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ICSSC Recommended Practice (RP) 9

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Implementation Guidelines for Executive Order 13717: Establishing a Federal Earthquake Risk Management Standard

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U.S. Department of Commerce
Penny Pritzker, Secretary

National Institute of Standards and Technology
Kent Rochford, Acting NIST Director and Under Secretary of Commerce for Standards and Technology

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Section 1
Overview

1.1 INTRODUCTION

Executive Order (EO) 13717, *Establishing a Federal Earthquake Risk Management Standard*, was issued by President Barack Obama on 2 February 2016. This document provides guidance to Federal agencies on their implementation of EO 13717.

EO 13717 revokes two previous orders related to earthquake safety in Federal buildings: EO 12699, Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction; and, EO 12941, Seismic Safety of Existing Federally Owned or Leased Buildings. From a technical perspective, EO 13717 replaces the requirements of EO 12699 and EO 12941 with updated seismic safety requirements for the Federal building stock based on the most recently published national consensus building codes and standards.

EO 13717 emphasizes that it is Federal policy to strengthen (improve) national earthquake resilience, to promote public safety, economic strength, and national security. The EO establishes minimum levels of seismic safety in buildings owned, leased, financed, or regulated by the Federal government, which is to be achieved by satisfying the requirements of referenced building codes and standards, as outlined in Section 3 of the EO. The EO also encourages each Executive department and agency[1] ("agency") to consider exceeding the minimum levels of seismic safety delineated in the codes and standards, in support of improved earthquake resilience.

1.2 SCOPE OF EXECUTIVE ORDER 13717

EO 13717 addresses seismic safety for all new or existing buildings that are owned or leased[2] by the Federal agencies, in the United States (U.S.) and its territories and possessions. EO 13717 also addresses seismic safety considerations for Federal programs that assist in the financing of newly constructed buildings through Federal grants or loans, loan guarantees, or mortgage insurance; or regulate the construction of new buildings, within the U.S., its territories, and possessions. EO 13717 also outlines agency responsibilities for achieving these seismic safety measures, and specifies timelines for implementing those measures.

[1] 40 U.S. Code § 3301 defines an "executive agency" as an executive department or independent establishment in the executive branch of the Federal Government, and defines a "Federal agency" as an executive agency or establishment in the legislative or judicial branch of the Government (except the Senate, the House of Representatives, the Architect of the Capitol, and any activities under the direction of the Architect of the Capitol).

[2] The General Services Administration (GSA) *Leasing Desk Guide* defines a "lease" as "as contract by which a rightful possessor of real property conveys the right to use and occupy that property in exchange for consideration or rent. It may include operational services provided by the lessor."

1.3 AGENCIES AFFECTED BY EXECUTIVE ORDER 13717

EO 13717 applies to all Federal agencies that are responsible for:

- Designing and constructing new Federally-owned buildings;
- Owning existing Federal buildings, including activities to alter or maintain those buildings;
- Leasing all or portions of buildings for Federal use[3];
- Assisting in the financing, through grants or loans, or guaranteeing the financing through loan or mortgage insurance of newly constructed buildings; and,
- Regulating structural safety of new buildings.

1.4 DEVELOPMENT OF IMPLEMENTATION GUIDELINES

Section 4(c) of EO 13717 charges the Director of the National Institute of Standards and Technology (NIST), on behalf of the Interagency Committee on Seismic Safety in Construction (ICSSC), with issuing guidelines for implementing the EO. The *Guidelines* contained in this document thus represent recommendations formulated by NIST and then coordinated by consensus with the ICSSC member agencies.

The *Guidelines* presented in this document are advisory only. They do not create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States. The use of any mandatory language in these *Guidelines* is intended only to summarize elements of EO 13717, and not be directive apart from the EO. The *Guidelines* provide broad guidance to the Federal agencies on implementing EO 13717, offering information for common use by all Federal agencies, so that each agency can establish its EO implementation policies and procedures that are consistent with both the EO and statutory agency-specific requirements.

Each affected Federal agency is given the responsibility for developing and implementing its own seismic safety measures to fulfill the requirements of EO 13717, commensurate with its specific responsibilities.

[3] See footnote 2.

Section 2
Implementation Guidelines

2.1 GENERAL RECOMMENDATIONS

Implementation policy development should be at the agency level.

The provisions of EO 13717 apply to all buildings owned or leased by Federal agencies.

Exemption criteria for such reasons as building function or occupancy, or low seismicity, are presented in the codes and standards referenced by the EO and are considered to be uniform across all agencies. EO Section 7 delineates agency-specific exemption authorities. Any agency-specified exemptions should be verified or validated by agency legal counsel.

In Federal agencies that assist in financing, through grants or loans, or that guarantee such financing through loan or mortgage insurance for newly constructed buildings, some building construction-related programs may be affected by the EO, while others may not. Agencies that are engaged with such assistance activities are encouraged to consider updating their procedures to be consistent with those for buildings that are owned or leased by Federal agencies.

Agencies with unique missions requiring exceptional seismic safety measures above those covered directly in EO 13717 should establish and promulgate appropriate implementation and enforcement policies and procedures that include the minimum acceptable standards specified in the EO. Absent unique agency mission requirements, implementation is to be in compliance with the minimum acceptable standards listed in the EO.

EO 13717 requires each agency to designate one or more Seismic Safety Coordinator(s) (SSC) to serve as focal points for implementing the EO and to participate in the ICSSC as appropriate. Each agency should determine the appropriate organizational level at which its SSC is to be placed. The Commentary on EO Section 4(c) presents ICSSC-recommended SSC qualifications, duties, and responsibilities.

Agencies with technically qualified staff members[4] are encouraged to include building plan reviews in their seismic safety programs. For agencies without technical staff members, prudent implementation of the EO would include notifying appropriate responsible parties of its specified minimum standards and requiring written acknowledgement of awareness of the requirements and intent to comply with them. "Responsible parties" may include the building owner (for leased buildings), architect, engineer, or contractor. No contract or grant involving building construction should be entered into without receipt of written acknowledgement of the requirements of the EO

[4] Such staff members should be registered design professionals, with technical training in structural and/or earthquake engineering, and experience in applying structural design provisions of U.S. model building codes (primarily the *International Building Code* - IBC) and national consensus design standards. See Section 2.2.11 of these *Guidelines*.

from the contractor or grantee. For Federally owned or leased buildings, agencies should consider requiring a form of certification or statements of compliance prior to acceptance of a new building or a strengthened existing building. Such statements of compliance might include the engineer's or architect's signed and sealed verification of seismic design codes, standards, and practices used in the design and construction of the building, construction observation reports, local or state building department plan review documents, or other documents deemed appropriate by the agency.

Each agency should develop and implement procedures for reviewing and revising its seismic safety program periodically to ensure that it is complying with the provisions of EO 13717.

As stated in Section 4(f) of the EO, each agency is also responsible for reporting biennially to the Director of the Office of Management and Budget (OMB) and the Director of NIST on its progress in implementing EO 13717.

During the initial work of the ICSSC to comply with EO 13717, agency representatives expressed the desire for the ICSSC to meet on a regular basis in the future, for the purpose of exchanging relevant information among all agencies. NIST will work with the agencies to schedule periodic meetings of this nature.

2.2 DETAILED RECOMMENDATIONS

The following pages provide section-by-section explanation and interpretation of EO 13717. The format provides the EO language in shaded text boxes, followed by commentary, all of which is advisory in nature.

EO 13717 *Section 1*

> *By the authority vested in me as President by the Constitution and the laws of the United States of America, including the Earthquake Hazards Reduction Act of 1977, as amended, and section 121(a) of title 40, United States Code, and to improve the Nation's resilience to earthquakes, I hereby direct the following:*
>
> ***Section 1.*** *Policy. It is the policy of the United States to strengthen the security and resilience of the Nation against earthquakes, to promote public safety, economic strength, and national security. To that end, the Federal Government must continue to take proactive steps to enhance the resilience of buildings that are owned, leased, financed, or regulated by the Federal Government. When making investment decisions related to Federal buildings, each executive department and agency (agency) responsible for implementing this order shall seek to enhance resilience by reducing risk to the lives of building occupants and improving continued performance of essential functions following future earthquakes. The Federal Government recognizes that building codes and standards primarily focus on ensuring minimum acceptable levels of earthquake safety for preserving the lives of building occupants. To achieve true resilience against earthquakes, however, new and existing buildings may need to exceed those codes and standards to ensure, for example, that the buildings can continue to perform their essential functions following future earthquakes. Agencies are thus encouraged to consider going beyond the codes and standards set out in this order to ensure that buildings are fully earthquake resilient.*

2.2.1 Commentary on Section 1

The Federal Government is responsible for protecting the safety of its workers and the public in or near buildings with Federal involvement. Specifically, with respect to EO 13717, adequate protection in future significant earthquakes must be provided. The Federal Government must also lead the Nation by example when it comes to constructing new buildings and improving the performance of its existing buildings, in accordance with nationally recognized consensus building codes and standards. This philosophy was articulated by President George H.W. Bush in EO 12699, *Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction* (1990) and by President William J. Clinton in EO 12941, *Seismic Safety of Existing Federally Owned or Leased Buildings* (1994).

EO 13717 combines the requirements of the two earlier EOs and updates their provisions to incorporate the most recent national consensus building codes and standards. It also supports the strategic vision of the National Earthquake Hazards Reduction Program (NEHRP) agencies: *A Nation that is earthquake-resilient in public safety, economic strength, and national security.*

EO 13717 recognizes the vital importance of building codes and standards in protecting life-safety in building performance. Building codes are sets of regulations governing the design, evaluation, construction, and maintenance of buildings. They specify *minimum* requirements necessary to adequately safeguard the health, safety, and welfare of building occupants. As stated in the *International Building Code*, "The purpose of this code is to establish the minimum requirements to provide a reasonable level of safety, public health, and general welfare through structural strength,

means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide a reasonable level of safety to fire fighters and emergency responders during emergency operations[5]."

