



Information Bulletin:

Revised ES54 C1 Precast Vault Standards

1.0 Items Covered

ES54 C1-02 R3 Precast Vaults Pull-and-Splice-Type Single Access

ES54 C1-03 R1 Precast Vaults T-Type Double Access

ES54 C1-04 R1 Precast Vaults 4-Way-Type Double Access

This advisory and the standards listed above can be found at bchydro.com/distributionstandards.

2.0 Overview

The design of the pull-and-splice, T, and 4-way type precast vaults have been revised to align with BC Hydro's change in supplier. Langley Concrete Group is now the sole supplier of these vaults. The new vault weights and dimensions are similar to the products provided by existing suppliers and should be applied in the same design applications in terms of functionality.

Key changes are:

- a. Lifting inserts will be cast into the top section roof slab and bottom section floor. Four Starcon lifting clutches are required to lift both top and bottom sections of the vault. Dayton Superior lift clutches have not been tested for interchangeability;
- b. Weights of the vault sections have changed:
 - i. Pull-and-splice top section from 3000 kg to 5500 kg
 - ii. Pull-and-splice bottom section from 3000 kg to 5600 kg
 - iii. T top section from 14,500 kg to 15,200 kg
 - iv. T bottom section from 14,000 kg to 15,520 kg
 - v. 4-way top section from 15,000 kg to 16,200 kg
 - vi. 4-way bottoms section from 14,000 kg to 16,400 kg
- c. Outside dimensions of the vaults have changed:
 - i. Pull-and-splice width of short wall from 1420 mm to 1690 mm
 - ii. Pull-and-splice width of long wall from 2210 mm to 2480 mm
 - iii. Pull-and-splice height of top section from 1115 mm to 1190 mm
 - iv. Pull-and-splice height of bottom section from 1220 mm to 1190 mm

- v. T footprint from 3900 mm x 4628 mm to 3970 mm x 4700 mm
- vi. T top section height from 1300 mm to 1370 mm
- vii. T bottom section height from 1390 mm to 1370 mm
- viii. 4-way footprint from 4560 mm x 4560 mm to 4620 mm x 4620 mm
- ix. 4-way bottom section height from 1390 mm to 1370 mm
- d. Sump location has moved to be closer to the corner;
- e. Self-grounding mechanism (Ufer grounding) has been incorporated into the vaults;
- f. Ducts for pull-and-splice vaults are pre-installed with 5" duct terminators; and
- g. Duct entry windows for T and 4-way vaults are pre-installed with 5" duct terminators, two rows on the top sections and three rows on the bottom sections.

3.0 Action

The material numbers for the three types of precast vaults remain the same.

Vault type	Material number
Pull-and-splice	400-0479
T	9601 9852
4-way	9601 9862

Previous iterations of the pull-and splice, T-type, and 4-way type vault standards can be found in BC Hydro's FileNet through the engineering standards search page.

Designers and Engineers

Designers and engineers shall use the latest ES54 C1-02, C1-03, and C1-04 revisions for underground residential distribution (URD), underground distribution (UD), and feeder installations using the above mentioned precast vaults. Functional applications of this structure remain the same and should not impact existing design applications. Designers should use the updated dimensions for clearance and separation requirements.

Civil Installers

Civil installers should:

- a. Use the latest ES54 C1-02, C1-03, and C1-04 revisions for updated weights and dimensions;
- b. Stock and use Starcon lifting clutches for appropriate lifting practices of precast concrete structures supplied by Langley Concrete Group; and
- c. Stock and supply appropriate couplers to transition from the pre-installed 5" ducts to 3" and 4" sizes.

4.0 Contact

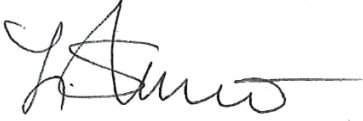
Customer and Customer Representatives

Please direct questions and concerns to your local BC Hydro representative.

BC Hydro Employees and Contractors

Please direct questions and concerns related to the standards to distribution.standards@bchydro.com.

5.0 Approval

Recommended		Reviewed		Approved	
					
J. Yang		L. Stevanovic		H. Giesbrecht	
Date:	2024-09-03	Date:	2024-09-03	Date:	2024-09-03