

LOWEN TOWER LEASE AGREEMENT

This LEASE AGREEMENT is entered into between, the CITY OF SALEM, an Oregon municipal corporation, whose address is 555 Liberty Street SE, Salem, Oregon ("Lessor"), and Capitol Community Television (CCTV) 575 Trade St SE Salem, Oregon 97301 ("Lessee"), (collectively the "Parties").

Recitals:

- 1) Lessor owns, maintains, and operates a communications tower, located at 1875 Lowen St. NW Salem, Oregon ("Premises"). Latitude 44-56-34, Longitude 123-04-20 (Lowen Tower Location)
- 2) Lessee wishes to install communications equipment consisting primarily of radio or data telecommunications equipment on a communications tower ("Tower" owned or controlled by Lessor, located at 1875 Lowen St. NW in Salem, Oregon.
- 3) Lessee desires to lease a part of the Premises for the purpose of providing radio communications under the terms and conditions set forth herein.
- 4) Lessor agrees that such property may be used for such purposes upon the terms and conditions set forth herein.

Lease Agreement:

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein, Lessor and Lessee agree as follows:

Section 1: Leased Premises. Lessor leases to Lessee, subject to the terms and conditions in this Lease Agreement.

Section 2: Effective Date. The effective date of this Lease Agreement is the date both Parties sign this Lease Agreement ("Effective Date"). If the parties sign on separate dates, the latter date shall be the Effective Date.

Section 3: Original Term. Unless sooner terminated as provided herein, the term of this Lease Agreement shall commence on the Effective Date of this Lease Agreement and shall remain in effect for a period of two (5) years expiring on May 1, 2024. At the conclusion of this initial term, the contract will renew for One (1) year unless a party has given notice to the other of an intent to non-extend. This process shall continue such that at the end of each one year extension, unless notice of non-extension is given, an additional (1) one year term shall be added. Such notice of non-extension shall be in writing at any point prior to the expiration of the then current term. In the event a party provides notice of non-extension under this agreement, the agreement shall expire upon the conclusion of the current contract term. During any and all extensions of this agreement under this section, all other terms of this agreement

shall remain in effect, save for annual increases in charges by the City per Section 4, subsection C of this agreement.

Section 4: Rent.

- (a) Lessee shall pay Lessor, without demand, offset or counterclaim on the Commencement Date and on the first day of each calendar quarter month (Jan, April, July, Oct) during the Initial Term, rent in the amount of one thousand, four hundred and one dollars and 84 cents (\$1,401.84, the "Quarterly Rental Fee") subject to adjustment as provided herein. If the Commencement Date occurs on a date other than the first day of a month, the Quarterly Rental Fee shall be prorated for such partial months. Likewise, if the Term ends on a date other than the last day of the quarter, the Quarterly Monthly Rental Fee shall be prorated for such partial quarter.
- (b) The Quarterly Rental Fee is due and payable in advance on the first day of each quarter and shall be deemed delinquent if it is not received by Lessor within ten (10) days thereafter. If the Quarterly Rental Fee is not paid when due, then a late charge of the greater of two hundred dollars (\$200.00) or twenty percent (20%) of the Quarterly Rental Fee will be applied on all amounts due and unpaid shall bear interest at the rate of fifteen percent (15%) per annum from the date due until paid.
- (c) Beginning January 1, 2020 and each calendar year thereafter, the Monthly Rental Fee shall be increased in accordance with the ODOT/SRP Annual Collocation & Ground Lease Rental Rates published in January of each year. The increased Quarterly Rental Fee shall be rounded up to the next highest whole dollar amount. Rack space will be charged at one half of the published rate.
- (d) In addition to the Monthly Rental Fee, Lessee shall pay Lessor, if and when due, any sales, use, property or other taxes or assessments which are assessed or due by reason of this or Lessee's use of the Premises hereunder.
- (e) Lessor shall pay all power charges at the site. The lessee is responsible for all costs incurred to install and/or to attach to any utility.

Section 5: Technical Standards

- (a) Prior to the commencement of this Lease Agreement and as a precondition hereto, Lessee shall, at Lessee's sole expense, provide to Lessor a frequency harmonic and inter-modulation study made by a registered professional engineer acceptable to Lessor to prove that Lessee's proposed frequency usage will not cause interference to other installations on the Premises, and shall provide Lessor with a copy of such study, as well as copies of its application for a Federal Communications Commission (FCC) license, an existing Construction Permit or

FCC license for the site as applicable.

- (b) At Lessor's request prior to installation of any antennas, Lessee shall provide to Lessor a copy of a structural analysis conducted by a registered professional engineer acceptable to Lessor indicating to Lessor's satisfaction that Lessee's proposed equipment shall be within the design limit of the Premises. Lessee shall bear the cost of such study.
- (c) Lessee agrees that the operation and maintenance of its equipment shall at all times, and at Lessee's expense, comply with such technical standards as may from time to time be established by Lessor for the Premises, including without limitations, technical standards relating to frequency compatibility, radio interference protection, antenna type, and location.
- (d) Lessee shall utilize only qualified installation and maintenance personnel who have been approved in advance by Lessor, which approval shall not be unreasonably withheld.

Section 6: Interference

- (a) Lessee acknowledges that it will not have exclusive use of the Premises, which may be leased by others for radio broadcast or other purposes. At all times during the term of this Lease Agreement, Lessee agrees to use equipment of a type and tuned to a frequency that will not cause interference to other lessees on the Premises, and agrees to make no changes in or to its equipment or to its frequencies without the prior written consent of Lessor.
- (b) If, in the sole reasonable judgment of Lessor, Lessee's equipment causes interference in violation of this section, Lessee shall promptly take all steps necessary to correct or eliminate such interference. In the event of radio frequency interference where the Lessee is found to be responsible or partially responsible, Lessee shall be liable for all or part of the cost to correct those matters that caused the interference.
- (c) If such interference cannot be corrected within twenty-four (24) hours, Lessor may require Lessee to cease operating its equipment immediately. If Lessee does not cease operating its equipment within the period required by Lessor, Lessor may shut down Lessee's equipment.
- (d) If such interference cannot be corrected within ten (10) days of Lessee's being informed by Lessor of such interference, Lessor may, in its sole discretion, terminate this Lease Agreement or, alternatively, Lessor may require that Lessee cease operation of its equipment until such interference can be corrected or eliminated, at which time Lessee may resume operation of its equipment or Lessor may also remove a specific item of equipment causing such interference.

- (e) Lessee shall indemnify Lessor and hold it harmless from all expenses, costs, damages, loss, claims, or other liabilities arising out of any shutdown, unless the shutdowns was the result of Lessor's gross negligence or willful misconduct.
- (f) Lessee agrees to cease operations, except for intermittent testing on a schedule approved by Lessor, until the interference has been corrected to the satisfaction of Lessor.

Section 7: Equipment

(a) Lessee's Equipment.

- (1) Lessee shall clearly and conspicuously mark the equipment itemized in Exhibit A with weatherproof tape stating the Lessee's name, frequencies and twenty-four (24) hour emergency contact phone numbers. Lessee shall also post a copy of its FCC license on its transmitter upon installation.
- (2) The physical location of all equipment listed on Exhibit A will be determined by Lessor. No equipment other than that set forth in Exhibit A shall be installed without Lessor's written consent. If any equipment other than that described in Exhibit A is installed, Lessor may, at Lessor's sole discretion, increase the above stated Monthly Rental Fee, which increased fee shall be determined by Lessor.
- (3) Lessee shall, in the use of the Premises, comply with all federal, state, county, and local government laws, rules, and regulations, specifically including but not limited to appointing as specified in the use permit for the subject premises issued by the government in which the leased premises is located. Lessee will paint all feed-lines to match the Tower.

