

**City of Ravenna Building Department  
P.O. Box 88  
103 North Main Street  
Ravenna, Texas 75476  
(903) 449- 4616**

## **Residential Builder Packet**

**Adopted Codes:**

The City of Ravenna is currently under the following codes:

2014 National Electrical Code  
2015 International Building Code  
2015 International Plumbing Code  
2015 International Mechanical Code  
2015 International Energy Conservation Code  
2015 International Residential Code  
The City of Ravenna Code of Ordinances

**Application for Permits:**

To apply for a permit, provide two (2) sets of plans with diagrams, computations, specifications, and other data as may be required by the Building Official.

**New Home Constructiuon Plan Submittal**

1. Two (2) Site Plans with surveyor's # (no larger than 8<sup>1/2</sup>" X 14")

- Complete address
- North arrow
- Footprint of building
- Setbacks to all property lines
- All easements
- Location of fence

**\*\*\* A form board survey (FBS) is required to be submitted before a "green-tag" will be issued for the rough plumbing inspection. Form board may be erected and this survey will be allowed to serve as the site plan.**

2. Two (2) Sets of Construction Plans

- Floor Plan
- Elevation drawings
- Electrical and plumbing plans

**\*\*\* Engineered Foundation Plans are required for post tension foundations.**

**\*\*\* Engineered framing plans are required if the project is larger than 5000 sq. ft. or more than one story.**

3. Sub-Contractor Validation Sheet with proper signatures

4. Square Footage Breakdown

5. Historic Approval (if applicable)

6. Certification that the home complies with the most current International Energy Conservation Code 3rd party Energy inspection form due at final inspection.

7. Termite Protection Form due before final inspection.

### **Additions and Alterations**

1. Two (2) Sets of Site Plans (see above)
2. Two (2) Sets of Construction Plans (see above)
3. Engineer Letter as required by the Building Official
4. Sub-Contractor Validation Sheet with the proper signatures
5. Square Footage Breakdown
6. Historic Approval (if applicable)
7. Value of Construction

### **Landscaping Requirments**

New construction and remodels of 50% or greater are required to meet the following landscaping requirments:

1. Minimum requirments for landscaping on residential lots is 20 percent. Grass areas that are installed for the purposes of meeting the landscaping requirments of this section shall be sidded and/ or seeded, except that solid sod shall be used in swales, earthen berms or other areas subject to erosion. Grass areas that are existing at the time of development or redevelopment and that are left in natural state are exempt from this requirement.
2. A minimum of one 2" caliper tree is required in the front yard for the first 10,000 sq. ft. An additional 2" caliper tree is required for each additional 25,000 sq. ft. of the lot being developed. Existing or preserved trees are included in the minimum landscaping requirements.
3. All street right-of-way located adjacent to the proposed development shall be improved with grass amterial and shall be maintained by the property owner.

The City Manager or their designee shall have authority to authorize reasonable exceptions to a property's strict conformity with these regulations upon request of a property owner, when it is shown the requested exceptions (1) are not contrary to public interest or the spirit of the planned development, (2) do not cause injury to other properties in the area, and (3) allow for the development in a manner contemplated by the planned development.

### **Inspection Request:**

The General Contractor should call in inspection requestrs for work done on private property at (903) 449-4616 24 hours before you would like this inspection.

### **Required Residential Inspections:**

1. Temporary Pole (Trash bin and port-a-let must be on site at time of first inspection)
2. Ground Plumbing (with form survey on site)
3. Foundation
4. Seconds (i.e., Building Frame/Electric and HVAC/ PLumbing Top Out)
5. Brick Ties inspection may be called simultaneously with Building Frame Inspection
6. Flatwork (Walks/Drives/Patio)
7. Gas and Electric Meters
8. Finals (required before building is occupied). Backflow test form (if applicable), termite affidavit, and all permits pertinent to the address must be present at the time of final inspection.

**INSPECTION READINESS POINTS** - We have developed the following lists of standard inspection points in an effort to assist the builders in assuring readiness for inspections, preventing time delays, and lowering the incidence of re-inspections. These are the most basic expectations and are not intended to

supplant the code; nor shall they assure approval. Builder's packets are required to be on-site at all inspections.

