

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

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In the Matter of:

MAY 14 2019

APPLICATION OF KENTUCKY RSA #3)
CELLULAR GENERAL PARTNERSHIP FOR)
APPROVAL TO CONSTRUCT AND OPERATE A NEW)
CELL FACILITY TO PROVIDE CELLULAR RADIO)
SERVICE (WAX) IN RURAL SERVICE AREA #3)
(GRAYSON COUNTY) OF THE COMMONWEALTH)
OF KENTUCKY)

Public Service
Commission

CASE No. 2019-00045

APPLICATION FOR A CERTIFICATE
OF PUBLIC CONVENIENCE AND NECESSITY
(WAX CELL SITE)

Kentucky RSA #3 Cellular General Partnership (“Kentucky RSA #3”), through counsel, pursuant to KRS 278.020 and 278.040, hereby submits this application for a certificate of public convenience and necessity to construct a cell site to be known as the Wax cell site in and for rural service area (“RSA”) #3 of the Commonwealth of Kentucky, namely the counties of Allen, Breckinridge, Butler, Edmonson, Grayson, Hancock, Logan, McLean, Meade, Muhlenberg, Ohio, Simpson, Todd and Warren, Kentucky.

1. Pursuant to the FCC Order, Docket No. 08-165, dated November 18, 2009, ¶ 32, pp. 11 & 12, the Commission has 150 days to process this application for a certificate of public convenience and necessity to construct a cell tower facility. If the Commission fails to act upon this application within 150 days, then Kentucky RSA #3 may seek redress with the U.S. District Court for the Eastern District of Kentucky.¹

¹In the Matter of: Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review and to Preempt Under Section 253 State and Local Ordinances that Classify all Wireless Siting Proposals as Requiring a Variance, FCC Order, Docket No. 08-165, November 18, 2009, pp 11 and 12. (“Specifically, we find that a “reasonable period of time” is, presumptively 90 days to process personal wireless service facility siting applications requesting collocations, and, also presumptively, 150 days to process all other

2. As required by 807 KAR 5:001 § 14 and 807 KAR 5:063, Kentucky RSA #3 states that it is a Kentucky general partnership whose full name and post office address are: Kentucky RSA #3 Cellular General Partnership, 2902 Ring Road, Elizabethtown, Kentucky, 42701. An email address for Kentucky RSA #3 is dougu@bluegrasscellular.com. A copy of the Certificate of Assumed Name as a General Partnership for Kentucky RSA #3 Cellular General Partnership is attached as Exhibit "A." This is the only document on file with the Kentucky Secretary of State that identifies all owners of Kentucky RSA #3 Cellular General Partnership.

3. Pursuant to 807 KAR 5:063 § 1(1)(b), a copy of the applicant's approvals from the Federal Aviation Administration and Kentucky Airport Zoning Commission are attached as Exhibit "B."

4. Pursuant to 807 KAR 5:063, § 1(1)(c), attached as Exhibit "C" is a copy of the application to, and authorization from, the Federal Communications Commission.

5. Pursuant to 807 KAR 5:063 § 1(1)(d), applicant is attaching as Exhibit "D" a geotechnical investigation report, signed and sealed by a professional engineer registered in Kentucky, that includes boring logs, foundation design recommendations, and a finding as to the susceptibility of the area surrounding the proposed site to flood hazard.

6. Pursuant to 807 KAR 5:063 § 1(1)(e), clear directions from the county seat to the proposed site, including highway numbers and street names, if applicable, with the telephone number of the person who prepared the directions are Exhibit "E."

applications. (Relevant pages attached as Exhibit "L"). Accordingly, if State or local governments do not act upon applications within those timeframes, then a "failure to act" has occurred and personal wireless service providers may seek redress in a court of competent jurisdiction within 30 days, as provided in Section 332(c)(7)(B)(v).") See also Order Denying Motion for Reconsideration, issued August 4, 2010.

7. Pursuant to 807 KAR 5:063 § 1(1)(f), a copy of the lease for the property on which the tower is proposed to be located, is Exhibit "F."

8. Pursuant to 807 KAR 5:063 § 1(1)(g), experienced personnel will manage and operate the Wax cell site. The President of Bluegrass Cellular Inc., Mr. Ron Smith, is ultimately responsible for all construction and operations of the cellular system of Kentucky RSA #3, of which system the Wax cell site will be a part. Bluegrass Cellular Inc. provides management services to Kentucky RSA #3 under a management contract, just as it does with three (3) other wireless carriers in the Commonwealth. And, Bluegrass Cellular Inc. has been providing these management services to these other wireless carriers for over 20 years. This extensive management experience with Bluegrass Cellular demonstrates that Bluegrass Cellular Inc.'s management and technical ability to supervise the operations of a wireless carrier.

9. Pursuant to 807 KAR 5:063 § 1(1)(g), World Tower Company, Inc. is responsible for the design specifications of the proposed tower (identified in Exhibit "D").

10. Pursuant to 807 KAR 5:063 § 1(1)(h), a site development plan and survey, signed and sealed by a professional engineer registered in Kentucky, that shows the proposed location of the tower and all easements and existing structures within 500 feet of the proposed site on the property on which the tower will be located, and all easements and existing structures within 200 feet of the access drive, including the intersection with the public street system, is Exhibit "G."

11. Pursuant to 807 KAR 5:063 §1(1)(i), a vertical profile sketch of the tower, signed and sealed by a professional engineer registered in Kentucky, indicating the height of the tower and the placement of all antennas is Exhibit "D".

12. Pursuant to 807 KAR 5:063 §1(1)(j), the tower and foundation design plans and a description of the standard according to which the tower was designed, signed and sealed by a professional engineer registered in Kentucky, is Exhibit “D.”

13. Pursuant to 807 KAR 5:063 § 1(1)(k), a map, drawn to a scale no less than one (1) inch equals 200 feet, that identifies every structure and every owner of real estate within 500 feet of the proposed tower, is Exhibit “G.”

14. Pursuant to 807 KAR 5:063 § 1(1)(l), applicant’s legal counsel hereby affirms that every person who owns property within 500 feet of the proposed tower has been: (i) notified by certified mail, return receipt requested, of the proposed construction; (ii) given the commission docket number under which the application will be processed; and (iii) informed of his or her right to request intervention.

15. Pursuant to 807 KAR 5:063 §1(1)(m), a list of the property owners who received the notice together with copies of the certified letters sent to listed property owners, is Exhibit “H.”

16. Pursuant to 807 KAR 5:063 § 1(1)(n), applicant’s legal counsel hereby affirms that the Office of the Grayson County Judge Executive has been: (i) notified by certified mail, return receipt requested, of the proposed construction; (ii) given the commission docket number under which the application will be processed; and (iii) informed of its right to request intervention.

17. Pursuant to 807 KAR 5:063 § 1(1)(o), a copy of the notice sent to the Grayson County Judge Executive is Exhibit “I.”

18. Pursuant to 807 KAR 5:063 § 1(1)(p), applicant’s legal counsel hereby affirms that (i) two written notices meeting subsection two (2) of this section have been posted, one in a

visible location on the proposed site and one on the nearest public road; and (ii) the notices shall remain posted for at least two weeks after the application has been filed.

19. Pursuant to 807 KAR 5:063 § 1(2)(a), applicant's legal counsel affirms that:

(a) A written notice, of durable material at least two (2) feet by four (4) feet in size, stating that "***Kentucky RSA #3 Cellular General Partnership proposes to construct a telecommunications tower on this site. If you have questions, please contact Kentucky RSA #3 Cellular General Partnership, 2902 Ring Road, Elizabethtown, Kentucky, 42701 or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to Case No. 2019-00045 in your correspondence***" has been posted and shall remain in a visible location on the proposed site until final disposition of the application; and

(b) A written notice, of durable material at least two (2) feet by four (4) feet in size, stating that "***Kentucky RSA #3 Cellular General Partnership proposes to construct a telecommunications tower near this site. If you have questions, please contact Kentucky RSA #3 Cellular General Partnership, 2902 Ring Road, Elizabethtown, Kentucky, 42701 or the Executive Director, Public Service Commission, 211 Sower Boulevard, PO Box 615, Frankfort, Kentucky 40602. Please refer to Case No. 2019-00045 in your correspondence***" has been posted on the public road nearest the site.

A copy of each sign is attached as Exhibit "J."

20. Pursuant to 807 KAR 5:063 § 1(1)(q), Applicant hereby affirms that notice of the location of the proposed construction has been published in a newspaper of general circulation in Grayson County. A copy of the affidavit of publication and tear sheets as proof of publication are attached as Exhibit "K."

21. Pursuant to 807 KAR 5:063 § 1(1)(r), the site is in relatively undeveloped area in Clarkson, Kentucky.

22. Pursuant to 807 KAR 5:063 § 1(1)(s), Kentucky RSA #3 has considered the likely effects of the installation on nearby land uses and values and has concluded that there is no more suitable location reasonably available from which adequate service to the area can be provided,

and that there is no reasonably available opportunity to co-locate. Kentucky RSA #3 has attempted to co-locate on towers designed to host multiple wireless service providers' facilities or existing structures, such as a telecommunications tower, or another suitable structure capable of supporting the utility's facilities.

23. Pursuant to 807 KAR 5:063 § 1(1)(t), a map of the area in which the tower is proposed to be located, that is drawn to scale and that clearly depicts the search area in which a site should, pursuant to radio frequency requirements, be located is Exhibit "L."

24. Pursuant to 807 KAR 5:001 § 15(b)(2)(d) and KRS 100.987(2)(a), a grid map, that is drawn to scale, that shows the location of all existing cellular antenna towers and that indicates the general position of proposed construction sites for new cellular antenna towers is Exhibit "M."

25. Pursuant to 807 KAR 5:063 § 2 and KRS 278.665(2), applicant's legal counsel hereby affirms that every person who, according to the records of the property valuation administrator, owns property contiguous to the property where the proposed cellular antenna tower will be located has been: (i) notified by certified mail, return receipt requested, of the proposed construction; (ii) given the commission docket number under which the application will be processed; and (iii) informed of his or her right to request intervention.

26. No reasonably available telecommunications tower, or other suitable structure capable of supporting the cellular facilities of Kentucky RSA #3 and which would provide adequate service to the area exists.

27. Correspondence and communication with regard to this application should be addressed to:

John E. Selent
Felix H. Sharpe, II
DINSMORE & SHOHL LLP
101 South Fifth Street
Suite 2500
Louisville, Kentucky 40202
(502) 540-2300
john.selent@dinsmore.com
felix.sharpe@dinsmore.com

WHEREFORE, Kentucky RSA #3 Cellular General Partnership requests the Commission to enter an order:

1. Granting a certificate of public convenience and necessity to construct the Wax cell site; and
2. Granting all other relief as appropriate.

Respectfully submitted,



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AGREEMENT
OF
KENTUCKY RSA #3 CELLULAR GENERAL PARTNERSHIP

THIS GENERAL PARTNERSHIP AGREEMENT, is entered into by and among Logan Telephone Cooperative, Incorporated, a Kentucky corporation. Lewisport Telephone Company, Inc., a Kentucky corporation, Brandenburg Telephone Co., Inc., a Kentucky corporation, and North Central Telephone Cooperative, Inc., a Tennessee corporation, and South Central Rural Telephone Cooperative Corporation, Inc., a Kentucky corporation, as the general partners, and the Persons (if any) who become general partners, as provided herein ("Partners").

W I T N E S S E T H:

WHEREAS, the parties hereto desire to form a general partnership under the Laws of the Commonwealth of Kentucky, for the purposes and upon the terms stated herein; and

WHEREAS, Logan Telephone Cooperative, Incorporated was selected in a lottery conducted December 20, 1989 by the Federal Communications Commission ("FCC") in the process of considering applications to construct a domestic public cellular radio telecommunications system, "the Cellular System," to serve the Kentucky 3 - Meade Rural Service Area (the "RSA"); and

WHEREAS, the Partners have entered into a "Kentucky RSA 3 Settlement Agreement" ("Settlement Agreement") on June 8, 1989, concerning the settlement of mutually exclusive applications for the construction permit (the "Permit").

I. ORGANIZATION MATTERS

1.1 Formation.

The General Partners have associated themselves in the formation of the Partnership as a general partnership pursuant to the provisions of the Kentucky Act. Except as expressly provided herein to the contrary, the rights and obligations of the Partners and the administration and termination of the Partnership shall be governed by the Kentucky Act. The Partnership Interest of any Partner shall be personal property for all purposes.

1.2 Name.

The name of the Partnership shall be, and the business of the Partnership shall be conducted under the name, "Ky RSA #3 Cellular General Partnership." The Partnership's business may be conducted under any other name or names deemed advisable by the Partners, including the name of any Partner.

1.3 Principal Office.

The principal office and address of the Partnership shall be 103 E. Main P. O. Box 97 Auburn, KY 42206, or such other place as the Partners may from time to time designate. The Partnership may maintain such offices at such other place or places as the Partners deem advisable.

1.4 Term.

The Partnership shall continue in existence until termination of the Partnership in accordance with the provisions of Article XI.

II. DEFINITIONS

The following definitions shall for all purposes, unless otherwise clearly indicated to the contrary, apply to the terms used in this Agreement.

"Agreed Value" means the fair market value of any Partnership property as determined from time to time by a Majority Interest of the Partners using such reasonable method of valuation as may be adopted by the Partners. Unless another Agreed Value is fixed by the Partners for any item of Partnership property, the Agreed Value of such property shall be deemed to equal its adjusted basis for federal income tax purposes.

"Agreement" means this Agreement of General Partnership, as it may be amended or supplemented from time to time.

"Bankruptcy" shall be deemed to have occurred with respect to any Partner 60 days after the happening of any of the following: (a) the filing of an application by the Partner for, or a consent to, the appointment of a trustee of the Partner's assets, (b) the filing by the Partner of a voluntary petition in bankruptcy or the filing of a pleading in any court of record admitting in writing the Partner's inability to pay the Partner's debts as they become due, (c) the making by the Partner of a general assignment for the benefit of creditors, (d) the filing by the Partner of an answer admitting the material allegations, of, or consenting to, or defaulting in answering, a bankruptcy petition filed against the Partner in any bankruptcy proceeding, or (e) the entry of an order, judgment, or decree by any court of

competent jurisdiction adjudicating the Partner a bankrupt or appointing a trustee of the Partner's assets, and such order, judgment, or decree continuing unstayed and in effect for such period of 60 days.

"Capital Account" means the capital account maintained for a Partner pursuant to Section 4.4.

"Capital Contribution" means any cash or other property which a Partner contributes to the Partnership pursuant to Sections 4.2 or 4.3.

"Carrying Value" means, with respect to any property of the Partnership, the Agreed Value of such property at the time of its contribution to the Partnership, or as fixed from time to time in accordance with Section 4.4(e), reduced (but not below zero) by all depreciation and cost recovery deductions charged to the Partners' Capital Accounts pursuant to Section 4.4(c) with respect to such property and by any other charges for sales, retirements and other dispositions of such property, as of the time of determination.

"Code" means the Internal Revenue Code of 1986, as amended and in effect from time to time.

"Excess Loss Account" means, with respect to any Partner, an amount equal to the aggregate losses allocated to such Partner pursuant to Section 5.2 less the aggregate income allocated to such Partner pursuant to Section 5.2. A transferee of a Partnership Interest will succeed to the Excess Loss Account with respect to the Partnership Interest transferred.

"General Partner" means any of the Partners listed on the first page, or admitted by a vote of the Partners in accordance with Article X.

"Majority Interest" means the owners of more than 50% of the Percentage Interests owned by the Partners.

"Management Committee" means the committee described in Section 6.1(a).

"Net Agreed Value" means (a) in the case of any property contributed to the Partnership, the Agreed Value of such property reduced by any indebtedness, either assumed by the Partnership upon such contribution or to which such property is subject when contributed, and (b) in the case of any property distributed to a Partner, the Agreed Value of such property at the time such property is distributed, reduced by any indebtedness either assumed by such Partner upon such distribution or to which such property is subject at the time of distribution.

"Partner" means any of the General Partners.

"Partnership" means the general partnership established by this Agreement.

"Partnership Interest" means the Percentage Interest of a Partner in the Partnership.

"Percentage Interest" means initially the amount specified in Section 4.1. After the first capital contributions of the Partners have been made, the Percentage Interest held by each Partner in the Partnership shall equal the percentage derived by multiplying the balance of the Partner's capital account by one

hundred and then dividing by the total balance of the capital accounts of all of the Partners.

"Person" means an individual or a corporation, partnership, trust, unincorporated organization, association or other entity.

"Recapture Income" means any gain that is not capital gain recognized by the Partnership or, in the case of gain required by the Code to be computed separately by each Partner, by a Partner (but computed without regard to any adjustment required by Section 734 or Section 743 of the Code) upon the disposition of any property or asset of the Partnership.

"Kentucky Act" means the Kentucky Uniform Partnership Act, KRS 362.175 to KRS 362.355, as it may be amended from time to time.

"Unrealized Gain" attributable to an item of Partnership property means, as of any date of determination, the excess, if any, of the Agreed Value of such property as of such date of determination over the Carrying Value of such property as of such date of determination (prior to any adjustment to be made pursuant to Section 4.4(e) as of such date).

"Unrealized Loss" attributable to an item of Partnership property means, as of any date of determination, the excess, if any, of the Carrying Value of such property as of such date of determination (prior to any adjustment to be made pursuant to Section 4.4(e) as of such date) over the Agreed Value of such property as of such date of determination.

III. PURPOSE

The purpose and business of the Partnership shall be to engage in any lawful business in which a general partnership formed under the Kentucky Act may engage, including, without limitation, the ownership of cellular radio telecommunications systems.

IV. CAPITAL CONTRIBUTIONS

4.1 Percentage Of Interest.

Each Partner shall have an initial percentage interest in the Partnership as described in the following schedule:

<u>Partner</u>	<u>Percentage Interest</u>
Logan Telephone Cooperative, Incorporated	20%
Lewisport Telephone Company, Inc.	20%
Brandenburg Telephone Co., Inc.	20%
North Central Telephone Cooperative, Inc.	20%
South Central Rural Telephone Cooperative Corporation, Inc.	20%

4.2 Initial Capital Contribution.

Each Partner shall contribute one-thousand dollars (\$1,000.00) to the Partnership as an initial capital contribution.

4.3 Partners' Additional Contributions.

(a) Additional Capital Contributions. From time to time additional capital may be required to be invested by the Partnership to fund expansion or operation of Cellular Service. If the Management Committee determines that additional capital

is so needed, each Partner shall be entitled to provide its share of additional capital in proportion to its then current Partnership Interest. This additional funding shall be due and payable on the date set forth in a written notice to each Partner from the Partnership requesting such additional Capital Contribution, which date shall not be less than 60 days from the date of the notice.

(b) Failure to Make Capital Contributions. Should any Partner (a "Nonparticipating partner") make a portion but not all of its initial Capital Contribution or any subsequent additional Capital Contribution, or fail to pay such contributions when due, the other Partners may contribute pro rata, according to their then current respective Partnership Interests, an aggregate amount equal to the Capital Contribution declined by the Nonparticipating Partner. In such event, the Nonparticipating Partner shall forfeit its right to select a person to serve on the Management Committee.

(c) Capital Contributions in Cash. Unless the Management Committee agrees to permit an in kind (property) contribution by a Partner by the affirmative vote of eighty percent of its members, funding of both initial and additional Capital Contributions to the Partnership shall be in cash and not real or personal property.

4.4 Capital Accounts.

(a) The Partnership shall maintain for each Partner a separate Capital Account. The initial balance of the Capital Account of the General Partners shall be zero.

(b) Each Partner's Capital Account shall be increased by (i) the cash amount or Net Agreed Value of all Capital Contributions made by such Partner to the Partnership pursuant to this Agreement and (ii) all items of Partnership income and gain computed in accordance with Section 4.4(c) and allocated to such Partner pursuant to Article V and decreased by (iii) the cash amount or Carrying Value of all distributions of cash or property made to such Partner pursuant to this Agreement and (iv) all items of Partnership deduction and loss computed in accordance with Section 4.4(c) and allocated to such Partner pursuant to Article V.

(c) For purposes of computing the amount of any item of income, gain, deduction or loss to be reflected in the Partners' Capital Accounts, the determination, recognition and classification of such items shall be the same as its determination, recognition and classification for federal income tax purposes, with the following adjustments:

(i) Any income of the Partnership that is exempt from federal income tax and not otherwise taken into account under this Section 4.4(c) shall be considered an item of income;

(ii) Any expenditures of the Partnership described in Section 705(a)(2)(B) of the Code or treated as Section 705(a)(2)(B) expenditures pursuant to Treasury Regulation Section 1.704-1(b)(2)(iv)(i), and not otherwise taken into account under this Section 4.4(c), shall be considered a deduction;

(iii) Gain or loss resulting from any disposition of Partnership property with respect to which gain or loss is recognized for federal income tax purposes shall be computed with reference to the Carrying Value of the property disposed of, rather than its adjusted basis; and

(iv) The depreciation, amortization, or other cost recovery deductions with respect to an item of Partnership property shall be computed with reference to the Agreed Value of such property rather than its adjusted basis.

(d) A transferee of a Partnership Interest will succeed to the Capital Account relating to the Partnership Interest transferred.

(e) Immediately prior to the distribution of any Partnership property other than money, the Capital Accounts of all Partners (and the Carrying Value of all Partnership property) may, in the discretion of the Management Committee, be adjusted (consistent with the provisions hereof and Section 704 of the Code) upwards or downwards to reflect any Unrealized Gain or Unrealized Loss attributable to such Partnership property (as if such Unrealized Gain or Unrealized Loss had been recognized upon

an actual sale of such property, immediately prior to such issuance, and had been allocated to the Partners, at such time, pursuant to Article V).

(f) The foregoing provisions and the other provisions of this Agreement relating to the maintenance of Capital Accounts are intended to comply with Treasury Regulation Section 1.704-1(b), and shall be interpreted and applied in a manner consistent with such regulations. To the extent that any provision required by the Treasury Regulations is not contained in this Agreement, that provision is hereby incorporated by reference. If the Management Committee determines that it is prudent to modify the manner in which the Capital Accounts are computed or maintained in order to comply with such regulations, the Management Committee may make such modification, provided that such modification is not likely to have a material effect on the amounts distributable to any Partner pursuant to Section 13.3 upon dissolution of the Partnership.

4.5 Negative Capital Account.

Upon the dissolution and termination of the Partnership, each Partner shall contribute to the Partnership an amount equal to the deficit balance in its capital account, if any.

4.6 Interest.

No interest shall be paid by the Partnership on Capital Contributions or on balances in Partners' capital accounts.

4.7 No Withdrawal.

A Partner shall not be entitled to withdraw any part of its Capital Contribution or its Capital Account or to receive any distribution from the Partnership, except as provided in Section 5.3 and Article XI.

4.8 Loans from Partners.

Loans by a Partner to the Partnership shall not be considered Capital Contributions.

V. ALLOCATIONS AND DISTRIBUTIONS

5.1 Income and Loss.

(a) In determining the rights of the Partners among themselves and for financial accounting purposes, each item of income, gain, loss, deduction and credit shall be credited or charged, as the case may be, among the Partners in accordance with their respective Percentage Interests.

(b) For federal income tax purposes, except as otherwise provided in Section 5.2, each item of income, gain, loss, deduction and credit of the Partnership shall be allocated among the Partners in accordance with their respective Percentage Interests.

5.2 Other Tax Allocations.

(a) Income, gain, loss, and deduction with respect to any property contributed to the Partnership shall, solely for federal income tax purposes, be allocated among the Partners so as to take into account any difference between the Agreed Value of such property and its adjusted basis on the date of such contribution,

in accordance with Section 704(c) of the Code. If the Carrying Value of any Partnership property is adjusted pursuant to Section 4.4(e), subsequent allocations of income, gain, loss, and deduction with respect to such property shall take account of any variation between the adjusted basis of such property and its Carrying Value, in the same manner as provided for under Section 704(c) of the Code. All allocations under this Section 5.2(a) shall be made in such manner as the Management Committee may in its discretion determine reasonably reflects the requirements of the Code and the intention of this Agreement.

(b) To the extent of any Recapture Income resulting from the sale or other taxable disposition of a Partnership asset, the amount of any gain from such disposition allocated to (or recognized by) a Partner (or its successor in interest) for federal income tax purposes pursuant to the above provisions shall be deemed to be Recapture Income to the extent such Partner has been allocated or has claimed any deduction directly or indirectly giving rise to the treatment of such gain as Recapture Income.

(c) In the event of the transfer of a Partnership Interest during a year, each item of Partnership income, gain, loss, deduction and credit attributable to the transferred Partnership Interest shall, for federal income tax purposes, be prorated between the transferor and transferee on a daily or other reasonable basis, as required by Section 706 of the Code; provided, however, that gain on a sale or other disposition of all or a substantial portion of the assets of the Partnership shall be

allocated among the Partners in proportion to their Partnership Interests on the date of sale.

(d) If the Percentage Interest of any Partner is changed during a taxable year such Partner's share of taxable income or loss shall be determined for federal income tax purposes by taking into account his varying Percentage Interests in the Partnership during the taxable year on a daily or other reasonable basis as required by Section 706 of the Code.

(e) It is intended that the allocations in this Article V effect an allocation for federal income tax purposes in a manner consistent with the Code and comply with any limitations or restrictions therein. The Management Committee shall have complete discretion to make the allocations pursuant to this Article V in any manner consistent with the Code. The Majority Interest of the Partners may amend the provisions of this Agreement in accordance with Article XII as appropriate as a result of the promulgation of final treasury regulations under any section of the Code, if in the opinion of counsel such an amendment is advisable to reflect allocations among the Partners consistent with those regulations.

5.3 Current Distributions.

(a) The Management Committee shall review the Partnership's accounts at the end of each calendar quarter to determine whether distributions are appropriate. The Management Committee may make such distributions as they in their discretion deem appropriate, without being limited to current or accumulated income or gains.

All such distributions shall be made to the Partners in accordance with the Percentage Interests of such Partners.

(b) Any amounts paid pursuant to Section 6.2 shall not be deemed to be distributions for purposes of this Agreement.

VI. MANAGEMENT, OPERATION OF BUSINESS AND
PARTNERSHIP POWERS

6.1 Management.

(a) The Partnership shall be managed by a Management Committee. Each Partner with a partnership interest equal to or greater than twenty percent shall be entitled to select one person to serve on the Management Committee subject to Section 9.1(c). Unless, otherwise provided in this Agreement all action taken by the Management Committee shall be by simple majority vote of the members of the Management Committee. The Management Committee shall hire an operations manager to manage the day to day operations of the Cellular System.

(b) Partnership Powers. In furtherance of the business purpose specified in Article III and subject to the limitations set forth in this Agreement, the Partnership, and the Management Committee on behalf of the Partnership, shall be empowered to do or cause to be done any and all acts reasonably deemed by the Management Committee to be necessary or appropriate in furtherance of the purposes of the Partnership or forbear from doing any act if the Management Committee reasonably deems such forbearance necessary or appropriate in furtherance of the

purposes of the Partnership, including without limitation, the power and authority:

(1) To enter into, perform and carry out contracts and agreements of every kind necessary or incidental to the accomplishment of the Partnership's purposes, including, without limitation, contracts and agreements with any Partner and the affiliates of any Partner, and to take or omit such other or further action in connection with the Partnership's business as may be reasonably necessary or desirable in the opinion of the Management Committee to further the purposes of the Partnership; provided, however, that (i) any transaction between the Partnership and any of the Partners or any of their affiliates shall be documented and shall become part of the records of the Partnership; and (ii) any such contracts or agreements shall be on terms no more favorable to such Partner or affiliate than the terms available to the Partnership from third parties;

(2) To borrow from banks and other lenders on such terms and conditions as shall be approved by the Management Committee and to secure any such borrowings by mortgaging, pledging or assigning assets and revenues of the Partnership to the extent deemed necessary or desirable by the Management Committee;

(3) To invest such funds as are temporarily not required for Partnership purposes in debt obligations selected by the Management Committee including government

securities, certificates of deposit of commercial banks (domestic or foreign), commercial paper, bankers' acceptances and other money market instruments; and

(4) To carry on any other activities necessary to, in connection with or incidental to any of the foregoing.

6.2 Management Compensation and Reimbursement of the Partners

(a) Operating and Management Expenses. The Partners may be reimbursed by the Partnership monthly for any reasonable and necessary expenses incurred by the Partners on behalf of the Partnership in providing cellular service, including reasonable and necessary administrative and general overhead expenses, including, but not limited to, marketing, maintenance, message charges, facilities, engineering, customary legal, accounting and audit fees, development and implementation of billing procedures, expenses of preparing tax returns and reports, taxes, travel, office rent, telephone, salaries (including social security, relief, pensions and other benefits), and other incidental business expenses incurred by the Partners on behalf of the Partnership in connection with the provision of Cellular Service. Reimbursement must be approved by the Management Committee.

(b) Powers of the Management Committee. In addition to those powers vested pursuant to Section 6.1(b) and subject to the limitations set forth in this Agreement, the Management Committee hereby is vested with the power to:

(1) Manage, supervise and conduct the affairs of the Partnership;

(2) Make all elections, investigations, evaluations and decisions, binding the Partnership thereby, that may be necessary or appropriate in connection with the business purposes of the Partnership;

(3) Incur obligations or make payments on behalf of the Partnership in its own name or in the name of the Partnership;

(4) Execute all instruments of all kind or character which the Management Committee in its discretion shall deem necessary or appropriate in connection with the business purposes of the Partnership;

(5) Enter into agreements with other providers of Cellular Service (including Affiliates of the Management Committee) to obtain switching services when, in the judgment of the Management Committee, such agreements are in the best interest of the Partnership.

6.3 Partnership Funds.

The funds of the Partnership shall be deposited in such account or accounts as are designated by the Management Committee and shall not be commingled with the funds of any Partner or any affiliate thereof. All withdrawals from such account(s) shall be made upon such authorized signature(s) as the Management Committee may from time to time, determine.

6.4 Indemnification.

The Partnership shall indemnify and hold harmless the Partners from and against any loss, expense, damage, or injury

suffered or sustained by them by reason of any acts, omissions, or alleged acts or omissions arising out of their activities on behalf of the Partnership or in furtherance of the interests of the Partnership, including but not limited to any judgment, award, settlement, reasonable attorneys' fees, and other costs or expenses incurred in connection with the defense of any actual or threatened action, proceedings, or claim, if the acts, omissions, or alleged acts or omissions upon which the actual or threatened action, proceedings, or claims are based were for a purpose reasonably believed to be in the best interests of the Partnership and were not performed or omitted fraudulently or in bad faith or as a result of negligence by a Partner and were not in violation of the Partner's fiduciary obligation to the Partnership. Any such indemnification shall be solely from the assets of the Partnership.

6.5 Other Matters Concerning the Partners.

(a) Any Partner may rely and shall be protected in acting or refraining from acting upon any resolution, certificate, statement, instrument, opinion, report, notice, request, consent, order, bond, debenture, or other paper or document believed by it to be genuine and to have been signed or presented by the proper party or parties.

(b) Any Partner may consult with legal counsel, accountants, appraisers, management consultants, investment bankers, and other consultants and advisors selected by it and may rely on any opinion of any such consultant or advisor as to matters which

the Partner believes to be within its professional or expert competence as long as the Partner acts in good faith and in accordance with such opinion.

6.6 General Partners' Other Business Activities.

It is recognized that the Partners and affiliates of the Partners are or may be engaged in the conduct of other substantial activities for their own account and for the accounts of others, including the management, ownership, and operation of cellular radio facilities in areas other than Kentucky RSA 3. The Partners and their officers, directors or representatives shall not be required to devote their full time to Partnership affairs but only such time as in their judgment the conduct of the Partnership affairs shall require.

6.7 Liability.

No Partner shall be liable, responsible, or accountable in damages or otherwise to the Partnership or any Partner for any action taken or failure to act on behalf of the Partnership within the scope of the authority conferred on any Partner by this Agreement or by law unless the act or omission was performed or omitted fraudulently or in bad faith or constituted negligence.

6.8 Bankruptcy. At the Bankruptcy of any Partner, that Partner (an "Inactive Partner") and any member of the Management Committee selected by that Partner pursuant to Section 6.1(a) shall cease to have any voice in the conduct of the affairs of the Partnership, and all acts, consents, and decisions with

respect to the Partnership shall thereafter be made by the other Partners. The Inactive Partner shall, nonetheless, remain liable for its share of any losses of the Partnership or contributions to the Partnership as provided herein, and shall be entitled to receive its share of income, gain, loss, deduction, credit, and distributions. For six months from and after the date of the Bankruptcy of any Partner, the other Partners shall have the irrevocable option to purchase the Inactive Partner's Partnership Interest. Any such purchase shall be made in proportion to the respective Percentage Interest of the other Partners at such time or in such other proportion as they may mutually agree. Should the other Partners exercise their option to purchase the Inactive Partner's Partnership Interest, they shall notify the Inactive Partner or his representative of their intention to do so within the six-month option period. The purchase price of any Partnership Interest purchase pursuant to this Section 6.8 shall be the Appraisal Price as (defined in Section 9.1(d)) and shall be payable in cash at the time specified in Section 9.1(e). Should the other Partners not exercise the option to purchase the Inactive Partner's Partnership Interest, the Inactive Partner shall remain an Inactive Partner in accordance with the provisions set forth in this Section 6.8.

VII. BOOKS, RECORDS, ACCOUNTING AND REPORTS

7.1 Records and Accounting.

The Partnership shall keep or cause to be kept complete and accurate books with respect to the Partnership's business, which

books shall at all times be kept at the principal office of the Partnership. The books of the Partnership shall be maintained, for financial reporting purposes, on the accrual basis in accordance with generally accepted accounting principles.

7.2 Fiscal Year.

The fiscal year of the Partnership shall be the calendar year.

VII. INCOME TAX MATTERS

8.1 Organizational Expenses.

The Partnership shall elect to deduct expenses incurred in organizing the Partnership ratably over a sixty-month period as provided in Section 709 of the Code.

8.2 Taxation as a Partnership.

No election shall be made by the Partnership, or any Partner to be excluded from the application of any of the provisions of Subchapter K, Chapter 1 of Subtitle A of the Code or from any similar provisions of any state tax laws.

IX. TRANSFER OF PARTNERSHIP INTERESTS

9.1(a) Rights of First Refusal. The Partners agree they will not (directly or indirectly) sell, give, assign, pledge or otherwise transfer or encumber (any such event hereinafter referred to as "sell or transfer") their Partnership Interest except pursuant to the provisions of this Section 9.1, and any attempt to sell or transfer a Partnership Interest other than in accordance with the terms and provisions of this Section 9.1 shall be null and void and of no effect.

9.1(b) If a Partner desires to sell or transfer all or any part of its Partnership Interest (hereinafter "Desire to Sell") (hereinafter such party desiring to sell referred to as "Seller"), it shall notify the nonselling Partners ("Notice of Transfer") of the Desire to Sell, and, if such Desire to Sell is in response to a third party offer, such Notice of Transfer shall contain the terms of the third party offer and the identity of the prospective purchaser. For a period of 60 days after the last of the nonselling Partners receipt from Seller of a Notice of Transfer the Partners shall have an option ("Transfer Option") to purchase the Seller's Partnership Interest identified in the Notice of Transfer. The purchase price and the terms of sale for the Partnership Interest to be purchased pursuant to the Transfer Option shall be the price and terms identified in the Notice of Transfer or if the Notice of Transfer is not in response to a third party offer, the terms of sale shall be cash and the price shall be the Appraisal Price as defined in Section 9.1(d) of this Article IX. Unless they agree otherwise, those Partners exercising the Transfer Option by notifying the Seller in a timely manner (the "Purchasing Partners") shall be obligated to purchase that percentage of the Partnership Interest identified in the Notice of Transfer as the Partnership Interest of each such Purchasing Partner bears to the Partnership Interests of all Purchasing Partners, but the seller shall not be obligated to sell less than all of the Partnership Interest Identified in the Notice of Transfer, so exercising. The Purchasing Partners shall

have a period of sixty (60) days to arrange financing for and close the purchase transaction. During such sixty (60) day period, the Purchasing Partners shall also cause the Appraisal Price to be determined, if necessary.

9.1(c) If the Partners do not exercise their respective options to purchase the Shares pursuant to Section 9.1(b) or if they fail or refuse to perform their purchase obligations after such exercise within the sixty (60) day period, such Partnership Interest may be sold or transferred by Seller for a period of sixty (60) days after the lapse of such options to the transferee identified in the Notice of Transfer at the purchase price and upon the terms specified in the Notice of Transfer. Unless the transferee becomes a substituted Partner pursuant to Article X, the transferee shall have no right to interfere in the management or administration of the Partnership's business or affairs, or to require any information or account of Partnership transactions, or to inspect the Partnership's books. The sale or transfer merely entitles the transferee to receive the share of distributions, income, and losses to which the Seller would otherwise be entitled.

(d) The "Appraisal Price" shall mean the value of a Partnership Interest determined on the basis of the value of the Partnership as a going concern, on the basis of such Partnership Interests being free of all restrictions imposed by this Agreement and on a basis exclusive of any adjustment to such value due to the illiquidity of or absence of any market for such

Partnership Interest. The Appraisal Price shall be determined as follows: within ten (10) days after exercise of the Transfer Option pursuant to Section 9.1, the Purchasing Partners and the Seller shall use their best efforts to agree on an Appraisal Price. If they fail to agree, then on the eleventh (11th) day after such exercise, the Seller, on the one hand, and the Purchasing Partners on the other, shall notify each other in writing of its opinion as to the Appraisal Price and the identity of an appraiser it has selected to determine the Appraisal Price. Each such appraiser shall deliver its report to the Seller and Purchasing Partners, and to the other appraiser, within forty-five (45) days of the giving of such notice and the two appraisers shall meet and attempt to determine the Appraisal Price within sixty (60) days after the exercise of the Transfer Option under Section 9.1(b). If the two appraisers fail to reach agreement within such sixty (60) day period they shall, at the end of such period, agree on a third appraiser who shall determine a third Appraisal Price. The third appraiser shall not be given the Appraisal Prices of the first two appraisers. The Final Appraisal Price shall be (i) the amount agreed to by the two parties if they do agree, or (ii) the amount specified in the notice given by one party on the eleventh (11th) day as above in the event that the other party fails to give notice on that day designating an appraiser or if the appraiser designated by such party fails to perform in accordance with the schedule contemplated hereby or fails to act in good faith, or (iii) the

amount agreed to by the two appraisers appointed by the parties if clauses (i) or (ii) immediately preceding are not applicable, or (iv) if a third appraiser has been appointed, the average of the two closest appraisals. All costs of the appraisals hereunder shall be paid 25% by the Purchasing Partners and 75% by the Seller. The Parties shall cooperate fully with each appraiser appointed under this Section 9.1 and shall fully disclose any and all information including, without limitation, any business plans or forecasts of the Partnership which is or may be material to the valuation of the Partnership as a going concern.

(e) The closing of any purchase transaction created pursuant to this Section 9.1 shall take place on or before the one-hundred twentieth (120) day after exercise of the Transfer Option. At the closing, Seller shall deliver the Partnership Interest free and clear of all liens and restrictions against delivery to it of the purchase price required by this Section 9.1.

9.2 Tiered Acquisition. Regardless of any contrary provision of this Agreement, no Person may acquire from any Partner or Partners (in either case, a "Selling Partner") a Partnership Interest unless the Person also offers to acquire the Partnership Interest of each other Partner at a price and under terms and conditions that are at least as favorable as those by which the Person offers to acquire the Partnership Interest from the Selling Partner. Any acquisition of an interest in the

Partnership in violation of this Section 9.2 shall be deemed null and void and of no effect.

X. ADMISSION OF OTHER GENERAL PARTNERS

By a vote of the Partners owning at least a Majority Interest of the Partnership, one or more parties may become additional or substituted partners. In the event of any such addition or substitution (i) the new Partner shall participate in the Partnership on the same terms and conditions as described in this Agreement, and shall be subject to and bound by all of the provisions of this agreement as if originally a party of this Agreement and (ii) the Partnership Interests of the other Partners shall be adjusted according to their then current respective Partnership Interests.

XI. DISSOLUTION AND LIQUIDATION

11.1 Dissolution.

The Partnership may be dissolved only upon:

- (a) the sale or other disposition of all or substantially all of the partnership's assets;
- (b) an election to dissolve the Partnership by the affirmative vote of the Partners owning at least eighty percent (80%) of the Partnership Interests.
- (c) the Bankruptcy of any Partner; provided that the remaining Partners shall have the authority to continue the business of the Partnership within

the meaning of Section 362.335(2)(b) of the Kentucky Act.

- (d) any other event that, under the Kentucky Act, would cause its dissolution.

11.2 The Partners shall liquidate the assets of the Partnership, and apply and distribute the proceeds of such liquidation in the following order of priority, unless otherwise required by mandatory provisions of applicable law:

- (a) the payment to creditors of the Partnership, including Partners, in order or priority provided by law;

- (b) to the Partners, in proportion to and to the extent of the positive balances in their respective Capital Accounts; and

- (c) to the Partners in accordance with their respective Percentage Interests; provided, however, that the Partners may place in escrow a reserve of cash or other assets of the Partnership for contingent liabilities in an amount determined by the Partners to be appropriate for such purposes.

11.3 Distribution in Kind.

Notwithstanding the provisions of Section 11.2 which require the liquidation of the assets of the Partnership, but subject to the order of priorities set forth therein, if on dissolution of the Partnership the Partners determine that an immediate sale of part or all of the Partnership's assets would be impractical or would cause undue loss to the Partners, the Partners may, by a vote of a Majority Interest defer for a reasonable time the liquidation of any assets except those necessary to satisfy lia-

bilities of the Partnership (other than those to Partners) and/or may, in its absolute discretion, distribute to the Partners prorata, in lieu of cash, as tenants in common and in accordance with the provisions of Section 11.2, undivided interests in such Partnership assets as the Partners deem not suitable for liquidation. Any distributions in kind shall be subject to such conditions relating to the disposition and management thereof as the Partners deem reasonable and equitable and to any joint operating, charter or management agreements or other agreements governing the operation of such properties at such time. The Partners shall determine the fair market value of any property distributed in kind using such reasonable method of valuation as they may adopt.

11.4 Waiver of Partition.

Each Partner hereby waives any rights to partition of the Partnership property.

XII. AMENDMENT OF PARTNERSHIP AGREEMENT

The Partnership Agreement may be amended by a vote of the Partners owning at least eighty percent (80%) of the Partnership Interests, provided, however that no such amendment shall otherwise change any Partner's Partnership Interest as determined in this Agreement, or any Partner's voting rights as otherwise specified in this Agreement.

XIII. SALE OR TRANSFER OF PARTNERSHIP ASSETS

No direct or indirect sale or transfer of substantially all of the Partnerships assets or licenses is permitted without the

prior approval of Partners controlling at least eighty percent (80%) of the Partnership Interests.

XIV. GENERAL PROVISIONS

14.1 Addresses and Notices.

Any notice, demand, request or report required or permitted to be given or made to a Partner under this Agreement shall be in writing and shall be deemed given or made when delivered in person or when sent by first class mail or by other means of written communication to the Partner at the address set forth below.

Logan Telephone Cooperative
Incorporated
P. O. Box 97
Auburn, Kentucky 42206
Attention: George Wilford Arnold, Manager

Lewisport Telephone Company, Inc.
P.O. Box 439
Pell Street
Lewisport, Kentucky 42351
Attention: Wayne R. Watts, Vice Pres. and Manager

Brandenburg Telephone Co., Inc.
332 East Broadway
Brandenburg, KY 40108
Attention: J. D. Tobin, Jr., President

North Central Telephone
Cooperative, Inc.
Highway 52 Bypass
Lafayette, TN 37083
Attention: F. Thomas Rowland, General Manager

South Central Rural Telephone
Cooperative Corporation, Inc.
Box 159
Glasgow, KY 42141
Attention: Clinton Quenzer, General Manager

Any notice, payment or report to be given or sent to a Partner hereunder shall be deemed conclusively to have been given or

sent, and the obligation to give such notice or report or to make such payment shall be deemed conclusively to have been given or sent, and the obligation to give such notice or report or to make such payment shall be deemed conclusively to have been fully satisfied, upon mailing such notice, payment or report to such Partner by certified mail, return-receipt requested, at its address as shown above. Any notice to the Partnership shall be deemed given if received at the principal office of the Partnership designated pursuant to Section 1.3. The Partnership may rely and shall be protected in relying on any notice or other document from a Partner or other Person if believed by them to be genuine.

14.2 Titles and Captions.

All Article or section titles or captions in this Agreement are for convenience only. They shall not be deemed part of this Agreement and in no way define, limit, extend or describe the scope of intent of any provisions hereof.

14.3 Pronouns and Plurals.

Whenever the context may require, any pronoun used in this Agreement shall include the corresponding masculine, feminine or neuter forms, and the singular form of nouns, pronouns and verbs shall include the plural and vice versa.

14.4 Further Action.

The parties shall execute and deliver all documents, provide all information and take or refrain from taking action as may be

necessary or appropriate to achieve the purpose of this Agreement.

14.5 Binding Effect.

This Agreement shall be binding upon and inure to the benefits of the parties and their heirs, executors, administrators, successors, legal representatives and permitted assigns.

14.6 Integration.

This Agreement constitutes the entire Agreement among the parties pertaining to the subject matter hereof and supersedes all prior agreements and understandings pertaining thereto.

14.7 Creditors.

None of the provisions of this Agreement shall be for the benefits of or enforceable by an creditors of the Partnership.

14.8 Waiver.

No failure by any party to insist upon the strict performance of any covenant, duty, Agreement or condition of this Agreement or to exercise any right or remedy consequent upon a breach thereof shall constitute waiver of any such breach or any other covenant, duty, Agreement or condition.

14.9 Counterparts.

This Agreement may be executed in counterparts, all of which together shall constitute one Agreement binding on all the parties, notwithstanding that all the parties are not signatories to the original or the same counterpart.

14.10 Applicable Law.

This Agreement shall be construed in accordance with and governed by the laws of Kentucky, without regard to the principles of conflicts of law.

14.11 Invalidity of Provisions.

If any provision of this Agreement is or becomes invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not be affected thereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of this 3rd day of January, 1990, but actually on the dates indicated below.

GENERAL PARTNERS:

NORTH CENTRAL TELEPHONE COOPERATIVE, INC.

By: [Signature]
Title: President
Date: 1/3/90

LOGAN TELEPHONE COOPERATIVE, INCORPORATED

By: [Signature]
Title: Manager
Date: 1-3-90

BRANDENBURG TELEPHONE CO., INC.

By: [Signature]
Title: President
Date: 1-3-90

LEWISPORT TELEPHONE COMPANY, INC.

By: [Signature]
Title: Manager
Date: 1-3-90

SOUTH CENTRAL RURAL TELEPHONE COOPERATIVE CORPORATION, INC.

By: [Signature]
Title: General Manager
Date: 1-3-90



KENTUCKY AIRPORT ZONING COMMISSION

MATTHEW BEVIN
Governor

421 Buttermilk Pike
Covington, KY 41017
www.transportation.ky.gov
859-341-2700

May 2, 2019

APPROVAL OF APPLICATION

APPLICANT:
BLUEGRASS CELLULAR
BLUEGRASS CELLULAR
2902 Ring Road
Elizabethtown, KY 42702

SUBJECT: AS-043-M20-2019-035

STRUCTURE: Antenna Tower
LOCATION: Clarkson, KY
COORDINATES: 37° 21' 41.68" N / 86° 8' 21.97" W
HEIGHT: 250' AGL/1137'AMSL

The Kentucky Airport Zoning Commission has approved your application for a permit to construct 250'AGL/ 1137'AMSL Antenna Tower near clarkson, KY 37° 21' 41.68" N / 86° 8' 21.97" W.

This permit is valid for a period of 18 Month(s) from its date of issuance. If construction is not completed within said 18-Month period, this permit shall lapse and be void, and no work shall be performed without the issuance of a new permit.

Medium Dual Obstruction Lighting is required in accordance with 602 KAR 50:100.

John Houlihan
Administrator



An Equal Opportunity Employer M/F/D



Mail Processing Center
 Federal Aviation Administration
 Southwest Regional Office
 Obstruction Evaluation Group
 10101 Hillwood Parkway
 Fort Worth, TX 76177

Aeronautical Study No.
 2019-ASO-1280-OE

Issued Date: 03/04/2019

Doug Updegraff
 Bluegrass Cellular, Inc.
 2902 Ring Road
 Elizabethtown, KY 42701

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Antenna Tower Wax
 Location: Clarkson, KY
 Latitude: 37-21-41.68N NAD 83
 Longitude: 86-08-21.97W
 Heights: 887 feet site elevation (SE)
 250 feet above ground level (AGL)
 1137 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 L Change 2, Obstruction Marking and Lighting, a med-dual system - Chapters 4,8(M-Dual),&12.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part 1)
- Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

This determination expires on 09/04/2020 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.

- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (718) 553-2611, or angelique.eersteling@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2019-ASO-1280-OE.

Signature Control No: 394859695-398677508
Angelique Eersteling
Technician

(DNE)

Attachment(s)
Frequency Data
Map(s)

cc: FCC

Frequency Data for ASN 2019-ASO-1280-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	55	dBW
6	7	GHz	42	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	901	MHz	500	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W

TOPO Map for ASN 2019-ASO-1280-OE



ASR Registration Search
Registration 1310238

 [Map Registration](#)

Reg Number	1310238	Status	Granted
File Number	A1132126	Constructed	
EMI	No	Dismantled	
NEPA			

Structure Type L TOWER - Lattice Tower

Location (in NAD83 Coordinates)

Lat/Long	37-21-41.7 N 086-08-22.0 W	Address	Wax, 12523 Peonia Road
City, State	Clarkson , KY		
Zip	42726	County	GRAYSON
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
270.4	76.2
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
346.6	73.2

Painting and Lighting Specifications

FAA Chapters 4, 8, 12
Paint and Light in Accordance with FAA Circular Number 70/7460-1L

FAA Notification

FAA Study	2019-ASO-1280-OE	FAA Issue Date	03/04/2019
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FRN	0001786706	Owner Entity Type	General Partnership
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Owner

KENTUCKY RSA 3 CELLULAR GENERAL PARTNERSHIP
2902 RING ROAD
P.O. Box 5012
ELIZABETHTOWN , KY 42701

P: (270)769-0339
F:
E: jvice@bluegrasscellular.com

Contact

Gist , Pamela L Esq
Attention To: Pamela L Gist
8300 Greensboro Drive, Suite 1200
Tysons , VA 22102

P: (703)584-8665
F:
E: pgist@fcclaw.com

Status	Granted	Received	05/02/2019
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**UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
ANTENNA STRUCTURE REGISTRATION**



OWNER: KENTUCKY RSA 3 CELLULAR GENERAL PARTNERSHIP

FCC Registration Number (FRN): 0001786706

KENTUCKY RSA 3 CELLULAR GENERAL PARTNERSHIP PO BOX 5012 2902 RING ROAD ELIZABETHTOWN, KY 42701	Antenna Structure Registration Number 1310238						
	Issue Date 05-02-2019						
Location of Antenna Structure Wax, 12523 Peonia Road Clarkson, KY 42726 County: GRAYSON	Ground Elevation (AMSL) 270.4 meters						
	Overall Height Above Ground (AGL) 76.2 meters						
<table border="0"> <tr> <td>Latitude</td> <td>Longitude</td> <td>NAD83</td> </tr> <tr> <td>37- 21- 41.7 N</td> <td>086- 08- 22.0 W</td> <td></td> </tr> </table>	Latitude	Longitude	NAD83	37- 21- 41.7 N	086- 08- 22.0 W		Overall Height Above Mean Sea Level (AMSL) 346.6 meters
Latitude	Longitude	NAD83					
37- 21- 41.7 N	086- 08- 22.0 W						
Center of Array Coordinates N/A	Type of Structure LTOWER Lattice Tower						
FAA Chapters 4, 8, 12 Paint and Light in Accordance with FAA Circular Number 70/7460-1L							

This registration is effective upon completion of the described antenna structure and notification to the Commission. **YOU MUST NOTIFY THE COMMISSION WITHIN 24 HOURS OF COMPLETION OF CONSTRUCTION OR CANCELLATION OF YOUR PROJECT, please file FCC Form 854.** To file electronically, connect to the antenna structure registration system by pointing your web browser to <http://wireless.fcc.gov/antenna>. Electronic filing is recommended. You may also file manually by submitting a paper copy of FCC Form 854. Use purpose code "NT" for notification of completion of construction; use purpose code "CA" to cancel your registration.

The Antenna Structure Registration is not an authorization to construct radio facilities or transmit radio signals. It is necessary that all radio equipment on this structure be covered by a valid FCC license or construction permit.

You must immediately provide a copy of this Registration to all tenant licensees and permittees sited on the structure described on this Registration (although not required, you may want to use Certified Mail to obtain proof of receipt), and display your Registration Number at the site. See reverse for important information about the Commission's Antenna Structure Registration rules.

FCC 854R
June 2012

You must comply with all applicable FCC obstruction marking and lighting requirements, as set forth in Part 17 of the Commission's Rules (47 C.F.R. Part 17). These rules include, but are not limited to:

- **Posting the Registration Number:** The Antenna Structure Registration Number must be displayed in a conspicuous place so that it is readily visible near the base of the antenna structure. Materials used to display the Registration Number must be weather-resistant and of sufficient size to be easily seen at the base of the antenna structure. Exceptions exist for certain historic structures. See 47 C.F.R. 17.4(g)-(h).
- **Inspecting lights and equipment:** The obstruction lighting must be observed at least every 24 hours in order to detect any outages or malfunctions. Lighting equipment, indicators, and associated devices must be inspected at least once every three months.
- **Reporting outages and malfunctions:** When any top steady-burning light or a flashing light (in any position) burns out or malfunctions, the outage must be reported to the nearest FAA Flight Service Station, unless corrected within 30 minutes. The FAA must again be notified when the light is restored. The owner must also maintain a log of these outages and malfunctions.
- **Maintaining assigned painting:** The antenna structure must be repainted as often as necessary to maintain good visibility.
- **Complying with environmental rules:** If you certified that grant of this registration would not have a significant environmental impact, you must nevertheless maintain all pertinent records and be ready to provide documentation supporting this certification and compliance with the rules, in the event that such information is requested by the Commission pursuant to 47 C.F.R. 1.1307(d).
- **Updating information:** The owner must notify the FCC of proposed modifications to this structure; of any change in ownership; or, within 30 days of dismantlement of the structure.

