CITY OF BERKELEY

BUILDING OCCUPANCY RESUMPTION PROGRAM

(BORP) MANUAL

BORP

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PLANNING AND DEVELOPMENT DEPARTMENT
BUILDING AND SAFETY DIVISION

Building Occupancy Resumption Program Manual

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Planning and Development
Building and Safety Division

CITY OF BERKELEY
Planning and Development Department
Building and Safety Division
1947 Center Street, 3rd Floor
Berkeley, CA 94704

Building Occupancy Resumption Program

After a major disaster involving damage to Berkeley buildings, it is important that buildings can be inspected and reoccupied and that business can resume operations as soon as it is safely possible. The Building and Safety Division and volunteer inspectors will be utilizing standard emergency inspection and posting procedures with priorities geared toward public safety rather than expeditious business resumption. Some building owners may wish to develop programs of private inspection for their buildings to permit rapid, individualized emergency response in the aftermath of a major disaster.

A program of private emergency building inspection, including pre-certification of building owners' engineers or architects, is outlined below. In order to assist the Building and Safety Division emergency management and assure public safety, it is necessary that private emergency inspection teams follow the same general format and procedures as those used by the City's post-disaster safety assessment teams.

I. PURPOSE

The purpose of a pre-certified Emergency Inspection Program is to allow a quick and thorough evaluation of possible damage to a structure by qualified persons familiar with the structural design and life-safety systems of the building. This private emergency inspection could facilitate rapid decisions regarding the closure or reoccupancy of building areas. Pre-certified emergency inspection could reduce inspection delays, as City inspection personnel typically are dispatched first to areas of greatest damage or public hazard, which may not include the building in question.

II. PREPARATION

Building owners or their authorized representatives may request participation in this program at any time except during the aftermath of a disaster resulting in a declared state of emergency. A building designated as having met the requirements outlined below in preparing for emergency response shall be placed on a list of buildings, which are accepted for private emergency inspection. The Building and Safety Division will charge its hourly review fee to cover the staff time used to review and process BORP submissions. The 2018 staff review fee is $200/hour. It is anticipated it will take 2-6 hours to review BORP submissions, depending on the size and complexity of the building.

Building owners who wish to participate in the program should take the following steps; more detail is available in referenced sections.

- Select emergency inspection team. (See Section III).
- Document inspector qualifications. (See Section III, Item A).
- Obtain structural, architectural, and/or life-safety system drawings. (See Section IV, Item A).

- Obtain and store emergency safety and inspection equipment and supplies (See Section IV, Items B and C).
- Develop a building Emergency Inspection Program. (See Section V).
- Obtain building information. (See Section V, Item A).
- Write Emergency Inspection Plan. (See Section V, Item D).
- Prepare and submit pre-certification documentation. (See Section VI).
- Obtain City of Berkeley BORP approval. (See Section VII).
- As changes occur, update inspection plan, supplies, personnel documents, and training.
- Submit BORP Renewal Application (Appendix E) within two years of the initial application approval date. (See Appendix E).

III. EMERGENCY INSPECTOR REQUIREMENTS

A minimum of one primary and one alternate inspector shall be retained by the building owner for each applicable inspection discipline. The structural inspection team shall consist of the primary structural engineer and one or more alternate structural engineers who are trained in ATC-20 Detailed Evaluation Procedures and are familiar with the building. Architects, mechanical engineers and other experienced inspectors can add expertise to an inspection team to address nonstructural hazards such as blockage of exits, facade and ceiling assembly hazards and life safety system performance. Architects/engineers experienced with historical structures should be considered for the emergency inspection of historic buildings.

Approved emergency inspectors for this program will be deputized by the City of Berkeley Building Official to give them authorization to perform inspections and post buildings which are on the pre-certified list with official City placards. The extent of responsibility and liability is governed by the agreement between the owner and inspectors.