***PLUMBING ROUGH INSPECTION (NOT INCLUSIVE)***

- An address visible from the street
  - The permit package containing:
    - The approved site plan
    - A form-board survey (with an original seal and signature)
  - A visible sewer tap connection
  - A city clean-out at the property line
  - A test tee in the sewer line (above the city clean-out, not at the bottom of the hole)
  - Water line material per code
  - All fittings and piping exposed for inspection
  - Sleeve the drainage PVC through beams and foundation
  - Proper drainage fittings
  - Proper fall on all drainage piping
  - Proper bedding for all drainage piping
  - A five foot plumbing stack water head test to the point of overflow
  - A connection between the hot and cold water lines
- (NOTE - Insulation of water lines allowed after the inspection approval)
- Yard PE gas line (if applicable)
  - Minimum 18 inches deep
  - Approved gas wrap material on pre-bent risers
  - Tracers wire in the trench

***REMEMBER:*** Erosion controls, debris control, trash bins, and porta-lets are always inspection points

***FOUNDATION INSPECTION (Not Inclusive)***

- An address visible from the street
- The permit package containing -
  - The City approved foundation plan
- Sleeve the drainage PVC and copper water lines through beams and foundation
- Tub boxes are installed
  - Concrete encased electrode is installed.

***ANCHORED VENEER (STONE OR BRICK) INSPECTION- This inspection may be requested prior to the Frame/MEP Inspection if all items below are in place:***

- Anchor ties completely installed to top plate
- U-Flashing installed with no unprotected wood
- All openings and penetrations shall be properly flashed and water resistant barriers installed
- All gas piping shall be wrapped with proper protection

***FRAME/ MEP INSPECTION (NOT INCLUSIVE)***

***Frame/ Electrical (NOT INCLUSIVE)***

- Wires in device boxes installed and fastened per code
- Anchor/ Fasten all load bearing plates per code (bolting) or with approved fasteners
- Mount device boxes to manufactures specifications and no box overfill
- Install all plan designed wall bracing and wall to plate and foundation anchors
- Wires stapled properly outside of box and throughout the structure
- Properly support beams per plan and/or code
- Jacuzzi electrical must be 4" above finished floor
- Install all flashing at gables
- New construction requires using new wiring and boxes
- Fire stop chimney chase installed
- Receptacles in kitchen and dining room placed and protected per code

- Headers installed per plan and/or code
- Rafters, Ridges, Hips, and Valleys installed with full bearing and load distribution
- Support Roof framing members
- Joist hangers installed where required and fully nailed
- Draft stop dead air space, double walls, and chases
- House must be poly sealed

***Plumbing Top-Out (NOT INCLUSIVE)***

**NOTE-** The attic access pull down stair must be securely installed for inspection with a minimum 300 pound design load.

**Gas supply - Black pipe (installer to provide BTU input information)**

- Wrapped through brick
- Sized per code
- Tested to 3 PSI on 20 kPa gauge - set indicator to test pressure

**Gas supply - Flexible stainless steel tubing (installer to provide BTU input information)**

- Nail guards and gas line blocking
- Terminations at equipment
- Tested to 3 PSI on 5 to 20 kPa gauge
- Tested to 5 PSI on 10 to 15 PSI gauge on high side

**Drain, Waste, and Vent Piping - DWV sizing per code**

- Trap arms (length, fall, size, and bends)
- Closet bends centered 15 1/2" (minimum) to framed walls and flanges secured
- Built up showers blocked and tested
- Tub boxes sealed - rat proofing
- Each floor rough tested to above lavatory arms (5' head test)
- Vents through roof and flashed

**Water- Supply and Distribution piping sized per code**

- City pressure on hot and cold water - anti scalding valves installed where required
- Insulated in garage walls, outside walls, and in attic
- Water heater T&P line roughed-in and pan drain installed
- Water heater vent roughed, flashed, and secured 1" from combustibles
- Frost proof hose bibs secured to building frame