Copies of the Code of Federal Regulations (which contain the FCC's antenna structure registration rules, 47 C.F.R. Part 17) are available from the Government Printing Office (GPO). To purchase CFR volumes, call (202) 512-1800. For GPO Customer Service, call (202) 512-1803. For additional FCC information, consult the Antenna Homepage on the internet at <http://wireless.fcc.gov/antenna> or call (877) 480-3201 (TTY 717-338-2824).

May 1, 2019

Bluegrass Cellular

RE: Q19333 Wax 240' WSST Fall Radius

Upon receipt of order, we propose to design and supply the above referenced WSSTP tower for an ultimate 3-second gust wind speed of 105 mph per ASCE7-16, Exposure Category C, Topographic Category 1, and Risk Category II were used in this analysis.

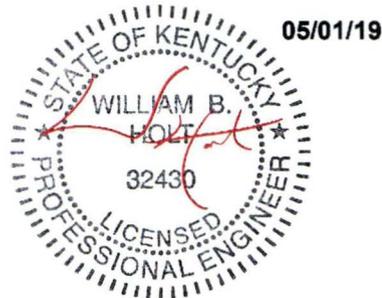
When designed according to this standard, the wind pressures and steel strength capacities include several safety factors, resulting in an overall minimum safety factor of 25%. Therefore, it is highly unlikely that the self support tower will fail structurally in a wind event where the design wind speed is exceeded within the range of the built-in safety factors.

Should the wind speed increase beyond the capacity of the built-in safety factors, to the point of failure of one or more structural elements, the most likely location of the failure would be in the legs from 140'-160'. Assuming the wind pressure profile is similar to that used to design the self support tower, the self support legs will buckle at this location, causing the tower to fall within the design radius of 50% of the tower height.

Sincerely,



William Holt, PE



World Tower
COMPANY, INC.

1213 Compressor Drive
P.O. Box 508
Mayfield, KY 42066
270-247-3642
FAX: 270-247-0909
E-mail: worldtower@worldtower.com
Web: www.worldtower.com

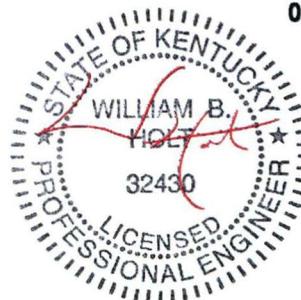


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**240' MODEL WSST TOWER
FOR: BLUEGRASS WIRELESS
SITE: WAX
GRAYSON COUNTY, KY
DESIGN PACKAGE**

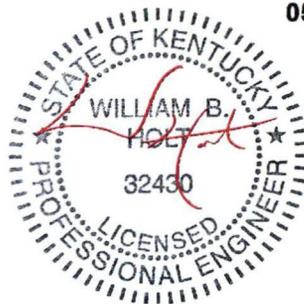
05/06/19



GENERAL NOTES

1. WELDED CONNECTIONS SHALL CONFORM TO THE LATEST REVISION OF THE AMERICAN WELDING SOCIETY AWS. D 1.1.
2. TOWER AND ALL FABRICATED ACCESSORIES ARE HOT-DIP GALVANIZED.
3. ALL BOLTS SHALL BE GALVANIZED ACCORDING TO THE STANDARD SPECIFICATION FOR ZINC COATING OF IRON AND STEEL HARDWARE ASTM A153.
4. LEG STEEL IS 50 KSI MIN YIELD SOLID ROUND OR PIPE AND BRACING STEEL IS 36 KSI MIN YIELD SOLID ROUND OR STRUCTURAL ANGLE.
5. ALL STRUCTURAL BOLTS ARE ASTM A325X, THREADS EXCLUDED FROM SHEAR PLANE.
6. TOWER SHOULD BE INSPECTED IN ACCORDANCE WITH TIA-222-G EVERY 5 YEARS.
7. TOWER INSPECTION SHOULD ONLY BE PERFORMED BY EXPERIENCED QUALIFIED PERSONNEL. FOR ASSISTANCE IN PROPER MAINTENANCE OF YOUR TOWER, CALL WORLD TOWER AT 270-247-3642.

05/06/19

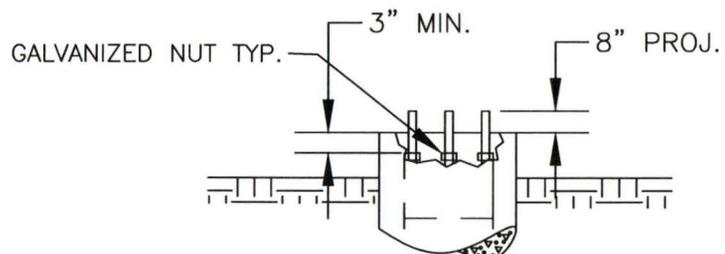


WORLD TOWER

TITLE:

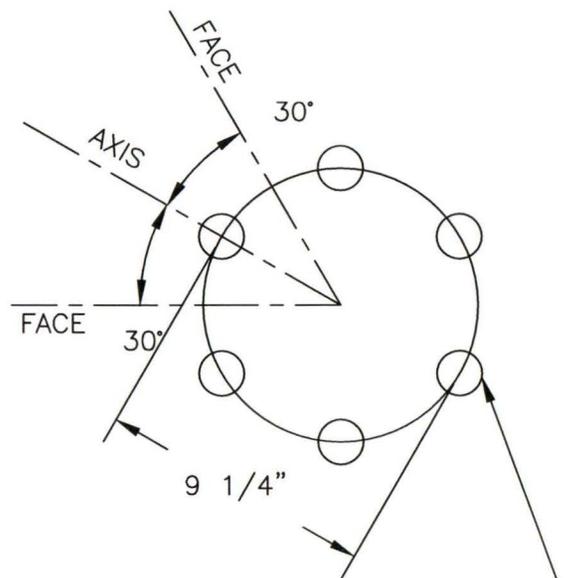
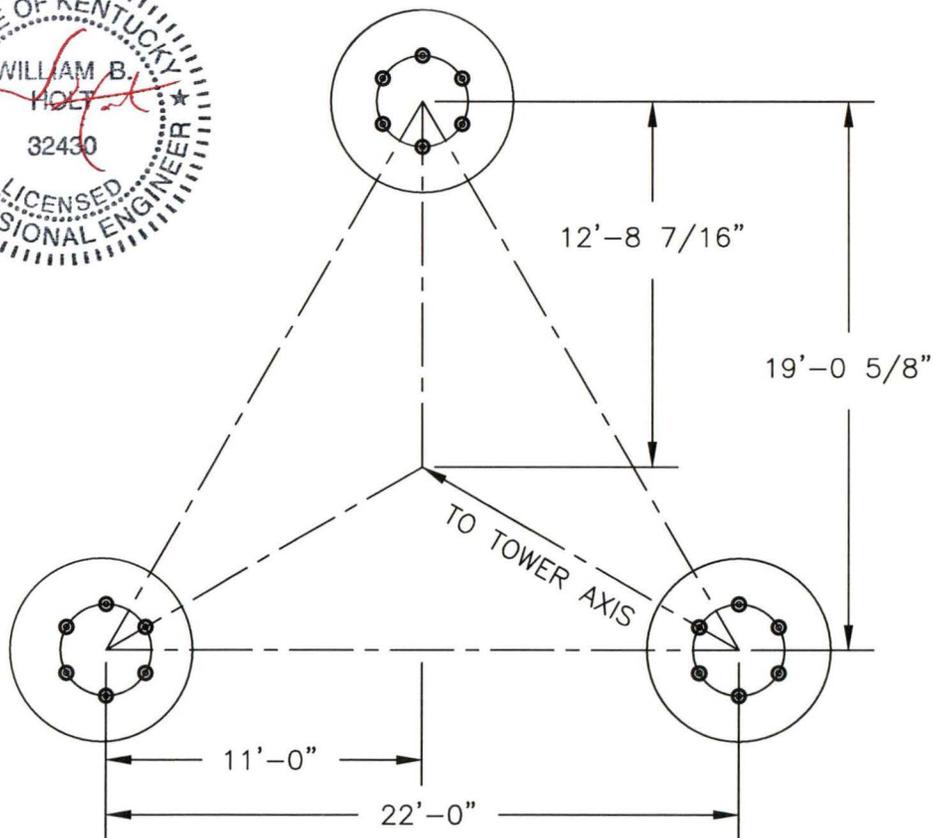
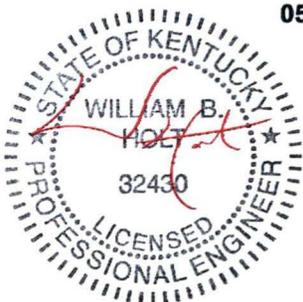
240' MODEL WSST TOWER
FOR: BLUEGRASS CELLULAR
SITE: WAX
GRAYSON COUNTY, KY

SCALE	DWN. LKG	CKD.	DATE 5-3-19
		DWG. NO.	Q19333N



PIER ELEVATION

05/06/19



ANCHOR BOLTS 6 (18 TOTAL)
1 1/4"Ø X 72" ASTM F1554-105
EQUALLY SPACED WITH TOP TEMPLATE
AND EMBEDDED PLATE

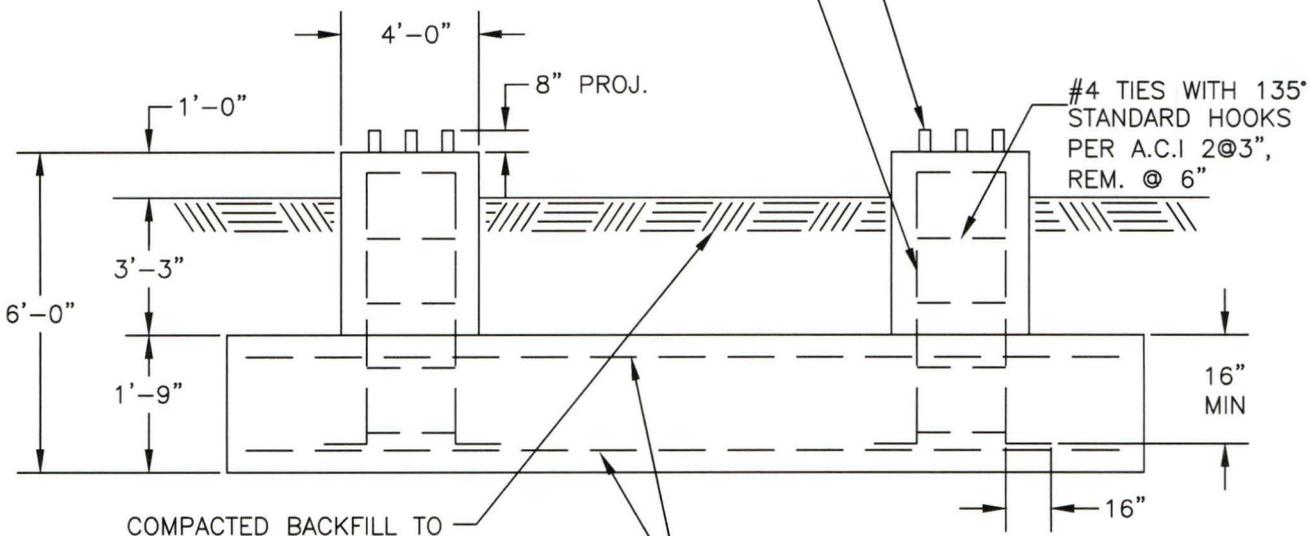
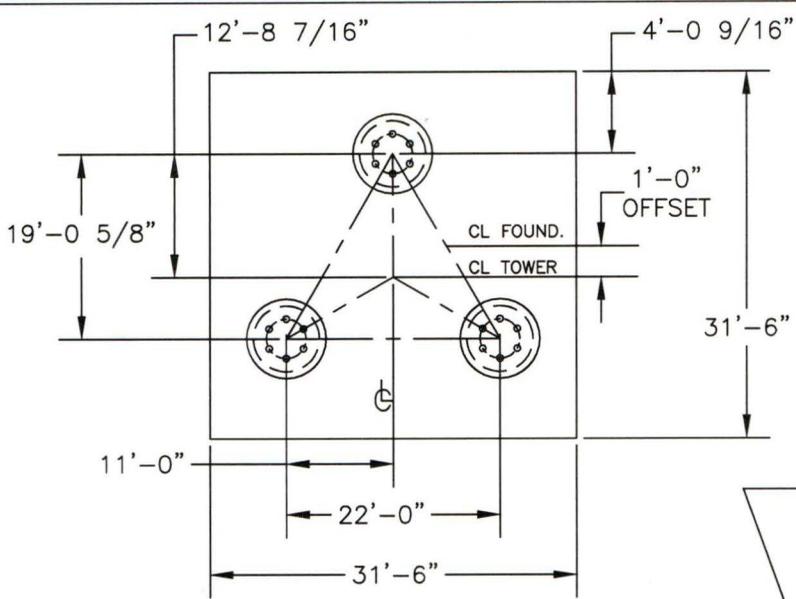
WORLD TOWER

TITLE:
ANCHOR BOLT LAYOUT
240' MODEL WSST TOWER
FOR: BLUEGRASS CELLULAR
SITE: WAX
GRAYSON COUNTY, KY

SCALE NONE	DWN. LKG	CKD.	DATE 5-3-19
FILE	DWG. NO. Q19333AB		

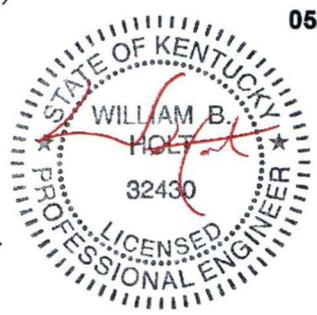
70.3 CU. YDS.
CONCRETE REQ'D.

BASE REACTIONS	
OTM:	7831.0 FT. KIPS
COMP.	445.0 KIPS
UPLIFT	369.0 KIPS
SHEAR (3 LEGS)	58.0 KIPS
WT. NO ICE	102.0 KIPS
WT. 3/4" ICE	244.0 KIPS



GENERAL NOTES

1. CONCRETE TO HAVE 4000 PSI MIN. COMPRESSIVE STRENGTH AFTER 28 DAYS.
2. ALL REINFORCMENT STEEL IS DEFORMED AND MEETS THE STRENGTH REQUIREMENTS OF ASTM A615 GRADE 60.
3. EMBEDDED STEEL TO HAVE 3" MIN. CONCRETE COVER.
4. FOUNDATION IS BASED UPON CUSTOMER SUPPLIED SOILS BY TERRACON. PROJECT NUMBER 57185152 DATED FEBRUARY 20, 2019.



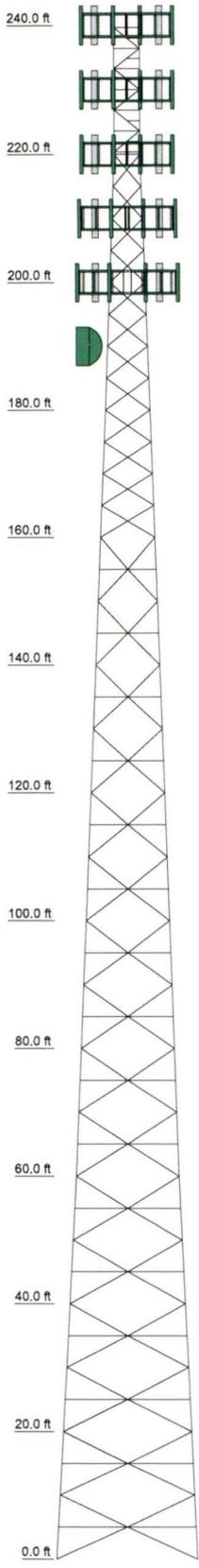
05/06/19

TITLE: FOUNDATION DETAILS
240' MODEL WSST TOWER
FOR: BLUEGRASS WIRELESS
SITE: WAX
GRAYSON COUNTY, KY

WORLD TOWER

SCALE	DWN. LKG	CKD.	DATE 5-3-19
FILE	DWG. NO. Q19333F		

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	
Legs	SR 1 1/2	SR 2 1/4	SR 2 3/4	SR 3	SR 3 1/4	SR 3 1/4	SR 3 1/2	SR 3 3/4	SR 3 3/4	SR 4	SR 4	SR 4 1/4	
Leg Grade							A572-50						
Diagonals	SR 1	L2x2x3/16	L2 1/2x2 1/2x3/16	L2 1/2x2 1/2x3/16	L3x3x3/16	L3x3x1/4	L3x3x3/16	L3x3x3/16	L3x3x3/16	L3 1/2x3 1/2x1/4	L3 1/2x3 1/2x1/4	L3 1/2x3 1/2x1/4	
Diagonal Grade							A36						
Top Girts	SR 1 1/8	L2x2x1/8											
Bottom Girts	SR 1												
Horizontals	SR 1												
Sec. Horizontals	SR 1												
Face Width (ft)	4	5.5	7	8.5	10	11.5	13	14.5	16	18	20		
# Panels @ (ft)	6 @ 3.20833					44 @ 5							
Weight (K)	0.9	1.3	1.9	2.3	2.4	2.7	3.4	3.8	4.0	4.7	5.0	5.7	38.1



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(2) 800 10965 w/Mount Pipe	240	WD13X53 Antenna Mounting Frame (w/ .75)*	220
(2) 800 10965 w/Mount Pipe	240	(2) 800 10965 w/Mount Pipe	210
(2) 800 10965 w/Mount Pipe	240	(2) 800 10965 w/Mount Pipe	210
WD13X53 Antenna Mounting Frame (w/ .75)*	240	(2) 800 10965 w/Mount Pipe	210
WD13X53 Antenna Mounting Frame (w/ .75)*	240	WD13X53 Antenna Mounting Frame (w/ .75)*	210
WD13X53 Antenna Mounting Frame (w/ .75)*	240	WD13X53 Antenna Mounting Frame (w/ .75)*	210
(2) 800 10965 w/Mount Pipe	230	WD13X53 Antenna Mounting Frame (w/ .75)*	210
(2) 800 10965 w/Mount Pipe	230	(2) 800 10965 w/Mount Pipe	200
(2) 800 10965 w/Mount Pipe	230	(2) 800 10965 w/Mount Pipe	200
WD13X53 Antenna Mounting Frame (w/ .75)*	230	(2) 800 10965 w/Mount Pipe	200
WD13X53 Antenna Mounting Frame (w/ .75)*	230	WD13X53 Antenna Mounting Frame (w/ .75)*	200
WD13X53 Antenna Mounting Frame (w/ .75)*	230	WD13X53 Antenna Mounting Frame (w/ .75)*	200
(2) 800 10965 w/Mount Pipe	220	WD13X53 Antenna Mounting Frame (w/ .75)*	200
(2) 800 10965 w/Mount Pipe	220	WD13X53 Antenna Mounting Frame (w/ .75)*	200
(2) 800 10965 w/Mount Pipe	220	4.5"x7" Pipe Mount	190
WD13X53 Antenna Mounting Frame (w/ .75)*	220	HPD6-5.9	190
WD13X53 Antenna Mounting Frame (w/ .75)*	220		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

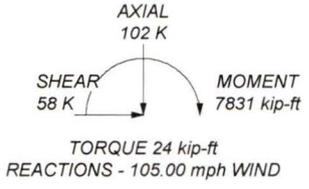
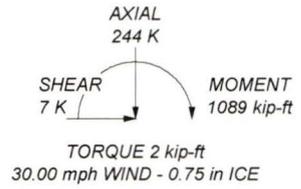
1. Tower is located in Grayson County, Kentucky.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 105.00 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 30.00 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60.00 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. fall radius less than half tower height per custome spec
9. TOWER RATING: 99.9%



ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
 DOWN: 445 K
 SHEAR: 37 K

UPLIFT: -369 K
 SHEAR: 32 K



World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job: 240' WSST / Run Q19333
	Project: Wax
	Client: Bluegrass Cellular
	Code: TIA-222-G
	Path: G:\World Tower\2019\KY\Q19333 Wax\Analysis\Q19333.eri
Drawn by: WBH	App'd:
Date: 05/01/19	Scale: NTS
Dwg No. E-1	

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job 240' WSST / Run Q19333	Page 1 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 240.00 ft above the ground line.

The base of the tower is set at an elevation of 0.00 ft above the ground line.

The face width of the tower is 4.00 ft at the top and 22.00 ft at the base.

This tower is designed using the TIA-222-G standard.

The following design criteria apply:

Tower is located in Grayson County, Kentucky.

ASCE 7-10 Wind Data is used.

Basic wind speed of 105.00 mph.

Risk Category II.

Exposure Category C.

Topographic Category 1.

Crest Height 0.00 ft.

Nominal ice thickness of 0.75 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 30.00 mph is used in combination with ice.

Temperature drop of 30 °F.

Deflections calculated using a wind speed of 60.00 mph.

fall radius less than half tower height per custome spec.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

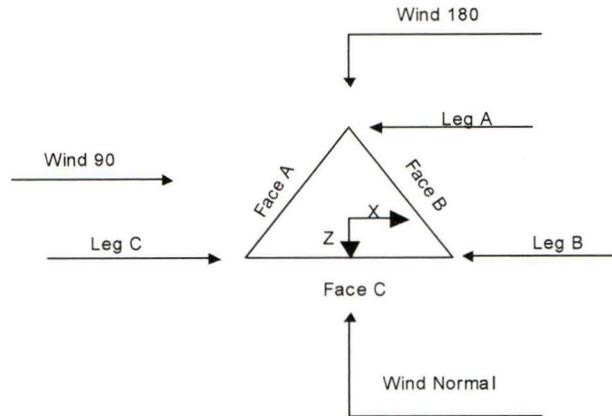
Stress ratio used in tower member design is 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

- | | | |
|--|--|---|
| <ul style="list-style-type: none"> Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification √ Use Code Stress Ratios √ Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile √ Include Bolts In Member Capacity Leg Bolts Are At Top Of Section √ Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) √ SR Members Have Cut Ends SR Members Are Concentric | <ul style="list-style-type: none"> Distribute Leg Loads As Uniform Assume Legs Pinned √ Assume Rigid Index Plate √ Use Clear Spans For Wind Area √ Use Clear Spans For KL/r Retension Guys To Initial Tension √ Bypass Mast Stability Checks √ Use Azimuth Dish Coefficients √ Project Wind Area of Appurt. Autocalc Torque Arm Areas Add IBC 6D+W Combination √ Sort Capacity Reports By Component Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder Ignore KL/ry For 60 Deg. Angle Legs | <ul style="list-style-type: none"> Use ASCE 10 X-Brace Ly Rules √ Calculate Redundant Bracing Forces Ignore Redundant Members in FEA √ SR Leg Bolts Resist Compression All Leg Panels Have Same Allowable Offset Girt At Foundation √ Consider Feed Line Torque √ Include Angle Block Shear Check Use TIA-222-G Bracing Resist. Exemption Use TIA-222-G Tension Splice Exemption Poles Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets Pole Without Linear Attachments Pole With Shroud Or No Appurtenances Outside and Inside Corner Radii Are Known |
|--|--|---|

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job 240' WSST / Run Q19333	Page 2 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH



Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	240.00-220.00			4.00	1	20.00
T2	220.00-200.00			4.00	1	20.00
T3	200.00-180.00			5.50	1	20.00
T4	180.00-160.00			7.00	1	20.00
T5	160.00-140.00			8.50	1	20.00
T6	140.00-120.00			10.00	1	20.00
T7	120.00-100.00			11.50	1	20.00
T8	100.00-80.00			13.00	1	20.00
T9	80.00-60.00			14.50	1	20.00
T10	60.00-40.00			16.00	1	20.00
T11	40.00-20.00			18.00	1	20.00
T12	20.00-0.00			20.00	1	20.00

Tower Section Geometry (cont'd)

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	240.00-220.00	3.21	K Brace Left	No	Yes+Steps	4.50	4.50
T2	220.00-200.00	5.00	X Brace	No	No	0.00	0.00
T3	200.00-180.00	5.00	X Brace	No	No	0.00	0.00

<i>tnxTower</i> World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job 240' WSST / Run Q19333	Page 3 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH

Tower Section	Tower Elevation <i>ft</i>	Diagonal Spacing <i>ft</i>	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset <i>in</i>	Bottom Girt Offset <i>in</i>
T4	180.00-160.00	5.00	X Brace	No	No	0.00	0.00
T5	160.00-140.00	5.00	Double K	No	Yes	0.00	0.00
T6	140.00-120.00	5.00	Double K	No	Yes	0.00	0.00
T7	120.00-100.00	5.00	Double K	No	Yes	0.00	0.00
T8	100.00-80.00	5.00	Double K	No	Yes	0.00	0.00
T9	80.00-60.00	5.00	Double K	No	Yes	0.00	0.00
T10	60.00-40.00	5.00	Double K	No	Yes	0.00	0.00
T11	40.00-20.00	5.00	Double K	No	Yes	0.00	0.00
T12	20.00-0.00	5.00	Double K	No	Yes	0.00	0.00

Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 240.00-220.00	Solid Round	1 1/2	A572-50 (50 ksi)	Solid Round	1	A36 (36 ksi)
T2 220.00-200.00	Solid Round	2 1/4	A572-50 (50 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T3 200.00-180.00	Solid Round	2 3/4	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T4 180.00-160.00	Solid Round	3	A572-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T5 160.00-140.00	Solid Round	3	A572-50 (50 ksi)	Equal Angle	L3x3x3/16	A36 (36 ksi)
T6 140.00-120.00	Solid Round	3 1/4	A572-50 (50 ksi)	Equal Angle	L3x3x3/16	A36 (36 ksi)
T7 120.00-100.00	Solid Round	3 1/2	A572-50 (50 ksi)	Equal Angle	L3x3x1/4	A36 (36 ksi)
T8 100.00-80.00	Solid Round	3 3/4	A572-50 (50 ksi)	Equal Angle	L3x3x1/4	A36 (36 ksi)
T9 80.00-60.00	Solid Round	3 3/4	A572-50 (50 ksi)	Equal Angle	L3x3x1/4	A36 (36 ksi)
T10 60.00-40.00	Solid Round	4	A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)
T11 40.00-20.00	Solid Round	4	A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)
T12 20.00-0.00	Solid Round	4 1/4	A572-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 240.00-220.00	Solid Round	1 1/8	A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T2 220.00-200.00	Equal Angle	L2x2x1/8	A36 (36 ksi)	Equal Angle		A36 (36 ksi)

<i>tnxTower</i> World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job 240' WSST / Run Q19333	Page 4 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH

Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T1 240.00-220.00	None	Single Angle		A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T5 160.00-140.00	None	Single Angle		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T6 140.00-120.00	None	Single Angle		A36 (36 ksi)	Equal Angle	L2x2x3/16	A36 (36 ksi)
T7 120.00-100.00	None	Single Angle		A36 (36 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T8 100.00-80.00	None	Single Angle		A36 (36 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)
T9 80.00-60.00	None	Single Angle		A36 (36 ksi)	Equal Angle	L3x3x3/16	A36 (36 ksi)
T10 60.00-40.00	None	Double Angle		A36 (36 ksi)	Equal Angle	L3x3x3/16	A36 (36 ksi)
T11 40.00-20.00	None	Double Angle		A36 (36 ksi)	Equal Angle	L3x3x1/4	A36 (36 ksi)
T12 20.00-0.00	None	Double Angle		A36 (36 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T1 240.00-220.00	Solid Round	1	A36 (36 ksi)	Solid Round		A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Gusset Area (per face) <i>ft²</i>	Gusset Thickness <i>in</i>	Gusset Grade	Adjust. Factor <i>A_f</i>	Adjust. Factor <i>A_r</i>	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals <i>in</i>	Double Angle Stitch Bolt Spacing Horizontals <i>in</i>	Double Angle Stitch Bolt Spacing Redundants <i>in</i>
T1 240.00-220.00	0.00	0.00	A36 (36 ksi)	1	1	1.05	0.00	0.00	36.00
T2 220.00-200.00	0.50	0.38	A36 (36 ksi)	1	1	1.06	0.00	0.00	36.00
T3 200.00-180.00	0.50	0.38	A36 (36 ksi)	1	1	1.06	0.00	0.00	36.00
T4 180.00-160.00	0.50	0.38	A36 (36 ksi)	1	1	1.06	0.00	0.00	36.00
T5 160.00-140.00	0.50	0.38	A36 (36 ksi)	1	1	1.07	0.00	0.00	36.00
T6	0.50	0.38	A36	1	1	1.07	0.00	0.00	36.00

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job 240' WSST / Run Q19333	Page 5 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
ft	ft ²	in							
140.00-120.00			(36 ksi)						
T7	0.50	0.50	A36	1	1	1.07	0.00	0.00	36.00
120.00-100.00			(36 ksi)						
T8	0.50	0.50	A36	1	1	1.07	0.00	0.00	36.00
100.00-80.00			(36 ksi)						
T9 80.00-60.00	0.50	0.50	A36	1	1	1.08	0.00	0.00	36.00
			(36 ksi)						
T10	0.50	0.50	A36	1	1	1.08	0.00	0.00	36.00
60.00-40.00			(36 ksi)						
T11	0.50	0.50	A36	1	1	1.08	0.00	0.00	36.00
40.00-20.00			(36 ksi)						
T12 20.00-0.00	0.50	0.50	A36	1	1	1.08	0.00	0.00	36.00
			(36 ksi)						

Tower Section Geometry (cont'd)

Tower Elevation	Calc K Single Angles	Calc K Solid Rounds	Legs	K Factors ¹							
				X Brace Diags	K Brace Diags	Single Diags	Girts	Horiz.	Sec. Horiz.	Inner Brace	
											X
ft			X	X	X	X	X	X	X	X	
T1	Yes	Yes	1	1	1	1	1	1	1	1	1
240.00-220.00				1	1	1	1	1	1	1	1
T2	Yes	Yes	1	1	1	1	1	1	1	1	1
220.00-200.00				1	1	1	1	1	1	1	1
T3	Yes	Yes	1	1	1	1	1	1	1	1	1
200.00-180.00				1	1	1	1	1	1	1	1
T4	Yes	Yes	1	1	1	1	1	1	1	1	1
180.00-160.00				1	1	1	1	1	1	1	1
T5	Yes	Yes	1	1	1	1	1	1	1	1	1
160.00-140.00				1	1	1	1	1	1	1	1
T6	Yes	Yes	1	1	1	1	1	1	1	1	1
140.00-120.00				1	1	1	1	1	1	1	1
T7	Yes	Yes	1	1	1	1	1	1	1	1	1
120.00-100.00				1	1	1	1	1	1	1	1
T8	Yes	Yes	1	1	1	1	1	1	1	1	1
100.00-80.00				1	1	1	1	1	1	1	1
T9	Yes	Yes	1	1	1	1	1	1	1	1	1
80.00-60.00				1	1	1	1	1	1	1	1
T10	Yes	Yes	1	1	1	1	1	1	1	1	1
60.00-40.00				1	1	1	1	1	1	1	1
T11	Yes	Yes	1	1	1	1	1	1	1	1	1
40.00-20.00				1	1	1	1	1	1	1	1
T12	Yes	Yes	1	1	1	1	1	1	1	1	1
20.00-0.00				1	1	1	1	1	1	1	1

¹Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.

Tower Section Geometry (cont'd)

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job 240' WSST / Run Q19333	Page 7 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH

Tower Elevation ft	Leg Connection Type	Leg Bolt Size in	Leg No.	Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
				Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.						
T12 20.00-0.00	Flange	1.25	6	0.75	1	0.00	0	0.00	0	0.63	0	0.75	1	0.00	0
		F1554-105		A325X		A325X		A325X		A325X		A325X		A325X	

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
Safety Line 3/8	C	No	No	Ar (CaAa)	240.00 - 5.00	1	1	0.38	0.38		0.22
1 5/8	A	No	No	Ar (CaAa)	5.00 - 240.00	18	6	0.52	1.98		1.04
1 5/8	B	No	No	Ar (CaAa)	5.00 - 230.00	18	6	0.52	1.98		1.04
1 5/8	C	No	No	Ar (CaAa)	5.00 - 220.00	18	6	0.52	1.98		1.04
1 5/8	A	No	No	Ar (CaAa)	5.00 - 210.00	18	6	0.52	1.98		1.04
1 5/8	B	No	No	Ar (CaAa)	5.00 - 200.00	18	6	0.52	1.98		1.04
W/G LADDER RAIL*	A	No	No	Af (CaAa)	5.00 - 240.00	2	2	48.00	0.25		3.00
W/G LADDER RAIL*	B	No	No	Af (CaAa)	5.00 - 230.00	2	2	48.00	0.25		3.00
W/G LADDER RAIL*	C	No	No	Af (CaAa)	5.00 - 220.00	2	2	48.00	0.25		3.00
EW52	C	No	No	Ar (CaAa)	5.00 - 190.00	1	1	0.50 0.00	1.74		0.59

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{A_A} In Face ft ²	C _{A_A} Out Face ft ²	Weight K
T1	240.00-220.00	A	0.000	0.000	72.947	0.000	0.49
		B	0.000	0.000	36.473	0.000	0.25
		C	0.000	0.000	0.750	0.000	0.00
T2	220.00-200.00	A	0.000	0.000	108.587	0.000	0.68
		B	0.000	0.000	72.947	0.000	0.49
		C	0.000	0.000	73.697	0.000	0.50
T3	200.00-180.00	A	0.000	0.000	144.227	0.000	0.87
		B	0.000	0.000	144.227	0.000	0.87
		C	0.000	0.000	75.439	0.000	0.50
T4	180.00-160.00	A	0.000	0.000	144.227	0.000	0.87
		B	0.000	0.000	144.227	0.000	0.87
		C	0.000	0.000	77.182	0.000	0.51
T5	160.00-140.00	A	0.000	0.000	144.227	0.000	0.87
		B	0.000	0.000	144.227	0.000	0.87
		C	0.000	0.000	77.182	0.000	0.51
T6	140.00-120.00	A	0.000	0.000	144.227	0.000	0.87
		B	0.000	0.000	144.227	0.000	0.87
		C	0.000	0.000	77.182	0.000	0.51
T7	120.00-100.00	A	0.000	0.000	144.227	0.000	0.87
		B	0.000	0.000	144.227	0.000	0.87
		C	0.000	0.000	77.182	0.000	0.51
T8	100.00-80.00	A	0.000	0.000	144.227	0.000	0.87
		B	0.000	0.000	144.227	0.000	0.87

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job	240' WSST / Run Q19333	Page	8 of 22
	Project	Wax	Date	11:37:13 05/01/19
	Client	Bluegrass Cellular	Designed by	WBH

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
T9	80.00-60.00	C	0.000	0.000	77.182	0.000	0.51
		A	0.000	0.000	144.227	0.000	0.87
		B	0.000	0.000	144.227	0.000	0.87
T10	60.00-40.00	C	0.000	0.000	77.182	0.000	0.51
		A	0.000	0.000	144.227	0.000	0.87
		B	0.000	0.000	144.227	0.000	0.87
T11	40.00-20.00	C	0.000	0.000	77.182	0.000	0.51
		A	0.000	0.000	144.227	0.000	0.87
		B	0.000	0.000	144.227	0.000	0.87
T12	20.00-0.00	C	0.000	0.000	77.182	0.000	0.51
		A	0.000	0.000	108.170	0.000	0.65
		B	0.000	0.000	108.170	0.000	0.65
		C	0.000	0.000	57.886	0.000	0.38

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
T1	240.00-220.00	A	1.821	0.000	0.000	68.755	0.000	1.83
		B		0.000	0.000	34.377	0.000	0.92
		C		0.000	0.000	8.036	0.000	0.10
T2	220.00-200.00	A	1.805	0.000	0.000	94.712	0.000	2.51
		B		0.000	0.000	68.510	0.000	1.82
		C		0.000	0.000	76.480	0.000	1.92
T3	200.00-180.00	A	1.787	0.000	0.000	120.524	0.000	3.18
		B		0.000	0.000	120.524	0.000	3.18
		C		0.000	0.000	81.458	0.000	1.99
T4	180.00-160.00	A	1.767	0.000	0.000	120.096	0.000	3.16
		B		0.000	0.000	120.096	0.000	3.16
		C		0.000	0.000	86.323	0.000	2.05
T5	160.00-140.00	A	1.745	0.000	0.000	119.620	0.000	3.14
		B		0.000	0.000	119.620	0.000	3.14
		C		0.000	0.000	85.821	0.000	2.03
T6	140.00-120.00	A	1.720	0.000	0.000	119.082	0.000	3.11
		B		0.000	0.000	119.082	0.000	3.11
		C		0.000	0.000	85.255	0.000	2.01
T7	120.00-100.00	A	1.692	0.000	0.000	118.464	0.000	3.08
		B		0.000	0.000	118.464	0.000	3.08
		C		0.000	0.000	84.604	0.000	1.99
T8	100.00-80.00	A	1.658	0.000	0.000	117.736	0.000	3.04
		B		0.000	0.000	117.736	0.000	3.04
		C		0.000	0.000	83.836	0.000	1.96
T9	80.00-60.00	A	1.617	0.000	0.000	116.845	0.000	3.00
		B		0.000	0.000	116.845	0.000	3.00
		C		0.000	0.000	82.897	0.000	1.92
T10	60.00-40.00	A	1.564	0.000	0.000	115.686	0.000	2.94
		B		0.000	0.000	115.686	0.000	2.94
		C		0.000	0.000	81.675	0.000	1.87
T11	40.00-20.00	A	1.486	0.000	0.000	114.001	0.000	2.86
		B		0.000	0.000	114.001	0.000	2.86
		C		0.000	0.000	79.898	0.000	1.81
T12	20.00-0.00	A	1.331	0.000	0.000	82.993	0.000	2.03
		B		0.000	0.000	82.993	0.000	2.03
		C		0.000	0.000	57.278	0.000	1.26

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job 240' WSST / Run Q19333	Page 9 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH

Feed Line Center of Pressure

Section	Elevation ft	CP _X	CP _Z	CP _X	CP _Z
		in	in	Ice in	Ice in
T1	240.00-220.00	-2.71	-5.27	-1.87	-3.05
T2	220.00-200.00	-1.27	-2.74	-0.95	-1.20
T3	200.00-180.00	0.00	-4.83	0.00	-2.85
T4	180.00-160.00	0.00	-5.31	0.00	-2.90
T5	160.00-140.00	0.00	-6.02	0.00	-3.31
T6	140.00-120.00	0.00	-6.64	0.00	-3.67
T7	120.00-100.00	0.00	-7.13	0.00	-3.99
T8	100.00-80.00	0.00	-7.66	0.00	-4.32
T9	80.00-60.00	0.00	-8.05	0.00	-4.62
T10	60.00-40.00	0.00	-8.25	0.00	-4.89
T11	40.00-20.00	0.00	-8.77	0.00	-5.31
T12	20.00-0.00	0.00	-7.53	0.00	-4.85

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T1	1	Safety Line 3/8	220.00 - 240.00	0.6000	0.5573
T1	2	1 5/8	220.00 - 240.00	0.6000	0.5573
T1	3	1 5/8	220.00 - 230.00	0.6000	0.5573
T1	8	W/G LADDER RAIL*	220.00 - 240.00	0.6000	0.5573
T1	9	W/G LADDER RAIL*	220.00 - 230.00	0.6000	0.5573
T2	1	Safety Line 3/8	200.00 - 220.00	0.6000	0.5502
T2	2	1 5/8	200.00 - 220.00	0.6000	0.5502
T2	3	1 5/8	200.00 - 220.00	0.6000	0.5502
T2	4	1 5/8	200.00 - 220.00	0.6000	0.5502
T2	5	1 5/8	200.00 - 210.00	0.6000	0.5502
T2	8	W/G LADDER RAIL*	200.00 - 220.00	0.6000	0.5502
T2	9	W/G LADDER RAIL*	200.00 - 220.00	0.6000	0.5502
T2	10	W/G LADDER RAIL*	200.00 - 220.00	0.6000	0.5502
T3	1	Safety Line 3/8	180.00 - 200.00	0.6000	0.6000
T3	2	1 5/8	180.00 - 200.00	0.6000	0.6000
T3	3	1 5/8	180.00 - 200.00	0.6000	0.6000
T3	4	1 5/8	180.00 - 200.00	0.6000	0.6000

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job 240' WSST / Run Q19333	Page 10 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T3	5	1 5/8	180.00 - 200.00	0.6000	0.6000
T3	6	1 5/8	180.00 - 200.00	0.6000	0.6000
T3	8	W/G LADDER RAIL*	180.00 - 200.00	0.6000	0.6000
T3	9	W/G LADDER RAIL*	180.00 - 200.00	0.6000	0.6000
T3	10	W/G LADDER RAIL*	180.00 - 200.00	0.6000	0.6000
T3	22	EW52	180.00 - 190.00	0.6000	0.6000
T4	1	Safety Line 3/8	160.00 - 180.00	0.6000	0.6000
T4	2	1 5/8	160.00 - 180.00	0.6000	0.6000
T4	3	1 5/8	160.00 - 180.00	0.6000	0.6000
T4	4	1 5/8	160.00 - 180.00	0.6000	0.6000
T4	5	1 5/8	160.00 - 180.00	0.6000	0.6000
T4	6	1 5/8	160.00 - 180.00	0.6000	0.6000
T4	8	W/G LADDER RAIL*	160.00 - 180.00	0.6000	0.6000
T4	9	W/G LADDER RAIL*	160.00 - 180.00	0.6000	0.6000
T4	10	W/G LADDER RAIL*	160.00 - 180.00	0.6000	0.6000
T4	22	EW52	160.00 - 180.00	0.6000	0.6000
T5	1	Safety Line 3/8	140.00 - 160.00	0.6000	0.6000
T5	2	1 5/8	140.00 - 160.00	0.6000	0.6000
T5	3	1 5/8	140.00 - 160.00	0.6000	0.6000
T5	4	1 5/8	140.00 - 160.00	0.6000	0.6000
T5	5	1 5/8	140.00 - 160.00	0.6000	0.6000
T5	6	1 5/8	140.00 - 160.00	0.6000	0.6000
T5	8	W/G LADDER RAIL*	140.00 - 160.00	0.6000	0.6000
T5	9	W/G LADDER RAIL*	140.00 - 160.00	0.6000	0.6000
T5	10	W/G LADDER RAIL*	140.00 - 160.00	0.6000	0.6000
T5	22	EW52	140.00 - 160.00	0.6000	0.6000
T6	1	Safety Line 3/8	120.00 - 140.00	0.6000	0.6000
T6	2	1 5/8	120.00 - 140.00	0.6000	0.6000
T6	3	1 5/8	120.00 - 140.00	0.6000	0.6000
T6	4	1 5/8	120.00 - 140.00	0.6000	0.6000
T6	5	1 5/8	120.00 - 140.00	0.6000	0.6000

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job 240' WSST / Run Q19333	Page 11 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T6	6	1 5/8	120.00 - 140.00	0.6000	0.6000
T6	8	W/G LADDER RAIL*	120.00 - 140.00	0.6000	0.6000
T6	9	W/G LADDER RAIL*	120.00 - 140.00	0.6000	0.6000
T6	10	W/G LADDER RAIL*	120.00 - 140.00	0.6000	0.6000
T6	22	EW52	120.00 - 140.00	0.6000	0.6000
T7	1	Safety Line 3/8	100.00 - 120.00	0.6000	0.6000
T7	2	1 5/8	100.00 - 120.00	0.6000	0.6000
T7	3	1 5/8	100.00 - 120.00	0.6000	0.6000
T7	4	1 5/8	100.00 - 120.00	0.6000	0.6000
T7	5	1 5/8	100.00 - 120.00	0.6000	0.6000
T7	6	1 5/8	100.00 - 120.00	0.6000	0.6000
T7	8	W/G LADDER RAIL*	100.00 - 120.00	0.6000	0.6000
T7	9	W/G LADDER RAIL*	100.00 - 120.00	0.6000	0.6000
T7	10	W/G LADDER RAIL*	100.00 - 120.00	0.6000	0.6000
T7	22	EW52	100.00 - 120.00	0.6000	0.6000
T8	1	Safety Line 3/8	80.00 - 100.00	0.6000	0.6000
T8	2	1 5/8	80.00 - 100.00	0.6000	0.6000
T8	3	1 5/8	80.00 - 100.00	0.6000	0.6000
T8	4	1 5/8	80.00 - 100.00	0.6000	0.6000
T8	5	1 5/8	80.00 - 100.00	0.6000	0.6000
T8	6	1 5/8	80.00 - 100.00	0.6000	0.6000
T8	8	W/G LADDER RAIL*	80.00 - 100.00	0.6000	0.6000
T8	9	W/G LADDER RAIL*	80.00 - 100.00	0.6000	0.6000
T8	10	W/G LADDER RAIL*	80.00 - 100.00	0.6000	0.6000
T8	22	EW52	80.00 - 100.00	0.6000	0.6000
T9	1	Safety Line 3/8	60.00 - 80.00	0.6000	0.6000
T9	2	1 5/8	60.00 - 80.00	0.6000	0.6000
T9	3	1 5/8	60.00 - 80.00	0.6000	0.6000
T9	4	1 5/8	60.00 - 80.00	0.6000	0.6000
T9	5	1 5/8	60.00 - 80.00	0.6000	0.6000
T9	6	1 5/8	60.00 - 80.00	0.6000	0.6000
T9	8	W/G LADDER RAIL*	60.00 - 80.00	0.6000	0.6000
T9	9	W/G LADDER RAIL*	60.00 - 80.00	0.6000	0.6000
T9	10	W/G LADDER RAIL*	60.00 - 80.00	0.6000	0.6000
T9	22	EW52	60.00 - 80.00	0.6000	0.6000
T10	1	Safety Line 3/8	40.00 - 60.00	0.6000	0.6000
T10	2	1 5/8	40.00 - 60.00	0.6000	0.6000
T10	3	1 5/8	40.00 - 60.00	0.6000	0.6000
T10	4	1 5/8	40.00 - 60.00	0.6000	0.6000
T10	5	1 5/8	40.00 - 60.00	0.6000	0.6000
T10	6	1 5/8	40.00 - 60.00	0.6000	0.6000
T10	8	W/G LADDER RAIL*	40.00 - 60.00	0.6000	0.6000
T10	9	W/G LADDER RAIL*	40.00 - 60.00	0.6000	0.6000
T10	10	W/G LADDER RAIL*	40.00 - 60.00	0.6000	0.6000
T10	22	EW52	40.00 - 60.00	0.6000	0.6000
T11	1	Safety Line 3/8	20.00 - 40.00	0.6000	0.6000
T11	2	1 5/8	20.00 - 40.00	0.6000	0.6000

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job 240' WSST / Run Q19333	Page 12 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice
T11	3	1 5/8	20.00 - 40.00	0.6000	0.6000
T11	4	1 5/8	20.00 - 40.00	0.6000	0.6000
T11	5	1 5/8	20.00 - 40.00	0.6000	0.6000
T11	6	1 5/8	20.00 - 40.00	0.6000	0.6000
T11	8	W/G LADDER RAIL*	20.00 - 40.00	0.6000	0.6000
T11	9	W/G LADDER RAIL*	20.00 - 40.00	0.6000	0.6000
T11	10	W/G LADDER RAIL*	20.00 - 40.00	0.6000	0.6000
T11	22	EW52	20.00 - 40.00	0.6000	0.6000
T12	1	Safety Line 3/8	5.00 - 20.00	0.6000	0.6000
T12	2	1 5/8	5.00 - 20.00	0.6000	0.6000
T12	3	1 5/8	5.00 - 20.00	0.6000	0.6000
T12	4	1 5/8	5.00 - 20.00	0.6000	0.6000
T12	5	1 5/8	5.00 - 20.00	0.6000	0.6000
T12	6	1 5/8	5.00 - 20.00	0.6000	0.6000
T12	8	W/G LADDER RAIL*	5.00 - 20.00	0.6000	0.6000
T12	9	W/G LADDER RAIL*	5.00 - 20.00	0.6000	0.6000
T12	10	W/G LADDER RAIL*	5.00 - 20.00	0.6000	0.6000
T12	22	EW52	5.00 - 20.00	0.6000	0.6000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horiz Lateral Vert	Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight	
			ft ft ft	°	ft	ft ²	ft ²	K	
(2) 800 10965 w/Mount Pipe	A	From Leg	3.00	0.000	240.00	No Ice	13.94	7.85	0.15
			0			1/2" Ice	14.51	8.91	0.25
			0			1" Ice	15.08	9.84	0.36
(2) 800 10965 w/Mount Pipe	B	From Leg	3.00	0.000	240.00	No Ice	13.94	7.85	0.15
			0			1/2" Ice	14.51	8.91	0.25
			0			1" Ice	15.08	9.84	0.36
(2) 800 10965 w/Mount Pipe	C	From Leg	3.00	0.000	240.00	No Ice	13.94	7.85	0.15
			0			1/2" Ice	14.51	8.91	0.25
			0			1" Ice	15.08	9.84	0.36
WD13X53 Antenna Mounting Frame (w/ .75)*	A	From Leg	1.50	0.000	240.00	No Ice	7.20	3.88	1.18
			0			1/2" Ice	10.42	5.70	1.60
			0			1" Ice	13.56	7.51	2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	B	From Leg	1.50	0.000	240.00	No Ice	7.20	3.88	1.18
			0			1/2" Ice	10.42	5.70	1.60
			0			1" Ice	13.56	7.51	2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	C	From Leg	1.50	0.000	240.00	No Ice	7.20	3.88	1.18
			0			1/2" Ice	10.42	5.70	1.60
			0			1" Ice	13.56	7.51	2.11
(2) 800 10965 w/Mount Pipe	A	From Leg	3.00	0.000	230.00	No Ice	13.94	7.85	0.15
			0			1/2" Ice	14.51	8.91	0.25
			0			1" Ice	15.08	9.84	0.36
(2) 800 10965 w/Mount Pipe	B	From Leg	3.00	0.000	230.00	No Ice	13.94	7.85	0.15
			0			1/2" Ice	14.51	8.91	0.25
			0			1" Ice	15.08	9.84	0.36
(2) 800 10965 w/Mount Pipe	C	From Leg	3.00	0.000	230.00	No Ice	13.94	7.85	0.15
			0			1/2" Ice	14.51	8.91	0.25
			0			1" Ice	15.08	9.84	0.36

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job	240' WSST / Run Q19333	Page	13 of 22
	Project	Wax	Date	11:37:13 05/01/19
	Client	Bluegrass Cellular	Designed by	WBH

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA}		Weight	
			Horz	Lateral			Front	Side		
			ft	ft	°	ft	ft ²	ft ²	K	
WD13X53 Antenna Mounting Frame (w/ .75)*	C	From Leg	1.50	0	0.000	230.00	No Ice 1/2" Ice 1" Ice	7.20 10.42 13.56	3.88 5.70 7.51	1.18 1.60 2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	B	From Leg	1.50	0	0.000	230.00	No Ice 1/2" Ice 1" Ice	7.20 10.42 13.56	3.88 5.70 7.51	1.18 1.60 2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	A	From Leg	1.50	0	0.000	230.00	No Ice 1/2" Ice 1" Ice	7.20 10.42 13.56	3.88 5.70 7.51	1.18 1.60 2.11
(2) 800 10965 w/Mount Pipe	A	From Leg	3.00	0	0.000	220.00	No Ice 1/2" Ice 1" Ice	13.94 14.51 15.08	7.85 8.91 9.84	0.15 0.25 0.36
(2) 800 10965 w/Mount Pipe	B	From Leg	3.00	0	0.000	220.00	No Ice 1/2" Ice 1" Ice	13.94 14.51 15.08	7.85 8.91 9.84	0.15 0.25 0.36
(2) 800 10965 w/Mount Pipe	C	From Leg	3.00	0	0.000	220.00	No Ice 1/2" Ice 1" Ice	13.94 14.51 15.08	7.85 8.91 9.84	0.15 0.25 0.36
WD13X53 Antenna Mounting Frame (w/ .75)*	C	From Leg	1.50	0	0.000	220.00	No Ice 1/2" Ice 1" Ice	7.20 10.42 13.56	3.88 5.70 7.51	1.18 1.60 2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	B	From Leg	1.50	0	0.000	220.00	No Ice 1/2" Ice 1" Ice	7.20 10.42 13.56	3.88 5.70 7.51	1.18 1.60 2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	A	From Leg	1.50	0	0.000	220.00	No Ice 1/2" Ice 1" Ice	7.20 10.42 13.56	3.88 5.70 7.51	1.18 1.60 2.11
(2) 800 10965 w/Mount Pipe	A	From Leg	3.00	0	0.000	210.00	No Ice 1/2" Ice 1" Ice	13.94 14.51 15.08	7.85 8.91 9.84	0.15 0.25 0.36
(2) 800 10965 w/Mount Pipe	B	From Leg	3.00	0	0.000	210.00	No Ice 1/2" Ice 1" Ice	13.94 14.51 15.08	7.85 8.91 9.84	0.15 0.25 0.36
(2) 800 10965 w/Mount Pipe	C	From Leg	3.00	0	0.000	210.00	No Ice 1/2" Ice 1" Ice	13.94 14.51 15.08	7.85 8.91 9.84	0.15 0.25 0.36
WD13X53 Antenna Mounting Frame (w/ .75)*	C	From Leg	1.50	0	0.000	210.00	No Ice 1/2" Ice 1" Ice	7.20 10.42 13.56	3.88 5.70 7.51	1.18 1.60 2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	B	From Leg	1.50	0	0.000	210.00	No Ice 1/2" Ice 1" Ice	7.20 10.42 13.56	3.88 5.70 7.51	1.18 1.60 2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	A	From Leg	1.50	0	0.000	210.00	No Ice 1/2" Ice 1" Ice	7.20 10.42 13.56	3.88 5.70 7.51	1.18 1.60 2.11
(2) 800 10965 w/Mount Pipe	A	From Leg	3.00	0	0.000	200.00	No Ice 1/2" Ice 1" Ice	13.94 14.51 15.08	7.85 8.91 9.84	0.15 0.25 0.36
(2) 800 10965 w/Mount Pipe	B	From Leg	3.00	0	0.000	200.00	No Ice 1/2" Ice 1" Ice	13.94 14.51 15.08	7.85 8.91 9.84	0.15 0.25 0.36
(2) 800 10965 w/Mount Pipe	C	From Leg	3.00	0	0.000	200.00	No Ice 1/2" Ice 1" Ice	13.94 14.51 15.08	7.85 8.91 9.84	0.15 0.25 0.36
WD13X53 Antenna Mounting Frame (w/ .75)*	C	From Leg	1.50	0	0.000	200.00	No Ice 1/2" Ice 1" Ice	7.20 10.42 13.56	3.88 5.70 7.51	1.18 1.60 2.11

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job	240' WSST / Run Q19333	Page	14 of 22
	Project	Wax	Date	11:37:13 05/01/19
	Client	Bluegrass Cellular	Designed by	WBH

