Basis of Design

This section establishes minimum seismic design and installation criteria for mechanical components that are permanently attached to the structure and for their supports and attachments.

Design Criteria

- Mechanical nonstructural component seismic design may be specified to be contractor designed.
- The seismic design shall comply with the “Seismic Design Requirements for Nonstructural Components” of the latest edition of American Society of Civil Engineers Standard ASCE/SEI 7, “Minimum Design Loads for Buildings and Other Structures”.
- The design team shall review and approve the contractor-designed seismic system.
- Provide a schedule that lists all equipment, piping, and ductwork that requires seismic restraint.

Design Evaluation

The following information is required to evaluate the design:

- **Preliminary Design Phase**: Provide a description of the project specific seismic restraint system in the design intent narrative.
- **Design Development Phase**: Provide outline specifications. Provide a preliminary schedule that lists all project equipment, piping, and ductwork that requires seismic restraint.
- **Construction Document Phase**: Provide final specifications. Provide a final schedule that lists all equipment, piping, and ductwork that requires seismic restraint.

Construction Submittals

- Submit all seismic structural calculations and shop drawings. Structural calculations and shop drawings shall be stamped and signed by a structural engineer licensed in the State of Washington.
- The mechanical nonstructural component seismic design shall be reviewed and approved by the design team prior to installation.

Quality Assurance

- Provide inspection of all installation by an independent testing lab.

Installation, Fabrication and Construction

- All steel exposed to the weather shall be hot dipped galvanized unless an acceptable alternate coating is specified.
- Powder driven fasteners are not allowable for use to resist seismic loads.

END OF DESIGN GUIDE SECTION