**Mechanical (NOT INCLUSIVE)**

- All equipment installed (ducts, vents, makeup, primary/secondary drains, etc.)
- Access walkway and required working platform and lighting installed per code
- Exhaust air (moisture fan) unit installed and ducted to outside per code
- Fireplace unit installed and chimney/vent extended to outside
- Range hood installed and if vented to outside, duct installed per code

***RESIDENTIAL TEMPORARY METERS (NOT INCLUSIVE)***

**House Ready for Inspection:**

- Address posted
- House bricked/ sided and sheet rocked
- Electric trim complete
- Gas shut off valve in place
- Seconds inspections shall be completed
- Gas and electric provider must be clearly marked on the breaker panel cover

-All trash and debris removed from house and garage

**Panel Readiness:**

- All breakers marked
- No exposed wires anywhere in the house
- Front panel cover to be removed (to be reinstalled after passing inspection)

**For temporary heating and AC only:**

- Breaker for 220 V plug in laundry
- Breaker for 110 V, GFCI circuit in laundry
- Breaker for furnace
- No other openings in panel
- Front panel cover to be removed (to be installed after passing inspection)

**Panel Ground Connected to Rod:**

- All ground rod shall be driven the full length to where the rod is at grade level. The UL listing shall be showing and facing away from the house or the T-Pole. Therefore, you must remove a shovel of dirt in front of the ground rod exposing the UL listing. The inspector will push the dirt back in the hole to cover the rod after the inspection. This procedure will be followed at T-Pole Inspections and at all Temporary Heat Inspections.
- Cold Water Ground (GEC) installed per code and connected and exposed if applicable
- Access to Attic Units - walk way and working platform installed per code
- Gas valve with sediment traps installed and capped or connected to unit with bonding
- Master tub installed with required bonding
- Connection to the concrete encased grounding electrode exposed
- Water heater installed and vented with all gas stops

**TEMPORARY HEAT - This must be approved on a case by case basis**

***BUILDING/ PLUMBING, MECHANICAL & ELECTRICAL FINAL INSPECTION (NOT INCLUSIVE)***

- No Debris and construction materials in empty/adjoining lots
- Addressing posted (front and back, if alley)
- No Spilled concrete on street, approach, and walks
- No Broken or cracked concrete city walks or cross slope over 2%
- Ground rod and grounding electrode conductor connected
- AC unit maximum over current device rating identified in panel-board
- Garbage disposal operable
- GFCI's located per code and with working labels
- Smoke detector and carbon monoxide detectors installed and operable
- Stair handrails installed to code
- Tempered glass located per code
- Receptacles located per code
- Seal fireplace lehtil and log lighter with approved fire caulk
- Permit apr work on site with current drainage survey, third party final energy letter affirming final approved inspection of compliance, termite protection form on City approved form
- Landscape installed where required by plans- see landscape requirements\*
- No lot to lot drainage
- Provide copy of the County final approved Septic/OSSF report or letter\*\*
- Water meter can complete and to grade
- City clean-out with approved cap- House clean outs with PVC caps
- PVC vents above the roof painted
- All plumbing and fixtures completed, including the safety glazing on shower/tub enclosure
- Water closet secured rigidly to the floor
- All gas appliances connected correctly (if installed)
- All attic catwalks and work platforms solid, secure, and unobstructed

- Combustion air for gas appliances
- All plumbing fixtures to be securely installed - including deep sinks
- T&P line termination no less than 6" from floor or receptor
- Air gap fitting on all dishwasher installations
- Expansion tank installed if thermal expansion encountered and not controlled
- Locate city water valves and fire hydrant valves\*

### **Section R324 Protection against Termites:**

In an effort to better serve our citizens and allow more flexibility for our construction customers, the City of Ravenna requires an affidavit from builders assuring that new construction meets or exceeds the IRC requirements for protection against termites. The affidavit should be left on the kitchen counter at the time of the final inspection. The code references are as follows:

**R324.1 Subterranean termite control.** In areas favorable to termite damage as established by Table R301.2 (1), methods of protection shall be by chemical soil treatment, pressure preservative treated wood in accordance with the AWPA standards listed in Section R323.1, naturally termite-resistant wood or physical barriers (such as metal or plastic termite shield), or any combination of these methods.

