BUILDING OCCUPANCY RESUMPTION PROGRAM (BORP)

OCTOBER 2014

CITY AND COUNTY OF SAN FRANCISCO
PORT OF SAN FRANCISCO
EMERGENCY OPERATIONS PLAN

For any questions regarding this program, please call PORT Engineering, 415-274-0595

PORT OF SAN FRANCISCO
EMERGENCY OPERATIONS PLAN

BUILDING OCCUPANCY RESUMPTION PROGRAM

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PORT OF SAN FRANCISCO
Pier 1 (Engineering Division)
The Embarcadero, San Francisco, California 94111

BUILDING OCCUPANCY RESUMPTION PROGRAM

After a major earthquake involving damage to Port of San Francisco buildings, it is important that local buildings under the jurisdiction of the PORT OF SAN FRANCISCO (PORT) can be inspected and reoccupied and that business can resume operations as soon as it is safely possible. The PORT 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.

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 re-occupancy of building areas. Prearranged emergency inspection could reduce inspection delays, as PORT 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 an earthquake 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. There is no PORT fee for participation in this program.

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

- ☐ Select emergency inspection team - (Section III, item A)
- ☐ Obtain building plans, including superstructure and substructure
- ☐ Write inspection plan - (Section IV, item D)
- ☐ Develop building information, including superstructure and substructure, evacuation plan, inspector response requirements, equipment and drawing locations, and other pertinent information - Use Checklist - Appendix A
- ☐ Prepare precertification documentation (Section V)
- ☐ Submit written building emergency inspection program, including inspection plan
- ☐ Obtain and store emergency earthquake safety and inspection equipment/supplies (Section III, item B)
- ☐ Update inspection plan, supplies, personnel changes, and training as necessary
- ☐ Submit Biennial Renewal form - Appendix D - before each biennial anniversary of initial approval date every other year

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 and/or alternate inspector and any additional structural engineer or person trained in ATC 20 procedures, as required.
Few architects consider structural inspections within their purview; however, architects 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 PORT OF SAN FRANCISCO 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, including superstructure and substructure
        c. Proficiency in ATC-20 Detailed Evaluation Procedures
        d. Substantial experience inspecting piers and similar type structures

    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 (required for high-rise buildings)
        a. Familiarity with building life-safety system

B. Required Documents, Equipment and Supplies
    1. Copy of building Emergency Inspection Program including evacuation plan and other pertinent information
    2. Structural, architectural, and/or life-safety system drawings; or
       [If building is so old that structural drawings do not exist or are not clear enough to allow a good understanding of the actual structural system] As-built drawings or a clear description of the structural system and any known weaknesses and unique features
    3. Personal safety equipment including hardhat, protective clothing, respirator, life vests etc.
    4. Inspection equipment including flashlights, measuring devices, ladders, boat, and other applicable items
    5. ATC-20 Detailed Evaluation forms (latest edition) for reporting inspection findings to PORT
    6. Caution tape and barricades
    7. Walkie-talkies or other emergency communication equipment for large buildings or pier structures, if applicable
    8. Sufficient green, yellow, and red official PORT safety assessment placards to provide one of each color for each entrance to the building or access point to the pier.- *to be supplied by PORT upon approval*

IV. EMERGENCY INSPECTION PROGRAM - The program shall include the following information. Please use the fill-in-the-blank format - Appendix E - for items A-C below. The form can be downloaded from the Internet (http://www.sf-port.org) or requested on computer disk for easier completion.

A. List of primary and alternate emergency inspectors for this building with addresses and phone numbers, and email addresses for engineers and architects:
   1. Licensed engineers/architects retained for structural inspection
   2. Staff building engineers
   3. Elevator firm, if elevator inspection required
   4. Life-safety system inspectors, if required

B. Building/Pier information
   1. Photograph of building and pier
   2. Address
   3. Description of building and pier including age, number of stories, size, materials
   4. Estimated current building and pier valuation
   5. Number of building entrances and pier access points to be posted with PORT placards
   6. Listing of building use(s) - offices, apartments, etc.
   7. Description of structural system, including superstructure and substructure
   8. Description of life-safety system including location of emergency power generator
   9. Description of building fire detection and suppression systems
   10. Description and locations of potential falling hazards
   11. Location, type, and handling instructions for any hazardous material

