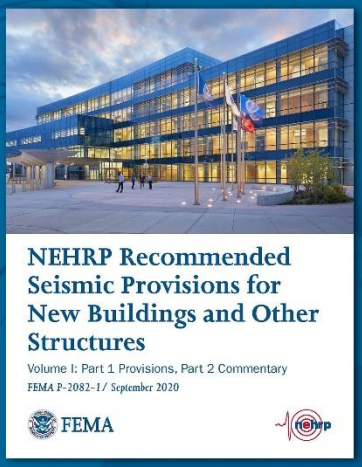

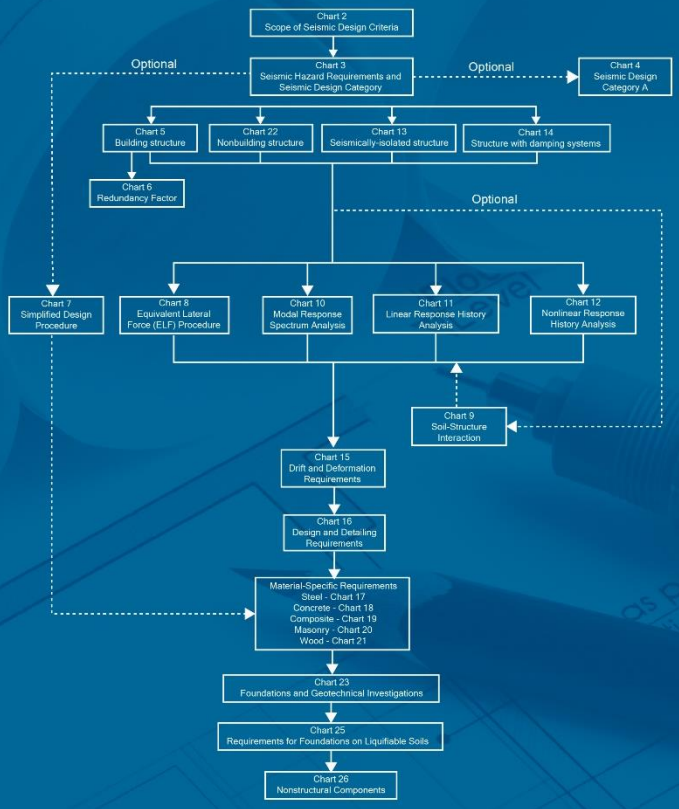

2020 NEHRP Recommended Seismic Provisions: Design Examples, Training Materials, and Design Flow Charts

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Volume III: Design Flow Charts

FEMA

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2020 NEHRP (National Earthquake Hazards Reduction Program) Recommended Seismic Provisions: Design Flow Charts

Prepared for

Federal Emergency Management Agency

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By

Building Seismic Safety Council

National Institute of Building Sciences

Washington, D.C.

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The National Institute of Building Sciences (NIBS) brings together members of the building industry, labor and consumer interests, government representatives, and regulatory agencies to identify and resolve problems and potential problems around the built environment. NIBS is a nonprofit, non-governmental organization established by Congress in 1974.

The Building Seismic Safety Council (BSSC) was established in 1979 under the auspices of NIBS as a national platform for dealing with the complex regulatory, technical, social, and economic issues involved in developing and promulgating building earthquake hazard mitigation regulatory provisions that are national in scope. By bringing together in the BSSC all of the needed expertise and all relevant public and private interests, it was believed that issues related to the seismic safety of the built environment could be resolved and jurisdictional problems overcome through authoritative guidance and assistance backed by a broad consensus. BSSC's mission is to enhance public safety by providing a national forum that fosters coordination of and improvements in seismic planning, design, construction, and regulation in the building community.

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2020 NEHRP Recommended Seismic Provisions: Design Examples, Training Materials, and Design Flow Charts

Volume III: Design Flow Charts

FEMA P-2092-V3 Volume III *Design Flow Charts*, as one of the *NEHRP Provisions'* supporting products, contains a series of flow charts to help practicing engineers better understand the provisions in the 2020 *NEHRP Recommended Seismic Provisions for New Buildings and Other Structures* (FEMA P-2082) and ASCE/SEI 7-22 *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*.

Design flow charts were prepared as part of the 2015 *NEHRP Provisions* supporting materials. Those flow charts were used as a starting point for updates by Bret Lizundia and Jorge Moreno of Rutherford + Chekene. The updated flow charts incorporate revisions between the 2015 *Provisions* and the 2020 *NEHRP Provisions* (and between ASCE/SEI 7-16 and ASCE/SEI 7-22). A general overview of the overall design process is provided in Chart 1, with the rest of the charts focusing on specific topics. The goal of the charts is to highlight the key steps and provisions and the recommended order of implementation. The charts also identify the interrelationships and dependencies of the steps and provisions on one another. To keep the charts reasonably concise, not every step has been addressed, and the reader is cautioned to review the 2020 *NEHRP Provisions* and ASCE/SEI 7-22 carefully as they apply to the specific project of interest.

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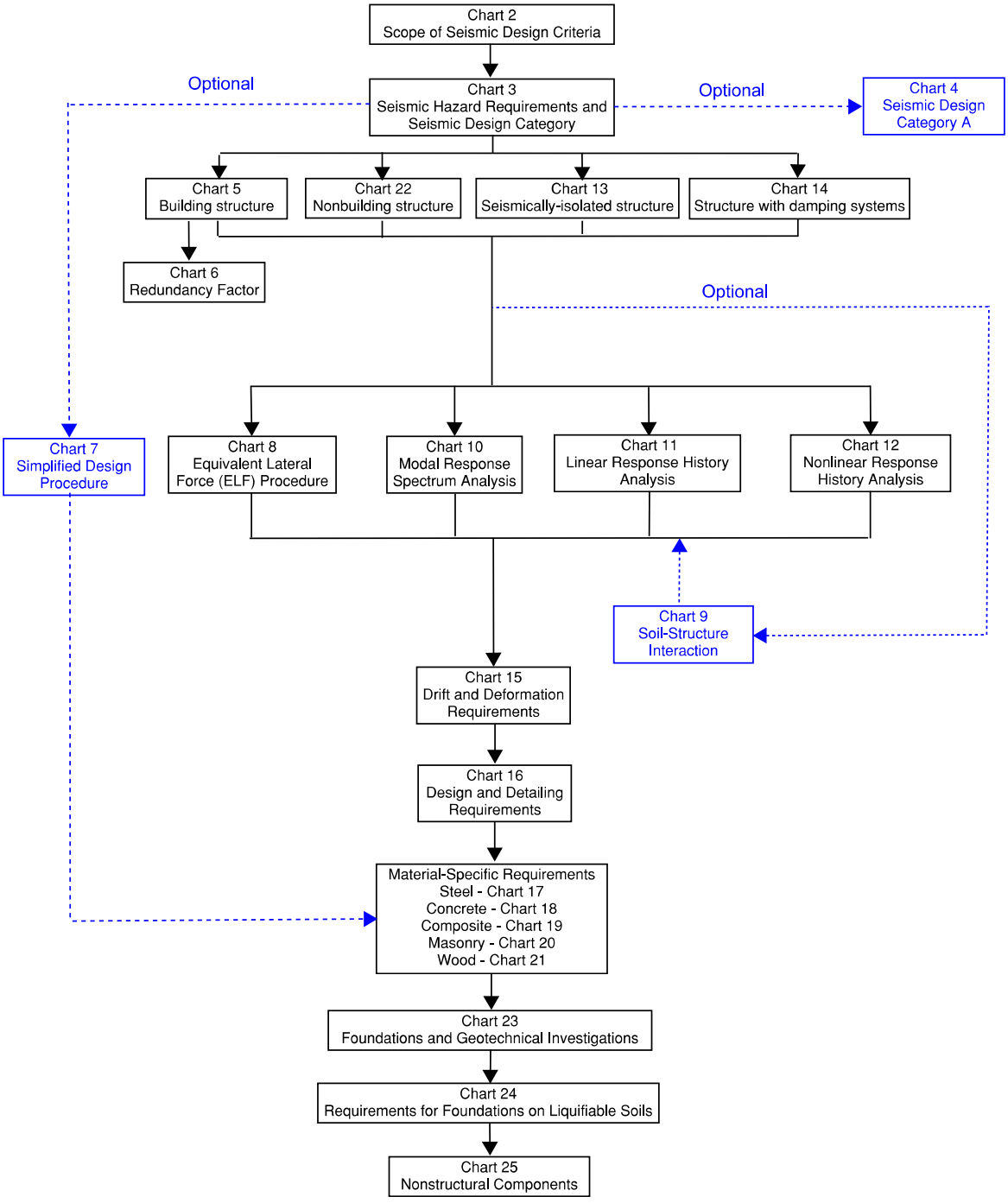

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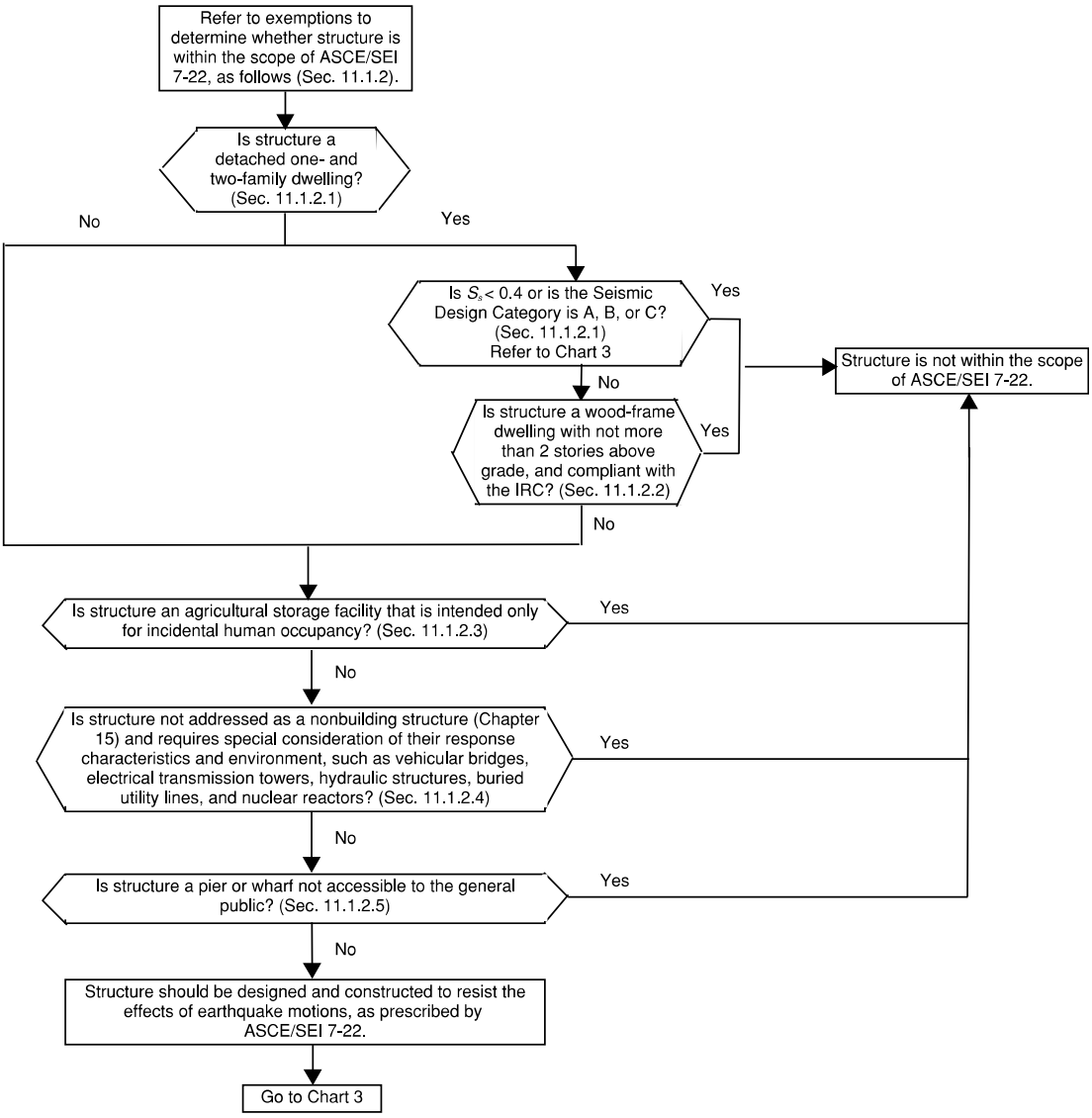

