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SS 500 Slab Box and Pad Requirements

Scope SS 500.1 Slab Box and Pad Requirements for Pad-Mounted Single-Phase and Three-Phase Equipment

The following table identifies the size of various slab boxes, pads, manufacturer’s name, and an arbitrarily assigned item number. On the List of Material (LOM) for each working drawing, the item number will be used as identification.

1.0 Slab Boxes — Precast Concrete

Slab boxes will be furnished complete with pad, box, cover, blind lifting holes, footing (6' x 8'-6" and 8' x 10'), and approved size stainless steel Penta head bolts for cover securing.

### Table SS 500–1: Slab Boxes — Precast Concrete

<table>
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<th>Item No.</th>
<th>Nominal Size</th>
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<td>SB-1</td>
<td>6’ x 8'-6&quot; Slab with Footing and 4’ x 7” x 3'-6&quot; Box</td>
<td>SS 530</td>
<td>K686-SB42-11 ED-686-SB</td>
<td>10117562</td>
</tr>
<tr>
<td>SB-2</td>
<td>8’ x 10’ Slab with Footing and 4’ x 7” x 3'-6&quot; Box</td>
<td>SS 530</td>
<td>K810-SB42-11 ED-810-SB</td>
<td>10117563</td>
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<tr>
<td>SB-3</td>
<td>10’ x 12’ Slab with 5’ x 8'-6&quot; x 5' Box</td>
<td>SS 535</td>
<td>K586-SB60-11 ED-1012-SB</td>
<td>10117564</td>
</tr>
<tr>
<td>SB-4</td>
<td>10’ x 12’ Slab with 8’ x 10” x 7” Box</td>
<td>SS 539</td>
<td>—</td>
<td>10171022</td>
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<tr>
<td>SB-5</td>
<td>4'-6&quot; x 7&quot; Slab with 3’ x 5” x 3'-6&quot; Box</td>
<td>SS 536</td>
<td>K3660-PUV42-11 ED-467-SB</td>
<td>10117565</td>
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<tr>
<td>SB-6</td>
<td>7’ x 8’ Slab with 4’ x 7” x 5’ Box</td>
<td>SS 537</td>
<td>K78-SB60-11 ED-78-SB</td>
<td>10117566</td>
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<tr>
<td>SB-7</td>
<td>8’ x 10’ x 8” Slab with 4’ x 7” x 3'-6&quot; Box</td>
<td>SS 538</td>
<td>K810-SB42-11 ED-810-SB538</td>
<td>10117617</td>
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* a/ Jensen Precast (formerly Brooks Products Inc.)

### Table SS 500–2: Pads — Precast Concrete

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<th>Item No.</th>
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<td>P-1</td>
<td>4’ x 4’-6”</td>
<td>PD4854-T4-11 ED 4854-04 Concrete</td>
<td>10118012</td>
</tr>
<tr>
<td>P-2</td>
<td>6’ x 5’-6”</td>
<td>PD6672-T6-11 ED 6672-06TP</td>
<td>10118011</td>
</tr>
<tr>
<td>P-3</td>
<td>7’-10” x 6”</td>
<td>PD7294-T6-11 ED 7294-06TP</td>
<td>10118013</td>
</tr>
</tbody>
</table>

* a/ See SS 504 for poured in the field and precast concrete pads.

What’s Changed? Table SS 500-1 and Table SS 500-2: Utility Vault Co. replaced with Oldcastle Infrastructure; parent company notes removed.
### Table SS 500–3: Polymer Concrete (RPM)

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<td>P-5</td>
<td>48” x 54”</td>
<td>Armorcast Products: A6001986</td>
<td>10118092</td>
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<td></td>
<td></td>
<td>Oldcastle Infrastructure: ED-4854-04 Polymer</td>
<td></td>
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<td></td>
<td></td>
<td>CDR Systemsb/: PH54481826502</td>
<td>9707</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New Basis: PH5448-1826502</td>
<td></td>
</tr>
<tr>
<td>P-4d/</td>
<td>34” x 40”</td>
<td>SAP: 9690</td>
<td>10117850</td>
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</table>

#### Note(s):
- a/ See SS 506 and SS 507 for polymer (RPM) pads.
- b/ Hubbell Power Systems is the parent company of CDR Systems.
- c/ Hubbell Power Systems is the parent company of Quazite Corp (formerly Power and Communication Systems Company).
- d/ Not approved for use on new construction.

### Table SS 500–4: PMH and PME Enclosures and Pads

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<td>SS 590</td>
<td>Jensen Precast: K5106-PUV84-11 Oldcastle Infrastructure: ED-5106-84-PMH</td>
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<td>PH-2</td>
<td>4’ x 6’ Pad with 2’-6” x 4’ Box</td>
<td>SS 591</td>
<td>K3048-PUV36-11 ED-264-30-PMH-5</td>
</tr>
<tr>
<td>PH-3b/</td>
<td>4’ x 6’ Pad with 2’-6” x 4’ Opening</td>
<td>SS 592</td>
<td>K2436-PUV36-11 ED-23-30-PMH-4</td>
</tr>
<tr>
<td>PH-4b/</td>
<td>4’ x 6’ with 2’ x 3’ Opening — PME Pad</td>
<td>SS 593</td>
<td>ED-4872-06-MP 10117287</td>
</tr>
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#### Note(s):
- a/ Jensen Precast (formerly Brooks Products Inc.)
- b/ Not approved for use on new construction.

### Table SS 500–5: Bart Pads

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<th>Manufacturers’ Reference Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP-1</td>
<td>60” x 72” x 22” w/box</td>
<td>SS 508.1</td>
<td>Jensen Precast: — Oldcastle Infrastructure: ED-56-Type 1-SB</td>
</tr>
<tr>
<td>BP-2</td>
<td>72” x 114” x 22” w/box</td>
<td>SS 508.2</td>
<td>— ED-696-Type 2-SB 10117863</td>
</tr>
<tr>
<td>BP-3</td>
<td>72” x 114” x 30” w/box</td>
<td>SS 508.3</td>
<td>— ED-696-Type 3-SB 10169529</td>
</tr>
</tbody>
</table>

#### Note(s):
1. See AC 701 for pad-mounted transformer/capacitor grounding requirements and AC 703 for approved grounding materials.

|= For Reference Only|

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**What’s Changed?** Tables SS 500–3, SS 500–4, SS 500–5, Utility Vault Co. replaced with Oldcastle Infrastructure; parent company notes removed.

**Effective Date:** 04-24-2020

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**UGS**

**Sheet:** 2 of 3

**Approved by:**

---

**SCE Public**
### Table SS 500–6: Fiberglass Box Pad

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Nominal Size</th>
<th>Manufacturer’s Reference Numbers</th>
</tr>
</thead>
</table>
| FP-1<sup>b</sup> | 38" x 43" x 20" | ProGlass<sup>a</sup>
|             |              | TX 423820                        |

<sup>a</sup> ProGlass — Division of Power Glass, Inc., P.O. Box 581, Wauna, WA, 98395

<sup>b</sup> This pad is experimental for trial use. Contact Distribution Apparatus Engineering (DAE) regarding use of this pad for single-phase minipad applications.
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SS 502  Equipment Poured Pad (Typical)

Scope SS 502.1  Shows Equipment Poured Pad (Typical)

Figure SS 502–1: Equipment Poured Pad (Typical)

Note(s):
1. Reinforced steel: #3 rebar @ 18" O.C. each direction.
2. Ground Rods, Clamps, and Ground Wire: To be furnished by the contractor. Contractor will install all grounding materials for customer-owned pads. Ground to be buried outside of pad and connected to rod with ground clamp.
5. See GI 020.
6. Riser bends shall be Schedule 40 PVC minimum on the primary side.

What's Changed? Added notation that riser bends shall be Sch. 40 PVC minimum on the primary side.
SS 503 Pad for Surface-Mounted Voltage Regulator Poured in Field

Scope SS 503.1 Pad for Surface-Mounted Regulator Poured in Field

Figure SS 503–1: Pad for Surface-Mounted Voltage Regulator Poured in Field

Table SS 503–1: Material List

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete 2500 PSI @ 28 Days per GI 020</td>
<td>6.5 Cubic Yards</td>
</tr>
<tr>
<td>#4 Rebar x 5'-6&quot; Long, ASTM A615 GR.60</td>
<td>20 Each</td>
</tr>
<tr>
<td>#4 Rebar x 19'-0&quot; Long, ASTM A615 GR.60</td>
<td>7 Each</td>
</tr>
<tr>
<td>1&quot; x 1'-2&quot; Long Hilti `HAS-E` threaded rod with std. nut and washer, A36/ISO 898 CLAS</td>
<td>12 Each</td>
</tr>
<tr>
<td>5.8 Steel ASTM B633 Zinc Plating (10 rods/nuts/washers per box, 1 required per hole)</td>
<td></td>
</tr>
<tr>
<td>Hilti HIT-HY 200 Adhesive Capsules 11.01 oz cartridge</td>
<td>12 Each</td>
</tr>
</tbody>
</table>

Note(s):
1. Contractor shall verify equipment assignment with structural engineer prior to placement of concrete foundations.
2. Dimension tolerance between center lines of anchor bolt for a common apparatus shall be 1/8 inch.
3. All exposed edges and corners of concrete shall be chamfered 3/4" or tooled.
4. Flat concrete surfaces shall be steel troweled.
5. Compact upper 8" of soil under footing per ASTM D1557.

What’s Changed? Initial issue.
Scope SS 503.2  Berm for Surface-Mounted Voltage Regulator Poured in Field

Figure SS 503–2: Berm for Surface-Mounted Voltage Regulator Poured in Field

What's Changed? Initial issue.
Scope SS 503.3  Grounding for Surface-Mounted Voltage Regulator Poured in Field

Figure SS 503–3: Grounding for Surface-Mounted Voltage Regulator Poured in Field

Note(s):
1. Grounding requirements for 33 kV Surface Mounted Voltage Regulators ONLY.
2. Install ground rods along the fence by each post and by the wood poles.
3. Gateposts shall be bonded together by a buried grounding conductor running on the inside of the gate 30" deep.
4. The grounding rods shall be driven until the upper end is flush or below the final grade.
5. Ground rods must be 5/8” x 8’.
6. Ground cable clamps for 5/8” rod and 1/4” common guy.
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SS 504 Pad for Surface-Mounted Transformer Poured in Field Construction and Precast Construction (Concrete)

Scope SS 504.1 Pad for Surface-Mounted Transformer Poured in Field Construction and Precast Construction (Concrete)

Figure SS 504–1: Pad for Surface-Mounted Transformer Poured in Field Construction and Precast Construction (Concrete)
Table SS 504–1: Surface-Mounted Transformer Pads — Dimensions

<table>
<thead>
<tr>
<th>Transformer</th>
<th>Pad Dimensions (in)</th>
<th>Weight (lb)</th>
<th>SAP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>1Ø 25 kVA–167 kVA</td>
<td>54</td>
<td>48</td>
<td>26</td>
</tr>
<tr>
<td>3Ø 75 kVA–150 kVA</td>
<td>66</td>
<td>72</td>
<td>38</td>
</tr>
<tr>
<td>No Switch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3Ø 75 kVA–500 kVA</td>
<td>72</td>
<td>94</td>
<td>50</td>
</tr>
<tr>
<td>SW and Fuse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>See Note 8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note(s):
1. Concrete to be 3,000 psi (minimum) at 28 days.
2. Reinforcing steel to be No. 4 bars installed in a double net. Perimeter bars to be continuous (8 inch minimum lap or weld).
3. Hold-down brackets to be P-3200 series unistrut (or equal).
4. Primary cables must be installed in shaded area of drawing above as far to the right as possible on single phase transformers only. On three-phase transformers primary cables must be installed in the unshaded area of drawing above as far left as possible.
5. See AC 701 for pad-mounted transformer/capacitor grounding requirements and AC 703 for approved grounding materials.
6. 1-inch listing insert to be located at center of gravity on precast pads.
7. See SS 500 for approved manufacturers.
8. The three-phase transformer shall only be used on a pad when four or fewer services are to be installed. A slab box should be used when more than four services will be installed.
9. Use a thin layer of redi-crete (or equivalent) for rodent and weed control or where transformer does not fully cover opening in pad.
10. A 17" x 30" x 15" plastic handhole (SAP 10117726) shall be inverted and installed under the cable opening of the pad. This will provide adequate cable slack for operation of the load-break elbows on single phase transformers only.

= For Reference Only

What's Changed? Note 8 was updated for clarity.
SS 505  38" x 43" Non-Concrete Box Pad for Single-Phase Transformers

Scope SS 505.1  Non-Concrete Box Pad for Single-Phase Transformers

Figure SS 505–1: Non-Concrete Box Pad for Single-Phase Transformers

Note(s):
1. Experimental for trial use only. Contact Distribution Apparatus Engineering (DAE) prior to using.
2. Riser bends shall be Schedule 40 PVC minimum on the primary side.

1.0 Installation Notes:

1.1 Box Pad to be set level on 6" of crushed rock base.

1.2 Box Pad can be used in slopes of up to 4:1 without the need for a level finish grade. A minimum of cover over the bottom lip is needed.

1.3 Contractor will set the box pad level to within 1/4" and to the correct grade relative to the finish curb or other reference elevation.

1.4 Subgrade below the pad will be mechanically compacted to 85% relative compaction unless local building authorities require higher.

1.5 Ground rods will be per AC 701.

1.6 Seal the bottom of the opening around the conduits with a thin layer of Redi-Crete or liquid asphalt emulsion for rodent control. Drive two 1" diameter PVC pipe through to act as drains.

1.7 Use template to locate primaries and secondaries and stake separately.

What's Changed? Section 1.6 was updated for clarity.
2.0 Fabrication Notes:

2.1 Pad will be built to meet the “GENERAL,” “HARDWARE,” “MATERIAL QUALIFICATION TEST,” and “STRUCTURAL CAPABILITIES TESTS” requirements for Pad 4 of Edison specification No. PCTP-9-94 except color will be concrete gray or telephone green, and dimensions on this drawing will control. Load frame will be 32” wide and deflection frame will be 36” wide.

2.2 Manufacturer will cast-in a manufacturer identification logo to the top of the box pad. Additionally a serial number or other means to identify date of manufacture are required on the inside or outside of the box pad. Markers or paint alone are not acceptable.

2.3 Pad will meet the lateral loading and deflection requirements and tests of Western Underground WUC 3.6.
SS 506 Polymer Concrete Pad for Surface-Mounted Transformers, PME-1, and PME-2

Scope SS 506.1 Polymer Concrete Pad for Surface-Mounted Single-Phase Transformers

Figure SS 506–1: Polymer Concrete Pad for Surface-Mounted Single-Phase Transformers

3’ MIN Working Clearance from Edge of Pad (Non-Door Side)

Pad P-4 approximate weight-125 lb

Hold-Down Bracket (See Note 2)

Cable Placement (See Figure 1 and Figure 2)

3’ MIN Working Clearance from Edge of Pad (Non-Door Side)

8’ MIN Working Clearance from Edge of Pad (Door Side)

Plan View

End View (Front)

Place pad on 6” of 3/4” crushed rock (See Note 3, 5, and 6)

Secondary Cables

Final Grade

Standard Padmount/PME-2 (See Note 1)

Primary Cables

6” of Crushed Rock
(See Note 3 and 5)

6” of Crushed Rock

Inverted 17” x 30” x 15” Plastic Handhole
(SAP 10117726)

Conduits per Figure 1 (Typ.)

