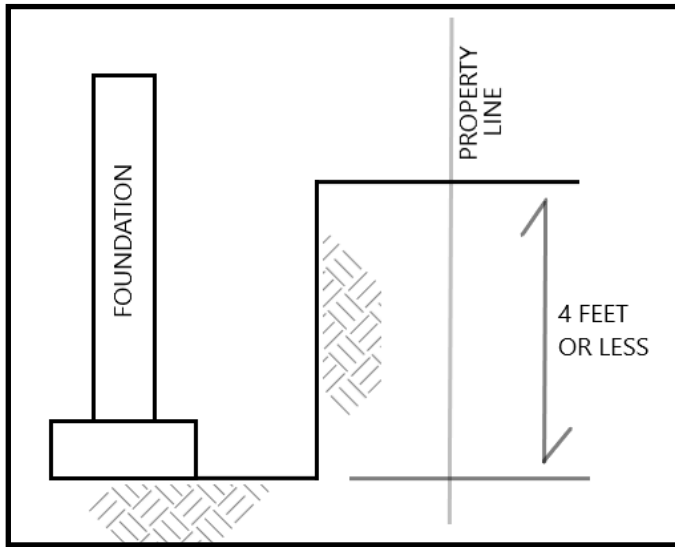




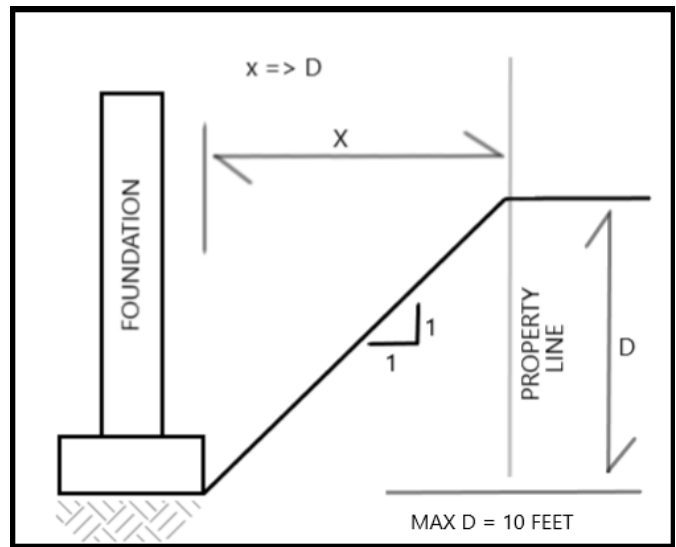
**City of Portland, Oregon**  
**Bureau of Development Services**  
**Site Development**  
 FROM CONCEPT TO CONSTRUCTION

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**Minimum Excavation Requirements**



**Figure 1 - Excavation is less 4 feet**



**Figure 2 - 1H:1V Cut Slope**

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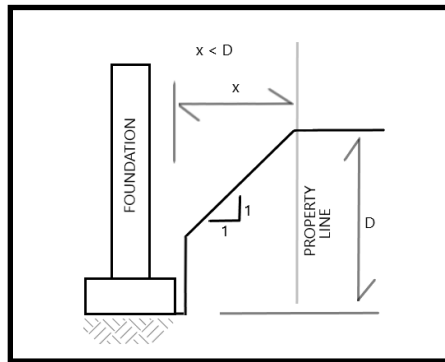
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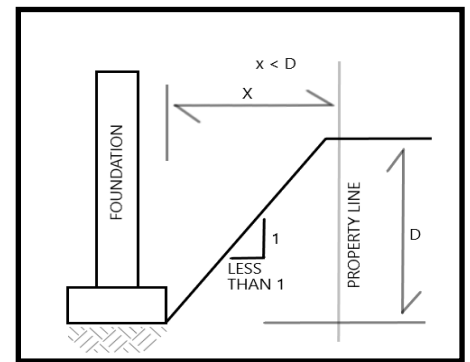
**Excavation Configurations Requiring a Design Professional**

If the minimum excavation requirements discussed above can not be met or if the design of the building can not be revised to meet the minimum requirements, than the excavation configurations illustrated in Figures 3 to 5 may be suitable.

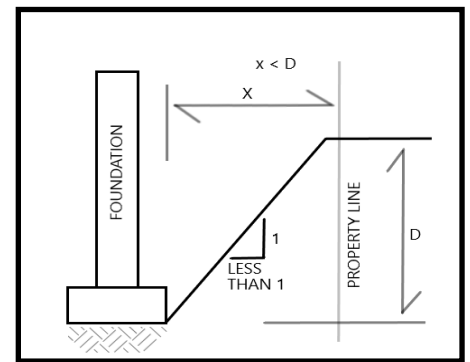
These excavation configurations require appropriate site conditions and a subsurface evaluation and design completed by a registered design professional (e.g. Geotechnical Engineer or Engineering Geologist). Soil special inspection is required for these excavation configurations. A separate building permit is required to underpin structures that are on adjacent properties, see Figure 5.



**Figure 3 - Over Steepen Slope Configurations**



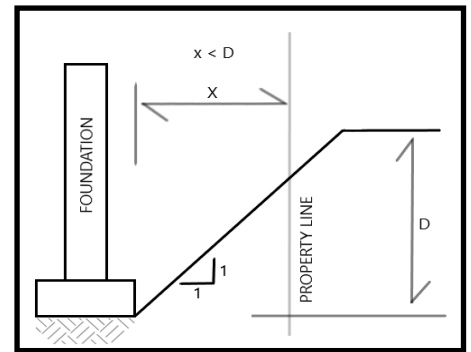
**Figure 4 - Shoring**



**Figure 5 - Underpinned**

**Temporary Easement**

An alternative to the options above is to obtain a temporary construction easement that allows the excavation to encroach on to the neighboring property, provided the excavation does not remove support of existing structures. The easement must be signed by both property owners, as the grantor and grantee, and must specify the area and nature of the easement. The neighboring property owner **is not** obligated to grant the easement. A design professional is not required for this excavation option.



**Figure 6 - Temporary Construction Easement**

**Summary**

Excavation cut slopes and shoring must be based on conditions encountered at the site during construction. The contractor performing the work is ultimately responsible for the stability of the excavation and safety on site. In summary the cut slope(s) illustrated in:

- Figures 1, 2, and 6 are acceptable for typical flat sites without a registered design professional.
- Figures 3, 4, and 5 a may be acceptable with the involvement of a registered design professional.
- Figure 6 is only acceptable with a temporary construction easement.

The guidance provided here is intended to outline the Bureau’s interpretation of the referenced code sections and should be used as information only. Approval of proposed cut slopes are at the discretion of the building official based on the site conditions.