CITY OF SAN JOSÉ, CALIFORNIA

SAN JOSE FIRE DEPARTMENT

FIRE SPRINKLER DATA REQUIRED BY 1996 NFPA 13, SECTION 6-1.1.1

Working plans shall be drawn to an indicated scale, on sheets of uniform size, with a plan of each floor, made so that they can be easily duplicated, and shall show the following data:

(a) Name of owner and occupant.

(b) Location, including street address.

(c) Point of compass.

(d) Full height cross section, or schematic diagram, if required for clarity; including ceiling construction and method of protection for nonmetallic piping.

(e) Location of partitions.

(f) Location of fire walls.

(g) Occupancy class of each area of room.

(h) Location and size of concealed spaces, closets, attics, and bathrooms.

(i) Any small enclosures in which no sprinklers are to be installed.

(j) Size of city main in street and whether dead-end or circulating; and, if dead-end, direction and distance to nearest circulating main. City main test results, and system elevation relative to the test hydrant.

(k) Other sources of water supply, with pressure or elevation.

(l) Make, type, and nominal orifice size of sprinklers.

(m) Temperature rating and location of high-temperature sprinklers.

(n) Total area protected by each system on each floor.

(o) Number of sprinklers on each riser per floor.

(p) Total number of sprinklers on each dry-pipe system, preaction system, combined dry-pipe/preaction system, or deluge system.

(q) Approximate capacity in gallons of each dry-pipe system.

(r) Pipe type and schedule of wall thickness.

(s) Nominal pipe size and cutting lengths of pipe (or center-to-center dimensions).

NOTE: Where typical branch lines prevail, it will be necessary to size only one line.

(t) Location and size of riser nipples.

(u) Type of fittings and joints and location of all welds and bends. The contractor shall specify on drawing any sections to be shop welded and the type of fittings or formations to be used.

(v) Type and locations of hangers, sleeves, braces, and methods of securing sprinklers when applicable.

(w) All control valves, check valves, drain pipes, and test connections.

(x) Make, type, model, and size of alarm or dry-pipe valve.

(y) Make, type, model, and size of preaction or deluge valve.

(z) Kind and location of alarm bells.

(aa) Size and location of hose outlets, hand hose, and related equipment.

(bb) Underground pipe size, length, location, weight, material, point of connection to city main; the type of valves, meters, and valve pits; and the depth that the top of the pipe is laid below grade.

(cc) Piping provision for flushing.

(dd) Where the equipment is to be installed as an addition to an existing system, enough of the existing system shall be indicated on the plans to make all conditions clear.

(ee) For hydraulically designed systems, the information to be included on the hydraulic data nameplate.

(ff) A graphical representation of the scale shall be provided on all plans.

(gg) Name and address of contractor.

(hh) Hydraulic reference points shown on the plan shall correspond with comparable reference points on the hydraulic calculation sheets.

NOTE: Hydraulic reference points are important to the designer because they help ensure that parts of the system are not overlooked. They are also essential to the plan checker, particularly in the case of gridded systems. Good coordination between calculations and plans is essential should it be necessary to re-evaluate the system, or make additions to the system, several years after it has been designed. In addition, the plan reviewers' job will be much easier if they can make the comparison between the plans and the calculations. This, in turn, will make reviews more efficient and timely.

(ii) The minimum rate of water application (density), the design area of water application, in-rack sprinkler demand, and the water required for hose streams both inside and outside.

NOTE: The information described in this item is the basis for the bulk of the design choices. If an incorrect density was selected or if the design area of operation is incorrect for the occupancy hazard, the entire set of plans can be rejected no matter how complete the other items called for in this section are. The following information relating to the basis of design must be shown on the plans:

(a) Density;
(b) Area of water application;
(c) In-rack sprinkler demand, if applicable;
(d) Inside hose demand, if applicable;
(e) Outside hose demand.

The sum of the inside and outside hose demand must always be equal to or greater than the values given in Table 5-2.3. In addition, the NFPA storage standards must be consulted when designing systems for high-piled storage or rack storage.

(jj) The total quantity of water and the pressure required noted at a common reference point for each system.

NOTE: The actual calculated demand is normally referenced at the base of the riser in buildings containing several systems. In single-system buildings, the reference point may be at the base of the riser or the point of connection to the city main.

(kk) Relative elevations of sprinklers, junction points, and supply or reference points.

(ll) If room design method is used, all unprotected wall openings throughout the floor protected.

(mm) Calculation of loads for sizing, and details of, sway bracing.

(nn) The setting for pressure-reducing valves.

(oo) Information about backflow preventers (manufacturer, size, type).

(pp) Information about antifreeze solution used (type and amount).