

CHAPTER OVERVIEW

This chapter introduces you to concepts in rural highway design and highway safety. Understanding of these concepts is critical for your learning of the process and tasks involved in highway design and safety analysis.

The chapter includes three activities.

Activity Number and Title	Type
Activity 1 Basic Concepts in Highway Design and Safety	Reading
Activity 2 Highway Functional Classification Concepts	Reading
Activity 2 Concepts of Highway Development Process	Reading

Each activity requires you to read articles or excerpts from highway design references. After you read the articles, you will participate in discussions with your fellow students in class.

Activity 1 begins with a reading on highway safety issues and a guided discussion based on the reading. The reading articles deal with the difference in the rates of traffic accidents in the rural and urban areas. The articles contain traffic accident statistics from both the urban and rural areas in the US. Based on the accident numbers, you will have a chance to think about the characteristics of urban and rural highways and why urban highways have higher fatality than rural highways. The reading and discussion in Activity 1 are designed to help you understand the unique design requirements for rural highways.

In **Activity 2**, you are formally introduced to one of the most important highway design references, *A Policy on the Geometric Design of Highways and Streets*, which is often referred to as the *Green Book* among highway design engineers. You will need to read the first chapter of the *Green Book* and fully understand the concepts in this chapter.

The reading for **Activity 3** is selected to show you the different tasks involved in the process of highway project development. An understanding of this process is critical for a highway engineer as each step in the process has its unique implication on the elements of design.