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _A A		Weight
			Horz	Lateral			Front	Side	
			ft	ft	°	ft	ft ²	ft ²	K
WD13X53 Antenna Mounting Frame (w/ .75)*	B	From Leg	1.50	0.000	200.00	No Ice	7.20	3.88	1.18
			0			1/2" Ice	10.42	5.70	1.60
			0			1" Ice	13.56	7.51	2.11
WD13X53 Antenna Mounting Frame (w/ .75)*	A	From Leg	1.50	0.000	200.00	No Ice	7.20	3.88	1.18
			0			1/2" Ice	10.42	5.70	1.60
			0			1" Ice	13.56	7.51	2.11
4.5"x7' Pipe Mount	C	From Leg	0.50	0.000	190.00	No Ice	2.01	2.01	0.02
			0			1/2" Ice	3.21	3.21	0.04
			0			1" Ice	3.64	3.64	0.07

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets:		Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter	Aperture Area	Weight	
				Horz	Lateral							
			ft	ft	°	°	ft	ft	ft ²	K		
HPD6-5.9	C	Paraboloid w/Shroud (HP)	From Leg	1.00	0.000	190.00	6.00	190.00	6.00	No Ice	26.73	0.25
				0						1/2" Ice	27.49	0.39
				0						1" Ice	28.26	0.53

Bolt Design Data

Section No.	Elevation	Component Type	Bolt Grade	Bolt Size	Number Of Bolts	Maximum Load per Bolt	Allowable Load per Bolt	Ratio		Allowable Ratio	Criteria
								per Bolt K	per Bolt K		
T1	240	Leg	A325X	0.75	4	5.34	29.82	0.179	✓	1	Bolt Tension
T2	220	Leg	A325X	0.75	4	13.08	29.82	0.439	✓	1	Bolt Tension
		Diagonal	A325X	0.63	1	4.25	8.89	0.478	✓	1	Member Block Shear
		Top Girt	A325X	0.63	1	1.29	5.93	0.218	✓	1	Member Block Shear
T3	200	Leg	A325X	1.00	4	23.67	53.01	0.446	✓	1	Bolt Tension
		Diagonal	A325X	0.63	1	5.45	10.93	0.498	✓	1	Member Block Shear
T4	180	Leg	A325X	1.00	4	33.67	53.01	0.635	✓	1	Bolt Tension
		Diagonal	A325X	0.63	1	5.59	10.93	0.511	✓	1	Member Block Shear
T5	160	Leg	A325X	1.00	4	41.71	53.01	0.787	✓	1	Bolt Tension
		Diagonal	A325X	0.63	1	7.42	11.09	0.669	✓	1	Member Bearing
		Horizontal	A325X	0.63	1	4.21	8.89	0.474	✓	1	Member Block Shear
T6	140	Leg	A325X	1.00	6	33.67	53.01	0.635	✓	1	Bolt Tension

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job 240' WSST / Run Q19333	Page 15 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load Allowable	Allowable Ratio	Criteria
T7	120	Diagonal	A325X	0.63	1	7.44	11.09	0.671 ✓	1	Member Bearing
		Horizontal	A325X	0.63	1	4.78	8.89	0.537 ✓	1	Member Block Shear
		Leg	A325X	1.00	6	39.26	53.01	0.740 ✓	1	Bolt Tension
		Diagonal	A325X	0.63	1	8.21	15.19	0.540 ✓	1	Bolt Shear
		Horizontal	A325X	0.63	1	5.27	10.93	0.482 ✓	1	Member Block Shear
T8	100	Leg	A325X	1.00	6	44.67	53.01	0.843 ✓	1	Bolt Tension
		Diagonal	A325X	0.63	1	8.82	15.19	0.581 ✓	1	Bolt Shear
		Horizontal	A325X	0.63	1	5.72	10.93	0.523 ✓	1	Member Block Shear
T9	80	Leg	A325X>1'	1.25	6	49.96	72.51	0.689 ✓	1	Bolt Tension
		Diagonal	A325X	0.63	1	9.51	15.19	0.626 ✓	1	Bolt Shear
		Horizontal	A325X	0.63	1	6.41	11.09	0.577 ✓	1	Member Bearing
T10	60	Leg	A325X>1'	1.25	6	53.98	72.51	0.745 ✓	1	Bolt Tension
		Diagonal	A325X	0.75	1	6.63	17.84	0.372 ✓	1	Member Bearing
		Horizontal	A325X	0.75	1	6.68	13.38	0.499 ✓	1	Member Bearing
T11	40	Leg	A325X>1'	1.25	6	57.42	72.51	0.792 ✓	1	Bolt Tension
		Diagonal	A325X	0.75	1	6.94	17.84	0.389 ✓	1	Member Bearing
		Horizontal	A325X	0.75	1	7.15	17.84	0.401 ✓	1	Member Bearing
T12	20	Leg	F1554-10 5	1.25	6	60.76	86.29	0.704 ✓	1	Bolt Tension
		Diagonal	A325X	0.75	1	7.12	17.84	0.399 ✓	1	Member Bearing
		Horizontal	A325X	0.75	1	7.61	17.84	0.427 ✓	1	Member Bearing

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio P _u / φP _n
T1	240 - 220	1 1/2	20.00	3.21	102.7 K=1.00	1.77	-25.64	36.79	0.697 ¹ ✓
T2	220 - 200	2 1/4	20.02	5.00	106.8 K=1.00	3.98	-68.33	77.75	0.879 ¹ ✓
T3	200 - 180	2 3/4	20.02	5.00	87.4 K=1.00	5.94	-117.70	152.99	0.769 ¹ ✓
T4	180 - 160	3	20.02	5.00	80.1 K=1.00	7.07	-162.40	199.04	0.816 ¹ ✓
T5	160 - 140	3	20.02	5.00	80.1	7.07	-198.81	199.04	0.999 ¹ ✓

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job 240' WSST / Run Q19333	Page 16 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T6	140 - 120	3 1/4	20.02	5.00	K=1.00 73.9	8.30	-238.63	250.37	0.953 ¹
T7	120 - 100	3 1/2	20.02	5.00	K=1.00 68.6	9.62	-277.53	306.80	0.905 ¹
T8	100 - 80	3 3/4	20.02	5.00	K=1.00 64.1	11.04	-315.82	368.18	0.858 ¹
T9	80 - 60	3 3/4	20.02	5.00	K=1.00 64.1	11.04	-353.62	368.18	0.960 ¹
T10	60 - 40	4	20.03	5.01	K=1.00 60.1	12.57	-384.67	434.24	0.886 ¹
T11	40 - 20	4	20.03	5.01	K=1.00 60.1	12.57	-411.93	434.24	0.949 ¹
T12	20 - 0	4 1/4	20.03	5.01	K=1.00 56.6	14.19	-438.92	505.22	0.869 ¹

¹ P_u / φP_n controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	240 - 220	1	5.13	4.97	166.9 K=0.70	0.79	-5.37	6.37	0.843 ¹
T2	220 - 200	L2x2x3/16	7.03	3.37	K=1.04 107.0	0.71	-4.45	12.67	0.351 ¹
T3	200 - 180	L2 1/2x2 1/2x3/16	8.45	4.05	K=1.06 103.7	0.90	-5.53	16.59	0.333 ¹
T4	180 - 160	L2 1/2x2 1/2x3/16	9.70	4.67	K=1.02 114.9	0.90	-5.53	14.59	0.379 ¹
T5	160 - 140	L3x3x3/16	7.07	6.60	K=1.00 133.0	1.09	-7.37	13.88	0.531 ¹
T6	140 - 120	L3x3x3/16	7.62	7.15	K=1.00 143.9	1.09	-7.68	11.88	0.647 ¹
T7	120 - 100	L3x3x1/4	8.20	7.73	K=1.00 156.6	1.44	-8.21	13.27	0.619 ¹
T8	100 - 80	L3x3x1/4	8.81	8.33	K=1.00 168.8	1.44	-8.82	11.42	0.773 ¹
T9	80 - 60	L3x3x1/4	9.43	8.96	K=1.00 181.6	1.44	-9.51	9.86	0.964 ¹
T10	60 - 40	L3 1/2x3 1/2x1/4	10.30	9.77	K=1.00 169.0	1.69	-6.82	13.37	0.510 ¹
T11	40 - 20	L3 1/2x3 1/2x1/4	11.18	10.66	K=1.00 184.4	1.69	-7.54	11.23	0.672 ¹
T12	20 - 0	L3 1/2x3 1/2x1/4	12.08	11.56	K=1.00 199.8	1.69	-8.09	9.56	0.846 ¹

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job 240' WSST / Run Q19333	Page 17 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH

¹ $P_u / \phi P_n$ controls

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in ²	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	240 - 220	1	4.00	3.88	130.2 K=0.70	0.79	-0.95	10.42	0.091 ¹
T5	160 - 140	L2x2x3/16	9.63	4.54	138.3 K=1.00	0.71	-4.21	8.44	0.499 ¹
T6	140 - 120	L2x2x3/16	11.13	5.28	160.9 K=1.00	0.71	-4.78	6.24	0.765 ¹
T7	120 - 100	L2 1/2x2 1/2x3/16	12.63	6.02	146.0 K=1.00	0.90	-5.27	9.56	0.551 ¹
T8	100 - 80	L2 1/2x2 1/2x3/16	14.13	6.76	163.9 K=1.00	0.90	-5.72	7.59	0.754 ¹
T9	80 - 60	L3x3x3/16	15.63	7.51	151.2 K=1.00	1.09	-6.41	10.77	0.595 ¹
T10	60 - 40	L3x3x3/16	17.50	8.42	169.5 K=1.00	1.09	-6.68	8.57	0.779 ¹
T11	40 - 20	L3x3x1/4	19.50	9.42	190.9 K=1.00	1.44	-7.15	8.93	0.801 ¹
T12	20 - 0	L3 1/2x3 1/2x1/4	21.50	10.41	179.9 K=1.00	1.69	-7.61	11.79	0.645 ¹

¹ $P_u / \phi P_n$ controls

Secondary Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in ²	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	240 - 220	1	2.00	1.94	83.9 K=0.90	0.79	-0.00	17.56	0.000 ¹

¹ $P_u / \phi P_n$ controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in ²	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	240 - 220	1 1/8	4.00	3.88	115.7 K=0.70	0.99	-1.15	15.91	0.072 ¹
T2	220 - 200	L2x2x1/8	4.00	3.58	114.1 K=1.05	0.48	-1.46	7.82	0.187 ¹

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job 240' WSST / Run Q19333	Page 18 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH

¹ P_u / φP_n controls

Bottom Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	240 - 220	1	4.00	3.88	130.2 K=0.70	0.79	-1.89	10.42	0.181 ¹ ✓

¹ P_u / φP_n controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	240 - 220	1 1/2	20.00	0.38	12.0	1.77	21.35	79.52	0.268 ¹ ✓
T2	220 - 200	2 1/4	20.02	5.00	106.8	3.98	52.33	178.92	0.292 ¹ ✓
T3	200 - 180	2 3/4	20.02	5.00	87.4	5.94	94.67	267.28	0.354 ¹ ✓
T4	180 - 160	3	20.02	5.00	80.1	7.07	134.68	318.09	0.423 ¹ ✓
T5	160 - 140	3	20.02	5.00	80.1	7.07	166.99	318.09	0.525 ¹ ✓
T6	140 - 120	3 1/4	20.02	5.00	73.9	8.30	202.17	373.31	0.542 ¹ ✓
T7	120 - 100	3 1/2	20.02	5.00	68.6	9.62	235.73	432.95	0.544 ¹ ✓
T8	100 - 80	3 3/4	20.02	5.00	64.1	11.04	268.26	497.01	0.540 ¹ ✓
T9	80 - 60	3 3/4	20.02	5.00	64.1	11.04	299.98	497.01	0.604 ¹ ✓
T10	60 - 40	4	20.03	5.01	60.1	12.57	324.18	565.49	0.573 ¹ ✓
T11	40 - 20	4	20.03	5.01	60.1	12.57	344.79	565.49	0.610 ¹ ✓
T12	20 - 0	4 1/4	20.03	5.01	56.6	14.19	364.88	638.38	0.572 ¹ ✓

¹ P_u / φP_n controls

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job 240' WSST / Run Q19333	Page 19 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	240 - 220	1	5.13	4.97	238.4	0.79	5.32	25.45	0.209 ¹
T2	220 - 200	L2x2x3/16	7.03	3.37	68.4	0.43	4.25	18.74	0.227 ¹
T3	200 - 180	L2 1/2x2 1/2x3/16	8.15	3.91	62.5	0.57	5.45	24.84	0.219 ¹
T4	180 - 160	L2 1/2x2 1/2x3/16	9.70	4.67	74.3	0.57	5.59	24.84	0.225 ¹
T5	160 - 140	L3x3x3/16	6.81	6.34	84.8	0.71	7.42	30.97	0.239 ¹
T6	140 - 120	L3x3x3/16	7.34	6.87	91.5	0.71	7.44	30.97	0.240 ¹
T7	120 - 100	L3x3x1/4	7.91	7.43	99.7	0.94	7.71	40.86	0.189 ¹
T8	100 - 80	L3x3x1/4	8.81	8.33	111.2	0.94	8.06	40.86	0.197 ¹
T9	80 - 60	L3x3x1/4	9.43	8.96	119.4	0.94	8.51	40.86	0.208 ¹
T10	60 - 40	L3 1/2x3 1/2x1/4	9.86	9.34	106.5	1.10	6.63	48.00	0.138 ¹
T11	40 - 20	L3 1/2x3 1/2x1/4	10.74	10.22	116.1	1.10	6.94	48.00	0.145 ¹
T12	20 - 0	L3 1/2x3 1/2x1/4	11.63	11.10	125.9	1.10	7.12	48.00	0.148 ¹

¹ P_u / φP_n controls

Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	240 - 220	1	4.00	3.88	186.0	0.79	0.97	25.45	0.038 ¹
T5	160 - 140	L2x2x3/16	9.63	4.54	136.8	0.43	4.21	18.74	0.225 ¹
T6	140 - 120	L2x2x3/16	11.13	5.28	158.3	0.43	4.78	18.74	0.255 ¹
T7	120 - 100	L2 1/2x2 1/2x3/16	12.63	6.02	142.7	0.57	5.27	24.84	0.212 ¹
T8	100 - 80	L2 1/2x2 1/2x3/16	14.13	6.76	159.8	0.57	5.72	24.84	0.230 ¹
T9	80 - 60	L3x3x3/16	15.63	7.51	146.8	0.71	6.41	30.97	0.207 ¹
T10	60 - 40	L3x3x3/16	17.50	8.42	164.5	0.69	6.68	30.21	0.221 ¹

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job	240' WSST / Run Q19333	Page	20 of 22
	Project	Wax	Date	11:37:13 05/01/19
	Client	Bluegrass Cellular	Designed by	WBH

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T11	40 - 20	L3x3x1/4	19.50	9.42	185.5	0.92	7.15	39.84	0.179 ¹
T12	20 - 0	L3 1/2x3 1/2x1/4	21.50	10.41	174.6	1.10	7.61	48.00	0.159 ¹

¹ P_u / φP_n controls

Secondary Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	240 - 220	1	2.00	1.94	93.0	0.79	0.00	25.45	0.000 ¹

¹ P_u / φP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	240 - 220	1 1/8	4.00	3.88	165.3	0.99	1.15	32.21	0.036 ¹
T2	220 - 200	L2x2x1/8	4.00	3.58	74.3	0.29	1.29	12.74	0.101 ¹

¹ P_u / φP_n controls

Bottom Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
T1	240 - 220	1	4.00	3.88	186.0	0.79	2.00	25.45	0.079 ¹

¹ P_u / φP_n controls

Section Capacity Table

tnxTower World Tower Company 1213 Compressor Drive Mayfield, KY Phone: (270) 247-3642 FAX:	Job	240' WSST / Run Q19333	Page	21 of 22
	Project	Wax	Date	11:37:13 05/01/19
	Client	Bluegrass Cellular	Designed by	WBH

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail	
T1	240 - 220	Leg	1 1/2	1	-25.64	36.79	69.7	Pass	
T2	220 - 200	Leg	2 1/4	50	-68.33	77.75	87.9	Pass	
T3	200 - 180	Leg	2 3/4	80	-117.70	152.99	76.9	Pass	
T4	180 - 160	Leg	3	107	-162.40	199.04	81.6	Pass	
T5	160 - 140	Leg	3	134	-198.81	199.04	99.9	Pass	
T6	140 - 120	Leg	3 1/4	167	-238.63	250.37	95.3	Pass	
T7	120 - 100	Leg	3 1/2	200	-277.53	306.80	90.5	Pass	
T8	100 - 80	Leg	3 3/4	233	-315.82	368.18	85.8	Pass	
T9	80 - 60	Leg	3 3/4	266	-353.62	368.18	96.0	Pass	
T10	60 - 40	Leg	4	299	-384.67	434.24	88.6	Pass	
T11	40 - 20	Leg	4	332	-411.93	434.24	94.9	Pass	
T12	20 - 0	Leg	4 1/4	365	-438.92	505.22	86.9	Pass	
T1	240 - 220	Diagonal	1	12	-5.37	6.37	84.3	Pass	
T2	220 - 200	Diagonal	L2x2x3/16	66	-4.45	12.67	35.1	Pass	
T3	200 - 180	Diagonal	L2 1/2x2 1/2x3/16	86	-5.53	16.59	47.8 (b) 33.3	Pass	
T4	180 - 160	Diagonal	L2 1/2x2 1/2x3/16	113	-5.53	14.59	49.8 (b) 37.9	Pass	
T5	160 - 140	Diagonal	L3x3x3/16	143	-7.37	13.88	51.1 (b) 53.1	Pass	
T6	140 - 120	Diagonal	L3x3x3/16	177	-7.68	11.88	66.9 (b) 64.7	Pass	
T7	120 - 100	Diagonal	L3x3x1/4	210	-8.21	13.27	67.1 (b) 61.9	Pass	
T8	100 - 80	Diagonal	L3x3x1/4	243	-8.82	11.42	77.3	Pass	
T9	80 - 60	Diagonal	L3x3x1/4	276	-9.51	9.86	96.4	Pass	
T10	60 - 40	Diagonal	L3 1/2x3 1/2x1/4	309	-6.82	13.37	51.0	Pass	
T11	40 - 20	Diagonal	L3 1/2x3 1/2x1/4	342	-7.54	11.23	67.2	Pass	
T12	20 - 0	Diagonal	L3 1/2x3 1/2x1/4	375	-8.09	9.56	84.6	Pass	
T1	240 - 220	Horizontal	1	30	-0.95	10.42	9.1	Pass	
T5	160 - 140	Horizontal	L2x2x3/16	136	-4.21	8.44	49.9	Pass	
T6	140 - 120	Horizontal	L2x2x3/16	169	-4.78	6.24	76.5	Pass	
T7	120 - 100	Horizontal	L2 1/2x2 1/2x3/16	202	-5.27	9.56	55.1	Pass	
T8	100 - 80	Horizontal	L2 1/2x2 1/2x3/16	235	-5.72	7.59	75.4	Pass	
T9	80 - 60	Horizontal	L3x3x3/16	268	-6.41	10.77	59.5	Pass	
T10	60 - 40	Horizontal	L3x3x3/16	301	-6.68	8.57	77.9	Pass	
T11	40 - 20	Horizontal	L3x3x1/4	334	-7.15	8.93	80.1	Pass	
T12	20 - 0	Horizontal	L3 1/2x3 1/2x1/4	370	-7.61	11.79	64.5	Pass	
T1	240 - 220	Secondary Horizontal	1	20	-0.00	17.56	0.1	Pass	
T1	240 - 220	Top Girt	1 1/8	5	-1.15	15.91	7.2	Pass	
T2	220 - 200	Top Girt	L2x2x1/8	54	-1.46	7.82	18.7	Pass	
T1	240 - 220	Bottom Girt	1	8	-1.89	10.42	21.8 (b) 18.1	Pass	
							Summary		
							Leg (T5)	99.9	Pass
							Diagonal (T9)	96.4	Pass
							Horizontal (T11)	80.1	Pass
							Secondary Horizontal (T1)	0.1	Pass
							Top Girt (T2)	21.8	Pass
							Bottom Girt (T1)	18.1	Pass
							Bolt Checks	84.3	Pass
							RATING =	99.9	Pass

<i>tnxTower</i> <i>World Tower Company</i> <i>1213 Compressor Drive</i> <i>Mayfield, KY</i> <i>Phone: (270) 247-3642</i> <i>FAX:</i>	Job 240' WSST / Run Q19333	Page 22 of 22
	Project Wax	Date 11:37:13 05/01/19
	Client Bluegrass Cellular	Designed by WBH



Geotechnical Engineering Report

**Proposed Bluegrass Cellular Tower at Wax, KY
Clarkson, Grayson County, KY**

February 20, 2019

Terracon Project No. 57185152

Prepared for:

Bluegrass Cellular, Inc.
Elizabethtown, Kentucky

Prepared by:

Terracon Consultants, Inc.
Louisville, Kentucky

Environmental



Facilities



Geotechnical



Materials

February 20, 2019

Bluegrass Cellular, Inc.
2902 Ring Road
Elizabethtown, Kentucky 42701



Attn: Mr. Tim Ash
P: (270) 765-6361
E: tash@bluegrasscellular.com

Re: Geotechnical Engineering Report
Proposed Bluegrass Cellular Tower at Wax, KY
12523 Peonia Road
Clarkson, Grayson County, KY
Terracon Project No. 57185152

Dear Mr. Ash:

Terracon Consultants, Inc. (Terracon) has completed the Geotechnical Engineering Services for the proposed 240-foot self-support tower at Wax, KY. The purpose of this report is to provide geotechnical recommendations for foundation design and earthwork considerations. This study was performed in general accordance with Kentucky RSA #3 Cellular General Partnership d/b/a Bluegrass Cellular Purchase Order PO-6914 dated November 30, 2018.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.

A handwritten signature in black ink that reads "Yibo Zhang".

Yibo Zhang, Ph.D., EIT
Staff Engineer



Benjamin W. Taylor, P.E.
Senior Associate, Office Manager

Reviewed by Jenny Guest – Project Manager

REPORT TOPICS

INTRODUCTION.....	1
SITE CONDITIONS.....	1
PROJECT DESCRIPTION.....	2
GEOTECHNICAL CHARACTERIZATION.....	4
GEOTECHNICAL OVERVIEW.....	6
EARTHWORK.....	7
SHALLOW FOUNDATIONS.....	12
DEEP FOUNDATIONS.....	14
SEISMIC CONSIDERATIONS.....	17
FLOOR SLABS.....	17
GENERAL COMMENTS.....	19
FIGURES.....	20

Note: This report was originally delivered in a web-based format. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES
PHOTOGRAPHY LOG
SITE LOCATION AND EXPLORATION PLANS
EXPLORATION RESULTS
SUPPORTING INFORMATION

Note: Refer to each individual Attachment for a listing of contents.

Geotechnical Engineering Report
Proposed Bluegrass Cellular Tower at Wax, KY
12523 Peonia Road
Clarkson, Grayson County, KY
Terracon Project No. 57185152
February 20, 2019

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed 240-foot self-support tower to be located at 12523 Peonia Road in Clarkson, Grayson County, KY. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil (and rock) conditions
- Groundwater conditions
- Site preparation and earthwork
- Foundation design and construction
- Floor slab design and construction
- Seismic site classification per IBC

The geotechnical engineering Scope of Services for this project included the advancement of one test boring to a depth of 25 feet below existing site grades.

Maps showing the site and boring location are shown in the **Site Location** and **Exploration Plan** sections, respectively. The results of the laboratory testing performed on soil/rock samples obtained from the site during the field exploration are included on the boring log and/or as separate graphs in the **Exploration Results** section.

SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Parcel Information	<p>We have reviewed the information provided by Bluegrass, which included Site Candidate Information and Site Sketch prepared by Landmark Surveying Co., Inc. dated November 19, 2018. Based on review of publicly available aerial map and the information provided to us, the project is located off of Peonia Road in Clarkson, Grayson County, Kentucky.</p> <p>Approximate Latitude/ Longitude: 37.361583°, -86.139444° (tower center)</p> <p>See Site Location</p>

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



Item	Description
Existing Improvements	The project site for the proposed tower is located at an open grassy area next to a residential home. The site is approximately 420 feet south of Peonia Road, and approximately 300 feet west of Lush Cemetery Road.
Current Ground Cover	Based on review of publicly available aerial map, the area adjacent to the proposed tower is grass covered.
Existing Topography	Based on review of USGS publicly available existing topographic contours, the site is generally flat (less than 5H:1V) at grass-covered area, but downslopes at a grade of 4H:1V to 2H:1V beyond tree lines to the west and east. Based on the information provided by Landmark Surveying Co., Inc. (dated November 19, 2018), the ground surface elevation at the tower center is about 890 feet. We have considered this survey elevation in our boring log.
Geology	Based on available Kentucky Geological Survey, the project site is mapped within the Tradewater and Caseyville Formations of Lower to Middle Pennsylvanian age deposits.

PROJECT DESCRIPTION

Our initial understanding of the project was discussed during project planning. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

Item	Description
Proposed Structures	A new 240-foot-tall self-support tower using deep/shallow foundation is planned at the subject property. An equipment shelter using shallow foundation may be constructed for equipment support.
240-foot Self-Support Tower: Maximum Loads	<p>The following loading conditions are anticipated at each tower leg.</p> <ul style="list-style-type: none">■ Vertical: 600 kips (to be confirmed)■ Shear: 80 kips (to be confirmed)■ Uplift: 500 kips (to be confirmed) <p>These anticipated loads are based on experience with similar projects. Loads should be confirmed by the project structural engineer. If loading conditions vary from those stated above, Terracon should review the recommendations in this report and confirm they are applicable.</p>

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



Item	Description
Equipment Building: Maximum loads	<p>The following loading conditions are anticipated for the equipment building.</p> <ul style="list-style-type: none">■ Column: 34 kips (to be confirmed)■ Wall: 1.5 kips/ft (to be confirmed) <p>These anticipated loads that are shown are based on experience with similar projects. Loads should be confirmed by the project structural engineer. If loading conditions vary from those stated above, Terracon should be provided with actual loading for review.</p>
Maximum allowable settlement	<p>The following tolerable settlements are anticipated for the proposed structures:</p> <ul style="list-style-type: none">■ 240-ft Self-Support Tower Total: 1.5-inch (to be confirmed)■ Equipment Building Total: 1-inch (to be confirmed) Differential: ¾ inch over 40 feet (to be confirmed) <p>These anticipated tolerable settlements are based on experience with similar projects. If tolerable settlements vary from those stated above, Terracon should be contacted for review.</p>
Grading/Slopes	<p>Please see the Site Conditions for additional details regarding the existing site topography. Site grading plans were not provided at the time of this report. For the purposes of this report, we anticipate up to 3 feet of cuts and fills may be required. Terracon should be retained to review the topographic plan and grading plan upon availability relative to the recommendations contained in this report. We anticipate that any cut/fill slopes will be flatter than 3H:1V.</p>

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



GEOTECHNICAL CHARACTERIZATION

Regional Geology

Formation	Description
Tradewater and Caseyville Formations of Lower to Middle Pennsylvanian Age¹	<p>Primary Lithology: shale, siltstone, sandstone, and coal</p> <p>Interbedded shale, siltstone, sandstone, and coal. Shale and siltstone, white to yellowish-gray; weather brown to light olive gray and medium dark gray; laminated to very thin bedded. Sandstone, white where fresh, iron-stained brown and moderate reddish brown; very fine to medium grained; very thin to thick bedded. Coal, thin and of only local occurrence.</p> <p>Upper sandstone:</p> <p>Sandstone, white to light-gray, iron-stained brown and pink, very fine to coarse-grained, slightly asphaltic locally; contains rounded quartz pebbles and granules; thin to thick bedded, locally crossbedded.</p> <p>Lower fine-grained interval: shale, sandstone, siltstone, and coal</p> <p>Shale, medium-gray, dark-gray; weathers yellowish orange; grades into, and interfingers with, sandstone of overlying unit. Coal present in four beds.</p> <p>Lower sandstone: sandstone, conglomerate, shale, and coal</p> <p>Sandstone and conglomerate, white where fresh, iron-stained yellowish orange to moderate red and moderate reddish brown, very thin to very thick bedded, in part crossbedded. Sandstone weathers dark gray to medium gray where locally asphaltic. Conglomerate consists of beds, stringers, and lenses of well-rounded granules and pebbles of clear to milky quartz, commonly frosted and iron-stained, in a matrix of quartz sand and pebbles; grades into sandstone. Shale, medium light-gray, weathers yellowish orange, light gray, and reddish gray, commonly sandy; plates of selenite and small nodules of pyrite in exposure. Coal, thin and of only local occurrence.</p>

1. Based on the Geologic map of the Nolin Reservoir quadrangle, western Kentucky published by U.S. Geological Survey (Quadrangle GQ-895).

The Tradewater and Caseyville Formations are reported to have a low to non-karst potential (e.g. may exhibit mature karst features, including sinkholes, springs, caves, or other solution features). It should be noted that, high karst potential areas were mapped about half a mile southwest to the

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



project site. Published karst potential maps prepared by the Kentucky Geological Survey do not indicate any sinkholes mapped within 1-mile radius. No indications of karst activities were observed during our limited subsurface exploration.

GeoModel – Subsurface Profile

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, laboratory data, geologic setting and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical calculations and evaluation of site preparation and foundation options. Conditions encountered at each exploration point are indicated on the individual log. The individual log can be found in the **Exploration Results** section and the GeoModel can be found in the **Figures** section of this report.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at the boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
1	Topsoil	Topsoil
2	Lean Clay	Yellowish brown to reddish brown lean clay, trace sand
3	Sandstone	Gray sandstone with water staining, weak to strong

Auger refusal was encountered at a depth of approximately 10 feet below existing grade at boring B-1 and the boring was extended using rock coring techniques (NQ-II) to a depth of about 25 feet below existing grade. Auger refusal is defined as the depth below the ground surface at which a test boring can no longer be advanced with the soil drilling technique being used. Auger refusal can result on slabs of unweathered sandstone suspended in the residual soil matrix ("floaters") or on bedrock.

Competent sandstone bedrock was encountered at about 21 feet below existing grade with sample recovery of 100 percent. The rock quality of the core obtained is considered to be excellent with RQD value of 95 percent.

Specific conditions encountered at the boring location are indicated on the attached boring log. Stratification boundaries on the boring log represent the approximate location of changes in soil types; in-situ, the transition between materials may be gradual. Further details of the boring can be found on the boring log in the Appendix of this report. Photographs of the rock core samples can be observed in the Rock Core **Photography Log**.

Groundwater Conditions

The borehole was observed while drilling for the presence and level of groundwater. No groundwater was observed in the boring for the short duration that the borehole was open. Due to

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



the low permeability of the soils encountered in the borings, a relatively long period of time may be necessary for a groundwater level to develop and stabilize in a borehole in these materials. Long-term observations in piezometers or observation wells sealed from the influence of surface water are often required to define groundwater levels in materials of this type. As water was introduced into the borehole for the coring operation, the groundwater table could be present within the depth of our boring.

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the level at the time of our exploration. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project. In particular, this project has potential for trapped/perched water at the overburden/bedrock interface.

GEOTECHNICAL OVERVIEW

The following sections describe pertinent geotechnical considerations identified by the exploration and laboratory testing. Site preparation recommendations, including subgrade improvement, fill placement, and excavations are provided in the **Site Preparation** section.

Shaft Excavation Caving Considerations

Although groundwater was not observed during the short period of drilling and long-term monitoring of groundwater was not a part of this scope of work, groundwater could be encountered during the drilling for the drilled pier. If groundwater seepage is encountered, water should be removed from each pier hole prior to concrete placement. Care should be taken so that the sides and bottom of the excavations are not disturbed during construction.

Due to the possible presence of groundwater, the contractor should have temporary casing available onsite during construction of the drilled pier to control seepage and/or caving soil, if encountered. The need for casing should be anticipated throughout the length of the drilled pier installation depth. The casing should be carefully extracted from the drilled pier excavation following concrete placement.

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



Foundation Support

The tower or equipment structure can be supported by shallow foundations dimensioned for a net allowable soil bearing pressure of **2,750 psf**, bearing at or below frost depth of **24 inches** below surrounding grade. Shallow foundations should bear on undisturbed, at least **stiff** native cohesive soils or engineered fill or lean concrete placed directly on at least **stiff** native cohesive soils.

Design parameters for deep foundations have also been provided. Competent sandstone bedrock was encountered at a depth of **21 feet** below existing grade. We were not provided with the information of shaft diameter, we are specifying a minimum shaft diameter of 30 inches. Minimum socket length should be the larger value of 1.5 times the shaft diameter (for the allowable end bearing to apply) and being able to provide sufficient side friction (to support the structural load). Therefore, to mobilize the strength parameters recommended in the **Foundations** section of our report, the pier should be embedded a minimum of **4 feet** into competent bedrock (a minimum socket length of 4 feet) and should be tipped at a minimum depth of about **25 feet** below existing grade.

Inspection of the bearing conditions should be performed by a geotechnical engineer or representative to identify any potential problematic conditions. Any undercut and replacement of unsuitable soils should be replaced with new engineered fill meeting the requirements of the Material Types in the **Site Preparation** section of this report or lean concrete. Additional recommendations for design and construction of foundations are presented in the following sections.

The **General Comments** section provides an understanding of the report limitations.

EARTHWORK

Earthwork is anticipated to include clearing and grubbing, excavations, and fill placement. The following sections provide recommendations for use in the preparation of specifications for the work. Recommendations include critical quality criteria, as necessary, to render the site in the state considered in our geotechnical engineering evaluation for foundations and floor slabs.

Site Preparation

The following presents recommendations for site preparation, excavation, and fill placement. Special considerations will be needed where site grading may expose unstable soils. Our recommendations presented for design and construction of earth supported elements (i.e. foundations, slabs, etc.) are contingent upon following the recommendations outlined in this section. Earthwork activities on the project should be observed and evaluated by Terracon.

Prior to construction, the site should be grubbed and all vegetation, topsoil and any otherwise unsuitable material should be removed from the construction area. Wet or dry material should

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



either be removed or moisture conditioned and recompacted to the project specified densities and moisture contents. Any unsuitable materials should be undercut and replaced with engineered fill meeting the requirements of the **Fill Material Requirements** section of this report. We recommend the actual stripping depth and undercutting of unsuitable soils be observed and documented by a representative of Terracon during construction.

Following rough grading, and prior to placement of foundations, the subgrade should be evaluated by proofrolling where possible to aid in locating unstable subgrade soils. Any soft, loose, or otherwise unsuitable areas identified during the proofroll will require undercutting or improvement. Where proofrolling is not possible, the subgrade should be evaluated by observation and probing to aid in locating unsuitable or unstable areas. The appropriate method and amount of stabilization, if required, should be determined at the time of construction based on observations by the geotechnical engineer.

It should be noted that the on-site clay soils may be susceptible to disturbance from construction activity, particularly if the soil has high natural moisture and is wetted by surface water or seepage. Therefore, care should be taken during the site grading operation to provide adequate site drainage and minimize disturbance of the bearing soils.

Fill Material Types

All imported material or on-site material proposed for reuse should be tested to verify conformance with the material property and placement recommendations in this section. Engineered fill should meet the following material property requirements:

Fill Type ¹	USCS Classification	Acceptable Location for Placement
Lean Clay ²	CL (LL<50% & PI<15)	On-site available soil. All locations and elevations.
Fat Clay ²	CH (LL>50%)	Not recommended for use as structural fill within 2 feet of any structures (i.e. floor slabs and foundations).
Well graded granular and silty gravel	GM-GW, GM	All locations and elevations
Low Volume Change Material	CL or GM-GW, GM ³ (LL<40% & PI<15)	All locations and elevations

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



Fill Type ¹	USCS Classification	Acceptable Location for Placement
1.	Controlled, compacted fill should consist of approved materials that are free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade. A sample of each material type should be submitted to the geotechnical engineer for evaluation.	
2.	Delineation of lean clays and fat clays should be performed in the field by a qualified geotechnical engineer or their representative, and could require additional laboratory testing.	
3.	Similar to KYTC DGA or crushed stone base limestone, limestone screenings, or granular material such as sand, gravel or crushed stone containing not more than 14% non-plastic fines.	

Fill Compaction Requirements

Structural and general fill should meet the following compaction requirements.

ITEM	DESCRIPTION
Fill Lift Thickness	8-inches or less loose thickness for heavy, self-propelled compaction equipment. 4- to 6-inches loose thickness for hand-guided equipment (i.e. jumping jack or plate compactor).
Compaction Requirements ¹ (Structural Areas)	At least 98% of the materials Standard Proctor maximum dry density (ASTM D 698)
Compaction Requirements (Landscape Areas)	At least 95% of Standard Proctor maximum dry density (provided long-term plans do not include a structure in these areas)
Moisture Content - Cohesive Soils	Within the range of 2% below to 3% above the optimum moisture content (OMC) as determined by the Standard Proctor test at the time of placement and compaction
Moisture Content - Granular Material ²	Within workable moisture levels / $\pm 2\%$ of OMC

1. Engineered fill should be tested for moisture content and compaction during placement. Should the results of the in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the test should be reworked and retested as required until the specified moisture and compaction requirements are achieved.

2. Specifically, moisture levels should be maintained low enough to allow for satisfactory compaction to be achieved without the cohesionless fill material pumping when proofrolled.

Utility Trench Backfill

All trench excavations should be made with sufficient working space to permit construction including backfill placement and compaction. If utility trenches are backfilled with relatively clean granular material, they should be capped with at least 18 inches of cohesive soil to reduce the infiltration and conveyance of surface water through the trench backfill.

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



Utility trenches are a common source of water infiltration and migration. All utility trenches that penetrate beneath the foundation should be effectively sealed to restrict water intrusion and flow through the trenches that could migrate below the foundation with a clay plug. The plug material should consist of clay compacted at a water content at or above the soil's optimum water content. The clay fill should be placed to completely surround the utility line and be compacted in accordance with recommendations in this report.

Grading and Drainage

Effective site drainage is important both during construction and during the life of the structures. Adequate drainage will be necessary to control and divert stormwater runoff away from the site. Final surrounding grades should be sloped away from the foundations to prevent ponding of water.

Excess materials generated during site grading, including soils unsuitable for use as engineered fill (i.e. high-plasticity material, topsoil, etc.), and may be placed as fill in non-structural landscape areas and in the construction of landscape berms. To the extent possible, these materials should be placed in accordance with the **Fill Compaction Requirements**.

Earthwork Construction Considerations

Although the exposed subgrade may be relatively stable upon initial exposure, unstable subgrade conditions could develop during general construction operations, particularly if the soils are wetted and/or subjected to repetitive construction traffic. It is recommended that construction activities be performed during drier weather, if possible. Some subgrade instability should be anticipated if construction is planned during wet weather that may require undercutting and/or stabilization. The use of light construction equipment would aid in reducing subgrade disturbance. Should unstable subgrade conditions develop, stabilization measures will need to be implemented.

Shallow excavations are anticipated to be accomplished with conventional construction equipment. Upon completion of filling and grading, care should be taken to maintain the subgrade water content prior to placement of utilities. Construction traffic over the completed subgrades should be avoided. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. Water collecting over, or adjacent to, construction areas should be removed. If the subgrade freezes, desiccates, saturates, or is disturbed, the affected material should be removed, or the materials should be scarified, moisture conditioned, and recompacted, prior to foundation construction.

At a minimum, all temporary excavations should be sloped or braced as required by OSHA guidelines to provide stability and safe working conditions, and to protect the integrity of adjacent structures. Temporary excavations will probably be required during grading operations and utility trenches. The grading contractor, by his contract, is usually responsible for designing and constructing stable, temporary excavations and should shore, slope or bench the sides of the excavations as required,

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



to maintain stability of both the excavation sides and bottom. All excavations should comply with applicable local, state and federal safety regulations, including the current Occupational Safety and Health Administration (OSHA) Excavation and Trench Safety Standards.

Construction site safety is the sole responsibility of the contractor who controls the means, methods, and sequencing of construction operations. Under no circumstances shall the information provided herein be interpreted to mean Terracon is assuming responsibility for construction site safety, or the contractor's activities; such responsibility shall neither be implied nor inferred.

The geotechnical engineer should be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during subgrade preparation; proofrolling; placement and compaction of controlled compacted fills; backfilling of excavations into the completed subgrade, and just prior to construction.

Construction Observation and Testing

The earthwork efforts should be monitored under the direction of the Geotechnical Engineer. Monitoring should include documentation of adequate removal of vegetation and topsoil, proofrolling, and mitigation of areas delineated by the proofroll to require mitigation.

Each lift of compacted fill should be tested, evaluated, and reworked, as necessary, until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the building areas. One density and water content test should be performed for every 50 linear feet of compacted utility trench backfill.

In areas of foundation excavations, the bearing subgrade should be evaluated under the direction of the Geotechnical Engineer. If unanticipated conditions are encountered, the Geotechnical Engineer should prescribe mitigation options.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer's evaluation of subsurface conditions, including assessing variations and associated design changes.

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



SHALLOW FOUNDATIONS

If the site has been prepared in accordance with the requirements noted in **Earthwork**, the following design parameters are applicable for shallow foundations.

Tower Shallow Mat Foundation Design Parameters

Parameter	Mat
Maximum net allowable bearing pressure on engineered fill or lean concrete extending to at least stiff clay ¹	2,750 psf
Minimum foundation plan dimensions ⁶	15 feet
Required bearing stratum ²	Engineered fill or lean concrete extending to at least stiff clay
Ultimate coefficient of sliding friction	0.30
Ultimate passive pressure ³	350 psf (below 3 feet)
Minimum embedment below finished grade for frost protection ⁴	24 inches
Est. total settlement from structural loads ⁵	1.5 inches

1. The maximum net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the mat base elevation. An appropriate factor of safety has been applied.
2. Unsuitable or soft soils should be undercut, and the mat should be deepened to bear on the competent bearing stratum or could bear on lean concrete or new engineered fill extending from the foundation base to competent bearing stratum.
3. The sides of the excavation for the mat foundation must be nearly vertical and the concrete should be placed neat against these vertical faces for the passive earth pressure value to be valid. If the loaded side is sloped or benched, and then backfilled, the allowable passive pressure will be significantly reduced. Passive resistance in the upper 3 feet of the subsurface profile should be neglected.
4. To reduce the effects of seasonal moisture variations in the subgrade soils. Embedment depth does not include considerations for uplift resistance.
5. The foundation settlement will depend upon embedment depth of the mat, the quality of the earthwork operations, and conformance with soil improvement methods recommended in this report. The estimated settlements are based on recommended allowable bearing pressures, long-term settlement will depend on the quality and uniformity of the engineered fill placement.
6. Based on our understanding of the anticipated structural loading.

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



Equipment Shelter Shallow Foundation Design Parameters

Parameter	Column	Wall
Maximum net allowable bearing pressure on engineered fill or lean concrete extending to at least stiff clay ¹	2,750 psf	
Minimum foundation plan dimensions	24 inches	18 inches
Required bearing stratum ²	Engineered fill or lean concrete extending to at least stiff clay	
Ultimate coefficient of sliding friction	0.30	
Ultimate passive pressure ³	350 psf (below 3 feet)	
Minimum embedment below finished grade for frost protection ⁴	24 inches	
Est. total settlement from structural loads ⁵	< 1 inch	
Estimated differential settlement ⁵	< 1 inch	

1. The maximum net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. An appropriate factor of safety has been applied.
2. Unsuitable or soft soils should be undercut, and the footings should be deepened to bear on the competent bearing stratum or could bear on lean concrete or new engineered fill extending from the foundation base to competent bearing stratum.
3. The sides of the excavation for the spread footing foundation must be nearly vertical and the concrete should be placed neat against these vertical faces for the passive earth pressure value to be valid. If the loaded side is sloped or benched, and then backfilled, the allowable passive pressure will be significantly reduced. Passive resistance in the upper 3 feet of the subsurface profile should be neglected.
4. For perimeter footing and footings beneath unheated areas. Also to reduce the effects of seasonal moisture variations in the subgrade soils.
5. The foundation settlement will depend upon embedment depth of the footings, the quality of the earthwork operations, and conformance with soil improvement methods recommended in this report. The estimated settlements are based on recommended allowable bearing pressures, long-term settlement will depend on the quality and uniformity of the engineered fill placement.

Shallow Foundation Construction Considerations

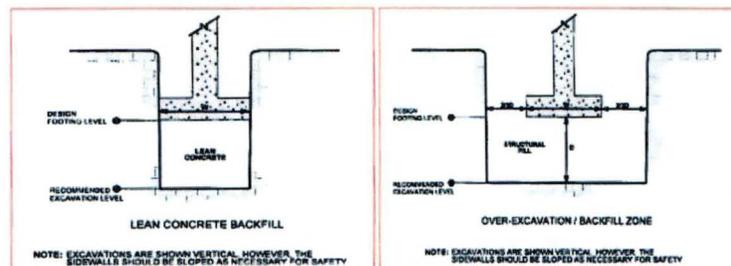
The base of all foundation excavations should be free of water and loose soil prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Should the soils at bearing level become excessively dry, disturbed or saturated, or frozen, the affected soil should be removed prior to placing concrete. Place a lean concrete mud-mat over the bearing soils if the excavations must remain open over night or for an extended period of time. It is recommended that the geotechnical engineer be retained to observe and test the soil foundation bearing materials.

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



If unsuitable bearing soils are encountered in footing excavations, the excavations should be extended deeper to suitable soils and the footings could bear directly on these soils at the lower level or on lean concrete backfill (minimum of 500 psi) placed in the excavations. The footings could also bear on properly compacted lean clay backfill extending down to the suitable soils. Overexcavation for compacted lean clay backfill placement below footings should extend laterally beyond all edges of the footings at least 8 inches per foot of overexcavation depth below footing base elevation. The overexcavation should then be backfilled up to the footing base elevation with engineered fill as described in the **Compaction Requirements** section placed in lifts of 8 inches or less in loose thickness and compacted to at least 98 percent of the material's maximum dry density as defined by the Standard Proctor (ASTM D 698). The overexcavation and backfill procedure is illustrated in the following figures for lean concrete or lean clay structural fill.



DEEP FOUNDATIONS

Drilled Shaft Design Parameters

Drilled piers should be designed with a minimum shaft diameter of 30 inches to facilitate clean out and inspection of the bedrock surface from the ground. Due to the variability of materials (weak sandstone with clay seams) in the upper portion of the sandstone layer (from about 10 to 21 feet below ground surface), we recommend the competent sandstone layer to be selected for support of the drilled pier, the pier should be socketed a minimum of 4 feet into competent sandstone bedrock (encountered at a depth of 21 feet at boring B-1) resulting in a minimum tip depth of 25 feet below existing grades (15-foot embedment into sandstone bedrock).

Based on the results of the test boring data and laboratory testing, we have developed the following drilled pier soil and rock design parameters:

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
 February 20, 2019 ■ Terracon Project No. 57185152



Approximate Depth (feet)	Allowable Skin Friction (psf)	Allowable End Bearing Capacity (psf)	Undrained Shear Strength, c (psf)	Unit Weight (pcf)	Strain ϵ_{50} / K_{rm}	Lateral Subgrade Modulus, k (pci)	Model
0 – 3.5	Ignore	Ignore	Ignore	Ignore	Ignore	Ignore	Ignore
Lean Clay 3.5 – 10	410	--	2,500	120	ϵ_{50} 0.008	120	Very stiff to hard clay w/o water
Sandstone with clay seams 10 - 16	2,840	--	1,500	135	k_{rm} 0.00001	3,000	Weak Rock (RQD=70)
Sandstone with clay seams 16 - 21	7,325	--	3,900	135	k_{rm} 0.00001	3,000	Weak Rock (RQD=70)
Sandstone 21 – 23	7,500	12,600	4,000	150	k_{rm} 0.00001	3,000	Strong Rock (RQD=95)

The above indicated cohesion, friction angle, lateral subgrade modulus and strain values have no factors of safety. The allowable skin friction has a factor of safety of 2. The allowable end bearing pressure provided in the table has an approximate factor of safety of 3. The parameters in the above table are based on our boring, published values and our past experience with similar soil and rock types. These values should, therefore, be considered approximate. To mobilize the higher rock strength parameters, the pier should be socketed at least 4 feet into the bearing stratum. If the drilled pier is designed using the above parameters and bear within the competent sandstone bedrock with a minimum socket length of 4 feet, settlement is anticipated to be about ½ inch or less.

Our recommendations provided in this section do not include consideration for lateral capacity. However, we can perform LPile analysis upon request.

Drilled Shaft Construction Considerations

Groundwater may be encountered during the drilling for the drilled pier. If groundwater seepage is encountered, water should be removed from each pier hole prior to concrete placement. Care should be taken so that the sides and bottom of the excavations are not disturbed during construction. The contractor should have temporary casing available onsite during construction of the drilled pier to control seepage and/or caving soil, if encountered.

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



Difficult drilling conditions may be encountered due to hard sandstone. The contractor should be prepared to penetrate competent sandstone bedrock. The bottom of the excavation should be inspected carefully by a qualified geotechnical engineer or representative for voids, clay layers within the sandstone, or any otherwise unsuitable bearing conditions.

Based on compressive strength and rock quality data, we expect that advancement of piers to minimum embedment in rock could be achieved by a rock auger equipped with self-rotating cutter bits or by rock coring. However, advancement method may vary between contractors depending on experience and their evaluation of penetration rates for the site conditions.

The bottom of the shaft should be free of loose soil or debris prior to reinforcing steel and concrete placement. We recommend that reinforcing steel and pier concrete be placed the same day as the shaft is drilled. No completed shaft excavation should be allowed to remain open overnight. It is suitable, however, for the contractor to excavate a portion of the drilled shaft and then complete the shaft excavation the next day.

If pier concrete cannot be placed in dry conditions, a tremie should be used for concrete placement. Free-fall concrete placement in piers will only be acceptable if provisions are taken to avoid striking the concrete on the sides of the hole or reinforcing steel. The use of a bottom-dump hopper or tremie discharging near the bottom of the hole where concrete segregation will be minimized, is recommended. Due to potential sloughing and raveling, foundation concrete quantities may exceed calculated geometric volumes.

Adequate performance of the drilled shaft foundations will be highly dependent on the contractor's installation techniques used to construct the foundation elements. At a minimum, the following inspection criteria should be incorporated as a requirement for construction of the drilled piers.

Bearing conditions of the drilled pier foundations should be evaluated by a qualified geotechnical engineer at the time of construction to confirm suitable end bearing on competent bedrock and to provide recommendations if unsuitable bearing materials are encountered. Entry of personnel into the drilled pier foundations is not required and is strongly discouraged for this project. The evaluation of the piers should include the following:

- Contractor should advance a test hole with an air track drill through the bedrock bearing surface to a depth of at least two times the pier diameter to check for discontinuities in the bedrock that may require additional rock removal.
- The number of test holes at each pier location would be determined by the geotechnical engineer's representative based on the field test results.
- Significant discontinuous rock layers may require additional rock removal as directed by the engineer's representative.
- Prior to installation of the reinforcing steel cage, the base of each pier should be sounded to check for voids or clay seams in the underlying bedrock. This could be done by dropping the drill rig Kelly bar onto the exposed bedrock surface at selected locations.

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



- Visual evaluation of the exposed bearing surface should be performed by the engineer's representative to confirm that the base is free from loose material, soil, water or other unsuitable materials. Visual inspection to determine the suitability of the shaft bottom using either a flashlight or reflected light with a mirror may be conducted from the ground surface.

SEISMIC CONSIDERATIONS

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7 and the International Building Code (IBC). Based on the soil/bedrock properties encountered at the site and as described on the exploration log and results, it is our professional opinion that the **Seismic Site Classification is C**. Subsurface explorations at this site were extended to a maximum depth of 25 feet. The site properties below the boring depth to 100 feet were estimated based on our experience and knowledge of geologic conditions of the general area. Additional deeper borings or geophysical testing may be performed to confirm the conditions below the current boring depth.

FLOOR SLABS

Where undercut is performed below the floor slab bearing elevation, the exposed material should pass a proofroll. Native soils below the floor slab bearing elevation should pass a proofroll observed by a geotechnical engineer or representative. Please refer to the **Site Preparation** section of this report for additional details regarding the partial undercut and replacement below floor slab subgrade elevation.

Design Parameters

Item	Description
Floor slab support	Engineered fill, or at least very stiff native soils
Modulus of subgrade reaction	100 pounds per square inch per in (psi/in) for point loading conditions
Aggregate base course/capillary break ¹	Minimum 4 inches of free-draining granular material
Vapor Barrier	Project Specific ²
Structural considerations	Floor slabs should be structurally independent of building ³

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



1. The floor slab design should include a capillary break, comprised of free-draining, compacted, granular material, at least 4 inches thick. Free-draining granular material should have less than 5 percent fines (material passing the #200 sieve).
2. The use of a vapor retarder should be considered beneath concrete slabs on grade that will be covered with wood, tile, carpet or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder.
3. Floor slabs should be structurally independent of any building footings or walls to reduce the possibility of floor slab cracking caused by differential movements between the slab and foundation. Where floor slabs are tied to perimeter walls or turn-down slabs to meet structural or other construction objectives, our experience indicates that any differential movement between the walls and slabs will likely be observed in adjacent slab expansion joints or floor slab cracks that occur beyond the length of the structural dowels. The structural engineer should account for this potential differential settlement through use of sufficient control joints, appropriate reinforcing or other means.

Floor Slab Construction Considerations

Prior to construction of grade supported slabs, varying levels of remediation may be required to reestablish stable subgrades within slab areas due to construction traffic, rainfall, disturbance, desiccation, etc. As a minimum, the following measures are recommended.

- Confirm that interior trench backfill placed beneath slabs is compacted in accordance with recommendations outlined in the **Site Preparation** section of this report.
- All floor slab subgrade areas should be moisture conditioned and properly compacted to the recommendations in this report immediately prior to placement of the stone base and concrete.

Floor Slab Subgrade Preparation

On most project sites, the site grading is generally accomplished early in the construction phase. However, as construction proceeds, the subgrade may be disturbed due to utility excavations, construction traffic, desiccation, rainfall, etc. As a result, the floor slab subgrade may not be suitable for placement of aggregate base and concrete and corrective action will be required. Additional protection, stabilization measures may be necessary and requires specific field evaluation. We recommend floor subgrades be maintained in a relatively moist condition until floor slabs are constructed. If the subgrade should become desiccated prior to construction of floor slabs, the affected material should be removed or the materials scarified, moistened, and recompacted. Upon completion of grading operations in the building areas, care should be taken to maintain the recommended subgrade moisture content and density prior to construction of the equipment building floor slabs.

