

# **Commercial Building Inspection Guidelines**

**City of Richmond  
Inspections and Permits**

Revised March 30, 2021

## **Preface**

The following information has been arranged as a guideline for the construction process for builders and contractors working within the inspection jurisdiction of the City of Richmond. Some items are clearly defined within the current City of Richmond Ordinance, Unified Development Code, Public Works Design Manual, 2017 NEC, and 2015 ICC codes while others are standard procedures set forth by the Inspections and Permits Division of the City of Richmond.

This material is to be used as a guideline only and may not include all circumstances or building practices that occur in the field.

In order to provide for quality, cost effective construction, please familiarize yourself with these guidelines.

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- Inspection Descriptions
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- Contact Information – City of Richmond
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## Required Building Department Inspections

- **Addressing shall be posted prior to any inspections being done**

- Layout Inspection (email to [permits@richmondtx.gov](mailto:permits@richmondtx.gov))
- Electrical Underground
- Temporary Electric Loop
- Plumbing Rough Inspection
- Water / Sewer Yard Lines and Backflow
- Engineer's Pre-Pour Report (email to [permits@richmondtx.gov](mailto:permits@richmondtx.gov))
- Plumbing Rough Test
- Pre-Pour Inspection
- Frame Inspection
- Electrical Rough
- Mechanical Rough
- Gas Test
- Plumbing Top Out
- Insulation Inspection
- Sheetrock/Firewall Inspection
- Permanent Power (Electric Meter Release)
- Ceiling Cover Up Inspection
- 2<sup>nd</sup> Gas Test (Gas Meter Release)
- Building Final
- Electrical Final
- Mechanical Final
- Plumbing Final
- Backflow Report Received (email to [permits@richmondtx.gov](mailto:permits@richmondtx.gov))
- Commercial Site Development Inspection (email to [inspections@richmondtx.gov](mailto:inspections@richmondtx.gov) to Schedule)
- Certificate of Completion
- Close Project

# Inspection Descriptions

The City Noise Ordinance considers the construction of any building or structure between the hours of 7:00 p.m. and 7:00 a.m. a nuisance. Please review the noise ordinance in detail on the city's website at [www.richmondtx.gov](http://www.richmondtx.gov).

## **Layout (emailed to [permits@richmondtx.gov](mailto:permits@richmondtx.gov))**

Foundation form boards to be in place and "form survey" to be posted on site and uploaded and emailed to [permits@richmondtx.gov](mailto:permits@richmondtx.gov)). String lines shall be allowed to mark property lines if the geographical layout of the property permits. Portable toilet facilities shall be in place for every two adjacent work sites. Trash/building material containers shall be in place for every two work sites if using a "roll off" type dumpster or, every single work site if using a minimum eight foot by eight foot (8' x 8') plywood box, constructed to withstand its purpose. Safety fence shall be in place when construction site is adjacent to a building completed or near completion. Silt fence shall be in place if deemed necessary for erosion control. Tree protection shall be in place. Address posted, visible from the street.

## **Temporary Electric Loop**

The visual inspection of a temporary power pole or pedestal located at the work site, according to the 2017 National Electrical Code.

## **Water/Sewer Yard Lines**

A visual inspection and testing of the building sewer and water service installed from the structure to the utility taps. This inspection requires proper separation of services and burial depths as required by the 2015 International Codes. Sewer line tests shall consist of a ten-foot head (10') of water column above the highest fitting. Backwater valves are required on applications deemed necessary by the 2015 International Codes. Water lines do not need to be connected to the water supply lines within the structure. Water meter boxes/vaults shall be properly installed for proper placement of meter(s). Water meter boxes shall not be damaged or missing. Required backflow devices and customer shut-off valves shall be in place. Pressure reducing valves shall be in place, if required.

## **Plumbing Rough**

The visual inspection and testing of proper installation according to the current adopted Plumbing Code (2015 International Codes). This inspection requires a ten-foot head (10') of water column above the highest fitting. Plumbing system shall not be buried or covered.

