

**COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION**

**In the Matter of:**

**APPLICATION OF KENTUCKY UTILITIES )  
COMPANY FOR AN ADJUSTMENT OF ITS ) CASE NO.  
ELECTRIC RATES AND FOR CERTIFICATES ) 2016-00370  
OF PUBLIC CONVENIENCE AND NECESSITY )**

**and**

**In the Matter of:**

**APPLICATION OF LOUISVILLE GAS AND )  
ELECTRIC COMPANY FOR AN ADJUSTMENT ) CASE NO.  
OF ITS ELECTRIC RATES AND FOR ) 2016-00371  
CERTIFICATES OF PUBLIC CONVENIENCE )  
AND NECESSITY )**

**DIRECT TESTIMONY AND EXHIBITS OF DANIEL RHINEHART  
ON BEHALF OF AT&T**

**March 3, 2017**

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1 **TESTIMONY OF DANIEL RHINEHART**  
2 **ON BEHALF OF AT&T**  
3

4 **I. WITNESS INTRODUCTION AND QUALIFICATIONS**

5 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

6 A. My name is Daniel P. Rhinehart. My business address is 208 South Akard Street, Room  
7 2539, Dallas, Texas 75202.

8 **Q. BY WHOM ARE YOU EMPLOYED, AND WHAT IS YOUR JOB TITLE?**

9 A. I am employed by AT&T Services, Inc., an entity that provides support services for  
10 various AT&T entities. My job title is Director – Regulatory.

11 **Q. WHAT ARE YOUR RESPONSIBILITIES IN THAT POSITION?**

12 A. My responsibilities include participating in regulatory dockets and litigation matters on  
13 behalf of various AT&T entities, including AT&T Kentucky (an ILEC) and AT&T  
14 Mobility (a wireless provider), with a focus on cost analysis and universal service  
15 matters.<sup>1</sup> I also direct the development of AT&T's pole attachment and conduit  
16 occupancy rates pursuant to standard FCC formulas and I support analysis of third-party  
17 pole attachment rates.

18 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

19 A. I hold a Bachelor of Science in Education from the University of Nevada, Reno and a  
20 Masters of Business Administration from Saint Mary's College of California. I have  
21 completed numerous training courses covering the topics of separations, telephone  
22 accounting, and long run incremental costs. I have completed the Brookings Institution  
23 course on Federal Government Operations and the Middle Management Program in

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<sup>1</sup> I am testifying on behalf of AT&T and its affiliated entities, including AT&T Mobility, formally known as New Cingular Wireless, PCS, LLC d/b/a AT&T Mobility, PCS.

1 Telecommunications at the University of Southern California Center for  
2 Telecommunications Management.

3 **Q. PLEASE BRIEFLY DESCRIBE YOUR PROFESSIONAL BACKGROUND.**

4 A. I began my career with Nevada Bell in 1979. Soon thereafter, I joined Nevada Bell's  
5 Separations and Settlements organization where I was responsible for reviews of  
6 independent telephone company separations and settlements studies and gained  
7 significant experience in analyzing telephone cost studies. Upon the divestiture of the  
8 Bell System in 1984, I joined AT&T's separations organization and subsequently  
9 assumed responsibility for mechanized separations results and analysis for AT&T  
10 Communications of California. Later, I joined the Exchange Carrier Cost Analysis  
11 group, where I evaluated numerous regulatory and cost filings of local telephone  
12 companies operating in California. I also was vice chairman of the California Universal  
13 Lifeline Telephone Service Trust Fund for approximately two years. I relocated to Texas  
14 in 1995, and initially had regulatory responsibilities in the states of Texas, Kansas,  
15 Arkansas, Missouri, and Oklahoma. Since then I have participated in numerous local  
16 exchange carrier regulatory proceedings, with a focus on local exchange carrier cost  
17 studies. In March 2006, I joined the post SBC-AT&T merger finance organization and  
18 assumed responsibility for developing cost studies as well as analyzing studies produced  
19 by others. I was promoted to Director – Financial Analysis in May 2012 and  
20 subsequently moved to my present job, Director – Regulatory, in March 2015.

21 **Q. HAVE YOU PREVIOUSLY TESTIFIED OR FILED TESTIMONY BEFORE A**  
22 **STATE REGULATORY COMMISSION?**

23 A. Yes. I have presented testimony and/or have been deposed on a variety of cost and  
24 policy topics in regulatory proceedings in Alaska, Arkansas, California, Georgia, Illinois,  
25

1 Iowa, Kansas, Maine, Missouri, Nebraska, Nevada, Oklahoma, South Dakota, and Texas.  
2 Topics I have addressed include pole attachment rates, terms, and conditions, state  
3 universal service funding, rate of return, and numerous other cost and policy issues.

4 **II. PURPOSE AND SUMMARY CONCLUSIONS**

5 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

6 A. I provide an analysis of the pole attachment rates proposed by Kentucky Utilities  
7 Company (KU) and Louisville Gas and Electric Company (LG&E) in their proposed Pole  
8 Structure Attachment Charges tariffs (PSA Tariff). As explained by AT&T witness  
9 Peters, the Commission should not adopt a PSA Tariff at all, and rather should continue  
10 to rely on the existing contract-based approach for pole attachments. Out of an  
11 abundance of caution, my testimony addresses the rates that would apply if, contrary to  
12 AT&T's recommendations and the existing industry practice, the Commission adopted a  
13 PSA Tariff.

14 **Q. DO YOU PROPOSE ADJUSTMENTS TO THE ATTACHMENT RATES**  
15 **PROPOSED BY KU AND LG&E?**

16  
17 A. Yes. As explained below, and solely for purposes of these proceedings, AT&T accepts  
18 the \$7.25 per foot rate proposed by KY and LG&E. I therefore do not propose any  
19 changes to the proposed rate for *wireline* attachments.

20  
21 I do, however, propose changes to the proposed rate for *Wireless Facility* attachments.  
22 KU's and LG&E's assumptions regarding the amount of space needed for pole-top and  
23 mid-pole Wireless Facility attachments are fatally flawed, and as a result their proposed  
24 rate is too high. I propose adjustments to the Wireless Facility attachment rate to correct  
25 these flaws.

1 **Q. WHAT IS THE APPROPRIATE AMOUNT OF SPACE TO CHARGE FOR**  
2 **WHEN A COMPANY MAKES A POLE-TOP WIRELESS FACILITY**  
3 **ATTACHMENT?**

4  
5 A. As I explain in detail below in Section V.A-B, the appropriate amount of chargeable  
6 space is 1 foot, not 11.585 feet as proposed by KU and LG&E. In other words, KU and  
7 LG&E propose to charge wireless attachers for 10.585 feet of pole space for which  
8 charges simply are not appropriate.

9 **Q. WHY ARE CHARGES NOT APPROPRIATE FOR 10.585 FEET OF THE 11.585**  
10 **FEET OF POLE SPACE PROPOSED BY KU AND LG&E?**

11  
12 A. As explained below, KU and LG&E propose to charge wireless attachers for 4 feet of  
13 pole space that is unusable safety space, and for an additional 6.585 feet of pole space for  
14 conduit (or riser) that does not interfere with or prevent any attachments by other entities  
15 in the same space. When these 10.585 feet of improper charges are removed, only 1 foot  
16 is actually chargeable to wireless attachers.

17 **Q. WHAT IS THE APPROPRIATE AMOUNT OF SPACE TO CHARGE FOR**  
18 **WHEN A COMPANY MAKES A MID-POLE WIRELESS FACILITY**  
19 **ATTACHMENT?**

20  
21 A. As I explain in detail below in Section V.C, the appropriate amount of chargeable space  
22 is 1 foot, for the same reasons just mentioned.

23 **Q. ARE YOU CHALLENGING HOW KU AND LG&E IMPLEMENTED THE POLE**  
24 **ATTACHMENT RATE METHODOLOGY THE COMMISSION ADOPTED IN**  
25 **THE 251 ORDER?**<sup>2</sup>

26  
27 A. Yes, in certain respects related to the development of a Wireless Facilities attachment  
28 rate, as addressed below.

29 **Q. DO YOU CHALLENGE, OR EVEN ADDRESS, EVERY ASPECT OF THE**  
30 **IMPLEMENTATION BY KU AND LG&E OF THE METHODOLOGY THE**  
31 **COMMISSION ADOPTED IN THE 251 ORDER?**

---

<sup>2</sup> *Adoption of a Standard Methodology for Establishing rates for CATV Pole Attachments*, Administrative Case No. 251 (Sept. 17, 2982) (251 Order).

1  
2 A. Not in this testimony. While there are many aspects of the implementation with which I  
3 disagree, most of them, either standing alone or in conjunction with other incorrect  
4 aspects of the implementation, have little if any negative impact on AT&T with regard to  
5 the per-foot wireline pole attachment or Wireless Facility attachment rates KU and  
6 LG&E propose in their tariffs. My testimony addresses only those aspects of the  
7 implementation that result in unreasonably high Wireless Facility attachment rates that  
8 KU and LG&E propose to impose on AT&T.<sup>3</sup>

9 **III. GENERAL METHOD OF CALCULATING PROPOSED RATES FOR FACILITY**  
10 **ATTACHMENTS**

11  
12 **Q. HOW DID KU AND LG&E DEVELOP THEIR PROPOSED POLE**  
13 **ATTACHMENT RATES FOR WIRELINE AND WIRELESS FACILITY**  
14 **ATTACHMENTS?**

15  
16 A. KU and LG&E incorporated the investments in and costs related to their 35-foot, 40-foot  
17 and 45-foot poles and multiplied those costs by a Space Usage Factor for three-user poles  
18 to identify the cost of a single wireline pole attachment rate as \$7.45 on a blended  
19 KU/LG&E basis, assuming a wireline attachment takes up one foot of usable space. The  
20 companies went on to propose a slightly lower wireline pole attachment rate of \$7.25,  
21 based on a settlement agreement in a prior rate case. As explained above, for the  
22 purposes of these proceedings, AT&T accepts the \$7.25 per-foot rate proposed by KU  
23 and LG&E. As for wireless attachments, KU and LG&E assumed that a pole-top  
24 mounted Wireless Facility should be attributed the use of an equivalent of 11.585 feet of  
25 pole space at a rate of \$7.25 per foot, yielding their proposed \$84.00 Wireless Facility  
26 attachment rate.

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<sup>3</sup> Accordingly, AT&T's decision not to address other concerns with the manner in which KU and LG&E calculated their proposed pole attachment rates cannot be construed as agreement with or acquiescence to those aspects of their calculations in future proceedings involving them or any other entities, in Kentucky or elsewhere.

1 **IV. PROPOSED WIRELINE ATTACHMENT RATES OF KU AND LG&E**

2 **Q. DOES AT&T OPPOSE THE PROPOSED \$7.25 PER FOOT WIRELINE POLE**  
3 **ATTACHMENT RATE?**

4  
5 A. No. I have reviewed discovery responses provided by KU and LG&E related to the  
6 development and selection of the \$7.25 rate. While I do not completely agree with the  
7 manner in which KU and LG&E calculated that rate, the rate itself is not unreasonably  
8 high and AT&T does not oppose it.

9 **V. PROPOSED WIRELESS FACILITY ATTACHMENT RATES OF KU AND**  
10 **LG&E**

11  
12 **Q. DOES AT&T OPPOSE THE PROPOSED WIRELESS FACILITY**  
13 **ATTACHMENT RATE OF \$84.00?**

14  
15 A. Yes, for the reasons explained below.

