



RESIDENTIAL CONSTRUCTION PACKET

Updated January 23, 2018

Residential Plan Review is 5 – 10 business days

This packet is only intended to be a helpful reference. Therefore, these requirements are only a general list of building, electrical, plumbing and mechanical code regulations. In the event that any section/item in this handout is found to be in conflict with the applicable adopted Code(s), the applicable adopted code section will prevail.

The Following are the currently adopted codes:

2015 International Residential Code
2017 National Electric Code

2015 International Energy Conservation Code

- The “Inspector of Record” shall have necessary onsite judgment discretion within the scope of currently adopted Code(s), Code Amendment(s) and City Ordinance(s). The Building Official or appointed designee shall in the event of project conflict as to interpretation, implementation or application of currently adopted Code(s), Code Amendment(s) or City Ordinance(s); intercede and assist in the mediation of a joint mutual solution within the scope of the adopted Code(s), Code Amendment(s) and City Ordinance(s).

EROSION CONTROL:

- Lots shall be mowed regularly as needed to keep ground cover less than twelve inches (12”).
 - During construction removal of natural ground cover should be as limited as possible during installation of: building, sewer, water service and foundation.
 - If lots do not have complete natural ground cover, lot owner must install and maintain silt screen or curlex systems.
 - Staggered bales and curlex roll systems should be installed and maintained at lowest point of swale to control runoff.
 - All storm drain inlets to have silt screen or curlex rolls installed and maintained. Storm inlet protection must follow SWPPP plans submitted by developer and be compliant with applicable TCEQ and City of Wylie rules, regulations and ordinances.
 - Streets shall be cleaned of any silt, sediment, or runoff within twenty four (24) hours of rain event or during the next business day.
 - Mud carried to the street by vehicles leaving lots shall be cleaned up immediately.
 - Concrete spillage shall be cleaned up immediately.
 - Must have assigned concrete wash-out area on site with directional signage to lot. Lot must have a sign. A letter must be submitted to the Building Inspections Department stating what lot the wash-out site will be on.
 - As subdivision enters build-out phase (less than 10 lots); Infill lots shall have “lot specific, onsite concrete wash out provisions” in place for that specific construction project”. Contact City of Wylie Building Inspection for a detail sheet. A letter must be submitted to the Building Inspections Department if the concrete wash out is being shared and must state the lot that wash-out is on.
- ❖ Failure to install and properly maintain erosion control systems can result in:
 - ✓ Re-inspection fee(s)
 - ✓ Citations

- ✓ Inspections being placed on hold
- ✓ Subdivision being closed

The above items are subject to Supervisory discretion.

BUILDING FINAL:

- Required subdivision specific landscape and sod shall be in place to remove silt screen/curlex systems. Erosion control measures shall be installed and maintained around all un-sodded yard/lots that do not have complete natural ground cover.
- May install four foot (4') wide strips of sod along perimeter of un-sodded area as erosion control with remainder to be installed within thirty (30) days. This will only be allowed during drought conditions. A letter of request stating the reason and duration must be sent to our office along with a site showing the erosion control. The letter must be site specific.
- Hydro mulch may be substituted but must be applied to complete lot and repaired within twenty four hours (24) after rain event where wash off occurred.

GENERAL REQUIREMENTS:

- No construction other than setting form boards and lot grading, may begin until a building permit has been issued.
- All subcontractors and their employees shall park in such a manner that emergency vehicular traffic will not be obstructed, i.e. fire trucks, ambulances and police.
- Building addresses shall be posted in a location that is visible from the street on each lot at all times. Numbers shall be a minimum of four inches (4") in height with contrasting background and one half inch (1/2") stroke minimum.
- Addresses shall be posted on all temporary electrical poles minimum of four inches (4") in height with contrasting background.
- Due to obvious safety considerations, citations shall be issued to the job superintendent, electrician, electrical contractor or an officer of the general contractor if temporary power is tied directly into the permanent breaker box.
- An eight by eight by four foot (8'x8'x4') high trash container (bin) is required on the job site prior to beginning any work. The trash bin shall be four (4) sided and made with solid materials. NOTE: For uniformity, locate all trash containers in the front yard between the house and the street. Other locations shall be approved by the Building Official or Chief Building Inspector. Blowing trash/construction debris must be cleaned up within seventy two (72) hours of notice to comply.
- All new construction adjacent to occupied houses shall install a construction fence (**minimum forty two inches (42") height**) encompassing project site along property lines prior to site start-up and shall be maintained until utility final.
- All re-inspection fees shall be paid prior to the requesting of further inspections. When a re-inspection is requested on a project and the re-inspection fee has not been paid, the inspection will be cancelled in office and must be re-scheduled by the contractor of record.
- No extension cords can be ran across the streets. This may result in the issuance of a citation.

GENERAL INSPECTION NOTES:

All inspections shall be requested through the contractor web-site at <http://permits.wylietexas.gov/impactwebclients/permits/permits.aspx>.

Inspection request(s) are to be submitted no later than 7:00 a.m. for a same day inspection(s). In the event that the web-site is down you have until 7:45 a.m. to request a same day inspection by calling 972-516-6420 and speaking to an inspector. **Inspection request left on voice mail will not be scheduled.**

Office hours for inspectors are from 7:00 a.m. – 8:00 a.m. and from 3:00p.m. to 4:00 p.m. Monday through Friday. Technical questions should be directed to the “Inspector of Record” during the above listed office hours. Please call the Inspector(s) after 3:00 p.m. for clarification of the disapproval (red-tagged item).

