

COLONEL JAMES JABARA AIRPORT

Commercial Site
Development Study



Appendix A

Airport Stormwater Discharge Permit



Division of Environment
Curtis State Office Building
1000 SW Jackson St., Suite 400
Topeka, KS 66612-1367



Phone: 785-296-1535
Fax: 785-559-4264
www.kdheks.gov

Janet Stanek, Acting Secretary

Laura Kelly, Governor

December 6, 2021

Rick Stone
Wichita Airport Authority
2173 Air Cargo Rd.
Wichita, KS 67209

**Industrial Stormwater Permit Holders Invoice for Annual Permit Fee
January 2022 through January 2023**

Dear Permittee: An Industrial Stormwater Permit is due **Immediately upon receipt.**

Facility Name: Colonel James Jabara Airport
Permit No. G-AR94-0018
Facility Location: Wichita
Please make check payable to: **KDHE**
Permit Fee: **\$60.00**

Please return this form with payment to:
KDHE Stormwater Coordinator
Kansas Department of Health & Environment
1000 SW Jackson Street– Suite 420
Topeka, KS 66612-1367

TO BE COMPLETED BY PERMITTEE:

- Has the annual comprehensive site evaluation (Permit Section 2.4.4) been completed? (Y/N) Y
- Has the SWP2 Plan been updated and certified (Permit Section 2.4.6)? (Y/N) Y

If you answered no to either of the above questions you are required to complete the annual evaluation and/or update/modify the SWP2 Plan within 90 days of this certification date.

Signature [Signature]

Date 12/13/2021

**TO ENSURE PERMIT COMPLIANCE, ALL QUESTIONS MUST BE ANSWERED, AND FORM
SIGNED AND SUBMITTED WITH PAYMENT.**

Contact the KDHE – Stormwater Coordinator at 785.296.5517 or Chris.Seeds@ks.gov with any questions

For official use only.	Check No.	Date Received:

COLONEL JAMES JABARA AIRPORT

Commercial Site
Development Study



Appendix B

Zoning and Building Code Evaluation



AAO Site Development Study

Code Evaluation

Prepared for: Coffman Associates

Colonel James Jabara Airport, Wichita, KS

Prepared by:



**1995 Midfield Road
Wichita, KS 67209**

December 2022

Garver Project No.: 2A17000

Colonel James Jabara Airport, Wichita, Kansas

1.0 Property Location

The property is located in Payne Township, Sedgwick County, Kansas and is owned by the Wichita Airport Authority. Areas 1 and 2 are in Wichita city limits, while Area 3 is partially divided between the City of Wichita and the City of Bel Aire. Adjacent to the site, Areas 1 and 2 generally abut the City of Wichita on all sides, with small portions of the Area 2 perimeter abutting Bel Aire or Sedgwick County. Area 3 abuts the City of Bel Aire on the north, east and west sides. Study area locations and city boundaries are shown in Figure 1.

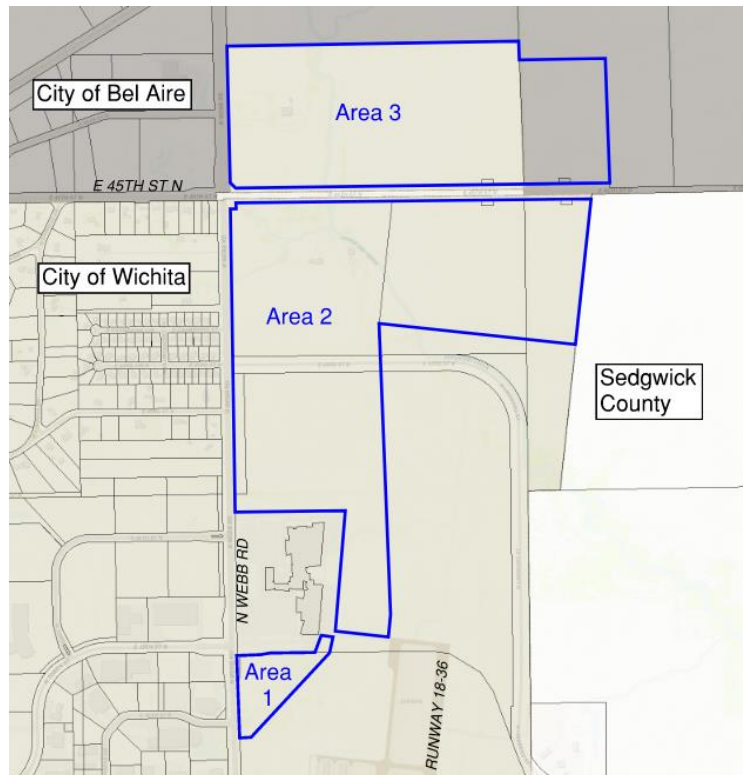


Figure 1: Study Areas

2.0 Platting

2.1 City of Wichita-Sedgwick County

Area 1 sits in the northwest corner of a parcel which was platted as Lot 1, Block A of the Colonel James Jabara Airport Addition. The portion of Area 2 that is south of vacated 43rd / Lindberg Street is located within a parcel which was platted as Lot 1, Block 1 of Colonel James Jabara Airport 2nd Addition. Plat maps for both additions are included on Page B-8. Area 2 south of vacated 43rd / Lindberg Street consists of two unplatted parcels, one east and one west, which are of approximately equal size. Area 3 is also an unplatted parcel.

The current plat for Lot 1, Block 1 of Colonel James Jabara Airport 2nd Addition contains elements which may be restrictive to a proposed development on the south half of Area 2 in terms of access and usable

Colonel James Jabara Airport, Wichita, Kansas

area. Access control from Webb Road between 39th Street and vacated 43rd / Lindberg Street is limited to two openings, both of which are currently utilized as the entrance drives for the WSU Tech Campus. Additionally, there is a 100-ft. wide reserve at the northwest corner of the Lot, which extends 1,067 ft. south along Webb Road, that is platted for open space purposes. A plat amendment or re-plat would be necessary to establish additional access openings from Webb Road and to vacate Reserve B.

Any potential new platting, re-platting, or plat amending on the site would require approval from the Wichita-Sedgwick County Metropolitan Area Planning Commission (MAPC).

2.2 City of Bel Aire

The east portion of Area 3, located in Bel Aire, is an unplatted parcel of land.

Any potential new platting of the parcel would require approval from the Bel Aire Planning and Development Department.

3.0 Zoning Ordinances

3.1 State of Kansas

Kansas Statute 3-116 requires any lease of municipal airport property to be for aviation-related purposes. This land use condition must be met in addition to the municipal zoning regulations listed below.

3.2 City of Wichita-Sedgwick County

Zoning for the City of Wichita is regulated by the Wichita-Sedgwick County MAPC. The Wichita-Sedgwick County Unified Zoning Code contains the articles for zoning district standards; regulations are also provided in Title 28 of the City of Wichita Code of Ordinances. A zoning map is included on Page B-11.

The development areas located in Wichita are currently classified as the following districts:

- Area 1 – LI (Limited Industrial)
- Area 2 – LI (Limited Industrial) south of 43rd Street and SF-5 (Single-Family Residential) north of 43rd Street
- Area 3 – SF-5 (Single-Family Residential)

The SF-5 portion of Areas 2 & 3 is expected to be re-zoned as LI by 2023.

3.2.1 LI – Limited Industrial

LI districts are the preferred zoning for development at Jabara, and are described as moderate intensity manufacturing, industrial, and commercial uses. Lot, setback, and building height restrictions for LI districts are listed in Table 1.

Colonel James Jabara Airport, Wichita, Kansas

Table 1: Limited Industrial Site Requirements and Restrictions

LI – Limited Industrial	
Minimum Lot Size	None
Minimum Lot Width	None
Minimum Front Setback	20 ft.
Minimum Rear Setback	None
Minimum Interior-Side Setback	0/5 ft.
Minimum Street-Side Setback	None
Maximum Height	80 ft. + 2 ft. increase/1 ft. add. setback

Article III of the Unified Zoning Code lists uses permitted by-right in LI Districts. Commercial uses include office, vehicle and equipment sales, vehicle repair, and warehouse. Industrial uses include freight terminal, gas and fuel storage and sales, manufacturing, research services, storage, vehicle storage yard, warehousing, and welding or machine shop. Conditional commercial uses include airport or airstrip and heliport. The code narrative as well as a full list of permitted uses for LI districts is included on Page B-13.

3.2.2 SF-5 – Single-Family Residential District

SF-5 districts are described as low to moderate density single-family and complimentary uses in areas with full public services.

All areas currently zoned as SF-5 (portions of Areas 2 & 3) are expected to be re-zoned as LI by 2023.

3.2.3 Airport Hazard Zoning

In addition to the development restrictions identified for the zoning districts, the Wichita-Sedgwick County Airport Hazard Zoning Map also identifies maximum allowable structure height, without the need for a permit, for areas based on proximity to airports. Based on this map, structures in Areas 1 and 2 exceeding 25' and structures in Area 3 exceeding 75' in height would require a permit. The Airport Hazard Zones Map is included on Page B-20.

3.3 City of Bel Aire

Zoning for the City of Bel Aire is regulated by the Bel Aire Planning and Development Department. Zoning maps are available on the City website; a zoning map has been included on Page B-21. City zoning regulations are in Chapter 18a of the Bel Aire City Code.

The development study Area 3 is located in Bel Aire and is currently classified as AG Agricultural. To meet the requirement for aviation-related development, this area is expected to be re-zoned as M1 – Planned Unit Development (PUD) – Industrial District.

3.3.1 M-1 – Planned Unit Development (PUD) – Industrial District

“M-1” PUD- Industrial Districts are intended to encourage innovation in commercial and industrial development through designs allowing for a more efficient use of land, incorporation of new technologies in urban land development, and incorporation of a greater variety and flexibility in type, design, and layout of structures.

Colonel James Jabara Airport, Wichita, Kansas

Article 7 of the Bel Aire Zoning Regulations lists permitted uses in M-1 districts. Permitted uses include commercial office and retail uses pursuant to a PUD, and manufacturing and industrial uses pursuant to a PUD. Conditional uses include intensive commercial, manufacturing, or industrial development typically not located near residential areas. A complete list of permitted uses for M-1 districts is included on Page B-23.

Regulations for height, area, setbacks, streets, parking, signage, and landscaping are pursuant to an approved plat and may differ from development to development within the PUD district.

4.0 Subdivision Regulations

4.1 City of Wichita-Sedgwick County

The City of Wichita-Sedgwick County Unified Subdivision Regulations provides rules and procedures for the improvement of property to ensure proper subdivision planning. These regulations provide for the proper location of streets, reservation or dedication of land, necessary on-site and off-site improvements, flood prevention and stormwater pollution control, designation of building lines, design compatibility, environmental protection, coordination of public and private resources for development, and the establishment of standards for the design and construction of improvements. Development on the proposed parcels within City of Wichita and Sedgwick County limits shall follow these regulations. The Subdivision Regulations are available on the Wichita-Sedgwick County Planning website.

<https://www.wichita.gov/Planning/Pages/SubdivisionRegulations.aspx>

4.2 City of Bel Aire

City of Bel Aire Subdivision Regulations are contained in Chapter 18b of the Bel Aire City Code. These regulations are designed and intended to provide efficient and orderly location of streets, storm water drainage, protection from periodic flooding conditions, adequate water supply, adequate sewage disposal, various utility services, adequate access for firefighting equipment and police protection, proper coordination with governmental agencies, and to establish administrative procedures for community development. The Subdivision Regulations are available on the City of Bel Aire Planning & Community Development Website. <https://belaireks.gov/180/Planning-Community-Development>

5.0 Design and Construction Ordinances

5.1 Federal Aviation Administration (FAA)

As a member of the National Plan of Integrated Airport Systems (NPIAS) and recipient of federal funding through the Airport Improvement Program (AIP), all development at AAO must adhere to FAA grant assurances as well as design and construction standards established through FAA Advisory Circulars (ACs). These include but are not limited to:

- AC 150/5200-33 Hazardous Wildlife Attractants on or Near Airports
- AC 150/5320-5 Surface Drainage Design
- AC 150/5320-6 Airport Pavement Design and Evaluation
- AC 150/5370-10 Standard Specifications for Construction of Airports

Colonel James Jabara Airport, Wichita, Kansas

5.2 Wichita Airport Authority (WAA)

The WAA has established standards and procedures which are applicable to design and construction projects on airport property. Adherence to these standards will be required as directed by the WAA for approval of the development project.

5.3 City of Wichita

Article 8 of the City of Wichita-Sedgwick County Subdivision Regulations indicates that the City of Wichita is the appropriate engineering jurisdiction based on the site location. This means that City of Wichita standards and specifications would be utilized for the applicable landside improvements. Additionally, any coordination relating to approval of engineering drawings, inspections, acceptance, petitions, and surety would be done through the City Engineer. Information on improvement standards and procedures can be found in the City of Wichita Code of Ordinances, as well as on the Public Works and Utilities website. The following items from the code are especially relevant.

5.3.1 Ordinances

- Title 10 – Public Streets and Sidewalks
- Title 15 – Fire Protection
- Title 16 – Sewers, Sewage Disposals, and Drains
- Title 17 – Water
- Title 18 – Building Code
- Title 19 – Electricity
- Title 21 – Plumbing and Gas Fitting Code
- Title 22 – Air Conditioning, Refrigeration, and Warm Air Heating Code
- Title 27 – Flood Damage Prevention

Titles 10, 15, 16, and 17 are applicable to those respective public or private site improvements to serve new development. Titles 19, 21, and 22 generally refer to Title 18, which contains the Wichita/Sedgwick Unified Building and Trade Code. Title 18, Flood Damage Prevention requirements and applicability to the site is discussed further in the drainage report. Also discussed in the drainage report are the City Stormwater Manual and requirements for water quality treatment and water quantity management.