A. Minimum Qualifications and Requirements:
   1. Structural Inspectors.
      a. Current California license as a professional civil or structural engineer or architect.
      b. Relevant experience in the structural design and/or inspection of similar buildings.
      c. Proficiency in ATC-20 Detailed Evaluation Procedures.
   2. Elevator Inspectors.
      a. Employment by a firm engaged in elevator maintenance and installation as their primary business.
      b. Familiarity with the building elevator installation.
   3. Life-safety System Inspectors are required for high-rise buildings which are defined as having occupied levels located more than 75 feet above the lowest floor level having building access.
      a. Familiarity with building life-safety system.

IV. DOCUMENTS, EQUIPMENT AND SUPPLIES

One of the keys to successful and efficient post-disaster inspections is availability of essential documents and equipment for the inspectors. While each inspector will be expected to provide certain items, which may be kept either in his or her vehicle or backpack, a number of items can realistically only be furnished on-site.

A. Documents:
   1. Access Procedures.
   2. Copy of the Emergency Inspection Program.
   3. Structural, architectural, and/or life-safety system drawings.

B. Equipment:
   1. Personnel safety equipment.
   2. Inspection equipment.
   3. Caution tape and barricades.
   4. Walkie-talkies or other emergency communication equipment.

C. Supplies:
   1. ATC-20 Detailed Evaluation Safety Assessment Form (Appendix F) for reporting inspection findings to the Building and Safety Division.
   2. Sufficient green, yellow, and red official City issued safety assessment placards and staple gun to enable posting at each entrance to the building.

V. EMERGENCY INSPECTION PROGRAM

The program shall include the following information. Please provide a completed BORP Application (Appendix D) documenting the items below.

A. Building information:
   1. Address.
   2. Description of building.
   3. Number of building entrances.
   4. Listing of building use(s).
   5. Description of structural system(s) and material(s).
   6. Description of life-safety system.
   7. Description of building fire detection and suppression system(s).
   8. Description and locations of potential falling hazards.

B. List of primary and alternate emergency inspectors with contact information:
   1. Structural inspectors.
   2. Staff building engineers or contact persons.
   3. Elevator firm.
   4. Life-safety system inspectors (high-rise buildings only).

C. Documents, equipment and supplies:
   1. Access procedures.
   2. Location of Emergency Inspection Plan and on-site drawings.
   3. Location of personnel safety and inspection equipment and supplies.

D. Emergency Inspection Plan and detailed evaluation procedure:
   1. Detailed instructions regarding where to look and what to inspect.
   2. Detailed instructions regarding how to inspect specific structural and non-structural elements and how to interpret observed damage.
   3. Detailed instructions regarding additional inspection procedures to be performed following aftershocks.

E. Location, type, and handling instructions for any hazardous materials.

VI. PRE-CERTIFICATION DOCUMENTATION

Pre-certification must occur before the disaster. No documentation will be accepted for a period of at least three months after a declared state of emergency. Submit digital (PDF) copies each of the following documents to the Building and Safety Division:

A. BORP Submittal Checklist (Appendix A).

B. Request for Pre-certification (Appendix B) signed by building owner or authorized representative.

C. Emergency Inspector Authorization (Appendix C) for each inspector:
   1. Structural inspectors.
   2. Elevator firm.
   3. Life-safety system inspectors (high-rise buildings only).

D. BORP Application (Appendix D).

VII. PRE-CERTIFICATION ACCEPTANCE

The Building and Safety Division will add the building to the list of buildings approved for the Building Occupancy Resumption Program and provide the following upon acceptance of pre-certification documentation:

A. Building and Safety Division signed Request for Pre-Certification (Appendix B).

B. Building and Safety Division signed copy of each Emergency Inspector Authorization (Appendix C).

C. Building and Safety Division signed copy of the approved BORP Application (Appendix D).

D. Official City posting placards requested for main building entrances.

E. Certificate of approval to display in building.

VIII. IMPLEMENTATION

In the event of a disaster resulting in damage to buildings located within the City of Berkeley and a declared state of emergency, the emergency inspector for the pre-certified building shall upon notification:

A. Initiate the emergency inspection, ideally within 8 hours of daylight, or as agreed between inspecting engineer(s) and owner, and complete the ATC-20 Detailed Evaluation Safety Assessment Form (Appendix F) as soon as reasonably possible.

