



**Town of Oro Valley**  
Community and Economic Development Department



## **BLASTING PERMIT CHECKLIST**

2018 International Fire Code

**NOTE:** Blasting Permits are accepted via the Town's online customer portal using the Demolition Permits category (link to portal [here](#)). Please reach out to Permitting Division staff at (520)229-4800 or [permits@orovalleyaz.gov](mailto:permits@orovalleyaz.gov) if you have any questions.

### **BLASTING PERMIT APPLICATION SUBMITTAL REQUIREMENTS**

Applicants are required to provide a completed and signed copy of this checklist with the submittal package. It is the applicant's responsibility to be familiar with the Town of Oro Valley's requirements and processes related to blasting operations. Review of submitted applications can take up to 10 business days and the permit fee is based on the plan review and processing time at a rate of \$60/hour.

The submittal package is to include the following information:

- Project Narrative**
  - General description of proposed blasting area.
  - Explanation of why blasting is required.
  - Blasting company history and qualifications.
  - Historical summary of the blasting company including experience on other projects.
  - Requested start and end dates for blasting operation.
- Blasting Plan**
  - Narrative detailing the following:
    - Type of explosives to be utilized.
    - Data Sheets for explosives to be used.
    - Total number of pounds of explosives to be brought to the blast site.
    - Delay pattern.
    - Number of pounds of explosives per delay.
    - Anticipated peak particle velocity and scaled distance.
  - Site Plan depicting the following:
    - All property lines within  $\frac{3}{4}$  mile of blasting locations.
    - All proposed blasting locations showing appropriate phasing of the blasting operation for the site.
    - All existing structures to be depicted within a  $\frac{3}{4}$  mile (3,960 feet), and a  $\frac{1}{4}$  mile (1,320 feet), and 500-foot radius of the proposed blasting site and the street address of each structure as applicable. Greater distances may be required as determined by the Town.
    - Location of all above ground and underground utilities, such as natural gas piping and lines, electric lines, phone lines, water lines, sewer lines, and storm drains within 500 feet of blasting locations.
- Blasting Schedule** – for each phased blasting location:
  - Date and time for the loading of shots and the scheduled time for the blast.
  - Proposed number of holes.
  - Note: Blasting schedules cannot be changed without written approval from the Town of Oro Valley CED Permitting Division.
- Notifications**
  - The Blaster is required to send notification letters to surrounding property owners, utility operators, and right-of-way operators per the requirements below. Provide a sample of the

notification letter to be used for this purpose.

- The contractor shall notify all property owners and utility/right-of-way operators within 3/4-mile (3,960 feet) radius of the proposed blasting site 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 another notification a minimum of 48 hours prior to any blast. All verbal notices shall be confirmed with written notice.
- Provide a list of all names and addresses of property owners and utility/right-of-way operators that will be notified.
- Agency Notifications: Notification to **Golder Ranch Fire District** (520-818-1017), **Town of Oro Valley CED Permitting Division** (520-229-4800) and **Town of Oro Valley Police Department** (520-229-4900) shall be made two business days (48 hours) in advance of whenever a new explosive material storage is established, including a temporary job site. The notification shall include the type, quantity and location of explosive materials at the site. Notification to the parties identified above shall also be required 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.
- **Blaster Information** - provide a copy of the following documents or descriptions as noted:
  - Arizona Commercial Driver's License (CDL) with Hazardous Materials Endorsement for all persons transporting explosive materials to the site.
  - Arizona Driver's License for each Blaster. The Blaster and Possessor of Explosives shall be a minimum of twenty-one years of age.
  - International Society of Explosives Engineers (ISEE) membership card for each Blaster.
  - 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.
  - Federal Explosives License/Permit or Limited Intrastate Permit as issued by the Federal Bureau of Alcohol, Tobacco & Firearms (ATF).
  - The Blaster shall be considered the Possessor of Explosives as defined by the Federal Bureau of Alcohol, Tobacco & Firearms. The above identifications shall be provided for all Possessor's of Explosives expected to be working the blasting site.
  - Current license issued by the State of Arizona Registrar of Contractors for the type of blasting operations proposed to be conducted by the contractor 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; A-3 through A-21.
    - A-3**, Blasting. The use of explosive and explosive devices for the purposes of excavation, demolition, geological exploration, mining or any related blasting. Included is any drilling, boring or earthwork required for the placement of explosive charges, the erection of temporary shelters, barricades and associated protective devices, equipment and enclosures.
    - AE**, (as restricted by Registrar.)
    - C-15**, Blasting. Use of explosives for movement of earthen materials or for demolition (Specialty Residential Contracting in accordance with Arizona Registrar of Contractor's definition.)
  - Certificate of Liability Insurance from an insurance company or Bond, providing for

