PSE
Structures & Equipment

A pictorial guide to typical PSE electrical distribution and transmission system facilities.

Typical PSE Underground Distribution System Structures & Equipment

Most PSE underground distribution systems operate at between 7,200 volts (7.2kV) and 12,500 volts (12.5kV). Much of our underground distribution system (cables) is located underground along public and private roads, and is never seen. This section displays typical PSE underground distribution facilities mounted above ground.

Typical Underground Distribution
Feeder Cable Pull Vault (11’ X 7’)

Typical Underground Distribution
Cable Junction Vault (5’ X 7’)

Typical Underground Distribution
Vista Switch Vault (8’ X 9’)
(the switch equipment sits completely within the vault)

Typical Underground Distribution Single Phase Pad-mount Transformer (2.5’ X 2.5’ X 2’)

Single phase pad-mount transformers are common in neighborhoods typically serving 1 - 8 homes per transformer

Typical Underground Distribution
Three Phase Pad-mount Transformer
(5’ X 5’ X 5’ typical but can vary by transformer output rating)

Three phase pad-mount transformers often serve a single commercial customer (but may serve multiple customers) and may be pair with single phase transformers in response to particular service needs

Typical Underground Distribution Pad-mount Switches (5’ X 5’& X 4’) & Vaults (11‘ X 6’)

Switches are common in neighborhoods and are sometimes installed in multiple adjacent configurations

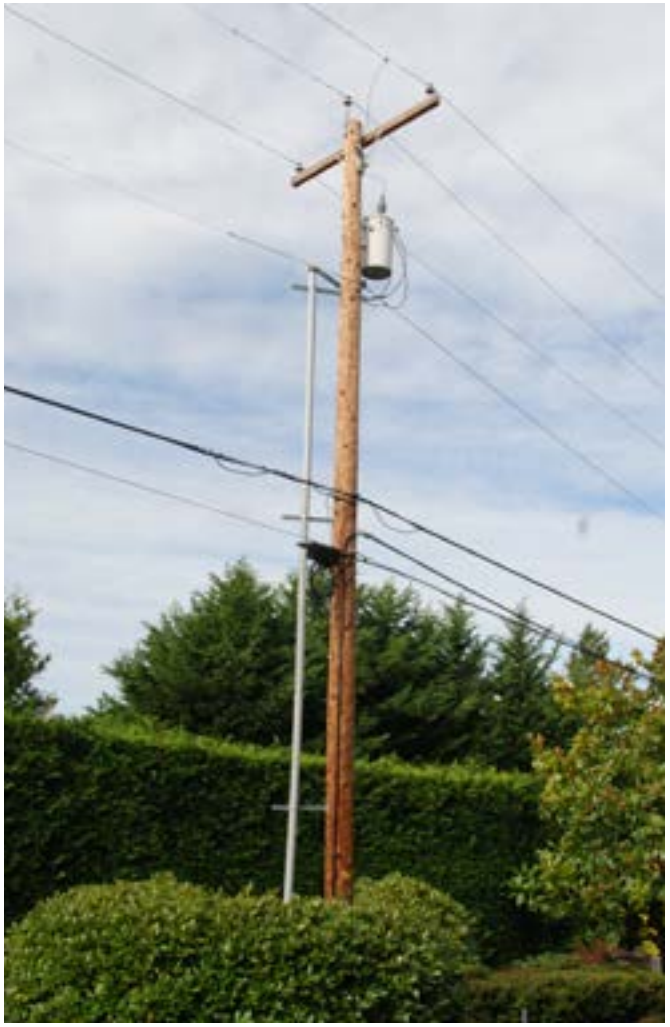
Typical PSE Overhead Distribution System Structures

Most PSE overhead distribution lines operate at between 7,200 volts (7.2kV) and 12,500 volts (12.5kV). Most of our overhead distribution system support structures are single wood poles located along public and private roads. This section displays typical PSE distribution line structures.

Typical Single Phase Distribution

Typical Single Phase Distribution with Transformer & Street Light

Typical Single Phase Distribution with Down Guys & Anchor



Typical Three Phase Distribution on Cross-arm (with single phase transformer and underground service connection)

Typical Three Phase Distribution with Three Phase Transformer Bank (with underground service connections)

Typical Three Phase Distribution with Down Guys & Anchor

Three Phase Distribution on Wing-arm

Three Phase Distribution – Compact Construction

Typical Three Phase Distribution with Sidewalk Guys & Anchor

Three Phase Distribution
with Gang Operated Switch

Three Phase Distribution with Recloser

Three Phase Distribution with Three Phase Underground Distribution Termination (where underground cable system connects to the overhead system)

Typical PSE 115KV Transmission Line Structures

Most PSE transmission lines operate at 115,000 volts (115kV). Many of our transmission line support structures are single wood poles along public roads, and a few are steel. Some transmission lines located in dedicated rights-of-way are supported by two or three wood pole H-Frame structure. This section displays typical PSE transmission line structures.

Typical 115kV Transmission Pole HPA (horizontal post alternating)

Typical 115kV Transmission Pole HPA with Distribution Under-build

Typical 115kV Transmission Pole HPD (horizontal post directional)

Typical 115kV Transmission Pole HPD with Distribution Under-build

Typical 115kV Transmission Pole Glu-lam
(laminated wood rectangular)

Typical 115kV Transmission Pole Steel

Typical 115kV Transmission H-Frame Structure