

Blind Penetrations (Cutting/Drilling) into Walls, Floors & Ceilings

Exclusions from this permitting process are:

- Up to 1.5" into CMU walls;
- The thickness of gypsum-board sheet for penetrations in gypsum board wall assemblies (if using self drilling wall anchors a permit is not required);
- Up to 2" into the top side of a concrete floor/slab. (Permits are always required for any penetrations into the bottom side of any concrete floor);
- Drill stops are always required.

A permit does not guarantee that a utility is not present. All precautions need to be taken to safe guard individuals during the penetration activity. Figure 1

Policy:

Cutting/Drilling blind penetrations into Walls, Floors & Ceilings at Jefferson Lab shall be performed only after utilities have been located and marked by a competent person. Refer to Fig. 1 for exclusions.

Instructions:

1. Obtain and print a copy of the instructions and permit from the Facilities web page:
<http://www.jlab.org/fm> under "Fillable Forms"
2. Filling out Page 1
 - a. *At the top of the page enter the date the permit is required.*
 - b. *In section "I. Requester"*
 - i. *Fill in the Company of JLab group that is going to be performing the work*
 - ii. *The contact phone number for the Company or JLab group*
 - iii. *The location, diameter, depth, number & spacing of the Penetrations*
 - iv. *Desired start date of work*
 - v. *Purpose of penetration*
 - vi. *The supervisor of the penetration work and a contact phone number*
 - vii. *If a work order was submitted, add the number in the appropriate box*
 - viii. *Provide a Project title*
 - ix. *If applicable, provide an account code*
 - x. *How to Identify an interior or exterior penetration of a building or structure*
 1. *Use a project drawing or a diagram to illustrate the location of the penetrations. Use nearby structures or reference points to better identify locations. Attach the drawing or diagram to the back of the permit.*
 2. *Or provide a sketch at the bottom of the page identifying locations of the penetrations. Use nearby structures or reference points to better identify locations.*
3. Filling out Page 2

a. Subject Matter Experts Approval- section II

- i. Subject Matter Experts ("SME") must review and sign off on the permit prior to having a locating company or Facilities contacted to mark the utilities, if required.
- ii. Each SME shall check the "Location Required" box next to their signature when in his/her expert opinion location services are required. This decision shall be based on the SME's knowledge of the work are including consideration of the size and depth of the proposed penetration(s), density of known utilities and/or the likelihood of unknown utilities.
- iii. If work is to be done within the Accelerator site a signature from Accelerator OPS is required. See page three of the permit request for authorized individuals
- iv. If work is to be done within the Accelerator site or a surface that functions as a physical barrier to a radiologically-controlled area a signature from RADCON is required. See page three of the permit request for authorized individuals
- v. For all permit requests, authorized Facilities Subject Matter Experts signatures are required for Electrical, Chilled, Cooling, Low Conductivity Water, Potable Water, Sewer, Communications and Data lines, Stormwater, Fire Protection and Life Safety Systems and Natural Gas systems. See page three of the permit request for authorized individuals.
- vi. For Building and Support structures an authorized Facilities SME signature is required. See page three of the permit request for authorized individuals.
- vii. If penetrations are in areas where utilities exist, the Requester shall perform a walkdown with the SME to determine if utility interruptions are required. If interruption or a potential of interruption to building operations is required, the appropriate Operations Coordinator (Hall Coordinators or Accelerator Operations) signature is required. The Operations Coordinator shall be responsible for scheduling and notifying occupants of the affected areas that the utility operation will occur. The SME is responsible for securing or having the utility secured and for entering the utility outage in the on-line Outage Management System. The Comment Box below the SME signature area shall be used by the SME to identify the utilities to be interrupted/secured before work can proceed. If necessary, a walkdown of the area, with the Operations Coordinator, shall be done to clearly identify the limits of the interruption. When in doubt, extend securing utilities in a wider area "

b. TR, Project Mgr, Inspector or Subcontractor Information – section III

- i. A JLab TR or contact name and phone number must be entered; the rest of the section is related to location service details and will be filled out by the locating company or Facilities as applicable.
- ii. Submit the Permit to Facilities Drafting (SSC Building, room 75) after all SME and TR signatures and other information have been entered.
- iii. Facilities will arrange for the utilities in the work area to be marked if required. Once the area is marked the permit is ready for final approval by the Director of Facilities, or his/her designee.
- iv. Facilities will notify the requester after the final approval signature is obtained.

