



RESIDENTIAL CONSTRUCTION INFORMATION PACKET

Implemented: November 6, 2013

201 N Ector • Euless, Texas 76039 • (817) 685-1630 • Fax (817) 685-1628

www.eulessstx.gov

GENERAL INFORMATION

REQUESTING INSPECTIONS:

- All inspections must be requested using the IVR system by calling (817) 685-1634. (See attached IVR instruction sheet)
- Inspections requested prior to 8:00 pm will be performed the next business day.
- Inspection requests will not be submitted through the office.
- Inspections which are requested during inclement weather or muddy/slick conditions, may be cancelled for the safety of the inspector.
- Cancellations. Inspections should not be requested until the contractor has verified that the work is complete and ready for inspection. Cancellations should be requested through the IVR system. Cancellations after the 8:00 pm cut off time shall be called to (817) 685-1630. Do not leave cancellation requests on voicemail.

OFFICE HOURS

- City office hours are 8:00 am to 5:00 pm.
- Office hours for inspectors vary from day to day, but are typically available from 8:00 a.m. – 9:00 a.m. and 4:00 p.m. – 5:00 p.m. each day.

REINSPECTION FEES:

- A re-inspection fee of \$94.00 may be assessed and no inspection performed until fee is paid when any of the following conditions apply:
 1. The inspection requested is not ready when the inspector arrives.
 2. The permit packet or the address of the site is not posted.
 3. City approved plans are not on site and available to the inspector at time of inspection.
 4. The work is red tagged for the same item(s) twice.
 5. The original red tag has been removed from the site.
 6. Violations exist on the property including failure to maintain erosion control, trash control, or tree protection.

LOCATION OF PERMIT PACKETS AND INSPECTION TAGS

- City approved building plans must be available on the job site when all inspections are conducted.
- In order to allow for uniformity and the most efficient use of time, permit packets must be on the construction site at the location specified below. Inspection tags will be placed inside the permit packet by the inspector once the inspection is completed. The inspection tag must remain where left by the inspector until the inspection is approved.
 1. T-Pole, Plumbing Rough & Foundation – The permit packet must be located on the form board facing the street.
 2. Top-Out, Frame, Utility Final– The permit packet must be adjacent to the front door of the house.
 3. Building Final-The permit packet must be located in the kitchen on the countertop

CONSTRUCTION TIMES

Construction times are 7:00am to 6:00 pm weekdays only.

LOST PERMIT PACKAGES

Lost permit packages-If a permit package is lost or damaged, including the approved plans, a \$94.00 re-inspection fee is required. The contractor must submit all materials normally required for plan review to the City for a re-stamp. The plans will be ready for pickup in 24 hours.

ENERGY INSPECTIONS

The City of Euless does not inspect for energy code compliance. The builder must contract with certified/licensed individuals to perform energy inspections and present an approved inspection(s) to the City at Building Final.

PLAN REVIEW/PERMIT SUBMITTAL REQUIREMENTS

PLAN SUBMITTAL

- Regular permit applications will generally be reviewed within five (5) working days.
- All plan submittals that are not master plan submittals must contain two (2) complete sets of the documents listed below.
 1. Site plan indicating all property lines, easements and setbacks of the proposed building.
 2. Floor Plans. Options and elevations not used must be marked out
 3. Elevations showing exterior wall construction and masonry percentage calculations.
 4. Floor/Ceiling Framing Plan
 5. Roof/Ceiling Framing Plan
 6. Mechanical Plan
 7. Plumbing Plan
 8. Electrical Plan
 9. Foundation drawing stamped by a professional engineer licensed by the State of Texas. Stamping of plans must conform to Texas Engineering Board guidelines by including the FIRM number and title block of the engineer.
 10. Engineer's Letter-One original letter from the same engineer that designed and sealed the foundation plans stating that the foundation was designed for the soil conditions on that particular lot. The letter must also state that the foundation design criteria

complies with the minimum standards required by the 2009 International Residential Code.