Current building codes are largely prescriptive in nature and are primarily intended to provide for a life-safety level of protection (or performance) when a design-level event such as earthquake ground shaking occurs. A code-compliant building is intended to achieve the goal of preventing the loss of life or life-threatening injury to its occupants for a code-specified level of ground shaking that is based on national seismic hazard models developed by the U.S. Geological Survey (USGS) and adapted for engineering usage in the *International Building Code* (IBC) and associated national consensus standards. ***However, a code-compliant building could sustain extensive structural and nonstructural damage and be out of service for an extended period of time until repairs are made. In extreme cases, damage may be too extensive and costly to repair, with demolition being the only option.***

EO 13717 recognizes that the primary emphasis of current national consensus building codes and standards is life safety, though code and standard organizations also recognize the need to build for resilience. The EO supports enhancing societal resilience in emergencies[6] by providing buildings, both new and existing, with levels of protection that may exceed those of existing codes and standards, ensuring that agencies can continue to perform their essential functions[7] after future earthquakes. Since many Government-owned or leased buildings are essential to Federal agency functions, design to higher than minimum life safety performance levels can reduce the risk that earthquake events will negatively impact building function or operation. See the commentary on Section 3(d) of EO 13717, in the following pages for additional discussion.

[5] International Code Council, *International Building Code*, Section 101.3 Intent, 2015.

[6] Presidential Policy Directive 8 (PPD-8), *National Preparedness*, defines "resilience" as the ability to adapt to changing conditions and withstand and rapidly recover from disruption due to emergencies.

[7] Essential functions are those functions that enable an agency or organization to accomplish its mission as set forth in its statutory or executive charter and to provide vital services, exercise civil authority, maintain the safety of the general public, and sustain the industrial/economic base during an emergency. Department of Homeland Security Federal Continuity Directive 2 (FCD 2). Essential functions are in many cases agency-specific and are supported by functions provided by buildings, building systems, and/or employees working in these buildings.

EO 13717 *Sections 2(a), 2(b)*

> ***Section 2.*** *Requirements for Earthquake Safety of New Federal Buildings, Improvements to Existing Federal Buildings, and Federally Leased, Financed, or Regulated Buildings.*
>
> *(a) New Buildings and Alterations to Existing Buildings. Each agency responsible for the design and construction of a new building or an alteration to an existing building shall ensure that the building is designed, constructed, or altered, respectively, in accord with appropriate earthquake-resistant design and construction codes and standards as set forth in sections 3(a) and 3(b) of this order.*
>
> *(b) Space Leased for Federal Occupancy. Each agency responsible for the lease of a building shall, to the extent permitted by law, ensure that it leases only buildings that have been designed and constructed in accord with the appropriate earthquake-resistant design and construction standards that apply to the type of lease at issue, as set forth in section 3(c) of this order.*

2.2.2 Commentary on Sections 2(a) and 2(b):

Section 2 of EO 13717 delineates general requirements for improving earthquake safety in the design and construction of new buildings that are Federally-owned or regulated, existing Federally-owned buildings that are altered, buildings that are leased for Federal occupancy, and new buildings financed through Federal programs.

Section 2(a) requires that design and construction of new buildings and alterations to existing buildings be performed in accordance with the standards delineated in Sections 3(a) and 3(b) of the EO. Section 2(b) requires that, to the extent permitted by law, Federally-leased buildings be designed and constructed in accordance with standards delineated in Section 3(c) of the EO.

EO 13717 Section 2(c)

> ***Section 2.*** *Requirements for Earthquake Safety of New Federal Buildings, Improvements to Existing Federal Buildings, and Federally Leased, Financed, or Regulated Buildings. (Continued)*
>
> *(c) Federal Assistance Programs. Each agency assisting in the financing, through Federal grants or loans, or guaranteeing the financing, through loan or mortgage insurance programs, of a newly constructed building shall consider updating its procedures for providing the assistance to be consistent with section 3(a) of this order, to assure appropriate consideration of earthquake safety.*

2.2.3 Commentary on Section 2(c):

Section 2(c) provides requirements regarding application of EO 13717 for Federal agencies that assist newly constructed buildings through grants, loans, or guarantees of financing ("assistance") through loan or mortgage insurance programs. Agencies are required to "consider updating"

procedures for such programs to be consistent with Section 3(a) in the EO to enhance the resilience of such buildings to the extent possible. Note that Section 2(c) applies these requirements only to newly constructed buildings; existing buildings that used Federal funds or financing are not included in the requirements.

Programs for which Section 2(c) is applicable - grants, loans, or financial guarantees that support newly constructed buildings - should be determined by each agency with such programs. The ICSSC recommends that each agency that is engaged with such activities develop a list of potentially applicable programs for newly constructed buildings and then assess the relevance of EO 13717 requirements for each of those programs.

Following this initial review, the ICSSC recommends that each agency should review its already published requirements for assistance for newly constructed buildings, and to the full extent practicable, update those requirements and all associated forms, policy and procedure documents, and management information systems to reference EO 13717 as appropriate. For programs that had previously referenced EO 12699, program language should be updated to reflect the new EO 13717 requirements, and the ICSSC recommends such agencies aim to complete this review no later than 31 March 2017 and update no later than 30 September 2017. For selected programs that did not reference EO 12699 but, based on the new agency assessment should also be included in EO 13717 actions, new language should be inserted in applicable program guidance. Due to the varying complexities of reviews and updates for programs that did not reference EO 12699, the ICSSC recommends that agencies aim to complete the initial review of such programs no later than 31 March 2017, and update program requirements no later than 31 December 2018.

The ICSSC recommends that each agency that is engaged with programs that assist newly constructed buildings require that all grants, loans, and financial guarantees for which the requirements of EO 13717 apply include those requirements upon publication of the relevant updated policies, regulations, and procedures[8].

An illustrative example of a Federal program requirement that should potentially be updated to provide compliance with EO 13717 is the U.S. Small Business Administration (SBA) Office of Capital Access Loan Authorization "Special Provisions When the Loan Covers Construction – Earthquake Provision." The document currently references requirements that were implemented by the ICSSC in response to EO 12699.

[8] The language of Section 2(c) is slightly changed from that found previously in EO 12699, *Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction*, 1990, which was revoked by EO 13717. EO 12699 included a three-year implementation deadline that is not included in EO 13717. The three-year implementation requirement found in EO 12699 would have been three years from the time of its issuance; since EO 12699 was issued in 1990, the implementation deadline would have been 1993. It warrants note that EO 12699 established earthquake-related requirements for Federally-assisted buildings for the very first time, whereas those requirements have now been in effect for more than 25 years. Section 2(c) requires consistency with Section 3(a) of EO 13717. However, the procedural differences between financial assistance programs and agency construction programs dictate a longer implementation deadline here than the 90 days required for new agency construction projects described in Section 3(a).

Section 2(c) requires agencies to consider application of these requirements to newly constructed buildings supported through Federal programs. Several agencies have such programs. A 1997 National Academy of Public Administration (NAPA) study[9] lists the Department of Housing and Urban Development (HUD), the Department of Agriculture (USDA), and the Department of Health and Human Services (HHS) as the agencies with the largest number of building construction-related assistance programs. The NAPA study found by analyzing the *Catalog of Federal Domestic Assistance* (CFDA)[10] that other, but not necessarily all, agencies with such programs include the Small Business Administration (SBA), the U.S. Forest Service (USFS), the Department of Commerce (DoC), the Department of the Interior (DoI), the Department of Veterans Affairs (VA), the Federal Emergency Management Agency (FEMA), the Department of Education (ED), and the Department of Transportation (DoT). The types of assistance included in the programs covered in the NAPA study included grants, direct payments, loans, loan guarantees, and loan or mortgage insurance.

Agencies may consider placing reasonable limits on the minimum levels of Federal support that are required to trigger the imposition of Federal requirements that might override State or local requirements, respecting the provisions of EO 13132, *Federalism*[11]. Any such limits should be based on agency analysis of buildings impacted in each program and specific program operations. NIST will be available to assist these agencies with technical language requirements and support interagency coordination that may be needed in determining such reasonable limits for programs that support similar buildings.

As agencies implement the terms of EO 13717 for Federal programs that assist newly constructed buildings, they should identify individuals or offices within their agencies for providing technical information regarding the application of the *International Building Code* (IBC) or *International Residential Code* (IRC), as appropriate, to potential assistance recipients or their financial institutions. There undoubtedly will be a need for increased awareness of this requirement on the part of those involved with the construction of new buildings who use Federal assistance or financing. As an example of this potential need, the National Earthquake Hazards Reduction Program (NEHRP) Office at NIST has fielded numerous inquiries since 2006 from lending institutions regarding SBA loan requirements that were tied to EO 12699. The ICSSC thus recommends that agencies that are impacted by this requirement for Federal programs designate individuals or offices who are responsible for answering client questions about this requirement and produce targeted outreach material, written or electronic, that clearly explains what this requirement means and where clients can obtain answers.

[9] *Reducing Seismic Risks in Existing Buildings*, National Academy of Public Administration (NAPA), November 1997.

[10] *Catalog of Federal Domestic Assistance*, https://www.cfda.gov/ , General Services Administration.

[11] EO 13132, *Federalism*, 1999, sets forth the philosophical principles governing the division of responsibilities between the "national government and the States that was intended by the Framers of the Constitution." EO 13132, while not detailed herein, clearly describes actions that the Federal government shall take to ensure that the policymaking discretion of States is maintained. These guidelines achieve the goals of EO 13132 by limiting the imposition of the requirements herein to larger projects in which Federal assistance exceeds half of total assistance.

Section 2(c) does not specifically address FEMA measures in support of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. See the commentary on Section 8(d) regarding this FEMA-related activity.

EO 13717 *Section 2(d)*

> ***Section 2.*** *Requirements for Earthquake Safety of New Federal Buildings, Improvements to Existing Federal Buildings, and Federally Leased, Financed, or Regulated Buildings. (Continued)*
>
> *(d) Federally Regulated Buildings. Each agency with responsibility for regulating the structural safety of a new building shall consider using earthquake-resistant design and construction standards for the new building consistent with section 3(a) of this order.*

2.2.4 Commentary on Section 2(d):

Section 2(d) provides requirements regarding application of EO 13717 for Federal agencies that regulate structural safety in new buildings. Agencies are again required to "consider using earthquake-resistant design and construction standards" that are consistent with Section 3(a). Note that Section 2(d) applies these requirements only to new buildings; existing buildings are not included in the requirements.

