

## Chapter 1 - Inspection

### ***1-100 General***

Inspection is one of the most important phases of construction work. Inspection consists of careful reviews and critical examination of all the factors entering into the construction of transportation projects to assure the proper combination of materials and details of construction. The goal is to produce a completed project complying with all the requirements of plans, specifications, and the special provisions as set forth by CONNDOT.

The detailed inspection of a project can be performed entirely by State employees or by private engineering firms hired by CONNDOT. These private firms, referred to as “consultant engineers,” represent the Commissioner and act as an agent of the State in accordance with the terms of their agreements with CONNDOT under the supervision of CONNDOT personnel. Their actions in the prosecution of their duties must be in accordance with the established policies of the Department and in the best interest of the State.

If the District determines that insufficient personnel are available to staff a project, the Assistant District Engineer must notify the Office of Construction. The Office of Construction will make a request for the Commissioner's approval to assign the work to a consulting engineer.

### ***1-101 Scope of the Work***

The construction of any transportation project consists of a number of operations that must be integrated in order to produce a finished product. Each operation has an effect on the quality of the final product. The procedures and restrictions applicable to the work to be performed and the estimated quantities involved are specified in the Contract documents. The actual quantities incorporated into the work must be documented and certified. The certification must be based on well-documented field measurements and computations.

The intent of the construction Contract is to prescribe a complete work or improvement. Knowledge of the plan details, design computations, and Contract requirements is a necessity, for the Inspector to properly fulfill the function of the Department representative.

### ***1-102 Initiating Inspection***

The Assistant District Engineer is responsible for determining the appropriate staffing level on all projects and will assign a Project Engineer and Chief Inspector to oversee and take charge of each project respectively. Before actual operations are started by the Contractor, the Chief Inspector must make a careful study of the plans, Contract(s), special provisions, property agreements, utility agreements, permit applications, permits, survey and design reports, and specifications for the Project to become familiar with all phases of the improvement and learn of any extraordinary features involved. During this phase, the Chief Inspector should also discuss the Project with the Project Engineer, Environmental Coordinator, Utility Coordinator, and EEO Officer to determine if they know of any extraordinary features that may affect the Project.

### ***1-103 The Inspector***

The Chief Inspector of the Project is a representative of the Commissioner. The Inspector is assigned to a Project to see that the best interests of the State are served and that the Contractor works in accordance with the terms of the Contract. In dealing with the Contractor, the Inspector must be fair and honest and strive to maintain a positive working relationship with the Contractor and his agent. The Inspector must be firm. Firmness in obtaining the required results from the start of the project will make the work of the inspection force easier as work progresses. **Inspectors should never act as supervisors for the Contractor**, and except in emergencies, should only issue instructions to the Contractor's supervisory personnel. This approach serves to maintain the Contractor's authority over his forces and will improve the relationship between the Contractor and the Inspector.

If differences between the Inspector and Contractor concerning the interpretation of the plans and specifications cannot be reconciled, the Inspector will immediately contact the Project Engineer for a decision.

In the absence of a superior, if an immediate decision is required, the Chief Inspector will make decisions according to the Inspector's best judgment and so direct the Contractor. The Inspector will, however, notify the Project Engineer of the decision and the reasons for the decision as soon as possible.

### ***1-104 Time on Project***

Inspection on projects will be continuous during any and all hours that the Contractor's forces are physically working at the project site, unless otherwise directed by the Assistant District Engineer. A sufficient number of Inspectors should be on the project at all times to properly inspect the Contractor's operations. On projects that require only one Inspector, the daily working hours of the Inspector (during the construction phase) will usually be the same as for the Contractor's forces. The Project Engineer may, with permission of the Assistant District Engineer, vary the schedule of daily hours for any Inspector when a departure from the Contractor's hours is proper procedure. The employee will be notified of changes in work schedule in accordance with the current collective bargaining Contract. The assignment of duties to the sub-inspectors is the responsibility of the Chief Inspector.

Time off that can be anticipated must be arranged in advance with the employee's immediate superior. Employees who cannot report to the Project because of emergencies must call the District Office as soon as it is apparent that they will be absent or late. Formal standard reports on forms established by the Human Resources Division will be submitted promptly in all cases in which the forms are applicable.

### ***1-105 Address of Inspectors***

Changes in the Chief Inspectors home address, home telephone number or CONNDOT provided communication service are promptly reported to the District Office. Other inspectors assigned to the Project report this information to the Chief Inspector, who advises the Assistant District Engineer.

