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REVISIONS: UPDATED LEGAL ACKNOWLEDGEMENT FORM. FD MAR '16

DESIGNED J. AGNOLIN	RECOMMENDED  F. DENNERT	ACCEPTED  G. REIMER	ENGINEER OF RECORD 	NOTICE FROM THE EXECUTIVE VICE PRESIDENT TRANSMISSION AND DISTRIBUTION AND CUSTOMER SERVICE		
DISTRIBUTION STANDARDS 		ISSUED: MAR 2016 REPLACES: MAY 2004 ORIGINALLY ISSUED: NOV 1980				PAGE 1 OF 2

Scope

This manual is one of a series containing standards for construction of the BC Hydro electrical distribution plant within the service area of BC Hydro. A new distribution plant shall be designed, constructed, owned, operated, maintained and repaired to these standards.

Purpose of Standards

BC Hydro objectives require standardization to:

- a) Ensure uniform safety requirements comply with BC statutes and regulations.
- b) Provide uniform system reliability.
- c) Provide uniform operating practices.
- d) Permit economic bulk purchasing of materials.
- e) Achieve optimum life cycle cost of plant construction.
- f) Effect efficient quality assurance.

Responsibility

The Distribution Standards Department prepares these standards and verifies that specified plant and procedures will perform adequately under all normally expected conditions encountered throughout the province of British Columbia. These standards are approved by Professional Engineers. It is the responsibility of BC Hydro Managers to ensure that the standards are followed unless abnormal conditions are encountered that require variations. These variations should be kept to a minimum and their performance shall be the responsibility of the Professional of Record in charge of the project, who will record and seal the variation based on satisfactory qualifications and experience to do so. As per the latest revision of the BC Hydro Distribution Owner's Engineer Guide, these variations must be accepted by BC Hydro's Owner's Engineer.

Use of Stock Materials

The electrical distribution plant covered by these standards is built using stock materials approved by a Professional Engineer as required by law. The use of non-stock materials for special and unusual situations must be approved by Distribution Standards or the BC Hydro Engineer responsible for the project.

Revisions to Manual

These standards are revised from time to time to improve the safety, performance, workability, cost effectiveness or appearance of the plant. The existing plant built to previous standards need not be updated unless so specifically advised by BC Hydro. When maintenance or other work, such as voltage conversion or conductor change is being done, updating plant to current standards is encouraged.

Mailing Addresses

The manual has been issued to a corporation or firm rather than to an individual. The corporation or firm is responsible for the safekeeping of the manual, and for keeping it current. Changes of address or in number of copies required must be reported promptly.

Suggestions for changes in the manual, or required changes of address may be made on the pre-addressed comment sheet included in the Manual and with each issue of revision.

REVISIONS: UPDATED LEGAL ACKNOWLEDGEMENT FORM. FD MAR '16

DESIGNED J. AGNOLIN	RECOMMENDED  F. DENNERT	ACCEPTED  S. REIMER	ENGINEER OF RECORD  F. U. DENNERT PROFESSIONAL ENGINEER BRITISH COLUMBIA	NOTICE FROM THE EXECUTIVE VICE PRESIDENT TRANSMISSION AND DISTRIBUTION AND CUSTOMER SERVICE		
DISTRIBUTION STANDARDS BC Hydro		ISSUED: MAR 2016 REPLACES: MAY 2004 ORIGINALLY ISSUED: NOV 1980		PAGE 2 OF 2	ES43/53/54/55/65 A1-01.02	R 4



Information Bulletin:

