



Commercial Construction Checklist Multi-Family and Commercial Construction

Building Inspection Submittal Requirements

Submit a “City of Big Spring Permit Application”, checklist, and 3 complete hard copy sets and 1 digital set (PDF format) of plans including a completed specification manual, site plan, architectural and structural, mechanical plumbing, electrical, energy conservation code, fire sprinkler and project specific plans to the Building Inspection office at the City Hall Annex, 305 Johnson Street.

Project shall be designed to meet the 2012 International Building, Energy, Fuel Gas, Mechanical, Plumbing and Fire Codes with City of Big Spring amendments, the 2011 National Electric Code with City of Big Spring amendments and the Texas Accessibility Standards. Projects with a construction value in excess of \$50,000 must have a TDLR **TAS Registration Number** at submittal. All required information must be submitted and all contractors must be licensed and currently registered with the City of Big Spring.

The following items must be submitted with the permit application:

Site Plan
<ul style="list-style-type: none"> ___ Drawn to a standard engineering scale on sheets 11” x 17” to 24” x 36” showing the following; ___ Copy of the final (approved) plat or legal description and property address ___ Copy North arrow, scale and plan date ___ Copy Dimensioned lot lines and property size ___ Copy Dimensioned building footprint with total building area and all existing structures on the site ___ Copy Building height, number of stories ___ Copy Building setbacks to property lines ___ Existing and proposed dumpster locations and enclosure ___ Existing and proposed fire hydrants (on-site and adjacent) ___ Existing and proposed utility lines with line sizes, showing point of connection to City lines ___ Existing and proposed easements (on-site and adjacent) identified by type ___ Existing and proposed sidewalks (on-site and adjacent) ___ Location of parking, number of spaces required and provided ___ Abutting alley and street(s), including street name(s) ___ Existing and proposed driveway locations with dimensions ___ Separation from driveways on adjacent properties ___ Exterior and parking lot lighting ___ Floodplain/floodway information, if applicable

The following plans shall be prepared by a homeowner, architect, or other approved designer, drawn to a minimum scale of 1/8” or 1/4” = 1’ on sheets 11” x 17” to 24” x 36” showing the following;
(Plan sheets maybe combined)

Provide complete signed and sealed architectural, mechanical, plumbing, electrical, structural plans and specifications of all work pertinent to the project.



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Architectural and Structural

- ___ Key Plan of Use Group(s) with use(s) of all rooms and sizes shown
- ___ Proposed Construction Type
- ___ Occupancy load for all portions of the building
- ___ Occupant load for all rooms or spaces and total building occupant load
- ___ Fully dimensioned drawings to determine building areas and heights including open perimeter, height and area calculations and total area of building(s)
- ___ Building elevations including all accessory buildings (all directions/views)
- ___ Fire suppression and fire alarm requirements, details of required fire protection systems, stand pipe system and fire extinguisher size and locations
- ___ Sections with construction details for all proposed foundations, floors, columns, beams, walls, partitions, ceilings and roofs
- ___ All fire rated assemblies including fire barriers, smoke barriers, smoke partitions, shaft enclosures with UL or other agency design number and locations and fire resistance ratings of all fire doors, fire shutters, fire windows and fire dampers
- ___ Adequate details to evaluate fire resistive construction requirements to include data to substantiate required fire ratings
- ___ Fire-stop systems/devices for all penetrations and joints of fire resistance rated assemblies
- ___ Details of plastic, insulation and safety glazing installations
- ___ Ceiling plan and material information
- ___ Adequate dimensions and details to evaluate means of egress, including occupant loads for each floor, exit arrangement and sizes with signage, corridors, doors, stairs, ramps, areas of refuge, etc
- ___ Door, door hardware and window schedule
- ___ Existing information including travel distances, exit signs and emergency lighting including power supply
- ___ Stair and/or ramp details including guardrail and handrail details
- ___ Accessibility scoping provisions and details including exterior and interior accessible routes, clear floor space at fixtures and controls, protruding objects, maneuvering clearances, accessible parking, accessible plumbing facilities and details, user group requirements, accessibility to features and facilities to include seating, dining, listening systems, accessible fixtures, elevators, work surfaces, visual and tactile signage, etc.
- ___ Information pertinent to the structural design including but not limited to design load criteria: earthquake design data, wind loads, snow loads, live loads, frost depth and any other special loads
- ___ Fully dimensioned floor plan with use(s) of all rooms and sizes shown
- ___ Structural plans, specifications and engineering details to include soils report indication of the soil type(s) and recommended allowable bearing pressure and foundation recommendations from a Texas licensed engineer*, signed and sealed structural design calculations to substantiate the member sizes and types on the drawings, details of foundations and superstructure, applicable construction standards and material specifications (wood, steel, masonry concrete, etc.)
- ___ Provisions for special inspections to comply with Chapter 17 of the IBC
- ___ Interior elevation and notes
- ___ Building and wall sections with construction details for all proposed walls, partitions and ceilings
- ___ Roof plan and details indicating all pertinent design and function features