16  
17 **Q. HOW IS THE \$84.00 WIRELESS FACILITY ATTACHMENT RATE**  
18 **CALCULATED?**

19  
20 A. This rate is the product of the \$7.25 per foot rate for wireline attachments multiplied by  
21 an assumed 11.585 feet of space for a wireless attachment on an average pole.

22 **Q. IS THIS \$84.00 RATE REASONABLE?**

23  
24 A. No. That rate erroneously assumes that wireless attachments, both pole-top and mid-  
25 pole, use 11.585 feet of space on an average pole. As I explain in more detail below,  
26 pole-top and mid-pole wireless attachments should be charged for only 1 foot of space on  
27 the pole.

28 **Q. WHAT IS THE BASIS FOR THE UTILITIES' ASSUMPTION THAT WIRELESS**  
29 **FACILITIES USE 11.585 FEET OF POLE SPACE?**

30  
31 A. KU and LG&E explain their basis for this determination in their responses to Kentucky  
32 Cable Telecommunications Association (KCTA) Information Request 1-10, a copy of  
33 which is included in Exhibit DR-1:



1 KPSC Administrative Case No. 251 sets forth the typical height, and  
2 usable and unusable space for a typical three-user pole. That is a height of  
3 42.5 feet, less 6 feet buried, 20 feet to the lowest attachment, 3.33 feet  
4 required safety space, resulting in 13.17 feet of usable pole space.  
5 [KU/LG&E] assumes a pole top wireless antenna attachment, as that is the  
6 preferred attachment location for Wireless Facility owners. As  
7 [KU/LG&E] typically has electric facilities located at or near the top of  
8 the pole, a pole top antenna dictates a 5 foot taller pole in order to  
9 maintain a safe working distance of at least 48 inches (a long standing  
10 [KU/LG&E] construction standard) between the electric facilities and the  
11 pole top antenna. Thus, the Wireless Facility owner is be (sic) responsible  
12 for the top 5 feet of the pole.  
13 The Wireless Facility owner will have conduit running through the initial  
14 presumed 13.17 feet of usable space on the pole, which it shares with  
15 [KU/LG&E]. Therefore, the Wireless Facility owner is responsible for  
16 half of the 13.17 feet of presumed usable space. 13.17 feet divided by 2  
17 users ([KU/LG&E] and the Wireless Facility owner) equals 6.585 feet.  
18 6.585 feet of shared usable space plus 5 feet of additional pole height  
19 needed by the new pole top antenna equals 11.585 feet.  
20 The Wireless Facility owner is permitted to place up to two radio units,  
21 needed for their pole top antenna, in the unusable space of the pole. This  
22 use of the unusable space is not factored into the above calculation.  
23 Further, although [KU/LG&E] and the Commission assume a typical pole  
24 height of 42.5 feet, as shown by [KU/LG&E's] response to AT&T 1-5, the  
25 average height of a [KU/LG&E] pole with a Wireless Facility attached is  
26 [47.73/51.05] feet.

27  
28 In short, KU & LG&E assume that (i) 5 feet will be added to the pole and the  
29 wireless attacher will use all 5 feet, and (ii) an additional 6.585 feet will be used  
30 on the existing pole for conduit (13.17 feet of assumed usable space divided by  
31 two users = 6.585 feet). Five feet plus 6.585 feet equals 11.585 total feet.<sup>4</sup>

32 **Q. ARE THESE SPACE USE ASSUMPTIONS REASONABLE OR ACCURATE**  
33 **WHEN CONSIDERING WIRELESS FACILITY ATTACHMENTS?**

34  
35 A. No. The assumptions are flawed in the following respects. First, KU and LG&E  
36 incorrectly assume the full 5 incremental feet of height required for Wireless Facility

---

<sup>4</sup> For a pole-top small cell deployment, KU and LG&E assume that the pole-top antenna will use 11.585 feet of space. Such a small-cell deployment also has radio equipment placed in the “unusable” portion of the pole, but KU and LG&E do not propose to assess any per-foot charges for placement of radio units placed in the “unusable” portion of the pole. That aspect of their proposal is appropriate.

1 attachments is usable and used space. Second, KU and LG&E incorrectly seek to assesses  
2 space usage for placement of conduit or riser.

3 **A. KU and LG&E Incorrectly Attribute the Full Incremental Height as Usable**  
4 **and Used Space**

5 **Q. WHAT IS KU'S AND LG&E'S JUSTIFICATION FOR ASSUMING WIRELESS**  
6 **ATTACHMENTS AT THE TOP OF POLES SHOULD BE CHARGED FOR FIVE**  
7 **FEET OF NEW POLE SPACE?**

8  
9 A. Their justification appears to be set out in their Electric System Codes and Standards  
10 related to wireless antenna attachments on wood poles in their Third Party Pole  
11 Attachment Handbooks provided in response to KCTA information request 1-16  
12 (excerpts attached as Exhibit DR-2), which provide that:

13 The height of all poles used to mount antennas must be increased by a  
14 minimum of five feet from above the existing pole's height. The cost of  
15 the taller pole is the responsibility of the attacher.  
16

17 **Q. IS THAT A REASONABLE JUSTIFICATION?**

18  
19 A. No. First, KU and LG&E are insisting that the wireless facility owner installing a pole-  
20 top attachment pay for new taller poles. Second, KU and LG&E seek to assess charges  
21 for the full 5 feet of extension. Instead, KU and LG&E should only charge for 1 foot,  
22 because an attaching party only uses 1 foot of the 5-foot extension to attach a pole-top  
23 wireless antenna. The other 4 feet of the 5-foot extension is mandatory safety space  
24 (space that must be kept bare for safety reasons to separate electric equipment from  
25 telecommunications equipment). Safety space is not "usable" pole space and, therefore,  
26 it is not appropriately charged to a specific attacher.

27 **Q. HAS THE COMMISSION PREVIOUSLY ADDRESSED SAFETY SPACE IN**  
28 **THE DETERMINATION OF POLE ATTACHMENT RATES?**

29  
30 A. Yes. The Commission has treated safety space as unusable space (251 Order at 14), and  
31 KU and LG&E used the Space Usage Factor from the 251 Order reflecting this.

1 **Q. GIVEN THAT THE ADDITIONAL 5 FEET OF SPACE ON A POLE**  
2 **SUPPORTING A POLE-TOP WIRELESS FACILITY IS ONLY REQUIRED**  
3 **WHEN PLACING A WIRELESS FACILITY, WHY SHOULD A WIRELESS**  
4 **FACILITIES ATTACHER NOT PAY RENT FOR THE FULL 5 FEET OF**  
5 **INCREMENTAL SPACE?**

6  
7 A. First, KU and LG&E acknowledge 4 of the 5 feet as safety space, and per the 251 Order  
8 safety space is not usable space. Second, a wireless facilities attacher is already required  
9 to bear the full cost of replacing a shorter pole with the new, taller pole through one-time  
10 paid-in-full make ready charges. That is the practice in place today, and KU and LG&E  
11 would likewise be fully compensated for the cost of the new taller pole under Section 7.e  
12 of the proposed PSA Tariff:

13 If an existing Structure is replaced or a new Structure is erected solely to  
14 provide adequate capacity for Attachment Customer's proposed  
15 Attachments, Attachment Customer shall pay a sum equal to the actual  
16 material and labor cost of the new Structure, as well as any replaced  
17 appurtenances, plus the cost of removal of the existing Structure minus its  
18 salvage value, within 30 days of receipt of an invoice. The new Structure  
19 shall be Company's property regardless of any Attachment Customer  
20 payments toward its cost. Attachment Customer shall acquire no right, title  
21 or interest in or to such Structure.  
22

23 From a cost analysis perspective, the new taller pole actually would cost KU and LG&E  
24 less to own and operate than the pole that was replaced. The new pole should be on the  
25 books of account at zero cost and as such would incur no depreciation expense, earn no  
26 return on investment, and have no income taxes or General & Administrative expense  
27 attributed to it. The only incremental costs could be slightly higher maintenance and tree  
28 trimming expense.

29 **Q. HOW MUCH OF THE INCREMENTAL 5 FEET OF HEIGHT IS USED TO**  
30 **ATTACH WIRELESS FACILITIES TO A POLE TOP?**  
31

1 A. Approximately 1 foot, based on the testimony of AT&T Witness Early and the diagrams  
2 in KU's and LG&E's documents provided in discovery, which are included in Exhibit  
3 DR-2).

4 **Q. PLEASE EXPLAIN HOW MR. EARLY'S TESTIMONY AND THESE**  
5 **GUIDELINES SUPPORT YOUR TESTIMONY THAT APPROXIMATELY 1**  
6 **FOOT OF THE INCREMENTAL 5 FEET OF HEIGHT IS USED TO ATTACH**  
7 **WIRELESS FACILITIES TO A POLE TOP.**

8  
9 A. The KU and LG&E responses to AT&T Supplemental Information Request 11, a copy of  
10 which is included as Exhibit DR-3, state:

11 The mounting hardware for the antenna will require some amount of space  
12 down the side of pole, *which [KU/LG&E] presumes to be approximately*  
13 *one foot.* The conduit housing the communications cable feeding the  
14 antenna must terminate prior to the antenna. The 48" clearance must be  
15 maintained between the highest [KU/LG&E] electric facility and the  
16 bottom of the mounting hardware or the top of the communications  
17 conduit, whichever is lower. *[KU/LG&E] presumes that the Wireless*  
18 *Facility owner will use the remaining one foot of pole space for its*  
19 *mounting hardware and the termination of its communications conduit.*  
20 Further, the wood poles used by [KU/LG&E] are available in 5 foot  
21 increments. All 5 feet required for the Wireless Facility attachment are for  
22 the sole benefit of the Wireless Facility owner. (Emphasis added).

23 KU's and LG&E's own words indicate that they understand that a pole-top wireless  
24 facility attachment will only occupy a single foot of usable pole space. Further, Mr.  
25 Early's testimony confirms that AT&T's practice assumes the use of a mounting bracket  
26 for a pole-top wireless antenna that uses 1 foot of space on the pole itself.

27 **B. In Calculating Their Proposed Attachment Rate, KU and LG&E**  
28 **Inappropriately Assess Space Usage for Placement of Conduit (Riser)**

29 **Q. DO KU AND LG&E PROPOSE TO CHARGE FOR CONDUIT (RISER )**  
30 **EXTENDING THROUGH THE USABLE SPACE OF A POLE WITH**  
31 **WIRELESS FACILITIES ATTACHED AT THE POLE TOP?**

32 A. Yes.

1 **Q. HOW DO KU AND LG&E ATTEMPT TO JUSTIFY CHARGING FOR**  
2 **CONDUIT OR RISER EXTENDING THROUGH THE USABLE SPACE OF A**  
3 **POLE WITH POLE-TOP WIRELESS FACILITIES?**

4  
5 A. In response to AT&T Supplemental Information Request 2, a copy of which is included  
6 as Exhibit DR-4, KU stated the following:

7 Conduit attached in the usable space on a pole will not prevent the  
8 attachment of additional wireline cables (electric or communications).  
9 However, the conduit may prevent KU from installing transformers, risers,  
10 vertical supply conductors to aerial services, switch handles, capacitor  
11 banks or similar fixtures. A Wireless Facility attachment also prevents  
12 additional Wireless Facility attachments as only one such attachment is  
13 permitted on a KU pole.

