
USACE / NAVFAC / AFCEC / NASA UFGS-01 45 35 (February 2015)

Preparing Activity: USACE Superseding
UFGS-01 45 35 (August 2008)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated October 2017

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 45 35

SPECIAL INSPECTIONS

02/15

PART 1 GENERAL

- 1.1 REFERENCES
- 1.2 GENERAL REQUIREMENTS
- 1.3 DEFINITIONS
 - 1.3.1 Continuous Special Inspections
 - 1.3.2 Periodic Special Inspections
 - 1.3.3 Perform
 - 1.3.4 Observe
 - 1.3.5 Special Inspector (SI)
 - 1.3.6 Associate Special Inspector (ASI)
 - 1.3.7 Third Party
 - 1.3.8 Special Inspector of Record (SIOR)
 - 1.3.9 Contracting Officer
 - 1.3.10 Contractor's Quality Control (QC) Manager
 - 1.3.11 Designer of Record (DOR)
 - 1.3.12 Statement of Special Inspections (SSI)
 - 1.3.13 Schedule of Special Inspections
 - 1.3.14 Designated Seismic System
- 1.4 SUBMITTALS
- 1.5 SPECIAL INSPECTOR QUALIFICATIONS
 - 1.5.1 Steel Construction and High Strength Bolting
 - 1.5.1.1 Special Inspector
 - 1.5.1.2 Associate Special Inspector
 - 1.5.2 Welding Structural Steel
 - 1.5.2.1 Special Inspector
 - 1.5.2.2 Associate Special Inspector
 - 1.5.3 Nondestructive Testing of Welds
 - 1.5.3.1 Special Inspector
 - 1.5.3.2 Associate Special Inspector
 - 1.5.4 Cold Formed Steel Framing
 - 1.5.4.1 Special Inspector
 - 1.5.4.2 Associate Special Inspector
 - 1.5.5 Concrete Construction
 - 1.5.5.1 Special Inspector
 - 1.5.5.2 Associate Special Inspector

- 1.5.6 Prestressed Concrete Construction
 - 1.5.6.1 Special Inspector
 - 1.5.6.2 Associate Special Inspector
- 1.5.7 Post-tensioned Concrete Construction
 - 1.5.7.1 Special Inspector
 - 1.5.7.2 Associate Special Inspector
- 1.5.8 Masonry Construction
 - 1.5.8.1 Special Inspector
 - 1.5.8.2 Associate Special Inspector
- 1.5.9 Wood
 - 1.5.9.1 Special Inspector
 - 1.5.9.2 Associate Special Inspector
- 1.5.10 Verification of Site Soil Condition, Fill Placement and Load-Bearing Requirements
 - 1.5.10.1 Special Inspector
 - 1.5.10.2 Associate Special Inspector
- 1.5.11 Deep Foundations
 - 1.5.11.1 Special Inspector
 - 1.5.11.2 Associate Special Inspector
- 1.5.12 Sprayed Fire Resistant Material
 - 1.5.12.1 Special Inspector
 - 1.5.12.2 Associate Special Inspector
- 1.5.13 Mastic and Intumescent Fire Resistant Coatings
 - 1.5.13.1 Special Inspector
 - 1.5.13.2 Associate Special Inspector
- 1.5.14 Exterior Insulation and Finish System (EIFS)
 - 1.5.14.1 Special Inspector
 - 1.5.14.2 Associate Special Inspector
- 1.5.15 Fire-Resistant Penetrations and Joints
 - 1.5.15.1 Special Inspector
 - 1.5.15.2 Associate Special Inspector
- 1.5.16 Smoke Control
 - 1.5.16.1 Special Inspector
 - 1.5.16.2 Associate Special Inspector
- 1.5.17 Special Inspector of Record (SIOR)

PART 2 PRODUCTS

2.1 FABRICATOR SPECIAL INSPECTIONS

PART 3 EXECUTION

3.1 RESPONSIBILITIES

- 3.1.1 Special Inspector of Record
- 3.1.2 Quality Control Manager
- 3.1.3 Special Inspectors

3.2 DEFECTIVE WORK

-- End of Section Table of Contents --

USACE / NAVFAC / AFCEC / NASA UFGS-01 45 35 (February 2015)

Preparing Activity: USACE Superseding
UFGS-01 45 35 (August 2008)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated October 2017

SECTION 01 45 35

SPECIAL INSPECTIONS 02/15

NOTE: This guide specification covers the requirements for special inspections when required by UFC 3-301-01. This specification will apply only to buildings.

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable item(s) or insert appropriate information.

Remove information and requirements not required in respective project, whether or not brackets are present.

Comments, suggestions and recommended changes for this guide specification are welcome and should be submitted as a Criteria Change Request (CCR).

PART 1 GENERAL

NOTE: This guide specification will be applicable to both new buildings and existing building rehabilitations designed according to UFC 3-301-01 STRUCTURAL ENGINEERING.

In addition to the Special Inspection and testing specified requirements, a registered design professional must perform "structural observations" during construction when required by UFC 3-301-01. All observed deficiencies will be immediately reported to the Contracting Officer. The registered design professional performing these observations will be a representative of the Designer of Record (DOR) for the building being constructed.

Structural observations are required for the following project conditions per IBC Chapter 17:

- 1) Seismic Design Category D, E or F; and assigned to Risk Cat III, IV or V.
- 2) Seismic Design Category D, E or F; and with a height greater than 22860 mm 75 ft.
- 3) Seismic Design Category E, assigned to Risk Category I or II and the building is greater than two stories above grade plane.
- 4) Nominal design wind speed in excess of 49 m/sec 110 mph; and assigned to Risk Cat III, IV or V.
- 5) Nominal design wind speed in excess of 49 m/sec 110 mph; and with a height greater than 23 m 75 ft.

Coordinate with the Contracting Officer how Structural Observations will be covered for Design-Bid-Build projects as this service will not be covered by the Contractor.

Special Inspections are minimum Quality Assurance requirements that are in addition to the Quality Control requirements that are defined in Sections 01 45 00.00 10 QUALITY CONTROL and 01 45 00.00 20 QUALITY CONTROL.

The requirements for Special Inspections, the special inspector, and related testing will be used where required by UFC 3-301-01 and UFC 4-023-03.

1.1 REFERENCES

NOTE: This paragraph is used to list the publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a Reference Identifier (RID) outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature to update the issue dates.

References not used in the text will automatically be deleted from this section of the project specification when you choose to reconcile references in the publish print process.

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

ASCE 7 (2017) Minimum Design Loads for Buildings
and Other Structures

INTERNATIONAL CODE COUNCIL (ICC)

ICC IBC (2015) International Building Code

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 3-310-04 (2013) Seismic Design for Buildings

1.2 GENERAL REQUIREMENTS

Perform Special Inspections in accordance with the Statement of Special Inspections, Schedule of Special Inspections and Chapter 17 of ICC IBC. The Statement of Special Inspections and Schedule of Special Inspections are included as an attachment to this specification. Special Inspections are to be performed by an independent third party and are intended to ensure that the work of the prime contractor is in accordance with the Contract Documents and applicable building codes. Special inspections do not take the place of the three phases of control inspections performed by the Contractor's QC Manager or any testing and inspections required by other sections of the specifications.[]

Structural observations will be performed by the Government. The contractor must provide notification to the Contracting Officer 14 days prior to the following points of construction:

**NOTE: Define the points in construction that
structural observations need to occur.**

- a. [_____]
- b. [_____]
- c. [_____]

1.3 DEFINITIONS

1.3.1 Continuous Special Inspections

Continuous Special Inspections is the constant monitoring of specific tasks by a special inspector. These inspections must be carried out continuously over the duration of the particular tasks.

1.3.2 Periodic Special Inspections

**NOTE: Consider revising the definition of periodic
if there is a specific time interval that is
required between periodic inspections. For a
specific time interval on a specific Special
Inspections, indicate the time interval in the
Schedule of Special Inspections for that task.**

Periodic Special Inspections is Special Inspections by the special inspector who is intermittently present where the work to be inspected has been or is being performed.

1.3.3 Perform

Perform these Special Inspections tasks for each welded joint or member.

1.3.4 Observe

Observe these Special Inspections items on a random daily basis. Operations need not be delayed pending these inspections.

