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CITY PLANNING & DEVELOPMENT

Commercial Construction Permit – Checklist
Information Bulletin No. 110 Part C

Purpose

Please utilize the following checklist of items necessary for performing a complete plan review of the project. Omission of required information will result in delays in the plan review approval process. The checklist is for reference only and does not constitute a complete list of all items that may be required for approval during the plans review process. The owner and the owner's design professionals are responsible for compliance with the requirements of the Code of Ordinances of Kansas City, Missouri.

Required Information on Plans

City Planning – Plans Review Division

1. General

Yes N/A

- Code Modifications Requests (CMR) and Design Appeals: If design is based on an approved CMR or decision of the Building and Fire Code Board of Appeals, list those approvals.
- Preliminary Code Review Design Meeting, Team Inspections correspondence, and/or any other related correspondence with City Planning and Development (CPD). Include a copy of the approval regarding any Preliminary Code Review Design Meetings and/or Team Inspections applicable to this project.
- Show on the plans the applicable adopted model codes and standards (e.g., building, plumbing, mechanical, electrical, fire protection, etc.), including edition, to which the project has been designed (see IB110B for adopted codes and standards). If listing codes for compliance with other agencies (such as State and/or Federal requirements), then they must be listed as codes used in addition to the adopted codes and standards.
- For residential occupancies, indicate on the plans whether the property will be lot split, platted, or otherwise constructed for separate ownership creating property lines between proposed dwelling units. If townhouse dwelling units are proposed, and the provisions of the 2018 IRC apply, the building plans must follow IB 100. Infrastructure, utilities, and sitework must follow IB 110.
- For all other occupancies, indicate if the property is undergoing a Minor Subdivision for lot split, lot combination, or lot line adjustment. Indicate if this is being done at the County or through a CPD process.
- Provide a report, prepared by a qualified person, of all materials regulated as constituting a physical health hazard, hazardous production material, detonation hazard, deflagration hazard, a hazard from accelerating burning, and/or materials that readily support combustion in excess of those found in IBC Tables 307.1(1) and 307.1(2).
- Indicate whether the proposed work constitutes a change in use and/or occupancy classification of the existing building per building code definitions. The prior legal occupancy shall be listed in the code analysis of the plans. Representative photographs showing the current existing condition of the building/space, both inside and outside are required to be submitted.
- Provide dimensions on all sheets of a minimum to allow construction of the details/items on that sheet.
- Provide a general description/narrative of the work proposed.

2. Code Analysis (includes above General) - Shall start within first 3 pages of plan submittal

Yes N/A

- Occupancy Classification: Provide occupancy classification(s) of the project. Show actual floor area for each occupancy group. The occupancy classification of the adjacent spaces may be needed, as applicable for the project. Indicate if utilizing separated or non-separated use approach per 2018 IBC §508.
- Type of Construction: Show type of construction classification for each building.
- Location on Property: Indicate width of public space, streets, or yards on sides of building for use as a basis for allowable area increase.
- Floor Area: Show actual gross floor area of the building.
- Floor Area: Show actual floor area of each story of the building.
- Floor Area: Provide the gross project floor area, separating renovation, addition, and new building areas.
- Height and Number of Stories: Show actual height and number of stories of the building.
- Occupant Load: Show calculated occupant load for each floor and space. Provide a layout for all fixed seating, if used. Identify assembly spaces/rooms with a name, assembly type (e.g., A-2), and occupant load.
- Fire-resistance Rated Construction: When required, show location and fire-resistance rating. Include design reference numbers and provide the complete listing details of all fire-resistive assemblies, per the referenced listing, on the plans.
- Penetrations of Rated Assemblies: Show method of opening protection, note reference listing, and provide full listing details of the listed method.
- Sprinklers: State whether building is currently or to be sprinklered throughout or partial. Note the NFPA design standard(s) to be used, (e.g., NFPA 13 or 13R).
- Egress Plan: Show exiting system including rated enclosures, stairways, exit widths, exit separation, maximum and common path of travel distance, means of egress lighting, exit discharge, etc.
- Show anticipated storage, equipment, and/or furniture layout. Include an egress plan for any platforms, stairs, ramps, or any obstructions. This includes storage racking and/or conveyors.
- For existing buildings, if using the IEBC indicate the compliance method (Prescriptive, Work Area, or Performance). Note: Performance may only be used for structures existing prior to 1878 - see KCBRC.
- Accessibility: Show means for providing accessibility for persons with disabilities in compliance with IBC Chapter 11 and ICC/ANSI A117.1. Include dimensions for elements such as restrooms and stairs.
- Provide list of required Special Inspections or denote as not applicable.
- Denote Risk Category per IBC §1604.5.
- Energy Conservation. Please see IB 171-CE or RE for required information to be included on plans. Absence of Energy Code Analysis sheet(s) (as required by IB 171) will result in a voided plan.

