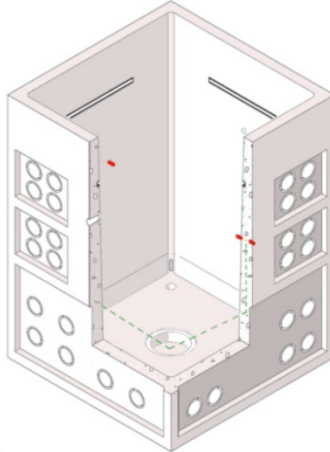


## 507 Electric Vault, Primary Service



### 1. Scope

This standard covers the requirements for 507 (also known as 557) electrical vault components (vault base and cover with hatch) and assembled 507 units.

Components can be ordered separately or ordered as an assembly.

This standard applies to the following Seattle City Light (SCL) stock numbers:

Stock No.	Description
013101	<b>Base</b> , standard 507
013102	<b>Cover</b> with hatch
013124	<b>Assembly</b> (base and cover with hatch)
013688	<b>Cover</b> with 42-in blockout
013689	<b>Assembly</b> (base and cover with 42-in blockout)

### 2. Application

507 vaults are used to construct the underground electric system. This precast concrete vault may be used to house medium-size transformers, loadbreak junction boxes, and service connections and splices for the distribution system.

H20-rated 507 vault assemblies should not be used in high-density locations.

Depending on the selected application, the 507 vault can be defined as a handhole or a vault. When SCL uses the 507 vault for primary service, it is designated a vault. For non-primary service, it is typically designated a handhole (not covered in this standard).

A 42-in round iron frame and cover must be ordered separately. For detailed material specifications for the iron frame and cover, see SCL 7204.70, "Frame and Covers, 42-Inch Round, Iron."

### 3. General Requirements

This standard is to be used in conjunction with the latest revision of SCL 7203.21, "Precast Reinforced Concrete Structures, General."

### 4. Component Requirements

#### 4.1 Grounding and Bonding

Vault grounding shall conform to SCL 7203.21.

#### 4.2 Base

**Table 4.2a. Vault Base Components**

	Size, Nominal (in)	Location	Per Location	Total Number
<b>Knockouts</b>				
Round	4-3/4 dia	All 4 walls, on bottom	8 ea side	32
Round	4-3/4 dia	4 panels of 4 on middle of all walls	16 ea side	64
Ground rod	2 dia	2 corners of floor	1 ea	2
<b>Channels</b>				
Galvanized "C" channel, horizontal, embedded in walls	36 long	All walls, above all knockouts	1 ea side	4
<b>Sump</b>	12 dia	Floor, center	1, to one side	1
<b>Pulling irons</b>	1/2 dia	1 ea corner of floor (typical)	1 ea corner	4
<b>Lift holes</b>	1-1/2 dia	2 opposite walls, center wall horizontally	1 ea side	2
<b>Ground Inserts, bronze</b>	1/2 dia	2 walls, opposite, internal and external	2 ea side	4
<b>Ladder</b>	–	Not required	–	–

The base shall have dimensions as shown in Tables 4.2b and 4.2c, and Figure 4.2.