C. Emergency response requirements and information including:
   1. Trigger for activation of emergency response (e.g. declaration of emergency, >6.0 earthquake, client request)
   2. Access procedures and/or keys for entrance to the site and all building areas
   3. Location of equipment and supplies
   4. Location of Emergency Inspection Plan and on-site drawings

D. Emergency inspection plan including:
   1. Inspection guidelines consistent with ATC-20 *Procedures for Post-earthquake Safety Evaluation of Buildings* including Detailed Evaluation Procedure with PORT amendments (See Appendix H). Recommended methodology for welded steel joint inspection is FEMA 352, where required. (Note: BORP does not require connection inspection per FEMA 352 for pre-Northridge moment frame buildings.) These inspections may be required by the inspecting engineers, or PORT. For special inspection or materials testing, use only agencies preapproved by the PORT; a current list is available at the PORT, Pier 1, Permit Desk.
   2. Detailed instructions regarding where to look, what to look for, and how to obtain access to inspection areas.
   3. Detailed instructions regarding how to inspect specific structural and non-structural elements and how to interpret observed damage.
   4. Detailed instructions regarding additional inspection procedures to be performed following aftershocks.
   5. [Optional] Placement of accelerometers. Instrumentation is recommended as part of an Emergency Inspection Program for certain buildings in San Francisco. Correct placement of accelerometers per Administrative Bulletin AB-058 by Department of Building Inspection can provide valuable post-earthquake information about the performance of a building. This option may be considered in certain cases as a means of reducing the percentage of joints required to be inspected after an earthquake. Instrumentation is recommended for substructure in which it is desirable to measure forces, pressures, loads, stresses, strains, displacements, deflections or other conditions

concerning post-earthquake damage and structural safety.

E. List of required documents, equipment and supplies and their location
.

V. PRE-CERTIFICATION DOCUMENTATION – Pre-certification must occur **before** the earthquake. No documentation will be accepted for a period of at least three months after a declared state of emergency. Submit two (2) copies each of the following to the PORT OF SAN FRANCISCO:

A. Completed Emergency Inspection Program Checklist (Appendix A)

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

C. Evidence of emergency inspector qualifications for each individual:
   1. Current California license as a professional civil or structural engineer or architect – (license number)
   2. Signed Emergency Inspector Authorization form (Appendix C) showing relevant experience in the structural design and/or inspection of buildings of similar size, construction, and complexity
   3. Signed copies of Appendix C for elevator and/or life safety system inspectors, if required

D. Copy of written Emergency Inspection Program (see content requirements and Appendix E)

VI. PRE-CERTIFICATION ACCEPTANCE - PORT will add the building/pier to the list of structures approved for the Building Occupancy Resumption Program and provide the following upon acceptance of precertification documentation:

A. PORT-signed Appendix A, Checklist

B. PORT-signed Appendix B, Request for Precertification form

C. PORT-signed copy of each Appendix C, Emergency Inspector Authorization form

D. Both copies of the accepted Emergency Inspection Program

E. Official PORT posting placards requested for main building entrances

F. Certificate of approval to display in building

VII. IMPLEMENTATION

A. Upon notification of an earthquake resulting in a declared state of emergency, the goal is to initiate the emergency inspection program within 8 hours of daylight access to building, or as agreed between inspecting engineers and owner.

B. Contact PORT 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.

C. Arrange for barricading of all unsafe areas. Contact the PORT Maintenance Department,

Infrastructure and Public Areas at 415-597-7747 immediately, if areas barricaded include a PORT street or otherwise adversely affect PORT services, or if barricades provided by the building owner/lessee are insufficient.

D. Complete detailed evaluation as soon as reasonably possible.

E. Post the building (green, yellow, or red) at the main entry of the building, or at all entrances of multi-entrance buildings, or at the access points to the pier.
Elevator and life safety inspection may occur separately from structural inspection.

F. Take preventive measures regarding gas leaks, release of hazardous materials, or other life-safety mitigation.

G. At owner's and inspector's discretion, non-structural hazards may be mitigated per PORT procedures.

H. The goal is to submit ATC-20 Detailed Evaluation report (Appendix G) signed and dated by prequalified engineer(s)/architect to PORT within 72 hours of the declared state of emergency. If reports are not received by that time, an inspection may be made by PORT inspectors or deputized volunteer inspectors using standard PORT-wide inspection criteria.

