

Preparing Activity: NAVFAC

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated January 2019

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USACE / NAVFAC / AFCEC / NASA UFGS 01 45 35.05 20 (September 2015)
Change 1 - 02/18

Preparing Activity: NAVFAC

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated January 2019

SECTION 01 45 35.05 20

SPECIAL INSPECTIONS FOR DESIGN-BUILD 09/15

NOTE: This guide specification covers the requirements for Special Inspections for Design-Build projects. 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 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 Inspections and testing specified requirements, a registered design professional must perform "structural observations" during construction when required by UFC 3-301-01. All observed deficiencies must be immediately reported to the Contracting Officer. The registered design professional performing these observations will be a representative of the Engineer of Record (EOR) for the building being constructed.

Structural observations are required for the following project conditions per ICC 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 75 ft.

Special Inspections are minimum Quality Assurance requirements that are in addition to the Quality Control requirements that are defined in Section 01 45 00.05 20 DESIGN AND CONSTRUCTION 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 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 (2018) International Building Code

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 3-301-01 (2013; with Change 3) Structural Engineering

UFC 3-310-04 (2013; with Change 1) Seismic Design of 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.

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.

1.2.1 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 per paragraph
1704.2.5.2 of ICC 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 final report of Special Inspections, stating that the materials supplied and work performed by the fabricator are in accordance the construction documents.

1.2.2 Defective Work

Check work as it progresses. 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.

1.3 DEFINITIONS

1.3.1 Continuous Special Inspections

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

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.

1.3.2 Periodic Special Inspections

Periodic Special Inspections are 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.

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 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.

[1.3.8 Special Inspector of Record (SIOR)

A licensed engineer in responsible charge of supervision of 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 requirements of UFGS 01 45 00.05 20 CONSTRUCTION QUALITY CONTROL having the overall responsibility for the contractor's QC organization.

1.3.11 Designer of Record (DOR)

A registered design professional, retained by the prime contractor, 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)

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

A schedule which lists each of the required Special Inspections, the extent to which each special inspection is to be performed, and the required frequency (periodic or continuous) for each in accordance with ICC IBC Chapter 17.

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

NOTE: Structural observations are required for the following project conditions:

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 75 ft.

In addition to these conditions, the DOR is encouraged to consider requiring structural observations for large magnitude or critical projects where this additional level of quality control is affordable.

[1.3.14 Structural Observations

Specific structural observations performed by the DOR for high wind and seismic loading.

]

NOTE: Include the following paragraph when Designated Seismic Systems are required per UFC 3-310-04.

[1.3.15 Designated Seismic System

Those nonstructural architectural, mechanical, and electrical systems or their components, in Risk Category III and IV, that are required to be designed in accordance with Chapter 13 of ASCE 7 and for which the component importance factor is greater than 1. All systems in Risk

Category V facilities designated as MC-1 per **UFC 3-310-04** are considered part of the Designated Seismic System.

]1.4 SUBMITTALS

NOTE: Review Submittal Description (SD) definitions in Section **01 33 00.05 20 CONSTRUCTION SUBMITTAL PROCEDURES** and **01 33 10.05 20 DESIGN SUBMITTAL PROCEDURES** and edit the following list to reflect only the submittals required for the project. Keep submittals to the minimum required for quality control.

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.

An "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**. Coordinate all Part 2 and Part 4 Specification Sections with **01 33 29.05 20 SUSTAINABILITY REPORTING FOR DESIGN-BUILD**.

