

BOARD OF COUNTY COMMISSIONERS OF DOUGLAS COUNTY, KANSAS

WEDNESDAY, AUGUST 16, 2017

6:00 p.m.

CONSENT AGENDA

- (1) (a) Consider approval of Commission Orders; and
- (b) Consider approving 2nd amendment to the lease agreement between the City of Lawrence, Douglas County and the Bioscience Technology Business Center (BTBC) to extend the lease repayment schedule for the BTBC expansion facility located at 4950 Bob Billings Parkway for one year through 2018, as requested by the BTBC. (Lavern Epp and Adam Courtney); and
- (c) Consider approval of application for an authorized emergency vehicle permit (Ken McGovern)

REGULAR AGENDA

- (2) Big Springs Quarry update for Certification of Phase 3 Reclamation. The reclamation of Phase 3 has been reviewed by staff and found to be in compliance with the approved reclamation plan. The reclamation is being placed on the County Commission agenda with staff's recommendation that the Commission certify that reclamation of Phase 3 is complete. (Mary Miller is the Planner)
- (3) **CUP-17-00215**: Consider a Conditional Use Permit for a new 190 ft self-supporting wireless telecommunications facility (tower), located at 2138 N 1000 Rd. Submitted by MW Towers LLC for F. Dwane Richardson & Valerie Richardson, property owners of record. *Deferred by County Commission on 7/19/17. Sandra Day is the Planner.*
- (4) (a) Consider approval of Accounts Payable (if necessary)
- (b) Appointments
 - Board of Zoning Appeals (1) position 10/16
 - Building Code of Appeals Board (2) positions 12/16
 - Community Corrections Advisory Board
 - Heritage Conservation Council (3) positions
- (c) Public Comment
- (d) Miscellaneous
- (5) Adjourn

WEDNESDAY, AUGUST 23, 2017 – light meeting

WEDNESDAY, AUGUST 30, 2017

6:00 p.m.

-Public Hearing regarding the initiated process to vacate a portion of an alley in the town site of Vinland lying between lots 3 and 4 (Michael Kelly)

-Request for a one-year extension to the approval of **CUP-15-00229**: Conditional Use Permit for Burning Barrel, a specialty butcher shop, located on approximately 30 acres at 292 N 2100 Road. Request submitted by Brian Strecker, Burning Barrel LLC, property owner of record. *Approved by the BoCC on 8/12/15. Mary Miller is the Planner.*

WEDNESDAY, SEPTEMBER 6, 2017 – light or cancelled

WEDNESDAY, SEPTEMBER 13, 2017

WEDNESDAY, SEPTEMBER 20, 2017

WEDNESDAY, SEPTEMBER 27, 2017

-815 Vermont Street NRA (Britt-Crum-Cano)

WEDNESDAY, NOVEMBER 15, 2017 – light agenda

***Note:** The Douglas County Commission meets regularly on Wednesdays at 4:00 P.M. for administrative items and/or 6:00 P.M. for public items at the Douglas County Courthouse. Specific regular meeting dates that are not listed above have not been cancelled unless specifically noted on this schedule.*

Memorandum

City of Lawrence

City Manager's Office

TO: Tom Markus, City Manager
CC: Casey Toomay, Assistant City Manager
FROM: Britt Crum-Cano, Economic Development Coordinator
Diane Stoddard, Assistant City Manager
DATE: August 15, 2017
RE: Consider BTBC request for proposed lease repayment schedule on the BTBC expansion facility.

Please place the following item on the August 15, 2017 City Commission Meeting agenda:

Consider 2nd amendment to the lease agreement between the City of Lawrence, Douglas County and the Bioscience Technology Business Center (BTBC) to extend the lease repayment schedule for the BTBC expansion facility located at 4950 Bob Billings Parkway for one year through 2018, as requested by the BTBC.

Background:

The City and County are partners, along with other stakeholders, in BTBC (Bioscience and Technology Business Center) business incubator facilities and services. In January 2010, the City of Lawrence and Douglas County, Kansas entered into a lease agreement with the BTBC (formerly Lawrence-Douglas County Bioscience Authority) for the building located at 4950 Bob Billings Parkway. Commonly known as the BTBC-West or expansion facility, the City and County agreed to subsidize rent for this facility for the initial years of operations. As per Article V, Section 5.01, the BTBC,

"...agrees to pay as Basic Rent to the City and County on each February 1 and August 1 (each a "Rent Payment Date") beginning August 1, 2010 through and including August 1, 2014, the sum of \$12,500.00. On each Rent Payment Date thereafter, the BTBC shall pay as Basic Rent to the City and the County the principal portion of Basic Rent as shown on Schedule I hereto plus the Interest Portion of Basic Rent."

The BTBC submitted a letter dated February 23, 2015, requesting, "...the bond payment structure of the last five years be extended for an additional three years through 2017. Under this proposed extension, the City and County would continue to make the bond payments with semi-annual lease payments provided by BTBC."

On March 31, 2015, the City Commission considered and authorized the 1st amendment to the lease agreement which extended the BTBC expansion facility's lease repayment schedule for three years, through 2017 as requested.

Annually, since the lease was executed, the BTBC has been paying two semi-annual payments of \$12,500 each (or \$25,000 total per year), with the City and County splitting annual bond payments. Starting in 2018, BTBC rent payments are to include both an interest and principal portion that would cover all bond debt service.

Request for 2nd Amendment:

The City received a letter from the BTBC on June 27, 2017 requesting the bond payment structure of the last eight years be extended for an additional year through 2018.

If approved, the extension will provide the City an opportunity to work with BTBC staff and the County on long-term options related to the BTBC expansion facility. The BTBC contribution would remain at \$12,500 twice per year (a total of \$25,000 annually) for one extra year, through 2018. The request would result in a net decrease in BTBC rent payments of approximately \$232,200 for 2018. The City and County would cover 2018 bond debt service, estimated at approximately \$116,100 each.

Note the City has budgeted for this extension in the 2018 budget, having assumed equal payments from the City and County to cover bond debt service and the BTBC paying a total of \$25,000 in rent for the year.

The below table shows a comparison of annual rents due on the BTBC West facility with and without the public rent subsidy extended through 2018.

BTBC Expansion Facility: Comparison of Annual Rent Payments							
Year	No Public Rent Subsidy			With Public Rent Subsidy Through 2018			
	Principal	Interest	BTBC Rent Payment	BTBC Rent Payment	Rent Payment Difference	Amount Due from City (to cover difference)	Amount Due from County (to cover difference)
2018	\$115,000	\$142,193	\$257,193	\$25,000	\$232,193	\$116,096.25	\$116,096.25

A 2nd amendment to the lease agreement along with a revised basic rent schedule has been prepared to respond to the request.

In addition to the City Commission, Douglas County will need to consider approving the 2nd amendment at a future County Commission meeting.

Requested Action:

Approve 2nd amendment to the lease agreement between the City of Lawrence, Douglas County and the Bioscience Technology Business Center (BTBC) to extend the lease repayment schedule for the BTBC expansion facility located near Bob Billings Parkway on Wakarusa Drive for one year through 2018.

Attachments:

1. Lease Agreement
2. BTBC Request Letter (February 23, 2015)
3. 1st Amendment to Lease Agreement
4. BTBC Request Letter (June 27,2017)
5. 2nd Amendment to Lease Agreement
6. Updated Basic Rent Schedule
7. Cooperative Agreement

**CITY OF LAWRENCE, KANSAS,
and
DOUGLAS COUNTY, KANSAS,
As Lessors**

AND

**LAWRENCE-DOUGLAS COUNTY BIOSCIENCE AUTHORITY,
As Lessee**

LEASE AGREEMENT

Dated as of January 1, 2010

LEASE AGREEMENT

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LEASE AGREEMENT

THIS LEASE AGREEMENT dated as of January 1, 2010 (the "Lease"), between the **CITY OF LAWRENCE, KANSAS**, a municipal corporation organized and existing under the laws of the State of Kansas (the "City") and **DOUGLAS COUNTY, KANSAS**, a body corporate and politic organized and existing under the laws of the State of Kansas (the "County"), as lessors, and **LAWRENCE-DOUGLAS COUNTY BIOSCIENCE AUTHORITY, INC.**, a Kansas not for profit corporation ("LDCBA"), as lessee;

WITNESSETH:

WHEREAS, the City is authorized pursuant to Ordinance No. 8480 (the "Ordinance") and Article 12, Section 5 of the Constitution of the State of Kansas (the "Home Rule Amendment"), to purchase, acquire, construct, improve, equip, remodel, sell and lease certain facilities within its jurisdiction for economic development purposes, and to issue general obligation bonds for the purpose of paying the cost of such facilities;

WHEREAS, the County is authorized pursuant to Resolution No. HR-09-12-4 (the "Resolution") and K.S.A. 19-101 (K.S.A. 19-101, the Ordinance, the Resolution and the Home Rule Amendment collectively referred to here in as the "Act") to purchase, acquire, construct, improve, equip, remodel, sell and lease certain facilities within its jurisdiction for economic development purposes; and

WHEREAS, pursuant to the foregoing, the City and the County desire to acquire and lease the Leased Premises to the LDCBA and the LDCBA desires to lease the Leased Premises from the City and the County, for the rentals and upon the terms and conditions hereinafter set forth; and

WHEREAS, pursuant to this Lease, and so long as there is no default hereunder, the parties desire that the LDCBA manage the day-to-day operations of the Leased Premises so as to encourage economic development of bioscience and technology components of the local economy.

NOW, THEREFORE, in consideration of the premises and the mutual representations, covenants and agreements herein contained, the City, the County and the LDCBA do hereby represent, covenant and agree as follows:

ARTICLE I

DEFINITIONS

Section 1.1. Definitions of Words and Terms. In addition to any words and terms defined elsewhere in this Lease, the following words and terms as used in this Lease shall have the following meanings:

"Additional Rent" means the additional rental described in **Sections 4.1, 5.2 and 6.2** of this Lease.

"Annual Interest Rate" means the lesser of (a) an interest rate equal to the City's average annual investment rate for the City's idle funds for the previous calendar year plus 50 basis points, or (b) 4.00%.

"Authorized City Representative" means the City Manager or his or her designee.

“Authorized County Representative” means the County Administrator or his or her designee.

“Authorized LDCBA Representative” means the President of the LDCBA or his or her designee.

“Basic Rent” means the rental described in **Section 5.1** of this Lease.

“Bonds” means the City’s Taxable General Obligation Bonds (Lawrence-Douglas County Bioscience Project), Series 2010-A in the estimated principal amount of \$2,900,000.

“Cooperation Agreement” means that certain Cooperation Agreement between the City and the County dated as of January 1, 2010.

“Event of Default” means any Event of Default as described in **Section 12.1** of this Lease.

“Expenses” means all expenses of any kind incurred with respect to the Leased Premises and paid by LDCBA, the City or the County.

“Full Insurable Value” means the full replacement cost of the Leased Premises, as determined by the City and the County.

“Lease” means this Lease Agreement, between the City and the County, as lessors, and the LDCBA, as lessee, as from time to time amended and supplemented in accordance with the provisions of this Lease.

“Lease Term” means the period from the effective date of this Lease until the expiration thereof pursuant to **Section 3.2** of this Lease.

“Leased Premises” means all of the real estate described in **Exhibit A** attached hereto and by this reference made a part hereof, including all buildings, structures, improvements, fixtures, machinery and equipment related thereto.

“Leasehold Improvements” means certain upgrades to the HVAC system on the Leased Premises and other improvements as proposed by LDCBA to the Management Committee in accordance with **Section 4.1** hereof.

“Net Proceeds” means, when used with respect to any insurance or condemnation award with respect to the Leased Premises, the gross proceeds from the insurance or condemnation award with respect to which that term is used remaining after payment of all expenses (including attorneys’ fees, trustee’s fees and any extraordinary expenses of the City and the County) incurred in the collection of such gross proceeds.

“Net Revenues” means, for the period of determination, all Revenues less all Expenses.

“Rent” means Basic Rent and Additional Rent.

“Revenues” means all revenues of any kind generated by the Leased Premises and paid to LDCBA.

Section 1.2. Rules of Interpretation.

(a) Words of the masculine gender shall be deemed and construed to include correlative words of the feminine and neuter genders.

(b) Unless the context shall otherwise indicate, words importing the singular number shall include the plural and vice versa, and words importing persons shall include firms, associations and corporations, including governmental entities, as well as natural persons.

(c) Wherever in this Lease it is provided that either party shall or will make any payment or perform or refrain from performing any act or obligation, each such provision shall, even though not so expressed, be construed as an express covenant to make such payment or to perform, or not to perform, as the case may be, such act or obligation.

(d) All references in this instrument to designated "Articles," "Sections" and other subdivisions are, unless otherwise specified, to the designated Articles, Sections and subdivisions of this instrument as originally executed. The words "herein," "hereof," "hereunder" and other words of similar import refer to this Lease as a whole and not to any particular Article, Section or other subdivision.

(e) The Table of Contents and the Article and Section headings of this Lease shall not be treated as a part of this Lease or as affecting the true meaning of the provisions hereof.

ARTICLE II

REPRESENTATIONS

Section 2.1. Representations by the City. The City hereby represents and warrants that the City is a municipal corporation duly organized and validly existing under the laws of the State of Kansas. Under the provisions of the Act, the City has lawful power and authority to enter into the transactions contemplated by this Lease and to carry out its obligations hereunder. By proper action of its governing body, the City has been duly authorized to execute and deliver this Lease, acting by and through its duly authorized officers.

Section 2.2. Representations by the County. The County hereby represents and warrants that the County is a body corporate and politic duly organized and validly existing under the laws of the State of Kansas. The County has lawful power and authority to enter into the transactions contemplated by this Lease and to carry out its obligations hereunder. By proper action of its governing body, the County has been duly authorized to execute and deliver this Lease, acting by and through its duly authorized officers.

Section 2.3. Representations by the LDCBA. The LDCBA makes the following representations as the basis for the undertakings on its part herein contained:

(a) The LDCBA is a 501(c)(6) not for profit corporation validly existing and in good standing under the laws of the State of Kansas and duly qualified to do business in the State of Kansas.

(b) The LDCBA has lawful power and authority to enter into this Lease and to carry out its obligations hereunder and by proper corporate action of its Board of Directors, the LDCBA

has been duly authorized to execute and deliver this Lease, acting by and through its duly authorized officers.

(c) The execution and delivery of this Lease, the consummation of the transactions contemplated hereby, and the performance of or compliance with the terms and conditions of this Lease by the LDCBA will not conflict with or result in a material breach of any of the terms, conditions or provisions of, or constitute a material default under, any mortgage, deed of trust, lease or any other corporate restrictions or any agreement or instrument to which the LDCBA is a party or by which it or any of its property is bound, or the LDCBA's Articles of Incorporation or Bylaws or any order, rule or regulation applicable to the LDCBA or any of its property of any court or governmental body, or constitute a material default under any of the foregoing, or result in the creation or imposition of any prohibited lien, charge or encumbrance of any nature whatsoever upon any of the property or assets of the LDCBA under the terms of any instrument or agreement to which the LDCBA is a party.

(d) The Leased Premises will comply with all presently applicable building and zoning, health, environmental and safety ordinances and laws, and to the best of its knowledge, without independent investigation, the Leased Premises will comply with all other applicable laws, rules and regulations.

ARTICLE III

GRANTING PROVISIONS

Section 3.1. Granting of Leasehold Estate. The City and the County hereby rent, lease and let the Leased Premises to the LDCBA, and the LDCBA hereby rents, leases and hires the Leased Premises from the City and the County, for the rentals and upon and subject to the terms and conditions herein contained.

Section 3.2. Lease Term.

(a) This Lease shall become effective upon its delivery, and subject to sooner termination pursuant to the provisions of this Lease, shall have an initial term commencing as of the date the City and the County take title to the Leased Premises, which date is expected to be on or about January 26, 2010, and terminating on January 31, 2035.

(b) The City and the County may terminate this Lease upon no less than five years' written notice to LDCBA.

Section 3.3. Possession and Use of the Leased Premises.

(a) The City and the County covenant and agree that as long as neither the City nor the County has exercised any of the remedies set forth in **Section 12.2(c)** following the occurrence and continuance of an Event of Default, the LDCBA shall have sole and exclusive possession of the Leased Premises (subject to the City's and the County's right of access and inspection pursuant to this Lease) and shall and may peaceably and quietly have, hold and enjoy the Leased Premises during the Lease Term. The City and the County covenant and agree that they will not take any action, other than expressly pursuant to **Article XII** of this Lease, to prevent the LDCBA from having quiet and peaceable possession and enjoyment of the Leased Premises during the Lease Term and will, at the request and expense of the LDCBA, cooperate with

the LDCBA in order that the LDCBA may have quiet and peaceable possession and enjoyment of the Leased Premises.

(b) Subject to the provisions of this Section, the LDCBA shall have the right to use the Leased Premises for a bioscience and technology incubator and/or graduation facility, and/or for any other purpose that is consistent with the economic development mission of the LDCBA.

(c) The LDCBA shall comply with all statutes, laws, ordinances, orders, judgments, decrees, regulations, directions and requirements of all federal, state, local and other governments or governmental authorities, now or hereafter applicable to the Leased Premises or to any adjoining public ways, as to the manner of use or the condition of the Leased Premises or of adjoining public ways. The LDCBA shall also comply with the mandatory requirements, rules and regulations of all insurers under the policies carried under the provisions of **Article VII** hereof. The LDCBA shall pay all costs, expenses, claims, fines, penalties and damages that may in any manner arise out of, or be imposed as a result of, the failure of the LDCBA to comply with the provisions of this Section. Notwithstanding any provision contained in this Section, however, the LDCBA shall have the right, at its own cost and expense, to contest or review by legal or other appropriate procedures the validity or legality of any such governmental statute, law, ordinance, order, judgment, decree, regulation, direction or requirement, or any such requirement, rule or regulation of an insurer, and during such contest or review the LDCBA may refrain from complying therewith; provided, however that (1) the LDCBA, before instituting any such contest, gives the City and the County written notice of its intention so to do, (2) the LDCBA diligently prosecutes any such contest, at all times effectively stays or prevents any official or judicial sale therefor, under execution or otherwise, and (3) the LDCBA promptly pays any final judgment related to such contest and thereafter promptly procures record release or satisfaction thereof. The LDCBA shall hold the City and the County whole and harmless from any costs and expenses the City and the County may incur related to any of the above.

(d) Neither the City nor the County shall be liable for any loss or damage to the property of LDCBA or any sublessee or any other personal property in or about the premises, regardless of the cause of such loss or damage.

Section 3.4. Funds and Accounts; Use of Revenues and Payment of Expenses.

(a) ***Establishment of Operating Fund; Annual Budget.*** Upon commencement of this Lease, the LDCBA shall create an Operating Fund with respect to the Leased Premises, which shall be separately accounted for and budgeted each year by the LDCBA. Annually, by each June 1, the LDCBA shall submit a budget to the Management Committee created pursuant to the Cooperation Agreement showing all expected Revenues and Expenses of the Leased Premises for the following calendar year.

(b) ***Revenues of Leased Premises; Deposit to Operating Fund.*** All Revenues generated by LDCBA from LDCBA's possession and use of the Leased Premises shall be deposited to the Operating Fund and shall be held by the LDCBA in escrow for the benefit of the LDCBA, the City and the County.

(c) ***Expenses of Leased Premises; Payment from Operating Fund.*** All moneys in the Operating Fund shall be used by the LDCBA solely and only to pay management, operation and maintenance expenses and Rent required to be paid by the LDCBA pursuant to this Lease. Any Expenses in excess of the total amount of aggregate Expenses shown in the then current budget, as approved by the Management Committee, shall require the approval of the Management Committee before such Expenses are paid from the Operating Fund. If LDCBA fails to pay any Rent when due pursuant to this agreement, the amount of any unpaid Rent shall accrue as a deficit in the Operating Fund. For purposes of approval of any budget under this **Section 3.4(c)**, the Authorized LDCBA Representative shall be considered an ex

officio member of the Management Committee, and shall have the right to attend all meetings of the Management Committee and advise the Management Committee with respect to the budget, but the Authorized LDCBA Representative shall not have the right to vote on the approval of such budget.

Section 3.5. Accounting; Reports. On each February 1 and August 1, LDCBA shall transmit to the City and the County a report showing an accounting of all Revenues and Expenses deposited to and paid from the Operating Fund. Such semi-annual report shall also describe maintenance performed on the Leased Premises during the prior six-month period, and an estimate of maintenance to be performed on the Leased Premises, including the estimated costs thereof, during the twelve months following such report.

ARTICLE IV

INITIAL IMPROVEMENTS

Section 4.1. Initial Improvements to Leased Premises. As soon as practical after execution of this Lease, the LDCBA shall submit a plan for the Leasehold Improvements to the Management Committee for approval. Following approval, the LDCBA shall cause the Leasehold Improvements to be completed. LDCBA may submit up to \$600,000.00 of the costs of such Leasehold Improvement to the Management Committee for payment and/or reimbursement, and any costs in excess thereof shall be paid by LDCBA.

ARTICLE V

RENT PROVISIONS

Section 5.1. Basic Rent.

(a) The LDCBA covenants and agrees to pay as Basic Rent to the City and the County on each February 1 and August 1 (each, a "Rent Payment Date") beginning August 1, 2010 through and including August 1, 2014, the sum of \$12,500.00. On each Rent Payment Date thereafter, the LDCBA shall pay as Basic Rent to the City and the County the Principal Portion of Basic Rent as shown on **Schedule I** hereto plus the Interest Portion of Basic Rent. The Interest Portion of Basic Rent on each Rent Payment Date shall be determined by (a) multiplying the Cumulative Outstanding Principal Amount as shown on **Schedule I** hereto on each Rent Payment Date by the Annual Interest Rate, as determined from time to time, and (b) dividing such amount by two. The City shall give notice of the Annual Interest Rate to LDCBA and the County by January 15 of each year.

(b) All payments of Basic Rent provided for in this Section shall be paid directly to the City and shall be deposited and applied by the City in accordance with the provisions of the Cooperation Agreement.

Section 5.2. Additional Rent.

(a) The LDCBA shall pay as Additional Rent the following amounts:

(1) all expenses reasonably incurred in connection with the enforcement of any rights against the LDCBA or the Leased Premises under this Lease by the City or the County, except for

such expenses as may be incurred solely as a result of the gross negligence or wrongful misconduct of the City, the County or both;

(2) an amount sufficient to reimburse the City for all expenses reasonably incurred by the City hereunder and in connection with the performance of its obligations under this Lease;

(3) an amount sufficient to reimburse the County for all expenses reasonably incurred by the County hereunder and in connection with the performance of its obligations under this Lease;

(4) all general ad valorem and personal property taxes, including any special assessments levied against the Leased Premises and/or any payments in lieu of taxes;

(5) all other payments of whatever nature which the LDCBA has agreed to pay or assume under the provisions of this Lease.

(b) Except as otherwise provided in this Section, Additional Rent shall be payable within 10 days of notice thereof from the City or the County, or by such later date specified in notice provided by the City or the County to LDCBA. All payments of Additional Rent provided for in this Section shall be paid directly to the person or entity owed, except that any payments to be made to the City or the County shall be paid directly to the City and shall be deposited and applied by the City in accordance with the provisions of the Cooperation Agreement.

Section 5.3. Obligations of LDCBA Absolute and Unconditional.

(a) The obligations of the LDCBA under this Lease are intended to be absolutely net to the City and the County, and the obligations of the LDCBA under this Lease to make payments of Basic Rent and Additional Rent on or before the date the same become due, and to perform all of its other obligations, covenants and agreements hereunder shall be absolute and unconditional, without notice or demand, and without abatement, deduction, set-off, counterclaim, recoupment or defense or any right of termination or cancellation arising from any circumstance whatsoever, whether now existing or hereafter arising, and notwithstanding any damage to, loss, theft or destruction of, the Leased Premises or any part thereof, any failure of consideration or frustration of commercial purpose, the taking by eminent domain of title to or of the right of temporary use of all or any part of the Leased Premises, legal curtailment of the LDCBA's use thereof, the eviction or constructive eviction of the LDCBA, any change in the tax or other laws of the United States of America, the State of Kansas or any political subdivision thereof, any change in the City's or the County's legal organization or status, or any default of the City or the County hereunder, and regardless of the invalidity of any action of the City or the County, and regardless of the invalidity of any portion of this Lease.

(b) Nothing in this Lease shall be construed to release the City or the County from the performance of any agreement on its part herein contained or as a waiver by the LDCBA of any rights or claims the LDCBA may have against the City or the County under this Lease or otherwise, but any recovery upon such rights and claims shall be had from the City or the County separately, it being the intent of this Lease that the LDCBA shall be unconditionally and absolutely obligated to perform fully all of its obligations, agreements and covenants under this Lease (including the obligation to pay Basic Rent and Additional Rent). The LDCBA may, however, at its own cost and expense and in its own name or in the name of the City or the County, prosecute or defend any action or proceeding or take any other action involving third persons which the LDCBA deems reasonably necessary in order to secure or protect its right of possession, occupancy and use hereunder, and in such event the City and the County hereby agree to

cooperate fully with the LDCBA and to take all action necessary to effect the substitution of the LDCBA for the City and the County in any such action or proceeding if the LDCBA shall so request.

ARTICLE VI

MANAGEMENT, MAINTENANCE, TAXES AND UTILITIES

Section 6.1. Management of the Leased Premises. The LDCBA may, at any time during the Lease Term, employ an individual or firm to manage the Leased Premises. Such individual or firm shall have experience managing facilities such as the Leased Premises, and shall be subject to review and approval by the City and the County.

Section 6.2. Maintenance and Repairs. Throughout the Lease Term the LDCBA shall, at its own expense, keep the Leased Premises in as reasonably safe condition as the operation thereof will permit, and keep the Leased Premises in good repair and in good operating condition, making from time to time all necessary repairs thereto and renewals and replacements thereof. LDCBA shall not commit waste of the Leased Premises.

Section 6.3. Taxes, Assessments and Other Governmental Charges.

(a) The LDCBA shall promptly pay and discharge, as the same become due, all taxes and assessments, general and special, and other governmental charges of any kind whatsoever that may be lawfully taxed, charged, levied, assessed or imposed upon or against the Leased Premises, or any part thereof or interest therein (including the leasehold estate of the LDCBA therein) or any buildings, improvements, machinery and equipment at any time installed thereon by the LDCBA, or the income therefrom or Basic Rent and other amounts payable under this Lease, including any new taxes and assessments not of the kind enumerated above to the extent that the same are lawfully made, levied or assessed in lieu of or in addition to taxes or assessments now customarily levied against real or personal property, and further including all utility charges, assessments and other general governmental charges and impositions whatsoever, foreseen or unforeseen, which if not paid when due would materially encumber the City's or the County's title to the Leased Premises; provided that with respect to any special assessments or other governmental charges that are lawfully levied and assessed which may be paid in installments, the LDCBA shall be obligated to pay only such installments thereof as become due and payable during the Lease Term; except, provided that the first and last installments thereof shall be prorated according to the Lease Term.

(b) The LDCBA shall have the right, in its own name or in the City's and the County's name, to contest the validity or amount of any tax, assessment or other governmental charge which the LDCBA is required to bear, pay and discharge pursuant to the terms of this Article by appropriate legal proceedings instituted before the tax, assessment or other governmental charge complained of becomes delinquent if and provided (1) the LDCBA, before instituting any such contest, gives the City and the County written notice of its intention so to do, (2) the LDCBA diligently prosecutes any such contest, at all times effectively stays or prevents any official or judicial sale therefor, under execution or otherwise, and (3) the LDCBA promptly pays any final judgment enforcing the tax, assessment or other governmental charge so contested and thereafter promptly procures record release or satisfaction thereof. The City and the County agree to cooperate fully with the LDCBA in connection with any and all administrative or judicial proceedings related to any tax, assessment or other governmental charge. The LDCBA shall hold the City and the

County whole and harmless from any costs and expenses the City and the County may incur related to any of the above.

Section 6.4. Utilities. All utilities and utility services used by the LDCBA in, on or about the Leased Premises shall be paid for by the LDCBA and shall be contracted for by the LDCBA in the LDCBA's own name, and the LDCBA shall, at its sole cost and expense, procure any and all permits, licenses or authorizations necessary in connection therewith.

Section 6.5. Ad Valorem Taxes. The City, the County and the LDCBA acknowledge that the Leased Premises shall pay general ad valorem and property taxes (including special assessments levied on account of special benefits) on real and personal property. The City, the County and LDCBA covenant that they will not voluntarily take any action which may be reasonably construed as tending to abate the levy or assessment of such ad valorem or property taxes on the Leased Premises during the Lease Term.

ARTICLE VII

INSURANCE

Section 7.1. Property Insurance. The City will obtain and shall maintain throughout the Lease Term, property insurance insuring the Leased Premises (excluding foundations), and business income (including extra expense) insurance for a period of not less than 12 months, against loss or damage resulting from perils covered by the causes of loss – special form (or the equivalent ISO form in use from time to time in Kansas). The property insurance shall be written on a replacement cost basis for the Full Insurable Value, with an agreed amount endorsement to prevent coinsurance and with deductibles not to exceed \$100,000. The insurance required pursuant to this Section shall be maintained at the LDCBA's sole cost and expense, which LDCBA shall pay to the City and the County as Additional Rent pursuant to Section 5.2(a) hereof, shall be maintained with generally recognized responsible insurance company or companies rated A(X) or better in the most current issue of Best's Insurance Reports and authorized to do business in the State of Kansas as may be selected by the City and the County. All such policies of insurance pursuant to this Section, and all renewals thereof, shall name the City, the County and the LDCBA as insureds as their respective interests may appear, and shall contain a provision that such insurance may not be canceled by the issuer thereof without at least 30 days' advance written notice to the City, the County and the LDCBA, and shall be payable to the City and the County. In the event of loss or damage to the Leased Premises, the Net Proceeds of casualty insurance carried pursuant to this Section shall be paid over and applied as provided in **Article IX** of this Lease.

Section 7.2. Public Liability Insurance.

(a) LDCBA shall at its sole cost and expense maintain or cause to be maintained at all times during the Lease Term commercial general liability insurance, or the equivalent ISO form in use from time to time in Kansas, naming the City and the County, their respective employees, and the managing agent for the Leased Premises, each as additional insured parties, insuring against claims for bodily injury, personal injury and property damage arising out of or in any way related to the use and occupancy of the Leased Premises by LDCBA or its agents, contractors, employees, servants, subtenants, licensees or concessionaires (including but not limited to coverage for all losses whatsoever arising from the ownership, maintenance, operation or use of any automobile, truck or other motor vehicle), with a combined single limit of not less than \$1,000,000 per occurrence with a \$3,000,000 aggregate for this location and a deductible not to exceed \$100,000. The policies of said insurance shall contain a provision that such insurance may not be canceled by the issuer thereof without at least 30 days' advance written notice to the

City, the County and the LDCBA. Such policies or copies or certificates thereof shall be furnished to the City and County. LDCBA's insurance shall provide primary coverage to the City and the County when any policy issued to the City and the County provides duplicate or similar coverage, and in such circumstance the policies of the City and the County will be excess over LDCBA's policy. If LDCBA has other locations that it owns or leases that are covered by such insurance, such policies shall include an aggregate limit per location endorsement, and such limit for the Leased Premises shall not be less than that specified above, so that losses at other properties cannot decrease the amount of insurance available for the Leased Premises below the limits specified above. In no event shall the limits of such insurance be considered as limiting the liability of LDCBA under this Lease.

(b) In the event of a public liability occurrence, the Net Proceeds of liability insurance carried pursuant to this Section shall be applied toward the extinguishment or satisfaction of the liability with respect to which such proceeds have been paid.

Section 7.3. Blanket Insurance Policies. The LDCBA may satisfy any of the insurance requirements set forth in this Article by using blanket policies of insurance, provided each and all of the requirements and specifications of this Article respecting insurance are complied with.

ARTICLE VIII

ALTERATION OF THE LEASED PREMISES

Section 8.1. Additions, Modifications and Improvements of the Leased Premises. Except as provided in **Section 4.1** hereof, and except for (i) any structural changes to the Leased Premises, (ii) any changes that affect the building systems (including, but not limited to, electrical, HVAC, or plumbing), or (iii) changes with a total cost in excess of \$200,000.00, all of which shall be subject to review and prior approval of the Management Committee, the LDCBA shall have and is hereby given the right to make such additions, modifications and improvements in and to any part of the Leased Premises as the LDCBA from time to time may deem necessary or desirable for its business purposes. All such additions, modifications and improvements shall be made at LDCBA's sole cost and expense. All additions, modifications and improvements made by the LDCBA pursuant to the authority of this Section shall (a) be made in workmanlike manner and in strict compliance with all laws and ordinances applicable thereto, (b) when commenced, be prosecuted to completion with due diligence, and (c) when completed, be deemed a part of the Leased Premises.

Section 8.2. Permits and Authorizations. The LDCBA shall not do or permit others under its control to do any work on the Leased Premises related to any repair, rebuilding, restoration, replacement, modification or addition to the Leased Premises, or any part thereof, unless all requisite municipal and other governmental permits and authorizations shall have been first procured. All such work shall be done in a good and workmanlike manner and in compliance with all applicable building, zoning and other laws, ordinances, governmental regulations and requirements and in accordance with the requirements, rules and regulations of all insurers under the policies required to be carried under the provisions of **Article VII** hereof.

Section 8.3. Mechanics' Liens.

(a) The LDCBA shall not do or suffer anything to be done whereby the Leased Premises, or any part thereof, may be encumbered by any mechanics' or other similar lien. Whenever and as often as any mechanics' or other similar lien is filed against the Leased Premises, or any part thereof, purporting to be for

or on account of any labor done or materials or services furnished in connection with any work in or about the Leased Premises, the LDCBA shall discharge the same of record within 90 days after the date of filing. Notice is hereby given that the City and the County shall not be liable for any labor or materials furnished the LDCBA or anyone claiming by, through or under the LDCBA upon credit, and that no mechanics' or other similar lien for any such labor, services or materials shall attach to or affect the reversionary or other estate of the City or the County in and to the Leased Premises or any part thereof.

(b) Notwithstanding paragraph (a) above, the LDCBA shall have the right to contest any such mechanics' or other similar lien if within said 90-day period stated above it notifies the City and the County in writing of its intention so to do and posts bond sufficient to cover such lien, and provided the LDCBA diligently prosecutes such contest, at all times effectively stays or prevents any official or judicial sale of the Leased Premises, or any part thereof or interest therein, under execution or otherwise, and pays or otherwise satisfies any final judgment enforcing such contested lien claim and thereafter promptly procures record release or satisfaction thereof. The LDCBA shall hold the City and the County whole and harmless from any loss, costs or expenses the City or the County may incur related to any such contest. The City and the County shall cooperate fully with the LDCBA in any such contest.

ARTICLE IX

DAMAGE OR DESTRUCTION

Section 9.1. Damage or Destruction.

(a) If the Leased Premises shall be damaged or destroyed by fire or any other casualty, whether or not covered by insurance, the LDCBA, as promptly as practicable, shall either repair, restore, replace or rebuild the same to as nearly as may be practicable their condition and character immediately prior to such damage or destruction, and so that upon completion of such repairs, restoration, replacement or rebuilding such Leased Premises shall be of a value not less than the value thereof immediately prior to the occurrence of such damage or destruction. The City and the County shall have the right to review and approve the plans and specifications related to such improvement of the Leased Premises.

The Net Proceeds of casualty insurance required by **Article VII** hereof received with respect to such damage or loss to the Leased Premises shall be paid to the Building Fund and shall be applied in the following manner:

(A) there shall be paid to the LDCBA from the Net Proceeds such part thereof as shall equal the cost to the LDCBA of making such temporary repairs or doing such other work, as, in the LDCBA's reasonable opinion, may be necessary in order to protect the Leased Premises pending adjustment of the insurance loss or the making of permanent repairs, restoration, replacement or rebuilding;

(B) there shall be paid to the LDCBA from the Net Proceeds such part thereof as shall equal the cost to the LDCBA of repairing, restoring, replacing or rebuilding the Leased Premises or any part thereof;

(C) payment to the LDCBA pursuant to subdivisions (A) or (B) of this subsection (a)(ii) from such Net Proceeds shall be made to the LDCBA from time to time as the work progresses, in amounts equal to the cost of labor and material incorporated into and used in such work, the architects' and engineers' fees, and other charges in connection with such work, upon

delivery to the City and the County of a certificate of the LDCBA's architect or general contractor, as the case may be, in charge of such work, certifying: (1) that the amounts so to be paid to the LDCBA are payable to the LDCBA in accordance with the provisions of this Article and that such amounts are then due and payable by the LDCBA or have theretofore been paid by the LDCBA; (2) the progress of the work; (3) that the work has been done in accordance with the plans and specifications approved by the City and the County therefor and all insurance requirements of **Article VII** hereof; (4) that the sum requested when added to all sums previously paid out under this Article for the work does not exceed the value of the work done to the date of such certificate; (5) the estimated cost of completing the work, in reasonable detail; and (6) that the remaining Net Proceeds are sufficient to pay the estimated cost of completing the work;

(D) at the request of the City or the County, the LDCBA shall furnish to the person requesting the same, at the time of any such payment, with an official search, or other evidence reasonably satisfactory to such person, that there has not been filed with respect to the Leased Premises any mechanic's or other lien which has not been discharged of record, in respect of any work, labor, services or materials performed, furnished or supplied, in connection with the work and that all of said materials have been purchased free and clear of all security interest or other encumbrances. The City shall not pay out any such sum when the Leased Premises shall be encumbered with any such security interest or encumbrance.

(b) The insurance monies, if any, paid to the LDCBA as provided under this Article, on account of any loss or destruction to the Leased Premises, shall be held by it in trust and applied only for the purposes of repairing, reconstructing or restoring the Leased Premises or constructing new buildings and improvements and installing new machinery, equipment and fixtures thereto.

(c) If any of the insurance monies paid by the insurance company to the City or the LDCBA as hereinabove provided, shall remain after the completion of such repairs, restoration, replacement or rebuilding, and this Lease shall not have terminated, the excess shall be used by the City and the County for any purpose permitted by law. If the Net Proceeds shall be insufficient to pay the entire cost of such repairs, restoration, replacement or rebuilding, the LDCBA shall pay the deficiency.

(d) Except as otherwise provided in this Lease, in the event of any such damage by fire or any other casualty, the provisions of this Lease shall be unaffected and the LDCBA shall remain and continue liable for the payment of all Basic Rent and Additional Rental and all other charges required hereunder to be paid by the LDCBA, as though no damage by fire or any other casualty has occurred.

(e) The City, the County and the LDCBA agree that they will cooperate with each other, to such extent as such other party may reasonably require, in connection with the prosecution or defense of any action or proceeding arising out of, or for the collection of any insurance monies that may be due in the event of, any loss or damage, and that they will execute and deliver to such other parties such instruments as may be required to facilitate the recovery of any insurance monies.

(f) The LDCBA agrees to give prompt notice to the City and the County with respect to all fires and any other casualties occurring in, on, at or about the Leased Premises.

(g) If the LDCBA shall determine that rebuilding, repairing, restoring or replacing the Leased Premises is not practicable and desirable, the LDCBA may elect to terminate this Lease. In the event LDCBA elects to terminate this Lease pursuant to this Section, the Net Proceeds of casualty insurance required by **Article VII** hereof received with respect to such damage or loss shall be (1) used to prepay Basic Rent, (2) pay any Additional Rent due and owing on the next Rent Payment Date, and (3) reimburse

the City and the County for all debt service paid or to be paid on the Bonds in excess of the amount of Basic Rent available therefor. All remaining Net Proceeds shall be released to the LDCBA to be used for any lawful purpose. The LDCBA agrees to be reasonable in exercising its judgment pursuant to this subsection (g).

(h) If the City and the County shall determine that rebuilding, repairing, restoring or replacing the Leased Premises is not practicable and desirable, the City and the County may elect to terminate this Lease. In the event the City and the County elect to terminate this Lease pursuant to this Section, the Net Proceeds of casualty insurance required by **Article VII** hereof received with respect to such damage or loss shall be (1) used to prepay Basic Rent, (2) pay any Additional Rent due and owing on the next Rent Payment Date, and (3) reimburse the City and the County for all debt service paid or to be paid on the Bonds in excess of the amount of Basic Rent available therefor. All remaining Net Proceeds shall be released to the LDCBA to be used for any lawful purpose. The City and the County agree to be reasonable in exercising its judgment pursuant to this subsection (h).

(i) The LDCBA shall not, by reason of its inability to use all or any part of the Leased Premises during any period in which the Leased Premises is damaged or destroyed or is being repaired, rebuilt, restored or replaced, nor by reason of the payment of the costs of such rebuilding, repairing, restoring or replacing, be entitled to any reimbursement from the City or the County or to any abatement or diminution of the rentals payable by the LDCBA under this Lease or of any other obligations of the LDCBA under this Lease except as expressly provided in this Section.

ARTICLE X

SPECIAL COVENANTS

Section 10.1. No Warranty of Condition or Suitability by the Lessors; Exculpation and Indemnification.

(a) The City and the County make no warranty, either express or implied, as to the condition of the Leased Premises or that it will be suitable for the LDCBA's purposes or needs. The LDCBA releases the City and the County from, agrees that the City and the County shall not be liable for and agrees to hold the City and the County harmless against, any loss or damage to property or any injury to or death of any person that may be occasioned by any cause whatsoever pertaining to the Leased Premises or the use thereof, unless such loss is the result of the City's or the County's gross negligence or willful misconduct.

(b) The parties acknowledge that the Americans With Disabilities Act of 1990 (42 U.S.C. Section 12101 *et seq.*) and regulations and guidelines promulgated thereunder, as all of the same may be amended and supplemented from time to time (collectively referred to herein as the "ADA") establish requirements under Title III of the ADA ("Title III") pertaining to business operations, accessibility and barrier removal, and that such requirements may be unclear and may or may not apply to the Leased Premises. The parties acknowledge and agree that LDCBA has been provided an opportunity to inspect the Leased Premises sufficient to determine whether or not the Leased Premises in their condition as of the date hereof deviate in any matter from the ADA Accessibility Guidelines ("ADAAG") or any other requirements under the ADA pertaining to the accessibility of the Leased Premises. LDCBA further acknowledges and agrees that except as may otherwise be specifically provided herein, LDCBA accepts the Leased Premises in "as-is" condition and agrees that neither the City nor the County make any representation or warranty as to whether the Leased Premises conform to the requirements of the ADAAG or any other requirements under the ADA pertaining to the accessibility of the Leased Premises.

If necessary, LDCBA shall be solely responsible for all costs related to work necessary to conform the Leased Premises to the ADA.

Section 10.2. Surrender of Possession. Upon accrual of the City's or the County's right of re-entry because of the LDCBA's default hereunder or upon the cancellation or termination of this Lease for any reason, the LDCBA shall peacefully surrender possession of the Leased Premises to the City and the County in good condition and repair, ordinary wear and tear excepted; provided, however, the LDCBA shall have the right within 90 days prior to the termination of this Lease to remove from the Leased Premises any buildings, improvements, furniture, trade fixtures, machinery and equipment owned by the LDCBA and not constituting part of the Leased Premises. All repairs to and restorations of the Leased Premises required to be made because of such removal shall be made by and at the sole cost and expense of the LDCBA, and during said 90-day (or extended) period the LDCBA shall bear the sole responsibility for and bear the sole risk of loss for said buildings, improvements, furniture, trade fixtures, machinery and equipment. All buildings, improvements, furniture, trade fixtures, machinery and equipment owned by the LDCBA and which are not so removed from the Leased Premises prior to the expiration of said period shall be the separate and absolute property of the City and the County.

Section 10.3. Lessors' Right of Access to the Leased Premises. The LDCBA agrees that the City and the County and their duly authorized agents shall have the right to enter upon the Leased Premises Site after giving notice to the LDCBA and with appropriate advance notice so as to allow LDCBA to comply with any confidentiality agreements contained in any subleases, all (a) as may be reasonably necessary to cause to be completed the acquisition, purchase, construction, improving, equipping or remodeling provided for in **Section 4.1** hereof, (b) to perform such work in and about the Leased Premises made necessary by reason of the LDCBA's default under any of the provisions of this Lease, and (c) following an Event of Default, to exhibit the Leased Premises to prospective purchasers, lessees or trustees.

Section 10.4. Indemnification of City and County. The LDCBA shall indemnify and save the City and the County harmless from and against all claims by or on behalf of any person, firm or corporation arising from the conduct or management of, or from any work or thing done in, on or about, the Leased Premises during the Lease Term, and against and from all claims arising during the Lease Term from (a) any condition of the Leased Premises caused by the LDCBA or its sublessees, (b) any breach or default on the part of the LDCBA in the performance of any of its obligations under this Lease, (c) any contract entered into in by the LDCBA or its sublessee, if any, in connection with the acquisition, purchase, construction, improving, equipping or remodeling of the Leased Premises, (d) any act of negligence of the LDCBA or of any of its agents, contractors, servants, employees or licensees, and (e) any act of negligence of any assignee or sublessee of the LDCBA, or of any agents, contractors, servants, employees or licensees of any assignee or sublessee of the LDCBA; provided, however, the indemnification contained in this **Section 10.4** shall not extend to the City or the County if (i) such claim is the result of work being performed at the Leased Premises by employees of the City or the County, or (ii) such claim is the result of the City's or the County's gross negligence or willful misconduct. The LDCBA shall indemnify and save the City and the County harmless from and against all costs and expenses (except those which have arisen from the willful misconduct or gross negligence of the City or the County) incurred in or in connection with any action or proceeding brought in connection with claims arising from circumstances described in clauses (a) through (e), and upon notice from the City or the County, the LDCBA shall defend them or either of them in any such action or proceeding.

Section 10.5. LDCBA to Maintain its Corporate Existence. The LDCBA agrees that throughout Lease Term, it will maintain its corporate existence, and will not dissolve or otherwise dispose of all or substantially all of its assets.

ARTICLE XI

HAZARDOUS MATERIALS

Section 11.1. Defined Terms. The following words and terms, as used in this Article, shall have the following meanings:

b. **"Claim"** shall mean and include any demand, cause of action, proceeding, or suit for any one or more of the following: (i) actual or punitive damages, losses, injuries to person or property, damages to natural resources, fines, penalties, interest, contribution or settlement, (ii) the costs and expenses of site investigations, feasibility studies, information requests, health or risk assessments, or Response (as hereinafter defined) actions, and (ii) the costs and expenses of enforcing insurance, contribution or indemnification agreements.

c. **"Environmental Laws"** shall mean and include all federal, state and local statutes, ordinances, regulations and rules in effect and as amended from time to time relating to environmental equality, health, safety, contamination and cleanup, including, without limitation, the Clean Air Act, 42 U.S.C. Section 7401 *et seq.*; the Clean Water Act, 33 U.S.C. Section 1251 *et seq.*, and the Water Quality Act of 1987; the Federal Insecticide, Fungicide and Rodenticide Act ("FIFRA"), 7 U.S.C. Section 136 *et seq.*; the Marine Protection, Research, and Sanctuaries Act, 33 U.S.C. Section 1401 *et seq.*; the National Environmental Policy Act, 42 U.S.C. Section 4321 *et seq.*; the Noise Control Act, 42 U.S.C. Section 2901 *et seq.*; the Occupational Safety and Health Act, 29 U.S.C. Section 651 *et seq.*; the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. Section 6901 *et seq.*, as amended by the Superfund Amendments and Reauthorization Act, the Emergency Planning and Community Right-to-Know Act, and the Radon Gas and Indoor Air Quality Research Act; the Toxic Substances Control Act ("TSCA"), 15 U.S.C., Section 2601 *et seq.*; the Atomic Energy Act, 42 U.S.C. Section 2011 *et seq.*; and the Nuclear Waste Policy Act of 1982, 42 U.S.C. Section 10101 *et seq.*; and state and local superlien and environmental statutes and ordinances, with implementing regulations, rules and guidelines, as any of the foregoing may be amended from time to time. Environmental Laws shall also include all state, regional, county, municipal and other local laws, regulations and ordinances insofar as they are equivalent or similar to the federal laws recited above or purport to regulate Hazardous Materials (as hereinafter defined).

d. **"Hazardous Materials"** shall mean and include the following, including mixtures thereof: any hazardous substance, pollutant, contaminant, waste, by-product or constituent regulated under CERCLA; oil and petroleum products and natural gas, natural gas liquids, liquefied natural gas and synthetic gas usable for fuel; pesticides regulated under the FIFRA; asbestos and asbestos-containing materials, PCBs, and other substances regulated under TSCA, source material, special nuclear material, by-product material and any other radioactive materials or radioactive wastes, however produced, regulated under the Atomic Energy Act or the Nuclear Waste Policy Act; chemicals subject to the OSHA Hazard Communication Standard, 29 C.F.R. Section 1901.1200 *et seq.*; and industrial process and pollution control wastes whether or not hazardous within the meaning of RCRA, and any other hazardous substance, pollutant or contaminant regulated under any other Environmental Law.

e. **"Manage" or "Management"** means to generate, manufacture, process, treat, store, use, re-use, refine, recycle, reclaim, blend or burn for energy recovery, incinerate, accumulate speculatively, transport, transfer, dispose of or abandon Hazardous Materials.

f. **"Release" or "Released"** shall mean any actual or threatened spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing of Hazardous Materials into the environment, as "environment" is defined in CERCLA.

g. **“Response” or “Respond”** shall mean action taken to correct, remove, remediate, clean up, prevent, mitigate, monitor, evaluate, investigate, assess or abate the Release of a Hazardous Material.

Section 11.2. LDCBA’s Obligations with Respect to Environmental Matters. During the Term of this Agreement, (i) LDCBA shall comply at its sole cost and expense with all applicable Environmental Laws; (ii) LDCBA shall not Manage, or authorize the Management of, any Hazardous Materials, except Hazardous Materials used by LDCBA in the ordinary course of its business in compliance with applicable Environmental Laws on the Leased Premises, without prior written disclosure to and prior written approval by the City and the County; (iii) LDCBA shall not take any action that would subject the Research Laboratory Facility to the permit requirements under RCRA for storage, treatment or disposal of Hazardous Materials; (iv) excepting *de minimis* quantities not in violation of Environmental Laws, LDCBA shall not dispose of Hazardous Materials in dumpsters provided by the City and the County for tenant use; (v) LDCBA shall not discharge Hazardous Materials into drains or sewers serving the Leased Premises; (vi) LDCBA shall not cause or allow the Release of any Hazardous Materials on, to or from the Leased Premises or surrounding land and (vii) LDCBA shall arrange at its sole cost and expense for the lawful transportation and off-site disposal in accordance with all applicable Environmental Laws, of all Hazardous Materials that it generates. Notwithstanding the foregoing, LDCBA shall be responsible only for compliance with Environmental Laws during the Term of this Agreement, as extended, if applicable, which responsibility expressly excludes compliance or causing the compliance of the Leased Premises with Environmental Laws (a) as a result of conditions in existence prior to the commencement of the Term of this Lease; or (b) as a result of a Release of Hazardous Materials from other sites onto the Leased Premises.

Section 11.3 Copies of Notices. During the Term of this Lease, as extended, if applicable, LDCBA shall provide the City and the County promptly with copies of all summons, citations, directives, information, inquiries or requests, notices of potential responsibility, notices of violation or deficiency, orders or decrees, Claims, complaints, investigations, judgments, letters notices of environmental liens, or Response actions in process, and other communications, written or oral, actual or threatened, from the United States Environmental Protection Agency, Occupational Safety and Health Administration, Kansas Department of Health and Environment, or other federal, state or local agency or authority, or any other entity or individual, concerning (i) any actual or alleged Release of a Hazardous Material on, to or from the Leased Premises; (ii) the imposition of any lien on the Leased Premises; (iii) any actual or alleged violation of, or responsibility under, any Environmental Laws; or (iv) any actual or alleged liability under any theory of common law tort or toxic tort, including without limitation, negligence, trespass, nuisance, strict liability or ultrahazardous activity. In addition, LDCBA shall provide the City and the County promptly with copies of all environmental studies and reports conducted in connection with the Leased Premises.

Section 11.4 City and County’s Right to Inspect. The City and the County and their employees shall have the right to enter the Leased Premises upon at least 24 hours prior notice to LDCBA (except in an emergency, in which even no prior notice is required) and conduct appropriate inspections or tests, which inspections and tests shall be carried out in such a manner as will cause the least practicable interference with LDCBA’s business in the Leased Premises, for the purpose of (i) determining LDCBA’s compliance with Environmental Laws, and (ii) determining the type, kind and quantity of all products, materials and substances brought onto the Leased Premises, or made or produced therein. The City and the County and their agents and representatives shall have the right to take samples in quantities sufficient for analysis of all products, materials and substances present on the Leased Premises including, but not limited to, samples, products, materials or substances brought onto or made or produced on the Leased Premises by LDCBA or its agents, employees, contractors or invitees.

LDCBA agrees to cooperate with such investigations by providing any relevant information requested by the City and the County. LDCBA may not perform any sampling, testing or drilling to locate Hazardous Materials in the Research Laboratory Facility without the Management Committee's prior written consent.

Section 11.5 Tests and Reports. Within ten (10) days of LDCBA's receipt of a written request by the City and the County, but in no event more often than semi-annually, unless Hazardous Materials are discovered on, in or under the Leased Premises in violation of this Paragraph, as there is a violation of Environmental Laws, in which event the City and the County hereby reserves the right to request the following described documents more often, LDCBA shall provide the City and the County with (i) copies of all environmental reports and tests obtained by LDCBA; (ii) copies of transportation and disposal contracts (and related manifests, schedules, reports and other information) entered into or obtained by LDCBA with respect to any Hazardous Materials; (iii) copies of any permits issued to LDCBA under Environmental Laws with respect to the Leased Premises; (iv) copies of any and all reports, notifications and other filings made by LDCBA to any federal, state, or local environmental authorities or agencies; and (v) any other applicable documents and information with respect to environmental matters relating to the Leased Premises. LDCBA shall provide the City and the County with the results of appropriate reports and tests, with transportation and disposal contracts for Hazardous Materials, with any permits issued under Environmental Laws, and with any other documents necessary to demonstrate that LDCBA complies with all Environmental Laws relating to the Leased Premises.

Section 11.6 LDCBA's Obligation to Respond. If LDCBA's Management of Hazardous Materials at the Leased Premises (i) gives rise to liability or to a Claim under any Environmental Law, or any common law theory of tort or otherwise; (ii) causes a threat to, or endangers, the public health; or (iii) creates a nuisance or trespass, LDCBA shall, at its sole cost and expense, promptly take all applicable action in response so as to comply with all applicable Environmental Laws and eliminate or avoid any liability claim with respect thereto.

Section 11.7 City and County's Right to Act. In the event that LDCBA shall fail to comply with any of its obligations under this Paragraphs as and when required hereunder, the City and the County shall have the right (but not the obligation) to take such action as is required to be taken by LDCBA hereunder and in such event, LDCBA shall be liable and responsible to the City and the County for all costs, expenses, liabilities, claims and other obligations paid, suffered, or incurred by the City and the County in connection with such matters. LDCBA shall reimburse the City and the County immediately upon demand for all such amounts for which LDCBA is liable.

Section 11.8 Indemnification. Notwithstanding anything contained in this Agreement to the contrary, LDCBA shall reimburse, defend, indemnify and hold the City and the County, and their officers, directors, shareholders, employees and agents, free and harmless from and against any and all Claims, Response costs, losses, liabilities, damages, costs and expenses, including, without limitation, loss of rental income, loss due to business interruption and reasonable attorneys' fees and costs, arising out of or in any way connected with any or all of the following:

1. Any Hazardous Materials which, a any time during the Term, as extended, if applicable, are or were actually or allegedly Managed, released or disposed of on or from the Leased Premises (regardless of the location at which such Hazardous Material are now or may in the future be located or disposed of), including but not limited to, any and all (1) liabilities under any common law theory of tort, nuisance, strict liability, ultrahazardous activity, negligence or otherwise based upon, resulting from or in connection with any Hazardous Material; (2) obligations to take Response, cleanup or corrective action pursuant to any investigation or

- remediation in connection with the decontamination, removal, transportation, incineration, or disposal of any of the foregoing; and
2. Any actual or alleged illness, disability, injury, or death of any person in any manner arising out of or allegedly arisen out of exposure to Hazardous Materials Managed or Released on or from the Leased Premises during the Term, as extended, if applicable, regardless of when any such illness, disability, injury, or death shall have occurred or been incurred or manifested itself; and
 3. Any actual or alleged failure of LDCBA or the Leased Premises at any time during the Term, as extended, if applicable, to comply with all applicable Environmental Laws as required under Paragraph 11(b); and
 4. Any failure by LDCBA to comply with its obligations under this Paragraph.

The foregoing indemnification obligations of LDCBA under this Lease shall expressly exclude any obligation for any pre-existing environmental condition prior to the Commencement Date of this Lease. In the event any Claims or other assertion of liability shall be made against the City and the County for which the City and the County are entitled to indemnity hereunder, the City and the County shall notify LDCBA of such Claim or assertion of liability and thereupon LDCBA shall, at its sole cost and expense, assume the defense of such Claim or assertion of liability and continue such defense at all times thereafter until completion. The obligations of LDCBA under this Paragraph shall survive any termination or expiration of this Lease.

Section 11.9 Environmental Assessment Requirement. LDCBA shall timely provide a Phase I environmental report of reasonable scope, form and depth (including, where appropriate, invasive soil or groundwater sampling) by a qualified environmental consultant reasonably approved by the City and the County, as to (1) any matter, to the extent such matter is attributable to events or conditions which arise during the Term, as extended, if applicable, and (2) the general environmental condition of the Leased Premises (the "Environmental Assessment"), within 60 days prior to termination or expiration of this Lease. If the Environmental Assessment is not delivered prior to such 60th day, then the City and the County may arrange for completion of same. The reasonable cost of any Environmental Assessment completed by the City and the County or LDCBA pursuant to this provision shall be paid by LDCBA or reimbursable to the City and the County by LDCBA (if completed by the City and the County) promptly upon the City and the County furnishing LDCBA with evidence of costs incurred therefor.

ARTICLE XII

DEFAULTS AND REMEDIES

Section 12.1. Events of Default. If any one or more of the following events shall occur and be continuing, it is hereby defined as and declared to be and to constitute an "Event of Default" or "default" under this Lease:

(a) Default in the due and punctual payment of Basic Rent for two consecutive Rent Payment Dates, upon five days written notice to the LDCBA by the City or the County or default in the due and punctual payment Additional Rent for a period of 30 days following written notice to the LDCBA by the City or the County; or

(b) Default in the due observance or performance of any other covenant, agreement, obligation or provision of this Lease on the LDCBA's part to be observed or performed, and such default shall continue for 30 days after the City or the County has given the LDCBA written notice

specifying such default (or such longer period as shall be reasonably required to cure such default; provided that (1) the LDCBA has commenced such cure within said 30-day period, and (2) the LDCBA diligently prosecutes such cure to completion); or

(c) The LDCBA shall: (1) admit in writing its inability to pay its debts as they become due; or (2) file a petition in bankruptcy or for reorganization, arrangement, composition, readjustment, liquidation, dissolution or similar relief under the Bankruptcy Code as now or in the future amended or any other similar present or future federal or state statute or regulation, or file a pleading asking for such relief; or (3) make an assignment for the benefit of creditors; or (4) consent to the appointment of a trustee, receiver or liquidator for all or a major portion of its property or shall fail to have the appointment of any trustee, receiver or liquidator made without the LDCBA's consent or acquiescence, vacated or set aside; or (5) be finally adjudicated as bankrupt or insolvent under any federal or state law; or (6) be subject to any proceeding, or suffer the entry of a final and non-appealable court order, under any federal or state law appointing a trustee, receiver or liquidator for all or a major part of its property or ordering the winding-up or liquidation of its affairs, or approving a petition filed against it under the Bankruptcy Code, as now or in the future amended, which order or proceeding, if not consented to by it, shall not be dismissed, vacated, denied, set aside or stayed within 60 days after the day of entry or commencement; or (7) suffer a writ or warrant of attachment or any similar process to be issued by any court against all or any substantial portion of its property, and such writ or warrant of attachment or any similar process is not contested, stayed, or is not released within 60 days after the final entry, or levy or after any contest is finally adjudicated or any stay is vacated or set aside; or

(d) The LDCBA shall vacate or abandon the Leased Premises, and the same shall remain uncured for a period of 60 days.

