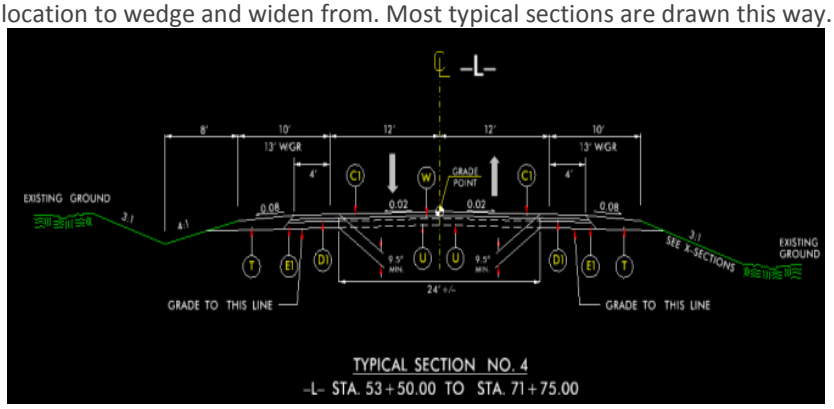
6_9 UNDERSTANDING WIDENING AND WEDGING LIMITS

Question:

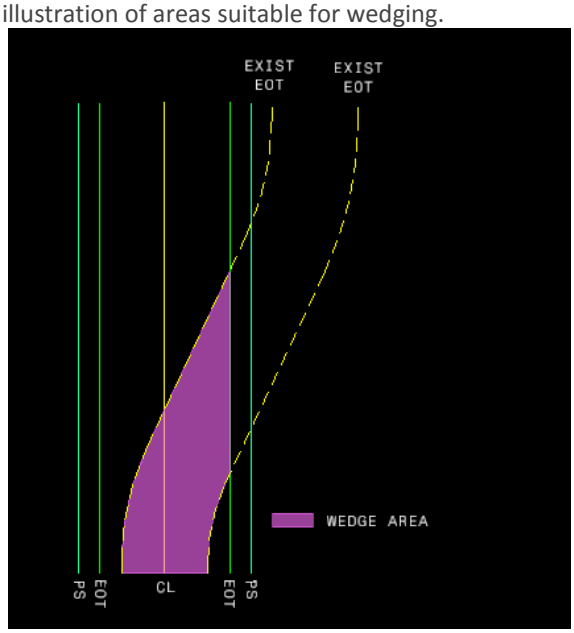
CM is not seeing the existing eop on the right side of the proposed alignment in the location the graphics was drawn. We are keeping the existing pavement and resurfacing, milling and filling as necessary. Full depth pavement is not needed on the entire paved shoulder. It is only needed at the edge of existing pavement to the outside of the paved shoulder. The XSC file will not draw the pavement correctly because it does not see the existing eop graphic on the right side. Is it something wrong with the templates?

Answer:

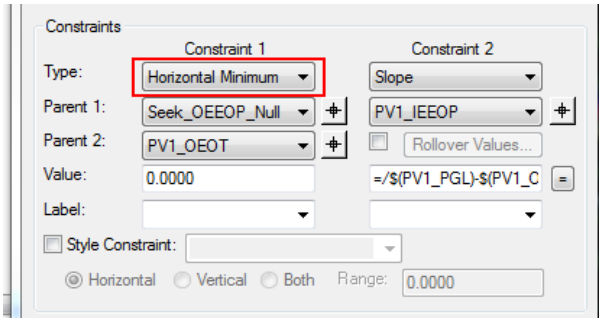
It is working as designed. Even back with Criteria, our past policy was to show wedging between the existing EOP, specifically the existing EOT limits. For various engineering reasons the existing paved shoulders is not an ideal location to wedge and widen from. Most typical sections are drawn this way.



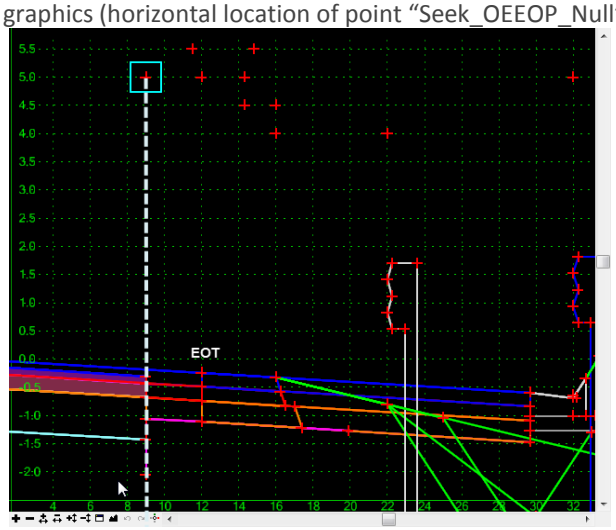
What happens in the same scenario when the existing EOT is located outside the proposed EOT? The wedging then stops at the proposed EOT and does not get carried over to the proposed paved shoulders. Below is an illustration of areas suitable for wedging.



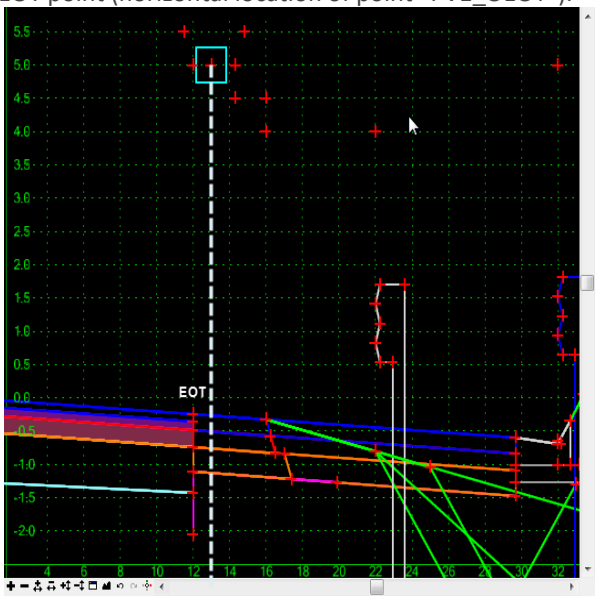
Our Corridor Modeling Templates use a special innovative point constraint to the achieved this desired effect. “Horizontal Minimum” is used to control the horizontal widening/wedging limits for the following two conditions.



When the existing EOT is located inside the proposed EOT point, widening/wedging occurs up to the existing EOT graphics (horizontal location of point “Seek_OEEOP_Null”).



When the existing EOT is located outside the proposed EOT point, widening/wedging occurs up to the proposed EOT point (horizontal location of point “PV1_OEOT”).



Normally the small area of existing pavement underneath the proposed paved shoulder can be classified as “pavement breakup”, “pavement removal”, or incidental to the project. If the existing paved shoulder has been determined unusable for roadbed construction, a “saw-cut” operation can be used to shear it off for new pavement to widen from. If you believe your project has a significant amount of shoulder wedging (on more than 75% of the project) and the superelevation of both the road and paved shoulder has been determined, then come see us for creating and customizing templates for your specific project need. We can definitely build a shoulder wedging template, but I would preferred not to make it a standard for all templates at this time.