

COMMERCIAL PERMIT PLAN SUBMITTAL GUIDELINES

These permit plan submittal guidelines are not intended for one- and two-family dwellings.

Revised December 2013

<http://ci.harrisonville.mo.us>

Building Permit Application:

Per the City of Harrisonville Code of Ordinances, Title V, Chapter 500: Adopted, paragraph (a); The City hereby adopts the International Building Code, 2012 Edition, as published by the International Code Council, including Appendix Chapters B, C, E, F, G, I, J, and K, as the official Building Code of the City of Harrisonville, Missouri. Ordinance #3236.

Section 105.1 Permits Required, of the 2012 International Building Code (IBC) states: Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or cause any such work to be done, shall first make application to the Building Official and obtain the required permit.

As a minimum, the following information is required in order to make application for a building permit:

- A commercial permit application completed by the registered design professional in responsible charge (DPRC), agent of the owner, or owner. A completed application is required before plans review begins.
- Construction documents consisting of plans, engineering calculations, diagrams and other data as required showing that the proposed work will conform to the codes and ordinances of the City of Harrisonville. These plans shall bear the seal and signature of an architect or engineer licensed by the State of Missouri, and shall be no larger dimensionally than thirty 30" inches by forty-two 42" inches. **Upon completion of the project, one set of complete drawings are required to be submitted in electronic format.**

Tenant Finish Projects – The applicant is required to submit three (3) full sets of construction documents and three (3) fire protection systems plans for review. **Upon completion of the project, one set of complete drawings is required to be submitted in electronic format.**

New Construction/Exterior Alterations – The applicant is required to submit three (3) full sets of construction documents, three (3) sets of fire protection systems plans, three (3) sets of structural calculations, three (3) geo-technical reports and three (3) specification books. Note: Additional specific information concerning the project may be required. **Upon completion of the project, one set of complete drawings is required to be submitted in electronic format.**

Grading and Land Disturbance Permit – A grading and land disturbance permit may be obtained prior to project approval. Contact the Engineering Department at 816-380-8913 for more information.

Stormwater Management Plan – A stormwater management plan is required for new construction. Contact the Engineering Department at 816-380-8913 for more information.

Phased Approval - The Building Official is authorized to issue a permit for the construction of foundations or any other part of a building or structure before the construction documents for the whole building or structure have been submitted, provided that adequate information and detailed statements have been filed complying with pertinent requirements of the codes. Phased approval, such as a footing permit or footing and foundation permit, may be requested and approved once the final site development plan has been approved. Approval from all departments may be required for partial permit issuance.

Plan Review Process:

- Final Site Development Plan – The final site development plan must be submitted, reviewed by the Development Review Team, and approved by the Director of Community Development prior to the issuance of a building permit.
- Typically the Community Development Department, Fire Department, Engineering Department, Public Works Department, and Electric Services Department should complete their initial review within 15-20 business days, however, this time frame may vary dependent upon the complexity of the project and the completeness and quality of the construction documents. Plan review comments will be faxed to the DPRC or applicant.
- Questions concerning the Community Development Department plan review comments should be referred to Community Development at 816-380-8958.
- Questions concerning the Fire Department plan review comments should be referred to the Fire Department at 816-380-8954.

- Questions concerning the Engineering Department plan review comments should be referred to the City Engineer at 816-380-8913.
- Questions concerning the Public Works Department plan review comments should be referred to Public Works at 816-380-8964.
- Questions concerning the Electric Services Department plan review comments should be referred to Electric Services at 816-380-8962.

Issuance of the Permit:

The Community Development Department will issue the building permit and return a “**RELEASED FOR CONSTRUCTION**” set of construction documents to the applicant when;

- The Community Development Department, Fire Department, Engineering Department, Public Works Department, and Electric Services Department have released the plans for construction.
- The final site development plan has been approved by the Community Development Department.
- Required stormwater management has been approved by the City Engineer.
- All applicable fees have been calculated and paid.
- All conditions have been met and/or signed by the applicant.

