

Electric Service Guide

Residential



*Contact MID's Electric Engineering Department
(electric.standards@mid.org)
with any questions about this Service Guide.*

*Check MID's website (www.mid.org) "Electric Service Guide" for the
most current version of this Service Guide.*

*If you have any suggestions about improving this Service Guide,
please complete the form on the last page of this Guide and return
it to MID's Electric Engineering Department.*

USE CAUTION WHEN DIGGING TO AVOID BURIED ELECTRICAL CABLES
BEFORE DIGGING CALL
USA (Underground Service Alert)
1 (800) 227-2600 or 811

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1 Abbreviations

The following abbreviations may be used throughout this Service Guide.

Amp	Amperes
CPUC	California Public Utilities Commission
EUSERC	Electric Utility Service Equipment Requirements Committee
GO	General Order
kW	Kilowatt
V	Volt
W	Watt

2 Frequently Asked Questions

I have a home construction project that involves upgrading or replacing my main electric panel. Where should I start?

Contact our Electric Engineering Department and request a meeting with an Engineering Technician. Refer to the Area Map (page 34) for the appropriate phone number. It's a simple process where we come out to your home and determine if your new main electric panel will be in a location that meets applicable MID standards and the State of California General Order (GO) 95 and 128. There is no charge for the site visit, and it's typically scheduled within 2-5 business days. It will typically take about 30-45 minutes of your time. At this site visit we will need load information as well as a site plan. After this visit the Engineering Technician will create a design and get you a requirements packet with all of the requirements for your new electric service. This packet will also outline any inspections required by MID (i.e. trench, transformer pad, conduit, etc.) and you will be required to have an inspection for the main electric panel by your local governing authority prior to MID energizing your electric service. The requirements packet will also identify any fees or deposits MID requires before scheduling your project with our construction departments. Once you have completed your project responsibilities, deposits and/or fees have been paid, and all inspections, by MID and any local governing authorities have been completed, MID will schedule your project with our construction departments.

Does MID replace my main electric panel?

MID does not replace customers' service panels. MID will schedule the disconnection of service and reconnection of service to allow you to replace your main electric panel (by a licensed contractor or electrician). A "rewire" fee will be required.

Where do I put my new main electric panel? Can I put it in the same place as my old panel?

You may be able to put the new panel in the same location as the old panel if that location meets our current standards. MID has the final say on the location of overhead and underground main electric service panels. In some instances you may have to relocate the panel when it is being replaced. Contact MID's Electric Engineering Department for specifics and schedule a site visit to go

over possible panel locations. Refer to the Area Map (page 34) for the appropriate phone number for your area.

Is there a fee to replace my main electric panel?

Yes, MID charges for replacing or upgrading a main electric panel. Fees can be found in MID's Electric Service Rules, Appendix A (www.mid.org/tariffs/).

What size wires and riser do I have to install?

When an overhead main electric panel is replaced MID does not dictate the size of the riser or the riser wires. This is inspected by your local governing authority (i.e., City of Modesto, Stanislaus County, etc.) MID does dictate height and location of the riser. Refer to Drawing RES-001.1. See a list of local governing authorities on page 17.

Why do I have to replace my underground conduit when I replace or upgrade my electric service?

If you replace a main electric panel which is served from an underground service, you will have to bring that electric service up to current MID standards. This may require you to replace the existing underground service wires and conduit to the underground service box. Contact MID's Electric Engineering Department for specific installation requirements or refer to Drawing RES-004.1 (page 22) and Drawing RES-005.1 (page 23).

My electric service wires cross over my pool, is that safe?

If done properly, it is safe to have your electric service wires over your pool provided that they satisfy height and wire type requirements. If you are constructing a new pool and you have an overhead electric service, contact MID's Electric Engineering Department. Refer to Drawing RES-003.0.

Can I convert the overhead service wires coming to my house to underground?

Yes, our Engineering Department can provide you the requirements and a cost estimate for you to convert your existing overhead service to an underground service.

Can I obtain three phase electric service at my residence?

Yes, provided you have met the minimum load requirements (see Rule 2, Section D, Item 2 of MID's Electric Service Rules) AND there is three phase service available. Contact MID's Electric Engineering Department for requirements and availability of Three Phase service.

Is a permit required to replace my main electric panel (panel upgrade)?

Yes, MID will not reconnect a main electric panel once the service has been disconnected until it has passed an electrical inspection by the local governing authority. See a list of local governing authorities on page 17.

How long is an inspection good for?

Typically an inspection is good for six (6) months from the date of the inspection.

Is a permit required to replace my main breaker (meter clips, and/or bus bar)?

No, if you are only replacing the main breaker, meter clips, and/or bus bar to a residential main electric panel, you do not need an electrical permit. You can contact MID's Trouble Department at 209-557-1522, and they will schedule a troubleshooter to disconnect your electric service and stand by while you replace the main breaker. Then they will reconnect your service.

3 Obtaining Overhead Electric Service

3.1 General Information

- Overhead electric service consists of electric wires running overhead from an MID pole to a customer's weatherhead and riser on a building.
- Riser material shall be galvanized rigid steel or intermediate metal conduit rigid steel. MID will not attach to risers made of PVC (except in the cases of service poles where the risers are PVC).
- New overhead services will be allowed provided the main electric panel is close to existing MID overhead facilities, or an overhead line extension can be built close to your panel, as long as overhead service is not prohibited by local jurisdiction.
- Normally residential overhead services will be limited to no greater than 400 Amps.

3.1.1 Apply for Electric Service

- a) Contact MID to apply for service. Refer to the Area Map (page 34) for the appropriate phone number for your area. Provide the location of the proposed residence, Site Maps, proposed panel location, desired voltage, load information and the date service is requested. Refer to the Sample Load Form (page 31) and Sample Application (page 30). For a sample Site Map, refer to Drawing RES-007.0, page 27.
- b) Schedule a site visit with an Engineering Technician to meet on site and go over details of the proposed new service, as well as service location and panel locations.
- c) Line Extensions: When service will be more than the allowed distance from acceptable MID facilities, a line extension may be required (see Appendix B of MID Electric Service Rules). The line extension charge will be based on the total length of the extension to be determined by MID, less any free footage allowances. The total charge will be the calculated distance minus any free footage allowance, multiplied by the extension cost per foot (see Appendix A of MID Electric Service Rules for footage costs).

- d) If easements will be required to bring service to the property, it is the customer's responsibility to provide, at no cost to MID, easements or right of ways needed to build the line extension.

3.1.2 Locate the Panel

Contact MID's Engineering Department to schedule a site visit to go over the panel location and any other requirements for the panel installation. MID has the final say on meter location, and some meter locations are prohibited by MID standards as well as the State of California GO 95. There are also requirements for meter height and access (see Section 3.4, Meters, and Drawing RES-001.1, page 18, for more information).

3.1.3 Proceed with Construction

Do not begin construction without an MID-approved design.

- a) MID will field check the job site, prepare a design/job packet and forward the job to construction.
- b) Proceed with installation of the service. Please notify MID if the installation will be completed earlier or later than originally estimated so we may update our scheduling with construction.
- c) The panel must be inspected and tagged by the local governing authority (city or county). MID may perform some work in advance, but cannot make final service connections until the panel is tagged. See a list of local governing authorities on page 17.
- d) When tagged and ready for electricity, notify MID so construction can be scheduled.

3.2 Locations of Overhead Service

3.2.1 Point of Attachment

- a) In areas served from overhead lines, an overhead service drop will be installed from an MID distribution line to a riser with weatherhead on the customer's residence. The point of attachment shall be located such that it can be reached with a single span from MID facilities, and the span must maintain all required vertical clearances.
- b) The service drop should not cross the building being served nor should it cross buildings on adjacent properties.
- c) MID must be able to safely access the service riser and weatherhead to make final connection. The weatherhead must be within 24" of the edge of the roof line, not exceeding 6 feet in height above the roof, be securely braced, and be accessible with a 15-foot ladder with the base of the ladder on the ground.

- d) Panels placed in unacceptable locations without consulting MID may result in customers having to relocate the panel or make modifications to the service at the customer's expense.

3.2.2 Two or More Buildings on One Lot

If two or more dwellings or buildings are located on the same lot, consult with MID to determine acceptable meter locations before proceeding with the wiring of the buildings.

For multi-dwelling buildings built at the rear of non-commercial lots, if practical, and at the customer's request, MID may install separate service facilities to the rear building. The meters for the rear building shall be grouped together at a suitable location at the rear building.

3.3 Clearances

All local, State, Federal and applicable Clearances shall apply.

On a customer's request an MID Engineering Technician will schedule a site visit with the customer (or contractor). At this site visit the Engineering Technician will provide an acceptable service drop attachment point (typically the service riser) which will ensure it meets all applicable required clearances from doors, windows, roofs, buildings and stairs.

The minimum clearances from ground, structures, and other objects for overhead service wires are outlined in California Public Utilities Commission's (CPUC) General Order 95. These clearances are shown in Drawing RES-002.0, page 20.

3.3.1 Minimum Vertical Clearances for Residential Overhead Services

- a) Clearances of overhead conductors above thoroughfares in public areas:
- Above the center portion, 12 feet horizontal from the curbs: 18 feet
 - At the curb line (from the level of the street, not the sidewalk): 16 feet
- (Where there is no curb, the curb shall be taken as the outer limit of possible vehicular traffic.)
- b) Clearances over Residential Property:
- Private roads and other areas accessible to agricultural equipment: 16 feet
 - Private driveways or other areas accessible to vehicles: 12 feet
 - Areas accessible to pedestrians only: 12 feet

- c) Clearances over pools:
- Consult MID's Engineering Technician for an acceptable point of connection to maintain all required clearances from pool surface, diving structures, or viewing platforms.
 - Minimum clearances are shown on Drawing RES-003.0, page 21.

3.3.2 Minimum Clearances to Buildings

- a) Minimum clearances from the service wires to the building being served:
- Generally, a minimum of 18 inches crossing no more than 4 feet of the roof. Allow a maximum of 6 feet above the roof to permit MID personnel access.
- b) The riser shall be a minimum of 18 inches above the roof line for MID to make connection of the service wires.
- If the riser height is more than 30 inches above the roof line, the customer **must** brace the riser with a brace kit.
 - If the riser must go under an eave, **contact an MID Engineering Technician**. A suitable dead-end insulator must be installed prior to the riser being attached to the wall. MID will not connect to screw-in, dead-end insulators.
 - If there is limited access to the customer's panel, the maximum overall height of the riser is limited to 16 feet above ground level.
- d) Other buildings on the same premises: 2 feet minimum
- e) Buildings on other premises: 8 feet minimum.
- f) Local governing authorities may have different requirements; consult them when applying for a permit.
- g) Horizontal and vertical clearances from windows, doors, fire escapes: 3 feet minimum.

3.4 Meters

3.4.1 Meter Location-General

- a) To ensure that a satisfactory meter location is selected and that adequate space is provided, MID should be consulted while the residence is in the preliminary planning stage. Installation of additional facilities or relocation of facilities can be prevented by early consultation with MID.

