

## PLAN REVIEW REQUIREMENTS FOR RESIDENTIAL CONSTRUCTION

### INTRODUCTION & INFORMATION ABOUT YOUR PERMIT

1. Construction drawings describing your project are necessary for you to obtain a building permit.
2. You or your authorized agent may prepare plans for buildings that are one- or two-family dwellings and their accessory structures provided that:
  - They are built using wood light-frame construction,
  - Are not over two stories in height with or without a basement, and
  - Design complies with the prescriptive conventional construction provisions of the CRC.
3. A Professional Engineer or Architect, registered in the State of California, shall supervise the preparation of plans and specifications for any other project, including but not limited to irregularly shaped buildings and designs not in conformance with the prescriptive code conditions.
4. Only complete construction drawings will be accepted for review; incomplete submittals may be rejected or returned with comments indicating what is required to make the Application complete and ready for review. The items listed below are the information that shall be included for your building permit application to be accepted for review and approval. As this list is written for the construction of a new one- or two-family dwelling, **not all items may apply to your project**. Specific notes regarding remodels and additions have been included in the list below to clarify requirements for those types of projects.
5. A plan review fee will be required at the time of permit application intake and plan review submittal. Fees for the permit itself, associated inspection costs and applicable municipal fees are invoiced when the permit is approved and due prior to permit issue.
6. Your completed building permit application will be reviewed by the appropriate City agencies, based on the project scope. As all initial submittals are required to be in digital form, each division/department or agency will review the submittal concurrently. You will be advised by email from each department of any deficiencies in your plans with instructions for resubmitting your corrections. All deficiencies noted shall be corrected, and revised plans submitted for additional compliance review and approval before the building permit can be issued. Upon completion you will be notified by email of approval and permit/agency fees due.
7. One copy of the approved plans, with corrected information and requirements noted, will be returned to you with your building permit. **The approved full-size, hard-copy plans, supporting documents, and permit shall always be available on the job site during construction.** Information concerning inspection requirements will be given to you with your permit and approved plans.
8. **IMPORTANT:** This document will be updated periodically as codes change and staff resources allow. Please check the Building Safety Division website for the latest version before starting design on your project.



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### ADOPTED BUILDING CODES

The California Code of Regulations, Title 24, also referred to as the California Building Standards Code, consists of 12 Parts. Many of those Parts are based on national model codes that have been amended by the State of California Per the 2022 California Administrative Code §1.8.2.1.1, the City of Santa Cruz is required to adopt and enforce the following Parts of Title 24 related to the construction of one- and two-family dwellings:

Adopted Code	Abbreviation	Title 24 Part #	Model Code/Abbreviation
2022 CA Administrative Code	<b>CAC</b>	Part 1	
2022 CA Building Code	<b>CBC</b>	Part 2	2021 International Building Code ( <i>IBC</i> )
2022 CA Residential Code	<b>CRC</b>	Part 2.5	2021 International Residential Code ( <i>IRC</i> )
2022 CA Electrical Code	<b>CEC</b>	Part 3	2020 National Electrical Code ( <i>NEC</i> )
2022 CA Mechanical Code	<b>CMC</b>	Part 4	2021 Uniform Mechanical Code ( <i>UMC</i> )
2022 CA Plumbing Code	<b>CPC</b>	Part 5	2021 Uniform Plumbing Code ( <i>UPC</i> )
2022 CA Energy Code	<b>CEnC</b>	Part 6	
2022 CA Historical Code	<b>CHC</b>	Part 8	
2022 CA Fire Code	<b>CFC</b>	Part 9	
2022 CA Existing Building Code	<b>CEBC</b>	Part 10	
2022 CA Green Building Standards	<b>CALGreen</b>	Part 11	
2022 CA Reference Standards Code	<b>CRSC</b>	Part 12	

See the City of Santa Cruz Municipal Code (**SCMC**) Titles 18 & 19 for adoption of the California Building Code Standards and Building and Fire Code local amendments & modifications.

