Please see the executable at the following link, which can be used as an example of a possible UI http://www.2bithack.com/test.exe.

As discussed, the first phase of UI will only support input via Excel import or manual input.

* Provide a method for excel import, such as shown File-->Import Excel on main menu
* Possibly provide a tabbed interface to separate/categorize different types of data and different views
* All common data and values should be in a single place, shown as the 'General' tab in the example.
    * These values will be the same across all tracks. An example would be max speed across an area, or braking characteristics of the train
* Possibly another tab where each track record can be edited individually.
    * Maybe include a tree view control to allow selection of the current track record and to all and delete records via right-click context menu. In this view, also an area to enter minimum data required to perform calculation, but provide 'Advanced' input to further customize the calculation.
    * These advanced values could be preloaded with the most commonly used values.
    * Calculations should be performed upon leaving a text field, i.e. Tab, or clicking in another.
    * Input validation should be performed on all fields, such as values > 0 where applicable, and not allowing any overlap of stationing/chaining values. Any calculated required stopping distance > actual stopping distance should alert the user in the UI.
    * A minimum alert should be the calculated text box font turning bold and RED. I would also include alert icons in the interface similar to[cid:56082754-F052-4AF9-8E21-6AEC051F735E]
* Provide an additional view that will be a Datagrid type view similar to viewing the excel worksheet, which should show each track as a row, and each value as a column.
    * This interface should also allow editing of values, add/remove records and should calculate upon change of values. This view should also alert by highlighting a row, and setting calculated stopping distance to bold and red.
* Integration of the track diagram would be another view, which should show the track layout, with track segmentation.
    * Each track name should be clearly displayed.
    * The placement of the insulated joints (track segmentation) should show the standard stationing/chaining for each at the top of the track display.
    * Near the track name, possibly above the name or below the track, both the actual and calculated required distance should be shown. If the actual is exceeded, it should show as red and also provide an alert.
    * Future versions should allow editing the data directly from the track layout, such as adding or removing insulated joints, naming tracks, etc. Also adjusting the distances by sliding the insulated joints horizontally on the tracks. Potentially allowing the setting of actual joint placement, and then adding a second proposed placement.