



Memorandum

To: Planning Commission
From: Niall Connolly, Principal Planner
Date: July 11th, 2025
Re: Excavations and Slope Stability

Introduction

The Planning Commission has worked over the last number of months on ordinance language that would address the slope stability issues that can arise adjacent to deep excavations. While the Code currently protects slopes of 30% or steeper from disturbance, development can sometimes include deep excavations in close proximity to these slopes, or adjacent to property lines. Such excavations have the potential to cause slope failure, particularly when it rains during the construction phase. This specific issue has, from time to time, caused problems during construction projects in Springdale.

In consultation with the Town Engineer, the Planning Commission has developed ordinance language that would require applicants to provide slope stability assessments in the following instances:

- Excavations adjacent to property lines,
- Excavations adjacent to slopes of 30% grade or greater,
- Excavations adjacent to protected natural washes,
- Excavations adjacent to the regulatory floodway.

The assessment is required if the distance from the excavation to the feature is less than twice the depth of the proposed excavation. So, for example, if a 5 ft deep excavation is proposed less than 10 ft from a property line, then the slope stability assessment is required.

The slope stability assessment is not a standalone report. It is envisaged that this would be included within the already mandated geotechnical report. In this regard, it is anticipated that this additional requirement should not be overly burdensome on prospective developers.

The recommendations of any such assessment will be required to be implemented in the development.

General Plan

All ordinance revisions should be supported by the goals and objectives of the General Plan. Chapter 1 of the General Plan (Land Use and Town Appearance) includes subgoal B3, which is as follows;

Town Staff will carefully monitor new development during construction to ensure it complies with all regulations and standards to reduce negative impacts on existing residents.

- a. *Staff will closely monitor all grading and excavation activities to ensure they are done in accordance with approved plans to minimize scarring of hillsides and damage to natural features.*

The proposed ordinance revision will support Town staff in this role, by requiring developers to address slope stability issues more comprehensively, when appropriate.

Planning Commission Action

The Planning Commission should review and discuss the draft language. The Commission should make a recommendation to the Town Council on the basis of its deliberations. The Commission may wish to use the following sample motion language:

*The Planning Commission **recommends/ does not recommend** that the proposed changes to Chapter 10-15-F of the Springdale Town Code regarding slope stability assessments, as discussed in the Commission's meeting on July 16th, 2025 are adopted. This motion is based on the following findings:*

[LIST FINDINGS]

10-15F-5: GEOTECHNICAL REPORT REQUIRED:

- A. A geotechnical report is required for the approval of any of the following:
1. Subdivision approval process;
 2. Design/development review process for any new building over 500 square feet in area; and
 3. Any addition to an existing building when the combined area of the existing building and new addition exceed 1,000 square feet in area;
 4. Any structure intended for human occupancy; and
 5. In any other instance where the DCD determines the site or soil conditions warrant a geotechnical report.
- B. The purposes of the geotechnical report are to 1) identify any problematic soils (including subsurface soils) that may be encountered during development and which may pose a threat to the structural integrity of the proposed development; 2) provide specific engineering recommendations to mitigate the threats posed by any problematic soils identified; and 3) conduct an initial analysis of geologic hazards for properties located in a Geologic Hazard Study Area.
- C. The geotechnical report must contain the following information:
1. Boundary lines and dimensions of the subject property.
 2. Existing site conditions: general topography, drainage, vegetation, and other surface conditions.
 3. Location, size, and type of any existing structures, previous surface disturbance or grading, or other improvements.
 4. Location, size, and type of all proposed development.
 5. Subsurface exploration and conditions: description of subsurface exploration methods, results of exploration, and general subsurface conditions.
 6. Laboratory analysis of subsurface exploration and soil sampling.
 7. Geotechnical recommendations for proposed development: site grading and subgrade preparation, foundation and slab design, seismicity and liquefaction, drainage control, and other associated recommendations.
 8. If the proposed development is located in a Geologic Hazard Study Area, or in any other area the DCD determines is at elevated risk from geologic hazards, an initial analysis of the geologic hazards associated with development of the site. Such initial analysis shall include the geotechnical engineer's professional opinion about whether or not additional study and analysis of site-specific geologic hazards is necessary for the safe development of the property.
 9. The geotechnical report must contain a slope stability analysis as described in section 10-15F-5(C)(10) if the horizontal distance from the edge of an excavation to any of the following features is less than twice the depth of the excavation:
 - a. A property line.
 - b. A natural slope with a grade of 30% or greater that is not defined as microtopography.
 - c. A floodway (as defined in section 10-13A-9 of this Title), or
 - d. The top of bank of a natural wash which is mapped as a Special Flood Hazard Area by the Federal Emergency Management Agency on the Flood Insurance Rate Map or on the Draft Hydraulic Work

Maps for Springdale (this does not include the Special Flood Hazard Area associated with the Virgin River).

e. For the purposes of this regulation, the depth of the excavation includes all over-excavation proposed or necessary for the development.

10. If any of the conditions in 10-15F-5(C)(9) apply, then the geotechnical report must include an analysis of slope stability. If the slope stability analysis determines that there are potential slope stability impacts to neighboring property or to any of the sensitive features listed above, or a risk of slope failure or collapse during construction or post construction, the analysis must include recommendations to mitigate these impacts. Any such recommendations must be implemented in the development.

D. Geologic Hazard Investigation Report required: For properties in a Geologic Hazard Study Area, if the initial analysis of geologic hazards in a geotechnical report required under paragraph A identifies significant site-specific risk of geologic hazard on a property, then a geologic hazard investigation and report that meets the standards of this chapter is required.

(Ord. No. 2021-05, 5-12-2021)