1.3.5 Special Inspector (SI)

A qualified person retained by the contractor and approved by the Contracting Officer as having the competence necessary to inspect a particular type of construction requiring Special Inspections. The SI must be an independent third party hired directly by the Prime Contractor.

1.3.6 Associate Special Inspector (ASI)

A qualified person who assists the SI in performing Special Inspections but must perform inspection under the direct supervision of the SI and cannot perform inspections without the SI on site.

1.3.7 Third Party

A third party inspector must not be company employee of the Contractor or any Sub-Contractor performing the work to be inspected.

[1.3.8 Special Inspector of Record (SIOR)

NOTE: The Special Inspector of Record is required for the following project conditions per UFC 3-301-01:

- 1) Seismic Design Category D, E or F; and assigned to Risk Cat III, IV or V.
- 2) Seismic Design Category D, E or F; and with a height greater than 22860 mm 75 ft.
- 3) Seismic Design Category E, assigned to Risk Category I or II and the building is greater than two stories above grade plane.
- 4) Nominal design wind speed in excess of 49 m/sec 110 mph; and assigned to Risk Cat III, IV or V.
- 5) Nominal design wind speed in excess of 49 m/sec 110 mph; and with a height greater than 23 m 75 ft.

In addition to these conditions, the DOR is encouraged to consider using an SIOR on large magnitude or critical projects where this additional level of quality control is affordable.

A licensed engineer in responsible charge of supervision all special inspectors for the project and approved by the Contracting officer. The SIOR must be an independent third party hired directly by the Prime

Contractor.

1.3.9 Contracting Officer

The Government official having overall authority for administrative contracting actions. Certain contracting actions may be delegated to the Contracting Officer's Representative (COR).

1.3.10 Contractor's Quality Control (QC) Manager

An individual retained by the prime contractor and qualified in accordance with the Section [01 45 00.00 20 QUALITY CONTROL] [DESIGN-BUILD Section 01 45 00.05 20 DESIGN AND CONSTRUCTION QUALITY CONTROL] having the overall responsibility for the contractor's QC organization.

1.3.11 Designer of Record (DOR)

A registered design professional [employed by the Government] [contracted by the Government as an A/E] responsible for the overall design and review of submittal documents prepared by others. The DOR is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws in state in which the design professional works. The DOR is also referred to as the Engineer of Record (EOR) in design code documents.

1.3.12 Statement of Special Inspections (SSI)

NOTE: The Statement of Special Inspections will be developed by the DOR and must cover the following items:

- 1) List of the Architectural Designated Seismic Systems.
 - a. These components are in or attached to a Risk Category IV or V structure and are needed for continued operation of the facility or their failure could impair the continued operation of the facility.
- 2) List of the Mechanical Designated Seismic Systems.
 - a. For Seismic Design Category C or Risk Category V list the following:
 - i. Heating, ventilation and air-conditioning (HVAC) ductwork containing hazardous materials and anchorage of such ductwork.
 - ii. Piping systems and mechanical units containing flammable, combustible or highly toxic materials.
 - b. For Seismic Design Category D, E or F or Risk Category V list mechanical system that meet one of the following:
 - i. Life safety component required to function after an earthquake
 - ii. Component that contains hazardous content
 - iii. All components in an essential facility needed for continued operation after an earthquake
- 3) List of the Electrical Designated Seismic Systems.

- a. For Seismic Design Category C or Risk Category V list the following:
 - i. Anchorage of electrical equipment used for emergency or standby power systems.
- b. For Seismic Design Category D, E or F list electrical system that meet one of the following:
 - i. Life safety component required to function after an earthquake
 - ii. Component that contains hazardous content
 - iii. All components in an essential facility needed for continued operation after an earthquake
- 4) Define the periodic walk-down inspections required by UFC 3-301-01.
- 5) List of elements that are part of the progressive collapse resistance system.
 - a. Provide a description of the following as they apply:
 - i. Elements of the tie force system consisting of internal longitudinal and transverse, vertical, and peripheral ties.
 - ii. Elements of the alternate path system.
 - iii. Elements having enhanced local resistance.

The Statement of Special Inspections and the Schedule of Special Inspections will be included as an attachment to this specification.

