

Review Checklist: Commercial Site & Building Plan(s)



Code 2012: IBC, IEBC, IMC, UPC, IFC, IFGC

Other Codes: 2011 NEC, 1999 Food Code, City Code of Ordinances

Plan Submittal Requirements:

- 2 full sets of stamped plans and a PDF
- 1 full set of specifications

Expectations: 2-3 weeks

(pg. 2) Project Information Sheet:

Must be completed for all projects.

(pg. 3) Phase I – Conceptual Site Plan Checklist:

New Buildings and Additions

Essential for all parties involved with regard to site development and appearance expectations.

(pg. 4) Phase II – Final Site Plan Development Checklist:

New Buildings and Additions

Final site plan review for intended site development.

(pg. 7) Phase III – Footings & Foundation Checklist:

Foundation Work

Review

This needs to be completed if the applicant wishes to start footing & foundation work prior to full plan review.

(pg. 8) Phase IV – Remaining Plan(s) Review:

For All

Projects.

Review of remaining plan s and construction documents for code compliance.

(pg. 15) Phase V – Shop Drawing(s) Review:

Building System(s) Requiring Drawings

Review of manufacturer or contractor shop drawings of specific building system(s). (Sprinkler piping, lightning protection shop drawings, steel supported systems, etc.)

Have Questions?

Development Review Coordinator:

Karen Bailey - (816) 271-5341 - kbailey@stjoemo.org

GENERAL PROJECT INFORMATION:

Project Title: _____ **Date Submitted** _____

Project Location / Address: _____

Parcel Number / ID: _____

Designer/Architect (responsible party for construction document(s)):

Name: _____ Phone #: _____

Address: _____

Email Address: _____

Contractor Name: (If known) _____ **Phone#:** _____

Address: _____

Project Scope (Details): _____

Seeking partial permit for footings & foundation (Circle One): Yes / No (If "Yes", Phase III Required)

Nature of Project (Circle One): New building - Addition - Expansion - Remodel - Tenant

Number of Stories: _____

Height of Existing Building: _____ (ft.)

Height of New Construction: _____ (ft.)

Area of Existing Facility: _____ (sq. ft.)

Area of New Construction: _____ (sq. ft.)

Existing Construction Type: _____

New Construction Type: _____

Existing Use Group: _____

New Proposed Use Group: _____

Occupant Load: Existing: _____

Occupant Load New: _____

Fire Sprinklers: Existing Structure: Yes / No; New Addition/Structure: Yes / No

Signature: _____ Title: _____ Date: _____

Phase I – Conceptual Site Plan Checklist

Purpose:

- Focus applicant’s development intentions to meet the city’s adopted ordinances.
- Initial discussion and review of applicant expectations for site development and appearance.
- To set project expectations on all sides before final detailed construction plans are drawn.

Complie

N/A

PUBLIC WORKS

Public Works Docs found at: <http://stjoemo.info/Index.aspx?NID=293>

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | -Conceptual Grading plan, storm water management plan, and facilities placement |
| <input type="checkbox"/> | <input type="checkbox"/> | -Existing streams and other bodies of water |
| <input type="checkbox"/> | <input type="checkbox"/> | -Proposed location & configuration of all accesses to public ROW and adjoining properties |
| | | <i>Copy of “Access Management Standards” at the website listed above</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | -Utilities & Easements – existing & proposed water, sanitary sewer, & storm utility systems |
| <input type="checkbox"/> | <input type="checkbox"/> | -Location of known existing gas, oil, water wells, and UST’s within 200 ft. of property line |
| <input type="checkbox"/> | <input type="checkbox"/> | -Traffic Study Needed? |

Development Triggers	Minimum Study Requirements
All Applications	Conduct Basic Study
100 to 499 trips in peak hour	Conduct Expanded Study. Review all drives and adjacent intersections
500+ trips in peak hour	Conduct Expanded Study, plus review adjacent streets to next major cross street.

PLANNING & ZONING

Zoning Code info found at: <http://stjoemo.info/index.aspx?NID=281>

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Zoning District of the proposed site |
| <input type="checkbox"/> | <input type="checkbox"/> | Zoning District of all property within 200’ of the proposed site |
| <input type="checkbox"/> | <input type="checkbox"/> | Legal Description of the property |
| <input type="checkbox"/> | <input type="checkbox"/> | Is the property located in a historic district or Downtown Precise Plan? |

BUILDING DEVELOPMENT

Building Code info found at: <http://stjoemo.info/index.aspx?NID=255>

- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Detailed description of operation |
| <input type="checkbox"/> | <input type="checkbox"/> | Any land development within a high flood hazard area according to the local F.I.R.M. will, at a minimum, require a Floodplain development permit. |
| <input type="checkbox"/> | <input type="checkbox"/> | Building footprint |



**Recommend Phase I to save applicant time and effort.*

**Full site plan details are required for plan review in this phase.*

Phase II – Final Site Plan Development Checklist

Compliance

N/A

Drawing Details

- Graphics, engineering scale not to exceed 1/8" / 1.0'.
- North arrow [Indicate true north and building north]
- Small key map w/ north arrow w/ the location of the property in City.
- Dimensions of property lines of the subject parcel with proposed location and dimensions of all new buildings, the footprint of existing structures, and lot arrangements.
- Distance from exterior building walls to property lines.
- Detailed existing and proposed grades (as approved in Phase I), elevations, and contours for the entire site.
- Identify public & private arterial, collector, & local streets within 200 ft., service & loading areas, outside storage, and points of access to public right-of-way (approved in Phase I).

LANDSCAPE

A landscape plan must be provided showing how the project meets the landscape and buffer requirements of Sections 31-400 through 31-418 of the zoning code. Landscaping is to be provided along street frontages and, for commercial properties, to screen parking lots. Also, landscape buffering is required to separate residential and nonresidential uses.

Proposed landscaping can be part of a site plan or on a separate plan sheet entitled "Landscape Plan." The determination as to whether or not a separate plan sheet is needed should be based on the ease by which the necessary information can be displayed on the plan and readily interpreted by the reader.

Please differentiate between existing and proposed improvements and show:

- Detailed existing and proposed landscape areas with dimensions.
- Proposed plant materials and landscape amenity locations with spacing noted where appropriate.

Complie

N/A

- Typical details for all other landscape amenities such as walls, benches, patios, walkways, etc. Screening for trash storage containers.
 - Calculations of the required landscaped street yard, parking lot trees, and perimeter buffer areas along with the amount of plant materials required.
 - Irrigation information and, if a formal irrigation system is to be added, show the location on the plan and provide typical details of the piping.
 - List of proposed landscape materials with the common and botanical name of plant species and size at time of planting.
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TRANSPORTATION

- Phase I Conceptual Site Review Approval
 - Internal/ External Site Circulation: Transit/ Pedestrian/ Vehicles
 - Final Sidewalks, ramps, stairs, curbs, lighting
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FLOODPLAIN

- Building finished floor elevations.
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EROSION CONTROL – STORM WATER DETENTION

- Storm water collection and detention plans showing any existing or proposed facilities for retention basins, detention basins, and drainage structures, such as culverts, paved or earthen ditches, or storm water sewers and inlets.
 - Attach calculations of the rate of run-off.
 - Drainage patterns and proposed erosion control measures.
 - Show permanent impervious surfaces
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UTILITIES

- Verification that all utilities and mechanical equipment will be protected from flood damage by elevation or flood protection means.
- Final layout of water, service fire line, electric, cable, telephone and sanitary sewer system, including the location of exterior grease trap, if required.

GENERAL

Complie

N/A

- If a warehouse/manufacturing use, please provide the proposed number of employees for the entire facility (and number of employees per shift) to be used toward the calculation of required parking stalls.
- Proposed parking layout including dimensions of parking stalls, drive lanes, striping, and the required number and designation of ADA parking stalls. ***Note: all parking surfaces are to be of impervious surface; either concrete, asphalt, or a like surface**
- All signage must be shown on the site plan (must also be applied by separate application)

FIRE

- Dumpster locations and fire access lanes.
- Fire apparatus access roads shall be shown for every facility and be within 150 feet of all sides of said facility or building and shall have an unobstructed width of not less than 20 feet and an unobstructed vertical clearance of not less than 14 feet as prescribed in City Ordinance.
- Design parking lots and access roads so they are capable of supporting fire apparatus and provide all-weather driving capacity.
- Provide a CD with PDF file showing site layout including all fire department access points. Building shut offs for all utilities and any special hazards present. Also show location of private and public hydrants.
- Identify dumpster locations and fire vehicle access, interior fire lanes, loading and unloading areas as necessary.
- Fire apparatus access roads shall be shown for every facility and be within 150 feet of all sides of said facility or building and shall have an unobstructed width of not less than 20 feet and an unobstructed vertical clearance of not less than 14 feet as prescribed in City Ordinance.
- Design parking lots and access roads so they are capable of supporting fire apparatus and provide all-weather driving capacity.

- Provide a CD with PDF file showing site layout including all fire department access points. Building shut offs for all utilities and any special hazards present. Also show location of private and public hydrants.
- Identify spacing between hydrants, and from hydrant to most remote points of building, and spacing to other site hazards.
- Identify turning radius for emergency vehicle access, turn-around, dead-end distances and fire lanes, etc.,
- Identify road widths, including fire lane signage based on respective road widths.
- Identify any gates, width, provisions for fire department override/access.

COMMENTS

Phase III – Footing and Foundation Checklist

Purpose:

-Review for code compliance the foundation and footing elements.

Requirements before review:

-Site plan approval.

-Necessary plan details for footing and foundation construction.

Complie

N/A

- List on the cover sheet of the design drawings the following:
 - a. The current adopted model codes.
 - b. The use group and construction type for all areas.
- Identify design loads for floors, roof, etc
(20 psf min. snow load, 115 mph wind load and seismic Zone (B))
- Submit a complete set of footing and foundation drawings that includes all associated details and underground utilities.
- Submit complete set of sealed structural calculations for all building and foundation components.
- Provide building elevations.
- Submit sealed soils report if assumed soil bearing is in excess of 2000 psf or if soils are engineered.
- Submit sealed drawings and calculations for all applicable underground mechanical, electrical and plumbing systems to be installed under this permit.

Additional Notes:

Phase IV – Building Plan Checklist

Purpose:

Provide remaining needed information related to submitted construction project for code compliance review.

Non-Structural Plan Review

2012 International Building Code

Complie

N/A

- Construction documents shall be signed and sealed as required by the State of Missouri.
 - Label use of all spaces.
 - List height and number of stories for the building.
 - Show exiting system including rated enclosures, corridors, stairs, etc.
 - List all rated assemblies, diagram assemblies and provide the complete listing.
 - Provide building elevations and sections.
 - Show compliance with accessibility requirements.
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Structural Plan Review

2012 International Building Code

Complie

N/A

- Identify design loads for floors, roof, etc., (20psf min. snow load), 90 mph wind load and seismic Zone (B).
- Submit complete set of sealed structural calculations for all building and foundation components.
- Submit complete sets of structural drawings including footing and foundations.
- Submit soils report if assumed soil bearing is in excess of 2000 psf or if soils are engineered.

Mechanical Plan Review

2012 International Mechanical Code

Complie
N/A

- Submit complete mechanical plans showing location and type of all mechanical equipment and appliances
- Show location, size and BTU's of all HVAC equipment.
- Show source and type of combustion air and provide drawings, which show duct sizes and locations. Include additional details for all hazardous exhaust systems.
- Show all kitchen exhaust hoods, exhaust quantity, makeup air, etc. IMC 2012-Sec 507
- Indicate the location of the duct smoke detectors in any system over 2,000 CFM including supervision. IMC 2012-Sec 606
- Show all fire and smoke dampers as required. IMC 2012 Sec 607
- Mechanical ventilation rates re: nail salons, repair garages, warehouses, locker rooms, hospitals, etc., please see table on minimum ventilation. IMC 2012 Sec 403
- Exhaust systems IMC 2012, Section 502
- Boilers IMC 2012 Section 1003 and 1004
- Hydronic Piping IMC 2012 Chapter 12

Plumbing Plan Review

2012 Uniform Plumbing Code

Compliance
N/A

- Show all plumbing fixtures per UPC 2012 code, and show basis for number of required bathroom fixtures for male and female.
- Provide a riser diagram showing all water piping, drain, waste and vent piping, include size and type of pipe.
- Indicate drinking fountains or bottled water.
- Indicate type of backflow protection provided meeting local water company requirements.
- Show thermal expansion tank, temperature relief and vacuum reliefs as necessary for water heaters.
- Show type of storm drainage, area of discharge, type and size of pipe.
- Indicate the location(s) of all pipe cleanouts.
- Provide details for handicapped access to the plumbing fixtures.
- Show sewer line with clean outs.
- Show fuel gas piping size and type of piping required.
- Show all fire stop protection relating to plumbing pipes.
- Note on drawing that all 3" and 4" drain and sewer lines must have 1/4" foot fall minimum. If less than 1/4" per foot fall is required then 6" pipe is to be installed after approval by the city inspector.

Electrical Plan Review

2011 National Electrical Code

Compliance

N/A

- Provide a riser diagram, which indicates type and size of the service with the location of the meters. Also show the main disconnects conductor types, number of conductors, conductor's sizes, conduit sizes, and all grounding.
- Provide floor plans showing the fixtures, equipment, transformers, panels, sub panels, receptacles and special systems.
- Indicate the size and type of all wire and number of all conductors in each conduit.
- Indicate the size and type of all conduit and/or raceways
- Indicate the use and amperage (load) for each circuit.
- Show the number of circuits, size of circuit breakers, location and size of main disconnect.
- Submit load calc. charts for all panel boards and main service with demand factors.
- Show emergency lighting to all rooms, spaces, corridors and access routes.
- Indicate circuit and number in panels schedule of connecting exit and emergency lights to the building electrical system.
- Show type and location for ground, ground conduit & bonding jumper at water meter.
- Indicate size and type of ground conductors.
- Show location of all GFCI outlets.
- Show lightning protection system, if applicable.
- Show all disconnects type, amperage and voltage
- Complete light fixture schedule.
- Panel schedule with all circuits.

Fire Sprinkler Plan Review

2012 International Fire

Code

Complie

N/A

- Submit complete stamped sprinkler plans including hydraulic calculations.
- Show the type and size of all piping, joints, fittings dimensions and lengths.
- Show sprinkler protection for all areas and square footage for each sprinkler.
- Indicate the type and temperature ratings for all sprinklers and number.
- Indicate the building occupancy and hazard category and submit details for process and storage equipment. .
- Show locations of inspectors test valves, gauges, main and auxiliary drains.
- Show type and location of fire department connection, (4 inch Storz), arrangement, drainage and piping.
- Indicate that a 200-psi hydrostatic test will be witnessed by the local official.
- Show hose rack layouts (storage areas in compliance with NFPA 231 or 231C), if applicable.
- Indicate the location and show all details for hangers.
- Show supervision of valves and flow switches.
- Indicate water flow test, pressure location, time, date, witness and seasonal adjustment. This information can be obtained from Missouri American Water Company.
- Submit description of special systems, show valves and trim flow diagrams.

Fire Alarm Plan Review

2012 International Fire

Code

Complie

N/A

- Show layout of all fire alarm devices.
- Indicate name of monitoring agency and listing of the agency and phone number of monitoring company.
- Submit sequence of operations and special applications.
- Submit voltage drop calculations for the initiating and alarm device circuits.
- Indicate type of wire and protection of wire when exposed to physical damage.
- Indicate a system test, which indicates a test for each device.
- Submit a zone chart or device address list.

Environmental Health Plan Review

City Ordinances

Complie

N/A

- Show designated smoking areas with seat counts for restaurants or food service establishments (non-smoking versus smoking and total) when designated smoking areas are provided. (This does not require a building owner to provide designated smoking areas.
- For buildings other than restaurants or food service establishments, show designated smoking areas and show total floor space (non-smoking versus smoking and total). This does not require a building owner to provide designated smoking areas.
- Show auxiliary exhaust systems in designated smoking areas.

Note: All items needed for a code review are not included on this checklist. This is only the minimum information required to begin the review. During the actual plan review process additional information may be requested.

Food Service Plan Review

1999 Food Code (FDA)

Compliance
N/A

Additional requirements for restaurants (Environmental Services/Health Dept)

- Number of seats
- Three compartment sink with (20 drain board areas)
- Location and number of hand wash sink(s) in food preparation area.
- Location of mop sink.
- Location of pre-rinse sprayer and garbage disposal.
- Hot and cold water through common spigot or tempered water with minimum 15 second hold.
- Make and model number of dish machine, if utilized.
- Location and specifications of water heaters, indicating BTUH and recovery rates.
- Location of ice machines and drains.
- Location of water, ice cream, and frozen dessert dipper wells.
- Location and design of plumbing for walk-in cooler(s).
- Location of sneeze guard(s) for food/condiment.
- Adequate lighting in food service/preparation areas.
- Description of smooth, nonporous, easily cleanable walls, ceiling and floors.
- Location of delivery doors.
- Location of outside dumpsters on hard cleanable surface.

Phase V – Shop Plans Checklist

Purpose:

-Identify building systems requiring the submission of shop drawings for submitted project.

-Give notice that work is not to be performed until shop plans are submitted and approved.

Contractors take undo financial risk if they install any building systems which require shop drawings without first receiving approvals from Building Department.

Complie

N/A

Sprinkler System Shop Drawings.

Lightening Protection Shop Drawings.