VIII. PORT VERIFICATION - The PORT OF SAN FRANCISCO may perform inspection of a building or pier accepted for the Building Occupancy Resumption Program under any of the following conditions:

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

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

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

IX. TERMINATION – Before each biennial anniversary of original approval date, a courtesy reminder notice will be sent to owner or agent via email. If there is no response from the owner within 180 calendar days, or for one or more of the following reasons, the building/pier may be removed from the Building Occupancy Resumption Program:

A. Biennial renewal forms have not been submitted.

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

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

BUILDING OCCUPANCY RESUMPTION PROGRAM
APPENDIX A
CHECKLIST

Building Address: _____

☐ Appendix A - This Checklist, **marked by submitter** to show all items submitted
☐ Appendix B - Request for Precertification - signed by building owner/lessee or authorized agent
☐ Appendix C - Emergency Inspector Authorization - signed, for each inspector
☐ Appendix E - Program Format - completed with applicable information including:
☐ List of primary & alternate emergency inspectors for this building w/addresses & phone numbers:
__ 1. Licensed engineers/architects for structural inspection
__ 2. Staff building engineers, if applicable
__ 3. Elevator firm, if elevator inspection required
__ 4. Life-safety system inspectors, if required
☐ Building information, including superstructure and substructure
__ 1. Photograph
__ 2. Address
__ 3. Description of building and pier including age, number of stories, size, materials
__ 4. Estimated current building and pier valuation
__ 5. Number of entrances and pier access points for which placards are requested:
__ 6. Listing of building and pier uses - offices, apartments, etc.
__ 7. Description of structural system (superstructure and substructure)
__ 8. Description of life-safety system including location of emergency power generator
__ 9. Description of building fire detection and suppression systems
__10. Description and locations of potential falling hazards
__11. Location, type, and handling instructions for any hazardous material
☐ Emergency response requirements and information including:
__ 1. Trigger for activation of emergency response
__ 2. Access procedures for entrance to the site and all building areas
__ 3. Location of equipment and supplies
__ 4. Location of Emergency Inspection Plan and on-site drawings
☐ Emergency inspection plan including:
__ 1. Inspection guidelines consistent with latest edition of ATC-20 *Procedures for Post-earthquake Safety Evaluation of Buildings* with PORT amendments (See Appendix H), including Detailed Evaluation Procedure.
__ 2. Detailed instructions regarding where to look, what to look for, and how to obtain access for inspection.
3. Detailed instructions regarding how to inspect specific structural and non-structural elements and how to interpret observed damage.
__ 4. Detailed instructions regarding additional inspection procedures to be performed following aftershocks.
__ 5. [Optional] Accelerometer placement - may reduce requirement for inspection of welded joints.
☐ List of required documents, equipment and supplies and their location, including:
__ 1. Copy of building Emergency Inspection Program incl. evacuation plan & other pertinent info.
__ 2. Structural, architectural, and/or life-safety system drawings; or as-built drawings or a clear description of the structural system and any unique features
__ 3. Personal safety equipment including hardhat, protective clothing, respirator, life vest, and other applicable items
__ 4. Inspection equipment including flashlights, measuring devices, ladders, boat & other needed items
__ 5. ATC-20 Detailed Evaluation for reporting inspections to the PORT OF SAN FRANCISCO
__ 6. Caution tape and barricades
__ 7. Walkie-talkies or other emergency communication equipment for large buildings or piers, if applicable
8. Sufficient green, yellow, & red official PORT placards for each building entrance - *supplied upon*

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Reviewed & Accepted by: _____ Date: _____

RETURN ONE COPY OF THIS FORM TO BUILDING/PIER OWNER/lessee AFTER REVIEW & ACCEPTANCE

BUILDING OCCUPANCY RESUMPTION PROGRAM

APPENDIX B

REQUEST FOR PRE-CERTIFICATION

[When used for Biennial Renewal, complete only if Owner/lessee has changed during last two years.]

Pre-certification of the building at (address) _____ , San Francisco, California, is requested for acceptance in the PORT OF SAN FRANCISCO Building Occupancy Resumption Program.

I certify that:

1. The owner/lessee of the building at the above address is:
   Address:_____ Phone:
   _____

2. I am authorized to act as the owner's/lessee's agent in requesting participation in the program.

3. The enclosed pre-certification documentation and written emergency inspection program complies with the minimum requirements of the Building Occupancy Resumption Program.