Section 12.2. Remedies on Default. If any Event of Default referred to in **Section 12.1** hereof shall have occurred and be continuing, then the City or the County may at the City's or County's election, then or at any time thereafter, and while such default shall continue, take any one or more of the following actions:

(a) cause all Basic Rent payable for the remainder of the term of this Lease to become due and payable;

(b) give the LDCBA written notice of intention to terminate this Lease on a date specified therein, which date shall not be earlier than 30 days after such notice is given, and if all defaults have not then been cured, on the date so specified, the LDCBA's rights to possession of the Leased Premises shall cease and this Lease shall thereupon be terminated, and the City and the County may re-enter and take possession of the Leased Premises; or

(c) without terminating this Lease, re-enter the Leased Premises to take possession thereof pursuant to legal proceedings or pursuant to any notice provided for by law, and having elected to re-enter or take possession of the Leased Premises without terminating this Lease, the City and the County shall use reasonable diligence to relet the Leased Premises, or parts thereof, for such term or terms and at such rental and upon such other terms and conditions as the City and the County may deem advisable, with the right to make alterations and repairs to the Leased Premises, and no such re-entry or taking of possession of the Leased Premises by the City or the County shall be construed as an election on the City's or the County's part to terminate this Lease, and no such re-entry or taking of possession by the City or the County shall relieve the LDCBA of its obligation to pay Basic Rent or Additional Rent (at the time or times provided herein), or any of its other

obligations under this Lease, all of which shall survive such re-entry or taking of possession, and the LDCBA shall continue to pay the Basic Rent and Additional Rent provided for in this Lease until the end of this Lease Term, whether or not the Leased Premises shall have been relet, less the Net Proceeds, if any, of any reletting of the Leased Premises after deducting all of the City's and County's reasonable expenses in or in connection with such reletting, including without limitation all repossession costs, brokerage commissions, legal expenses, expenses of employees, alteration costs and expenses of preparation for reletting. Having elected to re-enter or take possession of the Leased Premises without terminating this Lease, the City and the County may, by notice to the LDCBA given at any time thereafter following an Event of Default, elect to terminate this Lease on a date to be specified in such notice, which date shall be not earlier than 30 days after re-entry under (c) above, and if all defaults shall not have then been cured, on the date so specified this Lease shall thereupon be terminated. If in accordance with any of the foregoing provisions of this Article the City and the County shall have the right to elect to re-enter and take possession of the Leased Premises, the City and the County may enter and expel the LDCBA and those claiming through or under the LDCBA and remove the property and effects of both or either (forcibly if necessary) without being guilty of any manner of trespass and without prejudice to any remedies for arrears of rent or preceding breach of covenant. The City and the County may take whatever action at law or in equity which may appear necessary or desirable to collect rent then due and thereafter to become due, or to enforce performance and observance of any obligation, agreement or covenant of the LDCBA under this Lease.

Section 12.3. Survival of Obligations. The LDCBA covenants and agrees with the City and County that its obligations under this Lease shall survive the cancellation and termination of this Lease, for any cause, and that the LDCBA shall continue to pay the Basic Rent and Additional Rent and perform all other obligations provided for in this Lease, all at the time or times provided in this Lease.

Section 12.4. Performance of the LDCBA's Obligations by the City and the County. If the LDCBA shall fail to keep or perform any of its obligations as provided in this Lease in the making of any payment or performance of any obligation, then the City or the County, may (but shall not be obligated so to do) upon the continuance of such failure on the LDCBA's part for 30 days after written notice of such failure is given the LDCBA by the City or the County, and without waiving or releasing the LDCBA from any obligation hereunder, as an additional but not exclusive remedy, make any such payment or perform any such obligation, and all reasonable sums so paid by the City or the County and all necessary incidental reasonable costs and expenses incurred by the City or the County in performing such obligations shall be deemed Additional Rent and shall be paid to the City or the County on demand, and if not so paid by the LDCBA, the City or the County shall have the same rights and remedies provided for in **Section 12.2** hereof in the case of default by the LDCBA in the payment of Basic Rent.

Section 12.5. Rights and Remedies Cumulative. The rights and remedies reserved by the City, the County and the LDCBA hereunder and those provided by law shall be construed as cumulative and continuing rights. No one of them shall be exhausted by the exercise thereof on one or more occasions. The City, the County and the LDCBA shall each be entitled to specific performance and injunctive or other equitable relief for any breach or threatened breach of any of the provisions of this Lease, notwithstanding availability of an adequate remedy at law, and each party hereby waives the right to raise such defense in any proceeding in equity.

Section 12.6. Waiver of Breach. No waiver of any breach of any covenant or agreement herein contained shall operate as a waiver of any subsequent breach of the same covenant or agreement or as a waiver of any breach of any other covenant or agreement, and in case of a breach by the LDCBA of any covenant, agreement or undertaking by the LDCBA, the City and the County may nevertheless accept from

the LDCBA any payment or payments hereunder without in any way waiving City's or the County's right to exercise any of its rights and remedies provided for herein with respect to any such breach or breaches of the LDCBA which were in existence at the time such payment or payments were accepted by the City or the County.

ARTICLE XIII

ASSIGNMENT AND SUBLEASE

Section 13.1. Assignment; Sublease.

(a) The LDCBA shall not have the right to assign, transfer, encumber or dispose of this Lease or any interest therein or part thereof, except that LDCBA shall have the right to enter into subleases with such subtenants and on such terms as approved by the Management Committee. Such approval shall be handled by the Management Committee as expediently as possible under the circumstances. The Management Committee's approval of such subleases shall be evidenced by the written consent of the Authorized City Representative and the Authorized County Representative. For purposes of approval of any sublease under this **Section 13.1**, the Authorized LDCBA Representative shall be considered an *ex officio* member of the Management Committee, and shall have the right to attend all meetings of the Management Committee and advise the Management Committee with respect to the sublease, but the Authorized LDCBA Representative shall not have the right to vote on the approval of such sublease. If the Management Committee and the Authorized LDCBA Representative cannot reach a successful resolution of issues related to such sublease, the approval of such sublease shall be presented to the governing bodies of the City and the County, respectively. No sublease of the Leased Premises shall release or discharge the LDCBA from its primary liability for the payment of the Basic Rent and Additional Rent hereunder and the performance of each and all of the covenants and agreements herein contained, and its duties and obligations under this Lease shall continue as if no such sublease had been made. The LDCBA shall, within 10 days after the delivery thereof, furnish or cause to be furnished to the City and the County a true and correct copy of each such sublease.

(b) All subleases presented to and approved by the Management Committee shall include the provisions regarding insurance, damage or destruction of the subleased premises, hazardous materials, the Americans with Disabilities Act, indemnification and acknowledgement of this Lease in substantially the form attached hereto as **Exhibit A**. In no event shall the term of any sublease be in excess of five years for extend beyond the final term of this Lease.

Section 13.2. Assignment of Sublease Revenues by LDCBA. The LDCBA shall assign and pledge any rents, revenues and receipts receivable under any sublease, to the City and the County as security for payments due under this Lease.

Section 13.3. Assignment of Revenues by County. The County shall assign and pledge any rents, revenues and receipts receivable under this Lease, to the City pursuant to the Cooperation Agreement as security for payments due under the Cooperation Agreement and the LDCBA hereby consents to such pledge and assignment.

ARTICLE XIV

AMENDMENTS, CHANGES AND MODIFICATIONS

Section 14.1. Amendments, Changes and Modifications. Except as otherwise provided in this Lease, this Lease may not be effectively amended, changed, modified, altered or terminated without the prior written consent of all parties hereto.

ARTICLE XV

MISCELLANEOUS PROVISIONS

Section 15.1. Notices. All notices, certificates or other communications required or desired to be given hereunder shall be in writing and shall be deemed duly given when (i) mailed by registered or certified mail, postage prepaid, or (ii) sent by overnight delivery or other delivery service which requires written acknowledgment of receipt by the addressee, addressed as follows:

- | | | |
|-----|----------------|---|
| (a) | To the City: | City of Lawrence, Kansas
City Hall
6 East 6 th Street
Lawrence, Kansas 66044
Attention: City Clerk |
| (b) | To the County: | Douglas County, Kansas
Douglas County Courthouse
1100 Massachusetts Street
Lawrence, Kansas 66044
Attention: County Administrator |
| (c) | To the LDCBA: | Lawrence-Douglas County Bioscience Authority
1617 St. Andrews Drive
Lawrence, Kansas 66047
Attention: President |

All notices given by certified or registered mail as aforesaid shall be deemed fully given as of the date they are so mailed. A duplicate copy of each notice, certificate or other communication given hereunder by any party hereto shall also be given to all other parties. The City, the County and the LDCBA may from time to time designate, by notice given hereunder to the others of such parties, such other address to which subsequent notices, certificates or other communications shall be sent.

Section 15.2. Lessors Shall Not Unreasonably Withhold Consents and Approvals. Wherever in this Lease it is provided that the City and the County shall, may or must give its approval or consent, or execute supplemental agreements or schedules, the City and the County shall not unreasonably, arbitrarily or unnecessarily withhold or refuse to give such approvals or consents or refuse to execute such supplemental agreements or schedules.

Section 15.3. No Pecuniary Liability. No provision, covenant or agreement contained in this Lease, or any obligation herein or therein imposed upon the City or the County, or the breach thereof, shall

constitute or give rise to or impose upon the City or the County a pecuniary liability or a charge upon the general credit or taxing powers of the City, the County or the State of Kansas.

Section 15.4. Governing Law. This Lease shall be construed in accordance with and governed by the laws of the State of Kansas.

Section 15.5. Binding Effect. This Lease shall be binding upon and shall inure to the benefit of the City, the County and the LDCBA and their respective permitted successors and assigns.

Section 15.6. Electronic Storage. The parties agree that the transactions described herein may be conducted and related documents may be stored by electronic means.

Section 15.7. Severability. If for any reason any provision of this Lease shall be determined to be invalid or unenforceable, the validity and enforceability of the other provisions hereof shall not be affected thereby.

Section 15.8. Execution in Counterparts. This Lease may be executed simultaneously in several counterparts, each of which shall be deemed to be an original and all of which shall constitute but one and the same instrument.

Section 15.9. City and County Sale of the Leased Premises. The City or County may, at any time, contract to sell their respective interests in the Leased Premises. From and after such a sale, the City and County shall be released from all liability to LDCBA and its successors and assigns arising from this Lease because of any act, occurrence or omission of the City or County occurring after such sale, and LDCBA shall look solely to the City's or County's successor in connection with the same; provided however, that the City and County shall not be released from liability to LDCBA and its successors and assigns under this Lease because of any act, occurrence or omission of occurring prior to such sale, unless such liability is expressly assumed by the City's or County's successor-in-interest in and to the Leased Premises.

Section 15.10. Limitation of City and County Liability. Notwithstanding anything in this Lease to the contrary, the City's and County's liability under this Lease shall be limited to their respective interests in the Leased Premises.

[Remainder of page intentionally blank.]

IN WITNESS WHEREOF, the parties hereto have caused this Lease to be executed in their respective corporate names and their respective corporate seals to be hereunto affixed and attested by their duly authorized officers, all as of the date first above written.

CITY OF LAWRENCE, KANSAS

By: [Signature]
Mayor

[SEAL]

ATTEST:

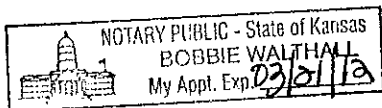
[Signature]
City Clerk

ACKNOWLEDGMENT

STATE OF KANSAS)
COUNTY OF DOUGLAS) SS.

On this 26 day of January 2010, before me, the undersigned, a Notary Public, appeared Robert Chestnut me personally known, who, being by me duly sworn, did say that (s)he is the Mayor of the **CITY OF LAWRENCE, KANSAS**, a municipal corporation duly authorized, incorporated and existing under and by virtue of the laws of the State of Kansas, and that the seal affixed to the foregoing instrument is the corporate seal of said City, and that said instrument was signed and sealed in behalf of said City by authority of its governing body, and said officer acknowledged said instrument to be executed for the purposes therein stated and as the free act and deed of said City.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal, the day and year last above written.



(SEAL)

[Signature]
Printed Name: Bobbie Walthall
Notary Public in and for said State
Commissioned in Douglas County

My commission expires: 03/21/12

DOUGLAS COUNTY, KANSAS

By: Nancy Thell
Chair of Board of County Commissioners

[SEAL]

ATTEST:

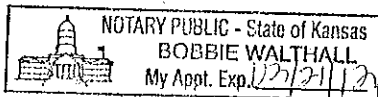
[Signature]
County Clerk

ACKNOWLEDGMENT

STATE OF KANSAS)
) SS.
COUNTY OF DOUGLAS)

On this 25 day of January, 2010, before me, the undersigned, a Notary Public, appeared **Nancy Thellman**, to me personally known, who, being by me duly sworn, did say that (s)he is the Chair of the Board of County Commissioners of **DOUGLAS COUNTY, KANSAS**, a body corporate and politic duly organized and existing under and by virtue of the laws of the State of Kansas, and that the seal affixed to the foregoing instrument is the corporate seal of said County, and that said instrument was signed and sealed in behalf of said County by authority of its governing body, and said officer acknowledged said instrument to be executed for the purposes therein stated and as the free act and deed of said County.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal, the day and year last above written.



Bobbie Walthall
Printed Name: Bobbie Walthall
Notary Public in and for said State
Commissioned in Douglas County

(SEAL)

My commission expires: 03/21/12

LAWRENCE-DOUGLAS COUNTY
BIOSCIENCE AUTHORITY, INC.

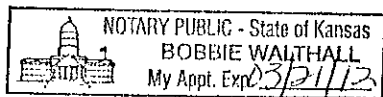
By: ELE
Name: E. Laverne Epp
Title: President / Chairman

ACKNOWLEDGMENT

STATE OF KANSAS)
) SS.
COUNTY OF DOUGLAS)

On this 25 day of January, 2010, before me, the undersigned, a Notary Public, appeared E. Laverne Epp, to me personally known, who, being by me duly sworn, did say that (s)he is the President / Chairman of the **LAWRENCE-DOUGLAS COUNTY BIOSCIENCE AUTHORITY, INC.**, a not for profit corporation duly authorized, incorporated and existing under and by virtue of the laws of the State of Kansas, and that the seal affixed to the foregoing instrument is the corporate seal of said organization, and that said instrument was signed and sealed in behalf of said organization by authority of its Board of Directors, and said officer acknowledged said instrument to be executed for the purposes therein stated and as the free act and deed of said organization.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal, the day and year last above written.



(SEAL)

Bobbie Walthall
Printed Name: Bobbie Walthall
Notary Public in and for said State
Commissioned in Douglas County

My commission expires: 03/21/12

EXHIBIT A

FORM OF SUBLEASE TERMS

DEFINED TERMS.

"Landlord" means the LDCBA.

"Leased Premises" means that portion of the Research Laboratory Facility and the Common Areas, which are leased by LDCBA to the subtenant.

"Master Lease" means that certain Lease Agreement between the Owners and LANDLORD, dated as of January 1, 2010.

"Owners" means the City of Lawrence, Kansas (the "City") and Douglas County, Kansas (the "County.")

"Research Laboratory Facility" means the following described real property, to-wit: LOT 2, BLOCK ONE, IN OREAD CENTER (A REPLAT OF LOT 1B OF A LOT SPLIT OF LOT ONE, OREAD WEST NO. 8), A SUBDIVISION IN THE CITY OF LAWRENCE, DOUGLAS COUNTY, KANSAS.

"Tenant" means the subtenant.

INSURANCE.

a. TENANT shall be solely responsible for obtaining insurance coverage for its personal property and/or trade fixtures located on the Leased Premises, business interruption coverage, leasehold coverage, or any additional insurance coverage TENANT deems necessary.

b. TENANT agrees to secure and keep in force during the term of this Agreement, at TENANT's sole cost and expense, the following insurance policies and/or pay insurance costs as hereinafter set forth:

i. a Commercial General Liability policy with a combined single limit of not less than \$1,000,000 per occurrence with a \$2,000,000 aggregate limit for this location and a deductible not to exceed \$100,000. The policy shall name LANDLORD, LANDLORD's employees, LANDLORD's managing agent for the Research Laboratory Facility (if any), the Owners and their employees and agents, and any other persons, firms or corporations designated by LANDLORD, and TENANT as insured, and shall contain a clause that the insured will not cancel or change the insurance without first giving LANDLORD and the Owners fifteen (15) days prior written notice. TENANT's insurance shall provide primary coverage to the Owners or LANDLORD when any policy issued to the Owners or LANDLORD, as applicable, provides duplicate or similar coverage, in such circumstance the Owners' or the LANDLORD's policy will be excess over TENANT's policy. The insurance shall be provided by an insurance company approved by LANDLORD and a copy of the policy or a certificate of insurance shall be delivered to LANDLORD and the Owners prior to the Effective Date and annually thereafter at least 30 day prior to the expiration date of the expiring policy. If TENANT refuses or neglects to secure and maintain insurance policies complying with the provisions of this paragraph, LANDLORD may, but shall not be required to do so, secure and maintain such insurance policies and TENANT shall pay the cost thereof to LANDLORD, as Additional Rent, upon

demand. The insurance required by this paragraph is deemed a material aspect of this Agreement. TENANT's failure to provide insurance as described herein shall be deemed a breach of this Agreement and cause for cancellation upon three (3) days written notice by LANDLORD to TENANT.

ii. Workers' compensation insurance in accordance with statutory law, and employers' liability insurance with a limit of not less than \$500,000 per occurrence, on which the LANDLORD and the Owners are named as additional insureds.

iii. Such other insurance as LANDLORD reasonably deems necessary and prudent, or as required by Owners.

TOTAL OR PARTIAL DAMAGE.

a. TENANT will promptly notify LANDLORD in writing of any event, damage or condition to which this Paragraph is or may be applicable.

b. In the event of the total destruction of the Research Laboratory Facility, so that the same cannot be occupied by TENANT, this Agreement shall terminate including TENANT's obligation to pay any further Rent hereunder. Total destruction shall mean damage that will not be repaired in 180 days.

c. In the event of partial destruction, LANDLORD may make such repairs, at LANDLORD's expense, as are necessary to place the property in substantially the same condition as prior to the destruction. If LANDLORD and the Owners determine that such repairs shall not be made, this Agreement shall terminate, including TENANT's obligation to pay any further Rent hereunder. If LANDLORD and the Owners determine that such repairs shall be made, TENANT's rent shall be proportionately reduced in the event that a portion of the Leased Premises is not fit for occupancy for a portion of the term hereof; provided, however, that in the event that the repairs cannot be substantially completed within one hundred and eighty (180) days of the date that the partial destruction first occurred, then TENANT shall have the right to terminate this Lease Agreement including all further obligations created upon it hereunder, or to continue occupying the Leased Premises with a pro-rata reduction of the rent. TENANT will assign to LANDLORD and the Owners (or to any party designated by LANDLORD and the Owners) all insurance proceeds payable to TENANT under TENANT's insurance required under this Agreement with respect to the TENANT's improvements in the Leased Premises.

d. Repair or replacement of TENANT's trade fixtures and personal property shall be at TENANT's expense, unless such expense arises as the result of an intentional, reckless or negligent act or omission of LANDLORD, its agents, employees or representatives, in which case, such expense shall be borne solely by LANDLORD.

INDEMNIFICATION.

TENANT shall hold LANDLORD and the Owners and their successors, assigns, officers, directors, employees and agents harmless from and indemnify and defend each against any and all claims, demands, actions and suits and all costs, loss, damage, liability, expense (including attorneys' fees) penalties, and fines which may arise from or be claimed against any or all of TENANT, LANDLORD, the Owners, the Leased Premises or the Research Laboratory Facility, arising directly or indirectly from (a) the use or occupancy of the Leased Premises by TENANT, or (b) the failure of TENANT to comply with any and all laws, statutes, ordinances, rules or regulations applicable to the Research Laboratory Facility or Leased Premises, or (c) any third party claims based upon TENANT's breach of warranty, covenant, liability or obligation under this Lease Agreement.

HAZARDOUS MATERIALS.

a. **Defined Terms.** The following words and terms, as used in this Paragraph 11, shall have the following meanings:

i. **"Claim"** shall mean and include any demand, cause of action, proceeding, or suit for any one or more of the following: (i) actual or punitive damages, losses, injuries to person or property, damages to natural resources, fines, penalties, interest, contribution or settlement, (ii) the costs and expenses of site investigations, feasibility studies, information requests, health or risk assessments, or Response (as hereinafter defined) actions, and (ii) the costs and expenses of enforcing insurance, contribution or indemnification agreements.

ii. **"Environmental Laws"** shall mean and include all federal, state and local statutes, ordinances, regulations and rules in effect and as amended from time to time relating to environmental equality, health, safety, contamination and cleanup, including, without limitation, the Clean Air Act, 42 U.S.C. Section 7401 *et seq.*; the Clean Water Act, 33 U.S.C. Section 1251 *et seq.*, and the Water Quality Act of 1987; the Federal Insecticide, Fungicide and Rodenticide Act ("FIFRA"), 7 U.S.C. Section 136 *et seq.*; the Marine Protection, Research, and Sanctuaries Act, 33 U.S.C. Section 1401 *et seq.*; the National Environmental Policy Act, 42 U.S.C. Section 4321 *et seq.*; the Noise Control Act, 42 U.S.C. Section 2901 *et seq.*; the Occupational Safety and Health Act, 29 U.S.C. Section 651 *et seq.*; the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. Section 6901 *et seq.*, as amended by the Superfund Amendments and Reauthorization Act, the Emergency Planning and Community Right-to-Know Act, and the Radon Gas and Indoor Air Quality Research Act; the Toxic Substances Control Act ("TSCA"), 15 U.S.C., Section 2601 *et seq.*; the Atomic Energy Act, 42 U.S.C. Section 2011 *et seq.*; and the Nuclear Waste Policy Act of 1982, 42 U.S.C. Section 10101 *et seq.*; and state and local superlien and environmental statutes and ordinances, with implementing regulations, rules and guidelines, as any of the foregoing may be amended from time to time. Environmental Laws shall also include all state, regional, county, municipal and other local laws, regulations and ordinances insofar as they are equivalent or similar to the federal laws recited above or purport to regulate Hazardous Materials (as hereinafter defined).

iii. **"Hazardous Materials"** shall mean and include the following, including mixtures thereof: any hazardous substance, pollutant, contaminant, waste, by-product or constituent regulated under CERCLA; oil and petroleum products and natural gas, natural gas liquids, liquefied natural gas and synthetic gas usable for fuel; pesticides regulated under the FIFRA; asbestos and asbestos-containing materials, PCBs, and other substances regulated under TSCA, source material, special nuclear material, by-product material and any other radioactive materials or radioactive wastes, however produced, regulated under the Atomic Energy Act or the Nuclear Waste Policy Act; chemicals subject to the OSHA Hazard Communication Standard, 29 C.F.R. Section 1901.1200 *et seq.*; and industrial process and pollution control wastes whether or not hazardous within the meaning of RCRA, and any other hazardous substance, pollutant or contaminant regulated under any other Environmental Law.

iv. **"Manage" or "Management"** means to generate, manufacture, process, treat, store, use, re-use, refine, recycle, reclaim, blend or burn for energy recovery, incinerate, accumulate speculatively, transport, transfer, dispose of or abandon Hazardous Materials.

v. **"Release" or "Released"** shall mean any actual or threatened spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing of Hazardous Materials into the environment, as "environment" is defined in CERCLA.

vi. **"Response" or "Respond"** shall mean action taken to correct, remove, remediate, clean up, prevent, mitigate, monitor, evaluate, investigate, assess or abate the Release of a Hazardous Material.

b. **Tenant's Obligations with Respect to Environmental Matters.** During the Term of this Agreement, (i) TENANT shall comply at its sole cost and expense with all applicable Environmental Laws; (ii) TENANT shall not Manage, or authorize the Management of, any Hazardous Materials, except Hazardous Materials used by TENANT in the ordinary course of its business in compliance with applicable Environmental Laws on the Leased Premises, without prior written disclosure to and prior written approval by LANDLORD and the Owners; (iii) TENANT shall not take any action that would subject the Research Laboratory Facility to the permit requirements under RCRA for storage, treatment or disposal of Hazardous Materials; (iv) excepting *de minimis* quantities not in violation of Environmental Laws, TENANT shall not dispose of Hazardous Materials in dumpsters provided by LANDLORD for tenant use; (v) TENANT shall not discharge Hazardous Materials into drains or sewers serving the Leased Premises; (vi) TENANT shall not cause or allow the Release of any Hazardous Materials on, to or from the Leased Premises or surrounding land and (vii) TENANT shall arrange at its sole cost and expense for the lawful transportation and off-site disposal in accordance with all applicable Environmental Laws, of all Hazardous Materials that it generates. Notwithstanding the foregoing, TENANT shall be responsible only for compliance with Environmental Laws during the Term of this Agreement, as extended, if applicable, which responsibility expressly excludes compliance or causing the compliance of the Leased Premises with Environmental Laws (a) as a result of conditions in existence prior to the commencement of the Term of this Lease; or (b) as a result of a Release of Hazardous Materials from other sites onto the Leased Premises.

c. **Copies of Notices.** During the Term of this Lease, as extended, if applicable, TENANT shall provide LANDLORD promptly with copies of all summons, citations, directives, information, inquiries or requests, notices of potential responsibility, notices of violation or deficiency, orders or decrees, Claims, complaints, investigations, judgments, letters notices of environmental liens, or Response actions in process, and other communications, written or oral, actual or threatened, from the United States Environmental Protection Agency, Occupational Safety and Health Administration, Kansas Environmental Protection Agency, or other federal, state or local agency or authority, or any other entity or individual, concerning (i) any actual or alleged Release of a Hazardous Material on, to or from the Leased Premises; (ii) the imposition of any lien on the Leased Premises; (iii) any actual or alleged violation of, or responsibility under, any Environmental Laws; or (iv) any actual or alleged liability under any theory of common law tort or toxic tort, including without limitation, negligence, trespass, nuisance, strict liability or ultrahazardous activity. In addition, TENANT shall provide LANDLORD promptly with copies of all environmental studies and reports conducted in connection with the Leased Premises.

d. **Landlord's Right to Inspect.** LANDLORD and LANDLORD's employees shall have the right to enter the Leased Premises upon at least 24 hours prior notice to TENANT (except in an emergency, in which even no prior notice is required) and conduct appropriate inspections or tests, which inspections and tests shall be carried out in such a manner as will cause the least practicable interference with TENANT's business in the Leased Premises, for the purpose of (i) determining TENANT's compliance with Environmental Laws, and (ii) determining the type, kind and quantity of all products, materials and substances brought onto the Leased Premises, or made or produced therein. LANDLORD and its agents and representatives shall have the right to take samples in quantities sufficient for analysis of all products, materials and substances present on the Leased Premises including, but not limited to, samples, products, materials or substances brought onto or made or produced on the Leased Premises by TENANT or its agents, employees, contractors or invitees. TENANT agrees to cooperate with such investigations by providing any relevant information requested by LANDLORD. TENANT may not perform any sampling, testing or drilling to locate Hazardous Materials in the Research Laboratory Facility without the LANDLORD's prior written consent.

e. **Tests and Reports.** Within ten (10) days of TENANT's receipt of a written request by LANDLORD, but in no event more often than semi-annually, unless Hazardous Materials are discovered on, in or under the Leased Premises in violation of this Paragraph, as there is a violation of

Environmental Laws, in which event LANDLORD hereby reserves the right to request the following described documents more often, TENANT shall provide LANDLORD with (i) copies of all environmental reports and tests obtained by TENANT; (ii) copies of transportation and disposal contracts (and related manifests, schedules, reports and other information) entered into or obtained by TENANT with respect to any Hazardous Materials; (iii) copies of any permits issued to TENANT under Environmental Laws with respect to the Leased Premises; (iv) copies of any and all reports, notifications and other filings made by TENANT to any federal, state, or local environmental authorities or agencies; and (v) any other applicable documents and information with respect to environmental matters relating to the Leased Premises. TENANT shall provide LANDLORD with the results of appropriate reports and tests, with transportation and disposal contracts for Hazardous Materials, with any permits issued under Environmental Laws, and with any other documents necessary to demonstrate that TENANT complies with all Environmental Laws relating to the Leased Premises.

f. **Tenant's Obligation to Respond.** If TENANT's Management of Hazardous Materials at the Leased Premises (i) gives rise to liability or to a Claim under any Environmental Law, or any common law theory of tort or otherwise; (ii) causes a threat to, or endangers, the public health; or (iii) creates a nuisance or trespass, TENANT shall, at its sole cost and expense, promptly take all applicable action in response so as to comply with all applicable Environmental Laws and eliminate or avoid any liability claim with respect thereto.

g. **Landlord's Right to Act.** In the event that TENANT shall fail to comply with any of its obligations under this Paragraph as and when required hereunder, LANDLORD shall have the right (but not the obligation) to take such action as is required to be taken by TENANT hereunder and in such event, TENANT shall be liable and responsible to LANDLORD for all costs, expenses, liabilities, claims and other obligations paid, suffered, or incurred by LANDLORD in connection with such matters. TENANT shall reimburse LANDLORD immediately upon demand for all such amounts for which TENANT is liable.

h. **Indemnification.** Notwithstanding anything contained in this Agreement to the contrary, TENANT shall reimburse, defend, indemnify and hold LANDLORD and Owners, and their officers, directors, shareholders, employees and agents, free and harmless from and against any and all Claims, Response costs, losses, liabilities, damages, costs and expenses, including, without limitation, loss of rental income, loss due to business interruption and reasonable attorneys' fees and costs, arising out of or in any way connected with any or all of the following:

i. Any Hazardous Materials which, at any time during the Term, as extended, if applicable, are or were actually Managed, released or disposed of on or from the Leased Premises by TENANT (regardless of the location at which such Hazardous Material are now or may in the future be located or disposed of), including but not limited to, any and all (1) liabilities under any common law theory of tort, nuisance, strict liability, ultrahazardous activity, negligence or otherwise based upon, resulting from or in connection with any Hazardous Material; (2) obligations to take Response, cleanup or corrective action pursuant to any investigation or remediation in connection with the decontamination, removal, transportation, incineration, or disposal of any of the foregoing; and

ii. Any actual illness, disability, injury, or death of any person in any manner arising out of exposure to Hazardous Materials Managed or Released by TENANT on or from the Leased Premises during the Term, as extended, if applicable, regardless of when any such illness, disability, injury, or death shall have occurred or been incurred or manifested itself; and

iii. Any actual failure of TENANT on the Leased Premises at any time during the Term, as extended, if applicable, to comply with all applicable Environmental Laws as required under subparagraph (b) of this [Section][Paragraph]; and

iv. Any failure by TENANT to comply with its obligations under this Paragraph.

The foregoing indemnification obligations of TENANT under this Lease shall expressly exclude any obligation for pre-existing environmental conditions prior to the Commencement Date of this Lease. In the event any Claims or other assertion of liability shall be made against LANDLORD for which LANDLORD is entitled to indemnity hereunder, LANDLORD shall notify TENANT of such Claim or assertion of liability and thereupon TENANT shall, at its sole cost and expense, assume the defense of such Claim or assertion of liability and continue such defense at all times thereafter until completion. The obligations of TENANT under this Paragraph shall survive any termination or expiration of this Lease.

i. **Environmental Assessment Requirement.** TENANT shall, within 60 days of the expiration of the Lease, provide documentation in such form reasonably acceptable to LANDLORD, that the general environmental condition of the Leased Premises is in compliance with all Environmental Laws and are in at least the same condition as shown in the Phase I Environmental Assessment provided by LANDLORD to TENANT at the commencement of this Sublease Agreement. If such documentation is not delivered prior to such 60th day, then LANDLORD may arrange for completion of same. The reasonable cost of such documentation obtained by LANDLORD or TENANT pursuant to this provision shall be paid by TENANT or reimbursable to LANDLORD by TENANT (if completed by LANDLORD) promptly upon LANDLORD's furnishing TENANT with evidence of costs incurred therefor.

AMERICANS WITH DISABILITIES ACT.

The parties acknowledge that the Americans With Disabilities Act of 1990 (42 U.S.C. Section 12101 *et seq.*) and regulations and guidelines promulgated thereunder, as all of the same may be amended and supplemented from time to time (collectively referred to herein as the "ADA") establish requirements under Title III of the ADA ("Title III") pertaining to business operations, accessibility and barrier removal, and that such requirements may be unclear and may or may not apply to the Leased Premises. The parties acknowledge and agree that TENANT has been provided an opportunity to inspect the Leased Premises sufficient to determine whether or not the Leased Premises in their condition as of the date hereof deviate in any matter from the ADA Accessibility Guidelines ("ADAAG") or any other requirements under the ADA pertaining to the accessibility of the Leased Premises. TENANT further acknowledges and agrees that except as may otherwise be specifically provided herein, TENANT accepts the Leased Premises in "as-is" condition and agrees that neither LANDLORD nor Owners make any representation or warranty as to whether the Leased Premises conform to the requirements of the ADAAG or any other requirements under the ADA pertaining to the accessibility of the Leased Premises. If required by TENANT, TENANT shall be solely responsible for all costs related to work necessary to conform the Leased Premises to the ADA.

MASTER LEASE.

a. This Agreement is and shall at all times be subject and subordinate to the Master Lease. Nothing in this Agreement shall be deemed to amend or modify any of the terms contained in the Master Lease, and to the extent any of the terms contained herein purport to grant TENANT greater rights than LANDLORD has been granted pursuant to the terms of the Master Lease, the rights herein granted shall be strictly limited so as not to exceed the rights of LANDLORD under the Master Lease.

b. TENANT agrees not to do or omit to do anything that would cause a default under the Master Lease. During the Initial Term and any renewal terms of this Agreement and for all periods subsequent for obligations which arise prior to the termination of this Agreement, TENANT does hereby expressly assume and agree to perform and comply with, for the benefit of LANDLORD, each and every

obligation of LANDLORD under the Master Lease to the extent that the same relate to the Leased Premises ("TENANT'S Assumed Obligations").

c. TENANT shall hold LANDLORD free and harmless from all liability, judgments, costs, damages, claims or demands, including reasonable attorneys' fees, arising out of TENANT'S failure to comply with or perform TENANT'S Assumed Obligations.

OWNERS CONSENT.

By signing below, the Authorized City Representative and Authorized County Representative (as defined in the Master Lease) consent to this Agreement pursuant to Section 13.1(a) of the Master Lease, but such consent shall not: (a) except for obligations of TENANT under this Agreement in favor of Owners, create privity of contract between Owners and TENANT; (b) be deemed to have amended the Master Lease in any regard; (c) be construed as a waiver of Owners' right to consent to any assignment or further sublease of the Master Lease by LANDLORD; or (d) relive LANDLORD of any of its obligations under the Master Lease.

TERMINATION OF MASTER LEASE.

TENANT agrees that in the event that (i) LANDLORD breaches any covenant or fails to satisfy any contingency set forth in the Master Lease, or (ii) Owners assert any right of cancellation or termination given to Owners under the Master Lease, and any of the foregoing events under clauses (i) and (ii) results in the cancellation or termination of the Master Lease, or (iii) the Master Lease is terminated, cancelled, or surrendered for any other reason, then this Agreement shall likewise be cancelled and terminated.

SCHEDULE I

Schedule of Basic Rent Payments

Rental Payment Date	Principal Portion	Cumulative Outstanding Principal	Estimated Interest Portion*	Estimated Total Payment
8/1/2010	-	n/a	-	\$ 12,500.00
2/1/2011	-	n/a	-	12,500.00
8/1/2011	-	n/a	-	12,500.00
2/1/2012	-	n/a	-	12,500.00
8/1/2012	-	n/a	-	12,500.00
2/1/2013	-	n/a	-	12,500.00
8/1/2013	-	n/a	-	12,500.00
2/1/2014	-	n/a	-	12,500.00
8/1/2014	-	\$2,975,000.00	-	12,500.00
2/1/2015	\$55,000.00	2,920,000.00	\$59,500.00	114,500.00
8/1/2015	55,000.00	2,865,000.00	58,400.00	113,400.00
2/1/2016	55,000.00	2,810,000.00	57,300.00	112,300.00
8/1/2016	55,000.00	2,755,000.00	56,200.00	111,200.00
2/1/2017	57,500.00	2,697,500.00	55,100.00	112,600.00
8/1/2017	57,500.00	2,640,000.00	53,950.00	111,450.00
2/1/2018	57,500.00	2,582,500.00	52,800.00	110,300.00
8/1/2018	57,500.00	2,525,000.00	51,650.00	109,150.00
2/1/2019	60,000.00	2,465,000.00	50,500.00	110,500.00
8/1/2019	60,000.00	2,405,000.00	49,300.00	109,300.00
2/1/2020	62,500.00	2,342,500.00	48,100.00	110,600.00
8/1/2020	62,500.00	2,280,000.00	46,850.00	109,350.00
2/1/2021	62,500.00	2,217,500.00	45,600.00	108,100.00
8/1/2021	62,500.00	2,155,000.00	44,350.00	106,850.00
2/1/2022	65,000.00	2,090,000.00	43,100.00	108,100.00
8/1/2022	65,000.00	2,025,000.00	41,800.00	106,800.00
2/1/2023	67,500.00	1,957,500.00	40,500.00	108,000.00
8/1/2023	67,500.00	1,890,000.00	39,150.00	106,650.00
2/1/2024	70,000.00	1,820,000.00	37,800.00	107,800.00
8/1/2024	70,000.00	1,750,000.00	36,400.00	106,400.00
2/1/2025	72,500.00	1,677,500.00	35,000.00	107,500.00
8/1/2025	72,500.00	1,605,000.00	33,550.00	106,050.00
2/1/2026	75,000.00	1,530,000.00	32,100.00	107,100.00
8/1/2026	75,000.00	1,455,000.00	30,600.00	105,600.00

2/1/2027	77,500.00	1,377,500.00	29,100.00	106,600.00
8/1/2027	77,500.00	1,300,000.00	27,550.00	105,050.00
2/1/2028	82,500.00	1,217,500.00	26,000.00	108,500.00
8/1/2028	82,500.00	1,135,000.00	24,350.00	106,850.00
2/1/2029	85,000.00	1,050,000.00	22,700.00	107,700.00
8/1/2029	85,000.00	965,000.00	21,000.00	106,000.00
2/1/2030	87,500.00	877,500.00	19,300.00	106,800.00
8/1/2030	87,500.00	790,000.00	17,550.00	105,050.00
2/1/2031	92,500.00	697,500.00	15,800.00	108,300.00
8/1/2031	92,500.00	605,000.00	13,950.00	106,450.00
2/1/2032	97,500.00	507,500.00	12,100.00	109,600.00
8/1/2032	97,500.00	410,000.00	10,150.00	107,650.00
2/1/2033	100,000.00	310,000.00	8,200.00	108,200.00
8/1/2033	100,000.00	210,000.00	6,200.00	106,200.00
2/1/2034	105,000.00	105,000.00	4,200.00	109,200.00
8/1/2034	105,000.00	-	2,100.00	107,100.00
Totals	\$2,975,000.00		\$1,359,850.00	\$4,447,350.00

* Interest rate is estimated at 4.0%. Actual interest portion will be determined pursuant to **Section 5.1** of the Lease.

February 23, 2015

Mr. David Corliss
Lawrence City Manager
6 E. 6th Street
Lawrence, KS 66044

Mr. Craig Weinaug
Douglas County Administrator
1100 Massachusetts
Lawrence, KS 66044

Re: BTBC West Facility
4950 Research Parkway
Lawrence, KS 66049

Gentlemen:

We are providing this brief response in follow up of our various communications the past several months regarding the BTBC West facility. As you are aware and as we have reported to the BTBC board, with the completion of construction of the Phase II on the KU Main Lawrence campus in 2014, BTBC is transitioning into a more aggressive company creation, recruitment, and retention phase. We plan to add to the thirty-four companies in the BTBC innovation and entrepreneurial system.

Pertinent to this expansion strategy is the future role that the West facility should play. The next several years will be critical in identifying what that role should be.

When the West facility was acquired in 2010 by the City of Lawrence and Douglas County the purposes were distinct and clear, viz., (i) community retention of an emerging major bioscience company, as an anchor tenant, offering modern specialized laboratory and office space for that company to grow, (ii) provide expansion space for the BTBC Main facility on KU's research campus, if necessary, and (iii) development of an important nexus to KU's bio-refining Center for Environmentally Beneficial Catalysis (CEBC), which is headquartered immediately adjacent to the West facility, and offering unique commercialization space for KU.

All of these purposes were successfully achieved. Critech remained in Lawrence and has grown, significantly expanding its employee base, although it has since graduated into its own building in North Lawrence. The West facility has provided important laboratory and office space to numerous companies, now four, when space was not available in the BTBC Main facility. One of those companies is Archer Daniels Midland (ADM), recruited to Lawrence as part of its collaborative relationship with CEBC; it has established its Lawrence operations in the West facility tripling its space since 2012.

In 2014 BTBC conducted an engineering study and drafted a business analysis to determine the changes needed in the West facility to strengthen its appeal to companies such as ADM. The conclusion is that significant infrastructure investment is needed to exploit its value as a multi-tenant commercialization facility serving the economic development needs of the City and County. This should be part of a longer term assessment of the facility.

At present, the West facility, both plant and location, offers many good benefits and amenities, some of which constituted the original purposes, noted above. We believe the continued strengthening of BTBC's partnership with the University of Kansas in areas of earth, energy, and environment offers great potential to attract private industry for which the facility could be an important asset. We also believe it is useful to have expansion space available especially as the BTBC Main facility achieves full occupancy in the next several years.

Our business analysis indicates, however, in light of the facility's specialized laboratories and limited size (the leasable square footage is less than 15,000) some level of public support will always be needed even if the infrastructure changes are made as recommended in the engineering study, noted above. Whether that is a priority for the City and County, as part of a long term economic development plan, needs to be determined as part of an extended assessment period.

When the West facility was acquired in 2010 the underlying financing structure provided for bond payments to be made, jointly, by the City and County with a token semi-annual lease payment made by BTBC. That payment plan adjusts in 2015 when BTBC is scheduled to assume the bond payment, in full. This adjustment was based on the assumption that the facility would retain its initial anchor tenant with additional smaller tenancies if space was available. It was also assumed the initial five year period would be sufficient for BTBC, the City and County, to make a meaningful determination of the facility's long term value as an economic development asset.

Additional time is needed for this assessment. Consequently, we request that the bond payment structure of the last five years be extended for an additional three years through 2017. Under this proposed extension the City and County would continue to make the bond payments with semi-annual lease payments provided by BTBC. BTBC would continue to make the ad valorem tax payments to Douglas County during this time as has been the case the last five years.

This extension would allow BTBC, the City, and the County to more carefully assess the long term market potential of the West facility including exploration of greater utilization by the University of Kansas as a commercialization repository. It would also provide ample time for the City and County to make a determination of the economic development viability of retaining the facility as part of its portfolio of real estate and commercialization opportunities for companies seeking to relocate or establish Kansas starter operations in Lawrence and Douglas County. The extension would also allow BTBC to continue to direct its limited budget resources to create new companies, such as Foster Care Technologies, and recruit firms, like Simcro, to move their business operations to Kansas.

Thank you for considering our request.

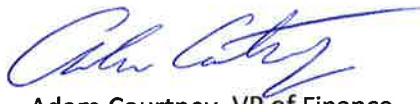
We are enthused about the progress of BTBC the past five years. Our engagement with KU has been a significant development; KU continues to be our region's most viable economic development engine. The BTBC coalition of government, business, and university is unique, regionally and nationally. This collaboration offers critical leveraging of assets among these stakeholders that allows us to achieve things that would not be possible without this partnership. As we project the next several years we see significant opportunities to boost our economic development metrics of companies, jobs, payroll, and tax base. We would like to determine, together with you, how the West facility plays into that future.

Thank you for your partnership support.

Very truly yours,

A handwritten signature in blue ink, appearing to read 'G. Underwood', with a stylized flourish at the end.

G.R. Underwood, President

A handwritten signature in blue ink, appearing to read 'Adam Courtney', with a long horizontal flourish extending to the right.

Adam Courtney, VP of Finance

A handwritten signature in blue ink, appearing to read 'E. LaVerne Epp', with a stylized, cursive script.

E. LaVerne Epp, Executive Chair

AMENDMENT TO LEASE AGREEMENT

THIS AMENDMENT TO LEASE AGREEMENT, entered into as of the 1 day of April, 2015, by and between the **CITY OF LAWRENCE, KANSAS**, a municipal corporation organized and existing under the laws of the State of Kansas (the "City") and **DOUGLAS COUNTY, KANSAS**, a body corporate and politic organized and existing under the laws of the State of Kansas (the "County"), as lessors, and **BIOSCIENCE AND TECHNOLOGY BUSINESS CENTER, INC.**, a Kansas not for profit corporation ("BTBC"), formerly known as LAWRENCE-DOUGLAS COUNTY BIOSCIENCES AUTHORITY, INC., as lessee.

WHEREAS, BTBC, the City, and the County entered into a certain Lease Agreement dated January 1, 2010, pertaining to certain real estate legally described as:

LOT 2, BLOCK ONE, IN OREAD CENTER (A REPLAT OF LOT 1B OF A LOT SPLIT OF LOT ONE, OREAD WEST NO. 8), A SUBDIVISION IN THE CITY OF LAWRENCE, DOUGLAS COUNTY, KANSAS.

WHEREAS, Section 14.1 of the Lease Agreement provides that the Lease may not be effectively amended, changed, modified, altered or terminated without the prior written consent of all parties thereto; and

WHEREAS, BTBC, the City, and the County desire to amend, change, modify, or alter the Lease Agreement in the following manner;

NOW THEREFORE, in consideration of the mutual representations, covenants, and agreements herein contained, the City, the County, and BTBC do hereby amend said Lease Agreement as follows:

1. Section 5.1(a) of the original Lease Agreement dated January 1, 2010 is hereby amended to state in its entirety as follows:

"Section 5.1. Basic Rent.

(a) The BTBC covenants and agrees to pay as Basic Rent to the City and the County on each February 1 and August 1 (each, a "Rent Payment Date") beginning August 1, 2010 through and including August 1, 2017, the sum of \$12,500.00. On each Rent Payment Date thereafter, the BTBC shall pay as Basic Rent to the City and the County the Principal Portion of Basic Rent as shown on **Amended Schedule I**, plus the Interest Portion of Basic Rent. The Interest Portion of Basic Rent on each Rent Payment Date shall be determined by (a) multiplying the Cumulative Outstanding Principal Amount as shown on **Amended Schedule I** hereto on each Rent Payment Date by the Annual Interest Rate, as determined from time to time, and (b) dividing such amount by two. The City shall give notice of the Annual Interest Rate to BTBC and the County by January 15 of each year."

The remaining provisions of Section 5.1 remain unaltered.

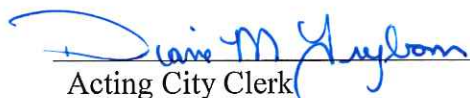
2. This Amendment may be executed simultaneously in several counterparts, each of which shall be deemed to be an original and all of which shall constitute but one and the same instrument.

3. The City, the County, and BTBC mutually agree and acknowledge that, except as herein expressly provided, the original Lease Agreement dated January 1, 2010 remains in full force and effect.

CITY OF LAWRENCE, KANSAS

By: _____
Vice Mayor Jeremy Farmer

ATTEST:


Acting City Clerk

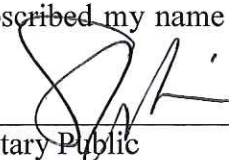
ACKNOWLEDGMENT

STATE OF KANSAS)
) ss:
COUNTY OF DOUGLAS)

BE IT REMEMBERED, that on this 31st day of March, 2015, before me

the undersigned, a notary public, came Vice Mayor Farmer, to me personally known, who, being by me duly sworn, did say that he is the Mayor of the CITY OF LAWRENCE, KANSAS, a municipal corporation duly authorized, incorporated and existing under and by virtue of the laws of the State of Kansas, and that the seal affixed to the foregoing instrument is the corporate seal of said City, and that said instrument was signed and sealed in behalf of said City by authority of its governing body, and said officer acknowledged said instrument to be executed for the purposes therein stated and as the free act and deed of said City.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my official seal the day and year last above written.


Notary Public

My appointment expires:

5/12/2018



Sherri Riedemann
Notary Public - State of Kansas
My Appt Expires 5/12/18

DOUGLAS COUNTY, KANSAS

By: 
Jim Flory, Chair of the Board of County
Commissioners

ATTEST:

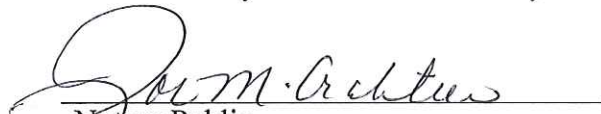

County Clerk

ACKNOWLEDGMENT

STATE OF KANSAS)
)
COUNTY OF DOUGLAS) ss:

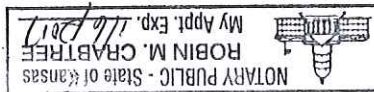
BE IT REMEMBERED, that on this 1 day of April, 2015, before me the undersigned, a notary public, came Jim Flory, to me personally known, who, being by me duly sworn, did say that he is the Chair of the Board of County Commissioners of DOUGLAS COUNTY, KANSAS, a body corporate and politic duly organized and existing under and by virtue of the laws of the State of Kansas, and that the seal affixed to the foregoing instrument is the corporate seal of said County, and that said instrument was signed and sealed in behalf of said County by authority of its governing body, and said officer acknowledged said instrument to be executed for the purposes therein stated and as the free act and deed of said County.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my official seal the day and year last above written.


Notary Public

My appointment expires:

1/6/2017



**BIOSCIENCE AND TECHNOLOGY
BUSINESS CENTER, INC.**

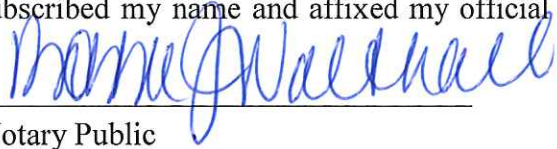
By: 
E. LaVerne Epp, Executive Chairman

ACKNOWLEDGMENT

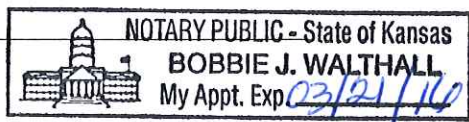
STATE OF KANSAS)
)
COUNTY OF DOUGLAS) ss:

BE IT REMEMBERED, that on this 1st day of April, 2015, before me the undersigned, a notary public, came E. LaVerne Epp, to me personally known, who, being by me duly sworn, did say that he is the President and Chairman of BIOSCIENCE AND TECHNOLOGY BUSINESS CENTER, INC., a not for profit corporation duly authorized, incorporated and existing under and by virtue of the laws of the State of Kansas, and that the seal affixed to the foregoing instrument is the corporate seal of said organization, and that said instrument was signed and sealed in behalf of said organization by authority of its Board of Directors, and said officer acknowledged said instrument to be executed for the purposes therein stated and as the free act and deed of said organization.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my official seal the day and year last above written.


Notary Public

My appointment expires:



**AMENDED
SCHEDULE I**

Schedule of Basic Rent Payments
--

Rental Payment Date	Principal Portion	Cumulative Outstanding Principal	Estimated Interest Portion*	Estimated Total Payment
8/1/2010	-	n/a	-	\$ 12,500.00
2/1/2011	-	n/a	-	12,500.00
8/1/2011	-	n/a	-	12,500.00
2/1/2012	-	n/a	-	12,500.00
8/1/2012	-	n/a	-	12,500.00
2/1/2013	-	n/a	-	12,500.00
8/1/2013	-	n/a	-	12,500.00
2/1/2014	-	n/a	-	12,500.00
8/1/2014	-	n/a	-	12,500.00
2/1/2015	-	n/a	-	12,500.00
8/1/2015	-	n/a	-	12,500.00
2/1/2016	-	n/a	-	12,500.00
8/1/2016	-	n/a	-	12,500.00
2/1/2017	-	n/a	-	12,500.00
8/1/2017	-	2,640,000.00	-	12,500.00
2/1/2018	57,500.00	2,582,500.00	52,800.00	110,300.00
8/1/2018	57,500.00	2,525,000.00	51,650.00	109,150.00
2/1/2019	60,000.00	2,465,000.00	50,500.00	110,500.00
8/1/2019	60,000.00	2,405,000.00	49,300.00	109,300.00
2/1/2020	62,500.00	2,342,500.00	48,100.00	110,600.00
8/1/2020	62,500.00	2,280,000.00	46,850.00	109,350.00
2/1/2021	62,500.00	2,217,500.00	45,600.00	108,100.00
8/1/2021	62,500.00	2,155,000.00	44,350.00	106,850.00
2/1/2022	65,000.00	2,090,000.00	43,100.00	108,100.00
8/1/2022	65,000.00	2,025,000.00	41,800.00	106,800.00
2/1/2023	67,500.00	1,957,500.00	40,500.00	108,000.00
8/1/2023	67,500.00	1,890,000.00	39,150.00	106,650.00
2/1/2024	70,000.00	1,820,000.00	37,800.00	107,800.00
8/1/2024	70,000.00	1,750,000.00	36,400.00	106,400.00
2/1/2025	72,500.00	1,677,500.00	35,000.00	107,500.00
8/1/2025	72,500.00	1,605,000.00	33,550.00	106,050.00
2/1/2026	75,000.00	1,530,000.00	32,100.00	107,100.00
8/1/2026	75,000.00	1,455,000.00	30,600.00	105,600.00

2/1/2027	77,500.00	1,377,500.00	29,100.00	106,600.00
8/1/2027	77,500.00	1,300,000.00	27,550.00	105,050.00
2/1/2028	82,500.00	1,217,500.00	26,000.00	108,500.00
8/1/2028	82,500.00	1,135,000.00	24,350.00	106,850.00
2/1/2029	85,000.00	1,050,000.00	22,700.00	107,700.00
8/1/2029	85,000.00	965,000.00	21,000.00	106,000.00
2/1/2030	87,500.00	877,500.00	19,300.00	106,800.00
8/1/2030	87,500.00	790,000.00	17,550.00	105,050.00
2/1/2031	92,500.00	697,500.00	15,800.00	108,300.00
8/1/2031	92,500.00	605,000.00	13,950.00	106,450.00
2/1/2032	97,500.00	507,500.00	12,100.00	109,600.00
8/1/2032	97,500.00	410,000.00	10,150.00	107,650.00
2/1/2033	100,000.00	310,000.00	8,200.00	108,200.00
8/1/2033	100,000.00	210,000.00	6,200.00	106,200.00
2/1/2034	105,000.00	105,000.00	4,200.00	109,200.00
8/1/2034	105,000.00		2,100.00	107,100.00
	\$2,640,000.00		\$1,019,400.00	\$3,846,900.00

* Interest rate is estimated at 4.0%. Actual interest portion will be determined pursuant to **Section 5.1** of the **Lease**.

June 27, 2017

Mr. Tom Markus
Lawrence City Manager
6 E. 6th Street
Lawrence, KS 66044

Mr. Craig Weinaug
Douglas County Administrator
1100 Massachusetts
Lawrence, KS 66044

City and County Partners:

We are providing this brief response in follow up of our various communications regarding the BTBC West facility.

When the West facility was acquired in 2010 by the City of Lawrence and Douglas County the purposes were distinct and clear, viz., (i) community retention of an emerging major bioscience company, as an anchor tenant, offering modern specialized laboratory and office space for that company to grow, (ii) provide expansion space for the BTBC Main facility on KU's research campus, if necessary, and (iii) development of an important nexus to KU's bio-refining Center for Environmentally Beneficial Catalysis (CEBC), which is headquartered immediately adjacent to the West facility, and offering unique commercialization space for KU.

All of these purposes were successfully achieved. Critech remained in Lawrence and has grown, significantly expanding its employee base, although it has since graduated into its own building in North Lawrence. The West facility has provided important laboratory and office space to numerous companies, now three. One of those companies is Archer Daniels Midland (ADM), recruited to Lawrence as part of its collaborative relationship with CEBC; it has established its Lawrence operations in the West facility tripling its space since 2012 and is a potential private-industry partner for an additional West campus Phase III project. For your information, an ADM delegation of scientists and business planners has scheduled a trip to KU and Lawrence in mid-May. The purpose of the visit is to explore expansion of ADM's Lawrence operations.

We believe the West facility can also provide additional strategic value while BTBC continues to develop Phase III of the technology park on West campus. With space unavailable at the Main facility, BTBC will attempt to utilize the West facility to continue its core mission of economic development by continuing to create, recruit, grow, and retain companies. Even if the West facility's occupancy increases over the next 12 - 24 months, the facility will never generate the revenue to sustainably manage under the current structure and make the fully amortized bond payments.

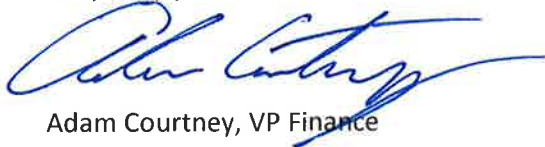
Our business analysis that was originally conducted in 2014 indicates, however, in light of the facility's specialized laboratories and limited size (the leasable square footage is less than 15,000), some level of public support will always be needed. Whether that is a priority for the City and County, as part of a long term economic development plan, needs to be determined as part of an extended assessment period.

When the West facility was acquired in 2010 the underlying financing structure provided for bond payments to be made, jointly, by the City and County with a token semi-annual lease payment made by BTBC. The original payment plan adjusted in 2015 when BTBC was scheduled to assume the bond payment, in full. This adjustment was based on the assumption that the facility would retain its initial anchor tenant with additional smaller tenancies if space was available. It was also assumed the initial five year period would be sufficient for BTBC, the City and County, to make a meaningful determination of the facility's long term value as an economic development asset. The original plan was then extended three years through 2017.

BTBC will make a fuller assessment of the strategic value of continuing to operate the building and make more formal proposal on the viability, including a proposed long-term plan, with regard to the West facility. Consequently, we request that the bond payment structure of the last eight years be extended for an additional year through 2018. Under this proposed extension the City and County would continue to make the bond payments with semi- annual lease payments provided by BTBC. BTBC would continue to make the ad valorem tax payments to Douglas County during this time as has been the case the last eight years.

Thank you for considering our request for your partnership support.

Very truly yours,



Adam Courtney, VP Finance

2nd AMENDMENT TO LEASE AGREEMENT

THIS 2nd AMENDMENT TO LEASE AGREEMENT, entered into as of the 15th day of August, 2017, by and between the **CITY OF LAWRENCE, KANSAS**, a municipal corporation organized and existing under the laws of the State of Kansas (the “City”) and **DOUGLAS COUNTY, KANSAS**, a body corporate and politic organized and existing under the laws of the State of Kansas (the “County”), as lessors, and **BIOSCIENCE AND TECHNOLOGY BUSINESS CENTER, INC.**, a Kansas not for profit corporation (“BTBC”), formerly known as LAWRENCE-DOUGLAS COUNTY BIOSCIENCES AUTHORITY, INC., as lessee.

WHEREAS, BTBC, the City, and the County entered into a certain Lease Agreement dated January 1, 2010, pertaining to certain real estate legally described as:

LOT 2, BLOCK ONE, IN OREAD CENTER (A REPLAT OF LOT 1B OF A LOT SPLIT OF LOT ONE, OREAD WEST NO. 8), A SUBDIVISION IN THE CITY OF LAWRENCE, DOUGLAS COUNTY, KANSAS.

WHEREAS, Section 14.1 of the Lease Agreement provides that the Lease may not be effectively amended, changed, modified, altered or terminated without the prior written consent of all parties thereto; and

WHEREAS, BTBC, the City, and the County desire to amend, change, modify, or alter the Lease Agreement in the following manner;

NOW THEREFORE, in consideration of the mutual representations, covenants, and agreements herein contained, the City, the County, and BTBC do hereby amend said Lease Agreement as follows:

1. Section 5.1(a) of the original Lease Agreement dated January 1, 2010 is hereby amended to state in its entirety as follows:

“Section 5.1. Basic Rent.

(a) The BTBC covenants and agrees to pay as Basic Rent to the City and the County on each February 1 and August 1 (each, a “Rent Payment Date”) beginning August 1, 2010 through and including August 1, 2018, the sum of \$12,500.00. On each Rent Payment Date thereafter, the BTBC shall pay as Basic Rent to the City and the County the Principal Portion of Basic Rent as shown on **Amended Schedule I**, plus the Interest Portion of Basic Rent. The Interest Portion of Basic Rent on each Rent Payment Date shall be determined by (a) multiplying the Cumulative Outstanding Principal Amount as shown on **Amended Schedule I** hereto on each Rent Payment Date by the Annual Interest Rate, as determined from time to time, and (b) dividing such amount by two. The City shall give notice of the Annual Interest Rate to BTBC and the County by January 15 of each year.”

The remaining provisions of Section 5.1 remain unaltered.

2. This Amendment may be executed simultaneously in several counterparts, each of which shall be deemed to be an original and all of which shall constitute but one and the same instrument.

3. The City, the County, and BTBC mutually agree and acknowledge that, except as herein expressly provided, the original Lease Agreement dated January 1, 2010 remains in full force and effect.

CITY OF LAWRENCE, KANSAS

By: _____
Mayor, Leslie Soden

ATTEST:

Sherri Riedemann, City Clerk

ACKNOWLEDGMENT

STATE OF KANSAS)
) ss:
COUNTY OF DOUGLAS)

BE IT REMEMBERED, that on this ____ day of _____, 2017, before me the undersigned, a notary public, came Leslie Soden, to me personally known, who, being by me duly sworn, did say that she is the Mayor of the CITY OF LAWRENCE, KANSAS, a municipal corporation duly authorized, incorporated and existing under and by virtue of the laws of the State of Kansas, and that the seal affixed to the foregoing instrument is the corporate seal of said City, and that said instrument was signed and sealed in behalf of said City by authority of its governing body, and said officer acknowledged said instrument to be executed for the purposes therein stated and as the free act and deed of said City.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my official seal the day and year last above written.

