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Inspection Checklist For Typical One- and Two-Family Dwellings

CONSTRUCTION

320.09 (09)		Permit card posted
Zoning 321.33		Proper setbacks
FOOTING INSPECTION		
FOOTINGS		
321.16		48" Frost depth including at basement walkouts
321.12 & 321.33		Proper planned sill elevation for zoning and drainage
321.14 (2)		Soil - no organics, uncompact fill, water, frost
321.16 & ACI 318 5.12		(shall be insulated if cold weather) and verify frost depth likely at site
321.17		Groundwater/clay: tiles with bleeders 8' o.c. (also requires 4" base course under slab and damp roofing of block foundations)
321.15		Forms or adequate soil stiffness (normally will form footings if tiles or basement floor base course required)
321.15 (2)		Form or trench sizes: - width: 8" plus foundation wall width - depth: 8" except fireplace and chimney footings to be 12" - columns: 12" x 24" x 24" (can include slab thickness) - footings for basement center bearing walls
320.10 & ACI 318 15.9.2		Rebar per plan or as needed to bridge problem spots
321.02 (3)(e)		Protected from freezing during cure
321.125		Silt fence, straw bales, or non-channel matting to protect downslope perimeter; 12" thick (3" to 6" diam. clean stone) tracking pad on all access drives (50 ft. length or to the foundation); soil stockpiles protected by proper erosion control methods; waterbodies and drainage ways protected from sediment discharge; no tracking onto street; off-site inlet protection; re-check as needed for repair and maintenance on future inspections.
FOUNDATION INSPECTION		
321.15 (2)(a)		Footing has minimum 4" each side of foundation wall and 8" minimum depth
321.18		Proper foundation thickness, pilaster spacing, and reinforcement per code tables
321.18 (3)		Maximum fill height for unreinforced HCB supporting WF: 8" block - (6 courses) in nongranular; 5' (8 courses) in granular; 10" block - 6' (8 courses) in nongranular; 6' (9 courses) in granular
321.15 (2)(c)		Stepped foundation lintels or reinforcement (short steps okay with plain concrete)
321.18 (3)(b)		Rebar or other reinforcement per plan
321.26(3)		Type M or S mortar
321.26(12)		1/2" maximum mortar joint
321.18 (3)		Anchor bolt placement: minimum 6' o.c. for concrete and 2 1/2' o.c. for HCB
321.26(9)		Beam to bear on: 8" height solid of solid concrete (or steel plate)

321.17 (3)(d)		Required tiles: gravel bed of 2", cover of 12"
321.18 (3)		Block damp proofed in clay soil
322.32 (6)		Foundation insulation per energy worksheet including frost wall under basement walkouts
321.07 (2) & 322.34(3)(a)		1:1500 crawl space venting and 14" x 24" access
321.02 (3) 321.26 (1)		Protected from freezing during cure
321.18 (1)(c) & (d)		Walls braced or floor system in prior to backfill
321.16, 321.12, 321.10		Proper elevation for frost depth, zoning, drainage, and protection of wood from decay
Fireplace **3**21.29(3)		- See Heating Checklist
BASEMENT FLOOR INSPECTION		
321.17 (3)		Bleeders 8' o.c. with tar paper over interior joints
321.17, 321.20 (2)(3)		4" clean base course if clay soil or tiles required
382.36 (8)(a)2.		Storm crock lip to be 1" above floor
321.20		Minimum 3" concrete floor thickness
321.203 (1)(2)		Minimum 4" garage floors on 4" base course, Floor slopes to drain toward overhead door or to an interior floor drain that complies with SPS 382
321.16		Ground to be free of frost
Permanent Wood Foundation (PWF) Excavation Inspection	Permanent Wood Foundation Design Specification Manual 2007 Edition	American Forest & Paper Association American Wood Council ANSI/AF&PA PWF-2007
3.2	Design Properties of Soil	Determine .design properties of soil. Good to Medium Drainage, Poor Drainage, Poor to Unsatisfactory
2.5 4.1.2	Aggregate for Footings and Fill	Washed gravel, free of organics 4in. clear granular (3/16" - 3/4") Crushed Stone, washed with no more than 10% fines (material that passes a 3.16 in. sieve) Max size ¾ inch Sand, coarse min 1/16 in. free of organics, clayey or silty soils
4.1.4	Sump	Provide sump in soils classified as GW, GP, SW, SP, or GM Sump shall extend 24 in. below the top of granular drainage layer.
5.5.2	Composite Footings	Per design specifications prescribed in document Granular footing width 2 x footing plate width, and thickness 3/4 x footing plate width (2 x 8 or 2 x 10 typical [for 7' backfill]. If interior bearing wall, then same rules apply. [2" x 6" minimum footing plate])
5.5.1.1		Footing plate at least at frost depth; or if Group 1 soil or positively drained then bottom of granular fill
5.5.2 5.5.3		Column footings as for conventional construction or engineered wood and gravel, per design calculations prescribed in document
5.4.5.5.1	Anchorage of Foundation Wall and Footing	If concrete footer used, place on 4" granular that is positively drained or provide bleeders at 6' O.C. For basements: anchored to basement floor slab by spikes and designed per Chap. 11 NDS. For crawl spaces: anchored to concrete pad on each side by spikes and designed per Chap 11 NDS