A document developed by the DOR identifying the material, systems, components and work required to have Special Inspections.

1.3.13 Schedule of Special Inspections

NOTE: A template for the Schedule of Special Inspections can be found on the Whole Building Design Guide website at <https://www.wbdg.org/FFC/NAVGRAPH/graphdoc.pdf>.

A schedule which lists each of the required Special Inspections, the extent to which each Special Inspections is to be performed, and the required frequency for each in accordance with ICC IBC Chapter 17.

[1.3.14 Designated Seismic System

NOTE: Include this paragraph when Designated Seismic Systems are required in accordance with UFC 3-310-04.

Those nonstructural components that require design in accordance with ASCE 7 Chapter 13 and for which the component importance factor, I_p , is greater than 1.0. This designation applies to systems that are required to be operational following the Design Earthquake for RC I - IV structures and following the MCER for RC V structures. All systems in RC V facilities

designated as MC-1 in accordance with UFC 3-310-04 are considered part of the Designated Seismic Systems. [Designated Seismic Systems will be identified by Owner and will have an Importance Factor $I_p = 1.5$].

1.4 SUBMITTALS

NOTE: Review submittal description (SD) definitions in Section 01 33 00 SUBMITTAL PROCEDURES and edit the following list to reflect only the submittals required for the project.

The Guide Specification technical editors have designated those items that require Government approval, due to their complexity or criticality, with a "G." Generally, other submittal items can be reviewed by the Contractor's Quality Control System. Only add a "G" to an item, if the submittal is sufficiently important or complex in context of the project.

For submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force, and NASA projects.

Use the "S" classification only in SD-11 Closeout Submittals. The "S" following a submittal item indicates that the submittal is required for the Sustainability eNotebook to fulfill federally mandated sustainable requirements in accordance with Section 01 33 29 SUSTAINABILITY REPORTING.

Choose the first bracketed item for Navy, Air Force and NASA projects, or choose the second bracketed item for Army projects.

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for [Contractor Quality Control approval.][information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] Submittals with an "S" are for inclusion in the Sustainability eNotebook, in conformance to Section 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

SIOR Letter of Acceptance; G[, [____]]
Special Inspections Project Manual; G[, [____]]

Special Inspections Agency's Written Practices
NDT Procedures and Equipment Calibration Records

SD-06 Test Reports

Special Inspections Daily Reports
Special Inspections Biweekly Reports

SD-07 Certificates

Fabrication Plant
Steel Truss Plant
Wood Truss Plant
AC472 Accreditation
Steel Joist Institute Membership
Precast Concrete Institute (PCI) Certified Plant
Certificate of Compliance
Special Inspector of Record Qualifications; G[, [____]]
Special Inspector Qualifications; G[, [____]]
Qualification Records for NDT technicians

SD-11 Closeout Submittals

NOTE: Include this submittal for large complex projects.

Interim Final Report of Special Inspections
Comprehensive Final Report of Special Inspections; G[, [____]]

1.5 SPECIAL INSPECTOR QUALIFICATIONS

Submit qualifications for each special inspector [and the special inspector of record].

Certifying Associations	
AABC	Associated Air Balance Council
ACI	American Concrete Institute
AWCI	Association of the Wall and Ceiling Industry
AWS	American Welding Society
FM	Factory Mutual
ICC	International Code Council
NDT	Nondestructive Testing
NICET	National Institute for Certification in Engineering Technologies
PCI	Precast/Prestressed Concrete Institute

Certifying Associations	
PTI	Post-Tensioning Institute
UL	Underwriters Laboratories

1.5.1 Steel Construction and High Strength Bolting

1.5.1.1 Special Inspector

**NOTE: For projects with Seismic Design Category D,
E or F or nominal design wind speed in excess of 49
m/s 110 mph, consider eliminating "b".**

- a. ICC Structural Steel and Bolting Special Inspector certificate with one year of related experience, or
- b. Registered Professional Engineer with related experience

1.5.1.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.2 Welding Structural Steel

1.5.2.1 Special Inspector

**NOTE: For highly complex steel projects use only
AWS Certified Welding Inspectors.**

- a. ICC Structural Welding Special Inspector certificate with one year of related experience, or
- b. AWS Certified Welding Inspector

1.5.2.2 Associate Special Inspector

AWS Certified Associate Welding Inspector

1.5.3 Nondestructive Testing of Welds

1.5.3.1 Special Inspector

NDT Level III Certificate

1.5.3.2 Associate Special Inspector

NDT Level II Certificate plus one year of related experience

1.5.4 Cold Formed Steel Framing

1.5.4.1 Special Inspector

NOTE: For projects with Seismic Design Category D,
E or F or nominal design wind speed in excess of 49
m/s 110 mph, consider eliminating "c and d".