Notary Public

My appointment expires:

DOUGLAS COUNTY, KANSAS

By: _____
Mike Gaughan, Chair of the Board of
County Commissioners

ATTEST:

County Clerk

ACKNOWLEDGMENT

STATE OF KANSAS)
)
COUNTY OF DOUGLAS) ss:

BE IT REMEMBERED, that on this ____ day of _____, 2017, before me the undersigned, a notary public, came Mike Gaughan, to me personally known, who, being by me duly sworn, did say that he is the Chair of the Board of County Commissioners of DOUGLAS COUNTY, KANSAS, a body corporate and politic duly organized and existing under and by virtue of the laws of the State of Kansas, and that the seal affixed to the foregoing instrument is the corporate seal of said County, and that said instrument was signed and sealed in behalf of said County by authority of its governing body, and said officer acknowledged said instrument to be executed for the purposes therein stated and as the free act and deed of said County.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my official seal the day and year last above written.

Notary Public

My appointment expires:

**BIOSCIENCE AND TECHNOLOGY
BUSINESS CENTER, INC.**

By: _____
E. LaVerne Epp, Executive Chairman

ACKNOWLEDGMENT

STATE OF KANSAS)
)
COUNTY OF DOUGLAS) ss:

BE IT REMEMBERED, that on this ____ day of _____, 2017, before me the undersigned, a notary public, came E. LaVerne Epp, to me personally known, who, being by me duly sworn, did say that he is the President and Chairman of BIOSCIENCE AND TECHNOLOGY BUSINESS CENTER, INC., a not for profit corporation duly authorized, incorporated and existing under and by virtue of the laws of the State of Kansas, and that the seal affixed to the foregoing instrument is the corporate seal of said organization, and that said instrument was signed and sealed in behalf of said organization by authority of its Board of Directors, and said officer acknowledged said instrument to be executed for the purposes therein stated and as the free act and deed of said organization.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my official seal the day and year last above written.

Notary Public

My appointment expires:

BTBC AMENDED RENT SCHEDULE II

Schedule of Basic Rent Payments					
	Date	Payment	Interest	Principal	Balance
	1/1/2018				2,975,000
1	1/1/2018	12,500	-	-	2,975,000
2	7/1/2018	12,500	-	-	2,975,000
1	1/1/2019	175,190	120,190	55,000	2,920,000
2	7/1/2019	113,400	58,400	55,000	2,865,000
3	1/1/2020	112,300	57,300	55,000	2,810,000
4	7/1/2020	111,200	56,200	55,000	2,755,000
5	1/1/2021	112,600	55,100	57,500	2,697,500
6	7/1/2021	111,450	53,950	57,500	2,640,000
7	1/1/2022	110,300	52,800	57,500	2,582,500
8	7/1/2022	109,150	51,650	57,500	2,525,000
9	1/1/2023	110,500	50,500	60,000	2,465,000
10	7/1/2023	109,300	49,300	60,000	2,405,000
11	1/1/2024	110,600	48,100	62,500	2,342,500
12	7/1/2024	109,350	46,850	62,500	2,280,000
13	1/1/2025	108,100	45,600	62,500	2,217,500
14	7/1/2025	106,850	44,350	62,500	2,155,000
15	1/1/2026	108,100	43,100	65,000	2,090,000
16	7/1/2026	106,800	41,800	65,000	2,025,000
17	1/1/2027	108,000	40,500	67,500	1,957,500
18	7/1/2027	106,650	39,150	67,500	1,890,000
19	1/1/2028	107,800	37,800	70,000	1,820,000
20	7/1/2028	106,400	36,400	70,000	1,750,000
21	1/1/2029	107,500	35,000	72,500	1,677,500
22	7/1/2029	106,050	33,550	72,500	1,605,000
23	1/1/2030	107,100	32,100	75,000	1,530,000
24	7/1/2030	105,600	30,600	75,000	1,455,000
25	1/1/2031	106,600	29,100	77,500	1,377,500
26	7/1/2031	105,050	27,550	77,500	1,300,000
27	1/1/2032	108,500	26,000	82,500	1,217,500
28	7/1/2032	106,850	24,350	82,500	1,135,000
29	1/1/2033	107,700	22,700	85,000	1,050,000
30	7/1/2033	106,000	21,000	85,000	965,000
31	1/1/2034	106,800	19,300	87,500	877,500
32	7/1/2034	105,050	17,550	87,500	790,000
33	1/1/2035	108,300	15,800	92,500	697,500
34	7/1/2035	106,450	13,950	92,500	605,000
35	1/1/2036	109,600	12,100	97,500	507,500
36	7/1/2036	107,650	10,150	97,500	410,000
37	1/1/2037	108,200	8,200	100,000	310,000
38	7/1/2037	106,200	6,200	100,000	210,000
39	1/1/2038	109,200	4,200	105,000	105,000
40	7/1/2038	107,100	2,100	105,000	-

Loan **4,395,540** **1,420,540** **2,975,000**
 Plus 2018
 rent 25,000
4,420,540

Source: City of Lawrence, Finance Department, 08-03-2017

COOPERATION AGREEMENT

between

CITY OF LAWRENCE, KANSAS,

AND

DOUGLAS COUNTY, KANSAS

Dated as of January 1, 2010

COOPERATION AGREEMENT

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Signatures and Seals

Acknowledgments

Exhibit A Project Site

COOPERATION AGREEMENT

THIS COOPERATION AGREEMENT dated as of January 1, 2010 (the "Cooperation Agreement"), between the **CITY OF LAWRENCE, KANSAS**, a municipal corporation organized and existing under the laws of the State of Kansas (the "City") and **DOUGLAS COUNTY, KANSAS**, a body corporate and politic duly organized and existing under the laws of the State of Kansas (the "County");

WITNESSETH:

WHEREAS, the City is authorized pursuant to Ordinance No. 8480 (the "Ordinance") and Article 12, Section 5 of the Constitution of the State of Kansas (the "Home Rule Amendment"), to purchase, acquire, construct, improve, equip, remodel, sell and lease certain facilities within its jurisdiction for economic development purposes, and to issue general obligation bonds for the purpose of paying the cost of such facilities;

WHEREAS, the County is authorized pursuant to Resolution No. HR09-12-4 (the "Resolution") and K.S.A. 19-101 (K.S.A. 19-101, the Ordinance, the Resolution and the Home Rule Amendment collectively referred to here in as the "Act") to purchase, acquire, construct, improve, equip, remodel, sell and lease certain facilities within its jurisdiction for economic development purposes;

WHEREAS, pursuant to the Home Rule Amendment, the governing body of the City has heretofore passed the Ordinance authorizing the City to issue its Taxable General Obligation Bonds (Lawrence-Douglas County Bioscience Authority Project), Series 2009-A, in the aggregate maximum principal amount of \$2,900,000 (the "Bonds"), for the purpose of allowing the City and the County to acquire, purchase, construct, install and equip an economic development project, consisting of the West Lawrence Labs building located at 4950 Research Parkway, Lawrence, Kansas, including land, buildings, structures, improvements, fixtures, machinery and equipment as hereinafter more fully described (as defined herein, the "Project"), and authorizing the City to lease its interest in the Project to the Lawrence-Douglas County Bioscience Authority (the "LDCBA"); and

WHEREAS, pursuant to the Ordinance and the Resolution, the City and the County are authorized to enter into this Cooperation Agreement, for the purpose of making certain agreements regarding the City's and the County's various rights and obligations with respect to the Project and the Bonds, as therein provided, and to enter into a Lease Agreement (as defined herein, the "Lease") with the LDCBA under which the City and the County will acquire, purchase, construct, improve, equip and remodel the Project and will lease the Project to the LDCBA in consideration of rental payments by the LDCBA.

NOW, THEREFORE, in consideration of the premises and the mutual representations, covenants and agreements herein contained, the City and the County do hereby represent, covenant and agree as follows:

ARTICLE I

DEFINITIONS

Section 1.1. Definitions of Words and Terms. In addition to any words and terms defined elsewhere in this Cooperation Agreement and the words and terms defined in **Section 1.1** of the Lease

which definitions are hereby incorporated herein by reference, and terms defined, the following words and terms as used in this Cooperation Agreement shall have the following meanings:

“Authorized City Representative” means the City Manager or his or her designee.

“Authorized County Representative” means the County Administrator or his or her designee.

“Available Revenues” means for any Fiscal Year, any balances of the County from previous Fiscal Years encumbered to pay any amounts due under this Cooperation Agreement, amounts budgeted or appropriated by the County for such Fiscal Year plus any unencumbered balances of the County from previous Fiscal Years that are legally available to pay amounts due under this Cooperation Agreement during such Fiscal Year.

“Event of Nonappropriation” means an Event of Nonappropriation as described in **Section 3.4**.

“Expenses” means all expenses of any kind incurred with respect to the Project and paid by the City or the County, including, but not limited to, debt service on the Bonds and operation and maintenance expenses, but excluding any expenses paid with proceeds of the Bonds.

“Fiscal Year” means the fiscal year of the County, currently the twelve-month period beginning January 1 and ending on December 31.

“Net Proceeds” means, when used with respect to any insurance with respect to the Project, the gross proceeds from the insurance remaining after payment of all expenses (including attorneys’ fees, trustee’s fees and any extraordinary expenses of the City and the County) incurred in the collection of such gross proceeds.

“Project” means the Project Site and all buildings, structures, improvements, fixtures, machinery and equipment related thereto.

“Project Site” means the real property described on **Exhibit A**.

“Real Estate Closing Date” means the date on which the City and the County take title to the Project.

“Reimbursement Rate” means an interest rate equal to the rate on the Bond Buyer 20-Bond GO Index, as published weekly in The Bond Buyer. The Reimbursement Rate shall be calculated on the basis of the actual number of days elapsed over a 360-day year.

“Revenues” means all revenues generated by the City and the County with respect to the Project, except for ad valorem property taxes and/or special assessments, personal property taxes and utility charges that are customarily charged against property like the Project and are payable to the City and the County.

Section 1.2. Rules of Interpretation.

(a) Words of the masculine gender shall be deemed and construed to include correlative words of the feminine and neuter genders.

(b) Unless the context shall otherwise indicate, words importing the singular number shall include the plural and vice versa, and words importing persons shall include firms, associations and corporations, including governmental entities, as well as natural persons.

(c) Wherever in this Cooperation Agreement it is provided that either party shall or will make any payment or perform or refrain from performing any act or obligation, each such provision shall, even though not so expressed, be construed as an express covenant to make such payment or to perform, or not to perform, as the case may be, such act or obligation.

(d) All references in this instrument to designated "Articles," "Sections" and other subdivisions are, unless otherwise specified, to the designated Articles, Sections and subdivisions of this instrument as originally executed. The words "herein," "hereof," "hereunder" and other words of similar import refer to this Cooperation Agreement as a whole and not to any particular Article, Section or other subdivision.

(e) The Table of Contents and the Article and Section headings of this Cooperation Agreement shall not be treated as a part of this Cooperation Agreement or as affecting the true meaning of the provisions hereof.

ARTICLE II

REPRESENTATIONS

Section 2.1. Representations by the City. The City makes the following representations as the basis for the undertakings on its part herein contained:

(a) The City is a municipal corporation duly organized and validly existing under the laws of the State of Kansas. The City has lawful power and authority to enter into the transactions contemplated by this Cooperation Agreement and the Lease and to carry out its obligations hereunder. By proper action of its governing body, the City has been duly authorized to execute and deliver this Cooperation Agreement, acting by and through its duly authorized officers.

(b) The City proposes to acquire an ownership interest as tenants in common with the County in the Project, and proposes to acquire, purchase, construct, improve, equip and remodel or cause to be acquired, purchased, constructed, improved, equipped and remodeled on the Project Site certain improvements, and proposes to acquire and install, or cause to be acquired and installed, certain equipment at the Project Site. The City proposes to lease its ownership interest in the Project to the LDCBA, all for the purpose of furthering the public purposes of the Act, and the governing body of the City has found and determined that the acquisition, purchase, construction, improving, equipping and remodeling of the Project will further the public purposes of the Act.

(c) To finance the costs of the Project, the City proposes to issue the Bonds and enter into this Cooperation Agreement with the County.

(d) The City will not mortgage its ownership interest in the Project or pledge the revenues derived therefrom for any bonds or other obligations except with the written consent of the Authorized County Representative.

(e) The acquisition, purchase, construction, improvement, equipping and remodeling of the Project and the leasing by the City of its ownership interest in the Project to the LDCBA will further the public purposes as set forth in the Ordinance.

Section 2.2. Representations by the County. The County makes the following representations as the basis for the undertakings on its part herein contained:

(a) The County is a body corporate and politic duly organized and validly existing under the laws of the State of Kansas. The County has lawful power and authority to enter into the transactions contemplated by this Cooperation Agreement and the Lease and to carry out its obligations hereunder. By proper action of its governing body, the County has been duly authorized to execute and deliver this Cooperation Agreement, acting by and through its duly authorized officers.

(b) The County proposes to acquire an ownership interest as tenants in common with the City in the Project, and proposes to acquire, purchase, construct, improve, equip and remodel or cause to be acquired, purchased, constructed, improved, equipped and remodeled on the Project Site certain improvements, and proposes to acquire and install, or cause to be acquired and installed, the certain equipment at the Project Site. The County proposes to lease its ownership interest in the Project to the LDCBA, all for the purpose of furthering the public purposes of the Act, and the governing body of the County has found and determined that the acquisition, purchase, construction, improving, equipping and remodeling of the Project will further the public purposes of the Act.

(c) To finance the costs of the Project, the County proposes to enter into this Cooperation Agreement with the City.

(d) The County will not mortgage its ownership interest in the Project or pledge the revenues derived therefrom for any bonds or other obligations except with the written consent of the Authorized City Representative.

(e) The acquisition, purchase, construction, improvement, equipping and remodeling of the Project and the leasing by the County of its ownership interest in the Project to the LDCBA will further the public purposes as set forth in the Resolution.

ARTICLE III

ISSUANCE AND PAYMENT OF BONDS

Section 3.1. Issuance of Bonds; Acquisition of Project. The City shall use its best efforts to cause the issuance of its Taxable General Obligation Bonds (Lawrence-Douglas County Bioscience Project), Series 2009-A in the estimated principal amount of \$2,900,000 (the "Bonds"). If issued, the proceeds of the Bonds shall be used by the City solely to (a) pay the purchase price necessary to allow the City and the County to acquire their respective ownership interests in the Project described in **Section 4.1** hereof, and (b) make certain upgrades to the HVAC system or other improvements at the Project Site, as required pursuant to the Lease or agreed to by the Management Committee. The City shall have no obligation to issue the Bonds if the Lease is not approved by the City Commission and the County Commission by January 7, 2010.

Section 3.2. Repayment of Bonds.

(a) The Bonds, if issued, will be secured by the City's full faith and credit and ad valorem taxing power. It is the intent of the City and the County that all payments of Basic Rent pursuant to the Lease will be used to pay a portion of the debt service on the Bonds.

(b) Pursuant to the Resolution and **Section 4.6(b)** hereof, the County has assigned to the City any and all rents, revenues and receipts receivable by the County under the Lease. Such rents, revenues and receipts shall be payable by LDCBA directly to the City and shall be used solely to pay debt service on the Bonds and other expenses of the Project.

(c) To the extent that the Basic Rent paid by LDCBA pursuant to the Lease is insufficient to pay all of the debt service on the Bonds coming due, the County hereby agrees, subject to **Section 3.4** hereof, to pay to the City one half of the amount of any shortfall (the "County Shortfall"). The City shall give notice to the County of the amount of the County Shortfall on or before each February 10 and August 10. The payments required by the County pursuant to this Section shall be made on or before each February 25 and August 25, respectively.

Section 3.3. Nonappropriation.

(a) The County is obligated only to make payments under this Cooperation Agreement as may lawfully be made from Available Revenues and the Kansas cash basis laws. The County intends, on or before the last day of each Fiscal Year, to budget and appropriate, specifically with respect to this Cooperation Agreement, moneys sufficient to make all payments required by **Section 3.2(c)** and **Section 4.2(a)** hereof (together, the "County Payments") for the next succeeding Fiscal Year. The County shall deliver written notice to the City no later than 15 days after the commencement of its Fiscal Year stating whether or not the governing body of the County has appropriated funds sufficient for the purpose of paying the County Payments to become due during such Fiscal Year. If the governing body of the County shall have made the appropriation necessary to pay the County Payments during such Fiscal Year, the failure of the County to deliver the foregoing notice on or before the 15th day after the commencement of its Fiscal Year shall not constitute an Event of Nonappropriation and, on failure to receive such notice 15 days after the commencement of the County's Fiscal Year, the City shall make independent inquiry of the fact of whether or not such appropriation has been made. If the governing body of the County shall not have made the appropriation necessary to pay the County Payments to become due during such succeeding Fiscal Year, the failure of the County to deliver the foregoing notice on or before the 15th day after the commencement of its Fiscal Year shall constitute an Event of Nonappropriation.

(b) The County covenants and agrees that the officer of the County at any time charged with the responsibility of formulating budget proposals is hereby directed to include in the budget proposal submitted to the governing body for each Fiscal Year that the Bonds are Outstanding a request for an appropriation of the amounts for transfer to the City at the times and in the manner provided in this **Article III**, it being the intention of the County that the decision to appropriate or not to appropriate under this Cooperation Agreement shall be made solely by the governing body of the County and not by any other official of the County. The County intends, subject to the provisions above respecting the failure of the County to budget or appropriate sufficient funds, to pay the County Payments. The County reasonably believes that legally available funds in an amount sufficient to make the County Payments during each Fiscal Year can be obtained. The County further intends to do all things lawfully within its power to obtain and maintain funds from which the County Payments may be made, including making provision

for such County Payments to the extent necessary in each proposed annual budget submitted for approval in accordance with applicable procedures of the County. The County Administrator is directed to do all things lawfully within his power to obtain and maintain funds from which the County Payments may be paid, including making provision for such County Payments to the extent necessary in each proposed annual budget submitted for approval or by supplemental appropriation in accordance with applicable procedures of the County. Notwithstanding the foregoing, the decision to budget and appropriate funds is to be made in accordance with the County's normal procedures then in effect for such decisions.

(c) Upon an Event of Nonappropriation or a failure to make any County Payment within 30 days after written notice of such failure to make payment is given the County by the City:

(1) the County the County shall give notice to any rating agencies who maintain ratings on the County's outstanding debt, that the County has failed to appropriate sufficient funds to make all payments set forth in this Cooperation Agreement; and

(2) the County shall quitclaim its ownership interest in the Project to the City and this Cooperation Agreement shall no longer be in force and effect.

ARTICLE IV

OWNERSHIP OF THE PROJECT

Section 4.1. Ownership Interests in the Project.

(a) Subject to the City's issuance of Bonds pursuant to **Section 3.1** hereof, on the Real Estate Closing Date, the City and the County shall take and receive title to and thereafter own the Project as tenants in common, each with ownership interest therein, expressed as percentages, as follows:

<u>Entity</u>	<u>Ownership Interest</u>
City	50.0%
County	50.0%

The rights, title and interest of the City and the County, respectively, in and to the Project and any and all portions thereof, as the same may exist from time to time, shall be as provided for under this Cooperation Agreement, and the covenants and obligations herein shall inure to the benefit of, and shall be binding upon their respective successors and assigns.

(b) Subject to the City's issuance of Bonds pursuant to **Section 3.1** hereof, on the Real Estate Closing Date, to the extent necessary to accomplish the ownership interests provided in this Section, the City and the County shall cause the seller of the Project to execute and deliver one or more bills of sale or other instruments conveying title to the Project in the appropriate ownership interest percentages to the City and the County and their successors and assign, as tenants in common, and the City and County shall, thereafter, own the Project subject to the provisions of this Cooperation Agreement.

Section 4.2. Agreement Regarding Expenses Of The Project.

(a) The City and the County hereby expressly agree that all Expenses of the Project shall be paid 50% by the City and 50% by the County.

(b) The City shall keep, and make available to the County upon request, a ledger of all payments of Expenses made by the City and the County.

Section 4.3. Agreement Regarding Revenues Generated By The Project. The City and the County hereby expressly agree that all Revenues generated by the Project shall be split as follows:

(a) Upon the execution of this Agreement and so long as the Bonds are Outstanding, the City shall be entitled to 100% of the Revenues generated by the Project, which the City shall use solely to pay Expenses of the Project, including debt service on the Bonds.

(b) Upon payment in full of the Bonds, all Revenues of the Project shall be paid to the City and the County as follows:

(1) First, to reimburse the City and the County, as the case may be, for any and all unequal payments made by the City or the County to pay principal of and interest on the Bonds, plus interest on such amounts at the Reimbursement Rate;

(2) Second, to reimburse the City and the County, as the case may be, for any and all unequal payments made by the City or the County to pay Expenses of the Project plus interest on such amounts at the Reimbursement Rate; and

(3) Third, the City and the County shall each be paid one-half of all remaining Revenues.

Section 4.4. Transfer of Ownership Interests. During the term of this Cooperation Agreement, neither the City nor the County shall have the right to transfer its ownership interest, except with the written consent of the other party to this Cooperation Agreement.

Section 4.5. Partition. The City and the County hereby waive their respective rights to the partition of the Project and any portion thereof. Neither the City nor the County shall have the power or right to take or resort to any action (including, without limitation, any court proceeding at law or in equity) for the purpose of or which might result in the partition of the Project.

Section 4.6. Encumbrance; Assignment of Rents.

(a) During the Term of this Cooperation Agreement, neither the City nor the County may sell, assign, encumber, mortgage, transfer or convey the Project or any portion of their respective interests therein, except as specifically provided by this Cooperation Agreement.

(b) The County hereby assigns and pledges to the City, all Revenues, as security for payment of the County Payments pursuant to **Section 3.2(b)** and **Section 4.2(a)** due to the City under this Cooperation Agreement; provided, however, that the foregoing assignment and pledge shall terminate upon (1) repayment in full of the Bonds and the County's satisfaction of its obligation to pay the County Payments, and (2) repayment in full of any reimbursement due to the City with respect to Expenses, pursuant to **Section 4.3(b)(2)**.

Section 4.7. Security Interests. At the written request of the City, the County agrees to enter into all instruments (including financing statements and statements of continuation) necessary for perfection of and continuance of the perfection of any security interests of the City in the County's share of the Revenues of the Project. The City or the County shall file all instruments the City shall deem necessary to be filed and shall continue or cause to be continued the liens of such instruments during the term of this

Cooperation Agreement. The County shall cooperate in this regard by executing such continuation statements and providing such information as the City may require to renew such liens.

ARTICLE V

OPERATION OF THE PROJECT

Section 5.1. Operation of the Project, Generally.

(a) All policies relating to the management, operation and maintenance of the Project shall be determined and administered by a committee (the "Management Committee") comprised of the Authorized City Representative and the Authorized County Representative. The Management Committee will act and operate the Project in accordance with the Lease, the Ordinance, the Resolution and all laws applicable to the City's and the County's respective ownership interests in the Project.

(b) In the event that the designated Authorized City Representative or Authorized County Representative have a conflict of interest regarding any action to be taken with respect to the Project, the Mayor or the Chair of the County Commission, respectively, shall appoint an alternate representative of the City or the County, respectively, to consider such action.

(c) Prior to the Real Estate Closing Date, the City and the County expect to enter into a Lease Agreement among the City and the County, as lessors and LDCBA, as lessee. It is expected that, pursuant to the Lease, LDCBA will manage the day-to-day operations of the Project.

(d) The Management Committee may take all actions necessary to manage the day-to-day operations of the Project. The Management Committee shall have the right to approve all subleases of the facility if such subleases are in substantially the form previously approved by both the City Commission and the County Commission. The Authorized City Representative shall have the power to authorize the payment of the City's share of all Expenses related to the Project in amounts equal to or less than the amounts set forth in the City's purchasing policy and the Authorized County Representative shall have the power to authorize the payment of the County's share of all Expenses related to the Project in amounts equal to or less than the amounts set forth in the County's purchasing policy. All Expenses exceeding such amounts shall be presented for approval to the City Commission and/or the County Commission, as applicable.

Section 5.2. Additions, Modifications or Improvements of the Project. All additions, modifications or improvement of the Project (whether in the nature of an operating, maintenance or capital expense) proposed by the City or the County shall be subject to review and approval by the Management Committee. The City and the County shall each pay one-half of the costs of such additions, modifications or improvement of the Project, in accordance with **Section 4.2** hereof.

Section 5.3. Damage or Destruction of the Project.

(a) If the Project is damaged or destroyed by fire or any other casualty while the Lease is in effect, the repair or replacement of such damaged or destroyed property shall be governed by the provisions of the Lease.

(b) If the LDCBA shall determine in accordance with the Lease that rebuilding, repairing, restoring or replacing the Project is not practicable and desirable and the Net Proceeds of casualty insurance are distributed by LDCBA to the City and the County pursuant to such provision, the Management

Committee shall determine whether such Net Proceeds shall be (i) applied to reconstruct all or any portion of the Project, (ii) used to repay the Bonds, or (iii) distributed to the City and the County in accordance with **Section 4.3** and used for any purpose permitted by law; except provided that if the Bonds are outstanding and the Management Committee determines not to reconstruct the Project, then such Net Proceeds shall be used first to repay the Bonds and then any remaining Net Proceeds may be distributed to the City and the County in accordance with **Section 4.3**.

(c) If the Lease has been terminated for any reason and the Project is damaged or destroyed by fire or any other casualty, the Management Committee shall determine how the Net Proceeds of casualty insurance shall be used; except provided that if the Bonds are outstanding and the Management Committee determines not to reconstruct the Project, then such Net Proceeds shall be used first to repay the Bonds and then any remaining Net Proceeds may be distributed to the City and the County in accordance with **Section 4.3**.

Section 5.4. Taxes.

The City and the County acknowledge that the Project shall be subject to general ad valorem and property taxes (including special assessments levied on account of special benefits) on real and personal property. The City and the County covenant that they will not voluntarily take any action which may be reasonably construed as tending to abate the levy or assessment of such ad valorem or property taxes on the Project during the term of this Cooperation Agreement.

Section 5.5. Insurance.

(a) To the extent that the Project is not insured pursuant to **Article VII** of the Lease, the Management Committee shall arrange for a policy or policies of insurance to keep the Project constantly insured as follows:

(1) property insurance insuring the Project (excluding foundations), and business income (including extra expense) insurance for a period of not less than 12 months the Project insuring against loss or damage resulting from perils covered by the causes of loss – special form (or the equivalent ISO form in use from time to time in Kansas) written on a replacement cost basis in an amount equal to the Full Insurable Value (subject to reasonable loss deductible clauses not to exceed \$100,000). Any insurance required pursuant to this Section shall be maintained with generally recognized responsible insurance company or companies authorized to do business in the State of Kansas as may be selected by the Management Committee. Copies of the insurance policies required under this Section, or originals or certificates thereof, shall be delivered by the Management Committee to the City and the County. All such policies of insurance pursuant to this Section, and all renewals thereof, shall name the City and the County as insureds as their respective interests may appear, and shall contain a provision that such insurance may not be canceled by the issuer thereof without at least 30 days' advance written notice to the City and the County, and shall be payable to the City and the County.

(2) commercial general liability insurance, under which the City and the County shall be named as insureds, providing primary coverage to the City and the County, with a combined single limit of not less than \$1,000,000 per occurrence with a \$3,000,000 aggregate for this location and a deductible not to exceed \$100,000, subject to the statutory limit(s) contained in the Kansas Torts Claim Act, K.S.A. 75-6101 et seq. Nothing herein shall be construed as a waiver of any rights, defenses or obligations contained in the Kansas Notice of Claim Statute, K.S.A. 12-105b, the Kansas Torts Claim Act or any statute in effect at the time of injury. The policies of said insurance shall contain a provision that such insurance may not be canceled by the issuer thereof without at

least 30 days' advance written notice to the City and the County. Such policies or copies or certificates thereof shall be furnished to the City and County.

(b) The Net Proceeds of casualty insurance obtained pursuant to this Section shall be used or distributed in accordance with **Section 5.3**.

ARTICLE VI

INDEMNITY

Section 6.1. Indemnification.

(a) To the extent permitted by law, the City shall indemnify and save the County harmless from and against all claims by or on behalf of any person, firm or corporation arising from the conduct or management of, or from any work or thing done in, on or about, the Project during the term of this Cooperation Agreement, and against and from all claims arising during the term of this Cooperation Agreement from (a) any condition of the Project caused by the City, (b) any breach or default on the part of the City in the performance of any of its obligations under this Cooperation Agreement or the Lease, (c) any contract entered into in by the City or its agents, if any, in connection with the acquisition, purchase, construction, improving, equipping or remodeling of the Project, and (d) any act of negligence of the City or of any of its agents, contractors, servants, employees or licensees; provided, however, the indemnification contained in this **Section 6.1(a)** shall not extend to the County if (i) such claim is the result of work being performed at the Project by employees of the County, or (ii) such claim is the result of the County's gross negligence or willful misconduct. The City shall indemnify and save the County harmless from and against all costs and expenses (except those which have arisen from the willful misconduct or gross negligence of the County) incurred in or in connection with any action or proceeding brought in connection with claims arising from circumstances described in clauses (a) through (d), and upon notice from the County, the City shall defend the County in any such action or proceeding, with attorneys acceptable to the County.

(b) To the extent permitted by law, the County shall indemnify and save the City harmless from and against all claims by or on behalf of any person, firm or corporation arising from the conduct or management of, or from any work or thing done in, on or about, the Project during the term of this Cooperation Agreement, and against and from all claims arising during the term of this Cooperation Agreement from (a) any condition of the Project caused by the County, (b) any breach or default on the part of the County in the performance of any of its obligations under this Cooperation Agreement or the Lease, (c) any contract entered into in by the County or its agents, if any, in connection with the acquisition, purchase, construction, improving, equipping or remodeling of the Project, and (d) any act of negligence of the County or of any of its agents, contractors, servants, employees or licensees; provided, however, the indemnification contained in this **Section 6.1(b)** shall not extend to the City if (i) such claim is the result of work being performed at the Project by employees of the City, or (ii) such claim is the result of the City's gross negligence or willful misconduct. The County shall indemnify and save the City harmless from and against all costs and expenses (except those which have arisen from the willful misconduct or gross negligence of the City) incurred in or in connection with any action or proceeding brought in connection with claims arising from circumstances described in clauses (a) through (d), and upon notice from the City, the County shall defend the City in any such action or proceeding, with attorneys acceptable to the City.

ARTICLE VII

DISPUTE RESOLUTION

Section 7.1. Disputes Regarding the Project. In the event the Management Committee does not agree with respect to any action to be taken with respect to the Project, the proposal under consideration shall be submitted to the City Commission and the County Commission for action. In the event that the City Commission and the County Commission do not agree with respect to such action the dispute shall be subject to non-binding mediation within 30 days of such request. Any such mediation will be held in the City of Lawrence, Kansas, and shall be conducted substantially in accordance with the mediation rules approved by the Kansas Supreme Court.

Section 7.2. Sale of Co-owner's Interest in the Project.. No party to this Cooperation Agreement may sell or transfer its interest in the Project, except upon compliance with this **Section 7.2.** If either party to this Cooperation Agreement wishes to sell its interest in the Project, that party (the "Selling Party") shall first give the other party (the "Non-Selling Party") a written notice of intention to sell, including a proposed purchase price. Upon receipt of the notice of intention to sell, the Non-Selling Party shall have the exclusive right and option to elect to purchase the Selling Party's interest upon the terms and conditions set forth below:

(a) The Non-Selling Party may elect, within 30 days after the receipt of such written notice of intention to sell, to exercise the option to purchase. Such notice of exercise shall constitute a binding contract between the Selling Party and the Non-Selling Party for the purchase and sale of the Selling Party's interest in the Project, at a purchase price determined in accordance with subparagraph (b). The closing of such contract shall take place at a date and time agreeable to by the Selling Party and the Non-Selling Party, but in no event later than 45 days after the purchase price is determined.

(b) The Non-Selling Party's notice to the Selling Party that it elects to purchase the Selling Party's interest in the Project shall state either (i) that the Non-Selling Party agrees to pay the Selling Party's proposed purchase price or (ii) that the Non-Selling Party desires to establish the purchase price by appraisals performed in accordance with this subparagraph (b). If the Non-Selling Party agrees to pay the Selling Party's proposed purchase price or fails to make any designation, then the Selling Party's proposed purchase price shall be the purchase price of the Selling Party's interest in the Project. If the Non-Selling Party states its desire to establish the purchase price by appraisals performed in accordance with this subparagraph (b), then within 10 days after the Non-Selling Party's notice of exercise of option, each party shall select an appraiser. Each appraiser shall be a qualified real estate broker or appraiser active in the Lawrence area with experience in appraising laboratory facilities and real estate of similar type and use as the Project. Both appraisers shall be instructed to prepare and deliver to both parties, within 21 days of their appointment, their written opinions of the fair market value of the Selling Party's interest. If the appraisers' opinions do not vary from one another by more than 10%, the purchase price shall be the arithmetic average of the two opinions. If the two opinions do vary from one another by more than 10%, the two appraisers shall jointly select a third appraiser of similar qualifications within 10 days of delivery of their opinions. The third appraiser shall be requested to prepare a delivery to both parties, within 21 days, a third written opinion of the fair market value of the Selling Party's interest in the Project. The purchase price shall then be whichever of the three opinions is in the middle, or if two opinions are the same, then that shall be the price. Each party shall pay the appraisal fees and costs of the appraiser it appoints and shall share the appraisal fees and costs of the third appraiser, if any equally. If either party fails to appoint a qualified appraiser within the first 10 day period specified above, the appraiser appointed by the other party shall be the sole appraiser and the price shall be determined by him alone.

(c) If the Non-Selling Party does not elect to exercise the option to purchase the Selling Party's interest in the Project, then parties shall engage a real estate broker to market the Project to third parties at a sale price upon which they agree, but if they cannot agree upon a sale price, the parties shall select appraisers in accordance with subparagraph (b) of this **Section 7.2** in order to determine a sale price for the entire Project. When such a price is determined, the parties shall engage a real estate broker to market the Project to third parties and, provided either if the City or the County approves the sales price as determined in accordance with subparagraph (b) of this **Section 7.2**, the other of them shall agree to sell its interests in the Project based upon a sales price of not less than 10% less than the appraised value of the Project as determined above. The net proceeds for any such sale shall be distributed in accordance with **Section 4.3**.

Section 7.3. Performance of the County's Obligations by the City. If the County shall fail to keep or perform any of its obligations as provided in this Cooperation Agreement in the making of any payment or performance of any obligation, then the City, may (but shall not be obligated so to do) upon the continuance of such failure on the County's part for 30 days after written notice of such failure is given the County by the City, and without waiving or releasing the County from any obligation hereunder, as an additional but not exclusive remedy, make any such payment or perform any such obligation, and all reasonable sums so paid by the City and all necessary incidental reasonable costs and expenses incurred by the City in performing such obligations shall be paid to the City on demand together with interest at the Reimbursement Rate.

Section 7.4. Performance of the City's Obligations by the County. If the City shall fail to keep or perform any of its obligations as provided in this Cooperation Agreement in the making of any payment or performance of any obligation, then the County, may (but shall not be obligated so to do) upon the continuance of such failure on the City's part for 30 days after written notice of such failure is given the City by the County, and without waiving or releasing the City from any obligation hereunder, as an additional but not exclusive remedy, make any such payment or perform any such obligation, and all reasonable sums so paid by the County and all necessary incidental reasonable costs and expenses incurred by the County in performing such obligations shall be paid to the County on demand together with interest at the Reimbursement Rate.

Section 7.5. Rights and Remedies Cumulative. The rights and remedies reserved by the City and the County hereunder and those provided by law shall be construed as cumulative and continuing rights. No one of them shall be exhausted by the exercise thereof on one or more occasions. The City and the County shall each be entitled to specific performance and injunctive or other equitable relief for any breach or threatened breach of any of the provisions of this Cooperation Agreement, notwithstanding availability of an adequate remedy at law, and each party hereby waives the right to raise such defense in any proceeding in equity.

Section 7.6. Waiver of Breach. No waiver of any breach of any covenant or agreement herein contained shall operate as a waiver of any subsequent breach of the same covenant or agreement or as a waiver of any breach of any other covenant or agreement, and in case of a breach by either party hereto of any covenant, agreement or undertaking by such party, the counter party may nevertheless accept from the breaching party any payment or payments hereunder without in any way waiving the counter party's right to exercise any of its rights and remedies provided for herein with respect to any such breach or breaches of the breaching party which were in existence at the time such payment or payments were accepted by the counter party.

Section 7.7. Notice of Defaults; Opportunity to Cure Defaults. Anything herein to the contrary notwithstanding, no breach of any provision of this Cooperation Agreement shall constitute an

Event of Default until actual notice of such default by registered or certified mail shall be given and the recipient of such notice shall have had 30 days after receipt of such notice to correct said default or cause said default to be corrected, and shall not have corrected said default or caused said default to be corrected within such period; provided, however, if any such default shall be such that it cannot be corrected within such period, it shall not constitute an Event of Default if corrective action is instituted by the recipient of notice within such period and diligently pursued until the default is corrected.

ARTICLE VIII

TERM AND TERMINATION

Section 8.1. Term and Termination of Cooperation Agreement. This Cooperation Agreement shall be binding and effective upon the City and the County until terminated pursuant to this Section. This Cooperation Agreement shall terminate and be of no further force and effect from and after the date of the earliest to occur of the following:

- (a) either the City or the County shall acquire by transfer hereunder or by operation of law all ownership interests in the Project and, as a result of the merger of such ownership interests of the City and/or the County herein, become the sole beneficial owner of all rights, titles and interest in the Project; or
- (b) the City and the County shall agree, in writing, to terminate this Cooperation Agreement.

ARTICLE IX

MISCELLANEOUS PROVISIONS

Section 9.1. Amendments, Changes and Modifications. Except as otherwise provided in this Cooperation Agreement, this Cooperation Agreement may not be effectively amended, changed, modified, altered or terminated without the prior written consent of both the City and the County.

Section 9.2. Notices. All notices, certificates or other communications required or desired to be given hereunder shall be in writing and shall be deemed duly given when (i) mailed by registered or certified mail, postage prepaid, or (ii) sent by overnight delivery or other delivery service which requires written acknowledgment of receipt by the addressee, addressed as follows:

- (a) To the City:
City of Lawrence, Kansas
City Hall
6 East 6th Street
Lawrence, Kansas 66044
Attention: City Clerk
- (b) To the County:
Douglas County, Kansas
Douglas County Courthouse
1100 Massachusetts Street
Lawrence, Kansas 66044
Attention: County Administrator

All notices given by certified or registered mail as aforesaid shall be deemed fully given as of the date they are so mailed. A duplicate copy of each notice, certificate or other communication given hereunder by any party hereto shall also be given to all other parties. The City and the County may from time to time designate, by notice given hereunder to the others of such parties, such other address to which subsequent notices, certificates or other communications shall be sent.

Section 9.3. Binding Effect. This Cooperation Agreement shall be binding upon and shall inure to the benefit of the City and the County and their respective successors and assigns.

Section 9.4. Electronic Storage. The parties agree that the transactions described herein may be conducted and related documents may be stored by electronic means.

Section 9.5. Severability. If for any reason any provision of this Cooperation Agreement shall be determined to be invalid or unenforceable, the validity and enforceability of the other provisions hereof shall not be affected thereby.

Section 9.6. Execution in Counterparts. This Cooperation Agreement may be executed simultaneously in several counterparts, each of which shall be deemed to be an original and all of which shall constitute but one and the same instrument.

Section 9.7. Governing Law. This Cooperation Agreement shall be governed by the laws of the State of Kansas.

[Remainder of page intentionally blank.]

IN WITNESS WHEREOF, the parties hereto have caused this Cooperation Agreement to be executed in their respective corporate names and their respective corporate seals to be hereunto affixed and attested by their duly authorized officers, all as of the date first above written.

CITY OF LAWRENCE, KANSAS

By: 
Mayor

[SEAL]

ATTEST:

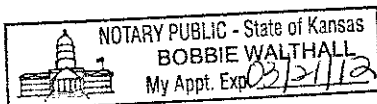
City Clerk

ACKNOWLEDGMENT

STATE OF KANSAS)
) SS.
COUNTY OF DOUGLAS)

On this 4 day of January, 2010, before me, the undersigned, a Notary Public, appeared Robert Christman, to me personally known, who, being by me duly sworn, did say that (s)he is the Mayor of the **CITY OF LAWRENCE, KANSAS**, a municipal corporation duly authorized, incorporated and existing under and by virtue of the laws of the State of Kansas, and that the seal affixed to the foregoing instrument is the corporate seal of said City, and that said instrument was signed and sealed in behalf of said City by authority of its governing body, and said officer acknowledged said instrument to be executed for the purposes therein stated and as the free act and deed of said City.

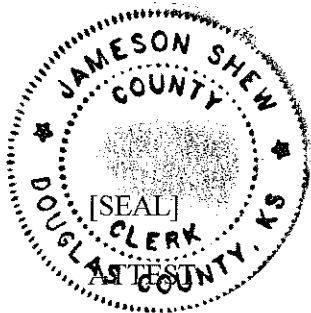
IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal, the day and year last above written.



(SEAL)

Bobbie Walthall
Printed Name: Bobbie Walthall
Notary Public in and for said State
Commissioned in Douglas County

My commission expires: 03/21/12



DOUGLAS COUNTY, KANSAS

By: Nancy Thell
Chair of Board of County Commissioners

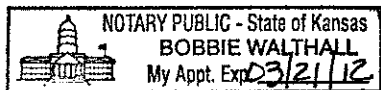
[Signature]
County Clerk

ACKNOWLEDGMENT

STATE OF KANSAS)
COUNTY OF DOUGLAS) SS.

On this 30 day of December 2009 before me, the undersigned, a Notary Public, appeared **Nancy Thellman**, to me personally known, who, being by me duly sworn, did say that she is the Chair of the Board of County Commissioners of **DOUGLAS COUNTY, KANSAS**, a body corporate and politic duly organized and existing under and by virtue of the laws of the State of Kansas, and that the seal affixed to the foregoing instrument is the corporate seal of said County, and that said instrument was signed and sealed in behalf of said County by authority of its governing body, and said officer acknowledged said instrument to be executed for the purposes therein stated and as the free act and deed of said County.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal, the day and year last above written.



(SEAL)

Bobbie Walthall
Printed Name: Bobbie Walthall
Notary Public in and for said State
Commissioned in Douglas County

My commission expires: 03/21/12

EXHIBIT A

PROJECT SITE

Lot 2, Block One, in Oread Center (a Replat of Lot 1B of a Lot Split of Lot One, Oread West No. 8), a subdivision in the City of Lawrence, Douglas County, Kansas



DOUGLAS COUNTY
APPLICATION FOR AN AUTHORIZED EMERGENCY VEHICLE PERMIT

Please type or print the following information:

Check one: ☒ New
☐ Annual Renewal

(If renewal, attach old permit. Must be renewed annually by January 31.)

Name: David A. Wulfkahrle

Street Address: 1571 E 100 Rd.

Phone #: 887-6107

City: Lecompton

State: KS

Zip: 66050

County: DG

Make of Vehicle: Ford

Year of Vehicle: 2010

Style of Vehicle: F150 Pickup

License Tag #: 15866

VIN #: 1FTFW1EV5AFC84923

Driver's License #: K01-81-7533

Vehicle Insurance Company Name: Farm Bureau

Policy #: 7637521

**Attach copy of Insurance Card

Agency: Don Bird

Agency Address: 544 Columbia Dr. Lawrence, KS 66049

Agency Head Signature: *James Miller*, Chief 1400

I HEARBY CERTIFY, I have read and agree to abide by the requirements set forth in Chapter 8 of the Kansas Statutes which related to the operation of Emergency Vehicles.

I FURTHER CERTIFY, I will drive with due regard for the safety of others as required by K.S.A. 8-1506.

I FURTHER CERTIFY, I will return my permit when requested by the Sheriff. This permit is not transferable to any other person or vehicle.

I FURTHER CERTIFY, violating any of these laws and/or rules and the commission of other serious traffic violations may be grounds for the cancellation of my vehicle being designated as an "Authorized Emergency Vehicle"

David A. Wulfkahrle
Signature of Applicant

8-5-17

Date

Kenneth M. McGovern
Kenneth M. McGovern, Sheriff

8-10-17

Date

Authorization granted by County Commission on this _____ day of _____, 20____.

Memorandum

City of Lawrence

Planning & Development Services

TO: Douglas County Board of County Commissioners

FROM: Mary Miller, Planning Staff

CC: Sean Reid, Douglas County Zoning and Codes Director
Scott McCullough, Planning Director
Eric Bettis, Mid-States Materials

Date: July 11, 2017 / Updated August 10, 2017

RE: Reclamation of Phase 3, Big Springs Quarry

Memo Updated August 10, 2017 with information on the water body. New language is shown in **bold**.

Attachment A Approved reclamation plan cover sheet and Phase 3 reclamation plan with surveyed elevation points

Attachment B Comparison of approved elevations with finished elevation

Attachment C Water body diagram

The Big Springs Quarry Conditional Use Permit (CUP) was approved subject to various Conditions of Approval and Restrictions of Use. Condition VII (Performance Bond for Reclamation) notes that the following performance bonds are required:

- (a) \$100,000.00 for the plant site designated on Phase 1. This bond shall remain in place for the life of the quarry.
- (b) \$400,000.00 for the first site excavated in Phase 1 other than the plant site (bond shall be for an excavation area no larger than 10 acres open at one time and shall remain in place until Douglas County Commission has certified that reclamation has been completed at the site for which it was obtained.
- (c) \$400,000.00 for each additional 10 acre site for extraction purposes in any phase. These bonds shall be for areas no larger than 10 acres open at one time per excavation and shall remain in place until certified by the Douglas County Commission that reclamation has been completed at each site.

The Quarry operator notified Planning Staff that quarrying had begun in Phase 6 and requested staff to visit the site to determine if reclamation on Phase 3 was complete.

Staff visited the quarry on Thursday, June 8th, along with Scott Carlson, the Department of Agriculture Assistant Director/Land Reclamation Program Manager. Scott Carlson indicated that the reclamation was compliant with the Department of Agriculture standards but noted that they would like to see the grass better established. He encouraged the operator to submit for a State reclamation award.

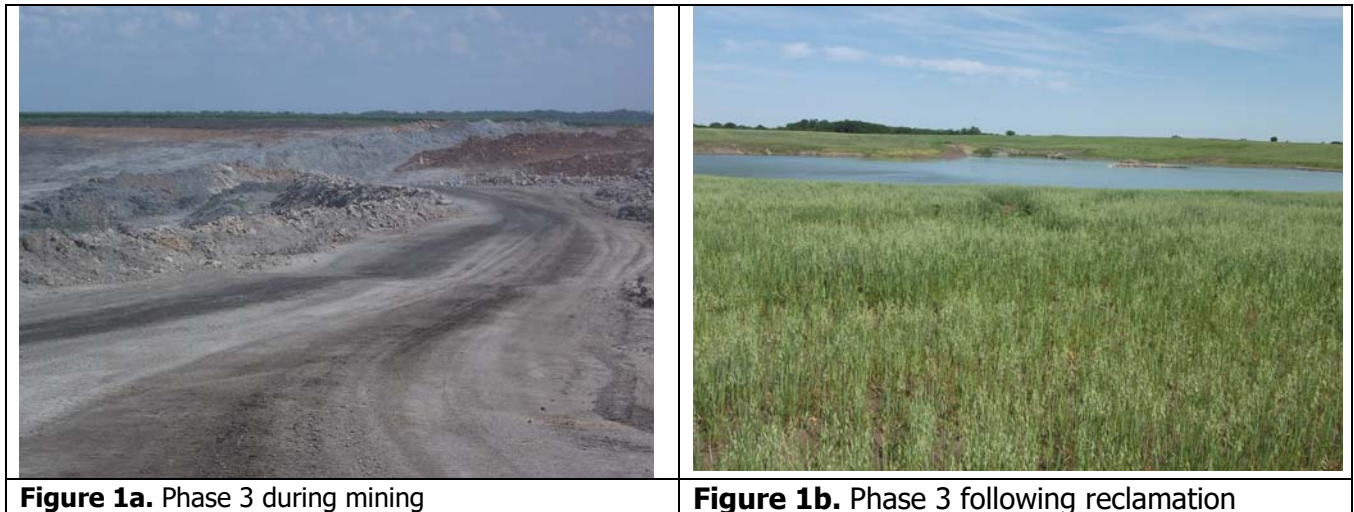
Staff's review of the reclamation varies from the Department of Agriculture's review in that the approved reclamation plan for Phases 1A-4 note that *"Reclamation activities, for the purpose of determining when quarrying in the subsequent phase may proceed beyond the acreage restriction in the CUP are considered complete when final grading, seeding, and mulching operations are completed."*

The approved Cover Sheet for reclamation of Phases 1A through 4 and the approved reclamation plan for Phase 3 are included as Attachment A. The surveyed elevations are noted on the Phase 3 reclamation plan for comparison. The approved reclamation plan notes in General Note 4 that:

"The detailed reclamation plans presented herein are subject to change based on variable field conditions relative to soil and rock volumes, soil and rock characteristics and field conditions which may be encountered during the mining and reclamation processes. Landforms indicated are general in nature and final elevations may vary as much as 5 ft higher or 10 ft lower than shown on the plan. Water bodies may change relative to size, location, shape and elevation as field conditions dictate."

The chart provided as Attachment B compares the final elevation to the approved elevation. The elevations are within the range of variation.

The reclaimed site is gently sloping with a pond in the interior. Each time staff has visited the site, ducks and other waterfowl have been on the pond. A portion of Phase 3 has been planted to beans by the property owner. Pictures of Phase 3 during mining and following reclamation are provided in Figure 1.



The approved reclamation plan also noted that the surface area of any water body (pond) will not exceed 40% of the disturbed area in the watershed contributing to that water body and that each water body will have an outflow spillway that matches the elevation of the existing waterway to allow the existing drainage pattern to be maintained.

Staff had not requested this information with the original reclamation review but it has since been provided and this memo is being updated to include a reclamation review of the water body (pond).

The diagram in Attachment D shows the general location of the pond in the interior of the site. The quarry operator noted that the area of the pond is 16.8 acres. This area is approximately 20% of the total disturbed area shown on the reclamation plan (approximately 84 acres). The approved reclamation plan included 2 ponds, one on each side of the property, but noted that the finished location and size of the water body may vary from that shown on the plan due to the mining operations. The diagram shows the general location of the single pond that was developed and notes the height of the spillway as 1062.01, which matches the ground elevation. This will maintain the drainage pattern of the area. The spillway was lined with rock as shown in Figure 1.



Figure 1. Rock placed along spillway.

Staff Recommendation

Based on the conditions noted at the site visit, input from the Dept. of Agriculture, the final elevations, **and the information regarding the water body** it is staff's opinion that the reclamation is compliant with the approved reclamation plan for Phase 3. Staff recommends that the Board of County Commissioners certify the reclamation of Phase 3 as complete.

BIG SPRINGS QUARRY

DETAILED RECLAMATION PLAN

PHASE 1A, 2, 3, AND 4

DOUGLAS COUNTY, KANSAS

Approved & Returned
 11/11/2009 11:11 AM
 11/11/2009 11:11 AM
 Approved by: [Signature]
 Big Springs Quarry Reclamation Plan
 per Consent Decree (5/27/09)

INDEX OF DRAWINGS

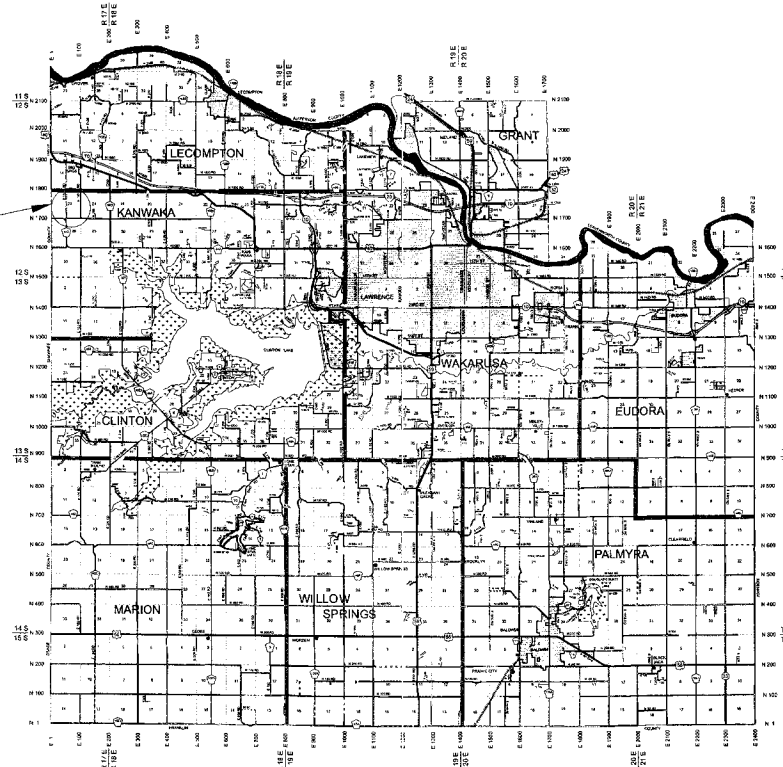
- 1 TITLE SHEET
- 2 OVERALL GEOLOGY MAP
- 3 COMPOSITE DETAILED RECLAMATION PLAN
- 4-6 DETAILED RECLAMATION PLANS
- 7 PHASE 1A RECLAMATION PLAN FOR OVERBURDEN PILE
- 8-9 PHASE 1A OVERBURDEN PILE CROSS SECTIONS
- 10 DRAINAGE PLAN FOR PHASE 1A, 2, 3, AND 4
- 11 GENERALIZED QUARRY CROSS SECTION

QUARRY LOCATION

LEGAL DESCRIPTION

All of Section 23, Township 12 South, Range 17 East of the Sixth Principal Meridian, in Douglas County, Kansas except the North 12 rods of East 16 rods of the Northeast Quarter of said Section 23;

TOGETHER WITH:
 The Northwest Quarter and the Northeast Quarter of Section 26, Township 12 South, Range 17 East of the Sixth Principal Meridian, in Douglas County, Kansas
 AND TOGETHER WITH:
 The West Half of the Southwest Quarter of Section 24, Township 12 South, Range 17 East of the Sixth Principal Meridian, in Douglas County, Kansas.



GENERAL NOTES

1. All quarry operations will be performed in accordance with the Storm Water Pollution Prevention Plan (SWPPP) on file with the Kansas Department of Health and Environment, as it may be amended from time to time.
2. Materials used to complete the reclamation of Phase 2 may be excavated and obtained from the mining operations in the area of Phase 3. In a likewise manner, materials used to complete the reclamation of the land in each phase may be taken from the mining operations in the subsequent phase. The area which may be disturbed in the subsequent phase prior to completion of reclamation in a previous phase is limited to the acreage specified in the CUP.
3. Reclamation of each quarry area within a phase is planned to occur concurrently with mining operations and will be completed as soon as practical after quarrying is complete. Material will be borrowed from the subsequent phase to finish reclamation in a completed phase where necessary. Reclamation activities, for the purpose of determining when quarrying in the subsequent phase may proceed beyond the acreage restriction in the CUP are considered complete when final grading, seeding, and mulching operations are completed.
4. The detailed reclamation plans presented herein are subject to change based on variable field conditions relative to soil and rock volumes, soil and rock characteristics and field conditions which may be encountered during the mining and reclamation processes. Landforms indicated are general in nature and final elevations may vary as much as 5 ft higher or 10 ft lower than shown on the plan. Water bodies may change relative to size, location, shape and elevation as field conditions dictate. The surface area of any water body or bodies will not exceed 40% of the disturbed area in the watershed contributing to that water body or bodies. There is no minimum range for the surface area of the water body. Each water body shall have an outflow spillway that matches the elevation of the existing waterway to allow the existing drainage pattern to be maintained. The surface area of the water body is measured at spillway elevation. No water body shall extend to a depth below elevation 1042. No water body shall be located within 300 feet of an exterior property line. Depth and surface area of water bodies will vary based on climatic conditions. Any other variations or variations beyond the ranges specified in this note will require a revision to the reclamation plan. The revised reclamation plan shall be submitted to the Planning Office for review and the Board of County Commissioners for approval. Provided however, no man-made earth slope, with the exception of the slope of the water feature below the established water level, shall exceed 3:1, and provided that where approved, natural strata with a stable slope steeper than 3:1, and 8 feet high or less in height above the established water surface elevation, may be retained for any water feature and provided that the overburden pile located in Phase 1 A will not exceed elevation 1070 after reclamation is complete.
5. The operator shall, in good faith, work with downstream landowners to effectively manage surface water flows for the benefit of said landowners and the quarry at large.

GENERAL SEQUENCING PLAN

The intent of reclamation is to return the land to be suitable for use for agriculture (hay and ranching activities), recreation, wildlife habitat, or other uses. Water features will be incorporated into the reclaimed land to support ranching and fishing, as well as to support wildlife. Reclamation of each quarry area within a phase is planned to occur concurrently with mining operations and will be completed as soon as practical after quarrying is complete. Material will be borrowed from the subsequent phase to finish reclamation in a completed phase where necessary. Reclamation activities, for the purpose of determining when quarrying in the subsequent phase may proceed beyond the acreage restriction in the CUP are considered complete when final grading, seeding, and mulching operations are completed.

Reclamation will occur in the following sequence:

1. Place erosion control sediment barriers on down gradient side of earthmoving operations.
2. Fill excavated area with overburden material taken from active mining processes or available stockpiles.
3. Where water bodies are to be created, the slope above the planned water's edge will be shaped to a gradient of 3:1 or flatter. Natural strata along the water body may be retained in place for bank stabilization, or stone may be placed at the planned water's edge to stabilize the bank.
4. All man-made slopes will be graded to have slopes 3:1 or flatter, with the exception of the slope of the water feature below the planned water level, and provided that where approved, natural strata with a slope steeper than 3:1 may be retained for stabilization of the bank of any water feature. Where appropriate, terraces will be installed to minimize erosion.
5. After final grading, the surface shall be disked to a depth of six inches. A thickness of four inches of topsoil shall be placed on all areas to be vegetated. Topsoil material to be taken from topsoil stockpile(s) on site.
6. All disturbed non-water body areas shall be seeded and mulched. Seeding shall be prairie grass/wildflower mix for the District 1 area in accordance with the standards of the Kansas Department of Transportation, or wildlife habitat mix in accordance with the standards of Quail Unlimited. Prairie hay or wheat straw mulch shall be applied at a rate of two tons per acre and tacked down. In areas seeded for erosion control, mowed lawns, and berms, seeding shall be K-31 fescue at 300 pounds per acre and annual rye at 50 pounds per acre.

