DCLU

Director's Rule 23-87

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CITY OF SEATTLE DEPARTMENT OF CONSTRUCTION AND LAND USE	1 13	3-84
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	Code and Section Reference Section 306 Seattle Building Code	
Subject General Duties and Responsibilities of Registered Special Inspectors	Type of Rule Code Interpretation	
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PURPOSE

This rule defines the general duties and responsibilities of registered special inspectors, and special inspectors-in-training who are employed by an approved inspection agency, and other non-registered special inspectors with certain credentials. A special inspector performs inspections required by the Building Official in reinforced concrete, prestressed concrete, concrete batching, reinforced masonry, structural steel, piling, shotcrete, spray applied fireproofing, site geotechnical engineering, surface and subsurface drainage engineering, and other complex or hazardous types of construction. This rule is intended to be used in conjunction with the Seattle Building Code and addresses the following subjects:

1. Definitions
2. Responsibilities
3. Types of Special Inspections
4. Notifications
5. Reports
6. Inspection Procedures
7. Revocation of Certification

SECTION 1. DEFINITIONS

1. Approved Inspection Agency

   An independent testing/inspection agency, an engineering firm, a government agency, or other organization which has demonstrated their ability to supervise specific quality control functions on a given project to the satisfaction of the Building Official.

2. Inspection

For the purpose of this rule, inspection is defined as the special inspections specified in Section 306 (a), Types of Special Inspections, of the Seattle Building Code.

3. Registered Special Inspector

A registered special inspector shall be a person who has been examined as to his/her technical knowledge and experience to the satisfaction of the Building Official for performing the special inspection of the type or types for which he/she has applied and who is employed by and is recommended by an approved inspection agency approved for that type of work. The Building Official shall issue the applicant a Certificate of Registration as evidence of the examination.

Types of Registered Special Inspectors are:

A. Special Inspector Unlimited

A person whose combined experience and training has prepared him/her to competently perform all required special inspection functions on large and complicated projects within the category/categories of his/her registration.

B. Special Inspector Limited

A person whose quality control and construction experience and/or training does not adequately prepare him/her to perform all the duties or deal with all the situations requiring specific skills that may arise during the construction of large and complex projects, but who is capable of performing routine inspection functions on specific phases of a large project or overall supervision on simple projects in the category/categories in which he/she is registered.

4. Special Inspector-in-Training

A person not holding a Certificate of Registration who works under the direct supervision of a qualified and registered special inspector to gain experience and training.

5. Special Inspector, Non-Registered

Upon approval by the Building Official, a person other than a registered special inspector may provide the required inspection as specified in SBC Section 306(a). Such inspector must comply with the requirements of this rule for minimum field testing, notifications, and reports. This applies when specialized skills are required, such as a civil engineer for drainage, a geotechnical engineer for soils engineering, the structural engineer-of-record for the project, or other engineers or individuals as designated by the Building Official.

A. Geotechnical Engineer

The geotechnical engineer shall be licensed to practice as a Professional Civil Engineer in the State of Washington and shall have at least four years of professional employment in a responsible geotechnical engineering position.

6. Special Inspector

The term "Special Inspector" as used in this Director's Rule refers to any of the inspectors defined in 3a, 3b, 5 and 5a, above.

7. Special Inspection Categories for Registered Special Inspectors

Certificates of Registration are issued in the following areas:

Reinforced Concrete
Prestressed Concrete
Structural Steel
Masonry
Piling
Shotcrete
Spray-applied Fireproofing

SECTION 2. RESPONSIBILITIES

1. Architect/Engineer/Owner. The licensed architect, structural engineer-of-record or owner shall be responsible for recommending to the building official an approved inspection agency or appropriate non-registered special inspector (such as geotechnical engineers - see Definitions), to conduct special inspections and tests required by SBC Section 306(a).

If the nominated special inspector is a geotechnical engineer other than the one who prepared the geotechnical report, they shall submit a letter to the Building Official stating whether or not the nominated geotechnical engineer agrees with the opinions and recommendations of the original geotechnical engineers. Further recommendations and supporting data shall be provided should there be exceptions to the original recommendations.

No changes of special inspectors shall be made without written approval from the Building Official. Requests for changes of special inspectors shall be made in writing by the owner or owner's representative.

