

**Environmental Assessment  
Determinations and Compliance Findings  
for HUD-assisted Projects  
24 CFR Part 58**

**Project Information**

**Project Name:** LDCHA-Legends-Housing

**HEROS Number:** 900000010400502

**Responsible Entity (RE):** LAWRENCE, PO Box 708 Lawrence KS, 66044

**RE Preparer:** Caitlyn Dolar

**State / Local Identifier:**

**Certifying Officer:** Jeff Crick

**Grant Recipient (if different than Responsible Entity):** Lawrence-Douglas County Housing Authority

**Point of Contact:** Shannon Oury, Executive Director

**Consultant (if applicable):**

**Point of Contact:**

**Project Location:** 5015 Legends Dr, Lawrence, KS 66049

**Additional Location Information:**

Two adjoining parcels located at 5015 Legends Dr and 1311 Research Park Dr.

**Direct Comments to:** [dwalters@lawrenceks.org](mailto:dwalters@lawrenceks.org)

City of Lawrence  
Planning & Development Services  
1 Riverfront Plaza, Ste 320  
Lawrence, KS 66044

**Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:**

Lawrence-Douglas County Housing Authority intends to purchase vacant adjoining parcels for the future development of affordable housing. The preliminary plan is to build six 4-plexes and one 6-plex designated for seniors on 5015 Legends Drive, for a total of 30 units. On 1311 Research Park Drive, the preliminary plan is to build two duplexes and four 8-plexes for a total of 36 units.

**Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:**

The City of Lawrence has a significant shortage of affordable housing. A BBC Research & Consulting Housing Market Analysis study conducted in 2018 found that 5,200 renter households are cost burdened, paying more than 30% of their household income on housing. The City of Lawrence has established the goal to "Provide affordable housing for all segments throughout the community" per Plan 2040, Comprehensive Plan for Unincorporated Douglas County and the City of Lawrence, adopted October 25, 2023.

**Existing Conditions and Trends [24 CFR 58.40(a)]:**

The subject property consists of 5.35 acres of vacant land appraised by Douglas County as being used for agriculture. The parcels are currently zoned for industrial use but have remained vacant for 25 years, never developed as anticipated due to a lack of demand for industrial land uses. Lawrence-Douglas County Housing Authority submitted a rezoning request to rezone both parcels to multi-dwelling residential districts. The rezonings received a recommendation for approval from the Lawrence-Douglas County Metropolitan Planning Commission and are pending final approval by the Lawrence City Commission. The character of the neighborhood is of a typical and average modern suburban development with large front setbacks and large parking lots. Landscaping is limited with only the required landscaping trees fronting the right of way with little to no original vegetation remaining. There is a small Montessori school to the north of the property. Since the property is vacant, it sits on a visual island with little to no infrastructure of any kind to tie it to the surrounding area. To the east and north-east sit a few medium sized industrial type building as is to be expected given the existing zoning designation. The properties are underutilized given the long vacancy and surrounding development pattern. Historically, few lots have been developed within the industrial business park that meet the purpose of the district as a "low impact employment and manufacturing use" district. The neighborhood character is dominated by low density residential uses. The proposed project would facilitate development of an alternative housing typology then detached or duplex dwelling units. The proposed zonings provide a land use transition



between intensive land uses located along Wakarusa Drive and the developed low-density residential neighborhoods to the north and west.

**Maps, photographs, and other documentation of project location and description:**

**Determination:**

✓	Finding of No Significant Impact [24 CFR 58.40(g)(1); 40 CFR 1508.13] The project will not result in a significant impact on the quality of human environment
	Finding of Significant Impact

**Approval Documents:**

[Signed HEROS Signature Page - LDCHA Legends Housing.pdf](#)

**7015.15 certified by Certifying Officer**

**on:**

**7015.16 certified by Authorizing Officer**

**on:**

**Funding Information**

Grant / Project Identification Number	HUD Program	Program Name	Funding Amount
4	Public Housing	MTW Block Grant	\$0.00

**Estimated Total HUD Funded, Assisted or Insured Amount:** \$725,000.00

**This project anticipates the use of funds or assistance from another federal agency in addition to HUD in the form of:**

**Estimated Total Project Cost [24 CFR 58.2 (a) (5)]:** \$6,225,000.00

**Compliance with 24 CFR §50.4, §58.5 and §58.6 Laws and Authorities**

<b>Compliance Factors:</b> Statutes, Executive Orders, and Regulations listed at 24 CFR §50.4, §58.5, and §58.6	Are formal compliance steps or mitigation required?	Compliance determination (See Appendix A for source determinations)
<b>STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR §50.4 &amp; § 58.6</b>		
<b>Airport Hazards</b> Clear Zones and Accident Potential Zones; 24 CFR Part 51 Subpart D	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The project site is not within 15,000 feet of a military airport or within 2,500 feet of a civilian airport. The project site is 29,092 feet from the civilian Lawrence Regional Airport and a map of the location of the Runway Protection Zones is also attached. The project is in compliance with Airport Hazards requirements. See attached Airport Hazards Worksheet packet.
<b>Coastal Barrier Resources Act</b> Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	This project is located in a state that does not contain CBRS units. Therefore, this project is in compliance with the Coastal Barrier Resources Act.
<b>Flood Insurance</b> Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The structure and insurable property are not located in a FEMA-designated Special Flood Hazard Area. Attached is FEMA/FIRMette map 20045C0158D, effective on 8/5/2010. While flood insurance may not be mandatory in this instance, HUD recommends that all insurable structures maintain flood insurance under the National Flood Insurance Program (NFIP). The project is in compliance with flood insurance requirements.
<b>STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR §50.4 &amp; § 58.5</b>		
<b>Air Quality</b> Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	According to the U.S. EPA Green Book, the project site is not located within a nonattainment or maintenance area for any National Ambient Air Quality Standard (NAAQS) criteria air pollutants. Attached is the EPA Kansas Nonattainment/Maintenance Status for Each County for All Criteria Pollutants (as of May 31, 2024), indicating that Douglas County, KS is not on the list.

		The project is in compliance with the Clean Air Act.
<b>Coastal Zone Management Act</b> Coastal Zone Management Act, sections 307(c) & (d)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	This project is located in a state that does not participate in the Coastal Zone Management Program. Therefore, this project is in compliance with the Coastal Zone Management Act.
<b>Contamination and Toxic Substances</b> 24 CFR 50.3(i) & 58.5(i)(2)]	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	GuideWire Consulting, LLC performed a Phase I Environmental Site Assessment dated June 28, 2024 on the undeveloped land at 1311 Research Park Drive and 5015 Legends Drive. Based on site reconnaissance, research, and interviews, the current and historical uses of the Subject Property and surrounding area do not appear to represent a material threat to the Subject Property. Furthermore, no Recognized Environmental Conditions, Historical Recognized Environmental Conditions, or Controlled Recognized Environmental Conditions were identified in connection with the Subject Property. It is the opinion of the environmental professional that the findings and conclusions presented in this report are reasonable and prudent, given the evidence as presented. In addition, this inquiry has not identified conditions indicative of releases or threatened releases of hazardous substances that would warrant additional investigation. Based on the findings of this Phase I ESA, GuideWire recommends no further environmental investigation at this time. Upon completion of construction, a licensed radon professional will test for radon levels and any units that reach indoor air radon levels at or above 4 pCi/L must have a radon reduction system installed, post-installation testing by a licensed radon professional, and an ongoing maintenance plan to ensure the system is operating as intended. On-site or

		nearby toxic, hazardous, or radioactive substances that could affect the health and safety of project occupants or conflict with the intended use of the property were not found. The project is in compliance with contamination and toxic substances requirements. See attached Site Contamination Multi Family Worksheet packet for documentation.
<b>Endangered Species Act</b> Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Upon researching the project site with the US Fish and Wildlife Service, we determined that based on the project type (multi-family residential development), and the lack of critical habitat and presence of endangered species on the project site, that none of the endangered species or their habitats listed on the IPaC document would be impacted. US Fish and Wildlife Project Title: LDCHA Legends Housing Project Code: 2024-0106990
<b>Explosive and Flammable Hazards</b> Above-Ground Tanks)[24 CFR Part 51 Subpart C	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	There is one current facility with stationary aboveground storage containers within 1 mile of the project site. The ASTs are two 12,000-gallon gasoline and diesel fuel tanks located 4,013' to the south at the 1901 Wakarusa Drive West 40 Fuel Station. The ASTs are diked with a square foot area of 1600sqft. The ASD for Thermal Radiation for People is 188.29' and the ASD for Thermal Radiation for Buildings is 32.99'. The Separation Distances from the project is acceptable. There are no planned stationary aboveground storage containers of concern within 1 mile of the project site. See attached Explosive and Flammable Facilities Worksheet packet.
<b>Farmlands Protection</b> Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	According to 7 CFR Part 658.2(a), Farmland does not include land already in or committed to urban development. Farmland already in urban development includes lands identified as "urbanized area" (UA) on the Census Bureau Map.

		According to the attached Census Bureau map showing land identified as "urbanized area" (UA), the project site is located in an urbanized area, and based on the project description, the project does not include new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use. The project is in compliance with the Farmland Policy Act. See attached Farmlands Protection Worksheet packet.
<b>Floodplain Management</b> Executive Order 11988, particularly section 2(a); 24 CFR Part 55	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	This project does not occur in a floodplain. The project is in compliance with Executive Order 11988. See attached Floodplain Management Worksheet Packet and FEMA/FIRMette map 20045C0158D (eff. 8/5/2010).
<b>Historic Preservation</b> National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Based on Section 106 consultation the project will have No Adverse Effect on historic properties. Conditions: None. Upon satisfactory implementation of the conditions, which should be monitored, the project is in compliance with Section 106.
<b>Noise Abatement and Control</b> Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Noise Assessment was conducted. The noise level was Acceptable: 57 dB. See noise analysis. The Lawrence Regional Airport (LWC) is located within 15 miles of the project site. The attached Lawrence Regional Airport Master Plan Noise Exposure Contour maps indicate that the 65 DNL noise contour does not extend off airport property and does not affect any noise-sensitive land uses. Using the attached FAA Airport Master Record for LWC and the attached HUD provided Small Airport Noise Worksheet, it was assumed the noise attributed to the airplanes would not extend beyond the boundaries of the airport. The Vinland Valley Aerodrome (K64) is located within 15 miles of the project site. Using the attached FAA Airport Master Record for K64 and the

		<p>attached HUD provided Small Airport Noise Worksheet, it was assumed the noise attributed to the airplanes would not extend beyond the boundaries of the airport. The project site is not within 3,000' of a railroad. The project site is within 1000' of one major roadway. Wakarusa Drive is a 4-lane major arterial road. As described in the HUD Noise Guidebook, when the locations of dwellings have not yet been specified at the time of the noise assessment of a site is made, distances used in the noise assessment should be measured as 2 meters (6.5') less than the distance from the building setback line to the major sources of noise. The Noise Assessment Location (NAL) used for the distance to Wakarusa Drive is 792'. City Streets 24-hour traffic counts obtained in May and June 2019 from KDOT indicate an average count of 16,035 vehicles on Wakarusa Drive. Individual breakdown of the number of autos, medium trucks, and heavy trucks were not available. Using the attached HUD provided Vehicle Class Distribution by Road Type for the State of Kansas, the noise calculation used 95.4% for autos, 1.4% for medium trucks, and 3.23% for heavy trucks. Using the attached HUD provided ADT Data Projection Worksheet for Noise, the AADT was projected out for 10 years and used in the attached HUD DNL Calculator. The project is in compliance with HUD's Noise regulation.</p>
<p><b>Sole Source Aquifers</b> Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>The project is not located on a sole source aquifer area. The project is in compliance with Sole Source Aquifer requirements.</p>
<p><b>Wetlands Protection</b> Executive Order 11990, particularly sections 2 and 5</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>The National Wetlands Inventory (NWI) Wetlands Mapper was used to review any on- or off-site wetlands near the project site. The project will not</p>

		impact on- or off-site wetlands. The project is in compliance with Executive Order 11990. See attached Wetlands Protection Worksheet packet.
<b>Wild and Scenic Rivers Act</b> Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	There are no Wild and Scenic Rivers designated in the state of Kansas. (Source: National Wild and Scenic Rivers System website); per the same site, there are no active or pending river studies in Kansas. Per the National Rivers Inventory system, there is one river in Douglas County on the list: The Kansas River NRI River Segment. The Outstandingly Remarkable Values of this river segment are listed as: Cultural, Fish, Recreational, Scenic, and Wildlife. Per HUD's Wild and Scenic Rivers website: "Boundaries for protected rivers generally extend one-quarter mile from either bank in the lower 48 states and one-half mile on rivers outside national parks in Alaska in order to protect river-related values." The project site is not located in a .25-mile proximity of the Kansas River NRI River Segment, therefore no adverse effects will occur. The project is not a water resources project that could affect the free-flowing condition of the river. The project is in compliance with the Wild and Scenic Rivers Act. See attached Wild and Scenic Rivers Worksheet packet.
<b>HUD HOUSING ENVIRONMENTAL STANDARDS</b>		
<b>ENVIRONMENTAL JUSTICE</b>		
<b>Environmental Justice</b> Executive Order 12898	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No adverse environmental impacts were identified in the project's total environmental review. The project is in compliance with Executive Order 12898.

**Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27]**

**Impact Codes:** An impact code from the following list has been used to make the determination of impact for each factor.

- (1) Minor beneficial impact

(2) No impact anticipated

(3) Minor Adverse Impact – May require mitigation

(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement.

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
<b>LAND DEVELOPMENT</b>			
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	3	Planned Rezoning to R12 and R15 from IBP. The Proposed Action will be compatible with surrounding land uses that consist of existing residential developments including single and multi-family housing to the southwest and northwest. There is light industrial business park development to the east and vacant land to the south. See Map #1. This Proposed Action is infill development and will not contribute to urban sprawl. Conformance with the Comprehensive Plan: ... "Plan 2040 specifies two goals that this request conforms to and furthers the goals of the plans. First, it aims to 'strengthen neighborhoods ties to the larger Lawrence community' and second, 'create complete neighborhoods that mix compatible land uses, include varied housing types and prices, and provide services and amenities to residents of all ages.'" All City services are present at the project site and the Proposed Action will construct a new street, sidewalks and storm drain systems to connect to existing City facilities. The residences to be built by the Proposed Action will conform to the surrounding design of the existing developments. Documentation: City of Lawrence Land Development Code Ordinance No. 7985, as amended, and Planning Commission Staff Report April 22, 2024, pages 4-5.	
Soil Suitability / Slope/ Erosion / Drainage and Storm Water Runoff	3	Soil Suitability: Other housing construction activities, and similar multi-family residential developments have been completed on adjacent parcels, indicating that the soils on the Project site are suitable for the proposed development. However,	



Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
		<p>Geotechnical studies of the site will be conducted during final design to determine engineering design criteria for development of residential housing. Those investigations ensure that appropriate soils engineering designs are provided to meet the Lawrence Building Code. Any design criteria will be included as standard design features of the project which will be reviewed and approved by the City of Lawrence prior to construction. Implementation of the geotechnical/soils recommendations in the geotechnical reports will provide appropriate site design methods that will reduce the potential impacts to swellings and their occupants from site specific soils conditions. Slope: No excessive slopes exist at the site identified for project development and associated activities. Erosion/Drainage: No erosion was evident at the Project Site and the site has minimal chance of significant erosion in the area of proposed development. This is due to (1) the relatively flat topography at the project site, (2) the limited area of project development, and (3) the project will comply with erosion control measures during construction, as prepared by a professional engineer. Once developed, the project design will include drainage structures that tie into the City's existing storm drainage system. Storm Water Runoff: in order to manage storm water runoff, the project will connect to the City of Lawrence storm water drainage network, and the type of system will be developed according to the current standards of the City of Lawrence. Implementation will comply with local regulations and provide appropriate site drainage of storm water runoff. Documentation: City of Lawrence Land Development Code Ordinance No. 7985, as amended</p>	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
Hazards and Nuisances including Site Safety and Site-Generated Noise	2	None identified.	
<b>SOCIOECONOMIC</b>			
Employment and Income Patterns	1	<p>The City of Lawrence is home to commercial and industrial establishments. The labor force consists of numerous skilled laborer, including those in the construction sector. The median household income is approximately \$56,536, and the per capita income is approximately \$34,074. Among those eligible for work, 2.6% of the population is unemployed. The poverty rate for the city is approximately 19%. The project will increase temporary labor needs for the construction of the housing unit. Once built, additional employment may be needed to assist in the maintenance of common areas. The project would be anticipated to draw a local labor force.</p>	
Demographic Character Changes / Displacement	2	<p>The population of the City of Lawrence is approximately 95,256. Among this total, approximately 11.6% are aged 65 years and older and 17% are aged under 18. The population is largely White (77.9%) however, Hispanic or Latino population comprises the next largest group (6.9%), Asian (6.2%) the next, and African American population comprises the next largest group (5%). The population of two or more races is 7.6% Housing is 50% owner occupied and 50% renter. Approximately 48.5% of renters in Lawrence are rent burdened. Approximately 72% of the houses have access to a computer and/or broadband subscription. This is largely consistent with the United States average (78%). As the overall project will have a limited construction timeframe and anticipates the use of local labor, the project would not likely impact the local physical, social and psychological dimensions of the community. The project would not displace any</p>	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
		population as the subject portion of the parcel is currently vacant and the project is not anticipated to cause gentrification or significantly alter property values or rents. The project may assist the community by providing for an opportunity for affordable housing. In this manner the project will also not concentrate and/or isolate low-income or disadvantaged people.	
Environmental Justice EA Factor	2	This project is not located in and not likely to affect a community with environmental justice concerns. There is no evidence of historical environmental or disproportionate impacts that burden low income or minority communities in this area.	
<b>COMMUNITY FACILITIES AND SERVICES</b>			
Educational and Cultural Facilities (Access and Capacity)	2	Educational: The Proposed Action will not have an impact on education facilities. Various public schools are located in the City of Lawrence and in close proximity to the project site, as are other private schools, including an adjacent Montessori preschool. Cultural: Numerous cultural facilities are located in the City of Lawrence and Douglas County. The Proposed Action will not impact any of these existing and planned opportunities for cultural activities/facilities, and families who live in the new housing will benefit from these existing cultural activities that are available to all. Documentation: Plan 2040 A Comprehensive Plan for Unincorporated Douglas County and the City of Lawrence	
Commercial Facilities (Access and Proximity)	1	The project will be located in an area noted by the City of Lawrence for its potential for transit-oriented development. Some commercial properties are present within walking distance of the subject parcel, including restaurants and convenience store. Banks, a grocery store and other service locations are located approximately a mile in either direction. These services will meet the needs of projected residents.	

<b>Environmental Assessment Factor</b>	<b>Impact Code</b>	<b>Impact Evaluation</b>	<b>Mitigation</b>
Health Care / Social Services (Access and Capacity)	2	Health care services are provided by a variety of private profit and not-for-profit entities in the City of Lawrence and surrounding communities. The project site is located approximately 4.6 miles west of Lawrence Memorial Hospital (LMH), which provides a wide range of emergency, and inpatient medical services, and 2.9 miles from the LMH Health West Campus. Additionally, a number of primary care and dental practices are located from .3 to less than 2 miles from the site. Social services are provided by both State, County and local non-profit agencies. These services, if required by the residents of the project are available within the City of Lawrence. The development of the Proposed Action is not expected to have any significant impacts on health care facilities or the ability to serve the population of the proposed project.	
Solid Waste Disposal and Recycling (Feasibility and Capacity)	2	The project site will be served by existing municipal waste disposal and recycling services. The proposed project will not have an adverse impact on the capacity of solid waste disposal or recycling.	
Waste Water and Sanitary Sewers (Feasibility and Capacity)	2	The project site will be served by existing municipal waste water and sanitary sewer infrastructure. The proposed project will connect to existing sewer services and will not require new facilities to be developed. The proposed project will not have an adverse impact on the capacity of waste water or sanitary sewer systems, and any issues will be addressed by a downstream sanitary sewer analysis which will be required as part of a future site plan application, as identified on page 4 of the Planning Commission Staff Report April 22, 2024.	
Water Supply (Feasibility and Capacity)	2	The City of Lawrence supplies water to the site. The water supply is safe and adequate to supply the proposed project.	

Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
Public Safety - Police, Fire and Emergency Medical	2	Police. The City of Lawrence Police Department provides police services for the project site and will continue to do so after the project is constructed. There are no anticipated additional needs for police department facilities related to the Proposed Action. Fire. The City of Lawrence Fire Department provides fire services to the project site and would continue to do so with the development of the Proposed Action. Lawrence Fire Station #4 is approximately 1.5 miles south of the project site. There will be no adverse impacts to fire services as a result of the Proposed Action. Emergency Medical: These services are provided by Lawrence Memorial Hospital (LMH) which is located 4.6 from the project site, and ambulances within the City. Two private urgent care clinics are located within three miles of the project site. Development of the Proposed Action will not have an impact on these medical services or require additional emergency medical services to be provided.	
Parks, Open Space and Recreation (Access and Capacity)	2	The project site is located within 1.3 miles of Devictor Park, 1.8 miles of The Loop walking trail, 2.3 miles of Lawrence Nature Park, and 2.9 miles of the Rock Chalk Recreational Pavilion. There will be no adverse impacts to the demand or availability of parks, open space or recreation as a result of this project.	
Transportation and Accessibility (Access and Capacity)	2	The project site is located along public sidewalks, and adjacent to a transit stop and bike routes. The project will not have an adverse impact on transportation or accessibility.	
<b>NATURAL FEATURES</b>			
Unique Natural Features /Water Resources	2	The project site is not located near any unique natural features or environmentally sensitive land and will have no negative impact on water resources. See Plan 2040 and page 4 of Planning Commission Staff Report April 22, 2024.	

<b>Environmental Assessment Factor</b>	<b>Impact Code</b>	<b>Impact Evaluation</b>	<b>Mitigation</b>
Vegetation / Wildlife (Introduction, Modification, Removal, Disruption, etc.)	2	The land is currently used for agricultural growing and baling of hay, there will be no immediate change. The proposed project will have no adverse impact on endangered species, critical habitats or other resources. There is a 30% Utility Easement and Conservation Easement as shown on Map #1, which will remain open space.	
Other Factors 1			
Other Factors 2			
<b>CLIMATE AND ENERGY</b>			
Climate Change	2	This proposed project will be constructed according to current building and land development code requirements and will be designed in a way that will withstand any expected climate changes within its useful life. The project is located within a developed area and will not have a negative impact on stormwater runoff or soil suitability.	
Energy Efficiency	2	The proposed new construction must comply with current Building and Energy Conservation Codes. There will be no adverse impacts to energy consumption or efficiency. The area is currently served by Eversource & Black Hills Energy.	

**Supporting documentation**

[Planning Commission Staff Report Drag Strip 4-22-2024.pdf](#)

**Additional Studies Performed:**

Phase I Environmental Site Assessment Phase I Cultural Resources Survey

**Field Inspection [Optional]:** Date and completed by:

**List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]:**

\* U.S. Fish and Wildlife Service \* GuideWire Consulting, LLC \* Goodwin & Associates, Inc. \* State Historic Preservation Office \* Tribal Historic Preservation Offices for: o Absentee-Shawnee Tribe of Indians of Oklahoma o Cheyenne and Arapaho Tribes of

Oklahoma o Delaware Nation Oklahoma o Delaware Tribe of Indians o Eastern Shawnee Tribe of Oklahoma o Little Traverse Bay Bands of Odawa Indians Michigan o Osage Nation o Prairie Band Potawatomi Nation o Seneca-Cayuga Nation o Wichita and Affiliated Tribes

**List of Permits Obtained:**

The project will go through development review with the City of Lawrence. Building permits must be obtained before the project can begin.

**Public Outreach [24 CFR 58.43]:**

The Lawrence Journal World

**Cumulative Impact Analysis [24 CFR 58.32]:**

The proposed project will consist of multi-family affordable dwelling units on underutilized lots in a developed residential area of the community. Based on this information, the location of the project and proximity to services, utilities, and transportation, no impact on the environment is anticipated.

**Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]**

The proposed construction is specific to this location and no alternatives were considered, as it creates no adverse environmental impacts.

**No Action Alternative [24 CFR 58.40(e)]**

Taking no action will result in fewer options for those seeking affordable housing.

**Summary of Findings and Conclusions:**

The proposed project will have no adverse impact on the environment. It will have a positive impact on the community by creating safe and affordable housing.

**Mitigation Measures and Conditions [CFR 1505.2(c)]:**

Summarized below are all mitigation measures adopted by the Responsible Entity to reduce, avoid or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

<b>Law, Authority, or Factor</b>	<b>Mitigation Measure or Condition</b>	<b>Comments on Completed Measures</b>	<b>Mitigation Plan</b>	<b>Complete</b>
Contamination and Toxic Substances	Upon completion of construction, a licensed radon professional will test for radon levels and any units that reach indoor air radon levels at or above 4 pCi/L must have a radon reduction system installed, post-installation testing by a licensed radon professional, and an ongoing maintenance plan to ensure the system is operating as intended.	N/A	Upon completion of construction, a licensed radon professional will test for radon levels and any units that reach indoor air radon levels at or above 4 pCi/L must have a radon reduction system installed, post-installation testing by a licensed radon professional, and an ongoing maintenance plan to ensure the system is operating as intended	



**Project Mitigation Plan**

Upon completion of construction, a licensed radon professional will test for radon levels and any units that reach indoor air radon levels at or above 4 pCi/L must have a radon reduction system installed, post-installation testing by a licensed radon professional, and an ongoing maintenance plan to ensure the system is operating as intended. The project design/build contractor will be required to submit these reports and plans to the City of Lawrence Housing Initiatives Division. The City of Lawrence Housing Initiatives Division will attach these reports and plans to the environmental review.

**Supporting documentation on completed measures**

## APPENDIX A: Related Federal Laws and Authorities

### Airport Hazards

General policy	Legislation	Regulation
It is HUD's policy to apply standards to prevent incompatible development around civil airports and military airfields.		24 CFR Part 51 Subpart D

1. To ensure compatible land use development, you must determine your site's proximity to civil and military airports. Is your project within 15,000 feet of a military airport or 2,500 feet of a civilian airport?

✓ No

Based on the response, the review is in compliance with this section. Document and upload the map showing that the site is not within the applicable distances to a military or civilian airport below

Yes

### Screen Summary

#### Compliance Determination

The project site is not within 15,000 feet of a military airport or within 2,500 feet of a civilian airport. The project site is 29,092 feet from the civilian Lawrence Regional Airport and a map of the location of the Runway Protection Zones is also attached. The project is in compliance with Airport Hazards requirements. See attached Airport Hazards Worksheet packet.

#### Supporting documentation

[Airport-Hazards-Worksheet packet.pdf](#)

Are formal compliance steps or mitigation required?

Yes

✓ No

## Coastal Barrier Resources

General requirements	Legislation	Regulation
HUD financial assistance may not be used for most activities in units of the Coastal Barrier Resources System (CBRS). See 16 USC 3504 for limitations on federal expenditures affecting the CBRS.	Coastal Barrier Resources Act (CBRA) of 1982, as amended by the Coastal Barrier Improvement Act of 1990 (16 USC 3501)	

**This project is located in a state that does not contain CBRA units. Therefore, this project is in compliance with the Coastal Barrier Resources Act.**

### Compliance Determination

This project is located in a state that does not contain CBRS units. Therefore, this project is in compliance with the Coastal Barrier Resources Act.

### Supporting documentation

[Coastal Barrier Resources Worksheet Packet.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

✓ No

## Flood Insurance

General requirements	Legislation	Regulation
Certain types of federal financial assistance may not be used in floodplains unless the community participates in National Flood Insurance Program and flood insurance is both obtained and maintained.	Flood Disaster Protection Act of 1973 as amended (42 USC 4001-4128)	24 CFR 50.4(b)(1) and 24 CFR 58.6(a) and (b); 24 CFR 55.1(b).

**1. Does this project involve financial assistance for construction, rehabilitation, or acquisition of a mobile home, building, or insurable personal property?**

No. This project does not require flood insurance or is excepted from flood insurance.

Yes

**2. Upload a FEMA/FIRM map showing the site here:**

[FIRMETTE 20045C0158D with project site outline.pdf](#)

The Federal Emergency Management Agency (FEMA) designates floodplains. The [FEMA Map Service Center](#) provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs). For projects in areas not mapped by FEMA, use the best available information to determine floodplain information. Include documentation, including a discussion of why this is the best available information for the site. Provide FEMA/FIRM floodplain zone designation, panel number, and date within your documentation.

**Is the structure, part of the structure, or insurable property located in a FEMA-designated Special Flood Hazard Area?**

No

Based on the response, the review is in compliance with this section.

Yes

**4. While flood insurance is not mandatory for this project, HUD strongly recommends that all insurable structures maintain flood insurance under the National Flood Insurance Program (NFIP). Will flood insurance be required as a mitigation measure or condition?**

Yes

✓ No

### **Screen Summary**

#### **Compliance Determination**

The structure and insurable property are not located in a FEMA-designated Special Flood Hazard Area. Attached is FEMA/FIRMette map 20045C0158D, effective on 8/5/2010. While flood insurance may not be mandatory in this instance, HUD recommends that all insurable structures maintain flood insurance under the National Flood Insurance Program (NFIP). The project is in compliance with flood insurance requirements.

#### **Supporting documentation**

[Flood-Insurance-Worksheet packet.pdf](#)

#### **Are formal compliance steps or mitigation required?**

Yes

✓ No

## Air Quality

General requirements	Legislation	Regulation
The Clean Air Act is administered by the U.S. Environmental Protection Agency (EPA), which sets national standards on ambient pollutants. In addition, the Clean Air Act is administered by States, which must develop State Implementation Plans (SIPs) to regulate their state air quality. Projects funded by HUD must demonstrate that they conform to the appropriate SIP.	Clean Air Act (42 USC 7401 et seq.) as amended particularly Section 176(c) and (d) (42 USC 7506(c) and (d))	40 CFR Parts 6, 51 and 93

**1. Does your project include new construction or conversion of land use facilitating the development of public, commercial, or industrial facilities OR five or more dwelling units?**

Yes

No

### Air Quality Attainment Status of Project's County or Air Quality Management District

**2. Is your project's air quality management district or county in non-attainment or maintenance status for any criteria pollutants?**

No, project's county or air quality management district is in attainment status for all criteria pollutants.

Yes, project's management district or county is in non-attainment or maintenance status for the following criteria pollutants (check all that apply):

### Screen Summary

#### Compliance Determination

According to the U.S. EPA Green Book, the project site is not located within a nonattainment or maintenance area for any National Ambient Air Quality Standard (NAAQS) criteria air pollutants. Attached is the EPA Kansas Nonattainment/Maintenance Status for Each County for All Criteria Pollutants (as of May 31, 2024), indicating that Douglas County, KS is not on the list. The project is in compliance with the Clean Air Act.

**Supporting documentation**

[Air Quality Worksheet packet.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

No

## Coastal Zone Management Act

General requirements	Legislation	Regulation
Federal assistance to applicant agencies for activities affecting any coastal use or resource is granted only when such activities are consistent with federally approved State Coastal Zone Management Act Plans.	Coastal Zone Management Act (16 USC 1451-1464), particularly section 307(c) and (d) (16 USC 1456(c) and (d))	15 CFR Part 930

**This project is located in a state that does not participate in the Coastal Zone Management Program. Therefore, this project is in compliance with the Coastal Zone Management Act.**

### Screen Summary

#### **Compliance Determination**

This project is located in a state that does not participate in the Coastal Zone Management Program. Therefore, this project is in compliance with the Coastal Zone Management Act.

#### **Supporting documentation**

[Coastal Zone Management Worksheet Packet.pdf](#)

#### **Are formal compliance steps or mitigation required?**

Yes

✓ No



## Contamination and Toxic Substances

General Requirements	Legislation	Regulations
It is HUD policy that all properties that are being proposed for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of the occupants or conflict with the intended utilization of the property.		24 CFR 58.5(i)(2) 24 CFR 50.3(i)
<b>Reference</b>		
<a href="https://www.onecpd.info/environmental-review/site-contamination">https://www.onecpd.info/environmental-review/site-contamination</a>		

**1. How was site contamination evaluated?\* Select all that apply.**

ASTM Phase I ESA

ASTM Phase II ESA

Remediation or clean-up plan

ASTM Vapor Encroachment Screening.

None of the above

\* HUD regulations at 24 CFR § 58.5(i)(2)(ii) require that the environmental review for multifamily housing with five or more dwelling units or non-residential property include the evaluation of previous uses of the site or other evidence of contamination on or near the site.

For acquisition and new construction of multifamily and nonresidential properties HUD strongly advises the review include an ASTM Phase I Environmental Site Assessment (ESA) to meet real estate transaction standards of due diligence and to help ensure compliance with HUD's toxic policy at 24 CFR §58.5(i) and 24 CFR §50.3(i). Also note that some HUD programs require an ASTM Phase I ESA.

**2. Were any on-site or nearby toxic, hazardous, or radioactive substances\* (excluding radon) found that could affect the health and safety of project occupants or conflict with the intended use of the property? (Were any recognized environmental conditions or RECs identified in a Phase I ESA and confirmed in a Phase II ESA?)**

Provide a map or other documentation of absence or presence of contamination\*\* and explain evaluation of site contamination in the Screen Summary at the bottom of this screen.

✓ No

Explain:

GuideWire Consulting, LLC performed a Phase I Environmental Site Assessment dated June 28, 2024 on the undeveloped land at 1311 Research Park Drive and 5015 Legends Drive. Based on site reconnaissance, research, and interviews, the current and historical uses of the Subject Property and surrounding area do not appear to represent a material threat to the Subject Property. Furthermore, no Recognized Environmental Conditions, Historical Recognized Environmental Conditions, or Controlled Recognized Environmental Conditions were identified in connection with the Subject Property. It is the opinion of the environmental professional that the findings and conclusions presented in this report are reasonable and prudent, given the evidence as presented. In addition, this inquiry has not identified conditions indicative of releases or threatened releases of hazardous substances that would warrant additional investigation. Based on the findings of this Phase I ESA, GuideWire recommends no further environmental investigation at this time.

Yes

\* This question covers the presence of radioactive substances excluding radon. Radon is addressed in the Radon Exempt Question.

\*\* Utilize EPA's Enviromapper, NEPAssist, or state/tribal databases to identify nearby dumps, junk yards, landfills, hazardous waste sites, and industrial sites, including EPA National Priorities List Sites (Superfund sites), CERCLA or state-equivalent sites, RCRA Corrective Action sites with release(s) or suspected release(s) requiring clean-up action and/or further investigation. Additional supporting documentation may include other inspections and reports.

**3. Evaluate the building(s) for radon. Do all buildings meet any of the exemptions\* from having to consider radon in the contamination analysis listed in CPD Notice [CPD-23-103](#)?**

Yes

Explain:

✓ No

\* Notes:

- Buildings with no enclosed areas having ground contact.
- Buildings containing crawlspaces, utility tunnels, or parking garages would not be exempt, however buildings built on piers would be exempt, provided that there is open air between the lowest floor of the building and the ground.
- Buildings that are not residential and will not be occupied for more than 4 hours per

day.

- Buildings with existing radon mitigation systems - document radon levels are below 4 pCi/L with test results dated within two years of submitting the application for HUD assistance and document the system includes an ongoing maintenance plan that includes periodic testing to ensure the system continues to meet the current EPA recommended levels. If the project does not require an application, document test results dated within two years of the date the environmental review is certified. Refer to program office guidance to ensure compliance with program requirements.
- Buildings tested within five years of the submission of application for HUD assistance: test results document indoor radon levels are below current the EPA's recommended action levels of 4.0 pCi/L. For buildings with test data older than five years, any new environmental review must include a consideration of radon using one of the methods in Section A below.

**4. Is the proposed project new construction or substantial rehabilitation where testing will be conducted but cannot yet occur because building construction has not been completed?**

✓ Yes

Compliance with this section is conditioned on post-construction testing being conducted, followed by mitigation, if needed. Radon test results, along with any needed mitigation plan, must be uploaded to the mitigation section within this screen.

No

**8. Mitigation**

Document the mitigation needed according to the requirements of the appropriate federal, state, tribal, or local oversight agency. If the adverse environmental impacts cannot be mitigated, then HUD assistance may not be used for the project at this site.

For instances where radon mitigation is required (i.e. where test results demonstrated radon levels at 4.0 pCi/L and above), then you must include a radon mitigation plan\*.

**Can all adverse environmental impacts be mitigated?**

No, all adverse environmental impacts cannot feasibly be mitigated.  
Project cannot proceed at this location.

- ✓ Yes, all adverse environmental impacts can be eliminated through mitigation, and/or consideration of radon and radon mitigation, if needed, will occur following construction.  
Provide all mitigation requirements\*\* and documents in the Screen

Summary at the bottom of this screen.

\* Refer to CPD Notice [CPD-23-103](#) for additional information on radon mitigation plans.

\*\* Mitigation requirements include all clean-up requirements required by applicable federal, state, tribal, or local law. Additionally, please upload, as applicable, the long-term operations and maintenance plan, Remedial Action Work Plan, and other equivalent documents.

**9. Describe how compliance was achieved. Include any of the following that apply: State Voluntary Clean-up Program, a No Further Action letter, use of engineering controls\*, or use of institutional controls\*\*.**

Upon completion of construction, a licensed radon professional will test for radon levels and any units that reach indoor air radon levels at or above 4 pCi/L must have a radon reduction system installed, post-installation testing by a licensed radon professional, and an ongoing maintenance plan to ensure the system is operating as intended.

If a remediation plan or clean-up program was necessary, which standard does it follow?

Complete removal

Risk-based corrective action (RBCA)

Other

\* Engineering controls are any physical mechanism used to contain or stabilize contamination or ensure the effectiveness of a remedial action. Engineering controls may include, caps, covers, dikes, trenches, leachate collection systems, radon mitigation systems, signs, fences, physical access controls, ground water monitoring systems and ground water containment systems including, slurry walls and ground water pumping systems.

\*\* Institutional controls are mechanisms used to limit human activities at or near a contaminated site, or to ensure the effectiveness of the remedial action over time, when contaminants remain at a site at levels above the applicable remediation standard which would allow for unrestricted use of the property. Institutional controls may include structure, land, and natural resource use restrictions, well restriction areas, classification exception areas, deed notices, and declarations of environmental restrictions.

**Screen Summary**  
**Compliance Determination**

GuideWire Consulting, LLC performed a Phase I Environmental Site Assessment dated June 28, 2024 on the undeveloped land at 1311 Research Park Drive and 5015 Legends Drive. Based on site reconnaissance, research, and interviews, the current and historical uses of the Subject Property and surrounding area do not appear to represent a material threat to the Subject Property. Furthermore, no Recognized Environmental Conditions, Historical Recognized Environmental Conditions, or Controlled Recognized Environmental Conditions were identified in connection with the Subject Property. It is the opinion of the environmental professional that the findings and conclusions presented in this report are reasonable and prudent, given the evidence as presented. In addition, this inquiry has not identified conditions indicative of releases or threatened releases of hazardous substances that would warrant additional investigation. Based on the findings of this Phase I ESA, GuideWire recommends no further environmental investigation at this time. Upon completion of construction, a licensed radon professional will test for radon levels and any units that reach indoor air radon levels at or above 4 pCi/L must have a radon reduction system installed, post-installation testing by a licensed radon professional, and an ongoing maintenance plan to ensure the system is operating as intended. On-site or nearby toxic, hazardous, or radioactive substances that could affect the health and safety of project occupants or conflict with the intended use of the property were not found. The project is in compliance with contamination and toxic substances requirements. See attached Site Contamination Multi Family Worksheet packet for documentation.

**Supporting documentation**

[Site Contamination MultiFamily Worksheet Legends Housing packet.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

No

## Endangered Species

General requirements	ESA Legislation	Regulations
Section 7 of the Endangered Species Act (ESA) mandates that federal agencies ensure that actions that they authorize, fund, or carry out shall not jeopardize the continued existence of federally listed plants and animals or result in the adverse modification or destruction of designated critical habitat. Where their actions may affect resources protected by the ESA, agencies must consult with the Fish and Wildlife Service and/or the National Marine Fisheries Service (“FWS” and “NMFS” or “the Services”).	The Endangered Species Act of 1973 (16 U.S.C. 1531 <i>et seq.</i> ); particularly section 7 (16 USC 1536).	50 CFR Part 402

**1. Does the project involve any activities that have the potential to affect species or habitats?**

No, the project will have No Effect due to the nature of the activities involved in the project.

No, the project will have No Effect based on a letter of understanding, memorandum of agreement, programmatic agreement, or checklist provided by local HUD office

- ✓ Yes, the activities involved in the project have the potential to affect species and/or habitats.

**2. Are federally listed species or designated critical habitats present in the action area?**

- ✓ No, the project will have No Effect due to the absence of federally listed species and designated critical habitat

Based on the response, the review is in compliance with this section. Document and upload all documents used to make your determination below.

Documentation may include letters from the Services, species lists from the Services’ websites, surveys or other documents and analysis showing that there are no species in the action area.

Yes, there are federally listed species or designated critical habitats present in the action area.

**Screen Summary****Compliance Determination**

Upon researching the project site with the US Fish and Wildlife Service, we determined that based on the project type (multi-family residential development), and the lack of critical habitat and presence of endangered species on the project site, that none of the endangered species or their habitats listed on the IPaC document would be impacted. US Fish and Wildlife Project Title: LDCHA Legends Housing  
Project Code: 2024-0106990

**Supporting documentation**

[Endangered Species Worksheet Packet.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

✓ No

## Explosive and Flammable Hazards

General requirements	Legislation	Regulation
HUD-assisted projects must meet Acceptable Separation Distance (ASD) requirements to protect them from explosive and flammable hazards.	N/A	24 CFR Part 51 Subpart C

**1. Is the proposed HUD-assisted project itself the development of a hazardous facility (a facility that mainly stores, handles or processes flammable or combustible chemicals such as bulk fuel storage facilities and refineries)?**

No

Yes

**2. Does this project include any of the following activities: development, construction, rehabilitation that will increase residential densities, or conversion?**

No

Yes

**3. Within 1 mile of the project site, are there any current or planned stationary aboveground storage containers that are covered by 24 CFR 51C? Containers that are NOT covered under the regulation include:**

- Containers 100 gallons or less in capacity, containing common liquid industrial fuels OR
- Containers of liquified petroleum gas (LPG) or propane with a water volume capacity of 1,000 gallons or less that meet the requirements of the 2017 or later version of National Fire Protection Association (NFPA) Code 58.

If all containers within the search area fit the above criteria, answer "No." For any other type of aboveground storage container within the search area that holds one of the flammable or explosive materials listed in Appendix I of 24 CFR part 51 subpart C, answer "Yes."

No

Yes



**4. Based on the analysis, is the proposed HUD-assisted project located at or beyond the required separation distance from all covered tanks?**

Yes

Based on the response, the review is in compliance with this section.

No

**Screen Summary**

**Compliance Determination**

There is one current facility with stationary aboveground storage containers within 1 mile of the project site. The ASTs are two 12,000-gallon gasoline and diesel fuel tanks located 4,013' to the south at the 1901 Wakarusa Drive West 40 Fuel Station. The ASTs are diked with a square foot area of 1600sqft. The ASD for Thermal Radiation for People is 188.29' and the ASD for Thermal Radiation for Buildings is 32.99'. The Separation Distances from the project is acceptable. There are no planned stationary aboveground storage containers of concern within 1 mile of the project site. See attached Explosive and Flammable Facilities Worksheet packet.

**Supporting documentation**

[Explosive and Flammable Facilities Worksheet packet.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

No

## Farmlands Protection

General requirements	Legislation	Regulation
The Farmland Protection Policy Act (FPPA) discourages federal activities that would convert farmland to nonagricultural purposes.	Farmland Protection Policy Act of 1981 (7 U.S.C. 4201 et seq.)	<a href="#">7 CFR Part 658</a>

**1. Does your project include any activities, including new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use?**

Yes

No

If your project includes new construction, acquisition of undeveloped land or conversion, explain how you determined that agricultural land would not be converted:

According to 7 CFR Part 658.2(a), Farmland does not include land already in or committed to urban development. Farmland already in urban development includes lands identified as "urbanized area" (UA) on the Census Bureau Map. According to the attached Census Bureau map showing land identified as "urbanized area" (UA), the project site is located in an urbanized area, and based on the project description, the project does not include new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use. The project is in compliance with the Farmland Policy Act. See attached Farmlands Protection Worksheet packet.

Based on the response, the review is in compliance with this section. Document and upload all documents used to make your determination below.

### Screen Summary

#### **Compliance Determination**

According to 7 CFR Part 658.2(a), Farmland does not include land already in or committed to urban development. Farmland already in urban development includes lands identified as "urbanized area" (UA) on the Census Bureau Map. According to the attached Census Bureau map showing land identified as "urbanized area" (UA), the project site is located in an urbanized area, and based on the project description, the project does not include new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use. The project

is in compliance with the Farmland Policy Act. See attached Farmlands Protection Worksheet packet.

**Supporting documentation**

[Farmlands Protection Worksheet packet.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

✓ No



## Floodplain Management

General Requirements	Legislation	Regulation
Executive Order 11988, Floodplain Management, requires Federal activities to avoid impacts to floodplains and to avoid direct and indirect support of floodplain development to the extent practicable.	Executive Order 11988 * Executive Order 13690 * 42 USC 4001-4128 * 42 USC 5154a * only applies to screen 2047 and not 2046	24 CFR 55

**1. Does this project meet an exemption at 24 CFR 55.12 from compliance with HUD's floodplain management regulations in Part 55?**

Yes

(a) HUD-assisted activities described in 24 CFR 58.34 and 58.35(b).

(b) HUD-assisted activities described in 24 CFR 50.19, except as otherwise indicated in § 50.19.

(c) The approval of financial assistance for restoring and preserving the natural and beneficial functions and values of floodplains and wetlands, including through acquisition of such floodplain and wetland property, where a permanent covenant or comparable restriction is place on the property's continued use for flood control, wetland projection, open space, or park land, but only if:

(1) The property is cleared of all existing buildings and walled structures; and

(2) The property is cleared of related improvements except those which:

(i) Are directly related to flood control, wetland protection, open space, or park land (including playgrounds and recreation areas);

(ii) Do not modify existing wetland areas or involve fill, paving, or other ground disturbance beyond minimal trails or paths; and

(iii) Are designed to be compatible with the beneficial floodplain or wetland function of the property.

(d) An action involving a repossession, receivership, foreclosure, or similar acquisition of property to protect or enforce HUD's financial interests under previously approved loans, grants, mortgage insurance,

or other HUD assistance.

(e) Policy-level actions described at 24 CFR 50.16 that do not involve site-based decisions.

(f) A minor amendment to a previously approved action with no additional adverse impact on or from a floodplain or wetland.

(g) HUD's or the responsible entity's approval of a project site, an incidental portion of which is situated in the FFRMS floodplain (not including the floodway, LiMWA, or coastal high hazard area) but only if: (1) The proposed project site does not include any existing or proposed buildings or improvements that modify or occupy the FFRMS floodplain except de minimis improvements such as recreation areas and trails; and (2) the proposed project will not result in any new construction in or modifications of a wetland .

(h) Issuance or use of Housing Vouchers, or other forms of rental subsidy where HUD, the awarding community, or the public housing agency that administers the contract awards rental subsidies that are not project-based (i.e., do not involve site-specific subsidies).

(i) Special projects directed to the removal of material and architectural barriers that restrict the mobility of and accessibility to elderly and persons with disabilities.

Describe:

No

### **Screen Summary**

#### **Compliance Determination**

This project does not occur in a floodplain. The project is in compliance with Executive Order 11988. See attached Floodplain Management Worksheet Packet and FEMA/FIRMette map 20045C0158D (eff. 8/5/2010).

#### **Supporting documentation**

[Floodplain Management Worksheet packet.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

✓ No

## Historic Preservation

General requirements	Legislation	Regulation
Regulations under Section 106 of the National Historic Preservation Act (NHPA) require a consultative process to identify historic properties, assess project impacts on them, and avoid, minimize, or mitigate adverse effects	Section 106 of the National Historic Preservation Act (16 U.S.C. 470f)	36 CFR 800 "Protection of Historic Properties" <a href="https://www.govinfo.gov/content/pkg/CFR-2012-title36-vol3/pdf/CFR-2012-title36-vol3-part800.pdf">https://www.govinfo.gov/content/pkg/CFR-2012-title36-vol3/pdf/CFR-2012-title36-vol3-part800.pdf</a>

### **Threshold**

#### **Is Section 106 review required for your project?**

No, because the project consists solely of activities listed as exempt in a Programmatic Agreement (PA ). (See the PA Database to find applicable PAs.)

No, because the project consists solely of activities included in a No Potential to Cause Effects memo or other determination [36 CFR 800.3(a)(1)].

- ✓ Yes, because the project includes activities with potential to cause effects (direct or indirect).

### **Step 1 – Initiate Consultation**

#### **Select all consulting parties below (check all that apply):**

- ✓ State Historic Preservation Offer (SHPO) Completed
- ✓ Indian Tribes, including Tribal Historic Preservation Officers (THPOs) or Native Hawaiian Organizations (NHOs)



✓ Absentee-Shawnee Tribe of Indians	Response Period Elapsed
✓ Cheyenne and Arapaho Tribes Oklahoma	Response Period Elapsed
✓ Delaware Nation Oklahoma	Response Period Elapsed
✓ Delaware Tribe of Indians	Response Period Elapsed
✓ Eastern Shawnee Tribe of Oklahoma	Response Period Elapsed
✓ Little Traverse Bay Bands of Odawa Michigan	Response Period Elapsed
✓ Osage Nation	Response Period Elapsed
✓ Prairie Band Potawatomi Nation	Response Period Elapsed
✓ Seneca-Cayuga Nation	Response Period Elapsed
✓ Wichita and Affiliated Tribes	Response Period Elapsed

#### Other Consulting Parties

#### Describe the process of selecting consulting parties and initiating consultation here:

Letters were sent to tribes identified through the TDAT Report and given a summary of the project, map of the project area, a copy of the SHPO response, and other pertinent information. The City received no responses from tribes.

Document and upload all correspondence, notices and notes (including comments and objections received below).

#### Was the Section 106 Lender Delegation Memo used for Section 106 consultation?

Yes

No

#### **Step 2 – Identify and Evaluate Historic Properties**

- 1. Define the Area of Potential Effect (APE), either by entering the address(es) or uploading a map depicting the APE below:**

The project area consists of two adjoining parcels located at 1311 Research Park Dr and 5015 Legends Drive in Lawrence, KS.

**In the chart below, list historic properties identified and evaluated in the APE. Every historic property that may be affected by the project should be included in the chart.**

Upload the documentation (survey forms, Register nominations, concurrence(s) and/or objection(s), notes, and photos) that justify your National Register Status determination

below.

Address / Location / District	National Register Status	SHPO Concurrence	Sensitive Information
----------------------------------	-----------------------------	------------------	--------------------------

**Additional Notes:**

The project is located in an area that was annexed into the City of Lawrence in 1988-1989. The area was platted beginning in 1989. The project site is vacant as is the property to the south. Commercial structures exist to the north and east and were constructed from 1997-2022. Residential structures that were constructed from 2003-2010 exist to the west of the project site. The structures adjacent to the project are not currently eligible for individual listing or as a contributing structures to a historic district in the National Register of Historic Places, the Register of Historic Kansas Places, or the Lawrence Register of Historic Places. There are no visible historic site elements in the project location that are eligible for individual listing or as a contributing object to a historic district. The proposed project will have no adverse effect on any property listed or eligible for listing in the National Register of Historic Places, the Register of Historic Kansas Places, or the Lawrence Register of Historic Places. The SHPO concurred that the proposed project will not adversely affect any National Register listed or National Register eligible properties.

**2. Was a survey of historic buildings and/or archeological sites done as part of the project?**

✓ Yes

Document and upload surveys and report(s) below.

For Archeological surveys, refer to HP Fact Sheet #6, Guidance on Archeological Investigations in HUD Projects.

**Additional Notes:**

A cultural resources survey was conducted by Goodwin & Associates Inc (Goodwin) of the area of potential affect, 5.26 acres at 5015 Legends Drive and 1311 Research Park Drive, Lawrence, Douglas County, Kansas on behalf of the Lawrence-Douglas County Housing Authority. The organization is proposing to construct new, low-income housing at this location. Survey methods included pedestrian inspection and excavation of shovel tests across the 5.26-acre area. Goodwin identified one historical archeological site, 14DO262, the Lawrence Dragway Complex, in the Project Area. The Lawrence Dragway Complex site consists of the remains of a dragway and quarter-midget track as well

as a sparse historical artifact scatter. The Lawrence Dragway Complex was in use as an automotive racing location from 1958 through 1986. Site 14DO262 does not satisfy the National Register criteria for evaluation (36 CFR 60.4 [a-d]), and Goodwin recommends it not eligible for listing in the National Register of Historic Places. No further work is recommended at 14DO262. Goodwin recommends a finding of "no historic properties present" for the Project at 5015 Legends Drive and 1311 Research Park Drive.

No

***Step 3 –Assess Effects of the Project on Historic Properties***

Only properties that are listed on or eligible for the National Register of Historic Places receive further consideration under Section 106. Assess the effect(s) of the project by applying the Criteria of Adverse Effect. (36 CFR 800.5)] Consider direct and indirect effects as applicable as per guidance on direct and indirect effects.

**Choose one of the findings below - No Historic Properties Affected, No Adverse Effect, or Adverse Effect; and seek concurrence from consulting parties.**

No Historic Properties Affected

✓ No Adverse Effect

Based on the response, the review is in compliance with this section.

**Document reason for finding:**

The SHPO has determined that the proposed project will not adversely affect any property listed or determined eligible for listing in the National Register.

**Does the No Adverse Effect finding contain conditions?**

Yes (check all that apply)

✓ No

Based on the response, the review is in compliance with this section. Document and upload

concurrency(s) or objection(s) below.

Adverse Effect

**Screen Summary**

**Compliance Determination**

Based on Section 106 consultation the project will have No Adverse Effect on historic properties. Conditions: None. Upon satisfactory implementation of the conditions, which should be monitored, the project is in compliance with Section 106.

**Supporting documentation**

[LDCHA Archaeology Report.pdf](#)

[14DO262 Site Inventory Form.pdf](#)

[Letters to Tribes.pdf](#)

[SHPO Response 7-12-24.pdf](#)

[SHPO Consultation Letter 7-5-24.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

✓ No

## Noise Abatement and Control

General requirements	Legislation	Regulation
HUD's noise regulations protect residential properties from excessive noise exposure. HUD encourages mitigation as appropriate.	Noise Control Act of 1972  General Services Administration Federal Management Circular 75-2: "Compatible Land Uses at Federal Airfields"	Title 24 CFR 51 Subpart B

**1. What activities does your project involve? Check all that apply:**

- New construction for residential use

NOTE: HUD assistance to new construction projects is generally prohibited if they are located in an Unacceptable zone, and HUD discourages assistance for new construction projects in Normally Unacceptable zones. See 24 CFR 51.101(a)(3) for further details.