## **Engineer's Pre-Pour Report**

This inspection is currently being performed by the Engineer of record for said construction. The Engineer's approved inspection report shall be on site and emailed to [permits@richmondtx.gov](mailto:permits@richmondtx.gov)).

**Plumbing Top-Out**

Visual inspection and test of the water supply and building drainage system, in accordance with the 2015 International Codes, within the building envelope. The water supply shall maintain a minimum 50 psi gauge test. The DWV shall be water tested 42" above the highest fitting. Tubs/showers shall be tested to the flood rim level and/or overflow drain.

**Gas Test (if applicable)**

A visual inspection and testing of the gas piping in accordance with the 2015 International Fuel Gas Codes. The inspection requires a minimum 20 psi gauge test with all valves in the open position. Bubble testing shall be required if deemed necessary by the Building Inspector.

**Electrical Rough**

A visual inspection of the electrical wiring and panel(s) in accordance with the 2017 National Electrical Code.

**Mechanical Rough**

A visual inspection of the mechanical ducts and equipment in accordance with the 2015 International Mechanical Code.

**Frame**

A visual inspection of the structural components of the building envelope. The Frame Pack inspection shall be approved prior to the installation of masonry and/or insulation.

**Sheetrock/Firewall**

Not currently a required inspection but may be performed if deemed necessary by the Building Inspector. All required fire rated walls shall be inspected by the Building Inspector and/or the Fire Marshal.

**Insulation**

A visual inspection in accordance with the 2015 International Energy Conservation Codes.

**Permanent Power (Meter Release)**

A visual inspection in accordance with the 2017 National Electrical Code. All wiring shall be properly terminated or contained within a covered outlet box prior to the issuance of a permanent electric meter. This inspection may be scheduled any time after the installation of electrical trim components. All equipment and panels (including meter can) shall be properly bonded. Panels shall be labeled

**2<sup>nd</sup> Gas (Meter Release)**

The visual inspection and testing of the gas piping system prior to the release of the gas meter. The system shall maintain a minimum 20 psi gauge test. All gas stops shall be in place at this time.

**Plumbing Final**

Visual inspection and testing of the plumbing system in accordance with the 2015 International Plumbing Code.

**Electric Final**

Visual inspection and testing of electrical components in accordance with the 2017 National Electrical Code.

**Mechanical Final**

Visual inspection and testing of mechanical components in accordance with the 2015 International Mechanical Code. Air conditioning and heat start-up is required.

**Landscaping**

Visual inspection for compliance with the current Unified Development Code Landscape requirements . All landscaping shall be completed at the time of Building Final.

**Site**

Visual inspection for completion of required/necessary components of the property. This shall include, but not limited to, sidewalks, flatwork, fences, parking, drainage, and signage (if required).

**Building Final**

Includes visual inspection of the proper completion, allowing for the issuance of a Certificate of Occupancy.

**Backflow Prevention**

Backflow prevention assembly test and maintenance report is required. Use most current TCEQ form.

# Common Turndowns

## LAYOUT

- Form survey not emailed
- Trash receptacle not provided
- Safety fence not provided
- Erosion control not in place
- Portable toilet not provided
- Trees not protected

## TEMPORARY ELECTRIC LOOP

- Not supported / secure properly
- Ground termination not to code
- Provide 220 A receptacle
- Receptacle(s) not GFCI protected
- Damaged / needs repair
- Missing / not complete
- Not ready

## PLUMBING ROUGH

- Buried/covered, unable to inspect
  - Provide 10' head of water
- Water test on DWV no holding
- Building drain not sleeved through exterior beam(s)
  - Maintain ¼ inch per foot
- Provide proper bed/fill material
- Clear debris from trench
- Damaged / needs repair
- Missing / not complete
- Not ready

## WATER / SEWER YARDLINES

- Separate water and sewer
- Burial depth not to code
- Maintain 1/8 inch per foot
  - Provide 10' head on DWV
- Clean trench
- Provide proper bed/fill material
- Pipe not supported properly
- Backflow not installed
- Damaged / needs repair
- Missing / not complete
- Not ready