### ZONING REQUIREMENTS

Your project may require design review by the Current Planning Division prior to application for a building permit. Please contact the Planning Counter prior to design and submittal to determine whether this applies to your project or not.

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### FLOOD PLAIN MANAGEMENT

If your structure is located within a floodplain/floodway, FEMA regulations may apply. Extensive remodeling or additions may require the entire structure be elevated above the base flood elevation. Habitable floors of all new dwellings and additions to existing dwellings shall be elevated above the base flood elevation and elevation certificates provided to the building department. See CRC R322 and ASCE 24-14 for more information and requirements.

### RESIDENTIAL FIRE SPRINKLERS

New dwellings are required to be fitted with a residential fire sprinkler system. This generally consists of a 2" lateral from the street main through a dual meter system and into an NFPA 13D residential system. As of March 1992, additions exceeding 50% and remodels/alterations exceeding 75% of the existing building's area will mandate the installation of a full residential sprinkler system. Please contact the City of Santa Cruz Fire Department for additional information.

### DRAWING REQUIREMENTS

The intent of the drawing set is to describe the scope of the construction proposed and demonstrate that that work will comply with the applicable requirements of the

### GENERAL REQUIREMENTS (listed below)

- ❑ All initial permit submittals to be accompanied by plans and supporting documentation (e.g., structural calculations, soils reports, energy reports, equipment listings) in digital format. Once the permit review is nearing approval, hard copies of the required drawings and documents will be requested for processing and permit approval/issue.
- ❑ For guidance regarding electronic file format and organization, see the "Electronic Submittal Requirements" paper found on the Building web page. All drawings shall be legible and of sufficient clarity to indicate the scope and location of the work to be performed.
- ❑ Please do not use **red text or linework** in the drawings as that color is reserved for minor edits made by the Building Safety Division during the permit approval process.
- ❑ The signature of the designer (and stamp, if licensed) shall be provided on all drawing sheets. All signatures to be a digital facsimile of the designer's handwritten signature with the signer's name shown next to the signature.
- ❑ The signature and stamp of the Engineer/Architect shall be shown on calculations and/or engineered sheets of drawings. All signatures to be a digital facsimile of the registrant's handwritten signature superimposed or adjacent to their current California registration seal.
- ❑ Minimum sheet size is determined based on project scope. Small remodels of less than 250 SF may be shown on 11" x 17" sheets. Use larger sheets as required to show the required plan scope at a standard, legible scale without the use of match lines. Supplemental documents may be letter-size (8½" x 11")

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- ❑ To aid sheet navigation, please number each sheet in the drawing set with a unique sheet identifier (i.e., number or letter/number combo) located in the lower right corner of the sheet.
- ❑ Each drawing sheet shall show the drawing version and date corresponding with the current submittal. A list of all submittal descriptions/dates shall be maintained in the title block area of each sheet.

### COVER SHEET

Each drawing set shall be accompanied by a cover sheet which shall contain the following items:

- ❑ **Project Information.** Show the following information:
  - Project Address and Assessor's Parcel Number (APN).
  - Description of Permit Scope.
  - Building Occupancy Type. For one and two-family dwellings, the occupancy type is **R-3** or, for dwellings with attached garage/carport, **R-3/U**.
  - Building Construction Type. For one- and two-family dwellings, this will be **Type V-B**.
  - Indicate whether a fire sprinkler system is currently installed or proposed to be installed and what type of system it is (e.g., NFPA 13 or NFPA 13D). If no sprinklers are required or installed, state that.
- ❑ **Code Information.** Specify the codes applicable to the scope of the project. The currently adopted codes are:
  - 2022 California Building Code (CBC)
  - 2022 California Residential Code (CRC)
  - 2022 California Mechanical Code (CMC)
  - 2022 California Electrical Code (CEC)
  - 2022 California Plumbing Code (CPC)
  - 2022 California Energy Code (CEnC)
  - 2022 California Green Building Standards (CALGreen)
  - Santa Cruz Municipal Code (SCMC) – Titles 18 & 19
- ❑ **Site Vicinity Map.** Provide a map of a minimum three-block radius showing the location of the project site.
- ❑ **Sheet Index** for the drawing set.

