Structural Design Information

Structural submissions being received by the Buildings Ordinance Office are ever increasing in terms of bulk of plans and calculations involved. As a result, it is sometimes difficult to ascertain the basic assumptions and structural criteria.

2. Consequently thought should be given to presenting such information in a more consistent form. I therefore suggest the following :-

(A) Structural Plans

(a) Structural plans should be properly indexed and the first structural plan should contain the following basic information :-

(i) concrete grades;

(ii) concrete covers;

(iii) specification, grade and characteristic strength of reinforcement, prestressing tendons, steel and other structural materials; and

(iv) fire resistance requirements.

(b) The superimposed loading and any allowance for partitions, screeds, etc. should be given on each framing plan. Should there be any variation of superimposed loading on a floor this should be indicated diagramatically.

(B) Building Plans

Each building floor plan should contain the superimposed loading as in (A)(b).

(C) Calculations for Superstructure

Calculations should be grouped into two physical parts each of which should be properly indexed. The first part of the calculations containing information as detailed below will be retained in this office while the second part embracing all the other detailed design calculations will be returned to the author shortly after the issue of the Occupation Permit for the building.

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The first part of the calculations should include :-

a) Synopsis of design :-

(i) a general description of the proposed building including the foundation scheme, with sketches where necessary;

(ii) general design data, including the design method, design codes used, allowable material stresses, etc.; and

(iii) where computer calculations are submitted, a brief description and the Buildings Ordinance Office reference number of the programme used.

(b) Wind analysis :-

(i) method of analysis, modelling for analysis;

(ii) basic wind data; and

(iii) principle moments & forces in structural elements.

(c) Loading data - this should include the dead and superimposed loads used, and any allowance for partitions and screeding, etc.

(d) Summary of gravity loads/moments on each floor level for all vertical members such as walls and columns.

(e) Analysis and design of unconventional structural elements e.g. transfer plates and substantial transfer beams.

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