

# COMPACTION, SOILS AND GEOLOGICAL REPORTS FOR REBUILDING IN THE PALISADES FIRE AREA

## I. INTRODUCTION

This Information Bulletin outlines the requirements relative to compaction, soil and geological reports, related to Wildfire reconstruction in the Pacific Palisades. This IB is also intended as an informational document outlining the typically required steps and actions during the Department of Building and Safety's (LADBS) grading permit review process.

Furthermore, this IB introduces alternative compliance methods intended to streamline the grading permit review processes within the Pacific Palisades fire-impacted areas, while still ensuring that safety is maintained. Please see the "Exceptions" subsections under Section III, Required Reports, below.

## II. DEFINITIONS

The following definitions are described within the context and applicability of this bulletin.

### **Compaction Report**

A compaction report is a geotechnical report that documents the process and results of placing new soil or removing soil and re-compacting it to meet engineering standards for construction. It ensures the soil has adequate strength, stability and uniformity to support the proposed construction.

### **Engineering Geologist**

An engineering geologist is a registered Professional Geologist and a Certified Engineering Geologist (EG).

### **Geologic sensitive area**

A geologic sensitive area is a location where natural geologic conditions or hazards could significantly impact development and safety. These areas require careful evaluation and often special engineering to prevent damage to structures.

### **Geologist**

A geologist is a registered Professional Geologist (PG) also known as Registered Geologist (GEO) practicing in the field of geology.

### **Geology**

Geology describes the structure of the Earth on and beneath its surface and the processes that have shaped that structure. Geologists study the mineralogical composition of rocks and soils in order to get insight into their history of formation and characteristics.

## **Geology Report**

A geology report is a technical document that provides an analysis of the geologic conditions of a specific site. It is prepared by a geologist or engineering geologist to identify and assess natural geologic features and hazards that may affect the safety, stability, and suitability of a site for the proposed building and excavation.

## **Geotechnical Engineer**

A geotechnical engineer is a registered Civil Engineer (also known as Professional Engineer (PE) and a registered Geotechnical Engineer (GE).

## **Palisades Geohazard Risk Assessment Zones**

The Department of Building and Safety (LADBS) has prepared a map, titled “Palisades Geohazard Risk Assessment Zones” (PGRAZ). The PGRAZ zones are identified as **geologically sensitive areas**, the map and the identified addresses can be found [here \(PGRAZ\)](#). Orange zones include sites on or next to steep slopes (in general, steeper than 2h:1v) or potential landslide areas. Yellow zones include sites at the bottom of steep slopes that are prone to be affected by mudslide debris. This document has been prepared as a quick reference to use in determining if a geology and soil report will be required. For properties that are not identified on the PGRAZ list, the Department recommends that the property owners contact a geotechnical consultant. In order to reduce costs, neighboring properties may jointly commission one geotechnical firm to provide reports that cover multiple properties.

## **Shallow (Conventional) foundation**

A shallow foundation is a type of foundation that transfers the structural load to near-surface soil layers, rather than to deeper layers. These foundations are suitable for light structures on soil with good load-bearing capacity near the surface. Common types include strip footings, and spread footings, which are more cost-effective and quicker to construct than deep foundations.

## **Soils Engineer**

A soils engineer is a registered Civil Engineer practicing in the field of soils engineering.

## **Soils Engineering**

Soils engineering is an applied science that uses principles from soil mechanics to address practical engineering problems related to soil, including evaluating soil properties for stability, load-bearing capacity, and settlement in foundations, retaining walls, and other structures.

## **Soils (Geotechnical) Reports**

A soils report is a technical document that is prepared by a soils engineer or a geotechnical engineer to provide detailed physical information and characteristics of the soil for a specific location. Such information includes soil layers, load capacity of the soil, soil compaction, drainage characteristics and how soil behaves under stress. This information is used in the design of the foundations and slabs to ensure against foundation failure, improper settling and landslides.

### III. REQUIRED REPORTS

#### Reports for Orange and Yellow Areas Within the PGRAZ

Combined Geology and Soils reports are required and shall be prepared in accordance with the guidelines presented in [Information Bulletin P/BC 2024-113](#). Previous Remedial Repairs (including foundation or slope improvements) may remain if the geotechnical consultants determine there is no potential instability. These reports will require approval from the Department of Building and Safety Grading Division.