11. Energy calculations from REScheck or IC3 software indicating that the building complies with 2009 IECC energy requirements or REM Rate.
12. Wall Bracing plan in accordance with 2009 IRC
13. Noise Reduction Letter-If structure is to be erected in the aircraft exposure zone “b”, the following certification shall appear on every sheet of the building plans. “(NAME), a registered professional engineer or architect of the State of Texas, has examined the plans and specifications, and does hereby certify that when the structure is constructed in accordance with these plans and with quality workmanship that the structure will provide a shell isolation rating (S.I.R.) of not less than 25 points.”
14. A drainage plan showing:
 - a. Footprint of house
 - b. Driveway
 - c. Building lines
 - d. Drainage flow arrows

CONSTRUCTION PRIOR TO PERMIT

- No construction, other than setting form boards and lot grading, may begin until a building permit has been issued.

PARKING

- Instruct all subcontractors and their employees to park in such a way that emergency vehicular traffic will not be obstructed, i.e., fire trucks and ambulances.

ADDRESSES

- Building addresses must be posted in a location that is conspicuous from the street on each lot at all times. Numbers must be a minimum of four inches (4”) in height. In addition, addresses must be posted on all temporary electrical poles.

SIDEWALKS, DRIVEWAYS, AND APPROACHES

- The City of Euless Public Works department must inspect all sidewalks, driveways, and approaches within the public right-of-way. Planning and Development inspects all flatwork on private property.
- All flatwork must meet attached “Street Paving Standards” or “Typical Sidewalk Plan.”

RESIDENTIAL INSPECTION REQUIREMENTS

TEMPORARY POWER POLE (IVR CODE:200)

- Legible address numbers must be posted on one brace of the T-pole. Numbers must be at least four inches (4") in height and plainly visible from the street.
- Covers which are weather resistant when in use (bubble covers) required on all outlets.
- Pole is to be braced with two braces, secure and stable.
- All breakers and receptacles must have legible amperage/voltage markings.
- Temporary Power pole must be in code-approved state through the duration of construction.

PLUMBING ROUGH (IVR CODE :100)

- No plumbing rough inspections will be made if it has been determined that it is too wet.
- All rained out inspections must be recalled
- Plumbing rough inspections cannot be performed if the temperature is below freezing or in wet weather.

1. Water Lines

- a. All water lines must be Pex or Copper. PVC is not approved for water lines.
- b. A water pressure gage must be installed on water piping system. If water pressure is above 80 psi, a Pressure Reducing Valve must be installed.
- c. The water meter box must be set if water meter is present.
- d. T & P (pop-off) lines for water heaters cannot be run in slab.
- e. All hot water piping, whether pex, copper, must be insulated.
- f. All piping located under the slab must be continuous with no joints or splices
- g. Water service line must be continuous from meter to house shut off valve without splices..
- h. The water meter must be in place with all valves open to allow for testing of the lines at City water pressure.
- i. Where a water service crosses a sewer ditch, the water line must be installed in a PVC sleeve.
- j. Water lines through grade beams must have an approved sleeve 2 pipe sizes larger.
- k. Vertical pipes in walls shall have pipe chases.

2. Sanitary Sewer

- a. Cell Core piping is not allowed under the foundation.
- b. The plumbing rough must be tested with a five-foot (5') head of water on all stacks in the house. The five-foot measurement will be taken from the top of the pad. If the last stack is too high to see water in the pipe, the inspection is subject to receiving a disapproval tag. The water test must include the sewer yard line
- c. Air test is not allowed on PVC piping.
- d. The main objective of a water test is to allow the inspector to look for wet spots along the plumbing piping. Overfilling the stacks to the point that the ground is wet around sewer piping will cause the inspection to fail.
- e. All holes dug for sewer taps that are deeper than four feet (4'), must be protected by a temporary construction fence.
- f. The Building Sewer must be connected to the City's sanitary sewer system.

- g. All sewer tap holes must be filled immediately after approval of the Plumbing Rough inspection. If the Foundation inspection is requested and performed prior to filling of the hole, the inspection will be classified as not ready.
- h. All lines must rest on a two inch (2") bed of cushion sand or fill dirt and all lines, traps and fittings must be completely exposed.

