

PLANNING COMMISSION REPORT
Regular Agenda – Public Hearing Item

PC Staff Report
6/22/15

ITEM NO. 2 SPECIAL USE PERMIT FOR VERIZON WIRELESS; 2001 MOODIE ROAD (SLD)

SUP-15-00185: Consider a Special Use Permit for Verizon Wireless LLC to construct a new communication tower, located at 2001 Moodie Rd. Submitted by PAMCORP on behalf of Verizon Wireless LLC for Ottawa Cooperative Association, property owner of record.

STAFF RECOMMENDATION: Planning Staff recommends approval of a Special Use Permit for a communication tower located at 2100 Moodie Road and forwarding the request to the City Commission with a recommendation of approval, subject to the following conditions:

1. Applicant shall submit a revised site plan to show five (5) additional street trees along the north 200 feet of Moodie Road to mitigate the proposed use from the residential use to the south.
2. Prior to release of the site plan for issuance of a building permit, the applicant shall provide the following changes and documentation:
 - a. Submission of documentation to demonstrate the tower fall zone will be maintained within the parent parcel.

Applicant's Reason for Request: *"Verizon Wireless proposes to construct and operate a 120' tall self-support monopole type communications tower which will be used to provide enhanced wireless voice and data services to its local subscribers. The facility will be unmanned and will be designed to accommodate at least two additional sets of antenna for use by other carriers. This tower is urgently needed to offload use at surrounding towers which are currently at or above capacity. Without the addition of this communication facility Verizon customers could realize significantly reduced services and very possibly lack of services in an emergency situation."*

In a written response to staff's review comments the applicant stated that "in addition to providing improved signal strength coverage in this area, the site will also serve to improve capacity by offloading network demands on nearby macro sites in the area."

ATTACHMENTS

1. Area Map
2. Site Plan
3. Residential Proximity map
4. RF Engineer Letter
5. 3rd Party Review
6. Letter from Clark Coan

KEY POINTS

- Third party review found the applicant's burden of proof justifying the need for a new communication tower is met.
- This tower is intended to augment existing facilities within the community and provide support for the communication infrastructure.
- Proposed tower type is a self-supporting monopole.

ASSOCIATED CASES/OTHER ACTION REQUIRED

- City Commission approval of Special Use Permit and adoption of ordinance.
- Publication of Special Use Permit ordinance.

PUBLIC COMMENT RECEIVED PRIOR TO PRINTING

- Letter from Clark Coan, Sunflower Tail-Trials Conservancy.

Table 1: Project Summary Table

Subject Property:	9.24 Acres
Proposed Buildings/structures:	Base enclosure 15' by 30' 20' access driveway to Moodie Road 12' x 6' pad site for equipment shelter Generator located within shelter building 120' monopole with 10' lightening rod (130' total)

GENERAL INFORMATION	
Current Zoning and Land Use:	IG (General Industrial) District, <i>Construction Sales and Service</i> , and <i>Wholesale, Storage and Distribution Light and Heavy</i> (Ottawa Cooperative).
Surrounding Zoning and Land Use:	IG (General Industrial) District; <i>Food and Beverage Production & Warehousing Office, Warehouse & Manufacturing</i> (Free State Brewing Co. bottling facility).
To the North:	
To the East, east side of Moodie Road:	GPI (General Public and Institutional) District, <i>Community Facility and Open Space</i> (City facilities, fire station and Chief Jim McSwain Park). CO (Commercial Office) District; Existing Use, <i>Community Facility</i> (Independence Inc.) RS7 (single-Dwelling Residential) District; <i>existing residential subdivision</i> (East View Subdivision No. 3, 1967 and East View Subdivision, 1956.)
To the South:	IG (General Industrial); <i>Professional Office</i> , (CFS Engineers and <i>Warehouse and Manufacturing and Production</i> (multi-tenant facility (P1 Group)).
To the immediate West:	IG (General Industrial) District; <i>Open Space</i> (Burroughs Creek Trail and Linear Park).
To the far West, west of Burroughs Creek Trail and Linear Park:	IG (General Industrial) District; <i>Wholesale, Storage and Distribution Light and Heavy</i> (warehouse buildings and undeveloped lots).

Summary of Request

This request is for the construction of a new 120' communication tower to include Verizon communication equipment. Additional space is available on the tower and within the ground lease area for other communication carriers in the future. The proposed location of the tower is in the northeast corner of the Ottawa Coop property along the west side of Moodie Road. The tower and enclosure is proposed to be located within an open space area of the Coop facility and includes a new access driveway shown on the face of the site plan.

Review and Decision-Making Criteria (Land Development Code Section 20-1306(i))

1. WHETHER THE PROPOSED USE COMPLIES WITH ALL APPLICABLE PROVISIONS OF THIS DEVELOPMENT CODE

Applicant's Response: *"Yes"*.

Two key considerations of the application for a new communication tower are the compliance with Section 20-529 Telecommunication Facilities and completion of an independent third party review of the request. Design standards are discussed later in this report. The proposed application complies with these requirements of the Development Code.

Staff Finding – This use complies with the applicable provisions of the Development Code.

2. WHETHER THE PROPOSED USE IS COMPATIBLE WITH ADJACENT USES IN TERMS OF SCALE, SITE DESIGN, AND OPERATING CHARACTERISTICS, INCLUDING HOURS OF OPERATION, TRAFFIC GENERATION, LIGHTING, NOISE, ODOR, DUST AND OTHER EXTERNAL IMPACTS

Applicant's Response: *"Yes."*

This area includes industrial buildings to the north, west and south, detached residences to the southeast, and community facility uses to the east including a fire station, public park space and Independence Inc. Non-residential uses in the immediate area, excluding the fire station, are typically associated with normal business hours so that they are operating during the daytime and closed during the evening and overnight hours.

A small pocket of residences are located between Moodie Road and Haskell Avenue, southeast of the proposed tower site. This residential subdivision is surrounded on the north, west and south by industrial and community facility uses.

Communication towers have a unique form and function. Additional traffic and activity are limited to periodic maintenance once a tower is constructed. Operational characteristics of a tower are not directly comparable to daily activity generated by residential and commercial/industrial uses and activities. This application includes a natural gas generator to be located in the shelter building. The proposed use will not generate odor or dust, if approved. Regular noise associated with the use is limited to the equipment used for cooling the electrical components within the shelter building, similar to an air conditioner, and periodic maintenance of the generator, also located within the shelter building.

Lighting is not proposed for the tower and is not typically required for towers less than 200 feet tall. Lighting for any security purposes required at the base of the tower is proposed over doorways. The overall height of the tower mitigates the need for the tower to be lit. The proposed tower type is a monopole tower that provides a minimized profile for the type of use compared to other types of tower structures.

Two historic properties are located within ¼ mile of the subject property to the east [Robert H. Miller House] and west [Zinn-Burroughs House]. Both of these historic properties are located in residentially zoned districts.

Staff Finding – The proposed tower is compatible with the adjacent uses in terms of hours of operation, orientation, and size. A self-supporting monopole tower has the most reduced profile of any tower type other than a fully stealth structure that is disguised as some other type of structure.

3. WHETHER THE PROPOSED USE WILL CAUSE SUBSTANTIAL DIMINUTION IN VALUE OF OTHER PROPERTY IN THE NEIGHBORHOOD IN WHICH IT IS TO BE LOCATED

Applicant's Response: *"No."*

Staff does not review property values or property assessment but generally considers broad impacts of land uses on a surrounding neighborhood.

The Development Code indicates a preference for communication towers to be located in commercial and industrial zoning districts. The tower is located adjacent to the eastern edge of the Barker Neighborhood. This property is not located within a designated neighborhood. The property is located within the Burroughs Creek Corridor Plan boundary.

A site plan was recently approved for the addition of a grain storage structure at 2100 Mooide Road per SP-15-00095. Other applications for site improvements for businesses located along E. 22nd Street have been approved between 2010 and 2013 in this area. A new business for an indoor sports and recreation use was recently approved for 701 E. 19th Street, the former Zimmerman Steel building, now Silverback Enterprises that includes a fitness center, offices and equipment storage for various events. These uses and activities represent an investment in the southeast part of the community within the Burroughs Creek Corridor.

The proposed tower is located in the front portion of the site. The existing development pattern of the property locates buildings along the west (rear) property line and therefore there is no opportunity to locate the tower, on this property in the rear. The proposed location also places the tower away from the linear park that had been cited as objectionable in a previous application. The northeast corner location also provides the greatest separation between the tower and the residential uses to the southeast.

Staff Finding – There is no anticipated diminution of value to this area that will result from the proposed use.

4. WHETHER PUBLIC SAFETY, TRANSPORTATION AND UTILITY FACILITIES AND SERVICES WILL BE AVAILABLE TO SERVE THE SUBJECT PROPERTY WHILE MAINTAINING SUFFICIENT LEVELS OF SERVICE FOR EXISTING DEVELOPMENT

The proposed tower is located on private property and does not require public infrastructure services such as water and sanitary sewer. There is an existing sanitary sewer line located within the property and along the east side of Moodie Road that extends one-half block north of E. 21st Street. A City water line is also located along the east side of Moodie Road.

Other infrastructure needs such as telephone, electric and gas service, needed for the generator, will be accommodated from existing utilities in the area.

The proposed tower is located near the existing public right-of-way (Moodie Road). The initial application showed the fall zone of the proposed tower as a 50' radius. This radius extended into the public street right-of-way. The fall zone also extends to the north, encroaching onto the adjacent

property located at 1927 Moodie Road. A tower must be setback equal to one half the height of the tower when adjacent to any R District as required in the Land Development Code. Section (b) of the Land Development Code goes on to state *"In any other base district, the telecommunication tower shall be setback from the property line in all directions the distance established by the fall zone of the tower."* The applicant has provided a statement that the tower will be designed to "fall" within the property. Additional engineering certification is required at the time of a building permit to ensure this standard is met.

Staff Finding – The subject property is located within an urbanized area of the community with adequate public services available to the site.

5. WHETHER ADEQUATE ASSURANCES OF CONTINUING MAINTENANCE HAVE BEEN PROVIDED

The proposed request provides an enforceable tool to address the use and continued maintenance of the property with regard to landscaping, exterior activity, and off-street parking associated with the communication tower. This application does not change or alter the other primary uses associated with the Coop operation. A requirement of the Development Code is that if a tower is not used for a period of three years then the tower shall be removed. This requirement is noted on the face of the drawing.

This application is for the construction of a communication tower. The approval does not change or alter the existing land use or base zoning district.

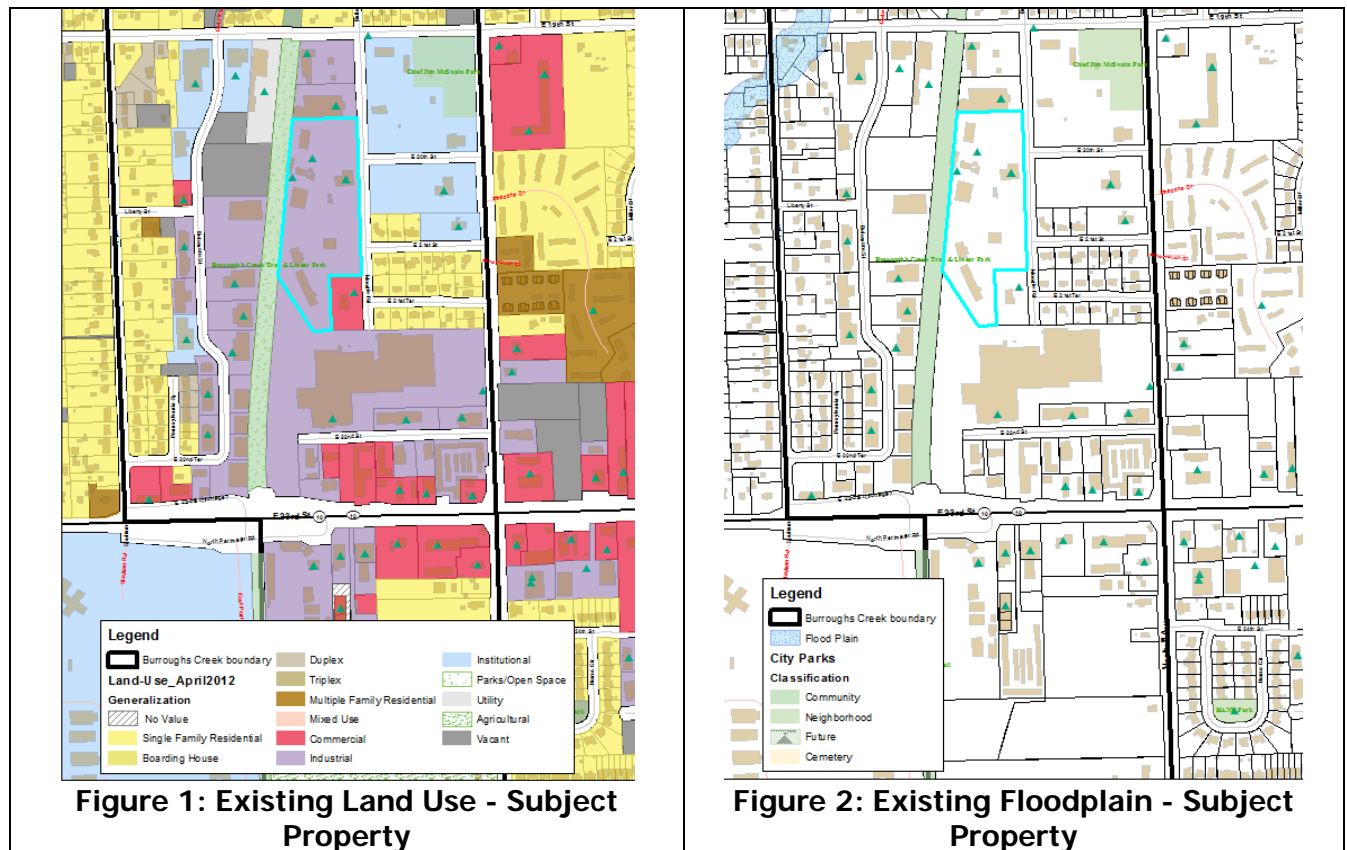
Staff Finding – Adequate assurances of continued maintenance are provided with this application.

6. WHETHER THE USE WILL CAUSE SIGNIFICANT ADVERSE IMPACTS ON THE NATURAL ENVIRONMENT

Applicant's Response: *"No."*

The property is located in a developed urban area. Moodie Road is a two block segment within the Burroughs Creek Corridor. This portion of the corridor area is predominantly industrial with a small pocket of residential use in the vicinity. The Burroughs Creek Trail and Linear Park, located along the west side of the subject property and the Chief Jim McSwain Park located to the northeast of the subject property provide open space within this area between 19th Street and 23rd Street.

- The property is not encumbered by the regulatory floodplain.
- There are no natural features in the immediate area that will be impacted by the proposed tower.
- The property is located within a developed urban area.



Staff Finding – No impact on the natural environment is anticipated from the development of this proposed communication tower.

7. WHETHER IT IS APPROPRIATE TO PLACE A TIME LIMIT ON THE PERIOD OF TIME THE PROPOSED USE IS TO BE ALLOWED BY SPECIAL USE PERMIT AND, IF SO, WHAT THAT TIME PERIOD SHOULD BE

Section 20-529 (3) (i) states: *"Any Telecommunications Facility that is not in use for a period of three full years or more shall be removed by the Owner at the Owner's expense. Failure to remove the Telecommunications Facility pursuant to non-use may result in removal and assessment of cost to the property pursuant to K.S.A. 12-6a17."* This code provision limits communication towers to active use. No additional limitation on time is required.

Staff Finding – The Development Code includes a provision for non-use and removal of towers. No additional restriction is needed.

