13D:4-3.1 Where insulation of the system piping in an unheated attic is to be used for freeze protection, install the insulation and piping above heated spaces so that:

(a) The piping is placed directly on top of the joists and the insulation is placed and secured in order to keep the pipe above 40 degrees F. Blown insulation shall not be used for the pipe insulation.

(b) Insulation shall not be permitted between the pipe and the ceiling of the heated space.

(c) A permanent plaque should be attached to the system riser warning that the building is to be heated at all times.

(d) The insulation shall be in place prior to, and shall be a requirement of, system approval and acceptance.

The above insulation procedure is not an acceptable alternative to space heating, dry pipe or anti-freeze systems for piping rising through or crossing unheated areas.
Pipe insulation must be batt or of sufficient R value secured in place without gaps.

Typical ceiling insulation - can be either batt or blown.

Secure to joists - can be battens nailed to top stapled to side, straps attached across, chicken wire, etc.

Room below maintained heated, TIP.

Sprinkler pipe parallel to joists.

Ceiling.

Joists beyond across joists.

Sprinkler pipe across joists.

Design basis: R value sufficient to maintain the pipe at 40°F during all freezing conditions.

For South LA use 10°F/24 hr outside.
North LA use 0°F/24 hr outside.
Assume 0°F maintained inside.