NOVEMBER 11, 2009
PEC PROJECT No. 08A39-000



Professional Engineering Consultants, P.A.
 1203 S.W. TOPEKA BLVD. • TOPEKA, KANSAS 66612
 785-233-8100 • FAX 785-233-8855



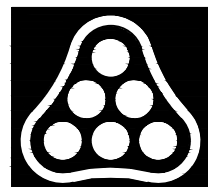
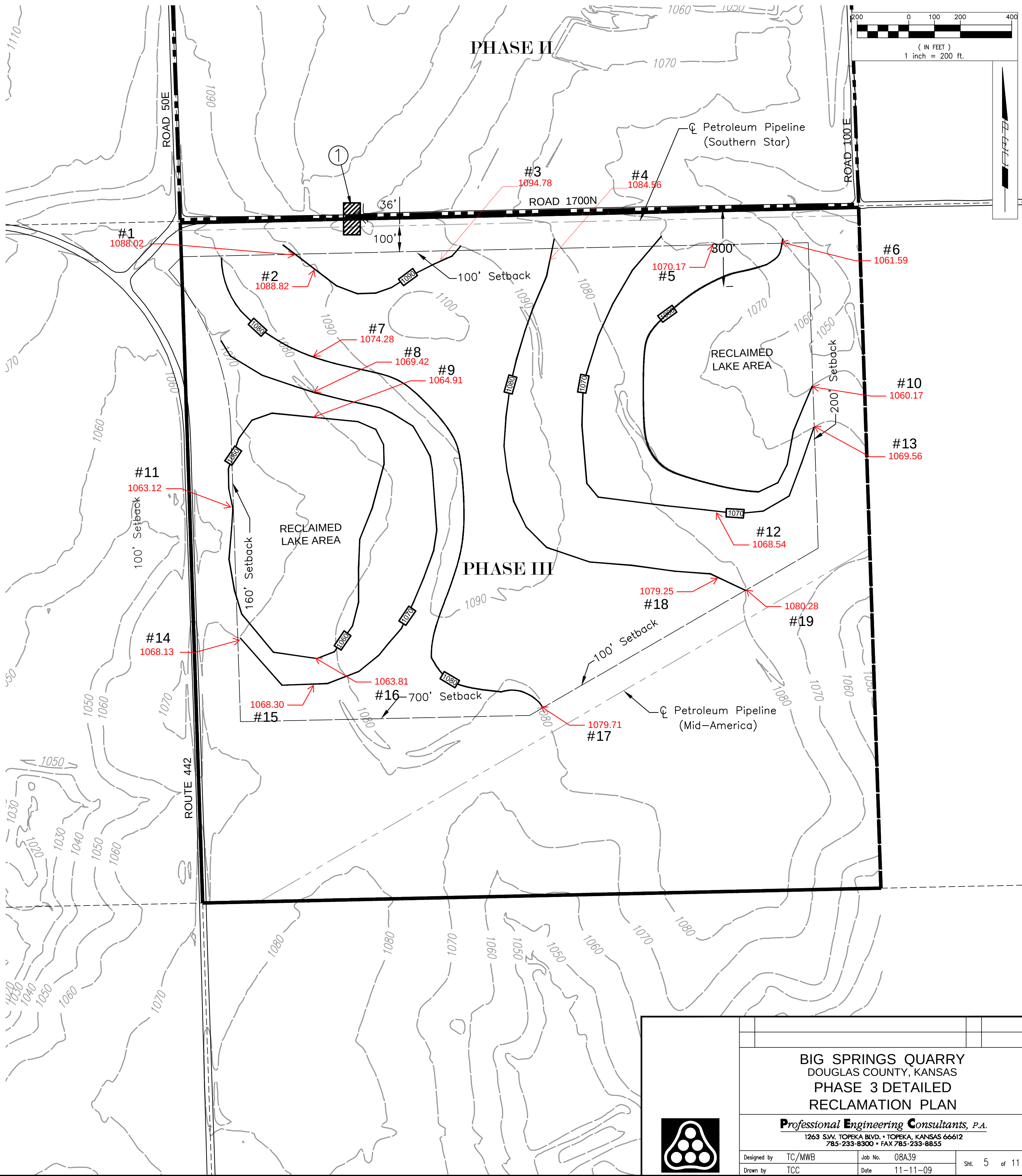
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F:\2008\08A39\DMG\Plans\RECLAMATION SITE 06-15-09\08A39-1001-SHT 5-Overall Site Plan2-NEW

LEGEND

--- PHASE 2 BOUNDARY
--- PHASE 3 BOUNDARY

NOTE THAT ALL DIMENSIONS ARE TO PROPERTY LINE

① HAUL ROAD CROSSING, APPROVED BY COUNTY ENGINEER, JUNE, 2009.



**BIG SPRINGS QUARRY
DOUGLAS COUNTY, KANSAS
PHASE 3 DETAILED
RECLAMATION PLAN**

Professional Engineering Consultants, P.A.
1263 S.W. TOPEKA BLVD. • TOPEKA, KANSAS 66612
785-233-8300 • FAX 785-233-8855

Designed by	TC/MWB	Job No.	08A39	Sht. 5 of 11
Drawn by	TCC	Date	11-11-09	

Attachment B
Approved and Finished Elevations

Points	RECLAMATION PLAN	FINISHED ELEVATION	DIFFERENCE
#1	1090	1088.02	-1.98
#2	1090	1088.82	-1.18
#3	1090	1094.78	4.78
#4	1080	1084.56	4.56
#5	1060-1070	1070.17	X**
#6	1060	1061.59	1.59
#7	1080	1074.28	-5.72
#8	1070	1069.42	-0.58
#9	1060	1064.91	4.91
#10	1060	1060.17	0.17
#11	1060	1063.12	3.12
#12	1070	1068.54	-1.46
#13	1070	1069.56	-0.44
#14	1070	1068.13	-1.87
#15	1070	1068.30	-1.70
#16	1060	1063.81	3.81
#17	1080	1079.71	-0.29
#18	1080	1079.25	-0.75
#19	1080	1080.28	0.28

Acceptable range of variation noted on Sheet 1 of approved reclamation plans Phase 1A-4:
5 ft higher than shown on the plan, or 10 ft lower.

- Elevations below that shown on the plan in red.
- Elevations that vary beyond that range are highlighted.

**The only point that may have varied beyond the 5 ft is Point # 5 which is midway between elevation lines. If the grade is uniform in this area, and the point is exactly at the midpoint, the finished elevation may be 0.17 above the 5 ft range of variation. Due to the uncertainty of the location of this point and the fact that the approved elevation and the finished elevation both require assumptions, this point is not included in the evaluation.

PLANNING COMMISSION REPORT Regular Agenda –Public Hearing Item	
PC Staff Report 6/24/17	
ITEM NO. 1	CONDITIONAL USE PERMIT FOR CELL TOWER; 2138 N 1000 RD (SLD)
CUP-17-00215: Consider a Conditional Use Permit for a new 190 ft self-supporting wireless telecommunications facility (tower), located at 2138 N 1000 Rd. Submitted by MW Towers LLC for F. Dwane Richardson & Valerie Richardson, property owners of record. <i>Joint meeting with Eudora Planning Commission.</i> (Eudora Planning Commission has sent a written response and will not attend.	
STAFF RECOMMENDATION: Staff recommends approval of the Conditional Use Permit for a <i>Communication Tower (Wireless Facility)</i> use, subject to the following conditions: 1. Provision of a revised site plan drawing that shows the location of the tower enclosure setback at least 60' from the right-of-way line and the tower shall be setback 150' from the future right-of-way line per section 12-310 of the County Zoning Regulations.	

Reason for Request:

Applicant's Response:

"To construct and maintain a 190 foot wireless telecommunications facility and related equipment shelters/cabinets."

ATTACHMENTS

1. Lease area survey and fall zone
2. Site plan
3. Memo summarizing City of Eudora recommendation
4. Letter from applicant regarding tower design and fall zone
5. Recommended setback exhibit

KEY POINTS

- Proposed location for new wireless communication facility.
- Structures less than 200' are generally not required to provide lighting per FAA.
- Access to site is from N 1000 Road.
- Property is located within 3 miles of the City of Eudora.

ASSOCIATED CASES/OTHER ACTION REQUIRED

- Existing home occupation – non-compliant. Use has expanded beyond allowable limits. Conditional use permit required for home business. (CUP application submitted on 6/19/2017 for a future Planning Commission meeting.)
- Approval of the Conditional Use by the Board of County Commissioners.
- Applicant shall obtain a permit for the Conditional Use from the Zoning and Codes Office prior to commencing the use.
- Applicant shall obtain a building permit from the Zoning and Codes Office prior to any construction.

PUBLIC COMMUNICATION

1. Communication from the City of Eudora Planning Commission.
2. Multiple calls from property owners requesting clarification of proposed tower location.
3. Nearby property owner called to express concerns that tower will conflict with aerial spraying, use of ultra-light aircraft, impact local wetlands and the Santa Fe Trail.
4. Hiquan Ma and Zongwu Cai; 2115 N 1000 Road letter.

GENERAL INFORMATION	
Current Zoning and Land Use:	A (County-Agricultural) District; <i>Agriculture</i> . This property includes 94 acres with a rural residence, out buildings and crop land.
Surrounding Zoning and Land Use:	A (County-Agricultural); <i>Agriculture</i> in all directions. Existing agricultural area with scattered rural residences along county roads.

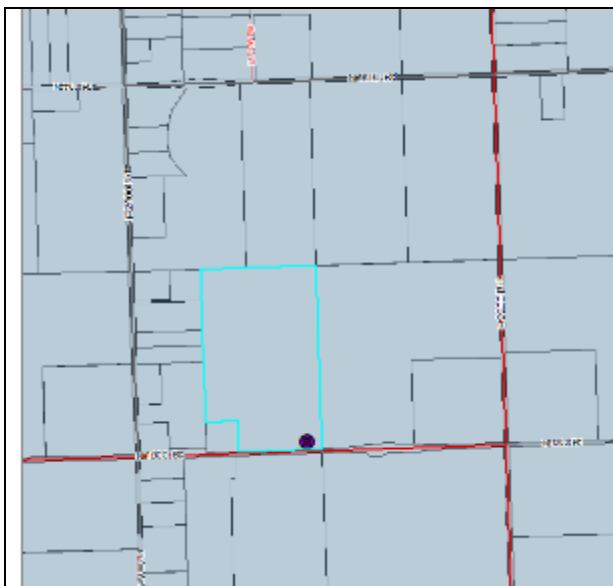


Figure 1: Existing Zoning; A (Agricultural) District

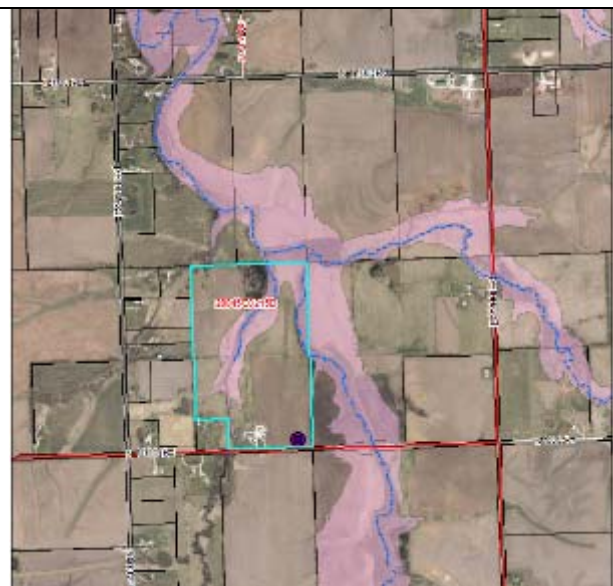


Figure 2: Existing Land Use and Regulatory Floodplain

Summary of Request

This application is for the construction of a new 190' self-support structure to be located on the north side of N 1000 Road. The structure is designed to provide platforms for multiple wireless communication providers. This project has been submitted in accordance with criteria set out in Section 12-319-1.02 of the County Zoning Ordinance. It should be noted that the application was submitted (April 24, 2017) and reviewed based on regulations in effect on the date of the submittal. Recent changes to wireless communications uses were not in effect until May 24, 2017 (TA-16-00511).

The text amendment was made to align the local zoning code regulations with the adopted State and Federal changes to law regarding wireless communication made effective last July.

This application does not include any justification reports or propagation maps. The applicant did provide the extra one mile notice that is required by the County Zoning Regulations.

I. ZONING AND USES OF PROPERTY NEARBY

The 93-acre parent parcel includes active agricultural land and accessory buildings. The nearby and surrounding area is uniformly zoned A (Agricultural). Land uses include large tracts of land with smaller rural residential parcels located along County roads. Smaller lots are concentrated along E 2100 Road west of the property. Larger land tracts are located to the east, north and south.

Section 20-319-4.31 (d) (5) states that towers “should be located in areas zoned commercial, industrial or agricultural” zoning district. The existing zoning is consistent with this land use preference and proposed development request.

Staff Finding – The subject property and immediately surrounding land area are zoned and used for agricultural activities and include rural residences along County roads. The proposed location of the tower (*Wireless Support Structure*) is consistent with the zoning district location requirements of the County Zoning Regulations.

II. CHARACTER OF THE AREA

The property is located within the Eudora Township. The area is characterized by agricultural uses and rural residential homes located along county roads. Both N 1000 and E 2200 Roads are principal arterial thoroughfares in the area. The north property line of the parent parcel is located approximately one mile south of the City of Eudora. The proposed tower would be located about 1.7 miles south.

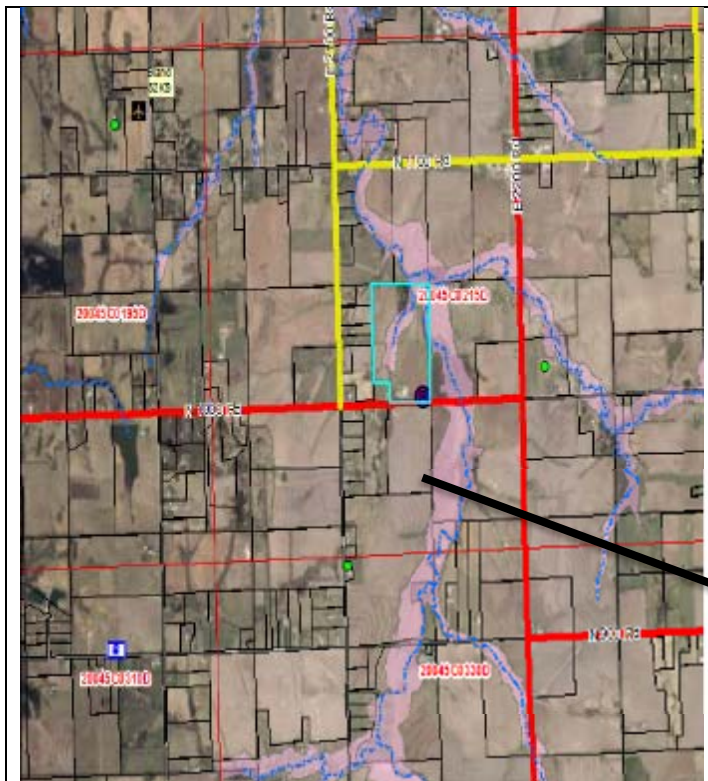


Figure 3: Area Map

The property and proposed tower location are located outside of the Eudora growth area but are located within three miles of the incorporated City Limits.

The Little Wakarusa Creek is located to the east of the property. A tributary to the creek is located within the subject property.

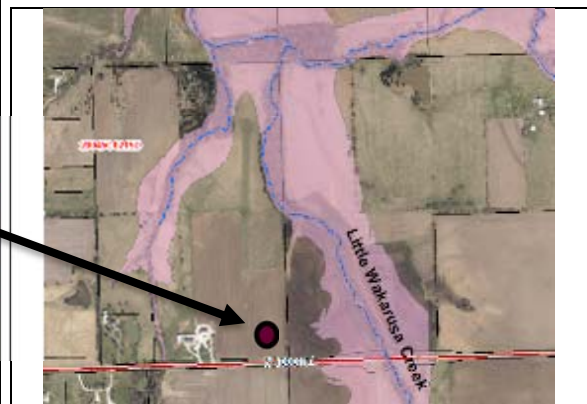


Figure 4: Little Wakarusa Creek

Staff Finding –The subject property is located within three miles of the City of Eudora within the unincorporated portion of Douglas County. The predominant characteristic of the area is agricultural.

III. SUITABILITY OF SUBJECT PROPERTY FOR THE USES TO WHICH IT HAS BEEN RESTRICTED

Applicant's Response: *"The subject property is agricultural. The subject property is suitable for a wireless telecommunications facility because it is geographically located in an area where public and private demand for high speed data and wireless communications exceed existing capacity and additional wireless equipment and access is needed to serve the demand."*

The proposed request does not alter the base zoning A (Agricultural) District. Uses permitted in this district include agricultural activities such as farms, truck gardens, nurseries, grazing and similar activities. Residential uses are also permitted. Certain uses are permitted in the A (Agricultural) District subject to review and approval of a Conditional Use Permit such as *Wireless Facilities* and support structures (towers). Section 12-319.4.31(d) specifically identifies commercial, industrial or agricultural zoning districts as suitable for communication towers (*Wireless Facilities*).

The specific location of the tower within the property is discussed later in this report as it pertains to building setbacks.

Staff Finding – The property, as zoned A (Agricultural) District, is suitable for the proposed use.

IV. LENGTH OF TIME SUBJECT PROPERTY HAS REMAINED VACANT AS ZONED

The proposed location of the tower is on the southeast corner of a 95 acre parcel. The property is undeveloped except for an area to the west along N 1000 Road which includes a residence and multiple agricultural buildings. Improvements appear on the parcel in the 1941 Aerial. Zoning was established in Douglas County in 1966.

Staff Finding –The property has been used for agricultural uses since before the adoption of the Zoning Regulations in 1966. The majority of the 95 acres is undeveloped except for the area located in the southwest corner of the property noted above.

V. EXTENT TO WHICH REMOVAL OF RESTRICTIONS WILL DETRIMENTALLY AFFECT NEARBY PROPERTY

Applicant's Response: *The granting of a Conditional Use Permit will not detrimentally affect nearby property because the wireless telecommunications facility will be located on a 95 acre farm tract with no direct visibility to any existing residences."*

Section 12-319-1.01 of the County Zoning Regulations recognize that *"....certain uses may be desirable when located in the community, but that these uses may be incompatible with other uses permitted in a district...when found to be in the interest of the public health, safety, morals and general welfare of the community may be permitted, except as otherwise specified in any district from which they are prohibited."*

Communication towers are specifically recommended to be located in commercial, industrial or agricultural zoning districts. This proposed development request is located within the existing A (Agricultural) District.

The subject property is encumbered by regulatory floodplain. However, the proposed location of the tower is identified in the southeast corner of the property along N 1000 Road and will not encroach on the floodplain.

Nearby uses include a private air strip located approximately two miles to the northwest. This private air strip is oriented north and south and located west of E 2000 Road. The proposed tower would not be located in direct alignment with the air strip.

Staff Finding –The proposed request is comparable to similar wireless facility requests made in Douglas County.

VI. RELATIVE GAIN TO THE PUBLIC HEALTH, SAFETY AND WELFARE BY THE DESTRUCTION OF THE VALUE OF THE PETITIONER’S PROPERTY AS COMPARED TO THE HARDSHIP IMPOSED UPON THE INDIVIDUAL LANDOWNERS

Applicant’s Response: *N/A. No property values will be destroyed and no hardship imposed on landowners. The public health, safety and welfare will be improved by increased access to high speed data and wireless telecommunications services provide by tower tenants.*

Evaluation of the relative gain weighs the benefits to the community-at-large vs. the benefit of the owners of the subject property. Approval of the request expands the structural network of towers that are capable of supporting wireless communication equipment. The proposed request facilitates wireless communications and wireless data use within the community. The proposed equipment does not conflict with existing emergency communication equipment. The majority of the property will remain viable for existing land uses and uses permitted within the A (Agricultural) District.

The County Public Works Director noted in the review that the proposed location of the tower, in proximity to the existing road right-of-way, will cause a conflict in the future with widening and improvement of N 1000 Road (County Route 458). N 1000 Road is classified as a Principal Arterial. The Subdivision Regulations require 120’ of right-of-way (50’ from center line.) The existing right-of-way along this road segment is only 30’ from centerline, so the fence enclosure should be moved at least 30’ north to preserve future right-of-way.

New structures are required to be setback 150’ from the right-of-way along Principal Arterial roads. The following graphs represents the location of the enclosure based on the existing and future right of way.

Table 1: Setback Requirements

Proposed enclosure setback from Right-of-way			
Roadway from center line.	Set back	Proposed Enclosure	
30’ ROW	30’	75’	

Recommended enclosure setback from right-of-way			
Roadway from center line.	Set back		Proposed Enclosure
60’ ROW	150’		75’

By moving the tower and enclosure farther north appropriate right-of-way is preserved for future improvements to the roadway.

Staff Finding – In staff’s opinion, the approval of this request as proposed does not preserve the necessary right-of-way for N 1000 Road, a Principal Arterial. Shifting the base of the tower and enclosure to the north right-of-way will be preserved. Staff recommends the tower site be relocated to the north to accommodate a future road improvement along N 1000 Road.

VII. CONFORMANCE WITH THE COMPREHENSIVE PLAN

Applicant’s Response: *North 1000 Road is designed as a principal arterial road. Having a facility to provide high speed data and wireless communications is paramount for economic growth. Additionally, reliable wireless services are critical for public safety and emergency services.*

Chapter 10; Community Facilities of *Horizon 2020* addresses public utilities. Key strategies (Page 10-10) primarily address municipal utilities such as water and wastewater planning. One strategy states:

- *The visual appearance of utility improvements will be addressed to ensure compatibility with existing and planned land use areas.*

The plan specifically addressed electric and telephone services and encourages this infrastructure to be placed underground in conjunction with new development where feasible. Wireless communication towers support the wireless industry and accommodate the reduction of hardwire infrastructure. However, it should not be interpreted that wireless communication will replace hardwire needs in the community.

The plan recognizes that *"telephone and electric utilities have a strong visual presence in the unincorporated Douglas County Landscape."* Large transmission lines and easements should be coordinated throughout the community to minimize visual and environmental impacts.

The Comprehensive Plan does not explicitly address communication towers.

Staff Finding – The comprehensive plan does not provide any specific land use recommendations regarding *Wireless Facilities*. A Conditional Use Permit can be used to allow specific non-residential uses subject to approval of a site plan. This tool allows proportional development in harmony with the surrounding area. The proposed request is consistent with the Comprehensive Plan.

CUP PLAN REVIEW

In addition to typical site plan design standards, communication towers must address specific requirements of section 12-319-4.31 of the County Zoning Regulations. As discussed above, the proposed use is located in an appropriate zoning district.

New communication towers require design that shall accommodate at least three two-way antennas for every 150’ of tower height or co-location space. The proposed tower site plan includes four co-location spaces on this tower.

The proposed project locates the wireless tower facility within a 75’ square enclosure area. The enclosure would be fenced and is shown graphically to include two future 12’ by 20’ tenant ground lease areas within the proposed fence enclosure (50’ by 50’). The current project does not include or show the location of a generator. Generators are typically provided by individual communication providers to support equipment during times of power loss. Tenant co-location on the tower in the future would be considered through an administrative site plan application review.

Parking and Access:

Wireless Facilities do not require traditional off-street parking. Access to the tower enclosure area is provided from a driveway access from N 1000 Road. Access to the site is limited to construction and maintenance. There are no offices or manned operations at this location. A county driveway permit would be required separately.

Utilities

Typical utilities are not required for this use. The site plan shows the location of an access and utility easement that will accommodate services (electric and phone) connections to the site. Water and sanitary sewer serves are not required.

Landscape and Screening:

This site will not be irrigated and will not be staffed. The survival of vegetation used for screening is usually unsuccessful especially in a rural application. The project as proposed does not include a landscape plan. An existing tree line is located along the east property line.

Tower Design

- Accommodations for the co-location of equipment for multiple tenants is provided with this proposed structure design.
- The overall tower height is less than 200'. Mandatory lighting is not required or proposed for the structure.

Setback

As discussed above the building setback for structures is 150' from the right-of-way for buildings located along Principal Arterial roads. For example, a new residence would be required to be setback 150' from the north right-of-way line along this segment of N 1000 Rod.

The tower is required, per section 12-319-4.31(d), to be setback at least equal to the height of the tower to the nearest property line measured from the center of the tower. The tower (center of tower), as proposed, is located 67' from the north right-of-way line (south property line) and approximately 80' from the east property line. The fence enclosure is proposed to be located 31' north of the right-of-way and 42.4' west of the east property line. While the tower is setback an additional distance, the location of the fence enclosure would not be adequately setback once the roadway for N 1000 Road is widened.

The typical right-of-way profile for a rural Primary Arterial Road is 120' (without a median) or 150' (with a median). The existing right-of way for this segment of N 1000 Road is 60'. Each property owner would provide one half of the right-of-way or roadway easement as applicable.

Primary structures are typically required to be setback 150' from the right-of-way for properties located along Principal Arterial roads per 12-318. This setback standard applies to residential structures. The existing residence to the west does not appear to meet this design standard. The following graphic shows the location of the tower and lease area in relationship to the right-of-way lines (south property line).



Figure 5: Proposed location of tower and enclosure

The proposed tower location is setback in line with the existing residence. The enclosure area would be located one foot north of the easement.

Wireless communication towers must meet the minimum setback established by Section 12-319-4.31(d) or provide documentation certified by a registered engineer certifying that in the event of a failure or collapse, the fall zone will be contained within the proposed setback area. The applicant has provided a letter from the tower designer indicating the intended design for the tower to result in collapse radius equal to the identified distance in the attached survey (67.5').

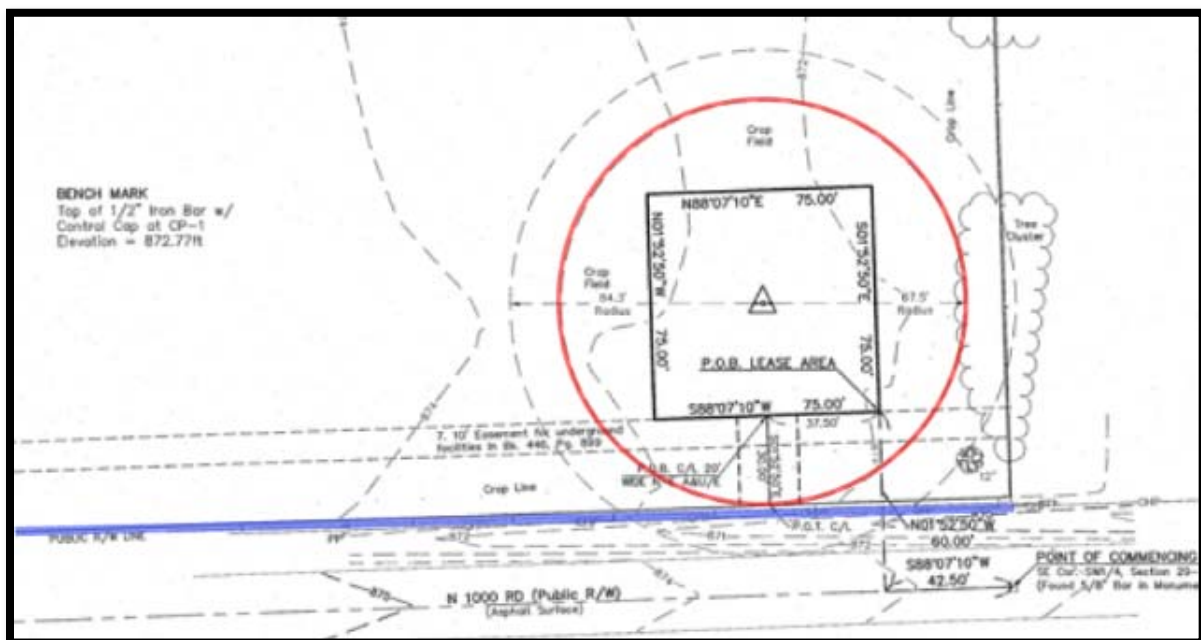


Figure 6: Fall Zone

Evaluation of the required structural documentation will continue to be reviewed with the submission of a building permit to the County Zoning and Codes Office. The lease area is located 42.5' from the east property line. The fall zone is located completely within the parent parcel.

The tower and ground equipment will be located in a 50' by 50' enclosure area within the larger lease area of 75' by 75'. Additional ground equipment could result in the need to expand the ground enclosure to accommodate added equipment in the future.

Staff recommends the enclosure area be setback the tower enclosure setback at least 60' from the right-of-way line and the tower shall be setback 150' from the future right-of-way line. This is intended to preserve the right-of-way for improvements to N 1000 Road.

Lighting

Lighting is not proposed with this application for the communication tower. The tower will need to meet any applicable FAA requirements. Generally, towers less than 200' are not required to be lit. ground equipment will have lighting on front and rear sides of the building. Lighting must be shielded and directed down.

Other

Prior to construction of the tower the applicant will be required to obtain a Conditional Use Permit, issued by the County Zoning and Codes office as well as applicable building and floodplain development permits.

Recent changes to federal laws allow some future modifications to approved and existing communication towers, base stations, co-location equipment and other features. The full scope of these changes has not been assessed by staff. Changes can include expanding the tower by up to an additional 20' and increasing the base station (enclosure area) by up to 10%.

Conclusion

The proposed application meets the required documentation requirements of the County Zoning Regulations. Staff recommends a changes to the site plan to facilitate the project compatibility with future roadway improvements along N 1000 Road as discussed in the body of this staff report.

The property owner has a current home-based business that is currently not in compliance with the home occupation regulations. The property owner has submitted a separate Conditional Use Permit for the continuation of the business at this location. The application will be considered on a future Planning Commission agenda.

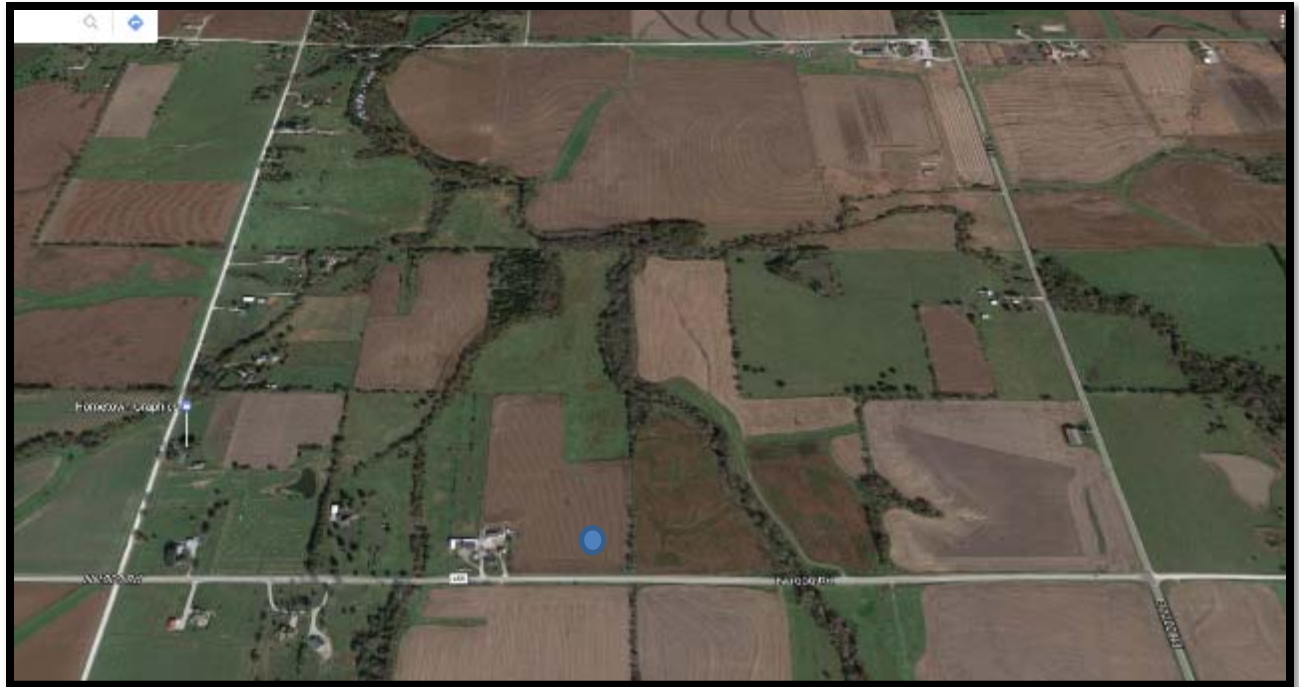


Figure 7: Aerial of surrounding property

EUDORA PART OF THE SW 1/4, SECTION 29, T13S, R21E, IN DOUGLAS COUNTY, KANSAS

PROPERTY DESCRIPTION: Parent Parcel as Provided

The East 100 acres of the Southwest Quarter of Section 29, Township 13 South, Range 21 East of the 5th P.M., in Douglas County, Kansas.

LESS AND EXCEPT:

Beginning at the Southwest corner of the East 100 acres of the Southwest Quarter of Section 29, Township 13 South, Range 21 East of the 5th P.M.; thence North 487 feet; thence East 487 feet; thence South 487 feet; thence West to the point of beginning, Douglas County, Kansas, 525 feet to easements, reservations, and restrictions, if any of record.

NOTE: The parent parcel, graphically shown hereon, in full or in part, is the same as that described above.

Property information shown hereon was provided by Premier Title of Kansas, Inc., Case No. 35318, effective November 6, 2016 at 8:00 a.m.

Schedule B-II Information:

6. R/W Easement granted to Rural Water Dist. No. 4 in Blk. 306, Pg. 1715. (Blanket in nature, unable to plot)

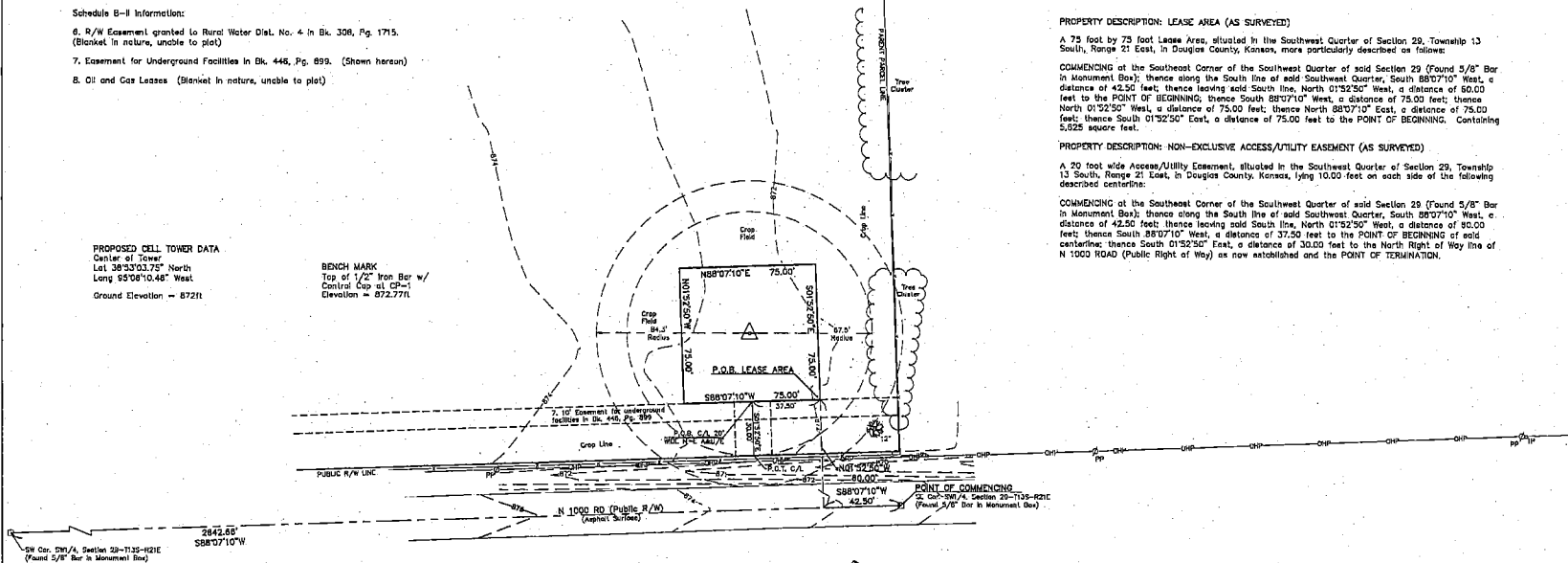
7. Easement for Underground Facilities in Blk. 446, Pg. 893. (Shown hereon)

8. Oil and Gas Leases (Blanket in nature, unable to plot)

PROPOSED CELL TOWER DATA

Center of Tower
Lat. 38°53'03.75" North
Long 95°08'10.48" West
Ground Elevation = 872.77ft

BENCH MARK
Top of 1/2" Iron Bar w/
Central Cap at 12-2-
Elevation = 872.77ft



Notes:

Bearings shown hereon are referenced to Grid North of the Kansas State Plane Coordinate System of 1983 (NAD 83), (2011 ADJ), North Zone. Obtained by static GPS observations and RINEX file submissions for NGS Opus solutions.

Vertical Datum = NAVD83 using GGD0128

The purpose of this survey is to establish and describe a Lease Area and associated Easements. This is not a boundary survey of the Parent Parcel.

The utilities as shown on this drawing were developed from the information available (existing utility maps, aboveground observations and/or surface markings placed on the ground by the utility company or a representative thereof). This company has made no attempt to excavate or go below surface to locate utilities and does not extend or imply a warranty or warranty as to the exact location of or complete inventory of utilities in this area. It shall be the contractor's responsibility to verify the location and depth of all utilities (whether shown or not) prior to excavation or construction and to protect said utilities from damage.

PROPERTY LEGEND

SECTION CORNER	LI
RIGHT OF WAY	R/W
CENTERLINE	C/L
POINT OF BEGINNING	P.O.B.
POINT OF TERMINATION	P.O.T.
ACCESS/UTILITY EASEMENT	A&U/E
NON-EXCLUSIVE	N-E
BROKEN SCALE	

LEGEND

POWER POLE	PP
TELEPHONE PEDISTAL	TP
PROPOSED TOWER	
TREE (DIA)	
TREE LINE	
FENCE	
OVERHEAD POWER LINE	OH-P
BENCHMARK	
CONTROL POINT	

PROPERTY DESCRIPTION: LEASE AREA (AS SURVEYED)

A 75 foot by 75 foot Lease Area, situated in the Southwest Quarter of Section 29, Township 13 South, Range 21 East, in Douglas County, Kansas, more particularly described as follows:

COMMENCING at the Southeast Corner of the Southwest Quarter of said Section 29 (Found 5/8" Bar in Monument Box); thence along the South line of said Southwest Quarter, South 88°07'10" West, a distance of 42.50 feet; thence leaving said South line, North 01°52'50" West, a distance of 80.00 feet to the POINT OF BEGINNING; thence South 88°07'10" West, a distance of 75.00 feet; thence North 01°52'50" West, a distance of 75.00 feet; thence North 88°07'10" East, a distance of 75.00 feet; thence South 01°52'50" East, a distance of 75.00 feet to the POINT OF BEGINNING. Containing 5,625 square feet.

PROPERTY DESCRIPTION: NON-EXCLUSIVE ACCESS/UTILITY EASEMENT (AS SURVEYED)

A 20 foot wide Access/Utility Easement, situated in the Southwest Quarter of Section 29, Township 13 South, Range 21 East, in Douglas County, Kansas, lying 10.00 feet on each side of the following described centerline:

COMMENCING at the Southeast Corner of the Southwest Quarter of said Section 29 (Found 5/8" Bar in Monument Box); thence along the South line of said Southwest Quarter, South 88°07'10" West, a distance of 42.50 feet; thence leaving said South line, North 01°52'50" West, a distance of 80.00 feet; thence South 88°07'10" West, a distance of 37.50 feet to the POINT OF BEGINNING of said centerline; thence South 01°52'50" East, a distance of 30.00 feet to the North Right of Way line of N 1000 ROAD (Public Right of Way) as now established and the POINT OF TERMINATION.

LOVELACE & ASSOCIATES
Land Surveying - Land Planning
Telecommunications Surveys
233 S. 3rd Street, Lawrence, Kansas 66044
Phone: (816) 347-9979 Fax: (816) 347-9979

SURVEY COORDINATED BY:

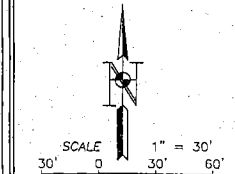
LOVELACE AND ASSOCIATES, LLC
P.O. BOX 68
LEE'S SUMMIT, MO 64063
TELEPHONE: 816-347-9997
FAX: 816-347-9979

SURVEY PROVIDED BY:

LOVELACE AND ASSOCIATES, LLC
P.O. BOX 68
LEE'S SUMMIT, MO 64063
TELEPHONE: 816-347-9997
FAX: 816-347-9979

SURVEY PROVIDED FOR:

MW TOWERS, LLC
3804 WEST 75TH ST.
PRAIRIE VILLAGE, KS 66208
TELEPHONE: 913-449-4774



FLOOD NOTE:

According to my interpretations of Community Panel No. 2004500210 of the Flood Insurance Rate Map for Douglas County, Kansas, dated 08-05-2010, the subject property is in Flood Zone "X", a "grass determined to be Outside the 0.2% annual chance floodplain".

LOVELACE & ASSOCIATES
233 S. 3rd Street, Lawrence, Kansas 66044
Phone: (816) 347-9979 Fax: (816) 347-9979

SITE ID: NA

SITE NAME: CN35318

SITE LOCATION: CITY OF EUDORA, DOUGLAS COUNTY, KS

LA PROJECT NO.: 17023

DRAWN BY: A.C.T.

CHECKED BY: J.B.L.

DATE: 02-07-17

FIELDWORK DATE: 02-01-17

SHEET NUMBER

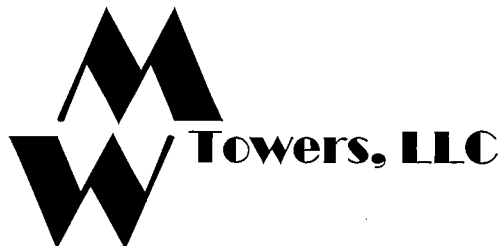
1 OF 1

CERTIFICATION:

I HEREBY CERTIFY THAT A SURVEY WAS MADE BY ME, OR UNDER MY DIRECT SUPERVISION, ON THE GROUND OF THE LEASE AREA, AND ASSOCIATED EASEMENT PREMISES HEREIN DESCRIBED, AND THE RESULTS OF SAID SURVEY ARE REPRESENTED HEREON TO THE BEST OF MY PROFESSIONAL KNOWLEDGE AND BELIEF.

JEFFREY L. LOVELACE
STATE OF KANSAS
DATE: 02-07-17

05-18-17: REVISED TYP
05-02-17: REVISED FOR COMMENTS
03-09-17: ADDED A/C



EUDORA SOUTH

SITE NAME:
CN35318

ADDRESS
EUDORA, KS 66025

PROPOSED 190'-0" SELF-SUPPORT TOWER



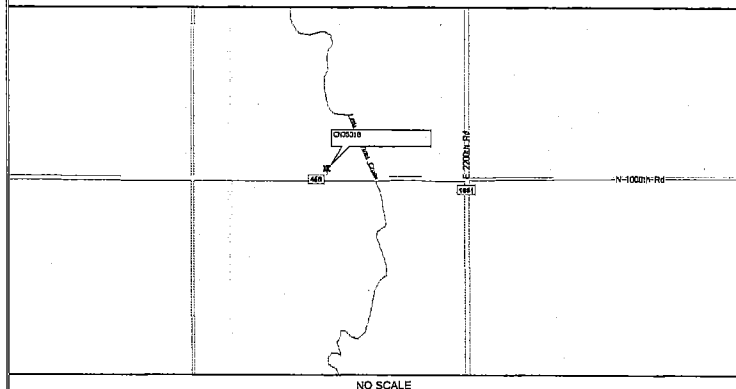
EUDORA SOUTH

ADDRESS
EUDORA, KS 66025
PROPOSED SELF-SUPPORT TOWER

PROJECT SUMMARY

SITE NAME: EUDORA SOUTH
SITE NUMBER: CN35318
SITE ADDRESS: EUDORA, KS 66025
JURISDICTION: DOUGLAS COUNTY
TOWER OWNER: MW TOWERS, LLC
3864 WEST 75TH STREET
PRAIRIE VILLAGE, KS 66208
(913) 449-4774
NAD83
LATITUDE: 38° 53' 03.75" N
LONGITUDE: 95° 06' 10.48" W
CUSTOMER/
APPLICANT: MW TOWERS, LLC
3864 WEST 75TH STREET
PRAIRIE VILLAGE, KS 66208
(913) 449-4774
OCCUPANCY TYPE: UNMANNED
A.D.A. COMPLIANCE: FACILITY IS UNMANNED AND NOT
FOR HUMAN HABITATION

LOCATION MAP



DRAWING INDEX

SHEET #	SHEET DESCRIPTION	REV. #
T-1	TITLE SHEET	A
GN-1	GENERAL NOTES	A
GN-2	GENERAL NOTES	A
GN-3	GENERAL NOTES	A
C-1	SURVEY	02/01/17
C-1.1	OVERALL SITE PLAN & TOWER ELEVATION	A
C-2	COMPOUND DETAILS	A
C-3	FENCE DETAILS	A
E-1	POWER/TELCO ROUTING AND DETAILS	A
E-2	UTILITY RACK ELEVATIONS	A
G-1	GROUNDING PLAN AND DETAILS	A

JURISDICTION

JURISDICTION: DOUGLAS COUNTY
ZONING: N/A
POWER PROVIDER: BALDWIN CITY MUNICIPAL LIGHT AND WATER
(785) 594-6427
TELCO PROVIDER: CENTURYLINK
(877) 290-5458

DRIVING DIRECTIONS

DEPART KANSAS CITY INTERNATIONAL AIRPORT ON INTERNATIONAL CIRCLE. KEEP RIGHT ONTO LP COOKINGHAM DR. TAKE RAMP (RIGHT) ONTO MO-D [LP COOKINGHAM DR]. TAKE RAMP (RIGHT) ONTO I-29 [US-71]. AT EXIT 3B, TAKE RAMP (RIGHT) ONTO I-635. AT EXIT 1A, TURN RIGHT ONTO RAMP. TAKE RAMP (RIGHT) ONTO I-35, AT EXIT 222B, TAKE RAMP (RIGHT) ONTO I-435 [FRONTIER MILITARY SCENIC BYWAY]. AT EXIT 1B, TURN RIGHT ONTO RAMP. ROAD NAME CHANGES TO KS-10 [GOVERNOR JOHN ANDERSON JR HWY]. KEEP RIGHT ONTO RAMP, TURN LEFT ONTO CR-1061 [CHURCH ST]. KEEP STRAIGHT ONTO CR-1061 [E 2200TH RD]. KEEP STRAIGHT ONTO CR-1061 [CHURCH ST]. KEEP STRAIGHT ONTO CR-1061 [E 2200TH RD], TURN RIGHT ONTO CR-458 [N 1000TH RD]. TURN RIGHT ONTO ACCESS ROAD AND ARRIVE AT CN35318.

A/E DOCUMENT REVIEW STATUS

TITLE	SIGNATURE	DATE
MW TOWERS LLC PROP:		
MW TOWERS LLC R.F. MGR.:		
MW TOWERS LLC NetOps:		
MW TOWERS LLC CONST. MGR.:		
INTERCONNECT:		
MW TOWERS LLC SITE DEV. MGR.:		
PROPERTY OWNER:		
PLANNING:		

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR MODIFICATIONS.



CALL KANSAS ONE CALL
(800) DIG-SAFE
CALL 3 WORKING DAYS
BEFORE YOU DIG!



CODE COMPLIANCE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

CODE TYPE	CODE
BUILDING/DWELLING	IBC 2012
STRUCTURAL	IBC 2012
MECHANICAL	IMC 2012
ELECTRICAL	NEC 2011

PROJECT DESCRIPTION

- THE PROPOSED PROJECT INCLUDES:
- INSTALL 190'-0" SELF-SUPPORT TOWER.
 - INSTALL 50'-0" x 50'-0" COMPOUND.
 - INSTALL MULTI-METER RACK.

DO NOT SCALE DRAWINGS

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 11X17. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SEE SHEET GN-1, GN-2 & GN-3
FOR ADDITIONAL CONSTRUCTION NOTES

PROJECT NO: 112623.001
CHECKED BY: SLM

ISSUED FOR:			
REV	DATE	DRWN	DESCRIPTION
A	3/28/17	RPS	PRELIMINARY REVIEW

B&T ENGINEERING, INC.

THIS DOCUMENT IS
PRELIMINARY IN
NATURE AND IS NOT
A FINAL, SIGNED
AND SEALED
DOCUMENT

IT IS A VIOLATION OF LAW FOR ANY PERSON,
UNLESS THEY ARE ACTING UNDER THE DIRECTION
OF A LICENSED PROFESSIONAL ENGINEER,
TO ALTER THIS DOCUMENT.

SHEET NUMBER: T-1
REVISION: A

IMPORTANT NOTE:

THE CONTRACTOR MUST PROVIDE CLOSE-OUT DOCUMENTS AT THE FINAL INSPECTION WALK BEFORE PAYMENTS WILL BE MADE.

GENERAL REQUIREMENTS

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY, SPECIFICATIONS AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS, THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND/OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE OWNERS REPRESENTATIVE OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED THEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK AND FAMILIARIZE THEMSELVES WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS OTHERWISE NOTED OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL MAINTAIN A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE, UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.
11. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC., DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
12. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS/RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PLAIN SPOTS, DUST OR SMUDGES OF ANY KIND.
13. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT SECTIONS OF THE APPLICABLE BUILDING CODES AND ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
14. THE CONTRACTOR SHALL NOTIFY THE TOWER OWNERS REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL THAT CONFLICT IS RESOLVED BY TOWER OWNERS REPRESENTATIVE.
15. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC., ON THE JOB.
16. THE CONTRACTOR SHALL SUBMIT, AT THE END OF THE PROJECT, A COMPLETE SET OF AS-BUILT DRAWINGS TO TOWER OWNERS PROJECT MANAGER.

SITE WORK AND DRAINAGE

EARTHWORK, EXCAVATION AND GRADING

PART 1 GENERAL

- 1.01 WORK INCLUDED: REFER TO SURVEY AND SITE PLAN FOR WORK INCLUDED.
- 1.02 RELATED WORK
 - A. CONSTRUCTION OF EQUIPMENT FOUNDATIONS
 - B. INSTALLATION OF ANTENNA SYSTEM
- 1.03 DESCRIPTIONS
 - A. ACCESS ROAD, TURNAROUND AREAS AND SITES ARE CONSTRUCTED TO PROVIDE A WELL DRAINED, EASILY MAINTAINED, EVEN SURFACE FOR MATERIAL AND EQUIPMENT DELIVERIES AND MAINTENANCE PERSONNEL ACCESS.
- 1.04 QUALITY ASSURANCE
 - A. APPLY SOIL STERILIZER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION (USE AS NEEDED)
 - B. VEGETATION LANDSCAPING, IF INCLUDED WITHIN THE CONTRACT WILL BE PLACED AND MAINTAINED AS RECOMMENDED BY NURSERY INDUSTRY STANDARDS.
- 1.05 SEQUENCING
 - A. CONTRACTOR IS RESPONSIBLE FOR LAYOUT AND CONSTRUCTION STAKING.
 - B. GRUB THE COMPLETE ROAD AND SITE AREA PRIOR TO FOUNDATION CONSTRUCTION OR PLACEMENT OF BACK FILL OR SUB-BASE MATERIAL.
 - C. CONSTRUCT TEMPORARY CONSTRUCTION ZONE ALONG ACCESS DRIVE.
 - D. THE SITE AREA WILL BE BROUGHT TO SUB-BASE COURSE ELEVATION AND THE ACCESS ROAD TO BASE COURSE ELEVATION PRIOR TO FORMING FOUNDATIONS.
 - E. APPLY SILT STERILIZER PRIOR TO PLACING BASE MATERIALS.
 - F. IF REQUIRED, GRADE, SEED, FERTILIZE AND MULCH DISTURBED AREAS IMMEDIATELY AFTER BRINGING THE SITE AND ACCESS ROAD TO BASE ELEVATION. WATER TO ENSURE GROWTH.
 - G. REMOVE EXCESS GRAVEL FROM TEMPORARY CONSTRUCTION ZONE.
 - H. AFTER APPLICATIONS OF FINAL SURFACES, APPLY SOIL STERILIZER TO THE STONE SURFACES.
- 1.06 SUBMITTALS
 - A. BEFORE CONSTRUCTION
 1. IF LANDSCAPING IS APPLICABLE TO THE CONTRACT, SUBMIT TWO COPIES OF THE LANDSCAPING PLAN UNDER NURSERY LETTERHEAD, IF A LANDSCAPE ALLOWANCE IS INCLUDED IN THE CONTRACT, PROVIDE AN ITEMIZED LISTING OF PROPOSED COSTS UNDER NURSERY LETTERHEAD (REFER TO SITE PLAN FOR LANDSCAPING REQUIREMENT).
 2. SUBMIT FOR APPROVAL, 1/2 CUBIC FOOT OF THE PROPOSED SURFACE COURSE MATERIAL.
 3. LANDSCAPING WARRANTY STATEMENT, IF REQUIRED.

PART 2 PRODUCTS

- 2.01 MATERIALS
 - A. ROAD AND SITE MATERIALS: FILL MATERIAL SHALL BE ACCEPTABLE. SELECT FILL AND SHALL BE IN ACCORDANCE WITH LOCAL DEPARTMENT OF HIGHWAY AND PUBLIC TRANSPORTATION STANDARD SPECIFICATIONS.
 - B. SOIL STERILIZER SHALL BE EPA REGISTERED OF LIQUID COMPOSITION AND OF PRE-EMERGENCE DESIGN.
 - C. SOIL STABILIZER FABRIC SHALL BE MIRAFI OR GREATER - 500% AT ACCESS ROAD AND SOAK AT COMPOUND.
 - D. GRAVEL FILL: WELL GRADED, HARD, DURABLE, NATURAL SAND AND GRAVEL FREE FROM ICE AND SNOW, ROOTS, SOD RUBBISH, AND OTHER DELETERIOUS OR ORGANIC MATTER. MATERIAL SHALL CONFORM TO THE FOLLOWING GRADATION REQUIREMENTS.

U.S. SIEVE NO. PASSING BY WEIGHT

4"	100
1/2"	50-85
#4	40-75
#10	30-60
#40	10-30
#100	5-20
#200	0-5

GRAVEL FILL TO BE PLACED IN LIFTS OF 9" MAXIMUM THICKNESS AND COMPACTED TO 95% DENSITY.

2.02 EQUIPMENT

- A. COMPACTION SHALL BE ACCOMPLISHED BY MECHANICAL MEANS. LARGER AREAS SHALL BE COMPACTED BY SHEEP'S FOOT, VIBRATORY OR RUBBER TIED ROLLERS WEIGHING AT LEAST 5 TONS. SMALLER AREAS SHALL BE COMPACTED BY POWER-DRIVEN, HAND-HELD TAMPER.
- B. PRIOR TO OTHER EXCAVATION AND CONSTRUCTION EFFORTS, GRUB ORGANIC MATERIAL TO A MINIMUM OF 6" BELOW ORIGINAL GROUND LEVEL.
- C. UNLESS OTHERWISE INSTRUCTED BY MW TOWERS, REMOVE TREES, BRUSH AND DEBRIS FROM THE PROPERTY TO AN AUTHORIZED DISPOSAL LOCATION.
- D. PRIOR TO PLACEMENT OF FILL OR BASE MATERIALS, ROLL THE SOIL.
- E. WHERE UNSTABLE CONDITIONS ARE ENCOUNTERED, LINE THE RUBBED AREAS WITH STABILIZER MAT PRIOR TO PLACEMENT OFFILL OR BASE MATERIAL.

3.03 INSTALLATION

- A. THE SITE AND TURNAROUND AREAS SHALL BE AT THE SUB-BASE COURSE ELEVATION PRIOR TO FORMING FOUNDATIONS. GRADE OR FILL THE SITE AND ACCESS ROAD AS REQUIRED TO PRODUCE EVEN DISTRIBUTION OF SPOILS RESULTING FROM FOUNDATION EXCAVATIONS. THE RESULTING GRADE SHALL CORRESPOND WITH SAID SUB-BASE COURSE. ELEVATIONS ARE TO BE CALCULATED FROM FINISHED GRADES OR SLOPES INDICATED.
- B. CLEAR EXCESS SPOILS, IF ANY, FROM JOB SITE AND DO NOT SPREAD BEYOND THE LIMITS OF THE OWNERS LEASE PROPERTY UNLESS AUTHORIZED BY PROJECT MANAGER.
- C. THE ACCESS ROAD SHALL BE BROUGHT TO BASE COURSE ELEVATION PRIOR TO FOUNDATION CONSTRUCTION.
- D. DO NOT CREATE DEPRESSIONS WHERE WATER MAY POND.
- E. THE CONTRACT INCLUDES ALL NECESSARY GRADING, BANKING, DITCHING AND COMPLETE SURFACE COURSE FOR ACCESS ROAD. ALL ROADS OR ROUTES UTILIZED FOR ACCESS TO PUBLIC THOROUGHFARE IS INCLUDED SCOPE OF WORK UNLESS OTHERWISE INDICATED.
- F. WHEN IMPROVING AN EXISTING ACCESS ROAD, GRADE THE EXISTING ROAD TO REMOVE ANY ORGANIC MATTER AND THEN SMOOTH SURFACE BEFORE PLACING FILL OR STONE.
- G. PLACE FILL OR STONE IN 3" MAXIMUM LIFTS AND COMPACT BEFORE PLACING NEXT LIFT.
- H. THE FINISH GRADE, INCLUDING TOP SURFACE COURSE SHALL EXTEND A MINIMUM OF 12" BEYOND THE SITE FENCE AND SHALL COVER THE AREA AS INDICATED.
- I. RIPRAP SHALL BE APPLIED TO THE SIDE SLOPES OF ALL FENCED AREAS, PARKING AREAS AND TO ALL OTHER SLOPES GREATER THAN 2:1.
- J. RIPRAP SHALL BE APPLIED TO THE SIDES OF DITCHES OR DRAINAGE SWALES AS INDICATED ON PLANS.
- K. RIPRAP ENTIRE DITCH FOR 6'-0" IN ALL DIRECTIONS AT CULVERT OPENINGS.
- L. SEED, FERTILIZER AND STRAW COVER SHALL BE APPLIED TO ALL OTHER DISTURBED AREAS AND DITCHES. DRAINAGE SWALES, NOT OTHERWISE RIPRAPPED.
- M. UNDER NO CIRCUMSTANCES SHALL DITCHES, SWALES OR CULVERTS BE PLACED SO THEY DIRECT WATER TOWARDS OR PERMIT STANDING WATER IMMEDIATELY ADJACENT TO SITE. IF OWNER DESIGNS OR IF DESIGN ELEVATIONS CONFLICT WITH THIS GUIDANCE, ADVISE THE OWNER IMMEDIATELY.
- N. IF A DITCH LIES WITH SLOPES GREATER THAN TEN PERCENT, MOUNT DIVERSIONARY HEADWALLS IN THE DITCH FOR 6'-0" ABOVE THE CULVERT ENTRANCE.
- O. SEED AND FERTILIZER SHALL BE APPLIED TO SURFACE CONDITIONS WHICH WILL ENCOURAGE ROOTING. RAKE AREAS TO BE SEED TO EVEN THE SURFACE AND TO LOOSEN THE SOIL.
- P. SOW SEEDS IN TWO DIRECTIONS IN TWICE THE QUANTITY RECOMMENDED BY THE SEED PRODUCER.
- Q. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE GROWTH OF SEEDING AND LANDSCAPED AREAS BY WATERING TO THE POINT OF RELEASE FROM THE CONTRACT. CONTINUE TO REWORK BARE AREAS UNTIL COMPLETE COVERAGE IS OBTAINED.

3.04 FIELD QUALITY CONTROL

- A. COMPACTION SHALL BE 90% MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557 FOR SITE WORK AND 95% MAXIMUM DENSITY UNDER SLAB AREAS. AREAS OF SETTLEMENT WILL BE EXCAVATED AND REFILLED AT CONTRACTOR'S EXPENSE.

3.05 PROTECTION

- A. PROTECT SEEDING AREAS FROM EROSION BY SPREADING STRAW TO A UNIFORM LOOSE DEPTH OF 1'-2". STAKE AND TIE DOWN AS REQUIRED. USE OF EROSION CONTROL MESH OR MULCH NET SHALL BE AN ACCEPTABLE ALTERNATIVE.
- B. ALL TIRES PLACED IN CONJUNCTION WITH A LANDSCAPE CONTRACT SHALL BE WRAPPED/TIED WITH HOSE PROTECTED WIRE AND SECURED TO STAKES EXTENDING 2'-0" INTO THE GROUND ON FOUR SIDES OF THE TREE.
- C. ALL EXPOSED AREAS SHALL BE PROTECTED AGAINST WASHOUTS AND SOIL EROSION. STRAW BALES SHALL BE PLACED AT THE INLET APPROACH TO ALL NEW OR EXISTING CULVERTS.



CN25318

EUDORA SOUTH

ADDRESS
EUDORA, KS 66025

PROPOSED SELF-SUPPORT TOWER

PROJECT NO: 112623.001

CHECKED BY: SLM

ISSUED FOR:

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SHEET NUMBER: REVISION:

GN-1 A

CONCRETE

CAST-IN-PLACE CONCRETE PART 1 - GENERAL

1.01 DESCRIPTION

WORK INCLUDES CONSTRUCTION OF CAST-IN-PLACE CONCRETE FOUNDATIONS, INCLUDING FURNISHING AND INSTALLING READY-MIX CONCRETE, REINFORCING, FORMWORK AND ACCESSORY MATERIALS AS SHOWN ON THE DRAWINGS. CAST-IN-PLACE CONCRETE INCLUDES ALL SITE CONCRETE, INCLUDING FOUNDATIONS, SLABS ON GRADE, EQUIPMENT PADS AND GUARDPOST FOUNDATIONS.

1.02 RELATED WORK

- A. COORDINATE UNDER SLAB CONDUITS
- B. COORDINATE WITH GROUNDING

1.03 APPLICABLE STANDARDS

- A. ACI 301 - SPECIFICATIONS FOR STRUCTURAL CONCRETE BUILDINGS
- B. ACI 347 - GUIDE TO FORMWORK FOR CONCRETE
- C. ASTM C33 - CONCRETE AGGREGATES
- D. ASTM C94 - READY-MIXED CONCRETE
- E. ASTM C150 - PORTLAND CEMENT
- F. ASTM C250 - AIR-ENTRAINING ADMIXTURES FOR CONCRETE
- G. ASTM C309 - LIQUID MEMBRANE FORMING COMPOUNDS FOR CURING CONCRETE
- H. ASTM C494 - CHEMICAL ADMIXTURES FOR CONCRETE
- I. ASTM A615 - STEEL WELDED WIRE FABRIC FOR CONCRETE REINFORCEMENT
- J. ASTM A185 - STEEL WELDED WIRE FABRIC FOR CONCRETE REINFORCEMENT

1.04 QUALITY ASSURANCE

CONCRETE MATERIALS AND OPERATIONS SHALL BE TESTED AND INSPECTED BY THE ENGINEER.

