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Glazing System Structural Movement Submittal Matrix

(Contact JEI Structural to get spec document in word @ info@jeistructural.com)

Notes on Purpose

This matrix is intended to document coordination between the Structural Engineer of Record (SER) and the Glazing Contractor regarding anticipated structural movements and the glazing system's capacity to accommodate those movements.

The matrix shall be included as part of the glazing submittal package and completed by both parties as described herein.

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1. Instructions for Use

A. The Structural Engineer of Record (SER) shall complete the following fields for each applicable beam. Applicable beams are defined as those beams which support glazing systems or are above glazing systems:

1. Beam Identification
2. Beam maximum vertical deflections (magnitude and direction)
3. Beam maximum lateral deflections parallel with beam
4. Associated glazing elevations

B. The Glazing Contractor (or Façade/Glazing Engineer) shall complete:

1. Glazing System Vertical Movement Design Capacity. Definition of glazing system includes anchors to the structure and joint between the glazing system and adjacent building materials.
2. Glazing System Drift Design and/or Tested Capacity
3. Notes & Exceptions

C. Movement values shall be clearly stated with units (inches or mm) and shall identify whether values are:

1. Total movement
2. Loadings or conditions of movement
3. Movement upward direction as positive versus movement in the downward direction as negative
4. Allowable versus expected movement

D. The glazing system design shall demonstrate accommodation of all structural movements without:

1. Glass breakage or glazing system damage
2. Sealant failure or joint failure
3. Loss of weather-tightness
4. Building envelope damage or openings in the envelope
5. Damage to framing members or anchors

E. This matrix shall be submitted as a standalone document, separate from the glazing system design calculations, and shall be keyed to the shop drawings and architectural contract drawings.

F. The completed matrix shall bear the seal and signature of a licensed Professional Engineer responsible for the glazing system design.

G. Any discrepancies between structural movements and glazing system capacity shall be clearly identified in the "Notes & Exceptions" column, along with proposed mitigation measures.

2. Structural Movement Submittal Matrix at Glazing Systems (Example)

Beam #	Beam Live Load Deflection	Beam/ Level Drift	Glazing Elev.	Glazing Vertical Movement Capacity	Glazing Drift Capacity	Notes & Exceptions

3. Definitions (Optional – Include if desired in specs)

A. **Structural Engineer of Record (SER)**: Is the structural engineer in responsible charge for the design of the building structure.
B. **Beam Live Load Deflection**: Vertical displacement of supporting structural member under design live load conditions.
C. **Glazing Elevation**: Specific facade or storefront elevation associated with the supporting structure.
D. **Vertical Movement Design Capacity**: Maximum vertical movement the glazing system (including system anchors and joint dimensions separating the glazing system from adjacent materials) can accommodate at head or intermediate joints.
E. **Lateral Drift Design / Testing**: In-plane movement capacity validated by analysis and/or testing.

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4. Acceptance Criteria

A. Glazing system movement capacities shall meet or exceed the structural movements indicated by the SER.
B. Where testing is referenced, documentation shall be provided.
C. Engineer’s seal is required for acceptance.