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. Submittals with an "S" are for inclusion in the Sustainability eNotebook, in conformance with Section **01 33 29.05 20 SUSTAINABILITY REPORTING FOR DESIGN-BUILD**. Submit the following in accordance with Section **01 33 00.05 20 CONSTRUCTION SUBMITTAL PROCEDURES** and **01 33 10.05 20 DESIGN SUBMITTAL PROCEDURES**:

SD-01 Preconstruction Submittals

Statement of Special Inspections; G

[Structural Observations; G

][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

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] SD-07 Certificates
[ AISC Certified Fabrication Plant
][ TPI Steel Truss Plant Quality Assurance
][ TPI Wood Truss Plant Quality Assurance
][ AC472 Accreditation
][ Steel Joist Institute Membership
][ PCI Certified Plant
][ Special Inspector of Record Qualifications; G
] Special Inspector Qualifications; G
[ Qualification Records for NDT Technicians
] SD-11 Closeout Submittals
[ Interim Final Report of Special Inspections
][ Comprehensive Final Report of Special Inspections; G
][ Final Report of Structural Observations; G
][ Final Walk-Down Inspection Report; G

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1.5 SPECIAL INSPECTOR QUALIFICATIONS

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

Certifying Associations

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

Certifying Associations	
PCI	Precast/Prestressed Concrete Institute
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

- a. AWS Certified Associate Welding Inspector

1.5.3 Nondestructive Testing of Welds

1.5.3.1 Special Inspector

- a. NDT Level III Certificate

1.5.3.2 Associate Special Inspector

- a. 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 Primary 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

]1.6 RESPONSIBILITIES

**NOTE: Include the following paragraph when the SIOR
is required.**

[1.6.1 Special Inspector of Record (SIOR)

- a. Supervise all Special Inspectors required by the contract documents and the ICC IBC.
- b. Submit a letter 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 SI 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 to the Contracting Officer 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.

- n. At the completion of each Definable Feature of Work (DFOW) requiring Special Inspections, submit an [interim final report of Special Inspections](#) to the Contracting Officer 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.

]

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

1.6.2 Quality Control Manager

- [a. Supervise all Special Inspectors required by the contract documents and the [ICC 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.

-] e. Maintain a rework items list that includes discrepancies noted on the Special Inspectors daily report.

1.6.3 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 "i" 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.
- i. At the completion of each Definable Feature of Work (DFOW) requiring Special Inspections, submit an interim final report of Special Inspections to the Contracting Officer that documents the Special Inspections completed for that DFOW. 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.
-]

1.6.4 Designer of Record

- a. Develop the Statement of Special Inspections and the Schedule of Special Inspections as defined in Chapter 17 of **ICC IBC**. Submit the Statement of Special Inspections and the Schedule of Special Inspections for approval by the Contracting Officer.

The Statement of Special Inspection must include the following information:

- (1) List of Architectural Designated Seismic Systems.
- (2) List of Mechanical Designated Seismic Systems.
- (3) List of the Electrical Designated Seismic Systems.
- (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.

Develop Schedule of Special Inspection using the template located on the Whole Building Design Guide website at:
<http://wbdg.org/ccb/NAVGRAPH/graphdoc.pdf>.

NOTE: Include the following paragraphs when one of the following conditions are met and structural observations are required:

- 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 75 ft.

The structural observations are specifically related to the wind/seismic force resisting system within the structure.

- [b. Prior to the start of structural observations submit a written statement identifying the frequency and delineation wind/seismic force resisting system requiring structural observations.
- c. At the conclusion of the structural observations submit a final report of structural observations indicating that the structural observation site visits have been made and identify any reported deficiencies which, to the best of the structural observer's knowledge, have not been resolved.

]

NOTE: Include the following paragraphs when the project includes designated seismic systems for mechanical and electrical components per UFC 3-301-01.

Include the Nonstructural Component Design Review Panel for Risk Category V structures per UFC 3-301-01.

- [d. Perform a final walk-down inspection of the designate seismic systems for mechanical and electrical components [with the Nonstructural Component Design Review Panel] to ensure that the non-structural elements satisfy life safety mounting requirements as defined in the Statement of Special Inspections.
- e. Submit a report of the final walk-down inspection that includes the following:
 - (1) Record/observations of final site visit
 - (2) Documentation that all required inspections were performed in

accordance with the Statement of Special Inspections.

- (3) Documentation that the Designated Seismic Systems were installed in accordance with the construction documents and the requirements of Chapter 17, as modified by [UFC 3-301-01](#).

]

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --