GEOLOGIC HAZARD REPORT REQUIREMENTS

IR A-4

Reference: California Building Standards Administrative Code, Section 4-317(e) — Revised 06-17-09
2001 California Building Code (CBC) Sections 1629A.4 and 1804A.1 — Revised 11-01-07
2007 CBC, Sections 1613A and 1802A — Revised 07-21-05
Education Code Section 17212.5 — Revised 02-03-04
Issued 09-01-99

Discipline: Structural

This Interpretation of Regulations (IR) is intended for use by the Division of the State Architect (DSA) staff, and as a resource for design professionals, to promote more uniform statewide criteria for plan review and construction inspection of projects within the jurisdiction of DSA which includes State of California public elementary and secondary schools (grade K-12, Community Colleges and state-owned or state-leased essential services buildings. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

This IR is reviewed on a regular basis and is subject to revision at any time. Please check the DSA web site for currently effective IRs. Only IRs listed in the document at http://www.dsa.dgs.ca.gov/Pubs/default.htm (click on "DSA Interpretation of Regulations Manual") at the time of plan submittal to DSA are considered applicable.

Purpose: The purpose of this Interpretation of Regulations (IR) is to describe the requirements for the submission of a geologic hazard report to the Division of the State Architect (DSA) for projects within the jurisdiction of DSA.

1. GENERAL: A geologic hazard is any geologic condition that is a potential danger to life or property. Geologic hazards include, but are not limited to, *earthquake shaking, surface rupture, liquefaction, and landslides*.

The California Building Standards Administrative Code (CAC), Section 4-317(e) includes requirements for the performance of soils investigation studies and geologic hazard studies for all construction, including additions and alterations. Note that "Geotechnical Reports" (or soils investigation reports) often include soils studies only and may not include complete geologic hazard studies.

In addition, the California Building Code (CBC), Section 1802A, describes requirements for engineering geologic reports, supplemental ground-response reports, and geotechnical reports. Any of these reports may contain elements of the geologic hazard studies, and these reports should all be submitted as "geologic hazards reports."

2. PROJECTS REQUIRING GEOLOGIC HAZARD REPORTS: Except as noted in Section 3, a geologic hazard report shall be submitted to the California Geological Survey (CGS) for projects located in any of the areas described in paragraph 2.1, through 2.7 below.

2.1 On any new site.

2.2 Within any "state mandated geologic hazard zone" which includes:

- Earthquake Fault Zones (Public Resources Code (PRC) Div. 2, Ch. 7.5, Sec. 2621 et seq.)
- Seismic Hazard Zones for Landslides and Liquefaction (PRC Div 2, Ch. 7.8, Sec. 2690 et. seq.)

2.3 Within an area identified as a geologic hazard in the Safety Element of the Local General Plan.

2.4 Any project where the design ground motion loads are developed using earthquake time history records, site response analysis, or site-specific ground motion hazard analysis. This includes projects using any portion of ASCE 7, Chapter 16 or Chapter 21, or projects using ASCE 41, to develop seismic parameters.

2.5 Any project where deep foundations are proposed.

2.6 Any project on existing sites if not exempted by Sections 3.1, 3.2 or 3.3 below.

2.7 On any other existing site when required by DSA, where a potential geologic hazard has been previously identified.

3. PROJECTS NOT REQUIRING GEOLOGIC HAZARD REPORTS: Except as noted in paragraph 2.7, a geologic hazard report will not be necessary for projects on existing sites in any of the situations described below:

3.1 Regardless of location, if the project includes only:

- non-structural alterations which do not cost more than 50% of the replacement cost of the structure, and/or
- alterations complying with Section 3403.2.3.2, where the alterations are not initiated for the purpose of increasing the strength or stiffness of the seismic-force-resisting system.

3.2 If the project is one or more one–story, wood-frame and light-steel frame buildings of Type II or V construction, 4,000 square feet or less in floor area, and not located within Earthquake Fault or Seismic Hazard Zones as shown on the most recently published maps from the CGS (see 2007 CBC, Section 1802A.6.1.1, Exception 1).

3.3 A new geologic hazard report is not required if the project is located on a site for which adequate studies (refer to CGS Note 48 for guidance) have been already made, and a reevaluation is made and the report is found to be currently appropriate. This existing report for the site and the reevaluation must be submitted to the CGS for approval for each project at the site.

4. SCOPE OF GEOLOGIC HAZARD STUDIES: For guidance in conducting a study and reporting evaluations and recommendations, refer to:

- Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California (2008)
- Special Publication 42 Fault-Rupture Hazard Zones in California (1997 revised edition, including supplements 1 and 2 added in 1999)

both published by the Department of Conservation and available to order from

http://www.consrv.ca.gov/CGS/information/publications/index.htm

CGS Note 48 will be used as a guide for review.

http://www.consrv.ca.gov/CGS/information/publications/cgs_notes/note_48/note_48.pdf

5. REPORTING PROCEDURES: DSA prefers that a copy of a geologic hazard report approved by the California Geological Survey (CGS) be submitted to DSA along with the initial project application. If a project is submitted to DSA without a CGS approved geologic hazard report DSA will start the plan review process pending receipt of the approved report.

5.1 All geologic hazard reports must be approved by CGS before DSA will stamp-out the plans and specifications for any project that requires a geologic hazards report.

5.2 School districts are responsible for submittal of reports to CGS and for the cost of review by CGS.

5.3 CGS will begin to accept submittals directly from school districts by July 1, 2009. DSA projects reviews and CGS reviews of geologic hazard reports for projects submitted to DSA during July and August will proceed concurrently.

5.4 Requirements regarding contents of geologic hazard reports are addressed by CGS:

http://www.conservation.ca.gov/cgs/rghm/reviews/Pages/Default.aspx