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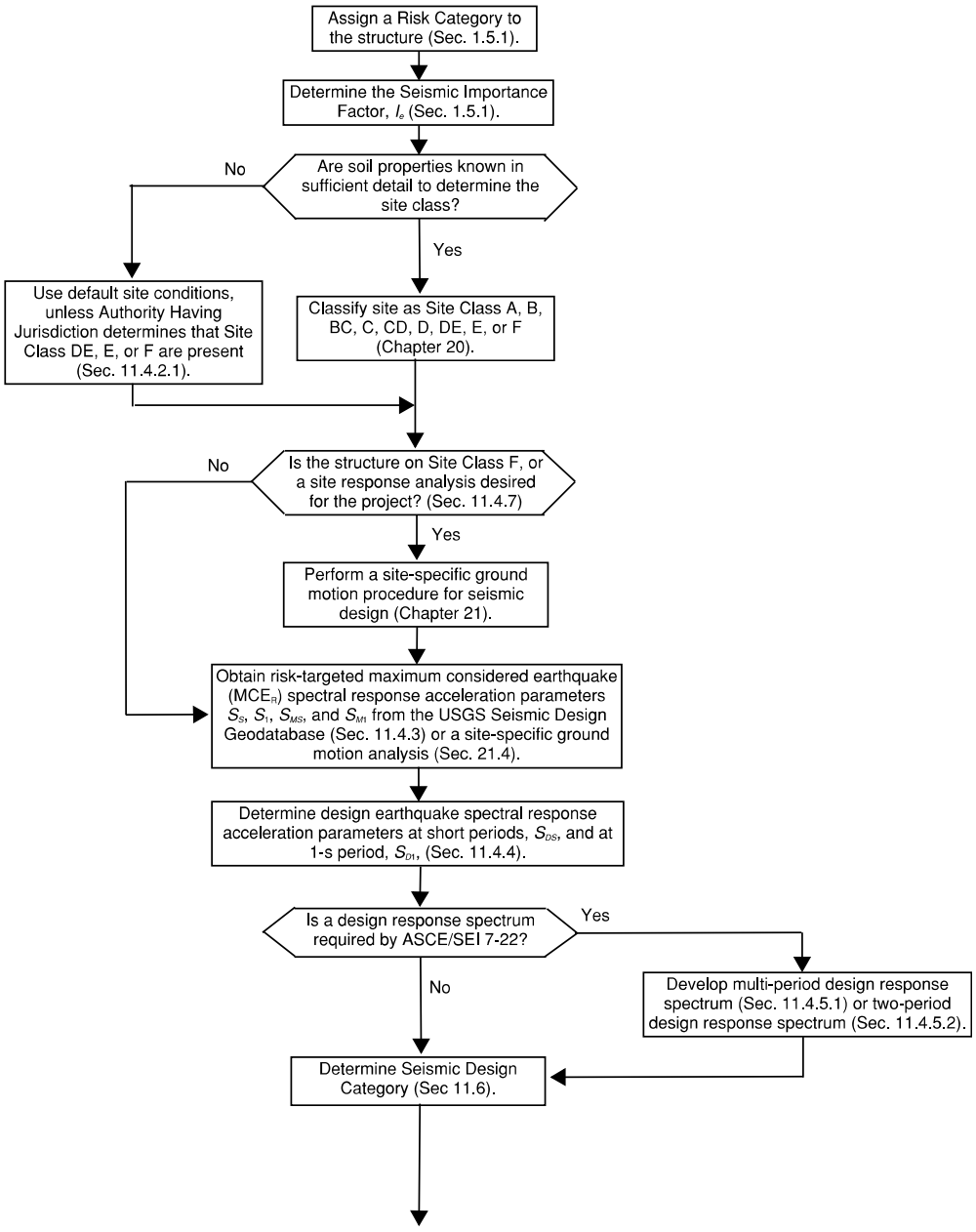

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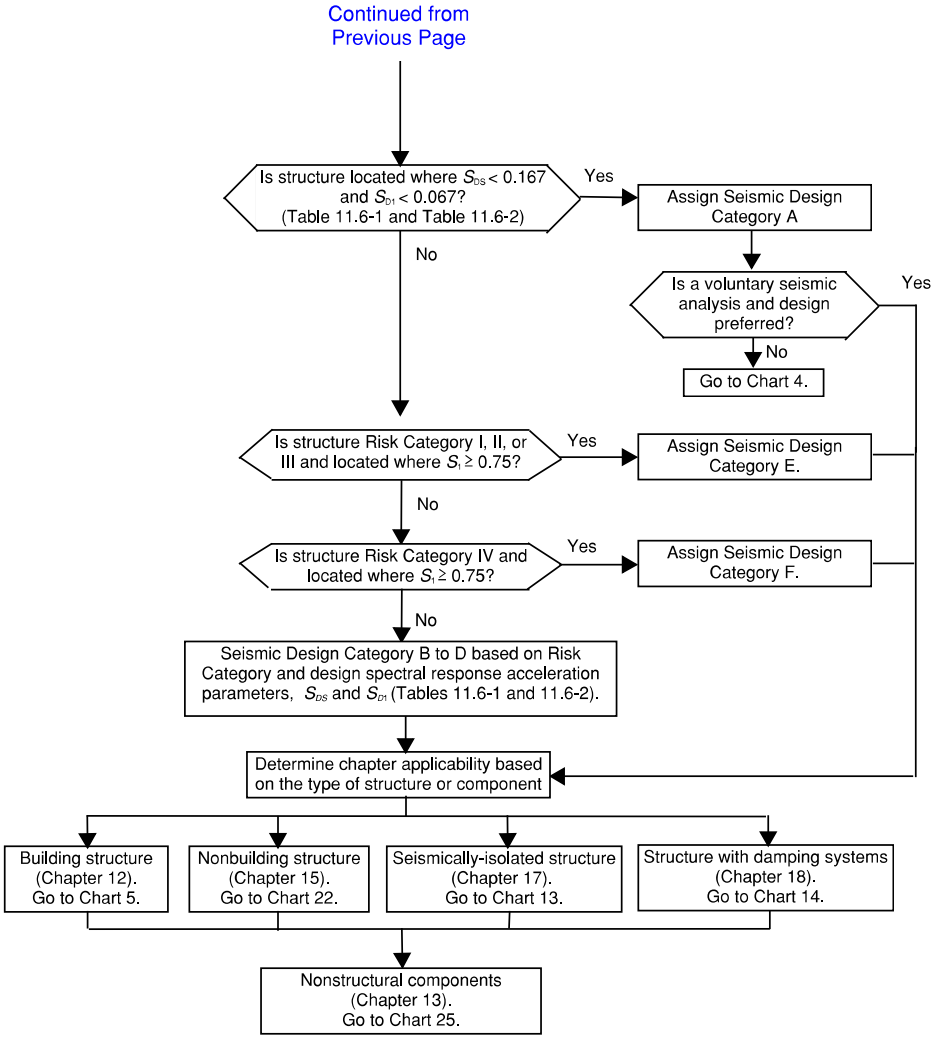

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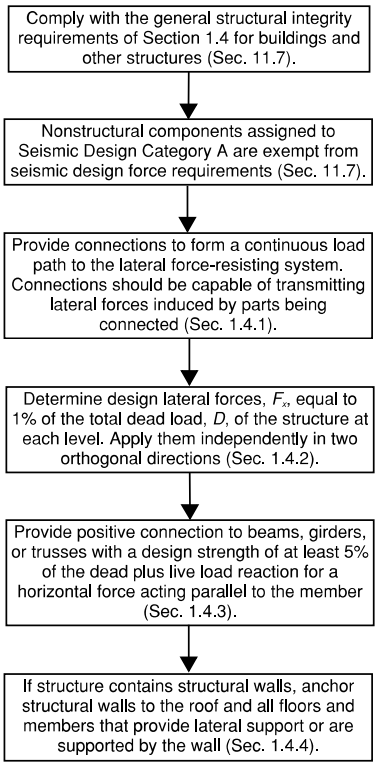

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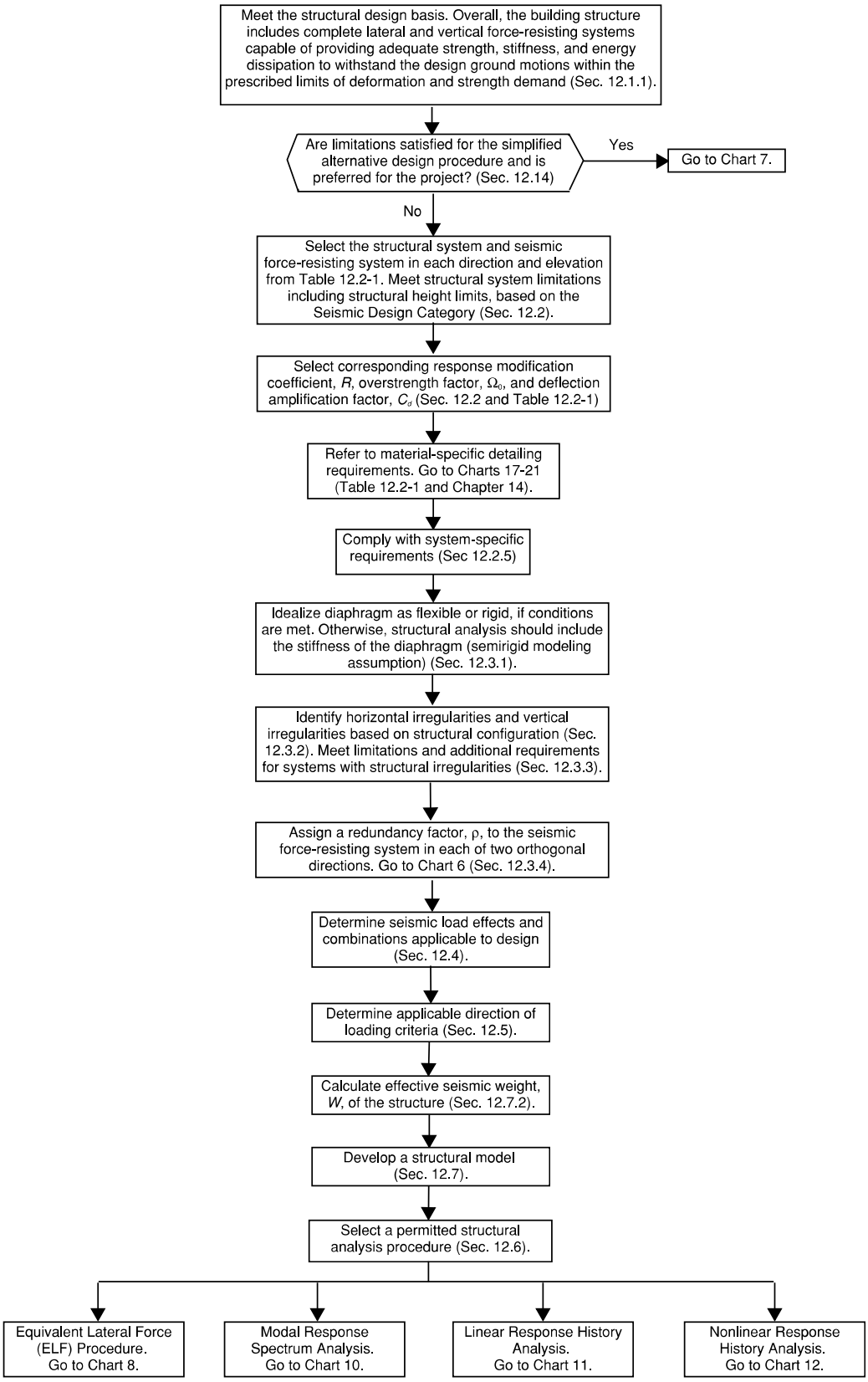

