

CHECKLIST FOR PLAN REVIEW

1. General

Yes ____ No ____ Design Certification – Submitted plans, specifications and engineering data for each applicable discipline shall be certified in writing as being prepared in conformance with the Jurisdiction’s Building Code. Such certification shall include the name, signature, state registration number and telephone number for each designer on the project.

2. Site Plan

All site plans shall be sealed and signed by an engineer or surveyor registered in the state of Missouri unless waived by the City Planner.

- Yes ____ No ____ a. Include name, and address of project and the preparer.
- Yes ____ No ____ b. Include date of issue, north arrow, and scale.
- Yes ____ No ____ c. Legal description of the property.
- Yes ____ No ____ d. Show property lines, lot dimensions, and setback dimensions.
- Yes ____ No ____ e. Show adjacent land uses.
- Yes ____ No ____ f. Show dimensions of buildings and distances to other buildings, improvements, property lines, driveways, and proposed parking.
- Yes ____ No ____ g. Location of the public right-of-ways adjacent to the property.
- Yes ____ No ____ h. Location of all easements on the property.
- Yes ____ No ____ i. Note on plans, boundaries of 100-year Regulatory Floodplain and Floodway.
- Yes ____ No ____ j. Identify site utilities.
- Yes ____ No ____ k. Layout and design of the parking areas, including spaces for the disabled, required screening, loading areas and pavement construction details.
- Yes ____ No ____ l. Parking area lighting standards, location, and screening.
- Yes ____ No ____ m. Landscaping plan complying with the requirements of the Zoning Ordinance.
- Yes ____ No ____ n. Storm drainage: site grading, storm discharge and detention.
- Yes ____ No ____ o. Drive entrances from city streets (show adjacent drives).
- Yes ____ No ____ p. Sidewalks as required by ordinance.
- Yes ____ No ____ q. Show dumpster enclosure(s) location, type, and screening.
- Yes ____ No ____ r. Show location and details of any proposed signs, free-standing, ground-mounted, or otherwise.
- Yes ____ No ____ s. Show location of any proposed fences/walls, decorative, security or otherwise.
- Yes ____ No ____ t. **Location of nearest fire hydrant(s) and fire flow calculations.**
- Yes ____ No ____ u. Fire lanes (minimum **20 ft** wide all weather surface) to reach within 150 ft. of building. **May be required to be wider depending on other factors.**

3. Architectural All architectural calculations and plans shall be signed and sealed by an Architect, registered in the state of Missouri.

- Yes ___ No ___ a. Occupancy Group:
Show actual floor area for each occupancy group.
- Yes ___ No ___ b. Type of Construction:
Show type of construction classification for each building.
Show design reference numbers of fire-resistive assemblies
- Yes ___ No ___ c. Location on Property:
Indicate width of public space, streets or yards on sides of building for use as a basis for allowable area increase.
- Yes ___ No ___ d. Floor area:
Show actual gross floor area with basement listed separately.
- Yes ___ No ___ e. Height and Number of Stories:
Show actual height and number of stories.
- Yes ___ No ___ f. Occupant Load:
Show occupant load for each floor and assembly rows where occupancy rating is required. Provide layout for all fixed seating.
- Yes ___ No ___ g. Area Separation Walls:
If used, show location and fire-resistance rating. **Include design reference numbers.**
- Yes ___ No ___ h. Penetrations of Rated Assemblies:
Show method of opening protection and note reference listing.
- Yes ___ No ___ i. Sprinklers:
State whether building is to be sprinkled and / or have standpipe system throughout or identify discrete areas to be sprinkled.
- Yes ___ No ___ j. Exiting:
Show exiting system including rated enclosures, stairways, exit widths, etc.
- Yes ___ No ___ k. Accessibility:
Show means for providing accessibility for persons with disabilities.
- Yes ___ No ___ l. Life Safety Features (Fire Alarm System, Fire Detection System, Special Features)

4. Structural: Structural calculations shall be furnished for all buildings except one and two family dwellings of conventional frame construction, or when waived by the Building Official. All structural calculations and plans shall be sealed and signed by an engineer registered in the state of Missouri. The following information is required:

- Yes ____ No ____ a. Design Load:
List design load combination
- Yes ____ No ____ b. Snow loads:
(1) Show basis for design P.
(2) Include drifted snow and rain-on-snow surcharge.
(3) Considerations for roof slopes < 1/2:1 ft.
- Yes ____ No ____ c. Live loads
List design floor live loads for each use category. State live-load reductions, if any, and show basis.
- Yes ____ No ____ d. Seismic Zone Earthquake regulations:
State coefficient(s) used.
- Yes ____ No ____ e. Design wind loads:
State design stagnation pressure q used. State coefficient(s) used.
- Yes ____ No ____ f. Foundations:
1. Show that all footings meet or exceed minimum depth of 36 inches.
2. State in soils report or in calculations applicable design soil parameters (i.e., vertical and lateral bearing, sliding, etc.)
3. State basis for design values used (i.e., assumed soils investigation report, etc.)
- Yes ____ No ____ g. Materials & Fasteners:
Provide materials specifications. Note allowable design stresses.