5.3.2 City of Wichita Private Projects

City of Wichita Private Project procedures are applicable to projects involving the construction of public infrastructure improvements by private contract. These improvements include water, sanitary sewer, drainage, and paving. Procedures involve the submittal of engineering plans and required documentation to the City, review and approval of plans by the City Engineer and appropriate departments, coordination of construction and inspection as well as surety with the contractor, and the submittal of as-built drawings for City records. Detailed guidelines are provided on the Public Works and Utilities website. Table 4 lists the improvement thresholds for when Private Projects become applicable.

Colonel James Jabara Airport, Wichita, Kansas

Table 2 – Private Projects

Item	Requirements
Private Project Water (PPW)	Any line publicly maintained, any domestic service line over 2", and any fire protection line from the tap to the building and/or furthest hydrant.
Private Project Sewer (PPS)	Any publicly maintained line, and any private sewer line 8" or larger.
Private Project Drainage (PPD)	Developments that require stormwater management facilities, detention ponds, downstream channel protection, water quality treatment, and/or storm sewers.
Private Project Paving (PPD)	Required for any public or private street or for any changes being made in City of Wichita Right of Way that cannot be issued under a pavement cut permit.

5.4 City of Bel Aire

Bel Aire standards and specifications would be utilized for applicable landside development within the City. Additionally, any coordination relating to approval of engineering drawings, inspections, acceptance, petitions, and surety would be done through the City Engineer. Information on improvement standards and procedures can be found in the Bel Aire City Code, as well as on the City Public Works page. The following items from the code are especially relevant.

- Chapter 11 – Streets and Sidewalks
- Chapter 13 – Fire Protection
- Chapter 14 – Sanitary Sewers and Stormwater
- Chapter 16 – Municipal Water Service
- Chapter 17 – Building Codes

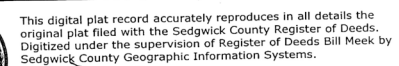
Colonel James Jabara Airport, Wichita, Kansas

Plat Maps

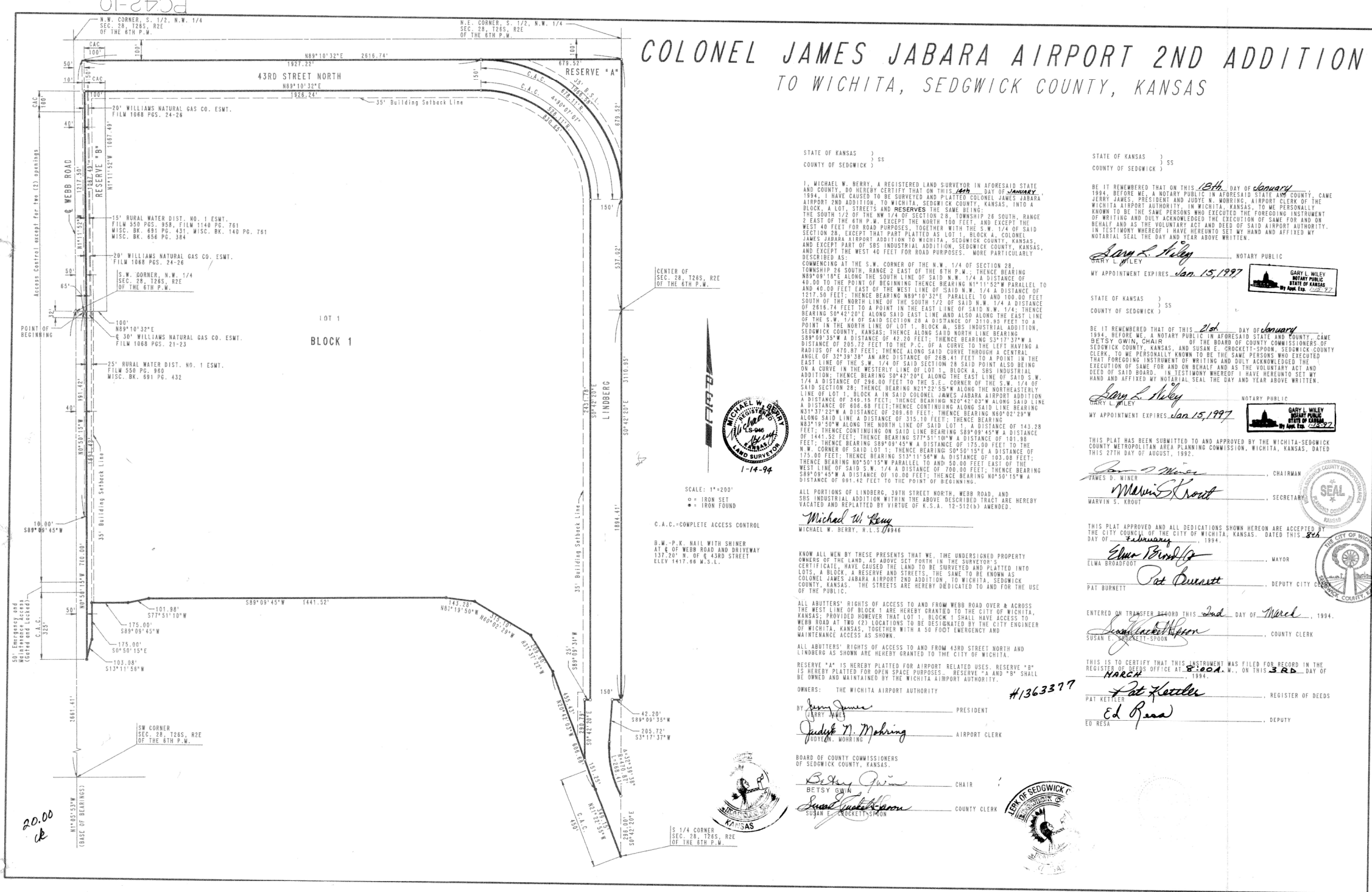
AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS.



S-2 4-35B

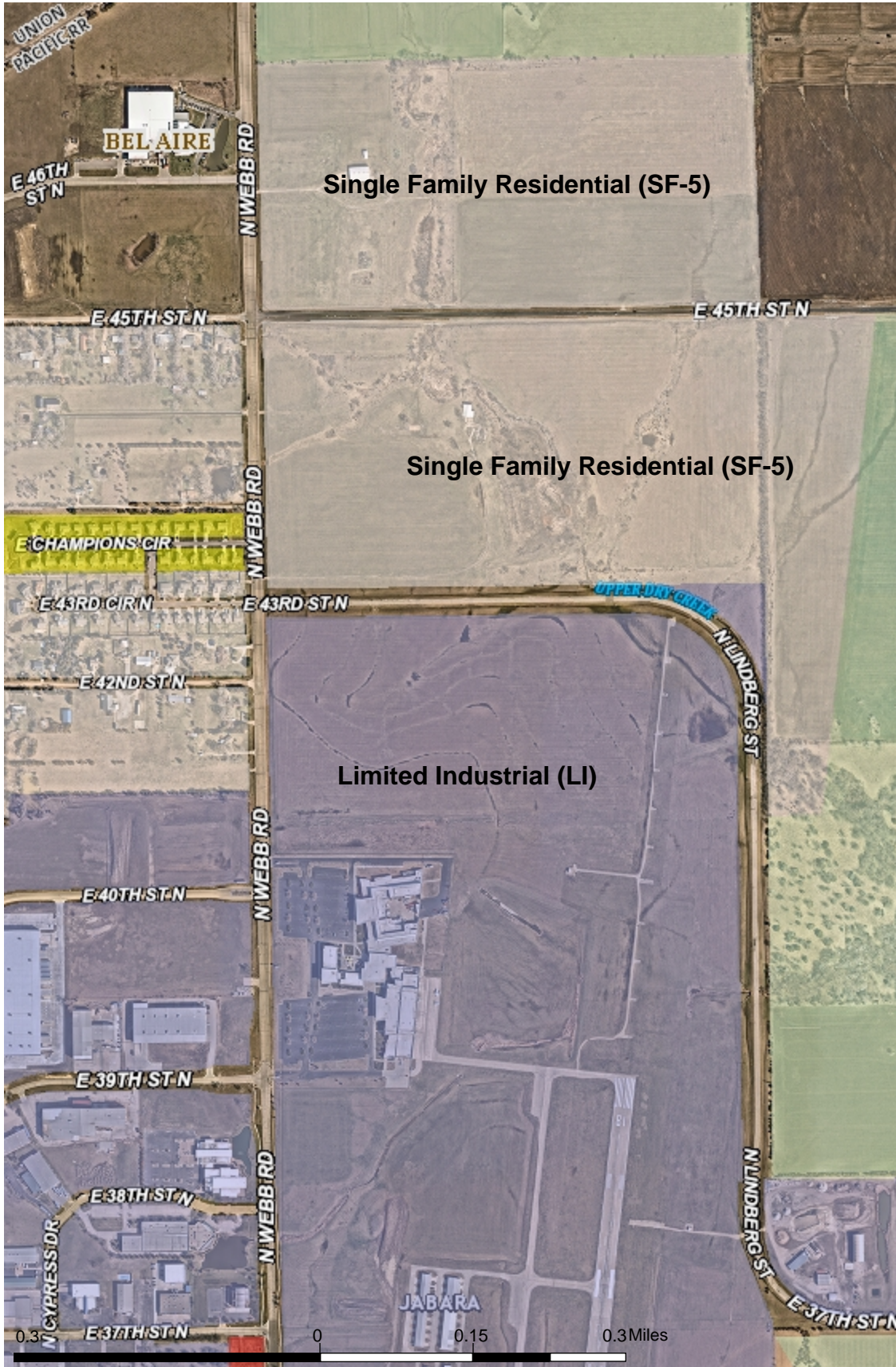


Bill Meek, Register of Deeds
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Colonel James Jabara Airport, Wichita, Kansas

Zoning Attachments



Legend

Zoning

- RR
- SF-20
- SF-10
- SF-5
- TF-3
- MF-18
- MF-29
- B
- MH
- NO
- GO
- NR
- LC
- GC
- CBD
- OW
- IP
- LI
- IP-A
- GI
- AFB
- U
- PUD
- AIRPORT
- OLD TOWN

Cityof_Wichita_KS_section3.si

- Red: Band_1
- Green: Band_2
- Blue: Band_3

CityofWichita_KS_section1.sid

- Red: Band_1
- Green: Band_2
- Blue: Band_3

CityofWichita_KS_section2.sid

- Red: Band_1
- Green: Band_2
- Blue: Band_3

1: 9,600



This information is not an official record, and cannot be used as such. The user should rely only upon official records available from the custodian of records in the appropriate City and/or County department. Some data provided here and used for the preparation of these maps has been obtained from public records not created or maintained by the City of Wichita.

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Wichita-Sedgwick County Unified Zoning Code - Article III Zoning District Standards

20. - LI Limited Industrial District ("LI")

- a. **Purpose.** The purpose of the LI Limited Industrial District is to accommodate moderate intensity manufacturing, industrial, commercial and complementary land uses. The LI District

is generally compatible with the "Employment/Industry Center" designation of the *Wichita-Sedgwick County Comprehensive Plan*. It is intended for application primarily within the City of Wichita, although it may be appropriate for application in areas of unincorporated Sedgwick County that have been designated as "Wichita 2030 Urban Growth Area."

b. **Permitted Uses.** The following uses shall be permitted by-right in the LI District.

(1) **Residential Uses**

None allowed by-right

(2) **Public and Civic Uses**

**This list only identifies the land uses based on zoning. Not all uses allowed by LI District are necessarily allowed for on-airport development.*

Auditorium or Stadium

Cemetery

Church or Place of Worship

Community Assembly

Correctional Facility, subject to Sec. III-D.6.h

Correctional Placement Residence, Limited and General, subject to Sec. III-D.6.h

Day Care, Limited and General, subject to Sec. III-D.6.i

Golf Course

Government Service

Hospital

Library

Nursing Facility

Parks and Recreation

Recycling Collection Station, Private, subject to Sec. III-D.6.q

Recycling Collection Station, Public, subject to Sec. III-D.6.r

Recycling Processing Center, subject to Sec. III-D.6.s

Reverse Vending Machine, subject to Sec. III-D.6.u

Safety Service

University or College Utility, Minor

(3) Commercial Uses

Animal Care, Limited or General

Automated Teller Machine

Bank or Financial Institution

Broadcast/Recording Studio

Car Wash, subject to Sec. III-D.6.f

Construction Sales and Service

Convenience Store

Entertainment Establishment in the City, subject to Sec. III-D.6.w

Event Center in the City, subject to Sec. III-D.6.w

Event Center in the County

Farmer's Market in the City, subject to Sec. III-D.6.jj

Farmer's Market in the County

Funeral Home

Hotel or Motel

Kennel, Boarding/Breeding/Training, subject to Sec. III-D.6.k

Marine Facility, Recreational

Medical Service

Microbrewery

Mobile Food Unit in the City, subject to Sec. III-D.6.oo

Monument Sales

Nightclub in the City, subject to Sec. III-D.6.w

Nightclub in the County, subject to Sec. III-D.6.ff

Nursery and Garden Center

Office, General

Parking Area, Commercial

Pawnshop

Personal Care Service

Personal Improvement Service

Post Office Substation

Printing and Copying, Limited

Printing and Publishing, General

Recreation and Entertainment, Indoor and Outdoor

Restaurant

Retail, General

Rodeo in the City, subject to Sec. III-D.6.kk

Riding Academy or Stable

Secondhand Store

Service Station

Sexually Oriented Business, subject to Sec. III-D.6.ff

Tattooing and Body Piercing Facility, subject to Sec. III-D.6.ee

Tavern or Drinking Establishment, subject to Sec. III-D.6.w

Teen Club in the City, subject to Sec. III-D.6.w

Vehicle and Equipment Sales

Vehicle Repair, Limited and General

Vocational School

Warehouse, Self-Service Storage

Wireless Communication Facility, subject to Sec. III-D.6.g

(4) Industrial, Manufacturing and Extractive Uses

Asphalt or Concrete Plant, Limited, subject to Sec. III-D.6.d

Freight Terminal

Gas and Fuel Storage and Sales

Manufacturing, Limited and General

Research Services

Storage, Outdoor, subject to Sec. III-D.6.dd

Vehicle Storage Yard

Warehousing

Welding or Machine Shop

Wholesale or Business Services

(5) Agricultural Uses

Agriculture

Agricultural Processing

Agricultural Research

Agricultural Sales and Service

Grain Storage

- c. **Conditional Uses.** The following Uses shall be permitted in the LI District if reviewed and approved by the Planning Commission in accordance with the procedures and standards of Sec. V-D.