An inspection window may be obtained from the “Inspector of Record” between 7:15 a.m. and 7:45 a.m. Please call 972-516-6420 to obtain your inspection window.

For general questions and permit information you may call the office at 972-516-6420.

Project work hours per City of Wylie Ordinance are:

- ✓ Monday – Saturday from 6:00 a.m. to 9:00 p.m.
- ✓ No work is to be performed on Sunday or Holidays.

Re-Inspection fees shall be assessed at the discretion of the Inspector of Record:

Assessed re-inspection fee is fifty dollars (\$50.00) and shall be paid before further inspections may be requested or performed. A re-inspection fee may be assessed and inspections canceled upon the occurrence of any of the following conditions apply:

- House not dried-in (consisting of roof boots, chimney cap, windows and installation of doors).
- The trade installation called for inspection is not ready. This could include a first-time inspection or where a history has developed for deficient items on continual or repeated bases.
- City approved plans not on the job site and located as specified below.
- Trash on lot or no trash bin on site.
- House is locked or work to be inspected is not otherwise accessible.
- An inspection is disapproved for the same item. (Previous tag items not corrected).
- Panel cover is not removed for Temporary Cut-In Electrical inspection or is not installed at building final.
- A safety fence is not installed around sewer tap excavations that are four feet (4') deep or more.
- Form board survey is not on job site in permit packet when a plumbing site/slab inspection is requested.
- Construction materials are located within the right-of-way as specified in the section below.
- If the sewer tap is not connected at the time of inspection for the plumbing site.
- No address posted.
- Ten (10) non-code compliant items have been noted. Responsible Builder/Contractor/Trade shall schedule for a complete re-inspection.
- If re-inspection fees are assessed, the fee must be paid prior to the re-inspection.

Materials located in the right-of-way:

All dirt, and or any type of construction material shall be located in such a way as to comply with the following requirements:

- If the city sidewalk has not been constructed on the property, all construction materials shall be located five feet (5') from the back of the curb to allow for pedestrian passage through the property.
- If a sidewalk does exist, construction materials shall be placed behind the sidewalk.
- At all times during construction, the water meter box shall be installed around the water meter.

Location of permit packets during the course of the project:

In order to allow for uniformity and the most efficient use of time, the permit packets shall be on the construction site at the location specified below.

- T-Pole, Plumbing site/slab and Foundation: The permit packet is to be attached to the street side face of the trash bin and the trash bin is to be located in the front yard of the lot. If no trash bin present the permit packet may be attached to street side of builders sign.
- MEP's wall/ceiling, Frame and All Finals: The permit packet is to be attached adjacent to the front door of the house.
- Flatwork: The permit packet is to be attached to a stake at the approach or trash bin.
- Temporary Cut-In Electric/Gas: The permit packet is to be placed next to the electrical panel.
- Building Final : The permit packet must be on site and placed on the kitchen counter inside of house.

Engineering letters and other required documents:

Whenever an engineering letter or other documents are required, the original wet sealed letter shall be placed inside the permit packet and visible from outside of the packet. This will allow the Inspector of Record to refer to the letter in order to verify compliance with the requirements of the Engineer of Record.

Cancellation(s):

Inspections should not be requested until the contractor has verified that the work is complete and ready for inspection. In the event that an inspection must be cancelled, the contractor may cancel the inspection via the web-site no later than 7:00 a.m. the day of the scheduled inspection. Additionally, contractors may cancel inspections up until 8:00 a.m. the day of the scheduled inspection by calling the Building Inspections office.

Inspection results:

Wet/rainy and cold weather inspection(s):

Concrete or plumbing site/slab inspections may be canceled when determined to be "too wet" by the Building Official. All rained canceled inspections shall be recalled by the contractor.

{Beginning February, 2013 air testing of sewer lines will no longer be allowed}

Ambient temperature shall be thirty eight degrees (38°) and rising to begin placing concrete and have cold weather protection on site such as: hay for placement over six (6) mil plastic or hydration blanket(s). If ambient temperature **is not** thirty eight degrees (38°) and rising, concrete inspection(s) shall be canceled. Canceled inspection(s) shall be recalled by Contractor.

"Cold weather concrete placement under the direct onsite supervision of a State of Texas licensed Engineer of Record or their Laboratory of choice will be allowed upon the receipt of a wet sealed letter from the Engineer of Record before concrete placement requesting and committing to direct onsite supervision and upon completion of concrete placement, Engineer of Record submits to the City of Wylie Building Inspection Department a wet sealed, site specific letter stating that:

“Concrete placement was handled under direct onsite supervision by the Engineer of Record or Laboratory of Choice in accordance with ACI guidelines for cold weather placement and protection”.

REQUIRED INSPECTIONS

Inspections:

Temporary Pole
Flatwork
Plumbing Site/Slab Underground
Electrical Site/Slab Underground
Foundation Site
Electrical Wall/Ceiling Cover
Mechanical Wall/Ceiling Cover
Plumbing Wall/Ceiling Cover
Gas Test
Framing
Temporary Cut in Electrical
Temporary Cut in Gas
Electrical Final
Mechanical Final
Plumbing Final
Building Final - Life Safety

RESIDENTIAL INSPECTION REQUIREMENTS:

TEMPORARY POWER POLE :

- Double pole/single throw breaker installed for two hundred forty volt (240) plug.
- Single pole breaker installed for one hundred twenty volt (120) plug with GFCI protection on all one hundred twenty volt (120) receptacles.
- Box is to be secured to the pole.
- Pole is to be braced, secure and stable, with two legs and pole.
- A ground rod shall be installed with minimum six (6) AWG ground wire attached.
- Citations will be issued to anyone on the T-pole without proper connectors on each end of the cord.
- A legible address number must be posted on the T-pole. Number shall be at least four inches (4") in height with a contrasting background. No holes are allowed in the panel face.
- Plugs outside the panel box shall be weatherproof.
- All breakers and receptacles shall have legible amperage/voltage markings. Damaged poles will have power disconnected ASAP.