Programs for which Section 2(d) is applicable should be determined by agencies that promulgate regulations for the structural safety of new non-Federal buildings. The ICSSC recommends that each agency that is responsible for regulating the safety of non-Federal new building construction first review the relevance of EO 13717 requirements for its regulatory programs. Following the initial review, the ICSSC recommends that the agency review its already published requirements for regulating structural safety (in particular, the earthquake-resistant aspects of regulations) of new building construction upon receipt of these guidelines and update those requirements and all associated forms, policy and procedure documents, and management information systems to reference EO 13717 as appropriate. For regulatory programs that had previously referenced EO 12699, the ICSSC recommends that program language should be updated to reflect the new EO 13717 requirements. For programs that did not reference EO 12699 but, based on the new agency assessment should also be included in EO 13717 actions, the ICSSC recommends that new language be inserted in applicable program guidance. The ICSSC recommends, for both those regulatory programs that previously referenced EO 12699 and for those that did not, that this review and update process be completed no later than 31 March 2017.

Following the review and update process, the ICSSC recommends that each agency that is charged with regulating structural safety for new non-Federal buildings require that new Federal regulations

governing structural safety in new non-Federal buildings reflect the requirements of EO 13717, commencing no later than 31 March 2018[12].

The provisions of Section 2(d) may impact fewer agencies than will other provisions of EO 13717. The previously-cited 1997 NAPA study[13] found that only four agencies had regulatory programs that dealt with structural safety in buildings that were then not linked in some way to Federal financial aid: HHS, HUD, the Environmental Protection Agency (EPA), and the Nuclear Regulatory Commission (NRC). Many buildings for which the NRC issues regulations are already required to meet significantly higher standards than those for buildings covered by EO 13717. The NAPA study stated that EPA, HHS, and HUD programs all had regulatory language that generally required the use of seismic safety standards in building design and construction.

However, the study observed that, without Federal financial assistance tied to implementing their regulations, those agencies are too far removed from any original lending transaction to be involved easily in determinations regarding applicable building code requirements.

[12] The language of Section 2(d) is slightly changed from that found previously in EO 12699, *Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction*, 1990, which was revoked by EO 13717. EO 12699 included a three-year implementation deadline that is not included in EO 13717. The three-year implementation requirement found in EO 12699 would have been three years from the time of its issuance; since EO 12699 was issued in 1990, the implementation deadline would have been 1993. It warrants note that EO 12699 established earthquake-related requirements for regulating structural safety in non-Federal buildings for the very first time, whereas those requirements have now been in effect for more than 25 years. Section 2(d) requires consistency with Section 3(a) of EO 13717. However, the procedural differences between regulation of non-Federal programs and agency construction programs dictate a longer implementation deadline here than the 90 days required for new agency construction projects described in Section 3(a).

[13] *Reducing Seismic Risks in Existing Buildings*, National Academy of Public Administration (NAPA), November 1997.

EO 13717 *Section 3(a)*

> ***Section 3***. *Codes, Standards, and Concurrent Requirements.*
> *(a) Commencing within 90 days after the date of this order, each agency shall ensure that every new building for which the agency has not started programming is in compliance with the earthquake-resistant design provisions of the 2015 editions of the International Building Code (IBC) or the International Residential Code (IRC), nationally recognized building codes promulgated by the International Code Council (ICC), or equivalent codes, consistent with the provisions of and to the extent required by 40 U.S.C. 3312.*
> *When the ICC releases a new version of the IRC or IBC, each agency that constructs buildings shall determine whether the new version is a nationally recognized code for the purposes of 40 U.S.C. 3312(b), as expeditiously as practicable, but not later than 2 years after the release of the new version. If an agency determines that a new version is a nationally recognized code, it shall ensure that any building, for which the agency has not started programming, shall be in compliance with that new version or an equivalent code.*

2.2.5 Commentary on Section 3(a):

Section 3(a) addresses earthquake risk in the design and construction of new Federally-owned ("Federal") buildings.

EO 13717 directs each agency that is responsible for the design and construction of a new Federal building to ensure that, *as a minimum*, the building is designed and constructed in accordance with the earthquake-resistant design provisions of the 2015 editions of the International Building Code (IBC) or the International Residential Code (IRC), whichever is applicable[14].

This requirement is consistent with the provisions of 40 U.S. Code § 3312, *Compliance with nationally recognized codes*[15]. This statute requires that, after 30 September 1989, "each building constructed or altered by the General Services Administration or any other Federal agency shall be constructed or altered, to the maximum extent feasible as determined by the Administrator or head of the Federal agency, in compliance with one of the nationally recognized model building codes . . ." When the statute was enacted in 1989, there were multiple nationally recognized model building codes; the national consensus coalesced around the IBC in 2000, and this code has matured. Some Federal agencies have developed agency-unique earthquake-resistant building design standards; those standards exceed but otherwise apply the IBC or IRC.

[14] The ICSSC recognizes that many States and localities have adopted State or local building code ordinances. In such instances, the State or local requirements of the locality where a new building is sited may be referenced for agency use, *so long as they meet or exceed the earthquake-resistant provisions of the current IBC*. In particular, specified ground motion design parameters should not be reduced from those of the current edition of the IBC, regardless of State or local provisions.

[15] https://www.gpo.gov/fdsys/granule/USCODE-2010-title40/USCODE-2010-title40-subtitleII-partA-chap33-sec3312/content-detail.html

Both the IBC and IRC are promulgated by the International Code Council (ICC). The IBC in turn directly adopts by reference the earthquake-resistant provisions of consensus standards published by the American Society of Civil Engineers (ASCE)/Structural Engineering Institute (SEI), American Concrete Institute (ACI), American Institute of Steel Construction (AISC), and other construction material-specific standards organizations. The IRC contains provisions that are based on the same consensus standards, only as applied to residential buildings.

In most instances, Federal buildings will be engineered buildings, the design of which is covered by the IBC. Possible exceptions that would instead be addressed by the IRC may include Military Family Housing on defense installations. The IRC primarily addresses the design and construction of one-family and two-family light frame dwellings. Any question about which code, IBC or IRC, is to be applied should be addressed to the agency Seismic Safety Coordinator for resolution.

These seismic safety requirements commenced no later than 2 May 2016, or 90 days following the signing of EO 13717. The EO stipulates that the commencement date applies to any construction project that is "programmed[16]" by an agency after that date. Many agencies may refer to this as the beginning of the "program development phase," and that terminology is adopted here.

Any project that had entered the program development phase before 2 May 2016 is not covered by EO 13717, but would still be subject to the provisions of EO 12699, which required that Federal agencies ensure that Federal buildings be designed and constructed in accord with "appropriate" seismic design and construction standards[17].

EO 13717 stipulates that agencies are to update their design and construction criteria in concert with new releases of the IBC or IRC, as quickly as is practicable but within two years of the new releases. Specifically, EO 13717 requires each agency to determine if an updated version of the IBC or IRC is a nationally recognized building code as quickly as is practicable but within two years of its release by the ICC and subsequently adopt it for design and construction of any building that the agency has not yet programmed for construction (i.e., entered the program development phase).

Leaving this determination entirely to individual agencies may result in inconsistent assessments of the validities of future building codes, as they are updated. The ICSSC therefore intends to provide to all member agencies advisory assessments regarding national recognition of the structural and seismic design provisions of future editions of the IBC or IRC in order to promote uniformity of assessment among all agencies. The ICSSC will strive to provide these assessments within six months of the releases of those future editions via email notification from NIST to ICSSC member agencies (including agency Seismic Safety Coordinators). The ICSSC recommends that each agency

[16] Section 6(c) of EO 13717 defines "programming" as "developing and validating project assumptions, scope, budgets, and implementation strategy for a building."

[17] For such buildings that are under design but for which design is not complete, the ICSSC recommends that the earthquake-resistant provisions of the 2012 IBC or IRC, as appropriate, be used to design and construct the buildings.

that is responsible for the design and construction of a new Federally-owned building recognize these ICSSC assessments and use them in their future determinations.

EO 13717 *Section 3(b)*

> ***Section 3***. *Codes, Standards, and Concurrent Requirements. (Continued)*
>
> *(b) Each agency that owns an existing Federal building shall adopt the Standards of Seismic Safety for Existing Federally Owned and Leased Buildings (Standards), which are developed, issued, and maintained by the Interagency Committee on Seismic Safety in Construction (ICSSC), as the minimum level acceptable for managing the earthquake risks in that building. Any agency that has not adopted the Standards at the time of this order shall adopt the Standards no later than 90 days from the date of this order. All agencies shall adopt subsequent editions of the Standards as expeditiously as practicable, but no later than 2 years following their issuance.*

2.2.6 Commentary on Section 3(b):

Section 3(b) addresses the agency management of earthquake risk for existing Federally-owned buildings.

EO 13717 requires the adoption of the ICSSC *Standards of Seismic Safety for Existing Federally Owned and Leased Buildings* ("*Standards*"). The ICSSC is responsible for promulgating the *Standards*. The current edition of the *Standards* is contained within ICSSC Recommended Practice (RP) RP 8, published as NIST GCR-11-917-12[18]. Federal agencies that were previously engaged with the ICSSC in ensuring their compliance with the requirements of EO 12941 regarding existing buildings are already familiar with RP 8, having used it to address earthquake risks in their existing buildings. However, any agency that has not yet adopted RP 8 is required by EO 13717 to adopt it no later than 90 days following the date of the EO; since the EO was issued on 2 February 2016, agencies were required to adopt RP 8 no later than 2 May 2016.

EO 13717 requires that all agencies adopt future editions of the *Standards* as soon as practicable but no later than two years after they are issued. At the time of the development of these Guidelines, NIST, FEMA, and the ICSSC are updating this publication. The updated *Standards*, to be known as RP 10, will supersede RP 8. Agencies will be required to adopt RP 10 no later than a date that will be established by the ICSSC, once RP 10 is issued, not to exceed two years from its issue. Subsequent updates to the ICSSC *Standards* will occur on approximately six year cycles.

The *Standards* series of publications (including RP 4, RP 6, RP 8, and, soon, RP 10) have been formulated by the ICSSC since 1994 to provide procedures that can be adopted by the agencies for managing earthquake risks in their existing building inventories. Particularly with RP 8 and RP 10,

[18] http://www.nehrp.gov/pdf/nistgcr11-917-12.pdf

the *Standards* strive to make best use, via reference, of national consensus standards that have been developed in recent years. RP 8 heavily references publications of ASCE/SEI[19]. The RP 10 volume will continue to reference ASCE publications[20] and begin referring to the *International Existing Building Code* (IEBC). The Standards also provide ICSSC-developed guidance to the agencies on types of existing buildings that are exempt from seismic evaluation and on actions that necessitate ("trigger") seismic evaluations of existing buildings.

