



Site Construction Tips:

Make sure that the excavator is placing the back fill in 8-12" lifts in order to achieve proper compaction.

Vibration compaction (the most used and appropriate for all types of stone) is only affective for 12" of material at a time.

This is why we must place back fill in 8-12" lifts, regardless of the material.

Hand compaction around the building or drain tile should be in 4" lifts.

There is no SELF COMPACTING FILL!

Pea gravel, 3" stone, CA-7 (#53 with no fines) are compactable, however, we cannot test the compaction.

Lime stabilization of the soil should be performed by a qualified company and should go down about 18".



A sheep foot roller is used effectively for clay only.



A vibrating roller is used for all other material.



One of the most important items for construction is the soil. How we treat the soil before, during and after construction is important regarding the longevity of the structure or surrounding support systems, such as paving and the parking lot. Reading and understand the soils report is imperative as well as understanding what questions to ask and understand about the report and your soil conditions will determine the success of a project starting at the foundation.

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Soils Reports

- ▶ Always request a soils report from the owner for any work regarding foundations, new sidewalks, parking lots, and pavers on-grade.
- ▶ Always verify that the soils report building or work description and location matches the final construction set of documents. If the description is incorrect, we must RFI the architect/engineer or owner prior to putting in a bid or starting construction, as conditions or foundation design might change.
- ▶ In general, soil borings should be taken about every 50'-100', ideally at each building corner and center, as well as two in the parking lot area. If you feel that more borings might be necessary or a test pit be performed in order to construct the building or parking lot, than we must RFI the architect/engineer or owner requesting more information with a clear explanation as to why we need this information.
- ▶ We should be requesting a test pit when there is a fair amount of miscellaneous debris or organics in the soil found in the soil borings. Test pits are used to determine the make-up of a large area of soil rather than a small 2" diameter soil sample.
- ▶ Boring depths should be two times (2x) the footing **width** at the bottom of the footing. (10x10 footing, the boring depth should be ±25'-0" from grade or a 4x4 = ±12'-0")
- ▶ Request adjacent property soils reports from the geotechnical engineer. They might have this information on file. Having this information will give you a better understanding of the overall soils make-up of the entire site area.
- ▶ The soils report should always have the design of the footing, slabs, sidewalks and parking lots, backfilling procedures and make-up. If these design recommendations differ from the structural or architectural drawings, we must RFI the architect/engineer and owner.
- ▶ Always review the underslab drainage suggestion with the recommended location(s). Make sure that these location(s) are confirmed with the MEP drawings. If these design recommendations differ from the MEP or architectural drawings, we must RFI the architect/engineer and owner.
- ▶ Review the compaction requirements on the report compared to the structural drawings. Make sure they match (i.e. Modified Proctor Method vs. Standard Proctor Method). There is a 3-8% difference in the compaction, depending on the material being compacted between the two methods. Where the Modified Proctor Method is more stringent.
- ▶ In poor soil or along a waterway, we might need to request that a settlement report be provided on the building.
- ▶ When using pervious pavements, we must verify that the soils engineer reviewed the pavement for water storage capacity. Ask the question, and make sure that the pervious pavement specified is the same as identified in the soils report.



Lime Stabilization Process