FLATWORK :

- All flatwork on private property shall have a pre-pour inspection made by the City of Wylie Building Inspection Department

- **Approaches and sidewalks shall follow the City of Wylie Engineering Design Standards which can be found on their City of Wylie Web-site and attached to your approved as noted building permit letter.**
- Expansion joints shall be installed at all existing concrete **(except streets and alleys).**
- Decorative concrete may be installed on private property **ONLY**. All concrete work placed within a street or alley easement shall be completed with a brush finish.
- The minimum width for a residential driveway is twelve feet (12'). The maximum width for a residential driveway at the property line is twenty four feet (24') per the city engineer's standards.
- The minimum distance from a driveway to a street intersection is forty five feet (45').
- All driveways, patios and private walkways shall be formed with a minimum concrete depth of at least three and one half inches (3 1/2") in thickness. Steel reinforcement shall be number three (#3) three eights inch (3/8") rebar at twenty four inches (24") on center each way. Driveways and lead walks shall have expansion joints every twenty five feet (25').
 - ❖ Hydrated lime **shall not be used** to dry out wet areas before concrete placement.

ELECTRIC SITE/SLAB UNDERGROUND :

- Installed grounding system shall be in accordance with currently adopted NEC.
- Installed in slab electrical shall be in accordance with currently adopted NEC.

PLUMBING SITE/SLAB UNDERGROUND :

If the house is to have gas service with a gas meter located at the alley, the underground gas piping shall be inspected at the same time as the plumbing site/slab inspection. Failure to have the underground gas piping ready for inspection with the plumbing site/slab inspection will automatically result in the inspection being noted as "not ready" and assessed a re-inspection fee by "Inspector of Record".

An original wet sealed form board survey by a licensed surveyor shall be onsite and placed inside the permit packet at the time of inspection. The survey shall show all pertinent site details and verify all property line(s) and set back requirements are met.

No plumbing rough inspections will be made if it has been determined that it is too wet. Rain canceled inspections shall be recalled by the contractor.

{Beginning February, 2013 air testing of sewer lines will no longer be allowed}

Water Lines:

- One hose bib with non-removable vacuum breaker shall be installed in the water line to check the pressure.
- All hose bibs shall have non-removable vacuum breakers permanently installed.
- Water supply lines shall be sized in accordance with currently adopted IRC/IPC.
- Piping that passes through concrete, cinder block walls, floors or other corrosive materials shall be protected in accordance with currently adopted IPC. **Duct tape will not be accepted as a pipe wrap in place of sleeve with a minimum wall thickness of 0.025" or .010" ten (10) mil code approved wrap tape.**
- Solder and fluxes containing lead cannot be used to join potable water lines.

- The cover shall be removed from water entry box when plumbing rough inspection is requested.
- T & P drain lines for water heaters shall not be run in slab.
- All water piping under the slab shall be type "M" copper or thicker, PEX-AL-PEX, CPVC, or PEX.
- All water piping located under the slab shall be continuous with no joints if possible. Joints located under a slab shall be installed in accordance with the currently adopted IRC/IPC
- The water meter shall be in place with all valves open to allow for testing of the lines at city water pressure. If city water is not available, a fifty (50) p.s.i. air test may be substituted for the water test. A valid air test will not have water in the lines.
- Where a water service crosses a sewer ditch, the water line shall be installed in a PVC sleeve.
- Water service piping shall be provided with a shut off valve at or in the house. Shut off valve may be located on the exterior near the main front entrance or located in garage ahead of distribution manifold.

Sanitary Sewer:

- The plumbing site/slab shall be tested with a five foot (5') head of water on all stacks in the house. The five foot (5') measurements will be taken from the top of the ninety degree (90°) fitting. If the last stack height is such that, water in stack cannot be visually verified, the inspection will be disapproved.
- All stacks on the system shall be at least five feet (5') high. Systems that have stacks less than five feet (5') and have a gem cap installed **will be disapproved**.
- The water test must include the sewer yard line. A test tee shall be installed within five feet (5') of the sewer tap. The test shall utilize screw-in test ball device that will not allow water to flow into the city sewer (such as 'clean-tap' device).
- All fixtures shall be stacked vented.
- Trap arms shall not exceed seventy two inches (72") in developed length on a one and one half inch (1 1/2") arm; nor more than ninety six inches (96") in developed length on a two inch (2") arm.
- Full size double clean outs shall be exposed for inspection.
- The sewer tap connection shall be exposed for inspection.
- All holes dug for sewer taps that are deeper than four feet (4') shall be protected by a temporary construction fence.
- The building sewer shall be connected to the city's sanitary sewer system.
- Excavations for sewer taps shall be backfilled immediately upon approval of the plumbing site/slab inspection. {Foundation inspection **will not be preformed** if building sewer excavation **has not been backfilled**. Inspection will be classified as "not ready" and a re-inspection fee will be assessed.}
- Building drains and building sewers shall be sized in accordance with the currently adopted IRC.
- A minimum four inch (4") building drain (yard line) is required.
- All lines shall be bedded on a minimum two inch (2") sand bed. All lines, traps and fittings shall be completely exposed.
- Air admittance valves **are not allowed** unless approved by the Building Official prior to installation.