3. Site and Grading Plans

Yes N/A

- A survey is required for all new construction, additions (including vertical), and infilled portions of the building.
- Legal description of the property
- Drawn to scale with North arrow on plan. The scale shall not be less than 1:60.
- Location and dimensions of all property lines and assumed imaginary property lines (IBC §705.3).
- Indicate all earth retaining structures (e.g., retaining walls).
- Existing and proposed grade elevation contours of the land.
- Show all sidewalks, driveways, paved areas, streets, curbs, and gutters.
- Show all existing and proposed fire hydrants and Siamese connections.

- Show dimensions of buildings and distances to other buildings, improvements, property lines, assumed imaginary property lines (IBC §705.3), driveways, and proposed parking, and the elevation at grade of buildings and structures.
- Identify site utilities and storm drainage, indicate routing of all utilities to the point of connection to public facilities.
- Flood plain information as follows (required if the regulatory 100-year floodplain is located anywhere on the parcel per most current adopted FEMA maps - NAVD datums shall be used:
 - The location and elevation of the boundary of the 100-year Regulatory Floodplain.
 - Where required for "critical facilities" in accordance with the Floodplain Ordinance Chapter 28, the location and elevation of the boundary of the 500-year Regulatory Floodplain.
 - The location and elevation of the boundary of the "one foot freeboard" as required by Chapter 28.
 - The elevation of lowest grade adjacent to the structure.
 - If there is work/development in the floodplain and/or if there is work within a structure, including existing, that is located within the area of the current regulator floodplain plus one-foot freeboard, then a Floodplain Development Permit is required (see [IB 120](#)).
- Location and dimensions of the public right-of-way adjacent to the property.
- Location and dimensions of all easements on the property.
- Layout and design of the parking areas, including accessible parking, required screening, off-street loading/unloading areas (including maneuvering area) and pavement construction details.
- Parking area outdoor lighting.
- Landscaping plan complying with ordinance requirements and Board of Zoning Adjustment (BZA) or City Plan Commission (CPC) cases, if applicable.
- Show erosion and sedimentation control measures. A Site Disturbance Permit is required if disturbed area is one acre or more.

4. Structural: Structural calculations shall be furnished for all new buildings/structures and existing buildings/structures when structural modifications are proposed. Calculations are not required for buildings of three stories or less in height and of conventional light-frame constructions complying with § 1804.1, 1804.4, 2302, 2304, and 2308 of the 2018 IBC, or when waived by CPD. The following information is required:

Yes N/A

- Design Load: List design load combination (IBC § 1605.1).
- Snow loads (IBC § 1608; ASCE 7 Chapter 7): (1) Show basis for design psf. (2) Include drifted snow and rain-on-snow surcharge. (3) Considerations for roof slopes < 2:12.
- Live loads (IBC table 1607.1): List design floor live loads for each use category. State live-load reductions, if any, and show basis (IBC § 1605.3.1.1).
- Point loads, wherever applicable, shall be used (as opposed to uniform loading). (IBC § 1604.4)
- Seismic Zone and Earthquake regulations (IBC § 1613): State site conditions and coefficients used.
- Design wind loads (IBC § 1609): State design wind pressure used. Show basis of design wind pressure for primary frames and systems (IBC § 1609 or ASCE 7 Chapters 26-30). State importance Factor I (IBC 1604.5).
- Analyses and designs using computer software shall be permitted, provided design assumptions, applicable codes, user input, and computer-generated output, most recent update, and summary are submitted. Model analysis shall be permitted to supplement calculations. All information requested in the section, at a minimum, shall be provided. If formulas are not available, sample calculations verifying the software output shall be provided. National software that has been thoroughly vetted by an approved agency may be allowed without formulas (such as RISA) but a summary is still required. In-house written programs will require formulas. This includes all excel type spreadsheets.