Secondary Cable Group Area

Primary Cables

6”

Mini-Padmount (See Note 1 and 7)

3’ MIN Working Clearance from Edge of Pad (Non-Door Side)

What's Changed? Figure SS 506-1 updated for clarity.
1.0 Manufacturing Notes:
   1. Pad will be manufactured in accordance with SCE specification PCTP-9-94 “Polymer Concrete Transformer and Equipment Pads” and meet all requirements for Pad 4.
   2. Hold-down brackets to be P-3200 series unistrut (or equal).
   3. See SS 500 for approved manufacturers.

2.0 Installation Notes:
   1. Primary and secondary cables for mini-pad-mounted transformers should be placed into the clear opening areas as shown in Figure 1; other transformers use Figure 2. The work order drawings will identify which case is required.
   2. For ground rod installation see AC 701.
   3. Subgrade soil below crushed gravel is to be mechanically compacted to 85 percent relative compaction unless higher is required by construction permit. Contractor is responsible for maintaining proper conduit location after grading.
   4. Pad to be placed to proper grade relative to finished curb or other reference elevation and level to within 1/4 inch.
   5. An inverted handhole, as shown in Figure 3, shall be installed for new construction or when existing pad requires replacement. The existing conduits can remain in place.
   6. Seal the bottom of the opening around the conduits with a thin layer of Redi-Crete or liquid asphalt emulsion for rodent control. Drive two 1-inch diameter PVC pipe through to act as drains.
   7. For conduit installation using Figure 1, a template should be used to locate conduit or CIC.
   8. Service conduits shall be sealed or plugged when the transformer is located above a customer’s meter panel, per G.O. 128, Rule 31.6.
   9. Riser bends shall be Schedule 40 PVC minimum on the primary side.
SS 507  Polymer Concrete Pad for PME-1

Scope SS 507.1  Polymer Concrete Pad for PME-1

Figure SS 507–1: Polymer Concrete Pad for PME-1

3' MIN Working Clearance from Edge of Pad (Non-Door Side)

1/2" Threaded Inserts with Bolts (Two Places)

3' MIN Working Clearance from Edge of Pad (Non-Door Side)

CIC or 3" Conduit (MAX)

2" 2" 7-1/2"

12"

11-1/2" 7-1/2"

34"

Front

40"

See Note 3.

8' MIN Working Clearance from Edge of Pad (Door Side)

Plan View

See Note 3.

CIC OR 3" Conduit Extended to Top Surface of Pad

Final Grade

Load

Line

6" MIN Crushed Rock Base (3/4" MIN 1-1/2" MAX)

Floor of trench

End View (Front)

What's Changed? Updated the title in UGS SS 507 for clarity. Figure SS 507-1 was revised to clarify the working clearance requirements for PME-1.
Note(s):
1. Place the pad on a level 6" minimum crushed rock base.
2. Fill the pad opening around the CIC or conduit with a thin layer of Redi-Crete (or equivalent) for rodent and weed control.
3. Install one 5/8" ground rod and connect to #6 BC (minimum) as shown (See AC 703). Grounding materials are furnished and installed by the contractor.
4. Riser bends shall be Schedule 40 PVC minimum on the primary side.
SS 508 Bart Pad Structure

Scope SS 508.1 60" x 72" x 22" Bart Pad with Box (For 3Ø Pad-Mounted Transformers up to 500 kVA)

Figure SS 508–1: Bart Pad Structure — 60" x 72" x 6" Pad with 60" x 72" x 16" Box

Approximate Weights
Box - 1900 lb
Pad - 1900 lb

What’s Changed? Figure SS 508-1 was updated for clarity.
Scope SS 508.2  
72" x 114" x 22" Bart Pad with Box (For 3Ø Pad-Mounted Transformers up to 1,500 kVA)

Figure SS 508–2: 508-2: Bart Pad Structure - 72" x 114" x 6" Pad with 60" x 102" x 16" Box

- 2 Ton Swiftlifts
  2 Each End Wall
  4 Total

- 1 5/8" x 5/8" x 18" Unistruts
  2 Total

- 5" DIA Terminators
  2 Each End Wall
  4 Total

- Approximate Weights
  Box - 2700 lb
  Pad - 3700 lb

- Concrete Key Way Not Shown for Clarity

- 2' MIN Working Clearance from Edge of Pad (Non-Door Side)
- 3' MIN Working Clearance from Edge of Pad (Non-Door Side)
- 3' MIN Working Clearance from Edge of Pad (Door Side)
- 8' MIN Working Clearance from Edge of Pad (Door Side)

- 5" DIA Terminators
  6 on This Side Wall Only
  6 Total

- 1'-4" 5'-0" 9'-6"
- 2 Ton Swiftlifts
  2 Each End Wall
  4 Total
- 1'-6" 6'-0" 6"

Effective Date: 10-26-2012
Scope SS 508.3  
72" x 114" x 30" Bart Pad with Box (For 3Ø Pad-Mounted Transformers up to 2,500 kVA)

Figure SS 508–3: Bart Pad Structure - 72" x 114" x 8" Pad with 60" x 102" x 22" Box

Note(s):
1. The building floor system shall be designed to support a dead load of 110 percent of the combined weight of the proposed transformer and Bart pad/box. The 10 percent accommodates for miscellaneous loads; that is the weights of the dolly, cables and maintenance equipment.
2. For vaults that appear to be undamaged and comply with the requirements of MC 860, Section 3.0, an additional 1-inch diameter inserts or pulling eyes may be installed into the transformer vault/room walls only (excluding ceiling) to facilitate the moving of the transformer and pad into the final position. The pulling loads shall not exceed 5,000 lb without approval of engineering. If the vault is damaged and violates the requirements of MC 860, Section 3.0, engineering shall be contacted before additional 1-inch diameter inserts or pulling eyes are installed.

3. Inserts located at the bottom edge of the box may be used for lifting brackets when installing or moving the box or for seismic anchoring when required by local codes or ordinances.

4. Equipment access to the building or enclosure must be designed to allow for the installation of the portable pad/box, and pad-mount transformers.

5. Use appropriate rigging equipment to support the overall pad/box weight when lifting and installing the Bart Pad structure (Refer to Rigging Standard Manual for guidance).

6. Bart Pads in vault rooms that have the potential of being subjected to water intrusion/flooding shall not be installed for the reason that Pad-Mounted Transformers are not design to be submerged in water.

7. Pad-mounted equipment exceeding 500 lb in weight installed onto the Bart Pad shall be secured to the pad with a minimum of four stainless steel seismic anchors through the equipment baseframes. Use 5/8-inch diameter anchors (SAP 10072174). When the baseframe hole diameter exceeds 3/4 inches, provide an approved oversize washer under the nuts. Threads shall be scoured (damaged) or double nutted to avoid loosening of the nuts once the installation is complete.
SS 510 Customer Substation Pad (for 1,500–2,500 kVA 3Ø Pad-Mounted Transformers) with Load Interrupter

Scope SS 510.1 Customer Substation Pad (for 1,500–2,500 kVA 3Ø Pad-Mounted Transformers) with Load Interrupter

Figure SS 510–1: Customer Substation Pad (for 1,500–2,500 kVA 3Ø Pad-Mounted Transformers) with Load Interrupter

Note(s):
1. Contractor is to furnish and install a concrete pad 15'-5" x 11'-0" x 0'-8" thick reinforced with 6" x 6" mesh - No. 10 gauge. The concrete is to have a 28 day breaking strength of not less than 3,000 psi. The pad is to be level with a smooth finish. (See GI 020).
2. Contractor is to furnish and install 3/8" inserts and hold down bolts (6 total) as shown. Floor plate to be drilled and painted with red oxide primer.
3. Ground rods, clamps and wire will be furnished to contractor only for Edison owned pads. Contractor will provide all grounding materials required for customer owned structures. Install each rod in shown location with top 6" grade. Install continuous 2/0 bare copper ground wire through the concrete and attach to each rod using a clamp. Continue wire back through concrete and into gutter, as shown.
4. Contractor is to furnish the number and size of service conduits required by the Edison Company.
5. Conduits will be terminated in 12" x 24" gutter or in a pullbox at the end of the gutter. The gutter may not be extended into the building unless approved by local inspection authority and an adequate seal against water is provided.
6. There will be 2 dry wells 8" in diameter located as shown above.
7. Protection barriers are required if pad is exposed to traffic. (See MC 830).
8. A clear passageway of 10’ minimum width will be available at all times from the pad to an accessible roadway for transformer maintenance.
9. Contractor to furnish all diamond floor plates, as required.
10. Conduits entering the trench will be fully encased with a minimum of 3 inches of concrete when the top of the conduits are less than 24 inches below final grade.
11. Cover to be 3/16” safety floor plate for 30” x 48” clear opening. To be hot dip galvanized per ASTM A123 after fabrication.

What’s Changed? Note 11 was updated for clarity.
SS 515  Concrete Pad for Mounting S/C and ESCO Preferred Emergency Switchgear

Scope SS 515.1  Concrete Pad for Mounting S/C and ESCO Preferred Emergency Switchgear

Figure SS 515–1: Concrete Pad for Mounting S/C and ESCO Preferred Emergency Switchgear

Figure SS 515–1.1: Plan, End, and Side Views

What’s Changed?
Concrete Pad for Mounting S/C and ESCO Preferred Emergency Switchgear

Note(s):
1. The pad will be 8" in thickness, the trench sides and bottom will all be 4" in thickness.
2. All concrete will have a minimum 28-day breaking strength of 3000 psi (see GI 020).
3. All concrete will be reinforced with 6" x 6" mesh - #10 gauge extending within 3" of the pad outside edges.
4. Contractor is to furnish and install pad finished smooth and level.
5. The top surface of the pad will be 4" above finish grade.
6. Protection barriers are required if pad is exposed to vehicular traffic (see MC 830).
7. Ground rods, clamps, and wire will be furnished and installed by contractor. Install each rod in shown location with top 6" below grade. Install continuous 2/0 bare copper ground wire through the concrete and attach to each rod using clamp. Continue wire back through concrete to trench and leave 12" inches exposed in trench.
8. Conduits entering the trench will be fully encased with a minimum of 3" of concrete when the top of the conduits are less than 24" below final grade.
9. Conduits and cables to enter any of the four ends of the cable trench only. The trenches can also be extended into adjacent pads supporting other equipment when desired.
10. A clear passage way of 10' minimum width will be available at all times from the pad to an accessible roadway for transformer maintenance.
11. Contractor to furnish all diamond floor plates, as required.
12. All plates will be 3/16" thick. Floor plates shall be hot dip galvanized per ASTM A123 after fabrication.
13. See working drawing for encasement schedule.

Figure SS 515–1.2: Section A-A

Figure SS 515–1.3: Section B-B
SS 520 Pad for Surface-Mounted Capacitor Cabinet — 3-Wire or 4-Wire Systems — Precast and Field Poured Construction

Scope SS 520.1 Pad for Surface-Mounted Capacitor Cabinet — 3-Wire or 4-Wire Systems — Precast and Field Poured Construction

Figure SS 520–1: Pad for Surface-Mounted Capacitor Cabinet — 3-Wire or 4-Wire — Systems

What's Changed? Figure SS 520-1 was revised to clarify the working clearance requirements for capacitor cabinets.
Note(s):
1. Poured pad concrete to be 3,000 psi (minimum) at 28 days.
2. Poured pad reinforcing steel to be No. 4 bars installed in double net. Perimeter bars to be continuous (8” minimum lap or weld).
3. See SS 504 for precast pad details (Pad No. 2). Unistrut only required for precast pads.
4. Precast pad opening will be filled with a minimum of 3” Redi-Crete mortar (or equivalent).
5. Conduit riser will be located to the dimensions on the plan view drawing.
6. For “Ungrounded Wye” 3-wire/4-wire pad-mounted capacitors, refer to DUG, UC 120.
7. See AC 703 for approved grounding material manufacturers.
8. A working clearance of 8 feet minimum on door side of pad-mounted cabinet doors, and 3 feet on each side, will be kept as clearances for the retaining wall.

What's Changed? Updated Note 8 for clarity.
SS 522 Pad for Underground Switch Capacitor Control Pedestal

Scope SS 522.1 Pad for Underground Switch Capacitor Control Pedestal

Figure SS 522–1: Pad for Underground Switch Capacitor Control Pedestal

Options:

Option #1 - 1" PVC Schedule 80 Sleeve

Option #2 — Exit 1" PVC Schedule 80 for Control Cable

Option #2 — 1" 90° PVC schedule 80, elbow to enter vent pipe below grade.

Anchor to adjacent sidewalk, curb, and/or vent encasement with 2 #4 rebars.

Concrete Encasement

Solvent Weld Flush with Interior Wall

Maximum distance between vent pipe and pedestal is 3".

Existing Vent and Encasement

#1 Threaded Coupling and Lock Ring

#2 Threaded Coupling and Lock Ring

6" Thick 3,000 PSI - 28 Days

6" Thick 3,000 PSI - 28 Days

FOR REFERENCE ONLY
This page intentionally left blank.
SS 530  6' x 8'-6" and 8' x 10' Slab Box for Pad-Mounted Transformer, VFI-4, and RAR

Scope SS 530.1  6' x 8'-6" x 6" and 8' x 10' x 6" Slab Box for Pad-Mounted Transformer, VFI-4, and RAR

Figure SS 530–1: 6' x 8'-6" x 6" and 8' x 10' x 6" Slab Box — Plan, Section A-A, Section B-B, and Detail

Note(s):
1. Pad overhang to rest on undisturbed earth or well-compacted backfill to prevent future subsidence.
2. The slab 30" x 48" clear opening will be covered with a 2-1/2" x 4' RPM cover as shown on FC 618. Six 1/2" stainless steel bolts with stainless steel captive washers will be supplied for cover bolt down.
3. Slab RPM cover recess will be concrete (nonmetal framed), and provided with six 1/2" threaded inserts, each with clean out holes.
4. An 8' minimum clearance is required on door side of cabinet for operation. Refer to Figure SS 530–3 (Sheet 3) and Figure SS 530–4 (Sheet 3) for working clearances.
5. Ground rods, clamps, and wire will be furnished and installed by the contractor. See AC 703 for approved grounding materials. Ground wire to be a minimum of 2/0 bare copper.
6. Mastic sealant is required at joints.
7. See Figure SS 530–2 (Sheet 2) for conduit entrance guidelines.
8. See SS 500 for approved manufacturers.

Approved by:  
6' x 8'-6" and 8' x 10' Slab Box for Pad-Mounted Transformer, VFI-4, and RAR

What's Changed?
Figure SS 530–2: 6’ x 8’-6” and 8’ x 10’ Slab Box — Plan and Detail “A”

Note(s):
1. All conduits are to enter slab box at corner knockouts within the angles shown. The working drawing will specify how many conduits are to be installed.
2. Install all conduits within the cast-in knockouts.
3. All conduits to be installed on a level course adjacent to box.
4. A maximum of six five-inch conduits can be installed into any one knockout. When six five-inch conduits are installed, do not install more than four 5-inch conduits in adjacent knockout (See Note 8).
5. All conduits to be cut smooth and flush with inside wall of box.
6. Pour a 12" minimum of concrete encasement (per CD 134) around all conduits that are not encased.
7. Grout work around all conduits to be flush with inside surface of structure and have a smooth finish.
8. When conduits are installed in both knockouts of any one corner, the conduits will be vertically staggered in order to allow cable to cross over (see Detail “A”).
9. Install grade rings as necessary in order to maintain minimum 30” cover over conduits. See CD 100.
Figure SS 530–3: Pad Mounted Transformer and VFI-4 Working Clearances

3' MIN Working Clearance from Edge of Pad (Non-Door Side)

3' MIN Working Clearance for Transformer and 8' MIN Working Clearance for VFI-4 from Edge of Pad

Cable Opening

3' MIN Working Clearance from Edge of Pad (Non-Door Side)

8' MIN Working Clearance from Back of Access Opening (Door Side)

Figure SS 530–4: RAR Working Clearances

8' MIN Working Clearance from Edge of Pad (Door Side)

Switch Operator

4' MIN Working Clearance from Edge of Pad (Non-Door Side)

Cable Opening

3' MIN Working Clearance from Edge of Pad (Non-Door Side)

8' MIN Working Clearance from Back of Access Opening (Door Side)
**SS 533 Slab Box — Pad-Mounted Transformers**

**Scope SS 533.1 Slab Box for Pad-Mounted Transformers — 75 kVA–1,000 kVA 3Ø**

**Figure SS 533–1: Slab Box for Pad-Mounted Transformers — 75 kVA–1,000 kVA 3Ø**

**Table SS 533–1: Slab Box for Pad-Mounted Transformers — 75–1,000-kVA 3Ø**

<table>
<thead>
<tr>
<th>Transformer Class and Capacity Padmount</th>
<th>Slab Box Dimensions (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>3Ø 75 kVA–500 kVAa/</td>
<td>96</td>
</tr>
<tr>
<td>3Ø 750 kVA–1,000 kVAc/</td>
<td>120</td>
</tr>
</tbody>
</table>

*a/ For use only when there are more than four service runs.

*b/ 1,500 kVA 3Ø transformers may be placed on the 96" x 120" slab box if a pole, pad, or vault is available for fusing equipment. Use the 11' x 15'-5" pad (refer to UGS book) where 1,500–3,750-kVA and padmount fusing are planned.

*c/ To be purchased with footing installation per UGS book.

**Note(s):**
1. To be purchased with footing installation per UGS book.
2. Precast units can be obtained from Jensen Precast (formerly Brooks Products) or Oldcastle Infrastructure under drawing numbers 1550TPV42-ED1, 1553TPV42-ED1, SB-6.6-66, and SB-10.6-66.
3. Slab-box to be placed on 6 inches compacted rock.
4. Slots of Unistrut must be filled with duct seal to seal off opening after padmount installation.

**What's Changed?** The approved manufacturer information has been updated. Utility Vault Co. replaced with Oldcastle Infrastructure.
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**SS 535** 10' x 12' Precast Slab Box for 3Ø Pad-Mounted Transformers up to 5,000 kVA and Pad-Mounted Voltage Regulators

**Scope SS 535.1** 10' x 12' Precast Slab Box for 3Ø Pad-Mounted Transformers up to 5,000 kVA and Pad-Mounted Voltage Regulators

**Figure SS 535–1:** 10' x 12' Precast Slab Box for 3Ø Pad-Mounted Transformers up to 5,000 kVA and Pad-Mounted Voltage Regulators

**Note(s):**

1. Conduit terminators to be located as shown on Figure SS 535–2 (Sheet 2) to Figure SS 535–5 (Sheet 5). Standard conduit entrance will be a flatwall design. Slight variations by manufacturers may be allowed with Company approval.

2. When cable trench openings are required in a slab box, they can be special ordered from the concrete precaster.

3. For slab box structural design criteria, see Figure SS 535–2 (Sheet 2) to Figure SS 535–5 (Sheet 5).

4. For list of material requirements notes, see Table SS 535–1 (Sheet 6).

5. Consult manufacturers' installation guides for excavation dimensions.

6. An 8' minimum clearance is required on door side of transformer for operation.

7. Ground rods, clamps, and wire will be furnished by contractor. See AC 703 for approved grounding materials. Ground wire to be a minimum of 2/0 bare copper. Ground wire to be placed through capped one-inch PVC conduit at either end of slab box. A minimum three-foot length of ground wire will be placed in slab box.

8. Mastic sealant is required at joints.

9. Top surface of slab box will be set three inches above finished grade.

10. See SS 500 for approved manufacturers.
Scope SS 535.2  Shows Precast Slab Box for 3Ø Pad-Mounted Transformers and Pad-Mounted Voltage Regulators

Figure SS 535–2: Shows Precast Slab Box for 3Ø Pad-Mounted Transformers and Pad-Mounted Voltage Regulators — Plan and Section C

Note(s):
1. For list of materials and notes, see Table SS 535–1 (Sheet 6).
Note(s):
1. For list of materials and notes, see Table SS 535–1 (Sheet 6).

What's Changed? Standard has been updated to include Voltage Regulators.
Figure SS 535–4: Precast Slab Box for 3Ø Pad-Mounted Transformers and Pad-Mounted Voltage Regulators — Box Section — Sections D and A

Note(s):
1. For list of materials and notes, see Table SS 535–1 (Sheet 6).

SS 535
10' x 12' Precast Slab Box for 3Ø Pad-Mounted Transformers up to 5,000 kVA and Pad-Mounted Voltage Regulators

What's Changed? Standard has been updated to include Voltage Regulators.

Effective Date: 07-26-2019
Figure SS 535–5: Precast Slab Box for 3Ø Pad-Mounted Transformers and Pad-Mounted Voltage Regulators — Box Section — Section B and Detail 1

Note(s):
1. For list of materials and notes, see Table SS 535–1 (Sheet 6).

What’s Changed? Standard has been updated to include Voltage Regulators.
Table SS 535–1: List of Materials — Precast Slab Box for 3Ø Pad-Mounted Transformers and Pad-Mounted Voltage Regulators — Box Section

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5&quot; DIA Plastic Conduit Terminators(^a)</td>
<td>28</td>
</tr>
<tr>
<td>2</td>
<td>Capped Schedule 40 PVC 1&quot; Conduit (See Detail 1)(^b)</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Pull Irons 7/8&quot; DIA Vertical(^c)</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>1/2&quot; DIA Plastic Inserts — Imper. Constr. Products — 15000(^d)</td>
<td>18</td>
</tr>
<tr>
<td>5</td>
<td>Hold-Down Brackets, P-3200 Series Unistrut, 1'-2&quot; Long(^e)</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Hot-Dipped Galvanized 30&quot; x 48&quot; Steel Pull Box Frame(^f)</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>1/2&quot; DIA Open Bottom Threaded Insert — Star #P35T(^g)</td>
<td>6</td>
</tr>
<tr>
<td>8</td>
<td>30&quot; DIA 48&quot; RPM Pull Box Cover(^h)</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>1/2&quot; x 2-1/2&quot; Large S.S. Penta-Head Bolt with Captive Free-Spinning Round Flat S.S. Washer(^i)</td>
<td>6</td>
</tr>
</tbody>
</table>

\(^a\) Plastic conduit terminators will be an Edison-approved one-piece design.
\(^b\) A one-inch dia. capped Schedule 40 PVC conduit will be installed as shown in Detail 1.
\(^c\) Seven-eighths-inch pull irons will be designed for a working tension of 20,000 pounds plus a safety factor of 2.
\(^d\) One-half-inch threaded plastic inserts will be Imperial Construction Products, Part No. 15000.
\(^e\) Hold-down brackets will be P-3200 series Unistrut (or equivalent), 1'-2" long. Brackets will be hot-dipped galvanized after fabrication. The end of the two brackets adjacent to the slab cable entrance will be permanently blocked solid.
\(^f\) 30" x 48" steel pull box frame will be constructed as shown in FC 608. Frame to be hotdipped galvanized after fabrication.
\(^g\) One-half-inch open bottom metal threaded inserts will be Star, Part #P35T or equivalent. A cleanout hole will be provided under each insert.
\(^h\) 30" x 48" RPM pull box cover will be constructed as shown in FC 618.
\(^i\) 30" x 48" RPM pull box cover will be attached to cover frame/inserts with 1/2" x 2-1/2" long S.S. Penta-head bolts with captive free-spinning round flat S.S. washers.

Note(s):
1. Design and construction of three-phase transformer slab box will conform to GI 030 wherever applicable (specification for precast reinforced concrete vaults and manholes).
2. Walls will be painted white.
3. No lifting inserts or like devices will be installed in floor of base section.
4. No lifting inserts or like devices will be installed on top outside slab surface.
5. Slab will be designed to support a maximum transformer weight of 30,000 pounds. For dimensional distribution of transformer loads, contact SCE Corp.
6. Structural design will be approved by Los Angeles County Road and Bridge Department.
SS 536  Precast Concrete Equipment Slab Box — 4’-6” x 7’ Pad with 3’ x 5’ Pull Box

Scope SS 536.1  Precast Concrete Equipment Slab Box — 4’-6” x 7’ Pad with 3’ x 5’ Pull Box for 2-Way Pad-Mounted SF6 Switch

Figure SS 536–1: 4’-6” x 7’ Pad with 3’ x 5’ Pull Box for 2-Way Pad-Mounted SF6 Switch

1.0  Excavation Size:

Minimum excavation for pull box will be 52” x 97” x depth to suit job. Installing contractor will provide grade rings (6 inch minimum) as necessary in order to maintain cover over conduits per SCE requirements or permit agency requirements, whichever is greater. Backfill material will be well compacted to prevent subsidence.

2.0  UGS References:

AC 700  Ground Rod — Ground Wires
AC 703  Grounding Materials
MC 830  Protection Barriers
3.0 Reference Drawing:
5230867-0: Equipment Slab Box, 4'-6" x 7'-0" Pad w/3' x 5' Pull Box for 2-Way SF6 Pad-Mounted Switchgear.

4.0 Installation Notes:

4.1 Pad and pull box will be set level. Pull box will be placed on 6 inch (minimum) compacted rock base to ensure uniform distribution of soil pressure in floor.

4.2 Mastic sealant is required at joints.

4.3 Top surface of pad will be set three inches above finished grade.

4.4 One ground rod will be furnished and installed by contractor. Install ground rod through floor of box per AC 700. Ground rod material will comply to AC 703.

4.5 An 8 foot (minimum) clearance is required on door side of Equipment Slab Box for operation.

4.6 Protection barriers will be installed if pad is exposed to vehicular traffic per MC 830.
Figure SS 536–2: Pad Plan View — Precast Concrete Equipment Slab Box

Table SS 536–1: Precast Concrete — Precast Concrete Equipment Slab Box

<table>
<thead>
<tr>
<th>Nominal Size</th>
<th>Manufacturers' Reference Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>4'-6&quot; x 7'</td>
<td>Jensen Precast: K3660-PUV42-11</td>
</tr>
<tr>
<td></td>
<td>Oldcastle Infrastructure: ED-467-SB</td>
</tr>
</tbody>
</table>

Note(s):
1. Item number and SAP number are listed in SS 500.

What’s Changed? Table SS 536–1: The approved manufacturer information has been updated. Utility Vault Co. replaced with Oldcastle Infrastructure; parent company note removed.
Figure SS 536–3: Precast Concrete — Precast Concrete Equipment Slab Box

Precast Concrete Equipment Slab Box — 4'-6" x 7' Pad with 3' x 5' Pull Box

Effective Date: 04-24-2020

What's Changed?
Note(s):
1. 24" x 36" hotdipped galvanized steel frame (3-sided) 2" x 2" x 3/16" or cast in concrete.
2. 24" x 36" polymer concrete pull box cover. (1 total)
3. 1/2" x 2-1/2" long s.s. Penta-head bolt with captive free spinning round flat s.s. washers to secure 2' x 3' polymer pull box cover to pad. (4 total)
4. Removable galvanized steel beam designed to support 24" x 36" personnel cover and switch cabinet enclosure. (1 total)
5. 1/2" x 1-1/2" long stainless steel countersunk machine screw for securing removable beam to pad. (2 total)
6. 1/2-inch diameter open bottom threaded insert with clean out hole or galvanized unistrut channel with unistrut nuts. (5 total)
7. Galvanized unistrut channels for securing the switch tank and cabinet enclosure to pad. (6 total)
8. 7/8-inch diameter pulling irons. (2 total)
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SS 537  Precast Concrete Equipment Slab Box — 7’ x 8’ Pad with 4’ x 7’ x 5’ Box

Scope SS 537.1  Precast Concrete Equipment Slab Box — 7’ x 8’ Pad with 4’ x 7’ x 5’ Box for 2-Way, 3-Way, and 4-Way, G&W Pad-Mounted RAM and RAG Gas Switches

Figure SS 537–1: 7’ x 8’ Pad with 4’ x 7’ x 5’ Box for 2-Way, 3-Way, and 4-Way, G&W Pad-Mounted RAM and RAG Gas Switches

1.0  Excavation Size:
Consult manufacturers’ installation guides for exact excavation dimensions. Backfill will be well compacted to prevent subsidence.

2.0  UGS References:
AC 731  J-Bolt Support for Neutral/Ground Bus
MC 830  Protection Barriers
3.0 **Reference Drawings:**

5230383-0: Equipment Slab Box 7' x 8' Pad w/4' x 7' x 5' Box for 2, 3 and 4-Way G&W SF₆ Pad-Mounted Switchgear.

5230384-0: 28" x 80" Steel Cover Frame w/Removable “I” Beam for 7’ x 8’ Pad

4.0 **Installation Notes:**

4.1 Install box so the sump is located under personnel opening.

4.2 Pad and slab box will be set level. Slab box will be placed on 6 inch (minimum) compacted rock base to ensure uniform distribution of soil pressure in floor. Pad overhang to rest on undisturbed earth or well compacted backfill to prevent subsidence.

4.3 Mastic sealant is required at seams.

4.4 Top surface of pad will be set 3 inches above finish grade.

4.5 Attach pad to box with anchor brackets and bolts as furnished and recommended by precast concrete manufacturer.

4.6 An 8 foot (minimum) clearance is required on door side of switch pad for operation.

4.7 Protection barriers will be installed if pad is exposed to vehicular traffic per MC 830.
Figure SS 537–2: Pad Plan View — 7' x 8' Pad with 4' x 7' x 5' Box for 2-Way, 3-Way, and 4-Way, G&W Pad-Mounted RAM and RAG Gas Switches

Table SS 537–1: Precast Concrete — 7' x 8' Pad with 4' x 7' x 5' Box

<table>
<thead>
<tr>
<th>Nominal Size</th>
<th>Manufacturers' Reference Numbers</th>
</tr>
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<tbody>
<tr>
<td>7' x 8'</td>
<td>Jensen Precast: K78-SB60-11</td>
</tr>
<tr>
<td></td>
<td>Oldcastle Infrastructure: ED-78-SB</td>
</tr>
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Note(s):
1. Item number and SAP numbers are listed in SS 500.