FOUNDATION (Code 400)

PRIOR to foundation inspection request, the following items must be submitted to Planning and Development for approval:

1. A form board survey sealed by a licensed surveyor
 2. A "form survey and building pad certification" form must be submitted and approved prior to requesting a foundation inspection.
 3. A finish floor elevation letter (if in floodplain)
 4. A drainage grading plan showing:
 - a. List and show all elevations on lot
 - b. Spot elevations for grading
 - c. Flow arrows
 - d. Finish Floor elevation
- A qualified testing lab is required to take test cylinders at the time of pour. Breaks are required at 7, 14, and 28 days. Lab report must be submitted at building final inspection.
 - All foundation plans must be sealed by a structural engineer.
 - An engineer's approved inspection of the foundation is required prior to concrete placement
 - No concrete inspections will be made if it has been determined that it is too wet or too cold (to pour concrete). All rained out inspections must be recalled.
 - After foundation pour, remove all form boards, perform all grading from slab to property line, THEN obtain lumber package drop and have trash bin put in place prior to framing inspection.
 - All work must conform with the engineered plans with no addition or subtractions to the approved plans. No changes can be made to the foundation after inspection approval without requesting another foundation inspection.
 - All piers shall be flush with the bottom of beam and free of debris.
 - If plastic water pipe is used, a concrete encased electrode must be installed. Concrete encased electrodes must extend at least 20 feet through the concrete. The preferred method is to use a #4 rebar that is at least 20 feet long (you can splice more than one piece of rebar together to get the 20 foot length as long as the bars are adequately tied together. Near the panel box, bend the bar to that it extends through the location of the bottom plate and extend about 2 feet through the bottom plate. At the electrical rough, extend the ground wire from the main panel to the rebar and clamp the ground wire to the rebar.

ROOF Felt (Code 405)

- Inspection requested prior to frame group.
- The purpose of this inspection is to ensure proper coverage of roofing felt prior to installation of shingles.
- Felt must be properly installed with shedding and proper coverage of decking.
- Drip edge must be installed.

MECHANICAL ROUGH (Code 300)

- Flexible ducts shall be supported with 6" metal saddles with 1' metal straps. Maximum spacing for supports is four feet (4'). Some manufacturers require supports every two feet (2'). Turns must be made in such a way that the airflow is not deterred.
- Metal ducts shall be screwed, joint mastic applied and inspected before insulation.
- Bath exhaust fan ducts must extend to the outside of the building. Where a fan is installed in a toilet room with a door, a second fan will be required in the room with the bathtub or shower.
- Dryer vents are limited to a maximum length of thirty-five feet (35'). The thirty-five foot (35') length includes two (2) ninety degree (90°) fittings. Additional fittings over and above the two (2) allowed will reduce the maximum length of the vent by two feet (2') for every ninety-degree (90°) fitting (or combination of fittings that total 90°). Dryer vent connections must be taped with high temperature tape and not screwed.
- Dryer vents extending through a roof must include a tight fitting collar to keep lint from falling back into the attic.
- Attic access to a gas appliance (water heater or furnace) cannot be made from the garage or a sleeping area and must be within twenty feet (20') of all furnaces and water heaters.
- Air conditioning outside units must have 7' minimum from house to property line to be placed on the side yard.

ELECTRICAL ROUGH (Code 210)

- Metallic boxes must be used when encased in masonry.
- A cold water ground may be used when copper water lines are used.
- All circuits that are not GFCI protected must be ARC fault protected.
- CSST manifolds must be properly bonded per manufacturer's specifications.
- Circuits for smoke detectors must be roughed in. Smoke detectors must be located in each sleeping room INCLUDING STUDIES, MEDIA ROOMS, AND SIMILAR ROOMS and outside of each sleeping area in the immediate vicinity of the sleeping area. Additionally, at least one smoke detector is required on each story of a building. Smoke detectors must be interconnected so that if the alarm sounds on one detector, it triggers the alarm of all of the smoke detectors in the house.
- Circuits for carbon monoxide detectors must be roughed in. Carbon monoxide detectors must be located outside of and in the immediate vicinity of each sleeping room.