(1) Residential Uses

None allowed by Conditional Use

(2) Public and Civic Uses

Day Reporting Centers, subject to Sec. III-D.6.ii

School, Elementary, Middle and High

Utility, Major

(3) Commercial Uses

Airport or Airstrip

Heliport

(4) Industrial, Manufacturing and Extractive Uses

Asphalt or Concrete Plant, General

Landfill

Mining or Quarrying

Oil and Gas Drilling

Rock Crushing

Solid Waste Incinerator, subject to Sec. III-D.6.v

Transfer Station

Wrecking/Salvage Yard, subject to Sec. III-D.6.e

(5) Agricultural Uses

None allowed by Conditional Use

d. **Property development standards.** Each site in the LI District shall be subject to the following minimum property development standards. Setbacks and heights are for Principal Structures. See Sec. III-D.7.e for Setbacks and heights for Accessory Structures. See also Secs. III-E.2.e(2) and III-E.2.e(3) for Front Setbacks on unplatted tracts or major roadways. Compatibility standards in Secs. IV-C.4 and IV-C.5 may take precedence.

(1) **Minimum Lot Area:** No minimum

(2) **Minimum Lot Width:** No minimum

(3) **Minimum Front Setback:** 20 feet, provided that the minimum required Front Setback may be reduced pursuant to Sec. III-E.1.e(5)

(4) **Minimum Rear Setback:** No minimum

(5) **Minimum Interior Side Setback:** zero feet, but if an Interior Side Setback is provided it shall be at least five feet in width.

(6) **Minimum Street Side Setback:** No minimum

(7) **Maximum Height:** 80 feet, plus two feet of additional height for each foot of Setback beyond the minimum required Setbacks.

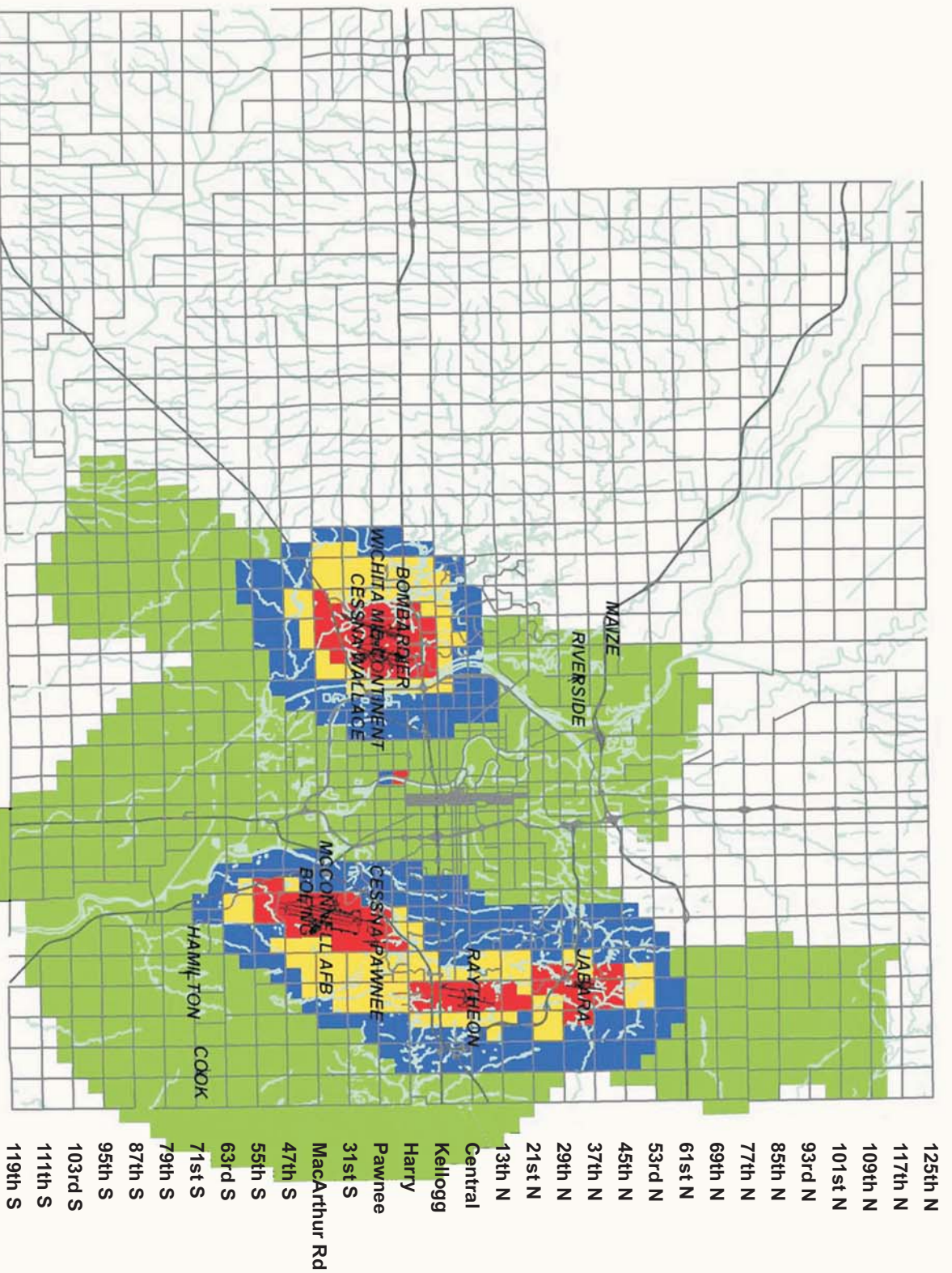
e. **Special LI District regulations**

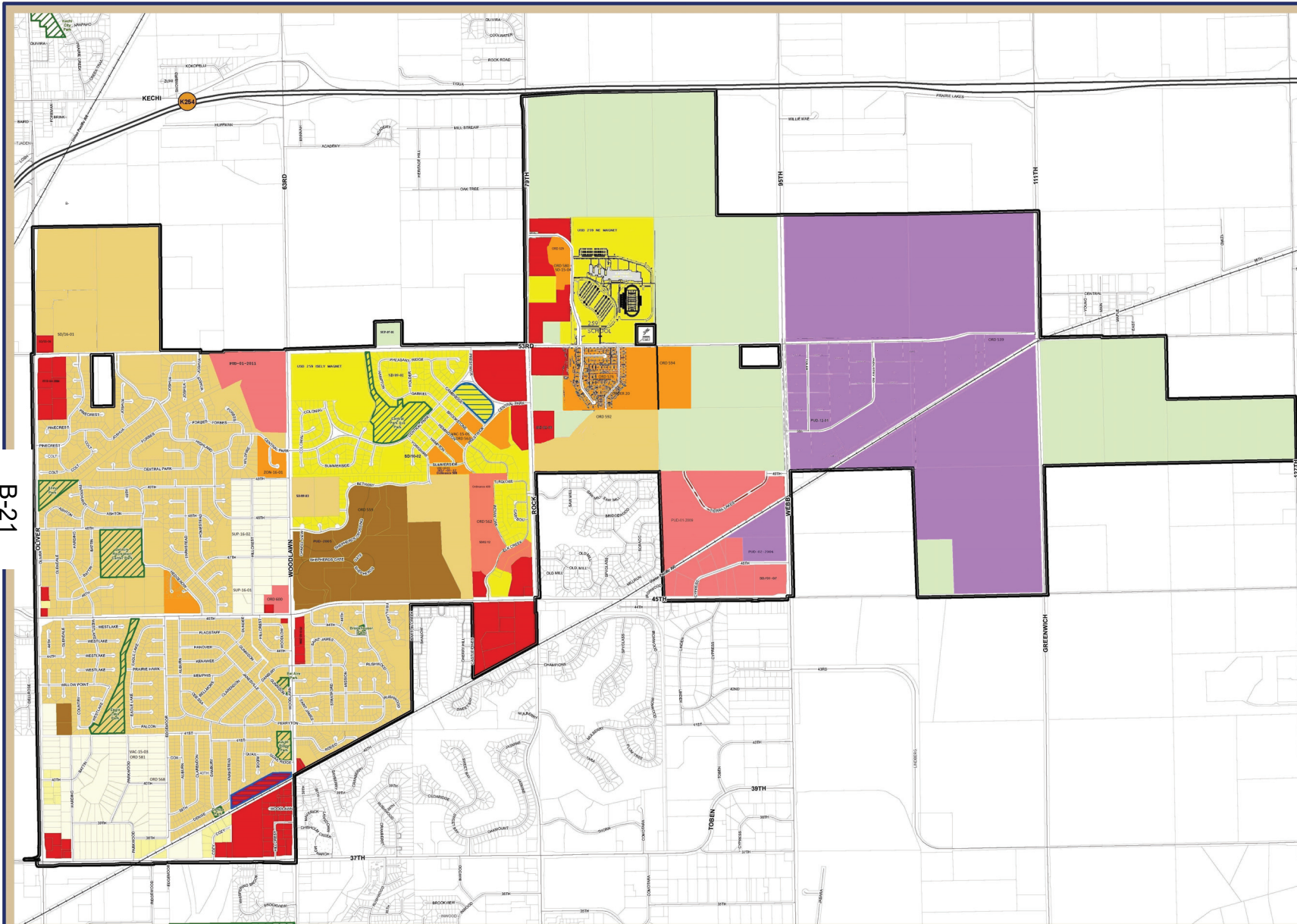
(1) **Environmental performance standards.** Uses and activities that are in violation of the Sedgwick County Code or the Code of the City of Wichita or that are out of character with ordinary and customary standards and practices for a Permitted Use to such an extent

that the Use or activity is obnoxious, offensive or a nuisance due to odor, dust, smoke, noise, vibration or other similar causes, are prohibited in the LI District.

Wichita- Sedgewick County Airport Hazard Zoning Map

Airport Hazard Zones
No Permit Required If:
Area A 25 ft. or less
Area B 75 ft. or less
Area C 150 ft. or less
Area D 300 ft. or less
**Areas Outside of
Airport Hazard Zones**
No Permit Required





Zoning Districts

Bel Aire, Kansas



Map Legend

- Government Properties
- Parks
- Property Boundaries
- Bel Aire City Limits

Zoning Types

- Rural Residential
- AG Agricultural
- R-1 Residential 1
- R-2 Residential 2
- R-3 Residential 3
- R-4 Residential 4
- R-5 Residential 5
- R-5b Residential 5b
- R-6 Residential 6
- C-1 Commercial 1
- C-2 Commercial 2
- M-1 Manufacturing
- MPH Manufactured Home Park



DATE: 9/15/16

It is understood that the Sedgwick County GIS, Division of Information and Operations, has no indication or reason to believe that there are inaccuracies in information incorporated in the base map.

The GIS personnel make no warranty or representation, either expressed or implied, with respect to the information or the data displayed.

City of Bel Aire Zoning Code - Article 7 Zoning Districts

7.13 PLANNED UNIT DEVELOPMENT - INDUSTRIAL DISTRICT (M-1)

The “M-1” Planned Unit Development - Industrial District is intended to encourage innovation in commercial and industrial development, through designs allowing for a more efficient use of land, incorporation of new technologies in urban land development, and incorporation of a greater variety and flexibility in type, design, and layout of structures.

A. **Use Regulations.** No building, structure, land or premises shall be used, and no building or structure shall hereafter be erected, constructed, reconstructed, moved or altered except in conformance with those uses provided for below.

1. Permitted uses: The following uses shall be permitted by right in the “M-1” Planned Unit Development - Industrial, subject to all applicable development and performance standards:
 - a. Commercial office and retail uses pursuant to a Planned Unit Development.
 - b. Manufacturing and industrial uses pursuant to a Planned Unit Development.
2. Conditional uses: The following uses shall be permitted in the “M-1” District if reviewed and approved by the Planning Commission in accordance with the procedures and standards of Article 5.03.
 - a. All conditional uses listed in all other more intensive zoning districts.
 - b. All uses generally considered intensive commercial, or manufacturing or industrial, and typically not located near residential areas, as such products are not typically purchased by consumers for their day-to-day use, and are more likely to produce odor, noise, vibration, intensive lighting, heavy traffic, or other offensive effects

B. **Accessory Uses.** Accessory uses and structures in the Industrial District shall be permitted pursuant to the specific terms of a Planned Unit Development, or as conditional uses pursuant to the procedures set forth within Article 5.03. The following are accessory uses and structures:

1. Automotive repair and maintenance shops, maximum of two (2) bays in conjunction with gasoline service stations.
2. Car washes (single-bay, automatic) in conjunction with gasoline service stations.
3. Dwelling units for security, management or maintenance personnel.
4. Fences or walls.
5. Flag poles, under sixty (60) feet in height.
6. Food service and vending machines for tenants.

