

CITY OF DES MOINES PLANNING BUILDING AND PUBLIC WORKS DEPARTMENT

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MINIMUM REQUIREMENTS FOR CONSTRUCTION DRAWINGS

Plans are required to have the following minimum information to be accepted for plan check. Plans shall be of sufficient clarity to indicate the location, nature, and extent of the work proposed and shall conform to the provisions of the adopted Building Codes and ordinances.

Plan sheets must be $11" \times 17"$, $18" \times 24"$, $24" \times 36"$, or $30" \times 42"$. All sheets shall be the same size. Plans shall be drawn in indelible ink. (Plan sheets that are cut and pasted, taped, or that have been altered by any means such as pen, pencil, marking pen, etc, will not be accepted for plan check.)

NOTE:

- Areas over 4,000 SF, and when required by the Building Official, plans must be drawn by a Washington State Architect.
- Drawings for Restaurants must bear approval stamp from King County Health Department
- <u>All</u> structural modifications shall be designed and stamped by a Washington State Registered Professional Engineer. Engineer's calculations must accompany design.

COVER SHEET:

Provide a code summary to show compliance with the occupancy requirements of Chapter 3, IBC and the building size, height and type of construction provisions of Chapter 5, IBC.

PROJECT IDENTIFICATION:

Project address, legal description, location map, and tax parcel number

ALL DESIGN PROFESSIONALS IDENTIFIED:

- Names, addresses, telephone and license numbers of all design professionals.
- Identification of the person who is responsible for project coordination. All communications should be directed through this individual.

DESIGN CRITERIA LIST:

- Occupancy Group
- Type Construction
- Seismic Zone
- Square Footage and/or Allowable Area
- Fire Sprinkler Requirements
- Height and Number of Stories
- Occupant Load
- Land Use Zone
- Parking Requirements Required/Provided
- Allowed Soil-Bearing Pressure
- Design Loads (roof, floor, wind, codes, seismic zones, and factors)

- Material Strengths
- □ Soils Report
- Landscaping Requirements

SITE PLAN:

- Scale, North Arrow oriented to the top of the page. Max scale is 1" = 40' (preferred scale is 1" = 20' or 1" = 40')
- Basic Data (type of structure, square footage, location).
- Dimensions of lot, distance to property lines, buildings located on adjacent lots, street name, location, use, and vicinity map
- Existing and proposed structures labeled with dimensions
- Show <u>with dashed lines</u> any existing structures to be removed or demolished.
- Location of utilities (water, sewer, gas, electricity). (additions only)
- Site contours and drainage (existing in dashed lines, new in solid lines)
- Show location of property lines and all easements. Recorded easements are not allowed as side yards for the purpose of determining allowable area unless part of the lot record.
- Show required 96" wide van accessible parking space with an adjacent 96" wide access aisle per IBC 1106.5.

CIVIL SITE PLAN:

- Project Name
- Date
- Engineer's name, address, telephone number, and signed stamp on all sheets
- Surveyor's name, address, telephone number, and signed stamp on all sheets
- Utilities and phone numbers
- Call before you dig Hotline number
- North arrow indicator (north at top or left side of sheet).
- Subject property with all property lines dimensioned.
- Show all adjoining parcels within 500 feet
- Location of subject site with respect to the nearest street intersections, alleys, and other rights of way. Be sure to use CITY OF DES MOINES (not King County) street names.
- Scale: 1" = 20 feet horizontally, 1" = 2 feet vertically
- Topography: 2 foot intervals with slopes <u>less</u> than 15%
 5 foot intervals with slopes <u>greater</u> than 15%
- Topographic features and other natural features such as streams, lakes, marshes, wetlands, bluffs, rock outcrops, etc. Show all Sensitive Areas as defined by the Des Moines Sensitive Areas Ordinance.
- Location of existing driveways adjacent to the property, and on the opposite side of the street facing the subject property.
- Location of all existing public improvements including, but not limited to:

Curbs Gutters Sidewalks Median islands

- Utlity poles
- Fire Hydrants
- Drainage catch basins and pipes
- Sewerlines and manholes

Street trees

 Wheel Chair Ramps

 Road Monuments

 Traffic signs

 Street lights

 Above and below ground utility lines (gas, phone, cable, power, water)
 and junction boxes

CIVIL PROFILE SHEET:

- Existing and proposed road centerline
- Proposed top of curb elevation
- Crossing elevations and diameter of piping/conduits
- Drainage facilities

CIVIL CONSTRUCTION DETAIL SHEET:

- Plan and profile of major drainage structures such as: control structures, detention facilities, water quality facilities, catch basins, manholes, and other non-standard items.
- Driveway detail
- Curbs, Gutters, Sidewalks
- Monuments
- Road cross section showing proposed pavement construction details

CIVIL SUPPORTING DOCUMENTS:

- Right-of-Way Permit Application Form
- Legal description (1 copy, typed, 8-1/2 "X 11" with parcel numbers for the subject property)
- Site zoning and adjacent zoning
- Drainage Report if project adds 5,000 square feet of impervious surface, in accordance to the City adopted 1998 King County Surface Water Design Manual (KCSWDM):
- Stamped by a professional civil engineer registered in the State of Washington.
- Documentation of how Core and Special requirements apply to site
- At least a Level 1 downstream analysis prepared per KCSWDM, additional analyses may be required
- Proposed detention facility (if required) location and calculations
- Proposed water quality facility if project adds 5,000 square feet of pavement subject to vehicular traffic.
- Geotechnical Report: Shall include soils and slope stability analysis, boring and test pit logs, and make recommendations on slope setbacks, foundation design, material selection, and all other pertinent information
- Traffic Control Plan
- Traffic Study which addresses both vehicles and pedestrians
- Supplemental Plan Review Checklist

LANDSCAPE PLAN:

- Existing and proposed grades
- Underground and above ground utilities
- All existing structures to remain and all new structures

- All streets abutting the project site
- Plant materials with appropriate symbols and identifications keyed to planting schedule
- Planting details
- Planting schedule to include botanical and common names, sizes, and conditions of plants
- Irrigation plan

FOUNDATION PLAN:

- Stamped engineering calculations and structural drawings are required for all foundation/footings
- Provide plan view of foundation
- Location and size of exterior and interior bearing footings/foundations
- Location, size, embedment, and spacing of reinforcing steel anchor bolts, hold downs (if required) and post to footing connections

FLOOR PLAN (Show all rooms: 1/4" or 1/8" scale):

- Specify the use and size of all rooms (classify use per IBC Section 302).
- Wall legend must delineate new, existing, demolished, and relocated construction.
- Show location, size, and door swing for all required exits.
- Specify size, grade, species, direction of run, span and spacing of all framing members (may be provided on floor plan in lieu of separate framing plans).
- Provide reflected ceiling plan. Show required draft-stopping for combustible construction.
- Show locations for all switches, outlets, receptacles, and electric appliances.

MEANS OF EGRESS SYSTEM:

Provide a Means of Egress summary to show compliance with IBC chapter 10 Means of Egress. The summary should include the occupant load of each space, exit and corridor width, the corridor design and the exit enclosure design with appropriate details and drawings. The summary shall clearly show the design approach for the exiting system. Shows the occupant load of each space include the calculation. Show the occupant load at all corridors, exit enclosures and exit doors include the cumulative occupant load from all spaces.

FRAMING PLANS:

- Specify size, span, spacing, species and grade of lumber, or manufacturer and series of steel framing for all framing members.
- Provide attachment details for top and bottom plates. Specify size and spacing of fasteners.
- Clearly show bearing and shear walls. Specify nailing schedule.
- Show materials and method of connection for all posts to beams connections.
- Special connection methods must be detailed to show how the structure is held together.
- Provide flashing details for all exterior openings.
- Provide engineered truss plans showing how trusses are to be laterally braced and noting how they are connected to bearing elements.

ELEVATIONS:

- Show full height elevation from finish floor to highest point of structure.
- Specify finished materials to be utilized in construction. Specify size of all materials.
- Show all doors and windows. Provides manufacturers installation and weather proofing details. Specify sizes if not shown on floor plan.
- Show shear walls and/or diagonal bracing.

BUILDING CROSS SECTIONS:

- Show sections of structure that clarify in detail the typical conditions and describe otherwise hidden conditions.
- Provide typical wall section. Show components of wall including finish materials.
- Provide detail showing lateral bracing at a minimum of 8' o.c. for walls over 8' in unsupported length. Wire bracing not acceptable without engineering.
- Ceiling construction (size and spacing of joists) and insulation; provide cross section of dropped ceiling and detail lateral bracing requirements of IBC 803.9.
- Roof structure (size and spacing of joists or pre-manufactured truss spacing) and insulation (if applicable).
- Provide full height details for <u>all</u> mezzanines and stairways. Details must specify framing members, spacing and finishes.

FIRE RESISTIVE ELEMENTS:

- All of the fire rated assemblies shall be detailed on the plans and shall clearly indicate listed and labeled assemblies or the prescriptive assembly per IBC 720. Include the exterior exit balcony wall and ceiling assemblies, duct and exit enclosures and Elevator shaft walls as well as opening protection of the shaft enclosures as per IBC 711/713.
- Provide details of all of the though penetration fire stops and membrane penetrations as per IBC 712.
- Show sections for required parapet walls.
- Provide detail/ICC report for rated suspended ceiling. Include UL approved detail for tenting of light fixtures.

BARRIER FREE ACCESS:

- Provide floor plans and elevations of sufficient detail to show that the building and site facilities are accessible to persons with disabilities, as provided in IBC Chapter 11 and ANSI A 117.1 requirements for accessibility.
- Plans must show an accessible route of travel. An accessible route of travel is a continuous unobstructed path connecting all accessible elements and spaces in an accessible building or facility that can be negotiated by a person using a wheelchair and is usable by persons with other disabilities.
- Show a primary entry into the building or tenant space that is accessible.
- Provide floor plans and elevations with dimensions for restrooms, kitchens, counters, and similar fixed facilities showing compliance with barrier-free access requirements.
- Provide hardware schedule specifying door locksets and latchsets having lever, push operated, or other devices openable by wrist or arm pressure.
- In an existing building, to the maximum extent feasible, the path of travel to altered areas shall be made accessible. The path of travel means a continuous, unobstructed

way of pedestrian passage by means of which an altered area may be approached, entered and exited; and which connects the altered area with an exterior approach (including sidewalks, streets, and parking area), an entry to the facility, and other parts of the facility. (This includes restrooms, telephones, and water fountains serving the altered area).

STRUCTURAL ENGINEERING:

- Provide two copies of the structural calculations, with wet seal.
- Provide two copies of the Geo-technical report of all commercial new construction and additions.
- Truss plans should be reviewed by engineer of record and note that they have been reviewed and meet all necessary structural requirements.

ENERGY/VENTILATION/NOISE LEVEL REDUCTION

Select Energy Code compliance option and provide completed forms as required for option chosen.

- Component Performance Compliance Approach Provide a separate sketch of elements for each wall, ceiling and floor type. A wall schedule keyed to the individual sketches is necessary for projects with more than one wall, ceiling or floor type. Provide appropriate sections with dimensions sufficiently detailed to indicate where each type of element occurs.
- Provide a completed Lighting Power Summary and a Lighting Budget Worksheet specifically identifying light fixture (wattage for light fixtures must include ballast wattage).
- Show compliance with the ventilation requirements of the Washington State Ventilation and Indoor Air Quality Code Table 3-4.
- Plans shall clearly show compliance with the Sound Control Ordinance in all details.

MECHANICAL SYSTEM PLANS:

- Entire mechanical system
- All units, their sizes, mounting details, all duct work and duct sizes
- All fire dampers where required
- Equipment schedules
- Energy conservation calculations per State of Washington
- Indoor air quality standards including radon mitigation systems
- Fire protection systems

PLUMBING SYSTEM PLANS:

- All fixtures, piping, slopes, materials and sizes
- Connection points to utilities, septic tanks, pretreatment sewer systems and water wells
- Isometric diagram of all waste and vent piping.
- Isometric diagram of all water distribution piping.
- Isometric diagram of all gas piping.

ELECTRICAL SYSTEM PLANS:

- All electrical fixtures (interior, exterior and site)
- □ Wiring sizes and circuiting
- Grounding, panel schedules, single line diagrams
- Load calculations
- Fixture schedules
- Connection to utility
- Fire alarm systems
- Power use budget

REVISIONS:

- For clarity, all revisions to be identified with a Delta "△" symbol, and clouded on the drawings, and clearly identify the engineer or architect in responsible charge and be stamped by the design professional.
- All design build and deferred submittals for building projects shall be reviewed by the architect or engineer in responsible charge for the correct application of the approved design prior to submitting plans for review by the City for such applications as Mechanical and Plumbing systems or roof and floor framing pre-approved deferred submittals.

SOUND ORDINANCE REQUIREMENTS

Des Moines has sound zones due to the proximity to SeaTac Airport. The applicable requirements are to be noted and detailed in the plans. See Sound Transmission Control Requirements I-002 DMMC 14.08.280)

- Exterior window and door requirements are noted on plans.
- Exterior wall and ceiling/roof assemblies are noted and detailed.
- Ducting insulation is properly called out.