

## 1.0 **SCOPE**

This specification covers precast concrete collars to be used on existing electrical vaults as a pad-mounted switch foundation.

## 2.0 **APPLICABLE PUBLICATIONS AND STANDARDS**

- 2.1. All concrete construction shall conform to ACI 301-10, “Standard Specification for Structural Concrete” and ACI 302, 305 and 306 unless noted otherwise.
- 2.2. All detailing, fabrication and placing of concrete shall conform to ACI 318-14, “Building Code Requirements for Structural Concrete” and the latest ACI “Manual of Standard Practice for Detail Reinforced Concrete Structures” unless noted otherwise.
- 2.3. Reinforcing bars shall conform to ASTM A615, Grade 60.

## 3.0 **PRODUCT REQUIREMENTS**

### 3.1. **Concrete**

- 3.1.1. All concrete shall develop a minimum compressive strength of 5000 psi in 28 days.
- 3.1.2. All concrete exposed to weather shall contain 6% ( $\pm$  1%) air entrainment.
- 3.1.3. All exposed edges to have a 3/4" chamfer.

### 3.2. **Reinforcing**

- 3.2.1. No tack welding of reinforcing in the field is permitted.
- 3.2.2. Provide corner bars at all locations where reinforcement changes direction.
- 3.2.3. Provide straight and diagonal bars at edges of all openings.
- 3.2.4. Clear distance shall be 2" minimum from face of concrete to center of reinforcing bar unless otherwise noted.
- 3.2.5. Reinforcing embedment and lap splices (inches) for 5000 psi concrete:

For Existing Vaults – Standard Size

Revised 09/2020

Specification

Bar Size	Other		Top*	
	Anchorage	Splice	Anchorage	Splice
#3	13	17	17	22
#4	17	22	22	30
#5	22	28	28	38
#6	26	33	33	45

\* Horizontal bars with more than 12” of concrete below bar

3.3. **Notes**

3.3.1. The collar dimensions and reinforcing steel has been designed based on the dimensions that are common of DOP vaults. The buyer and fabricator are responsible for verifying the geometric conformity of the detailed precast slab structure and its fitment to the existing or proposed below grade vault structures. When installed, one full existing vault grate should remain in place.

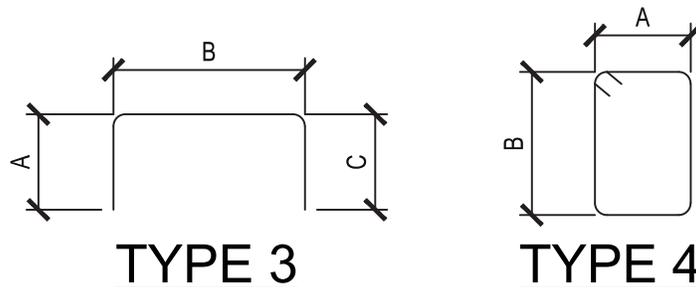
3.3.2. This structure has been designed for anticipated dead loads of up to 1,950 lbs.

