Summary of Modifications/Changes in this Update

This Summary of Changes is for information only.
It is not a part of the referenced document, and should not be used for project documentation.

U.S. Department of Veterans Affairs ♦ Office of Construction & Facilities Management

DATE OF THIS VERSION (new)

August 1, 2013

TITLE OF DOCUMENT (new title if applicable):

Structural Design Manual for Seismic Retrofit Projects

DATE OF VERSION BEING SUPERSEDED (old):

October 1, 2009

DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):

Structural Design Manual for Seismic Retrofit Projects

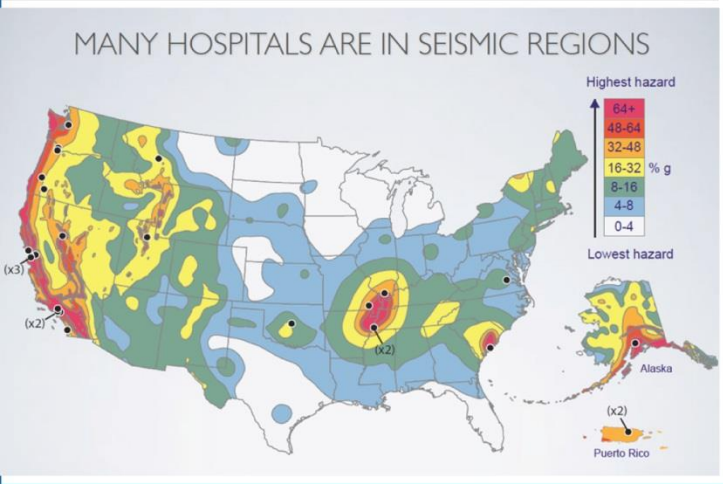
SUMMARY OF CHANGES IN THIS VERSION:

1. Reference of IBC with Latest Edition;
2. Earthquake design accelerations reference changed from USGS to H-18-8; and
3. Updated reference of structural spec sections.

VA

U.S. Department of Veterans Affairs

Office of Construction & Facilities Management



Seismic design manual

AUGUST 2013

For VA Retrofit Projects

STRUCTURAL DESIGN MANUAL
FOR SEISMIC RETROFIT PROJECTS

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STRUCTURAL DESIGN MANUAL
FOR SEISMIC RETROFIT PROJECTS DEPARTMENT OF VETERANS AFFAIRS

August 1, 2013

1. CRITERIA UNIQUE TO VA

Existing buildings requiring seismic strengthening shall be designed in accordance with VA Handbook H-18-8, Seismic Design Requirements, Revised, August 2013.

2. GENERAL

2.1 Structural design shall comply with the latest editions of the following:

2.1.1 Reinforced Concrete Design - ACI 318, Building Code Requirements for Reinforced Concrete, American Concrete Institute.

2.1.2 Structural Steel Design - Specification for Structural Steel for Buildings, American Institute of Steel Construction, Inc.

2.1.3 International Building Code (latest edition) International Code Council, Inc.

2.1.4 Significant variations from the above in local building codes shall be brought to the attention of the Project Manager, for approved substitution prior to their use in the structural design.

2.2 Where applicable, verify the load-bearing capability of the existing structural elements to support the new design loads.

2.3 Where alterations are made to the structural elements in existing buildings, these elements individually and the buildings as units, must maintain adequate strength to safely resist both gravity and lateral loads. Any resulting deficiencies must be reinforced accordingly.

2.4 Follow the Fire Protection Design Manual for fireproofing requirements of structural elements.

3. BASIS OF DESIGN

3.1 Prepare contract documents including specifications to reinforce the existing building to resist maximum considered earthquake and design spectral response acceleration obtained from VA Handbook (H-18-8).

3.2 The existing building shall be inspected for indications of any structural alterations, deteriorations, or significant differential settlement affecting the capacity of the building to resist superimposed vertical and lateral loads.

3.3 Explore methods of reinforcing the building to arrive at the most desirable solution considering both total construction cost and minimizing noise and disruption of the facility’s operation during construction. Correlate also to existing functional requirements with proposed structural changes desired.

3.4 Reinforce interior and exterior walls as necessary to resist in plane and out of plane forces.

3.5 An earlier //detailed/preliminary//seismic study of the building completed in May 1, 2006 is available with VA Office of Facilities Management, and will be used for guidance only.

4. APPLICABLE STRUCTURAL MASTER SPECIFICATIONS INDEX

SECTION	DATE	TITLE
01 45 00	07/13	TESTING LABORATORY SERVICES
02 41 00	04/13	DEMOLITION
31 23 19	10/12	DEWATERING
31 20 00	10/12	EARTH MOVING
31 23 23.33	10/12	FLOWABLE FILL
31 62 00	10/12	DRIVEN PILES
31 63 16	10/12	AUGER-PLACED CONCRETE PILES
31 63 26	10/12	DRILLED CAISSONS
03 30 00	10/01	CAST-IN-PLACE CONCRETE
03 37 00	07/11	SHOTCRETE
05 12 00	11/12	STRUCTURAL STEEL FRAMING
05 21 00	03/10	STEEL JOIST FRAMING
05 31 00	10/12	STEEL DECKING
05 30 00	07/11	COMPOSITE METAL DECKING
13 05 41	08/11	SEISMIC RESTRAINTS FOR NON-STRUCTURAL COMPONENTS

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