8. CONFORMANCE WITH AREA OR NEIGHBORHOOD PLAN

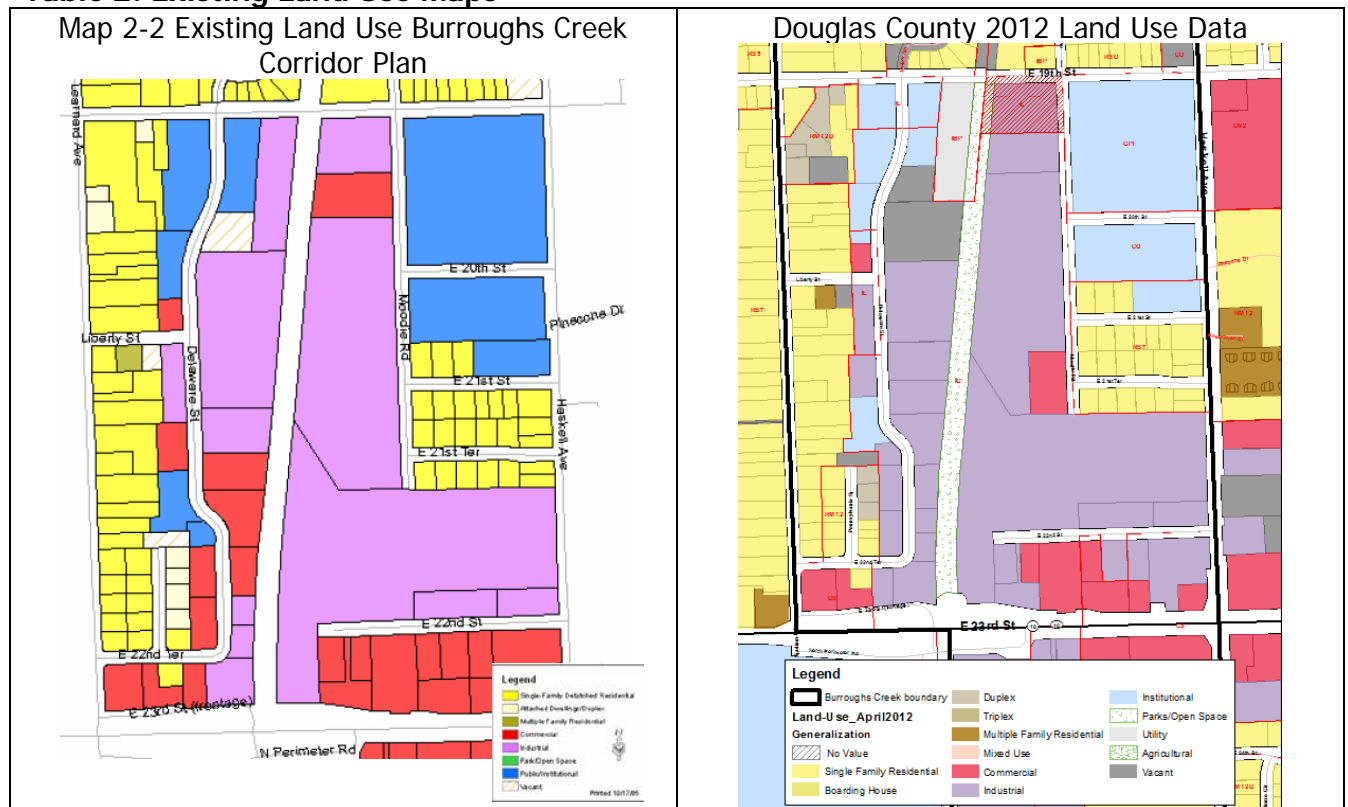
This property is located within the boundary of the Burroughs Creek Corridor Plan. The plan was approved in February 2006. The Land Development Code was adopted in July 2006. References to specific zoning districts are updated and related in this report with the current district titles. A significant feature of this plan is the Burroughs Creek Trail, formerly part of the BNSF railroad that extends north to south through the plan area. The plan breaks the area into three sections:

- Section One: is located generally between 9th Street and 15th Street;
- Section Two: is located between 15th Street and 23rd Street, and;
- Section Three: is located between 23rd Street and 31st Street.

This request is located within Section Two of the area plan. This section is characterized by predominantly residential uses with an area of commercial uses north of 19th Street. South of 19th Street includes predominantly industrial uses with significant area used for public and institutional uses as well as commercial uses. Residential use in Section 2 south of 19th Street is limited to a pocket area around E. 22nd Street and the east block along Larnard Avenue. Map 2-2. Access to the Burroughs Creek Trail from this area is limited to the trail crossings at 19th Street and E. 23rd Street.

One recommendation included in the plan is to align the zoning consistent with the use (Page ii). Specific properties are recommended for rezoning along the corridor from the designated industrial district to a commercial district. An example of this recommendation includes parcels located along Bullene and Lynn Streets. Because the plan was written prior to 2006 the zoning recommendations do not match with the current districts adopted by the Land Development Code. A recommendation to change M-2 to C-5 would be reflected as IG to CS. This change of zoning is intended for underutilized commercial and industrial sites (Page 1-5) with an emphasis placed on residential infill and neighborhood friendly infill development. A review of the current land uses as provided by the Appraiser's Office (2012 data) and Map 2-2 included in the Burroughs Creek Corridor Plan shows several changes in the mix of commercial and industrial uses between 19th Street and 23rd Street.

Table 2: Existing Land Use Maps



- The subject property is not included in the list of properties to be rezoned within the plan area.
- The existing use, Ottawa Cooperative, is classified as a *Construction Sales and Service, and Wholesale, Storage and Distribution Light and Heavy*.
- The subject property is actively used by the Ottawa Cooperative Association.
- A special use permit does not alter the base zoning district.

The plan recommends that when redevelopment of industrially zoned areas is proposed in the future, these areas should be scrutinized for neighborhood compatibility. The plan also states commercial and industrial development should be designed to enhance the area and not detract from the character of the area. The proposed tower is located within an area designated to be retained as an industrial district within the Burroughs Creek Corridor.

The partially developed property on the southeast corner of E. 20th and Moodie Road (Independence Inc.) was identified in the plan as a candidate to be rezoned from M-2 to O-1. This rezoning was completed and is currently reflected as CO, per the current Land Development Code designation. No additional land use recommendations are included for the area between 19th Street and 23rd Street within the plan boundary.

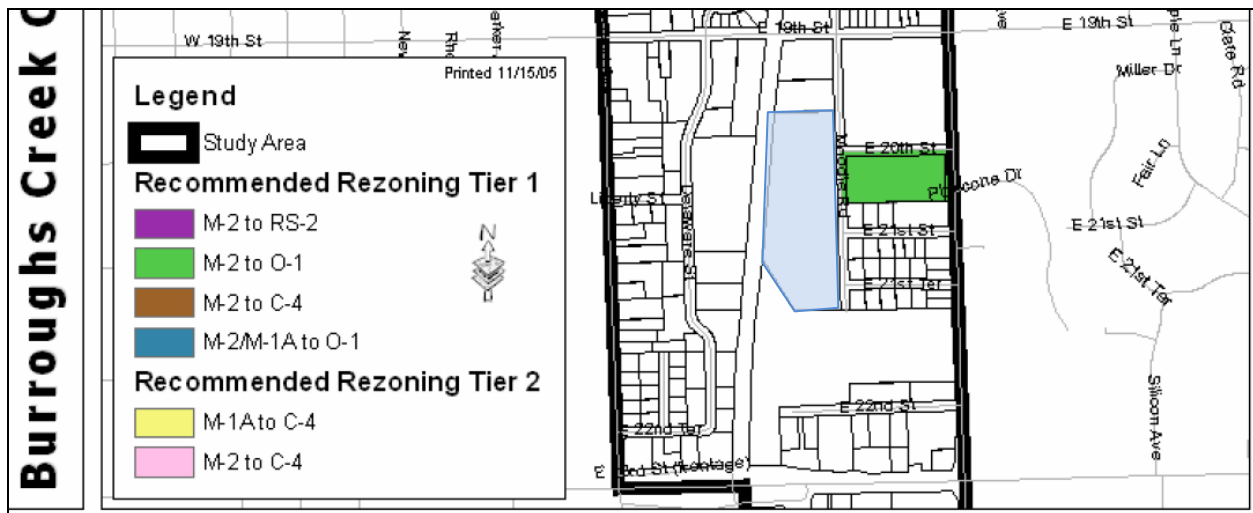


Figure 3: Recommended Zoning Burroughs Creek Corridor Plan

The area highlighted in light blue represents the subject property. Property in green, 2001 Haskell Avenue, is the location of Independence Inc. and was rezoned to O-1 (Office District) as an action step following the adoption of the plan.

Burroughs Creek Corridor Plan and Historic Resources

A recommendation of the plan is to survey the area for historical properties. The environs of the Zinn-Burroughs House extends into Section Two of the corridor study area but does not encumber the subject property. The locally listed property is approximately 1,300 feet west of the proposed tower location. The Robert H. Miller House property, another locally listed landmark, is located approximately 1,200' east of the proposed tower. The environs of that property does not extend into the Burroughs Creek Corridor Plan area.

This project required review under Section 106 of the National Historic Preservation Act. The FCC found that there was no adverse effect on any historic property in the Area of Potential Effect (APE) (FCC project # 0006790154). The Kansas State Historic Preservation Office concurred with this finding (Project # RNC 15-05-080). The City of Lawrence's Historic Resources Administrator concurs with this no adverse effect finding.

Staff Finding – Burroughs Creek Corridor Plan provides guidance for the development of a linear park as well as provides land use recommendations for specific properties within the corridor. The subject property is located within a designated industrial area. The existing uses are consistent with the base zoning. Approval of the request does not alter the base zoning district.

9. NEW TELECOMMUNICATION FACILITIES – ADDITIONAL CRITERIA FOR REVIEW. IN ADDITION TO THE STANDARDS AND CONDITIONS LISTED IN SECTION 20-529 (2) AND 20-529 (9), THE CITY COMMISSION SHALL CONSIDER THE FOLLOWING FACTORS IN DETERMINING WHETHER OR NOT TO ISSUE A SPECIAL USE PERMIT.

(i) Height of proposed Telecommunications Facility.

The proposed height of the tower is 120' with a 10' lightening rod for an overall height of 130'. The tower will be capable of supporting a total of three carriers, including Verizon, the applicant.

Tower height and setback are related. The Development Code requires a tower to be "setback from the property line in all directions a distance equal to at least one-half the height of the telecommunications tower if the site is in or adjoins an R Base District." In all other districts the setback must be contained within the "fall zone".

The proposed tower is located 27.4' south of the north property line and approximately 22' west of the east property line. These dimensions place the tower in close proximity to a common property line to the north and to the public street to the east. The applicant has stated that the tower will be engineered to "fall" within the boundary of the property and not encroach onto the north property or into the public street. A detailed engineering report will be required with the submittal of the building permit for the tower to document the "fall zone" as described by the applicant.

The specific fall zone of the tower will be provided with the final engineering documentation at the time the tower is ordered for construction. If approved, the applicant will need to provide documentation to demonstrate that in the event of a tower failure the equipment will "fall" within the subject property and not encroach on the adjacent property to the north or the public right-of-way.

Section 20-529 (2)(iv) requires the overall tower height to comply with Section 20-302 of the Development Code. Section 20-302 addresses the Airspace Overlay District. The proposed tower is not located within the affected vicinity of the Municipal Airport Runways. The proposed tower will not impact the Lawrence Municipal Airport.

(ii) Proximity of Telecommunications Facility to residential structures and residential district boundaries.

The nearest residential boundary is located more than 500' to the southeast. An exhibit is attached to this report showing the approximate distance of the proposed tower to the surrounding residential zoning districts. The property to the southeast has a direct view to the proposed tower. There are no street trees or other vegetation that obscure the line of sight between the nearest residence and the proposed tower.

The applicant has revised the site plan to provide landscape materials along the north, south and east sides of the enclosure. This will aid in screening the ground equipment from view. Staff recommends additional street trees be added between the tower site and E. 20th Street to mitigate the proximity of the residential uses and the proposed tower.

The site has a wide driveway at E. 20th and the exterior storage yard extends to the east property line south of the office building. Trees will need to be understory since there are overhead lines along the east property line of this site. The following graphics show the proposed landscape plan around the base of the tower facility and the proximity of the tower to the residential uses with the addition of trees along the north portion of the property.

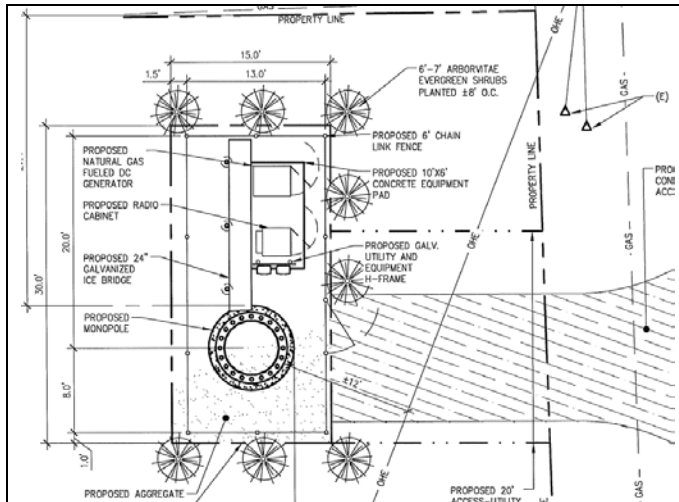


Figure 4: Proposed Landscape Plan



Figure 5: recommended Street Trees

(iii) Technical or engineering requirements limiting placement of the Telecommunications Facility in other areas in order to provide coverage.

A requirement for new telecommunications towers is to demonstrate or justify why the proposed equipment cannot be co-located on existing equipment. This requires a third party review. The City contracted with Burns and McDonnell to review the applicant's justification for this request. A previous application located north of this site in the 1700 block of Bullene was denied by the City Commission, on November 17, 2014. That action did not diminish the applicant's stated need for an additional facility. It did result in reconsidering an alternative site as proposed in this application.

The independent study prepared by Burns and McDonnell concluded that no existing telecommunication towers or structures are located within the geographic area required to meet the applicant's engineering needs. The study concluded that the burden of proof required per Section 20-529 (7) of the Land Development Code is met. A copy of the Burns and McDonnell study is attached to this report.

(iv) Nature and uses on adjacent and nearby properties.

This design consideration has been previously discussed throughout this report. The nature and use of adjacent properties includes a variety of uses including other industrial, warehouse, office, public parks, and residential uses. The location of the proposed tower on the subject property provides the greatest separation between the tower structure and the nearest residence. The west side of the subject property is occupied by buildings associated with the primary business.

(v) Surrounding topography, tree coverage and foliage

The subject property is a developed industrial site. The site and immediately surrounding area is generally flat.

The site is generally devoid of trees. Vegetation is located along the Burroughs's Creek Trail west of the subject property.

(vi) Design of the Telecommunications Facility, with particular reference to design characteristics that have the effect of reducing or eliminating visual obtrusiveness and making the proposed Telecommunications Tower or Telecommunications antenna a stealth or disguised facility.

The proposed tower is a monopole similar to other telecommunication towers constructed in the city limits in the 1980' and 1990's. The monopole type tower is the most common tower type in the City.

Monopole with multiple platforms for carriers



Figure 6: Existing Tower E. 23rd Street

"Stealth Pole"



Figure 7: Existing Tower E. 23rd Street

Stealth application of tower as flag pole along W. 6th Street.



Figure 8: Existing Tower on W. 6th Street

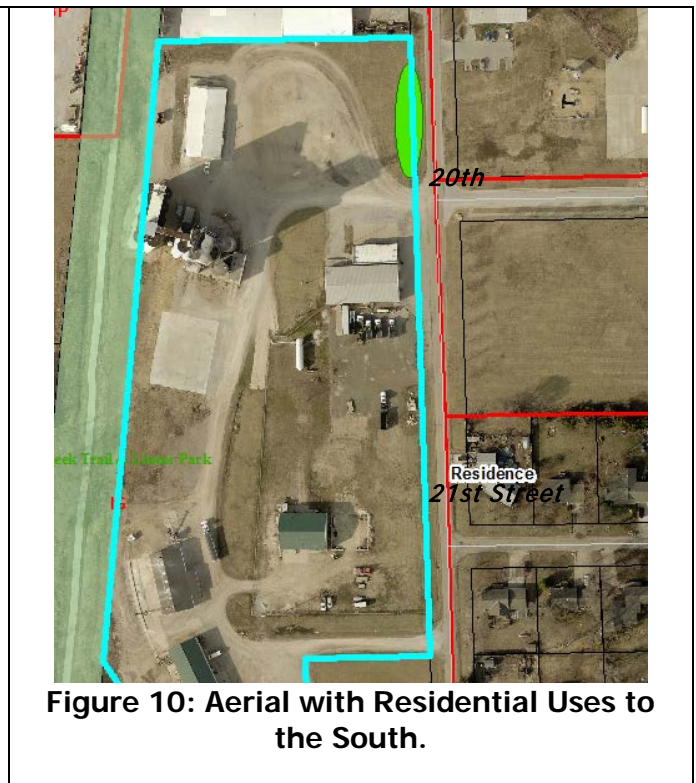
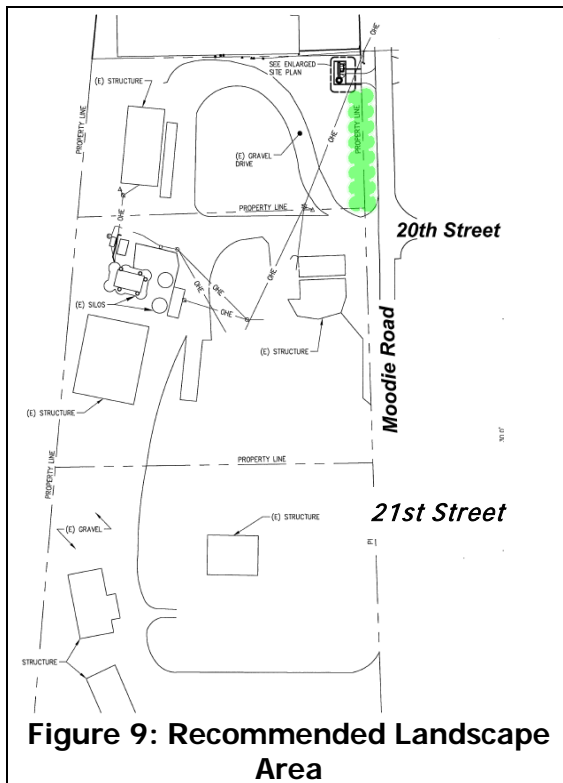
The "stealth" pole type structure was constructed as a new tower along the 23rd Street Corridor in 2006. A similar tower was also constructed along Bob Billings Parkway in the Hidden Valley Girl Scout Property, and adjacent to the medical building along N. 6th

Street. The tower along W. 6th Street was designed as a flagpole, located in the northwest corner of the site.

There are many examples of stealth tower applications that result in the structure having an appearance of water tanks, smoke stacks, trees, and other types of features found in urban areas. To date, the City of Lawrence has not adopted or amended the existing tower regulations to include policies about stealth applications.

Previous applications, typically those related to co-location of communication equipment added to City water tanks or located in City Parks, have included a requirement to screen ground equipment with landscape. This has posed some difficulty with both maintenance and the need for clear visibility required to meet national security standards. The applicant revised the plans to add landscape around the base of the tower site.

Staff recommends landscape be added in the area north of the existing access drive to include shrubs and under-story shade trees along the public right-of-way.



(vii) Availability of suitable existing Telecommunications towers or other structures for placement of proposed Telecommunications Antenna.

The grain elevator is located to the southwest of the proposed structure and is the only "tall structure" in the immediate area. Its height is estimated at 145'. The Fire training tower located to the northeast is approximate 45' tall. Most buildings in the immediate area are single story structures. Typical industrial buildings in the area are 20-35' tall. The Coop recently received approval for the construction of a 75' tall grain bin immediately south of the existing grain silos. The proposed tower is 120' with a 10' lightning rod.

Based on the third party review there are no suitable towers or other “tall structures” within the area for co-location of antenna to meet the applicant’s requirements.

(viii) Whether the character of the proposed site and the proposed Telecommunications Tower will facilitate maximum utilization of space for placement of Telecommunication antennas serving multiple users.

The proposed tower is capable of supporting additional communication carriers as required by the Development Code. The proposed application represents the microcell site needs of the applicant, Verizon Wireless. The area footprint for the tower and ground equipment is smaller than typically included in applications for new communication towers. Lease spaces are commonly 100’ by 100’ intended to capture the initial equipment/carrier, tower and any additional pad sites that will be associated with future carriers to be co-located on a tower.

This application lease area is 15’ by 30’ and captures the proposed tower and initial ground equipment only. Future carriers will need to negotiate with the land owner as well as the tower owner for future co-location requests. The enclosure area will need to be expanded as additional carriers are added to this site to accommodate additional ground mounted equipment to support future carriers.

10. STAFF REVIEW

This portion of the staff report addresses the site plan details and physical development of the site.

A. Site Summary/History

The following site summary is provided from the recently approved site plan for the addition of a grain storage building along the west side of the property. The proposed tower application does not include a summary of the pervious and impervious area typically included in a site plan. The proposed tower improvements are noted in the beginning of this report.

Table 3: Site Summary Table

SITE SUMMARY – SP-15-00095 addition of grain storage building			
	Existing	Proposed	Change
Primary Land Use:	<i>Construction Sales and Service, and Wholesale, Storage and Distribution Light and Heavy</i>	<i>Construction Sales and Service, and Wholesale, Storage and Distribution Light and Heavy</i>	
Land Area (sq. ft.):	402,732 sq. ft.	402,732 sq. ft.	0
Total Impervious Area (sq. ft.):	51,610 sq. ft.	48,453 sq. ft.	-3,157
% Impervious:	13 %	12%	-1%
Total Pervious Area (sq. ft.):	351,122 sq. ft.	354,279 sq. ft.	+3,157

ASSOCIATED CASES

- SP-5-30-90: Farmer’s Co-op; Construction of office building
- SP-8-49-90: Farmer’s Co-op; Fence addition
- SP-6-33-93: Farmer’s Co-op; Addition of a storage facility and retaining wall
- SP-2-15-12: Farmer’s Co-op; Demolition of grain storage building
- SP-14-00168: Contractor Shop; addressed as 2111 Moodie Road

- SP-15-00095: Ottawa Cooperative Association, building addition for 75' tall grain bin.

B. Access and Parking

Access and On-site Parking:

Parking is not required for communication towers. Access to the site is from a proposed access easement (driveway) intersecting with Moodie Road. Driveways must be designed and constructed per City standards. Approval of this use does not alter the parking for the existing uses associated with the Coop operation.

C. Design Standards

Site Design: This tower represents a monopole construction capable of supporting multiple carriers. Ground equipment includes radio cabinets and a generator located within a fenced enclosure. The applicant has added landscape around the base of the facility to provide some screening of the ground equipment from the public right-of-way and residential use to the southeast without fully obscuring visibility of the site.

Historic District Review: This property is not located within the environs of a designated historic property or district.

Pedestrian accessibility: This application is for a utility type use. Accessibility needs for the site are limited to periodic maintenance of the structure and equipment as needed. Moodie Road is an existing local street constructed without curbs, gutters or sidewalks. Sidewalks are not proposed to be added with this project.

Neighborhood: This property is located east of the Barker Neighborhood and south of the Brook Creek Neighborhood. The area between 19th Street and E. 23rd Street east of the Burroughs Creek Trail and Linear Park is not within a designated neighborhood. The subject property is located within the boundary of the Burroughs Creek Corridor Plan that extends north to south between 11th Street and 31st Street.

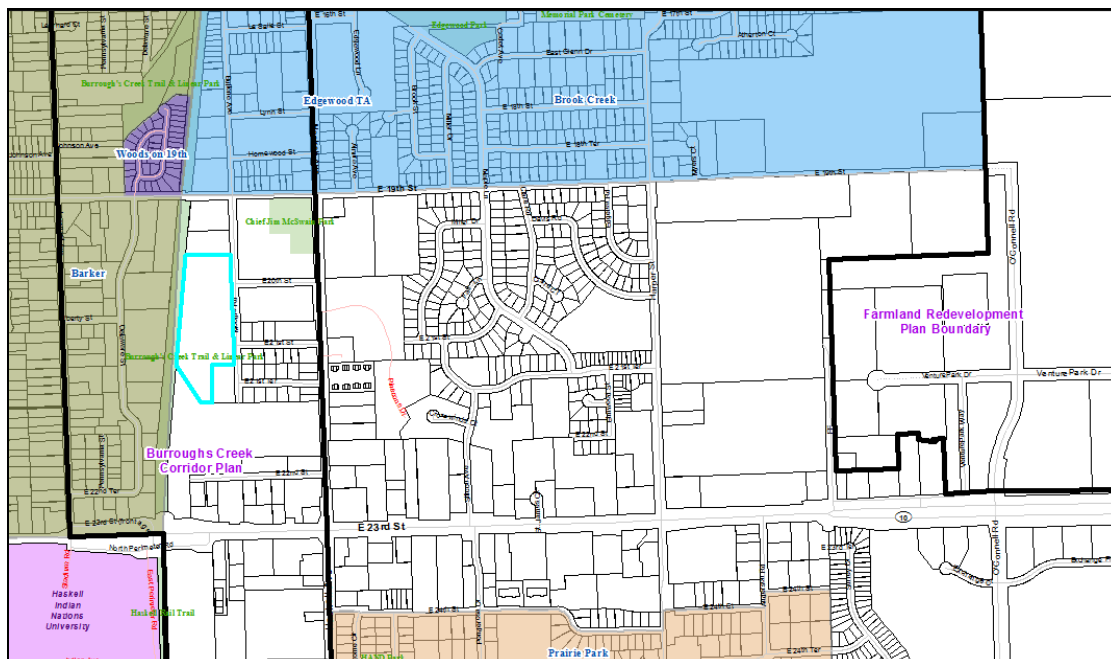


Figure 11: Neighborhood Area

D. Landscaping and Screening

The following section provides a brief detail of the existing and proposed landscaping for this property. The applicant does not propose to alter the existing landscape condition of the existing site as it relates to the Coop use. Generally, the site does not comply with the current design standards for landscaping, street trees, interior landscaping and similar elements.

Street Trees: The property was platted as Farmers Coop Subdivision No. 2 in 1970. A master street tree plan was not required for the property at that time. This site does not include any street trees along Moodie Road.

Parking Lot Landscaping: Interior and perimeter landscaping standards were adopted after the development of the site. Recent approval of the grain bin did not alter the existing parking or access to the site; therefore perimeter and interior parking lot landscaping were not required. Likewise, the proposed tower structure will not alter the off-street parking standards and related parking lot landscaping.

Buffer yard: The proposed location of the tower site within the subject property is surrounded by industrial zoning and uses to the north, west and south. The area to the east includes City property that includes parks and recreation facilities and the Fire Training Facility. The property to the southeast includes a partially developed lot, Independence Inc.

If developed today, buffering would be required along Moodie Road where the industrially zoned property abuts the GPI, CO and RS7 zoning districts along the east side of the property.

With regard to the proposed communication tower, ground equipment should be appropriately screened from the public right-of-way. Ground equipment will be located within a structure. Ground improvements will also be located within a fenced enclosure similar to that found within the immediate area.

Mechanical Equipment Screening: As discussed in the buffer yard section, mechanical equipment is required to be screened per City Code. Screening must be balanced with the need for security and visibility with this type of facility. The provision of landscape material along the east property line provides reasonable screening of the ground equipment along the public right-of-way.

E. Lighting

Lighting is not proposed for this tower other than minimum required lighting at the base of the tower for the equipment building. Additional detail regarding the lighting fixture is required to demonstrate compliance with the City's photometric standards.

F. Floodplain

This property is not located within the regulatory floodplain and is not subject to a local floodplain development permit.

CONCLUSION

The proposed tower meets the design standards of the Development Code. The proposed tower provides space for future co-location of equipment. Conditions recommended for approval relate to mitigating visual impacts of the proposed tower on the surrounding property owners.



LAWC BARKER CELL SITE

2001 MOODIE ROAD
LAWRENCE, KS 66046
DOUGLAS COUNTY

LOCATION No: 273487
PROJECT No: 20130934055

PROPOSED MONOPOLE WITH COMMUNICATIONS EQUIPMENT



CERTIFICATION:

PRELIMINARY
NOT FOR
CONSTRUCTION

RELEASE	
DATE	
03-24-15	ZONING EXHIBIT
05-15-15	CONSTRUCTION DWGS - REV A
06-02-15	ZONING EXHIBIT

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DRAWN BY: JLM
CHECKED BY: DJH

SITE NAME:

LAWC BARKER
CELL SITE

SITE ADDRESS:

2001 MOODIE ROAD
LAWRENCE, KS 66046

SHEET TITLE:

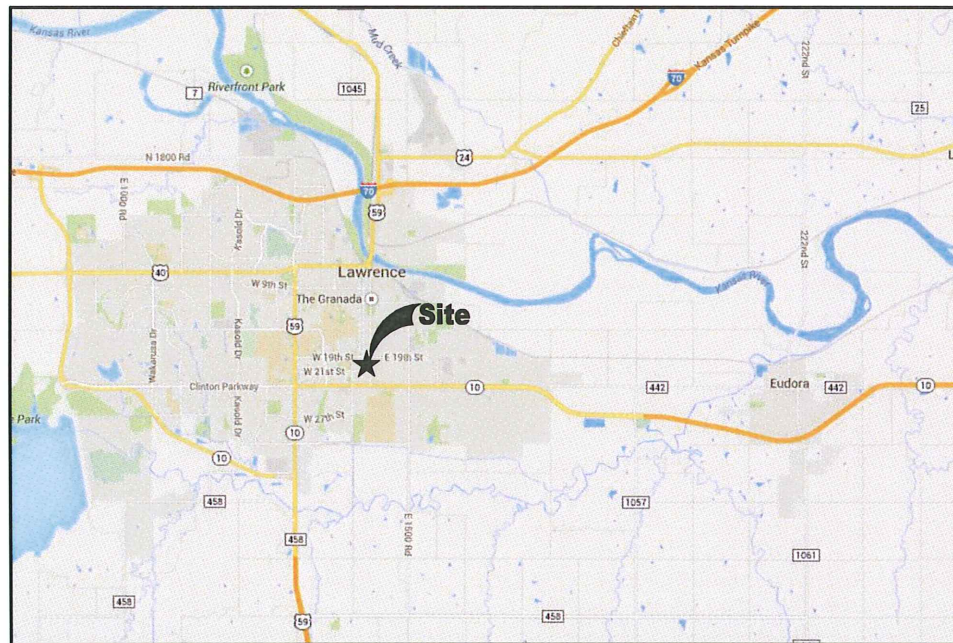
PROJECT INFORMATION,
LOCATION MAPS
AND DRAWING INDEX

A&E PROJECT NO.:

001-1507

SHEET NO.:

T-1



VICINITY MAP

MAPS PROVIDED BY DeLORME STREET ATLAS USA



LOCATION MAP

AERIAL MAP PROVIDED BY GOOGLE

APPLICANT

VERIZON WIRELESS
MANAGER-NETWORK REAL ESTATE
PHONE: (913) 244-2800

SITE ACQUISITION

KGI
PHONE: (417) 848-7584

SURVEYOR

ANDERSON ENGINEERING
PHONE: (417) 782-7399

ARCHITECTURAL AND ENGINEERING FIRM

MAGTECH MIDWEST, INC.
PHONE: (260) 436-2668

POLICE DEPARTMENT

LAWRENCE POLICE DEPT.
111 EAST STREET
LAWRENCE, KS 66044
PHONE: (785) 830-7400

FIRE DEPARTMENT

LAWRENCE FIRE DEPARTMENT
1911 STEWART AVENUE
LAWRENCE, KS 66046
PHONE: (785) 830-7000

PROPERTY OWNER

OTTAWA COOPERATIVE
ASSOC.

KANSAS ONE-CALL SYSTEM
811 OR 1-800-DIG SAFE



CONSULTANT TEAM

THE PROJECT INCLUDES:

INSTALLATION OF PANEL ANTENNA, ASSOCIATED COAX AND OTHER EQUIPMENT IN NEW 120' MONOPOLE TOWER.

INSTALLATION OF A 12'x6' CONCRETE EQUIPMENT PAD AND OUTDOOR EQUIPMENT .

NEW ELECTRIC AND TELEPHONE/FIBER SERVICE TO SITE AND EQUIPMENT SHELTER. NO WATER SUPPLY OR SEWAGE TO/FROM THE SITE.

SITE LAT/LON ELEV.

LATITUDE - N38° 56' 55.05"
LONGITUDE - W95° 13' 33.43"
GRD ELEV. - ±870' AMSL

PROJECT DESCRIPTION

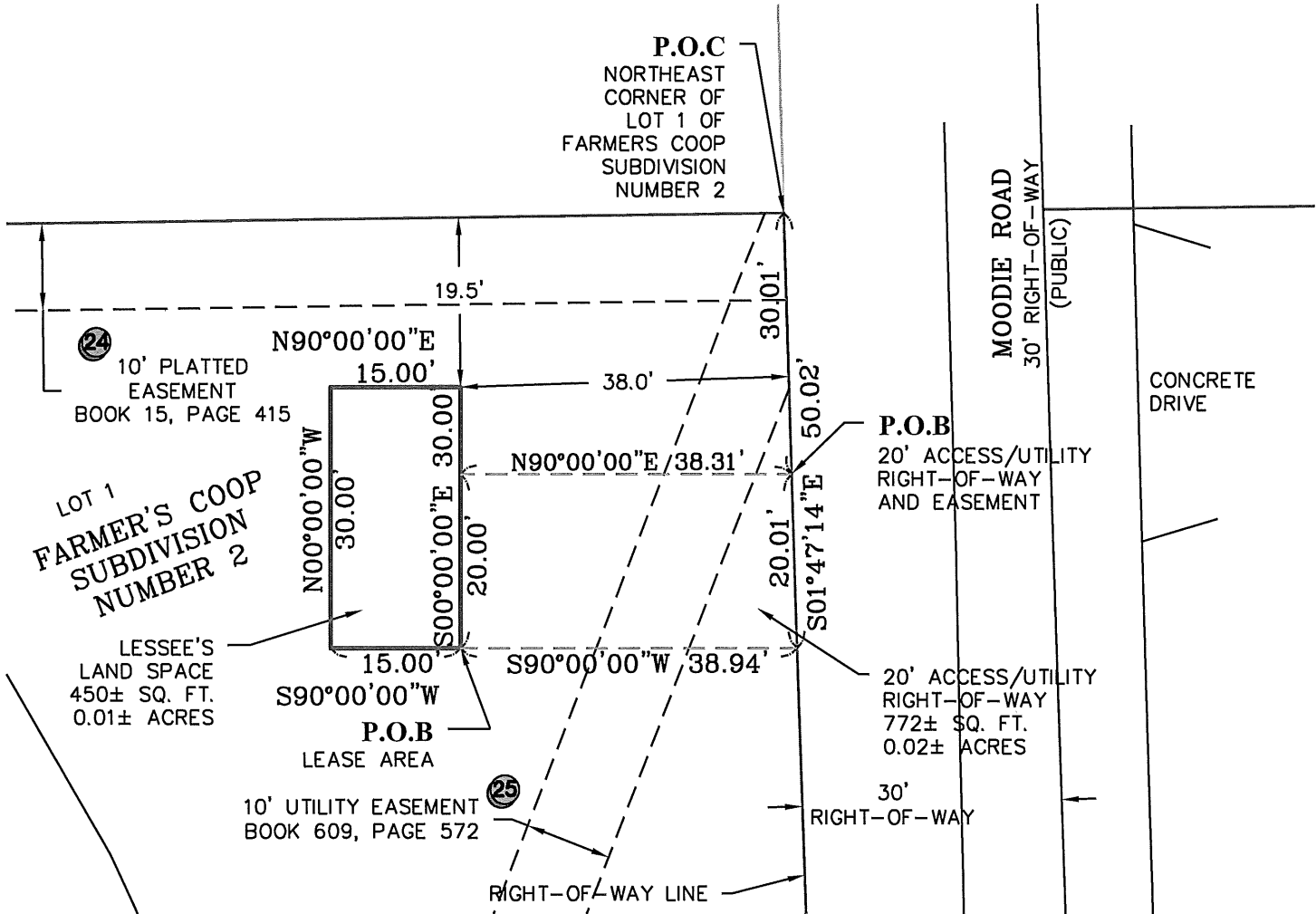
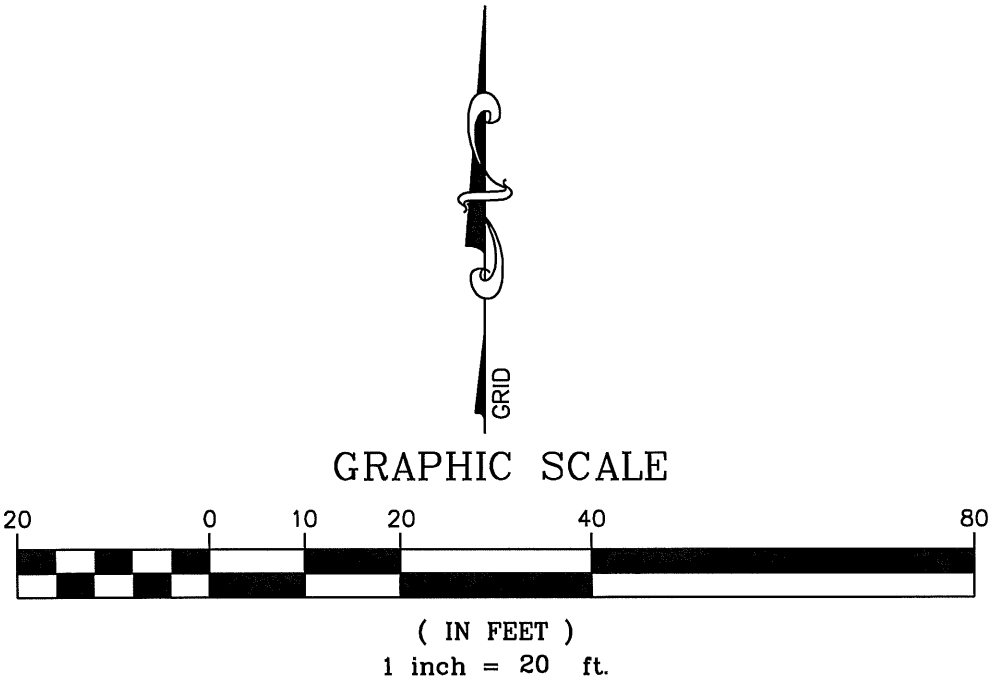
- ANY TELECOMMUNICATIONS FACILITY THAT IS NOT IN USE FOR A PERIOD OF THREE (3) FULL YEARS OR MORE SHALL BE REMOVED BY THE OWNER AT THE OWNERS EXPENSE. FAILURE TO REMOVE THE TELECOMMUNICATIONS FACILITY PURSUANT TO NON-USE MAY RESULT IN REMOVAL AND ASSESSMENT OF COST TO THE PROPERTY PURSUANT TO K.S.A. 12-6a17.
- A SIGN SHALL BE POSTED ON THE FACILITY NOTING THE NAME AND TELEPHONE NUMBER OF THE TOWER OWNER/OPERATOR.
- THE TOWER OWNER/OPERATOR SHALL SUBMIT A LETTER TO THE PLANNING BY JULY 1 EACH YEAR LISTING THE CURRENT USERS AND TYPES OF TELECOMMUNICATION ANTENNA LOCATION ON THE FACILITY.
- THE TOWER WILL BE INSPECTED ANNUALLY AND A REPORT SHALL BE FILED WITH THE DIRECTOR OF PLANNING PER SECTION 20-529 (4) WHICH STATES; INSPECTIONS, ALL TELECOMMUNICATIONS FACILITIES SHALL BE INSPECTED ANNUALLY AT THE OWNER'S EXPENSE AND AN INSPECTION REPORT SHALL BE FILED WITH THE DIRECTOR OF PLANNING. ALL TELECOMMUNICATIONS FACILITIES MAY BE INSPECTED AT ANY TIME BY THE CODES ENFORCEMENT OFFICER IN ORDER TO DETERMINE COMPLIANCE WITH ORIGINAL CONSTRUCTION STANDARDS. DEVIATION FROM THE ORIGINAL CONSTRUCTION FOR WHICH A PERMIT IS OBTAINED CONSTITUTES A VIOLATION OF THIS CODE. NOTICE OF VIOLATIONS WILL BE SENT BY REGISTERED MAIL TO THE TELECOMMUNICATIONS FACILITY OPERATOR WHO WILL HAVE 30 DAYS FROM THE DATE THE NOTIFICATION IS ISSUED TO MAKE ADJUSTMENTS OF REPAIRS. THE OPERATOR SHALL NOTIFY THE CODES ENFORCEMENT OFFICER IN WRITING THAT THE ADJUSTMENTS OR REPAIRS HAVE BEEN MADE BY THE CODES ENFORCEMENT OFFICER TO ASSESS COMPLIANCE. THE OPERATOR SHALL THEN BE NOTIFIED OF THE RESULTS OF THE SECOND INSPECTION. AN APPEAL OF THE DECISION OF THE CODE ENFORCEMENT OFFICER CAN BE MADE TO THE BOARD OF ZONING APPEALS IN ACCORDANCE WITH SECTION 20-1311.
- THE TOWER WILL NOT HAVE TOWER LIGHTING OR BEACONS.

DRAWING INDEX

T-1	PROJECT INFORMATION, LOCATION MAPS, AND DRAWING INDEX
LS-1	LAND SURVEY
LS-2	LAND SURVEY
LS-3	LAND SURVEY
C-1	OVERALL SITE PLAN
C-2	ENLARGED SITE PLAN
C-3	TOWER ELEVATION AND ANTENNA INFORMATION
C-4	FENCE DETAILS

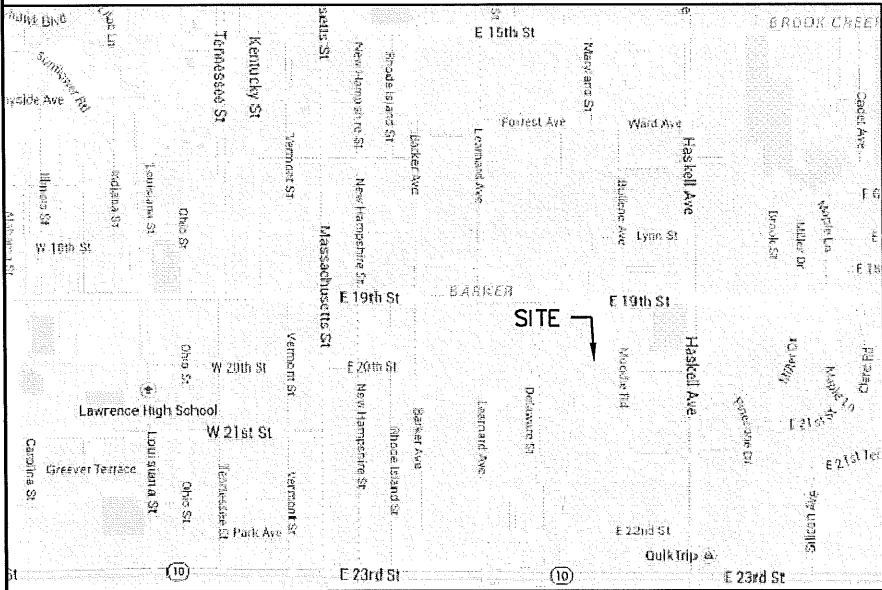
PARENT PARCEL DESCRIPTION:

PROPERTY LOCATED IN LAWRENCE, KS
LOTS 1 AND 2, IN FARMERS COOP SUBDIVISION NUMBER 2, A SUBDIVISION AND A REPLAT OF EAST VIEW SUBDIVISION NUMBER 2, IN THE CITY OF LAWRENCE, DOUGLAS COUNTY, KANSAS.
AND
LOT 3A, AS SHOWN BY THE PLAT OF SURVEY OF THE LOT SPLIT OF LOTS 3 AND 4, IN FARMERS COOP SUBDIVISION NUMBER 2, FILED IN PLAT BOOK P15 AT PAGE 415, IN THE OFFICE OF THE REGISTER OF DEEDS OF DOUGLAS COUNTY, KANSAS.



LAND SPACE & R.O.W. DETAIL
Scale: 1"=20'

VICINITY MAP

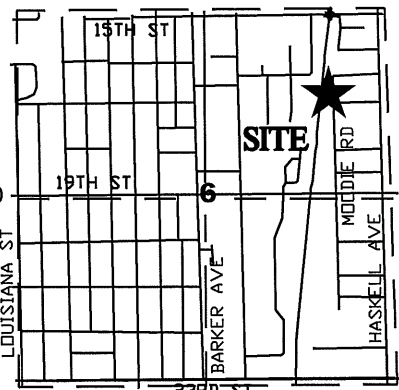


SURVEYORS NOTES

- 1.) ALL BEARINGS BASED ON KANSAS STATE PLANE COORDINATE SYSTEM, NORTH ZONE. (NAD-83)
- 2.) NOT INTENDED TO REPRESENT A SURVEY FOR THE ENTIRE PARENT PARCEL.
- 3.) A UTILITY LOCATE WAS REQUESTED ON 1-19-2015, TICKET NO. 15018801. THE MARKINGS OF SAID LOCATE ARE AS SHOWN.

ZONING INFORMATION: IG

FLOOD INFORMATION:
PROPERTY FALLS WITHIN A ZONE "X"
AS DETERMINED BY FEMA FLOOD
RATE MAP NO. 20045C0178D
EFFECTIVE 8-5-10 (ZONE "X" AREAS
DETERMINED TO BE OUTSIDE THE
0.2% ANNUAL CHANCE FLOODPLAIN.)



T. 13 N, R. 20 W
PARENT PARCEL
DETAIL

SURVEYOR'S DECLARATION

I, THE UNDERSIGNED, DO HEREBY DECLARE THAT THE BOUNDARY AND TOPOGRAPHIC SURVEY SHOWN HEREON WAS MADE UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE THE INFORMATION IS AS SHOWN AND IN ACCORDANCE WITH THE CURRENT KANSAS MINIMUM STANDARDS FOR URBAN SURVEYS.
LAST REVISION DATE MAY 26, 2015
ANDERSON ENGINEERING, INC. C OF A#17
BY: (RENEWAL DATE DECEMBER 31, 2016)

JERROD L. HOGAN, P.L.S. 1449

5-26-15
DATE

Prepared for:

Prepared for:



MAGTECH
MIDWEST

Surveyed By:

ANDERSON
ENGINEERING, INC.
ENGINEERS • SURVEYORS • LABORATORIES
DRILLING

811 E. 3RD STREET
JOPLIN, MISSOURI 64801
PHONE (417) 782-7399

CHECKED BY:

APPROVED BY:

#	DATE	DESCRIPTION	INT.
1			
2			
3			
4			
5			

SITE NAME:

LAWC
BARKER

SITE NUMBER:

SITE ADDRESS:
2001 MOODIE ROAD
LAWRENCE, KS 66046

SHEET NAME:

LAND SURVEY

SHEET NUMBER:

LS-1

LESSEE'S LAND SPACE DESCRIPTION:

COMMENCING AT THE NORTHEAST CORNER OF LOT 1 OF FARMS COOP SUBDIVISION NUMBER 2, SAID POINT ALSO LYING ON THE WEST RIGHT-OF-WAY OF MOODIE ROAD; THENCE ALONG SAID WEST RIGHT-OF-WAY, SOUTH 01°47'14" EAST, 50.02 FEET; THENCE LEAVING SAID RIGHT-OF-WAY, SOUTH 90°00'00" WEST, 38.94 FEET, TO THE POINT OF BEGINNING; THENCE SOUTH 90°00'00" WEST, 15.00 FEET; THENCE NORTH 00°00'00" WEST, 30.00 FEET; THENCE NORTH 90°00'00" EAST, 15.00 FEET; THENCE SOUTH 00°00'00" EAST, 30.00 FEET, TO THE POINT OF BEGINNING; ALL LYING IN LOT 1 OF FARMS COOP SUBDIVISION NUMBER 2, AND THE NORTHEAST QUARTER OF SECTION 6, TOWNSHIP 13 NORTH, RANGE 30 WEST, DOUGLAS COUNTY, KANSAS. CONTAINING 0.01 ACRES, MORE OR LESS. BEARINGS BASED ON GRID NORTH OF THE KANSAS COORDINATE SYSTEM OF 1983, NORTH ZONE.

LESSEE'S 20' ACCESS/UTILITY RIGHT-OF-WAY DESCRIPTION:

COMMENCING AT THE NORTHEAST CORNER OF LOT 1 OF FARMS COOP SUBDIVISION NUMBER 2, SAID POINT ALSO LYING ON THE WEST RIGHT-OF-WAY OF MOODIE ROAD; THENCE ALONG SAID WEST RIGHT-OF-WAY, SOUTH 01°47'14" EAST, 30.01 FEET, TO THE POINT OF BEGINNING; THENCE CONTINUING ALONG SAID RIGHT-OF-WAY, SOUTH 01°47'14" EAST, 20.01 FEET; THENCE LEAVING SAID RIGHT-OF-WAY, SOUTH 90°00'00" WEST, 38.94 FEET; THENCE NORTH 00°00'00" WEST, 20.00 FEET; THENCE NORTH 90°00'00" EAST, 38.31 FEET, TO THE POINT OF BEGINNING; ALL LYING IN LOT 1 OF FARMS COOP SUBDIVISION NUMBER 2, AND THE NORTHEAST QUARTER OF SECTION 6, TOWNSHIP 13 NORTH, RANGE 30 WEST, DOUGLAS COUNTY, KANSAS. CONTAINING 0.02 ACRES, MORE OR LESS. BEARINGS BASED ON GRID NORTH OF THE KANSAS COORDINATE SYSTEM OF 1983, NORTH ZONE.

INFORMATIONAL REPORT:

TITLE COMMITMENT PROVIDED BY FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NUMBER NCS-72741-KCTY WITH AN EFFECTIVE DATE OF APRIL 14, 2015 AT 7:30AM.

NOTE: THE OTTAWA COOPERATIVE ASSOCIATION OWNS MULTIPLE PARCELS AS LISTED IN THIS TITLE WORK. THE LAND SPACE AREA AND ACCESS/UTILITY RIGHT OF WAY LIE ENTIRELY IN LOT 1 OF FARMERS COOP SUBDIVISION NUMBER 2. MANY OF THE EXCEPTIONS ON THE TITLE COMMITMENT AFFECT PORTIONS OF THE OTTAWA COOP PROPERTY BUT ARE NOT SHOWN ON THIS SURVEY. THOSE WILL BE NOTED "DOES NOT AFFECT LOT 1" WHICH ALSO MEANS IT DOES NOT AFFECT THE LAND SPACE AREA OR THE ACCESS/UTILITY RIGHT OF WAY.

- 8
- AN AGREEMENT BETWEEN THE CITY OF LAWRENCE AND FARMERS COOP ASSOCIATION, RECORDED JULY 13, 1990, DOCUMENT NO. 6213 IN BOOK 446, PAGE 1411. DOES NOT AFFECT LOT 1.
- 9
- AN AGREEMENT BETWEEN THE CITY OF LAWRENCE AND FARMERS COOP ASSOCIATION, RECORDED JULY 12, 1993, DOCUMENT NO. 50674 IN BOOK 495, PAGE 2011. AFFECTS ENTIRE PARCEL. SUBJECT TO TERMS AND CONDITIONS WITHIN.
- 14
- AN EASEMENT FOR UTILITIES IN THE DOCUMENT RECORDED FEBRUARY 25, 1996 IN BOOK 243, PAGE 144 OF OFFICIAL RECORDS. DOES NOT AFFECT LOT 1.
- 16
- AN EASEMENT FOR ROADWAY IN DOCUMENT RECORDED AUGUST 17, 1990 IN BOOK 448, PAGE 310 OF OFFICIAL RECORDS. DOES NOT AFFECT LOT 1
- 17
- AN EASEMENT FOR UTILITIES IN THE DOCUMENT RECORDED OCTOBER 5, 1990 IN BOOK 449, PAGE 2031 OF OFFICIAL RECORDS. DOES NOT AFFECT LOT 1.
- 20
- AN EASEMENT FOR UTILITIES AND ACCESS IN THE DOCUMENT RECORDED APRIL 15, 1998 IN BOOK 606, PAGE 526 OF OFFICIAL RECORDS. DOES NOT AFFECT LOT 1.
- 21
- AN EASEMENT FOR SANITARY SEWER IN THE DOCUMENT RECORDED JULY 21, 2009 IN BOOK 1052, PAGE 1472 OF OFFICIAL RECORDS. DOES NOT AFFECT LOT 1.
- 22
- TERMS AND PROVISIONS OF AN UNRECORDED LEASE DATED OCTOBER 30, 1977, BY AND BETWEEN THE FARMERS COOPERATIVE ASSOCIATION OF LAWRENCE, KANSAS AS LESSOR AND NEXTEL WEST CORP., INC., D/B/A NEXTEL COMMUNICATIONS AS LESSEE, AS DISCLOSED BY A MEMORANDUM OF AGREEMENT RECORDED JULY 9, 1998 IN BOOK 615, PAGE 353 OF OFFICIAL RECORDS. DOES NOT AFFECT LOT 1.
- 23
- TERMS AND PROVISIONS OF AN UNRECORDED LEASE DATED OCTOBER 23, 2001, BY AND BETWEEN ACORN EAST LLC AS LESSOR AND NEXTEL WEST CORP., INC., D/B/A NEXTEL COMMUNICATIONS AS LESSEE, AS DISCLOSED BY A MEMORANDUM OF AGREEMENT RECORDED JULY 5, 2002 IN BOOK 776, PAGE 701 OF OFFICIAL RECORDS. DOES NOT AFFECT LOT 1.
- 24
- EASEMENTS, RESTRICTIONS AND SETBACK LINES AS PER PLAT, RECORDED IN PLAT BOOK 12, PAGE 13 AND AS AMENDED BY LOT SPLIT IN BOOK 15, PAGE 415. AS SHOWN.
- 25
- SURVEY OF UTILITY EASEMENT RECORDED MAY 15, 1998 IN BOOK 609, PAGE 572. AS SHOWN.
- 29
- AN EASEMENT FOR CONSTRUCTION AND MAINTENANCE OF UTILITIES IN THE DOCUMENT RECORDED FEBRUARY 25, 1966 AS BOOK 243, PAGE 143 OF OFFICIAL RECORDS. DOES NOT AFFECT LOT 1.
- 30
- AN EASEMENT FOR CONSTRUCTION AND MAINTENANCE OF UTILITIES IN THE DOCUMENT RECORDED FEBRUARY 25, 1966 AS BOOK 243, PAGE 145 OF OFFICIAL RECORDS. DOES NOT AFFECT LOT 1.

