

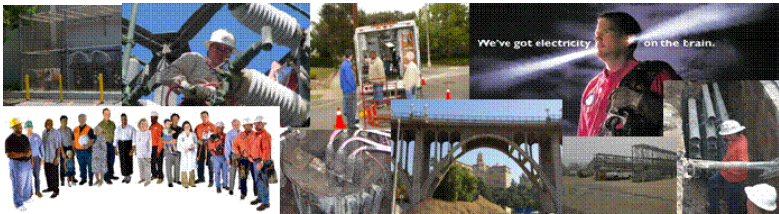
## About this Guide

This guide walks you through your general responsibilities in caring for any privately owned transformer vault located on your property, including your obligations to comply with state and local regulations, basic descriptions of what these obligations are, and other information to help you stay in compliance with City code.

Also addressed is the Department's right to access your property in order to inspect and, if necessary, repair any deficiencies, and the potential consequences of not meeting the set standards.

We hope you find this guide a helpful resource.

Note that this guide is not a comprehensive technical guide and it is not a substitute for the complete requirements as set forth in the City's Electric Service Requirements and applicable Ordinance 13.04.125. For that information you should refer to PWP on the web at [www.pwpweb.com](http://www.pwpweb.com) and follow the links to Rates and Service Requirements, or view Municipal Codes at <http://ordlink.com/codes/pasadena/> and follow the links to Title 13 and then look for Chapter 13.04.125.



## Summary of Important Codes, Guidelines and Standards

### Noncompliant Vaults, Remediation and Code Enforcement

Pasadena Water and Power Department Electric Service Requirements—Regulation 21

Section IV applies to Transformer Enclosures/Vaults on Private Property. Here it is stated that the “installation of a vault/enclosure shall be required, at the vault owner's expense, for any single-phase service that exceeds 200 amperes or any three-phase service that exceeds 100 amperes.”

Following approved installation, PWP is responsible for the maintenance and repair of the electrical equipment inside the vault (except as described in the regulation), but the maintenance and repair of the actual vault, including guaranteeing easy access to the vault for PWP employees and contractors is entirely the responsibility of the property owner (who is the direct beneficiary of the vault) and must meet the standards set forth in the Regulation and as enforced by the City's Ordinance 13.04.125.

Currently there are approximately 2,000 private property owners in the City of Pasadena that are required to have and maintain a transformer vault on their property.

*Note: For information on construction requirements for transformer vault installations, including design, construction, permitting and inspection, please consult Regulation 21 or contact a PWP Utility Service Planner at (626) 744-4495.*

## It's Your Responsibility

### **Ordinance 13.04.125 Private Underground Electric Vaults**

#### **Underground Electric Vaults.**

“On reasonable notice, the department may enter upon private property to inspect, repair or replace any private underground electrical vault. It shall be the duty of the owner of a private underground vault to: i) make the vault freely accessible to department employees; ii) maintain the vault in good repair free from water or other unsafe conditions; and iii) comply with all state and local regulations applicable to underground electrical vaults. Any vault which fails to meet these requirements is hereby deemed a nuisance per se.”

#### **What Does that Mean?**

It means that a vault owner is responsible for keeping the vault in a safe condition and that a Pasadena Water and Power Department employee must be able to get to the vault for inspection or equipment maintenance (if necessary) at any time. Both state and local entities have regulations with which you need to be familiar and in compliance.

## Property Owner Responsibilities:

Power distribution equipment and the protective enclosures that house it must be inspected regularly by PWP employees and contractors and repaired as necessary. To be able to do this safely and efficiently, private property vault owners need to help out by making sure that their vaults are accessible and free of hazardous conditions.

### **Ensure appropriate signage is posted**

- Vault must be clearly marked with signage indicating that high-voltage equipment is housed within.
- Any high-voltage conduits between PWP's manhole and the vault that pass through a building must have permanent signs attached indicating "High Voltage." (Such conduits must be encased in a 3-inch envelope of red concrete.)
- PWP provides the signage that must remain in place at all times.

Note: If your signage has been stolen, damaged or needs to be replaced, contact the PWP Underground Distribution Division at (626) 744-4467 and let us know that you would like replacement signage for your vault. We're here to help.

### **Maintain free and safe access and exit for PWP employees and contractors**

- PWP must be allowed to inspect the vault and/or conduct maintenance on the equipment inside the vault at any time, without hindrance.
- No locks other than those belonging to PWP may be placed on the vault.
- PWP provides locks; the customer is responsible for providing the lock hasps.
- PWP installed locks may not be cut, damaged, or removed for any reason and no one other than PWP employees or contractors are allowed to enter or access the vault.

### **Make sure that no structures, landscaping or other obstructions are placed on, over, or in front of any transformer vaults or enclosures**

- Surrounding plants, trees and/or shrubs must be kept trim so as to not block access to the transformer vault.

Keep in mind that there must be enough space around the vault for PWP to be able to drive a truck with a crane up to the transformer

vault in the event that there are any heavy parts that need to be moved or removed. (A transformer can weigh thousands of pounds!) This means that a minimum of 5ft. clearance is needed around the vault.

### **Never use the vault for storage of any kind**

- No items shall be stored inside the vault or block access to the electrical equipment inside the vault

### **Ensure vault integrity so that the equipment inside can remain dry. For example:**

- No fire sprinklers can be placed inside the vault
- Garden sprinkler systems should not spray into the vault

Vault ducts are designed to keep rainwater out, but manmade water devices and runoff should be di-

rected away from the vault — this is highly dangerous

### **Do Not allow foreign pipes or any other objects to pass through the vault**

### **Be responsible for general vault maintenance required to ensure vault integrity**

- Make sure that the vault is adequately ventilated and that there is nothing blocking ventilation ducts. If ventilation ducts are blocked, this may result in overheating of the transformer, which can lead to a disruption of service
- Maintain high and low voltage conduits via a privately retained contractor or by contacting PWP to request service. (Service provided by PWP will be billed to the vault owner at the cost of labor and materials.)

## **What if My Vault Isn't In Compliance?**

### **Noncompliant Vaults, Remediation and Code Enforcement**

Pasadena Ordinance 13 .04 .125 Private Underground Electric Vaults.

Section 1, Paragraph B of this ordinance states:

“In event the condition of a private underground vault does not meet the requirements set forth in subsection A, the department may proceed with code enforcement proceedings pursuant to Chapters 1 .24, 1 .26 or 1 .30 of the Pasadena Municipal Code . The department may also, in its discretion, remediate the condition of any private underground vault. Prior to such

remediation, the department shall notify the vault owner of the problems to correct and the time for correcting them. If the problems are not timely corrected, the department shall notify the vault owner of the department's proposed solutions to the problems and the department's cost to complete them. The vault owner shall have the right to contest the department's proposed action by filing an administrative appeal with the general manager of the department no later than ten days from the date set forth on the department's notice. In event an appeal is not timely taken, the department's proposed action shall be the final administrative decision and no resort to the courts may be taken therefrom due to failure to exhaust remedies."

**"...the department shall do the necessary work and the costs related to any such work will be billed back to the property owner."**

Simply stated, PWP will give private property vault owners written notification that they have 10 days to correct any issues. If the problems are not addressed to the satisfaction of a PWP inspector on subsequent inspection, the department shall do the necessary work and the costs related to any such work will be billed back to the property owner. (In the event that unsafe conditions are found, PWP has the right to interrupt service.)



### Do I Have to Pay for Repairs Made by PWP?

Yes, you must pay for any and all repairs made by PWP to bring your vault to compliance. The cost of labor and materials will be billed back to you, as incurred by PWP.