1.3 2.3.3		All wood within 8" of grade treated to "FDN" standards and so stamped in accordance with AWPA U1. Treated field cuts in accordance with AWPA M4.
2.4.1 321.10 (5)		Fasteners and connectors used in preservative treated wood shall be Type 304 or 316 stainless steel, or hot dipped galvanized zinc coated steel fasteners where excepted.
5.5 5.5.2.1		Framing connections properly designed. (Critical)
5.5		Properly sized footing plate per design calculation set in the standard (2 x 8 or 2 x 10 for 7" backfill and 2 x 8 studs)
5.2.3 5.4.4	Design of Lateral Connections	Footing plate secured to wall plate (10d 12" O.C.) Design in accordance with the NDS
5.5		Provide support frame under stepped footing
5.4.1	Design of Studs	Properly sized studs Per design calculations in the standard (2" x 8" usually for 7" backfill)
5.4.3		Joints in footing plate and top plate staggered at least one stud space form joints in the corresponding plate
5.5.3		Adequate bearing stress (1 ½" – 2") bottom of studs against floor slab
5.4.5.5		Studs secured to plates: Basement Wall anchorage to resist wind uplift (2 – 16d at bottom plate; 4 – 20d or U framing anchor at top plate)
5.2.3 5.4.3		Top plates secured together (10d face nailed 2" o.c.)
5.2.3 5.4.3		Joists secured to top plate (common joists with U framing anchor; header joist with 8d 8" o.c.; end joist with 8d 4" o.c.)
5.4		On end walls, provide full depth joist blocking (24" o.c. for 7' backfill) between top plate and parallel joist (secured with anchor or 8d 4" o.c. to top plate, 9 - 6d to floor sheathing)
5.4.2		Properly sized plywood sheathing (19/32" 40/20 for 12" o.c., 23/32" 48/24 for 16" o.c. and 7' backfill)
5.5.2		Properly secured plywood per spec. (8d 6" o.c. on edges, 12" o.c. 23/32" 48/24 for 16" o.c. in field)
5.2.3 5.4.3		Reinforce top plate with additional bolted top plates if stairwell opening is adjacent to foundation wall (4 additional plates for 10' opening)
4.1.7		If unequal backfill, provide shear strength (Between 2' and 6' differential, provide additional sheathing nailing of all walls and block and possibly double sheath end walls to act as shear walls. Also provide interior shear wall(s) if house is longer than 24')
2.6 4.1.5		Caulk plywood joints
2.7 2.8 4.1.3 4.1.6 4.1.5		Six mil poly over below-grade foundation wall down to footing plate. Joints lapped 6" and caulked. Top edge caulked to wall and protected above grade with wood or similar material
4.1.7		Granular fill for 1/2 excavation height
		Protect granular fill with proper erosion control BMPs
4.2.1		Insulation of exterior walls per UDC SPS 322
4.2.2		Vapor Barrier – with Vented Air Space: b/t insulation and plywood foundation wall, barrier shall be installed from the upper plate and extend down to the bottom plate
4.2.3		Vapor Barrier – with No Vented Air Space: barrier shall be installed from the upper plate to approx. one foot below outside ground surface
321.07		Crawl Space Access per 321.07
4.2.2		Crawl Space Ventilation: per 322.34
4.1.4		Sump Requirements