14 The Wireless Facility owner will have conduit running through the initial  
15 presumed 13.17 feet of usable space on the pole, *which it may share with*  
16 *KU or other communications cable attachers*. In fact, on many poles, the  
17 Wireless Facility owner's conduit may be attached to sections of usable  
18 space not otherwise occupied by KU or another communications attachers.  
19 Conduit located in the usable space on the pole may prevent the  
20 installation of additional electrical equipment as described above. It is for  
21 this reason that, as shown by page 27 of KU's construction standards  
22 produced in response to KCTA 1-16, that KU does not permit Wireless  
23 Facility attachments to wooden poles supporting transformers, risers,  
24 vertical supply conductors to aerial services, switch handles, capacitor  
25 banks or similar fixtures. Wireless Facility attachments pose additional  
26 safety and reliability concerns to KU: antennas could fall into electric  
27 lines, qualified personnel must maintain antennas attached above electric  
28 facilities, and antennas emit radiofrequency radiation that pose additional  
29 risks to all utility workers. Additional conduit may also serve to slow  
30 KU's maintenance and restoration of its facilities. A Wireless Facility  
31 attachment has a far different composition than a simple wireline  
32 attachment. Wireless Facilities are not simply antennas. Conduit housing  
33 electric and communications lines are needed to serve the Wireless  
34 Facility and radio units accompany the antennas. KU does not propose to  
35 charge for the two conduits and two potential radio units attached in the  
36 unusable space of the pole. (Emphasis in original, LG&E's response was  
37 similar).  
38

39 **Q. IS KU'S OR LG&E'S JUSTIFICATION REASONABLE?**

40  
41 A. No. First, consistent with industry practice, conduit (riser) is not chargeable unless it  
42 precludes any other use of usable space on a pole. As AT&T witness Mr. Early notes,

1 KU and LG&E acknowledge that Wireless Facility conduit will not interfere with other  
2 potential attachers' use of space. Second, KU and LG&E essentially assume that the  
3 Wireless Facility owner should pay for half of the costs of the entire pole (6.585 feet of  
4 the presumed 13.17 feet of usable space), because the Wireless Facility conduit *might*  
5 interfere with their *future, potential* desire to place transformers, risers, vertical supply  
6 conductors to aerial services, switch handles, capacitor banks or similar fixtures, even  
7 though through the KU and LG&E Guidelines for Wireless Antenna Attachments  
8 expressly prohibit use of poles with such equipment already existing on the pole.

9 **Q. SHOULD ANY SPACE USE BE CHARGED FOR CONDUIT ASSOCIATED**  
10 **WITH WIRELESS FACILITIES ON KU AND LG&E POLE TOPS?**

11  
12 A. No. As shown in response to AT&T supplemental data request 2 in Exhibit DR-1, KU  
13 and LG&E do not charge for conduit (or any other equipment associated with Wireless  
14 Facilities) in the "unusable" space on poles. Further, KU and LG&E admit that conduit  
15 associated with Wireless Facilities attachments will not interfere with the use of usable  
16 space by and generation of revenue from third-party attachers on the pole. Charging for  
17 conduit in space used by others would constitute double recovery for the same space.  
18 Finally, conduit placed beside "usable" space not yet used by others can be placed in such  
19 a way as to not impede access to the pole for maintenance purposes and to not interfere  
20 with new electric utility attachments or other revenue-generating attachments on the pole.  
21 Thus, there should be no charge for conduit supporting wireless facilities attachments.

22 **C. Only One Foot of Space Should Be Charged for Mid-Pole Wireless**  
23 **Attachments.**

24 **Q. EARLIER YOU DISCUSSED THE ALLOCATION OF THE INCREMENTAL 5**  
25 **FEET OF POLE HEIGHT FOR POLE-TOP WIRELESS FACILITY**  
26 **ATTACHMENTS. HOW SHOULD A MID-POLE WIRELESS ATTACHMENT**  
27 **BE TREATED?**  
28

1 A. Because a mid-pole attachment does not necessitate a taller pole, allocating four feet of  
2 non-existent safety space at the top of the pole would be inappropriate. Likewise, the KU  
3 and LG&E Wireless Facilities attachment rate is premised on charging for one half of all  
4 the usable space on a standard pole on the assumption that a Wireless Facility will require  
5 conduit (riser) the full length of the usable space. As noted above, none of the conduit  
6 should be included in the rental calculation. But even if it were, a mid-pole placement  
7 would not utilize conduit (riser) for more than a few feet, and certainly not for the entire  
8 13 or more feet to the top of the pole. For these reasons, application of the \$84.00 pole-  
9 top Wireless Facility rate for mid-pole wireless facility attachments as proposed by KU  
10 and LG&E would not be reasonable. Instead, a mid-pole attachment should also be  
11 allocated only 1 foot of space for attachment rate purposes.

12 **Q. WHAT IS THE PRACTICAL IMPACT OF KU'S AND LG&E'S PROPOSAL TO**  
13 **CHARGE FOR 11.585 FEET OF SPACE FOR WIRELESS ATTACHMENTS,**  
14 **WHETHER POLE-TOP OR MID-POLE?**  
15

16 A. Based on the presumed use of the standard 3-user, 42.5 foot pole, and its associated  
17 7.59% Space Usage Factor, KU's and LG&E's proposal greatly overallocates cost to any  
18 Wireless Facilities owner. At 7.59% of cost per foot, charging for 11.585 feet of  
19 occupancy would recover nearly 88% of the total typical pole cost regardless of whether  
20 there are one or more other attachers in addition to KU and LG&E on the pole. This  
21 result is inappropriate on its face given that a pole-top or mid-pole Wireless Facility  
22 attachment consumes only one foot of usable space on a pole. AT&T's proposal is  
23 therefore more reasonable and should be adopted.

24 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**  
25

26 A. Yes.

# **AT&T EXHIBIT**

**DR-1**



**KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Cable Telecommunications Association's  
First Requests for Information  
Dated January 11, 2017**

**Case No. 2016-00370**

**Question No. 1-10**

**Responding Witness: William S. Seelye**

Q-1-10. Please refer to Your Application, Tab 14, Testimony of William Steven Seelye, Managing Partner, The Prime Group, LLC, at p. 61. Explain and provide data related to Your conclusion that the Wireless Facilities on average use 11.585 feet of Pole space, including but not limited to how such average was determined, what Wireless Facilities were considered for determining such average, and identification of the "space" used by such attachments.

A-1-10. KPSC Administrative Case No. 251 sets forth the typical height, and usable and unusable space for a typical three-user pole. That is a height of 42.5 feet, less 6 feet buried, 20 feet to the lowest attachment, 3.33 feet required safety space, resulting in 13.17 feet of usable pole space. KU assumes a pole top wireless antenna attachment, as that is the preferred attachment location for Wireless Facility owners. As KU typically has electric facilities located at or near the top of the pole, a pole top antenna dictates a 5 foot taller pole in order to maintain a safe working distance of at least 48 inches (a long standing KU construction standard) between the electric facilities and the pole top antenna. Thus, the Wireless Facility owner is be responsible for the top 5 feet of the pole.

The Wireless Facility owner will have conduit running through the initial presumed 13.17 feet of usable space on the pole, which it shares with KU. Therefore, the Wireless Facility owner is responsible for half of the 13.17 feet of presumed usable space. 13.17 feet divided by 2 users (KU and the Wireless Facility owner) equals 6.585 feet. 6.585 feet of shared usable space plus 5 feet of additional pole height needed by the new pole top antenna equals 11.585 feet.

The Wireless Facility owner is permitted to place up to two radio units, needed for their pole top antenna, in the unusable space of the pole. This use of the unusable space is not factored into the above calculation. Further, although KU and the Commission assume a typical pole height of 42.5 feet, as shown by KU's response to AT&T 1-5, the average height of a KU pole with a Wireless Facility attached is 47.73 feet.

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Kentucky Cable Telecommunications Association's  
First Request for Information  
Dated January 11, 2017**

**Case No. 2016-00371**

**Question No. 1-10**

**Responding Witness: William S. Seelye**

Q-1-10. Please refer to Your Application, Tab 14, Testimony of William Steven Seelye, Managing Partner, The Prime Group, LLC, at p. 61. Explain and provide data related to Your conclusion that the Wireless Facilities on average use 11.585 feet of Pole space, including but not limited to how such average was determined, what Wireless Facilities were considered for determining such average, and identification of the "space" used by such attachments.

A-1-10. KPSC Administrative Case No. 251 sets forth the typical height, and usable and unusable space for a typical three-user pole. That is a height of 42.5 feet, less 6 feet buried, 20 feet to the lowest attachment, 3.33 feet required safety space, resulting in 13.17 feet of usable pole space. LG&E assumes a pole top wireless antenna attachment, as that is the preferred attachment location for Wireless Facility owners. As LG&E typically has electric facilities located at or near the top of the pole, a pole top antenna dictates a 5 foot taller pole in order to maintain a safe working distance of at least 48 inches (a long standing LG&E construction standard) between the electric facilities and the pole top antenna. Thus, the Wireless Facility owner is be responsible for the top 5 feet of the pole.

The Wireless Facility owner will have conduit running through the initial presumed 13.17 feet of usable space on the pole, which it shares with LG&E. Therefore, the Wireless Facility owner is responsible for half of the 13.17 feet of presumed usable space. 13.17 feet divided by 2 users (LG&E and the Wireless Facility owner) equals 6.585 feet. 6.585 feet of shared usable space plus 5 feet of additional pole height needed by the new pole top antenna equals 11.585 feet.

The Wireless Facility owner is permitted to place up to two radio units, needed for their pole top antenna, in the unusable space of the pole. This use of the unusable space is not factored into the above calculation. Further, although LG&E and the Commission assume a typical pole height of 42.5 feet, as shown by LG&E's response to AT&T 1-5, the average height of a LG&E pole with a Wireless Facility attached is 51.05 feet.

# **AT&T EXHIBIT**

**DR-2**

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Response to Kentucky Cable Telecommunications Association's  
First Request for Information  
Dated January 11, 2017**

**Case No. 2016-00371**

**Question No. 1-16**

**Responding Witness: John K. Wolfe**

Q-1-16. Please provide a copy of all of Your standards and specification related to the design, installation, and maintenance of Attachments with which You propose Attachment Customers must comply.