4. Page 3 - Final Approval – section IV.

- i. Check page 3 to verify the Director of Facilities or designee has signed and dated the permit. Also read and communicate any comments added to the signature area.
- b. If facilities assisted in the permit process, the TR, Project Manager, Inspector must field verify the utilities with the requester after they have been marked.

c. After work is completed.

Return entire permit to Facilities Drafting (SSC Building, room 75) after completion of cutting/drilling activities. If additional utilities are located or encountered (or marked utilities are not found in their expected locations) then the Requester shall provide an "as-built" sketch to Facilities Drafting precisely detailing the location(s) of all utilities that were found to not be in the location expected.



FLOOR, WALL and CEILING PENETRATION PERMIT REQUEST

Exclusions for this permit are: penetrations up to 1.5" into CMU walls, the thickness of gypsum-board sheet (self-drilling wall anchors do not require a permit) and up to 2" into the top side of concrete floors. Drill Stops are required.

Submit request to Facilities Management **at least seven days before needed start date.**

This permit is valid for 14 days from the approval date unless specifically authorized by facilities on this permit.

DO NOT start work until you have received a signed, approved copy of this document.

I. Requester

Company or JLab
Group performing work:

Phone
number:

Location of penetration:

Desired
start date:

Purpose of penetration:

Supervisor of
penetration work:

Phone
number:

Work Order
Number

Project
Title:

Account
Code:

For interior or exterior penetration of a building or structure, use project drawing, a sketch below, or attach diagram to illustrate location relative to nearby structure or reference points inside the building.

II. SME APPROVAL

System	Comment	Reviewed/Approved By	Date	Locate Required? ✓ If Yes
Accelerator OPS	Required for any work within the accelerator fence			
RADCON	Required for any work within the accelerator fence and on any structure or surface that functions as a physical barrier to a radiological-controlled area			
Electrical	All Permits			
Chilled, Cooling, Low Conductivity Water	All Permits			
Potable Water	All Permits			
Sewer	All Permits			
Communications/Data	All Permits			
Stormwater	All Site			
Structural	Within structures			
Fire Protection/Life Safety Systems	All Permits			
Natural Gas	All Permits			
Operations Coordinator	If Applicable			

Comments:

Return this permit to Facilities Drafting for Location Services and Permit Approval

III. Services under this section are to be performed by Facilities

JLab TR or contact:

Name of locate service used:

Locating equipment used:

Site or building drawing(s) used:

Date utilities located & marked:

POC for advance building notification & other emergency contacts:

Comments, notes:

Phone number:

Technician name: (first, last)

Make/Model Serial Number: Calibration Due Date:

Additional location or verification required? ☐ Yes ☐ No

Phone numbers:

IV. Facilities Mgmt. Approval

Date:

Comments:

A copy of the Signed Permit is to be provided to Facilities Drafting (Bldg 28, room 75)
Permit and As-Built Drawings (if any) Returned to Facilities Management Drafting

By: _

Date: _

Authorized SMEs

System	SME Department	SMEs
Accelerator OPS	Accelerator OPS	Shawn Frierson/Daniel Moser
RADCON	Required for any work within the accelerator fence and on any structure or surface that functions as a physical barrier to a radiologically-controlled area	Adam Stavola/Pavel Degtiarenko/David Hamlette
Electrical	Facilities – FMENG-E	Jason Willoughby/Paul Powers
Chilled, Cooling, Low Conductivity Water	Facilities – FMENG-M	Carroll Jones/Mike Sprouse
Potable Water	Facilities - FMENG-M	Carroll Jones/Mike Sprouse
Sewer	Facilities - FMENG-M	Carroll Jones/Mike Sprouse
Communications/Data	Facilities - FMENG-E	Jason Willoughby/Paul Powers
Stormwater	Facilities - FMENG-S	Tony Risk/Joel Dolbeck
Structural	Facilities - FMENG-S	Suresh Chandra/Tom Renzo
Fire Protection/LLS	Facilities - FMFS	Robert Myles
Natural Gas	Facilities - FMENG-M	Carroll Jones/Mike Sprouse
Operations Coordinator	If Applicable	Hall Coordinators, Phil Denny, Jonathan Creel etc

APWA Uniform Color Code

WHITE	Proposed excavation
Pink	Temporary survey marking
Red	Electric power cable or conduit
Yellow	Gas, oil, petroleum, gaseous materials

Orange	Telecommunications, data, alarm cables
Blue	Potable water
Purple	Irrigation water
Green	Sewers & drains