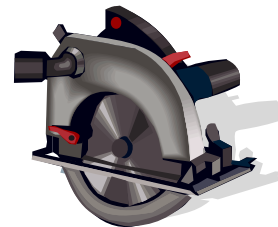




Welding, Brazing & Cutting Guidelines

Hot Work is any work activity that generates a flame, heat or sparks such as soldering, brazing, welding, torch cutting or grinding. The California Fire Code requires a fire permit to perform hot work operations. The fire permit is issued by the UC Davis Fire Department and is required to perform any hot work activity on campus.



Facilities, Operations & Maintenance and Architects & Engineers employees managing contracted projects that include any hot work activity shall follow the [Hot Work Procedure for UCD Facilities Projects](#).

Non emergency hot work:

- All non-emergency hot work must be scheduled at least **72 hours** in advance with the UC Davis Fire Department and a hazardous conditions permit must be obtained (see Hazardous Conditions Permit Firenet).
- Advanced coordination and approval is needed with the UC Davis Fire Department to have any fire protection system remain de-activated past normal working hours – Monday thru Friday, 8:00a.m. – 5:00p.m. excluding holidays. The **Fire Protection System Impairment Form** is used by the UC Davis Fire Department to facilitate and coordinate planned, non-emergency impairments to any fire protection system (sprinkler, fire alarm, dry standpipe, wet standpipe, hydrant, etc.) on the UC Davis Campus.

General Requirements:

- A fire watch must be conducted by the person performing the hot work or qualified designee for 30 minutes following the completion of any hot work under this procedure on campus.
- Persons performing painting, demolition, ceiling tile removal/installation or any other activity that could negatively affect a fire protection system or device must consult and coordinate with the UC Davis Fire Department to obtain a hazardous conditions permit and the Alarm Shop prior to starting the activity.

- Only a trained and authorized FO&M employee can install/remove the protective cover(s) or bag(s) from smoke detectors.

Contract Work

- For contract work on campus, FO&M and A/E Project Managers are responsible to ensure that they or their designees first call the FO&M Customer Support Center (530-752-1655) prior to scheduling any hot work. The Project Managers are also responsible for initiating, either directly or through FO&M Customer Support Center, a Maximo Work/Sub Work Order(s) and coordinate with the FO&M Alarm Shop to identify the fire protection system in operation and to coordinate with the UC Davis Fire Department to request a Hot Work Permit. The work order number will be printed on the Fire Department issued permit.
- It is critical that as soon as any Hot Work is complete (including a fire watch for 30 minutes) the UC Davis Fire Department shall be notified and the fire protection system shall be reactivated or if “bag” method is used the bag(s) must be removed by an FO&M employee.
- **Contractors are prohibited from altering, disabling or modifying any fire protection system, device or related fire protection equipment on campus unless specifically permitted in writing by the Fire Department. Only trained and authorized FO&M employees may disable (for Hot Work purposes) a fire protection device, deactivate a zone or use the bag method.**

Other Contracted Activities That Could Affect Fire Protection Systems:

- The project manager overseeing contractors performing painting, demolition, ceiling tile removal/installation or any other activity that could negatively affect a fire protection system or device shall consult and coordinate with the FO&M Customer Support Center and Alarm Shop prior to starting the activity.

Setting up the work area:

- Erect signs, barricades (Welding shields if applicable) and secure area preventing unauthorized entry.
- Have an appropriate fire extinguisher (20 pound minimum) available or in close proximity (Do not remove fire extinguishers from buildings).
- Work area must be cleared of all combustible materials (minimum 25 feet). Where items can not be removed, they must be protected by appropriate fire prevention device.
- Have proper PPE (Personal Protective Equipment) for the job (i.e., welding hood, face shields, goggles, clothing & gloves, etc.).
- Area must be properly ventilated.

After Hot Work is Complete:

- Conduct Fire Watch (30 minutes).
- Call UC Davis Fire Dispatch (530-752-6317) when Hot Work and Fire Watch are completed.

Welding Safety Rules

- Only approved devices shall be used for pre-mixed air or oxygen and combustible gases.
- Transferring gases between cylinders or mixing gases in cylinders is not permitted.
- The use of liquid acetylene is prohibited.
- Do not allow acetylene gas to be brought in to contact with unalloyed copper except in a blowpipe torch.
- Acetylene gas shall be stored, transported and used in the vertical, upright position.
- Approved and marked oxygen and fuel gas pressure regulators must be used at all times. Fuel gas must never be used from the cylinder through torches or other devices equipped with shut off valves without reducing the pressure through a suitable regulator attached to the cylinder valve manifold.
- All equipment, including cylinders, hoses, valves etc., shall be kept free from oil and grease.
- Do not handle oxygen cylinders with oily and/or greasy hands or materials.
- Use suitable cradles when moving cylinders. Do not use rope slings and/or electromagnets.
- Place cylinders away from the welding operation so that they will not be unduly heated by radiation from heated materials.
- A fire watch shall be maintained for at least 30 minutes after a completed welding or cutting operation to detect and extinguish possible smoldering fires.

