Safety Lock-Out Procedure for ionizing radiation

for preventing access to Gerstacker High-Bay roof (3S12) and room 2019M during times when radiation-generating SHOT ON TARGET are being fired

How will access to the Gerstacker High-Bay Roof and room 2019M be secured during SHOTS ON TARGET?

A Kirk Key system has been installed in the 1C03 corridor to prevent exposure to the sky shine radiation. Using a UM Mcard (C-Cure system) a maintenance worker or a laser user will remove the key they need to do their task while leaving their name. Once a key has been removed the remaining key is trapped and no access will be available until the key in use has been returned. Thus, if maintenance is underway, the laser team will not be able to take a SHOT ON TARGET and if the laser is firing SHOTS ON TARGET, maintenance will not have access to the mezzanine mechanical space or the roof of Gerstacker High-Bay.

Where is the Kirk Key closet?

The Kirk Key is located in a 2' x 2' closet at chest level in corridor 1C03 (this is the long Gerstacker High-Bay corridor facing parking lot NC16) where the wall takes a jog and access to these keys is via the C-cure card reader system.

Who is able to use the Kirk Key lock-out system?

Only those trained and registered will be allowed to use the system. Access will be provided via the card reader system once the appropriate training has been completed and certificate has been issued (or documentation has been signed.

ZEUS staff will be registered by our Research Administration Manager and the ECE Facilities Manager.

UM Maintenance workers will be registered by North Campus Region Asset Supervisor and North Campus Region Manager.

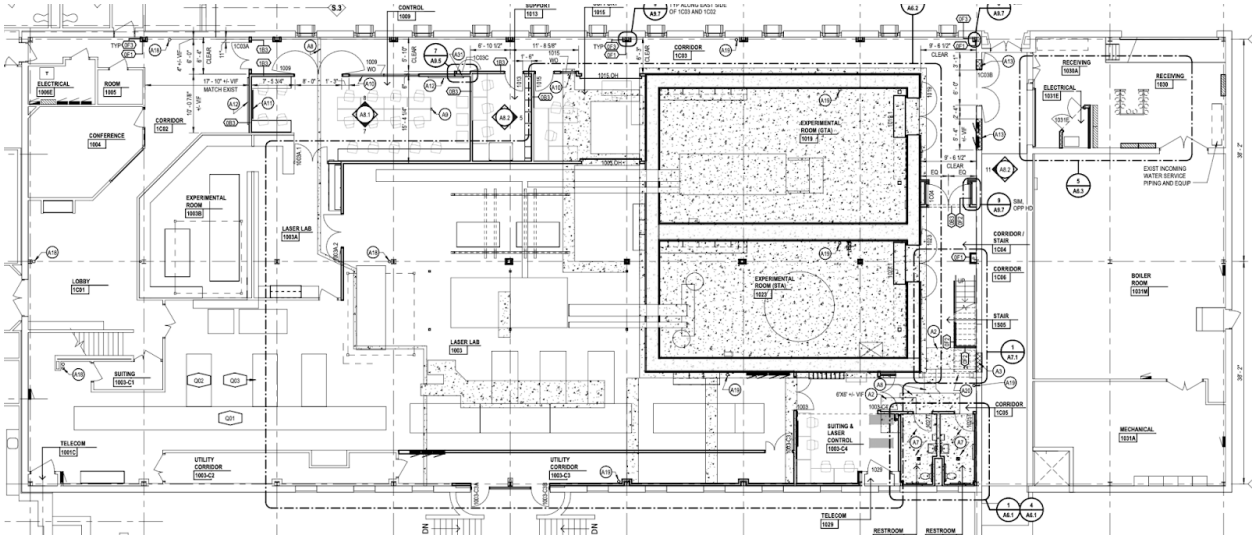
Training will be verified annually by OSEH through the Laser Safety Officer or EHS Health and Safety Specialist.

Procedures for lost keys:

