Ameren Electric Meter Sockets Change:

Due to safety concern with horn bypass, Ameren is moving forward to switch to clamp jaw lever bypass meter socket for residential services. At present clamp jaw lever bypass is only required for commercial services. Horn bypass meter sockets are no longer allowed for any permanent services after January 6, 2015.

The changes made to the Ameren approved meter mounting equipment are listed below:

1. *Clamp jaw lever bypass meter sockets are required in the following individual meter situations:*
   A. *Residential single phase (320 amp max)*
   B. *Non-residential single phase(320 amp max)*
   C. *All three phase services (320 amp max except only 200 amp max for 480V and 277/480V)*
   D. *All single phase 480V services (200 amp max)*
   E. *All temporary services except as noted #3 below*
2. *Clamp jaw lever bypass meter socket is required for all multi-meter sockets for residential and non-residential services with or without a main disconnect. A slide type bypass is not permitted.*
3. *For a single phase 100 or 200 amp construction temporary service, a bypass is not required in the meter base unless that meter base is to be re-used for the permanent service.*
4. 120/240V 3 wire single phase socket will change from a four terminal to 5 terminal clamp jaw lever bypass
5. For all 320 amp meter bases the need for an anti-inversion clip is eliminated.

The clamp jaw bypass meter socket shall be rated 200 amp services and shall be heavy duty, lever operated, clamp jaw with jaw tension release design with plastic protective shield similar to the Milbank(HD-5 or HD-7) or Siemens/Talon HQ-5 or HQ-7 bypass mechanisms. The bypass action of all lever type bypass mechanisms shall be visible. This includes the ability to visibly see the opening and closing of the bypass mechanism contacts, as well as the clamping action of the meter socket jaws. Bypass mechanisms not meeting this requirement shall be rejected. Clamp jaw lever bypass mechanisms not previously used on the Ameren system shall be presented to the Standards Engineering Department for review.

The changes will be effective on January 6, 2015.

Ameren
FOCUSED ENERGY. For life.

Department of Building & Zoning

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ELECTRICAL PERMITS AND STANDARDS

All electrical work is to comply with the 2008 edition of the National Electric Code (NEC) and all applicable City regulations.

Electrical permits are required:

- For the installation of a new service;
- For the installation of a new service box;
- The upgrading of a service box;
- The alteration, relocation, or addition of an existing system that requires the redistribution of a breaker/circuit load;
- For the replacement or upgrading of an electrical service;
- The modification of an individual branch or circuit.

Projects that involve a substantial amount of electrical work are required to submit a minimum of two copies of all plans/drawings with the permit application. Plan and application review may require a maximum of 48 hours for review by both the Department of Building and Zoning and the Electrical Inspector.

INSPECTIONS

Electrical inspections are conducted by the City's Inspectors and may be scheduled Monday thru Friday, 8 a.m.- 5 p.m. To schedule an appointment, contact the Building and Zoning Department at (618) 251-3100.

Minimum 2 inspections:

1. For new or upgraded services, the Electrical Inspector shall be called after the service panel and meter base have been installed and connected, but prior to the power company reconnecting the service.

2. For new, upgraded systems or substantial additions/alterations to existing systems, the Electrical Inspector shall be contacted for rough in wiring and after all fixtures have been installed and all wiring is in place.

Before any wiring or other such construction shall be covered or concealed, it shall be the duty of the company, firm, or individual doing the same, to give notice to the Electrical

Inspector to perform an inspection of such work. If these inspections are not scheduled at the appropriate phase, the City can require the applicant to remove or redo any work that was not inspected. The applicant may also incur fines and other penalties for noncompliance. Where applicable, a site inspection may be requested by the contractor at no additional charge.

A certificate of compliance shall be issued if the work is in strict conformity with the rules and regulations of the National Electric Code (NEC) and any applicable City ordinances.

No electrical permit issued by the City of Wood River shall be transferable unless specifically authorized by the Building and Zoning Administrator.

All electrical permits are void 12 months after the date of issuance. If for any cause, work is delayed or goes beyond the specified 12-month period, the person or persons responsible for the work must secure a new permit.

FEE SCHEDULE

Single-Family, Detached Residential

For all general work-basic flat fee	$20.00
100 amp service	$25.00
200 amp service	$35.00
Greater than 200 amp service	$45.00

Multi-Family Residential

For all general work-basic flat fee per unit	$30.00
For new construction-basic flat fee per unit	$50.00
100 amp service	$25.00
200 amp service	$35.00
Greater than 200 amp service	$45.00

Commercial/Non-Residential

Basic flat fee	$50.00 (Ord. 08-06)
Plus, each amp over 100 amps	$ .25

SERVICE LOCATION

Three (3) feet must be maintained from the meter base and weather head to any opening that may be utilized as an exit from the structure, such as a door or window. The ground rod must be installed at a minimum of 3 feet from the gas service entrance. Service entrance wires must meet the separation distances when crossing/passing near swimming pools before services are approved.

Only one service entrance per principal building and service entrances are prohibited in all accessory structures. Exceptions may be allowed for commercial applications where special voltage needs are required or for remote or non-metered installations.
Please review the following requirements prior to the installation of any services, alterations to existing services, additions or rewiring of structures.

Contractors and/or installers are responsible to meet specifications prior to inspection.

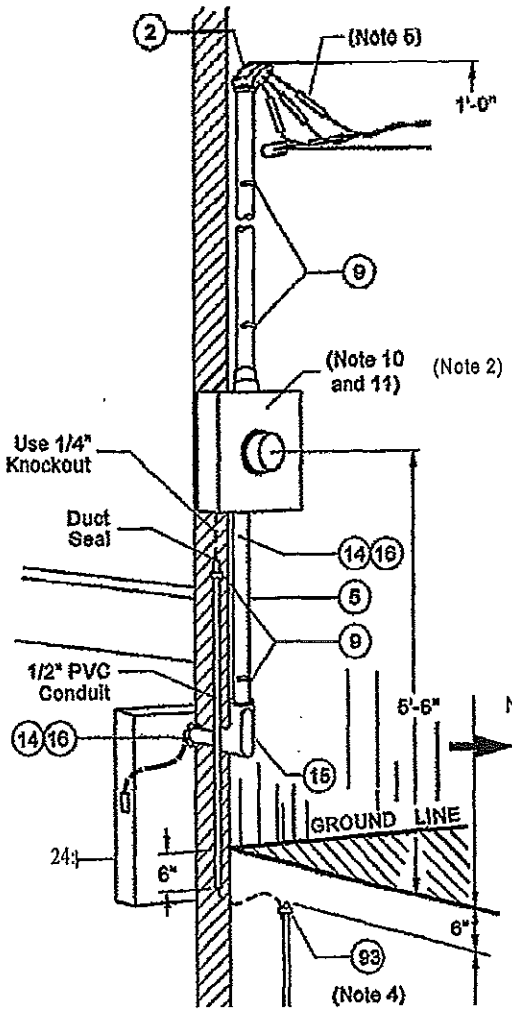
MINIMUM STANDARDS

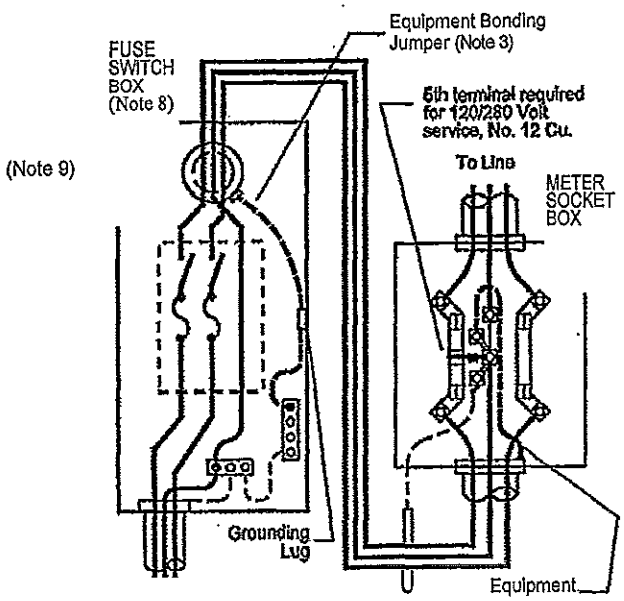
The following minimum standards shall apply to any electrical installation:

1. Minimum of 100-amp service for residential or commercial occupancy.
2. #3 T.H.W. copper minimum for 100-amp service; aluminum is prohibited.
3. #3-0 T.H.W. copper minimum for 200-amp service; aluminum is prohibited.
4. Service entrances are allowed in principal buildings only; no accessory structure.
5. Entrance cable and neutral must be of equal size.
6. Neutral must be identified and continuous from weather-head through meter socket to termination point on main service panel.
7. Only one over-head entrance feeder shall be attached per principal building.
8. Ground wire and grounding system shall meet latest NEC requirements.
9. Only rigid metal conduit shall be used from weather head to service panel and all conduit bonded to ground rod or other approved grounding device. *Note: PVC may be substituted on the Ameren IP side of underground installations.
10. Where there is more than 10 linear feet from the service panel to the entrance, an approved outside disconnect shall be installed. All main panels shall have a single main disconnect. Commercial buildings must have an outside disconnect on main service.
11. Main panels shall not be allowed in living areas, including: bathrooms, bedrooms, halls, closets, living rooms or dining areas.
12. #12 awg. copper minimum shall be used for branch circuits and switch legs on 110 v. systems.
13. No more than 8 electrical devices, receptacles, and/or switches shall be installed on one circuit in commercial occupancies unless the load calculation receives prior approval from the Electrical Inspector.
14. All electrical installations or rewiring installed in public places must be installed in an approved metal conduit.

CITYOF WOOD RIVER
ELECTRIC METER STANDARDS

120/240 & *1201208* VOLT, 1 PHASE, 3 WIRE, 100 OR 200 AMP OVERHEAD SERVICE





Notes:

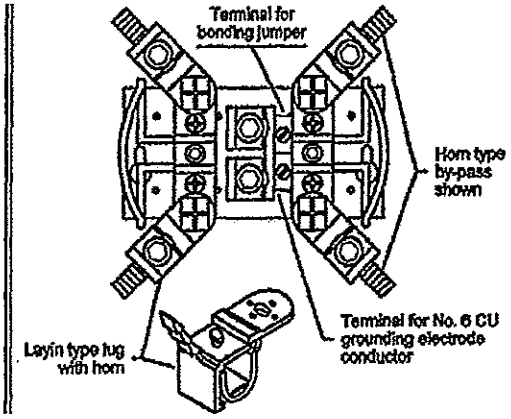
1) Before Installing electrical facilities check for compliance with the city electrical inspector as well as the N.E.C. and requirements stated in Note 4.
2) All service support must be furnished and installed by customer to provide not less than 10' ground clearance where service is subject to pedestrian traffic only: 12' over residential property. driveways and commercial areas which are not subject to truck traffic; 16' minimum (18' recommended) over public streets, alleys. roads and parking areas subject to truck traffic.
3) #6 Bonding jumper for 100 Amp. #4 Bonding jumper for 200 Amp
4) N.E.C. approved clamp, leave uncovered until after Inspection.
5) Approximately 3 feet of conductor will extend from weatherhead. All conductors to be the same size.
6) Neutral to be insulated and marked with white tape.
7) Two ground rods recommended to assure requirement of NEC 250.56 is met.
8) If panel is equipped with one floater bar instead of both a neutral and grounding bar, make sure the green screw is used to ground the bar to the cabinet.
9) The main service disconnect means shall be installed at the nearest readily accessible location (or immediately behind the wall where it enters the building if possible).
10) The electric meter, fuse box. and switch should be installed at least 18" horizontally from gas meter set. When conditions allow, a spacing of 36" is preferable.
11) Customer provided socket must meet 10-2.815 through 2.617.
12) All equipment bonding jumpers to be sized according to table on back. Equipment bonding jumper shall be permitted to be bare, covered, or Insulated. Individually covered or Insulated equipment jumper shall have a continuous outer finish that is either green or green with one or more yellow stripes.
14) Galvanized conduit Locknut.
15) LB conduit fitting, Gal. steel.
16) Galvanized conduit bushing, bonding type.
92 & 93) Copperweld rod clamp & 5/8" x 10' Rod.

CITY OF WOOD RIVER
ELECTRIC METER STANDARDS

MATERIAL LIST

ITEM NO	DESCRIPTION
2	WEATHERHEAD FOR CONDUIT, GALV. STEEL
5	RIGID CONDUIT. GALV. STEEL CONDUIT
9	CONDUIT OR CABLE STRAPS, HOT DIPPED GALVANIZED
14	GALVANIZED CONDUIT LOCKNUT
15	LB CONDUIT FITTING, GALV. STEEL
16	GALVANIZED CONDUIT BUSHING, BONDING TYPE
24	SERVICE ENTRANCE SWITCH, FUSED OR CIRCUIT BREAKER AND A THREADED HUB
92	COPPER WELD GROUND ROD. 5/8" X 10'
93	GROUND ROD CLAMP, 5/8"
-(2)	METER MOUNTING DEVICE AND A HUB (SEE CRITERIA BELOW)

CRITERIA FOR 100/200 AMP
METER SOCKET APPROVAL



Recommended size for service entrance conduit, conductor and bonding jumper for 1 phase, 3 wire RESIDENTIAL service. (Weatherhead to main panel)

	SERVICE				
AMP.	ENTRANCE		BONDING		
RATING	CONDUCTOR		JUMPER		CONDUIT SIZE
		CU		CU	
100 A.		NO. 3		NO. 8	11/4"
200 A.		NO. 3/0		NO. 4	2"

1. Socket must have a UL sticker, and have a NEMA3, 3s or 3R enclosure rating. Sockets shall be ringless.
2. Socket must be rated for continuous duty. (For a 200 amp service the meter socket needs to be marked, usually inside, 200 amp CONTINUOUS as opposed to 200 amp maximum).
3. Clamp jaw by-pass is required on class 300 amp and below.
4. Multiple meter sockets are to comply with the same criteria as above.

1000.03 METER BYPASS REQUIREMENTS

1. Clamp jaw lever bypass type meter sockets are required in the following individual meter situations:

A. Residential single phase (320 amp max)

B. Non-residential single phase (320 amp max)

C. All three phase services (320 amp max except only 200 amp for 480V and 277/480V)

D. All single phase 480V services (200 amp max)

E. All temporary services except as noted in 1003.03.3 below.

2. Clamp jaw lever bypass meter socket is required for all multi-meter sockets for residential and non- residential services with or without a main disconnect. A slide type bypass is not permitted.

3. For a single phase 100 or 200 amp construction temporary service, a clamp jaw or horn bypass is not required in the meter base unless that meter base is to be re-used for the permanent service.

The clamp jaw bypass meter socket shall be rated 200 amp services and shall be heavy duty, lever operated, clamp jaw with jaw tension release design with plastic protective shield similar to the Milbank (HD-5 or HD-7) or Siemens/Talon (HQ-5 or HQ-7) bypass mechanisms. The bypass action of all lever type bypass mechanisms shall be visible. This includes the ability to visibly see the opening and closing of the bypass mechanism contacts, as well as the clamping action of the meter socket jaws. Bypass mechanisms not meeting this requirement shall be rejected. Clamp jaw lever bypass mechanisms not previously used on the Ameren system shall be presented to the Standards Engineering Department for review.

The customer shall provide a service entrance which meets the requirements of a permanent installation with respect to service drop clearances, metering, safety and adequate structure, guying or bracing as required by the Company.

The customer furnishes and installs conductors from the meter socket on his structure to be connected to source and leaves sufficient length for Company to connect into the Company's transformer or pedestal in underground installations. Company connects customer's wires to the source and installs meter. The Company shall provide a suitable meter.

Customer using temporary service is expected to give prompt notice to the Company when such service is to be disconnected. Notice shall include account number, location and meter number to insure proper identification.

Underground (pad mount or pedestal)

1. Customer furnishes and installs his meter structure in close proximity to the Company's transformer or pedestal.
2. Some local municipalities require customer to obtain a variance for overhead temporary service in an underground subdivision. A municipal inspection may also be required for any underground or overhead temporary installation.

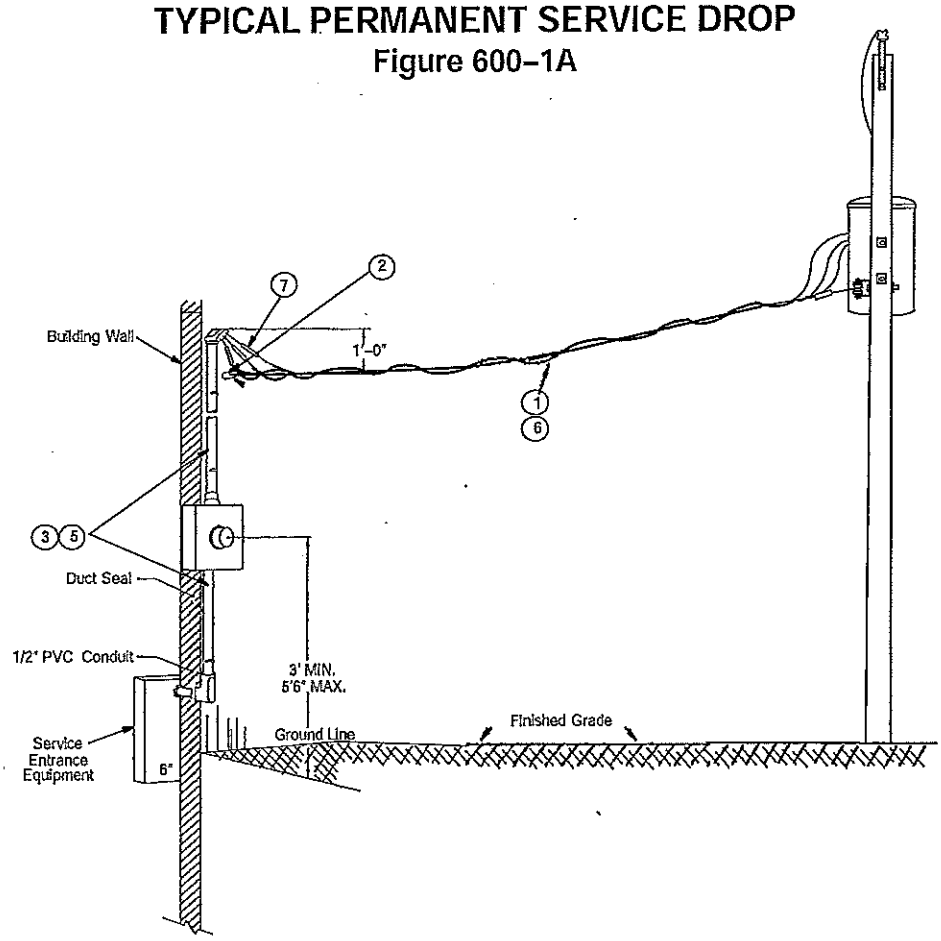
Overhead

1. The customer furnishes and installs the meter pole near the Company's power pole, but at least 10 feet away. It is recommended that the customer install the meter pole within 75 feet of power source.

600.05 DRAWINGS

1. TYPICAL PERMANENT SERVICE DROP
   Figure 600–1A
2. MAXIMUM ATTACHMENT HEIGHT FOR STEEL CONDUIT MAST DEADEND FOR STANDARD SERVICE DROP
   Figure 600–2A
3. OVERHEAD SERVICE TO MULTIPLE WEATHERHEADS
   Figure 600–3A
4. OVERHEAD TEMPORARY SERVICE POLE CLEARANCE AND METER
   Figure 600–4A
5. CUSTOMER–OWNED SECONDARY METERING
   UNDERGROUND DISTRIBUTION INSTALLATION
   100 OR 200 AMPERE, SINGLE–PHASE
   Figure 600–5A
6. OVERHEAD SERVICE SPECIFICATIONS ATTACHMENT TO BUILDINGS
   Figure 600–6A
7. SERVICE SPECIFICATIONS – OVERHEAD SERVICES ATTACHED TO BUILDINGS
   Figure 600–7A

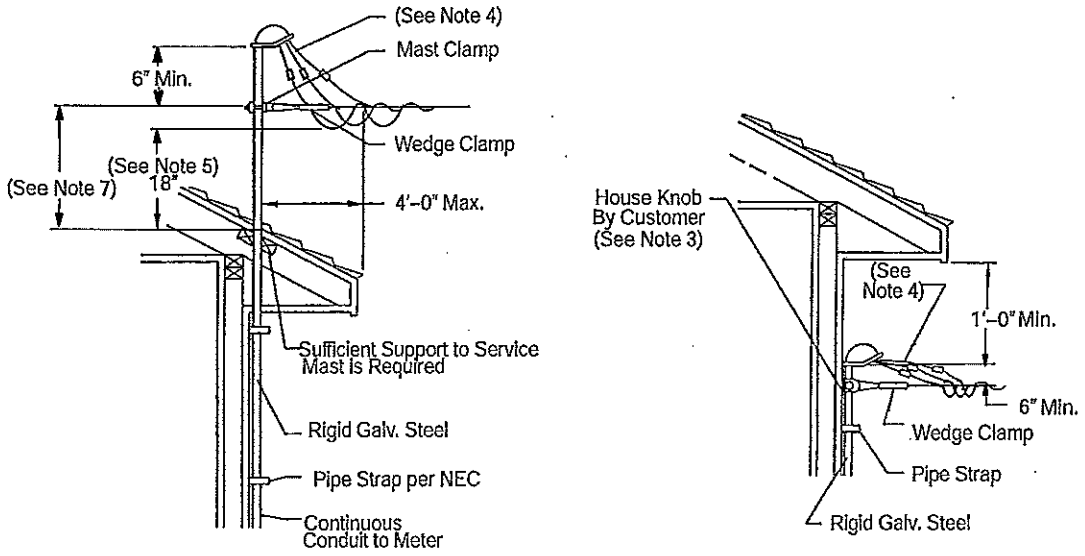
TYPICAL PERMANENT SERVICE DROP
Figure 600–1A



NOTES:

1. Overhead service drops and the connections at each end of the service drop will be owned, installed, and maintained by Ameren.
2. Customer shall install a service drop attachment of adequate strength for the installation of Ameren service. See Figure 600–2A.
3. The weatherhead, service raceway or conduit, service entrance conductors, grounding electrode system, meter socket, and service entrance equipment will be installed, owned and maintained by the customer. This installation shall meet the requirements of the Authority having Jurisdiction.
4. Grounding shall meet the requirements of the latest edition of the National Electrical Code (NEC) or the requirements of the Authority having Jurisdiction.
5. Refer to Section 200 and Figures 200–1A, 200–1C, and 600–6A within this manual for details regarding the location, installation, and placement of customer owned facilities.
6. For maximum residential service drop length, see Figure 600–2A, Note 4. For the maximum lengths of commercial overhead services, contact your local Ameren representative. Large service sizes, uneven grades, or a combination of these may require reduced service lengths or additional poles to maintain the required ground clearances. Additional charges may apply. Clearance requirements are outlined in Section 800 of this manual.
7. Service entrance conductors will extend approximately 3 feet from the weatherhead.
8. If the installation is a Current Transformer installation, refer to Section 1001 for additional information.

MAXIMUM ATTACHMENT HEIGHT FOR STEEL CONDUIT MAST DEADEND FOR STANDARD SERVICE DROP FIGURE 600–2A



NOTES:

1. Before installing electrical facilities, check for compliance with local codes as well as NEC.
2. The screw of the knob shall be imbedded at least 2" into a vertical stud or masonry of the house. Another acceptable attachment such as clevis, bolt and backing plate may be substituted.
3. Approximately 36" or longer of conductor will extend from weatherhead.
4. #2 triplex cable shall not be used where the span length exceeds 140' and 1/0 and 4/0 triplex and quadruplex shall not exceed 100 ft.
5. 18" minimum permitted within 6 feet of service mast, providing voltage between conductors does not exceed 600V, the service mast is no more than 4' from the edge of the roof, and the service is terminated at the service mast.
6. Refer to Section 800 for required clearances.
7. Heights greater than shown in Table 1 are possible provided that adequate guying and support are provided and approved by Ameren.
8. The conduit size specified are the minimum required for either conduit fill or strength required to support the overhead service, whichever is greater.

Table 1
Maximum Attachment Height Above Roof (Note 8)

Amperes	Phase	Service Drop Conductor	2" Rigid Steel Conduit	2 1/2" Rigid Steel Conduit	3" Rigid Steel Conduit
100 A	1	#2 Al, Triplex	2'2"	4'1"	–
200 A	1	#2 Al, Triplex	2'2"	4'1"	–
200 A	3	1/0 Al, Quadruplex	–	4'0"	–
320 A	1	4/0 Al. Triplex	–	3'2"	4'0"
320 A	3	4/0 Al, Quadruplex	–	–	4'0"