(b) Common Equipment.

- (1) Lessor contemplates that it may, at its sole option and expense, furnish and install antenna, transmission lines, combiner, multi couplers and/or other related equipment ("Common Antenna Systems") at the site.
- (2) Provided that the Common Antenna Systems are compatible with Lessee's equipment Lessor may require, by written notice to Lessee that Lessee connect its equipment to the Common Antenna Systems within 180 days of such notice.
- (3) Lessor may require Lessee to pay a one-time connection fee and a recurring Common Antenna Systems maintenance fee in connection therewith. After receipt of such notice, Lessee may elect to (a) terminate

this Lease Agreement or (b) so connect and pay the applicable fees. Lessee must notify Lessor of its election within thirty (30) days after receipt of Lessor's notice. If Lessee does not respond in said time period, Lessee shall be deemed to have elected option (a). If Lessee elects to terminate this Lease Agreement, such termination shall be effective one hundred eighty (180) days after the date of such notice to Lessor.

Section 8: Obstruction Painting.

- (a) Lessor shall be responsible for maintenance of any obstruction painting and lighting equipment as required by the Federal Aviation Administration in the absence of any of Lessee's equipment and shall periodically inspect same to ensure its working condition. Lessor shall take prompt action to repair any damaged or failed lighting equipment upon notice to Lessor by Lessee or discovery by Lessor of such damage or failure.
- (b) Lessee shall be responsible to make its own inspection and determination of the adequacy of any existing obstruction painting and lighting and for compliance with any and all requirements promulgated upon it by the Federal Aviation Administration, the Federal Communications Commission, and/or any other federal, state, or local government entity.
 - (1) Lessor grants Lessee, at Lessee's expense, the right to install and maintain an alarm system to monitor failure of any required obstruction lighting, and Lessee shall have access to the appropriate electrical distribution panels for this purpose.
 - (2) Lessor is aware of the obligations other owners promulgated at Title 47, United States Code, Section 303 (Q).

Section 9: Environmental

- (a) Lessor represents and warrants to Lessee that Lessor has never generated, stored, handled, or disposed of any hazardous waste or hazardous substance upon the Premises, and that Lessor has no knowledge of such uses historically have been made of the Premises or such substances historically having been introduced thereupon.
- (b) Lessee shall be solely responsible for and shall defend, indemnify, and hold Lessee, its officers, employees, and agents harmless from and against any and all claims, costs, and liabilities, including attorney's fees and costs, arising out of or in connection with the cleanup or restoration of the Premises associated with Lessee's use of asbestos, hazardous substance, waste, waste materials, or

hazardous materials as defined by any federal state, or local environmental or safety law or regulation, including but not limited to CERCLA.

Section 10: Termination.

(a) Termination by Lessor.

- (1) Lessor may terminate this Lease Agreement effective upon the mailing of written notice upon the happening of one or more of the following events of default:
 - (A) In the event Lessee terminates the City of Salem-Eagle Crest Tower Space Lease Agreement in effect with Lessor.
 - (B) Failure of Lessee to comply with any other term or condition, or fulfill any other obligation of the lease within 30 days after written notice by Lessor specifying the nature of the default with reasonable particularity. If the default is of such a nature that it cannot be completely remedied within the 10-day period, this provision shall be complied with if Lessee corrects the default within the 10-day period and thereafter proceeds with reasonable diligence and in good faith to effect the remedy as soon as possible.
 - (C) Abandonment by the Lessee of the Premises.
- (2) Lessor may terminate this Lease Agreement, effective after 60 days' written notice to Lessee or at such later date as may be established by Lessor, under the following conditions:
 - (A) If the federal or state laws, regulations, or guidelines are adopted, modified, or interpreted, in such a way that the use of the Premises under this Lease Agreement is no longer permitted.
 - (B) If Lessor deems the demolition and removal of the Premises is necessary for the public interest.
 - (C) If the Lessor is no longer able, for budgetary or other operational reasons, to maintain the Premises.
 - (D) If a condemning authority takes all of the Premises or a portion sufficient to render the remaining premises reasonably unsuitable for the use that Tenant was then making of the premises.
 - (E) If the Premises is destroyed or damaged such that the cost of repair

exceeds 25% of the value of the structure before the damage.

- (3) On termination of this Lease Agreement, Lessor shall be entitled re-enter, take possession of the Premises and remove any persons or property by legal action or by self-help, with the use of reasonable force and without liability for damages. The foregoing remedies shall be in addition to and shall not exclude any other remedy available to Lessor under applicable law and in equity.
- (b) **Termination by Lessee.** This Lease Agreement may be terminated by Lessee by not less than thirty (30) days' prior written notice to Lessor.
- (c) Lessor and Lessee agree that prior to either party terminating this Lease Agreement, both parties will meet to discuss options and consequences.
- (d) Any termination of this Lease Agreement shall not prejudice any rights or obligations accrued to the parties prior to termination.
- (e) Upon termination of this Lease Agreement, Lessee shall immediately arrange with Lessor for the removal of Lessee's equipment from the Premises and the repair of any damage to the Premises caused by or as a result of Lessee's equipment, reasonable war and tear excepted, all at Lessee's expense.

Section 11: Liens. Lessee shall not cause or allow any liens or encumbrances, including but not limited to construction or materialman's liens, to be imposed upon the Premises without the consent of the Lessor. If any lien or other encumbrance or assessment is imposed upon the premises as a result of Lessee's activities, Lessee shall proceed immediately to remove it.

Section 12: Use of Premises; Surrender at Expiration. Lessee shall use the Premises for the purpose of radio communications. Upon vacation of the Premises, Lessee shall surrender the Premises good condition, ordinary wear and tear excepted.

Section 13: Common Privileges and Uses. In addition to the specific privileges, uses, rights and interests granted to Lessee in this Lease Agreement, Lessee shall have the common privileges, uses, rights and interests granted to all Lessees, including the non-exclusive use of the public facilities at the Premises and the non-exclusive use of common use areas, which areas may be changed, altered or modified from time to time at the discretion of Lessor.

Section 14: Improvements, Signs, and Notification of Dangers.

- (a) **Improvements.** Lessee shall make no improvements to the Premises without prior written approval of Lessor.
- (b) **Signs.** Lessee shall not erect, install, operate or cause, nor permit to be erected, installed or operated upon the Premises any sign or other device without the prior

written consent of Lessor, which it may withhold in its sole discretion. The plans and specifications of any sign must have been approved in writing in advance by Lessor. Any signs installed by Lessee shall conform to Lessor's regulations and ordinances regarding the installation or maintenance of such signs. Unless otherwise allowed by Lessor, Lessee agrees at its cost to remove such signs and to restore the Premises within thirty (30) days after expiration or termination of the Lease Agreement. Lessee shall immediately repair any damage caused by such removal and leave the Premises free and clear of all debris.

- (c) **Notification of Dangers.** Lessee shall notify Lessor of any dangers to person or property, or any dangerous conditions, that exist on the Premises, which are either known or discovered by Lessee. Lessee shall inform its employees and agents of any known or discovered dangers, or any dangerous conditions, that are present on the Premises, until such time as the condition is remedied by Lessor.

Section 15: Compliance with Laws. Lessee agrees to comply with all local, state, and federal laws, codes, and regulations, including but not limited to environmental laws, now in effect or which may be enacted during the term of the Lease Agreement respecting Lessee's use of the Premises. Lessee shall not use, or allow the Premises to be used by its officers, agents, employees, and invitees for any unlawful or hazardous purpose and Lessee will neither commit nor allow others to commit any nuisance on the premises.