- Island fixture vents shall utilize the following fittings in the order listed: a forty five degree (45°) fitting, a short turn ninety degree (90°) fitting and a forty five degree (45°) fitting.
- Wet sealed form board survey shall be on site, in the permit packet and visible from outside of the packet at the time of the plumbing site inspection.
- Slope to tap cannot exceed a forty five degree (45°) slope.

Gas Test:

Diaphragm gauges are required for gas tests.

- Low pressure systems shall be tested at three (3) psi using a five (5) psi diaphragm gauge.
- Medium and High pressure systems shall be tested at ten (10) psi using a fifteen (15) psi diaphragm gauge.
- Underground gas shall be of an approved material in accordance with currently adopted IRC/IFGC and shall not be placed less than eighteen inches (18") deep to the top of the pipe with a yellow tracer wire laid adjacent to the pipe.
- Gas risers shall be anode less risers.

Foundation/site :

The contractor shall place a temporary concrete walkway when foundation is placed.

Walkway shall run from the street to foundation for all weather access to the structure as construction progresses. The walkway must be free of construction materials and debris. No inspection will be performed if access is not provided as specified.

- All foundation plans and city-stamped plans shall be stamped by a State of Texas licensed Engineer of Record.
- Concrete or plumbing site/slab inspections may be canceled when determined to be "too wet" by the Building Official.
- Ambient temperature shall be thirty eight degrees (38°) and rising to begin placing concrete and have cold weather protection on site such as: hay for placement over six (6mil) plastic or hydration blanket(s). If ambient temperature **is not** thirty eight degrees (38°) and rising, concrete inspection(s) shall be canceled. Canceled inspection(s) shall be recalled by Contractor.

"Cold weather concrete placement under the direct onsite supervision of a State of Texas licensed Engineer of Record or their Laboratory of choice will be allowed upon the receipt of a wet sealed letter from the Engineer of Record before concrete placement requesting and committing to direct onsite supervision and upon completion of concrete placement, Engineer of Record to submit to the City of Wylie Building Inspection Department a wet sealed, site specific letter stating that:

"Concrete placement was handled under direct onsite supervision by the Engineer of Record or Laboratory of Choice in accordance with ACI guidelines for cold weather placement and protection".

Post Tension:

- Foundation shall be in full compliance with City Approved, Sealed Engineered plans. Any revisions or changes to approved engineered slab design that are not shown on "City Approved plans or detail sheets" will be automatically disapproved for failure to install foundation per "Approved Plans of a State of Texas Engineer Sealed design".

- ❖ **{Engineer of Record will be contacted and apprised by City of Wylie Building Inspection Department; that at the time of scheduled City inspection, foundation was not set up per City approved, Engineer Sealed Plans by Contractor/Builder of Record.}**
- ❖ *No changes can be made to the foundation after inspection approval without resubmitting for review new or revised plans wet sealed by State of Texas Engineer of Record. These resubmitted plans to be reviewed for Code and Zoning compliance, be restamped and issued prior to inspection being rescheduled.*
- ❖ *A new form survey will be required due to changes in foundation size, location on lot or form board configuration.*
- All cables shall be straight and level and chaired per plan design.
- The post tension drawing shall be on the job with the detail sheet and the plot plan (both must be city stamped).
- Cables that may be re-routed to miss plumbing fixtures shall be done with long sweeping curves of the cable one inch (1") per foot of cable length, may reset heads by twelve inches (12") at one (1) end.
- Electrical conduit(s) as noted on approved plans to be installed in foundation for pre-pour inspection.
- Jenn-Air ducts or other similar down draft vent systems shall be installed.
- All gas line sleeves shall be installed.
- Piping that passes through concrete, cinder block walls, floors or other corrosive materials shall be protected in accordance with currently adopted IPC. Duct tape will not be accepted as a pipe wrap in place of sleeve with a minimum wall thickness of 0.025" or .010" or ten (10) mil code approved wrap tape.
- Original finished floor elevation surveys, when required and wet sealed Engineer letter(s) verifying required pier installation was in accordance with sealed Engineer design, shall be submitted prior to requesting inspection.
- No changes may be made to the foundation after inspection approval.
- Wet sealed foundation redesign/correction shall be submitted for review/ approval and shall pass re-inspection prior to placing concrete.
- Poly must cover entire pad to bottom of interior beam(s). Poly is not required in bottom of exterior beam(s).
- All tub boxes shall be installed.
- Sewer lines shall run at a ninety degree (90°) angle to grade beams.
- Water heater T & P lines cannot be composed of PVC material and shall not be installed in slab.
- Excavations for sewer taps shall be backfilled immediately upon approval of the plumbing site/slab inspection. {Foundation inspection will not be preformed if building sewer excavation has not been backfilled. Inspection will be classified as "not ready" and a re-inspection fee will be assessed.}
- If copper piping is not available for bonding of electrical system per currently adopted NEC; an NEC approved alternative bonding method shall be installed and inspected with foundation inspection.

Rebar:

- Foundation shall be in full compliance with City Approved, Sealed Engineered plans. Any revisions or changes to approved engineered slab design that are not shown on "City Approved plans or detail sheets" will be automatically disapproved for failure to install foundation per "Approved Plans and in violation of State of Texas Engineer Sealed design".