FRAMING INSPECTION

General		Suggested order of inspection: Scan exterior layout for offset walls, overhangs, wings and porches. Inspect in general order of exterior garage, upstairs, downstairs, basement. Follow load transfer down to earth including linear loads from bearing walls and any masonry and point loads from header ends, beam ends, and columns. Check for adequate fasteners especially for foam sheathed homes. For metal anchors, all holes generally filled with special connector nails (not roofing nails).
Roofs		
321.28 (7)(d)		Cricket (saddle) if chimney over 30" wide
321.27 (9)		Roof sheathing
		Properly sized: minimum thickness 5/8" for solid sheathing on rafter spacing of 24" or less, ¾" minimum thickness for spaced sheathing
321.08 (2)		Tenant separation in attic
321.27 (1)		Roof openings headered similar to floor openings (around skylights, chimneys, etc.)
321.02 (1)(d)		Roof member to top plate: 2-16d or 3-8d
Rafters		2 x sawn members
321.27 (4)(b)		Ridge board to be 2 x if rafter pairs offset; ridge board shall have a depth at least equal to the length of the cut end of the rafter abutting it
321.27 (4)(a)		Collar ties every third pair in upper one third
321.27 (6)		Hip rafters 2" deeper than commons
		Interior end of lower intersecting ridge board supported
321.27 (6)(a)		Valley rafters doubled and minimum 2" deeper than commons
321.28 (2)		Large cathedral ceilings and 1 1/2-story homes with properly sized ridge beam; or cantilevered wall ties; or rigid ridge connection (batts or gussets) and wall ties, or other means. Adequate hangers or bearing of rafters on ridge beam.
321.27 (8)(b)		Notches maximum 1/6 of depth and not in mid-1/3 span
		Notches in end maximum 1/4 depth of rafter
		Holes in center of rafter and maximum 1/3 depth of rafter
321.22 (4)(b)		Minimum bearing of 1 1/2" on wood, 3" on masonry or anchor clips (ledger boards for shed roofs well anchored)
321.27 (4)(e)		Gable end ladders anchored to interior rafter if overhang more than about 1'
Rafters Wood I Member Rafters (TJIs, etal.)		Per Mfr.
General		
		Properly sized
		No cutting of flanges or other damage
		Proper cutting of web - watch holes by bearing points
Ridge		
		Must be supported by ledger board or ridge beam, not ridge board and collar ties
		Bottom flange bearing condition
		- blocking or X-bracing between I members
		- beveled top edge of ridge beam
		- pairs of members gusseted with 3/4" plywood or lapped with filler block between members
		Framed into ridge beam or ledger condition
		- proper hangers - may need web stiffeners
		- strap together I members across ridge if more than 7/12 slope
Eaves		

		Uncut bottom flange must bear on beveled top plate (or hanger if < 6/12 slope)
		Cut bottom joist flange must bear fully on top plate and have web stiffener(s) or cripples
		Blocking or X-bracing between I members
		Refer to manufacturer's literature for other eave details
Ladders		
		Outriggers notched to top chord
321.27 (8)		Roof trusses
		- proper factory fabrication per plans
		- no modifications or damage
		- Bearing
		- end bearing points under scarf cut, factory blocking or cantilever strut
		- any interior bearing points to be at panel points
		- adequate bearing width for design (typical 3 1/2" for dwellings) (need extended seat or "double shear" hangers)
		- Girder trusses
		- laminated girder trusses properly nailed together (typical staggered o.c. spacing: 10" Top Chord, 3" Bottom Chord, 4" webs)
		- proper girder truss hangers for common trusses
		- adequate end columns or multiple studs for girder trusses
		- Permanent bracing per plans or markings
		- Location
		- TC - only if no rigid sheathing
		- BC - 10' o.c. only if no rigid ceiling such as drywall
		- webs - typically for webs over 8' long or if intersecting interior bearing point
		- cantilever struts at mid-point
		- TC of bottom portion of piggyback type truss
		- Method of lateral bracing
		- near panel points on TC and BC
		- minimum 1" x 4" continuous or lapped for one truss bay
		- anchored into solid (not frame) end walls or diagonally braced in plane of brace (up or out at end walls)
		- Gable ends fully supported along full length unless trussed
Ceilings		
321.06		Ceiling height, at least 7 feet, habitable rooms may be less than 7 ft. if at least 50% of the room's floor area has a ceiling height of at least 7 feet. Beams and girders shall not project more than 8 inches below the required ceiling height.
321.07 (1)		14" x 24" scuttle opening for attic access
321.27 (2)		Properly sized ceiling joists
321.27(5)		Joist to rafter: 3-16d
		Joist to plate: 2-16d or 3-8d
		or in accordance with the floor joist requirements under s. SPS 321.22(4)(a)1.d.
Frame Walls		
321.25 (2)		**Top plate**
		- doubled or bearing members above studs (includes basement
		center walls)

