



RESIDENTIAL BATHROOM REMODEL GUIDE

GENERAL

The purpose of the information provided in this document is general and intended as a guide only. Each project is unique, and additional requirements may be required. All work shall comply with the applicable codes and regulations, such as the 2019 California Building Code, the 2019 California Residential Code, and the 2019 California Electrical Code, etc.

SUBMITTAL REQUIREMENTS (Minimum size 11 X 17 plans or larger plans that is eligible to read).

1. Building application form
2. Three (3) sets of plans required with the following information:
 - A written scope of work
 - A sheet directory.
 - The property owner's name, address, and APN (Assessor's Parcel Number).
 - The name, address and phone number of the designer or draft person.
 - Indicate the governing codes and regulations in effect at the time of application.
 - Existing floor plan (Identify all existing electrical, plumbing, mechanical devices and dimension).
 - New proposed plan (Identify all proposal electrical, plumbing, mechanical devices and dimension)

RESIDENTIAL CODE REQUIREMENTS:

1. Minimum ceiling height for bathroom ceilings is 6'-8".
2. Provide interconnected [smoke and carbon monoxide alarms](#) in accordance with CRC Section R314 and Section R315.
3. Provide safety glazing for tub / shower enclosures and doors in accordance with CRC Section R308.4.
4. Minimum width of shower doors is 22". Doors shall open outward. Shower door or rod shall be installed prior to final.
5. Use only approved tile backer materials and gyp board in bathrooms:

ELECTRICAL AND LIGHTING REQUIREMENTS:

1. An upgrade of the existing electrical service may be required based on the number of & ampacity of the new & existing circuits. CEC 220
2. All 125-volt, 15- & 20-ampere receptacles shall be listed tamper resistant receptacles. CEC 406.11, 210.52
3. Min. (1) 20 amp circuit for bathrooms receptacles CEC 210.11 (C) (3)
4. GFCI protection shall be provided for all outlets in bathrooms, with at least one outlet 36" inches of the outside edge of each basin. CEC 210-8(a) (1) & 210-52 (d)
5. Light fixtures in wet locations shall be protected by GFCI circuit CEC 410.4 (A)(D) (Per the manufacturer's installation instructions)
6. Hanging light fixtures are not allowed within 3' horizontal & 8' vertical from tub & shower. CEC 410.4 (d)

7. All receptacles shall be GFCI protected and tamper-resistant (TR). If any new/additional outlets are installed, the bathroom shall have a dedicated 20-amp circuit. (CEC 210.8, 210.11, 406.12)
8. Exhaust fans with a minimum ventilation rate of 50 CFM are required in all bathroom remodels unless the existing ceiling is left in place, even if an operable window is installed. Exhaust fans and lighting shall have separate control switches (even if a combination unit is installed). The exhaust fan may need to be supplied by a GFCI protected circuit based on the manufacturer's requirements. (CEES 150.0(k), 150.0(o))
9. Lighting fixtures located above and within 8 feet vertically of the bathtub rim or shower stall threshold shall be listed for a damp location or listed for wet locations where subject to shower spray. (CEC 410.10)
10. All installed lighting fixtures shall be high efficacy in accordance with CEES Table 150.0-A.

PLUMBING REQUIREMENTS:

1. Testing piping system: Drain, waste, & vent (DWV) system shall be tested with no less than 10' of head water above the system for 15 minutes OR 5 psi air test for 15 minutes. *Cannot use an air test on plastic Drainage, Waste, & Vent (DWV) piping. CPC 712.2 , CPC 723
2. Tub test: Fill water slightly above overflow. (fill tubs prior to inspection) Waste vents shall terminate vertically not less than 6" above roof, nor less than 1' from any vertical surface & 10' from or 3' above any opening such as windows, doors, air intake, nor less than 3' from any lot line. Side wall vent may not terminate under vented soffit. CPC 906.1, 2
3. ABS piping not permitted in City of San Mateo residential buildings over 2 stories in height and not permitted on exterior except vent pipes above the roof. Shall be protected with latex paint.
4. Venting shall be vertical until 6" above the flood rim of the fixture. CPC 905.3
5. Bathtub/whirlpools & shower valves shall be approved pressure-balanced or thermostatic mixing type adjusted to a maximum of 120 degrees. CPC 418, 414
6. Use listed fittings only (i.e. water supply hoses) CPC 604
7. Accessible full way control valve installed for each sink. CPC 605.5
8. Verify new penetrations at roof are properly sealed & flashed & painted if required.
9. Provide a min. 12" access door for fixtures with concealed slip joint connections. CPC 404.2
10. Minimum 1" airgap separation between the flood level of sink & tub & the water supply outlet. CPC 603.2.1, Table 6-3.