#### Soils Reports for Areas Not Within the Orange and Yellow PGRAZ

Areas not within the PGRAZ are relatively flat and will typically not require combined Geology and Soil reports, however, a soils report will be required for excavations deeper than 5 feet and/or where lateral support from an adjacent property, structure or public way is removed.

#### Exceptions:

1. A soils report is not required when removing a lateral support from an adjacent private property if the neighboring lot does not have any structures, including masonry (block or concrete) walls, within 45 degrees from the bottom of the excavation provided one of the following support methods is used.
  - A. ABC Slot Cuts: Maximum width of 6 feet and a maximum height of 8 feet. In the event, sloughing or caving of soils is observed, the project civil engineer shall immediately support the excavation; and submit a soils report containing site specific temporary excavation recommendations for Department review and approval. **OR,**
  - B. Shoring: Design with an Equivalent Fluid Pressure of 30 pound per cubic foot (pcf) to a maximum height of 12 feet. In the event, shoring lateral deflections greater than one inch are measured, the project civil engineer shall immediately add additional elements to the shoring system such as bracing or rakers, and submit a soils report containing site specific temporary excavation recommendations for review and approval.

#### Compaction Reports

When an existing conventional foundation is removed during the demolition process, the soil adjacent to the foundation will be disturbed. In situations like these, the disturbed soil will need to be removed and properly compacted. In this case, a grading permit is required and a compaction report is required to be submitted to the Department for approval. The compaction report will ensure that future settlement of the soils is negligible to prevent distress of the new structure. Prior to placing a new fill, the subgrade has to be observed and approved by the grading inspector. Once all new fill has been placed and compacted, the final report shall be submitted to the Grading Division. Thereafter, a final inspection must be requested for the grading work once the building and site drainage have been completed.

#### Exception:

In areas not designated as orange or yellow on the PGRAZ map, soil compaction may be self-certified by the consulting licensed civil or geotechnical engineer. In this case, both a subgrade

observation memorandum and a compaction report must be submitted to the LADBS Residential Inspector (BMI) for record keeping. These self-certified documents must confirm that all applicable code requirements have been met.

Projects that intend to use this self-certification option must provide the following note on the plans: “The compaction report and observation of the subgrade will be self-certified by the consulting licensed civil/geotechnical engineer.” The plan check engineer will verify that the project is not within the PGRAZ.

### **Using Previously Approved Soils and Geology/Soils Reports**

Eligible Projects with an existing geology and/or soils report prepared for a project with a similar scope of work may be used again for the rebuild, provided there is an approval letter dated within 10 years of the Mayor’s EEO1. However, reports approved prior to the 2019 California Building Code will need to be updated for seismic design parameters, including seismic slope stability analysis and seismic lateral earth pressures. Additionally, existing reports with an approval letter older than 10 years of the Mayor’s EEO1, may be used if the consultant is able to justify using such a report. Existing reports for adjacent or nearby sites may be used to reduce new exploration if the area is relatively comparable geologically. Consultants shall include a statement that they have reviewed, concur and assume responsibility for the data in a previously approved report that was completed by others.

Existing reports can be requested or viewed on the Department’s website ([link](#)).

### **REPORT SUBMITTAL**

Compaction, soils and geological reports, when required, shall be filed with the Grading Division, refer to the Memorandum titled “Submittal of Documents to the Grading Division” ([link](#)) for filing information.

## **IV. GRADING PERMIT**

A grading permit is required to perform any grading (excavation or fill), import or export any earth materials to or from any grading site, A grading permit is not required if the work complies with any one of the following conditions:

1. Self-certified compaction reports
2. An excavation which is less than 2 feet in depth.
3. Slope cut where the remaining cut has less than 50% (45 degrees) slope provided the cut does not exceed 50 cubic yards or changes the existing drainage pattern.
4. A fill less than one foot in depth and placed on natural terrain with a slope flatter than one 10% provided the cut does not exceed 50 cubic yards or changes the existing drainage pattern.
5. Excavations, located in hillside areas, for caissons or piles under buildings or structures authorized by valid building permits.
6. Excavations, not located in hillside areas, for basements, footings, caissons, piles, swimming pools or underground structures which are authorized by valid building permits.