- Foundations: Show that all footings meet or exceed minimum frost depth of 36 inches.
- Foundations: Provide geotechnical soils report when an assumed design soil bearing capacity of > 2000 psf for undisturbed grounds is utilized in the design of the foundation systems.
- Foundations: State in geotechnical soils report, as applicable, or in calculations applicable design soil parameter (i.e., vertical and lateral bearing, sliding, etc.).
- Foundations: State basis for design values used (i.e., assumed for stated soil classification, recommended in soils investigation report, etc.).
- Materials & Fasteners: Provide materials specifications including IBC material designations (or other approved designations such as ASTM, etc.). Note allowable design stresses.

5. Special Inspections in accordance with § 1704 of the IBC

Yes N/A

- List of all applicable types of work which require Special Inspection per KCBRC § 18-22, IBC § 1704-1705, and Chapter 2 of the [CPD Special Inspections Manual](#):

<input type="checkbox"/> EIFS (if non-drainable)	<input type="checkbox"/> Placement of Reinforcing Steel	<input type="checkbox"/> Modular Block Earth Retaining Structure
<input type="checkbox"/> Temporary Shoring	<input type="checkbox"/> Placement of Reinforced Concrete	<input type="checkbox"/> Inspection of Metal Building Fabricator
<input type="checkbox"/> Excavation and Filling	<input type="checkbox"/> Testing of Reinforced Concrete	<input type="checkbox"/> Inspection of Precast Fabricator
<input type="checkbox"/> Verification of Soils	<input type="checkbox"/> Erection of Precast Concrete	<input type="checkbox"/> Inspection of Structural Steel Fabricator
<input type="checkbox"/> Drilled Piers or Piles	<input type="checkbox"/> Prestressing Concrete	<input type="checkbox"/> Mastic and Intumescent Fire-Resistive Coatings
<input type="checkbox"/> Aggregate Piers	<input type="checkbox"/> Bolts installed in Concrete	<input type="checkbox"/> Sprayed Fire-Resistant Materials
<input type="checkbox"/> Seismic Resistance	<input type="checkbox"/> Steel Frame Inspection	<input type="checkbox"/> Smoke Control System (per §909)
<input type="checkbox"/> Post-Installed Anchors	<input type="checkbox"/> High Strength Bolting	<input type="checkbox"/> Fire Stopping (§17015.17)
<input type="checkbox"/> Structural Masonry	<input type="checkbox"/> Structural Welding	<input type="checkbox"/> Other: _____
- Submit a letter from the Special Inspection Agency hired by the owner accepting responsibility for each applicable item. This is to be submitted to SpecialInspections@kcmo.org.
- List approved fabricators (if any) for specific types of work.
- For smoke control systems, submit system documentation including the design requirements (IBC 909.2), rational analysis (IBC 909.4), and acceptance testing procedures and methods (IBC 909.3, 909.18).
- Where Quality Assurance for Seismic Resistance is required, submit the quality assurance plan and the contractor statement of responsibility (IBC 1705).

See [CPD Special Inspections Manual](#) for complete information. A Preconstruction Meeting is required prior to permit issuance for all Special Inspections projects.

6. Mechanical

Yes N/A

- Provide a Mechanical riser plan when there are multiple stories.
- HVAC Equipment Specifications: Show locations, type, capacity, and weight/support of all HVAC equipment.
- Provide analysis and calculation for minimal ventilation rates. State if using natural and/or mechanical ventilation and provide calculations showing outdoor airflow rate(s).
- Rated Enclosures: Show or specify wall construction where rated enclosures are required (heaters, boilers, etc., over 400,000 BTU, Boilers over 15 psi and 10 hp; etc.).
- Special Equipment: Show special equipment such as kitchen hoods, enclosed garage ventilation, paint booth exhaust, automatic fire suppression, etc.
- Special Requirements: Show appurtenances and required details such as flue vent type and size, expansion tanks, blow down systems, protection devices, means for combustion air and special use equipment.