Water Closet Requirements

- The water closet shall have a clearance of 30 inches wide (15 inches each side of the center line) and 24 inches in front. (CPC 402.5)
- Where the water closet (or other plumbing fixture) comes into contact with the wall or floor, the joint shall be caulked and sealed to be watertight. (CPC 402.2)

Water Efficient Plumbing Fixtures (CalGreen 301.1.1)

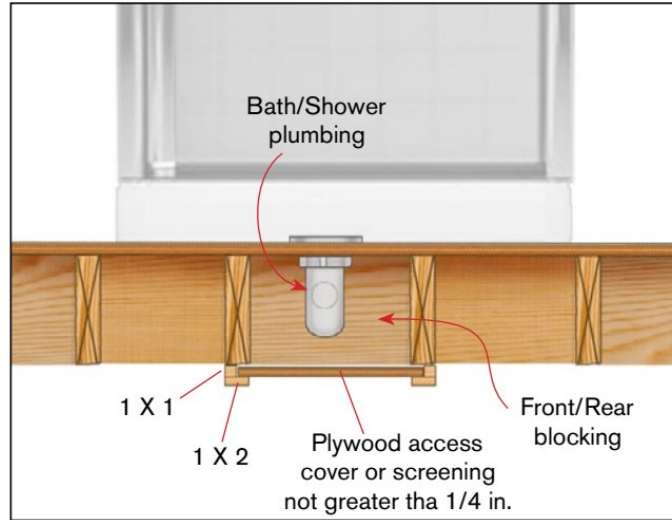
Residential buildings undergoing permitted alterations, additions, or remodels are required to replace all non-compliant plumbing fixtures (based on water efficiency) throughout the house with water-conserving plumbing fixtures. The following table shows what is considered to be a non-compliant plumbing fixture and the current water efficiency standards for various plumbing fixtures. All existing non-compliant plumbing fixtures shall be replaced with fixtures meeting the current standards.

Plumbing Fixture	Non-Complaint Plumbing Fixture	Current Standard for the Maximum Flow Rate of Newly Installed Plumbing Fixtures
Water Closet (Toilet)	Greater than 1.6 gallons/flush	1.28 gallons/flush
Showerhead	Greater than 2.5 gallons/minute	1.8 gallons/minute at 80psi
Faucet -Bathroom	Greater than 2.2 gallons/minute	1.2 gallons/minute At 60 psi
Faucet - Kitchen	Greater than 2.2 gallons/minute	1.8 gallons/minute at 60 psi (average)

RODENT PROTECTION

1. Tub waste openings in framed construction to crawl spaces shall be protected from rodent intrusion with no openings greater than 1/2" inch. See figure below for an approved method of protection/access. CPC 313.12.4.

**Crawl Space
Bath/Shower
Plumbing Access**



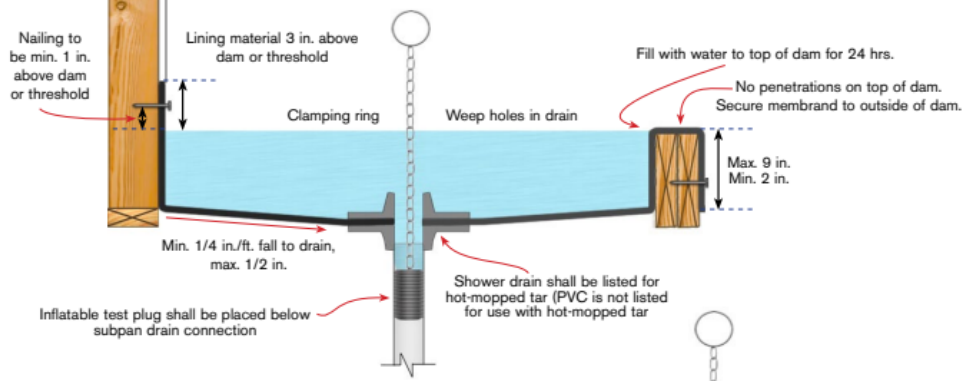
On-site Built-up Shower Receptors

Approved Tile Backer Methods for Shower & Tub Compartment
See Shower Wall Guidelines (click here)