- ❖ **{Engineer of Record will be contacted and apprised by City of Wylie Building Inspection Department; that at the time of scheduled City inspection, foundation was not set up per City approved, Engineer Sealed Plans by Contractor/Builder of Record.}**
- ❖ *No changes can be made to the foundation after inspection approval without resubmitting for review new or revised plans wet sealed by State of Texas Engineer of Record. These resubmitted plans to be reviewed for Code and Zoning compliance, be re-stamped and issued prior to inspection being rescheduled.*
- ❖ *A new form survey will be required due to changes in foundation size, location on lot or form board configuration.*
 - Chairs shall be in place with a maximum thirty six (36") inches on center each way and tied.
 - Electrical conduit(s) as noted on approved plans to be installed in foundation for pre-pour inspection.
 - Jenn-Air ducts or other similar down draft vent systems as shown on approved foundation plans and installed in accordance with the currently adopted IMC.
 - All gas lines shall be sleeved or wrapped using .010" or ten (10) mil code approved wrap tape in accordance with currently adopted IPC.
 - Original finished floor elevation surveys, when required and wet sealed Engineer letter(s) verifying required pier installation is in accordance with sealed Engineer design, shall be submitted prior to requesting foundation inspection.
 - All tub boxes shall be installed.
 - Sewer lines shall run at a ninety degree (90°) angle to grade beams.
 - All copper shall be sleeved using sleeve with a minimum wall thickness of 0.025" or .010" ten (10) mil code approved wrap tape. ***Painting of the copper will not be accepted.***
 - The use of PVC material for water heater T & P drain lines is not allowed.
 - T&P drain line shall not be installed in slab.
 - Sewer tap holes shall be filled immediately after approval of the plumbing site/slab inspection.
- {Foundation inspection will not be preformed if building sewer excavation has not been backfilled. Inspection will be classified as "not ready" and a re-inspection fee will be assessed.}**
- If copper piping is not available for bonding of electrical system per currently adopted NEC; an NEC approved alternative bonding method shall be installed and inspected with foundation inspection.
- Unless other wised noted by State of Texas Engineer of Record on approved plan sets, a minimum lap of forty (40) bar diameters or two foot (2') whichever is greater is required on all rebar joins in all beams; at/in corners and intersection of interior beams to perimeter beams.
 - ❖ The following rebar substitutions are allowed unless otherwise noted by engineer of record:
 - ❖ two (2) #3 rebar's (3/8") for one (1) #4 rebar (1/2"),
 - ❖ three (3) #3 rebar's (3/8") for one (1) #5 rebar (5/8"),
 - ❖ one (1) #3 rebar (3/8") and one (1)#4 rebar (1/2") for one (1) #5 rebar (5/8"),
 - ❖ two (2) #4 rebar's (1/2") for one (1)#5 rebar (5/8"),
 - ❖ Rebar substitutions to be tied in bundles.

Piers:

If the foundation has been designed to require piers, the following methods of inspection are acceptable.

A City Inspector of Record can be scheduled to make an A.M. (8:00 – 11:00) or P.M. (12:00 – 4:00) inspection of piers holes completed at the time of arrival.

The City Inspector of Record will verify:

- Pier depth.
- Pier diameter.
- Piers are dry.
- Number of piers
- No pier wall slough-off or debris present.

Or an Engineer's wet sealed letter may be submitted to the City of Wylie's Building Inspector of Record at the time of the foundation inspection.

- ❖ **No pier holes shall be left uncovered or placed at close of work day.**

ELECTRICAL WALL/CEILING :

- Romex shall be stapled every four and one half feet (4 ½') on the horizontal.
- Romex shall be stapled within twelve inches (12") of all boxes.
- Romex extending through masonry shall be sleeved in accordance with currently adopted NEC.
- Sheathing on romex must extend a minimum of one fourth inches (1/4") into the box.
- Wire shall be clamped to metal boxes.
- Two (2) separate twenty (20) amp circuits shall be run for kitchen use. No fixed appliances other than a refrigerator may use these circuits.
- When copper piping is installed, a ground shall be attached to the cold water piping on the first floor at the point of nearest access **if** a water heater is not available. Where a water heater is installed on the ground floor, the ground shall be attached at the cold water inlet (cold side) of the water heater. A supplemental (secondary) grounding rod may be required when water pipe is using "Code Approved" nonmetallic products.
- A House wired using "Code Approved" nonmetallic product(s) shall utilize a concrete encased grounding electrode per currently adopted NEC.
- A separate twenty (20) amp laundry circuit shall be supplied. No other outlets will be allowed off this circuit.
- All receptacles located outside the building, in the garage, in the bathroom and at the kitchen counter top shall be protected by a ground fault circuit interrupter (GFCI).
- All room(s) except for kitchen, bathroom, laundry rooms and garages shall be arc fault circuit interrupter (AFCI) protected.
- Where a panel or disconnect device is tapped more than one (1) time approved lugs shall be provided.
- If service entrance conductors are more than three feet (3') in length, a disconnect shall be provided at the outside of the structure next to the electrical meter.
- All two hundred forty volt (240) appliances shall be wired with a four (4) wire system that includes a neutral and separate ground.
- Electrical wiring installed through a bored hole in wood studs shall be protected by a steel plate at least one sixteenth inch (1/16") thick if the edge of the hole is less than one and one fourth inch (1 ¼") from the edge of the wood member.
- All metal boxes shall be bonded in accordance with currently adopted NEC.
(No wood screws will be accepted/allowed).
- All N.M. cable shall terminate in the device box.

