This policy is promulgated in accordance with Section 104.1 of the 2015 International Fire Code (IFC) and is an official interpretation of Section 23.1.1 of NFPA 13 (2013 edition) which is adopted by reference from the IFC.

23.1.1* Working plans shall be submitted for approval to the authority having jurisdiction before any equipment is installed or remodeled.

8.15.20.5 Revamping of Hydraulic Design Systems.
8.15.20.5.2* Calculations shall be provided to verify that the system design flow rate will be achieved.

It is the position of the Fire Prevention Bureau that, in addition to projects whose scope fall within the less than 21 head permit, projects solely involving relocation of sprinklers and/or addition of drops may be submitted without new hydraulic calculations. The following situations are not covered by this policy and require a full submittal including new calculations per NFPA 13:

1. Addition or alteration branch line pipe or main pipe as defined in NFPA 13
2. Changes in the design criteria per NFPA 13 including but not limited to:
   a. Changing in hazard
   b. Change in required design density
   c. Addition of sprinkler heads within the remote area
   d. Increase remote area
   e. Addition of flexible sprinkler drops
3. Addition of a backflow preventer or other valves
4. Modification to main or system riser(s)
5. Addition or change in sprinkler head supply or discharge requirements (e.g. extended coverage)

A submittal that does not require hydraulic calculations must contain the following:

1. Original system design criteria. (e.g. As-Built drawings or a detailed description of the existing system)
2. If the original system was calculated, provide a copy of the calculation.
3. If the original calculations are not available a detailed narrative explaining how the modified system’s design criteria and demand is equivalent to or less demanding than the original design and layout.
4. Plans should include at least:
   a. Mains with pipe size
   b. Branch lines with pipe size
   c. Sprinkler types and locations within the area of work
   d. The area of work
   e. Sprinkler pipe back to the riser

Any comments or questions regarding the above information may be submitted to:

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City of Des Moines Fire Department
Fire Prevention Bureau
2715 Dean Avenue
Des Moines, Iowa 50317
Office: (515) 283-4240
Fax: (515) 283-4907
Email: firedept@dmgov.org