

Plumbing

Use double 2x4 or 2x6 studs for boring required for plumbing.

Firestops required to cut off concealed draft opening (vert. and horz. at 10 foot intervals).

Firestop openings around vents, pipes, ducts, chimneys, fireplaces, etc. with noncombustible materials.

Hot and cold water piping in unconditioned spaces require R-3 min. insulation.

Electric hot water heaters in unheated spaces or on concrete floors are to be placed on an incompressible, insulated surface - min. thermal resistance of R-10 required, water heater also must meet NAECO and be so labeled.

Electric water heaters shall be glass lined, insulate baked enamel jacketed of indicated capacities (quick recovery) and equipped with code approved temperature and pressure relief valves.

Shower heads or faucet to be 3.0 gpm or less max. flow.

Attic access doors opening into a living space must be weather stripped, insulated to level of the surrounding surfaces and framed with wood retainer to prevent spillage.

In single member framed vaults a 1" min. air space is required.

Thermostats to have at least a manual temp. set back. Heat pumps are to have 2 programmable setbacks per day and limit the supplementary heat during the warm up period.

All ductwork seams and joints in unconditioned space are to be sealed and insulated to R-8.

Ducts in slabs or buried to be insulated to R-5.

R-4 insulation on all exhaust ducts in unconditioned spaces.

FAN Ducts and fittings to be 4" in dia. or larger/ all ducts to terminate outside of the building.

Wholehouse vent. equipment to provide an air flow rate between 0.35 to 0.5 air changes per hour or 15 cfm per bedroom plus an additional 15 cfm which ever is larger.

Intermittently operated exhaust ducts to have backdraft dampers.

Spot ventilation to have manual switch, timer or humidistat.

Whole house to have manual and automatic controls with possible continuous operation.

Size heating system to UBC 503.2 and to UBC 503 for performance standards.

Integrated forced air - Connection to furnace return located to prevent thermal shock to the system heat exchange. 8" min. dia. or equal inlet duct to run continuously from a terminal element outside the building to the return plenum, with a damper in the inlet duct set to regulate air flow between 0.35 and 0.5 ACH under normal conditions.

Insulate an electrical panel on an insulated wall with 2" of rigid foam insulation in the wall behind the box.

2" of rigid insulation in a (2) 2 x header.

INDOOR AIR QUALITY

Plywood or wafer board used in living space to be exterior grade or sealed.

Builder to supply a three month etched track radon monitor, installation instructions and radon information. (First floor units on multi family)

All work shall conform to minimum standards of current editions of the Uniform Building Code (UBC) and all local ordinances and regulations.

It is the specific intent of these specifications that workmanship on all phases of the construction and embracing all trade sections shall be of high quality, performed by workmen skilled in their trade and performing their work only according to the standards of the best practice of trade.

All manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with manufacturers directions, unless otherwise specified.

The drawings and specifications represent the finished structure. They do not indicate the method of construction. This is the builders responsibility. The builder shall provide all methods and related equipment necessary to protect the structure, workmen and other

persons and property during construction. The builder shall determine where and how temporary precautionary measures shall be used and to inspect same in the field.

Construction loads upon the structure shall not be in excess of the design loads.

Structural loading:
Floor Live load 40psf
Roof Live load 25psf
Ceiling(Attic) Live load 15psf
Deck Live load 60psf
For design loading add calculated dead load of structure to live load.

Interior partition 6psf 48plf
Exterior partition 8psf 64psf

Soil bearing load: 2000psi minimum after 28 days.

Lumber strength	FV	FB	E
Joist and rafters:			
Doug Fir #2 or BTR	85	1250	1,400,000
Beams, Headers, Lentsils, Girders:			
4" Nominal Doug Fir #2	95	1350	1,700,000
6" Nominal Doug Fir #1	95	1350	1,600,000
Glue laminated timbers:			
Doug fir larch			
15" depth and less	185	2400	1,500,000
Greater than 15" depth	185	2400	1,700,000

A minimum insulation R-19 in-walls and floors, R-30 in ceilings separating heated spaces from unheated spaces.

Vapor barriers are required to be installed in floors which separate heated spaces from unheated space.