		- lower top plate broken over stud
		- corners and tees tied by laps or straps
		Proper stud sizing and spacing (2 x 6 16" o.c. or 2 x 4 12" o.c.)
321.25 (8)		**Wall Bracing**
321.25 (8)		Wall brace plans meet code requirements Redesign / reconfigure wall bracing detail on plans as needed to satisfy code requirements
(8)(b)		Wall bracing methods match those on plans
(8)(b)		Proper products used for wall bracing
(8)(b)		Nailing patterns as per code
(8)(c)		Brace panels installed to proper lengths
(3)(a), (b)		**Headers where load bearing**
		properly sized
		- Headers > 3' but < 6' in length shall be directly supported on each end by the single common stud and 1 shoulder stud
		- 3 feet or less, supported by single 2 x 4 common stud and a shoulder stud; or single common stud with a framing anchor attached
		- Headers greater than 6' in length shall be supported on each end by the single 2 x 4 common stud and 2 shoulder studs
321.18(1)(c)3.		Bottom plate anchored in garage and whole foundation
321.10 (2) Treated Wood Required		
(a)		All wood resting directly upon or embedded in earth
(c)		Joists within 18 inches above exterior grade unless protected with a moisture barrier
(d)		Girders spanning directly over and within 12 inches of earth
(e)		Sills and rim joists resting on concrete or masonry and also below grade or within 8 inches above final exterior grade
(f)		Siding and sheathing in contact with concrete, masonry, or earth and within 6 inches above final exterior grade
(g)		Ends of wood structural members and their shims resting on or supported in masonry or concrete walls and having clearances of less than ½ inch on the top, sides, and ends
(h)		Bottom plates or sole plates of walls that rest on concrete or masonry and that are below exterior grade or less than 8 inches above final exterior grade
(i)		Columns in direct contact with concrete or masonry unless supported by a structural pedestal or plinth block at least one inch above the floor
(5)		Proper fasteners compatible with treated lumber
321.25 (4)		Reinforce stud if more than 1/3 depth bored or cut out

321.085 (1)(2)		Fire blocking at soffits, dropped ceilings, openings around wires, cables, vents, pipes, ducts, chimneys, etc., concealed spaces, connections between concealed vertical or horizontal spaces
321.08 (1)		Fire Separation per code specifications
(a)		**Attached garages** ¾ hour fire-resistive construction or shall be: - One layer of 5/8 inch Type X gypsum drywall on the garage side of the separation wall or ceiling - One layer ½ inch gypsum drywall on each side of the separation wall or ceiling - Two layers of ½ inch gypsum drywall shall be used on the garage side of separation wall or ceiling - Drywall joints taped and sealed - Gap between joints no greater than 1/20 inch, joints backed by solid wood or another layer of drywall
(b)		Structural elements exposed in an attached garage shall be protected as per 321.08 (a)
(c)		**Doors:** minimum fire resistant rating of 20 min.
(2)		Dwelling Unit Separation per code specifications
(a)		Dwelling units separated from each other: attics, basements, garages, vestibules and corridors
(b) (d) (c) (e) (f)		**Attic Separation:** complete separation extended to underside of the roof deck, **Walls:** At least one layer 5/8 inch Type X gypsum wallboard or equiv. Or two layers of ½ inch gypsum wallboard or equiv. **Doors:** Minimum 20 minute fire rating **Floors and Ceiling:** 5/8 inch Type X gypsum wallboard with joints in compliance with sub. (1) (a)2.
		Building Design - recheck architectural plan review, plus:
321.04(2)		**Stairs**
		- 36 inches minimum width
		- Handrails and trim may project max. 4.5 inches into width area at each side
		-
		- 6'4" headroom measured from the stair's nosing to the ceiling, soffit or any overhead obstruction
		- 8" riser, 9" tread
		- winders in series - minimum 7" tread 12 inches in from pivot (individual winder - equal to tread depth of the rectangular steps 12 inches in from pivot)
		Handrail: located at least 30 inches, but no more than 38 inches above tread nosing
(3)		**Handrails**: required on stair flights with more than 3 risers. At least one handrail provided for full length of stair flight.
		Handrails: symmetrical about the vertical centerline to allow for equal wraparound of thumb and finger
		Round or truncated round handrail: max. whole diameter of 2 inches
		Rectangular handrails: max perimeter of 61/4 inches with a max. cross sectional area of 27/8 inches.
(4) (a)		**Landings**: Intermediate landing required for any stairway with a height of 12 feet or more
(b)		**Landing:** Provide a level landing at the top and base of every set of stairs. Landing as wide as stairs and measure at least 3 feet in direction of travel.

		Doors at landings: Level landing provided on each side of any door located at the top or base of stairs
		Exterior landing: Landing, platform or sidewalk located max 8 inches below the interior floor elevation. Minimum 36 inch length to in the direction of travel out of the building.
Brick Veneer Walls		
321.26(7)(a) 1.		Brick ledge or base flashing provided
		Maximum 1" corbel over foundation
(a)2.		Provide (1") air space behind brick
4.		Provide weep holes at max. intervals of 2 feet.
T.321.26 - C		Properly sized lintels
		Large stone securely anchored with 1/4" dowels
321.26(8)(a)1	.	Proper flashing installed to drain water away from structural members
Floors		
321.22(8)		Properly sized sheathing, as per Table 321.22-B
Joists		2 x sawn members
321.22(1)		Properly sized
321.10(1)		Untreated crawlspace joists at least 18" to earth
321.22(4)		Bearing - minimum 1 1/2" on wood, 3" on masonry
321.22 (1) (c)		Where a sill plate is provided for floor joists on solid block top course masonry, the sill plate shall be fastened to the foundation.
321.22(1)(d)		Where the masonry wall has an open top course, a sill plate at least as wide as the foundation wall shall be fastened to the foundation.
321.22(4)(c)		The tail end of a floor joist may not extend past the edge of a beam by more than the depth of the floor joist.
321.22 (5)		Notching and boring
		- notches maximum of 1/6 of depth and not in mid-1/3 span
		- notches in end maximum 1/4 depth of joist
		- holes in center of joist and maximum 1/3 depth
321.22 (6)		Overhangs - maximum 2' where common joists are extended over wall and
		carry roof load
		- lookout joists anchored to doubled common joist setback
		2 x overhang
Joists		Wood I member Joists (TJIs, etal.) Per Mfr.
General:		Properly sized
		No cutting of flanges or other damage
		Proper cutting of web - watch holes by bearing points
Rim		
		1 story: 3/4" plywood
		Carrying 2 stories: I-blocking: 2 layers 3/4" plywood; pair of 2 x 4 cripples; or continuous 2 x rim

