SOUTHERN COLORADO BUILDING DEPARTMENT
719-543-0002 socobd.com
830 N Main Street | Pueblo, CO 81003

CHECKLIST FOR TOWNHOUSE PLAN REVIEW SUBMITTAL

(INCLUDES BUT IS NOT LIMITED TO THIS LIST)

Codes adopted by SoCoBD.

- 2021 IBC - International Building Code
- 2021 Existing building code (IEBC)
- 2021 IECC - International Energy Code
- 2021 IMC - International Mechanical Code
- 2021 IFGC - International Fuel Gas Code
- 2021 IFC - International Fire Code
- 2023 NEC - National Electric Code - Effective on all permits as the State dictates required code cycle.
- 2021 IPC - International Plumbing Code - Effective on all permits as the State dictates required code cycle.
- 2021 International Swimming Pool and Spa Code - Effective on all permits as the State dictates required code cycle.

Basic Design Criteria:

- Snow Load: 20LB Ground load for City, Variable with altitude in County --> See Snow Load Table at https://socobd.com
- Wind Load: 106 mph
- Frost Line: 26 Inches
- Seismic Zone: B

Two (2) complete sets of plans:

2 House plan – 2 Soils – 2 Foundation plan –2 Utility Site plan - 2 Site plan – 2 Energy calculation – 2 Manual J&D

Allow at least one week for Plan Review.

Plans should be of sufficient detail to allow construction without any further information being required from the Designer. Plans shall be drawn to an acceptable, approved, architectural scale, dimensioned & consisting of but not limited to the following:

- **Title Block** on drawings consisting of:
  - Site Address
  - Name of Owner

- **Utility Site Plan:**
  - Must contain legal description, County Parcel (Schedule) Number and North Arrow.
  - Show plot of land with all dimensions from ALL property lines, name of streets/roads, and right-of-ways.
  - IF any existing buildings, show and locate those buildings.
  - Plumbing to structure with sizing i.e. water, sewer, and fire main (when applicable).
  - Gas and Electric to show location of entrance to structure.

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- ☐ **Site Plan:** NO LARGER THAN 11X17
  - Must contain legal description, County Parcel (Schedule) Number and North Arrow.
  - Show plot of land with all dimensions from all property lines, name of streets/roads, and right-of-ways. If there are existing buildings, show location of those buildings.

- ☐ **Engineered Soils Report:** Shall require original Colorado Engineer's or Architect's stamp, it must show the seal and signature with a date and must appear on each sheet of design drawings and all other documents submitted by or through that Design Professional.

- ☐ **Engineered Footing** and **Foundation Plans:** Shall require original Colorado Engineer's or Architect's stamp, it must show the seal and signature with a date and must appear on each sheet of design drawings and all other documents submitted by or through that Design Professional. Foundation plans to be drawn at 1/4" per 1'-0" scale.

- ☐ **Drawings** to include:
  - Overall Floor plan shall include room usage and location of all openings. This will include, but not be limited to windows, doors, vents, stairs, crawl space and attic access, and be fully dimensioned.
  - Enlarged Floor plan (each different unit) shall include room usage and location and sizes of all openings, including safety or tempered glazing. This will include, but not be limited to windows, doors, vents, stairs, crawl space access, etc., and Interior dimensioned.
  - Elevation drawings, four (4) views of Overall structure(s) shall include though not be limited to dimensions, grade levels, windows, doors, guardrails, steps, stairs, basement lines, decks, patio covers, and porches. The elevation drawing shall also include identification of exterior materials.
  - Building wall section through the structure(s) shall include framing details, floors, decking, basement walls, insulation, U-Factors, R-Values, and foundation. A typical wall section shall note all pertinent information from foundation to the roof.
  - Rated wall details are to be continuous from the top of the foundation to the underside of roof decking or by referenced code section and shall include:
    - UL listed design number and detail - OR - ICC code listing for construction.
    - UL listed design number and detail - OR - ICC code listing of penetration.
    - Show vertical penetration withing 5 feet of fire rated walls.
  - Wall bracing method used to be listed on the plans.
  - Stair information for rise/run and overall height are required on the plans.
  - Detailed drawings for miscellaneous details such as special conditions, narrow wall bracing, etc., are required on plans.

