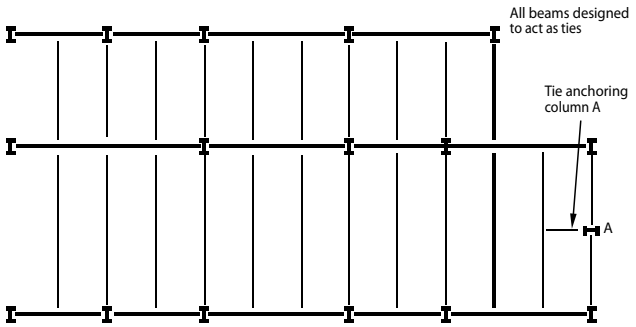

Fig (4.2) Tying of Columns – All beams including secondary beams used as Ties

4. All horizontal ties, and all other horizontal members, should be capable of resisting a factored tensile load, which should not be considered as additive to other loads, of not less than 75 kN.

5. Each portion of a building between expansion joints shall be treated as a separate building.

6. For special buildings where it is stipulated to be designed to avoid disproportionate collapse, all requirements with regard to tying of columns, continuity of columns, resistance to horizontal forces, notional removal of column, accidental loading and key element design etc. shall be carefully studied and designed as required by the relevant sections of codes.

4.4 GENERAL GUIDELINES FOR INDUSTRIAL STEEL STRUCTURES

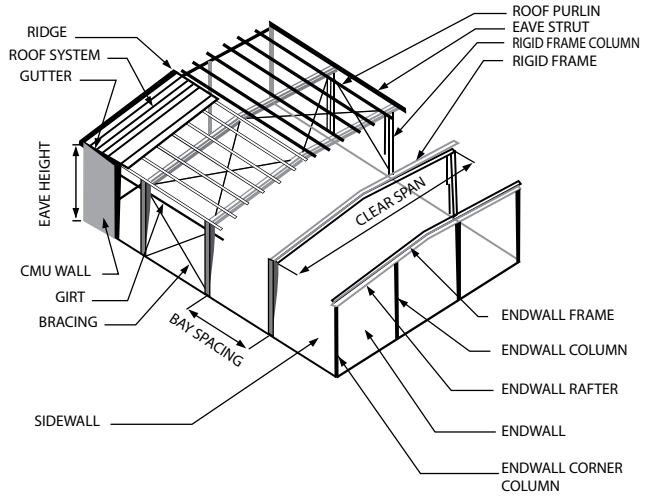

Fig (4.3). Parts of a Typical Steel Industrial Building

1. Design calculations and details of all parts (See Figure (4.3)) of a steel industrial building including foundations shall be submitted.

2. Footings shall be designed to solely resist the horizontal thrust from the portal frames. Hair pin bars connecting pedestal to the grade slab for horizontal restraint shall be avoided.

3. A minimum footing effective depth of 300mm for all footings with reinforcement cover meeting the durability requirements and the recommendations in the soil investigation report shall be provided.

4. Connections and loading drawings shall be provided with the input and output from the applicable steel design software.

5. All steelwork drawings shall be properly coordinated with the architectural and services drawings. Bracings shall not foul with openings & windows. A minimum of two bays shall be braced.

6. For built up sections, thickness of structural steel members shall not be less than 6mm for main members and 4mm for secondary members.

7. Anti-sag rods shall be a minimum of 16mm diameter and the maximum spacing of rods shall not exceed 3.8m. The roof bracing rods used shall be of 20mm minimum diameter.