4. Emergency inspectors have been given a copy of the Emergency Inspection Program for the building at the address listed above.

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).

*(signature)*_____ Phone_____ Date _____

(typed or printed name)

The pre-certification documentation for this building has been accepted by the PORT OF SAN FRANCISCO. The building will be placed on the list of buildings for the Building Occupancy Resumption Program.

Accepted by:_____ Date: _____

RETURN ONE COPY OF THIS FORM TO BUILDING OWNER/lessee AFTER REVIEW & ACCEPTANCE

BUILDING OCCUPANCY RESUMPTION PROGRAM
APPENDIX C

EMERGENCY INSPECTOR AUTHORIZATION
[When used for biennial renewal, complete only for NEW inspectors]

I request precertification as an emergency inspector for the building at _____ , San Francisco, California for the following type of emergency inspection:

A. [ ] Structural Inspector
I am a California licensed [ ] engineer [ ] architect Lic. No._____
I certify that:

1. I have relevant experience in the design and/or inspection of similar buildings:

Building Address	Building Type	No. Stories

2. I am proficient in ATC-20 Detailed Evaluation Procedures and will complete any additional and/or refresher training in a manner consistent with maintaining readiness.
3. I am familiar with the emergency inspection plan and relevant drawings for this building.
4. I have substantial experience inspecting piers and similar type structures.
5. I accept authorization as an emergency inspector by the PORT OF SAN FRANCISCO 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 PORT with copy to the structural inspector.

C. [ ] Life-safety System Inspector
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 PORT with copy to the structural inspector.

*(signature)*_____ Date: _____
(typed or printed name)

The structural engineers shown above are deputized as emergency inspectors for the above-listed building by the PORT OF SAN FRANCISCO and are authorized to post this building with official PORT post-earthquake safety evaluation placards.

Accepted by:_____ Date: _____

RETURN ORIGINAL OF THIS FORM TO BUILDING OWNER/lessee AFTER REVIEW & ACCEPTANCE; BUILDING OWNER/lessee TO GIVE ORIGINAL TO INSPECTOR FOR IDENTIFICATION PURPOSES

BUILDING OCCUPANCY RESUMPTION PROGRAM

APPENDIX D

BIENNIAL PROGRAM RENEWAL

TO BE SUBMITTED EVERY OTHER YEAR
BEFORE EACH BIENNIAL ANNIVERSARY OF ORIGINAL APPROVAL DATE

Building Address: _____ San Francisco, California.

Estimated current building and pier valuation is $_____.

[ ] No change has been made in the building and pier 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/lessee has changed. The new owner/lessee is
.
A Request for Pre-certification form signed by the new owner/lessee 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 and pier that affect the Emergency Inspection Program. Emergency inspectors have been given revised drawings for any relevant changes to the building.

[ ] Emergency inspectors have been given a copy of all Emergency Inspection Program revisions.

Signed by: The designated contact person for biennial update (the structural inspector, or the owner/lessee, or the owner's/lessee's agent):

*(signature)*_____ Date: _____

(typed or printed name)

(Company): _____*(Phone No.):* _____*(Email):* _____
_____

The updated documentation for this building/pier has been accepted by the PORT OF SAN FRANCISCO. The building will remain on the list of structures for the Building Occupancy Resumption Program.

Accepted by:_____ Date:
_____

RETURN ONE COPY OF THIS FORM TO BUILDING OWNER/lessee AFTER REVIEW & ACCEPTANCE

BUILDING OCCUPANCY RESUMPTION PROGRAM

APPENDIX E
PROGRAM FORMAT

A. Emergency Inspectors

1. Licensed engineers/architects retained for Structural Inspection:

Name/email address	Address	Work Phone	Other	Cell Phone	Home Phone
Primary:					
Alternate:					

2. Staff building engineers:

Name	Address	Work Phone	Other	Cell Phone	Home Phone

3. Elevator firm, if elevator inspection required:

Firm address:

Contact Name	Address	Work Phone	Other	Cell Phone	Home Phone
Primary:					
Alternate:					

4. Life-safety system inspectors, if required:

Name	Address	Work Phone	Other	Cell Phone	Home Phone
Mechanical:					
Electrical:					

B. Building/Pier Information

1. Photograph
2. Address:
3. Description of building and pier:
   a. Date of original construction: _____
   b. No. of stories beginning at ground floor: _____
   c. No. of levels below ground: _____
   d. Building height and square footage: _____ft. Total square feet _____
   e. Dimension of ground floor footprint: ___ x_____
   f. Other recommended items:
      Sketch or plan of each floor level, roof level, sub-structure details including piers and piles,
      and each exterior elevation.
      Identify all entrances, location of supplies, primary structural elements, and additional key
      inspection information.