Section 16: Assignment and Sublease.

- (a) This Lease Agreement shall be binding upon Lessor and Lessee and their respective successors and assigns, except that Lessee shall not assign or sublease the whole or any of the rights granted hereunder, without the prior written consent of Lessor, which Lessor may in its sole discretion withhold. In the event of assignment or sublease of the Premises as provided in this section, Lessee shall remain obligated and liable under all the terms and conditions of this Lease Agreement, as if there had been no assignment or sublease. The assignee or sublease shall provide that nothing in such assignment or sublease shall be construed so as to modify, in any way, the provisions of this Lease Agreement. In the event of conflict between the language of this Lease Agreement and the language of the sublease or assignment, the language of this Lease Agreement shall govern.
- (b) Lessor reserves the right to assign, pledge, or transfer this Lease Agreement and will provide not less than thirty (30) days written notice to Lessee.

Section 17: Lessor's Right of Entry. Lessor reserves the right at any time without notice to enter upon the Premises through its designated agents or employees for any purpose necessary, incidental to or connected with the performance of its obligations under this Lease Agreement or in the exercise of its proprietary or governmental functions, except that Lessor shall not so enter and occupy the Premises as to materially hinder or prevent normal use of the Premises by

Lessee, without Lessee's consent, which shall not be unreasonably withheld. Lessor reserves the right to enter and take possession of the Premises in case of emergency for the purpose of preventing sabotage or otherwise protecting the Premises. During such emergency Lessor shall relieve Lessee from any obligation to comply with any provision of this Lease Agreement.

Section 18: Relocation. In the event the Premises are required by the Lessor for any reason, Lessor shall attempt to provide reasonable relocation of an equivalent space at a mutually suitable location or within the Premises.

Section 19: Access to Premises. Lessor shall provide necessary ingress and egress to the Premises and reasonably attempt to keep the access way in good repair during the term of this Lease Agreement.

Section 20: Indemnity.

- (a) Lessee agrees to defend, indemnify, release, and hold Lessor, its officers, agents, and employees and affiliates harmless from and against any and all losses, damages to persons or property, injuries or deaths of persons, liability, claims, liens, demands and causes of action of every kind and character, including environmental liability, and including the amounts of judgments penalties, interest court costs and legal fees incurred by Lessor in defense of same ("Claims") arising in favor of any person, corporation or other entity, including the parties hereto and their employees, contractors and agents as the result of any break by Lessee of any covenant or condition of this Lease Agreement, or as the result of Lessee's use or occupancy of the Premises, or any careless, negligent, or improper acts or omissions of Lessee, except for claims arising from the gross negligence or willful conduct of Lessor, its officers, agents or employees.
- (b) Lessee warrants to Lessor that its indemnity obligation will be supported by liability insurance to be furnished by it or self-insurance program that complies with state law; provided that recovery under or in respect of this indemnity shall not be limited to the proceeds of any such insurance. Lessee's indemnity obligation under this Lease Agreement extends to the acts and omissions of any agent, officer, employee, invitee, permittee, or visitor of Lessee. The indemnity obligations under this section shall survive termination of this Lease Agreement for any reason.
- (c) Lessee shall have control of the defense and settlement of any claim that is subject to sections 20.a or 20.b; however, neither Lessee nor any attorney engaged by Lessee shall defend the claim in the name of the Lessor, nor purport to act as legal representative of the Lessor or any of its officers, employees, or agents, without first receiving from the Lessor, in a form and manner determined appropriate by Lessor, authority to act as legal counsel for Lessor, nor shall provider settle any claim on behalf of the Lessor without the approval of the Lessor. Lessor may, at its election and expense, assume its own defense and

settlement in the event that Lessor determines that Lessee is prohibited from defending Lessor, or is not adequately defending the Lessor's interests, or that an important governmental principle is at issue and Lessor desires to assume its own defense.

Section 21: Insurance.

- (a) Lessee shall obtain and keep in effect at its own cost during the term of this Lease Agreement comprehensive or commercial general liability insurance covering bodily injury and property damage. This insurance shall include personal injury coverage and contractual liability coverage for the indemnity provided under this Lease Agreement. The combined single limit per occurrence shall not be less than that under the Oregon Tort Claims Act, ORS 30.270, et seq., or \$1,000,000, whichever is greater. The certificate of insurance shall name the Lessor, its officials, officers, agents and employees, as additional insureds with respect to claims arising out of Lessee's activities under this Lease Agreement. Lessee shall provide a copy of the certificate to the Lessor. The insurance coverage shall not be amended, altered, modified or canceled insofar as the coverage contemplated herein is concerned without at least 30 days' prior written notice. Lessor reserves the right to require periodic adjustment of insurance coverage based upon then current industry standards or statutory limits.
- (b) Lessee, as a government body, may fulfill the insurance obligations listed above through a program of self insurance; provided that the self-insurance program complies with applicable laws and provides insurance coverage equivalent to both type and level of coverage to that listed in section 21(a).

Section 22: Renegotiation. Nothing in this Lease Agreement shall be construed or interpreted in any manner whatsoever as prohibiting or limiting the renegotiation or amendment of lease terms or execution of a new lease.

Section 23: Waiver. The failure of any party hereto to insist upon strict performance of any of the covenants, terms or conditions of this Lease Agreement shall not be construed to be a waiver or relinquishment of such, or any other covenants, terms or condition, but the same shall be and remain in full force and effect.

Section 24: Notices. All notices required or permitted by this Lease Agreement shall be writing and shall be deemed to have been properly given when delivered personally or sent by mail with all postage fully prepaid to the parties hereto at the respective addresses set forth below, or to such other address as may be furnished by either party to the other in writing:

Lessor:

Lessee:

City of Salem
Attention: Real Estate Supervisor

CCTV
Attention: Alan Bushong

555 Liberty Street SE
Salem, OR 97301

575 Trade St SE
Salem, OR 97301

Section 25: Interpretation of Lease Agreement. Nothing in this Lease Agreement shall be construed as requiring Lessor to incur costs or expenses for operating or maintaining the Premises, nor shall Lessor be liable for any loss sustained by Lessee, because of damage from any source whatsoever, irrespective of any prior or subsequent knowledge on the part of Lessor respecting the possibility of such damage.

Section 26: Entire Agreement. This Lease Agreement constitutes the entire agreement between the parties with respect to these Premises. It supersedes all prior agreements, negotiations, and representations between the parties, whether written or oral pertaining to the Premises. This Lease Agreement may be amended only by written instrument executed with the same formalities as this Lease Agreement.

Section 27: No Joint Venture. Lessee is an independent entity and not a contractor nor agent of the Lessor for any purpose. Nothing contained in this Lease Agreement shall be deemed or construed by the parties hereto or by any third party to create the relationship of principal and agent or a partnership, joint venture or of any other association whatsoever between the parties in the operation and use of the Premises other than the relationship of Lessor and Lessee.

Section 28: Severability. The invalidity or unenforceability of any provision of this Lease Agreement shall not affect or impair the validity of any other provision contained herein.

Section 29: Paragraph Headings. The paragraph headings herein are for convenience only, and do not define, limit or construe the contents of such paragraphs.

Section 30: No Warranties. Lessee acknowledges that no representations as to the condition or use of the Premises have been made by the Lessor or any agent or person acting for Lessor. Lessee acknowledges and affirms that the Premises and the Premises are not now, and may not hereafter, be secured facilities, and the Lessor makes no representation or warranty as to the current or future security of persons or property within the Premises or the Premises. Lessee hereby assumes the risk of loss or damage to persons or property which may result of the existence of any condition on the Premises that might now or hereafter affect Lessee's use.