Inspections:

- Community Development, construction compliance– Routine inspections are performed during the construction phase, but the majority of inspections are performed upon request of the applicant or permit holder. Any questions concerning required inspections should be referred to the Community Development Department at 816-380-8958. Final inspections for occupancy shall be requested a minimum of 48 hours in advance for all commercial projects.
- Fire Department – Inspections are performed upon request.
- Engineering Department – Inspections are performed upon request.
- Public Works Department – Inspections are performed upon request.
- Electric Services Department – Inspections are performed upon request.

Phone & Fax Numbers:

Community Development Department	Ph: 816-380-8958	Fax: 816-380-8906
Fire Department	Ph: 816-380-8954	Fax: 816-380-8956
Engineering Department	Ph: 816-380-8913	Fax: 816-380-8906
Public Works Department	Ph: 816-380-8964	Fax: 816-380-3997
Electric Services Department	Ph: 816-380-8962	Fax: 816-380-3724

Plan Requirements:

The following information is furnished for the purposes of expediting the City's review of construction documents submitted for building permits issued by the Community Development Department. Every project will not involve every city department or plan submittal listed; therefore, this checklist provides directions based upon the type of project submitted for review. It does not constitute a complete list of all items, which may be required for approval during the plan review process prior to permit issuance. The owner or owner's representative is responsible for compliance with the requirements of the City of Harrisonville Code of Ordinances.

The estimated plans review turnaround time (15 to 20 business days) reflects the time to complete a first review or a resubmittal review, and does not indicate the time required for approval of the plans. Approval of the plans depends upon the accuracy and completeness of the submitted plans by the DPRC. Please contact any other city department that may require the issuance of a permit outside of this plan review to reduce project delays.

Plans for public improvements should not be submitted with building permit plans. Submit plans for all public improvements to Community Development for distribution to the appropriate department for review and approval. Community Development "Released for Construction" plans and permits cover development on private property only. Plans for public improvements and the project site should be delivered as follows:

Water main construction, fire hydrant installations, and sanitary sewer construction plans are reviewed by the Engineering Department at 816-380-8913 and Public Works Department at 816-380-8964. All plans are required to be signed and sealed by an engineer licensed by the State of Missouri.

Grading, land disturbance and stormwater management are reviewed, approved, and permitted by the City Engineer. They may be reached at 816-380-8917. All plans are required to be signed and sealed by an engineer licensed by the State of Missouri.

Public street, curb, sidewalk, and storm sewer plans are reviewed and permitted by the Engineering Department at 816-380-8913 and Public Works Department at 816-380-8964. All plans are required to be signed and sealed by an engineer licensed by the State of Missouri.

Required plans and submittal documents: A minimum number of drawing sets and submittal documents are required as follows:

- New buildings and building additions – three (3) complete sets; 30"x 42" maximum size
- Tenant finish and tenant alterations – three (3) complete sets; 30"x 42" maximum size

NOTE: *In addition to the required building and civil plans, three (3) copies of the specifications, three (3) copies of the structural calculations, three (3) copies of the soils investigation reports, three (3) copies of the certified modular building drawings, prefabricated metal building plans, precast concrete building plans, and truss plan (if applicable) are required. Plans and drawings shall be of such size necessary to provide legible text, dimensions and details. Submitted information shall be signed and sealed by an architect or engineer licensed by the State of Missouri.*

The plans review period will not begin until a completed permit application and the three complete sets of construction documents are submitted. The Community Development Department will forward each department's plan review comments to the applicant or DPRC. The applicant is encouraged to communicate directly with the plans examiner in each department in order to clarify requirements.

Note: Separate permit applications shall be submitted for each building to be constructed on a single property or tenant finishes within the same building. Separate sets of construction documents as described previously may not be required at the discretion of the Building Official, if the buildings are the same size, type of construction, and occupancy classification. The Community Development Department may approve exceptions prior to submittals.

Deferred Submittals: Are defined as those portions of the design that are not submitted at the time of the permit application and that are to be submitted to the Building Official within a specified time. Deferral of any submittal shall have the prior approval of the Building Official. The DPRC shall list the deferred submittals on the construction documents for review by the Building Official.

Documents for deferred submittal items shall be submitted to the DPRC who shall review them and forward them to the Building Official with a notation indicating that the deferred submittal documents have been reviewed and been found to be in general conformance to the design of the building. The deferred submittal items shall not be installed until the design and submittal documents have been approved by the Building Official.