7. Excavations for wells or tunnels or utilities, which do not provide vertical or lateral support for buildings, or adversely impact the safety or stability of private or public properties.
8. Grading permits may be waived by the department for excavations under buildings or structures in hillside areas, if the applicant can demonstrate that the site is relatively level, or the excavation is entirely for footings and/or grade beams not exceeding 5 feet deep.

### **Grading Pre-Inspections (GPI)**

A GPI consists of a site visit by an LADBS grading inspector to identify the requirements, if any, for grading reports such as soils or geology reports, prior to permit issuance. A GPI is required for all projects in the hillside grading area except as provided in this section.

GPI's are not required when:

1. A geology and soils report have been submitted and approved by the LADBS Grading Division.
2. Projects within the PGRAZ zones (these projects require a geology and soils reports to be submitted to LADBS.)

GPI's can also be waived by the LADBS plan check engineer on a case by case basis. However, A GPI waiver does not waive other requirements like the requirement for a property line survey or a grading permit.

## **V. GENERAL CONSIDERATIONS**

The following information includes specific code sections that may impact the reconstruction of Eligible Projects.

91.7005.9 Nonconforming Sites: Rebuilds will not be considered "new buildings" so the whole site need not be in full compliance with the Building and Residential Codes. However, the proposed residential building will have to conform to current Code standards.

91.7006.8 Conformance with Zoning Regulations: The Mayor's Emergency Executive Order No. 1 (EEO1) waives zoning regulations for Eligible Projects that are in conformance with EEO1.

91.7011.6 Old Fills (older than 4/25/1963): This code section requires the project soils engineer to investigate fills older than April 25, 1963. Testing the old fill will not be required provided the consultants determine that the fill and the proposed foundation is suitable for the proposed reconstruction.

## **VI. CALIFORNIA SEISMIC HAZARD ZONES**

Seismic hazard evaluations (i.e., earthquake induced slope stability, liquefaction analysis, or a fault investigation) will be required except as provided in the Department's Information Bulletin [P/BC 2023-044](#). If a site already has a previously approved report with seismic hazard evaluations, a new report may not be necessary.

## VII. EXISTING FOUNDATIONS

Reusing the existing slab and foundation is permitted, provided a California-licensed Professional Structural Engineer or Architect evaluates the foundation system and affirms that it is in satisfactory condition. Documentation, which may include observations and tests of the foundation system, must be submitted to LADBS for review and approval. Additional soil or geotechnical investigations may be necessary for projects within PGRAZ zones to assess the feasibility of reusing the foundation system.

## VIII. GRADING BONDS

Building code section 91.7006.5 requires bonds in such amounts to assure that the work is completed, if not fully executed in accordance with the approval plans and specifications. The amount of the bond will be determined by the LADBS to conform with Section 91.7006.5.7 of the Building Code.

## IX. NOTIFICATION AND POSTING

LAMC 91.3307.1 requires that prior to the issuance of any permit, which authorizes an excavation where the excavation is to be of a greater depth than the walls or foundation of any adjoining building or structure and located closer to the property line than the depth of the excavation, the owner of the site shall provide the Department of Building and Safety with evidence that the adjacent property owner or owners have been given a 30-day written notice of the intent to excavate. This notice shall state the depth to which the excavation is intended to be made and when the excavation will commence. This notice shall be by certified mail, return receipt requested. See [Information Bulletin P/BC 2023-060](#).

LAMC 91.106.4.6.1: In any area designated as a hillside grading area, the department shall not issue (1) a building permit for construction of a building with over 500 square feet of floor area, or (2) a building permit for any addition to an existing building which adds over 500 square feet of floor area, or (3) a grading permit for the grading of more than 1,000 cubic yards (765 m<sup>3</sup>) of earth materials without having first done the following at least 10 days prior to issuance of the building or grading permit:

1. The department shall send written notices of the permit application, by mail, to the owners of all property abutting the property at which the construction or grading will occur. Notices shall also be sent to the owners of all property across the street or alley when such property is intersected by a projection of the lot lines of the property at which the construction or grading will occur. This requirement has been suspended in the Mayor's Emergency Executive Order No. 8.
2. The department shall post a notice of the permit application on the property at which the construction or grading will occur.