B. Arrange for barricading of all unsafe areas. Contact the Department of Public Works immediately if areas barricaded include a City street or otherwise adversely affect City services.

C. Contact the Building and Safety Division immediately if building or area (including sidewalk, street, or parking area) presents a public safety hazard or if emergency demolition or shoring permit is needed.

D. Post building (green, yellow, or red) at the main entry of the building or at all entrances of multi-entrance buildings. The elevator and life safety inspection may occur separately from the structural inspection.

E. Take preventive measures regarding life-safety hazards such as gas leaks, shoring, falling hazards, etc.

F. At owner's and inspector's discretion, non-structural hazards may be mitigated without a building permit.

G. The team should notify the Building and Safety Division within 72 hours that they have initiated the inspection and provide a progress update for any ongoing inspections. The ATC-20 Detailed Evaluation Safety Assessment Form (Appendix F) should be submitted to the Building and Safety Division signed and dated by prequalified engineer(s).

IX. VERIFICATION

The Building and Safety Division may perform inspection of a building accepted for the Building Occupancy Resumption Program under any of the following conditions:

A. The emergency inspector has reported the building unsafe and has posted it with a red placard.

B. There is reason to believe that unsafe conditions exist.

C. Building owners, tenants, other City agencies, or members of the general public have expressed specific concerns regarding the building safety.

X. TERMINATION

A building may be removed from the Building Occupancy Resumption Program for one or more of the following reasons:

A. BORP Renewal Application (Appendix E) has not been submitted within two years of the initial application approval date.

B. Agreement between building owner and inspection team has been terminated.

C. Changes in building or inspection team do not meet minimum requirements.

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APPENDIX A
BORP Initial Submittal Checklist

Building Address:

- ☐ Appendix A – This checklist, **marked by applicant** to show all items submitted.
- ☐ Appendix B – Request for Pre-Certification signed by building owner or authorized agent.
- ☐ Appendix C – A signed Emergency Inspector Authorization for each inspector.
- ☐ Appendix D – BORP Application completed with applicable information including:
- ☐ Building information:
  - __ 1. Address.
  - __ 2. Description of building.
  - __ 3. Number of entrances.
  - __ 4. Listing of building use(s).
  - __ 5. Description of structural system(s) and material(s).
  - __ 6. Description of life-safety system.
  - __ 7. Description of building fire detection and suppression system(s).
  - __ 8. Description and locations of potential falling hazards.
- ☐ List of primary and alternate emergency inspectors with contact information:
  - __ 1. Structural inspectors.
  - __ 2. Staff building engineers or contact persons.
  - __ 3. Elevator firm.
  - __ 4. Life-safety system inspectors (high-rise buildings only).
- ☐ Locations of the documents, equipment and supplies:
  - __ 1. Access procedures.
  - __ 2. Emergency Inspection Program documents.
  - __ 3. Structural, architectural, and/or life-safety system drawings.
  - __ 4. Personnel safety equipment.
  - __ 5. Inspection equipment.
  - __ 6. Caution tape and barricades.
  - __ 7. Walkie-talkies or other emergency communication equipment.
  - __ 8. ATC-20 Detailed Evaluation Safety Assessment Form (Appendix F) for reporting inspections to the Building and Safety Division.
  - __ 9. Sufficient green, yellow, and red official City issued safety assessment placards and staple gun to enable posting at each entrance to the building.

- ☐ Emergency Inspection Plan and detailed evaluation procedure:
  - ___ 1. Detailed instructions regarding where to look and what to inspect.
  - ___ 2. Detailed instructions regarding how to inspect specific structural and non-structural elements and how to interpret observed damage.
  - ___ 3. Detailed instructions regarding additional inspection procedures to be performed following aftershocks.
- ☐ Location, type, and handling instructions for any hazardous materials.