EO 13717 *Section 3(c)*

> ***Section 3***. *Codes, Standards, and Concurrent Requirements. (Continued)*
>
> *(c) Each agency that leases space in an existing building shall adopt the Standards as the minimum level acceptable for managing the earthquake risks in that building. This requirement shall apply to existing leases or leases existing at the time of issuance of updated Standards only to the extent appropriate, as determined by the leasing agency. With respect to leases for a building being constructed to accommodate a Federal agency under the authority in 40 U.S.C. 585(a), the leasing agency shall ensure that the building complies with the earthquake-resistant design and construction standards that would apply to a building constructed by the agency pursuant to section 3(a) of this order. With respect to such leases entered into under authority other than 40 U.S.C. 585(a), the leasing agency shall ensure that the building complies with the earthquake-resistant design and construction standards that would apply to a building constructed by the agency pursuant to section 3(a) of this order, to the extent permitted by law.*

2.2.7 Commentary on Section 3(c):

Section 3(c) addresses the agency management of earthquake risk for Federally-leased buildings. Both new and existing buildings are addressed in this section.

In many instances, the General Services Administration (GSA) either owns buildings in which space is occupied by other Federal agencies or leases space from non-Federal owners that is occupied by other Federal agencies. In such instances, the Occupancy Agreement between GSA and the partnering Federal agency should include provisions for the administration of EO 13717 requirements, including biennial progress reporting that is required by the EO, for the leased space, and both agencies should act accordingly. There are other instances in which some Federal agencies have been given Delegated Authority Agreements from GSA for their buildings that are leased from GSA. In such instances, GSA, the building owner, should provide and address the EO 13717 requirements with the support of the agency with Delegated Authority.

[19] ASCE/SEI 31-03, *Seismic Evaluation of Existing Buildings*, 2003; and ASCE/SEI 41-06, *Seismic Rehabilitation of Existing Buildings*, 2007.

[20] ASCE/SEI 41-13, *Seismic Evaluation and Retrofit of Existing Buildings*, 2014.

For new buildings being constructed for the purpose of leasing by a Federal agency under the authority of 40 U.S.C. § 585(a)[21], *Lease agreements*, Section 3(c) requires that provisions of Section 3(a) for agency-owned buildings apply.

Similarly, for new buildings being constructed for the purpose of leasing by a Federal agency under authority other than 40 U.S. Code § 585(a), Section 3(c) requires that provisions of Section 3(a) for agency-owned buildings still apply, to the extent permitted by law. Agency counsel will determine the authority for their agency's construction and, if it is other than 40 U.S.C. § 585(a), whether there are any legal restrictions on the full application of Section 3(a).

Section 3(c) requires Federal agencies that lease space in an existing building to adopt ICSSC RP 8 (known as the *Standards*), and its successor publications, as discussed in the Commentary on Section 3(b). Agencies are directed to adopt the *Standards* for managing earthquake risk in future leases of space in existing buildings and are also directed to adopt the *Standards* for application to existing leases or to leases existing at the time updated *Standards* are issued to the extent appropriate, as determined by the leasing agency. In short, EO 13717 recognizes that agencies cannot necessarily apply the *Standards* to all leases that are in effect at the time the *Standards* are issued, and permits the agencies leasing buildings to determine when, in these existing lease situations, the *Standards* should apply.

In recognition of the complexity of leasing agreements, ICSSC RP 8 includes several provisions that apply specifically to leased buildings; ICSSC RP 10 is expected to include provisions for leased buildings that are nearly identical to the RP 8 provisions. These provisions include (see ICSSC RP 8 for details[22]):

- Non-Federally owned buildings being leased by Federal agencies in temporary short-term leases[23] are exempt from the requirements of the *Standards*.

- Non-Federally owned buildings located in areas of lower anticipated earthquake ground motion[24] and in which the total area leased by Federal agencies in one building is less than 930 m^2 (10,000 SF) are exempt from the requirements of the *Standards*.

- An exception is allowed for situations where no seismically conforming leased space that complies with the *Standards* is available for an agency to lease. This exception permits agencies to lease from the proposed lessor with the best overall proposal, if no conforming space is

[21] https://www.gpo.gov/fdsys/pkg/USCODE-2010-title40/pdf/USCODE-2010-title40-subtitleI-chap5-subchapV-sec585.pdf .

[22] Following the publication of RP 10, RP 10 will replace RP 8.

[23] "Short-term" leases will be defined in terms of a maximum number of years in the upcoming publication of RP 10.

[24] Ground motion parameters are specifically defined in the current RP 8 and will also be specifically defined in RP 10.

available. ICSSC RP 10 is expected to clarify that this exception is intended to apply to the immediate service area for the needs of the Federal agency that seeks the lease.

EO 13717 *Section 3(d)*

> ***Section 3***. *Codes, Standards, and Concurrent Requirements. (Continued)*
>
> *(d) Agencies may require higher performance levels than exist in the codes and standards described in sections 3(a), (b), and (c) of this order.*

2.2.8 Commentary on Section 3(d):

Section 3(d) states that Federal agencies covered by EO 13717 may require the design and construction of their buildings to achieve higher performance levels than those that are required to comply with the minimum provisions of the IBC, IRC, IEBC, or ICSSC *Standards*. Section 1 of EO 13717 states: *"Agencies are thus encouraged to consider going beyond the codes and standards set out in this order to ensure that buildings are fully earthquake resilient."* The ICSSC supports this concept and encourages its application, within agency physical and financial constraints.

Buildings that have been designed to achieve higher performance objectives than life safety will be more quickly brought "back on line" following major earthquakes (if they are "off line" at all). They should also incur less damage than buildings designed to provide minimum life safety and thus be less costly to repair.

Improved performance can be achieved by specifying the use of performance criteria that are higher than the performance typically provided by current building codes. Agencies should consider several factors when they decide whether to require increased resilience of their facilities:

- In order to address Section 3(d), it must first be remembered that EO 13717, in requiring compliance with the national consensus building codes, already directs agencies adopting those codes to consider "occupancy-based" performance objectives that exceed minimum life safety requirements for a number of commonly defined building occupancies, including "buildings and other structures that represent a substantial hazard to human life in the event of failure," and "buildings and other structures designated as essential facilities." Current building codes do not prescribe rigorous procedures for providing higher-than-life safety performance levels. They provide simplified prescriptive procedures for achieving higher performance objectives[25], and they also provide some latitude for performance-based seismic design (PBSD). Section 3(d)

[25] The national consensus building codes and standards accomplish this by establishing higher "Importance Factors" for buildings that, because of their function or number of occupants, are placed in higher "Risk Categories." The importance factors increase earthquake design loads and some structural detailing requirements for the buildings in higher risk categories.

encourages agencies to require higher building performance than the standard building code-based Risk Category[26] minimum objectives. Some Federal agencies and other government entities already prescribe design standards for achieving higher than building code-specified minimum performance objectives. The Department of Defense, Department of Energy, and the Department of Veterans Affairs, for example, include unique design requirements for facilities that must perform at higher levels than the typical "essential" facility as defined by the IBC must achieve.

Should they wish to achieve higher than minimum building code-specified levels of building performance, agencies have options open to them.

The following paragraphs briefly describe approaches that produce designs that can achieve improved building performance by exceeding minimum life safety requirements.

- The first and simplest approach effectively involves increasing earthquake-induced design loads to some higher level than the code-specified minimum. Within the prescriptive design procedures found in the IBC and its referenced ASCE/SEI standards, an occupancy-based "Importance Factor" is assigned that effectively scales earthquake design forces up from the life safety minimum. This prescriptive procedure is already used with the higher Risk Categories discussed in the previous paragraphs; agencies may also decide to assign their buildings to higher Risk Categories than the IBC would minimally require, based on occupancy. A higher Risk Category carries with it a higher Importance Factor. A higher Importance Factor equates to increasing the input design load, which could be used as a surrogate to provide improved performance.

  The ICC's *International Performance Code for Buildings and Facilities* (ICCPC), also increases earthquake-induced design loads as a surrogate for increased performance. However, simply increasing design loads can be an imperfect approach for achieving higher earthquake performance levels. While increasing the input design load can provide a stronger building, that higher strength does not necessarily equate to improved performance and a higher probability of a building's remaining functional after an earthquake. A problem with applying the IBC or ICCPC in this manner is that there are currently no American National Standards Institute (ANSI)-approved processes for developing consensus standards for improved seismic performance for new buildings that can be referenced by those codes.

- A second approach that is gaining acceptance involves concepts that are generally described as Performance-Based Seismic Design (PBSD), whereby buildings are designed with the expectation that they will achieve a desired performance level when subjected to earthquakes corresponding to specified hazard levels. PBSD has been under development since the 1980s, when FEMA began a series of projects to provide engineers with more reliable tools to predict an *existing* building's likely earthquake performance and to enable

[26] Table 1604.5 of the 2015 edition of the IBC lists typical building occupancy-defined Risk Categories, some of which require greater than minimum life safety design procedures.

seismic upgrade design to achieve desired performance. These efforts culminated in 1997 with the publication of the FEMA-273/274 (FEMA, 1997) seismic rehabilitation guidelines, later revised as the FEMA 356 (FEMA, 2000b) pre-standard and then re-published by the American Society of Civil Engineers as its ASCE/SEI 41-06 standard[27].

ASCE/SEI 41-06 defined the present approach to PBSD. It includes the basic performance-based design process (Figure 1) that includes a formal statement of quantitative performance objectives, development of preliminary design, and evaluation to determine if the design is capable of achieving the targeted performance objectives. Performance objectives are framed as statements of desired performance, quantified in terms of standard performance levels: Immediate Occupancy, Life Safety and Collapse Prevention, coupled with a definition of the seismic hazard level for which this performance is to be achieved. Performance assessment consists of constructing an analytical model of the building

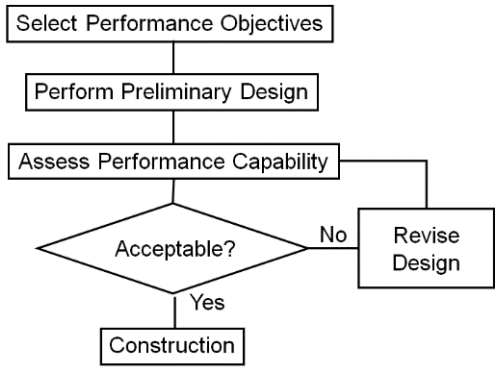

Figure 1. Performance-based seismic design process (courtesy FEMA)

structure; analyzing the model using a design ground motion to predict the values of key response quantities, typically element forces and deformations; and, comparing these response quantities with tables of acceptable values keyed to structural component type, detailing, and performance level.