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### **Contact Information for:**

- Owner
- Designer/Architect
- Project Manager (if applicable)
- Contractor (if known)
- Structural Engineer (if applicable)
- M/E/P Engineers (if applicable)
- Geotechnical Engineer (if applicable)
- Energy Consultant (if applicable)

### **List Deferred Submittals Proposed**

Per CBC 107.3.4.1, deferral of any submittal items shall have the prior approval of the building official. **List the proposed deferred submittals on the cover page of the construction documents** for review and approval by the building official. Please indicate all items proposed for deferred submittal on the cover page for the project and add notes describing the protocol for deferred submittals, as follows:

1. Documents for deferred submittal items shall be submitted to the registered design professional in responsible charge, who shall review them and forward two (2) copies to the building official with a notation indicating that the deferred submittal documents have been reviewed and found to be in general conformance to the design intent for the building. The deferred submittal items shall not be installed until these deferred submittal documents have been approved by the building official.
2. For truss designs, ensure that all items that are not provided by the truss supplier have been coordinated and shown on the framing plans to be submitted with the truss designs. This includes truss hangers, holdown devices, collector strapping/blocking, and permanent truss/web bracing.

### **List HERS Verifications Required**

Please note what HERS verifications are required with a prominent note located on the cover sheet of the plan set. The list of HERS verifications required can be found in the energy forms for the project.

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- Tabulation of Construction Area(s)** Provide a list/table describing the area of existing and proposed construction. Provide separate area tabulations for the following:

Existing Construction	New Construction
(E) Floor Area (heated space)	(N) Floor Area (heated space)
(E) Porch Area	(N) Porch Area
(E) Deck Area	(N) Deck Area
(E) Garage/Carport Area	(N) Garage/Carport Area
(E) Utility Area/Unfinished Basement (unheated space)	(N) Utility Area/Unfinished Basement (unheated space)

### Remodeled Construction

Remodeled Floor Area (heated space)  
 Remodeled Porch Area  
 Remodeled Deck Area  
 Remodeled Garage/Carport Area  
 Remodeled Utility Area (unheated space)

#### Notes

1. Items that are not part of the project need not be shown, unless required for context of adjacent space.
2. All areas measured to the outside face of the exterior walls and far face of interior walls.

### SITE PLAN

A site plan shows the location and orientation of a building(s) on a plot of land and in relation to its context. This plan shall have the following features:

- Scale 1" = 10' or 20' as required to show the required level of detail on the plan.
- Show the entire property shown with legally recorded dimensions of boundaries (property lines, easements, etc.), locations of existing and proposed buildings, required zoning setbacks, and distances between new and existing buildings on the site and the distance from the subject building(s) to adjacent property lines.
- Show all rights-of-way and easements
- Tabulate lot coverage of existing and new construction relative to lot size.
- Show the North arrow, both True North and, if different, Plan North. **Verify that any energy forms submitted show the correct orientation of the building.**

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- Show proposed site grading, including existing and proposed grades in the vicinity of improvements (buildings, driveway, street & sidewalk). Contour intervals to be 2 feet maximum unless otherwise directed by Planning staff. This information may also be shown on a separate plan.
- Show the location of existing proposed site construction, such as walks, retaining walls, courts, and roads.
- Show off street parking, driveways, walkways (include driveway profile)
- Indicate curbside improvements (sidewalk, gutter, etc.)
- Show natural site features such as trees, landscaping, and adjacent watercourses.
- Show the lot drainage means and methods (see erosion control plan requirements below)
- Show the proposed location of on-site sewer, lateral, clean-outs, manholes connections to street lateral, etc.
- Show the location and rating of the primary electrical service to the lot. If routing power to a new building on the site, show the rating of the disconnect and feeder wire size and insulation type. If using conduit, specify conduit size and type suitable for the installation.