## PLUMBING TOP OUT

- Venting requirements not met
- Water test on DWV not holding
- Air/water test on copper no holding
- Tub drains not open for proper test
- Copper in contact with dissimilar metal
- Gas vents not to code
- Gas test not holding at 20 psi
- Gas piping not protected through masonry
- Pipe not supported or properly secured
- Protect pipe
- Damaged / needs repair
- Missing / not complete

- Not ready

## Electrical Rough

- Wire to be in raceway
- Wire damaged, needs repair
  - Receptacles spaced greater than 12'
- Nail plates required at studs/plates
- Secure wires in panel
- Smoke detector placement not to code
- Stairway lighting not to code
- Wire not supported or properly secured
- Protect wire
- Ground termination not to code
- Missing / not complete
- Not ready

## Mechanical Rough

- Crimped duct
- Duct not properly sealed
- Not supported / secure properly
- Dryer vent not to code
- Vent hood duct not to code
- Exhaust fans not to code
- Plenums not properly sealed
- Combustion air not to code
- Return / supply air too close to gas burning appliance
- Damaged / needs repair
- Missing / not complete
- Not ready

## GAS TEST

- Pipe not protected through masonry
- Test not holding at 20psi
- Damaged / Needs repair
- Not Ready

# Common Turndowns

## Plumbing Topout

### FRAME

- ☒ Seal/secure exterior sheathing
- ☒ Seal untreated lumber
- ☒ Seal/secure exterior penetrations
- ☒ Engineered trusses not installed per design
- Provide Engineer's repair detail
- ☒ Over cut studs/plates
- ☒ Glue/shim headers
- ☒ Rafters not to code
- ☒ Joist hangers missing
- ☒ Double studs where required
- ☒ Windows do not meet egress
- ☒ Wind brace not to code
- ☒ Attic access not to code
- ☒ Tempered glass where required
- ☒ Stair risers/treads not to code
- ☒ Fire block not to code
- ☒ Not supported / secure properly
- ☒ Masonry requirements not met

- ☒ Water heater drain termination not to code
- ☒ Water heater not to code
- ☒ Drain pan required
- ☒ Expansion tank required
- ☒ Leak in DWV
- ☒ Leak in water supply
- ☒ T & P relief not to code
- ☒ Gas vents in contact with combustibles
- ☒ Copper in contact with dissimilar metal
- ☒ Low water pressure
- ☒ Water closet / faucets / valves run continuous
- ☒ Clean / repair meter box
- ☒ Insulate copper
- ☒ Private sewage disposal certificate not posted.
- ☒ Damaged / needs repair
- ☒ Missing / not complete
- ☒ Missing / Backflow Report
- ☒ Not ready



- Headers/joists over spanned
- Draft stop not to code
- Provide moisture barrier
- Bottom plates not secured
- Fireplace clearances not met
- Truss hangers / ledgers not to code
- Make site safe and sanitary
- Strap plates / studs
- Nail schedule not to code
- Attic ventilation requirements not met
- Damaged / needs repair
- Missing / not complete
- Not ready

#### **PERMANENT POWER**

- Wire termination not to code
- Exposed wire
- Fixture / cover plates missing
- Wire not properly secured
- Service equipment not properly bonded

#### **2<sup>nd</sup> GAS TEST**

- Provide 20 psi gauge test
- Gas stub-out not connected to riser
- Damaged pipe / riser
- Not ready

#### **PLUMBING FINAL**

- Vent termination not to code
- Paint plumbing vents
- Provide anti-siphon device on hosebibs

## ELECTRICAL FINAL

- Wire termination not to code
- Smoke detectors not to code
- Smoke detectors beeping or not functioning (low or bad battery)
- ARC fault not to code
- Fixture/cover plates missing
- Stairway illumination not to code
- Wire not properly secured
- Power not on
- Label GFCI's
- Label electrical panel(s)
- Label panel with ground termination locations
- Caulk around exterior devices
- Duplex receptacle not permitted for vent hood
- Wire damaged
- Ground / bond termination not to code
- Provide knock-out plug(s)
- Provide panel cover
- Not ready