The structural engineering community has begun embracing the PBSD process and applying it not only for its originally intended purpose of evaluating and retrofitting existing buildings but also for the design of major new buildings. As the PBSD process is increasingly applied for new building design, the need to research improved adaptation of existing building evaluation procedures for use in new building design has become clear.

To address these needs, FEMA began efforts in 2001 to develop next-generation performance-based design criteria that enable engineers to predict reliably the earthquake

[27] American Society of Civil Engineers, Structural Engineering Institute, *Seismic Rehabilitation of Existing Buildings*, ASCE/SEI 41-06, 2007. The standard has been developed in a consensus process that is ANSI-approved.

performance of both new and existing buildings. The first phase of development was completed in 2012 with the publication of FEMA P-58, *Seismic Performance Assessment of Buildings, Volume 1 – Methodology*; *Volume 2 – Implementation Guide* (FEMA, 2012c), and a series of supporting electronic materials and background technical information. For practical implementation of the methodology, the FEMA work included the development of an electronic tool, referred to as the *Performance Assessment Calculation Tool* (PACT) to help capture building inventory data, input given earthquake shaking probability or intensity, apply specific fragilities and consequences to each building component, and present the results of a large number of analyses in a logical format.

FEMA is continuing PBSD methodology development using the FEMA P-58 tools to develop PBSD guidelines, with completion expected by 2018. NIST is pursuing research that supports the PBSD methodology, as there are still many technical questions that remain to be resolved, especially in the adaptation of procedures that were developed to analyze existing, older buildings to the analysis of new building systems.

- While EO 13717 focuses on buildings and does not directly address earthquake survivability of lifelines (*e.g.,* water, power, fuel, and sewer utilities; communications systems; and transportation infrastructure), post-earthquake lifeline performance must also be considered in providing improved resilience. The ICSSC recommends that agencies consider lifeline performance needed to support their essential functions. Even with lifeline service disruption, buildings that have been designed to achieve higher performance objectives than life safety will be more quickly brought "back on line" following major earthquakes. However, their full functionality will only be achieved when supporting lifelines are also functional.

- An emerging tool for quantifying and communicating earthquake risks in buildings to agency leaders and others is the *earthquake performance rating system*. While EO 13717 does not require agencies to adopt or apply building rating systems to implement it, and rating systems cannot be used alone to satisfy the requirements of the EO, rating systems are nevertheless being developed, with some available now that can be applied to assess the contribution of a building to installation or community resilience. According to the Structural Engineers Association of California (SEAOC)[28], several private sector-developed building rating tools are currently available, in addition to those developed by FEMA under its P-58 project.

Some Federal agencies are examining rating systems of their own. Since the use of such rating systems is not required for implementing EO 13717, they are not detailed further here, but the ICSSC notes that agencies may consider the use of building ratings in the future as a means of assessing their building inventories. The ultimate goal of the various rating system development efforts should be a national consensus-based building rating system that can be applied in a

[28] The term "earthquake performance rating systems" is suggested by the Structural Engineers Association of California for a class of tools that communicate expected earthquake performance of a building. See *Earthquake Performance Rating Systems: SEAOC Perspective and Future Directions*, http://seaoc.org/news-publications/earthquake-performance-rating-systems-seaoc-perspective-and-future-directions , 13 May 2016.

manner that is consistent with building codes that are promulgated by the ICC, design standards that are promulgated by ASCE and the various construction materials organizations, and principles of the ANSI accreditation process. Should these rating systems ultimately involve Federal buildings, system development should also be in accordance with principles delineated in OMB Circular A-119[29] and future relevant policies outlined by the ICSSC.

FEMA has also developed other building evaluation methods:

- The FEMA HAZUS Advanced Engineering Building Module (AEBM), a feature of FEMA's HAZUS[30] loss estimation software tool, which allows for a more detailed evaluation of a single building. However, AEBM does not effectively track the performance of non-structural building components.

- The FEMA Simplified Seismic Assessment of Detached, Single-Family, Wood-Frame Dwellings (FEMA P-50). This residential seismic rating system has been adopted by the California Earthquake Authority (CEA), a California State entity that provides earthquake insurance for residential structures.

EO 13717 *Section 4(a)*

> ***Section 4***. *Agency and Committee Responsibilities.*
>
> *(a) The ICSSC shall be composed of representatives of all Federal agencies engaged in construction, financing of construction, or related activities. The National Earthquake Hazards Reduction Program (NEHRP) Lead Agency, currently the National Institute of Standards and Technology (NIST), shall lead the ICSSC, and shall lead the development and maintenance of ICSSC guidelines to assist the Federal agencies with implementing earthquake risk reduction measures in their construction programs.*

2.2.9 Commentary on Section 4(a):

Section 4(a) outlines major interagency responsibilities that are associated with EO 13717.

First, the Interagency Committee on Seismic Safety in Construction (ICSSC) is composed of representatives of all Federal agencies engaged in construction, financing of construction, or related activities. The ICSSC was created as a part of the National Earthquake Hazards Reduction Program (NEHRP), which was established in 1978 pursuant to the Earthquake Hazards Reduction Act of 1977, Pub. L. No. 95-124, *codified at* 42 U.S.C §§ 7701-08. The ICSSC mission is to assist Federal departments and agencies that are engaged in construction in developing and incorporating earthquake risk reduction measures in their ongoing programs. As stated in Section 4(a) of the EO, all Federal agencies that are engaged in construction, financing of construction, or related activities

[29] OMB Circular A-119 establishes policies on Federal use and development of voluntary consensus standards and on conformity assessment activities.

[30] https://www.fema.gov/hazus

shall participate in the ICSSC. The ICSSC Charter, originally developed in 1978 and revised in 1997, states that "ICSSC recommended practices will not be mandated for use by Federal agencies except by Executive Order or direction of the President's Office, but they may be adopted as required practices by the various Federal agencies following their established practices for implementing regulations."

Section 4(a) also delineates the statutory Lead Agency for NEHRP as the Lead Agency for the ICSSC. The NEHRP Lead Agency is currently NIST. Section 4(a) also requires NIST to lead the development and maintenance of ICSSC guidelines; such guideline publications have been traditionally designated as "recommended practices" reports.

At a meeting of the ICSSC that was composed of officially appointed agency Seismic Safety Coordinators and other agency ICSSC representatives at NIST in June 2016, the ICSSC committed to reinvigorating the ICSSC as an interagency technical body to foster the discussion and exchange of common interest seismic issues among the agencies.

EO 13717 *Section 4(b)*

> ***Section 4***. *Agency and Committee Responsibilities. (Continued)*
>
> *(b) Agencies whose activities are covered by this order shall designate one or more Seismic Safety Coordinator(s) to serve as focal points for the agency's compliance with this order and to participate in the ICSSC as appropriate. Within 30 days of the date of this order, each agency shall identify its Seismic Safety Coordinator(s) to the Director of NIST.*

2.2.10 Commentary on Section 4(b):

Section 4(b) directed agencies that are covered by EO 13717 to name official Seismic Safety Coordinator(s) (SSC's) and provide the Coordinators' names to the NIST Director within 30 days of the issuance of EO 13717, or 3 March 2016. NIST provided an electronic means for the agencies to provide this information via the Office of Management and Budget (OMB) MAX.gov web site. At the time of the publication of these guidelines, twenty-five departments or agencies had provided SSC name and contact information. Many of those agencies also provided alternate SSC name and contact information. The commentary for Section 4(c) lists SSC qualifications, duties, and responsibilities. As agencies designate new SSC's following the publication of these guidelines, the ICSSC recommends that they contact NIST to report the new designees. NIST will provide a Point of Contact for this reporting mechanism, but agencies may also send updates via email to nehrp@nist.gov .

EO 13717 *Section 4(c)*

> ***Section 4***. *Agency and Committee Responsibilities. (Continued)*
>
> *(c) The Director of NIST, on behalf of the ICSSC, shall issue implementing guidelines to assist agency compliance with this order within 8 months of the date of this order. The implementing guidelines shall provide specific guidance, including guidance about the roles and responsibilities of the agencies under section 2 of this order. The implementing guidelines shall also describe the responsibilities and necessary qualifications of the Seismic Safety Coordinator.*

2.2.11 Commentary on Section 4(c):

Section 4(c) of EO 13717 directs the NIST Director to issue guidelines for implementing the EO on behalf of the ICSSC within eight months of its issuance, or 2 October 2016. This document (RP 9) constitutes those guidelines. Required with these guidelines is a listing of the qualifications, duties, and responsibilities of agency Seismic Safety Coordinators (SSC's).

The ICSSC recommends that the following SSC qualifications, duties, and responsibilities be applied as appropriate by all Federal agencies[31]:

SSC Qualifications

Agency SSCs should be Federal employees; consistent with applicable law, they should not be Contractor personnel. Some of the SSC responsibilities are inherently governmental in nature and are thus inappropriate for performance by Contractor personnel.

The ICSSC recommends that agency SSCs be registered design professionals, with technical training in structural and/or earthquake engineering and experience in applying structural design provisions of U.S. model building codes (primarily the IBC) and national consensus design standards. Experience and advanced training in the application of seismic design provisions of national consensus design standards and U.S. model building codes is strongly preferred.
SSCs should:

- Be directly involved in agency efforts to develop and apply structural design and construction criteria for agency-owned or agency-leased buildings, for those agencies that own or lease buildings;

- Be directly or indirectly involved in the agency space leasing processes, for those agencies that lease buildings;

- Be involved in agency efforts associated with agency assistance for or regulation of the

[31] Information in this section has been adapted from similar information provided in ICSSC RP 2.1-A, *Guidelines and Procedures for Implementation of the Executive Order on Seismic Safety of New Building Construction*, NISTIR 4852, 1992.

construction of new non-Federal buildings, for those agencies that are associated with Federal assistance or regulatory programs;

- Be familiar with agency programs that fall within the scope of EO 13717 (both a qualification and a responsibility);

- Have direct or indirect access to agency-owned or leased building inventory data; and,

- Be positioned at an organizational level within the agency that allows the individual(s) to represent official agency policy views to the ICSSC.