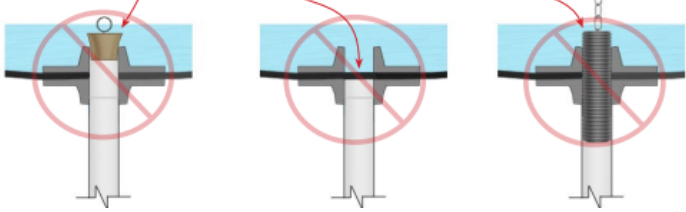
Not Allowed:
Green Board, Purple Board, Mold-resistant Board, ANY Paper-faced board is not allowed in shower & tub compartments. Unless one-piece shower wall panels

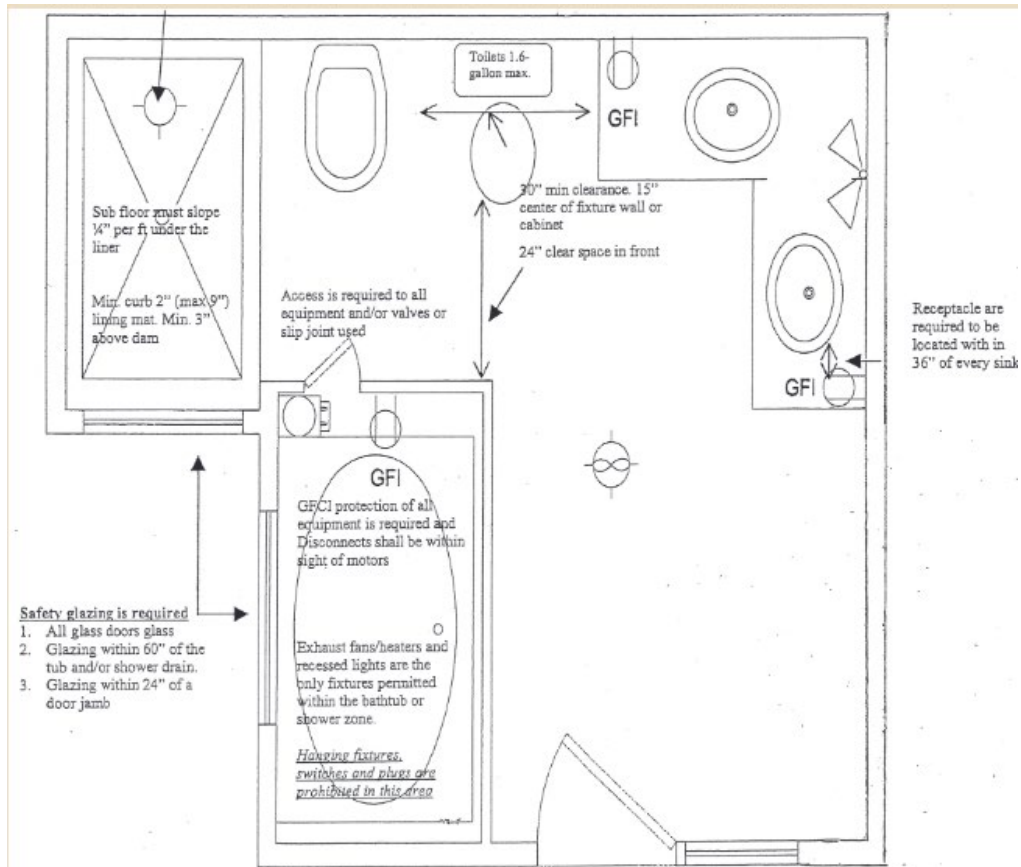
Fasteners:
Shall be corrosion-resistant & listed for the backer board (not black drywall screws)

- Top Three Missed/inspection Failures:**
1. Wrong Backer Board
 2. Wrong Fasteners
 3. Wrong testing plug
- Inspection for shower pan receptor shower receptors shall be tested for water-tightness by filling with water to the level of the rough threshold. The test plug shall be so placed that both upper and under sides of the sub-pan shall be subjected to the test at the point where it is clamped to the drain. Test shall be 24 hours min. CPC 411.8.1
 - At time of inspection, qualified person with proper tools shall remove test plug and demonstrate weep hole function.



Wrong method of testing!





Bathtub and shower zone