7. Gate houses.
8. Parking and loading areas.
9. Private parking garages.
10. Recreational areas and facilities.
11. Satellite dish antennas.
12. Signs.
13. Solar collectors.
14. Storage lots for vehicles awaiting repair, with screening requirements.

COLONEL JAMES JABARA AIRPORT

Commercial Site
Development Study



Appendix C **Utility Study**



AAO Site Development Study

Utility Study

Prepared for: Coffman Associates

Colonel James Jabara Airport, Wichita, KS

Prepared by:



**1995 Midfield Road
Wichita, KS 67209**

December 2022

Garver Project No.: 2A17000

Colonel James Jabara Airport, Wichita, Kansas

1.0 Public Utilities

1.1 Water Distribution

The City of Wichita and City of Bel Aire have existing distribution facilities adjacent to the study areas.

Generally, normal pressures of 60-75 psi are sufficient to provide sprinkler service to a building under 4 stories. To ensure that residual pressure of 20 psi is maintained during fire flows, utilization of an 8-in. diameter main will likely be required.

1.1.1 Area 1

- 20-in. main in the west Webb Road right-of-way (City of Wichita)
- 8-in. main north of the southern entrance drive for WSU Tech – NCAT (City of Wichita)



City of Wichita GIS Map – Area 1 Water

Colonel James Jabara Airport, Wichita, Kansas

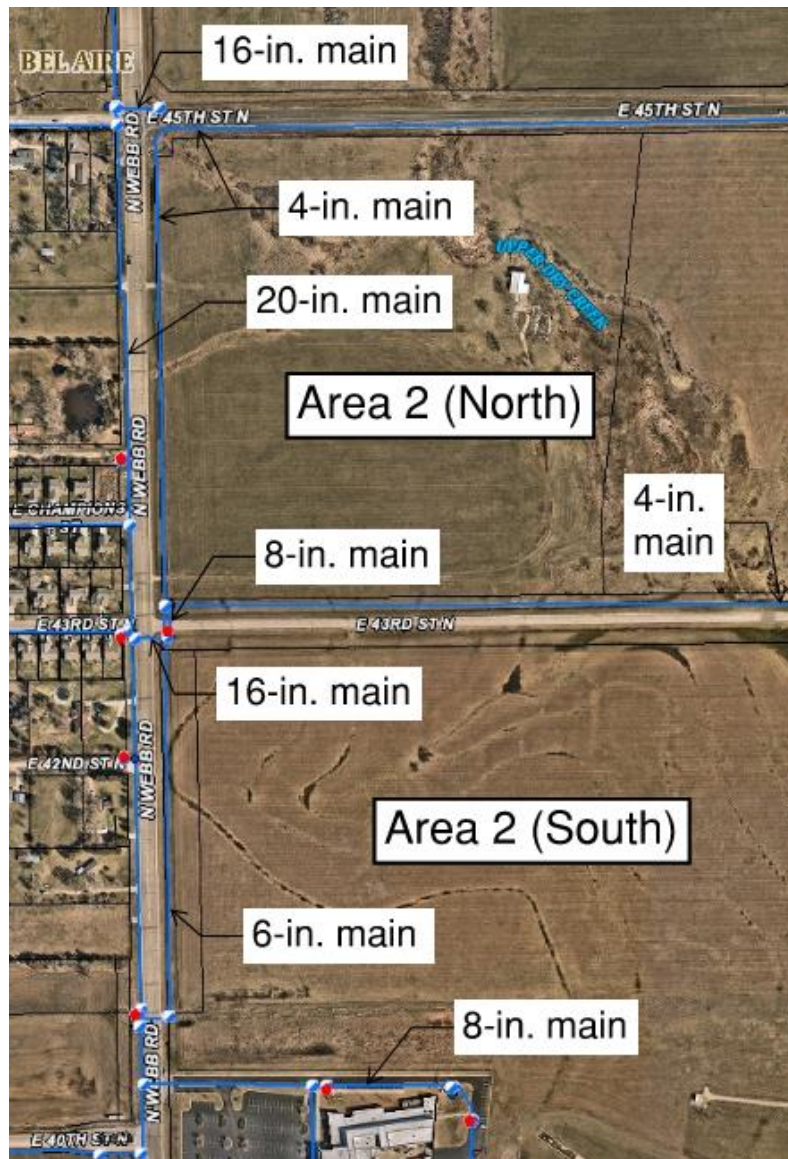
It is anticipated that any water demands of a proposed FBO, MRO, or other commercial / industrial development could be met by the water mains which exist adjacent to the site. A new 8-in. main could likely be extended south from the existing 8-in. main to serve a department service connection and meter for domestic service, and to support fire service and hydrant connections within the site. Based on design flows, size, and layout of the premises, it may be necessary to loop the new main by connecting it to the existing 20-in. main on the west side of Webb Road. Looping the new line would help maintain higher static pressure.

Based on information from the Wichita Fire Department, the site has an IOS rating of 1 (Rating for the entire City of Wichita). The site is approximately 1.5 miles north of WFD Firehouse 18, which is located at the southeast corner of the K-96 interchange on Webb Road.

1.1.2 Area 2

- 8-in. main along the north entrance drive for WSU Tech – NCAT (City of Wichita)
- 20-in. main in the west Webb Road right-of-way (City of Wichita)
- 6-in. main in the east Webb Road right-of-way between the south Area 2 boundary and the north side of vacated 43rd / Lindberg Street (City of Wichita)
- 16-in. main which terminates on the southeast corner of the intersection of vacated 43rd / Lindberg Street and Webb Road (City of Wichita)
- 8-in. main which extends north from the end of the 16-in main at the southeast corner of the intersection of vacated 43rd / Lindberg Street and terminates on the northeast corner of the intersection (City of Wichita)
- 4-in. main in the north right-of-way of vacated 43rd / Lindberg Street (City of Wichita)
- 4-in. main in the east Webb Road right-of-way between the north side of vacated 43rd / Lindberg Street and the north Area 2 boundary (City of Wichita)
- 4-in. main in the south 45th Street right-of-way (City of Wichita)
- 16-in. main which terminates northeast of the intersection of 45th Street and Webb Road (City of Wichita)

Colonel James Jabara Airport, Wichita, Kansas



City of Wichita GIS Map – Area 2 Water

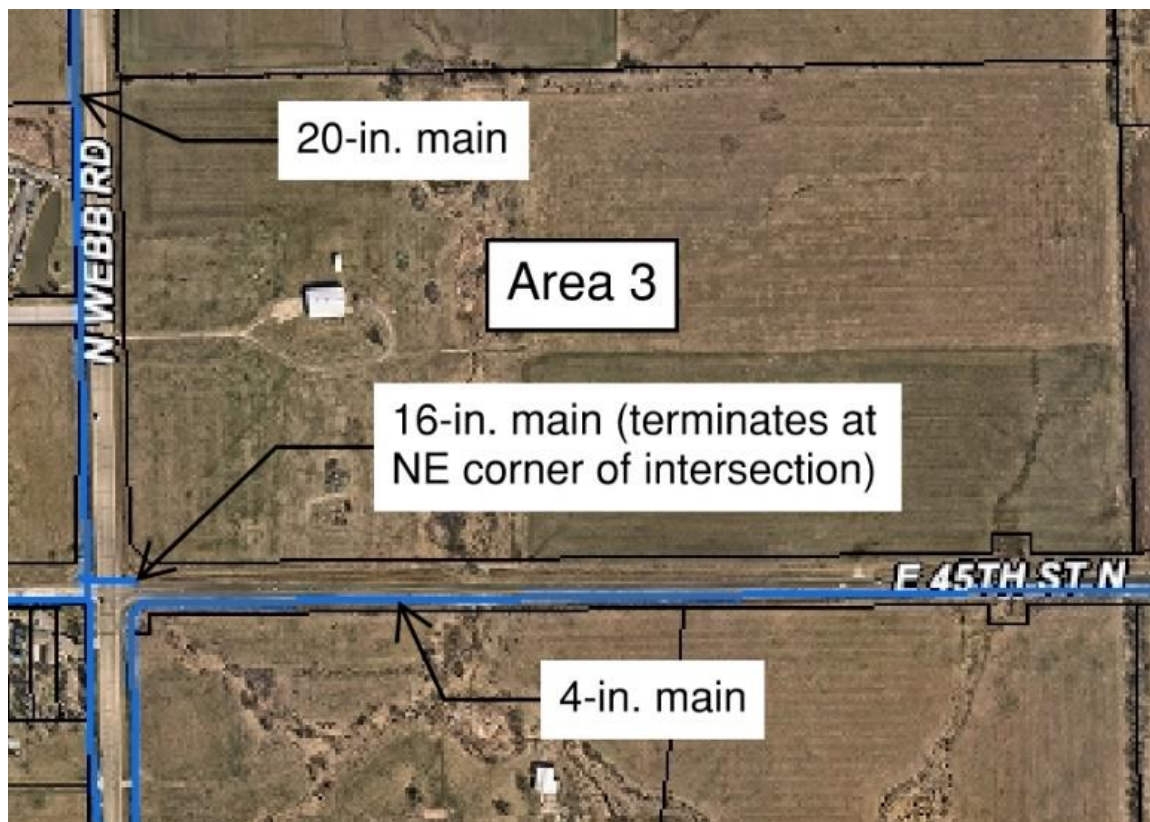
It is anticipated that any water demands of a proposed FBO, MRO, or other commercial / industrial development could be met by the water mains which exist adjacent to the site. A new 8-in. main could likely be installed, from either the existing 8-in. main to the south or extended from the termination points of the existing 16- or 8-in. mains in the east Webb Road right-of-way, to serve department service connections and meters for domestic service, and to support fire service and hydrant connections within the site. Based on design flows, size, and layout of the premises, it may be necessary to loop the new main by connecting between the existing 8-in. main and/or termination points of the 16- or 8-in mains. A connection could also be made to the larger 20-in. main on the west side of Webb Road. Looping the new lines would help maintain higher static pressures. The smaller 4- to 6-in. mains could potentially be utilized for domestic service but would likely be insufficient to meet fire flow demands without construction of onsite fire protection supply storage tanks.

Colonel James Jabara Airport, Wichita, Kansas

Based on information from the Wichita Fire Department, the site has an IOS rating of 1 (Rating for the entire City of Wichita). The site is approximately miles north of WFD Firehouse 18, which is located at the southeast corner of the K-96 interchange on Webb Road.

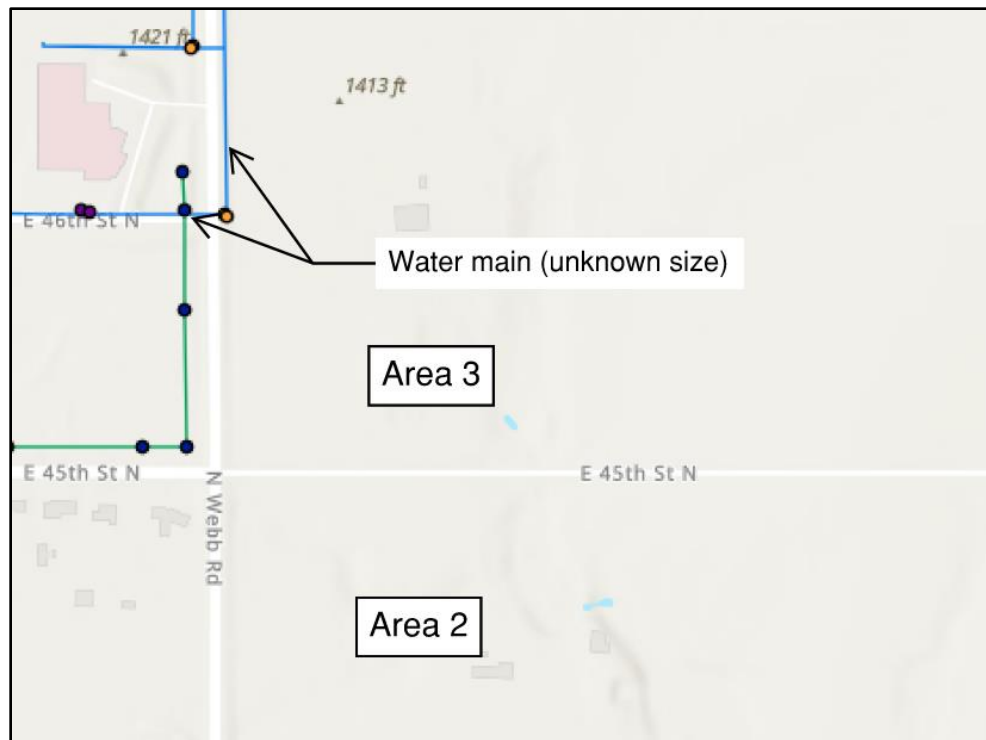
1.1.3 Area 3

- 16-in. main which terminates northeast of the 45th Street and Webb Road intersection (City of Wichita)
- 20-in. main in the west right-of-way for Webb Road (City of Wichita)
- 4-in. main in the south right-of-way for 45th Street (City of Wichita)
- Main north of 46th Street that extends to the east side of Webb Road and then runs north in the east Webb Road right-of-way (City of Bel Aire)



City of Wichita GIS Map – Area 3 Water

Colonel James Jabara Airport, Wichita, Kansas



City of Bel Aire Utility Map

It is anticipated that any water demands of a commercial or industrial development could be met by the water mains which exist adjacent to the site. A new 8-in. main could likely be extended from the existing 16-in. main in the southwest corner to serve department service connections and meters for domestic service, and to support fire service and hydrant connections within the site. The Bel Aire main would also likely have capacity to serve the site, assuming it is 8-in. diameter or larger. The smaller 4- to 6-in. mains could potentially be utilized for domestic service but would likely be insufficient to meet fire flow demands without construction of onsite fire protection supply storage tanks.