- 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.
- Materials: Specify materials of installation components.
- Fire or Smoke Control: Define special use of equipment in conjunction with fire or smoke control. Submit system documentation including the design requires (IBC 909.2), rational analysis (IBC 909.4), and acceptance testing procedures and methods (IBC 909.3, 909.18).
- Penetrations of Rated Assemblies: Show dampers and/or method of opening protection and note referenced listing or refer to drawings containing same information.

7. Plumbing

Yes N/A

- Provide a plumbing riser plan/diagram.
- Plumbing Fixtures: Show fixture numbers and locations and provide basis for number of fixtures (IBC Chapter 29). Include water closets, urinals, lavatories, and drinking fountains.
- Building Drain System: Show the system of the drain, waste, and soil piping, specifying pipe sizes and slope. Provide riser diagram for multiple fixtures.
- Building Utilities: Show the sanitary building sewer, storm sewer system, water service, gas service, and all connections to the public utilities.
- Materials: Specify all piping materials.
- Penetrations of Rated Assemblies: Show method of opening protection and note referenced listing or refer to drawings containing same information.
- Water System: Provide known water pressure and supply pipe sizes and calculations of water system, water heater data, and hot water system.
- Venting System: Show pipe sizes, size of vent through the roof and connection to building drains.
- Trap Arms: Specify trap arm size and specify lengths.
- Special Requirements: Show all required appurtenances, such as grease interceptors, sump pumps, sewage ejectors, sample ports, backflow preventers, backwater valves, and special fixtures.
- Gas Piping System Pressure: Specify the gas piping system operating pressure.

8. Electrical

Yes N/A

- See IB 160 for information required to be shown on all submitted line drawings/plans.
- See IB 162 for Solar Panel Installations.
- Riser Specifications: Show riser and note equipment amps, wire size, and grounding.
- Current: Show in calculations the available fault current.
- Voltage: Note service voltage
- Show service equipment short circuit amp rating.
- Provide panel schedules with circuit amp rating.
- Provide plan showing equipment and circuits. Specify wire as copper or aluminum and insulation type.
- Penetrations of Rated Assemblies: Show method of opening protection and note referenced listing or refer to drawings containing same information.
- Grounding: Show grounding electrode conductor system, including conductor size(s).
- Emergency generators with capacity greater than or equal to excess of **185 kW** may require a [Health Department Air Permit](#).

9. Automatic Sprinkler System and Alternative Fire Suppression Systems:

Yes N/A

- Show the NFPA standard(s) and edition of the standard(s) utilized in design of the fire sprinkler system. The edition referenced by the IBC of the parent building permit shall be used. The edition of the currently adopted IBC shall be used for stand-alone projects.
- Show reference information of "work by others" including, but not limited to, fire service line.
- Show occupancy/hazard classification and design density information.
- Show description of use for all portions of the building included in this application.
- Identify whether obstructed or unobstructed construction. Indicate if there are un-sprinklered, concealed combustible spaces.
- Indicate whether sprinkler system design is pipe schedule, hydraulically designed, or special design.
- Show all applicable design information as specified in the referred NFPA standards.
- Show full height cross-section or details as necessary to reflect sprinkler locations in relation to obstructions for all atypical conditions.
- Indicate type of sprinkler system: wet pipe system, dry pipe system, etc.
- Provide hydraulic design calculations for new systems or for modifications to an existing system which affects the hydraulically most remote area of the system.
- Indicate couplings, clearance, and sway bracing for protection of sprinkler system against seismic forces.
- Provide fire stop assembly design number (UL or other approved assembly) and complete construction details for sprinkler system piping penetrations of fire resistive assemblies.
- Indicate electrical supervision or other approved method of supervision of valves controlling the water supply for automatic fire sprinkler systems.
- Show the use of special sprinklers, such as extended coverage or ESFR sprinklers, or special conditions, such as the use of a water curtain. Show the method of protection as required for nonmetallic piping.
- Provide listing information for special piping and sprinklers.
- Show water supply flow test data, including, but not limited to, flow location, static and residual pressures in PSI, flow in GPM, date of test, name of party who conducted test or supplied information.
- For storage and/or warehouse occupancies provide information regarding commodity, commodity classification, encapsulated (method of packaging, height of storage, storage arrangement (i.e., aisles, piles, on pallets, racks, arrays, etc.), in-rack sprinklers, as applicable, and small hose stations.
- For new buildings or building additions four or more above or below grade plane, note that standpipes shall be provided during construction in accordance with the building code.
- Show the materials, listing information, and installation specifications for the piping, fittings, and hangers.
- All items required for working plans in the applicable NFPA document.
- Indicate on the plans all information required on the hydraulic information sign as required by the applicable NFPA document.