Prepared for:

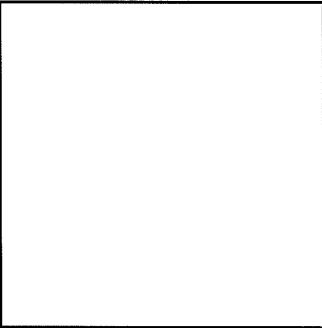
Prepared for:



Surveyed By:



CHECKED BY:			
APPROVED BY:			
#	DATE	DESCRIPTION	INT.
1			
2			
3			
4			
5			



SITE NAME:

LAWC BARKER

SITE NUMBER:

SITE ADDRESS:

2001 MOODIE ROAD
LAWRENCE, KS 66046

SHEET NAME:

LAND SURVEY

SHEET NUMBER:

LS-2

● FND IP FOUND IRON PIN
LESSEE'S LAND SPACE LINE
LESSEE NON-EXCLUSIVE
ACCESS/UTILITY RIGHT-OF-WAY

LESSEE NON-EXCLUSIVE
ACCESS/UTILITY RIGHT-OF-WAY

P.O.C
NORTHEAST
CORNER OF
LOT 1 OF
FARMERS COOP
SUBDIVISION
NUMBER 2

6' CHAIN
LINK FENCE

BUILDING

24

10' PLATTED
EASEMENT
BOOK 15, PAGE 415

LESSEE'S
LAND SPACE
450± SQ. FT.
0.01± ACRES

LOT 1
FARMER'S COOP
SUBDIVISION
NUMBER 2

BENCHMARK

TBM IS A "SQUARE CUT" IN CONCRETE PAD JUST SOUTH OF PAD MOUNTED TRANSFORMER TO THE SOUTHWEST OF PROPOSED TOWER SITE WITH AN ELEVATION 869.28 FEET.

10' UTILITY EASEMENT
BOOK 609, PAGE 572

P.O.B
LEASE AREA

P.O.B
20' ACCESS/UTILITY
RIGHT-OF-WAY AND
EASEMENT

20' ACCESS/UTILITY
RIGHT-OF-WAY
772± SQ. FT.
0.02± ACRES

30'
RIGHT-OF-WAY

RIGHT-OF-WAY LINE

GRAPHIC SCALE

(IN FEET)
1 inch = 10 ft.

Prepared for:

Prepared for:



MAGTECH MIDWEST

Surveyed By:

ANDERSON 
ENGINEERING, INC.
ENGINEERS • SURVEYORS • LABORATORIES
DRILLING

811 E. 3RD STREET
JOPLIN, MISSOURI 64801
PHONE (417) 782-7399

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#	DATE	DESCRIPTION
1		
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SITE NAME:

LAWC
BARKER

SITE NUMBER:

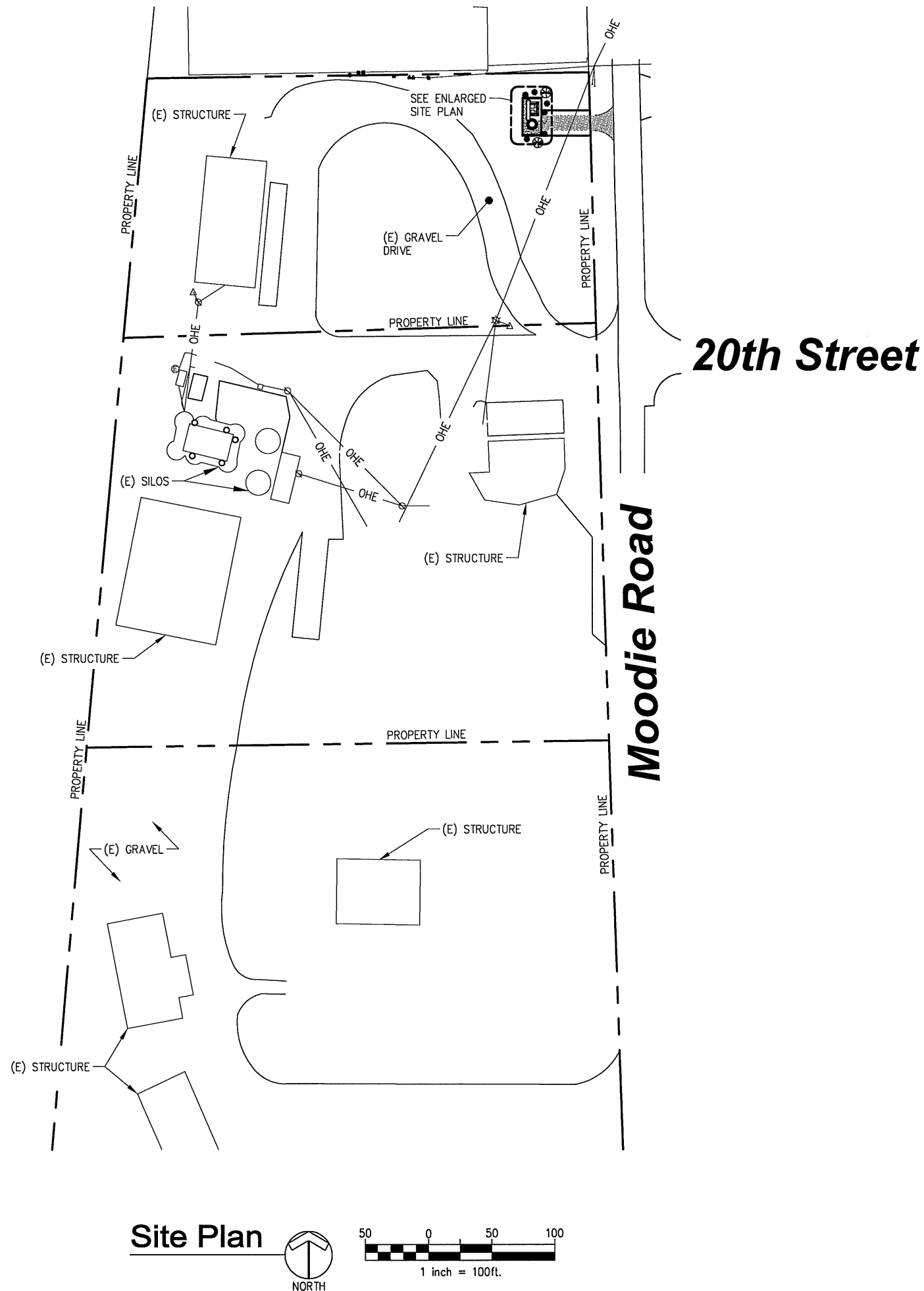
SITE ADDRESS:
2001 MOODIE ROAD
LAWRENCE, KS 66046

SHEET NAME:

LAND SURVEY

SHEET NUMBER:

LS-3



CERTIFICATION:

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DRAWN BY: JLM
CHECKED BY: DJH

SITE NAME:

**LAWC BARKER
CELL SITE**

SITE ADDRESS:

**2001 MOODIE ROAD
LAWRENCE, KS 66046**

SHEET TITLE:

OVERALL SITE PLAN

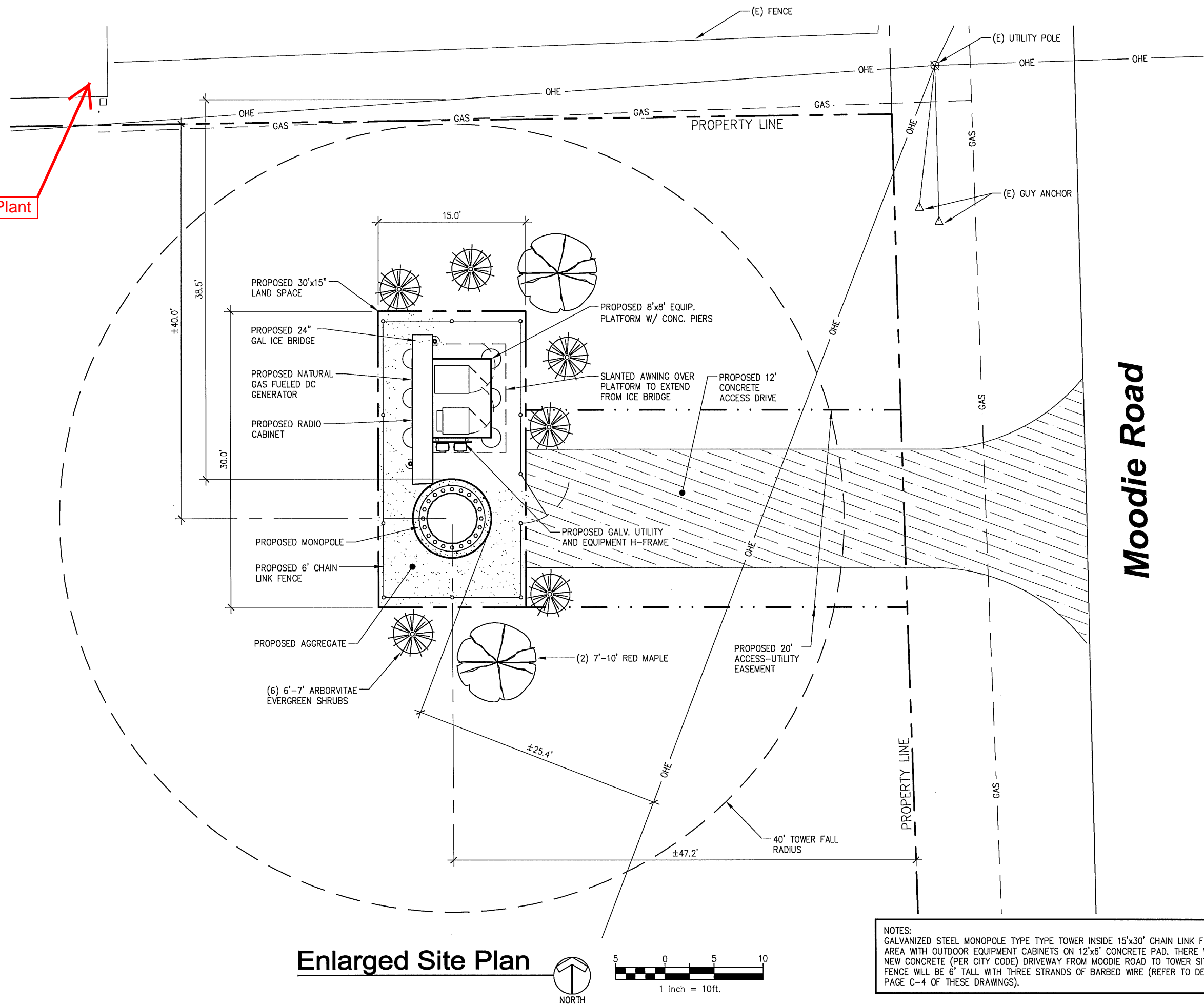
A&E PROJECT NO.:

001-1507

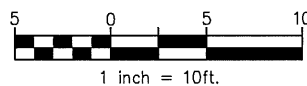
SHEET NO.:

C-1

Corner of Bottling Plant



Enlarged Site Plan



NOTES:
GALVANIZED STEEL MONOPOLE TYPE TOWER INSIDE 15'x30' CHAIN LINK FENCED AREA WITH OUTDOOR EQUIPMENT CABINETS ON 12'x6' CONCRETE PAD. THERE WILL BE A NEW CONCRETE (PER CITY CODE) DRIVEWAY FROM MOODIE ROAD TO TOWER SITE. THE FENCE WILL BE 6' TALL WITH THREE STRANDS OF BARBED WIRE (REFER TO DETAILS ON PAGE C-4 OF THESE DRAWINGS).



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**2001 MOODIE ROAD
LAWRENCE, KS 66046**

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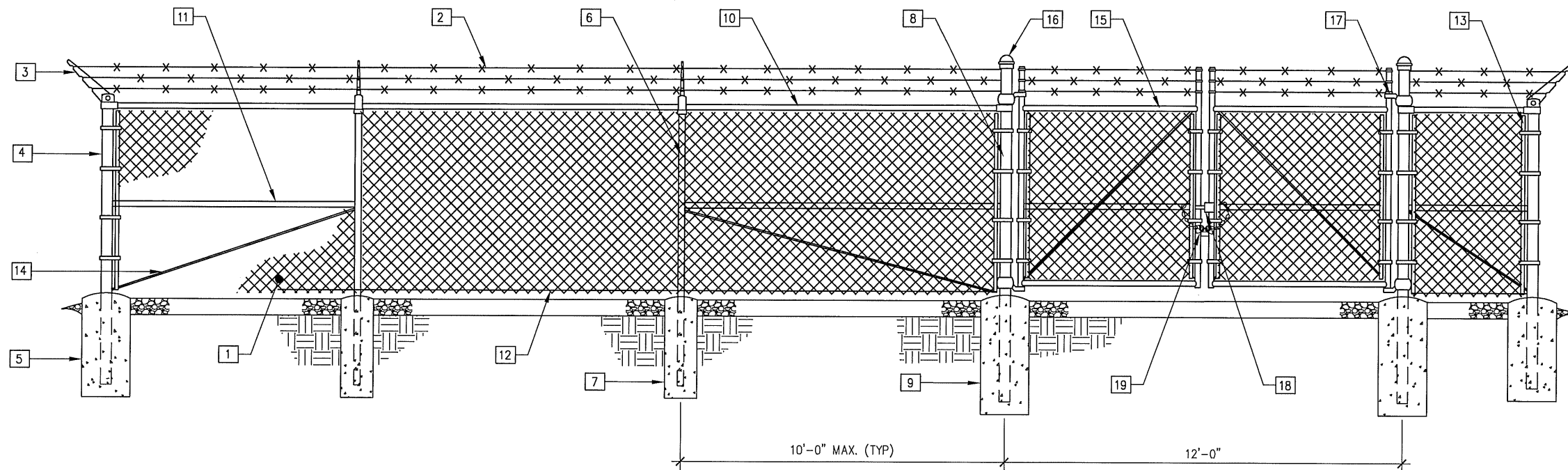
ENLARGED SITE PLAN

A&E PROJECT NO.:

001-1507

SHEET NO.:

C-2



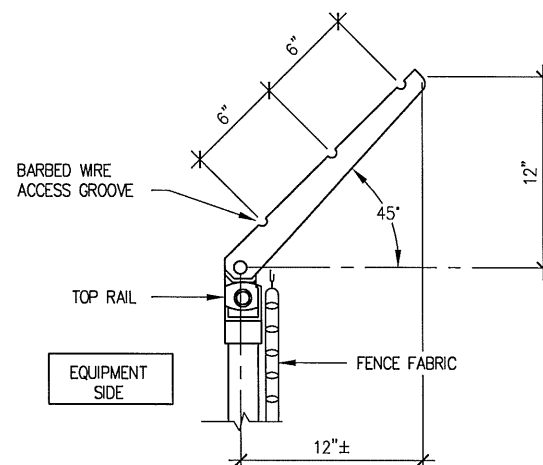
1 Typical Fence Elevation
NO SCALE

Keynote Legend

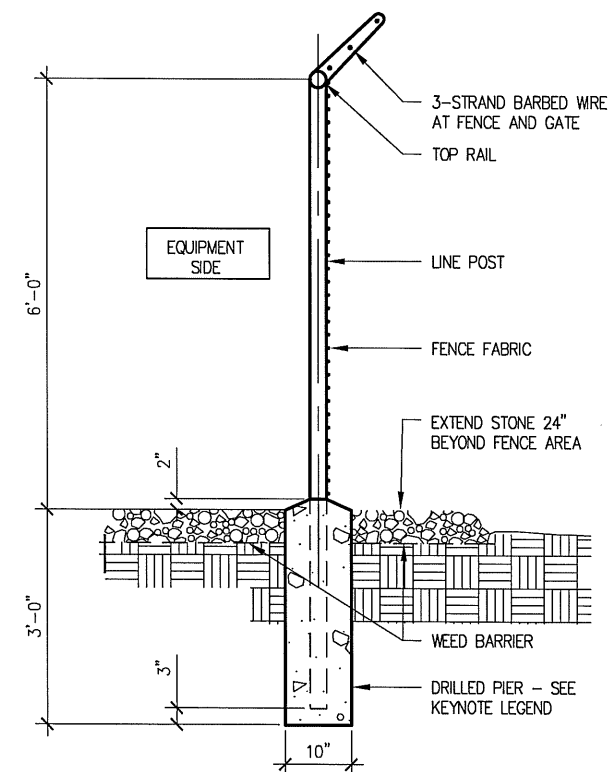
- 1 FABRIC: 9 GAUGE, 2" MESH, ASTM A392 (SEE FENCE SECTION FOR HEIGHT).
- 2 BARBED WIRE: 12 GAUGE WIRE, 4 POINT (3 RUNS), FINISH TO MATCH FABRIC, ASTM A121.
- 3 EXTENSION ARMS: STAMPED STEEL WITH MALLEABLE IRON BASE, FINISH TO MATCH FENCE FRAMEWORK, ASTM F626.
- 4 END AND CORNER POSTS: 3"Ø PIPE SCH. 40 (GALV.) ASTM F1083
- 5 CONCRETE FOUNDATION: 36"x12"Ø (3000 PSI)
- 6 LINE POSTS: 2"Ø PIPE SCH. 40 (GALV.) ASTM F1083
- 7 CONCRETE FOUNDATION: 36"x10"Ø (3000 PSI)
- 8 GATE POSTS: 4"Ø PIPE SCH. 40 (GALV.) ASTM F1083
- 9 CONCRETE FOUNDATION: 48"x12"Ø (3000 PSI)
- 10 TOP RAIL & BRACE RAIL: 1-1/2"Ø PIPE SCH. 40 (GALV.) ASTM F1083
- 11 MIDDLE RAILS: 1-1/2"Ø PIPE SCH. 40 (GALV.) ASTM F1083
- 12 BOTTOM TENSION WIRE: 0.177"Ø METALLIC-COATED STEEL (GALV.), MARCELLED, ASTM A824
- 13 TENSION BARS: 3/16"x3/4", FULL HEIGHT OF FABRIC, FINISH TO MATCH FENCE FRAMEWORK.
- 14 TENSION ROD: 3/8"Ø WITH ADJ. TIGHTNER, FINISH TO MATCH FENCE FRAMEWORK.
- 15 GATE FRAME: 2"Ø SCH. 40 (GALV.) ASTM F1083
- 16 POST CAPS: PER POST DIAMETER.
- 17 GATE HINGES: NON-LIFT-OFF TYPE, OFFSET TO PERMIT 180 DEGREE SWING.
- 18 DOUBLE GATE LATCH: COMMERCIAL STRONG ARM EQUAL TO: DAC INDUSTRIES 615-C ELEVENTH STREET, GRAND RAPIDS, MI 49504
- 19 LOCK CHAIN: 3/8" SIZE, 36" LONG HOT DIP GALVANIZED ZINC COATED. W/ MARINE-GRADE PROGRAMMABLE FOUR DIGIT PADLOCK (SESAME BRAND OR APPROVED EQUAL)

NOTES:

1. REFER TO PROJECT SPECIFICATIONS FOR INFORMATION NOT SHOWN IN THE DRAWING.
2. FENCE FABRIC SHALL CONFORM TO CHAIN LINK FENCE MANUFACTURERS INSTITUTE (CLFMI) PRODUCT MANUAL.
3. INSTALL FENCE IN COMPLIANCE WITH ASTM F 567.
4. INSTALL SWING GATES IN COMPLIANCE WITH ASTM F 900.
5. DO NOT BEGIN INSTALLATION AND ERECTION BEFORE FINAL GRADING IS COMPLETED, UNLESS OTHERWISE PERMITTED. INSTALL FENCING ON BOUNDARY LINES INSIDE OF PROPERTY LINE ESTABLISHED BY SURVEY.
6. DRILL OR HAND-EXCAVATE (USING POST - HOLE DIGGER) HOLES FOR POSTS TO DIAMETERS AND SPACINGS INDICATED, IN FIRM, UNDISTURBED OR COMPACTED SOIL. IF NOT INDICATED ON DRAWINGS, EXCAVATE HOLES FOR EACH POST TO MINIMUM DIAMETER RECOMMENDED BY FENCE MANUFACTURER, BUT NOT LESS THAN (4) TIMES LARGEST GROSS-SECTION OF POST.
7. REMOVE POST HOLE SPOILS FROM SITE. DO NOT SET SPOILS ON AGGREGATE WITHOUT ADEQUATE PROTECTION.
8. PROTECT PORTION OF POSTS ABOVE GROUND FROM CONCRETE SPLATTER. PLACE CONCRETE AROUND POSTS AND VIBRATE OR TAMP FOR CONSOLIDATION. CHECK EACH POST FOR VERTICAL AND TOP ALIGNMENT AND HOLD IN POSITION DURING PLACEMENT AND FINISHING OPERATIONS, UNLESS OTHERWISE SHOWN, EXTEND CONCRETE FOOTING 1 INCH ABOVE GRADE AND TROWEL TO A CROWN TO SHED WATER.
9. INSTALL BARBED WIRE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
10. APPLY FABRIC TO OUTSIDE OF FRAMEWORK.



2 Barbed Wire Detail
NO SCALE



3 Typical Fence Section
SCALE: 3/8" = 1'-0"

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CHECKED BY: DJH

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**LAWC BARKER
CELL SITE**

SITE ADDRESS:

**2001 MOODIE ROAD
LAWRENCE, KS 66046**

SHEET TITLE:

FENCE DETAILS

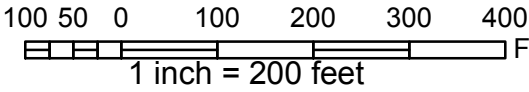
A&E PROJECT NO.:

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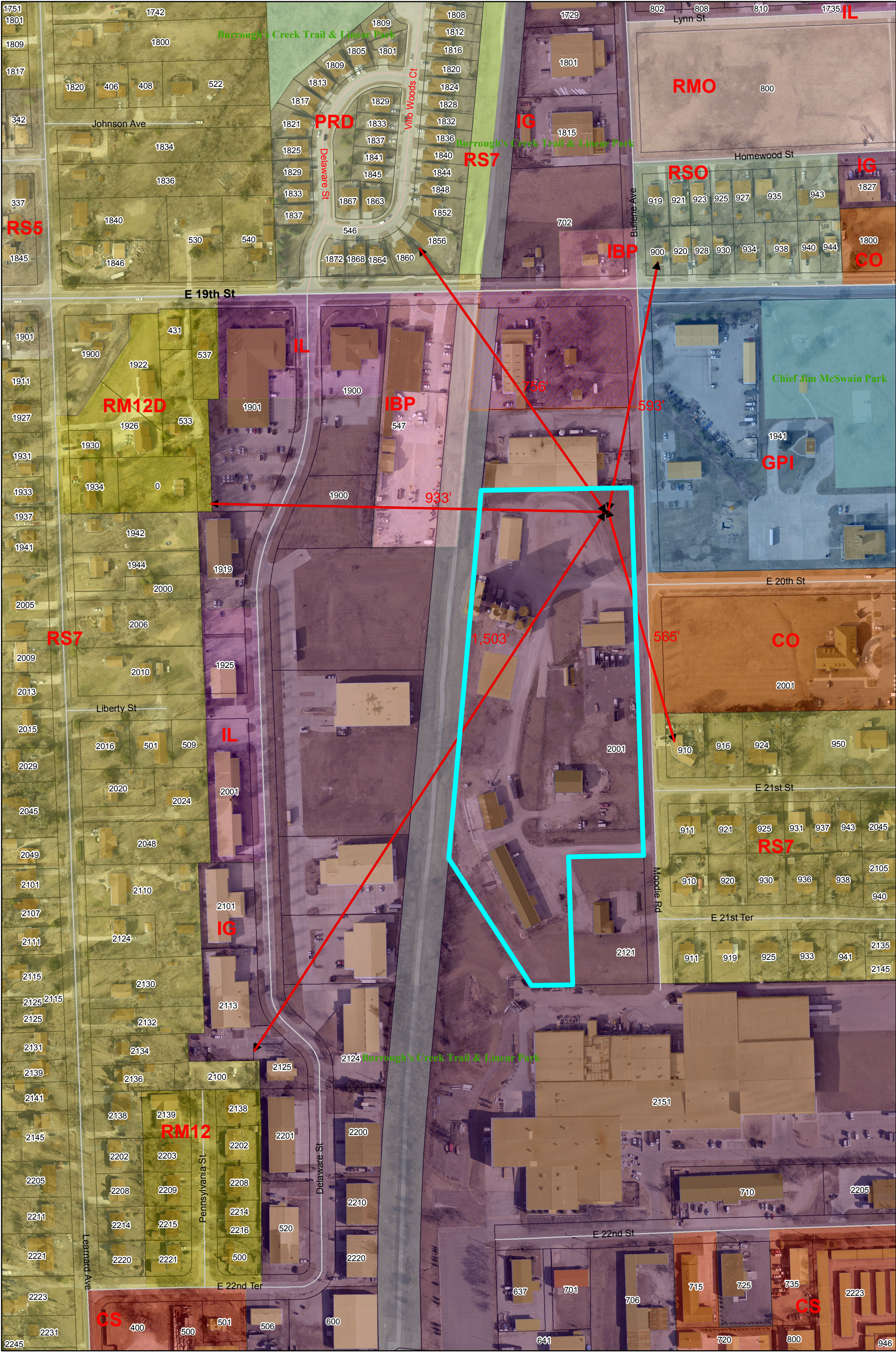
C-4





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The map is provided "as is" without warranty or any representation of accuracy, timeliness or completeness. The burden for determining accuracy, completeness, timeliness, merchantability and fitness for or the appropriateness for use rests solely on the requester. The City of Lawrence makes no warranties, express or implied, as to the use of the map. There are no implied warranties of merchantability or fitness for a particular purpose. The requester acknowledges and accepts the limitations of the map, including the fact that the map is dynamic and is in a constant state of maintenance, correction and update.

Date: 5/4/2015





From: Hank Madden & Billy Stubbs – RF Engineers, Verizon Wireless

April 17, 2015

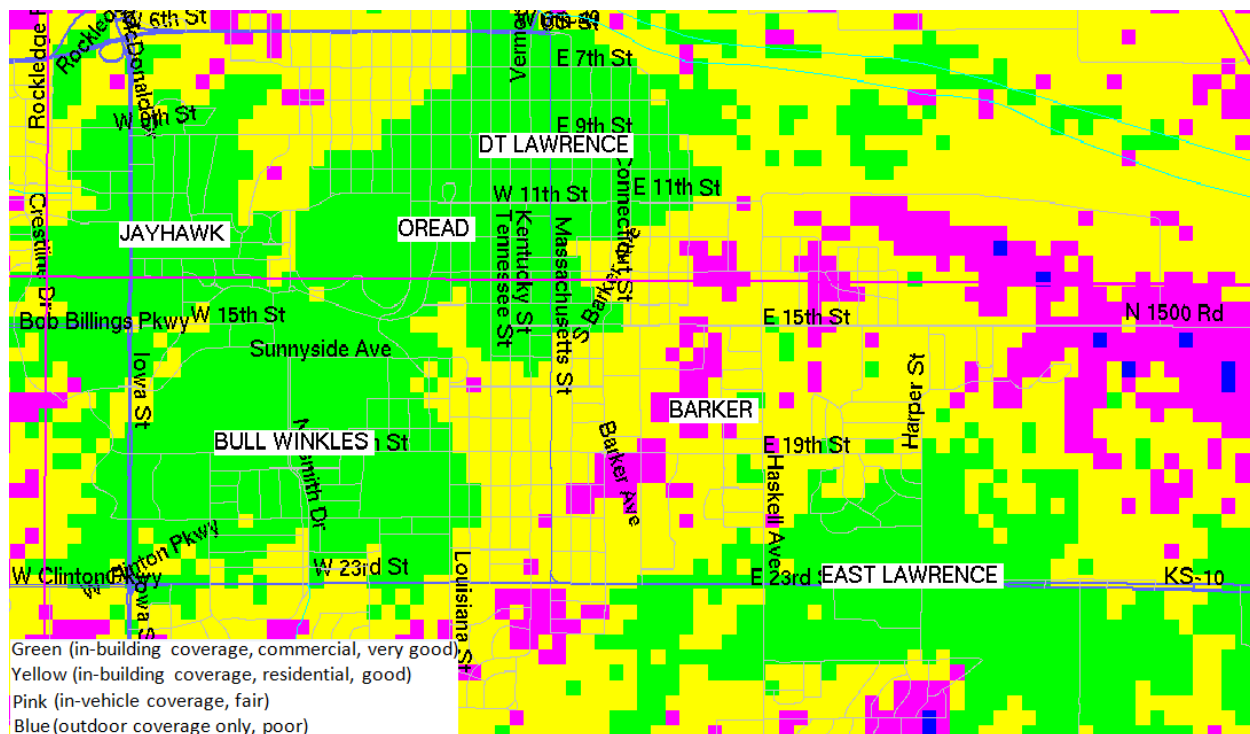
To: **The City Representatives**

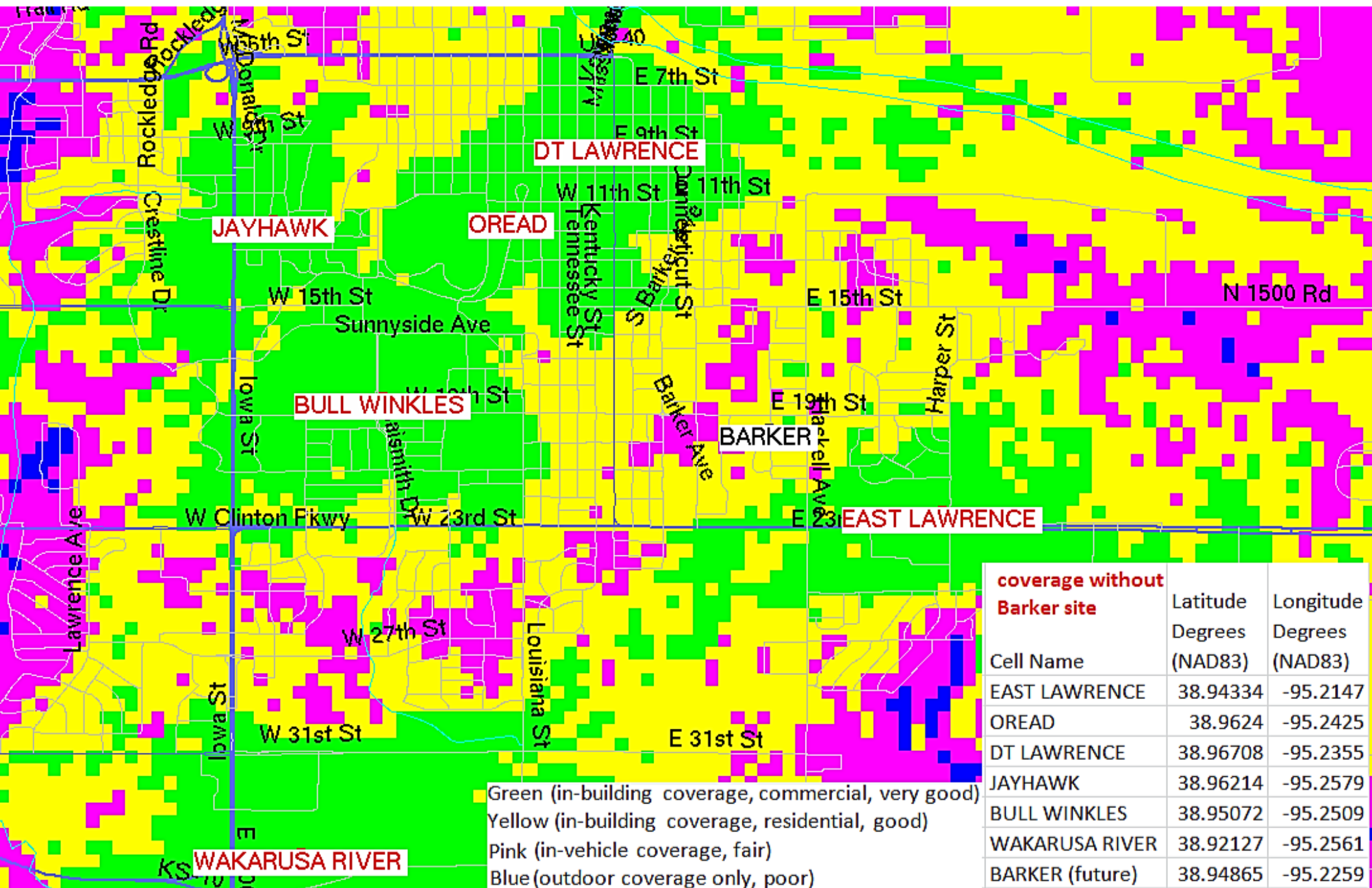
RE: **Proposed Barker cell site**

Dear City Representatives,

Verizon Wireless is proud to serve the greater Lawrence, KS area and we are always diligent to maintain excellent service and improvements. At this time, Verizon Wireless is trying to enhance the area of east-central portions of Lawrence, KS where coverage service reliability and capacity must be improved. The area that needs improvement at this time in both capacity and performance is between Massachusetts St and Haskell Ave just north of 20th St in east-central Lawrence. The fast growing 4G (LTE) data usage has required Verizon Wireless to plan for a new cell site in this area to improve coverage, performance and offload capacity from existing sites namely Oread, DT Lawrence and East Lawrence sites as shown below, Map 1.