APPENDIX B
Request for Pre-Certification

[Required for BORP Renewal Application only if Owner has changed during last two years.]

Pre-certification of the building at (address) _____
is requested for acceptance in the Building and Safety Division Building Occupancy Resumption Program.

I certify that:

1. The owner of the building at the above address is:

   Owner's Name: _____ Phone: _____
2. I am the owner, or authorized to act as the owner's agent, in requesting participation in the program.
3. The enclosed documentation and Emergency Inspection Program complies with the minimum requirements of the Building Occupancy Resumption Program.
4. Emergency inspectors will be given a copy of the Emergency Inspection Program for the building at the address listed above after approval by the City.
5. Emergency inspectors have been given means of access to all areas of the building at all times of day and night or have been given instructions regarding obtaining accompanied access.
6. Emergency inspectors have access to the most recent accurate copies of all relevant structural, architectural, and life-safety drawings at all times.
7. All emergency inspectors will receive immediate notification of any changes in factors affecting the Emergency Inspection Program (e.g. changes to structural or life-safety systems, access to buildings, etc.)

Applicant:

Signature: _____ Date: _____

Name (Printed): _____

City of Berkeley:
The pre-certification documentation for this building has been accepted by the Building and Safety Division. The building will be placed on the list of buildings for the Building Occupancy Resumption Program.

Accepted by: _____ Date: _____

RETURN A COPY OF THIS FORM TO APPLICANT AFTER REVIEW and ACCEPTANCE

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APPENDIX C
Emergency Inspector Authorization

[Required for BORP Renewal Application only if Inspector has changed during last two years.]

I request pre-certification as an emergency inspector for the building located at (address) _____ for the following type of emergency inspection:

A. ☐ Structural Inspector
I am a California licensed engineer or architect. License Number: _____
I certify that:
1. I have relevant experience in the design and/or inspection of similar buildings.
2. I am proficient in ATC-20 Detailed Evaluation Procedures and will complete any additional and/or refresher training to maintain readiness.
3. I am familiar with the Emergency Inspection Plan and relevant drawings for this building.
4. I accept authorization as an emergency inspector by the City of Berkeley Building and Safety Division and will display this form upon request.

B. ☐ Elevator Inspection Firm
I certify that:
1. Employees of my firm are authorized as qualified elevator technicians by the building owner.
2. My firm is familiar with the building elevator equipment, installation, and operation.
3. I will report findings to the structural inspector for inclusion in emergency inspection reports, or submit findings directly to the Building and Safety Division with a copy sent to the structural inspector.

C. ☐ Life-Safety System Inspector (High-Rise Buildings Only)
I certify that:
1. I am familiar with the building life-safety system and have access to relevant drawings.
2. I will report findings to the structural inspector for inclusion in emergency inspection reports, or submit findings directly to the Building and Safety Division with a copy sent to the structural inspector.

Applicant:

Signature: _____ Date: _____

Name (Printed): _____

City of Berkeley:
The licensed design professionals shown above are deputized as emergency inspectors for the above listed building by the City of Berkeley Building and Safety Division and are authorized to post this building with official City post-disaster safety evaluation placards.

Accepted by: _____ Date: _____

RETURN A COPY OF THIS FORM TO APPLICANT AFTER REVIEW and ACCEPTANCE

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APPENDIX D
BORP APPLICATION

A. BUILDING INFORMATION

1. Address: _____

2. Description of building:

   a. Date of original construction: _____

   b. Number of stories beginning at ground floor: _____

   c. Number of levels below ground: _____

   d. Building height and area: _____feet Total square feet: _____

   e. Other recommended items:

      Sketch or plan of each floor, roof, and basement level, and each exterior elevation. Identify all entrances, location of supplies, primary structural elements, and additional key inspection information.

