



LAKE HAVASU CITY FIRE DEPARTMENT

Fire Prevention Bureau

2330 McCulloch Blvd. N.

Lake Havasu City, AZ 86403

(928) 855-1141 lhcfire@lhcaz.gov



Explosives (Blasting) Permit Application & Checklist

Apply Online at <https://h2.maintstar.co/lakehavasu/Portal/#/> or in person.

Once this application has been processed, all communication will be sent via automatic email.

See Lake Havasu City Fire Department website for latest Fire Code Information and Prevention Fee Schedule.

Application Date: _____ Site location & description: _____

Legal description: _____

Permit number: _____ Approved by: _____

Date & time of blasting: _____

Blasting permit application submittal requirements – Part I

Provide two (2) paper copies or one (1) digital copy of each of the following items:

- A completed copy of this blasting permit & checklist: Initial each item on this checklist to indicate completion of each requirement.
 - o A completed Permit Application must be submitted to the LHCFD Prevention Division with the Blasting Permit Checklist no later than 15 days prior to the first requested blast day.
 - o No blasting shall occur prior to permit approval.
 - o Any revisions to the permit shall be submitted to the LHCFD Prevention Division for review and approval along with a completed Permit Application for the proposed revision.
 - o All applications will require ten (10) working days to review, please plan accordingly.

- A current scaled blasting plan, which clearly delineates all, the following:
 - o All property lines within a $\frac{3}{4}$ mile (3,960 ft.) radius of the blasting area.
 - o All structures within a $\frac{1}{4}$ mile (1,320 ft.) radius of the blasting area.
 - o All structures, underground and aboveground utilities, roadways, established trails, golf cart paths, and outdoor public areas within a 500-foot radius of the area blasting will occur. Greater distances may be required as determined by the LHCFD.
 - o All proposed blasting locations showing appropriate phasing of the blasting operation for the site.

- A narrative description of the area blasting is to occur that delineates all the following:
 - o Why blasting is required.
 - o The requested permit start date and end date.
 - o Blasting company history and qualifications.
 - o Detail the proposed number of drill holes, type of explosive data sheets, delay pattern, anticipated peak particle velocity and scaled distance, the number of pounds of explosive per delay, and the total amount of explosive material (in pounds) brought to the blast site.

- A blasting schedule:
 - o Identify the site's phased location, proposed number of holes, date, and time for the loading of shots and a time for the blast.
 - o Note: Blasting schedule cannot be changed without written approval from the LHCFD Prevention Division.
 - o Blasting permits shall not extend greater than 6 months from the date of issue.

- A notification letter to all structure or property owners, and utility companies within $\frac{3}{4}$ mile (3,960ft.) of the blast site:
 - o Provide a copy of the letter to be sent out for review and approval with the permit application documents.
 - o Once the applicant is notified the permit is approved, the letter can be mailed or delivered but shall be received by all structure or property owners and utility companies a minimum of 48 hours prior to the first requested blast day.
 - o The permit application will not be issued until the documentation of proof of mailing or delivery is provided to the LHCFD Prevention Division.

- A Copy of the Arizona Commercial Driver's License (CDL) with Hazardous Materials Endorsement for all persons transporting explosive materials to the site.
- A Copy of each Blaster's current Arizona Driver's License. The Blaster and Possessor of Explosives shall be a minimum of twenty-one (21) years of age.
- A Copy of each Blaster's qualifications to perform blasting operations. The Blaster and Possessor of Explosives shall have a minimum of two years experience in the conduct of blasting operations. Experience shall include the understanding of blasting designs, drilling of holes, loading of holes, decking, stemming, and detonating methods.
- A Copy of the blasting company's current Federal Explosives License/Permit or Limited Intrastate Permit as issued by the Federal Bureau of Alcohol, Tobacco, Firearms & Explosives (BATF&E). The Blaster shall be considered the Possessor of Explosives as defined by the BATF&E. The above identifications shall be provided for all possessors of explosives expected to be working the blasting site.
- A Copy of a current license issued by the State of Arizona Registrar of Contractors for the type of blasting operations proposed to be conducted by the contactor as follows:
 - A-, General Engineering.** Construction in connection with fixed works requiring specialized engineering knowledge and skill, including streets and roads, power and utilities plants, dams and hydroelectric plants, sewage and waste disposal plants, bridges, tunnels, and overpasses. Also included are the scopes of work allowed by all other engineering classifications as applicable.
 - C-15, Blasting.** This classification allows the licensee to drill, bore, move earth, and build temporary shelters or barricades, as required for the licensee's use of explosives and explosive devices for excavation, demolition, construction related blasting or other approved uses.
- A Historical summary of the blasting company including experience on other projects.
- A copy of the current Certificate of Liability Insurance from an insurance company or a Bond, providing for indemnification of any property damage and personal injury resulting from blasting activities performed at the permitted blasting site. Minimum amount of \$1,000,000.
- A Hold Harmless Agreement in favor of Lake Havasu City and LHCFD.

