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INTRODUCTION

The purpose of this manual is to supply essential information to customers, contractors, builders, architects, engineers, and others concerned with the planning of electrical installations.

All information given in this manual is to be used in conjunction with the Company's **Electric Service Rules and Regulations**, on file with the Public Service Commissions of Wisconsin and Michigan. In issuing this manual, the Company is in no way relieving the customer or contractor of his or her responsibility to install the wiring in accordance with the applicable Wisconsin or Michigan State Electrical Codes, as well as local ordinances, or to maintain the wiring and equipment in a safe operating condition. The Company cannot accept any responsibility for the condition of the customer's wiring and equipment.

The information contained herein is general and may not cover all conditions. For new or special cases not specifically covered in this manual, the Company should be consulted.

This edition of the **Electric Service and Metering Manual** supersedes any and all previous editions.

HOW TO USE THIS MANUAL

This Manual is broken into five main sections. Each section has a Table of Contents and General Requirements that apply to that section.

- The section you are reading is the **G** (General) Section, which has the main Table of Contents, phone numbers for We Energies, and provides general information.
- Sections **O & U** (Overhead & Underground) provide the installation details of the equipment for overhead and underground services respectively. They show the equipment layout, critical dimensions and service drop or lateral terminations.
- The **M** (Metering) Section should then be consulted for the wiring of the service equipment. This section is organized by type of service, overhead or underground, 1Ø or 3Ø, and ampacity. The metering sequence to be followed is given after the title block. This section references pages in the **D** Section for that specific metering installation.
- The **D** (Devices) Section lists all the approved termination and metering equipment and is arranged similar to the **M** Section. Only equipment listed in the **D** Section is to be used.

WE ENERGIES SERVICE CENTER DIRECTORY

Winnebago Service Center

800 S. Lynndale Dr.
Appleton, WI 54914 or
P.O. Box 1699
Appleton, WI 54912
(920) 380-3490 or
1-800-972-8856
Fax: (920) 380-3507 or
1-800-932-6227

KR Service Center

201 First St. (CTH KR)
Racine, WI 53403
(262) 552-7500 or
1-800-223-3446
Fax: (262) 552-3460

Watertown Service Center

315 William St.
Watertown, WI 53094
(920) 261-6010 or
1-800-842-7628
Fax: (920) 262-6814

Burlington Service Center

700 S. Kane St.
Burlington, WI 53105
(262) 763-1099 or
1-800-558-3396
Fax: (262) 763-1077

Menomonee Falls Service Center

W164 N9168 Water St.
Menomonee Falls, WI 53051
(262) 251-7000 or
1-800-281-3888
Fax: (262) 253-4561

Waukesha Service Center

1830 S. West Ave.
Waukesha, WI 53189
(262) 549-1100 or
1-800-878-8439
Fax: (262) 574-3109

Calumet Service Center

7301 W. Calumet Rd.
Milwaukee, WI 53223
(414) 362-5185 or
1-800-922-2120
Fax: (414) 362-5175

Metro North Service Center

3100 W. North Ave.
Milwaukee, WI 53208
(414) 449-3002 or
1-877-621-9140
Fax: (414) 449-3075

West Bend Service Center

245 Sand Drive
West Bend, WI 53095
(262) 338-7600 or
1-800-268-2060
Fax: (262) 338-7646

Delafield Service Center

S13 W33800 Highway 18
Delafield, WI 53018
(262) 968-2575 or
1-800-564-9113
Fax: (262) 968-5714

Metro South Service Center

500 S. 116th Street
West Allis, WI 53214
(414) 944-5772
Fax: (414) 944-5773

Wolverine Service Center

800 Industrial Park Dr.
Iron Mountain, MI 49801
(906) 779-2400 or
1-800-562-1050
Fax: (906) 779-2466

Fort Atkinson Service Center

1300 Janesville Ave.
Fort Atkinson, WI 53538
(920) 563-2441 or
1-800-842-0813
Fax: (920) 563-1281

Oakbrook Service Center

4800 W. Rawson Ave
Franklin, WI 53132
(414) 423-6100 or
1-800-757-3777
Fax: (414) 423-5061

Headwaters Service Center

4222 County Road B
Land O' Lakes, WI 54540-9987
1-800-562-1050
Fax: (906) 779-2473

Port Washington Service Center

700 Sunset Rd.
Port Washington, WI 53074
(262) 268-3600 or
1-800-498-5111
Fax: (262) 268-3628

CUSTOMER CONTACT CENTER

- To Energize or De-energize a Service
- To Request Meter or Service Drop Removal
- To Apply for New Service or Rewiring

Phone **1-800-242-9137**
Fax **1-800-354-3585**

EMERGENCY SERVICE/LIGHTS OUT

1-800-662-4797

TO REPORT GAS LEAKS/GAS HAZARDS

1-800-261-5325

GENERAL INFORMATION

1. Unless otherwise indicated, all items shown on the sketches are to be furnished and installed by the customer.
2. Meters and current transformers will be furnished and maintained by We Energies.
3. Only meter mounting devices and service termination equipment listed in Section D of this manual are to be used. The listing of equipment in this manual is not an endorsement or indication of suitability, but only that it is acceptable for installation of our metering equipment and termination of our service lateral conductors as required. It is the responsibility of the customer or their electrical contractor to verify that the equipment is suitable for the installation and that it is installed in accordance with all applicable codes.
4. Application of these standards must be made in accordance with the Company's **Electric Service Rules and Regulations**.
5. Electrical contractors are expected to acquaint themselves with the plans of other trades on the premises being wired so that the meter can be located in accordance with the requirements set forth in this manual.
6. For all new and rewired, one or two family, single-phase residential services rated at 200 amperes or less, We Energies will not provide an outlet location letter with a Guaranteed Available Short Circuit Current (GASCC) or service equipment location sketch. The customer and/or the electrical contractor will be responsible for ensuring outlet locations and service entrance facilities comply with requirements specified in this manual and in accordance with the applicable Wisconsin or Michigan State Electrical Codes and local ordinances. A GASCC value of 10,000 amps is to be used for these services only.
7. Accepted service entrance cable may be used where permitted by the applicable Wisconsin or Michigan State Electrical Codes and Local Ordinances.
8. Transfer equipment used with stand-by power plants or generators shall be suitable for intended use and be so designed and installed as to prevent the inadvertent interconnection of normal and stand-by sources of supply in any operation of the transfer equipment. Further, transfer equipment shall be installed such that it is located electrically on the load side of the meter. All transfer schemes shall be submitted to the local Company office for acceptance before installation.
9. The use of approved material, tested and listed by a nationally recognized testing laboratory, and approved methods of installation are requirements of the Wisconsin State Electrical Code by the Wisconsin State Electrical Code Section of the Department of Commerce, and by OSHA for employers, for customer owned electrical service equipment.
10. This manual only covers secondary services. For Primary Services refer to the Electric Service and Metering Manual Addendum **Primary Rate Requirements for Customer Substations**.

NEW SERVICES

1. Before any new electric service can be installed and energized :
 - ◆ The electrical contractor, building owner or general contractor must be on site to take responsibility for the newly energized service.
 - ◆ Or We Energies crews must have safe access to the service's main disconnect.

Please Note that these requirements are in addition to requirements or contingencies such as, but not limited to, the City OK from the Local Municipal Electrical Inspector (or Affidavit in areas where they are used in place of the City OK), grading, permits and payment of any charges.

2. If the above conditions are not met or the service is deemed unsafe the service lateral may be installed, but the service will not be energized. Our crew will leave a tag on site with a telephone number to call to arrange to have the service energized after the reason(s) for not energizing the service have been corrected.
3. If a service is energized and there is no one on site authorized to take responsibility, the main disconnect will be left in the off position and tagged to indicate that the electric service is energized.

SECONDARY VOLTAGES

The following secondary voltages are generally available from We Energies. It must be noted that all voltages and ampacities may not be available in all areas and there may be a charge to extend the necessary facilities to the customer. For some classes of service, especially three phase, availability is also dependent upon the customer's connected load. The local office must be contacted for cost and availability of service.

- 120 Volt, 1Ø, 2-Wire..... 30 Amperes maximum
- 120/240 Volt, 1Ø, 3-Wire..... 800 Amperes maximum
- 208Y/120 Volt, 3Ø, 4-Wire, grounded-wye 4000 Amperes maximum
- 480Y/277 Volt, 3Ø, 4-Wire, grounded-wye 4000 Amperes maximum
- 208Y/120 Volt, 1Ø, 3-Wire Service 100 Amperes/Position maximum
(limited availability)
- 2400 Volt, 3Ø, 3-Wire Service..... 800 kW load maximum
(generally used for municipal wells, contact local office for requirements)

Secondary voltages no longer provided as new services:

- 240 Volt, 3Ø, 3-Wire Service, Grounded B Phase
- 480 Volt, 3Ø, 3-Wire Service

ONE-CALL CENTERS FOR LOCATION OF UTILITY FACILITIES

WISCONSIN - DIGGERS HOTLINE¹

1. Phone numbers include: From Milwaukee area (414) 259-1181
Toll-free 1-800-242-8511 or 811
TTY 1-800-542-2289
2. All types of requests are accepted 24 hours a day, 7 days a week, 365 days a year.
3. Wisconsin law requires that a minimum of three working days notice be given for any excavation other than emergencies.
4. Will accept calls for emergencies, planned excavation, planning information, appointments and overhead information.

MICHIGAN - MISS DIG¹

1. Phone number: toll-free 1-800-482-7171
2. Hours of operation 7:00 A.M. - 7:00 P.M. Monday thru Friday. Emergency calls accepted 24 hours a day 7 days a week.
3. Michigan law requires that a minimum of three working days notice be given for any excavation other than emergencies.
4. Will accept calls for emergencies, planned excavation, appointments and overhead information.

NOTE:1. These Services will only notify members to locate their facilities.