

# Glazing System Structural Movement Submittal Matrix

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

## 1. 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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## 2. Instructions for Use

1. The Structural Engineer of Record (SER) shall complete the following fields for each applicable beam:
  - Beam Identification
  - Beam Live Load Deflection (magnitude and direction)
  - Associated Glazing Elevation
2. The Glazing Contractor (or Specialty Glazing Engineer) shall complete:
  - Glazing System Vertical Movement Design Capacity
  - Glazing System Drift Design and/or Tested Capacity
  - Notes & Exceptions
3. Movement values shall be clearly stated with units (inches or mm) and shall identify whether values are:
  - Total movement
  - Movement upward direction as positive vs movement in the downward direction as negative.
  - Allowable vs. expected movement
4. The glazing system design shall demonstrate accommodation of all structural movements without:
  - Glass breakage
  - Sealant failure
  - Loss of weather-tightness
  - Building envelope damage or openings
  - Damage to framing members or anchors

5. This matrix shall be submitted as a standalone document, separate from the glazing system design calculations.
6. The completed matrix shall bear the seal and signature of a licensed Professional Engineer responsible for the glazing system design.
7. Any discrepancies between structural movements and glazing system capacity shall be clearly identified in the “Notes & Exceptions” column, along with proposed mitigation measures.

### 3. Structural Movement Submittal Matrix at Glazing Systems

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

### 4. Definitions (Optional – Include if desired in specs)

- **Beam Live Load Deflection:** Vertical displacement of supporting structural member under design live load conditions.
- **Glazing Elevation:** Specific facade or storefront elevation associated with the supporting structure.
- **Vertical Movement Design Capacity:** Maximum vertical movement the glazing system can accommodate at head or intermediate joints.
- **Lateral Drift Design / Testing:** In-plane movement capacity validated by analysis and/or testing (e.g., AAMA standards).

### 5. Acceptance Criteria

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

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## 6. Third-Party Facade Structural Engineering Review

### 6.1 General Requirement

The General Contractor shall retain an independent, qualified third-party Facade Structural Engineer to perform a comprehensive engineering review of the delegated design submittals prepared by the Glazing Contractor.

The third-party Facade Structural Engineer shall not be the Glazing Contractor's engineer of record and shall act as an independent reviewer.

### 6.2 Scope of Review

The third-party review shall include, at a minimum:

- Review of glazing system structural calculations
- Verification of design loads, including wind, seismic drift, and thermal effects
- Review of anchorage design and load paths to primary structure
- Verification of movement accommodation (vertical, lateral, and interstory drift)
- Review of glass and framing member stresses
- Coordination with structural movement criteria provided by the Structural Engineer of Record
- Review of testing requirements and referenced standards (e.g., AAMA)

The review is intended to identify errors, omissions, and inconsistencies prior to fabrication and installation.

### 6.3 Submittal Requirements

The third-party Facade Structural Engineer shall provide a written, sealed report that includes:

- Summary of documents reviewed
- Confirmation of compliance with contract documents, or
- Identification of deficiencies and required corrective actions
- Confirmation that glazing system design accommodates specified structural movements

The report shall be submitted to the Architect and Structural Engineer of Record for review.

### 6.4 Timing

The third-party review shall be completed and accepted prior to release of glazing materials for fabrication.

## 6.5 Qualifications

The third-party Facade Structural Engineer shall be:

- A licensed Professional Engineer in the project jurisdiction
- Experienced in curtain wall and storefront structural design and review
- Demonstrably independent from the Glazing Contractor

## 6.6 Basis of Design (Optional Requirement)

Where specified in the Contract Documents, the third-party Facade Structural Engineer shall be:

- JEI Structural Facade Engineering and Drafting, or
- Another qualified firm approved by the Architect and Structural Engineer of Record

Requests for substitution shall be submitted in accordance with Division 01 requirements and shall demonstrate equivalent qualifications and experience.

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## 7. End of Section