



# Interpretation

## Section 26. Strength requirements

### Rule 261 Grades B and C construction

#### Table 261-1—Strength factors for structures, crossarms, braces, support hardware, guys, foundations, and anchors

(2023 Edition, page 209)  
(17 August 2023) IR599

**Question:** Table 261-1, Footnote 2 states, “Wood and reinforced concrete structures shall be replaced or rehabilitated when deterioration reduces the structure strength to 2/3 of that required when installed.” Does the 2/3 factor apply to the original strength of the structure, or to the required strength based on loading?

**Discussion:** Consider an application where a standard wood pole class provides 25% more load capacity than load calculations require. Should the pole be replaced (or rehabilitated) when the pole itself is at 2/3 of original strength, or can the additional 25% capacity be considered (such that pole replacement or rehabilitation happens at  $(2/3) * (100/125) = 53.3\%$  of original strength)?

### Interpretation

Footnote 2 of Table 261-1 states “*Wood and reinforced concrete structures shall be replaced or rehabilitated when deterioration reduces the structure strength to 2/3 of that required when installed.*” The required strength is based on the initial (or revised) loading, not the initial strength of the pole. Some utilities may install supporting structures with greater strength than required by the NESCS to allow for expected additions to the structure, to increase the life expectancy, or because a pole used from inventory happens to be a larger pole class (higher strength) than what was required. Footnote 2 requires the wood pole or reinforced concrete structure to be replaced or rehabilitated if the structure’s strength is reduced to 2/3 of the strength needed to support the NESCS loads, not 2/3 of the initial strength of the pole.

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Using the example, the required strength of a pole needs to be capable of handling 57 000 lb·ft of groundline moment, but a pole with the strength of handling 71 250 lb·ft of groundline moment is installed. The installed pole has a strength 25% greater than the load requires. This pole will have to deteriorate to 2/3 of the required strength or (2/3) times 57 000 lb·ft, which is 38 000 lb·ft before it would have to be replaced or rehabilitated.

However, if the loading on the structure changes, Footnote 7 of Table 261-1 shall apply.

- 7. When new or changed facilities add loads to existing structures (a) the strength of the structure when new shall have been sufficient to support the additional loads, and (b) the strength of the deteriorated structure shall exceed the strength required at replacement. If either (a) or (b) cannot be met, the structure must be replaced, augmented, or rehabilitated.*