

**Requirements for Geotechnical Construction Inspection and Testing
Documentation
Single-Family Residence Project**

Building permits for construction of new single-family residences and associated improvements are issued by the Town with the condition that documentation of Geotechnical Construction Inspections and Testing are submitted prior to granting final (occupancy/as-built) project approval. Appropriate inspections and testing of all geotechnical aspects of construction are to be completed by the Geotechnical Consultant of Record. Geotechnical inspection and testing documentation for a new residence, as a minimum, should include the following:

1. **Grading** – Documentation should be provided of inspection and testing of engineered fill materials. The consultant should confirm that representative in-situ compaction tests achieved the recommended minimum relative compaction. A table of compaction test results should be submitted if new structures are to be supported by engineered fill or project fill placement exceeds 500 cubic yards. The compaction curve(s) utilized for engineered fill placement should be included. The inspection summary should verify adequate keying and benching of fill materials into competent, in-place materials. The consultant should confirm that temporary and final cut slopes do not display adverse structural conditions with respect to stability.
2. **Foundations** – Documentation confirming adequate footing embedment and inspection of pier drilling should be presented. For pier and grade beam foundations, a simplified foundation plan should be included illustrating pier locations. Achieved earth material embedment conditions and range of final pier depths should be described. Any piers that are changed from initial design depths should be noted and locations identified on the included foundation plan figure. Justification for acceptance of any reduced pier length should be provided. Adequate void construction beneath grade beams (if required) should be confirmed.
3. **Interior Slab Floors** – Adequate preparation of subgrade materials, capillary break, and vapor barrier should be documented.
4. **Subdrains and Wall Backdrains** – Inspection documentation confirming adequate construction of all subdrain systems and retaining wall backdrains should be included. Cleanout and discharge locations should be shown on a scaled plan.

5. **Basements** – Confirmation of geotechnical inspection of basement excavations to verify anticipated earth material conditions should be provided. Any supplemental geotechnical recommendations based on exposed subsurface conditions should be documented.
6. **Crawlspace** – Documentation should be included to address adequate installation of measures to prevent adverse accumulation of water in crawlspaces (if shown on approved plans).
7. **Utility Trenches** – Documentation of adequate inspection and testing of trench backfill placement should be provided.
8. **Consultant Changes** – Change of the Geotechnical Consultant of Record must be accompanied by a letter submitted to the Building Official at the time of consultant change. The incoming consultant must verify in this letter that they have reviewed the work of the previous consultant, concur with project geotechnical design parameters, and agree to assume responsibility as the Geotechnical Consultant of Record for the project. Additional testing and analyses may be necessary to confirm geotechnical aspects of completed construction and/or provide a basis for proposed modifications to geotechnical design criteria.
9. **Final Inspection** – Documentation should be provided of a final site inspection specifically addressing satisfactory installation of all surface drainage improvements, adequate final graded slope inclinations, and completion of fill compaction.
10. **Summary** – In addition to addressing the above items, the Project Geotechnical Consultant should indicate whether observed geotechnical aspects of project construction have been completed in substantial conformance with approved plans, and in accordance with presented geotechnical design recommendations. If not, supplemental recommendations should be provided to clarify additional work required to comply with project geotechnical recommendations.

Due to the variable complexity of residential projects, additional geotechnical inspection documentation may be warranted. These requirements are not intended to limit professional judgment regarding supplemental aspects of project construction that should be evaluated and documented in the Final Geotechnical Inspection and Testing Letter Report. The consultant should retain complete construction inspection documents, testing data, and construction photographs in their project file.

6/09