4. Estimated current building and pier valuation: _____$
5. Number of building entrances and pier access points for which placards are requested:
6. Estimated number of occupants:
7. Listing of building use(s): _____
8. Description of structural system & materials, including superstructure and substructure:
   _____
   _____
   _____
   _____
9. Description of life-safety system including location of emergency power generator:
   _____
   _____

_____

_____

10. Description of building fire detection and suppression systems:

_____

_____

_____

_____

11. Description & locations of potential falling hazards:

_____

_____

_____

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

a. Location: _____ Type: _____

Handling instructions:

_____

b. Location: _____ Type: _____

Handling instructions:

_____

C. Emergency response requirements and information:

1. Trigger for activation of emergency response: _____

_____

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

_____

_____

___

3. Location of equipment and supplies:

   a. Drawings (structural, architectural, life-safety); Emergency Inspection Plan; evacuation plan; green, yellow & red official PORT safety assessment placards (one of each color for each building entrance); inspection report forms for owner/lessee; ATC-20 Detailed Evaluation forms:

   _____

   _____

   b. Hard hats, gloves, safety glasses, respirators, flashlights, tape measures, micrometer, hammer, screwdriver, and walkie-talkies or other emergency communication equipment (if needed):

   _____

   c. Ladders or other equipment needed for inspection access:

   _____

   _____

   d. Caution tape, barricades

   _____

   _____

   e. Other necessary equipment or supplies:

   _____

D. Emergency Inspection Plan - Please attach inspection guidelines for the building which are consistent with ATC-20 Procedures for Post-earthquake Safety Evaluation of Buildings including Detailed Evaluation Procedure (Appendix F) and with PORT amendments (Appendix H). The emergency inspection plan **must** include:

1. A detailed evaluation procedure.

2. Detailed instructions regarding where to look, what to look for, and how to obtain access to inspect specific structural and non-structural elements.

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

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

5. [Optional] Placement of accelerometers. (This option may be considered in certain cases as a means of reducing the percentage of joints required to be inspected after an

earthquake.)

ATTACH AS MANY SHEETS AS NEEDED.

* * * * *

Appendices F & G - Pages 13-23 - are the “Detailed Evaluation Method,” *ATC-20 Post-earthquake Safety Evaluation of Buildings* and accompanying inspection report form, which are not included in the electronic version of the program. To order a copy of the entire publication, contact the Applied Technology Council, 555 Twin Dolphin Drive, Suite 500, Redwood City, CA 94065, 650-595-1542; email http://www.atcouncil.org/.

BUILDING OCCUPANCY RESUMPTION PROGRAM

APPENDIX H

Amendments to ATC 20 by PORT OF SAN FRANCISCO

SECTION 5.9 Add the following section:

SECTION 5.9 Posting Criteria for Inspection of the Substructure:

The following criteria are supplemental to Section 5.7:

Inspected. All primary structural elements are sound, but minor to moderate defects or deterioration has been observed.
Localized areas of moderate to advanced deterioration may be present but do not significantly reduce the load-bearing capacity of the structure.
Repairs are recommended, but the priority of the recommended repairs is low to moderate.

Limited Entry. Advanced deterioration, overstressing, or breakage may have significantly affected the load-bearing capacity of primary structural components.
More widespread failures are possible or likely to occur, and load restrictions should be implemented as necessary, but no evidence of eminent failure is visible.
Repairs may need to be carried out on a very high priority basis with strong urgency.

Unsafe. Extremely advanced deterioration, fracture, or breakage has resulted in failure(s) of primary structural components.
Structure is in danger of collapse. Barricading of area is necessary.
Occupancy shall not be resumed without repairs.

SECTION 6.1 - 7. Foundations:

Revise this section as follows:

7. Foundations, including piers, piles and other substructure elements.
Examine the base of the structure for fractures in foundations and distress caused by ground movements. See Chapter 11 for discussion of geotechnical hazards.
Structures with fractured foundations in a zone of ground movements must be considered unsafe.

