



## A Consideration of Flow Retardant Drains

One of the basic recommendations of good roofing practice promoted by C.R.C.A. since its formation in 1958, has been the advisability of draining roofs as quickly and as positively as possible. This recommendation which has been strongly endorsed by major roofing manufacturers and no less a prominent authority than the National Research Council of Canada, is now threatened by the advent of the flow retardant type of drains.

A brief history of these drains will reveal that they are designed to hold water on roofs, using the latter as temporary storage areas in municipalities where sewers and storm drainage systems are unable to handle sizeable quantities of water suddenly discharged from large roof areas. The water would be allowed to run off the roofs over a calculated period of time, which in some localities is as long as forty-eight hours.

Due to the decreased sizes of rainwater leaders and sewers required to handle the reduced flow of water, it became apparent that substantial savings in plumbing costs could be realized by the use of these drains. As a result, they have been rapidly promoted and used with greater frequency, even in cities and towns where adequate storm and sewage facilities would seem to be available.

Unfortunately, very little, if any consultation with roofing authorities was sought by the drain manufacturers. As result, roofing contractors suddenly found themselves faced with as much as 5" of water stored on roofs which were designed to shed water. Since water does freeze, and temperatures do drop rapidly in this country, they were also faced with even more unhappy prospects of heavy accumulations of ice frozen over roofing systems during winter months.

It does not require too much imagination to envisage the probable end result of the contraction and expansion of this ice on roof membranes, membrane flashings, curbs, plastic pans, etc., none of which were designed to cope with this situation. It should also be noted that the initial saving realized by the use of these drains is only a small percentage of the cost of replacing an insulated built up roof which has failed prematurely.

C.R.C.A. would therefore strongly recommend that designers avoid the use of these drains.