A-1-16. See attached.



a PPL company

AT&T Exhibit DR-2

Page 2 of 15

**LG&E**

**THIRD PARTY POLE**

**ATTACHMENT**

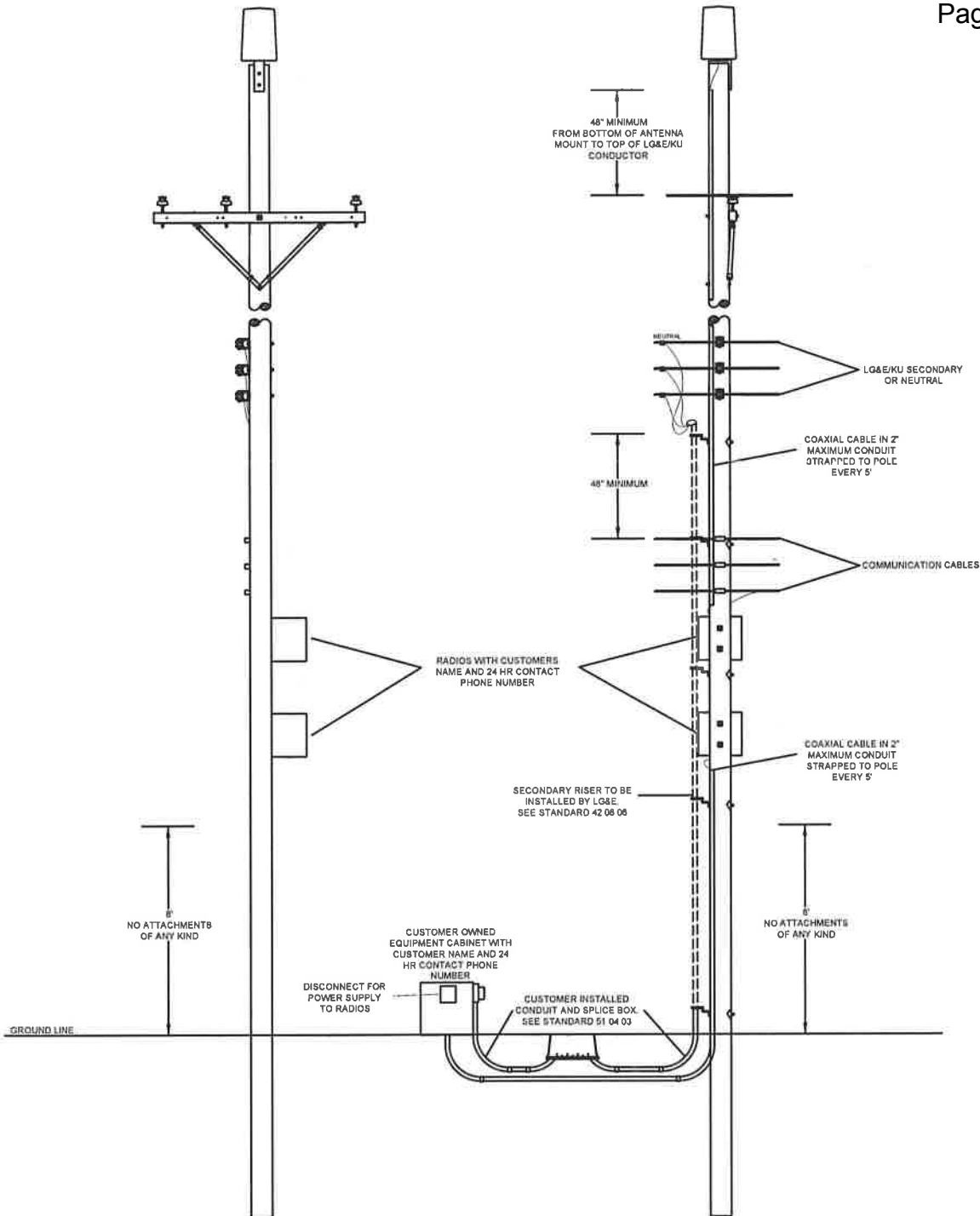
**HANDBOOK**

WIRELESS ANTENNA ATTACHMENTS ON WOOD POLES

3Ø POLE WITH ANTENNA ABOVE PRIMARY

AT&T Exhibit DR-2

Page 3 of 15

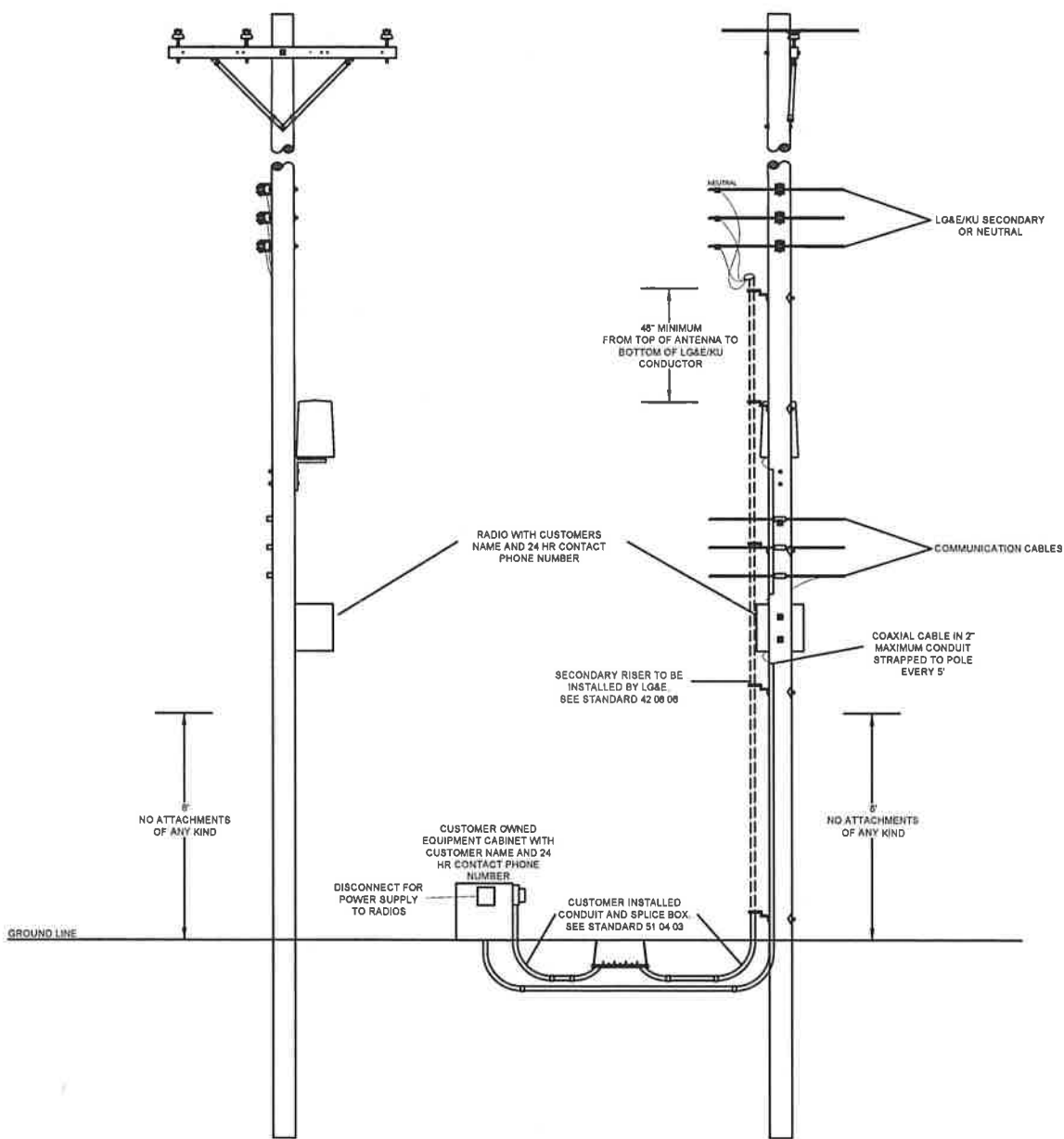


WIRELESS ANTENNA ATTACHMENTS ON WOOD POLES

3Ø POLE WITH ANTENNA BELOW SECONDARY

AT&T Exhibit DR-2

Page 4 of 15

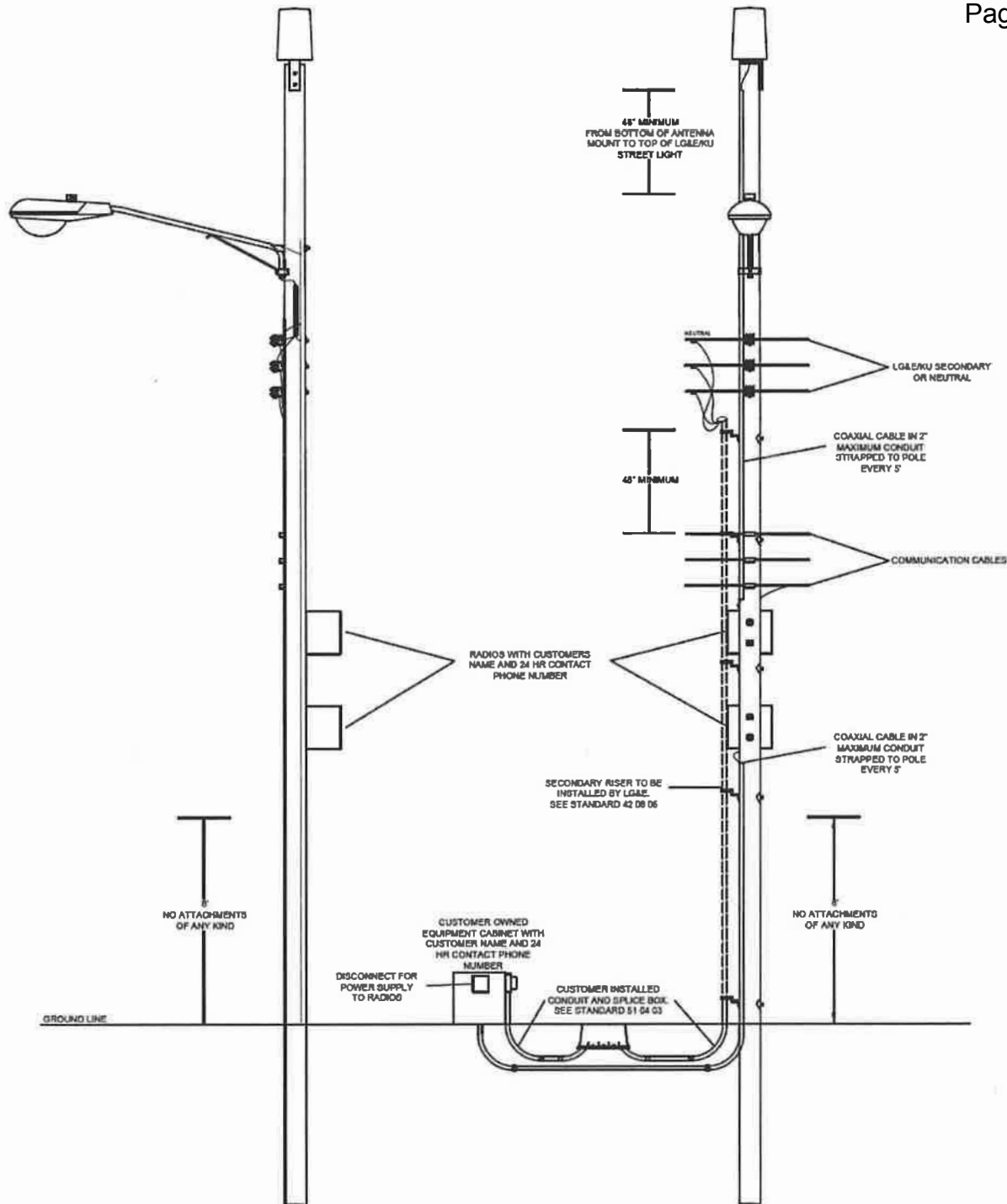


WIRELESS ANTENNA ATTACHMENTS ON WOOD POLES

SECONDARY POLE WITH ANTENNA ABOVE SECONDARY

AT&T Exhibit DR-2

Page 5 of 15



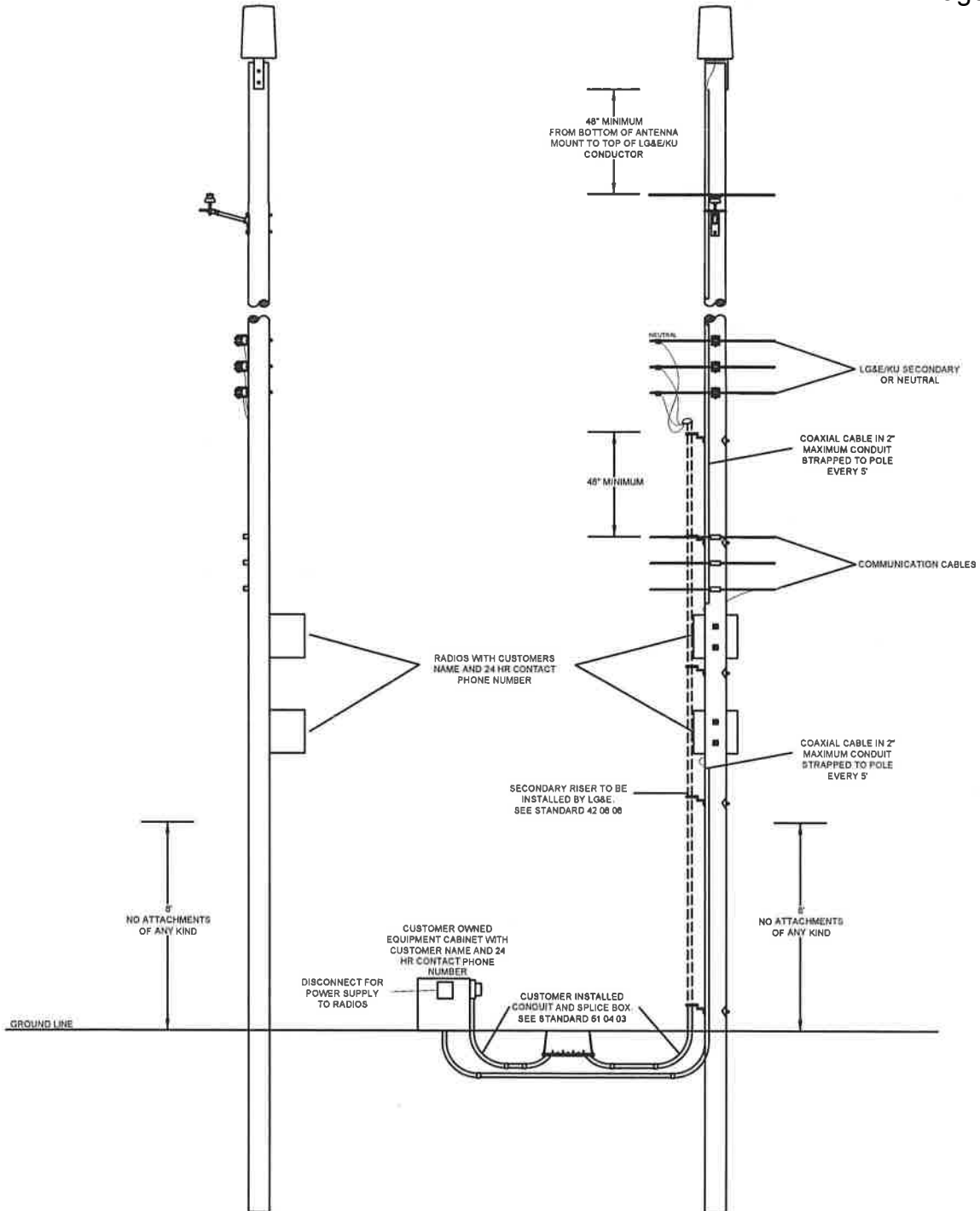


WIRELESS ANTENNA ATTACHMENTS ON WOOD POLES

1Ø POLE WITH ANTENNA ABOVE PRIMARY

AT&T Exhibit DR-2

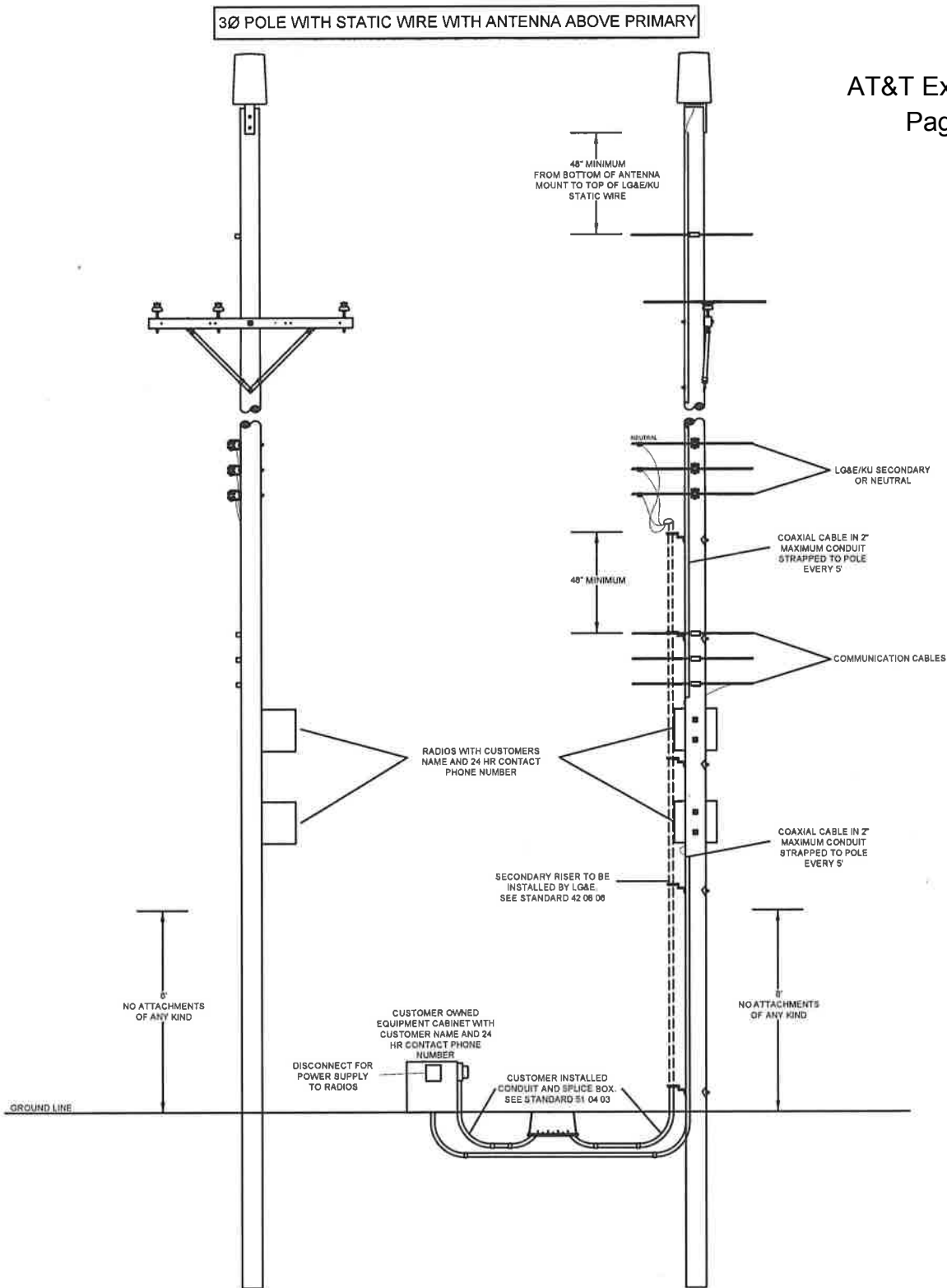
Page 6 of 15



WIRELESS ANTENNA ATTACHMENTS ON WOOD POLES

AT&T Exhibit DR-2

Page 7 of 15



## GUIDELINES FOR DESIGN AND INSTALLATION

AT&amp;T Exhibit DR-2

Page 8 of 15

- All clearance dimensions are a minimum distance.
- Installations will be allowed on bucket truck accessible poles only, where bucket truck poses no risk of damage to public or private property.
- Consult Distribution Operations Design Group to ensure that 120/240 volt service is available on the pole in question.
- All installations must conform to all applicable electrical codes and LG&E/KU requirements for clearances, climbing space and working space.
- All communications equipment shall be furnished and installed by the facility owner. Refer to Standard 510403 for service related equipment.
- Only qualified personnel approved by LG&E/KU shall be allowed to work above the communications space. They shall be trained in and knowledgeable of the clearance requirements and working rules of OSHA and the NESC.
- A driven ground is required at each equipment location.
- Grounding shall be in accordance with all applicable electrical codes. Bond the antenna bracket and radio/equipment box(s) to ground lead.
- Only one antenna unit shall be installed per pole.
- The height of all poles used to mount antennas must be increased by a minimum of five feet above the existing pole's height. The cost of the taller pole is the responsibility of the attachee. Pole height not to exceed 60' above ground.
- Minimum Class 3 pole is required unless approved by LG&E/KU Distribution Operations staff.
- If a pole is topped for installation the untreated pole top must be treated and covered.
- Unit may not be mounted to any pole on which there are transformers, risers, vertical supply conductors to aerial services, switch handles, capacitor banks or similar fixtures.
- The service riser shall be installed by LG&E/KU.
- All wireless attachment sites must be metered. No third party meters will be allowed on LG&E/KU poles.
- The meter socket shall be a minimum of 100 amp, ringless style, with bypass horns. The service will be three wire 120/240 volt. Two wire 120 volt service is not acceptable.