Not paying the full cost for repairs made to the vault by PWP in a timely manner may result in shut-off of electrical service to the premises served by the privately owned transformer vault. Proceedings to recover costs incurred by PWP in the remediation of issues with the vault may also be brought against the vault owner.

Privately owned vaults are regulated by state and local codes and, because of the seriousness of the potential hazards posed by non-compliant vaults, in extreme cases, violations may be prosecuted as misdemeanors.

### Vault Owner's Checklist

Regularly "inspect" your own vault

- Make sure there is no water, such as sprinkler systems, that can get into the enclosure and in contact with the equipment inside (vaults are designed to protect against weather conditions, such as rain)
- See to it that there are no access restrictions (5ft clearance around the vault)
- Clear any debris from vault ventilating ducts
- Note any cracks in the vault structure (and contact PWP if you find any)
- Keep the area clear of any objects that are not related to the vault or transformer equipment
- Cut back any trees, shrubs or other landscaping (do not put anything on top of the vault)
- When in doubt, contact the PWP Underground Distribution Division at (626) 744-4467

... and be sure to promptly comply with any notice of unacceptable vault conditions you may receive from PWP.

## California Public Utilities Commission Mandates Regular Inspections of Electric Distribution Facilities

California Public Utilities Commission (CPUC) General Order 165, in effect since March 1, 1977, lays out the requirements for inspections of distribution facilities.

According to this order, electric utilities, like PWP, are to conduct regular inspections of facilities “as necessary, to assure reliable, high-quality and safe operation, but in no case may the period between inspections (measured in years) exceed the time specified...”

PWP has adopted Order 165 and therefore inspects its urban transformers at least annually by patrol (visual inspection) to identify any obvious structural issues and hazardous conditions. A detailed inspection is conducted at least every three years. A detailed inspection involves actually entering the vault and inspecting the transformer equipment up close.

Using a detailed inspection form, PWP documents items such as:

- Vault number, location and type
- Ambient temperature of the vault
- General condition of the vault and compliance with standards, including:
  - signage, cover, exhaust fans, vents, walls, ceiling, floor, sump pump, light/plugs, proper work space, etc.
- List of transformer equipment and type
- Condition of the transformer equipment, including:
  - temperature, oil leaks, rust, overload, grounding, etc.
- Any required corrective action and schedule for response/ completion

These regular inspections are critical to PWP's ability to provide the safest most reliable service.

## Maintaining Your Underground Electric Vault – A Guide for Private Property Vault Owners

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Pasadena, CA 91101-2437  
Phone: (626) 744-4153

Check us out on the Web!  
[www.pwpweb.com](http://www.pwpweb.com)

### For More Information or Questions

Electronic versions of the City of Pasadena Municipal Code, PWP Electric Service Requirements: Regulation 21 and Pasadena City Ordinance 13.04.125, are available on the web. Just follow the links.

- ◆ PWP Homepage:  
[www.pwpweb.com](http://www.pwpweb.com)
- ◆ Rates and Service Requirements (Regulation 21):  
[www.cityofpasadena.net/waterandpower/aboutpwp\\_regulations.asp](http://www.cityofpasadena.net/waterandpower/aboutpwp_regulations.asp)
- ◆ City of Pasadena Municipal Code:  
[www.cityofpasadena.net/cityclerk/municipalcode.asp](http://www.cityofpasadena.net/cityclerk/municipalcode.asp)
- ◆ Pasadena City Ordinance 13.04.125:  
[www.ordlink.com/codes/pasadena/](http://www.ordlink.com/codes/pasadena/)  
(click on Title 13 and then navigate to 13.04.125)
- ◆ CPUC's General Order 165:  
[www.cpuc.ca.gov/PUBLISHED/Graphics/617-2.PDF](http://www.cpuc.ca.gov/PUBLISHED/Graphics/617-2.PDF)

You can also call the PWP Power Delivery Services main office at (626) 744-4153 if you have any questions.