Seismic retrofit methods for exiting RC and SRC building, e.g., schools, apartments and offices

**Retrofit by Internal Brace**

**Internal Direct-Joint Brace System**

Retrofit method of directly jointing brace and frame by anchors to beams and columns.

- Wide opening
- Cost reduction
- Shortened construction period

**Retrofit by Internal Brace**

**Self-Installing Brace Method**

Retrofit method of directly jointing pre-stressed precast braces to beams and columns.

- Pre-fabricated product shortens construction period
- Noise reduction by using no anchor
- Cost reduction

**Retrofit by External Frame**

**External Hybrid Frame System**

Retrofit method of jointing external RC or SRC frame to beams and columns.

- Same wide opening
- Construction with using
- Ease-of-use is not affected

**Retrofit for Columns and Beams**

**Application of Reinforced Sheets System**

Retrofit method of wrapping carbon or aramid fiber sheets around beams or columns.

- Shortened construction period compared with Steel Wrapping Method
- No welding and water needed
- Noise reduction as no machinery is required