- The antenna power source must have an additional lockable disconnect installed to allow the antenna and radio/equipment boxes to be disconnected from the battery backup before work is performed within the area designated by the RF Warning signs. Each disconnect must provide a visible break, a test point, or similar means for utility workers to ensure circuit has been de-energized. Each attaching company shall provide and install a lockbox with a key to their disconnect switch inside. LG&E/KU will padlock the lockbox to enable access to the attachee's key for the disconnect switch.
- All antennas are required to have two RF warning signs installed. A sign shall be installed near the pole top at the level where the safe approach distance ends for the FCC General Population/Uncontrolled Power Levels and read at minimum "Warning - Antenna Approach distance is \_\_\_ Feet." The second sign shall be installed near the base of the pole at eye-level and shall read "Radio frequency fields at pole top may exceed FCC limits for utility work on structure within the safe antenna approach distance designated above. Disconnect RF power using disconnect located on ground mounted equipment cabinet before working within the safe antenna approach distance. Call \_\_\_\_\_ (800-XXX-XXX) for disconnect instructions or more information." The sign shall include the antenna owners name and phone number or attachee number. When LG&E/KU work is required within the antenna approach distance, workers will disconnect the RF source.
- All antennas and ancillary equipment shall be labeled with the owner's name and contact information, including an emergency contact number.
- It is the antenna owners responsibility to inform all pole attachees on the pole of the RF exposure hazards and mitigation techniques.
- The antenna cables shall be run in non-metallic conduit. Schedule 80 will be used for the first 8' from the ground and Schedule 40 or 80 can be used for the rest of the riser. Conduit is to extend at least 48" above and below any supply conductors.
- All cabinets must be installed with thru-bolts on same side of pole to maintain ability to climb pole when required. Band-type attachments shall not be used.
- Maximum weight for radio/equipment boxes will be determined during permitting process.
- Attachee may have their equipment mounted to the pole contained within no more than two separate boxes unless approved from LG&E/KU Distribution Operations staff.
- Antenna cable(s) shall be installed in maximum 2" non-metallic conduit strapped every 5' unless approved from LG&E/KU Distribution Operations staff.
- Customer's equipment may not occupy more than two adjacent quadrants.
- The weatherhead and Wi-Fi unit must be mounted on the same quadrant of the pole unless approved by LG&E/KU Distribution Operations staff.
- The unit cannot prevent other communication companies from accessing their facilities.
- LG&E/KU is not responsible for any damages caused by weather events, other's actions, or when the pole and associated fixtures are maintained or replaced.
- LG&E/KU must approve the final design prior to any installations.

**KENTUCKY UTILITIES COMPANY**

**Response to Kentucky Cable Telecommunications Association's  
First Requests for Information  
Dated January 11, 2017**

**Case No. 2016-00370**

**Question No. 1-16**

**Responding Witness: John K. Wolfe**

Q-1-16. Please provide a copy of all of Your standards and specification related to the design, installation, and maintenance of Attachments with which You propose Attachment Customers must comply.

A-1-16. See attached.

Attachment to Response to KCTA Question No. 1-16

22 of 39

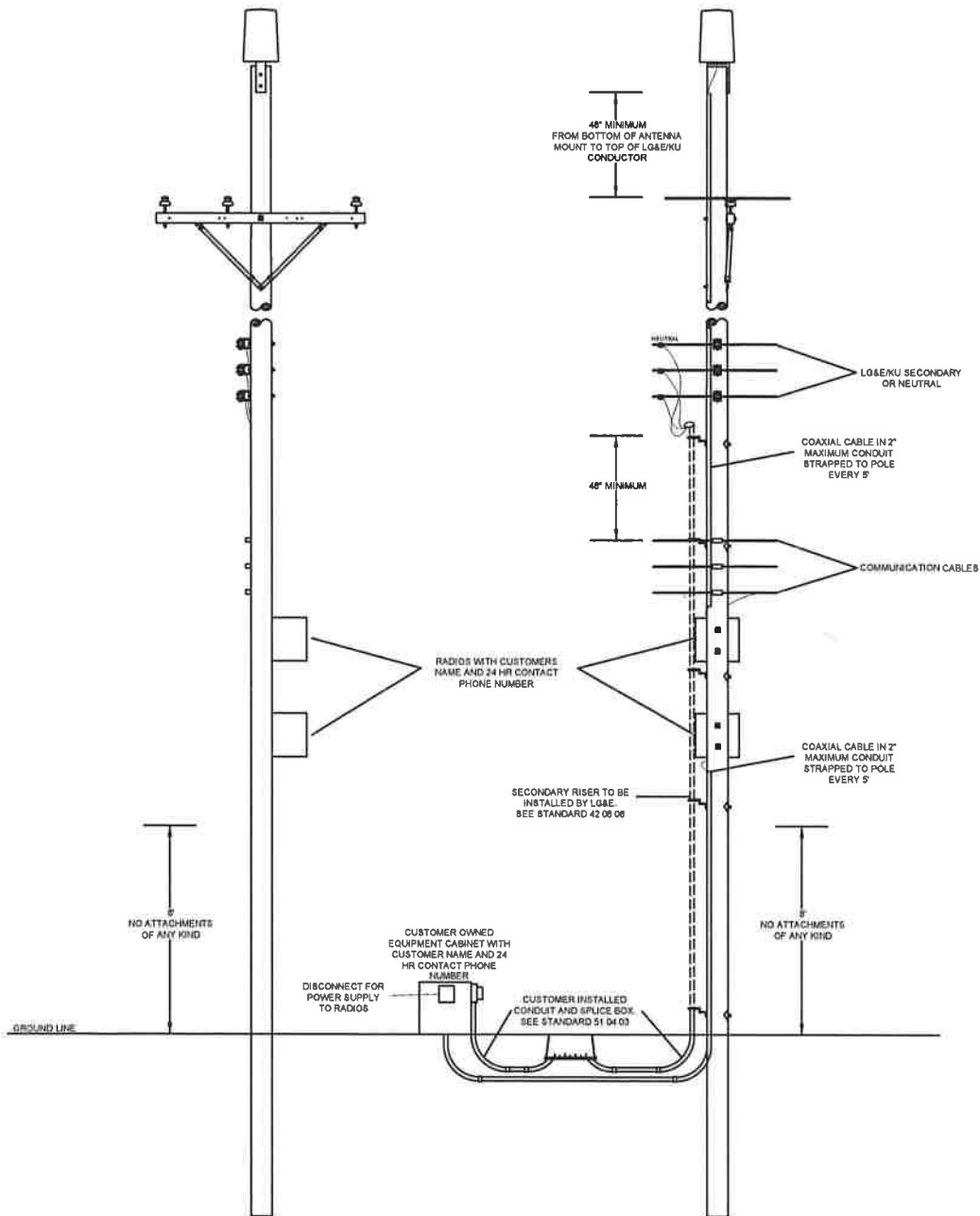
Wolfe

Electric System  
Codes & Standards

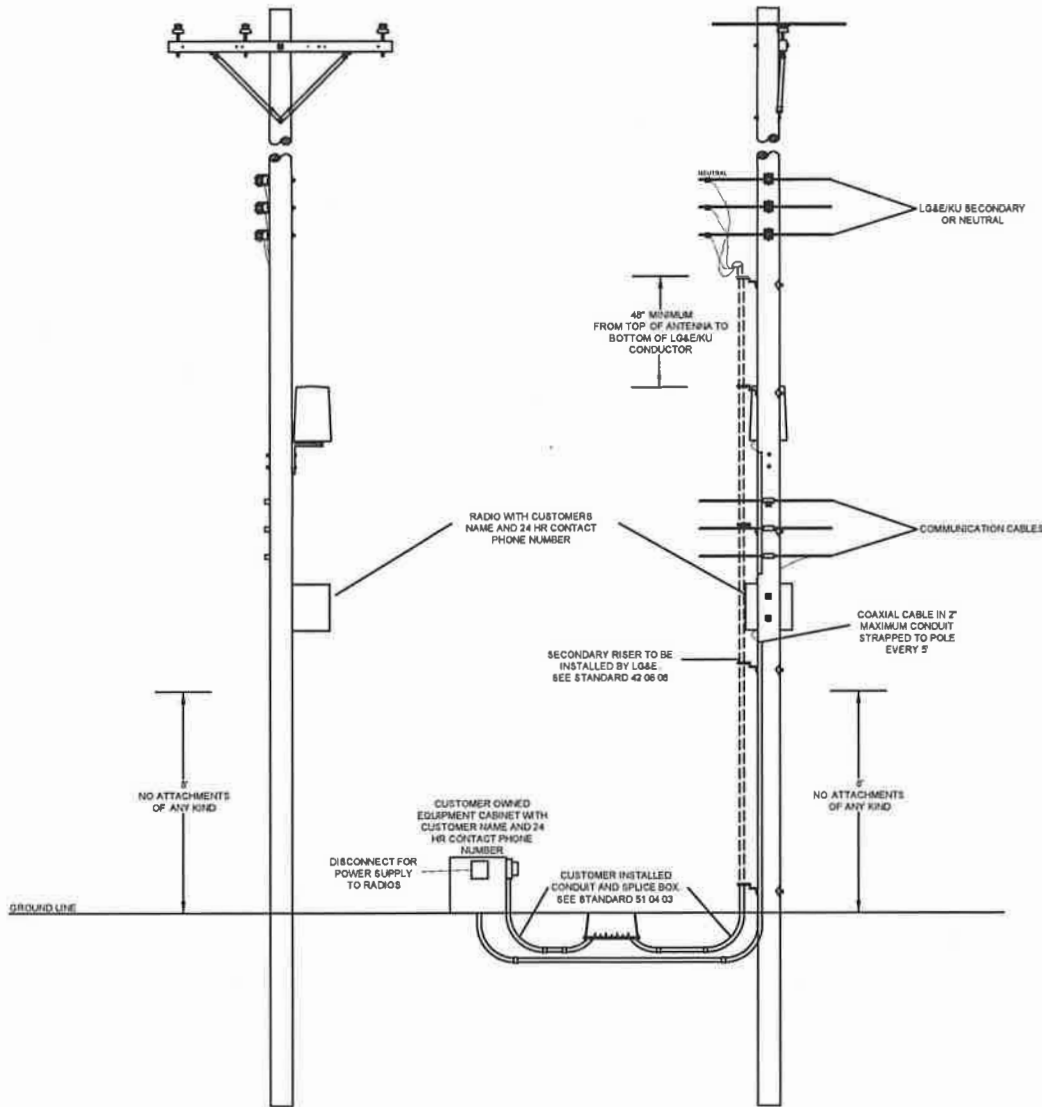
WIRELESS ANTENNA ATTACHMENTS ON WOOD POLES

07 14 02  
Rev.

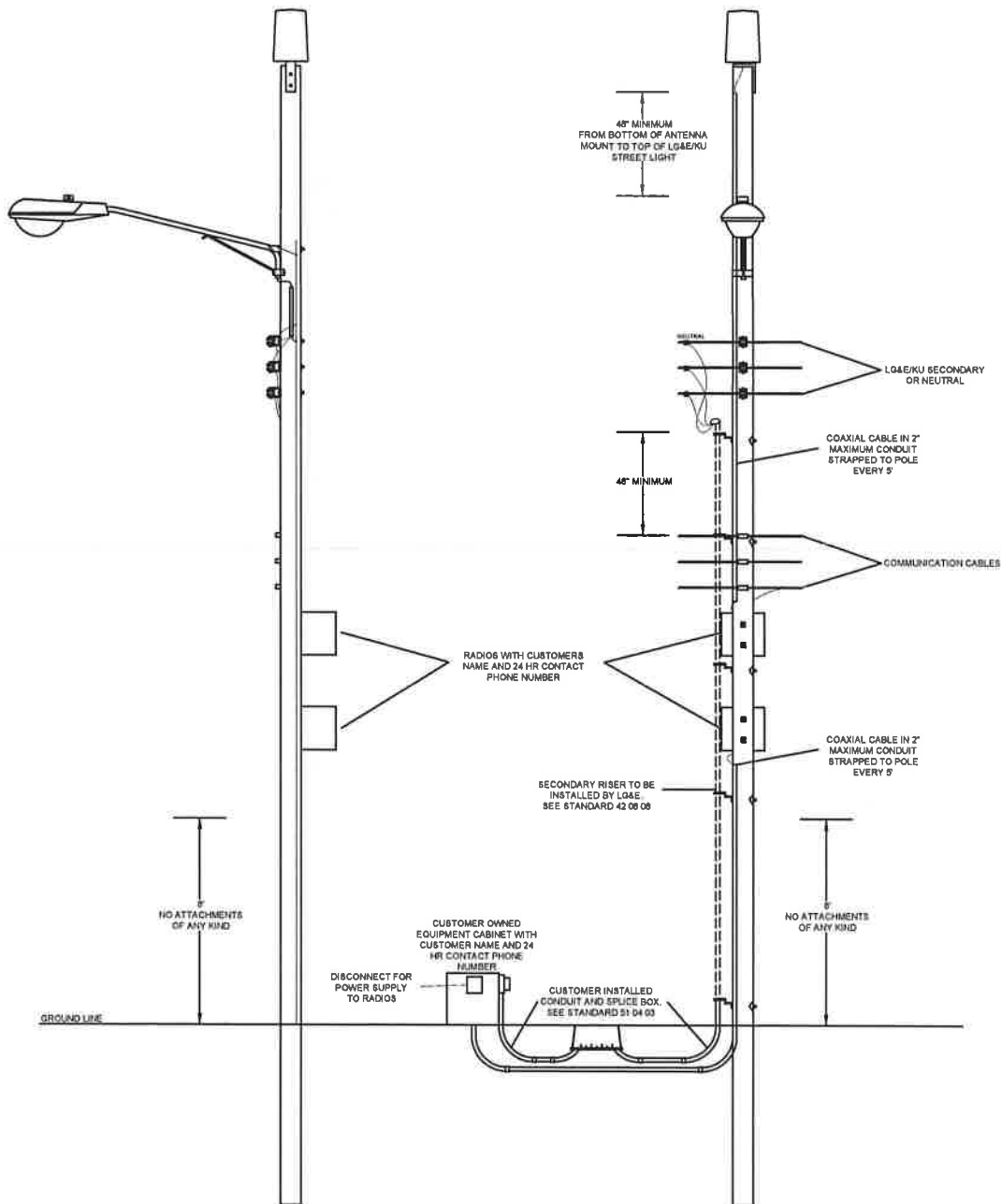
3Ø POLE WITH ANTENNA ABOVE PRIMARY



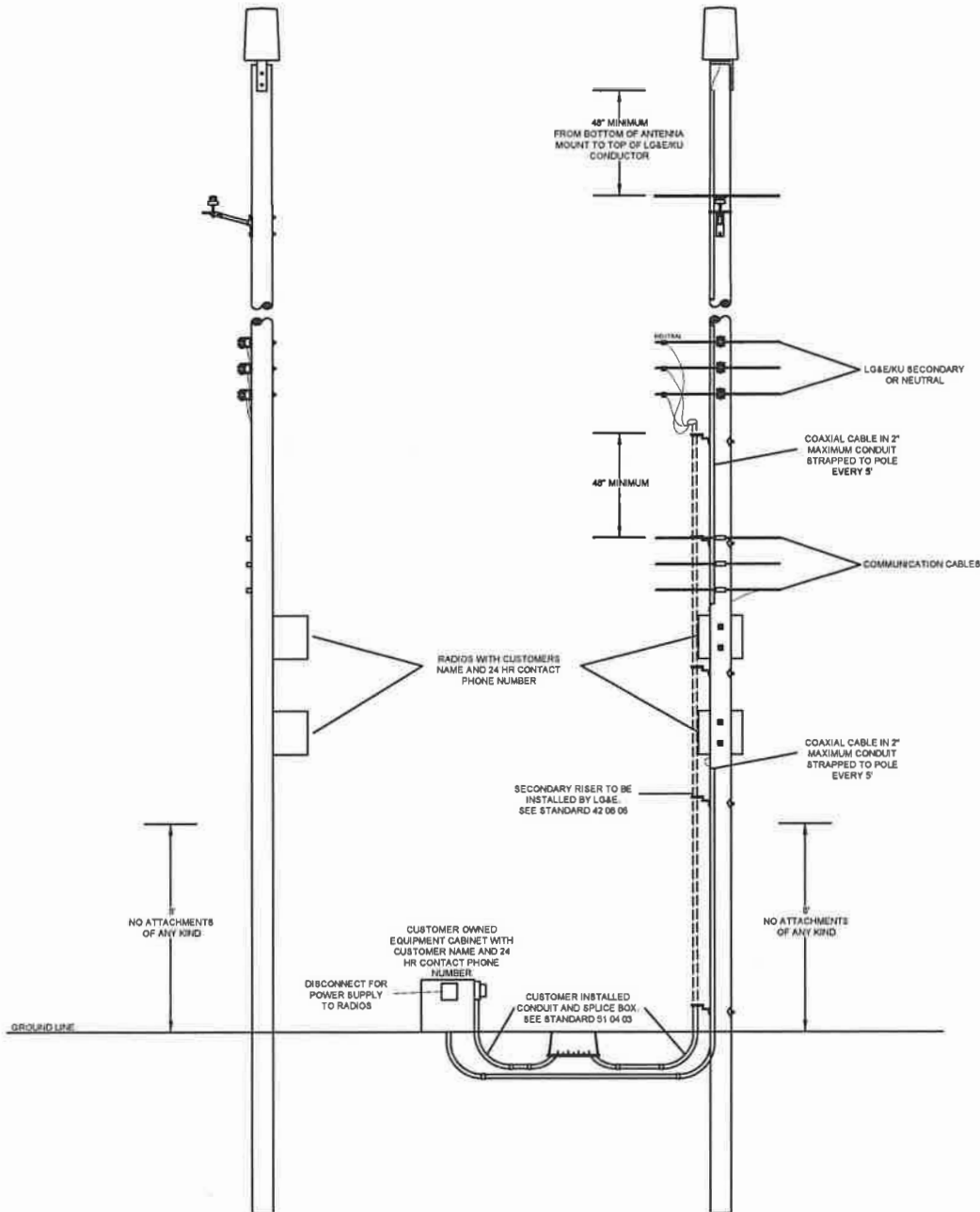
3Ø POLE WITH ANTENNA BELOW SECONDARY



SECONDARY POLE WITH ANTENNA ABOVE SECONDARY



1Ø POLE WITH ANTENNA ABOVE PRIMARY





Attachment to Response to KCTA Question No. 1-16

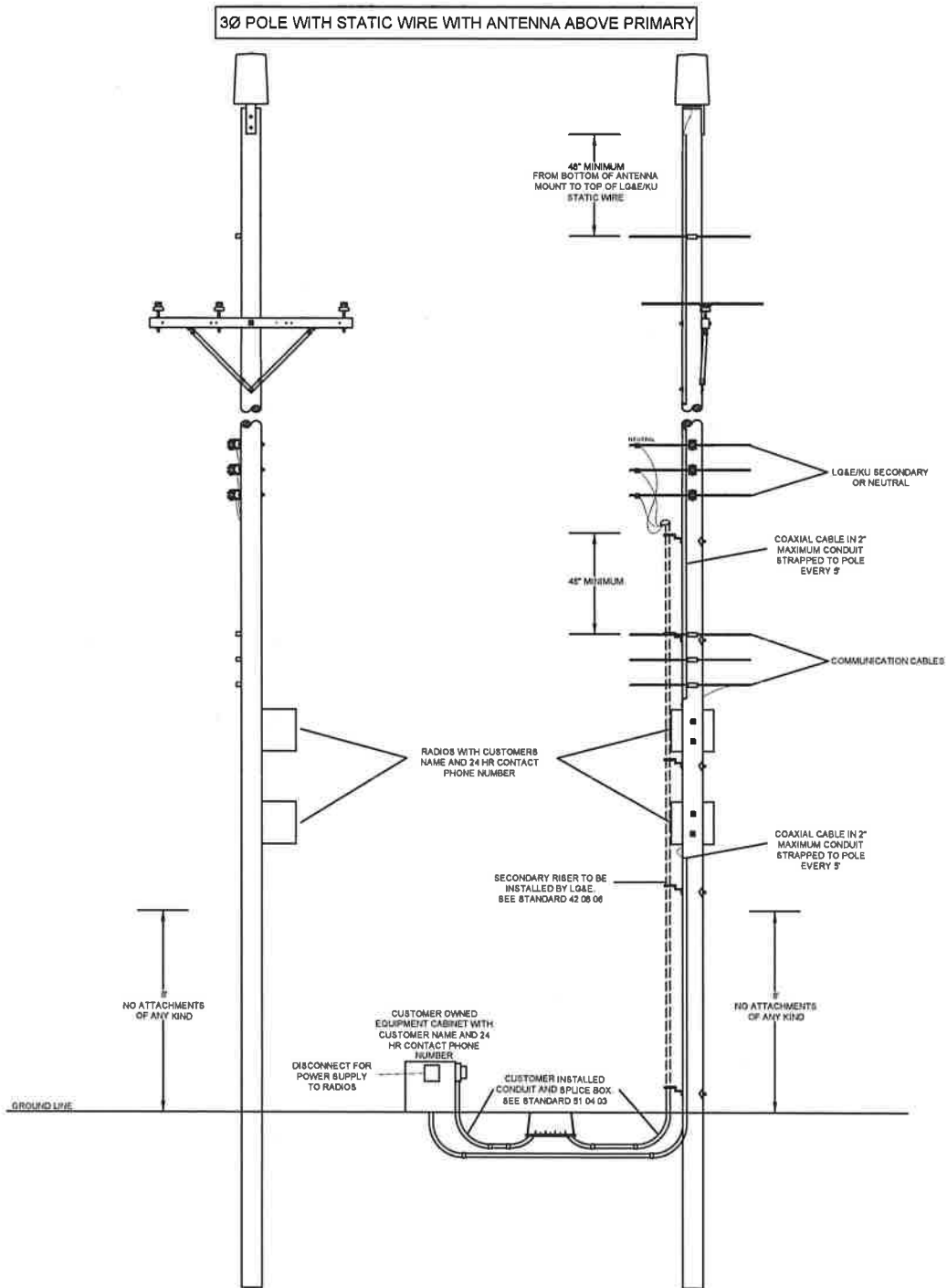
26 of 39

Wolfe

Electric System  
Codes & Standards

WIRELESS ANTENNA ATTACHMENTS ON WOOD POLES

07 14 02  
Rev.



## GUIDELINES FOR DESIGN AND INSTALLATION

- All clearance dimensions are a minimum distance.
- Installations will be allowed on bucket truck accessible poles only, where bucket truck poses no risk of damage to public or private property.
- Consult Distribution Operations Design Group to ensure that 120/240 volt service is available on the pole in question.
- All installations must conform to all applicable electrical codes and LG&E/KU requirements for clearances, climbing space and working space.
- All communications equipment shall be furnished and installed by the facility owner. Refer to Standard 510403 for service related equipment.
- Only qualified personnel approved by LG&E/KU shall be allowed to work above the communications space. They shall be trained in and knowledgeable of the clearance requirements and working rules of OSHA and the NESC.
- A driven ground is required at each equipment location.
- Grounding shall be in accordance with all applicable electrical codes. Bond the antenna bracket and radio/equipment box(s) to ground lead.
- Only one antenna unit shall be installed per pole.
- The height of all poles used to mount antennas must be increased by a minimum of five feet above the existing pole's height. The cost of the taller pole is the responsibility of the attacher. Pole height not to exceed 60' above ground.
- Minimum Class 3 pole is required unless approved by LG&E/KU Distribution Operations staff.
- If a pole is topped for installation the untreated pole top must be treated and covered.
- Unit may not be mounted to any pole on which there are transformers, risers, vertical supply conductors to aerial services, switch handles, capacitor banks or similar fixtures.
- The service riser shall be installed by LG&E/KU.
- All wireless attachment sites must be metered. No third party meters will be allowed on LG&E/KU poles.
- The meter socket shall be a minimum of 100 amp, ringless style, with bypass horns. The service will be three wire 120/240 volt. Two wire 120 volt service is not acceptable.
- The antenna power source must have an additional lockable disconnect installed to allow the antenna and radio/equipment boxes to be disconnected from the battery backup before work is performed within the area designated by the RF Warning signs. Each disconnect must provide a visible break, a test point, or similar means for utility workers to ensure circuit has been de-energized. Each attaching company shall provide and install a lockbox with a key to their disconnect switch inside. LG&E/KU will padlock the lockbox to enable access to the attacher's key for the disconnect switch.
- All antennas are required to have two RF warning signs installed. A sign shall be installed near the pole top at the level where the safe approach distance ends for the FCC General Population/Uncontrolled Power Levels and read at minimum "Warning - Antenna Approach distance is \_\_\_ Feet." The second sign shall be installed near the base of the pole at eye-level and shall read "Radio frequency fields at pole top may exceed FCC limits for utility work on structure within the safe antenna approach distance designated above. Disconnect RF power using disconnect located on ground mounted equipment cabinet before working within the safe antenna approach distance. Call \_\_\_\_\_ (800-XXX-XXX) for disconnect instructions or more information." The sign shall include the antenna owners name and phone number or attachee number. When LGE/KU work is required within the antenna approach distance, workers will disconnect the RF source.
- All antennas and ancillary equipment shall be labeled with the owner's name and contact information, including an emergency contact number.
- It is the antenna owners responsibility to inform all pole attachee's on the pole of the RF exposure hazards and mitigation techniques.
- The antenna cables shall be run in non-metallic conduit. Schedule 80 will be used for the first 8' from the ground and Schedule 40 or 80 can be used for the rest of the riser. Conduit is to extend at least 48" above and below any supply conductors.
- All cabinets must be installed with thru-bolts on same side of pole to maintain ability to climb pole when required. Band-type attachments shall not be used.
- Maximum weight for radio/equipment boxes will be determined during permitting process.
- Attachee may have their equipment mounted to the pole contained within no more than two separate boxes unless approved from LG&E/KU Distribution Operations staff.
- Antenna cable(s) shall be installed in maximum 2" non-metallic conduit strapped every 5' unless approved from LG&E/KU Distribution Operations staff.
- Customer's equipment may not occupy more than two adjacent quadrants.
- The weatherhead and Wi-Fi unit must be mounted on the same quadrant of the pole unless approved by LG&E/KU Distribution Operations staff.
- The unit cannot prevent other communication companies from accessing their facilities.
- LG&E/KU is not responsible for any damages caused by weather events, other's actions, or when the pole and associated fixtures are maintained or replaced.
- LG&E/KU must approve the final design prior to any installations.

**AT&T EXHIBIT**

**DR-3**

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to Supplemental Request for Information of AT&T  
Dated February 7, 2017**

**Question No. 11**

**Responding Witness: John K. Wolfe**

- Q-11. Please refer to page 22 of 39 of the Attachment to KU's Response to KTCA's Request for Information No. 1-16 (setting out a 48" minimum clearance between the bottom of the antenna and the top of the conductor). In light of this 48" clearance, please explain in detail why KU assumed a 5 foot clearance in developing its proposed attachment rate.
- A-11. The referenced page actually sets out a 48" minimum clearance between the bottom of the antenna *mount* and the top of the conductor. The mounting hardware for the antenna will require some amount of space down the side of pole, which KU presumes to be approximately one foot. The conduit housing the communications cable feeding the antenna must terminate prior to the antenna. The 48" clearance must be maintained between the highest KU electric facility and the bottom of the mounting hardware or the top of the communications conduit, whichever is lower. KU presumes that the Wireless Facility owner will use the remaining one foot of pole space for its mounting hardware and the termination of its communications conduit. Further, the wood poles used by KU are available in 5 foot increments. All 5 feet required for the Wireless Facility attachment are for the sole benefit of the Wireless Facility owner.

**LOUISVILLE GAS AND ELECTRIC COMPANY**

**CASE NO. 2016-00371**

**Response to Supplemental Request for Information of AT&T  
Dated February 7, 2017**

**Question No. 11**

**Responding Witness: John K. Wolfe**

- Q-11. Please refer to page 59 of 97 of the Attachment to LG&E's Response to KTCA's Request for Information No. 1-16 (setting out a 48" minimum clearance between the bottom of the antenna and the top of the conductor). In light of this 48" clearance, please explain in detail why LG&E assumed a 5 foot clearance in developing its proposed attachment rate.
- A-11. The referenced page actually sets out a 48" minimum clearance between the bottom of the antenna *mount* and the top of the conductor. The mounting hardware for the antenna will require some amount of space down the side of pole, which LG&E presumes to be approximately one foot. The conduit housing the communications cable feeding the antenna must terminate prior to the antenna. The 48" clearance must be maintained between the highest LG&E electric facility and the bottom of the mounting hardware or the top of the communications conduit, whichever is lower. LG&E presumes that the Wireless Facility owner will use the remaining one foot of pole space for its mounting hardware and the termination of its communications conduit. Further, the wood poles used by LG&E are available in 5 foot increments. All 5 feet required for the Wireless Facility attachment are for the sole benefit of the Wireless Facility owner.

# **AT&T EXHIBIT**

**DR-4**

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to Supplemental Request for Information of AT&T  
Dated February 7, 2017**

**Question No. 2**

**Responding Witness: John K. Wolfe**

- Q-2. Please refer to KU's Response to KTCA's Request for Information No. 1-10 (providing, in part, "The Wireless Facility owner will have conduit running through the initial presumed 13.17 feet of usable space on the pole, which it shares with KU.").
- a. Does KU charge for "conduit" in usable space in these situations?
  - b. Does KU charge for "conduit" in unusable space in these situations?
  - c. To the extent your answer to S2.a or S2.b is anything other than an unequivocal "no," please:
    - i. State whether the referenced conduit prevents other attachers from using that space.
    - ii. Describe in detail your rationale for charging for conduit.
    - iii. State the amount you propose to charge for conduit and identify all documents, including without limitation workpapers, photographs, and schematics, that support this amount.
- A-2.
- a. Yes.
  - b. No.
  - c. i. Conduit attached in the usable space on a pole will not prevent the attachment of additional wireline cables (electric or communications). However, the conduit may prevent KU from installing transformers, risers, vertical supply conductors to aerial services, switch handles, capacitor banks or similar fixtures. A Wireless Facility attachment also prevents additional Wireless Facility attachments as only one such attachment is permitted on a KU pole.
  - ii. The Wireless Facility owner will have conduit running through the initial presumed 13.17 feet of usable space on the pole, *which it may share with KU or other communications cable attachers*. In fact, on many poles, the Wireless Facility owner's conduit may be attached to sections of usable space not otherwise occupied by KU or another communications attachers. Conduit

**Response to Question No. 2**  
**Page 2 of 2**  
**Wolfe**

located in the usable space on the pole may prevent the installation of additional electrical equipment as described above. It is for this reason that, as shown by page 27 of KU's construction standards produced in response to KCTA 1-16, that KU does not permit Wireless Facility attachments to wooden poles supporting transformers, risers, vertical supply conductors to aerial services, switch handles, capacitor banks or similar fixtures. Wireless Facility attachments pose additional safety and reliability concerns to KU: antennas could fall into electric lines, qualified personnel must maintain antennas attached above electric facilities, and antennas emit radiofrequency radiation that pose additional risks to all utility workers. Additional conduit may also serve to slow KU's maintenance and restoration of its facilities. A Wireless Facility attachment has a far different composition than a simple wireline attachment. Wireless Facilities are not simply antennas. Conduit housing electric and communications lines are needed to serve the Wireless Facility and radio units accompany the antennas. KU does not propose to charge for the two conduits and two potential radio units attached in the unusable space of the pole.

- iii. KU proposes to charge one-half of 13.17 feet of usable space (13.17 feet of usable space as set forth by the KPSC's Order of September 17, 1982 in Administrative Case No. 251) multiplied by the proposed wireline pole attachment rate (which is based on the wireline attachment using a presumed one foot of pole space as set forth in the KPSC's Order of September 17, 1982 in Administrative Case No. 251).



**LOUISVILLE GAS AND ELECTRIC COMPANY**

**CASE NO. 2016-00371**

**Response to Supplemental Request for Information of AT&T  
Dated February 7, 2017**

**Question No. 2**

**Responding Witness: John K. Wolfe**

- Q-2. Please refer to LG&E's Response to KTCA's Request for Information No. 1-10 (providing, in part, "The Wireless Facility owner will have conduit running through the initial presumed 13.17 feet of usable space on the pole, which it shares with LG&E.").
- a. Does LG&E charge for "conduit" in usable space in these situations?
  - b. Does LG&E charge for "conduit" in unusable space in these situations?
  - c. To the extent your answer to S2.a or S2.b is anything other than an unequivocal "no," please:
    - i. State whether the referenced conduit prevents other attachers from using that space.
    - ii. Describe in detail your rationale for charging for conduit.
    - iii. State the amount you propose to charge for conduit and identify all documents, including without limitation workpapers, photographs, and schematics, that support this amount.
- A-2.
- a. Yes.
  - b. No.
  - c.
    - i. Conduit attached in the usable space on a pole will not prevent the attachment of additional wireline cables (electric or communications). However, the conduit may prevent LG&E from installing transformers, risers, vertical supply conductors to aerial services, switch handles, capacitor banks or similar fixtures. A Wireless Facility attachment also prevents additional Wireless Facility attachments as only one such attachment is permitted on a LG&E pole.
    - ii. The Wireless Facility owner will have conduit running through the initial presumed 13.17 feet of usable space on the pole, *which it may share with LG&E or other communications cable attachers*. In fact, on many poles, the Wireless Facility owner's conduit may be attached to sections of usable space not otherwise occupied by LG&E or another communications attachers.

**Response to Question No. 2**  
**Page 2 of 2**  
**Wolfe**

Conduit located in the usable space on the pole may prevent the installation of additional electrical equipment as described above. It is for this reason that, as shown by page 27 of LG&E's construction standards produced in response to KCTA 1-16, that LG&E does not permit Wireless Facility attachments to wooden poles supporting transformers, risers, vertical supply conductors to aerial services, switch handles, capacitor banks or similar fixtures. Wireless Facility attachments pose additional safety and reliability concerns to LG&E: antennas could fall into electric lines, qualified personnel must maintain antennas attached above electric facilities, and antennas emit radiofrequency radiation that pose additional risks to all utility workers. Additional conduit may also serve to slow LG&E's maintenance and restoration of its facilities. A Wireless Facility attachment has a far different composition than a simple wireline attachment. Wireless Facilities are not simply antennas. Conduit housing electric and communications lines are needed to serve the Wireless Facility and radio units accompany the antennas. LG&E does not propose to charge for the two conduits and two potential radio units attached in the unusable space of the pole.

- iii. LG&E proposes to charge one-half of 13.17 feet of usable space (13.17 feet of usable space as set forth by the KPSC's Order of September 17, 1982 in Administrative Case No. 251) multiplied by the proposed wireline pole attachment rate (which is based on the wireline attachment using a presumed one foot of pole space as set forth in the KPSC's Order of September 17, 1982 in Administrative Case No. 251).

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY UTILITIES )
COMPANY FOR AN ADJUSTMENT OF ITS ) CASE NO.
ELECTRIC RATES AND FOR CERTIFICATES ) 2016-00370
OF PUBLIC CONVENIENCE AND NECESSITY )

and

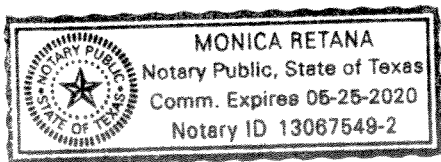
In the Matter of:

APPLICATION OF LOUISVILLE GAS AND )
ELECTRIC COMPANY FOR AN ADJUSTMENT ) CASE NO.
OF ITS ELECTRIC RATES AND FOR ) 2016-00371
CERTIFICATES OF PUBLIC CONVENIENCE )
AND NECESSITY )

VERIFICATION OF DANIEL RHINEHART

STATE OF TEXAS )
COUNTY OF DALLAS )

Daniel Rhinehart, being duly sworn, states that he has read the foregoing prepared testimony and that he would respond in the same manner to the questions if so asked upon taking the stand, and that the matters and things set forth therein are true and correct to the best of his knowledge, information and belief.



Handwritten signature of Daniel Rhinehart over a horizontal line, with the printed name 'Daniel Rhinehart' below it.

The foregoing Verification was signed, acknowledged and sworn to before me this 3rd day of March, 2017, by Daniel Rhinehart.

Handwritten signature of Monica Retana, followed by 'NOTARY PUBLIC, Notary # 13067549-2' and 'Commission expiration: 5/25/2020'.