The ICSSC recognizes that an individual agency may already have a person or persons, office, or organizational unit serving as a focal point for seismic safety for its buildings. SSC responsibilities outlined here may be fulfilled by such individuals, without requiring establishing new positions, even if they do not meet every requirement. It is also acceptable for the SSC's duties to be divided among different offices or individuals based on assigned functions, individual experience, or expertise. The ICSSC also recognizes that agencies or departments are free to designate additional personnel to participate in ICSSC activities.

SSC Duties and Responsibilities:

The ICSSC recommends that agency SSC's be responsible for coordinating all aspects of their respective agency building seismic safety activities. ICSSC-recommended SSC duties and responsibilities include:

- Be familiar with all agency building programs covered by EO 13717 (both a qualification and a responsibility);

- Act as focal point for developing and maintaining agency building seismic safety policies, procedures, records, documents, and reports;

- Participate in developing agency seismic safety implementation plans, programs, policies, procedures, and other related agency actions;

- Monitor agency efforts to comply with EO 13717 and improve seismic safety of new and existing owned and leased buildings;

- If it is within the scope of the agency's mission, monitor agency efforts to apply EO 13717 to Federal assistance and structural safety regulation activities that are associated with new non-Federal buildings;

- Document the agency's rationale and/or results of any risk analyses, cost effectiveness studies, and other reviews or determinations that form the basis for the agency's seismic safety decisions;

- Provide biennial reports on agency efforts to implement EO 13717 to NIST and OMB, as required by Section 4(f) of EO 13717[32]; and,

- Serve as official agency representative to the ICSSC, or designate other individuals with adequate technical qualifications to serve in that capacity.

EO 13717 *Section 4(d)*

> ***Section 4***. *Agency and Committee Responsibilities. (Continued)*
>
> *(d) The Director of NIST, on behalf of the ICSSC, shall provide assistance in interpreting the implementing guidelines to the Federal departments and agencies.*

2.2.12 Commentary on Section 4(d):

Section 4(d) directs the NIST Director, on behalf of the ICSSC, to assist Federal departments and agencies in interpreting the implementing guidelines it develops for EO 13717. With the issuance of this guidance, NIST will provide all members of the ICSSC with contact information for key NIST personnel who can assist with its interpretation.

EO 13717 *Section 4(e)*

> ***Section 4***. *Agency and Committee Responsibilities. (Continued)*
>
> *(e) The ICSSC shall publish updated Standards for assessing and enhancing the earthquake resilience of existing buildings as required by this order. The ICSSC shall review and update the Standards as needed to comply with this order at the maximum interval of every 6 years. Participation in the ICSSC shall continue to be open to all agencies with programs affected by this order. The Director of NIST shall provide support for the secretariat of the ICSSC and determine the frequency and scope of the ICSSC meetings as necessary to support this order.*

2.2.13 Commentary on Section 4(e):

Section 4(e) of EO 13717 includes multiple requirements.

EO 13717 tasks the ICSSC with updating the *Standards of Seismic Safety for Existing Federally Owned and Leased Buildings* (*Standards*) at a maximum time interval of every six years. The interval permits approximate synchronization with future updates of the *International Building Code*, ASCE/SEI 7, *Minimum Design Loads for Buildings and Other Structures*; ASCE/SEI 41, *Seismic Evaluation and Retrofit of*

[32] The biennial reports are required by EO 13717. See section 2.2.14 of these *Guidelines*.

Existing Buildings. NIST, FEMA, and the ICSSC are currently updating the ICSSC RP 8 *Standards*, with the next edition, ICSSC RP 10, likely to be available in 2017. This tentatively indicates the need for a post-RP 10 edition of the *Standards* to be produced by 2023. It will be the responsibility of NIST, working in concert with the other ICSSC agencies, to maintain this schedule.

As mentioned previously in these guidelines, the ICSSC RP 8 edition of the *Standards* succeeds earlier editions, ICSSC RP 4 and RP 6. As the earlier editions evolved, numerous significant changes were implemented. In accordance with Section 3(a) of EO 13717, the forthcoming ICSSC RP 10 and future editions of the *Standards*, will focus more fully on alignment with contemporaneous future editions of national model codes and standards.

Section 4(e) directs that ICSSC participation is to remain open to all agencies that have any programs that are affected by EO 13717. Further, it directs NIST to support the ICSSC Secretariat and to determine the scope and frequency of future ICSSC meetings needed to support the EO. To facilitate accomplishing this goal, NIST plans to work with the ICSSC to update and republish the ICSSC Charter, which was last revised in 1997.

EO 13717 *Sections 4(f), 4(g)*

> ***Section 4***. *Agency and Committee Responsibilities. (Continued)*
>
> *(f) Agencies whose activities are covered by this order shall submit biennial reports to the Director of the Office of Management and Budget (OMB) and the Director of NIST on their progress in implementing the order, commencing 2 years from the date of this order.*
>
> *(g) Agency compliance shall be summarized in the NEHRP reports to the Congress.*

2.2.14 Commentary on Sections 4(f) and 4(g):

Section 4(f) of EO 13717 directs all agencies with activities covered by the EO to submit biennial reports covering their progress in implementing it, commencing two years after it was issued. The reports shall be submitted to both OMB and NIST. The first report will therefore be due on or about 2 February 2018 and will cover agency activities in compliance with the EO in FY 2016 and FY 2017, recognizing that they are "startup" years for agency compliance with the EO.

The ICSSC recommends that the following information be provided to NIST, as a minimum, from each agency that is in any way covered by EO 13717:

- **For agencies engaged in the design and construction of new owned buildings or in leases for new buildings:** Each agency that is engaged in the design and construction of new buildings should describe its efforts over the previous two years to develop, adopt, and implement policies that require the use of the latest version of the *International Building Code* (IBC) for seismic design and construction of new buildings. Each agency that is engaged in leasing buildings from non-Federal owners should describe its efforts over the previous two years to

develop, adopt, and implement policies that require the use of the latest version of the IBC for leases of new buildings and the *Standards of Seismic Safety for Existing Federally Owned and Leased Buildings,* currently ICSSC RP 8, for new leases of existing buildings.

- **For agencies engaged in the operation and maintenance (O&M) of existing owned or leased buildings:** Each agency should describe its efforts over the previous two years to develop, adopt, and implement policies that require the use of the latest version of the ICSSC Recommended Practice (RP) document, *Standards of Seismic Safety for Existing Federally Owned and Leased Buildings*, currently ICSSC RP 8. Sec 3.c of EO 13717 states that the EO requirements apply to existing leases only to the extent considered to be appropriate by the leasing agency.

- **For agencies engaged in Federal Assistance Programs, as described in Sec. 2.c of EO 13717:** Each agency should describe its efforts in the previous two years to develop, adopt, and implement financial assistance procedures that are consistent with the provisions of the EO. The description should include an agency listing of the financial assistance programs for which it has determined that the EO requirements apply.

- **For agencies engaged in Federal Regulatory Programs, as described in Sec. 2.d of EO 13717:** Each agency should describe its efforts in the previous two years to develop, adopt, and implement regulatory procedures that are consistent with the provisions of the EO. The description should include an agency listing of the regulatory programs for which it has determined that the EO requirements apply.

The ICSSC provides the optional template shown in Appendix B for agency reports, for those instances where agencies plan to provide information that is more detailed than the minimum specified in this section. NIST, as the NEHRP Lead Agency, will issue a data call for these reports to all Federal agencies on or about 1 October of the year preceding the February due dates for the information.

Section 4(g) directs that the agency reports required by Section 4(f) be summarized in reports submitted by NEHRP to Congress. The National Earthquake Hazards Reduction Program Reauthorization Act of 2004, Pub. L. No. 108-360, requires that NIST, as the NEHRP Lead Agency, provide Congress with annual reports that summarize NEHRP activities. The NEHRP Lead Agency will incorporate the biennial reports of agency progress in meeting EO 13717 in every other NEHRP Annual Report to Congress, commencing with the report prepared by NEHRP in 2018. For example, the 2018 report would cover FY 2016 and FY 2017 activities by the agencies; the FY 2020 report would cover FY 2018 and FY 2019 activities by the agencies.

EO 13717 *Section 5*

> ***Section 5***. *Revocation.*
>
> *Executive Order 12699 of January 5, 1990 (Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction), as amended, and Executive Order 12941 of December 1, 1994 (Seismic Safety of Existing Federally Owned or Leased Buildings) are hereby revoked.*

2.2.15 Commentary on Section 5:

Section 5 of EO 13717 revokes EO 12699 and EO 12941, the two previous Executive Orders that addressed earthquake safety in Federal Buildings.

EO 13717 *Section 6*

> ***Section 6***. *Definitions. As used in this order:*
>
> *(a) "building" means any structure, fully or partially enclosed, used or intended for sheltering persons or property;*
>
> *(b) "alteration to an existing building" means an action that alters, as defined in 40 U.S.C. 3301(a)(1), a building and that significantly extends the building's useful life and totals more than the replacement values established in the Standards for the building's assigned Seismic Design Category; and*
>
> *(c) "programming" means developing and validating project assumptions, scope, budgets, and implementation strategy for a building.*

2.2.16 Commentary on Section 6:

Section 6 provides important clarifying definitions for terms used in EO 13717. The definitions are self-explanatory.

EO 13717 *Section 7*

> ***Section 7.*** *Exemption Authority.*
>
> *(a) The head of an agency may exempt a building from sections 2 and 3 of this order:*
>
> *(i) to the extent the head of an agency determines that exempting such building is substantially related to an important law enforcement purpose; or*
>
> *(ii) to the extent the head of an agency determines that exempting such building is necessary to address an extraordinary circumstance relating to national security or public safety.*
>
> *(b) Even when otherwise eligible for an exemption under this section, each agency shall strive to comply with the purposes, goals, and requirements set forth in this order to the maximum extent practicable.*
>
> *(c) If the head of an agency issues an exemption under this section, the agency must notify the Director of OMB in writing within 30 days of issuance of the exemption under this subsection.*

2.2.17 Commentary on Section 7:

Section 7(a) provides two possible grounds upon which the head of an agency may exempt a building from the provisions of EO 13717. The first requires agency head determination that the building's exemption is substantially related to an important law enforcement purpose; the second requires agency head determination that extraordinary circumstances related to national security or public safety necessitate the building's exemption.