The owner shall be responsible to employ approved special inspectors and inspection agencies to conduct required special inspections and tests.

The owner shall be responsible for notifying the approved inspection agency employed to conduct special inspections when construction activity is scheduled which requires special inspection. If the contractor or another representative of the owner is designated to provide notification, the owner retains the responsibility to assure that the required special inspections are conducted and the required reports are submitted to the building official.

2. Special Inspector. Special inspectors are authorized deputies of the Building Official and are responsible for duties assigned as follows:

   a. Conduct all special inspections for which he/she is employed and/or notified and for carrying out the duties of a special inspector as specified in SBC Section 306(1).

   b. Special inspectors shall not inspect construction performed, or materials supplied by any contractor, subcontractor, or material vendor with whom such inspector is employed.

   c. While at work, the special inspector shall not undertake or engage in any other task or occupation which will interfere with the proper performance of his/her duties of inspection.

   d. The special inspector employed on any work shall be present during the execution of ALL work he/she has been given a letter of authorization to inspect, unless specifically exempted below.

   e. He/she shall report to the job sufficiently in advance of construction to familiarize himself/herself with the plans and to inspect all materials to be used within such work.

   f. He/she shall inspect the construction, erection, placing or other use of such materials.

   g. He/she shall observe and report in writing whether there is compliance with the DCLU-approved design drawings.

   h. The special inspector shall be employed only by an approved inspection agency.

   i. The registered special inspector must have a Certificate of Registration valid for each type of inspection made. Only unlimited special inspectors shall inspect large and complicated structures.

      1. The Certificate of Registration is issued for special inspections performed within the City of Seattle ONLY. (Any other use is not authorized by the City of Seattle.)

      2. Inspection licenses from other jurisdictions or licensing agencies acceptable to the Building Official may be accepted where work is to be performed in a manufacturing plant outside the State of Washington.

      3. When a special inspector-in-training is performing inspections, a qualified registered special inspector shall be on site, responsible for, and in direct communication with that person during their performance of any inspections.

j. Required inspections may be provided by a non-registered special inspector in the following cases:

1) Inspection is performed by the architect or engineer responsible for the design of the work, with prior approval by the Building Official.

2) Inspection is performed by a person with specifically required technical knowledge or skill because of the nature of the work, (such as a geotech nical engineer for soils engineering), with prior approval of the Building Official.

k. The non-registered special inspector shall, if not specified in the contract documents, determine the frequency of testing and observation necessary to comply with the approved drawings or normal standards. Such monitoring requirements shall be given to the contractor performing the work, such that all parties involved in the direct construction have a clear understanding of the special inspector's role.

The non-registered special inspector shall prepare, prior to the initial field inspection, a schedule or basis of required inspections for the project. This schedule will define, at a minimum, the individual items of inspections. type of inspections required, frequency (i.e., continuous, every so many lifts, daily, etc.) and specific personnel requirements. The non-registered special inspector shall use his/her professional judgement in developing the specific schedule of inspections which would meet accepted professional standards of the Seattle area.

SECTION 3. TYPES OF SPECIAL INSPECTIONS

1. Concrete - During the mixing concrete and taking of test specimens and placing of all reinforced concrete as follows:

A. When the proportions of the ingredients for concrete are established in accordance with the criteria in SBC Section 2604(d), continuous special inspection shall be required during the mixing and placement of concrete and taking of all test specimens.

Exception: If concrete mixes have been granted Continuous Approval status by DCLU and have been approved by the Structural Engineer-of-Record for the project, special inspection in the batch plant is not required.

B. When the proportions of concrete are established in accordance with the criteria in SBC Section 2604(e), continuous special inspection shall be required during the placement of concrete and taking of all test specimens.

2. Ductile Moment-resisting Concrete Space Frames: As required by SBC Section 2625(j).

3. Reinforcing Steel and Prestressing Steel:

   A. During all stressing and grouting of prestressed concrete.

   B. During placing of reinforcing steel, placing of tendons and prestressing steel for all concrete required to have special inspection by Item 1.

      EXCEPTION: The special inspector need not be present during entire reinforcing steel and prestressing steel-placing operations, provided he/she can inspect for conformance with the DCLU-approved plans prior to the delivery of concrete to the job site.

4. **Structural Steel**: Fabrication and erection of structural steel members and assemblies.

   EXCEPTION: The special inspector need not be present during the entire fabrication and erection process provided:

   1. Inspection of welding and bolting is in accordance with SBC Section 306(a) Item 4B and C.

   2. That upon completion of fabrication and erection of all members, sizes and grades of steel can be easily identified.

   A. Erection: Verify grade of steel, size of members, location of members, and assemblies during erection.

   B. Welding:

      (i) Ductile moment-resisting steel frames. As required by SBC Section 2722(f).

      (ii) All structural welding, including welding of reinforcing steel.

      EXCEPTION: When approved by the building official, single-pass fillet welds when stressed to less than 50 percent of allowable stresses and floor and roof deck welding and welded studs when used for structural diaphragm or composite systems may have periodic inspections as defined in SBC Section 306(c) of this building code. For periodic inspection, the special inspector shall check qualifications of welders at the start of work and then make final inspection of all welds for compliance.

   C. High-strength Bolting: During all bolt installations and tightening operations.

EXCEPTIONS:1. The special inspector need not be present during the entire installation and tightening operations provided he/she:

A. Has inspected the surfaces and bolt type, size, and grade for conformance to plans and specifications prior to the start of bolting, and

B. Will, upon completion of all bolting, verify the minimum specified bolt tension for a random 10 percent of the bolts for each connection, with a minimum of 2 bolts per connection.

2. In bearing type connections when threads are not required by design to be excluded from the shear plane, inspection prior to or during installation will not be required.

5. Aluminum: Fabrication and erection of structural aluminum members and assemblies.

EXCEPTION: The special inspector need not be present during the entire fabrication and erection process provided inspection of welding and bolting is in accordance with SBC Section 306(a) Item 4B and C.

6. Structural Masonry: During preparation of masonry wall prisms, sampling and placing of all masonry units, placement of reinforcement, inspection of grout space immediately prior to closing of cleanouts, and during all grouting operations. Where masonry prism tests are required, they shall be made in accordance with SBC Section 2405(c). Number of mortar and grout tests specimens required and frequency of testing shall be as determined by the building official.

EXCEPTIONS: Periodic special inspection may be allowed when approved by the building official.

7. Reinforced Gypsum Concrete: When cast-in-place Class "B" gypsum concrete is being mixed and placed.

8. Insulating Concrete Fill: During the application of insulating concrete fill when used as part of a structural system.

EXCEPTION: The special inspection may be limited to an initial inspection to check the deck surface and placement of reinforcing. The special inspector shall supervise the preparation of compression test specimens during this initial inspection.

9. Sprayed-On Fireproofing: When required by the building official.

10. Piling, Drilled Piers and Caissons: During driving and testing of piles and construction of cast-in-place drilled piers or caissons. See Items 1 and 3 for concrete and reinforcing steel inspection.

11. Special Grading, Excavation and Filling: During earthwork excavations, grading and filling operations, inspection to satisfy requirements of Chapter 29 of the Seattle Building Code and Title 22, Subtitle VIII of the Grading and Drainage Ordinance, of the Seattle Municipal Code, as amended, regulating grading and drainage.

12. Shotcrete: During the taking of test specimens and placing of all shotcrete and as required by Section 2621(j) of the SBC.

    EXCEPTION: Shotcrete work for minor repairs and where, in the opinion of the building official, no special hazard exists.

13. Special Cases:

    A. Work which, in the opinion of the building official, involves unusual hazards.

    B. Where the magnitude of complexity of a specific job is sufficient to warrant, additional special inspectors may be required by the Building Officials.

SECTION 4. NOTIFICATIONS

1. Daily Notification to Building official

DCLU shall be notified of all scheduled special inspections prior to commencement of work. Notifications shall be made by calling 684-8477 and giving the following information:

a. Building permit number
b. Project name
c. Project address
d. Type of inspection
e. When an inspection will start
f. Special inspector's name and affiliation

2. Emergency Notification

Field problems requiring immediate action by the DCLU structural staff are reported to the special inspection section at 684-8472 or 684-8477. The general departmental emergency telephone is 684-8601 and it may be used to contact individual plan examiners.

3. Notice to Contractor

    A. Prior to commencement of special inspections, the special inspector shall notify the contractor that all permit drawings at the construction site must have a DCLU approval stamp. The only exception is that structural steel shop require Engineer of Record review stamps. (DCLU-approved drawings ARE required for structural steel design drawings.)

B. The building permit card must be posted at the jobsite and signed by a DCLU Building Inspector prior to any special inspections being performed. Authorization by the building inspector at a pre-construction conference shall satisfy this requirement.

C. The special inspector shall also notify the contractor of requirements for testing and inspection.

4. Notice to Special Inspector

A. The Building Official shall notify the approved inspection agency of which special inspections they are to perform in a letter of authorization. This letter from DCLU will contain permit and telephone numbers for special inspection reporting purposes.

B. It shall be the duty of the person doing the work requiring special inspection to notify the approved inspection agency that such work is ready for inspection. The Building Official may require that every request for inspection be made at least 24 hours before such inspection is desired. Such request may be in writing or by telephone at the option of the Building Official.

C. It shall be the duty of the person requesting special inspections to provide access to and means for proper inspection of such work.

SECTION 5. REPORTS

1. General

A. The special inspector shall review previous inspection reports to verify that continuity of inspection has been maintained and immediately notify DCLU of any construction performed when the special inspector was not present. (Use Emergency Notification procedures Section 4.2)

B. One copy of the handwritten field report must be left at the job site.

C. All reports must be signed by the special inspector responsible for and on-site during the inspection. Special inspectors-in-training shall not sign reports.

2. All reports must provide the following minimum information:

A. DCLU Permit Number - Note: The correct number is always found on the jobsite copy of the DCLU-approved design drawings for each project. The number found on the current building permit card may not always be the correct number for special inspection reporting purposes, as permits are renewed and renumbered annually. For the purposes of reporting and filing, the original permit drawing number is maintained throughout the duration of a project. There are sometimes more than one permit issued during the construction of large projects (i.e. - foundation and superstructure under separate permits). Each permit has its own set of numbered drawings.

B. Job address - as it appears on the DCLU-approved design drawings.

C. Location of Inspection

1. For field inspections, pinpoint exact location of inspection using gridlines, floor numbers, or other applicable identification.

2. For shop inspections, identify the fabricator and the location of the shop.

3. For permits with multiple buildings, the DCLU identification number shall be called-out so that inspections can be correlated with specific structures. The DCLU ID number is shown on the plot plan.

D. Identification of Materials and Methods of Construction

Adequately identify materials and note the methods of construction, erection, placement or other use of the materials. Describe specific items that were inspected.

E. Testing Data

Identify and document results of all material testing, treatment certificates, non-destructive testing, load tests, sampling, or other tests being utilized.

F. Conformance Statement

State whether the work requiring special inspection was either in conformance or not in conformance with DCLU-approved plans (except as noted below for structural steel shop drawings), project specifications, applicable workmanship provisions of the Seattle Building Code, related standards and Director's Rules, and verbal instructions from the Structural Engineer-of-Record. NOTE: DCLU approved drawings are NOT required for structural steel shop drawings but ARE required for structural steel design drawings.

3. Other Information

In addition to the minimum requirements listed above, the special inspector shall also provide, as directed by the Building Official, such other information as may be required during his/her inspection and evaluation.

4. Substitutions/Deviations

All substitutions of materials or other deviations from approved permit drawings and applicable codes, shall be immediately reported to the contractor for correction, then, if uncorrected, to the architect/engineer and Building Official (use Emergency Notification procedure, Section 4.2). Fully identify all non-conforming items.

5. Daily Reports

At the conclusion of each inspection, the special inspector shall submit a report to the architect, engineer, owner, and building official relative to the portion of the work inspected. The report shall be submitted to the building official no later than one week from the date of the inspection and shall be filed in the records of his/her office.

6. Final Report from Inspection Agency

The approved inspection agency shall submit a final signed report stating whether all special inspections were performed and reported as specified on permit documents. In addition, it shall be stated in writing that, to the best of their knowledge, all work was performed in conformance with DCLU approved plans, specifications, Director's Rules, SBC and related standards, and verbal instructions from the Structural Engineer-of-Record. A Certificate of Occupancy will not be issued until a final report is received and approved by DCLU. If the report was required to be prepared by an engineer, the report shall be submitted bearing the registered professional engineer's seal.

SECTION 6. INSPECTION PROCEDURES

1. Special Inspector's Notebook

All special inspectors shall maintain a notebook which shall contain the code sections of the Seattle Building Code, DCLU Director's Rules, and other applicable codes and information pertaining to good inspection.

2. Inspection Checklist

Prior to inspection, special inspectors shall perform the following:

A. Check that he/she has DCLU approval to perform the inspection and that:

1) A letter of authorization from DCLU was sent to the approved inspection agency in which they are employed.

2) The contractor has an outline of required inspections.

B. Check that the permit has been issued.

1) The building permit card must be posted with inspection record side accessible for sign-offs.

2) DCLU-approved drawings and required shop drawings bearing permit numbers must be on the job site. Remember, there are sometimes more than one permit number for a given project (i.e. foundation and superstructure under separate permits). Each permit has its own set of numbered drawings.

C. Verify that all previously required inspections have been made and the appropriate approvals have been obtained. If the contractor has performed work for which approvals have not been recorded, contact DCLU immediately (use emergency notification procedure, see Section 4.2).

D. Verify that setbacks (foundation location relative to lot lines) have been approved by the DCLU Building Inspector and properly signed-off on the back of the building permit card if a new structure or addition is being constructed.

E. Verify that foundation soils (structural fill and/or original ground) have been approved prior to placing foundation.

F. Verify that pile placement is approved before placing pilecaps.

G. Verify that shop drawings are DCLU approved and shop inspections are completed for precast concrete and any other prefabricated products requiring shop inspections. Verify that structural steel shop drawings are review stamped by the Structural Engineer-of-Record and shop inspections are completed for structural steel fabrications.

H. Special inspectors should carefully study the DCLU-approved drawings and the Structural Engineer-of-Record's reviewed structural steel shop drawings (where applicable) to determine the extent of supervision required. The type of inspections required will be found in the structural notes as well as on the plans cover sheet that the DCLU provides.

I. Go over the outline of required inspections with the contractor. Questions, such as the extent of inspections and types of testing, should be clarified at this time.

   Some inspections may be made on a periodic basis and satisfy the requirements of continuous inspection, provided this periodic scheduled inspection is performed as outlined in the project plans and specifications and approved by the Building Official. If there are any questions regarding the extent of special inspection, contact the Quality Control Section of DCLU at 684-8472.

J. All construction must be in accordance with DCLU-approved drawings <u>only.</u> The only exception is that structural steel shop drawings do not require DCLU-approval stamps, but do require Structural Engineer-of-Record review stamps. DCLU-approved drawings are required for the structural steel design drawings. No inspections are authorized without the use of approved permit drawings. All design changes must be approved by DCLU. If structural design changes are not so approved, the inspector must notify the Building Official <u>immediately</u> (use emergency notification procedures in Section 4.2). Notify the contractor that he is proceeding at his own risk. The Building Official may stop the work until the redesign is approved.

K. If any special inspector or special inspector-in-training is negligent in the performance of his/her duties, the work may be stopped.

SECTION 7. REVOCATION OF CERTIFICATE

1. The building official may revoke, suspend, or refuse to renew any Certificate of Registration upon evidence submitted to him/her of incompetence, of willful or negligent failure to observe or report violations of the SBC or related documents, or of any other failure to perform properly and effectively the duties assumed by a registered special inspector.

2. The registered special inspector shall be notified in writing of the building official's decision to revoke, suspend or refuse to renew the Certificate of Registration. The registered special inspector may request in writing a hearing before the building official for reconsideration of the decision to revoke, suspend or nonrenewal. The request shall be filed with the building official by five o'clock of the fifteenth working day following service of the notice. The hearing shall be held no later than 15 working days from receipt of a written request. After the hearing, the building official shall issue a final decision, in writing, sustaining, modifying or withdrawing the initial decision to revoke, suspend or refusal to renew the certificate of registration.

3. The Building Official may suspend, or refuse to renew any authorization for approved inspection agencies and/or non-registered special inspectors. This may be done upon evidence submitted to DCLU of incompetence, of willful or negligent failure to observe or report violations of the Seattle Building Code or of any other failure to perform properly and effectively the duties of this document or other such duties assumed by an approved inspection agency or non-registered special inspector.