Because Area 3 is partially located in Wichita and Bel Aire, public utility installation would require an inter-local agreement or a release from one city to allow the other to provide the service from their facilities. This would allow the site to be served by a single provider, rather than having a supply from two separate sources within the same development. The City of Bel Aire has indicated that they would be open to discussion about allowing Wichita to serve the portion of Area 3 located in Bel Aire, and that they may also be able to provide service to the entire parcel.

Based on information from the Wichita Fire Department, the site has an IOS rating of 1 (Rating for the entire City of Wichita). The site is approximately 12,700 ft. north of WFD Firehouse 18, which is located at the southeast corner of the K-96 interchange on Webb Road. The City of Bel Aire utilizes the Sedgwick County Fire Department, which has a joint first response agreement with the City of Wichita. The Wichita and Sedgwick County Fire Departments could both respond to the east side of Area 3 located in Bel Aire.

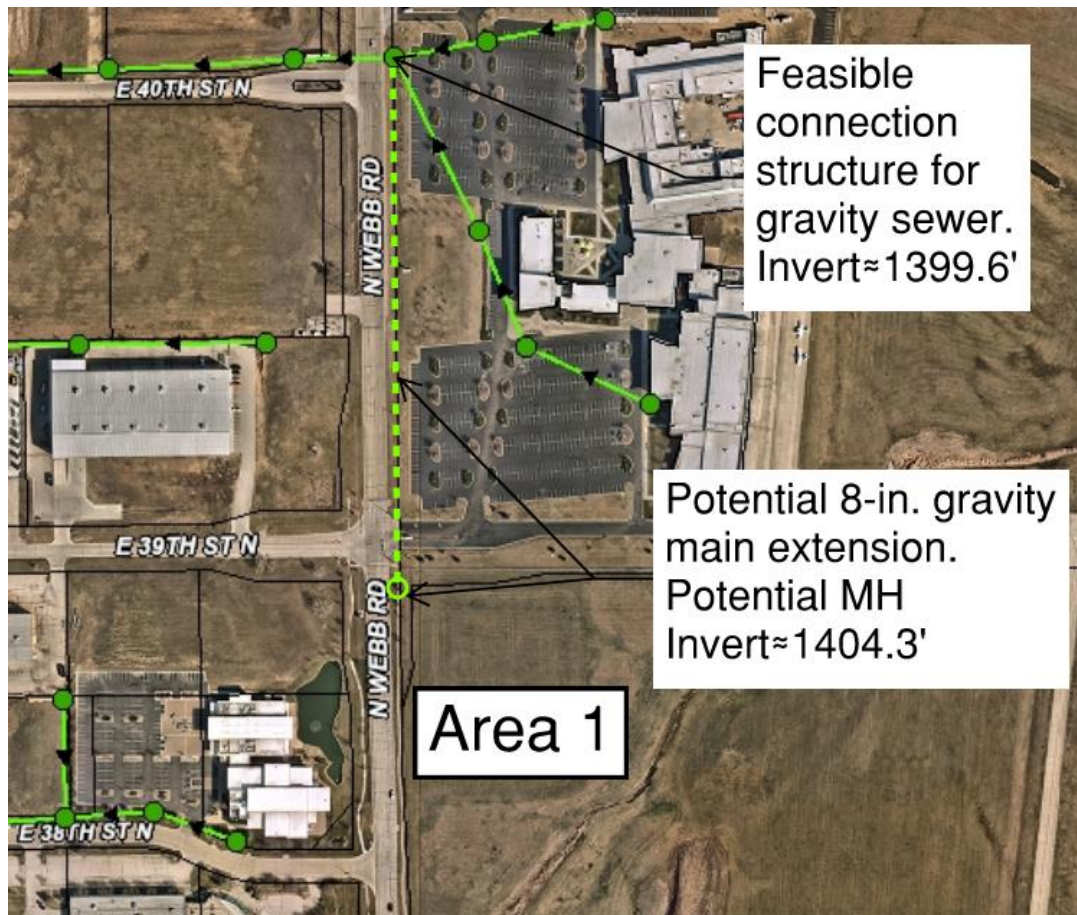
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1.2 Sanitary Sewer

The City of Wichita has existing sewer facilities in the vicinity of Areas 1 and 2, and the City of Bel Aire has existing sewer facilities in the vicinity of Area 3.

1.2.1 Area 1

Existing City of Wichita sewer mains and structures adjacent to Area 1 are shown on the following map.



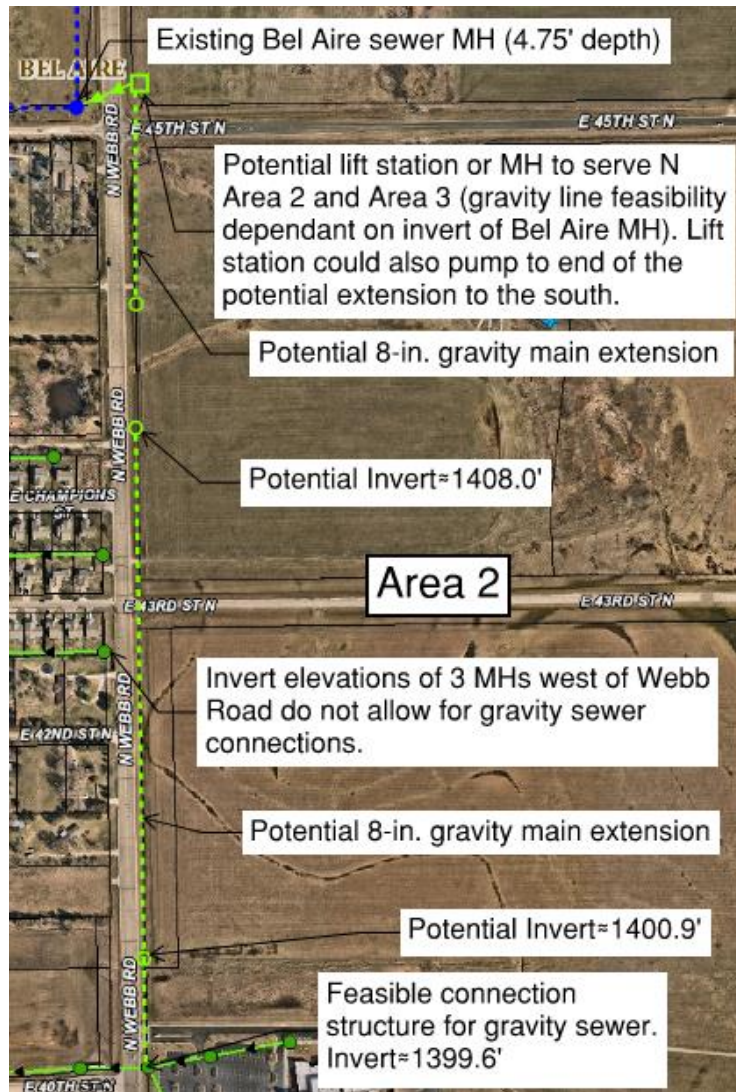
City of Wichita GIS Map – Area 1 Sanitary Sewer

Based on existing sewer invert elevations and lidar contours, the only feasible tie in location for a gravity system to serve Area 1 is the manhole located near the northern entrance drive for WSU Tech – NCAT. The existing 8-in. main is anticipated to meet the demands of a proposed development. Using the minimum design criteria for gravity sewer, a linear sanitary sewer extension from this structure to the northwest corner of Area 1 would allow for a minimum invert of approximately 1404.3-ft. (9.2' depth in right-of-way) on the site. This would provide sufficient cover at the structure and could reasonably provide service for on-grade development within Area 1 without requiring significant site grading to raise the finished floor elevation. Gravity sewer for basements could not be provided; however, duplex pumps could be utilized to pump to the manhole structure if a basement was desired.

Colonel James Jabara Airport, Wichita, Kansas

1.2.2 Area 2

Existing City of Wichita and City of Bel Aire sewer mains and structures adjacent to Area 2 are shown on the following map.



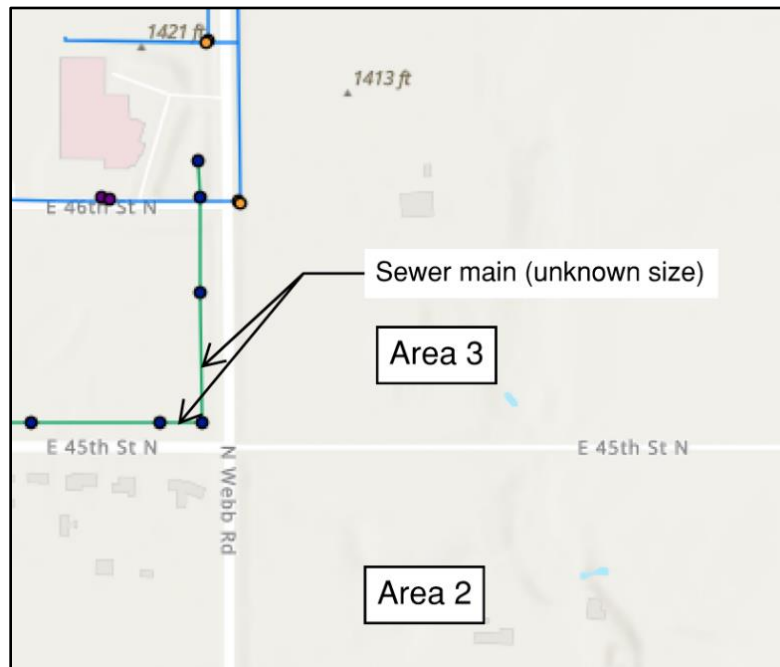
City of Wichita GIS Map – Area 2 Sanitary Sewer

Based on existing sewer invert elevations and lidar contours, the only feasible location to connect a gravity line to the Wichita sewer system is the manhole located near the northern entrance drive for WSU Tech. The existing 8-in. main is expected to meet the demands of a proposed development. Using minimum design criteria for gravity sewer, a linear main could be extended approximately 2,000-ft. north of the existing structure before cover would become too shallow due to falling elevations of the existing ground to the north and northeast in Area 2. Along this potential extension, a structure at the southwest corner of Area 2 could have an approximate invert elevation of 1400.9 ft. (16.2' depth in right-of-way), and a structure at the far north end could have an approximate invert of 1408.0 ft. (4.0' depth in right-of-way).

Colonel James Jabara Airport, Wichita, Kansas

Service for the north and northeast portions of Area 2 would require pumping with duplex pumps or a lift station, or substantial fill to raise the finished grade.

Existing City of Bel Aire sewer mains and structures adjacent to Area 2 are shown on the following map.



City of Bel Aire Utility Map – Area 2 & 3

An existing Bel Aire sewer manhole is located northwest of 45th Street and Webb Road, but is only 4.75' in depth, and could only be accessed through a force main. A connection to the Bel Aire sewer manhole would require approval from the City and likely an inter-local agreement. The City of Bel Aire has indicated that they would be open to a discussion about providing public utility service to portions of the site located in Wichita.

1.2.3 Area 3

No existing City of Wichita sewer mains are located on or adjacent to Area 3. The nearest sewer structure from which gravity service could be provided is a manhole and 18-in. sewer main in the west Rock Road right-of-way at the intersection of 45th Street and Rock Road, one mile west of the site. The 18-in. main is deep enough that minimum allowable pipe slopes could be maintained from the site to the connection point in Area 3.

Otherwise, development on Area 3 would require pumping with duplex pumps or a lift station to the manholes identified in Area 2.

Because Area 3 is partially located in Wichita and Bel Aire, public utility installation would require an inter-local agreement or a release from one city to allow the other to provide the service from their facilities. This would allow the site to be served by a single provider, rather than having a supply from two separate

Colonel James Jabara Airport, Wichita, Kansas

sources within the same development. The City of Bel Aire has indicated that they would be open to discussion about allowing Wichita to serve the portion of Area 3 located in Bel Aire, and that they may also be able to provide service to the entire parcel.

