



Memorandum

To: Planning Commission
From: Niall Connolly, Principal Planner
Date: May 2nd, 2025
Re: Excavations and Slope Stability

Background

While discussing minimum setback requirements for swimming pools at a recent work meeting, the Planning Commission questioned whether the Town has regulations for deep excavations adjacent to property lines. The Town does not. The Commission expressed concern that deep excavations could potentially create slope stability issues for neighboring properties. The Commission instructed Town staff to explore this topic in more detail.

Staff has consulted the Town Engineer. The Town Engineer has advised staff that typically structures are built on bedrock and so a large excavation is unlikely to impact on the structural stability of neighboring buildings. However, the geologic make-up of Springdale is such that in several areas the “bedrock” is in fact mudstone, which originally formed part of a landslide. There are therefore potential stability concerns. The Town Engineer therefore supports efforts to address this issue.

The Town Engineer has recommended that this concern be addressed through a geotechnical report, which includes an assessment of slope stability. The Code already requires geotechnical reports for any building larger than 500 sq ft (see section 10-15F-5). Geotechnical reports help inform the foundation design of new buildings. However, they generally do not address slope stability. The Town Engineer has recommended that a slope stability assessment be required to be included in the geotechnical report in circumstances where there is a risk an excavation could have an impact on a neighboring property.

Their recommendation is that where the depth of an excavation is less than twice the horizontal distance between the excavation and the nearest property line, the geotechnical report should include an analysis and recommendations on slope stability. So, for example, if the excavation required on a house was 10 ft in depth, and that excavation was less than 20 ft from the closest property line, the slope stability analysis would be required. The slope stability analysis would quantify this risk and, as needed, recommend mitigation measures.

Staff has drafted some ordinance language intended to achieve this. This is appended to the staff report.

Planning Commission Action

The Planning Commission should review and discuss the draft language. Subject to the Commission’s recommendations, staff will prepare this ordinance revision for a public hearing at an upcoming meeting.

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. If the horizontal distance from the edge of an excavation to any property line is less than twice the depth of the excavation, then the geotechnical report must also include an assessment of slope stability. If the assessment determines that there are potential slope stability impacts to neighboring property, the report must include recommendations to mitigate these impacts. For the purposes of this regulation, the depth of the excavation includes all overexcavation recommended in the geotechnical report.
- 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)