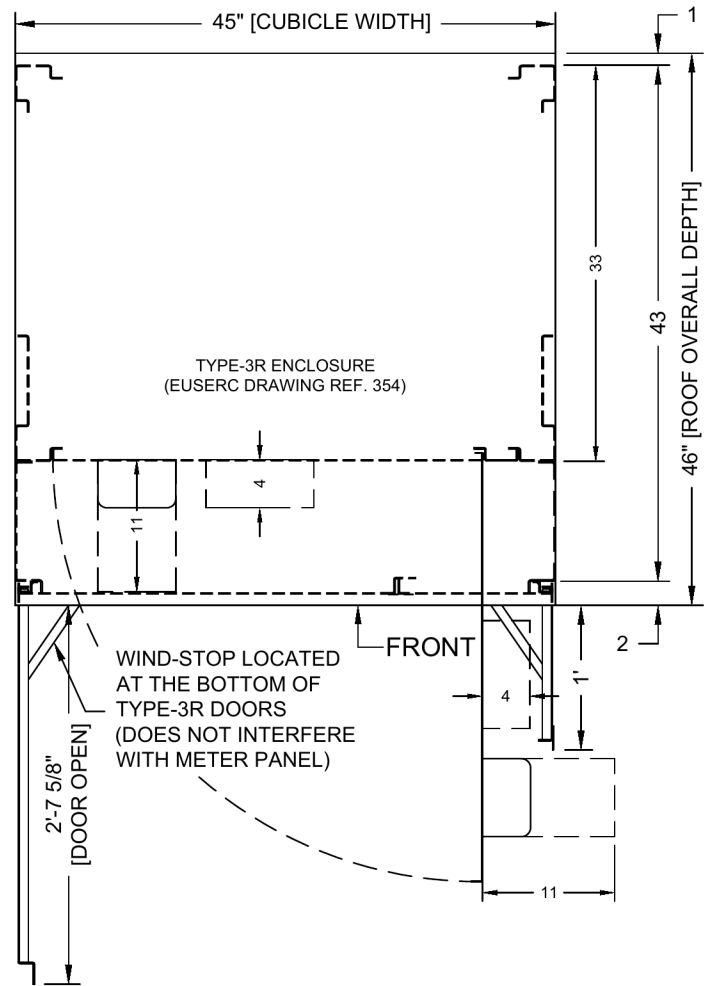
1. BUS BARS SHALL BE SILVER PLATED COPPER, 98% CONDUCTIVITY.
2. REMOVABLE BUS LINK HARDWARE SHALL BE 1/2"-13, GRADE-5, ZINC PLATED, HEX HEAD STEEL BOLTS, SPLIT-LOCK & FLAT WASHERS AND HEX NUTS. A LABEL INDICATING THE CORRECT TORQUE VALUES FOR HARDWARE, SHALL BE CLEARLY POSTED INSIDE THE CABINET.
3. POTENTIAL TAPS SHALL BE PROVIDED FOR THE PHASE AND NEUTRAL BUSES, BOTH LINE & LOAD SIDES OF THE BUS LINK.
4. THE CURRENT TRANSFORMER COMPARTMENT SHALL BE SEPARATED FROM THE TERMINATION CABINET BY A VENTILATED HORIZONTAL BARRIER. THE BARRIER SHALL BE FABRICATED FROM 1/4" THICK GLASTIC AND SECURELY FASTENED IN PLACE WITH NON-CONDUCTIVE HARDWARE.
5. THE CURRENT TRANSFORMERS SHALL BE ORIENTED FOR ACCEPTING THE INCOMING SERVICE (LINE SIDE) FROM THE BOTTOM.
6. WHEN LOCATED OUTDOORS, A TYPE-3R ENCLOSURE SHALL BE FURNISHED WITH A SEPARATE SEALABLE, HINGED DOUBLE DOOR AND THREE-WAY CATCH. THE DOOR HANDLE SHALL HAVE FACILITIES TO ACCOMMODATE STANDARD UTILITY SEALS AND A PADLOCK WITH A 3/8" HASP. THE DOORS SHALL SPAN THE OVERALL WIDTH OF THE UTILITY COMPARTMENT AND ALLOW THE HINGED PANELS TO OPEN 90 DEGREES. EXTERIOR DOORS SHALL HAVE STOPS TO SECURE THE DOORS IN THE OPEN, 90 DEGREE POSITION (SEE DRAWING 2 OF 2)
7. PHENOLIC NAMEPLATES SHALL BE PERMANENTLY AFFIXED TO COVERS AND/OR DOORS. REFER TO THE NAMEPLATE TABLE FOR THEIR DESCRIPTIVE TEXT.
8. SEALING SCREWS WITH WINGNUTS, FOR WIRE SEALS, SHALL BE INSTALLED AS SHOWN AND FOR ALL COVERS GUARDING UN-METERED CONDUCTORS.

