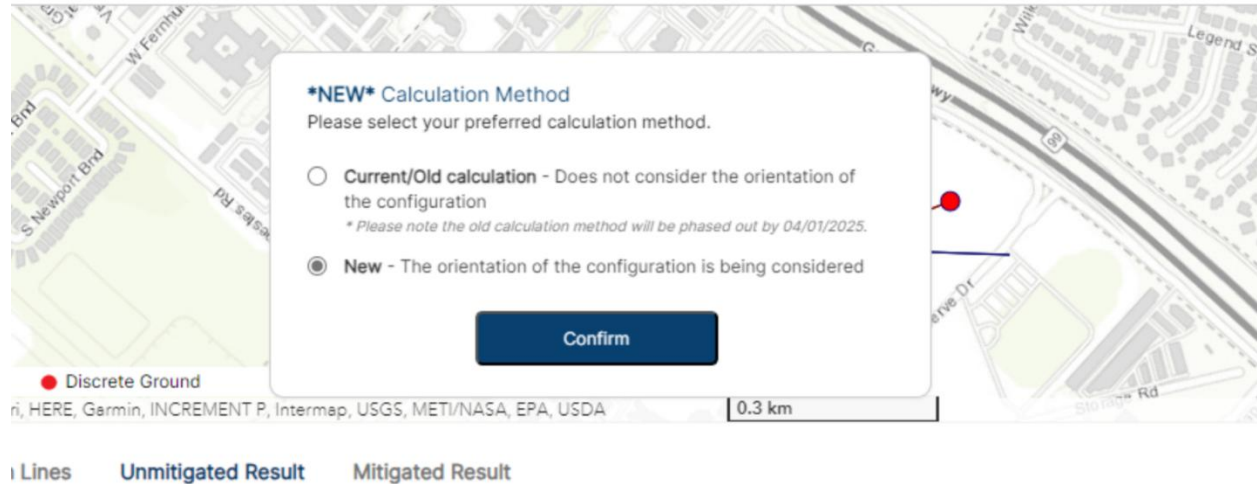


New Method of Calculating Section Distances

The older PRCI application gives distances for each section with respect to a centerline, averaging the distances between entities. Recently, we have implemented a new, more accurate section line calculation method that more closely follows the centerline approach laid out by PRCI. To access this new section line calculation method, please select “new section method” when calculating your section angles and distances:



This new section calculation method using the centerline will lead to less conservative results but will better reflect actual conditions in the field. We leave the decision of which method to use up to the reader, but we’re happy to answer any questions on this topic you may have.

Negative Distances and Angles Now Visible in Section Information

The original application specified which side of the reference line a powerline or pipeline was on by assigning a positive or negative sign to the distance. Similar sign nomenclature was used with angles. Traditionally, the Powertool abstracted the signs of distances and angles out of the user’s view. However, this has led to some confusion with users familiar with older manual section entry methods and makes it difficult to construct a right of way from the calculated section data. In our new section line calculation method, we explicitly label the sign of the distance and angle for the user.

Adjusted Local Earth Impedance

The AC Mitigation Powertool has historically given ultraconservative values when a fault to the pipeline occurs in the immediate vicinity of the tower’s earth grid. Although this did serve as a fair warning tool to the large danger that these faults pose, the potential predicted in these local faults was exceedingly excessive. To bring the calculator more in line with

reality, we've revised our estimate of the local earth impedance. This makes the estimated fault voltage for these cases more reasonable, while still giving conservative potentials.

Recommendations

Thank you for taking the time to review these recent enhancements in the AC Mitigation Powertool. We hope these changes lead to faster, more accessible, and more accurate results. For more information, please contact our support team at support@technicaltoolboxes.com, or to call us at (713) 379-8066; we are happy to arrange a meeting with you to discuss these changes in more detail.