



About This Manual

Design Manual
Chapter 1
General Information

Originally Issued: 09-01-95

Revised: 12-10-10

The Design Manual is a repository of institutional knowledge published by the Methods Section in the Office of Design. This institutional knowledge is based on:

- Policies set forth by FHWA, CFR, Iowa Code, etc.
- Publications such as the Greenbook, Roadside Design Guide, HEC-22, NCHRP and other TRB reports, MwRSF reports, etc.
- Design, construction, and contract administration experience.

Much of this manual is presented in dual units. Generally, English units are followed by metric units in parentheses. Some tables and graphics require information to be presented separately in English and metric units. Some graphics and most example problems are presented in English units only.

Purpose

The intent of this manual is to provide design guidance to designers to assist with projects involving the Primary highway and Interstate systems. Often, this involves referencing recommended ranges of values for critical dimensions. Lower values in a given range represent the minimum that can be used. Larger values will normally be used where the social, economic, and environmental (S.E.E.) impacts are not critical. To this extent, the manual also functions to document normal design policy.

Many sections of this manual focus on how certain elements of design are normally handled. These sections are not intended to be a detailed instruction manual that could supersede the need for the application of sound principles by the knowledgeable design professional. Sufficient flexibility is permitted to encourage independent designs tailored to particular situations. However, designers need to remain within the boundaries of institutional knowledge. When this is not possible or feasible, the designer will be required to document their design decision and the process used to arrive at that decision.

Automation

The first series chapters of this manual focus on design guidance. Chapters 20 through 29 focus on the automation tools used to assist designers. These chapters provide detailed instructions for using MicroStation and GEOPAK to assist with the design process. However, it is still up to the designer to implement the guidelines presented in the other chapters to ensure that designs remain within the constraints of institutional knowledge. Chapter numbers between 30 and 99 apply to specialized groups within the office of Design. Chapters above 100 and documents created by other offices.

Effective Dates

No specific effective date will be indicated for material published in this manual. Instead, the date a section was originally issued will be indicated (see above). If a section is revised, it will be indicated below the original issue date (see above).

Projects initiated after material is published in the Design Manual should consider the policies and guidelines in the manual. Projects already under development when new material is published will need to be examined on a case-by-case basis. If practical, the new guidance may be considered; however, this will depend on how much of the design has already been completed and other considerations.

In some cases new designs must be implemented by a fixed date (for example, a specific deadline set by the FHWA for using improved safety appurtenances like guardrail terminals). The Methods Section will notify designers of such deadlines, but they will not be indicated in the Design Manual.

Chronology of Changes to Design Manual Section:

001A-001

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12/10/2010 Revised

Update to include information regarding automation and institutional knowledge