NAMEPLATE TABLE	
NP	DESCRIPTION
NP1	1200A. TUCSON ELECTRIC POWER C/T COMPARTMENT
	1600A. TUCSON ELECTRIC POWER C/T COMPARTMENT
	2000A. TUCSON ELECTRIC POWER C/T COMPARTMENT

STANDARD BUSSING @ 1000A / SQ. IN.	
AMPS	QTY & SIZE (FOR C/T LINKS)
1200	(2) 4" x 1/4" CU
1600-2000	(2) 4" x 1/4" CU

SPECIAL HARDWARE (NOTE-2)	
ITEM	DESCRIPTION
HDW1	1/2"-13 x 2-1/2" SPLINE BOLTS
HDW2	#10-32 SCREW & FLAT WSHR
HDW3	3/8"-16 X 1" NYLON HEX BOLT
HDW4	3/8"-16 NYLON HEX NUT
HDW5	3/8" FLAT NYLON WASHER

REFERENCES:
- FOR ADDITIONAL [TYPE-3R ENCLOSURE]
VIEWS AND DIMENSIONS SEE DRAWING 2 OF 2.



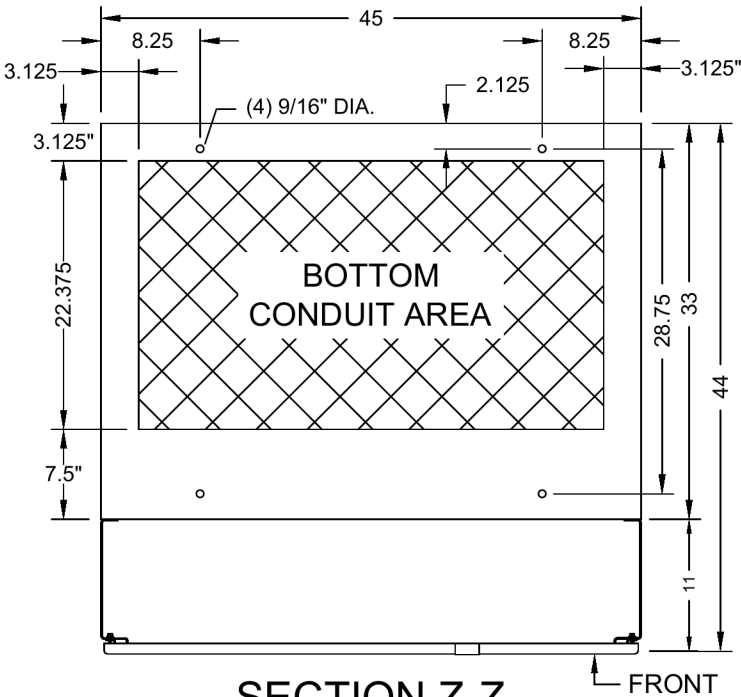
PRODUCT DESCRIPTION & RATINGS:

ENCLOSURE DATA

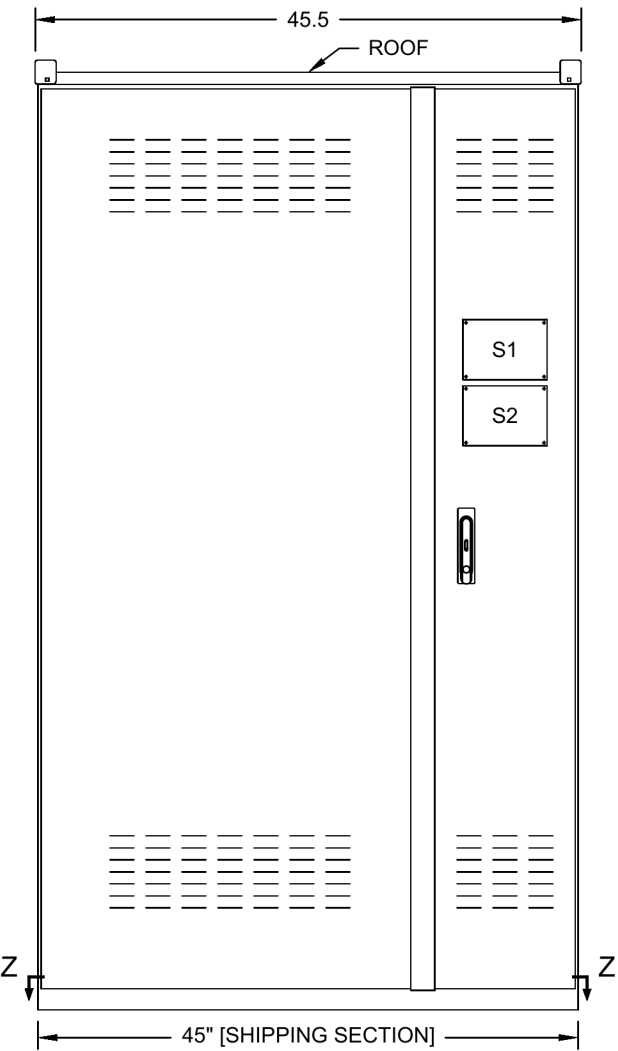
- CODE GAUGE, FORMED COVERS & DOORS
- ENCLOSURE SHALL CONFORM TO INGRESS PROTECTION REQUIREMENTS IN ACCORDANCE WITH TYPE-3R RATING.
- EXTERIOR HARDWARE TO BE TAMPER-RESISTANT S.S. SEALING SCREWS & WINGNUTS.
- DOOR HANDLES ARE EQUIPPED WITH PADLOCK HASP.
- FRONT ACCESSIBLE ONLY

