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CRAM 32: CLEARING LIMITS

Summary and Overview

Introduction:

Clearing limits are the outside limits of disturbance for the contractor. They are set outside of the slope stake limits, any slope rounding, and are required on most FHWA reconstruction projects. The amount of slope rounding in cuts and additional clearing in fill locations are project specific. Recommendations for slope rounding can be found in the Project Development Design Manual (PDDM).



To learn more about slope treatments in the PDDM follow this link. [PDDM Chapter 09.html](#)

This document is guidance for FHWA employees and A/E consultants to draw graphical elements representing limits of clearing in a MicroStation plan view drawing. Clearing limits for FHWA projects are generated in a multiple step process. Macros are used to create a clearing report. Then, a 3 Port Criteria (3PC) file reads the report and draws the clearing limits. The distance left and right of centerline for the clearing limit lines is based on the information in a standard Geopak clearing report. The clearing limit lines include all the additional distances beyond the cut/fill catches (such as cut slope rounding, additional clearing in cut and fill, etc.) that are a part of the clearing report. Contrast this with the Geopak Limits of Construction tool which draws the cut/fill catch lines at slope stake locations.

Notes:

- If you want to draw the clearing limits onto the proposed cross-sections use the three port criteria clearing_limits_xs.3pc.
- This criteria file expects the clearing report to have a very specific format, so don't make any modifications to the report Geopak creates.
- The old adage "garbage in, garbage out" applies here. If the clearing report has incorrect information in it, the clearing limit lines drawn by the criteria will also be incorrect.
- The clearing limit lines are drawn in the dgn file as a graphic group.
- The 3PC criteria file does not accept spaces in the report's file name and path. To avoid renaming the project's directory structure, it may be required to copy the report to the C:\Temp directory.

Requirements:

- Roadway centerline chain stored in a gpk file.
- Proposed design cross-sections.
- A C:\Temp folder on the user's workstation. This folder is used by the criteria and the user needs to have write privileges to the folder.
- Geopak Clearing Report for the proposed cross-sections.
- The FLH (English or Metric) database (.ddb) file.
- A MicroStation design file (for plan view) to display the clearing limits.

Primary Work Flow:

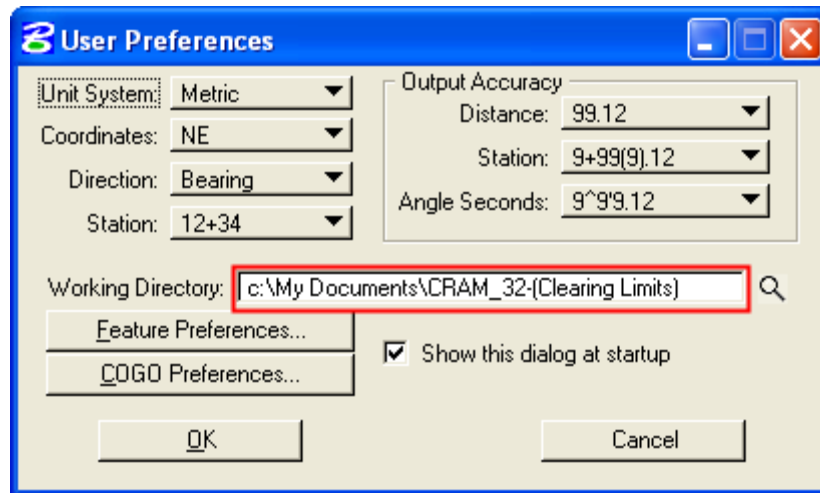
1. Create the Geopak Clearing Report for the proposed cross-sections.
2. Get into MicroStation and call up the plan view dgn file where you want to draw the clearing limit lines. This is important because this criteria file will draw the clearing limit lines in whatever dgn file that's open when the criteria file is executed.
3. Run the clearing limits 3PC criteria file by calling up D&C Manager.

Example 1: Create the Clearing Report

Description: This example will demonstrate the process for creating a clearing report from a MicroStation proposed cross section file.