We recommend the area underlying the floor slab be rough graded and then thoroughly proofrolled with a loaded tandem-axle dump truck prior to final grading and placement of aggregate base. Particular attention should be paid to high traffic areas that were rutted and disturbed earlier and to

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



areas where backfilled trenches are located. Areas where unsuitable conditions are located should be repaired by removing and replacing the affected material with properly compacted fill. All floor slab subgrade areas should be moisture conditioned and properly compacted to the recommendations in this report immediately prior to placement of the aggregate base and concrete.

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

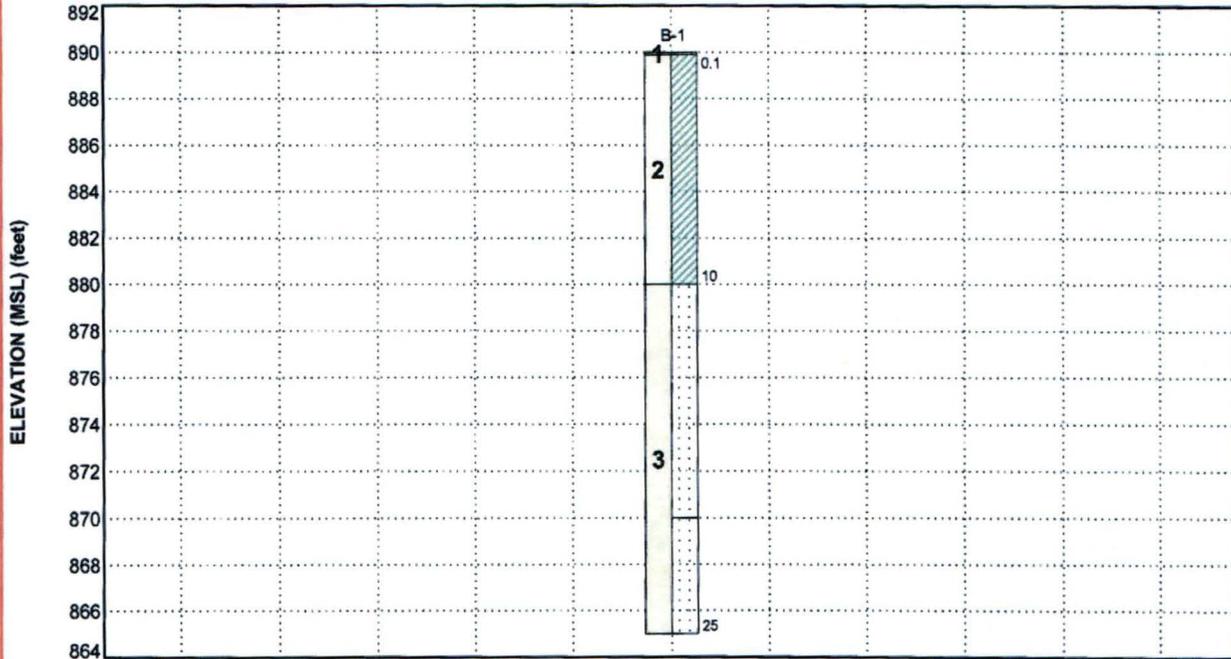
FIGURES

Contents:

GeoModel

GEOMODEL

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, KY
 2/20/2019 ■ Terracon Project No. 57185152



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	Topsoil	Topsoil
2	Lean clay	Yellowish brown to reddish brown lean clay, trace sand
3	Sandstone	Gray sandstone with water staining, weak to strong

LEGEND

- Topsoil
- Lean Clay
- Sandstone

- First Water Observation
- Second Water Observation
- Third Water Observation

Groundwater levels are temporal. The levels shown are representative of the date and time of our exploration. Significant changes are possible over time. Water levels shown are as measured during and/or after drilling. In some cases, boring advancement methods mask the presence/absence of groundwater. See individual logs for details.

NOTES:

Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

ATTACHMENTS

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



EXPLORATION AND TESTING PROCEDURES

Field Exploration

Number of Borings	Boring Depth (feet)	Location
1	25	Tower

Boring Layout and Elevations: Bluegrass Cellular Inc. personnel provided the boring layout and staked the boring. Approximate elevation was obtained by Landmark Surveying Co., Inc. If elevation and a more precise boring layout are desired, we recommend boring be surveyed following completion of fieldwork.

Subsurface Exploration Procedures: We advanced the boring with an ATV-mounted rotary drill rig using continuous flight augers (hollow stem). Four samples were obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon was driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring log at the test depths. We observed and recorded groundwater levels during drilling and sampling. For safety purposes, the boring was backfilled with auger cuttings after completion.

The sampling depths, penetration distances, and other sampling information was recorded on the field boring log. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Our exploration team prepared the field boring log as part of the drilling operations. The field log included visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. The final boring log was prepared from the field log. The final boring log represent the Geotechnical Engineer's interpretation of the field log and include modifications based on observations and tests of the samples in our laboratory.

Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests to understand the engineering properties of the various soil and rock strata, as necessary, for this project. Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods were applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- ASTM D7012 Standard Test Methods for Compressive Strength and Elastic Moduli of Intact Rock Core Specimens under Varying States of Stress and Temperatures

The laboratory testing program often included examination of soil samples by an engineer. Based on the material's texture and plasticity, we described and classified the soil samples in accordance with the Unified Soil Classification System.

Rock classification was conducted using locally accepted practices for engineering purposes; petrographic analysis may reveal other rock types. Rock core samples typically provide an improved specimen for this classification. Boring log rock classification was determined using the Description of Rock Properties.

Geotechnical Engineering Report

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



PHOTOGRAPHY LOG



**PHOTO #1 – Rock core sample at B-1 from about 10 to 20 feet below existing grade
(top of the core at upper right corner)**



**PHOTO #2 – Rock core sample at B-1 from about 20 to 25 feet below existing grade
(bottom of the core at lower left corner)**

SITE LOCATION AND EXPLORATION PLANS

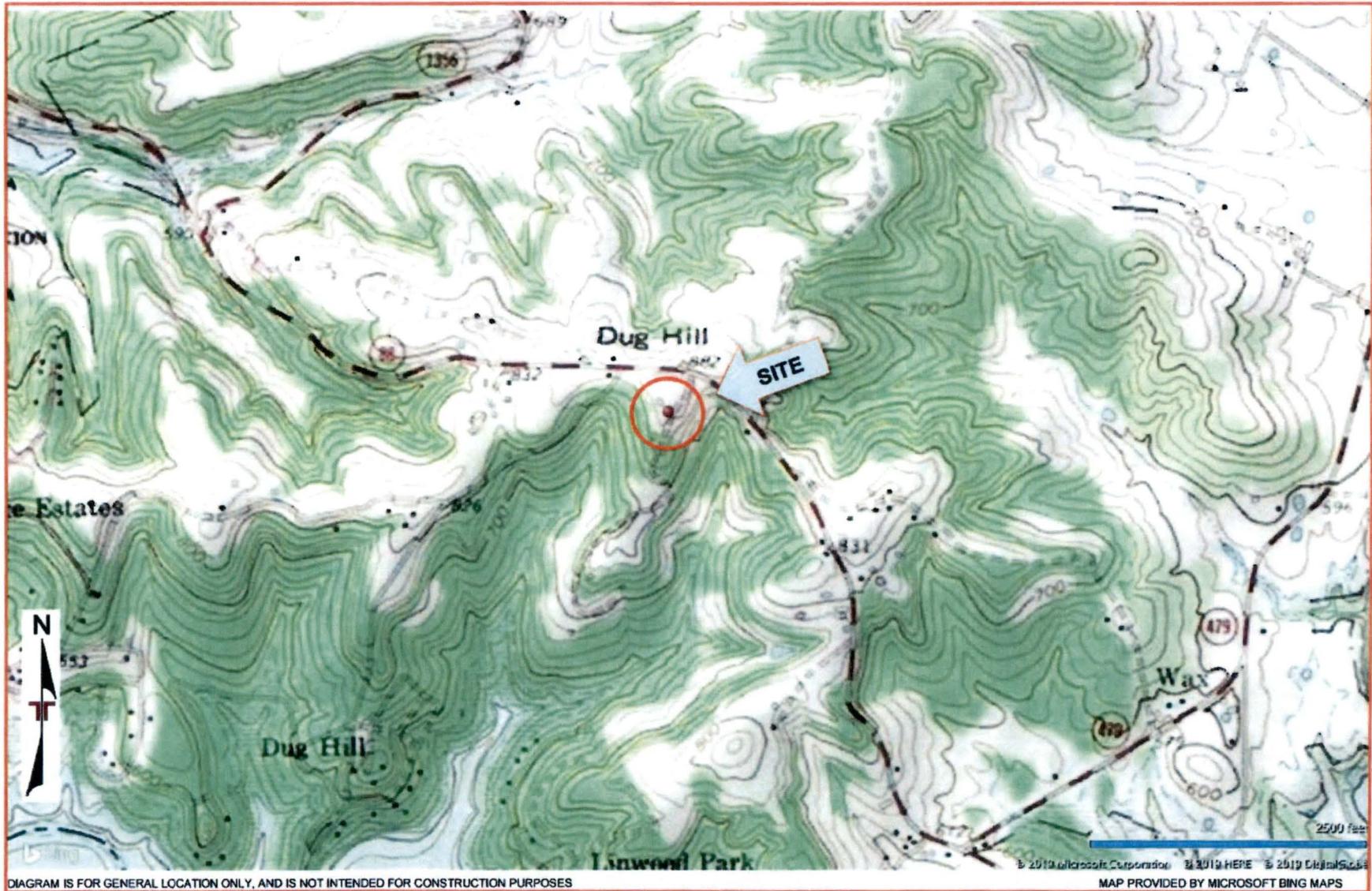
Contents:

Site Location Plan
Exploration Plan

Note: All attachments are one page unless noted above.

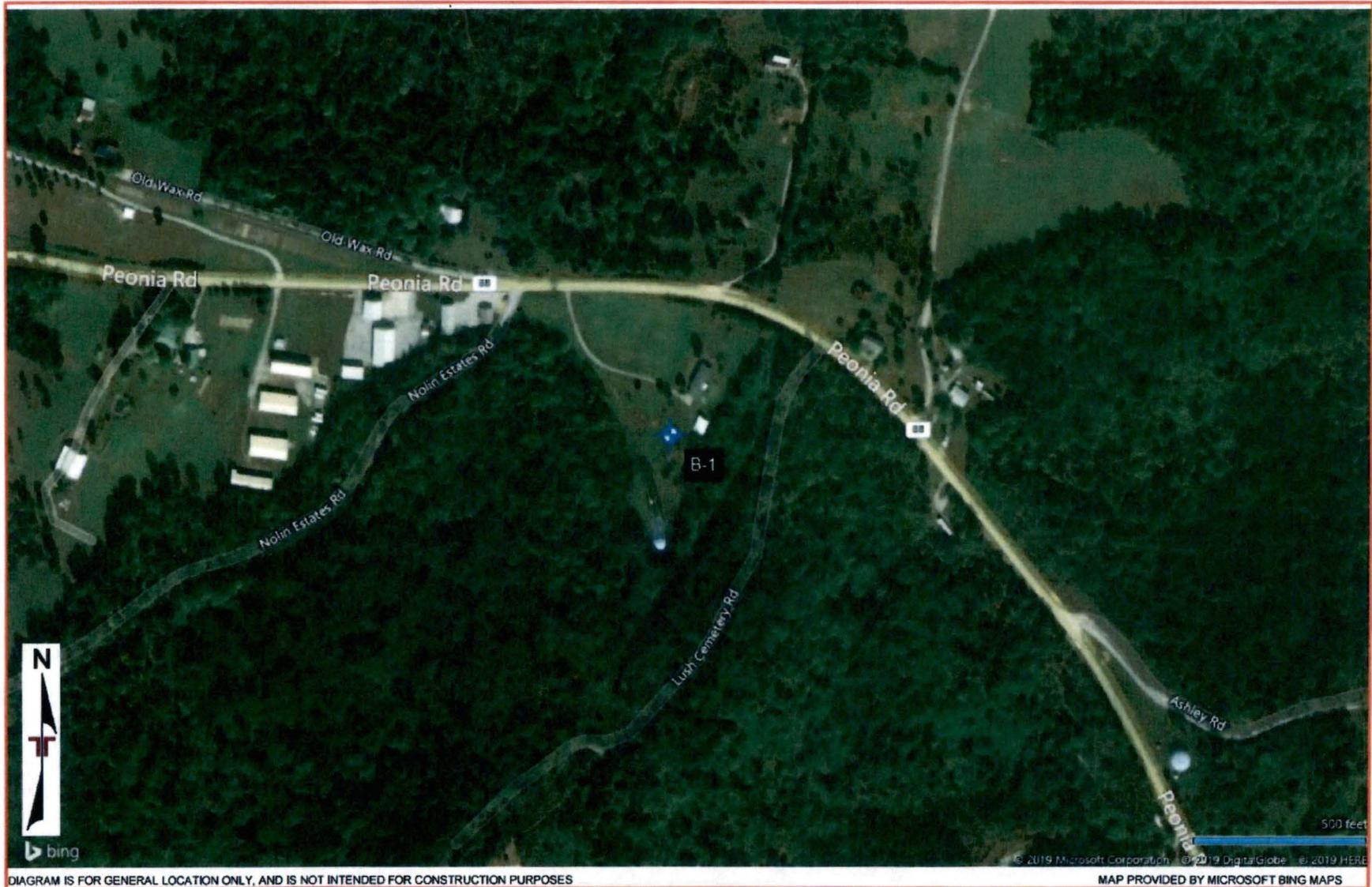
SITE LOCATION

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



EXPLORATION PLAN

Proposed Bluegrass Cellular Tower at Wax, KY ■ Clarkson, Grayson County, KY
February 20, 2019 ■ Terracon Project No. 57185152



EXPLORATION RESULTS

Contents:

**Boring Log (B-1)
Atterberg Limits**

Note: All attachments are one page unless noted above.

BORING LOG NO. B-1

PROJECT: Proposed Bluegrass Cellular Tower at Wax, KY

CLIENT: Bluegrass Cellular Partnership
Elizabethtown, KY

SITE: 12523 Peonia Road
Clarkson, KY

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 37.3616° Longitude: -86.1394° Approximate Surface Elev.: 890 (Ft.) +/-	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	Unconfined Compressive Strength (psi)	LABORATORY HP (tsf)	WATER CONTENT (%)	ATTERBERG LIMITS
		DEPTH	ELEVATION (Ft.)								LL-PL-PI
1		0.1' TOPSOIL	890+/-								
		LEAN CLAY (CL) , trace sand, yellowish brown to reddish brown, moist, stiff to hard									
					X	16	4-6-8 N=14		2.25 (HP)	12	
2		- rock fragment			X	10	6-10-10 N=20		4.5 (HP)	17	40-18-22
					X	5	16-12-21 N=33		3.0 (HP)	14	
					X	5	50/5"			8	
		10.0' Auger Refusal at 10 feet	880+/-								
3		SANDSTONE , gray, very close fracture spacing, thin bedding, highly weathered, weak rock, with water staining. - vertical fracture - clay seam, 2 inches thick - clay seam, 2 inches thick - vertical fracture						1940			
								1500			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
3-1/4 HSA

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Supporting Information for explanation of symbols and abbreviations.

Elevations were provided by Landmark Surveying Co., Inc.

Boring Started: 01-12-2019 Boring Completed: 01-12-2019

WATER LEVEL OBSERVATIONS
Groundwater not encountered



Drill Rig: CME-750 Driller: Rob Sizemore

Project No.: 57185152

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 57185152 PROPOSED BLUEGRASS.GPJ MODEL LAYER.GPJ 2/19/19

BORING LOG NO. B-1

PROJECT: Proposed Bluegrass Cellular Tower at Wax, KY

CLIENT: Bluegrass Cellular Partnership
Elizabethtown, KY

SITE: 12523 Peonia Road
Clarkson, KY

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 37.3616° Longitude: -86.1394° Approximate Surface Elev.: 890 (Ft.) +/- DEPTH _____ ELEVATION (Ft.) _____	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	Unconfined Compressive Strength (psi)	LABORATORY HP (tsf)	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI
	3	<p>SANDSTONE, gray, very close fracture spacing, thin bedding, highly weathered, weak rock, with water staining. (<i>continued</i>)</p> <ul style="list-style-type: none"> - clay seam, 1 inch thick - vertical fracture - vertical fracture - clay seam, 1 inch thick - clay seam, 1 inch thick - vertical fracture - vertical fracture - clay seam, 1 inch thick 	15			113	RQD=70%	3900			
		<p>20.0 _____ 870+/-</p> <p>SANDSTONE, gray, close fracture spacing, thin bedding, moderately weathered, strong rock, with water staining.</p> <ul style="list-style-type: none"> - clay seam, 1 inch thick - clay seam, 1 inch thick - pink layer, 1 inch 	20			60	RQD=95%	7090			
		<p>25.0 _____ 865+/-</p> <p>Boring Terminated at 25 Feet</p>	25								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
3-1/4 HSA

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

Elevations were provided by Landmark Surveying Co., Inc.

WATER LEVEL OBSERVATIONS
Groundwater not encountered

13050 Eastgate Park Way, Ste 101
Louisville, KY

Boring Started: 01-12-2019	Boring Completed: 01-12-2019
Drill Rig: CME-750	Driller: Rob Sizemore
Project No.: 57185152	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL_57185152 PROPOSED BLUEGRASS GPJ_MODEL LAYER.GPJ 2/19/19

SUMMARY OF LABORATORY RESULTS

Borehole No.	Depth (ft.)	USCS Soil Class.	In-Situ Properties		Classification			Expansion Testing					Corrosivity			Remarks	
			Dry Density (pcf)	Water Content (%)	Passing #200 Sieve (%)	LL	PL	PI	Dry Density (pcf)	Water Content (%)	Surcharge (psf)	Expansion (%)	Expansion Index EI ₅₀	pH	Resistivity (ohm-cm)		Sulfates (ppm)
B-1	1			12													2
B-1	3.5	CL		17		40	18	22									
B-1	6			14													2
B-1	8.5			8													2

REMARKS

1. Dry Density and/or moisture determined from one or more rings of a multi-ring sample.
2. Visual Classification.
3. Submerged to approximate saturation.
4. Expansion Index in accordance with ASTM D4829-95.
5. Air-Dried Sample

PROJECT: Proposed Bluegrass Cellular Tower at Wax, KY

SITE: 12523 Peonia Road
Clarkson, KY



PH. 502-456-1256

FAX. 502-456-1278

PROJECT NUMBER: 57185152

CLIENT: Bluegrass Cellular Partnership
Elizabethtown, KY

EXHIBIT: B-1

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. SOIL PROPERTIES 57185152, PROPOSED BLUEGRASS.GPJ, TERRACON_DATATEMPLATE.GDT 1/28/19

SUPPORTING INFORMATION

Contents:

General Notes

Unified Soil Classification System

Description of Rock Properties

Note: All attachments are one page unless noted above.

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING			WATER LEVEL		Water Initially Encountered	FIELD TESTS	(HP) Hand Penetrometer	
	Auger	Split Spoon			Water Level After a Specified Period of Time		(T) Torvane	
					Water Level After a Specified Period of Time		(b/f) Standard Penetration Test (blows per foot)	
	Shelby Tube	Macro Core		Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.			(PID) Photo-Ionization Detector	
							(OVA) Organic Vapor Analyzer	
Ring Sampler	Rock Core							
								
Grab Sample	No Recovery							

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS	RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance Includes gravels, sands and silts.			CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
	Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Ring Sampler Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength, Qu, psf	Standard Penetration or N-Value Blows/Ft.
Very Loose	0 - 3	0 - 6	Very Soft	less than 500	0 - 1	< 3
Loose	4 - 9	7 - 18	Soft	500 to 1,000	2 - 4	3 - 4
Medium Dense	10 - 29	19 - 58	Medium-Stiff	1,000 to 2,000	4 - 8	5 - 9
Dense	30 - 50	59 - 98	Stiff	2,000 to 4,000	8 - 15	10 - 18
Very Dense	> 50	≥ 99	Very Stiff	4,000 to 8,000	15 - 30	19 - 42
			Hard	> 8,000	> 30	> 42

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

Major Component of Sample	Particle Size
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 5
With	5 - 12
Modifier	> 12

PLASTICITY DESCRIPTION

Term	Plasticity Index
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A				Soil Classification		
				Group Symbol	Group Name ^B	
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels: Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3$ ^E	GW	Well-graded gravel ^F	
		Gravels with Fines: More than 12% fines ^C	$Cu < 4$ and/or $[Cc < 1$ or $Cc > 3.0]$ ^E	GP	Poorly graded gravel ^F	
			Fines classify as ML or MH	GM	Silty gravel ^{F, G, H}	
		Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands: Less than 5% fines ^D	$Cu \geq 6$ and $1 \leq Cc \leq 3$ ^E	SW	Well-graded sand ^I
	Sands with Fines: More than 12% fines ^D		$Cu < 6$ and/or $[Cc < 1$ or $Cc > 3.0]$ ^E	SP	Poorly graded sand ^I	
		Fines classify as ML or MH	SM	Silty sand ^{G, H, I}		
	Fines classify as CL or CH		SC	Clayey sand ^{G, H, I}		
		Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silts and Clays: Liquid limit less than 50	Inorganic:	$PI > 7$ and plots on or above "A" line	CL
$PI < 4$ or plots below "A" line ^J	ML				Silt ^{K, L, M}	
Organic:	Liquid limit - oven dried			< 0.75	OL	Organic clay ^{K, L, M, N}
	Liquid limit - not dried					Organic silt ^{K, L, M, O}
Silts and Clays: Liquid limit 50 or more	Inorganic:		PI plots on or above "A" line	CH	Fat clay ^{K, L, M}	
			PI plots below "A" line	MH	Elastic Silt ^{K, L, M}	
	Organic:		Liquid limit - oven dried	< 0.75	OH	Organic clay ^{K, L, M, P}
			Liquid limit - not dried			Organic silt ^{K, L, M, Q}
Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat	

^A Based on the material passing the 3-inch (75-mm) sieve.

^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

$$Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

^F If soil contains $\geq 15\%$ sand, add "with sand" to group name.

^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^H If fines are organic, add "with organic fines" to group name.

^I If soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^L If soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.

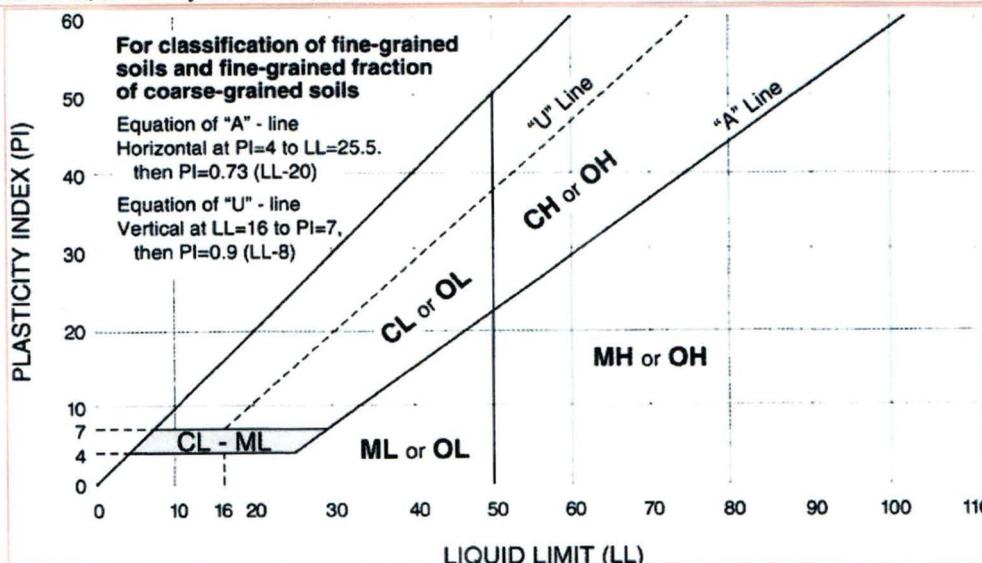
^M If soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

^N $PI \geq 4$ and plots on or above "A" line.

^O $PI < 4$ or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.



DESCRIPTION OF ROCK PROPERTIES



WEATHERING	
Term	Description
Unweathered	No visible sign of rock material weathering, perhaps slight discoloration on major discontinuity surfaces.
Slightly weathered	Discoloration indicates weathering of rock material and discontinuity surfaces. All the rock material may be discolored by weathering and may be somewhat weaker externally than in its fresh condition.
Moderately weathered	Less than half of the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present either as a continuous framework or as corestones.
Highly weathered	More than half of the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present either as a discontinuous framework or as corestones.
Completely weathered	All rock material is decomposed and/or disintegrated to soil. The original mass structure is still largely intact.
Residual soil	All rock material is converted to soil. The mass structure and material fabric are destroyed. There is a large change in volume, but the soil has not been significantly transported.

STRENGTH OR HARDNESS		
Description	Field Identification	Uniaxial Compressive Strength, psi (MPa)
Extremely weak	Indented by thumbnail	40-150 (0.3-1)
Very weak	Crumbles under firm blows with point of geological hammer, can be peeled by a pocket knife	150-700 (1-5)
Weak rock	Can be peeled by a pocket knife with difficulty, shallow indentations made by firm blow with point of geological hammer	700-4,000 (5-30)
Medium strong	Cannot be scraped or peeled with a pocket knife, specimen can be fractured with single firm blow of geological hammer	4,000-7,000 (30-50)
Strong rock	Specimen requires more than one blow of geological hammer to fracture it	7,000-15,000 (50-100)
Very strong	Specimen requires many blows of geological hammer to fracture it	15,000-36,000 (100-250)
Extremely strong	Specimen can only be chipped with geological hammer	>36,000 (>250)

DISCONTINUITY DESCRIPTION			
Fracture Spacing (Joints, Faults, Other Fractures)		Bedding Spacing (May Include Foliation or Banding)	
Description	Spacing	Description	Spacing
Extremely close	< ¼ in (<19 mm)	Laminated	< ½ in (<12 mm)
Very close	¼ in – 2-1/2 in (19 – 60 mm)	Very thin	½ in – 2 in (12 – 50 mm)
Close	2-1/2 in – 8 in (60 – 200 mm)	Thin	2 in – 1 ft. (50 – 300 mm)
Moderate	8 in – 2 ft. (200 – 600 mm)	Medium	1 ft. – 3 ft. (300 – 900 mm)
Wide	2 ft. – 6 ft. (600 mm – 2.0 m)	Thick	3 ft. – 10 ft. (900 mm – 3 m)
Very Wide	6 ft. – 20 ft. (2.0 – 6 m)	Massive	> 10 ft. (3 m)

Discontinuity Orientation (Angle): Measure the angle of discontinuity relative to a plane perpendicular to the longitudinal axis of the core. (For most cases, the core axis is vertical; therefore, the plane perpendicular to the core axis is horizontal.) For example, a horizontal bedding plane would have a 0-degree angle.

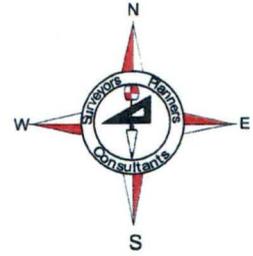
ROCK QUALITY DESIGNATION (RQD) ¹	
Description	RQD Value (%)
Very Poor	0 - 25
Poor	25 – 50
Fair	50 – 75
Good	75 – 90
Excellent	90 - 100

¹ The combined length of all sound and intact core segments equal to or greater than 4 inches in length, expressed as a percentage of the total core run length.

Reference: U.S. Department of Transportation, Federal Highway Administration, Publication No FHWA-NHI-10-034, December 2009 Technical Manual for Design and Construction of Road Tunnels – Civil Elements

LANDMARK SURVEYING CO., INC.

15 N.E. 3RD STREET • WASHINGTON, INDIANA 47501
PHONE: 812.257.0950 • WEBSITE: WWW.LANDMARKSURVEYINGCO.COM
DARREN L. HELMS, P.S., PRESIDENT
DENNIS N. HELMS, P.S., CPESC, VICE-PRESIDENT



Directions to the Site

From the County Seat of Grayson County, Kentucky

Wax Site

From the courthouse in downtown Leitchfield, Kentucky: travel north on U.S. Highway 62 (North Main Street) for 0.3 miles to a stop light; turn right at the stop light and continue on U.S. Highway 62 (Mill Street) east for 3.9 miles to Clarkson and Kentucky Highway 88; turn right onto Kentucky Highway 88 and travel south for 12.5 miles to an asphalt lane, which leads to the tower site, that lies 1.1 miles from Kentucky Highway 479 in Wax; turn right onto the asphalt lane and travel southeast for 250 feet to a stone lane; turn right onto the stone lane and continue southeast for 200 feet to the tower site near an Edmonson County Water District elevated water storage tank. The address of the site is 12523 Peonia Road, Clarkson, Kentucky 42726.

Darren L. Helms
Darren L. Helms, P.L.S. 3386

JANUARY 24, 2019
Date



OPTION TO LEASE AND LEASE AGREEMENT

I.

OPTION TO LEASE REAL PROPERTY

THIS OPTION TO LEASE REAL PROPERTY (the "Option Agreement") is made and entered into this 11 day of December, 2018, by and between Nathan C Maulden, whose address is 12517 Peonia Road, Clarkson, KY 42726 (the "Optionor(s)" and Kentucky RSA #3

Cellular General Partnership (a Kentucky general Partnership) with principal office and place of business at 2902 Ring Road, Elizabethtown, KY 42701 (the "Optionee").

WITNESSETH:

WHEREAS, the Optionor(s) is the owner of certain real property located in Grayson County, Kentucky as more particularly described on Exhibit A attached hereto and incorporated herein by reference (the "Property"); and

WHEREAS, the Optionor(s) wishes to grant to the Optionee, and the Optionee wishes to obtain from the Optionor(s), an option to lease a portion of the Property upon the terms and conditions set forth herein;

NOW, THEREFORE, in consideration of the foregoing premises and for other good and valuable consideration, the mutuality, receipt and sufficiency of which are hereby acknowledged, the parties hereto do agree as follows.

1. In consideration of the payment of **One Thousand Eight Hundred Dollars and Zero Cents (\$1,800.00)** paid by the Optionee to the Optionor(s) (the "Option Consideration"), the receipt of which is hereby acknowledged by the Optionor(s),

Site Name: Wax

the Optionor(s) hereby grants to the Optionee an exclusive and irrevocable option to lease a portion of the Property upon the terms and conditions hereinafter set forth (the "Option") for a period of eighteen (18) months, commencing on the date of full execution (the "Option Period"), as set forth in Paragraph 5 thereof.

2. The parties hereto anticipate that the portion of the Property which is the subject of this Option will comprise approximately a **One Hundred Foot by One Hundred Foot** area, together with a right of way across the Property for the purposes of ingress and egress throughout the term of the lease. The Optionee shall obtain an accurate survey of the portion of the Property to be leased by it by a registered land surveyor licensed in the Commonwealth of Kentucky at the sole expense of the Optionee. A copy of the survey shall be provided to the Optionor(s). The description of the portion of the Property to be leased by the Optionee, including the right of way, shall be determined by the surveyor and shall hereafter be referred to as the "Leased Premises." The Optionee shall obtain said survey within a reasonable time following the date of the Option Agreement.
3. During the term of the Option, the Optionee may enter onto the Property at its own risk to obtain soil samples and to bore soil for the purposes of determining the suitability of the Leased Premises for a communications tower.
4. Upon the Optionee's proper exercise of the Option in accordance with Paragraph 5 hereof, the Optionor(s) shall be deemed to have immediately executed, acknowledged and delivered to the Optionee the Lease Agreement contained in Section II hereof. The description of the Leased Premises shall be that determined by the registered land surveyor in accordance with Paragraph 2 hereof.
5. If the Optionee elects to exercise the Option in accordance with the terms hereof, notice of such election shall be deemed sufficient if personally delivered or sent by

Site Name: Wax

registered or certified mail, return receipt requested, to the address of the Optionor(s) set forth in Paragraph 14 hereof.

6. The Optionor(s) agrees not to sell, lease or offer for sale or lease the Property, or any portion thereof, during the term of this Option or any renewal or extension of the Option.
7. In the event the Optionee fails to exercise the Option as set forth herein (unless such failure is due to the discovery of a defect in the Leased Premises or other matter unsatisfactory to the Optionee), the Optionor(s) shall have the right to retain the Option Consideration.
8. The Optionee may assign this Option with written consent of the Optionor(s), which consent shall not be unreasonably withheld, and upon any assignment such assignee shall have all the rights, remedies and obligations as if it were the original Optionee hereunder. From and after any such assignment, the term "Optionee" shall refer to such assignee.
9. Each party hereto shall bear any and all of its own expenses in connection with the negotiation, execution or settlement of this Option.
10. Risk of loss with respect to the Property during the term of this Option and during the term of the lease shall be upon the Optionor(s). If, during the term of the Option, any portion of the Leased Premises shall be acquired by public authority under the right or threat of eminent domain, the Optionee may, at its sole option, either (i) exercise the Option, and in such event, all sums received from the public authority by the Optionor(s) by reason of the taking of a portion of the Leased Premises shall reduce the rent due under the lease, or (ii) terminate this Option and thereupon the Optionor(s) shall be obligated to return to the Optionee the full amount of the

Site Name: Wax

Option Consideration previously paid to the Optionor(s) in "good and collected funds."

11. The parties hereto represent to each other that neither has engaged any broker to represent their interests in connection with the transactions contemplated hereby, and each agrees to indemnify the other against any and all claims made by any brokers engaged or purported to be engaged by the other for brokerage commissions or fees in connection with the transactions contemplated hereby.
12. The Optionor(s) represents, warrants and covenants to the Optionee that the Optionor(s) has not caused or permitted, and shall not cause or permit, and to the best of Optionor(s)' knowledge no other person has caused or permitted any hazardous material (as defined by any applicable federal, state or local law, rule or regulation) to be brought upon, placed, held, located or disposed of at the Leased Premises. In the event any such contamination occurs for which the Optionee becomes legally liable, the Optionor(s) shall indemnify the Optionee against all claims, damages, judgments, penalties and costs and expenses, including reasonable attorneys' fees, which Optionee may incur.
13. This Option Agreement and the rights and obligations of the parties hereto shall be construed in accordance with the laws of the Commonwealth of Kentucky.
14. For the purposes of giving notice as permitted or required herein, the address of the Optionor(s) shall be: **12517 Peonia Road, Clarkson, KY 42726**; the Optionee's address shall be: P.O Box 5012, Elizabethtown, KY 42702-5012. Any inquiry by the Optionor to the Optionee regarding the terms and conditions of the Option Agreement or Lease Agreement, or otherwise related to the Option Agreement or Lease Agreement, shall be made in writing and submitted to the attention of the Optionee's Lease Administrator at the above address.

15. The parties agree that without the express written consent of the other party, neither party shall reveal, disclose or publish to any third party the terms of this Option Agreement or Lease Agreement or any portion thereof, except to such party's auditor, accountant, lender, attorney or to a government entity if required by regulation, subpoena or government order to do so. Notwithstanding the foregoing, either party may disclose the terms of this Option Agreement or Lease Agreement to any of its affiliated entities, and Optionee may disclose the terms of this Option Agreement or Lease Agreement to any of its lenders or creditors or to third parties that are potential lessees or licensees of space at the Leased Premises as may be reasonably necessary with respect to the operation, leasing, licensing and marketing of the Leased Premises.
16. The Optionee shall have the right, in its sole discretion, to record this Option in the Office of the Clerk of the County Court of Grayson County, Kentucky.

II.

LEASE AGREEMENT

17. In the event the Optionee elects to exercise the Option to lease the Leased Premises, the terms of the Lease Agreement ("Lease Agreement" or "Lease") shall become immediately effective upon such exercise and shall be as follows.
 - a. The term of the Lease shall commence on the date that the Optionor(s) receives proper notice that the Optionee has exercised the Option, pursuant to Paragraph 5 therein. The initial term shall expire **five (5) year(s)** from the commencement date of the Lease Agreement and shall include **six (6) additional five (5)-year terms** per the Lease Agreement. Optionee may, by providing written notice at least sixty (60) days prior to the expiration of the

Site Name: Wax

original or any renewal Lease term, elect to unilaterally terminate this Lease at the end of any original or renewal Lease term. Such notice must be personally delivered or sent via registered or certified mail, return receipt requested, to the address of the Optioner(s) set forth in Paragraph 14 hereof. The Lease amount shall be adjusted at the end of each term by an increase of 12%.

- b. The Optionee shall pay to the Optionor(s) rent for the Leased Premises in the sum of Four Thousand Eight Hundred Dollars and Zero Cents (\$4,800.00) yearly, to be paid in advance. All rent payments shall be personally delivered or mailed to the Optionor(s) at the address set forth in Paragraph 14 hereof. Any check payment of the rent due under the Lease shall be payable to the order of Optionor(s).
- c. The Optionee shall be entitled to use and occupy the Leased Premises for the purpose of erecting, maintaining and operating a communications tower ("Tower") and communications facilities ("Facilities") thereon and for all such other uses as Optionee may, in its sole discretion, deem necessary in connection therewith.
- d. The Optionor(s) hereby grants Optionee easements on, under and across the Property for ingress, egress, utilities and access (including access for the purposes described in Paragraph 2) to the Leased Premises adequate to install and maintain utilities, including, but not limited to, the installation of power and telephone service cable, and to service the Leased Premises and the Tower and Facilities at all times during the Initial Term of the Lease and any Renewal Term ("Easement"). The Easements provided hereunder shall have the same term as this Lease.

Site Name: Wax

- e. In the event the Property is encumbered by a mortgage or deed of trust, Optionor(s) agrees, upon request of Optionee, to obtain and furnish to Optionee a non-disturbance and attornment agreement for each such mortgage or deed of trust.

- f. The Optionor(s) shall be responsible for the payment of all real estate taxes which shall be assessed against the Property during the term of the Lease. In the event Optionor(s) fails to pay, when due, real estate taxes assessed against the Property ("Delinquent Taxes"), Optionee shall have the right, but not the obligation, to pay said Delinquent Taxes on Optionor(s) behalf and withhold such amount from future rental payments described in Paragraph 17(b) above. Optionee's election to pay any Delinquent Taxes in no way binds or obligates Optionee to continue to pay any such Delinquent Taxes thereafter. The responsibility to pay all real estate taxes assessed against the Property remains with Optionor(s). The Optionee shall pay all charges for heat, water, gas, electricity, sewer use charges and any other utility used or consumed on the Leased Premises. The Optionee shall, at its own cost and expense, maintain and keep in full force and effect during the term of the lease public liability insurance with coverage in the amount of at least one million dollars (\$1,000,000.00) per person for bodily injury, disease, or death and shall maintain property insurance on any property of the Optionee located on the Leased Premises.

- g. The Optionee may assign the lease. The Optionee may sublet all or part of the space on the tower or ground space.

- h. The Optionor(s) covenants that upon the Optionee's payment of the rent agreed upon herein, as well as Optionee's observing and performing all of the covenants and conditions contained in the Lease, the Optionee may

Site Name: Wax

peacefully and quietly enjoy the Leased Premises subject to the terms and conditions set forth in the Lease.

- i. The Optionee agrees to maintain an access road in a passable manner for the term of the lease.
- j. Optionee's Payment of Taxes, Fees and Assessments. Optionee shall pay directly to the applicable federal, state or local governmental unit or agency ("Governmental Entity") or to Optionor if Optionor is invoiced by such Governmental Entity, all taxes, fees, assessments or other charges assessed by any Governmental Entity directly against Optionee's Equipment and/or Optionee's use of the Facilities. Optionee shall also pay to Optionor Optionee's Pro Rata Share of all taxes, fees, assessments or charges including, but not limited to, personal property taxes attributable to Optionee's equipment and antenna(s), municipal franchise fees, use fees, municipal application fees, installation fees and increases thereof. "Pro Rata Share" shall mean the fraction of decimal equivalent of dividing one (1) by the total number of then existing users occupying a tower on the last day of the applicable calendar year.

18. This Option and Lease Agreement contains the entire agreement between the parties hereto and no modification or amendment shall be binding upon any party unless made in writing and signed by each of the parties hereto.
19. Upon the termination or other end of this Lease Agreement, Optionee shall have the right to remove any and all of its property (real or personal) from the Leased Premises regardless of whether or not such property may be considered a fixture thereto.

Site Name: Wax

20. Upon abandonment of the property, Optionee shall have thirty (30) days to dismantle and remove the Tower and any/all equipment located on Optionor's property.
21. Before any interest in Optionor(s)' interest in the Lease, or any part thereof, is sold, assigned or transferred in any manner whatsoever (with or without consideration), the Optionee shall have a right of first refusal to acquire whatever interest in the Lease that the Optionor(s) proposes to transfer (the "Proposed Transfer"), on the terms and conditions set forth in this Paragraph 21 (the "Right of First Refusal").
 - a. Optionor(s) shall deliver to the Optionee a written notice (the "Notice") stating (i) the name of the proposed purchaser or transferee and the material terms and conditions of the Proposed Transfer, together with a complete copy of any written offer made to the Optionor(s) to acquire any interest in the Lease ("Offer").
 - b. ~~At any time within thirty (30) days after receipt of the Notice, the~~ Optionee may, by giving written notice to the Optionor (s) ("Optionee's Notice"), elect to exercise its Right of First Refusal and acquire the interest in the Lease proposed to be transferred pursuant to the Proposed Transfer at the purchase price and on the same terms and conditions as are contained in the Offer. If the Offer includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Optionee in good faith. In the event, Optionee exercises its right to acquire the interest in the Lease, the Optioner(s) shall convey, assign and/or transfer said interest to Optionee free and clear of all liens and encumbrances whatsoever (other than this Lease, which Lease shall remain in effect). All taxes, rents and other assessments applicable

Site Name: Wax

to the transferred interest, if any, shall be prorated to the date of closing. The Closing shall occur within thirty (30) days from the date of Optionee's Notice.

- c. If the Optionee declines to exercise its Right of First Refusal to acquire the interest in the Lease proposed to be transferred, the Optioner(s) may sell or transfer same in accordance with the terms of the Offer subject, however, to this Lease and the Optionee's rights thereunder.

[Remainder of Page Intentionally Left Blank]

EXECUTION OF AGREEMENT(S)

IN WITNESS WHEREOF, the parties hereto have set their hands and affixed their respective seals.

Print Name: Nathan C. Maulden

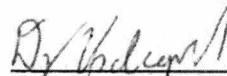
Sign: 

Date: 12-11-18

("Optionor(s)")

Property Owner(s)

Kentucky RSA #3
Cellular General Partnership

Sign: 

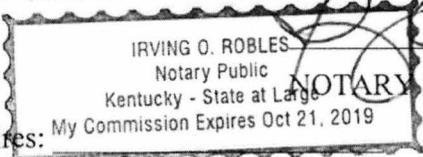
Date: 12-11-18

("Optionee")

By: Doug Updegraff
Authorized Representative

STATE OF Kentucky
 COUNTY OF Hardin

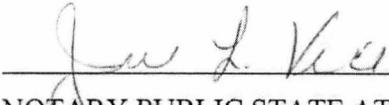
The foregoing instrument was acknowledged before me this 11 day of December, 2018, by Nathan C. Maulden to be his/her free act and deed.

 #544310
 NOTARY PUBLIC STATE AT LARGE

My commission expires: _____

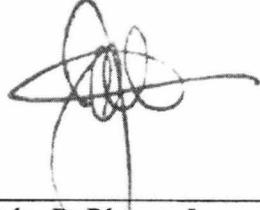
STATE OF KENTUCKY
 COUNTY OF HARDIN

The foregoing instrument was acknowledged before me this 11 day of December, 2018, by Doug Updegraff, as Authorized Representative on behalf of Kentucky RSA #3 Cellular General Partnership (a Kentucky general Partnership), to be his free act and deed.


 NOTARY PUBLIC STATE AT LARGE

My commission expires: 1-21-21

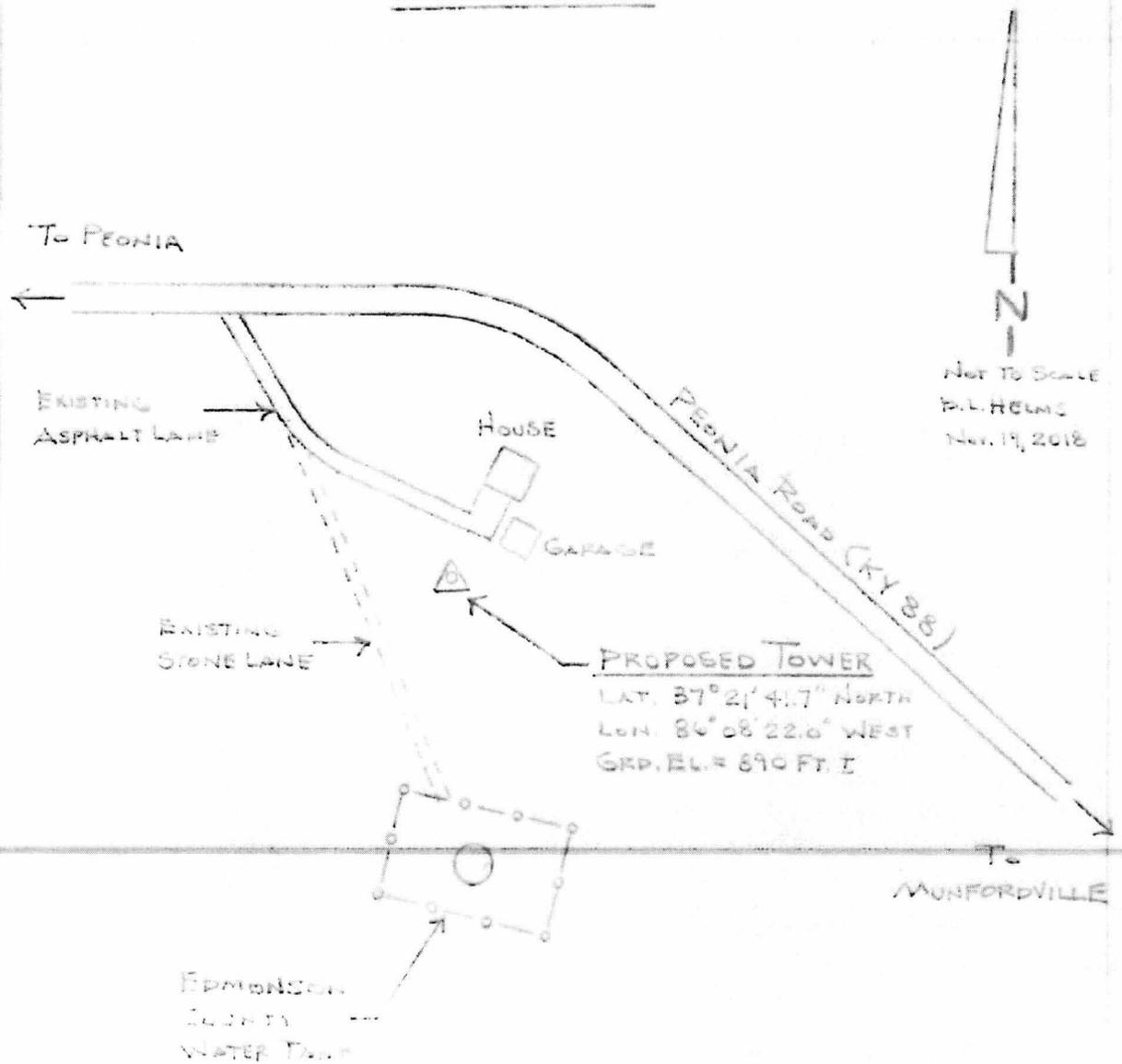
This instrument prepared by:



 John R. Rhorer, Jr.
DINSMORE & SHOHL LLP
 250 West Main Street, Suite 1400
 Lexington, KY 40507
 (859) 425-1000

EXHIBIT A

WAX
SITE SKETCH



LAND SURVEYING CO., INC.
150 E. ...
WAS. ... IN 47501
(612) 287-0650



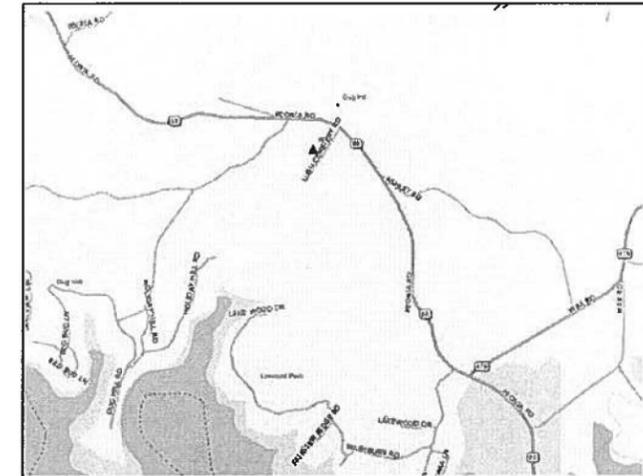
APPROVAL SIGNATURES	
BLUEGRASS CELLULAR PROJECT SUPERVISOR:	_____
DATE:	_____
CITY REPRESENTATIVE:	_____
TITLE:	_____
DATE:	_____
PROPERTY OWNER/OWNERS:	_____
DATE:	_____
TOWER OWNER/OWNERS:	_____
DATE:	_____

SITE NAME: WAX

911 ADDRESS: 12523 PEONIA RD.
CLARKSON, KY
42726

COUNTY: GRAYSON

TOWER LATITUDE & LONGITUDE
N37° 21' 41.7" W86° 08' 22.00"



VICINITY MAP
NOT TO SCALE
DIRECTIONS TO SITE

FROM ELIZABETHTOWN, KENTUCKY: TRAVEL WEST ON WESTERN KENTUCKY PKWY. TO EXIT 112, GO EAST ON S.R. 224 AND IMMEDIATELY TAKE A RIGHT ON NELSON RD. FOLLOW APPROX. 2 MILES UNTIL IT DEADENDS INTO S.R. 88 (PEONIA RD) TAKE A LEFT ON S.R. 88 AND FOLLOW SOUTH APPROXIMATELY 1.1 MILES. WATCH FOR DUB HILL RD. ON THE RIGHT. THE VERY NEXT DRIVE ON THE RIGHT WILL BE THE ENTRANCE TO THE EXISTING WATER TANK. TAKE WATER TOWER DRIVEWAY BACK TO SITE, WHICH SITS JUST NORTHEAST OF TANK.

SHEET INDEX		
SHEET NO.	DESCRIPTION	REVISION
TITLE SHEET	TITLE SHEET	
SURVEY	SURVEY	
A-1	SITE PLAN	
A-2	FENCE DETAIL	
ANTENNA DETAILS 1	ANT. SPECS/TOWER ELEV.	
ANTENNA DETAILS 2	ANTENNA DETAILS 2	
E-1	SITE PLAN - ELECTRICAL	
E-2	ELECTRICAL DETAILS	
LYNCOLE	LYNCOLE GROUNDING	
E-3	ELEC. PLAN - GROUNDING	
E-4	GROUNDING - DETAILS	
S-1	FOUNDATION DETAILS	
GENERATOR DETAILS	GENERATOR DETAILS	
GENERAL NOTES	GENERAL NOTES	

SITE DATA

PROPERTY OWNER: NATHAN MAULDEN (270)230-3129
12517 PEONIA RD.
CLARKSON, KY. 42726

TOWER OWNER: BLUEGRASS CELLULAR
(270) 769-0339

POWER COMPANY: WARREN RECC
1-270-259-3161

TELEPHONE COMPANY: WINDSTREAM
(800) 752-6007

BLUEGRASS PROJECT MANAGER: MARK McNUTT (270) 734-1028

BLUEGRASS PROJECT SUPERVISOR: MASON McDOWELL (270) 734-1002



ROBIN BECKER
(502) 599-9427
OFFICE

P.O.C. of Lease Tract
 CENTERLINE INTERSECTION OF PEONIA ROAD (KENTUCKY HIGHWAY 88) AND NOLIN ESTATES ROAD PER DEED BOOK 370, PAGE 419 IN THE OFFICE OF THE COUNTY CLERK OF GRAYSON COUNTY, KENTUCKY.

SITE: WAX

Lease Boundary and Topographic Survey
Grayson County, Kentucky

Lease Boundary and Easement Description

A TRACT OF LAND THAT IS LOCATED 600 FEET SOUTHEASTERLY OF THE INTERSECTION OF NOLIN ESTATES ROAD (ALSO KNOWN AS DUG HILL ROAD) AND PEONIA ROAD (ALSO KNOWN AS KENTUCKY HIGHWAY 88) IN THE WAX COMMUNITY OF GRAYSON COUNTY, KENTUCKY; SAID TRACT BEING DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE CENTERLINES OF SAID ROADS; THENCE SOUTH 38 DEGREES 13 MINUTES 13 SECONDS EAST 383.75 FEET TO A 5/8-INCH REBAR SET FLUSH WITH A SURVEY CAP INSCRIBED "D.L. HELMS PLS 3386" (REFERRED TO AS A REBAR IN THE REMAINDER OF THIS DESCRIPTION) AT THE POINT OF BEGINNING OF THIS DESCRIPTION (SAID REBAR LIES SOUTH 39 DEGREES 35 MINUTES 47 SECONDS WEST 571.13 FEET FROM A UNITED STATES COAST AND GEODETIC SURVEY STANDARD 3-INCH DIAMETER BRASS TABLET SET IN CONCRETE, BURIED 4 INCHES, AND LABELED "DUG HILL 2 1979" AND IT LIES NORTH 22 DEGREES 18 MINUTES 14 SECONDS EAST 60.00 FEET FROM A 5/8-INCH IRON PIN FOUND FLUSH WITH A SURVEY CAP INSCRIBED "RICHARD WOOD PLS 3609" AT THE NORTHWEST CORNER OF THE 0.744-ACRE TRACT DESCRIBED IN DEED TO THE EDMONSON COUNTY WATER DISTRICT ON DECEMBER 29, 2006 IN DEED BOOK 370, PAGE 419 IN THE OFFICE OF THE COUNTY CLERK OF GRAYSON COUNTY, KENTUCKY; THENCE NORTH 25 DEGREES 12 MINUTES 00 SECONDS EAST 100.00 FEET TO A REBAR SET FLUSH; THENCE SOUTH 64 DEGREES 48 MINUTES 00 SECONDS EAST 100.00 FEET TO A REBAR SET FLUSH; THENCE SOUTH 25 DEGREES 12 MINUTES 00 SECONDS WEST 100.00 FEET TO A REBAR SET FLUSH; THENCE NORTH 64 DEGREES 48 MINUTES 00 SECONDS WEST 100.00 FEET TO THE POINT OF BEGINNING AND CONTAINING 0.230 ACRES (10,000 SQUARE FEET), MORE OR LESS.