1.05 TESTS

CONCRETE MATERIALS AND OPERATIONS SHALL BE TESTED AND INSPECTED BY THE ENGINEER AS THE WORK PROGRESSES. FAILURE TO DETECT ANY DEFECTIVE WORK OR MATERIAL SHALL NOT IN ANY WAY PREVENT LATER MATERIAL REJECTION WHEN SUCH DEFECT IS DISCOVERED, NOR SHALL IT OBLIGATE THE ENGINEER FOR FINAL ACCEPTANCE.

- A. FIVE CONCRETE TEST CYLINDERS SHALL BE TAKEN OF THE TOWER AND PIER FOUNDATION. TWO SHALL BE TESTED AT THREE DAYS AND TWO AT TWENTY-EIGHT DAYS. THE FIFTH CYLINDER SHALL BE KEPT SEPARATELY, IF REQUIRED TO BE USED IN THE FUTURE.
- B. ONE ADDITIONAL TEST CYLINDER SHALL BE TAKEN DURING COLD WEATHER AND CURED ON SIDE UNDER SAME CONDITIONS AS CONCRETE IT REPRESENTS.

PART 2 - PRODUCT

2.01 CONCRETE MATERIALS

CONCRETE SHALL BE COMPOSED OF PORTLAND CEMENT, WATER, FINE COARSE AGGREGATES AND ADMIXTURES AS SPECIFIED BELOW. ALL WELL MIXED AND BROUGHT TO PROPER CONSISTENCY.

- A. CEMENT: CEMENT SHALL BE IN TYPE II, GRAY COLOR, LOW-ALKALI PORTLAND CEMENT CONFORMING TO ASTM C150.
- B. FINE AND COARSE AGGREGATES: AGGREGATES FOR USE IN CONCRETE SHALL COMPLY WITH ASTM C33.
- C. WATER: WATER FOR MIXING AND CURING CONCRETE SHALL BE FREE FROM SEWAGE, OIL, ACID, ALKALI, SALTS AND SHALL BE FREE FROM OBJECTIONABLE QUANTITIES OF SILT AND OTHER DELETERIOUS SUBSTANCES.

2.02 ADMIXTURES

- A. AIR ENTRAINMENT: AIR ENTRAINING AGENT SHALL CONFORM TO ASTM C250. THE ADMIXTURE SHALL BE ADDED AS PART OF THE COMPUTED MIXING WATER REQUIREMENTS. AGENTS PREPARED IN SOLUTION SHALL BE MAINTAINED AT A UNIFORM STRENGTH AND SHALL BE BATCH BY MEANS OF RELIABLE MECHANICAL DISPENSERS.

- B. CHEMICAL ADMIXTURES: ASTM 494, TYPE A - WATER REDUCING AND RETARDING.

2.03 CURING COMPOUND: ASTM C309, TYPE 1, CLASS B, TRANSLUCENT.

2.04 ACCESSORIES

- A. NON-SHRINK GROUT: PREMIXED COMPOUND CONSISTING OF NON-METALLIC AGGREGATE, CEMENT, WATER AND PLASTICIZING AGENTS; CAPABLE OF DEVELOPING MINIMUM COMPRESSIVE STRENGTH OF 7,000 PSI IN 28 DAYS.
- B. JOINT FILLERS BITUMINOUS TYPE, ASTM D1751 OR NON-BITUMINOUS TYPE, ASTM D1752.
- C. ANCHOR BOLTS: ASTM A307; UNPRIMED.

2.05 CONCRETE MIX

- A. CONCRETE SHALL BE PROPORTIONED FOR WORKABILITY, MAXIMUM DENSITY, STRENGTH AND DURABILITY REQUIREMENTS IN ACCORDANCE WITH ACI 301. THE 28 DAY DESIGN COMPRESSIVE STRENGTH OF CONCRETE SHALL BE SPECIFIED ON THE DRAWINGS. CONCRETE FURNISHED MAY BE A COMMERCIAL READY-MIX PROVIDED THAT DELIVERY TO THE PLACING LOCATION IS SATISFACTORILY ESTABLISHED AS OCCURRING NOT LATER THAN 45 MINUTES AFTER ADDITION OF WATER TO THE MIX. SLUMP OF DELIVERED CONCRETE SHALL NOT EXCEED 5".

- B. THE FOLLOWING STRENGTHS SHALL BE USED:

- 1. FENCE POST FOUNDATIONS - DESIGN COMPRESSIVE STRENGTH AT 28 DAYS OF 2,000 PSI.
- 2. EQUIPMENT FOUNDATIONS - DESIGN COMPRESSIVE STRENGTH AT 28 DAYS OF 4,000 PSI.
- 3. ALL OTHER CONCRETE NOT SPECIFIED - DESIGN COMPRESSIVE STRENGTH AT 28 DAYS OF 3,000 PSI.
- 4. CONCRETE SPECIFICATION FOR MONOPOLE OR TOWER FOUNDATION SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS.

- C. USE ACCELERATING ADMIXTURES IN COLD WEATHER ONLY WHEN APPROVED BY THE ENGINEER. USE OF ADMIXTURES WILL NOT RELAX COLD WEATHER PLACEMENT REQUIREMENTS.

- D. USE SET-RETARDING ADMIXTURES DURING HOT WEATHER ONLY WHEN APPROVED BY THE ENGINEER.

- E. ADD AIR ENTRAINING AGENT TO CONCRETE MIX FOR CONCRETE WORK SUBJECT TO OR EXPOSED TO EXTERIOR.

PART 3 - EXECUTION

3.01 INSPECTION

THE CONTRACTOR SHALL VERIFY ANCHORS, SEATS, PENETRATIONS, PLATES, REINFORCEMENT AND OTHER ITEMS TO BE CAST INTO CONCRETE ARE ACCURATELY PLACED, HELD SECURELY AND SHALL NOT CAUSE HANDSHIP IN PLACING CONCRETE.

3.02 PREPARATION

- A. THE CONTRACTOR SHALL PREPARE PREVIOUSLY PLACED CONCRETE BY CLEANING WITH STEEL BRUSH AND APPLYING BONDING AGENT. APPLY BONDING AGENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

3.03 PLACING CONCRETE

- A. THE ENGINEER SHALL BE NOTIFIED NOT LESS THAN 24 HOURS IN ADVANCE OF CONCRETE PLACEMENT. UNLESS INSPECTION IS WAIVED IN EACH CASE, PLACING OF CONCRETE SHALL BE PERFORMED ONLY IN THE PRESENCE OF THE ENGINEER. CONCRETE SHALL NOT BE PLACED UNTIL ALL FORMWORK, EMBEDDED PARTS, STEEL REINFORCEMENTS FOUNDATION SURFACES AND JOINTS INVOLVED IN THE PLACING HAVE BEEN APPROVED AND UNTIL FACILITIES ACCEPTABLE TO THE ATC REPRESENTATIVE HAVE BEEN PROVIDED AND MADE READY FOR ACCOMPLISHMENT OF THE WORK AS SPECIFIED. CONCRETE MAY NOT BE ORDERED FOR PLACEMENT UNTIL ALL ITEMS HAVE BEEN APPROVED AND ATC HAS PERFORMED A FINAL INSPECTION AND GIVEN APPROVAL TO START PLACEMENT TESTING.

- B. PLACEMENT OF CONCRETE SHALL BE IN ACCORDANCE WITH ACI 301.

- C. THE CONTRACTOR SHALL ENSURE THAT REINFORCEMENT, INSERTS, EMBEDDED PARTS, FORMED JOINTS AND VAPOR BARRIERS ARE NOT DISTURBED DURING CONCRETE PLACEMENT.

3.04 SURFACE FINISHES

- A. SURFACES AGAIN WHICH BACKFILL OR CONCRETE SHALL BE PLACED REQUIRE NO TREATMENT EXCEPT REPAIR OF DEFECTIVE AREAS.
- B. SURFACES THAT WILL BE PERMANENTLY EXPOSED SHALL PRESENT A UNIFORM FINISH PROVIDED BY THE REMOVAL OF FINIS AND THE FILLING OF HOLES AND OTHER IRREGULARITIES WITH DRY PACK GROUT, OR BY SACKING WITH UTILITY OR ORDINARY GROUT.
- C. SURFACES THAT WOULD NORMALLY BE LEVEL AND WHICH WILL BE PERMANENTLY EXPOSED TO THE WEATHER SHALL BE SLOPED FOR DRAINAGE. UNLESS ENGINEER'S DESIGN DRAWING SPECIFIES A HORIZONTAL SURFACE OR SURFACES, SUCH AS STAIR TREADS, WALLS, CURBS, AND PARAPETS SHALL BE SLOPED APPROXIMATELY 1/4 INCH PER FT.
- D. SURFACES THAT WILL BE COVERED BY BACKFILL OR CONCRETE SHALL BE SMOOTH SCREENED.
- E. EXPOSED SLAB SURFACES SHALL BE CONSOLIDATED, SCREENED, FLOATED, AND STEEL TROWEL. HAND OR POWER-DRIVEN EQUIPMENT MAY BE USED FOR FLOATING SLAB SHALL BE STARTED AS SOON AS THE SCREENED SURFACE HAS ATTAINED A STIFFNESS TO PERMIT FINISHING OPERATIONS. FLOATING SHALL BE CONTINUED THE MINIMUM TIME REQUIRED TO PRODUCE A SURFACE UNIFORM IN TEXTURE AND FREE FROM SCREENED MARKS OR OTHER IMPERFECTIONS. THE FINAL FINISH SHALL BE PRODUCED BY USE OF STEEL-BLADED FINISHING TROWELS. STEEL TROWELING SHALL COMMENCE ONLY AFTER THE SURFACES TO BE FINISHED HAVE BEEN BROUGHT TO CORRECT ELEVATION AND ALL SURFACE IMPERFECTIONS CORRECTED AND SHALL BE CONTINUED ONLY UNTIL THE SURFACE IS SMOOTH AND UNIFORM IN TEXTURE AND APPEARANCE. IF FREE WATER IS BROUGHT TO THE SURFACE DURING THE FINISHING OPERATIONS, IT SHALL BE REMOVED BY SPONGING. FINISHING SHALL BE TMD AND PERFORMED SO THAT EXTRA WATER NEED NOT BE APPLIED TO THE SURFACE BEING TROWELED.

3.05 PATCHING

THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON REMOVAL OF THE FORMS TO OBSERVE CONCRETE SURFACE CONDITIONS. IMPERFECTIONS SHALL BE PATCHED ACCORDING TO THE ENGINEER'S DIRECTION.

3.06 DEFECTIVE CONCRETE

THE CONTRACTOR SHALL NOTIFY OR REPLACE CONCRETE NOT CONFORMING TO REQUIRED LEVELS AND LINES, DETAILS, AND ELEVATIONS AS SPECIFIED IN ACI301.

3.07 PROTECTION

- A. IMMEDIATELY AFTER PLACEMENT, THE CONTRACTOR SHALL PROTECT THE CONCRETE FROM PREMATURE DRYING, EXCESSIVELY HOT OR COLD TEMPERATURES, AND MECHANICAL INJURY. FINISH WORK SHALL BE PROTECTED.
- B. CONCRETE SHALL BE MAINTAINED WITH MINIMAL MOISTURE LOSS AT RELATIVELY CONSTANT TEMPERATURE FOR PERIOD NECESSARY FOR HYDRATION OF CEMENT AND HARDENING OF CONCRETE.
- C. ALL CONCRETE SHALL BE WATER CURED BY CONTINUOUS (NOT PERIODIC) FINE MIST SPRAYING OR SPRINKLING ALL EXPOSED SURFACES. WATER SHALL BE CLEAN AND FREE FROM ACID, ALKALI, SALTS, OIL, SEDIMENT, OR ORGANIC MATTER. SUCCESSFUL CURING SHALL BE ASSURED BY USE OF AN AMPLE WATER SUPPLY UNDER PRESSURE IN PIPES, WITH ALL NECESSARY APPLIANCES OF HOSE, SPRINKLERS AND SPRAYING DEVICES.

METALS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. THE WORK CONSISTS OF THE FABRICATION AND INSTALLATION OF ALL MATERIALS TO BE FURNISHED, AND WITHOUT LIMITING THE GENERALITY THEREOF, INCLUDES ALL EQUIPMENT, LABOR AND SERVICES REQUIRED FOR ALL STRUCTURAL STEEL WORK INCLUDING ALL ITEMS INCIDENTAL THERETO AS SPECIFIED HEREIN AND AS SHOWN ON THE DRAWINGS, INCLUDING:
 - 1. STEEL FRAMING INCLUDING BEAMS ANGLES, CHANNELS AND PLATES.
 - 2. WELDING AND BOLTING OF ATTACHMENTS.

1.02 REFERENCE STANDARDS

- A. THE WORK SHALL CONFORM TO THE CODES AND STANDARDS OF THE FOLLOWING AGENCIES AS FURTHER CITED HEREIN:
 - 1. ASTM: AMERICAN SOCIETY FOR TESTING AND MATERIALS, 196 RACE STREET, PHILADELPHIA, PA 19103, USA AS PUBLISHED IN "COMPILATION OF ASTM STANDARDS IN BUILDING CODES."
 - 2. AWS: AMERICAN WELDING SOCIETY INC., 2501 NW 7TH STREET, MIAMI, FL 33125 USA AS PUBLISHED IN "CODE FOR STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES." "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."

PART 2 - PRODUCTS

2.01 MATERIALS

- A. STRUCTURAL STEELS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM A36 AND A50 FOR STRUCTURAL STEEL.

2.02 WELDING

- A. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS. CERTIFICATION DOCUMENTS SHALL BE MADE AVAILABLE FOR ENGINEER'S AND/OR OWNER'S REVIEW IF REQUESTED.
- B. WELDING ELECTRODES FOR MANUAL SHIELDED METAL ARC WELDING SHALL CONFORM TO ASTM 1-233, E70 SERIES. BARE ELECTRODES AND GRANULAR FLUX USED IN THE SUBMERGED ARC PROCESS SHALL CONFORM TO AISC SPECIFICATIONS.
- C. FIELD WELDING SHALL BE DONE AS PER AWS D 1.1 REQUIREMENTS. VISUAL INSPECTION IS ACCEPTABLE.
- D. STUD WELDING SHALL BE ACCOMPLISHED BY CAPACITOR DISCHARGE (CD) WELDING TECHNIQUE USING MIDWEST FASTENERS, INC. CD100 CAPACITOR DISCHARGE STUD WELDER OR APPROVED EQUAL.
- E. PROVIDE STUD FASTENERS OF MATERIALS AND SIZES SHOWN ON DRAWINGS OR AS RECOMMENDED BY THE MANUFACTURER FOR STRUCTURAL LOADINGS REQUIRED.
- F. FOLLOW MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS TO PROPERLY SELECT AND INSTALL STUD WELDS.

2.03 BOLTING

- A. BOLTS SHALL BE 3/4" (MINIMUM) CONFORMING TO ASTM A325 HOT DIP GALVANIZED OR ASTM A153. NUTS SHALL BE HEAVY HEX TYPE.
- B. ALL BOLTS SHALL BE INSTALLED IN SLIP CRITICAL CONNECTIONS CONFORMING TO AISC METHOD, CONFORMING TO THE 1/4 TURN METHOD.

2.04 FABRICATION

- A. FABRICATION OF STEEL SHALL CONFORM TO THE AISC AND AWS STANDARDS AND CODES.

2.05 FINISH

- A. STRUCTURAL STEEL EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.

2.06 PROTECTION

- A. UPON COMPLETION OF ERECTION INSPECT ALL GALVANIZED STEEL AND PAINT ANY FIELD CUTS, WELDS, OR GALVANIZED BREAKS WITH ZINC BASED PAINT. COLOR TO MATCH THE GALVANIZING PROCESS.



CN35318

EUDORA SOUTH

ADDRESS
EUDORA, KS 66025
PROPOSED SELF-SUPPORT TOWER

PROJECT NO: 112623.001
CHECKED BY: SLM

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
A	3/28/17	RPS	PRELIMINARY REVIEW

B&T ENGINEERING, INC.

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SHEET NUMBER: **GN-2** REVISION: **A**

ELECTRICAL SPECIFICATIONS

GENERAL PROPERTIES

- A. REQUIREMENTS: FURNISH ALL LABOR, MATERIALS, SERVICE, EQUIPMENT AND APPLIANCES REQUIRED TO COMPLETE THE INSTALLATION OF THE COMPLETE ELECTRICAL SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS AND CONTRACT DRAWINGS.
- B. REQUIREMENTS OF REGULATORY AGENCIES AND STANDARDS: INSTALLATION, MATERIAL, EQUIPMENT AND WORKMANSHIP SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THE NATIONAL ELECTRIC CODE (NEC) - APPLICABLE STATE ELECTRIC CODES, THE NATIONAL ELECTRICAL SAFETY CODE (NESC), AND THE TERMS AND THE CONDITIONS OF THE AUTHORITIES HAVING LAWFUL JURISDICTION PERTAINING TO THE WORK REQUIRED. ALL MODIFICATIONS REQUIRED BY THESE CODES, RULES, REGULATIONS AND AUTHORITIES SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL CHARGE TO THE UNDERWRITER'S LABORATORIES (UL); ALL MATERIALS, APPLIANCES OR DEVICES SHALL CONFORM TO THE APPLICABLE STANDARDS OF UNDERWRITER'S LABORATORIES, INCLUDING THE LABEL OF OR LISTING BY: UL IS REQUIRED.
- C. MATERIALS: ALL SIMILAR MATERIALS AND EQUIPMENT SHALL BE THE PRODUCT OF THE SAME MANUFACTURER WHERE NO SPECIFIC MATERIAL APPARATUS OR APPLIANCE IS MENTIONED. MANUFACTURER MAY BE USED PROVIDING IT CONFORMS TO THE CONTRACT REQUIREMENTS AND MEETS THE APPROVAL OF THE OWNER. MATERIAL AND EQUIPMENT SHALL BE THE STANDARD PRODUCTS OF MANUFACTURER'S REGULARLY ENGAGED IN THE PRODUCTIONS OF SUCH MATERIAL AND SHALL BE THE MANUFACTURER'S CURRENT IN STANDARD AND DESIGN.
- D. EXECUTION: FABRICATION, ERECTION AND INSTALLATION OF THE COMPLETE ELECTRICAL SYSTEM SHALL BE DONE IN A FIRST CLASS WORKMANLIKE MANNER BY QUALIFIED PERSONNEL EXPERIENCED IN SUCH WORK AND SHALL PROCEED IN AN ORDERLY MANNER SO AS NOT TO HOLD UP PROGRESS OF THE PROJECT.
- E. PERFORMANCE TESTS: THOROUGHLY TEST FEEDERS, EQUIPMENT AND ALL CIRCUITS FOR PROPER OPERATING CONDITION AND FREEDOM FROM GROUNDS AND SHORT CIRCUITS BEFORE ACCEPTANCE IS REQUESTED. ALL EQUIPMENT, APPLIANCES AND DEVICES SHALL BE OPERATED UNDER LOAD CONDITIONS.
- F. AS-BUILT DRAWINGS: DURING PROCESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF THE INSTALLATION OF THE DATA. UPON COMPLETION OF THE INSTALLATION, TRANSFER ALL RECORDED DATA TO BLUE PRINTS OF THE ORIGINAL DRAWINGS.

RACEWAYS AND FITTINGS

- A. CONDUITS: ELECTRICAL METALLIC TUBING (EMT): MILD STEEL, ZINC COATED ON THE OUTSIDE AND EITHER ZINC COATED OR COATED WITH AN APPROVED CORROSION RESISTANT COATING ON THE INSIDE. MAXIMUM, SIZE 2 ELECTRICAL TRADE SIZE, UNLESS NOTED ON THE DRAWINGS OF SPECIFICALLY APPROVED FOR EQUIPMENT CONNECTIONS. SIZES NOT NOTED ON DRAWINGS SHALL BE AS REQUIRED BY NEC.
- B. CONDUIT FITTINGS: CONNECTORS AND COUPLINGS: EMT COUPLINGS AND CONNECTORS EITHER STEEL OR MALLEABLE IRON ONLY. CONCRETE TIGHT OR RAIN TIGHT AND EITHER THE GLAND AND RING COMPRESSION TYPE OR THE STAINLESS STEEL MULTIPLE LOCKING TYPE CONNECTORS TO HAVE INSULATED THROATS, EMT FITTINGS USING SET SCREWS OR INDENTATIONS AS A MEANS OF ATTACHMENT ARE NOT TO BE PERMITTED. BUSHINGS: INSULATED TYPE DESIGNED TO PREVENT ABRASION OF WIRES WITHOUT IMPAIRING THE CONTINUITY OF THE CONDUIT, IMC AND RIGID ALUMINUM CONDUIT.
- C. CONDUIT INSTALLATIONS: CONDUITS SYSTEMS, EMT OR RIGID NONMETALLIC CONDUIT UNLESS NOTED, CONDUIT INSTALLATION: INSTALL CONCEALED CONDUIT AND EMT IN AS DIRECT LINES AS POSSIBLE. INSTALL EXPOSED CONDUITS AND EMT PARALLEL TO OR AT RIGHT ANGLES TO THE LINES OF THE BUILDING. RIGHT ANGLE BENDS IN EXPOSED CONDUIT AND EMT RUNS SHALL BE MADE WITH STANDARD ELBOWS, SCREW JOINTED CONDUIT FITTINGS OR CONDUIT BENT TO RADIUS NO LESS THAN THOSE OF STANDARD ELBOWS.
- D. CONDUIT SUPPORTS: PROVIDE SUPPORTS FOR HORIZONTAL CONDUITS AND EMT NOT MORE THAN 8 FEET APART WITH NOT LESS THAN TWO ELBOW OR BEND INCLUDING RUNS ABOVE SUSPENDED CEILINGS AND WITHIN 3 FEET OF ALL JUNCTION BOXES, SWITCHES, FITTINGS, ETC. INSTALL HOLE PIPE STRAPS ON CONDUITS 1 INCH OR SMALLER. INSTALL INDIVIDUAL PIPE HANGERS FOR CONDUITS LARGER THAN 1 INCH. SPRING STEEL FASTENERS WITH HANGER RODS MAY BE USED IN DRY LOCATIONS IN LIEU OF PIPE STRAPS.

CONDUCTORS

- A. WIRES AND CABLES (600 VOLTS): CONFORM TO THE APPLICABLE UL AND IPCEA STANDARDS FOR THE USE INTENDED. COPPER CONDUCTORS WITH 600 VOLTS INSULATION UNLESS OTHERWISE SPECIFIED OR NOTED ON THE DRAWINGS. STRANDED CONDUCTORS FOR NO. 8 OR LARGER WHERE ELSEWHERE SPECIFIED OR NOTED ON THE DRAWINGS. USE OF ALUMINUM CONDUCTORS WILL NOT BE PERMITTED. INSULATION SHALL BE TYPE THHN/THWN INSULATION 75° C FOR ALL CONDUCTORS, OTHERWISE SPECIFIED CONDUCTORS COLOR-CODED IN ACCORDANCE WITH NEC. CONNECT ALL CONDUCTORS OF THE SAME PHASE CONDUCTOR, COLOR CODING SHALL BE A-BLACK, B-RED, N-WHITE, WITH GREEN FOR ALL GROUND CONDUCTORS.

- B. CONNECTORS AND LUGS: FOR COPPER CONDUCTORS NO. 6 AND SMALLER: 3M SCOTCH-LOK OR THOMAS & BETTS STA-KON COMPRESSION OR INDENT TYPE CONNECTORS WITH INTEGRAL OR SEPARATE INSULATING CAPS. FOR COPPER CONDUCTORS LARGER THAN NO. 6 SOLDERLESS INDENT HEX SCREW OR BOLT TYPE PRESSURE CONDUCTORS, PROPERLY TAPED OR INSULATED.

- C. SPLICES: (480 VOLTS AND UNDER): CONDUCTOR LENGTHS SHALL BE CONTINUOUS FROM TERMINATION TO TERMINATION WITHOUT SPLICES UNLESS APPROVED BY THE BUILDING INSPECTOR.

CIRCUIT BREAKERS

- A. PROVIDE MOLDED CASE, BOLT-ON, THERMAL MAGNETIC TRIP, SINGLE, TWO OR THREE POLE BRANCH CIRCUIT BREAKERS AS SHOWN ON DRAWINGS. MULTIPLE POLE BREAKERS SHALL BE SINGLE HANDLE, COMMON TRIP, A/C RATING TO MATCH EXISTING OR AS REQUIRED FOR AVAILABLE FAULT CURRENTS.

GROUNDING

1. ALL ELECTRICAL AND GROUNDING AT THE CELL SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER.
2. IF THE AC PANEL IN THE POWER CABINET IS WIRED AS SERVICE ENTRANCE, THE AC SERVICE GROUND CONDUCTOR SHALL BE CONNECTED TO GROUND ELECTRODE SYSTEM. WHEN THE AC PANEL IN THE POWER CABINET IS CONSIDERED A SUB-PANEL, THE GROUND WIRE SHALL BE INSTALLED IN THE AC POWER CONDUIT, THE INSTALLATION SHALL BE PER LOCAL AND NATIONAL ELECTRIC CODE (NFPA-70).
3. EXOTHERMIC WELDING IS RECOMMENDED FOR GROUNDING CONNECTION WHERE PRACTICAL. OTHERWISE, THE CONNECTION SHALL BE MADE USING COMPRESSION TYPE-2 HOLE LONG BARREL LUGS OR DOUBLE CRIMP CLAMP "C" CLAMP. THE COPPER CABLES SHALL BE COATED WITH ANTI-OXIDANT (COPPER SHIELD) BEFORE MAKING THE CRIMP CONNECTIONS. THE MANUFACTURER'S TORQUING RECOMMENDATIONS ON THE BOLT ASSEMBLY TO SECURE CONNECTIONS ARE TO BE FOLLOWED.
4. THE ANTENNA CABLES SHALL BE GROUNDING AT THE TOP AND BOTTOM OF THE VERTICAL RUN FOR LIGHTING PROTECTION. THE ANTENNA CABLE SHIELD SHALL BE BONDED TO A COPPER GROUND BUS AT THE LOWER MOST POINT OF A VERTICAL RUN JUST BEFORE IT BEGINS TO BEND TOWARD THE HORIZONTAL PLANE. WIRE RUNS TO GROUND SHALL BE KEPT AS STRAIGHT AND SHORT AS POSSIBLE. ANTENNA CABLE SHIELD SHALL BE GROUNDED JUST BEFORE ENTERING THE CELL CABINET. ANY ANTENNA CABLES OVER 200 FEET IN LENGTH SHALL ALSO BE EQUIPPED WITH ADDITIONAL GROUNDING AT MID-POINT.
5. ALL GROUNDING CONDUCTORS INSIDE THE BUILDING SHALL BE RUN IN CONDUIT RACEWAY SYSTEM, AND SHALL BE INSTALLED AS STRAIGHT AS PRACTICAL WITH MINOR BENDS TO AVOID OBSTRUCTIONS. THE BENDING RADIUS OF ANY #2 GROUNDING CONDUCTOR IS 8". PVC RACEWAY MAY BE FLEXIBLE OR RIGID PER THE FIELD CONDITIONS. GROUNDING CONDUCTORS SHALL NOT MAKE CONTACT WITH ANY METALLIC CONDUITS, SURFACES OR EQUIPMENT.
6. PROVIDE PVC SLEEVES WHERE GROUNDING CONDUCTORS PASS THROUGH THE BUILDING WALLS AND /OR CEILING.
7. INSTALL GROUND BUSHINGS ON ALL METALLIC CONDUITS AND BOND TO THE EQUIPMENT GROUND BUS IN THE PANEL BOARD.
8. GROUND ANTENNA BASES, FRAMES, CABLE RACKS AND OTHER METALLIC COMPONENTS WITH #2 GROUNDING CONDUCTORS AND CONNECT TO INSULATED SURFACE MOUNTED GROUND BARS. CONNECTION DETAILS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR GROUNDING.
9. GROUND COAXIAL SHIELD AT BOTH ENDS USING MANUFACTURER'S GUIDELINES.

GROUND FIELD TEST PROCEDURE:

- A. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A "FALL OF POTENTIAL" TEST ON THE NEW SUPPLEMENTAL GROUND FIELD PRIOR TO FINAL CONNECTION OF THE GROUNDING SYSTEM TO EQUIPMENT. THE TEST SHALL BE PERFORMED BY A QUALIFIED AND CERTIFIED TESTING AGENT. PROVIDE INDEPENDENT TEST RESULTS TO THE PROJECT MANAGER FOR REVIEW. THE GROUND SYSTEM RESISTANCE TO EARTH GROUND SHALL NOT EXCEED FIVE (5) OHMS. IF THE GROUND TEST EXCEEDS THE MAXIMUM OF 5 OHMS THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ADDITIONAL GROUND CONNECTIONS AS REQUIRED TO MEET THE 5 OHMS MAXIMUM.

ENCLOSURES:

- A. ANY ENCLOSURES PURCHASED BY THE CONTRACTOR SHALL BE STAINLESS STEEL NEMA 4X (WEATHERPROOF) CONSTRUCTION. HOFFMAN ENCLOSURES OR APPROVED EQUAL.

GENERAL NOTES

1. CONTRACTOR SHALL INSPECT THE EXISTING CONDITIONS PRIOR TO SUBMITTING BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS TO THE CONTRACTOR'S FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.
2. LOCATION OF EQUIPMENT, CONDUIT AND DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE COORDINATED WITH FIELD CONDITIONS PRIOR TO ROUGH-IN.
3. THE CONDUIT RUNS AS SHOWN ON THE PLANS ARE APPROXIMATE. EXACT LOCATION AND ROUTING SHALL BE PER EXISTING FIELD CONDITIONS.
4. PROVIDE PULL BOXES AND JUNCTION BOXES WHERE SHOWN OR REQUIRED BY NEC.
5. ALL CONDUITS SHALL BE MET WITH BENDS MADE IN ACCORDANCE WITH NEC TABLE 346-10. NO RIGHT ANGLE DEVICE OTHER THAN STANDARD CONDUIT ELBOWS WITH 12" MINIMUM INSIDE SWEEPS FOR ALL CONDUITS 2" OR LARGER.
6. ALL CONDUIT TERMINATIONS SHALL BE PROVIDED WITH PLASTIC THROAT INSULATING GROUNDING BUSHINGS.
7. ALL WIRE SHALL BE TYPE THWN, SOLID, ANNEALED COPPER UP TO SIZE #10 AWG (#8 AND LARGER SHALL BE CONCENTRIC STRANDED) 75° C, (167° F), 98% CONDUCTIVITY, MINIMUM #12.
8. ALL WIRES SHALL BE TAGGED AT ALL PULL BOXES, J-BOXES, EQUIPMENT BOXES AND CABINETS WITH APPROVED PLASTIC TAGS, ACTION CRAFT, BRADY OR APPROVED EQUAL.
9. CONDUIT ROUGH-IN SHALL BE COORDINATED WITH THE MECHANICAL EQUIPMENT TO AVOID LOCATION TO CONFLICTS. VERIFY WITH MECHANICAL CONTRACTOR AND COMPLY AS REQUIRED.
10. ALL PANEL DIRECTORIES SHALL BE TYPE WRITTEN NOT HAND WRITTEN.
11. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS PER THE SPECIFICATIONS AND NEC. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULLBOXES AND ALL DISCONNECT SWITCHES, STARTERS AND EQUIPMENT CABINETS.
12. THE CONTRACTOR SHALL PREPARE AS-BUILT DRAWINGS, DOCUMENT ANY AND ALL WIRING AND EQUIPMENT CONDITIONS AND CHANGES WHILE COMPLETING THIS CONTRACT. SUBMIT AT SUBSTANTIAL COMPLETION.
13. ALL DISCONNECT SWITCHES AND OTHER CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED, LAMICOID NAMEPLATES INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS INSTALLED ON AND PANEL FIELD LOCATIONS FED FROM (NO EXCEPTIONS).
14. ALL ELECTRICAL DEVICES AND INSTALLATIONS OF THE DEVICES SHALL COMPLY WITH (ADA) AMERICANS WITH DISABILITIES ACT AS ADOPTED BY THE APPLICABLE STATE.
15. PROVIDE CORE DRILLING AS NECESSARY FOR PENETRATIONS OR RISERS THROUGH BUILDING. DO NOT PENETRATE STRUCTURAL MEMBERS WITHOUT CONSTRUCTION MANAGERS APPROVAL. SLEEVES AND/OR PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE PACKED WITH FIRE RATED MATERIAL WHICH SHALL MAINTAIN THE FIRE RATING OF THE WALL OR STRUCTURE. FILL FOR FLOOR PENETRATIONS SHALL PREVENT PASSAGE OF WATER, SMOKE, FIRE AND FUMES. ALL MATERIAL SHALL BE UL APPROVED FOR THIS PURPOSE.
16. ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT (NEW AND EXISTING) SHALL BE FIELD VERIFIED WITH THE OWNER'S REPRESENTATIVE AND EQUIPMENT SUPPLIER PRIOR TO ROUGH-IN OF CONDUIT AND WIRE. ALL EQUIPMENT SHALL BE PROPERLY CONNECTED ACCORDING TO THE NAMEPLATE DATA FURNISHED ON THE EQUIPMENT (THE DESIGN OF THESE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AT THE TIME OF DESIGN AND SOME EQUIPMENT CHARACTERISTICS MAY VARY FROM DESIGN AS SHOWN ON THESE DRAWINGS). LOCATION OF ALL OUTLET, BOXES, ETC. AND THE TYPE OF CONNECTION (PLUG OR DIRECT) SHALL BE CONFIRMED WITH THE OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.



CN35318

EUDORA SOUTH

ADDRESS
EUDORA, KS 66025

PROPOSED SELF-SUPPORT TOWER

PROJECT NO: 112623.001
CHECKED BY: SLM

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
A	3/28/17	RPS	PRELIMINARY REVIEW

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SHEET NUMBER: GN-3 REVISION: A

CN35318 PART OF THE SW 1/4, SECTION 19, T13S, R21E, IN DOUGLAS COUNTY, KANSAS

PROPERTY DESCRIPTION: Parent Parcel as Provided

The East 100 acres of the Southwest Quarter of Section 29, Township 13 South, Range 21 East of the 6th P.M., in Douglas County, Kansas.

LESS AND EXCEPT:

Beginning at the Southwest corner of the East 100 acres of the Southwest Quarter of Section 29, Township 13 South, Range 21 East of the 6th P.M.; thence North 467 feet; thence East 467 feet; thence South 467 feet; thence West to the point of beginning, Douglas County, Kansas. Subject to easements, reservations, and restrictions, if any of record.

NOTE: The parent parcel graphically shown hereon, in full or in part, is the same as that described above.

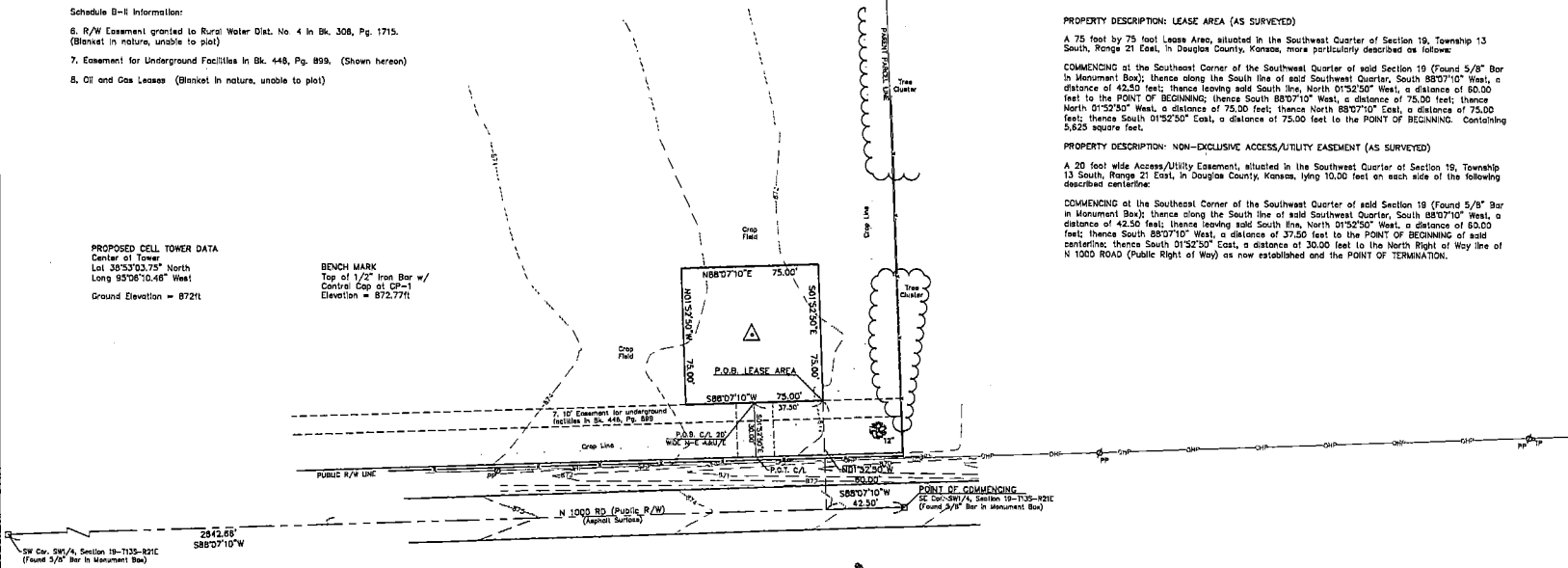
Property Information shown hereon was provided by Premier Title of Kansas, Inc., Case No. 35318, effective November 8, 2010 at 8:00 a.m.

Schedule B-II Information:

6. R/W Easement granted to Rural Water Dist. No. 4 in Bk. 308, Pg. 1715. (Blanket in nature, unable to plot)
7. Easement for Underground Facilities in Bk. 448, Pg. 899. (Shown hereon)
8. Oil and Gas Leases (Blanket in nature, unable to plot)

PROPOSED CELL TOWER DATA
Center of Tower
Lat. 38°53'03.73" North
Long 95°08'10.46" West
Ground Elevation = 872ft

BENCHMARK
Top of 1/2" Iron Bar w/
Control Cap at CP-1
Elevation = 872.77ft



Notes:

Bearings shown hereon are referenced to Grid North of the Kansas State Plane Coordinate System of 1983 (NAD 83), (2011 ADJ.), North Zone. Calculated by static GPS observations and RINEX file submissions for NGS Opus solutions.

Vertical Datum = NAVD88 using GEOID12B

The purpose of this survey is to establish and describe a Lease Area and associated Easements. This is not a boundary survey of the Parent Parcel.

The utilities as shown on this drawing were developed from the information available (existing utility maps, aboveground observations and/or surface markings placed on the ground by the utility company or a representative thereof). This company has made no attempt to excavate or go below surface to locate utilities and does not extend or imply a warranty or warranty as to the exact location of or complete inventory of utilities in this area. It shall be the contractors responsibility to verify the location and depth of all utilities (whether shown or not) prior to excavation or construction and to protect said utilities from damage.

PROPERTY LEGEND

SECTION CORNER	□
RIGHT OF WAY	R/W
CENTERLINE	C/L
POINT OF BEGINNING	P.O.B.
POINT OF TERMINATION	P.O.T.
ACCESS/UTILITY EASEMENT	AMU/E
NON-EXCLUSIVE	N-E
BROKEN SCALE	—

LEGEND

POWER POLE	⊕ PP
TELEPHONE PESTAL	⊕ TP
PROPOSED TOWER	⊕
TRCE (DA)	—
TRCE LINE	—
FENCE	—
OVERHEAD POWER LINE	—
BENCHMARK	⊕
CONTROL POINT	⊕

PROPERTY DESCRIPTION: LEASE AREA (AS SURVEYED)

A 75 feet by 75 foot Lease Area, situated in the Southwest Quarter of Section 19, Township 13 South, Range 21 East, in Douglas County, Kansas, more particularly described as follows:

COMMENCING at the Southeast Corner of the Southwest Quarter of said Section 19 (Found 5/8" Bar in Monument Box); thence along the South line of said Southwest Quarter, South 88°07'10" West, a distance of 42.50 feet; thence leaving said South line, North 01°32'50" West, a distance of 80.00 feet to the POINT OF BEGINNING; thence South 88°07'10" West, a distance of 75.00 feet; thence North 01°32'50" West, a distance of 75.00 feet; thence North 88°07'10" East, a distance of 75.00 feet; thence South 01°32'50" East, a distance of 75.00 feet to the POINT OF BEGINNING. Containing 5,625 square feet.

PROPERTY DESCRIPTION: NON-EXCLUSIVE ACCESS/UTILITY EASEMENT (AS SURVEYED)

A 20 foot wide Access/Utility Easement, situated in the Southwest Quarter of Section 19, Township 13 South, Range 21 East, in Douglas County, Kansas, lying 10.00 feet on each side of the following described centerline:

COMMENCING at the Southeast Corner of the Southwest Quarter of said Section 19 (Found 5/8" Bar in Monument Box); thence along the South line of said Southwest Quarter, South 88°07'10" West, a distance of 42.50 feet; thence leaving said South line, North 01°32'50" West, a distance of 80.00 feet; thence South 88°07'10" West, a distance of 37.50 feet to the POINT OF BEGINNING of said centerline; thence South 01°32'50" East, a distance of 30.00 feet to the North Right of Way line of N 1000 ROAD (Public Right of Way) as now established and the POINT OF TERMINATION.

SCALE
30' 0 30' 60'

FLOOD NOTE:

According to my interpretation of Community Panel No. 20045002150 of the Flood Insurance Rate Map for Douglas County, Kansas, dated 08-05-2010, the subject property is in Flood Zone "X", i.e. "area determined to be Outside the 0.2% annual chance floodplain".

SITE I.D.: NA

SITE NAME: CN35318

SITE LOCATION:
CITY OF EUDORA,
DOUGLAS COUNTY, KS

LA PROJECT NO.: 17023

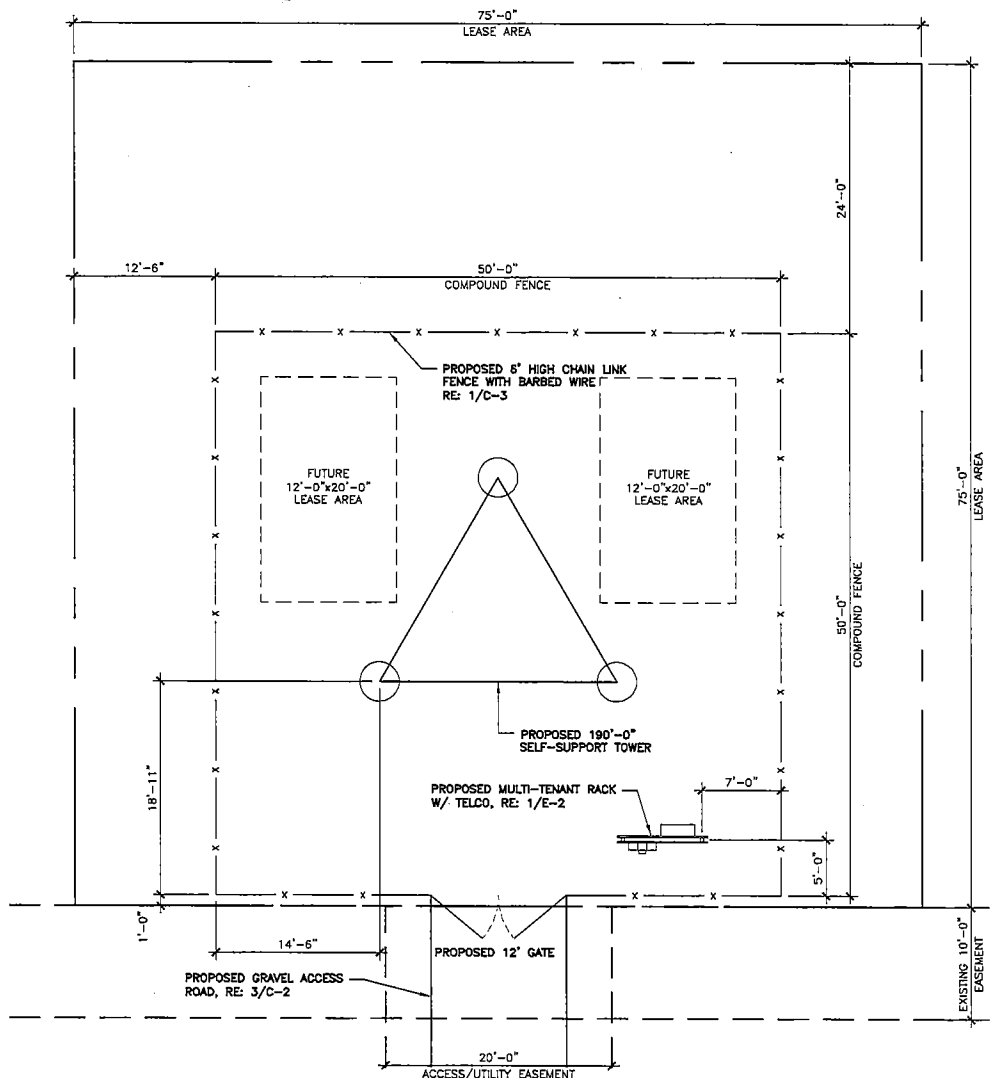
DRAWN BY: A.C.T.

CHECKED BY: J.B.L.

DATE: 02-07-17

FIELDWORK DATE: 02-01-17

SHEET NUMBER
1 OF 1

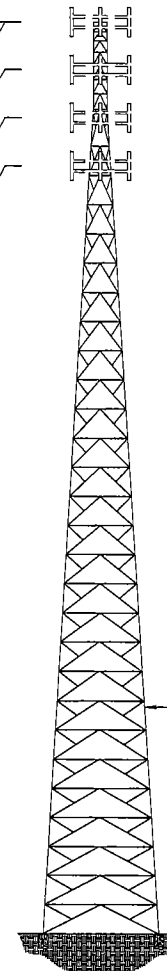


1 OVERALL SITE PLAN
SCALE: 1" = 4'



STRUCTURAL ANALYSIS NOTE:
REFER TO STRUCTURAL ANALYSIS OR
STRUCTURAL LETTER FOR APPROVAL OF
ADDITIONAL NEW APPURTENANCES.

- TOP OF TOWER
ELEV. = 190'-0"
- FUTURE ANTENNAS
ELEV. = 190'-0"
- FUTURE ANTENNAS
ELEV. = 180'-0"
- FUTURE ANTENNAS
ELEV. = 170'-0"
- FUTURE ANTENNAS
ELEV. = 160'-0"



PROPOSED 190'-0" SELF-SUPPORT TOWER

2 TOWER ELEVATION
SCALE: N.T.S.



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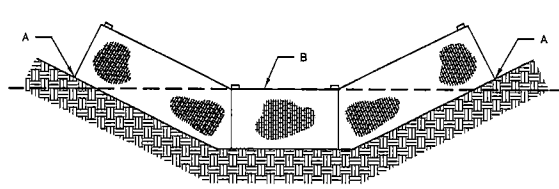
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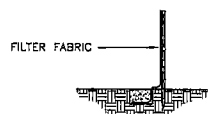
SHEET NUMBER: C-1.1
REVISION: A

112623 EUDORA SOUTH_LGR.dwg -- Sheet C-2 -- User: emmanuel -- Mar 30, 2017 -- 5:05pm

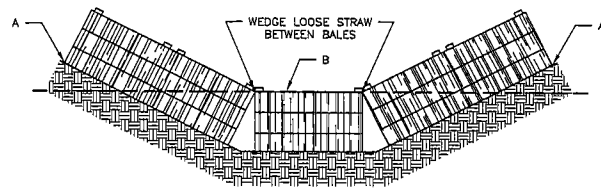


POINTS A SHOULD BE HIGHER THAN POINT B

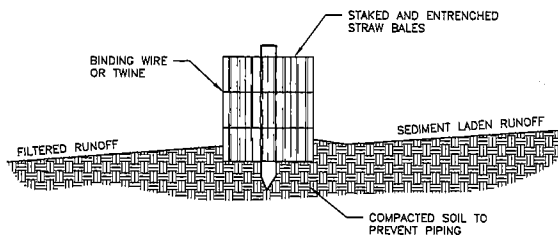
EXTENSION OF FABRIC
INTO THE TRENCH



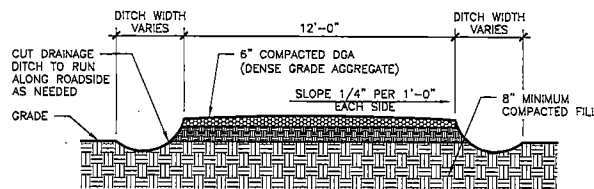
1 SILT FENCE DETAIL
SCALE: N.T.S.



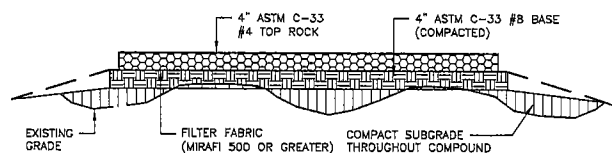
POINTS A SHOULD BE HIGHER THAN POINT B



2 STRAW BALE BARRIER
SCALE: N.T.S.



3 ACCESS ROAD DETAIL
SCALE: N.T.S.



4 COMPOUND DETAIL
SCALE: N.T.S.



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SHEET NUMBER: REVISION:

C-2

A

CHAIN LINK FENCE

PART 1 - GENERAL

4.01 SEQUENCING

- A. IF THE SITE AREA HAS BEEN BROUGHT UP TO SURFACE COURSE ELEVATION PRIOR TO FENCE CONSTRUCTION, FENCE POST EXCAVATION SPOILS MUST BE CONTROLLED TO PRECLUDE CONTAMINATION OF SAID SURFACE COURSE.

4.02 APPLICABLE STANDARDS

- ASTM-A120 SPEC. FOR PIPE, STEEL BLACK AND HOT-DIPPED ZINC COATED (GALVANIZED) WELDED AND SEAMLESS FOR ORDINARY USES.
ASTM-A123 ZINC (HOT-DIP GALVANIZED) COATING ON IRON AND STEEL PRODUCTS.
ASTM-A525 STANDARD SPECIFICATION FOR STEEL SHEET ZINC COATED (GALVANIZED) BY THE HOT-DIPPED PROCESS. FEDERAL SPECIFICATION RR-F-191-FENCING, WIRE AND POST METAL (AND FATES, CHAIN LINK FENCE FABRIC AND ACCESSORIES).

PART 2 - PRODUCTS

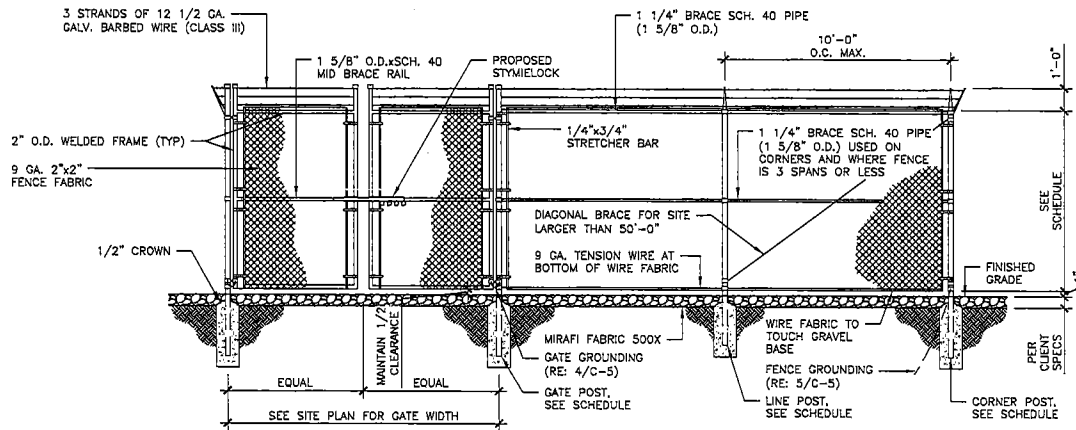
4.03 FENCE MATERIALS

- A. ALL FABRIC WIRE, RAILS, POLES, HARDWARE AND OTHER MATERIALS SHALL BE HOT-DIPPED GALVANIZED.
B. FABRIC SHALL BE 2" CHAIN LINK MESH OF NO. 9 GAUGE (0.148) WIRE. THE FABRIC SHALL HAVE A TWISTED AND BARBED FINISH FOR THE TOP EDGES AND A KNUCKLED FINISH FOR THE BOTTOM EDGES, FABRIC SHALL CONFORM TO THE SPECIFICATIONS OF ASTM A-392 CLASS 1.
C. BARBED WIRE SHALL BE DOUBLE-STRAND, 12 GAUGE TWISTED WIRE, WITH 14 GAUGE 4 POINT ROUND BARBS SPACED AT 5" O.C.
D. ALL POSTS SHALL BE SCHEDULE 20-GALVANIZED PIPE AND SHALL BE TYPE 1 ASTM A-123 AND OF THE FOLLOWING DIAMETER (OD PER FENCE INDUSTRY STANDARDS).
LINE 2 3/8"
CORNER 3"
GATE 3"
E. EXTEND GATE AND CORNER POSTS 12", INCLUDING DOME CAP, TO PROVIDE FOR ATTACHMENT OF BARBED WIRE.

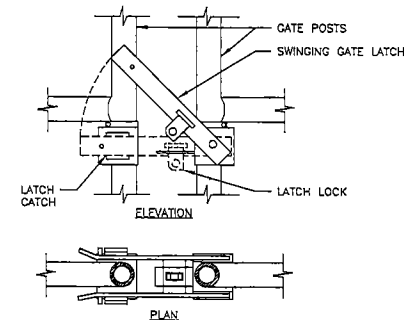
- F. ALL TOP AND BRACED RAIL SHALL BE 1 5/8" DIAMETER SCHEDULE - 20 MECHANICAL - SERVICE PIPE. FRAMES SHALL HAVE WELDED CORNERS.
G. GATE FRAMES SHALL HAVE A FULL-HEIGHT VERTICAL BRACE AND A FULL-WIDTH HORIZONTAL BRACE, SECURED IN PLACE BY USE OF GATE BRACE CLAMPS.
H. GATE HINGES SHALL BE MERCHANTS METAL MODEL 64388 HINGE ADAPTER WITH MODEL 5439, 188 DEGREE ATTACHMENT, OR APPROVED EQUAL.
I. THE GUIDE (LATCH ASSEMBLY) SHALL BE TAMPER PROOF.
J. LATCHES, STOPS AND KEEPERS SHALL BE PROVIDED FOR ALL GATES.
K. ALL STOPS SHALL HAVE A FULL-HEIGHT PLUNGER BAR WITH DOME CAP.
L. DOUBLE GATES SHALL HAVE A FULL-HEIGHT PLUNGER BAR WITH DOME CAP.
M. A NO. 7 GAUGE, ZINC COATED, TENSION WIRE SHALL BE USED AT THE BOTTOM OF THE FABRIC, TERMINATED WITH BAND CLIPS AT CORNER AND GATE POSTS.
N. A 5"x1/2" EYE-BOLT TO HOLD TENSION WIRE WILL BE PLACED AT LINE POSTS.
O. STRETCHER BARS SHALL BE 3/16" X 3/4" OR HAVE EQUIVALENT CROSS SECTIONAL AREA.
P. ALL CORNER, GATE AND END PANELS SHALL HAVE A 3/8" TRUSS ROD WITH TURNBUCKLES AND BE BRACED WITH ONE 1-5/8" HORIZONTAL COMPRESSION MEMBER, SECURELY ATTACHED WITH IRON FITTINGS.
Q. PROVIDE OTHER HARDWARE INCLUDING BUT NOT LIMITED TO TIE CLIPS, BAND CLIPS AND TENSION BAND CLIPS.
R. BARBED WIRE GATE GUARDS SHALL BE FITTED WITH DOME CAPS.
S. BARBED WIRE SUPPORT ARMS SHALL BE CAST IRON WITH SET BOLT AND LOCK WIRE IN THE ARM.
T. ALL CAPS SHALL BE CAST STEEL.

PART 3 - EXECUTION

- 4.04 EQUIPMENT: EXCAVATE POST HOLES WITH MECHANICAL AUGER EQUIPMENT.
4.05 INSPECTION: EXCAVATE POST HOLES PER CONSTRUCTION DOCUMENTS, CONFIRM PROPER DEPTH AND DIAMETER OF POST HOLE EXCAVATIONS.
4.06 INSTALLATION
A. POST FOUNDATIONS SHALL HAVE A MINIMUM 6" CONCRETE COVER UNDER POST.
B. ALL FENCE POSTS SHALL BE VERTICALLY PLUMB WITHIN 1/4" IN 8'-0".
C. AT CORNER POSTS, GATE POST AND SIDES OF GATE FRAME, FABRIC SHALL BE ATTACHED WITH STRETCHER AND TENSION BAND-CLIP AT 1'-3" INTERVALS.
D. AT LINE POSTS, FABRIC SHALL BE ATTACHED WITH BAND CLIPS AT 1'-3" INTERVALS.
E. ATTACH FABRIC TO BRACE RAILS, TENSION WIRE AND TRUSS RODS WITH TIE CLIPS AT 2'-0" INTERVALS.
F. A MAXIMUM GAP OF 1" WILL BE PERMITTED BETWEEN THE CHAIN LINK FABRIC AND THE FINAL GRADE.
G. GATES SHALL BE INSTALLED SO LOCKS ARE ACCESSIBLE FROM BOTH SIDES.
H. GATE HINGE BOLTS SHALL HAVE THEIR THREADS PEENED OR WELDED TO PREVENT UNAUTHORIZED REMOVAL.
4.07 PROTECTION: UPON COMPLETION OF ERECTION, INSPECT FENCE MATERIAL AND PAINT FIELD CUTS OR GALVANIZING BREAKS WITH ZINC-BASED PAINT COLOR TO MATCH THE GALVANIZING PROCESS.



TYPICAL FENCING SIZES		
5' HIGH FENCE	SIZE	POST FOOTING
LINE POST	2"	9" x 27" DP.
CORNER POST	3"	12" x 36" DP.
GATE POST	4"	12" x 36" DP.



1 COMPOUND FENCE ELEVATION
SCALE: N.T.S.

2 GATE LATCH DETAIL
SCALE: N.T.S.



EUDORA SOUTH

CN35318

ADDRESS
EUDORA, KS 66025

PROPOSED SELF-SUPPORT TOWER

PROJECT NO. 112623.001
CHECKED BY: SLM

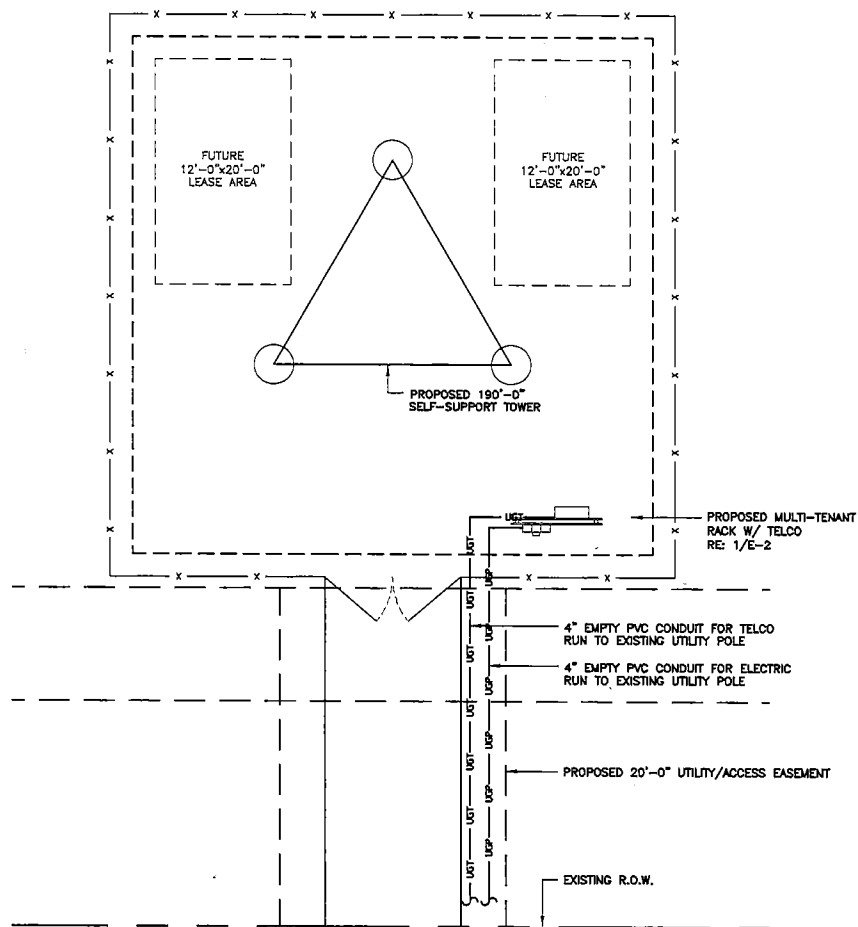
ISSUED FOR:				
REV	DATE	DRWN	DESCRIPTION	
A	3/28/17	RPS	PRELIMINARY REVIEW	

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SHEET NUMBER: C-3
REVISION: A



1 UTILITY ROUTING PLAN

SCALE: 0' 4' 8' 16' 32'

GENERAL ELECTRICAL NOTES

1. REFER TO SPECIFICATIONS DRAWINGS IN THIS SET FOR ELECTRICAL SPECIFICATIONS.
2. REFER TO ELECTRICAL DETAILS WHICH ARE APPLICABLE FOR THE TYPE OF ELECTRICAL AND TELEPHONE SERVICES REQUIRED FOR THIS SHELTER. VERIFY REQUIREMENTS FOR ELECTRICAL AND TELEPHONE SERVICES WITH LOCAL UTILITIES BEFORE BIDDING AND INCLUDE IN SCOPE OF WORK.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A NEW 200A/2P/250A FUSED MAIN DISCONNECT SWITCH WITH SERVICE ENTRANCE LABEL IN WEATHERPROOF NEMA 3R ENCLOSURE (WHEN REQUIRED BY LOCAL JURISDICTION). MOUNT ADJACENT TO METER BASE ON OUTSIDE WALL OF THIS DISCONNECT SWITCH AND THRU WALL TO SHELTER DISCONNECT SWITCH. VERIFY WITH LOCAL BUILDING INSPECTOR BEFORE BID AND INCLUDE IN SCOPE OF WORK IF REQUIRED.