Section 31: Rule of Construction. Any rule of construction interpreting this instrument against its drafter shall be inapplicable.

Section 32: Counterparts and Facsimile. This Lease Agreement may be executed in one or more counterparts all of which shall be considered one and the same. This Lease Agreement shall be effective only when one or more counterparts have been signed by and delivered to each of the Parties. An agreement executed and transferred by facsimile shall be deemed a duly executed, and fully enforceable, agreement.

Section 33: Lessee Certification. Lessee understands and agrees to the terms and conditions of this Lease Agreement and certifies that the information provided to Lessor for the purpose of executing this Lease Agreement is true and accurate and that the undersigned is duly authorized by Lessee to enter into this Lease Agreement on its behalf.

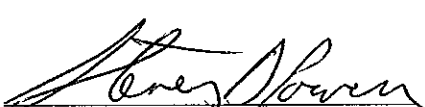
IN WITNESS HEREOF the parties have caused this Lease Agreement to be signed in their respective names by their duly authorized representatives as of the dates set forth below.

LESSOR

LESSEE

CITY OF SALEM,
an Oregon municipal corporation

Capitol Community Television

By: 
Name: Steven D. Powers
Title: City Manager
Date: July 24, 2019

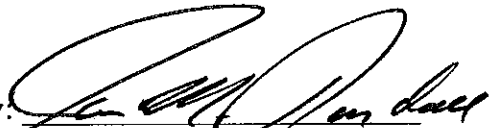
By: 
Name: JAMES M. RANDALL
Title: President of the Board
Date: 7/9/19

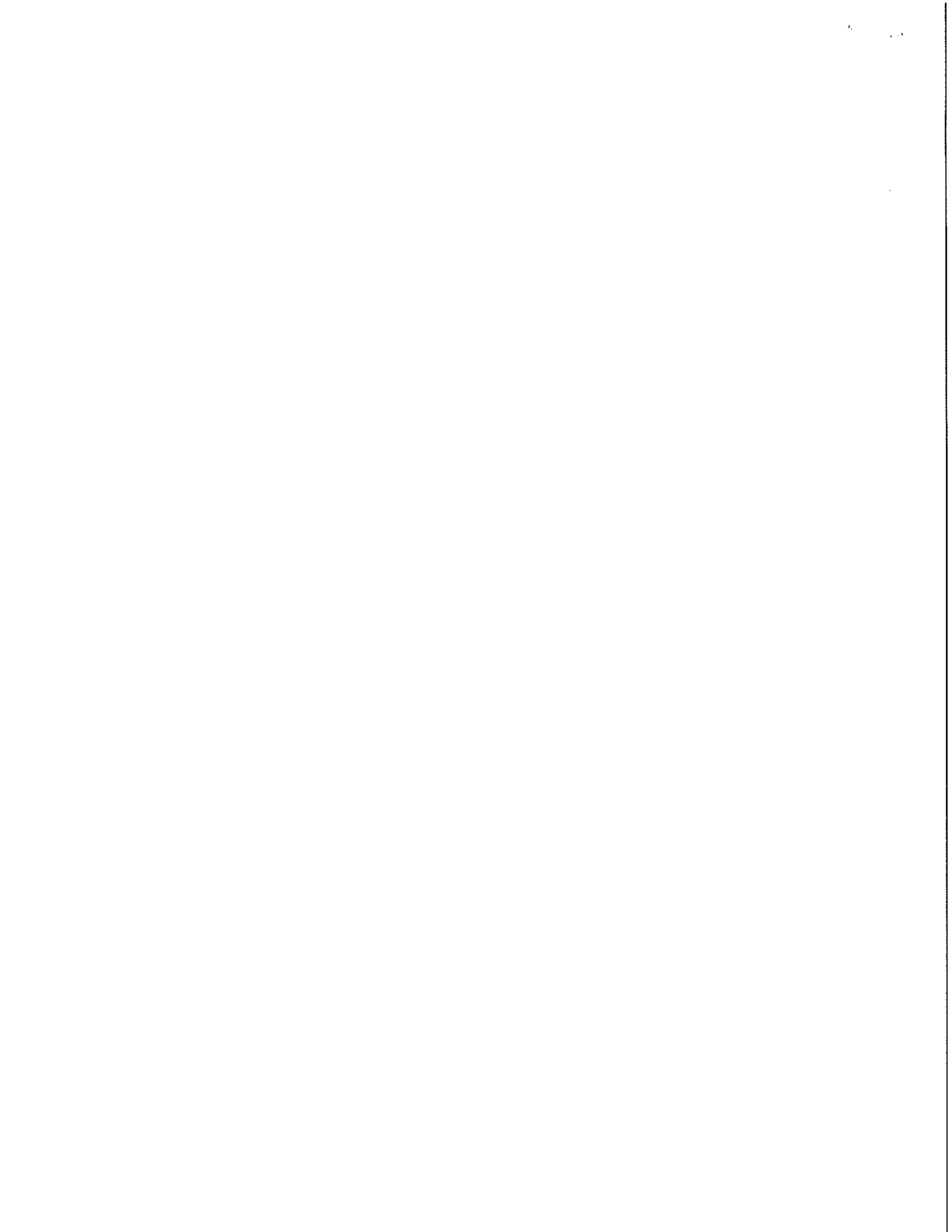
Exhibit A1 ***FIRST HQP***

ver1.0

| TRANSMITTER EQUIPMENT TECHNICAL INFORMATION | | |
|--|--|--|
| TRANSMITTER : **LINK IS A BI-DIRECTIONAL MICROWAVE DISH, WITH SIMULTANEOUS TRANSMISSION & RECEPTION** | | |
| Mfg. <u>Mimosa</u> Type Accepted No. _____ Age _____(yrs.) New <u>X</u> | Model No. _____ Serial No. <u>TBA</u> Model Year <u>2019</u> | B5 (dish and electronics integrated) |
| TRANSMITTER ISOLATORS OR CIRCULARS USED : | | |
| Mfg. <u>NONE</u> Age _____ yrs New _____ Model Year _____ | Model No. <u>NONE</u> Serial No. _____ Number ISO used: _____ | Total isolation achieved <u>N/A</u> db |
| ANTENNA AND CABLE SYSTEM : | | |
| Antenna : Mfg. <u>Mimosa</u> Type <u>_____</u> dish Model <u>B5</u> Gain <u>25</u> dBi Age <u>_____</u> yrs. New <u>x</u> Direction <u>101.5</u> degrees Height: (AGL) Top approx AGL <u>137</u> ft Bottom approx AGL <u>135</u> ft Polarization: Horizontal _____ Vertical _____ Circular _____ dual polarizatio <u>xx</u> Number of fitting adapters used in transmitter system. _____ | Cable Mfg. _____ Cable Dia. <u>0.25</u> " Cable Len. Inside Bldg. _____ Cable Len. Outside Bldg. _____ Cable fittings type: N _____ UHP _____ RJ45 _____ Cable Type _____ 2x: CAT6 Shielded | Shireen -- two cables: one active + spare <u>TBA, depending on routing</u> ft <u>TBA depending on routing</u> ft |
| EMISSION : | | |
| Call Sign _____ unlicensed <u>xx</u> Emission Type <u>4X4:4 MIMO OFDM up to 256QAM</u> True Power _____ Watts Emission Bandwidth _____ Watts EIRP <u>+30dBm (1W)</u> | | |
| FREQUENCIES: | | |
| Mhz Ghz KhZ | <u>5150 to 5875 MHz</u> <u>this link is an unlicensed service</u> _____ _____ _____ | _____ _____ _____ |
| It is understood and agreed that the transmitter will not be placed in service until it is properly licensed. Initial _____ M.B. _____ this link is an unlicensed service | | |
| OTHER RELATED DATA : | | |
| Transmitter equipment will be located in small room located off the AT&T building. One half of a 84" Rack will be provided by Lessor | | |

