

# **GUIDELINES FOR HOMEOWNERS SLOPE REPAIR**

## **BEFORE PROCEEDING WITH SLOPE REPAIRS, CONTACT THE CITY TO DETERMINE IF A PERMIT IS REQUIRED**

October 06, 2008

It is the responsibility of property owners who have experienced slope damage to their property to determine the type and extent of repair that will be required to **restore** their properties to a safe condition. In all circumstances, property owners should consult a Geologist or a Geotechnical Engineer to inspect the slope damage and provide recommendations for the repairs. Improperly engineered or constructed repairs can aggravate instability problems. **All** slope repair work is required to conform to City Ord. No. 1114.

Common causes of slope erosion and shallow slope failures are:

- a. Inadequate care and maintenance of slopes and drainage devices.
  - Inspect slopes and drains often, especially prior to, and during the winter. Terrace drains on slopes should be cleared from debris and dirt.
  - Correct small problems before they turn into big ones. Squirrels and gophers may damage slopes causing them to fail.
  
- b. Inadequate and/or improper planting.
  - Drought-tolerant landscaping is very effective in providing slope erosion control.
  - Replant bare spots as soon as possible.
  - Plants selected for slope planting should develop deep root structures, require little water and be fire retardant.
  - A list of plant materials that fulfill the above requirements is available in the City as a separate handout.
  
- c. Too much irrigation or diversion of runoff over the slope.
  - Over-irrigation can saturate the slope with water. Keep plants watered, but do not overwater. Choose plants that are drought-tolerant and require less irrigation.
  - Limit the amount of irrigation and storm runoff running over the slope.
  - Please refer to the handout "Guidelines for Protecting Hillside Homes" for further details on slope maintenance.

As each site has its own unique problems and issues, it is best to utilize the expertise of a Geologist and/or Geotechnical Engineering Professional to address slope failures. The professional engineer can assist in determining the causes and repair recommendations for any particular slope problem and to implement the most effective repair method.

The following are four (4) conditions that will require various degrees of review and approvals:

1. **Superficial Slope Failure** is a condition that concerns only the slope surface and confined to a relatively small area. This condition does not appear to be penetrating more than two (2) feet below the surface. In addition, it is clearly not a threat to adjacent properties or structures.

In this case, landscaping will be removed and/or replaced. **Dirt** will be replaced and re-compacted using hand-held equipment and no construction of retaining walls or drainage devices are required. The dirt to be removed and/or replaced must be less than fifty (50) cubic yards. Fifty (50) cubic yards is approximately five (5) dump truck loads.

2. **Slope Failure** is a condition that not only has affected the surface, but has penetrated the surface to a point that a substantial amount of grading will be required to restore the slope to a safe condition. In addition, the slope problem may post a potential hazard to adjoining properties and/or structures.

In this case, some portion of the work will require grading and replacement of landscaping. The grading may require the use of heavy equipment and the removal and replacement of fifty (50) or more cubic yards of dirt.

3. **Major Failure** is a condition that not only has affected the surface, but has penetrated the surface to a point that a **substantial** amount of grading will be required. Construction of retaining walls and drainage devices may be required to restore the slope to a safe condition. Such a failure is more likely to have more serious potential hazards to adjacent properties and/or structures.

In this case, the major portion of the work will require grading, landscaping and construction of retaining walls and drainage devices recommended by the engineering reports. The grading will require the use of heavy equipment and the removal and replacement of fifty (50) or more cubic yards of dirt.

4. **Extreme Slope Failure** is a condition that has caused severe damage and involves great risk to slopes, adjacent properties and/or structures. To restore the property to a safe condition will depend upon the recommendations of the engineering and structural reports. The work will involve a substantial amount of grading and often requires retaining walls and drainage devices. In extreme cases, depending on engineering reports and structural analysis, the structure may be condemned and may not be re-occupied.

In all cases except Condition 1, geotechnical reports, plans and permits will be required. For Condition 1, the property owner may proceed to repair superficial surface damage which does not require the use of heavy equipment, after contacting the City at (949) 361-6131 to schedule an inspector to visit the site and verify that the property owner is proceeding in the appropriate manner. No permit will be required for minor slope repairs, penetrating less than two (2) feet and involving less than fifty (50) cubic yards that do not effect adjacent properties or encroach into public rights of way or easements. If in a coastal canyon, contact the Planning Division to verify that permits are not required.

For Conditions 2 through 4, the property owner must make an appointment with the City Engineering Division to determine submittal requirements. Construction permits and inspections will be required for any repairs.

The City will assist the property owner through the plan check process in obtaining the repairs necessary to stabilize the slopes. All questions regarding the information presented herein may be referred to the City Engineering Division at (949) 361-6135.

The property owner shall utilize interim means to protect the damaged slope from further failure. In addition, adjacent private and public properties shall be protected from silt deposits due to storm water runoff. This may require the use of temporary measures such as sandbags and plastic covers on an interim basis to protect the slope. Failure to provide protective measures could result in further damage to the slope and possible violation of City and State Water Quality Regulations.

If your property is within any canyon or coastal bluff, contact the City's Planning Division for assistance regarding the necessary local and State permits at (949) 361-6184.