What's Changed? Table SS 537–1: The approved manufacturer information has been updated. Utility Vault Co. replaced with Oldcastle Infrastructure; parent company note removed.
Note(s):
1. 1/2-inch diameter threaded bronze grounding insert. (4 total)
2. 1/2-inch diameter threaded galvanized insert for J-Bolts. (4 total)
3. 1/2" x 6" galvanized J-Bolt to support neutral/ground bus. (4 total)
4. 5-inch diameter plastic conduit terminators. (8 total)
5. 7/8-inch diameter pulling irons for cable pulling and rigging purposes. (2 total)
6. 13-inch diameter x 3" deep sump with Edison sump plate. (1 total)
7. 24" x 36" polymer concrete pullbox cover. (2 total)
8. 1/2" x 2-1/2" large s.s. Penta-Hd. bolt with captive free spinning round flat s.s. washers. (8 total)
9. Removable galvanized steel "I" beam with floating nut plates. (1 total)
10. 1/2-inch diameter threaded plastic insert for cable rack mounting. (19 total)
11. 1/2-inch diameter threaded open bottom insert with cleanout hole or galvanized unistrut channel with unistrut nuts. (8 total)
12. 1-inch diameter capped PVC conduit for 4/0 neutral wire. (2 total)
13. 10-inch diameter plastic vent terminator. (2 total)
14. 1/2" x 1-1/2" large s.s. counter sunk machine screw for securing beam to pad. (2 total)
15. Galvanized unistrut channel for securing switch tank and enclosure to pad. (6 total)
16. Galvanized anchor bracket assembly to prevent pad and box from separating (location varies based on manufacturer). (2 total)
SS 538  Precast Equipment Slab Box — 8' x 10' Pad with 4' x 7' x 3'-6" Box

Scope SS 538.1 Precast Concrete Equipment Slab Box — 8' x 10' x 8" Pad with 4' x 7' x 3'-6" Box for 2-Way, 3-Way, and 4-Way Pad-Mounted RAG Gas Switches, VFI 9, VFI 12, Bypass Switch, and 33 kV Primary Metering Cabinet

Figure SS 538–1: 8' x 10' Pad with 4' x 7' x 3'-6" Box for 2-Way, 3-Way, and 4-Way Pad-Mounted Gas Switches, VFI 9, VFI 12, Bypass Switch, and 33 kV Primary Metering Cabinet

1.0 Excavation Size

Consult manufacturer's installation guide for exact excavation dimensions. Backfill will be well compacted to prevent subsidence.

2.0 UGS References

AC 703 for approved grounding material
MC 830 for protection barriers
3.0 Installation Notes

3.1 Install box and completely backfill until the soil is flush with the box top minus the keyhole height. This is vital in order to provide soil support for the pad to avoid cracking and damaging of the pad. Be sure to compact further after placement of the pad to ensure soil support.

3.2 Pad and slab box will be set level. Slab box will be placed on 6" (minimum) compacted rock base to ensure uniform distribution of soil pressure on floor. Pad overhang to rest on undisturbed earth or well-compacted backfill to prevent subsidence.

3.3 Top surface of pad will be set 3" above finish grade.

3.4 Mastic sealant is required at seams.

3.5 An 8-foot minimum working clearance is required on door side of pad-mounted cabinet doors.

3.6 Ground rods, clamps, and wire will be furnished and installed by the contractor. See AC 703 for approved grounding materials. Ground wire to be a minimum of 2/0 bare copper.

3.7 Protection barriers will be installed if pad is exposed to vehicular traffic per MC 830.
Figure SS 538–2: 8’ x 10’ Slab Box for Pad-Mounted Equipment — Plan and Detail “A”

Note(s):
1. All conduits are to enter slab box at corner knockouts within the angles shown. The working drawing will specify how many conduits are to be installed.
2. Install all conduits within the cast-in knockouts.
3. All conduits to be installed on a level course adjacent to box.
4. A maximum of six 4-inch conduits can be installed into any one knockout. When six 4-inch conduits are installed, do not install more than four 4-inch conduits in adjacent knockout (See Note 8).
5. All conduits to be cut smooth and flush with inside wall of box.
6. Pour a 12” minimum of concrete encasement (per CD 134) around all conduits that are not encased.
7. Grout work around all conduits to be flush with inside surface of structure and have a smooth finish.
8. When conduits are installed in both knockouts of any one corner, the conduits will be vertically staggered in order to allow cable to cross over (see Detail “A”).
9. Install grade rings as necessary in order to maintain minimum 30” cover over conduits. See CD 100.
Figure SS 538–5: Box Section Plan View — Precast Concrete Slab Box

What’s Changed? Figure SS 538-5: revised several dimensions for precast slab box.

Precast Equipment Slab Box — 8’ x 10’ Pad with 4’ x 7’ x 3’-6” Box

Effective Date: 07-27-2018

Approved by:

SS 538
Sheet 5 of 6
UGS
SCE Public
Figure SS 538–6: Box Section Detail “A” and “B” — Precast Concrete Slab Box

What's Changed? Figure SS 538-6: updated dimensions for thinwall knockout.
SS 539 10' x 12' Precast Slab Box for 6-way Pad-Mounted RAM Gas Switch, 5-way and 6-way Pad-Mounted RAG Gas Switches

Scope SS 539.1 10' x 12' Precast Slab Box for 6-way Pad-Mounted RAM Gas Switch, 5-way and 6-way Pad-Mounted RAG Gas Switches

Figure SS 539–1: 10' x 12' Precast Slab Box for 6-way Pad-Mounted RAM Gas Switch, 5-way and 6-way Pad-Mounted RAG Gas Switches

Note(s):
1. 30" x 48" polymer concrete cover (1 total).
2. 1/2" x 2-1/2" long stainless steel penta - head bolt with captive free spinning round flat stainless steel washers to secure 30" x 48" polymer concrete cover to pad (6 total).
3. Galvanized unistrut channels for securing the switch tank and cabinet enclosure to pad (6 total).
4. All equipment supported by precast slab box shall be suitably anchored for seismic purposes.

1.0 Excavation Size:
Minimum excavation for slab box will be 120" x 144" x depth that will set the pad at least three inches above the finished grade. Provide grade rings (12" minimum) as necessary in order to maintain cover over conduits per SCE requirements or permit agency requirements, whichever is greater. Backfill material shall be well compacted to prevent subsidence.

2.0 UGS References:
- AC 731 J-Bolts Support for Neutral/Ground Bus
- MC 830 Protection Barriers

3.0 Installation Notes:
1. Pad and pull box shall be set level. Pull box will be placed on 6" (minimum) compacted rock base to ensure uniform distribution of soil pressure on base of structure.
2. Mastic sealant is required at all joint connections.
3. Top surface of pad shall be set three inches above finished grade.
4. An 8’ (minimum) working clearance from back of access opening is required directly in front of equipment doors for operation.
5. Protection barriers shall be installed if pad is exposed to vehicular traffic per MC 830.

What’s Changed? Pad cable opening orientation updated.
What's Changed? Pad cable opening orientation updated.
Figure SS 539–3: 10’ x 12’ Precast Slab Box for 6-way Pad-Mounted RAM Gas Switch, 5-way and 6-way Pad-Mounted RAG Gas Switches - Plan View (Slab Box)

What’s Changed? Pad cable opening orientation updated.
Figure SS 539–4: 10' x 12' Precast Slab Box for 6-way Pad-Mounted RAM Gas Switch, 5-way and 6-way Pad-Mounted RAG Gas Switches - Side View (Slab Box)

- 1/2" DIA Grounding Inserts: 2 Each Top Section, 4 Total
- 1/2" DIA Grounding Inserts: 1 Each Bottom Section, 2 Total
- 1" DIA Spider Insert: 1 Each End Wall, 2 Total
- 1/2" DIA Kohler Inserts: 2 Each End Walls, 4 Total
- 5" DIA Terminators: 12 Each End Wall
- 1/2" DIA Grounding Inserts: 1 Each Bottom Section, 2 Total
- 10" Typ.

What's Changed? Pad cable opening orientation updated.
SS 540  Structure for PME-3, PME-4, and PME-5

Scope SS 540.1  Structure for PME-3, PME-4, and PME-5

Figure SS 540–1: Pad Installation — Structure for PME-3, PME-4, and PME-5

Note(s):
1. Identify bus, switch, or fuse position sides on drawing.
2. Riser bend must terminate vertically.
3. Not to be used as a cable pulling structure with inverted handhole design, cable feeding only.
4. Identify inverted handholes on drawings when required.
5. On pad with no handholes, the duct should be against the concrete edge of the opening.
6. See SS 591 for pull box design and working clearance around the pad.
7. Service conduits shall be seated or plugged when the transformer is located above a customer’s meter panel, per G.O. 128, Rule 31.6.
8. Riser bends shall be Schedule 40 PVC minimum on the primary side.
Figure SS 540–2: Structure for PME

6'-0" L x 4'-0" W x 6" H Concrete Pad with 4'-0" L x 2'-6" W opening

Figure SS 540–2.1
Structural for PME-3, PME-4, and PME-5

Figure SS 540–2.2: Inverted FRP Handhole (13" x 24" x 15")

Note(s):
1. 13" W x 24" L x 15" H inverted FRP handhole is placed under fuse position or for 750 kcmil or 1,000 kcmil cable.

Table SS 540–1: Precast Concrete — Structure for PME 3, 4, and 5

<table>
<thead>
<tr>
<th>Item</th>
<th>Supplier</th>
<th>Part Number</th>
<th>SAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>6'-0&quot; L x 4'-0&quot; W x 6&quot; H Precast Concrete</td>
<td>Oldcastle Infrastructure</td>
<td>ED4872-06-PAD</td>
<td>10117288</td>
</tr>
<tr>
<td>Pad w/2'-6&quot; x 4' Opening</td>
<td>Jensen Precast</td>
<td>PD3048-P-11</td>
<td></td>
</tr>
<tr>
<td>13&quot; L x 24&quot; W x 15&quot; H FRP Handhole without Cover(\text{\textsuperscript{a}})</td>
<td>CDR</td>
<td>PB10-1324-18-0206</td>
<td>10117275</td>
</tr>
<tr>
<td>17&quot; L x 30&quot; W x 15&quot; H Plastic HDPE Handhole with Cover</td>
<td>New Basis</td>
<td>SEB173015CH0</td>
<td>10117726</td>
</tr>
<tr>
<td></td>
<td>Carson Industries</td>
<td>173015-HY-OU0</td>
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</tbody>
</table>

\(\text{\textsuperscript{a}}\) For Reference Only

What's Changed? Table SS 540-1: The approved manufacturer information has been updated. Utility Vault Co. replaced with Oldcastle Infrastructure; parent company note removed.

Approved by: RR

Effective Date: 04-24-2020

FOR REFERENCE ONLY
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SS 541 7' x 14' x 11' Precast Tub-Style Structure with Modular Top Type I and II

Scope SS 541.1 7' x 14' x 11' Precast Tub-Style Structure with Modular Top Type I for 4-, 5-, and 6-Way Gas

Figure SS 541–1: 7' x 14' x 11' Tub-Style Structure with Modular Top Type I

Note(s):
1. Composite manhole cover may be used for replacement (SAP 10205271).

Figure SS 541–2: 7' x 18' x 11' Tub-Style Structure with Modular Top Type I

Note(s):
1. Composite manhole cover may be used for replacement (SAP 10205271).

What's Changed? New 7' x 18' Modular Tub Structure, Additional Terminators, Cable Opening and Placement Location.
Figure SS 541–3: 7’ x 14’ x 11’ and 7’ x 18’ x 11’ Tub-Style Structure with Modular Top Type I

What's Changed?
New terminators added.
Figure SS 541–4: 7’ x 14’ x 11’ and 7’ x 18’ x 11’ Tub-Style Structure with Modular Top Type I

Top Section
18” as shown
6”, 12” are available

1/2” Ø Bronze Grounding Insert
2 each End in Top Section
2 each End in Intermediate Section
1 each End in Base Section
10 Total

1/2” Ø S.S. Ferrule Loop
1 each End in Top Section/Intermediate
2 each End in Top Section/Intermediate
12 Total

1/2” Ø High Tensile Insert w/ Halo Bracket
2 each End Wall
4 Total

5” Ø or 6” Ø Terminators
(see project drawings)
8 each end wall
16 total

5” Ø or 6” Ø Terminators
(see project drawings)
12 each end wall
24 total

1” Ø Double Spider Insert
2 each end wall
4 total

VIEW B-B’
Opposite Side Similar

What’s Changed? New terminators added.
Figure SS 541–5: 7’ x 14’ x 11’ Tub-Style Structure with Modular Top Type I Working Clearances

Note(s):
1. Placement of the PME enclosure is site-specific. The Design Organization will determine the placement of the switch door opening based on field conditions.
2. To allow for shaping and termination of cables, it is recommended that the structure and cabinet be placed in location 1 (as shown on the drawing) whenever possible.
3. When a PME switch is installed in placement location 2, cable steps or cable hooks shall be used to shape cable to maximize working space in the structure.
4. The 4-foot clearance of the side of new PME installations will enable the placement of automated switching equipment (RCS).
5. Alternate position (Placement 2) is not approved for new construction.
6. Alternate position (Placement 2) requires District Manager approval.

What’s Changed? New 7’ x 18’ Modular Tub Structure, Additional Terminators, Cable Opening and Placement Location
Scope SS 541.2  
7' x 14' x 11' Precast Tub-Style Structure with Modular Top Type II for PME-6 through PME-12 Switchgears

Figure SS 541–6: 7' x 14' x 11' Tub-Style Structure with Modular Top Type II

Figure SS 541–7: 7' x 18' x 11' Tub-Style Structure with Modular Top Type II

What's Changed? New 7' x 18' Modular Tub Structure, Additional Terminators, Cable Opening and Placement Location
What's Changed? New terminators added.
Figure SS 541–9: 7' x 14' x 11' Tub-Style Structure with Modular Top Type II

- **Cover & Frame**
  - 5T P53 Lifting
  - 4 places top
  - 4 places mid-section
  - 8 total

- **1/2" Kohler Insert**
  - 2 each end wall
  - 4 total

- **1/2" Grounding Insert**
  - 2 each end wall @ mid-section
  - 1 each end wall base
  - 6 total

- **5"Ø or 6"Ø Terminators**
  - (see project drawing)
  - 20 each end wall
  - 40 total

- **1/2"Ø 1-5000 Plastic Insert**
  - 10 each side wall
  - 4 each end wall
  - 28 total

- **1/2"Ø Ferrule Loop Inserts & 1/2"Ø x 1” Bolts**
  - 2 each end wall
  - 4 each side wall
  - 12 total

**VIEW B-B**

**SECTION VIEW**

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What's Changed? New terminators added.

Approved by: RR

Effective Date: 10-30-2020

7' x 14' x 11' Precast Tub-Style Structure with Modular Top Type I and II

Underground Structures Standards
Figure SS 541–10: 7’ x 14’ x 11’ Tub-Style Structure with Modular Top Type II Working Clearances

Note(s):
1. Placement of the PME enclosure is site-specific. The Design Organization will determine the placement of the switch door opening based on field conditions.
2. To allow for shaping and termination of cables, it is recommended the structure and cabinet be placed in location 1 (as shown on drawing) whenever possible.
3. When a PME switch is installed in placement location 2, cable steps or cable hooks shall be used to shape cable to maximize working space in the structure.
4. The 4-foot clearance on the side of new PME installations will enable the placement of automated switching equipment (RCS).
5. Alternate position (Placement 2) is not approved for new construction.
6. Alternate position (Placement 2) requires District Manager approval.
Figure SS 541–11: 7' x 14' x 11' Tub-Style Structure with Modular Top Type I (For Reference Only)

Plan View

Section View

3/8" Deep x 2" Wide Recess
with (16) S.S. Spring Nut Bolt
Plate Cover at Each Cable Opening

2'-6" TYP.

FOR REFERENCE ONLY
Figure SS 541–11.1: 7' x 14' x 11' Tub-Style Structure with Modular Top Type I (For Reference Only)
**SS 542**  Unistrut/Chain Link Enclosure

**Scope SS 542.1**  Unistrut/Chain Link Enclosure

---

**Figure SS 542–1: Unistrut/Chain Link Enclosure**

**Note(s):**
1. All fences to be installed to meet local standards.
2. All grounding material will be furnished by the contractor. Contractor will install ground rods. Number and position of rods to be specified by SCE.
3. All fence material to be galvanized.
4. Enclosure to be a prefabricated assembly.
5. Line posts to be standard unistrut (1-5/8" x 1-5/8" 12 ga.).
6. Corner posts to be 2 standard unistrut welded together.
7. See CD 170.
8. See GI 020.

---

SS 542  Unistrut/Chain Link Enclosure
This page intentionally left blank.
SS 544 Masonry Enclosure

Scope SS 544.1 Masonry Enclosure

Figure SS 544–1: Masonry Enclosure

3/8" Horizontal Rebar 16" O.C.

2" x 6" Capping Blocks

1/2" Rebar at top of wall.

All cells to be concrete filled.

Signs: “Authorized Personnel Only” and “High Voltage”

8'-0" MIN 9'-4" MAX or to SCE Specs.

1/2" rebar around door lapped 15".

1/2" threaded insert 4" from floor, each corner.

1/2" rebar at bottom of wall.

Metal Clad or Chain Link Door 5' x 7" or to SCE specs.

Grade

What's Changed?

SS 544 Sheet 1 of 3

Masonry Enclosure

Effective Date: 01-26-2007

Approved by:

Signed by:

SCE Public
Figure SS 544–1.2: Plan Floor Slab and End Elevation

- 5/8" x 8' Copperclad Steel Ground Rods to be set through slab to approval of SCE. See Note 6.
- Risers 6" MIN from inside of wall. (See Note 7.)
- Floor to Drain to Sump 1/8"/ft
- 3000# Concrete (See Note 8.)
- Sump
- Grating (See Note 9.) Center in slab
- 1/2" rebar around sump
- 1/2" rebar centered in slab both directions
- All floor rebar to be bent 15" into wall and tied to wall rebar
- 1/2" rebar centered in slab both directions
- 4" MIN
- 2' MAX between rebar both directions.
- For sump details, see Note 9.
- 8" MIN
- Ground Rod
- 16" wider than req'd enclosure
- 16" longer than req'd enclosure

What's Changed?

SS 544
Masonry Enclosure

Approved by:

UGS
Sheet 2 of 3
What's Changed?

Effective Date: 01-26-2007
Note(s):
1. Hollow 8" x 16" blocks to be used (See Note 4).
2. All work must meet local standards.
3. Use type “S” mortar per Uniform Building Code.
4. Capping blocks to be 2" x 6" x 16" set flush with the outside face leaving a 2" shelf for fence cover.
5. Slab to be smooth and sloped 1/8" per foot towards sump.
6. Ground rods will be furnished by the contractor. Number and position of rods to be specified by SCE.
7. See CD 170.
8. See GI 020.
9. See AC 710.
SS 546 Concrete Type Enclosure

Scope SS 546.1 Concrete Type Enclosure

Figure SS 546–1: Concrete Type Enclosure

1" Threaded Insert 24" above ground floor, in wall nearest risers.

9 Gauge 2" x 2" Mesh Chain Link Cover When Req'd. Recessed 6"

All rebar to be bent around all corners.

18" MAX

4" MAX

6" Typ.

Figure SS 546–1.1: Cover Plan

6" MAX

18" MAX

What's Changed?
Figure SS 546–1.2: Plan Floor Slab and End Elevation

- **4" MIN**
- **5/8" x 8' Copperclad Steel Ground Rods to be set through slab to approval of SCE.**
- **Risers 6" MIN from inside of wall (See Note 4.)**
- **3000# Concrete (See Note 5.)**
- **Sump**
- **Grating, see Note 4.**
- **Center in Slab**
- **1/2" rebar around sump.**
- **All floor steel to be bent 15" into wall and tied to wall steel.**
- **1/2" rebar centered in slab 18" both directions.**
- **For sump details, see Note 6.**

**Concrete Type Enclosure**

Approved by: [Signature]

Effective Date: 01-26-2007
Concrete Type Enclosure

Effective Date: 01-26-2007

Approved by: [Signature]

SS 546
Sheet 3 of 3

What's Changed?

Concrete Type Enclosure

Figure SS 546–1.3: Side Elevation

Note(s):
1. All work must meet local codes.
2. Slab to be smooth and sloped 1/8" by the per foot toward sump.
3. Ground rods will be furnished by the contractor. Number and position of rods to be specified by SCE.
4. See CD 170.
5. See GI 020.
6. See AC 710.
SS 548  Unistrut/Chain Link Enclosure Cover (Removable)

Scope SS 548.1  Unistrut/Chain Link Enclosure Cover (Removable)

Figure SS 548–1: Unistrut/Chain Link Enclosure Cover (Removable)

Note(s):
1. Dimensions of cover depend on size of enclosure.
2. Cover mandatory when enclosure is on school grounds, or within 6' of building.
3. All cover material must be galvanized.
4. All covers must be bolted down.
5. Cover to be removable. Maximum size of removable sections to be 12' x 12'.

Approved by:

Effective Date: 01-26-2007

What's Changed?

Unistrut/Chain Link Enclosure Cover (Removable)
SS 549    Chain Link Fence (Surface Mounted Equipment)

Scope SS 549.1    Chain Link Fence (Surface Mounted Equipment)

1.0 General Requirements

1.1 Chain link fence shall comply with UGS SS 542 and ASTM F5567-00 at a minimum.

1.2 Chain link fence shall be a minimum of 8 feet high.

1.3 Chain link fence fabric shall be 9 gauge galvanized steel wire, no larger than 2" X 2" mesh size.

1.4 The fence shall utilize Y-shaped 12½ gauge galvanized barbed wire with 3 strands outside and 2 strands inside.

1.5 End post, gate post, and corner post shall be 2-1/2" in diameter

1.6 Brace and line post shall be 2" in diameter.

1.7 Post foundation concrete shall be 2500 psi @ 28 days.

1.8 Post shall be set at a depth per ASTM F567 - 00.

1.9 Ground rods will be furnished by the contractor. Number and position of rods to be specified by SCE.

Figure SS 549–1: Chain Link Fence (Surface Mounted Equipment)
Scope SS 549.2  Chain Link Fence Safety Signs

1.0  General Requirements

1.1  High Voltage Sign

Signs shall read as follows: “DANGER/HIGH VOLTAGE/UNLAWFUL FOR UNAUTHORIZED PERSONS TO ENTER.” (SAP 10135410), see Figure SS 549-2. A sign shall be mounted on each entrance gate and at least two sides of the enclosure. If obstructions are in the line of sight, place signs in locations which will provide the most visibility.

1.2  Keep Out! Sign

Signs shall read as follows: “DANGER/Keep Out!/Hazardous voltage inside will cause severe injury or death. Do not enter this enclosure.” (SAP 10135426), see Figure SS 549-3. One sign shall be mounted outside of each entrance gate, and at least one on each side of the enclosure. These signs shall be mounted approximately 7 feet above the ground or near the top of the fence, where it would be most visible. If obstructions are in the line of sight, place signs in locations which will provide the most visibility.

Figure SS 549–2: High Voltage Sign

![High Voltage Sign]

Figure SS 549–3: Keep Out! Sign

![Keep Out! Sign]
Subsurface Structure Requirements

Scope SS 560.1 Subsurface Structure Requirements

The following tabulation shows the sizes of various subsurface structures, manufacturers' names and numbers, and an arbitrarily assigned item number.

The Item Number will be the identification used when listed on the “List of Materials” on each working drawing.

Table SS 560–1: Subsurface Structures

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Type</th>
<th>Nominal Size (Inside)</th>
<th>Number of</th>
<th>Precast Concrete Manufacturers’ No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Covers</td>
<td>Grates</td>
</tr>
<tr>
<td>SS-21</td>
<td>Parkway</td>
<td>5’ x 8-1/2’ x 5’</td>
<td>3&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0</td>
</tr>
<tr>
<td>SS-22</td>
<td>Parkway</td>
<td>4’ x 4’ x 4’</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>SS-23</td>
<td>Full-Traffic</td>
<td>4’ x 4’ x 4’</td>
<td>1&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0</td>
</tr>
<tr>
<td>SS-2</td>
<td>Light-Traffic</td>
<td>4’ x 4’ x 4’</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>SS-3</td>
<td>Parkway</td>
<td>4’ x 7’ x 4’</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>SS-4</td>
<td>Light-Traffic</td>
<td>4’ x 7’ x 4’</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>SS-7</td>
<td>Parkway</td>
<td>4’ x 7’ x 7’</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>SS-8</td>
<td>Light-Traffic</td>
<td>4’ x 7’ x 7’</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>SS-9</td>
<td>Parkway</td>
<td>4’ x 7’ x 7’</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>SS-10</td>
<td>Light-Traffic</td>
<td>4’ x 7’ x 7’</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>SS-11</td>
<td>Parkway</td>
<td>5’ x 8-1/2’ x 4’</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>SS-12</td>
<td>Light-Traffic</td>
<td>5’ x 8-1/2’ x 4’</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>SS-15</td>
<td>Parkway</td>
<td>5’ x 8-1/2’ x 7’</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>SS-16</td>
<td>Light-Traffic</td>
<td>5’ x 8-1/2’ x 7’</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>SS-17</td>
<td>Parkway</td>
<td>5’ x 8-1/2’ x 7’</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>SS-18</td>
<td>Light-Traffic</td>
<td>5’ x 8-1/2’ x 7’</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>SS-19</td>
<td>Full-Traffic</td>
<td>4’ x 7’ x 7’</td>
<td>3&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0</td>
</tr>
<tr>
<td>SS-20</td>
<td>Full-Traffic</td>
<td>5’ x 8-1/2’ x 7’</td>
<td>3&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0</td>
</tr>
</tbody>
</table>

<sup>a</sup> Removable Support Beams
<sup>b</sup> 30” Cast Iron MH Cover
<sup>c</sup> 2’ x 2’ Cast Iron Covers

Note(s):
1. All structures will be supplied complete with the correct number of covers, grates, and tamper shields. (Tamper shields not required with solid covers.)
2. All structures contain a precast concrete floor.
3. See SS 562, SS 564, SS 566, SS 568, SS 590, and FC 618 for details.
4. Two grounding bars are provided in enclosures SS-3 through SS-20 (except SS-22 and SS-23). Enclosure SS-21 is provided with four 1/2” threaded bronze grounding inserts.
5. RPM covers will be provided for all parkway 4’ x 4’ (SS-22), 4’ x 7’, and 5’ x 8’-6” enclosures.

What’s Changed?
Table SS 560-1: The approved manufacturer information has been updated. Utility Vault Co. replaced with Oldcastle Infrastructure; parent company note removed.
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SS 562  Concrete Enclosure 4’ x 4’ x 4’

Scope SS 562.1  For Use with following BURD Switches — Switched Only – 2W-3 Pole, 3W-3 Pole — Switched and Fused – 2W-2 Pole, 2W-3 Pole

Figure SS 562–1: Concrete Enclosure 4’ x 4’ x 4’ — SAP 10117682 Nontraffic — SAP 10117683 Light Traffic (Parking Lots)

Figure SS 562–1.1

For Reference Only
Concrete Enclosure 4' x 4' x 4''

SS 562
Sheet 2 of 2

What's Changed?

1. Enclosure to be furnished complete with cover plate and adequate lifting inserts.
2. Six-inch grade rings are available (SAP 10118069).
3. Sealant required at joints.
4. See SS 560 for approved manufacturers.
5. Secure #6 minimum B.C. ground wire to one 5/8'' x 8' copper-clad steel ground rod with a Burndy "GAR" type ground clamp. (Leave 10 feet of ground wire inside enclosure).
6. See SS 564 for new design for this structure.
7. See FC 601.

Effective Date: 01-26-2007
SS 563  Concrete Enclosure — 36" Inner Diameter x 36" — SAP 10117680

Scope SS 563.1  For Use with following BURD Switches — Switched Only – 2W-1 Pole, 2W-2 Pole 3W-1 Pole, 3W-2 Pole — Switched and Fused – 2W-1 Pole

Figure SS 563–1: Concrete Enclosure

3/16" Floor Plate with Recessed Bolt Downs 4 Places Painted Per Note 5.

1" Lift Hole (2 Required)

1/2" Lifting Insert (2 Required)

3/4" Screw Adjustments (4 Places), 4 bolts furnished with each cover.

2" DIA x 2" Deep Lifting Holes (2 Required)

5" x 6" Knockout for Cable Entry 6 required spaced at 60°.

Concrete Enclosure - 780 lb

Concrete Cover — 300 lb

3" MIN Crushed Rock 3/4" MIN – 1-1/2" MAX

What's Changed? This standard was made For Reference Only. SCE no longer performs this type of installation.
Note(s):
1. Enclosure is no longer available. Replacement concrete covers and cover plates are available.
2. Replacement concrete covers are available (plate not included) with SAP 10117669.
3. Steel cover to be interchangeable with transformer enclosure grate, steel cover SAP 10117514.
4. Replacement parts available from Jensen Precast.
5. See FC 601.
6. For parkway use only.
SS 564  Precast Concrete BURD Switch Enclosure — 4' x 4' x 4'

Scope SS 564.1  Precast Concrete BURD Switch Enclosure — 4' x 4' x 4'

Figure SS 564–1: Precast Concrete BURD Switch Enclosure — 4' x 4' x 4'

- 3' MIN Working Clearance
- 4" Typ.
- 6" Typ.
- Manhole Cover
- Conduit Terminators
- 5" Conduit Terminators
- 3 Each Side — Typ
- 2 Each Side — Typ
- Sealing Gasket
- 30" Cast-Iron MH Cover Frame
- Concrete Slab
- 3' MIN Working Clearance
- Slab Adjustment Bolt Pocket — Typ
- Concrete Base
- 4,850 Lb
- 1" Dia. Capped PVC Conduit for Grounding
- (See Note 5.)
- Joint with Mastic Sealant Typ
- (See Note 3.)
- Drop Through Cleanouts Under Cover Bolts — Typ.
- Concrete Slab
- 3"
- Final Grade
- (See Note 4.)
- 5" Conduit Terminators
- 2 Each Side — Typ
- 6" MIN Crushed Rock
- (3/4" MIN — 1-1/2" MAX)
- 4" Typ.
Note(s):

1. **Parkway SAP 10117682.**
   Full traffic SAP 10117683.

2. Enclosure to be furnished complete with manhole gasket, cover, and related bolts. Full-traffic manhole cover is cast-iron and parkway is RPM. Composite manhole covers may be installed for existing parkway (non-traffic) installations.

3. Mastic sealants required at slab/base joint if cover slab is not elevated.

4. Top surface of enclosure slab will be set three inches above grade when installed in a planted area. In paved installations, top surface of slab to be flush with grade.

5. Secure #6 minimum BC ground wire to one 5/8" x 8' copper-clad steel ground rod with a bronze ground clamp. See AC 703 for grounding material. Ground wire to be inserted through capped one-inch PVC conduit. (Leave 10 feet of ground wire inside enclosure.)

6. See SS 560 for approved manufacturers.

7. Replacement parts may be ordered from the following SAP numbers:
   - Top Cap Concrete Cover: SAP 10117534
   - RPM Parking Lid: SAP 10117535
   - Cast Iron Traffic Lid: SAP 10117544
   - 6-inch Grade Ring: SAP 10118069
   - Composite Manhole Cover: SAP 10205271

---

= For Reference Only
SS 565 Subsurface Equipment Enclosure — 4’ x 7’ x 7’

Scope SS 565.1 Subsurface Equipment Enclosure — 4’ x 7’ x 7’ — (4’ x 7’ x 4’)

Figure SS 565–1: Subsurface Equipment Enclosure — 4’ x 7’ x 7’

- Tamper Shield (2) attaches to cover frame with 4 nuts.
- Galvanized Bonded Grate (2 Req’d.)
- Covers with Grates
- Solid Cover Alternate
- Holes for 1/2” x 1-1/2” Penta Head Bolts

H Beams Req’d.: Parkway 2 Traffic 8
H Beams Req’d.: Traffic 7
14” DIA knockouts for vents — 4 Req’d. (one on each end wall — two on one side).