PLUMBING TOP-OUT (Code 110)

1. Water

- a. Water heaters are not allowed in attics.
- b. All copper lines must be braced.
- c. T & P lines must be composed of hard drawn copper or CPVC. T & P lines cannot be composed of PVC material and cannot be installed in slab.
- d. Frost proof hose bibbs with non-removable vacuum breakers must be installed.
- e. All copper located in the brick ledge must be wrapped.

2. Sewer

- a. Cell Core piping is not allowed underneath a slab.
- b. A top-out water test is required for all plumbing located above the first floor. Lines must be tested at least two feet (2') above the trap arm, but no less than six feet (6') above the highest floor.
- c. Water heaters must have a drip pan with a drain line to the outside of the building.
- d. Water heater T&P lines must be roughed in from the water heater location to the outside of the building.
- e. Air admittance valves are not allowed unless approved by the Building Official prior to installation.
- f. Island loop vents must utilize the following fittings in the order listed: a 45° fitting, a short-turn 90° fitting and a 45° fitting.

3. Gas Lines

- a. Where a gas piping system is utilized that contains a working pressure greater than ½ p.s.i., an air test of at least ten pounds per square inch (10 p.s.i) on a diaphragm gauge that has a set hand and has a maximum range of twenty (20) p.s.i. is required. For portions of CSST piping that are regulated to a working pressure of less than ½ p.s.i, a 3 psi test with a diaphragm gage that has a set hand and has a maximum range of six (6) p.s.i. is required.
- b. Holes cut for gas lines must only be large enough for the line to penetrate.
- c. Gas lines must be properly supported.
- d. Gas lines located between bricks and studs must be factory mill wrapped.
- e. All gas outlets must have approved gas stops installed along with caps.
- f. No water, soil, or waste pipe can be installed or located outside of a building, in an unheated area or in an exterior wall unless, adequate provisions are made to protect such lines from freezing.
- g. Gas vents must terminate at least 4 feet from any wall.
- h. CSST manifolds must be properly bonded per manufacturer's specifications.
- i. CSST lines must be labeled at header on gas lines themselves.

FRAMING (Code 410)

- Hurricane straps are required on every rafter tied to the top plate.
- Rafters must be framed directly opposite each other at the ridge. The size of the ridge must be so that it is not less in depth than the cut end of the rafter.
- Valleys and hip rafters must not be less than two inches (2") nominal thickness and not less in depth than the cut end of the rafter.
- Rafter, hip and valley splices must be spliced as follows. The spliced member must have a dove tail or an angle cut with a brace directly under the splice running to a load bearing wall. One side of the splice must remain open to allow the inspector to verify that the proper cut is made on the splice. The opposite side of the side left open must have a scab piece spray nailed to the spliced member that is the same size as the hip, rafter or valley. The scab piece must be long enough to extend at least two feet (2') beyond both sides of the splice.
- All lumber must be grade stamped. Unstamped lumber is unacceptable.
- Any engineer's letter on structural repairs, including trusses, must include stated repairs plus a letter that the engineer has inspected the member after repairs have been made and the repairs are structurally sound.
- All penetrations in top plates must be sealed. Small penetrations may be poly sealed.

- Holes in exterior sheathing must be sealed.
- Covered porches and patios must be inspected to verify proper structural framing prior to installing fascia material.
- All enclosed stairways must have 5/8" type x sheetrock on the underside of the stairs inspected at frame stage.

BRICK TIES (Code 460)

- Brick ties must be installed on the entire perimeter of the first floor.
- Bricktie spacing maximum 33" on center each way
- Moisture barrier is required on top of brickledge.