**R324.2 Chemical soil treatment.** The concentration, rate of application, and treatment method of the termiticide shall be consistent with and never less than the termiticide label.

**R324.3 Pressure preservative treated and naturally resisted wood.** Heartwood of redwood and eastern red cedar shall be considered termite resistant. Pressure preservatives treated wood and naturally termite-resistant wood shall not be used as a physical barrier can be inspected for any termite shelter tubes around the inside and outside edges and joints of a barrier.

**R324.3.1 Field treatment.** Field cut ends, notches, and drilled holes of pressure preservative treated wood shall be retreated in the field in accordance with AWPA M4.

**R324.4 Foam plastic protection.** In areas where the probability of termite infestation is "very heavy" as indicated in Figure R301.2(6), extruded and expanded polystyrene, polyisocyanurate and other foam plastics shall not be installed on the exterior face or under interior or exterior foundation walls or slab foundations located below grade. The clearance between foam plastics installed above grade and exposed earth shall be at least six (6) inches (152 cm).

Exceptions:

1. Buildings where the structural members of walls, floors, ceilings, and roofs are entirely of noncombustible materials or pressure preservative treated wood.
2. When in addition to the requirements of R324.1, an approved method of protecting the foam plastic structure from subterranean termite damage is provided,
3. The interior side of basement walls.

### **Construction Site Standards**

These guidelines establish uniform standards for the installation and maintenance of required systems. They are to be considered the standard for all building sites in the city. Due to variances in site elevations or grade, some sites may have modified standards to meet the requirements of established ordinances. Modifications, if any, will be reviewed and approved by the Chief Building Official on a case-by-case basis.

### **Standards**

1. **PORTA-LET:** All residential and commercial sites are required to have one porta-let per lot.
  - a. **Exception 1:** If two lots are side by side on the same side of the street, one porta-let

- may serve the two lots.
- b. Exception 2:** The porta-let may be removed from the lot only when a working toilet is properly installed in the structure for the use of the workers. On commercial sites, one porta-let for every 10 persons on the site is required.
2. **TRASH BIN:** Trash bins are required on all construction sites. On residential lots, the minimum requirements are 3-sided OSB or plywood bins, well nailed, OR 3-4 sided chain link fence panels properly secured. Chain link material will be no larger than 2"X2" square.
- a. Exception:** Trash bin will not be required after the brick package is completed. The garage may be used for storage of excess materials and refuse until final inspection, in which case it must be empty. NO debris will be allowed on the lot. *On commercial sites an industrial refuse container is required for the duration of the project.*
3. **ADDRESS AND SIGN:** All lots must have a company/builder sign located at the front of the lot facing the street. The lot address must be clearly posted and be easily seen from the street. Addresses painted on curb are not acceptable. It is highly recommended that independent and private builders include a contact phone number on their sign.

### ***Drive Approach and Sidewalk Inspection Guidelines***

- If block-out has damaged remaining curb, saw out damaged area
- If the block-out is within two feet of redwood header or saw joint, extend the block out to the header or joint
- Check for valve boxes, water meters, and sewer cleanouts in proposed paving locations
- If applicable, remove concrete pad from valve box and adjust to grade; pour new pad sidewalk if valve is in walk
- Expansion joints on sidewalks every 20 feet and/or equally spaced
- At a storm drain inlet, move driveways as far from them as possible. Car will drag due to increased curb height
- Sewer service needs to be compacted before walk is poured. Install traffic-bearing cleanout if in right of way
- Install smooth dowels with proper caps at property line on sidewalks. Dowel into street at wheelchair ramps. Dowel into redwood expansion between drive approach and driveway and epoxy seal dowels into street
- Provide expansion material at curb for jump walk
- No exposed aggregate permitted
- Be aware of potential differential setting on sidewalk
- Drive approach slope must end at face of gutter- not at end of block out
- In bar-ditch sections, check downstream culvert size, where applicable, to assure sufficient size to pass the flow
- No wooden stakes allowed below grade
- Required on sidewalk 3/8 rebar 12" on center OR #6 mesh