10. Elevator:

Yes N/A

- Emergency elevator communication systems for the deaf, hard of hearing, and speech impaired (IBC § 3001.2).
- Hoist way: Show hoist way construction and access.
- Hoist way Ventilation: Show hoist way venting and any equipment, ducts, ore wiring located in hoist way.
- Machine Room: Show machine room construction and access.
- Machine Room Lighting and Ventilation: Show machine room lighting and ventilation.
- High-rise Requirements: Show details related to high-rise requirements.

- Pit Construction: Show pit construction details.
- Emergency Operation: Provide information on emergency operations.
- Alternate Materials and Methods: If design utilizes approved alternate materials and methods of construction, list those engineered alternates on the plans.

11. Floodplain:

Yes N/A

- Where a floodplain development permit (FDP) is required, the FDP application shall be filed separately using IB 120.
- See Site Plan section above for general information required if a regulatory floodplain exists on the parcel.

12. Zoning:

Yes N/A

- Description of the proposed use of the property.
- Zoning district classification.
- For all new buildings, additions, and/or change of occupancy/uses - provide an analysis showing ratios/calculations for required parking. Note any exemptions/reductions/special area standards and/or alternative compliance parking plans.
- Reference to any BZA, CPC, Special Review District, Landmarks Commission, Building and Fire Codes Board of Appeals (BFCBA) or other cases related to the project (including requests for zoning variances, special use permits, development/project plan review, subdivision plat or lot split approval, MPD/UR plans, rezoning, etc.). Indicate that the conditions of any related cases have been satisfied in this application.
- Elevation views of the building above ground level.
- Verification of the elevation of the Airport Height Zone limits in relation to the height of the building. Airport Height Zones are established surrounding Kansas City International Airport and Kansas City Downtown Airport.
- Indication of the approval of any encroachment of the project into the public right-of-way, see IB 106.

13. Fire Alarm System:

Yes N/A

- Show the standard(s) and edition of the standard(s) utilized in design of the fire alarm system. The edition referenced by the IBC of the parent building permit shall be used. The edition of the currently adopted IBC shall be used for stand-alone projects.
- Show the specifications for the fire alarm system materials and equipment.
- Indicate if the fire alarm system is required by the Building Code.
- Show the location and spacing of alarm-initiating devices such as smoke detectors, heat detectors, radiant energy-sensing fire detectors, manual fire alarm boxes, etc.
- Show the location of audible and visual notification appliances for the fire alarm system.
- Show the location of fire alarm control panel within the building.
- Indicate the nominal production sensitivity (prevent per foot obscuration), as required by the listing, for smoke detectors.
- Indicate the temperature of operation for fixed-temperature, rate-compensated or spot-pattern type heat detectors.
- Show that fire alarm system shall be provided with two independent and reliable power supplies, one primary (main) and one secondary (standby), each with adequate capacity to accommodate the system's demand.

- Show that fire alarm electrical wiring and equipment installed in ducts, HVAC plenums, or space used for environmental air-handling purpose shall be listed for the intended application.
- Provide fire stop assembly design number (UL or other approved assembly) and complete construction details for fire alarm system equipment penetration of fire-resistive assemblies.
- Indicate the type of fire alarm system (i.e., protected premises, supervising station, etc.) for review of the method of supervision of the system.
- Indicate if the fire alarm system is part of a combination system to initiate elevator recall for fire fighters' service and/or elevator shutdown.
- Indicate if the fire alarm system interfaces with the HVAC systems and is to cause the operation of smoke/fire dampers; fan control for mechanical smoke-control systems for atria, stair/elevator hoist way pressurization, or smoke-removal system for high-piled combustible storage occupancies; smoke/fire doors or activates the HVAC system for the purpose of smoke control.
- Indicate if the fire alarm system is listed for releasing service to provide automatic or manual actuation of fire suppression systems.
- Provide descriptive information as to the fire alarm system's performance criteria including a list of the sequence of events started upon activation of the system's alarm-initiating devices.