Description of Projects for Which Plans Review is Required:

New buildings, additions, alterations, tenant finishes, remodeling, modifications to electrical systems, plumbing, mechanical and fire protection systems, proposed changes in the occupancy group classification of a building, pre-fabricated buildings, and any flammable or combustible liquid storage tanks.

Applicable Codes and Ordinances:

Chapter 205, Fire Protection & Prevention, City of Harrisonville Code of Ordinances,
Chapter 400, Planning & Zoning, City of Harrisonville Code of Ordinances
Chapter 500, Building & Property Maintenance, City of Harrisonville Code of Ordinances,
Chapter 700, Utilities, City of Harrisonville Code of Ordinances

2012 International Building Code (IBC), including Appendix Chapters B, C, E, F, G, I, J, and K, and as amended by the City in Ordinance #3236.
2012 International Residential Code (IRC), including Appendix Chapters E, H, J and M, and as amended by the City in Ordinance #3236.
2012 International Fire Code (IFC), including Appendix Chapters B, C, D, E, F, G, H, and I, and as amended by the City in Ordinance #3235.
2012 International Mechanical Code (IMC), including Appendix Chapter A, and as amended by the City in Ordinance #3236.
2011 National Electrical Code (NEC), including Annex Chapters A, B, C, D and H, and as amended by the City in Ordinance #3236
2012 International Plumbing Code (IPC), including Appendix Chapters B, E, and F, and as amended by the City in Ordinance #3236
2012 International Fuel Gas Code (IFGC), Including Appendix Chapters A, B, C and D, and as amended by the City in Ordinance #3236
2012 International Existing Building Code , and as amended by the City in Ordinance #3236

Information To Be Provided On The Plans

General:

- Specifications and engineering data for each applicable discipline shall include the name, signature, and state registration number and telephone number for each designer on the project.
- Indicate all demolition areas.
- Code Modification Requests (CMR) and design appeals: If the design is based on an approved CMR or decision of the Board of Building and Engineering Appeals, list those approvals.

- Preliminary Code Review Design Meeting correspondence. Include a copy of the approved correspondence regarding any preliminary discussions regarding the project.
- Show on the plans the adopted model codes and standards for the building, mechanical, electrical, plumbing, and fire suppression systems to which the project has been designed. Provide required flow data.

Architectural:

- A complete code analysis.
- Occupancy group: Show actual floor area for each occupancy group.
- Type of Construction: Show type of construction classification for each building. Show design reference numbers of fire-resistive assemblies.
- Location on Property: Indicate the width of public space, streets or yards on all sides of the building for use as a basis of allowable area increases.
- Floor Area: Show actual gross floor area (not including basement). Show allowable area calculations and indicate which, if any, allowable increases are being used.
- Height and Number of Stories: Show actual height and number of stories.
- Occupant Load: Show the occupant load for each floor and each assembly area. Provide furniture layout for all fixed and non-fixed seating.
- Fire Walls, Fire Barriers, Fire Partitions, and Smoke Barriers: If used, show location and fire-resistive rating. Include design reference numbers.
- Exiting: Show all exiting including rated enclosures, stairways, exit widths, etc.
- Materials, Equipment & Devices: Materials, equipment and devices approved by the Building Official shall be constructed and installed in accordance with such approval.
- Accessibility: Show means for providing accessibility for persons with disabilities in accordance with IBC Chapter 11 & ANSI A117.1.
- Automatic Fire Sprinklers: State whether the building is to be sprinkled throughout, and if so, what type of system. Indicate if the basement only is sprinkled.
- Incidental Use Areas: Show or specify separation construction where rated enclosures are required per IBC 508.2 (fuel burning mechanical equipment over 400,000 BTU input, storage rooms, etc).
- Building Elevations: Show elevations of all sides of the proposed building, including notation indicating building material to be used on exteriors and roofs.
- RTU Screening: Show location, size, and materials to be used in all screening of rooftop mechanical equipment.

Tenant Finish/Interior Alteration:

The following information shall be provided on each permit application as well as the information requested in all other sections as applicable.