TOGETHER WITH AN ACCESS AND UTILITY EASEMENT FROM THE ABOVE-DESCRIBED 0.230-ACRE LEASE TRACT TO PEONIA ROAD (ALSO KNOWN AS KENTUCKY HIGHWAY 88); SAID EASEMENT FOLLOWS AN EXISTING ASPHALT AND STONE LANE MOST OF ITS LENGTH, AND IT IS DESCRIBED AS FOLLOWS: BEGINNING AT A 5/8-INCH REBAR SET FLUSH WITH A SURVEY CAP INSCRIBED "D.L. HELMS PLS 3386", WHICH MARKS THE SOUTHWEST CORNER OF THE ABOVE-DESCRIBED 0.230-ACRE LEASE TRACT; THENCE NORTH 64 DEGREES 48 MINUTES 00 SECONDS EAST 40.00 FEET; THENCE NORTH 64 DEGREES 48 MINUTES 00 SECONDS WEST 74.64 FEET; THENCE NORTH 27 DEGREES 53 MINUTES 47 SECONDS WEST 156.53 FEET; THENCE NORTH 50 DEGREES 04 MINUTES 29 SECONDS WEST 8.21 FEET; THENCE NORTH 42 DEGREES 06 MINUTES 05 SECONDS WEST 25.23 FEET; THENCE NORTH 26 DEGREES 42 MINUTES 07 SECONDS WEST 25.60 FEET; THENCE NORTH 21 DEGREES 28 MINUTES 13 SECONDS WEST 10.74 FEET; THENCE NORTH 19 DEGREES 12 MINUTES 00 SECONDS WEST 27.92 FEET; THENCE NORTH 16 DEGREES 25 MINUTES 22 SECONDS WEST 35.90 FEET; THENCE NORTH 14 DEGREES 41 MINUTES 35 SECONDS WEST 41.19 FEET; THENCE NORTH 13 DEGREES 09 SECONDS WEST 49.49 FEET; THENCE NORTH 12 DEGREES 00 SECONDS WEST 57.13 FEET; THENCE NORTH 11 DEGREES 00 SECONDS WEST 64.48 FEET; THENCE NORTH 10 DEGREES 00 SECONDS WEST 71.75 FEET; THENCE NORTH 09 DEGREES 00 SECONDS WEST 79.38 FEET; THENCE NORTH 08 DEGREES 00 SECONDS WEST 87.00 FEET; THENCE NORTH 07 DEGREES 00 SECONDS WEST 94.63 FEET; THENCE NORTH 06 DEGREES 00 SECONDS WEST 102.25 FEET; THENCE NORTH 05 DEGREES 00 SECONDS WEST 109.88 FEET; THENCE NORTH 04 DEGREES 00 SECONDS WEST 117.50 FEET; THENCE NORTH 03 DEGREES 00 SECONDS WEST 125.13 FEET; THENCE NORTH 02 DEGREES 00 SECONDS WEST 132.75 FEET; THENCE NORTH 01 DEGREES 00 SECONDS WEST 140.38 FEET; THENCE SOUTH 89 DEGREES 08 MINUTES 17 SECONDS EAST 10.10 FEET TO THE POINT OF BEGINNING.

THE BEARING SYSTEM OF THIS DESCRIPTION IS BASED UPON THE KENTUCKY STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83 (2011), AS DETERMINED BY G.P.S. OBSERVATIONS MADE ON JANUARY 8, 2019 USING THE KENTUCKY TRANSPORTATION CABINET'S KYCORS NAD83 2011 NETWORK. THIS BEARING SYSTEM IS GRID NORTH.

THIS DESCRIPTION IS BASED UPON A SURVEY COMPLETED BY LANDMARK SURVEYING CO., INC. AND CERTIFIED BY DARREN L. HELMS, P.L.S. 3386, ON JANUARY 24, 2019.

SOURCE OF TITLE: BEING A PORTION OF AND LYING ENTIRELY WITHIN THE LAND DESCRIBED IN DEED TO NATHAN C. MAULDEN ON FEBRUARY 28, 2018 IN DEED BOOK 467, PAGE 224 IN THE OFFICE OF THE COUNTY CLERK OF GRAYSON COUNTY, KENTUCKY.

Notes

- ANY ENCUMBRANCES AND LANDOWNER INFORMATION SHOWN HEREON, REGARDING THE SUBJECT TRACT, ARE BASED UPON A TITLE SEARCH COMPLETED BY ABSTRACTS & TITLES, INC. OF LOUISVILLE, KENTUCKY, DATED JANUARY 3, 2019, EXAM NO. 238171.
- THE UTILITIES SHOWN ON THIS PLAN MAY OR MAY NOT REPRESENT ALL OF THE UTILITIES LOCATED AT THE SUBJECT SITE. THE PRESENCE OF UTILITIES WAS DETERMINED BY A VISUAL INSPECTION OF THE PROPERTY SURFACE. NO UTILITY LOCATE WAS CALLED IN PRIOR TO THIS SURVEY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE UTILITIES PRIOR TO CONSTRUCTION.
- THE TOPOGRAPHIC INFORMATION CONTAINED ON THIS PLAN IS AS REQUESTED BY THE CLIENT AND MAY OR MAY NOT REPRESENT ALL OF THE TOPOGRAPHIC FEATURES LOCATED AT THE SUBJECT SITE.
- ACCORDING TO THE OFFICE OF MR. KEVIN HENDERSON, COUNTY JUDGE EXECUTIVE OF GRAYSON COUNTY, NO LOCAL PLANNING UNIT EXISTS WHICH HAS GEOGRAPHICAL JURISDICTION OF THE SUBJECT TOWER SITE. THE COUNTY JUDGE EXECUTIVE'S OFFICE MAY BE CONTACTED AT 270-259-3159.
- THE PROPOSED LOCATION OF THE WAX TOWER SITE WILL BE LOCATED OUTSIDE OF AN INCORPORATED CITY.
- THE RIGHT OF WAY OF PEONIA ROAD (KENTUCKY HIGHWAY 88) WAS DETERMINED FROM THE PLANS OF STATE PROJECT NO. 617, SECTION B-G, DATED NOVEMBER 17, 1933.
- THE FOLLOWING EQUIPMENT WAS USED TO COMPLETE THIS SURVEY: (1) TOPCON QB-3 ROBOTIC TOTAL STATION AND (2) TOPCON HIPER II NETWORK ROVER/BASE-ROVER DUAL FREQUENCY GPS SYSTEM. THE GPS SYSTEM WAS USED IN THE RTK MODE.

Certification

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN COMPILED FROM A SURVEY MADE UPON THE GROUND UNDER MY DIRECT SUPERVISION ON JANUARY 16, 2019 BY THE METHOD OF REAL TIME KINEMATIC GPS SURVEYING AND A RANDOM TRAVERSE WITH SIDESHOTS. THE RELATIVE POSITIONAL ACCURACY OF ANY POINT ON THIS SURVEY IS BETTER THAN ± 0.10 FEET ± 200 FPM. THIS PLAN REPRESENTS A RURAL BOUNDARY SURVEY AND COMPLIES WITH THE REQUIREMENTS OF 201 KAR 18:150.

DARREN L. HELMS, P.L.S. 3386

DATE

LANDMARK SURVEYING CO., INC.
 15 N.E. 3RD STREET
 WASHINGTON, INDIANA 47501
 (812) 237-0950
 WEBSITE: LANDMARKSURVEYINGCO.COM
 Project No: 19-01-0101 © 2019

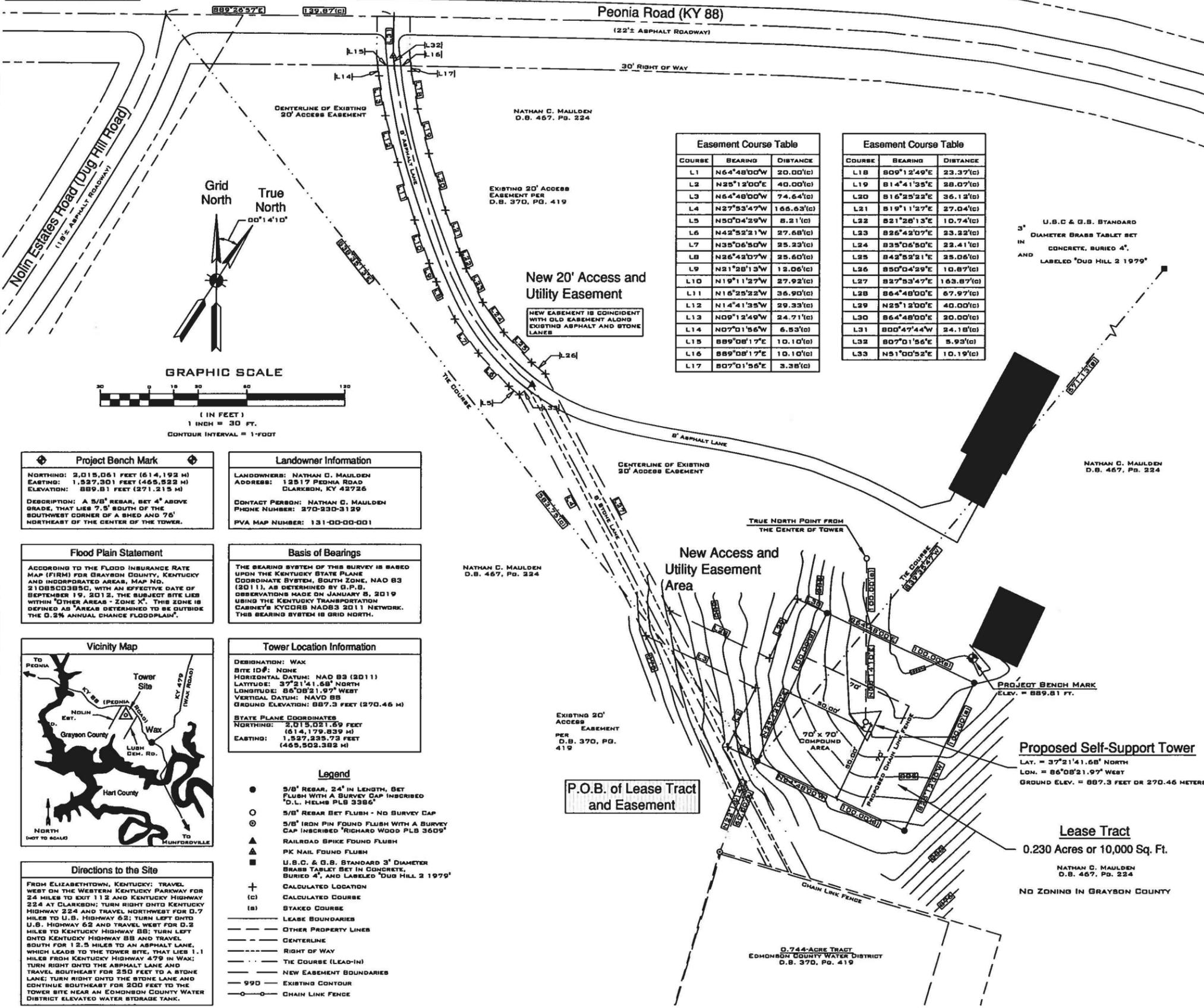


Lease Boundary Survey
 12523 Peonia Road
 Clarkson, Kentucky 42726

Bluegrass Cellular
 2902 Ring Road
 Elizabethtown, KY 42701

REVISIONS	DATE

SHEET No.
 1
 of 1 SHEETS
 FILE NAME
 wax.dwg



Easement Course Table

COURSE	BEARING	DISTANCE
L1	N64°48'00"W	20.00'(c)
L2	N25°12'00"E	40.00'(c)
L3	N64°48'00"W	74.64'(c)
L4	N27°53'47"W	156.53'(c)
L5	N50°04'29"W	8.21'(c)
L6	N42°52'21"W	27.68'(c)
L7	N39°06'50"W	25.23'(c)
L8	N26°42'07"W	25.60'(c)
L9	N21°28'13"W	10.74'(c)
L10	N19°12'27"W	27.92'(c)
L11	N16°25'22"W	35.90'(c)
L12	N14°41'35"W	41.19'(c)
L13	N13°09'17"W	49.49'(c)
L14	N12°00'00"W	57.13'(c)
L15	N11°00'00"W	64.48'(c)
L16	N10°00'00"W	71.75'(c)
L17	N09°00'00"W	79.38'(c)

Easement Course Table

COURSE	BEARING	DISTANCE
L18	S09°12'49"E	23.37'(c)
L19	S14°41'35"E	28.07'(c)
L20	S16°25'22"E	36.12'(c)
L21	S19°12'27"E	41.19'(c)
L22	S21°28'13"E	10.74'(c)
L23	S26°42'07"E	25.60'(c)
L24	S35°06'50"E	22.41'(c)
L25	S42°52'21"E	25.06'(c)
L26	S50°04'29"E	10.87'(c)
L27	S57°53'47"E	163.87'(c)
L28	S64°48'00"E	57.97'(c)
L29	S25°12'00"E	40.00'(c)
L30	S64°48'00"E	20.00'(c)
L31	S00°47'44"W	24.18'(c)
L32	S07°01'56"E	5.93'(c)
L33	N51°00'52"E	10.19'(c)

3" U.S.C. & G.S. STANDARD
 DIAMETER BRASS TABLET SET
 IN CONCRETE, BURIED 4",
 AND LABELED "DUG HILL 2 1979"

New 20' Access and Utility Easement
 NEW EASEMENT IS COINCIDENT WITH OLD EASEMENT ALONG EXISTING ASPHALT AND STONE LANES

New Access and Utility Easement Area

P.O.B. of Lease Tract and Easement

Proposed Self-Support Tower

LAT. = 37°21'41.68" NORTH
 LONG. = 86°08'21.97" WEST
 GROUND ELEV. = 887.3 FEET OR 270.46 METERS

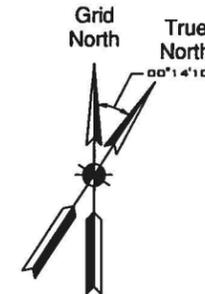
Lease Tract

0.230 Acres or 10,000 Sq. Ft.

NATHAN C. MAULDEN
 D.B. 467, Pg. 224

NO ZONING IN GRAYSON COUNTY

0.744-ACRE TRACT
 EDMONSON COUNTY WATER DISTRICT
 D.B. 370, Pg. 419



GRAPHIC SCALE

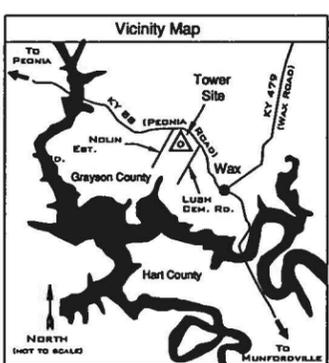
(IN FEET)
 1 INCH = 30 FT.
 CONTOUR INTERVAL = 1 FOOT

Project Bench Mark
 NORTHING: 2,015,061 FEET (614,192 M)
 EASTING: 1,527,301 FEET (465,522 M)
 ELEVATION: 889.81 FEET (271.215 M)
 DESCRIPTION: A 5/8" REBAR, SET 4" ABOVE GRADE, THAT LIES 7.5' SOUTH OF THE SOUTHWEST CORNER OF A SHED AND 76' NORTHEAST OF THE CENTER OF THE TOWER.

Landowner Information
 LANDOWNERS: NATHAN C. MAULDEN
 ADDRESS: 12517 PEONIA ROAD
 CLARKSON, KY 42726
 CONTACT PERSON: NATHAN C. MAULDEN
 PHONE NUMBER: 270-230-3129
 PVA MAP NUMBER: 131-00-00-001

Flood Plain Statement
 ACCORDING TO THE FLOOD INSURANCE RATE MAP (FIRM) FOR GRAYSON COUNTY, KENTUCKY AND INCORPORATED AREAS, MAP NO. 21088003880, WITH AN EFFECTIVE DATE OF SEPTEMBER 19, 2012, THE SUBJECT SITE LIES WITHIN "OTHER AREAS - ZONE X". THIS ZONE IS DEFINED AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN".

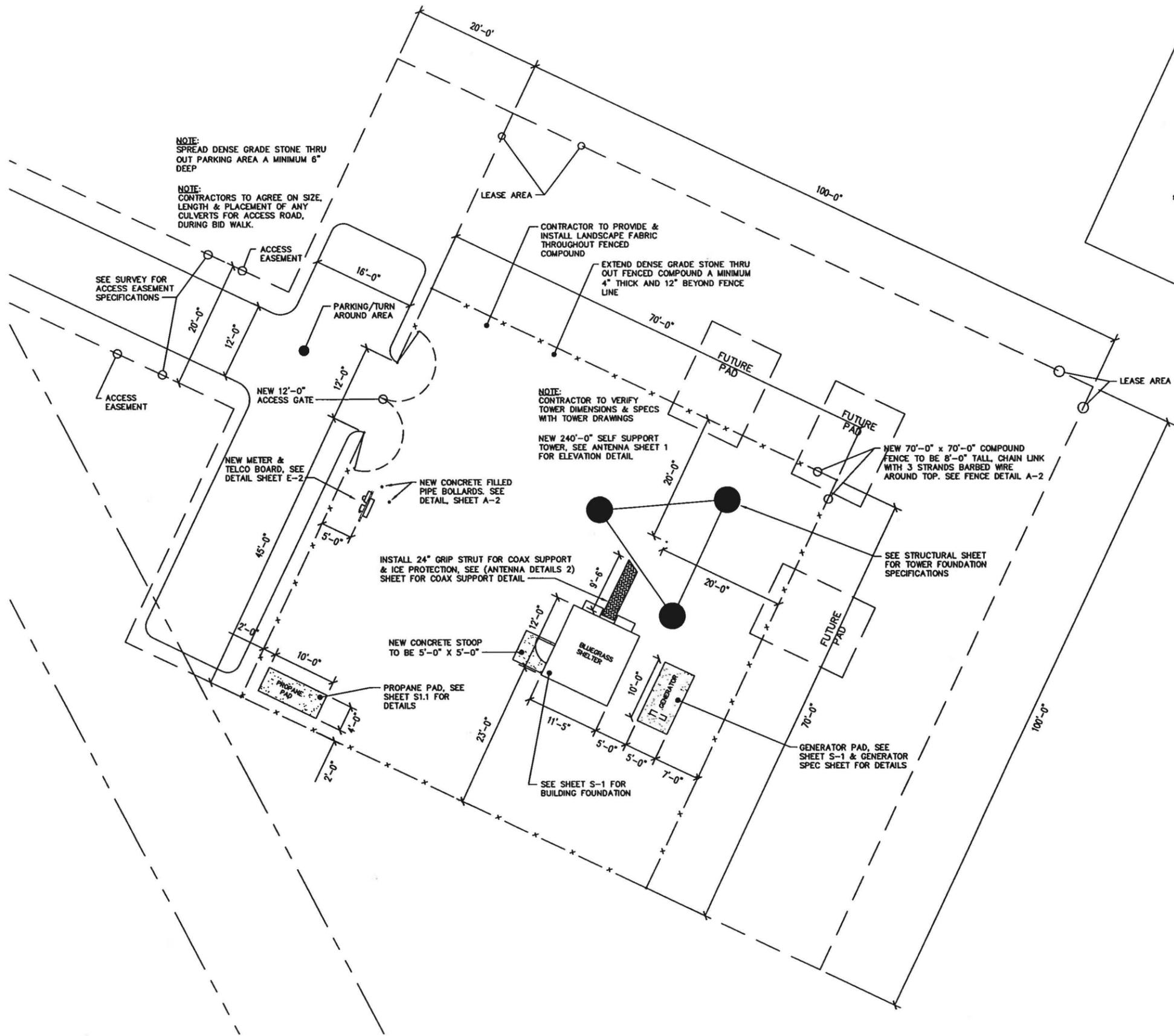
Basis of Bearings
 THE BEARING SYSTEM OF THIS SURVEY IS BASED UPON THE KENTUCKY STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83 (2011), AS DETERMINED BY G.P.S. OBSERVATIONS MADE ON JANUARY 8, 2019 USING THE KENTUCKY TRANSPORTATION CABINET'S KYCORS NAD83 2011 NETWORK. THIS BEARING SYSTEM IS GRID NORTH.



Tower Location Information
 DESIGNATION: WAX
 SITE ID#: NONE
 HORIZONTAL DATUM: NAD 83 (2011)
 LATITUDE: 37°21'41.68" NORTH
 LONGITUDE: 86°08'21.97" WEST
 VERTICAL DATUM: NAVD 88
 GROUND ELEVATION: 887.3 FEET (270.46 M)
 STATE PLANE COORDINATES
 NORTHING: 2,015,061.59 FEET (614,179.829 M)
 EASTING: 1,527,235.73 FEET (465,502.382 M)

- Legend**
- 5/8" REBAR, 24" IN LENGTH, SET FLUSH WITH A SURVEY CAP INSCRIBED "D.L. HELMS PLS 3386"
 - 5/8" REBAR SET FLUSH - NO SURVEY CAP
 - ⊙ 5/8" IRON PIN FOUND FLUSH WITH A SURVEY CAP INSCRIBED "RICHARD WOOD PLS 3609"
 - ▲ RAILROAD SPIKE FOUND FLUSH
 - PK NAIL FOUND FLUSH
 - ▲ U.S.C. & G.S. STANDARD 3" DIAMETER BRASS TABLET SET IN CONCRETE, BURIED 4", AND LABELED "DUG HILL 2 1979"
 - + CALCULATED LOCATION
 - (c) CALCULATED COURSE
 - (s) STAKED COURSE
 - LEASE BOUNDARIES
 - OTHER PROPERTY LINES
 - CENTERLINE
 - RIGHT OF WAY
 - THE COURSE (LEAD-IN)
 - NEW EASEMENT BOUNDARIES
 - 99D EXISTING CONTOUR
 - CHAIN LINK FENCE

Directions to the Site
 FROM ELIZABETHTOWN, KENTUCKY: TRAVEL WEST ON THE WESTERN KENTUCKY PARKWAY FOR 2.4 MILES TO EXIT 112 AND KENTUCKY HIGHWAY 224 AT CLARKSON; TURN RIGHT ONTO KENTUCKY HIGHWAY 224 AND TRAVEL NORTHWEST FOR 0.7 MILES TO U.S. HIGHWAY 62; TURN LEFT ONTO U.S. HIGHWAY 62 AND TRAVEL WEST FOR 0.2 MILES TO KENTUCKY HIGHWAY 88; TURN LEFT ONTO KENTUCKY HIGHWAY 88 AND TRAVEL SOUTH FOR 1.25 MILES TO AN ASPHALT LANE, WHICH LEADS TO THE TOWER SITE, THAT LIES 1.1 MILES FROM KENTUCKY HIGHWAY 479 IN WAX; TURN RIGHT ONTO THE ASPHALT LANE AND TRAVEL SOUTHEAST FOR 250 FEET TO A STONE LANE; TURN RIGHT ONTO THE STONE LANE AND CONTINUE SOUTHEAST FOR 200 FEET TO THE TOWER SITE NEAR AN EDMONSON COUNTY WATER DISTRICT ELEVATED WATER STORAGE TANK.



NOTE:
SPREAD DENSE GRADE STONE THRU
OUT PARKING AREA A MINIMUM 6"
DEEP

NOTE:
CONTRACTORS TO AGREE ON SIZE,
LENGTH & PLACEMENT OF ANY
CULVERTS FOR ACCESS ROAD,
DURING BID WALK.

NOTE:
CONTRACTOR TO VERIFY
TOWER DIMENSIONS & SPECS
WITH TOWER DRAWINGS

NEW 240'-0" SELF SUPPORT
TOWER, SEE ANTENNA SHEET 1
FOR ELEVATION DETAIL

INSTALL 24" GRIP STRUT FOR COAX SUPPORT
& ICE PROTECTION, SEE (ANTENNA DETAILS 2)
SHEET FOR COAX SUPPORT DETAIL

NEW CONCRETE STOOP
TO BE 5'-0" X 5'-0"

PROPANE PAD, SEE
SHEET S1.1 FOR
DETAILS

SEE SHEET S-1 FOR
BUILDING FOUNDATION

GENERATOR PAD, SEE
SHEET S-1 & GENERATOR
SPEC SHEET FOR DETAILS

SEE STRUCTURAL SHEET
FOR TOWER FOUNDATION
SPECIFICATIONS

NEW 70'-0" x 70'-0" COMPOUND
FENCE TO BE 8'-0" TALL, CHAIN LINK
WITH 3 STRANDS BARBED WIRE
AROUND TOP. SEE FENCE DETAIL A-2

CONTRACTOR TO PROVIDE &
INSTALL LANDSCAPE FABRIC
THROUGHOUT FENCED
COMPOUND

EXTEND DENSE GRADE STONE THRU
OUT FENCED COMPOUND A MINIMUM
4" THICK AND 12" BEYOND FENCE
LINE

GENERAL NOTES:

- 1) EQUIPMENT PICK-UP AND DELIVERY TO SITE FROM BLUEGRASS CELLULAR STAGING FACILITY TO BE THE CONTRACTORS RESPONSIBILITY, INCLUDING CRANE SET, AND ALL COST INCURRED.
- 2) FOR, BUILDING AND ALL CONCRETE PAD DETAILS REFER TO STRUCTURALS AND SHEET S1.1
- 3) ANY DAMAGE DUE TO CONSTRUCTION, TO BE REPAIRED OR REPLACED TO ORIGINAL CONDITION. (SUBJECT TO BLUEGRASS CELLULAR'S APPROVAL).
- 4) ANY DAMAGE OF NATURAL SURROUNDINGS, INCLUDING BUT NOT LIMITED TO, GRASS, TREES, LANDSCAPING, ETC.. TO BE REPAIRED OR REPLACED TO ORIGINAL CONDITION AT BLUEGRASS CELLULAR'S APPROVAL.
- 5) ROADWAYS TO BE GRADED SMOOTH AND EVEN, REMOVING ALL POTHOLES. ROADS TO HAVE PROPER DRAINAGE AND RUNOFF PER BLUEGRASS CELLULAR'S APPROVAL.
- 6) ANY RELOCATION OF EXISTING UTILITIES TO BE DONE IN ACCORDANCE WITH LOCAL CODES AND RECOMMENDATIONS, CONSULTING ALL UTILITY COMPANIES INVOLVED FOR APPROVAL AND SPECIFICATIONS REQUIRED.
- 7) FOR GRADING DETAILS, SEE GENERAL NOTESHEET
- 8) CONTRACTOR TO FIELD VERIFY ALL TOWER DIMENSIONS WITH TOWER MANUFACTURER PRIOR TO JOB BIDDING OR START OF ANY CONSTRUCTION
- 9) CONTRACTOR RESPONSIBLE FOR APPLYING FOR SERVICE TO SITE AND PAYING ANY FEES REQUIRED FOR PERMITS, HOOKUP, ETC..



BLUEGRASS CELLULAR, INC.
STANDARD CELLULAR SITE

NO.	DATE	REVISION

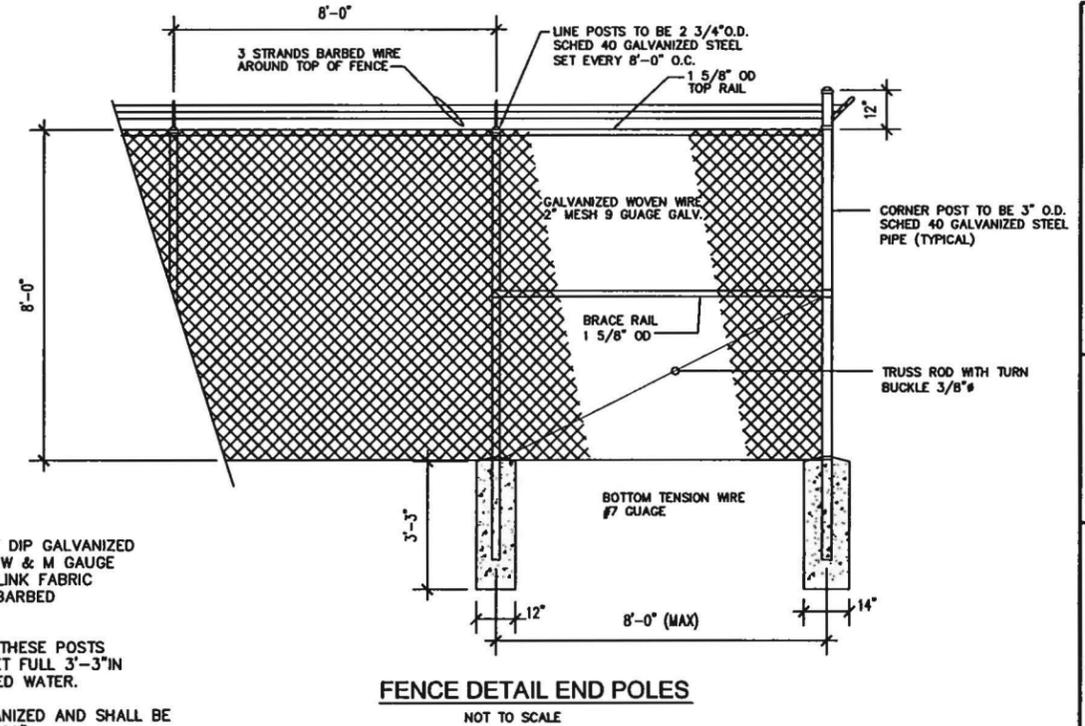
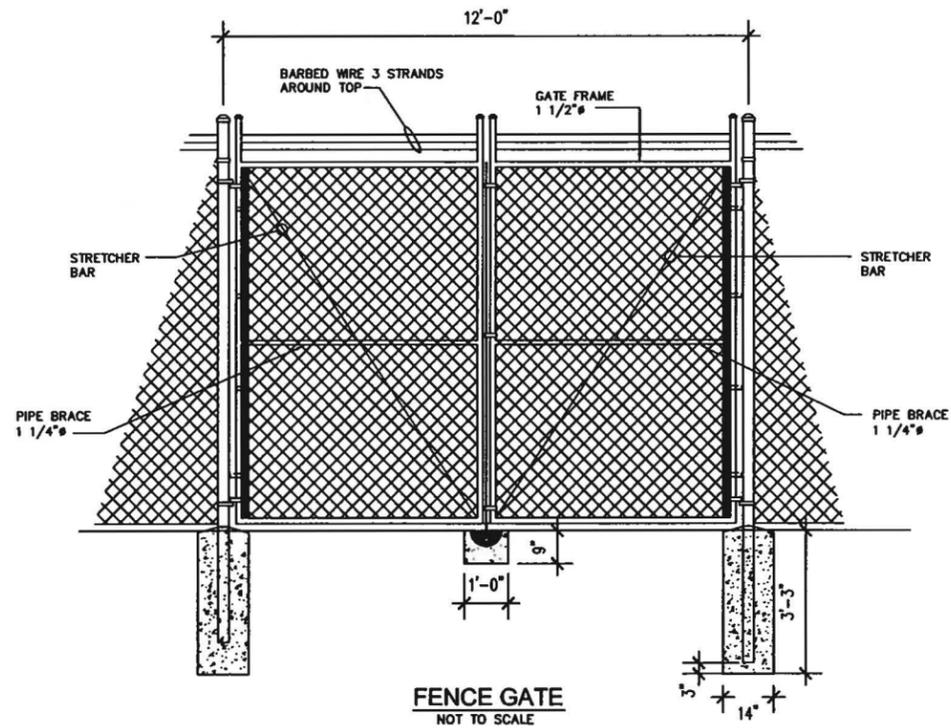
12523 PEONIA RD., CLARKSON, KY. 42726

WAX

DRAWN BY:
R. BECKER
ISSUE DATE:
2-21-19
SCALE:
LISTED

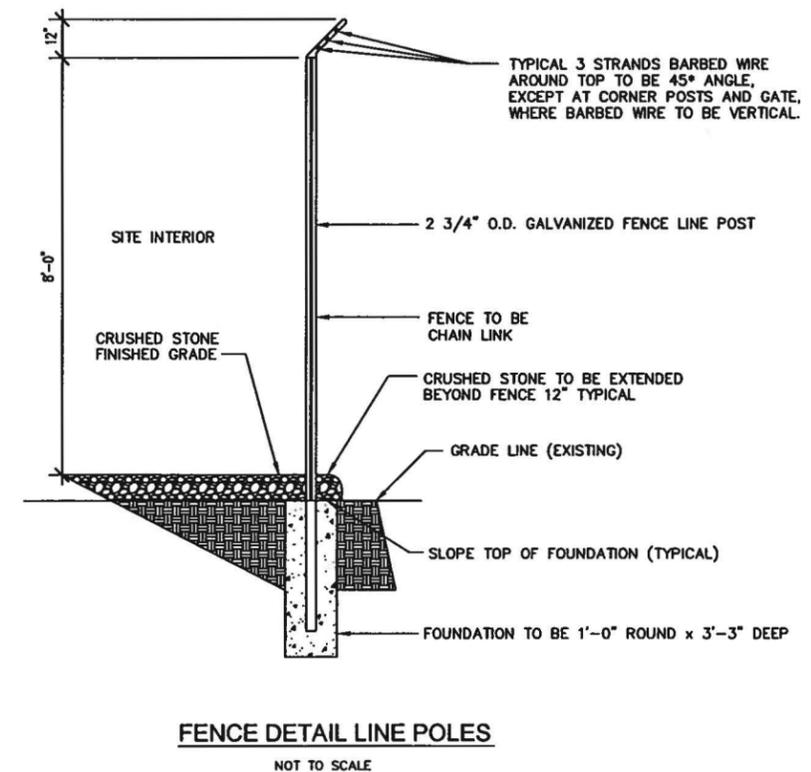
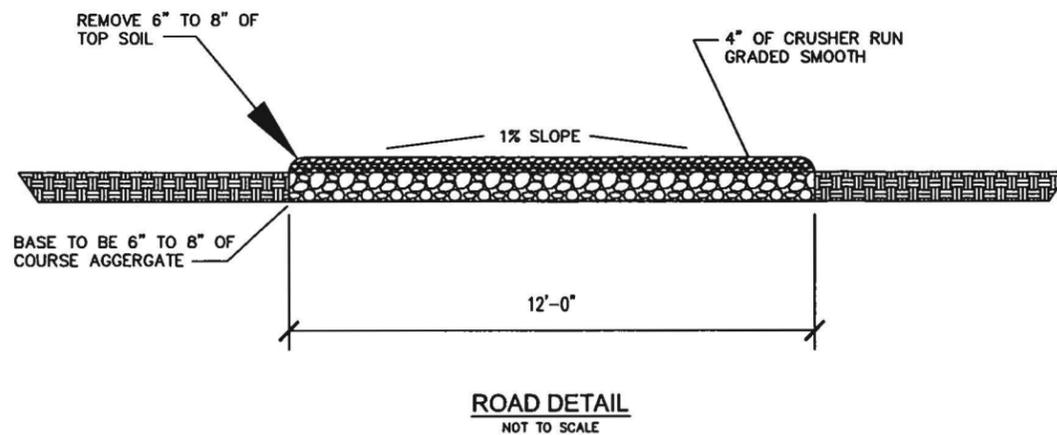
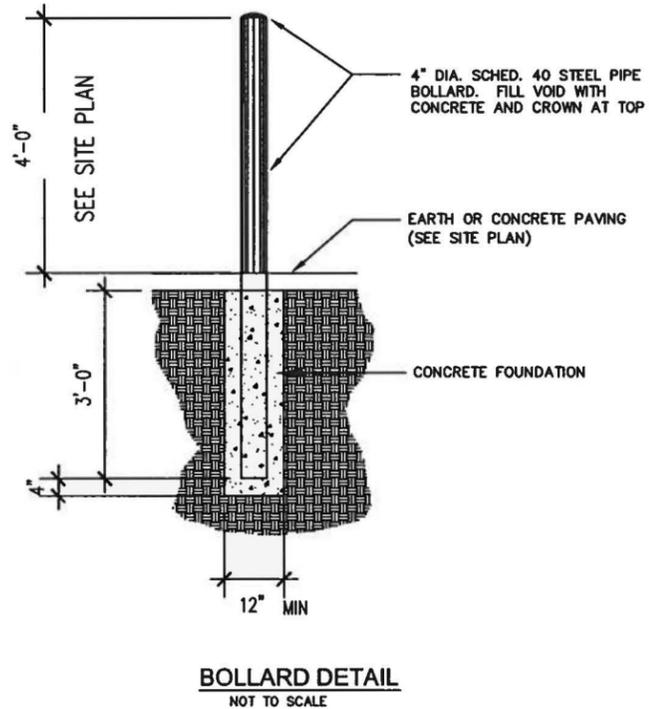
SHEET NUMBER
A-1

SITE PLAN
SCALE: 1/16" = 1'-0"



CHAIN LINK FENCING NOTES:

- FABRIC:** THE FABRIC SHALL BE COMPOSED OF INDIVIDUAL HOT DIP GALVANIZED WIRE PICKETS HELICALLY WOUND AND INTERWOVEN FROM NO.9 W & M GAUGE COPPER BEARING STEEL WIRE TO FORM A CONTINUOUS CHAIN LINK FABRIC HAVING A 2" MESH. TOP EDGES SHALL HAVE A TWISTED AND BARBED
- POSTS:** SHALL BE 2 3/4" O.D. SS 40 PIPE HOT GALVANIZED. THESE POSTS SHALL BE SPACED APPROXIMATELY 8'-0" ON CENTERS AND SET FULL 3'-3" IN BELL - SHAPED CONCRETE FOOTING, CROWNED AT TOP TO SHED WATER.
- TOP RAIL:** SHALL BE 1 5/8" O.C. STANDARD PIPE HOT GALVANIZED AND SHALL BE FURNISHED IN RANDOM LENGTHS AVRERAGING NOT LESS THAN 20".
- FABRIC TIES:** FOR ATTACHING FABRIC TO LINE POST, TOP RAIL OR TOP WIRE, SHALL BE ALUMINUM STRIP OF WIRE OF APPROVED GUAGE AND DESIGN. USED ON TOP OF RAIL EVERY 24" AND ONE POST EVERY 12".
- EXTENSION ARMS:** CAST STEEL GALVANIZED TO ACCOMODATE 3 STRANDS OF BARB WIRE, SINGLE ARM SLOPED TO 45°, AND VERTICAL ON TOP OF SWING GATES.
- BARBED WIRE (STEEL):** ASTM A121 GALVINIZED STEEL, 12 GAUGE THICK WIRE, 3 STRANDS 4 POINTS AT 3" O.C.
- SWING GATE POSTS:** SHALL BE 3" O.C. STANDARD HOT GALVINIZED, WEIGHING 5.79 LBS. PER FOOT.
- GATES: (a) SWING GATES:** 2" O.C. STANDARD PIPE WITH INTERNAL BRACING OF 1 5/8" O.D. STANDARD PIPE; WELDED AT ALL JOINTS TO PROVIDE RIGID WATERTIGHT CONSTRUCTION. FABRIC SAME AS FENCE.
- FENCE TO BE 100% ERECTED WITHIN TEN(10) DAYS OF COMPLETION OF CONSTRUCTION, IF TIME FRAME CANNOT BE MET, PLEASE NOTIFY PROJECT SUPERVISOR.
- FENCE STOPS TO BE PLACED ON INSIDE OF COMPOUND PER ACCESS GATE SPECIFICATIONS.



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SCALE: LISTED

SHEET NUMBER
A-2

ALL LINES AND ANTENNAS TO BE PROPERLY MOUNTED TO TOWER OR STRUCTURE PER BLUEGRASS CELLULAR SPECIFICATIONS.

ALL GROUND BARS TO BE INSTALLED AND CAD WELDED TO GROUND FIELD (WHERE REQUIRED)

ALL COAX LINES TO BE GROUNDED AT THE TOP AND BASE OF STRUCTURE OR TOWER.

ALL COAX LINES TO BE GROUNDED AT ENTRANCE OF SHELTER/CABINET BEFORE WAVE GUIDE PORTS. (EXTERIOR OF BUILDING)

LINES ARE TO BE SECURED TO ICE BRIDGE

WAVE-GUIDE BOOTS ARE TO BE INSTALLED ON ALL LINES (BOTH INSIDE AND OUTSIDE, WHERE APPLICABLE)

ALL COAX CONNECTIONS ARE TO BE WEATHER PROOFED.

INVENTORY OF ALL MATERIAL IS TO BE DONE PRIOR TO INSTALLATION BY CONTRACTOR. (LIST WILL BE PROVIDED)

ALL TRASH AND REFUGE IS TO BE PROPERLY DISPOSED OF.

GENERAL CONTRACTOR TO MOUNT ANTENNA MOUNTS AT TOP OF STRUCTURE OR TOWER BY BLUEGRASS CELLULAR SPECIFICATIONS.

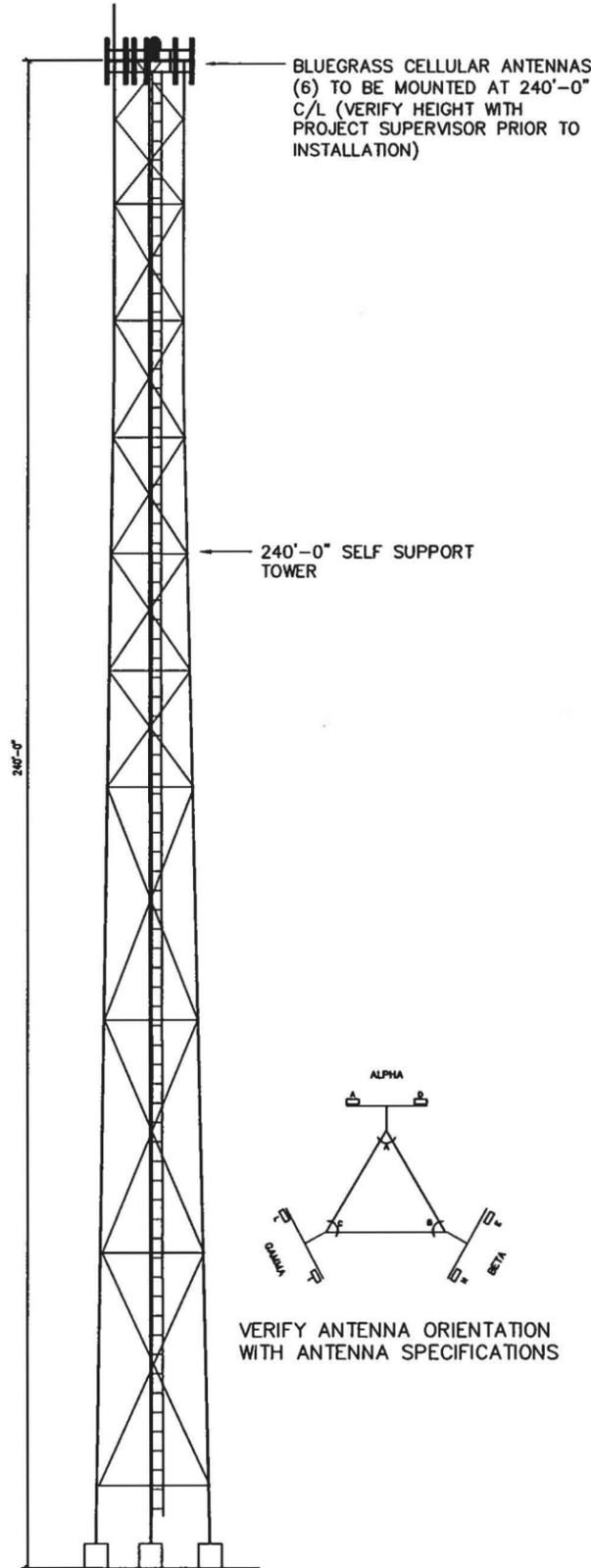
ALL ICE BRIDGE TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR.

TRAPEZE KIT TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR.

CONTRACTOR TO INSTALL GPS SYSTEM COMPLETE. CONTRACTOR TO SUPPLY (1) 10' PIECE OF 1" RIGID CONDUIT AND STRUT CLAMPS TO SUPPORT GPS ANTENNA.

CONTRACTOR TO STOP HARDLINES AT END OF ICE BRIDGE, INSTALL POLYPHASER AND RUN GROUND THROUGH REMOVABLE WEATHERPROOFING "CAN" TO GROUND BAR. BE SURE GROUND WIRE EXISTS THE BOTTOM OF CAN. ROUTE JUMPER FROM POLYPHASER, DOWN TO CABINET SIDE ENTRY AND UP TO RADIOS. INSTALL 90 DEGREE CONNECTOR BETWEEN JUMPER AND RADIO.

BLUEGRASS CELLULAR GENERAL NOTES & ANTENNA SPECS



SELF SUPPORT TOWER ELEVATION (TYPICAL)

TOWER HEIGHT & TYPE

240' SELF SUPPORT TOWER

ANTENNA SPECS

	TYPE	SIZE L x W x D	NUMBER	AZIMUTH	MOUNTING HEIGHT
ANTENNA (PRIMARY)	KATHREIN 800-10965		6	60*, 180*, 300*	240'-0" C/L <small>VERIFY WITH CONSTRUCTION SUPERVISOR</small>
RADIOS (1)	RRUS 2212 BC13		6	A, B, G	240'-0" C/L
RADIOS (2)	RRUS 2212 BC66		6	A, B, G	240'-0" C/L

ANTENNA MOUNTING HARDWARE SPECS

	TYPE	SIZE	NUMBER
MOUNT (PRIMARY)	MODEL RMQP-4126		1
MOUNT (SECONDARY)			

ANTENNA TRANSMISSION LINES SPECS

	TYPE	SIZE	NUMBER
TRANSMISSION LINE (PRIMARY)	(7) #8AWG	7/8"	1
TRANSMISSION LINE (SECONDARY)	(24) Fiber	1/2"	1

DISH SPECS

	MICROWAVE/DONOR	SIZE	NUMBER	AZIMUTH	MOUNTING HEIGHT
DISH #1					

DISH MOUNT SPECS

	TYPE	SIZE	NUMBER
MOUNT #1			
MOUNT #2			

DISH TRANSMISSION LINES

	TYPE	SIZE	NUMBER
TRANSMISSION LINE #1			
TRANSMISSION LINE #2			

ANTENNA SYNOPSIS

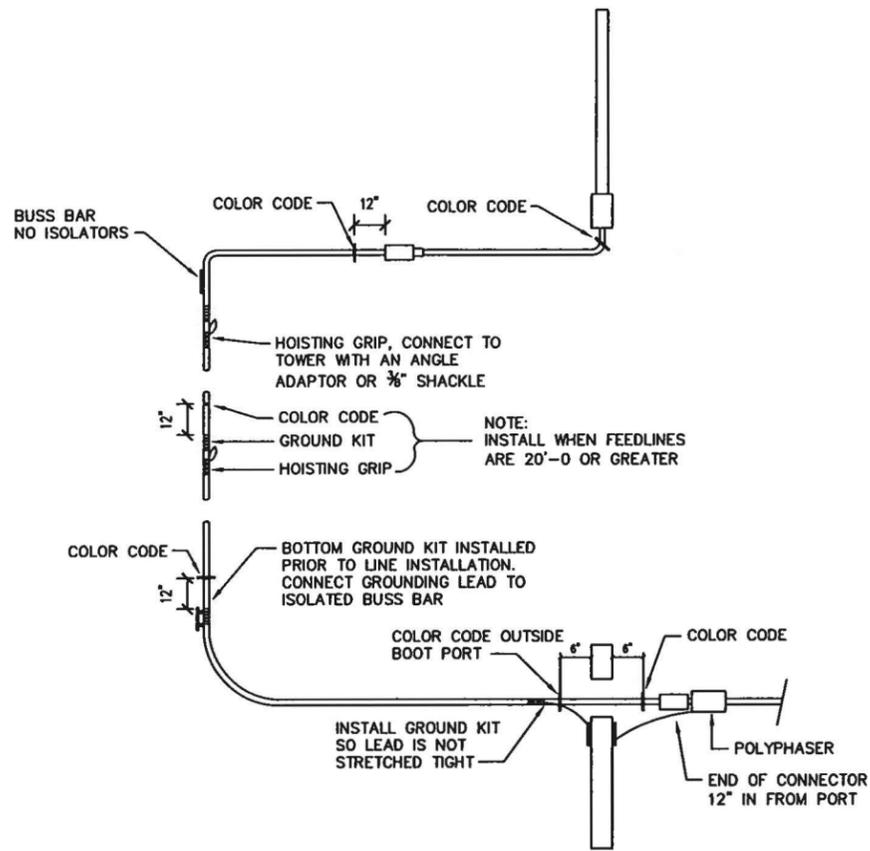
- * ANTENNAS TO HAVE A 2°E DOWNTILT
- * ANTENNAS TO HAVE A 0°M
- * ANTENNA FREQUENCY 698.00 - 2690.00

NO.	DATE	REVISION

BLUEGRASS CELLULAR, INC.
 STANDARD CELLULAR SITE
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12523 PEONIA RD. CLARKSON, KY. 42726

DRAWN BY: R. BECKER	ISSUE DATE: 2-21-19	SCALE: LISTED
SHEET NUMBER		
ANTENNA DETAILS		
1		



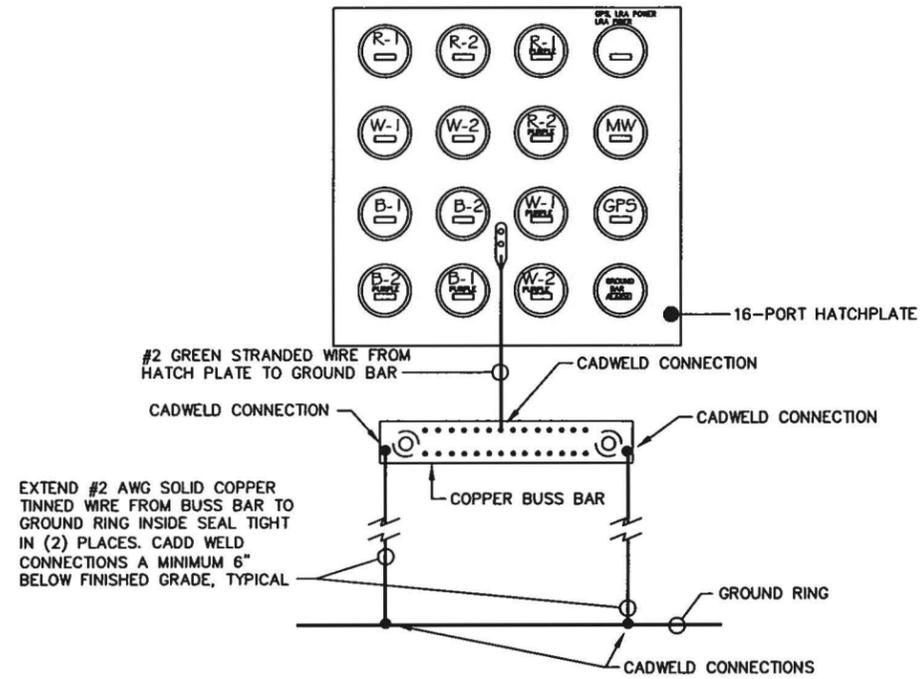
COLOR CODING DETAIL
NO SCALE

COLOR CODE DETAILS:

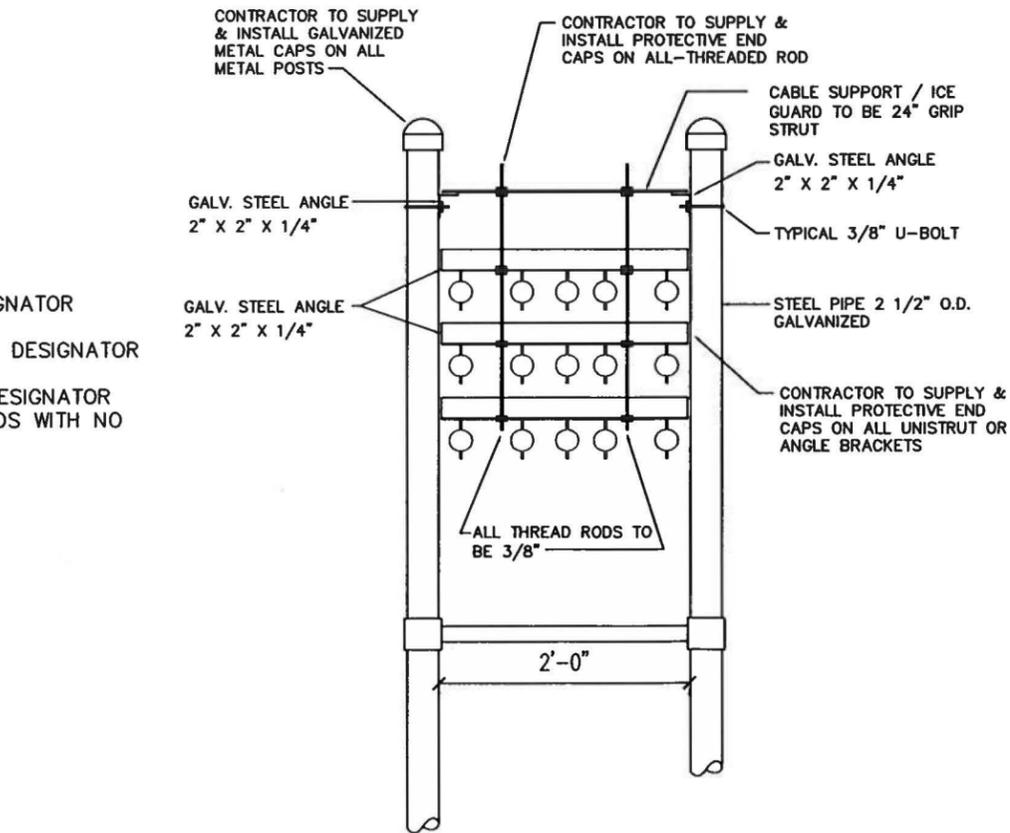
CDMA—NO COLOR OTHER THAN THE SECTOR DESIGNATORS
 BCI LTE—ALWAYS 1 PURPLE BAND AFTER RED, WHITE OR BLUE SECTOR DESIGNATOR COLORS.
 LRA LTE—ALWAYS HAS 1 ORANGE BAND AFTER RED, WHITE OR BLUE SECTOR DESIGNATOR COLORS.
 AWS—ALWAYS HAS 2 ORANGE BANDS AFTER RED, WHITE OR BLUE SECTOR DESIGNATOR COLORS. AWS POWER AND FIBER TRUNK CABLES JUST HAVE 2 ORANGE BANDS WITH NO SECTOR DESIGNATOR COLORS SINCE ALL 3 SECTORS ARE IN TRUNK.

THE SECTOR DESIGNATOR COLORS ARE:

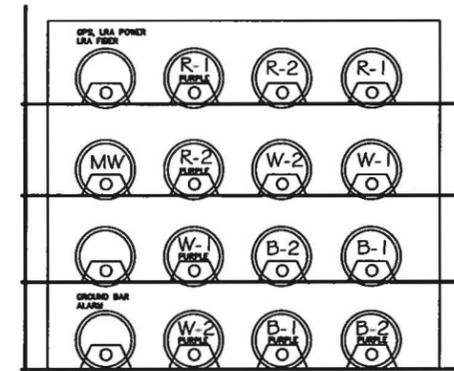
- ALPHA 1—1 RED BAND
- ALPHA 2—2 RED BANDS
- DELTA 1—3 RED BANDS
- DELTA 2—4 RED BANDS
- BETA 1—1 WHITE BAND
- BETA 2 —2 WHITE BANDS
- EPSILON1 —3 WHITE BANDS
- EPSILON 2—4 WHITE BANDS
- GAMMA 1— 1 BLUE BAND
- GAMMA 2— 2 BLUE BANDS
- ZETA 1 — 3 BLUE BANDS
- ZETA 2 — 4 BLUE BANDS
- BCI LTE (PURPLE BAND)
- 1 RED 1 PURPLE (ALPHA 1 BCI LTE)
- 2 RED 1 PURPLE (ALPHA 2 BCI LTE)
- 1 WHITE 1 PURPLE (BETA 1 BCI LTE)
- 2 WHITE 1 PURPLE (BETA 2 BCI LTE)
- 1 BLUE 1 PURPLE (GAMMA 1 BCI LTE)
- 2 BLUE 1 PURPLE (GAMMA 2 BCI LTE)



BOOT PORT GROUNDING DETAIL
NO SCALE



ICE BRIDGE / COAX SUPPORT DETAIL
NO SCALE



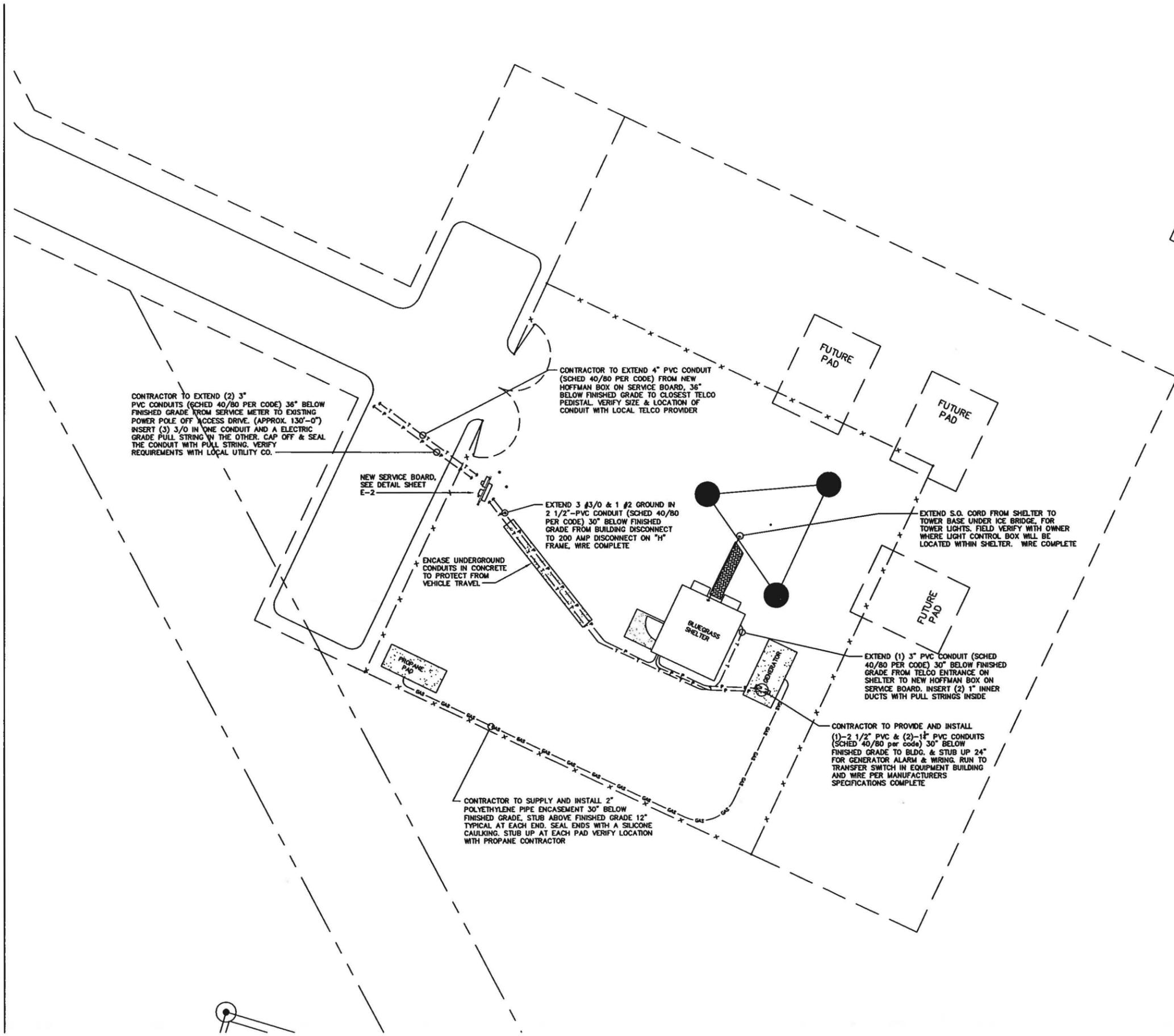
COAX ENTRY DETAIL POWER SIDE (VIEW FROM INSIDE SHELTER)
NO SCALE



NO.	DATE	REVISION

BLUEGRASS CELLULAR, INC.
 STANDARD CELLULAR SITE
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 12523 PEONIA RD. CLARKSON, KY. 42726

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 ISSUE DATE: 2-21-19
 SCALE: LISTED
 SHEET NUMBER: ANTENNA DETAILS 2

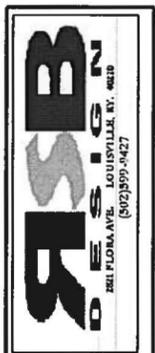


- GENERAL ELECTRICAL NOTES:**
- 1) CONTRACTOR RESPONSIBLE FOR MAKING ALL ARRANGEMENTS WITH THE LOCAL UTILITIES FOR SERVICE AND FEE PAYMENTS REQUIRED TO OBTAIN SERVICE.
 - 2) CONTRACTOR RESPONSIBLE FOR MAKING ALL ARRANGEMENTS WITH THE LOCAL TELEPHONE COMPANY FOR SERVICE AND FEE PAYMENTS REQUIRED TO OBTAIN SERVICE.
 - 3) GROUND RING TO BE CONTAINED WITH IN THE COMPOUNDS FENCED AREA.
 - 4) FENCE TO BE GROUNDED FROM GROUND RING TO ALL CORNER POST & GATES. SPACE FENCE GROUNDING APPROXIMATELY 20'-0" O/C. (CAD WELD ALL CONNECTIONS)
 - 5) ALL GROUND RING CONNECTIONS TO BE AS CLOSE AS POSSIBLE, SHARP BENDS WILL NOT BE PERMITTED AS WELL AS "T" CONNECTIONS. ALL CONNECTIONS TO HAVE A SWEEPING RADIUS OF 8" MINIMUM. GROUNDING CONFIGURATION TO BE IN PARALLEL.
 - 6) CONTACT POINTS FOR GROUNDING TO BE CLEANED OF ANY RUST, PAINT, DIRT, ETC. TO CREATE A GOOD BOND FOR CONDUCTOR. AREA THAT HAS BEEN CLEANED TO BE RESEALED TO PREVENT RUSTING.
 - 7) PROPERLY GROUND ANY EXPOSED METAL THAT MAY EXIST ON EXTERIOR OF EQUIPMENT SHELTER OR CABINET.
 - 8) WHERE GROUND CONDUCTORS REQUIRE MECHANICAL BONDING, STAINLESS STEEL CONNECTORS ARE REQUIRED AT EACH CONNECTING POINT USING LOCK WASHERS.
 - 9) CONTRACTOR RESPONSIBLE FOR SEEING THAT UTILITY PERSONNEL MAKE FINAL CONNECTIONS, MAKING SURE THE TOWER ALARM IS CONNECTED AND WORKING. A TELEPHONE NUMBER FOR THE ALARM MUST BE SUPPLIED.
 - 10) CONTRACTOR RESPONSIBLE FOR MEG TESTING THE SITE AND SUPPLYING OWNER WITH FINAL READINGS IN OWNERS SPECIFICATIONS.
 - 11) IF CONDUIT RUNS BURIED LESS THAN REQUIRED DEPTHS, CONTACT BLUEGRASS CELLULAR FOR FURTHER INSTRUCTIONS
- NOTE:**
CONTRACTOR TO PROVIDE WARNING TAPE IN TRENCHES FOR ALL POWER AND TELCO RUNS UNDER GROUND. TAPE TO BE INSTALLED 1'-0" ABOVE CONDUIT RUNS. (TAKE PICTURES)

SYMBOLS LEGEND

—P—	POWER
—G—	GAS
—T—	TELEPHONE
—X—	FENCE
⊞	SWITCH (DISCONNECT)
⊞	METER PACK

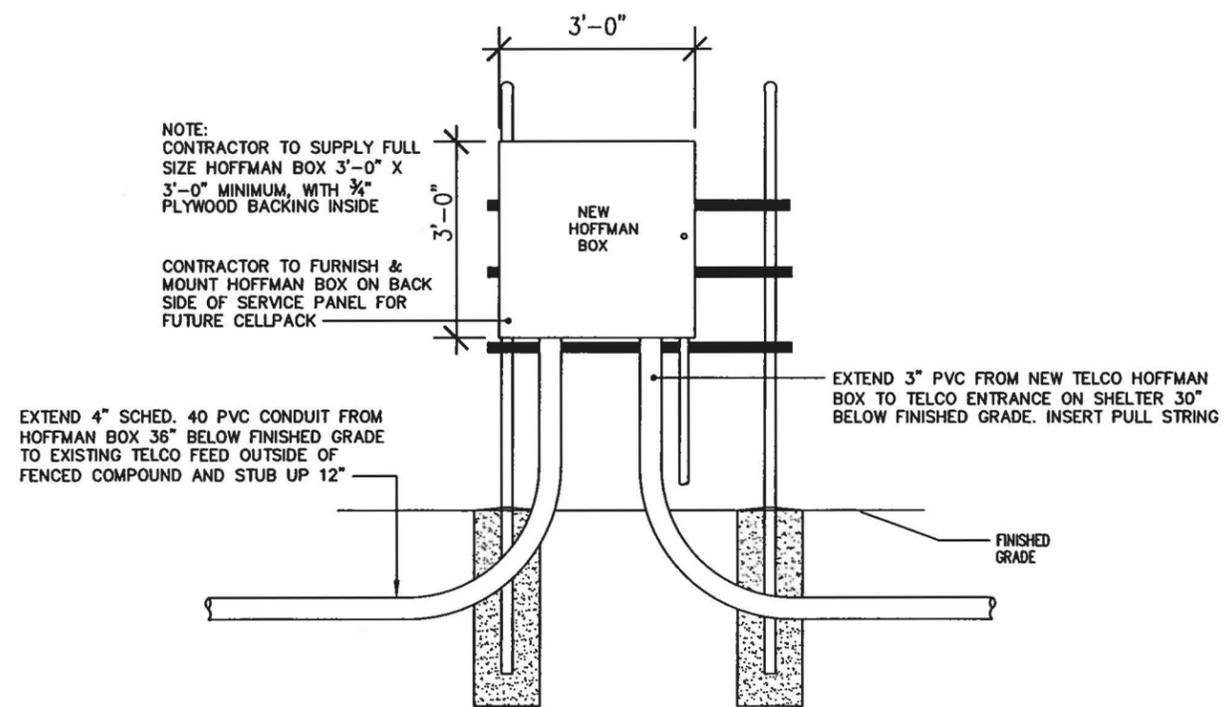
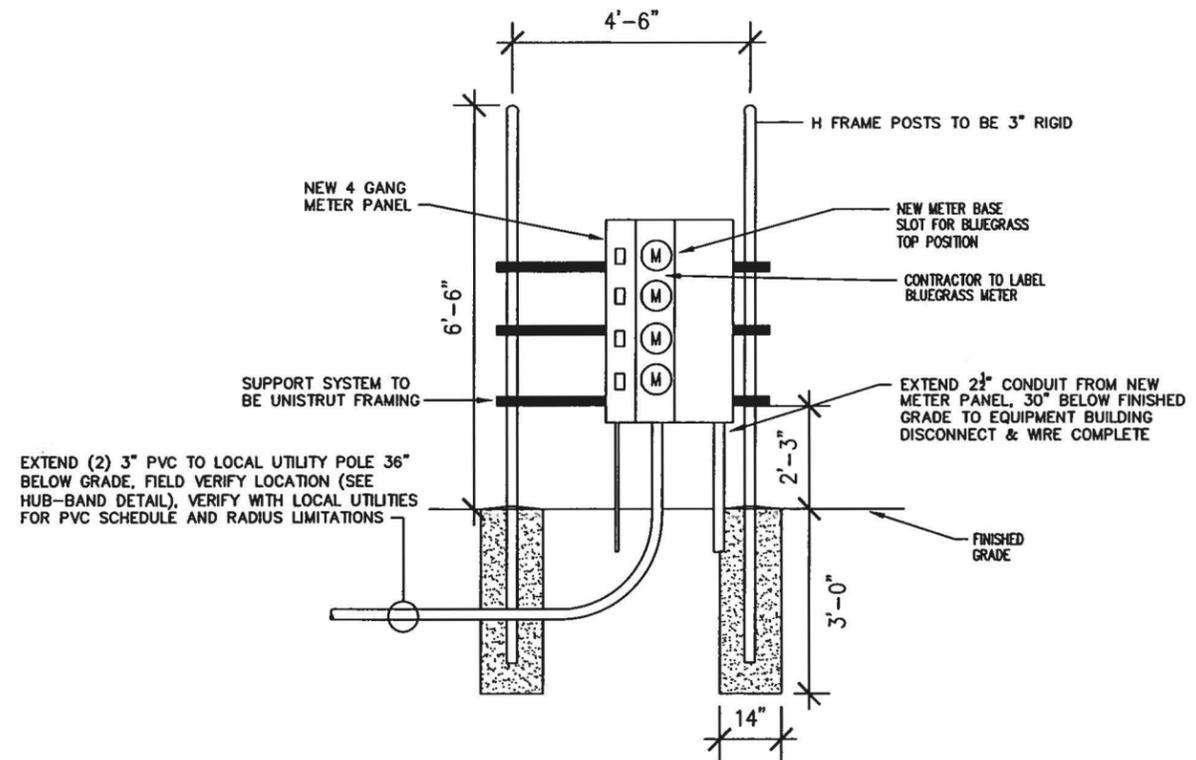
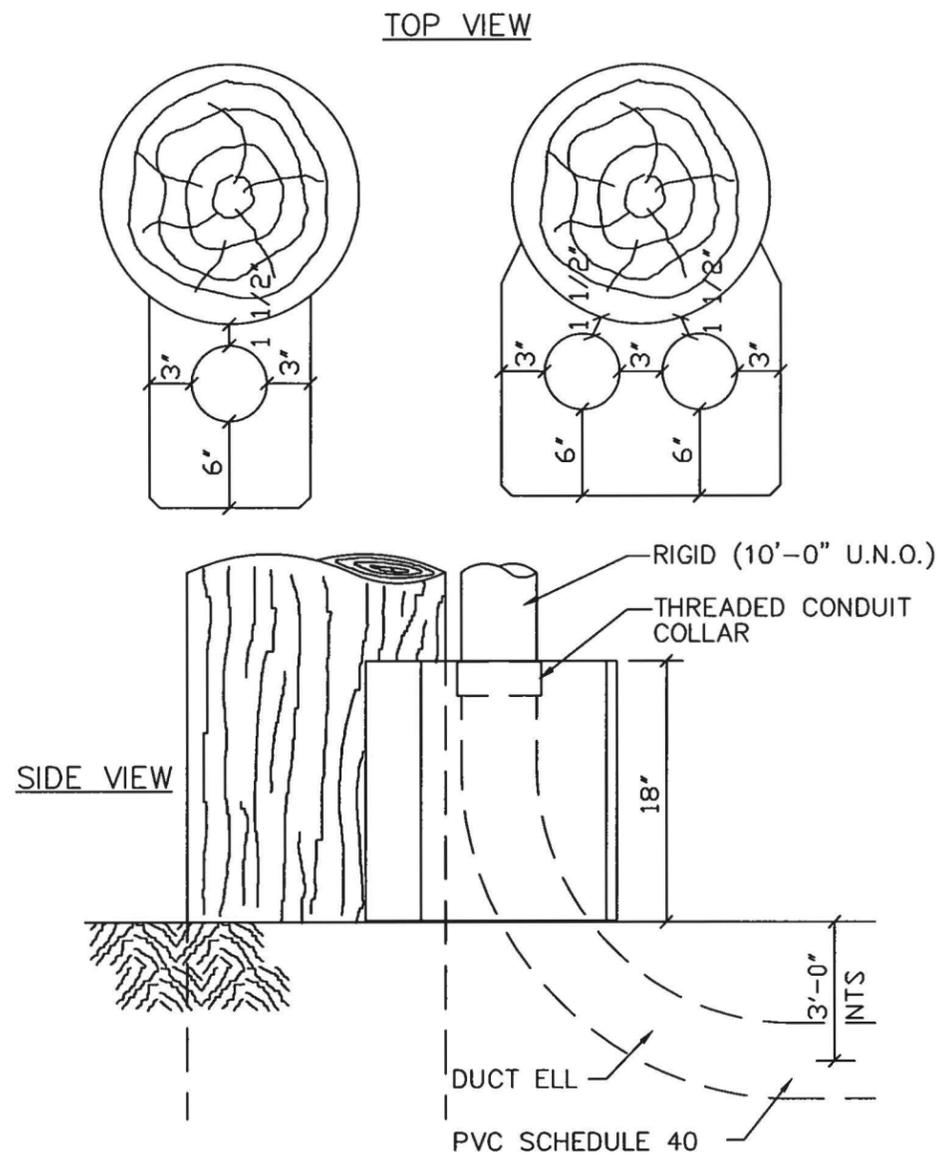
SITE PLAN- ELECTRICAL
SCALE: 1/16" = 1'-0"



NO.	DATE	REVISION

BLUEGRASS CELLULAR, INC.
STANDARD CELLULAR SITE
WAX
12523 PEONIA RD. CLARKSON, KY. 42726

DRAWN BY: R. BECKER	ISSUE DATE: 2-21-19	SCALE: LISTED
SHEET NUMBER E-1		

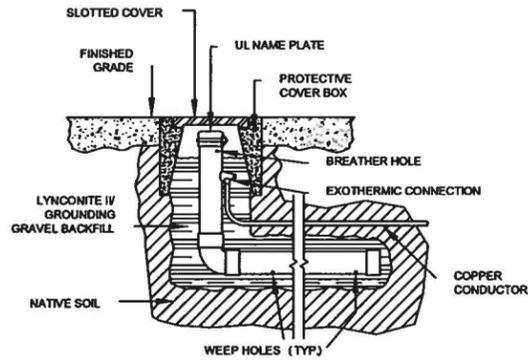


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BLUEGRASS CELLULAR, INC.
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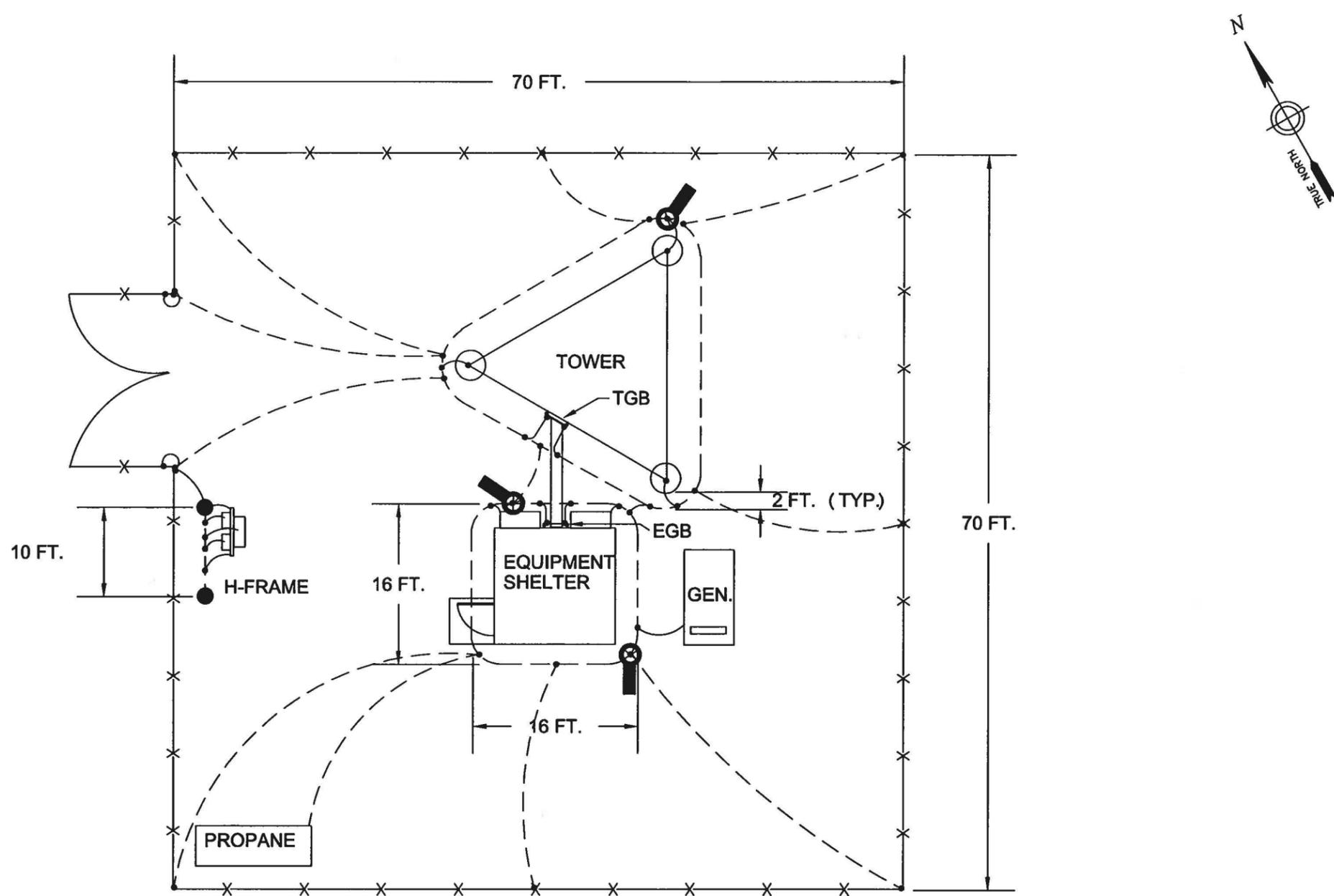
DRAWN BY: R. BECKER
 ISSUE DATE: 2-21-19
 SCALE: LISTED

SHEET NUMBER
E-2



L-SHAPE MODEL
LYNCOLE XIT GROUNDING
(800) 962-2610

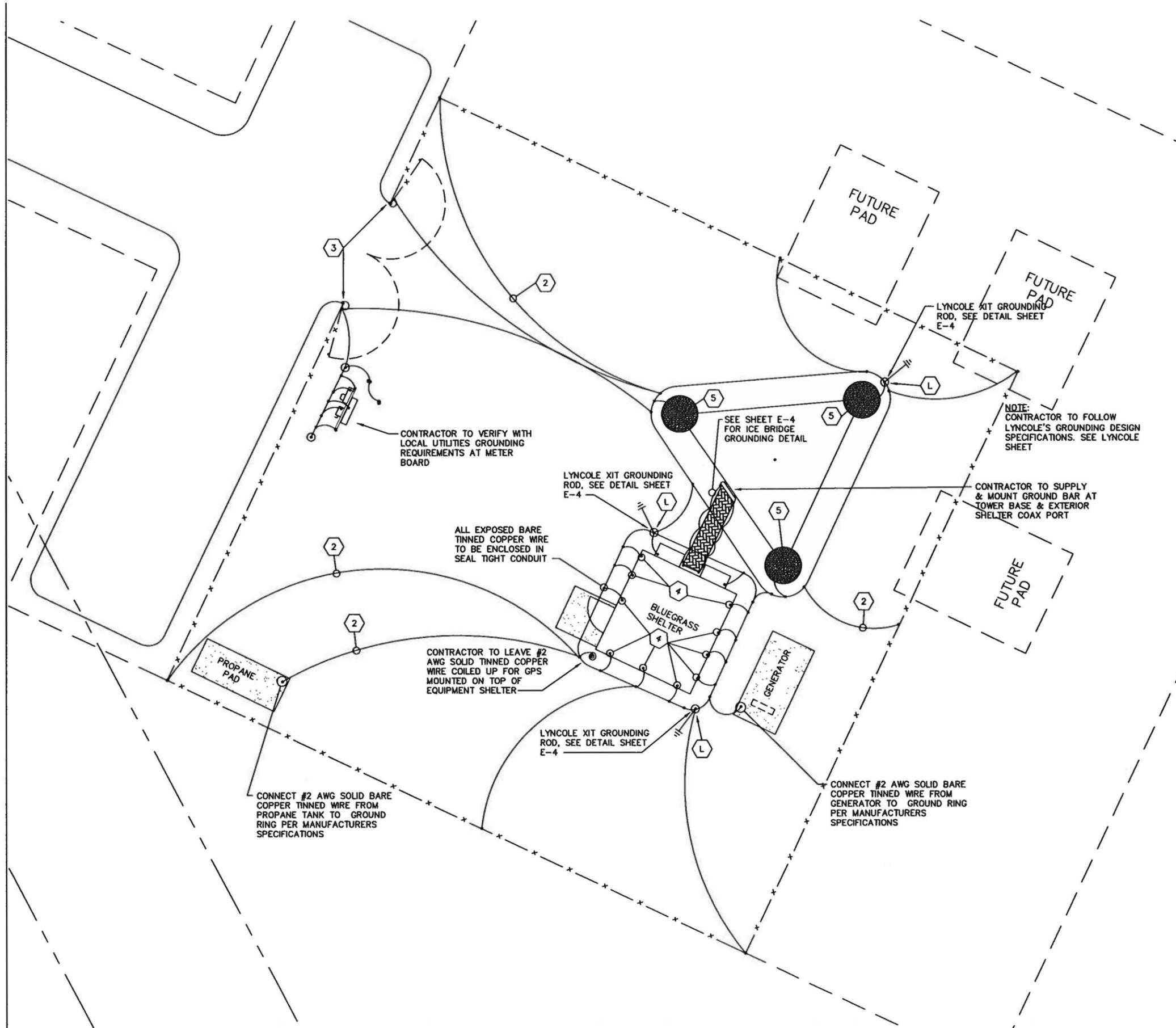
DETAIL



NOTES:

- X — CHAIN LINK FENCE
- - - - BARE #2 TINNED SOLID COPPER CONDUCTOR
BURIED 30 IN. BELOW GRADE OR 6 IN. BELOW FROST LINE
- — — BARE #2 TINNED SOLID COPPER CONDUCTOR IN NON-METALLIC FLEXIBLE CONDUIT
ALL BENDS IN GROUND CONDUCTORS TO BE MADE
WITH 12 IN. RADIUS OR LARGER
- ⊗ K2L-10CS-24 (SEE DETAIL)
- 3/4 IN. X 10 FT. COPPER CLAD GROUND ROD
- EXOTHERMIC WELD
- ⊔ GROUND BAR

LYNCOLE		CLIENT / END USER BLUEGRASS CELLULAR	
		DRAWING 1	PROJECT NAME WAX
TECHNICAL SERVICES		TITLE GROUNDING OPTION	
3547 VOYAGER STREET, SUITE 204 TORRANCE, CA. 90503 (800)962-2610 FAX (310)214-1114 ENGINEERING@LYNCOLE.COM		LOCATION CITY, STATE CLARKSON, KY	CALCULATED RESISTANCE < 5 OHMS
DRAWN BY BBD	APPROVED BY	DATE 04/14/2019	
SOIL DATA PROVIDED BY TERRACON	REFERENCE NUMBER N/A	SCALE NONE	LTS NUMBER 201904-169



GENERAL ELECTRICAL NOTES:

- 1) CONTRACTOR RESPONSIBLE FOR MAKING ALL ARRANGEMENTS WITH THE LOCAL UTILITIES FOR SERVICE AND FEE PAYMENTS REQUIRED TO OBTAIN SERVICE.
- 2) CONTRACTOR RESPONSIBLE FOR MAKING ALL ARRANGEMENTS WITH THE LOCAL TELEPHONE COMPANY FOR SERVICE AND FEE PAYMENTS REQUIRED TO OBTAIN SERVICE.
- 3) GROUND RING TO BE CONTAINED WITH IN THE COMPOUNDS FENCED AREA.
- 4) FENCE TO BE GRONDED FROM GROUND RING TO ALL CORNER POST & GATES. SPACE FENCE GRONDING APPROXIMATELY 20'-0" O/C. (CAD WELD ALL CONNECTIONS)
- 5) ALL GROUND RING CONNECTIONS TO BE AS CLOSE AS POSSIBLE, SHARP BENDS WILL NOT BE PERMITTED AS WELL AS "T" CONNECTIONS. ALL CONNECTIONS TO HAVE A SWEEPING RADIUS OF 8" MINIMUM. GRONDING CONFIGURATION TO BE IN PARALLEL.
- 6) CONTACT POINTS FOR GRONDING TO BE CLEANED OF ANY RUST, PAINT, DIRT, ETC. TO CREATE A GOOD BOND FOR CONDUCTOR. AREA THAT HAS BEEN CLEANED TO BE RESEALED TO PREVENT RUSTING.
- 7) PROPERLY GROND ANY EXPOSED METAL THAT MAY EXIST ON EXTERIOR OF EQUIPMENT SHELTER OR CABINET.
- 8) WHERE GROUND CONDUCTORS REQUIRE MECHANICAL BONDING, STAINLESS STEEL CONNECTORS ARE REQUIRED AT EACH CONNECTING POINT USING LOCK WASHERS.
- 9) CONTRACTOR RESPONSIBLE FOR SEEING THAT UTILITY PERSONNEL MAKE FINAL CONNECTIONS, MAKING SURE THE TOWER ALARM IS CONNECTED AND WORKING. A TELEPHONE NUMBER FOR THE ALARM MUST BE SUPPLIED.
- 10) CONTRACTOR RESPONSIBLE FOR MEG TESTING THE SITE AND SUPPLYING OWNER WITH FINAL READINGS IN OWNERS SPECIFICATIONS.

NOTE:
CONTRACTOR TO PROVIDE WARNING TAPE IN ALL POWER & TELCO TRENCHES, 12" ABOVE CONDUIT RUNS, BUT BELOW FINISHED GRADE.

NOTE:
CONTRACTOR TO FOLLOW LYNCOLES GRONDING SPECIFICATIONS WHEN USING THEIR XIT GRONDING RODS. SEE DETAIL SHEET E-4.

KEYNOTES:

- (L) LYNCOLE XIT GRONDING ROD TO BE INSTALLED WHERE SHOWN AND TO MANUFACTURERS SPECIFICATIONS. (SEE LYNCOLE SPECIFICATIONS)
- (1) GRONDING RODS 10'-0" LONG x 3/4" COPPER BONDED GROUND RODS
- (2) INSTALL AND PROVIDE SOLID BARE TINNED COPPER WIRE #2 AWG, GROUND RING BELOW GRADE 30". USE #2 AWG SOLID BARE TINNED COPPER GROUND "TAP" CONNECTING CONDUCTORS. (CONNECTIONS FOR ALL TAP CONDUCTORS TO BE PARALLEL AND "CAD WELD" CONNECTIONS)
- (3) FLEXIBLE GRONDING STRAP TO BE USED TO PROVIDE A COMMON BOND BETWEEN GATE AND CHAIN LINK FENCE. #2 AWG SOLID COPPER BARE TINNED CONDUCTOR FROM GROUND RING TO FENCE USING CAD WELD CONNECTIONS. GROUND TAP TO BE PROVIDED ON EACH 4 SIDES TO GROUND RING AS DESCRIBED ABOVE.
- (4) BONDED GROUND TO BE PROVIDED TO GROUND RING FOR EACH OF THE FOLLOWING: BUILDING STEEL, HATCH PLATE, EMERGENCY RECEPTACLE, WAVE GUIDE STRUCTURE, FRAME WORK, BUILDING DISCONNECT.
- (5) FOR TOWER FRAME GRONDING, REMOVE GALVANIZED COATING COMPLETELY AT SPOT TO "CAD WELD" TO AND CLEAN. #2 AWG SOLID BARE TINNED COPPER CONDUCTOR TO BE CAD WELDED APPROXIMATELY 1'-0" ABOVE FOUNDATION OR AT FLANGE IF PROVIDED BY TOWER MANUFACTURER. EXTEND CONDUCTOR TO GROUND RING. RIGHT ANGLES NOT ACCEPTED ALL BENDS TO BE SWEEPING.

SITE PLAN-GROUNDING

SCALE: 3/32" = 1'-0"

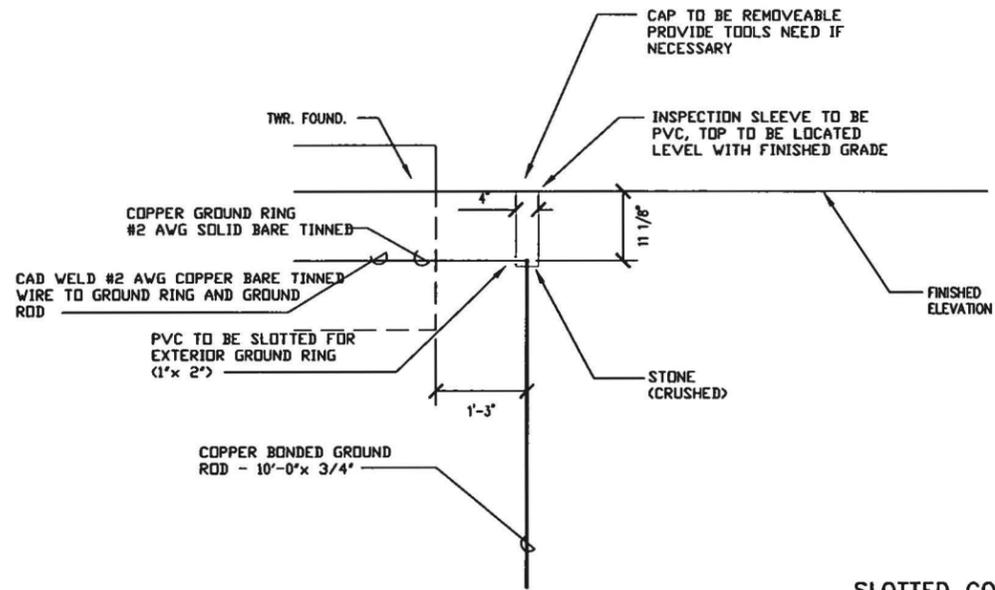


NO.	DATE	REVISION

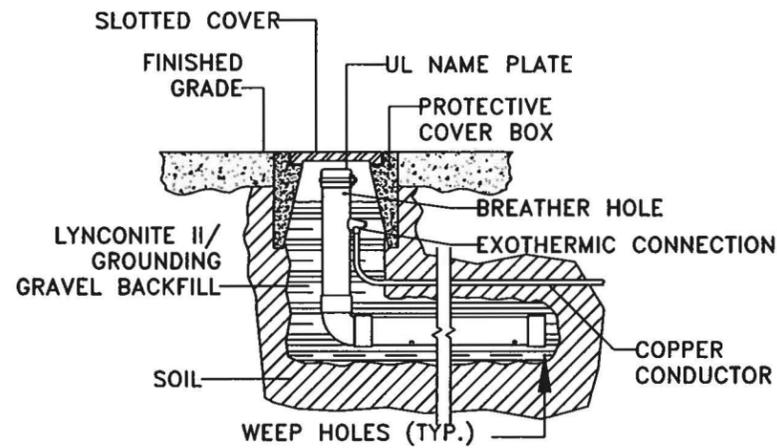
BLUEGRASS CELLULAR, INC.
STANDARD CELLULAR SITE
WAX
12523 PEONIA RD. CLARKSON, KY. 42726

DRAWN BY: R. BECKER
ISSUE DATE: 2-21-19
SCALE: LISTED

SHEET NUMBER
E-3

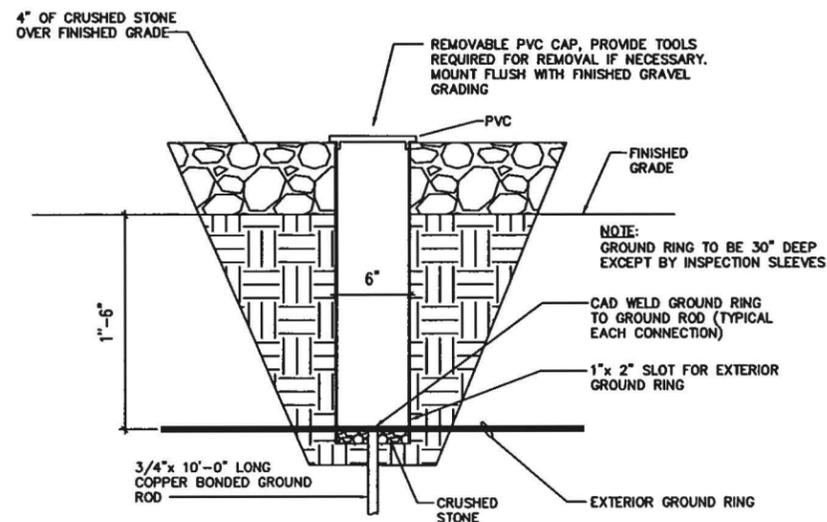


GROUND ROD DETAIL
NO SCALE

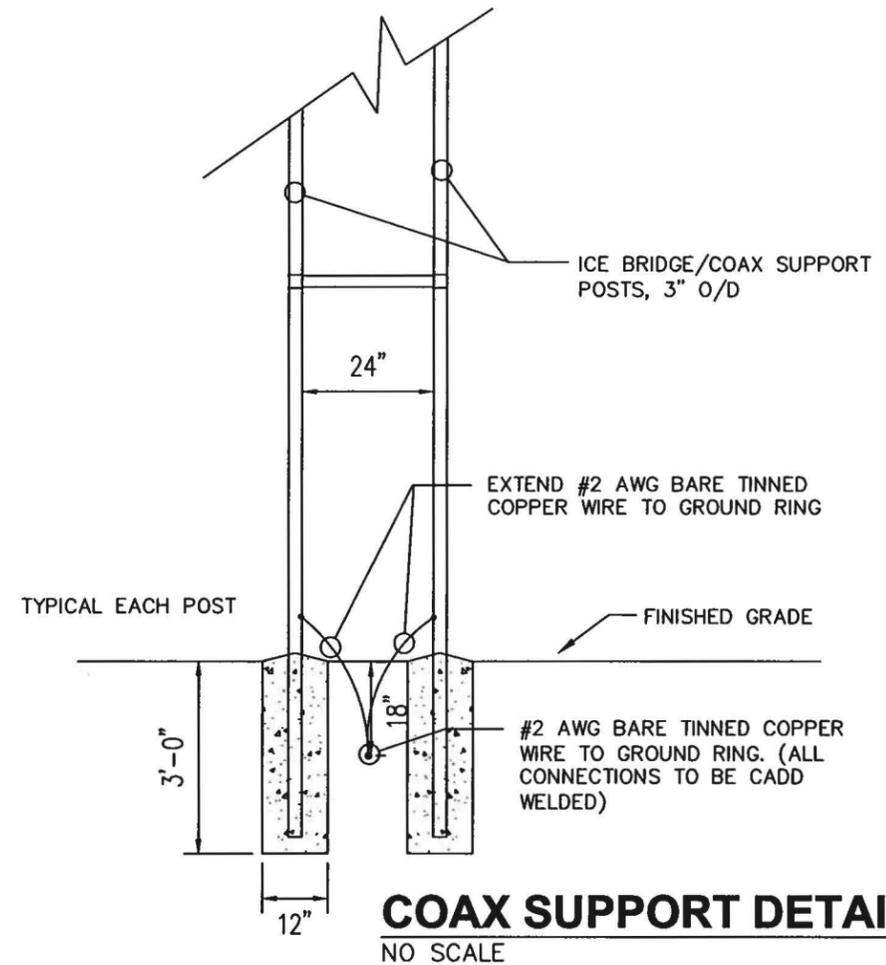


L-SHAPE MODEL
LYNCOLE XIT GROUNDING
(800) 962-2610

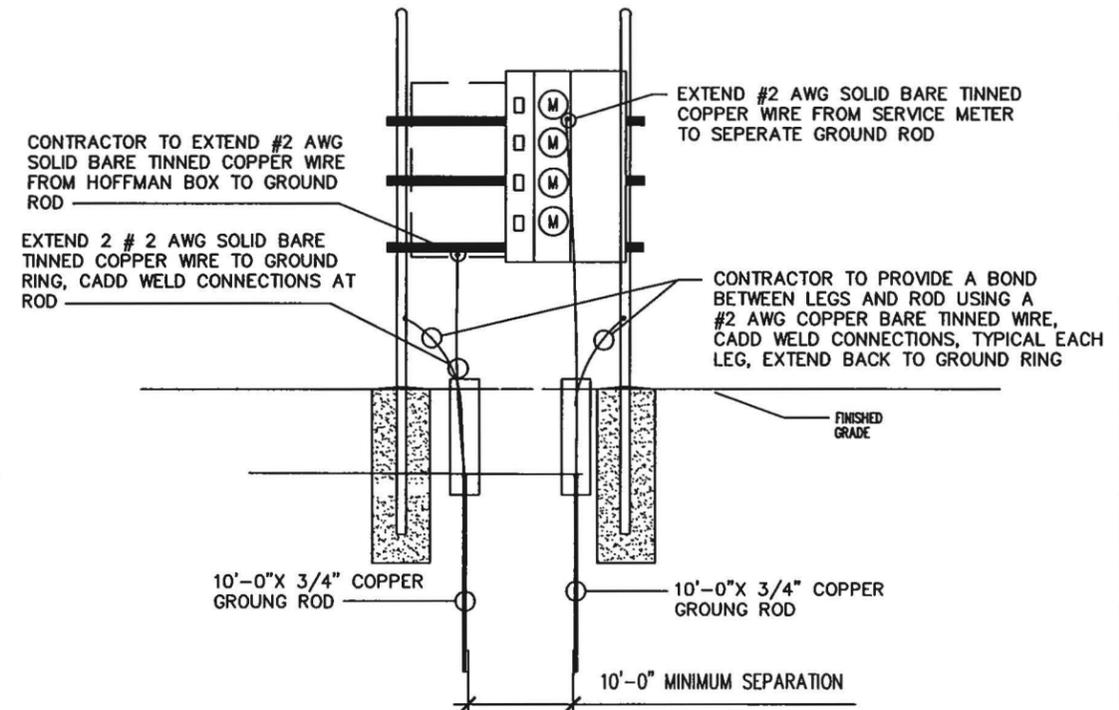
LYNCOLE XIT ROD DETAIL
NO SCALE



GROUND SLEEVE DETAIL
NO SCALE



COAX SUPPORT DETAIL
NO SCALE



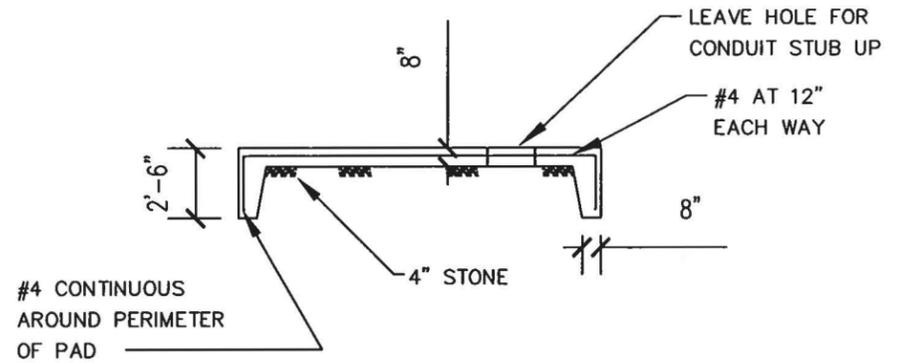
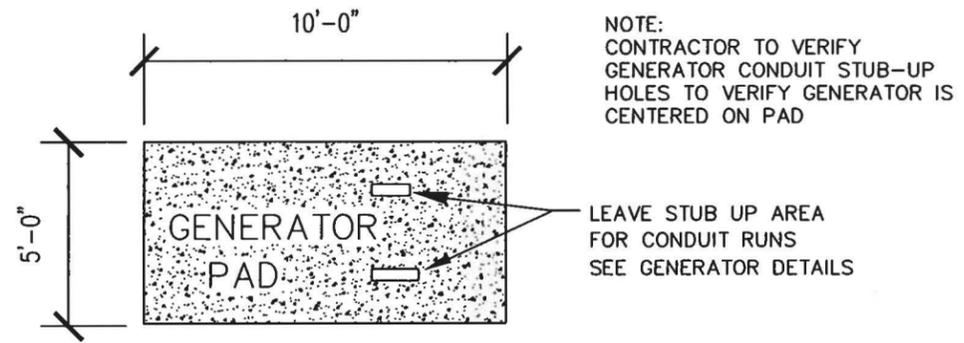
SERVICE BOARD DETAIL
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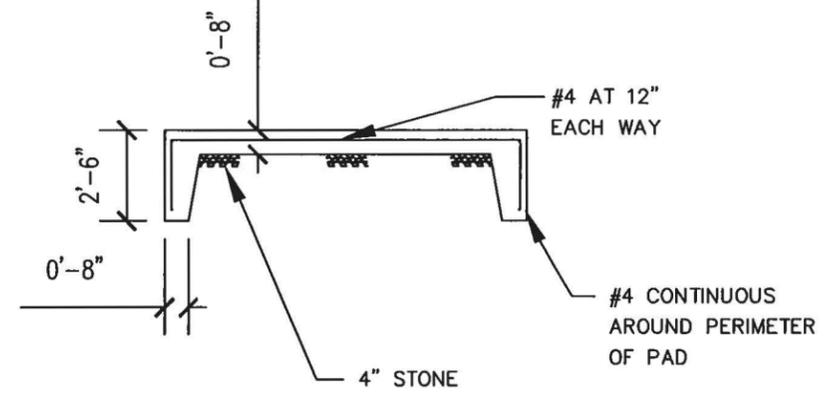
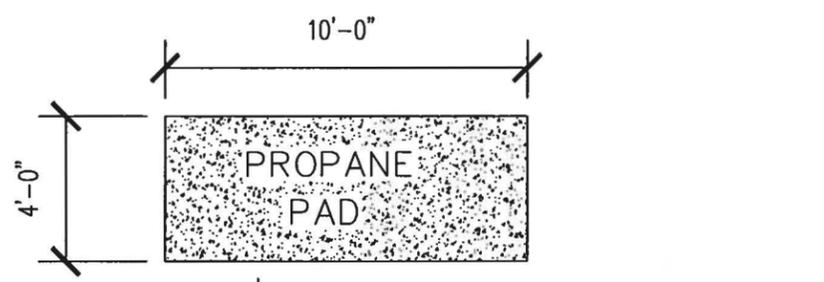
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12523 PEONIA RD. CLARKSON, KY. 42726

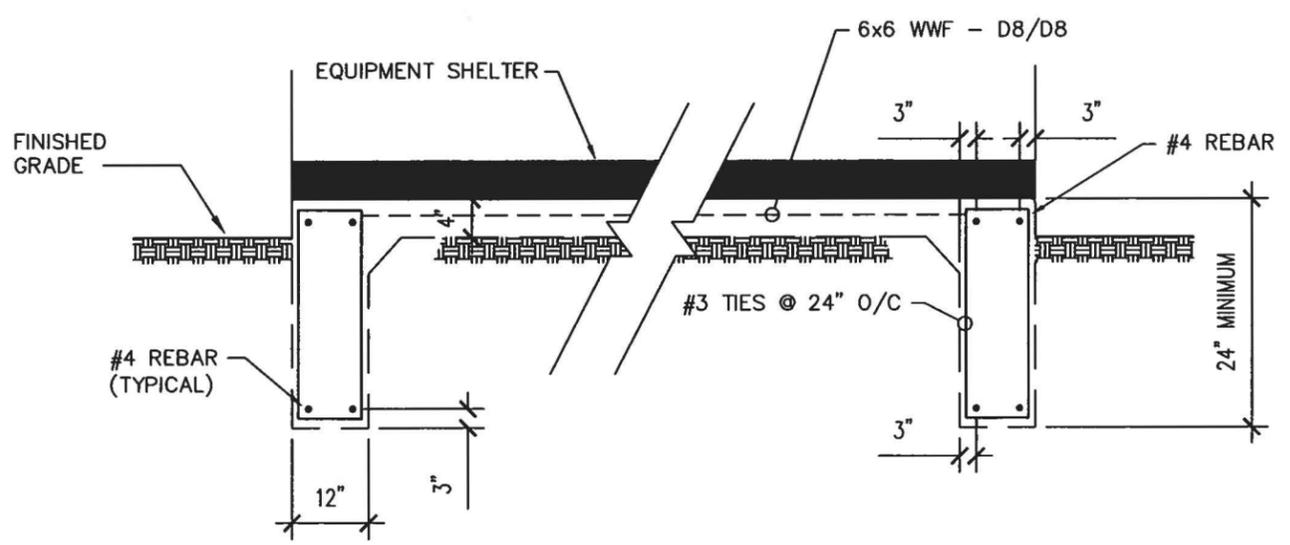
DRAWN BY: R. BECKER	ISSUE DATE: 2-21-19	SCALE: LISTED
SHEET NUMBER		



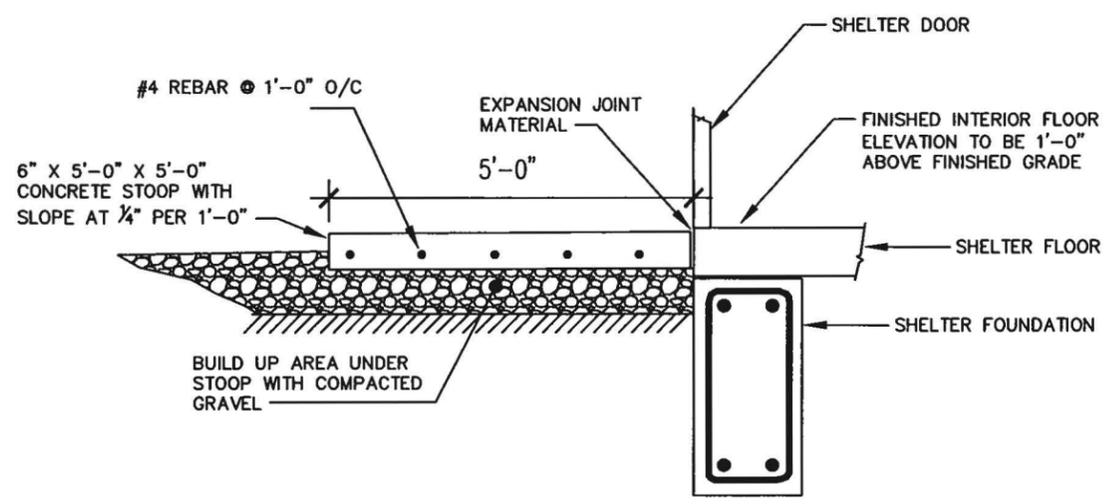
FOUNDATION DETAIL
NO SCALE



FOUNDATION DETAIL
NO SCALE



SHELTER FOUNDATION PLAN
NO SCALE



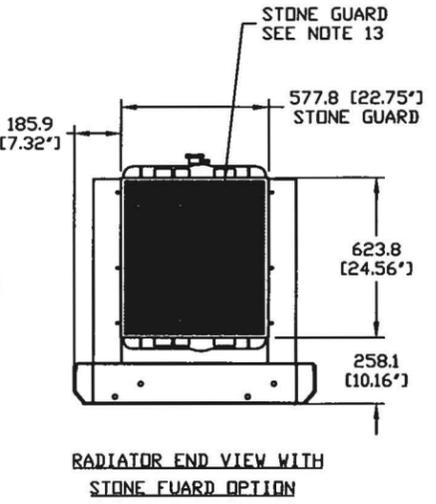
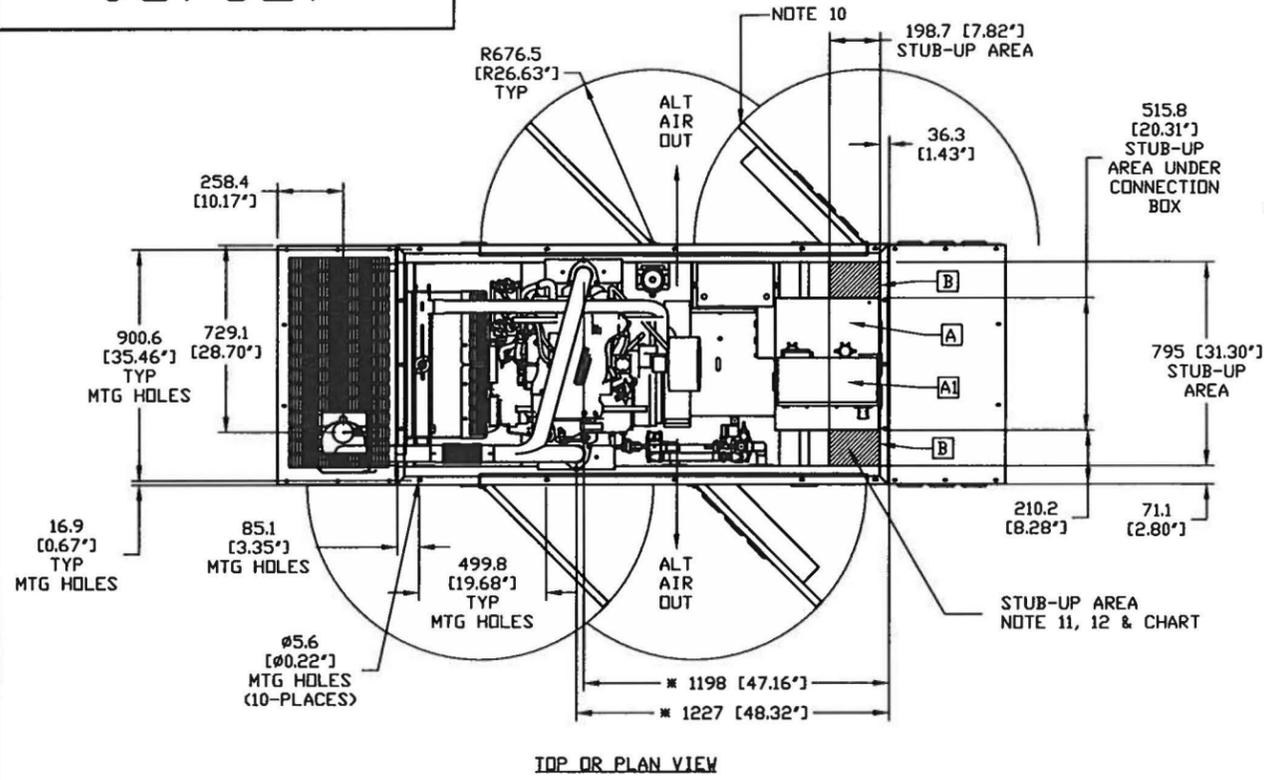
CONCRETE STOOP DETAIL
NO SCALE

		REVISION NO. DATE	
		NO. DATE	
BLUEGRASS CELLULAR, INC. STANDARD CELLULAR SITE WAX		12523 PEONIA RD. CLARKSON, KY. 42726	
DRAWN BY: R. BECKER	ISSUE DATE: 2-21-19	SCALE: LISTED	SHEET NUMBER S-1

OG7627

ENGINE SERVICE CONNECTIONS

INLET L/P GAS = 3/4" NPT COUPLING
 INLET NATURAL GAS = 3/4" NPT COUPLING
 OIL DRAIN = 1/2" NPT COUPLING
 EXHAUST OUTLET - EXHAUST MANIFOLDS AS SHOWN
 ON OPEN SET, 3" DD MUFFLER
 OUTLET WITH ENCLOSURE



RECOMMENDED FUEL/ELECTRICAL STUB-UPS (SEE TOP VIEW)

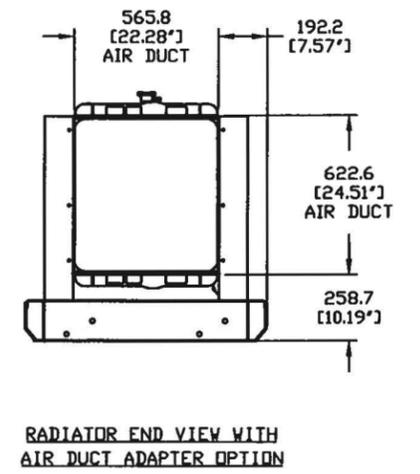
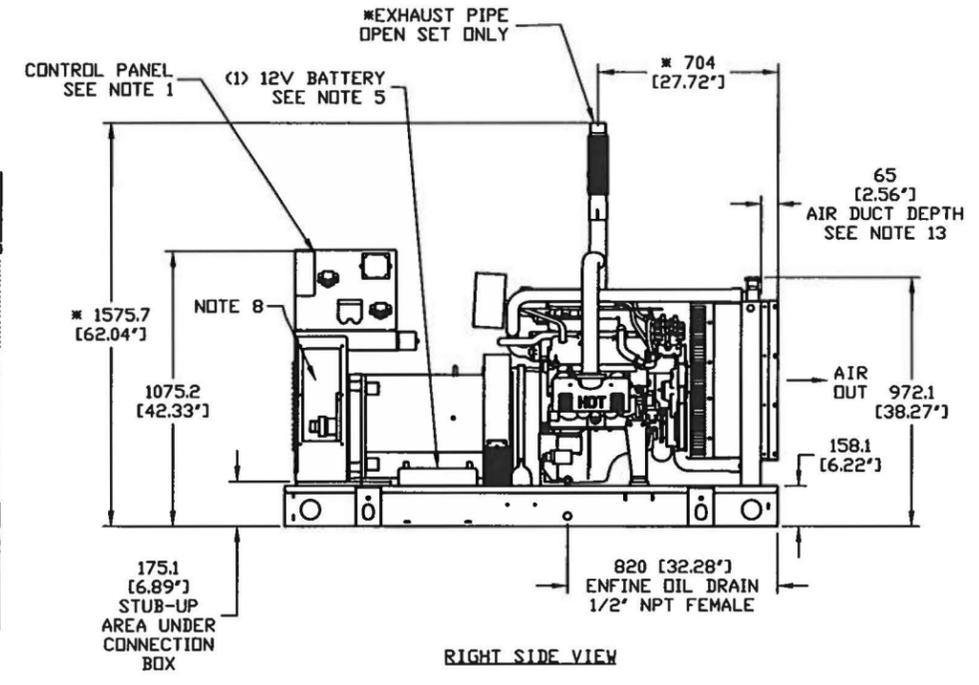
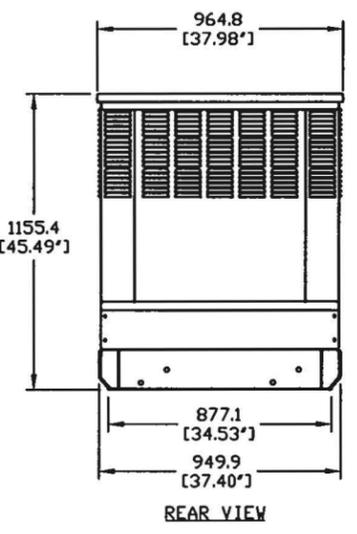
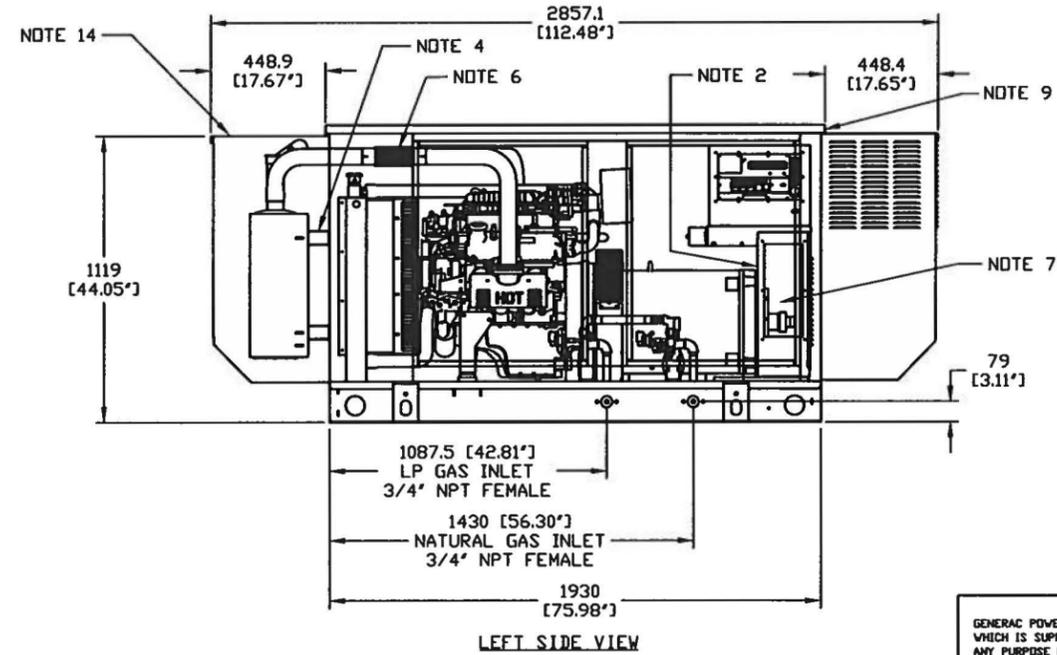
DESCRIPTION	INSIDE BASE
AC LOAD LEAD CONDUIT (RIGHT)	A
(LEFT)	A'
ADDITIONAL STUB UP AREA FOR 120VAC GFCI OUTLET, (STANDARD BLOCK HEATER, BATTERY CHARGER, AND OTHER 120 VAC OPTIONS).	B

NOTE:
 FUEL SYSTEM SET UP WITH OUTSIDE STUB-UPS (SEE RIGHT SIDE VIEW).

