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## TING WALL BULLETIN NO. 120

### COMPARISON OF CURTAIN WALL DESIGN AGAINST STORY DRIFT

#### TingWall System

The patented TingWall design against story drift is very unique and solves all the drawbacks of the conventional systems and special systems. The unique accomplishments are summarized below.

1. Competitive price of the Conventional Unitized System with the performance better than the Special System and without the limitations of the Special System.
2. Can sustain multiple large earthquakes without causing water leakage or “Glass Rain” problems.

#### Conventional Unitized Systems

1. Basic Features
  - a. Facing material (e.g. glass) directly sealed to mullion using caulking.
  - b. Split mullions with fix connection to floor edge.
2. Drawbacks
  - a. In case of story drift due to earthquake or wind load, the system always produces sealant line stresses. Therefore, it is not a durable system due to the problems of hardened sealant and/or stress fatigue.
  - b. The frames can be designed to tolerate a large degree of story drift but it can not maintain a durable sealant function (i.e. water leakage problem).

#### Special System: Point Supported Glass System

1. Basic Features
  - a. The structural anchor at the floor edge is designed to have two parts separately fixed to the floor and to the glass and the two parts can freely slide in between in the horizontal direction.
  - b. The connector to the glass must penetrate through the glass and the exposed connector head must have expensive aesthetic treatment.
2. Drawbacks
  - a. Very expensive (about twice of the cost of a conventional system).
  - b. Very little tolerance to inter-floor deflection, therefore, it is only commonly used in store-front application and is not suitable for high-rise.
  - c. The exposed connector design is normally aesthetically unacceptable for other facing material (e.g. aluminum plate, stone).
  - d. The water-tightness performance must rely on exposed perfect silicone caulking.