Fractured piers, piles and other foundation elements ……UNSAFE

SECTION 7.1 - 6. Foundations:

Revise this section as follows:

6. Foundations, including piers, piles and other substructure elements.
Examine the base of the structure, for new large cracks, differential settling, and other signs of ground movement. See also Chapter 11.

Fractured piers, piles and other foundation elements……UNSAFE

SECTION 8.1 - 6. Foundations:

Revise this section as follows:

6. Foundations, including piers, piles and other substructure elements.
Examine the base of the structure for new large cracks, differential settlements, and other signs of ground movement. See also Chapter 11.

Fractured piers, piles and other foundation elements……UNSAFE

SECTION 9.1 – 10. Foundations:

Revise this section as follows:

10. Foundations, including piers, piles and other substructure elements.

Often the concrete frame extends to the lowest levels, and earth pressures are resisted by concrete walls that span between floors. Perimeter walls and seawall should be examined for bowing caused by excessive earth pressures.

Bowing of Walls…… ……UNSAFE

Fractured piers, piles and other foundation elements……UNSAFE

SECTION 10.1 – 7. Foundations:

Revise this section as follows:

7. Foundations, including piers, piles and other substructure elements.

Often the steel frame extends to the lowest levels, and earth pressures are resisted by concrete walls that span between floors. These walls should be examined for bowing caused by excessive earth pressures.

Bowing of Walls…… ……UNSAFE

New Fractures ½ Inch Wide or More in Floor Slabs…….... UNSAFE

Fractured piers, piles and other foundation elements……..UNSAFE

SECTION 10.3 - 5. Foundations:

Revise this section as follows:

5. Foundations, including piers, piles and other substructure elements.
Look for signs of foundation distress caused by ground movements.

Fractured piers, piles and other foundation elements……UNSAFE

Appendix C: Safety Assessment Forms:

ATC-20 Rapid Evaluation Safety Assessment Form:

Add the following Condition:

7. Substructure:
   (a) Displacement or damage to pile-deck connection

(b) Damage to pier deck
(c) Damage to piles
(d) Damage to pier/pile caps
(e) Pier out-of-plumb or visibly shifted
(f) Damage to seawall/abutments
(g) Other

ATC-20 Detailed Evaluation Safety Assessment Form:

Add the following Condition:

5. Substructure:
   (a) Displacement or damage to pile-deck connection
   (b) Damage to pier deck
   (c) Damage to piles
   (d) Damage to pier/pile caps
   (e) Pier out-of-plumb or visibly shifted
   (f) Damage to seawall/abutments
   (g) Other

Port of San Francisco

Monique Moyer
Executive Director

(BORP Attachment 1) RECOGNIZED SPECIAL INSPECTION & TESTING AGENCIES

Updated: June 9, 2014

Key: RC = Reinforced Concrete; PC = Prestressed Concrete; SM = Structural Masonry; SW = Steel Welding
HSB = High-Strength Bolting; NDT = Non-destructive Testing; SWC = Structural Wood Construction; FP = Fireproofing

