

SUBSECTION 13.3 CONSTRUCTION INSPECTION PROCESS

13.3A PROCEDURE

1. General

Any project for which design approval has been granted by the Hebron Planning & Zoning Commission to construct, reconstruct or complete construction of a road intended to be opened to the public shall require periodic inspections to be conducted by the Town of Hebron to monitor compliance with the approved drawings and plans, the requirements outlined in these regulations, and good construction practices. However, it is the applicant's sole responsibility to ensure that all construction shall conform to such requirements.

2. Failure To Properly Execute Required Improvements

Failure to follow these Inspection Requirements & Guidelines may result in a rejection of that portion of the work completed without required inspections, resulting in delays and added costs to the owner in demonstrating compliance, to the Town's satisfaction, with applicable regulations and standards. Failure to construct road, drainage and other public improvements in accordance with approved construction plans, Town Regulations and Standards, and good construction practice may result in the Town's refusal to accept any such improvements.

3. Construction Coordinator

In respect of all matters pertaining to inspection hereunder, the applicant shall designate one Construction Coordinator who shall be fully authorized to give and receive communications to or from the Town. Such designation shall be made in writing which shall state such individual's mailing address and telephone number and shall be delivered to the Director of Planning and Development prior to commencement of any work. All notices, orders or other communications delivered to or served upon such individual shall be deemed to have been delivered or served upon the applicant. All notices or other communications received from him shall be deemed to have been received from the applicant.

4. Preconstruction Meeting

Prior to the start of any construction, it is the applicant's responsibility to schedule a preconstruction meeting with the Town. Scheduling of this meeting shall be made with the Director of Planning and Development, who shall be responsible for notification of the Public Works Department and other appropriate Town Staff. The applicant shall be responsible for

ensuring that the contractor and Construction Coordinator are in attendance and that prior to the meeting all necessary state approvals for the project have been obtained. The general purpose of the preconstruction meeting is to introduce all parties, construction inspection responsibilities, exchange telephone numbers, review the construction schedule, and discuss any additional requirements or concerns specific to the proposed project.

5. Performance Bond

Prior to the start of any construction, the applicant shall post a performance bond with the Town in accordance with the procedures established in Section 7 of the Hebron Subdivision Regulations.

6. Bond Reductions

During the course of construction, periodic reductions in the amount of the performance bond may be requested by the applicant, and considered by the Commission, to reflect the cost of remaining improvements. Any such request by the applicant for a bond reduction shall be in accordance with the procedures established in Section 7.11 of these Regulations.

7. Required Inspections and Notifications

In order to provide a reasonable level of confidence that a road, which is to be used for public travel, has been constructed in general conformance with the approved drawings and plans; the requirements outlined in these regulations; and, good construction practice, scheduled inspections shall be conducted by the Town at key construction stages specified in Section 13.3B. At the discretion of the Town, the Construction Coordinator may be notified of additional inspections that may be required. It is the Construction Coordinator's sole responsibility to schedule and coordinate all required inspections with the Town Engineer. A minimum advance notification of twenty-four (24) hours shall be required for all inspections, which shall only be made during the normal working hours. Unannounced spot inspections may also be made by the Town at anytime.

8. Right-of-Entry

All Town Staff, and Board or Commission members, shall have the right to enter upon the premises and to inspect, or cause to be inspected, construction work authorized by Design Approval hereunder at any time with or without notice during, before or after regular business hours.

9. Construction Materials

The applicant shall be required to submit samples and certified laboratory reports to the Town documenting the conformance of certain construction materials with the specifications included in these regulations. The applicant shall not be permitted to place, or to have delivered to the project site, any materials for which approvals have not been granted by the Town. Any approvals granted by the Town on the basis of certified laboratory reports shall be conditional upon the tested sample being representative of all such materials utilized for construction. The Town shall reserve the right at any time during the course of construction, for whatever reason, to have additional materials testing conducted. Should the results of such testing find that the materials do not conform to specifications, then such materials shall be removed and replaced with conforming materials at the applicant's expense. The applicant shall be required to reimburse the Town for the cost of any such testing only if the results prove that the materials tested do not conform to required specifications.