Rehabilitation of an existing residential property

A research demonstration project which does not result in new construction or reconstruction

An interstate land sales registration

Any timely emergency assistance under disaster assistance provision or appropriations which are provided to save lives, protect property, protect public health and safety, remove debris and wreckage, or assistance that has the effect of restoring facilities substantially as they existed prior to the disaster

None of the above

**4. Complete the Preliminary Screening to identify potential noise generators in the vicinity (1000' from a major road, 3000' from a railroad, or 15 miles from an airport).**

**Indicate the findings of the Preliminary Screening below:**

There are no noise generators found within the threshold distances above.

- ✓ Noise generators were found within the threshold distances.

5. **Complete the Preliminary Screening to identify potential noise generators in the**

- ✓ Acceptable: (65 decibels or less; the ceiling may be shifted to 70 decibels in circumstances described in §24 CFR 51.105(a))

Indicate noise level here: 57

Based on the response, the review is in compliance with this section. Document and upload noise analysis, including noise level and data used to complete the analysis below.

Normally Unacceptable: (Above 65 decibels but not exceeding 75 decibels; the floor may be shifted to 70 decibels in circumstances described in §24 CFR 51.105(a))

Unacceptable: (Above 75 decibels)

HUD strongly encourages conversion of noise-exposed sites to land uses compatible with high noise levels.

Check here to affirm that you have considered converting this property to a non-residential use compatible with high noise levels.

Indicate noise level here: 57

Document and upload noise analysis, including noise level and data used to complete the analysis below.

### **Screen Summary**

#### **Compliance Determination**

Noise Assessment was conducted. The noise level was Acceptable: 57 dB. See noise analysis. The Lawrence Regional Airport (LWC) is located within 15 miles of the project site. The attached Lawrence Regional Airport Master Plan Noise Exposure Contour maps indicate that the 65 DNL noise contour does not extend off airport property and does not affect any noise-sensitive land uses. Using the attached FAA Airport Master Record for LWC and the attached HUD provided Small Airport Noise Worksheet, it was assumed the noise attributed to the airplanes would not extend

beyond the boundaries of the airport. The Vinland Valley Aerodrome (K64) is located within 15 miles of the project site. Using the attached FAA Airport Master Record for K64 and the attached HUD provided Small Airport Noise Worksheet, it was assumed the noise attributed to the airplanes would not extend beyond the boundaries of the airport. The project site is not within 3,000' of a railroad. The project site is within 1000' of one major roadway. Wakarusa Drive is a 4-lane major arterial road. As described in the HUD Noise Guidebook, when the locations of dwellings have not yet been specified at the time of the noise assessment of a site is made, distances used in the noise assessment should be measured as 2 meters (6.5') less than the distance from the building setback line to the major sources of noise. The Noise Assessment Location (NAL) used for the distance to Wakarusa Drive is 792'. City Streets 24-hour traffic counts obtained in May and June 2019 from KDOT indicate an average count of 16,035 vehicles on Wakarusa Drive. Individual breakdown of the number of autos, medium trucks, and heavy trucks were not available. Using the attached HUD provided Vehicle Class Distribution by Road Type for the State of Kansas, the noise calculation used 95.4% for autos, 1.4% for medium trucks, and 3.23% for heavy trucks. Using the attached HUD provided ADT Data Projection Worksheet for Noise, the AADT was projected out for 10 years and used in the attached HUD DNL Calculator. The project is in compliance with HUD's Noise regulation.

**Supporting documentation**

[Noise Abatement and Control EA Worksheet packet.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

✓ No

## Sole Source Aquifers

General requirements	Legislation	Regulation
<b>The Safe Drinking Water Act of 1974 protects drinking water systems which are the sole or principal drinking water source for an area and which, if contaminated, would create a significant hazard to public health.</b>	Safe Drinking Water Act of 1974 (42 U.S.C. 201, 300f et seq., and 21 U.S.C. 349)	40 CFR Part 149

1. Does the project consist solely of acquisition, leasing, or rehabilitation of an existing building(s)?

Yes

No

2. Is the project located on a sole source aquifer (SSA)?

A sole source aquifer is defined as an aquifer that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. This includes streamflow source areas, which are upstream areas of losing streams that flow into the recharge area.

No

Based on the response, the review is in compliance with this section. Document and upload documentation used to make your determination, such as a map of your project (or jurisdiction, if appropriate) in relation to the nearest SSA and its source area, below.

Yes

### Screen Summary

#### Compliance Determination

The project is not located on a sole source aquifer area. The project is in compliance with Sole Source Aquifer requirements.

#### Supporting documentation



[Sole Source Aquifers Worksheet Packet.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

✓ No

## Wetlands Protection

General requirements	Legislation	Regulation
Executive Order 11990 discourages direct or indirect support of new construction impacting wetlands wherever there is a practicable alternative. The Fish and Wildlife Service's National Wetlands Inventory can be used as a primary screening tool, but observed or known wetlands not indicated on NWI maps must also be processed. Off-site impacts that result in draining, impounding, or destroying wetlands must also be processed.	Executive Order 11990	24 CFR 55.20 can be used for general guidance regarding the 8 Step Process.

**1. Does this project involve new construction as defined in Executive Order 11990, expansion of a building's footprint, or ground disturbance? The term "new construction" shall include draining, dredging, channelizing, filling, diking, impounding, and related activities and any structures or facilities begun or authorized after the effective date of the Order**

No

Yes

**2. Will the new construction or other ground disturbance impact an on- or off-site wetland? The term "wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.**

**"Wetlands under E.O. 11990 include isolated and non-jurisdictional wetlands."**

No, a wetland will not be impacted in terms of E.O. 11990's definition of new construction.

Based on the response, the review is in compliance with this section. Document and upload a map or any other relevant documentation below which explains your determination

Yes, there is a wetland that be impacted in terms of E.O. 11990's definition of new construction.

### **Screen Summary**

#### **Compliance Determination**

The National Wetlands Inventory (NWI) Wetlands Mapper was used to review any on- or off-site wetlands near the project site. The project will not impact on- or off-site wetlands. The project is in compliance with Executive Order 11990. See attached Wetlands Protection Worksheet packet.

**Supporting documentation**

[Wetlands Protection Worksheet packet.pdf](#)

**Are formal compliance steps or mitigation required?**

Yes

✓ No

## Wild and Scenic Rivers Act

General requirements	Legislation	Regulation
The Wild and Scenic Rivers Act provides federal protection for certain free-flowing, wild, scenic and recreational rivers designated as components or potential components of the National Wild and Scenic Rivers System (NWSRS) from the effects of construction or development.	The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287), particularly section 7(b) and (c) (16 U.S.C. 1278(b) and (c))	36 CFR Part 297

### 1. Is your project within proximity of a NWSRS river?

✓ No

Yes, the project is in proximity of a Designated Wild and Scenic River or Study Wild and Scenic River.

Yes, the project is in proximity of a Nationwide Rivers Inventory (NRI) River.

### Screen Summary

#### **Compliance Determination**

There are no Wild and Scenic Rivers designated in the state of Kansas. (Source: National Wild and Scenic Rivers System website); per the same site, there are no active or pending river studies in Kansas. Per the National Rivers Inventory system, there is one river in Douglas County on the list: The Kansas River NRI River Segment. The Outstandingly Remarkable Values of this river segment are listed as: Cultural, Fish, Recreational, Scenic, and Wildlife. Per HUD's Wild and Scenic Rivers website: "Boundaries for protected rivers generally extend one-quarter mile from either bank in the lower 48 states and one-half mile on rivers outside national parks in Alaska in order to protect river-related values." The project site is not located in a .25-mile proximity of the Kansas River NRI River Segment, therefore no adverse effects will occur. The project is not a water resources project that could affect the free-flowing condition of the river. The project is in compliance with the Wild and Scenic Rivers Act. See attached Wild and Scenic Rivers Worksheet packet.

#### **Supporting documentation**

[Wild and Scenic Rivers Worksheet packet.pdf](#)

#### **Are formal compliance steps or mitigation required?**

Yes

✓ No

## Environmental Justice

General requirements	Legislation	Regulation
Determine if the project creates adverse environmental impacts upon a low-income or minority community. If it does, engage the community in meaningful participation about mitigating the impacts or move the project.	Executive Order 12898	

**HUD strongly encourages starting the Environmental Justice analysis only after all other laws and authorities, including Environmental Assessment factors if necessary, have been completed.**

**1. Were any adverse environmental impacts identified in any other compliance review portion of this project's total environmental review?**

Yes

No

Based on the response, the review is in compliance with this section.

### Screen Summary

#### **Compliance Determination**

No adverse environmental impacts were identified in the project's total environmental review. The project is in compliance with Executive Order 12898.

#### **Supporting documentation**

**Are formal compliance steps or mitigation required?**

Yes

No



U.S. Department of Housing and Urban  
Development  
451 Seventh Street, SW  
Washington, DC 20410  
[www.hud.gov](http://www.hud.gov)  
[espanol.hud.gov](http://espanol.hud.gov)

## Environmental Assessment Determinations and Compliance Findings for HUD-assisted Projects 24 CFR Part 58

### Project Information

**Project Name:** LDCHA-Legends-Housing

**HEROS Number:** 900000010400502

**Project Location:** 5015 Legends Dr, Lawrence, KS 66049

#### **Additional Location Information:**

Two adjoining parcels located at 5015 Legends Dr and 1311 Research Park Dr.

#### **Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:**

Lawrence-Douglas County Housing Authority intends to purchase vacant adjoining parcels for the future development of affordable housing. The preliminary plan is to build six 4-plexes and one 6-plex designated for seniors on 5015 Legends Drive, for a total of 30 units. On 1311 Research Park Drive, the preliminary plan is to build two duplexes and four 8-plexes for a total of 36 units.

### Funding Information

Grant Number	HUD Program	Program Name	
4	Public Housing	MTW Block Grant	\$0.00

**Estimated Total HUD Funded Amount:** \$725,000.00

**Estimated Total Project Cost [24 CFR 58.2 (a) (5)]:** \$6,225,000.00

### Mitigation Measures and Conditions [CFR 1505.2(c)]:

Summarized below are all mitigation measures adopted by the Responsible Entity to reduce, avoid or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Law, Authority, or Factor	Mitigation Measure or Condition
Contamination and Toxic Substances	Upon completion of construction, a licensed radon professional will test for radon levels and any units

	that reach indoor air radon levels at or above 4 piC/L must have a radon reduction system installed, post-installation testing by a licensed radon professional, and an ongoing maintenance plan to ensure the system is operating as intended.
Permits, reviews, and approvals	The project will go through development review with the City of Lawrence. Building permits must be obtained before the project can begin.

**Project Mitigation Plan**


Upon completion of construction, a licensed radon professional will test for radon levels and any units that reach indoor air radon levels at or above 4 piC/L must have a radon reduction system installed, post-installation testing by a licensed radon professional, and an ongoing maintenance plan to ensure the system is operating as intended. The project design/build contractor will be required to submit these reports and plans to the City of Lawrence Housing Initiatives Division. The City of Lawrence Housing Initiatives Division will attach these reports and plans to the environmental review.

**Determination:**

<input checked="" type="checkbox"/>	Finding of No Significant Impact [24 CFR 58.40(g)(1); 40 CFR 1508.13] The project will not result in a significant impact on the quality of human environment
<input type="checkbox"/>	Finding of Significant Impact

Preparer Signature: Caitlyn Dolar Date: 08/27/24

Name / Title/ Organization: Caitlyn Dolar / / LAWRENCE

Certifying Officer Signature:  Digitally signed by Jeff Crick  
Date: 2024.08.27 12:23:44  
-05'00' Date: 8/27/24

Name/ Title: Jeff Crick, Planning & Development Services Director

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environment Review Record (ERR) for the activity / project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).





# Agenda Item Report

## Planning Commission - Apr 22 2024

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Department	Staff Contact
Planning & Development Services	Sandra Day, Planner II

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### Recommendations

Consider approving a request to rezone, Z-24-1000, approximately 3.16 acres from IBP (Industrial Business Park) District to RM12 (Multi-Dwelling Residential) District, located at 5015 Legends Drive. Submitted by Hernly Associates on behalf of Lawrence Douglas County Housing Authority, developer, Mazda LLC, property owner of record. and Consider approving a request to rezone, Z-24-1001, approximately 2.83 acres from IBP (Industrial/Business Park) District to RM15 (Multi-Dwelling Residential) District, located at 1311 Research Park Drive. Submitted by Hernly Associates, on behalf of Mazda LLC, property owner of record.

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### Executive Summary

The staff report includes two specific properties. Each property is associated with a specific zoning district as follows.

1. Z-24-1000, 5015 Legends Drive, Proposed RM12.
2. Z-24-1001, 1311 Research Park Drive, Proposed RM15.

Both the RM districts are considered to be medium density residential land uses with a maximum of 12 dwelling units per acre and 15 dwelling units per acre, respectfully. The intent of the request is for affordable housing, per the Lawrence Douglas County Housing Authority as the applicant of these requests.

While the agenda item and staff report are combined, the Planning Commission must take separate action on each request.

### Alignment to Strategic Plan

Strong, Welcoming Neighborhoods

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### Action Requested

Approve the request to rezone, Z-24-1000, approximately 3.16 acres from IBP (Industrial Business Park) District to RM12 (Multi-Dwelling Residential) District, located at 5015 Legends Drive, based on the findings presented in the staff report and forwarding it to the City Commission with a recommendation for approval.

And,

Approve the request to rezone, Z-24-1001, approximately 2.83 acres from IBP (Industrial Business Park) District to RM15 (Multi-Dwelling Residential) District, based on the findings presented in the staff report and forwarding it to the City Commission with a recommendation for approval.

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**Attachments**

[Staff Report](#)

[Page Map](#)

[Concept Plan](#)

[Communications \(Updated 4/22/24\)](#)

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PLANNING COMMISSION REPORT

PC Staff Report  
04/22/2024

IBP (INDUSTRIAL BUSINESS PARK) DISTRICT TO RM12 (MULTI-DWELLING RESIDENTIAL) DISTRICT; 3.16 ACRES.

And

IBP (INDUSTRIAL BUSINESS PARK) DISTRICT TO RM15 (MULTI-DWELLING RESIDENTIAL) DISTRICT; 2.83 ACRES.

Z-24-1000: Consider a request to rezone approximately 3.16 acres from IBP (Industrial Business Park) District to RM12 (Multi-Dwelling Residential) District, located at 5015 Legends Drive. Submitted by Hernly Associates on behalf of Lawrence Douglas County Housing Authority, developer, MAZDA LLC, property owner of record.

And

Z-24-1001: Consider a request to rezone approximately 2.83 acres from IBP (Industrial/Business Park) District to RM15 (Multi-Dwelling Residential) District, located at 1311 Research Park Drive. Submitted by Hernly Associates, on behalf of Mazda LLC, property owner of record.

*Note: A separate motion is required for each zoning request.*

STAFF RECOMMENDATION Z-24-1000: Staff recommends approval of 3.16 acres from IBP (Industrial Business Park) District to RM12 (Multi-Dwelling Residential) District based on the findings presented in the staff report and forwarding it to the City Commission with a recommendation for approval.

STAFF RECOMMENDATION Z-24-1001: Staff recommends approval of 2.83 acres from IBP (Industrial Business Park) District to RM15 (Multi-Dwelling Residential) District based on the findings presented in the staff report and forwarding it to the City Commission with a recommendation for approval.

*Reason for Request: Parcels are currently zoned IBP (Industrial Business Park) District which does not allow for any residential use of any kind. Rezoning would allow for housing to be constructed on these parcels.*

KEY POINTS/FINDINGS

- See communication packet for comments provided by the public prior to the public hearing.
- Both properties are part of the Industrial Business Park District industrial area.
- The RM12 District is a medium density<sup>1</sup> residential district with a maximum allowed density of 12 dwelling units per acre. The maximum number of units permitted in the RM12 district would be 30, if all setbacks, off-street parking, and landscape design

<sup>1</sup> Residential Density designation [table](#).

<p>standards could be met. Proposed for 5015 Legends Drive</p> <ul style="list-style-type: none"> <li>The RM15 District is also a medium density residential district with a maximum allowed density of 15 dwelling units per acre. The maximum number of units permitted in this RM15 District would be 36, if all setbacks, off-street parking, and landscape design standards could be met. Proposed for 1311 Research Park Drive.</li> <li>The subject properties is located within the existing city limits, Tier 1 per <a href="#">Plan 2040</a>.</li> <li>The properties does not include any environmentally sensitive land as defined in the Land Development Code.</li> <li>There is no existing area, neighborhood, nodal or district plan that includes the subject properties.</li> <li>The properties are currently vacant/undeveloped.</li> <li>The properties have been zoned as IBP (Industrial Business Park) District since 2006.</li> <li>The proposed development would be considered infill development.</li> <li>The area to the north and west of 5015 Legends Drive is zoned RM12D and developed with duplex housing.</li> <li>The area to the east and south of 1311 Legends Drive is zoned IBP and IL (with conditions) and includes both developed land and vacant land.</li> </ul>
<p><b>PLANS AND STUDIES REQUIRED</b></p> <ul style="list-style-type: none"> <li><i>Downstream Sanitary Sewer Analysis</i> – Additional documentation requested to assess impact of increased residential density in area. This requirement will be addressed with the submission of a future subdivision or site plan application.</li> </ul>
<p><b>ATTACHMENTS</b>          Attachment A: Area Map          Attachment B: Concept Plan</p>

**PROJECT SUMMARY:**

The proposed zoning request is intended to support permanently affordable housing development that could include both family and senior housing.

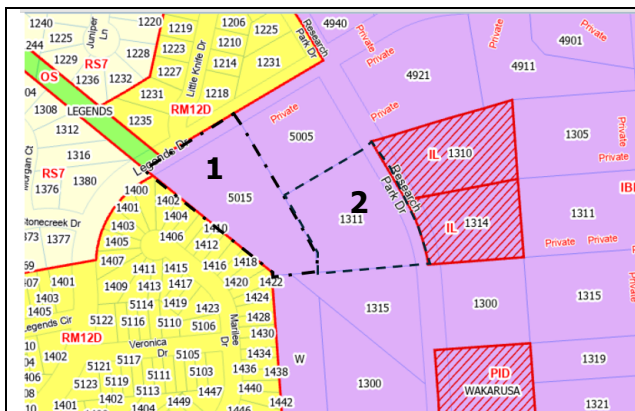


Figure 1. Existing Zoning - IBP (Industrial Business Park) District. Subject properties outlined in dashed lines.

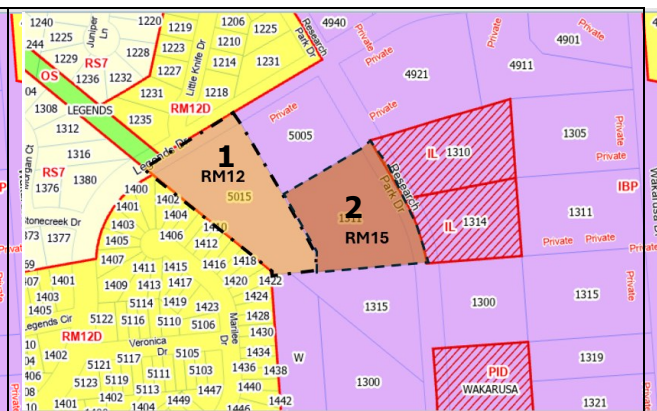


Figure 2. Proposed Zonings - RM12 and RM15 (Multi-Dwelling Residential) Districts

- Z-24-1000 includes 2.55 acres (5015 Legends Drive excluding right-of-way)
- Z-24-1001 includes 2.45 acres (1311 Research Park Drive excluding right-of-way)

- CONFORMANCE WITH THE COMPREHENSIVE PLAN**  
 Applicant’s Response: *“Plan 2040 specifies two goals that this request conforms to and furthers the goals of the plans. First, it aims to “strengthen neighborhoods ties to*

*the larger Lawrence community” and second, “create complete neighborhoods that mix compatible land uses, include varied housing types and prices, and provide services and amenities to residents of all ages.”*

The framework of [Plan 2040](#) is to create and maintain places to “Live”, “Work”, “Learn”, “Play”<sup>2</sup>

- *Places and neighborhoods that encourage healthy living for all ages.*
- *Investment in a growing population with diverse economic opportunities, including local businesses, new primary employers, and thriving creative arts and entrepreneurial communities.*
- Dedication and access to high-quality lifelong learning.
- A thriving mix of activity centers, schools, and parks/trails within walking and biking distance of residential uses.

Land use visions, goals and action items are set out in the applicable chapters of *Plan 2040*. Neighborhoods are essential building blocks within the incorporated city limits. The proposed application would facilitate the creation of new residential uses within the West Lawrence Neighborhood. The plan prioritizes infill development as a key growth management practice. Since this property is located within Tier 1, readers should refer to the goals, policies and action items found on [pages 28 and 29 of Plan 2040](#). Ensuring compatibility of design is a function of the site plan review as a future administrative application. *Plan 2040* does not include any location criteria for residential development.

There are no environmental or natural resources (sensitive lands) within the boundary of the proposed zoning district subject to protections recommended in *Plan 2040* or proscribed in the Land Development Code.

*Plan 2040* does recommend the community “provide sites to meet the future needs of the community”.<sup>3</sup> The subject property is part of an area long been identified for a specific type of industrial development but the length of time the property has been vacant belies the suitability for the property as zoned.

Staff Finding – *Plan 2040* does not provide a specific land use recommendation for this area. However, the plan does include general goals and policies applicable to new neighborhood development. This includes having a mix of housing types and related uses.

### 3. ZONING AND USE OF NEARBY PROPERTY, INCLUDING OVERLAY ZONING

See map attached to staff report for zoning summary.

- *To the north and west:* RM12D (Multi-Dwelling Residential – Duplex) District. Developing residential subdivision along the north side of Legends Drive. This same zoning district is also located along the west property line of 5015 Legends Drive.
- *To the east and south:* IBP to the immediate east and south, IBP (Industrial Business Park) District and IL (Light Industrial) to the east of Research Park Drive. Childcare, 5005 Legends Drive, developed and undeveloped/vacant lots to the east of Research Park Drive. Undeveloped lots to the south.

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<sup>2</sup> Plan 2040, Chapter 1, Introduction pages 4-5.

<sup>3</sup> Chapter 3, Section D. Industrial, [Goal 3](#)



**Staff Finding** – The subject property is adjacent to residential uses and zoning to the north and west, vacant land to the south, and an existing school/childcare use to the east. The surrounding zoning and lands uses are listed in the table above.

3. CHARACTER OF THE NEIGHBORHOOD

Applicant’s Response *“The character of the neighborhood is of a typical and average modern suburban development with large front setbacks and large parking lots. Landscaping is limited with only the required landscaping trees fronting the right of way with little to no original vegetation remaining. There is a small Montessori school to the north of the property. But since the property is vacant, it sits on a visual island with little to no infrastructure of any kind to tie it to the surrounding area. To the east and north-east sit a few medium sized industrial type building as is to be expected given the existing zoning designation.”*

The subject properties are located in the West Lawrence neighborhood. This is one of the largest neighborhoods in the community. The neighborhood boundary extends east to Wakarusa Drive, Clinton Parkway marks the southern boundary, and the South Lawrence Trafficway marks the western boundary. The neighborhood extends to Peterson Road to the north. The neighborhood includes commercial uses located along Wakarusa Drive, W. 6<sup>th</sup> Street and the intersections of Wakarusa Drive with Clinton Parkway, and a developing commercial node at Bob Billings Parkway and the South Lawrence Trafficway.

Most of the IBP (Industrial Business Park) District is located within the neighborhood boundary, on the west side of Wakarusa Drive. The neighborhood is largely developed with low density residential land uses (RS5, RS-5PD, RS7, RS10, RS20, and PRD districts). Duplex development and multi-dwelling residential development make up a combined 17% of the neighborhood. Area circled in red includes the IBP (Industrial Businesses Park) District

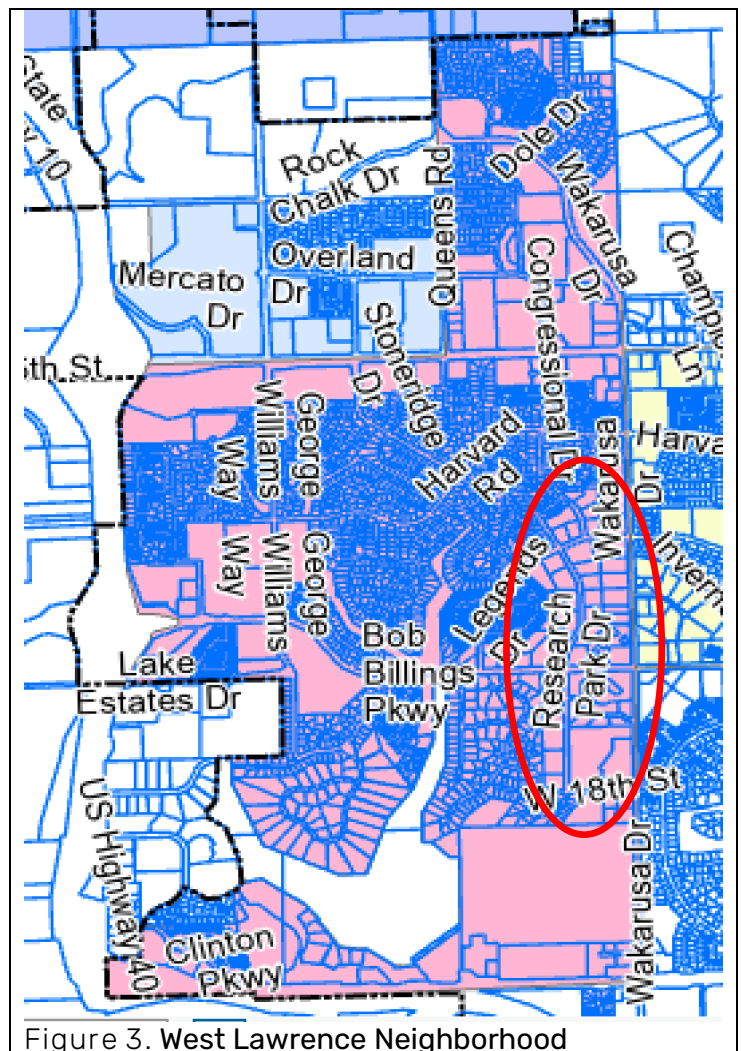


Figure 3. West Lawrence Neighborhood

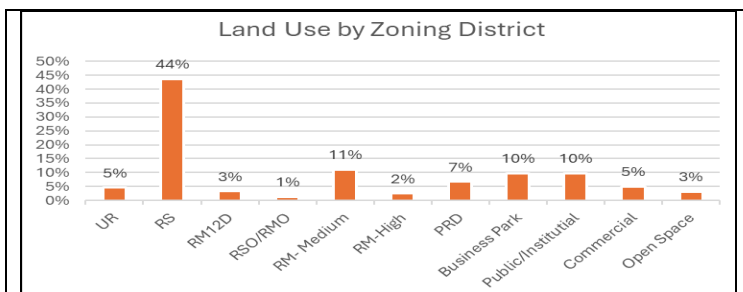


Figure 4. Land Use Distribution of West Lawrence Neighborhood

**Staff Finding** – The subject property is currently located in an established neighborhood that includes a range of land uses. Staff concurs with the applicant’s description of the immediate surrounding area.

4. PLANS FOR THE AREA OR NEIGHBORHOOD, AS REFLECTED IN ADOPTED AREA AND/OR SECTOR PLANS INCLUDING THE PROPERTY OR ADJOINING PROPERTY  
Applicant's Response *"Not applicable - this area does not have an area plan."*

Staff Finding – There is no adopted area or sector plan that includes 5015 Legends Drive and 1311 Research Park Drive.

5. SUITABILITY OF SUBJECT PROPERTY FOR THE USES TO WHICH IT HAS BEEN RESTRICTED UNDER THE EXISTING ZONING REGULATIONS  
Applicant's Response: *"The majority of the allowed uses under the existing zoning designation are unlikely to be utilized. Research Park Drive has evolved to become a natural separation of intensity with lower intensity uses to the west and higher to the east. The presence of the school, an influx of doctors' offices, a dance studio and martial arts studio, and the overarching reality of how the surrounding land has developed, the nature and character of the property has decreased in intensity from the original intent of the IBP zoning. While these uses are all allowed under the IBP, they are all on the lower end of the use-intensity gradient, ultimately changing the character and nature of the neighborhood"*

The properties are underutilized given the long vacancy and surrounding development pattern. Historically, few lots have been developed within the industrial business park that meet the purpose<sup>4</sup> of the district as a *"low impact employment and manufacturing use"* district.

The neighborhood character is dominated by low density residential uses. The proposed request would facilitate development of an alternative housing typology then detached or duplex dwelling units.

The proposed zonings provide a land use transition between intensive land uses located along Wakarusa Drive and the developed low-density residential neighborhoods to the north and west.

Staff Finding – Development of the properties require rezoning to an applicable district listed in the Land Development Code to accommodate multi-dwelling residential development. The IBP (Industrial Business Park) District is not suitable for medium density residential development.

6. LENGTH OF TIME SUBJECT PROPERTY HAS REMAINED VACANT AS ZONED  
Applicant's Response: *"This property has never been developed. Additionally, Lawrence GIS imagery indicates that only 4 or so buildings have been constructed in the vicinity under this zoning designation in the past 25 year or so indicating that demand for the IBP zoning in this particular area is not as anticipated."*

The M-1 (Research Industrial) District, the predecessor to the current zoning district, was established through multiple annexation and rezoning actions occurring between 1983 and 2003. The IBP (Industrial Business Park) District was established in 2006 with the adoption of the Land Development Code.

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<sup>4</sup> Purpose statement for district found in [Section 20-214](#) of the Land Development Code.

Staff Finding – The properties have remained vacant/undeveloped as zoned. The current zoning has been in place since the adoption of the Land Development Code in 2006.

7. EXTENT TO WHICH APPROVING THE REZONING WILL DETRIMENTALLY AFFECT NEARBY PROPERTIES

Applicant’s Response: *“There will be little to no negative effects on the nearby properties. Vacant lots are of a greater detriment than what is being proposed.”*

The proposed requests are a substantial change from the anticipated development pattern of non-residential uses south of Legend Drive. Appropriate buffer yards between RM and IBP zoning will be required. No such bufferyard standards are applicable between RM and RM12D districts. This design standard would be applicable along the west property line of the property and may be perceived by adjacent property owners as undesirable depending on the specific arrangement of buildings, parking, vehicular circulation, open space, and other physical components of development. The following graphic shows how the proposed uses would intersect with existing uses in the area and what mitigations are provided by the Land Development Code.

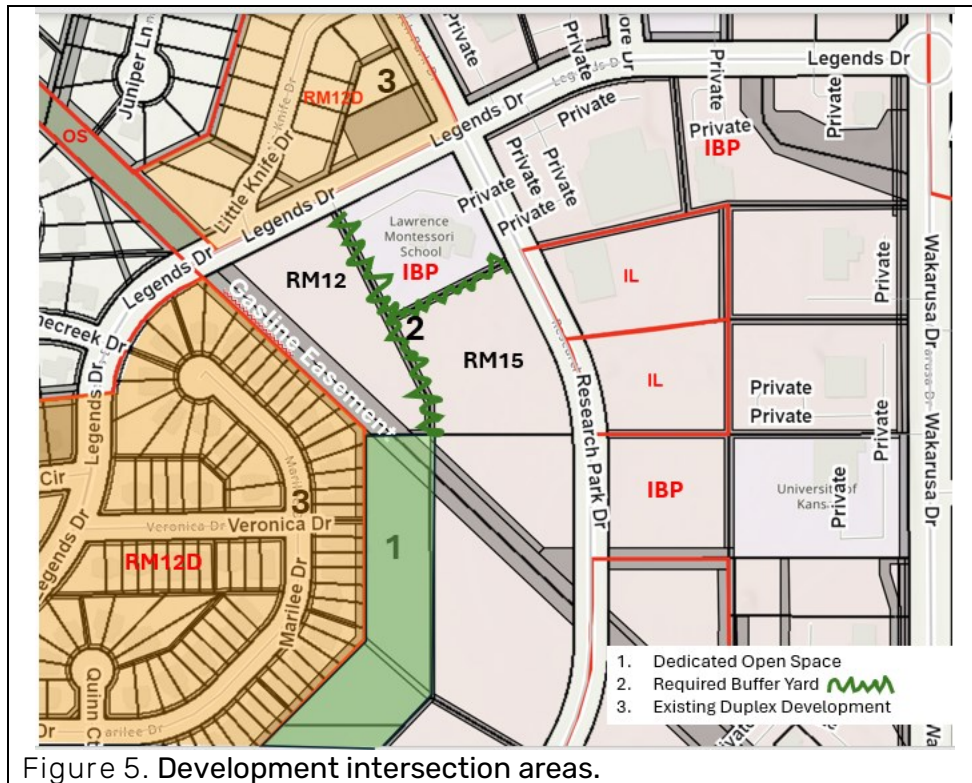


Figure 5. Development intersection areas.

Staff Finding – While the Land Development Code considers the change substantial, the effects on nearby properties can be addressed through the design and details provided as part of the site planning process.

8. THE GAIN, IF ANY, TO THE PUBLIC HEALTH, SAFETY AND WELFARE DUE TO THE DENIAL OF THE APPLICATION, AS COMPARED TO THE HARDSHIP IMPOSED UPON THE LANDOWNER, IF ANY, AS A RESULT OF DENIAL OF THE APPLICATION

Applicant’s Response: *“Creating additional housing options within a walkable distance of a school and the development and elimination of vacant lots will help activate the area. Neighborhoods that are walkable and that have diverse populations with a*



*variety of housing options create healthy communities. The alternative is for the property to sit and remain undeveloped for an additional 25 plus years as it has done since the business park was first developed. It is clear that the original use and designated zoning of IBP, while perhaps well-intentioned, is not what is desired in this particular area.”*

Evaluation of this criterion includes weighing the benefits to the public versus the benefit of the owners of the subject property. Benefits are measured based on anticipated impacts of the rezoning request on the public health, safety, and welfare.

Denial of the applications require the applicant to consider other undeveloped property to meet the needs for a proposed residential development. The proposed rezonings will facilitate the activation of undeveloped property within the city and provide needed housing for the neighborhood.

Staff Finding – Gain to the public is associated with the creation of additional residential housing units.

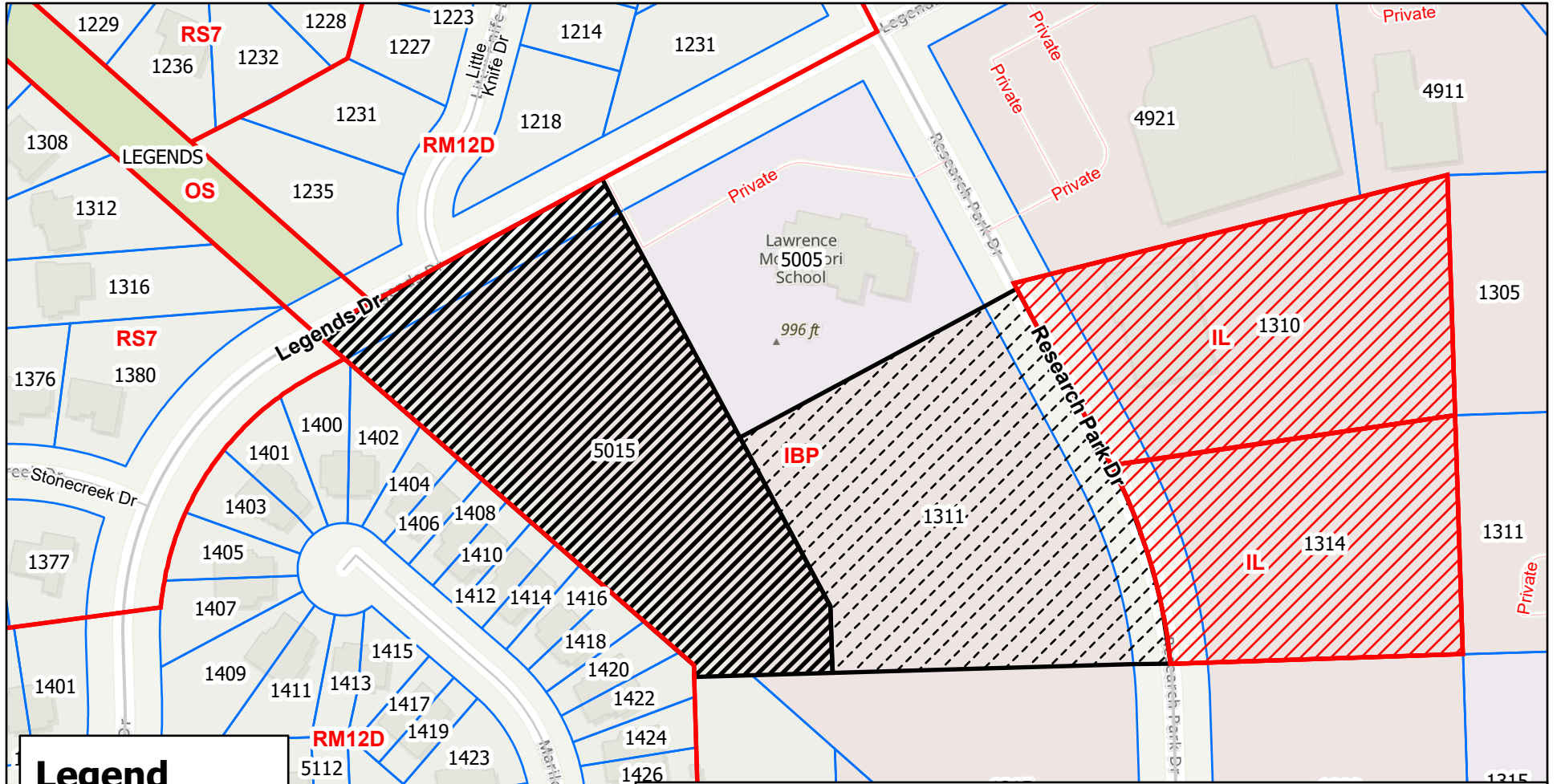
## 9. PROFESSIONAL STAFF RECOMMENDATION

The applicant has been notified during the review that extensive infrastructure will be required to support residential development including the extension of sanitary sewer service and water line extensions. The developer would be responsible for the cost of construction and any downstream improvements. The City would then be responsible for any maintenance of public infrastructure to serve the proposed development. There is no estimated cost assessment available at this time. This assessment is the purview of City Staff and the City Commission and will be assessed with the submission of future documents including any subdivision or site plan application as required by the Land Development Code or code updates. The purpose of providing this information with the rezoning is to advise the applicant of the additional concern that must be addressed with the proposed land use change. Documentation will be required with a future subdivision and site plan application as applicable.

The proposed land use change would accommodate the Lawrence Housing Authority’s plan to provide additional permanently affordable housing.

## CONCLUSION

Staff supports the proposed requests for RM12 and RM15 rezoning. Additional land use approvals will be required for development including subdivision and site plan applications as applicable. The applicant will need to work closely with city staff to develop the necessary public improvement plans to serve the property.



**Legend**

**Zoning Layers**

- Conditional Zoning
- Lawrence Zoning
- Parcels
- Z-24-1000
- Z-24-1001

**Z-24-1000: Consider a request to rezone approximately 3.16 acres from IBP (Industrial/Business Park) District to RM12 (Multi-Dwelling Residential) District, located at 5015 Legends Drive.**

**Z-24-1001: Consider a request to rezone approximately 2.83 acres from IBP (Industrial/Business Park) District to RM15 (Multi-Dwelling Residential) District, located at 1311 Research Park Drive.**



**DISCLAIMER**  
 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.

**NOTICE**





**RM12:**  
 7 BUILDINGS  
 4 UNITS PER BUILDING  
 28 UNITS x 3 BEDS PER UNIT = 84 BEDS

**RM15:**  
 6 BUILDINGS  
 8 UNITS PER BUILDING  
 48 TOTAL UNITS  
 48 UNITS x 2 BEDROOMS PER DWELLING  
 = 96 BEDROOMS

1 CONCEPT PLAN  
 1" = 40'-0"

AS1.0

DATE: 2/26/2016  
 DRAWN BY: WCT/TA  
 CHECKED BY: WCT/TA  
 REVISIONS:

**Henry**  
 ARCHITECTS  
 11000 Redwood Avenue  
 Lawrenceville, GA 30046  
 770-962-5898

**DRAG STRIP COMMUNITY DEVELOPMENT**  
 5015 LEGENDS DRIVE & 1311 RESEARCH PARK DRIVE  
 LAWRENCEVILLE, GA 30046  
 Page 11 of 59

PARCEL 1 (0.86 ACRES)	
MAX # OF DWELLINGS PER ACRE	34.2
MIN #	34.2
MAX #	48.8
MIN #	48.8

PARCEL 2 (2.46 ACRES)	
MAX # OF DWELLINGS PER ACRE	29.4
MIN #	29.4
MAX #	50.8
MIN #	50.8

PARCEL 3 (5.31 ACRES)	
MAX # OF DWELLINGS PER ACRE	43.7
MIN #	43.7
MAX #	73.7
MIN #	73.7



# 1 SITE AREA PLAN

1" = 100'-0"

## DRAG STRIP COMMUNITY DEVELOPMENT

5015 LEGENDS DRIVE & 1311 RESEARCH PARK DRIVE  
 LAWRENCE, KS 66044



11000 Research Blvd  
 Lawrence, KS 66044  
 785-748-5886

ARCHITECTURAL SITE PLAN

Date: 2/20/2019  
 Drawn by: AMW  
 Checked by: [blank]  
 Revision: [blank]

AS1.1

**From:** jenn bihlmaier <jennifer.bihlmaier@gmail.com>  
**Sent:** Sunday, April 21, 2024 10:12 AM  
**To:** Planning Email <planning@lawrenceks.org>  
**Subject:** Rezoning concerns April 22nd meeting

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

Dear Ms Day,

We live on Stonecreek Drive with two young children, and we ask that the request to rezone the areas between Research and Legends Drive be denied. We are already concerned about the amount of traffic within our area, and we have reached out several times to the city of Lawrence, asking for speed humps. Our numerous requests were denied. There have been several instances where cars have sped through the area at such high speeds that they end up on the sidewalk. We walk on those sidewalks frequently with our young children.

In addition to traffic safety concerns, we are concerned about the devaluation of the homes within the area. Many of our neighbors were unaware of this proposal, and it doesn't feel as though there was an appropriate amount of signage or proper notice to allow for discussion prior to the hearing scheduled for April 22nd. It is our understanding that there must be at least 20 days of appropriate notification prior to this going up for discussion.

In addition to these concerns, we are worried about the influx of students this may create at our local elementary, Langston Hughes, as these homes would fall within that boundary. Our class sizes are already overstretched. Unfortunately, this may be a way to coerce families out of Lawrence, as education and safety are priorities for many families, including our own.

Lastly, this would drastically affect the wildlife habitat in this area. Owls, Coyotes, Deer, we see them all within this green space.

It is a sad reality that this is even being proposed. We strongly ask for reconsideration of rezoning this area for such a vast number of affordable housing complexes.

Kindly,

Drs Matt & Jennifer Bihlmaier



-----Original Message-----

From: Angela Gerling-Calixte <[angela.calixte@icloud.com](mailto:angela.calixte@icloud.com)>

Sent: Sunday, April 21, 2024 3:29 PM

To: Planning Email <[planning@lawrenceks.org](mailto:planning@lawrenceks.org)>

Subject: Drag Strip Community Development - Opposition

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

In response to the information that has been circulating about the development of 76 low income/Section 8 housing that is set to be developed on the intersection of Legends Drive and Research, I would like to voice my concern as a homeowner. I purchased my home a couple of blocks away from this location last year for \$500,000 - like all of my neighbors. If this proposal goes through, our property values are going to plummet! Why not find an empty space somewhere that would be more consistent with values around the area.

The last few years, Lawrence has really disappointed me with decisions that have been made for this city. It used to be a wonderful place to call home, but the longer I stay the more I question my choice.

Also, I have done extensive research and it seems as though there is a MAJOR gas line and fiber optic line that run through this land. How is this going to be handled? Or is it a ploy by the current land owner to get this approved for building then he is going to attempt to turn around and sell it to an outsider that doesn't know the area and make a large profit, since he bought it for very cheap.... Because it was known that this land would only be a "fantasy" for someone to build in.

I oppose this plan and will not be available to come to the meeting on April 22nd

Thank you!  
Angela Calixte  
Sent from my iPhone

**From:** Nancy Coup <nanapiebrown@gmail.com>  
**Sent:** Sunday, April 21, 2024 6:08 PM  
**To:** Planning Email <planning@lawrenceks.org>  
**Subject:** POD

**External Email. Be careful with links and attachments.**

*- City of Lawrence IT Helpdesk*

Please do not bring this type of housing into this area of existing homes. It will effect our property values as well as create low income buyers. We should have been informed before day before your meeting! Very Poor Notice

Nancy Coup  
1353 Stonecreek Dr  
R  
Lawrence KS 66049

-----Original Message-----

From: Marla Eriksen <[marlaeriksen@icloud.com](mailto:marlaeriksen@icloud.com)>

Sent: Sunday, April 21, 2024 3:15 PM

To: Planning Email <[planning@lawrenceks.org](mailto:planning@lawrenceks.org)>

Subject: Proposal for rezoning Z-24-1000 and Z-24-1001

External Email. Be careful with links and attachments.  
- City of Lawrence IT Helpdesk

We are writing to oppose the request to rezone Z-24-1000 to RM12 (4-plexes) and Z-24-1001 to RM15 (8-plexes). We live in a single-family home at 5016 Spruce St., to the north of this proposed development, that was built on a small lot in a new neighborhood that seems to have been built with housing density in mind. We like the quiet neighborhood where we feel safe walking and riding our bikes.

We appreciate what the developer is trying to do with this proposal to increase the number of affordable housing units in Lawrence, but we don't feel this is the location for it. Our main concern is how many families would be living in such a small area, bringing increased traffic to the area. The adjacent neighborhood to the west on Marilee Dr. has duplexes and we would support a development here that would continue that type of housing.

Thank you for your consideration.

Jeff and Marla Eriksen



**From:** Greg G <greg.grenard@gmail.com>  
**Sent:** Monday, April 22, 2024 9:46 AM  
**To:** Planning Email <planning@lawrenceks.org>  
**Subject:** Reasoning Request Z-24-1001

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

Dear Members of the Planning Commission,

I am writing to strongly urge the denial of rezoning request Z-24-1001 for the land in question. This request carries dangerous implications for our community, particularly for the majority of elderly retirees and young families with small children who reside in the vicinity.

Of utmost concern is the fact that the proposed rezoning would place our community's children, some as young as a few months old, at serious risk. The land in question is directly adjacent to a children's Montessori school, making the potential consequences of rezoning alarmingly tangible.

Furthermore, approving this rezoning request would not only jeopardize the safety of our children but also drastically alter the fabric of our entire community. The carefully crafted culture of this neighborhood, built upon the presence of retirees and families, would be irreparably damaged.

For these reasons, and many others, our community adamantly opposes the rezoning of this property. We implore the Planning Commission to prioritize the well-being of our residents and the integrity of our neighborhood by refusing this request.

Thank you for your attention to this matter.

Sincerely,

Greg Grenard

**From:** Rosemary Morris <rosemaryem2003@gmail.com>

**Sent:** Sunday, April 21, 2024 3:47 PM

**To:** Planning Email <planning@lawrenceks.org>

**Subject:** Public hearing on April 22, 2024 regarding re-zoning of industrial area within cross streets of Legends Drive and Research Park Drive. I oppose this re

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

re-zoning for the purpose of building affordable housing.

Rosemary E Morris  
5020 Spruce St  
Lawrence, KS 66049  
785-550-7245

-----Original Message-----

From: Katie Bohn <[katiebohn04@gmail.com](mailto:katiebohn04@gmail.com)>

Sent: Sunday, April 21, 2024 8:50 PM

To: Planning Email <[planning@lawrenceks.org](mailto:planning@lawrenceks.org)>

Subject: AGAINST 5015 Legends Rezoning

External Email. Be careful with links and attachments.  
- City of Lawrence IT Helpdesk

Good evening. I'd like to express our family's concern with the proposed rezoning of 5015 Legends Drive. We are strongly against allowing 8 and 4 plex units because of the additional traffic and safety concerns for us with young children who frequently walk and ride bikes. Stonecreek Drive is already become a highly trafficked short cut due all of the commercial businesses coming into the neighborhood. Our neighbors want to protect our property values. We are not interested in having an apartment complex right next to homes that \$500,000-\$600,000. Low income/affordable housing does suit our neighborhood. Also, our local elementary schools are already at capacity for their buildings. If an influx of new young students came to our school it would increase already too large of classroom sizes. Prime Martial arts already has an overflow parking issue when their business is in session. We want to maintain our single family neighborhood. Please considering an alternative site. We want to maintain our single family neighborhood feel. Residents across the street have new homes that are worth over \$600,000. Do you think family's in this area want to live next to a low income housing units? No!!! Please find another location.

Katie Naylor

Sent from my iPhone

-----Original Message-----

From: Tyler Naylor <naylorfitness@gmail.com>  
Sent: Sunday, April 21, 2024 9:47 PM  
To: Planning Email <planning@lawrenceks.org>  
Subject: 5015 Legends Zoning

External Email. Be careful with links and attachments.  
- City of Lawrence IT Helpdesk

> Good evening. I'd like to express our family's concern with the proposed rezoning of 5015 Legends Drive. We are strongly against allowing 8 and 4 plex units because of the additional traffic and safety concerns for us with young children who frequently walk and ride bikes. Stonecreek Drive is already become a highly trafficked short cut due all of the commercial businesses coming into the neighborhood. Our neighbors want to protect our property values. We are not interested in having an apartment complex right next to homes that \$500,000-\$600,000. Low income/affordable housing does suit our neighborhood. Also, our local elementary schools are already at capacity for their buildings. If an influx of new young students came to our school it would increase already too large of classroom sizes. Prime Martial arts already has an overflow parking issue when their business is in session. We want to maintain our single family neighborhood. Please considering an alternative site. We want to maintain our single family neighborhood feel. Residents across the street have new homes that are worth over \$600,000. Do you think family's in this area want to live next to a low income housing units? No!!! Please find another location.

>

> Tyler Naylor

-----Original Message-----

From: Perry Perkins <[plperkins@sunflower.com](mailto:plperkins@sunflower.com)>

Sent: Sunday, April 21, 2024 10:05 AM

To: Planning Email <[planning@lawrenceks.org](mailto:planning@lawrenceks.org)>

Cc: [plperkins@sunflower.com](mailto:plperkins@sunflower.com)

Subject: Public Hearing April 22

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

Regarding rezoning of land adjacent to the Montessori School at Legends and Research:

We strongly oppose the rezoning of this area to allow six 8-Plex and seven 4-Plex buildings. That would allow 76 families in a small area directly adjacent to the Montessori School. This potential dense housing development will cause more traffic, negatively impacting the safety of walkers and others in the area.

We already have some concerns about drainage in our general area; we don't need more such concerns.

We are concerned about how this high density development will impact our property values.

As retired educators, we would also have some concern about increasing enrollment in the area's elementary school. We assume a discussion between the city and school district has occurred.

We recognize this land will not and should not remain vacant forever. We support either or both single family homes such as those just built across Legends and the school, and/or duplexes such as directly adjacent to this property. We do not support the current planned development as proposed.

Thank you for your consideration.

Perry and Joyce Perkins  
1377 Stonecreek Drive  
Lawrence, Kansas 66049

Sent from my iPhone

**From:** Kathryn Sheedy  
**Sent:** Monday, April 22, 2024 9:39 AM  
**To:** Planning Email <planning@lawrenceks.org>  
**Subject:** Agenda Item Report: 5015 Legends Drive & 1311 Research Park Drive

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

Please withhold my contact information.

I'm writing in opposition to the requested rezoning of 5015 Legends Drive and 1311 Research Park Drive from Industrial Business Park District to Multi-Dwelling Residential District. While I appreciate the need for more affordable housing options within Lawrence, there is also a need, now and in the future, for business growth. Rezoning of these properties as proposed is inconsistent with the following goals of Plan 2040:

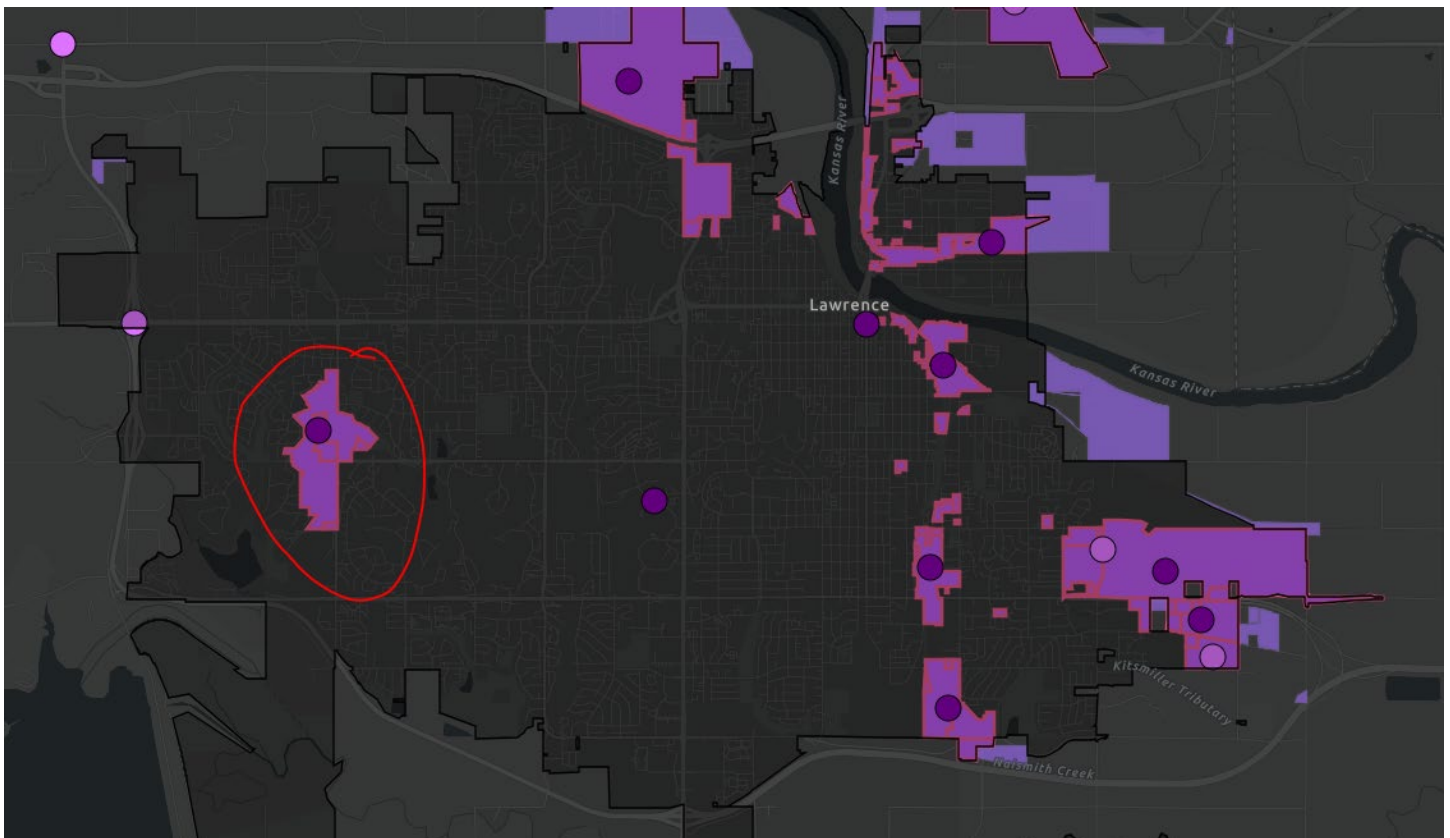
**Protecting and enhancing existing developments** helps retain the investment and the jobs that are integral parts of our community today, and in the future.

