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## Chapter 10 3R Projects

This chapter will discuss the different modules that will be run during a 3R project. The workflows will describe how to tell IHSDM which reports to run and how to read the reports.

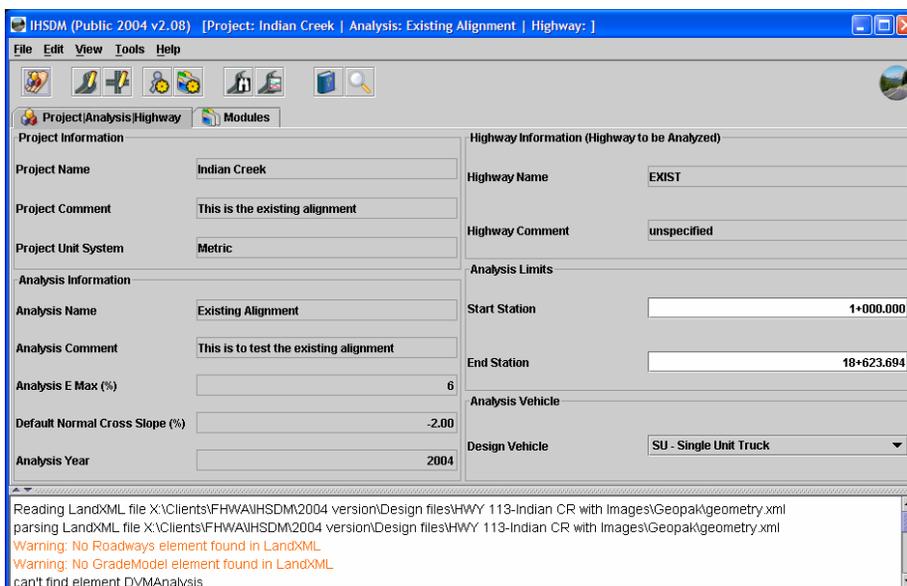
As stated in chapter 8 there is no need to run IHSDM for the conceptual design stage, so this chapter will begin with the preliminary design stage.

### Preliminary Design

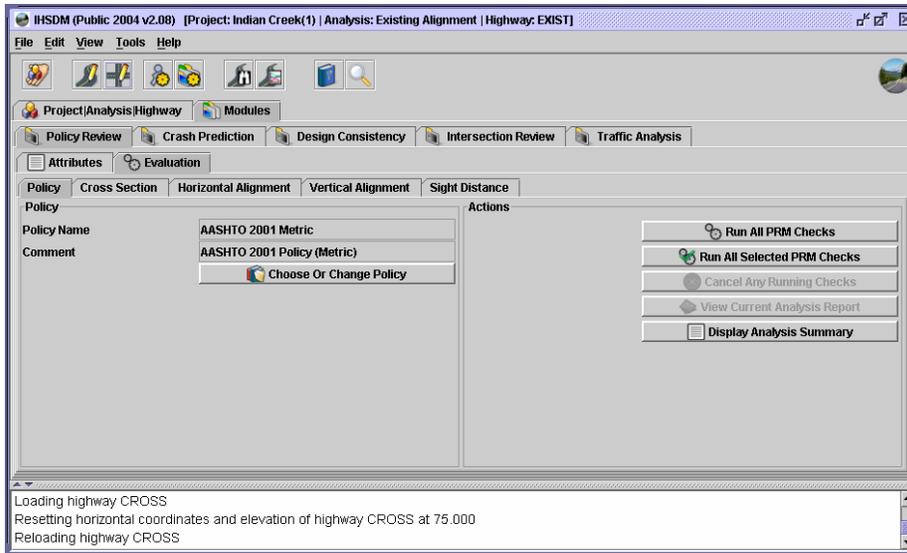
The following workflow will describe all of the possible reports for this stage of a 3R project. Some data may not be available for all projects, such as Vertical Alignment and Superelevation. The purpose of this workflow is to guide the user on creating as many reports as possible.

### Workflow 1: Policy Review for 3R Preliminary Design

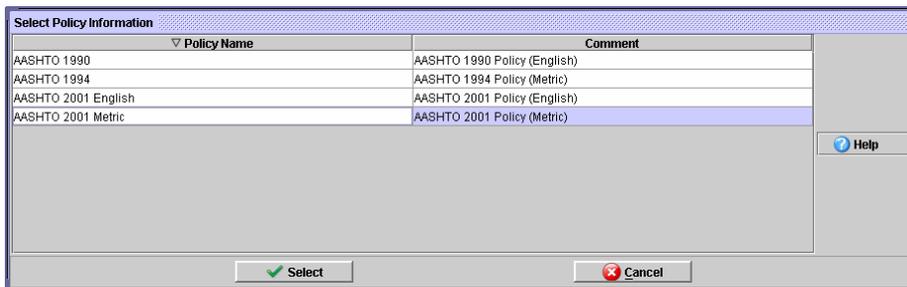
1. Access the IHSDM main dialog box which look like this:



2. Click on the Modules>Policy Review>Evaluation tab to get the following dialog box:

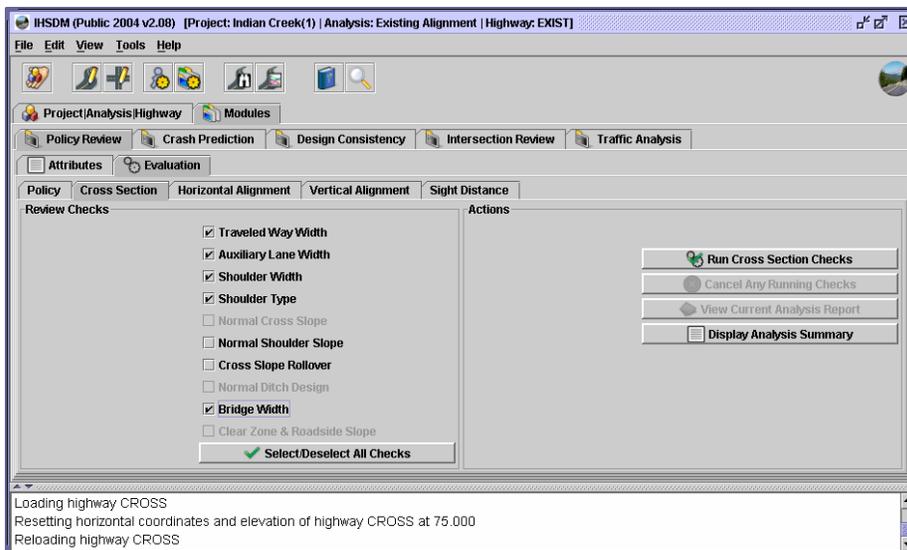


3. Make sure the correct policy is referenced. If it is not click on the Choose or Change Policy button to get the following dialog box:



4. Highlight the correct policy and choose select.

5. Pick the cross section tab to get the following dialog box:



6. Pick the items to check the design policy against. The designer should have the traveled way width, any auxiliary lane widths, average shoulder width, shoulder type, and any bridge widths at a

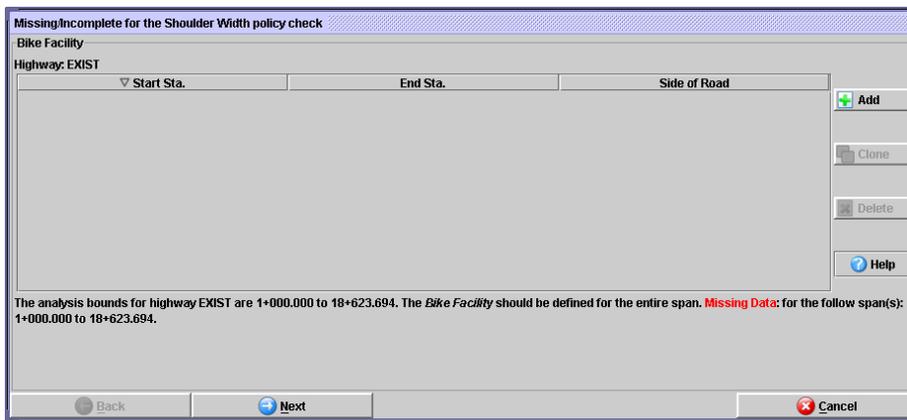
minimum for this type of project. If the designer has superelevation data, he will be able to run the normal shoulder slope and cross slope rollover checks.

- Pick the Run Selected Checks button. IHSDM will start running and will indicate its working in the upper right corner with a red



pie through the IHSDM logo. Depending on the length of the project, the IHSDM calculations could take a couple of minutes.

- If the following dialog box appears during the run, IHSDM is looking for some data to check an analysis. The user can either enter the data or choose finish and IHSDM will ignore that data in its analysis.