Samples and/or certified laboratory reports shall be submitted for the following materials:

- a) Rolled Granular Base - A five (5) gallon sample and sieve analysis for conformance with the State Standard Specification Section M.02.06 Grading A.
- b) Processed Aggregate Base - A five (5) gallon sample and sieve analysis for conformance with the State Standard Specification Section M.05.01.
- c) Bituminous Concrete - Plant certification by the State Department of Transportation for use of such materials in state highway construction projects.

13.3B SCHEDULED INSPECTIONS

The Following is a general outline of key construction stages requiring inspections by the Town. The contractor shall contact the Town and shall not proceed until receiving approval from the Town Engineer to do so. At the discretion of the Town, the contractor may be notified of additional inspections that may be required. Unannounced spot inspections may also be made at anytime. It is the contractor's sole responsibility to schedule and coordinate all required inspections with the Town Engineer. At a minimum, twenty-four hours advance notification shall be required for the following inspections:

1. Limits of Clearing

After limits of clearing are marked but prior to any cutting of trees. The Director of Planning & Development should be notified that the limits of clearing have been marked. At that time, the Director of Planning & Development may schedule a site-walk with the Developer, Contractor and Town Staff. No tree clearing should take place until the Director of Planning & Development and the Town Engineer approve the marked limits of clearing.

2. Sediment and Erosion Control Measures

After cutting of trees and brush, and installation of sediment and erosion control measures, but prior to any stumping and/or grading.

3. Roadbed Prepared for Cut & Fill

After stumping and stripping of topsoil and organic material from earth cut and fill areas, but prior to the placement of any fill material.

4. Road Subgrade

After earth cuts and fills and the formation of the road subgrade. Proof rolling of the subgrade must be observed by the Town after installation of storm drainage improvements and prior to the placement of any gravel subbase materials. Refer to Section 13.3C for testing requirements and procedures.

5. Storm Drainage

After the installation of storm drainage pipe, underdrains and catch basins, but prior to backfilling.

6. Gravel Subbase

After the placement of gravel subbase but prior to placement of the process aggregate base. Refer to Section 13.3C for testing requirements and procedures.

7. Processed Aggregate Base

After the placement of processed aggregate base but prior to paving of the bituminous concrete binder course. Refer to Section 13.3C for testing requirements and procedures.

8. Bituminous Concrete Pavement

Prior to the installation of bituminous concrete pavement. The Town Engineer must be notified at least 48 hours prior to the scheduled paving. State D.O.T certification of plant and mix is required. Material and methods must meet all requirements. of the Subdivision Regulations and Conn. D.O.T. Form 814A as amended. All weight slips for bituminous concrete material delivered to the site must be provided to the Town of Hebron.

9. Bituminous Concrete Curbing

After placement of bituminous concrete lip curbs, but prior to any backfilling of curbs. Bituminous curbing should be installed on the binder course pavement and prior to the placement of the bituminous surface course.

10. Shoulder Grading

After backfilling of curbs and final grading of shoulder areas.

11. Final Restoration

After restoration of all disturbed areas, placement of road monuments, traffic control/street name signs and street trees.

13.3C TESTING REQUIREMENTS & PROCEDURES

Outlined below are the minimum testing requirements for the subgrade, subbase and base materials for all new and rehabilitated roads to be incorporated in to a Subdivision. The Town Engineer may require additional testing based on field conditions.

These tests are to be performed by a professional testing service meeting all the requirements and having all licenses and certifications required by the State of Connecticut. All tests reports generated by the testing service shall be current and shall be reviewed and approved by, and bear the seal of the Engineer of Record who shall be a Professional Engineer registered in the State of Connecticut. The contractor/developer shall bear all costs associated with all tests required by the Town of Hebron.