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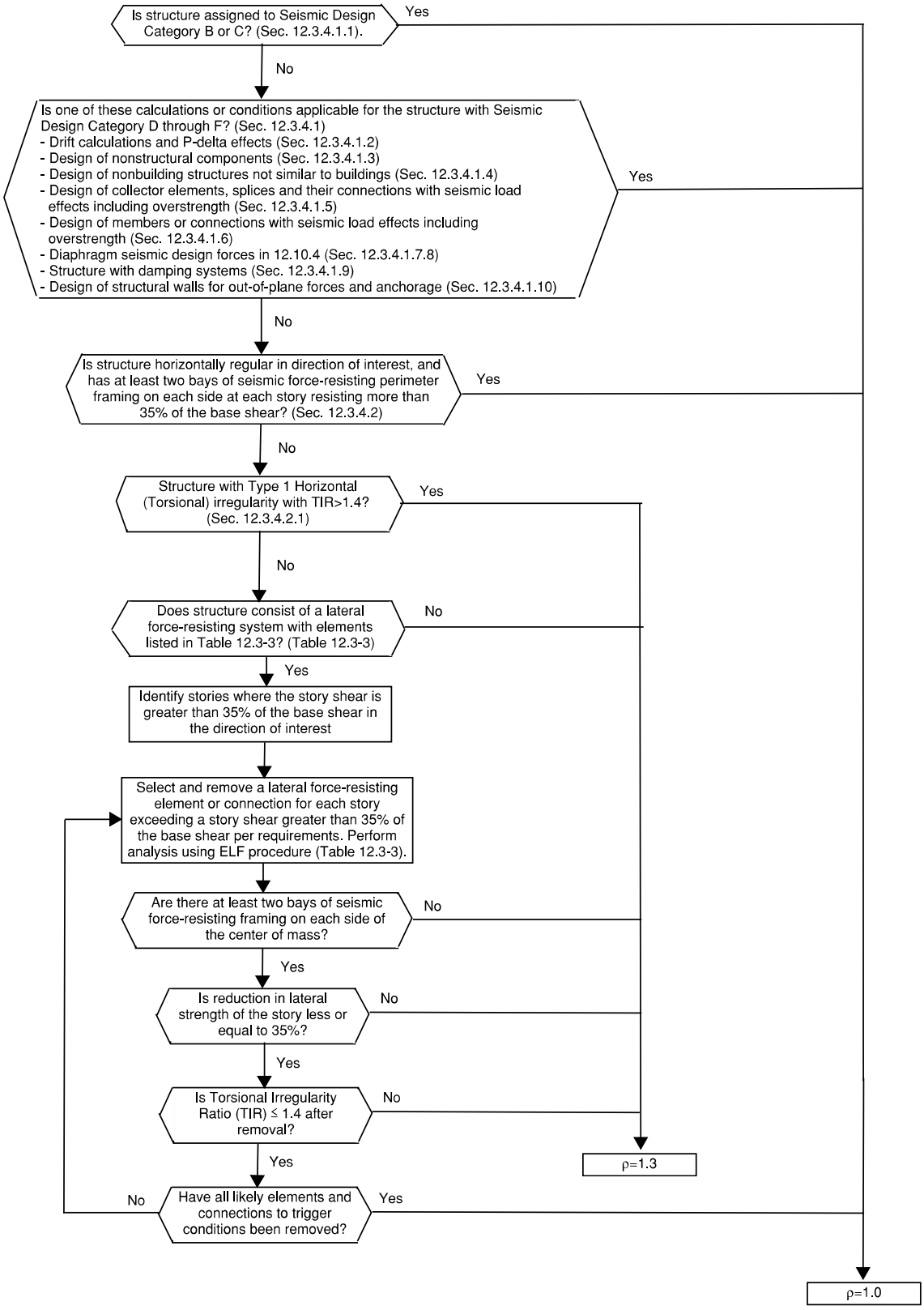

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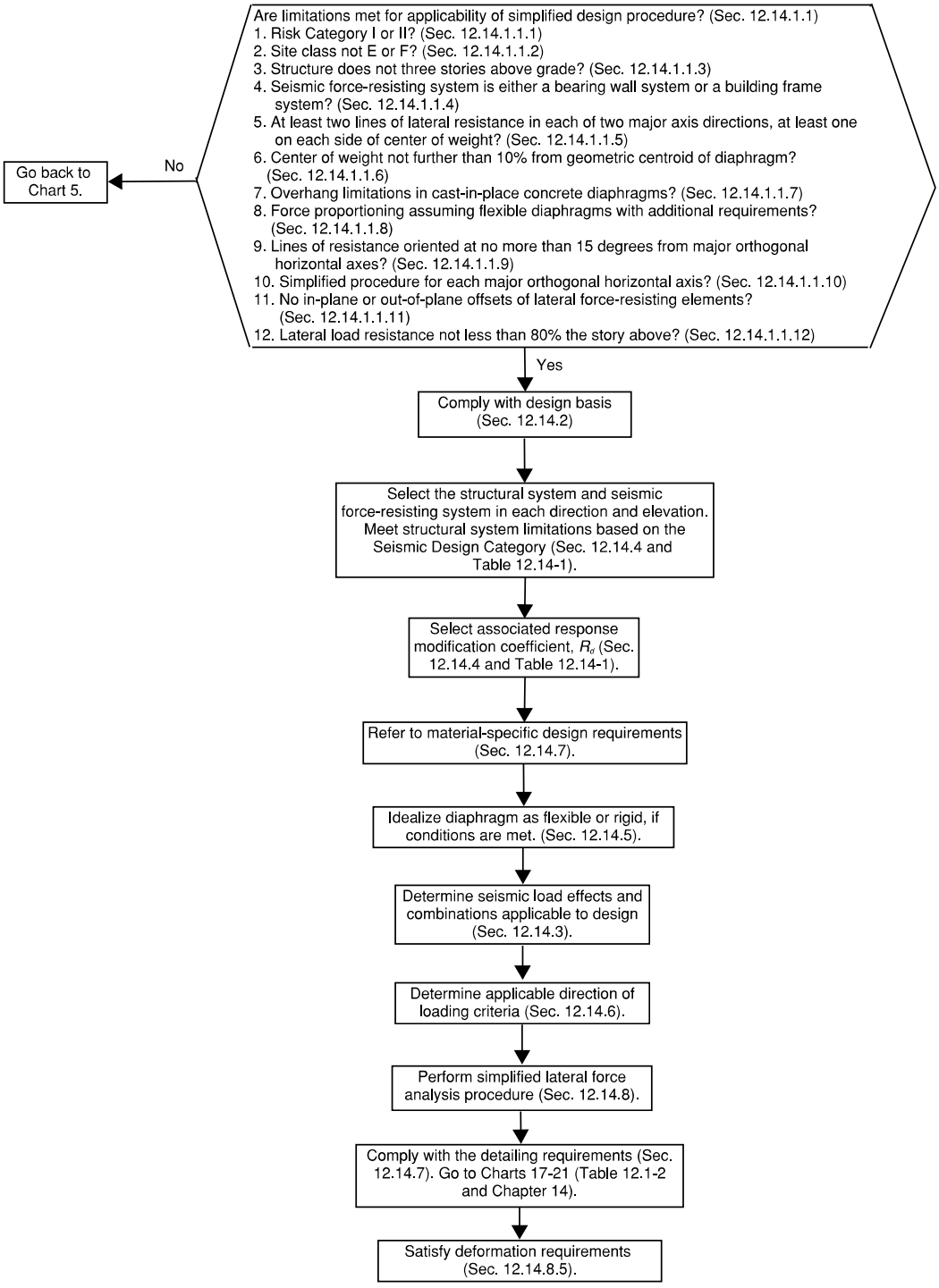

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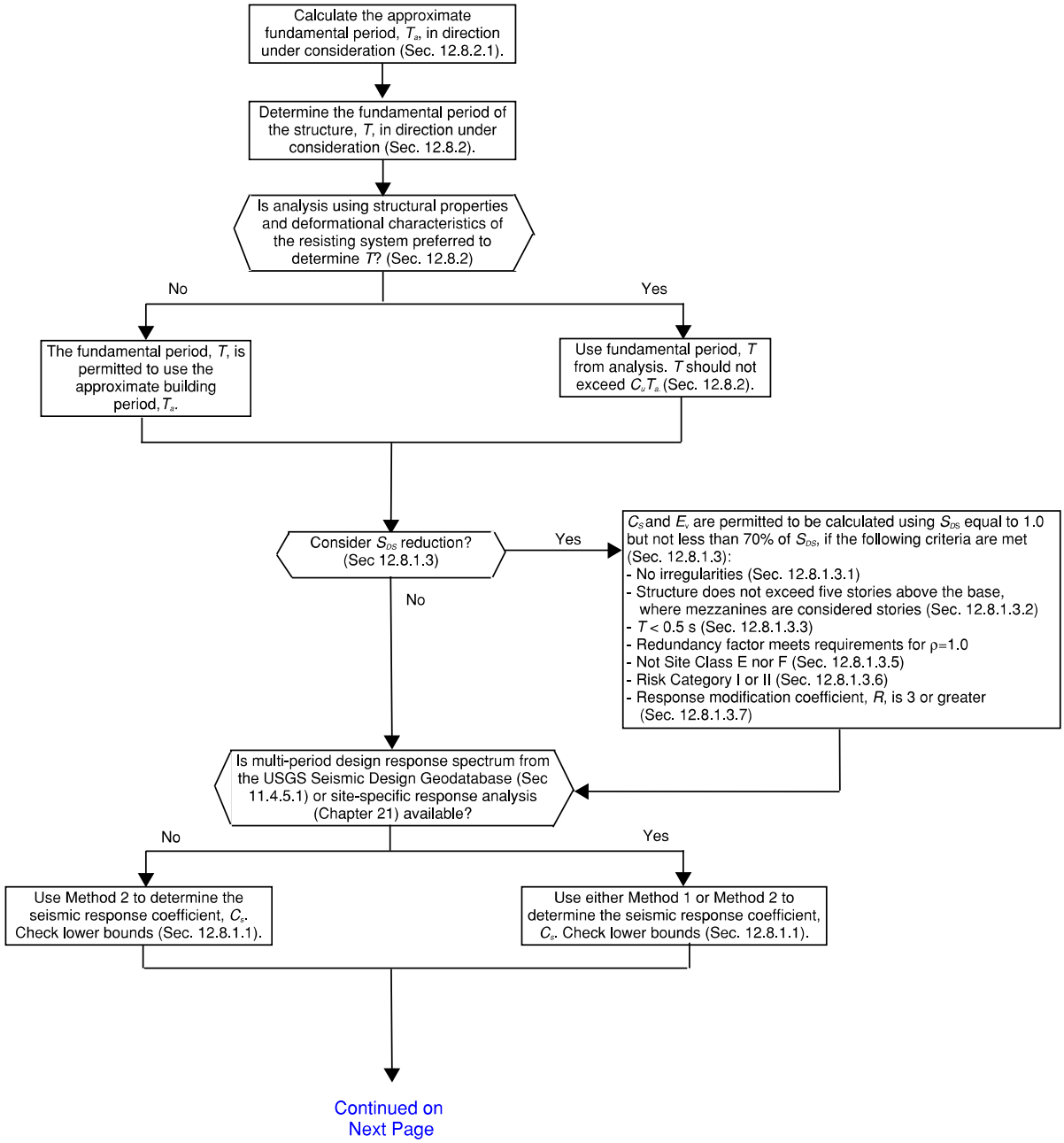

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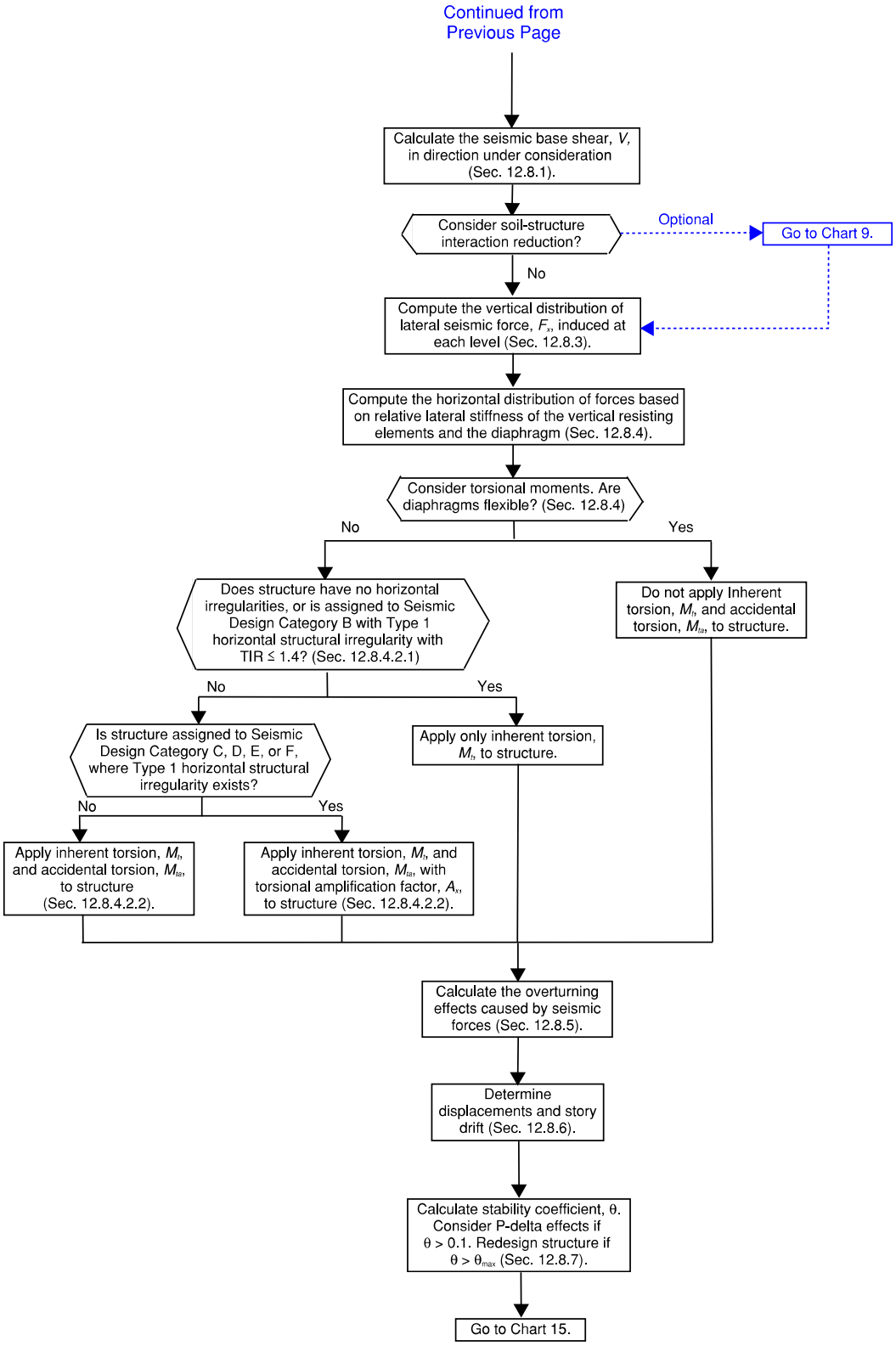