- A complete code analysis.
- Indicate the location of the tenant space within the outline of the shell building.
- Provide the construction type, occupancy type, and total area of the shell building as well as the tenant space.
- Provide the business name and occupancy type of adjoining tenants.
- If the required emergency exits for the tenant space are through the shell building, an exiting plan shall be provided.
- Clearly distinguish on the plans what exists and what is new. This shall include, but is not limited to, the walls, plumbing fixtures, mechanical, and life safety devices.

Site Plan Information:

- Provide the legal description of the property.
- Verify that no structures or “encroachments” are being constructed within a public sewer easement or within the public right-of-way. Show all easements.
- Show all required spot elevations and/or contours necessary to completely evaluate and review the pre-construction and post-construction elevation differences on the site.
- Provide finish grades or contours for the entire site (2’ foot or 5’ foot contour intervals may be required depending on the site).
- Show all adjacent public right-of-way, existing and proposed, with centerline location.
- Show all adjacent public street and private drive locations, widths, curb cuts and radii (existing and proposed).
- Show location, width and limits of all existing and proposed sidewalks.
- Show location, size, and radii of all existing and proposed median breaks and turning lanes.
- Show the distance between buildings, between building and property lines and between all parking areas and property lines.
- Show location of all required building and parking setbacks.
- Show location, dimensions, number of stories, and area in square feet of proposed buildings.
- Show the area of the land in square feet or acres.
- Show limits, location, size and material to be used for all proposed retaining walls. Retaining walls greater than four 4’ feet tall measured from the bottom of the footing shall be designed by an architect or engineer and will be permitted separately.

- Show north arrow, scale and location map.
- Show location, size, and type of material and message of all proposed monuments or detached signs.
- Show location of all fire hydrants, public or private.
- Show location of all fire access lanes.

Structural:

- Structural calculations shall be furnished for all buildings except structures of three stories or less of conventional light frame construction complying with Chapter 23 of the International Building Code, or when not required by the Building Official. The following information is required:
- Design Load: List design load combination (IBC, Chapter 16).
- Snow Loads: (IBC)
- Ground Snow Load shall be 20# psf.
- Live Loads (IBC Table 1607.1): List design floor live loads for each category.
- Earthquake Loads: (IBC Sec. 1613).
- Design Wind Loads (IBC Sec. 1609): Identify that the design is in compliance with the minimum basic wind speed requirements of a 105(or greater) MPH wind speed.
- Show basis of design wind pressure for primary frames and systems (IBC Sec. 1609 or ASCE 7).
- Foundations: Show that all footings meet or exceed a minimum depth of thirty-six inches (36"). State in soils report, or in calculations, applicable design parameters (i.e., assumed for stated soil classification, recommended in soils investigation report, etc.).
- Materials and Fasteners: provide materials specifications including IBC material designations, or other approved designations such as ASTM, etc. Note the allowable design stresses.

Special Inspections:

The following information shall be provided in accordance with the 2012 IBC, Chapter 17.

Identify the Special Inspector for each applicable item and submit qualifications and letter of acknowledgement from the Special Inspector. If unknown, submit time schedule for submissions of names. List the applicable types of work which require Special Inspection per the Chapter 17 of the IBC.

**Special Inspections Will Be Required:
Required:**

Verification of Soils
Concrete
Excavation and Filling
Structural Welding
Concrete
High Strength Bolting
Sprayed Applied Fire Resistant Materials
EIFS Insulation/Finish Systems

Fabricator

Other _____

Special Inspections May Be

Placement of Reinforced
Testing of Reinforced Concrete
Placement of Reinforced
Prestressing Concrete
Bolts Installed in Concrete
Drilled Piers or Piles
Earth Retaining Structure
Inspection of Precast Fabricator
Erection of Precast Concrete
Steel Frame Inspection
Inspection of Metal Building
Smoke Control Systems
Seismic Resistance

Mechanical:

- HVAC Equipment Specifications: Show locations, type, capacity and weight/support of all heating, ventilation and air conditioning equipment.
- Rated Enclosures: Show or specify wall construction where rated enclosures are required (heaters, boilers, etc., over 400,000 BTU; air conditioners over 100 HP, etc.).
- Special Equipment: Show special equipment such as kitchen hoods, enclosed garage ventilation, paint booth exhaust, automatic fire suppression systems, etc.
- Fire or Smoke Control: Define on plans special use of equipment in conjunction with fire or smoke control systems.
- Special Requirements: Show appurtenances and required details such as flue vent type and size, expansion tanks, protection devices, means of combustion air and special use equipment.
- Materials: Specify materials of installation components.
- Duct Detectors: Identify if duct detectors are required and the locations where they are required. Provide remote test indicators for emergency personnel.
- Penetrations of Rated Assemblies: Show method of penetration and note design reference listing.