Preliminary Steps

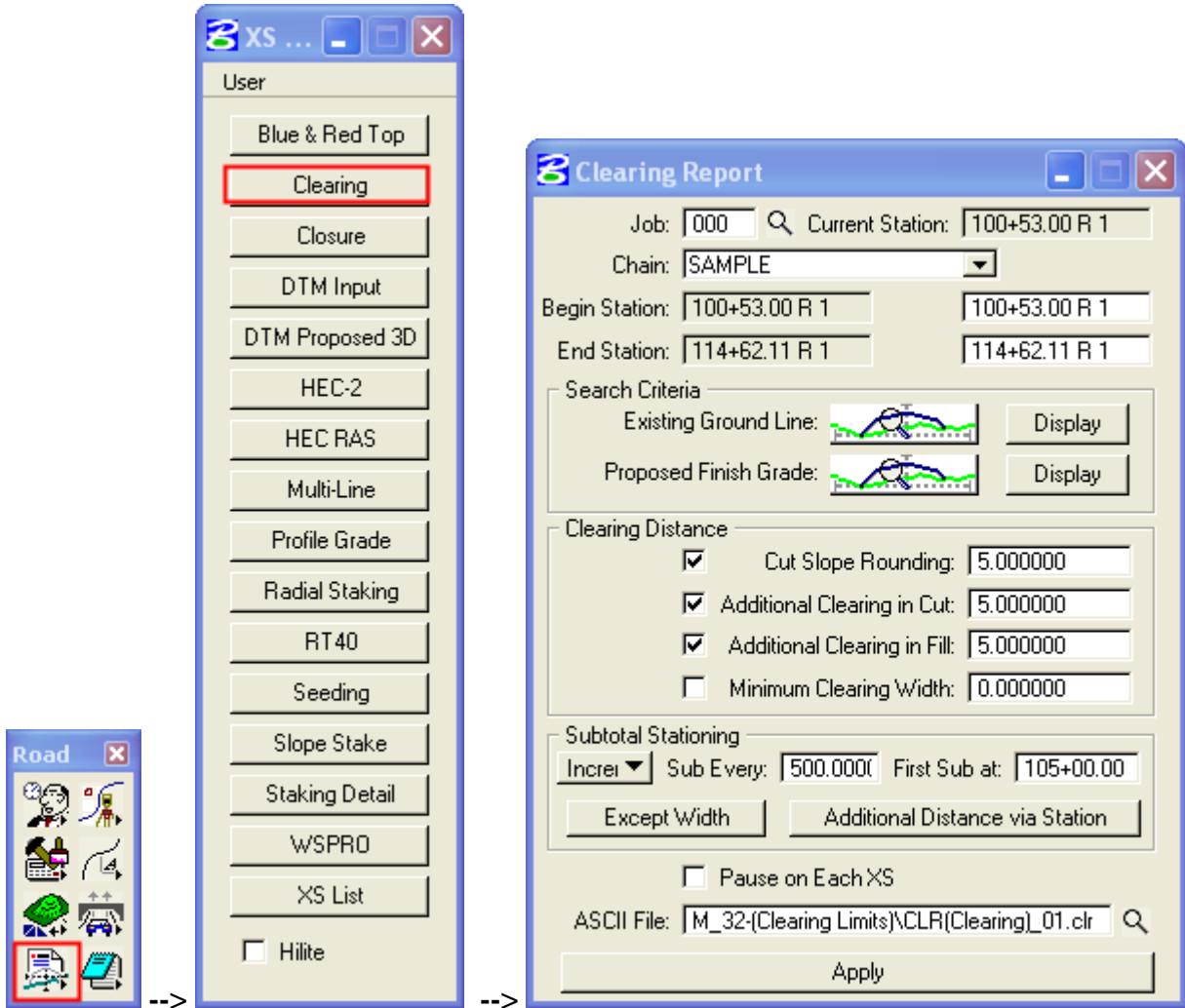
1. **Download** from the cflhd.gov website, **or Copy** directory K:\CADD Coordinator\4A_Training & Presentations\CRAM Sessions\CRAM_32 to the local C:\My Documents\ directory.
2. **Open MicroStation** in the **X30_English** workspace. **Open** MicroStation File C:\My Documents\CRAM_32-(Clearing Limits)\ **XSE(Clearing)_01.dgn**
3. **Set the Working Directory** to the C:\My Documents\ CRAM_32-(Clearing Limits)\ directory through the **User Preferences**.



Exercise Steps

1. **Create a Clearing Report:** This step will demonstrate how to create a clearing report using Geopak XS Reports. *Note: To complete a C:\Temp folder must be created on the user's workstation.*

1.1. Open the **Clearing Report** dialog from the **Road Tools>XS Reports**.



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1.2. Set the Clearing Report criteria, settings and process the report. Complete all the necessary features in the Clearing report dialog (As shown above): Set the Job #, Select the Chain, input the desired station ranges, set the existing ground attributes, select the Proposed Finished Grade elements, set Clearing Distances, include subtotal stationing if desired, and select a name and location for the report. This Example uses the name **CLR(Clearing)_01.clr**. When complete, select the **Apply** button.



