

Chapter 11: <u>Excavation Safety</u> Excavation Permit Form

Product ID: <u>134</u> | Revision ID: 2281 | Date Published: 23 June 2021 | Date Effective: 23 June 2021 URL: <u>https://www-group.slac.stanford.edu/esh/eshmanual/references/excavationsFormPermit.pdf</u> | <u>docx</u>

ENVIRONMENT, SAFETY & HEALTH DIVISION

Instructions

This form must be completed for *excavations* (including *ground disturbance* activities) in which contact with soil is expected – such as trenching, drilling, removing, or penetrating soil – that meet any of these conditions at any time:

- 1. Depth is one foot or more
- 2. Power tools will be used
- 3. Utilities are identified
- 4. Soil will be disturbed as a result of asphalt and/or concrete removal
- 5. Any hazardous condition is likely to be encountered

The following activities are exempt:

- Sampling soil, concrete, and asphalt from bins, hoppers, or stockpiles using hand tools
- Replacing existing sign posts in and around SLAC roads, parking areas, and pathways, provided sleeves are used

The form must be completed, approved, and kept with work planning and control (WPC) documentation at the work site for the duration of the described excavation. (See Excavation Procedures [SLAC-I-730-0A23C-001].) The excavation safety program manager maintains the record copies of all closed permits.

Important

The conditions and hazard mitigations listed below must be included in the appropriate job safety analysis (JSA) and pre-work/tailgate briefing.

Scheduling

- Allow 10 working days for required reviews.
- If soil testing is required, allow an extra 2 weeks after the sampling date.
- Permitted work must be initiated within 3 months of original submission. If it is not initiated the permit must be resubmitted to confirm in-field survey accuracy.

Emergency Excavation

There may be times when an excavation needs to begin before the permit is fully approved. The excavation safety program manager can authorize beginning an excavation while the permit is going through the approval process. Before the start of excavation, a review of utility location must be performed, including a review of drawings and a utility survey when possible. Once utilities have been identified, the excavation can begin in conjunction with the permit going through the approval process.

Multiple Excavations within the Same Work Site

Multiple excavations within the same work site require additional documentation and survey in instances where an excavation permit is completed for an initial large excavation and later additional smaller excavations may be needed in areas not covered by the existing excavation permit. Additional utility surveys will need to be conducted in locations that had not been surveyed previously or if a new utility had been installed since the original excavation permit was issued. For each additional excavation location needed on the site, Section A of the excavation permit form must be completed by the FCM and approved by a Safety Services representative.

A Description

Completed by the project manager (PM) or field construction manager (FCM)

Initiated by:			Phone:		Date:		
PM or FCM:			Phone:		Service request	#:	
PM or FCM:	VI:		Phone:		PO #:		
Competent person:			Phone:		Estimated start d	late:	
Subcontractor:			Phone:		Estimated end da	ate:	
Project location (include	e grid coordinates):				Nearest building:	•	
Describe excavation pu	urpose:						
Attach a detailed sket	tch or drawing (include lo	cation, din	nensions of wo	rk to be completed, and	d grading plans for	cut-and-	fill work)
Length: Width:	Length:		d volume of excavated material, ds (yd³) soil reuse as backfill?		As-builts, if needed, will be completed by Subcontractor Facilities engineer (see service request # above)		
Depth:		Yes	No 🔲		Requester		
	five or more feet deep and n (sloping, benching, shori			• •		Yes 🗌] No 🗌
Will the excavation be 20 or more feet deep? If yes 1 The protective system must be designed by a registered professional engineer. 2 A description of the system must be submitted prior to excavation.					Yes 🗌	No 🗌	
Will soil compaction testing be needed? If yes Specify testing method: ☐ nuclear gauge (prior authorization required) ☐ sand cone test					Yes [] No 🗌	
Is the excavation within any area that is posted as any type of controlled area, radiologically controlled area, contamination area, radiation, high radiation, or radioactive material area?					Yes / n	ot sure No	
Is the excavation within 25 lateral feet of an underground beam line housing? (indicated by yellow on the Beam Line Map)				Yes / n	oot sure 🗌 No 🗍		
Does the excavation involve a well or soil boring? If yes				Yes 🗌] No 🗌		
1 Will the bore be near accelerator housing or is there any reason to suspect that radiological conditions may be encountered (such as tritium in groundwater)?					Yes / n	ot sure No	
2 Will a drill rig be brought on-site? If yes, complete Excavation Safety: Mobile / Portable Drilling Rig Initial Inspection Form before beginning work Yes No] No 🗌		
3 Will the bore encounter groundwater or be deeper than 10 feet? If yes, attach completed San Mateo County Environmental Health Services Division subsurface drilling permit] No 🗌			
Are there utilities within the excavation area (confirm after utility survey, Section B)? If yes Yes No							
1 All known utilities must be located before digging. If the excavation will be within three feet of a utility, the exact location (horizontal and vertical position and depth below surface) of the utility must be determined by potholing and recorded on the as-builts.							
2 Use of heavy machinery is not allowed within an exclusion zone (the width of the utility plus 18 inches in all directions) around the utility.							
3 All utilities in the area must be de-energized/de-pressurized and locked and tagged before digging unless an exception is approved by the Facility and Operations division director. Is an exception requested? Yes \(\sqrt{P} \) No \(\sqrt{P} \) Explain:					approved by the		
Important: these hazard mitigations must be included in the JSA and pre-work/tailgate briefing for the days digging will occur.					ır.		

B Utility Drawing Review

Completed by the facilities engineer

The following utilities are present in the excavation/ground disturbance area (check all that apply):				
☐ Electrical	☐ Process piping	☐ Control cables	☐ Water	☐ Sanitary sewer
☐ Natural gas	Compressed air	Telephone	Groundwat	
Other:				
Refer to drawing number(s):				
Important An in-field utility line location is required for all excavations that require a permit; a completed Excavation Safety: Utility Line Location Results Form must be attached to this form. Updated as-builts required upon completion? Yes No				
Name (print):				
Signature:			Date:	

C Radiological Review

Completed by the Radiation Protection Field Operations (RPFO) Group

 □ No additional RPFO requirements □ Additional requirements apply as follows: 					
	A <u>radiation generating device authorization</u> is required prior to bringing the device onto SLAC property.				
	A <u>radiological work permit</u> is required and must be attached to this form during excavation operations.				
	Radioactive waste management is required. Contact Radioactive Waste Management. Allow 3-5 days for container delivery.				
	Other:				
	Call ext for further instructions				
Name (print):					
Signature:			Date:		
☐ No specia	al requiren	ion Physics Group if excavation/ground disturbance is or may be within 25 nents apply. ents apply as follows:	lateral fee	et of any underground beam housing	
Name (print):					
Signature:			Date:		

D Environmental Review

Completed by the Environmental Protection (EP) Department

Soil reuse requirements:					
Chemical data for WM	use:				
Other requirements:					
Nove (c.250)					
Name (print):		5.			
Signature:		Date:			
E Weste M	Vanagament Paviou				
	Management Review Management (WM) Group				
Waste classification of					
vvasto diassinoation or	oxeavated material.				
Other requirements:					
Contact the Waste Management Group for any disposal coordination and containers by means of the <u>Hazardous Waste Pick Up and Disposal Form</u> . Allow 3-5 days for container delivery.					
Name (print):					
Signature:		Date:			

F Approvals

Completed by the excavation safety program manager

I have reviewed this permit and work may proceed.				
Name (print):				
Signature:		Date:		
Completed by the Facilities and Operations division director, if excavation over active utilities is required.				
No special requirements apply. Additional requirements apply as follows:				
Name (print):				
Signature:		Date:		

G Scope Change / Additions to Project Excavation

The PM or FCM must notify the excavation safety program manager of any scope of work changes or additions to excavations not included in the initial excavation permit. The excavation safety program manager will determine if the permit must be revised and reapproved. (Examples of a scope change include encountering unexpected conditions or an increase in the size of the excavation.)

For additional excavations not covered in the permit, complete Section A of this form and attach to the permit as an addendum. Based on the time lapsed from original permit and the location of new excavations, additional utility survey may be required.

Describe scope chang	e:		
Name (print):			
Signature:		Date:	
Completed by the excav	vation safety program manager		
I have reviewed the sc	ope change / additions to the initial excavation permit and work may proce	eed.	
Name (print):			
Signature:		Date:	
H Close C	Out ct manager (PM) or field construction manager (FCM)		
	utility line location results were verified in the field, the drawings were delivered according to the permit conditions.	vered to the	e facility engineer as required, and the
Name (print):			
Signature:		Date:	
Completed by the excav	ration safety program manager		
RP, EP, WM, and the	facilities engineer have been notified that the permit has been closed.		
Name (print):			
Signature:		Date:	