Exhibit A1 (cont)

| RECEIVER EQUIPMENT TECHNICAL INFORMATION | | |
|---|---|--|
| **SEE TRANSMITTER SECTION, ABOVE** | | |
| 26. RECEIVER: | Mfg. _____ Type Accepted No. _____ Age _____ yrs. | Model No. _____ Serial No. _____ New _____ Model Year _____ |



27. MULTICOUPLER ___ Mfg. _____ Model No. _____
 DUPLEXER ___ Serial No. _____
 CAVITY ___ Age _____ (years) Number of Rx's on system _____
 New ___ Model year _____ Cabinet Mount? Yes ___ No ___
 Rack Mount? Yes ___ No ___ Type of fittings used? N ___ UHF ___ BMC ___
 Free Standing? Yes ___ No ___

28. ANTENNA AND CABLE SYSTEM USED : Same as transmit cable and antenna system?
 Yes ___ No ___

ANTENNA : CABLE :

Mfg. _____ Mfg. _____
 Type _____ Type _____
 Model No. _____ Dia. _____
 Direction _____ degrees Length inside Bldg. _____ ft
 Height (AGL) Top _____ ft Length outside Bldg. _____ ft
 Height (AGL) Bottom _____ ft Type of fittings N ___ UHF ___ BHC ___
 Polarization Vertical _____
 Horizontal _____

Number of fitting adapters used in receiver system? _____

29. FREQUENCIES :

| | | | |
|-----|-----|-------|-------|
| Mhz | Ghz | _____ | _____ |
| | | _____ | _____ |
| Khz | | _____ | _____ |
| | | _____ | _____ |

30. OTHER RELATED DATA : (Tones, etc.)

Receive equipment will be located in small room located off the AT&T building.
 One half of a 84" Rack will be provided by Lessor

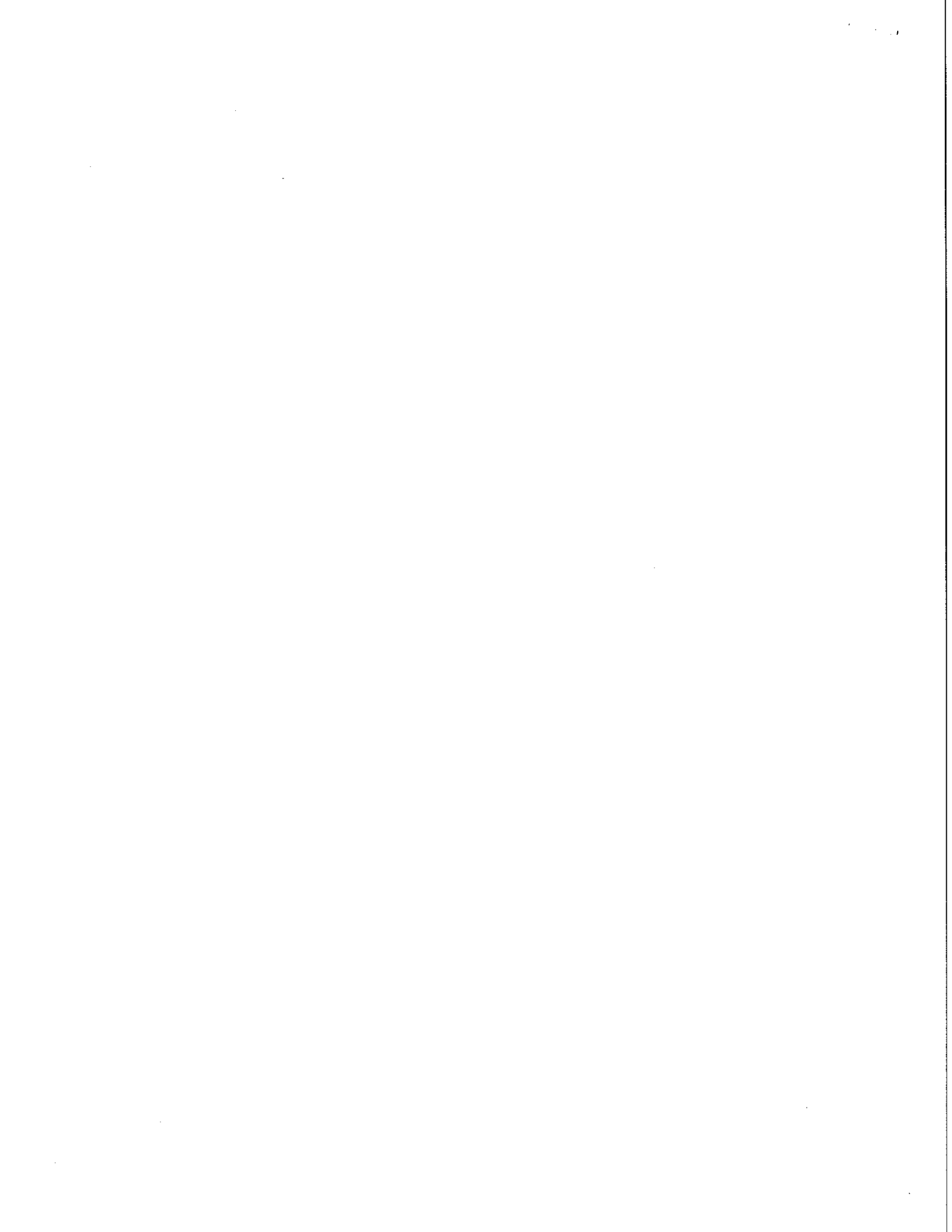


Exhibit A2 ***SECOND HOP***

ver 1.0

TRANSMITTER EQUIPMENT TECHNICAL INFORMATION

TRANSMITTER :

****LINK IS A BI-DIRECTIONAL MICROWAVE DISH, WITH SIMULTANEOUS TRANSMISSION & RECEPTION****

| | |
|------------------------------------|---------------------------|
| Mfg. <u>Cambium</u> | Model No. <u>PTP 820S</u> |
| Type Accepted No. _____ | Serial No. <u>TBA</u> |
| Age _____ (yrs.) New <u>X</u> | Model Year <u>2019</u> |

TRANSMITTER ISOLATORS OR CIRCULARS USED :

| | |
|---------------------------------|------------------------|
| Mfg. <u>NONE</u> | Model No. <u>NONE</u> |
| Age _____ yrs | Serial No. _____ |
| New _____ Model Year _____ | Number ISO used: _____ |

Total isolation achieved N/A db

ANTENNA AND CABLE SYSTEM :

| | |
|--|---|
| Antenna : Mfg. <u>Cambium</u> | Cable Mfg. <u>TBA</u> |
| Type _____ 3ft dish | Cable Dia. <u>TBA</u> |
| Model <u>PTP 820 3ft ANT, SP</u> | Cable Len. Inside Bldg. <u>TBA, depending on routing</u> ft |
| Gain <u>33</u> dbi Age <u>yr</u> New <u>x</u> | Cable Len. Outside Bldg. <u>TBA, depending on routing</u> ft |
| | Cable fittings type <u>N</u> <u>UHP</u> <u>BNC</u> |
| Direction <u>201.8</u> degrees | Cable Type <u>2</u> cables: 14 gaa twisted pair power; & Fiber Optic Cable IP-20_FO_MM_LC2LC_OUT |
| Height: (AGL) Top_(est.) <u>137</u> ft Bottom_(est.) <u>135</u> ft | |
| Polarization: Horizontal _____ Vertical _____ Circular _____ | <u>TBA</u> Dia _____ |
| Number of fitting adapters used in transmitter system. _____ | |

EMISSION :

Call Sign TBA Emission Type QPSK TO 2048 QAM w/ACM
 True Power _____ Watts Emission Bandwidth _____ Watts
 EIRP 62dBm or less / 1585 Watts

FREQUENCIES:

| | | |
|-----|------------------------------------|-------|
| | <u>6GHz licensed TBA</u> | |
| Mhz | <u>Currently being coordinated</u> | _____ |
| Ghz | _____ | _____ |
| Khz | _____ | _____ |
| | _____ | _____ |

It is understood and agreed that the transmitter will not be placed in service until it is properly licensed.

