

DESIGN OF POLE LINES

Purpose: This addendum is issued to: (1) revise Table 4 to reflect the elimination of Figure 8 distribution wire in the 12-pair size, (2) revise Table 5 in accordance with PE-38, REA Specification for Figure 8 Cable, to reflect replacement of the 0.148-inch solid integral support messenger with a 3/16-inch, 7-wire strand EHS galvanized steel integral support messenger, (3) establish Table 6 to provide the information previously included for lashed cable in Table 4. Addendum No. 3 replaces Addenda Nos. 1 and 2.

TABLE 4

APPROXIMATE EQUIVALENTS OF FIGURE 8 DISTRIBUTION WIRE  
 IN NUMBERS OF 0.109 INCH DIAMETER BARE LINE WIRES FOR  
 USE IN CALCULATING TRANSVERSE LOADS ON POLES

FIGURE 8 DISTRIBUTION WIRE Pair/Support Wire	EQUIVALENT NUMBER OF WIRES		
	Storm Loading District		
	<u>Heavy</u>	<u>Medium</u>	<u>Light</u>
1/0.109" or 0.134"	2	2	4
3/0.109" or 0.134"	2	2	6
6/0.109" or 0.134"	2	2	6

TABLE 5

APPROXIMATE EQUIVALENTS OF FIGURE 8 CABLE IN NUMBERS  
OF 0.109 INCH DIAMETER BARE LINE WIRES FOR USE IN  
CALCULATING TRANSVERSE LOADS ON POLES

<u>FIGURE 8 CABLE</u>		<u>EQUIVALENT NUMBER OF WIRES</u>			
<u>Messenger</u>	<u>Pair/Gauge</u>	<u>Storm Loading District</u>			
		<u>Heavy</u>	<u>Medium</u>	<u>Light</u>	
3/16-Inch	6/19	2	2	8	
	12/19	2	4	8	
	18/19	2	4	10	
	6/22	2	2	6	
	7-Wire Strand	12/22	2	2	8
		18/22	2	4	8
	EHS Steel	25/22	2	4	8
1/4-Inch	6/24	2	2	6	
	12/24	2	2	6	
	18/24	2	2	8	
	25/24	2	4	8	
	50/24	2	4	10	
		25/19	2	4	10
		50/19	4	4	14
7-Wire Strand	75/19	4	4	16	
	50/22	2	4	10	
	75/22	2	4	12	
EHS Steel	100/22	4	4	14	
	75/24	2	4	10	
	100/24	2	4	12	
	150/24	4	4	14	
	200/24	4	4	16	

Note: REA recommends that no poles smaller than class 9 be used for supporting Figure 8 cables having 18 pairs or less; and that no poles smaller than class 7 be used for supporting Figure 8 cables having 25 pairs or more. A margin of strength of 1.33 should be used in selecting the class pole to be used for supporting all Figure 8 cables. The relatively large number of subscribers served from cable is considered as justification for these requirements.

TABLE 6

APPROXIMATE EQUIVALENTS OF CABLE LASHED TO 6M OR 10M SUSPENSION STRAND IN NUMBERS OF 0.109 INCH DIAMETER BARE LINE WIRES FOR USE IN CALCULATING TRANSVERSE LOADS ON POLES

CABLE  Diameter, Excluding Strand	EQUIVALENT NUMBER OF WIRES		
	Storm Loading District		
	Heavy	Medium	Light
0.5 inch	2	2	8
0.75 inch	2	4	12
1.0 inch	2	4	14
1.25 inch	4	4	16
1.5 inch	4	4	18
1.75 inch	4	6	20
2.0 inch	4	6	22
2.25 inch	4	6	24
2.5 inch	4	6	28

Note: Diameters stated are for cable only. However, the equivalent number of bare wires is based on the cable diameter plus the strand diameter. For example, a cable 0.5 inch in diameter lashed to a 6M or 10M strand when storm loaded equates approximately to 2 bare 0.109-inch diameter wires when these are storm loaded, in either the heavy or medium loading districts.