POWER & TELEPHONE GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY FOR FINAL AND EXACT WORK/MATERIALS REQUIREMENTS AND CONSTRUCT TO UTILITY COMPANY ENGINEERING PLANS AND SPECIFICATIONS ONLY.
2. CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT, PULL WIRES, CABLE PULLBOXES, CONCRETE ENCASUREMENT OF CONDUIT (IF REQUIRED), TRANSFORMER PAD, BARRIERS, POLE RISERS, TRENCHING, BACKFILL AND INCLUDE ANY UTILITY COMPANY REQUIREMENTS IN SCOPE OF WORK.
3. UTILITY CONTACTS, SEE SHEET T-1

ELECTRICAL EQUIPMENT LOAD

1. **ELECTRICAL SERVICE CHARACTERISTICS:**
120/240 VOLT, SINGLE PHASE, THREE WIRE -200 AMP SERVICE
2. **CONNECTED BUILDING LOADS:**

A. LIGHTING	120V	640 WATTS
B. RADIO EQUIPMENT (RECTIFIERS)	240V	19,200 WATTS
C. RADIO EQUIPMENT (FUTURE)	240V	5,680 WATTS
D. MISCELLANEOUS POWER (DEHYDRATOR, ETC.)	120V	1,800 WATTS
E. (2) 4 TON A/C UNITS	240V	13,800 WATTS
F. (2) 8KW ELECTRIC HEATERS WITH A/C UNIT	240V	16,000 WATTS

CONNECTED LOAD WITH FUTURE RECTIFIERS AND UTILIZING HEATING AS LARGEST A/C UNIT LOAD.

3. **DEMAND BUILDING LOAD** BASED ON HIGHEST DEMAND LOAD REPORTED FROM LOCAL POWER COMPANY ON SIMILAR BUILDING.
4. **FULL CONNECTED LOAD** COULD POSSIBLY BE ACHIEVED AFTER A POWER OUTAGE HAS BEEN RESTORED. ALL RECTIFIERS WILL DRAW MAXIMUM POWER FOR RECHARGE OF BATTERIES. BOTH A/C UNITS WILL RUN TO SATISFY THERMOSTAT DEMAND.



CN35318

EUDORA SOUTH

ADDRESS
EUDORA, KS 66025

PROPOSED SELF-SUPPORT TOWER

PROJECT NO: 112623.001
CHECKED BY: SLM

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
A	3/28/17	RPS	PRELIMINARY REVIEW

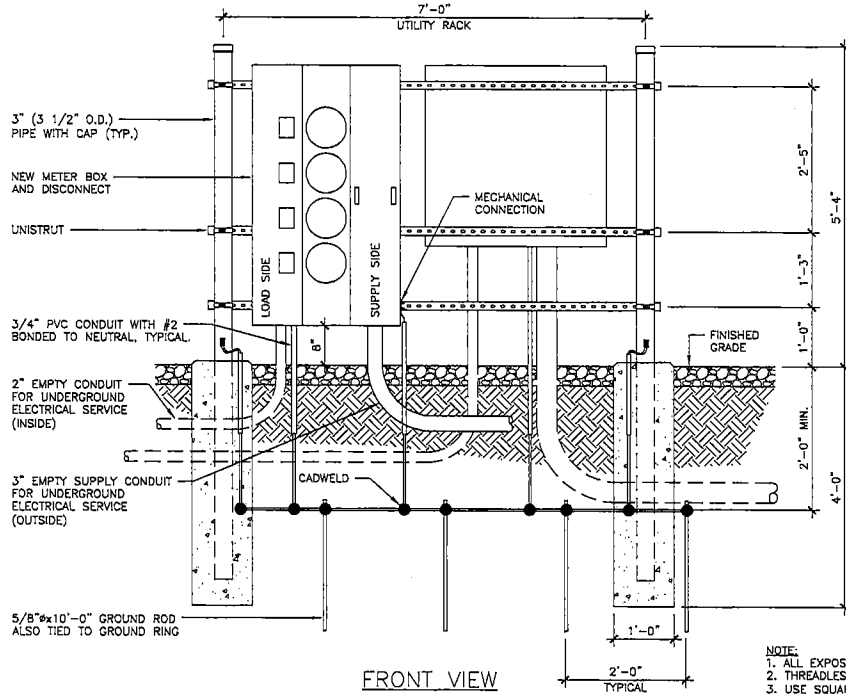
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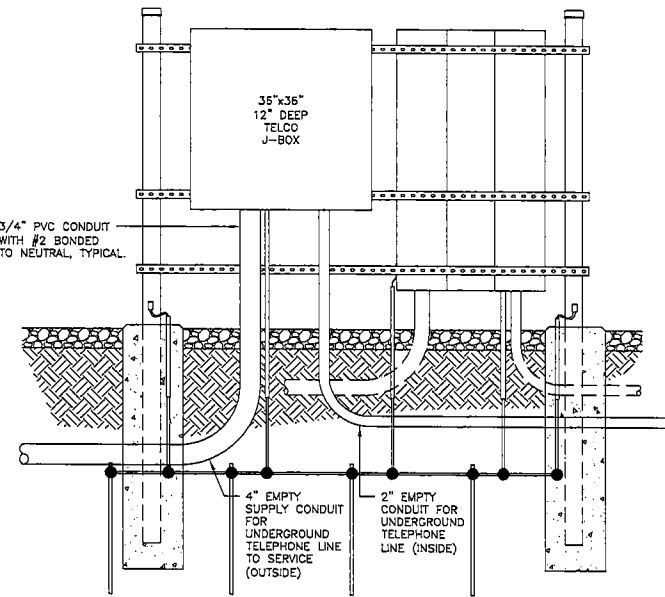
SHEET NUMBER: REVISION:

E-1 A



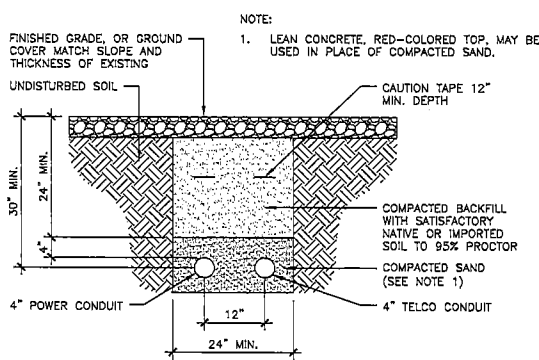
FRONT VIEW

- NOTE:
1. ALL EXPOSED ELECTRICAL CONDUIT MUST BE RIGID.
 2. THREADLESS CONNECTORS ARE NOT ALLOWED.
 3. USE SQUARE "D" 200A FUSIBLE DISCONNECT
 4. EMT CONDUIT CAN ONLY BE USED INSIDE
 5. USE ONLY COMPRESSION TYPE FITTINGS ON EMT CONDUIT
 6. USE ONLY STRANDED CONDUCTORS FOR ALL ELECTRICAL WIRING, (EXCEPT TELCO AND THERMOSTAT)
 7. USE SCHEDULE 80 CONDUIT UNDER DRIVEWAYS AND/OR ANY VEHICLE CROSSING AREA.

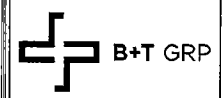


REAR VIEW

1 UTILITY RACK ELEVATIONS
SCALE: N.T.S.



2 TRENCH DETAIL
SCALE: N.T.S.



CN35318

EUDORA SOUTH

ADDRESS
EUDORA, KS 66025

PROPOSED SELF-SUPPORT TOWER

PROJECT NO: 112623.001
CHECKED BY: SLM

ISSUED FOR:			
REV	DATE	DRWN	DESCRIPTION
A	3/28/17	RPS	PRELIMINARY REVIEW

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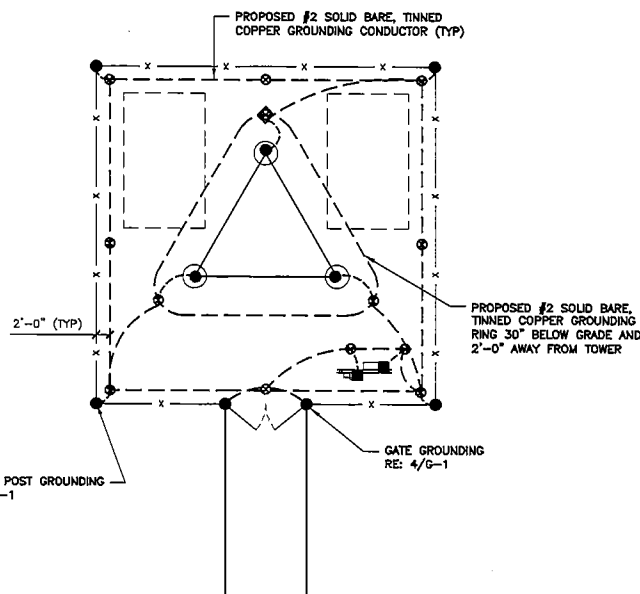
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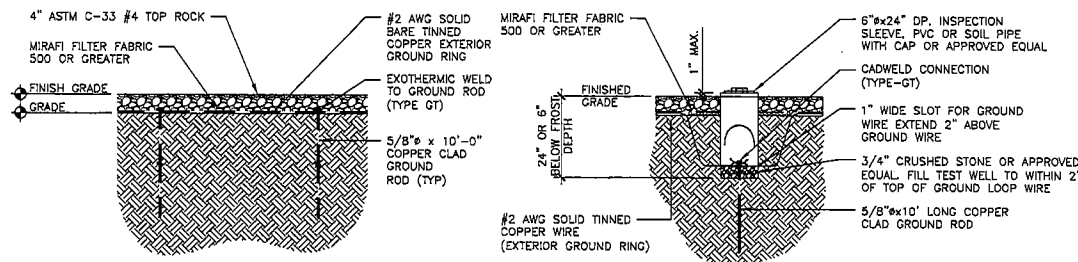
SHEET NUMBER: E-2
REVISION: A

GROUNDING LEGEND

- ◆ -5/8"x10'-0" COPPER CLAD GROUND ROD WITH INSPECTION WELL (FIELD VERIFY LOCATION WITH MANAGER)
- ⊗ -5/8"x10'-0" COPPER CLAD GROUND ROD AT 15'-0" MAX. CENTERS
- -MECHANICAL CONNECTION
- -EXOTHERMIC WELD (CAD WELD)
- #2 SOLID COPPER TINNED WIRE UNLESS NOTED OTHERWISE



1 GROUNDING PLAN
SCALE: N.T.S.

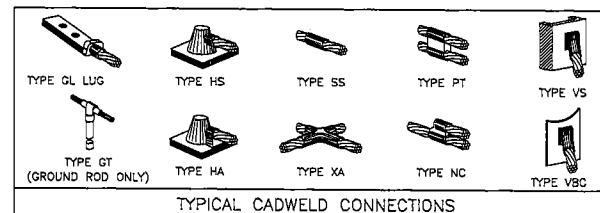


2 GROUND RING DETAIL
SCALE: N.T.S.

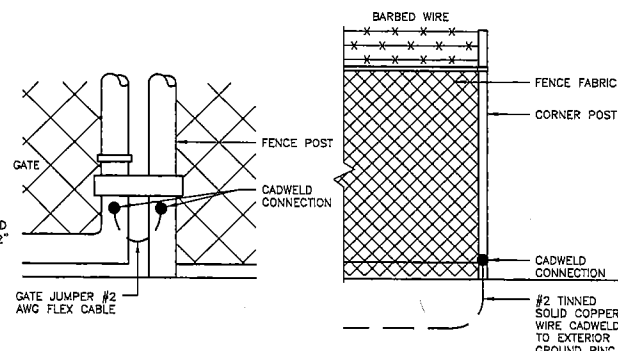
3 GROUND TEST WELL
SCALE: N.T.S.

GROUNDING NOTES:

- ALL ELECTRICAL AND GROUNDING AT THE CELL SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER.
- IF THE AC PANEL IN THE POWER CABINET IS WIRED AS SERVICE ENTRANCE, THE AC SERVICE GROUND CONDUCTOR SHALL BE CONNECTED TO GROUND ELECTRODE SYSTEM. WHEN THE AC PANEL IN THE POWER CABINET IS CONSIDERED A SUB-PANEL, THE GROUND WIRE SHALL BE INSTALLED IN THE AC POWER CONDUIT. THE INSTALLATION SHALL BE PER LOCAL AND NATIONAL ELECTRIC CODE (NFPA-70).
- EXOTHERMIC WELDING IS RECOMMENDED FOR GROUNDING CONNECTION WHERE PRACTICAL. OTHERWISE, THE CONNECTION SHALL BE MADE USING COMPRESSION TYPE-2 HOLES, LONG BARREL LUGS OR DOUBLE CRIMP CLAMP "O" CLAMP. THE COPPER CABLES SHALL BE COATED WITH ANTIOXIDANT (COPPER SHIELD) BEFORE MAKING THE CONNECTIONS. THE MANUFACTURER'S TORQUING RECOMMENDATIONS ON THE BOLT ASSEMBLY TO SECURE CONNECTIONS ARE TO BE FOLLOWED.
- PROVIDE PVC SLEEVES WHERE GROUNDING CONDUCTORS PASS THROUGH THE BUILDING WALLS AND /OR CEILINGS.
- INSTALL GROUND BUSHINGS ON ALL METALLIC CONDUITS AND BOND TO THE EQUIPMENT GROUND BUS IN THE PANEL BOARD.
- GROUND ANTENNA BASES, FRAMES, CABLE RACKS AND OTHER METALLIC COMPONENTS WITH #2 GROUNDING CONDUCTORS AND CONNECT TO INSULATED SURFACE MOUNTED GROUND BARS. CONNECTION DETAILS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS FOR GROUNDING.
- GROUND FIELD TEST PROCEDURE: - THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A "FALL OF POTENTIAL" TEST ON THE NEW SUPPLEMENTAL GROUND FIELD PRIOR TO FINAL CONNECTION OF THE GROUNDING SYSTEM TO EQUIPMENT. THE TEST SHALL BE PERFORMED BY A QUALIFIED AND CERTIFIED TESTING AGENT. PROVIDE INDEPENDENT TEST RESULTS TO THE PROJECT MANAGER FOR REVIEW. THE GROUND SYSTEM RESISTANCE TO EARTH GROUND SHALL NOT EXCEED FIVE (5) OHMS. IF THE GROUND TEST EXCEEDS THE MAXIMUM OF 5 OHMS THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ADDITIONAL GROUND CONNECTIONS AS REQUIRED TO MEET THE 5 OHMS MAXIMUM.



TYPICAL CADWELD CONNECTIONS



4 GATE GROUNDING
SCALE: N.T.S.

5 FENCE GROUNDING
SCALE: N.T.S.



CN35318

EUDORA SOUTH

ADDRESS
EUDORA, KS 66025

PROPOSED SELF-SUPPORT TOWER

PROJECT NO: 112623.001
CHECKED BY: SLM

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
A	3/28/17	RPS	PRELIMINARY REVIEW

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SHEET NUMBER: REVISION:

G-1

A

Memorandum

City of Lawrence

Planning & Development Services

TO: Lawrence Douglas County Metropolitan Planning Commission

FROM: Sandy Day, Planning Staff

CC: CUP-17-0021; communication tower located at 2138 N 1000 Road

Date: June 8, 2017

RE: City of Eudora Planning Commission review of project.

The proposed development application is located within three miles of the incorporated limits of the City of Eudora. The project was forwarded to the City of Eudora for review. This project has been advertised as a joint Planning Commission/Eudora meeting.

The City of Eudora met separately on June 7, 2017. At their meeting, the Eudora Commission ruled unanimously to forward a recommendation to the Lawrence Douglas County Metropolitan Planning Commission for approval for the Conditional Use Permit, CUP-17-000215 with the following stipulation:

Move the tower 190 ft. from public right of way and adjacent property, or have the applicant submit a registered engineer's certification regarding the fall zone.

This information was provided to staff by Curtis Baumann, Codes Administrator, City of Eudora.

May 22, 2017

Mr. Paul Wrablica III
Telecom Realty Consultants, LLC
3864 West 75th Street
Prairie Village, KS 66208

RE: Proposed 190' Sabre Self-Supporting Tower for Eudora South, KS

Dear Mr. Wrablica,

Upon receipt of order, we propose to design and supply the above referenced Sabre tower for a Basic Wind Speed of 90 mph with no ice and 40 mph with 3/4" radial ice, Structure Class II, Exposure Category C and Topographic Category 1, in accordance with the Telecommunications Industry Association Standard ANSI/TIA-222-G, "Structural Standard for Antenna Supporting Structures and Antennas".

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 tower will fail structurally in a wind event where the design wind speed is exceeded within the range of the built-in safety factors.

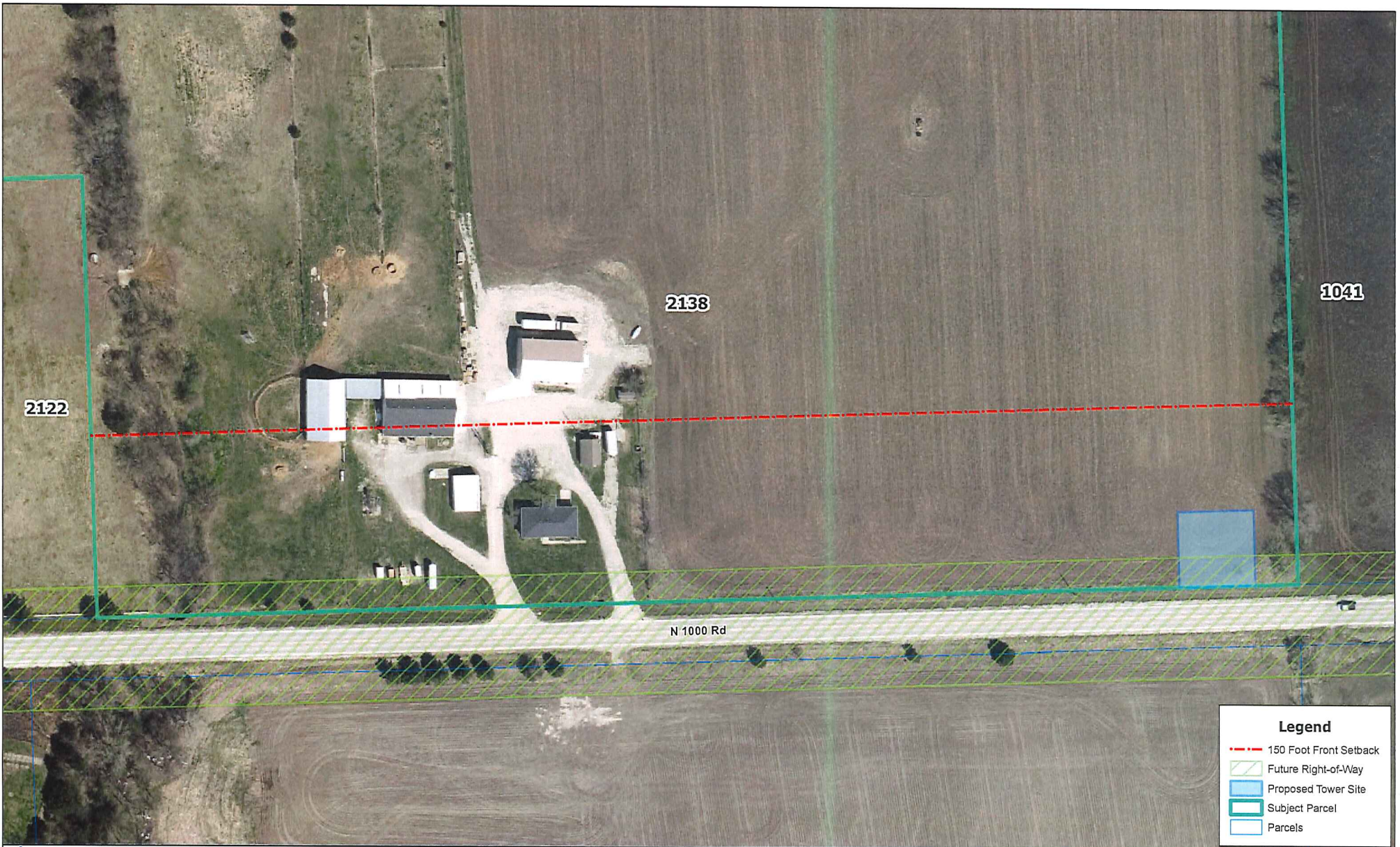
Should the wind speed increase beyond the capacity of the built-in safety factors, to the point of failure of one or more structural elements, the most likely location of the failure would be within one or more of the tower members in the upper portion. This would result in a buckling failure mode, where the loaded member would bend beyond its elastic limit (beyond the point where the member would return to its original shape upon removal of the wind load).

Therefore, it is likely that the overall effect of such an extreme wind event would be localized buckling of a tower section. Assuming that the wind pressure profile is similar to that used to design the tower, the tower is most likely to buckle at the location of the highest combined stress ratio in the upper portion of the tower. This would result in the portion of the tower above the failure location "folding over" onto the portion of the tower below the failure location. ***Please note that this letter only applies to the above referenced tower designed and manufactured by Sabre Towers & Poles.*** In the unlikely event of total separation, this, in turn, would result in collapse within a radius equal to 67.5 feet.

Sincerely,

Robert E. Beacom, P.E., S.E.
Senior Design Engineer





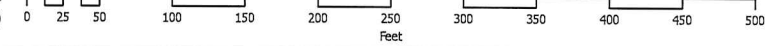
Legend

- 150 Foot Front Setback
- Future Right-of-Way
- Proposed Tower Site
- Subject Parcel
- Parcels

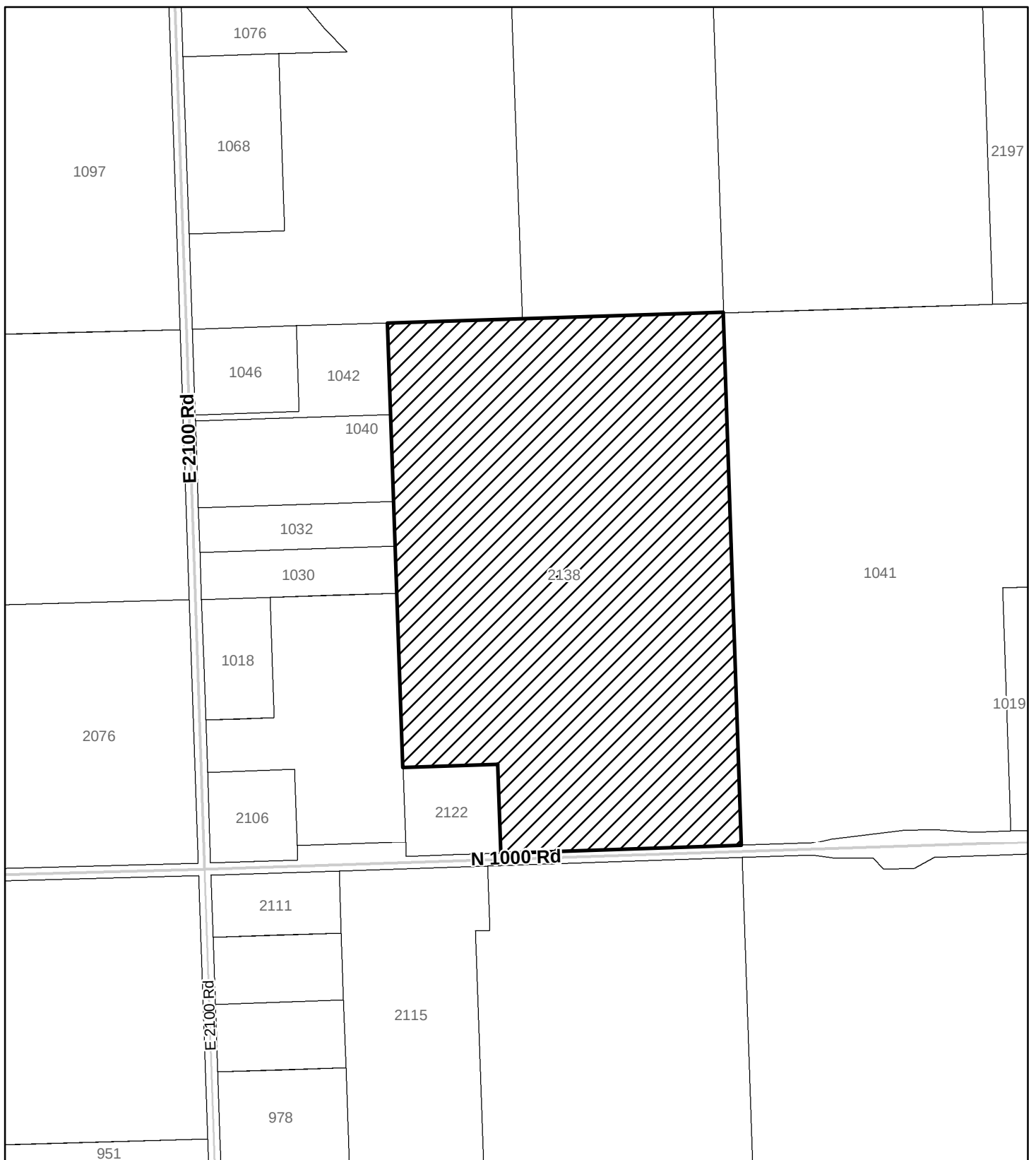


CUP-17-00215: Proposed Tower
 2138 N. 1000 Road

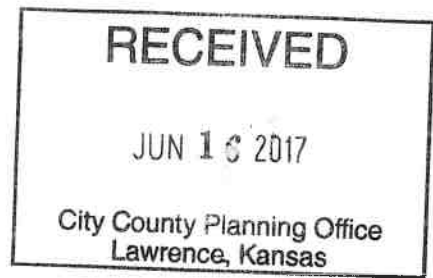
June 20 2017
 Prepared by: J.Crick



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CUP-17-00215: Conditional Use Permit for a new 190 ft. self-supporting wireless telecommunications facility (tower), located at 2138 N 1000 Rd



City of Lawrence

Douglas County

Planning & Development Services

Dear Sandra,

We are a property owners living near the 2138 N 1000 Road, Eudora, KS 66025. We received the letter regarding having a self-supporting wireless telecommunication tower located at 2138 N 1000 Rd. We are strongly against to have this tower in this location. Our area did not have any cable internets (that is already very weird), all surrounding area neighbors rely only on wireless internets either through satellite wireless internet or wireless internets provided by cellular phone companies. All the wireless internet signals will interfere each other, our area is the far away (5 miles away) from the Towers of Verizon and Sprint wireless, those wireless signals are not very strong. We are fear that we will have even worse signal if the other wireless Tower is set up. So we are not agreeing to build another wireless tower near us.

Thank you for considering our concerns.

Sincerely,

Two handwritten signatures in black ink. The first signature is "Huiqun Ma" and the second signature is "Zongwu Cai".

Huiqun Ma and Zongwu Cai

2115 N 1000 Road

Eudora, KS 66025

pg 1 of 3

FAX COVER SHEET

TO: Lawrence-Douglas County Planning Commission

fax 785-832-3160 ✓
Three PAGES TOTAL

From Barbara J. Braa & Michael G. Braa
Phone 785-542-3829

RE CUP -17=00215 Conditional Use Permit == Hearing 6/28

The following two pages contain written comments regarding the hearing referenced above

**** Please confirm receipt of this FAX by leaving a message at the phone number above.**

Thank you!

**Michael & Barbara Braa
1032 E 2100 Road
Eudora, KS 66025**

June 24, 2017

To - Lawrence— Douglas County Planning Commission

RE CUP-17-00215 – Conditional Use Permit for a new 190-foot telecommunications facility (tower) at 2138 N 1000 Road (aka Douglas County Road 458)

We received notice regarding a proposed communications facility/tower conditional use permit request for 2138 N 1000 Road, also known as Douglas County Road 458. This property is near our rural Eudora home of 17 years. Below are some of our questions /concerns:

- 1) Is this facility/tower, which would be as tall as a nineteen story building, appropriate in our rural residential area? The affected residences total 10-12, if you count recent and pending construction in the immediately area.
- 2) Will this require another driveway cut onto this property which already has two cuts? Does Douglas County Road 458 allow that much access to a single property?
- 3) Is the facility/tower to be positioned exactly in the SE corner of the property or is that an estimated location?
- 4) Will this 190 foot tower require lighting? If so, what type - strobing or steady? It is just under the 200' height to require lighting. Can lighting be added later due to safety concerns without notification to the surrounding homeowners?
- 5) The property also has a grass airstrip upon which ultra-light aircraft lands frequently. Will this use be rescinded or continue as well on this land?
- 6) The current schematic shows the tower, the surrounding compound fence and two "future lease areas." What will be on those separate future lease areas? More towers?
- 7) Is anyone concerned about the loss of agricultural land?
- 8) Towers such as this often make the surrounding land less aesthetically appealing. Home owners purchased and or built in the area for the aesthetics and this is likely to mar the view and limit future use of the surrounding areas.
- 9) If property value falls due to the detrimental effects on surrounding homes, the tax base and resulting tax revenue to the county will fall too. Is this considered in your decision?

- 10) Will you consider the potential erosion of land values of the surrounding properties? No one wants to have their hard-earned appreciation to vanish.
- 11) How long is the lease? Permanent? Who is responsible for the upkeep around the tower & for any safety concerns? Who is responsible to remove the tower and compound if it falls into disuse or becomes obsolete?
- 12) Is any plant screening required to mask the unattractive fenced compound?
- 13) Does the leasehold stay with the owner of the land or does it stay with the current owner even if the current owner sells the land?
- *I know of a property where the lease went with the seller and not with the land. The use of the land is now seriously affected and 9+ acres are sitting unused due to the tower right in the middle of otherwise usable land.*
- 14) Is there a historical marker for the Santa Fe Trail on property that is due east? Any restrictions due to historical nature of that marking?

We hope you will seek answers to our questions and concerns prior to your decision regarding approval of this conditional use request.

To us, it seems that an area which will affect fewer residential properties would be more appropriate. We hope the Planning Committee members, and ultimately the County Commissioners will consider all of the above concerns when considering approval or denial of this request for a conditional use permit.

Please contact either of us if you have questions or feedback prior to the meeting on 6/28. Barbara can be reached at w. 785-465-1065 or c. 785-760-7525. Michael can be reached at 785-542-3829.

Thank you for considering our questions and input before making your decision.

Sincerely,



Barbara J. Braa



Michael G. Braa

cc: Douglas County Commissioners

From: Kelly, Pat [<mailto:PAKelly@StateStreet.com>]
Sent: Monday, June 26, 2017 10:05 AM
To: Sandra Day <sday@lawrenceks.org>
Cc: pkelly3855@aol.com
Subject: Protest against CUP-17-00215

Hi Sandy

I am against the approval of CUP-17-00215 for the following reasons which I speak to in more detail at the hearing on Wednesday, June 28, 2017.

- **Decrease in property values**
- **Aesthetics**
- **Historical**
- **Safety/Hazard issues**
- **Environmental**

**Regards,
Pat Kelly**

PATRICK & AMY JANKOWSKI
2111 N. 1000TH RD
EUDORA, KS 66025
(785) 542-2070

21 June 2017

To: Lawrence-Douglas County Metropolitan Planning Commission / Eudora Planning Commission

RE: CUP-17-00215, Telecommunications tower located at 2138 N. 1000th Rd. Eudora, KS 66025

Dear Commission members,

First, as a prior member of the Eudora Planning Commission I would like to thank you for your service and for allowing me to voice my concerns.

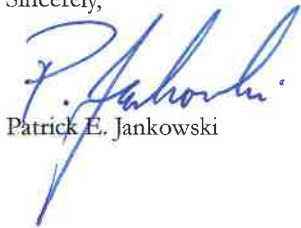
I'm sure that you are all well aware that telecommunication (cell) towers have many things in common with wind turbines in western Kansas, most notably "visual" pollution. I have enclosed a copy of an article from the Notre Dame Journal of Law, Ethics & Public Policy which reviews cell tower visual pollution. Although the article neither condemns or condones erection of new cell towers it does offer a solution to lessen the effects of the visual pollution by disguising the cell tower as a tree (photo on the last page). Perhaps some of you have noticed some of the same cell tower camouflage along K-10 near Desoto, KS? As a neighbor who chose to move outside the city to enjoy country scenery I feel that new cell towers should be required to use some type of disguise when placed in rural residential areas, thus limiting the amount of visual pollution.

Another type of pollution cell towers have in common with wind turbines is light pollution. My family and I, as well as many of our neighbors enjoy spending time outdoors, especially in the evening hours after sunset. I would assume that a tower of 190 ft. would require safety lighting, especially with its proximity to the Vinland airport. I think I can speak for most of us in the area when I say that our evening outdoor activities would certainly be less enjoyable in the presence of constantly blinking lights. There have also been several studies done to document the adverse effects of light pollution on humans, animals and especially migratory birds.

I find myself questioning the geographic placement of this tower. The property is significantly lower than the properties to both the east, west and south. Anyone who drives Douglas County 458 highway west from Eudora knows there is a significant drop in elevation east of the property in question at Captain's creek, followed by a rise in elevation west of county road 2100, placing the tower in what common sense would tell me is close to the lowest geographical area in the vicinity. Not to mention that there is a significantly taller tower at a higher elevation approximately 3 miles to the west of the proposed location which would seem to serve as a better alternative to the proposed tower.

Finally, there have also been several studies done by the real estate profession which show that the closer a property is to a cell tower, the less desirable and less valuable it becomes, mostly due to my first two objections stated above. I fully understand and agree that a property owner should have the right to develop a property as they see fit, with the understanding that such development should not impede upon his neighbors and their property. With these concerns in mind I must object to the Conditional Use Permit# CUP-17-00215.

Sincerely,



Patrick E. Jankowski



Amy M. Jankowski



City of Lawrence
Douglas County
PLANNING & DEVELOPMENT SERVICES

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P.O. Box 708
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June 5, 2017

Dear Property Owner:

The Lawrence-Douglas County Metropolitan Planning Commission will hold its regular meeting on **Wednesday, June 28, 2017, beginning at 6:30 p.m., in the Commission Meeting Room on the first floor of City Hall, 6 E. 6th Street, Lawrence.** The following item may be of interest to you:

CUP-17-00215: Consider a Conditional Use Permit for a new 190 ft self-supporting wireless telecommunications facility (tower), located at 2138 N 1000 Rd. Submitted by MW Towers LLC for F. Dwane Richardson & Valerie Richardson, property owners of record. *Joint meeting with Eudora Planning Commission.*

Conditional Use Permit requests are considered public hearing items and the public will be given the opportunity to make oral comments on such requests at the meeting. Written comments are welcomed and encouraged. The Commission has established a **deadline for receipt of all written communications of no later than 10:00 a.m. on Monday, June 26, 2017.** This deadline allows time for the Commission to receive and review comments prior to the meeting.

A complete legal description for this property is available at the Planning Office, 6 E. 6th Street, Monday - Friday from 8:00 a.m. until 5:00 p.m. If you have questions relating to this matter, please contact me at 832-3161.

PLEASE NOTE: If you have recently transferred ownership of your property in the area of this request, or if such property is under a contract purchase agreement, we ask you to please forward this letter to the new owner or the contract purchaser.

Sincerely,

Sandra Day
Sandra Day, AICP
Planner II

1st Concern is Property Value Due to

Pollution:

- (A) Visual Pollution
- (B) Light Pollution - Humans & Animals - cattle

2nd Concern: Why Place a tower in this valley when there is a taller tower directly visible to the west.





1-1-2012

Cell Phone Towers as Visual Pollution

John Copeland Nagle

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CELL PHONE TOWERS AS VISUAL POLLUTION

JOHN COPELAND NAGLE*

Granger, Indiana is a collection of residential subdivisions filled with nearly 800 cul-de-sacs. Besides those subdivisions, Granger's most prominent features are its proximity to South Bend and to the Michigan state line, its lack of any real downtown, and the precarious status of an unincorporated community of 30,000 residents who rely upon individual water wells and septic tanks.¹ Granger was also known for spotty wireless coverage when cell phones first became popular. My cell phone did not receive a signal in my Granger home, nor did most of my visitors whose phones were serviced by other providers. So I was pleased to learn that a new cell phone tower was planned for a vacant field about one mile from my home. Then I checked my mailbox one day and found a bright pink flyer that objected to the proposed tower as "visual pollution." Most of my neighbors felt the same way, as demonstrated by the 1,135 residents who signed a petition against the tower. Another resident reported that she had abandoned plans to build a deck on the back of her house because she did not want to look at a tower. "View is everything," said one neighbor, "and a tower kills the view." Heeding these complaints, the county council repeatedly voted to deny the necessary permits.²

These stories can be multiplied across the country. Indeed, they have been, as local newspaper accounts and the reports of litigated disputes attest. There are now about 200,000 cell sites (including both tow-

* John N. Matthews Professor of Law, Notre Dame Law School; nagle.8@nd.edu. Alejandro Camacho offered helpful comments on an earlier draft of this paper. Research librarians Chris O'Byrne and Patti Ogden provided invaluable assistance, and I am grateful for the research assistance of Kacy Romig and Rachel Williams.

1. The origin of Granger's name is contested, with one view citing the name of the grange farm movement of the late nineteenth century (when Granger was founded) and the alternative view crediting Father Alexis Granger, the priest who operated a farm in the area beginning in 1867. See Carol Draeger, *Where (and What) is Granger?; Not a City or Village, ZIP Code 46530 is Michiana's Own "Beverly Hills 90210"—A State of Being. So to Speak*, SOUTH BEND TRIB., July 22, 2001, at A1.

2. See Carol Elliott, *Can You Hear Them Now? Poses of Wireless Technicians Patrol the Roads to Improve Cell Phone Reception*, SOUTH BEND TRIB., Nov. 28, 2004, at B1; Don Porter, *Communications Towers Sprouting Up All Over: "Visual Pollution" Could Be Result in Residential Areas*, SOUTH BEND TRIB., June 30, 1997, at B1; Don Porter, *Will Granger Accept Another Tower?*, SOUTH BEND TRIB., June 11, 2003, at A1; James Wensits, *County Council Denies Cell Phone Tower Plea; Granger Foes Mount Strong Opposition*, SOUTH BEND TRIB., Feb. 11, 2004, at A1; James Wensits, *New Location But Same Question: Cell Tower Site Still Sought to Serve Granger Area*, SOUTH BEND TRIB., Jan. 30, 2004, at A1; James Wensits, *Tower Plan Wilts Under Pressure; Council Rejects Site Near Knollwood*, SOUTH BEND TRIB., June 11, 2003, at A1.

ers and antennas attached to existing structures) to accommodate the exponential increase in the use of wireless communication devices. Yet residents repeatedly object to the environmental, health, safety, and especially aesthetic harms of cell phone towers, which in turn lead to claims of reduced property values. As National Public Radio's Noah Adams reported in November 2004, "Americans everywhere from Manhattan to Hollywood take their cell phones for granted, but in many parts of the country where scenery is cherished, cell phone towers have been called visual pollution."³

Cell phone towers are just the most recent target of visual pollution complaints. The term visual pollution has been used by courts, academics, and environmental groups to explain their distaste for ugly buildings, telephone towers, billboards, flags and signs, and numerous other images that have been derided as polluting the visual landscape.⁴ As Chief Jus-

3. *Day to Day: Squaring off Over "Frankenpines" in the Adirondacks* (NPR radio broadcast Nov. 22, 2004), available at <http://www.npr.org/templates/story/story.php?storyId=4182101>. For additional descriptions of cell phone towers as visual pollution, see *AT&T Wireless PCS, Inc. v. City Council of Va. Beach*, 155 F.3d 423, 427 (4th Cir. 1998); *Avoid Cell Tower Pollution*, CHATTANOOGA TIMES FREE PRESS, May 30, 2007, at B7; Eric Peterson, *Silo to Hide Cellular Tower, Schaumburg OK's Church's Request*, DAILY HERALD, Aug. 11, 2004, at 1; Richard Quinn, *New Cell Towers, Public Protests Rising Together*, VIRGINIAN-PILOT [NORFOLK, VA.], Oct. 7, 2007, at B1; *Visual Pollution*, BURLINGTON FREE PRESS [VT.], Feb. 23, 2003, at 10A; *The Early Show: Cell Phone Towers in Disguise* (CBS television broadcast Nov. 29, 2006), available at http://www.cbsnews.com/video/watch/?id=2214391n963f&source=search_video; ScenicNevada.org, *Taming Wireless Telecommunications Towers*, <http://www.scenicnevada.org/main/towers.html>.

4. For judicial references to visual pollution, see, e.g., *Ballen v. City of Redmond*, 466 F.3d 736, 744 (9th Cir. 2006) (billboards); *Shivwits Band of Paiute Indians v. Utah*, 428 F.3d 966, 983 (10th Cir. 2005) (billboards); *Cleveland Area Bd. of Realtors v. City of Euclid*, 88 F.3d 382, 384 (6th Cir. 1996) (residential signs); *Kramer v. Gov't of V.I.*, 479 F.2d 350, 352 (3d Cir. 1973) (drive-in theater); *Lamar Adver. Co. v. Twp. of Elmira*, 328 F. Supp. 2d 725, 729 (E.D. Mich. 2004) (billboards); *People v. Amerada Hess Corp.*, 765 N.Y.S.2d 202, 205 (N.Y. Dist. Ct. 2003) (gas stations); *Blue Legs v. EPA*, 732 F. Supp. 81, 83 (D.S.D. 1990) (waste dumps); *State v. Watson*, 6 P.3d 752, 758 (Ariz. Ct. App. 2000) (trash); *Stearn v. County of San Bernardino*, 170 Cal. App. 4th 434 (Cal. Ct. App. 2009) (billboards); *Am. Nat'l Bank & Trust Co. v. City of Chi.*, 568 N.E.2d 25, 35-36 (Ill. App. Ct. 1990) (building that blocked view); *Mayor & City Council of Balt. v. Mano Swartz, Inc.*, 299 A.2d 828, 833 (Md. 1973) (billboards); *John Donnelly & Sons, Inc. v. Outdoor Adver. Bd.*, 339 N.E.2d 709, 718 (Mass. 1975) (billboards); *Mtn. Cmty. for Responsible Energy v. Pub. Serv. Comm.*, 665 S.E.2d 315, 329 (W. Va. 2008) (affirming an administrative decision allowing the construction of 124 wind turbines because "[s]ome people consider them eyesores they do not want in their backyards. Others consider them elegant or beautiful.").

For some of the other references to visual pollution, see Final National Pollutant Discharge Elimination System (NPDES) General Permits for the Eastern Portion of Outer Continental Shelf (OCS) of the Gulf of Mexico (GMG280000) and Record of Decision, 63 Fed. Reg. 55,718, 55,722 (Oct. 16, 1998) (noting that an Alabama coastal city had complained that offshore drilling structures constituted visual pollution); Sunrise Powerlink Project: Final EIR/EIS 3-1663 (Oct. 2008) (comment from the Sierra Club

tice Burger once wrote, "[E]very large billboard adversely affects the environment, for each destroys a unique perspective on the landscape and adds to the visual pollution of the city. Pollution is not limited to the air we breathe and the water we drink; it can equally offend the eye and the ear."⁵

Visual pollution is a fascinating example of pollution. Ordinarily, we associate pollution with air pollution, water pollution, and hazardous wastes. But we also worry about hostile work environments "polluted" by discrimination, claims of cultural pollution leveled against violent entertainment and internet pornography, and political processes polluted by excessive campaign spending. As I have argued elsewhere, a wide range of pollution claims have long appeared in the law and literature, with the idea of moral pollution preceding the contemporary understanding of pollution as a uniquely environmental phenomenon.⁶ Some of these other pollution claims persist, as evidenced by the kinds of pollution discussed in legal and political debates and by the continuing role that pollution plays in academic writing about anthropology.⁷

Offensive sights fit within this broader understanding of pollution. These offensive sights are polluting agents because their appearance is found objectionable. A polluting agent is placed into the environment by a sign, a tower, a building, or a disorganized pile of materials. The affected environment is the heretofore uncluttered outdoor landscape. The most common harm associated with visual pollution is the annoyance resulting from the perception of something that is judged unsightly. That is not the only harm, though. Signs, communications towers, and discarded cars have all been blamed for reducing property values and inhibiting the enjoyment of neighboring property. Aesthetic concerns have also been linked to human health and blamed for depriving landowners of the cultural identity of their neighborhood. Billboards have been accused of distracting drivers, degrading public taste, encouraging

Visual Pollution Task Force objecting to "visual pollution and visual impacts of the 150 miles of 160 foot-tall and 65 foot-wide transmission towers covering some of San Diego's formerly most scenic parks and neighbourhoods"); Harvey K. Flad, *Country Clutter: Visual Pollution and the Rural Landscape*, 553 ANNALS AM. ACAD. POL. & SOC. SCI. 117 (1997); Lesley K. McAllister, *Revisiting a "Promising Institution": Public Law Litigation in the Civil Law World*, 24 GA. ST. U. L. REV. 693, 730 (2008) (noting that Brazilian prosecutors regarded the reduction of visual pollution as one of their six priority areas); Peter J. Howe, *Storefront Tobacco Ads Said to Target Students*, BOSTON GLOBE, Sept. 11, 1998, at B2 (cigarette advertisements).

5. *Metromedia, Inc. v. City of San Diego*, 453 U.S. 490, 560-61 (1980) (Burger, C.J., dissenting).

6. See John Copeland Nagle, *The Idea of Pollution*, 43 U.C. DAVIS L. REV. ____ (forthcoming 2009).

7. See *id.* The classic work on pollution as an anthropological concept is MARY DOUGLAS, *PURITY AND DANGER: AN ANALYSIS OF CONCEPTS OF POLLUTION AND TABOO* (1966).

needless consumption, and desecrating the landscape. Billboards also illustrate the cumulative nature of visual pollution, for the sight of a solitary billboard proves much less objectionable than a highway that is filled with them. Visual pollution rarely results from a purposeful effort to offend the aesthetic sensibilities of others, though the person or organization that introduces the sight to the landscape may expect that the sensibilities of many viewers will be offended.

Visual pollution also illustrates the three ways of responding to pollution. Toleration is the initial response. Toleration is championed by First Amendment scholars as the appropriate response to claims of cultural pollution resulting from violent entertainment and internet pornography (though not the appropriate response for hostile work environments). The idea of tolerating pollution may seem foreign to environmental law, but in fact many environmental laws prescribe the tolerable amount of air or water pollution, or they establish the permissible tolerances for pesticides. Prevention is the second response to pollution. Here the goal is to altogether eliminate pollution by preventing it from occurring. The Pollution Prevention Act states the national policy of the United States that pollution should be prevented or reduced at the source whenever feasible.⁸ The act establishes a program for achieving that goal, but it is generally understood that zero pollution is a goal our society has so far been unwilling to pay to achieve. So the most common response to pollution is avoidance. The law variously encourages dilution, filtering, separating pollution and its victims, and the treatment and removal of pollution as methods to reduce the harms resulting from exposure to pollution.⁹

This Essay seeks to analyze the idea of visual pollution in the context of cell phone towers. Part I provides a general description of the nature of, and responses to, visual pollution. Part II examines the debate concerning the aesthetics of cell phone towers, which pits affected residents against cellular providers, with local governments exercising their traditional powers of land use regulation while being constrained by a federal law designed to promote wireless services. Part III reflects on the lessons that the idea of pollution offers for controversies regarding cell

8. 42 U.S.C. § 13101(b) (2000). Pollution prevention also appears in other federal statutes. A primary goal of the Clean Air Act (CAA) is to encourage or otherwise promote reasonable actions for pollution prevention. 42 U.S.C. § 7401(c) (2000). The Clean Water Act (CWA) supports activities and programs for the prevention, reduction, and elimination of pollution. 33 U.S.C. §§ 1253(a), 1254(a) (2000). The Resource Conservation and Recovery Act declares that wherever feasible, the generation of hazardous wastes is to be reduced or eliminated as expeditiously as possible. 42 U.S.C. § 6902(b) (2000).

9. See generally John Copeland Nagle, *The Three Responses to Pollution* (Mar. 2009) (unpublished manuscript, on file with author).

phone towers, and the lessons that the cell phone tower controversies offer for understanding pollution in other contexts.

I. VISUAL POLLUTION

The first reported case to acknowledge "visual pollution" rejected a challenge to a gas station to be located in the downtown shopping area of a Detroit suburb.¹⁰ Two years later, the same court upheld another Detroit suburb's rejection of a proposed high-rise sign to advertise another gas station located along Interstate 75. The court enthusiastically embraced municipal aesthetic regulation:

The modern trend is to recognize that a community's aesthetic well-being can contribute to urban man's psychological and emotional stability. It is true that the question of what is beautiful and pleasing is for each individual to decide. We should begin to realize, however, that a visually satisfying city can stimulate an identity and pride which is the foundation for social responsibility and citizenship. These are proper concerns of the general welfare. Yellin, *Visual Pollution and Aesthetic Regulation*, 12 *The Municipal Attorney* 186 (1971). Madison Heights has determined that its citizens' well-being will be served best by preventing the visual pollution which occurs when high-rise signs dot major thoroughfares. It has sought to do this by limiting the height of free-standing signs within its boundaries.

The use of such signs for advertising purposes is often done with little regard for their natural or man-made environment. Their garishness often intrudes on a citizen's visual senses. Property owners do have the right to put their property to profitable use. But, we do not think that the right to advertise a business is such that a businessman may appropriate common airspace and destroy common vistas. Nor do we believe that the right to advertise a business means the right to interfere with the landscape and the views along public thoroughfares.¹¹

The concurring judge warned, however, that "[w]e will all live to rue the day that public officials are permitted to meddle in private affairs on aesthetic considerations since . . . each person has his own yardstick for the evaluation of matters aesthetic."¹²

10. *Pure Oil Div. of Union Oil Co. of Cal. v. City of Northville*, 183 N.W.2d 303, 304 (Mich. Ct. App. 1970). The suburb's website now boasts of the "charming and relaxed setting of downtown Northville." Northville Downtown!, <http://downtownnorthville.org/>.

11. *Sun Oil Co. v. City of Madison Heights*, 199 N.W.2d 525, 529 (Mich. Ct. App. 1972).

12. *Id.* at 530 (Targonski, J., concurring in the result).

Of course, the law struggled with aesthetic concerns long before the term visual pollution was coined. Traditionally, aesthetic complaints were insufficient to establish a nuisance. As Horace Wood's treatise explained over a century ago, "[T]he law will not declare a thing a nuisance because it is unpleasant to the eye."¹³ The courts repeatedly rejected assertions that aesthetic objections to junk yards, fences, and other things as unsightly rendered those objects a nuisance.¹⁴ The basis for those decisions was the reluctance of courts to find that offenses to one's sense of aesthetics constituted an injury that could be remedied by the courts.¹⁵

"The cases rejecting aesthetic nuisances are now in tension with other areas of the law. Aesthetic concerns were once held insufficient to support zoning laws, but the modern trend is to uphold zoning conducted for aesthetic purposes."¹⁶ Other areas of the law now accept aesthetic concerns as a valid purpose, too.¹⁷ Moreover, several academic commentators have favored the acceptance of aesthetic nuisance cases. Raymond Coletta has argued that "it seems somewhat incongruous to allow individuals redress for offenses to their senses of hearing and smell, but at the same time to deny them a remedy for offenses to their sense of sight."¹⁸

13. HORACE G. WOOD, A PRACTICAL TREATISE ON THE LAW OF NUISANCES IN THEIR VARIOUS FORMS; INCLUDING REMEDIES THEREFOR AT LAW AND IN EQUITY 24 (3d ed. 1893); see also DAN B. DOBBS, THE LAW OF TORTS 1331 (2000) ("[B]ecause tastes differ and criteria for aesthetic judgment are deemed unreliable, courts have been reluctant to say that an inappropriate and ugly sight can be a nuisance."); W. PAGE KEETON ET AL., PROSSER & KEETON ON THE LAW OF TORTS 626 & n.3 (5th ed. 1984) (indicating that "mere unsightliness" does not constitute a nuisance, but that "aesthetic considerations . . . play an important part in determining reasonable use"); John Copeland Nagle, *Moral Nuisances*, 50 EMORY L.J. 265 (2001) (discussing the application of nuisance law to aesthetic harms).

14. See, e.g., *Bixby v. Cravens*, 156 P. 1184, 1187 (Okla. 1917) (holding that an unsightly fence did not constitute a nuisance because landowners are "not compelled to consult the 'aesthetic taste' of their neighbors" when building a fence); *Mathewson v. Primeau*, 395 P.2d 183, 189 (Wash. 1964) (holding that the unsightliness of a pig farm did not create a nuisance); *State Rd. Comm'n of W. Va. v. Oakes*, 149 S.E.2d 293, 300 (W. Va. 1966) (rejecting a nuisance claim against the storage of rubbish near a road).

15. See generally Raymond Robert Coletta, *The Case of Aesthetic Nuisance: Rethinking Traditional Judicial Attitudes*, 48 OHIO ST. L.J. 141, 145-48 (1987) (explaining that courts refused to find a nuisance based on mere unsightliness because of the belief that aesthetic harms are subjective and de minimis).

16. Nagle, *supra* note 13, at 286.

17. See, e.g., *Berman v. Parker*, 348 U.S. 26, 36 (1954) (holding that aesthetic concerns can justify a use of the government's eminent domain power). See generally Coletta, *supra* note 15, at 159 & n.111 (citing cases illustrating that "many federal and state courts have upheld a wide variety of aesthetically oriented regulations" since *Berman*).

18. Coletta, *supra* note 15, at 165-66. Coletta adds that "there is no physiological reason for treating visual perceptions any differently from noise or smell." *Id.* at 166.

These arguments have resulted in increasing judicial acceptance of aesthetic nuisance claims. The cases also contain novel assertions of the harm caused by unsightly activities on a neighbor's property. One landowner, for example, asserted that the view of wrecked cars on a neighbor's lot made him self-conscious and unwilling to invite friends over for cookouts.¹⁹ Yet the reluctance to rely upon unsightliness as an injury giving rise to a nuisance still endures in some courts.²⁰ Today most courts agree that a nuisance claim can rest on either aesthetic concerns themselves, or the decreased property value associated with unpleasant aesthetics. But aesthetic nuisance claims remain rare compared to the ubiquity of zoning provisions governing appearances.

Zoning law now provides the primary means for regulating visual pollution. Local ordinances prescribe the acceptable colors, architectural styles, sizes, location, and variety of buildings and other structures constructed within communities throughout the United States. The other source of legal regulation of visual pollution is contained in statutes specifically designed to preserve the aesthetic appeal of certain places. For example, federal and state law designate particular rivers, highways, and communities as "scenic" and thus entitled to protection against any structures or other sights that would impair the visual quality of that environment.

Many laws, and many claims of visual pollution, target billboards. "Billboards erode the quality of life," claimed one scenic advocacy organization. "They pollute our landscape, destroy our historic, cultural, and natural diversity, and undermine America's heritage and sense of place."²¹ It took a while for that view to take hold, and even longer for the law to accept it. Consider the concerns articulated by a Maryland court in 1973:

The effort to eliminate what was referred to in argument before us as "visual pollution" by controlling signs and billboards through the exercise of the zoning power has been slowly developing. The

19. *Foley v. Harris*, 286 S.E.2d 186, 188 (Va. 1982).

20. See, e.g., *Oklejas v. Williams*, 302 S.E.2d 110, 111 (Ga. Ct. App. 1983) (rejecting the claim that the unsightliness of a wall constituted a nuisance); *Carroll v. Hurst*, 431 N.E.2d 1344, 1349 (Ill. App. Ct. 1982) (rejecting the claim that a junkyard and salvage operation constituted a nuisance because "[n]o testimony was given that defendant's use of his land created an unsightly view; indeed, under Illinois law, a landowner does not have a right to a pleasing view of his neighbor's land"); *Ness v. Albert*, 665 S.W.2d 1, 2 (Mo. Ct. App. 1983) (holding that the presence of several dilapidated appliances and other refuse was not a nuisance because of the subjective nature of aesthetic considerations).

21. 132 CONG. REC. S13509 (daily ed. Sept. 24, 1986) (remarks of Sen. Stafford) (introducing materials from the Coalition on Scenic Beauty). Bill Bryson had a different impression during his travels throughout the United States. See BILL BRYSON, *THE LOST CONTINENT: TRAVELS IN SMALL-TOWN AMERICA* 49 (1990) ("[I]n the lonesome heartlands billboards were practically a public service.").

principal difficulty is that other forms of pollution, stench and noise and the like, can be measured by more nearly objective standards. If beauty, however, lies in the eyes of the beholder, so does the tawdry, the gaudy and the vulgar—and courts have traditionally taken a gingerly approach to legislation which circumscribes property rights by applying what amount to subjective standards, which may well be those of an idiosyncratic group.²²

Gradually, legislatures and courts became more accepting of billboard regulations. The federal Highway Beautification Act restricts the placement of billboards and other signs near interstate highways.²³ That 1965 law resulted from a campaign led by Lady Bird Johnson, and upon signing the statute, her husband Lyndon proclaimed that “[b]eauty belongs to all the people. And as long as I am President, what has been divinely given to nature will not be taken recklessly away by man.”²⁴ The Visual Pollution Control Act of 1990 would have further regulated billboards, though Congress declined to enact that law.²⁵ The regulation of billboards raises First Amendment issues because billboards contain speech, and much of the recent litigation has considered whether local regulations of billboards comply with the First Amendment’s standards.²⁶

This approach is seen in earlier efforts to address the aesthetic concerns of towers. “It is always interesting to observe the manner in which the courts deal with new inventions and apply old principles of law to new conditions.” That statement could summarize the reaction to the law governing cell phone towers, but it actually appeared in Edward Quinton Keasbey’s 1900 treatise entitled *The Law of Electric Wires in Streets and Highways*.²⁷ Telephone poles and wires, electric poles and wires, and trolley wires were all the subject of complaints—and litigation—concerning their aesthetic impacts. Or, as Keasbey put it, “a line of posts and wires often spoils the appearance of a pretty place.”²⁸

22. *Mayor & City Council of Balt. v. Mano Swartz, Inc.*, 299 A.2d 828, 833 (Md. 1973).

23. 23 U.S.C. § 131 (2000).

24. Lyndon B. Johnson, Remarks at the Signing of the Highway Beautification Act of 1965 (October 22, 1965), in *AMERICAN EARTH: ENVIRONMENTAL WRITING SINCE THOREAU* 398 (Bill McKibben ed., 2008); see also Flad, *supra* note 4, at 125 (referring to “the Highway Beautification Act, which was specifically enacted to curtail visual pollution along roadways”).

25. Visual Pollution Control Act of 1990, S. 2500, 101st Cong. (1990).

26. See, e.g., *Outdoor Media Group, Inc. v. City of Beaumont*, 506 F.3d 895 (9th Cir. 2007) (describing the First Amendment standards applicable to billboard ordinances).

27. EDWARD QUINTON KEASBEY, *THE LAW OF ELECTRIC WIRES IN STREETS AND HIGHWAYS* vii (1900).

28. *Id.* at 108. Keasbey also noted that “there are few, if any, decisions” involving telegraph lines before 1883 even though that technology had been employed since the 1840s. *Id.* at 97.