<u>Material</u>	<u>Tests Required</u>	<u>AASHTO Method</u>	<u>Test Frequency</u>
Subgrade	Sieve Analysis Moisture Density Relationship Field Moisture Density (Nuclear) [†]	T 27, T 11 T 99, T 180 T 238	1 per 2000 C.Y. or Change of Material * 1 per 2000 C.Y. or Change of Material * 1 per 100 LF of road per 2' lift
Subbase	Sieve Analysis Moisture Density Relationship Field Moisture Density (Nuclear) [†]	T 27, T 11 T 99, T 180 T 238	1 per 2000 C.Y. or Change of Material * 1 per 2000 C.Y. or Change of Material * 1 per 200 LF of road per 1' lift
	Plasticity** Loss on Abrasion**	T 90 T 96	Refer to Connecticut D.O.T. Form 814 1 per 2000 C.Y. or Change of Material *
Base	Sieve Analysis Moisture Density Relationship Field Moisture Density (Nuclear) [†]	T 27, T 11 T 99, T 180 T 238	1 per 2000 C.Y. or Change of Material * 1 per 2000 C.Y. or Change of Material * 1 per 200 LF of road per 1' lift
	Plasticity** Loss on Abrasion** Soundness of Aggregate**	T 90 T 96 T 104	Refer to Connecticut D.O.T. Form 814 1 per 2000 C.Y. or Change of Material * 1 per 2000 C.Y. or Change of Material *

* Change of Material refers to a change in source, texture, or appearance

** Optional, as required by Town Engineer

† Compaction requirements – 95% of Optimum Dry Density as determined by Modified Proctor

1. Test Report Requirements

Prior to being submitted for review by the Town of Hebron all test reports shall be reviewed and approved by, and bear the seal of the Engineer of Record who shall be a Professional Engineer register in the State of Connecticut. Each test report shall include all test results, an accurate location map showing where each test and sample were taken, the time and date of each sample and test and the name of the technician performing the tests and/or taking the samples. In addition, the test results shall identify the material and state if the material being tested meets or does not meet all the requirements of the Town of Hebron and Connecticut Form 814 as amended. All test results shall be submitted to the Town of Hebron for review.

2. Test Procedures

a) Sieve Analysis

This test is required to determine the gradation of the material for comparison with the minimum specifications and requirements of the Town of Hebron. Samples for this test will be taken initially from the source of the material and again during placement at the frequency noted above. Initial results for this test shall be submitted to the Town of Hebron for approval prior to placement of any materials for which this test is required.

b) Moisture Density Relationship

This test is required to establish the optimum moisture content for compaction operations as well as the maximum dry density of the material. The maximum compaction required when the material is in place is expressed as a percentage of the maximum dry density achieved by this test. Samples for this test will be taken initially from the source of the material and again during placement at the frequency noted above.

c) Field Moisture Density by Nuclear Methods

This test is required to determine the percent compaction of the material in place. The results of this test will be compared to the results of the Moisture Density Relationship test to determine if the percent compaction of the material in place meets the minimum specifications and requirements of the Town of Hebron. This test will be performed as road construction progresses at the frequency noted above.

13.3D CHANGES DURING CONSTRUCTION

1. Modifications

If at any time during the construction of the required improvements, unforeseen field conditions make it necessary or preferable to modify the location or design of such required improvements, the Construction Coordinator shall notify the Town Engineer, who shall determine whether the change is minor in nature or whether the Commission itself must act on the proposed change. If the change is minor, the Town Engineer shall either approve or disapprove the applicant's request. If it is determined that the change is not minor, the applicant shall submit an application for a modification of the subdivision approval. Such application shall meet all the informational requirements required by the Commission.

2. Additional Work

If during the course of construction of any new road, or any other improvements required by the Commission in connection with the approval of a subdivision, it appears that additional work is required owing to unforeseen conditions such as, but not limited to springs, old drains, wet conditions, side hill drainage from cuts, bedrock, or other conditions which were not apparent at the time of the approval by the Commission, the Town may require such additional work to be done, and the Commission may require additional surety.