Blasting Permit Application – Part II

Minimum blasting operations requirements:

- AHJ Notification.** Notification to LHCFD Prevention Bureau (928) 855-1141 and the LHCPD Dispatch (928) 855-4111 shall be made for the following:
 - Any blasts that do not occur on a scheduled date.
 - Have a change in time due to unforeseeable circumstances.
 - Blasts resulting in cutoff shots.
 - Blasts resulting in property damage or injury shall be immediately reported to the Fire Marshal's office at (928)-855-1141.
- The person making the notification shall state the blasting site location and include the area of the blast as indicated on the blasting site location plan provided with the permit.
- Blasting Control Measures.** When blasting is performed in a congested area or in close proximity to a structure, or roadway, precautions shall be taken to minimize earth vibrations and air blast effects.
 - Blasting mats shall be used to prevent fragments from being thrown and to control dust when blasting operations occur within 500 feet of any structures or roadways.
 - Earthen cover shall be used when blasting operations occur between 501 feet and ¼ mile (1,320 ft.). The type and amount of earthen cover shall be performed as requested by the LHCFD Fire Prevention Division.

- Blasting Log.** An accurate blasting log shall be maintained by the blasting contractor. The log shall contain the following information:
- o A copy of the approved permit and blasting plan.
 - o The location of the blasting operation.
 - o The date and time of each blasting occurrence.
 - o The name of the blaster and possessor of explosives.
 - o Whether blasting mats were used.
 - o Whether earthen cover was used.
 - o Special inspection reports.
 - o The seismic readings received.
 - o The name of the individual who conducted the seismic monitoring.
 - o The type of explosive, pounds of explosive per delay, drill hole layout, depths and diameters of drill holes, timing and delay pattern, anticipated peak particle velocities, and scaled distance.
 - o Any and all known damage or injury that occurred as a result of the blast. If no known damage or injury occurred, the log shall state.
 - o Post blast survey. After a blast, all wires and or non-electric leads shall be carefully traced and a search made for any unexploded explosive materials. All misfires shall be investigated by the blasting contractor who shall determine a safe method of disposal.

- Blasting Log Onsite.** A current copy of the blasting log shall be available at the blast site. A copy of the blasting log shall also be kept at the blasting contractor's local office. If the contractor does not have a local office, the blasting log shall be kept at the office of the general contractor for the project.

- Blasting Log Submittal to LHCDFD Prevention Division.** The following conditions shall require a copy of the days blasting log to be submitted to the LHCDFD within 24 hours and in person; a fax copy is not acceptable:
- o Each blast within 500 feet of structures.
 - o Each blast exceeding the maximum allowable peak, particle velocity for ground vibration of 0.625 inches/second.
 - o Each Blast causing fly rock or large dust plumes.

Failure to submit the daily blasting log is cause for the revocation of the blasting permit.

Blasts of more than 500 feet from structures, and not as described above, shall be submitted weekly in person; a fax copy is not acceptable. Failure to submit the daily blasting log is cause for the revocation of the blasting permit.

- Blasting Materials Storage Prohibited.** Only a one-day supply of explosive materials shall be permitted on-site. One-day supply of explosive materials means: the quantity required to conduct one-day blasting operations only. No explosive materials, including blasting wires and caps, shall be permitted to be stored overnight within LHC. On-site storage of explosive materials shall be stored in type 3 magazine(s) also known as a "day-box" as required under federal explosives storage requirements. Detonators shall not be stored with high explosives. At no time shall the explosive materials be left unattended. The blaster or possessor of explosives shall have, at all times, an unobstructed view of the on-site explosive material storage, and shall ensure that the storage magazine is locked and not accessible to unauthorized persons.

- Dust Control.** All earthen cover material shall be watered as a dust control measure.