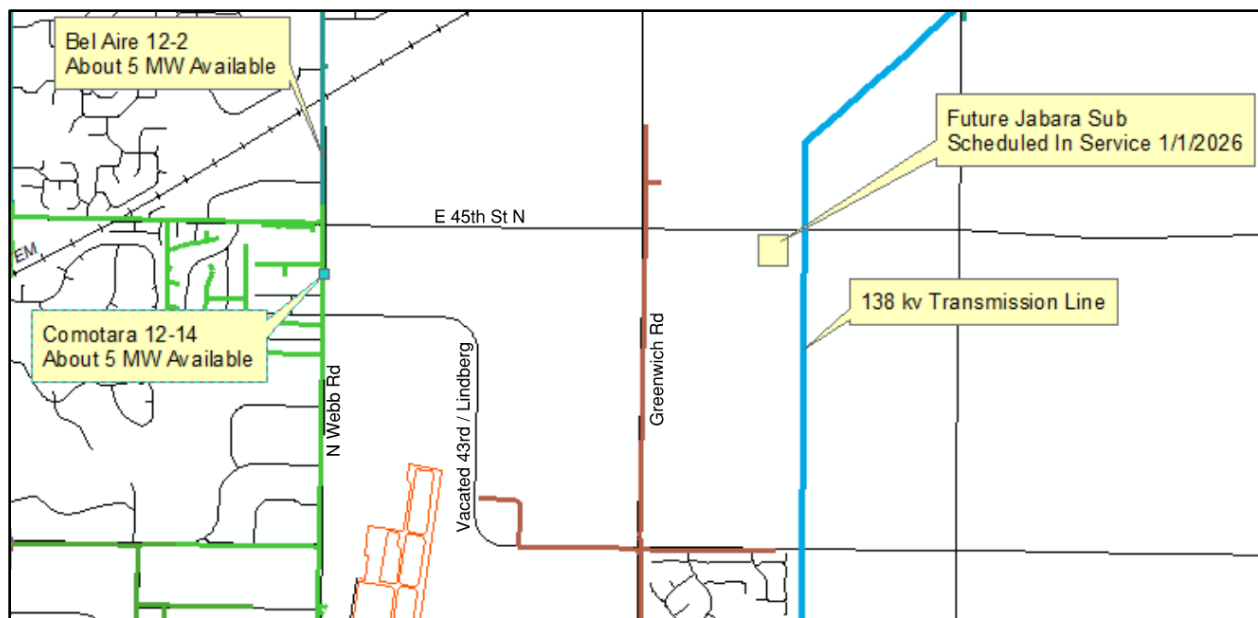
2.0 Private Utilities

A summary of existing private utilities near the site, including electric, natural gas, and communications, is provided in the following sections. Any potential private utility extensions on the airport must be installed underground. The One-Call private utility list indicated that Southern Star Central Gas and CenturyLink communications facilities may exist near the study Areas. Information was requested from these companies, but not received.

2.1 Electric

2.1.1 Evergy

Existing Evergy facilities are adjacent to the site and a facilities map is included below. Electrical lines are located in the Webb Road right-of-way along Areas 1, 2, and 3. The capacity of the Webb Road electrical lines is approximately 5 MW. Evergy has indicated a future 138 kV transmission line and substation east of airport property is planned for 2026, which will increase the available power. The planned facilities are also identified in the map.



Evergy Facilities Map

Colonel James Jabara Airport, Wichita, Kansas

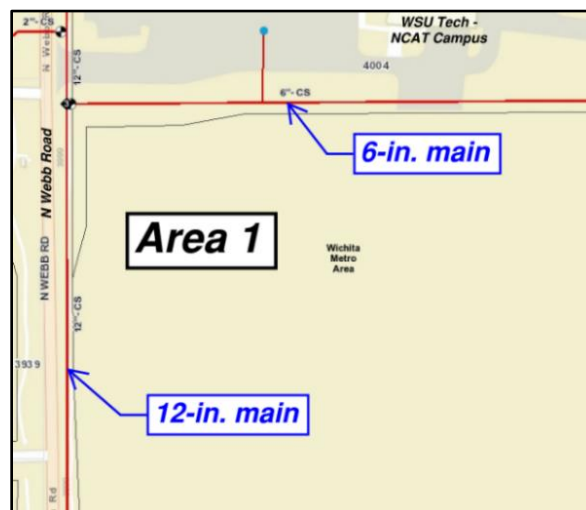
2.2 Natural Gas

2.2.1 Kansas Gas Service (KGS)

Existing KGS facilities are adjacent to the site. Gas mains with the potential to serve a commercial or industrial development within each area are summarized below. Maps received from the utility company are also provided.

2.2.1.1 Area 1

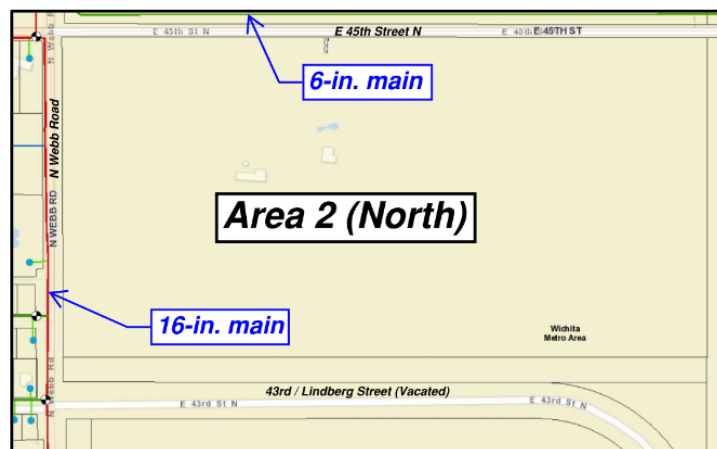
- 12-in. main in the east Webb Road right-of-way
- 6-in. main south of the WSU Tech - NCAT entrance drive



KGS Facilities Map – Area 1

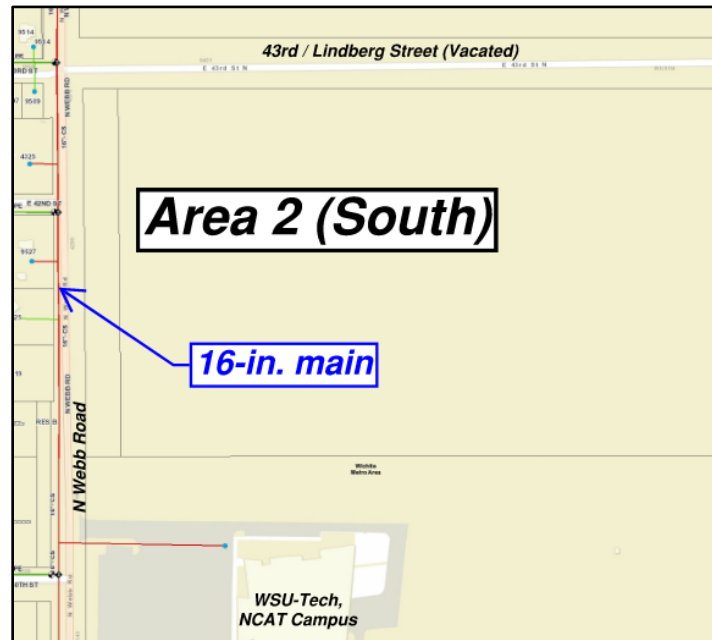
2.2.1.2 Area 2

- 16-in. main in the west Webb Road right-of-way
- 6-in. main in the north 45th Street right-of-way



KGS Facilities Map – Area 2 North

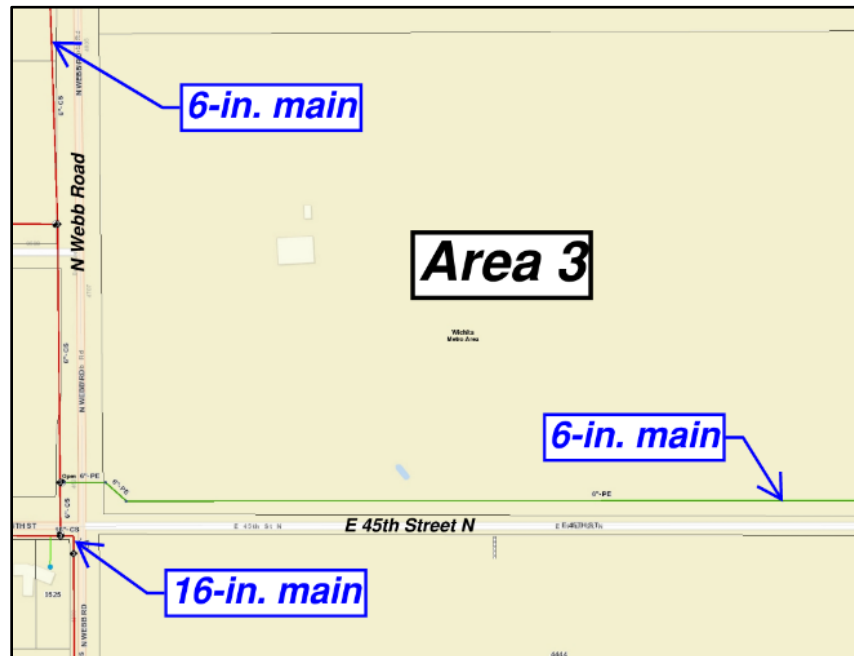
Colonel James Jabara Airport, Wichita, Kansas



KGS Facilities Map – Area 2 South

2.2.1.3 Area 3

- 6-in. main in the north 45th Street right-of-way
- 6-in. main in the west Webb Road right-of-way
- 16-in. main in the southwest corner of the intersection of 45th Street and Webb Road



KGS Facilities Map – Area 3

Colonel James Jabara Airport, Wichita, Kansas

Other than the construction of service lines, no significant linear main extensions would be required to serve the site. Boring east under Webb Road from the 16-in. main would likely be required to serve Area 2. Coordination with KGS would be necessary to establish any service agreements and to verify that existing facilities could meet proposed demands based on the ultimate development. Any potential developer-incurred costs for extension of service within the site would also be coordinated with KGS.

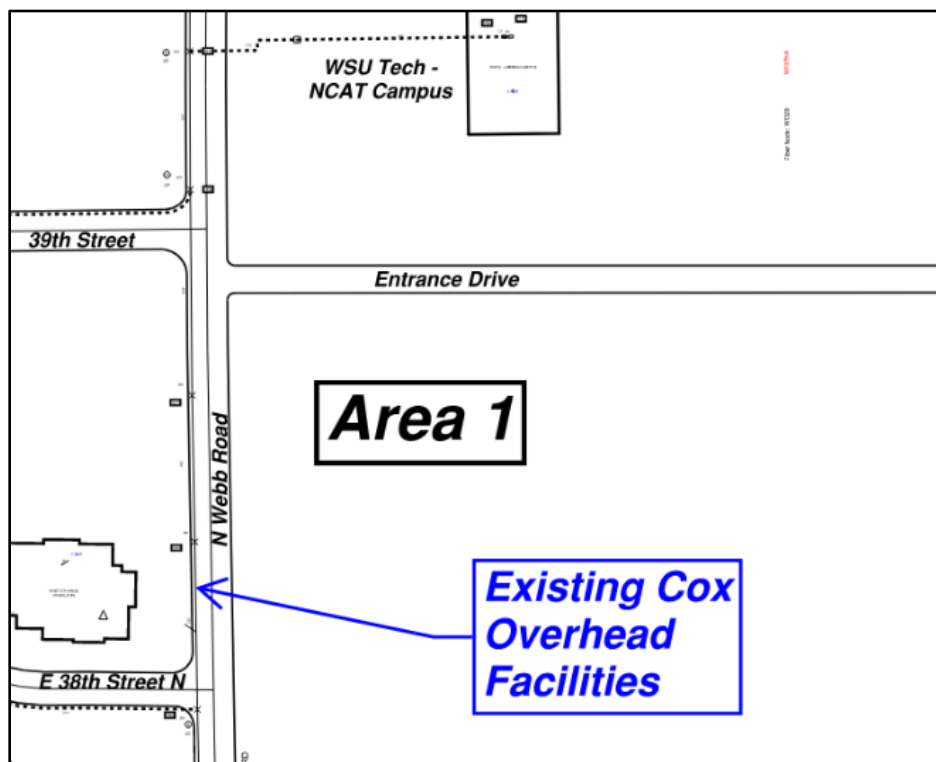
2.3 Communications

2.3.1 Cox Communications

Existing Cox facilities are adjacent to the site. Facilities with the potential to serve a commercial or industrial development within each area are summarized below. Maps received from the utility company are also provided.

