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Flood Resistant Design
and Construction

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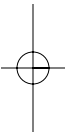
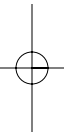
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STANDARDS

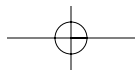
In April 1980, the Board of Direction approved ASCE Rules for Standards Committees to govern the writing and maintenance of standards developed by the Society. All such standards are developed by a consensus standards process managed by the Codes and Standards Activities Committee. The consensus process includes balloting by the Balanced Standards Committee, which is composed of Society members and nonmembers, balloting by the membership of ASCE as a whole, and balloting by the public. All standards are updated or reaffirmed by the same process at intervals not exceeding 5 years.

The following Standards have been issued:

- ANSI/ASCE 1-82 N-725 Guideline for Design and Analysis of Nuclear Safety Related Earth Structures
- ANSI/ASCE 2-91 Measurement of Oxygen Transfer in Clean Water
- ANSI/ASCE 3-91 Standard for the Structural Design of Composite Slabs and ANSI/ASCE 9-91 Standard Practice for the Construction and Inspection of Composite Slabs
- ASCE 4-98 Seismic Analysis of Safety-Related Nuclear Structures
- Building Code Requirements for Masonry Structures (ACI 530-02/ASCE 5-02/TMS 402-02) and Specifications for Masonry Structures (ACI 530.1-02/ASCE 6-02/TMS 602-02)
- ASCE/SEI 7-05 Minimum Design Loads for Buildings and Other Structures
- ANSI/ASCE 8-90 Standard Specification for the Design of Cold-Formed Stainless Steel Structural Members
- ANSI/ASCE 9-91 listed with ASCE 3-91
- ASCE 10-97 Design of Latticed Steel Transmission Structures
- SEI/ASCE 11-99 Guideline for Structural Condition Assessment of Existing Building
- ASCE 12-05 Guideline for the Design of Urban Subsurface Drainage
- ASCE 13-05 Standard Guidelines for Installation of Urban Subsurface Drainage
- ASCE 14-05 Standard Guideline for Operation and Maintenance of Urban Subsurface Drainage
- ASCE 15-98 Standard Practice for Direct Design of Buried Precast Concrete Pipe Using Standard Installation Details (SIDD)
- ASCE 16-95 Standard for Load Resistance Factor Design (LRFD) of Engineered Wood Construction
- ASCE 17-96 Air-Supported Structures
- ASCE 18-96 Standard Guidelines for In-Process Oxygen Transfer Testing
- ASCE 19-96 Structural Applications of Steel Cables for Buildings
- ASCE 20-96 Standard Guidelines for the Design and Installation of Pile Foundations
- ASCE 21-96 Automated People Mover Standards—Part 1
- ASCE 21-98 Automated People Mover Standards—Part 2
- ASCE 21-00 Automated People Mover Standards—Part 3
- SEI/ASCE 23-97 Specification for Structural Steel Beams with Web Openings
- ASCE/SEI 24-05 Flood Resistant Design and Construction
- ASCE 25-97 Earthquake-Actuated Automatic Gas Shut-Off Devices
- ASCE 26-97 Standard Practice for Design of Buried Precast Concrete Box Sections
- ASCE 27-00 Standard Practice for Direct Design of Precast Concrete Pipe for Jacking in Trenchless Construction
- ASCE 28-00 Standard Practice for Direct Design of Precast Concrete Box Sections for Jacking in Trenchless Construction
- SEI/ASCE/SFPE 29-99 Standard Calculation Methods for Structural Fire Protection
- SEI/ASCE 30-00 Guideline for Condition Assessment of the Building Envelope
- SEI/ASCE 31-03 Seismic Evaluation of Existing Building
- SEI/ASCE 32-03 Design and Construction of Frost-Protected Shallow Foundations
- EWRI/ASCE 33-01 Comprehensive Transboundary International Water Quality Management Agreement
- EWRI/ASCE 34-01 Standard Guidelines for Artificial Recharge of Ground Water
- EWRI/ASCE 35-01 Guidelines for Quality Assurance of Installed Fine-Pore Aeration Equipment
- CI/ASCE 36-01 Standard Construction Guidelines for Microtunneling
- SEI/ASCE 37-02 Design Loads on Structures During Construction
- CI/ASCE 38-02 Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data
- EWRI/ASCE 39-03 Standard Practice for the Design and Operation of Hail Suppression Projects
- ASCE/EWRI 40-03 Regulated Riparian Model Water Code
- ASCE/EWRI 42-04 Standard Practice for the Design and Operation of Precipitation Enhancement Projects
- ASCE/SEI 43-05 Seismic Design Criteria for Structures, Systems, and Components in Nuclear Facilities
- ASCE/EWRI 44-05 Standard Practice for the Design and Operation of Supercooled Fog Dispersion Projects
- ASCE/EWRI 45-05 Standard Guidelines for the Design of Urban Stormwater Systems
- ASCE/EWRI 46-05 Standard Guidelines for the Installation of Urban Stormwater Systems
- ASCE/EWRI 47-05 Standard Guidelines for the Operation and Maintenance of Urban Stormwater Systems



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FOREWORD

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Conrad Battreal
William L. Coulbourne, P.E.
Shou Shan Fan, Ph.D.
Daryle L. Fontenot
Kenneth A. Ford
James S. Graham, Jr., P.E.
Michael Graham
Barbara D. Hayes
John L. Ingargiola
Christopher P. Jones, P.E., Vice Chair
Thomas MacAllen
Joseph J. Messersmith, Jr., P.E.
Kim Paarlberg
Spencer M. Rogers, Jr.
Herbert S. Saffir, P.E., L.S.
Edward M. Salisbury, P.E.
Erez Sela, P.E.
Paul R. Tertell
Harry B. Thomas, P.E., Chair
Theodore C. Van Kirk
Robert A. Wessel
Thomas G. Williamson, P.E.

