NOTE: All pages in this section are provided as a reference only, as these items are under the AHJ. The NEC codes referenced on the details in this section may not be current. Contact the AHJ for their current NEC grounding and bonding code requirements.

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NOTES

1. Local municipal codes shall prevail. If no local code exists, use NEC bonding/grounding requirements.
2. 20' or more of No. 4 bare copper conductor (or larger) below the permanent moisture level and about 3" above the base of the footing.
3. If neutral terminal is insulated from the can, install a bonding jumper or screw.
4. Bond as per NEC sec.250-104 and 250-66. See NEC or local regulations for type of material and protection of the grounding conductor.
5. Approved system ground clamps shall be accessible.
6. Bond to interior metallic piping system as per NEC 250-104 and 250-50.
7. 20' or more of No. 4 (or larger) bare copper conductor as per NEC 250-52 and 250-66.

GROUNDING AND BONDING
GROUNDING AND BONDING REQUIREMENTS
1 - 1,000 AMP SES

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SRP®
PROPRIETARY MATERIAL
GROUNDING AND BONDING REQUIREMENTS

SIZE OF BONDING AND GROUNDING CONDUCTORS
NEC TABLE 250-66

<table>
<thead>
<tr>
<th>SIZE OF LARGEST SERVICE CONDUCTORS OR EQUIVALENT FOR MULTIPLE CONDUCTORS</th>
<th>SIZE OF GROUNDING CONDUCTOR AWG NO.</th>
</tr>
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<tbody>
<tr>
<td>Copper</td>
<td>Aluminum</td>
</tr>
<tr>
<td><strong>Copper</strong></td>
<td><strong>Aluminum</strong></td>
</tr>
<tr>
<td>2 or smaller</td>
<td>1/0 or smaller</td>
</tr>
<tr>
<td>1 or 1/0</td>
<td>2/0 or 3/0</td>
</tr>
<tr>
<td>2/0 or 3/0</td>
<td>4/0 or 250 MCM</td>
</tr>
<tr>
<td>over 3/0 to 350 MCM</td>
<td>over 250 MCM to 500 MCM</td>
</tr>
<tr>
<td>over 350 MCM to 600 MCM</td>
<td>over 500 MCM to 900 MCM</td>
</tr>
<tr>
<td>over 600 MCM to 1,100 MCM</td>
<td>over 900 MCM to 1,750 MCM</td>
</tr>
<tr>
<td>over 1,100 MCM</td>
<td>over 1,750 MCM</td>
</tr>
<tr>
<td><strong>Copper</strong></td>
<td><strong>Aluminum</strong></td>
</tr>
<tr>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>1/0</td>
</tr>
<tr>
<td>1/0</td>
<td>3/0</td>
</tr>
<tr>
<td>2/0</td>
<td>4/0</td>
</tr>
<tr>
<td>3/0</td>
<td>250 MCM</td>
</tr>
</tbody>
</table>

* see installation restrictions in NEC section 250-64.

**GROUNDING**

1. The grounding conduit shall contain a grounding conductor if its bare or with green insulation extended from the service switch neutral lug to the ground clamp and shall have an ampere rating not less than than one third of that of the largest service conductor.

2. Bare wire is acceptable as a grounding conductor provided it is No. 4 copper wire or larger, solid or stranded and need not be in conduit or bare grounding conductor, not in conduit, must be securely fastened to the building or structure with approved fastening devices. The spacing of such devices shall not exceed 6'.

3. No grounding electrode conduit or piping system conduit conductor shall enter or exit the utility pull section on any service entrance equipment. The equipment bonding conductor shall be the only grounding conductor to enter, exit or remain in the utility pull section.

4. Direct taps to the ground electrode conductor shall be provided for other utilities requiring bonding to the common ground electrode. A bonding clamp to the electrical service riser is not acceptable.