Plumbing:

- Plumbing Fixtures: Show fixture numbers and locations. Include water closets, urinals, lavatories, and drinking fountains.
- Building Drain System: Show the under-floor system of the drain waste, specifying pipe sizes and slope. Provide a riser diagram for multiple fixtures.
- Building Utilities: Show the sanitary building sewer, storm sewer, water service, gas service and all connections to the public utilities.
- Materials: Specify all piping materials.
- Penetrations of rated Assemblies: Show method of penetration protection and note design reference listing.
- Water System: Provide supply pipe sizes and materials for the water system, water heater data, and hot water system.
- Venting System: Show pipe sizes, size of vent through the roof and the connection to the building drains.
- Trap Arms: Specify trap arm size and specify lengths.
- Special requirements: Show all required appurtenances such as grease interceptors (show calculations for capacity), sump pumps, sewer ejectors, sample ports, backflow prevention devices, containment devices, backwater valves and fixtures.

Electrical:

- Riser Specifications: Show riser and note equipment amps, wire size, and grounding.
- Current: Show in calculations the available fault current.
- Voltage: Note the service voltage. Typical would be 120/208 volt three phase.
- Show service equipment short circuit amp rating.
- Provide panel schedules with circuit amp rating.
- Provide plans showing equipment and circuits, and specify wire as copper or aluminum and insulation type.
- Penetrations of rated Assemblies: Show method of opening protection and note design reference listing.
- Grounding: Note the grounding wire size.
- Bonding: Show bonding as required in Article 250 of the 2011 National Electrical Code.
- Meter Location: Show the preferred meter location. Final location shall be approved by the Community Development Department and Electric Services Department.

Automatic Sprinkler System and Fire Suppression Systems:

- Required fire flows are based on Appendix Chapter B of the 2012 IFC.

- Required hydrant locations and distribution is based on Appendix Chapter C of the 2012 IFC.
- Required Fire Apparatus Access Roads are based on Appendix Chapter D of the 2012 IFC. Aerial apparatus access roads, 26' feet in width, shall be provided completely around the perimeter of every building classified as a Group R-1, R-2, or R-4 occupancy.
- Automatic fire sprinkler systems required by the IBC or IFC shall be installed in sprinkler rooms with access provided to the room from an exterior 3'-0" x 6'-8" door for emergency personnel. The door shall be labeled in 3" inch letters, "FIRE SPRINKLER ROOM".
- System Layout: Provide a plan showing sprinkler system layout and major components.
- Fire mains shall be C900, Class 200 pipe.
- Calculations: Provide system calculations and shop drawings signed and sealed by a licensed engineer in the State of Missouri. **Exception: A National Institute in Engineering Technologies, (NICET) Level III Certification may be permitted for automatic sprinkler systems design.**
- Standpipes: provide location of all standpipes.
- Materials: List the material specifications.
- Fire Suppression Systems: Provide UL Listing. Provide copy of the "system plate" showing schematic layout of the system.
- Fire Department Connections: Show the proposed location for the fire department connections to the sprinkler system. The fire department connection shall be a 4" inch Storz quick coupling connector type fitting, and must be located within one-hundred feet (100') of a fire hydrant.
- Sprinkler System Supervision: Specify the type of supervision provided for systems as required by IBC Section 903.4. Alarm devices provided on the exterior of the building shall be a combination horn and strobe device.
- Show the location of all "Knox Box Rapid Entry Systems".
- Show the type of backflow-prevention assembly proposed. A reduced-pressure principle backflow-prevention assembly is required for any fire protection system using additives or being supplied by an auxiliary water supply. A double check valve assembly is required for all other fire protection systems.

Fire Alarm System:

- Show the standard(s) and edition of the standard(s) utilized in the design of the fire alarm system.
- The fire alarm system plans shall be signed and sealed by a licensed engineer in the State of Missouri. **Exception: A National Institute in Engineering Technologies (NICET) Level IV Certification may be permitted for fire alarm systems design.**
- Show the specifications for the fire alarm system materials and equipment.

- Indicate if the fire alarm system is required by the IBC or IFC.
- Show the location and spacing of alarm-initiating devices such as smoke detectors, heat detectors, radiant energy-sensing fire detectors, manual fire alarm boxes, pull stations, etc.
- Show the location of audible and visual notification appliances for the fire alarm system for the interior and exterior of the building. Alarm devices provided on the exterior of the building shall be a combination horn and strobe device.
- Show the location of the fire alarm control panel within the building.
- Indicate the nominal production sensitivity (percent per foot obscuration), as required by the listing for the smoke detectors.
- Indicate the temperature of operation for the fixed-temperature, rate-compensated, or spot-pattern type heat detectors.
- Show that the 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 the fire alarm electrical wiring and equipment installed in ducts, HVAC plenums, or space used for environmental air-handling purposes shall be listed for the intended application.
- Provide fire stop assembly design number(s) (UL or other approved assembly) for all penetrations 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 HVAC systems and is to cause the operation of smoke/fire dampers, fan control for the mechanical smoke-removal systems for high piled combustible storage occupancies, smoke/fire doors, or activates the HVAC system for the purpose of smoke control as applicable.
- Indicate if the fire alarm system is listed for releasing service to provide automatic or manual actuation of fire suppression systems as applicable.
- 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.

Elevator:

- Hoistway: Show hoistway construction and access.
- Hoistway ventilation: Show hoistway venting and any equipment, ducts, or wiring located in the hoistway.
- 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 the design utilizes approved alternate materials and methods of construction, list those engineered alternates on the plans.

Kitchens and Food Preparation Areas:

- Floor plans showing kitchen equipment layout, location of required plumbing facilities including hand sink, mop sink or curbed janitor's sink, three compartment sink, and employee locker rooms if provided. Plans also need to include 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 towel dispenser.
- Indicate that the 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, i.e., 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.
- Indicate 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 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.
- Indicate 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. Indicate that all rooms shall be provided with sufficient ventilation to keep 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. Restrooms must be completely enclosed, including tight-fitting, self-closing doors. Restrooms must be vented to the outside.
- Appliances and equipment not regularly classified as plumbing fixtures which are equipped with pumps, drips, or drainage outlets shall be drained by indirect waste pipes discharging into an approved floor drain as required by the International Plumbing Code.
- Plans must indicate fire suppression systems.
- Plans must include the hood and duct specifications if applicable.
- Grease interceptors or outside tanks shall be sized accordingly.

- Show appropriate containment where applicable.
- Provide a set of plans to the Cass County Health Department. (816-380-8427)

Water Service:

- Indicate location, size and type of material used for the service line connection.
- Tap Location and Size: The tap typically will 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 size as the water service. Contact the Community Development Department for any variations.
- Service Line Type and Size: The service line size must be determined by the hydraulic needs of the building 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 combination service. The domestic and fire protection service typically are connected separately to the public main for new installations, however, they may be installed as a combination service with the domestic service tap made directly ahead of the Post Indicator Valve provided the required fire flow for the structure can be met. Domestic water service line material shall be Type K copper from the City's main to the meter and Type K copper from 15 feet outside the structure to a minimum of 12" inches inside the structure.
- Location of Water Meter: Indicate the location of the proposed water meter or meters. Meters shall be located within the City's right-of-way.
- Type and Location of Backflow prevention or Cross Connection Control: The City and the State of Missouri Department of Natural Resources require backflow prevention for containment, thus protecting the public water supply from contamination.

Sewer Service:

- Show location and size of all private sewer connections to the existing public sewer mains. Show size, material and slope of sewer lines.
- Show location of cleanouts as required by the International Plumbing Code.
- Indicate the type of material/pipe to be used.
- The minimum size of any building sewer shall be determined on the basis of the total number of fixture units drained by such sewer, in accordance with the IPC. No building sewer shall be smaller than four 4" inches, regardless of the number of fixture units.