- b) The following basic location requirements shall apply in all cases:
- All locations for meters and metering equipment are subject to MID approval.
 - Meters shall be capable of being reached quickly and conveniently 24 hours a day for construction, operation, maintenance, inspection, testing or reading, without requiring those seeking access to climb over or remove obstacles; or to obtain special permission or security clearances. Truck access may be required.
 - Meters and metering equipment installed on or recessed in the external surface of any building shall have a clear working and standing space entirely on the property of the customer being served.

3.4.2 Unacceptable Locations for Electric Meters

Meters and metering equipment shall not be installed:

- a) In any location that is hazardous to equipment or persons or unsuitable for entry, such as:
- Any elevator shaft
 - Any doorway or hatchway
 - Directly over any stairways, ramps, or steps
 - Any area accessible through a trapdoor, hatch way, or by means of a ladder.
- b) In any place where vibration, moisture, excessive temperature, fumes, or dust may damage the meter or interfere with its operation.
- c) On any portion of a building where future landscaping, fencing, or other building construction will make the meter inaccessible.
- d) Within any enclosed area that contains or will contain gas meters.
- e) Within any locked facility in which MID would be denied access at any time of the day.
- f) Indoors.
- g) Where they will interfere with traffic, sidewalks, driveways, or where they will obstruct the opening of doors, or windows, or in any location which may be considered hazardous.

3.4.3 Meter Height

The requirements for meter height, which is the vertical distance between the center line of the meter socket and ground level/standing surface shall be:

- 48" minimum – 75" maximum for single meter residential services and meter pedestals (see Drawing RES-001.1, page 18).

3.4.4 Meter Working Space

- a) The width of clear and level working space shall be 36" minimum for a single meter installation, with a minimum of 10" from the center line of the meter socket to the closest wall or obstruction.
- b) The depth of the clear and level working space in front of the electric meter must be a minimum of 36" for a residential electrical service.

3.4.5 Multiple Meter Panels

- a) Where the installation requires more than one meter for service to the premises, each meter, main disconnect and sub-panel shall be permanently marked with an identification plaque (NOT PAINTED) by the customer to properly identify the portion of the premises being served (i.e. units, suites, buildings, etc.).

Each building, unit, or suite being served must also have a permanent address to identify the unit being served.

- b) Identification plaques for meters, disconnects, and sub-panels shall be made of plastic, brass, aluminum, or other approved non-magnetic material, with the letters engraved or raised and being a minimum of 1/4" tall. The engraving must be deep enough or raised enough as not to be obscured by painting of the tag.





- c) The tag is to be attached to a non-removable section of the panel with a high strength 5-minute epoxy. Other types of adhesive WILL NOT be accepted. (Refer to the examples of properly installed placards above.)

3.4.6 Sealing of Meters and Metering Equipment

All meters and enclosures for meters, metering equipment, and service entrances (the area prior to the meter) will be sealed by MID. The MID seal shall not be broken or removed except by an authorized MID representative. No person is permitted to tamper with, remove, replace, or in any way interfere with a meter or its connection as placed by MID. Questions about electric service should be referred to MID's Engineering Department.

Fees may apply for tampering, removal, replacement, or for interfering with MID equipment.

3.4.7 Electric Utility Service Equipment Requirements Committee (EUSERC)

EUSERC is an organization whose purpose is to promote electric service requirements among the utilities. MID is a member of and supports EUSERC. As such, when a customer applies for service within MID's service area, the equipment chosen must meet EUSERC requirements.

4 Obtaining Underground Electric Service

4.1 General Information

- Underground electric service consists of electric service wires being run underneath the ground from MID secondary locations to the customer's main electric panel.
- Service conduit shall be Electrical Grade PVC Conduit, Schedule 40 PVC for all horizontal sections and Schedule 80 for all vertical sections.
- New underground electric service will be allowed in areas where existing underground MID facilities have already been installed, customer is willing to pay to MID the cost to convert from an overhead service to an underground, or there is an ordinance or District in place that prevents new overhead electric services.
- Normally residential underground services will be limited to no greater than 400 Amps.
- No combination current transformer cabinet and meter socket panels may be used for residential services.

4.1.1 Apply for Electric Service

- a) Contact MID to apply for service (call (209) 526-7337 or visit 1231 Eleventh Street, Modesto, California). Provide the location of the proposed residence, Site Maps, proposed panel location, desired voltage, load information and the date service is requested.
- b) Schedule a site visit with an Engineering Technician to meet on site and go over details of the proposed new service, as well as service location and panel locations.
- c) Line Extensions: When service will be more than the allowed distance from acceptable MID facilities (see Appendix B of MID Electric Service Rules), a line extension may be required. The line extension charge will be based on the total length of the extension to be determined by MID, less any free footage allowances. The total charge will be the calculated distance minus any free footage allowance, multiplied by the extension cost per foot (see Appendix A of MID Electric Service Rules for footage costs).

- d) If easements will be required to bring service to the property, it is the customer's responsibility to provide, at no cost to MID, easements or right of ways needed to build the line extension.

4.1.2 Locate the Panel

Contact MID's Engineering Department to schedule a site visit to go over the panel location and any other requirements for the panel installation. MID has the final say on meter location, and some meter locations are prohibited by MID standards as well as the State of California General Order 128. There are also requirements for meter height and access (see Section 4.2, Meters, and Drawing RES-004.1, Drawing RES-005.1, and Drawing RES-006.1, pages 22-25, for more information).

4.1.3 Proceed with Construction

Do not begin construction without an MID-approved design.

- a) MID will field check the job site, prepare a design/job packet and forward the job to construction.
- b) Proceed with installation of the service. Please notify MID if the installation will be completed earlier or later than originally estimated so we may update our scheduling with construction.
- c) The panel must be inspected and tagged by the local governing authority (city or county). MID may perform some work in advance, but cannot make final service connections until the panel is tagged. See a list of local governing authorities on page 17.
- d) When tagged and ready for electricity, notify MID so we can schedule completion of the work with construction.

4.2 Meters

4.2.1 Meter Location-General

- a) To ensure that a satisfactory meter location is selected and that adequate space is provided, MID should be consulted while the residence is in the preliminary planning stage. Installation of additional facilities or relocation of facilities can be prevented by early consultation with MID.
- b) The following basic location requirements shall apply in all cases:
 - All locations for meters and metering equipment are subject to MID approval.
 - Meters shall be capable of being reached quickly and conveniently 24 hours a day for construction, operation, maintenance, inspection, testing or reading, without requiring those seeking access to climb over or remove

obstacles; or to obtain special permission or security clearances. Truck access may be required.

- Meters and metering equipment installed on or recessed in the external surface of any building shall have a clear working and standing space entirely on the property of the customer being served.

4.2.2 Unacceptable Locations for Electric Meters

Meters and metering equipment shall not be installed:

- a) In any location that is hazardous to equipment or persons or unsuitable for entry, such as:
 - Any elevator shaft
 - Any doorway or hatchway
 - Directly over any stairways, ramps, or steps
 - Any area accessible through a trapdoor, hatch way, or by means of a ladder.
- b) In any place where vibration, moisture, excessive temperature, fumes, or dust may damage the meter or interfere with its operation.
- c) On any portion of a building where future landscaping, fencing, or other building construction will make the meter inaccessible.
- d) Within any enclosed area that contains or will contain gas meters.
- e) Within any locked facility in which MID would be denied access at any time of the day.
- f) Indoors.
- g) Where they will interfere with traffic, sidewalks, driveways, or where they will obstruct the opening of doors, or windows, or in any location which may be considered hazardous.

4.2.3 Meter Height

The requirements for meter height, which is the vertical distance between the center line of the meter socket and ground level/standing surface shall be:

- 48" minimum – 75" maximum for single meter residential services and meter pedestals (see Drawing RES-004.1, Drawing RES-005.1, and Drawing RES-006.1, pages 22-25).

4.2.4 Meter Working Space

- a) The width of clear and level working space shall be 36" minimum for a single meter installation, with a minimum of 10" from the center line of the meter socket to the closest wall or obstruction.
- b) The depth of the clear and level working space in front of the electric meter must be a minimum of 36" for a residential electrical service.

4.2.5 Multiple Meter Panels

- a) Where the installation requires more than one meter for service to the premises, each meter, main disconnect and sub-panel shall be permanently marked with an identification plaque (NOT PAINTED) by the customer to properly identify the portion of the premises being served (i.e. units, suites, buildings, etc.).

Each building, unit, or suite being served must also have a permanent address to identify the unit being served.

- b) Identification plaques for meters, disconnects, and sub-panels shall be made of plastic, brass, aluminum, or other approved non-magnetic material, with the letters engraved or raised and being a minimum of ¼" tall. The engraving must be deep enough or raised enough as not to be obscured by painting of the tag.
- c) The tag is to be attached to a non-removable section of the panel with a high strength 5-minute epoxy. Other types of adhesive WILL NOT be accepted. (Refer to the examples of properly installed placards on pages 8 and 9.)

4.2.6 Sealing of Meters and Metering Equipment

All meters and enclosures for meters, metering equipment, and service entrances (the area prior to the meter) will be sealed by MID. The MID seal shall not be broken or removed except by an authorized MID representative. No person is permitted to tamper with, remove, replace, or in any way interfere with a meter or its connection as placed by MID. Questions about electric service should be referred to MID's Engineering Department.

Fees may apply for tampering, removal, replacement, or for interfering with MID equipment.

4.2.7 Electric Utility Service Equipment Requirements Committee (EUSERC)

EUSERC is an organization whose purpose is to promote electric service requirements among the utilities. MID is a member of and supports EUSERC. As such, when a customer applies for service within MID's service area, the equipment chosen must meet EUSERC requirements.

4.3 Panel Replacements

If relocating, replacing, or upgrading an electric meter for any reason, contact MID's Electric Engineering Department. A site visit will be scheduled at the residence to discuss project requirements, evaluate locations for the main electric panel, and ensure the technical aspects are appropriate and meet MID's current standards. MID will make sure the meter panel is located and sized to meet MID's current standards. There is no fee for this preliminary inspection. There is, however, at minimum a "rewire" fee for all panel replacements and upgrades within MID's service area (see Appendix A of MID's Electric Service Rules).

4.3.1 Information Required Before the Site Visit

- Customer name and phone number or email
- Project location address
- The plan (relocate, replace, or upgrade service).

4.3.2 The Site Visit

The Engineering Technician will meet the customer (or contractor) on site to go over acceptable main electric panel locations, project requirements and to ensure technical aspects are addressed. The customer will be provided with an Engineering Request Form outlining the service type and voltage of the service. A copy of this Engineering Request Form should be kept by the customer.

4.3.3 Applicable Charges

There is a "rewire" fee charged for all panel replacements, relocations, and upgrades inside of MID's Service Area (see MID's Electric Service Rules for current fee amounts). However if there are any extensive changes to MID facilities at the customer's request, or extensions beyond MID's free extension allowances, other customer charges may be included specific to the project. If this is the case, the Engineering Technician will prepare a package outlining requirements as well as a cost estimated.

4.3.4 Apply For A Permit

A permit is required from the local governing authority making sure the installation is in compliance with all applicable building codes as well as the National Electric Code. See a list of local governing authorities on page 17.