**BONDING**

1. Bonding - sized in accordance with NEC section 250-66. Service bonding conductors must be of the same size as the service bonding conductor, but in no case shall the ampere rating of the bonding conductor be less than one third of that of the largest service conductor.

2. Insulated bonding conductors shall be protected by only green insulation.

3. Bonding is required on all enclosures, equipment, raceways and fittings that contain unfused service conductors. Nipples and bushings installed with eccentric or concentric knockouts and lock nuts must be bonded with ground bushings, wedges, or other approved devices. All metal conduit containing unfused conductor shall be threaded rigid or intermediate type.

4. An insulated bondable vertical lay-in lug (large enough to accommodate required wire size) shall be mounted on either sidewall.

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NOTE: LOCAL MUNICIPAL CODES SHALL PREVAIL. IF NO LOCAL CODE EXISTS, USE NEC BONDING/GROUNDING REQUIREMENTS.
NOTES
1. Local municipal codes shall prevail. If no local code exists, use NEC bonding/grounding requirements.
2. Connection for main bond jumper ahead of neutral disconnect link.
3. Neutral disconnect link.
4. Main bonding jumper(s) (NEC Articles 250-24 & 250-28 and NEC 250-105).
5. All neutral wires to be placed on neutral bus.
6. All bond wires (NEC Article 250-28) to be placed on bond bus.
7. Enclosure grounded NEC Article 250-80.
8. A wire may not be necessary if grounding busbar has been installed on a cleaned surface of the frame with bolts of adequate size and strength.
NOTES
1. Grounding electrode conductor. See NEC Article 250-64 for material and installation, and NEC Article 250-66 for size.
2. Connection to electrode. Connect grounding electrode conductor to grounding electrode with approved ground clamp. See NEC 250-70.
3. Local municipal codes shall prevail. If no local code exists, use NEC bonding/grounding requirements.
4. Where metallic conduit is used, install a bond bushing and bond per NEC 250-102
5. Connection for main bond jumper. Must be on lineside of neutral disconnect link.
1. Main bonding jumper sized per NEC Article 250-28 & 250-102.
2. Ground bond bus to be tied to metal gutter.
3. All meters and disconnects shall be 6" above or below gutter. Riser shall not extend beyond gutter.
5. Bond conductor to be tied to metal enclosure.
6. All non-fused nipples to be bonded.
7. Bond terminal bar to be tied to metal enclosure.
8. Neutral terminal shall be insulated from metal enclosure.
9. If parallel conductors run from the meter can into the gutter, a bond wire must be installed in each conduit (see NEC Article 250-28 and 250-102).
10. Bonding conductor must be insulated using green insulation.
11. Local municipal codes shall prevail. If no local code exists, use NEC bonding/grounding requirements.
NOTES
1. Size main bonding jumper per NEC Articles 250-28 & 250-102.
2. Ground bond bus to be tied to metal gutter.
3. All meters and disconnects shall be 6" above or below gutter. Riser shall not extend beyond gutter.
4. Size the insulated bond conductor per NEC Article 250-122.
5. Bond conductor to be tied to metal enclosure.
6. Bond all non-fused nipples, on both sides, per NEC Articles 250-28 & 250-102.
7. Bond terminal bar to be tied to metal enclosure.
8. Neutral terminal shall be insulated from metal enclosure.
10. Insulate bonding conductor using green insulation.
11. Local municipal code shall prevail. If no local code exists, use NEC bonding/grounding requirements.
NOTES

1. All meters and disconnects shall be 6" above or below gutter. Riser shall not extend beyond gutter.
2. See table on page 8-2 for bonding and grounding conductor size.
3. All non-fused nipples to be bonded on both sides per NEC Article 250-92.
4. Connection to electrode: Connect grounding electrode conductor to grounding electrode with approved ground clamp (see NEC Article 250-70).
5. Neutral lay in lug shall be insulated from enclosure. Adjacent bonding screw shall be removed and hole plugged.
6. Where neutral terminal bus is insulated from the enclosure, install a bonding jumper or screw (See NEC Article 250-28). Neutral disconnect means (See NEC Article 230-75).
7. Local municipal codes shall prevail. If no local code exists, use NEC bonding/grounding requirements.
8. If bolted hub or self-bonding hub is used, bond jumper is not required.
9. Grounding electrode conductor. See NEC Article 250-62 for material, NEC Article 250-64 for installation, and NEC Article 250-66 for size.
NOTES