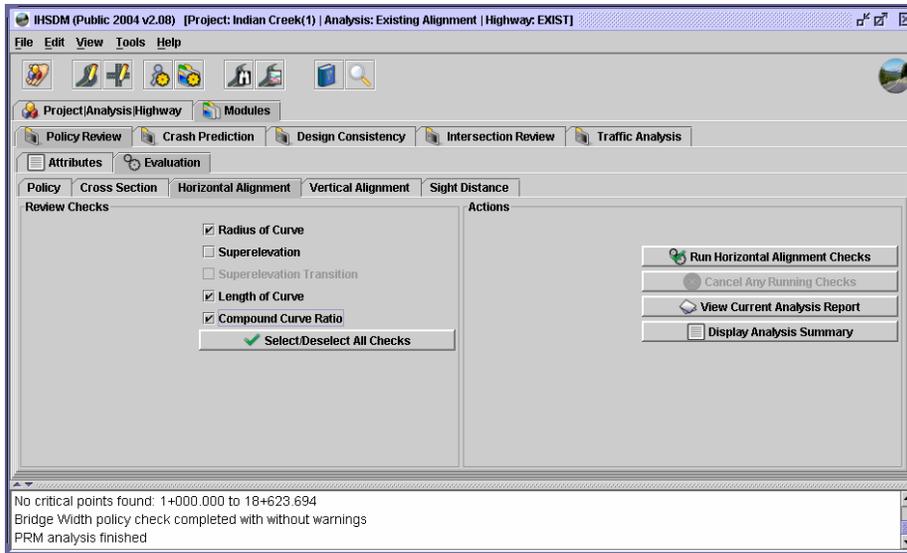


- Once IHSDM has completed its analysis, pick the View Current Analysis Report ([Chapter 13](#)). IHSDM will launch the web browser to view the report.

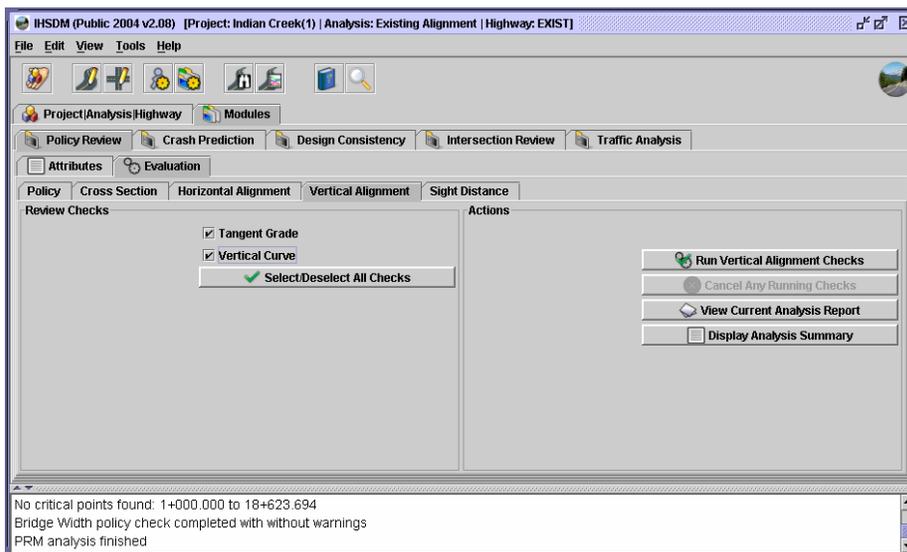


The user can wait to view all the reports at once by selecting the Run All Selected PRM Checks button under the Policy tab.

- Go back to the IHSDM main dialog box.
- Pick the Horizontal Alignment tab:

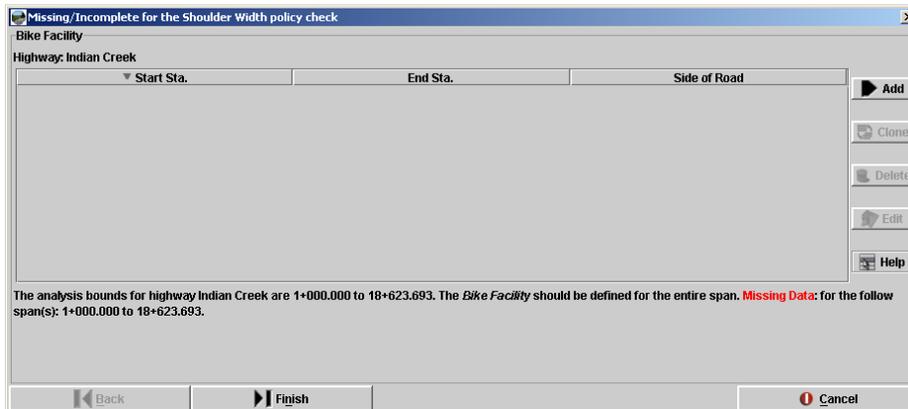


12. At a minimum, the designer should check the Radius of Curve, Length of Curve, and Compound Curve Ratio. If the designer has the Superelevation information, the Superelevation button should be checked.
13. Pick Run Selected Checks
14. After IHSDM is complete, pick the View Current Analysis Report button ([Chapter 13](#)). Notice that IHSDM appended the new report to the previous report.
15. Pick the Vertical Alignment tab to get the following dialog box:



16. If the designer has vertical information, both buttons should be checked.
17. Pick the Run Selected Checks button.
18. If the following dialog box appears during the run, IHSDM is looking for some data to check an analysis. The user can either

*enter the data or choose finish and IHSDM will ignore that data in its analysis.*



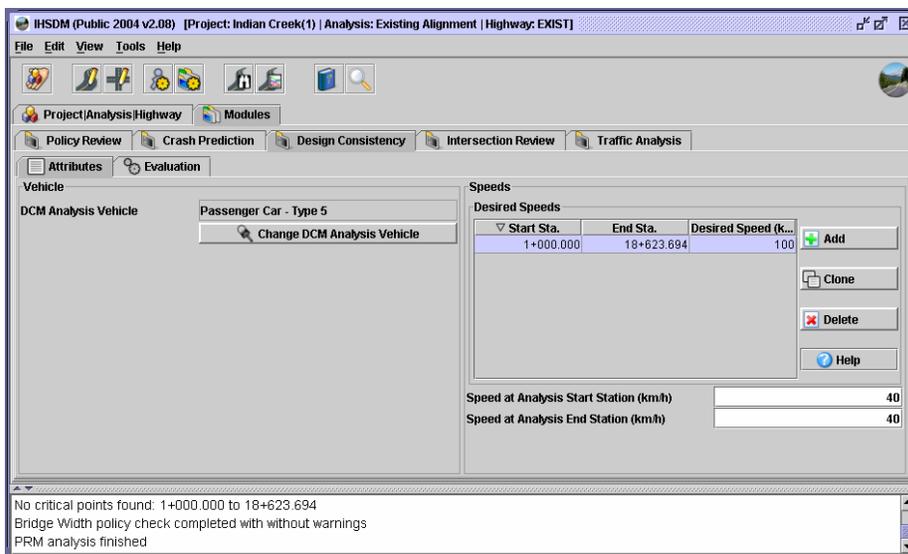
19. Pick the *View Current Analysis Report* button ([Chapter 13](#)).

20. *Print the report for review.*

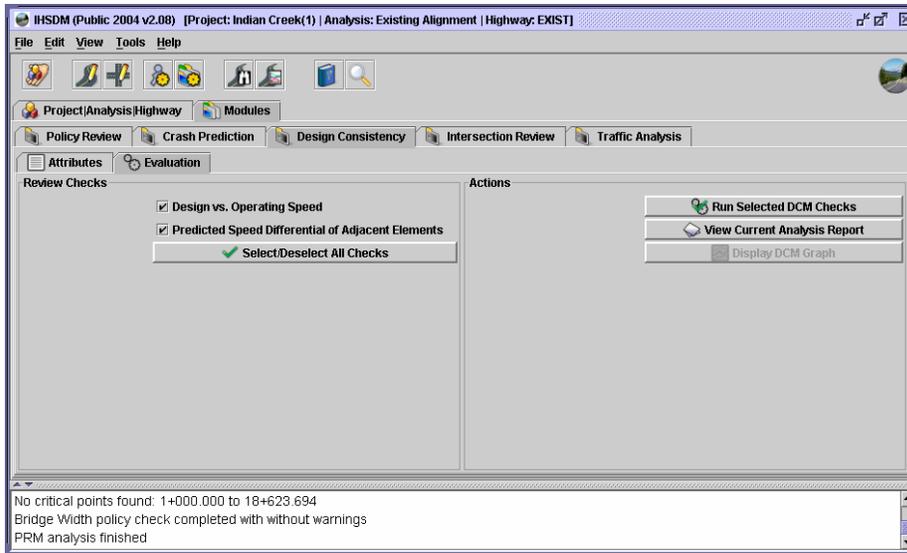
These reports will indicate possible deficient areas along the alignment that the project manager and designer may want to address further.

## Workflow 2: Design Consistency Review for 3R PD

1. *From the IHSDM main dialog box, pick the Design Consistency Tab to get the following:*



2. *Make sure the DCM Analysis Vehicle, Desired Speed, and Speed at Analysis Start/End Stations are correct and pick the Evaluation Tab to get the following dialog box:*



3. *The user should be able to check both buttons and pick Perform Selected Checks.*
4. *Pick View Current Analysis Report to open a web browser and view the report.*

## Final Design

Once the final design is completed the designer can update IHSDM based on the changes made and rerun workflows 1 and 2 to verify that the final design has corrected the deficiencies it was meant to.