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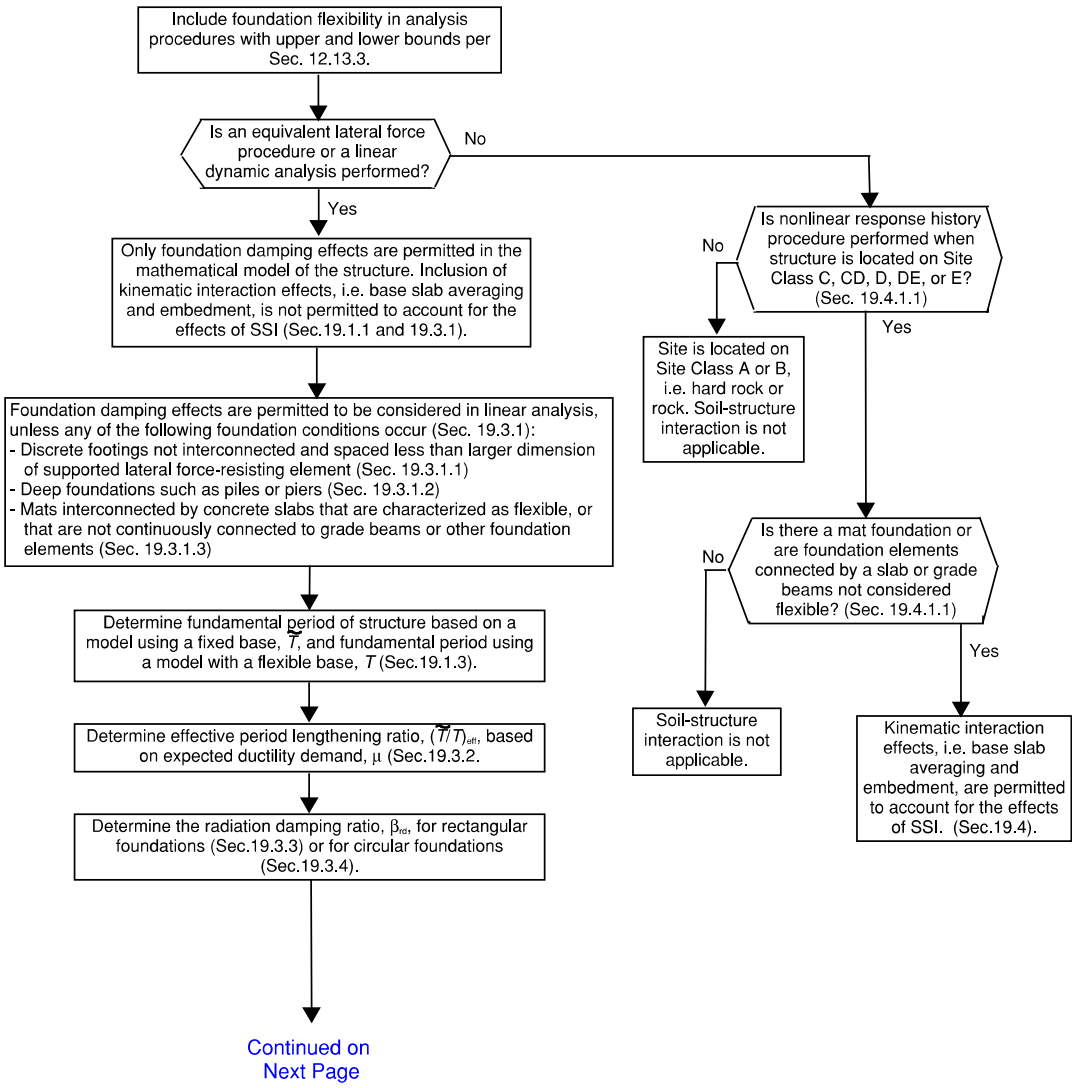

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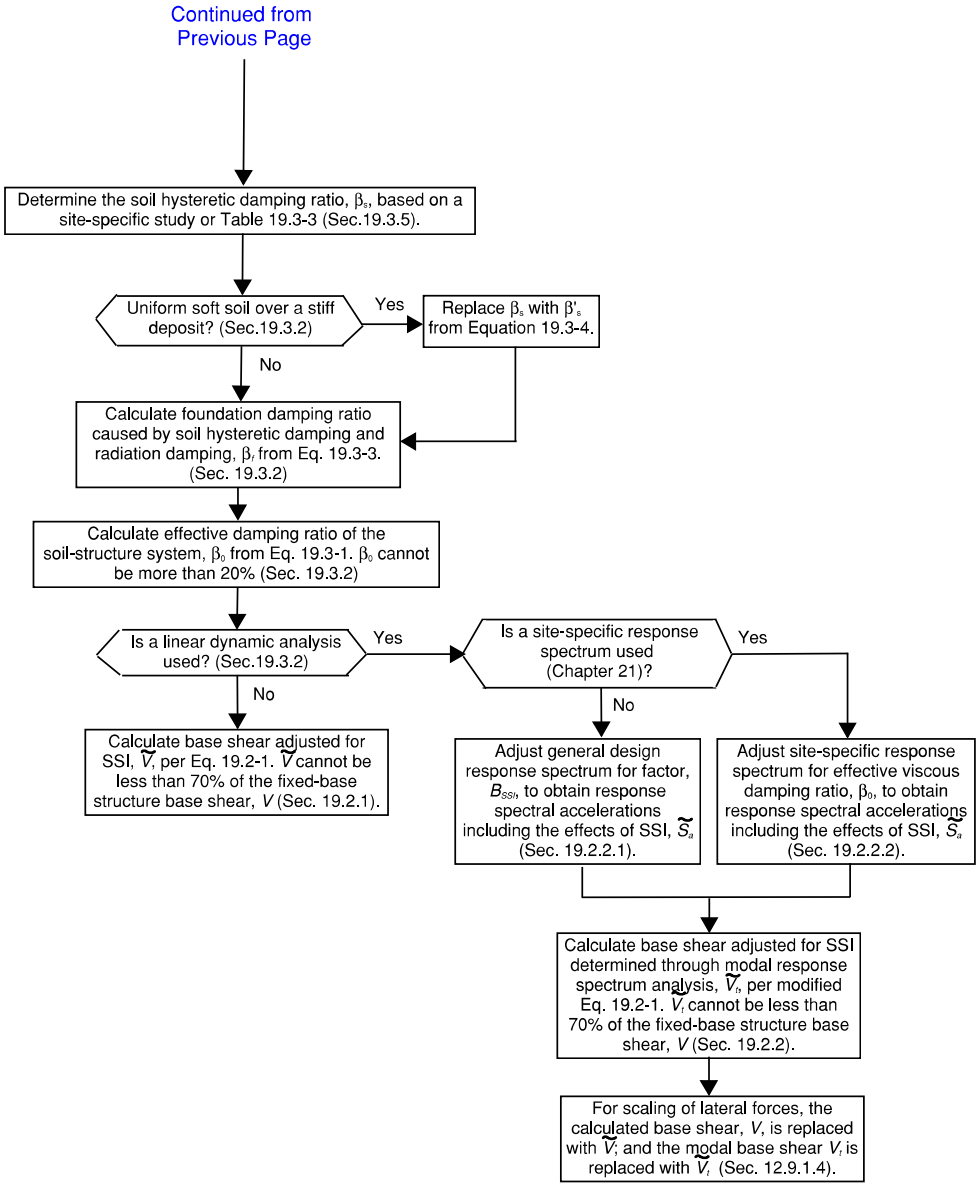

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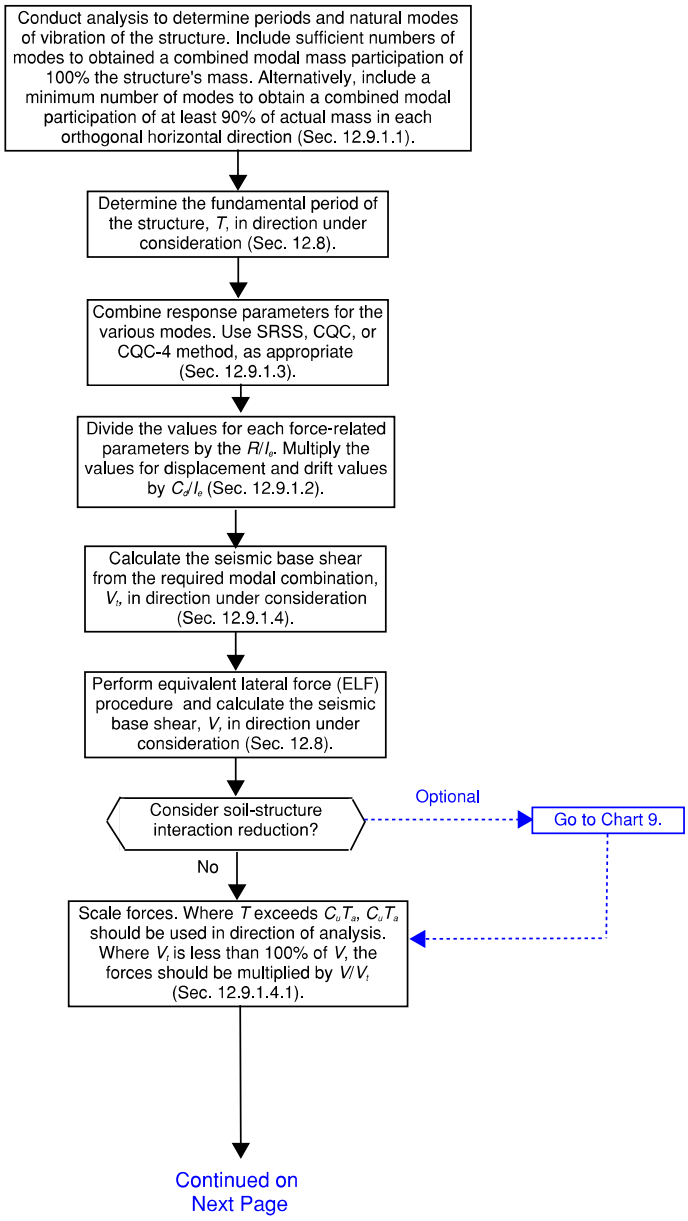

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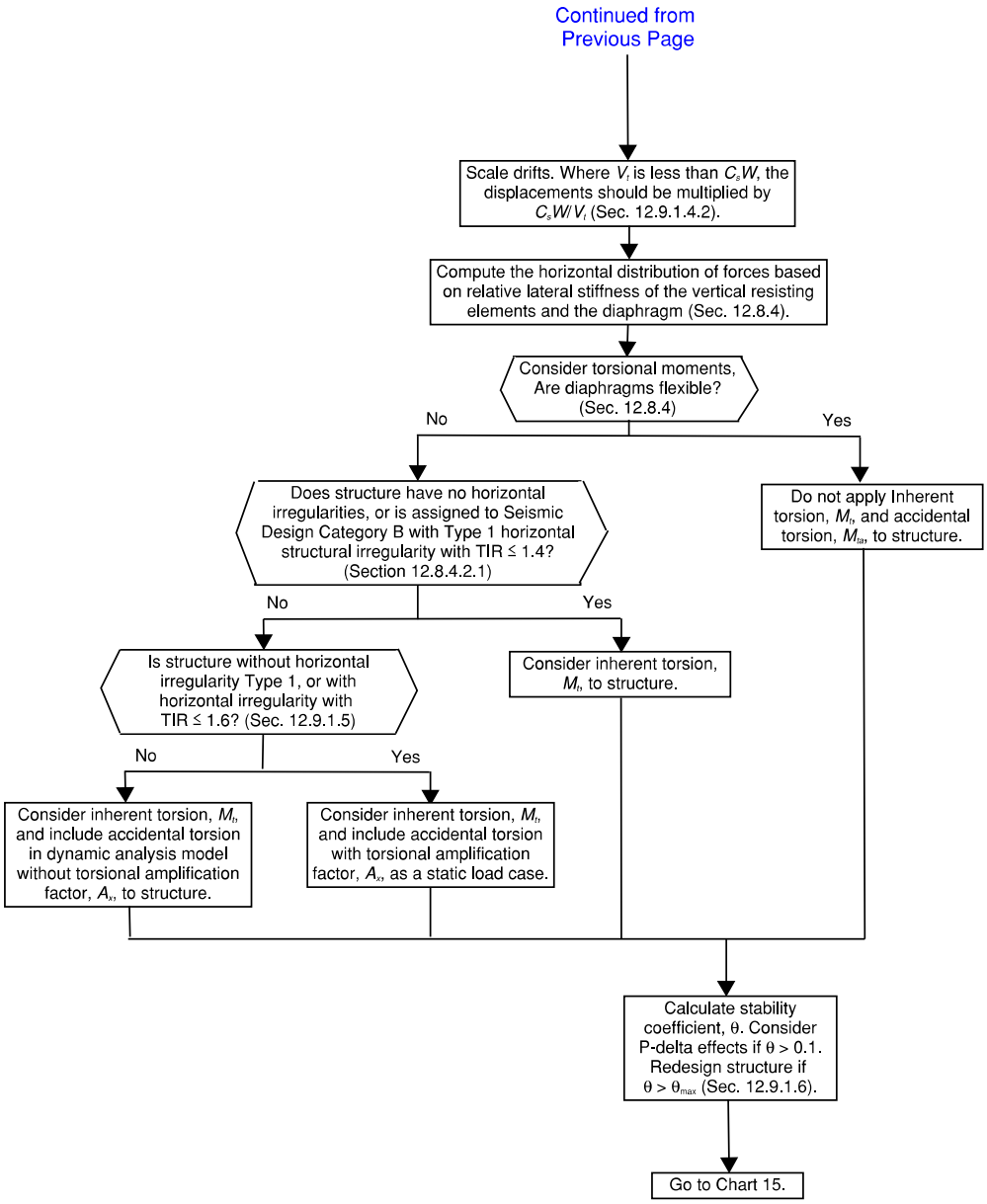