Map 1 – Existing Coverage

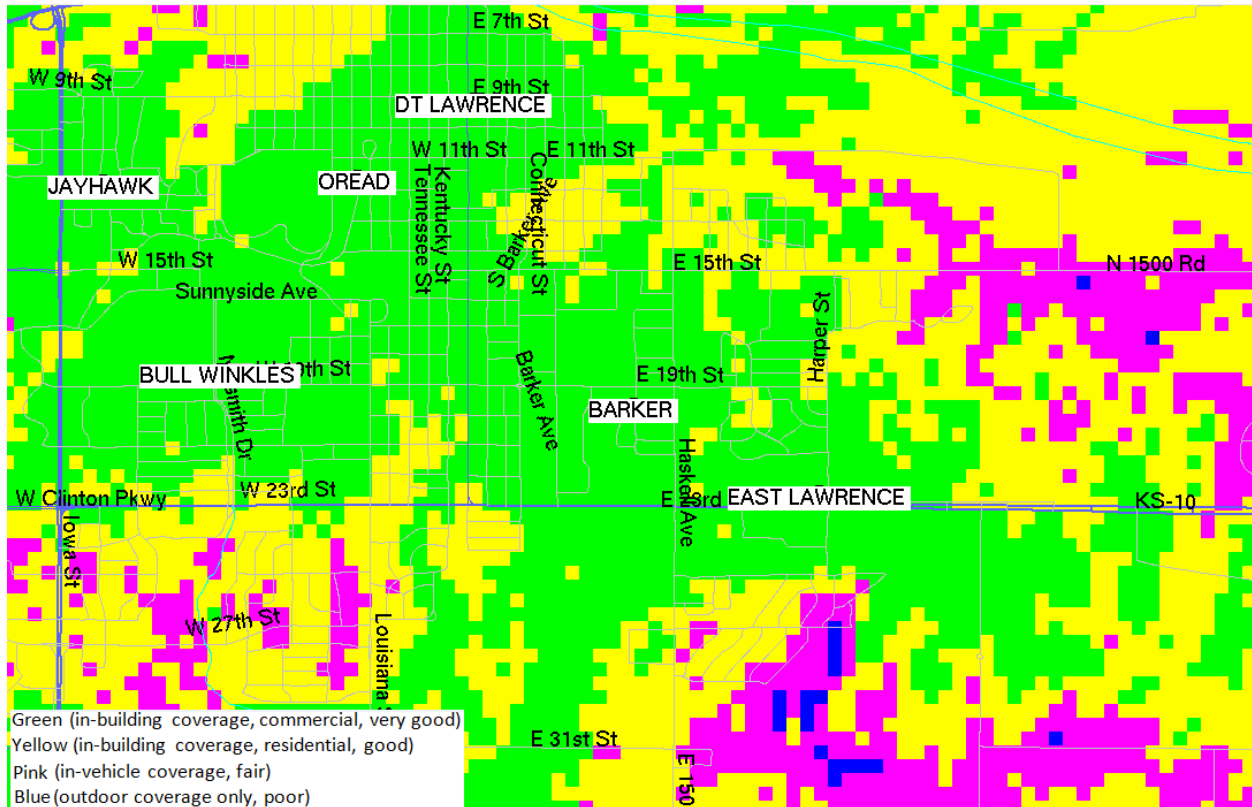




coverage without Barker site	Latitude Degrees (NAD83)	Longitude Degrees (NAD83)
Cell Name		
EAST LAWRENCE	38.94334	-95.2147
OREAD	38.9624	-95.2425
DT LAWRENCE	38.96708	-95.2355
JAYHAWK	38.96214	-95.2579
BULL WINKLES	38.95072	-95.2509
WAKARUSA RIVER	38.92127	-95.2561
BARKER (future)	38.94865	-95.2259

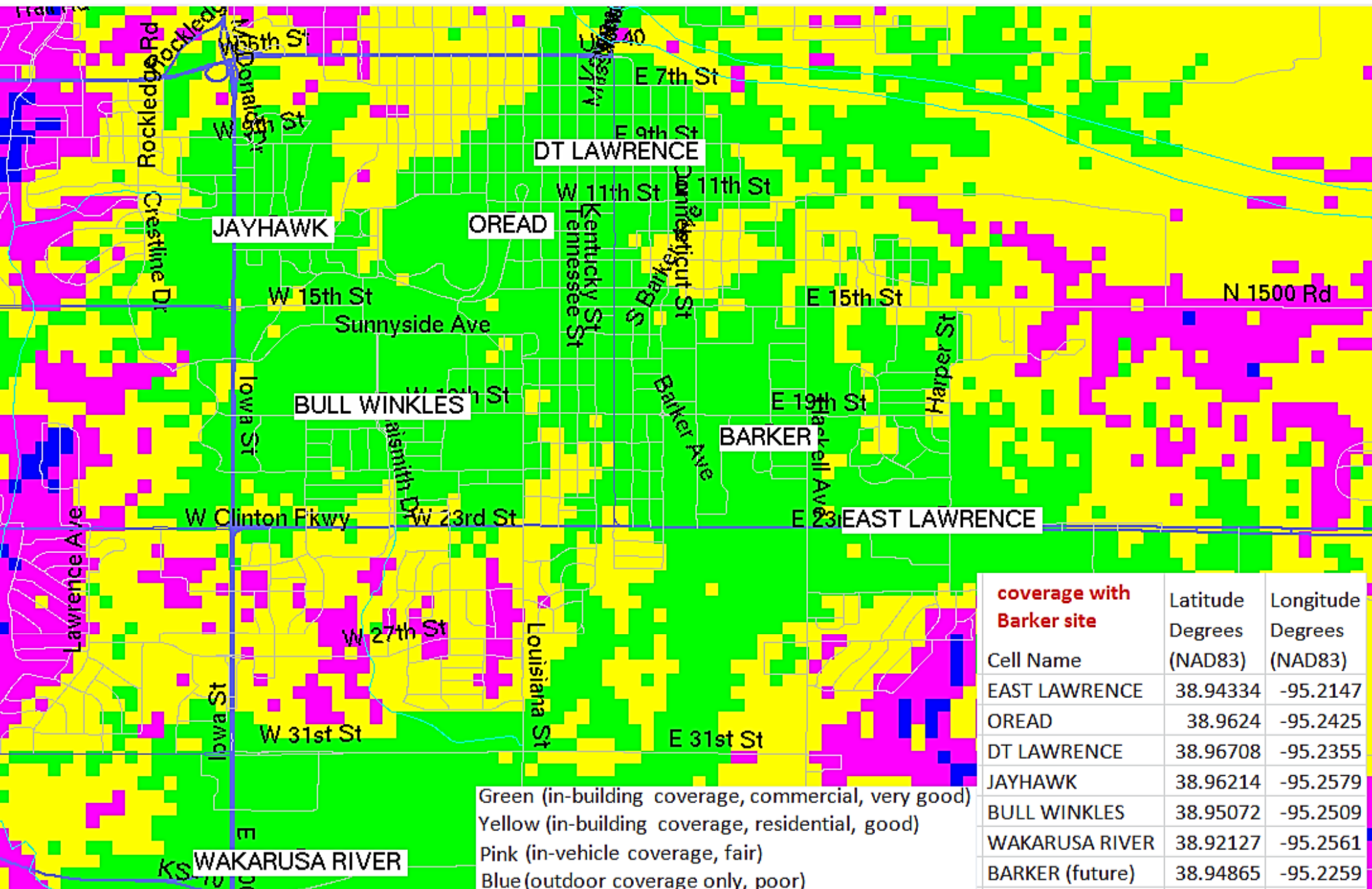
Below is Map 2 showing coverage improvement with the proposed new cell site, Barker.

Map 2 – Coverage with the new cell site, Barker



As 4G (LTE) data usage continues to increase dramatically as wireless customers utilize their wireless devices for more day to day task and recreation, the demand also increases to meet these needs by creating new opportunities to develop methods of improving coverage, capacity, and data throughput. The most challenging is capacity and data throughput. Verizon Wireless is meeting the expectations of our customers by designing this proposed cell site in the Lawrence area.

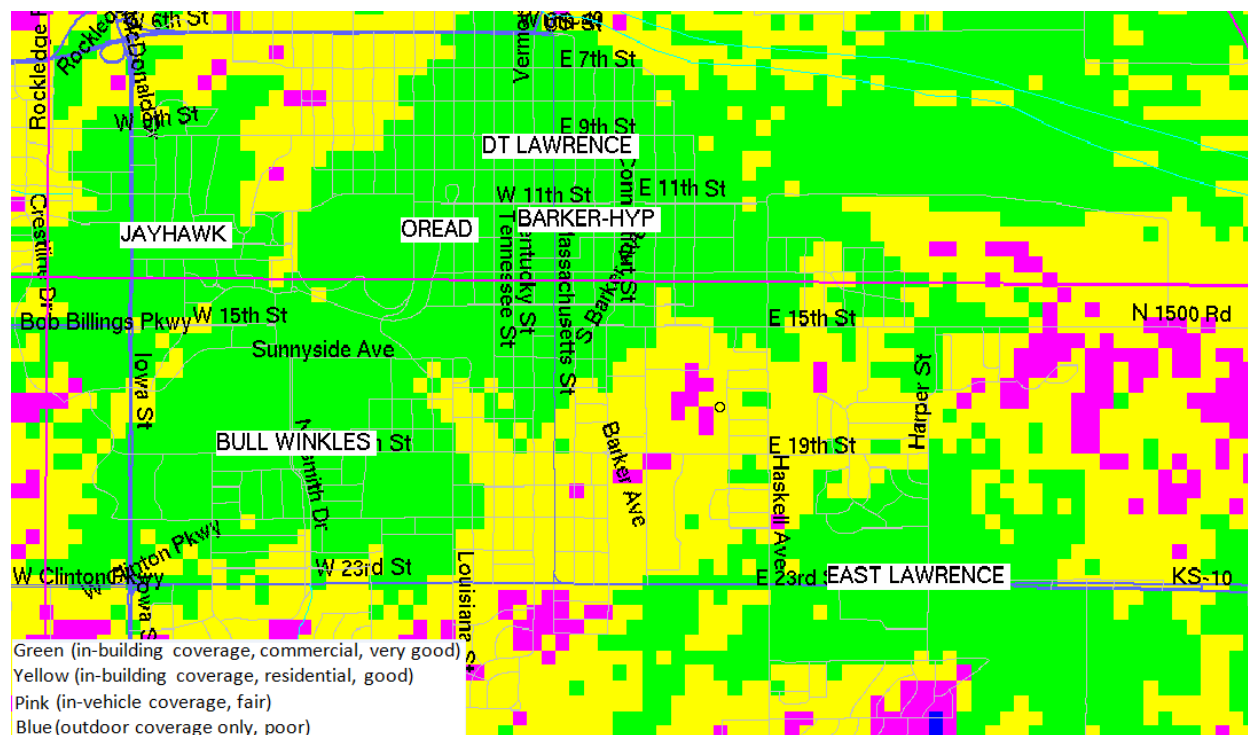
This coverage improvement combined with the capacity offload will afford Verizon Wireless customers the best possible data performance at the location identified. Verizon Wireless continues to strive to provide the best possible wireless experience for its customers while still recognizing the needs and desires of the surrounding community and being a good neighbor.



coverage with Barker site	Latitude Degrees (NAD83)	Longitude Degrees (NAD83)
Cell Name		
EAST LAWRENCE	38.94334	-95.2147
OREAD	38.9624	-95.2425
DT LAWRENCE	38.96708	-95.2355
JAYHAWK	38.96214	-95.2579
BULL WINKLES	38.95072	-95.2509
WAKARUSA RIVER	38.92127	-95.2561
BARKER (future)	38.94865	-95.2259

Below is Map 3 showing coverage improvement utilizing the LAWC Barker tower site.

Map 3 – Coverage with the new cell site using the LAWC Barker site



The Douglas County tower location (Barker-HYP) was considered in the analysis; however the proximity of Barker-HYP is only 0.3 miles from the current VZW location of the DT Lawrence site. Typically, a separation of roughly 1 mile or more is preferred. If sites are closer than 1 mile apart this will cause excessive signal overlap and non-equidistant spacing among the other towers in the area. This could cause inter-signal interference which would result in poor signal quality or data throughput. The Barker-HYP location also does not fully address the coverage null identified earlier between Massachusetts St and Haskell Ave just north of 20th St in east-central Lawrence, which is the objective of the proposed site.

Based on these results, the Barker-HYP location is not considered a viable candidate.

May 22, 2015

Ms. Sandra L. Day
Planning Division
P.O. Box 708
Lawrence, KS 66044

Re: Third Party Review for a New Communication Tower at 2001 Moodie Road
LAWC Barker Cell Site

Dear Ms. Day:

Burns & McDonnell has completed our radio collocation feasibility assessment and report the following:

Applicant

PAMCORP, LLC on behalf of Verizon Wireless, LLC

Project

Applicant proposes to construct a telecommunications tower in Lawrence, Kansas. Burns & McDonnell conducted a study in accordance with the Land Development Code to determine the extent to which the Applicant has, or has not, met the Burden of Proof required by Subsection 20-529 (7).

Proposed tower: LAWC Barker

Location: 2001 Moodie Road, Lawrence, Kansas, 66046

Geographic Coordinates: Lat. 38-56-55.05 North; Long. 95-13-33.43 West

Approximate Ground Elevation: 871 feet above mean sea level.

Structure height: 120 feet above ground level.

Transmitter Frequency Bands: 1860-1900 MHz; 700 MHz

Analysis

Burns & McDonnell reviewed the project data provided by the City including:

- Applicant's software-generated radio signal propagation models showing current radio signal coverage and proposed coverage after construction of the new tower.
- Applicant's zoning application including proposed site design drawings.

Burns & McDonnell's engineer travelled to Lawrence on May 22, 2015 and reviewed the proposed tower location, and other structures in the general area of study. The proposed tower site would be located in an improved area on Moodie Road 375 feet northeast of the existing Ottawa COOP grain elevator.

Ms. Sandra Day
May 22, 2015
Page 2

The New Telecommunications Towers – Burden of Proof

In accordance with the Land Development Code Subsection 20-529 (7) requires that the applicant meet the burden of proof by showing that one or more of the following conditions exist:

- (i) No existing telecommunications towers or structures are located within the geographic area required to meet the applicant's engineering requirements;
- (ii) Existing telecommunications towers or structures are not of sufficient height, and could not be extended to become sufficient in height, to meet the applicant's engineering requirements;
- (iii) Existing telecommunications towers or structures do not have sufficient structural capacity to support the applicant's proposed telecommunications antenna and related equipment; and the existing or approved telecommunications tower cannot be reinforced, modified or replaced to accommodate planned or equivalent equipment at a reasonable cost;
- (iv) The proposed telecommunications antenna would cause excessive electromagnetic interference with an existing telecommunications antenna on the telecommunications tower or structure, or the telecommunications antenna on the existing telecommunications tower or structure would cause interference with the proposed telecommunications antenna; and reconfiguration would not resolve the interference problem; or
- (v) The applicant demonstrates that there are other limiting factors, not including the provisions of this Article, that render existing telecommunications towers or structures unsuitable for its proposed telecommunications antenna.

The Applicant's software-generated radio signal propagation models show the current network coverage both before and after construction of the proposed site. Based on Burns & McDonnell experience, these propagation models represent a reasonable approximation of coverage performance for the network.

Towers and structures already occupied by the applicant were evaluated to determine whether height could be extended to cover the desired Barker area. Otherwise, the applicant's propagation models and their construction proposal are sufficient evidence that these current facilities do not sufficiently cover the desired area.

Ms. Sandra Day

May 22, 2015

Page 3

Name: Jayhawk

The facility is installed on a water tower. Significant extension of height is not feasible.

Name: Bull Winkles

The facility is installed on a 10-story building. Significant extension of height is not feasible.

Name: Oread

The facility is installed on an 8-story building. Significant extension of height is not feasible.

Name: DT Lawrence

The facility is installed on a 6-story building. Significant extension of height is not feasible.

Name: East Lawrence

The facility is installed on a 94-foot self-supporting tower owned by American Tower Corporation. The current structure does not appear to be capable of a height extension sufficient to cover the desired area.

Name: Wakarusa River

This is a 157-foot monopole tower. It is Burns & McDonnell's opinion that a tower at this location, due to its distance from the desired area, would have to be increased to an unreasonable height to provide coverage, and the current structure is not capable of being extended to such a height.

Burns & McDonnell obtained a list of existing communication towers not currently occupied by the applicant and located within an approximate one-mile radius of the proposed site. Given the radio coverage characteristics, frequency re-use and capacity requirements of 4G LTE, a reasonable expectation for "very good" coverage is a 0.5 to 0.75 mile radius around a given site. Therefore, a one-mile search radius for alternate sites is conservative, i.e. sites more than a mile from the proposed site would not have any reasonable expectation of providing the desired coverage.

FCC Reg. No. 1240758

Owner: Knology of Kansas, Inc.

This is a 202-foot guyed tower located in a residential area. The tower supports CATV and cellular antennas. The tower appears to be fully loaded and is too distant to provide adequate coverage of the required area in Burns & McDonnell's opinion.

Ms. Sandra Day
May 22, 2015
Page 4

FCC Reg. No. 1258675

Owner: T-Mobile USA Towers LLC

At 1.1 miles from the proposed site, this tower is outside the search area but was included due to its prominent location along K-10. This is a 160-foot monopole tower. It is too distant from the proposed site to provide coverage of the desired area, and the current structure is not capable of being extended to sufficient height to overcome the distance.