MECHANICAL WALL/CEILING :

- Metal ducts installations shall be screwed, taped before inspection.
- Maximum support spacing is four feet (4') or per manufactures guideline whichever is most stringent.
- Duct bend radius shall be equal to or greater than duct diameter.
- A minimum one inch (1") clearance shall be maintained around gas appliance vents at the bend only.
- Air conditioning condensation drains shall drain into a wet tap. Condensation lines that tie into a washer box shall be tied in above the inlet of the washer box.
- When air conditioning condensation drain pans are located in an attic, a secondary drain shall be installed with condensation line discharging to an approved location.
- Condensation drain lines shall be a minimum of three fourth inches (3/4") in diameter.
- Bath exhaust fan systems to be installed per manufacture specifications and discharged directly to the outdoors.
- Horizontal runs on gravity type water heater and furnace flue vents shall not exceed seventy five percent (75%) of the height of the vent.
- Dryer vents are limited to a maximum length of thirty five feet (35'). The thirty five foot (35') lengths include one (1) ninety degree (90°) fitting. Additional fittings will reduce the maximum length of the vent by two and one half feet (2 1/2') for every forty five (45°) bend and five feet (5') for each ninety degree (90°) bend.
- Dryer vents extending through a roof shall include a tight fitting collar.
- Attic access to a gas appliance(s) (water heater or furnace) cannot occur in or from a sleeping area
- Access location shall be within twenty feet (20') of all furnaces and water heaters.

PLUMBING WALL/CEILING :

Water:

- All copper, PEX or other approved water lines shall be braced.
- All T&P drain lines shall have positive fall to line outlet. A ninety degree (90°) fitting shall be attached at exterior termination point and be turned toward the ground.
- The T&P drain line shall terminate at least six inches (6") above grade/floor and no more than twenty four inches (24") above grade /floor level.
- Each water heater shall have individual T&P drain line.
- T&P drain lines from separate water heaters shall not be connected.
- Water heaters on the second floor and any other area where water damage may occur shall have a drain pan and pan drain line extended to exterior as set forth for T&P drain line.
- Hose bibs shall be frost proof, and shall be protected by an atmosphere type or pressure type vacuum breaker, or a permanently attached hose connection vacuum breaker. If a permanently attached hose connection vacuum breaker is used, the set screw must be tightened until it breaks off.
- Single family homes shall have one (1) hose bib allotted for the rear yard and one (1) hose bib allotted for the front yard.
- Solder and fluxes containing lead are prohibited for use in potable water pipes.

❖ **Plumbing walls shall be two inches (2") x six inches (6") with full size plates.**

- Notching, cutting or boring should not exceed limits as set forth in the currently adopted IRC, if so, damaged framing member(s) shall:
 - ❖ **Be determined by City Inspector of Record at time of inspection.**
- All lines within one and a half inches (1 ½") of the edge of a stud or plate shall have a minimum sixteen gauge (16) x six inch (6") x one and one-half inch (1 ½") wide steel plate/strap placed over the area of the pipe where the member is notched or bored. Cleated plates may be used.
 - ❖ **NO ROOFING NAILS ALLOWED IN STRAPPING OR NAIL PLATES.**
- All water lines in unheated areas shall be insulated with pipe insulation having a minimum three quarter inch (¾") wall thickness.
- All copper located in the brick ledge shall be sleeved using sleeve with a minimum wall thickness of 0.025" or .010" or ten (10) mil code approved wrap tape.

Sewer:

- All vents shall extend through the roof with flashing installed at the roof and at least one foot (1') from any wall and at least six inches (6") above the roof.
- A top out water test is required for all plumbing located above slab. Minimum five foot (5') head is required.
- Trap arms shall not exceed seventy two inches (72") in developed length on a one and one half inch (1 ½") arm; nor more than ninety six inches (96") in developed length on a two inch (2") arm.
- No vents may be less than forty five degrees (45°) from the horizontal until they are at least six inches (6") above the flood rim of the fixture.
- Plumbing vents shall terminate at least ten feet (10') from or three feet (3') above any window that can be opened.
- All lines within one and a half inches (1 ½") of the edge of a stud or plate shall be strapped with a one eighth inch (1/8") thick by one and one half inch (1 ½") wide strap. The strap shall be nailed to the stud or plate using ten (10d) nails. Cleated plates may be used.
 - ❖ **NO ROOFING NAILS ALLOWED IN STRAPPING OR NAIL PLATES.**
- Support horizontal runs of PVC piping every four feet (4') on center.
- Shower pans shall be set in concrete and secure to the wall. Voids under the shower pan shall be eliminated.
- Air admittance valves **are not allowed** unless approved by the Building Official prior to installation.
- Island fixture vents shall utilize the following fittings in the order listed: A forty five degree (45°) fitting, a short turn ninety degree (90°) fitting and a forty five degree (45°) fitting.

Gas Lines:

All gas tests shall utilize a diaphragm gauge that has been tested and certification is current.

Diaphragm gauges required for gas tests.

- Low pressure systems shall be tested at three (3) psi using a five (5) psi diaphragm gauge.
- Medium and High pressure systems shall be tested at ten (10) psi using a fifteen (15) psi diaphragm gauge.
- Underground gas lines shall be of an approved material in accordance with currently adopted IRC/IFGC and shall not be placed less than 18" deep to the top of the pipe with a yellow tracer wire laid adjacent to the pipe.

- Gas risers shall be anode less risers.
- Gas lines shall be properly supported.
- Gas lines located between bricks and studs shall be wrapped using .010" or ten (10) mil code approved wrap tape.
- All gas outlets shall have approved gas stops installed along with caps.
- No water, soil or waste pipe shall be installed or located outside of a building in an unheated area or in an exterior wall without adequate provisions to protect such lines from freezing.

