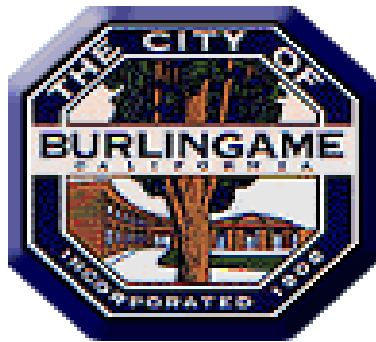


City of Burlingame Public Works



Hot Work

Welding, cutting, brazing, grinding or other similar operations that can produce spark or flame.

Revised May 2018

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- A Hot Work Request (Work in designated areas does not require a permit).
- B Hot Work Permit

1.0 PURPOSE AND SCOPE

The City of Burlingame Public Works Department is committed to providing a safe and healthy work environment and to protecting our employees from injury or death caused by uncontrolled hazards in the workplace. The department recognizes the potential for fire from hot work operations. The Hot Work Program has been established to help protect the safety of employees and property by establishing appropriate hot work procedures and designated areas for hot work operations.

This program applies to all employees (permanent, temporary and contractors) who complete hot work or work in areas where hot work is taking place. All employees are required to follow the procedures outlined in this program. Any deviations from this program must be immediately brought to the attention of the Program Administrator.

2.0 REGULATIONS

- a. California Code of Regulations, Title 8, Section 4848, “Fire Prevention & Suppression Procedure”
- b. American National Standards Institute ANSI Z49.1:2012, “Safety in Welding, Cutting and Allied Processes,” which is incorporated into law by reference in 8CCR4794(a) and 4850(a).
- c. National Fire Code 51B, “Hot Work,” which is incorporated into law by reference in 8CCR4848.
- d. 2016 California Fire Code, California Code of Regulations Title 24, Part 9.

3.0 DEFINITIONS

- a. Hot Work: Any work involving gas or electric welding, cutting, brazing, grinding, use of a needle gun, use of powder-driven fasteners, or other similar operations that produce spark or flame (patch truck torch). It does not include electric soldering irons, or cooking operations.
- b. Designated Area: A permanent location designed or approved for performing hot work operations
- c. Permit Authorizing Individual (PAI): The individual designated by management to authorize hot work. The PAI cannot be the hot work operator. For the City of Burlingame Public Works Department all Division Heads and Supervisors are PAI’s.
- d. Welding blankets, curtains and pads: Materials that are listed or approved for such uses.

- e. Shall: Means it is *mandatory*.

4.0 GENERAL PROTECTION

- a. Refer to the appropriate documentation (SOP, Manufacturer's instructions, etc.) for safe and proper use of the equipment.
- b. Workers or other personnel near the Hot Work area shall be protected from sparks, spatter, or light/radiation hazards by the use of screens or shields, or shall be required to wear appropriate Personal Protective Equipment. Ensure that screens do not interfere significantly with ventilation
- c. Ensure that personnel are either prevented from contacting hot materials, or that effective signage warns of the presence of hot materials.
- d. No hot work shall be done while, if or when the fire sprinkler system is impaired or inoperable in buildings that are equipped with a sprinkler system.

5.0 VENTILATION

- a. All Hot Work shall be properly ventilated.
- b. The material to be operated on must be taken into consideration when determining proper ventilation.
- c. Care must be taken to ensure that forced ventilation or ventilation exhaust does not move hazardous fumes or vapors to other areas where they still constitute a hazard.
- d. Respiratory protective equipment shall be used when adequate ventilation is not practical. It shall be used in accordance with the City of Burlingame Public Works Department's Respiratory Protection Program.

6.0 HOT WORK

All hot work shall be done in a Designated Area, or it shall be done by Permit. No Hot Work shall be done anywhere that is not approved of by Management in one of these two fashions.

7.0 DESIGNATED AREA

- a. The Designated Area shall be free from all flammable liquids and gases, and essentially free from ordinary combustible materials, for a minimum of 35 feet from the work.

- b. The Designate Area shall not be within 35 feet of any openings into other areas in which combustible or flammable materials are present.
- c. The Designated Area shall be properly equipped with fire extinguishing equipment.
- d. The following areas have been designated as approved hot work areas. Hot work may be performed in these areas without issuance of a hot work permit.
 - Equipment Maintenance Welding Room in Building B?
 - Concrete Parking Area directly in front of the Water Shop which is designated for Chop Saw and Grinding only.

All other hot work requires a Permit Request form be completed and provided to a qualified Permit Authorizing Individual as identified in section 3(c).

8.0 HOT WORK PERMIT

- a. The Hot Work Permit form is shown In Appendix A
- b. The PAI completes the Permit. The permit documents that the PAI has evaluated the Hot Work area, and certifies that it meets all the necessary conditions.
- c. Conditions:
 - i. All equipment is in satisfactory operating condition and in good repair.
 - ii. All combustible materials have been removed for at least 35 feet. Materials that cannot be removed have been protected with fire-retardant blankets, metal shielding, etc. Blankets, shields, etc., shall protect against all entry of sparks
 - iii. All openings in walls, floors or ducts are sealed within 35 ft.
 - iv. Walls, partitions, ceilings or roofs are protected, including the sides away from the Hot Work
 - v. Hot Work shall not be done on pipes or other metals in contact with combustible walls, partitions, ceilings or roofs
 - vi. If Hot Work is to be done near a sprinkler head, either shield the head or protect the head with a wet rag, which is to be removed as soon as the Hot Work is completed.
- d. The Permit should generally be good for one day only.
- e. At least once per day, the PAI shall inspect the area to ensure that it is fire-safe.
- f. Fire Watch:
 - i. A Fire Watch shall be required by the PAI when Hot Work is performed in a location where other than a minor fire might develop, or where the following conditions exist:

- A. Combustible materials are closer than 35 feet
- B. Combustible materials are more than 35 feet away, but are easily ignited by sparks.
- C. Wall or floor openings within 35 feet expose combustible materials, including concealed spaces in walls or floors.
- D. Combustible materials that are likely to be ignited are adjacent to the opposite side of partitions, walls, ceiling or roofs
- E. A second Fire Watch may be required if the risk of fire hazard cannot be seen by one person alone, e.g., where there is a risk of fire on the other side of a wall.
 - ii. The Fire Watch shall be prepared to recognize and respond to fires, including alerting occupants, notifying the Fire Department, and extinguishing smoldering or incipient fires.
 - iii. The Fire Watch has the authority to stop the Hot Work if unsafe conditions develop.
 - iv. The Fire Watch shall be maintained for at least ½ hour after completion of Hot Work. The PAI may extend this time if deemed necessary.
- g. When a fire watch is not required, the PAI shall make a final check ½ hour after the completion of hot work to detect, respond to and extinguish smoldering fires.

9.0 WELDERS

Management shall assure that welders are trained in the safe operation of their equipment, the safe use of the process, and emergency procedures.

Appendix A – Hot Work Request

HOT WORK PERMIT REQUEST

Before beginning hot work, ask yourself, “Can this job be avoided? Is there a safer way?”

Hot work permits are required for any operation involving open flame, sparks or any heat-producing process. This includes, but is not limited to, brazing, cutting, drilling, welding, grinding, soldering and torch work.

The person performing the hot work must fill out this form in its entirety and submit it to the safety director for approval prior to beginning the project.

General Information

Company: _____

Responsible person: _____ Phone number: _____

Date work to be performed: _____ Start time: AM / PM _____

Building: _____

Room number/area/equipment: _____

Type of work to be performed: _____

Welding Cutting Grinding Soldering Drilling Pipe thawing

Brazing Torch-applied roofing Electric tools Other heat-producing process

Planned Safety Precautions

Perform fire watch. (List designated _____)

Remove flammable and combustible materials within 35 ft. of work zone.

Guard flammable and combustible materials that cannot be removed.

Maintain appropriate and adequate fire extinguishers.

Sweep floors within 35-ft radius of work zone.

- Protect floors within 35-ft radius of work zone by wetting, covering with damp sand or by using fire-resistant shields.
- Protect or shut down ducts and conveyors.
- Protect walls, partitions, ceilings and roofs with fire-resistant shields or guards.
- Other

Appendix B – Hot Work Permit

HOT WORK PERMIT

A completed and signed hot work permit is required before any hot work process can begin. Both pages of this permit and the warning page are required to be posted at the work area during the hot work process or for the approved permit period.

Hot Work Safety Checklist

- Hot work process is located in the safest location possible or in an approved area.
- Precautions are in place to protect floors, walls, open doorways or open windows within a 35-ft radius of the work zone.
- Suitable fire extinguishing devices are available at the hot work site.
- If the worksite is inside a building equipped with a sprinkler system, the system is operational.
- If the worksite is inside a building equipped with a sprinkler system, the sprinkler heads within a 3-ft radius of hot work operations have been covered with a wet rag to prevent unwanted alarms.
- If the worksite is inside a building equipped with smoke detectors, the smoke detectors within a 3-ft radius of hot work operations have been covered to prevent unwanted alarms
- Hot work equipment is in good repair.
- Fire watch personnel are trained on the proper use of extinguishing equipment and alarm operation.
- Fire watch is posted and will remain for at least 30 min after all hot work has been completed.
- No flammable or combustible fibers, dust, vapors, gasses or liquids are in the area.
- Floors are swept clean within a 35-ft radius of the work zone.
- Combustible floors are wet, covered with damp sand or protected by fire-resistant shields.
- Combustible materials are relocated at least 35 ft away from the work zone.
- Immovable combustibles are protected with flameproof covers or otherwise shielded with metal guards.
- Ducts and conveyors are protected or shut down.
- Combustible walls, partitions, ceilings and roofs are protected with fire-resistant shields or guards.
- No danger exists from conduction of heat through noncombustible walls, partitions, ceilings and roofs.

- There is adequate clearance between combustible material and pipes and other metals.
- There is adequate ventilation to remove smoke, vapor and dust from the work zone.
- All required lockout/tagout procedures are in place.
- Hot work operators are adequately trained.
- Contractors are advised about all hazardous materials and conditions they may encounter.
- Supervisors and employees are notified of nearby hot work operations.

Authorization

I have personally inspected the location where the above work is to be done, have checked for compliance with safety precautions listed on this permit and authorize the work to be performed.

Name: _____

Title: _____

Signature: _____ Date: _____

Permit #: _____

Authorized duration of permit: _____ To: _____
Date and Time Date and Time

This permit is only valid as long as the working conditions existing at the time of issuance are maintained. The permit will automatically and immediately expire when any change in conditions adversely affects the safety of the work area while hot work is in progress. After a change occurs, another hot work permit must be issued before work can resume.

This permit and associated warning sign must be posted near the hot work site during all hot work.