FCC Reg. No. 1240013

Owner: Douglas County, KS

This is a 199-foot self-supporting tower located near the Law Enforcement Center. This tower appears fully occupied and would not appear to be a candidate for colocation. It is also too far to the northeast to provide adequate coverage of the required area in Burns & McDonnell's opinion. Other problems related to the close spacing of this tower to existing network sites are explained in applicant's radio propagation study report.

Grain Elevator

Owner: Ottawa COOP

This 130-foot structure is located approximately 365 southwest of the proposed site. There are numerous land mobile radio antennas currently on the structure. Burns & McDonnell contacted the applicant's representative concerning use of this structure for their proposed antennas. The applicant's representative explained that the Grain Elevator had been studied by Verizon engineering and operations groups and found to be unsuitable, primarily because the roof is accessible only from a single man lift that is insufficient for their operations and maintenance needs.

Harper Water Tower

Owner: City of Lawrence

This structure is not of sufficient height to cover the proposed area and is already occupied by a cellular array.

A summary of the findings of this study are shown provided in Table 1. Attachment A contains a map of the radio sites that were reviewed, and Attachment B contains photographs of these sites.

Ms. Sandra Day
May 22, 2015
Page 5

Table 1
Study Findings

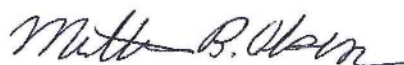
	Burden of Proof Disqualifying Condition				
	(ii)	(iii)	(iv)	(v)	
Location	Height Limitations	Structural Limitations	Electromagnetic Interference	Other Disqualifier	Applicant- Occupied
Jayhawk	X				Yes
Bull Winkles	X				Yes
Oread	X				Yes
Bull Winkles	X				Yes
DT Lawrence	X				Yes
East Lawrence	X			X	Yes
Wakarusa River	X			X	Yes
1240758	X	X		X	No
1258675	X			X	No
1240013	X			X	No
Grain Elevator				X	No
Harper Water Tower	X				No

X=disqualifying condition is met for the site.

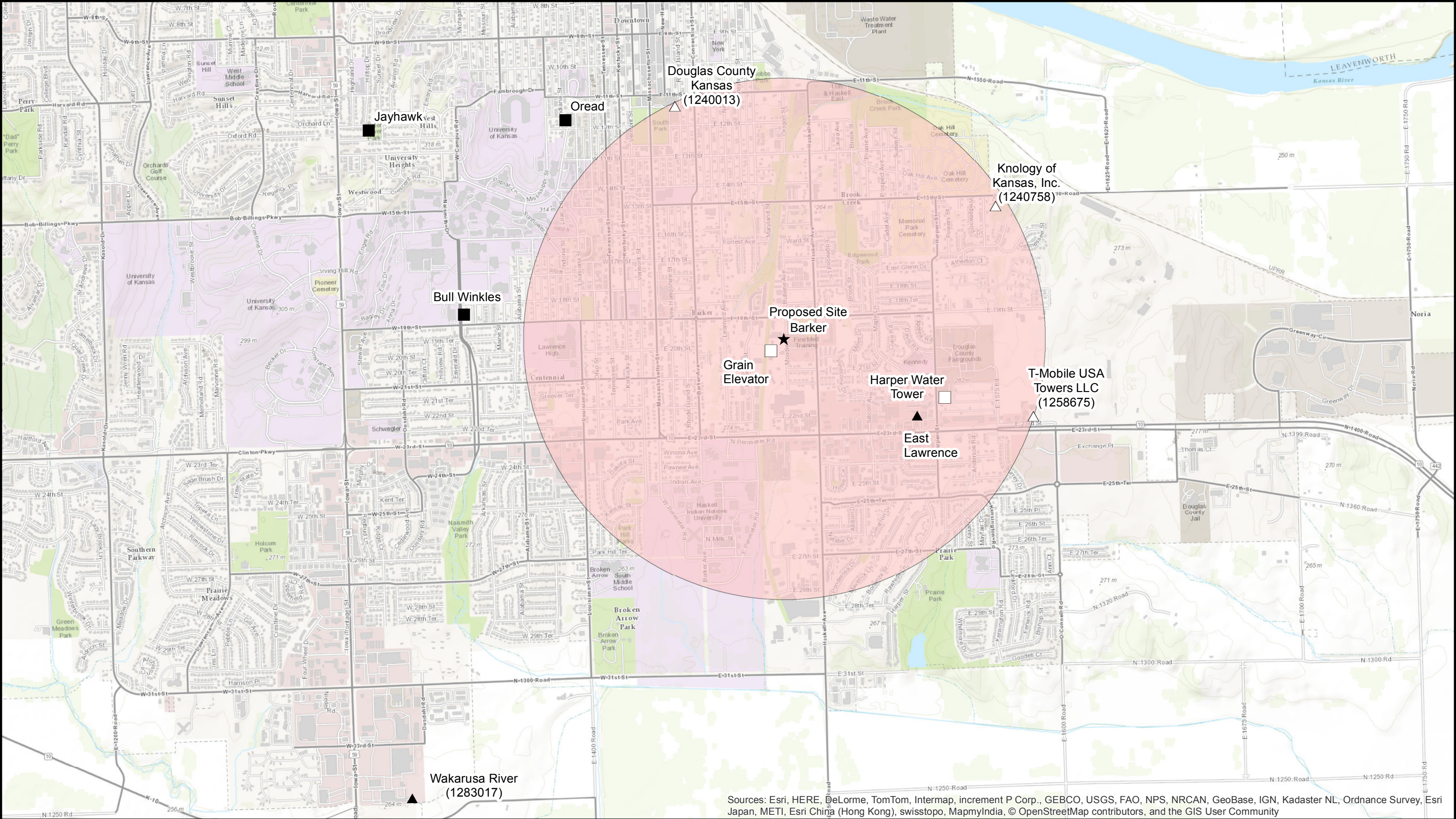
Findings

No existing telecommunications towers or structures are located within the geographic area required to meet the applicant's engineering requirements. The Burden of Proof required of the Applicant has been met as shown in Table 1. These findings are Burns & McDonnell's independent professional opinion based on our experience related to the propagation characteristics of the radio frequency bands proposed, our experience in the design and construction of similar radio facilities, and our observations of the site and the surrounding area.

Sincerely,



Matthew B. Olson, P.E.
License KS20642
Attachment A-Third Party Review LAWC Barker
Attachment B-Photographs of Proposed Site and Other Structures



Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Legend

- | | | | | | |
|--|----------------------|--|---------------------------------------|--|---|
| | One-Mile Search Area | | Proposed Site | | Tower Not Occupied by Applicant |
| | | | Tower Occupied by Applicant | | Other Structure Not Occupied by Applicant |
| | | | Other Structure Occupied by Applicant | | |

Attachment A
Third Party Review LAWC Barker
05/29/2015



Attachment B

Photographs of Proposed Site and Other Area Structures



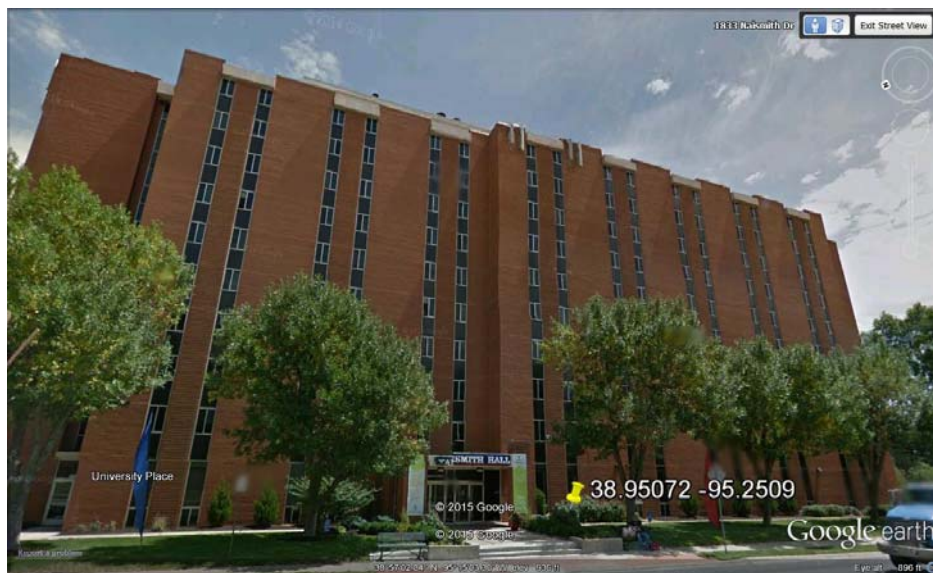
2001 Moodie Road, Lawrence, KS
Looking Northwest



2001 Moodie Road, Lawrence, KS
Looking West



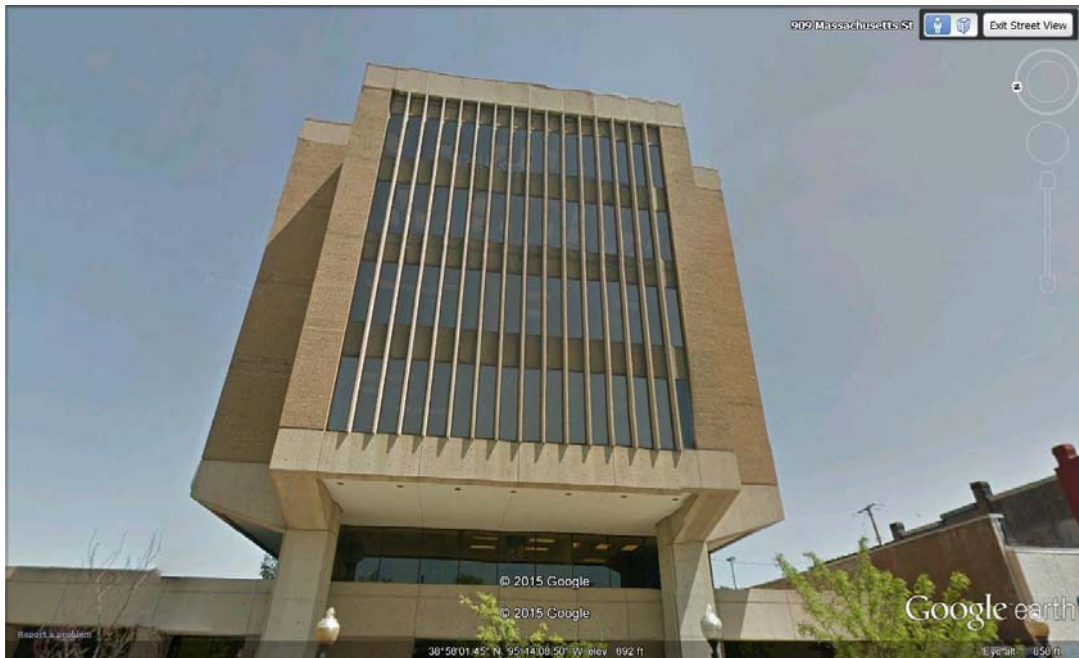
Name: Jayhawk



Name: Bull Winkles



Name: Oread



Name: DT Lawrence



Name: East Lawrence



Name: Wakarusa River



FCC Reg. No. 1240758
Owner: Knology of Kansas, Inc.



FCC Reg. No 1258675
Owner: T-Mobile USA Towers LLC



FCC Reg. No. 1240013
Owner Douglas County, KS



Grain Elevator on Moodie Road near Proposed Site
Owner: Ottawa COOP



Harper Water Tower

From: [Clark Coan](#)
To: [Sandra Day](#)
Subject: Verizon Cell Phone Tower
Date: Thursday, May 07, 2015 5:16:22 PM

Sandra,

Since Verizon apparently mislead the planning commission (by saying their engineers claimed that no other site would work) and immediately filed suit against the City without trying to compromise first, they should be required to do some mitigation.

They could be required to put a belt of evergreen trees (firs, spruce) along the western boundary of the grain elevator property to help screen these eyesores from trail users on the Burroughs Creek Trail. As a precedence, the developers of the Oread Hotel put in fir trees in front of the city water tower on Jayhawk Blvd.

Thank you for paying attention to my comments.

Clark Coan
Corporate Secretary
Public Information Specialist
Sunflower Rail-Trails Conservancy

P.S. I see where the contractors for Menards have started earth work in preparation of laying concrete for the Naismith Trail extension.



Sunflower Rail-Trails Conservancy, Inc.
PO Box 44-2014
Lawrence, Kansas 66044
www.sunflowertrails.org

RECEIVED

JUN 16 2015

City County Planning Office
Lawrence, Kansas

June 15, 2015

Lawrence Douglas County
Planning Commission
c/o Planning and Development
City Hall, 6 East Sixth St.
Lawrence, KS 66044

Dear Commissioner:

Since Verizon apparently mislead the planning commission (by testifying that their engineers asserted that no other site would work) and immediately filed suit against the City without trying to compromise first, they should be required to perform some mitigation.

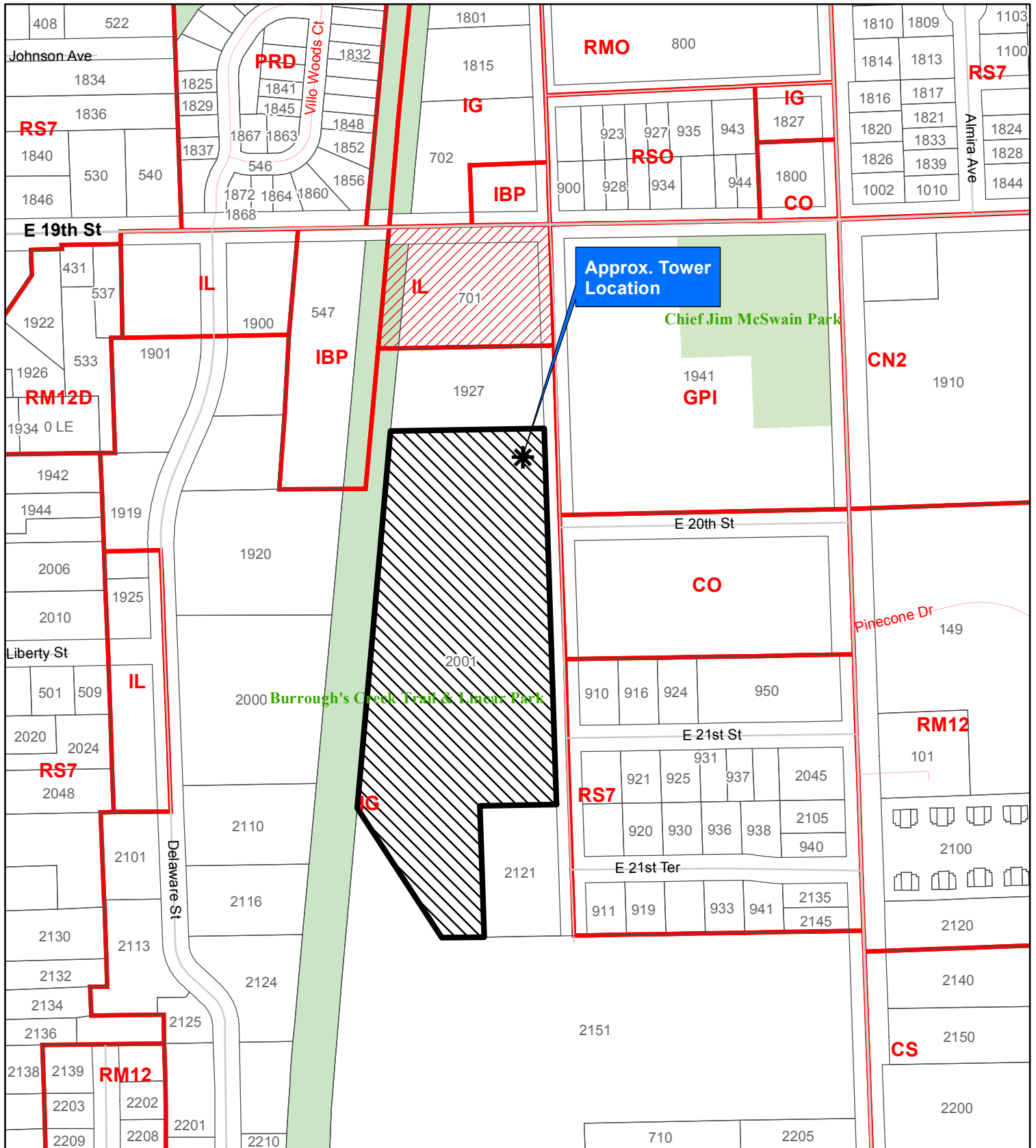
They could be required to put a berm topped with a belt of a mix of evergreen trees (firs, spruce, etc.) along the whole western boundary of the grain elevator property to help screen these eyesores from trail users on the Burroughs Creek Trail. As a precedence, the developers of the Oread Hotel put in fir trees in front of the city water tower on Jayhawk Blvd.

Thank you for paying attention to my comments.

Clark Coan
Corporate Secretary
Public Information Specialist

BOARD OF DIRECTORS

President: Larry Ross, Wichita; Vice-president: Richard Stein, Dodge City; Secretary: Clark Coan, Lawrence;
Treasurer: Carol O'Neal, Marysville



SUP-15-00185: Special Use Permit for a New Verizon Wireless Communications Tower to be Located in the Northeast Corner of 2001 Moodie Road

Lawrence-Douglas County Planning Office
June 2015

 Subject Property