5. Special Inspections in accordance with Section 1704 of the 2006 International Building Code

- Yes ____ No ____ a. List applicable types of work which require Special Inspection.
- Yes ____ No ____ b. Identify the Special Inspector for each applicable item and submit qualifications and letter of acknowledgment from Special Inspector himself. If unknown, submit time schedule for submission of names.
- Yes ____ No ____ c. List approved fabricators (if any) for specific types of work.

6. Mechanical All mechanical calculations and plans shall be sealed and signed by an engineer registered in the state of Missouri unless waived by the Building Official.

- Yes ____ No ____ a. HVAC Equipment Specifications:
Show locations, type, capacity and weight/support of all heating, ventilation and air conditioning equipment.
- Yes ____ No ____ b. Rated Enclosures:
Show or specify wall construction where rated enclosures are required.

- Yes ____ No ____ c. Special Equipment:
Show special equipment such as kitchen hoods, enclosed garage ventilation, paint booth exhaust, automatic fire suppression, etc.
- Yes ____ No ____ d. Fire or Smoke Control:
Define in specifications or on plans special use of equipment in conjunction with fire or smoke control.
- Yes ____ No ____ e. Special Requirements:
Show appurtenances and required details such as flue vent type and size.
- Yes ____ No ____ f. Venting System:
Show all duct runs, fire dampers where applicable, gauge thickness for medium and high velocity systems, type and class of non-metallic duct, etc.
- Yes ____ No ____ g. Materials:
Specify materials of installation components.
- Yes ____ No ____ h. Fire or Smoke Control:
Define in specifications or on plans special use of equipment in conjunction with fire or smoke control.
- Yes ____ No ____ i. Penetrations of Rated Assemblies:
Show method of opening protection and note referenced listing or refer to drawings containing same information.

7. Plumbing

- Yes ____ No ____ a. Plumbing Fixtures:
Show fixture numbers and locations and provide basis for number of fixtures. Include water closets, urinals, lavatories and drinking fountains.
- Yes ____ No ____ b. Building Drain System:
Show the under-floor system of the drain waste and soil piping, specifying pipe sizes and slope. Provide riser diagram for multiple fixture.
- Yes ____ No ____ c. Building Utilities:
Show the sanitary building sewer, storm sewer system, water service, gas service and all connections to the public utilities.
- Yes ____ No ____ d. Materials:
Specify all piping materials.
- Yes ____ No ____ e. Penetrations of Rated Assemblies:
Show method of opening protection and note referenced listing or refer to drawings containing same information.
- Yes ____ No ____ f. Water System:
Provide known water pressure and supply pipe sizes and calculations of water system, water heater data, and hot water system.

- Yes ____ No ____ g. Venting System:
 Show pipe sizes, size of vent through the roof and connection to building drains.
- Yes ____ No ____ h. Trap Arms:
 Specify trap arm size and specify lengths.
- Yes ____ No ____ i. Special Requirements:
 Show all required appurtenances, such as grease interceptors, sump pumps, sewer ejectors, sample ports, backflow preventers, backwater valves, and special fixtures.

8. Electrical All electrical calculations and plans shall be sealed and signed by an engineer registered in the state of Missouri unless waived by the Building Official.

- Yes ____ No ____ a. Riser Specifications:
 Show riser and note equipment amps, wire size and grounding.
- Yes ____ No ____ b. Current:
 Show in calculations the available fault current.
- Yes ____ No ____ c. Voltage:
 Note service voltage.
- Yes ____ No ____ d. Show service equipment short circuit amp rating.
- Yes ____ No ____ e. Provide panel schedules with circuit amp rating.
- Yes ____ No ____ f. Provide plan showing equipment and circuits.
 Specify wire as copper or aluminum and insulation type.
- Yes ____ No ____ g. Penetrations of Rated Assemblies:
 Show method of opening protections and note referenced listing or refer to drawings containing same information.
- Yes ____ No ____ h. Grounding:
 Note service grounding wire size.
- Yes ____ No ____ i. Show equipment grounding conductors and grounded conductor bonding point, at first service disconnect. All subpanels show 4 wires and sizes.
- Yes ____ No ____ j. Show bonding of all required systems.