2.3.1.1 Area 1

- Overhead communication lines in the west Webb Road right-of-way

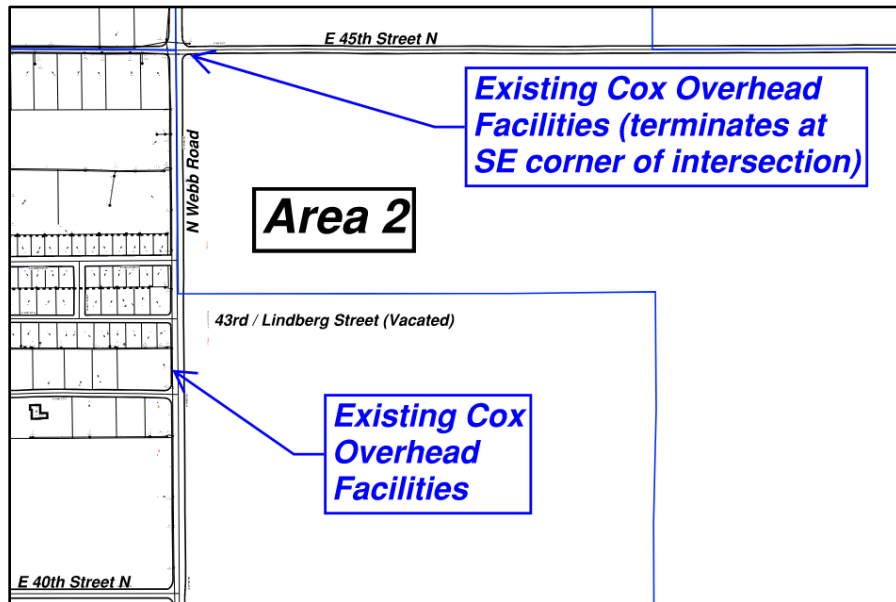


Cox Facilities Map – Area 1

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2.3.1.2 Area 2

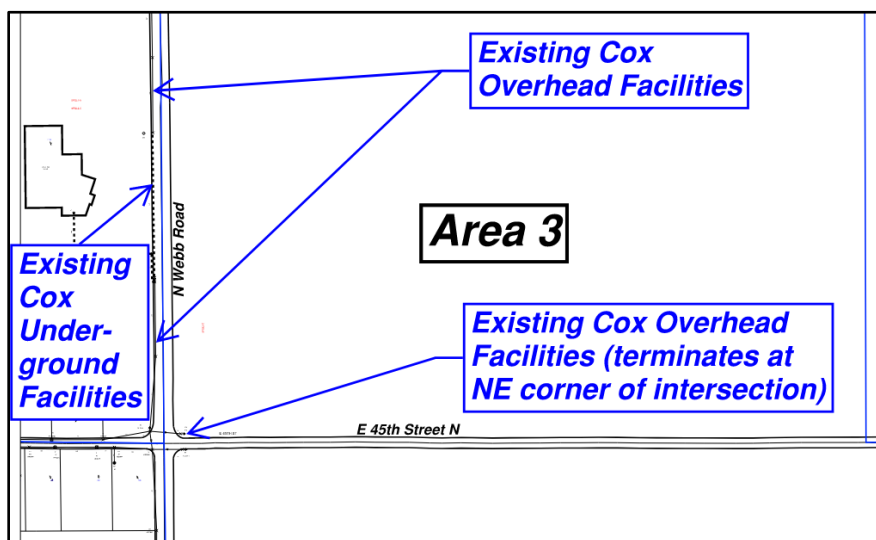
- Overhead communication lines in the west Webb Road right-of-way
- Overhead communication line which terminates at the southeast corner of the intersection of 45th Street and Webb Road



Cox Facilities Map – Area 2

2.3.1.3 Area 3

- Overhead and underground communication lines in the west Webb Road right-of-way
- Overhead communication line which terminates at the northeast corner of the intersection of 45th Street and Webb Road



Cox Facilities Map – Area 3

Colonel James Jabara Airport, Wichita, Kansas

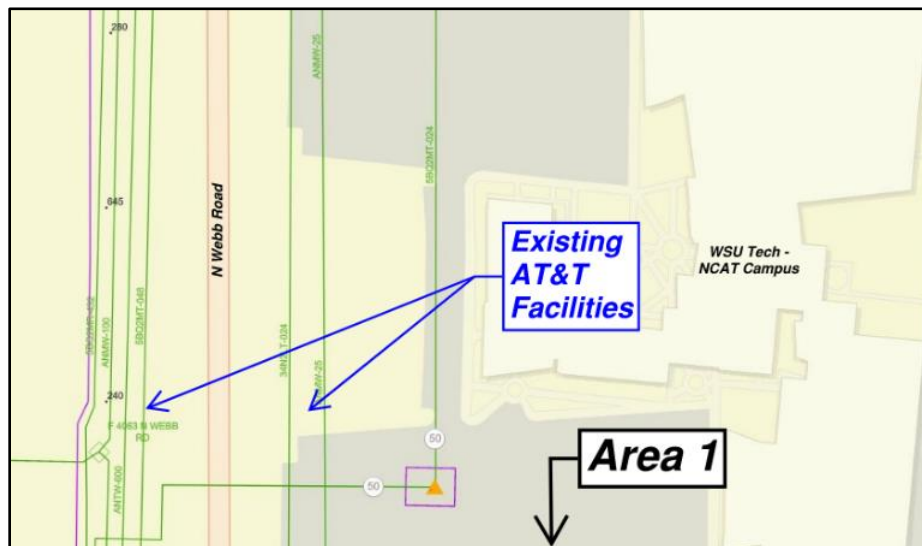
Other than the installation of service connections, no major linear overhead or buried communication line extensions would be required to bring service the site. Coordination with Cox Communications would be necessary to establish any service agreements and to determine any potential developer-incurred costs for extension of service within the site.

2.3.2 AT&T

Existing AT&T facilities are adjacent to the site. Facilities with the potential to serve a commercial or industrial development within each area are summarized below. Maps received from the utility company are also provided.

2.3.2.1 Area 1

- Communication lines in the east and west Webb Road right-of-way

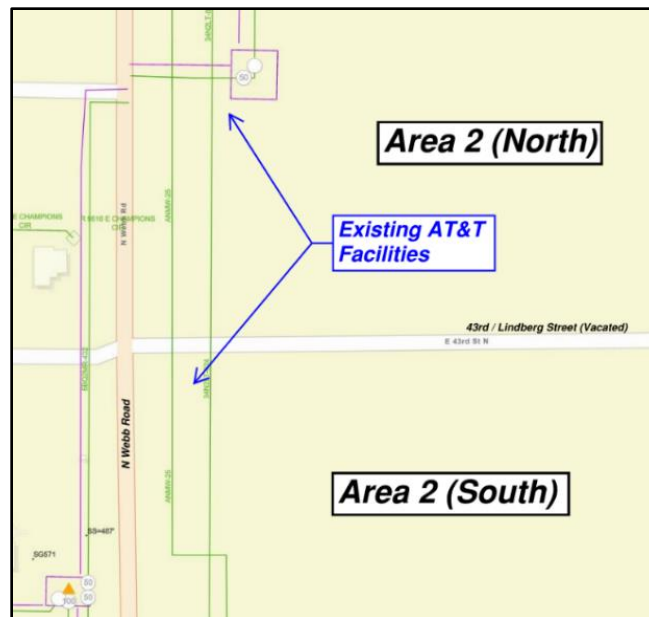


AT&T Facilities Map – Area 1

2.3.2.2 Area 2

- Communication lines in the east and west Webb Road right-of-way on the south side of Champions Circle.
- Communication lines in the east Webb Road right-of-way north of Champions Circle
- Communication lines in the south 45th Street right-of-way

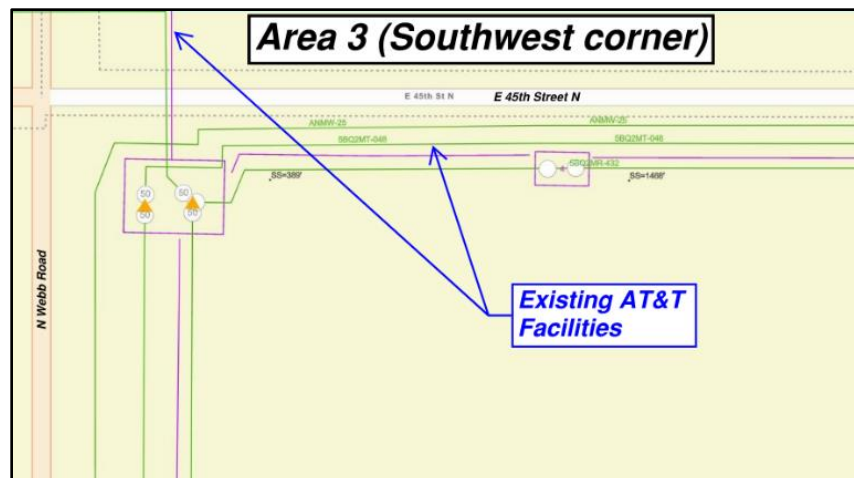
Colonel James Jabara Airport, Wichita, Kansas



AT&T Facilities Map – Area 2

2.3.2.3 Area 3

- Communication lines in the south 45th Street right-of-way
- Communication lines in the east Webb Road right-of-way



AT&T Facilities Map – Area 3

Other than the installation of service connections, no major linear overhead or buried communication line extensions would be required to bring service the site. Coordination with AT&T would be necessary to establish and service agreements and to determine any potential developer-incurred costs for extension of service within the site.

COLONEL JAMES JABARA AIRPORT

Commercial Site
Development Study



Appendix D

Taxilane Cost Estimates



WICHITA AIRPORT AUTHORITY
COLONEL JAMES JABARA AIRPORT (AAO) - COMMERCIAL DEVELOPMENT STUDY
ENGINEER'S ESTIMATE OF PROBABLE COST
Area 1 - Alternative 1

			Engineer's Estimate of Probable Cost		
ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
GENERAL					
1	CONTRACTOR QC PROGRAM (2.0%)	LS	1	\$15,000.00	\$15,000.00
2	CONSTRUCTION SAFETY AND SECURITY	LS	1	\$50,000.00	\$50,000.00
3	TEMPORARY EROSION CONTROL	LS	1	\$25,000.00	\$25,000.00
4	CONSTRUCTION LAYOUT AND STAKING (1.5%)	LS	1	\$11,000.00	\$11,000.00
5	MOBILIZATION (10%)	LS	1	\$76,000.00	\$76,000.00
					\$177,000.00
CIVIL					
6	UNCLASSIFIED EXCAVATION	CY	6,200	\$15.00	\$93,000.00
7	UNSUITABLE EXCAVATION	CY	620	\$30.00	\$18,600.00
8	PAVEMENT REMOVAL AND RECONFIGURATION OF EXISTING ACCESS DRIVE	LS	1	\$10,000.00	\$10,000.00
9	P-155 LIME-TREATED SUBGRADE (12")	SY	3,793	\$13.00	\$49,309.00
10	STORMWATER AND DRAINAGE IMPROVEMENTS	LS	1	\$10,000.00	\$10,000.00
11	4 INCH PIPE UNDERDRAIN	LF	886	\$40.00	\$35,440.00
12	4 INCH NON-PERFORATED OUTLET PIPE	LF	60	\$35.00	\$2,100.00
13	UNDERDRAIN CLEANOUT RISER	EA	2	\$1,500.00	\$3,000.00
14	GEOTEXTILE FABRIC	SY	3,821	\$4.00	\$15,284.00
15	P-209 CRUSHED AGGREGATE BASE COURSE (6")	SY	3,793	\$15.00	\$56,895.00
16	P-203SP STABILIZED DRAINAGE LAYER (4")	SY	3,646	\$25.00	\$91,150.00
17	STEEL REINFORCEMENT (MESH)	SY	170	\$12.00	\$2,040.00
18	P-501 PCC PAVEMENT (8")	SY	3,322	\$70.00	\$232,540.00
19	PAVEMENT MARKINGS	SF	388	\$4.00	\$1,552.00
20	SEEDING (BUFFALO)	AC	3	\$5,000.00	\$15,000.00
21	SODDING (BUFFALO)	SY	1,030	\$17.00	\$17,510.00
					\$653,420.00
ELECTRICAL					
22	LOCKOUT/TAGOUT AND CCR CALIBRATION	LS	1	\$5,000.00	\$5,000.00
23	PERIMETER FENCE AND AUTOMATIC SLIDING ACCESS GATE, RELOCATED	LS	1	\$40,000.00	\$40,000.00
24	NON-ENCASED ELECTRICAL CONDUIT, 1-WAY 2"C	LF	1,620	\$8.00	\$12,960.00
25	ELECTRICAL JUNCTION STRUCTURE, L-867 CLASS 1, SIZE 16" DIAMETER BY 24" DEPTH	EA	4	\$800.00	\$3,200.00
26	LED BASE MOUNTED TAXIWAY EDGE LIGHT	EA	23	\$1,300.00	\$29,900.00
27	NO. 8 AWG, 5kV, L-824 TYPE C CABLE	LF	1,780	\$2.00	\$3,560.00
28	NO. 6 AWG, SOLID, BARE COUNTERPOISE WIRE	LF	1,620	\$4.50	\$7,290.00
					\$101,910.00
Total Construction =					\$930,000.00
10% Contingency =					\$90,000.00
Total Estimated Construction Cost =					\$1,020,000.00
Estimated Soft Costs					
Engineering Design (8%)				\$	80,000.00
Construction Services (8%)				\$	80,000.00
Total Estimated Soft Costs =				\$	160,000.00
Total Estimated Project Cost (2022 Dollars) =					\$1,180,000.00

**WICHITA AIRPORT AUTHORITY
COLONEL JAMES JABARA AIRPORT (AAO) - COMMERCIAL DEVELOPMENT STUDY
ENGINEER'S ESTIMATE OF PROBABLE COST
Area 1 - Alternative 2**