3. Number of entrances (number of required placards): _____

4. List of building use(s) – Office, retail, industrial, assembly, school, etc:

   _____

   _____

   _____

   _____

5. Description of structural system(s) and material(s):

   _____

   _____

   _____

   _____

6. Description of life-safety system including alarms, emergency power generator, etc:

   _____

   _____

   _____

   _____

7. Description of building fire detection and suppression systems:

   _____

   _____

   _____

   _____

8. Description and locations of potential falling hazards:

   _____

   _____

   _____

   _____

B. EMERGENCY INSPECTORS

1. Licensed Engineers/Architects Retained for Structural Inspection:

Name	Work Address	Work Phone	Cell Phone	Email
Primary:				
Alternate:				
Alternate:				

2. Staff Building Engineers or Building Contact Persons:

Name	Work Address	Work Phone	Cell Phone	Email
Primary:				
Alternate:				

3. Elevator Inspectors:

Name	Work Address	Work Phone	Cell Phone	Email
Primary:				
Alternate:				

4. Life-safety system inspectors (high-rise buildings only):

Name	Work Address	Work Phone	Cell Phone	Email
Mechanical:				
Alternate:				
Electrical:				
Alternate:				

C. DOCUMENTS, EQUIPMENT AND SUPPLIES:

1. Access procedures and/or location of keys for entrance to the site and all building areas:

2. Location of documents:
   a. Copy of the Emergency Inspection Program.
   b. Drawings (structural, architectural, life-safety):

3. Location of Equipment:
   a. Personnel Safety Equipment- Hard hats, gloves, safety glasses, respirators, etc:
   b. Inspection Equipment – Ladders, flashlights, measuring devices, etc:
   c. Caution tape, barricades:
   d. Walkie-talkies or other emergency communication equipment:

4. Location of Supplies:
   a. ATC-20 Detailed Evaluation Safety Assessment Form (Appendix F) for reporting inspection findings to the Building and Safety Division.
   b. Sufficient green, yellow, and red official City issued safety assessment placards and staple gun to enable posting at each entrance to the building.

D. EMERGENCY INSPECTION PLAN

Please attach inspection guidelines for the building which are consistent with *ATC-20 Procedures for Postearthquake Safety Evaluation of Buildings* including a detailed evaluation procedure which **must** include:

1. Detailed instructions regarding where to look and what to inspect.

2. Detailed instructions regarding how to inspect specific structural and non-structural elements and how to interpret observed damage.

3. Detailed instructions regarding additional inspection procedures to be performed following aftershocks.

E. HAZARDOUS MATERIALS

For facilities participating in BORP that are listed on the Hazardous Materials Area Plan as a high hazard for chemical storage or use, the Emergency Inspection Program shall include a post-disaster start-up engineering survey written by qualified staff engineers who are familiar with the hazardous materials operations in the facility. The program shall also include written operating procedures that provide clear instructions for emergency startup operations for each chemical process or area. Prior to startup, a staff engineer will perform a systematic walkthrough of the building to evaluate any spills, equipment failure or potential failure of equipment that handles hazardous materials and will submit a signed startup survey record to the City of Berkeley Toxics Management Division following their inspection. The staff engineer will communicate to the inspection team that this survey has occurred, so they may coordinate their efforts.

1. Information about hazardous material, including known friable asbestos-containing materials:

   a. Location:_____ Type: _____

      Handling instructions: _____

      _____

      _____

   b. Location:_____ Type: _____

      Handling instructions: _____

      _____

      _____

City of Berkeley:
The pre-certification documentation for this building has been accepted by the Building and Safety Division. The building will be placed on the list of buildings for the Building Occupancy Resumption Program.

Accepted by: _____ Date: _____

RETURN A COPY OF THIS FORM TO APPLICANT AFTER REVIEW and ACCEPTANCE

APPENDIX E
BORP RENEWAL APPLICATION

[Required within two years of the initial application approval date.]

Building Address: _____

- ☐ No change has been made in the building or any element of Emergency Inspection Program.
- ☐ All emergency equipment and supplies for the program have been checked and updated as necessary.
- ☐ The building owner has changed, the new owner is _____.
  A Request for pre-certification form signed by the new owner is enclosed.
- ☐ Emergency inspectors/contact information has changed. Completed Emergency Inspector Authorization forms for *new* inspectors are enclosed.
- ☐ Changes have been made to the building that affect the Emergency Inspection Program. Revised drawings for any relevant changes to the building are enclosed and will be provided to Emergency Inspectors upon approval.
- ☐ All Emergency Inspection Program revisions are enclosed and will be provided to Emergency Inspectors upon approval.

The designated contact person for this biennial update (the structural inspector, or the owner, or the owner's agent):

Applicant:

Signature: _____ Date: _____

Name (Printed): _____

Company Name: _____

Email: _____ Phone: _____

City of Berkeley:

The updated documentation for this building has been accepted by the Building and Safety Division. The building will remain on the list of buildings for the Building Occupancy Resumption Program.

Accepted by: _____ Date: _____

RETURN A COPY OF THIS FORM TO APPLICANT AFTER REVIEW and ACCEPTANCE

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APPENDIX F
ATC-20 DETAILED EVALUATION SAFETY ASSESSMENT FORM

To order a copy of *ATC-20 Postearthquake Safety Evaluation of Buildings* contact:

Applied Technology Council
201 Redwood Shores Parkway, Suite 240
Redwood City, CA 94065,
(650) 595-1542
http://www.atcouncil.org/

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ATC-20 Detailed Evaluation Safety Assessment Form

Inspection

Inspector ID: _____

Affiliation: _____

Inspection date and time: _____ ☐ AM ☐ PM

Final Posting
from page 2

☐ Inspected
☐ Restricted Use
☐ Unsafe

Building Description

Building name: _____

Address: _____

_____

Building contact/phone: _____

Number of stories above ground: _____ below ground: _____

Approx. "Footprint area" (square feet): _____

Number of residential units: _____

Number of residential units not habitable: _____

Type of Construction

☐ Wood frame
☐ Steel frame
☐ Tilt-up concrete
☐ Concrete frame
☐ Concrete shear wall
☐ Unreinforced masonry
☐ Reinforced masonry
☐ Other: _____

Primary Occupancy

☐ Dwelling
☐ Other residential
☐ Public assembly
☐ Emergency services
☐ Commercial
☐ Offices
☐ Industrial
☐ Other: _____
☐ Government
☐ Historic
☐ School

Evaluation

Investigate the building for the conditions below and check the appropriate column. There is room on the second page for a sketch.

	Minor/None	Moderate	Severe	Comments
Overall hazards:				
Collapse or partial collapse	☐	☐	☐	_____
Building or story leaning	☐	☐	☐	_____
Other _____	☐	☐	☐	_____
Structural hazards:				
Foundations	☐	☐	☐	_____
Roofs, floors (vertical loads)	☐	☐	☐	_____
Columns, pilasters, corbels	☐	☐	☐	_____
Diaphragms, horizontal bracing	☐	☐	☐	_____
Walls, vertical bracing	☐	☐	☐	_____
Precast connections	☐	☐	☐	_____
Other _____	☐	☐	☐	_____
Nonstructural hazards:				
Parapets, ornamentation	☐	☐	☐	_____
Cladding, glazing	☐	☐	☐	_____
Ceilings, light fixtures	☐	☐	☐	_____
Interior walls, partitions	☐	☐	☐	_____
Elevators	☐	☐	☐	_____
Stairs, exits	☐	☐	☐	_____
Electric, gas	☐	☐	☐	_____
Other _____	☐	☐	☐	_____
Geotechnical hazards:				
Slope failure, debris	☐	☐	☐	_____
Ground movement, fissures	☐	☐	☐	_____
Other _____	☐	☐	☐	_____

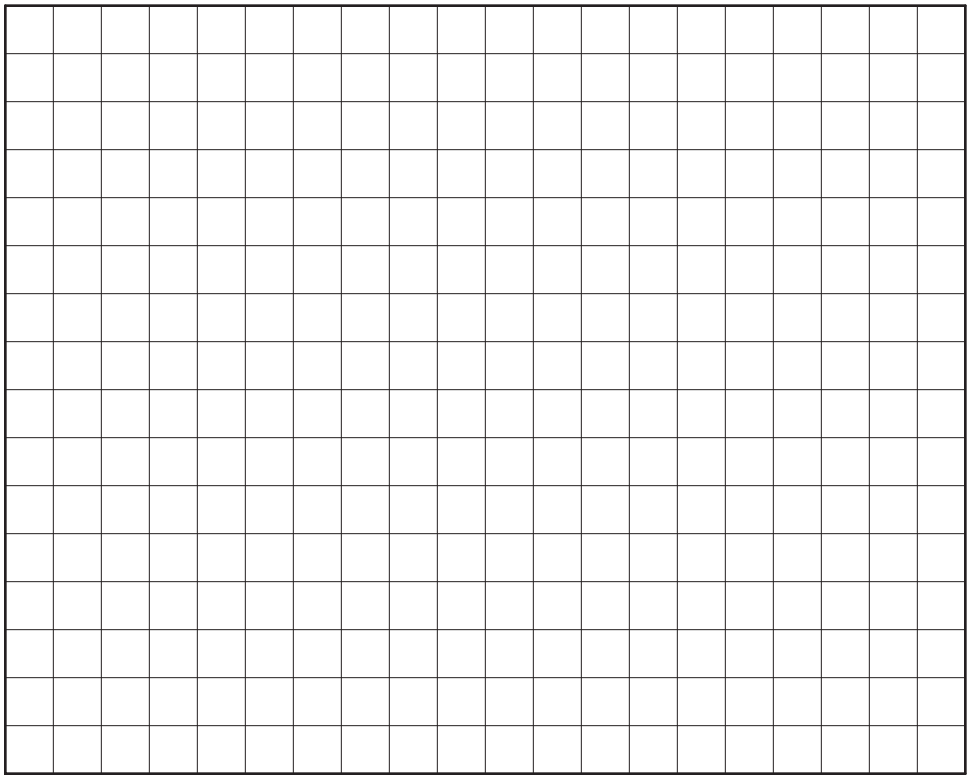
General Comments: _____

_____

Continue on page 2

Building name: _____ Inspector ID: _____

Sketch (optional)
Provide a sketch of the building or damaged portions. Indicate damage points.



Estimated Building Damage
If requested by the jurisdiction, estimate building damage (repair cost ÷ replacement cost, excluding contents).

- ☐ None
- ☐ 0–1%
- ☐ 1–10%
- ☐ 10–30%
- ☐ 30–60%
- ☐ 60–100%
- ☐ 100%

Posting
If there is an existing posting from a previous evaluation, check the appropriate box.

Previous posting: ☐ INSPECTED ☐ RESTRICTED USE ☐ UNSAFE Inspector ID: _____ Date: _____

If necessary, revise the posting based on the new evaluation and team judgment. *Severe* conditions endangering the overall building are grounds for an Unsafe posting. Local *Severe* and overall *Moderate* conditions may allow a Restricted Use posting. Indicate the current posting below and at the top of page one.

☐ **INSPECTED** (Green placard) ☐ **RESTRICTED USE** (Yellow placard) ☐ **UNSAFE** (Red placard)

Record any use and entry restrictions exactly as written on placard: _____

_____

_____

Further Actions Check the boxes below only if further actions are needed.

☐ Barricades needed in the following areas: _____

_____

☐ Engineering Evaluation recommended: ☐ Structural ☐ Geotechnical ☐ Other: _____

☐ Other recommendations: _____

_____

_____

Comments: _____

_____