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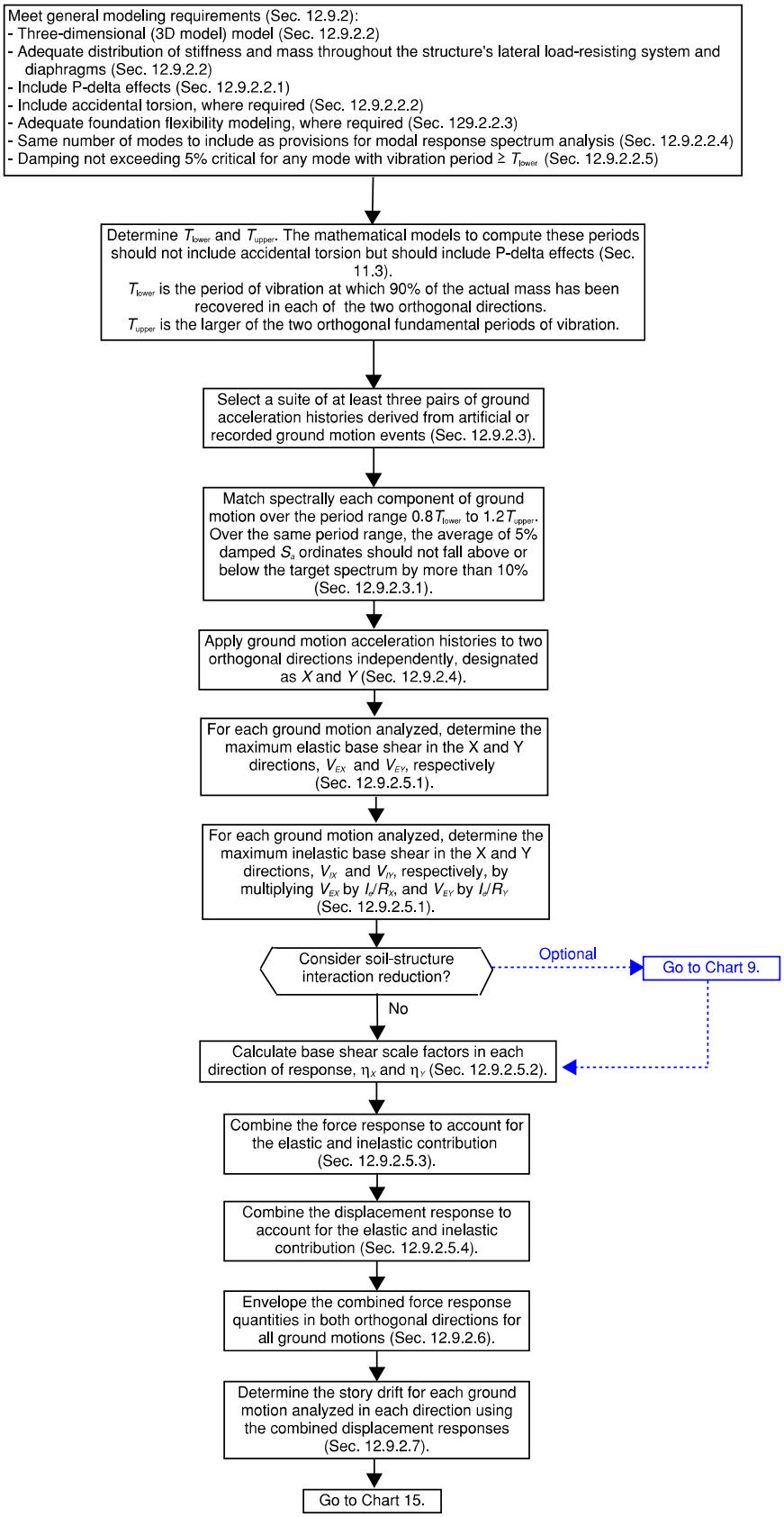

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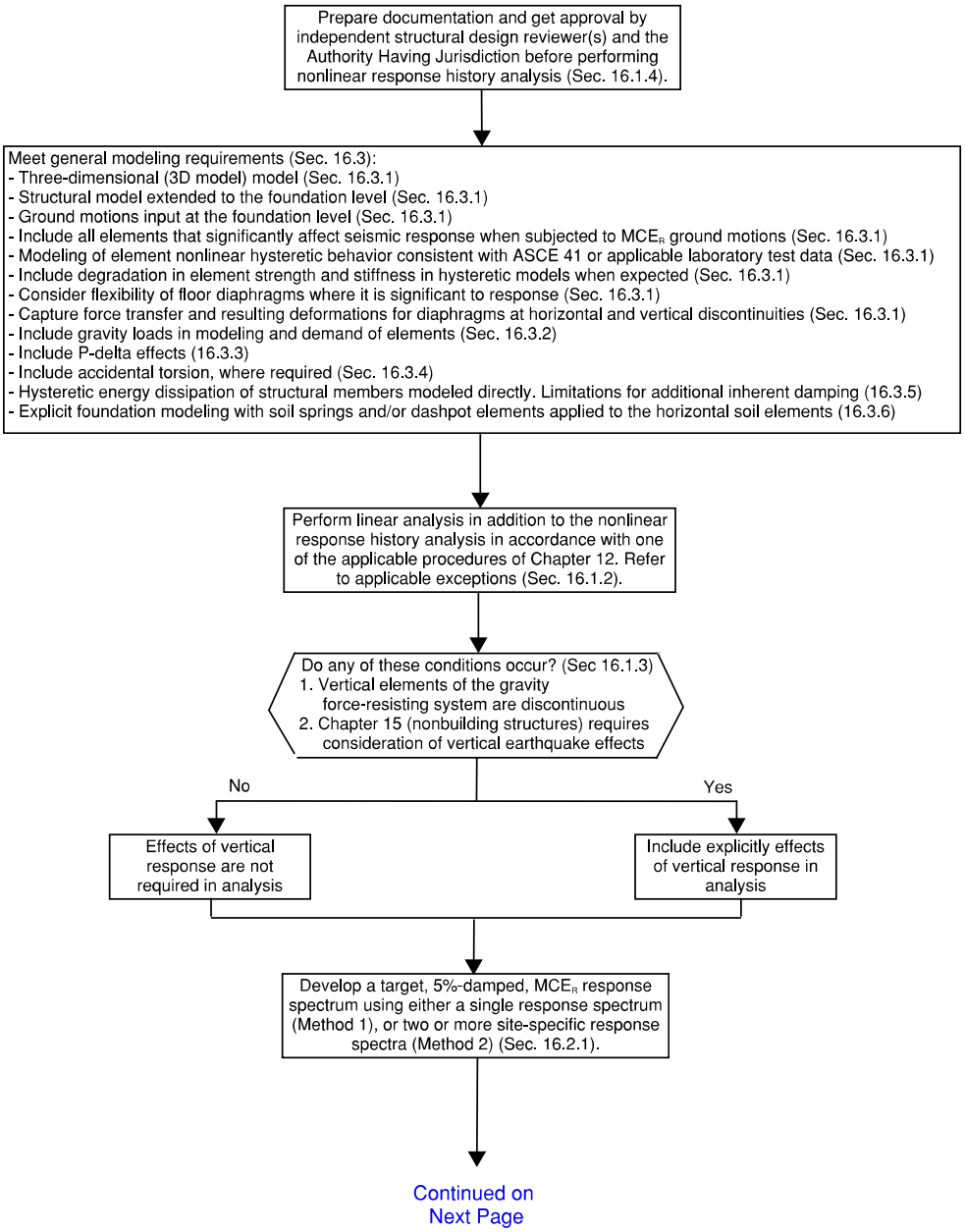

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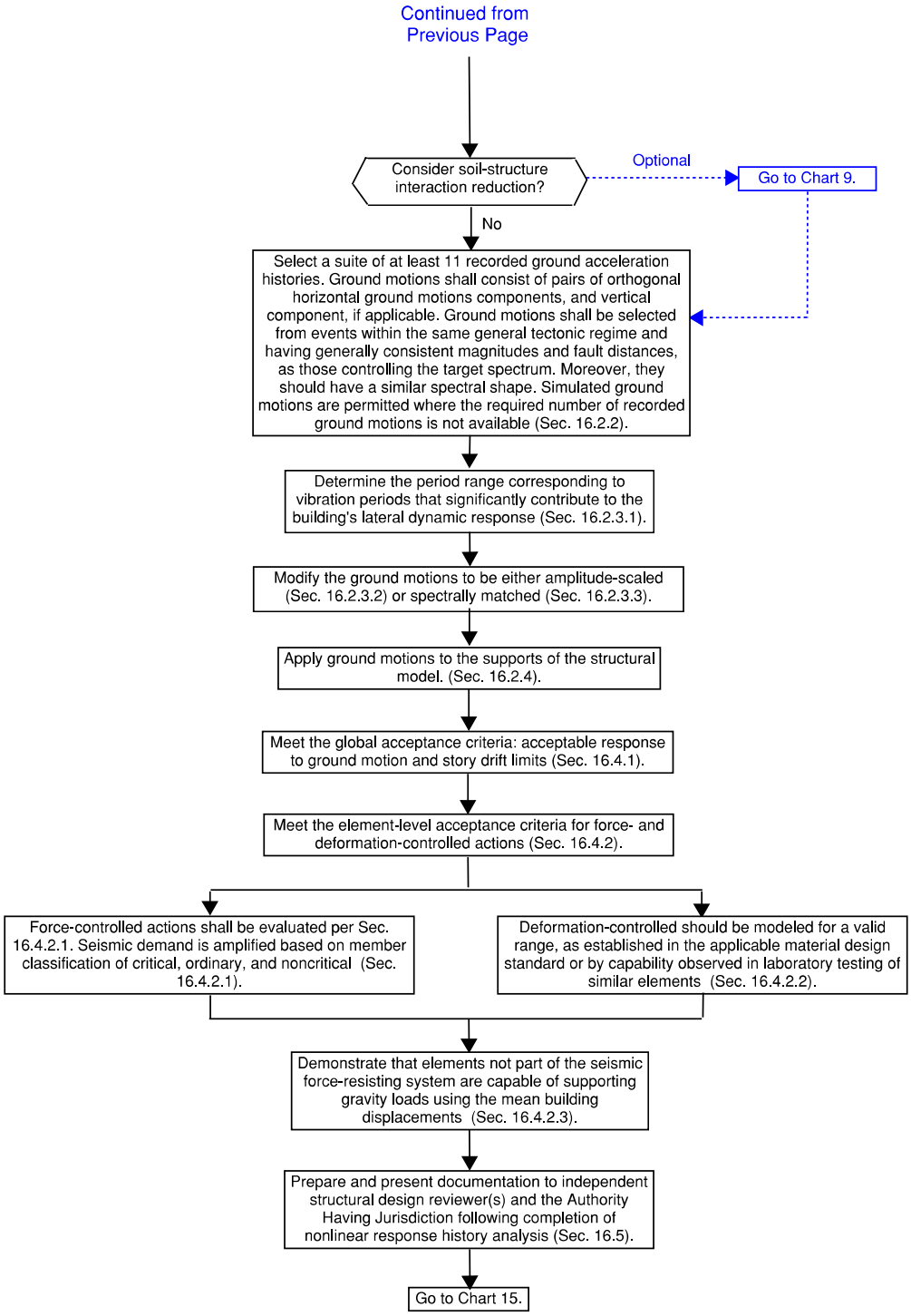