1. Figures 1 and 2 for overhead and underground commercial use per manufacturer's specifications.
2. Main breaker may be located on either side of meter base and below meter base for overhead use only.
3. Grounding and bonding requirements per local codes of AHJ.
4. All non-fused nipples to be bonded on both sides per NEC Article 250-92.
5. Local municipal codes shall prevail. If no local code exists, use NEC bonding/grounding requirements.
1. Main disconnect required when panel exceeds more than 6 disconnects.
2. Local municipal codes shall prevail. If no local code exists, use NEC bonding/grounding requirements.
3. Where neutral bus is insulated from enclosure, install a bonding jumper or screw (see NEC Article 250-28).
   Neutral disconnect means (see NEC Article 230-75).
4. Connection to electrode: Connect grounding electrode conductor to grounding electrode with approved ground clamp (see NEC Article 250-70).
5. Grounding electrode conductor. (see NEC Article 250-62 for material, NEC Article 250-64 for installation, and NEC Article 250-66 for size).
6. If bolted hub or self-bonding hub is used, bond jumper is not required.
NOTES

1. See table on page 8-2 for bonding and grounding conductor size.
2. Local municipal codes shall prevail. If no local code exists, use NEC bonding/grounding requirements.
3. Grounding electrode conductor. See NEC Article 250-62 for material, NEC Article 250-64 for installation, and NEC Article 250-66 for size.
4. Connection to electrode. Connect grounding electrode conductor to grounding electrode with approved ground clamp (see NEC Article 250-70).
5. If bolted hub or self-bonding bushing is used, bonding jumper is not required.
6. Where neutral bus is insulated from the enclosure, install a bonding jumper or screw (see NEC Article 250-28). Neutral disconnect means (see NEC Article 230-75).
7. Neutral landing terminal (Insulated from enclosure). Where metallic service raceway is installed with locknuts, install a ground bushing or device and bond to the enclosure (see NEC Article 250-92).
NOTES

1. See table on page 8-2 for bonding and grounding conductor size.
2. Local municipal codes shall prevail. If local code exists, use NEC bonding/grounding requirements.
3. Where neutral bus is insulated from the enclosure, install a bonding jumper or screw (see NEC Article 250-102).
4. Bare or insulated grounding electrode conductor (see NEC Article 250-62 for material, NEC 250-64 for installation and NEC Article 250-66 for size).
5. Connection to electrode: Connect grounding electrode conductor to grounding electrode with approved ground clamp (see NEC Article 250-70).
6. If bolted hub or self bonding hub is used, bonding jumper is not required (NEC Article 250-92).
7. Where metallic service raceway is installed with locknuts, install a ground bushing or device and bond to the enclosure (see NEC Article 250-92).
NOTES

1. See table on page 8-2 for bonding and grounding conductor size.
2. Local municipal codes shall prevail. If no local code exists, use NEC bonding/grounding requirements.
3. If bolted hub or self-bonding hub is used, bonding jumper is not required per NEC Article 250-92.
4. Neutral terminal bus: Where neutral terminal is insulated from the enclosure install a bonding jumper or screw (see NEC Article 250-28 and NEC Article 250-102. Neutral disconnect means (see NEC Article 230-75).
5. Bare or insulated grounding electrode conductor. See NEC Article 250-62 for material, NEC Article 250-64 for installation and NEC Article 250-66 for size.
6. Connection to electrode: Connect grounding electrode conductor to grounding electrode with approved ground clamp (see NEC 250-70).