- a. ICC Structural Steel and Bolting Special Inspector certificate with one year of related experience, or
- b. ICC Commercial Building Inspector with one year of experience, or
- c. ICC Residential Building Inspector with one year of experience, or
- d. Registered Professional Engineer with related experience

1.5.4.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.5 Concrete Construction

1.5.5.1 Special Inspector

NOTE: For projects with Seismic Design Category D,
E or F or nominal design wind speed in excess of 49
m/s 110 mph, consider eliminating "c and d".

- a. ICC Reinforced Concrete Special Inspector Certificate with one year of related experience, or
- b. ACI Concrete Construction Special Inspector, or
- c. NICET Concrete Technician Level III Certificate in Construction Materials Testing, or
- d. Registered Professional Engineer with related experience

1.5.5.2 Associate Special Inspector

NOTE: For projects with Seismic Design Category D,
E or F or nominal design wind speed in excess of 49
m/s 110 mph, consider eliminating "b".

- a. ACI Concrete Construction Special Inspector in Training, or
- b. Engineer-In-Training with one year of related experience

1.5.6 Prestressed Concrete Construction

1.5.6.1 Special Inspector

NOTE: For projects with Seismic Design Category D,
E or F or nominal design wind speed in excess of 49
m/s 110 mph, consider eliminating "c".

- a. ICC Pre-stressed Special Inspector Certificate with one year of related experience, or
- b. PCI Quality Control Technician/ Inspector Level II Certificate with one year of related experience, or
- c. Registered Professional Engineer with related experience

1.5.6.2 Associate Special Inspector

NOTE: For projects with Seismic Design Category D,
E or F or nominal design wind speed in excess of 49
m/s 110 mph, consider eliminating "b".

- a. PCI Quality Control Technician/ Inspector Level I Certificate with one year of related experience, or
- b. Engineer-In-Training with one year of related experience

1.5.7 Post-tensioned Concrete Construction

1.5.7.1 Special Inspector

NOTE: For projects with Seismic Design Category D,
E or F or nominal design wind speed in excess of 49
m/s 110 mph, consider eliminating "b".

- a. PTI Level 2 Unbonded PT Inspector Certificate, or
- b. Registered Professional Engineer with related experience

1.5.7.2 Associate Special Inspector

NOTE: For projects with Seismic Design Category D,
E or F or nominal design wind speed in excess of 49
m/s 110 mph, consider eliminating "b".

- a. PTI Level 1 Unbonded PT Inspector Certificate with one year of related experience, or
- b. Engineer-In-Training with one year of related experience

1.5.8 Masonry Construction

1.5.8.1 Special Inspector

NOTE: For projects with Seismic Design Category D,
E or F or nominal design wind speed in excess of 49
m/s 110 mph, consider eliminating "b".

- a. ICC Structural Masonry Special Inspector Certificate with one year of related experience, or
- b. Registered Professional Engineer with related experience

1.5.8.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.9 Wood

1.5.9.1 Special Inspector

NOTE: For projects with Seismic Design Category D,
E or F or nominal design wind speed in excess of 49
m/s 110 mph, consider eliminating "b".

- a. ICC Commercial Building Inspector Certificate with one year of related experience, or
- b. ICC Residential Building Inspector with one year of experience, or
- c. Registered Professional Engineer with related experience

1.5.9.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.10 Verification of Site Soil Condition, Fill Placement and Load-Bearing Requirements

1.5.10.1 Special Inspector

NOTE: For projects with Seismic Design Category D,
E or F or nominal design wind speed in excess of 49
m/s 110 mph, consider eliminating "d and e".

