



CITY OF SUGAR LAND

GENERAL BUILDING, PLUMBING, MECHANICAL & ELECTRICAL GUIDELINES

APPROVED BUILDING PLANS ARE REQUIRED AT JOB SITES. SITES MUST BE PROPERLY MAINTAINED AND SANITARY INCLUDING BUT NOT LIMITED TO DEBRIS AND SAFETY MANAGEMENT. SITE ADDRESS MUST BE POSTED.

BUILDING

Building projects must follow the rules and laws established by City of Sugar Land's adopted ordinances, codes and any applicable State law. Inspections included but may not be limited to the following:

Foundation

Prior to a foundation make up inspection, a form survey must be provided. This can be accomplished at the job site and at the time of an inspection request. The survey must be prepared by a State of Texas registered surveyor.

A foundation inspection will include but is not limited to the following:

- Building setbacks – front, side and rear
- Top of form elevation that meets or exceeds: 12" above the top of the front street curb or 12" above the base flood elevation or 18" above natural grade
- No encroachments
- Foundation shall comply with City of Sugar Land approved drawings.
- Approved applicable plumbing, electrical and mechanical inspections associated with the foundation make up. Plumbing pipes must be sleeved and protected as required by code
- Workmanship



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Wood Framing

A building frame inspection may be scheduled concurrently with plumbing, electrical and mechanical rough-ins/covers or after those inspections are complete. A building frame will not be approved unless all trade inspections are approved.

A frame inspection will include but may not be limited to the following:

- Framing of walls, joists, rafters, headers, stairs and beams that comply with approved plans
- Wood framing complies with code span charts
- Wood framing does not exceed notching and boring standards
- Blocking, joist hangers, and ledger strips. Verify sizing and nailing requirements
- Required egress such as windows, doors and locks
- Foundation anchor bolts or anchor straps and spacing
- Bracing
- Rafters and joist installations and fastening/nailing
- Collar ties
- Draft stopping, fire blocking
- Wind design for 110 MPH, 3-second gust. Clips, straps and shear-walls are typically part of design. Must have wind design plan available for Inspector
- Masonry work
- Roof sheathing and covering
- Brick ties are checked concurrently with other inspections
- Attic access
- Fireplaces –must have a gas pressure test
- Workmanship

Structural Steel

Structural steel framing may be inspected by the City of Sugar Land and must meet the special inspections criteria of the current adopted code, and the approved building plans. Inspection reports must be provided verifying that required bolting, welding and other elements of construction are in compliance with code and the approved City of Sugar Land building plans.



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Building Final

A building final inspection may be scheduled concurrently with plumbing, electrical and mechanical finals or after those finals are complete. A building final will not be approved unless all trade inspections are approved. Gas, water and electricity must be operational.

*Commercial building final inspections do not permit occupancy in and by itself. Commercial projects require approvals from one or more of the following: Fire, Public Works, Engineering and Planning. A Certificate of Occupancy is required for occupancy for all commercial buildings.

*An approved residential building final inspection (single family) allows a resident to occupy a home; however a certificate of occupancy is issued after final infrastructure inspections are completed. Residential construction is required to obtain a certificate of occupancy.

A building final inspection will include but may not be limited to the following:

- Exterior finishes and components
- Interior finishes and components
- Driveway, sidewalks and flatwork
- Means of egress
- Attic access and ventilation
- Site drainage, code required slab relief above finished grade
- Landscaping
- Permanent address visible from the street 4" numbers,
- Safety/tempered glass
- Stair and guard rail requirements
- Appliance installations
- Special inspection compliance reports.
- Workmanship



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PLUMBING

Plumbing work must follow the rules and laws established by City of Sugar Land's adopted ordinances, codes and the State of Texas Plumbing License Law. Inspections included but may not be limited to the following:

Sewer/Ground

A sewer/ground inspection can be scheduled together or separately and will include but may not be limited to the following:

- **Water test:** minimum of 10' water column above the highest fitting or the highest point in the completed system for 15 minutes, or
- **Air test:** maintain a gauge pressure of 5 psi for 15 minutes
- Minimum 4" Schedule 40 PVC sanitary sewer required for residential construction. (City Ordinance)
- Minimum 6" SDR 26 or equal sanitary sewer required for commercial construction. (City Ordinance)
- Sewer/Ground piping shall maintain grade in accordance with adopted code
- Sewer/Ground clean outs are required in accordance with adopted code
- Sleeve drain lines passing thru footings in accordance with adopted code
- Water piping installed within a foundation shall comply with adopted code
- Building water service line must be buried a minimum of 12" deep and of a code approved material
- Water service line shall be installed and tested during sewer/ground inspection or with top-out
- Workmanship