### EROSION CONTROL PLAN

- Scale: same as plot plan (may be included on plot plan) .
- Show details of existing and proposed drainage patterns
- Show provisions for site grading around new buildings or additions. Show how water is diverted away from the building and where it drains to. The grade shall fall a minimum of 6 inches within the first 10 feet (5% slope). Impervious surfaces within 10 feet of the building foundation shall be sloped a minimum of 2 percent away from the building.
- Where lot lines, walls, slopes or other physical barriers prohibit 6 inches of fall within 10 feet, drains or swales shall be constructed to ensure drainage away from the structure.
- Storm water shall not be diverted onto adjoining properties or across the public way.
- Show proposed re-vegetation for all disturbed slopes.
- Show sediment containment measures and special precautions for winter grading operations (October 15<sup>th</sup> to April 15<sup>th</sup>)
- Show landscaping and irrigation plan

### FLOOR PLANS




- Minimum Scale: ¼" = 1' - 0". We recommend that a minimum scale of ½" = 1'-0" plans be used for detail plans of rooms such as kitchens and bathrooms.
- The thickness of walls and partitions shall be delineated on the plan (single lines indicating walls are not allowed except for schematic-level location plans).

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- Dimension lines shall clearly demonstrate termination of dimension such as outside, inside or centerline of partition. The traditional convention is to dimension to face of stud or structural wall face because that is how it will be built. Use feet and inches normally, inches only on distances under 1 foot.
- Show dimensions and arrangement of rooms and partitions on each floor, including basement
- Label doors and windows with identifying symbols and sizes
- Indicate finish of floors, walls, ceilings, countertops, vanities, etc.
- Shower enclosures:
  - o Indicate glass doors as "Type II tempered glass".
  - o Minimum door opening width: 22 inches.
- Show location of smoke detectors, carbon-monoxide alarm(s), fans and skylights
- Indicate handrails and guards with minimum required heights and specify infill opening criteria per CRC R311.8.
- Illustrate stair locations and stair geometry (rise/run, landing sizes, headroom) that complies with CRC R311.7.
- Identify all required landings at doors and stairs with minimum required dimensions.
- Note minimum fire-resistive construction requirements for house/garages separation, property line walls and eave overhangs, under stair storage \_areas, etc.
- Wood stoves, fireplaces (Note: if using manufactured stove or fireplace include make, model and manufacturer's brochure if available and listing. If masonry fireplace, detail design, (Masonry Design Handbook is acceptable)

### FOR ADDITIONS AND REMODELS:

- Clearly distinguish between new and existing construction on plot plan, elevations, floor plan, foundation, framing details, structural details. It is suggested that plans show walls as follows:

	EXISTING WALL TO REMAIN
	EXISTING WALL TO BE REMOVED
	NEW WALL

- Provide floor plans and elevations of the existing construction prior to the remodel/Addition. Indicate any constructed to be demolished as part of the project.



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### ROOF PLAN

- Information required may also be shown on the site plan where drawing scale allows.
- For new buildings and additions, provide a roof plan showing the following information:
  - Outline of roof and all ridges and valleys. Distinguish between existing and new roofs for additions.
  - Show the slope of each roof plane (e.g., 4:12) and direction of downward slope.
  - Show the location of roof drains, overflow devices, and crickets required for same (flat roofs)
  - Show the location and size of all skylights. New skylights shall also include notes specifying the maximum U-factor and SGHC of the skylights, as shown in the energy forms.
  - Specify the roofing material and underlayment
  - Show the location of the chimney, if applicable

### BUILDING SECTIONS & DETAILS

- Provide a minimum of two full building sections through the area of work, one in each direction at a minimum  $\frac{1}{4}'' = 1'-0''$  scale (new buildings and additions only)
- Show plate and subfloor elevations at each level of the building.
- Show where insulation is required and what product/R-value is to be used. Where utilizing sprayed-foam insulation product, specify the product manufacturer, product name, and thickness of each layer in the insulation assembly. Provide a listing for the specified product(s).
- Provide a typical exterior wall section illustrating the foundation type, wall framing, insulation, exterior sheathing, weather resistive barrier, and interior/exterior wall finish types and thickness.
- Provide illustrations and/or details of listed fire-rated floor-ceiling and roof-ceiling assemblies, party walls, property line walls and eave overhang assemblies.

