

Concrete Pipe Design Manual

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This manual is a compilation of data on concrete pipe, and it was planned to provide all design information needed by the engineer when he/she begins to consider the type and shape of pipe to be used. All equations used in developing the figures and tables are shown along with limited supporting theory. A condensed bibliography of literature references is included to assist the engineer who wishes to further study the development of these equations.

Chapters have been arranged so the descriptive information can be easily followed into the tables and figures containing data which enable the engineer to select the required type and size concrete pipe without the lengthy computations previously required. All of these design aids are presently published in engineering textbooks or represent the computer analysis of involved equations. Supplemental data and information are included to assist in completing this important phase of the project, and illustrative example problems are presented in Chapters 2 through 4. A review of these examples will indicate the relative ease with which this manual can be used.

The revised Chapter 4 on Loads and Supporting Strengths incorporates the Standard Installations for concrete pipe bedding and design. The Standard Installations are compatible with today's methods of installation and incorporate the latest research on concrete pipe. In 1996 the B, C, and D beddings, researched by Anson Marston and Merlin Spangler, were replaced in the AASHTO Bridge Specifications by the Standard Installations. A description of the B, C, and D beddings along with the appropriate design procedures are included in Appendix B of this manual to facilitate designs still using these beddings.