- a. ICC Soils Special Inspector Certificate with one year of related experience, or
- b. NICET Soils Technician Level II Certificate in Construction Material Testing, or
- c. NICET Geotechnical Engineering Technician Level II Construction or Generalist Certificate, or

- d. Geologist-In-Training with one year of related experience, or
- e. Registered Professional Engineer with related experience

1.5.10.2 Associate Special Inspector

**NOTE: For projects with Seismic Design Category D,
 E or F or nominal design wind speed in excess of 49
 m/s 110 mph, consider eliminating "c".**

- a. NICET Soils Technician Level I Certificate in Construction Material Testing with one year of related experience, or
- b. NICET Geotechnical Engineering Technician Level I Construction or Generalist Certificate with one year of related experience, or
- c. Engineer-In-Training with one year of related experience

1.5.11 Deep Foundations

1.5.11.1 Special Inspector

**NOTE: For projects with Seismic Design Category D,
 E or F or nominal design wind speed in excess of 49
 m/s 110 mph, consider eliminating "c and d".**

- a. NICET Soils Technician Level II Certificate in Construction Material Testing, or
- b. NICET Geotechnical Engineering Technician Level II Construction or Generalist Certificate, or
- c. Geologist-In-Training with one year of related experience, or
- d. Registered Professional Engineer with related experience

1.5.11.2 Associate Special Inspector

**NOTE: For projects with Seismic Design Category D,
 E or F or nominal design wind speed in excess of 49
 m/s 110 mph, consider eliminating "c".**

- a. NICET Soils Technician Level I Certificate in Construction Material Testing with one year of related experience, or
- b. NICET Geotechnical Engineering Technician Level I Construction or Generalist Certificate with one year of related experience, or
- c. Engineer-In-Training with one year of related experience

1.5.12 Sprayed Fire Resistant Material

1.5.12.1 Special Inspector

- a. ICC Spray-applied Fireproofing Special Inspector Certificate, or
- b. ICC Fire Inspector I Certificate with one year of related experience,
or
- c. Registered Professional Engineer with related experience

1.5.12.2 Associate Special Inspector

Engineer-In-Training with one year of related experience

1.5.13 Mastic and Intumescent Fire Resistant Coatings

1.5.13.1 Special Inspector

- a. ICC Spray-applied Fireproofing Special Inspector Certificate, or
- b. ICC Fire Inspector I Certificate with one year of related experience,
or
- c. Registered Professional Engineer with related experience

1.5.13.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.14 Exterior Insulation and Finish System (EIFS)

1.5.14.1 Special Inspector

- a. AWCI EIFS Inspector Certificate, or
- b. Exterior Design Institute Certificate, or
- c. Registered Professional Engineer with related experience

1.5.14.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.15 Fire-Resistant Penetrations and Joints

1.5.15.1 Special Inspector

- a. Passed the UL Firestop Exam with one year of related experience, or
- b. Passed the FM Firestop Exam with one year of related experience, or
- c. Registered Professional Engineer with related experience

1.5.15.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

1.5.16 Smoke Control

1.5.16.1 Special Inspector

- a. AABC Technician Certification with one year of related experience, or
- b. Registered Professional Engineer with related experience

1.5.16.2 Associate Special Inspector

Engineer-In-Training with one year of related experience.

[1.5.17 Special Inspector of Record (SIOR)

Registered Professional Engineer

]PART 2 PRODUCTS

2.1 FABRICATOR SPECIAL INSPECTIONS

Special Inspections of fabricator's work performed in the fabricator's shop is required to be inspected in accordance with the Statement of Special Inspections and the Schedule of Special Inspections unless the fabricator is certified by the approved agency to perform such work without Special Inspections. Submit the following certification [certifications] to the Contracting Officer for information to allow work performed in the fabricator's shop to not be subjected to Special Inspections.

NOTE: The following certifications meet the requirements for fabricator approval in accordance with paragraph 1704.2.5.2 of IBC.

- [American Institute of Steel Construction (AISC) Certified Fabrication Plant, Category STD.
-][Truss Plate Institute (TPI) steel truss plant quality assurance program certification.
-][Truss Plate Institute (TPI) wood truss plant quality assurance program certification.]

