

Technical Bulletin

FROM SPEIGHT, MARSHALL & FRANCIS,
P.C.

Structural Engineers
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On a regular basis, we plan to distribute these informational leaflets about crucial - but often ambiguous - structural engineering topics. With the knowledge our featured subjects, our goal is to help our clients improve their profitability while reducing their liability. We suggest distributing a copy of our technical bulletins throughout your office and keeping them on hand for quick reference.

SPECIAL INSPECTIONS (PART IV)

Earthwork for Buildings - Specification Section 02300

Introduction:

In this bulletin we will outline in chronological order the process of evaluating "Earthwork for Buildings" pursuant to the Schedule of Special Inspections and the Project Specifications. The Special Inspection team is typically made up of two or more players. Agent 1 is the designated Special Inspector and Agent 2 is the Testing Laboratory (usually the geotechnical engineering company), who normally handles the geotechnical aspects outlined in the Schedule of Special Inspections. Additional testing laboratories may be required depending on the needs of the project. We will use the terms Agent 1 and Agent 2 to assign responsibility for each inspection item. Agent No. 1 has limited "hands-on" responsibility for this particular specification section.

Building Pad:

- A. Site Preparation - Agent No. 2
- Review geotechnical report, project specifications and Contract Drawings.
 - Visually inspect building perimeter and/or offsets.
 - Following stripping operation inspect subgrade elevation after it is established by the Contractor.
 - Compact subgrade.



- B. Subgrade Evaluation - Agent No. 2
- Proofroll subgrade soils within building perimeter and offsets.
 - Perform field density tests and evaluate.
- C. Fill Placement - Agent No. 2
- Evaluate structural fill material.
 - Monitor placement of structural fill material.
 - Compact fill by mechanical means suitable for type of material.
- D. Fill Compaction - Agent No. 2
- Perform in-place density tests. Frequency determined by specifications.
 - Evaluate in-place density tests and stability of building pad.
 - Any disruption of the compacted building pad, such as utility excavations, foundation excavations or construction traffic, must be re-evaluated by Agent No. 2 prior to placing concrete.

Foundations:

- A. Foundation Subgrade - Agent No. 2
- Contractor shall excavate foundations and establish proposed sub-grade elevations prior to inspection.
 - Review Geotechnical report, Project Specifications, and Contract Drawings.
 - Perform hand auger(s) to explore the sub-surface soil conditions.
 - Determine whether or not the soils encountered are consistent with the Geotechnical report.
 - If necessary, direct course of action to achieve suitable bearing capacity.
- B. Foundation Wall Backfill - Agent No. 2
- Review Project Specifications and Contract Drawings.
 - Evaluate backfill material.
 - Perform tests on backfill material. Frequency determined by specifications.
 - Evaluate density test results.



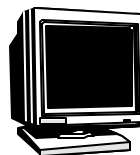
Conclusion:

Responsibility for Earthwork in this section falls heavily upon Agent No. 2; however, all test results and soils reports generated must be reviewed by Agent No. 1. Due to the unpredictable nature of weather and scheduling it is not always possible to complete each step entirely before moving to the next step. Earthwork for every project is different and we all know that time is money, yet each aspect within this section must be completed satisfactorily to ensure a stable foundation for the structure above.

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