Saravut Sripiangchan 2010: A Study and Development of Interchange Geometric Design Checking Program. Master of Engineering (Civil Engineering), Major Field: Civil Engineering, Department of Civil Engineering. Thesis Advisor: Assistant Professor Watcharin Witayakul, M.Eng. 134 pages.

The purpose of this research is to study and develop a computer program for checking interchange geometric design. The objective of this program is providing fast and accurate results and lower expense when comparing to commercial software in the market. Any engineer who has no experience in the highway design will have an opportunity to gain knowledge in the design or assist senior engineers. The DOH and AASHTO standards are used to be reference. The computer programs developed consist of 5 parts; Horizontal alignment design checking, Vertical alignment design checking, Super elevation design checking, Merging-Diverging checking and Vertical Clearance checking.

The developed program is thus suitable for design checking that involve complication and repetitive computations which inhere to the nature of the interchanges.

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