14. City Planning & Development - Development Management Division

Yes N/A

- Site plans indicating conditions of approval in approved development plans.
- Reference to City Plan Commission case number, if applicable.
- Landscaping plans complying with approved development plans and applicable codes and ordinances.
- Tree preservation plans, if applicable.

15. City Planning & Development - Long Range Planning - Historic Preservation Branch

Yes N/A

- Site plan indicating conditions of Landmarks Commission approval.
- Exterior elevations and/or building cross-sections indicating conditions of Landmarks Commission approval.
- Reference to Landmarks Commission case number.

16. Department of Aviation

Yes N/A

- Site plan conforming to the lease agreement for projects located on Aviation Department property and the elevation of building or structure in relation to the Airport Height Zone elevation. Buildings can be on airport property or adjacent to airport property needing review and approval.
- Determination of no hazard to air navigation as issued by the Federal Aviation Administration for those projects that exceed the airport height zone limits.
- Height of building or structure Above Ground Level (AGL) and above Mean Sea Level (AMSL) for those projects that exceed the airport height zone limits.

17. Department of Fire

Yes N/A

- Fire Department access roads: Access roads must be capable of supporting Fire Department vehicles weighing in excess of 85,000 pounds and must provide such access to within 150 feet of all portions of the building exterior. Fire Department access roads are to be a minimum of 20 feet wide unobstructed with an overhead height restriction not less than 13'6". Turning radiuses will be evaluated. Gates which cross a fire

department access road shall have an approved means of operating (opening) the gate, electric gates will require the installation of a siren sensor switch installed on the gate.

- Location of fire hydrants and Siamese connections at building: Fires hydrants shall be located within 400' travel distance of all portions of the building. Fire Department Connections (FDC) shall be of the 2.5" type and be accessible from a driving surface (fire access road) capable of supporting the weight of Fire Department vehicles. Per NFPA 291, private fire hydrants visible from a public right-of-way shall be painted solid red. Private fire hydrants on private access roads that are not visible from the public way may be painted any other color than that of public fire hydrants, which presently is international orange and black.
- Standpipe and hose cabinet locations within the building: Occupant use fire hose is strongly discouraged, due to the hazards involved, maintenance and training requirements.
- Key boxes are only required for secured R-2, high rises or other areas as required by the Authority Having Jurisdiction (AHJ). Other occupancy types may obtain a key box for their structure if they so desire. An order form must be obtained from the Fire Prevention Division to ensure the lock is property keyed to the City of Kansas City, Missouri.
- A separate Fire Department permit is required for the installation/modification/removal of any flammable/combustible liquid tank located within the City Limits. Plans and permit applications are required to be submitted separately and directly to the fire Prevention Division.

Department of Health

18. Air Quality Program

Yes N/A

- A complete description and process flow diagram of the proposed construction/modification; the composition and maximum design rate of material throughout; control device information; any additional information needed to establish emission rates.

19. Food Protection Program

Yes N/A

- For projects that include construction, conversions, or renovation of a food establishment, including restaurants, bars, and institutions (schools, hospitals), remodeling of existing kitchens and other uses involving food preparation for public consumption, including grocery stores, cafeterias and convenience stores, a completed [Plan Review Audit Form](#) must be submitted with the plan application.

20. Environmental Health - Childcare Facilities

Yes N/A

- Floor plans showing layout of rooms, restrooms, diapering stations, hand sinks, food preparation sinks, drinking fountains, kitchen equipment (stoves, refrigerators, three compartment sinks, hand sinks). All lavatories must be equipped with hot (100-120°) and cold running water under pressure, soap dispensers, and sanitary hand drying device (mechanical, paper towels, etc.).
- Indicating that floor coverings shall be constructed of smooth durable materials such as concrete, terrazzo, ceramic tile, durable grade linoleum, quarry tile, or tight wood impregnated with plastic.
- Indicating permanently fixed lighting.
- Indicating restroom walls must be full floor to ceiling, doors solid unvented, and the room have mechanical ventilation.
- Indicating hand sink within 8 feet of diaper station (without going through a door).