Initial _____ MB _____.

OTHER RELATED DATA :

Transmitter equipment will be located in small room located off the AT&T building.
 One half of a 84" Rack will be provided by Lessor

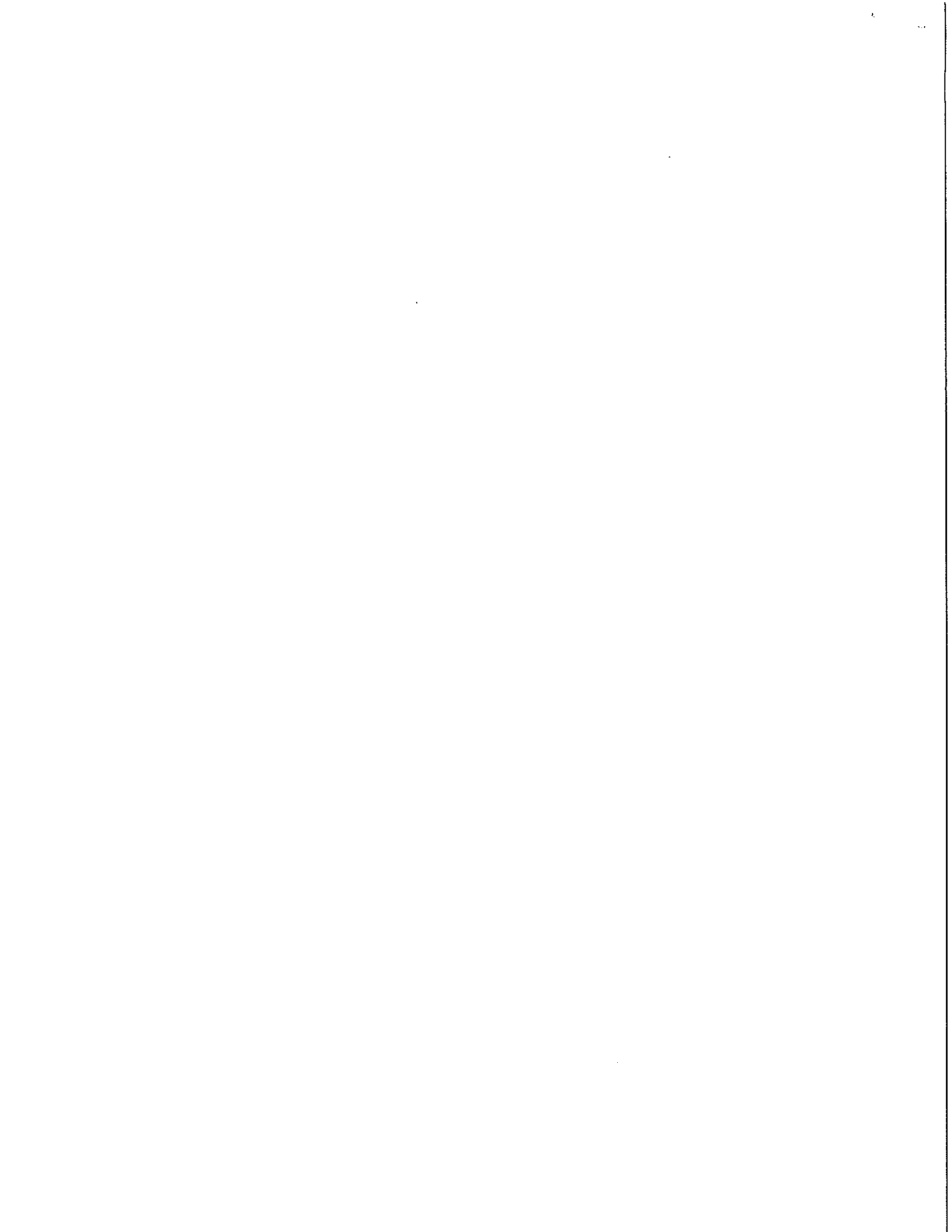


Exhibit A2 (cont)

RECEIVER EQUIPMENT TECHNICAL INFORMATION

****SEE TRANSMITTER SECTION, ABOVE****

26. RECEIVER: Mfg. _____ Model No. _____
 Type Aceoated No. _____ Serial No. _____
 Age _____ yrs. New _____ Model Year _____

27. MULTICOUPLER _____ Mfg. _____ Model No. _____
 DUPLEXER _____
 CAVITY _____ Age _____ (years) Serial No. _____
 New _____ Model year _____ Number of RX's on system _____
 Rack Mount? Yes _____ No _____ Cabinet Mount? Yes _____ No _____
 Free Standing? Yes _____ No _____ Type of fittings used? N _____ UHF _____ BMC _____

28. ANTENNA AND CABLE SYSTEM USED : Same as transmit cable and antenna system?
 Yes _____ No _____

| | |
|--|--|
| ANTENNA : Mfg. _____ Type _____ Model No. _____ Direction _____ degrees Height (AGL) Top _____ ft Height (AGL) Bottom _____ ft Polarization _____ Vertical _____ Horizontal _____ | CABLE : Mfg. _____ Type _____ Dia. _____ Length inside Bldg. _____ ft Length outside Bldg. _____ ft Type of fittings N _____ UHF _____ BHC _____ |
|--|--|