TEMPORARY ELECTRIC SERVICE (Code 250)

- All wires must be terminated with a receptacle, switch, appliance or fixture -- or all wire ends must have wire nuts and placed in an electrical box with a blank cover installed. If appliances and fixtures are on site, all electrical connections to those appliances or fixtures must be complete.
- Cover must be off of the main electrical panel.
- All required grounds must be installed. If a cold water ground is utilized, you must also have a supplemental ground such as an eight foot (8') ground rod. Concrete encased electrodes must have an access cover exposing the connection of the ground wire to the rebar. All ground clamps and connections are to be tight.
- Neutral and ground conductors must be properly coded and identified.
- The meter base must be bonded to the main panel box. If metal conduit is installed between the meter and the main panel, the conduit will serve as the bond. If plastic conduit is used, a bond bushing will be required.
- Feeder wires and branch wires must be protected by the proper sized breaker or fuse.
- All receptacles and switches must be installed.
- Bare bulb incandescent lights must not be installed in closet storage areas. Incandescent lights in closet areas must be located at least twelve inches (12") from any shelf. Fluorescent lights in closets must be installed at least six inches (6") from any shelf. LED lights can be installed at any location within the closet.
- All light fixtures located within thirty-six inches (36") horizontally and less than eight feet (8') of the lip of a bathtub or shower must be waterproof.
- CSST manifolds must be properly bonded per manufacturer's specifications.

TEMPORARY GAS SERVICE (Code 150)

- Where a gas piping system is utilized that contains pressure greater than ½ p.s.i., an air test of at least ten pounds per square inch (10 p.s.i) on a diaphragm gauge that has a set hand and has a maximum range of twenty (20) p.s.i. is required. For portions of gas piping that are regulated to less than ½ p.s.i, a 3 psi test with a diaphragm gage that has a set hand and had a maximum range of six (6) p.s.i. is required.
- Gas stops at each appliance must be properly secured for all types of piping including CSST systems.
- All gas lines must be connected. Gas stops and caps must be installed on any gas line for future use.
- Gas connectors must not exceed three feet (3') (except for clothes dryers and ranges, which must not exceed six feet (6')).
- CSST manifolds must be properly bonded per manufacturer's specifications.

MECHANICAL FINAL (code 399)

- Each combustion air vent must be a minimum of one cubic inch for every 4,000 BTU of the appliance rating. (A 40,000 BTU water heater will require a ten (10) square inch vent in the bottom twelve (12) inches of the closet and a ten (10) square inch vent in the upper twelve (12) inches of the closet.
- A mechanical heating system must be operational that is capable of maintaining a temperature of 68 degrees Fahrenheit (68°) at a point that is three feet (3') above floor level and two feet from exterior walls. The installation of one or more portable space heaters shall not be used to achieve compliance with this requirement.
- Vent fans must be operational in bath and utility rooms. Where a water closet is separated from the shower or tub area by a door, the fan is required to be installed in the shower or tub area.
- A solid walkway at least twenty-four inches (24") wide must be installed from attic openings to furnaces, water heaters and gas regulators. The distance from the opening to the equipment cannot be any further than twenty feet (20'). A thirty-inch (30") working platform is also required directly in front of the equipment.
 1. Drain pans must be clear of debris and insulation.
 2. Flue pipes must be raintight at roof penetration.
- Clearances required for flue pipes. 1" for furnaces, water heaters and gas dryers, 2" for fireplaces.
- Fireplaces:
 1. Gas log fireplaces must have damper interlock or damper block
 2. Log liter gas line must be sealed
 3. Flue pipe must not be damaged or altered
 4. Minimum 2" clearance to combustibles for flue.
 5. Hearth must be distinguishable from remainder of floor.
 6. Gas valve with key required on all fireplaces.

ELECTRICAL FINAL (Code 299)

- The electrical meter must be installed. No inspection will be performed until the electrical meter is installed.
- A permanent electrical outlet and light fixture controlled by a switch located at the required attic opening must be provided at or near air-conditioning and water heater equipment.
- Circuits must be labeled in breaker box.
- Electrical outlets located in garages that are not GFCI protected must be single receptacles and labeled.
- Jacuzzi access panels must be at least 12" X 12" with clear access to the motor (no pipes, wires, etc.). The opening must also be close enough to reach the motor in order to do maintenance on it and large enough to remove the motor for repair or replacement. The Jacuzzi access panel must be removed for inspection.
- All HVAC equipment must have an electrical disconnect within site of the equipment served.
- Water Heaters must have an electrical disconnect within site of the water heater.
- All receptacles located outside the building, in a garage, in a bathroom, serving a kitchen countertop and receptacles within 6 feet of any other sink must be protected by a ground fault circuit interrupter.
- All circuits that are not GFCI protected must be ARC fault protected.