21. Environmental Health - Water Recreational Facilities

Yes N/A

- Complete plans of construction of the water recreational facility (swimming pool, spa, etc.), indicating materials used for interior lining.
- Indicate enclosures at least 4' high (wall or fence) with no more than 4" opening between slats of a slatted fence, door, or gate (doors/gates must be self-closing and self-latching).
- Indicate restrooms with adequate lighting and ventilation, toilets, hand sinks, and showers (showers are exempt for hotels and motels).
- Indicate walkways at least 8' wide for outdoor pools, 4' wide for indoor pools, and at least 10' between pools and/or spas.
- Indicate pool/spa depths and demotions including square footage and capacity in gallons of water, pool water inlets, skimmers, anti-entrapment pool main drain, at least two means of egress (one at each end), a device for fastening lifeline across pool if the water level is over 5' deep, and under water lights are on a ground fault circuit interrupter breaker.
- Indicate pool equipment enclosed and protected from the elements with adequate lighting and mechanical ventilation to remove toxic fumes and vapors.
- Indicating pump that will provide proper turnover rate (6 hours for pools, 2 hours for wading pools, 30 minutes for spas), filter, chemical feeder for sanitizer, heater (optional), flow meter, and plumbing to skimmers, inlets, and main drain.

22. Department of Parks & Recreation

Yes N/A

- Site plans showing property lines and boulevard or parkway right-of-way.
- Dimensioned setbacks of proposed structures from property lines.
- Existing and proposed drive approaches, reference the appropriate standard.
- Existing and proposed storm drainage inlets.
- Demolition areas.
- Existing and proposed street trees.
- Existing and proposed signage.

Department of Public Works

23. Street and Traffic Division

Yes N/A

- Location of drive approaches on public streets and driveway geometrics.
- Identification of Public Works standards for public improvements.

24. Land Development Division

Yes N/A

- Erosion/siltation control is required even when a Site Disturbance permit is not required.
- Show disposition of existing site trees.
- A Site Disturbance permit is required when the disturbed area is equal to or greater than one acre. The Site Disturbance plans must include the following items.
 - Sheet 1: Total disturbed area, project benchmark, section-township-range, city, county, state, legal description labeled as "Legal Description" or "Property Description," sheet index, and full name of Land Disturbance plans including other coincidental activities.
 - Sheet 2: General notes, KCMO Ordinance No. 981135 notes, construction schedule, excerpt of soil survey from County soils records, and soils legend.

- Sheet 3: Existing and proposed contours, seed and mulch notes, property lines labeled as "Property Line," BMP construction details, storm sewer plans for permanent detention facilities used temporarily for siltation control, and earthwork quantities (public/private).
- Sheet 4/5/6: Phased erosion control measures, inlet protection measures, explanation of work to be performed in each phase of Land Disturbance activities, vehicle tracking control location and detail, no more than ¼ acre of disturbed area per 100 LF of silt fence, and material stockpile locations and erosion control measures.
- Sheet 7: Riser pipe/sediment basin detail, check dam detail, silt trap detail, temporary diversion dike detail, diversion ditch details, and inlet protection details.
- Mics.: Offsite grading easements and private grading permit application.
- A storm drainage study sealed by a Missouri P.E. is required if the project meets the definition of a development under APWA § 5601.2 and 5601.3. This study at minimum must consist of a letter addressing stormwater runoff management from the project and may recommend stormwater detention/retention and/or downstream drainage improvements in accordance with APWA and adopted KCMO supplements. A macro drainage must be prepared for phased projects in accordance with the Stormwater Management Plan document.
- For projects proposing limited miscellaneous work in the public right-of-way that are not required to have separate public improvement plans review permit applications, include the type of construction (e.g., sidewalk, drive approach, etc.), specifications, unit type, and number of units.
- Include description of proposed uses of the building, floor area for all nonresidential uses, and any other information necessary to calculate the required impact fee. Also reference any previously approved credits and individual assessment.