Telephone and electric systems were installed by public utilities that possessed the power of eminent domain. That allowed the utilities to decide where to locate their poles and wires. Some landowners tried to block the installation of unsightly poles and wires on their property, but the courts usually found that the placement was incident to the existing street or utility easements or otherwise authorized.²⁹ More litigation concerned the proper measure of compensation owed to those whose property was taken for the new systems. Specifically, numerous courts considered whether the aesthetic harm of the pole and wires was a compensable harm. The courts reached differing results.³⁰ Some courts held that the reduction in property value attributable to the unsightliness of the poles and wires was compensable.³¹ Other courts held the oppo-

29. See, e.g., *Palmer v. Larchmont Elec. Co.*, 52 N.E. 1092, 1095 (N.Y. 1899) (noting that "[i]t may be that some prejudice exists against wires strung on unsightly poles," but holding that the town was authorized to build them pursuant to the earlier construction of a highway); *Dayton v. City Ry. Co.*, 12 Ohio Dec. 258, 285 (Ohio Ct. Com. Pl. 1902) ("With rare unanimity the courts have concurred in holding that an electric street railway . . . is not an additional servitude upon the fee within the streets, but a legitimate use of the streets within the original general purpose of their dedication."); *Pelton v. E. Cleveland R.R. Co.*, 10 Dec. Reprint 545, 1889 WL 352, at *7 (Ohio Ct. Com. Pl. 1889) (admitting that electric trolley wires and poles "add nothing to the beauty of the street," but adding that "[o]ne of these poles is no more of an obstruction than a lamp post or an electric light post"). But see *Donovan v. Allert*, 91 N.W. 441 (N.D. 1902) (holding that a telephone company had not acquired the right to erect unsightly telephone poles on the plaintiff's property); *Krueger v. Wis. Tel. Co.*, 81 N.W. 1041 (Wis. 1900) (holding that the placement of a telephone pole is a new servitude). See generally KEASBEY, *supra* note 27, at 110-11 (summarizing the arguments on both sides).

30. *Kamo Elec. Coop. v. Cushard*, 416 S.W.2d 646, 651-55 (Mo. Ct. App. 1967) (discussing many of the cases on both sides and concluding that "the trend of authority is presently inclined to the view that the disfigurement of farms by unsightly power lines is a compensable element of damage").

31. See *Bd. of Trade Tel. Co. v. Darst*, 61 N.E. 398, 399 (Ill. 1901) (holding that the damage suffered by the property owner due to the unsightliness of the telegraph poles or structure was a proper element of his damages for loss of value to his property); *Cushard*, 416 S.W.2d at 648-50 (upholding a \$5,000 compensation award where about half of the damages were attributed to the aesthetic loss); *Union Elec. Co. v. Simpson*, 371 S.W.2d 673, 681 (Mo. Ct. App. 1963) (holding that jury allowed to consider any effect that the power lines would have had on value of owner's land, and thus allowed to consider that line would be unsightly); *Wadsworth Land Co. v. Charlotte Elec. Co.*, 88 S.E. 439, 440-41 (N.C. 1915) (holding that unsightliness of trolley wires and poles was a consideration in the depreciation in value of property); *Ohio Pub. Serv. Co. v. Dehring*, 172 N.E. 448, 449 (Ohio Ct. App. 1929) (holding that the unsightliness of towers and transmission lines may be considered in determining damages); *Anderson v. Phila. Elec. Co.*, 2 Pa. D. & C.2d 709, 713 (Pa. Ct. Com. Pl. 1953) (allowing compensation for the presence of the poles, though not merely their unsightliness); *Sw. Tel. & Tel. Co. v. Smithdeal*, 136 S.W. 1049 (Tex. 1911) (owner allowed to recover for loss of value to property for unsightly wires and poles); *Tex. Power & Light Co. v. Jones*, 293 S.W. 885, 886-87 (Tex. Civ. App. 1927) (owner could recover for damages caused to property because power lines are unsightly).

site.³² The Mississippi Supreme Court, for example, refused to compensate the residents of Bay St. Louis who complained that electric poles and wires interfered with their view of the Gulf of Mexico:

It is said the poles and wires of appellant are unsightly, and are a disfigurement to the property, and an especial injury in that it obstructs the open view of the sea. Similar erections in all cities and towns present, though perhaps in a less degree, like inconveniences to the owners of palatial residences, but disfigurements of this kind to property are not the subjects of compensation, or, if so, they are conclusively presumed to have been paid for upon the opening of the street and its dedication to public use.³³

Another court even contended that "[s]ince the advent of rural electrification, many farms have transmission lines traversing them and instead of being unsightly, many prospective buyers of farms regard them as evidence that an abundance of electric power is manifest."³⁴

Several property owners claimed that the aesthetic harms produced by telephone or electric systems constituted a nuisance. In 1881, the New York Attorney General filed a nuisance suit against "huge telegraph poles, of a size and clumsiness such as has been rarely seen outside of the Maine woods in which they got their growth."³⁵ One Louisiana court ordered the removal of ten-foot posts that were "unsightly, interfere with and are a menace to the full and free use of the sidewalk and prevent the planting of trees and grass" by the sidewalk.³⁶ But most courts refused to hold that the unsightliness of the poles or wires resulted in a nuisance.³⁷

Detroit residents took a different approach. When the city authorized a new electric street railway system, the neighbors "cut[] down the poles, and threatened to continue to do so."³⁸ The railway then sought an injunction against the actions of the neighbors. The Michigan

32. See *Ill. Power & Light Corp. v. Barnett*, 170 N.E. 717, 719 (Ill. 1930) (holding that unsightliness of towers is not a proper element of damage to land); *Ill. Power Co. v. Wieland*, 155 N.E. 272, 274 (Ill. 1927) (holding unsightliness of poles for electric wires is not a proper element of damage); *Kamo Elec. Coop. v. Brooks*, 337 S.W.2d 444, 451 (Mo. Ct. App. 1960) (denying compensation for aesthetic harms but suggesting that it might be forthcoming if the property hosted "an amusement park, cemetery, campus, institutional grounds, club grounds, school or hospital lawns, garden or a beautified estate, or the like"); *Shinzel v. Bell Tel. Co. of Phila.*, 31 Pa. Super. 221, 226 (Pa. Super. Ct. 1906) (unsightliness of poles do not constitute a special injury for which damages can be recovered).

33. *Gulf Coast Ice Mfg. Co. v. Bowers*, 32 So. 113, 114 (Miss. 1902).

34. *Salt River Rural Elec. Coop. v. Thurman*, 275 S.W.2d 780, 782 (Ky. 1955).

35. *The Unsightly Telegraph Poles. Suit by the Attorney-General to Remove the Pine-Street Obstructions*, N.Y. TIMES, Mar. 1, 1881, at 3 (referring to the telegraph poles as "these huge, ugly excrescences").

36. *Viering v. N.K. Fairbanks Co.*, 14 Teiss. 130, 1916 WL 1706, at *2 (La. Ct. App. 1917).

37. See *City of Passaic v. Pub. Serv. Corp. of N.J.*, 73 A. 122 (N.J. Ch. 1909).

38. *Detroit City Ry. v. Mills*, 48 N.W. 1007, 1008 (Mich. 1891).

Supreme Court approved the requested remedy, albeit by a 3-2 vote. The majority was dismissive of the neighbors' aesthetic complaints about the poles: "If it be said they are unsightly, and therefore offend his taste, it can well be replied that they are no more so than the lamp-post or the electric tower."³⁹ One dissenter responded that "poles may be so thickly planted along our sidewalks as even to exclude light and air from our dwellings, and yet we shall have no remedy."⁴⁰

Over time, municipalities began to object to the aesthetics of telephone and electric poles and wires. They enacted prohibitions against such poles and wires or required them to be located in less intrusive places.⁴¹ The utilities objected to those laws, and more litigation resulted.⁴² Sometimes the courts forced the use of underground wires themselves. In 1894, for example, a local court held that "[t]he city of Cleveland should maintain its wires in conduits underground" because the "large and unsightly poles erected . . . in front of the residences of the plaintiffs, thus marring and in a measure destroying the beauty of a beautiful avenue," was not a reasonable exercise of the city's authority.⁴³ Eventually, technological developments helped the aesthetic cause. Once underground wires became available, cities and courts required them instead of the objectionable above-ground systems.⁴⁴

39. *Id.* at 1012.

40. *Id.* at 1018 (Morse, J., dissenting).

41. See generally KEASBEY, *supra* note 27, at 57-58 (summarizing the municipal power to regulate poles and wires).

42. See *Vill. of Jonesville v. S. Mich. Tele. Co.*, 118 N.W. 736 (Mich. 1908); *City of Plattsmouth v. Neb. Tel. Co.*, 114 N.W. 588, 591 (Neb. 1908) (holding that a city ordinance requiring underground wires exceeded the government's police power); *Castle v. Bell Tel. Co. of Buffalo*, 61 N.Y.S. 743, 745-46 (N.Y. Sup. Ct. 1899) (concluding that "public and private interests would be greatly promoted by" requiring underground wires instead of "unsightly telephone and telegraph poles"); *Am. Rapid Tel. Co. v. Hess*, 12 N.Y.S. 536 (N.Y. Gen. Term 1890) (upholding a New York City ordinance requiring the removal of unsightly telegraph poles and wires and their replacement underground); *Duq. Light Co. v. City of Pitt.*, 97 A. 85, 89 (Pa. 1916) (sustaining a Pittsburgh ordinance requiring underground wires to avoid "the unsightly disfigurement of the streets"); *Appeal of Bell Tel. Co.*, 10 A.2d 817, 820 (Pa. Super. Ct. 1940) (noting that "[t]he esthetic features are not to be entirely ignored" in upholding a borough ordinance requiring underground wires); see also *Mut. Union Tel. Co. v. City of Chi.*, 16 F. 309, 315 (C.C. N.D. Ill. 1883) (opining "[t]here must be a power, I think, somewhere" for city authorities to remove and "put an end to such unsightly obstructions as these [telegraph] poles and wires [that] are now in our streets"); *Greenville Gas, Elec. Light, Power & Fuel Co. v. City of Greenville*, 130 N.W. 333, 334 (Mich. 1911) (describing a city ordinance prohibiting overhead electric wires and poles because they were unsightly).

43. *Prentiss v. Cleveland Tel. Co.*, 1 Ohio Dec. 79, 1894 WL 1374, at *2-*3 (Ohio Ct. Com. Pl. 1894).

44. See *City of Monroe v. Postal Tel. Co.*, 162 N.W. 76 (Mich. 1917) (upholding a city ordinance requiring telegraph wires to be removed from poles and placed underground).

II. CELL PHONE TOWERS

Motorola's Martin Cooper is credited with inventing the first portable telephone in 1973.⁴⁵ A trial of the first cellular system linked 2,000 customers in Chicago in 1978.⁴⁶ Since then, the number of cell phones has increased dramatically to 34 million in 1995, 159 million in 2004, and now 270 million.⁴⁷

Cell phones and other personal wireless services depend on the transmission of radio signals. The easiest—and cheapest—way to transmit those signals is from antennas that are placed on towers. The antennas must be placed on high towers because wireless technology is relatively low-powered and requires a line-of-sight to the next tower. Coverage within an area is maintained by arranging antennas in a honeycomb-shaped grid, from which the term "cell" originates. A phone call is transferred from one tower's coverage area to another as a phone user travels. Providers want to increase the number of cells and decrease the geographic coverage of each cell in order to increase the quality of service and therefore attract subscribers. The coverage area of each cell determines the most desirable tower locations. Antennas may be located on existing towers, light poles, or roof tops in urban areas, but new towers must be built outside of cities in order to achieve continuous wireless service. Additionally, towers are expensive, so providers have an incentive to build as few as possible.⁴⁸

Several harms are attributed to cell phone towers, including health impacts from electromagnetic fields, safety, harm to wildlife, and loss of property value. The most common complaint is aesthetic. As one court observed, "Few people would argue that telecommunications towers are aesthetically pleasing."⁴⁹ Many people object to the sight of a tower or to

45. See Mary Bellis, *Selling the Cell Phone: Part 1: History of Cellular Phones*, <http://inventors.about.com/library/weekly/aa070899.htm>.

46. See *id.*; Thomas A. Wikle, *Cellular Tower Proliferation in the United States*, 92 GEOGRAPHICAL REV. 45, 49 (2002).

47. See U.S. CENSUS BUREAU, THE 2009 STATISTICAL ABSTRACT: THE NATIONAL BOOK tbl.1112 (2008), <http://www.census.gov/compendia/statab/tables/09s1112.pdf>; Wikle, *supra* note 46, at 47; Associated Press, *Group: Ban All Cell-Phone Use by Drivers*, CHI. TRIB., Jan. 12, 2009, at A3 (reporting that there are 270 million cell phone users in the United States).

48. For the basics of cell phone technology, see, e.g., Wikle, *supra* note 46, at 54; see also *Voice Stream PCS I, LLC v. City of Hillsboro*, 301 F. Supp. 2d 1251 (D. Or. 2004); David W. Hughes, *When NIMBY's Attack: The Heights to Which Communities Will Climb to Prevent the Siting of Wireless Towers*, 23 J. CORP. L. 469, 478–86 (1998).

49. *Sw. Bell Mobile Sys. v. Todd*, 244 F.3d 51, 61 (1st Cir. 2001); see also *Am. Bird Conservancy v. Fed. Comm'n's Comm'n*, 545 F.3d 1190, 1195 (9th Cir. 2008) (dismissing a lawsuit alleging that cell phone towers were killing endangered Hawaiian petrel and Newall's shearwaters); *PrimeCo Pers. Comm'n's, Ltd. P'ship v. City of Mequon*, 352 F.3d 1147, 1149 (7th Cir. 2003) ("The unsightliness of the antenna and the adverse effect on property values that is caused by its unsightliness are the most common concerns," while environmental and safety effects are sometimes cited as well.).

a tower's interference with their preexisting view. But it is hard to be too precise about the nature of the aesthetic harm. The most common complaint is that cell phone towers are so different—and taller—than other features of the landscape. The emphasis upon the contrast between a tower and the existing landscape makes the harm depend upon where a tower is located. Commercial districts and areas with tall buildings or other structures are generally regarded as places where the aesthetic impact of a cell phone tower is least, while the harm is greatest in residential communities, historic sites, parks, forests, hillsides, or wilderness areas. Some observers have also cited the metallic character of most towers as producing an industrial or even "intergalactic" appearance.⁵⁰

Cellular providers do not enjoy the power of eminent domain, unlike the utilities that built telephone and electric systems a century ago. Instead, cell phone providers must persuade—and pay—private or public landowners to allow a tower on their property. That makes the paid property owner happy, but it leaves the neighboring individuals and businesses to suffer the externality—the pollution—of the aesthetic harms. Those neighbors often turn to their local governments, who have become adept at employing zoning law and other regulations to achieve aesthetic ends. The efforts to combat the aesthetic harms mirror the efforts to combat other types of pollution, though with some unique twists.

A. *Responding to the Visual Pollution of Cell Phone Towers*

Recall the three responses to pollution claims: tolerance, prevention, and avoidance.⁵¹ Tolerance is an obvious response to the presence of cell phone towers. Aesthetic harms are real, but they are perhaps the least serious and most subjective of all of the harms associated with pollution claims. An ugly cell phone tower does not expose people or wildlife nearby to any toxic chemicals, nor does it interfere with most uses of one's property or other activities, nor has anyone lodged any moral objections to cell phone towers. Aesthetic harms are especially subjective, though distaste with the sight of cell phone towers is widespread. And when people object to the sight of cultural pollution in the form of pornographic movies displayed at drive-in theaters, the typical response has been to encourage those who are offended to avert their eyes or to simply be more tolerant.

50. See Robert Long, Note, *Allocating the Aesthetic Costs of Cellular Tower Expansion: A Workable Regulatory Regime*, 19 STAN. ENVTL. L.J. 373, 390 (2000) (describing cell phone towers as "industrial-looking, metallic structures"); see also Hughes, *supra* note 48, at 497 (noting that "[t]he metallic composition of these towers further compounds the visual contrast"); B. Blake Levitt, *Cell-Phone Towers and Communities: The Struggle for Local Control*, ORION AFIELD, Autumn 1998, at 32, 33 (referring to the "intergalactic look" of cell phone towers).

51. See *supra* text accompanying notes 8–9.

Toleration is an especially appropriate response to claims of visual pollution because the harm is generally less than other kinds of pollution and the harm is more subjective. Virginia Postrel sees the battle against the visual pollution of cell phone towers as the latest confirmation of Ronald Coase's insight "that pollution is not a simple matter of physical invasion or evil-doing. It is a byproduct of valuable actions."⁵² Postrel explicitly calls for "tolerance" of cell phone towers and other forms of visual pollution because "[e]nforcing taste means blocking experimentation," and because we can simply avert our eyes from the offending structure (just like drive-in movies).⁵³ Postrel also contends that "since we tend to become used to our surroundings over time, it becomes easier and easier to ignore visual offenses. Sometimes we even come to enjoy sights we once found annoying."⁵⁴ There is ample precedent to support this call for toleration of cell phone towers. One geographer insists that "[t]he majority of Americans who use and value cell phones seem willing to overlook the visual impacts of towers," just as they have done with barbed wire, electric wires, and telephone poles.⁵⁵ The experience with these other structures suggests that it is likely that people will grow accustomed to the sight of cell phone towers if they persist in coming decades; the intolerance for cell phone towers could be a temporary phenomenon.

Pollution prevention may be another viable response to the visual pollution of cell phone towers. In this context, prevention means retaining the benefit of cell phone coverage without experiencing the externality of aesthetic harms. So far, the prevention of those harms has been difficult because we want cell phones to work as we move from one area to another. Cell phone providers satisfy these popular desires by designing a honeycomb of cells, each containing a tower that transmits the radio signals necessary for communication via cell phone. Each provider, moreover, needs its own antenna to transmit its customers' signals, and usually that means that each provider needs its own tower. Multiple towers for each provider can be avoided by "co-location"—the placement of multiple antennas on a single tower—and the resulting elimination of the need to build a new tower eliminates the additional visual pollution that a new tower would cause. Co-location is not always possible,

52. Virginia Postrel, *Economic Scene: When it Comes to Enforcing Taste, It's Best to Tread Lightly—If at All*, N.Y. TIMES, July 13, 2000, at C2.

53. *Id.*

54. *Id.*

55. Wikle, *supra* note 46, at 56. Wikle cites Pierce F. Lewis, *Aesthetic Pollution: When Cleanliness Is Not Enough*, 52 PUB. MGMT. 8 (1970), for the proposition that "the frontier philosophy of Americans has led to acceptance of landscape elements viewed as functional, such as barbed wire." Cellular providers have made the same argument. See *Sprint Spectrum Ltd. P'ship v. Parish of Plaquemines*, No. Civ.A. 01-0520, 2003 WL 193456, at *17 (E.D. La. Jan. 28, 2003) (reporting the testimony of a Sprint official who "observed that in his experience the towers tend to lose their identity and blend into the landscape over time").

though, because of leasing disputes between providers and because of the electrical interference that can occur from placing antennas too close together.⁵⁶

Prevention thus requires a technological development that provides phone coverage without towers that loom over the landscape. One township tried to justify a moratorium on new cell phone towers pending the necessary "rapidly advancing technologies in wireless telecommunications."⁵⁷ The court overturned the moratorium, though, because while satellite technology or other developments could make cell phone towers obsolete, "the use of communications towers and antennas is still the most prevalent and realistic technology in the industry at the present time."⁵⁸ Femtocells are the next, best hope for reducing the need for cell phone towers. A femtocell is the size of an ordinary home internet router and operates like a mini-cell phone tower that boosts the cellular provider's existing signal for better use inside a home. Sprint began offering nationwide femtocell service in August 2008. Cellular providers would benefit from femtocells "by being able to offload traffic from their main networks, saving the substantial cost of building more cell phone towers."⁵⁹ If that actually happens, then fewer cell phone towers are necessary and the visual pollution associated with cellular service may be prevented. The ability to prevent that pollution may also persuade courts to uphold laws requiring such prevention, just as the courts began to uphold laws restricting telephone and electric poles once underground wiring became feasible.⁶⁰

While toleration and prevention each hold promise, avoidance remains the most frequently employed response to the aesthetic complaints about cell phone towers. This strategy accepts that cell phone towers will exist and that people will object to them, so it works to prevent the objecting parties from being harmed. One way of doing that is treatment. For environmental pollutants, treatment means altering the chemical composition of the pollutant so that it is no longer harmful, as is frequently done in municipal wastewater treatment plants. For visual pollution, treatment refers to efforts to diminish the aesthetic impact of a

56. See Long, *supra* note 50, at 386-87 (describing co-location).

57. APT Minneapolis, Inc. v. Stillwater Twp., No. 00-2500 (JRT/FLN), 2001 WL 1640069, at *11 (D. Minn. June 22, 2001).

58. *Id.*

59. Ed Sutherland, *Femtocell FAQ: Is It Time for Your Own "Personal Cell-Phone Tower"? Cell-Service Miracle or Mirage? We Answer 18 Burning Questions About Femtocell Technology*, COMPUTERWORLD MOBILE & WIRELESS, Nov. 19, 2008, <http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=9118798>; see also Roger O. Crockett, *A Cell Phone Tower in Your Living Room? Wireless Operators Want to Sell You a Toaster-Size Box That Will Improve Service—And Cut Their Costs*, BUS. WK., Nov. 10, 2008, at 56.

60. See *supra* in text at notes 55-57 above.

cell phone tower. For example, Gwinnett County in suburban Atlanta prescribes that towers

- shall either maintain a galvanized steel or concrete finish . . . or be painted a neutral color so as to reduce visual intrusiveness
- use materials, colors, textures, screening, and landscaping that will blend the tower facilities to the natural setting and building environment
- shall not be artificially lighted unless otherwise required (say by the Federal Aviation Administration), or
- include any commercial signage.⁶¹

These provisions are intended to accomplish the goals of the county's Telecommunications Tower and Antenna Ordinance, including "the design and construction of towers and antennas to minimize adverse visual impacts."⁶²

Camouflage represents a more aggressive approach to treating the visual pollution of cell phone towers. Cellular providers have disguised towers as flag poles, church steeples, light poles, chimneys, trees, silos, lighthouses, cacti, and bird nests. Towers have also been attached to existing structures, such as church steeples, buildings, chimneys, gas station signs along interstates, electricity poles, and clock towers.⁶³ There is also one case involving "an 80-foot tower designed to look like a ship's mast or a flagpole in a boyard in Manchester harbor."⁶⁴ The goal of these disguises is to transform cell phone towers into sights that are aesthetically innocuous, or even pleasing. The polluting vision is thus rendered harmless in much the same way that various environmental pollutants are treated to eliminate their toxic effects. But such camouflaging techniques are not always successful. In the Manchester harbor case, the local planning board objected to the tower because, as one member put it, "the proposed tower looked like an 80-foot smoke-stack."⁶⁵ Cellular providers sometimes object to camouflaging, too,

61. GWINNETT COUNTY, GA., CODE OF ORDINANCES ch. 108, art. 3, div. 4, § 108-55 (Municode through Oct. 21, 2008 ordinance).

62. *Id.* div. 1, § 108-31.

63. See Vince Vittore, *Crouching Market, Hidden Towers*, WIRELESS REV., Nov. 1, 2002, at 20, available at http://telephonyonline.com/wireless/towers/wireless_crouching_market_hidden/ (describing the development of cell tower camouflaging); Hughes, *supra* note 48, at 498-99 (describing camouflage techniques); Larson Camouflage Division, <http://www.utilitycamo.com/sites.html> (providing photos of camouflaged towers). A formal definition of "[c]amouflage design or camouflage tower" is "the design of a tower or tower structure that blends into the surrounding environment and is visually unobtrusive." HOUSTON, TX., CODE OF ORDINANCES ch. 41, art. 3, § 41.50 (Municode through Jan. 7, 2009 ordinance).

64. *Nextel Commc'ns of the Mid-Atl., Inc. v. Manchester-by-the-Sea*, 115 F. Supp. 2d 65, 68 (D. Mass. 2000).

65. *Id.* at 71. Another member of the planning board agreed "that the tower would not look like a mast." *Id.* On the other hand, the state historical commission

because it is much more expensive than simply building a regular metallic tower.⁶⁶ All pollution control is expensive, though, so it would be surprising if controlling visual pollution was the exception.

B. *Regulating the Location of Cell Phone Towers*

The most common way of avoiding the aesthetic harms of cell phone towers, and the most common response to those harms generally, is to place the towers where they are least objectionable. Initially, this separation strategy may be achieved by voluntary actions. Providers often seek to build towers away from any residential neighborhoods simply to avoid the controversy that is likely to ensue. For their part, residential neighborhoods can establish private covenants that forbid the location of cell phone towers on their property. Covenants forbidding a wide range of activities or structures have become a staple of new subdivisions, and they are easily employed to block the siting of a tower by current and future owners of the land. The first case to enforce a restrictive covenant to exclude a cell phone tower arose on land in Westchester County, New York, that was subject to a covenant prohibiting anything besides a single-family home. The New York Court of Appeals rejected the provider's claims that the enforcement of the covenant would violate the Federal Telecommunications Act (TCA) or generalized interests in public policy. The court reached that result even though the tower had already been built, and thus the court's decision ordered the removal of the tower within "a reasonable period of time."⁶⁷ In another case, a Florida state court ordered the demolition of a tower built on land that had been conveyed to the city "solely for passive park purposes."⁶⁸

concluded that "the stealth pole will be designed to blend in with the ships' masts in the marina," and therefore it would "have no adverse effect on the Manchester Village National Register Historic District and the Manchester Historic District." *Id.* at 69. You can decide for yourself who is right by looking at the photo at <http://www.necellularsites.net/Mass.htm>.

For similar competing views of cell phone towers that are disguised as flag poles, compare Edward C. Fennell, *POST & COURIER* [CHARLESTON, S.C.], Oct. 23, 2003, at 1C (describing the compliments for "a giant version of Old Glory visible for miles away from a 140-foot pole that almost nobody knows is also a cell-phone tower") with *Sprint Spectrum Ltd. P'ship v. Bd. of Zoning Appeals*, 244 F. Supp. 2d 108, 115 (E.D.N.Y. 2003) (opining that "it is reasonable for many residents to find camouflaging a monopole as a flagpole flying an American flag to be offensive").

66. See Hughes, *supra* note 48, at 499 (providing data on the cost of camouflaging cell phone towers circa 1998).

67. *Chambers v. Old Stone Hill Rd. Assocs.*, 806 N.E.2d 979, 984 (N.Y. Ct. App. 2004). I discuss the TCA *infra* Part II.C. See also *Burke v. Voicestream Wireless Corp.*, 87 P.3d 81 (Ariz. Ct. App. 2004) (enforcing a covenant that prohibited a cell phone tower built on a church).

68. *AT&T Wireless Servs. of Fla. v. WCI Cmty's., Inc.*, 932 So.2d 251, 253 (Fla. Dist. Ct. App. 2005).

Nuisance law is the traditional means of separating conflicting use of the land, including pollution claims. The plaintiffs in one nuisance case blamed a cell phone tower for straining the marriage of one couple and forcing another family to move because the tower was "'offensive,' 'overbearing,' that it clearly did not fit in place with the surrounding flora, and that he 'felt [his] dream house was shattered by this monstrosity.'"⁶⁹ But the judge visited the site and concluded that the tower "simply cannot be found without the assistance of a guide," and "it would be difficult to imagine being able to see this pole even in the dead of winter."⁷⁰ The court thus dismissed the nuisance claim because "[n]o harm occurred here, nor could it be plausibly so alleged."⁷¹ Most other nuisance cases involving the aesthetics of cell phone towers have failed as well.⁷²

Separation is usually achieved by the existing tools of municipal zoning laws and land use regulations. The standard zoning law contains restrictions on the height of structures, requirements that structures be set back a certain distance from the property's boundary, and designations upon which uses are permissible in each area. Zoning law further authorizes conditional uses and special exceptions that operate to allow certain structures only upon a showing of need and the absence of harm. Each of these provisions has been applied to cell phone towers. The typical tower is over one hundred feet tall, and the ideal place for a tower that best serves its purpose might be close to the property line or in a residential area or an environmentally sensitive location, so providers often struggle to gain the permission of local zoning authorities to build a new cell phone tower.⁷³

69. *Littlefield v. Zoning Bd. of Appeals*, No. 03CV1816F, 2007 WL 3258779, at *1 (Mass. Super. Ct. Sept. 25, 2007).

70. *Id.* at *1 & n.1.

71. *Id.* at *2.

72. See generally Gregory H. Birne, Annotation, *Tower or Antenna as Constituting Nuisance*, 88 A.L.R. 5th 641 (2004) (citing cases). Other nuisance cases target the noises emitted from cell phone towers. See *Cal. RSA No. 4 v. Madera County*, 2331 F. Supp. 2d 1291 (E.D. Cal. 2003) (holding that noise from a cell phone tower did not constitute a nuisance); *GTE Mobilnet of S. Tex. Ltd. P'ship v. Pascouet*, 61 S.W.3d 599 (Tex. Ct. App. 2001) (upholding a jury finding of nuisance based upon the noise and glaring lights from a 126-foot cell phone tower located on municipal land near a residential area).

73. Representative cases include *T-Mobile USA, Inc. v. County of Hawai'i Planning Comm'n*, 104 P.3d 930 (Haw. 2005) (holding that a special use permit was not needed to place an antenna in a fake chimney); *Sprint Spectrum, Ltd. P'ship v. Zoning Bd. of Adjustment*, 823 A.2d 87, 99 (N.J. Super. Ct. App. Div. 2003) (reversing the denial of a variance because, inter alia, the company had minimized the aesthetic impact of the antennas); *AT&T Wireless Servs. v. City of Streetsboro*, No. 97-P-0070, 1998 WL 813834, at *7 (Ohio Ct. App. June 26, 1998) (reversing the denial of a conditional use permit that relied "solely [on] statements made by nearby landowners expressing general concerns about aesthetic deterioration in the area," lowered property values, and health risks); *In re Shaw*, 945 A.2d 919 (Vt. 2008) (upholding the issuance of a conditional use

A recent Kansas City case is illustrative. T-Mobile wanted to build a 120-foot cell phone tower in Kansas City, Kansas. To do so, it needed a special permit, which would be forthcoming only after considering, *inter alia*, the effect of the tower on "[t]he character of the neighborhood" and "visual quality."⁷⁴ The city code also expressed a preference for locating cell phone towers in commercial districts rather than residential districts. The local board denied the application in part because the tower would be located in a residential district and because it "would be 'the tallest structure in the area' and 'may be considered unsightly by many.'"⁷⁵

Some municipalities have expanded upon their general zoning provisions by specifying which places are acceptable and which places are unacceptable for cell phone towers. For example, San Diego County's 2003 Wireless Telecommunications Facilities ordinance divides tower applications "into four tiers, depending primarily on the visibility and location of the proposed facility," and then it imposes more stringent aesthetic requirements upon proposals in residential areas than in industrial areas.⁷⁶ Towers located in residential areas must be camouflaged and they are subject to height and setback restrictions. The applicant for a permit to build a cell phone tower must prepare a "visual impact analysis," and the tower "must meet many design requirements, primarily related to aesthetics."⁷⁷

C. *The Federal Telecommunications Act of 1996*

The cumulative effect of such local ordinances has been extremely effective in restricting the location of cell phone towers. Zoning authorities often heed the objections that their constituents have voiced to the presence of a cell phone tower in their neighborhood, just as I experienced in my suburban community. One of my Notre Dame physics department colleagues was quoted in the local newspaper describing "[v]isual pollution of the scenery" as "a much bigger worry. I certainly wouldn't want one in my back yard."⁷⁸ One cannot imagine a clearer

permit for a cell phone tower); *Cingular Wireless v. Thurston County*, 129 P.3d 300 (Wash. Ct. App. 2006) (affirming the denial of a special use permit).

74. *T-Mobile Central, LLC v. Unified Gov't of Wyandotte County*, 546 F.3d 1299, 1304 (10th Cir. 2008) (quoting WYANDOTTE COUNTY-KANSAS CITY, KAN., CODE OF ORDINANCES ch. 27, art. 4, § 27-214(l)(5), art. 8, div. 6, § 27-593(a)(30)).

75. *Id.* at 1305.

76. *Sprint Telephony PCS, Ltd. P'ship v. County of San Diego*, 543 F.3d 571, 574 (9th Cir. 2008) (en banc) (describing the ordinance and rejecting a TCA challenge to it).

77. *Id.*; see also *Celco P'ship v. Town of Grafton*, 335 F. Supp. 2d 71, 75-76 (D. Mass. 2004) (prescribing a descending order of preferences for cell phone towers built on existing structures, where screening already exists, in commercial districts, on government or educational structures, or finally in residential districts).

78. Porter, *Communications Towers*, *supra* note 2, at B1.

statement of the NIMBY—"not in my back yard"—response that characterizes many complaints about pollution. Zoning law empowers local authorities with broad discretion to regulate such visual pollution. So much discretion, in fact, that cellular providers worry that the industry will never achieve its potential "if NIMBYs and local governments are allowed to bottleneck growth."⁷⁹

So Congress intervened to recalibrate the balance between the municipal zoning control of cell towers and the broader demand for cell phone coverage. The Telecommunications Act of 1996 (TCA) sought to provide "a pro-competitive, de-regulatory national policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services to all Americans by opening all telecommunications markets to competition."⁸⁰ Most of the law's provisions were designed to deregulate telephone service, though the law also regulated television station ownership and encouraged the installation of the V-chip technology that was seen as a solution to the claims of violent entertainment and pornography as cultural pollution. The TCA's treatment of cell phone towers is buried in § 332(c)(7). Entitled "Preservation of Local Zoning Authority," section 332(c)(7) is a compromise provision that acknowledged the concerns that local zoning decisions were creating a patchwork of requirements that impeded the development of wireless communications while recognizing legitimate local concerns about the siting of cell phone towers. The section strives to achieve the appropriate balance by imposing several substantive and procedural requirements for local zoning regulation of cell phone towers. For example, denial of permission to build a tower must be in writing, supported by "substantial evidence contained in a written record," and must neither "unreasonably discriminate" among providers nor effectively prohibit personal wireless services.⁸¹ Moreover, cell phone towers cannot be prohibited based upon the alleged environmental

79. Hughes, *supra* note 48, at 476; see also *id.* at 471 ("[Z]oning boards ignore their limited authority . . . to reject tower siting applications based on unsubstantiated myths that wireless towers and antennas are . . . eyesores."); Long, *supra* note 50, at 409 ("[A] coalition of localities bent on preventing cell towers could burden society with a negative externality by hoarding aesthetic resources at the expense of cellular customers."); Vittore, *supra* note 63, at 21 ("[T]here are about 37,000 different zoning authorities in the U.S. that have the ability to stall the construction of wireless towers.").

80. H.R. REP. NO. 104-458, at 1 (1996) (Conf. Rep.), *reprinted in* 1996 U.S.C.C.A.N. 10, 124.

81. See 47 U.S.C. § 332(c)(7)(B) (2000); *City of Rancho Palos Verdes v. Abrams*, 544 U.S. 113, 115-16 (2005) (summarizing the TCA's provisions governing municipal regulation of cell phone towers).

effects of their electronic emissions, "to the extent such facilities comply with the Commission's regulations concerning such emissions."⁸²

These provisions have generated extensive litigation as providers have challenged the unfavorable decisions of local zoning authorities. Much of that litigation has focused upon the meaning of the "substantial evidence" requirement, especially as it applies to aesthetic concerns. While there has been some dispute about the meaning of "substantial evidence," most courts agree that the TCA adopts the traditional understanding of substantial evidence in other contexts. That means the standard is "less evidence than a preponderance, but more than a scintilla of evidence. 'It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.'"⁸³

The TCA thus requires substantial evidence to support a local government's refusal to permit the construction of a cell phone tower. But substantial evidence of *what*? How does a local government show—or a cellular provider contest—that there is substantial evidence that a proposed cell phone tower will result in an aesthetic harm? Cellular providers have occasionally suggested that aesthetic harm can never yield substantial evidence, which would disqualify local governments from relying upon aesthetics to reject a proposed cell phone tower.⁸⁴ That extreme argument has failed in court,⁸⁵ but it leaves the nature of the relevant aesthetic evidence unresolved. Several types of evidence have been proffered: photos of the site, reports on nearby building and structures, and especially the complaints of neighboring individuals. Again, though, the challenge is to transform that evidence into a conclusion

82. See 47 U.S.C. § 332(c)(7)(B)(iv); see also *Sprintcom, Inc. v. P.R. Regulations & Permits Admin.*, 553 F. Supp. 2d 87 (D.P.R. 2008) (overturning a permit denial based upon the effects of electronic emissions).

83. *MetroPCS, Inc. v. City & County of S.F.*, 400 F.3d 715, 725 (9th Cir. 2004) (quoting *Cellular Tel. Co. v. Town of Oyster Bay*, 166 F.3d 490, 494 (2d Cir. 1999)); see also Stephanie E. Niehaus, Note, *Bridging the (Significant) Gap: To What Extent Does the Telecommunications Act of 1996 Contemplate Seamless Service?*, 77 NOTRE DAME L. REV. 641 (2002) (discussing the debate over the TCA's substantial evidence standard).

84. See *Sprint Spectrum Ltd. P'ship v. Parish of Plaquemines*, No. Civ.A. 01-0520, 2003 WL 193456, at *12 (E.D. La. Jan. 28, 2003) (describing Sprint's argument that allegations that a cell phone tower is unsightly are "information," not "evidence"); Timothy J. Tryniecki, *Cellular Tower Siting Jurisprudence Under the Telecommunications Act of 1996—The First Five Years*, 37 REAL PROP. PROB. & TR. J. 271, 282 (2002) ("Upon a first reading of the TCA, aesthetics now should be absolutely irrelevant, in that virtually no one would argue that even the best designed cellular tower is aesthetically positive.").

85. See, e.g., *Preferred Sites, LLC v. Troup County*, 296 F.3d 1210, 1219 (11th Cir. 2002) ("Aesthetic concerns may be a valid basis for denial of a permit if substantial evidence of the visual impact of the tower is before the board."); *Comm. for Reasonable Regulation of Lake Tahoe v. Tahoe Reg'l Planning Agency*, 311 F. Supp. 2d 972, 989–90 (D. Nev. 2004) ("Under the Telecommunications Act, substantial evidence may take the form of aesthetic information and judgment as long as it is apparent that aesthetic judgment is not a pretext for a particular decision.").

about aesthetics. The clearest photo, the most detailed report, and the most thoughtful comment must still rely upon some standard to judge what is aesthetically acceptable and what is not. The persuasive force of individual aesthetic objections has been particularly contested. In one case, seven residents complained that a proposed cell phone tower would (1) block the view of Mount Rainier, (2) "be an eyesore [and] cause our town to lose its reputation as a . . . beautiful community," (3) be a "hideous huge 100-foot piece of steel being placed in my space" where it would "substantially dominate and diminish the scenic beauty of my view of the forest . . . and my skyline view," (4) be a "monstrosit[y]" that "defaces the community," (5) be "an eyesore" that would turn off tourists, (6) be "the start of a huge monster" that would change the character of the community, and (7) defeat the community's efforts to remove power lines and telephone lines.⁸⁶ The town relied upon such claims to deny a permit for the tower. But the court dismissed the complaints of the residents as "no more than individualized aesthetic opinions, not based on any fixed standards adopted by the town."⁸⁷ The court added that "[a]s 'beauty is in the eye of the beholder,' 'adverse impacts' are also in the eye of the beholder," and the town failed to adopt any standards by which to judge those proposals that would infringe upon "the town's desire to maintain its scenic beauty and views."⁸⁸

Cases like that show why the TCA has probably generated more land use litigation since 1996 than any other federal statute.⁸⁹ That litigation has produced a roughly even number of cases in which providers win or local officials win. Several patterns emerge from these cases, with courts emphasizing distinct features of a location depending upon whether they find that local governments have complied with the TCA or not.⁹⁰

86. *W. PCS BTA Corp. v. Town of Steilacoom*, No. C98-5664RJB, 1999 U.S. Dist. LEXIS 9068, at *14-*17 (W.D. Wash. Apr. 20, 1999).

87. *Id.* at *17.

88. *Id.* at *12-*13.

89. I say "probably" because my claim is based upon a casual review of reported cases for purposes of describing current developments in property law and environmental law. See J.B. RUEL ET AL., *THE PRACTICE AND POLICY OF ENVIRONMENTAL LAW* 1261-68 (2008) (discussing the TCA); JAMES CHARLES SMITH ET AL., *PROPERTY: CASES & MATERIALS* 737-40 (2d ed. 2008) (same). The only close competitors are the wetlands provisions of the Clean Water Act, 33 U.S.C. § 1344 (2000 & Supp. V 2006), and RLUIPA's restrictions on local government regulation of religious land uses, 42 U.S.C. § 2000cc(b)(1) (2000). It is also telling that the first TCA challenge to a municipal cell phone tower decision was filed five days after the law went into effect. See Susan Lorde Martin, Comment, *Communications Tower Sitings: The Telecommunications Act of 1996 and the Battle for Community Control*, 12 BERKELEY TECH. L.J. 483, 493 (1997) (citing *Sprint Spectrum Ltd. P'ship v. City of Medina*, 924 F. Supp. 1036 (W.D. Wash. 1996)).

90. These cases show three trends: compliance with a zoning ordinance favors providers, specific factual evidence of a tower's likely effects is especially valuable, and

The courts have relied on several propositions in overturning local zoning decisions denying permission for cell phone towers when those zoning decisions have been driven by aesthetic objections. First, it is well established that "generalized concerns about aesthetics are insufficient to constitute substantial evidence."⁹¹ As Judge Posner explained, "If blanket opposition to poles could count as sufficient evidence for denying an application to build an antenna, the substantial-evidence provision of the Telecommunications Act would be set at naught."⁹² Conclusory allegations about the appearance of a cell phone tower are not sufficient either.⁹³ Statements that rely upon a misunderstanding of a proposed tower do not count.⁹⁴ An inaccurate model of what a tower would look

towers are more likely to be excluded from residentially zoned areas than other areas. Long, *supra* note 50, at 400.

91. Preferred Sites, LLC v. Troup County, 296 F.3d 1210, 1219 (11th Cir. 2002). For applications of that principle, see, e.g., New Par v. City of Saginaw, 301 F.3d 390, 398 (6th Cir. 2002) (finding that the mere mention and lack of discussion of aesthetic concerns did not constitute substantial evidence); T-Mobile S., LLC v. Coweta County, No. 1:08-CV-0449-JOF, 2009 U.S. Dist. LEXIS 17067, at *26 (N.D. Ga. Mar. 5, 2009) (holding that a neighbor's "concerns about steel structures in a neighborhood setting are classic 'generalized concerns'"); Callahan Tower Joint Venture v. Benton County, No. 07-5214, 2008 U.S. Dist. LEXIS 56437, at *16-*17 (W.D. Ark. July 24, 2008) (no substantial evidence where the zoning board did not make any findings about aesthetics and the neighbors simply complained about the "eyesore"); Verizon Wireless LLC v. Douglas County, Kan. Bd. of Comm'rs, 544 F. Supp. 2d 1218, 1249 (D. Kan. 2008) (holding that the complaints of four neighbors about "an industrial looking site," the "unsightly" tower, an "eyesore," and not wanting to look at the tower did not constitute substantial evidence); Omnipoint Commc'ns, Inc. v. Vill. of Tarrytown Planning Bd., 302 F. Supp. 2d 205, 222 (S.D.N.Y. 2004) (holding that "unsubstantiated community objection to aesthetics is not sufficient evidence by itself to support" a permit denial); USOC of Greater Iowa, Inc. v. City of Bellevue, 279 F. Supp. 2d 1080, 1086 (D. Neb. 2003) ("[C]ounsel for the City acknowledged at trial that these 'NIMBY' concerns expressed by the eight residents did not constitute 'substantial evidence' for purposes of [the Telecommunications Act]."); SBA Commc'ns, Inc. v. Zoning Comm'n, 164 F. Supp. 2d 280, 291-92 (D. Conn. 2001) ("[T]hose citizens who expressed aesthetic concerns at the hearings did not articulate specifically how the proposed monopole would have an adverse aesthetic impact on the community.").

92. PrimeCo Pers. Commc'ns, Ltd. P'ship v. City of Mequon, 352 F.3d 1147, 1150 (7th Cir. 2003).

93. See Cellular Tel. Co. v. Bd. of Adjustment, 37 F. Supp. 2d 638, 650 (D.N.J. 1999) ("There was no evidence or testimony in support of the Board's conclusion that the negative aesthetic impact would be significant or that the facility would detract from the character or appearance of the area."); U.S. W. Commc'ns, Inc. v. City of Vadnais Heights, No. 97-2248, 1998 U.S. Dist. LEXIS 22962, at *15 (D. Minn. May 15, 1998) (noting the lack of evidence supporting "the City's conclusory statement that freestanding towers are an aesthetic blight").

94. See Cellular Tel. Co. v. Town of Oyster Bay, 166 F.3d 490, 495 (2d Cir. 1999) (observing that "a few comments suggested that the residents who expressed aesthetic concerns did not understand what the proposed cell sites would actually look like," with the residents referring to "a mass of spaghetti of wires" and "a small birthday cake with candles").

like is not substantial evidence.⁹⁵ A municipal zoning plan that employs vague aesthetic standards does not support a decision to refuse a tower.⁹⁶ Perhaps most interestingly, there is no aesthetic harm when a tower would be located in an already ugly site.⁹⁷

The decisions sustaining local government denials of cell phone towers because of aesthetics have adopted their own maxims. A cell phone tower may be rejected if it would be located in a prominent place,⁹⁸ in a historic area,⁹⁹ or in a scenic place.¹⁰⁰ A local government

95. See *SBA Towers II, LLC v. Town of Atkinson*, No. 07-CV-209-JM, 2008 U.S. Dist. LEXIS 72401, at *41-*42 (D.N.H. Sept. 19, 2008) (rejecting a simulation that was not to scale and did not contain all features of the tower).

96. See *W. PCS BTA Corp. v. Town of Steilacoom*, No. C98-5664RJB, 1999 U.S. Dist. LEXIS 9068, at *12-*13 (W.D. Wash. Apr. 20, 1999) (finding the municipal siting standards to be too vague to provide adequate guidance to cellular providers); cf. *Lucarelli v. City of S. Portland*, No. CV-96-1095, 1998 Me. Super. LEXIS 52, at *12 (Me. Super. Ct. Mar. 5, 1998) (holding as a matter of state law that a zoning board could not rely upon aesthetics to deny a cell phone tower "without legislatively established criteria").

97. See *Nextel W. Corp. v. Town of Edgewood*, 479 F. Supp. 2d 1219, 1232 (D.N.M. 2006) ("[T]here is not substantial evidence in the record of any significant visual or aesthetic difference between Plaintiff's proposed antenna array and those of other, similarly situated providers already located on the [existing] tower."); *Cal. RSA No. 4 v. Madera County*, 332 F. Supp. 2d 1291, 1308-09 (E.D. Cal. 2003) ("[T]he overarching presence of [a] concededly ugly and massive water storage tank" near the proposed tower meant that "assertions regarding several small antennae are without a factual foundation and are tantamount to speculative and generalized concerns.").

98. See *Sw. Bell Mobile Sys. v. Todd*, 244 F.3d 51, 61-62 (1st Cir. 2001) (sustaining the rejection of a proposed cell phone tower "on the top of a fifty-foot hill in the middle of a cleared field"); *Red Sky Comm'n, LLC v. City of Lenexa*, No. 07-2069-DJW, 2008 U.S. Dist. LEXIS 15335, at *53-*54 (D. Kan. Feb. 28, 2008) (finding substantial evidence where "the Proposed Site is at a high point topographically in the surrounding area and the proposed tower is taller than the trees located on this elevated piece of property" as well as relying upon the city code's encouragement "to unobtrusively locate new towers").

99. See *ATC Realty, LLC v. Town of Kingston*, 303 F.3d 91, 97 (1st Cir. 2002) (noting that "the tower would be located on property that was once listed by the state as being historically significant"); *AT&T Wireless PCS, Inc. v. Winston-Salem Zoning Bd. of Adjustment*, 172 F.3d 307, 316 (4th Cir. 1999) (sustaining a tower denial based upon "the tower's negative impact on the historical value of" a 1932 house proposed for listing on the National Register of Historic Places); *Se. Towers, LLC v. Pickens County*, No. 2:06-CV-0172-RWS, 2008 U.S. Dist. LEXIS 38767, at *25 (N.D. Ga. May 12, 2008) (considering tower near sites listed on the National Register of Historic Places); *Cellco P'ship v. Town of Grafton*, 336 F. Supp. 2d 71, 79-81 (D. Mass. 2004) (relying upon the negative visual impacts that a tower would have on the Grafton Historic District); *Sprint Spectrum Ltd. P'ship v. Bd. of Zoning Appeals*, 244 F. Supp. 2d 108, 114 (E.D.N.Y. 2003) (evaluating tower's proximity to the Old Setauket Historic District Transition Zone).

100. See *Voicestream Minneapolis, Inc. v. St. Croix County*, 342 F.3d 818, 831-32 (7th Cir. 2003) (rejecting a tower to be located near "the extraordinary scenery of the National Scenic Riverway and with the historic district in the City of Marine on St. Croix," and where "the National Park Service voiced strong opposition to the tower" based upon its visual impacts); *Sprint Spectrum, Ltd. P'ship v. Bd. of County Comm'rs*,

may also defend its rejection of a cell phone tower by showing that it would be out of character in the proposed location,¹⁰¹ for instance by being taller than any nearby structures.¹⁰² A local government may reject a cell phone tower that conflicts with its general zoning scheme.¹⁰³

These general trends are contradicted by numerous decisions that rely upon conflicting principles. For example, the character of a community may be contested such that the mere assertion that a tower would be out-of-place will not always survive judicial scrutiny.¹⁰⁴ The trashy appearance of an area is no guarantee that a new cell phone tower will be

59 F. Supp. 2d 1101, 1106, 1109 (D. Colo. 1999) (sustaining a tower denial because "[t]he unique and diverse landscapes of Jefferson County [at the foothills of the Rocky Mountains] are among its most valuable assets"); *Site Acquisitions, Inc. v. Town of New Scotland*, 770 N.Y.S.2d 157, 161 (N.Y. App. Div. 2003) (citing "proof of potential negative impact on views from widely used areas of natural beauty" as part of the substantial evidence supporting a permit denial).

101. See *Omnipoint Commc'ns, Inc. v. City of Nashua*, No. 07-CV-46-PB, 2008 U.S. Dist. LEXIS 8611, at *16-*17 (D.N.H. Feb. 6, 2008) (finding substantial evidence where "the proposed tower would be visually, aesthetically, and functionally out of character with the surrounding neighborhood" which was a residential neighborhood next to an undeveloped wooded area); *USOC of Greater Mo., LLC v. City of Ferguson*, No. 4:07-CV-1489 (JCH), 2007 U.S. Dist. LEXIS 87760, at *5, *22-*23 (E.D. Mo. Nov. 29, 2007) (the tower "would not blend in with the one story buildings surrounding it"); *Sprint Spectrum Ltd. P'ship v. County of Platte*, No. 06-6049-CV-SJ-DW, 2007 U.S. Dist. LEXIS 75724, at *12, *14-*15 (W.D. Mo. Oct. 11, 2007) (finding that the zoning commission's aesthetic concerns "were grounded in the specific characteristics of the proposed location, design and surrounding property," as evidenced by photos indicating "that the tower would not be obscured by trees or other structures and would dominate the visual landscape"); *R.H. Gump Revocable Trust v. City of Wichita*, 131 P.3d 1268, 1276 (Kan. Ct. App. 2006) (finding substantial evidence in the city's finding "that the proposed stealth flagpole was incompatible and inconsistent with the area" because "[t]here were no other flagpoles in the area, and extensive beautification efforts had been made in the area").

102. See *Todd*, 244 F.3d at 62 (observing that the proposed "tower would soar to almost four times the height of the water towers" located nearby); *T-Mobile S. LLC v. City of Jacksonville*, 564 F. Supp. 2d 1337, 1347 (M.D. Fla. 2008) ("The Planning Department also noted that the surrounding properties lacked either tall structures or trees and vegetation that would help reduce the impact of the proposed tower on adjacent landowners.").

103. See *Aegerter v. City of Delafield*, 174 F.3d 886, 890 (7th Cir. 1999) (upholding the rejection of a tower because "the proposed expansion of the commercial use in the area would be unsightly and inconsistent with its R-1 residential zoning").

104. See *AT&T Wireless Servs. of Cal. LLC v. City of Carlsbad*, 308 F. Supp. 2d 1148, 1162 (S.D. Cal. 2003) (rejecting the city's claim that a tower conflicted with the character of a neighborhood because "there simply is no evidence that the cell site would cause the area to look commercial since the site looks like a part of a large house in a neighborhood with very large houses"); *MIOP, Inc. v. City of Grand Rapids*, 175 F. Supp. 2d 952, 957-58 (W.D. Mich. 2001) (holding that the record lacked substantial evidence despite the value that the neighbors placed on their "rural setting, natural environment and peace and enjoyment").

approved,¹⁰⁵ nor does the presence of historic or scenic sites ensure that a new tower will be denied.¹⁰⁶ Such conflicts mimic the disputes about the appropriate location of other types of pollution. Part of the Clean Air Act discourages the location of new polluting facilities in areas that already experience clean air; environmental justice concerns counsel against locating such facilities in areas that already experience high levels of pollution.¹⁰⁷ Similarly, local governments vacillate between locating sources of cultural pollution such as adult theaters and bookstores all in one area or instead spreading them throughout the community.¹⁰⁸

There is also a more fundamental disagreement among the courts about the nature of federal judicial review of TCA claims involving the aesthetics of cell phone towers. Generally, one view simply defers to local decisions, while the other view demands a reasoned explanation to support a local decision. The first view is represented in an early TCA case arising in Virginia Beach. Hundreds of residents objected to a proposed tower, the board rejected it without explanation, and the Fourth Circuit held that "the repeated and widespread opposition of a majority of the citizens of Virginia Beach who voiced their views—at the Planning Commission hearing, through petitions, through letters, and at the City Council meeting—amount[ed] to far more than a 'mere scintilla' of evidence to persuade a reasonable mind to oppose the application."¹⁰⁹ Judge Luttig offered a spirited defense of the ability of local residents to simply decide not to host a cell phone tower:

[W]e should wonder at a legislator who ignored such opposition. In all cases of this sort, those seeking to build will come armed with exhibits, experts, and evaluations. Appellees, by urging us to hold that such a predictable barrage mandates that local govern-

105. See *BellSouth Mobility, Inc. v. Miami-Dade County*, 153 F. Supp. 2d 1345, 1357–58 (S.D. Fla. 2001) (upholding a county decision to exclude a tower because it "was aesthetically incompatible with the surrounding area," which was "deteriorating" and where "numerous light and utility poles already occupy the landscape").

106. See *Omnipoint Commc'ns, Inc. v. Vill. of Tarrytown Planning Bd.*, 302 F. Supp. 2d 205, 222 (S.D.N.Y. 2004) (concluding that the evidence in the record of aesthetic impacts was outweighed by other evidence asserting that the proposed tower would not impact the nearby historic area); *Corcoran v. Conn. Siting Council*, 934 A.2d 870, 874 (Conn. Super. Ct. 2006) (approving a cell phone tower located in an area designated as "a 'scenic viewpoint' for a 'scenic vista'"), *aff'd*, 934 A.2d 825 (Conn. 2007).

107. See 42 U.S.C. § 7477 (2000) (the Clean Air Act's prevention of significant deterioration command); Shi-Ling Hsu, *Fairness Versus Efficiency in Environmental Law*, 31 *ECOLOGICAL L.Q.* 303, 390–92 (2004) (describing efforts to address "hot spots" of pollution in poor communities).

108. Compare *City of Renton v. Playtime Theatres, Inc.*, 475 U.S. 41 (1986) (upholding an ordinance prohibiting the location of an adult business near schools, residences, churches, and parks) with *Young v. Am. Mini Theatres, Inc.*, 427 U.S. 50 (1976) (upholding an ordinance prohibiting the concentration of adult businesses).

109. *AT&T Wireless PCS, Inc. v. City Council of Va. Beach*, 155 F.3d 423, 431 (4th Cir. 1998).

ments approve applications, effectively demand that we interpret the Act so as to always thwart average, non-expert citizens; that is, to thwart democracy. The district court dismissed citizen opposition as "generalized concerns." Congress, in refusing to abolish local authority over zoning of personal wireless services, categorically rejected this scornful approach.¹¹⁰

Judge Luttig's opinion has been widely cited as reflecting the deferential approach to TCA review.¹¹¹

The alternative view is best expressed in a recent federal district court decision from Ocala, Florida. This time the court held that neighborhood opposition failed to satisfy the TCA's substantial evidence standard for cell phone tower denials:

It is predictable—and entirely understandable—in every case the Court has encountered under the Federal Telecommunications Act that there will be a group of property owners or nearby residents who oppose the erection of communications towers in their neighborhoods for purely subjective and mostly aesthetic reasons. It seems that such towers, like prisons, are just not welcome additions to the landscape, and those who hold those sincere opinions are entitled to some sympathy. This makes for hard cases when they are presented to local political bodies who might find it difficult to explain to their constituents, in an emotionally charged public hearing, the arcane difference between personal preference and substantial evidence. But the law requires the latter—substantial evidence—and while the substantial evidence standard is a lenient one (being something less than a preponderance of the evidence), when a tower erector meets all of the objective and reasonably relevant prerequisites established in advance by local authority for the placement of communications towers, the purely subjective preferences of the towers' putative neighbors, not augmented buy [sic] any technical or objective facts or evidence, simply do not constitute "substantial evidence" upon which local government can properly rely in denying an application. Unfortunately, this is such a case, and the Court is required to intervene to grant the Plaintiffs' requested remedy.¹¹²

That approach characterizes the majority view toward judicial review under the TCA.

110. *Id.*; see also Long, *supra* note 50, at 394 ("[H]omeowner groups are understandably frustrated by the TCA's robbery of their 'voice.'").

111. See, e.g., *Aegerter v. City of Delafield*, 174 F.3d 886, 890 (7th Cir. 1999) (citing the case but using it to distinguish between judicial review of the enactment of laws by municipal councils and judicial review of the administrative zoning decisions made by municipal councils, the latter of which are subject to review under the TCA).

112. *Vertex Dev., LLC v. Marion County*, No. 5:07-CV-380-Oc-10GRJ, 2008 U.S. Dist. LEXIS 59114, at *2–*3 (M.D. Fla. July 30, 2008).

But not everyone has been satisfied with this understanding of the TCA. The sparse legislative history of the section suggests that Congress may have expected local governments to retain more zoning authority than the courts have afforded them.¹¹³ The prevailing view has been attacked as "the biggest land-grab in one industry's favor at the federal level since the buildout of the railroads at the turn of the last century"¹¹⁴ and as an unconstitutional violation of states' rights under the Tenth Amendment.¹¹⁵ U.S. Senator Patrick Leahy repeatedly introduced legislation designed to shift all of the zoning power back to local officials.¹¹⁶ The premise of all of these efforts is that local governments will make the best decisions regarding the aesthetics of cell phone towers.

They are wrong. The TCA strikes the right balance between the visual pollution attributed to cell phone towers and the need for cell phone coverage. The combination of local authority constrained by federal law has encouraged municipal zoning officials to identify those places in their community where cell phone towers would produce the least aesthetic harms, rather than trying to ban such towers altogether. The abundant TCA litigation shows that local governments are capable of identifying the proper locations for cell phone towers, but they are equally capable of relying upon unsupported aesthetic complaints that fail to grapple with the hard questions of where to locate a new tower. The TCA forces local governments to think seriously about claims of visual pollution. The TCA also encourages cellular providers to research the propriety of possible sites for a new cell phone tower rather than simply choosing a site and then trying to force local officials to approve it—for a strategy that fails to seek to minimize aesthetic harms while evaluating the availability of sites that would satisfy coverage needs will cause a provider to lose a TCA claim. The delicate balance achieved by the TCA should be preserved, rather than shifting all of the power back

113. See H.R. REP. NO. 104-458, at 207-08 (1996), *reprinted in* 1996 U.S.C.C.A.N. 10, 222-23 (explaining that section 704 "preserves the authority of State and local governments over zoning and land use matters except in . . . limited circumstances," and stating that localities should have the flexibility to address aesthetic concerns); 142 CONG. REC. 2240 (statement of Rep. Sensenbrenner) (insisting that "[t]he authority of state and local governments over zoning and land use matters is absolutely essential and must be preserved"); 142 CONG. REC. 2230 (statement of Rep. Goodlatte) (praising the "agreement that protects the rights of local governments to see that their zoning regulations are carried forward in making sure that, when new cell towers are located, they have the ability to determine in each locality where they are placed while fairly making sure that these locations do not interfere with interstate commerce and with the opportunity to advance this new technology").

114. Levitt, *supra* note 50, at 33.

115. See *Petersburg Cellular P'ship v. Bd. of Supervisors*, 205 F.3d 688, 692 (4th Cir. 2000) ("[T]he federally imposed standard authorizing a state or local legislative body to deny a permit only on substantial evidence violates the Tenth Amendment.").

