



Are All Compaction Tests Being Performed In All The Right Places?

It happens... numerous compaction tests are performed on a project and yet sometimes certain areas are missed resulting in distress later on. The picture above shows a large void below a concrete floor slab next to an exterior wall. What happened?

It seems that we get caught up in the hectic schedule of construction and sometimes don't pay attention to details, especially if they are not our details. When it comes to compaction tests, we are just happy that someone remembered to call the tester to perform the tests. So..., in the project file the test reports go with our assumption that they were performed in all the right places.

SOIL TECHNOLOGIES INC

Most of the time, the requirement to perform compaction tests is listed in the project specifications and they are performed without question. Occasionally there is a difference of opinion as to how many tests are

After all, “That darn rebar and those columns are in the way, and we’d have to use hand compaction equipment.”

necessary, but there is typically little discussion about where the tests should be performed. In the picture above, compaction efforts and compactions tests were not performed below the floor slab next to a foundation wall.

We probably have all seen the common practice of equipment operators compacting the heck out of the soils in the open floor areas where there is lots of room for their self-propelled roller. Unfortunately, it is much less common to see them compact the soils in tight places, like in the footing trenches and along the foundation walls where there is little room. After all, “That darn rebar and those columns are in the way, and we’d have to use hand compaction equipment.” Similarly, the soil technician sometimes follows that same pattern and performs numerous compaction tests out in the open floor areas where there is lots of room, but few, if any tests in those tight places like next to foundation walls.

So how can we prevent this from happening again on future projects? Well, we can hope that contractor’s laborer and the soil technician will remember to do their jobs well on our projects. But “hope” is sometimes allusive..., and is not likely enough to keep our projects out of trouble. Instead, we might consider providing a little encouragement by asking the soil technician/soil consultant HOW MANY compaction tests have they performed in the tight places, like in footing trenches and next to the interior foundation walls. The speed and quality of their response will tell you if it should be looked into further.

- Other articles about construction and design as they relate to soils can be viewed on the blog page at: [www. soil-technologies.com](http://www.soil-technologies.com).

Kim Stoecker 4/18/11