- ☐ **Energy Calculations:** Per section R401.3 of the 2021 IECC: A permanent certificate shall be completed by the builder or other approved party and posted on a wall in the space where the furnace is located, a utility room or an approved location inside the building. Where located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label or other required labels.
  - UA alternative per the 2018 or 2021 REScheck web application (https://energycode.pnl.gov/REScheckWeb)

- OR –

- Two copies of the Prescriptive handout included in this checklist and noted on the drawings. (Verify plans and details do not reference REScheck when following Prescriptive method)

OR -

- Total Building Performance Option per section R405 of the 2021 IECC (Verify plans and details do not reference REScheck when following Prescriptive method)

☐ **Mechanical plan review requirements (Manual J&D per Address/Unit)** Drawings shall provide an HVAC layout with equipment locations and completed IECC/IRC Ventilation form (Attached).

- Air distribution ductwork and sizes
- Air intake and exhaust locations
- Gas and refrigeration piping layout including gas meter location
- Fan and pump type location
- Control diagram indication type of HVAC control specific to the equipment being controlled
- Water heater system layout with equipment locations, gas and water piping diagram, and water heater information
- Schedules
    - List heating and cooling equipment capacity, types, sizes and efficiency, fan horsepower, and airflow capacity as well as outside air volume.
    - Duct insulation R-values, pipe insulation thickness and ki-values (thermal conductivity per inch)

☐ **Required Project Approval Sheet / Routing**

- This form is issued by the Southern Colorado Building Department and needs to be approved and signed-off by the required agencies listed on the sheet.
- If an agency that is listed as required for Permit or Certificate of Occupancy states it is out of their jurisdiction, they are not a required agency, etc., the form is still REQUIRED to be completed and/or commented on by that agency.

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Prescriptive Insulation Values adopted to 2021 Code,

Use as default values instead of using REScheck.

The underlined values in the table below have been revised in Residential section of the 2021 International Energy Code

CLIMATE ZONE	FENESTRATION *U*-FACTOR [b, i]	SKYLIGHT [b] *U*-FACTOR	GLAZED FENESTRATION SHGC [b, e]	CEILING *R*-VALUE	WOOD FRAME WALL *R*-VALUE [g]	MASS WALL *R*-VALUE [h]	FLOOR *R*-VALUE	BASEMENT [c,g] WALL *R*-VALUE	SLAB [d] *R*-VALUE & DEPTH	CRAWL SPACE [c,g] WALL *R*-VALUE
5 and Marine 4	0.32	0.55	NR	49	20 or 13+5	13/17	30	15ci or 19 or 13&5ci	10ci, 2 ft	15ci or 19 or 13&5ci

For SI: 1 foot = 304.8 mm.
NR = Not Required.
ci = continuous insulation.
a. *R*-values are minimums. *U*-factors and SHGC are maximums. Where insulation is installed in a cavity that is less than the label or design thickness of the
insulation, the installed *R*-value of the insulation shall be not less than the *R*-value specified in the table.
b. The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
Exception: In Climate Zones 0 through 3, skylights shall be permitted to be excluded from glazed fenestration SHGC requirements provided that the SHGC for such skylights does not exceed 0.30.
c. "5ci or 13" means R-5 continuous insulation (ci) on the interior or exterior surface of the wall or R-13 cavity insulation on the interior side of the wall. "10ci or 13" means R-10 continuous insulation (ci) on the interior or exterior surface of the wall or R-13 cavity insulation on the interior side of the wall. "15ci or 19 or 13&5ci" means R-15 continuous insulation (ci) on the interior or exterior surface of the wall; or R-19 cavity insulation on the interior side of the wall; or R-13 cavity insulation on the interior of the wall in addition to R-5 continuous insulation on the interior or exterior surface of the wall.
d. R-5 insulation shall be provided under the full slab area of a heated slab in addition to the required slab edge insulation *R*-value for slabs. as indicated in the table. The slab-edge insulation for heated slabs shall not be required to extend below the slab.
e. There are no SHGC requirements in the Marine Zone.

If you use REScheck, you have the opportunity to use either the 2018 or the 2021 version.

These values were adopted on June 29, 2023 for SoCobd code cycle.

Current codes for this code cycle are the 2021 International Codes

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IECC/IRC VENTILATION (New Homes Only)

This form must be submitted with your Manual J&D

J&D Designer Name: _____ Phone Number: _____

Site Address: _____

- Indicate method of compliance with Entire House Ventilation. (Check all that apply)

  [ ] Outside Air/Supply [ ] Exhaust

- List Brand, Model Number, CFM/Watt, and Location of **ALL** exhaust fans, including kitchen hoods. List CF/Watt if fan is part of ventilation system.