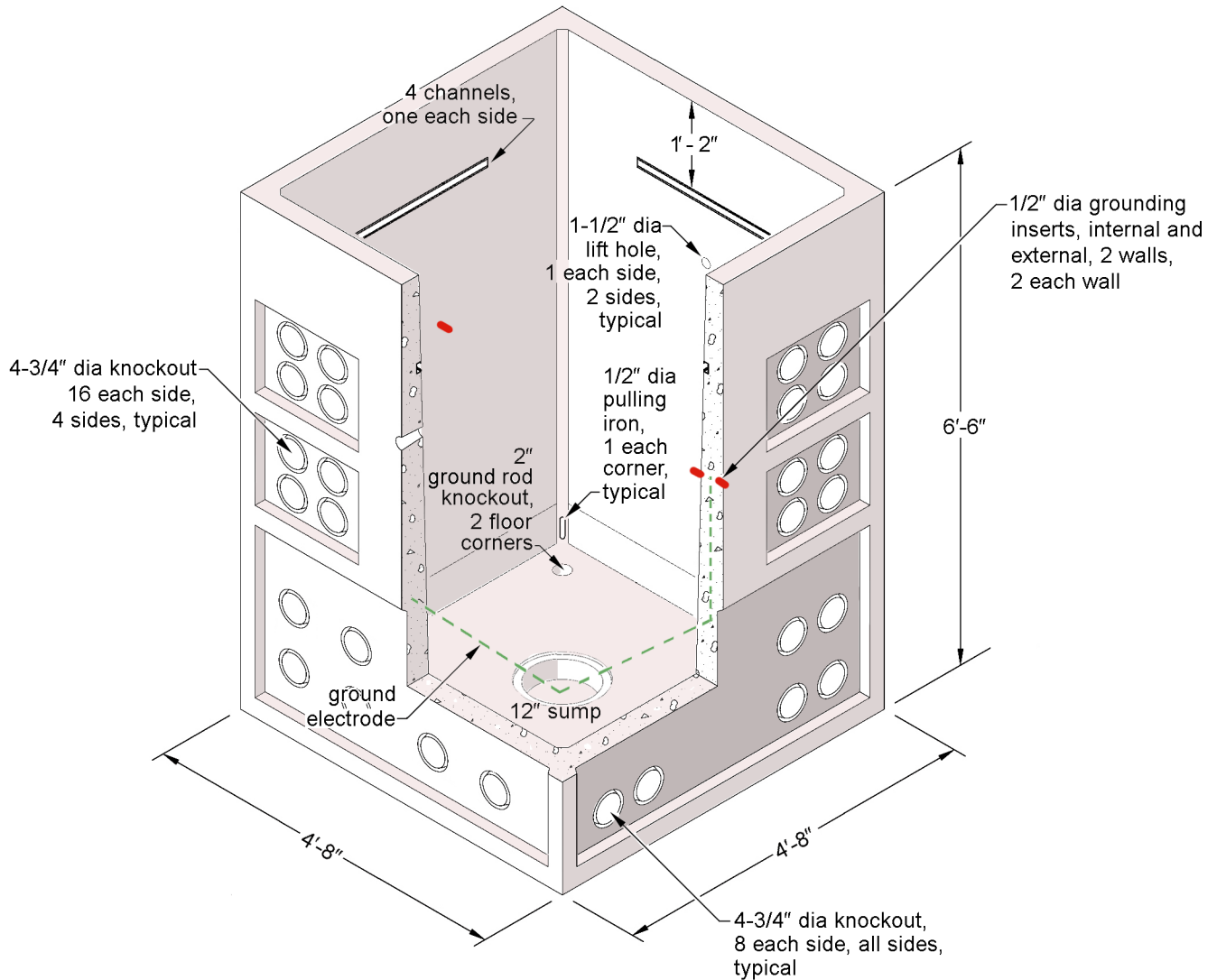
**Table 4.2b. Base Dimensions, Inside, Nominal (ft-in)**

Length	Width	Height
4-2	4-2	6-0

**Table 4.2c. Base Dimensions, Outside, Nominal (ft-in)**

Length	Width	Height
4-8	4-8	6-6

**Figure 4.2. Base**



### 4.3 Cover

Covers shall consist of a concrete collar with a slip-resistant steel-grated vent hatch or a concrete collar with a 42-in round blockout.

Covers shall have dimensions as shown in Table 4.3. Note: The cover for a square opening is tapered from top to bottom and is notched on the bottom to fit inside the sides of the vault.

Covers shall have a 3/4-in diameter (nominal) lift insert at each corner on the top as shown in Figure 4.3a.

Caps shall be provided to cover the lift inserts.