indemnification of any property damage and personal injury resulting from blasting activities performed at the permitted blasting site. Minimum amount of \$1,000,000.00.

**Special Inspector Information**

- Identify all Special Inspectors with their qualifications to be used for this project. An approved special inspector shall take seismographic readings for all blasting activities. The Special Inspector with approved blasting discipline certification shall place monitors in locations where the most reliable, accurate data will be collected. 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. The seismograph monitors shall be placed no farther than 300 feet from the blast site in the direction of the home closest to the site. The maximum allowable peak particle velocity for ground vibration shall not exceed 0.625 inches/second. 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 approved Special Inspector.

**Blasting Log**

- An accurate blasting log shall be maintained by the blasting contractor. The log shall contain the following information:
  - A copy of the approved permit and blasting plan.
  - The location of the blasting operation.
  - The date and time of each blasting occurrence.
  - The name of the Blaster and Possessor of Explosives.
  - Whether blasting mats were used.
  - Whether earthen cover was used.
  - Special Inspection reports.
  - The seismic readings received.
  - The name of the individual who conducted the seismic monitoring.
  - 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.
  - 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 so state.
  - 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 Submittal to the Town of Oro Valley - the following conditions shall require a copy of the day's blasting log and Special Inspection Report to be submitted to the Oro Valley CED Permitting Division within 24 hours:
  - Each blast within 500 feet of structures.
  - Each blast exceeding the maximum allowable peak particle velocity for ground vibration of 0.625 inches/second.
  - Each blast causing fly rock or large dust plumes.
- **NOTE:** Failure to submit the daily blasting log is cause for the revocation of the blasting permit. Blasts more than 500 feet from structures, and not as described above, shall be submitted weekly.

Hold Harmless Agreement in favor of the Town of Oro Valley.

Copies of all previous seismic readings for this site

## BLASTING OPERATION REQUIREMENTS

- **2018 IFC Section 104.7.2 Technical Assistance:** If the blasting plan identifies structures within ¼ mile (1,320 feet) of the blasting site, the blasting contractor shall retain for the purpose of independent technical review of the blasting plan and operations, an approved qualified specialist (Special Inspector). The Special Inspector must have expertise in blasting operations and be approved by the Town of Oro Valley Building Official or designated representative.
  - 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 first scheduled blast shall have a Special Inspector present. All blasts performed within 500 feet of structures shall also have a Special Inspector present. Other periodic observations by a Special Inspector shall be performed as requested by the Town of Oro Valley CED Department.
- **2018 IFC Section 5607.1 General:** Blasting operations shall be conducted only by approved, competent operators familiar with the required safety precautions and the hazards involved and in accordance with the provisions of NFPA 495.
- **2018 IFC Section 5607.3 Blasting in Congested Areas:** 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 feet). The type and amount of earthen cover shall be approved by the Special Inspector.
- **2018 IFC Section 5607.4 Restricted Hours:** Blasting operations shall only be conducted during daylight hours between sunrise and sunset. However, at no time shall such activities occur before 6:00 AM, after 6:00 PM, nor conducted at any time on Saturday, Sunday or any legal Holiday.
- **2018 IFC Section 5607.6 Electronic Detonator Precautions:** Precautions shall be taken to prevent accidental discharge of electric detonators 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.
- **2018 IFC Section 5607.7 Nonelectric Detonator Precautions:** Precautions shall be taken to prevent accidental initiation of nonelectric detonators from stray currents induced by lightning or static electricity.
- If inclement weather is approaching, drill holes shall not be loaded with explosive materials and the day's blast shall be cancelled.
- **2018 IFC Section 5607.8 Blasting Area 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. The blast site shall be guarded or barricaded and posted. Blast site security shall be maintained until after the post-blast inspection has been completed.
- **2018 IFC Section 5607.9 Drill Holes:** Holes drilled for the loading of explosive charges shall be made and loaded in accordance with NFPA 495.
- **2018 IFC Section 5607.10 Removal of Excess Explosive Materials:** After loading for a blast is completed and before firing, excess explosive materials shall be removed from the area and returned to the proper storage facilities.