3.4. **Detailed Drawings**

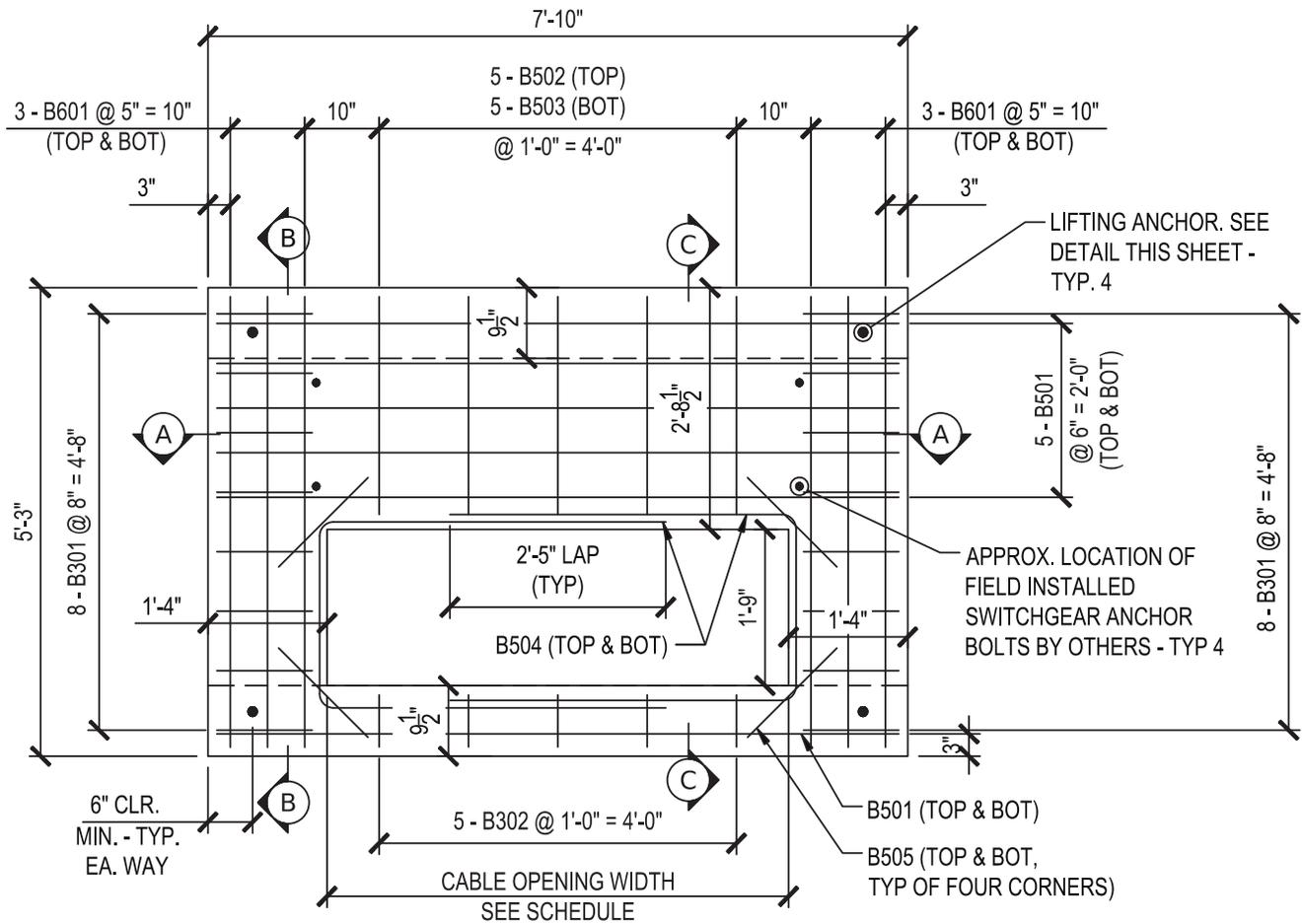
Refer to the attached drawings and tables at the end of this document for detailed dimensional and construction information.

Bar Mark	Bar Size	Length	Total	Weight (lbs.)	Type	Dimension		
						A	B	C
B301	#3	4’-2”	16	26	3	1’-0”	10”	
B302	#3	3’-0”	5	6	3	5”	10”	
B501	#5	7’-6”	12	94	STR			
B502	#5	3’-9”	5	20	2	10”	3’-4”	10”
B503	#5	2’-4”	5	13	STR			
B504	#5	9’-10”	4	42	2	4’-0”	2’-1”	4’-0”
B505	#5	1’-5”	8	12	STR			
B601	#6	5’-11”	12	107	STR			