- 2. Retain established developments, and encourage redevelopment and expansion of existing sites.**
  - 2.1 Encourage parcel consolidation to provide land for infill development and expansion opportunities.
  - 2.2 Incentivize existing facility expansion and redevelopment of vacant buildings and lands.
  - 2.3 Maintain an appropriate supply of industrially-zoned sites to provide a variety of location and lot size options.
  - 2.4 Upgrade infrastructure and services to support redevelopment opportunities.
  - 2.5 Encourage partnerships for redevelopment opportunities.

Staying ahead of new trends and needs requires a **proactive market response for new developments** to a constantly changing environment.

- 3. Provide sites to meet the future needs of the community.**
  - 3.1 Develop existing planned industrial areas by annexing, platting, zoning, and extending infrastructure to enable immediate development.
  - 3.2 Utilize appropriate locational criteria identified in Goal 1 for the use and site considerations for new or expanding areas.
  - 3.3 Designate areas to support future industrial development needs.
  - 3.4 Ensure developments are concentrated with compatible uses.
  - 3.5 Monitor and maintain a site inventory to match a variety of potential users' needs that fit within our community goals.

If approved, this request to rezone will remove six acres of land from the existing Industrial Business Park District. The vast majority of land devoted to Industrial Business Park Districts is located on the east side of Lawrence, as shown on the Plan 2040 Industrial Map:



The Industrial Business Park District (circled in red above) where the two properties are located currently serves Lawrence residents by providing desired services, including a dance studio, gymnastics gym, martial arts school, daycare center, medical offices, banks, professional offices, and corporate offices. These businesses are easily accessible from Wakarusa, which concentrates businesses along a main transportation corridor. As Lawrence continues to grow, the city should reserve the Industrial Business Park District for new businesses and expansion of existing businesses to allow for economic and job growth.

The Agenda Item Report indicates the current tracks to be rezoned have been zoned as Industrial Business Park District since 2006 and the properties are underutilized given the long vacancy. This implies that no one has been interested in developing the land for purposes consistent with the current zoning for 18 years. This is misleading. 5015 Legends Drive and 1311 Research Park Drive are currently owned by Mazda, LLC. Records on file with the Kansas Secretary of State indicate Mazda, LLC, is owned by Purviz Birdie, who founded the Lawrence Montessori School that is located on the corner between the two properties. I question whether the properties to be developed have been offered for sale for business development in the last 18 years.

While there is need for affordable housing in Lawrence, there is not need for additional housing in this area. This Industrial Business Park District abuts one of the largest neighborhoods in Lawrence. If more residential properties are added to this area, it will likely necessitate another change to the elementary school boundary map, as the elementary school in this area already has enrollment nearing capacity. There are other locations within the city limits that are appropriate for new residential growth, but there are few locations suitable for business growth.

I respectfully request that you deny this rezoning request.

Thank you,

Kathryn Sheedy



-----Original Message-----

From: Connie Snow <snowma60@gmail.com>

Sent: Sunday, April 21, 2024 7:01 PM

To: Planning Email <planning@lawrenceks.org>

Subject: Opposition to multi family dwellings along legends drive

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

Please accept my email as our notice to the city planning commission of our opposition to this proposed multi family building site. The streets in this area are already overflowing with cut through drivers and support many single family homes now. Please reconsider your proposal as this site is only about 1 1/2 blocks from our home and feels crowded now!

Thank you

Connie and Gary Snow

Sent from my iPad

**From:** Trina Spencer <trinadspencer@yahoo.com>  
**Sent:** Saturday, April 20, 2024 11:05 AM  
**To:** Planning Email <planning@lawrenceks.org>  
**Subject:** Rezone in west Lawrence

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

Hello,

I heard that this rezoning may involve building where the walking path is planned. I'm writing to tell you that is a very bad idea. We need the walking path to be connected. The path is used extensively and we are all waiting for it to be finished. In fact, I just bought a Drippe new build right near the beginning of that path on Legends and the only reason I bought that house and not another one was because of the proximity to that path. I absolutely made my decision based on the anticipated completion of that path. Please do not change those plans. I understand people need affordable housing but we also need easy access to nature and exercise.

Thank you.  
Trina

[Yahoo Mail: Search, Organize, Conquer](#)

-----Original Message-----

From: Steve Strom <[steve@msclawrence.com](mailto:steve@msclawrence.com)>

Sent: Sunday, April 21, 2024 7:30 PM

To: Planning Email <[planning@lawrenceks.org](mailto:planning@lawrenceks.org)>

Subject: Public Hearing, Apr 22

External Email. Be careful with links and attachments.  
- City of Lawrence IT Helpdesk

The proposal for 8-plexes & 4-plexes to be built behind the Montessori School is a terrible idea. I don't feel safe walking on the sidewalks or jogging on the streets currently because there is too much traffic. My grandchildren were learning how to ride their bikes a couple weeks ago and just about got hit by inattentive drivers. Another possible 76 families in this congested area is absolute poor planning.

Please listen to the people of this neighborhood and terminate this shortsighted idea.

Please respond.

Steve Strom

1361 Stonecreek Dr

Sent from my iPhone

-----Original Message-----

From: Leta Strom <[stroms1@sbcglobal.net](mailto:stroms1@sbcglobal.net)>

Sent: Sunday, April 21, 2024 8:42 PM

To: Planning Email <[planning@lawrenceks.org](mailto:planning@lawrenceks.org)>

Subject: Public hearing April 22

External Email. Be careful with links and attachments.  
- City of Lawrence IT Helpdesk

Please consider the fact that the 8-plexes and 4-plexes to be built behind the Montessori School is a very poor decision. There are many families with children living in these neighborhoods and the streets are already very busy. Please do not prioritize money over the safety and wellbeing of the neighborhood families who have worked hard to afford and care for the safety and comfort of their families. You must stop putting money, money, money over the wellbeing of the families you represent.

Sent from my iPhone

**From:** [raswain@me.com](mailto:raswain@me.com) <[raswain@me.com](mailto:raswain@me.com)>

**Sent:** Sunday, April 21, 2024 8:42 PM

**To:** [jme@sunflower.com](mailto:jme@sunflower.com); [candcthomas@gmail.com](mailto:candcthomas@gmail.com); [hayden@unl.edu](mailto:hayden@unl.edu)

**Cc:** 'Scott Robinson MD' <[scrobins57@gmail.com](mailto:scrobins57@gmail.com)>; 'kcapps' <[kcapps@sunflower.com](mailto:kcapps@sunflower.com)>; 'James Pottorff' <[pottorffj@outlook.com](mailto:pottorffj@outlook.com)>; 'David Hentges' <[hentgesdc@gmail.com](mailto:hentgesdc@gmail.com)>; 'Kimberly Williams' <[kimberly@kiwilliams.com](mailto:kimberly@kiwilliams.com)>; [lfinger52@gmail.com](mailto:lfinger52@gmail.com); [tteef@sunflower.com](mailto:tteef@sunflower.com); 'Tom DOBSKI AND ASSO' <[tmdobski@sunflower.com](mailto:tmdobski@sunflower.com)>; [marilyn.dobski@partners.mcd.com](mailto:marilyn.dobski@partners.mcd.com); 'Jeremy Hamm' <[Jeremy.Hamm@nrhamm.com](mailto:Jeremy.Hamm@nrhamm.com)>; [garylsollars@gmail.com](mailto:garylsollars@gmail.com); [sgish78@gmail.com](mailto:sgish78@gmail.com); 'Chip La Clair' <[chip@laclair.net](mailto:chip@laclair.net)>; [litanrobert2@gmail.com](mailto:litanrobert2@gmail.com); [davidstutler@gmail.com](mailto:davidstutler@gmail.com); [dave@rueschhoffs.com](mailto:dave@rueschhoffs.com)

**Subject:** FW: Inclusionary zoning works for greenfield development, but shouldn't be applied retroactively to in-fill development

Dear Planning Commissioners Eldredge, Thomas, and Hayden:

On behalf of Dr. Scott Robinson, President of the Alvarado Neighborhood Association (who is out of town and will be unable to attend tomorrow's meeting) and the rest of us present at your prior meeting, I am sending this to the 3 of you.

- We appreciated each of you staying after your April 10<sup>th</sup> meeting to chat with us about our concerns.
- We are grateful for the empathy you showed to us and hope you will be able to support our position, which is outlined in the email at the bottom of this chain (which was previously sent to Elizabeth Garvin, of Clarion, on April 9<sup>th</sup>).
- We look forward to the opportunity to present our position to the entire planning committee at tomorrow night's meeting.

Thank you for our consideration in this matter,

Randall Swain  
1709 Inverness Drive  
785-550-3889

**From:** [raswain@me.com](mailto:raswain@me.com) <[raswain@me.com](mailto:raswain@me.com)>

**Sent:** Sunday, April 21, 2024 8:07 PM

**To:** 'egarvin@clarionassociates.com' <[egarvin@clarionassociates.com](mailto:egarvin@clarionassociates.com)>

**Cc:** 'Scott Robinson MD' <[scrobins57@gmail.com](mailto:scrobins57@gmail.com)>; 'kcapps' <[kcapps@sunflower.com](mailto:kcapps@sunflower.com)>; 'James Pottorff' <[pottorffj@outlook.com](mailto:pottorffj@outlook.com)>; 'David Hentges' <[hentgesdc@gmail.com](mailto:hentgesdc@gmail.com)>; 'Kimberly Williams' <[kimberly@kiwilliams.com](mailto:kimberly@kiwilliams.com)>; 'lfinger52@gmail.com' <[lfinger52@gmail.com](mailto:lfinger52@gmail.com)>; 'tteef@sunflower.com' <[tteef@sunflower.com](mailto:tteef@sunflower.com)>; 'Tom DOBSKI AND ASSO' <[tmdobski@sunflower.com](mailto:tmdobski@sunflower.com)>; 'marilyn.dobski@partners.mcd.com' <[marilyn.dobski@partners.mcd.com](mailto:marilyn.dobski@partners.mcd.com)>; 'Jeremy Hamm' <[Jeremy.Hamm@nrhamm.com](mailto:Jeremy.Hamm@nrhamm.com)>; 'garylsollars@gmail.com' <[garylsollars@gmail.com](mailto:garylsollars@gmail.com)>; 'sgish78@gmail.com' <[sgish78@gmail.com](mailto:sgish78@gmail.com)>; 'Chip La Clair' <[chip@laclair.net](mailto:chip@laclair.net)>; 'litanrobert2@gmail.com' <[litanrobert2@gmail.com](mailto:litanrobert2@gmail.com)>; 'davidstutler@gmail.com' <[davidstutler@gmail.com](mailto:davidstutler@gmail.com)>; 'dave@rueschhoffs.com' <[dave@rueschhoffs.com](mailto:dave@rueschhoffs.com)>

**Subject:** RE: Inclusionary zoning works for greenfield development, but shouldn't be applied retroactively to in-fill development

Dear Ms. Garvin, I checked my emails and my spam filter and did not find a reply to this email.

- If you did send one, please recheck the address and send it to me again at:  
[raswain@me.com](mailto:raswain@me.com)

- If you have not yet replied, would you please do so at your earliest convenience. I would like to share that with Members of the Alvamar Neighborhood Association who will be attending these meetings, so they will be informed of your response:
  - Monday, April 22 6:30 pm—Planning Commission—in order to participate in the public comments portion of the meeting.
  - Thursday, April 25 from 4-6pm—Steering Committee meeting—also to make public comments

Thanks, Randall Swain

**From:** [raswain@me.com](mailto:raswain@me.com) <[raswain@me.com](mailto:raswain@me.com)>

**Sent:** Tuesday, April 9, 2024 11:16 AM

**To:** 'egarvin@clarionassociates.com' <[egarvin@clarionassociates.com](mailto:egarvin@clarionassociates.com)>

**Subject:** FW: Inclusionary zoning works for greenfield development, but shouldn't be applied retroactively to in-fill development

Good morning Elizabeth, I appreciated the opportunity to have had a brief discussion with you following one of your presentations in Lawrence last year.

Hopefully, you will recall I raised the concern that the Alvamar, Inc. golf operation was purchased by a developer/construction company owner a few years ago who promised that “if you live on a golf hole you would always live on a golf hole...” Sadly, in 2022 he discontinued operation of the Alvamar 9-hole course, but there remains green space behind the homes on that course. His prior history on development-related activities call into question the reliability of his promise.

I told you at the time I was concerned that he would ultimately try to develop these green spaces into homesites. You indicated that Alvamar would be expected to be an exception to that kind of development and talked about how the Land Development Code would not be expected to result in infill of the Alvamar courses. From my reading of the draft document and from discussions with 2 individuals on the steering committee, however, I understand that so far such a recognition of preservation of Alvamar is not included in the draft. If so, and if passed as currently proposed, it appears these changes would make it easier for this developer or others to eliminate those green spaces on all existing 27 holes at Alvamar. We have great concern about the potential for further damage to our neighborhoods and the overall appearance of the City of Lawrence in this situation.

I understand that the procedural provisions of the new Code are still under development and that there will be updates to the planning commission on April 10th, and a Steering Committee Meeting on April 25th. It is imperative that this Code be revised before it is presented for approval to the City Commission.

I plan to attend the Planning Committee meeting in person this Wednesday morning (7:30 Lawrence time) and learn more about this. I trust that you can appreciate the point of view of someone who has lived in the Alvamar neighborhood since 1976 and worked as a VP of Finance for Alvamar during the growth of west Lawrence from the mid-1970s through the late 1980s.

I agree that inclusionary zoning is ideal for greenfield development, but I don't agree that it should ever be applied retroactively to in-fill green spaces in existing and carefully planned developments like Alvamar given the history and the character of this P.U.D. I am confident that my many neighbors throughout this area agree with me.

- In greenfield development, if a developer elects inclusionary zoning use mix, buyers will know in advance when they buy a spec house, or have their custom home built, what is either already next to them or what could possibly end up going in next to them. So, when people make that major investment in their home, it is a “known.”
- But inclusionary zoning that attempts to alter the character and nature of completed developments through in-fill of their existing spaces certainly changes the game with the high probability of devaluing the adjacent homes and diminishing the quality and attractiveness of the city itself.

The potential loss of the green spaces existing in the area represented by the Alvamar Neighborhood Association would be a tragedy for not only the Alvamar neighborhood, but for the City of Lawrence. It is well known that the beauty of Alvamar is what attracted so many people to Lawrence who otherwise would have chosen to live elsewhere.

I worked 18 years at Payless ShoeSource on the east side of Topeka, retiring as VP of Real Estate Services. Of the 700 people who worked in our corporate office, operating 5,000 stores, a large number were recruited from out-of-state and guided to Lawrence as the place to live during their recruitment. Otherwise, many expressed their refusal to re-locate to Kansas in the absence of Alvamar and its housing. I know Colgate-Palmolive’s Hill’s Pet Products company, also headquartered in Topeka, had the same experience with its employees. When I attended Parent-Teacher conferences at Quail Run Elementary near Bob Billings Parkway and Wakarusa Drive, I recognized about one-third of the parents as colleagues from work. They were there because of Alvamar.

While I support diversity of neighborhoods and the need for affordable housing for all in Lawrence, the planned changes to the Code would have just the opposite effect in leading to the potential elimination of one of the best features of our city. The potential destruction of the character and beauty of the Alvamar neighborhood is not an appropriate means to support that goal. There are many other options available to develop the necessary housing stock.

I look forward to your response,

Randall Swain  
1709 Inverness Drive  
785-550-3889

**From:** sharon1740 <sharon1740@aol.com>  
**Sent:** Sunday, April 21, 2024 11:57 AM  
**To:** Planning Email <planning@lawrenceks.org>  
**Subject:** Drag Strip Community Development

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

To Whom It May Concern:

I am a resident of Cedar Grove and oppose strongly the development of six 8-plex and seven 4-plex buildings to be built in the field west and south of the Montessori School.

This would equate to 76 families and possibly 152 automobiles in that area. I moved to this area because there aren't apartments or multi-plex buildings that could potentially effect the value of my home.

Please, please, please do not allow this development to go forward.

Thanking you in advance,

Sharon Thiel  
5013 Cedar Grove Way

Sent from my Galaxy Tab A



**From:** Dave Williams <[dwilliams@chadasales.com](mailto:dwilliams@chadasales.com)>  
**Sent:** Sunday, April 21, 2024 6:39 PM  
**To:** Sandra Day <[sday@lawrenceks.org](mailto:sday@lawrenceks.org)>  
**Subject:** Rezoning Legends Drive and Research Park

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

Dear Ms. Day,

I am writing to express my concerns about the proposed low-income apartment complex in our neighborhood and its potential impact on property values. While affordable housing is crucial, the location and density of such developments can significantly affect the surrounding property values.

Here are some reasons why a low-income apartment complex might be detrimental to property values:

1. **Perception and Stereotypes:** Unfortunately, there can be negative stereotypes associated with low-income housing, which may lead to perceptions of increased crime rates or lower standards of living. This perception alone can drive down property values.
2. **Maintenance and Upkeep:** Low-income housing projects may struggle with maintaining the same level of upkeep and aesthetics as higher-income neighborhoods. This can result in a less visually appealing environment, which can affect property values negatively.
3. **School District and Education:** Property values are often closely tied to the quality of local schools. If a low-income housing complex leads to overcrowding or strains local educational resources, it can impact the desirability of the area for families, thus affecting property values.
4. **Market Dynamics:** The introduction of a large number of low-income units can shift the market dynamics of the neighborhood, potentially leading to lower demand from higher-income buyers or renters, which in turn can influence property values.
5. **Investment and Development:** Concerns about future developments in the area might arise, as investors and developers may be less inclined to invest in or upgrade properties in a neighborhood perceived as primarily low-income.

It's important to note that these concerns are not about stigmatizing low-income individuals but rather about understanding the complex dynamics that can affect property values. Finding a balance between providing affordable housing and maintaining property values is key to creating a thriving and inclusive community.

Thank you for considering these points.

Sincerely,

David Williams  
Sales Representative  
ChaDa Sales, Inc  
Mobile: 1-785-331-5004  
[www.chadasales.com](http://www.chadasales.com)



# Assessing the Impact of Affordable Housing on Nearby Property Values in Alexandria, Virginia

*Christina Stacy and Christopher Davis*

*April 2022*

**Stable, affordable housing provides benefits to both people with low incomes and local economies overall. For individuals, it reduces homelessness, lifts people out of poverty, and improves health outcomes (Lubell, Crain, and Cohen 2007). It also improves youth educational outcomes and long-term earnings and reduces the likelihood of later adult incarceration (Andersson et al. 2016; Fischer 2015; Cunningham and McDonald 2012). Affordable housing can help maintain health, daily functioning, quality of life, and maximum independence for adults as they age (Spillman 2012). And it supports employment growth and stability, because low-wage workers are less willing to travel long distances for minimum wage jobs (Altali 2017; Chakrabarti 2014).**

Despite these benefits, property owners who live near proposed affordable housing developments often oppose such projects, citing fear that the developments will cause their property values to decline (Sally 2014). However, empirical research provides little evidence that subsidized housing depresses neighborhood property values (Ellen et al, 2007; Galster 2002; Center for Housing Policy 2009). Projects financed through the Low-Income Housing Tax Credit (LIHTC), the largest affordable housing financing program in the United States, have been associated with an immediate positive increase of 3.8

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Data provided by Zillow through the Zillow Transaction and Assessment Dataset (ZTRAX). More information on accessing the data can be found at <http://www.zillow.com/ztrax>. The results and opinions in this brief are those of the authors and do not reflect the position of Zillow Group.

Dr. Christina Stacy is a voluntary member of the Alexandria Housing Development Corporation, an affordable housing nonprofit developer in Alexandria, Virginia.

percentage points in nearby property values (Ellen et al. 2007). Another study found that LIHTC properties, on average, revitalize low-income neighborhoods, increasing house prices by 6.5 percent, lowering crime rates, and attracting racially and income-diverse populations (Diamond and McQuade 2016). However, some studies have found that LIHTC developments in higher-income areas are associated with house price declines (Diamond and McQuade 2016; Woo, Joh, and Van Zandt 2016). Other types of affordable developments, such as those funded by new markets tax credits, have not been found to depress property values and can increase property values under certain conditions (Theodos et al. 2021).

It is unclear what conditions and which types of affordable housing developments affect property values differentially, and many local governments require their own analyses to help inform community debates. To add to this knowledge base, we use Zillow’s assessor and real estate database to estimate the relationship between affordable housing developments in Alexandria, Virginia, and sales prices of nearby single-family homes, duplexes, cooperatives, and residential condominiums between 2000 and 2020 (Zillow 2021). We use a repeat sales model that estimates the change in sales prices before and after an affordable housing development is built near a home. The model compares those changes with changes in the sales prices of other residential units in Alexandria, thus isolating the relationship between the development and changes in property values.

We find that affordable units in the city of Alexandria are associated with a small but statistically significant *increase* in property values of 0.09 percent within 1/16 of a mile of a development, on average—a distance comparable to a typical urban block. These results are robust to other radii and comparison groups, such as comparing homes within a block with homes within a few blocks or comparing homes within a block with homes between half a mile and one mile away. When we remove set-asides—defined as affordable housing units within market-rate developments—the coefficient increases to 0.11 percent, confirming that set-asides are not driving these results. And when we split the effects by the baseline income of neighborhoods to see whether affordable housing construction in lower-income neighborhoods is driving the results, we find the opposite of prior research: in Alexandria, affordable housing in higher-income neighborhoods has a positive and highly significant effect on surrounding home values, as does affordable housing in lower-income neighborhoods. This calls into question prior findings that affordable housing in high-income areas necessarily causes nearby property values to decline.

The positive relationship between affordable units and nearby home sales in Alexandria may reflect strong local oversight and the close relationship between the city and affordable housing developers. Various municipal measures help ensure that new or preserved developments fulfill strict requirements for design, development, maintenance, and operation. Other cities have shared that they are unhappy with affordable housing in their jurisdictions, which they believe is because they have little local oversight over the developments.<sup>1</sup> Alexandria’s close partnerships with affordable housing developers and oversight of affordable housing may explain the positive effects found here.

These findings show that multifamily affordable housing developments in Alexandria do not cause a decline in nearby property values, as some fear, but are actually associated with a small but statistically

significant increase in nearby values. This should ease residents' concerns about their impact on neighborhoods and bolster support for increased development.

## Background

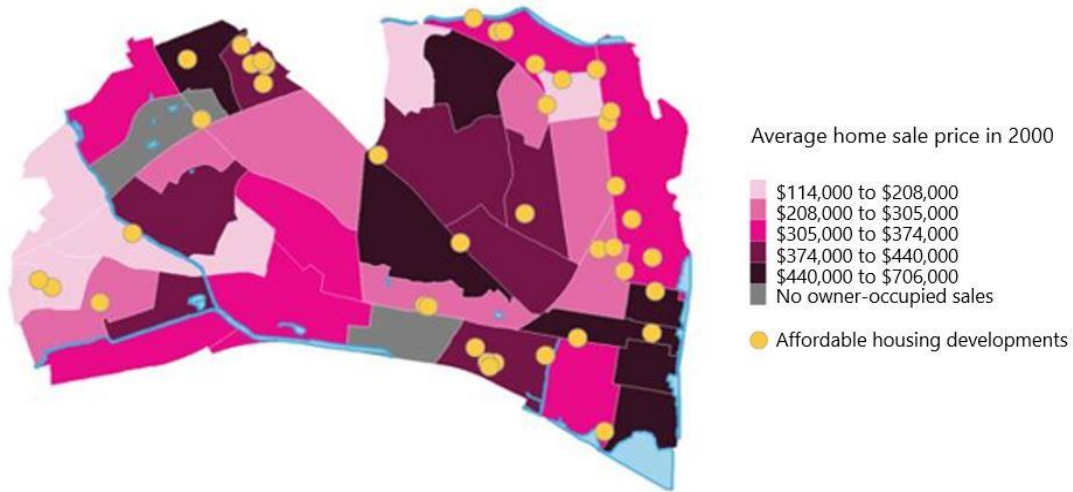
Alexandria, Virginia, a suburb of Washington, DC, had an estimated population of 159,200 in 2020. The city lost 78 percent of its market-rate affordable units—defined as nonsubsidized rental units affordable to households earning 60 percent of the area median income (AMI)—between 2000 and 2020.<sup>2</sup> 2019 estimates generated by the Urban Institute predict that the city will need an additional 13,600 housing units to accommodate household growth from 2015 to 2030 (Turner et al. 2019), and most of those units need to be affordable to middle- and low-income households.

However, producing and preserving affordable units can be a challenge as some residents oppose their development on the grounds that it will depress their property values.<sup>3</sup> To explore whether this is true, we estimate the relationship between the development of 40 multifamily affordable housing developments that began providing subsidized rental units between 2000 and 2020 and nearby property values.

The developments included in our analysis are shown in figure 1 and table 1. This list includes 6 public housing developments, 18 market-rate developments that include affordable set-asides, and 16 developments that were built or preserved by affordable housing developers and include all affordable units. Some of the developments were new construction; others were converted to affordable housing or preserved through redevelopment in partnership with a market-rate developer.

Affordability levels in the developments range from units affordable to families whose incomes are between 0 and 30 percent of AMI to those affordable to families with incomes between 60 and 80 percent of AMI. The number of affordable units in each development ranges from 2 to 244 and accounts for 1 to 100 percent of the total units in the development. To account for this range, our model uses the number of affordable units as the treatment variable, rather than the number of developments.

**FIGURE 1**  
**Multifamily Affordable Housing Developments in Alexandria, Virginia, between 2000 and 2020, Overlaid with Average Home Sale Price in 2000**



**Source:** Authors' calculations from city of Alexandria administrative data and Zillow ZTRAX home sales data (Zillow 2021). Home sale price is inflation-adjusted to 2020 dollars.

TABLE 1

## Multifamily Affordable Housing Developments in Alexandria, Virginia, Where Assistance Began between 2000 and 2020

Project name	Year assistance began	Set-asides	Public housing	Origin	Level of affordability of affordable units (percent of AMI)	Committed affordable units	Total units in complex	Percent affordable
Potomac West Apartments	2001	No	No	Conversion to affordable housing	60–80	45	60	75%
Lynhaven Apartments	2002	No	No	Conversion to affordable housing	50–60	28	28	100%
Chatham Square	2004	No	Yes	Preservation through redevelopment	0–30	52	151	34%
Northampton Place	2005	Yes	No	New construction	60	12	275	4%
BWR/Reynolds	2005	No	Yes	New construction	0–30	18	18	100%
BWR/Whiting	2005	No	Yes	New construction	0–30	24	24	100%
Beverly Park Apartments	2005	No	No	Conversion to affordable housing	60	33	33	100%
Arbelo Apartments	2006	No	No	Conversion to affordable housing	60	34	34	100%
Lacy Court Apartments	2006	No	No	Conversion to affordable housing	40–60	44	44	100%
ParcView Apartments	2006	No	No	Conversion to affordable housing	60	120	149	81%
Carlyle Place	2007	Yes	No	New construction	60	13	326	4%
BWR/Braddock	2007	No	Yes	New construction	0–30	6	6	100%
Halstead Tower	2007	Yes	No	New construction	60	9	174	5%
Meridian at Eisenhower Station	2007	Yes	No	New construction	60	15	369	4%
The Alexander	2007	Yes	No	New construction	60	13	275	5%
Longview Terrace	2007	No	No	Conversion to affordable housing	60	41	41	100%
The Tuscany Apartments	2007	Yes	No	New construction	60	2	104	2%
The Station at Potomac Yard	2009	No	No	New construction	60–80	64	64	100%
Alexandria Crossing at Old Dominion	2009	No	Yes	New construction	0–30	36	54	67%

Project name	Year assistance began	Set-asides	Public housing	Origin	Level of affordability of affordable units (percent of AMI)	Committed affordable units	Total units in complex	Percent affordable
Alexandria Crossing at West Glebe	2009	No	Yes	New construction	0-30	48	48	100%
Del Ray Central	2010	Yes	No	New construction	60	9	141	6%
Beasley Square	2011	No	No	New construction	60	8	8	100%
Post Carlyle Square II	2012	Yes	No	New construction	60	6	344	2%
Old Town Commons	2013	No	Partial	Preservation through redevelopment	0-30	134	379	35%
Station 650 at Potomac Yard	2015	Yes	No	New construction	60	8	186	4%
The Bradley	2015	Yes	No	New construction	60	10	159	6%
Notch 8	2015	Yes	No	New construction	60	12	252	5%
Parc Meridian at Eisenhower Station	2016	Yes	No	New construction	60	33	505	7%
Jackson Crossing	2016	No	No	New construction	60	78	78	100%
Southern Towers	2016	Yes	No	Conversion to affordable housing	55-60	105	2,184	5%
The Thornton	2018	Yes	No	New construction	60	24	443	5%
St. James Plaza	2018	No	No	New construction	40-60	93	93	100%
Silverado Alexandria Memory Care	2018	Yes	No	New construction	0-80	2	66	3%
Gables Old Town North	2019	Yes	No	New construction	60	9	232	4%
Ellsworth Apartments	2019	No	No	Conversion to affordable housing	50-60	20	20	100%
The Nexus at West Alex	2019	No	No	New construction	40-60	74	74	100%
Parkstone	2020	No	No	Conversion to affordable housing	60-80	244	326	75%
The Foundry	2020	Yes	No	New construction	60-80	5	520	1%
Denizen Apartments at Eisenhower Square	2020	Yes	No	New construction	60	13	336	4%
The Bloom	2020	No	No	New construction	40-60	97	97	100%

Source: City of Alexandria administrative data.

TABLE 2

**Descriptive Statistics of Census Tracts with and without Affordable Units in Alexandria, Virginia**

	Never had affordable housing units between 2000 and 2020	Had affordable housing units between 2000 and 2020	Had affordable set-aside units between 2000 and 2020	Had affordable units that were not set-asides between 2000 and 2020
Population	2,978	4,408	3,078	4,705
Median household income	\$86,360	\$69,783	\$56,662	\$72,718
Unemployment	2.70%	3.43%	3.81%	3.34%
Percentage in poverty	7.22%	11.15%	10.01%	11.41%
Share of people of color	44.93%	53.63%	52.10%	53.86%

**Sources:** Authors’ calculations from city of Alexandria administrative data and the 2000 Census.

**Notes:** Numbers reflect weighted averages, weighted by the total number of affordable units in the census tract between 2000 and 2020.

## Methods

Our primary analysis uses an analytic sample that includes properties that were sold more than once between 2000 and 2020 within the city of Alexandria and properties that were sold more than once outside of the city that were also within 1 mile of an affordable housing development in our sample (i.e., properties just outside the city’s borders located near affordable housing developments). We drop sales that were greater than \$10 million since they appear to be data errors rather than true sales.

The main model estimates the linear relationship between the natural log of sales prices within 1/16 of a mile of each affordable housing development, before and after the year the assistance began—compared with all other properties in the city that sold more than once—while controlling for housing characteristics by incorporating a fixed effect, or dummy variable, for each property. This “repeat sales” model strives to eliminate omitted variable bias by examining multiple sales of the same properties over time. This controls for attributes about each property that do not change over time. We also control for changes in the housing market at the city level to account for overall trends in the housing market.

The treatment variable in the regression is the number of affordable units in each development. This allows us to weight the development by size (or number of affordable units) and allows developments with more affordable units to count for more than ones with a small number of affordable units.

To examine the spatial impacts, we also estimate mutually exclusive treatment effects for each 1/16-mile ring around a project, up to 1 mile. This analysis allows us to observe the geographic relationship between affordable housing and nearby property values over space. If a property is within 1 mile of more than one development, our model counts the affordable units in both of those developments in the treatment variable.



Finally, we conduct a series of checks to ensure that our results are robust to alternative treatment and control radii. This includes increasing the size of each treatment variable and including a development window control two years before and after the development opened to account for anticipatory effects and to give residents time to move in.

## Data

We use two main sources of data for this analysis: administrative data from the city of Alexandria about multifamily affordable housing developments that began assistance between 2000 and 2020 and sales data from the Zillow Transaction and Assessment Dataset (ZTRAX) (Zillow 2021). These data are available from 2000 to 2020 and contain multiple characteristics related to sales and building parcels, including the number of units, year the building was built, size of the parcel, sale amount, and sale type.

## Results

We find that affordable housing units in Alexandria are associated with an increase in property values of 0.09 percent within 1/16 of a mile of a development, on average (table 3). This effect is statistically significant at the 1 percent level, roughly meaning that there is a 99 percent chance of a positive value.

TABLE 3

### The Relationship between Affordable Housing and Property Values

*Average treatment effects for affordable housing on property values within 1/16 of a mile of a development*

	In sales price
Affordable housing units	0.09%*** (0.03%)
Number of observations	57,998
Adjusted R-squared	0.46

**Source:** Authors' calculations from ZTRAX (Zillow 2021) and city of Alexandria administrative data.

**Notes:** Impact estimates show the effect of affordable housing units and developments on nearby property values. We estimate changes in sales prices using a repeat sales model over all property sales within 1 mile of an affordable housing development. Dollars are adjusted to inflation for 2021. Standard errors (listed in parentheses) are heteroskedastic robust and are clustered at the property level. All regressions include property and quarter fixed effects.

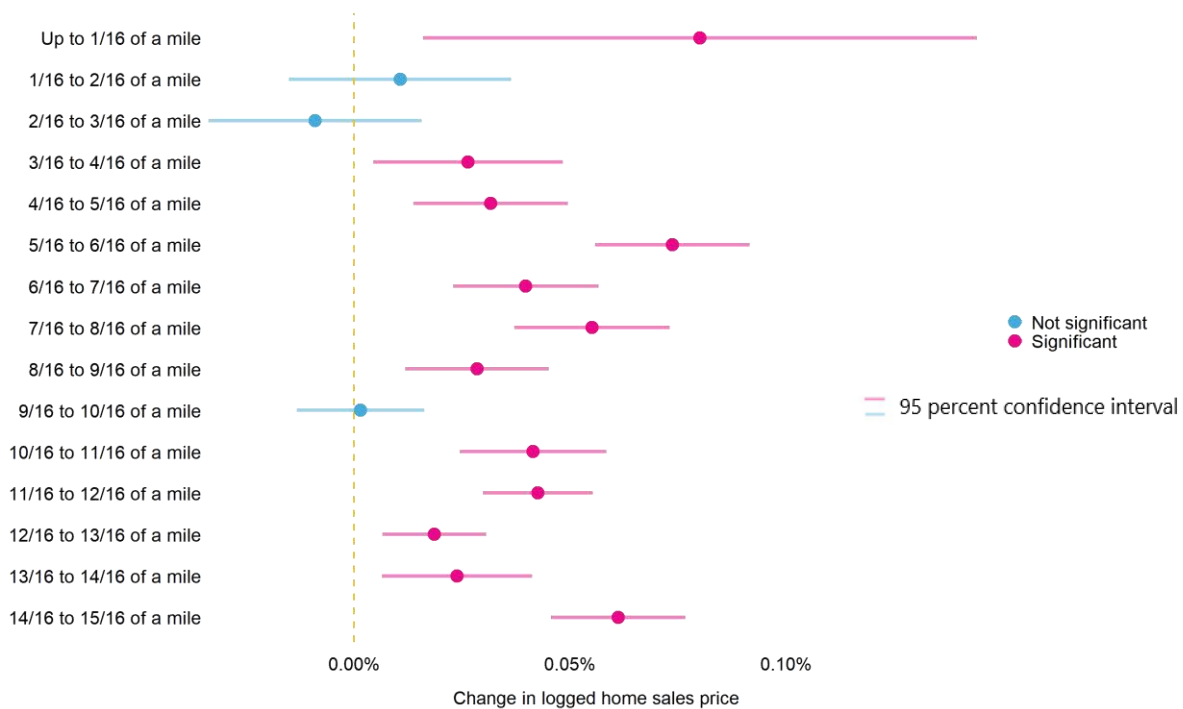
\*\*\* p < 0.01; \*\* p < 0.05; \* p < 0.10

Over space, affordable housing units are associated with a positive and statistically significant effect on properties within 1/16 of a mile of a unit but have no effect on properties between 1/16 of a mile and 3/16 of a mile (figure 2). Affordable housing units are associated with an increase in property values for each 1/16-mile ring after that, but at a much lower level, suggesting that those coefficients reflect the placement of the units in growing neighborhoods rather than representing the true impact of an affordable unit.

FIGURE 2

**The Relationship between Affordable Housing Units and Property Values over Space**

*Distance to affordable housing development*



**Source:** Authors’ calculations from ZTRAX (Zillow 2021) and city of Alexandria administrative data.

**Notes:** Impact estimates show the effect of affordable housing units and developments on nearby property values. We estimate changes in sales prices using a repeat sales model over all property sales within 1 mile of an affordable housing development. Dollars are adjusted to inflation for 2021. Confidence intervals at the 95 percent level (shown as lines) are heteroskedastic robust and are clustered at the property level. All regressions include property and quarter fixed effects. Coefficients shown in red are statistically significant at the 5 percent level, and coefficients shown in blue are not significant.

**Removing Set-Asides**

Because affordable units in set-asides often account for a small portion of the overall number of units, the market-rate units in set-aside buildings may bias our results. To ensure that this is not the case, we re-run our analysis removing set-asides.

We find that the relationship between affordable units and nearby properties after removing set-asides is even larger than it is when we include them (table 4). Affordable units that are not set-asides are associated with an increase in property values of 0.11 percent within 1/16 of a mile of a development, on average. Again, this may be due to the close relationship between the city and affordable housing developers in Alexandria, which ensures that affordable housing developments excluding set-asides are amenities rather than disamenities to the neighborhood.

TABLE 4

**The Relationship between Affordable Housing and Property Values, Removing Set-Asides***Average treatment effects for affordable housing on property values within 1/16 of a mile of a development*

	In sales price
Affordable housing units that were not set-asides	0.11%*** (0.03%)
Number of observations	57,998
Adjusted R-squared	0.460

**Source:** Authors' calculations from ZTRAX (Zillow 2021) and city of Alexandria administrative data.

**Notes:** Impact estimates show the effect of affordable housing units and developments on nearby property values. We estimate changes in sales prices using a repeat sales model over all property sales within 1 mile of an affordable housing development. Dollars are adjusted to inflation for 2021. Standard errors (listed in parentheses) are heteroskedastic robust and are clustered at the property level. All regressions include property and quarter fixed effects. \*\*\*p<0.01; \*\*p<0.05; \* p<0.10.

**Variation by Census Tract Income Level**

Previous literature has found that affordable housing in higher-income neighborhoods has a different effect on nearby property values than does affordable housing in low-income neighborhoods. To see whether this is true in Alexandria, we re-run our analysis with the treatment variable split by whether the affordable housing units were in census tracts that had household median incomes above or below the median income in Alexandria, as determined by the 2000 Census (table 5).

We find that affordable housing units in above-median-income census tracts are associated with a 0.06 percent increase in property values, and affordable housing units in below-median-income tracts are associated with a 0.17 percent increase in nearby property values. This is counter to prior findings in the literature that show that affordable housing in high-income neighborhoods reduces nearby property values. In Alexandria, affordable housing units in both higher-income and lower-income neighborhoods are associated with statistically significant increases in nearby property values.

TABLE 5

**The Relationship between Affordable Housing and Property Values, Split by Household Median Income in Census Tract of Affordable Housing Development**

	In sales price
Affordable housing units in census tracts with household median incomes below the median	0.17%* (0.101%)
Affordable housing units in census tracts with household median incomes above the median	0.06%*** (0.03%)
Number of observations	57,998
Adjusted R-squared	0.460

**Source:** Author calculations from ZTRAX (Zillow 2021), city of Alexandria administrative data, and the 2000 Census.

## Other Robustness Checks

We run a number of additional regressions to ensure that our results are robust to various specifications and models. This includes using alternative treatment radii and alternative comparison group radii, as well as including a five-year development window for each opening date.

Specifically, we estimate the relationship between affordable housing developments and property values located within 1/16 of a mile of the development—our preferred specification, since effects are likely very localized—but also within 1/8 of a mile, 1/4 of a mile, and 1/2 of a mile. We also estimate the relationship between properties within 1/8 of a mile, controlling for those between 1/8 of a mile and 1/2 of a mile, in case there are spillover or displacement effects within that distance. In other words, we compare changes in property values within 1/8 of a mile with changes in property values farther than 1/2 a mile from the development.

Table 6 shows the results of these robustness checks. The findings are consistent throughout and follow theory (i.e., they are positive and significant and generally decline with distance), showing that our results are robust to these alternative specifications.

**TABLE 6**

### Robustness Check Results for Varying Distances

*In sales price, by varying distances from an affordable housing development*

	1/16 of a mile (main model)	1/8 of a mile	1/4 of a mile	1/2 of a mile	1/8 of a mile, controlling for 1/8 to 1/2 of a mile
Affordable housing units	0.09%*** (0.03%)	0.03%** (0.01%)	0.01%** (0.007%)	0.03%*** (0.004%)	0.02%* (0.01%)
Observations	57,998	57,998	57,998	57,998	57,998
R-squared	0.460	0.460	0.460	0.461	0.461

**Source:** Authors' calculations from ZTRAX (Zillow 2021) and city of Alexandria administrative data.

**Notes:** Impact estimates show the effect of affordable housing units and developments on nearby property values. We estimate changes in sales prices using a repeat sales model over all property sales within 1 mile of an affordable housing development. Dollars are adjusted to inflation for 2021. Standard errors (listed in parentheses) are heteroskedastic robust and are clustered at the property level. All regressions include property and quarter fixed effects. \*\*\*p<0.01; \*\*p<0.05; \* p<0.10.

We also undertake robustness checks where we control for a five-year window around the opening of the affordable housing development to account for anticipatory effects and any construction effects that are likely to have a short-term impact on nearby properties (table 7). These results are again consistent and actually larger than our main results, suggesting that controlling for this predevelopment window and move-in period correlates affordable housing developments with even larger increases in nearby property values.

TABLE 7

**Robustness Check Results, Varying Distances and Controlling for a Five-Year Development Window**  
*In sales price, by varying distances from an affordable housing development*

	1/16 of a mile (main model)	1/8 of a mile	1/4 of a mile	1/2 of a mile	1/8 of a mile, controlling for 1/8 to 1/2 of a mile
Effects controlling for five-year development window	0.16%*** (0.044%)	0.03%* (0.018%)	0.02% (0.010%)	0.04%*** (0.005%)	0.03% (0.018%)
Five-year development window	0.20%*** (0.047%)	-0.01% (0.009%)	-0.01% (0.005%)	0.003% (0.003%)	-0.01% (.009%)
Observations	57,998	57,998	57,998	57,998	57,998
R-squared	0.460	0.460	0.460	0.461	0.461

**Source:** Authors' calculations from ZTRAX (Zillow 2021) and city of Alexandria administrative data.

**Notes:** Impact estimates show the effect of affordable housing units and developments on nearby property values. We estimate changes in sales prices using a repeat sales model over all property sales within 1 mile of an affordable housing development. Dollars are adjusted to inflation for 2021. Standard errors (listed in parentheses) are heteroskedastic robust and are clustered at the property level. All regressions include property and quarter fixed effects. \*\*\*p<0.01; \*\*p<0.05; \* p<0.10.

## Conclusion

Although the impact of affordable housing on nearby property values is not the primary reason to build affordable housing, individuals often cite it as a reason to oppose such developments. This analysis adds to the current research on the topic, showing that affordable housing developments in the city of Alexandria, Virginia, not only do not reduce property values but also are associated with a small but statistically significant *increase* in values.

Alexandria's positive results overall could reflect a combination of strict requirements for design, development, maintenance, and operation of affordable housing, as well as a cadre of sophisticated local and regional developers including nonprofit housing developers working in the city's real estate market. They could also reflect ongoing oversight from local, state, federal, and private lenders and investors, as well as the city's commitment to diversity and inclusion, which helps incorporate new and preserved affordable housing developments into the fabric of Alexandria neighborhoods.

Given the known benefits of affordable housing on housing stability, access to opportunity, the economy as a whole, and the overall health of households with low incomes, these results support the development of additional affordable housing in the city of Alexandria.

## Appendix A. Supplemental Tables and Figures

**TABLE A.1**

**Number of Property Sales by Distance from an Affordable Housing Development  
2000-2020**

<b>Distance to affordable housing development</b>	<b>Number of sales</b>
0 to 1/16 of a mile	1,832
1/16 to 2/16 of a mile	7,513
2/16 to 3/16 of a mile	11,517
3/16 to 4/16 of a mile	14,637
4/16 to 5/16 of a mile	18,009
5/16 to 6/16 of a mile	20,370
6/16 to 7/16 of a mile	24,334
7/16 to 8/16 of a mile	25,100
8/16 to 9/16 of a mile	24,867
9/16 to 10/16 of a mile	29,251
10/16 to 11/16 of a mile	27,322
11/16 to 12/16 of a mile	28,173
12/16 to 13/16 of a mile	33,656
13/16 to 14/16 of a mile	34,964
14/16 to 15/16 of a mile	34,632
15/16 to 1 mile	36,050

**Source:** Authors' calculations from ZTRAX (Zillow 2021) and city of Alexandria administrative data. Sales above \$10 million are excluded from this analysis.

**Notes:** The number of sales includes homes located between the distances shown in the first column, not for all sales between the affordable housing development and the larger distance.

TABLE A.2

**Descriptive Statistics of Property Sales by Distance**  
*2000 and 2020*

	<b>Minimum</b>	<b>Mean</b>	<b>Median</b>	<b>Maximum</b>	<b>Count</b>
Within 1 mile, 2000	\$2,040	\$337,126	\$297,320	\$4,784,986	2,944
Within 1 mile, 2020	\$1,268	\$605,314	\$527,043	\$5,035,610	4,525
Within 1/16 of a mile, 2000	\$70,598	\$276,443	\$289,139	\$502,031	45
Within 1/16 of a mile, 2020	\$59,071	\$672,892	\$641,845	\$3,913,686	68

**Source:** Authors' calculations from ZTRAX (Zillow 2021) and city of Alexandria administrative data. Sales above \$10 million are excluded from this analysis.

# Notes

- <sup>1</sup> Urban Institute presentation with a city council from a midsized Southern city.
- <sup>2</sup> Office of Housing, City of Alexandria.
- <sup>3</sup> Authors' discussion with local leaders and developers.

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# Errata

This brief was updated on April 22, 2022, to acknowledge data sourcing from Zillow.

## About the Authors

**Christina Plerhoples Stacy** is a principal research associate in the Metropolitan Housing and Communities Policy Center at the Urban Institute, where she specializes in urban economics, equity, and inclusion. Her work focuses on the intersection of economics and urban spaces and how housing, transportation, local economies, health, and crime interact. Dr. Stacy is a voluntary member of the Alexandria Housing Development Corporation, an affordable housing nonprofit developer in Alexandria, Virginia.

**Christopher Davis** is a data scientist in the Metropolitan Housing and Communities Policy Center. He is interested in the impact housing inequities have on health, poverty, and career opportunity in disadvantaged communities. Before joining Urban, Davis was a budget analyst at the Department of Finance in California, overseeing environmental protection issues.

## Acknowledgments

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-----Original Message-----

From: Brook Bloom <[brookbloom@gmail.com](mailto:brookbloom@gmail.com)>  
Sent: Friday, April 19, 2024 11:18 AM  
To: Planning Email <[planning@lawrenceks.org](mailto:planning@lawrenceks.org)>  
Subject: Rezoning Z-24-10

External Email. Be careful with links and attachments.  
- City of Lawrence IT Helpdesk

To whom it may concern,

I live in the neighborhood off of research Park Drive and I am concerned about the rezoning in the neighborhood that allows for affordable housing units to be built there.

My concern, stems from the fact that there are so many families in that area who are constantly driving up and down those streets, and it seems unsafe to add that many more housing units to that area. Especially considering the taekwondo, dance, school, and gymnastics businesses right in that area it will be, very dangerous and stressful for families to get in and out of that neighborhood 74 housing units are added.. there are constantly kids running around out there and if there would be a possibility that area could be residential or business it would be much safer.

Thank you,  
Brook Bloom

Sent from my iPhone

**From:** Sheila Connolly <stellconnolly@gmail.com>  
**Sent:** Thursday, April 18, 2024 6:43 PM  
**To:** Planning Email <planning@lawrenceks.org>  
**Subject:** Rezoning request on Legends and Research Park

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

Dear Ms. Day,

We are reaching out to express our concern regarding the request to rezone areas of Legends and Research Park Drives. We will be out of town the day of the meeting. Our primary concern is the density you are introducing to our neighborhood. 76 units could easily equate to 152 vehicles. Does the developer plan to accommodate 152 vehicles? Where will overflow parking be when occupants of 76 units have visitors? Research Drive becomes quite congested and dangerous when Prime Martial Arts has an event and cars are forced to park on the street. Stone Creek Drive is already a shortcut utilized by many (speeding more often than not) to get from Legends Drive to Harvard and vice versa. This neighborhood has an unusually high number of cyclists, runners, walkers and scooter users, many of whom are children. The density of this new development, if allowed to go forward as proposed, will dramatically increase the traffic and therefore the danger on our street. At the very least there should be an activity study of the main thoroughfares - Legends Drive, Research Park Drive and Stone Creek Drive, to truly understand this concern.

We don't mind the infill, but believe either single family homes or duplexes would be a much better fit for our neighborhood. We hope the planning commission will reconsider the impact on the surrounding neighborhoods, and not approve such a densely populated development to be built.

Thank you,

Sheila Connolly  
Suzanne Morrissey

## Sandra Day

---

**From:** Mathew Faulk <mfaulk@bertnash.org>  
**Sent:** Thursday, April 18, 2024 9:23 AM  
**To:** Sandra Day  
**Subject:** Z-24-1000 Zoning Feedback

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

I am writing to voice support for approving the zoning request for z-24-1000. Affordable housing is a top priority for our community, and affordable senior housing is a specifically high area of need. This project has been designed to compliment the existing LDCHA operated facility in site and will add needed units to the local stock. A significant number of individuals in the community of people without housing are elderly and living on a low income. This facility will help the community better serve this population.

**Mathew Faulk,**  
Director of Housing

Tel: (785)830-1868  
Fax: (785)856-1097  
Mobile: (785)550-5023  
Email: mfaulk@bertnash.org



200 Maine Street, Suite A  
Lawrence, KS 66044



COMPASSION, INTEGRITY AND EQUITY, ON A FOUNDATION OF HOPE

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## Sandra Day

---

**From:** Rebecca Buford <rebeccab@tenants-to-homeowners.org>  
**Sent:** Thursday, April 18, 2024 3:35 PM  
**To:** Sandra Day  
**Cc:** Shannon Oury  
**Subject:** Support for rezoning request by the Lawrence Douglas County Housing Authority on 4.22.24

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

Dear Planning Commission,

I fully support approving both rezoning requests from the Lawrence Douglas County Housing Authority. As a community, we keep talking about the need for more affordable housing options, but our system prevents this in many ways. You have the ability to rezone for an affordable project and make it possible. As a community, we need to understand that affordable housing is for the people that work in Lawrence. We cannot allow a few neighbors who bought their single family homes when it was much cheaper, to prevent us from creating affordable housing for today's teachers and social workers or the 46% of Lawrence households who are eligible for "affordable housing." Single family housing on large lots is not sustainable or attainable for most of our community and we need to understand this and change our standards of what high-quality housing for those who live and work in Lawrence can be. Affordable housing does not mean poor quality housing, it means housing that meets the needs of those who work in our community at a price point that their wages can finance. Most wages in Lawrence cannot buy a \$350,000 house at 7% interest rates. The math does not work, so we need other options. New, energy-efficient fourplexes sound like a great option and will not detract or lower the value of anyone's single family home. Affordable housing is workforce housing and we need it to support the people that work in our community. Please approve rezoning for these projects.

Sincerely,  
Rebecca Buford

Rebecca Buford  
Executive Director  
Cell: 785.760.2058  
Email: [rebeccab@tenants-to-homeowners.org](mailto:rebeccab@tenants-to-homeowners.org) – Please note my new email address.

## Sandra Day

---

**From:** Sherry Downing <sdowni1@gmail.com>  
**Sent:** Thursday, April 18, 2024 5:32 PM  
**To:** Dailen Downing; Planning Email; Sandra Day  
**Subject:** Proposal for re-zoning Z-24-1000 and Z-24-1001

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

We would like to express our concerns on the re-zoning proposal for Z-24-1000 and Z-24-1001.

1. This is directly east behind our house, 1412 Marilee Dr. And south of the Montessori school. The density of this housing development (76units) will negatively impact the safety of pedestrians, kids, cyclists etc in our very active neighborhood.
2. The effect on property values on current homes will be negatively impacted.
3. The green space will be limited in an already dense area.
4. An extension of the walking path is not seen in these plans.
5. The gas line between our property and the school looks like it will be paved over. I understand the line is only 14” deep in places. There are concerns about the dynamics of heavy cars traveling over that daily. We thought there was a 60’ easement for the gas line.
6. Water drainage is always a concern as we already have issues with the houses on the west end of the “1000” lot holding water.

Dailen and Sherry Downing  
1412 Marilee Dr  
Lawrence, Ks 66049

-----Original Message-----

From: Amy <amydconway@hotmail.com>

Sent: Wednesday, April 17, 2024 7:27 PM

To: Planning Email <planning@lawrenceks.org>

Subject: Re zoning Legends and Research Park

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

I am a homeowner on Spruce Street

I intentionally purchased a home in this location because there were not multi family housing (not talking about the high end duplexes that are owned and not rented).

This land was supposed to be business zoned and I asked my real estate agent because I was concerned.

I am against this proposal for rezoning to residential multi family housing.

It is a fact, this brings home values down and traffic up. People don't take care of the property because they don't own it.

I am sure you will be hearing from several neighbors as well.

We don't pay what we do, to be close to these types of neighborhoods.

There is already issues in Lawrence. Why drive people to sell and move out of the county as they have had the last straw. I know several that this is all it will take.

You can't even go downtown anymore without being harassed.

Lawrence is disappointing since COVID in all the hands off mentality, but that is another issue.

Thank you

5222 Spruce Street

66049

## Sandra Day

---

**From:** Cathy <letsplaytennis07@yahoo.com>  
**Sent:** Wednesday, April 17, 2024 6:05 PM  
**To:** Sandra Day  
**Subject:** Rezoning Legends Drive and Research Park

External Email. Be careful with links and attachments.

- City of Lawrence IT Helpdesk

Dear Ms. Day:

I am writing to you in regard to the notice we received about this rezoning land on Legends Drive and Research Park.

My husband and I purchased a new townhome 4 years ago on Research Park and Spruce St. No sooner had we moved in that someone wanted to build medical offices on what is now called (Little Knife St) behind the homes and townhomes. The neighborhood was up in arms about that plan and most of us wrote letters or attended the meetings. No medical office was built and now there are nice single-family homes with elderly seniors, families with babies and small children, widows and widowers living in all of this area that is fairly new.

I own the townhome at 5225 Spruce St. My husband also owns a townhome on 1418 Marilee Dr which any building would be right behind that townhome. Our son, daughter in law and 11-year-old grandchild live in that townhome. There are many ages on Marilee Dr also, families, singles, seniors.

We all realize that everyone needs a home. But we all know what happens when a Low-Income Housing comes into a nicer brand-new area. Property values go down, they don't keep their homes clean, too many people live in the home that shouldn't, drugs, shootings stabbings, rapes, robberies and on and on. You can go to any of the low-income housing, and you will see all of this. The areas become unsafe. We all live in a relative quiet and safe neighborhood and take pride in our homes, lawns, etc. Investing in our property is not easy on senior retirement income and then to see the value of our homes go down is not right. We are totally against any support of this rezoning.

Thank you,

Catherine Clara Williams  
Karl Robert Williams  
5225 Spruce St  
Lawrence, KS 66049  
785-766-2890



## Sandra Day

---

**From:** Ken Hile <kenhile@hotmail.com>  
**Sent:** Monday, April 15, 2024 8:54 PM  
**To:** Sandra Day  
**Subject:** Feedback from Planning and Development Services contact page

External Email. Be careful with links and attachments.  
- City of Lawrence IT Helpdesk

Hello Ms. Day!

I understand plans for the property behind my house at 1422 Marilee Drive are scheduled for discussion on April 22nd; however, I am unable to attend the meeting.

Considering the location, and the level of taxes our neighborhood pays to support the city of Lawrence, please do not consider low income housing for this area. Instead, please suggest approving the land for single family households only.

Thank you for your time and help regarding this land development.

If you have any further questions, please feel free to contact me by email or phone. Thank you.

Respectfully,

Ken Hile  
1422 Marilee Drive  
Lawrence, KS  
785-331-5648  
kenhile@hotmail.com

## Sandra Day

---

**From:** Christina Leonard <christinajoe@hotmail.com>  
**Sent:** Monday, April 15, 2024 5:09 PM  
**To:** Sandra Day  
**Subject:** Z-24-1000 & Z-24-1001

External Email. Be careful with links and attachments.  
- City of Lawrence IT Helpdesk

Sandy,

Thank you for speaking with me the other day. I want to get my concerns "on record." Should I email Lawrence planning as well?

My concerns:

1. The trail/walkway for the Devictor Park trail should be continued along the gas line behind my property at 1402 Marilee Dr.

The gas line should not be paved over so that a road can be built directly behind so many people's homes. If that happens, there will be no opportunity for the city to continue that walkway in the future.

There should be a 60 foot (30 on each side) abutment to the gas line. Construction of any type should not be allowed closer than 30 feet to the gas line.

2. Aesthetics and green space should be considered. The homeowners in this area take pride in having a peaceful, clean, quiet neighborhood. Fourplexes do not seem to fit into the current neighborhood structure.

3. Water flow and drainage needs to be taken into GREAT consideration so that heavy rain water will not flow into the backyards of the current residences, adjacent to the now empty field.

4. Nature should be considered. The open area in question draws in large birds of prey (hawks, falcons). Also, a pack of coyotes live and have their den in the space in question. What will happen to their den?

Thank you,  
Christina Leonard

Sent from my iPhone

## Airport Hazards (CEST and EA)

General policy	Legislation	Regulation
It is HUD's policy to apply standards to prevent incompatible development around civil airports and military airfields.		24 CFR Part 51 Subpart D
References		
<a href="https://www.hudexchange.info/environmental-review/airport-hazards">https://www.hudexchange.info/environmental-review/airport-hazards</a>		

**1. To ensure compatible land use development, you must determine your site's proximity to civil and military airports. Is your project within 15,000 feet of a military airport or 2,500 feet of a civilian airport?**

- No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within the applicable distances to a military or civilian airport.*

### **Worksheet Summary**

#### **Compliance Determination**

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

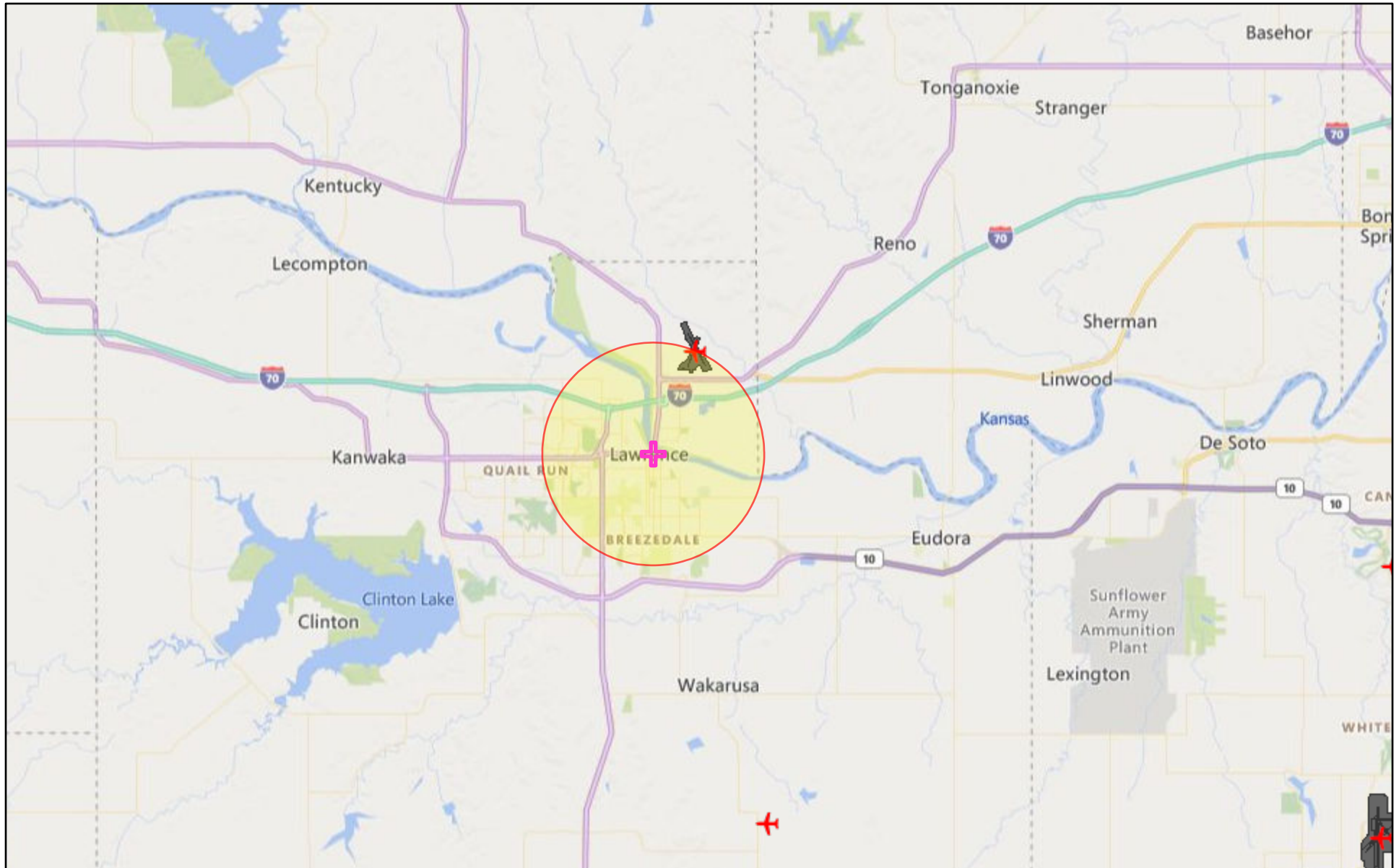
- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

The project site is not within 15,000 feet of a military airport or within 2,500 feet of a civilian airport. The project site is 29,092 feet from the civilian Lawrence Regional Airport and a map of the location of the Runway Protection Zones is also attached. The project is in compliance with Airport Hazards requirements. See attached Airport Hazards Worksheet packet.

#### **Are formal compliance steps or mitigation required?**

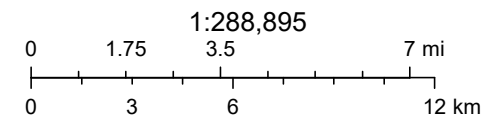
- Yes  
 No

# Lawrence, KS - No Military Airports within 15,000'



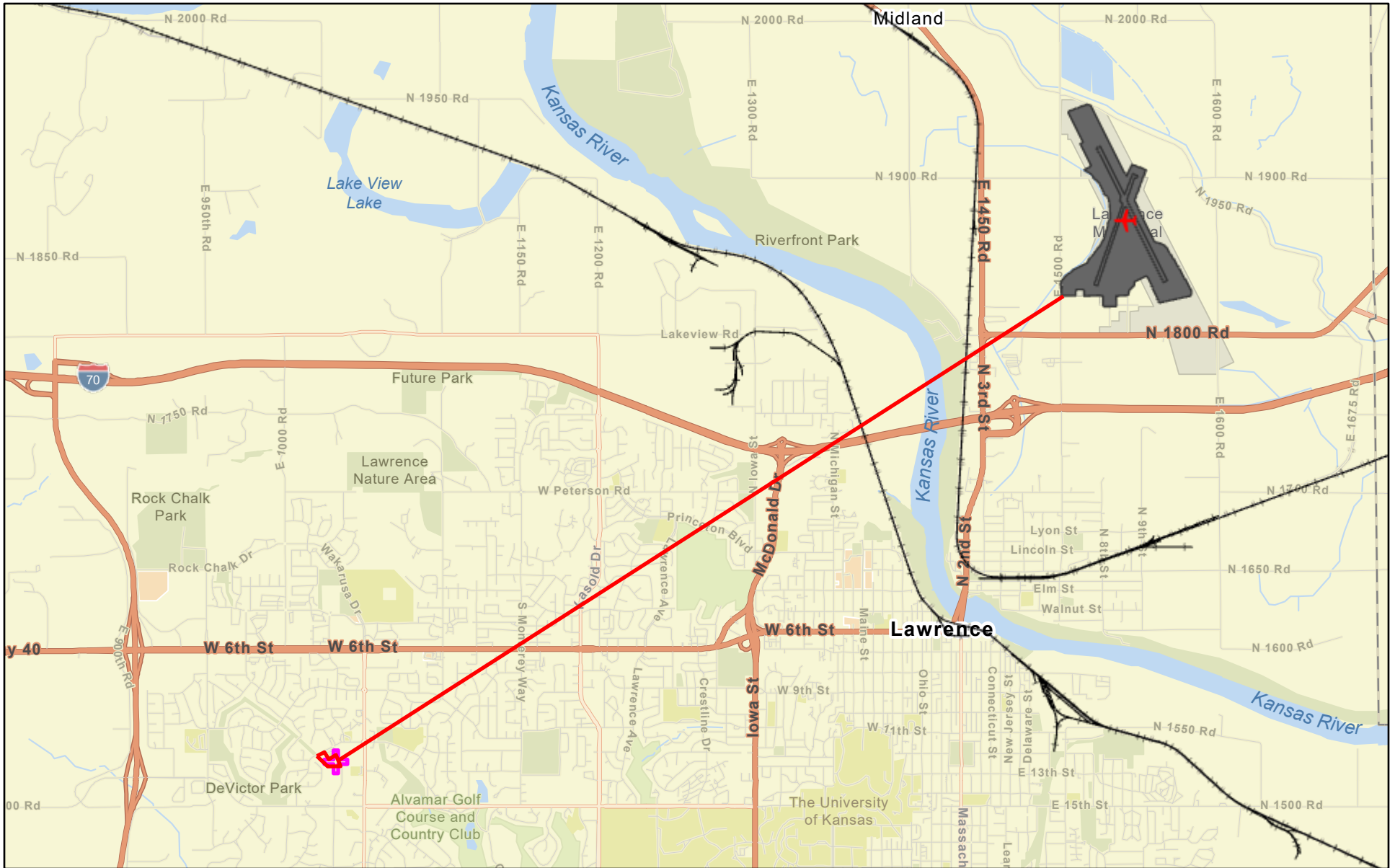
October 1, 2021

-  Project Buffer
-  Airport Points
-  Lawrence, KS
-  Airport Polygons



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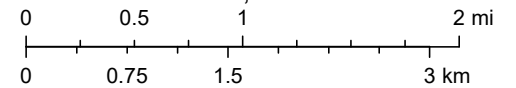
# Distance to the Lawrence Regional Airport



June 18, 2024

- 29,092' to the Lawrence Regional Airport
- 1311 Research Park Dr/5015 Legends Dr
- + Search Result (point)
- + Airport Points
- Airport Polygons
- Railroads

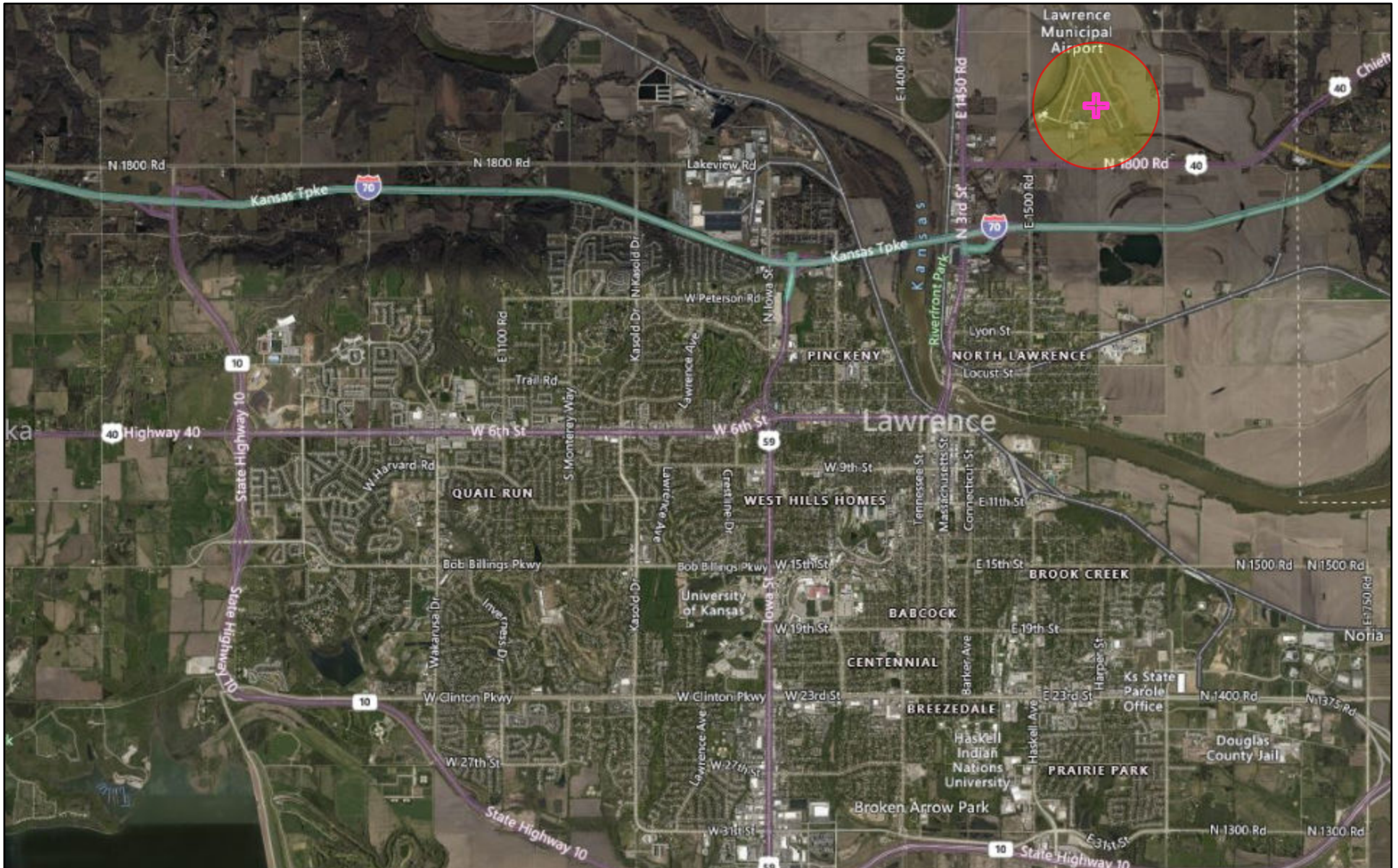
1:72,224



City of Lawrence, Kansas, Douglas County Kansas GIS, Missouri Dept. of Conservation, Missouri DNR, Esri, TomTom, Garmin, SafeGraph,




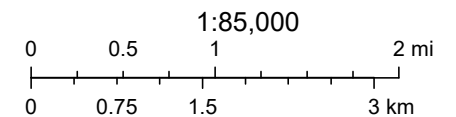
# 2,500' radius of Lawrence Municipal Airport



April 6, 2021

 Project Buffer

 Lawrence Municipal Airport





**LEGEND**

- Airport Property Line
- Easement
- Runway Safety Area (RSA)
- Object Free Area (OFA)
- ▭ Runway Protection Zone (RPZ)

**KEY**

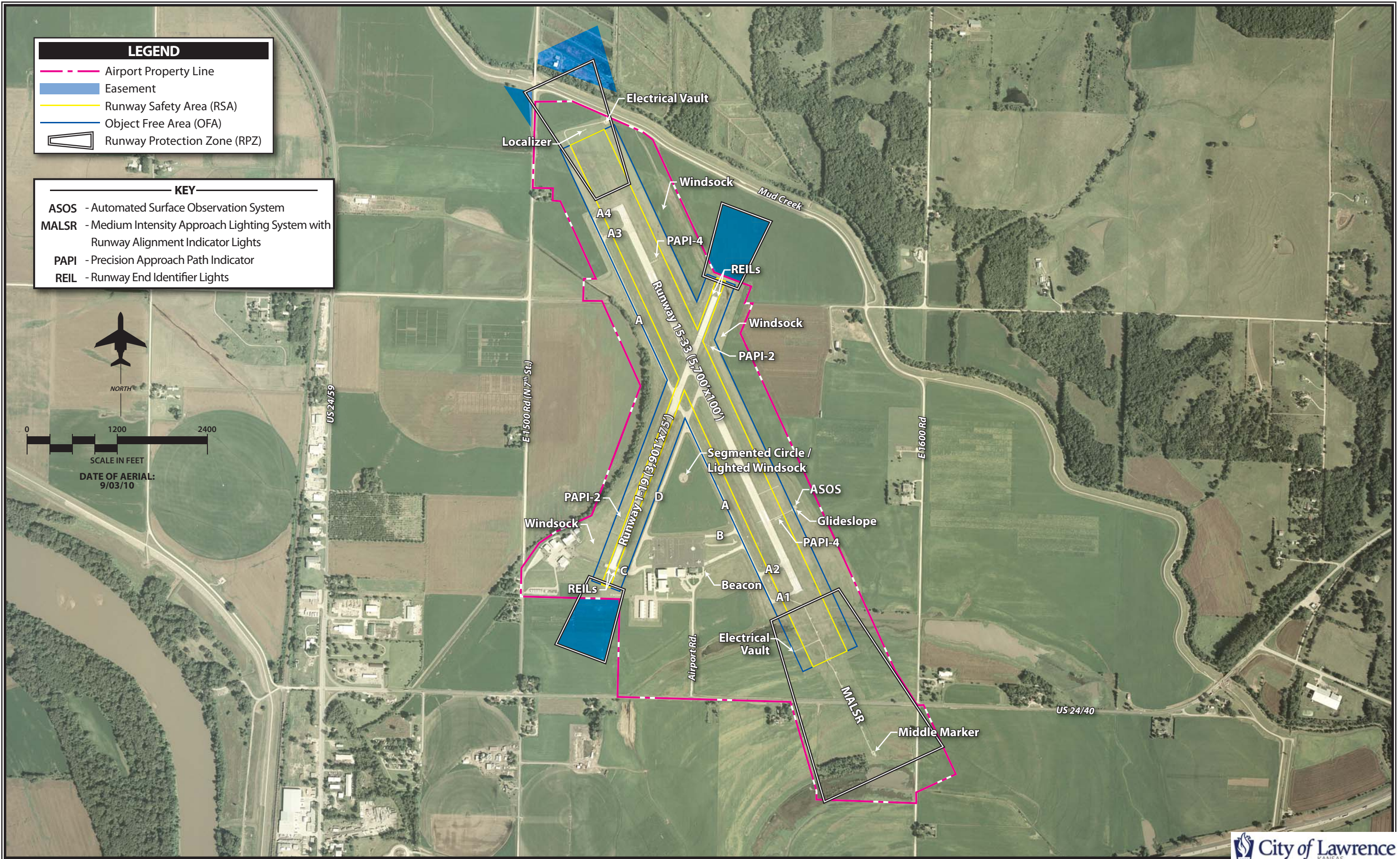
- ASOS - Automated Surface Observation System
- MALSR - Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights
- PAPI - Precision Approach Path Indicator
- REIL - Runway End Identifier Lights

NORTH

0 1200 2400

SCALE IN FEET

DATE OF AERIAL: 9/03/10





## Coastal Barrier Resources (CEST and EA)

General requirements	Legislation	Regulation
HUD financial assistance may not be used for most activities in units of the Coastal Barrier Resources System (CBRS). See 16 USC 3504 for limitations on federal expenditures affecting the CBRS.	Coastal Barrier Resources Act (CBRA) of 1982, as amended by the Coastal Barrier Improvement Act of 1990 (16 USC 3501)	
References		
<a href="https://www.hudexchange.info/environmental-review/coastal-barrier-resources">https://www.hudexchange.info/environmental-review/coastal-barrier-resources</a>		

Projects located in the following states must complete this form.

Alabama	Georgia	Massachusetts	New Jersey	Puerto Rico	Virgin Islands
Connecticut	Louisiana	Michigan	New York	Rhode Island	Virginia
Delaware	Maine	Minnesota	North Carolina	South Carolina	Wisconsin
Florida	Maryland	Mississippi	Ohio	Texas	

### 1. Is the project located in a CBRS Unit?

- No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within a CBRS Unit.*

### Worksheet Summary

#### **Compliance Determination**

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

According to a review of the U.S. Fish and Wildlife Service Coastal Barrier Resources System Mapper, the project is located in a state that does not contain CBRS units. Therefore, this project is in compliance with the Coastal Barrier Resources Act. Attached is a map showing the location of CBRS units in the United States and a list of the states that contain CBRS units.

### Are formal compliance steps or mitigation required?

- Yes  
 No



April 7, 2021

 CBRS Units

This map is for general reference only. The Coastal Barrier Resources System (CBRS) boundaries depicted on this map are representations of the controlling CBRS boundaries, which are shown on the official maps, accessible at <https://www.fws.gov/cbra/maps/index.html>. All CBRS related data should be used in accordance with the layer metadata found on the CBRS Mapper website.

The CBRS Buffer Zone represents the area immediately adjacent to the CBRS boundary where users are advised to contact the Service for an official determination (<http://www.fws.gov/cbra/Determinations.html>) as to whether the property or project site is located "in" or "out" of the CBRS.

CBRS Units normally extend seaward out to the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS mapper.

# Coastal Barrier Resources System

Ecological Services

## CBRS Menu

- CBRS Home
- Legislation & Testimony
- Historical Changes
- CBRA Prohibitions
- Flood Insurance
- Official Maps and Data +
- Boundary Modifications
- Mapping Projects +
- CBRS Documentation
- Project Consultations +
- Help and Contacts

## Official CBRS Maps

The Coastal Barrier Resources Act (CBRA) of 1982 and subsequent amendments established the John H. Chafee Coastal Barrier Resources System (CBRS). The CBRS consists of relatively undeveloped coastal barriers and other areas located the Atlantic, Gulf of Mexico, Great Lakes, U.S. Virgin Islands, and Puerto Rico coasts. The CBRS currently includes 585 System Units, which comprise nearly 1.4 million acres of land and associated aquatic habitat. There are also 277 "Otherwise Protected Areas," a category of coastal barriers that are mostly already held for conservation and/or recreation purposes that include an additional 2.1 million acres of land and associated aquatic habitat. The CBRS units are identified and depicted on a series of maps entitled "John H. Chafee Coastal Barrier Resources System." These maps are controlling and indicate which lands are affected by the CBRA. The maps are maintained by the Department of the Interior through the U.S. Fish and Wildlife Service.

### Viewing an Official CBRS Map

An official CBRS map can be obtained through the [CBRS Mapper](#) by following these steps:

- Locate the area of interest in the mapper
- Click on the location of interest. A pop-up window will open providing information for the area.
- In the pop-up window, click on the map link. A PDF of the official map will then open in a separate tab or download.

Alternatively, if the name or number of the CBRS unit is known, then the official CBRS maps can also be found in the table at: <https://www.fws.gov/cbra/maps/cbrs/>.

### State Locator Maps

The below state locator maps show the locations of units in each state and may be helpful in determining a unit number.

<a href="#">Alabama</a>	<a href="#">Georgia</a>	<a href="#">Massachusetts</a>	<a href="#">New Jersey</a>	<a href="#">Ohio</a>	<a href="#">Texas</a>
<a href="#">Connecticut</a>	<a href="#">Louisiana</a>	<a href="#">Michigan</a>	<a href="#">New York Great Lakes</a>	<a href="#">Puerto Rico</a>	<a href="#">Virgin Islands</a>
<a href="#">Delaware</a>	<a href="#">Maine</a>	<a href="#">Minnesota</a>	<a href="#">New York Long Island</a>	<a href="#">Rhode Island</a>	<a href="#">Virginia</a>
<a href="#">Florida</a>	<a href="#">Maryland</a>	<a href="#">Mississippi</a>	<a href="#">North Carolina</a>	<a href="#">South Carolina</a>	<a href="#">Wisconsin</a>

Last updated: November 6, 2019



Frequently Asked Questions



Glossary



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## Flood Insurance (CEST and EA)

General requirements	Legislation	Regulation
Certain types of federal financial assistance may not be used in floodplains unless the community participates in National Flood Insurance Program and flood insurance is both obtained and maintained.	Flood Disaster Protection Act of 1973 as amended (42 USC 4001-4128)	24 CFR 50.4(b)(1) and 24 CFR 58.6(a) and (b); 24 CFR 55.1(b).
Reference		
<a href="https://www.hudexchange.info/environmental-review/flood-insurance">https://www.hudexchange.info/environmental-review/flood-insurance</a>		

**1. Does this project involve mortgage insurance, refinance, acquisition, repairs, construction, or rehabilitation of a structure, mobile home, or insurable personal property?**

No. This project does not require flood insurance or is excepted from flood insurance. → *Continue to the Worksheet Summary.*

**2. Provide a FEMA/FIRM map showing the site.**

The Federal Emergency Management Agency (FEMA) designates floodplains. The [FEMA Map Service Center](#) provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs). For projects in areas not mapped by FEMA, use the best available information to determine floodplain information. Include documentation, including a discussion of why this is the best available information for the site. Provide FEMA/FIRM floodplain zone designation, panel number, and date within your documentation.

**Is the structure, part of the structure, or insurable property located in a FEMA-designated Special Flood Hazard Area?**

No → *Continue to the Worksheet Summary.*

### Worksheet Summary

#### **Compliance Determination**

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

The structure and insurable property are not located in a FEMA-designated Special Flood Hazard Area. Attached is FEMA/FIRMette map 20045C0158D, effective on 8/5/2010. While flood insurance may not be mandatory in this instance, HUD recommends that all insurable structures maintain flood insurance under the National Flood Insurance Program (NFIP). The project is in compliance with flood insurance requirements.

**Are formal compliance steps or mitigation required?**

Yes

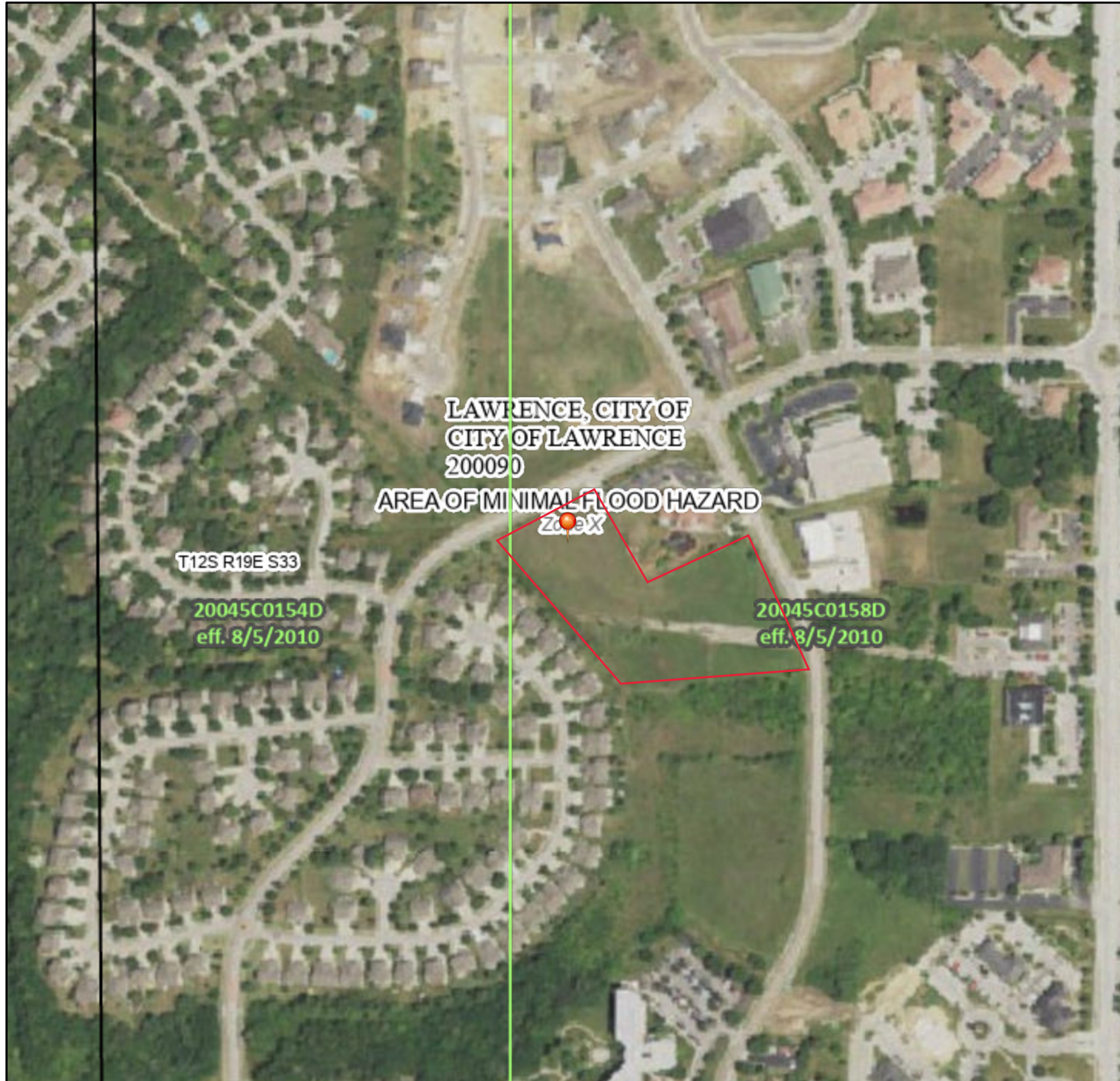
No



# National Flood Hazard Layer FIRMMette



95°19'2"W 38°57'56"N



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, A99	With BFE or Depth Zone AE, AO, AH, VE, AR	Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X	Future Conditions 1% Annual Chance Flood Hazard Zone X	Area with Reduced Flood Risk due to Levee. See Notes. Zone X	Area with Flood Risk due to Levee Zone D

OTHER AREAS	NO SCREEN Area of Minimal Flood Hazard Zone X	Effective LOMRs	Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer	Levee, Dike, or Floodwall

OTHER FEATURES	Cross Sections with 1% Annual Chance Water Surface Elevation	Coastal Transect	Base Flood Elevation Line (BFE)	Limit of Study	Jurisdiction Boundary	Coastal Transect Baseline	Profile Baseline	Hydrographic Feature

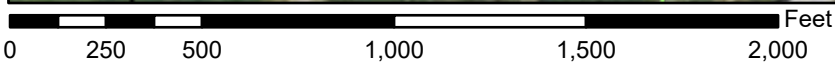
MAP PANELS	Digital Data Available	No Digital Data Available	Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/18/2024 at 4:26 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



1:6,000

95°18'24"W 38°57'28"N

Basemap Imagery Source: USGS National Map 2023

## Air Quality (CEST and EA)

General Requirements	Legislation	Regulation
The Clean Air Act is administered by the U.S. Environmental Protection Agency (EPA), which sets national standards on ambient pollutants. In addition, the Clean Air Act is administered by States, which must develop State Implementation Plans (SIPs) to regulate their state air quality. Projects funded by HUD must demonstrate that they conform to the appropriate SIP.	Clean Air Act (42 USC 7401 et seq.) as amended particularly Section 176(c) and (d) (42 USC 7506(c) and (d))	40 CFR Parts 6, 51 and 93
<b>Reference</b>		
<a href="https://www.hudexchange.info/environmental-review/air-quality">https://www.hudexchange.info/environmental-review/air-quality</a>		

### Scope of Work

- 1. Does your project include new construction or conversion of land use facilitating the development of public, commercial, or industrial facilities OR five or more dwelling units?**

Yes

→ Continue to Question 2.

### Air Quality Attainment Status of Project's County or Air Quality Management District

- 2. Is your project's air quality management district or county in non-attainment or maintenance status for any criteria pollutants?**

Follow the link below to determine compliance status of project county or air quality management district:

<https://www.epa.gov/green-book>

No, project's county or air quality management district is in attainment status for all criteria pollutants

→ Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.

## **Worksheet Summary**

### **Compliance Determination**

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

According to the U.S. EPA Green Book, the project site is not located within a nonattainment or maintenance area for any National Ambient Air Quality Standard (NAAQS) criteria air pollutants. Attached is the EPA Kansas Nonattainment/Maintenance Status for Each County for All Criteria Pollutants (as of May 31, 2024), indicating that Douglas County, KS is **not** on the list.

The project is in compliance with the Clean Air Act.

### **Are formal compliance steps or mitigation required?**

Yes

No



You are here: EPA Home > Green Book > >National Area and County-Level Multi-Pollutant Information >Kansas Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

## Kansas Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Data is current as of May 31, 2024

Listed by County, NAAQS, Area. The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.

\* The 1997 Primary Annual PM-2.5 NAAQS (level of 15 µg/m<sup>3</sup>) is revoked in attainment and maintenance areas for that NAAQS. For additional information see the PM-2.5 NAAQS SIP Requirements Final Rule, effective October 24, 2016. (81 FR 58009)

Change the State:

KANSAS

Important Notes

Download National Dataset: [dbf](#) | [xls](#) | [Data dictionary \(PDF\)](#)

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or Part County	Population (2010)	State/County FIPS Codes
<b>KANSAS</b>								
Johnson County	1-Hour Ozone (1979)-NAAQS revoked	Kansas City, MO-KS		07/23/1992	Other	Whole	544,179	20/091
Saline County	Lead (2008)	Saline County, KS	1112131415161718192021222324	//		Part	9	20/169
Wyandotte County	1-Hour Ozone (1979)-NAAQS revoked	Kansas City, MO-KS		07/23/1992	Other	Whole	157,505	20/209

Important Notes

Discover.

Connect.

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2024-05-31



## Coastal Zone Management Act (CEST and EA)

General requirements	Legislation	Regulation
Federal assistance to applicant agencies for activities affecting any coastal use or resource is granted only when such activities are consistent with federally approved State Coastal Zone Management Act Plans.	Coastal Zone Management Act (16 USC 1451-1464), particularly section 307(c) and (d) (16 USC 1456(c) and (d))	15 CFR Part 930
References		
<a href="https://www.onecpd.info/environmental-review/coastal-zone-management">https://www.onecpd.info/environmental-review/coastal-zone-management</a>		

Projects located in the following states must complete this form.

Alabama	Florida	Louisiana	Mississippi	Ohio	Texas
Alaska	Georgia	Maine	New Hampshire	Oregon	Virgin Islands
American Samona	Guam	Maryland	New Jersey	Pennsylvania	Virginia
California	Hawaii	Massachusetts	New York	Puerto Rico	Washington
Connecticut	Illinois	Michigan	North Carolina	Rhode Island	Wisconsin
Delaware	Indiana	Minnesota	Northern Mariana Islands	South Carolina	

### 1. Is the project located in, or does it affect, a Coastal Zone as defined in your state Coastal Management Plan?

- No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within a Coastal Zone.*

### Worksheet Summary

#### Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

The project is located in a state that does not participate in the Coastal Zone Management Program. Therefore, this project is in compliance with the Coastal Zone Management Act. Attached is the NOAA Office for Coastal Management list of states that participate in the Coastal Zone Management Program; Kansas is not listed.

#### Are formal compliance steps or mitigation required?

- Yes  
 No



# Coastal Zone Management Programs

Alabama [#alabama]	Alaska (*) [#alaska]	American Samoa [#samoa]
California [#california]	Connecticut [#connecticut]	Delaware [#delaware]
Florida [#florida]	Georgia [#georgia]	Guam [#guam]
Hawaii [#hawaii]	Illinois [#illinois]	Indiana [#indiana]
Louisiana [#louisiana]	Maine [#maine]	Maryland [#maryland]
Massachusetts [#massachusetts]	Michigan [#michigan]	Minnesota [#minnesota]
Mississippi [#mississippi]	New Hampshire [#newhampshire]	New Jersey [#newjersey]
New York [#newyork]	North Carolina [#northcarolina]	Northern Mariana Islands [#mariana]
Ohio [#ohio]	Oregon [#oregon]	Pennsylvania [#pennsylvania]
Puerto Rico [#puertorico]	Rhode Island [#rhodeisland]	South Carolina [#southcarolina]
Texas [#texas]	Virgin Islands [#virginislands]	Virginia [#virginia]
Washington [#washington]	Wisconsin [#wisconsin]	

*\* All 35 coastal and Great Lakes states and territories (with the exception of Alaska) participate in the National Coastal Zone Management Program.*

## ALABAMA

The Alabama Coastal Management Program [<http://www.adem.state.al.us/programs/coastal/default.cnt>] , approved by NOAA in 1979, is administered by two state agencies:

- The [Alabama Department of Conservation and Natural Resources](http://www.outdooralabama.com/alabama-coastal-area-management-program) is responsible for planning, fiscal management, public education, and research management; and the
- Alabama Department of Environmental Management [<http://adem.alabama.gov/programs/coastal/default.cnt>] carries out permitting, regulatory, and enforcement functions.

The primary authority for the coastal management program is the Alabama Coastal Area Act of 1976 (Act 534). The Alabama coastal zone [<https://coast.noaa.gov/data/czm/media/StateCZBoundaries.pdf>] extends inland to the continuous 10-foot contour in Mobile and Baldwin Counties.

## ALASKA

Alaska withdrew from the voluntary National Coastal Zone Management Program [</czm/about/>] on July 1, 2011. Contact NOAA's Office for Coastal Management for additional information.

## AMERICAN SAMOA

The American Samoa Coastal Management Program [<http://www.doc.as/resource-management/ascmp/>] , approved by NOAA in 1980, is led by the American Samoa Department of Commerce. The coastal program has developed a unique approach that incorporates both western and traditional systems of management. The American Samoa Coastal Management Act provides the primary authority for the program. American Samoa's coastal zone boundary [<https://coast.noaa.gov/data/czm/media/StateCZBoundaries.pdf>] consists of seven islands, totaling roughly 77 square miles, with a coastline of 126 miles.

## CALIFORNIA

The California Coastal Management Program, approved by NOAA in 1978, is administered by three state agencies:

## Contamination and Toxic Substances (Multifamily and Non-Residential Properties)

General requirements	Legislation	Regulations
It is HUD policy that all properties that are being proposed for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of the occupants or conflict with the intended utilization of the property.		24 CFR 58.5(i)(2) 24 CFR 50.3(i)
Reference		
<a href="https://www.hudexchange.info/programs/environmental-review/site-contamination">https://www.hudexchange.info/programs/environmental-review/site-contamination</a>		

**1. How was site contamination evaluated? <sup>1</sup> Select all that apply.**

- ASTM Phase I ESA
- ASTM Phase II ESA
- Remediation or clean-up plan
- ASTM Vapor Encroachment Screening
- None of the above

→ Provide documentation and reports and include an explanation of how site contamination was evaluated in the Worksheet Summary.

Continue to Question 2.

**2. Were any on-site or nearby toxic, hazardous, or radioactive substances found that could affect the health and safety of project occupants or conflict with the intended use of the property? (Were any recognized environmental conditions or RECs identified in a Phase I ESA and confirmed in a Phase II ESA?)**

- No

**Explain:**

---

<sup>1</sup> HUD regulations at 24 CFR § 58.5(i)(2)(ii) require that the environmental review for multifamily housing with five or more dwelling units or non-residential property include the evaluation of previous uses of the site or other evidence of contamination on or near the site. For acquisition and new construction of multifamily and nonresidential properties HUD strongly advises the review include an ASTM Phase I Environmental Site Assessment (ESA) to meet real estate transaction standards of due diligence and to help ensure compliance with HUD's toxic policy at 24 CFR §58.5(i) and 24 CFR §50.3(i). Also note that some HUD programs require an ASTM Phase I ESA.

GuideWire Consulting, LLC performed a Phase I Environmental Site Assessment dated June 28, 2024 on the undeveloped land at 1311 Research Park Drive and 5015 Legends Drive. Based on site reconnaissance, research, and interviews, the current and historical uses of the Subject Property and surrounding area do not appear to represent a material threat to the Subject Property. Furthermore, no Recognized Environmental Conditions, Historical Recognized Environmental Conditions, or Controlled Recognized Environmental Conditions were identified in connection with the Subject Property.

It is the opinion of the environmental professional that the findings and conclusions presented in this report are reasonable and prudent, given the evidence as presented. In addition, this inquiry has not identified conditions indicative of releases or threatened releases of hazardous substances that would warrant additional investigation.

Based on the findings of this Phase I ESA, GuideWire recommends no further environmental investigation at this time.

→ *Based on the response, the review is in compliance with this section.  
Continue to the Worksheet Summary below.*

### **Worksheet Summary**

#### **Compliance Determination**

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

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It is the opinion of the environmental professional that the findings and conclusions presented in this report are reasonable and prudent, given the evidence as presented. In addition, this inquiry has not identified conditions indicative of releases or threatened releases of hazardous substances that would warrant additional investigation.

Based on the findings of this Phase I ESA, GuideWire recommends no further environmental investigation at this time.

Upon completion of construction, a licensed radon professional will test for radon levels and any units that reach indoor air radon levels at or above 4 pCi/L must have a radon reduction system installed, post-installation testing by a licensed radon professional, and an ongoing maintenance plan to ensure the system is operating as intended.

On-site or nearby toxic, hazardous, or radioactive substances that could affect the health and safety of project occupants or conflict with the intended use of the property were not found. The project is in compliance with contamination and toxic substances requirements. See attached Site Contamination Multi Family Worksheet packet for documentation.

**Are formal compliance steps or mitigation required?**

Yes

No

PHASE I ENVIRONMENTAL SITE ASSESSMENT

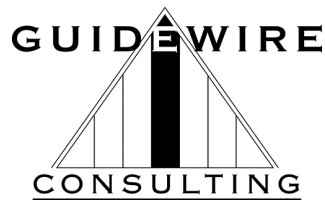
*Field Work Conducted and Report Prepared in Accordance with ASTM E 1527-21*



Undeveloped Land  
1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas 66049

Report Date: June 28, 2024

Project Number: 17.1.240071



Prepared for:  
Lawrence Douglas County Housing Authority  
1600 Haskell Avenue  
Lawrence, Kansas 66044

Prepared by:  
GuideWire Consulting, LLC  
211 E. 8th Street, Suite F  
Lawrence, Kansas 66044

June 28, 2024

Ruth Lichtwardt  
Lawrence Douglas County Housing Authority  
1600 Haskell Avenue  
Lawrence, Kansas 66044

Subject: Phase I Environmental Site Assessment  
Undeveloped Land  
1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas 66049  
GuideWire Project No. 17.1.240071

Dear Ruth Lichtwardt,

GuideWire Consulting, LLC (GuideWire) has performed a Phase I Environmental Site Assessment (ESA) for the above-referenced Property. The project was completed in general accordance with the scope and limitations set forth in ASTM E 1527-21. Please find enclosed the Phase I ESA report.

If you have any questions about the Project or if we may be of service in any way please contact us. Thank you for working with us on this project, we look forward to the opportunity of working with you again on future projects.

Sincerely,



Michael Dever, President



Andrew Clayton, Vice President

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Appendix G - Qualifications of Environmental Professional

Appendix H - Additional Documentation

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## 1.0 Project Summary

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### 1.1 Scope of Services

GuideWire was retained by Lawrence Douglas County Housing Authority (the "Client") to conduct a Phase I Environmental Site Assessment (ESA) of 1311 Research Park Drive and 5015 Legends Drive in Lawrence, Kansas (the "Subject Property") in accordance with the scope of work detailed in the GuideWire proposal dated May 31, 2024. Authorization to perform the work was provided by Ruth Lichtwardt on June 10, 2024. The Scope of Work for the Phase I ESA is included in Appendix F of this report.

### 1.2 Significant Assumptions

This Phase I ESA was conducted in accordance with ASTM Standard Practice ASTM E 1527-21 to insure that methodologies used constitute appropriate inquiry into the prior uses of the Subject Property consistent with good commercial and customary practice in order to identify and analyze environmental conditions that constitute existing, past, or potential environmental risks associated with a property. Performance, in accord with these standards is intended to reduce, but not eliminate uncertainty with respect to the potential for RECs associated with a property.

This report is designed to satisfy the requirements for the innocent landowner defense to CERCLA liability as defined in 42 USC 9601 (34)B. All of the investigative reports as stated in ASTM subject have been satisfied by this assessment.

### 1.3 Client Supplied Information

Recorded land title records for the Subject Property were not reviewed for this assessment. No environmental liens were reported by the Client.

The Client reported no specialized knowledge of RECs, HRECs, or other potential environmental concerns in connection with the Subject Property. No Property valuation reduction related to environmental issues or concerns was reported by the Client.

GuideWire was not provided with any commonly known or reasonably ascertainable information about the Subject Property that is material to recognized environmental conditions in connection with the Subject Property.

GuideWire was not provided with any information which indicated any valuation reduction for the Subject Property.

### 1.4 Site Setting

The Subject Property consists of approximately 5.32 acres of land, is irregular in shape, identified as parcel 023-068-33-0-30-01-012.04-0 and 023-068-33-0-30-01-002.02-0 by the Douglas County assessor's office, and is currently undeveloped, naturally vegetated land. The Subject Property is currently owned by Mazda LLC. The Subject Property includes no buildings.

## 1.5 Current Use of the Adjoining Properties

Summary of current use of Adjoining properties:

Direction	Site Use	Adjoining Street	Database Listings
North	Single-family residences	Legends Dr.	NA
Northeast	Lawrence Montessori School (5005 Legends Dr.)	NA	NA
East	Multi-tenant commercial buildings (4921 Legends Dr., 1310 Research Park Dr.), the remnants of the Lawrence Drag Strip main track, and undeveloped land	Research Park Dr.	NA
South	Undeveloped land	NA	NA
West	Duplex residences	NA	NA

## 1.6 Land Use and Development History

The Subject Property was developed with a portion of the main track of the Lawrence Drag Strip from 1958 until the race course ceased operations in 1986. Remnants of the asphalt track currently remain onsite. Prior to this, the Subject Property was agricultural or undeveloped land dating to at least 1937.

## 1.7 Federal/State Listing Summary

### Regulatory Report Summary

Database	Search Radius	Target Property	Within 0.12mi	0.12mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
SPILLS	0.125	1	0	-	-	-	1
RCRA NON GEN	0.25	0	0	4	-	-	4
RCRA VSQG	0.25	0	0	1	-	-	1
PFAS	0.5	0	0	0	1	-	1

The Subject Property was identified on the Kansas Spills Database (SPILLS), a list of spills, discharges, and emergency release sites reported to the Kansas Department of Health and Environment (KDHE). A release of 0.5 gallons of hydraulic oil was reported on February 20, 2017 from a leaking hydraulic pump on a skid steer operated by Southern Star Central Gas Pipeline. Contaminated soil was cleaned up and removed from the site and the Spill received regulatory closure on February 23, 2017. Based on the limited extent of the release, the completed remedial actions, and the regulatory closure, this listings is not considered to represent a material threat to the Subject Property.

Based on distance, topography, area groundwater conditions, and/or site status, the surrounding properties identified in the regulatory database report are not considered to represent a material threat to the Subject Property.

## 1.8 Site Observations

Summary of observations:

Category	Item or Feature	Item or Feature Observed
<b>Site Operations, Processes, and Equipment</b>	Emergency generators	
	Hydraulic equipment	
<b>Aboveground Chemical or Waste Storage</b>	Evidence of aboveground storage tanks	
	Drums, barrels and/or containers >= 5 gallons	
<b>Underground Chemical or Waste Storage, Drainage or Collection Systems</b>	Evidence of underground storage tanks or ancillary UST equipment	
	Grease Traps	
	Oil/water separators	
	Sumps, cisterns, catch basins and/or dry wells	
	Septic tanks and/or leach fields	
	Pipeline markers	✓

Category	Item or Feature	Item or Feature Observed
<b><i>Electrical Transformers/ PCBs</i></b>	Pad or pole mounted transformers and/or capacitors	
	Generators	
<b><i>Evidence of Releases or Potential Releases</i></b>	Stressed vegetation	
	Stained soil	
	Stained pavement or similar surface	
	Leachate or waste seeps	
	Trash, debris and/or other waste materials	
	Dumping or disposal areas	
	Construction/demolition debris and/or dumped fill dirt	
	Surface water discoloration, odor, sheen, and/or free floating product	
	Strong, pungent or noxious odors	
	Exterior pipe discharges and/or other effluent discharges	
	Discharge from roof drains	
	Discharge other than roof drains	
	Compressor blowdown	
<b><i>Other Notable Site Features</i></b>	Surface water bodies	
	Quarries or pits	

Category	Item or Feature	Item or Feature Observed
	Wells	
	Additional observations	
<b>Hazardous Materials and Petroleum Products</b>	Hazardous materials and petroleum products	

### *Pipeline markers*

During the site reconnaissance, natural gas pipeline markers were observed along the western boundary of the Subject Property. According to the National Pipeline Mapping System (NPMS), an active natural gas pipeline, operated by Southern Star Central Gas Pipelines, is located along the western boundary of the Subject Property. Based on a review of NPMS data, no incidents, releases, or impacts to the Subject Property were identified in relation to the Southern Star Central Gas Pipeline.

None of the items or features observed on the Subject Property were identified as representing a material threat to the Subject Property.

## **1.9 Interviews**

Representative interviews were conducted with various individuals knowledgeable of the Subject Property. The interviews were conducted to determine an awareness of any recognized environmentally related problems or concerns at the Subject Property. Specific information obtained from the noted individuals appears in the appropriate sections of this report.

## **1.10 Opinions**

Based on site reconnaissance, research, and interviews, the current and historical uses of the Subject Property and surrounding area do not appear to represent a material threat to the Subject Property. Furthermore, no Recognized Environmental Conditions, Historical Recognized Environmental Conditions, or Controlled Recognized Environmental Conditions were identified in connection with the Subject Property.

It is the opinion of the environmental professional that the findings and conclusions presented in this report are reasonable and prudent, given the evidence as presented. In addition, this inquiry has not identified conditions indicative of releases or threatened releases of hazardous substances that would warrant additional investigation.

## **1.11 Significant Data Gaps**

Significant data gaps were not encountered during the preparation of this Phase I Environmental Site Assessment.



### **1.12 Recognized Environmental Conditions**

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM E 1527-21 of 1311 Research Park Drive and 5015 Legends Drive, the Subject Property. Any exceptions to, or deletions from, this practice are described in Section 2.4 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the Subject Property.

### **1.13 Additional Investigation**

Based on the findings of this Phase I ESA, GuideWire recommends no further environmental investigation at this time.

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## **2.0 Introduction**

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### **2.1 Purpose**

The purpose of this Phase I ESA is to identify existing or potential recognized environmental conditions or historical recognized environmental conditions (as defined by ASTM E 1527-21) affecting the Subject Property.

### **2.2 Detailed Scope of Services**

GuideWire was retained by Lawrence Douglas County Housing Authority to conduct a Phase I Environmental Site Assessment (ESA) of the Subject Property in accordance with the scope of work detailed in the GuideWire proposal dated May 31, 2024. Authorization to perform the work was provided by Ruth Lichtwardt on June 10, 2024. The Scope of Work for the Phase I ESA is included in Appendix F of this report.

### **2.3 Significant Assumptions**

This Phase I ESA was conducted in accordance with ASTM Standard Practice ASTM E 1527-21 to insure that methodologies used constitute appropriate inquiry into the prior uses of the Subject Property consistent with good commercial and customary practice in order to identify and analyze environmental conditions that constitute existing, past, or potential environmental risks associated with a property. Performance, in accord with these standards is intended to reduce, but not eliminate uncertainty with respect to the potential for RECs associated with a property.

This report is designed to satisfy the requirements for the innocent landowner defense to CERCLA liability as defined in 42 USC 9601 (34)B. All of the investigative reports as stated in ASTM subject have been satisfied by this assessment.

### **2.4 Limitation, And Exceptions**

A Phase I ESA is limited by the availability and quality of site documentation. Undocumented, unauthorized releases of hazardous materials, the remains of which are not readily identifiable by visual inspection, are very difficult and often impossible to detect within the scope of such an investigation.

In preparing this report, GuideWire has relied on certain information provided by various government agencies and officials, interviews, third party environmental database providers, and data available at the time of the site inspection. Although there may be some degree of overlap in the information provided by these various sources, GuideWire did not attempt to independently verify the accuracy of all information reviewed or received during the course of this Phase I ESA. GuideWire disclaims any and all liability for any errors, omissions or inaccuracies in information provided by third party sources.

The findings of this report are valid as of the date of this report. Changes in the condition of a property can occur with the passage of time, whether due to natural processes or to the works of man on this or adjacent sites. In addition, changes in state-of-the-art procedures or government regulations may occur. Such changes, which are beyond GuideWire's control, may render the findings of this report invalid, wholly or in part. GuideWire has no responsibility for any contingent liabilities for any reason.

The final assessment of the potential for the existence of hazardous material at the subject property should be considered professional opinions based upon the data obtained during the investigations and should not be considered a definitive statement that hazardous material is or is not present in the area of study. These opinions have been derived in accordance with ASTM E 1527-21.

This report does not constitute legal advice, nor does GuideWire claim to give legal advice. Any maps, plats, sketches, drawings, or photographs reproduced and included in this report are intended only for the purpose of showing spatial relationships and do not represent legal surveys.

All of the investigative requirements as stated in ASTM E 1527-21 have been satisfied by this assessment.

## **2.5 Special Terms and Conditions**

All appropriate inquiry into the prior uses of the Subject Property was made with good commercial and customary practices in order to identify and analyze RECs constituting existing, past or potential environmental concerns in connection with the Subject Property.

