



**Mandatory Retrofit Program for Non-Ductile Concrete Buildings
And Pre-Northridge Steel Moment Frame Buildings
Ordinance 17-1011**

SEISMIC DESIGN GUIDELINES

ISSUED NOVEMBER 8, 2019

**APPENDIX D: STRUCTURAL AND GEOTECHNICAL PEER REVIEW
REQUIREMENTS**

1.0 Introduction

The Peer Review process is intended to facilitate the plan review process for the retrofit of complex building structures by providing an objective, technical review of the structural analysis and retrofit design. The process is intended to advise the City as to whether or not an analysis and design generally conforms to the intent of the ordinance in addition to other requirements set forth in the Building Code.

The City of West Hollywood will require a structural design and/or geotechnical/geological report to be reviewed by an independent Peer Reviewer(s) when triggers are met in a project as defined below.

The City of West Hollywood has developed the following protocol to facilitate the independent peer review process.

2.0 Peer Review Triggers

The following sections outline the circumstances of when a peer review will be required.

2.1 Structural Peer Review Triggers

Structural peer reviewer will be required in the following circumstances or at the discretion of the Building Official:

1. A nonlinear procedure is used.
2. An alternative design standard or Design Criteria is used for the project.
3. Use of proprietary/specialized systems such as passive energy dissipation systems, base isolation systems, or systems not defined in the applicable design standards.
4. Where a targeted building has insufficient seismic separation per ASCE 41 Section 7.2.13.



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5. Complex building (building height, risk category, site conditions requiring special foundations, irregularities, etc.).

2.2 Geotechnical/Geological Peer Review Triggers

Geotechnical/geological peer reviewer will be required in the following circumstances or at the discretion of the Building Official:

1. Use of proprietary/specialized foundation systems that are not defined in the applicable design standards.
2. Site-specific response spectra is used.
3. Ground motion selection and scaling is performed.
4. Where Geologic Site Hazards exist such as Fault Rupture, Liquefaction, Differential Settlement, Compaction, Land sliding and Earthquake Induced Flooding/Inundation (See Appendix B: Geotechnical Requirements).

3.0 Peer Review Process

It is recommended that the peer review process begin as early as possible, with the Peer Review Panel reviewing the Basis of Design documents (if applicable) and Geotechnical/Geological Report, and recommend that peer review continue throughout the design process.

The Peer Reviewer(s) will be working under the direction of the City. The Peer Reviewer(s) will be selected by the City of West Hollywood from a pre-approved Peer Reviewer list. The Peer Reviewer(s) will develop a scope of work and associated fee that is tailored to the project prior to the start of the review. Peer Review fees will vary depending on complexity and scope of work. Peer Reviewer(s) fees will be in addition to city plan check fees that are the responsibility of the property owner. These fees will be determined and presented to the applicant prior to the commencement of the peer review. It is noted that Peer Reviewer(s) may also perform the full plan check of the project at City's discretion.



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3.1 Selection Process for a Peer Reviewer

When a project design requires a Structural Peer Reviewer (SPR) or Geotechnical/Geological Peer Reviewer (GPR), the design team shall request that the City of West Hollywood start the Peer Reviewer selection process. The potential Peer Reviewer(s) shall not pose a conflict of interest for the subject project. The following peer review team selection process will be used in a project:

1. The project team shall submit a Basis of Design describing the structural system and the analysis method to the City.
2. The City selects a Peer Reviewer(s) from a pre-approved list of Peer Reviewers based on experience and expertise in the related field for the type of project.
3. The Peer Reviewer(s) will provide the City with a proposal for scope of work which shall include the following:
 - a. All requirements of this Bulletin.
 - b. Task of the Peer Reviewer(s) during the project.
 - c. Estimated Schedule.
 - d. Estimated Fee.
4. The estimate of the Peer Review fees will be provided to the owner prior to start of the Peer Review process.

4.0 Peer Review Tasks

The following sections provide an outline of the expected tasks that the Peer Reviewer(s) will have in a project.