### BUILDING ELEVATIONS

- Scale  $\frac{1}{4}'' = 1'-0''$
- Provide a minimum of four elevations labeled North, South, East, West oriented to agree with the site plan. Elevations are not required when there is no work occurring on the exterior of the building.
- Note the elevation corresponding with the "Front" of the building as defined in the energy report.
- Show the height of new construction, (highest, lowest projections and plate elevations)
- Illustrate roofing material (Class B minimum) and exterior finish, trim, gutters, downspouts, velocity dissipaters; handrails, guardrails, etc.
- Show the height of chimney above the roof and horizontal distance from combustible materials

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### ELECTRICAL PLAN

- Scale 1/4" = 1'-0"
- May be included on floor plan
- Provide a legend of all electrical terms and symbols used
- Show the location of all outlets, switches, lights, fans, smoke detectors, sub-panels (w/rating), service equipment (w/rating), electrical appliances.
- Identify location of all required GFCI protected outlets CEC 210.8
- Identify location of all required AFCI protected outlets CEC210.12
- Indicate specialized circuits (i.e., kitchen small appliances, dedicated laundry, dishwasher/garbage disposal, etc.)
- Feeder wiring: Show wire size and insulation type. If using conduit, show conduit size and type that is appropriate for the work proposed.

### PLUMBING PLAN

- Scale 1/4" = 1'-0"
- May be included on floor & site plans.
- Location of all fixtures. Location of hose bibs (approximate)
- Location of required back flow preventers and backwater valves.
- Location of gas meter
- Size, material and approximate location of gas lines serving fuel burning appliances.
- Size, material and approximate location of water supply piping
- Size, material and approximate location of DWV piping
- New plumbing systems or extensions of existing systems shall require demonstration that the new (and existing, if applicable) plumbing is sized correctly for the demands of the new construction.

### MECHANICAL PLAN

- Scale 1/4" = 1'-0"
- May be included on floor plan.
- Show location and make/model of water heating and space-heating appliance. If gas, call out BTU/H Input rating, make and model. (Units shall be CA Energy Code approved)
- Note minimum required elevation of all devices that generate a spark, glow or flame for furnace or water heater in garage.
- Location of ductwork and floor registers, incl. size and material
- Location, size and material of return air register and duct.
- Location of fire dampers and/or protection of fire wall penetration
- Identify combustion air sources and minimum required opening for all fuel burning equipment or appliances within the space or area where it is located.

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### FOUNDATION PLAN

- Scale: 1/4" = 1'-0"
- layout of foundation walls, footings, piers and grade beams w/ dimensions and any required hold downs
- Referenced illustrated details of foundation, footing/stem walls/slab design & connections to include sill plate material, 5/8" anchor bolts w/ 3"x3"x1/4" washers (include size/spacing and embed requirements), minimum foundation reinforcement of (1) #4 rebar @ top & bottom of footing w/ 3" minimum concrete cover.
- Note indicating minimum  $f_c'$  for concrete (minimum compressive strength = 2,500 psi)
- Note all required hold downs to be tied in-place prior to requesting a foundation inspection.
- Location and dimensions of required-crawl space vents, under floor access opening, heating duct layout.
- A soils report is required unless waived by the Building Official. See "Soils Report Exemptions" on the Building Safety website.
- Under slab plumbing and electrical runs