4 Knockouts — 6” dia. (8 total — each end wall)
8 Knockouts — 6” Dia (16 Total — Each End Wall)

6” Crushed Rock 3/4” MIN — 1-1/2” MAX
Minimum Excavation Parkway 60” x 96” x 93-1/2” Deep Traffic 60” x 96” x 95” Deep

Approved by: 
Effective Date: 01-26-2007

What’s Changed?
Note(s):  
1. Twelve stainless steel penta head bolts furnished.  
2. Enclosures available in parkway and traffic loading types, with vented or solid covers. See SS 560 for approved manufacturers and ordering information.  
3. Covers will be identified with model numbers on the underside and painted in accordance with FC 601.  
4. Grout under frame when adjusting bolts are used.  
5. Sealant required at joints.  
6. Two grounding bars are provided in each enclosure.  
7. Four-foot-deep enclosure utilizes base section (with floor) and cover only.
SS 566 Subsurface Equipment Enclosure — 5’ x 8’-1/2” x 7’

Scope SS 566.1 Subsurface Equipment Enclosure — 5’ x 8’-1/2” x 7’ — (5’ x 8-1/2’ x 4’)

Figure SS 566–1: Subsurface Equipment Enclosure — 5’ x 8’-1/2” x 7’

- Solid Cover Alternate
- Tamper Shield (2) Attaches to cover frame with 8 nuts.
- Galvanized Bonded Grate (4 Req’d.)
- Holes for 1/2” x 1-1/2” Penta Head Bolts
- 1/2” (MIN) Letters
- 1” DIA Lifting Holes
- 3-1/2” Parkway 6” Traffic
- Adjusting Bolts in Frame Allow 3” of grade adjustment. (Typical — All Models)
- H Beams Req’d.: Parkway 3 Traffic 11
- All Plates 1/4” Parkway 5 1/16” Traffic
- 14” DIA Knockouts for Vents — 4 Req’d. (One on each end wall — two on one side.)
- 4 Knockouts — 6” DIA (8 Total — Each End Wall)
- 8 Knockouts — 6” DIA (16 Total — Each End Wall)
- 6” Crushed Rock 3/4” MIN — 1-1/2” MAX
- Minimum Excavation Parkway 72” x 114” x 93-1/2” Deep
- Traffic 72” x 114” x 96” Deep

6” Floor may be separate section depending upon manufacturer.
Note(s):
1. Twelve stainless steel penta head bolts furnished.
2. Enclosures available in parkway and traffic loading types, with vented or solid covers. See SS 560 for approved manufacturers and ordering information.
3. Covers will be identified with model numbers on the underside and painted in accordance with FC 601.
4. Grout under frame when adjusting bolts are used.
5. Sealant required at joints.
6. Two grounding bars are provided in each enclosure.
7. Four-foot-deep enclosure utilizes base section (with floor) and cover only.
SS 568  Precast Surface Operable Parkway Enclosure — 5' x 8'-1/2" x 5'  

Scope SS 568.1  Precast Surface Operable Parkway Enclosure — 5' x 8'-1/2" x 5'  

**Figure SS 568–1: Precast Surface Operable Parkway Enclosure — 5' x 8'-1/2" x 5'**

1.0  **Excavation Size:**
Consult manufacturers’ installation guides for exact excavation dimensions.

2.0  **UGS References:**
- GI 030 General Specification for Precast Structures
- GI 035 Allowable Tolerances for Installed Precast Structures
- CD 142 Conduit Entrance
- FC 618 Polymer Concrete Pull Box Covers
- AC 711 Sump Drain and Detail

**Note(s):**
1. Conduit terminators to be generally located as shown in CD 142. Standard conduit entrance will be a flatwall design. Slight variations by manufacturers may be allowable with Company approval.
2. For surface operable enclosure structural design criteria, see Figure SS 568–2 (Sheet 3) and Figure SS 568–3 (Sheet 4).
3. For a list of material requirements and notes, see Table SS 568–1 (Sheet 7).
4. Top surface of enclosure slab will be set three inches above finish grade when installed in a planted area. In paved installations, top surface of slab to be flush with grade.
5. See SS 560 for listing of approved surface operable enclosure manufacturers’ names and catalog numbers.
6. Mastic sealant is required between top slab and enclosure.
7. Structure SAP number is SAP 10117580. For special fault indicator covers refer to DUG, TD 100.

What's Changed? SAP Number added to Note 7.
Scope SS 568.2  Top Slab/Cover with Removable Beams

Figure SS 568–2: Top Slab/Cover with Removable Beams — Plan and Section A-A

Note(s):
1. For list of materials and notes, see Table SS 568–1 (Sheet 7).
2. See Detail "B" in Figure SS 568–5 (Sheet 6).

What's Changed?
Figure SS 568–3: Top Slab/Cover with Removable Beams — Section B-B and Detail “A”

Note(s):
1. For list of materials and notes, see Table SS 568–1 (Sheet 7).

SS 568

Preceded Surface Operable Parkway Enclousure — 5' x 8'-1/2" x 5'

Approved by:
UGS
SCE Public

What's Changed?
SS 568
Sheet 4 of 7
Effective Date: 10-24-2014
Scope SS 568.3  Cover Frame/Gasket Insert Detail

Figure SS 568–4: Cover Frame/Gasket Insert Detail

1. For list of materials and notes, see Table SS 568–1 (Sheet 7).
## Scope SS 568.5  
**List of Materials for Precast Surface Operable Parkway Enclosure**

### Table SS 568–1: List of Materials for Precast Surface Operable Parkway Enclosure

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10” Plastic Vent Terminator&lt;sup&gt;a/&lt;/sup&gt;</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>1/2” Diameter Threaded Bronze Grounding Inserts&lt;sup&gt;b/&lt;/sup&gt;</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>1/2” Diameter Richmond “Kohler” Threaded Insert or Equal</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>1/2” Diameter J-Bolts — AC 731</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>5” Diameter Plastic Conduit Terminators&lt;sup&gt;c/&lt;/sup&gt;</td>
<td>16</td>
</tr>
<tr>
<td>8</td>
<td>Pull Irons 7/8” Diameter Vertical&lt;sup&gt;d/&lt;/sup&gt;</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>Hot-Dipped Galvanized 30” x 48” Steel Pull Box Frame</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>1/2” x 2-1/2” Lg. S.S. Penta Hd. Bolt with Captive Free Spinning Round Flat S.S. Washer&lt;sup&gt;e/&lt;/sup&gt;</td>
<td>18</td>
</tr>
<tr>
<td>11</td>
<td>30” x 48” Polymer Concrete Pull Box Cover&lt;sup&gt;f/&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>1/2” Diameter Open Bottom Threaded Insert — Star #P35T&lt;sup&gt;g/&lt;/sup&gt;</td>
<td>18</td>
</tr>
<tr>
<td>13</td>
<td>30” x 48” One-Piece EPDM Gasket — R&amp;D Co. #MBE-03-MOD&lt;sup&gt;h/&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>14</td>
<td>8-Piece Rubber Gasket, SAP 10117297</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>Concrete Slab, SAP 10117301</td>
<td>1</td>
</tr>
</tbody>
</table>

<sup>a/</sup> 10-inch plastic vent terminators will be an Edison-approved design.

<sup>b/</sup> 1/2-inch threaded bronze grounding inserts will be an Edison-approved design. A #2 solid copper wire will be permanently brazed to the insert and structure rebar.

<sup>c/</sup> Plastic conduit terminators will be an Edison-approved one-piece design.

<sup>d/</sup> 7/8-inch pull irons will be designed for a working tension of 20,000 pounds, plus a safety factor of 2.

<sup>e/</sup> The pull box cover will be attached to cover frame/inserts with 1/2” x 2-1/2” long S.S. Penta head bolts with captive free spinning round flat S.S. washers.

<sup>f/</sup> The pull box will be constructed as shown in FC 618. In addition, bottom of cover will be flat and smooth with no surface pockets for a minimum of 2” back from the outer perimeter of cover.

<sup>g/</sup> 1/2-inch open-bottom metal threaded inserts will be Star, part no. P35T or equal. A clean out hole will be provided under each insert.

<sup>h/</sup> Each cover frame will be furnished with a 8-piece gasket, permanently glued in place prior to shipment. The gasket will be glued in place using 3M, Scotch-Grip brand #847 rubber and gasket adhesive. The gasket material will be Ethylene Propylene Dione Monomer (EPDM) material, 50 Shore from Research and Development Co., Part No. MBE-03-MOD. The gasket and frame will be cleaned prior to application of the glue. Glue will be applied to the gasket and frame surface.

### Note(s):
1. Design and construction of the surface operable enclosure will conform to GI 030 wherever applicable (specification for precast reinforced concrete vaults and manholes).
2. Abbreviation “GRD” will be stenciled in red letters, 1-1/2-inch minimum height, adjacent to each grounding insert.
3. Walls will be painted white.
4. No lifting inserts or like devises will be installed in floor of base section or top outside slab surface of the enclosure.
SS 575 Transformer Enclosure — 3’ x 6’ Concrete — BURD

Scope SS 575.1 Concrete Enclosure for 4-Wire BURD Transformers for Use in Rocky Areas Only (3’ x 6’)

Figure SS 575–1: Concrete Enclosure for 4-Wire BURD Transformers for Use in Rocky Areas Only

Note(s):
1. Concrete enclosure for 4-wire BURD transformers for use in rocky areas only. (36” x 72”) (SAP 10117685)
2. Each concrete component shall be furnished with adequate inserts or slots for handling during installation.
3. The complete enclosure is no longer available; replacement top caps, grates, and tamper vents are available.
4. This enclosure is not to be used in traffic areas.
5. Top of enclosure shall be placed flush with grade when adjacent to a sidewalk or curb. It shall be placed 2 inches above grade when in a planted or open area.
6. Tamper vent (SAP 10117529)
Figure SS 575-2: Enclosure for BURD Transformer

- **3/8" Insert for Hold Down**
  (4 Req) Furnish (4) 3/8" x 1-1/2"
  Stainless Steel Penta Head
  Cap Screws with Grate.

- **32" Sq. Galvanized Banded Grate with 1-1/4" x 1/8" Bars**
  1" O.C.: Crossbars 4" O.C.
  (750# Loading).

- **1/2" Coil Inserts for Lifting (2 Req.)**

- **1-1/4" Wide x 1" Deep Groove for Tamper Vent Support (1 Req.)**

- **30" Net Opening**

- **Concrete Cover and Grate**

- **32-1/4" Sq.**

- **44" Sq.**

- **2-1/2"**

- **4" Block Letter (2 Req.)**

- **1/2" x 1/2" x 1/8" L**
  4" Long (2 Req.)

- **1-1/4" Wide x 1" Deep Groove for Tamper Vent Support (4 Req.)**

- **4" Long (2 Req.)**

- **1/2" x 1/2" x 1/8" L**
  4" Long (2 Req.)

- **Plan Section "A-A" Tamper Vent Detail**

- **30"**

- **3-7/8"**

- **3"**

- **1/2" x 1/2" x 1/8" L**
  (4 Req.)

- **1" x 1" x 3/16" L**
  (2 Req.)

- **30"**

- **1/2" x 1/2" x 1/8" L**
  (4 Req.)

- **1/2" x 1/2" x 1/8" L**
  (4 Req.)

- **What's Changed?**

---

**Transformer Enclosure — 3' x 6' Concrete — BURD**

**Effective Date:** 07-29-2016

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FOR REFERENCE ONLY
Scope SS 575.2  Replacement Part for Steel Tamper Vent: Underground Retrofit Shield (URS)

Figure SS 575–3: Underground Retrofit Shield (URS)

Note(s):
1. This is a replacement for the steel tamper vent (SAP 10117533).
2. The steel tamper vent (SAP 10117533) can be replaced with the underground retrofit shield (SAP 10178034) in conjunction with other work being performed in the transformer enclosure.
3. Transfer structure ID # to new vent.
4. The installation of this vent with embossed “HIGH VOLTAGE” does not require installing a high voltage sign, SAP 10135332.
5. The underground retrofit shield shall be Polyethylene (PE), Acrylonitrile Butadiene Stryrene (ABS), or Fiberglass Reinforced Polyester (FRP).

What’s Changed? Figure SS 575-3 was updated to include Notes 3 and 4.
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SS 577 Transformer Enclosure — 3'-6" x 6' Concrete — BURD

Scope SS 577.1 Concrete Enclosure for 3-Wire BURD Transformers for Use in Rocky Areas Only (3'-6" x 6') (SAP 10117686)

Figure SS 577–1: Concrete Enclosure for 3-Wire BURD Transformers

Note(s):
1. Each concrete component shall be furnished with adequate inserts or slots for handling during installation.
2. Enclosure shall be furnished complete with grate, tamper vent, bolts, and support bars.
3. This enclosure is not to be used in traffic areas.
4. Set screw adjustments at 3 inches when installing. Top will then have a 3-inch up or down adjustment available at a future time.
5. Grade rings available: 3-inch ring (SAP 10118070)
   6-inch ring (SAP 10118071)
6. Top of enclosure shall be placed flush with grade when adjacent to a sidewalk or curb. It shall be placed 2 inches above grade when in a planted or open area.

What's Changed?
Figure SS 577–2: Concrete Cover for 3-Wire BURD Transformers

- 3/8” Sq. Gal v. Banded Grate with 1-1/4” x 1/8 Bars 1” O.C.; Crossbars 4.22” O.C. (250/ft²) Loading 
  SAP 10117531
- 3/8” Insert for Hold Down (4 Req.) 
  Furnish (4) 3/8” x 1-1/2” S.S. Penta Head Cap Screws with Grate.
- Concrete Top Cap 
  SAP 10117530
- 4” Thick Concrete
- 1/2” Coil Lifting Inserts (2 Req.)
- 1/4” Wide x 1” Deep (4 Req.)
- 8-1/2”
- 8-1/2”
- 8-1/2”
- 8-1/2”
- 36” Clear Opening
- Tamper Vent 
  SAP 10117533
- 3/8” Typ.
- 61” Sq.
- 38-1/4” Sq.
- 4” Thick Concrete
- 4” Block Letter (2 Req.)
- 3/8” Insert for Hold Down (4 Req.)
- 1/2” x 1/2” x 1/8” (2 Req.)
- Tamper vent to be hot-dip galvanized after fabrication.
- Plate to be 12 gauge MIN.
- Spacers 1/8” MIN and Support Bars 3/16” MIN
- 1/4” Wide x 1” Deep (4 Req.)
- 1/2” Coil Lifting Inserts (2 Req.)
- 1/2” x 1/2” x 1/8” (4 Req.)
- 1/2” x 1/2” x 1/8” (4 Req.)

What's Changed?
Scope SS 577.2 Replacement Part for Steel Tamper Vent: Polyethylene Underground Retrofit Shield (PURS)

Figure SS 577–3: Polyethylene Underground Retrofit Shield (PURS)

Note(s):
1. This is a replacement for the steel tamper vent (SAP 10117533).
2. The steel tamper vent (SAP 10117533) can be replaced with the polyethylene underground retrofit shield (SAP 10178036) in conjunction with other work being performed in the transformer enclosure.
3. Transfer structure ID # to new vent.
4. The installation of this vent with embossed “HIGH VOLTAGE” does not require installing a high voltage sign, SAP 10135332.
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SS 580  Transformer Housing — Semi-Buried — 4' x 4' x 4'

Scope SS 580.1  Transformer Housing — Semi-Buried — 4' x 4' x 4'

Figure SS 580–1: Typical Installation Details — Transformer Housing — Semi-Buried — 4' x 4' x 4'

Plan View

Cover Plate
See Note 8 for details.

3/8" Everdur
Round Head
Stove Bolt
(4 Required)

Hood
See Note 5
for details.

Primary Ducts

Service Conduits by Custumers

3/8" Everdur
Round Head
Stove Bolt
(4 Required)

Primary Conduit

Secondary Conduit

Grout

Typical Grout

Hasp and Hinge Mounting
See Note 6.

Pre-cast Concrete Base
See Note 7.

Drain Hole.
See working
drawing for
open or closed.

3" 12" 9" 4"

12" x 18" x 18" Drain
Sump of 3/4" – 1-1/2" Rock
Figure SS 580–2: Pre-Cast Concrete Base

Drill and Tap for 3/8" Bolt. (Ream to 7/16" DIA hole when converting to S.M.T. Type II installation.)

Recess 12" W x 15" H. 2" Draft (2 Required)

1" Spider Coil Inserts set at 45° on 2 walls. (4 Required)

1" Cored Hole

Plan View

Frame to be galvanized by hot-dip process after fabrication.

See Detail "A"

Typical

3/8" Inserts (4 Req’d)

3/8" Inserts (8 Req’d)

Typical

38" Inserts

32 Req’d.

1" Cored Hole

Section A-A

Figure SS 580–2.1

Transformer Housing — Semi-Buried — 4’ x 4’ x 4’

SS 580

Sheet 2 of 6

What’s Changed?

Effective Date: 01-26-2007

Approved by:

FOR REFERENCE ONLY

UGS

SCE Public
Note(s):
1. Minimum 28th day concrete strength requirements = 3,000 psi.
2. See working drawings and/or specifications for conduit details.
3. Grout entire joint between upper and lower sections.
4. Terminate ducts in the following manner:
   a. Non-ferrous conduits with end bells.
   b. Galvanized electrical conduits with galvanized conduit bushings.
5. See Figure SS 580–3 (Sheet 4) for details.
6. See Figure SS 580–5 (Sheet 5).
7. See Figure SS 580–2 (Sheet 2) for details.
8. See Figure SS 580–4 (Sheet 4) for details.
Scope SS 580.2  Hood Details

Figure SS 580–3: 4’ x 4’ x 4’ Hood Details

Note(s):
1. The location and size of all holes are to be identical on both pieces.
2. All material to be galvanized by hot dip process after fabrication.

Figure SS 580–4: Hood Mounting Details

Note(s):
1. See Figure SS 580–1 (Sheet 1) for typical installation details.
Scope SS 580.3  Cover Details

Figure SS 580–5: 4’ x 4’ x 4’ Cover Details

Note(s):
1. See Figure SS 580–1 (Sheet 1) for typical installation details.
2. Hood Finishing Procedure:
   Finish is to be applied to all inside and outside surfaces.
   Refer to manufacturer’s (Subox, Inc) recommendations for application and drying methods.
   a. Initial Preparation:
      Galvanized metal surfaces: Wash with a 5% phosphoric acid solution. Rinse with water and allow to dry.
      Black metal or rusted surfaces: remove all rust flakes, mill scale, and so on with wire brush. Rinse water and allow to dry.
b. Paint Application
   Step 1 — Apply one coat of Subox #11 red primer.
   Step 2 — Apply one coat of Subalox #521 (dust)
   Step 3 — Apply one coat of Subalox #521 (dust)
SS 585  3Ø Subsurface Transformer Enclosure

Scope SS 585.1  3Ø Subsurface Transformer Enclosure

Figure SS 585–1: 3Ø Subsurface Transformer Enclosure

Note(s):
1. Each enclosure is furnished completely with covers, grates, tamper vents, and all capscrews. The light traffic enclosure only is furnished with the shown footing.
2. Each enclosure to be set on 6 inches minimum crushed rock. Set the light traffic enclosure flush with grade and the parkway enclosure 3 inches above grade.
3. There are four lifting holes in each section. Two BURD enclosure lifting bars are used to set each section.
4. All covers, grates, and vents must be securely fastened in place using all capscrews. Use Penta-head type for exposed locations.
5. To remove the light traffic covers, first remove both grates; this will reveal two lifting brackets on each cover. Lift and slide each cover off the end of the enclosure.
6. It is not necessary to remove the grates to remove the parkway covers. They may be slid over the grates using the bolt downs as lifting holes.

What’s Changed? This is a new standard: 3Ø Subsurface Transformer Enclosure. The standard absorbed DUG US 185. It is FRO.
SS 586 PMH Concrete Enclosure

Scope SS 586.1 PMH Tub-Style Concrete Enclosure — 5’ x 10’-6” x 7’

Figure SS 586–1: PMH Tub-Style Concrete Enclosure — 5’ x 10’-6” x 7’

Note(s):
1. Enclosure is delivered with a steel adapter plate to be used only with S&C cabinet. Plate can be placed in one of two recess locations to allow alternate placement of cabinet. Secure plate with two flathead screws provided. See Figure SS 586–1 (Sheet 1).
2. To allow for shaping and termination of cables, it is recommended that cables and conduits be installed into structure and cabinet be placed in the preferred location (as shown on drawing) whenever possible.
3. An 8 foot minimum working clearance is required directly in front and back of pad-mounted cabinet doors, and 3 feet from side or ends of enclosure top surface at non-door side of cabinet.
4. Enclosure to be placed on a minimum of 6 inches crushed rock. Top surface of enclosure shall be 6 inches above finish grade.
5. Four sets of 1/2 inch threaded plastic inserts are cast-in to both sides of base section for attachment of 30 inch cable racks.
6. See Scope SS 586.2 (Sheet 2) for installation procedures of barrier plates.

PMH Cabinet

Working Clearance (See Note 3)

Preferred Placement Location (See Note 2 and 3)

Alternate Placement Location (See Note 3)

6" Crushed Rock
3/4" MIN — 1 1/2" MAX
(See Note 4)

30" RPM Manhole Cover

Working Clearance (See Note 3)

Working Clearance (See Note 3)

Top Section

Base Section

Cables and conduits should enter and leave structure at either front and back (not side). (See Note 2)

FOR REFERENCE ONLY
Scope SS 586.2 Moisture Barrier Plates

Figure SS 586–2: Moisture Barrier Plates

Metal Barrier Plate Support (See Notes 1 and 2)

Nonconductive RPM/Plastic Barrier Plates—3 Total (See Note 1)

S&C Adapter Plate Recess

Cable Hole Preferred (See Note 3)

Cable Slot Alternate

1'-10" 1'-10" 1'-10"

Barrier Plates

Silicone (See Note 4)

Metal Barrier Support Plate

Figure SS 586–2.1

Figure SS 586–2.2

SS 586
PMH Concrete Enclosure

What's Changed?

Approved by:

Effective Date: 01-30-2009
Note(s):
1. PMH enclosure is supplied with three nonconductive RPM/plastic barrier plates, 22" (width) x 6" (length). Barriers are supported by two metal support plates bolted to bottom of ceiling, see Figure SS 586–2 (Sheet 2).
2. Position barrier plates No. 1 and 3 on top of two metal support plates with long sides tight against adjacent concrete. Center plate No. 2 on top of plates No. 1 and 3, see Figure SS 586–2.2 (Sheet 2).
3. To terminate cables to PMH, it is necessary to cut holes or slots in the barrier plates. Locate and mark center terminating locations of individual cables onto barriers. Holes should be utilized over slots whenever possible to provide better cable sealing capability. Barrier holes/slots can be cut by using a 1/2 inch drill with a hole saw (SAP 10145256 mandrel and SAP 10145946 carbide hole saw), or a skill saw with a concrete abrasive blade (6 inch — SAP 10063807 or 7 inch — SAP 10063808).
4. After placing cable through barriers and terminating to PMH, seal around all cables, outside perimeter of barrier plates, and all joints with silicone (SAP 10117811). Cutout slots can be reinstalled by placing silicone along cut edges of barrier slots and pressing cutout material back into place. Tape can be used to hold the cutout material in place until the silicone has set.
5. If replacement moisture barriers are required, a set of three is available under SAP 10117329.
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SS 587  PME Concrete Enclosure

Scope SS 587.1  PME Tub-Style Concrete Enclosure — 5' x 10'-6" x 7'

Figure SS 587–1: PME Tub-Style Concrete Enclosure — 5' x 10'-6" x 7'

Note(s):
1. Placement of the PME enclosure is site-specific. The Design Organization will determine the placement of the switch door opening based on field conditions.
2. To allow for shaping and termination of cables, it is recommended the structure and cabinet be placed in location 1 (as shown on drawing) whenever possible.
3. When a PME switch is installed in placement location 2, cable steps or cable hooks shall be used to shape cable to maximize working space in the structure.
4. Refer to Figure SS 587–2 (Sheet 2) for working clearances.
5. Enclosure to be placed on a minimum of 6 inches crushed rock. Top surface of enclosure shall be 3 inches above finish grade.
6. Four sets of 1/2-inch threaded plastic inserts are cast-in to both sides of base section for attachment of 30-inch cable racks.
7. Placement location 2 shall not be used for PMH installations.
8. Composite manhole cover may be used for replacement. SAP 1020 5271
Figure SS 587–2: PME-6 Through 12 Concrete Encloser Working Clearance

Note(s):
1. The 4-foot clearance on the side of new PME installations will enable the placement of automated switching equipment (RCS). RCS retrofits on existing PME installations will keep the 3-foot side working clearance as long as the RCS cabinet door can be fully opened without being obstructed by any part of the retaining wall, building, or landscape.
2. Alternate position (Placement 2) is not approved for new construction.
3. Alternate position (Placement 2) requires District Manager approval.
SS 590 Precast Tub-Type for PMH/PME, Primary Metering Cabinets, and Preferred Emergency Switch — 5' x 10'-6" x 7'

Scope SS 590.1 Precast Tub-Type for PMH/PME, Primary Metering Cabinets, and Preferred Emergency Switch — 5' x 10'-6" x 7'

Figure SS 590–1: 5' x 10'-6" x 7" — Precast Tub-Type PMH/PME Structure

1.0 Excavation Size
Consult manufacturer’s installation guides for exact excavation dimensions.

2.0 UGS Reference
GI 030: General Specification for Precast Structures
GI 035: Allowable Tolerances for Installed Precast Structures
AC 711: Sump Drain and Detail

Note(s):
1. Conduit terminators to be located as shown on Figure SS 590–3 (Sheet 3). Standard conduit entrance will be a flatwall design. Slight variations by manufacturers may be allowable with Company approval.
2. For PMH/PME structural design criteria, see Figure SS 590–2 (Sheet 2), Figure SS 590–3 (Sheet 3), and Figure SS 590–4 (Sheet 4).
3. For list of material requirements and notes, see Table SS 590–2 (Sheet 5).
4. Top surface of PMH/PME structure will be set 3 inches above finish grade.
5. Cable clear opening will be covered with an Edison-approved cover at the time of structure placement.
6. Backfill around the structure will be with a minimum of one sack per yard sand cement slurry to within one foot of finished grade. The surface elevation of the slurry will not vary more than one foot around the perimeter of the structure as it is being placed.
7. Table SS 590–1 (Sheet 1) shows the approved PMH/PME enclosure manufacturers’ names and catalog numbers. See SS 500 for item number and SAP number.
8. See GI 030.

Table SS 590–1: Precast Concrete Manufacturers’ Part Numbers

<table>
<thead>
<tr>
<th>Jensen Precast</th>
<th>Oldcastle Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>K5106-PUV84-11</td>
<td>ED-5106-84-PMH</td>
</tr>
</tbody>
</table>

What's Changed? Table SS 590-1: The approved manufacturer information has been updated. Utility Vault Co. replaced with Oldcastle Infrastructure; parent company note removed.
Scope SS 590.2  Top Section for 5' x 10'-6" x 7' Precast Tub-Type Structure

Figure SS 590–2: Top Section for 5' x 10'-6" x 7' Precast Tub-Type Structure

Note(s):
1. For list of materials and notes, see Table SS 590–2 (Sheet 5).
Scope SS 590.3  Base for 5' x 10'-6" x 7' Precast Tub-Type Structure

Figure SS 590–3: Base for 5' x 10'-6" x 7' Precast Tub-Type Structure

Note(s):
1. For list of materials and notes, see Table SS 590–2 (Sheet 5).
Scope SS 590.4  
Detail Information for 5' x 10'-6" x 7' Precast Tub-Type Structure

Figure SS 590–4: Detail Information for 5' x 10'-6" x 7' Precast Tub-Type Structure

Concrete Recess Detail

Adapter Plate Detail

Note(s):
1. For list of materials and notes, see Table SS 590–2 (Sheet 5).
Scope SS 590.5  List of Materials for 5' x 10'-6" x 7' Precast Tub-Type Structure

Table SS 590–2: List of Materials for 5' x 10'-6" x 7' Precast Tub-Type Structure

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/2&quot; Diameter Threaded Bronze Grounding Inserts</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>1/2&quot; Diameter Threaded Plastic Inserts Imperial Construction Products — 15,000</td>
<td>22</td>
</tr>
<tr>
<td>3</td>
<td>1/2&quot; Diameter Richmond Kohler Threaded Inserts or Equal</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>1/2&quot; Diameter J Bolts — AC 731</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>5&quot; Diameter Plastic Conduit Terminators</td>
<td>24</td>
</tr>
<tr>
<td>6</td>
<td>Pull Irons 7/8&quot; Vertical</td>
<td>8</td>
</tr>
<tr>
<td>7</td>
<td>30&quot; Manhole Cover</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>30&quot; Manhole Frames</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Steel Adaptor Plate for S&amp;C PMH Cabinets</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>3/8&quot; Diameter Inserts</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>1&quot; (Length) x 3/8&quot; (Diameter) Stainless Steel Flathead Screw</td>
<td>2</td>
</tr>
</tbody>
</table>

Note(s):

1. Design and construction of PMH top and base section will conform to GI 030 wherever applicable (specification for precast reinforced concrete vaults and manholes).
2. One-half inch threaded bronze grounding inserts will be an Edison-approved design (see 1 above). A #2 solid copper wire will be permanently brazed to the insert and structure rebar.
3. Abbreviation “GRD” will be stenciled in red letters, 1-1/2” minimum height, adjacent to each ground insert.
4. The 7/8-inch pull iron will be designed for a tension load of 20,000 pounds, with a safety factor of 2 (see 6 above).
5. Walls and ceiling will be painted white.
6. One-half inch threaded plastic inserts will be Imperial Construction Products, Part Number 15,000 (see 2 above).
7. The 30-inch manhole frame and 30-inch manhole cover will be Alhambra Foundry, Part Number A-1106-MOD, per FC 621.
   Composite manhole cover may be used for replacement, per FC 623P, SAP 10205271
8. Steel adapter plate will be covered with one coat of primer and one coat of paint as specified in FC 600 (see 9 above). Plate will be attached to top section with 1" x 3/8" stainless steel flathead screws (see 11 above).
9. No lifting inserts or like devices will be installed in the top outside surface of the top tub PMH section, or in the floor of the base section.
10. Plastic conduit terminators will be an Edison-approved one-piece design (see 5 above).
11. Structure design will be approved by the Los Angeles County Road and Bridge Department.