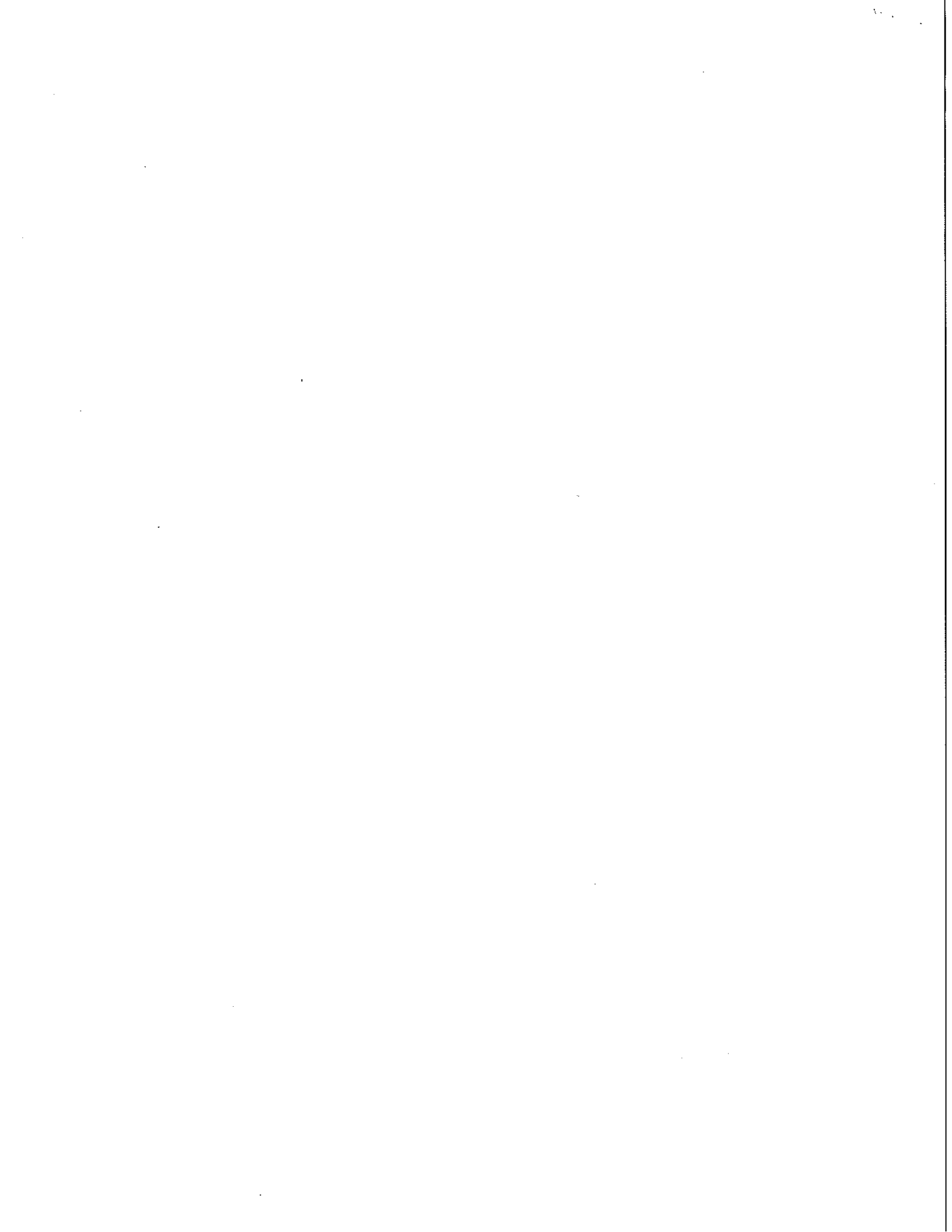
Number of fitting adapters used in receiver system? _____

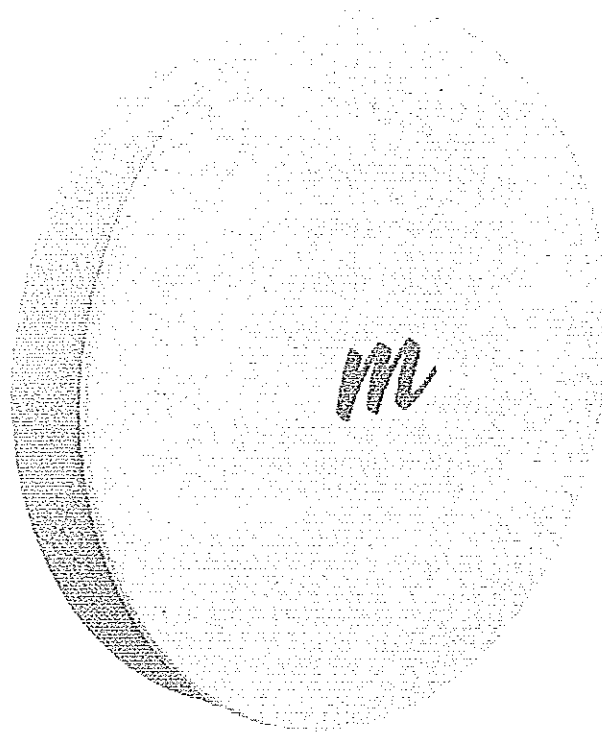
29. FREQUENCIES :

| | | | | |
|-----|-----|-------|--|-------|
| Mhz | Ghz | _____ | | _____ |
| | Khz | _____ | | _____ |
| | | _____ | | _____ |
| | | _____ | | _____ |

30. OTHER RELATED DATA : (Tones, etc.)

Receive equipment will be located in small room located off the AT&T building.
 One half of a 84" Rack will be provided by Lessor





Gigabit Backhaul Made Easy

The Mimosa B5 backhaul radio is hands down the easiest to use and highest capacity unlicensed 5 GHz backhaul solution for short and mid-range link applications. Ideal for collocation applications, relay sites and building-to-building settings.

Incredibly Fast. Incredibly Flexible.

Recognized as the fastest unlicensed backhaul in the industry. Extensive bandwidth control options, low latency, reserved bandwidth and GPS sync mode mean peak performance.

Monitor with Ease

Assessing link health and identifying potential problems has never been easier. Links are instantly monitored by our Mimosa Cloud service with rich data collection and analysis.

Ultra Rugged

Carrier-grade IP67 design allows the B5 to withstand the harshest of environmental conditions.

Just Mount and Go

The integrated high gain antenna and super easy quick mount lets you install in minutes, and accurately aim the B5 using the Mimosa smartphone aiming tool.

Easily Add New Links

Spectrum friendly. Unique high precision GPS Sync technology reuses the same channel network wide. Keep adding more capacity to more sites and waste less spectrum.

Double Reliability

Tames unlicensed spectrum interference via custom engineered multi-channel and auto-everything technology. As good as two smart links in one radio.

Technical Specifications

Performance

- **Max Throughput:** Up to 1.5 Gbps IP aggregate UL/DL (1.7 Gbps PHY)
- **Low Latency:** Configurable to 5ms+
- **Wireless Protocols:** TDMA, TDMA-FD, Auto-TDMA

Radio

- **MIMO & Modulation:** 4x4:4 MIMO OFDM up to 256QAM
- **Bandwidth:** Single or Dual 20/40/80 MHz channels
- **Frequency Range:** 5150-5875 MHz restricted by country of operation (*new* US/FCC 5600-5650 support)
- **Max Output Power:** 30 dBm (2-stream), 27 dBm (4-stream)
- **Sensitivity (MCS 0):**
 - 87 dBm @ 80 MHz
 - 90 dBm @ 40 MHz
 - 93 dBm @ 20 MHz

Antenna

- **Gain:** 25 dBi
- **Beamwidth (3dB):** 8° (HPOL and VPOL)
- **Elevation Adjust:** ± 20° mechanical adjust
- **Front-to-Back Ratio:** >30 dB
- **Cross-Polar Isolation:** >20 dB
- **Polarization:** Dual-Linear (horizontal & vertical)

Power

- **Max Power Consumption:** 20W
- **System Power Method:** 48 V DC 802.3 at compliant power injectors
- **System Lightning & ESD Protection:** 6 kV
- **PoE Power Supply:** Passive POE compliant, 48-56 V Power over Ethernet supply with IEC61000-4-5 surge protection

Physical

- **Dimensions:** Diameter - 442 mm (17.4")
Depth - 362 mm (14.3") with bracket
- **Weight:** 4.9 kg (10.8 lbs) with bracket
- **Enclosure Characteristics:** Single enclosure with radome
Outdoor UV stabilized plastic
Painted steel bracket plate
- **Wind Survivability:** 200 km/h (125 mph)
- **Wind Loading:** 39 kg @ 160 km/h (86 lbs @ 100 mph)
- **Mounting:** Pole mounting kit included for 30mm (1.18") to 90mm (3.54") OD pipes

Environmental

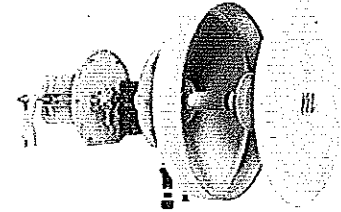
- **Outdoor Ingress Protection Rating:** IP67
- **Operating Temperature:** -40°C to +55°C (-40°F to 131°F)
- **Operating Humidity:** 5 to 100% condensing
- **Operating Altitude:** 4,420 m (14,500) maximum
- **Shock & Vibration:** ETS 300-019-2-4 class 4M5

