



INFORMATION SHEET

NO. S-05

DATE : April 29, 2024
CATEGORY : Structural
SUBJECT : **Geotechnical Report Requirements**

PURPOSE : The purpose of this Information Sheet is to clarify when the submittal of a geotechnical report is required based on the proposed work.

REFERENCE : San Francisco Building Code (SFBC), Current Edition
Minimum Design Loads and Associated Criteria for Buildings and Other Structures, American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI) 7, Current Edition
State of California Department of Conservation Division of Mines and Geology (CDMG) Seismic Hazard Zones Map for San Francisco, released November 17, 2000.
Information Sheet S-19: Projects Subject to the Slope and Seismic Hazard Zone Protection Act (SSPA) Ordinance
Administrative Bulletin AB-083 Requirements and Guidelines for the Seismic Design of New Tall Buildings using Non-Prescriptive Seismic-Design Procedures
Administrative Bulletin AB-111 Guidelines for Preparation of Geotechnical and Earthquake Ground Motion Reports for Foundation Design and Construction of Tall Buildings

DISCUSSION:

The following proposed work requires the submittal of a geotechnical report:

1. New structures (with the exception of one-story storage or utility occupancies, including storage sheds and garages).

For projects involving new tall buildings, refer to Administrative Bulletin AB-083 and Administrative Bulletin AB-111.

2. Horizontal additions if the footprint area increases more than 50% of the existing footprint square footage.

3. Horizontal and/or vertical addition having over 500 square feet of new projected roof area on a property that lies within the "Earthquake-Induced Landslide" area on the state of California Department of Conservation, Division of Mines and Geology (CDMG) Seismic Hazard Zones Map for San Francisco, released November 17, 2000, or on a property exceeding an average slope of one unit vertical to four units horizontal grade, per SFBC Section 106A.4.1.4.3 and per SFBC Section 106A.4.1.4.4. For projects subject to the Slope and Seismic Hazard Zone Protection Act (SFBC Section 106A.4.1.4), refer to Information Sheet S-19.
4. Any grading, unless exempt per SFBC Section J104.3.

Any grading, including excavation or fill, of over 50 cubic yards of earth materials for projects subject to the Slope and Seismic Hazard Zone Protection Act per SFBC 106A.4.1.4.3.
5. Fill slopes steeper than one unit vertical to two units horizontal (50-percent slope) per SFBC Section J107.6, or fills that deviate from the stipulated provisions in SFBC Section J107 Fills.
6. Any footings on or adjacent to slopes steeper than one unit vertical to three units horizontal without clearances as indicated per SFBC Section 1808.7 and Figure 1808.7.1.
7. The design soil lateral loads are less than the minimum design requirements specified in SFBC Section 1610 Soil Lateral Loads.
8. The design load bearing value used exceeds values stipulated for Class 5 soil materials in SFBC Table 1806.2 Presumptive Load-Bearing Values.
9. For structures assigned to Seismic Design Category D, E, or F, foundation walls and retaining walls supporting more than 6 feet of backfill height to determine the dynamic seismic lateral earth pressures due to design earthquake ground motions per SFBC Section 1803.5.12.
10. Special foundation including, but not limited to, deep foundations as specified in SFBC Section 1803.5.5 and 1810, base isolation and any design not covered by code. Piers supporting a fence, sign or isolated post are exempt from a geotechnical report for special foundations.
11. As required per Building Code, including` but not limited to:
 - a) Expansive soil per SFBC Section 1803.5.3.
 - b) Drainage system as an alternative to the requirements per SFBC Section J109 Drainage and Terracing.
 - c) Ground-water table per SFBC Section 1803.5.4 to determine whether the existing ground-water table is above or within 5 feet below the elevation of the lowest floor level where such floor is located below the finished ground level adjacent to the foundation, unless waterproofing is provided in accordance with SFBC Section 1805.
 - d) Ground improvement, including soil mix grouting and chemical soil grouting.
 - e) Where shallow foundations will bear on controlled low-strength material (CLSM), a geotechnical investigation shall be conducted per SFBC Section 1803.5.9 Controlled low-strength material.

- f) Where the classification, strength or compressibility of the soil is in doubt, such as soils in liquefaction zones for structures assigned to Seismic Design Category C, D, E or F, the building official shall be permitted to require that a geotechnical investigation be conducted per SFBC 1803.5.2 and 1803.5.11.
 - g) Where geological investigation is deemed necessary per SFBC Section 1803 Geotechnical Investigations.
12. Permit scope subject to mandatory structural advisory committee review under SFBC Section 106A.4.1.2 Edgehill Slope Protection Area and Section 106A.4.1.3 Northwest Mt. Sutro Slope Protection Area.
 13. All structures utilizing Modal Response Spectrum Analysis in accordance with ASCE 7 Section 12.9.1 Modal Response Spectrum Analysis.

The following are submittal requirements for geotechnical reports:

1. Geotechnical reports shall be prepared in accordance with SFBC Section 1803.2 through Section 1803.6 and Section J104.3.
2. Civil engineers experienced in geotechnical engineering are authorized to practice geotechnical engineering. This includes preparing or reviewing geotechnical reports. Engineers shall perform services only in the areas of their competence.
3. Geotechnical reports shall be submitted along with the permit application and drawings for plan review. An electronic copy of the final geotechnical report shall be made available to the plan reviewer for DBI and state records. Geotechnical reports or additional geotechnical information may be requested by the plan reviewer during review of the project.
4. In addition to the geotechnical report, provide a letter signed and sealed by the geotechnical consultant, who is a licensed civil or geotechnical engineer, stating that they have reviewed and approved the final structural plans, drawings, and calculations if applicable. Include the letter in the permit drawings.

Note: In addition to a licensed geotechnical or civil engineer, a licensed geologist is also required for properties subject to the Slope and Seismic Hazard Zone Protection Act. See Information Sheet S-19.



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Date

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