

Application

This standard describes requirements for customer-owned medium-voltage (primary) services for dead-front outdoor kiosks.

Revision Notes

Updated Figure 3 to remove service neutral bus. Changes are marked by green vertical revision lines in the left margin. This revision released concurrently with Standards and Equipment Advisory Information Bulletin 2025-055
Revised ES54 S3 Primary Services Private Property Installation Standards.

References

BC Hydro Distribution Standards

ES54 S0-02	Services General Notes
ES54 S0-03	Services General Notes Medium-Voltage (Primary) Services
ES54 S0-05	Services General Notes Service Ducts and Trenches

Other BC Hydro Documents

Requirements for Customer-Owned Primary Services Supplied at 4 kV to 35 kV – Primary Guide

Notes

1. Supply service cables installed with each phase in a separate service duct shall be designed to prevent eddy current heating in ferrous components, including but not limited to ducts, attachments, and routing.
2. See ES54 S0-03 for more information on pull box requirements.
3. Three-phase services using 4/0 AWG 25 kV supply service cables (with concentric neutral conductors) shall have a minimum of three service ducts, one for each supply service cable. Three-phase services using 500 kcmil 25 kV or 750 kcmil 25 kV supply service cables (tape shielded) shall have a minimum of four service ducts, one for each supply service cable and one for the supply service neutral.
4. Figures 1, 2, and 3 show typical installations of customer-owned dead-front equipment that may resemble a specific manufacturer's equipment. The figures show typical equipment configuration and specify BC Hydro minimum requirements. Multiple dead-front service equipment designs have been evaluated and accepted by BC Hydro. The configuration of some acceptable service equipment may differ from what is shown in this standard, but all acceptable service equipment is considered functionally equivalent to BC Hydro. See Primary Guide section 9.1.9 for a list of acceptable customer-owned dead-front primary service equipment.
5. The centre of each service duct shall be aligned directly underneath the contact surface of each service bushing due to the constrained supply service cable compartment for dead-front equipment. Failure to do so may prevent installation of the supply service cables by BC Hydro, incurring delays and requiring service duct reconfiguration by the customer. A service duct designated for the service neutral need not comply with this requirement. See ES54 S0-03 for minimum service duct clearance to edge of duct well.

Designed: B. Linforth		Professional of Record 2025-12-18  Permit to Practice 1002449	Primary Services Dead-Front Outdoor Kiosk Private Property Installation	
Checked: M. Kelvin, P. Eng				
Reviewed: M. Stevens, P. Eng			DISTRIBUTION STANDARDS 	ES54 S3-01 R9
Approved: M. Stevens, P. Eng				
		Issued: 2025-12-19 Effective: 2026-06-19		

6. The cable support channel shall be configurable by the installer in either of the two options shown in detail 3 (Figure 3) and shall be reconfigurable to either of the options during future cable replacement or other work. The assembly shall be adjustable inward and outward by a minimum of +15 mm and -75 mm when the front edge of the channel is aligned with the plane of the service bushings connection surface.
7. See Primary Guide section 9.1 for physical security requirements for mid-run pull boxes, supply service cable compartments, and switch compartments (where applicable).
8. See the Primary Guide for acceptable grounding ball studs.
9. Supply service cable type and size for three-phase service shall be determined by the BC Hydro designer.
10. See ES54 S0-02 and S0-03 for general notes related to medium-voltage (primary) services.
11. See ES54 S0-05 for trenching and service duct requirements.
12. All illustrations not to scale.

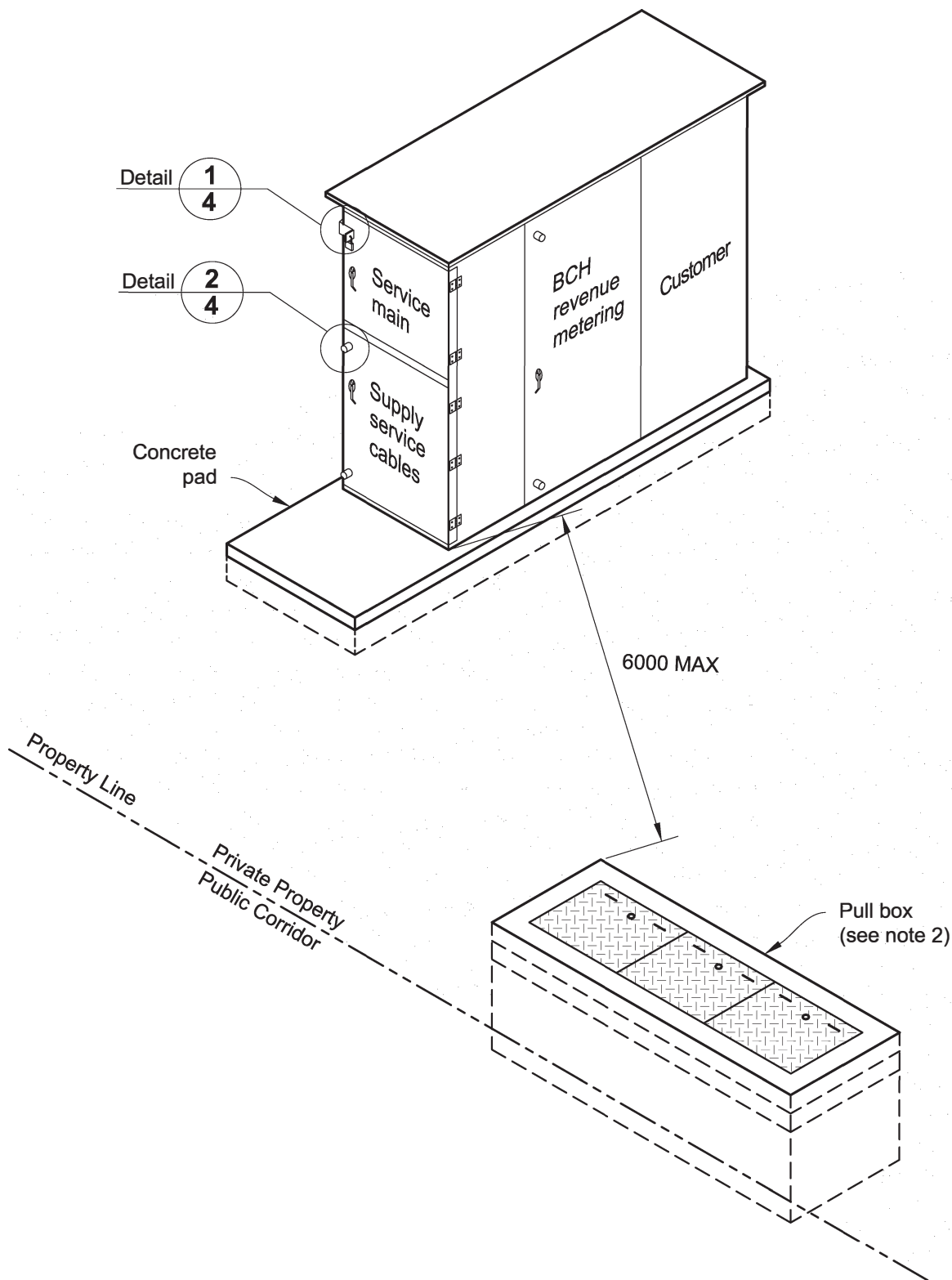
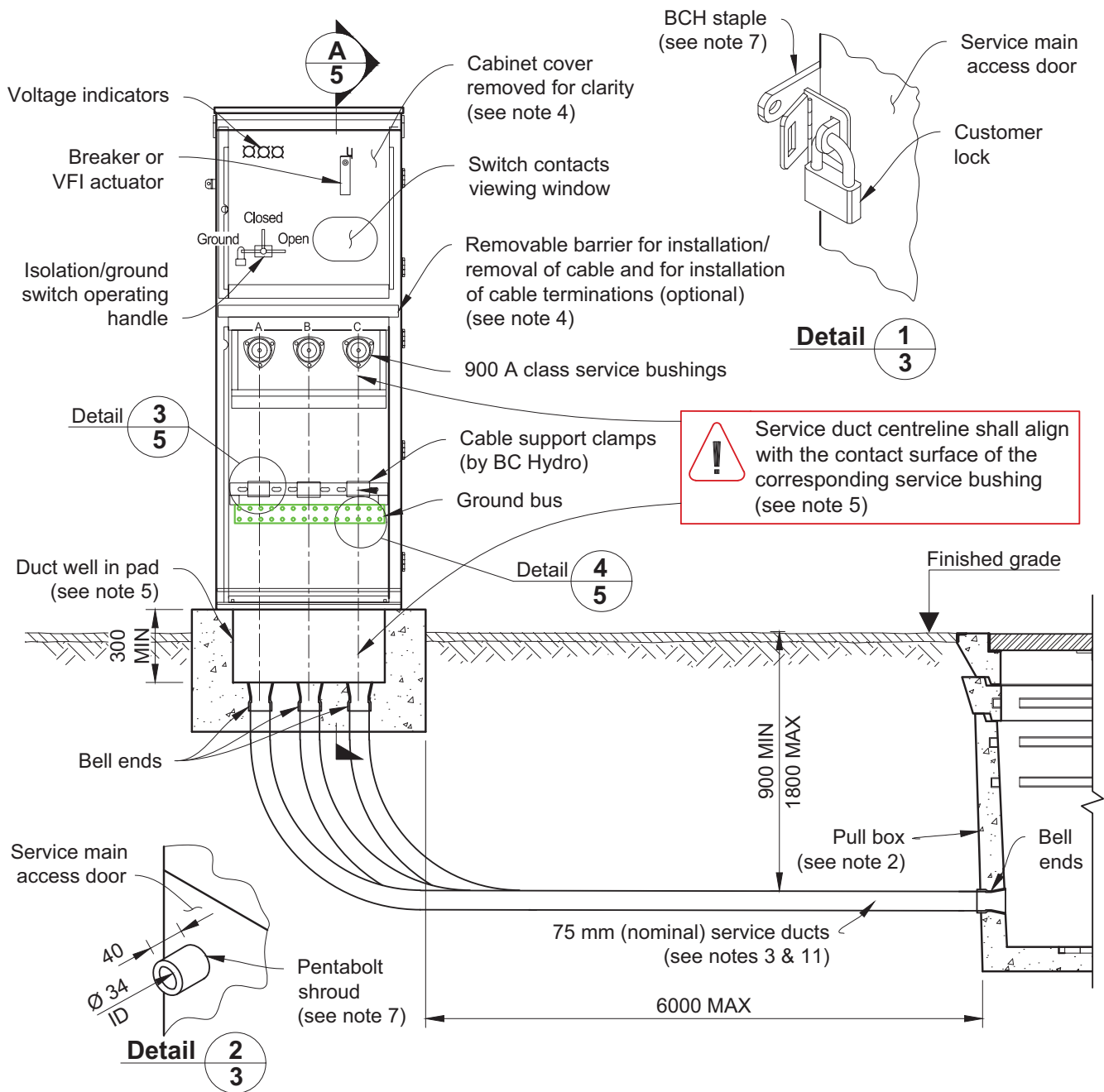


Figure 1 – Typical site layout



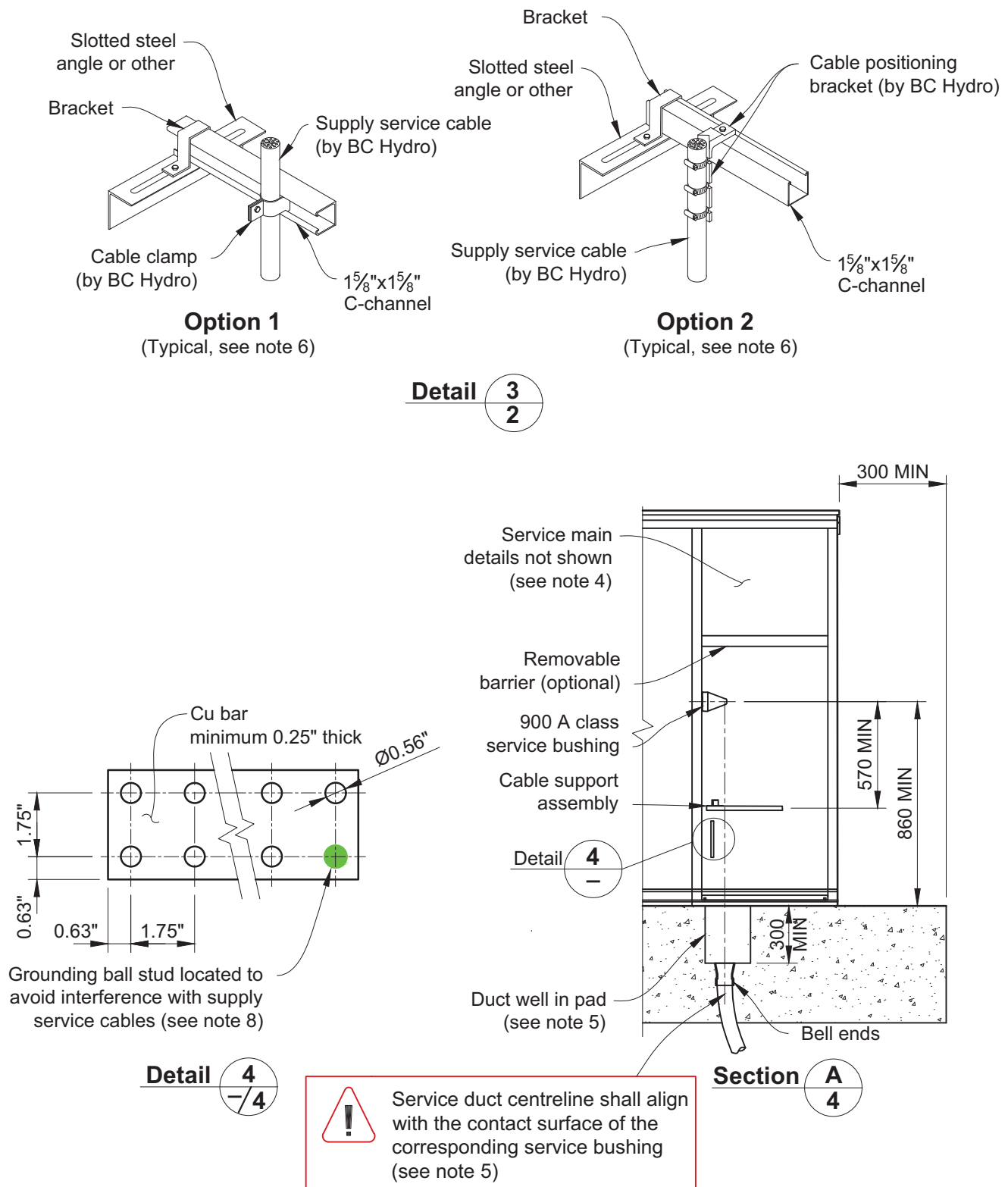


Figure 3 – Details 3 and 4 and section A