NOTES:

- CONTROL PANEL MAY BE ROTATED 180° IN EITHER DIRECTION.
 - STANDARD 20A GFCI DUPLEX OUTLET - 120VAC REQUIRED.
 - CONNECTION POINTS FOR CONTROL WIRES PROVIDED IN AC CONNECTION PANEL.
 - EXHAUST MUFFLER SUPPORT BRACKETS SUPPLIED WITH OPTIONAL ENCLOSURE.
 - 12 VOLT NEGATIVE GROUND SYSTEM.
 - 2.5" I. D. FLEX EXHAUST, STANDARD WITH ENCLOSURE UNITS, OPTIONAL WITHOUT.
 - MAIN LINE CIRCUIT BREAKER (MLCB) AND AC LOAD LEAD CONNECTION.
 - REMOVABLE BLANK PANEL FOR OPTIONAL 2nd MAIN LINE CIRCUIT BREAKER.
 - OPTIONAL ENCLOSURE.
 - DOORS MUST BE ABLE TO OPEN 90 DEG. TO BE REMOVED.
 - STUB-UPS:
 STANDARD BASE TANK REQUIRES ALL STUB-UPS TO BE OUTSIDE OR IN THE REAR TANK STUB-UP AREA.
 - A OR A' IS THE STUB UP AREA UNDER THE MLCB, DEPENDING ON CIRCUIT BREAKER LOCATION. AREA B IS STUB UP AVAILABLE FOR UNITS WITH A BASE TANK.
 - STONE GUARD AND AIR DUCT ADAPTER STANDARD WITH OPEN SET ONLY.
 - SEE DRAWING OC3850 FOR DUCT REMOVAL. REMOVAL OF FRONT DUCT WILL PROVIDE ACCESS TO MUFFLER FOR SERVICING.
- *NOTE: DIMENSIONS TO THE CENTER OF EXHAUST FLANGE SHOULD BE USED AS A REFERENCE WHEN EXHAUST SYSTEM IS NOT ORDERED. APPLIES TO OPEN SET ONLY.

WEIGHT DATA
 UNIT: ??? kg [??? lbs.]
 STEEL ENCLOSURE: ??? kg [??? lbs.]
 UNITS: mm [INCHES]



APPLICABLE TO 4.5L G3 35, 40 & 45KW

GENERAC POWER SYSTEMS OWNS THE COPYRIGHT OF THIS DRAWING WHICH IS SUPPLIED IN CONFIDENCE AND MUST NOT BE USED FOR ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS.
 © GENERAC POWER SYSTEMS 2001

SG 35, 40, 45 KW (UPSIZED 100 KW)
 4.2L DIRECT DRIVE
 ACOUSTIC ENCLOSURE
 ISSUE DATE: 11/13/07

GENERAC POWER SYSTEMS Waukesha P.O. BOX 8 WAUKESHA, WIS. 53187	
FILE NAME	OG7627-A.DWG
SCALE	NTS
FIRST USE	4.2L G3
DWG NO.	OG7627
SIZE	B
REV	A

INSTALLATION DRAWING

GENERAL NOTES:

- 1) THE CONTRACTOR IS RESPONSIBLE FOR EQUIPMENT PICK UP DELIVERY TO SITE, ERECTION OF TOWER, AND CRANE SET, ALL COSTS INCURRED.
- 2) THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE PRIOR TO BIDDING AND REVIEWING EXISTING STRUCTURES OR UTILITIES THAT MIGHT BE LOCATED ON OR AROUND THE COMPOUND THAT COULD INTERFERE.
- 3) THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING LOCAL AUTHORITIES NECESSARY FOR INSPECTIONS IF REQUIRED, PLEASE PROVIDE AMPLE NOTICE.
- 4) THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING PERSONS RESPONSIBLE FOR ANY MATERIALS TESTING, PLEASE PROVIDE AMPLE NOTICE.
- 5) THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE OWNER WITH FINAL TEST RESULTS ON ALL MATERIALS TESTING. IF ANY PROBLEMS ARE FOUND PRIOR TO FINAL RESULTS PLEASE NOTIFY A&E OR OWNER IMMEDIATELY.
- 6) THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ADJOINING PROPERTY, AND REPAIRING OR REPLACING WHAT IS NECESSARY TO OWNERS APPROVAL.
- 7) THE CONTRACTOR IS TO VERIFY DIMENSIONS ON SITE PRIOR TO CONSTRUCTION STARTING, ANY PROBLEMS OR CHANGE FOUND CONTACT A&E OR OWNER TO VERIFY.
- 8) THE CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY LIGHTING ON THE TOWER AND CONTACTING PROPER AUTHORITIES IF ANY LIGHTING PROBLEMS OCCUR, ALL FINAL LIGHTING TO BE MOUNTED ON TOWER DURING CONSTRUCTION, NOTIFY OWNER WHEN TOWER HAS REACHED FINAL HEIGHT.
- 9) THE CONTRACTOR IS RESPONSIBLE FOR ALL ON SITE WORK MEANS AND METHODS.
- 10) CONTRACTOR, ANY CONTRACTOR EMPLOYEES OR REPRESENTATIVES, OR SUB-CONTRACTOR, ANY SUB-CONTRACTOR EMPLOYEES OR REPRESENTATIVES, WILL CONFORM TO ALL LAWS AND REGULATIONS APPLICABLE TO THE WORK BEING PERFORMED, INCLUDING BUT NOT LIMITED TO, ALL OCCUPATIONAL SAFETY AND HEALTH ACT ("OSHA") STATUTES AND REGULATIONS AS WELL AS ALL OTHER FEDERAL, STATE AND/OR LOCAL LAWS OR REGULATIONS APPLICABLE TO THE WORK BEING PERFORMED BY CONTRACTOR.
- 11) THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL SITE DRAINAGE, AND PROVIDING SILT AND EROSION CONTROL NECESSARY TO MAINTAIN ANY RUN OFF.
- 12) THE CONTRACTOR IS RESPONSIBLE FOR ALL SEED AND STRAW WORK NECESSARY TO REPAIR DAMAGED AREAS.
- 13) CONTRACTOR TO GRADE SMOOTH OR REPAIR ANY POT HOLES OR DITCHING ON PROPERTY OR ROAD THAT HAS OCCURRED DURING CONSTRUCTION AT CONTRACTORS EXPENSE.
- 14) CONTRACTOR'S RESPONSIBILITIES REGARDING BUILD OUT ON FIBREBOND EQUIPMENT SHELTERS TO INCLUDE:
 - * INSTALLING THE DOOR CANOPY
 - * INSTALLING EXTERIOR LIGHT ON WALL DETERMINED BY PROJECT SUPERVISOR AND PHOTOCCELL REQUIREMENTS
 - * INSTALLING INTRUDER ALARMS
 - * CHECK OPERATIONS OF DOOR AND DOOR HARDWARE
 - * ADJUST WEATHERSTRIPPING ON DOORS AS NEEDED
 - * INSPECT ROOF FOR DAMAGE AND POSSIBLE LEAKS
 - * INSPECT INTERIOR FINISH FOR IMPERFECTIONS AND REPAIR AS NEEDED
 - * CHECK OPERATION OF LIGHTS AND ELECTRICAL OUTLETS
 - * CHECK OPERATION OF INTAKE AND EXHAUST LOUVERS AND ADJUST AS NEEDED
 - * CHECK OPERATION OF ENVIRONMENTAL CONTROLS AND HVAC UNITS
 - * INSTALL AND PAINT SHELTER TIE-DOWNS TO MATCH
- 15) INSTALL CONCRETE PADS FOR BUILDING, PROPANE TANK, GENERATOR PAD.
- 16) INSTALL ELECTRIC AND GROUND FIELD FOR COMPOUND.

- 17) GC WILL BE RESPONSIBLE FOR ALL CRANE OPERATIONS IN ORDER TO SET FIBREBOND BUILDING. COORDINATE BUILDING DELIVERY DATE THROUGH BLUEGRASS CELLULAR.
- 18) GC WILL BE RESPONSIBLE FOR OFF LOADING AND STACKING OF TOWER WHEN APPLICABLE.
- 19) GC WILL BE RESPONSIBLE FOR MOUNTING ALL LINES AND ANTENNAS.
- 20) GC WILL BE RESPONSIBLE FOR SUPPLYING AND INSTALLING ICE BRIDGE.
- 21) GC WILL BE RESPONSIBLE FOR SCHEDULING PROPANE TANK DELIVERY AND HOOK-UP. PREFERRED SUPPLIERS ARE EMPIRE & AMERIGAS
- 22) GC WILL BE RESPONSIBLE FOR COORDINATING THE CLEANING OF THE INSIDE OF THE BUILDING WITH THE PROJECT SUPERVISOR AFTER THE SITE HAS BEEN TURNED OVER TO THE OPERATIONS DEPARTMENT AND ALL TURN-UP PROCEDURES HAVE BEEN COMPLETED. THIS WILL INCLUDE SUPPLYING A 30 GALLON TRASHCAN, 30 GALLON TRASH BAGS, BROOM, DUST PAN AND DOORMAT FOR BUILDING.
- 23) GC TO VERIFY ALL BLUEGRASS CELLULAR EQUIPMENT DIMENSIONS & SPECIFICATIONS WITH MANUFACTURER'S DRAWINGS, (FIBREBOND, GENERAC, EASTPOINTE ETC.) PRIOR TO CONSTRUCTION. ADDRESS ANY ISSUES WITH PROJECT SUPERVISOR BEFORE WORK BEGINS.
- 24) ALL WAREHOUSE MATERIAL (LINES, ANTENNAS, MOUNTING HARDWARE, GENERATOR, TOWER FOUNDATION KIT, ETC.) WILL NEED TO BE PICKED UP BY GC.
- 25) GC WILL BE RESPONSIBLE FOR SCHEDULING GENERATOR START-UP WITH CONTACT SCOTT ANDERSON (EVAPAR) 502-267-6315
- 26) T1 CONDUIT WILL NEED TO BE PLACED FROM POLE TO BUILDING. (IF A MICROWAVE DISH IS USED, THE T1 CONDUIT WILL STILL BE INSTALLED FOR FUTURE USE.)
- 27) GC WILL BE RESPONSIBLE FOR INSTALLATION OF ALL FENCING.
- 28) ALL TRASH AND DEBRIS TO BE REMOVED BY GC
- 29) GC WILL BE RESPONSIBLE FOR APPLYING FOR ELECTRICAL SERVICE AND PAYING NECESSARY FEES REQUIRED.
- 30) GC WILL BE RESPONSIBLE FOR SUPPLYING & INSTALLING PROTECTIVE END CAPS ON ANY EXPOSED THREADED ROD OR UNISTRUT USED ON SITE. VERIFY TYPE WITH PROJECT SUPERVISOR PRIOR TO INSTALLATION.
- 31) GC WILL BE RESPONSIBLE FOR HAVING A CERTIFIED ELECTRICIAN HOOK UP THE BATTERIES (IMMEDIATELY) AFTER POWER HAS BEEN TURNED UP AT THE SITE, PREVENTING THE DELAY OF ANY WORK FOR OPERATIONS. THE GENERAL CONTRACTOR MUST NOTIFY THE PROJECT SUPERVISOR IMMEDIATELY AT THIS TIME SO HE CAN COORDINATE A CELL TECH TO BE ONSITE WHEN THIS OCCURS.
- 32) GC WILL BE RESPONSIBLE FOR RUNNING (CAT5) FROM THE GENERATOR ALARM PANEL MOUNTED ON THE SIDE OF THE TRANSFER SWITCH (BY THE CONTRACTOR), THROUGH THE TRANSFER SWITCH AND UP TO THE EXISTING CONDUIT BESIDE THE A/C POWER FAIL RELAY. THE (CAT5) WILL BE PULLED THROUGH EXISTING CONDUIT AROUND THE SHELTER AND EXTENDED TO THE ALARM BLOCK. THERE SHOULD BE A MINIMUM 3'-0" OF (CAT5) LEFT HANGING ON EACH END FOR THE CELL TECH TO HOOK UP THE GENERATOR ALARMS.
- 33) GC MUST SUBMIT A COPY OF THE BUILDING PERMIT AND CONSTRUCTION SCHEDULE TO THE PROJECT SUPERVISOR PRIOR TO RECEIVING (NTP) TO BEGIN CONSTRUCTION (NO EXCEPTIONS).
- 34) GC MUST DISPLAY FCC TOWER REGISTRATION NUMBER AND EMERGENCY PHONE NUMBERS ON 3'-0 X 4'-0" MINIMUM WOODEN BACKBOARD SOMEWHERE ON SITE LOCATION PRIOR TO BREAKING GROUND.

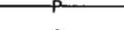
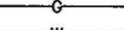
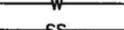
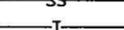
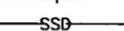
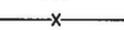
GRADING & EXCAVATING NOTES:

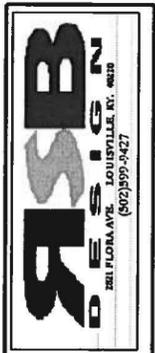
- 1) ANY DAMAGE TO EXISTING UTILITIES, STRUCTURES, ROADS AND PARKING AREAS TO BE REPAIRED OR REPLACED TO OWNERS SATISFACTION.
- 2) PREPARATION FOR FILL: REMOVAL OF ALL DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, TOPSOIL, VEGETATION, AND HARMFUL MATERIALS FROM SURFACE OF GROUND PRIOR TO PLOWING, STRIPPING, PLACING FILLS OR BREAKING UP OF SLOPED SURFACES GREATER THAN 1 VERTICAL TO 4 HORIZONTAL SO MATERIAL FOR FILL WILL BOND TO EXISTING SURFACE. WHEN AREA TO RECEIVE FILL HAS A DENSITY LESS THAN REQUIRED, BREAK UP GROUND SURFACE TO DEPTH REQUIRED, AERATE, MOISTURE - CONDITION, OR PULVERIZE SOIL AND RECOMPACT TO REQUIRED DENSITY.
- 3) BACK FILLING:
 - EXCAVATED AREA SHALL BE CLEARED FROM STONES OR CLODS OVER 2 1/2" MAXIMUM DIAMETER
 - SHALL BE PLACED IN LAYERS OF 6" AND COMPACTED TO A 95% STANDARD PROCTOR, USE A 90% PROCTOR IN GRASSED / LANDSCAPED AREAS WHERE REQUIRED.
 - SHALL BE APPROVED MATERIALS CONSISTING OF SANDY CLAY, GRAVEL AND SAND, SOFT SHALE, EARTH OR LOAM. CONSULT WITH OWNER PRIOR TO FILL BEING ADDED.
- 4) ALL MATERIAL FOR FILL TO BE APPROVED BY OWNER AND ALL COMPACTING TEST TO BE COMPLETED TO SPEC'S ALL COMPACTING RESULTS TO BE TURNED OVER TO OWNER.
- 5) AFTER COMPLETION OF BELOW GRADE EXCAVATING, AREA TO BE CLEANED AND CLEARED OF ANY UNSUITABLE MATERIALS, SUCH AS TRASH, DEBRIS, VEGETATION AND SO FORTH.
- 6) ANY EXCAVATING IN WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIALLY HORIZONTAL ON UNDISTURBED AND UNFROZEN SOIL AND BE FREE OF ANY LOOSE MATERIAL AND EXCESS GROUND WATER.
- 7) IF SOUND SOIL IS NOT REACHED AT DESIGNATED EXCAVATION DEPTH, THE POOR SOIL IS TO BE EXCAVATED TO ITS FULL DEPTH AND EITHER REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION TO BE FILLED WITH THE SAME QUALITY CONCRETE SPECIFIED FOR THE FOUNDATION. PLEASE NOTIFY THE PROJECT SUPERVISOR AND THEY WILL HAVE A 3RD PARTY ENGINEERING FIRM CONTACT YOU WITH RECOMMENDATIONS.
- 8) MECHANICALLY COMPACTED GRANULAR MATERIAL OR CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATIONS TO BE USED IF EXCAVATION EXCEEDED THE OVERALL REQUIRED DEPTH. FOR STABILIZATION OF THE BOTTOM OF THE EXCAVATION, CRUSHED STONE MAY BE USED. STONE, IF USED, SHALL NOT BE USED AS COMPILING CONCRETE THICKNESS. PLEASE NOTIFY THE PROJECT SUPERVISOR AND THEY WILL HAVE A 3RD PARTY ENGINEERING FIRM CONTACT YOU WITH RECOMMENDATIONS.
- 9) EXCAVATION TO COMPOUND TO INCLUDE WEED CONTROL MAT.
- 10) SITE TO HAVE PROPER DRAINAGE & EROSION CONTROL (CROWNED FORMATION)
- 11) GC WILL BE RESPONSIBLE FOR REPAIR OF ALL AREAS DISTURBED DURING CONSTRUCTION. (EXCAVATING ISSUES)

"CALL BEFORE YOU DIG"

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE UTILITY PROTECTION CENTER, PHONE 811 IN KENTUCKY, WHICH WAS ESTABLISHED TO PROVIDE ACCURATE LOCATIONS OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE UTILITY PROTECTION CENTER 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ON THIS PROJECT. ALL NEW SERVICE AND GROUNDING TRENCHES PROVIDE A WARNING TAPE @ 12 INCHES BELOW GRADE.

SYMBOLS LEGEND

-  KEYNOTE
-  INSPEC. SLEEVE / GRND ROD
-  INSPECTION SLEEVE
-  CAD WELD CONNECTION
-  TRANSFORMER
-  LIGHTNING SUPPRESSOR
-  SWITCH (DISCONNECT)
-  METER PACK
-  POWER
-  GAS LINE
-  WATER LINE
-  SANITARY SEWER
-  TELEPHONE
-  STORM SEWER DRAIN
-  FENCE



REVISION	DATE	NO.

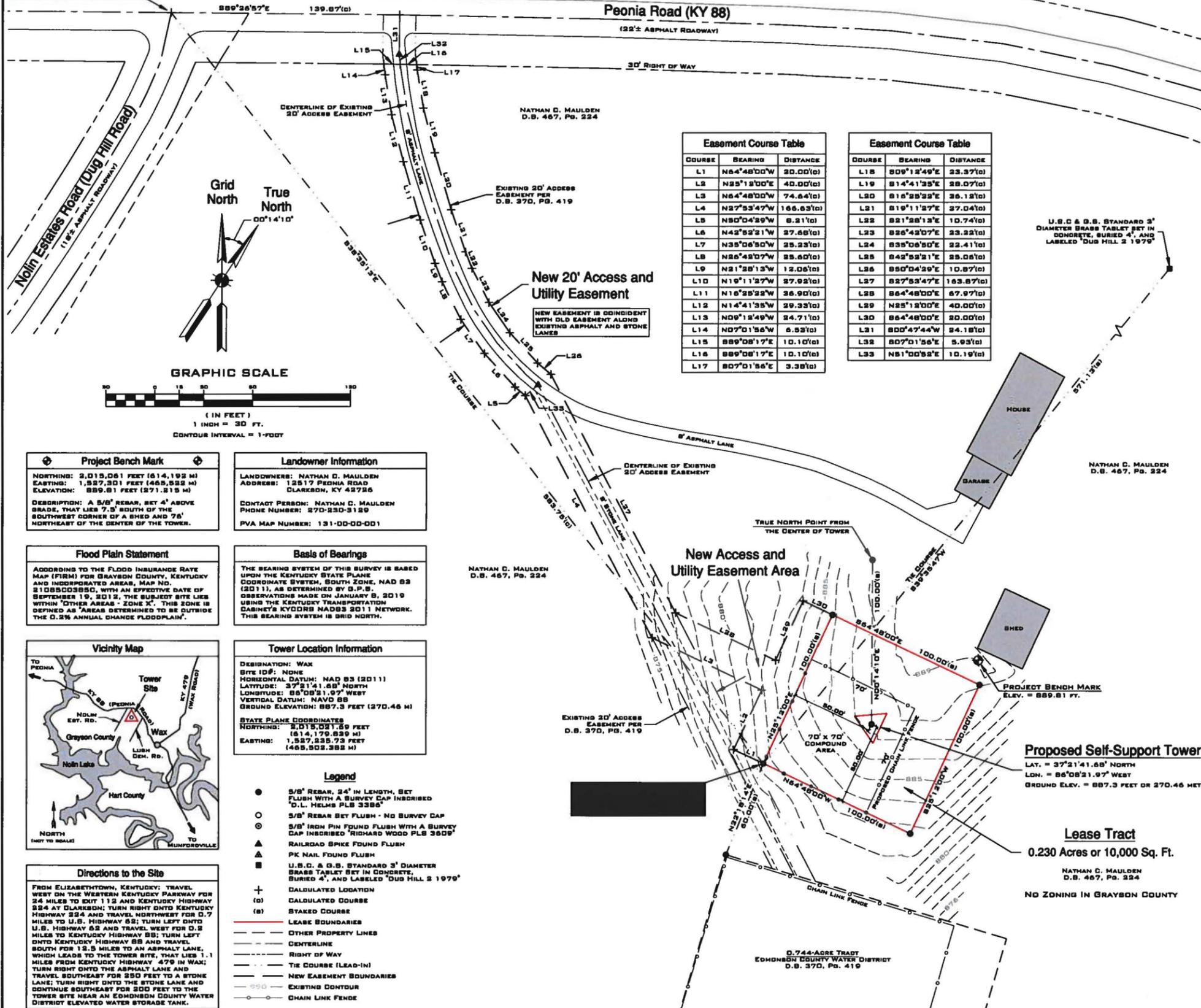
BLUEGRASS CELLULAR, INC.
STANDARD CELLULAR SITE
WAX
12523 PEONIA RD. CLARKSON, KY. 42726

DRAWN BY: R. BECKER
ISSUE DATE: 2-21-19
SCALE: LISTED

SHEET NUMBER
General Notes

P.O.C. of Lease Tract

CENTERLINE INTERSECTION OF
PEONIA ROAD (KENTUCKY
HIGHWAY 88) AND NOLIN ESTATES
ROAD PER DEED BOOK 370, PAGE
419 IN THE OFFICE OF THE
COUNTY CLERK, GRAYSON
COUNTY, KENTUCKY.



SITE: WAX

Lease Boundary and Topographic Survey

Grayson County, Kentucky

Lease Boundary and Easement Description

A TRACT OF LAND THAT IS LOCATED 600 FEET SOUTHEASTERLY OF THE INTERSECTION OF NOLIN ESTATES ROAD (ALSO KNOWN AS DUG HILL ROAD) AND PEONIA ROAD (ALSO KNOWN AS KENTUCKY HIGHWAY 88) IN THE WAX COMMUNITY OF GRAYSON COUNTY, KENTUCKY; SAID TRACT BEING DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE CENTERLINES OF SAID ROAD; THENCE SOUTH 28 DEGREES 35 MINUTES 13 SECONDS EAST 583.75 FEET TO A 5/8-INCH REBAR SET FLUSH WITH A SURVEY GAP INSCRIBED "D.L. HELMS PLS 3386" (REFERRED TO AS A REBAR IN THE REMAINDER OF THIS DESCRIPTION) AT THE POINT OF BEGINNING OF THIS DESCRIPTION (SAID REBAR LIES SOUTH 39 DEGREES 47 SECONDS WEST 571.13 FEET FROM A UNITED STATES COAST AND GEODETIC SURVEY STANDARD 3-INCH DIAMETER BRASS TABLE SET IN CONCRETE, BURIED 4 INCHES, AND LABELED "DUG HILL 2 1979" AND IT LIES NORTH 23 DEGREES 18 MINUTES 14 SECONDS EAST 80.00 FEET FROM A 5/8-INCH IRON PIN FOUND FLUSH WITH A SURVEY GAP INSCRIBED "RICHARD WOOD PLS 3609" AT THE NORTHWEST CORNER OF THE 0.744-ACRE TRACT DESCRIBED IN DEED TO THE COMMONS COUNTY WATER DISTRICT ON DECEMBER 29, 2006 IN DEED BOOK 370, PAGE 419 IN THE OFFICE OF THE COUNTY CLERK OF GRAYSON COUNTY, KENTUCKY; THENCE NORTH 25 DEGREES 12 MINUTES 00 SECONDS EAST 100.00 FEET TO A REBAR SET FLUSH; THENCE SOUTH 64 DEGREES 48 MINUTES 00 SECONDS EAST 100.00 FEET TO A REBAR SET FLUSH; THENCE SOUTH 25 DEGREES 12 MINUTES 00 SECONDS WEST 100.00 FEET TO A REBAR SET FLUSH; THENCE NORTH 64 DEGREES 48 MINUTES 00 SECONDS WEST 100.00 FEET TO THE POINT OF BEGINNING AND CONTAINING 0.230 ACRES (10,000 SQUARE FEET), MORE OR LESS.

TOGETHER WITH AN ACCESS AND UTILITY EASEMENT FROM THE ABOVE-DESCRIBED LEASE TRACT TO PEONIA ROAD (ALSO KNOWN AS KENTUCKY HIGHWAY 88); SAID EASEMENT FOLLOWS AN EXISTING ASPHALT AND STONE LANE FOR MOST OF ITS LENGTH, AND IT IS DESCRIBED AS FOLLOWS: BEGINNING AT A 5/8-INCH REBAR SET FLUSH WITH A SURVEY GAP INSCRIBED "D.L. HELMS PLS 3386", WHICH MARKS THE SOUTHWEST CORNER OF THE ABOVE-DESCRIBED 0.230-ACRE LEASE TRACT; THENCE NORTH 64 DEGREES 48 MINUTES 00 SECONDS WEST 30.00 FEET; THENCE NORTH 25 DEGREES 12 MINUTES 00 SECONDS EAST 40.00 FEET; THENCE NORTH 25 DEGREES 48 MINUTES 00 SECONDS WEST 74.64 FEET; THENCE NORTH 27 DEGREES 53 MINUTES 47 SECONDS WEST 166.63 FEET; THENCE NORTH 50 DEGREES 04 MINUTES 29 SECONDS WEST 8.21 FEET; THENCE NORTH 19 DEGREES 01 MINUTE 58 SECONDS WEST 27.58 FEET; THENCE NORTH 25 DEGREES 06 MINUTE 30 SECONDS WEST 25.23 FEET; THENCE NORTH 26 DEGREES 42 MINUTE 07 SECONDS WEST 12.06 FEET; THENCE NORTH 19 DEGREES 11 MINUTE 37 SECONDS WEST 27.92 FEET; THENCE NORTH 16 DEGREES 25 MINUTE 22 SECONDS WEST 36.90 FEET; THENCE NORTH 14 DEGREES 41 MINUTE 35 SECONDS WEST 49.32 FEET; THENCE NORTH 09 DEGREES 01 MINUTE 58 SECONDS WEST 24.71 FEET; THENCE NORTH 07 DEGREES 01 MINUTE 58 SECONDS WEST 5.53 FEET TO THE SOUTH RIGHT OF WAY OF PEONIA ROAD 132 FEET FROM THE CENTERLINE PER STATE HIGHWAY PROJECT NO. 617, SECTION B-G, DATED NOVEMBER 17, 1933; THENCE, ALONG SAID RIGHT OF WAY, SOUTH 09 DEGREES 08 MINUTE 17 SECONDS EAST 20.20 FEET; THENCE SOUTH 07 DEGREES 01 MINUTE 58 SECONDS EAST 3.38 FEET; THENCE SOUTH 09 DEGREES 12 MINUTE 49 SECONDS EAST 23.37 FEET; THENCE SOUTH 14 DEGREES 41 MINUTE 35 SECONDS EAST 28.07 FEET; THENCE SOUTH 18 DEGREES 35 MINUTE 23 SECONDS EAST 12.12 FEET; THENCE SOUTH 19 DEGREES 37 SECONDS EAST 37.04 FEET; THENCE SOUTH 21 DEGREES 28 MINUTE 13 SECONDS EAST 10.74 FEET; THENCE SOUTH 26 DEGREES 42 MINUTE 07 SECONDS EAST 23.38 FEET; THENCE SOUTH 28 DEGREES 05 MINUTE 30 SECONDS EAST 22.41 FEET; THENCE SOUTH 42 DEGREES 52 MINUTE 21 SECONDS EAST 25.06 FEET; THENCE SOUTH 50 DEGREES 04 MINUTE 29 SECONDS EAST 163.67 FEET; THENCE SOUTH 64 DEGREES 48 MINUTE 00 SECONDS EAST 67.97 FEET; THENCE NORTH 25 DEGREES 12 MINUTE 00 SECONDS EAST 40.00 FEET; THENCE NORTH 64 DEGREES 48 MINUTE 00 SECONDS EAST 100.00 FEET TO A 5/8-INCH REBAR SET FLUSH WITH SAID SURVEY GAP AT THE NORTHWEST CORNER OF THE ABOVE-DESCRIBED 0.230-ACRE LEASE TRACT; THENCE SOUTH 25 DEGREES 12 MINUTE 00 SECONDS WEST 100.00 FEET TO THE POINT OF BEGINNING.

THE BEARING SYSTEM OF THIS DESCRIPTION IS BASED UPON THE KENTUCKY STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83 (2011), AS DETERMINED BY G.P.S. OBSERVATIONS MADE ON JANUARY 8, 2019 USING THE KENTUCKY TRANSPORTATION CABINET'S KYGORS NAD83 2011 NETWORK. THIS BEARING SYSTEM IS GRID NORTH.

THIS DESCRIPTION IS BASED UPON A SURVEY COMPLETED BY LANDMARK SURVEYING CO., INC. AND CERTIFIED BY DARREN L. HELMS, P.L.S. 3386, ON JANUARY 24, 2019.

SOURCE OF TITLE: BEING A PORTION OF AND LYING ENTIRELY WITHIN THE LAND DESCRIBED IN DEED TO NATHAN C. MAULDEN ON FEBRUARY 28, 2018 IN DEED BOOK 467, PAGE 224 IN THE OFFICE OF THE COUNTY CLERK OF GRAYSON COUNTY, KENTUCKY.

Notes

1. ANY ENCUMBRANCES AND LANDOWNER INFORMATION SHOWN HEREOF, REGARDING THE SUBJECT TRACT, ARE BASED UPON A TITLE SEARCH COMPLETED BY ABSTRACTS & TITLES, INC. OF LOUISVILLE, KENTUCKY, DATED JANUARY 3, 2019. EXAM NO. 238171.
2. THE UTILITIES SHOWN ON THIS PLAN MAY OR MAY NOT REPRESENT ALL OF THE UTILITIES LOCATED AT THE SUBJECT SITE. THE PRESENCE OF UTILITIES WAS DETERMINED BY A VISUAL INSPECTION OF THE PROPERTY SURFACE. NO UTILITY LOCATE WAS CALLED IN PRIOR TO THIS SURVEY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE UTILITIES PRIOR TO CONSTRUCTION.
3. THE TOPOGRAPHIC INFORMATION CONTAINED ON THIS PLAN IS AS REQUESTED BY THE CLIENT AND MAY OR MAY NOT REPRESENT ALL OF THE TOPOGRAPHIC FEATURES LOCATED AT THE SUBJECT SITE.
4. ACCORDING TO THE OFFICE OF MR. KEVIN HENDERSON, COUNTY JUDGE EXECUTIVE OF GRAYSON COUNTY, NO LOCAL PLANNING UNIT EXISTS WHICH HAS GEOGRAPHICAL JURISDICTION OF THE SUBJECT TOWER SITE. THE COUNTY JUDGE EXECUTIVE'S OFFICE MAY BE CONTACTED AT 270-259-3159.
5. THE PROPOSED LOCATION OF THE WAX TOWER SITE WILL BE LOCATED OUTSIDE OF AN INCORPORATED CITY.
6. THE RIGHT OF WAY OF PEONIA ROAD (KENTUCKY HIGHWAY 88) WAS DETERMINED FROM THE PLANS OF STATE PROJECT NO. 617, SECTION B-G, DATED NOVEMBER 17, 1933.
7. THE FOLLOWING EQUIPMENT WAS USED TO COMPLETE THIS SURVEY: (1) TOPCON QS-3 ROBUST TOTAL STATION AND (2) TOPCON HIPER II NETWORK ROVER/BASE-ROVER DUAL FREQUENCY GPS SYSTEM. THE GPS SYSTEM WAS USED IN THE RTK MODE.

Certification

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN COMPILED FROM A SURVEY MADE UPON THE GROUND UNDER MY DIRECT SUPERVISION ON JANUARY 15, 2019 BY THE METHOD OF REAL TIME KINEMATIC GPS SURVEY AND A RANDOM TRAVERSE WITH SIDESHOTS. THE RELATIVE POSITIONAL ACCURACY OF ANY POINT ON THIS SURVEY IS BETTER THAN ± 0.10 FEET ± 200 PPM. THIS PLAN REPRESENTS A RURAL BOUNDARY SURVEY AND COMPLIES WITH THE REQUIREMENTS OF 201 KAR 18:150.

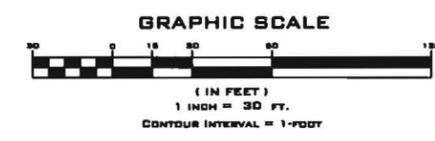
Darren L. Helms
DARREN L. HELMS, P.L.S. 3386

JANUARY 24, 2019
DATE

STATE OF KENTUCKY
Darren L. Helms
3386
LICENSED PROFESSIONAL
LAND SURVEYOR

COURSE	BEARING	DISTANCE
L1	N64°48'00"W	20.00'(0)
L2	N25°12'00"E	40.00'(0)
L3	N64°48'00"W	74.64'(0)
L4	N27°53'47"W	166.63'(0)
L5	N50°04'29"W	8.21'(0)
L6	N42°52'21"W	27.58'(0)
L7	N35°06'30"W	25.23'(0)
L8	N26°42'07"W	25.06'(0)
L9	N21°28'13"W	12.06'(0)
L10	N19°11'27"W	27.92'(0)
L11	N16°25'22"W	36.90'(0)
L12	N14°41'35"W	29.33'(0)
L13	N09°18'49"W	24.71'(0)
L14	N07°01'58"W	5.53'(0)
L15	S89°08'17"E	10.10'(0)
L16	S89°08'17"E	10.10'(0)
L17	S07°01'56"E	3.38'(0)

COURSE	BEARING	DISTANCE
L18	S09°12'49"E	23.37'(0)
L19	S14°41'35"E	28.07'(0)
L20	S18°35'23"E	36.12'(0)
L21	S19°11'27"E	27.04'(0)
L22	S21°28'13"E	10.74'(0)
L23	S26°42'07"E	23.32'(0)
L24	S35°06'30"E	22.41'(0)
L25	S42°52'21"E	25.06'(0)
L26	S50°04'29"E	10.87'(0)
L27	S27°53'47"E	163.67'(0)
L28	S64°48'00"E	67.97'(0)
L29	S25°12'00"E	40.00'(0)
L30	S64°48'00"E	20.00'(0)
L31	S00°47'44"W	24.18'(0)
L32	S07°01'56"E	5.93'(0)
L33	N51°00'52"E	10.19'(0)

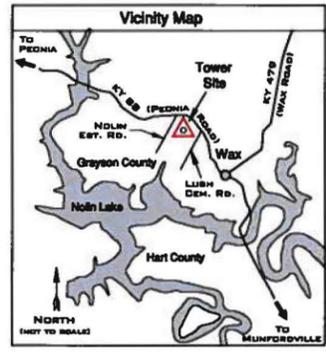


Project Bench Mark
NORTHING: 2,015,061 FEET (614,192 M)
EASTING: 1,527,301 FEET (465,532 M)
ELEVATION: 889.81 FEET (271.315 M)
DESCRIPTION: A 5/8" REBAR, SET 4" ABOVE GRADE, THAT LIES 7.5' SOUTH OF THE SOUTHWEST CORNER OF A BIRD AND 78' NORTHEAST OF THE CENTER OF THE TOWER.

Landowner Information
LANDOWNERS: NATHAN C. MAULDEN
ADDRESS: 12517 PEONIA ROAD
CLARKSON, KY 42726
CONTACT PERSON: NATHAN C. MAULDEN
PHONE NUMBER: 270-250-3129
PVA MAP NUMBER: 131-DD-00-001

Flood Plain Statement
ACCORDING TO THE FLOOD INSURANCE RATE MAP (FIRM) FOR GRAYSON COUNTY, KENTUCKY AND INCORPORATED AREAS, MAP NO. 21085003850, WITH AN EFFECTIVE DATE OF SEPTEMBER 19, 2012, THE SUBJECT SITE LIES WITHIN OTHER AREAS - ZONE X. THIS ZONE IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

Basis of Bearings
THE BEARING SYSTEM OF THIS SURVEY IS BASED UPON THE KENTUCKY STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83 (2011), AS DETERMINED BY G.P.S. OBSERVATIONS MADE ON JANUARY 8, 2019 USING THE KENTUCKY TRANSPORTATION CABINET'S KYGORS NAD83 2011 NETWORK. THIS BEARING SYSTEM IS GRID NORTH.



Tower Location Information
DESIGNATION: WAX
SITE ID#: NONE
HORIZONTAL DATUM: NAD 83 (2011)
LATITUDE: 37°21'41.68" NORTH
LONGITUDE: 86°08'21.97" WEST
VERTICAL DATUM: NAVD 88
GROUND ELEVATION: 887.3 FEET (270.46 M)
STATE PLANE COORDINATES
NORTHING: 2,015,031.59 FEET (614,179.839 M)
EASTING: 1,527,235.73 FEET (465,503.382 M)

- Legend**
- 5/8" REBAR, 24" IN LENGTH, SET FLUSH WITH A SURVEY GAP INSCRIBED "D.L. HELMS PLS 3386"
 - 5/8" REBAR SET FLUSH - NO SURVEY GAP
 - ⊙ 5/8" IRON PIN FOUND FLUSH WITH A SURVEY GAP INSCRIBED "RICHARD WOOD PLS 3609"
 - ▲ RAILROAD SPIKE FOUND FLUSH
 - ▲ PK NAIL FOUND FLUSH
 - U.S.C. & G.S. STANDARD 3" DIAMETER BRASS TABLE SET IN CONCRETE, BURIED 4", AND LABELED "DUG HILL 2 1979"
 - + CALCULATED LOCATION
 - (0) CALCULATED COURSE
 - (s) STAKED COURSE
 - LEASE BOUNDARIES
 - OTHER PROPERTY LINES
 - CENTERLINE
 - RIGHT OF WAY
 - THE COURSE (LEAD-IN)
 - NEW EASEMENT BOUNDARIES
 - EXISTING CONTOUR
 - CHAIN LINK FENCE

Directions to the Site
FROM ELIZABETHTOWN, KENTUCKY: TRAVEL WEST ON THE WESTERN KENTUCKY PARKWAY FOR 24 MILES TO EXIT 112 AND KENTUCKY HIGHWAY 224 AT CLARKSON. TURN RIGHT ONTO KENTUCKY HIGHWAY 224 AND TRAVEL NORTHWEST FOR 0.7 MILES TO U.S. HIGHWAY 88; TURN LEFT ONTO U.S. HIGHWAY 88 AND TRAVEL WEST FOR 0.3 MILES TO KENTUCKY HIGHWAY 88; TURN LEFT ONTO KENTUCKY HIGHWAY 88 AND TRAVEL SOUTH FOR 1.3 MILES TO AN ASPHALT LANE, WHICH LEADS TO THE TOWER SITE, THAT LIES 1.1 MILES FROM KENTUCKY HIGHWAY 479 IN WAX; TURN RIGHT ONTO THE ASPHALT LANE AND TRAVEL SOUTHEAST FOR 350 FEET TO A STONE LANE; TURN RIGHT ONTO THE STONE LANE AND CONTINUE SOUTHEAST FOR 200 FEET TO THE TOWER SITE NEAR AN EDMONDSON COUNTY WATER DISTRICT ELEVATED WATER STORAGE TANK.

New Access and Utility Easement Area
TRUE NORTH POINT FROM THE CENTER OF TOWER
The Course: S25°12'00"E
70' x 70' COMPOUND AREA
PROPOSED CHAIN LINK FENCE



Proposed Self-Support Tower
LAT. = 37°21'41.68" NORTH
LON. = 86°08'21.97" WEST
GROUND ELEV. = 887.3 FEET OR 270.46 METERS

Lease Tract
0.230 Acres or 10,000 Sq. Ft.
NATHAN C. MAULDEN
D.B. 467, Pg. 224
NO ZONING IN GRAYSON COUNTY
0.744-ACRE TRACT
EDMONDSON COUNTY WATER DISTRICT
D.B. 370, Pg. 419

LANDMARK SURVEYING CO., INC.
15 N.E. 360 STREET
WASHINGTON, INDIANA 47581
(813) 231-257-0950
WEBSITE: LANDMARKSURVEYINGCO.COM
Project No. 19-01-0101 © 2019

Lease Boundary Survey
12523 Peonia Road
Clarkson, Kentucky 42726

Bluegrass Cellular
2902 Ring Road
Elizabethtown, KY 42701

REVISIONS	DATE

DATE: Jan. 24, 2019
DRAWN BY: D.L. Helms
CHECKED BY: D.L. Helms

SHEET No.
1
of 1 SHEETS
FILE NAME
wax.dwg

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY RSA #3)
CELLULAR GENERAL PARTNERSHIP FOR)
APPROVAL TO CONSTRUCT AND OPERATE A NEW) CASE No. 2019-00042
CELL FACILITY TO PROVIDE CELLULAR RADIO)
SERVICE (WAX) IN RURAL SERVICE AREA #3)
(GRAYSON COUNTY) OF THE COMMONWEALTH)
OF KENTUCKY)

AFFIDAVIT OF FELIX H. SHARPE

I, Felix H. Sharpe, being duly sworn, depose and state as follows:

1. My name is Felix H. Sharpe and I am a member of the Kentucky Bar Association. I am legal counsel to Kentucky RSA #3 Cellular General Partnership d/b/a Bluegrass Cellular and am submitting this affidavit in conjunction with the above referenced matter.
2. In order to demonstrate compliance with 807 KAR 5:063 §1(1)(l) & (m), Exhibit 1 identifies, with the exception of the individual identified in paragraph 4, 5, & 6, the names of the residents/tenants and property owners within 500 feet of the proposed tower who have been: (i) notified by written notice of the proposed construction, sufficient postage prepaid, by United States Certified Mail, return receipt requested; (ii) given the Commission docket number under which the application will be processed; and (iii) informed of the right to request intervention.
3. Attached as Exhibit 2 is a copy of the United States Certified Mail return receipt requested that demonstrates proof of service of the written notice of the proposed construction upon: (1) Sheila K. Utz; (2) Gail Lush, Houston Lush, Linda Lush and James H. Lush; (3) Houston and Mabeline Lush; (4) Edmonson County Water District; (5) Marjorie Darlene Childress; (6) Thomas and Nancy Milas; (7) Rick and Sharon Hiser c/o Chad K. and Daniel E.

Peyton; (8) Kirk Cummings; (9) Domingo and Venita L. Laracuate; (10) James and Cynthia Sturgeon; and (11) Richard Dale and Judy C. Yocum.

4. Service of the written notice of the proposed construction was attempted upon James Wendell Segó, Carmel T. Segó, Winnie Pierce and Mary Burnetta Pierce, (see Exhibit 1) via United States Certified Mail pursuant to 807 KAR 5:063 §1(1)(l) & (m). James Wendell Segó, Carmel T. Segó, Winnie Pierce and Mary Burnetta Pierce were not served with a copy of the written notice of the proposed construction via United States Certified Mail. Therefore, another copy of the written notice of the proposed construction was sent to James Wendell Segó, Carmel T. Segó, Winnie Pierce and Mary Burnetta Pierce via Federal Express and United States First Class Mail. James Wendell Segó, Carmel T. Segó, Winnie Pierce and Mary Burnetta Pierce were served via Federal Express on March 22, 2019 (See Exhibit 3).

5. Service of the written notice of the proposed construction was attempted upon Nathan C. Maulden, (see Exhibit 1) via United States Certified Mail pursuant to 807 KAR 5:063 §1(1)(l) & (m). Nathan C. Maulden was not served with a copy of the written notice of the proposed construction via United States Certified Mail. Therefore, another copy of the written notice of the proposed construction was sent to Nathan C. Maulden via Federal Express and United States First Class Mail. Nathan C. Maulden was served via Federal Express on March 22, 2019 (See Exhibit 4).

6. Service of the written notice of the proposed construction was attempted upon Edward H. and Mable Lush, (see Exhibit 1) via United States Certified Mail pursuant to 807 KAR 5:063 §1(1)(l) & (m). Edward H. and Mable Lush were not served with a copy of the written notice of the proposed construction via United States Certified Mail. Therefore, another copy of the written notice of the proposed construction was sent to Edward H. and Mable Lush

via Federal Express and United States First Class Mail. Edward H. and Mable Lush were served via Federal Express on February 22, 2019 (See Exhibit 5).

Further Affiant saith not.


Felix H. Sharpe



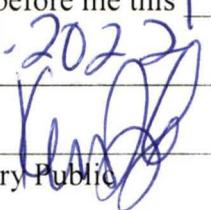
COMMONWEALTH OF KENTUCKY)

)SS:

COUNTY OF JEFFERSON)

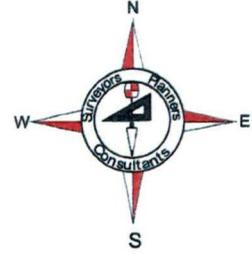
SUBSCRIBED AND SWORN to before me this 13 day of May, 2019

My commission expires: 6-2-2022


Notary Public

LANDMARK SURVEYING CO., INC.

15 N.E. 3RD STREET · WASHINGTON, INDIANA 47501
PHONE: 812.257.0950 · WEBSITE: WWW.LANDMARKSURVEYINGCO.COM
DARREN L. HELMS, P.S., PRESIDENT
DENNIS N. HELMS, P.S., CPESC, VICE-PRESIDENT



Landowner and Adjacent Landowner List

Wax Site

Shelia K. Utz
453 Lock Road
Butler, KY 41006

Edward H. and Mable Lush
13587 Peonia Road, Unit 2
Clarkson, KY 42726

Gail Lush, Houston Lush,
Linda Lush and James H. Lush
13587 Peonia Road, Unit 360
Clarkson, KY 42726

Houston and Mabeline Lush
13007 Peonia Road
Clarkson, KY 42726

Edmonson County Water District
P.O. Box 208
Brownsville, KY 42210

Nathan C. Maulden
12517 Peonia Road
Clarkson, KY 42726

Marjorie Darlene Childress
4314 Sexton Lane
Dallas, TX 75229

Thomas and Nancy Milas
12728 Peonia Road
Clarkson, KY 42726

Rick and Sharon Hiser
c/o Chad K. and Daniel E. Peyton
10900 Electron Drive, Suite 100
Louisville, KY 40299

Kirk Cummings
1609 Dawn Drive
Louisville, KY 40216

James Wendell Segoe, Carmel T.
Segoe, Winnie Pierce and
Mary Burnetta Pierce
7905 Jonquil Drive
Louisville, KY 40258

Domingo and Venita L. Laracuenta
12600 Peonia Road
Clarkson, KY 42726

James E. and Cynthia Sturgeon
P.O. Box 58473
Louisville, KY 40268

Richard Dale and Judy C. Yocum
12736 Peonia Road
Clarkson, KY 42726

Darren L. Helms
Darren L. Helms, P.L.S. 3386

JAN. 24, 2019
Date



**Sheila K. Utz
453 Lock Road
Butler, Kentucky 41006**

Public Notice

Kentucky RSA #3 Cellular General Partnership is a Kentucky general partnership that markets its services as Bluegrass Cellular. Bluegrass Cellular has been serving Central Kentucky with wireless communications services for over 20 years.

