



## INFORMATION BULLETIN / PUBLIC - BUILDING CODE

REFERENCE NO.: LAMC 91.3303.9

Effective: 7-14-95

DOCUMENT NO. P/BC 2002-020

Revised: 11-17-00

Previously Issued As: MGD #105

---

# DEMOLITION BY USE OF EXPLOSIVES

## I. PURPOSE

Section 91.3303.9 of the Los Angeles Municipal Code requires the plans and a complete schedule for demolition to be approved by the building official. Information Bulletin P/BC 2001-39 (formerly RGA 1-73), specifies that explosives shall not be used in the demolition of a building unless specific written approval is granted. This bulletin specifies the conditions upon which A Request for Modification of Building Ordinances may be approved for "Demolition by Use of Explosives".

## II. QUALIFICATIONS OF THE CONTRACTOR

**A. License** - The subcontractor using explosives shall have a C-21 license in the State of California.

### B. Insurance

1. Insurance coverage for blasting operations shall be provided by an A-12 Best's Guide Carrier. The City of Los Angeles shall be named as "additionally insured" on the insurance certificate. The certificate shall specifically state that the coverage applies to explosives demolition and shall specify the height, type of construction and number of stories of each structure to be demolished.
2. The minimum general liability coverage provided by the explosives subcontractor for the blasting operations shall be determined by the City's Risk Manager
3. Proof of worker's compensation insurance for both the demolition contractor and the subcontractors handling explosives shall be provided.

### C. Experience

1. The explosives contractor shall submit addresses of at least ten (10) projects where structures similar in height, type of construction, and proximity to adjacent improvements were successfully demolished by explosives.
2. The explosives contractor shall submit a copy of the AIA 301A credential document and AIA 254 list of credentials for review. These documents shall be part of the permanent project file.

### III. INTERAGENCY REVIEW

#### A. Required Reports and Plans for the Interagency Review

**Review** - The applicant shall provide a fully dimensioned radius map identifying the height, number of stories, type of construction, use, dimensions and location of each structure within 200 feet of the demolition project. The information shall be used to determine the buildings which may be required to be protected during the explosion event. The radius map shall also show existing structures within 600 feet of the demolition project to determine the buildings which may be required to be evacuated during the explosion event.

**B. Coordination** - The Department of Building and Safety shall serve as the lead agency in coordinating an interagency review meeting. (The Chief of Structural Plan Check shall notify the appropriate Department staff to attend this meeting.) The purpose of this meeting is to allow the contractor to brief each agency on the general scope of the proposed demolition and to allow each agency to ask questions. This meeting shall be scheduled at least four (4) weeks before the scheduled demolition. Each agency shall be allowed one (1) week to review the application and to voice its concerns. All concerns shall be satisfied by the demolition contractor before the demolition permit is issued.

The inter-agency meeting shall include but not be limited to the following agencies:

1. Fire Department (explosives)
2. Department of Transportation (traffic control and public transportation)
3. AQMD (dust and smoke control)
4. Police Department (crowd control)
5. Public Works:
  1. Bureau of Engineering
  2. Bureau of Street Maintenance
  3. Bureau of Street Lighting
6. Department of Water and Power (power transmission lines, water lines and fire hydrants)
7. MTA
8. The Gas Company
9. The Telephone Company
10. California Highway Patrol
11. The plan check engineer shall also notify the Mayor's Office and respective Councilperson that a request for demolition by use of explosion has been received. They shall be invited to this meeting
12. Department of Telecommunications (cable operators)
13. Cal Trans

### C. Permits and Clearances Required

1. A "blasting" permit and clearance is required from the Fire Department.
2. A clearance from the Bureau of Engineering shall be required for lateral support of the public way. The "use of explosives" shall be indicated on the permit as the method of demolition.
3. A permit from the Police Department shall be obtained for street closures.
4. Department Of Transportation clearance is required for street closures.
5. A Sewer Cap Permit shall be required from Building and Safety.
6. There may be other permits and clearances required from other agencies.

### IV. OFF-SITE PREPARATIONS

**A. Pre-inspection of adjacent property** - The demolition contractor, explosives contractor or the building owner shall pre-inspect adjacent structures prior to the event and document such findings with written notes, and motion or still photography.

**B. Notification of adjacent property owners and tenants** - Prior to the issuance of the building permit, the applicant shall provide ample proof to the Department that all property owners within the subject area have been notified of the event.

**C. Evacuation of residents** - Security personnel, provided by the contractor, shall verify that all buildings within a 600 foot radius (or as specified by the Request for Slight Modification) of the building remain unoccupied at the same time of the event. No person shall be allowed within the vacated area without authorization from the Police Department, demolition contractor, or explosives contractor. The coordinator for this responsibility shall be the demolition contractor or his appointee.

**D. Protection of glazing** - Windows on walls of buildings directly facing the subject building within the 200 foot radius (or as specified by Slight Modification) shall be covered to minimize the possibility of damage due to the effects of the explosions.

