POLE ATTACHMENT AGREEMENT FOR SMALL CELLS

BETWEEN

ROCKY MOUNTAIN POWER

AND

Crown Castle NG West, LLC
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THIS POLE ATTACHMENT AGREEMENT (this “Agreement”), dated as of December 21, 201L, is entered into by and between PACIFICORP, an Oregon Corporation, doing business in Utah as ROCKY MOUNTAIN POWER, hereinafter “Rocky Mountain Power,” and Crown Castle NG West, LLC “Licensee”, a New Jersey limited liability company.

WHEREAS, Rocky Mountain Power is engaged in the business of providing electric service to customers in certain areas within the state of Utah; and

WHEREAS, Licensee conducts its telecommunications business in some of the same areas within Utah; and

WHEREAS, Licensee wishes to attach certain Small Cell Attachments and Equipment used in connection with its business operations to Poles owned by Rocky Mountain Power within the state of Utah and Rocky Mountain Power agrees to grant Licensee access to such Poles in accordance with the terms and conditions of this Agreement.

NOW, THEREFORE, the Parties agree as follows:

ARTICLE I. DEFINITIONS

The following terms, when used herein with initial capitalization, whether in the singular or in the plural, shall have the meanings specified in this Article I:

“Application” means an action where Licensee requests permission to add or modify its Small Cell Attachment(s), or sends notification of its removal of previous Attachment(s).

“Attachment(s)” means any Equipment used for the transmission of wireless technology communications installed upon any Pole.

“Attachment Space” has the meaning set forth in UAR R746-345-2(B).

“Business Days” means days other than a Saturday, Sunday, or state or federal holiday when banks are authorized to be closed.

“Cellular Communications Site Installation Guidelines” means the current Rocky Mountain Power Cellular Communications Site Installation Guidelines (21U.1) attached as Exhibit B, and any subsequent revisions.

“Commission” means the State of Utah Public Service Commission.

“Cost Estimate” means either estimates for anticipated costs on each individual piece of work or flat rates for Make-ready Work when included in the Fee Schedule (Exhibit A) and used in lieu of detailed estimates.
“Electric Facilities” means any equipment, facilities, or improvements owned by or operated by Rocky Mountain Power or a Service Provider, and located on Poles.

“Electric Service Requirements” means the current PacifiCorp Six State ESR document available online, as may be updated from time to time: https://www.rockymountainpower.net/con/esr.html

“Electronic Notification System” or “ENS” means the electronic system, or combination of electronic systems designated by the Utah Public Service Commission or by Rocky Mountain Power in its sole discretion. If an ENS is designated, Licensee must use to submit Applications for permission to attach, relocate, or submit notification of removal of its Attachments and associated Equipment, and complete any other notifications as required under the terms of this Agreement.

“Emergency Condition” means any interference or degradation by Licensee Equipment which, in Rocky Mountain Power’s sole opinion, jeopardizes its utility operations or Electric Facilities, or the operations or Electric Facilities of a Service Provider, or creates an imminent risk of physical injury.

“Equipment” means all support equipment such as guy wires, anchors, anchor rods, grounds, and other accessories which have been pre-approved in writing by Rocky Mountain Power in accordance with this Agreement, but does not include power supply equipment.

“Estimated Attachments” means the number of Attachments Licensee estimates will be installed by Licensee under this Agreement.

“Fee Schedule” means the fees set forth in Exhibit A, as may be amended from time to time in accordance with UAR R746-345-3(A).

“Inspection” means examination by Rocky Mountain Power of Poles and all proposed or existing Attachments for the purpose of verifying the number and location of all Attachments and any other Pole-mounted Equipment of Licensee, or determining whether Licensee is in compliance with this Agreement, which includes the following types of Inspections:

1. Pre-Construction Inspection: Performed when Applications by Licensee are submitted for new Attachment(s).
2. Special Inspection: Rocky Mountain Power’s field visit made at the request of Licensee for all non-periodic Inspections. A Special Inspection does not include Pre-Construction Inspections.
3. Audit: A periodic effort to collect information through examination of all or any number of Poles that may have Licensee Attachments.

“Make-ready Work” means engineering or construction activities necessary to make a Pole available for a new Attachment, Attachment modifications, or additional facilities. Make-ready Work costs are non-recurring costs and are not contained in carrying charges as defined in the UAR 746345-5-2 (A)(2)(a).
“National Electrical Safety Code” or “NESC” means the current edition published by the Institute of Electrical and Electronics Engineers, Inc., as may be amended or supplemented from time to time.

“Party” means Rocky Mountain Power or Licensee, as the context requires; “Parties” means Rocky Mountain Power and Licensee.

“Permitted Purpose” means Licensee’s use of Pole(s) for the installation, operation, maintenance, replacement, repair and removal of Licensee’s Equipment for the transmission and reception of Equipment.

“Pole” means any Pole owned by Rocky Mountain Power that is designed to carry distribution as defined in R746-345-2(C) of the Utah Administrative Rules.

“Security” means a bond, cash escrow, letter of credit or parental guaranty, acceptable in form to Rocky Mountain Power in its sole and reasonable discretion, to assure performance by Licensee of its obligations under this Agreement.

“Service Provider” means a company, other than Rocky Mountain Power, providing electrical utility service.

“Small Cells” mean Licensee-controlled installation of low-powered radio frequency access nodes on Rocky Mountain Power Poles that sends and/or receives radio frequency signals, including those that operate in licensed and unlicensed spectrum. Small Cells may include, but are not limited to, technologies such as distributed antenna systems.

“Wi-Fi Antenna Installation Guidelines” means the current Rocky Mountain Power Wi-Fi Antenna Installation Guidelines (2U.2) attached as Exhibit C, and any subsequent revisions.

ARTICLE II. SCOPE OF AGREEMENT

Section 2.01 Grant of License; Geographic Scope; Permits

In accordance with the terms and conditions of this Agreement, Rocky Mountain Power grants Licensee the non-exclusive right to attach its Small Cells and associated Equipment directly pertaining to its Permitted Purpose. Licensee Attachments hereunder shall be limited to Poles within the state of Utah.

Consistent with UAR 746-345-5, Permits for Attachment(s) on a Pole by telecommunications providers will be in increments of not less than one (1) foot. The amount of annual contact rent (Exhibit A) will be determined by the amount of space on the Pole rendered unusable for other uses as a result of the Attachment. If additional Attachments are placed within the same space as previously permitted, and are compliant with all requirements of this Agreement, no additional annual contact rental will be required. If additional Attachments will be placed on the Pole outside the previously permitted space, additional space will be added in one (1) foot increments for calculation of annual contact rental.
Initial installation of Small Cells requires permits and are subject to annual rent. Rigid riser installations require permits, but no annual rent.

Section 2.02 Attachments: Scope
Licensee’s use of Poles will be confined to Attachments needed for the Permitted Purpose. Under no circumstances will Licensee place any signage, logos, or graphics on Poles or Licensee’s Equipment, except for such signage required by law or required under this Agreement.

Attachments to Poles that are not designed to accommodate distribution lines will be reviewed and approved at Rocky Mountain Power’s sole discretion. Nothing in this Agreement will be construed to obligate Rocky Mountain Power to grant Licensee permission to use any particular Pole or Poles. The Agreement expressly excludes Licensee macro cell technology, wireline attachments and attachments to Rocky Mountain Power street light only poles.

Section 2.03 Compliance with Governmental Requirements
Licensee’s use of Poles will be in compliance with all applicable laws, orders, ordinances, and regulations of federal, state, county and municipal authorities and agencies (“Governmental Authorities”), including but not limited to the Federal Communications Commission (“FCC”).

Section 2.04 Governmental Approvals
Licensee will, at its own expense, obtain all authorizations, approvals, permits, licenses, variances, and certifications for its Permitted Purpose from Governmental Authorities having jurisdiction, including but not limited to, all necessary zoning, land use, or similar approvals, and all certificates of public convenience and necessity, licenses, or similar operational authority from the FCC (“Governmental Approvals”). Rocky Mountain Power will reasonably cooperate with Licensee, at Licensee’s sole expense, in obtaining Governmental Approvals.

Section 2.05 Reservation of Rights
Rocky Mountain Power reserves the right, in its sole judgment, to reject Applications for attachment to Poles for the following reasons:

a. Insufficient capacity, after all reasonable potential accommodations have been considered by Rocky Mountain Power and communicated to Licensee.

b. Threat to Rocky Mountain Power’s system reliability.

c. Proposed Attachment and/or associated Equipment is considered to be unsafe according to the NESC, Cellular Communications Site Installation Guidelines (Exhibit B) or Wi-Fi Antenna Installation Guidelines (Exhibit C).

d. Unreasonable interference, as determined by Rocky Mountain Power, with Rocky Mountain Power’s equipment.

e. Unreasonable interference with third party equipment, as determined by the third-party.

f. Already a wireless device or antenna on Pole or approved to attach to Pole.

g. Licensee is in default of this Agreement.
ARTICLE III. LICENSEE’S USE OF POLES

Section 3.01 Application for Permission to Install Attachment
Licensee must not place any Attachment or associated Equipment upon Poles without first submitting an Application and receiving Rocky Mountain Power’s written approval. Licensee must not modify the position of any Attachment upon any Poles outside the space approved in the relevant Application without first submitting an additional Application and receiving Rocky Mountain Power’s written approval. Licensee may modify, replace, enhance, maintain, and upgrade its Attachments and Equipment without submitting a new Application, so long as such work does not materially alter its Equipment, which includes but is not limited, to radio frequency (“RF”) change, or increase Pole loading beyond the Pole loading established in the relevant Application and conforms with Section 3.08. If Licensee’s modification, replacement, enhancement, maintenance or upgrade materially alters its Equipment, an Application is required in accordance with this Section 3.01.

Licensee’s Application to place any Attachment upon Poles must be submitted via the Commission approved Electronic Notification System (ENS). The Application must include, without limitation: all location information including Rocky Mountain Power’s Pole numbers; amount of space requested (including space rendered unusable for other uses by Licensee’s Attachment); type and number of Attachments and Equipment to be attached on each Pole; Attachment location on the Pole; physical characteristics of Attachment(s) including dimensions; description of installation; indication of known required Make-ready Work as outlined in Section 3.02; proposed schedule for construction; and all applicable contact information for the Licensee or Licensee’s qualified contractor. Rocky Mountain Power will either approve or deny Applications in writing in accordance with requirements of UAR R746-345-3. If the Application is denied for insufficient information from the Licensee, the timelines outlined in UAR R746-345-3 will be suspended until Licensee provides the required information to Rocky Mountain Power.

Licensee will promptly submit payment for all charges applicable to the assessment of proposed Attachments in accordance with the Fee Schedule (Exhibit A) upon receipt of an invoice from Rocky Mountain Power. Rental charges for each approved Attachment will be in accordance with Section 5.01 and Electric Service Schedule No. 4 (Exhibit A).

Section 3.02 Make-ready Work
Licensee must identify in its Applications any Make-ready Work necessary to accommodate Attachments. If in the reasonable judgment of Rocky Mountain Power, the accommodation of any Attachment(s) necessitates Make-ready Work, Rocky Mountain Power will provide Licensee with the Cost Estimate of the Make-ready Work. Rocky Mountain Power reserves the right to determine when a flat rate is applicable according to the specific situation. Licensee may request a detailed estimate for work where Rocky Mountain Power has provided a flat rate Cost Estimate.

Licensee must indicate whether it accepts the Cost Estimate by returning Rocky Mountain Power’s Make-ready Work notice, signed by an authorized representative of Licensee, within thirty (30) days of the date Rocky Mountain Power approved the Application. If Licensee accepts the Cost Estimate, Rocky Mountain Power will perform the Make-ready Work, and Licensee will reimburse
Rocky Mountain Power for the entire expense actually incurred, without regard to whether Licensee elects not to use the Pole or Poles after Make-ready Work has commenced. If requested by Rocky Mountain Power, Licensee must submit pre-payment for the estimated Make-ready Work in accordance with UAR 746-345-3(C)(7). Upon request, Rocky Mountain Power will provide Licensee a statement of the actual material, hours, equipment costs, and any other associated costs for payment of Make-ready Work.

Rocky Mountain Power will provide Licensee an estimated completion date for any Make-ready Work, taking into account the timeframes set by UAR 746-345-3, the overall scope of Licensee’s project, the volume of Applications received from other licensees, as well as the availability of crews to perform the work. Licensee and Rocky Mountain Power will negotiate solutions in good faith when the estimated time to perform the Make-ready Work does not meet Licensee’s project requirements. At Licensee’s option and upon approval from Rocky Mountain Power, Licensee may request either assistance with the work by Licensee or by qualified contractors hired by Licensee, payment of premium rates for Rocky Mountain Power’s employees to be dedicated to perform work solely on Licensee’s project, or similar measures designed to augment Rocky Mountain Power’s capabilities. If Licensee chooses to employ a self-build option as provided in UAR 746-345-3(C) to complete the Make-ready Work, to ensure safety and reliability, the qualified contractor and the schedule must be approved by Rocky Mountain Power.

Section 3.02 (a) Make-Ready Work Associated with an Application
Licensee’s failure to accept the Cost Estimate associated with an Application within thirty (30) days of Rocky Mountain Power’s notice of Make-ready Work will be deemed as rejection of the Make-ready Work and revocation of Application to attach to Pole(s) requiring Make-ready Work. Upon rejection of a Cost Estimate, Rocky Mountain Power will cancel the Cost Estimate and close the Application request. If Licensee determines at a later date that it still wishes to attach, Licensee must submit a new Application for the Attachment(s). Licensee must reimburse Rocky Mountain Power for costs related to preparation of a Make-ready Work Cost Estimate, regardless of whether Licensee accepts or rejects the Make-ready Work.

Section 3.02 (b) Make-Ready Work Associated with Conformance to Requirements and Specifications
Rocky Mountain Power will prepare a Cost Estimate for Make-ready Work under Section 3.08. Failure to accept or reject such Cost Estimate within thirty (30) days will be deemed as acceptance by Licensee. If Licensee accepts or fails to timely reject the Cost Estimate, Rocky Mountain Power may perform such Make-ready Work, and Licensee must reimburse Rocky Mountain Power for the entire expense actually incurred, without regard to whether Licensee elects not to use the Pole or Poles after Make-ready Work has commenced. Licensee must pay Rocky Mountain Power for costs related to preparation of a Make-ready Work Cost Estimate, regardless of whether Licensee accepts or rejects the Cost Estimate.

Section 3.03 Pole Replacement for Licensee’s Benefit
In the event an existing Pole is prematurely replaced by a new Pole for the benefit of Licensee, Licensee must reimburse Rocky Mountain Power for all costs, including, but not limited to, the cost to replace the Pole, transfer of existing Rocky Mountain Power equipment, lower and haul of the existing Pole, and topping of the existing Pole. Rocky Mountain Power may also charge return
trip costs to Licensee in accordance with the Fee Schedule (Exhibit A) or actual cost when incurred by Rocky Mountain Power to return to the work site to lower and haul the existing Pole after either the Licensee or other attachers have transferred existing Attachments, when such existing Pole is prematurely replaced by a new Pole for the benefit of Licensee. Rocky Mountain Power will remove and may retain or dispose of such Pole. Any payments for Poles made by Licensee shall not entitle Licensee to ownership of any part of said Poles.

Section 3.04 Mid-span Poles
Any Poles erected by Licensee will not interfere with, or be in-line with Poles, and will not create a structure conflict as defined in the NESC. If Licensee requires placement of a Pole in-line with any existing Poles (i.e., a “mid-span Pole”), Licensee will submit an Application requesting such mid-span Pole and Rocky Mountain Power will determine, in its sole and reasonable discretion whether it will place a Pole in the requested location. If Rocky Mountain Power installs a mid-span Pole in accordance with this Section 3.04, Licensee will pay installation costs. Rocky Mountain Power will have sole ownership of the mid-span Pole and Licensee will pay rental fees to Rocky Mountain Power in accordance with this Agreement.

Section 3.05 Pole Placement or Replacement for Joint Benefit of Rocky Mountain Power and Licensee
Where Rocky Mountain Power requires a new Pole for its utility purposes irrespective of Licensee’s Attachment and Licensee requires a Pole with extra height or strength exceeding Rocky Mountain Power’s requirements, Licensee will pay to Rocky Mountain Power a sum equal to the difference between the cost of erecting a Pole adequate to meet Rocky Mountain Power’s needs, and the actual cost of erecting a Pole adequate to meet both Parties’ needs. Rocky Mountain Power will bear the remainder of the cost of erecting such Pole. Each Party will transfer its Equipment at its own cost.

Section 3.06 Licensee’s Installation Responsibilities
Licensee must complete the installation of its Attachments upon the Pole(s) covered by each approved Application, within one hundred eighty (180) days following receipt of approval by Rocky Mountain Power of such Application, unless Licensee requests additional time, which Rocky Mountain Power may approve at its sole discretion. Licensee must provide written notice to Rocky Mountain Power of its completion within five (5) Business Days of the actual installation.

If Licensee fails to complete installation of its Attachments within the prescribed time limit or otherwise agreed upon time limit, Rocky Mountain Power’s approval to place Attachments upon the Pole or Poles will be automatically revoked. Licensee must reapply and receive permission to install, in accordance with Section 3.01. Licensee’s failure to install its Equipment after receiving approval from Rocky Mountain Power will not entitle Licensee to a refund or reduction of fees or rental charges incurred for its proposed Attachments.

Section 3.07 Identification of Equipment
Licensee must clearly label its Attachments in accordance with UAR R746-345-4(B).
Section 3.08 Conformance to Requirements and Specifications

Licensee will, at its sole risk and expense, place and maintain its Equipment upon Poles in conformity with the requirements and specifications of the NESC, the FCC, and specifications as Rocky Mountain Power may from time to time prescribe, including without limitation the current Cellular Communications Site Installation Guidelines (Exhibit B) and/or Wi-Fi Antenna Installation Guidelines (Exhibit C). In the event of any conflict between any of the requirements and specifications of the NESC, FCC, and those prescribed by Rocky Mountain Power, the more stringent requirements and specifications will govern.

Any request for electric service must comply with the current PacifiCorp Electric Service Requirements available online.

Licensee (including its employees and contractors) will not enter Rocky Mountain Power’s electric utility space for any purpose including making connections to Rocky Mountain Power’s neutral. If Licensee requires grounding on an existing Pole where a grounding conductor does not exist, Licensee must request that Rocky Mountain Power install grounding. Grounding will be installed at the sole expense of Licensee. Licensee, its employees and its contractors, will at all times exercise Licensee’s rights and perform Licensee’s responsibilities under the terms of this Agreement in a manner that treats all Electric Facilities of Rocky Mountain Power as energized at all times.

Licensee will have in place a facility inspection program that ensures compliance with the requirements and specifications of this section. Licensee must provide Rocky Mountain Power with documentation of Licensee’s program upon request. Licensee will utilize Rocky Mountain Power’s Electronic Notification System, if applicable, for updating status of communicated nonconforming conditions.

Section 3.09 Nonconforming Equipment

If any Attachment is not installed and maintained in accordance with Section 3.08, Rocky Mountain Power reserves the right to correct any non-conformance, which may include removal of Licensee’s Equipment, upon Licensee’s failure to do so. Such work will be performed at Licensee’s sole risk and expense. If practicable, Rocky Mountain Power will attempt to notify Licensee in writing before performing such work. However, if Rocky Mountain Power determines the conditions pose an immediate threat to the safety of utility workers or the public, interfere with the performance of Rocky Mountain Power’s service obligations, or pose an immediate threat to the integrity of Poles or other electric facilities, Rocky Mountain Power may make necessary corrections without prior notice at the sole risk and expense of Licensee. As soon as practicable thereafter, Rocky Mountain Power will notify Licensee in writing of the work performed. Licensee will pay all costs incurred by Rocky Mountain Power in making corrections to Attachments.

To the extent Rocky Mountain Power and the Licensee agree the Licensee has not caused non-compliance with the NESC, FCC or Rocky Mountain Power standards, Licensee will not be responsible for correction costs. However, if the cost causer is undetermined, Licensee will share in the cost of correction.
Section 3.10 Interference with Rocky Mountain Power’s Equipment

If, in Rocky Mountain Power’s judgment, Licensee’s existing Attachments on any Pole interfere with Rocky Mountain Power’s existing facilities or prevent the placing of any additional facilities by Rocky Mountain Power, Rocky Mountain Power will notify Licensee in writing of rearrangements or transfers of Licensee’s Attachment, Pole replacements or other changes required in order to continue to accommodate Licensee’s Attachments. If appropriate, this notice will include a Cost Estimate for any applicable Make-ready Work by Rocky Mountain Power to accommodate Licensee’s continued Attachment.

If Licensee wishes to continue to maintain its Attachments on a Pole where a Cost Estimate has been provided for Make-ready Work to be completed by Rocky Mountain Power, it will return Rocky Mountain Power’s notice of the Cost Estimate, signed by an authorized representative, within thirty (30) days. Rejection of Cost Estimates must be made in writing within thirty (30) days. If Licensee accepts or fails to timely reject the Cost Estimate, Rocky Mountain Power may perform such Make-ready Work, and Licensee will reimburse Rocky Mountain Power for the entire expense actually incurred, without regard to whether Licensee elects to remove Attachments after Make-ready Work has commenced.

If Licensee does not accept the cost to accommodate its continued Attachment, Licensee must remove its Attachments from the affected Pole or Poles within thirty (30) days from such notification by Rocky Mountain Power. Licensee must notify Rocky Mountain Power in writing of its removal within five (5) Business Days of completion of the removal.

If Licensee has not removed its Attachments at the end of the thirty (30) day period Rocky Mountain Power may remove Licensee’s Equipment at Licensee’s sole risk and expense, and Licensee will reimburse Rocky Mountain Power all costs.

Section 3.11 Expense of Situating Pole Attachments

Licensee will place, maintain, rearrange, transfer, and remove its own Attachments at its own expense except as otherwise expressly provided in this Agreement.

When an existing Attachment requires modification by Licensee solely for a third-party’s benefit, Licensee must coordinate with such third-party. Rocky Mountain Power will facilitate only to the extent of notifying the third-party that the third-party must coordinate with Licensee to effectuate the modification. If the third-party is an occupant, Rocky Mountain Power will provide the third-party’s contact information to Licensee. If the third-party is not an occupant, Rocky Mountain Power will notify Licensee and provide the location of the Pole at issue. Nothing in this Agreement prohibits Licensee from seeking reimbursement for costs it incurs from third-party requests; however, all required work to be completed by Licensee must meet the timeframe prescribed by Rocky Mountain Power without regard to third-party cost recovery negotiations.

Section 3.12 Vegetation Management

All vegetation management in connection with the initial placement of an Attachment will be undertaken entirely by the Licensee at its sole risk and expense. Unless agreed to otherwise, each occupant is responsible for any and all vegetation management related to the facilities it owns. If Licensee fails to fulfill its obligations of this Section, Rocky Mountain Power will provide written
notice to Licensee that if the issue is not resolved within thirty (30) days, Rocky Mountain Power will perform the required remedy at Licensee’s sole risk and expense.

Section 3.13 Third-party Consents, Permits, Licenses, or Grants
Licensee is solely responsible for obtaining from public authorities and private owners of real property and maintaining in effect any and all consents, permits, licenses or grants necessary for the lawful exercise by Licensee of the permission granted by Rocky Mountain Power under this Agreement. Rocky Mountain Power, at any time, may require Licensee to submit written documentation of compliance with this Section 3.13. Upon notice from Rocky Mountain Power to Licensee that necessary permission for the use of any Pole or Poles has expired, or has not been secured from property owners or public authorities, any permission granted covering the use of such Pole or Poles shall immediately terminate and Licensee must remove its Equipment from the affected Pole or Poles within thirty (30) days of said notice, or within the period required by the property owners or public authorities, whichever is shorter. Notwithstanding the foregoing, if Licensee has commenced legal action to establish its rights and is legally permitted to use the Pole or Pole(s) pending such legal action, Rocky Mountain Power will allow Licensee to maintain its Attachment while pursuing those efforts, provided Licensee defend, indemnify and hold harmless Rocky Mountain Power for all loss and expense that results from Licensee’s continued use of the Pole or Pole(s). If Licensee ultimately fails to establish its rights or has not removed its Attachment within the stated period, Rocky Mountain Power may remove Licensee’s Equipment from such Poles without incurring any liability and Licensee will reimburse Rocky Mountain Power all costs incurred by Rocky Mountain Power in the removal of Licensee’s Equipment.

Section 3.14 Relocation of Attachments at Rocky Mountain Power’s Option
Licensee will at any time at its own sole risk and expense, upon written notice from Rocky Mountain Power, relocate, replace, repair, or perform any other work in connection with the Attachments that may be required by Rocky Mountain Power, within thirty (30) days unless another timeframe is specified in writing by Rocky Mountain Power. Licensee will provide written notification to Rocky Mountain Power within five (5) Business Days of its completion.

At Rocky Mountain Power’s option, Rocky Mountain Power may transfer Licensee’s Attachment(s) to a new Pole when possible, at the listed rate in the Fee Schedule (Exhibit A) or for the actual cost of the transfer if a listed rate is not in place. If Equipment is needed for the transfer, Licensee will supply the Equipment.

Section 3.15 Removal of Attachments by Licensee
Licensee may at any time remove its Attachments from any of the Poles and, in each case, Licensee must immediately give Rocky Mountain Power written notice of such removal. Removal of the Attachments from any Pole is a termination of Licensee’s right to use such Pole. Licensee will not be entitled to a refund of any rent for any removal. After removal of Attachments, the applicable Attachment count will be reduced in the next annual billing cycle following Licensee’s proper notice to Rocky Mountain Power of the removal. When Licensee performs maintenance to or removes or replaces its Attachment on a Pole, Licensee must chemically treat all field drilled holes and plug any vacated holes, including those resulting from removal of Attachment. If Licensee fails to adequately plug and treat such holes, Rocky Mountain Power may do so at Licensee’s sole risk and expense.
Licensee’s failure to remove Attachment(s) in accordance with any notice of removal will be subject to an unauthorized Attachment fee in accordance the Fee Schedule (Exhibit A).

Section 3.16 Pole Abandonment
If Rocky Mountain Power abandons any Pole, Rocky Mountain Power will give Licensee written notice at least ninety (90) days prior to the date on which it intends to abandon such Pole. If after ninety (90) days, Rocky Mountain Power and any third-parties have no facilities on such Pole but Licensee’s Attachments remain, upon execution of a transfer of ownership, the Pole will become the property of Licensee “as is” and Licensee will hold harmless Rocky Mountain Power from all obligations, liabilities, damages, costs, expenses or charges incurred thereafter arising out of the presence, location or condition of such Pole or any of Licensee’s Attachments thereon. Should Rocky Mountain Power relinquish ownership of any Pole to another party, Rocky Mountain Power will notify Licensee at least ninety (90) days prior to the date on which ownership will assumed by the new party.

Section 3.17 Damage to Equipment
Licensee will exercise all necessary precautions to avoid causing damage to Rocky Mountain Power’s Poles and associated facilities as well as third-party facilities. Licensee will assume responsibility for any and all loss from any such damage and will reimburse Rocky Mountain Power for the actual reasonable expense incurred to repair the damage.

Section 3.18 Inspections and Audits
Inspections. Rocky Mountain Power may perform reasonable Inspections of Licensee’s Attachments upon Poles. Rocky Mountain Power has the right to charge Licensee for a Pre-Construction Inspection (other than Audits) for each of Licensee's proposed Attachments upon Poles which cost is included in the per Pole application fee (Exhibit A). In addition, Rocky Mountain Power may charge Licensee for the expense of any other Inspections requested by Licensee.

Audits. Rocky Mountain Power may conduct an Audit of Attachments made to its Poles no more frequently than once every five (5) years. Rocky Mountain Power will give Licensee at least ninety (90) days prior written notice of an initial meeting to plan Audits. At such meeting, Rocky Mountain Power, Licensee and all other occupants in attendance will, among other things, review the predicted costs to perform an Audit, the selection of an independent contractor for conducting the Audit, and the scheduling, scope, extent and reporting of the Audit results. Regardless of whether Licensee attends the Audit planning meeting or expresses an intention to participate in the Audit, Rocky Mountain Power will notify Licensee in writing at least sixty (60) days before the commencement of the Audit. Licensee must notify Rocky Mountain Power in writing if Licensee wishes to participate in the Audit not less than thirty (30) days before the scheduled date of the Audit. The data from the Audit will be made available to Licensee and all other occupants and used to update the Parties’ records. A Party must object to the Audit results within ninety (90) days of receipt of the Audit report or such objections are waived.

The cost of the Audit shall be included in the carrying charge for the rental rate in accordance with the methodology approved by the Commission for such purposes. If during an Audit, occupants
request items to be added to the Audit beyond the scope predicated in the carrying charge, the additional costs for including those items in the Audit will be the sole responsibility of the party requesting them.

Section 3.19  Tax Liability
Licensee will promptly pay any tax, fee, or charge that may be levied or assessed against Poles or Rocky Mountain Power’s property resulting from use by Licensee. If Licensee fails to pay any such tax or assessment on or before the date such tax or assessment becomes delinquent, Rocky Mountain Power, at its own option, may pay such tax on account of Licensee and Licensee will reimburse Rocky Mountain Power for the full amount of tax and any penalties paid.

Section 3.20  Emergency Access
In the case of emergencies, Rocky Mountain Power may require removal or relocation of Licensee’s Attachments within the time period necessitated by the emergency. If Licensee fails to complete the relocation or removal within the necessary time period, Rocky Mountain Power may remove or relocate Licensee’s Attachments at Licensee’s sole risk and expense and Licensee must reimburse Rocky Mountain Power for the costs. Rocky Mountain Power will, to the extent practicable, provide notice to Licensee via Licensee’s emergency contact number set forth in Section 9.16 prior to removing or relocating Licensee’s Attachments in accordance with this Section 3.20. Where prior notice is not possible, Rocky Mountain Power will notify Licensee of any such removal or relocation as soon as practicable thereafter.

ARTICLE IV. RADIO FREQUENCY; INTERFERENCE; EMERGENCIES

Section 4.01  Radio Frequency Emissions
Licensee is solely responsible for RF emissions emitted by its Equipment. Licensee is responsible for ensuring RF exposure from its emissions, in combination with the emissions of all other contributing sources of RF emissions, is within the limits allowable under all applicable rules of the FCC. If required by the FCC, Licensee must install appropriate signage to notify workers and third-parties of the potential for exposure to RF emissions and such signage must be readable from the ground without the use of optical aides such as binoculars. Licensee will communicate and cooperate with other occupants that emit RF to minimize the number of signs.

Section 4.02  Interference Prohibited
Licensee will not allow the transmission of its RF signals to interfere with or degrade Rocky Mountain Power’s transmission of authorized radio frequencies or Rocky Mountain Power facilities, or other occupants. Licensee and other occupants who emit RF through Attachments on Poles are under a duty and obligation in connection with the operations of their own facilities, now existing or in the future, to protect RF interference to the RF signals of any other such occupants, as applicable. Licensee will, at its own cost, cooperate and eliminate any such interference or degradation to other RF networks created by its RF emissions and work with other RF emitters as needed relating to the same as soon as practicable upon written notice by Rocky Mountain Power.
Section 4.03 Preventing Interference
To prevent interference, Licensee will provide Rocky Mountain Power with written plans for any material alteration to Licensee’s Equipment, including any RF change or additions outside of Licensee’s authorized frequency band. Such plans must be submitted to Rocky Mountain Power at least forty-five (45) days before commencing the alterations via the application process (Section 3.01). Rocky Mountain Power will notify Licensee in writing of any material modifications to Rocky Mountain Power’s facilities that it reasonably determines may present a substantial risk of interference with Licensee’s Equipment. If Licensee determines that it is not economically practical to correct interference caused by Rocky Mountain Power’s modification, Licensee may submit a removal notice via Rocky Mountain Power’s approved ENS with no further obligations or liability thereunder except the obligations accrued through removal of Licensee’s Attachments and associated Equipment.

Section 4.04 RF Power Cut-off Switch; Emergency Condition
Licensee must install and maintain a disconnect switch that can be operated manually and/or remotely for the purpose of powering down Licensee’s Equipment and all battery backups in the event of an emergency. Licensee must place and maintain signage on Pole(s) and any Licensee Equipment cabinet. The signage must meet FCC requirements and contain the site identification number, a contact phone number for the purpose of requiring Licensee to power down its Equipment, and a notice that the Equipment has battery backup when the disconnect switch to Rocky Mountain Power’s system is open. The signage must not be subject to discoloring or peeling away. Rocky Mountain Power’s authorized field personnel will notify Licensee’s designated point of contact not less than twenty-four (24) hours in advance of the need for a temporary power shut-down if circumstances allow, or as soon as practicable. Licensee must immediately and completely shut off all power to its Equipment upon request from Rocky Mountain Power. Rocky Mountain Power may disable, or cause to be disabled, either manually or remotely, any and all of Licensee’s Equipment that creates or exacerbates an Emergency Condition in addition to any other remedy Rocky Mountain Power may have under the law. Rocky Mountain Power will not be liable to Licensee for actions taken in a good faith belief that Licensee’s transmissions or other acts or omissions are creating or exacerbating the Emergency Condition. Rocky Mountain Power will, within a reasonable amount of time after disabling Licensee’s Equipment, notify Licensee of such action, which notice may be made in accordance with Section 4.05.

Section 4.05 Emergency and Emergency After Hours Contact Information
Licensee must provide emergency after hours contact information to Rocky Mountain Power to ensure proper notification in case of an Emergency Condition. Information will include 24/7 telephone and cellphone information, a list of contacts by district (if applicable) and escalation procedures. Licensee will also provide contacts for Emergency Conditions that arise during normal business hours.

Section 4.06 Installation and Upkeep of Sign(s)
Licensee is responsible for the installation and upkeep of its signage on each Pole as required by law and this Agreement. The signage will be placed so that it is clearly visible from the ground without the use of optical aides such as binoculars. Signage will contain the information approved
for such signs by the FCC, or in the absence of FCC approval, the information commonly used in
the industry for such signs.

ARTICLE V. BILLING & PAYMENTS; ANNUAL RENT

Section 5.01 Rental Amount
For authorized Attachments covered under this Agreement, Licensee must pay to Rocky Mountain
Power, in advance, on an annual basis under a billing cycle beginning July 1, a rental amount
computed in accordance with UAR R746-345-5(A) and Electric Service Schedule 4 (Exhibit A).

The amount of annual contact rent (Exhibit A) for each Attachment will be in accordance with
UAR 746-345-5(A)(3)(d)(v) and based on Rocky Mountain Power’s tabulation of Licensee's Attachments situated upon Rocky Mountain Power's Poles and based upon Rocky Mountain Power's current records.

The rental rate does not include the costs of Application processing, Inspections (other than Audits
and Periodic Safety Inspections), Make-ready Work, and the costs related to unauthorized Attachments as addressed in Section 5.03. Charges for activities not included in the rental rate will
be based on actual costs, including administrative costs, or flat rates specified in Exhibit A, and
will be charged in addition to the rental rate. Parties recognize that rates will change consistent
with approved changes to Electric Service Schedule 4 (Exhibit A).

Section 5.02 Fee Schedule
Rocky Mountain Power’s Fee Schedule (Exhibit A) sets forth flat rates for work or activities
performed by Rocky Mountain Power and invoiced to Licensee. Work and activities performed
by Rocky Mountain Power not included in the Fee Schedule will be invoiced at actual cost.

Section 5.03 Unauthorized Attachments
Licensee must not make Attachments to Rocky Mountain Power’s Poles without obtaining Rocky
Mountain Power’s written permission as provided for in this Agreement. Rocky Mountain Power
may charge Licensee an unauthorized Attachment fee as shown on Exhibit A, upon the discovery
of unauthorized Attachments belonging to Licensee. In addition to such fees, back rent will be
charged for the lesser of 5 years or the period of unauthorized Attachment. The imposition of such
charges will be without prejudice to Rocky Mountain Power’s right to utilize additional other
remedies, including, but not limited to, the remedies available for default under Article VIII of this
Agreement and any remedies available under Commission rules. Licensee may avoid unauthorized
Attachment fees, except back rent, if it self-discloses unpermitted Attachments and makes an
Application for said Attachment pursuant to Section 3.01 prior to Rocky Mountain Power's
discovery.

Section 5.04 Billing and Payments
Rocky Mountain Power will send invoices to Licensee via electronic mail (e-mail) to the
address(es) provided by Licensee in writing. Licensee must pay all charges within forty-five (45)
days of the invoice date. Interest will be imposed on any delinquent amounts as specified in
Section 5.05 of this Agreement.
If Licensee disputes an invoice, Licensee will provide written notice of the dispute to Rocky Mountain Power within forty-five (45) days of the date of the disputed invoice, otherwise Licensee forfeits its right to dispute the invoice, except as provided by Commission rule. Notice of dispute must include a detailed explanation of the dispute. Rocky Mountain Power may impose interest as specified in Section 5.05 of this Agreement if the dispute is unfounded.

Licensee will provide its accounts payable address(es) in writing and any future changes to the address(es) in writing sixty (60) days prior to the date of the change. Copies of individual invoices may be requested in writing to be forwarded to an alternate address upon each written request.

Section 5.05  Interest on Late Payments
All amounts payable under the provisions of this Agreement are payable, unless otherwise specified, within forty-five (45) days of the invoice date. An interest charge at the lower of one and one-half percent (1.5%) per month or the maximum rate allowed by applicable law will be assessed against all late payments.

ARTICLE VI.  INDEMNIFICATION; LIMITATION OF LIABILITY; WARRANTIES

Section 6.01  Indemnification/Release
To the fullest extent permitted by law, Licensee will indemnify, protect, and hold harmless Rocky Mountain Power, its successors and assigns, and its directors, officers, employees and agents (collectively, the “Rocky Mountain Power Indemnified Parties”) against and from any and all claims, demands, suits, losses, costs and damages of every kind and description, including reasonable attorneys’ fees and/or reasonable litigation expenses, brought or made against or incurred by the Rocky Mountain Power Indemnified Parties (“Claims”) resulting from or arising out of, or in any way connected with any act, omission, fault or negligence of Licensee, its employees, agents, representatives, customers or contractors, their employees, agents or representatives in the performance or nonperformance of Licensee’s obligations under this Agreement or in any way related to this Agreement except to the extent that such Claims arise from the gross negligence or intentional misconduct of any of the Rocky Mountain Power Indemnified Parties. Licensee will also indemnify and release, protect and hold harmless the Rocky Mountain Power Indemnified Parties from and against any and all claims, demands, causes of action, costs (including attorneys’ fees), or other liabilities arising from any interruption, discontinuance, or interference with Licensee’s service to its customers which may be caused, or which may be claimed to have been caused, by any action of Rocky Mountain Power undertaken in furtherance of the purposes of this Agreement including damages caused by Rocky Mountain Power’s ordinary negligence. Additionally, Licensee will, upon demand, and at its own sole risk and expense, defend any and all suits, actions, or other legal proceedings which may be brought against Rocky Mountain Power Indemnified Parties, on any Claims, demand, or cause of action arising from any interruption, discontinuance, or interference with Licensee’s service to its customers to the extent caused, or claimed to have been caused, by any action of Licensee. To the extent Licensee shall be found to have caused such interruption, discontinuance or interference, Licensee will pay and satisfy to such extent any judgment or decree which is rendered against Rocky Mountain Power Indemnified Parties, in any such suit, action, or other legal proceeding; and further, Licensee will reimburse Rocky Mountain Power for such
reasonable legal expenses, including attorneys’ fees, incurred in connection therewith, including appeals thereof. Licensee hereby releases Rocky Mountain Power from any liability for damage to Licensee’s Equipment, or for any interruption, discontinuance or interference with Licensee’s service to its customers, caused by or resulting from Rocky Mountain Power’s actions or inaction, including damages caused by Rocky Mountain Power’s ordinary negligence.

Section 6.02 Warranty
Rocky Mountain Power warrants that its work in constructing and maintaining the Poles covered by this Agreement shall be consistent with prudent utility practices. ROCKY MOUNTAIN POWER DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTY OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, AND SIMILAR WARRANTIES. Under no circumstances will Rocky Mountain Power be liable for economic losses, costs or damages, including but not limited to special, indirect, incidental, punitive, exemplary or consequential damages.

ARTICLE VII. INSURANCE AND SECURITY REQUIREMENTS

Section 7.01 Insurance
Without limiting any liabilities or any other obligations of Licensee, Licensee must, before adding Attachments or Equipment to Poles, secure and continuously carry with insurers having an A.M. Best Insurance Reports rating of A-:VII or better the following insurance coverage:

a. Workers’ Compensation. Licensee must comply with all statutory Workers’ Compensation Laws and will furnish proof thereof satisfactory to Rocky Mountain Power prior to commencing work.

b. Employers' Liability. Insurance with a limit of $1,000,000 each accident, $1,000,000 by disease-each employee, and $1,000,000 by disease-policy limit.

c. Commercial General Liability. Licensee must maintain commercial general liability insurance on the most recently approved ISO policy, or its equivalent, written on an occurrence basis, with minimum limits of $1,000,000 each occurrence for bodily injury and property damage and $2,000,000 general aggregate including the following coverages:
   a. Premises and operations coverage
   b. Independent contractor’s coverage
   c. Contractual liability

d. Business Automobile Liability. Licensee must maintain business automobile liability insurance on the most recently approved ISO policy, or its equivalent, with a minimum combined single limit of $1,000,000 for bodily injury and property damage with respect to Licensee’s vehicles whether owned, hired or non-owned, assigned to or used in the performance of the work.

e. Umbrella Liability. Licensee must maintain umbrella or excess liability insurance with minimum limits of $5,000,000 each occurrence/$5,000,000 aggregate, providing coverage in excess of the primary coverages and limits in the Employers’ Liability insurance,
Commercial General Liability insurance and Business Automobile Liability insurance above.

Rocky Mountain Power does not represent that the insurance coverages specified herein (whether in scope or amounts of coverage) are adequate to protect the obligations of the Licensee, and Licensee is solely responsible for any deficiencies thereof.

Section 7.02 Additional Insurance Requirements

The following additional requirements apply to coverage specified in Section 7.01:

Except for workers’ compensation, the policies required herein shall include provisions or endorsements naming Company, its parent, divisions, affiliates, subsidiary companies, co-lessees, co-venturers, officers, directors, agents, employees, servants and insurers as additional insureds or loss payees, as applicable to specific insurance coverage. The commercial general liability additional insured endorsement shall be ISO Form CG 20 10 and ISO Form CG 20 37, or their equivalents.

To the extent of Licensee’s negligent acts or omissions, all policies required by this Agreement shall include: (i) provisions that such insurance is primary insurance with respect to the interests of PacifiCorp and that any other insurance maintained by PacifiCorp (including self-insurance) is excess and not contributory insurance with the insurance required hereunder; and (ii) provisions that the policy contain a cross liability or severability of interest clause or endorsement in the commercial general liability and business automobile liability coverage. Unless prohibited by applicable law, all required insurance policies shall contain provisions that the insurer will have no right of recovery or subrogation against PacifiCorp, its parent, divisions, affiliates, subsidiary companies, co-lessees or co-venturers, agents, directors, officers, employees, servants, and insurers, it being the intention of the Parties that the insurance as effected shall protect all of the above-referenced entities evidenced by waiver of subrogation wording.

A certificate of insurance shall be furnished to PacifiCorp confirming the issuance of such insurance prior to installation of Equipment by Licensee. Should a loss arise during the term of the Agreement that may give rise to a claim against Licensee and/or PacifiCorp as an additional insured, Licensee shall deliver to PacifiCorp (or cause to be delivered to PacifiCorp) certified copies of such insurance policies. Licensee shall not cancel or reduce limits of liability without (i) ten (10) calendar days prior written notice to PacifiCorp if canceled for nonpayment of premium; or (ii) thirty (30) calendar days prior written notice to PacifiCorp if canceled for any other reason. Lack of notification shall be considered a material breach of this Agreement.

Licensee shall require Subcontractors who perform work to carry liability insurance (auto, commercial general liability and excess) and workers' compensation/employer's liability insurance commensurate with their respective scopes of work. Licensee shall remain responsible for any claims, lawsuits, losses and expenses including defense costs that exceed any of its Subcontractors’ insurance limits or for uninsured claims or losses.
Section 7.03  Security
Licensee must furnish to Rocky Mountain Power Security based on (a) the total number of Estimated Attachments; or (b) the total number of actual Attachments, if greater than Estimated Attachments. Rocky Mountain Power may draw upon such Security to satisfy Licensee's obligations under this Agreement, and Licensee shall replenish such Security within sixty (60) days. Such Security must be furnished upon execution of this Agreement and be maintained in full force and effect throughout the term of this Agreement, including any renewals thereof, except as otherwise agreed to by the Parties. The furnishing of Security will not relieve Licensee of any of its obligations under this Agreement, and Security will not be released until all of Licensee’s obligations under this Agreement have been discharged. The initial required Security will be $10,000 and may be reviewed and adjusted annually by Rocky Mountain Power.

The amount of Security will be in an amount sufficient to pay Rocky Mountain Power for the cost to remove and dispose of Licensee Attachments and related Equipment, plus two (2) years’ of rental payment obligations under this Agreement. The calculation of the cost to remove and dispose of Licensee’s Attachments and related Equipment will be Rocky Mountain Power’s current hourly wage rate of a four-person crew multiplied by the number of (a) Estimated Attachments; or (b) actual Attachments, if greater than Estimated Attachments.

ARTICLE VIII. TERM, DEFAULT AND TERMINATION

Section 8.01  Term and Termination
This Agreement shall have an initial term of ten years (10) with 2 automatic renewal terms of five years (5) each and remain in full force and effect unless and until it is terminated by either Party upon ninety (90) days written notice to the other Party unless terminated sooner as otherwise provided in this Agreement. Licensee must remove its Attachments and Equipment from Poles within the ninety (90) day notice period. If Licensee fails to remove its Attachments and Equipment within the ninety (90) day period, Rocky Mountain Power may remove and dispose of Licensee’s Attachments and Equipment at Licensee’s sole risk and expense. On the date of termination, all rights and privileges of Licensee under this Agreement will cease; however that Licensee will not be released from any liability under this Agreement, which may have arisen or accrued during the term of this Agreement.

Section 8.02  Default
The following constitutes a default under this Agreement if not cured within thirty (30) days following written notice: (a) any material breach of this Agreement; (b) the appointment of a receiver to take possession of all of the assets of Licensee; (c) a general assignment for benefit of creditors; (d) any action taken or suffered by Licensee under any insolvency or bankruptcy act.

Section 8.03  Notice of Default/Cure Period
Rocky Mountain Power will provide written notice of the default to Licensee and Licensee must cure the default within thirty (30) days from receipt of notice of default.
Section 8.04 Remedies for Default
Rocky Mountain Power may utilize any and all remedies available to it at law and in equity in the event the Licensee fails to cure a default within the cure period set forth above. Such remedies may include, without limitation: (a) refusal to authorize any additional Attachments until the default is cured; (b) termination, in whole or in part, of this Agreement; (c) withhold amounts due to the Licensee from Rocky Mountain Power under this Agreement or another agreement; (d) cure the default at Licensee’s sole cost and expense.

ARTICLE IX. GENERAL PROVISIONS

Section 9.01 Entire Agreement
This Agreement constitutes the entire Agreement of the Parties for Small Cells and supersedes any existing agreements for Small Cells but does not supersede existing agreements between the Parties for attachments under existing agreements for macro cell, street light only poles or wireline Attachments. Any amendments to this Agreement must be in writing and signed by the Parties.

Section 9.02 Choice of Law/Venue
This Agreement and performance under this Agreement will be construed, interpreted, regulated and enforced under the laws of Utah. The state and federal courts within Salt Lake County, Utah will be the sole proper venue for resolution of disputes under this Agreement and the Parties agree to submit to such jurisdiction.

Section 9.03 Changes in Law
The Parties agree to negotiate in good faith any changes to this Agreement necessitated to conform to applicable law.

Section 9.04 Severability
If any provision or part of this Agreement is or becomes invalid under any applicable statute, regulation, or law and such invalidity does not materially alter the essence of this Agreement with respect to either Party, the invalidity shall not render this entire Agreement unenforceable and such provision or part shall be deemed void.

Section 9.05 Encumbrances
Licensee must prevent any and all liens or other encumbrances from attaching to Rocky Mountain Power’s property as a result of Licensee’s activities under this Agreement.

Section 9.06 Headings and Exhibits
The captions and headings used in this Agreement are for convenience in reference only and not for interpretation purposes. All exhibits referred to herein and recitals are incorporated by reference.

Section 9.07 Force Majeure
Except for the payment of monies due under this Agreement, neither Party shall be deemed in default under this Agreement to the extent that any delay or failure in the performance of its obligations is caused by an event of Force Majeure, including acts of the United States of America or any state, territory or political subdivision thereof, acts of God or a public enemy, fire, flood,
freight embargos, civil disturbances or any other cause beyond the reasonable control of the Party claiming Force Majeure. The Party claiming Force Majeure must provide prompt written notice to the other Party and will immediately commence cure and so notify the other Party after it is reasonably practicable to do so.

Section 9.08 Assignments
Licensee must not voluntarily or involuntarily assign, transfer, sublease or sublet this Agreement, in whole or in part, or any right, privilege or obligation hereunder, without Rocky Mountain Power’s prior written consent which shall not be unreasonably withheld, conditioned or delayed, at which time Rocky Mountain Power may require that the proposed assignee or successor enter into a new agreement or other reasonable conditions except that in association with its provisioning of its telecommunications service, Licensee may place equipment of others within cabinets or boxes or on brackets owned by Licensee placed on Rocky Mountain Power Poles and such placement of equipment shall not constitute an assignment, sublicense, sublease, or transfer of rights. However, if Licensee places equipment of others within cabinets or boxes or on brackets of Licensee placed on Rocky Mountain Power Poles, Licensee’s responsibilities under this Agreement shall be, in all respects, as though such equipment belonged to Licensee. Approval of assignment may require Application to remove from each Pole by the assignor and an Application to attach to each Pole by assignee if the record of Attachments is in dispute. Notwithstanding the foregoing, Licensee may assign this Agreement to an affiliate entity (i.e. an entity controlling, controlled by or under common control with Licensee) with written notice to but without Rocky Mountain Power’s written consent within no more than thirty (30) calendar days of such assignment. In addition, assignee will provide Rocky Mountain Power Security in the amount as outlined in Section 7.03 of this Agreement. Until Security is provided to Rocky Mountain Power by assignee, Licensee will continue to cover Security.

Section 9.09 Waiver
Failure by either Party to enforce any of the terms or provisions of this Agreement shall not be construed as a waiver hereunder.

Section 9.10 Time is of Essence
Time is of essence with respect to every term and provision of this Agreement.

Section 9.11 No Partnership
Nothing herein shall be construed to create a partnership, trust, joint venture, or association between the Parties.

Section 9.12 No Third-party Beneficiaries
This Agreement shall not be construed for the benefit of any third-party, including without limitation, customers of either Party.

Section 9.13 Attorneys’ Fees
If either Party files any action or brings any proceeding against the other arising from or related to this Agreement, the prevailing Party will be entitled to recover, in addition to any judgment or decree for costs, such reasonable attorneys’ fees as it may have incurred in such suit, action, or other legal proceeding, together with other reasonable litigation expenses.
Section 9.14 Waiver of Jury Trial

TO THE FULLEST EXTENT PERMITTED BY LAW, EACH OF THE PARTIES HERETO WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF LITIGATION DIRECTLY OR INDIRECTLY ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS AGREEMENT. EACH PARTY FURTHER WAIVES ANY RIGHT TO CONSOLIDATE ANY ACTION IN WHICH A JURY TRIAL HAS BEEN WAIVED WITH ANY OTHER ACTION IN WHICH A JURY TRIAL CANNOT BE OR HAS NOT BEEN WAIVED.

Section 9.15 Agreement Notices

Any notice regarding this Agreement must be in writing, addressed to the Party to be notified as set forth below or at such other address as a Party may designate for itself from time to time by written notice, and be transmitted by United States mail, by regularly scheduled overnight delivery, electronic mail or by personal delivery:

Rocky Mountain Power:
Joint Use Administration-Contracts
825 NE Multnomah St., Suite 1700
Portland, Oregon 97232
jointusecontracts@pacificorp.com

Licensee:
Crown Castle NG West, LLC
c/o Crown Castle
2000 Corporate Drive
Canonsburg, PA 15317-8564
Attn: Ken Simon, General Counsel
(724) 416-2000

With a copy which shall not constitute legal notice to:
Crown Castle NG West, LLC
c/o Crown Castle
2000 Corporate Drive
Canonsburg, PA 15317-8564
Attn: Small Cell Contracts Administration
(724) 416-2000
SCNContract.mgmt@crowncastle.com

Section 9.16 Operational Notice

All notices regarding permitting and other communications regarding day-to-day operations will be submitted by the Parties via ENS if designated by the Utah Commission or Rocky Mountain Power, or via e-mail at the addresses set forth below or at such other address as a Party may designate for itself from time to time by written notice.
Rocky Mountain Power:
jointuse@pacificorp.com

Licensee:
SCN.NOC@CrownCastle.com

In the case of emergency work, as prescribed in Section 3.20 each Party will notify the other Party via the emergency contact information set forth below in addition to the operational contact notice in writing.

Rocky Mountain Power:
(888) 221-7070

Licensee:
(866) 446-3984

When an Emergency Condition arises under Section 4.05, Rocky Mountain Power will notify Licensee’s contact below:

Licensee’s 24 hour phone/cellphone number: (866) 446-3984
Licensee’s e-mail: SCN.NOC@CrownCastle.com

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized officers as of the date first herein written.

LICENSEE
Crown Castle NG West, LLC

PACIFICORP, doing business as 
ROCKY MOUNTAIN POWER

Signed
Rod Hanson

Signed
Jeffrey M. Kent

Printed
VP/Central Mountain

Printed
Director, Distribution Support

Title
12/15/16

Title
12/21/16

Date Signed

Date Signed
Rocky Mountain Power Electric Service Schedule No. 4

Annual Utah Rental Rate per attachment is $5.76 per foot of space used for its Attachments and associated Equipment as well as space rendered unusable
ROCKY MOUNTAIN POWER

ELECTRIC SERVICE SCHEDULE NO. 4

STATE OF UTAH

Pole Attachments

AVAILABILITY: To public utilities, wireless providers, cable television companies, communications companies, or other entities that provide information or telecommunications services or any other services whose operation requires that cables, wires, and other appurtenances be placed on Company utility poles. This Schedule shall be available only upon the following three conditions:

1. The execution of a Pole Attachment Agreement between an “attaching entity” as defined by Utah Admin. Code § 746-345-2 and the Company for permission to place equipment on the Company’s poles; or, in the event that such an agreement has not been reached, the attaching entity is subject to the provisions of the standard Attachment Agreement approved by the Utah Public Service Commission (“Standard Agreement”).

2. The approval by the Company of the attaching entity’s application, as required under the agreement between the Company and the attaching entity, for permission to place equipment on Company poles.

3. The availability of utility poles located on the Company’s interconnected system in the state of Utah, which are of sufficient size and capacity to accommodate the equipment to be installed in accordance with the National Electric Safety Code, the applicable pole attachment agreement and applicable Utah Administrative Code provisions.

APPLICATION: The rate specified in this Electric Service Schedule shall apply to all Company-owned poles.

(continued)

Issued by authority of Report and Order of the Public Service Commission of Utah in Docket No. 06-035-21

FILED: December 7, 2006

EFFECTIVE: December 11, 2006
ANNUAL CHARGE: For each Company pole on which the attaching entity has placed an attachment, $5.76 per foot of space used by the attaching entity. "Space used" is determined under the provisions of Utah Admin. Code § R746-345-5.A.3.

SCHEDULE OF NON-RECURRING FEES: For each Company pole on which the attaching entity has placed or requests to place an attachment, the following fees may be applied.

1. Per Pole Application Fee: $55.64 per Pole
   This fee is applicable when Licensee's submit application for permission to attach to the Company's poles. This fee covers the expected costs for performing the work necessary to determine what make-ready work must be done to accommodate the application. The fee shall be based on a state specific allocation of costs.

2. Unauthorized Attachment Charge: $100.00 + Back Rent, per Pole
   This fee is applicable when the Company discovers a Licensee attachment on a Company pole where the Company has no record of approving the attachment. Back Rent shall consist of 5 years of rent at the current rental rate unless credible evidence supports a lesser period. The Unauthorized Attachment Fee shall be waived if Licensee presents credible evidence of any of the following: approval by and payment of rent to a putative pole owner; good faith belief of pole ownership; or of attaching in good faith. The Unauthorized Attachment Fee shall also be waived if Licensee presents credible evidence the attachment was in place prior to January 1, 2007.

3. Other Miscellaneous Fees: To be invoiced at the Company's actual cost. This fee is applicable to recover the cost of work necessitated by Licensee requests not otherwise recovered in the Annual Charge or other fee categories, such as actual or estimated charges for make-ready work and labor for emergency restoration work.

TERMS, CONDITIONS, LIABILITIES: The terms, conditions, and liabilities for service under this Schedule shall be those specified in the applicable pole attachment agreement between the Company and the attaching entity. The annual charge rate specified by the agreement shall be in accordance with the rate specified in this Schedule and shall be subject to periodic adjustment in accordance with the applicable agreement and the rules established by the Public Service Commission of Utah and subject to its approval.

ELECTRIC SERVICE REGULATIONS: Service under this Schedule will be in accordance with the terms of the Pole Attachment Agreement or the Standard Agreement between the Company and the attaching entity. The Electric Service Regulations of the Company on file with and approved by the Public Service Commission of Utah, including future applicable amendments, will be considered as forming a part of and incorporated in said Agreement. In case of any conflict between any of the provisions of the Pole Attachment Agreement or Standard Agreement, this Rate Schedule, and the Electric Service Regulations, the provisions of this Rate Schedule will take precedence followed by the provisions of the Pole Attachment Agreement or the Standard Agreement, whichever is applicable.

Issued by authority of Report and Order of the Public Service Commission of Utah in Advice No. 14-11

FILED: November 25, 2014
EFFECTIVE: December 25, 2014
Exhibit B
Page 0 of 16

Cellular Communications Site Installation Guidelines

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2U.1—Cellular Communications Site Installation Guidelines

1. Scope

This document covers the installation of cellular communications sites on power poles according to Federal Communications Commission 11-50 and 47 U.S.C. (United States Code) 224. It is intended to be used as a guide for company field engineers to assist them in evaluating the correct installation of the communications equipment to avoid operational problems for the company. This guide is not considered all-inclusive. Depending on the local operating and weather conditions, deviations from this guideline may be required as determined by the local engineering and operations staff.

2. Definitions

Company. PacifiCorp, doing business as Pacific Power and Rocky Mountain Power
ESR. Company Electric Service Requirements Manual
FAA. Federal Aviation Administration
FCC. Federal Communications Commission
GO 95. California Public Utilities Commission General Order 95
NESC. National Electrical Safety Code
OSHA. Occupational Safety and Health Administration

3. Coordination Between the Company and the Telecommunications Company

Close coordination will be necessary with the telecommunications company to complete the installation. In addition, company personnel use terminology not familiar to the communications industry; be aware of the resulting gap in understanding. This guideline may be shared with the telecommunications company prior to designing the installation so that the telecommunications company may be aware of the company’s basic requirements.

4. Pole Selection Criteria

Installation is limited to poles carrying electrical distribution facilities only. No lattice tower installations will be allowed. Installations are preferred on secondary or service poles and are at the sole discretion of the company. The priority of selection of appropriate pole candidates for antenna, cable, and associated equipment is as follows:

4.1. Distribution

Existing wood poles with or without streetlights at tangent primary distribution locations are preferred for use with communications equipment. Street-light-only poles are not considered distribution poles. Access to street-light-only poles is very limited. Priority for selection for distribution wood poles shall be:
i. secondary and service poles

Figure 1—Secondary/Service Pole Example
ii. single-phase primary pole

Figure 2—Single-Phase Primary Pole Example
iii. two-phase "V" primary pole – two phases on each end of the cross-arm with low neutral position

Figure 3—Two-Phase "V" Primary Pole Example
iv. three-phase primary pole without pole top pin conductor

Figure 4—Three-Phase Primary Pole Without Pole-Top Pin Conductor Example

Light-duty steel poles may be needed at these locations depending on the pole loading requirements. No angle, deadend, or tap pole locations may be used.

Structures including and/or similar to the following may be used for installing cellular antennae:

15-35 kV: EH 101, EH 301, EH 303, EI 101, EI 103, EI 401, EI 403,
4.2. Transmission: Monopoles with a Rating of 138 kV or Less

Existing poles shall be replaced with new steel poles that include the antenna mounting plate and access openings to feed the cables inside the pole. Special provisions may be made occasionally for 161 kV and 230 kV monopoles and H-frame structures, however this is not encouraged. All other options should be considered before these structures are used for cellular antenna supports. Structures energized at 345 kV or 500 kV shall not be used for cellular antennae.

Structures including and/or similar to the following may be used for installing cellular antennae:

- 46/69 kV: TE 101 through 104, TE 171, TE 200 through 202, TE 271
- 115 kV: TF 101 through 104, TF 171, TF 200 through 202, TF 271
- 138 kV: TG 200 through 202, TG 271
- 161 kV: TH 200 through 202 (exceptional cases only)
- 230 kV: TI 101, 102, 201, 202 (exceptional cases only)

5. General Installation Requirements

The following list covers the basic requirements for a cellular communications site installation on a power pole; it does not include all requirements for installation. Section EU, Joint Use, of the distribution construction standards is an excellent source of further information on this subject:

1. Installation of macro-cellular antennas are on a non-equipment pole. The pole is not encumbered by an air break switch, transformers, capacitor banks, regulators, deadend guys, or a three-phase dip.
2. Distribution facilities are nearby for providing electrical service.
3. Photographs are supplied of the pole and the surrounding area to be used for the proposed site. When available, the telecommunications company should also supply the facility point numbers from the pole tag.
4. Location and approval drawings of the proposed installation are supplied to PacifiCorp.
5. Zoning clearance and building permit(s), where required, are obtained by the telecommunications company.
6. Estimated electrical load information of the installation is provided to the company.
7. Project approval turn-around time is identified and a proposed installation schedule is outlined. The typical time span required for project approval is 45 days and may be extended for proposed installations on pole-carrying transmission facilities.
8. Antenna array wind loading information shall be provided to the company. A separate pole loading calculation study may be required.
9. Power outage for equipment installation is coordinated.
10. All work shall be performed by qualified workers per OSHA sections 1910.268, 1910.269, and Part 4 of the NESC.
11. All necessary modifications to the pole or associated electrical system to accommodate the installation shall be paid for by the telecommunications company.
12. Approval is obtained from the appropriate engineering department.

13. Communications equipment cabinets must not block access to the pole and must be installed in accordance with NESC, GO 95, and the ESR requirements. The preferred location is on adjacent private property, if possible, at least 10’ away from the pole. Conduits shall be run underground between the pole and the equipment cabinet(s).

14. The telecommunications company must notify the surrounding residents and landowners when the pole modifications will be made at least 48 hours in advance and in accordance with local ordinances.

15. The antenna owner shall provide lightning and over/under voltage protection adequate to protect their equipment from damage due to variations in voltage or current impulses.

16. The telecommunications equipment owner shall incur the cost of removing the equipment from a pole in the event that the equipment is abandoned.

17. The telecommunications company must notify PacifiCorp at least 45 days in advance when an outage will be required to service an installed antenna.

18. For transmission line structures, a Ground Potential Rise (GPR) test shall be performed by PacifiCorp. For more information about this test see Section 8.14 of this guideline. The cost of this test shall be the responsibility of the telecommunications company.

6. Small Cell Installation Guidelines

In addition to the general installation guidelines in the previous section, this section provides basic installation guidelines for small cell technologies on distribution poles. Small cell technologies include, but are not limited to, microcells, picocells/metrocells, and femtocells. All installations must meet the current applicable NESC, GO 95 (for California installations), and FCC clearances and requirements.

6.1. Antenna Installations

An antenna installed on a distribution pole will be limited by the antenna’s physical dimensions and weight based on the wind loading described in Section 8.8. This information shall be included in the application. Antennas may be installed on distribution poles in the supply space or communication space.

No antennas are allowed in the communications worker safety zone space. To maintain the climbability of the pole, it is preferred that no antennas may be installed if existing equipment is installed on the pole. In addition, only one antenna array may be installed on a pole. Figure 5 shows the possible antenna locations on the distribution pole. Pole-top extension may not be used to extend the height of the pole for antenna array installation.
Figure 5—Possible Antenna Locations on Distribution Pole

Antenna installation above the communications worker safety zone space are considered to be in the supply space. The antenna in Figure 5 above the neutral is an example of an antenna installed in the supply space. In addition to NESC, G.O. 95, and FCC requirements, installations may also need to comply with FAA regulations. See Section 8.6 for additional information.

Antenna installations below the communications worker safety zone space are considered to be in the communication space. The antenna in Figure 5 below the communications worker safety zone space is an example of an antenna installed in the communications space.
6.2. Antenna Communications Equipment, Meter, and Disconnect Switches

Other equipment required by the antenna shall be installed in a separate pedestal as shown in Figure 6 at a distance specified according to NESC, GO 95, and the ESR. See Section 8.11 for additional information.

The metering equipment shall be installed according to ESR requirements in a separate pedestal on the ground away from the pole along with other communications equipment. See Section 8.13 for additional information.

Power AC or DC disconnect switches must be provided in the pedestal to allow utility personnel and communication workers to power off the antenna to safely work on the pole. See Section 8.3 for additional information.
6.3. Conduits

Conduits may be needed to route supply cables and communication cables along the pole to and from the antenna. Conduit design shall be according to company underground standard GC 011, Conduit and Cable Pulling—Conduit System Design. The size and number of conduit risers is limited to the approved conduit bracket in GC 821, Bracket, Conduit, Extension. See Section 8.10 for additional information.

7. Top-to-Bottom Review and Inspection

The following list covers the basic requirements for a top-to-bottom review and inspection:

1. Verify that there is adequate clearance from the antenna, cable, and conduit to any conductor.
2. Verify that the antenna cable conduit is properly installed from the antenna array down to the transmit/receive units and banded to pole or standoff brackets depending on conduit size. If a single-phase dip is on the pole, the antenna cable conduit should be mounted on the same set of standoff brackets as the dip.
3. Antenna cable conduit is non-metallic.
4. Except for microcell antennas, antennas shall be properly mounted on the pole top only.
5. The customer’s meter shall be installed in accordance with the company ESR.
6. The customer has installed their own NEC-approved ground for their service to the meter, and is bonded to company grounds.
7. An enclosed service disconnect is installed. A manual transfer switch is installed where provisions are made for connecting to an emergency generator.
8. Communications landlines are installed in conduit or are covered.
9. Communications landline conduits are either banded to the pole or mounted on standoffs if the conduit is two inches (2") or larger in diameter.
10. The climbing space is not encumbered by the installation: 30° wide clear space on one face or quadrant of the pole. If the climbing space rotates, overlapping climbing space sections are provided.

8. Requirements Detail

8.1. Clean Pole

In order to prevent operational conflicts, it is preferred that cellular equipment should not be installed on a pole with other equipment. Structures with installed equipment such as air break switches, transformer banks, capacitor banks, voltage regulators, and three-phase dips will not be considered. For pole-top installations, the top of the pole should not utilize pole top pin conductor placement. Distribution class lines should be nearby to facilitate providing power for the antenna amplifiers. If no pole that meets the criteria is available, relocation of some facilities or replacing a short pole with a taller pole at the telecommunications company’s expense will be considered. Alternatively, a new pole may be installed in a long span at the telecommunications company’s expense.
8.2. Pole Configuration Requirements

The class, length, and burial depth of light-duty steel poles used for each antenna installation will be subject to the review and approval of the company. All cross arm and insulator attachment elevations must be identical to those of the original wood pole. To allow for internal cable routing on light-duty steel poles, brackets will be installed for mounting arms instead of through-vangs and insulator posts instead of through-bolts. No ground sleeves are to be used on light-duty poles.

Climbing ladders or climbing steps must be furnished on all steel poles fabricated to carry an antenna system. Company material specification ZT 004, Steel Pole Design and Fabrication, shall be used in conjunction with this standard for the construction of the steel pole.

For transmission and primary distribution poles, the coaxial cables feed directly through the base of the antenna into the top of the pole. Therefore, the pole-top flange plate shall be specified with a center opening. The minimum diameter of this opening is 8.5” to allow for future internal cable additions.

The coaxial cable access port is only necessary at the base of the pole. The diameter(s) of the opening(s) for cable exit will be determined by the telecommunications company. These holes must be fabricated by the pole supplier, not field-drilled, so that the pole supplier may reinforce the pole for section loss if necessary. The preferred conduit type for pole exit is Schedule 80 PVC or fiberglass conduit. The conduit must have a complete and weatherproof seal with the pole opening. An alternative material type may be used if deemed suitable by the company. The location of the lowest point of the access port opening(s) shall be two feet (2’) above the ground line.

8.3. Antenna Equipment Requirements

All antenna equipment details, except the mounting base plate, will be defined by the telecommunications company for each installation. The antenna mounting base plate must match the universal pole-top flange plate. These details shall be included in the application to the company.

AC and DC power disconnect switches shall be installed in a pedestal at a distance of 10’ away from the base of the pole. Installations less than 10’ will be reviewed on a case-by-case basis. The applicant will be required to specify compliance with NESC, GO 95, ESR, and local ordinances.
The switch box shall house the cutoff switch. The cutoff switch is an on/off switch which will control the AC power to the RF transmitter. RF-monitoring devices measure approximately 2” x 3” x 3/4” and should be worn by all authorized PacifiCorp personnel when servicing the pole.

Since many telecommunications antenna systems possess an automatic RF power backup system, use of the RF detectors will ensure the successful shutoff of the RF transmitter. Until the RF power is confirmed to be off, no PacifiCorp personnel may be within 50% of the maximum permissible exposure limit, per FCC regulations. The RF-detection devices shall be inspected by the company on a biannual basis, and recalibrated when necessary.

At the company’s discretion, the telecommunications company shall provide a sign affixed to the pole nearest the shutoff box reading “High Energy Field — RF Monitors Must Be Worn.”

As shown in the standard detail drawings, a canister-type antenna system is preferred and should be used if such a system is viable for the cellular telecommunications application being considered.

8.4. Making an Application

Requests from any telecommunications company wishing to install a macro-cell antenna on any company facility must be sent to the property management department. Requests for installation of small-cell antennas must be sent to the joint use department. They will process the requests and then forward them on for final approval to the corresponding engineering and operations department within the company. Installations involving a transmission structure would be forwarded to the transmission engineering department, installations involving a distribution pole or circuit would be forwarded to the appropriate area engineer, installations involving a substation would be forwarded to the substation department. They, in turn, will work with the telecommunications company to approve the proposed design, and coordinate the installation of the equipment.

The telecommunications company shall have the duty to propose a pole location for its antenna installation and submit a request to PacifiCorp. The request shall identify the applicant, the installation contractor, the address of the pole, the facility point number (from the pole tag) if present, a photograph of the upper portion of the pole and the area around it, and a drawing of the antenna facilities proposed to be attached. PacifiCorp may, upon request, provide cost estimates of any accommodations that may be necessary. The company may accept a proposed location, require changes to allow the installation at the telecommunications company’s expense, or decline the proposed location.

If the telecommunications company accepts the conditions for the antenna installation, the telecommunications company shall make application for electric service through normal procedures and notify the company representative that it accepts the conditions. If a joint-use contract covering the proposed installation does not already exist, one must be executed. The company representative will direct the telecommunications company to the appropriate department for next steps. No installation shall commence before a contract is signed by both parties and the application to attach is approved by the company.
8.5. Drawings

The drawings should not be conceptual drawings, but location specific and final for the proposed installation. Details should include clearances to current carrying conductors, down guys where required, equipment sizes and mounting locations, metering and electric service facilities and their proposed locations on the pole, and antenna array size and wind loading.

8.6. Zoning and Permits

The customer is wholly responsible for obtaining all government-required permits and approvals. The company is not responsible for obtaining these approvals, and is limited to the company retaining the right to remove the equipment if requested by the local authority.

The applying telecommunications company shall perform a TOWAIR (or Landing Slope Facility Calculator) study. The collected information shall be provided to the company, and PacifiCorp shall file an application with the FAA.

TOWAIR allows antenna structure owners to determine whether their structures are close enough to an airport or heliport to require an aeronautical study by the FAA and registration with the FCC. Under FCC Rules, the owner of an antenna structure that exceeds an imaginary line (i.e. “slope”) that runs outward and upward from the nearest point of the nearest runway of an FAA-listed airport or heliport must obtain an FAA study and FCC registration for that structure.

If it is determined that the designated structure must be registered, an Antenna Structure Registration (ASR) number must be obtained from the FCC. This number is required in order for the telecommunications company to begin construction at the site. If the FAA determines that the structure must be painted or lighted, the telecommunications company will effect this addition.

8.7. Electrical Load Information

The customer is required to supply the information showing the total anticipated electrical load for the proposed site. Failure to provide this information will result in immediate rejection of the application.

8.8. Antenna Wind Loading

The maximum allowable wind loading is based upon the transverse load capabilities of the pole calculated according to NESC or GO 95 for California installations. A taller pole or a different pole class may be required to accommodate the antenna array installation based on guidelines set in NESC or G.O. 95 for California. Wind loading information must be provided by the telecommunications company with the application. Refer to standard EB 011, *Poles—Class Selection*, of the distribution construction standards for an example of pole loading calculation.

8.9. System Modifications

The telecommunications company shall reimburse PacifiCorp for all engineering studies and modifications to the electrical system to accommodate the installation of their facility.
8.10. Conduit Installation

All communications conduit that enters the utility space must be non-conductive as per NESC 239H. All metallic conduit (outside of the utility space) on a pole must be bonded to the pole ground to avoid a shock hazard to a person climbing the pole.

All conduits on the pole must not interfere with the ability of a lineman to climb the pole. Conduits must be mounted on standoff brackets, and comply with section EU, Joint Use, of the distribution construction standards. Where a single-phase primary dip is on the pole, the communications conduit should be mounted on the conduit standoffs jointly with the company conduit unless otherwise specified by the local operations personnel. The maximum number of conduits allowed on a pole is limited to the allowable space on the standoff bracket.

8.11. Communication Equipment

The company prefers to have all equipment mounted on the ground away from the pole in a separate pad-mounted enclosure. Where this is not possible, and where agreed to by the company, NESC and G. O. 95 clearances and working space requirements shall be followed when communication cabinet is mounted on the pole. A communication cabinet unit, if approved by the company, over 12" in height must be mounted on a standoff bracket. The maximum size of the cabinet is a combined 26" wide by 26" tall by 20" deep, not including the standoff bracket. These limitations cover the total wind loading. If the equipment is larger than this, it should be mounted on the ground in a separate enclosure. Only one such cabinet will be considered on a pole.

8.12. Grounding

All communication equipment including antenna arrays and communication cabinets must be grounded in accordance with NESC, G. O. 95 and/or NEC requirements. If a ground is not available on the pole, the telecommunications company must request that PacifiCorp install a ground and be bonded to the system neutral according to NESC.

For transmission line structures, a Ground Potential Rise (GPR) test is required and shall be conducted by the company.

A GPR test evaluates the local soil and ground grid of any facility (usually a substation or generating station) and its associated power lines, transformers, and generators. Since the telecommunications company has its own ground remote to the substation, the potential difference (voltage) between the ground systems can become very large under fault conditions. The GPR test determines whether high voltages might occur between the grounds. If the test indicates a risk of ground fault, the telecommunications company shall install an isolation box (Positron) that does not allow the voltages from the remote ground and the local ground to come within a six-inch (6") proximity.

Transmission poles without grounded neutrals carry a similar risk of ground faults and must undergo a GPR test. Distribution poles with neutrals grounded at each pole are not a hazard because of their lower voltages and because many grounds are within close proximity which help dissipate fault currents.
When the test is completed the local telecommunications company shall be notified.

8.13. Meter Pedestal

The meter shall not be mounted on the pole but on a separate meter pedestal or attached to the pad-mounted enclosure where telecommunications equipment is installed in accordance with ESR and local ordinance requirements.

The meter base shall be a standard four-jaw meter base. This may be lockable if necessary for security reasons.

8.14. Climbing Space

All facilities must be installed in a manner that maintains adequate climbing space. The NESC defines the climbing space as a series of boxes 30" wide by 30" deep extending up the pole as shown in Figure 7. This is to provide the necessary space for an electrical worker to climb the pole. Therefore, if equipment already exists on the pole as illustrated in Figure 7, no antenna shall be installed on the pole as this will impede with the climbing space. In addition, the electrical worker wears a belt that wraps around the pole while they climb, the belt also allows them to position themselves on the pole to perform work. If the equipment extends more than 12" on the back-side of the pole, it will interfere with the belt; standoffs will then be required. The standoffs must be tall enough for the worker to put the belt through the space while wearing gloves. This is assumed to be at least 4-1/2". Additional information is available in standard EU 401, Joint Use—CATV on Poles.

![Figure 7—Climbing Space](image-url)
9. Handbook Issuing Department

The engineering standards and technical services department of the company published this document. Questions regarding editing, revision history and document output may be directed to the lead editor at eampub@pacificorp.com. Technical questions and comments may be directed to joint use or distribution standards engineering. This handbook document shall be used and duplicated only in support of company projects.
2U.2—Wi-Fi Antenna Installation Guidelines

1 Scope

This document covers the installation of wi-fi type antennas on distribution and streetlight poles. The guidelines contained herein are intended to avoid operational problems and to ensure installations comply with existing laws and regulations. This guide is not considered to be all-inclusive. Depending on the local operating and weather conditions, deviations from this document may be required as determined by local operations staff.

2 Special Conditions

Any attachment to supply-line or fiber systems where a wireless terminal is attached in the supply space and a tail or lead traverses the distance from the supply space into the communication space of the attached structure is prohibited. If the wireless device must connect to supply-line or fiber systems in the communications space, it shall be installed on a separate structure unless the wireless device is also permitted in the communication space.

3 Coordination between PacifiCorp and the Attaching Entity

Close coordination with the attaching entity will be necessary to complete the installation. This guideline may be shared with the attaching entity prior to designing the installation so that they may be aware of PacifiCorp’s basic requirements. Following are detailed requirements for attachments to PacifiCorp poles. For a checklist of deliverables due to the PacifiCorp Joint Use department, see Section NO TAG.

3.1 Attachment agreement

Entities wishing to install any equipment on PacifiCorp’s poles shall have a signed Attachment Agreement in effect prior to making application for attachment. If such an agreement is not currently executed, please contact PacifiCorp’s Joint Use department to arrange one.

3.2 Making an Application

All requests from any attaching entity wishing to install a wi-fi antenna on any PacifiCorp facility shall be sent to the PacifiCorp Joint Use department in Portland, Oregon. Prior to installing any equipment on PacifiCorp’s pole, the attaching entity shall make application and receive written approval from PacifiCorp to attach the antenna. PacifiCorp may accept a proposed location, require changes to allow the installation at the attaching entity’s expense, or decline the proposed location.

No installation shall commence until written approval is given from PacifiCorp’s Joint Use department. The request shall identify the applicant, the installation contractor, the
address of the pole, the facility point number (from the pole tag) if present, and a photograph of the upper portion of the pole or streetlight, including the surrounding wires and aerial space. In addition, the following information is required:

3.2.1 Wi-Fi Antenna Information
Requester shall provide PacifiCorp a copy of the wi-fi antenna’s physical and electrical information. This document shall have information on radio frequency (RF) exposure from the wi-fi antenna. The antenna’s RF shall be in accordance with the Federal Communications Commission (FCC) regulations regarding RF exposure from antennas to workers. Also, requester shall clearly and conspicuously post signs indicating:
• Safe working distance (approach distances) from the device; and
• Contact information for field workers, including information for temporary disabling of antenna at the site.

3.2.2 Electrical Load Information
Requester shall supply information for electrical connection, such as demand in kW, voltage required, and method of connection to source. PacifiCorp is not responsible for possible poor performance of the electrical supply due to incorrect information provided by the customer.

3.2.3 Physical Information for Devices
Requester shall provide physical dimensions for the device and antennae as well as weight information. A typical installation drawing or photo shall be submitted which demonstrates that the antenna is designed so as not to experience wind loading of more than four pounds per square foot based on 40 MPH wind.

3.3 Zoning and Permits
Requester is wholly responsible for obtaining all government-required permits and approvals. Furthermore, requester is responsible for removing the equipment if requested by the local authority.

3.4 Removal cost
The equipment owner shall incur all costs of removing the equipment from a pole in the event that the equipment is abandoned or no longer in service.

4 General Installation Requirements
This section identifies the basic requirements for a wi-fi antenna installation on a distribution or streetlight pole. For further detail on installation requirements, see the PacifiCorp Distribution Construction Standards, EU—Joint Use.
4.1 **Installation on Streetlight-Only Poles**

Antennas may be installed on streetlight-only poles without any utility primary wires or Joint Use attachments, provided the installation does not interfere with maintenance of the structure or streetlight.

All installations shall be made and maintained in compliance with the current National Electrical Safety Code (NESC), or if in California, General Order 95 (GO 95).

No additional devices are allowed on the pole without prior approval from the PacifiCorp Joint Use department.

![Figure 1—Typical Wi-Fi Antenna Installation on Streetlight Pole](image)

4.2 **Installation on Distribution Poles**

Antennas may be installed on primary and/or secondary distribution poles, either: 1) on the streetlight mast, provided the streetlight is located in the power supply space, or 2) on the pole in the communication space, using extension arm or crossarm construction, provided material and strength specifications are suitable and approved for such installations.

All installations shall be made and maintained in compliance with the current NESC, or if in California, GO 95.

No additional devices are allowed on the pole without prior approval from the PacifiCorp Joint Use department.

The following figures illustrate proper antenna installation on distribution poles.
Antenna shall be installed by qualified workers on streetlights located in the power supply space.

Clearance in any direction will be based on rule 235I, table 235-6, row 1b (3” to neutral, 3” to secondary, and 6” plus 0.4” per KV in access of 8.7 KV line to line primary voltage).

Figure 2—Antenna Installed in Power Supply Space

No antenna shall be attached to streetlights located in the communication worker safety zone, as described in rules 235C4 and 238E of NESC.

Figure 3—No Antennas on Streetlights in Communication Worker Safety Zone
Antenna may be installed in the communication space if attached to the pole. Antennas may not be installed on light fixtures located in the communication space.

Installations shall not impede the climbing space on the pole. The climbing space is intended to provide adequate clearances on the pole for safe ascent and descent by the crew. The climbing space must extend 40" (48" in California) above and below the communication circuit.

Figure 4—Antenna Installed on Pole in Communication Space

Figure 5—Climbing Space
5 Code requirements

5.1 Compliance with safety codes and rules
All attachments and work performed shall meet or exceed the requirements of the latest edition of the NESC (for example, rules 224A, 230C, 235C, 235I, 236, 238B, 238E, 239H, Section 42, Section 44 and 420Q); the Occupational Safety and Health Administration (rules 1910.268, 1910.097); applicable bulletins (FCC Bulletin 65 & IEEE C95.1, published in 1999); and the rules of any state agencies having jurisdiction.

5.2 Climbing Space
All facilities shall be installed in a manner that maintains adequate climbing space. The NESC defines the climbing space as a series of boxes 30 inches wide by 30 inches deep extending up the pole. See Figure 5 for more details.

5.3 Clearances
Local operations personnel may require a greater clearance distance to ensure that the approach distance is not compromised.

The following provides the minimum clearance from any part of the antenna to other equipment on the pole or ground surfaces. Refer to the latest copy of the NESC for other requirements or further detail:

1. Over the roadway, clearances shall exceed 16 feet.
2. Over driveways, parking lots, and alleys, clearances shall exceed 16 feet.
3. Over the pedestrian walkway, clearances shall exceed 12 feet.
4. Clearance to any supply wire shall be at least 48 inches.
5. Clearance to any other communications wire or equipment shall be 2 feet or more.
6. Horizontal clearance to pole surface shall be at least 2 feet.
7. The climbing space shall not be obstructed (see PacifiCorp Construction Standards EU—Joint Use).
8. Any antenna in the supply space shall be installed and maintained by workers authorized and qualified to work in the supply space.
9. All antennas shall be installed so as not to obstruct traffic control devices, signs, or vehicle sight lines.
10. No attachment method shall promote rust or decay of any kind to the pole or structure.
11. Some streetlights may have a wind rod attached above the arm. The wind rod must be considered part of the bracket-carrying luminaries as discussed in NESC rule 238C; therefore, clearances must be measured from this rod.
6 Checklist for Wi-Fi Attachments to PacifiCorp Facilities

Prior to attaching wi-fi devices to PacifiCorp facilities, the following must be provided to PacifiCorp's Joint Use department:

- Attachment Contract executed with PacifiCorp.
- All installation locations, including:
  - Pole number (from PacifiCorp pole plate);
  - Height of attachment;
  - Direction of any antennae (if applicable);
  - Address; and
  - Photographs of the top section of each pole showing streetlight and all attached wires/equipment.
- Employer's statement regarding qualification of employees performing installation (for installations in the supply space).
- Physical and electrical information, including:
  - Dimensions of device and antennae;
  - Weight;
  - Method of connecting to power source (e.g., photocell socket, etc.);
  - Maximum electrical demand in kW;
  - Voltage desired; and
  - Statement on size of RF field and worker-exposure limitations (include safe working distances and maximum exposure durations).
- Typical installation drawing or photo.
- Copies of applicable permits.

After PacifiCorp review:

- Corrections made either to the application or facilities in the field, if required by PacifiCorp.
- Receipt of Permit to Attach from PacifiCorp.

Post-Installation:

- Notification that installation is complete (to trigger post-installation inspection).
- Receipt of post-inspection results and required corrections.
- Receipt and payment of invoice for any billable work performed by PacifiCorp.

Maintenance:

- Any future pole attachments and/or equipment additions or replacements (where physical/electrical properties or location are altered) must be approved by the PacifiCorp Joint Use department.
7 Handbook Issuing Department

The Standards Engineering Documentation Department of PacifiCorp is responsible for issuing this document. Comments and suggestions are welcome. Additional copies may be obtained from:

Standards Engineering Documentation, Lloyd Center Tower
825 NE Multnomah St., Suite 1600, Portland, Oregon 97232
Telephone: (503) 813–5293  Fax: (503) 813–6804

Technical questions regarding the content of this document may be directed to PacifiCorp Standards Engineering, (503) 813–6883. Publication and use of this document is authorized by the Manager of Standards Engineering when the block below has been signed.

Approved:  
Dave Asgharian  
Standards Engineering

Approved:  
Greg Lyons, Manager  
Standards Engineering and Technology Development