What's Changed?
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SS 591 Precast Concrete Equipment Slab Box — 4' x 6' Pad with 2'-6" x 4' Box

Scope SS 591.1 Precast Concrete Equipment Slab Box — 4' x 6' Pad with 2'-6" x 4' Box for PME-3, PME-4, and PME-5 Switchgear

Figure SS 591–1: Precast Concrete Equipment Slab Box — 4' x 6' Pad with 2'-6" x 4' Box

1.0 Excavation Size:

Minimum excavation for pullbox will be 46" x 83" x depth to suit job. Installing contractor will provide grade rings (6" minimum) as necessary in order to maintain cover over conduits per SCE requirements or permit agency/requirements, whichever is greater. Backfill will be well compacted to prevent subsidence.

2.0 UGS References:

AC 700 Ground Rod — Ground Wires
AC 703 Grounding Materials
MC 830 Protection Barriers

3.0 Reference Drawing:

5227040-0: Equipment Slab Box 4' x 6' Pad w/2'-6" x 4' Pullbox for PMH-5 Switchgear.
4.0 Installation Notes:

4.1 Pad and pullbox will be set level. Pullbox will be placed on 6” (minimum) compacted rock base to ensure uniform distribution of soil pressure in floor.

4.2 Mastic sealant is required at joints.

4.3 Top surface of pad will be set 3” above finished grade.

4.4 One ground rod will be furnished and installed by contractor. Install ground rod through floor of box per AC 700. Ground rod material will comply with AC 703.

4.5 An 8’ (minimum) clearance is required on door side of switch pad for operation.

4.6 Protection barriers will be installed if pad is exposed to vehicular traffic per MC 830.
Figure SS 591–2: Precast Concrete Equipment Slab Box, Plan and Section Views — 4' x 6' Pad with 2'-6" x 4' Box for PME-3, PME-4, and PME-5 Switchgear

Note(s):
1. Galvanized unistrut channel for securing switch to pad. (4 total)
2. Pad is designed to accommodate Scott PMH-5 or S&C PMH-5 switchgear.
3. Switchgear can only be installed with cabinet doors facing ends of pad. Cabinet can be rotated 180 degrees.

Table SS 591–1: Precast Concrete Manufacturers’ Reference Numbers

<table>
<thead>
<tr>
<th>Nominal Size</th>
<th>Jensen Precast</th>
<th>Oldcastle Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>4' x 6' with 2'-6&quot; x 4' Box</td>
<td>K3048-PUV36-11</td>
<td>ED-264-30-PMH-5</td>
</tr>
</tbody>
</table>

What's Changed? Table SS 591–1: The approved manufacturer information has been updated. Utility Vault Co. replaced with Oldcastle Infrastructure; parent company note removed.
This page intentionally left blank.
SS 592  Precast Concrete Equipment Slab Box — 4’ x 4’6” Pad with 2’ x 3’ Box

Scope SS 592.1  Precast Concrete Equipment Slab Box — 4’ x 4’6” Pad with 2’ x 3’ Box for PMH-4 Switchgear

1.0 Excavation Size:
Minimum excavation for pull box will be 46” x 83” x depth to suit job. Installing contractor will provide grade rings (6” minimum) as necessary in order to maintain cover over conduits per SCE requirements or permit agency/requirements, whichever is greater. Backfill will be well compacted to prevent subsidence.

2.0 UGS References:
- SS 500 Slab Box Requirements — Approved Manufacturers
- AC 700 Ground Rod – Ground Wire
- AC 703 Ground Materials
- MC 830 Protection Barriers
3.0 Installation Notes:

1. Pad and pull box will be set level. Pull box will be placed on 6" (minimum) compacted rock base to ensure uniform distribution of soil pressure in floor.
2. Mastic sealant is required at joints.
3. Top surface of pad will be set three inches above finished grade.
4. One ground rod will be furnished and installed by contractor. Install ground rod through floor of box per AC 700. Ground rod material will comply with AC 703.
5. An 8' (minimum) clearance is required at each end of pad for operation of switchgear.
6. Protection barriers will be installed if pad is exposed to vehicular traffic per MC 830.
Figure SS 592-2: Precast Concrete Equipment Slab Box — Plan and Section Views — 4' x 4'-6" Pad with 2' x 3' Box for PMH-4 Switchgear

Note(s):
1. One-half inch diameter star inserts for securing switch to pad (8 total).
2. Pad is designed to accommodate Scott PMH-4 or S&C PMH-4 switchgear.
3. Switchgear must be installed with cabinet doors facing ends of pad.
4. See SS 500 for approved manufacturers.
Figure SS 593–1: PME-4 Conversion Pad for PMH-4 Structures

1.0 Excavation Size:

SS 592

Figure SS 592–2 (Sheet 3)

2.0 Installation Notes:

2.1 Remove existing switch and 4'-0" x 4'-6" pad and remove from site.

2.2 Do not disturb or remove existing PMH box.

2.3 Clean residual sealing mastic from the old joint on box structure.
2.4 Apply new mastic to joints.
2.5 Put the new conversion pad (SAP 10117287) in place.
2.6 An 8 foot (minimum) clearance is required at each end of pad for operation of switchgear.
2.7 Maintain the same protective barriers that were installed for the PMH switch.
2.8 See SS 500 for approved manufacturers.
SS 599 Perimeter Walls for Pad-Mounted Equipment and Underground Structures

Scope SS 599.1 Perimeter Walls for Pad-Mounted Equipment and Underground Structures

1.0 General Requirements

1.1 Perimeter walls are required wherever the grade rises up to the following:

A. 18 inches above the top of a subsurface enclosure at a distance of 5 feet from the edge of the enclosure.
B. 24 inches above the top of a pad at a distance of 5 feet from the edge of the pad.
C. 2 inches above the top of a subsurface enclosure at any point adjacent to the enclosure.
D. 6 inches above the top of a pad at any point adjacent to the pad.

1.2 For perimeter wall heights exceeding those heights in Section 1.1 or when the city/county requires engineering drawings to be submitted for review, the T&D Underground Structures Engineering Group shall be contacted to develop the perimeter wall design as needed.

1.3 A maximum of two inclined grade rings may be used with each concrete BURD enclosure before a perimeter wall is required. The perimeter wall should extend a minimum of 12 inches above the highest point in the grade at the outside surface of the wall.

1.4 The perimeter wall shall conform to local building ordinances.

2.0 Clearances Between Perimeter Wall and Pad-Mounted Equipment

2.1 The following minimum clearances shall be maintained between the perimeter wall and pad-mounted equipment. These clearances apply to new construction and upgrades to existing pad-mounted equipment.

- 8 feet working clearance on the door side of pad-mounted equipment (typical), measured either from the edge of the pad or back of the access opening, as shown in Figure SS 599–1 (Sheet 2).
- 3 feet clearance on the non-door side of pad-mounted equipment (typical), measured from the edge of pad, as shown in Figure SS 599–1 (Sheet 2).
- 4 feet clearance on the side of pad-mounted equipment with automation measured from the edge of pad, as shown in Figure SS 599–2 (Sheet 2).
- 4 feet clearance on the side of pad-mounted multi-position switches, measured from the edge of the pad with the access opening, as shown in Figure SS 599–3 (Sheet 3).

What's Changed? Section 1.2: Updated “TDBU Civil/Structural and Geotechnical Engineering” to “T&D Underground Structures Engineering” as contact group
Figure SS 599–1: Perimeter Wall for Pad-Mounted Equipment (Typical) Installed on a Concrete Pad or Slab Box

Note(s):  
1. For existing installations, maintain a minimum clearance of 18 inches.  
2. For existing installations, maintain a minimum clearance of 12 inches.

Figure SS 599–2: Perimeter Wall for Remote Control Automatic Recloser (RAR)
Figure SS 599–3: Perimeter Wall for Multi-position Switches (i.e. PME 6 through PME 12 or Primary Metering Cabinets)

Note(s):
1. Placement of the PME enclosures is site-specific. The Design Organization will determine the placement of the switch door opening based on field conditions.
2. The 4-foot clearance on the side of new PME installations will enable the placement of automated switching equipment (RCS). RCS retrofits on existing PME installations will keep the 3-foot side working clearance as long as the RCS cabinet door can be fully opened without being obstructed by any part of the retaining wall.
3.0 Clearances Between Perimeter Wall and BURD Enclosures, Vaults, or Manholes:

3.1 A minimum clearance of 3 feet shall be maintained between the perimeter wall and BURD enclosure, vault lid, or manhole lid. See Figure SS 599–4 (Sheet 4), Figure SS 599–5 (Sheet 4), and Figure SS 599–6 (Sheet 4) for details.

![Figure SS 599–4: Perimeter Wall for BURD Enclosures](image)

Note(s):
1. For existing installations, maintain a minimum clearance of 12 inches.
2. For existing installations, maintain a minimum clearance of 18 inches.

![Figure SS 599–5: Perimeter Wall for Vault](image)

Note(s):
1. For existing installations, maintain a minimum clearance of 24 inches.

![Figure SS 599–6: Perimeter Wall for Manhole](image)

Note(s):
1. For existing installations, maintain a minimum clearance of 24 inches.
SS 600 Protection Wall

Scope SS 600.1 Protection Wall for Replacement of Single-Phase, Mini-Pad-Mounted Transformers

The protection wall prevents corrosion and other damage by blocking dirt, rocks, water runoff, and/or other debris from falling on or against a single-phase, mini-pad-mounted transformer.

The protection wall is for existing transformers only and to be installed only when replacing single-phase or mini-pad-mounted transformers and pads located in areas where dirt, rocks, water runoff, and/or other debris may make contact with the transformer. The protection wall is to be installed on the sides and rear of the pad leaving the transformer door area unobstructed. Bury the protection wall a minimum of 2 inches deep to the top of the front lip when replacing the pad.

The size of the protection wall shall be determined based upon the height of the debris behind the single-phase, mini-pad-mounted transformer.

NOTE: The protection wall is not a perimeter wall engineered for restraining Earth movement nor is it to be used as such. Refer to UGS SS 599 for perimeter walls.

Figure SS 600–1: Protection Wall Dimensions

<table>
<thead>
<tr>
<th>A</th>
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<td>10176755</td>
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</table>

What's Changed? New standard for "Protection Wall".
Figure SS 600–2: Example Installation of a Protection Wall

Figure SS 600–3: Side View of an Example Installation of a Protection Wall

What's Changed? New standard for "Protection Wall".

Effective Date: 02-24-2012
SS 602  Landscaping Around Pad-Mounted Equipment

Scope SS 602.1  Landscaping Around Pad-Mounted Equipment

1.0  General Information:

1.1  This standard provides guidelines for landscaping around pad-mounted equipment.

1.2  Shrubs, trees, low vegetation grass or fences installed by Edison customers shall be maintained by the customer owner to meet the required working clearances specified Section 2.0. Shrubs, trees or fences that are located too close to equipment will be trimmed or removed in order to operate, inspect and perform maintenance to the equipment.

1.3  Landscape irrigation systems shall be installed clear of the required minimum clearances and shall be maintained by the customer owner. Irrigation water will cause accelerated deterioration of the equipment enclosure which results in premature failure and service interruption. Irrigation water shall not be sprayed onto the pad-mounted equipment and concrete pad/slab box and shall be away from the equipment maintaining minimum clearances.

1.4  Shrubs, trees or fences shall not be placed over handholes and pullboxes that may be adjacent to the pad

2.0  Clearances Between Landscape and Pad-Mounted Equipment:

2.1  The following clearances shall be maintained when landscaping around pad-mounted equipment or structures. Refer to Figure SS 602–1 (Sheet 2) and Figure SS 602–2 (Sheet 2) for details.

- 8-foot working clearance on each door side of the pad-mounted equipment, measured either from the edge of the slab or the back of the access opening.

- 3-foot working clearance on each non-door side of the pad-mounted equipment, measured from the edge of pad or slab.

- 4-foot working clearance on the sides of the pad-mounted equipment with automation and all pad-mounted multi-position switches measured from the edge of pad or slab.

What's Changed? New standard for landscaping around pad-mounted equipment using shrubs, trees, low vegetation grass or fences.
What’s Changed? New standard for landscaping around pad-mounted equipment using shrubs, trees, low vegetation grass or fences.
2.2 Refer to Table SS 602–1 (Sheet 3) for additional information on the working clearances and structure information of various types of pad-mounted equipment:

**Table SS 602–1: Standards Showing Clearances for Pad-Mounted Equipment**

<table>
<thead>
<tr>
<th>Pad-Mounted Equipment Type</th>
<th>UGS Standard</th>
</tr>
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<tbody>
<tr>
<td>Single Phase Transformer</td>
<td>SS 504, SS 506</td>
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<tr>
<td>Three Phase Transformer</td>
<td>SS 504, SS 530, SS 535</td>
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<tr>
<td>Load Break Fuse Cabinet</td>
<td>SS 506</td>
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<tr>
<td>PME-1 &amp; PME-2 Switch</td>
<td>SS 506</td>
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<tr>
<td>Capacitor Cabinet</td>
<td>SS 520</td>
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<tr>
<td>Pad-Mounted Gas Switch</td>
<td>SS 536, SS 537</td>
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<tr>
<td>PME-3, PME-4 or PME-5</td>
<td>SS 540, SS 591</td>
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<td>PME-6 through PME-12</td>
<td>SS 587, SS 590</td>
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<tr>
<td>Primary Metering Cabinet</td>
<td>SS 590</td>
</tr>
<tr>
<td>VFI-4</td>
<td>SS 530</td>
</tr>
<tr>
<td>VFI-9, VFI-12 or Bypass Switch</td>
<td>SS 538</td>
</tr>
<tr>
<td>RAR</td>
<td>SS 530</td>
</tr>
</tbody>
</table>

3.0 Landscaping Around Pad-Mounted Equipment Using Shrubs, Trees or Fences:

3.1 The developer or customer owner can contact the local nursery or arborist for information on popular shrubs or trees grown in the area.

3.2 California State Law requires contacting Dig Alert (811) 48 hours prior to digging for marking underground utility facilities.

3.3 The size and spread that a shrub or tree will reach at maturity shall be considered when selecting the proper shrub or tree for landscaping. Customers should select landscaping plants whose roots, vines, and branches will not grow under or into Edison structures or equipment. Contact local nursery or arborist for guidance.

The examples shown are shrubs which can be planted near the pad-mounted equipment but are not limited to the following:

- Abelia Grandiflora (Common name: Abelia)
- Acanthus Mollis (Common name: Bear's Breeches)
- Agapanthus 'Midnight Blue' (Common name: Lily of the Nile)
- Lavandula Augustifolia (Common name: Lavender)
- Nanadina Domestica (Common name: Heavenly Bamboo)
- Phormium Tenax (Common name: New Zealand Flax)
- Rosmarius Officinalis (Common name: Rosemary)
- Salvia Greggii (Common name: Autumn Sage)
3.4 Fences shall not block the door side of the pad-mounted equipment. An 8-foot clearance shall be maintained of the door side of the pad-mounted equipment, measured from edge of concrete pad/back of access opening to the fence gate swung wide open. See Figure SS 602–1 (Sheet 2) & Figure SS 602–2 (Sheet 2) for details.

3.5 Contact Edison for approved locks on fence gate.