116. See, e.g., Local Control of Broadcast Towers Act, S. 3102, 107th Cong. (2002); 148 CONG. REC. S10361 (daily ed. Oct. 10, 2002) (statement of Sen. Leahy).

to local officials (as Senator Leahy's legislation would do) or to providers (as legislation to allow the Federal Communications Commission to preempt local zoning laws once contemplated).¹¹⁷

D. Cell Phone Towers in National Parks

One other location has generated a special amount of controversy regarding the placement of cell phone towers. National parks have experienced numerous disputes regarding the placement of cell phone towers. The TCA makes national parks and other federal lands available for cell phone towers,¹¹⁸ but, as a Park Service official once testified, "[N]o one would want to see a cellular phone tower on the rim of the Grand Canyon or in sight of Old Faithful."¹¹⁹ That is because, as the Park Service recently explained, "Scenery has always been an integral part of the fundamental resources and values of national parks. . . . Because the primary viewsheds are natural, built structures often stand out in stark contrast to the scenery and thereby degrade part of the fundamental resource."¹²⁰ Yet Old Faithful and the rest of Yellowstone National Park are in the midst of a debate about the appropriate location of cell phone towers. The first cell phone tower was built there in 2001. The park responded to complaints about that tower by ordering changes that make it less visible and by imposing a moratorium on additional cell phone towers in 2004. Then, in September 2008, the park released an environmental assessment that evaluated four alternative wireless communications services plans: retaining the current cell phone site "on a ridge above the Old Faithful development" and reviewing new proposals on a case-by-

117. See Matthew N. McClure, Comment, *Working Through the Static: Is There Anything Left to Local Control in the Siting of Cellular and PCS Towers After the Telecommunications Act of 1996?*, 44 VILL. L. REV. 781, 786 n.40 (1999) (citing proposals to empower the FCC to preempt local zoning).

118. Telecommunications Act of 1996 § 704(c), 47 U.S.C. § 157 (2000 & Supp. V 2006).

119. *The Wireless Privacy Enhancement Act of 1999 and the Wireless Communications and Public Safety Enhancement Act of 1999: Hearing Before the Subcomm. on Telecommunications, Trade & Consumer Protection of the H. Comm. on Commerce*, 106th Cong. 23 (1999) (prepared statement of Maureen Finnerty, Assoc. Dir., Park Operations & Educ., Nat'l Park Serv.). See also *Wireless Enhanced 911 Services: Hearing Before the Subcomm. on Telecommunications, Trade & Consumer Protection of the House Commerce Comm.*, 105th Cong. 74 (1998) (testimony of Denis Galvin, Deputy Dir., Nat'l Park Serv.) ("We don't want a tower on top of Independence Hall, and we don't want a tower [on the] Lincoln Memorial."); H.R. REP. NO. 104-204, 62 (1995) ("[U]se of the Washington Monument, Yellowstone National Park or a pristine wildlife sanctuary, while perhaps prime sites for antenna and other facilities, are not appropriate and use of them would be contrary to environmental, conservation, and public safety laws.").

120. U.S. DEPT. OF THE INTERIOR, NAT'L PARK SERV., YELLOWSTONE NATIONAL PARK, WIRELESS COMMUNICATIONS SERVICES PLAN: ENVIRONMENTAL ASSESSMENT 68 (2008), http://www.nps.gov/yell/parkmgmt/upload/WIRELESS%20EA%20September_9_08%20Final.pdf.

case basis, reducing wireless services, allowing a limited increase in wireless services, or allowing a substantial increase.¹²¹ The Park Service prefers the limited increase proposal, which would improve coverage in the two areas of the park while relocating the cell phone tower at Old Faithful "to the site near a water treatment plant to further reduce the impact on the viewshed."¹²² By contrast, the substantial increase proposal would keep the tower at Old Faithful while camouflaging it "to reduce its impact on the Old Faithful Historic District when it becomes feasible to do so."¹²³ Regardless of the chosen alternative, the park listed both appropriate sites for future cell phone towers (such as existing structures and vacant or non-historic buildings) and inappropriate sites (such as near residential buildings, on top of ridges or near creeks, and "[s]ites within plain view of sensitive natural or cultural areas, visitor centers, campgrounds, residential areas, trails, or park viewsheds").¹²⁴ The Park Service's approach should adequately address the visual pollution concerns about cell phone towers in national parks. Whether cell phones should be permitted at all raises harder, but different, questions about the nature of the experience that national parks are intended to provide.

III. CONCLUSION

The idea of pollution helps explain the controversy surrounding the aesthetics of cell phone towers. Claims of visual pollution assert a desire for a particular kind of environment—one free from the polluting effects of unwanted signs, towers, and other sights. Yet no environment is free from pollution, as demonstrated by the persistence of significant air pollution and water pollution nearly four decades after the enactment of the Clean Air Act and the Clean Water Act. The challenge is to decide how much pollution is acceptable. For federal environmental law, that is a question to be answered by the federal government. EPA identifies the National Ambient Air Quality Standards (NAAQS) that determine how much air pollution is acceptable. EPA also selects the technologies that each industry must employ to comply with the Clean Water Act. Yet there is no such standard for judging the visual pollution from cell phone

121. *Id.* at 21.

122. *Id.* at ii.

123. *Id.* at 33.

124. *Id.* at 46–47. Yellowstone, of course, is not the only national park to struggle with the aesthetic impacts of cell phone towers. For another example, see U.S. DEP'T OF THE INTERIOR, NAT'L PARK SERV., THEODORE ROOSEVELT NATIONAL PARK, REPLACEMENT OF A COMMUNICATIONS TOWER IN THEODORE ROOSEVELT NATIONAL PARK AND U.S. FOREST SERVICE ACCESS ROAD IMPROVEMENT: ENVIRONMENTAL ASSESSMENT 9 (2005) (approving the replacement of a tower within the park because the alternative of "building a new tower on other public or privately owned land would generally have significant impacts on the scenery and viewsheds of the region, by increasing the number of towers in the region by one").

towers. Some local governments have tried to legislate the kinds of places where towers should or should not be located, but those efforts have met with mixed success and sporadic application. The TCA does not address the question of where cell phone towers should be located, insisting only that local governments be able to justify their decisions. As those local governments continue to be especially suspect to constituent complaints, the hope for deciding how to respond to visual pollution remains elusive.

The experience with locating cell phone towers offers lessons for thinking about other kinds of pollution, too. Avoidance has been the dominant response to the visual pollution of cell phone towers, as individual citizens, cellular providers, local governments, and federal judges have all struggled to decide how to keep towers from imposing unacceptable aesthetic harms. But avoidance is likely to be an unstable response to pollution. It is likely that people will gradually accept the presence of cell phone towers (thus adopting a toleration response to pollution) or that technological developments will render towers obsolete (thus implementing a prevention response to pollution). Avoidance will persist only so long as prevention is impossible or toleration is unacceptable. The history of visual pollution claims involving other kinds of towers suggests that either toleration or prevention will prevail. A similar dynamic may explain the social response to other kinds of pollution, too. And the next visual pollution claims are already on the horizon. Literally: wind farm proposals are now experiencing the same kind of battle over aesthetics that cell phone towers have endured for the past two decades.¹²⁵

Meanwhile, Granger finally did build its cell phone tower. It is camouflaged to look like a really tall pine tree. The neighbors complained, and there are still signs saying "no cell tower" along the road.¹²⁶ My cell phone works fine . . . but my wife still cannot get a reliable signal on her I-Phone.

125. See *Residents Opposed to Kittitas Turbines v. State Energy Facility Site Evaluation Council*, 197 P.3d 1153 (Wash. 2008) (holding that the state governor could override a county's aesthetic concerns to allow the siting of a wind farm); Avi Brisman, *The Aesthetics of Wind Energy Systems*, 13 N.Y.U. ENVTL. L.J. 1, 74 (2005) (describing the "fear that wind farms will cause 'visual pollution' of the landscape").

126. See Nancy J. Sulok, *Commissioners OK Cell Phone Tower for Granger Area; Officials Respond to Need Despite Neighbors' Protests*, SOUTH BEND TRIB., Dec. 13, 2006, at B3 (reporting that one of the tower's opponents said "[t]hanks for killing us" as he left the meeting).



Like on K-10 in
the DeSoto Area



JAMIE SHEW
DOUGLAS COUNTY CLERK
1100 Massachusetts
Lawrence, KS 66044

Marni Penrod-Chief Deputy Clerk
Heather Dill-Deputy Clerk Elections

July 10, 2017

ATTN: DOUGLAS COUNTY COMMISSIONERS

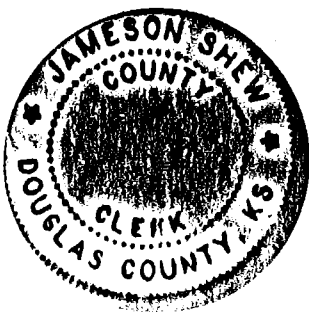
RE: Protest Petition against Conditional Use Permit 17-00215, MW Towers LLC for F. Dwane Richardson & Valerie Richardson, Trustees, owners of record.

CERTIFICATION

I, JAMIE SHEW, DOUGLAS COUNTY CLERK, DO HEREBY CERTIFY THAT THE ATTACHED PETITION, RECEIVED ON JULY 10, 2017 IS A VALID PETITION.

Jamie Shew
Douglas County Clerk

JS/mtb



REZONING (CONDITIONAL USE PERMIT) PROTEST PETITION

DOUGLAS COUNTY CLERK

Protest Petition against CUP 17-00215 (~~MW Towers LLC~~ ^{PB} ~~F.D. + V. Richardson~~)

2017 JUL 10 PM 3 02

MW Towers LLC for F. Duane & Valerie Richardson, Trustees

We, the undersigned property owners, do hereby protest the granting by the Board of County Commissioners of Douglas County, Kansas of [proposed rezoning from _____

_____ (existing zoning) to _____ (proposed zoning)] or [a

CUP to permit 190' telecommunications tower on the following described property: 2138 N 1000 Rd. Eudora, KS

[Attach or insert legal description or general description of the real estate proposed to be rezoned (or for the proposed CUP). A description of the real estate is available through the Lawrence-Douglas County Planning Office.] 2138 N 1000 Rd, Eudora
(plus see attached legal)

We, the undersigned, are owners of real property located within the statutory area of notification related to the area for which the rezoning (or CUP) is sought. See K.S.A. 12-757(f).

Note: Print name legible below or beside signature. All owners of the property must sign.

	PRINTED NAME AND SIGNATURE OF OWNER	DESCRIPTION OF PROPERTY WITHIN NOTIFICATION AREA	RESIDENCE ADDRESS (IF DIFFERENT)	DATE
①	<u>Barbara J. Braa</u>	<u>1032 E 2100 Rd</u>		<u>7-9-2017</u>
	<u>Barbara J. Braa</u>	<u>Eudora, KS 66025</u>		
②	<u>Michael G. Braa</u>	<u>1032 E 2100 Rd</u>		<u>7-9-2017</u>
	<u>Michael G. Braa</u>	<u>Eudora, KS 66025</u>		
3	<u>Gary L. Elston</u>	<u>2106 N 1000 Rd</u>	<u>2101 Learned</u>	<u>7-9-2017</u>
	<u>Gary L. Elston</u>	<u>Eudora, KS 66025</u>	<u>Lawrence KS 66046</u>	
④	<u>Linda R. Elston</u>	<u>2106 N 1000 Rd</u>	<u>2101 Learned</u>	<u>7-9-2017</u>
	<u>Linda R. Elston</u>	<u>Eudora, KS 66025</u>	<u>Lawrence</u>	

KS 66046

PRINTED NAME AND
SIGNATURE OF OWNER

DESCRIPTION OF PROPERTY
WITHIN NOTIFICATION AREA

RESIDENCE ADDRESS
(IF DIFFERENT)

DATE

- ⑤ { Kimberly K. Elston 2106 N 1000 Rd 2101 Leeward 7-9-2017
X Kimberly K. Elston Eudora, KS 66025 Lawrence KS
66046
~~Mark Elston~~
6 { X Patrick E. Jankowski 2111 N. 1000th Rd 09 July, 2017
Patrick E. Jankowski Eudora, KS 66025
7 { Amy M. Jankowski 2111 North 1000 Rd 7-9-2017
Amy M Jankowski Eudora KS 66025
8 { Dennis W. Buehler 978 E 2100 Rd
X Dennis W. Buehler Eudora, KS 66025
9 { Dawn L. Buehler 978 E 2100 Rd
X DBuehler Eudora, KS 66025
10 { Mark C Elston ~~2106~~ 2106 N 1000 Rd 1816 N Yew Rd 7/10/17
X ~~Mark C Elston~~ Eudora, KS 66025 Baldwin City, KS 66006

STATE OF KANSAS)

COUNTY OF DOUGLAS)

SS:

I am the circulator of this Protest Petition and a resident of the state of Kansas and possess the qualifications of an elector of the State of Kansas. I have personally witnessed the signing of the Protest Petition by each person whose name appears thereon.

Barbara J Brac
Circulator Signature

Barbara J Brac
Printed Name

Circulator's Residence and Address 1032 E 2100 Rd
Eudora, KS 66025 Date 7/10/2017

Signed and sworn to (or affirmed) before me on this 10th day of July,
2017, by Barbara J. Brac, circulator of this Protest Petition.

Brent Weber
Notary Public
My appointment expires: 7/18/17



DOUGLAS COUNTY

KANSAS

[Departments](#) | [FAQ](#) | [Maps](#) | [Contact Us](#)[Home](#) / [Residents](#) / [Property and Taxes](#) / [Property Search](#)

Property Search Results: Real Property

Please Note: This information is assumed current as of: **7/6/2017**. For more current information, please call the Appraiser's Office: (785) 832-5133.

[New Search](#) | [Modify Search](#) | [Search Results](#) | [Print this Page](#)

- Select Year -

Property Information

[Map this Property](#)**Year:** 2016**Pin Number:** 023-099-29-0-00-00-011.01-0**Plate/Record Id:** 200406A01**Owner 1:** RICHARDSON F DWANE TRUSTEE**Owner 2:** RICHARDSON VALERIE TRUSTEE**In-Care-Of:** (no record)**Property Address:** 2138 N 1000 RD, EUDORA, KANSAS**Mailing Address:** 2122 N 1000 RD EUDORA, KS, 66025-9193**Delinquent Tax:** No**Tax Unit:** 619**School:** USD 491**Sec-Twp-Rng:** (no record)**Book:** 1101**Page:** 5522

Value Information

Class**Appraised****Assessed**

	Land	Improvements	Total*	Land	Improvements	Total
AR	\$19,440	\$26,640	\$46,080	\$5,832	\$6,660	\$12,492
CR	\$1,300	\$8,480	\$9,780	\$325	\$2,120	\$2,445
FR	\$9,750	\$120,790	\$130,540	\$1,121	\$13,891	\$15,012

*Market or Ag use

Tax Information

Tax	Special Tax	Total Tax	Taxes Paid	Mill Levy
\$4,134.84	\$0.00	\$4,134.84	\$4,134.84	139.5990

Tax Payment Information

Year	Payment Date	Payment Type	Payment Amount	Print Receipt
2016	03/06/2017	PAYMENT	\$2,067.42	Print Receipt
2016	12/22/2016	PAYMENT	\$2,067.42	Print Receipt

Please Note: The Accuracy of Payment Information is not Guaranteed. If you have questions regarding payment information, contact the Treasurer's office at (785) 832-5178.

Property Description

29-13-21 E 1650 OF SW/4 LESS W 467 OF S 467 & LESS R/W 100.1A(C)

Legal Description

94.99A 29-13-21 E 100A OF SW 1/4, LESS 5.01A D 452/2097 WW35(DIV 1991 200406)

Residents | Business | Courts and Law | Government | Employment | Health and Environment | Recreation

Departments | FAQ | Maps and Directions | Contact Us

Courthouse: 1100 Massachusetts Street, Lawrence, KS 66044

Judicial and Law Enforcement Center: 111 East 11th Street, Lawrence, KS 66044

Phone: 785-832-5100 | Contact the Webmaster

REZONING (CONDITIONAL USE PERMIT) PROTEST PETITION

Protest Petition against CUP-17-00215

RECEIVED
DOUGLAS COUNTY CLERK
LAWRENCE, KANSAS

2017 JUL 10 PM 3 02

We, the undersigned property owners, do hereby protest the granting by the Board of County Commissioners of Douglas County, Kansas of [proposed rezoning from _____ (existing zoning) to _____ (proposed zoning)] or [a CUP to permit telecommunications tower] on the following described property: 2138 N 1000 Rd., Eudora, Kansas

[Attach or insert legal description or general description of the real estate proposed to be rezoned (or for the proposed CUP). A description of the real estate is available through the Lawrence-Douglas County Planning Office.] 2138 N 1000 Rd., Eudora, Kansas (please, see attached legal)

We, the undersigned, are owners of real property located within the statutory area of notification related to the area for which the rezoning (or CUP) is sought. See K.S.A. 12-757(f).

Note: Print name legible below or beside signature. All owners of the property must sign.

PRINTED NAME AND SIGNATURE OF OWNER	DESCRIPTION OF PROPERTY WITHIN NOTIFICATION AREA	RESIDENCE ADDRESS (IF DIFFERENT)	DATE
Rosaline A. Kelly by Patrick A. Kelly POA	1041 E 2200 Road	14600 Village Drive	
Rosaline A. Kelly by Patrick A. Kelly POA	Eudora, Kansas	Olathe, Kansas 66062	7-9-2017
KELCO Patrick A. Kelly, Vice President	PLATE # 200426	14600 Village Drive	
KELCO Patrick A. Kelly, Vice President	Eudora, Kansas	Olathe, Kansas 66062	7-9-2017
Patrick A. Kelly	949 E 2100 Road	14600 Village Drive	
Patrick A. Kelly	Eudora, Kansas	Olathe, Kansas 66062	7-9-2017
KELCO Patrick A. Kelly, Vice President	950 E 2100 Road	14600 Village Drive	
KELCO Patrick A. Kelly, Vice President	Eudora, Kansas	Olathe, Kansas 66062	7-9-2017

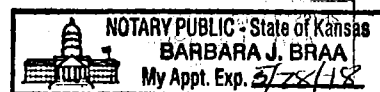
DATEThis image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

SS:

PATRICK A. KELLY
Printed Name

Signed and sworn to (or affirmed) before me on this 9th day of July, 2017, by Patrick A. Kelly, circulator of this Protest Petition.

Barbara J Braa
 Notary Public
 My appointment expires: 5/28/2018



POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS:

Rosalene A. Kelly [individual], hereinafter referred to as PRINCIPAL, in the County of **Douglas** State of **Kansas**, does appoint **Patrick A. Kelly** [individual] to be and act as her true and lawful attorney.

In principal's name, and for principal's use and benefit, said attorney is authorized hereby;

- (1) To demand, sue for, collect, and receive all money, debts, accounts, legacies, bequests, interest, dividends, annuities, and demands as are now or shall hereafter become due, payable, or belonging to principal, and take all lawful means, for the recovery thereof and to compromise the same and give discharges for the same;
- (2) To buy and sell land, make contracts of every kind relative to land, any interest therein;
- (3) To buy, sell, mortgage, hypothecate, assign, transfer, and in any manner deal with goods, wares and merchandise, choses in action, certificates or shares of capital stock, and other property in possession or in action, and to make, do, and transact all and every kind of business of whatever nature;
- (4) To inquire and be granted all information regarding health related matters;
- (5) To execute, acknowledge, and deliver contracts of sale, escrow instructions, deeds, leases including leases for minerals and hydrocarbon substances and assignments of leases, covenants, agreements and assignments of agreements, mortgages and assignments of mortgages, conveyances in trust, to secure indebtedness or other obligations, and assign the beneficial interest thereunder, subordinations of liens or encumbrances, bills of lading, receipts, evidences of debt, releases, bonds, notes, bills, requests to reconvey deeds of trust, partial or full judgments, satisfactions of mortgages, and other debts, and other written instruments of whatever kind and nature, all upon such terms and conditions as said attorney shall approve.

Giving and granting to said attorney full power and authority to do all and every act and thing whatsoever requisite and necessary to be done relative to any of the foregoing as fully to all intents and purposes as principal might or could do if personally present.

All that said attorney shall lawfully do or cause to be done under the authority of this power of attorney is expressly approved.

Dated: 3-7-2011 /s/ Rosalene Kelly

STATE OF MISSOURI

COUNTY OF JACKSON

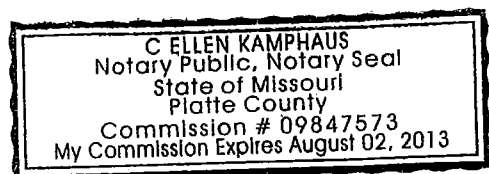
BEFORE ME, the undersigned authority, on this 7th day of MARCH, 2011, personally appeared Rosalene Kelly to me well known to be the person described in and who signed the foregoing Power of Attorney, and acknowledged to me that (s)he executed the same freely and voluntarily for the uses and purposes therein expressed.

WITNESS my hand and official seal the date aforesaid.

NOTARY PUBLIC

C. Ellen Kamphaus

My Commission Expires: AUGUST 2, 2013



Please Do
Not Stamp**AR**
50**KANSAS SECRETARY OF STATE**
For-Profit Corporation
Annual Report**Kansas Office of the Secretary of State:**Memorial Hall, 1st Floor (785) 296-4564
120 S.W. 10th Avenue kssos@sos.ks.gov
Topeka, KS 66612-1594 www.sos.ks.gov4819 01
050 001
\$.**FILED BY KS SOS**
04-21-2017
09:52:09 AM
FILE#: 0843599

04795260

1. Business entity ID #This is not the Federal Employer ID
Number (FEIN).**0843599****2. Name of corporation**Must match name on record with
Kansas Secretary of State.**Kelco, Inc.****3. Mailing address**Address will be used to
send official mail from the
Secretary of State's Office.

Do not leave blank.

Attention Name

Steve Kelly

Address

25610 W 69th Terr

City

SHAWNEE

State

KS

Zip

66226

Country

US☐ Check this box if this is a new address. Our records will be updated **only** if this box is checked.**4. Principal office address**Must be a street, rural route,
or highway. A P.O. box is
unacceptable.

Street Address

25610 W 69th Terr

City

SHAWNEE

State

KS

Zip

66226

Country

US**5. Tax closing date**

Month

December

Year

2016**6. State of incorporation****KS****7. Name, title, and
address of each
officer of corporation**If additional space is needed,
please provide attachment.

Do not leave blank.

Name

See Statement 1

Title

Address

City

State

Zip

Country

Name

Title

Address

City

State

Zip

Country

Name

Title

Address

City

State

Zip

Country

Kelco, Inc.

8. Name and address of each director of corporation
If additional space is needed, please provide attachment.

Do not leave blank.

Name Steven Kelly			
Address 21211 W 23rd St			
City Olathe	State KS	Zip 66061	Country US
Name Joseph Kelly			
Address 815 W 21st St.			
City Lawrence	State KS	Zip 66046	Country US
Name Patrick Kelly			
Address 14600 Village Dr.			
City Olathe	State KS	Zip 66062	Country US

9. Federal Employer Identification Number (FEIN)

48-0984648

10. What is the nature and kind of business in which corporation is engaged?

Farming

11. Total number of shares of capital stock issued

60

- 12a. Does this corporation hold more than 50% equity ownership in any other business entity that is filed with the Kansas Secretary of State?

☐ Yes (Complete Question 12b.) ☒ No (Skip to Question 13.)

- 12b. Name and ID number of each business

Name and ID # should be provided exactly as filed with Kansas Secretary of State.

ID number is not Federal Employer ID Number (FEIN).

Business Entity Name	Business Entity ID Number
Business Entity Name	Business Entity ID Number
Business Entity Name	Business Entity ID Number

13. Does this corporation own or lease land in Kansas that is suitable for use in agriculture?

This question does not apply to 1) tracts of land of fewer than 10 acres, 2) contiguous tracts of land that are fewer than 10 acres in aggregate, or 3) state-assessed railroad operating property.

☒ Yes (Complete Attachment AG.) ☐ No

14. I declare under penalty of perjury pursuant to the laws of the state of Kansas that the foregoing is true and correct, and that I have remitted the required fee.

Signature of Authorized Officer X <i>Steve Kelly</i>		
Name of Signer (printed or typed) Steve Kelly	Title/Position President	Phone Number 816-806-6951

AG

KANSAS SECRETARY OF STATE
Annual Report Agriculture Attachment
 for Forms AR or NP

Complete this form only if the business entity owns or leases land suitable for agricultural use. All information must be complete or this document will not be accepted for filing.

1. Provide information on each lot, tract or parcel of agricultural land in Kansas owned or leased by corporation.

Location of tract or lot					Was this tract acquired after July 1, 1981?		Purpose for which land is owned or leased.	Indicate for each tract or parcel if the tract is...			
County	Section	Township	Range	Number of acres in tract or lot	Yes	No		Owned by corporation	Leased to corporation	Leased from corporation	If leased from corporation, indicate to whom leased.
Hodgeman	34	21	24	160	X		Farming	X			
Lane	26	20	28	80	X		Farming	X			
Pawnee	34	21	15	160		X	Farming	X			
Douglas	32	13	21	56		X	Farming	X			
Douglas	31	13	21	80		X	Farming	X			

2. Total agricultural acres

Must be numeric values.
 "NA" or "—" is unacceptable.

A. Total acres owned and operated

536

B. Total acres owned, operated, and irrigated

0

C. Total acres leased to the corporation

0

D. Total acres leased to the corporation and irrigated

0

E. Total acres leased from the corporation

0

E. Total acres leased from the corporation and irrigated

0

3. Total number of stockholders

3

4. Value and location of agricultural and nonagricultural assets owned and controlled by corporation

Include all assets within and outside of Kansas.

All lines must be complete.

Within Kansas - Agricultural
 Value

Location
 Counties Listed Above

Within Kansas - Nonagricultural

Value

Location

Outside of Kansas - Agricultural

Value

Location

Outside of Kansas - Nonagricultural

Value

Location

Att.

K.S.A. 17-7503, 17-7505
 Rev. 6/30/16 to

Please review to ensure completion.

K3070 Kelco, Inc.
48-0984648
FYE: 12/31/2016

Kansas Statements

3/22/2017 1:38 PM

Statement 1 - Form AR, Page 1, Line 7 - Officers of the Corporation

Title	Name	Address	City	ST	Zip	Country
President	Steven Kelly	21211 W 23rd St	Olathe	KS	66061	US
Secretary	Joseph Kelly	815 W 21st St	Lawrence	KS	66046	US
Treasurer	Steven Kelly	21211 W 23rd St	Olathe	KS	66061	US
Vice President	Patrick Kelly	14600 Village Dr.	Olathe	KS	66062	US

DOUGLAS COUNTY

KANSAS

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Property Search Results: Real Property

Please Note: This information is assumed current as of: **7/6/2017**. For more current information, please call the Appraiser's Office: (785) 832-5133.

[New Search](#) | [Modify Search](#) | [Search Results](#) | [Print this Page](#)

 - Select Year -

Property Information

[Map this Property](#)
Year: 2016**Pin Number: 023-099-29-0-00-00-011.01-0****Plate/Record Id: 200406A01****Owner 1:** RICHARDSON F DWANE TRUSTEE**Owner 2:** RICHARDSON VALERIE TRUSTEE**In-Care-Of:** (no record)**Property Address:** 2138 N 1000 RD, EUDORA, KANSAS**Mailing Address:** 2122 N 1000 RD EUDORA, KS, 66025-9193**Delinquent Tax:** No**Tax Unit:** 619**School:** USD 491**Sec-Twp-Rng:** (no record)**Book:** 1101**Page:** 5522

Value Information

Class**Appraised****Assessed**

	Land	Improvements	Total*	Land	Improvements	Total
AR	\$19,440	\$26,640	\$46,080	\$5,832	\$6,660	\$12,492
CR	\$1,300	\$8,480	\$9,780	\$325	\$2,120	\$2,445
FR	\$9,750	\$120,790	\$130,540	\$1,121	\$13,891	\$15,012

*Market or Ag use

Tax Information

Tax	Special Tax	Total Tax	Taxes Paid	Mill Levy
\$4,134.84	\$0.00	\$4,134.84	\$4,134.84	139.5990

Tax Payment Information

Year	Payment Date	Payment Type	Payment Amount	Print Receipt
2016	03/06/2017	PAYMENT	\$2,067.42	Print Receipt
2016	12/22/2016	PAYMENT	\$2,067.42	Print Receipt

Please Note: The Accuracy of Payment Information is not Guaranteed. If you have questions regarding payment information, contact the Treasurer's office at (785) 832-5178.

Property Description

29-13-21 E 1650 OF SW/4 LESS W 467 OF S 467 & LESS R/W 100.1A(C)

Legal Description

94.99A 29-13-21 E 100A OF SW 1/4, LESS 5.01A D 452/2097 WW35(DIV 1991 200406)

Residents | Business | Courts and Law | Government | Employment | Health and Environment | Recreation
Departments | FAQ | Maps and Directions | Contact Us

Courthouse: 1100 Massachusetts Street, Lawrence, KS 66044

Judicial and Law Enforcement Center: 111 East 11th Street, Lawrence, KS 66044

Phone: 785-832-5100 | Contact the Webmaster

REZONING (CONDITIONAL USE PERMIT) PROTEST PETITION

Protest Petition against CUP-17-00215

RECEIVED
DOUGLAS COUNTY CLERK
LAWRENCE, KANSAS

We, the undersigned property owners, do hereby protest the granting by the Board of
County Commissioners of Douglas County, Kansas of [proposed rezoning from _____
_____ (existing zoning) to _____ (proposed zoning)] or [a
CUP to permit telecommunications tower] on the following described
property: 2138 N 1000 Rd, Eudora, KS 66025

[Attach or insert legal description or general description of the real estate proposed to
be rezoned (or for the proposed CUP). A description of the real estate is available
through the Lawrence-Douglas County Planning Office.] 2138 N 1000 Rd
Eudora, KS 66025

We, the undersigned, are owners of real property located within the statutory area of
notification related to the area for which the rezoning (or CUP) is sought. See K.S.A. 12-757(f).

Note: Print name legible below or beside signature. All owners of the property must sign.

<u>PRINTED NAME AND SIGNATURE OF OWNER</u>	<u>DESCRIPTION OF PROPERTY WITHIN NOTIFICATION AREA</u>	<u>RESIDENCE ADDRESS (IF DIFFERENT)</u>	<u>DATE</u>
<u>Huiqun Ma</u>	<u>2115 N 1000 RD.</u>		<u>7-11-2017</u>
<u>Xigella</u>	<u>Eudora, KS 66025</u>		
<u>Zongwu Cai</u>	<u>2115 N 1000 RD.</u>		<u>7-11-2017</u>
<u>ZD</u>	<u>Eudora, KS 66025</u>		
<u>by Xigella</u>			

DATE _____

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

COUNTY OF DOUGLAS

SS:

Barbara J. Brown
Circulator Signature

Barbara J. Braca
Printed Name

Circulator's Residence and Address 1032 E 2100 Rd Date 7-12-2017

Signed and sworn to (or affirmed) before me on this Eudora KS 66025 12th day of July

2017, by Barbara J. Brad, circulator of this Protest Petition.

Notary Public

My appointment expires: 7/18/17

BRENT WEBER
Notary Public-State of Kansas
My Appt. Expires 7/18/17



Barbara Braa <bjbrea@gmail.com>

Cell Tower near our Eudora homes

1 message

Cai, Zongwu <caiz@ku.edu>
To: Barbara Braa <bjbrea@gmail.com>
Cc: Huiqun Ma <Hma@firsttennessee.com>

Tue, Jul 11, 2017 at 1:01 AM

Dear Barbara,

I am strongly opposed to the cell tower at 2138 N 1000 Road and I give my wife Huiqun Ma) the power to sign the petition on my behalf as I am not able to sign in person (I am out of country now).

Best, Zongwu

+++++

Dr. Zongwu Cai

The Charles Oswald Professor of Econometrics & Professor of Economics

The Advisor for the Master Program in Economics

Department of Economics

University of Kansas

Lawrence, KS 66045, USA

Tel: (785) 864-1886 (Office) | Fax: (785) 86-5270 (Department)

E-mail addresses: caiz@ku.edu OR zongwucai@gmail.com

RECEIVED
DOUGLAS COUNTY CLERK
LAWRENCE, KANSAS

2017 JUL 12 PM 4 28

REZONING (CONDITIONAL USE PERMIT) PROTEST PETITION

Protest Petition against CUP-17-00215

We, the undersigned property owners, do hereby protest the granting by the Board of County Commissioners of Douglas County, Kansas of [proposed rezoning from _____ (existing zoning) to _____ (proposed zoning)] or [a CUP to permit telecommunications tower] on the following described property:

[Attach or insert legal description or general description of the real estate proposed to be rezoned (or for the proposed CUP). A description of the real estate is available through the Lawrence-Douglas County Planning Office.] 2138 N 1000 Rd.,
Eudora, KS

We, the undersigned, are owners of real property located within the statutory area of notification related to the area for which the rezoning (or CUP) is sought. See K.S.A. 12-757(f).

Note: Print name legible below or beside signature. All owners of the property must sign.

PRINTED NAME AND SIGNATURE OF OWNER	DESCRIPTION OF PROPERTY WITHIN NOTIFICATION AREA	RESIDENCE ADDRESS (IF DIFFERENT)	DATE
<u>KELLY, STEVEN J</u> <u>[Signature]</u>	<u>Plate: 200419A 78+- Ac.</u> <u>200420 35+- Ac.</u> <u>200426 59+- Ac.</u>	<u>25610 W. 69th Ter., Shawnee, KS</u>	<u>6/22/16</u>
<u>Justin N. Kelly</u> <u>[Signature]</u>	<u>Plate: 200501A → 160+- Ac.</u> <u>9-14-21</u>	<u>18962 W. 118th St., Olathe, KS</u>	<u>660601 7/12/2017</u>
<u>Kelly Children Trust, By: Justin Kelly, Trustee</u> <u>[Signature]</u>	<u>Plate: 200485A</u> <u>160+- Ac.</u>	<u>18962 W. 118th St., Olathe, KS</u>	<u>660601 7/12/2017</u>

PRINTED NAME AND
SIGNATURE OF OWNER

DESCRIPTION OF PROPERTY
WITHIN NOTIFICATION AREA

RESIDENCE ADDRESS
(IF DIFFERENT)

DATE

STATE OF KANSAS)

COUNTY OF DOUGLAS)

ss:

I am the circulator of this Protest Petition and a resident of the state of Kansas and possess the qualifications of an elector of the State of Kansas. I have personally witnessed the signing of the Protest Petition by each person whose name appears thereon.

Circulator Signature

Printed Name

Circulator's Residence and Address

18962 W. 118th St., Olathe, KS 66061

Date

7/12/2017

Signed and sworn to (or affirmed) before me on this 12 day of July

2017, by

Justin Kelly

, circulator of this Protest Petition.

Notary Public

My appointment expires:

8/27/18



Notary Public - State of Kansas

Chad Oehlert

My appt. expires 8/27/18

From: Dawn Buehler
To: [AD - Crabtree, Robin](#)
Subject: Proposed Tower on 1000 Road in Douglas County
Date: Friday, July 14, 2017 9:15:05 AM

Dear Douglas County:

We are writing to express our concerns about a proposed tower for 1000 Road in Douglas County, south of Eudora. We live at 978 E 2100 Road, but we also own the 5 acre property to the north of us on 2100 Road. We recently built a house and moved in about a 2 months ago. We are concerned about several factors:

- We built in this part of the county because of the beautiful landscape and this tower will diminish the enjoyment of the area. Every year we watch the Eudora 4th of July fireworks from our property and this tower will likely block the view forever. It is unfortunate that one land owner can do something that will impact all of their neighbors and we are suppose to just accept it.
- We are concerned that a property owner could put up the tower, own the lease on the tower, then sell the property and be an absentee lease holder. There would then be no one local to take of any issues and that always creates problems. We all know that land in this part of the county is rising in value and in demand.
- We are also concerned about the presently vacant 5 acres that we own to the north of our house. We bought this property as an investment and to have the option to sell in the future for someone to build a house. The addition of this tower will likely result in a decrease in the value of the land and that would result in a lower price as no one wants to build a house and look at a tower. We have invested in this part of the county. We bought a very distressed property and have worked hard to rebuild it. Now we believe our property's value is being threatened. Not just the 5 acres to the north, but our present property with the house that we just built. What a shame. It makes me feel like we made a bad choice to build here if the county is going to let a tower come into the neighborhood to benefit one person and potentially lower property values to the neighbors.

We realize that there are many important issues that the county faces and that these types of towers are important to infrastructure. However, building it in the middle of our neighborhood serves no one other than the landowner that is gaining the lease profits. Surely there are more suitable sites for a tower that the county could look to serve the people. We are asking you to consider denying this request and protecting our property values and landscape views.

Sincerely,
Dennis & Dawn Buehler
978 E 2100 Road
Eudora, KS 66025

ITEM NO. 1 CONDITIONAL USE PERMIT FOR CELL TOWER; 2138 N 1000 RD (SLD)

CUP-17-00215: Consider a Conditional Use Permit for a new 190 ft self-supporting wireless telecommunications facility (tower), located at 2138 N 1000 Rd. Submitted by MW Towers LLC for F. Dwane Richardson & Valerie Richardson, property owners of record. *Joint meeting with Eudora Planning Commission.*

STAFF PRESENTATION

Ms. Sandra Day presented the item.

APPLICANT PRESENTATION

Mr. Vincent O'Flaherty, MW Towers, said the condition to move the tower back 150' was acceptable to the applicant. He said MW Towers had built 25 towers in the Kansas/Missouri area to improve cellular service. He referenced the State Statute established in 2016 that restricted the subject that Planning Commission can consider. He said that towers provide significant economic impact and were encouraged by the State Statute.

PUBLIC HEARING

Mr. Patrick Kelly, representing three property owners, expressed opposition. He expressed concern regarding decrease in property value and aesthetics of an ugly tower. He stated the Oregon Trail crossing was 1/10 mile away. He expressed safety hazard issues with an additional access point to the site. He was concerned about the fall zone and the proximity to the natural gas well nearby. He also expressed concern about low flying aircraft from the unregulated airstrip nearby as well as crop dusters.

Mr. Justin Kelly spoke in opposition on behalf of two property owners. He expressed concern about farmers being restricted with crop dusting. He said the Wakarusa River was nearby and contaminants from the cell tower could end up in the river. He expressed concern regarding the impact to migratory birds passing through the area of the cell tower site.

Ms. Barbara Braa echoed Mr. Justin Kelly's comments regarding migratory birds and the impact to them. She wondered how intrusive fencing would be around the cell tower. She wondered if a monopole would be less intrusive to the area. She expressed concern about the potential harm to the growth of Eudora. She asked for the addresses of other towers that MW Towers had built so she could see what they looked like.

Mr. Michael Braa questioned the need for another tower in the area and that he could already see two towers from his home. He said he was not aware of the lack of cell service in the area.

Mr. Mark Elston echoed Mr. Braa's comments regarding the need for another tower. He wondered who would profit from the cell tower being built.

Ms. Braa said the lease holder of the land moved away.

APPLICANT CLOSING COMMENTS

Mr. O'Flaherty said the fence would be 6' with three strands of barb wire on the top. He said the property was being leased from the land owner and subject to a ground lease. He said regarding questions about the floodplain and birds he referenced the Kansas Statute (KSA 66-2009) that said environmental impacts were not a reason to deny an application. He stated other towers being in the area was not grounds for rejecting an application per the Kansas Statute. He said the area needs additional coverage which was why the tower was being placed where it was. He said there were no statistics regarding a decrease in property value. He said Kansas public policy encouraged the development of wireless structures as being an economic benefit. He said regarding safety the electrical would be brought in underground to the site. He said staff had no concerns about access to the site. He said he would be happy to sit down with property owners to address any further concerns.

COMMISSION DISCUSSION

Commissioner Kelly asked staff about the limitations of the State Statute.

Ms. Day said Planning Commission could not consider other towers in the area as a factor for denial. She said they could also not consider the need or justification for the tower. She said regarding evidence of value loss that was a specific burden of property owners to show economic loss. She said one of the environmental factor considered was floodplain and it would still need to meet local standards. She said the proposed location did not encroach in floodplain.

Commissioner Kelly said Planning Commission had dealt with cell towers before and the laws conflict with the charge of Planning Commission. He said sometimes they cannot talk about certain concerns and it was frustrating.

Commissioner Sands said the proposed site drawings show up to four more facilities added to the tower.

Ms. Day said that was correct.

Commissioner Willey inquired about what else could be added within the fencing.

Ms. Day said the pad sites for ground equipment could be added. She said the lease area is initially larger than what they would fence at first. She said the fencing could be expanded if more equipment was added.

Commissioner Carpenter inquired about the tower being expanded by 20' and adding a light without public comment.

Ms. Day said it would probably come back as an administrative modification. She said the lighting was guided by the Federal Aviation Administration (FAA).

Mr. McCullough said the laws had evolved to benefit the cell tower industry. He urged Planning Commission to consider it has the potential to go up 20' and then be lit.

Commissioner Carpenter said the Comprehensive Plan does not specifically address cell towers.

Mr. McCullough said it was a matter of competing values and a necessary evil for everyone to have cell phones. He said the only study he had seen on property values showed that there was no effect on values. He said they were becoming less and less able to prohibit cell towers.

Commissioner Sands wondered if a light study should be required.

Ms. Day said it was not part of the old or recently approved regulation. She said a photometric plan that other development requires was completely different than a light study for a cell tower.

Commissioner Sands said he was talking about a low blinking red light.

Mr. McCullough said staff could not answer that.

Mr. O'Flaherty said he had no problem adding a condition that the tower would not go higher without public comment.

Mr. Paul Wrablica said lighting on towers over 200' was nighttime lighting was a red pulsing light that beats 30 strobes per minute. He said daytime lights were a medium intensity strobe.

Commissioner Carpenter inquired about how the FAA looks at towers near unregulated airstrips.

Mr. Wrablica said the FAA looks at airstrips that have FAR 75 protection, mostly paved airstrips. He said the landlord for the cell tower site owned an ultralight and was aware of the tower and had no concerns. He said the property owner does not fly at night.

Commissioner Butler appreciated the public comment. She referenced the State Statute and did not see any problem with not supporting the Conditional Use Permit. She felt the issues brought forth by the community were relevant and did not feel they were in specific contrast to what Planning Commission could consider.

Commissioner Sands asked how sites were selected.

Mr. O'Flaherty said it was a combination of a land owner willing to lease their land and coverage maps of who they want covered.

Commissioner Struckhoff inquired about tower camouflage.

Ms. Day said there was discussion about a monopole versus a sub-support. She said the applicant indicated that monopoles were more challenging to co-locate on.

Commissioner Culver wondered about the historical marker nearby and any restrictions in in the Code.

Ms. Day said there were no registered historic properties in the area. She said the applicant would have to coordinate with the State as part of the process. She said she forwarded the application to the State and they said the tower was not in the immediate vicinity. She said there may be historic elements but there was nothing regulatory at the local level that would regulate it.

Mr. O'Flaherty he said he had a letter from the State saying that the tower would have no adverse impact from their perspective.

Commissioner Willey appreciated the public comment. She said cell towers provide a public good by providing service but also becomes a burden in part of the landscape. She said the law does not allow them to regulate where towers are placed. She said she would vote in favor with a heavy heart. She said they did not have a lot to stand on in opposing it at this level. She encouraged the public to voice their opinions to County Commission.

Commissioner Sands said he was inclined to support it but not because he liked seeing cell towers. He said it was a private and public good. He said the State Statute requires a reasonable reason for denial. He said one of the Golden Factors that Planning Commission looks at is opposition and support from neighbors. He appreciated the public comment.

Commissioner Kelly echoed what Commissioner Willey said. He said there was probably a time when people didn't want telephone poles in their yard and now everyone is just used to them. He said he would support the Conditional Use Permit.

Commissioner Carpenter thanked the public for their comments. He said the Kansas Statute prohibits what Planning Commission can and can't do. He said he did not like cell towers and how they look. He felt like they were boxed into a corner of approving this. He was thankful the applicant was willing to bring it back for public comment if it would become taller.

Commissioner Butler encouraged residents to express their opposition to the County Commission. She was troubled by the applicant using Statue Statutes and regulations in an attempt to force their hands.

ACTION TAKEN

Motioned by Commissioner Carpenter, seconded by Commissioner Sands, to recommend approval the Conditional Use Permit, CUP-17-00215, for a *Communication Tower (Wireless Facility)* use, and forward to the Board of County Commission, subject to the following conditions:

1. Provision of a revised site plan drawing that shows the location of the tower enclosure setback at least 60' north of the right-of-way line and the tower to be setback a minimum of 150' from the future right-of-way line per section 12-310 of the County Zoning Regulations, and
2. Provision of a note on the face of the plan that states any increase in height above 200' or that would require installation of lights for FAA regulations will require a full public hearing process by the Planning Commission and County Commission with notice prior to modifications being permitted.

Commissioner Culver said based on the criteria they had it met the staff findings. He said he would support the motion since they could not consider other factors.

Commissioner Struckhoff said he would support the motion begrudgingly. He echoed Commissioner Culver's statement and said it was in line with the Comprehensive Plan and staff report findings of fact. He thanked the public for their comments.

Motion carried, 6-2 with Commissioners Butler & Carpenter voting in opposition.



Heart of America Real Estate & Auction

PO Box 56

313 Jefferson St.

Oskaloosa, KS 66066

785-863-3322

July 15, 2017

Dear Barbara Braa,

It has been a pleasure working with you over the years in real estate. Our company thanks you for recommending us for real estate and auction needs to your friends and business affiliates.

Our last conversation we discussed cell towers and the effects on real estate a cell tower has on value. I would be happy to tell you my personal experience over the last 20 years in North East Kansas with selling property as a listing agent or representing buyers. Our company has had the experience of personally listing, auctioning and representing buyers in four counties in the last 5 years with cell towers in Leavenworth, Jefferson, Shawnee and Douglas County. In each case the value was definitely effected by the tower.

In Jefferson County a past owner kept the benefits of the payments and we believe that not only was the land harmed by the visual effect but also any value of being reimbursed by the looks were taken away. We have listed, auctioned and tried to sell the property over a 10 year period and have not been successful. This property will sell but at a value that is far less than the seller would like to have. This particular piece of property is in the city limits of Valley Falls and is in the 3-5 acre range and would be an ideal setting for subdividing in larger city lots or for someone that would enjoy a small town business and need parking and a large business building. The city would be open to re-zoning the property. This value is being estimated to be 40 to 50% less than average market value of like properties.

In Shawnee County we represented a buyer that was willing to buy a property with the tower adjoining the subject property. In this case the buyer was able to purchase a home that was of better quality and value than other homes that they had been seeing in their price range. Upon driving up to the property they found out why it was priced less than other homes that they had been looking at. A cell tower was directly behind the property. The buyer was not concerned because the seller was selling at a discounted price because of the cell tower. This would be considered a plus for the buyer. The buyers and I discussed that when they would want to sell that they would have to take into consideration the cell tower, also. I believe that the sale price was approximately \$5,000-5,300 less than like homes in a 6-mile radius.



Heart of America Real Estate & Auction

PO Box 56

313 Jefferson St.

Oskaloosa, KS 66066

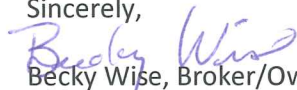
785-863-3322

The land affected by a tower in Leavenworth County is prime building ground within a 5 mile radius of the city of Leavenworth. There are homes that are in the \$250-300,000 +-value on small acreages nearby. This 20 acre site was dividable, had black top access, visually beautiful and good for building and would be cropped until the seller decided to take it out of production. The sale price was listed for the same as other parcels had sold in the area. The price was reduced after a 6 month period and after 18 months on the market the seller decided to keep the parcel.

I have shown 2 small acreages in the Douglas County area south of the city of Lawrence and another South East of Lawrence. Both were priced at what the buyer's deemed as very reasonable and each buyer was excited to find just the right home and acreage for such a great price. Both of these buyers were "turned off" and did not purchase the properties due to the cell towers being near the subject listings.

The above references were all my personal experience. I do believe that cell towers do adjust the price of real estate and that adjustment would lower the value.

Sincerely,


Becky Wise, Broker/Owner

United Country Heart of America Real Estate & Auction

AD - Crabtree, Robin

From: Mark Elston <elstonauction@embarqmail.com>
Sent: Tuesday, July 18, 2017 4:51 PM
To: County Commissioner - Derusseau, Michelle; County Commissioner - Thellman, Nancy; AD - Crabtree, Robin; County Commissioner - Gaughan, Mike
Cc: bBraa; pkelly3855@aol.com
Subject: FW: Re Cup-17-00215 Cell tower letter - opinion from realtor on effects on property values due to cell towers
Attachments: 20170717175744043.pdf
Importance: High

I echo the letter as the prices are effected!

Talking to my Real Estate Connections with our Auction Co. they seem to agree.

Thanks for your consideration and keep that open mind of no we cannot just approve it by legal litigations or we are wrongly representing our constitution!

I cannot attend the meeting but my Dad(Gary) and Sister(Kim) will be present.

Sincerely

Mark Elston/Elston Family

Property owner 2106 North 1000 Rd.

From: Barbara Braa [mailto:bjbraa@gmail.com]

Sent: Tuesday, July 18, 2017 1:44 PM

To: pkelly3855@aol.com; Kelly, Pat; Mark Elston; Jayhawk Dental

Subject: Fwd: Re Cup-17-00215 Cell tower letter - opinion from realtor on effects on property values due to cell towers

Fyi Just wanted all of you to see this new info I sent today to the commissioners.

Hope to see some/most of you Wed 7/19 on evening at 6 pm.

Barbara J. Braa

785-760-7525 Mobile

785-542-3829 Home

bjbraa@gmail.com

----- Forwarded message -----

From: "Barbara Braa" <bjbraa@gmail.com>

Date: Jul 18, 2017 1:38 PM

Subject: Re Cup-17-00215 Cell tower letter - opinion from realtor on effects on property values due to cell towers

To: <rcrabtree@douglas-county.com>, <nthellman@douglas-county.com>, <mgaughan@douglas-county.com>, <mderusseau@douglas-county.com>

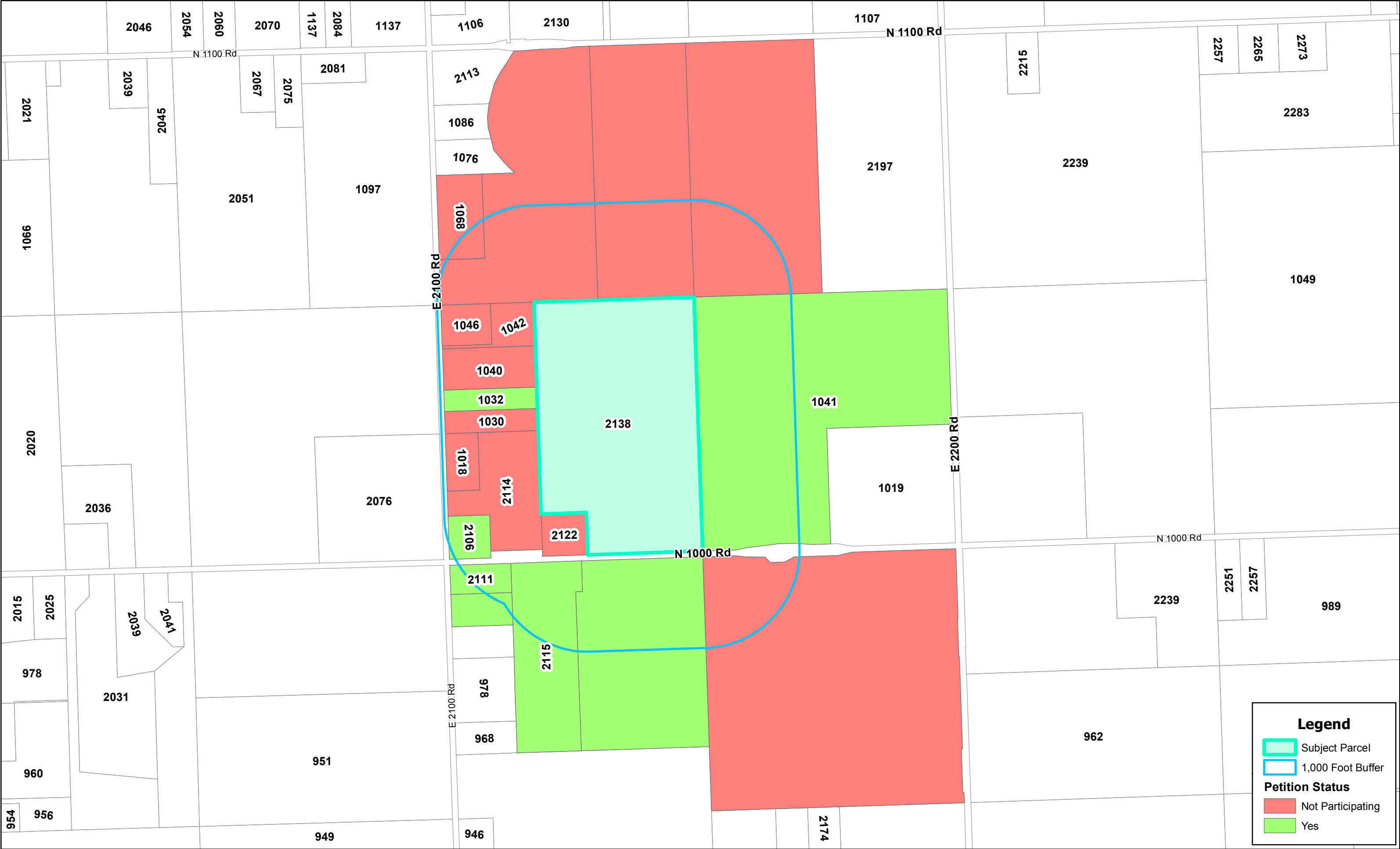
Cc:

Hello everyone,

Please see the attached letter from a broker, realtor who relays her experience with diminished property values due to cell towers in 4 counties, including Douglas County.

Please consider this information when you vote tomorrow.

Barbara J. Braa
bjbraa@gmail.com





July 18, 2017

Douglas County Commissioners,

My name is Bill Gaughan and I am a licensed real estate broker in the states of Kansas and Missouri with Farmers National Company. We are the largest real estate company in the country specializing in selling rural properties. We have sold many rural properties across the state of Kansas including properties in Douglas County, Kansas.

The issue of how much a cell phone tower affects property value and its marketability is directly proportional to visibility. Can you see it from a home? Does it have lights? If the answer is yes to either of those it has an impact. Additionally, buyers have expressed concerns about the potential health hazards associated with exposure to the radiation cell towers emit.

I have been selling rural properties for many years and part of the dream of owning a rural property is having a peaceful country lifestyle, and that does not include having a tower of any kind in the field of view of the house. No one enjoys a quiet night sky with a red light that never stops blinking. I do not find this an issue for homes in the city. Folks in the city anticipate that they will be bombarded with sights, sounds, and smells that come with a city, but not so for people buying in the country.

I have had buyers refuse to consider buying a house or property in rural areas with a cell tower in view, and some have looked at rural properties on aerial maps such as Google Earth and when they notice a cell tower they drop that property off of their list. Rural properties with towers nearby and in view will sell, but only at a discount from properties that are more serene and undisturbed.

Sincerely,

Bill Gaughan
Farmers National Company

Sincerely,
Bill Gaughan
913-837-0760
Bill@RuralKC.com



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Kansas Ecological Services Field Office
2609 Anderson Avenue
Manhattan, Kansas 66502



June 9, 2017

Mark W. Kelly, J.D.
K&K Environmental LLC

RE: Proposed 190-foot tall Self-Support Telecommunications Tower, Douglas Co.
FWS Tracking # 2017-CPA-0435

Dear Mr. Kelly:

This is in response to your letter dated April 29, 2017, requesting comment on the proposed construction of a new 190-foot tall Self-Support Telecommunications Tower and associated equipment placed on a 75-foot by 75-foot leased tract of land located in Section 29, Township 13 South, Range 21 East, Douglas County, Kansas.

In accordance with section 7(c) of the Endangered Species Act, it has been determined that the federally-listed Mead's milkweed (*Asclepias meadii*) and the western prairie fringed orchid (*Platanthera praeclara*) may occur in the project area. If the project may affect listed species, the federal funding/permitting agency should initiate section 7 consultation with this office.

If warm season, native grasslands or hay meadows are present and will be disturbed or removed by the project, we recommend that a qualified botanist inspect the proposed site in early June to determine the presence of suitable habitat and the federally-listed plant species prior to ground disturbing activities. If these plants are present within the project boundaries, project construction may adversely affect the species. The Kansas Biological Survey, 2041 Constant Avenue, Lawrence, Kansas 66047-2906, (785) 864-1538 may be contacted for assistance in determining the necessity of and protocols for plant surveys.

Any company/applicant/licensee proposing to construct a new communications tower should be strongly encouraged to co-locate the communications equipment on an existing communication tower or other structure (e.g., billboard, water tower, or building mount). Depending on tower load factors, from 6 to 10 providers may collocate on an existing tower.

If collocation is not feasible and a new tower or towers are to be constructed, communications service providers should be strongly encouraged to construct towers no more than 199 feet above ground level (AGL), using construction techniques which do not require guy wires (e.g., use a lattice structure, monopole, etc.). Such towers should be unlighted if Federal Aviation Administration regulations permit.

If constructing multiple towers, providers should consider the cumulative impacts of all of those towers to migratory birds and threatened and endangered species as well as the impacts of each individual tower.

If at all possible, new towers should be sited within existing "antenna farms" (clusters of towers). Towers should not be sited in or near wetlands, other known bird concentration areas (*e.g.*, state or Federal refuges, staging areas, rookeries), in known migratory or daily movement flyways, or in habitat of threatened or endangered species. Towers should not be sited in areas with a high incidence of fog, mist, and low ceilings.

If taller (>199 feet AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA should be used. Unless otherwise required by the FAA, only white (preferable) or red strobe lights should be used at night, and these should be the minimum number, minimum intensity, and minimum number of flashes per minute (longest duration between flashes) allowable by the FAA. The use of solid red or pulsating red warning lights at night should be avoided. Current research indicates that solid or pulsating (beacon) red lights attract night-migrating birds at a much higher rate than white strobe lights. Red strobe lights have not yet been studied.

Towers and appendant facilities should be sited, designed and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint". However, a larger tower footprint is preferable to the use of guy wires in construction. Road access and fencing should be minimized to reduce or prevent habitat fragmentation and disturbance, and to reduce above ground obstacles to birds in flight.

If significant numbers of breeding, feeding, or roosting birds are known to habitually use the proposed tower construction area, relocation to an alternate site should be recommended. If this is not an option, seasonal restrictions on construction may be advisable in order to avoid disturbance during periods of high bird activity.

In order to reduce the number of towers needed in the future, providers should be encouraged to design new towers structurally and electrically to accommodate the applicant/licensee's antennas and comparable antennas for at least two additional users (minimum of three users for each tower structure), unless this design would require the addition of lights or guy wires to an otherwise unlighted and/or un-guyed tower.

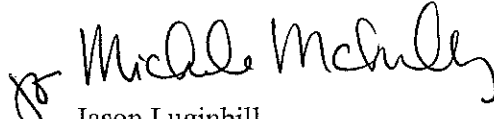
Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.

If a tower is constructed or proposed for construction, Service personnel or researchers from the Communication Tower Working Group should be allowed access to the site to evaluate bird use, conduct dead-bird searches, to place net catchments below the towers but above the ground, and to place radar, Global Positioning System, infrared, thermal imagery, and acoustical monitoring equipment as necessary to assess and verify bird movements and to gain information on the impacts of various tower sizes, configurations, and lighting systems.

Towers no longer in use or determined to be obsolete should be removed within 12 months of cessation operations.

Please notify this office with the results of any surveys for Meads milkweed and western prairie fringed orchid, so that we may determine whether there may be any impacts to these species. Thank you for this opportunity to comment on the proposal. If we can be of any further assistance, please call Ms. Michele McNulty, of this office, at 785-539-3474 ext. 106.

Sincerely,


Jason Luginbill
Field Supervisor

cc: KDWPT, Pratt, KS (Ecological Services)
KBS, Lawrence, KS (Deslisle)



1018 East 2100th Rd.
Eudora, KS 66025
P: 785-542-0516

August 7, 2017

City of Lawrence Douglas County
To Whom It May Concern:

In regards to **CUP-17-00316**.

It has come to our attention that Dwane and Valerie Richardson have applied for a permit to put a large tower on their property. We have received concerns and requests for petitions against this permit. However, we would like to express that we are in favor of the Richardsons being granted this permit.

We operate our business out of our home and find it very difficult to get internet access that is reliable. As business owners we are hopeful that this tower will allow us new options for internet service. Without reliable internet, we are not able to conduct business as needed.

Thank you for your time.

Sincerely,

A handwritten signature in black ink, appearing to read "Lori and Curtis Eisenhour". The signature is written in a cursive style.

Lori and Curtis Eisenhour
Hometown Graphics