The Washington state energy code training manual states that polyethylene provides the best vapor barrier, but foil or craft paper faced insulation is acceptable if the facing is overlapped and stapled to the face of the framing.

Whenever a vapor barrier is installed, it must be installed on the warm side of the building element.

New homes, conversions and remodelings, must meet Callam Co. and P.U.D. Energy efficiency standards to receive permanent electrical service.

Enclosed useable space under interior stairs to be protected on the enclosed side as required for one hour fire restrictive construction.

6"-8" min. headroom, required for stairways.

Glue laminated Lumber to be fabricated in accordance with section 2511(f) U.B.C.

Plywood grade to comply with table 25-8 U.B.C.

The minimum roof ventilation shall be provided in accordance with section 3205 of the U.B.C. as amended by local authority.

Care must be taken to provide a minimum of one (1) inch of air space above the insulation and to provide blocking or baffles to prevent insulation from blocking vents.

All skylights to be insulated glass, and conform to chapter 34 U.B.C.

All flashing to be a minimum of 26 gauge

Provide approved smoke detectors per section 1413 of the U.B.C.

An approved set of plans and specifications is required on the job site when calling for an inspection.

All floor and roof trusses in accordance with manufacturers instructions.

All concrete and workmanship shall conform to the minimum standards of current editions of the U.B.C. and all local ordinances and regulations.

Provide a minimum 6 mil. plastic ground cover throughout crawlspace under elevated wood framed floors of habitat spaces

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Blow insulation shall be fire retardant treated.

Guardrails and handrails to conform to section 1711, U.B.C.

Plumbing shall be in accordance with state and local codes throughout.

Structural steel shapes shall conform to ASTM A-36. Prefrmed expansion joints shall conform to ASTM 01711 for asphalt saturated fiberboard thickness shall be 3/2" thick and of sufficient length and depth to fully separate the contact surface.

Provide sidewalks on all streets frontages per city standards.

If a fireplace is to be build, a separate permit must be obtained.

The difference in grade between the garage foundation and the improved street grade shall not exceed 15%.

All wood shall be minimum 8" above ground unless pressure treated as per local codes and UBC.

Plywood roof and floor sheathing shall be laid with face grain perpendicular to joists or trusses, joists shall occur at bearing or blocking, in lap panel staggered pattern.

Block between joist and rafters at supports with same size material as member, unless member is nailed to rim joist.

Beams and joists supporting bearing walls or concentrated loads shall not be notched.

Fabricate and install members for full required bearing without the use of shims.

Notch all sloped rafters for full bearing at supports.

Glazing within 12" on either side of a exterior door opening, glazing closer than 18" from floor shower doors and tub enclosures to be safely glazing per UBC section 5405 and all state and local ordinances.

Nailing schedule to comply with UBC section 2510 (F) and UBC table 25 (G) and (H) for lateral and withdrawal strength.

Heating systems to maintain 70 degrees F at 3' above floor when 10 degrees F outside temperatures as per 1980 UBC section 1410 and as amended by all local ordinances.

Plumber to verify all locations and conditions of existing plumbing pipes, water heater, and all related items; plumber to correct any faulty parts and bring up to local and city codes as well as UBC.

Bolts shall conform to ASTM 307. Anchor bolts for embedment in concrete shall be fabricated with a bent leg.

Welding electrodes shall conform to ASTM A-233 E70XX.

All bolts bearing on wood shall be supplied with standard washers.

All welds shall be full length unless indicated otherwise.

Galvanizing shall be by "hot dip" method, after all fabrication has been completed.

Shop prime all ungalvanized ferrous metals.

Provide drainage and terracing per U.B.C. 7012.

Do not install furnaces under stairways, UMC section 704 (4).

Space or room heaters to have a minimum 70% efficiency at maximum rated out put.

Placing of concrete shall conform to ACI 318 and 614 and at time of pour shall have a temperature not below 50 degrees F for three days. The maximum temperature of the concrete produced with heated aggregates, heated water, or both shall not exceed 85 degrees F at any time during production or transit.

Before pouring clear all debris, water and ice from formed areas and vields from reinforcing. Dampen wood forms and subgrade prior to placing.

