

CHAPTER 28

MECHANICAL SYSTEMS

SECTION 2801 GENERAL

2801.1 Scope. Mechanical appliances, equipment and systems shall be constructed, installed and maintained in accordance with the *International Mechanical Code* and the *International Fuel Gas Code*. Masonry chimneys, fireplaces and barbecues shall comply with the *International Mechanical Code* and Chapter 21 of this code.

SECTION 2802 SPECIAL INSPECTIONS

2802.1 General. In addition to the inspections required by Section 109 of the *Phoenix Building Construction Code—Administrative Provisions*, the owner, engineer or architect of record acting as the owner's agent shall employ one or more special inspectors who shall provide inspections during construction on the types of work listed under Section 2802.5.

Exception: Special inspections are not required for work of a minor nature or as warranted by conditions in the jurisdiction as approved by the building official.

2802.2 Special inspector. The special inspector shall be a qualified person who shall demonstrate competence, to the satisfaction of the building official, for inspection of the particular type of construction or operation requiring special inspection.

Special inspectors shall be independent, third-party individuals, firms or testing agencies and shall not be the installing contractor or any other person responsible for performing the work.

2802.3 Duties and responsibilities of the special inspector. The special inspector shall observe the work assigned for conformance with the approved design drawings and specifications.

The special inspector shall furnish inspection reports to the building official, the engineer or architect of record or other designated persons. All discrepancies shall be brought to the immediate attention of the contractor for correction, then, if uncorrected, to the proper design authority and to the building official.

The special inspector shall submit a final signed report stating whether the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans and specifications and the applicable workmanship provisions of this code.

2802.4 Standard of quality. Testing and inspection procedures for mechanical special inspection shall be in accordance with regulations established by the building official.

2802.5 Types of work. Except as provided in Section 2802.1, the types of equipment or installations noted below shall be tested or inspected by a special inspector.

1. Duct smoke detectors for air distribution systems as required by Section 607 of the *International Mechanical Code*.
2. Fire and smoke damper operation for dampers required by Section 607 of the *International Mechanical Code*.
3. Installation of grease duct enclosure alternative systems allowed under the exceptions to Section 506.3.10 of the *International Mechanical Code*.
4. Special cases—work that, in the opinion of the building official, involves unusual hazards or conditions.

SECTION 2803 MECHANICAL OBSERVATION

2803.1 General. In addition to the inspections required by Section 109 of the *Phoenix Building Construction Code—Administrative Provisions* and the special inspections required by Section 2802, mechanical observation shall be provided when such observation is specifically required by the building official.

The owner shall employ the engineer responsible for the mechanical design, or another engineer designated by the engineer responsible for the mechanical design, to perform visual observation of complex mechanical equipment and systems for general conformance to the approved plans and specifications, including, but not limited to, placement and interconnection of equipment. Mechanical observation shall be performed at significant stages of the construction and when the installation is complete and ready to be inspected.

2803.2 Procedures. The engineer responsible for mechanical observation shall personally visit the site prior to completion of the Certificate of Compliance and periodically during the course of construction requiring mechanical observation as set forth in the inspection and observation program for each project.

The engineer responsible for performing mechanical observation shall complete a signed written report after each site visit. A copy of each report shall be kept on the job site for review by an inspector at all times until the inspector has issued final approval. Any and all deviations from the approved plans or specifications shall be immediately reported to the contractor for correction and then, if uncorrected, shall be reported to the engineer or architect of record and to the building official.

In addition to individual reports, the engineer or architect of record shall file with the building official a written monthly progress report indicating the dates of each site visit, the special inspections or observations performed, any deviations noted from approved plans and specifications and any resulting instructions or change orders issued to the contractor.

2803.3 Certificate of Compliance. Upon completion of the portions of the work requiring mechanical observation, a Certificate of Compliance shall be issued to the building official under the seal and signature of the engineer responsible for such observation. A Certificate of Occupancy will not be issued until the building official receives all required special inspection reports and the Certificates of Compliance.

The Certificate of Compliance for mechanical observation shall read as follows:

“I certify to the best of my knowledge the mechanical requirements of the *Phoenix Building Construction Code* and approved plans and specifications have been complied with insofar as the portion of the work requiring mechanical observation is concerned, except for those deviations that have been previously reported. A guarantee that the contractor has constructed the building in full accord with the plans and specifications is neither intended nor implied.”