



**CITY OF DES MOINES
PLANNING BUILDING AND
PUBLIC WORKS DEPARTMENT**

2006 IRC
Pre-Construction
Guidelines
BH - 005

21630 11th Avenue S, Ste D • Des Moines, Washington 98198 • Tel: (206) 870-7576 Fax: (206) 870-6544

INSPECTION REQUESTS:

- The telephone number for scheduling inspections is **(206) 870-6531**. The cut off time for calling in a next day inspection is 3pm. Any requests left after that time may not be checked until 3pm on the following day.
- Inspection requests made using a cell phone are at your own risk. The Building Division is not responsible for any inspection request not entered because of a dropped call and/or bad reception. Inspections not scheduled due to dropped calls and/or bad reception will not be performed the next day.
- Press 1, listen for the beep, and begin leaving your inspection request. You will need the following information: permit number, job site address, contact name with phone number, and the type of inspection requested. Refer to your permit card for the name of the inspection needed. Please be advised that if you are requesting a plumbing inspection, you will need the plumbing permit number, electrical requires the electrical permit number, etc. You can not use the building permit number to call in other types of inspections.
- You may state if your preference is for a morning or afternoon inspection. Although we do our best to honor such requests, we can not guarantee you will receive your requested time. No same day inspections will be scheduled.
- To find out your scheduled time: (1) call back after 5:00pm, press 2 and listen for the permit number and time or (2) check online after 5:00pm by going to the city website at <http://www.desmoineswa.gov> and following the "Schedule a Building Inspection" link.
- Inspectors may arrive at the site within 15 minutes before or after the provided schedule time.
- **You or your representative will be expected to be onsite for every inspection. Inspections where no valid representative is present at the site will be cancelled by the inspector at that time and you will need to reschedule for another time.**

INSPECTIONS:

- *Approved Plans:*
 1. Approved drawings, permit(s), and inspection record(s) shall be on site and accessible.
 2. Testing lab shall inspect from the approved plans and specifications only.
 3. Building Division shall inspect from the approved plans and specifications only.
 4. Any deviations from the approved plans require the approval of the Building Official. Revisions are to be submitted to building division with two (2) sets of structural documents stamped by the engineer of record and the architectural revisions stamped by the architect.
- When the work for which an inspection is called for is incomplete or there is a deviation from the approved plans or the approved plans specifications and permit

are not on site a re-inspection fee shall be charged.

- *Footing and foundation wall:*
 1. All form work and reinforcement to be in place and ready for inspection with all bolting to be on job-site and interior of forms to be free of loose soil, mud and all rebound material (wood, organic or large rocks) to be removed.
 2. All form work to be removed prior to any backfill activity.
 3. Under slab.
 4. All required insulation and plumbing/mechanical/ electrical to be in place before placement of concrete.
 5. All hold downs to be cast in place, no Wet Setting ACI 318.
- *Under-floor inspection:* All girders and joists are required to be inspected before sheathing of first floor.
- *Sheathing/ shear panels:* Exterior roof and exterior deck floor sheathing to be inspected before coverage.
- *Plumbing:*
 1. Per UPC and requires a separate permit.
 2. All penetrations of rated walls to be in metal with the transition occurring inside the wall.
- *Mechanical:* Per IMC and requires a separate permit.
- *Framing Inspection:* After all electrical, plumbing mechanical and fire suppression inspections have passed inspection.
- Provide ICC research report numbers for metal studs.
- Fire blocking/draft stops to be installed prior to framing inspection.
- Penetrations of rated assemblies to be approved metal or material with "T" or "F" rating per IBC Section 712.
- *Insulation:* Insulation to be in compliance with current Washington State Energy Code. The NREC Examiner of Record shall inspect during construction to ensure compliance with the code and for final shall submit a letter stating such compliance to be filed with the permit record.
- *Sheet rock:* Nailing is required to be inspected after all sheet rock is in place and before any fasteners are covered.

FINAL INSPECTION:

- The final inspection can not be performed by the building division until after the Fire Department, Planning Division, and Engineering Division have signed off their final approvals on the permit card.
- Testing laboratory final letter must be received prior to final inspection.
- Certificate of Occupancy requires four (4) signatures (SWM, ROW, Fire Marshal and Building Official) along with final test lab letter and final architects' and engineers' reports. A certificate may not always be issued if the work was for a remodel or change. Please contact the Permit Coordinator with any questions.

OTHER APPROVALS REQUIRED PRIOR TO FINAL BUILDING DIVISION APPROVAL:

- Obtain written Water District approval of water system and back-flow prevention prior to final inspection.
- Obtain written approval from the Sewer District of sewer design and final connection prior to final inspection.
- The architect and engineer of record shall submit their final inspection reports of the work performed according to their discipline to confirm trueness of design to the Building Official prior to the final inspection.

FIRE DEPARTMENT REQUIREMENTS:

- A fire sprinkler system is required to be installed and maintained in accordance with NFPA 13 as directed by South King County Fire & Rescue.
- A permit is required for this fire sprinkler system through South King County Fire & Rescue. Three sets of fire sprinkler system plans are required to be submitted for the review of the system design for permit issuance. These plans and the application should be dropped off at the Front Counter for the City of Des Moines Building Division.
- The sprinkler system designer is required to design the system in accordance with NFPA 13 and in accordance with the approved plans for the conditioned space envelope and the concealed spaces.
- Work at the site will not continue beyond the framing stage unless the fire sprinkler system is permitted and approved by South King County Fire & Rescue.
- Schedule inspections of the fire suppression system with the Fire Marshal.

REQUIRED SPECIAL INSPECTIONS:

- Concrete
- Bolts installed in concrete
- Moment resisting concrete frame
- Reinforcing steel and prestressing steel tendons
- Structural welding
- Special moment-resisting steel frames
- Welding of reinforcing steel
- High strength bolting
- Structural masonry reinforced gypsum concrete
- Insulating concrete fill
- Spray applied fire-resistive materials
- Piling, drilled piers and caissons
- Shotcrete
- Special grading, excavation and filling
- Wood shear panels
- Other inspections as directed by the Building Official
- All special inspections are subsequent the city inspection.

SPECIAL INSPECTIONS CONCRETE:

- Testing lab inspector to be scheduled on site prior to the arrival of concrete to allow time for the inspection of re-bar and forms in accordance with the approved plans.
- Provide the name of the special inspector and a schedule of the inspections prior to the start of work to the Building Official.
- Concrete shall not be placed without the special inspector on site. The special inspector shall remain on site until the completion of concrete placement.
- Be careful adding water to mix. Water/cement ratio must not be excessive. Slump on approved mix is not to be exceeded unless a plus or minus tolerance is called out on plans or mix design.
- No admixtures are allowed to the "city mix". Any admixtures will require project engineers' approval with notification to the Building Division before being used.

- All concrete is to be mechanically consolidated regardless of compressive strength requirements.
- Vibrating equipment is to be on the job-site when concrete is being placed.
- The special inspector has the right and obligation to stop the placement of concrete if specifications and codes are not strictly adhered to.
- Special inspector shall appear on certified list.
- City inspector shall be given one-day notice of all concrete placement.
- When requesting concrete inspections please give the time you intend to start your placement.

CONCRETE PLACEMENT CONSIDERATIONS:

- Report from soils engineer to be on site and clearly state that all areas to receive placement are satisfactory per original soils report recommendations.
- Approved mix design to be on site and be reviewed by structural engineer of record with two (2) copies of engineer's approval submitted to the Building Division. The Building Division will review and supply "site copy" to be on site prior to concrete placement.
- Use of "city mix" does not require engineer's approval and is the only exception, i.e.: 5 sack 2,000 psi, 5 ½ sack 2,500 psi, 6 sack 3,000 psi
- **The daily report is to be left on site.**

SPECIAL INSPECTIONS OTHER THAN CONCRETE:

- Asbestos abatement certificate.
- Welders shall be WABO certified.
- All expansion bolts to be inspected for embedment depth and torque.
- Intermittent inspection of CMU and masonry may be allowed. All grouting to be inspected including panel grout, and prisms to be taken daily.
- All high strength bolting to be inspected for placement and torque.
- If insulation is to be applied directly to roof sheathing, moisture content of sheathing to be verified at 14% or less prior to placing insulation.
- Special nail patterns (shear walls, roof decks. etc.) shall be special inspected.
- Parabolting requires a special inspection.

GEOTECHNICAL ENGINEER SITE REVIEW:

- In all projects where a geotechnical engineer has determined suitability of soils for construction in the City of Des Moines, the engineer of record is required to review the testing and verification of substrate conditions for foundations, slabs on grade, shoring of substrate cut and other site construction and to determine conditions requiring special procedures and make a detailed report to the Building Official prior to the footing inspection.
- A final report shall be submitted prior to the final inspection.
- Alterations to the approved design are required to be reviewed and approved by the Building Official prior to any work at the site.

STRUCTURAL ENGINEER SITE REVIEW:

- In all projects where a licensed structural engineer has designed a structure in the City of Des Moines, the engineer of record shall make periodic inspections of the work performed according to their discipline to confirm trueness of design and compliance with all State and local codes and to submit written reports of the site visits to the

Building Official (Include all corrections). These reports shall detail site conditions and completeness of design.

- A final report shall be submitted prior to the final inspection.
- Alterations to the approved design are required to be reviewed and approved by the Building Official prior to any work at the site.

ARCHITECTUAL SITE REVIEW:

- In all projects where a licensed architect has designed a building constructed in the City of Des Moines, the architect shall inspect the work performed and submit reports to the Building Official for design compliance and compliance with all State and local codes and to submit written reports of the site visits to the Building Official. These reports shall detail site conditions and completeness of design.
- A final report shall be submitted prior to the final inspection.
- Alterations to the approved design are required to be reviewed and approved by the Building Official prior to any work at the site.

DESIGN BUILD AND DEFERRED SUBMITTALS:

- All design build, deferred submittals, plan changes and detail alterations shall be reviewed by the architect or engineer of record for the correct application of the approved design.
- These changes to the approved design shall be submitted for review by the City of Des Moines only after the design professional of record has completed the review of the alteration.
- These changes include such items as Mechanical and Plumbing systems, pre-engineered roof and floor framing designs and fire sprinkler systems. No work shall be performed at the site prior to approval.

FIRE-STOP SYSTEMS IBC 712

- All through penetrations and membrane penetrations of fire rated assemblies shall be protected by an approved penetration fire-stop system.
- The system shall be installed as tested in accordance with IBC Standard 7-5 with an F and T rating of one hour, but not less than the required rating of the wall or floor penetrated, by a professional agency approved by the Building Official.
- The firestop system and the agency's qualifications shall be submitted for review and approved by the Building Official prior to any site installation of the fire-stop system.

SPECIAL TOPICS:

- 1/4" corrosion-resistant metal screen required for attic/foundation vents.
- See Table 803.5 in the 2006 IBC for maximum flame-spread class for rooms, areas, and exitways.
- A separate right-of-way permit is required for any work in the right-of-way.
- The fire restiveness and integrity of all rated corridors, walls, and floor/ceiling assemblies shall be maintained.
- Flagging, construction fences, and construction barriers must be in place and maintained at all times.
- Wayne Matthews will need to be contacted for surface water concerns before backfilling foundation at (206) 870-6567.
- Backfill for plumbing ditches bedded 6" - 12" in sand or pea gravel.

- Trap primers required on area drains and remote floor drains.
- All trades responsible for cutting & notching of structural members.
- Plumbing penetrations in rated walls to be by approved penetration fire stops or cast iron.
- In multi-family buildings each unit shall have a separate water main shutoff.
- Staples to be parallel with framing and fasteners not to fracture face of sheathing.
- All materials and fasteners to be used as intended by their listings. Non listed fasteners (staples, screws and power nails) are not to be used.
- Construction personnel only are allowed on the job-site during construction and no dead storage is allowed until approval of final inspection.
- Washington Barrier Free Code requirements are strictly enforced without exception and adaptable dwelling units need lever handle, door, and window latches, electrical outlets no less than 15" above floor, etc.

Local ordinance confines the **"hours of operation" for land clearing and grading** to 8:00 a.m. - 5:00 p.m. and **"hours of construction" for building related projects** to 7:00 a.m. - 7:00 p.m. Monday through Friday and 8:00 a.m. - 5:00 p.m. Saturdays, Sundays and legal holidays. Refer to DMMC Title 14 for hours of construction and hours of operation.

You may contact the following staff members directly at these numbers:

Lawrence Pickard, Building Official	(206) 870-6569
Rex Christensen, Assistant Building Official/ Lead Inspector	(206) 870-6542
Greg Fox, Plans Examiner/Building Inspector	(206) 870-6557
Dave Shivvers, Building Inspector	(206) 870-6716
Rick Armstrong, Building Inspector	(206) 870-6520
David Huson, Building Inspector	(206) 870-6717

The rest of the Building division staff can be reached at our general office number of (206) 870-7576