Department of Water Services (WSD)

25. Water Meter Connections

Yes N/A

- Location and size of existing public water main.
- Tap/Tee location and size: The tap-tee connection must be opposite the building served and be perpendicular to the public water main from the main to the curb box or, in the absence of a curb box, to the property line. Any service over 1' will require a tee, two solid sleeves, and three gate valves provided by the contractor. See KC Water Rules and Regulations (R & R) for Water Service Lines.
- Service line type and size: Service line size will be determined by the hydraulic needs of the building to be served. The Fire Marshall's office will determine the size of a fire protection line. 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 (domestic teeing off the fire protection). Combination Service lines are not recommended. If a combination service line is proposed, a registered Professional Engineer (P.E.) licensed in the State of Missouri must certify the water in the service line will be turned over (refreshed) every two days. See KC Water R & R for Water Service Lines.
- Location of controlling valve: A large service (over 1") will be installed by cutting in a tee (min. 4") using two solid sleeves and tree key operated gate valves that are to be furnished by the contractor and will be installed immediately after the solid sleeve (installed by the contractor). A small service (1" and less) will have a ball type valve (curb stop) that will be located perpendicular to the water main and in the public right-of-way one foot inside of the curb, normally in a grassy area. When a combination service is proposed, a controlling valve will be located immediately after the tee off the fire protection service for the domestic line. The domestic tee off the fire protection will be done entirely on private property.
- Location of commercial water meter: On commercial buildings a meter will be located outside in a pit or vault, depending upon the size of the meter. See KC Water R & R for Water Service Lines.

- □ Type of water meter: If a domestic service is a single tap off the public water main or is teed off a fire protection service with no private fire hydrants then a meter will be installed on the domestic service line and a double detector check backflow preventer shall be installed on the fire protection service line. The meter size shall be based on the expected actual demand calculated according to the fixture value method as described in the most recent edition of the AWWA M22 manual or the International Plumbing Code. Detailed meter sizing calculations shall be included for any proposed water meter 2" or larger. Meter sizing calculations shall be stamped by a Missouri State P.E. and must be submitted with plans. Meter sizing calculations sheet must be listed in the index indicating the page number they appear on. Under no circumstance will the meter size be greater than the service line size.
 - □ Full flow fire meter: Required on a combination line that has private fire hydrants. The full flow fire meter will be (1) located on the fire protection service before domestic tee, (2) located on private property, and (3) easily accessible by a water service truck (exact location of the meter can be coordinated with a WSD field inspector).
 - □ Small meters: All ¾" and 1" meter sets shall include an unmeasured flow reducer attached to the meter yoke. See KC Water R & R for Water Service Lines.
- □ Location of stop valve: A stop valve is required on all domestic services immediately upon entering the building just before the reduced pressure zone (RPZ) backflow preventor. The inlet valve of the RPZ can serve for a stop valve.
- □ Type and location of backflow preventor (BFP): The WSD requires backflow prevention for containment, thus protecting the public water supply from contamination. A RPZ backflow preventer is required on all high hazard service lines which includes any commercial domestic water service. The RPZ will be located just inside the building, after the stop valve, before any branch service lines or, if outside, in a heated enclosure such as a "hot box." If an RPZ is located inside it must be within 20' of a floor drain, unobstructed. A double check backflow preventor will be required on any low hazard service such as lawn irrigation (using no chemical injections). A double detector check backflow assembly shall be installed on all fire protection service lines that are tapped off the public water main.
- □ Service lines for all fire protection/sprinkler systems shall be designed to properly always maintain adequate pressures and flows in the system. Applicant must submit a separate letter with the following statement signed and sealed by a Missouri P.E.. See KC Water R & R for Water Service Lines for the form that shall be signed by the Design Professional in Responsible Charge (DPRC) and submitted with the project documents for permit application.

26. Regulatory Compliance Division

Yes N/A

- □ Site plan showing routing and size of the private sanitary sewer including location and capacity of outdoor grease interceptor when required or existing. Location of sampling manhole when required, and all connections to the public sanitary sewer. Grease interceptor sizing calculations required on plan. Reference to CPD plan number for building shell when applicable.
- □ Plumbing plan will identify and locate all fixtures and show routing of wastewater discharge from said fixtures including dishwashers, floor drains, and floor sinks. Fixture labeling will be consistent with riser diagram. Grease interceptor sizing calculations required on plan. Existing grease interceptors require current certificates of pumping/cleaning and satisfactory inspection.
- □ Site, plumbing, and mechanical plans showing SAC Meter specifics and locations, pretreatment equipment, if required, and any other specialized equipment required for regulatory compliance.