			Engineer's Estimate of Probable Cost		
ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
GENERAL					
1	CONTRACTOR QC PROGRAM (2.0%)	LS	1	\$11,000.00	\$11,000.00
2	CONSTRUCTION SAFETY AND SECURITY	LS	1	\$50,000.00	\$50,000.00
3	TEMPORARY EROSION CONTROL	LS	1	\$25,000.00	\$25,000.00
4	CONSTRUCTION LAYOUT AND STAKING (1.5%)	LS	1	\$8,000.00	\$8,000.00
5	MOBILIZATION (10%)	LS	1	\$53,000.00	\$53,000.00
					\$147,000.00
CIVIL					
6	UNCLASSIFIED EXCAVATION	CY	2,400	\$15.00	\$36,000.00
7	UNSUITABLE EXCAVATION	CY	240	\$30.00	\$7,200.00
8	PAVEMENT REMOVAL AND RECONFIGURATION OF EXISTING ACCESS DRIVE	LS	1	\$5,000.00	\$5,000.00
9	P-155 LIME-TREATED SUBGRADE (12")	SY	3,072	\$13.00	\$39,936.00
10	STORMWATER AND DRAINAGE IMPROVEMENTS	LS	1	\$10,000.00	\$10,000.00
11	4 INCH PIPE UNDERDRAIN	LF	696	\$40.00	\$27,840.00
12	4 INCH NON-PERFORATED OUTLET PIPE	LF	40	\$35.00	\$1,400.00
13	UNDERDRAIN CLEANOUT RISER	EA	2	\$1,500.00	\$3,000.00
14	GEOTEXTILE FABRIC	SY	3,099	\$4.00	\$12,396.00
15	P-209 CRUSHED AGGREGATE BASE COURSE (6")	SY	3,072	\$15.00	\$46,080.00
16	P-203SP STABILIZED DRAINAGE LAYER (4")	SY	2,956	\$25.00	\$73,900.00
17	STEEL REINFORCEMENT (MESH)	SY	130	\$12.00	\$1,560.00
18	P-501 PCC PAVEMENT (8")	SY	2,697	\$70.00	\$188,790.00
19	PAVEMENT MARKINGS	SF	356	\$4.00	\$1,424.00
20	SEEDING (BUFFALO)	AC	3	\$5,000.00	\$15,000.00
21	SODDING (BUFFALO)	SY	810	\$17.00	\$13,770.00
					\$483,296.00
ELECTRICAL					
22	LOCKOUT/TAGOUT AND CCR CALIBRATION	LS	1	\$5,000.00	\$5,000.00
23	NON-ENCASED ELECTRICAL CONDUIT, 1-WAY 2"C	LF	1,240	\$8.00	\$9,920.00
24	ELECTRICAL JUNCTION STRUCTURE, L-867 CLASS 1, SIZE 16" DIAMETER BY 24" DEPTH	EA	4	\$800.00	\$3,200.00
25	LED BASE MOUNTED TAXIWAY EDGE LIGHT	EA	16	\$1,300.00	\$20,800.00
26	NO. 8 AWG, 5kV, L-824 TYPE C CABLE	LF	1,360	\$2.00	\$2,720.00
27	NO. 6 AWG, SOLID, BARE COUNTERPOISE WIRE	LF	1,240	\$4.50	\$5,580.00
					\$47,220.00
Total Construction =					\$680,000.00
10% Contingency =					\$70,000.00
Total Estimated Construction Cost =					\$750,000.00
Estimated Soft Costs					
Engineering Design (8%)				\$	60,000.00
Construction Services (8%)				\$	60,000.00
Total Estimated Soft Costs =				\$	120,000.00
Total Estimated Project Cost (2022 Dollars) =					\$870,000.00

WICHITA AIRPORT AUTHORITY
COLONEL JAMES JABARA AIRPORT (AAO) - COMMERCIAL DEVELOPMENT STUDY
ENGINEER'S ESTIMATE OF PROBABLE COST
Area 2 - Alternative 1

**Engineer's Estimate of
Probable Cost**

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
GENERAL					
1	CONTRACTOR QC PROGRAM (2.0%)	LS	1	\$56,000.00	\$56,000.00
2	CONSTRUCTION SAFETY AND SECURITY	LS	1	\$150,000.00	\$150,000.00
3	TEMPORARY EROSION CONTROL	LS	1	\$100,000.00	\$100,000.00
4	CONSTRUCTION LAYOUT AND STAKING (1.5%)	LS	1	\$42,000.00	\$42,000.00
5	MOBILIZATION (10%)	LS	1	\$280,000.00	\$280,000.00
					\$628,000.00

CIVIL					
6	UNCLASSIFIED EXCAVATION	CY	28,600	\$15.00	\$429,000.00
7	UNSUITABLE EXCAVATION	CY	2,860	\$30.00	\$85,800.00
8	P-155 LIME-TREATED SUBGRADE (12")	SY	14,542	\$13.00	\$189,046.00
9	STORMWATER AND DRAINAGE IMPROVEMENTS	LS	1	\$125,000.00	\$125,000.00
10	4 INCH PIPE UNDERDRAIN	LF	3,289	\$40.00	\$131,560.00
11	4 INCH NON-PERFORATED OUTLET PIPE	LF	200	\$35.00	\$7,000.00
12	UNDERDRAIN CLEANOUT RISER	EA	7	\$1,500.00	\$10,500.00
13	GEOTEXTILE FABRIC	SY	14,723	\$4.00	\$58,892.00
14	P-209 CRUSHED AGGREGATE BASE COURSE (6")	SY	14,542	\$15.00	\$218,130.00
15	P-203SP STABILIZED DRAINAGE LAYER (4")	SY	13,994	\$25.00	\$349,850.00
16	STEEL REINFORCEMENT (MESH)	SY	640	\$12.00	\$7,680.00
17	P-501 PCC PAVEMENT (8")	SY	12,716	\$70.00	\$890,120.00
18	PAVEMENT MARKINGS	SF	1,629	\$4.00	\$6,516.00
19	SEEDING (BUFFALO)	AC	10	\$5,000.00	\$50,000.00
20	SODDING (BUFFALO)	SY	3,840	\$17.00	\$65,280.00
					\$2,624,374.00

ELECTRICAL					
21	LOCKOUT/TAGOUT AND CCR CALIBRATION	LS	1	\$5,000.00	\$5,000.00
22	NON-ENCASED ELECTRICAL CONDUIT, 1-WAY 2"C	LF	6,950	\$8.00	\$55,600.00
23	ELECTRICAL JUNCTION STRUCTURE, L-867 CLASS 1, SIZE 16" DIAMETER BY 24" DEPTH	EA	4	\$800.00	\$3,200.00
24	LED BASE MOUNTED TAXIWAY EDGE LIGHT	EA	49	\$1,300.00	\$63,700.00
25	NO. 8 AWG, 5kV, L-824 TYPE C CABLE	LF	7,650	\$2.00	\$15,300.00
26	NO. 6 AWG, SOLID, BARE COUNTERPOISE WIRE	LF	6,950	\$4.50	\$31,275.00
					\$174,075.00

Total Construction = \$3,430,000.00
10% Contingency = \$340,000.00
Total Estimated Construction Cost = \$3,770,000.00

Estimated Soft Costs
Engineering Design (8%) \$ 300,000.00
Construction Services (8%) \$ 300,000.00
Total Estimated Soft Costs = \$ 600,000.00

Total Estimated Project Cost (2022 Dollars) = \$4,370,000.00

WICHITA AIRPORT AUTHORITY
COLONEL JAMES JABARA AIRPORT (AAO) - COMMERCIAL DEVELOPMENT STUDY
ENGINEER'S ESTIMATE OF PROBABLE COST
Area 2 - Alternative 2

**Engineer's Estimate of
Probable Cost**

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
GENERAL					
1	CONTRACTOR QC PROGRAM (2.0%)	LS	1	\$55,000.00	\$55,000.00
2	CONSTRUCTION SAFETY AND SECURITY	LS	1	\$150,000.00	\$150,000.00
3	TEMPORARY EROSION CONTROL	LS	1	\$100,000.00	\$100,000.00
4	CONSTRUCTION LAYOUT AND STAKING (1.5%)	LS	1	\$42,000.00	\$42,000.00
5	MOBILIZATION (10%)	LS	1	\$277,000.00	\$277,000.00
					\$624,000.00

CIVIL					
6	UNCLASSIFIED EXCAVATION	CY	34,600	\$15.00	\$519,000.00
7	UNSUITABLE EXCAVATION	CY	3,460	\$30.00	\$103,800.00
8	P-155 LIME-TREATED SUBGRADE (12")	SY	14,347	\$13.00	\$186,511.00
9	STORMWATER AND DRAINAGE IMPROVEMENTS	LS	1	\$25,000.00	\$25,000.00
10	4 INCH PIPE UNDERDRAIN	LF	3,258	\$40.00	\$130,320.00
11	4 INCH NON-PERFORATED OUTLET PIPE	LF	200	\$35.00	\$7,000.00
12	UNDERDRAIN CLEANOUT RISER	EA	7	\$1,500.00	\$10,500.00
13	GEOTEXTILE FABRIC	SY	14,513	\$4.00	\$58,052.00
14	P-209 CRUSHED AGGREGATE BASE COURSE (6")	SY	14,347	\$15.00	\$215,205.00
15	P-203SP STABILIZED DRAINAGE LAYER (4")	SY	13,804	\$25.00	\$345,100.00
16	STEEL REINFORCEMENT (MESH)	SY	630	\$12.00	\$7,560.00
17	P-501 PCC PAVEMENT (8")	SY	12,551	\$70.00	\$878,570.00
18	PAVEMENT MARKINGS	SF	1,613	\$4.00	\$6,452.00
19	SEEDING (BUFFALO)	AC	10	\$5,000.00	\$50,000.00
20	SODDING (BUFFALO)	SY	3,800	\$17.00	\$64,600.00
					\$2,607,670.00

ELECTRICAL					
21	LOCKOUT/TAGOUT AND CCR CALIBRATION	LS	1	\$5,000.00	\$5,000.00
22	NON-ENCASED ELECTRICAL CONDUIT, 1-WAY 2"C	LF	6,880	\$8.00	\$55,040.00
23	ELECTRICAL JUNCTION STRUCTURE, L-867 CLASS 1, SIZE 16" DIAMETER BY 24" DEPTH	EA	4	\$800.00	\$3,200.00
24	LED BASE MOUNTED TAXIWAY EDGE LIGHT	EA	42	\$1,300.00	\$54,600.00
25	NO. 8 AWG, 5kV, L-824 TYPE C CABLE	LF	7,570	\$2.00	\$15,140.00
26	NO. 6 AWG, SOLID, BARE COUNTERPOISE WIRE	LF	6,880	\$4.50	\$30,960.00
					\$163,940.00

Total Construction = \$3,400,000.00
10% Contingency = \$340,000.00
Total Estimated Construction Cost = \$3,740,000.00

Estimated Soft Costs
Engineering Design (8%) \$ 300,000.00
Construction Services (8%) \$ 300,000.00
Total Estimated Soft Costs = \$ 600,000.00

Total Estimated Project Cost (2022 Dollars) = \$4,340,000.00

WICHITA AIRPORT AUTHORITY
COLONEL JAMES JABARA AIRPORT (AAO) - COMMERCIAL DEVELOPMENT STUDY
ENGINEER'S ESTIMATE OF PROBABLE COST
Area 2 - Alternative 3

			Engineer's Estimate of Probable Cost		
ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
GENERAL					
1	CONTRACTOR QC PROGRAM (2.0%)	LS	1	\$59,000.00	\$59,000.00
2	CONSTRUCTION SAFETY AND SECURITY	LS	1	\$150,000.00	\$150,000.00
3	TEMPORARY EROSION CONTROL	LS	1	\$100,000.00	\$100,000.00
4	CONSTRUCTION LAYOUT AND STAKING (1.5%)	LS	1	\$44,000.00	\$44,000.00
5	MOBILIZATION (10%)	LS	1	\$294,000.00	\$294,000.00
					\$647,000.00
CIVIL					
6	UNCLASSIFIED EXCAVATION	CY	30,800	\$15.00	\$462,000.00
7	UNSUITABLE EXCAVATION	CY	3,080	\$30.00	\$92,400.00
8	P-155 LIME-TREATED SUBGRADE (12")	SY	14,494	\$13.00	\$188,422.00
9	STORMWATER AND DRAINAGE IMPROVEMENTS	LS	1	\$240,000.00	\$240,000.00
10	4 INCH PIPE UNDERDRAIN	LF	3,278	\$40.00	\$131,120.00
11	4 INCH NON-PERFORATED OUTLET PIPE	LF	200	\$35.00	\$7,000.00
12	UNDERDRAIN CLEANOUT RISER	EA	7	\$1,500.00	\$10,500.00
13	GEOTEXTILE FABRIC	SY	14,674	\$4.00	\$58,696.00
14	P-209 CRUSHED AGGREGATE BASE COURSE (6")	SY	14,494	\$15.00	\$217,410.00
15	P-203SP STABILIZED DRAINAGE LAYER (4")	SY	13,948	\$25.00	\$348,700.00
16	STEEL REINFORCEMENT (MESH)	SY	630	\$12.00	\$7,560.00
17	P-501 PCC PAVEMENT (8")	SY	12,674	\$70.00	\$887,180.00
18	PAVEMENT MARKINGS	SF	1,623	\$4.00	\$6,492.00
19	SEEDING (BUFFALO)	AC	10	\$5,000.00	\$50,000.00
20	SODDING (BUFFALO)	SY	3,820	\$17.00	\$64,940.00
					\$2,772,420.00
ELECTRICAL					
21	LOCKOUT/TAGOUT AND CCR CALIBRATION	LS	1	\$5,000.00	\$5,000.00
22	NON-ENCASED ELECTRICAL CONDUIT, 1-WAY 2"C	LF	6,930	\$8.00	\$55,440.00
23	ELECTRICAL JUNCTION STRUCTURE, L-867 CLASS 1, SIZE 16" DIAMETER BY 24" DEPTH	EA	4	\$800.00	\$3,200.00
24	LED BASE MOUNTED TAXIWAY EDGE LIGHT	EA	47	\$1,300.00	\$61,100.00
25	NO. 8 AWG, 5kV, L-824 TYPE C CABLE	LF	7,620	\$2.00	\$15,240.00
26	NO. 6 AWG, SOLID, BARE COUNTERPOISE WIRE	LF	6,930	\$4.50	\$31,185.00
					\$171,165.00
Total Construction =				\$3,590,000.00	
10% Contingency =				\$360,000.00	
Total Estimated Construction Cost =				\$3,950,000.00	
Estimated Soft Costs					
Engineering Design (8%)				\$	320,000.00
Construction Services (8%)				\$	320,000.00
Total Estimated Soft Costs =				\$	640,000.00
Total Estimated Project Cost (2022 Dollars) = \$4,590,000.00					