




City of Mission Viejo

Memorandum

GEOTECHNICAL REPORTS FOR PROPOSED FOUNDATION UNDERPINNING PROJECTS

Date: October 25, 2017

To: All Foundation Repair Applicants in the City of Mission Viejo

From: Richard Schlesinger, P.E., City Engineer 

Subject: **Geotechnical Reports for Proposed Foundation Repair, Shoring, and Underpinning Projects**

To ensure proposed foundation repair, shoring, and underpinning projects address the underlying causes contributing to foundation distresses, geotechnical reports are required to be submitted in conjunction with Building Permit applications and plans for such projects, unless waived by the Building Official. Separate review fees apply for the review of geotechnical reports. Geotechnical reports shall contain the following minimum criteria:

- A description of the property including a detailed discussion of slopes adjacent to the property.
- Geologic description of the subsurface materials underlying the lot (i.e., depth of fill, bedrock description, geologic structure).
- A description of the distress.
- A floor level elevation survey.
- Soil borings/exploration to at least to the depth of the proposed underpinning.
- Supporting geotechnical lab data including but not limited to – moisture and density, expansion testing, shear strength, and soil corrosivity testing.
- Conclusions with regard to:
 - Causal distress mechanism(s).
 - Likely depth and lateral extent of repair needed (must be shown on a plan view of the property).
 - Whether underpinning needs to be designed for lateral loading (i.e., due to slope creep, lateral fill extension or “lot stretching,” etc.).
- Recommendations for the proposed underpinning:
 - Plan view location and depth.
 - Vertical soils resistance design values.
 - Lateral loading and lateral soil resistance (if needed based on causal mechanism).
- A discussion of how and to what extent the underpinning will remediate the identified causal mechanism(s).

- A discussion as to whether the remediation will fully mitigate the distress or whether there is a significant potential for future distress (i.e., to due to variables which are too difficult or costly to assess) along with a description of that distress if appropriate.

If there is a potential for future distress, then the property owner will need to provide a letter acknowledging that the scope of work will not mitigate the cause(s) of the distress(es) and accepts the potential future risks associated with the project. Providing an acknowledgement letter from the property owner shall not be in-lieu of providing a geotechnical report.

The geotechnical report is required for two primary reasons:

1. To provide information supporting that the proposed project is sufficient to mitigate the distress(es) in order to provide *reasonable* assurance that the structure is safe from structural failure; and
2. To provide a permanent record of the underlying causes necessitating the work.

If you have any questions about the necessity of these requirements, please contact the Building Department at 949-470-3054.

If you have any technical questions about these requirements, please contact the Public Works Department at 949-470-3056.