NOTE: AC472 Accreditation is the accreditation criteria for inspection programs for manufacturers of metal building systems.

- [International Accreditation Service, AC472 Accreditation
-][Steel Joist Institute Membership
-][Precast Concrete Institute (PCI) Certified Plant, Group C]

At the completion of fabrication, submit a certificate of compliance, to be included with the comprehensive final report of Special Inspections, stating that the materials supplied and work performed by the fabricator are in accordance the construction documents.

PART 3 EXECUTION

3.1 RESPONSIBILITIES

[3.1.1 Special Inspector of Record

NOTE: Include this paragraph when the SIOR is required.

- a. Supervise all Special Inspectors required by the contract documents and the IBC.
- b. Submit a SIOR Letter of Acceptance to the Contracting Officer attesting to acceptance of the duties of SIOR, signed and sealed by the SIOR.
- c. Verify the qualifications of all of the Special Inspectors.
- d. Verify the qualifications of fabricators.

NOTE: Include the following bracketed requirements when the structural design is required to follow AISC 341 for seismic design of steel structures.

- [e. Submit Special Inspections agency's written practices for the monitoring and control of the agency's operations to include the following:
 - (1) The agency's procedures for the selection and administration of inspection personnel, describing the training, experience and examination requirements for qualifications and certification of inspection personnel.
 - (2) The agency's inspection procedures, including general inspection, material controls, and visual welding inspection.
- f. Submit qualification records for nondestructive testing (NDT) technicians designated for the project.
- g. Submit NDT procedures and equipment calibration records for NDT to be performed and equipment to be used for the project.]
- h. Prepare a Special Inspections Project Manual, which will cover the following:
 - (1) Roles and responsibilities of the following individuals during Special Inspections: SIOR, SI, General Contractor, Subcontractors, QC Manager, and DOR.
 - (2) Organizational chart and/or communication plan, indicating lines of communication.
 - (3) Contractor's internal plan for scheduling inspections. Address items such as timeliness of inspection requests, who to contact for inspection requests, and availability of alternate inspectors.

- (4) Indicate the government reporting procedures.
- (5) Propose forms or templates to be used by SI and SIOR to document inspections.
- (6) Indicate procedures for tracking nonconforming work and verification that corrective work is complete.
- (7) Indicate how the SIOR and/or SI will participate in weekly QC meetings.
- (8) Indicate how Special Inspections of shop fabricated items will be handled when the fabricator's shop is not certified per paragraph FABRICATOR SPECIAL INSPECTIONS.
- (9) Include a section in the manual that covers each specific item requiring Special Inspections that is indicated on the Schedule of Special Inspections. Provide names and qualifications of each special inspector who will be performing the Special Inspections for each specific item. Provide detail on how the Special Inspections are to be carried out for each item so that the expectations are clear for the General Contractor and the Subcontractor performing the work.

Make a copy of the Special Inspections Project Manual available on the job site during construction. Submit a copy of the Special Inspections Project Manual for approval.

- i. Attend coordination and mutual understanding meeting where the information in the Special Inspections Project Manual will be reviewed to verify that all parties have a clear understanding of the Special Inspections provisions and the individual duties and responsibilities of each party.
- j. Maintain a 3- ring binder for the Special Inspector's daily and biweekly reports and the Special Inspections Project Manual. This file must be located in a conspicuous place in the project trailer/office to allow review by the Contracting Officer and the DOR.
- k. Submit a copy of the Special Inspector's daily reports to the QC Manager.
- l. Discrepancies that are observed during Special Inspections must be reported to the QC Manager for correction. If discrepancies are not corrected before the special inspector leaves the site the observed discrepancies must be documented in the daily report.
- m. Submit a biweekly Special Inspections report until all work requiring Special Inspections is complete. A report is required for each biweekly period in which Special Inspections activity occurs, and must include the following:
 - (1) A brief summary of the work performed during the reporting time frame.

NOTE: Include the bracketed portion of the following line when there are designated seismic systems for mechanical and electrical.

- (2) Changes and/or discrepancies with the drawings, specifications [and mechanical or electrical component certification,] that were observed during the reporting period.
- (3) Discrepancies which were resolved or corrected.
- (4) A list of nonconforming items requiring resolution.
- (5) All applicable test results including nondestructive testing reports.