## **2.6 User Reliance**

This assessment was performed at the request of the Client utilizing methods and procedures consistent with good commercial or customary practices designed to conform with acceptable industry standards. The independent conclusions represent the best professional judgment of the Environmental Professional based on the conditions that existed and the information and data available to us during the course of this assignment. Factual information regarding operations, conditions, and test data provided by the Client, owner, or their representative have been assumed to be correct and complete. The report may be distributed and relied upon by the Client, its successors and assigns:

Lawrence Douglas County Housing Authority

Douglas County Housing, Inc.

Reliance on the information and conclusions presented in this report by any other party(ies) is not authorized.

## 3.0 Property Description

A site visit was performed by James Davis, Environmental Professional, on June 25, 2024. The observations noted in this section apply to the site as it appeared on that day. Site maps and plans showing general site layout are provided in Appendix A - Property Maps and Site Plans.

### 3.1 Property Location and Legal Description

#### 3.1.1 Property Location

The Subject Property is located at 1311 Research Park Drive and 5015 Legends Drive in Lawrence, Douglas County, Kansas. It is irregular in shape and identified as parcel 023-068-33-0-30-01-012.04-0 and 023-068-33-0-30-01-002.02-0 by the Douglas County assessor's office. The Subject Property is located on the west side of Research Park Drive and the south side of Legends Drive.

#### 3.1.2 Legal Property Description

The legal description for the Subject Property was obtained from the office of the Douglas County Assessor. A copy of the legal description is included in Appendix H - Additional Documentation.

### 3.2 Site and Vicinity General Characteristics

The Subject Property is located in an area of commercial and residential development in the City of Lawrence.

### 3.3 Current Use of the Subject Property

The Subject Property is currently undeveloped, naturally vegetated land.

### 3.4 Descriptions of Structures, Roads, Other Improvements

The Subject Property consists of approximately 5.32 acres and contains no buildings. The asphalt remnants of the main track for the former Lawrence Drag Strip are located on the central portion of the site.

### 3.5 Current Use of the Adjoining Properties

Summary of current use of Adjoining properties:

Direction	Site Use	Adjoining Street	Database Listings
North	Single-family residences	Legends Dr.	NA

Direction	Site Use	Adjoining Street	Database Listings
Northeast	Lawrence Montessori School (5005 Legends Dr.)	NA	NA
East	Multi-tenant commercial buildings (4921 Legends Dr., 1310 Research Park Dr.), the remnants of the Lawrence Drag Strip main track, and undeveloped land	Research Park Dr.	NA
South	Undeveloped land	NA	NA
West	Duplex residences	NA	NA

### 3.6 Physical Setting Sources

#### 3.6.1 Topography

GuideWire reviewed the USGS Lawrence West, Kansas 7.5 minute series topographic map (Contour Interval: 10 feet) for this assessment. The Subject Property elevation is approximately 994 feet above Mean Sea Level (MSL) with a gentle slope to the west. A copy of the topographic map can be found in Appendix A - Property Maps and Site Plans of this report.

#### 3.6.2 Groundwater Depth and Movement

Based on local topography and other physiographic information obtained, the groundwater is anticipated to flow toward the west at an estimated depth of 10 to 25 feet. However, it is possible that groundwater may not be present in unconsolidated material above bedrock in the area or may be seasonally present along bedrock surfaces. Local features may influence groundwater flow direction; therefore, a complete hydrogeologic investigation would be required to adequately determine groundwater flow direction at the Subject Property. An unnamed intermittent creek is located approximately 2,500 feet southwest of the Subject Property.

#### 3.6.3 Regional Geology

According to a map of Geologic Provinces of the United States, produced by the US Geological Survey, the Property is situated within the Interior Plains geologic province. The Interior Plains is a vast region that spreads across the stable core of North America. With the exception of the Black Hills of South Dakota, the entire region has low relief. The northern and eastern portions of the province, extending from Kansas to the Canadian border, were affected by Pleistocene glaciation. Alluvial actions have shaped the topography over much of the province. The bedrock in the Interior Plains consists primarily of thick layers of Paleozoic sedimentary rock, although, more recent alluvial deposits are found along many river and stream systems.

### 3.6.4 Soil Survey Information

According to the United States Department of Agriculture's Soil Survey of Douglas County, Kansas, the predominant soil classification for the Subject Property is as follows:

<b>Soil Classification</b>	Martin silty clay loam
<b>Percent Slope</b>	1 to 3 percent
<b>Depth</b>	Deep
<b>Drainage</b>	Moderately well drained
<b>Natural Fertility</b>	High
<b>Permeability</b>	Moderate
<b>Water Capacity</b>	Moderate
<b>Surface Runoff</b>	Moderate
<b>Hydric Soil Type</b>	No
<b>Formed In</b>	Colluvium derived from limestone and shale

### 3.6.5 Flood Zone Map

According to Federal Emergency Management Agency (FEMA) map number 20045C0158D, dated August 5, 2010 obtained from FEMA Flood Map Service Center, the Subject Property is located within Zone X (unshaded), an area of minimal flood hazard.

### 3.6.6 Other Maps and Data

No additional maps or other data were provided by the Client or obtained during the assessment.

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## **4.0 User Provided Information**

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### **4.1 Title Records**

Review of chain-of-title information is out of scope for this project.

### **4.2 Environmental Liens or Activity and Use Limitations**

Recorded land title records for the Subject Property were not reviewed for this assessment. No environmental liens were reported by the Client.

### **4.3 Specialized Knowledge**

The Client reported no specialized knowledge of RECs, HRECs, or other potential environmental concerns in connection with the Subject Property. No property valuation reduction related to environmental issues or concerns was reported by the Client.

### **4.4 Commonly Known or Reasonably Ascertainable Information**

GuideWire was not provided with any commonly known or reasonably ascertainable information about the Subject Property that is material to recognized environmental conditions in connection with the Subject Property.

### **4.5 Valuation Reduction for Environmental Issues**

GuideWire was not provided with any information which indicated any valuation reduction for the Subject Property.

### **4.6 Owner, Occupant, and Property Manager Information**

The Subject Property is currently owned by Mazda LLC. The Subject Property is unoccupied. No Key Site Manager was identified for the Subject Property.

### **4.7 Reason for Performing the Phase I ESA**

This Phase I ESA and report was prepared by GuideWire at the request of the Client. The ESA was requested for one or more of the following reasons:

- Assist in the evaluation of legal and financial liabilities associated with the Subject Property.
- Assist in the evaluation of the Subject Property's overall development potential.
- Assist in the determination whether any immediate actions at the Subject Property are necessary to comply with existing environmental laws and regulations.
- Constitute partial or whole appropriate inquiry for purposes of CERCLA's innocent landowner defense.

#### **4.8 Other**

The user has not made known to the environmental professional any other reason why the user wants to have this Phase I Environmental Site Assessment performed other than the user's desire to qualify for an LLP to CERCLA liability.



## 5.0 Records Review

### 5.1 Standard Environmental Records Review

A search of available federal and state environmental records was conducted by Environmental Risk Information Services (ERIS). The ERIS Radius Report (Report) for the Subject Property is included in Appendix D Regulatory Records Documentation of this report. The provided Report meets or exceeds the regulatory records search requirements of ASTM E 1527-21. Discrepancies may exist between the ERIS report and the findings of GuideWire's research and reconnaissance regarding sites identified in the Report. Listed facilities may not be plotted in correct locations or may be listed as unmapped sites because of incomplete or incorrect addresses or other inadequate data. When discrepancies occur, the findings of GuideWire's site reconnaissance and other records review will take precedence over information provided by ERIS.

#### 5.1.1

##### Regulatory Report Summary

Database	Search Radius	Target Property	Within 0.12mi	0.12mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
SPILLS	0.125	1	0	-	-	-	1
RCRA NON GEN	0.25	0	0	4	-	-	4
RCRA VSQG	0.25	0	0	1	-	-	1
PFAS	0.5	0	0	0	1	-	1

#### 5.1.2

##### Subject Property Summary

Database	Site Name	Address	Comments
SPILLS	NULL		Discussed below

## Default Section Title

The Subject Property was identified on the Kansas Spills Database (SPILLS), a list of spills, discharges, and emergency release sites reported to the Kansas Department of Health and Environment (KDHE). A release of 0.5 gallons of hydraulic oil was reported on February 20, 2017 from a leaking hydraulic pump on a skid steer operated by Southern Star Central Gas Pipeline. Contaminated soil was cleaned up and removed from the site and the Spill received regulatory closure on February 23, 2017.

Based on the limited extent of the release, the completed remedial actions, and the regulatory closure, this listings is not considered to represent a material threat to the Subject Property.

### 5.1.3

\*NC - No Concern, site not considered a material threat to the Subject Property

## Surrounding Properties Summary

Database	Site Name	Address	Dist. (mi) / Dir.	Elev. diff. (ft)	Comments
RCRA NON GEN	Midwest Superconductivity Inc	1315 Wakarusa Dr, Lawrence, KS, 66049	0.15/E	-15.0	NC - no releases identified
RCRA NON GEN	Midwest Superconductivity Inc	1321 Wakarusa Dr Ste 2104, Lawrence, KS, 66049	0.18/ESE	-23.0	NC - no releases identified
RCRA NON GEN	Prairie Graphics	1201 Wakarusa Dr Suite B4, Lawrence, KS, 66049	0.24/NE	-3.0	NC - no releases identified
RCRA VSQG	Us Geological Survey	4821 Quail Crest Pl, Lawrence, KS, 66049	0.24/E	-22.0	NC - no releases identified
RCRA NON GEN	Midwest Graphics	4811 Quail Crest Pl, Lawrence, KS, 66049	0.25/ESE	-41.0	NC - no releases identified

Database	Site Name	Address	Dist. (mi) / Dir.	Elev. diff. (ft)	Comments
PFAS	W Africa Oil & Gas Corp	909 Congressional Dr, Lawrence, KS, 66049	0.46/N	7.0	NC - no releases identified

## 5.2 Federal and State Listing Findings

Based on distance, topography, area groundwater conditions, and/or site status, the surrounding properties identified in the regulatory database report are not considered to represent a material threat to the Subject Property.

### 5.2.1 Unmappable "Orphan" Sites

Unmapped facilities are those that do not contain sufficient address or location information to evaluate the facility listing locations relative to the site. The ERIS Report listed no facilities in the unmapped section.

### 5.2.2 Additional Environmental Record Sources

In addition to the database review, the following local and/or state agencies were contacted and questioned with regard to any environmental issues related to the Subject Property or adjoining properties: Kansas Department of Health and Environment (KDHE).

Relevant regulatory records are included in Appendix D.

## 5.3 Historical Use Information on the Subject Property

### 5.3.1 Land Use and Development

The Subject Property was developed with a portion of the main track of the Lawrence Drag Strip from 1958 until the race course ceased operations in 1986. Remnants of the asphalt track currently remain onsite. Prior to this, the Subject Property was agricultural or undeveloped land dating to at least 1937.

### 5.3.2 City Directories

Historical city directories for the Subject Property obtained from the Lawrence Public Library were investigated for indications of previous uses of the Subject Property. Where available, city directories are reviewed to determine historical Property use at a minimum of five-year intervals. Historical uses of the adjoining properties were also researched, to the extent that records were considered practically reviewable. The following city directories were reviewed:

1961	1964	1969	1972	1977
1982	1987	1992	1997	1998
1999	2002	2007	2012	2017
2019	2024			

### 5.3.3 Fire Insurance Maps

Sanborn fire insurance maps were produced for urban areas since the late 1800s and were utilized for determining fire hazards. When available, these maps are reviewed for further documentation concerning the historical use of the Subject Property and surrounding area. A search was conducted locally and through a national database company for all readily available fire insurance maps.

According to a review of the Sanborn collection of fire insurance maps, there is no map coverage for the area of the Subject Property.

### 5.3.4 Aerial Photographs

Aerial photographs of both developed and undeveloped land have been produced since approximately 1930. Historical photographs are often available from local and federal government agencies. Numerous private companies also maintain collections for certain parts of the country. Where available, aerial photographs provide a valuable tool for evaluating the historical use of the Subject Property and surrounding area. A search was conducted locally and/or through national providers for readily available aerial photographs.

Historical aerial photographs of the Subject Property and vicinity were obtained from the office of the Douglas County Assessor. The photographs were reviewed for indications of previous uses of the Subject Property and potential environmental concerns in the area.

Representative copies of the aerial photographs reviewed can be found in Appendix C - Historical Research Documentation of this report. A summary of the aerial photograph review is as follows:

1937	1941	1954	1966	1976
1986	1995	2000	2003	2006
2009	2013	2016	2018	2020
2022				

### **5.3.5 Historical Topographic Maps**

GuideWire Consulting, LLC reviewed the following historical topographic maps published by the USGS and obtained from US Geological Survey (USGS):

- 1951 Lawrence West, Kansas 7.5-minute, USGS
- 1964 Lawrence West, Kansas 7.5-minute, USGS
- 1965 Lawrence West, Kansas 7.5-minute, USGS
- 1968 Lawrence West, Kansas 7.5-minute, USGS
- 1978 Lawrence West, Kansas 7.5-minute, USGS
- 1995 Lawrence West, Kansas 7.5-minute, USGS

### **5.3.6 Prior Reports and Other Documentation**

GuideWire was not provided with, nor did we obtain, prior environmental reports or other documentation for the Subject Property during the investigative process.

### **5.3.7 Building Department Records**

Building Department Records were not reviewed during the assessment. The Subject Property is not developed with any structures subject to permitting or inspections by the City of Lawrence.

### **5.3.8 Zoning/Land Use Records**

Zoning Land Use Records were reviewed during the assessment. According to information available from the City of Lawrence, the Subject Property is zoned IBP, Industrial/Business Park District, and appears to be a conforming use in its current configuration.

### **5.3.9 Property Tax Files**

Property Tax Files were reviewed during the assessment. According to the office of the Douglas County Assessor, the Subject Property is currently owned by Mazda LLC.

### **5.3.10 Other Historical Sources**

Other Historical Sources were not reviewed during the assessment.

### **5.3.11 Historical Use of the Subject Property Table**

The following table summarizes historical land uses identified for the Subject Property:

### Historical Use Information on the Subject Property

Year(s)	Property Use	Reference Source
1937-1954	The Subject Property was agricultural or undeveloped land.	Aerial Photograph Topographic Map
1958-Present	The Subject Property was developed with a portion of the main track of the Lawrence Drag Strip, running east-to-west across the central portion of the site, until the race course ceased operations in 1986. Remnants of the asphalt track currently remain onsite.	Aerial Photograph City Directory Local Records Site Reconnaissance Topographic Map

The historical review did not identify any usage of the Subject Property that is considered evidence of a REC.

### 5.3.12 Historical Use Information on Adjoining Properties

The following tables summarize historical land uses identified for adjoining properties:

#### North

Year(s)	Property Use	Reference Source
1937-2003	Agricultural or undeveloped land	Aerial Photograph City Directory Topographic Map
2006-Present	Developed in phases with current single-family residences	Aerial Photograph City Directory Site Reconnaissance

#### Northeast

Year(s)	Property Use	Reference Source
1937-2009	Agricultural or undeveloped land	Aerial Photograph City Directory Topographic Map

Year(s)	Property Use	Reference Source
2013-Present	Developed with current school	Aerial Photograph City Directory Site Reconnaissance

**East**

Year(s)	Property Use	Reference Source
1937-1954	Agricultural or undeveloped land	Aerial Photograph Topographic Map
1958-1995	Developed with a portion of the Lawrence Drag Stip main track and part of an unpaved circular track	Aerial Photograph City Directory Local Records Topographic Map
1999-2016	Developed with the current commercial building at 4921 Legends Dr. and the remnants of the Lawrence Drag Stip main track	Aerial Photograph City Directory
2018-Present	Developed in current configuration with both commercial buildings and the remnants of the Lawrence Drag Stip main track	Aerial Photograph City Directory Site Reconnaissance

No tenants of environmental concern were identified for the adjoining commercial buildings

**South**

Year(s)	Property Use	Reference Source
1937-Present	Agricultural or undeveloped land	Aerial Photograph City Directory Site Reconnaissance Topographic Map

**West**

Year(s)	Property Use	Reference Source
1937-1954	Agricultural or undeveloped land	Aerial Photograph Topographic Map
1958-2000	Developed with a portion of the Lawrence Drag Strip main track	Aerial Photograph City Directory Local Records Topographic Map
2003-Present	Developed in phases with current duplex residences	Aerial Photograph City Directory Site Reconnaissance

The historical review did not identify any usage of adjoining properties that is considered evidence of a REC.



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## 6.0 Site Reconnaissance

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### 6.1 Methodology and Limiting Conditions

A site reconnaissance of the Subject Property was performed by James Davis, Environmental Professional, on June 25, 2024. The observations noted in this section apply to the Subject Property as it appeared on that day. The exteriors of adjoining properties were visually evaluated as part of the site reconnaissance. James Davis was unaccompanied at the time of the site reconnaissance. The weather was 85F and overcast.

### 6.2 General Site Setting

The Subject Property consists of approximately 5.32 acres of land, is irregular in shape, identified as parcel 023-068-33-0-30-01-012.04-0 and 023-068-33-0-30-01-002.02-0 by the Douglas County assessor's office, and is currently undeveloped, naturally vegetated land. The Subject Property is currently owned by Mazda LLC. The Subject Property includes no buildings.

#### 6.2.1 Solid Waste Disposal

Solid waste is not generated on the Subject Property.

#### 6.2.2 Sewage Discharge

Sanitary sewage is not generated on the Subject Property.

#### 6.2.3 Process Wastewater

Process wastewater is not generated at the Subject Property.

#### 6.2.4 Surface Water Drainage

Surface water on the Subject Property drains onto adjacent sites and flows toward the west.

#### 6.2.5 Utilities

The area of the Subject Property is serviced by the following utilities:

Utility	Present Provider
Electric	Evergy
Natural Gas	Black Hills Energy
Water	City of Lawrence

Utility	Present Provider
Sewage	City of Lawrence

### 6.2.6 Additional Property Conditions

Additional relevant property characteristics were not observed.

### 6.3 Site Observations

#### 6.3.1 Landfills

No landfill activities were identified on the Subject Property.

#### 6.3.2 Summary of Observations Table

Summary of observations:

Category	Item or Feature	Item or Feature Observed
<b>Site Operations, Processes, and Equipment</b>	Emergency generators	
	Hydraulic equipment	
<b>Aboveground Chemical or Waste Storage</b>	Evidence of aboveground storage tanks	
	Drums, barrels and/or containers $\geq$ 5 gallons	
<b>Underground Chemical or Waste Storage, Drainage or Collection Systems</b>	Evidence of underground storage tanks or ancillary UST equipment	
	Grease Traps	
	Oil/water separators	
	Sumps, cisterns, catch basins and/or dry wells	
	Septic tanks and/or leach fields	

Category	Item or Feature	Item or Feature Observed
	Pipeline markers	✓
<b>Electrical Transformers/ PCBs</b>	Pad or pole mounted transformers and/or capacitors	
	Generators	
<b>Evidence of Releases or Potential Releases</b>	Stressed vegetation	
	Stained soil	
	Stained pavement or similar surface	
	Leachate or waste seeps	
	Trash, debris and/or other waste materials	
	Dumping or disposal areas	
	Construction/demolition debris and/or dumped fill dirt	
	Surface water discoloration, odor, sheen, and/or free floating product	
	Strong, pungent or noxious odors	
	Exterior pipe discharges and/or other effluent discharges	
	Discharge from roof drains	
	Discharge other than roof drains	
	Compressor blowdown	
<b>Other Notable Site Features</b>	Surface water bodies	

Category	Item or Feature	Item or Feature Observed
	Quarries or pits	
	Wells	
	Additional observations	
<b><i>Hazardous Materials and Petroleum Products</i></b>	Hazardous materials and petroleum products	

### **Underground Chemical or Waste Storage, Drainage or Collection Systems**

#### *Pipeline markers*

During the site reconnaissance, natural gas pipeline markers were observed along the western boundary of the Subject Property. According to the National Pipeline Mapping System (NPMS), an active natural gas pipeline, operated by Southern Star Central Gas Pipelines, is located along the western boundary of the Subject Property. Based on a review of NPMS data, no incidents, releases, or impacts to the Subject Property were identified in relation to the Southern Star Central Gas Pipeline.

### **6.3.3 Site Observations Discussion**

None of the items or features observed on the Subject Property were identified as representing a material threat to the Subject Property.

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## **7.0 Interviews**

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Representative interviews were conducted with various individuals knowledgeable of the Subject Property. The interviews were conducted to determine an awareness of any recognized environmentally related problems or concerns at the Subject Property. Specific information obtained from the noted individuals appears in the appropriate sections of this report.

### **7.1 Interview with Owner**

At the time of this ESA, property owners were not available for interview.

### **7.2 Interview with Site Manager**

At the time of this ESA, individuals with detailed knowledge of the Subject Property were not available for interview.

### **7.3 Interviews with Local Government Officials**

At the time of this ESA, government officials were not available for interview.

### **7.4 Interviews with Others**

The user questionnaire can be found in Appendix E.

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## **8.0 Findings and Conclusions**

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The following findings and conclusions were derived from GuideWire's assessment of the Subject Property located at 1311 Research Park Drive and 5015 Legends Drive, Lawrence, Douglas County, Kansas.

### **8.1 Significant Data Gaps**

Significant data gaps were not encountered during the preparation of this Phase I Environmental Site Assessment.

### **8.2 Opinion**

Based on site reconnaissance, research, and interviews, the current and historical uses of the Subject Property and surrounding area do not appear to represent a material threat to the Subject Property. Furthermore, no Recognized Environmental Conditions, Historical Recognized Environmental Conditions, or Controlled Recognized Environmental Conditions were identified in connection with the Subject Property.

It is the opinion of the environmental professional that the findings and conclusions presented in this report are reasonable and prudent, given the evidence as presented. In addition, this inquiry has not identified conditions indicative of releases or threatened releases of hazardous substances that would warrant additional investigation.

### **8.3 Recognized Environmental Conditions**

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM E 1527-21 of 1311 Research Park Drive and 5015 Legends Drive, the Subject Property. Any exceptions to, or deletions from, this practice are described in Section 2.4 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the Subject Property.

### **8.4 Additional Investigation**

Based on the findings of this Phase I ESA, GuideWire recommends no further environmental investigation at this time.

### **8.5 Deviations**

No material deviations from the standard were made in the preparation of this report.

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## 9.0 Additional Services

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### 9.1 Radon

Radon is an invisible, odorless, radioactive gas produced by the decay of uranium in rock and soil. Radon gas enters a building through cracks in the foundation, areas surrounding drainage pipes, and other openings in the foundation and walls. Buildings with basements and concrete slab foundations are more susceptible to elevated radon gas levels. The radon decay products, once inside a building, may become attached to dust particles and inhaled, or the decayed radioactive particles alone may be inhaled and cause damage to lung tissue.

The EPA National Database for Douglas County, Kansas indicates that a high (Zone 1) potential for elevated radon levels exists. The average radon level for Douglas County, Kansas is predicted to be greater than 4.0 pCi/L.

If more information is needed regarding prevalent radon levels, further investigation would be required. Such investigation may include short-term and/or long-term testing for radon inside any onsite structures.

### 9.2 Lead in Drinking Water

Drinking water is supplied to the area of the Subject Property by the municipal water supply and is reported to be within state and federal standards for lead.

### 9.3 Wetlands Map

According to the U.S. Fish and Wildlife Service (FWS) 2024 online wetlands data, the subject Property does not contain identified wetland areas.

### 9.4 PFAS

Per- and polyfluoroalkyl substances (PFAS) are a group of manufactured chemicals that have been used in industry and consumer products since the 1940s because of their useful properties. There are thousands of different PFAS, including perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). One common characteristic of concern of PFAS is that many break down very slowly and can build up in people, animals, and the environment over time. Scientific studies have shown that exposure to some PFAS in the environment may be linked to harmful health effects in humans and animals, however, PFAS are substances about which human understanding is evolving. Robust research is needed to better determine how to measure PFAS, how to identify exposure pathways, and how harmful the chemicals are to people. PFAS are not currently classified by CERCLA as a hazardous substance and thus the presence of PFAS would not represent a REC. However, the User should be aware that regulatory criteria and classifications are subject to change.

Based on the regulatory records review, historical land use information, and site reconnaissance, PFAS do not appear to represent a business environmental risk to the Subject Property at this time.

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## 10.0 References

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The following documents, maps or other publications may have been utilized specifically in the preparation of this Phase I ESA Report or generally in the development of the report format. References to specific documents are also provided in appropriate sections of the report.

ASTM E 1527-21 Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process.

Environmental Risk Information Services, Database Report

Federal Emergency Management Agency, National Flood Insurance Program, Flood Insurance Rate Maps

King, P.B., The Evolution of North America, Princeton University Press, Princeton, New Jersey, 1977 (Revised Edition), 197 pg.

United States Department of Agriculture, Soil Conservation Service, Soil Surveys

United States Department of the Interior, Fish and Wildlife Service, National Wetlands Inventory Map

The following web sites may have been accessed to obtain information used in the preparation of this Phase I ESA Report.

Bedrock Geology - <https://mrdata.usgs.gov/geology/state/>

Geological Provinces - <https://www.nps.gov/subjects/geology/physiographic-provinces.htm>

Soils Reference - <http://soils.usda.gov/>

State and Local Government Records - <http://www.statelocalgov.net/index.cfm>

State Radon Levels - [http://radon.com/radon/radon\\_map.html](http://radon.com/radon/radon_map.html)

Wetlands Maps - <https://www.fws.gov/wetlands/Data/Mapper.html>



---

**11.0 Signature(s) and Qualification(s) of Environmental Professional(s)**

---

I, James Davis, declare that to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined by 312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Subject Property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

A handwritten signature in black ink that reads "James Davis". The signature is written in a cursive, flowing style.

James Davis, Environmental Professional

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## 12.0 Industry Standard Definitions & Acronyms

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### *Industry Standard Definitions for Reference per ASTM E 1527-21*

#### **Adjoining Property**

Any real property or properties the border of which is contiguous or partially contiguous with that of the subject property, or that would be contiguous or partially contiguous with that of the subject property but for a street, road, or other public thoroughfare separating them.

#### **Approximate Minimum Search Distance (AMSD)**

Identifies the area for which records must be obtained and reviewed as pursuant to ASTM E 1527 Section 7 subject to the limitations provided in that section.

#### **Business Environmental Risk**

Refers to the risk that may have a material environmental or environmentally- driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice. Consideration of business environmental risk issues may involve addressing one or more non-scope considerations, some of which are identified in ASTM E 1527 Section 12

#### **Controlled Recognized Environmental Condition**

A recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations).

#### **De minimis**

Refers to conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions.

#### **Emerging Contaminants**

Not *hazardous substances* under CERCLA, however may be regulated under state law and may be federally regulated in the future. These substances may include: (i) some substances that occur naturally or through biological digestion (for example, methane), and (ii) substances about which human understanding is evolving (for example, per- and polyfluoroalkyl substances, also known as

“PFAS”). Emerging contaminants are not included in the scope of this standard. If and when such emerging contaminants are defined to be a hazardous substance under CERCLA, as interpreted by EPA regulations and the courts, such substances shall be included in the scope of this standard.

***Environmental Lien***

Is a charge, security, or encumbrance upon title to a property to secure the payment of cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon a property, including (but not limited to) liens imposed pursuant to CERCLA 42 USC § 9607 (1) and similar state or local laws.

***Hazardous Substance***

A substance defined as a hazardous substance pursuant to CERCLA 42 U.S.C. § 9601(14), as interpreted by EPA regulations and the courts. The term does not include petroleum, including crude oil, natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel.

***Hazardous Waste***

Is defined by RCRA as “a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may – (A) cause, or significantly contribute to an increase in mortality or any increase in serious irreversible, or incapacitating reversible illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.”

***Historical Recognized Environmental Condition***

A previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations). A historical recognized environmental condition is not a recognized environmental condition.

***Practically Reviewable***

Means that the information is provided by the source in the manner and in a form that, upon examination, yields information relevant to the Subject Property without the need for extraordinary analysis of irrelevant data.

***Property Use Limitation***

A limitation or restriction on current or future use of a property in connection with a response to a release, in accordance with the applicable regulatory authority or authorities that allows hazardous substances or petroleum products to remain in place at concentrations exceeding unrestricted use criteria.

***Publicly Available Information***

Is information to which access is allowed to anyone upon request.

***Reasonably Ascertainable***

Refers to information that is publicly available, obtainable from its source within reasonable time and cost restraints, and practically reviewable.

***Recognized Environmental Condition***

(1) The presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) The likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) The presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.

***Significant Data Gap***

A data gap that affects the ability of the environmental professional to identify a recognized environmental condition.

***Subject Property***

Is identified as the real property that is the subject of environmental assessment including improvements, buildings, and other fixtures located on the Subject Property and affixed to the land.

## **List of Acronyms Used in the Report**

AST: Above Ground Storage Tank

ASTM: American Society for Testing Materials

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CREC: Controlled Recognized Environmental Condition

ESA: Environmental Site Assessment

FEMA: Federal Emergency Management Agency

HREC: Historical Recognized Environmental Condition

LUST: Leaking Underground Storage Tank

NPL: National Priorities List

PCB: Polychlorinated Biphenyls

PFAS: Per- and Polyfluoroalkyl Substances

PFOA: Perfluorooctanoic Acid

PFOS: Perfluorooctanesulfonic Acid

RCRA: Resource Conservation and Recovery Act

REC: Recognized Environmental Condition

USDA: United States Department of Agriculture

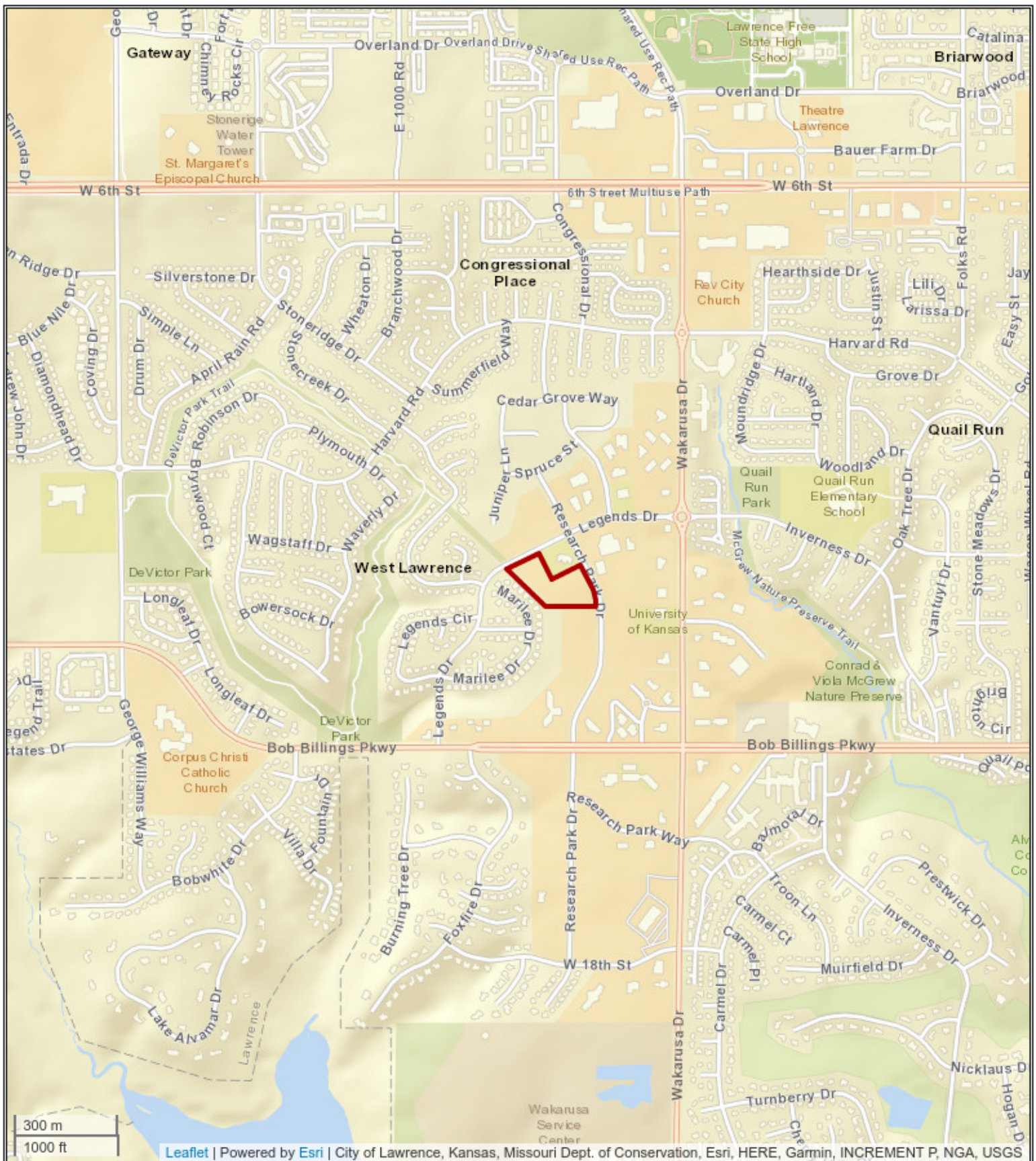
USEPA: United States Environmental Protection Agency

UST: Underground Storage Tank

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**Appendix A - Property Maps and Site Plans**

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**Site Location Map**

17.1.240071

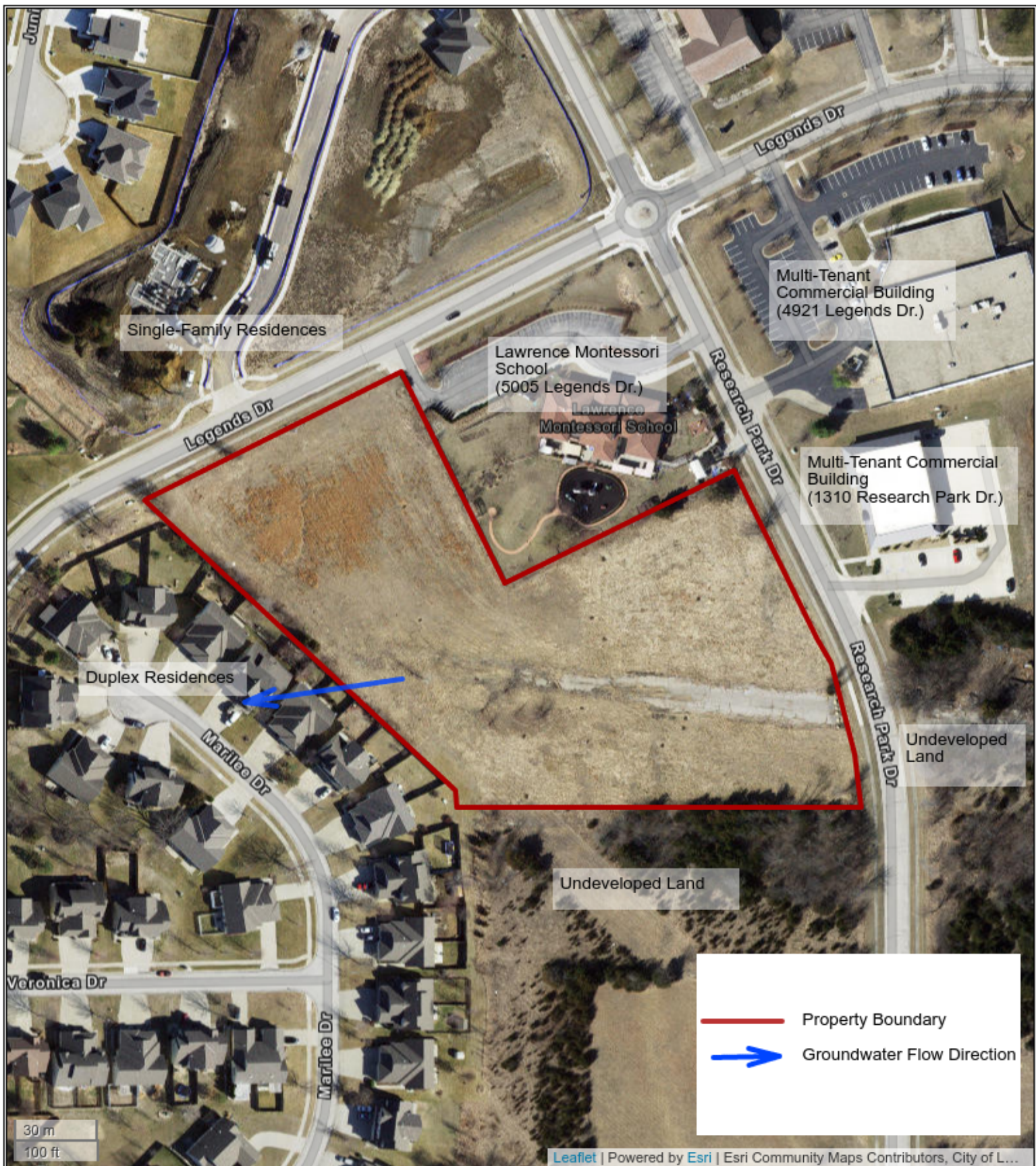
Undeveloped Land

1311 Research Park Drive and 5015 Legends Drive

Lawrence, Kansas 66049







### Field Sketch

17.1.240071

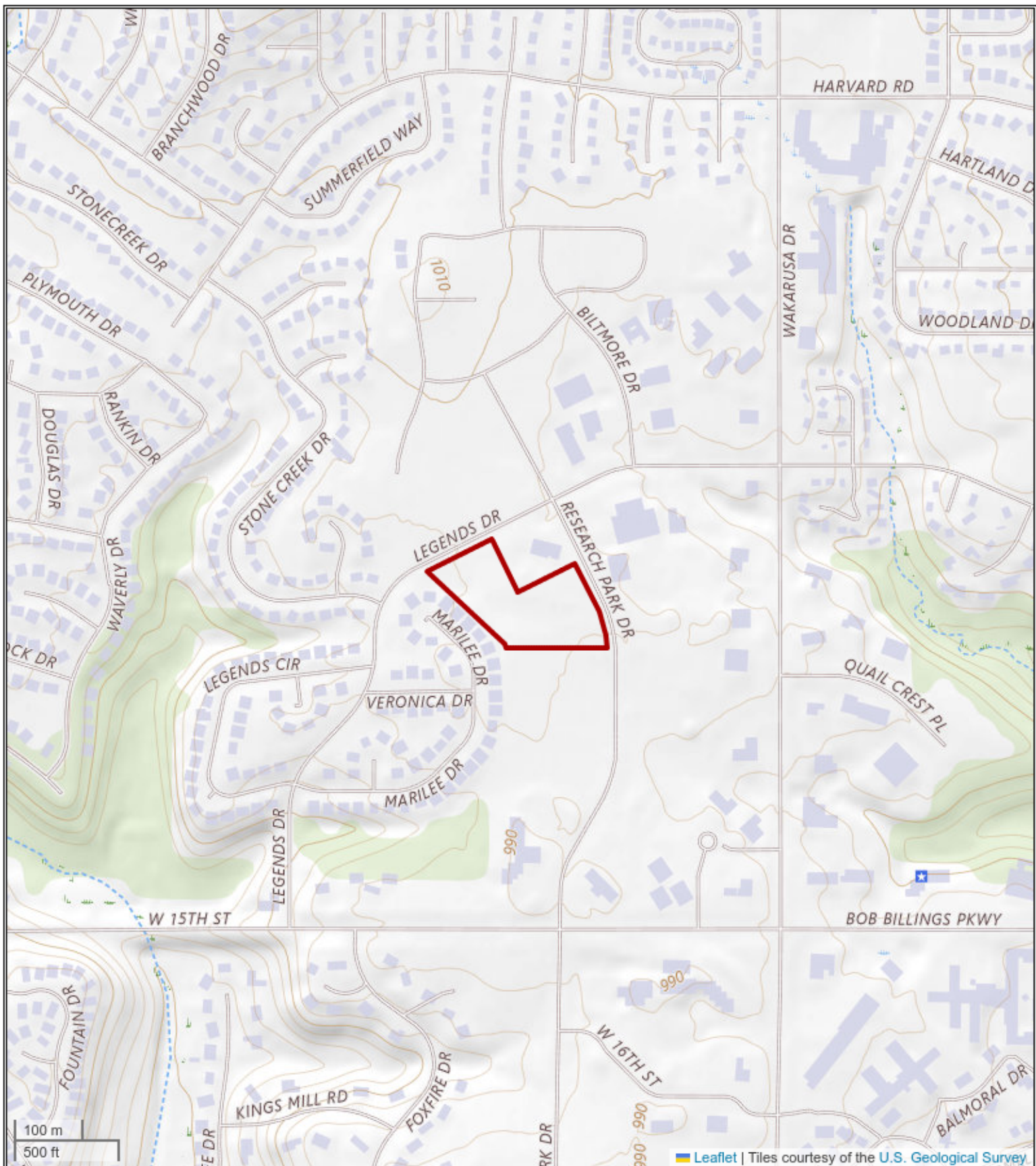
Undeveloped Land

1311 Research Park Drive and 5015 Legends Drive

Lawrence, Kansas 66049







**USGS Topographic Map**

17.1.240071

Undeveloped Land

1311 Research Park Drive and 5015 Legends Drive

Lawrence, Kansas 66049







**Parcel Map**

17.1.240071

Undeveloped Land

1311 Research Park Drive and 5015 Legends Drive

Lawrence, Kansas 66049





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## **Appendix B - Site Photographs**

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1: Northern Portion of Site, facing South



2: Northern Portion of Site, facing Southeast





3: Northern Portion of Site, facing North



4: Eastern Portion of Site, facing Northwest





5: Eastern Portion of Site, facing East



6: Southern Portion of Site, facing East





7: Southern Portion of Site, facing South



8: Southwestern Portion of Site, facing South





9: Central Portion of Site, facing West



10: Central Portion of Site, facing East





11: Eastern Portion of Drag Strip Track, facing West



12: Central Portion of Drag Strip Track





13: Western Portion of Drag Strip Track



14: Western Boundary of Site, facing South





15: Pipeline Markers



16: Adjoining Properties North





17: Adjoining School, Northeast



18: Adjoining Commercial Building, Northeast





19: Adjoining Commercial Building, East



20: Adjoining Undeveloped Land, East





21: Adjoining Property South



22: Adjoining Properties West

---

## **Appendix C - Historical Research Documentation**

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**1937 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas





**1941 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas





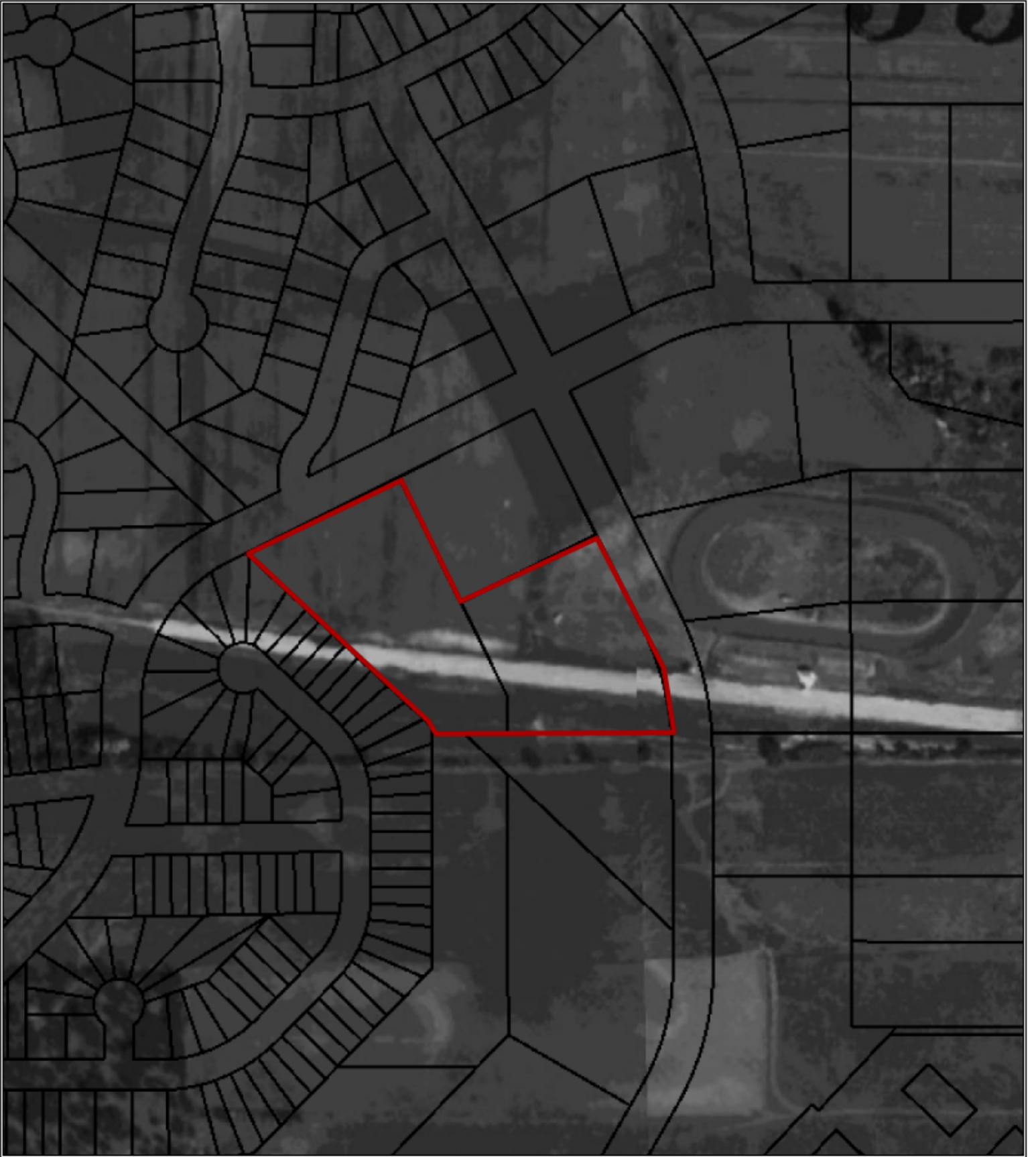


**1954 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas





**1966 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas





**1976 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas







**1986 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas







**1995 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas





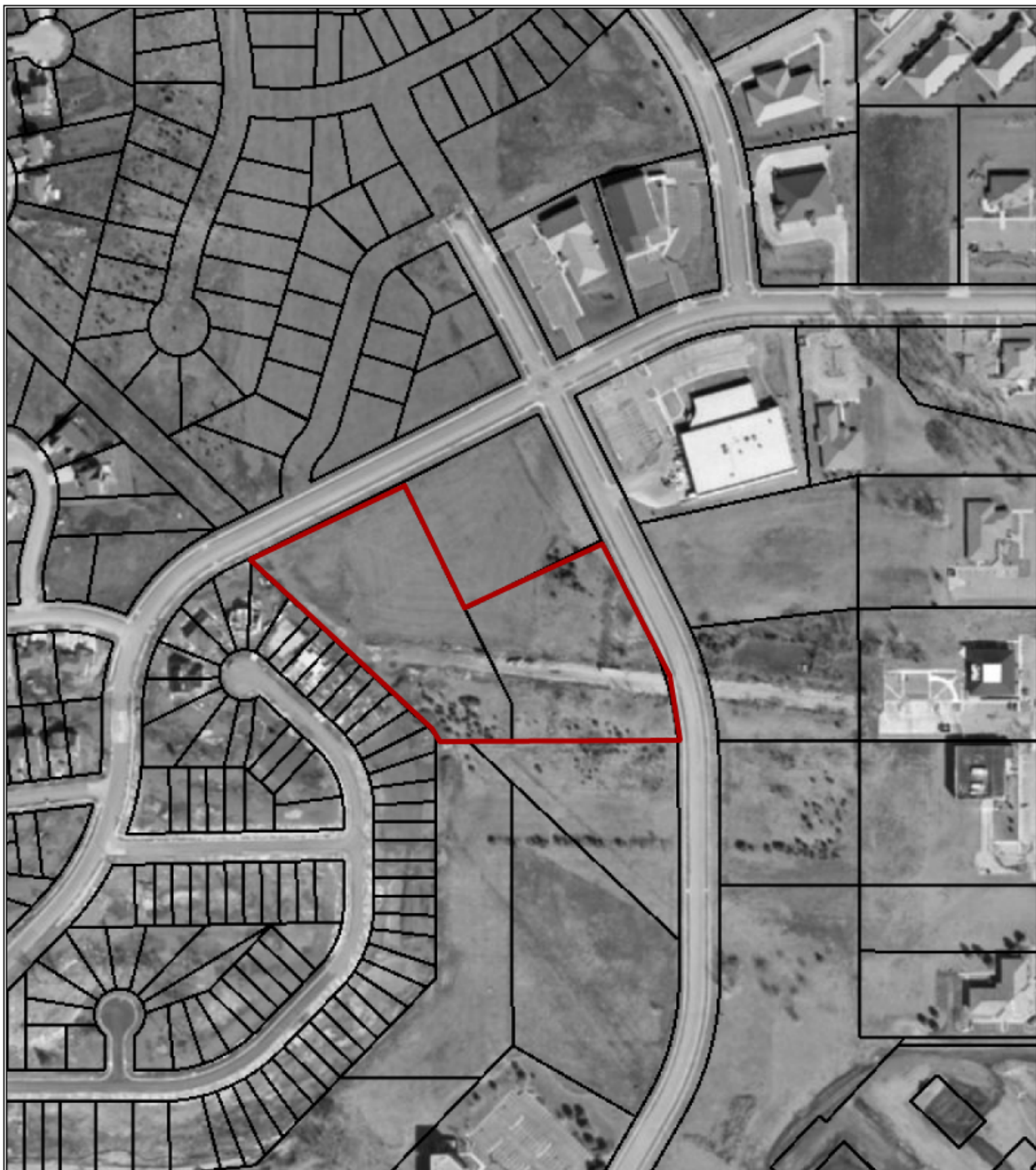
**2000 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas







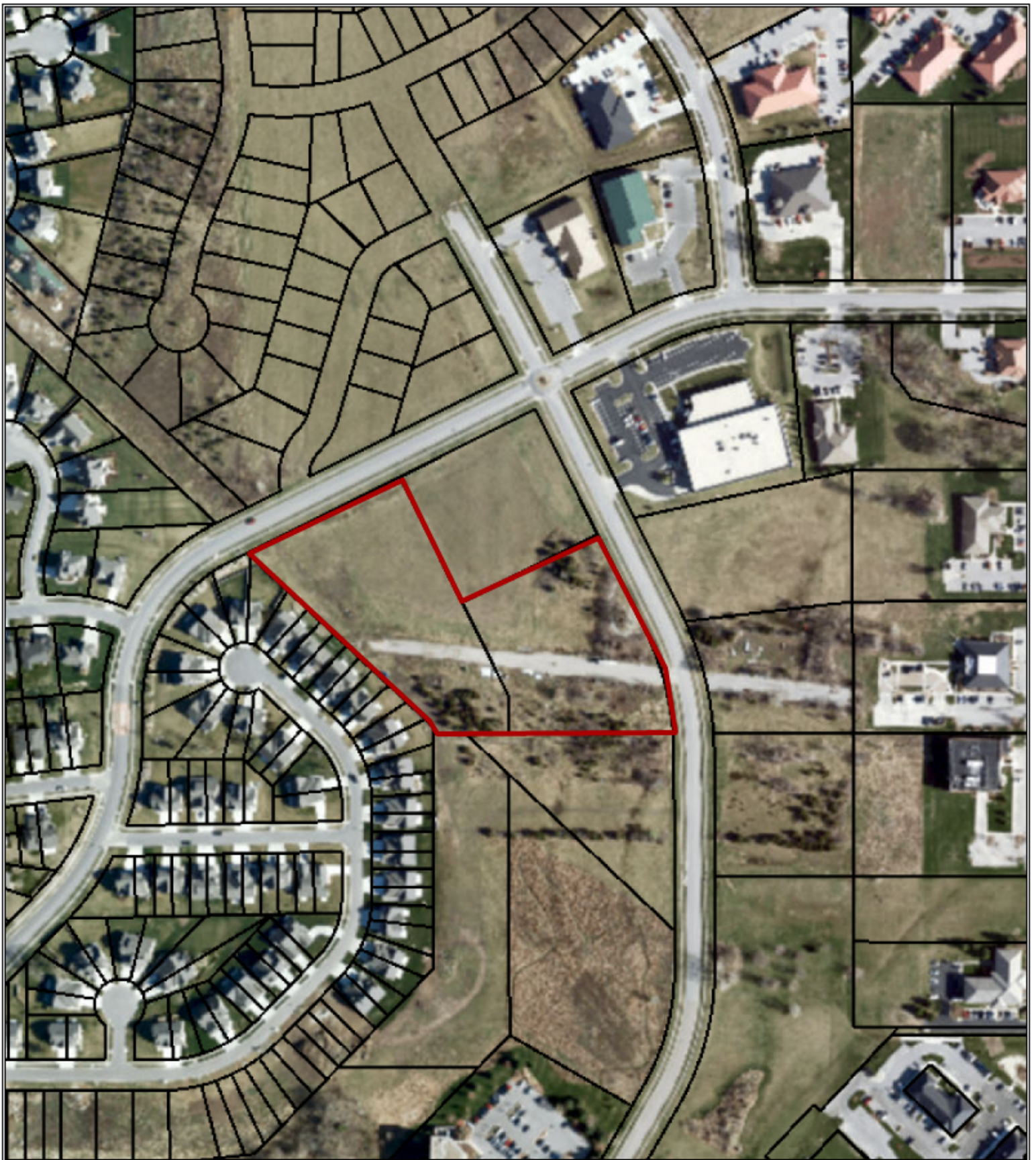
**2003 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas







**2006 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas







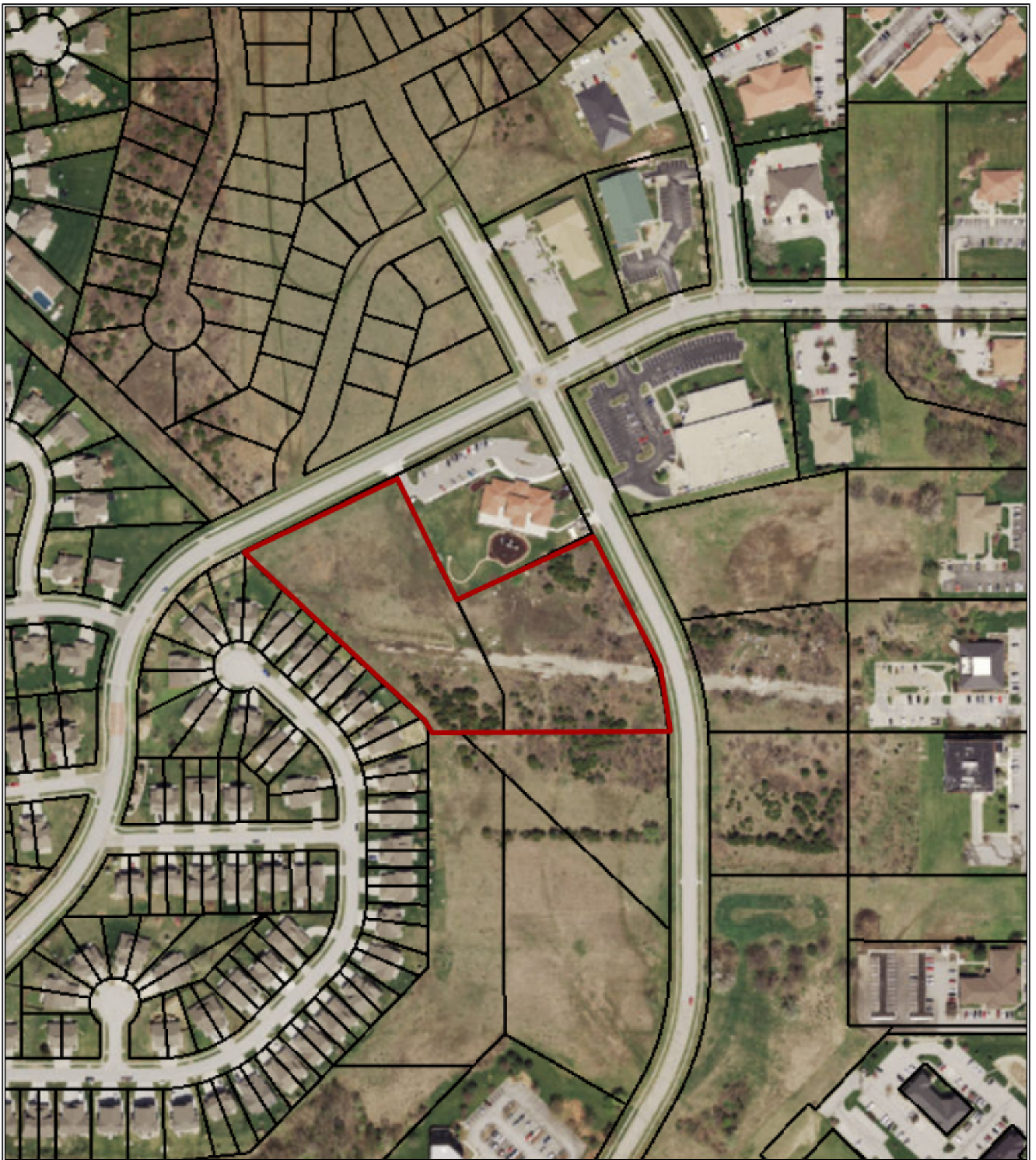
**2009 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas







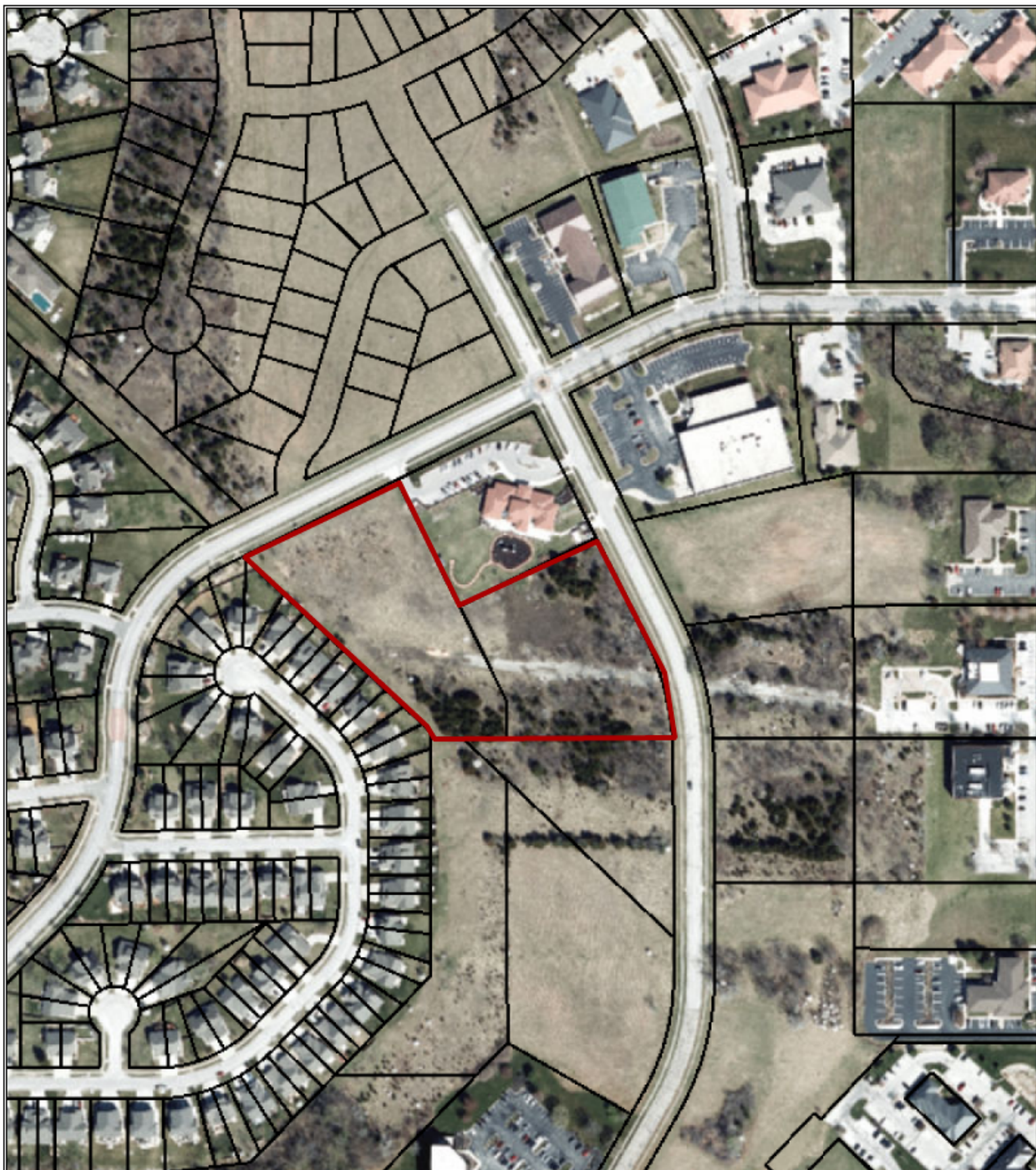
**2013 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas







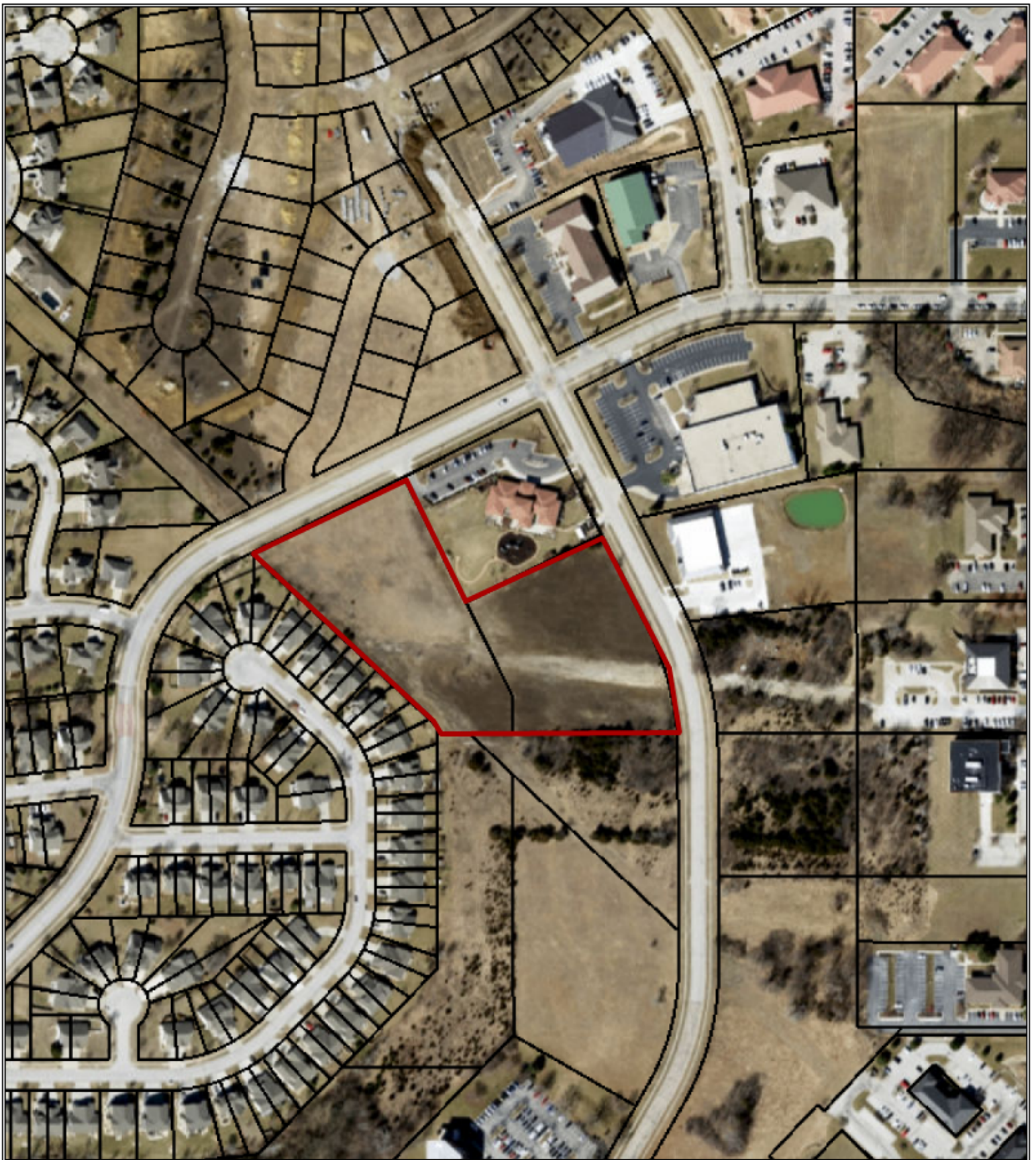
**2016 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas







**2018 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas







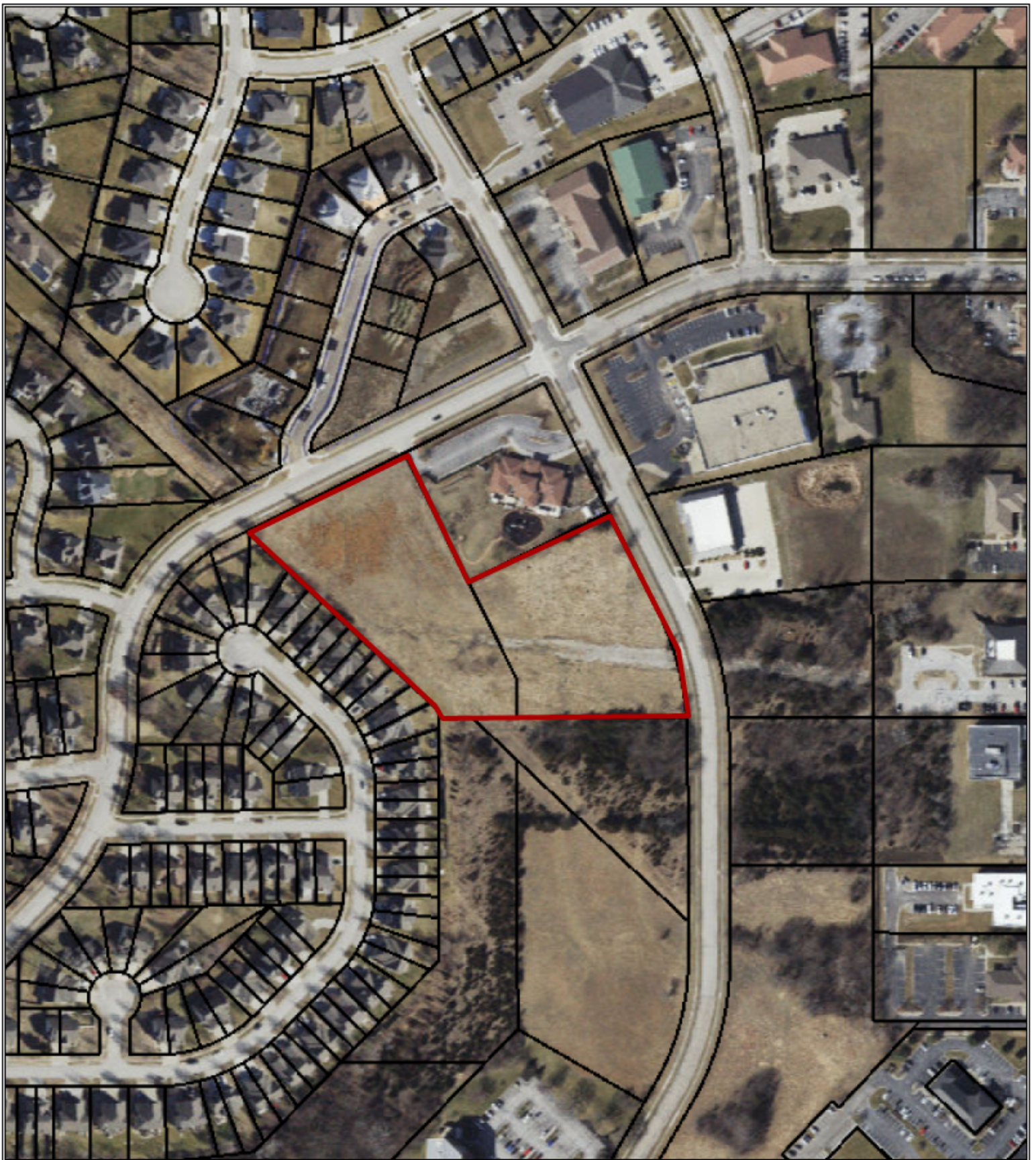
**2020 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas







**2022 Aerial Photograph**

17.1.240071

1311 Research Park Drive and 5015 Legends Drive  
Lawrence, Kansas



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## **Appendix D - Regulatory Records Documentation**

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# DATABASE REPORT

**Project Property:** *Vacant land  
1311 Research Park Drive and 5015  
Legends Drive  
Lawrence KS 66049*

**Project No:** *17.1.240071*

**Report Type:** *Database Report*

**Order No:** *24061000693*

**Requested by:** *GuideWire Consulting, LLC*

**Date Completed:** *June 12, 2024*

**Environmental Risk Information Services**

*A division of Glacier Media Inc.*

1.866.517.5204 | [info@erisinfo.com](mailto:info@erisinfo.com) | [erisinfo.com](http://erisinfo.com)



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# Executive Summary

## Property Information:

**Project Property:** *Vacant land  
1311 Research Park Drive and 5015 Legends Drive Lawrence KS 66049*

**Project No:** *17.1.240071*

### **Coordinates:**

**Latitude:** *38.96120587*  
**Longitude:** *-95.31118228*  
**UTM Northing:** *4,315,011.92*  
**UTM Easting:** *299,749.95*  
**UTM Zone:** *15S*

**Elevation:** *994 FT*

## Order Information:

**Order No:** *24061000693*  
**Date Requested:** *June 10, 2024*  
**Requested by:** *GuideWire Consulting, LLC*  
**Report Type:** *Database Report*

## Historicals/Products:

**ERIS Xplorer** [\*ERIS Xplorer\*](#)  
**Excel Add-On** *Excel Add-On*

# Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
<b><u>Standard Environmental Records</u></b>								
<b>Federal</b>								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	0.5	0	0	0	0	-	0
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	0	-	-	0
RCRA VSQG	Y	0.25	0	0	1	-	-	1
RCRA NON GEN	Y	0.25	0	0	4	-	-	4
RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
NPL IC	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
FRP	Y	0.25	0	0	0	-	-	0

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
DELISTED FRP	Y	0.25	0	0	0	-	-	0
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0
DOE FUSRAP	Y	1	0	0	0	0	0	0

**State**

SHWS	Y	1	0	0	0	0	0	0
DELISTED SHWS	Y	1	0	0	0	0	0	0
SWF/LF	Y	0.5	0	0	0	0	-	0
LUST	Y	0.5	0	0	0	0	-	0
LAST	Y	0.5	0	0	0	0	-	0
LST	Y	0.5	0	0	0	0	-	0
DELISTED LST	Y	0.5	0	0	0	0	-	0
UST	Y	0.25	0	0	0	-	-	0
AST	Y	0.25	0	0	0	-	-	0
TANK	Y	0.25	0	0	0	-	-	0
DELISTED STORAGE TANK	Y	0.25	0	0	0	-	-	0
INST	Y	0.5	0	0	0	0	-	0
VCP	Y	0.5	0	0	0	0	-	0
BROWNFIELDS	Y	0.5	0	0	0	0	-	0

**Tribal**

INDIAN LUST	Y	0.5	0	0	0	0	-	0
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED INDIAN LST	Y	0.5	0	0	0	0	-	0
DELISTED INDIAN UST	Y	0.25	0	0	0	-	-	0

**County**

*No County standard environmental record sources available for this State.*

**Additional Environmental Records**

**Federal**

PFAS GHG	Y	0.5	0	0	0	0	-	0
OSC RESPONSE	Y	0.125	0	0	-	-	-	0
FINDS/FRS	Y	PO	0	-	-	-	-	0

<i>Database</i>	<i>Searched</i>	<i>Search Radius</i>	<i>Project Property</i>	<i>Within 0.12mi</i>	<i>0.125mi to 0.25mi</i>	<i>0.25mi to 0.50mi</i>	<i>0.50mi to 1.00mi</i>	<i>Total</i>
TRIS	Y	PO	0	-	-	-	-	0
PFAS NPL	Y	0.5	0	0	0	0	-	0
PFAS FED SITES	Y	0.5	0	0	0	0	-	0
PFAS SSEHRI	Y	0.5	0	0	0	0	-	0
ERNS PFAS	Y	0.5	0	0	0	0	-	0
PFAS NPDES	Y	0.5	0	0	0	0	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	0	-	0
PFAS TSCA	Y	0.5	0	0	0	0	-	0
PFAS E-MANIFEST	Y	0.5	0	0	0	0	-	0
PFAS IND	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	0	0	0	0	0	0
FUDS MRS	Y	1	0	0	0	0	0	0
FORMER NIKE	Y	1	0	0	0	0	0	0
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
SMCRA	Y	1	0	0	0	0	0	0
MRDS	Y	1	0	0	0	0	0	0
LM SITES	Y	1	0	0	0	0	0	0
ALT FUELS	Y	0.25	0	0	0	-	-	0
CONSENT DECREES	Y	0.25	0	0	0	-	-	0
AFS	Y	PO	0	-	-	-	-	0



Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
SSTS	Y	0.25	0	0	0	-	-	0
PCBT	Y	0.5	0	0	0	0	-	0
PCB	Y	0.5	0	0	0	0	-	0

**State**

DRYC REM REL	Y	0.5	0	0	0	0	-	0
DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
SPILLS	Y	0.125	1	0	-	-	-	1
PFAS	Y	0.5	0	0	0	1	-	1
CDL	Y	0.125	0	0	-	-	-	0
TIER 2	Y	0.125	0	0	-	-	-	0

**Tribal**

**No Tribal additional environmental record sources available for this State.**

**County**

**No County additional environmental record sources available for this State.**

---

**Total: 1 0 5 1 0 7**

\* PO – Property Only

\* 'Property and adjoining properties' database search radii are set at 0.25 miles.

## Executive Summary: Site Report Summary - Project Property

<i>Map Key</i>	<i>DB</i>	<i>Company/Site Name</i>	<i>Address</i>	<i>Direction</i>	<i>Distance (mi/ft)</i>	<i>Elev Diff (ft)</i>	<i>Page Number</i>
<a href="#">1</a>	SPILLS		KS	SW	0.00 / 0.00	2	<a href="#">17</a>

*Spill No | Spill Status: 41205 | Closed*

## Executive Summary: Site Report Summary - Surrounding Properties

<b>Map Key</b>	<b>DB</b>	<b>Company/Site Name</b>	<b>Address</b>	<b>Direction</b>	<b>Distance (mi/ft)</b>	<b>Elev Diff (ft)</b>	<b>Page Number</b>
<a href="#">2</a>	RCRA NON GEN	MIDWEST SUPERCONDUCTIVITY INC	1315 WAKARUSA DR LAWRENCE KS 66049  <i>EPA Handler ID: KSP000000807</i>	E	0.15 / 808.23	-15	<a href="#">18</a>
<a href="#">3</a>	RCRA NON GEN	MIDWEST SUPERCONDUCTIVITY INC	1321 WAKARUSA DR STE 2104 LAWRENCE KS 66049  <i>EPA Handler ID: KS0000200808</i>	ESE	0.18 / 946.19	-23	<a href="#">19</a>
<a href="#">4</a>	RCRA NON GEN	PRAIRIE GRAPHICS	1201 WAKARUSA DR SUITE B4 LAWRENCE KS 66049 <i>EPA Handler ID: KSD985013986</i>	NE	0.24 / 1,248.75	-3	<a href="#">21</a>
<a href="#">5</a>	RCRA VSQG	US GEOLOGICAL SURVEY	4821 QUAIL CREST PL LAWRENCE KS 66049  <i>EPA Handler ID: KSR000002378</i>	E	0.24 / 1,250.11	-22	<a href="#">22</a>
<a href="#">6</a>	RCRA NON GEN	MIDWEST GRAPHICS	4811 QUAIL CREST PL LAWRENCE KS 66049  <i>EPA Handler ID: KS0000850594</i>	ESE	0.25 / 1,308.44	-41	<a href="#">23</a>
<a href="#">7</a>	PFAS	W Africa Oil & Gas Corp	909 Congressional Dr Lawrence KS 66049-4733	N	0.46 / 2,432.55	7	<a href="#">25</a>

## Executive Summary: Summary by Data Source

### Standard

#### Federal

##### RCRA VSQG - RCRA Very Small Quantity Generators List

A search of the RCRA VSQG database, dated Apr 8, 2024 has found that there are 1 RCRA VSQG site(s) within approximately 0.25 miles of the project property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
US GEOLOGICAL SURVEY	4821 QUAIL CREST PL LAWRENCE KS 66049	E	0.24 / 1,250.11	<a href="#">5</a>
<i>EPA Handler ID: KSR000002378</i>				

##### RCRA NON GEN - RCRA Non-Generators

A search of the RCRA NON GEN database, dated Apr 8, 2024 has found that there are 4 RCRA NON GEN site(s) within approximately 0.25miles of the project property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
MIDWEST SUPERCONDUCTIVITY INC	1315 WAKARUSA DR LAWRENCE KS 66049	E	0.15 / 808.23	<a href="#">2</a>
<i>EPA Handler ID: KSP000000807</i>				
MIDWEST SUPERCONDUCTIVITY INC	1321 WAKARUSA DR STE 2104 LAWRENCE KS 66049	ESE	0.18 / 946.19	<a href="#">3</a>
<i>EPA Handler ID: KS0000200808</i>				
PRAIRIE GRAPHICS	1201 WAKARUSA DR SUITE B4 LAWRENCE KS 66049	NE	0.24 / 1,248.75	<a href="#">4</a>
<i>EPA Handler ID: KSD985013986</i>				
MIDWEST GRAPHICS	4811 QUAIL CREST PL LAWRENCE KS 66049	ESE	0.25 / 1,308.44	<a href="#">6</a>
<i>EPA Handler ID: KS0000850594</i>				

### Non Standard

#### State

##### SPILLS - Kansas Spills Database

A search of the SPILLS database, dated Mar 11, 2024 has found that there are 1 SPILLS site(s) within approximately 0.12miles of the project property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
	KS	SW	0.00 / 0.00	<a href="#">1</a>

**Equal/Higher Elevation**      **Address**      **Direction**      **Distance (mi/ft)**      **Map Key**

*Spill No | Spill Status: 41205 | Closed*

**PFAS - Inventory of potential Perfluoroalkyl substances (PFAS) sites in Kansas**

A search of the PFAS database, dated Jun 30, 2019 has found that there are 1 PFAS site(s) within approximately 0.50miles of the project property.

**Equal/Higher Elevation**      **Address**      **Direction**      **Distance (mi/ft)**      **Map Key**

W Africa Oil & Gas Corp	909 Congressional Dr Lawrence KS 66049-4733	N	0.46 / 2,432.55	<a href="#">7</a>
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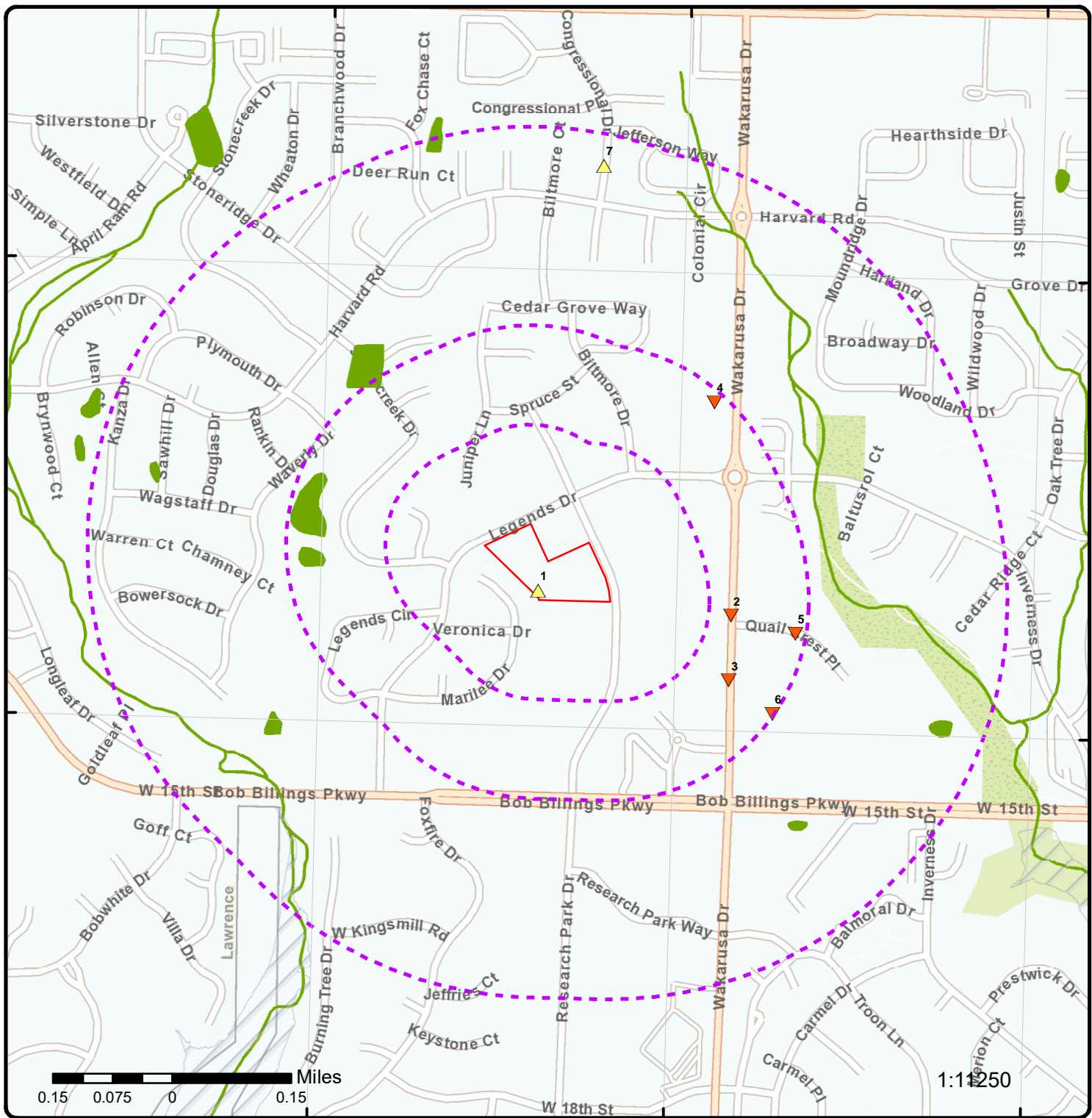
**Map: 1.0 Mile Radius**

Order Number: 24061000693

Address: 1311 Research Park Drive and 5015 Legends Drive, Lawrence, KS



- Project Property
- Buffer Outline
- ▲ Sites with Higher Elevation
- Sites with Same Elevation
- ▼ Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- + Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)



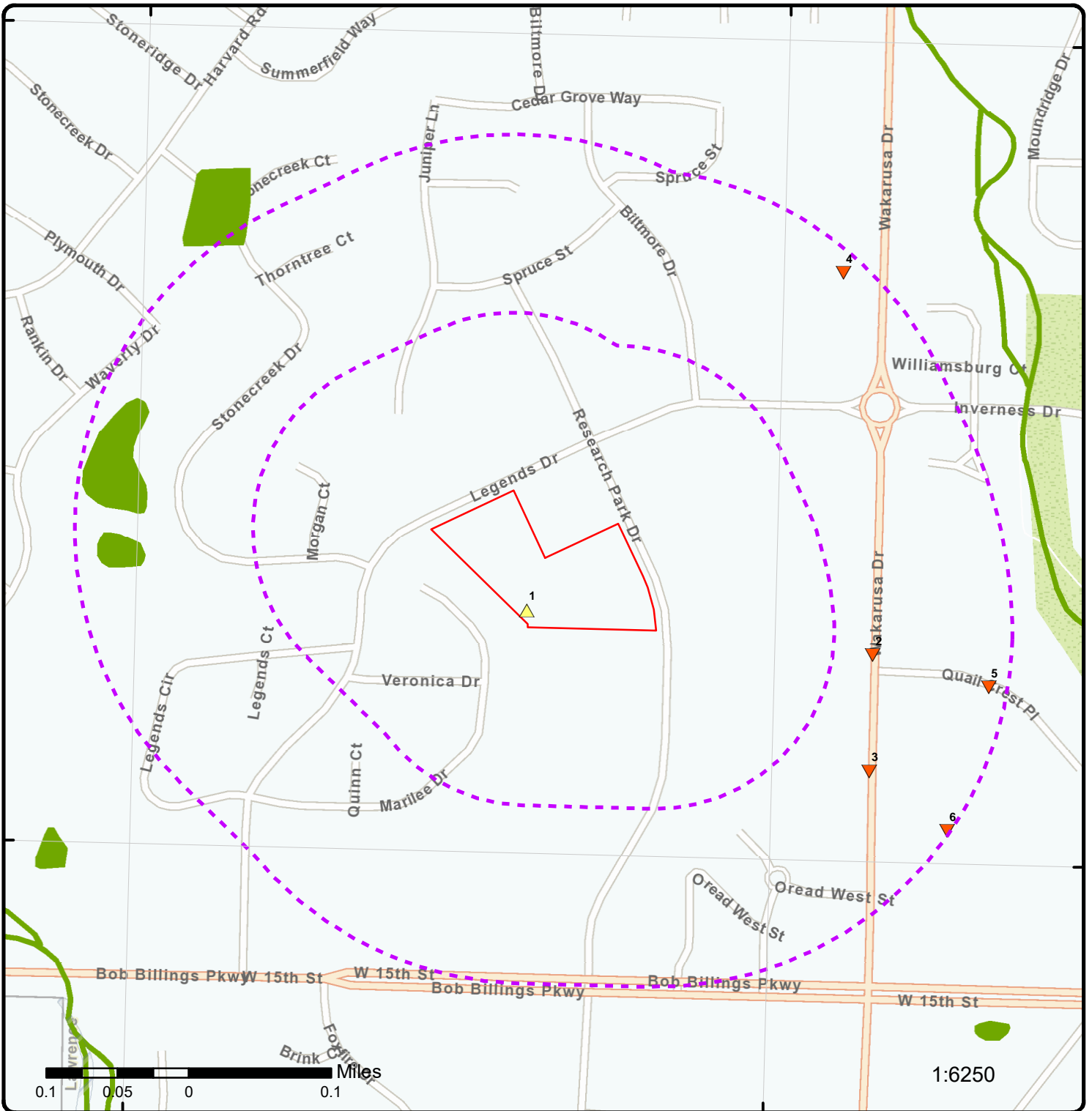
### Map: 0.5 Mile Radius

Order Number: 24061000693

Address: 1311 Research Park Drive and 5015 Legends Drive, Lawrence, KS



- Project Property
- Buffer Outline
- ▲ Sites with Higher Elevation
- ▲ Sites with Same Elevation
- ▼ Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)



**Map: 0.25 Mile Radius**

Order Number: 24061000693

Address: 1311 Research Park Drive and 5015 Legends Drive, Lawrence, KS



- Project Property
- Buffer Outline
- ▲ Sites with Higher Elevation
- Sites with Same Elevation
- ▼ Sites with Lower Elevation
- Sites with Unknown Elevation
- Areas with Higher Elevation
- Areas with Same Elevation
- Areas with Lower Elevation
- Areas with Unknown Elevation
- Freeways; Highways
- Traffic Circle; Ramp
- Major & Minor Arterial
- Traffic Circle; Ramp
- Local Road
- Rail
- State
- Country
- National Wetland
- Indian Reserve Land
- 100 Year Flood Zone
- 500 Year Flood Zone
- FWS Special Designation Areas
- National Priorities List (Active, Delisted, Proposed, Institutional Control)



95°19'W

95°18'30"W

38°58'N

38°58'N

38°57'30"N

38°57'30"N



**Aerial** Year: 2022

Order Number: 24061000693

Address: 1311 Research Park Drive and 5015 Legends Drive, Lawrence, KS

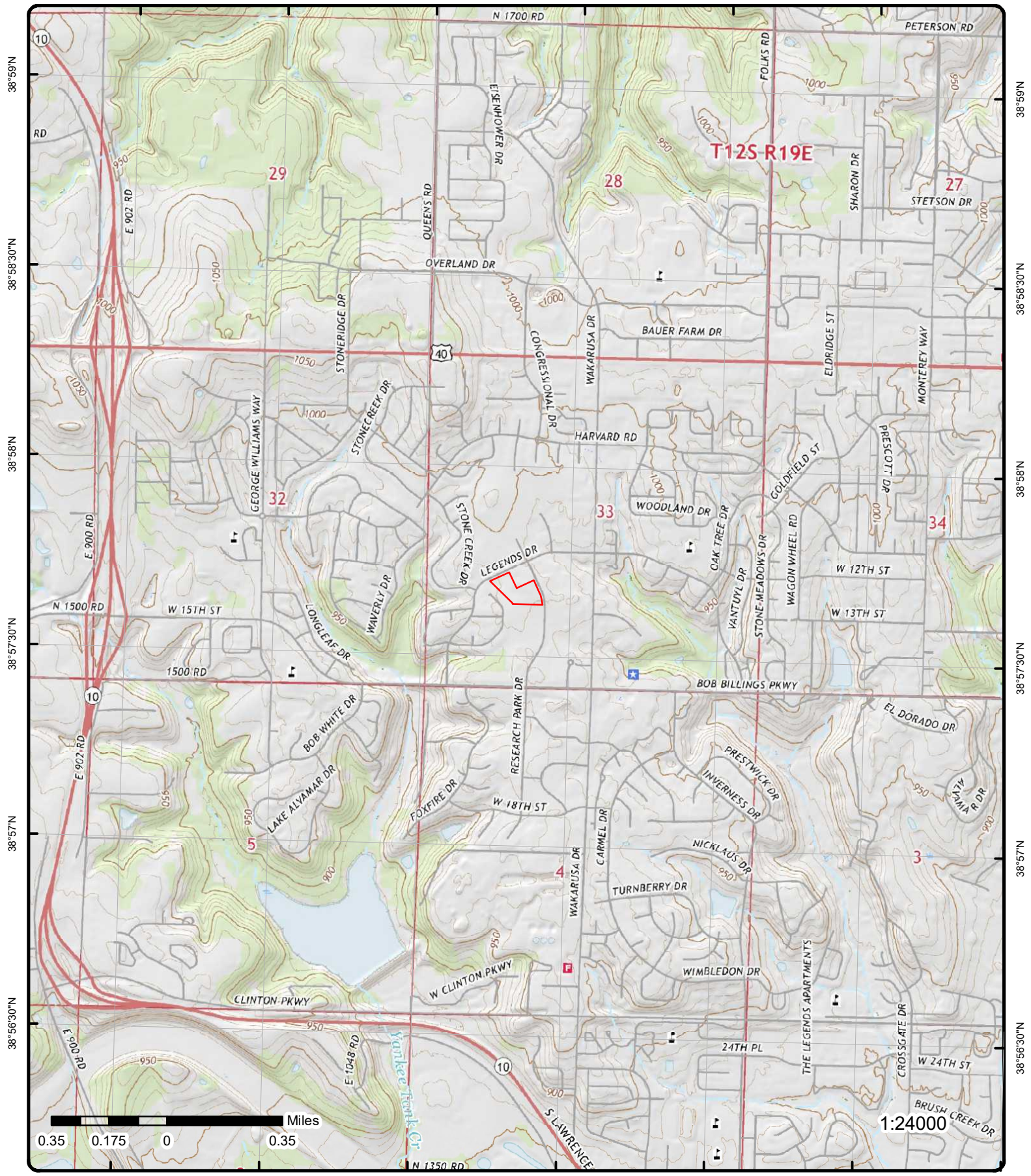


© ERIS Information Inc.

Source: ESRI World Imagery



95°20'W 95°19'30"W 95°19'W 95°18'30"W 95°18'W 95°17'30"W



# Topographic Map

Year: 2018

Order Number: 24061000693

Address: 1311 Research Park Drive and 5015 Legends Drive, KS



Quadrangle(s): Lawrence West KS

© ERIS Information Inc.

Source: USGS Topographic Map



# Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
<u>1</u>	1 of 1	SW	0.00 / 0.00	996.06 / 2	KS	SPILLS

<b>Spill No:</b>	41205	<b>Object ID:</b>	51484
<b>Incident ID:</b>	FA5C8CABF90E11E680DF005056BF7EBA	<b>Lead Agency:</b>	KDHE
<b>Spill Stage:</b>		<b>LEPC Notified:</b>	No
<b>Reported Date:</b>	2/22/2017, 3:17 AM	<b>County:</b>	Douglas
<b>DAT Spill Date:</b>		<b>District:</b>	NE
<b>Closed Date:</b>	2/23/2017, 11:27 AM	<b>KCC District:</b>	
<b>Medium Affected:</b>	Soil	<b>Inc. QTR1:</b>	
<b>Material 1 Name:</b>		<b>Inc. QTR2:</b>	
<b>Material 2 Name:</b>		<b>Inc. QTR3:</b>	
<b>Mat 1 Rec Comm:</b>		<b>Inc. QTR4:</b>	
<b>Mat 2 Rec Comm:</b>		<b>Inc. Range:</b>	
<b>Material 1 Unit:</b>		<b>Inc. Section:</b>	
<b>Material 2 Unit:</b>		<b>Inc. State:</b>	
<b>Inv Agency:</b>		<b>Inc. Township:</b>	
<b>Rep Org ID:</b>		<b>Inc. Zip:</b>	
<b>Rep Name:</b>		<b>Entry by:</b>	
<b>Rep Org Type:</b>		<b>Latitude D:</b>	
<b>Rep Address:</b>		<b>Latitude M:</b>	
<b>Rep State:</b>		<b>Latitude S:</b>	
<b>Rep Zip:</b>		<b>Longitude D:</b>	
<b>Rep City:</b>		<b>Longitude M:</b>	
<b>Rep By:</b>		<b>Longitude S:</b>	
<b>Rep Phone:</b>		<b>Latitude:</b>	38.9608
<b>Rep Ext:</b>		<b>Longitude:</b>	-95.3115
<b>Spill Status:</b>	Closed		
<b>Spill Cause:</b>	Equipment Failure		
<b>Other Cause:</b>			
<b>Source of Spill:</b>	Motor Vehicle/Carrier		
<b>Other Source:</b>			
<b>Other Medium:</b>			
<b>Material Combo:</b>	0.5 Gallons of Hydraulic Oil		
<b>Cleanup Method:</b>	Physical Removal		
<b>Cleanup Description:</b>			
<b>Spiller Action Taken:</b>	Impacted soil excavated and transported to Tonganoxie facility pending disposal. **Note: Many records provided by the department have a truncated [Spiller Action Taken] field **Note: Many records provided by the department have a truncated [Spiller Action Taken] field.		
<b>Approx Location:</b>			
<b>Water Way Name:</b>			
<b>Water Way Type:</b>			
<b>Detail Report:</b>	<a href="https://www.reports.esriuk.com/view-report/a91bd7d4db604b208378646118aa3219/41205">https://www.reports.esriuk.com/view-report/a91bd7d4db604b208378646118aa3219/41205</a>		
<b>Web Map Link:</b>	<a href="https://maps.kdhe.state.ks.us/ksberspill?search=41205">https://maps.kdhe.state.ks.us/ksberspill?search=41205</a>		

**Spill Details**

<b>Facility No:</b>	<b>Mat Amount 2 Comm:</b>
<b>Spiller License:</b>	<b>Material Amount 3:</b>
<b>EPA Spill No:</b>	<b>Mat Amount 3 Comm:</b>
<b>KCC Spill No:</b>	<b>Material Case 1:</b>
<b>NRC No:</b>	<b>Material Case 2:</b>
<b>Old Spill No7:</b>	<b>Material Case 3:</b>
<b>No of Tanks:</b>	<b>Material Class 2:</b>
<b>Tank Capacity:</b>	<b>Material Class 3:</b>
<b>Tanks Units:</b>	<b>Mat in Water 1:</b>
<b>Discharger Org ID:</b>	<b>Mat in Wtr 1 Comm:</b>
<b>Incident Date:</b> 2/20/2017, 10:46 AM	<b>Mat in Water 2:</b>

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
Discovery Time:					Mat in Wtr 2 Comm:	
Spill Time:					Mat in Water 3:	
Reported Time:					Mat in Wtr 3 Comm:	
Spill or Complaint:					Mat Recovered 1:	
SSI Report:					Mat Recovered 2:	
Through NRC:					Mat Recovered 3:	
Updated by:					Mat Recov 3 Comm:	
Investigated By 1:					Material Name 3:	
Investigated By 2:					Material Unit 1:	
Investigated By 3:					Material Unit 2:	
Organization Type:					Material Unit 3:	
Highway Type:					Material 3 Unit:	
Act Evacuation:					KDHE Notif List:	
No of Injuries:					Conf Requested:	
Prop Dam>\$50,000:					Spl Report Inci:	
Inci GPS Source:					Follow up Required:	
Highway Designatn:					Resp Req by Date:	
Mile Post:					Notified:	
NRC Notified:					No of Deaths:	
Init Entry Cmpltd:					Contact Name:	
Method Recv Call:					Address:	
Multiple Report:					City:	
Noti Received by:					State:	
Hours Worked 1:					Zip:	
Hours Worked 2:					Phone:	
Hours Worked 3:					Phone2:	
Site Visit By KDHE:					Ext:	
Material Amount 1:					Ext2:	
Mat Amount 1 Comm:					X:	-95.31149238330751
Material Amount t2:					Y:	38.96079308249172
Vehicle ID/Carrier No:						
Discharger:		Southern Star Central Gas Pipeline				
Material Type:		Oil, lubricating/hydraulic				
FID:						
A11:						
A12:						
A13:						
A14:						
Act Responders:						
Comments:						

<u>2</u>	1 of 1	E	0.15 / 808.23	978.95 / -15	MIDWEST SUPERCONDUCTIVITY INC 1315 WAKARUSA DR LAWRENCE KS 66049	RCRA NON GEN
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**EPA Handler ID:** KSP000000807  
**Gen Status Universe:** No Report  
**Contact Name:** HENRY MULLER  
**Contact Address:** 1315 WAKARUSA DR , , LAWRENCE , KS, 66049 , US  
**Contact Phone No and Ext:** 785-749-3613  
**Contact Email:**  
**Contact Country:** US  
**County Name:** DOUGLAS  
**EPA Region:** 07  
**Land Type:** Private  
**Receive Date:** 19990514  
**Location Latitude:**  
**Location Longitude:**

**Violation/Evaluation Summary**

**Note:** NO RECORDS: As of Apr 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

**Handler Summary**

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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**Importer Activity:** No  
**Mixed Waste Generator:** No  
**Transporter Activity:** No  
**Transfer Facility:** No  
**Onsite Burner Exemption:** No  
**Furnace Exemption:** No  
**Underground Injection Activity:** No  
**Commercial TSD:** No  
**Used Oil Transporter:** No  
**Used Oil Transfer Facility:** No  
**Used Oil Processor:** No  
**Used Oil Refiner:** No  
**Used Oil Burner:** No  
**Used Oil Market Burner:** No  
**Used Oil Spec Marketer:** No

**Hazardous Waste Handler Details**

**Sequence No:** 1  
**Receive Date:** 19990514  
**Handler Name:** MIDWEST SUPERCONDUCTIVITY INC  
**Source Type:** Notification  
**Federal Waste Generator Code:** N  
**Generator Code Description:** Not a Generator, Verified

**Waste Code Details**

**Hazardous Waste Code:** D001  
**Waste Code Description:** IGNITABLE WASTE  
  
**Hazardous Waste Code:** P113  
**Waste Code Description:** THALLIC OXIDE (OR) THALLIUM OXIDE TL2O3

**Owner/Operator Details**

<b>Owner/Operator Ind:</b> Current Owner	<b>Street No:</b>
<b>Type:</b> Private	<b>Street 1:</b> 600 LAWRENCE AVE 2B
<b>Name:</b> HITECH INVESTORS LP	<b>Street 2:</b>
<b>Date Became Current:</b>	<b>City:</b> LAWRENCE
<b>Date Ended Current:</b>	<b>State:</b> KS
<b>Phone:</b> 785-841-8744	<b>Country:</b>
<b>Source Type:</b> Notification	<b>Zip Code:</b> 66049

<a href="#">3</a>	1 of 1	ESE	0.18 / 946.19	971.22 / -23	MIDWEST SUPERCONDUCTIVITY INC 1321 WAKARUSA DR STE 2104 LAWRENCE KS 66049	RCRA NON GEN
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**EPA Handler ID:** KS0000200808  
**Gen Status Universe:** No Report  
**Contact Name:** WANG PING  
**Contact Address:** 1321 WAKARUSA DR STE 2104 , , LAWRENCE , KS, 66049 , US  
**Contact Phone No and Ext:** 785-749-3613  
**Contact Email:**  
**Contact Country:** US  
**County Name:** DOUGLAS  
**EPA Region:** 07  
**Land Type:** Private  
**Receive Date:** 20030818  
**Location Latitude:**  
**Location Longitude:**

<b>Map Key</b>	<b>Number of Records</b>	<b>Direction</b>	<b>Distance (mi/ft)</b>	<b>Elev/Diff (ft)</b>	<b>Site</b>	<b>DB</b>
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**Violation/Evaluation Summary**

**Note:** NO RECORDS: As of Apr 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

**Handler Summary**

**Importer Activity:** No  
**Mixed Waste Generator:** No  
**Transporter Activity:** No  
**Transfer Facility:** No  
**Onsite Burner Exemption:** No  
**Furnace Exemption:** No  
**Underground Injection Activity:** No  
**Commercial TSD:** No  
**Used Oil Transporter:** No  
**Used Oil Transfer Facility:** No  
**Used Oil Processor:** No  
**Used Oil Refiner:** No  
**Used Oil Burner:** No  
**Used Oil Market Burner:** No  
**Used Oil Spec Marketer:** No

**Hazardous Waste Handler Details**

**Sequence No:** 1  
**Receive Date:** 19940407  
**Handler Name:** MIDWEST SUPERCONDUCTIVITY INC  
**Source Type:** Notification  
**Federal Waste Generator Code:** 2  
**Generator Code Description:** Small Quantity Generator

**Waste Code Details**

**Hazardous Waste Code:** P113  
**Waste Code Description:** THALLIC OXIDE (OR) THALLIUM OXIDE TL2O3

**Hazardous Waste Handler Details**

**Sequence No:** 1  
**Receive Date:** 20030818  
**Handler Name:** MIDWEST SUPERCONDUCTIVITY INC  
**Source Type:** Implementer  
**Federal Waste Generator Code:** N  
**Generator Code Description:** Not a Generator, Verified

**Owner/Operator Details**

<b>Owner/Operator Ind:</b> Current Owner	<b>Street No:</b>	
<b>Type:</b> Private	<b>Street 1:</b>	1321 WAKARUSA DR STE 2104
<b>Name:</b> CAMPBELL BECKER INC	<b>Street 2:</b>	
<b>Date Became Current:</b>	<b>City:</b>	LAWRENCE
<b>Date Ended Current:</b>	<b>State:</b>	KS
<b>Phone:</b> 785-841-7120	<b>Country:</b>	
<b>Source Type:</b> Notification	<b>Zip Code:</b>	66049

<b>Owner/Operator Ind:</b> Current Owner	<b>Street No:</b>	
<b>Type:</b> Private	<b>Street 1:</b>	1321 WAKARUSA DR STE 2104
<b>Name:</b> CAMPBELL BECKER INC	<b>Street 2:</b>	
<b>Date Became Current:</b>	<b>City:</b>	LAWRENCE
<b>Date Ended Current:</b>	<b>State:</b>	KS
<b>Phone:</b> 785-841-7120	<b>Country:</b>	
<b>Source Type:</b> Implementer	<b>Zip Code:</b>	66049

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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**Historical Handler Details**

Receive Dt: 19940407  
 Generator Code Description: Small Quantity Generator  
 Handler Name: MIDWEST SUPERCONDUCTIVITY INC

<a href="#">4</a>	1 of 1	NE	0.24 / 1,248.75	990.83 / -3	PRAIRIE GRAPHICS 1201 WAKARUSA DR SUITE B4 LAWRENCE KS 66049	RCRA NON GEN
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EPA Handler ID: KSD985013986  
 Gen Status Universe: No Report  
 Contact Name: GRETCHEN B HATFIELD  
 Contact Address: 1201 WAKARUSA DR SUITE B4 , , LAWRENCE , KS, 66049 , US  
 Contact Phone No and Ext: 785-841-1166  
 Contact Email:  
 Contact Country: US  
 County Name: DOUGLAS  
 EPA Region: 07  
 Land Type: Private  
 Receive Date: 20030828  
 Location Latitude:  
 Location Longitude:

**Violation/Evaluation Summary**

Note: NO RECORDS: As of Apr 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

**Handler Summary**

Importer Activity: No  
 Mixed Waste Generator: No  
 Transporter Activity: No  
 Transfer Facility: No  
 Onsite Burner Exemption: No  
 Furnace Exemption: No  
 Underground Injection Activity: No  
 Commercial TSD: No  
 Used Oil Transporter: No  
 Used Oil Transfer Facility: No  
 Used Oil Processor: No  
 Used Oil Refiner: No  
 Used Oil Burner: No  
 Used Oil Market Burner: No  
 Used Oil Spec Marketer: No

**Hazardous Waste Handler Details**

Sequence No: 1  
 Receive Date: 19921214  
 Handler Name: PRAIRIE GRAPHICS  
 Source Type: Notification  
 Federal Waste Generator Code: 2  
 Generator Code Description: Small Quantity Generator

**Waste Code Details**

Hazardous Waste Code: D001  
 Waste Code Description: IGNITABLE WASTE



Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
<b>Hazardous Waste Code:</b>		D018				
<b>Waste Code Description:</b>		BENZENE				
<b>Hazardous Waste Code:</b>		D039				
<b>Waste Code Description:</b>		TETRACHLOROETHYLENE				
<b><u>Hazardous Waste Handler Details</u></b>						
<b>Sequence No:</b>		1				
<b>Receive Date:</b>		20030828				
<b>Handler Name:</b>		PRAIRIE GRAPHICS				
<b>Source Type:</b>		Implementer				
<b>Federal Waste Generator Code:</b>		N				
<b>Generator Code Description:</b>		Not a Generator, Verified				
<b><u>Owner/Operator Details</u></b>						
<b>Owner/Operator Ind:</b>	Current Operator				<b>Street No:</b>	
<b>Type:</b>	Private				<b>Street 1:</b>	1201 WAKARUSA DR SUITE B4
<b>Name:</b>	PRAIRIE GRAPHICS				<b>Street 2:</b>	
<b>Date Became Current:</b>	20030826				<b>City:</b>	LAWRENCE
<b>Date Ended Current:</b>					<b>State:</b>	KS
<b>Phone:</b>	785-841-4466				<b>Country:</b>	
<b>Source Type:</b>	Implementer				<b>Zip Code:</b>	66049
<b>Owner/Operator Ind:</b>	Current Owner				<b>Street No:</b>	
<b>Type:</b>	Private				<b>Street 1:</b>	1201 WAKARUA DR SUITE B4
<b>Name:</b>	PRAIRIE GRAPHICS				<b>Street 2:</b>	
<b>Date Became Current:</b>	20030826				<b>City:</b>	LAWRENCE
<b>Date Ended Current:</b>					<b>State:</b>	KS
<b>Phone:</b>	785-841-1166				<b>Country:</b>	
<b>Source Type:</b>	Implementer				<b>Zip Code:</b>	66049
<b>Owner/Operator Ind:</b>	Current Owner				<b>Street No:</b>	
<b>Type:</b>	Private				<b>Street 1:</b>	2317 PONDEROSA DR
<b>Name:</b>	PRAIRIE GRAPHICS				<b>Street 2:</b>	
<b>Date Became Current:</b>					<b>City:</b>	LAWRENCE
<b>Date Ended Current:</b>					<b>State:</b>	KS
<b>Phone:</b>	785-841-1166				<b>Country:</b>	
<b>Source Type:</b>	Notification				<b>Zip Code:</b>	66046
<b><u>Historical Handler Details</u></b>						
<b>Receive Dt:</b>	19921214					
<b>Generator Code Description:</b>	Small Quantity Generator					
<b>Handler Name:</b>	PRAIRIE GRAPHICS					

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<u>5</u>	1 of 1	E	0.24 / 1,250.11	972.36 / -22	US GEOLOGICAL SURVEY 4821 QUAIL CREST PL LAWRENCE KS 66049	RCRA VSQG
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**EPA Handler ID:** KSR000002378  
**Gen Status Universe:** VSG  
**Contact Name:** BETTY SCRIBNER  
**Contact Address:** 4821 QUAIL CREST PL , , LAWRENCE , KS, 66049 , US  
**Contact Phone No and Ext:** 785-832-3564  
**Contact Email:**  
**Contact Country:** US  
**County Name:** DOUGLAS  
**EPA Region:** 07  
**Land Type:** Private  
**Receive Date:** 19951122  
**Location Latitude:** 38.959672  
**Location Longitude:** -95.304974

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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**Violation/Evaluation Summary**

**Note:** NO RECORDS: As of Apr 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

**Handler Summary**

**Importer Activity:** No  
**Mixed Waste Generator:** No  
**Transporter Activity:** No  
**Transfer Facility:** No  
**Onsite Burner Exemption:** No  
**Furnace Exemption:** No  
**Underground Injection Activity:** No  
**Commercial TSD:** No  
**Used Oil Transporter:** No  
**Used Oil Transfer Facility:** No  
**Used Oil Processor:** No  
**Used Oil Refiner:** No  
**Used Oil Burner:** No  
**Used Oil Market Burner:** No  
**Used Oil Spec Marketer:** No

**Hazardous Waste Handler Details**

**Sequence No:** 1  
**Receive Date:** 19951122  
**Handler Name:** US GEOLOGICAL SURVEY  
**Federal Waste Generator Code:** 3  
**Generator Code Description:** Very Small Quantity Generator  
**Source Type:** Notification

**Waste Code Details**

**Hazardous Waste Code:** D001  
**Waste Code Description:** IGNITABLE WASTE  
  
**Hazardous Waste Code:** D002  
**Waste Code Description:** CORROSIVE WASTE

**Owner/Operator Details**

<b>Owner/Operator Ind:</b>	Current Owner	<b>Street No:</b>	
<b>Type:</b>	Private	<b>Street 1:</b>	4821 QUAIL CREST PL
<b>Name:</b>	U S GEOLOGICAL SURVEY	<b>Street 2:</b>	
<b>Date Became Current:</b>		<b>City:</b>	LAWRENCE
<b>Date Ended Current:</b>		<b>State:</b>	KS
<b>Phone:</b>	785-832-3564	<b>Country:</b>	
<b>Source Type:</b>	Notification	<b>Zip Code:</b>	66049

<a href="#">6</a>	1 of 1	ESE	0.25 / 1,308.44	953.27 / -41	MIDWEST GRAPHICS 4811 QUAIL CREST PL LAWRENCE KS 66049	RCRA NON GEN
<b>EPA Handler ID:</b>	KS0000850594					
<b>Gen Status Universe:</b>	No Report					
<b>Contact Name:</b>	DOUGLAS HAMMOND					
<b>Contact Address:</b>	PO BOX 3128 , , LAWRENCE , KS, 66046-3128 , US					
<b>Contact Phone No and Ext:</b>	785-841-4100					
<b>Contact Email:</b>						
<b>Contact Country:</b>	US					
<b>County Name:</b>	DOUGLAS					

<b>Map Key</b>	<b>Number of Records</b>	<b>Direction</b>	<b>Distance (mi/ft)</b>	<b>Elev/Diff (ft)</b>	<b>Site</b>	<b>DB</b>
<b>EPA Region:</b>		07				
<b>Land Type:</b>		Private				
<b>Receive Date:</b>		20040607				
<b>Location Latitude:</b>						
<b>Location Longitude:</b>						

**Violation/Evaluation Summary**

**Note:** NO RECORDS: As of Apr 2024, there are no Compliance Monitoring and Enforcement (violation) records associated with this facility (EPA ID).