FRAME :

The contractor shall place a temporary concrete walkway when foundation is placed. Walkway shall run from the street to foundation for all weather access to the structure as construction progresses. The walkway must be free of construction materials and debris. No inspection will be performed if access is not provided as specified.

- **All MEP's must pass inspections prior to a frame.**

Framing:

- Rafter spans shall conform to the current adopted IRC, IBC and/or AWC span tables. (See attached span tables for specific wood species allowances).
- Sole/sill plates shall be pressure treated or naturally doubled wood per code.
- Exterior sill/sole plates; Interior load bearing and shear rated wall sole plates shall be secured to the foundation by J-bolts, L bolts or other ICC approved anchor method.
- Power actuated fasteners shall be three inch (3") peg with a one inch (1") washer installed per manufacturers specifications are limited to use in nonload bearing/nonshear rated interior walls exclusively.
- Top plate splices shall be offset of a minimum of forty eight inches (48").
- Rafters shall be framed directly opposite each other when the ridge board is nominal one inch (1") material equal in-depth to rafter end cuts.
- The ridge board depth shall not be less than depth than the rafter end cuts.
- Valleys and hip rafters shall not be less than two inches (2") nominal thickness and not less in depth than the rafter end cuts.
- Purlins shall be the same size as the rafter(s) that it supports. Purlin struts shall be installed four foot (4') on center the full length of Purlin and bear on a load bearing wall/plate line or beam at not less than a forty five degree (45°) angle from the horizontal
- Ceiling joists over four feet (4') in length must have proper bearing or supported using properly sized and installed ICC approved hangers.
- Floor and ceiling joist shall be lapped a minimum of three inches (3") each direction across plate lines then nailed in accordance with currently adopted IRC/IBC.
- All floor joists and beams shall have proper bearing on plate, beam pocket or supported using properly sized and installed ICC approved hangers.
 - ❖ **No pressure blocks allowed.**
- Fur downs, chimneys, ceiling of different heights and vertical wall spaces over ten feet (10') shall be fire blocked. Poly sealing small holes and gaps in fire-blocks will be acceptable.
- Headers to be sized and supported in accordance with currently adopted IRC/IBC Header Tables.
- All lumber and wood products used in structure shall be compliant with currently adopted IRC/IBC and have at least one "Approved Grading Agency" certification stamp per piece.

- **Engineered Woods Systems (EWS) shall be specified by** licensed State of Texas Engineer of Record and installed in accordance with engineer design and/or manufacture specifications whichever is most stringent.
- Where ceiling joists are used to provide primary support of air handling units, skylight and water heaters. Loads shall be calculated for and framing members sized as floor joists.
- Where air handling units are supported by rafters, rafters shall be doubled. Air handler shall be hung from doubled rafters in as close proximity to Purlin and Strut systems as is practical.
- Masonry fireplaces shall be completed to a point one foot (1') above the damper when house is called for frame/electric wall inspection. **Fire box inspection is required.**
- Brick on wood shall comply with the city's brick on wood policy or provide a wet sealed site specific design by a State of Texas licensed Engineer of Record.
- Brick wall ties shall be twenty two (22) gauges x seven eights inch (7/8") minimum, installed using ten (10d) nails and placed in a minimum 3x4 arraignment stagger.
 - ❖ **NO ROOF NAILS ALLOWED.**
- All penetrations in top plates shall be sealed. Small penetrations may be poly sealed.
- Holes in exterior sheathing shall be sealed.
- Covered porches and patios shall be left open for inspection and fascia material installed only after inspection as received an "Approved, ok to cover".
- Cutting, notching or boring of engineered wood systems (EWS/beams) is not allowed without specific approval from a licensed State of Texas Engineer of Record.
- Individual rafter spans may also be completed using two members that are lapped a minimum of two feet (2') with lap centered on Purlin and splay nailed on both faces with minimum twelve (12d's) nails shall be cleated.
- Required stiff backs shall not be drilled, notched or cut or used for bracing support and must be attached to wall or roof members at ends.
- All plumbing walls and sills shall be two inches (2") by six inches (6").
- Narrow garage walls at portal/opening(s) shall be installed in accordance with currently adopted IRC/IBC. Alternate ICC/APA methods will be considered.

TEMPORATY CUT-IN'S :

Electric:

- All wires shall be terminated with a receptacle or blanked off. If appliances and fixtures are on site, all electrical connections to those appliances or fixtures shall be complete.
- Electric panel face to be removed when called for inspection.
- Cold water and ground rod clamps to be installed and well tighten.
- Neutral and ground conductors shall be properly coded and identified.
- The meter base shall be bonded to the main panel box.
- Feeder wires and branch wires shall be protected by the proper sized breaker or fuse.
- All receptacles and switches shall be installed.
- Bare bulb incandescent lights shall not be installed in closet storage areas.
- All light fixtures located within thirty six inches (36") horizontally and less than eight feet (8') above the lip of a bathtub or shower shall be waterproof.
- When galvanized nipples are utilized between the meter base and the main electrical panel, bonding bushings shall be installed. Fiberglass nipples do not require bonding bushings.
- Arc-fault circuit interrupter (ARCI) devices shall be combination type. "See Drawing"

Gas:

Diaphragm gauges are required for gas tests.

- Gas lines that require a ten (10) p.s.i. test may be tested at three (3) p.s.i. using a five (5) p.s.i. diaphragm gauge.
- Gas lines that require a sixty (60) p.s.i. test may be tested at ten (10) p.s.i. using a fifteen (15) p.s.i. diaphragm gauge.