Revised ES54 C1-05 Through-Type Double Access Precast Vaults

1.0 Items Covered

ES54 C1-05 Precast Vaults Through-Type Double Access

2.0 Overview

The design of through-type double access precast vaults (material number 96022513) has been revised to align with BC Hydro's change in supplier. Langley Concrete Group is now the sole supplier of through-type double access precast vaults. The new vault dimensions are similar to the vaults 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 from 15,000 kg for both sections to 14,550 kg for the top section and 13,145 kg for the bottom section;
- (c) Outside dimensions of the vault have been changed:
 - i. Length: from 4310 (without buoyancy wing) mm to 4350 mm
 - ii. Width: from 2490 mm to 2530 mm
 - iii. Height of top section: from 1380 mm to 1455 mm
 - iv. Height of bottom section: from 1300 mm to 1305 mm
- (d) Sump location has moved to be closer to the corner, see Figure 1; and
- (e) Buoyancy wing has been removed;

3.0 Action

The through-type double access precast vault material number (96022513) remains the same. Previous iterations of through-type double access precast 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 C1-05 revision for underground residential distribution (URD), underground distribution (UD), and feeder installations using through-type double access precast vaults. Functional applications of this structure remains the same and should not impact existing design applications. Designers should use the updated dimensions for any clearance or separation requirements.

Civil Installers

Civil Installers should:

- (a) Use the latest ES54 C1-05 revision for updated weights and dimensions; and
- (b) Stock and use Starcon lifting clutches for appropriate lifting practices of precast concrete structures supplied by Langley Concrete Group.

4.0 Figures

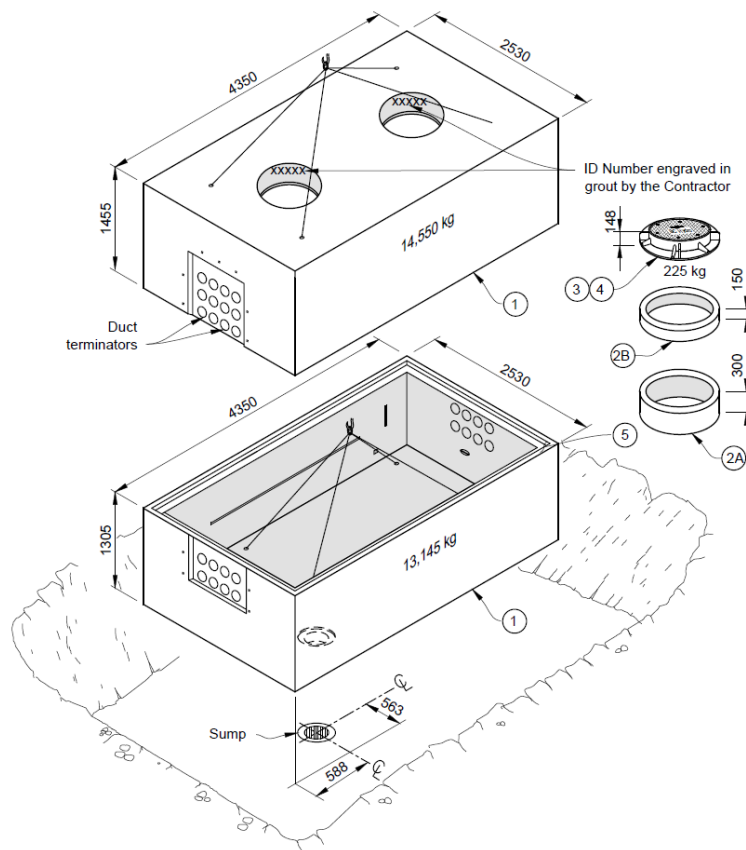
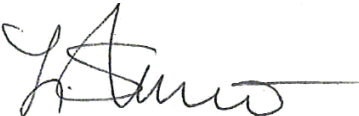


Figure 1 – Through-type double access vault

5.0 Distribution Standards Contact

Name: Jordan Yang	Email: Jordan.yang@bchydro.com
Phone:	Mobile: 604-989-8339

6.0 Approval

Recommended		Reviewed		Approved	
					
J. Yang		L. Stevanovic		H. Giesbrecht	
Date:	2023-04-30	Date:	2023-04-30	Date:	2023-04-30