- Electric Discharge.** Precautions shall be taken to prevent accidental discharge of electric blasting caps from currents induced by radar and radio transmitters, lightning, adjacent power lines, dust and snowstorms, or other sources of extraneous electricity. These precautions shall include, among others, the posting of signs warning against the use of mobile radio transmitters on all roads within 1,000 feet of blasting operations.

- Homeowner Notification.**
- o The contractor and/or designee requesting a blasting permit, along with the LHCDFD Prevention Division, shall set up and conduct a pre-blast meeting for all property owners within the $\frac{3}{4}$ mile (3,960 ft.) radius of the proposed blasting area at a minimum of 14 days prior to the first requested blast day.
 - o The contractor shall notify the same property owners within 3.4 mile (3,960 ft.) radius of the proposed blasting area for all impending blast activities a minimum of 48 hours prior to each blast.

- An established schedule can be provided, but all variances from the schedule shall require homeowner notification a minimum of 48 hours prior.
 - All property owners shall be notified the morning of all pending blasts scheduled following the 48-hour notice.
- Operation Hours.** Blasting operations shall be conducted during weekdays, between sunrise and sunset. At no time shall such activities occur before 6:00 a.m. or sunrise, whichever is later as determined by the LHCFD Prevention Division. No blasting operations shall be conducted at any time on Saturday, Sunday, or any legal holiday.
- Packing Material.** No material that can become a projectile shall be used in packing loads.
- Security.** During the time that holes are being loaded or are loaded with explosive materials, blasting agents or detonators, only authorized persons engaged in drilling and loading operations or otherwise authorized to enter the site shall be allowed at the blast site.
- All roadways, established trails, golf cart paths, and outdoor public areas within a 500-foot radius of the area blasting will occur shall be guarded by dedicated personnel and/or barricaded and clearly posted.
 - In addition to the above guard or barricade, a dedicated responsible guard shall be at each blast site, be capable of viewing the entire site within a 500-foot radius and have direct responsible guard shall only have duties responsible for securing the site.
 - Greater distances may be required as determined by LHCFD.
 - Blast site security shall be maintained until after the post-blast inspection has been completed.
- Seismographic Readings.** An approved special inspector shall take seismographic readings for all blasting activities. The special inspector shall place monitors in locations where the most reliable, accurate data will be collected. Seismographic monitors shall be placed at the home or homes nearest the blast site. A copy of all reports shall be maintained in a blasting log. The reports shall provide seismic information; company used, inspector taking readings, type of units used and how the monitors are placed as well as distances they are placed from existing buildings. Ground vibrations, air blast and fly rock shall be monitored by the recommendations and procedures listed in Chapter 11 of NFPA 495. However, Lake Havasu City will only except peak particle velocity (PPV) limits set forth in figure 11.2.1 of Chapter 11 of NFPA 495. Additional seismographic readings shall be performed in congested areas where multiple structures are present within 500 feet. The location of additional seismographic equipment shall be determined by the special inspector.
- Special Inspector.** Periodic observation shall be required to be performed by the approved special inspector. All costs of required independent review, inspection, and observation of blasting operations shall be the responsibility of the property owner. The special inspector must have expertise in blasting operations and be approved by the LHCFD Fire Marshal or designated representative.
- Per Section 104.7.2 of the IFC, if the blasting plan identifies structures within ¼ mile (1,320 ft.) of the blasting site, the blasting contractor may be required to obtain an independent technical review of the blasting plan and operations, or an approved qualified specialist (special inspector).
 - The first scheduled blast of a permit shall have a special inspector present.
 - All blasts performed within 500 feet of structures shall have a special inspector present.
 - Other periodic observations by a special inspector shall be performed as requested by the LHCFD Prevention Division.
- Suspension/Revocation of Permit.** The following issues shall result in the temporary or permanent suspension/revocation of the blasting permit:
Unauthorized deviation from the approved schedule; failure to submit the required blasting log reports; blasting resulting in fly rock, dust, property damage, or injury; blasting resulting in ground vibrations exceeding the maximum velocities; unsafe practices; violation of adopted, codes and standards; other conditions effecting public safety as determined by the LHCFD Prevention Division.
- Utility Notification.** Whenever blasting is being conducted in the vicinity of utility lines or rights-of-way, the blaster shall notify the appropriate representatives of the utilities at least 24 hours in advance of blasting, specifying the location and intended time of such blasting. Verbal notices shall be confirmed with written notice.
- Weather.** In the event of a lightning storm that would affect the blast site, the area shall be cleared and blocked as if it were a scheduled blast. Blocks will be held until the shot can be safely detonated or the storm passes.