**Handler Summary**

**Importer Activity:** No  
**Mixed Waste Generator:** No  
**Transporter Activity:** No  
**Transfer Facility:** No  
**Onsite Burner Exemption:** No  
**Furnace Exemption:** No  
**Underground Injection Activity:** No  
**Commercial TSD:** No  
**Used Oil Transporter:** No  
**Used Oil Transfer Facility:** No  
**Used Oil Processor:** No  
**Used Oil Refiner:** No  
**Used Oil Burner:** No  
**Used Oil Market Burner:** No  
**Used Oil Spec Marketer:** No

**Hazardous Waste Handler Details**

**Sequence No:** 1  
**Receive Date:** 19940928  
**Handler Name:** CARROUSEL TRADING CO  
**Source Type:** Notification  
**Federal Waste Generator Code:** 2  
**Generator Code Description:** Small Quantity Generator

**Waste Code Details**

**Hazardous Waste Code:** D001  
**Waste Code Description:** IGNITABLE WASTE

**Hazardous Waste Code:** D018  
**Waste Code Description:** BENZENE

**Hazardous Waste Code:** D039  
**Waste Code Description:** TETRACHLOROETHYLENE

**Hazardous Waste Handler Details**

**Sequence No:** 1  
**Receive Date:** 20040607  
**Handler Name:** MIDWEST GRAPHICS  
**Source Type:** Implementer  
**Federal Waste Generator Code:** N  
**Generator Code Description:** Not a Generator, Verified

**Waste Code Details**

**Hazardous Waste Code:** D001  
**Waste Code Description:** IGNITABLE WASTE

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
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**Hazardous Waste Code:** D018  
**Waste Code Description:** BENZENE

**Hazardous Waste Code:** D039  
**Waste Code Description:** TETRACHLOROETHYLENE

**Owner/Operator Details**

<b>Owner/Operator Ind:</b>	Current Owner	<b>Street No:</b>	
<b>Type:</b>	Private	<b>Street 1:</b>	4811 QUAIL CREST PLACE
<b>Name:</b>	CARROUSEL TRADING CO	<b>Street 2:</b>	
<b>Date Became Current:</b>		<b>City:</b>	LAWRENCE
<b>Date Ended Current:</b>		<b>State:</b>	KS
<b>Phone:</b>	785-841-4100	<b>Country:</b>	
<b>Source Type:</b>	Implementer	<b>Zip Code:</b>	66049

<b>Owner/Operator Ind:</b>	Current Owner	<b>Street No:</b>	
<b>Type:</b>	Private	<b>Street 1:</b>	4811 QUAIL CREST PLACE
<b>Name:</b>	CARROUSEL TRADING CO	<b>Street 2:</b>	
<b>Date Became Current:</b>		<b>City:</b>	LAWRENCE
<b>Date Ended Current:</b>		<b>State:</b>	KS
<b>Phone:</b>	785-841-4100	<b>Country:</b>	
<b>Source Type:</b>	Notification	<b>Zip Code:</b>	66049

**Historical Handler Details**

**Receive Dt:** 19940928  
**Generator Code Description:** Small Quantity Generator  
**Handler Name:** CARROUSEL TRADING CO

<u>7</u>	1 of 1	N	0.46 / 2,432.55	1,000.97 / 7	W Africa Oil & Gas Corp 909 Congressional Dr Lawrence KS 66049-4733	PFAS
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<b>ID No:</b>	303	<b>SIC Code:</b>	13890000
<b>DNS No:</b>	01-745-0579	<b>NAICS Code:</b>	213112
<b>Line of Business:</b>	Oil Gas Fld Svc Ne	<b>County:</b>	Douglas
<b>Year Started:</b>	2008	<b>State:</b>	KS
<b>Contact:</b>	Connie Patterson	<b>Latitude:</b>	38.968607
<b>Title:</b>	Principal	<b>Longitude:</b>	-95.310491
<b>Phone:</b>	785-832-9545	<b>Map No:</b>	23
<b>Doing Business as:</b>			
<b>Type:</b>	Industrial and Commercial Sites Identified by SIC or NAICS code		
<b>SIC Code Description:</b>	Oil And Gas Field Services, Nec		
<b>NAICS Code Description:</b>	Support Activities For Oil And Gas Operations		

# Unplottable Summary

Total: 0 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
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No unplottable records were found that may be relevant for the search criteria.



# Unplottable Report

No unplottable records were found that may be relevant for the search criteria.

# Appendix: Database Descriptions

*Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:*

*"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."*

## **Standard Environmental Record Sources**

### **Federal**

#### **National Priority List:**

NPL

Sites on the United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. The NPL, which EPA is required to update at least once a year, is based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

**Government Publication Date: Apr 22, 2024**

#### **National Priority List - Proposed:**

PROPOSED NPL

Sites proposed by the United States Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

**Government Publication Date: Apr 22, 2024**

#### **Deleted NPL:**

DELETED NPL

Sites deleted from the United States Environmental Protection Agency (EPA)'s National Priorities List. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate. Sites are represented by boundaries where available in the EPA Superfund Site Boundaries maintained by the Shared Enterprise Geodata and Services (SEGS). Site boundaries represent the footprint of a whole site, the sum of all of the Operable Units and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Where there is no polygon boundary data available for a given site, the site is represented as a point.

**Government Publication Date: Apr 22, 2024**

#### **SEMS List 8R Active Site Inventory:**

SEMS

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the EPA's Facility Registry Service map tool.

**Government Publication Date: Mar 27, 2024**

**SEMS List 8R Archive Sites:**

[SEMS ARCHIVE](#)

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file.

**Government Publication Date: Mar 27, 2024**

**Inventory of Open Dumps, June 1985:**

[ODI](#)

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

**Government Publication Date: Jun 1985**

**EPA Report on the Status of Open Dumps on Indian Lands:**

[IODI](#)

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

**Government Publication Date: Dec 31, 1998**

**Comprehensive Environmental Response, Compensation and Liability Information System -**

[CERCLIS](#)

**CERCLIS:**

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

**Government Publication Date: Oct 25, 2013**

**CERCLIS - No Further Remedial Action Planned:**

[CERCLIS NFRAP](#)

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

**Government Publication Date: Oct 25, 2013**

**CERCLIS Liens:**

[CERCLIS LIENS](#)

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

**Government Publication Date: Jan 30, 2014**

**RCRA CORRACTS-Corrective Action:**

[RCRA CORRACTS](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

**Government Publication Date: Apr 8, 2024**

**RCRA non-CORRACTS TSD Facilities:**

[RCRA TSD](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites that have indicated engagement in the treatment, storage, or disposal of hazardous waste which requires a RCRA hazardous waste permit.

**Government Publication Date: Apr 8, 2024**

**RCRA Generator List:**

[RCRA LQG](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste.  
**Government Publication Date: Apr 8, 2024**

**RCRA Small Quantity Generators List:**

[RCRA SQG](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.  
**Government Publication Date: Apr 8, 2024**

**RCRA Very Small Quantity Generators List:**

[RCRA VSQG](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.  
**Government Publication Date: Apr 8, 2024**

**RCRA Non-Generators:**

[RCRA NON GEN](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.  
**Government Publication Date: Apr 8, 2024**

**RCRA Sites with Controls:**

[RCRA CONTROLS](#)

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.  
**Government Publication Date: Apr 8, 2024**

**Federal Engineering Controls-ECs:**

[FED ENG](#)

List of Engineering controls (ECs) made available by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.  
**Government Publication Date: Apr 22, 2024**

**Federal Institutional Controls- ICs:**

[FED INST](#)

List of Institutional controls (ICs) made available by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.  
**Government Publication Date: Apr 22, 2024**

**Land Use Control Information System:**

LUCIS

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

**Government Publication Date: Sep 1, 2006**

**Institutional Control Boundaries at NPL sites:**

NPL IC

Boundaries of Institutional Control areas at sites on the United States Environmental Protection Agency (EPA)'s National Priorities List, or Proposed or Deleted, made available by the EPA's Shared Enterprise Geodata and Services (SEGS). United States Environmental Protection Agency (EPA)'s National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy.

**Government Publication Date: Apr 22, 2024**

**Emergency Response Notification System:**

ERNS 1982 TO 1986

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

**Government Publication Date: 1982-1986**

**Emergency Response Notification System:**

ERNS 1987 TO 1989

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

**Government Publication Date: 1987-1989**

**Emergency Response Notification System:**

ERNS

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

**Government Publication Date: Feb 20, 2024**

**The Assessment, Cleanup and Redevelopment Exchange System (ACRES) Brownfield Database:**

FED BROWNFIELDS

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. This data is provided by the United States Environmental Protection Agency (EPA) and includes Brownfield sites from the Cleanups in My Community (CIMC) web application.

**Government Publication Date: Feb 7, 2024**

**FEMA Underground Storage Tank Listing:**

FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

**Government Publication Date: Dec 31, 2017**

**Facility Response Plan:**

FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. This listing includes FRP facilities from an applicable EPA FOIA file and Homeland Infrastructure Foundation-Level Data (HIFLD) data file.

**Government Publication Date: Jan 9, 2024**

**Delisted Facility Response Plans:**

DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

**Government Publication Date: Jan 9, 2024**



**Historical Gas Stations:**

[HIST GAS STATIONS](#)

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

**Government Publication Date: Jul 1, 1930**

**Petroleum Refineries:**

[REFN](#)

List of petroleum refineries from the U.S. Energy Information Administration (EIA) Refinery Capacity Report. Includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year located in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and other U.S. possessions. Survey locations adjusted using public data.

**Government Publication Date: Feb 28, 2024**

**Petroleum Product and Crude Oil Rail Terminals:**

[BULK TERMINAL](#)

A list of petroleum product and crude oil rail terminals from the U.S. Energy Information Administration (EIA), as well as petroleum terminals sourced from the Federal Communications Commission Data hosted by the Homeland Infrastructure Foundation-Level Database. Data includes operable bulk petroleum product terminals with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil with activity between 2017 and 2018. EIA petroleum product terminal data comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings.

**Government Publication Date: Sep 22, 2023**

**LIEN on Property:**

[SEMS LIEN](#)

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

**Government Publication Date: Mar 27, 2024**

**Superfund Decision Documents:**

[SUPERFUND ROD](#)

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

**Government Publication Date: Mar 27, 2024**

**Formerly Utilized Sites Remedial Action Program:**

[DOE FUSRAP](#)

The U.S. Department of Energy (DOE) established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

**Government Publication Date: Mar 4, 2017**

**State**

**Identified Sites List:**

[SHWS](#)

The Identified Sites List (ISL) is a public record of environmentally contaminated sites (Excluding underground and above-ground tank sites). This list is made available by the Kansas Department of Health and Environment, Bureau of Environmental Remediation (BER). The BER ISL dataset is also utilized from the web map provided through the KS Data Access and Support Center (DASC). This database is state equivalent CERCLIS.

**Government Publication Date: May 15, 2024**

**Delisted Identified Sites:**

[DELISTED SHWS](#)

This database contains environmentally contaminated sites (Excluding underground and above-ground tank sites) that were removed from Kansas Department of Health and Environment's Identified Sites list.

**Government Publication Date: May 15, 2024**

**Solid Waste Disposable Facilities:**

[SWF/LF](#)

This list of Solid Waste Facilities and Closed City Dump Cleanup Sites is provided by the Kansas Department of Health and Environment's (KDHE) Bureau of Waste Management (BWM). KDHE regulated solid waste facilities include municipal solid waste Landfills. The Old City Dump Cleanup Program provides funds to cities or counties for the repair of old, unused municipal dump sites; these sites primarily operated between the 1940s and the 1970s before many counties had landfills and prior to the current solid waste regulations. The data includes applicable map layers sourced from KDHE Solid Waste Database Viewer.

**Government Publication Date: May 2, 2024**

**Leaking Underground Storage Tank Data:**

LUST

A list of Leaking Underground Storage Tank (LUST) facilities registered with the Kansas Petroleum Storage Tank Release Trust Funds. This list is made available by the Kansas Department of Health and Environment(KDHE), Bureau of Remediation (BER) Storage Tank Section.

**Government Publication Date: Feb 26, 2024**

**Aboveground Storage Tank Assessment Database (Leaking Tanks):**

LAST

A list of Leaking Aboveground Storage Tank (LAST) facilities registered with the Kansas Petroleum Storage Tank Release Trust Funds. This list is made available by the Kansas Department of Health and Environment(KDHE), Bureau of Remediation (BER) Storage Tank Section.

**Government Publication Date: Feb 26, 2024**

**Leaking Storage Tanks:**

LST

A list of facilities registered with the Kansas Petroleum Storage Tank Release Trust Funds. This listing includes facilities for which there is not adequate information to determine whether the facility is associated with a leak from an Aboveground tank (LAST) or Underground tank (LUST). Listing made available by the Kansas Department of Health and Environment.

**Government Publication Date: Feb 26, 2024**

**Delisted Leaking Storage Tanks:**

DELISTED LST

This database contains a list of leaking storage tank sites that were removed from the Petroleum Storage Tank Release Trust Funds, Kansas Department of Health and Environment.

**Government Publication Date: Feb 26, 2024**

**Underground Storage Tanks:**

UST

List of Underground Storage Tank (UST) facilities in the state of Kansas. This list is made available by Kansas Department of Health and Environment.

**Government Publication Date: Feb 26, 2024**

**Aboveground Storage Tanks:**

AST

A list of Aboveground Storage Tank (AST) facilities in the state of Kansas. This list is made available by Kansas Department of Health and Environment.

**Government Publication Date: Feb 26, 2024**

**Storage Tank Facilities:**

TANK

List of storage tank facilities without associated tank details, not distinguished as either Underground Storage Tanks (UST) or Aboveground Storage Tanks (AST). This facilities listing is made available by the Kansas Department of Health and Environment (KDHE).

**Government Publication Date: Feb 26, 2024**

**Delisted Storage Tanks:**

DELISTED STORAGE TANK

This database contains a list of storage tank sites that were removed from the Kansas Department of Health and Environment storage tank database.

**Government Publication Date: Feb 26, 2024**

**Environmental Use Control/Institutional Control Information:**

INST

A list of sites with Environmental Use Control/Institutional Control Information in Kansas. This list is made available by the Kansas Department of Health and Environment.

**Government Publication Date: May 15, 2024**

**Voluntary Cleanup Sites:**

VCP

A list of sites registered with the Voluntary Cleanup and Property Redevelopment Program (VCPRP). This list is made available by the Kansas Department of Health and Environment. Under the VCPRP, developers and buyers who perform successful cleanups of contaminated properties that are within established criteria will be granted a "No Further Action" determination by the department, satisfying the regulated community's need for protection from potential future liabilities.

**Government Publication Date: May 15, 2024**

**Brownfields:**

[BROWNFIELDS](#)

A list of Brownfield sites in the state of Kansas. This list is made available by Kansas Department of Health and Environment.

**Government Publication Date: May 15, 2024**

**Tribal**

**Leaking Underground Storage Tanks on Tribal/Indian Lands:**

[INDIAN LUST](#)

This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 7, which includes Kansas, is made available by the United States Environmental Protection Agency (EPA).

**Government Publication Date: Oct 24, 2023**

**Underground Storage Tanks on Tribal/Indian Lands:**

[INDIAN UST](#)

This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 7, which includes Kansas, is made available by the United States Environmental Protection Agency (EPA).

**Government Publication Date: Oct 24, 2023**

**Delisted Tribal Leaking Storage Tanks:**

[DELISTED INDIAN LST](#)

Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).

**Government Publication Date: Oct 25, 2023**

**Delisted Tribal Underground Storage Tanks:**

[DELISTED INDIAN UST](#)

Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).

**Government Publication Date: Oct 25, 2023**

**County**

**No County standard environmental record sources available for this State.**

**Additional Environmental Record Sources**

**Federal**

**PFAS Greenhouse Gas Emissions Data:**

[PFAS GHG](#)

The U.S. Environmental Protection Agency's Greenhouse Gas Reporting Program (GHGRP) collects Greenhouse Gas (GHG) data from large emitting facilities (25,000 metric tons of carbon dioxide equivalent (CO<sub>2</sub>e) per year), and suppliers of fossil fuels and industrial gases that results in GHG emissions when used. Includes GHG emissions data for facilities that emit or have emitted since 2010 chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures by DSSTox. PFAS emissions data has been identified for facilities engaged in the following industrial processes: Aluminum Production (GHGRP Subpart F), HCFC-22 Production and HFC-23 Destruction (Subpart O), Electronics Manufacturing (Subpart I), Fluorinated Gas Production (Subpart L), Magnesium Production (Subpart T), Electrical Transmission and Distribution Equipment Use (Subpart DD), and Manufacture of Electric Transmission and Distribution Equipment (Subpart SS). Over time, other industrial processes with required GHGRP reporting may include PFAS emissions data and the list of reportable gases may change over time.

**Government Publication Date: May 9, 2024**

**On-Scene Coordinator Response Sites:**

[OSC RESPONSE](#)

This list of On-Scene Coordinator (OSC) Response Sites is provided by the U.S. Environmental Protection Agency (EPA). OSCs are the federal officials responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government. OSCs coordinate all federal efforts with, and provide support and information to local, state, and regional response communities. An OSC is an agent of either EPA or the U.S. Coast Guard (USCG), depending on where the incident occurs. EPA's OSCs have primary responsibility for spills and releases to inland areas and waters. USCG OSCs have responsibility for coastal waters and the Great Lakes. In general, an OSC has the following key responsibilities during and after a response: Assessment, Monitoring, Response Assistance, and Evaluation.

**Government Publication Date: Apr 4, 2024**

**Facility Registry Service/Facility Index:**

FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the U.S. Environmental Protection Agency (EPA).

**Government Publication Date: Feb 9, 2024**

**Toxics Release Inventory (TRI) Program:**

TRIS

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment. This database includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

**Government Publication Date: Sep 20, 2023**

**PFOA/PFOS Contaminated Sites:**

PFAS NPL

This list of Superfund Sites with Per- and Polyfluoroalkyl Substances (PFAS) detections is made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data, previously the list was obtained by EPA FOIA requests. EPA's Office of Land and Emergency Management and EPA Regional Offices maintain what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment. Limitations: Detections of PFAS at National Priorities List (NPL) sites do not mean that people are at risk from PFAS, are exposed to PFAS, or that the site is the source of the PFAS. The information in the Superfund NPL and Superfund Alternative Agreement (SAA) PFAS detection site list is years old and may not be accurate today. Site information such as site name, site ID, and location has been confirmed for accuracy; however, PFAS-related information such as media sampled, drinking water being above the health advisory, or mitigation efforts has not been verified. For Federal Facilities data, the other Federal agencies (OFA) are the lead agency for their data and provided them to EPA.

**Government Publication Date: Mar 19, 2024**

**Federal Agency Locations with Known or Suspected PFAS Detections:**

PFAS FED SITES

List of Federal agency locations with known or suspected detections of Per- and Polyfluoroalkyl Substances (PFAS), made available by the U.S. Environmental Protection Agency (EPA) in their PFAS Analytic Tools data. EPA outlines that these data are gathered from several federal entities, such as the Federal Superfund program, Department of Defense (DOD), National Aeronautics and Space Administration, Department of Transportation, and Department of Energy. The dates this data was extracted for the PFAS Analytic Tools range from 2022 to 2024. Sites on this list do not necessarily reflect the source/s of PFAS contamination and detections do not indicate level of risk or human exposure at the site. Agricultural notifications in this data are limited to DOD sites only. At this time, the EPA is aware that this list is not comprehensive of all Federal agencies.

**Government Publication Date: Apr 1, 2024**

**SSEHRI PFAS Contamination Sites:**

PFAS SSEHRI

This PFAS Contamination Site Tracker database is compiled by the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents, and this is cited in the tracker. Locations for the Known PFAS Contamination Sites are sourced from the PFAS Sites and Community Resources Map, credited to the Northeastern University's PFAS Project Lab, Silent Spring Institute, and the PFAS-REACH team. Disclaimer: The source conveys the data undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Access the following source link for the most current information:

<https://pfasproject.com/pfas-sites-and-community-resources/>

**Government Publication Date: May 19, 2023**

**National Response Center PFAS Spills:**

ERNS PFAS

This Per- and Poly-Fluoroalkyl Substances (PFAS) Spills dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The National Response Center (NRC), operated by the U.S. Coast Guard, is the designated federal point of contact for reporting all oil, chemical, and other discharges into the environment, for the United States and its territories. This dataset contains NRC spill information from 1990 to the present that is restricted to records associated with PFAS and PFAS-containing materials. Incidents are filtered to include only records with a "Material Involved" or "Incident Description" related to Aqueous Film Forming Foam (AFFF). The keywords used to filter the data included "AFFF," "Fire Fighting Foam," "Aqueous Film Forming Foam," "Fire Suppressant Foam," "PFAS," "PERFL," "PFOA," "PFOS," and "Genx." Limitations: The data from the NRC website contains initial incident data that has not been validated or investigated by a federal/state response agency. Keyword searches may misidentify some incident reports that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS spills/release incidents.

**PFAS NPDES Discharge Monitoring:**

[PFAS NPDES](#)

This list of National Pollutant Discharge Elimination System (NPDES) permitted facilities with required monitoring for Per- and Polyfluoroalkyl (PFAS) Substances is made available via the U.S. Environmental Protection Agency (EPA)'s PFAS Analytic Tools. Any point-source wastewater discharger to waters of the United States must have a NPDES permit, which defines a set of parameters for pollutants and monitoring to ensure that the discharge does not degrade water quality or impair human health. This list includes NPDES permitted facilities associated with permits that monitor for Per- and Polyfluoroalkyl Substances (PFAS), limited to the years 2007 - present. EPA further advises the following regarding these data: currently, fewer than half of states have required PFAS monitoring for at least one of their permittees, and fewer states have established PFAS effluent limits for permittees. For states that may have required monitoring, some reporting and data transfer issues may exist on a state-by-state basis.

Government Publication Date: May 6, 2024

**Perfluorinated Alkyl Substances (PFAS) from Toxic Release Inventory:**

[PFAS TRI](#)

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a per- or polyfluoroalkyl (PFAS) substance included in the U.S. Environmental Protection Agency's (EPA) consolidated PFAS Master List of PFAS Substances. Encompasses Toxics Release Inventory records included in the EPA PFAS Analytic Tools. The EPA's TRI database currently tracks information on disposal or releases of 770 individually listed toxic chemicals and 33 chemical categories from thousands of U.S. facilities and details about how facilities manage those chemicals through recycling, energy recovery, and treatment. This listing includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

**Perfluorinated Alkyl Substances (PFAS) Water Quality:**

[PFAS WATER](#)

The Water Quality Portal (WQP) is a cooperative service sponsored by the United States Geological Survey (USGS), the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC). This listing includes records from the Water Quality Portal where the characteristic (environmental measurement) is in the Environmental Protection Agency (EPA)'s consolidated Master List of PFAS Substances.

Government Publication Date: Jul 20, 2020

**PFAS TSCA Manufacture and Import Facilities:**

[PFAS TSCA](#)

The U.S. Environmental Protection Agency (EPA) issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. This list is specific only to TSCA Manufacture and Import Facilities with reported per- and poly-fluoroalkyl (PFAS) substances. Data file is sourced from EPA's PFAS Analytic Tools TSCA dataset which includes CDR/Inventory Update Reporting data from 1998 up to 2020. Disclaimer: This data file includes production and importation data for chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures in DSSTox. Note that some regulations have specific chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard. Reporting information on manufactured or imported chemical substance amounts should not be compared between facilities, as some companies claim Chemical Data Reporting Rule data fields for PFAS information as Confidential Business Information.

Government Publication Date: Jan 5, 2023

**PFAS Waste Transfers from RCRA e-Manifest :**

[PFAS E-MANIFEST](#)

This Per- and Poly-Fluoroalkyl Substances (PFAS) Waste Transfers dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. Every shipment of hazardous waste in the U.S. must be accompanied by a shipment manifest, which is a critical component of the cradle-to-grave tracking of wastes mandated by the Resource Conservation and Recovery Act (RCRA). According to the EPA, currently no Federal Waste Code exists for any PFAS compounds. To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: • PFAS • PFOA • PFOS • PERFL • AFFF • GENX • GEN-X (plus the Vermont state-specific waste codes). Limitations: Amount or concentration of PFAS being transferred cannot be determined from the manifest information. Keyword searches may misidentify some manifest records that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS waste transfers.

Government Publication Date: Apr 29, 2024

**PFAS Industry Sectors:**

[PFAS IND](#)

This Per- and Poly-Fluoroalkyl Substances (PFAS) Industry Sectors dataset is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The EPA developed the dataset from various sources that show which industries may be handling PFAS including: EPA's Enforcement and Compliance History Online (ECHO) records restricted to potential PFAS-handling industry sectors; ECHO records for Fire Training Sites identified where fire-fighting foam may have been used in training exercises; and 14 CFR Part 139 Airports compiled from historic and current records from the FAA Airport Data and Information Portal. Since July 2006, all certificated Part 139 Airports are required to have fire-fighting foam onsite that meet certain military specifications, which to date have been fluorinated (Aqueous Film Forming Foam). Limitations: Inclusion in this dataset does not indicate that PFAS are being manufactured, processed, used, or released by the facility. Listed facilities potentially handle PFAS based on their industrial profile, but are unconfirmed by the EPA. Keyword searches in ECHO for Fire Training sites may misidentify some facilities and should not be considered to be an exhaustive list of fire training facilities in the U.S.

Government Publication Date: Apr 15, 2024



**Hazardous Materials Information Reporting System:**

HMIRS

The Hazardous Materials Incident Reporting System (HMIRS) database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

**Government Publication Date: Nov 26, 2023**

**National Clandestine Drug Labs:**

NCDL

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

**Government Publication Date: Nov 30, 2023**

**Toxic Substances Control Act:**

TSCA

The U.S. Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule. The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI). EPA CDR collections occur approximately every four years and reporting requirements change per collection.

**Government Publication Date: May 12, 2022**

**Hist TSCA:**

HIST TSCA

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

**Government Publication Date: Dec 31, 2006**

**FTTS Administrative Case Listing:**

FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

**Government Publication Date: Jan 19, 2007**

**FTTS Inspection Case Listing:**

FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

**Government Publication Date: Jan 19, 2007**

**Potentially Responsible Parties List:**

PRP

Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).

**Government Publication Date: Apr 22, 2024**

**State Coalition for Remediation of Drycleaners Listing:**

SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRD no longer maintains this data, refer to applicable state source data where available.

**Government Publication Date: Nov 08, 2017**

**Integrated Compliance Information System (ICIS):**

ICIS

The Integrated Compliance Information System (ICIS) database contains integrated enforcement and compliance information across most of U.S. Environmental Protection Agency's (EPA) programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained by the EPA Headquarters and at the Regional offices. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.

**Government Publication Date: Aug 26, 2023**

**Drycleaner Facilities:**

**FED DRYCLEANERS**

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. The EPA tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

**Government Publication Date: Jan 20, 2024**

**Delisted Drycleaner Facilities:**

**DELISTED FED DRY**

List of sites removed from the list of Drycleaner Facilities (sites in the EPA's Integrated Compliance Information System (ICIS) with NAIC or SIC codes identifying the business as a drycleaner establishment).

**Government Publication Date: Jan 20, 2024**

**Formerly Used Defense Sites:**

**FUDS**

Formerly Used Defense Sites (FUDS) are properties that were formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for an environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is compiled from the USACE's Geospatial FUDS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) FUDS dataset which applies to the Fiscal Year 2021 FUDS Inventory.

**Government Publication Date: May 15, 2023**

**FUDS Munitions Response Sites:**

**FUDS MRS**

Boundaries of Munitions Response Sites (MRS), published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial MRS data layers and Homeland Infrastructure Foundation-Level Data (HIFLD) MRS dataset.

**Government Publication Date: May 15, 2023**

**Former Military Nike Missile Sites:**

**FORMER NIKE**

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

**Government Publication Date: Dec 2, 1984**

**PHMSA Pipeline Safety Flagged Incidents:**

**PIPELINE INCIDENT**

This list of flagged pipeline incidents is made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types. Accidents reported on hazardous liquid gravity lines (§195.13) and reporting-regulated-only hazardous liquid gathering lines (§195.15) and incidents reported on Type R gas gathering (§192.8(c)) are not included in the flagged incident file data.

**Government Publication Date: May 6, 2024**

**Material Licensing Tracking System (MLTS):**

**MLTS**

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

**Government Publication Date: May 11, 2021**

**Historic Material Licensing Tracking System (MLTS) sites:**

[HIST MLTS](#)

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

**Government Publication Date: Jan 31, 2010**

**Mines Master Index File:**

[MINES](#)

The Master Index File (MIF) is provided by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.

**Government Publication Date: Feb 5, 2024**

**Surface Mining Control and Reclamation Act Sites:**

[SMCRA](#)

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by the Office of Surface Mining Reclamation and Enforcement (OSMRE) to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This inventory contains information on the type and extent of Abandoned Mine Land (AML) impacts, as well as information on the cost associated with the reclamation of those problems. The data is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed. Disclaimer: Per the OSMRE, States and tribes who enter their data into eAMLIS (AML Inventory System) may truncate their latitude and longitude so the precise location of usually dangerous AMLs is not revealed in an effort to protect the public from searching for these AMLs, most of which are on private property. If more precise location information is needed, please contact the applicable state/tribe of interest.

**Government Publication Date: Jun 13, 2023**

**Mineral Resource Data System:**

[MRDS](#)

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

**Government Publication Date: Mar 15, 2016**

**DOE Legacy Management Sites:**

[LM SITES](#)

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Title II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

**Government Publication Date: Dec 12, 2023**

**Alternative Fueling Stations:**

[ALT FUELS](#)

This list of alternative fueling stations is sourced from the Alternative Fuels Data Center (AFDC). The U.S. Department of Energy's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

**Government Publication Date: Apr 30, 2024**

**Superfunds Consent Decrees:**

[CONSENT DECREES](#)

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Cases filed since 2010 limited to the following: Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS); and applicable ENRD's Environmental Defense Section (EDS) CERCLA Cases with "Consent" in History Note. CMS may not reflect the latest developments in a case, nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

**Government Publication Date: Sep 15, 2023**

**Air Facility System:**

[AFS](#)

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

**Government Publication Date: Oct 17, 2014**

**Registered Pesticide Establishments:**

[SSTS](#)

This national list of active EPA-registered foreign and domestic pesticide and/or device-producing establishments is based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that each producing establishment must place its EPA establishment number on the label or immediate container of each pesticide, active ingredient or device produced. An EPA establishment number on a pesticide product label identifies the EPA registered location where the product was produced. The list of establishments is made available by the U.S. Environmental Protection Agency (EPA).

**Government Publication Date: Feb 29, 2024**

**Polychlorinated Biphenyl (PCB) Transformers:**

[PCBT](#)

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

**Government Publication Date: Oct 15, 2019**

**Polychlorinated Biphenyl (PCB) Notifiers:**

[PCB](#)

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

**Government Publication Date: May 23, 2024**

**State**

**Dry Cleaner Remediation & Release Trust Fund Applicant Sites:**

[DRYC REM REL](#)

This list of Dry Cleaner Remediation Sites and Dry Cleaner Facility Release Trust Fund Applicant Sites is maintained by the Bureau of Environmental Remediation (BER) of the Kansas Department of Health and Environment (KDHE). Applicable BER sites are sourced from the KDHE's Kansas Environmental Information Management System (KEIMS).

**Government Publication Date: Feb 13, 2024**

**Dry Cleaner Sites:**

[DRYCLEANERS](#)

This list of Registered Dry Cleaners is maintained by the Bureau of Environmental Remediation (BER) of the Kansas Department of Health and Environment (KDHE). Applicable sites are sourced from the KDHE's Kansas Environmental Information Management System (KEIMS).

**Government Publication Date: Feb 13, 2024**

**Delisted Drycleaners List:**

[DELISTED DRYCLEANERS](#)

List of sites removed from the drycleaners list made available by the Department of Health and Environment.

**Government Publication Date: Feb 13, 2024**

**Kansas Spills Database:**

[SPILLS](#)

A list of Spills, discharges, and emergency release sites reported to the Kansas Department of Health and Environment (KDHE). This list is made available by KDHE.

**Government Publication Date: Mar 11, 2024**

**Inventory of potential Perfluoroalkyl substances (PFAS) sites in Kansas:**

PFAS

List of sites in the statewide inventory of potential Perfluoroalkyl substances (PFAS) sites in Kansas, made available by the Kansas Department of Health and Environment (KDHE). The KDHE is taking steps to address Per-and polyfluoralkyl substances (PFAS) in drinking water through a joint investigation conducted by the Bureau of Environmental Remediation and the Bureau of Water, including the development of the statewide inventory and prioritization of potential PFAS sources.

**Government Publication Date: Jun 30, 2019**

**Clandestine Drug Lab Locations:**

CDL

A list of illegal clandestine drug laboratories that are found throughout Kansas. This list was made available by the Kansas Department of Health and Environment (KDHE) and contains sites only till 2009. KDHE stopped funding the cleanup program in 2009 and now only provides technical advice and clean up guidance.

**Government Publication Date: Aug 11, 2013**

**Tier 2 Report:**

TIER 2

A list of facilities which have reported hazardous substances to the Kansas Department of Health and Environment under the Kansas and Federal Emergency Planning and Community Right to know Act (EPCRA). Data provided by the Kansas Department of Health and Environment.

**Government Publication Date: Dec 31, 2019**

**Tribal**

**No Tribal additional environmental record sources available for this State.**

**County**

**No County additional environmental record sources available for this State.**



# Definitions

**Database Descriptions:** This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

**Detail Report:** This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

**Distance:** The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

**Direction:** The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

**Elevation:** The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

**Executive Summary:** This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

**Map Key:** The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

**Unplottables:** These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

## KDHE Incident Notification Report

<b>Spill Number</b> 41205	<b>Reported Date/Time</b> 02-22-2017	<b>Spill or Complaint</b> spill
<b>Notification Received By</b> Alexis Crawford	<b>Updated By</b> GISAdaptor	
<b>Through NRC - NRC Number</b> N/A	<b>Did EPA Respond?</b> N/A	<b>Spill Stage</b> Closed

<b>DISCHARGER</b>	<b>Organization Type</b> N/A	<b>Discharger Name</b> Southern Star Central Gas Pipeline	<b>Operator ID Number</b> N/A
	<b>Contact Name</b> Patrick Leis	<b>Phone</b> 316-220-8656	<b>Address</b> 19209 SW Maryland Rd.
<b>INCIDENT LOCATION</b>	<b>911 Street Address</b> N/A	<b>City, State, Zip</b> N/A, KS, N/A	<b>County</b> Douglas
	<b>KCC District</b> Chanute	<b>KDHE District</b> NE	<b>Legal Description</b> N/A
	<b>Facility or Lease Name</b> 41205	<b>Facility or Permit Number</b> N/A	
	<b>Approximate Location or Other Directions</b> N/A		

<b>MAP</b>	<b>Reported Coordinates</b> -95.3115,38.9608	<b>Incident Location Map</b> 
	<b>Official Coordinates</b> -95.3115,38.9608	
	<b>Location Comment</b> N/A	

City of Lawrence, Kansas, Missouri Dept. of Conservation, Esri, HERE... Powered by Esri

<b>DATE</b>	<b>Spill Date/Time</b> 02-20-2017	<b>Discovery Date/Time</b> 02-22-2017	<b>Closed/Transferred Date</b> 02-23-2017
-------------	--------------------------------------	--	--

<b>MATERIALS</b>	<b>Material Spilled</b> Oil, lubricating/hydraulic	<b>Material Name</b> Hydraulic Oil	<b>Quantity Spilled</b> 0.5 Gallons	<b>Quantity Recovered</b>

<b>SOURCE</b>	<b>Source of Spill</b> Motor Vehicle/Carrier	<b>Vehicle ID or Carrier Number</b> N/A	<b>Tank Capacity</b> N/A N/A
	<b>Source Description</b> skid steer loader		

<b>MEDIA</b>	<b>Media Affected</b> Soil
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<b>CAUSE</b>	<b>Reported Causes</b> Equipment Failure		
	<b>Cause Description</b> N/A		

<b>DAMAGE</b>	<b>Number of Injuries</b> N/A	<b>Number of Fatalities</b> N/A	
	<b>Damage Description</b> Hydraulic pump on skid steer loader was leaking. Contaminated soil has been cleaned up and removed.		
<b>ACTIONS/ CLEANUP</b>	<b>Cleanup Methods</b> Motor Vehicle/Carrier	<b>Responders</b> N/A	<b>Evacuation</b> N/A
	<b>Source Description</b> skid steer loader		
<b>INVESTIGATION</b>	<b>Investigating Agencies</b> KDHE	<b>Site Visited by KDHE</b> No	<b>Reporter has Notified</b> N/A
	<b>Investigator(s) Name: Hours Worked</b> N/A		

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## **Appendix E - Interview Documentation**

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## USER QUESTIONNAIRE

For Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must provide the following information (if available) to the environmental professional. As per the Brownfields Amendments, failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

<b>Property Name:</b>	
<b>Property Address:</b>	5015 Legends Drive, Lawrence, KS 66049
<b>Respondent Name:</b>	Shannon Oury, CEO, Lawrence-Douglas County Housing Authority
<b>Respondent Address:</b>	1600 Haskell Ave. Lawrence, KS 66044
<b>Response Date:</b>	June 12, 2024

### 1. Environmental Cleanup Liens

Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

Yes **No**

### 2. Activity and Land Use Limitations

Are you aware of any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

**Yes** No *Easement for gas pipeline for Southern Star – see Title Commitment*

### 3. Specialized Knowledge or Experience

Do you have any specialized knowledge or experiences related to the property, nearby properties, or are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Yes **No**

### 4. Purchase Price vs. Fair Market Value

Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

**Yes** No

### 5. Commonly Known or Reasonably Ascertainable Information

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases?

Yes **No**

5a. Do you know the past uses of the property?

If yes, please specify. Yes **No**



5b. Do you know of specific chemicals that are present or were once were present at the property?

Yes No

5c. Do you know of spills or other chemical releases that have taken place at the property?

Yes No

5d. Do you know of any environmental cleanups that have taken place at the property?

Yes No

**6. Obviousness of the Presence or Likely Presence of Contamination**

As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?

Yes No

## USER QUESTIONNAIRE

For Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must provide the following information (if available) to the environmental professional. As per the Brownfields Amendments, failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

<b>Property Name:</b>	
<b>Property Address:</b>	1311 Research Park Drive, Lawrence, KS, 66049
<b>Respondent Name:</b>	Shannon Oury, CEO, Lawrence-Douglas County Housing Authority
<b>Respondent Address:</b>	1600 Haskell Ave. Lawrence, KS 66044
<b>Response Date:</b>	June 12, 2024

### 1. Environmental Cleanup Liens

Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

Yes No

### 2. Activity and Land Use Limitations

Are you aware of any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

Yes No

### 3. Specialized Knowledge or Experience

Do you have any specialized knowledge or experiences related to the property, nearby properties, or are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Yes No

### 4. Purchase Price vs. Fair Market Value

Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

Yes No

### 5. Commonly Known or Reasonably Ascertainable Information

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases?

Yes No

5a. Do you know the past uses of the property?

If yes, please specify. Yes No

5b. Do you know of specific chemicals that are present or were once were present at the property?

Yes No

5c. Do you know of spills or other chemical releases that have taken place at the property?

Yes No

5d. Do you know of any environmental cleanups that have taken place at the property?

Yes No

**6. Obviousness of the Presence or Likely Presence of Contamination**

As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?

Yes No

## USER QUESTIONNAIRE

For Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must provide the following information (if available) to the environmental professional. As per the Brownfields Amendments, failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

Property Name:	ALVAREZ BLK 1 LT2 1CS 66049
Property Address:	1311 RESEARCH PARK DRIVE, LAWRENCE
Respondent Name:	MAZDA, LLC
Respondent Address:	4705 MCCORMICK ST, LAWRENCE, KS 66044
Response Date:	6/12/2024

### 1. Environmental Cleanup Liens

Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

Yes  No

### 2. Activity and Land Use Limitations

Are you aware of any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

Yes  No

### 3. Specialized Knowledge or Experience

Do you have any specialized knowledge or experiences related to the property, nearby properties, or are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Yes  No

### 4. Purchase Price vs. Fair Market Value

Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

Yes  No

### 5. Commonly Known or Reasonably Ascertainable Information

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases?

Yes  No

5a. Do you know the past uses of the property?

If yes, please specify Yes  No

5b. Do you know of specific chemicals that are present or were once were present at the property?

Yes  No

5c. Do you know of spills or other chemical releases that have taken place at the property?

Yes  No

5d. Do you know of any environmental cleanups that have taken place at the property?

Yes  No

**6. Obviousness of the Presence or Likely Presence of Contamination**

As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?

Yes  No



## USER QUESTIONNAIRE

For Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must provide the following information (if available) to the environmental professional. As per the Brownfields Amendments, failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

Property Name:	ALVAREZ BLK 1 LTA
Property Address:	5015 LEGENDS DRIVE, LAWRENCE, KS 66049
Respondent Name:	MAZDA, LLC
Respondent Address:	4705 MCCORMICK ST, LAWRENCE, KS 66049
Response Date:	6/12/2024

### 1. Environmental Cleanup Liens

Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

Yes  No

### 2. Activity and Land Use Limitations

Are you aware of any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

Yes  No

### 3. Specialized Knowledge or Experience

Do you have any specialized knowledge or experiences related to the property, nearby properties, or are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Yes  No

### 4. Purchase Price vs. Fair Market Value

Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

Yes  No

### 5. Commonly Known or Reasonably Ascertainable Information

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases?

Yes  No

5a. Do you know the past uses of the property?

If yes, please specify.  Yes  No

5b. Do you know of specific chemicals that are present or were once were present at the property?

Yes  No

5c. Do you know of spills or other chemical releases that have taken place at the property?

Yes  No

5d. Do you know of any environmental cleanups that have taken place at the property?

Yes  No

**6. Obviousness of the Presence or Likely Presence of Contamination**

As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?

Yes  No

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**Appendix F - Special Contractual Conditions Between User and Environmental Professional**

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# Phase I Environmental Site Assessment

The Phase I Environmental Site Assessment (Phase I ESA) prepared by GuideWire Consulting, LLC (GuideWire) was performed in accordance with the standards set forth in ASTM Designation E 1527-21 and the following Scope of Work Summary.

## Purpose

The purpose of this Phase I ESA is to identify existing or potential recognized environmental conditions or historical recognized environmental conditions (as defined by ASTM Designation E 1527-21) affecting the Property. The qualitative assessment will be accomplished by, and limited to, a review of presently and readily available information regarding past and current land use for indications of the manufacture, generation, use, storage and/or disposal of hazardous substances at the site, and site reconnaissance to observe existing site conditions. The Phase I ESA is typically requested by the Client for one or more of the following reasons:

- Assist in the evaluation of legal and financial liabilities associated with the property;
- Assist in the evaluation of the Property's overall development potential;
- Assist in the determination whether any immediate actions at the Property are necessary to comply with existing environmental laws and regulations; and
- Constitute partial or whole appropriate inquiry for purposes of CERCLA's innocent landowner defense.

## Scope Of Work

- Performing a site visit to identify any obvious visual signs of contamination. Access to all portions of the subject property, including roof(s), storage area(s), and basement(s), if applicable will be necessary. If access is unavailable to any portion of the subject property, ability to complete the scope of services described herein may be hindered);
- Investigation of past and present land use. (Should past use dictate, review of previous site usage to identify the possibility of on-site release or disposal of manufacturing or other waste);
- Investigation of adjacent land use and possible source(s) of contamination;
- Review of pertinent readily available documents and maps regarding geologic and hydrogeologic conditions for the site;
- Review and interpretation of available historical aerial photographs and other readily available historical documentation of the site and vicinity and provide representative copies of the photographs reviewed;
- Review of existing facility for potential PCB or PCB-contaminated electrical equipment (if applicable);
- Review county, state, and U.S. Environmental Protection Agency (EPA) lists of known or potential hazardous waste sites or landfills and sites currently under investigation for environmental violations;
- Conduct inquiries to applicable municipal, county, and state regulatory agencies for information regarding building or environmental permits, environmental violations or incidents and/or status of enforcement actions at the subject property;
- Conduct interviews, if appropriate, with subject property owner or manager and maintenance personnel, if available, to evaluate site history and operation and maintenance procedures; and
- Prepare a report of findings of the above investigation including color photographic documentation of the subject site and site maps. The report may include a recommendation to perform a Phase II Environmental Site Assessment to evaluate concerns disclosed during Phase I. Phase II typically includes, but is not limited to, additional sampling and analysis of water, soil, electrical equipment fluid and building materials. This scope does not include services associated with Phase II of an Environmental Site Assessment.

## Out of Scope Items / Additional Services

- When applicable and at the request of the Client, additional out-of scope items may be included in the Phase I Environmental Site Assessment. These additional out-of-scope items may include, but are not limited to: limited inspection for suspect asbestos-containing materials (ACM) or lead-based paints; placement, collection and analysis of radon test canisters; collection and analysis of soil or groundwater samples; identification and evaluation of site-specific wetland areas; and obtaining chain-of-title documentation.

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**Appendix G - Qualifications of Environmental Professional**

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## James E. Davis

Environmental Professional / Project Manager

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### **EDUCATION**

Bachelor of Arts, Environmental Studies, University of Kansas, 2010

### **LICENSES/ CERTIFICATIONS**

US EPA AHERA Certified Asbestos Inspector - Licensed in Missouri and Nebraska

### **EXPERIENCE**

Working in environmental due diligence industry since 2015

### **SUMMARY OF SKILLS AND QUALIFICATIONS**

- Performing Phase I Environmental Site Assessments, Phase II Subsurface Investigations, Property Condition Assessments, and other environmental/structural site assessment services
- Conducting on-site reconnaissance at properties including gasoline stations, dry cleaners, automotive repair garages, and industrial/manufacturing facilities
- Research of regulatory records from EPA as well as state environmental agencies across the contiguous United States
- Project and portfolio management for skilled nursing, assisted living, multi-family residential, retail, restaurant, and hospitality properties
- Writing and technical skills required for professional report preparation

### **SUMMARY OF COMPLETED PROJECTS**

- Personally written hundreds of ASTM compliant Phase I reports
- Personally performed the site reconnaissance and total report preparation for projects in over 25 states
- Completed additional due diligence requirements for HUD, SBA, and Fannie Mae/Freddie Mac

### **RECENT PROJECTS**

- Phase I and Phase II: Previously Unidentified USTs at Historical Filling Station Operating from 1920's-1960's – St. Cloud, MN
- Phase I and PCA Portfolio: Industrial Park – Warrensville Heights, OH
- Phase I Portfolio: Steel Fabrication Facilities – Northeast, KS
- Phase I and PCA Portfolio: Converted Downtown Office Buildings – Green Bay, WI
- HUD Asbestos Sampling: Assisted Living – Butler, MO

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# Michael H. Dever

President

Environmental Professional / Project Manager

**Education:** B.A. Environmental Studies/Geography, University of Kansas, 1986

**Licenses/Registrations:** CA EPA Registered Environmental Assessor I, No. 2676  
US EPA AHERA Asbestos Inspector  
Accredited Asbestos Inspector / Professional – Multiple States  
US EPA AHERA Asbestos Project Designer  
OSHA HAZWOPER  
NIOSH 582

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## Qualifications & Professional Experience

Michael H. Dever has worked as an environmental consultant since 1985. He has managed environmental site assessment programs for several Fortune 500 companies located throughout the country. Mr. Dever manages and performs Phase I Environmental Site Assessments as well as Phase II investigations and Phase III remediation projects. Michael also performs Property Condition Screens and Property Condition Assessments. Because of his vast environmental and real estate background, he has been called upon to complete projects in nearly all of the contiguous United States as well as Alaska, Hawaii and Puerto Rico.

Michael has built upon his environmental experience through the development of a program for integrating hand-held computer technology with site reconnaissance and property review. Working with computer programmers, Michael has developed an application of digital data collection and custom database development to allow users to provide accurate, efficient and easy-to-read documents. With his field experience and hands-on involvement in all aspects of the environmental industry, Michael has successfully implemented procedures and protocols for the performance and development of field assessments: protocols that further enhance the benefit of performing assessments of real property.

He has performed hazardous materials assessments on more than 30,000,000 square feet of educational, governmental, commercial and industrial facilities, and has designed and managed hazardous materials remediation projects for contaminants such as petroleum hydrocarbons, poly-chlorinated biphenyls (PCBs), asbestos and lead-based paint on more than 300 projects. He has managed facility-wide projects for a variety of commercial, industrial, and health-care organizations. One example is a project that involved assessments of 450 facilities in 8 states. Additionally, he has performed various types of assessment and remediation projects on properties for federal and state government agencies, corporations, property development firms and lending institutions.

