

Residential Seismic Survey Report Format & Contents

I. Executive Summary

This is a one paragraph summary of the effort and findings. Repeat the Professional Opinion as to the expected response of the building to a large future earthquake along with the Seismic Hazard Rating.

II. Report

A. Introduction

Briefly state the purpose of the study, which can be lifted from Section A and Section B.1 of the Scope of Work. Include a statement on the seismic risk being considered for this location – from Section B.2. Note: the contract Statement of Work should be included as an appendix to this report and can be referenced here.

B. Building Location & Description

Identify the country and region and city where the property is located. Show the location of the property – either a city street map or a satellite image of the city from Google Map – provide a figure. Include GPS coordinates of the property. Show the relation of the property with respect to the US Embassy/Consulate.

Describe the property and building(s). Include basic features such as slope of the lot; retaining walls; major intersections; and other site related observations. Describe the building – dates of design/construction; number of stories; basement or crawl space; roof height above grade; floor heights; construction materials; and, overall condition and maintenance. Include information on design engineer/architect, and construction contractor.

C. Local Practices – Design & Construction

Provide an overview of the country's national building design and construction code, specifically as it relates to seismic design requirements. Are buildings such as the one being evaluated designed by an engineer or architect?

Briefly describe construction practices – materials, sources of material, quality control – inspection and testing. Has construction improved over recent years? Note any key dates that mark specific periods of construction practices – i.e., events that may have forced improvements, etc.

D. Interviews & Drawing Availability/Reviews

Provide a summary of interviews conducted with the building owner, the architect/engineer, contractor, and/or building maintenance personnel.

Describe the availability of design drawings, specifically structural, and the review conducted of these drawings. Were copies made, and where do these copies reside – were they shared with the Embassy/Consulate? Indicate whether construction photographs are available or whether construction inspection took place to ensure compliance with design concepts. Indicate what was learned from the review of these drawings with respect to materials, typical concrete beam, column, and shear wall reinforcement detailing including reinforcing steel sizes and amounts, spacing of column ties and beam stirrups, location of column bar splices, shear wall details, shear wall cross ties and boundary elements, whether or not 135° seismic hooks were used, etc.

Discuss typical reinforcement detailing in the interior and exterior walls and partitions, if of reinforced masonry construction.

Discuss foundation design and allowable soil bearing. Is the site located in a liquefaction-prone area?

E. Building Evaluation

This is the main section of the report. This section is not intended to be a copy of the Building Investigation Worksheet. Data gathered and recorded on the worksheet should be explained in the text of this section. Expand on the observations and findings from the actual site inspection. Note: the Building Investigation Worksheet should be included as an appendix to this report and can be referenced here.

Explain important facts or deficiencies noted during the survey and/or review of available construction documents. Use the itemized list in the Scope of Work as a basis for this discussion.

Include copies of drawings or sketches or photographs as appropriate, or reference them in an Appendix, to demonstrate the topic(s) being discussed.

F. Summary of Findings & Professional Opinion

Summarize the building positives and deficiencies – specifically those of a seismic nature. Include site deficiencies, too. Provide a statement on the quality of design and construction relative to local standards for upper end residential construction.

Provide a professional engineering opinion on the expected seismic performance of the building, including a prognosis of potential damage level (i.e., minor damage, moderate damage, major damage, or partial/total collapse) and corresponding life safety risk to occupants – see Attachment B to the Scope of Work for Seismic Hazard Rating (SHR) classifications.

The Engineer shall assign a SHR to the building.

III. Appendices**A. Drawings**

Reproduce specific drawings, sections, and details necessary to support the report and its findings.

B. Photographs

Include representative photographs of the property, site features, adjacent structures, and the building itself (exterior and interior). Include photographs that demonstrate building seismic deficiencies. Annotate the photographs appropriately to provide reader with sufficient information to understand the view/orientation of the photograph, the important aspects of the intended picture, etc.

C. Building Investigation Worksheet

Include the Building Inspection Worksheet (the original field sheet or a clean reproduction). There is no need to spend a great deal of time re-typing this worksheet – a scanned copy will be accepted.

D. Scope of Work with Attachments

Include a copy of the contract scope of work and its attachments. It is not necessary to include another copy of the Building Inspection Worksheet since the completed one appears in Appendix C.