

# EL 551 Overhead Stepdown Transformer Assembly—Closed Three-Phase GndY-GndY, Platform-Mounted

## Scope

This standard may be used to install a three-phase, closed gnd-wye-to-gnd-wye stepdown bank of transformers.

## Standard References

- DE 011 Connectors—Applications
- DG 011 Grounding—Overhead Installations
- DP 011 Overcurrent Protection—Transformer and Overhead Line Fusing
- EL 001 Overhead Transformers—General Information
- EB 011 Poles—Class Selection

RCMS Code: CU

		EL 551			
Primary Voltage	Code	•	—	—	—
12470 / 7200	B				
13200 / 7600	C				
20800 / 12000	D				
24900 / 14000	E				
34500 / 19900	F				
Secondary Voltage	Code		•		
4160 / 2400	A				
12470 / 7200	B				
13200 / 7600	C				
20800 / 12000	D				
Transformer Sizes	Code			•	
167-167-167 kVA	A				
250-250-250 kVA	B				
333-333-333 kVA	C				
500-500-500 kVA	D				
Primary Conductor	Code				•
795 AAC	A				
477, 500, 556 AAC; 397.5 ACSR	B				
336 AAC	C				
250 AAC	D				
4/0 AAC; ACSR; 3/0 ACSR	E				
1/0 AAAC, ACSR; 2 ACSR; 4ACSR	F				
2/0 and smaller copper	G				
Secondary Conductor (Outgoing)	Code				•
795 AAC	A				
477, 500, 556 AAC; 397.5 ACSR	B				
336 AAC	C				
250 AAC	D				
4/0 AAC; ACSR; 3/0 ACSR	E				
1/0 AAAC, ACSR; 2 ACSR; 4ACSR	F				
2/0 and smaller copper	G				

## Notes

1. This platform will support three transformers, each weighing up to 3600 pounds.
2. Use shell-fired connectors for 250 AAC and larger. Use a stirrup and hot line clamp for smaller conductor.
3. The neutral-to-ground conductor should be as large as the primary/secondary riser conductor.
4. The poles supporting the platform are not included in this assembly; nor are the crossarms and insulators supporting the in- and out-circuits. These must be installed separately.
5. Load-side protective equipment is not included; it should be designed and installed separately.
6. Additional lightning arresters are also recommended, installed one span away, on both the incoming and outgoing lines.
7. If the incoming primary and neutral conductors are not the same as the outgoing conductors, provide guying.
8. Depending upon maximum winds and the strength of the soil, side guys may be desired. They should be attached below the timber on both poles.
9. At 34.5 kV, use two in-line insulators in series: a 35 kV and a 25 kV.

**Table I—Component Assemblies**

<b>No.</b>	<b>Standard</b>	<b>Description</b>
1	EF 191	Deadend Insulator Assembly—In-Line
2	DE 341	Connector, Shell-Fired, Yellow Cartridge
	DE 351	Connector, Shell-Fired, Blue Cartridge
3	DE 366	Connector, Stirrup, Bolted
4	DE 491	Clamp, Hot-Line
5	EC 951	Conductor, Overhead Primary, Leads and Jumpers
6	EF 186	Deadend Assembly—Neutral
7	EC 961	Conductor, Overhead Primary, Copper, Hard-Drawn, Bare
8	EF 101	Pin Insulator Assembly—Crossarm-Mounted
9	EF 961	Tie, Hand, Copper
10	EL 905	Transformer, Overhead—Single-Phase, Step-Down—with Tank-Mount Arresters
11	DP 501	Fuse Links, Universal, 7.2/12.4 kV to 14.4/24.9 kV and 19.9/34.5 kV (Newer Short Tubes)
12	EM 301	Cutout Assembly—Three-Phase—Equipment-Arm-Mounted
13	EV 921	Guard, Bird, Equipment Bushing
19	DE 321	Connector, Vise-Type, Bolted
	DE 371	Connector, C-Tap, Copper
20	DE 301	Connector, H-Tap, Compression
26	EE 771	Timber (6" × 8" × 20')
27	EE 905B	Gain, Crossarm, Metallic with Bonding Clip (4" × 7")
28	DY 171	Bolt Assembly, Machine, 5/8", Single Curved Washer (18")
29	DY 601	Washer, Flat Square (2 1/4" × 2 1/4")
31	EL 891	Platform, Transformer (18' Pole Centers)
32	DY 181	Bolt Assembly, Machine, 3/4", Single Curved Washer (16")
35	DY 701	Screw, Lag (1/2" × 4 1/2")
36	DY 121	Bolt Assembly, Machine, 5/8" Double Washer (Split Bolt)
39	DG 201	Grounding Assembly—Pole
41	DG 301	Grounding Assembly—Pole-Mounted Equipment
43	DY 071	Bolt Assembly, Hex, 1/2" (3")
44	DY 611	Washer, Flat Round (9/16" hole)

