



StEER: Structural Extreme Events Reconnaissance Network

QRS: Tiered Performance Assessment

Objective: Create standardized performance assessments implemented in a nested, interactive mobile applications and protocols to consistently guide more objective assessments for different reuse purposes

Basic Assessment (BA)

Purpose: Global performance assessment

General Information

- Facility category and geolocation
- Type of Inspection
- Sampling method
- Hazard category

Media Attachment

- Overview photos of surroundings
- Audio

Facility Information

- Basic metadata (geometry, irregularity, occupancy, etc.)
- Structural typology
- Non-structural information

Global Damage Information

- Overview damage photos
- Close view damage photos
- Observed Conditions
 - Structural damage
 - Non-structural damage
- Functionality Information
- Global damage rating*

Load Path Assessment (LPA)

Purpose: Global and component-level performance assessment to determine damaged components in the load path preventing load transfer.

Basic Assessment (BA)



Critical Load Path Element (CLPE) Damage Information

- Observed conditions
- Geolocation of damaged CLPE
- Damage measures/classes
- Component damage rating*

Detailed Component Assessment (DCA)

Purpose: Global and component-level performance assessment with details necessary for advanced analysis

Basic Assessment (BA)

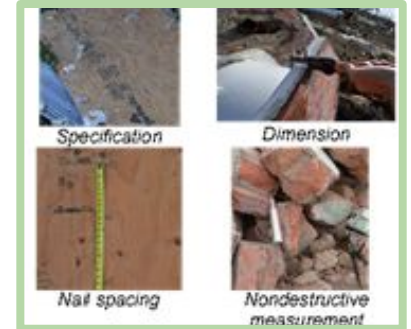


Load Path Assessment (LPA)



Component Information

- Specifications (manufacturer, impact rating, etc.)
- Dimensional data
- On-site nondestructive measurement, LiDAR scan
- Sample collection for lab testing



Use: Identify damage gradient, patterns of failure

Use: Damage quantifications mapped to key rating systems

Use: Detailed modeling, forensic reconstruction, hindcasting



* Damage ratings currently reported on EMS-98 scale

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