		Provide solid blocking under point column loads
Center bearing		
		I-blocking or 2 x 4 cripples if bearing wall above
		May need web stiffener
Sistered 2 x cantilevered deck		
		Plywood filler between I-member and 2 x joist
		Maximum 4' cantilever
Cantilevered I-member with roof load		May need to reinforce I-member
Hangers		
		Proper nails and nailing
		Sized for I-member thickness and either full depth or install web stiffener
		Top mounted hangers on I-member header - may also need backer block
		Filler between doubled I-member header at hangers
321.22 (2)		**Parallel Chord Floor Trusses**
		- no modifications or damage
		- bottom bearing trusses not flipped top for bottom
		- top bearing trusses bearing within 1" of last web
		- strong back installed 10' o.c. and tied to end walls
		- any interior bearing point at joint
		- no cantilevers unless engineered
		- if top bearing trusses used on frame wall, will need
		fire stopping in wall at bottom chord
321.22 (7)		**Floor openings** (around stairs, fireplaces, chimneys, plumbing, etc.)
		- doubled trimmers and headers if header over 4'
		- hangers or bearing for headers over 6'
		- clips, hangers, blocking plates, or bearing for tail joists
		over 8' including joists over basement windows
Beams		
321.22 (3)		Properly sized
321.22 (5)		No notching or boring
T. 321.22 A-2		Built up wood beams to have double row of 10d nails spaced 18" in each row; member joints within 1/4 span points, no adjacent butt joints, maximum 1/2 of plies jointed at same 1/4 point (especially critical for side-loaded beams)
321.02		Proper beam nailers (width equal to beam width)
321.22 (3)(a)		Adjoining ends to be fastened together at columns
321.22 (4)		Bearing length of 3" on 8" thick solid masonry concrete or on metal
321.02		Adequate beam columns
321.15 (1)(b)		Beam columns on footings
321.10 (1)		
Foundation		
321.18 (1) (a)(b)(c)		Lateral support for tops of masonry wall including knee walls

		- foundation bolts or anchors
		- ledger board and end wall blocking
		- furred interior wall with connection to floor joists
INSULATION INSPECTION		
322 20 – 322.39		**Envelope (ceiling, walls, floors, foundation) insulated per Subchapter IV SPS 322 and ResCheck/RemRate Heat Loss Programs or SPS 322.31 Prescriptive tables:** **Insulation matches inputs used for heat loss calcs and cross section plans**
322.20 – 322.39		**Check installation and plans of window U values and insulation R values for consistency with inputs used in heat loss calculation**
322.20 (6)		A permanent certificate from the heat loss calculations shall be posted on or immediately adjacent to the electrical distribution panel. Include predominant R-Values and U-Values
322.20 (5)		Thermal Resistance Identification shown on insulation greater than 12 inches wide
322.20 (5)		Blown attic insulation: ID tag per 300ft^2 tag min 1 in height Text facing attic access
322.20 (4)		Manufacturer's installation instructions available at job site
322.37 Joint and Penetration Sealing		- behind studs at wall corners and intersections
322.37 (3)		- attic knee walls
322.37 (3)		- gable ends of cathedral ceilings
322.37 (3)		- bay window seats and roof/ceilings
322.37 (3)		- skylight wells
322.37 (3)		Recessed lighting fixtures
322.37 (3)		- between window/door jambs and framing
322.37 (3)		Between wall assemblies, sill plates and foundation
322.37 (3)		Penetrations of utility services through walls, floor and roof assemblies, top and bottom roof plates
322.37 (3)		Attic and crawl space panels
322.37 (4)		Recessed lights
322.37		**Fan housings**
322.34		- spaces over unheated areas such as garages and crawlspaces
322.32(7)		- second floor box sill
322.32 (8)		**Overhang Joist Spaces**
322.32(9)		- 2nd story walls adjacent to attics
322.30 (4)		- house/garage wall (including insulating sheathing)
		- window glazing
322.21		- support provided for ceiling insulation where not dry walled (stairwells, chases, etc.)
322.42(1)		All heating (supply and return) ducts exposed to unheated spaces insulated to R-8 including in exterior walls
382.40(8)(a)		Water piping protected from freezing by insulation in exterior walls
322.38(1)		**Continuous vapor barrier on warm side of all insulation**
		- seams lapped at least 6 inches or batt flanges stapled to stud/joist faces
		- tightly cut around penetrations
		- interior soffits properly handled
		- vapor barrier paint also okay
322.37 (3) (4)		Top plate penetrations sealed
321.37 (5)		Exhaust fans terminate outside dwelling