Top out

- **Water & Air test:** same as sewer/ground
- Shield plates are required for concealed piping, other than cast-iron or galvanized steel. Note adopted code for specific requirements
- Notching & boring of wood frame construction shall comply with adopted code
- Drain, waste and vent piping shall maintain proper slope (grade) in accordance with adopted code
- Water piping shall be protected in all areas subject to freeze damage. Examples of such areas include outside of a building, in exterior walls, in attics and crawl spaces



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- Water heater installations must comply with code and manufacturers specifications
- All venting through roof (VTR) shall meet adopted code requirements
- Gas piping shall be protected, sized, supported and tested in accordance with adopted Fuel Gas Code
- Workmanship

Gas Turn On (GTO)

Check with the local gas company for service requirements. City approval is also required, which includes a permit and inspection.

- All piping and valves are installed and capped to prevent an accidental release of gas
- An approved calibrated gauge with the code required testing pressure
- Equipments venting such as water heaters and furnaces is properly installed
- Evaluate gas piping workmanship in attic space. (access to attic must be provided)
- Workmanship

Plumbing Final

- Vents through roof installations
- Hose bib back flow
- Installation of water meter box (s)
- Sanitary sewer cleanouts
- Plumbing fixture installations. (water test for leaks)
- Water lines subject to freeze damage are insulated
- A/C condensation lines properly connected to active trap
- Access panels for bath tubs (where applicable)
- Water valves & gas valves are accessible and operable
- Approved back flow devices for water supply (where applicable)
- Workmanship



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MECHANICAL (HVAC)

Mechanical/HVAC work must follow the rules and laws established by City of Sugar Land's adopted ordinances, codes and applicable State of Texas Licensing rules and regulation. Inspections include but may not be limited to the following:

Cove/Rough In

Register and duct placement, attachment, support (two side minimum for registers).

- Return air, properly sized & sealed
- Auxiliary and secondary condensate drains installation
- Proper insulation, support and protection of refrigerant lines
- Proper vent terminations, (ex. - vent hood exhaust, furnaces, clothes dryers, vent fan exhaust)
- Dryer vent [maximum 25 feet] Note Mechanical Code or Residential Code method of measuring
- Mechanical equipment (source of ignition) location in relationship to gas meter check with local gas provider
- Workmanship

HVAC Final

- Proper operation of units with instruction manual available
- Access walkway(s) (cat walk) and unit(s) access and working clearances
- Disconnects for mechanical equipment
- Smoke detector/fan shut down operations (commercial units)
- Equipment vents
- Installation of units including but not limited to support, disconnect, conduit and sealing
- Equipment labeling
- Workmanship



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ELECTRICAL

Electrical work must follow the rules and laws established by City of Sugar Land's adopted ordinances, codes and applicable State of Texas Licensing rules and regulation. Inspection includes but may not be limited to the following:

Temporary Power Pole

- Address must be visible and ledge able
- Pole/equipment must be properly supported
- Correct circuit, wiring, protection, burial depth
- Workmanship

Cover/ Rough In:

- Protection of wiring including nail plates, placement and fastening
- Receptacle spacing including walls and counters
- Circuitry: including kitchen (small appliances), laundry room(s), bed room(s), bath room(s), and etc
- Wire sizing (12-2 minimum per City Ordinance)
- Fastening and supporting of wiring/conduit and equipment
- Grounding
- Bonding
- Box fills including receptacles, lightings, gutters, j-boxes and etc
- Code approved wiring methods
- Attic lighting
- Closet lighting, especially note clothes closets
- Notching and Boring standards (wood frame construction)
- De-ratings particularly for bundled wiring
- Smoke detector wiring
- Di-oxidizer
- Disconnects
- HVAC – General use receptacle within 25 ft. and GFCI as required. Conductor provided to power equipment must be sized according to the adopted code
- Workmanship



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Temporary Cut-in (TCI)

- Electrical underground/overhead approval
- Service entrance conductor sizing
- Over current protection sizing (main breaker/breakers)
- Grounding
- Bonding
- Workmanship

Final

- All installations operable and ready to test including ground fault and arch fault circuit interrupters
- Main panel must be labeled
- Any 12-3 systems shall be bar tied
- Smoke detectors tested for proper operation
- Each receptacle will be continuity tested
- Each light fixture must be equipped to test
- Closet lighting clearances
- Spa/hydro tub circuit test
- Weather proof exterior panel(s), fixtures, boxes, conduits and etc
- Workmanship