**E. Protection of public improvements** - A soil cushion of 12" in depth (min.) shall be placed over the street, sidewalk, alley and other paved surfaces to prevent damage to utilities and to limit the fly of debris. The required location and width of the soil cushion shall be determined by the Bureau of Engineering.

## V. ON-SITE PREPARATION

### A. Structural

1. Structural members that are to be removed by explosives charges shall be wrapped with a minimum of four (4) layers of chain link fence to prevent flying debris from the explosion.
2. In addition to the chain link fence directly around the structural members to be removed by explosives, a curtain of chain link fence shall be hung around the interior columns to be shot to insure that debris cannot be thrown outside of the building perimeter by the detonation.
3. On the exterior columns to be removed by explosive charges, a thin layer of sheet steel shall be placed against the two sides and front of each column to preclude flying debris.

### B. Explosives

1. The Fire Department is the final authority with regard to the storage, handling, and detonation of explosives. The explosives shall be brought to the site no earlier than 10:00 a.m. (or as directed by the Fire Department) on the morning before the event and not until all persons not required for explosives operations have vacated the structure. A Fire Safety Officer(s) shall be required on the site.
2. The maximum amount of explosives used per delay in the demolition shall be determined by the Fire Department.
3. All explosives shall be detonated using a primary and back-up detonation system to eliminate the possibility of misfired or dangerously delayed explosives.
4. A series of explosives shall last no longer than 8 seconds to minimize the effect of vibrations to the adjacent properties.

## VI. POST-DETONATION REQUIREMENTS

**A. Survey by the Explosives Contractor** - The explosives contractor with authorization from the Engineer of Record shall survey the building within 10 minutes following the explosions to verify detonation of all charges. Furthermore, an inspection shall be made by the explosives contractor and the Engineer of Record in "daylight" to confirm such findings of the initial survey. This inspection shall be conducted immediately following the detonation sequence and prior to the commencement of any further work.

## B. Certification to Allow Entry

1. Prior to allowing entry to the building and the recommencement of any work, the explosives contractor shall certify in writing to the Building Inspector that all charges have been detonated.
2. No one shall be allowed into a *partially* demolished building without the approval of the Engineer of Record. This approval shall be submitted to the Building Inspector in writing documenting the date and time in which personnel will be allowed back into the building or the continuance of demolition work.

**C. Removal of Explosive Material** - Any surplus gasoline, black powder and initiators shall be legally removed prior to allowing personnel to enter the building for purposes other than to survey the damage and to look for any misfired explosives.

## D. Placement of Safety Barriers

1. If any hole is created by the explosion in the first floor which is large enough to allow a 6" sphere to pass through it, then a special perimeter fence around or covering such hole or holes shall be installed to prevent injury to any personnel.
2. Protection fences, a minimum of 8'-0" in height shall be placed within 50 feet of the building footprint within 12 hours following the explosion to prevent unauthorized entry while work has stopped. This area shall remain secured from unauthorized entry by a security representative of the demolition contractor. The location of the security fence shall be shown on the approved plans. Personnel authorized to enter this perimeter marked by the fence shall be issued special passes by the demolition contractor, explosives contractor, or the building owner.

**E. Re-inspection of adjacent structures** - The demolition contractor or explosives contractor shall re-inspect adjacent structures after the event and document such findings with written notes, and motion or still photography. This report shall be submitted to the Building Inspector within 14 days following the event. Failure to do so may initiate an Order to Stop Work by the Building Inspector.

## VII. MONITORING REQUIREMENTS

### A. Seismic

1. The demolition contractor, explosives contractor or building owner shall retain an independent testing company to monitor the explosion with at least four (4) tape seismographs. Copies of the seismic record shall be submitted to the Building Inspector within thirty (30) days of the date of explosion.
2. The vertical component of the ground motion velocity shall be limited to 0.25 inches per second

at 100 feet from the perimeter of the building. The results of such tests or recording shall be submitted to this Department for review and shall become a permanent record of the event.

## **B. Noise Monitoring**

1. The demolition contractor, explosives contractor or building owner shall retain an independent testing or monitoring company to monitor and record the level of noise resulting from the detonation and explosion of this event. The results of such tests or recording shall be submitted to this Department within thirty (30) days following the date of detonation for review and shall become a permanent record of this event.
2. The peak level of noise shall be 140 decibels measured at 100 feet from the building footprint for a maximum sustained duration of six (6) seconds.

## **VIII. MISCELLANEOUS REQUIREMENTS**

1. A Request for Modification of Building Ordinances is required. This shall be processed by the Plan Check Engineer and reviewed for approval by the Chief of the Structural Plan Check Division. Written concurrence from the Fire Department is required on the Request for Modification of Building Ordinances.
2. The plans shall indicate the contractor of record (demolition contractor) and the demolition subcontractor (explosives contractor).
3. A plan check fee based on a valuation of \$10.00/ sq. ft. shall be collected.
4. Additional Inspection Fees for inspections performed outside of normal working hours shall be required.
5. A Structural Engineer shall be required as the Engineer of Record for the project.
6. A Demolition Pre-Inspection Report by Building Inspection shall be required prior to plan check review.