## MECHANICAL FINAL

- SEER requirements not met
- Programmable thermostat required (Commercial)
- Energy Efficiency requirements not met
- Not supported / secure properly
- Gas vent in contact with combustibles
- Gas vent termination not to code
- Drain pan required
  
- Condensate drain not to code
- Combustion air not to code
- Dryer vent to code
- Crimped duct
- Raise / level A/C pad
- Protect duct
- Missing / not complete
- Damaged / needs repair
- Not ready

## BUILDING FINAL

- Seal/secure exterior penetrations
- Landscape requirements not met
- Flatwork damaged / needs repair
- Clean flatwork
- Clean site/street
- Exterior seal not complete
- Screens missing
- Occupied prior to finals
- Weep holes to be 33" on center
- Maintain 6" clearance from finished floor to grade
- Provide weather strips
- Provide insulation certificate
- Finish yard / grade to drain
- Provide street address
- Provide anti-tip device on range
- Attic access not to code
- Catwalk not to code
- Adjust doors
- Hardware missing
- Provide fire rated attic access

- ☐ Address not posted
- ☐ Work in progress
- ☐ Missing / not complete
- ☐ Damaged / needs repair
- ☐ Not Ready

# Requirements for a Certificate of Occupancy

Please use this checklist for project completion and issuance of a Certificate of Occupancy. Some items do not pertain to Commercial Finish-outs and Remodels. If your project required a Site Development Permit or site improvements, you will need a Certificate of Completion.

## **Building Inspector:**

- Building Final
- Electrical Final
- Plumbing Final
- Mechanical Final

## **Fire Inspector:**

- Fire Final
- Fire Sprinkler
- Fire Alarm
- Fire Lanes/Egress/Life Safety
- Hydrant Pre-Install

## **Planning Department:**

- Certificate of Completion
- Landscaping
- Parking
- General Site Requirements

## **Engineering:**

- Drainage and Detention

## **Permits Department:**

- Outstanding Fees
- Issuance of Certificate of Occupancy

It is the Contractor's responsibility to contact each department directly to schedule an inspection.

Building Inspection – [inspections@richmondtx.gov](mailto:inspections@richmondtx.gov)

Planning Department Inspection -  
([inspections@richmondtx.gov](mailto:inspections@richmondtx.gov))

# Contact Information

## City of Richmond

Approval of permits by the City of Richmond

### Permits/Building Inspections

- Building Official – Lori Bownds 281) 232-6871
- Permits Specialist – 281-232-6871
- Plumbing/Building Inspector Greg Ross –(832)473-3804
- Building Inspector/ Flat work - Oscar Govea – (832)473-0587
- Zoning Jose Abraham – 281-342-0559
- Building Department- 600 Morton Street, Richmond Texas 77469
- Fax – 281-238-1215
- Email -Permits@richmondtx.gov

# Contact Information

## Outside Entities

### U.S. Department of Energy (COMCheckForm/Information)

[www.energycodes.gov](http://www.energycodes.gov)

### Federal Emergency Management Agency (FEMA)

- Flood Plain Information  
1-800-638-6620

### Texas Commission on Environmental Quality (TCEQ), formerly TNRCC

- Drainage Issues  
(512) 239-1000

### U.S. Fish & Wildlife Services

- Habitat/Endangered Species and Caves  
(512) 490-4390

City of Richmond follows Fort Bend County Drainage Criteria

## **Building Permit and Inspection Fees**

### **NOTES:**

1. Double Permit Fees will be charged for any work started before receiving the permit.
2. Reinspection Fees - \$25.00 for first, \$37.50 for second and \$50.00 thereafter for failed inspections
3. Reinspection fees shall be paid prior to requesting additional inspections.