4.1 Tasks of the Structural Peer Reviewer (SPR)

The primary tasks of the SPR may include the following, and require a direct, personal participation by the SPR for the project. Minor tasks may be delegated under supervision of the SPR; however, the selected SPR shall personally participate in all meetings and discussions, and shall be well versed in the details and specifics of the project. At the Building Official's discretion, one or all of the following items may be required of the SPR as they pertain to the specifics of the project.



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1. Review of the structural Basis of Design (if applicable).
2. Review of the structural Design Criteria (if applicable).
3. Review of the structural analysis.
4. Review of the structural design documents.
5. Meet with the design team and City to determine if the structural design meets the requirements of the ordinance.

The scope of review of the structural design should include the following (as applicable):

1. Earthquake hazard determination as it relates to the structural analysis,
2. Ground motion application as it relates to the structural analysis (time step size, duration, etc.),
3. Seismic design methodology,
4. Seismic design performance goals,
5. Acceptance criteria,
6. Mathematical modeling and simulation,
7. Seismic design and results,
8. Drawings and specifications.

Once the structural design is deemed adequate, the SPR shall provide a letter to the City indicating that the structural analysis and retrofit design meets the intent of the Ordinance. The letter shall clearly identify and reference all documents that were reviewed for approval.

Changes observed during construction that affect the lateral force resisting system shall be reported to the Building Official in writing for review and recommendation. Peer Review team may be re-engaged at the discretion of the Building Official.

4.2 Tasks of the Geotechnical/Geological Peer Reviewer (GPR)

The primary tasks of the GPR include may the following and require a direct and personal participation by the GPR for the project. Minor tasks may be delegated under supervision of the GPR; however, the selected GPR shall personally participate in all meetings and



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discussions, and shall be well versed in the details and specifics of the project. At the Building Official's discretion, one or all of the following items may be required of the GPR as they pertain to the specifics of the project.

1. Review of the Geotechnical Report
2. Review of the Geological Report
3. Meet with design team and City to determine if the conclusions contained within the Geotechnical recommendations meets the requirements of the ordinance.

The scope of review of the geotechnical recommendations and geological study should include the following (as applicable):

1. Geologic hazards.
2. Earthquake hazard.
3. Ground motion application (selection, scaling, time step size, duration, etc.).
4. Expected settlement (total and differential).
5. Foundation design recommendations.
6. Sub-surface soil properties such as strength and stiffness.

Once the structural design is deemed adequate, the GPR will provide the following approved letter:

1. A letter by the GPR to the City indicating that the geotechnical/geological recommendations and foundation design meets the intent of the ordinance. The letter shall clearly indicate all documents that were reviewed.

Changes observed during construction that affect the foundation system shall be reported to the Building Official in writing for review and recommendation. Peer Review team may be re-engaged at the discretion of the Building Official.

5.0 Peer Review Communication Process

The project design team/owner and the Peer Review(s) shall adhere to the following requirements during the peer review process:

1. Correspondence:



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- a. City staff shall be made aware of all communication, including phone calls, between the project design team/owner and the Peer Reviewer(s).
 - b. The project design team shall submit all project documents being reviewed (or supporting the review) to the City staff. The City staff will forward the documents to the Peer Reviewer(s).
 - c. Emails containing responses and comments sent between the project design team/owner and Peer Reviewer(s) shall include the City staff as recipients.
 - d. A comment log shall be maintained by the SPR with the peer review comments and Engineer of Record's written responses.
 - e. When the conclusions and recommendations of the Peer Reviewer(s) conflict with the registered design professional's proposed design, the enforcement agency shall make the final determination of the requirement for the design.
2. Meetings:
- a. Meeting scheduled throughout the peer review process shall be included as part of the agreement between the City, project design team/owner and Peer Reviewer(s).
 - b. All meetings between the PR and design team/owner for the project shall be coordinated by City staff.

The Peer Reviewer(s) shall take into consideration the project schedule and be readily available for full participation to ensure timely review during the peer review process.