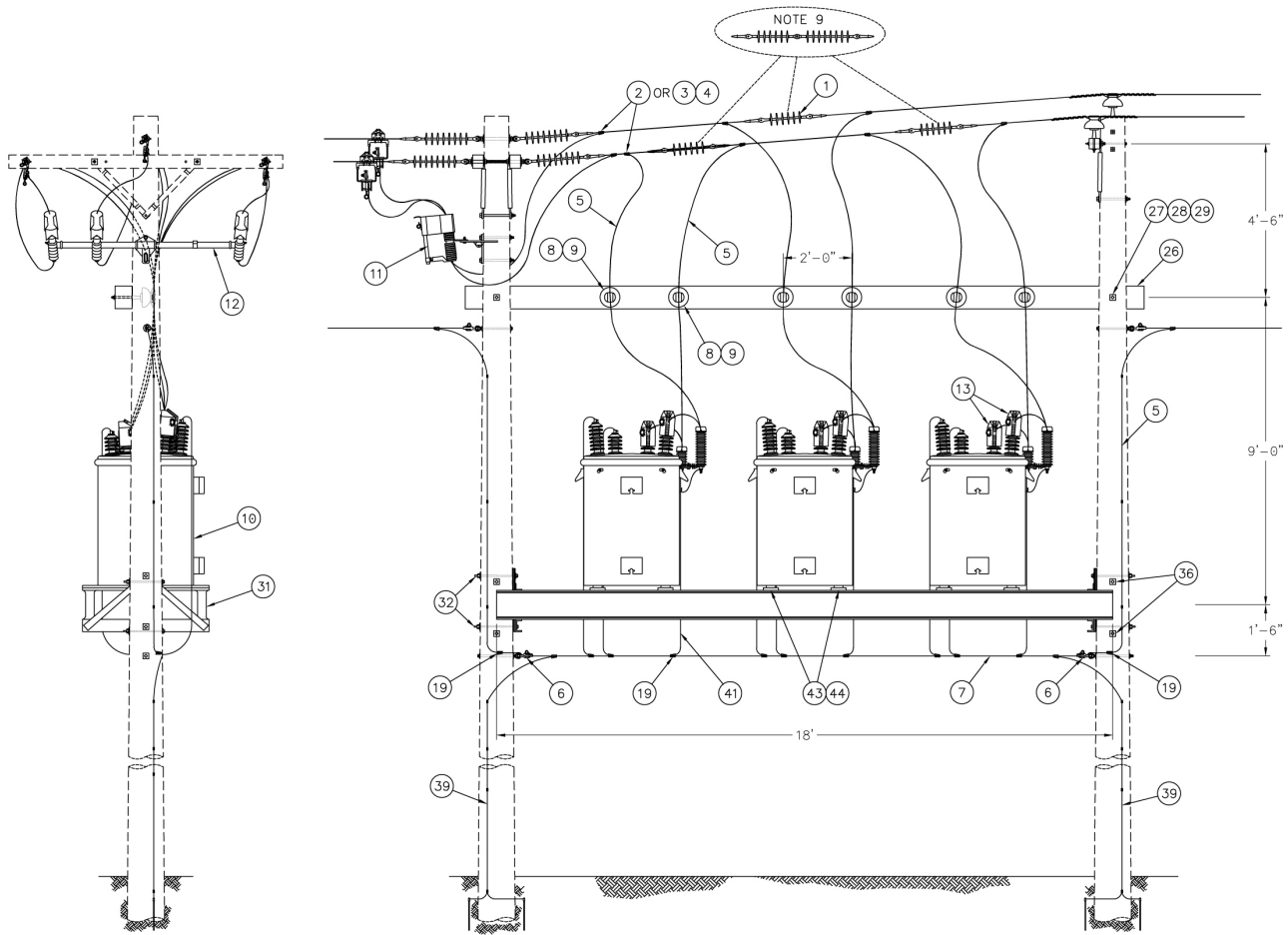
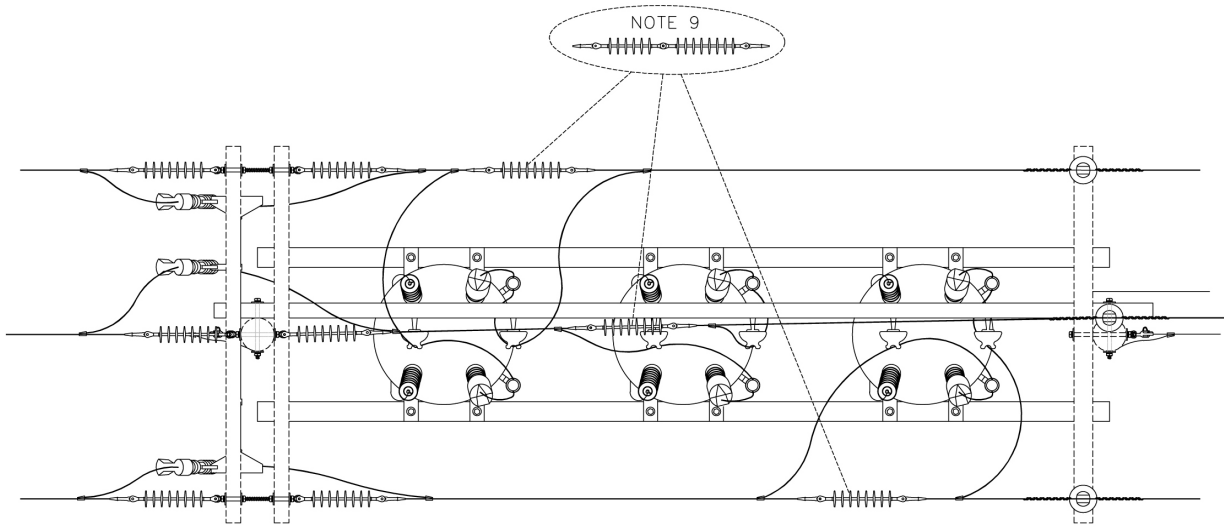


Figure I—Two-Pole Platform, Three Transformers (Side View)



**Figure 2—Two-Pole Platform, Three Transformers (Top View)**

This page is left blank intentionally.