### FRAMING PLANS

- Scale: 1/4" = 1'-0"
- Separate floor, loft, deck and roof plans required.
- Indicate member type and location, framing direction (for repetitive members) species and grade, size (nominal unless engineered member then actual) and spacing of all wood members.
- Complete typical cross section of each major framing type (use section lines on floor and framing plans to identify section location). At least one longitudinal and one transverse cross section shall be provided.
- Note all hardware types such as hold downs, joists hangers, straps, etc. and manufacturer's installation requirements.
- Crawlspace, ceiling and attic heights (show on section drawings) All floor, wall, ceiling & roof framing with size and spacing of members, Information may be included in the typical cross sections.
- Braced wall applications (CRC R602.10 for seismic design category D2) shall include the following; braced wall method, all braced wall lines, minimum braced wall lengths and locations and all required attachments at foundation, 1<sup>st</sup> to 2<sup>nd</sup> story and 2<sup>nd</sup> story to roof.
- Engineered shear wall designs shall include the following; all shear wall locations, lengths, identification of type (referenced to shear wall schedule), referenced load transfer details, drags and out-of-plane shear transfer methods. Shear wall schedules shall include the following for each type of shear wall assembly; maximum allowable adjusted loads, nailing schedule, sill plate attachments, load transfer methods or devices.
- Minimum roof/floor sheathing thickness and nailing pattern.
- Insulation type (R-value) and location roof, ceiling or floor, can be incorporated in typical sections.
- Show how positive crossflow ventilation of under floor, attic, cathedral ceiling, flat roof areas will be achieved through ventilation calculations for under floor and attic spaces.

### FOR ADDITIONS

- Show adequate cross ties between new and existing work. Call out straps, braces, nailing, etc.
- Complete framing details are required for major connection points.

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### SPECIAL INSPECTIONS AND FORMS

- Post installed concrete/masonry anchors – expansion, sleeve, concrete screws, and epoxy.
- High-load shear walls and diaphragms.
- Structural steel, high-strength bolted and welded connections.
- Concrete foundation designs with  $f'_c$  exceeding 2,500 psi.
- Driven piles, cast-in-place deep and helical pile foundations.
- Soil fill compaction and placement when required by soils report.
- Special cases when required by the Building Official or manufacturer's installation Instructions or conditions of listing.

### ENERGY CONSERVATION REQUIREMENTS

Minimum energy standards for residential buildings shall be the current Title 24 standards for new residential buildings, additions and alterations as adopted by the California Energy Commission (CEC). See the current versions of the CA Energy code and CA Administrative Code, Chapter 10 for more information.

- Compliance forms are required to be reproduced onto the plan set, all signatures shall be original and affixed on the documents before issuance of permit. Forms requiring registration shall be signed prior to registration.

### STRUCTURAL ENGINEERING REQUIRED

The CRC offers prescriptive designs for many parts of a dwelling's structure that do not require engineering; however, when the design contains a plan configuration or structural element that is outside the prescriptive limits of the code, engineering performed by a CA-registered Professional Engineer or Architect shall be provided. Other items requiring engineering include, but are not limited to, those noted below:

- Show adequate cross ties between new and existing work. Call out straps, braces, nailing, etc.
- Complete framing details are required for major connection points.
- Buildings over two stories in height
- Retaining walls over 4 feet high when measured from the bottom of footing, or supporting sloped backfill or surcharge
- Non-conventional foundation designs
- Any span exceeding 25 feet
- All engineered truss designs (sealed calculations required at time of plan submittal with engineer of record review letter)
- Buildings employing steel frame components (those portions only)
- Buildings of adobe, load-bearing hollow unit/brick masonry, or concrete
- Swimming pools and spas, unless pre-manufactured and portable
- Lateral analysis is required on all exposure "D" ( $\leq 600$  feet to ocean coastline) structures
- Elevation certificates are required for new buildings or additions located in a Floodplain/Floodway. See the [City's GIS viewer](#) to determine whether your property is in a Floodplain/Way. Flood Zones are shown by activating the "FEMA Flood Zones" layer under the "Planning" layer list.