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Mechanical

- ___ Complete information on all the mechanical equipment and materials including listing, labeling, installations and compliance with referenced material standards
- ___ Details on the vents used to vent the products of combustion from all fuel burning applications to include the type of venting system, sizing criteria for the type of vent and the routing of the vent
- ___ Details on type and quantity of refrigerant, calculations of refrigerant piping material and type of connections
- ___ Water heater or boiler equipment and piping details to include distribution piping layout, gauges, valves and safety controls
- ___ Details on the HVAC equipment to include the equipment capacity (BTU/h input), controls, equipment location, access and clearances
- ___ Details for supplying combustion air to all fuel fired appliances with location and size of openings and the criteria used to size the openings
- ___ Location of all outdoor air intakes
- ___ Details of the exhaust system to include sizing and routing of ducts and termination from the exterior of the building
- ___ Provide a ventilation schedule to indicate the outdoor air rates, the estimated occupant load, the floor area of the space and the amount of outdoor air supplied to each space
- ___ Detail of condensate disposal to include size and routing of piping and auxiliary and secondary drainage systems
- ___ Complete details on the gas piping system to include materials, installation, gas demand at each location, pipe segment sizing and calculations, gas type, inlet pressure, pressure drop and specific gravity to meet the requirements of the gas piping tables in the IFGC
- ___ Duct construction and installation methods, flame spread/smoke development ratings of materials, flexible air duct and connector listing, sealing of duct joints, seams and connections and spacing of duct support and duct smoke detectors
- ___ Details of duct penetrations through fire-resistive rated assemblies to include locations for smoke dampers, smoke dampers and ceiling radiation dampers with applicable fire protection ratings and labeling requirements
- ___ Details of Type I and Type II kitchen hoods, grease duct construction and velocity, clearance to combustibles and fire suppression system

Plumbing

- ___ Include a plumbing site plan indicating the routing of sanitary, storm drain and water service piping as well as the burial depth of sewer and water services
- ___ Bathroom dimensions and plumbing fixture locations along the wall and the floor and wall surface materials
- ___ Plumbing fixture schedule to include the maximum flow rates for all fixtures
- ___ Underground plumbing and riser diagram including venting to include pipe material(s) and sizing calculations
- ___ Water distribution diagram including all backflow prevention devices to include pipe material(s) and sizing calculations, location of water hammer and all valves and the incoming water supply
- ___ Fixture information and location to include the basis for the amount of plumbing fixtures provided with the occupant load used in calculations and the occupancy group(s) and fixture rates
- ___ Provide locations of all backflow preventers to include type of backflow preventers for each piece of equipment or outlet and the specified material standard referenced in the code



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- ___ Provide drainage system piping plan indicating the layout of all plumbing fixtures and the location of all cleanouts
- ___ Provide the location of all indirect waste connections, grease traps, separators and standpipes
- ___ Provide water heater/boiler details to include temperature and pressure relief valve discharge, discharge piping and pan details and the method of supplying tempered water to the required fixtures
- ___ Provide all pipe support, anchoring and bracing to include materials, locations and attachment methods
- ___ Provide riser diagrams for the water distribution, drain and waste and vent piping and the gas piping. To include the building drain, all horizontal branches and connections and layout of all fixtures. Pipe sizes, direction of flow, grade of horizontal piping, drainage fixture loads and the method of venting all plumbing fixtures
- ___ Provide roof drainage system to include calculations to verify pipe and/or gutter sizes, location of all roof drains/scuppers and indicate the roof area(s) that each group of roof drains is intended to serve as well as an independent secondary roof drainage system
- ___ Gas meter location and piping layout, if applicable
- ___ Provide piping material specifications to verify compliance with the referenced standards for all potable water piping, gas piping, storm water and sanitary sewer piping, types of joints and connections for all piping

Electrical

- ___ Include a site electrical plan to include service size and location
- ___ Provide electrical symbol schedule and diagrams and lighting fixture schedule
- ___ Provide labeling criteria for all electrical equipment
- ___ Provide details indicating the grounding electrodes, the size of all bonding and grounding electrode conductors for the service and bonding of the grounding electrode system
- ___ Provide power floor plan to include all electrical circuits, wiring sizes, panel and sub-panel(s) locations and working clearances, receptacle locations to include required GFCI and arc fault protected circuit locations and disconnect switches
- ___ Provide lighting floor plan to indicate fixture locations including ceiling/exhaust fans, smoke and CO2 detectors, exit signs/means of egress lighting location and power supply, exit discharge lighting, circuit numbers and panel locations
- ___ Provide single line diagram and panelboard schedule including AIC rating, available fault current and the calculated service load with a load distribution schedule
- ___ Provide specifications and requirements for electrical wiring devices, electrical boxes, connections, fittings and installation, overcurrent protection and grounding, switchboard(s) and panelboard(s), wire, cable, raceway, and conduit with fittings, circuit and motor disconnects and motor control centers, hangers and supports, transformers, lighting fixtures, etc.