### ***1-106 Enforcing Provisions of the Contract***

**Inspectors cannot waive specified requirements, nor permit an inferior grade of work to be done, or allow use of unapproved or rejected materials. They are expected to give instructions, and to demand strict compliance at all times. They shall accept only such changes in plans and specifications as are authorized by the Assistant District Engineer, or above.**

Chief Inspectors or their sub-inspectors shall immediately advise, orally and in writing, Contractors or their representatives, when work is being done in violation of Contract provisions. The Project Engineer should be advised of the problem and any orders that were given to the Contractor. It is expected that spoken orders will accomplish results in almost every instance; however, the Inspector still needs to document these orders on the Daily Work Report. If a Contractor persists in working contrary to orders, the Project Engineer will intervene. If the problem cannot be resolved, inspection shall be withdrawn from that part of the work, or the Project Engineer may suspend the operation if conditions warrant such action. The Assistant District Engineer must be notified immediately about the problem and the course of action taken. The Assistant District Engineer will visit the project, make the necessary inspections and investigations, and render a decision. In the event that the Assistant District Engineer cannot settle the difficulty, the District Engineer will be called to the job, and the District Engineer's decision shall be final.

### ***1-107 Safety***

It is the duty of the Chief Inspector to enforce public transportation safety and regulations as set forth in the *Standard Specifications* and special provisions.

All Inspectors must be familiar with and follow the guidelines established in the Department's *Manual of Safety & Training Topics*. Safety practices related to the environment are included in Volume 2, Chapter 1, "Environmental Protection." In cases where the Inspector is subjected to hazards not covered by the Department guidelines, the safety requirements set up for the project by the Contractor shall govern.

Inspectors will wear appropriate headgear, safety vests and protective footwear in accordance with current Department policy. Other protective equipment, such as goggles and ear protectors, are to be used when necessary. The Chief Inspector is responsible to enforce the safety issues involving the sub inspectors on the job.

The Contractor is required to take all precautions that the Engineer may deem necessary and reasonable for the protection of Traveling Public and all people on the project—including employees of both the Contractor and CONNDOT, as well as private citizens—and for the protection of property. The Contractor must employ extreme caution when working in the vicinity of live wires.

When an unsafe practice or condition exists which would likely affect the safety of the traveling public or persons on site, the Inspector will request the Contractor to correct the situation. If the Contractor does not correct the unsafe practice or condition, the Chief Inspector should order the Contractor in writing to stop the operation that has been deemed unsafe, and notify the Assistant District Engineer as soon as possible. If the Assist District Engineer's involvement cannot correct the situation, the Office of Construction will be notified.

### ***1-108 Change in Travelway Clearances and Bridge Capacity Ratings***

When a construction activity reduces the height clearance on a bridge or overhead sign support, reduces the lane width on any roadway or intersection, or reduces the weight capacity of a bridge, the Chief Inspector is responsible to notify the supervisor of Motor Transport Services Unit 15 days in advance of the planned construction activity and inform them of the reductions and time frame that they will exist. When determining the vertical clearance restrictions, measure from the bottom of the falsework to travelway surface. Please conform to CONNDOT Policy No. E&H.O.-22, regarding warning signs, when height is restricted to 14'-2" or less.

### ***1-109 Data, Supplies and Equipment***

The Project Engineer will provide the Inspector with the following data, supplies, and equipment:

#### **Data**

- Two sets of plans, including large-scale layouts of major structures
- Design Report and computations
- A copy of the Contract
- Copies of the property agreements
- Copies of utility agreements
- Copies of all permits issued for the work

#### **Minimum Supplies**

- *Standard Specification* book
- *Construction Manual*
- "Schedule of Minimum Requirements for Sampling Materials for Test"
- Diary and field books
- Report blanks
  - + Daily Work Reports (Forms CON-134, CON-135 and CON-136)
  - + Pile Driving Report (Con87 and 87M)
  - + Daily Report on Cost Plus (Form CON-9) or applicable electronic spreadsheet
  - + Utilities forms (Forms CON-40 and CON-41)
  - + Labor Wage Check (Form CON-131) and Labor Wage Check Summary
  - + Request for Test (Form MAT-1) for non-SiteManager
  - + Report of Test on Cylinders (Form MAT-308)
  - + Rejected Material (Form MAT-103)
  - + Environmental Check List-New Project Start Up
  - + Project Site Environmental Inspection Report
  - + Notification of Environmental Corrective Actions Implementation of 24 – Hour Rule
  - + Leave of Absence Report (Form PER-4 ) or applicable electronic spreadsheet
- Spray paint for marking

- Hard hats
- Safety vests
- Rain gear

**Minimum Equipment**

- Measuring devices
- Folding rule
- Hand level or one line level
- Rain gauge

**Additional Equipment for Concrete Projects**

- single use or other suitable cylinder forms, plate and level
- slump cone and rod
- calibrated air meter
- thermometer