



Foundation Maintenance & Care

Slab-On-Grade

The following information is taken from the **Post Tensioning Institute** manual describing the Design and Construction of Post Tensioned Slab-On-Ground Foundations. The data refers to Post-Construction conditions. Slab-On-Ground foundations with steel reinforcement (rebar) will perform similarly to a Post Tensioned system.

- Properly designed and constructed slab-on-ground foundations may experience distress if the site slope, type of vegetation, surrounding landscape and irrigation systems are not properly selected and maintained. One of the most critical aspects of landscaping is the continuous maintenance of properly designed slopes. Installing flower beds or shrubs next to the foundation and keeping the area flooded will result in localized soil swelling. This expansion may result in lifting of the foundation slabs around the edges.
- Initial landscaping should be done on all sides adjacent to the foundation and drainage away from the foundation should be provided and maintained. Landscaping should be installed to avoid "ponding" or "standing" water at any location in the vicinity of the foundation. Positive drainage away from the foundation is critical to the performance of an slab-on-ground foundation. Proper landscaping and ground cover can help prevent erosion and, if properly maintained, protect the ground from losing moisture.
- Sprinkler systems are useful in maintaining a uniform moisture content in the soils. However, they need to be placed around the entire perimeter of the foundation to avoid differential movement.
- Trees located near a foundation can be a contributing factor to foundation distress. Experience has shown that the presence of or the removal of large mature trees that are in close proximity to a residential foundation can cause localized swelling or shrinkage of soils that may produce foundation distress. It is recommended that trees not be planted closer than half of their anticipated canopy diameter or 20-feet from the edge of a foundation.
- It is important to note that consistent moisture content of supporting soils is the key to successful foundation performance. In our expansive clay soil area excessive water can cause swelling of the soil and drying can cause the shrinkage of the soils.
- The objective of a proper maintenance program is to maintain as near constant moisture content as possible for the soil around the perimeter and under the foundation.
- It is recommended that all property owners conduct a yearly survey of their foundation and perform any maintenance necessary to improve drainage and prevent ponding of water near the structure.