



Assessing Pole Loading with LoadCalc[®]

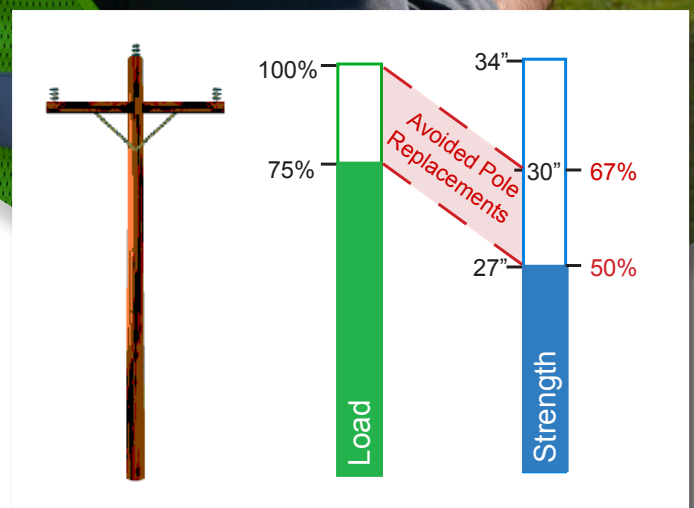
Osmose LoadCalc software, used in conjunction with StrengthCalc[®] can help reduce pole replacements by identifying poles that are less than fully loaded and adjusting the strength requirements accordingly. The National Electrical Safety Code (NESC) states that "When a pole loses one-third of its required bending strength, it must be replaced or restored." Many poles are not loaded to their full capacity and therefore have more strength than required by the NESC.

Osmose technicians use LoadCalc mobile software to estimate the actual load on a pole and determine the remaining strength required by the NESC for that installation. The percent remaining strength is compared to the required remaining strength for a more precise pass/fail decision.

Without an accurate load-estimating tool, a pole is assumed to be loaded at 100% during pole inspection. This graphic example shows a pole with an original circumference of 34" which would become a reject when the remaining strength is 67% or less. However, with loading estimated at 75%, this pole would not become a reject until the remaining strength was 50% or less (which correlates to an effective circumference of 27"). If the remaining strength was 62%, traditional methods without a load estimate would reject this pole when, in fact, it has enough strength to exceed code requirements and remain in service.



District	(L)ight
Grade	NESC (B)
Pole Depth	6
Back Span Yds	87.5
Front Span Yds	55
Full Spans	T++
Single Spans	No Single Spans
Equipment	No Equipment
Back Span Yds	7 8 9
	4 5 6
LoadCalc™	1 2 3
	0 1/2 (N)xt
Pole Load: 89%	



Savings from Load Assessment with LoadCalc

A pole owner can typically expect 2% to 5% of the poles in their plant to have a remaining strength between 33% and 67%. Typically one-third to one-half of these poles can remain in service by estimating the load and aligning the remaining strength with the required strength.

For every 10,000 poles inspected, an owner can potentially avoid \$300,000 - \$750,000 in unnecessary replacement costs by assessing load as part of the reject evaluation process (assuming change-out costs of \$3,000).

10,000 poles inspected
<u>X 3%</u>
300 poles with 33%-67% remaining strength
<u>X 50%</u>
150 poles likely rejected by less precise method
<u>X \$3000</u> average per pole replacement cost
\$450,000 in unnecessary replacement costs

10,000 poles inspected
<u>X 3%</u>
300 poles with 33%-67% remaining strength
<u>X 50%</u>
150 poles likely rejected by less precise method
<u>X \$1500</u> average per pole replacement cost
\$225,000 in unnecessary replacement costs

Using LoadCalc in conjunction with StrengthCalc, Osmose technicians produce highly accurate strength and load data, enabling pole owners to more effectively manage their pole plants, reduce risks, and save money.

Contact your local Osmose representative or:

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