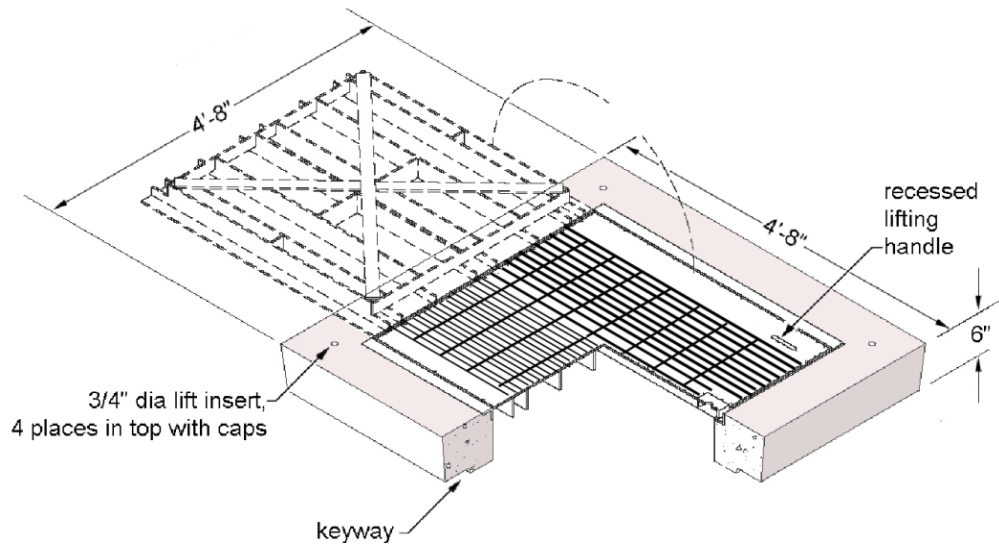
Covers shall have a keyway to ensure a tight fit.

Covers with a 42-in round blockout are used in conjunction with a 42-in round hatch and frame as shown in Figure 4.3b.

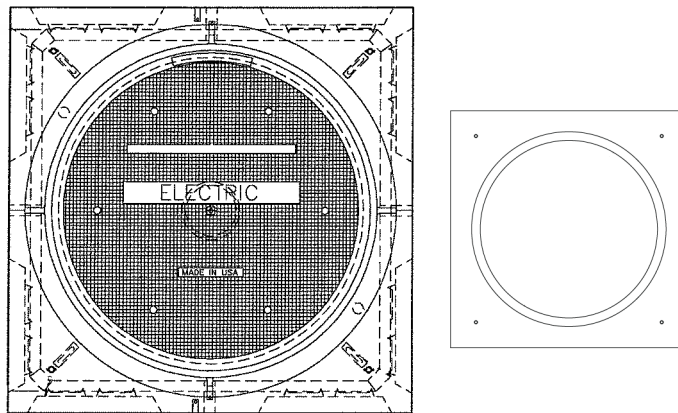
The steel-grated vent hatch shall have:

- 3 ft x 3 ft dimension
- H20 rating
- Recessed lift handles
- Non-slip surfaces
- One handle located on each of the short ends of the hatch
- 5/8-in bonding point hole on support bar for grounding hatch
- Hatch-locking mechanism with Penta head bolt

**Figure 4.3a. Cover with Hatch**



**Figure 4.3b. Cover with 42-in Round Blockout**



**Table 4.3. Cover Dimensions, Nominal**

Stock No.	Concrete Collar			Opening (in)
	Length (ft-in)	Width (ft-in)	Thickness (in)	
013102	4-8	4-8	6	36 x 36
013688	4-8	4-8	6	42 dia, round

## 5. Issuance

Unit: EA

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## 6. Approved Manufacturer

<b>Stock No.</b>	<b>Description</b>	<b>Oldcastle/Utility Vault Catalog No.</b>
130101	<b>Base</b> , standard 507	507-LA Base w/ Irons and GRD In & Out
130102	<b>Cover</b> , with hatch	55-332 GV
013124	<b>Assembly</b> ; base and cover with hatch	507-LA Base w/ Iron and GRD In & Out w/Grate Vent, SCL
013688	<b>Cover</b> , with 42-in blackout	55-42C
013689	<b>Assembly</b> ; base and cover with 42-in blackout	507-LA with 55-42C

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## 7. References

**SCL Material Standard 7203.21**; "Precast Reinforced Concrete Structure, General"  
**SCL Material Standard 7204.70**; "Frames and Covers, 42-Inch Round, Iron"

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## 8. Sources

**Detter, Chris**; SCL Distribution Engineer and subject matter expert for 7203.36  
**Ng, Sharon**; SCL Civil Engineer and subject matter expert for 7203.36  
**Wang, Quan**; SCL Standards Engineer, originator, and subject matter expert for 7203.36