4.3.5 Construction and Inspection

Once all approvals have been obtained, construction can begin to have the main electrical panel installed. There are two (2) sets of inspections needed:

- The local governing authority must inspect and approve the panel installation. See a list of local governing authorities on page 17.
- After installation and approval by the local governing authority, MID's Engineering Technician must verify that the installation is ready, has been inspected and is safe to have the power turned on. A service crew will be notified and the panel will be energized in 7-10 business days. The Engineering Technician can schedule a specific date and time if preferred.

5 Inspections

Facilities constructed by either the customer or his/her builder/contractor must be constructed according to MID standards and all applicable building codes. If the MID Engineering Technician determines that any of the customer/contractor installed facilities do not meet MID standards, the customer/contractor will be responsible for making the necessary changes at his or her cost. MID cannot energize the electric service until ALL customer work has passed MID's inspection and has also passed an inspection from the local governing authority.

6 Project Scheduling Table

Step	Party	Typical Time Required by MID	Action
1	Customer		Send final set of site plans to MID's Electrical Engineering Department for review and design.
2	MID	10 business days	Engineering Technician designs the electric layout and sends the installation agreement and one marked-up copy of site plan to the Customer.
3	Customer		Pay any charges, return a signed installation agreement, and return completed Residential Load Information Form with all relevant dates regarding construction and service requirements. Both must be returned to MID. Obtain all necessary permits from the local governing authority.
4	MID	10 business days	Engineering Technician designs engineering drawing(s), materializes and assembles the work order.
5	Customer		Call USA to locate underground utilities, install conduit and substructures, return Application for Electric Services to the Customer Service Department, request MID and local governing authority to inspect conduit, substructure, transformer pad, and electric facilities.
6	MID	3 business days	MID inspects trench, conduit, substructures, and transformer pad. This stage repeats itself until you satisfactorily pass inspection.
7	Customer		Close trench, pull service conductors to agreed location, connect conductors to panel. Local governing authority inspects electric facilities. Your facilities pass inspection and you request service.
8	MID	7 business days pending weather and scope of project	Meter Department wires instrument transformers, where required; MID construction installs transformer, primary cables and secondary cables where needed. MID reviews the local governing authority inspection tag to verify equipment conformance; if the equipment passes, the meter is set and the panel is energized.

7 Local Governing Authorities Within MID's Service Area

City of Modesto Building Department

1010 Tenth St. 3rd Floor
Modesto, CA 95353
Phone: 209-577-5232

City of Waterford Building Division

101 E St.
Waterford, CA 95386
Phone: 209-874-2328
Fax: 209-874-9656

Stanislaus County Building Department

1010 Tenth St. Suite 3500
Modesto, CA 95354
Phone: 209-525-6557
Fax: 209-525-7759

City Of Oakdale Community Development

455 S. Fifth Ave.
Oakdale, CA 95361
Phone: 209-845-3625
Fax: 209-848-4344

San Joaquin County Building Department

1810 Hazelton Ave.
Stockton, CA 95205
Phone: 209-468-3121

City of Escalon Building Department

2060 McHenry Ave.
Escalon, CA 95320
Phone: 209-691-7460
Fax: 209-691-7439

City of Riverbank Building Department

6617 3rd St.
Riverbank, CA 95367
Phone: 209-863-7128

City of Ripon Building Department

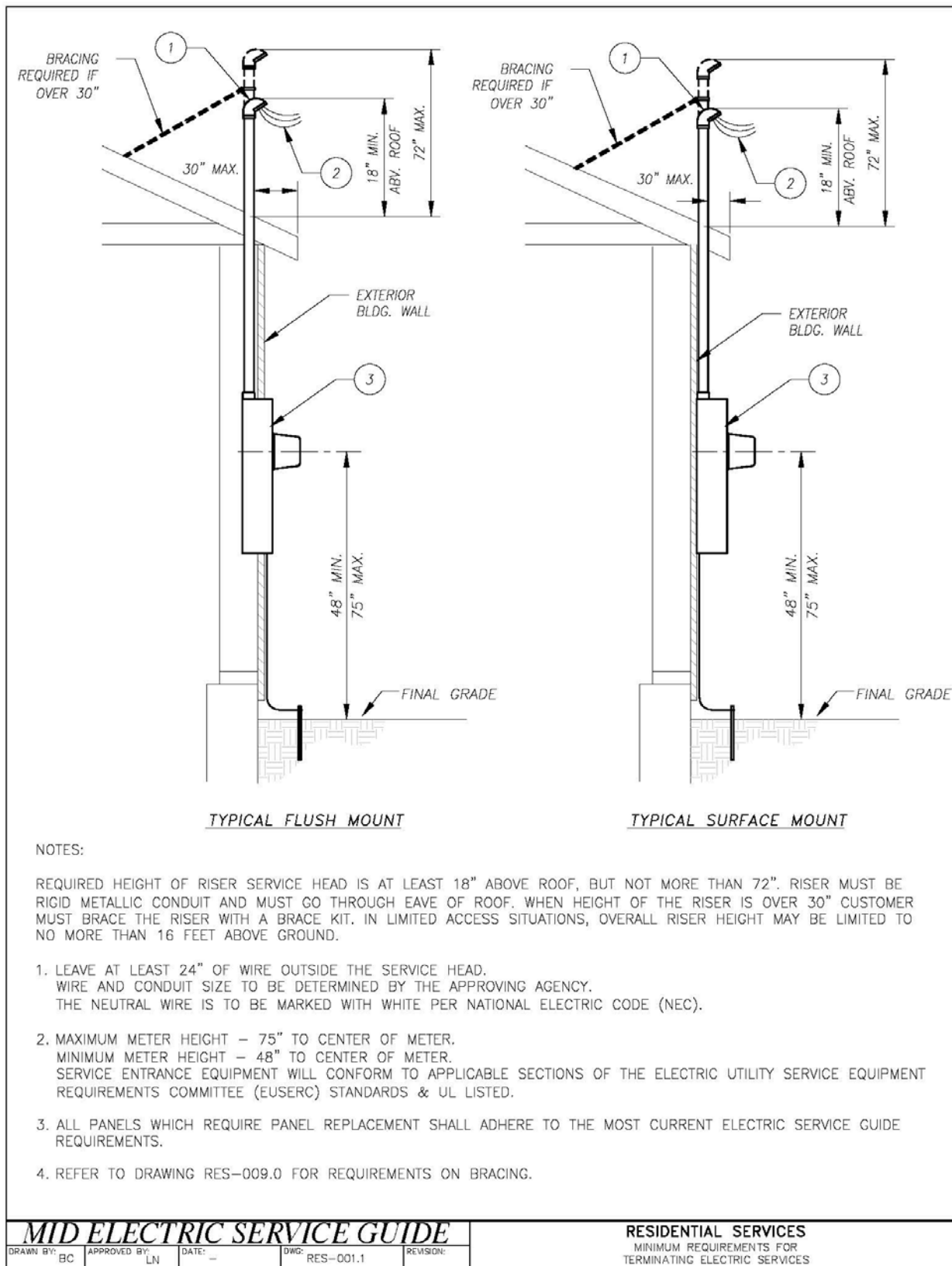
259 N. Wilma Ave.
Ripon, CA 95366
Phone: 209-599-2613
Fax: 209-599-2183

8 MID Contact Information

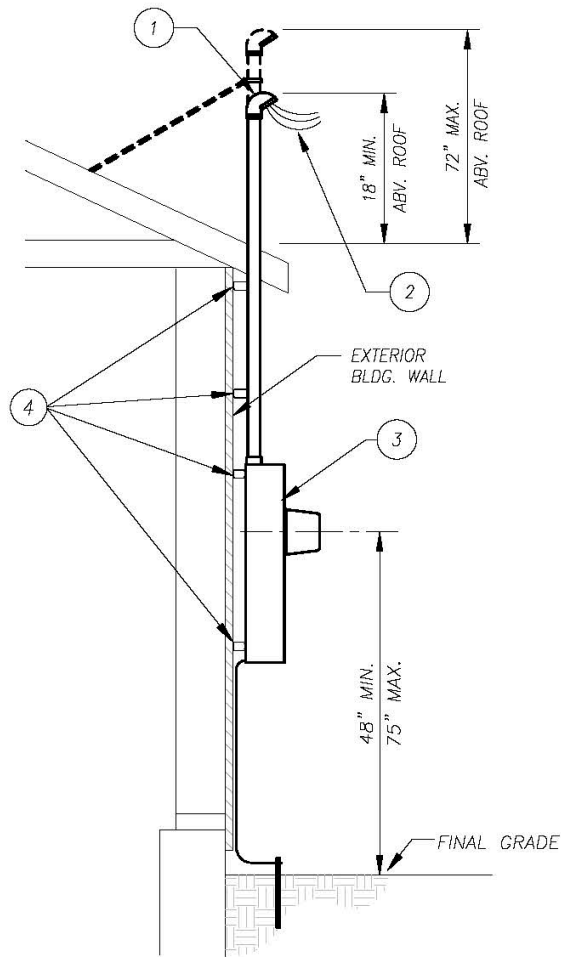
Modesto Irrigation District

1231 Eleventh Street (P.O. Box 4060)
Modesto, CA 95354 (Modesto, CA 95352)
Electrical Engineering Department¹
Phone: 209-526-7468
Fax: 209-526-7357

¹ Contact the MID Engineering Technician assigned to the area (see map on page 34).



Drawing RES-001.1: Minimum Requirements for Terminating Electric Services



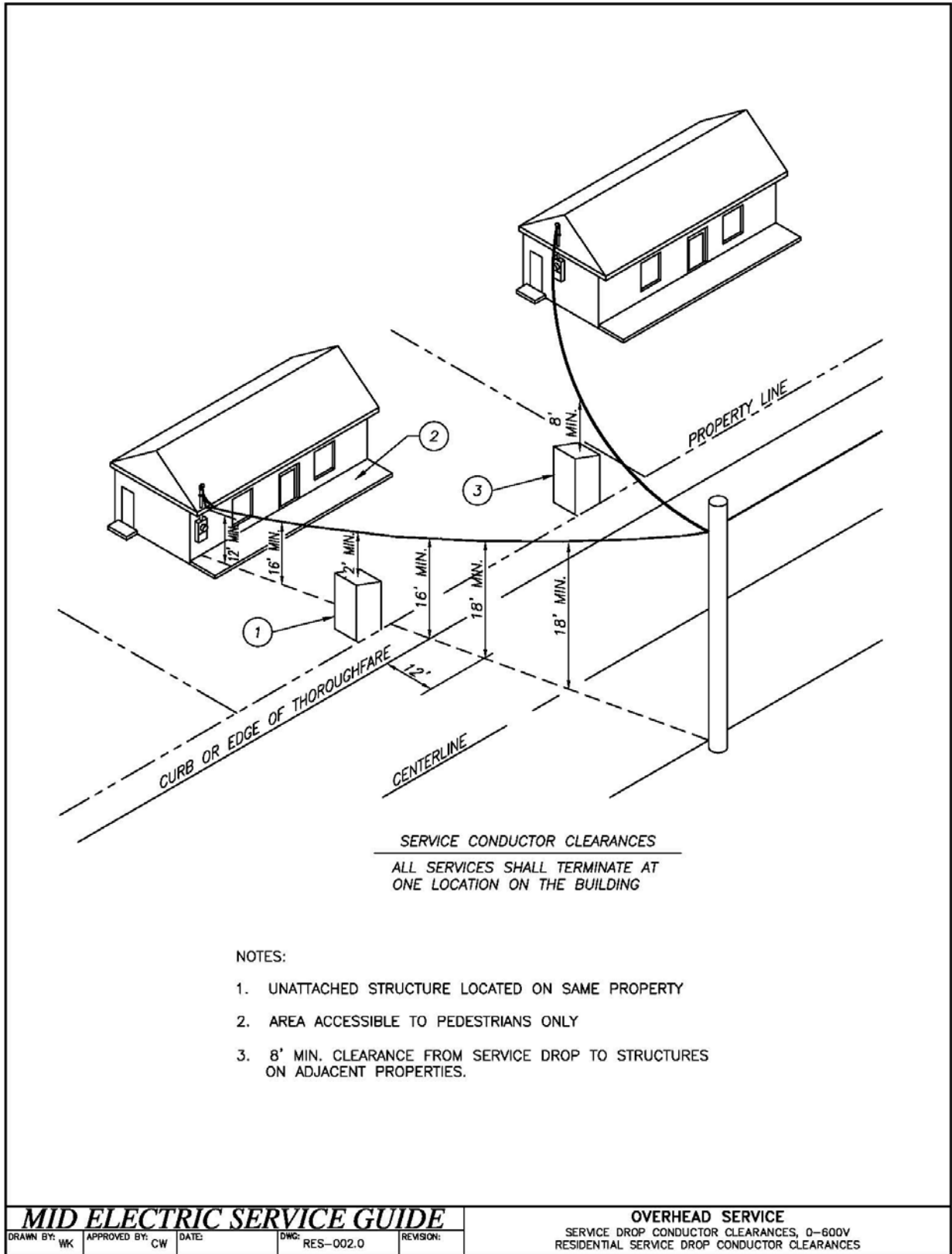
SURFACE MOUNT

NOTES:

1. REQUIRED HEIGHT OF RISER SERVICE HEAD IS AT LEAST 18" ABOVE ROOF, BUT NOT MORE THAN 72". RISER MUST BE RIGID METALLIC CONDUIT. WHEN HEIGHT OF THE RISER IS OVER 30" CUSTOMER MUST BRACE THE RISER WITH A BRACE KIT. IN LIMITED ACCESS SITUATIONS, OVERALL RISER HEIGHT MAY BE LIMITED TO NO MORE THAN 16 FEET ABOVE GROUND. IF THE RISER WEATHER HEAD MUST GO UNDER THE EAVE, CONTACT MID'S ELECTRICAL ENGINEERING DEPT. MID WILL NOT ATTACH TO SCREW KNOB INSULATORS.
2. LEAVE AT LEAST 24" OF WIRE OUTSIDE THE SERVICE HEAD.
WIRE AND CONDUIT SIZE TO BE DETERMINED BY THE APPROVING AGENCY.
THE NEUTRAL WIRE IS TO BE MARKED WITH WHITE PER NATIONAL ELECTRIC CODE (NEC).
3. MAXIMUM METER HEIGHT - 75" TO CENTER OF METER.
MINIMUM METER HEIGHT - 48" TO CENTER OF METER.
SERVICE ENTRANCE EQUIPMENT WILL CONFORM TO APPLICABLE SECTIONS OF THE ELECTRIC UTILITY SERVICE EQUIPMENT REQUIREMENTS COMMITTEE (EUSERC) STANDARDS & UL LISTED.
4. 1-1/2" STRUT CHANNEL TO BE INSTALLED BEHIND PANEL AND CONDUIT PROVIDING AN UNOBSTRUCTED VIEW BEHIND PANEL AND CONDUIT.

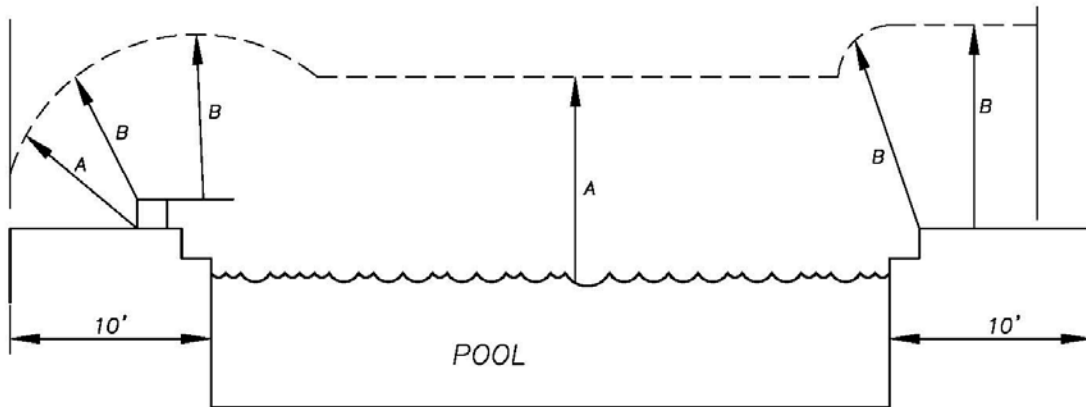
MID ELECTRIC SERVICE GUIDE					RESIDENTIAL SERVICES	
DRAWN BY: AA	APPROVED BY: LN	DATE: 09/27/2017	DWG: RES-001.2	REVISION:	MINIMUM REQUIREMENTS FOR TERMINATING ELECTRIC SERVICES DUE TO POWER DIVERSION	

Drawing RES-001.2: Minimum Requirements for Terminating Electric Services Due to Power Diversion



Drawing RES-002.0: Service Drop Conductor Clearances

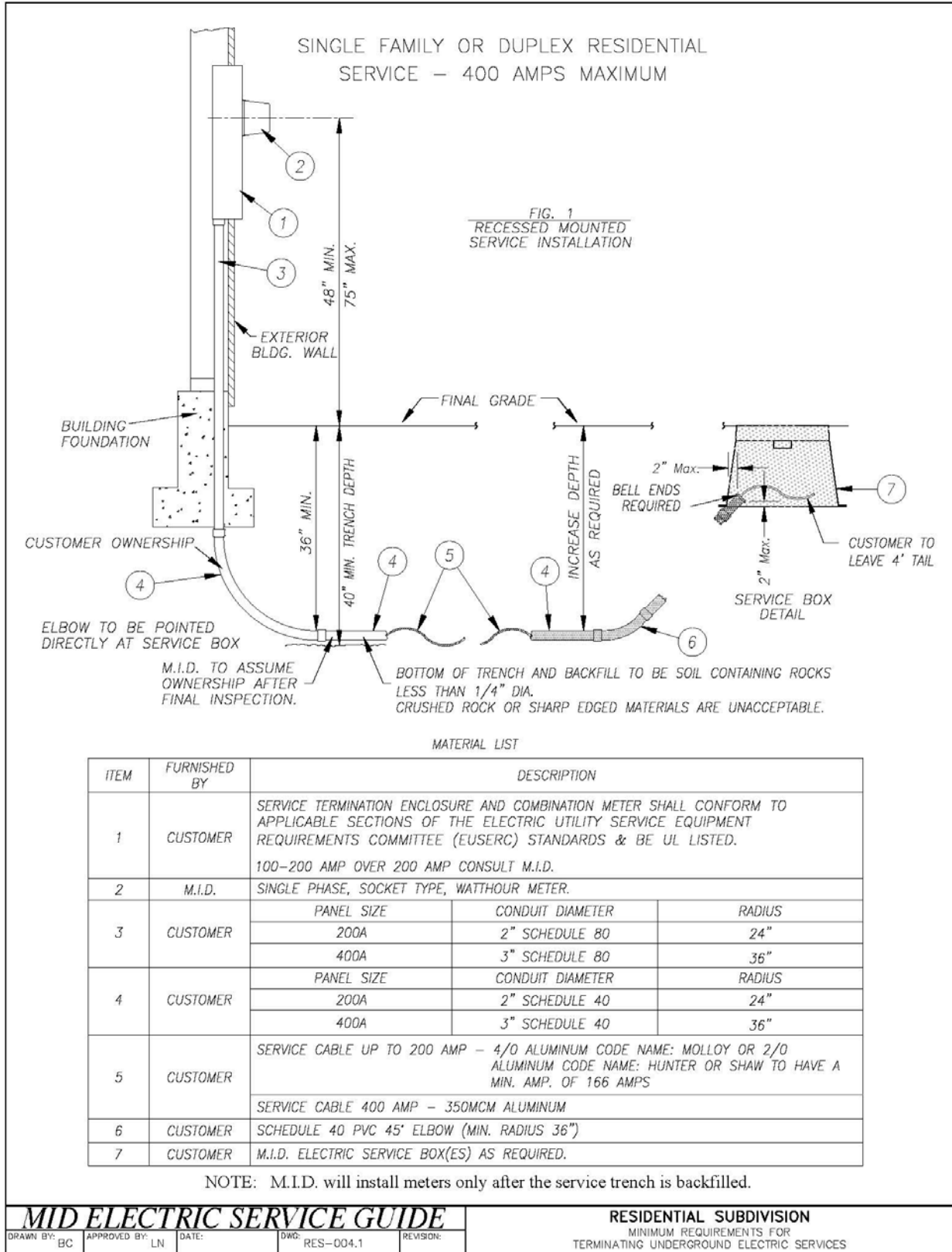
		Insulated supply or service drop cables 0-600v to ground, supported on and cabled together with an effectively grounded bare messenger	ALL OTHER SUPPLY OR SERVICE DROP CONDUCTORS	
			VOLTAGE TO GROUND	
			0-15KV	>15-50KV
A	Clearance in any direction to the water surface, base of diving platform or permanently anchored raft.	22.5 FEET	25 FEET	27 FEET
B	Clearance in any direction to the diving platform or tower.	14.5 FEET	17 FEET	18 FEET



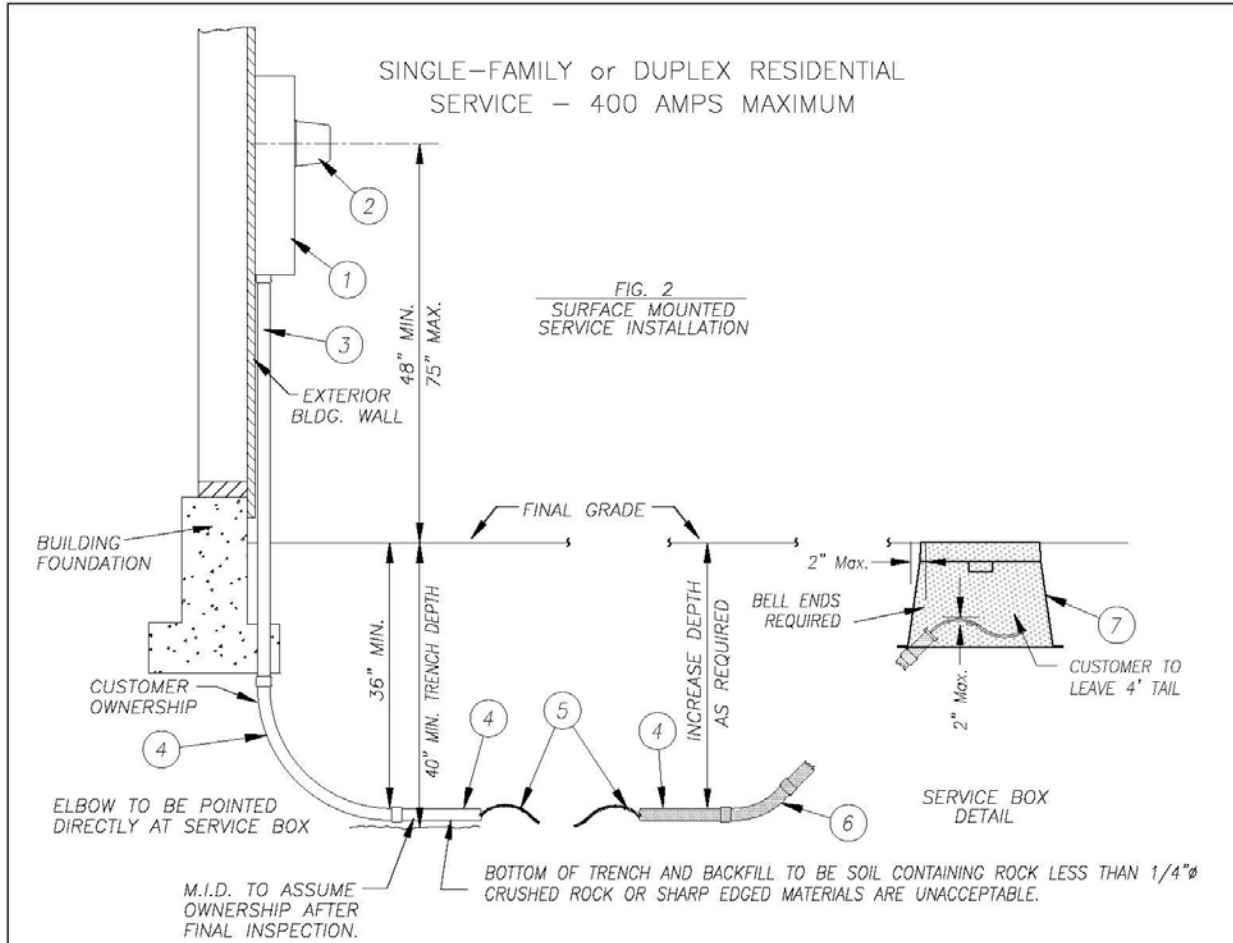
PREVIOUSLY GE-06-275.2

MID ELECTRIC SERVICE GUIDE				OVERHEAD SERVICE	
DRAWN BY: TE	APPROVED BY: E J	DATE: 09/20/95	DWG: RES-003.0	SERVICE DROP CONDUCTOR CLEARANCES, 0-600V CLEARANCE FROM SWIMMING POOLS AND DIVING BOARDS	
				REVISION: 9/4/08-D	

Drawing RES-003.0: Clearance from Swimming Pools and Diving Boards



Drawing RES-004.1: Single-Family Residential, Recessed Mounted Service Installation



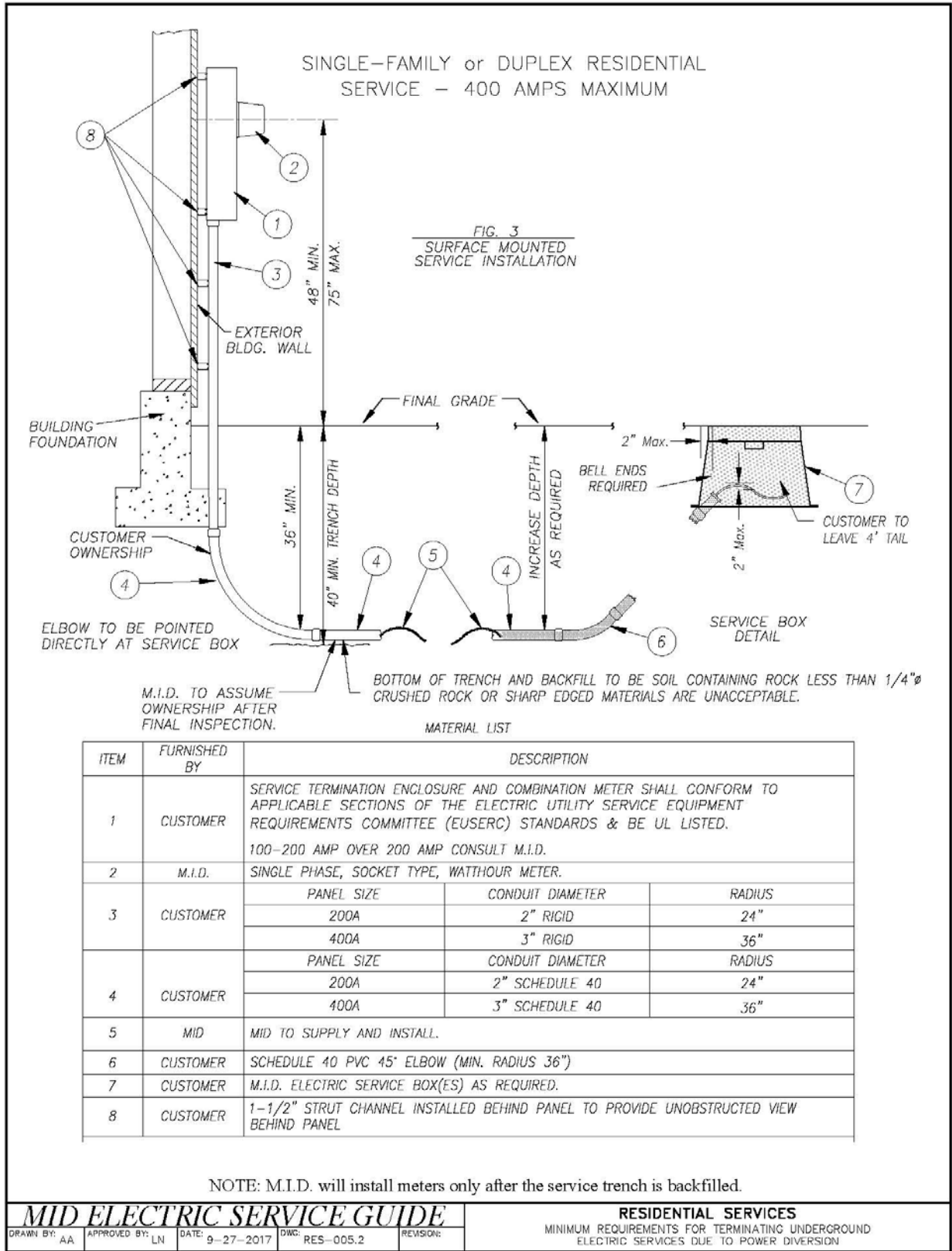
MATERIAL LIST

ITEM	FURNISHED BY	DESCRIPTION
1	CUSTOMER	SERVICE TERMINATION ENCLOSURE AND COMBINATION METER SHALL CONFORM TO APPLICABLE SECTIONS OF THE ELECTRIC UTILITY SERVICE EQUIPMENT REQUIREMENTS COMMITTEE (EUSERC) STANDARDS & BE UL LISTED. 100-200 AMP OVER 200 AMP CONSULT M.I.D.
2	M.I.D.	SINGLE PHASE, SOCKET TYPE, WATTHOUR METER.
3	CUSTOMER	PANEL SIZE CONDUIT DIAMETER RADIUS
		200A 2" SCHEDULE 80 24"
4	CUSTOMER	PANEL SIZE CONDUIT DIAMETER RADIUS
		400A 3" SCHEDULE 80 36"
5	CUSTOMER	SERVICE CABLE UP TO 200 AMP - 4/0 ALUMINUM CODE NAME: MOLLOY OR 2/0 ALUMINUM CODE NAME: HUNTER OR SHAW TO HAVE A MIN. AMP. OF 166 AMPS
		SERVICE CABLE 400 AMP - 350MCM ALUMINUM
6	CUSTOMER	SCHEDULE 40 PVC 45' ELBOW (MIN. RADIUS 36")
7	CUSTOMER	M.I.D. ELECTRIC SERVICE BOX(ES) AS REQUIRED.

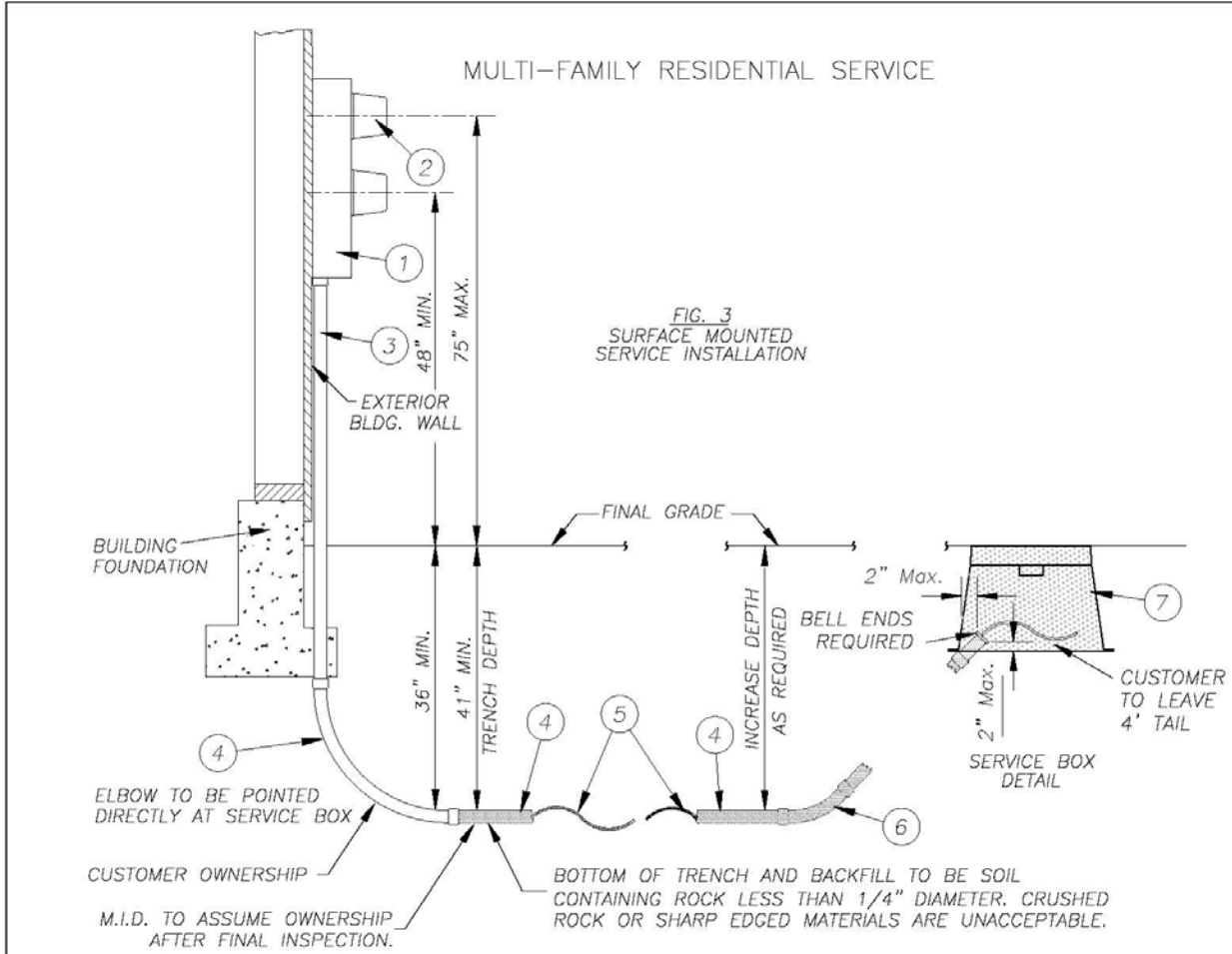
NOTE: M.I.D. will install meters only after the service trench is backfilled.

MID ELECTRIC SERVICE GUIDE				RESIDENTIAL SUBDIVISION	
DRAWN BY: BC	APPROVED BY: LN	DATE:	DWG: RES-005.1	REVISION:	MINIMUM REQUIREMENTS FOR TERMINATING UNDERGROUND ELECTRIC SERVICES

Drawing RES-005.1: Single-Family Residential, Surface Mounted Service Installation



Drawing RES-005.2: Single-Family Residential, Surface Mounted Service Installation Due to Power Diversion



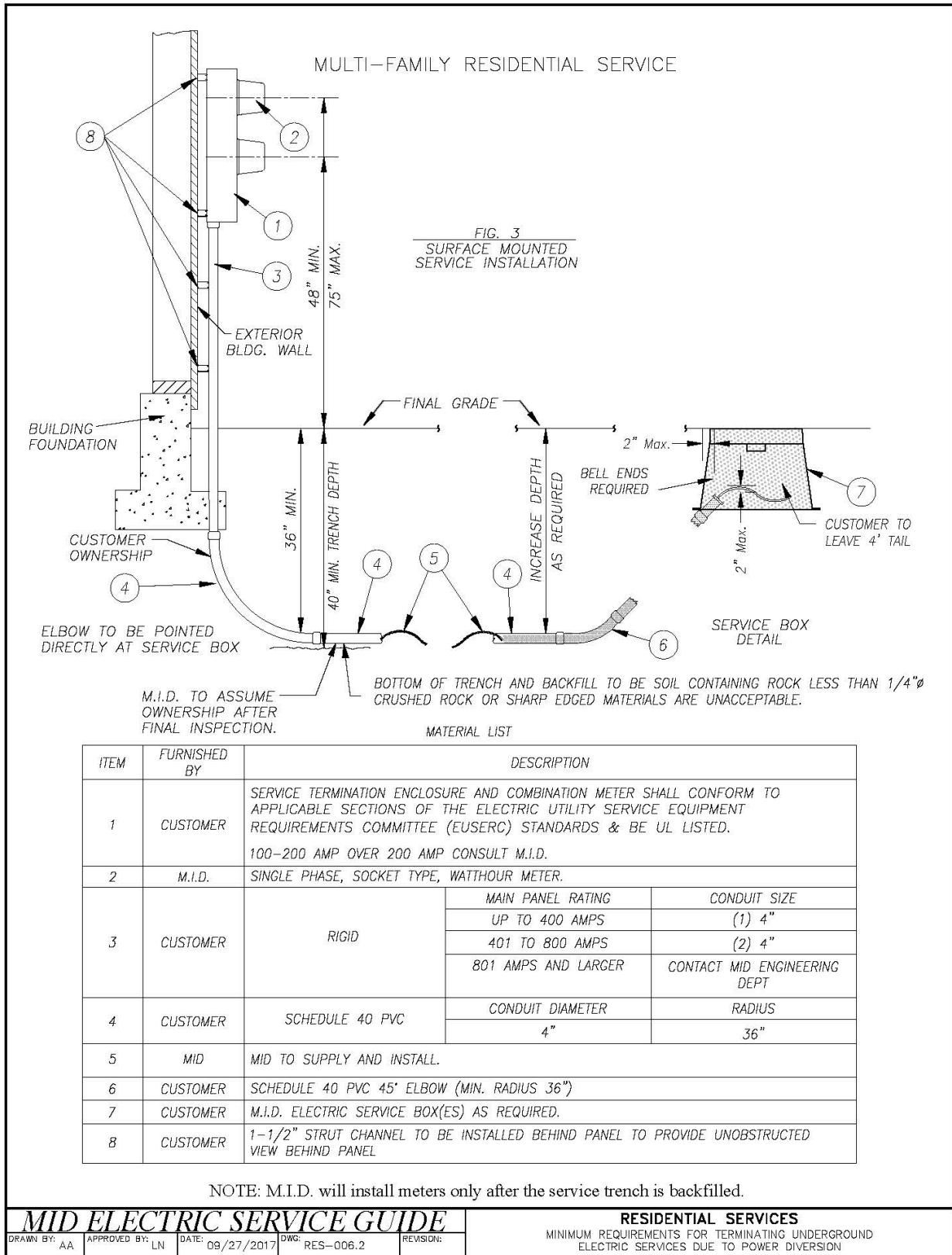
MATERIAL LIST

ITEM	FURNISHED BY	DESCRIPTION	
1	CUSTOMER	SERVICE TERMINATION ENCLOSURE AND COMBINATION METER PANEL SHALL CONFORM TO APPLICABLE SECTIONS OF THE ELECTRIC UTILITY SERVICE EQUIPMENT REQUIREMENTS COMMITTEE (EUSERC) STANDARDS & BE UL LISTED.	
2	M.I.D.	SINGLE PHASE, SOCKET TYPE, WATTHOUR METER.	
3	CUSTOMER	SCHEDULE 80 PVC	MAIN PANEL RATING
			UP TO 400 AMPS
			401 TO 800 AMPS
4	CUSTOMER	SCEDULE 40 PVC	CONDUIT SIZE MINIMUM I.D. (INCHES)
			801 AMPS AND LARGER
4	CUSTOMER	SCEDULE 40 PVC	CONDUIT DIAMETER
			4"
5	CUSTOMER	SCHEDULE 80 PVC	CONTACT MID ENGINEERING DEPT.
			RADIUS
			36"
5	CUSTOMER	SERVICE CABLES FOR UP TO 400 AMPS – 350MCM AL. SERVICE CABLES FOR 401 TO 800 AMPS – 2-350MCM AL./PHASE SERVICE CABLES FOR 801 AMPS AND LARGER – CONTACT MID'S ENG. DEPT.	
6	CUSTOMER	SCHEDULE 40 PVC 45' ELBOW (MIN. RADIUS 36")	
7	CUSTOMER	M.I.D. ELECTRIC SERVICE BOX(ES) AS REQUIRED.	

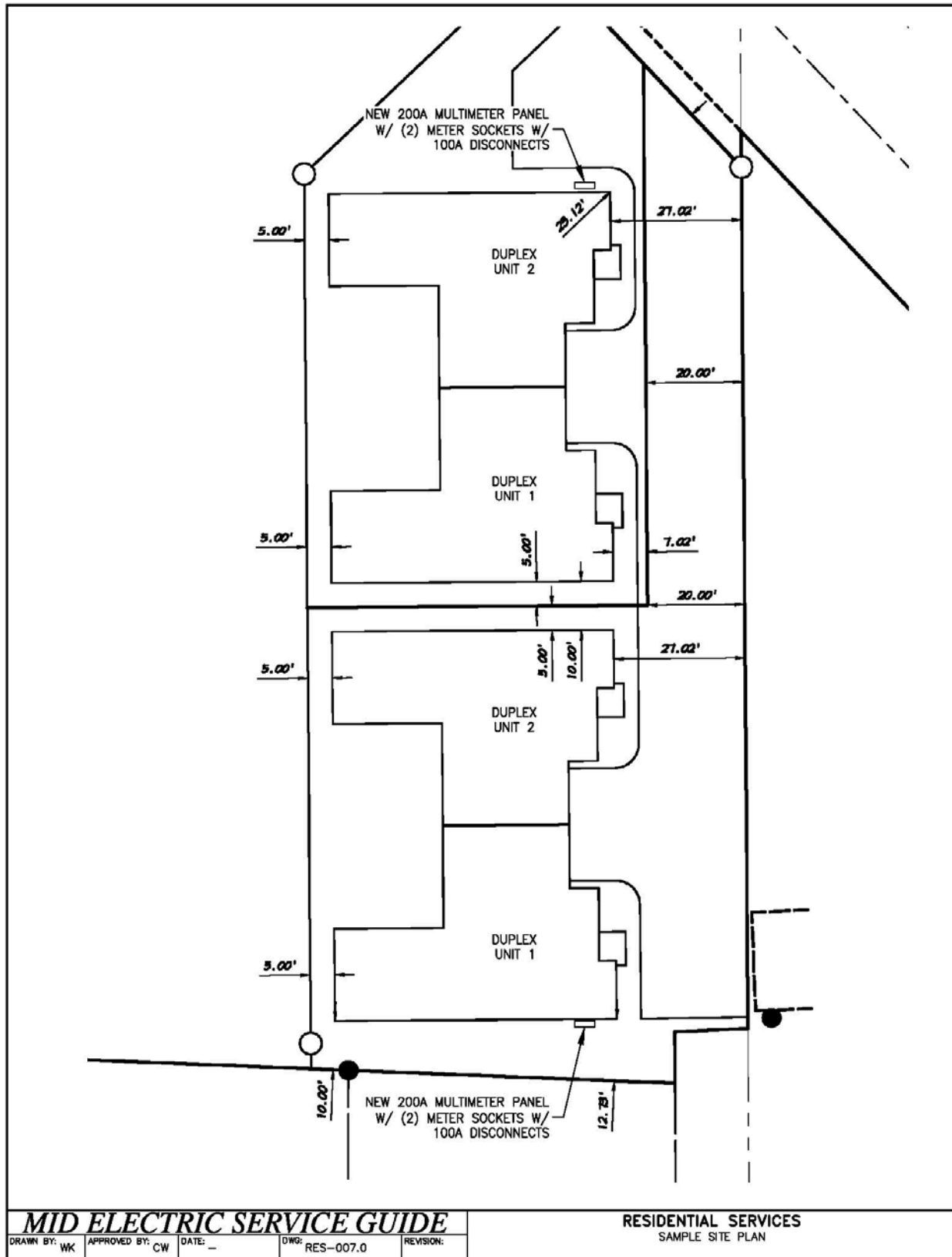
NOTE: M.I.D. will install meters only after the service trench is backfilled.

MID ELECTRIC SERVICE GUIDE				RESIDENTIAL SUBDIVISION	
DRAWN BY: BC	APPROVED BY: LN	DATE:	DWG: RES-006.1	REVISION:	MINIMUM REQUIREMENTS FOR TERMINATING UNDERGROUND ELECTRIC SERVICES

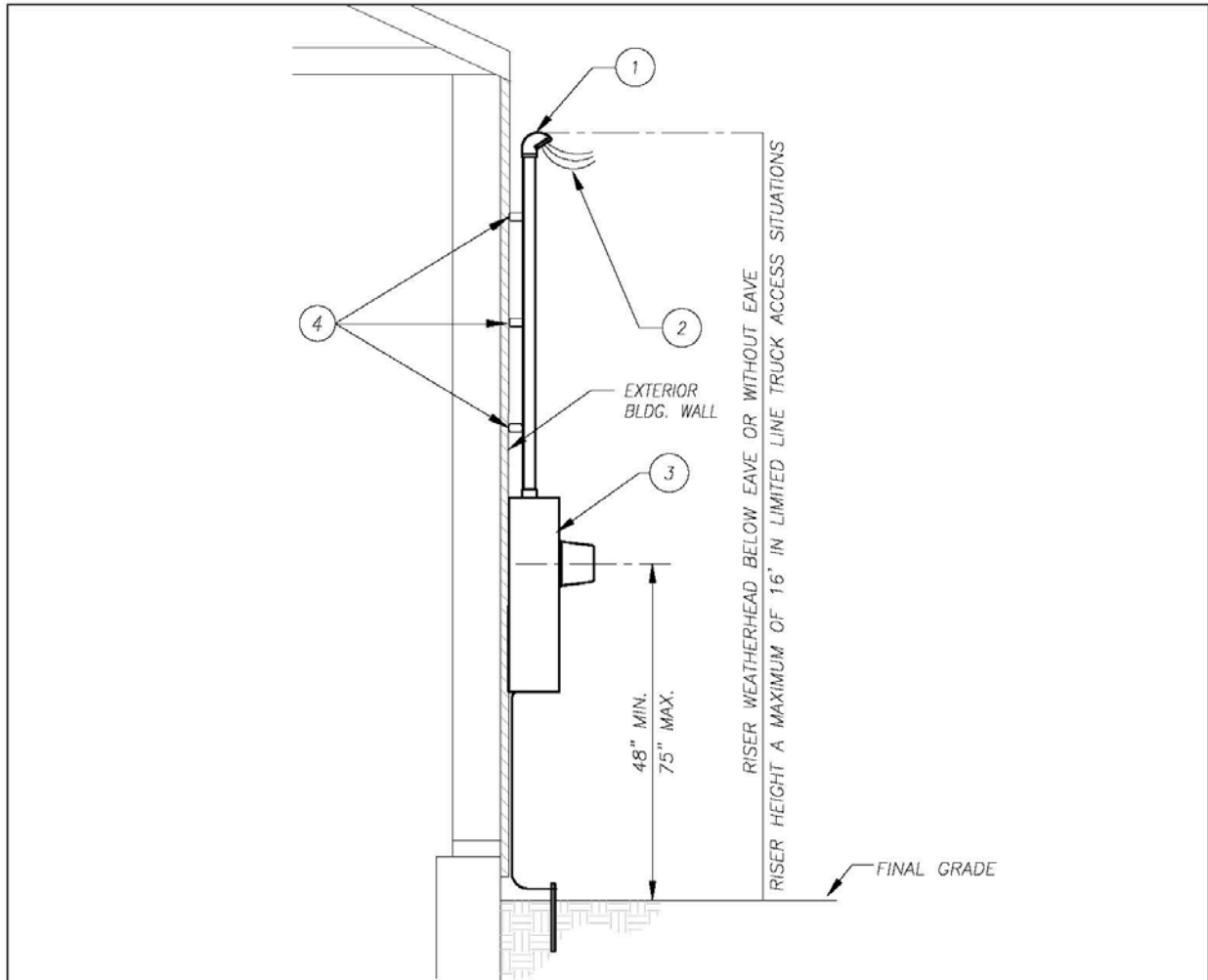
Drawing RES-006.1: Multi-Family Residential, Surface Mounted Service Installation



Drawing RES-006.2: Multi-Family Residential, Surface Mounted Service Installation Due to Power Diversion



Drawing RES-007.0: Sample Site Plan



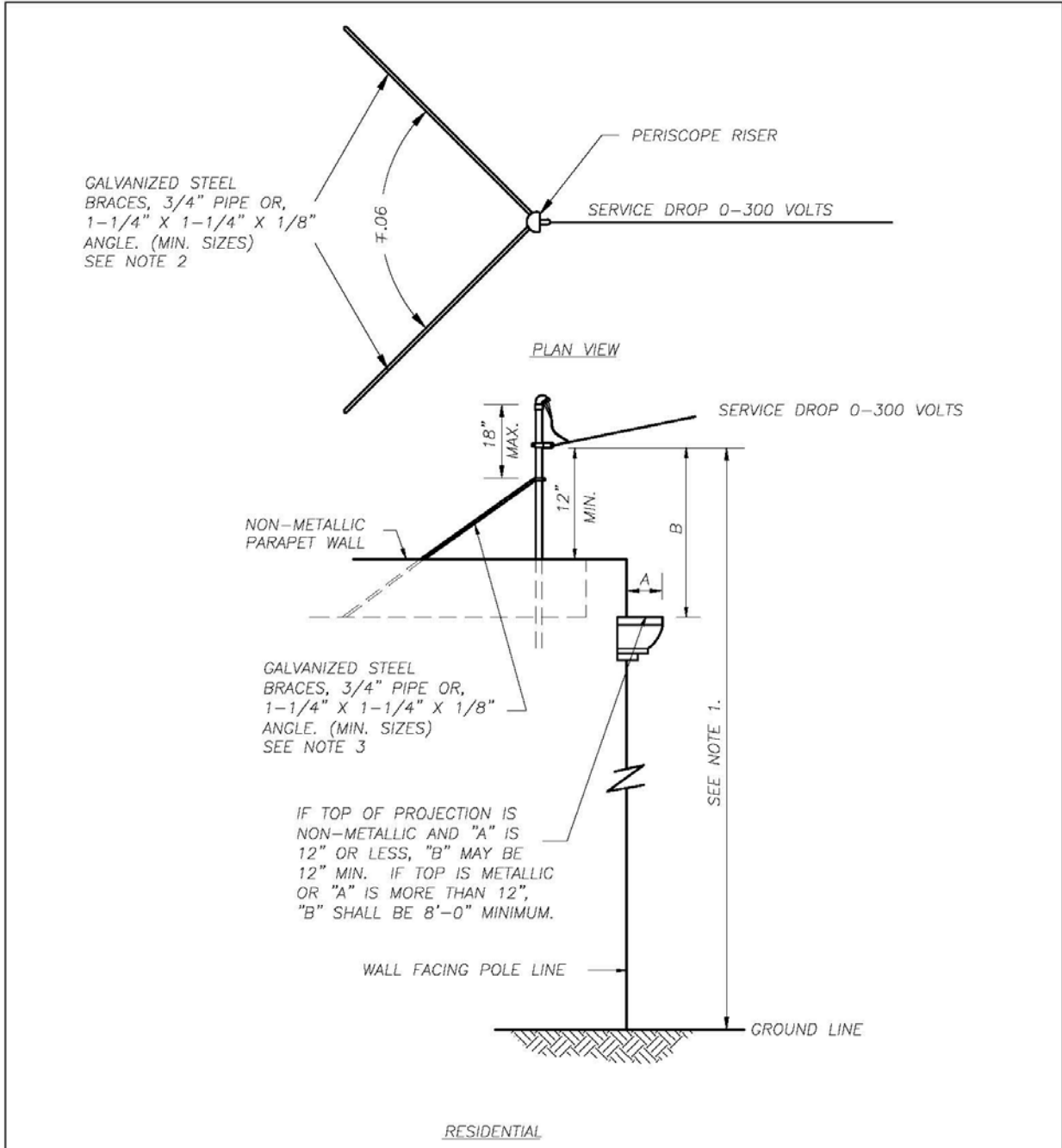
SURFACE MOUNT

NOTES:

1. IN LIMITED ACCESS SITUATIONS, OVERALL RISER HEIGHT MAY BE LIMITED TO NO MORE THAN 16 FEET ABOVE GROUND, BUT ALSO MUST BE A MINIMUM OF 8 FEET ABOVE GROUND. IF THE RISER WEATHER HEAD MUST GO UNDER THE EAVE, CONTACT MID'S ELECTRICAL ENGINEERING DEPT. MID WILL NOT ATTACH TO SCREW KNOB INSULATORS.
2. LEAVE AT LEAST 24" OF WIRE OUTSIDE THE SERVICE HEAD.
WIRE AND CONDUIT SIZE TO BE DETERMINED BY THE APPROVING AGENCY.
THE NEUTRAL WIRE IS TO BE MARKED WITH WHITE PER NATIONAL ELECTRIC CODE (NEC).
3. MAXIMUM METER HEIGHT - 75" TO CENTER OF METER.
MINIMUM METER HEIGHT - 48" TO CENTER OF METER.
SERVICE ENTRANCE EQUIPMENT WILL CONFORM TO APPLICABLE SECTIONS OF THE ELECTRIC UTILITY SERVICE EQUIPMENT REQUIREMENTS COMMITTEE (EUSERC) STANDARDS & UL LISTED.
4. 1-1/2" STRUT CHANNEL TO BE INSTALLED BEHIND CONDUIT TO PROVIDE STABILITY FOR RISER. STRUT CHANNEL NEEDS TO BE MOUNTED TO STUDS.

MID ELECTRIC SERVICE GUIDE				RESIDENTIAL SERVICES	
DRAWN BY: BC	APPROVED BY: LN	DATE: --	DWG: RES-008.0	REVISION:	MINIMUM REQUIREMENTS FOR TERMINATING ELECTRIC SERVICES

Drawing RES-008.0: Riser Without or Below Eave



NOTES:

1. 1-1/4" minimum galvanized rigid conduit (GRC) or intermediate metal conduit (IMC) is required for all periscope risers. GRC and IMC to be steel only.
2. Periscope type risers projecting in excess of 30" above the roof must be braced against the pull of the service drop conductors.

MID ELECTRIC SERVICE GUIDE				OVERHEAD SERVICE	
DRAWN BY: BC	APPROVED BY: LN	DATE: --	DWG: RES-009.0	REVISION:	BRACING OF PERISCOPE TYPE RISERS

Drawing RES-009.0: Bracing of Periscope Type Risers



MODESTO IRRIGATION DISTRICT
 1231 Eleventh Street, PO Box 4060, Modesto, CA 95352
 Customer Service Phone: (209) 526-7337
 Fax: (209) 526-7359



RESIDENTIAL ELECTRIC SERVICE APPLICATION

--- MID USE ONLY ---				
CSR Name:	Deposit Amount:	NEW METER INSTALLATION		
Account #:	Or reason for waiving:	Map grid seq #:		
Svc Pl #:		Franchise District:		# of lights: Watts:
Rental Agreement:	Approved by:	Date:	Tax District:	Bill Code:

Please fill out application completely, sign and return to MID Customer Services Division. In accordance with MID Rules & Regulations, a deposit of \$200 or two times the highest monthly bill may be required to activate

Today's date: 6-10-2014 Service request date: 12/31/2014

Type of Service: **Electric Service** **Lighting** Is the power currently on? Yes No

- Applicant is: Owner Agent Renter
- Billing name: Sample Brown
Legal Name of Responsible Party
- Service address: 1234 Sample Street Modesto 95358
Street City Zip Code
- Mailing address: 1234 Sample Street Modesto 95358
Street City Zip Code
- Home phone: 209-526-5555 Cell: 209-555-0000 E-Mail: _____
- Social security number: 123-45-6789 Date of birth: 01/01/1950
- Driver's license number: D1234567 State: California
- Employer: Brown Consulting Work phone: 209-555-0001
- Name of co-applicant: _____
- Relationship to applicant: _____ Date of birth: _____
- Co-applicant's social security number: _____ Cell phone: _____
- Co-applicant's driver's license number: _____ Work phone: _____
- If rental, name of landlord/property manager: _____
- Landlord/property manager phone number: _____

Signature (required): _____

Print Name

ID verification: Driver's License number & State, if not other
 Go to www.mid.org/yourhome/ for the most current Application.

Note: In accordance with published MID regulations, supporting documents and/or ID may be required.

Sample 1: Residential Electric Service Application

Residential Load Information Form

Modesto Irrigation District
 ATTN: Electrical Engineering
 PO Box 4060
 1231 11th Street
 Modesto, California 95352
 Fax: (209) 526-7357

Date: 6/9/2015

Project: Sample
 Location (Street): 1234 Sample Street
 Owner (Name): Sample Brown Telephone: (209) 526-5555
 Address: 1234 Sample Street
 Engineer (Name): Engineer/Architect Telephone: (209) 529-0000
 Address: 4321 Sample Ave.
 Estimated Date Ready for Service: 12/31/2015 Pre-Construction Meeting Date: 6/31/2015
 Begin Rough Grading Date: 8/31/2015

General Information

Approximate Square Footage: 2210

Electric Load Information

	Initial		Future		Initial		Future	
Stove/Oven	1.28	kW		kW	Water Heater	4	kW	kW
Refrigerator	11.8	Amps		Amps	HVAC	3.2	kW	kW
Clothes Dryer	1.8	kW		kW	Receptacles	40	Amps	Amps
Pool Pump	1.1	HP		HP	Lighting	1.2	kW	kW
Pool Heater	1.5	kW		kW	Misc. Motors		HP	2.0 HP
Welders		Amps	20	Amps	Electric Car Charger			

Total Initial Connected Electrical Load: 22.4 kW Size Main Fused Switch: 200 Amps

Total Future Connected Electrical Load: 24.0 kW Estimated Date of Future Load: TBD

Do you anticipate installation of a Solar Photovoltaic System? (circle one) Yes No Decline to State

Type of Service Desired: (circle one) Overhead Underground

Phase: _____ Voltage: 120/240 Wires: 3 Estimated Initial Date: 12/31/2015

Site Plan: One site plan in dxf or Autocad format on a CD is provided with the application
 Emailed electronic file to electric_standards@mid.org

 Signature of Applicant

		Office Use Only	
Application Complete	<input type="checkbox"/> Yes <input type="checkbox"/> No	Checked By: _____ If no, explain: _____	Date: _____

9/2015

Sample 2: Residential Load Information Form



RESIDENTIAL ELECTRIC SERVICE APPLICATION

--- MID USE ONLY ---

CSR Name:	Deposit Amount:	NEW METER INSTALLATION	
Account #:	Or reason for waiving:	Map grid seq #:	
Svc Pt #:		Franchise District:	
Rental Agreement:	Approved by:	Date:	# of lights: Watts:
			Tax District: Bill Code:

Please fill out application completely, sign and return to MID Customer Services Division. In accordance with MID Rules & Regulations, a deposit of \$200 or two times the highest monthly bill may be required to activate

Today's date: _____ Service request date: _____

Type of Service: Electric Service Lighting Is the power currently on? Yes No

1. Applicant is: Owner Agent Renter

2. Billing name: _____
Legal Name of Responsible Party

3. Service address: _____
Street City Zip Code

4. Mailing address: _____
Street City Zip Code

5. Home phone: _____ Cell: _____ E-Mail: _____

6. Social security number: _____ Date of birth: _____

7. Driver's license number: _____ State: _____

8. Employer: _____ Work phone: _____

9. Name of co-applicant: _____

10. Relationship to applicant: _____ Date of birth: _____

11. Co-applicant's social security number: _____ Cell phone: _____

12. Co-applicant's driver's license number: _____ Work phone: _____

13. If rental, name of landlord/property manager: _____

14. Landlord/property manager phone number: _____

Signature (required): _____
ID verification: Driver's License number & State (list if other)

Print Name Date

Note: In accordance with published MID regulations, supporting documents and/or ID may be required.

Residential Load Information Form

Modesto Irrigation District
 ATTN: Electrical Engineering
 PO Box 4060
 1231 11th Street
 Modesto, California 95352
 Fax: (209) 526-7357

Date: _____

Project: _____

Location (Street): _____

Owner (Name): _____ Telephone: _____

Address: _____

Engineer (Name): _____ Telephone: _____

Address: _____

Estimated Date Ready for Service: _____ Pre-Construction Meeting Date: _____

Begin Rough Grading Date: _____

General Information

Approximate Square Footage: _____

Electric Load Information

	Initial		Future			Initial		Future	
Stove/Oven		kW		kW	Water Heater		kW		kW
Refrigerator		Amps		Amps	HVAC		kW		kW
Clothes Dryer		kW		kW	Receptacles		Amps		Amps
Pool Pump		HP		HP	Lighting		kW		kW
Pool Heater		kW		kW	Misc. Motors		HP		HP
Welders		Amps		Amps	Electric Car Charger				

Total Initial Connected Electrical Load: _____ kW Size Main Fused Switch: _____ Amps

Total Future Connected Electrical Load: _____ kW Estimated Date of Future Load: _____

Do you anticipate installation of a Solar Photovoltaic System? (circle one) Yes No Decline to State

Type of Service Desired: (circle one) Overhead Underground

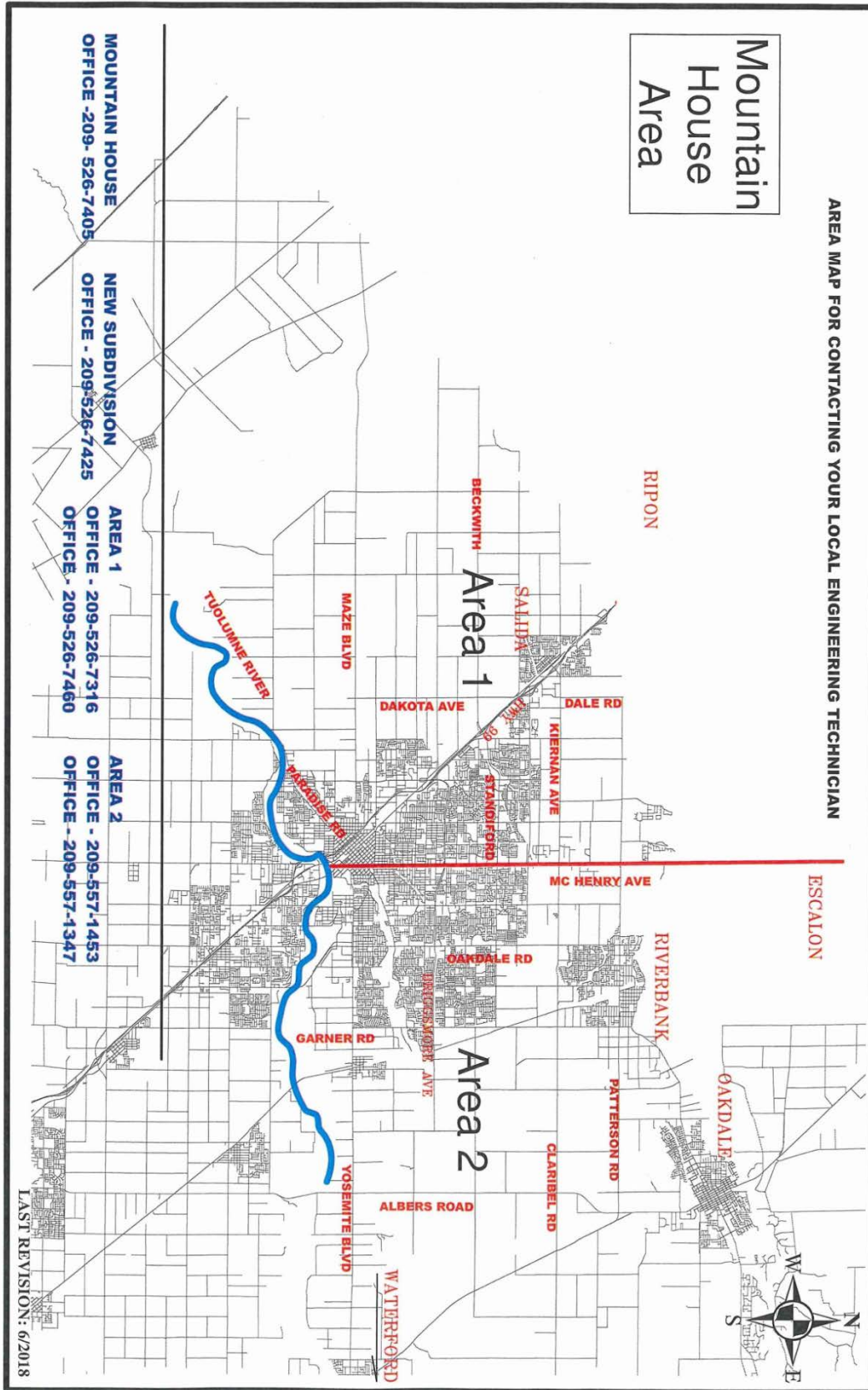
Phase: _____ Voltage: _____ Wires: _____ Estimated Initial Date: _____

Site Plan: (X) One site plan in dxf or Autocad format on a CD is provided with the application

 () Emailed electronic file to electric.standards@mid.org

 Signature of Applicant

Office Use Only	
Application Complete	<input type="checkbox"/> Yes Checked By: _____ Date: _____ <input type="checkbox"/> No If no, explain: _____



Form 3: Area Map

Service Guide Customer Input Form

The Modesto Irrigation District strives to provide excellent customer service. In an effort to improve our Service Guides, this form is provided so you can share your comments and suggestions. Please fill out this form and submit it with along with your comments. Please be as specific as possible. Once the form is complete, email the form to our Standards Department at electric_standards@mid.org, or mail the form to the Modesto Irrigation District office, attention Electrical Standards.

Modesto Irrigation District
 Attn: Electrical Standards
 PO Box 4060
 Modesto CA, 95352-4060

Name: _____ Date: _____

Phone Number: _____ Email: _____

Indicate which Service Guide your comments pertain to:

- | | |
|--|--|
| <input type="checkbox"/> Residential | <input type="checkbox"/> Solar Photovoltaic |
| <input type="checkbox"/> Agricultural | <input type="checkbox"/> Electric Vehicle |
| <input type="checkbox"/> Commercial and Industrial | <input type="checkbox"/> Residential Subdivision |
| <input type="checkbox"/> Temporary | <input type="checkbox"/> Street Lighting and Miscellaneous |

	Not Effective	Somewhat Effective	Effective	Very Effective	N/A
Organization of Service Guide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Requirements Were Clear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Effectiveness of Sample Forms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Effectiveness of Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Effectiveness of Service Guide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: _____