Agency Name	Address	Phone/Fax	RC	PC	SM	SW	HSB	NDT	SWC	FP	EXPIRATION DATE
A 1 Inspection Services	1754 Mission Street San Francisco, CA 94109	**(415) 621-8001** (415) 358-4409	X	X	X	X	X	X	X	X	8/7/2015
Achievement Engineering Corp.	144 S 3rd Stree, Unit 206 San Jose, CA 9512	**(800) 653-1397** (408) 852-0331	X	X	X		X		X	X	7/10/2015
Advanced Testing & Inspection, LLC	540 Brunken Avenue, Suite B Salinas, CA 93901	**(831) 422-2272** (831) 597-2004	X	X	X	X	X			X	2/5/2016
Apex Testing Laboratories, Inc.	3450 Third Street, Suite 3E San Francisco, CA 94124	**(415) 550-9800** (415) 550-9880	X	X	X	X	X			X	Expired 3/3/2012
Applied Materials & Engineering, Inc.	980 41st Street Oakland, CA 94608	**(510) 420-8190** (510) 420-8186	X	X	X	X	X	X	X	X	3/11/2016
BAGG Engineers	847 West Maude Avenue Sunnyvale, CA 94085-2911	**(650) 852-9133** (650) 852-9138	X	X	X	X	X	X		X	3/6/2015
Berlogar Geotechnical Consultants	5587 Sunol Boulevard Pleasanton, CA 94566	**(925) 484-0220** (925) 846-9645	X	X	X	X	X				6/7/2014
Biggs Cardosa Associates, Inc.	1871 The Alameda, Suite 200 San Jose, CA 95126	**(408) 296-5515** (408) 296-8114	X	X	X	X	X				2/1/2014
B.S.K. Associates	1181 Quarry Lane, #350 Pleasanton, CA 94566	**(925) 462-4000** (925) 462-6283	X	X	X	X	X	X		X	10/2/2015
Capex Engineering Inc.	571 Seville Place Fremont, CA 94539	**(510) 668-1815** (510) 490-8690	X	X	X	X	X		X	X	4/3/2015
Consolidated Engineering Labs	2001 Crow Canyon Rd, Suite 100 San Ramon, CA 94583	**(925) 314-7100** (925) 855-7140	X	X	X	X	X	X	X	X	3/27/2015
Construction Materials Testing, Inc.	2278-F Pike Court Concord, CA 94520-1252	**(925) 825-2840** (925) 682-7953	X	X	X	X	X			X	3/14/2016
Construction Testing Services	2174 Rheem Drive, Suite A Pleasanton, CA 94588	**(925) 462-5151** (925) 462-5183	X	X	X	X	X	X	X	X	4/25/2016
Construction Testing & Engineering, Inc.	242 West Larch Road, Suite F Tracy, CA 95304	**(209) 839-2890** (209) 839-2895	X	X	X	X	X			X	Expired 2/2/2013 pending review
Earth System Pacific	780 Montague Expy Suite 205 San Jose, CA 95131	**(408) 934-9302** (408) 946-4569	X	X	X	X	X			X	4/3/2015
ENGEO Incorporated	2010 Crow Canyon Pl., Suite 250 San Ramon, CA 94583-1545	**(925) 866-9000** (888) 279-2698	X	X	X	X	X	X	X	X	3/6/2015
Geocon Consultants, Inc.	6671 Brisa Street Livermore, CA 94550	**(925) 371-5900** (925) 371-5915	X	X	X		X			X	5/10/2015
Holdrege & Kull	792 Searls Ave Nevada City, CA 95959	**(530) 478-1305** (530) 478-1019	X	X	X	X	X	X		X	8/6/2015
HP Inspections	690 Sunol Street, Bldg. H San Jose, CA 95126	**(408) 288-8460** (408) 271-0902	X	X	X	X	X	X		X	3/1/2014
Inspection Consultants, Inc.	1515 North C Street Sacramento, CA 95814	**(916) 321-5580** (916) 321-5590	X	X	X	X	X			X	10/2/2015
Inspection Services Inc.	1798 University Avenue Berkeley, CA 94703	**(415) 243-3265** (415) 243-3266	X	X	X	X	X	X	X	X	10/2/2015