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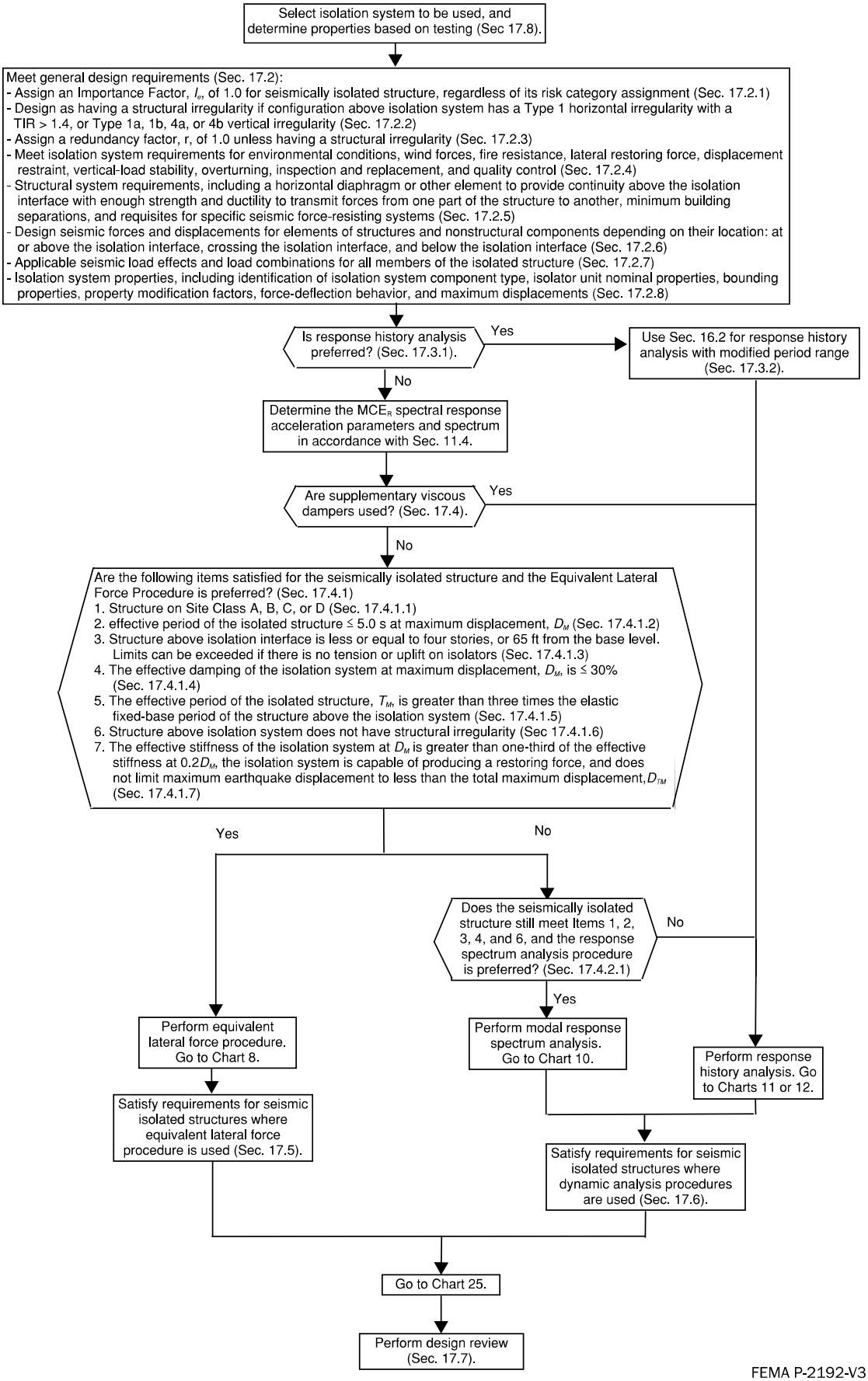

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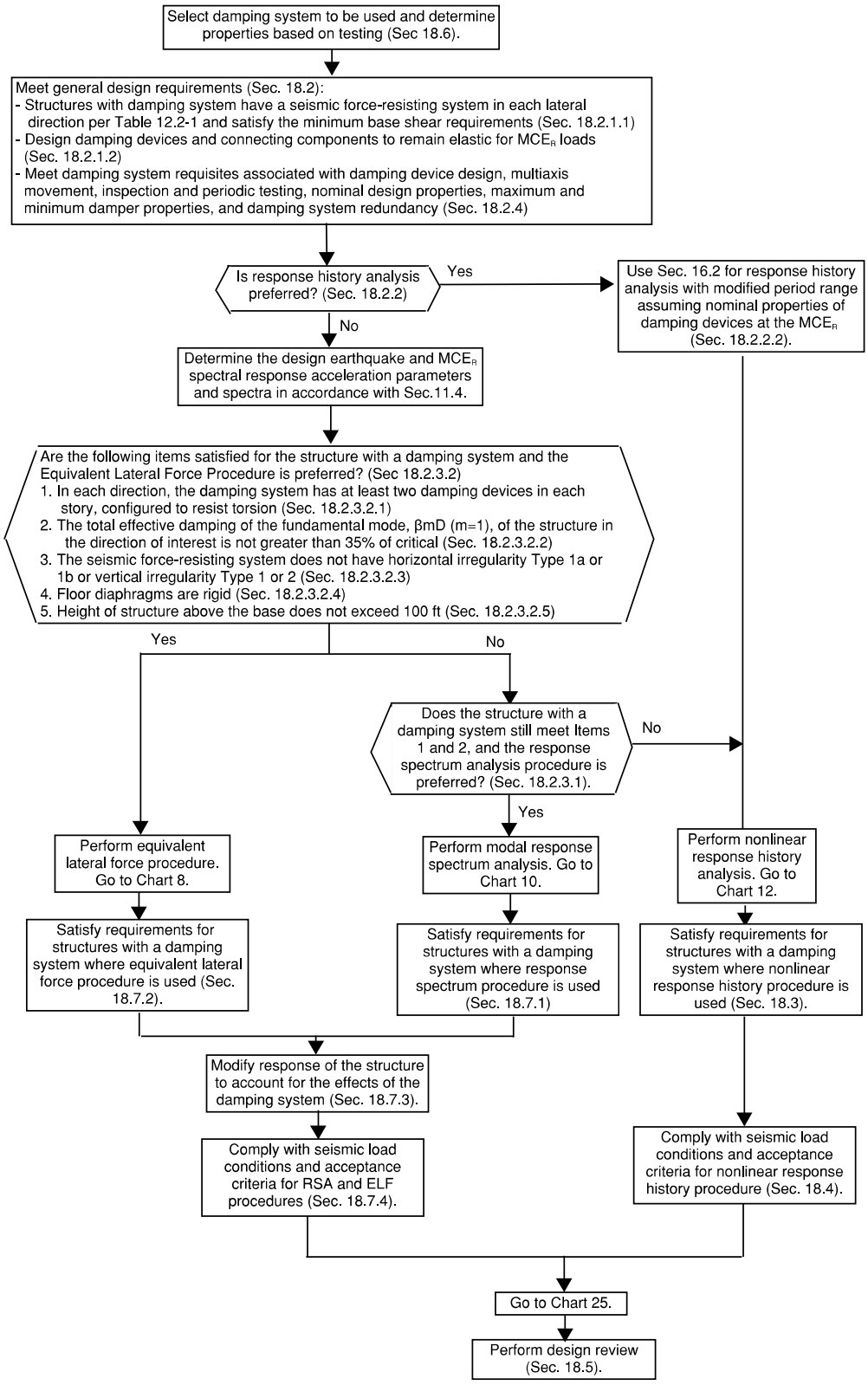

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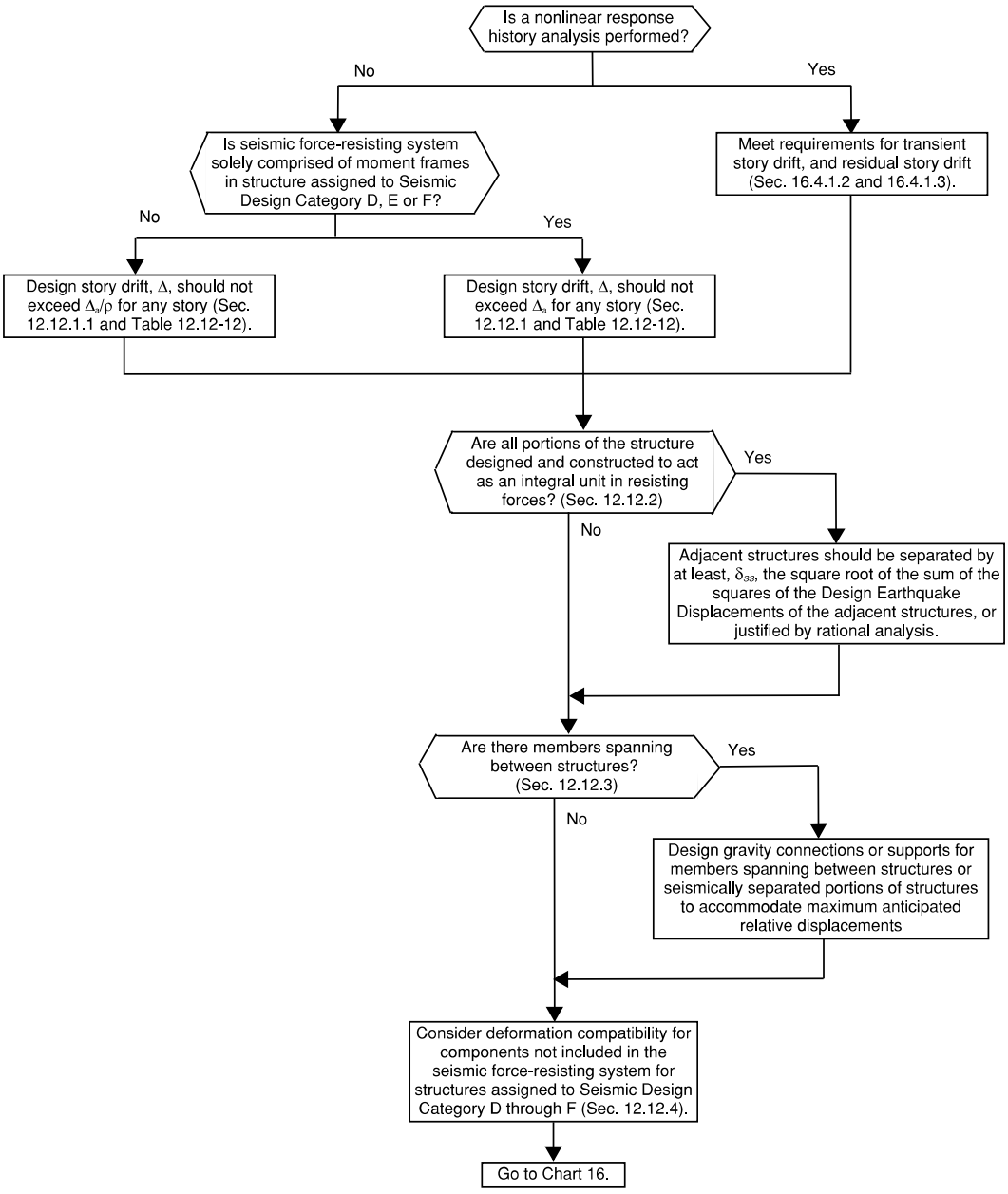