Section 7(b) stipulates that, even in situations where the exemption provisions of Section 7(a) may apply, agencies shall strive to fulfill the requirements of EO 13717 for their buildings, to the maximum extent practicable.

Given the importance of earthquake safety and earthquake resilience, the ICSSC strongly recommends that agencies apply the exemptions listed here only rarely and under the most unusual circumstances.

Section 7(c) requires that the head of any agency that issues an exemption for a building from the provisions of EO 13717 notify the Director of OMB in writing within 30 days of issuing the exemption.

EO 13717 *Section 8*

> ***Section 8***. *General Provisions.*
>
> *(a) Nothing in this order shall be construed to impair or otherwise affect: (i) the authority granted by law to an executive department, agency, or the head thereof; or (ii) the functions of the Director of OMB relating to budgetary, administrative, or legislative proposals.*
>
> *(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.*
>
> *(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.*
>
> *(d) Nothing in this order shall apply to assistance provided for emergency work essential to save lives and protect property and public health and safety, performed pursuant to agencies' statutory authorities, and sections 402, 403, 502, and 503 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the "Stafford Act") (42 U.S.C. 5170a, 5170b, 5192, and 5193), or for temporary housing assistance programs and individual and family grants performed pursuant to section 408 of the Stafford Act (42 U.S.C. 5174). This order shall, however, apply to other provisions of the Stafford Act after a Presidentially declared major disaster or emergency when assistance actions involve new construction or alterations to an existing building.*
>
> *(e) This order applies only to buildings within the United States and its territories and possessions.*

2.2.18 Commentary on Section 8:

Section 8 provides several general provisions clarifying the scope of EO 13717.

Section 8(a) stipulates that EO 13717 does not impair or conflict with other authorities granted by law to Federal agencies or to the Director of OMB.

Section 8(b) makes clear that EO 13717 is to be implemented in accordance with otherwise applicable law, subject to the availability of appropriated funds.

Section 8(c) stipulates that EO 13717 does not create any legal right or action against the Federal Government, its subdivisions, officers, employees and agents or against any other person.

Section 8(d) exempts disaster and other emergency assistance provided to save lives and protect property and public health and safety or for temporary housing assistance under specified sections of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (specifically, those *codified as amended at* 42 U.S.C. 5170a, 5170b, 5192, 5193, and 5174). Section 8(d) clarifies that EO 13717 does, however, apply to other provisions of the Stafford Act after a Presidentially-declared major disaster or emergency, when assistance actions involve new construction or alterations to an existing building.

Finally, Section 8(e) makes clear that EO 13717 only applies to Federal buildings inside the U.S., its territories, and its possessions. Agencies that have installations and buildings outside the U.S. and its territories and possessions are not required to apply the EO to such buildings. However, the ICSSC notes that prudent consideration of the intent of the EO to improve safety and resilience could extend its requirements to those agencies' buildings, particularly those sited in countries that do not have modern science-based, consensus-driven and widely accepted building codes and standards.

Appendix A
Executive Order 13717

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Vol. 81, No. 24
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Title 3—
The President

Executive Order 13717 of February 2, 2016

Establishing a Federal Earthquake Risk Management Standard

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the Earthquake Hazards Reduction Act of 1977, as amended, and section 121(a) of title 40, United States Code, and to improve the Nation's resilience to earthquakes, I hereby direct the following:

Section 1. *Policy.* It is the policy of the United States to strengthen the security and resilience of the Nation against earthquakes, to promote public safety, economic strength, and national security. To that end, the Federal Government must continue to take proactive steps to enhance the resilience of buildings that are owned, leased, financed, or regulated by the Federal Government. When making investment decisions related to Federal buildings, each executive department and agency (agency) responsible for implementing this order shall seek to enhance resilience by reducing risk to the lives of building occupants and improving continued performance of essential functions following future earthquakes. The Federal Government recognizes that building codes and standards primarily focus on ensuring minimum acceptable levels of earthquake safety for preserving the lives of building occupants. To achieve true resilience against earthquakes, however, new and existing buildings may need to exceed those codes and standards to ensure, for example, that the buildings can continue to perform their essential functions following future earthquakes. Agencies are thus encouraged to consider going beyond the codes and standards set out in this order to ensure that buildings are fully earthquake resilient.

Sec. 2. *Requirements for Earthquake Safety of New Federal Buildings, Improvements to Existing Federal Buildings, and Federally Leased, Financed, or Regulated Buildings.*

a) *New Buildings and Alterations to Existing Buildings.* Each agency responsible for the design and construction of a new building or an alteration to an existing building shall ensure that the building is designed, constructed, or altered, respectively, in accord with appropriate earthquake-resistant design and construction codes and standards as set forth in sections 3(a) and 3(b) of this order.

b) *Space Leased for Federal Occupancy.* Each agency responsible for the lease of a building shall, to the extent permitted by law, ensure that it leases only buildings that have been designed and constructed in accord with the appropriate earthquake-resistant design and construction standards that apply to the type of lease at issue, as set forth in section 3(c) of this order.

c) *Federal Assistance Programs.* Each agency assisting in the financing, through Federal grants or loans, or guaranteeing the financing, through loan or mortgage insurance programs, of a newly constructed building shall consider updating its procedures for providing the assistance to be

consistent with section 3(a) of this order, to assure appropriate consideration of earthquake safety.

d) *Federally Regulated Buildings.* Each agency with responsibility for regulating the structural safety of a new building shall consider using earthquake-resistant design and construction standards for the new building consistent with section 3(a) of this order.

Sec. 3. *Codes, Standards, and Concurrent Requirements.*

a) Commencing within 90 days after the date of this order, each agency shall ensure that every new building for which the agency has not started programming is in compliance with the earthquake-resistant design provisions of the 2015 editions of the International Building Code (IBC) or the International Residential Code (IRC), nationally recognized building codes promulgated by the International Code Council (ICC), or equivalent codes, consistent with the provisions of and to the extent required by 40 U.S.C. 3312. When the ICC releases a new version of the IRC or IBC, each agency that constructs buildings shall determine whether the new version is a nationally recognized code for the purposes of 40 U.S.C. 3312(b), as expeditiously as practicable, but not later than 2 years after the release of the new version. If an agency determines that a new version is a nationally recognized code, it shall ensure that any building, for which the agency has not started programming, shall be in compliance with that new version or an equivalent code.

b) Each agency that owns an existing Federal building shall adopt the Standards of Seismic Safety for Existing Federally Owned and Leased Buildings (Standards), which are developed, issued, and maintained by the Interagency Committee on Seismic Safety in Construction (ICSSC), as the minimum level acceptable for managing the earthquake risks in that building. Any agency that has not adopted the Standards at the time of this order shall adopt the Standards no later than 90 days from the date of this order. All agencies shall adopt subsequent editions of the Standards as expeditiously as practicable, but no later than 2 years following their issuance.

c) Each agency that leases space in an existing building shall adopt the Standards as the minimum level acceptable for managing the earthquake risks in that building. This requirement shall apply to existing leases or leases existing at the time of issuance of updated Standards only to the extent appropriate, as determined by the leasing agency. With respect to leases for a building being constructed to accommodate a Federal agency under the authority in 40 U.S.C. 585(a), the leasing agency shall ensure that the building complies with the earthquake-resistant design and construction standards that would apply to a building constructed by the agency pursuant to section 3(a) of this order. With respect to such leases entered into under authority other than 40 U.S.C. 585(a), the leasing agency shall ensure that the building complies with the earthquake-resistant design and construction standards that would apply to a building constructed by the agency pursuant to section 3(a) of this order, to the extent permitted by law.

d) Agencies may require higher performance levels than exist in the codes and standards described in sections 3(a), (b), and (c) of this order.

Sec. 4. *Agency and Committee Responsibilities.*

a) The ICSSC shall be composed of representatives of all Federal agencies engaged in construction, financing of construction, or related activities. The National Earthquake Hazards Reduction Program (NEHRP) Lead Agency, currently the National Institute of Standards and Technology (NIST), shall lead the ICSSC, and shall lead the development and maintenance of ICSSC

guidelines to assist the Federal agencies with implementing earthquake risk reduction measures in their construction programs.

b) Agencies whose activities are covered by this order shall designate one or more Seismic Safety Coordinator(s) to serve as focal points for the agency's compliance with this order and to participate in the ICSSC as appropriate. Within 30 days of the date of this order, each agency shall identify its Seismic Safety Coordinator(s) to the Director of NIST.

c) The Director of NIST, on behalf of the ICSSC, shall issue implementing guidelines to assist agency compliance with this order within 8 months of the date of this order. The implementing guidelines shall provide specific guidance, including guidance about the roles and responsibilities of the agencies under section 2 of this order. The implementing guidelines shall also describe the responsibilities and necessary qualifications of the Seismic Safety Coordinator.

d) The Director of NIST, on behalf of the ICSSC, shall provide assistance in interpreting the implementing guidelines to the Federal departments and agencies.

e) The ICSSC shall publish updated Standards for assessing and enhancing the earthquake resilience of existing buildings as required by this order. The ICSSC shall review and update the Standards as needed to comply with this order at the maximum interval of every 6 years. Participation in the ICSSC shall continue to be open to all agencies with programs affected by this order. The Director of NIST shall provide support for the secretariat of the ICSSC and determine the frequency and scope of the ICSSC meetings as necessary to support this order.

f) Agencies whose activities are covered by this order shall submit biennial reports to the Director of the Office of Management and Budget (OMB) and the Director of NIST on their progress in implementing the order, commencing 2 years from the date of this order.

g) Agency compliance shall be summarized in the NEHRP reports to the Congress.

Sec. 5. *Revocation.* Executive Order 12699 of January 5, 1990 (Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction), as amended, and Executive Order 12941 of December 1, 1994 (Seismic Safety of Existing Federally Owned or Leased Buildings) are hereby revoked.