A permanent metal tag is required at the meter, at the entrance into the house (if the gas meter is located at the alley), and at the regulator stating the following: "Warning: one half inch (.5") to five (5) p.s.i. gas line."

- Gas stops at each appliance shall be properly secured for all types of piping including CSST systems and readily accessible.
- All gas lines shall be connected. Gas stops and caps shall be installed on any gas line for future use.
- Gas connectors shall not exceed three feet (3) except for clothes dryers and ranges, which shall not exceed six feet (6).
- Where a sediment trap is not incorporated as part of the gas utilization equipment, a sediment trap shall be installed downstream of the equipment shutoff valve.
- Corrugated stainless steel tubing (CSST) shall be bonded to the structures electrical system in accordance with the currently adopted edition of the NEC/NFPA 70.

ELECTRICAL FINAL :

- All receptacles shall have proper face plates installed.
- All light fixtures shall be installed
- All required ground fault circuit interrupter (GFCI) and arc fault circuit interrupter (AFCI) outlets shall be installed and working properly.
- A permanent electrical outlet and light fixture shall be provided at or near air conditioning and water heater equipment located in the attic. The light fixture switch shall be located at the required attic opening.
- All areas requiring illumination shall be switched with a wall type switch.
- Circuits shall be labeled in breaker box (in ink).
- Jacuzzi motor/pump assembly shall be readily accessible for repair or replacement through an easily removable access panel not less than twelve inches by twelve inches (12"x12"). Motor/pump assembly access shall not be impeded by wiring or piping.
- Electrical outlets located in garages that are not ground fault circuit interrupter (GFCI) protected shall be single receptacles and labeled.
- Floor outlet receptacles shall be accessible.

MECHANICAL FINAL :

- Combustion air vents shall be installed in the upper twelve inches (12") and lower twelve inches (12") of closets enclosing gas appliances.
- Mechanical heating system(s) shall be operational and capable of maintaining a temperature of sixty eight degrees (68°) Fahrenheit at a point three feet (3') above finished floor level and two feet (2') from interior face of exterior walls in all habitable rooms.
- Vent fans must be operational in bath and utility rooms or have an operable window.
- Where water closet is separated from the shower area by a door, a separate bath fan is required in water closet area and shower area.

- A solid walkway at least thirty inches (30") wide shall be installed from attic openings to furnaces, water heaters and gas regulators. The distance from the access opening to the equipment shall not exceed twenty feet (20'). A thirty inch (30') deep level working space shall be present along all sides of the appliance where access is required.

PLUMBING FINAL :

- All gas lines shall be connected. Gas stops and caps shall be installed on any gas line installed for future use.
- All plumbing fixtures shall be installed. Any drain or water line that is installed for future use or expansion shall have permanent caps.
- Frost proof hose bibs with integral vacuum breakers shall be installed.
- Sewer cleanouts shall be cut so that the top of the cleanout is at least one inch (1") to no more than two inches (2") above grade.
- Hot water shall correspond to the left side of fittings on plumbing fixtures.
- Unions shall be installed within twelve inches (12") of regulation equipment, water heaters, conditioning tanks, or other similar equipment. Flexible water connectors can be used in place of unions.
- PVC vent stacks shall be painted with latex paint.
- Air gap fittings shall be installed on all dishwashers.
- Shower doors shall have a minimum opening clearance of twenty four inches. (24")
- Sediment trap are required on gas water heaters and HVAC units.
- Six inch (6") clearance to grade under water meter.
- Hot water supplied to bathtubs and whirlpool bathtubs shall be limited to a temperature of not greater than one hundred twenty degrees (120°) by a water temperature limiting device that conforms to ASSE 1070 or CSA B125.3, except where such protection is otherwise provided by combination tub/shower valve in accordance with section P2708.3 (The water temperature limiting device shall be accessible).

GAS TEST :

Diaphragm gauges are required for gas tests.

- Gas lines that require a ten (10) p.s.i. test may be tested at three (3) p.s.i. using a five (5) p.s.i. diaphragm gauge.
- Gas lines that require a sixty (60) p.s.i. test may be tested at ten (10) p.s.i. using a fifteen (15) p.s.i. diaphragm gauge.

A permanent metal tag is required at the meter, at the entrance into the house (if the gas meter is located at the alley), and at the regulator stating the following: "Warning: one half inch (.5") to five (5) p.s.i. gas line."

BUILDING/LIFE SAFETY :

- A solid walkway at least thirty inches (30") wide shall be installed from attic openings to furnaces, water heaters and gas regulators. The distance from the access opening to the equipment shall not exceed twenty feet (20'). A thirty inch (30") wide and thirty inch (30") deep level working space shall be present along all side of the appliance where access is required.
- Chimneys shall extend at least two feet (2') higher than any portion of the building within ten feet (10'), but not less than three feet (3') above the highest point were the chimney passes through roof.
- Street, alley and all flatwork shall be clean and clear of mud and debris.

- Yard shall be clear of debris and final grade completed and all landscape complete.
- **A solid core self-closing door shall be installed between the garage and living area.**
- A permanent address shall be installed on the front and rear of the house with a minimum four inch (4") in height one half inch (1/2") minimum strike. (rear address numbers are only required when driveway access is provided from the alley)
- Third (3rd) party Energy inspection report shall be submitted to City of Wylie Building Inspection Department using the City of Wylie's Energy Code Form prior to scheduling the Final Inspection.
- Termite Inspection must be on city form and the final drainage survey shall be on job site in permit pack.
- Saw cut shall be sealed using hot dipped tar or Air-Bloc 06 at driveway to City street interface per City of Wylie engineering design.