This revision of the standard began in 2001 and incorporates information as described in the commentary.

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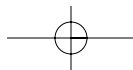
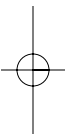
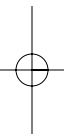
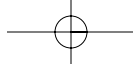
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Flood Resistant Design and Construction

1.0 GENERAL

1.1 SCOPE

This standard provides minimum requirements for flood-resistant design and construction of structures that are subject to building code requirements and that are located, in whole or in part, in flood hazard areas. This standard applies to new construction that includes: (a) new structures, including subsequent work to such structures, and (b) work classified as substantial repair or substantial improvement of an existing structure that is not an historic structure (see Fig. 1-1).

The general provisions of this section shall apply to all new construction and substantial improvements

in flood hazard areas. In addition to the requirements of this section (see Fig. 1-2):

1. Section 2 shall apply to all new construction and substantial improvements in Flood Hazard Areas and High Risk Flood Hazard Areas except those that are identified as Coastal High Hazard Areas and Coastal A Zones;
2. Section 3 shall apply to all new construction and substantial improvements in High Risk Flood Hazard Areas;
3. Section 4 shall apply to all new construction and substantial improvements in Coastal High Hazard Areas and Coastal A Zones; and
4. Sections 5, 6, 7, 8, and 9 shall apply to all new construction and substantial improvements.

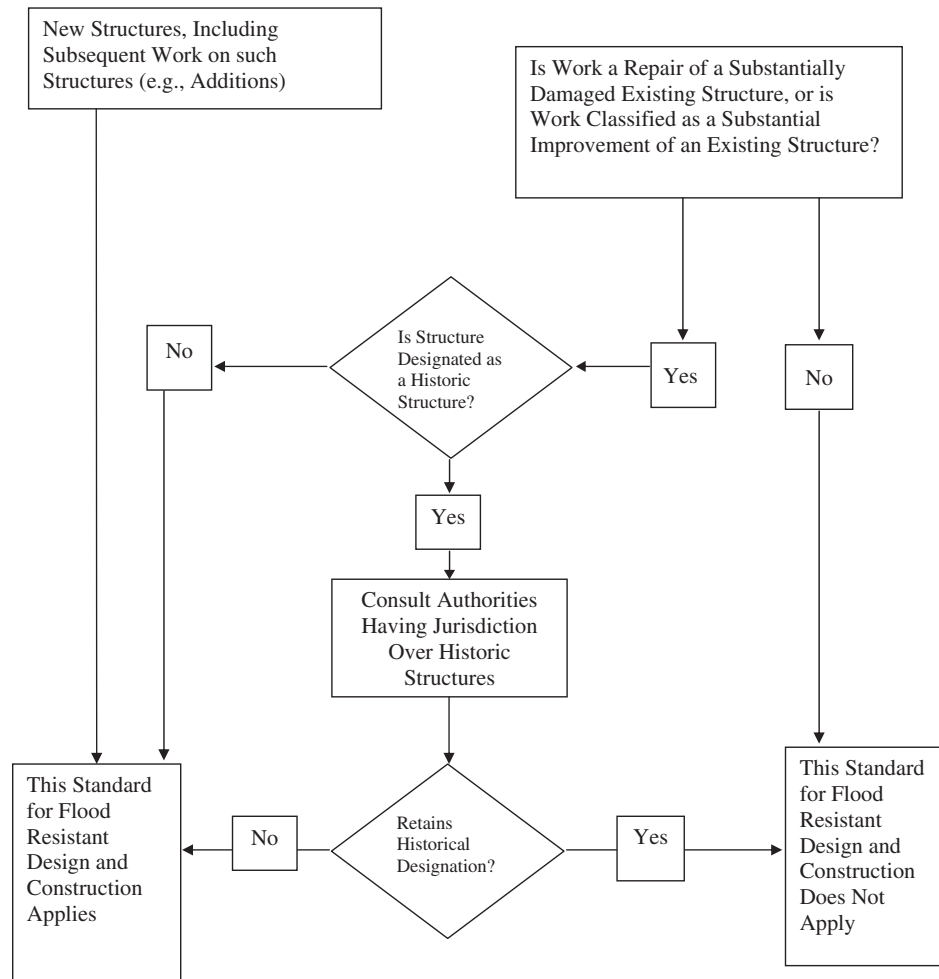


FIGURE 1-1. Illustration of Application of this Standard.