OSA: [ ] CFM/Watt _____

Kitchen Hood: [ ] CFM/Watt _____

Exhaust Fan – Laundry Room: [ ] CFM/Watt _____

Exhaust Fan – Master Bath: [ ] CFM/Watt _____

Exhaust Fan – Master Water Closet: [ ] CFM/Watt _____

Exhaust Fan – Bathroom #2: [ ] CFM/Watt _____

Exhaust Fan – Bathroom #3: [ ] CFM/Watt _____

Exhaust Fan – Basement Toilet: [ ] CFM/Watt _____

HRV, ERV: [ ] CFM/Watt _____

Inline-Fan: [ ] CFM/Watt _____

Air-handler that is integrated to tested and listed HVAC equipment:

[ ] CFM/Watt _____

Indicate Ventilation Control (check one)

- Indicate method of compliance with While House Ventilation. (Check all that apply)

  [ ] Constant [ ] Intermittent _____% per table M1505.4.3(1)

- Specify location of Entire-House Ventilation Manual Override Control Switch: _____

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2021 International Energy Conservation Code
Residential Requirements

Interior Lighting

2021 IECC: 100% permanent lighting shall be high efficacy.
Southern Colorado Building Department has amended the 2021 IECC from 100% to 90%

WHAT DOES THIS MEAN?
90% of the light bulbs in the home must be high efficacy, which is LED, or Fluorescent Lamps only. This does not include plug-in lighting sources like floor and desk lamps

Interior Lighting Controls

Permanently installed fixtures shall have dimmer, occupant sensor control, or other control installed or built into the fixture.

Exceptions include:
- Bathrooms
- Hallways
- Exterior lighting fixtures*
- Lighting for safety and security

WHAT DOES THIS MEAN?
Any light fixture in all areas or rooms of the home (example, living room, dining room, kitchen, clothes closets, storage rooms, bedrooms, etc.,), does not include the garage, garage is not part of the interior of the home. Not included: the bathrooms, hallways, and lights for safety and security. The lighting areas required must have one of the following, a dimmer switch, occupancy switch or area, exterior lighting is not excluded but has its own requirement in the next section. Lights for security do not include normal porch lights, lights on the front of the garage or coach lights or lights in the soffit or eves of the home, etc.

Exterior lighting Controls

Permanently installed outdoor lighting > 30 watts total power, are required to turn off with adequate daylight.

- Override permitted up to 24 hrs.
- Must then return to automatic operation.

WHAT DOES THIS MEAN?
Outside light, more than 2 outside light fixtures, must have a photocell control ahead of the outside light circuit, or a time clock, or automation control switch or photocell build into the outside light fixture, that turn the light fixtures off at the presents of daylight and reset to turn the light fixtures off at the next daylight cycle. (Example, front and back porch lights, lights under a covered porch, coach lights at the front of the garage doors, lights at the exit of garages, soffit lighting, etx.).

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SECTION R404

ELECTRICAL POWER AND LIGHTING SYSTEMS

R404.1 Lighting equipment. All permanently installed lighting fixtures, excluding kitchen appliance lighting Fixtures, shall contain only high-efficacy lighting sources.

R404.1.1 Exterior lighting. Connected exterior lighting for residential buildings shall comply with Section C405.5.

Exceptions:

1. Detached one- and two- family dwellings.
2. Townhouses.
3. Solar-powered lamps not connected to any electrical service.
4. Luminaires controlled by a motion sensor.
5. Lamps and luminaires that comply with

R404.1.2 Fuel gas lighting equipment. Fuel gas lighting systems shall not have continuously burning pilot lights.

R404.2 Interior lighting controls. Permanently installed lighting fixtures shall be controlled with either a dimmer, an occupant sensor control or other control that is installed

or built into the fixture.

Exception: Lighting controls shall not be required for the following:

1. Bathrooms.
2. Hallways.
3. Exterior lighting fixtures.
4. Lighting designed for safety or security.

R404.3 Exterior lighting controls. Where the total permanently installed exterior lighting power is greater than 30 watts, the permanently installed exterior lighting shall comply with the following:

1. Lighting shall be controlled by a manual on and off switch which permits automatic shut-off actions.

   Exception:

   1. Lighting serving multiple dwelling units.
   2. Lighting shall be automatically shut off when daylight is present and satisfies the lighting needs.
   3. Controls that override automatic shut-off actions shall not be allowed unless the override automatically returns automatic control to its normal operation within 24 hours.