Sec. 6. *Definitions.* As used in this order:

a) "building" means any structure, fully or partially enclosed, used or intended for sheltering persons or property;

b) "alteration to an existing building" means an action that alters, as defined in 40 U.S.C. 3301(a)(1), a building and that significantly extends the building's useful life and totals more than the replacement values established in the Standards for the building's assigned Seismic Design Category; and

c) "programming" means developing and validating project assumptions, scope, budgets, and implementation strategy for a building.

Sec. 7. *Exemption Authority.*

a) The head of an agency may exempt a building from sections 2 and 3 of this order:
   i. to the extent the head of an agency determines that exempting such building is substantially related to an important law enforcement purpose; or
   ii. to the extent the head of an agency determines that exempting such building is necessary to address an extraordinary circumstance relating to national security or public safety.

b) Even when otherwise eligible for an exemption under this section, each agency shall strive to comply with the purposes, goals, and requirements set forth in this order to the maximum extent practicable.

c) If the head of an agency issues an exemption under this section, the agency must notify the Director of OMB in writing within 30 days of issuance of the exemption under this subsection.

Sec. 8. *General Provisions.*

a) Nothing in this order shall be construed to impair or otherwise affect:
(i) the authority granted by law to an executive department, agency, or the head thereof; or
(ii) the functions of the Director of OMB relating to budgetary, administrative, or legislative proposals.

b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

d) Nothing in this order shall apply to assistance provided for emergency work essential to save lives and protect property and public health and safety, performed pursuant to agencies' statutory authorities, and sections 402, 403, 502, and 503 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the "Stafford Act") (42 U.S.C. 5170a, 5170b, 5192, and 5193), or for temporary housing assistance programs and individual and family grants performed pursuant to section 408 of the Stafford Act (42 U.S.C. 5174). This order shall, however, apply to other provisions of the Stafford Act after a Presidentially declared major disaster or emergency when assistance actions involve new construction or alterations to an existing building.

e) This order applies only to buildings within the United States and its territories and possessions.

THE WHITE HOUSE,
February 2, 2016.

[FR Doc. 2016–02475
Filed 2–4–16; 11:15 am]
Billing code 3295–F6–P

Appendix B
Optional Template for Biennial Agency Reports

This "template" is provided to assist agencies in preparing their biennial reports regarding their compliance with EO 13717. While minimum reporting requirements needed to comply with the EO are listed in section 2.2.14 of these Guidelines, this template is made available for optional use by those agencies that plan to provide more detailed reporting than the specified minimum.

Agencies should provide information for only those categories of buildings for which they have activities to report; for other sections of the report, they should report "N/A." Agencies should limit their discussion to basic data suggested in the template; lengthy narratives are not expected.

Agencies may also describe briefly any other seismic risk mitigation or seismic research measures that they have undertaken during the two-year time period time period covered by their report, should they choose to do so.

The following information comprises the "template":

Date of Submission:

Agency Name:

Seismic Safety Coordinator(s) Name(s) and Contact Information:

Time Period Covered (FY's):

For New Federally-Owned Buildings:

Number of New Buildings Constructed (completed) During Two-Year Reporting Time Period:

Listing of Building Codes and Standards Used in Design, including year of issue (if other than *International Building Code* specified in these Guidelines):

Brief Description of Agency Procedures for Establishing and Applying Building Performance Objectives that Exceed Minimum Seismic Requirements of *International Building Code* that is specified in these Guidelines, if applicable:

For New Federally-Leased Buildings:

Number of New Leases Undertaken During Time Period (include leases that are for less than entire building space):

Listing of Building Codes and Standards Required for New Lease Agreements:

Number of New Leases Undertaken During Time Period in Buildings that do not Comply with *International Building Code* that is specified in these Guidelines (either because no seismically conforming space was available or because total area leased in individual buildings is less than 10,000 SF or lease is for temporary short term purposes):

For New Federally-Assisted Buildings:

For agencies that are engaged in grant, loan, or financial guarantee assistance programs, a listing of the Assistance Programs Deemed by the Agency to be Impacted by the EO, as per the commentary in Section 2.2.3 of this report:

A Brief Description of How Requirements for Building Codes and Standards for Programs Covered by EO are Administered:

For New Federally-Regulated Buildings:

For agencies that are engaged in programs regulating the structural safety of new non-Federal buildings, a listing of Regulatory Activities Deemed by the Agency to be Impacted by the EO, as per the commentary in Section 2.2.4 of this report:

Brief Description of How Requirements for Building Codes and Standards for Regulatory Activities Covered by EO are Administered:

For Existing Federally-Owned Buildings[33]:

Number of Existing Buildings in Agency Inventory:

Number of Existing Buildings Evaluated During Time Period:

Number of Evaluated Buildings Found to Pass Evaluation:

[33] Per EO 13717, standards for existing Federal buildings are defined by ICSSC RP 8 and its successor standards.

Number of Evaluated Buildings Found to Fail Evaluation:

Number of Existing Buildings Mitigated[34] During Time Period (either by Demolition or Abandonment or by Structural Measures):

Number of Exceptionally High Risk (EHR) Buildings Identified During Time Period:

Number of EHR Buildings Evaluated During Time Period:

Number of EHR Buildings Mitigated During Time Period (either by Demolition or Abandonment or by Structural Measures):

Brief Description of Process Used to Identify EHR Buildings:

[34] If shown to be seismically deficient in evaluation.

Appendix C
Acronyms and Abbreviations

ACI	American Concrete Institute
AEBM	Advanced Engineering Building Module
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
ASCE	American Society of Civil Engineers
CEA	California Earthquake Authority
CFDA	Catalog of Federal Domestic Assistance
DOC	Department of Commerce
DOI	Department of Interior
DOT	Department of Transportation
ED	Department of Education
EO	Executive Order
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
GCR	Government Contractor Report
GSA	General Services Administration
HHS	Department of Health and Human Services
HUD	Department of Housing and Urban Development
IBC	International Building Code
ICC	International Code Council
ICCPC	ICC International Performance Code for Buildings and Facilities
ICSSC	Interagency Committee on Seismic Safety in Construction
IEBC	International Existing Building Code
IRC	International Residential Code
NAPA	National Academy of Public Administration
NEHRP	National Earthquake Hazards Reduction Program

NIST	National Institute of Standards and Technology
NRC	Nuclear Regulatory Commission
OMB	Office of Management and Budget
PACT	Performance Assessment Calibration Tool
PBSD	Performance-Based Seismic Design
SBA	Small Business Administration
SEAOC	Structural Engineers Association of California
SEI	Structural Engineering Institute
SSC	Seismic Safety Coordinator
USDA	United States Department of Agriculture
USFS	United States Forest Service
USGS	United States Geological Survey
VA	Department of Veterans Affairs

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Appendix E
Federal Agency Participants

The following listing presents the names and agencies of key individuals who have participated in the activities of the Interagency Committee on Seismic Safety in Construction (ICSSC) efforts to produce these Guidelines. Two listings of participants are provided. First listed are the officially designated agency Seismic Safety Coordinators (SSC's) that were so designated by their agencies in response to EO 13717. Following this listing, at-large members of the ICSSC are listed.

Agency Seismic Safety Coordinators:

Central Intelligence Agency: David Jacobs

Department of Agriculture: Doreen LaRoche

Department of Agriculture – Forest Service: Michael Balen

Department of Commerce: Richard Townsend

Department of Defense: Thadd Buzan

Department of Defense – Air Force: Robert Dinan

Department of Defense – Army: Richard Ludwitzke

Department of Defense – Navy: Curtis Craven

Department of Energy: Sharon Jasim-Hanif

Department of Health and Human Services: Alfred Cypress

Department of Homeland Security: Robert Klipfel

Department of Homeland Security – Federal Emergency Management Agency: Donald Williams

Department of Housing and Urban Development: Danielle Schopp

Department of Justice: Scott Snell

Department of the Interior: Larry Reynolds

Department of Labor: Philip Puckett

Department of Transportation: Yvonne Medina

Department of Transportation - Federal Aviation Administration: Shannon Byrnes

Department of Veterans Affairs: Donald Myers, Juan Archilla

Environmental Protection Agency: Lance Swanhorst

Export-Import Bank of the United States: Alan Foust

Agency Seismic Safety Coordinators, Continued:

General Services Administration: Willie Hirano

National Aeronautics and Space Administration: Edison Carlos

Nuclear Regulatory Commission: Jim Xu

Office of Government Ethics: Ty Cooper

Office of the Director of National Intelligence: Ben Dichoso

Presidio Trust: Michael McGill

Small Business Administration: Floy Rodriguez

Tennessee Valley Authority: Johnathan Duncan

At-Large Members of ICSSC:

Department of Commerce – NIST: Howard Harary

Department of Commerce – NIST: Jason Averill

Department of Commerce – NIST: John Hayes

Department of Commerce – NIST: Steven McCabe

Department of Defense: Catherine Fitzpatrick

Department of Defense – Army: Thomas North

Department of Defense – Navy: Rich Kahler

Department of Energy: Subir Sen

Department of Energy – Bonneville Power Administration: Leon Kempner

Department of Energy – Western Area Power Administration: Jerry Schreiber

Department of Energy – Los Alamos National Laboratory: Michael Salmon

Department of Energy – Richland Operations Office: Steve McDuffie

Department of Homeland Security – Federal Emergency Management Agency: Ed Laatsch

Department of Homeland Security – Federal Emergency Management Agency: Bill Blanton

Department of Homeland Security – Federal Emergency Management Agency: Mike Mahoney

Department of the Interior – Bureau of Reclamation: Tim Brown

Department of the Interior – U.S. Fish and Wildlife Service: Ron Begin

Department of the Interior – U.S. Geological Survey: Mehmet Celebi

Department of the Interior – U.S. Geological Survey: Nicolas Luco

Department of Justice: Arash Aghvami

Department of Justice – Federal Bureau of Prisons: Katharine Chan

Department of State: Bernie Dennis

Department of State: Dai Oh

Department of Transportation – Federal Aviation Administration: Toan Dang

Department of Transportation – Federal Aviation Administration: Jim Farasatpour

Department of Veterans Affairs: Asok Ghosh

Department of Veterans Affairs: Fred Lau

General Services Administration: Pete Blakely

General Services Administration: James Sampson

General Services Administration: Bernard Minakowski

Nuclear Regulatory Commission: Scott Flanders

Tennessee Valley Authority: Husein Hasan

Tennessee Valley Authority: Jeffrey Munsey