NOTE: Include this paragraph on large complex projects.

- [n. At the completion of each Definable Feature of Work (DFOW) requiring Special Inspections, submit an interim final report of Special Inspections that documents the Special Inspections completed for that DFOW and corrections of all discrepancies noted in the daily reports. The interim final report of Special Inspections must be signed, dated and bear the seal of the SIOR.]
- o. At the completion of the project submit a comprehensive final report of Special Inspections that documents the Special Inspections completed for the project and corrections of all discrepancies noted in the daily reports. The comprehensive final report of Special Inspections must be signed, dated and bear the seal of the SIOR.

]3.1.2 Quality Control Manager

NOTE: Include the bracketed items when there is no SIOR.

- [a. Supervise all Special Inspectors required by the contract documents and the IBC.
 - b. Verify the qualifications of all of the Special Inspectors.
 - c. Verify the qualifications of fabricators.
 - d. Maintain a 3- ring binder for the Special Inspector's daily and biweekly reports. This file must be located in a conspicuous place in the project trailer/office to allow review by the Contracting Officer and the DOR.
-] [a.][e.] Maintain a rework items list that includes discrepancies noted on the Special Inspectors daily report.

3.1.3 Special Inspectors

- a. Inspect all elements of the project for which the special inspector is qualified to inspect and are identified in the Schedule of Special Inspections.

- b. Attend preparatory phase meetings related to the Definable Feature of Work (DFOW) for which the special inspector is qualified to inspect.

**NOTE: Include subparagraphs "c" through "j" when
the SIOR is NOT required.**

**NOTE: Include subparagraphs "c" through "e"
requirements when the structural design is required
to follow AISC 341 for seismic design of steel
structures.**

- [c. Submit Special Inspections agency's written practices for the monitoring and control of the agency's operations to include the following:
- (1) The agency's procedures for the selection and administration of inspection personnel, describing the training, experience and examination requirements for qualifications and certification of inspection personnel.
 - (2) The agency's inspection procedures, including general inspection, material controls, and visual welding inspection.
- d. Submit qualification records for nondestructive testing (NDT) technicians designated for the project.
- e. Submit NDT procedures and equipment calibration records for NDT to be performed and equipment to be used for the project.]
- f. Submit a copy of the daily reports to the QC Manager.
- g. Discrepancies that are observed during Special Inspections must be reported to the QC Manager for correction. If discrepancies are not corrected before the special inspector leaves the site the observed discrepancies must be documented in the daily report.
- h. Submit a biweekly Special Inspection Report until all inspections are complete. A report is required for each biweekly period in which Special Inspections activity occurs, and must include the following:
- (1) A brief summary of the work performed during the reporting time frame.
- *****
**NOTE: Include the bracketed portion when there are
designated seismic systems for mechanical and
electrical.**

- (2) Changes and/or discrepancies with the drawings, specifications [and mechanical or electrical component certification,] that were observed during the reporting period.
 - (3) Discrepancies which were resolved or corrected.

(4) A list of nonconforming items requiring resolution.

5) All applicable test result including nondestructive testing reports.

NOTE: Include this paragraph for large complex projects.

- [i. At the completion of each DFOV requiring Special Inspections, submit an interim final report of Special Inspections that documents the Special Inspections completed for that DFOV. Identify the inspector responsible for each item inspected and corrections of all discrepancies noted in the daily reports. The interim final report of Special Inspections must be signed, dated and indicate the certification of the special inspector qualifying them to conduct the inspection.]
- j. At the completion of the project submit a comprehensive final report of Special Inspections that documents the Special Inspections completed for the project and corrections of all discrepancies noted in the daily reports. The comprehensive final report of Special Inspections must be signed, dated and indicate the certification of the special inspector qualifying them to conduct the inspection.

NOTE: Include the following requirement when the SIOR is required.

- [k. Submit daily reports to the SIOR.

]3.2 DEFECTIVE WORK

Check work as it progresses, but failure to detect any defective work or materials must in no way prevent later rejection if defective work or materials are discovered, nor obligate the Contracting Officer to accept such work.

-- End of Section --