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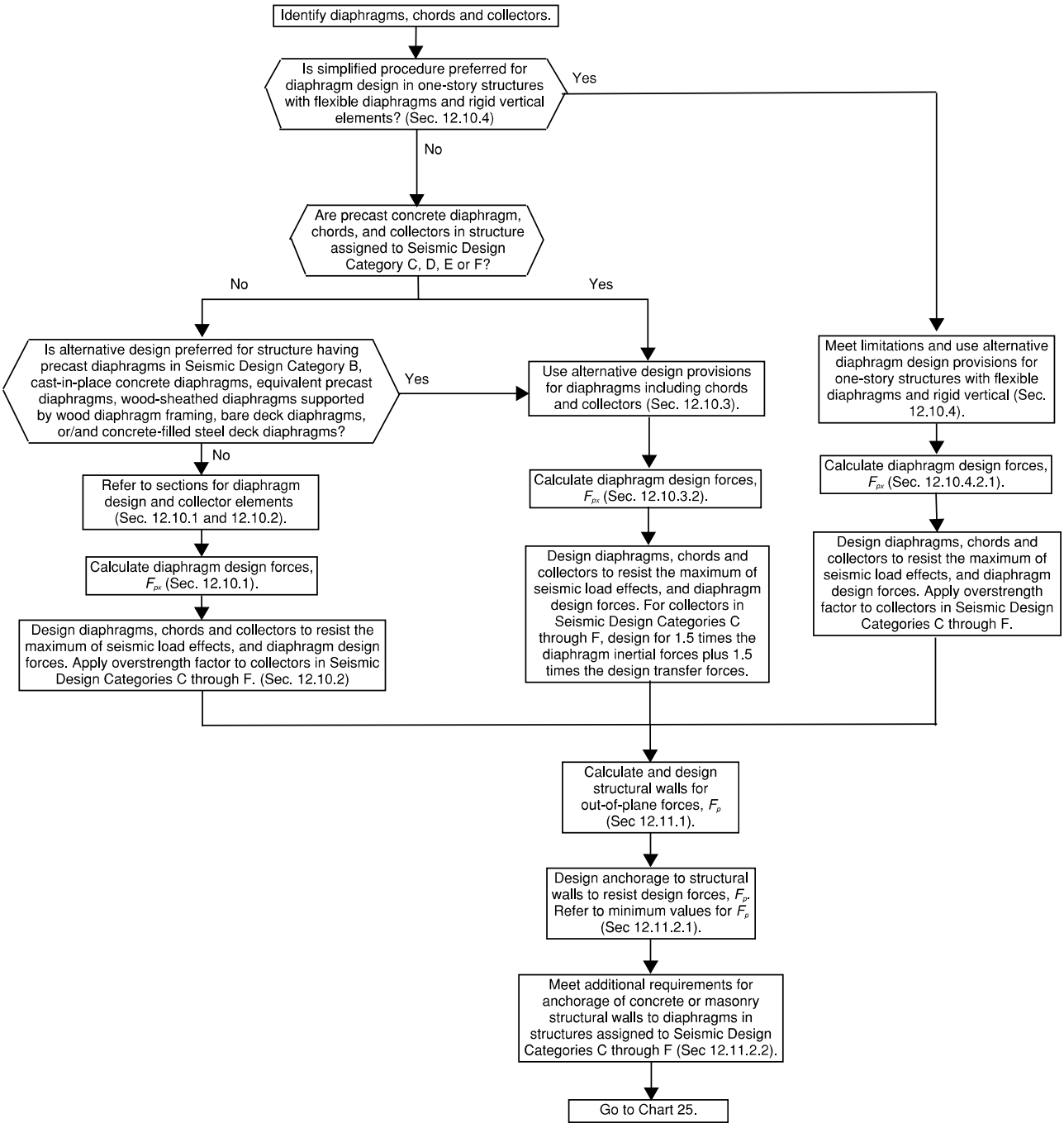

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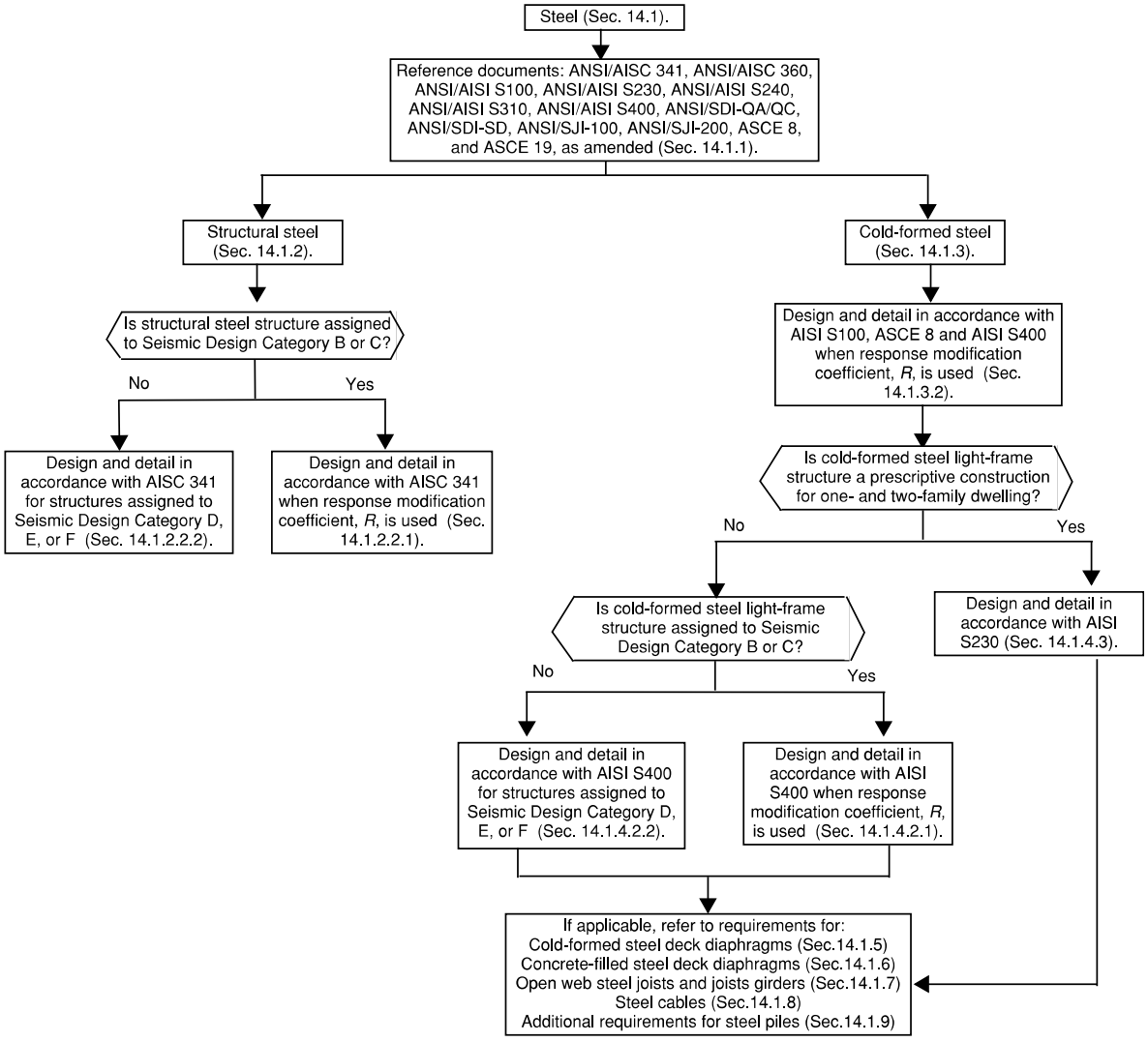

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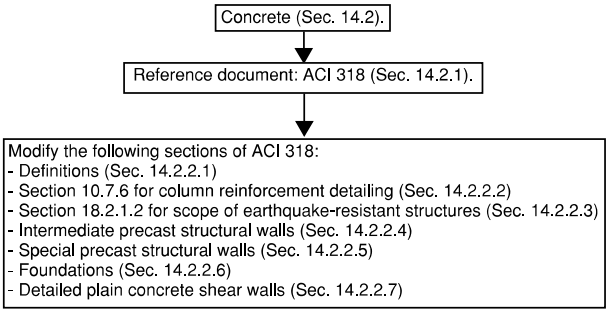

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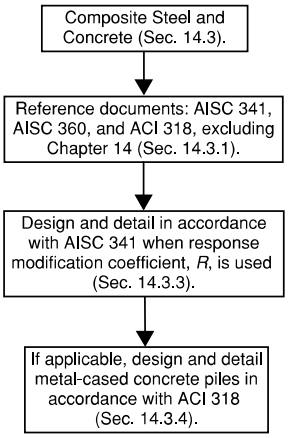

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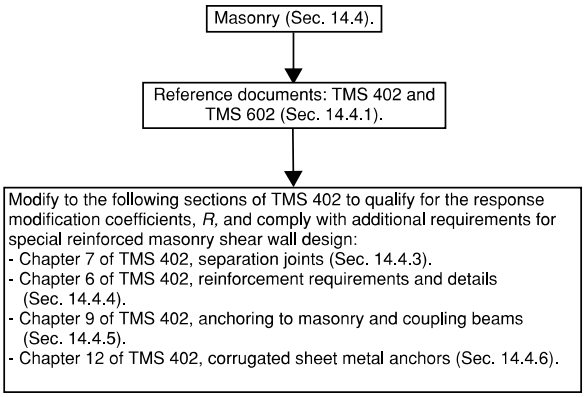

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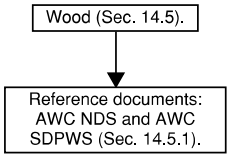

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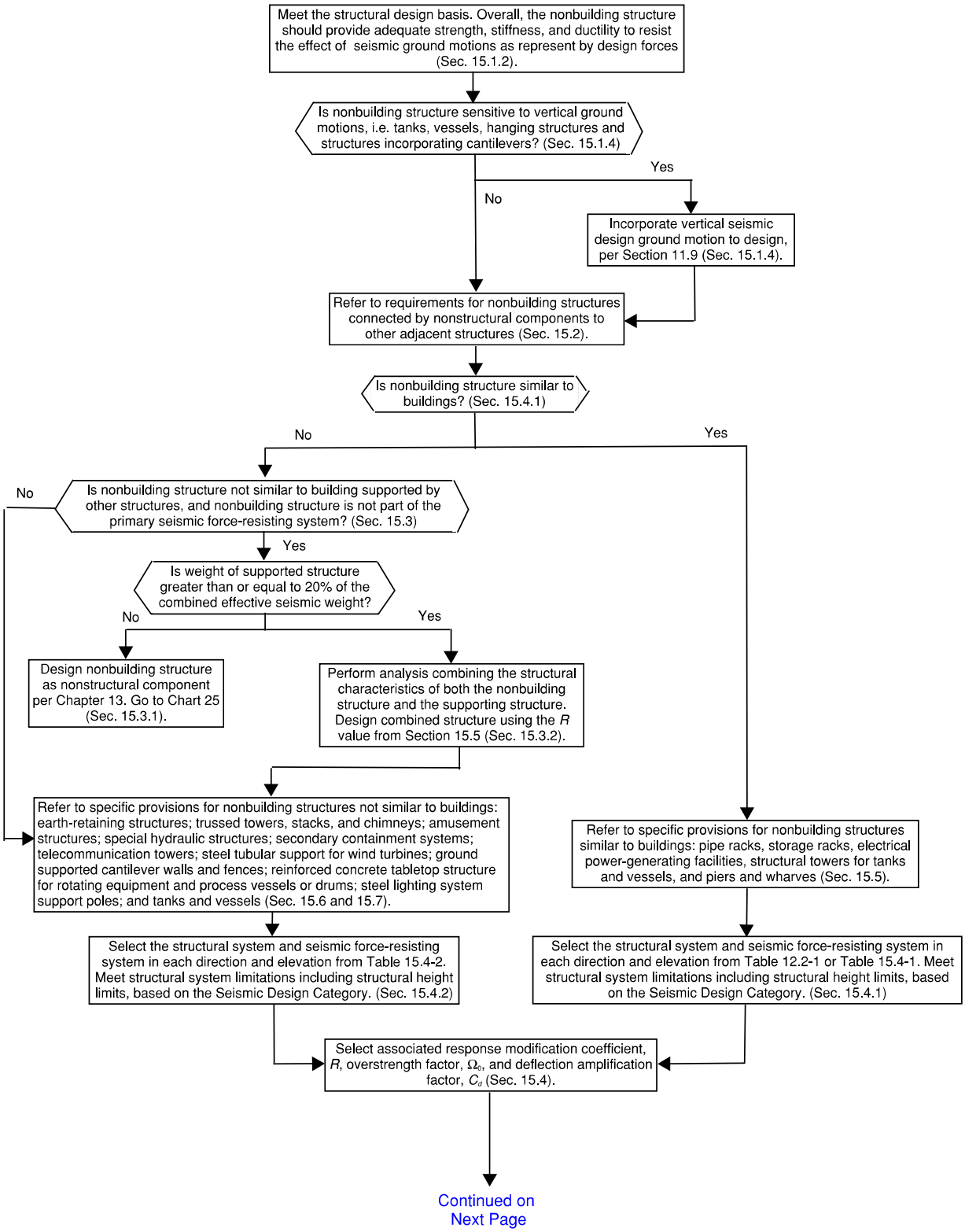