322.39(1)		Attic venting: one side 1:150, high/low 1:300; insulated roof vents = 1/3 square foot, air chutes in or raised truss heel
322.37(3)		Sill sealer on foundation
322.34		Vapor retarder properly covering soil in Crawl Spaces
		Insulated Crawl Space per Table 322.31-1
323.08(2)		Metallic duct for kitchen hoods
Insulation of Permanent Wood Foundation	**Permanent Wood Foundation Design Specification Manual 2007 Edition**	**American Forest & Paper Association American Wood Council** **ANSI/AF&PA PWF-2007**
322.31		Insulated per Energy Worksheet or an acceptable software program
322.38(1)(b)		Continuous vapor barrier
Below-Grade per PWF Manual	Permanent Wood Foundation Design Specification Manual 2007 Edition	ANSI/AF&PA PWF-2007
6.10.3.		- Provide air space between insulation and foundation sheathing or
6.10.2.		- Stop vapor barrier 1' below outside grade and fold against foundation sheathing
6.10.4.		Stop insulation 2" above bottom plate
CONSTRUCTION FINAL INSPECTION		
Outside		
Zoning		Broken sidewalk and curb replaced
321.12		Grade away from dwelling
321.125		Final erosion control measures in place or site “stabilized” per code
322.31 Table 322.31-1		Foundation insulation protection
321.24(2)(c)		Caulking or flashing of penetrations and joints
321.24 (4)		Weather resistant wall covering (painted if necessary)
321.24(3)(4)		Horizontal plywood siding joints lapped, Z-flashed, or battered per mfr. and APA
321.10		Untreated wood clearance to grade
321.27(4)		Proper roof flashing
Various		Code complying decks
323.02 (3)		Bath exhaust terminating outside dwelling
321.04(2)		Code complying steps, riser heights , tread depths
321.26(7)		Brick veneer installed properly
Inside		
321.09		Smoke detector in each sleeping room,
		outside of each sleeping room within 21 feet of sleeping room door opening (at centerline)
		On floor levels without sleeping rooms, one alarm on each level

(2)		Smoke Alarms hardwired per code
321.097		Carbon Monoxide (CO) detector installed on each floor hardwired per code
322.37(3)		Minimum 14" x 24" weather-stripped scuttle to each attic
321.08(1)		Garage fire separation in place including door casing, eaves, complying attic scuttle, and protection of beams and columns supporting living space above
321.05(3)		Safety glazing in doors and sidelights
321.04		Code complying stairs - risers, tread, handrail, headroom, guardrail
321.03		Code complying bedroom egress windows in basement and second floor if no second exit
Basement		
321.22 (3)		Columns secured to beams, providing full beam width bearing,
321.25 (6)		and anchored to floor
321.09		Smoke detector / CO detector
321.097		Carbon Monoxide (CO) detector installed hardwired per code
321.085		Fire stop around all chimneys, vents, ducts, and pipes in ceiling and also open stud spaces in split level
322.32 (7)		Box sill insulation
322.34 (2) (1)		Vapor barrier on crawl space floors, organics removed
321.22(5)		Recheck notching and boring of joists
321.22(1)		Recheck floor joist support and header
HEATING		
ROUGH HEATING INSPECTION		
323.11(1)		Metal Chimney/Vent
Listing		
323.11 (2)		Proper roof termination - 3' above roof and 2' above roof within 10' (B vent with listed cap can terminate 1' above a roof with slope less than 8/12)
Listing		
321.08		- Fire stop and clearance to combustibles per label,
321.08 (2)		Proper Dwelling Unit Separation: attics, doors, walls, floors and ceilings
		at roof, ceiling and floor penetrations and at each
		floor level unless in a chase
Listing		- Insulation shield in attic
Listing		- Enclosed in chase through occupied spaces
Rough ductwork (and-to-be concealed ducts) 323.09(2)(b)		At least one return air opening per floor
321.22(5)		Proper notching and boring of joists - maximum notch of 1/6 of depth but not in mid-1/3 span
321.225)		Proper notching of studs - maximum 1/3 depth or reinforce
T.323.08-A		Minimum 30 gauge for concealed ducts