9. Automatic Sprinkler System and Fire Suppression System:

- Yes ____ No ____ a. Identify if the building is sprinkled.
 ____ Full; ____ Partial, What portion? ____
- Yes ____ No ____ b. Fire Suppression Systems including hood extinguishing system:
 (1) Provide UL Listing
 (2) Provide schematic layout of system.
 (3) Proposed location of Fire Department connection to sprinkler system and the closest fire hydrant.
 (4) Adequate water available to supply sprinkler system

- Yes ____ No ____ c. Indicate Method of Storage:
(1) Piled Storage
(2) Rack Storage
(3) High Rack Storage

10. Elevator

- Yes ____ No ____ a. Hoistway:
Show hoistway construction and access.
- Yes ____ No ____ b. Hoistway Ventilation:
Show hoistway venting and any equipment, ducts, or wiring located in hoistway.
- Yes ____ No ____ c. Machine Rooms:
Show machine room construction and access.
- Yes ____ No ____ d. Machine Room lighting and Ventilation:
Show machine room lighting and ventilation.
- Yes ____ No ____ e. High-rise Requirements:
Show details related to high-rise requirements.
- Yes ____ No ____ f. Pit Construction:
Show pit construction details.
- Yes ____ No ____ g. Emergency Operation:
Provide information on emergency operations.
- Yes ____ No ____ h. Alternate Materials and Methods:
If design utilizes approved alternate materials and methods of construction, list those engineered alternates on the plans.
- Yes ____ No ____ i. Elevators shall be reviewed and inspected by Missouri State Elevator Inspectors.

11. Kitchens, Food Preparation Areas:

- Yes ____ No ____ a. Floor plans showing kitchen equipment layout, location of required plumbing facilities (hand sink, mop sink or curbed janitor's sink, three compartment sink), employee locker rooms (if provided), floor drains, plumbing connections, drain lines from equipment, etc. A hand-washing sink must be installed in the food preparation area, utensil-washing area and in, or immediately adjacent to all restrooms. All such lavatories must be equipped with hot (110-120 degrees F) and cold running water under pressure, soap dispensers and sanitary towels.
- Yes ____ No ____ b. Indication that floor covering in all food preparation areas, food storage areas, utensil washing areas, locker rooms, and toilet rooms shall be constructed of smooth durable material such as concrete, terrazzo ceramic tile, durable grades of linoleum, quarry tile, or tight wood impregnated with plastic. Where water-

flush cleaning methods are utilized, the junctures between the walls and floors must be covered and sealed.

- Yes ____ No ____ c. Indication that walls, including non-supporting partitions, wall coverings, and ceilings of walk-in refrigerating units, food preparation areas, equipment and utensil washing areas and toilet rooms are to be finished with light colored, smooth, nonabsorbent and easily washable materials. Concrete or pumice block walls must be finished and sealed. All fixtures and food preparation equipment shall be easily washable.
- Yes ____ No ____ d. Indication that permanently fixed artificial lighting shall be installed to provide a minimum of 20 foot candles of light on all food preparation surfaces and equipment or utensil washing areas.
- Yes ____ No ____ e. Indication that all rooms shall be provided with sufficient ventilation to keep the rooms free of excessive heat, steam, condensation, vapors, obnoxious odors, smoke and fumes. All rooms from which obnoxious odors, smoke and fumes originate shall be mechanically ventilated to the outside.
- Yes ____ No ____ f. Restrooms must be completely enclosed, including tight fitting, self-closing doors. Restrooms must be vented to the outside.
- Yes ____ No ____ g. A dipper-well must be provided if dispensing bulk ice cream and must be provided with running water and a suitable drain.
- Yes ____ No ____ h. Fire suppression system.
- Yes ____ No ____ i. Hood and duct specifications provided.

12. Water Service:

- Yes ____ No ____ a. Location and size of public water main to be used for service line connection.
- Yes ____ No ____ b. Tap location and size – The tap must be along the frontage of the lot served, and be perpendicular to the public water main from the main to the meter. Tap size is generally the same as the water service.
- Yes ____ No ____ c. Service line type and size – Service line size must be determined by the hydraulic needs of the building to be served. Plans must be clear as to the intended use of a water service, that is, whether it is a domestic service, fire protection, or a combination service.
- Yes ____ No ____ d. Location of water meter – The meter will be located outside in a pit or vault, depending upon the size of the meter.
- Yes ____ No ____ e. Size and Type of water meter – The meter size and type must be determined by the applicant based on hydraulic needs of the building to be served. All turbine meters will require approval from the Water Quality Division.
- Yes ____ No ____ f. Location of stop valve – A stop valve is required on all domestic services immediately upon entering the building.

Yes ____ No ____ g. Type and location of backflow preventer (BFP) – The City and Department of Natural Resources requires backflow prevention for containment, thus protecting the public water supply from contamination. A reduced pressure zone (RPZ) is required on all high hazard service lines. The RPZ will be located just inside the building, after the stop valve (see F. above), before any branch service lines. Unless there is a hazard prior to the line entering the building, a backflow preventer must be installed prior to any hazard. A double check backflow preventer will be required on any low hazard service and a double check detector assembly backflow preventer is required on fire suppression systems, i.e. sprinkler systems.

13. Sewer Service:

Yes ____ No ____ a. Location and size of public sewer main to be used for service line connection.

Yes ____ No ____ b. Show location and size of all private sewer connections to existing public sewer mains.

Yes ____ No ____ c. Show location of clean-outs as required per code.

Yes ____ No ____ d. Indicate the type of material/pipe to be used.

Yes ____ No ____ e. Size of building sewers – The minimum size of any building sewer shall be determined on the basis of the total number of fixture units drained by such sewer. No building sewer shall be smaller than the building drain.