- Receptacles installed less than 5.5 feet off of the floor must be tamper resistant.
- Incandescent lights installed in a closet must be at least 12 inches from the plane of the shelf and not just measured to the shelf itself. Fluorescent lights must be installed at least 6 inches from the plane of the shelf. LED lights can be installed at any location within the closet.
- Exterior receptacles must have weather resistant when in use (bubble covers) where required by code.
- Exterior receptacles must be 36" min. from hose bibs or sprinkler heads.

PLUMBING FINAL (Code 199)

- The gas meter must be installed. No inspection will be performed until the gas meter is installed.
- All gas lines must be connected. Gas stops and caps must be installed on any gas line installed for future use.
- All plumbing fixtures must be installed. Any drain or water line that is installed for future use or expansion must have permanent caps.
- Frost proof hose bibbs with integral vacuum breakers must be installed.
- Sewer cleanouts must be cut so that the top of the cleanout is between one inch (1") and two inches (2") from the top of the ground.
- Hot water must correspond to the left side of fittings on plumbing fixtures.
- Dielectric unions must be installed within twelve inches (12") of regulation equipment, water heaters, conditioning tanks, or other similar equipment. Flexible water connectors with dielectric nipples can be used in place of unions.
- PVC vent stacks must be painted to match roof.
- Air gap fittings must be installed on all dishwashers.
- Gas connectors must not exceed 3 feet (except for clothes dryers and ranges which must not exceed 6 feet).

BUILDING FINAL (Code 499)

- All work is to be complete. No workers should be on the site at the time of inspection.
- Letters to be received are:
 1. CSST letter from plumbing company on company letterhead stating they have installed to manufacturer's specifications.
 2. Energy Code/Energy Star final report-Sticker must be placed at circuit breaker box.
 3. Concrete break test report from Engineer
 4. Engineer's approval letter on foundation.
 5. Lot grading letter from builder stating the drainage patterns have not been significantly altered from approved subdivision drainage plan.
 6. Letter from plumbing company on company letterhead stating the current water pressure at final, and if a Pressure Reducing Valve has been installed.
 7. If house is in a floodplain, a finish floor letter is required.
 8. Pex letter from plumbing company on company letterhead stating they have installed to manufacturer's specifications.
- A solid walkway at least twenty-four inches (24") wide must be installed from attic openings to furnaces and gas regulators. The distance from the opening to the equipment cannot be any further than twenty feet (20'). A thirty-inch (30") working platform is also required directly in front of the equipment.

- Street, alley, and all flatwork must be clean and clear of mud and debris with no damage.
- Yard must be clear of debris with final grade and landscape completed. Typical landscape requirements, unless otherwise noted, are 14 shrubs and 2, 2-inch caliper trees in the front yards of the house.
- A permanent address must be installed on the front and rear of the house (rear address is only required when driveway access is provided from the alley) with 4" minimum height numbers of contrasting color to background.
- Hard wired smoke detectors with a battery backup must be located in each sleeping room INCLUDING STUDIES, MEDIA ROOMS, AND SIMILAR ROOMS and outside of each sleeping area in the immediate vicinity of the sleeping area. Additionally, at least one smoke detector is required on each story of a building. Smoke detectors must be interconnected so that if the alarm sounds on one detector, it triggers the alarm of all of the smoke detectors in the house.
- Hard wired carbon monoxide detectors with a battery backup must be located outside of and in the immediate vicinity of each sleeping room when gas fired appliances are installed in the house.

This packet is only intended to be a helpful reference. Therefore, the above requirements are only a general list of building, electrical, plumbing, and mechanical code regulations. For a complete list of building requirements refer to:

2009 International Residential Code

2011 National Electrical Code