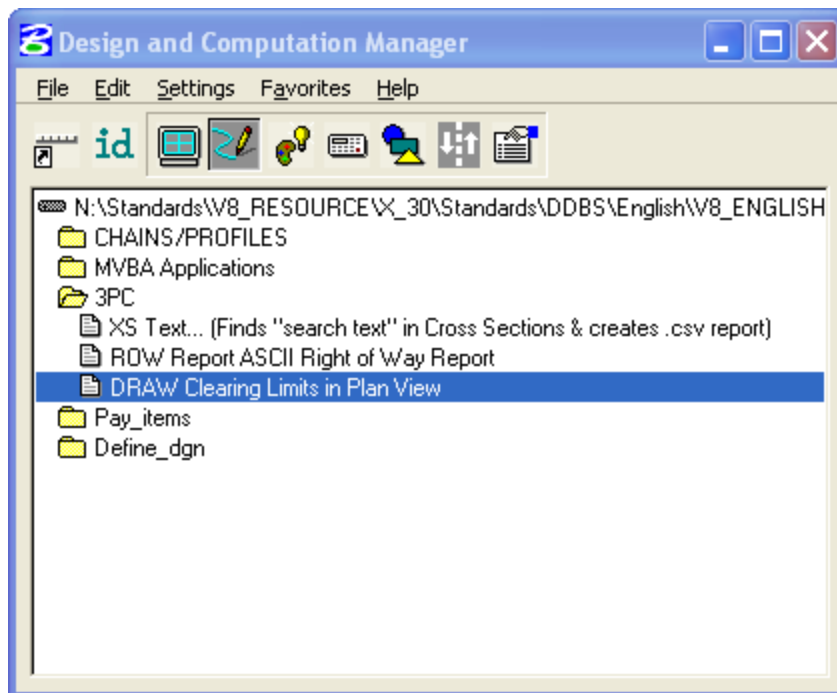
For more on naming conventions, refer to Chapter 3 of the CADD Standards with the following link. [Chapter 3_NamingConventions.html](#)

Important Note: The 3PC criteria file does not accept spaces in the file name and path! It may be necessary to copy the report to the C:\Temp directory and run it from that location.

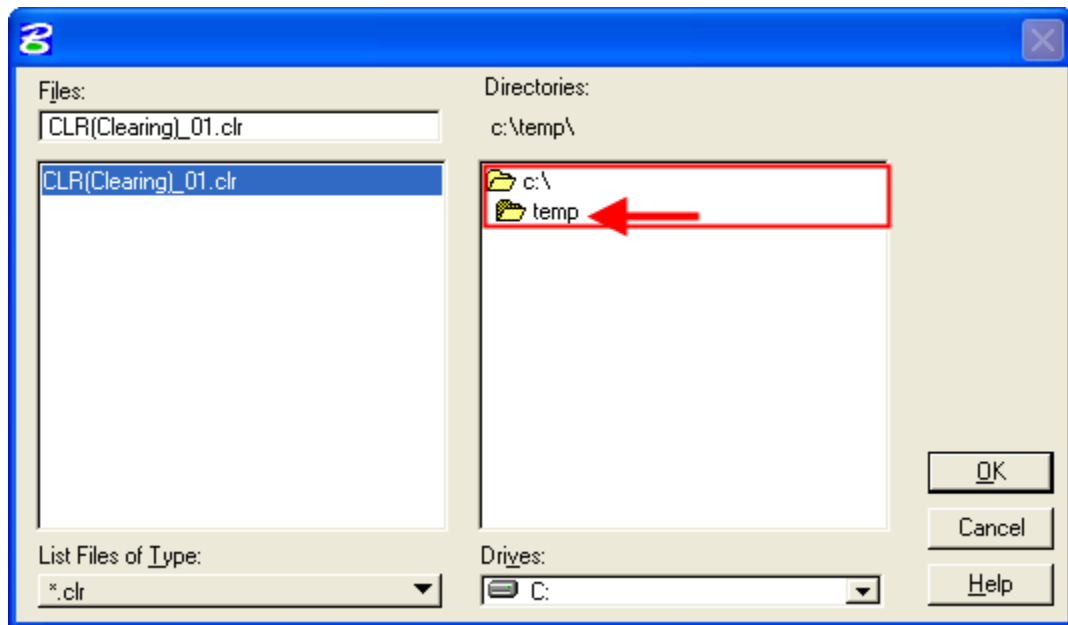
2. Draw the Clearing Limits: This step will draw the clearing limits in plan view.

2.1. Open the plan view that will have the clearing limits displayed. For this example open the file C:\My Documents\CRAM_32-(Clearing Limits)**PLN(Clearing)_01.dgn**.

2.2. Open the D&C Manager and access the 3PC criteria. Double-click to initiate the criteria.



2.2.1. Run the criteria and select the clearing report. In this example, C:\My Documents has a space in the name, so the report was copied into the C:\Temp folder. After selected, click on the **OK** button.



2.2.2. Set the Clearing Limit information and symbology. Clearing limits should be placed on level P_RDW_Clearing_Limits. Setting the correct level may have to be done after displaying the limits. The application does not always place the elements on the correct level.

