

▶ PURPOSE

To provide you an opportunity to become familiar with highway design controls and criteria as stated in AASHTO's *Green Book*.

▶ LEARNING OBJECTIVE

- Be able to identify major groups of design controls and criteria
- Be able to describe the relationships between highway design controls and geometric elements

▶ REQUIRED RESOURCES

- Chapter 2 of AASHTO's *Green Book*
- Answer sheet for the Critical Thinking Questions

▶ CRITICAL THINKING QUESTIONS

1. What are highway design controls and criteria?
2. What is a design vehicle?
3. What aspect of driver performance is most critical in determining stopping sight distance?
4. What is design speed? What design features are directly related to the design speed selected?
5. How does traffic volume of a highway control its design?
6. How does the expected capacity of a highway control its design?

▶ TASKS

Read the assigned reading material. Write down your answers to the Critical Thinking Questions. Prepare to discuss your thoughts in class.

▶ DELIVERABLE

The completed answer sheet.

▶ INFORMATION

AASHTO defines Design Controls and Criteria as “the characteristics of vehicles (vehicles and drivers), pedestrians, and traffic that act as criteria for the optimization or improvement in design of the various highway and street functional classes.” Determining design controls and criteria is a critical step in highway design as the established controls and criteria determine the values that can be applied for various design elements. For example, a project with high design speed cannot be designed with sharp curves.

Chapter 2 of the *Green Book* discusses various design controls and criteria. The discussions in this chapter act as resources for highway designers in understanding the concepts, evaluating specific considerations, and choosing appropriate values for the design controls and criteria that are relevant to a project.

Name: _____

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