CODE STANDARDS

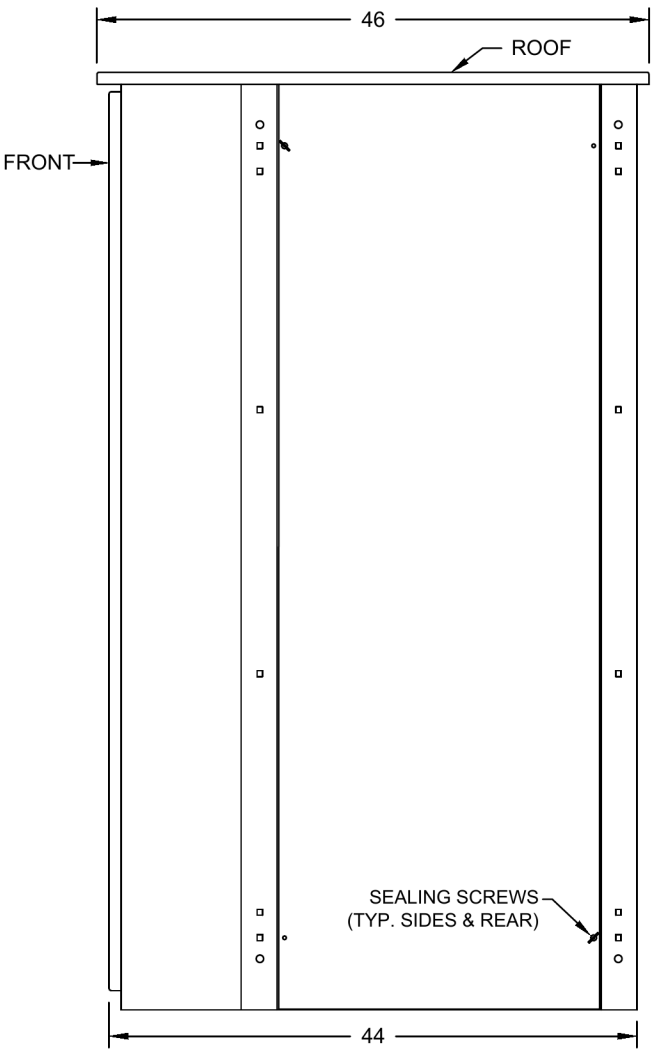
- UL891



SECTION Z-Z
ANCHOR BOLT LOCATIONS &
BOTTOM CONDUIT AREA



FRONT VIEW
(EXTERIOR DOORS)



SIDE VIEW
(TYPICAL)

SIGNAGE:

- S1 -DANGER 480 VOLTS (BI-LINGUAL)
- S2 -DANGER ARC FLASH (BI-LINGUAL)



LINCOLN ELECTRIC
PRODUCTS CO., INC.

DRAWING TITLE		EQUIPMENT DESIGNATION				
EUSERC STYLE		SERVICE EQUIPMENT				
TYPE-3R ENCLOSURE						
SHORT CIRCUIT RATING	VOLTAGE	AMPERAGE	SYSTEM	BUS MATERIAL	ENCLOSURE	REV
65kA. SYM. RMS	480Y/277V AC	SEE TABLE	3ϕ, 4W	COPPER	TYPE-3R	0

SHEET NUMBER
2 OF 2