323.08 (1)		Not used for any other systems (any electrical, telephone or CATV boxes in return air spaces to be separated off)
T.323.08-B		Supported 10' - 12' o.c.
323.08(8)		Joints securely fastened
323.08(2)		Ducts serving kitchen hoods to be metallic
321.32		Factory-built fireplace
323.18(1)		Equipment Installed per listing and manual (which is to be left on site)
		Safety strip in front of opening
		Chimney installed per above
Listing		No combustibles below top spacers or closer to jacket than listing (1" typical)
323.09		No combustion air from garage without backdraft damper;
Listing		**Manufactured Fireplace** • Safety strip installed • Clearances to combustibles
ROUGH MASONRY FIREPLACE AND MASONRY CHIMNEY		
Masonry Fireplace		
321.15(2) (d)		Supported on 12" thick footings that extend 4" on either side
321.29		Fireplace supported on minimum 8" thick foundation
(10)		Cleanout provided
(6)		Properly sized hearth extension: less than 6 square feet opening - 8" to sides, 16" to front; bigger - 12" to sides, 20" to front
(3)		Side and back walls of fireplace at least 8" thick
		Masonry fireboxes of firebrick laid in thin refractory cement
(1)		Flue sized for fireplaces: round: 1/12 of opening; rectangular: 1/10; minimum 75 square inches
Masonry Chimney		
321.30(2)		Proper flue size for other appliances
(3)		Multiple flues separated by 4" masonry
(9)(a)		Minimum clearance to combustible framing of 2" for interior chimneys and 1/2" for exterior chimneys
(9)(b)		Minimum clearance of 1/2" to combustible trim
(9)(c)		Draft stop at each floor level
(8)		Minimum 2" chimney cap
321.29(2)		Terminate 3' above roof and 2' above any roof within 10'
HEATING FINAL INSPECTION		
Outside		
NFPA 54 7.2.1		Gas pipe entrance nipple protected - galvanized, epoxy coated, taped or sleeved

323.11		**Sidewall appliance venting**
Typical Listing per NFPA 54 12.7.2		- 3' from gas meter or regulator
12.7.2		- 1' above grade
3.3.107		- sealed combustion
10.7.1.2		- 50,000 BTU or less - 9" from building opening - over 50,000 BTU - 12" from opening
10.7.2		- power vented - 4' from openings
323.11 (2)		**Chimney and vent termination**
		- 3' above roof and 2' above roof within 10'
323.13 Typical Listing		- B vent with listed cap can terminate 1' above roof with slope less than 8/12
323.16 (1)/NFPA 58		**LP Tanks**
6.3		125 gallon tank - 5' from doors or windows, 10' from any sources of ignition (AC, furnace intakes)
6.3		125-1200 gallons - 10' from building, sources of ignition or property line
323.16 (1)(c)		On adequate supports
6.3		Safe from vehicle damage
6.3		Gas regulator outlet to be 3' horizontally away from building opening below outlet
6.8.1		Piping and regulator properly secured
Inside		
323.09 (1)&(2) T-323.07		Dampers, registers, and grilles
Listing		Insulation shield around vent or chimney in attic
323.16/NFPA 54 9.6.4		Gas range and dryer shutoffs within 6' of appliance
Woodstoves properly installed (see checklist)		
323.045		
Fireplaces		
321.29 (6)		Hearth extension properly sized, less than 6 square feet: 8" to sides, 16" to front; bigger: 12" and 20"
321.32 (1)(a)		Factory-built fireplace firebox caulked or mortared to surround
321.29 (11)		Proper mantel and trim clearances; masonry fireplace: not within 6", maximum 1/8 projection per inch of clearance between 6" and 12" away from fireplace opening
Basement		
NFPA 54/7.2.6		Gas pipe hangers: 1/2": 6' o.c., 3/4" and 1": 8' o.c. lines on 8' centers
321.30 (9)		2" clearance between chimney and combustibles
323.11 (1)		Proper clearance to B vent (typically 1")
Listing		
		Furnace and water heater properly installed (see heating checklist)
Ducts		
323.09(1)		- shutoff dampers on accessible runs
322.17		
T.323.08-B		- supported 10' - 12' o.c.
323.08(1)		- not used as chases for other mechanical systems