Kentucky RSA #3 Cellular General Partnership is applying to the Public Service Commission of the Commonwealth of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new cellular facility to provide cellular telephone service. This facility will include a 240 foot tower and an equipment shelter to be located at 12523 Peonia Road, Clarkson, Grayson County, Kentucky, 42726. A map showing the location is attached.

The Commission invites your comments regarding this proposed construction. Also, the Commission wants you to be aware of your right to intervene in this matter. Your comments and request for intervention should be addressed to:

**Executive Director's Office
Public Service Commission of Kentucky
P.O. Box 615
Frankfort, Kentucky, 40602.**

Please refer to Case Number 2019-00045 in your correspondence.

Bluegrass Cellular welcomes the opportunity to serve and provide wireless service in your community! (For more information, please check us out online at www.myblueworks.com)

**Gail Lush, Houston Lush,
Linda Lush and James H. Lush
13587 Peonia Road, Unit 360
Clarkson, Kentucky 42726**

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**Houston and Mabeline Lush
13007 Peonia Road
Clarkson, Kentucky 42726**

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**Edmonson County Water District
P.O. Box 208
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**Marjorie Darlene Childress
4314 Sexton Lane
Dallas, Texas 75229**

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**Thomas and Nancy Milas
12728 Peonia Road
Clarkson, Kentucky 42726**

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**Rick and Sharon Hiser
c/o Chad K. and Daniel E. Peyton
10900 Electron Drive, Suite 100
Louisville, Kentucky 40299**

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**Kirk Cummings
1609 Dawn Drive
Louisville, Kentucky 40215**

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Domingo and Venita L. Laracuente
12600 Peonia Road
Clarkson, Kentucky 42726

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**Richard Dale and Judy C. Yocum
12736 Peonia Road
Clarkson, Kentucky 42726**

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**James E. and Cynthia Sturgeon
P.O. Box 58473
Louisville, Kentucky 40268**

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SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Gail Lush, Houston Lush,
Linda Lush, James H. Lush
13587 Peonia Rd, Unit 360
Clarkson, KY 42726



9590 9402 4799 8344 7761 58

2. Article Number (Transfer from service label)

018 2290 0000 9058 8184

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

Edward Lush Agent
 Address

B. Received by (Printed Name)

Edward Lush

C. Date of Delivery

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Insured Mail Restricted Delivery (over \$500)
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation
- Signature Confirmation Restricted Delivery

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Sheila K. Utz
453 Lock Rd.
Butler, KY 41006



9590 9402 4799 8344 7761 72

2. Article Number (Transfer from service label)

018 2290 0000 9058 8160

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

P. Sheels Agent
 Address

B. Received by (Printed Name)

P. Sheels

C. Date of Delivery

8/20/19

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Insured Mail Restricted Delivery (over \$500)
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation
- Signature Confirmation Restricted Delivery

Domestic Return Receipt

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<ul style="list-style-type: none"> Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> <i>[Signature]</i> <input type="checkbox"/> Agent <input type="checkbox"/> Address</p> <p>B. Received by (Printed Name) _____ C. Date of Delivery <i>2/14/11</i></p>																
<p>1. Article Addressed to: <i>Marjovic Darkne Childress</i> <i>4314 Sexton Lane</i> <i>Dallas, TX 75229</i></p>  <p>9590 9402 4799 8344 7761 10</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>																
<p>2. Article Number (Transfer from service label) 7018 2290 0000 9058 8221</p>	<p>3. Service Type</p> <table border="0"> <tr> <td><input type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input checked="" type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input checked="" type="checkbox"/> Return Receipt for Merchandise</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Insured Mail</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</td> <td></td> </tr> </table>	<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input checked="" type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation	<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Insured Mail		<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)	
<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®																
<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™																
<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery																
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<input type="checkbox"/> Insured Mail																	
<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)																	
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<ul style="list-style-type: none"> Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> <i>[Signature]</i> <input type="checkbox"/> Agent <input type="checkbox"/> Address</p> <p>B. Received by (Printed Name) _____ C. Date of Delivery _____</p>																
<p>1. Article Addressed to: <i>Edmonson Co. Water District</i> <i>P.O. Box 208</i> <i>Brownsville, KY 42210</i></p>  <p>9590 9402 4799 8344 7761 34</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>																
<p>2. Article Number (Transfer from service label) 7018 2290 0000 9058 8207</p>	<p>3. Service Type</p> <table border="0"> <tr> <td><input type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input checked="" type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input checked="" type="checkbox"/> Return Receipt for Merchandise</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Insured Mail</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</td> <td></td> </tr> </table>	<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input checked="" type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation	<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Insured Mail		<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)	
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<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery																
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<p>1. Article Addressed to: <i>Houston & Mabeline Lush</i> <i>13007 Peonia Rd.</i> <i>Clarkson, KY 42726</i></p>  <p>9590 9402 4799 8344 7761 41</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>																
<p>2. Article Number (Transfer from service label) 7018 2290 0000 9058 8191</p>	<p>3. Service Type</p> <table border="0"> <tr> <td><input type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input checked="" type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input checked="" type="checkbox"/> Return Receipt for Merchandise</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Insured Mail</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Insured Mail Restricted Delivery</td> <td></td> </tr> </table>	<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input checked="" type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation	<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Insured Mail		<input type="checkbox"/> Insured Mail Restricted Delivery	
<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®																
<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™																
<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery																
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<ul style="list-style-type: none"> Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> <i>Randall Cummings</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressed to addressee <input type="checkbox"/></p> <p>B. Received by (Printed Name) _____ C. Date of Delivery _____</p>
<p>1. Article Addressed to:</p> <p>Kirk Cummings 1609 Dawn Drive Louisville, KY 40215</p>  <p>9590 9402 4799 8344 7760 80</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> 
<p>2. Article Number (Transfer from service label)</p> <p>7018 2290 0000 9058 8252</p>	<p>3. Service Type <input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Adult Signature <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail Restrict Delivery <input checked="" type="checkbox"/> Certified Mail® <input checked="" type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Signature Confirmation <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery <input type="checkbox"/> Insured Mail <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</p>
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<ul style="list-style-type: none"> Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> <i>Matt Wilson</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressed to addressee <input type="checkbox"/></p> <p>B. Received by (Printed Name) Matt Wilson C. Date of Delivery 2-12-17</p>
<p>1. Article Addressed to:</p> <p>Rick & Sharon Hiser c/o Chad K. & Daniel Peyton 10900 Electron Drive, Suite 100 Louisville, KY 40299</p>  <p>9590 9402 4799 8344 7760 97</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input checked="" type="checkbox"/> No</p>
<p>2. Article Number (Transfer from service label)</p> <p>7018 2290 0000 9058 8245</p>	<p>3. Service Type <input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Adult Signature <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail Restrict Delivery <input checked="" type="checkbox"/> Certified Mail® <input checked="" type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Signature Confirmation <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery <input type="checkbox"/> Insured Mail <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</p>
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<p>1. Article Addressed to:</p> <p>Thomas & Nancy Milas 12728 Peonia Rd. Clarkson, KY 40226</p>  <p>9590 9402 4799 8344 7761 03</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input checked="" type="checkbox"/> No</p>
<p>2. Article Number (Transfer from service label)</p> <p>7018 2290 0000 9058 8238</p>	<p>3. Service Type <input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Adult Signature <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail Restrict Delivery <input checked="" type="checkbox"/> Certified Mail® <input checked="" type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Signature Confirmation <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery <input type="checkbox"/> Insured Mail <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</p>
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<p>1. Article Addressed to:</p> <p><i>James d Cynthia Sturgeon P.O. Box 58473 Covington, KY 40268</i></p>  <p>9590 9402 4799 8344 7760 59</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type</p> <table border="0"> <tr> <td><input type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input checked="" type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input checked="" type="checkbox"/> Return Receipt for Merchandise</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Insured Mail</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</td> <td></td> </tr> </table>	<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input checked="" type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation	<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Insured Mail		<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)	
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<p>1. Article Addressed to:</p> <p><i>Richard Dale & Judy Yocum 12736 Peonia Rd. Clarkson KY 42726</i></p>  <p>9590 9402 4799 8344 7760 42</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type</p> <table border="0"> <tr> <td><input type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input checked="" type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input checked="" type="checkbox"/> Return Receipt for Merchandise</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Insured Mail</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</td> <td></td> </tr> </table>	<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input checked="" type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation	<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Insured Mail		<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)	
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<p>1. Article Addressed to:</p> <p><i>Domingo & Venita L. Laracumte 12600 Peonia Rd. Clarkson, KY 42726</i></p>  <p>9590 9402 4799 8344 7760 66</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>3. Service Type</p> <table border="0"> <tr> <td><input type="checkbox"/> Adult Signature</td> <td><input type="checkbox"/> Priority Mail Express®</td> </tr> <tr> <td><input type="checkbox"/> Adult Signature Restricted Delivery</td> <td><input type="checkbox"/> Registered Mail™</td> </tr> <tr> <td><input checked="" type="checkbox"/> Certified Mail®</td> <td><input type="checkbox"/> Registered Mail Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Certified Mail Restricted Delivery</td> <td><input checked="" type="checkbox"/> Return Receipt for Merchandise</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery</td> <td><input type="checkbox"/> Signature Confirmation</td> </tr> <tr> <td><input type="checkbox"/> Collect on Delivery Restricted Delivery</td> <td><input type="checkbox"/> Signature Confirmation Restricted Delivery</td> </tr> <tr> <td><input type="checkbox"/> Insured Mail</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</td> <td></td> </tr> </table>	<input type="checkbox"/> Adult Signature	<input type="checkbox"/> Priority Mail Express®	<input type="checkbox"/> Adult Signature Restricted Delivery	<input type="checkbox"/> Registered Mail™	<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery	<input type="checkbox"/> Certified Mail Restricted Delivery	<input checked="" type="checkbox"/> Return Receipt for Merchandise	<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation	<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery	<input type="checkbox"/> Insured Mail		<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)	
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<input checked="" type="checkbox"/> Certified Mail®	<input type="checkbox"/> Registered Mail Restricted Delivery																
<input type="checkbox"/> Certified Mail Restricted Delivery	<input checked="" type="checkbox"/> Return Receipt for Merchandise																
<input type="checkbox"/> Collect on Delivery	<input type="checkbox"/> Signature Confirmation																
<input type="checkbox"/> Collect on Delivery Restricted Delivery	<input type="checkbox"/> Signature Confirmation Restricted Delivery																
<input type="checkbox"/> Insured Mail																	
<input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)																	
<p>2. Article Number (Transfer from service label)</p> <p>7018 2290 0000 9058 8276</p>	<p>PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt</p>																

**James Wendell Sego, Carmel T. Sego,
Winnie Pierce and Mary Burnetta Pierce
7905 Jonquil Drive
Louisville, Kentucky 40258**

Public Notice

Kentucky RSA #3 Cellular General Partnership is a Kentucky general partnership that markets its services as Bluegrass Cellular. Bluegrass Cellular has been serving Central Kentucky with wireless communications services for over 20 years.

Kentucky RSA #3 Cellular General Partnership is applying to the Public Service Commission of the Commonwealth of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new cellular facility to provide cellular telephone service. This facility will include a 240 foot tower and an equipment shelter to be located at 12523 Peonia Road, Clarkson, Grayson County, Kentucky, 42726. A map showing the location is attached.

The Commission invites your comments regarding this proposed construction. Also, the Commission wants you to be aware of your right to intervene in this matter. Your comments and request for intervention should be addressed to:

**Executive Director's Office
Public Service Commission of Kentucky
P.O. Box 615
Frankfort, Kentucky, 40602.**

Please refer to Case Number 2019-00045 in your correspondence.

Bluegrass Cellular welcomes the opportunity to serve and provide wireless service in your community! (For more information, please check us out online at www.myblueworks.com)

INGLE, KERRY

From: TrackingUpdates@fedex.com
Sent: Friday, March 22, 2019 9:17 AM
To: INGLE, KERRY
Subject: FedEx Shipment 774761430668 Delivered

Your package has been delivered

Tracking # 774761430668

Ship date:
Thu, 3/21/2019

Kerry W. Ingle
DINSMORE & SHOHL
LLP
LOUISVILLE, KY 40202
US

Delivery date:
Fri, 3/22/2019 9:12
am

Winnie Pierce, Mary
Burnetta Pierce
James Segó, Carmel
Segó
7905 Jonquil Drive
LOUISVILLE, KY 40258
US

Delivered

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number: 774761430668

Status: Delivered:
03/22/2019 09:12 AM
Signed for By:
Signature not required

Reference: 21963.48

Signed for by: Signature not required

Delivery location: LOUISVILLE, KY

Delivered to: Residence

Service type: FedEx Priority Overnight®

Packaging type: FedEx® Envelope

Number of pieces: 1

Weight: 0.50 lb.

Special handling/Services: Residential Delivery

Deliver Weekday

Standard transit: 3/22/2019 by 10:30 am

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 8:17 AM CDT on 03/22/2019.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Standard transit is the date and time the package is scheduled to be delivered by, based on the selected service, destination and ship date. Limitations and exceptions may apply. Please see the FedEx Service Guide for terms and conditions of service, including the FedEx Money-Back Guarantee, or contact your FedEx Customer Support representative.

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Thank you for your business.

**Nathan C. Maulden
12517 Peonia Road
Clarkson, Kentucky 42726**

Public Notice

Kentucky RSA #3 Cellular General Partnership is a Kentucky general partnership that markets its services as Bluegrass Cellular. Bluegrass Cellular has been serving Central Kentucky with wireless communications services for over 20 years.

Kentucky RSA #3 Cellular General Partnership is applying to the Public Service Commission of the Commonwealth of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new cellular facility to provide cellular telephone service. This facility will include a 240 foot tower and an equipment shelter to be located at 12523 Peonia Road, Clarkson, Grayson County, Kentucky, 42726. A map showing the location is attached.

The Commission invites your comments regarding this proposed construction. Also, the Commission wants you to be aware of your right to intervene in this matter. Your comments and request for intervention should be addressed to:

**Executive Director's Office
Public Service Commission of Kentucky
P.O. Box 615
Frankfort, Kentucky, 40602.**

Please refer to Case Number 2019-00045 in your correspondence.

Bluegrass Cellular welcomes the opportunity to serve and provide wireless service in your community! (For more information, please check us out online at www.myblueworks.com)

INGLE, KERRY

From: TrackingUpdates@fedex.com
Sent: Friday, March 22, 2019 4:40 PM
To: INGLE, KERRY
Subject: FedEx Shipment 774761450968 Delivered

Your package has been delivered

Tracking # 774761450968

Ship date:
Thu, 3/21/2019

Delivery date:
Fri, 3/22/2019 3:32 pm

Kerry W. Ingle
DINSMORE & SHOHL
LLP
LOUISVILLE, KY 40202
US

Delivered

Nathan C. Maulden
12517 Peonia Road
CLARKSON, KY 42726
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number: 774761450968

Status: Delivered:
03/22/2019 3:32 PM
Signed for By:
Signature not required

Reference: 21963.48

Signed for by: Signature not required

Delivery location: CLARKSON, KY

Delivered to: Residence

Service type: FedEx Priority Overnight®

Packaging type: FedEx® Envelope

Number of pieces: 1

Weight: 0.50 lb.

Special handling/Services: Residential Delivery

Deliver Weekday

Standard transit: 3/22/2019 by 4:30 pm

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 3:40 PM CDT on 03/22/2019.

All weights are estimated.

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Thank you for your business.

**Edward H. and Mable Lush
13587 Peonia Road, Unit 2
Clarkson, Kentucky 42726**

Public Notice

Kentucky RSA #3 Cellular General Partnership is a Kentucky general partnership that markets its services as Bluegrass Cellular. Bluegrass Cellular has been serving Central Kentucky with wireless communications services for over 20 years.

Kentucky RSA #3 Cellular General Partnership is applying to the Public Service Commission of the Commonwealth of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new cellular facility to provide cellular telephone service. This facility will include a 240 foot tower and an equipment shelter to be located at 12523 Peonia Road, Clarkson, Grayson County, Kentucky, 42726. A map showing the location is attached.

The Commission invites your comments regarding this proposed construction. Also, the Commission wants you to be aware of your right to intervene in this matter. Your comments and request for intervention should be addressed to:

**Executive Director's Office
Public Service Commission of Kentucky
P.O. Box 615
Frankfort, Kentucky, 40602.**

Please refer to Case Number 2019-00045 in your correspondence.

Bluegrass Cellular welcomes the opportunity to serve and provide wireless service in your community! (For more information, please check us out online at www.myblueworks.com)

INGLE, KERRY

From: TrackingUpdates@fedex.com
Sent: Friday, February 22, 2019 12:39 PM
To: INGLE, KERRY
Subject: FedEx Shipment 774526494937 Delivered



Your package has been delivered

Tracking # 774526494937

Ship date:
Thu, 2/21/2019

Kerry W. Ingle
DINSMORE & SHOHL
LLP
LOUISVILLE, KY 40202
US



Delivery date:
Fri, 2/22/2019
11:35 am

Edward and Mable
Lush
13587 Peonia Road, Unit
2
CLARKSON, KY 42726
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number: [774526494937](#)

Status: Delivered:
02/22/2019 11:35 AM
Signed for By:
Signature not required

Reference: 21964.43

Signed for by: Signature not required

Delivery location: CLARKSON, KY

Delivered to: Residence

Service type: FedEx Priority
Overnight®

Packaging type: FedEx® Envelope

Number of pieces: 1

Weight: 0.50 lb.

Special Residential Delivery

handling/Services:

Deliver Weekday

Standard transit:

2/22/2019 by 4:30 pm

✉ Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 11:39 AM CST on 02/22/2019.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Standard transit is the date and time the package is scheduled to be delivered by, based on the selected service, destination and ship date. Limitations and exceptions may apply. Please see the FedEx Service Guide for terms and conditions of service, including the FedEx Money-Back Guarantee, or contact your FedEx Customer Support representative.

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Thank you for your business.



Legal Counsel.

DINSMORE & SHOHL LLP
101 South Fifth Street ^ Suite 2500 ^ Louisville, KY 40202
www.dinsmore.com

Kerry W. Ingle
502-540-2354 (Direct Dial)
kerry.ingle@dinsmore.com

February 5, 2019

Via Certified Mail
Honorable Kevin Henderson
Grayson County Judge Executive
10 Public Square
Leitchfield, Kentucky 42754

7019 2290 0000 9058 8306

U.S. Postal Service™	
CERTIFIED MAIL® RECEIPT	
<i>Domestic Mail Only</i>	
For delivery information, visit our website at www.usps.com ®.	
OFFICIAL USE	
Certified Mail Fee	Postmark Here
\$ _____	
Extra Services & Fees (<i>check box, add fee as appropriate</i>)	
<input type="checkbox"/> Return Receipt (hardcopy) \$ _____	
<input type="checkbox"/> Return Receipt (electronic) \$ _____	
<input type="checkbox"/> Certified Mail Restricted Delivery \$ _____	
<input type="checkbox"/> Adult Signature Required \$ _____	
<input type="checkbox"/> Adult Signature Restricted Delivery \$ _____	
Postage	
\$ _____	
Total Postage and Fees	
\$ _____	
Sent To	Grayson Co. CJE
Street and Apt. No., or PO Box No.	
City, State, ZIP+4®	
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

Re: Application of Kentucky RSA #3 Cellular General Partnership d/b/a Bluegrass Cellular for a Certificate of Public Convenience and Necessity to construct a new cellular facility to be located at 12523 Peonia Road, Clarkson, Grayson County, Kentucky, 42726, before the Public Service Commission of the Commonwealth of Kentucky, Case No. 2019-00045

Judge Henderson:

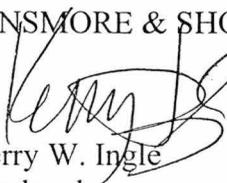
Kentucky RSA #3 Cellular General Partnership d/b/a Bluegrass Cellular is applying to the Public Service Commission of Kentucky (the "Commission") for a Certificate of Public Convenience and Necessity to construct and operate a new cellular facility to provide cellular telephone service. This facility will include a 240 foot tower and an equipment shelter to be located at 12523 Peonia Road, Clarkson, Grayson County, Kentucky, 42726. A map showing the location is attached.

The Commission invites your comments regarding the proposed construction. You also have the right to intervene in this matter.

Your comments and request for intervention should be addressed to: Executive Director's Office, Public Service Commission, P.O. Box 615, Frankfort, Kentucky 40602. Please refer to Case No. 2019-00045 in your correspondence.

Very Truly Yours,

DINSMORE & SHOHL LLP


Kerry W. Ingle
Paralegal

Enclosure

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Grayson County Judge Exec.
 10 Public Square
 Leitchfield, KY 42754



9590 9402 4799 8344 7760 35

2. Article Number (Transfer from service label)

7018 2290 0000 9058 8306

PS Form 3811, July 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature

Tammy Langdon

Agent

Addressee

B. Received by (Printed Name)

Tammy Langdon

C. Date of Delivery

2-12-19

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type

- Adult Signature
- Adult Signature Restricted Delivery
- Certified Mail®
- Certified Mail Restricted Delivery
- Collect on Delivery
- Collect on Delivery Restricted Delivery
- Insured Mail
- Insured Mail Restricted Delivery (over \$500)
- Priority Mail Express®
- Registered Mail™
- Registered Mail Restricted Delivery
- Return Receipt for Merchandise
- Signature Confirmation
- Signature Confirmation Restricted Delivery

Domestic Return Receipt

PUBLIC NOTICE

Kentucky RSA #3 Cellular
General Partnership proposes
to construct a cellular
communications

TOWER

near this site. If you have any
questions please contact:

Kentucky RSA #3 Cellular	Executive Director
General Partnership	The Public Service Commission
P.O. Box 5812	215 Center Boulevard
2902 King Road	P.O. Box 915
Ellenwood, KY 42701	Frankfort, KY 42302

Please refer to
Case #2019-00045
in your correspondence.



PUBLIC NOTICE
The City of [illegible]
is hereby notifying the public that
TOWER
is located on [illegible]
at the intersection of [illegible]
and [illegible].
Please refer to
[illegible] for more information.







FOR SALE

PUBLIC NOTICE

**Kentucky RSA #3 Cellular
General Partnership proposes
to construct a cellular
communications**

TOWER

**on this site. If you have any
questions please contact:**

**Kentucky RSA #3 Cellular
General Partnership
P. O. Box 5012
2902 Ring Road
Elizabethtown, KY 42701**

**or
Executive Director,
The Public Service Commission
211 Sower Boulevard
P. O. Box 615
Frankfort, KY 40602**

**Please refer to
Case #2019-00045
in your correspondence.**

W TOWER LE



PUBLIC NOTICE
TOWER

AFFP

NOTICE Kentucky RSA #3 Cellula

Affidavit of Publication

STATE OF KY }
COUNTY OF GRAYSON } SS

NOTICE

Kentucky RSA #3 Cellular General Partnership d/b/a Bluegrass Cellular is applying to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular radio telecommunications service in rural service area #3 of the Commonwealth of Kentucky (Wax Cell Site). The facility is a 240 tower and an equipment shelter to be located at 12523 Peonia Road, Clarkson, Grayson County, Kentucky, 42726. Your comments and requests for intervention should be addressed to: Executive Director's Office, Public Service Commission, Post Office Box 615, 211 Sower Boulevard, Frankfort, Kentucky 40602. Please refer to Case No. 2019-00045 in your correspondence.

Alicia Chambers, being duly sworn, says:

That she is Accounting Clerk of the News Gazette, a daily newspaper of general circulation, printed and published in Leitchfield, Grayson County, KY; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

February 16, 2019, February 23, 2019

That said newspaper was regularly issued and circulated on those dates.

SIGNED:

Alicia Chambers
Accounting Clerk

Subscribed to and sworn to me this 23rd day of February 2019.

Melanie Miller
Melanie Miller, , Grayson County, KY

My commission expires: September 26, 2019

00144356 00635016

KERRY INGLE
43ND-DINSMORE & SHOL LLP
101 S 5TH ST
SUITE 2500
LOUISVILLE, KY 40202



Retired Teachers holds mid-winter meeting

SUBMITTED

The mid-winter meeting provided Grayson County Retired Teachers Association with information from Debbie Meyers about a new membership program, Mission of Hope. The program is looking for mentors for its Tuesday after school program beginning in September. There will be a kick-off at the Centre on Main on March 18 from 4 to 6 p.m.

Alfreda Weedman provided information regarding legislation and possible insurance changes.

Pat Hackley provided the devotional. Everyone is encouraged to invite their former colleagues to join GCRTA. The dues are only \$10, and the benefits of learning about issues impacting the group

is invaluable.

The Kentucky Retired Teachers' State Convention will be held in Louisville, Kentucky in April. Any GCRTA member who would like to attend should contact either president Linda French or Jenice Bratcher.

The third annual Valentine's flower door prize drawing was also held. Winners and the generous, talented local florists who donated were Mary Leslie Davis (For Myself Florist), Carolyn Thomason (Designs by Brad), Kay Decker (Raye's Flowers), Pat Hackley (Whoop De Do Designs) and Theresa Basham (Gibson's Florist).

The association's next meeting will be held on April 12 at 10 a.m. at the Board of Education. All retired teachers are welcome.



The Grayson County Retired Teachers Association's third annual Valentine's flower door prize drawing was held recently. Winners and the generous, talented local florists who donated were: front row: Mary Leslie Davis (For Myself Florist) and Carolyn Thomason (Designs by Brad); and back row: Kay Decker (Raye's Flowers), Pat Hackley (Whoop-De-Do Design) and Theresa Basham (Gibson's Florist).

G.C. NEWS-GAZETTE

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PLACE YOUR AD TODAY! 270-259-9622 (option 2) classifieds@gcnnews gazette.com

OUR HOURS: 8:00am-4:30pm
Deadlines: Saturday's paper 12pm Thursday

VISA • M/C • CHECK

ANNOUNCEMENTS	0107 Special Notice DONATE YOUR CAR FOR BREAST CANCER! Help United Breast Cancer Foundation education, prevention, & support programs. FAST FREE PICKUP 24 HR RESPONSE - TAX DEDUCTION 1-877-624-2030	0107 Special Notice DONATE YOUR CAR, TRUCK OR BOAT TO HENRIE! For The Blind, Free 3 Day Vacation, Tax Deductible, Free Towing, All Paperwork Taken Care Of! CALL 1-866-713-1593	0107 Special Notice REDUCE YOUR CAR TRUCK OR BOAT TAXES! Stop Payments & Interest! Stop Garnishments! 100% FREE Consultation Call Now 1-855-398-3085	0107 Special Notice WANT SMART & COMPLETE Home Security. Easily manage anywhere. Professional installations only as follows. \$0 Activation. Call For a Free Quote. Contract Options 1-800-878-7568	0503 Auction Sales Bed and Breakfast with Restaurant Liquidation Auction. February 18, 2019, at 2:00 P.M. at MM Mini Storage, 623 MM Street, Leitchfield, Kentucky 42754.	0563 This & That DISH TV \$59.99 For 190 Channels \$14.95 High Speed Internet. Free Installation. Smart HD DVR Included. Free Voice Remote. Some restrictions apply. Call 1-855-633-4574	0955 Legals WILCO Kentucky RSA #2 Cellular Cellular Partnership #10/10 Business Cellular is applying to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular radio telecommunications service in overall service area #2 of the Commonwealth of Kentucky (West-Central). The facility is a 240 tower and an equipment shelter to be located at 12525 Pleasure Road, Clarkson, Grayson County, Kentucky, 42776. Your comments and requests for intervention should be addressed to Executive Director's Office, Public Service Commission, Post Office Box 615, 211 Sower Boulevard, Frankfort, Kentucky 40602. Please refer to Case No. 2019-00405 in your correspondence.
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0107 Special Notice *STOP STRUGGLING ON THE STAIRS* Give your life a lift with an ACORN STAIRLIFT! Call now for \$250 OFF your stairlift purchase and FREE DVD & brochure! 1-855-709-8229	0107 Special Notice 70 YEARS OLD kids are grown. Still need your life insurance? It's a big LIFE SETTLEMENT CASH PAYOUT! smart? Call Beniffi Advance 1-855-419-5972	0107 Special Notice A PLACE FOR MOM: The nation's largest senior living referral service. Contact our trusted, local experts today! our service is FREE no obligation. Call 1-855-670-0186	0107 Special Notice ADVERTISE your JOB OPENING. IT'S IN THIS NEWSPAPER PLUS IT'S IN 400+ NEWSPAPERS IN KY for only \$250. Save time and money by making one call for all! For more information, contact the classified department of this newspaper or call 1-800-223-8821. ADMIN: SHERRYL@GNCN.COM	0107 Special Notice APPLYING FOR SOCIAL SECURITY Disability or Appealing a Denied Claim? Call Bill Gordon & Assoc., Social Security Disability Attorneys. Call 1-866-540-5400. Free Consultations. Local Attorneys Nationwide (Mail: 2420 N.W. Washington St., Office: Broward Co. (TXAM) [B])	0107 Special Notice AT&T INTERNET Get More For Your High-Speed Internet Thing. Starting at \$40/month w/12-mo. agmt. Includes 18 hrs of data per month. Ask us how to bundle and SAVE! Go to www.att.com for more info. Call today 1-877-686-4720	0107 Special Notice ATTENTION ALL HOMEOWNERS in jeopardy of foreclosure? We can help stop your home from foreclosure. The Foreclosure Defense Institute can help save your home. The call is absolutely free 1-800-758-0070	0107 Special Notice BATHROOM RENOVATIONS. EASY ONE DAY updates. We specialize in safe bathing. Grab bars, no slip flooring & sealed showers. Call for a free in-home consultation. 1-844-319-3621	0107 Special Notice BECOME A PUBLISHED AUTHOR! Publications sold at all major secular & specialty Christian bookstores. Call Christian Faith Publishing for your FREE author submission kit. 1-877-622-6586	0107 Special Notice BECOME A PUBLISHED AUTHOR. We want to Read Your Book! Dorrance Publishing - Translated by Authors Since 1920 Book manuscript submissions currently being reviewed. Comprehensive Services: Consultation, Production, Promotion and Distribution. Call for Your Free Author's Guide 1-855-209-2951 or visit http://dorrance.com /Kentucky	0107 Special Notice CALL EMPIRE TODAY! To schedule a FREE in-home estimate on Carpeting and Flooring. Call Today! 800-860-0392	0107 Special Notice CHARTMATIC MOVING! \$695 for most to 50% Off Leading Competitors. #1 Rated Adjustable Bed. Trusted Over 20 Years. All Mattress Types Available. Shop by Phone and SAVE! Call 1-855-890-7656	0107 Special Notice CROSS COUNTRY MOVING. \$799 long distance. Moving. Get Free quote on your long distance move 1-800-864-4508	0107 Special Notice DEALING WITH WATER DAMAGE requires immediate action. Local professionals that respond immediately. Nationwide and 24/7. No cold calls. Call today! 1-800-218-7180	0107 Special Notice DENTAL INSURANCE. Call Physicians Mutual Insurance Company for details. NOT just a discount plan. REAL coverage for 250 procedures. 844-477-8333 or 531-3111. http://www.dentalbidental.com/26/Aut6118	0107 Special Notice DO YOU HAVE CHRONIC knee or back pain? If you have insurance, you may qualify for the perfect brace or lift to no cost. Get yours today! 1-866-774-8415	0107 Special Notice DONATE YOUR CAR FOR BREAST CANCER! Help United Breast Cancer Foundation education, prevention, & support programs. FAST FREE PICKUP 24 HR RESPONSE - TAX DEDUCTION 1-877-624-2030	0107 Special Notice DONATE YOUR CAR, TRUCK OR BOAT TO HENRIE! For The Blind, Free 3 Day Vacation, Tax Deductible, Free Towing, All Paperwork Taken Care Of! CALL 1-866-713-1593	0107 Special Notice EARTHQUAKE HIGH SPEED Internet. As Low As \$14.95/month (for the first 3 months). Reliable High Speed Fiber Optic Technology. Stream Videos, Music and More! Call America Today 1-866-930-8254	0107 Special Notice ENJOY 100% guaranteed, delivered to-the-door Omaha Steaks! Makes a great holiday gift! SAVE 75% PLUS GET 4 FREE Burgers! Order The Family Feast! - ONLY \$49.99. Call 1-855-925-4783. mention code 5558FFH or visit www.omahasteaks.com/excelsior20	0107 Special Notice FDA-REGISTERED HEARING AIDS. 100% Risk-Free 45-Day Home Trial. Comfort Fit. Clear Sound. No Wax. If you decide to keep it, PAY ONLY \$299 per pair. FREE Shipping. Call Hearing Help Experts 1-844-685-4441	0107 Special Notice FINANCIAL BENEFITS for those facing serious illness. You may qualify for a Living Benefit Loan today up to 50 percent of your life insurance policy. Death Benefit! Free information! Call 1-855-701-9081	0107 Special Notice FRONTIER COMMUNICATIONS internet. Serious Speed. Serious Service. Broadband Max. \$19.99/mo. or Broadband Ultra. \$61.97/mo. Both include FREE HD Cable! Call for details! 1-855-746-1835	0107 Special Notice GET A SMARTPHONE for \$0 DOWN! with AT&T Next@ and AT&T Next Every Year! \$250 Gift Card for switching to AT&T! *Must well-qualified credit. Limits & restrictions apply! 1-866-478-8659	0107 Special Notice GET AN OLDER CAR, VAN OR SUV? Do the home thing. Don't let it be the Humane Society. Call 1-855-443-0865	0107 Special Notice HAVE \$10K IN DEBT? Credit Cards, Medical Bills, Personal Loans, Be Debt Free in 24-48 Months. Call NATIONAL DEBT RELIEF Know Your Options. Get a FREE debt relief quote. Call 1-877-934-0632	0107 Special Notice Highest Rated SATELLITE INTERNET - 25Mbps starting at \$49.99/mo! Get More Data FREE! 0% Prom. Data. FAST download speeds. WiFi built in! FREE Standard installation for lease customers! Limited Time. Call 1-844-604-1300	0107 Special Notice INVENTORS - FREE INFORMATION PACKAGE! Have your product idea developed affordably by the Research & development pros and presented to manufacturers. Call 1-844-800-3328 for a Free idea Starter Guide. Submit your idea for a free consultation.	0107 Special Notice LUNG CANCER! And Age 60+. You And Your Family May Be Entitled To Significant Cash Award. Call 888-888-8888 for information. No Risk. No Money Out Of Pocket. 1-866-626-1890	0107 Special Notice MEDICAL-GRADE HEARING AIDS for LESS THAN \$200! FDA-Registered. Clear, clear sound, state-of-the-art features & no audiology needed. Try it RISK FREE for 45 Days! CALL 1-866-544-2822	0107 Special Notice Medicare, AMERICA'S PREMIER Mobile Medical Alert System. Whether You're Home or Away. For Safety and Peace of Mind. No Long Term Contract! Free Brochure! Call Today! 1-800-640-5776	0107 Special Notice NEW STARTING BASE PAY - 30.00 cm w/option to make all cm for Class A CO. Filled Drivers, Excellent Benefits, Home Weekends. Call 800-649-9915 or www.koytdon.com	0107 Special Notice PORTABLE OXYGEN CONCENTRATOR May be Covered by Medicare! 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Our customer care agents await your call. 1-877-349-8574	0107 Special Notice SPECTRUM TRIPLE PLAY! TV, Internet & Voice for \$29.99 ea. 60 MB per second speed. No contract or commitment. More Channels. Faster internet. Unlimited Voice. Call 1-844-309-2853	0107 Special Notice START SAVING BIG On Medication! Up To 90% Savings from PHARMACEUTICALS Over 3500 Medications Available! Prescription Req'd. Pharmacy Checker Approved. Call Today for Your Free Price Quote. 844-774-3350	0107 Special Notice STAY IN YOUR HOME LONGER with an American Standard Walk in Bathtub. Receive up to \$1,500 off, including a free toilet, and a lifetime warranty on the tub and installation. Call us at 1-877-530-1935	0107 Special Notice SUFFERING FROM AN ADDICTION to Alcohol, Opiates, Prescription Painkillers or other DRUGS? There is hope! Call Today to speak with someone who cares. Call NOW 1-888-706-5851	0107 Special Notice TRAIN TODAY for your CDL in one of our Seven locations in Kentucky Class A and Class B Training. Lake Cumberland Rd. 877-308-9661. Call today to enroll.	0135 Personal LOOKING FOR LOVE or just a friendly chat? Connect with Ladies singles in your area. 18+ Plus Call 1-866-686-9836. Try it free	0135 Personal MAKE A CONNECTION. Real People. Flirt Chat. Meet singles right now! Call Liveline. Try it Free! Call now 1-888-979-2264	0135 Personal Tired of the same old dating sites? Meet real people in your area and make a new connection on your terms! 18+ only. Call 1-855-850-1741	0135 Personal WAGRA and CALLUSERS! Cut your drug costs! SAVE \$50-\$50 Pills for \$99.00. FREE Shipping! 100% Guaranteed and Discreet. Call 1-855-533-2311	0527 Sporting Goods GUN. GOLF & BOWS. BUY-SELL-TRUCK-LOOK. Cave City Convention Center. 502 Mammoth Cave Dr. Cave City, Saturday, February 16th 9AM-5PM	0563 This & That DIRECTV & AT&T. 151 Channels & 1000s of Shows/Movies On Demand (w/SELECT Package) AT&T Internet 99 Percent Reliability. Unlimited Texts to 120 Countries w/AT&T Wireless. Call 4 FREE Quote Call 1-866-292-5435.	0563 This & That DIRECTV NOW. No Satellite Needed. \$40/month. 65 Channels. Stream Breaking News. Live Events. Sports. On Demand Titles. No Annual Contract. No Commitment. Call 1-833-743-7162	0955 Legals NOTICE OF PUBLIC HEARING The Public Service Commission of Kentucky issued an order on January 3, 2019, scheduling a hearing for the purpose of receiving public comment and cross-examining witnesses of Kentucky Utilities Company ("KU") and intervenors in Case No. 2018-02006, which is the Application of KU for an Adjustment of its Electric Rates. This hearing will be streamed live and may be viewed on the PSC website, psc.ky.gov .
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SCOTT, TRUPHY & DANIEL

General Trades Carpenter
MUST HAVE 5-7 YEARS EXPERIENCE
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YEAR-ROUND WORK
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401k
Profit Sharing Program
Paid Vacation
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60% of our Workforce has been with our company from 15-35 years
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Hartz Contracting, LLC
1855 Old Calhoun Rd., Owensboro
M-F 7am-4:00pm
Saturday by appointment
(270)926-6554

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Inquiries To:
TOLL FREE
1-888-720-2826
Stacy Bengtson
HR Manager

Submit resume by email to:
BCH@hartzcontracting.com
or mail to:
Hartz Office Address
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HELLO! Read the Classifieds

International Cooking Class Series

SUBMITTED
You can travel around the world in this 4-part International Cooking Series that will be taught at the Grayson County Extension Office. You will learn about the customs and cuisine of four different featured countries, and experience wonderful new tastes, recipes, food demonstrations and food sampling! Robin Felix, Grayson County Nutrition Education Program Assistant, will introduce you to healthy, nutritious foods that you can make in your own home. The weekly series will be held on Tuesday's from 5 p.m. to 6:30 p.m. on the following schedule:

April 2 — El Salvador, April 16 — Venezuela, April 9 — Germany, April 30 — Thailand
The class series is free to attend and open to the public, but advanced registration is required by calling (270) 259-3492. Participants will receive a free gift for every session they attend! Please park in the back of the building and enter in the West entrance door.

More information, enhanced functionality

New upgrades to LG&E and KU online outage map designed to empower customers

SUBMITTED
Whether it's for a few minutes, a few hours or a few days, experiencing a power outage is never convenient. Getting detailed information about the outage enables customers to make critical decisions regarding what they need to do until power is restored. For nearly a decade now, Louisville Gas and Electric Company and Kentucky Utilities Company have empowered customers by providing this important information through the utilities' online outage map. Since its launch in 2010, the map's near real-time outage data has become a valuable tool for customers, media, emergency operations and government agencies.

Now, LG&E and KU are unveiling new upgrades to the map, designed to provide better functionality and even more information for those who depend on it. Upgrades to the map, which is easily accessible from the LG&E and KU website, include the following:
Mobile interactive design — The map is now fully interactive on mobile devices, enhancing functionality and providing users with even more information on the go.
More detailed outage information — Information panels now include more outage details, when possible, giving those impacted a better idea of where outages stand within the restoration and government agencies.

New outage icons — New icons indicate a range of the number of customers impacted and enhance the viewing experience for the visually impaired.
Updated layout — The map's refreshed layout provides an updated outage information panel, user-friendly tabs to assist in reporting outages and the ability to loop the map's weather radar overlay.
Just as before, the newly updated map can be saved as an icon on mobile devices to allow for easy access. The map also continues to work in conjunction with the utilities' other tools designed to provide information and offer greater communications choices to customers, including Outage Texting. The

Outage Texting feature allows customers with up-to-date mobile information in their registered accounts to report and keep track of the status of their outage by texting 4LGEKU (454358).

OUTAGE MAP APP
LG&E and KU's outage map app has been revamped to reflect the map's new changes. Individuals with mobile devices that accept automatic updates will automatically receive the newest version of the outage map app. All other devices will populate an alert message on the app screen, notifying them the map is in need of an upgrade. Users can get the map by downloading the new version from the app store associated with their device.
Try out the new outage map after Feb. 14 by visiting lge-ku.com.

8-week classes begin March 18 at ECTC

SUBMITTED
Current college students as well as new students looking to complete their course work in a shorter time may take advantage of 8-week classes at Elizabethtown Community and Technical College. These options can provide more time for students to file for financial aid and prepare for the beginning of classes. Students who are currently enrolled also have the opportunity to add classes to their schedules this semester. By taking 15 credit hours per semester, students can be eligible for the 15-to-Finish Scholarship. The Work Ready Scholarship is available for many students who are working on credentials in one of five high-demand career fields, including healthcare.

SEE ECTC/PAGE B8

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NOTICE
Kentucky USA #3 Cultural General Farming/9th Inaugural Calendar is applying to the Public Service Commission of Kentucky for a Certificate of Public Convenience and Necessity to construct and operate a new facility to provide cellular radio telecommunications service in rural service areas of the Commonwealth of Kentucky (Wax Call Site). The facility is a 240 tower and an equipment shelter to be located at 12522 Pines Road, Clarkston, Grayson County, Kentucky, 42726. Your comments and requests for intervention should be addressed to Executive Director's Office, Public Service Commission, Post Office Box 615, 215 S. Green Boulevard, Frankfort, Kentucky 40602. Please refer to Case No. 2019-00045 in your correspondence.

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— SCOTT, MURPHY & DANIEL —

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Background check & drug screen performed

YEAR-ROUND WORK
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401k
Profit Sharing Program
Paid Vacation
Strong prior work references required
Pre-employment physical required

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BUILDING CONSTRUCTION SUPERINTENDENT

Start 2019 With A Successful New Career

HARTZ Contracting SMD

A minimum of 7-10 years of experience in general building construction. We continue our successful growth and need additional building superintendents to join our family team.

60% of our Workforce has been with our company from 15-35 years
"We've got to be doing something good for our people."

- Great Wages
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- Short/Long Term Disability Ins.
- 401K Profit Sharing Program
- Paid Holidays/Vacation
- Year-End Production Bonus

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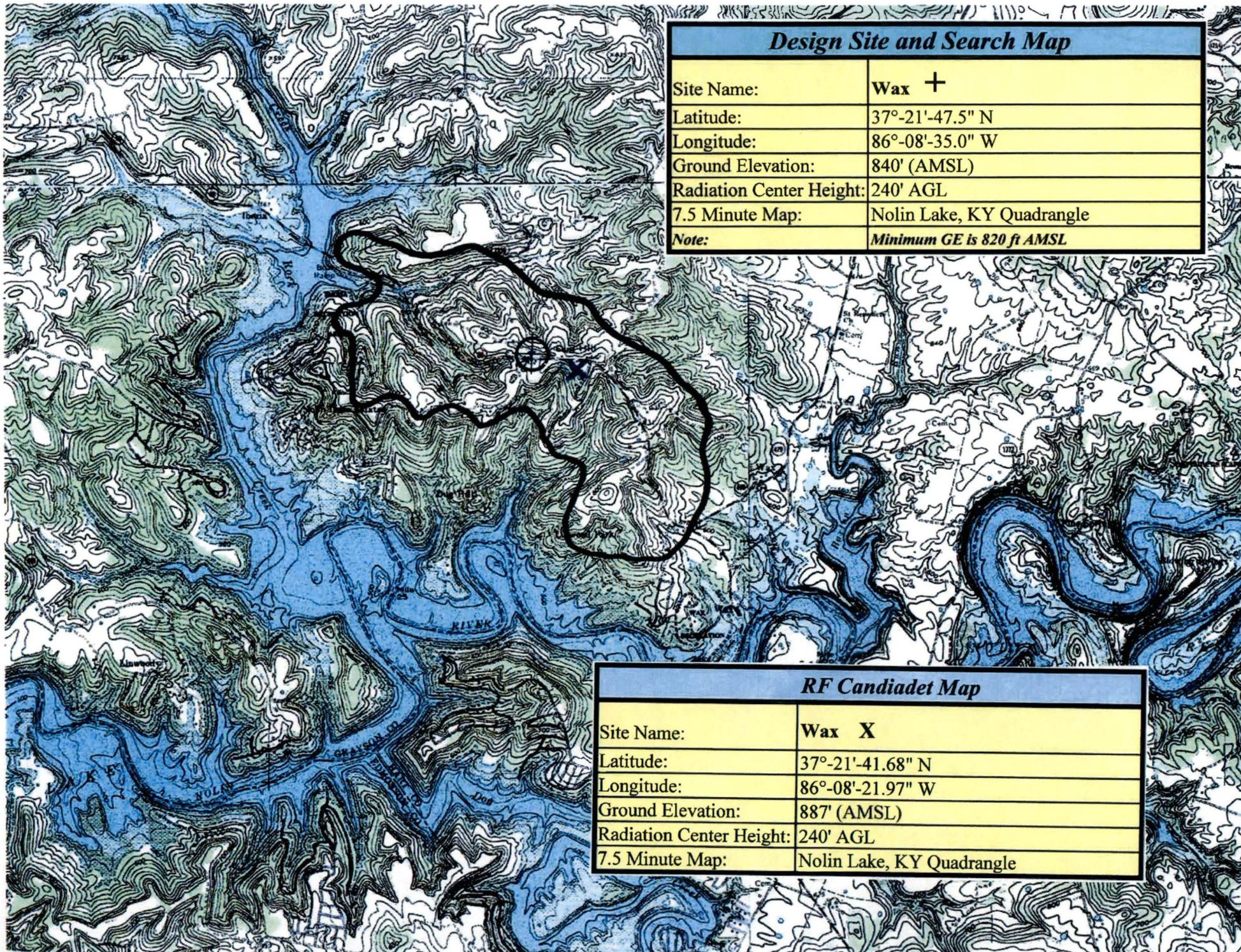
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1855 Old Calhoun Rd., Owensboro
M-F 7am-4:00pm
Saturday by appointment
(270)926-6554

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Stacy Bengston
HR Manager

Submit resume by email to:
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Hartz Office Address

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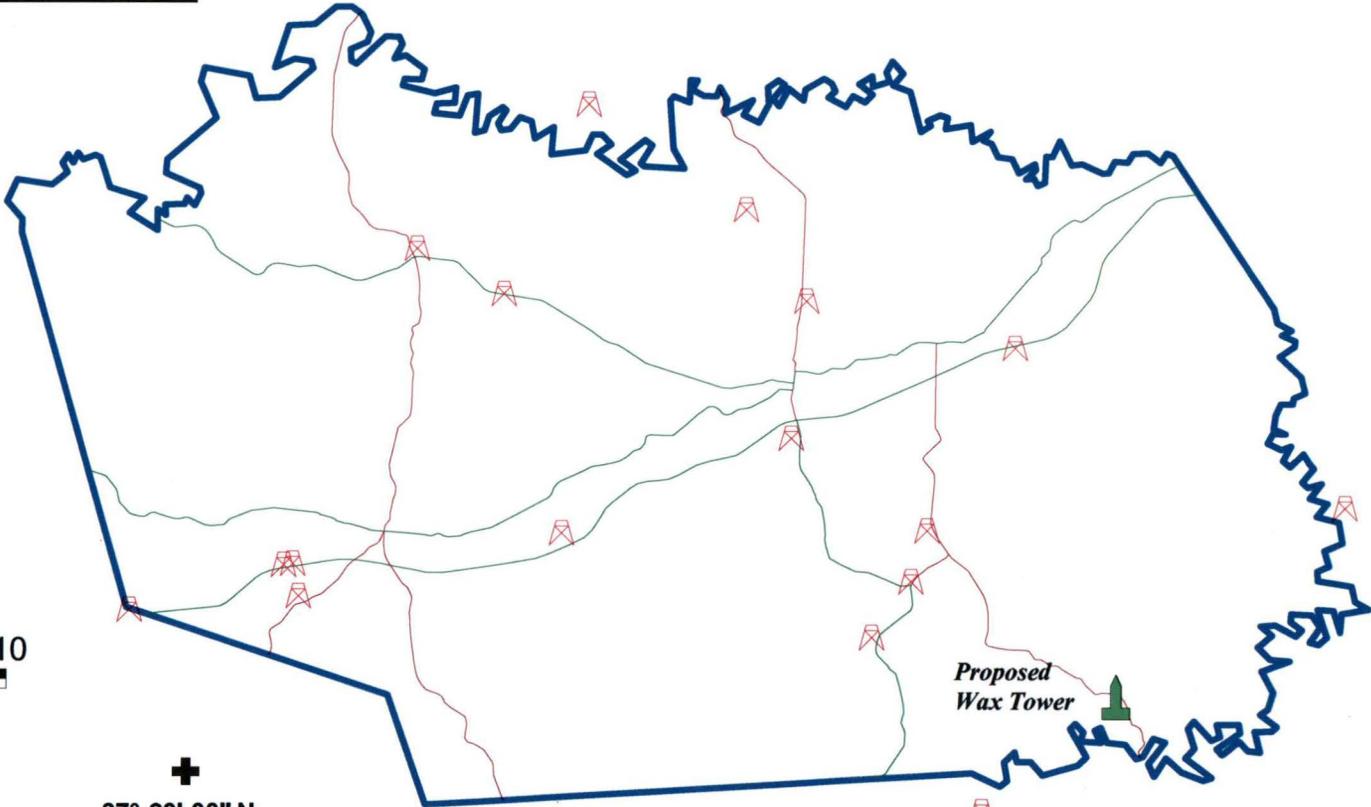
Design Site and Search Map	
Site Name:	Wax +
Latitude:	37°-21'-47.5" N
Longitude:	86°-08'-35.0" W
Ground Elevation:	840' (AMSL)
Radiation Center Height:	240' AGL
7.5 Minute Map:	Nolin Lake, KY Quadrangle
Note:	Minimum GE is 820 ft AMSL

RF Candiadet Map	
Site Name:	Wax X
Latitude:	37°-21'-41.68" N
Longitude:	86°-08'-21.97" W
Ground Elevation:	887' (AMSL)
Radiation Center Height:	240' AGL
7.5 Minute Map:	Nolin Lake, KY Quadrangle

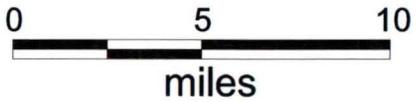
-  Grayson County Boundary
-  Wireless Tower Locations Registered with the FCC
-  Proposed Tower Location
-  Tick Marks

Prepared By: LLGS Engineering January 24, 2019

+
37°-40'-00" N
86°-10'-00" W



*Proposed
Wax Tower*



+
37°-20'-00" N
86°-35'-00" W

***Information on Towers Registered with the FCC
in Grayson County and 1/2 Mile Area Outside of the County Boundary***

FCC ASR No.	North Latitude	West Longitude	City, State	Tower Owner
1043035	37-24-41	86-32-12	Caneyville, KY	Kentucky RSA #3 Cellular General Partnership, dba Bluegrass Cellular
1043037	37-27-33	86-17-41	Leitchfield, KY	Kentucky RSA #3 Cellular General Partnership, dba Bluegrass Cellular
1043268	37-30-40	86-17-15	Leitchfield, KY	HERITAGE MEDIA OF KENTUCKY INC
1043431	37-24-42.6	86-31-56.6	Caneyville, KY	NEW CINGULAR WIRELESS PCS, LLC
1052138	37-25-58	86-01-49	Millerstown, KY	FM 90.1, INC.
1217206	37-29-36	86-11-16.5	Clarkson, KY	Crown Communication Inc.
1217214	37-25-24.5	86-24-14.9	Millwood, KY	Crown Communication Inc.
1217219	37-23-39.9	86-36-37.8	Morgantown, KY	Crown Communication Inc.
1235514	37-19-5.4	86-12-12.3	Mammoth Cave, KY	Powertel/Memphis, Inc.
1244902	37-31-51.2	86-28-23.9	Short Creek, KY	NEW CINGULAR WIRELESS PCS, LLC
1250554	37-24-17.9	86-14-14.4	Clarkson, KY	Tennessee Valley Authority
1258451	37-32-44.1	86-18-58.4	Leitchfield, KY	Kentucky RSA #3 Cellular General Partnership, dba Bluegrass Cellular
1268314	37-30-50	86-25-54.6	Leitchfield, KY	Mobilitie Investments II, LLC
1268315	37-35-8.1	86-23-28.8	Leitchfield, KY	Mobilitie Investments II, LLC
1280487	37-25-27.1	86-13-46.7	Clarkson, KY	Kentucky RSA #3 Cellular General Partnership, dba Bluegrass Cellular
1281698	37-23-1.9	86-15-21.7	Meredith, KY	Kentucky Utilities Company
1284809	37-23-58.9	86-31-46.8	Caneyville, KY	KENTUCKY UTILITIES COMPANY