

Undergrounding Transmission Lines - A Comparison

OVERHEAD

Costs

- \$3 million to \$4 million per mile to construct*
- Costs covered by all PSE ratepayers

Aesthetics

- Visible poles and wires
- Some vegetation can remain near lines

Outage impacts

- Outages infrequent
- Repairs typically made within hours to days

Construction impacts

- Includes setting poles and stringing wire
- Requires removing dirt and trees for pole foundations

**Note: Costs per mile are noted for construction only and do not include other costs such as easement acquisitions, mitigation, and future operation and maintenance.*



Examples of 230 kV poles



230 kV poles under construction

UNDERGROUND

Costs

- \$20 million to \$28 million per mile to construct*
- Costs greater than the overhead option must be paid locally

Aesthetics

- No transmission poles, no visible wires
- Steel termination poles are visible
- No deep-rooted vegetation permitted along route
- Approximately 10- by 30- by 10-foot access vaults required every quarter to half mile



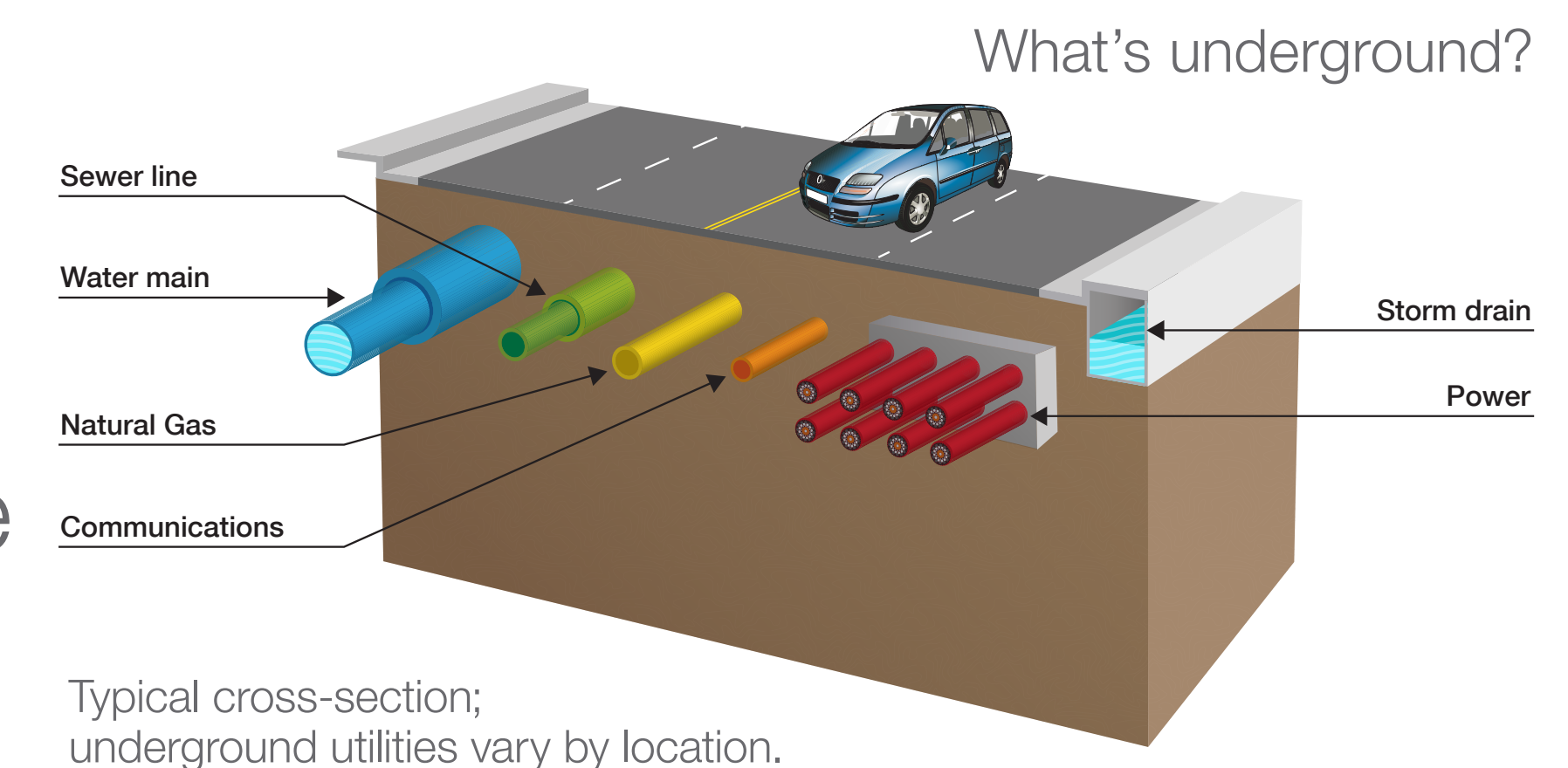
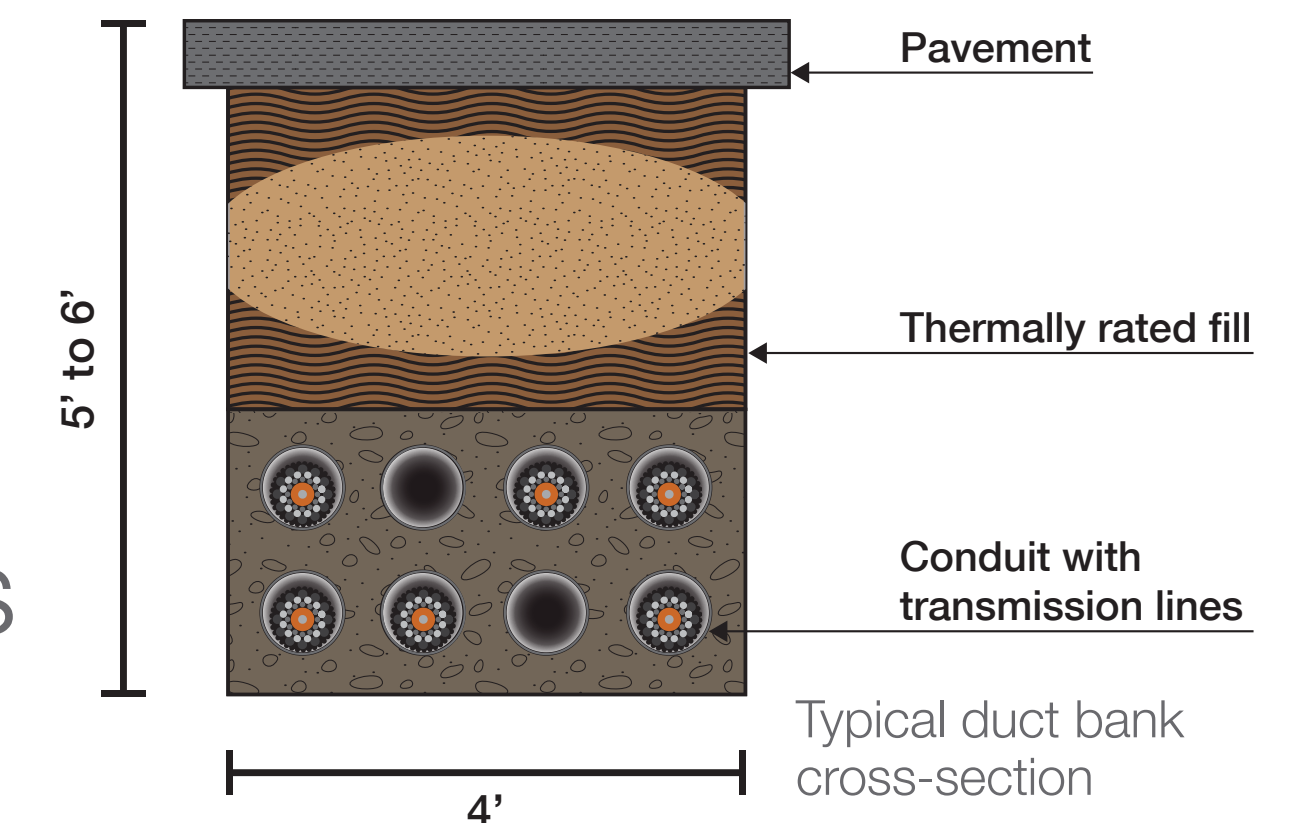
Steel termination pole

Outage impacts

- Outages very infrequent
- Repairs may take days to months

Construction impacts

- Potential relocation of major underground utilities
- Substantial dirt and tree removal required for trenches and vaults



Typical cross-section; underground utilities vary by location.