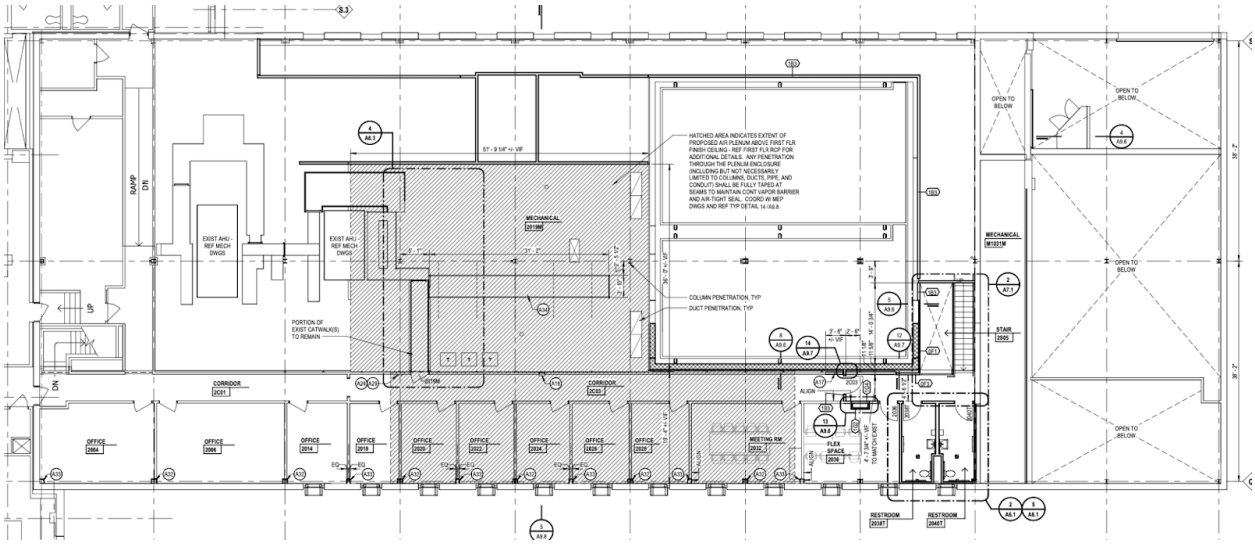
Due to the hazards and the need for security and to protect workers' safety, a lost key will require that all relevant lock cores be replaced with a new key-numbered core to protect the integrity of the lab and maintenance access points and safety procedures.

Securing mezzanine and roof areas:

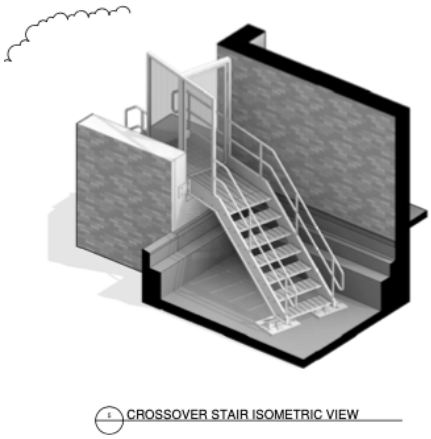
- Multiple people

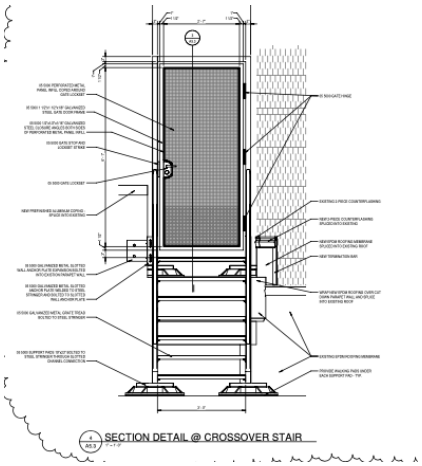


Design of the Gerstacker High Bay Area at 2200 Bonisteel Blvd. Closet (cabinet) 1C03C is located slightly to the left of the center of hallway 1C03 along the top of this drawing on the side opposite the row of windows.



Design of the Gestacker High-Bay Area Mezzanine. Room 2019M is the only door opening into the mechanical space upward from the long hallway 2C03. It is shown at the bottom of the dashed rectangle marked “PORTION OF EXISTING CATWALK TO REMAIN.”





Drawings of the roof crossover gate that blocks access to the Gerstacker High-Bay Area roof. Access to the Gerstacker Addition roof is gained through the Gerstack Addition Penthouse area via the stairs in the southeast corner of the Addition.

SAFE LASER OFF:
When this is illuminated, the laser system is inactive and the mezzanine & roof areas do not pose any Laser or radiation hazard.

CAUTION LASER ON:
When this is illuminated, the laser system is active but not capable of producing a radiation hazard or ionizing. Do not pull ceiling tiles in the mezzanine area. Do not enter the laser system area without notifying laser system operators.

RADIATION HAZARD / DANGER LASER ON:
When these are illuminated, the laser system is active and capable of producing a radiation hazard mainly in the form of high energy photons and neutrons. The dose rate could potentially exceed the public dose limit of 2 mrem in one hour. Do not enter the mezzanine or roof areas when these notices are illuminated. Do not enter the laser system area.

Red light at top of pole on the roof:
When this is on, the laser system is active and capable of producing a radiation hazard. Local signage should indicate: “CAUTION, HIGH RADIATION AREA” or “DANGER, HIGH RADIATION AREA”.