



Subject: GENERAL REQUIREMENTS FOR SUBMITTAL OF PLANS, DESIGN DOCUMENTS, AND SPECIFICATIONS FOR BUILDING PERMIT

1. Design calculations and drawings must demonstrate compliance with the current code enforced during time of submittal.

Construction Drawings

2. Provide a complete set of construction drawings (pdf format) and pdf sets of design calculations and referenced documentsⁱ.
3. Construction drawings package to include the following:
 - o Drawings Title Sheet to show:
 - Scope of work categorized as entered in the permit application (as applicable):
 - Building
 - Electrical and instrumentations
 - Plumbing
 - Mechanical
 - Grading
 - Applicable Codes and Standards
 - Project location
 - Contact information of the parties involved (owner, designers, project management)
 - o General Index to indicate what is being submitted so far and if there are deferred items, what are those items. If each discipline designer is providing a separate index, the general permit index may refer to these discipline indexes. The list must indicate the current version (revision) of each drawing.
 - o Construction drawings must be organized sequentially as listed in the above mentioned index with the Title Sheet as first page, followed by the index (contents list).
 - o Project location on vicinity map
 - o Plot plan to show unique locations for the items to be installed.
 - o General notes to include design criteria and material specifications

- Statement of Special Inspections and Structural Observation (if applicable)
- Floor plans, framing plans, elevations, and details as needed so that permitted items can be installed as intended by the design.
- All drawings must be clear and readable (Min. font size 1/12" when printed).
- Min. Drawing size is 11x17

MINIMUM STRUCTURAL CALCULATION REQUIREMENTS

(When applicable)

The Engineer of Record shall confirm that calculations are complete enough to perform a plan review. Title 24, Part 1, Section 4-317 (d) states that "the calculations shall be sufficiently complete to establish that the structure will resist the loads and forces prescribed in Part 2, Title 24, the California Building Code (CBC)."

Design Criteria. The calculations submitted shall clearly document on a summary sheet the information noted below. Documentation shall also be submitted to show how the design loads were established.

- The current building code and reference codes used in the design.
- Itemized dead & live loads used in the gravity design.
- Snow loading criteria including terrain and exposure category, importance factor, design ground snow load and snow drifting loads.
- Seismic design criteria including importance factor, site class, seismic use group, design category and response modification coefficient.
- Wind loading criteria including minimum wind design speed, exposure category and importance factors.
- Special loading(s) (where applicable).
- Reference to the geotechnical report and values used in design.
- Materials (wood, steel, concrete, masonry, etc.), grade of materials and stresses of materials used in design (bending, shear, compression) should be noted in the calculations, notes and/or specifications.
- Load combinations used in design for each material should be documented.

Gravity Design. The following key items shall be included:

- Design of the Primary Structural Components. This design should document the location, tributary area, span, loading and controlling condition for each member designed.
- Calculations of the Primary Structural Components should be keyed to the plans for reference.
- Calculations should note the final member size as shown on the plans, including the support condition.
- Calculations for design of the connections between the Primary Structural Components unless specifically noted as a Deferred Submittal.

Lateral Design. The following key items shall be included:

- Factors used in determining base shear should be indicated in addition to the required seismic design criteria
- Factors used in determining overall wind load should be indicated
- Comparison between wind load vs. seismic load for controlling design of the Primary and Secondary Structural Components.
- Clearly defined type of Lateral-Force-Resisting System used and which Primary Structural Components are part of the system.
- Computer analysis and design results should be submitted with enough data to determine code compliance, including but not limited to the following items:
 - Input or model sketch showing geometry, loading, boundary conditions, etc.
 - Basic (un-factored loads) and reactions for these loads, including sum of forces
 - Load combinations
 - Limit state and code check for the members indicating design capacity ratio and the load combination
- Design of Primary Structural Components relating to the Lateral Force Resisting System. These components would include, but are not, diaphragms, collectors, drag struts, out-of-plane anchorage and connection design.
- Design of Secondary Structural Components unless specifically noted as a Deferred Submittal.

Footing & Foundation Design. The following key items shall be included:

- Clearly documented loading conditions and locations for reference.
- Design of the primary footing and foundation components.
- Design of Secondary Structural Components required at the interface between foundation and structure above. These components would include base plates, anchor bolts and embed plates.
- Effects of lateral loading including uplift, overturning and shear transfer to soil must be included.
- The requirements for engineered fill or other specific placement criteria should be noted in the calculations and on the plans.
- A geotechnical investigation and report

ⁱ Refer to Design Licensing requirements form at: <http://www.ci.richmond.ca.us/index.aspx?nid=2100>