Table 1: Bar Mark Reference Table



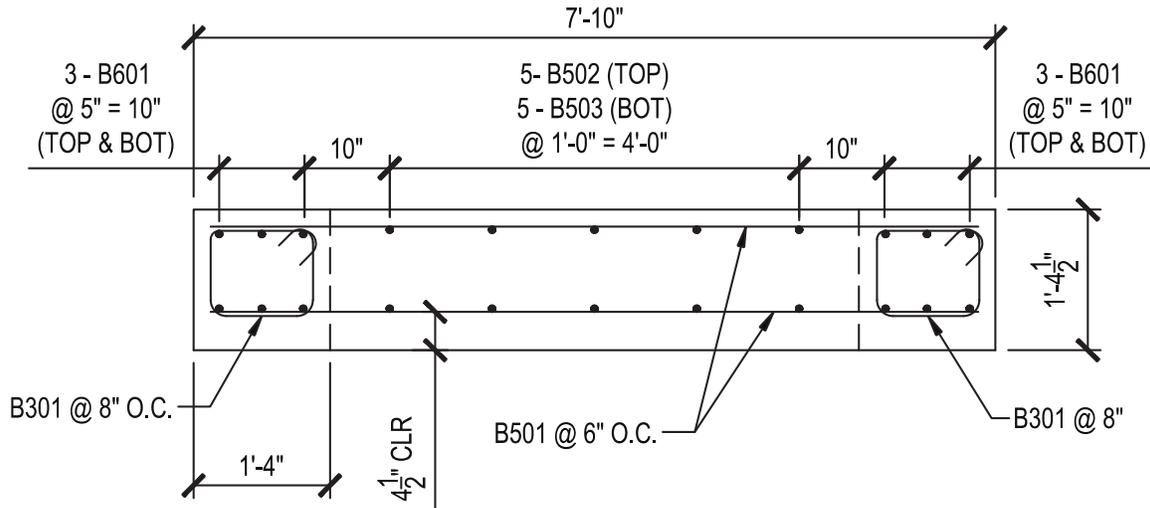
**PLAN VIEW**



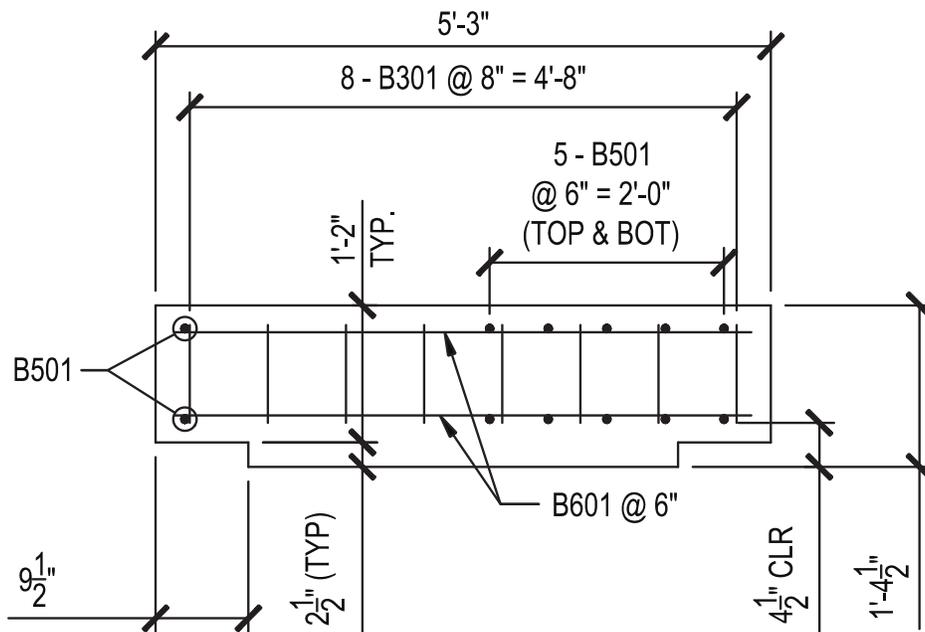
Number of Switch Ways	Width
4	50"
5	71"
6	71"

**Table 2: Schedule for Cable Opening Width**

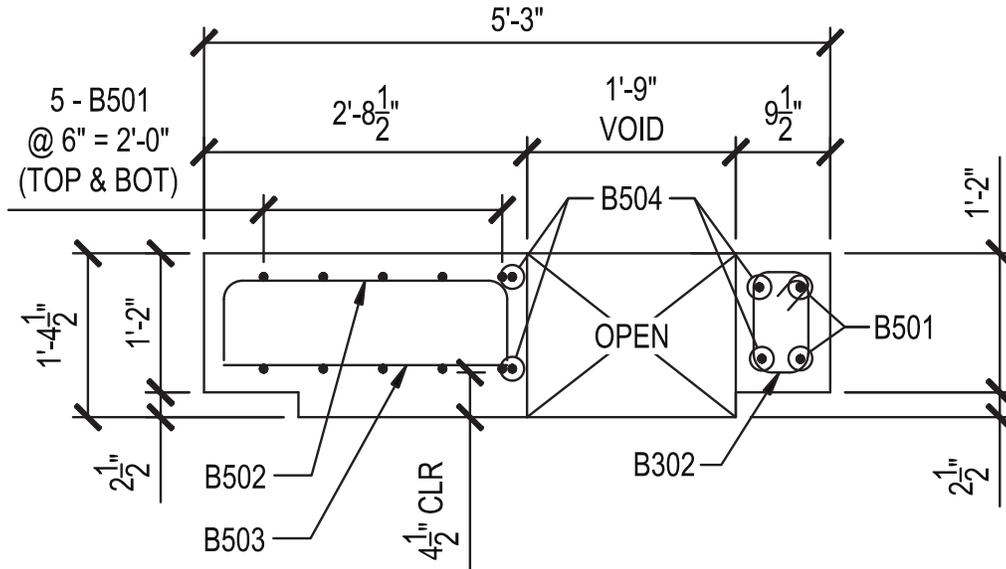
**SECTION A-A**



**SECTION B-B**



**SECTION C-C**



**LIFTING ANCHOR DETAILS**