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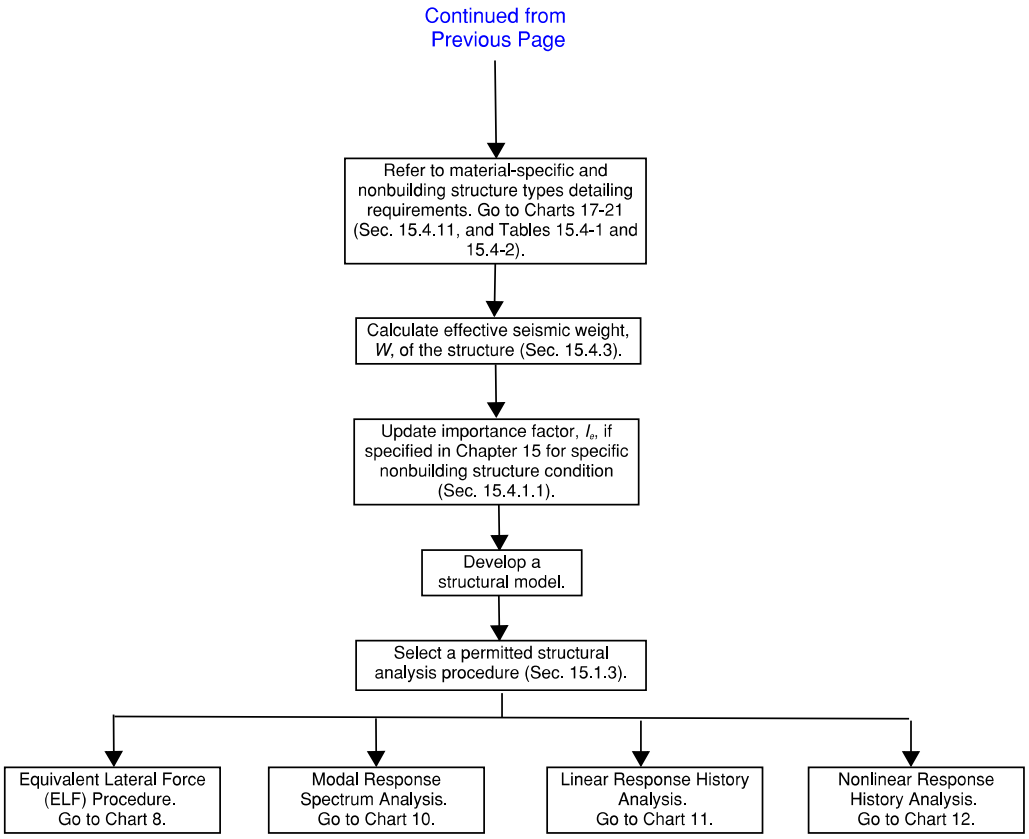

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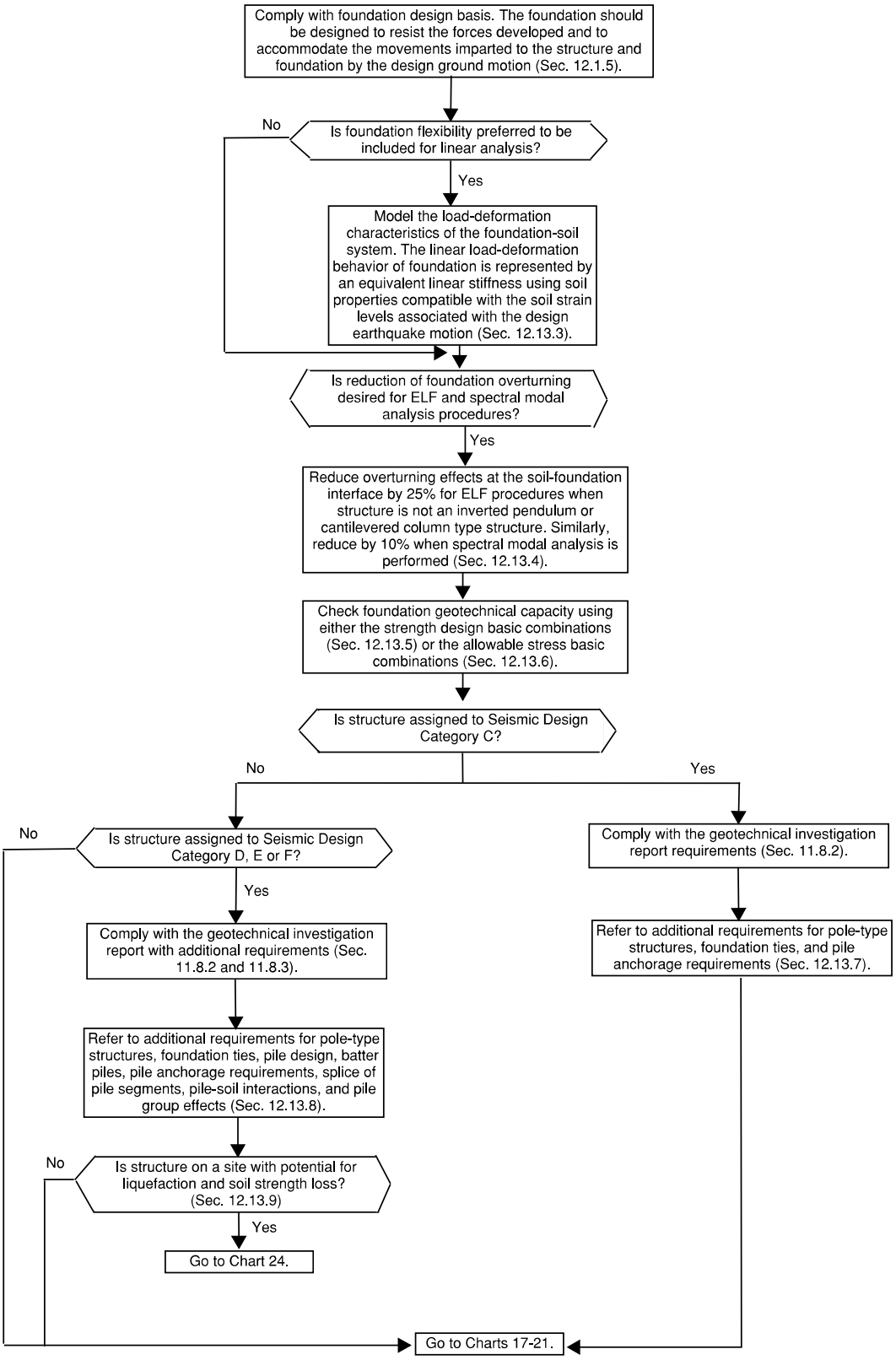

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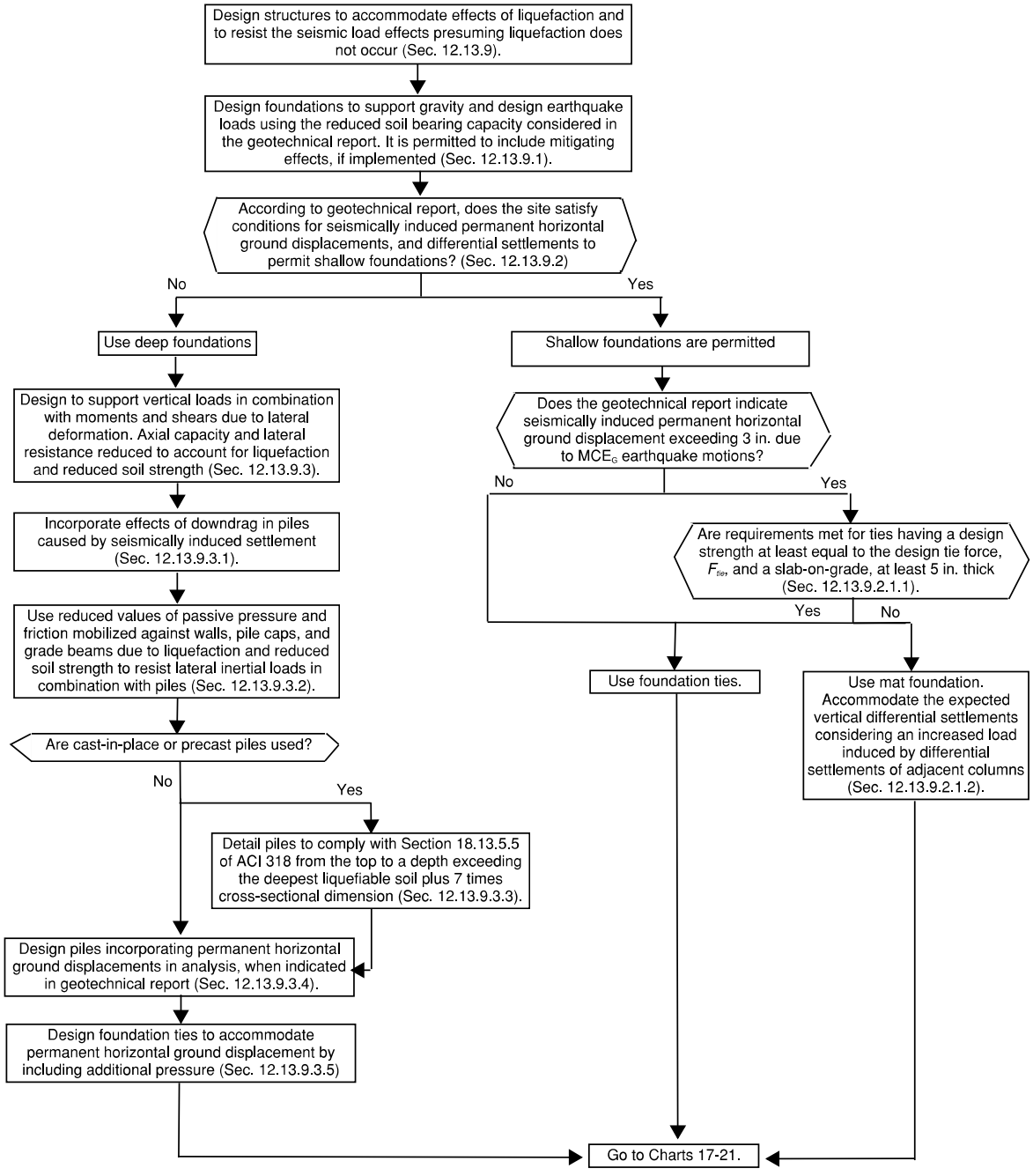

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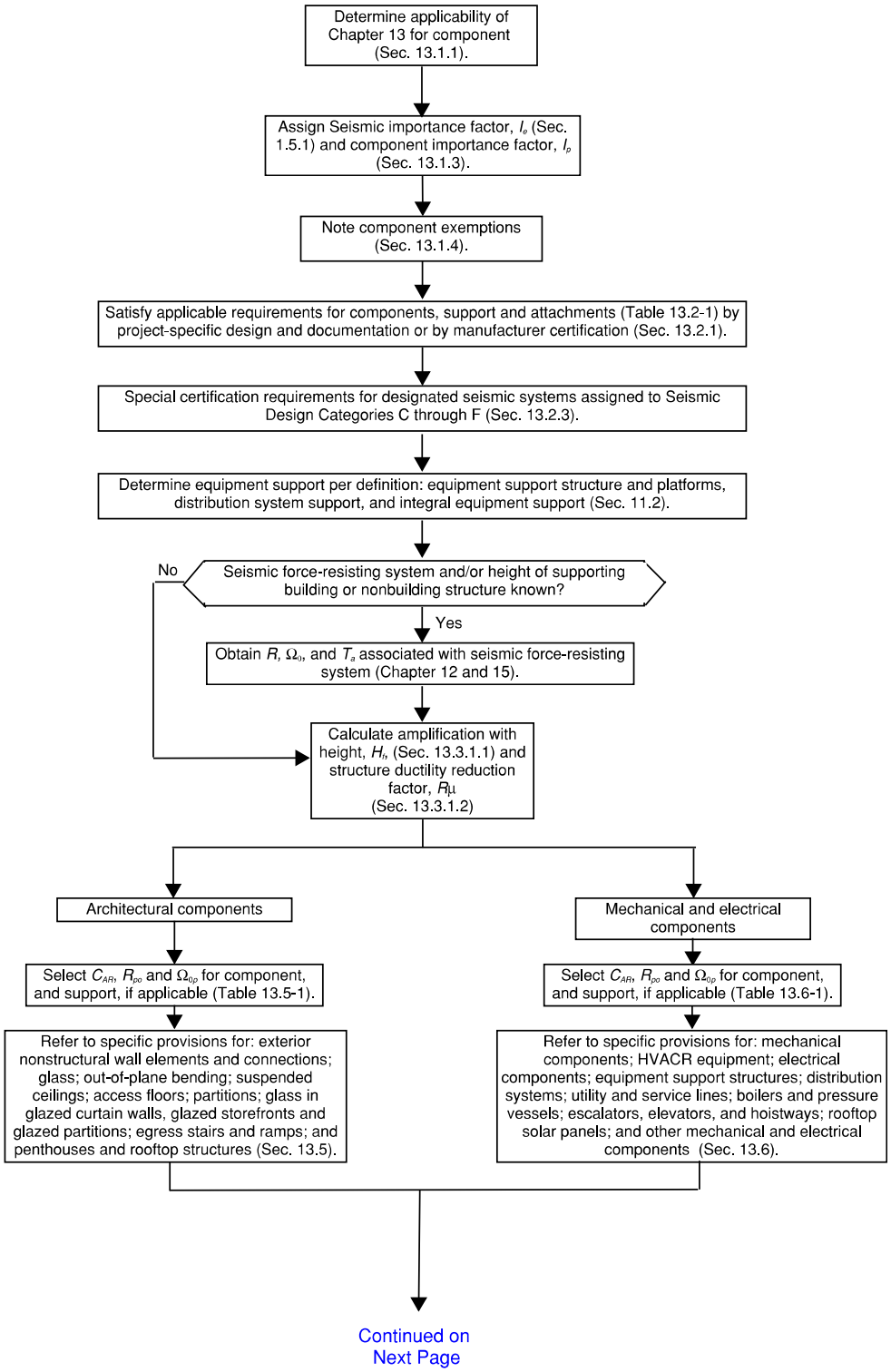

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