Curing of concrete during cold weather shall conform to ACI 308.

Concrete shall conform to standards specifications for ready mixed concrete, ASTM designation C-94, with a minimum compression strength of 2500 psi at 28 days and shall contain minimum 5 sacks of portland cement per cubic yard. Maximum slump shall 4" (four) inches.

Reinforcing bars shall be deformed steel of sizes indicated and shall conform to ASTM A615 grade 40. All bars shall be clean and free of loose rust scales or other materials that reduces bond.

Lapped bar splices length minimums = 24" for #4 and 30" for #5.

Electrical contractor to verify all existing conditions, panel size and wire size, make all corrections and new additions according to all local and city ordinances.

NOTE: Builder to verify all new and existing conditions prior to commencement of work on job site as well as drawings and specifications. Any errors or omissions found on drawings and specifications shall be brought to the attention of the designer prior to commencement of any work.

SEAL - BETWEEN WALLS & FOUNDATIONS
- BETWEEN WALLS & ROOF, BETWEEN
ADJ. WALL PANELS
- OPENINGS IN ENVELOPE
- BETWEEN UNIT ON MULTI FAMILY

UNDERCUT DOORS 1/2" IN ROOMS HOUSING
WHOLE HOUSE VENT. FAN

EQUIP SPEC'S
- VENT FANS TO MEET CFM @ 0.25 INCH WATER
GAUGE. 1.5 SONES @ 1.0 INCH WATER GAUGE

CONCRETE FOR SLABS & APRON TO BE A MIN
OF 3000 PSI IN 28 DAYS

EXT. WOOD DECK & SUPPORT BM TO BE FT.
OR EQUAL.

1991 UNIFORM BUILDING CODE

TABLE NO. 25-Q - NAILING SCHEDULE

CONNECTION	NAILING
1. Joist to sill or girder, toenail	3-8d
2. Bridging to joist, toenail each end	2-8d
3. 1" x 6" subfloor or less to each joist, face nail	2-8d
4. Wider than 1" x 6" subfloor to each joist, face nail	3-8d
5. 2" subfloor to joist or girder, blind and face nail	2-16d
6. Sole plate to joist or blocking, face nail	16d at 16" o.c.
7. Top plate to stud, end nail	2-16d
8. Stud to sole plate	4-8, toenail or 2-16d, end nail
9. Double studs, face nail	16d at 24" o.c.
10. Doubled top plates, face nail	16d at 16" o.c.
11. Top plates, laps and intersections, face nail	2-16d
12. Continuous header, two pieces	16d at 16" o.c. along each edge
13. Ceiling joists to plate, toenail	3-8d
14. Continuous header to stud, toenail	4-8d
15. Ceiling joists, laps over partitions, face nail	2-16d
16. Ceiling joists to parallel rafters, face nail	3-16d
17. Rafter to plate, toenail	3-8d
18. 1" brace to each stud and plate, face nail	2-8d
19. 1" x 6" sheathing or less to each bearing, face nail	2-8d
20. Wider than 1" x 6" sheathing to each bearing, face nail	3-8d
21. Built-up corner studs	16d at 24" o.c.
22. Built-up girder and beams	20d at 32" o.c. at top and bottom and staggered 2-20d at ends and at each splice
23. 2" plates	2-16d at each bearing
24. Plywood and particleboard: Subfloor, roof and wall sheathing (to framing): 1/2" and less 6d 3/4" 8d or 8d 1" 8d 1 1/4" 10d Combination Subfloor-underlayment (to framing): 3/4" and less 6d 1" 8d 1 1/4" 10d 1 1/2" 10d or 8d	
25. Panel Siding (to framing): 1/2" or less 6d 3/4" 8d	
26. Fiberboard Sheathing: 1/2" No. 11 ga. F 3/4" 5d No. 16 ga. F 1" No. 11 ga. F 3/4" 5d No. 16 ga. F	

Comments:
1. Common or selected nails.
2. Deformed steel.
3. Nails spaced at 6 inches on center at edges, 12 inches at intermediate intervals at all supports unless otherwise specified.
4. Nails spaced at 12 inches on center at ends, 18 inches at intermediate intervals.
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