Agency Name	Address	Phone/Fax	RC	PC	SM	SW	HSB	NDT	SWC	FP	EXPIRATION DATE
KC Engineering Co.	865 Cotting Lane, Suite A Vacaville, CA 95688	**(707) 447-4025** (707) 447-4143	X	X	X	X	X			X	12/6/2014
Kleinfelder Inc.	21330 Broadway, Suite 1200 Oakland, CA 94612	**(510) 628-9000** (510) 628-9009	X	X	X	X	X	X	X	X	10/2/2015
Korbmacher Engineering Inc.	480 Preston Court, Suite B Livermore, CA 94551	**(925) 454-9033** (925) 454-9564	X	X	X	X	X		X	X	1/27/2015
Krazan and Associates Inc.	6711 Sierra Court, Suite B Dublin, CA	**(925) 307-1160** (925) 307-1161	X	X	X	X	X			X	Expired 6/9/2012 Pending Review
MatriScope Engineering Laboratories, Inc	436 14th Street, Suite 1429 Oakland, CA 94612	**(510) 763-3601** (510) 763-1388	X	X	X	X	X	X	X	X	9/24/2015
Moore Twining Associates, Inc.	2527 Fresno Street Fresno, CA 93721	**(559) 268-7021** (559) 268-0740	X	X	X	X	X			X	Expired 8/11/2012 Pending Review
Neil O. Anderson and Associates	50 Goldenland Ct., #100 Sacramento, CA 95834	**(916) 928-4690** (916) 928-4697	X	X	X	X	X		X	X	4/17/2015
Nicholas Engineering Consultants	6743 Dublin Boulevard, #15 Dublin, CA 94568	**(925) 829-8090** (925) 829-0235	X	X	X	X	X		X	X	8/21/2015
Ninyo & Moore	1956 Webster Street, Suite 400 Oakland, CA 94612	**(510) 633-5640** (510) 633-5646	X	X	X	X	X			X	7/09/2016
Professional Service Industries, Inc.	365 Victor St, Suite C Salinas, CA 93907	**(831) 757-3536** (831) 757-6265	X		X	X	X			X	3/1/2014
Purcell, Rhoades & Associates, Inc.	1041 Hook Avenue Pleasant Hill, CA 94523	**(925) 932-1177** (925) 932-2795	X		X						Expired 10/7/2011
Raney Geotechnical, Inc	3140 Beacon Blvd. West Sacramento, CA 95691	**(916) 371-0434** (916) 371-1809	X	X	X	X	X			X	Expired 5/14/2013 Pending review
RES Engineers, Inc.	150 North Wiget Lane, Suite 204 Walnut Creek, CA 94598-2434	**(925) 932-4600** (925) 932-4625	X	X	X	X	X	X	X	X	8/7/2015
RMA Group	6293 San Ignacio Ave, Suite A San Jose, CA 95119	**(408) 362-4920** (408) 362-4926	X	X	X	X	X			X	10/4/2014
Salem Engineering Group, Inc.	4055 W. Shaw Ave, Suite 110 Fresno, CA 93722	**(559) 271-9700** (559) 275-0827	X	X	X	X	X	X			5/3/2014
Signet Testing Laboratories	3121 Diablo Avenue Hayward, CA 94545	**(510) 887-8484** (510) 783-4295	X	X	X	X	X			X	Expired 9/28/2012
Smith-Emery Company	P.O. Box 880550, Hunters Point Shipyard, Building 114 San Francisco, CA 94188	**(415) 642-7326** (415) 642-7055	X	X	X	X	X	X	X	X	1/9/2016
Stevens Ferrone & Bailey	1600 Willow Pass Court Concord, CA 94520	**(925) 688-1001** (925) 688-1005	X	X	X	X	X		X	X	7/5/2014
Structure Materials Group	2352 Research Drive Livermore, CA 94550	**(925) 447-9900** (925) 447-9901	X	X	X	X	X		X	X	8/6/2016
Summit Associates	2300 Clayton Road, Suite 1380 Concord, CA 94520	**(925) 363-5560** (925) 363-5511	X		X	X	X	X	X	X	3/6/2015
T. Makdissy Consulting, Inc.	23 Las Colinas Lane, Suite 106 San Jose, CA 95119	**(408) 227-8595** (408) 227-1672	X	X	X	X				X	1/29/2016
Terracon	3140 Gold Camp Drive, Suite 170 Rancho Cordova, CA 95670	**(916) 858-1579** (916) 858-8277	X	X	X		X			X	Expired 6/1/2013 Pending review
Testing Engineers Inc.	2811 Teagarden Street San Leandro, CA 94577	**(510) 835-3142** (510) 834-3777	X	X	X	X	X	X	X	X	5/3/2014
Twining	1572 Santa Ana Avenue Sacramento, CA 95838	**(916) 649-9000** (916) 921-8532	X	X	X	X	X			X	4/3/2015
Valley Inspection	326 Woodrow Avenue Vallejo, CA 94591	**(707) 552-7037** (707) 552-7022				X			X	X	2/7/2015
Wallace-Kuhl & Associates, Inc.	3251 Beacon Blvd., Suite 300 West Sacramento, CA 95691	**(916) 372-1434** (916) 372-2565	X	X	X	X	X	X		X	4/19/2016
Youngdahl Consulting Group, Inc.	1234 Glenhaven Court El Dorado Hills, CA 95762	**(916) 933-0633** (916) 933-6482	X	X	X	X	X	X	X	X	8/17/2015

Agencies may have offices in more than one location. Agencies with a 'Pending review" status are recognized

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