

T3SAP

Frequently Asked Questions

1. What is the significance of the Cable Demand/Capacity (D/C) ratios in a Type I analysis of a span wire structure?

For a Type I analysis of a span wire structure, it is expected that the cable diameter will be selected by the contractor using the pole design load provided by the designer. Therefore, the *Cable D/C Ratios* that are output by the current version of T3SAP (v1.0.0) are not needed. Consequently, in the upcoming version of T3SAP (v1.1.0), when a Type I analysis is performed for a span wire structure, *Cable D/C Ratios* will not be included in the output. Note that, in a Type II Analysis of an existing span wire structure, capacity assessment is performed by T3SAP and thus the user is required to specify the cable diameter as input and *Cable D/C Ratios* are provided in the output.

2. What is the height that is used to compute the estimate of the base overturning moment (OTM)?

For a Type I analysis of a span wire structure, T3SAP uses the full height of the pole (from the base to the tip) to compute the base overturning moment (OTM). This may be viewed as a conservative estimate of the moment since the cable is not attached to the tip of the pole but rather is attached at a distance of 1.5 ft below the tip. However, in a Type I analysis, the geometry of the pole is unknown and thus the wind load on the pole is not computed. Therefore, the overturning effect of that wind load is not considered. Using the full height of the pole to compute the base OTM is intended to compensate to some extent for neglecting the overturning effect of wind load acting on the pole.

For a Type II analysis of a span wire structure, the pole geometry is known and thus the overturning effect of the wind load on the pole is considered in T3SAP. Therefore, there is no need for the compensation mentioned above for a Type I analysis and thus T3SAP computes the base OTM using the height from the base of the pole to the cable attachment (full height of the pole minus 1.5 ft).

For a Type I and Type II analysis of a mast arm structure, T3SAP computes the base OTM using the height from the base of the pole to the mast arm connection.

An explanation of how the base OTM is computed will be added to the updated T3SAP Final Report and User Manual, and the two updated documents will be made available in the upcoming version of T3SAP (v1.1.0).