Energy Conservation Code

Complete signed and sealed plans and specifications for the following:

- ___ Building envelope to include description of uses and proposed occupancy group(s) for all portions of the building, thermal performance of envelope components, fenestration performance details to include air leakage rates, U-factor, SC, SHGC, VLT, etc., fully dimensioned drawings to determine gross and net areas of all envelope components, details of vapor barrier and insulation installation and air sealing methods, COMcheck Building Compliance Certificate, and design conditions for the interior and exterior consistent with the local climate



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- ___ Electrical power and lighting work to include riser **diagrams** of the distribution system to indicate subdivision of feeders by their end use; lighting, HVAC, SWH and systems over 20KW, check metering provisions for individual dwelling units, lighting fixture schedule(s) depicting location, fixture lamps, ballasts, ballast specifications, fixture input watts, fixture wiring methods, power factor, etc., lighting plans for building exterior and interior to include total interior and exterior Connected Lighting Power (CLP), COMcheck interior and exterior Compliance Certificates, interior and exterior means of lighting controls, electric motor schedule including type, horse power and efficiencies
- ___ Mechanical work to include equipment type, capacity (Btuh) and efficiency (peak and part-load), system design air flow rates (cfm), details of equipment/system sizing, system and/or zone control capabilities including terminal device schedule, provisions for automatic setback/shutdown, indicate intentions or plans for systems commissioning, energy consumed by fans and pumps, economizers (air and water) including provisions for integrated control, hydronic piping lining and insulation materials, provisions for air and/or hydronic system balancing, boiler and water heater equipment and piping details, safety controls and distribution piping layout, COMcheck Mechanical Compliance Certificate
- ___ Service water heating (SWH) to include SWH equipment data with type, capacity and efficiency, SWH pipe insulation, thickness, conductivity and vapor retarder (where appropriate), water conservation requirements, energy conservation measures for swimming pools (where applicable)

Fire Sprinkler (if applicable)

- ___ Provide complete signed and sealed plans and specifications for the sprinkler system and related equipment
- ___ Provide description of uses within the building and corresponding occupancy class for each area. Location and size of all concealed spaces, closets, attics and bathrooms. Details of occupancies utilized for high-piled storage including commodity types and storage arrangement
- ___ Provide design details in accordance with the appropriate sprinkler system standard, as referenced by the IBC and all other applicable design standards
- ___ Provide design calculations indicating the discharge requirements of the sprinkler system including the design density, area of application and inside/outside hose stream demand for each occupancy
- ___ Provide results of a current flow test indicating the location, date and witness of the test. Site plan indicating the overall water supply source and arrangement
- ___ Provide working drawings indicating all pipe sizes and the space between branch lines and sprinklers on the branch line. Hydraulic reference points on the drawings correlated with the hydraulic calculations
- ___ Provide make, model, type and temperature rating and k-factor for all sprinklers. Total number of sprinklers on each floor and for each system
- ___ Provide full height section views and location of all interior partitions, fire barriers, fire partitions, fire walls and horizontal assemblies
- ___ Provide material specifications and equipment specifications for all sprinkler system components including type of sprinkler pipe(s), pipe fittings, control valves, check valves, dry pipe valves, test connections, pipe hangers, backflow preventers, fire department connections and alarm bells.

Flood Mitigation/Management Plan:

- ___ Location of Flood Plain (if applicable)



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Project Specific Documents and Plans (if applicable)

- ___ Landscape Plan, see Article 10, Big Spring Zoning Ordinance
- ___ Irrigation Plan, show irrigation meter location on engineering utility plan sheet
- ___ Energy Code Compliance, paper work showing compliance with the Energy Conservation Code with COM-CHECK software.
- ___ TCEQ or EPA Permits, if the project is located on a site of 1.0 acres or more, you must obtain a permit from the Texas Commission on Environmental Quality (TCEQ) or if 5.0 acres or more you must obtain a permit from the Environmental Protection Agency (EPA). More information may be found at the TCEQ website, www.tceq.state.tx.us.
- ___ Retaining Walls, if there is a retaining wall 4 feet or more in height being built as part of this project, an engineered design must be submitted. Shorter walls may require engineered plans depending on the type, location and other factors.
- ___ Asbestos Survey, if this is a commercial or public building remodel or demolition, an asbestos survey is required. A State of Texas licensed asbestos survey company must complete the survey. A copy of the survey must be included with your application.
- ___ Civil Engineering Plans, see the Engineering section of the "Development Process Guidelines" for requirements.
- ___ Other Specific Document or Permits may include, letter(s) of permission or permits from adjacent property owners and/or other public agencies, off-site easements, facilities agreements, cross-access easements, FEMA documentation, TxDOT access and crossing permits.

This checklist was designed to help guide you through the plan submittal process. If you have not provided all the required information, action on your permit application will be delayed until that information is submitted and review. If you have any questions, please feel free to ask the permit technician or the building official.

THIS CHECKLIST MUST BE COMPLETED AND ATTACHED WITH YOUR PERMIT.

Signature

Date

*An engineered foundation plan and details to include a soils report are not required for the following; apartments not exceeding eight (8) units for each building in the case of one-story buildings; apartments not exceeding four (4) units for each building and having a maximum of two-stories.