- **2018 IFC Section 5607.11 Initiation Means:** The initiation of blasts shall be by means conforming to the provisions of NFPA 495.
- **2018 IFC Section 5607.12 Connections:** The Blaster shall supervise the connecting of the blastholes and the connection of the loadline to the power source or initiation point. Connections shall be made progressively from the blast hole back to the initiation point. Blasting lead lines shall remain shunted (shorted) and shall not be connected to the blasting machine or other source of current until the blast is to be fired.
- **2018 IFC Section 5607.13 Firing Control:** A blast shall not be fired until the Blaster has made certain that all surplus explosive materials are in a safe place in accordance with Section 5607.10, all persons and equipment are at a safe distance or under sufficient cover and that an adequate warning signal has been given.
- **2018 IFC Section 5607.14 Post-blast Procedures:** After the blast, the following procedures shall be observed.
  - Persons shall not return to the blast area until allowed to do so by the Blaster in charge.
  - The Blaster shall allow sufficient time for smoke and fumes to dissipate and for dust to settle before returning to or approaching the blast area.
  - The Blaster shall inspect the entire blast site for misfires before allowing other personnel to return to the blast area.
- **2018 IFC Section 5607.15 Misfires:** Where a misfire is suspected, all initiating circuits shall be traced and a search made for unexploded charges. Where a misfire is found, the Blaster shall provide proper safeguards for excluding all personnel from the blast area. Misfires shall be reported to the blasting supervisor immediately. Misfires shall be handled under the direction of the person in charge of the blasting operation in accordance with NFPA 495.
- No material that can become a projectile shall be used in packing loads.
- 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 the Town of Oro Valley. 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.
- A "**Possessor of Explosives**" is someone who has actual physical possession or constructive possession, which means the person has dominion or control over explosives. For example, persons who are physically handling explosive materials would be considered to be Possessor's of Explosives. This would include employees who handle explosive materials as part of the production process; employees who handle explosive materials in order to ship, transport, or sell them; and employees, such as Blasters, who actually use explosive materials. Other examples of Possessor's of Explosives include a supervisor at a construction site who keeps keys for magazines in which explosives are stored, or who directs the use of explosive materials by other employees; and, an employee of a licensee or permittee transporting explosive materials from a licensed distributor to a purchaser. *Definition established by the Federal Bureau of Alcohol, Tobacco & Firearms.*
- 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 fly rock, dust, property damage, or injury; blasting

resulting in ground vibrations exceeding the maximum velocities; unsafe practices; other conditions effecting public safety as determined by the Town of Oro Valley CED Permitting Division.

Owner of Property Blasting Will Be Conducted Upon:  Contact Information:	
Company Conducting Blasting:  Contact Information:	
Person/Persons Conducting the Blasting and Possessor of Explosives:  Contact Information:	
I hereby certify that I have read and examined this checklist and know the same to be true and correct. I am the owner of the property or the owner's authorized representative, and if not the owner, I have obtained the owner's permission to perform stated work. All provisions of laws and ordinances governing this type of work will be complied with whether specified herein or not. The granting of a permit does not presume to give authority to violate or cancel the provisions of any other state or local law regulating construction or the performance of construction.	
Signature:	Printed Name: