

## Paragould Code Pertaining to Electrical Installations

### Sec. 7.3 Requirements for service entrances and wiring methods in addition to those required by the NEC.

In addition to the requirements of the electrical code adopted by this chapter, the following shall apply to all new and upgraded service entrances and wiring methods:

- (a) A service disconnecting means shall be installed at a readily accessible location outside of a building or structure nearest the meter base/point of entry.
- (b) The meter socket shall be mounted so that the center of the electric meter will be no higher than 72 inches and no lower than 48 inches above finished ground grade. Screws, anchors or toggle bolts shall be used to fasten the socket.
- (c) For overhead service, the service mast shall be a minimum two (2) inch rigid trade size steel conduit extending through the roof \* no less than 24 inches to allow for minimum clearance of 18 inches from drip loop to roof. A weather head shall be installed and roof flashing shall be fitted around the mast. Height of mast and point of attachment shall be such as to allow adherence to NESC Table 232-1 for clearance from the ground or structure to service line.
  - Exception – only if building is multiple stories or attachment point is such as to give the utility above ground/structure clearances and is approved in advance of installation. If service is to be attached to the structure instead of the mast, a 5/8 inch galvanized eyebolt with a backing plate inside the structure shall be installed through the wall.
- (d) Approved pipe straps shall be used to hold the mast, and installed every 24 inches, starting 6 inches above the meter socket.
- (e) A five eighths (5/8) inch by eight (8) foot copper clad ground rod shall be driven below the ground surface.
- (f) The ground wire from the meter socket to the ground rod shall be in a conduit.  
\*Underground installations shall have the grounding wire in a separate conduit from the service conductors.
- (g) A conduit nipple or service entrance cable shall be installed from the service disconnect to the distribution panel.
- (h) For masonry or metal wall construction, a conduit nipple shall be used from the service disconnect to the distribution panel.
- (i) Grounding bushings shall be installed on metal nipples in the meter socket and panel box.
- (j) For installations of 400 amps and below, the minimum wire \* size compared to the main breaker shall be as follows:

<u>Wire Size</u>	<u>Main</u>
#4 copper	100 amps
#2/0 copper	200 amps
#500 MCM copper	400 amps
Or 2 parallel #2/0	400 amps

\* Aluminum wire may be used in service entrances. Contact PLWC personnel to ask about aluminum wire sizes.

- (k) All additions and new construction of commercial buildings and places of assembly shall be wired in conduit.

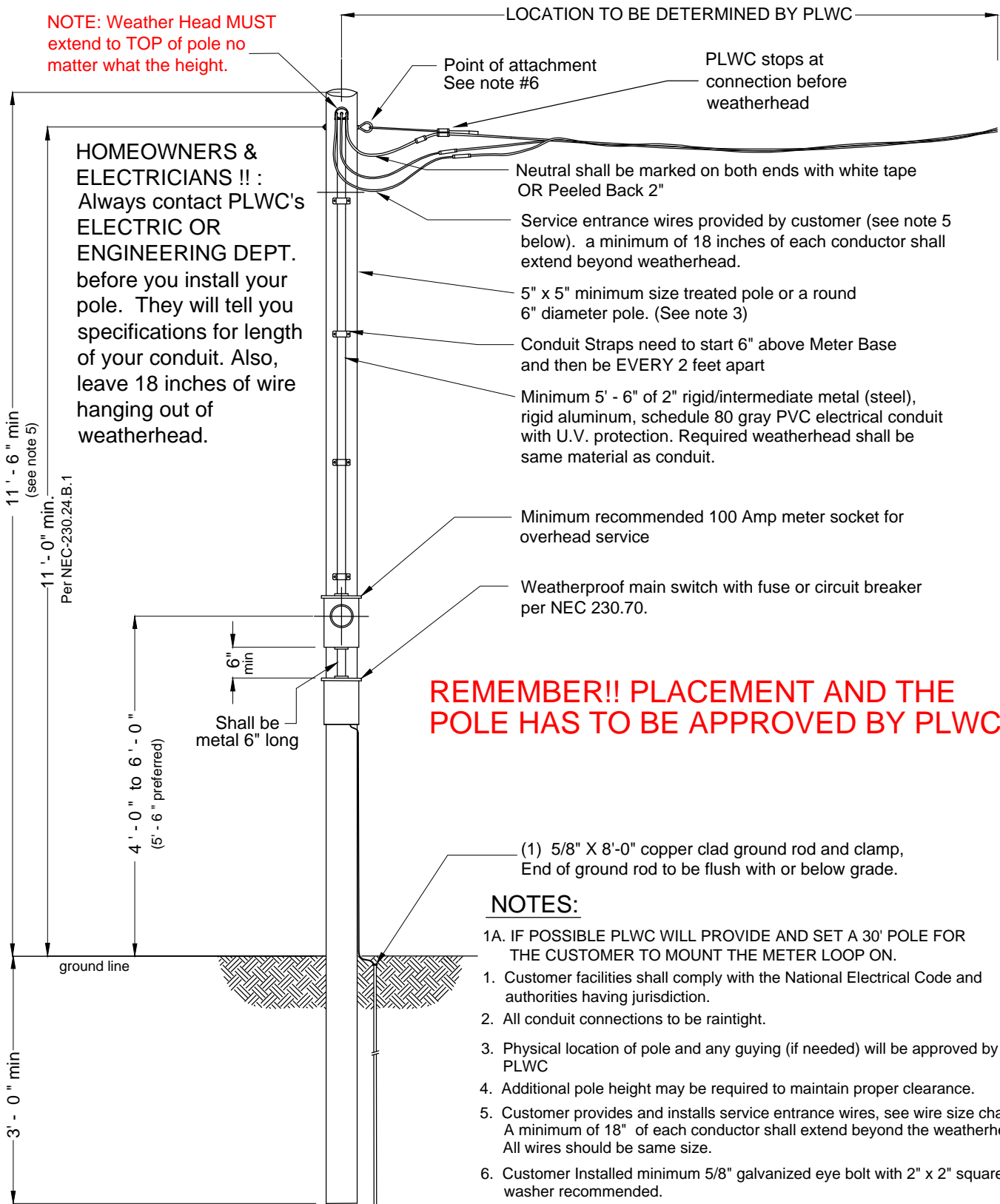
Reference: #84-5, §1,4-9-84, #95-18, §1.6-26-95

**Roger Knight – Metering/Services**  
**PLWC Electrical Maintenance Technician**  
**Office 870.239.7718**

**Jay Boone**  
**PLWC Engineering Department**  
**Office 870.239.7739**

**Gary Wise**  
**PLWC Electric Dept Mgr**  
**Office 870.239.7752**

**NOTE: Weather Head MUST extend to TOP of pole no matter what the height.**



**REMEMBER!! PLACEMENT AND THE POLE HAS TO BE APPROVED BY PLWC**

**NOTES:**

- 1A. IF POSSIBLE PLWC WILL PROVIDE AND SET A 30' POLE FOR THE CUSTOMER TO MOUNT THE METER LOOP ON.
1. Customer facilities shall comply with the National Electrical Code and authorities having jurisdiction.
2. All conduit connections to be raintight.
3. Physical location of pole and any guying (if needed) will be approved by PLWC
4. Additional pole height may be required to maintain proper clearance.
5. Customer provides and installs service entrance wires, see wire size chart. A minimum of 18" of each conductor shall extend beyond the weatherhead. All wires should be same size.
6. Customer Installed minimum 5/8" galvanized eye bolt with 2" x 2" square washer recommended.

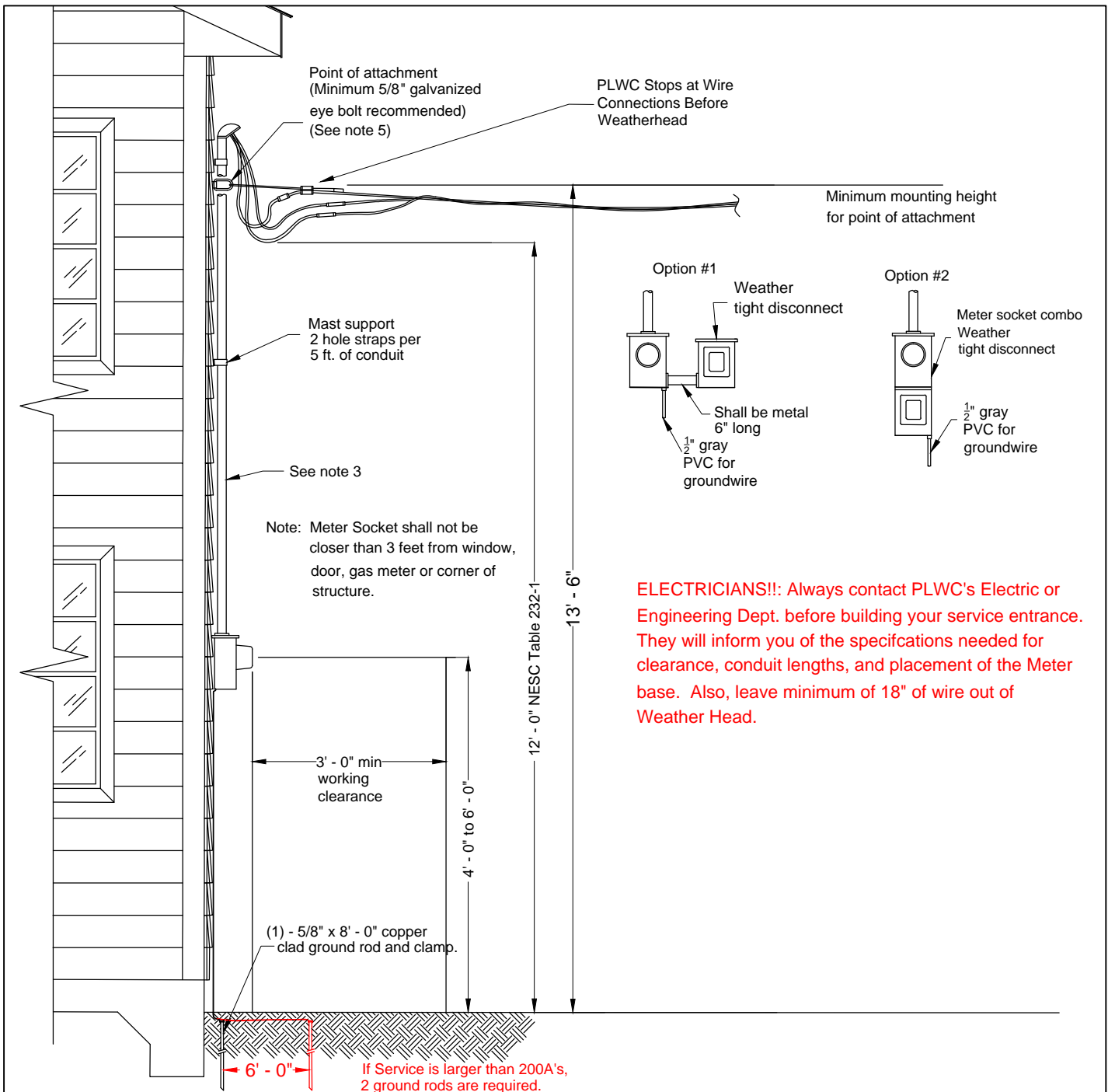
EXPECTED LOAD	CONDUIT SIZE	COPPER (INSULATION PER NEC)	NEUTRAL WIRE SIZE	GROUND WIRE SIZE
100 Amp	2"	#4	same as phase	#6 Cu
200 Amp	2"	2/0	same as phase	#6 Cu
320 Amp	2.5, 3"	350 kcm	same as phase	#6 Cu

**Call before you dig 811 or 1-800-482-8998**

In location with underground facilities, the Customer shall notify Arkansas One Call and shall have One Call locate all underground facilities before digging. It shall be the responsibility of the Customer to stay clear of all underground facilities.

NEC = National Electric Code

PARAGOULD LIGHT, WATER, AND CABLE	
<b>SERVICE FROM AN OVERHEAD SOURCE</b>	
APPROVED BY: DM	DATE: 3/29/2016
CHECKED BY: RK & SP	SCALE: none
DRAWN BY: DAJ	DWG #: 1101
<b>PLWC</b>	OFFICE PHONE #
	<b>870-239-7700</b>



**ELECTRICIANS!!:** Always contact PLWC's Electric or Engineering Dept. before building your service entrance. They will inform you of the specifications needed for clearance, conduit lengths, and placement of the Meter base. Also, leave minimum of 18" of wire out of Weather Head.

**NOTES:**

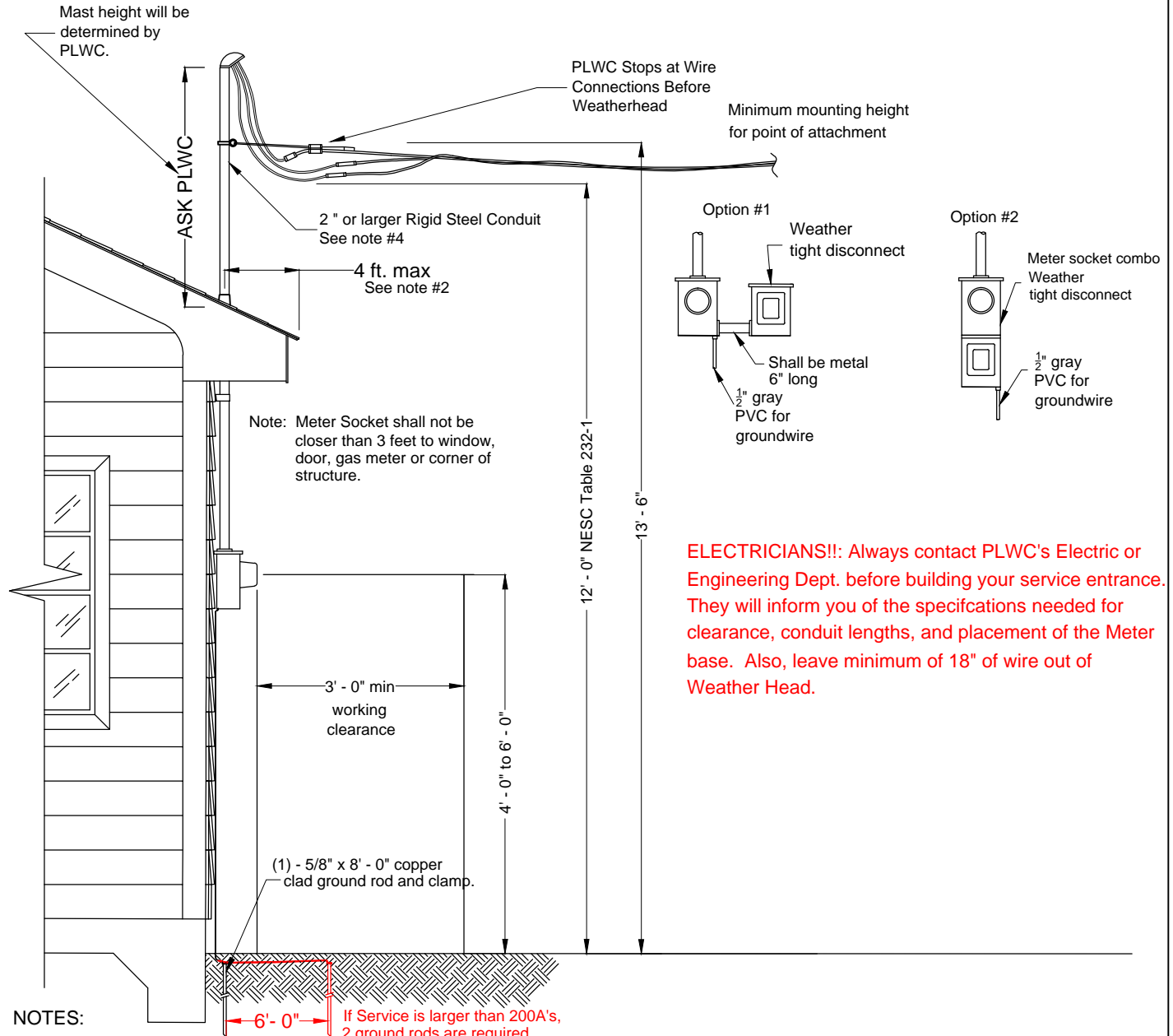
1. Customer facilities shall comply with the National Electrical Code and authorities having jurisdiction.
2. Buildings or other facilities shall not be constructed under existing company supply lines.
3. Rigid/intermediate metal (steel), rigid aluminum, or schedule 80 PVC gray electrical conduit Weatherhead shall be same material as the conduit.
4. A minimum of 18" of each conductor shall extend from the top of the service mast. The neutral shall be marked with white tape on both ends.
5. Customer shall install point of attachment.
6. Customer shall Furnish and install meter socket.
7. Ground wire shall be attached to wall in 1/2" gray PVC conduit.
8. Any Service greater than 200 amps, consult PLWC.

**CUSTOMER INSTALLATION MINIMUM WIRING SIZE FOR SINGLE FAMILY DWELLING**

EXPECTED LOAD	CONDUIT SIZE	COPPER (INSULATION PER NEC)	ALUMINUM (INSULATION PER NEC)	NEUTRAL WIRE SIZE	GROUND WIRE SIZE
200 Amp	2"	2/0	ASK PLWC	same as phase	#6 Cu
320 Amp	Ask PLWC	350 kcm	ASK PLWC	same as phase	#6 Cu

NEC= National Electric Code  
Current Code Requirement

PARAGOULD LIGHT, WATER, AND CABLE	
<b>TYPICAL PERMANENT OVERHEAD RESIDENTIAL SERVICE #1</b>	
APPROVED BY: DM	DATE: 3/29/2016
CHECKED BY: RK & SP	SCALE: none
DRAWN BY: JB	
<b>PLWC</b>	OFFICE PHONE # <b>870-239-7700</b>



**ELECTRICIANS!!:** Always contact PLWC's Electric or Engineering Dept. before building your service entrance. They will inform you of the specifications needed for clearance, conduit lengths, and placement of the Meter base. Also, leave minimum of 18" of wire out of Weather Head.

**NOTES:**

- Customer facilities shall comply with the National Electrical Code and authorities having jurisdiction.
- Distance from fascia to center of mast to be 4' - 0" max. NEC 230.29
- Buildings or other facilities shall not be constructed under existing company supply lines.
- Only continuous rigid steel 2", 2.5", 3" or IMC conduit can be used above the roof.
- A minimum of 18" of each conductor shall extend from the top of the service mast. The neutral shall be marked with white tape at both ends.
- Customer shall Furnish and install meter socket.
- No telephone or cable attachment allowed on mast. NEC 230.28.
- Ground wire shall be attached to wall in PVC, NEC Code 250.52
- Any Service greater than 320 amps, consult PLWC.
- #6 Copper for Ground Rods. See NEC Code #250.66 A, B & C for other permitted grounds.

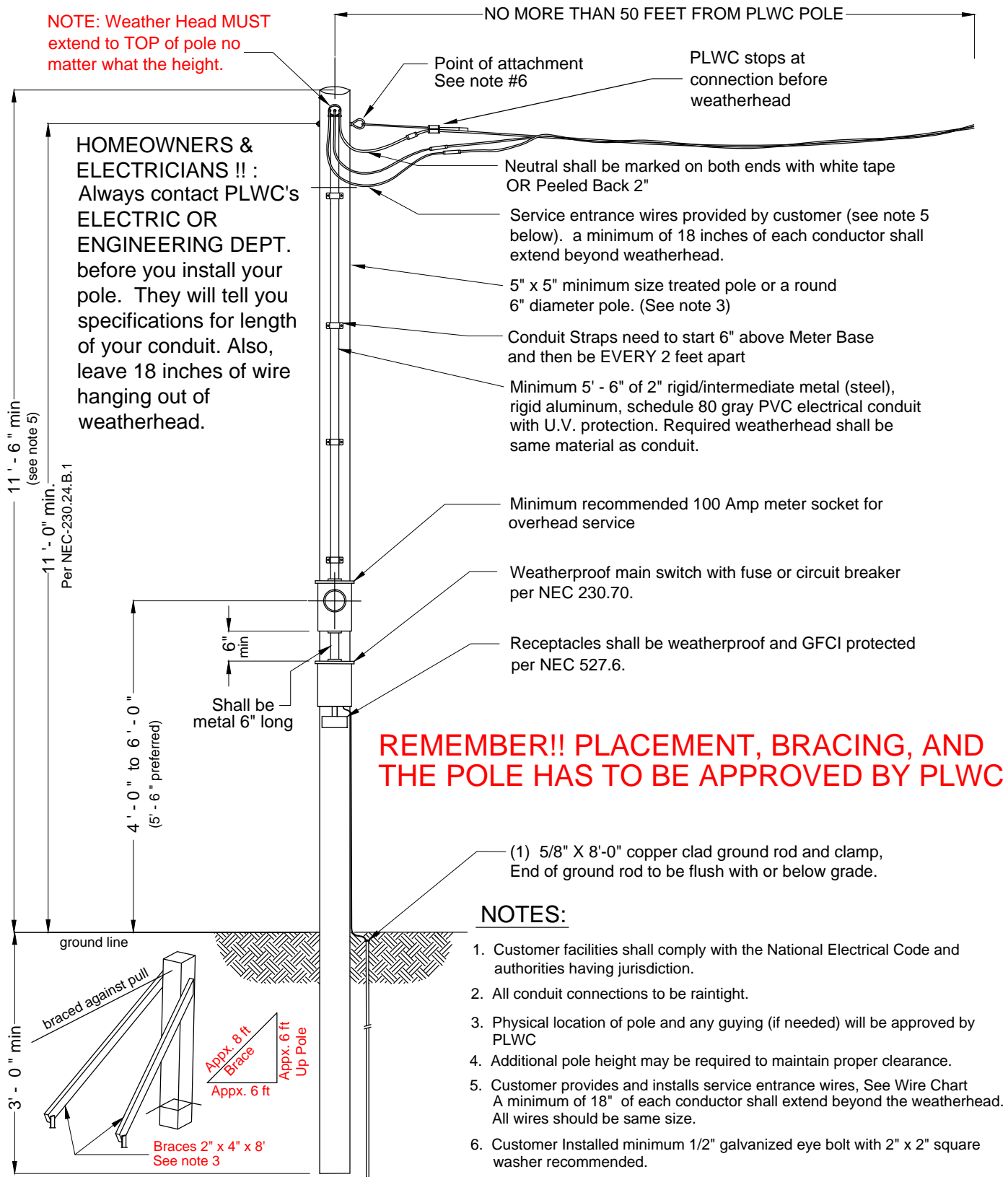
**CUSTOMER INSTALLATION MINIMUM WIRING SIZE FOR SINGLE FAMILY DWELLING**

EXPECTED LOAD	CONDUIT SIZE	COPPER (INSULATION PER NEC)	ALUMINUM (INSULATION PER NEC)	NEUTRAL WIRE SIZE	GROUND WIRE SIZE
200 Amp	2"	2/0	ASK PLWC	same as phase	#6 Cu
320 Amp	Ask PLWC	350 kcm	ASK PLWC	same as phase	#6 Cu

NEC = National Electric Code  
Current Code Requirement

<b>PARAGOULD LIGHT, WATER, AND CABLE</b>	
<b>TYPICAL PERMANENT OVERHEAD RESIDENTIAL SERVICE #2</b>	
APPROVED BY: DM	DATE: 3/29/2016
CHECKED BY: RK & SP	SCALE: none
DRAWN BY: JB	
<b>PLWC</b>	OFFICE PHONE #
	<b>870-239-7700</b>

**NOTE: Weather Head MUST extend to TOP of pole no matter what the height.**



EXPECTED LOAD	CONDUIT SIZE	COPPER (INSULATION PER NEC)	Alumium (INSULATION PER NEC)	NEUTRAL WIRE SIZE	GROUND WIRE SIZE
100 Amp	2"	#4	#2	same as phase	#6 Cu
200 Amp	2"	2/0	4/0	same as phase	#6 Cu

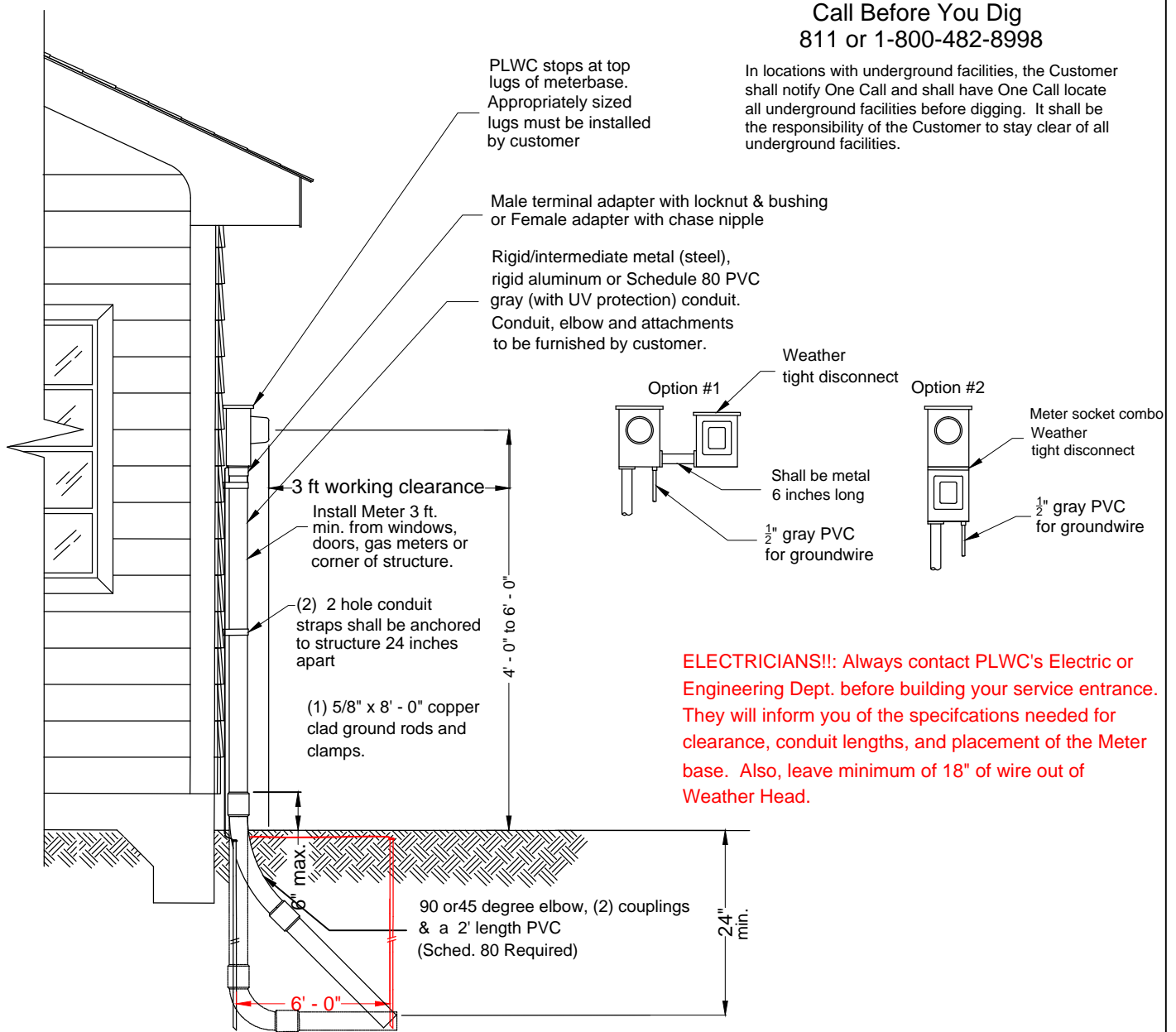
**Call before you dig 811 or 1-800-482-8998**

In location with underground facilities, the Customer shall notify Arkansas One Call and shall have One Call locate all underground facilities before digging. It shall be the responsibility of the Customer to stay clear of all underground facilities.  
NEC = National Electric Code

PARAGOULD LIGHT, WATER, AND CABLE	
<b>TEMPORARY SERVICE FROM AN OVERHEAD SOURCE</b>	
APPROVED BY: DM	DATE: 3/29/2016
CHECKED BY: RK & SP	SCALE: none
DRAWN BY: DAJ	
<b>PLWC</b>	OFFICE PHONE #
	<b>870-239-7700</b>

**Call Before You Dig  
811 or 1-800-482-8998**

In locations with underground facilities, the Customer shall notify One Call and shall have One Call locate all underground facilities before digging. It shall be the responsibility of the Customer to stay clear of all underground facilities.



**ELECTRICIANS!!!: Always contact PLWC's Electric or Engineering Dept. before building your service entrance. They will inform you of the specifications needed for clearance, conduit lengths, and placement of the Meter base. Also, leave minimum of 18" of wire out of Weather Head.**

**If Service is larger than 200A's, 2 ground rods are required. Need to be minimum of 6 feet apart.**

**NOTES:**

- Customer facilities shall comply with the National Electrical Code and authorities having jurisdiction.
- Meter socket shall be Furnished, installed, and maintained by the customer.
- Install vertical run of conduit from the meter to the top of the ground.
- The vertical run of conduit should be straight for optimum installation of conductor. A meter base offset should be used to avoid ledges.
- If bends are necessary, all PVC parts must be schedule 80.
- PLWC will perform any necessary excavation.
- Leave 45 degree elbow, (2) couplings and 2 feet of conduit near meter base for below ground installation by PLWC. ( Do not assemble below ground pieces )

**CUSTOMER INSTALLATION MINIMUM WIRING SIZE FOR SINGLE FAMILY DWELLING**

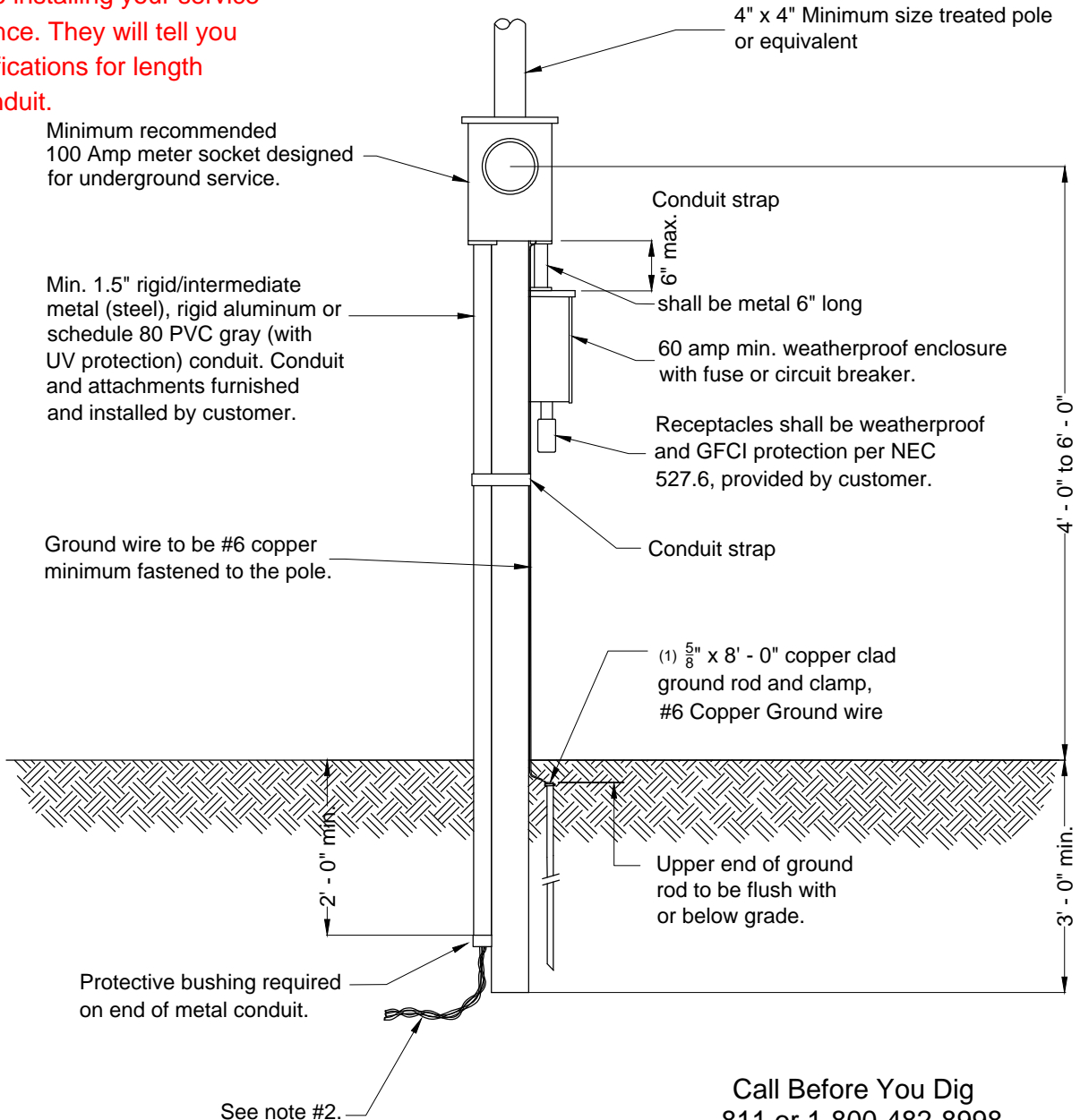
EXPECTED LOAD	CONDUIT SIZE	COPPER (INSULATION PER NEC)	ALUMINUM (INSULATION PER NEC)	NEUTRAL WIRE SIZE	GROUND WIRE SIZE
200 Amp	2"	2/0	ASK PLWC	same as phase	#6 Cu
320 Amp	Ask PLWC	350 kcm	ASK PLWC	same as phase	#6 Cu

NEC= National Electric Code current code requirement

<b>PARAGOULD LIGHT, WATER, AND CABLE</b>	
<b>UNDERGROUND SECONDARY SERVING A RESIDENCE / MFG HOME</b>	
APPROVED BY: DM	DATE: 3/29/2016
CHECKED BY: RK & SP	SCALE: none
DRAWN BY: JB	
<b>PLWC</b> OFFICE PHONE #	
<b>870-239-7700</b>	

**ELECTRICIANS!!:**  
**Always contact PLWC's ELECTRIC OR ENGINEERING DEPT.**  
**before installing your service entrance. They will tell you specifications for length of conduit.**

Temp shall be on right hand side when facing front of underground transformer



**Call Before You Dig**  
**811 or 1-800-482-8998**

In location with underground facilities, the Customer shall notify Arkansas One Call and shall have One Call locate all underground facilities before digging. It shall be the responsibility of the Customer to stay clear of all underground facilities.

**NOTES:**

- Customer facilities shall comply with the National Electrical Code and authorities having jurisdiction.
- Customer provides minimum wire size of #6 copper. Service wire suitable for direct burial to be furnished, installed and maintained by customer. Customer to tail out enough service wire to reach inside of pedestal or transformer.
- All conduit connections to be raintight.
- Customer to trench to within 12" of pedestal or transformer. Minimum depth of trench is 24".
- Location of underground cables shall be identified prior to digging.

EXPECTED LOAD	CONDUIT SIZE	COPPER (INSULATION PER NEC)	Aluminum (INSULATION PER NEC)	NEUTRAL WIRE SIZE	GROUND WIRE SIZE
100 Amp	2"	#4	#2	same as phase	#6 Cu
200 Amp	2"	2/0	4/0	same as phase	#6 Cu

NEC = National Electric Code  
 Current Code Requirements.

PARAGOULD LIGHT, WATER, AND CABLE	
<b>TEMPORARY SERVICE FROM AN UNDERGROUND SOURCE</b>	
APPROVED BY: DM	DATE: 3/29/2016
CHECKED BY: RK & SP	SCALE: none
DRAWN BY: DAJ	
<b>PLWC</b>	OFFICE PHONE #
	<b>870-239-7700</b>