Features

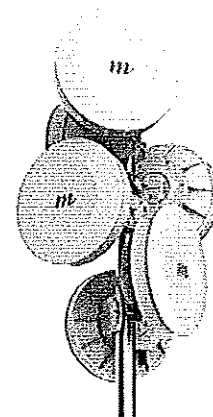
- **Gigabit Ethernet:** 10/100/1000-BASE-T
- **Dual Link Operation:** 2 independent dual-stream radios operating on non-contiguous frequencies
Automatic load balancing of traffic across 4 total MIMO streams with individual stream encoding up to 256 QAM
- **Management Services:** Mimosa cloud monitoring and management SNMPv2 & Syslog legacy monitoring HTTPS HTML 5 based Web UI
2.4 GHz 802.11 b/g/n radio for local management access
- **Smart Antenna Alignment:** Hands-free dedicated 2.4 GHz Wi-Fi management radio
- **Smart Spectrum Management:** Active scan monitors/logs ongoing RF interference across channels (no service impact)
Dynamic auto-optimization of channel and bandwidth use
- **Security:** 128-bit AES PSK with hardware acceleration
- **QoS:** Supports 4 pre-configured QoS levels
- **GPS Location:** GNSS-1 (GPS + GLONASS)
- **Collocation Synchronization:** 1PPS GPS TX/RX synchronization for collocated co-channel radios
Adjustable up/downstream bandwidth ratio

Regulatory + Compliance

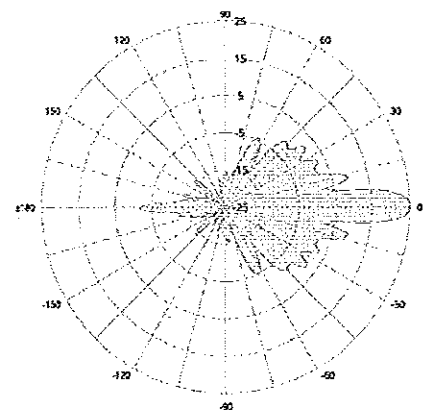
- **Approvals:** FCC Part 15.407, IC RSS210, CE, ETSI 301 893/302 502
- **RoHS Compliance:** Yes
- **Safety:** UL/EC/EN/ 60950-1 + CSA-22.2



B5 Backhaul

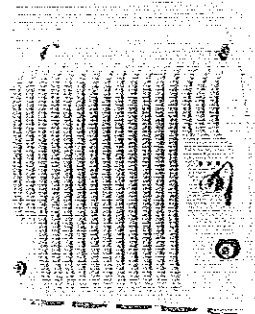


B5 - 6 Dish Collocation



B5 Polar Plot

PTP 820S Licensed Microwave Radio



All-Outdoor Specifications

RADIO

- 6-38 GHz
- 1+0, 1+1 HSB, 2+0

Radio Features

- Protection: 1+1 HSB
- QPSK to 2048 QAM w/ACM
- Advanced Frequency Reuse (AFR)

ETHERNET

Ethernet Interfaces

- Traffic Interfaces – 1 x 10/100/1000Base-T (RJ-45) and 2 x 1000base-X (SFP) or 2 x 10/100/1000 Base-T (electrical SFP)
- Management Interface - 1 x 10/100 Base-T (RJ-45)
- Optical SFP Types - Optical 1000Base-LX (1310 nm) or SX (850nm)
Note: SFP devices must be of Industrial grade (-40°C to +85°C)

Ethernet Features

- MTU – 9600 Bytes
- Quality of Service
 - Multiple Classification criteria (VLAN ID, p-bits, IPv4, DSCP, IPv6 TC, MPLS EXP)
 - 8 priority queues
 - Deep buffering (configurable up to 64 Mbit per queue)
 - WRED
 - Hierarchical QoS – high service granularity*
 - P-bit marking/remarking
- 4K VLANs
- VLAN add/remove/translate
- Frame Cut Through – controlled latency and PDV for delay sensitive applications
- Header De-Duplication – Capacity boosting by eliminating inefficiency in all layers (L2, MPLS, L3, L4, Tunneling – GTP for LTE, GRE)
- Adaptive Bandwidth Notification (ABN)
- Network Resiliency - G.8032 and Multiple Spanning Tree Protocol (MSTP)*
- Ethernet OAM – ITU-T Y.1731 FM, ITU-T Y.1731 PM*

SYNCHRONIZATION

Synchronization Distribution

- Sync Distribution over any traffic interface (GE/FE)
- Sync-E (ITU-T G.8261, G.8262)
- SSM/ESMC Support for ring/mesh applications (ITU-T G.8264)
- Sync-E Regenerator mode, providing PRC grade (ITU-T G.811) performance for smart pipe applications.

IEEE-1588

- Optimized Transport for reduced PDV
- IEEE-1588 TC

STANDARD

MEF

- Carrier Ethernet 2.0 (CE 2.0)**

Supported Ethernet Standards

- 10/100/1000base-T/X (IEEE 802.3)
- Ethernet VLANs (IEEE 802.3ac)
- Virtual LAN (VLAN, IEEE 802.1Q)
- Class of service (IEEE 802.1p)
- Provider bridges (QinQ – IEEE 802.1ad)
- Link aggregation (IEEE 802.3ad)
- Auto MDI/MDIX for 1000baseT
- RFC 1349: IPv4 TOS
- RFC 2474: IPv4 DSCP
- RFC 2460: IPv6 Traffic Classes

Security

- AES 256-bit Encryption
- Secured protocols (HTTPS, SNMPV3, SSH, SFTP)
- Radius authentication and authorization

Standards Compliance

- EMC: EN 301 489-1, EN 301 489-4, Class B (Europe), FCC 47 CFR, part 15, class B (US), ICES-003, Class B (Canada), TEC/EMI/TEL-001/01, Class B (India)
- Surge: EN61000-4-5, Class 4 (for PWR and ETH1/PoE ports)
- Safety: EN 60950-1, IEC 60950-1, UL 60950-1, CSA-C22.2 No.60950-1, EN

60950-22, UL 60950-22, CSAC22.2.60950-22

- Ingress Protection: IP66-compliant
- Storage: ETSI EN 300 019-1-1 Class 1.2
- Transportation: ETSI EN 300 019-1-2 Class 2.3

TECHNICAL SPECIFICATION

Mechanical Specifications

- Dimensions: 230mm(H), 233mm(W), 98mm(D), 6.0kg
- Pole Diameter Range (for Remote Mount Installation): 8.89 cm – 11.43 cm

Environmental Specifications

- -33°C to +55°C (-45°C to +60°C extended)

Power Input Specifications

- Standard Input: -48 VDC
- IDU DC Input range: -40 to -60 VDC

Power Consumption Specifications

- Maximum Power Consumption 6-11 GHz: 40W; 13-38 GHz: 35W

PoE Injector Mechanical Specifications

- Dimensions – 134mm(H), 190mm(W), 62mm(D), 1 kg

PoE Injector Environmental Specifications

- 33°C to +55°C (-45°C to +60°C extended)

PoE Injector Power Input Specifications

- Standard Input: -48 or +24 VDC (Optional)
- DC Input range: ±(18/40.5 to 60) VDC (+18VDC extended range is supported as part of the nominal +24VDC support)

PoE Injector Interfaces

- GbE Data Port supporting 10/100/1000Base-T
- Power-Over-Ethernet (PoE) Port
- DC Power Port -40V to -60V (a PoE supporting two redundant DC feeds each supporting ±(18-60)V is available)

* Planned for future release.

** Certification pending.