General Heating Plant		
323.04		To be installed per listing
323.18(1)		Manual left at site
322.15		Sized per ResCheck/RemRate Energy Worksheet
323.17(2)		24" of clearance in front of portions needing servicing
322.31 (3) T-322.31-3		80% AFUE minimum
322.39 (5)		Automatic flue damper (or outside combustion air or induced draft or secondary exchanger) and electronic ignition
Typical Listing		If damp floor, provide raised base
NFPA 54		**Gas Piping**
9.6.4.1		Shutoff valve within 6'
7.6.1		Drip tee
NEC 90		**HVAC Electrical Connection - Venting**
		Dedicated circuit (new construction)
4450.53		Properly fused per data plate
440.14		Disconnect within sight
440.61		Grounding connection made
323.06		Combustion air
(1)(a)		100 cubic feet of room volume per 1000 BTU (12.5 square foot floor area if 8' tall) input or bring in air
(4)(d)4.c.		House air - two openings (high/low), each 1 square inch per 1000 BTU (figure 20% free air for wood louvers and 60% for metal louvers)
(4)(b)		Outside air - two openings (high/low) each 1 square inch per 4000 BTU
Venting		
Atmospheric Venting		
T.323.15-C		6" min. clearance between single wall connector and combustibles
323.045 (4)(d) 4.		Connector securely joined and supported
323.155		Vent sized to appliance collar
		Co-venting - no exhaust pipe tees or back-to-back flue entrances – f Venting area shall be at least equal to the size of the largest vent connectors plus at least 50% of the area of the other vent connectors.
323.11(1) + (2)		Termination - 3' above roof and 2' above roof within 10' (B vent with listed cap can terminate 1' above roof with slope less than 8/12)
		Sidewall venting (typical)
Listing		All vents under positive pressure to be tightly sealed
Listing		PVC vent supported 3' o.c.
Listing		PVC vent sloped 1/4" per foot to furnace
Listing		Maximum vent length per manufacturer (typical 30-40 feet plus two elbows)
NFPA 54 and Listing		Termination
12.7.2		3' from gas meter or regulator
12.7.2		1' above grade
12.7.2		Away from damageable items (AC, electrical equipment)
3.3.107		Sealed combustion
12.7.2		- 50,000 BTU or less - 9" from windows, etc.
12.7.2		- power vented - 4' from openings
Listing		Condensate drain vent in place
323.156		Condensate drain to sanitary drain

Ducts		
T.323.08-A		Duct construction - Minimum Sheet Metal Gauge
323.08(1)		Not used as chases for other mechanical systems
323.09(1)		Duct dampers (on accessible ducts)
T.323.08-B		Rigid Duct Support 12' o.c.
323.08(8)		Joints securely fastened
323.09(2)(b)		No return air openings in same room as atmospheric vented appliance
323.09(2)(b)		Doors undercut if no return air opening in room
Boilers		
T-(382.43-1)		Backflow prevention: per Table 382.43-1
Listing		Pressure/temperature blow off valve and pipe
Listing		Barometric damper in same room as appliance
WATER HEATER		
323.04		Installed per listing
323.18 (1)		Manual left at site
323.17 (2)		Twenty-four inches clearance in front of portions needing servicing
382.40 (5)(d)		Pressure/temperature blow off valve and pipe discharging within 6 inches of the floor or receptor but not less than 2 x pipe dia. to floor
323.06		Combustion air - see furnace section
NFPA 54 5.5.6		Gas sediment trap
NFPA 54 5.5.4		Gas shutoff within 6 feet
T-323.15-C		Six inches clearance to smoke pipe
323.045 (4)(d)4.		Smoke pipe sections securely joined and supported
Listing & NFPA 54		Sidewall venting - see furnace section
Wood Appliances		
323.045 (1)		To be listed and installed per listing
Listing		Proper clearances to combustibles
323.045 (5)		Proper floor protection
		Supplemental units (connected to furnace)
323.045(8)		Connected on warm air side of furnace (stove not to dump hot air into furnace return air cabinet)
323.045(8)(e)		Three feet separation between stove and furnace
Chimney Connector		
323.045(4)(b)		Eighteen inches clearance between single wall connector and unprotected combustibles
323.045(4)(c)		Readily accessible
323.045(4)(d) 4.		Sections joined with 3 screws or rivets
323.045(4)(d) 5.		Sections joined so creosote flows to stove
323.045(4)(d) 4.		Securely supported
		Damper installed
Chimney		
323.045(3)(b)		Vented to own flue
323.045(3)(a) 2		Lined masonry

323.045(3)(a) 1.		Factory built chimney to be 2100^{o} F. high temperature (HT) type
Ducts		
323.045 (9)		Supply duct clearances to combustibles
T- 323.045-F		First 3 feet from stove: 18 inches
		3 to 6 feet: 6 inches
		Over 6 feet: 1 inch
Final Inspection Guidelines **The following items are generally critical items that must be complying in order for occupancy to take place:**		
		All easily accessible electrical boxes closed up
		Bathroom and kitchen plumbing fixtures in place
		Smoke detectors
		Guardrails
		Steps and handrails
		Erosion Control measures to be maintained by owner until site is stabilized (70% perennial vegetative cover)
The following items may generally be noted as non-complying on the occupancy permit and not require re-inspection		
		Caulking
		Final Grade