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## **Appendix H - Additional Documentation**

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DGCAMA Property Record Card

Parcel ID: 023-068-33-0-30-01-012.04-0

Quick Ref: R10797

Tax Year: 2024

Run Date: 5/31/2024 9:43:27 AM

OWNER NAME AND MAILING ADDRESS

MAZDA LLC

4705 MCCORMICK ST  
LAWRENCE, KS 66047

PROPERTY SITUS ADDRESS

1311 RESEARCH PARK DR  
KS

LAND BASED CLASSIFICATION SYSTEM

Function: 9010 Farming / ranch Sfx: 0  
Activity: 8100 Farming, plowing, tilling, harv  
Ownership: 1100 Private-fee simple  
Site: 1000 Site in natural state

GENERAL PROPERTY INFORMATION

Prop Class: A Agricultural Use - A  
Living Units:  
Zoning: IBP  
Neighborhood: 070.0 070.0 - Wakarusa / Bob Bil  
Economic Adj. Factor:  
Map / Routing: / U15767DE  
Tax Unit Group: 000041-City of Lawrence - 041

TRACT DESCRIPTION

ALVABET BLK 1 LT 2 (REPLAT 2017)



R10797 06/01/2022

Image Date: 06/15/2022

PROPERTY FACTORS

Topography: Level - 1  
Utilities: All Underground  
Access: Paved Road  
Fronting: Residential Street  
Location: Neighborhood or Spot  
Parking Type: Off Street  
Parking Quantity: Adequate  
Parking Proximity: On Site  
Parking Covered:  
Parking Uncovered:

INSPECTION HISTORY

Date	Time	Code	Reason	Appraiser	Contact	Code
12/05/2023	12:00 PM	FR	FR	Ag Staff		
08/23/2023	7:40 AM	AU	DM	354	Tiraz Birdie	1
06/01/2022	9:50 AM	0	FM	356		

BUILDING PERMITS

Number	Amount	Type	Issue Date	Status	% Comp

2024 APPRAISED VALUE

Cls	Land	Building	Total
A	270		270
Total	270	0	270

2023 APPRAISED VALUE

Cls	Land	Building	Total
A	260		260
Total	260	0	260

MISCELLANEOUS IMPROVEMENT VALUES

Class	Value	Reason Code

NEW CONSTRUCTION

Class	Value	Reason Code

MARKET LAND INFORMATION

Method	Type	AC/SF	Eff FF	Depth	D-Fact	Inf1	Fact1	Inf2	Fact2	OVRD	Rsn	Cls	Model	Base Size	Base Val	Inc Val	Dec Val	Value Est
Total Market Land Value																		0

AGRICULTURAL LAND

COMMENTS

IMPROVEMENT COST SUMMARY

DGCAMA Property Record Card

Parcel ID: 023-068-33-0-30-01-012.04-0

Quick Ref: R10797

Tax Year: 2024

Run Date: 5/31/2024 9:43:27 AM

Ag Type	Ag Acres	Soil Unit	Irr Type	Well Depth	Acre Feet	Acre Ft/Ac	Adj Code	Govt Prog	Base Rate	Adj Rate	Ag Value
TG	2.50	7301				0.00			107	107	270

Other Improvement RCN:	0
Eco Adj:	100
Other Improvement Value:	0

**AG LAND SUMMARY**

Dry Land Acres:	0.00
Irrigated Acres:	0.00
Native Grass Acres:	0.00
Tame Grass Acres:	2.50
Total Ag Acres:	2.50
Total Ag Use Value:	270
Total Ag Mkt Value:	15,750



DGCAMA Property Record Card

Parcel ID: 023-068-33-0-30-01-002.02-0

Quick Ref: R10774

Tax Year: 2024

Run Date: 5/31/2024 9:42:19 AM

OWNER NAME AND MAILING ADDRESS

MAZDA LLC  
4705 MCCORMICK ST  
LAWRENCE, KS 66047

PROPERTY SITUS ADDRESS

5015 LEGENDS DR  
LAWRENCE, KS

LAND BASED CLASSIFICATION SYSTEM

Function: 9010 Farming / ranch Sfx:  
Activity: 8100 Farming, plowing, tilling, harv  
Ownership: 1100 Private-fee simple  
Site: 1000 Site in natural state

GENERAL PROPERTY INFORMATION

Prop Class: A Agricultural Use - A  
Living Units:  
Zoning: IBP  
Neighborhood: 070.0 070.0 - Wakarusa / Bob Bil  
Economic Adj. Factor:  
Map / Routing: / U15795  
Tax Unit Group: 000041-City of Lawrence - 041

TRACT DESCRIPTION

ALVABET BLK 1 LT 1 (REPLAT 2017)



R10774 06/01/2022

Image Date: 06/15/2022

PROPERTY FACTORS

Topography: Level - 1  
Utilities: None  
Access: Dirt Road  
Fronting: None  
Location: Neighborhood or Spot  
Parking Type: None  
Parking Quantity: None  
Parking Proximity: Far  
Parking Covered:  
Parking Uncovered:

INSPECTION HISTORY

Date	Time	Code	Reason	Appraiser	Contact	Code
12/05/2023	12:00 PM	FR	FR	Ag Staff		
08/23/2023	7:40 AM	AU	DM	354	Tiraz Birdie	1
06/01/2022	9:53 AM	0	FM	356		

BUILDING PERMITS

Number	Amount	Type	Issue Date	Status	% Comp
--------	--------	------	------------	--------	--------

2024 APPRAISED VALUE

Cls	Land	Building	Total
A	310		310
Total	310	0	310

2023 APPRAISED VALUE

Cls	Land	Building	Total
A	310		310
Total	310	0	310

MISCELLANEOUS IMPROVEMENT VALUES

Class	Value	Reason Code
-------	-------	-------------

NEW CONSTRUCTION

Class	Value	Reason Code
-------	-------	-------------

MARKET LAND INFORMATION

Method	Type	AC/SF	Eff FF	Depth	D-Fact	Inf1	Fact1	Inf2	Fact2	OVRD	Rsn	Cls	Model	Base Size	Base Val	Inc Val	Dec Val	Value Est
--------	------	-------	--------	-------	--------	------	-------	------	-------	------	-----	-----	-------	-----------	----------	---------	---------	-----------

Total Market Land Value 0

AGRICULTURAL LAND

COMMENTS

IMPROVEMENT COST SUMMARY

DGCAMA Property Record Card

Parcel ID: 023-068-33-0-30-01-002.02-0

Quick Ref: R10774

Tax Year: 2024

Run Date: 5/31/2024 9:42:19 AM

Ag Type	Ag Acres	Soil Unit	Irr Type	Well Depth	Acre Feet	Acre Ft/Ac	Adj Code	Govt Prog	Base Rate	Adj Rate	Ag Value
TG	1.40	7301				0.00			107	107	150
TG	1.50	7302				0.00			107	107	160

Other Improvement RCN:	0
Eco Adj:	100
Other Improvement Value:	0

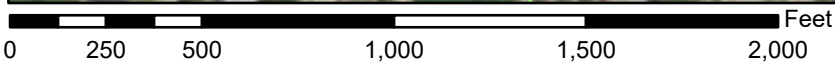
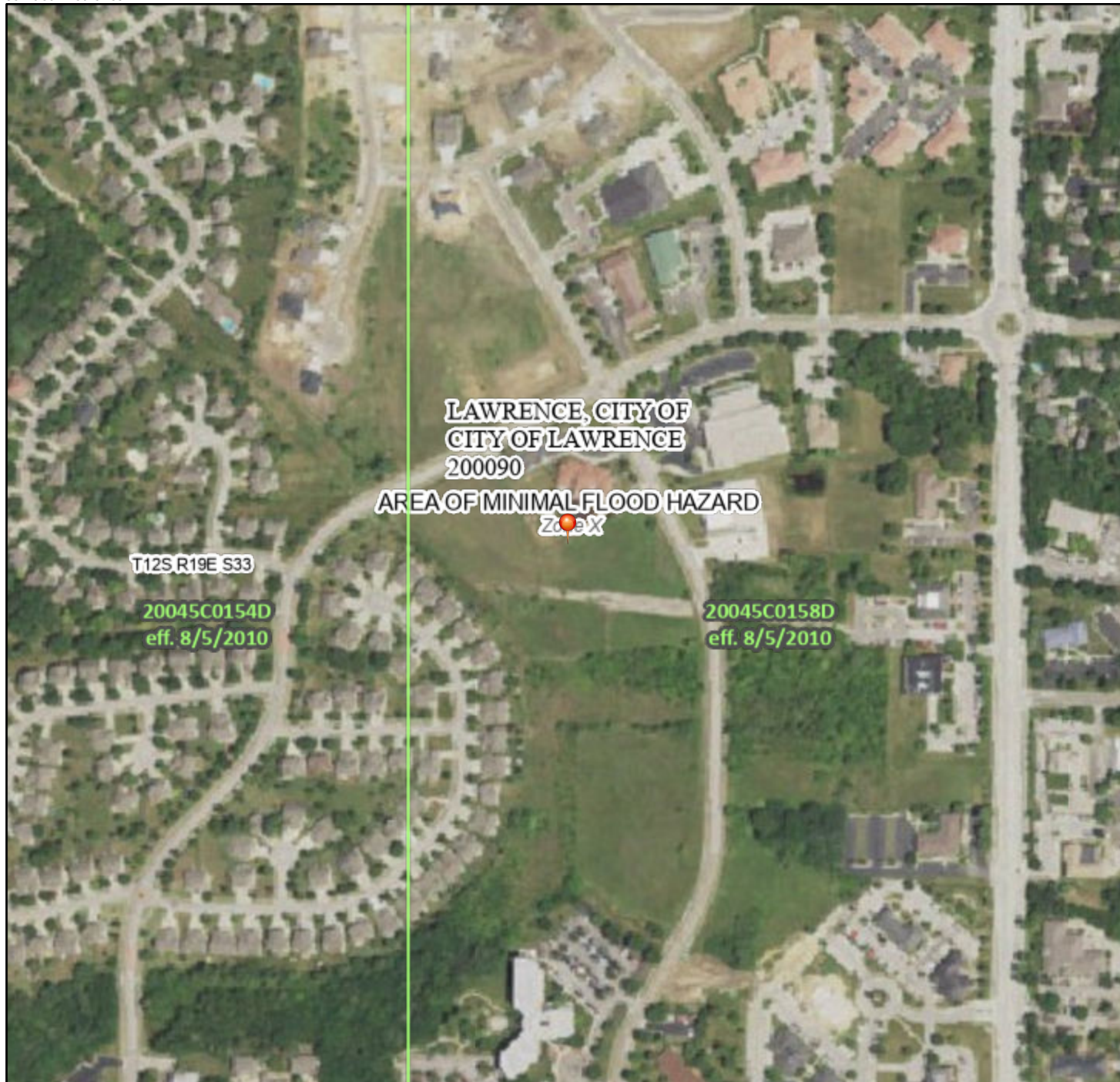
**AG LAND SUMMARY**

Dry Land Acres:	0.00
Irrigated Acres:	0.00
Native Grass Acres:	0.00
Tame Grass Acres:	2.90
Total Ag Acres:	2.90
Total Ag Use Value:	310
Total Ag Mkt Value:	18,270

# National Flood Hazard Layer FIRMMette



95°18'58"W 38°57'55"N



1:6,000

95°18'21"W 38°57'27"N

Basemap Imagery Source: USGS National Map 2023

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
MAP PANELS		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

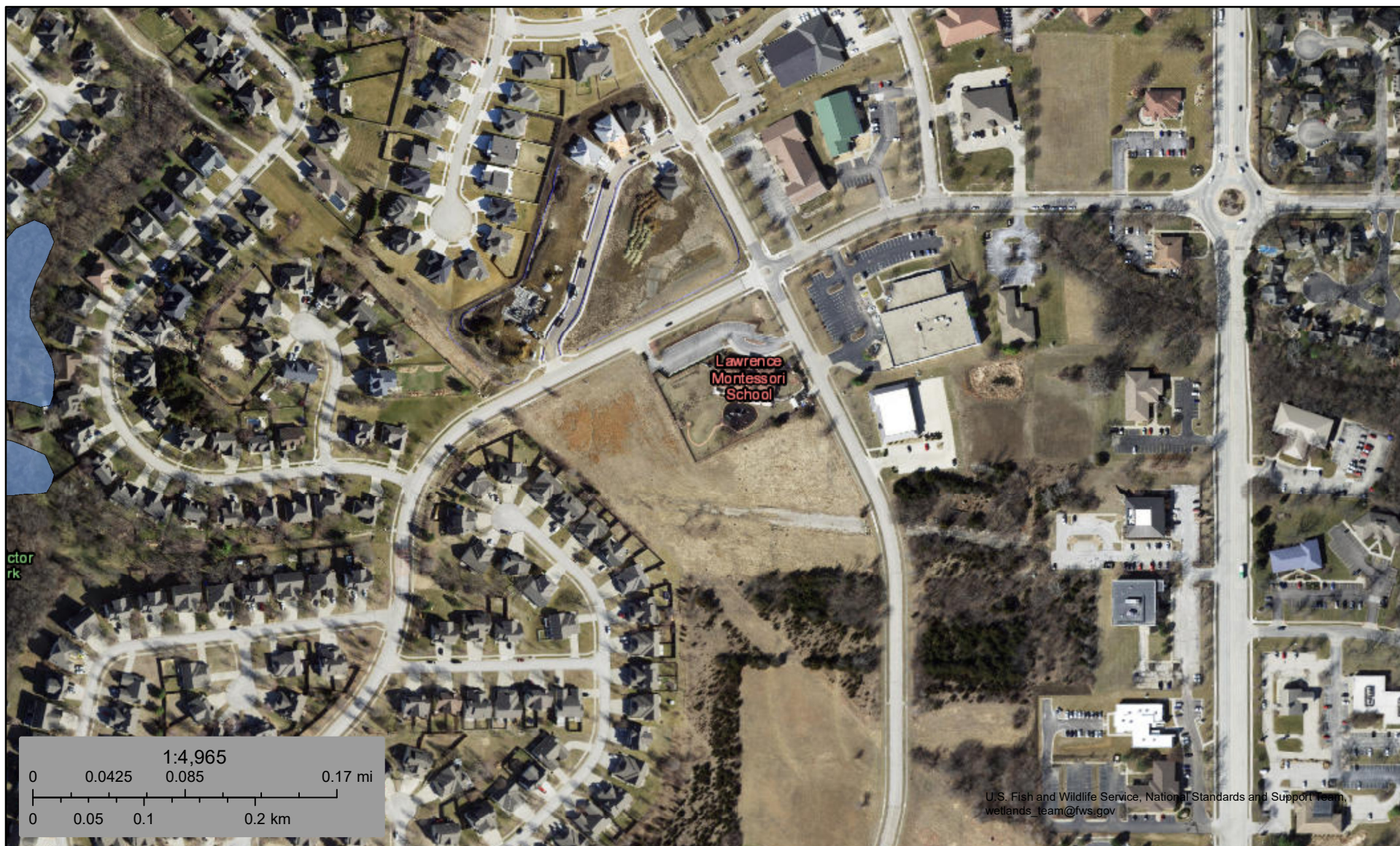


This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **6/27/2024 at 11:10 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.




This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.





June 28, 2024

**Wetlands**

- |   |                                |   |                                   |   |          |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland       |  | Lake     |
|  | Estuarine and Marine Wetland   |  | Freshwater Forested/Shrub Wetland |  | Other    |
|   |                                |  | Freshwater Pond                   |  | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

## Endangered Species Act (CEST and EA)

General requirements	ESA Legislation	Regulations
Section 7 of the Endangered Species Act (ESA) mandates that federal agencies ensure that actions that they authorize, fund, or carry out shall not jeopardize the continued existence of federally listed plants and animals or result in the adverse modification or destruction of designated critical habitat. Where their actions may affect resources protected by the ESA, agencies must consult with the Fish and Wildlife Service and/or the National Marine Fisheries Service (“FWS” and “NMFS” or “the Services”).	The Endangered Species Act of 1973 (16 U.S.C. 1531 <i>et seq.</i> ); particularly section 7 (16 USC 1536).	50 CFR Part 402
References		
<a href="https://www.hudexchange.info/environmental-review/endangered-species">https://www.hudexchange.info/environmental-review/endangered-species</a>		

### 1. Does the project involve any activities that have the potential to affect species or habitats?

Yes, the activities involved in the project have the potential to affect species and/or habitats. → *Continue to Question 2.*

### 2. Are federally listed species or designated critical habitats present in the action area?

Obtain a list of protected species from the Services. This information is available on the [FWS Website](#) or you may contact your [local FWS](#) and/or [NMFS](#) offices directly.

No, the project will have No Effect due to the absence of federally listed species and designated critical habitat.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination. Documentation may include letters from the Services, species lists from the Services’ websites, surveys or other documents and analysis showing that there are no species in the action area.*



## **Worksheet Summary**

### **Compliance Determination**

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

Upon researching the project site with the US Fish and Wildlife Service, we determined that based on the project type (multi-family residential development), and the lack of critical habitat and presence of endangered species on the project site, that none of the endangered species or their habitats listed on the IPaC document would be impacted.

US Fish and Wildlife Project Title: LDCHA Legends Housing  
Project Code: 2024-0106990

**Are formal compliance steps or mitigation required?**

Yes

No



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Kansas Ecological Services Field Office  
2609 Anderson Avenue  
Manhattan, KS 66502-2801  
Phone: (785) 539-3474 Fax: (785) 539-8567

In Reply Refer To:  
Project Code: 2024-0106990  
Project Name: LDCHA Legends Housing

06/20/2024 23:10:00 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

## **OFFICIAL SPECIES LIST**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Kansas Ecological Services Field Office**

2609 Anderson Avenue

Manhattan, KS 66502-2801

(785) 539-3474

## PROJECT SUMMARY

Project Code: 2024-0106990

Project Name: LDCHA Legends Housing

Project Type: Acquisition of Lands

Project Description: The Lawrence-Douglas County Housing Authority intends to use HUD Moving to Work Block Grant funds to purchase vacant adjoining parcels at 1311 Research Park Drive and 5015 Legends Drive in Lawrence, Kansas for the future development of affordable housing. The preliminary plan for 5015 Legends Drive is to build six 4-plexes and one 6-plex designated for seniors for a total of 30 units. On 1311 Research Park Drive, the preliminary plan is to build two duplexes and four 8-plexes for a total of 36 units.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.96125245,-95.31105251369206,14z>



Counties: Douglas County, Kansas



## ENDANGERED SPECIES ACT SPECIES

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

**MAMMALS**

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/10515">https://ecos.fws.gov/ecp/species/10515</a>	Proposed Endangered

**FISHES**

NAME	STATUS
Pallid Sturgeon <i>Scaphirhynchus albus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/7162">https://ecos.fws.gov/ecp/species/7162</a>	Endangered

**INSECTS**

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

**FLOWERING PLANTS**

NAME	STATUS
Mead's Milkweed <i>Asclepias meadii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8204">https://ecos.fws.gov/ecp/species/8204</a>	Threatened
Western Prairie Fringed Orchid <i>Platanthera praeclara</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1669">https://ecos.fws.gov/ecp/species/1669</a>	Threatened

**CRITICAL HABITATS**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

## **IPAC USER CONTACT INFORMATION**

Agency: Lawrence city  
Name: Caitlyn Dolar  
Address: 1 Riverfront Plaza  
Address Line 2: Ste 320  
City: Lawrence  
State: KS  
Zip: 66044  
Email: cdolar@lawrenceks.org  
Phone: 7858323113

## **LEAD AGENCY CONTACT INFORMATION**

Lead Agency: Department of Housing and Urban Development

# LDCHA LEGENDS HOUSING

## BIOLOGICAL ANALYSIS

Prepared using IPaC

Generated by Caitlyn Dolar (cdolar@lawrenceks.org)

June 27, 2024

The purpose of this document is to assess the effects of the proposed project and determine whether the project may affect any federally threatened, endangered, proposed, or candidate species. If appropriate for the project, this document may be used as a biological assessment (BA), as it is prepared in accordance with legal requirements set forth under [Section 7 of the Endangered Species Act \(16 U.S.C. 1536 \(c\)\)](#).

In this document, any data provided by U.S. Fish and Wildlife Service is based on data as of June 26, 2024.

Prepared using IPaC version 6.111.0-rc1

# LDCHA LEGENDS HOUSING BIOLOGICAL ASSESSMENT

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# 1 DESCRIPTION OF THE ACTION

## 1.1 PROJECT NAME

LDCHA Legends Housing

## 1.2 EXECUTIVE SUMMARY

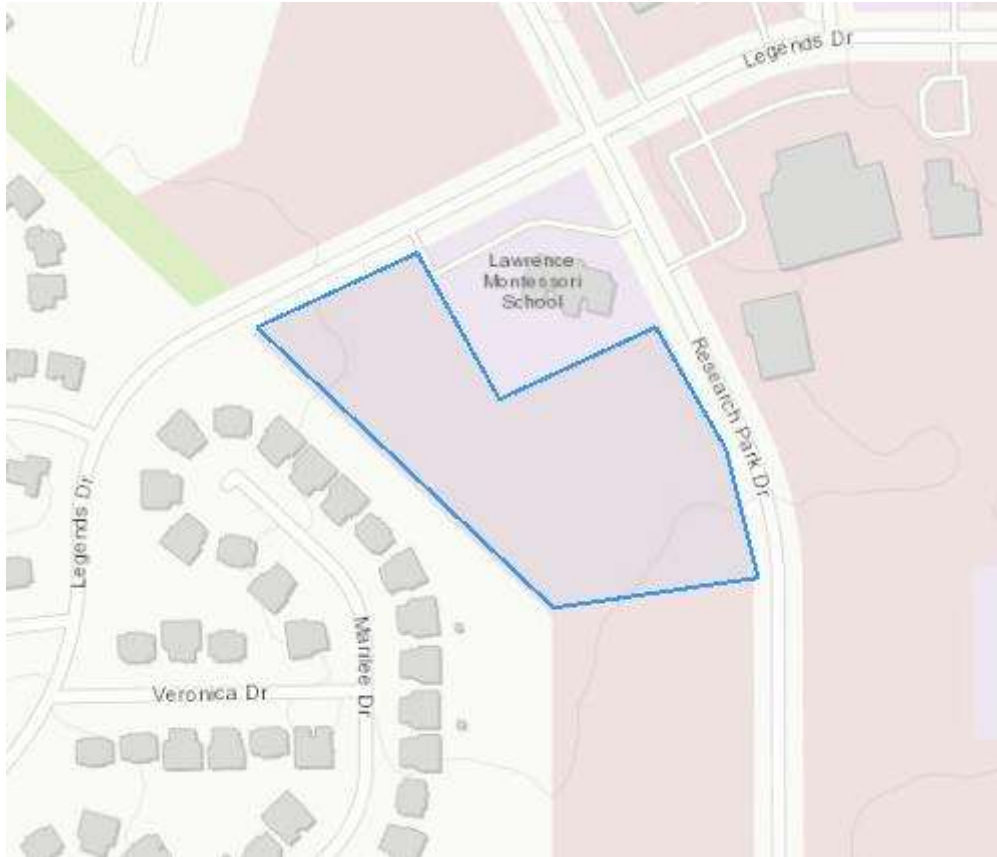
The Lawrence-Douglas County Housing Authority intends to use HUD funds to purchase vacant land for future development of affordable housing on adjoining parcels at 5015 Legends Drive and 1311 Research Park Drive. The preliminary plan is to build six 4-plexes and one 6-plex designated for seniors on 5015 Legends Drive, for a total of 30 units. On 1311 Research Park Drive, the preliminary plan is to build two duplexes and four 8-plexes for a total of 36 units. The land is currently used for agricultural growing and baling of hay, and there will be no immediate change. The approximate date that construction will begin is still unknown.

## 1.3 EFFECT DETERMINATION SUMMARY

SPECIES (COMMON NAME)	SCIENTIFIC NAME	LISTING STATUS	PRESENT IN ACTION AREA	EFFECT DETERMINATION
<a href="#">Mead's Milkweed</a>	Asclepias meadii	Threatened	No	NE
<a href="#">Monarch Butterfly</a>	Danaus plexippus	Candidate	Excluded from analysis	Excluded from analysis
<a href="#">Northern Long-eared Bat</a>	Myotis septentrionalis	Endangered	No	NE
<a href="#">Pallid Sturgeon</a>	Scaphirhynchus albus	Endangered	No	NE
<a href="#">Tricolored Bat</a>	Perimyotis subflavus	Proposed Endangered	Excluded from analysis	Excluded from analysis
<a href="#">Western Prairie Fringed Orchid</a>	Platanthera praeclara	Threatened	No	NE

## 1.4 PROJECT DESCRIPTION

### 1.4.1 LOCATION



#### LOCATION

Douglas County, Kansas

### 1.4.2 DESCRIPTION OF PROJECT HABITAT

The Lawrence-Douglas County Housing Authority intends to use HUD funds to purchase vacant land for future development of affordable housing on adjoining parcels at 5015 Legends Drive and 1311 Research Park Drive. The preliminary plan is to build six 4-plexes and one 6-plex designated for seniors on 5015 Legends Drive, for a total of 30 units. On 1311 Research Park Drive, the preliminary plan is to build two duplexes and four 8-plexes for a total of 36 units. The land is currently used for agricultural growing and baling of hay, and there will be no immediate change. There is a 30% Utility Easement and Conservation Easement which will remain open space.

#### RELEVANT DOCUMENTATION

- [Site map](#)

### **1.4.3 PROJECT PROPONENT INFORMATION**

*Provide information regarding who is proposing to conduct the project, and their contact information. Please provide details on whether there is a Federal nexus.*

#### **REQUESTING AGENCY**

**FULL NAME**

Caitlyn Dolar

**STREET ADDRESS**

1 Riverfront Plaza

Ste 320

**CITY**

Lawrence

**STATE**

KS

**ZIP**

66044

**PHONE NUMBER**

7858323113

**E-MAIL ADDRESS**

cdolar@lawrenceks.org

#### **LEAD AGENCY**

Department of Housing and Urban Development

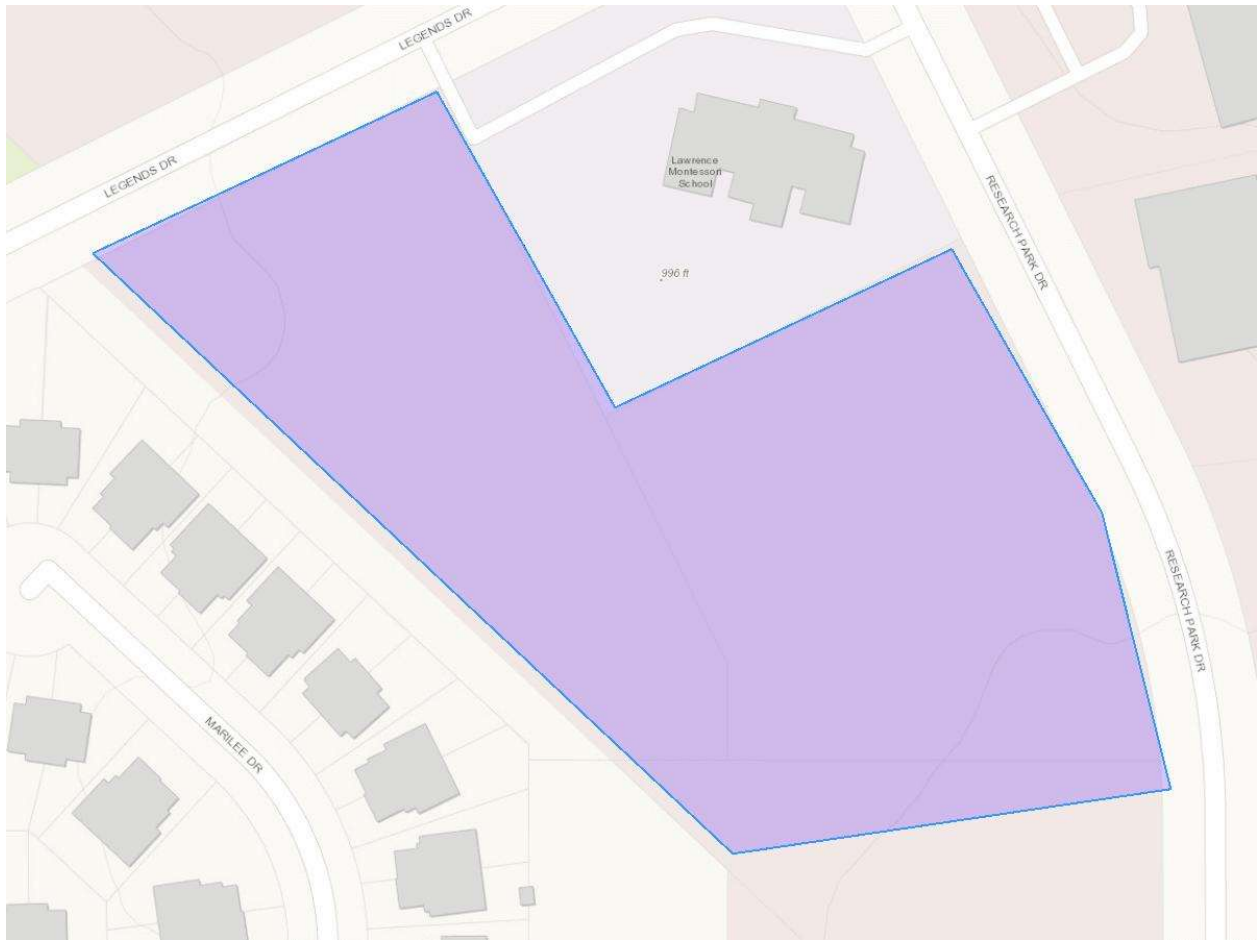
### **1.4.4 PROJECT PURPOSE**

The Lawrence-Douglas County Housing Authority intends to use HUD funds to purchase vacant land for future development of affordable housing on adjoining parcels at 5015 Legends Drive and 1311 Research Park Drive. The preliminary plan is to build six 4-plexes and one 6-plex designated for seniors on 5015 Legends Drive, for a total of 30 units. On 1311 Research Park Drive, the preliminary plan is to build two duplexes and four 8-plexes for a total of 36 units. The land is currently used for agricultural growing and baling of hay, and there will be no immediate change. There is a 30% Utility Easement and Conservation Easement which will remain open space.



### **1.4.5 PROJECT TYPE AND DECONSTRUCTION**

This project is a residential, commercial, industrial development project.

### 1.4.5.1 PROJECT MAP



#### LEGEND

-  Project footprint
-  Multi-family Construction/Development: Construct building, building (structure)



#### **1.4.5.2 BUILDING**

##### **STRUCTURE COMPLETION DATE**

September 30, 2028

##### **REMOVAL/DECOMMISSION DATE (IF APPLICABLE)**

*Not applicable*

##### **STRESSORS**

This activity is not expected to have any impact on the environment.

##### **DESCRIPTION**

The Lawrence-Douglas County Housing Authority intends to use HUD funds to purchase vacant land for future development of affordable housing on adjoining parcels at 5015 Legends Drive and 1311 Research Park Drive. The preliminary plan is to build six 4-plexes and one 6-plex designated for seniors on 5015 Legends Drive, for a total of 30 units. On 1311 Research Park Drive, the preliminary plan is to build two duplexes and four 8-plexes for a total of 36 units. The land is currently used for agricultural growing and baling of hay, and there will be no immediate change. The approximate date that construction will begin is still unknown.

#### **1.4.5.3 CONSTRUCT BUILDING**

##### **ACTIVITY START DATE**

September 30, 2028

##### **ACTIVITY END DATE**

*Unspecified*

##### **STRESSORS**

This activity is not expected to have any impact on the environment.

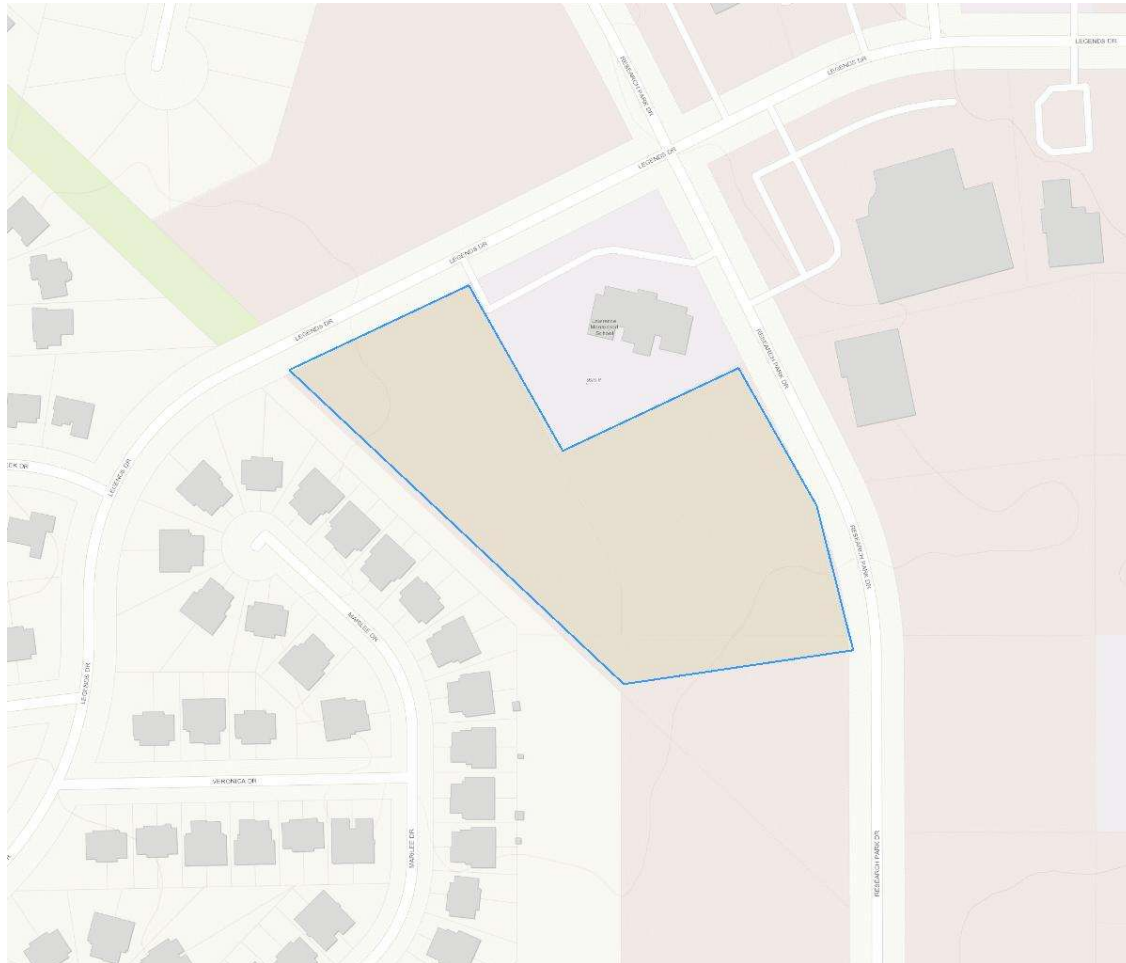
##### **DESCRIPTION**

The Lawrence-Douglas County Housing Authority intends to use HUD funds to purchase vacant land for future development of affordable housing on adjoining parcels at 5015 Legends Drive and 1311 Research Park Drive. The preliminary plan is to build six 4-plexes and one 6-plex designated for seniors on 5015 Legends Drive, for a total of 30 units. On 1311 Research Park Drive, the preliminary plan is to build two duplexes and four 8-plexes for a total of 36 units. The land is currently used for agricultural growing and baling of hay, and there will be no immediate change. The approximate date that construction will begin is still unknown.



### 1.4.6 ANTICIPATED ENVIRONMENTAL STRESSORS

Describe the anticipated effects of your proposed project on the aspects of the land, air and water that will occur due to the activities above. These should be based on the activity deconstructions done in the previous section and will be used to inform the action area.

### 1.5 ACTION AREA



#### LEGEND

-  Project footprint
-  Stressor location

## **1.6 CONSERVATION MEASURES**

*Describe any proposed measures being implemented as part of the project that are designed to reduce the impacts to the environment and their resulting effects to listed species. To avoid extra verbiage, don't list measures that have no relevance to the species being analyzed.*

*No conservation measures have been selected for this project.*

## **1.7 PRIOR CONSULTATION HISTORY**

N/A

## **1.8 OTHER AGENCY PARTNERS AND INTERESTED PARTIES**

N/A

## **1.9 OTHER REPORTS AND HELPFUL INFORMATION**

N/A

## **2 SPECIES EFFECTS ANALYSIS**

*This section describes, species by species, the effects of the proposed action on listed, proposed, and candidate species, and the habitat on which they depend. In this document, effects are broken down as direct interactions (something happening directly to the species) or indirect interactions (something happening to the environment on which a species depends that could then result in effects to the species).*

*These interactions encompass effects that occur both during project construction and those which could be ongoing after the project is finished. All effects, however, should be considered, including effects from direct and indirect interactions and cumulative effects.*

### **2.1 MEAD'S MILKWEED**

*This species has been excluded from analysis in this environmental review document.*

#### **RELEVANT DOCUMENTATION**

- [Douglas-County-Inventory-Report-Final-15Feb2016](#)

#### **JUSTIFICATION FOR EXCLUSION**

Mead's milkweed is a rare plant of the tallgrass prairie that currently is found primarily in eastern Kansas and Missouri. Most populations are very small, but the University of Kansas Field Station manages two prairies (Rockefeller Prairie, Anderson County Prairie Reserve) that have some of the largest populations in Kansas. Most populations occur on dry-mesic to mesic tallgrass prairies that are hayed annually, but a few sites are known to be grazed lightly during the winter. Plants grow most frequently on the middle and upper slopes of ridges and hills that have shallow, well-drained, limestone or (infrequently) sandstone soils. These lots are not on a tallgrass prairie or on a slope/ridge of a hill.

### **2.2 MONARCH BUTTERFLY**

*This species has been excluded from analysis in this environmental review document.*

#### **JUSTIFICATION FOR EXCLUSION**

The monarch butterfly's habitat is open fields and meadows with milkweed during the spring and summer. This project is not in a meadow or open field containing milkweed. There will be no work on this project that impacts monarch habitats.

## **2.3 NORTHERN LONG-EARED BAT**

*This species has been excluded from analysis in this environmental review document.*

### **JUSTIFICATION FOR EXCLUSION**

The project area is open field used for agriculture and contains no trees that could serve as habitat for the Northern Long-eared Bat.

## **2.4 PALLID STURGEON**

*This species has been excluded from analysis in this environmental review document.*

### **JUSTIFICATION FOR EXCLUSION**

The project site is not near a waterway.

## **2.5 TRICOLORED BAT**

*This species has been excluded from analysis in this environmental review document.*

### **JUSTIFICATION FOR EXCLUSION**

The project area is open field used for agriculture and contains no trees that could serve as habitat for the Tricolored Bat.

## **2.6 WESTERN PRAIRIE FRINGED ORCHID**

*This species has been excluded from analysis in this environmental review document.*

### **RELEVANT DOCUMENTATION**

- [Douglas-County-Inventory-Report-Final-15Feb2016](#)

### **JUSTIFICATION FOR EXCLUSION**

The western prairie fringed orchid is most often found in mesic to wet unplowed tallgrass prairies and meadows. In Kansas, western prairie fringed orchids typically inhabit moderate to steep slopes and swales of tallgrass prairie on glacial drift or on level to hilly, unglaciated upland prairies covered with a thin, discontinuous mantle of loess. The lot is not associated with a moderate to steep slope or swale of tallgrass prairie on glacial drift or on level to hilly, unglaciated upland prairies covered with a thin, discontinuous mantle of loess.



### **3 CRITICAL HABITAT EFFECTS ANALYSIS**

*No critical habitats intersect with the project action area.*

## **4 SUMMARY DISCUSSION AND CONCLUSION**

### **4.1 SUMMARY DISCUSSION**

The Lawrence-Douglas County Housing Authority intends to use HUD funds to purchase vacant land for future development of affordable housing on adjoining parcels at 5015 Legends Drive and 1311 Research Park Drive. The preliminary plan is to build six 4-plexes and one 6-plex designated for seniors on 5015 Legends Drive, for a total of 30 units. On 1311 Research Park Drive, the preliminary plan is to build two duplexes and four 8-plexes for a total of 36 units. The land is currently used for agricultural growing and baling of hay, and there will be no immediate change. The approximate date that construction will begin is still unknown. There are no critical habitats in the action area and all species have been excluded from this review.

### **4.2 CONCLUSION**

The proposed project consists of multi-family residential development on vacant land currently used for agriculture. There are no critical habitats in the action area and all species have been excluded from this review.

ranges; however, it is likely that WNS spread throughout their entire ranges. For this reason, USFWS believes that WNS has significantly reduced the redundancy and resiliency of both the NLEB and Indiana bat.

Although significant NLEB population declines have only been documented due to the spread of WNS, other sources of mortality could further diminish the species' ability to persist as it experiences ongoing dramatic declines. Specifically, declines due to WNS have significantly reduced the number and size of NLEB populations in some areas of its range. This has reduced these populations to the extent that they may be increasingly vulnerable to other stressors that they may have previously had the ability to withstand. These impacts could potentially be seen on two levels. First, individual NLEB sickened or struggling with infection by WNS may be less able to survive other stressors. Second, NLEB populations impacted by WNS, with smaller numbers and reduced fitness among individuals, may be less able to recover making them more prone to extirpation. The status and potential for these impacts will vary across the range of the species.

The reasons for listing the Indiana bat were summarized in the original Recovery Plan (USFWS 1983) including: declines in populations at major hibernacula despite efforts to implement cave protection measures, the threat of mine collapse, and the potential loss of the largest known hibernating population at Pilot Knob Mine, Missouri. Additionally, other hibernacula throughout the species range were not adequately protected. Although several known human-related factors have caused declines in the past, they may not solely be responsible for recent declines. Documented causes of Indiana bat population decline include: 1) human disturbance of hibernating bats; 2) improper cave gates and structures rendering them unavailable or unsuitable as hibernacula; and 3) natural hazards like cave flooding and freezing. Suspected causes of Indiana bat declines include: 1) changes in the microclimate of caves and mines; 2) dramatic changes in land use and forest composition; and 3) chemical contamination from pesticides and agricultural chemicals. In addition to WNS, current threats from changes in land use and forest composition include forest clearing within the summer range, woodlot management and wetland drainage, and other land management activities that affect the structure and abundance of forest resources.

Destruction and degradation of the bat's summer habitat (i.e., forests) is identified as a longstanding and ongoing threat to the species (USFWS 2009). The U.S. Forest Service (USFS) (2014) summarized U.S. forest trends and found a decline from 1850 to the early 1900s and a general leveling off since that time; therefore, conversion from forest to other land cover types has been fairly stable with conversion to forest (cropland reversion/plantings). However, between 2001-2006 there has been a net loss of 1.2 percent of forest across the U.S. with most losses in the southeast and west and a net loss of 4.3 percent of interior forest (a forest parcel embedded in a 40-acre landscape that has at least 90 percent forest land cover) leading to increased forest fragmentation and smaller remaining forest patches (USFS 2014). Not all forest is suitable for the bats and there is interest in locating the bats in the summer to ensure conservation of Indiana bat and/or NLEB habitat.

There is growing concern that bats, including both Indiana bat and NLEB (and other bat species) may be threatened by the recent surge in construction and operation of wind turbines across the species' range. Mortality of Indiana bats and NLEBs has been documented at multiple operating wind turbines/farms. The USFWS is now working with wind farm operators to avoid and minimize incidental take of bats and assess the magnitude of the threat.

Impacts to forest within bats' range is one of the most important stressors attributable to transportation projects. Depending on their characteristics and location, forested areas can function as summer maternity habitat, staging and swarming habitat, migration or foraging habitat, or sometimes, combinations of more than one habitat type. Transportation projects frequently require tree clearing. Tree clearing can have a variety of impacts on the bat depending on the quality, amount, and location of the lost habitat, and the time of year of clearing. These impacts could directly impact bats during the active season, or indirectly via habitat loss during the hibernation season.

### **4.3 Species Status**

#### **4.3.1 Northern Long-Eared Bat**

The NLEB ranges across much of the eastern and north central United States, and all Canadian provinces west to the southern Yukon Territory and eastern British Columbia (Nagorsen and Brigham 1993; Caceres and Pybus 1997; Environment Yukon 2011). In the United States, the species' range reaches from Maine to Montana, south to eastern Kansas, eastern Oklahoma, Arkansas, and east through the Gulf States to the Atlantic Coast (Whitaker and Hamilton 1998; Caceres and Barclay 2000; Amelon and Burhans 2006). The species' range includes the following 37 States (plus the District of Columbia): Alabama, Arkansas, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Vermont, Virginia, West Virginia, Wisconsin, and Wyoming. Historically, the species has been most frequently observed in the northeastern United States and in the Canadian Provinces, Quebec and Ontario, with sightings increasing during swarming and hibernation (Caceres and Barclay 2000). However, throughout the majority of the species' range it is patchily distributed, and was historically less common in the southern and western portions of the range than in the northern portion of the range (Amelon and Burhans 2006).

Although they are typically found in low numbers in inconspicuous roosts, most records of NLEBs are from winter hibernacula surveys (Caceres and Pybus 1997). More than 780 hibernacula have been identified throughout the species' range in the United States, although many hibernacula contain only a few (1 to 3) individuals (Whitaker and Hamilton 1998). Known hibernacula (sites with one or more winter records of NLEB) include: Alabama (2), Arkansas (41), Connecticut (8), Delaware (2), Georgia (7), Illinois (21), Indiana (25), Kentucky (119), Maine (3), Maryland (8), Massachusetts (7), Michigan (103), Minnesota (11), Missouri (more than 269), Nebraska (2), New Hampshire (11), New Jersey (7), New York (90), North Carolina (22), Oklahoma (9), Ohio (7), Pennsylvania (112), South Carolina (2), South Dakota (21), Tennessee (58), Vermont (16), Virginia (8), West Virginia (104), and Wisconsin (67). NLEB have been documented in hibernacula in 29 of the 37 States in the species' range. Other States within the species' range have no known hibernacula (due to no suitable hibernacula present, lack of survey effort, or existence of unknown retreats).

The current range and distribution of NLEB must be described and understood within the context of the impacts of WNS. Prior to the onset of WNS, the best available information on NLEBs came primarily from surveys (primarily focused on Indiana bat or other bat species) and some targeted research projects. In these efforts, NLEBs were frequently encountered and considered the most common myotis bat in many areas. Overall, the species was considered to be widespread and abundant throughout its historic range (Caceres and Barclay 2000).

WNS has been particularly devastating for NLEBs in the northeast, where the species was believed to be the most abundant. There are data supporting substantial declines in NLEB populations in portions of the Midwest due to WNS. In addition, WNS has been documented at more than 100 NLEB hibernacula in the southeast, with apparent population declines at most sites. WNS has not been found in any of the western States to date and the species is considered rarer in the western extremes of its range. Further declines are expected as the disease continues to spread across the species' range.

#### **4.3.2 Indiana Bat**

The current range of the Indiana bat includes much of the eastern half of the United States, from Oklahoma, Iowa, and Wisconsin east to Vermont, and south to northwestern Florida. The species has disappeared from, or greatly declined, in most of its former range in the northeastern United States due to the impacts of WNS. The current revised recovery plan (USFWS 2007) delineates recovery units based on population discreteness, differences in population trends, and broad level differences in land use and macrohabitats. There are currently four proposed recovery units for the Indiana bat: Ozark-Central, Midwest, Appalachian Mountains, and Northeast.

Historically, the Indiana bat had a winter range restricted to areas of cavernous limestone in the karst regions of the east-central United States. Hibernacula are divided into priority groups that have been redefined in the USFWS's Draft Recovery Plan (USFWS 2007):



## Northern Long-Eared Bat

### *Myotis septentrionalis*

The northern long-eared bat is federally listed as a threatened species under the Endangered Species Act. **Endangered** species are animals and plants that are in danger of becoming extinct. **Threatened** species are animals and plants that are likely to become endangered in the foreseeable future. Identifying, protecting and restoring endangered and threatened species is the primary objective of the U.S. Fish and Wildlife Service's Endangered Species Program.

#### What is the northern long-eared bat?

**Appearance:** The northern long-eared bat is a medium-sized bat with a body length of 3 to 3.7 inches and a wingspan of 9 to 10 inches. Their fur color can be medium to dark brown on the back and tawny to pale-brown on the underside. As its name suggests, this bat is distinguished by its long ears, particularly as compared to other bats in its genus, *Myotis*.

**Winter Habitat:** Northern long-eared bats spend winter hibernating in caves and mines, called hibernacula. They use areas in various sized caves or mines with constant temperatures, high humidity, and no air currents. Within hibernacula, surveyors find them hibernating most often in small crevices or cracks, often with only the nose and ears visible.

**Summer Habitat:** During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). Males and non-reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. They rarely roost in human structures like barns and sheds.

**Reproduction:** Breeding begins in late summer or early fall when males begin to swarm near hibernacula. After



*This northern long-eared bat, observed during an Illinois mine survey, shows visible symptoms of white-nose syndrome.*

copulation, females store sperm during hibernation until spring. In spring, females emerge from their hibernacula, ovulate and the stored sperm fertilizes an egg. This strategy is called delayed fertilization.

After fertilization, pregnant bats migrate to summer areas where they roost in small colonies and give birth to a single pup. Maternity colonies of females and young generally have 30 to 60 bats at the beginning of the summer, although larger maternity colonies have also been observed. Numbers of bats in roosts typically decrease from the time of pregnancy to post-lactation. Most bats within a maternity colony give birth around the same time, which may occur from late May or early June to late July, depending where the colony is located within the species' range. Young bats start flying by 18 to 21 days after birth. Maximum lifespan for the northern long-eared bat is estimated to be up to 18.5 years.

**Feeding Habits:** Like most bats, northern long-eared bats emerge at dusk to feed. They primarily fly through the

understory of forested areas feeding on moths, flies, leafhoppers, caddisflies, and beetles, which they catch while in flight using echolocation or by gleaning motionless insects from vegetation.

**Range:** The northern long-eared bat's range includes much of the eastern and north central United States, and all Canadian provinces from the Atlantic Ocean west to the southern Yukon Territory and eastern British Columbia. The species' range includes 37 States and the District of Columbia: Alabama, Arkansas, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Vermont, Virginia, West Virginia, Wisconsin, and Wyoming.

#### Why is the northern long-eared bat in trouble?

**White-nose Syndrome:** No other threat is as severe and immediate as



this. If this disease had not emerged, it is unlikely that northern long-eared bat populations would be experiencing such dramatic declines. Since symptoms were first observed in New York in 2006, white-nose syndrome has spread rapidly from the Northeast to the Midwest and Southeast; an area that includes the core of the northern long-eared bat's range, where it was most common before this disease. Numbers of northern long-eared bats (from hibernacula counts) have declined by up to 99 percent in the Northeast. Although there is uncertainty about the rate that white-nose syndrome will spread throughout the species' range, it is expected to continue to spread throughout the United States in the foreseeable future.

#### **Other Sources of Mortality:**

Although no significant population declines have been observed due to the sources of mortality listed below, they may now be important factors affecting this bat's viability until we find ways to address WNS.

**Impacts to Hibernacula:** Gates or other structures intended to exclude people from caves and mines not only restrict bat flight and movement, but also change airflow and microclimates. A change of even a few degrees can make a cave unsuitable for hibernating bats. Also, cave-dwelling bats are vulnerable to human disturbance while hibernating. Arousal during hibernation causes bats to use up their energy stores, which may lead to bats not surviving through winter.

#### **Loss or Degradation of Summer**

**Habitat:** Highway construction, commercial development, surface mining, and wind facility construction permanently remove habitat and are activities prevalent in many areas of this bat's range. Many forest management activities benefit bats by keeping areas forested rather than converted to other uses. But, depending on type and timing, some forest management activities can cause mortality and temporarily remove or degrade roosting and foraging habitat.

**Wind Farm Operation:** Wind turbines kill bats, and, depending on the species, in very large numbers. Mortality from windmills has been documented for northern long-eared bats, although a

small number have been found to date. However, there are many wind projects within a large portion of the bat's range and many more are planned.

#### **What Is Being Done to Help the Northern Long-Eared Bat?**

**Disease Management:** Actions have been taken to try to reduce or slow the spread of white-nose syndrome through human transmission of the fungus into caves (e.g. cave and mine closures and advisories; national decontamination protocols). A national plan was prepared by the Service and other state and federal agencies that details actions needed to investigate and manage white-nose syndrome. Many state and federal agencies, universities and non-governmental organizations are researching this disease to try to control its spread and address its affect. See [www.whitenosesyndrome.org/](http://www.whitenosesyndrome.org/) for more.

#### **Addressing Wind Turbine**

**Mortality:** The Service and others are working to minimize bat mortality from wind turbines on several fronts. We fund and conduct research to determine why bats are susceptible to turbines, how to operate turbines to minimize mortality and where important bird and bat migration routes are located. The Service, state natural resource agencies, and the wind energy industry are developing a Midwest Wind Energy Habitat Conservation Plan, which will provide wind farms a mechanism to continue operating legally while minimizing and mitigating listed bat mortality.

**Listing:** The northern long-eared bat is listed as a threatened species under the federal Endangered Species Act. Listing a species affords it the protections of the Act and also increases the priority of the species for funds, grants, and recovery opportunities.

**Hibernacula Protection:** Many federal and state natural resource agencies and conservation organizations have protected caves and mines that are important hibernacula for cave-dwelling bats.

#### **What Can I Do?**

##### ***Do Not Disturb Hibernating Bats:***

To protect bats and their habitats, comply with all cave and mine closures, advisories, and regulations. In areas without a cave and mine closure policy, follow approved decontamination protocols (see <http://whitenosesyndrome.org/topics/decontamination>). Under no circumstances should clothing, footwear, or equipment that was used in a white-nose syndrome affected state or region be used in unaffected states or regions.

##### ***Leave Dead and Dying Trees***

**Standing:** Like most eastern bats, the northern long-eared bat roosts in trees during summer. Where possible and not a safety hazard, leave dead or dying trees on your property. Northern long-eared bats and many other animals use these trees.

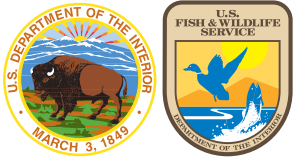
**Install a Bat Box:** Dead and dying trees are usually not left standing, so trees suitable for roosting may be in short supply and bat boxes may provide additional roost sites. Bat boxes are especially needed from April to August when females look for safe and quiet places to give birth and raise their pups.

**Support Sustainability:** Support efforts in your community, county and state to ensure that sustainability is a development goal. Only through sustainable living will we provide rare and declining species, like the northern long-eared bat, the habitat and resources they need to survive alongside us.

**Spread the Word:** Understanding the important ecological role that bats play is a key to conserving the northern long-eared and other bats. Helping people learn more about the northern long-eared bat and other endangered species can lead to more effective recovery efforts. For more information, visit [www.fws.gov/midwest/nleb](http://www.fws.gov/midwest/nleb) and [www.whitenosesyndrome.org](http://www.whitenosesyndrome.org)

**Join and Volunteer:** Join a conservation group; many have local chapters. Volunteer at a local nature center, zoo, or national wildlife refuge. Many state natural resource agencies benefit greatly from citizen involvement in monitoring wildlife. Check your state agency websites and get involved in citizen science efforts in your area.





## Threatened and Endangered Species

### Mead's Milkweed (*Asclepias meadii*)

Mead's milkweed is a federally threatened species. Threatened species are animals and plants that are likely to become endangered in the foreseeable future.

Endangered species are animals and plants that are in danger of becoming extinct. Identifying, protecting, and restoring endangered and threatened species is the primary objective of the U.S. Fish and Wildlife Service's endangered species program.



*Mead's milkweed was extirpated from northern Illinois, Indiana, and Wisconsin.*

#### What is Mead's milkweed?

Mead's milkweed is a long-lived, tallgrass prairie herb belonging to the milkweed family (*Asclepiadaceae*).



*Photo by Mike Redmer*

**Appearance** – Mead's milkweed has a single slender unbranched stalk, 8 to 16 inches high, without hairs but with a whitish waxy covering. The hairless leaves are opposite, broadly ovate, 2 to 3 inches long, 3/8 to 2 inches wide, also with a whitish waxy covering. A solitary umbel (an umbrella-like cluster of flowers) at the top of the stalk has 6 to 15 greenish, cream-colored flowers.

**Habitat Requirements** – This milkweed requires moderately wet (mesic) to moderately dry (dry mesic) upland tallgrass prairie or glade/barren habitat characterized by vegetation adapted for drought and fire. It persists in stable late-successional prairie.

**Life History** – Mead's milkweed is a long-lived perennial herb. Studies suggest that it may take 15 years or more to mature from a germinating seed to a flowering plant. After maturing, it can persist indefinitely.

**Reproduction** – Mead's milkweed flowers as early as late May in the south through mid to late June in the north. It is pollinated by small bumblebees and miner bees. Young green fruit pods appear by late June and reach their maximum length of 1.5 to 4 inches by late August or early September. The hairy seeds within these pods mature by mid-October. Mead's milkweed also spreads vegetatively through underground stems called rhizomes, which strike new roots and stems from their nodes.

## What is Mead's milkweed? (cont'd.)

**Distribution and Range** – This milkweed formerly occurred throughout the eastern tallgrass prairie region of the central United States, from Kansas through Missouri and Illinois and north to southern Iowa and northwest Indiana. It currently is known from 171 sites in 34 counties in eastern Kansas, Missouri, south-central Iowa, and southern Illinois.

## Why is the Mead's milkweed threatened?

**Habitat Loss** – Mead's milkweed is threatened by the destruction and alteration of tallgrass prairie due to farming along with residential and commercial development. Sites known to have Mead's milkweed were destroyed by plowing and land development.

**Habitat Fragmentation** – Smaller habitat fragments support lower numbers of plants, and thus, fragmentation may hasten or explain the loss of genetic diversity and failure of this plant to sexually reproduce. Populations with low numbers may not attract sufficient numbers or types of pollinators.

**Hay Mowing** - Most Kansas and Missouri populations occur in prairie hay fields where mowing typically takes place in late June to early July, which removes immature Mead's milkweed fruits and prevents completion of the plant's life cycle.

## What is being done to prevent extinction of Mead's milkweed?

**Listing** – Mead's milkweed was added to the U.S. list of Endangered and Threatened Species on September 1, 1988.

**Recovery** – A recovery plan\* was published on September 16, 2003 which included strategies to increase the numbers and distribution of this plant.

**Recovery Plan Strategies** – Protect and manage habitat, increase size and number of populations, conduct field surveys for new populations or potential habitat for introduction, conduct research, maintain existing populations, promote public understanding, and review progress.

**Reintroductions** - Reintroductions are taking place in northern Illinois, Indiana, and Wisconsin. We do not know, yet, if they are successful.

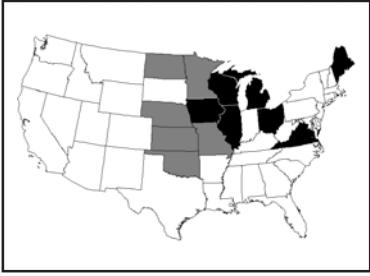
## What can I do to help prevent the extinction of species?

**Learn** – Learn more about the Mead's milkweed and other endangered and threatened species. Understand how the destruction of habitat leads to loss of endangered and threatened species and our nation's plant and animal diversity. Tell others about what you have learned.

**Join** – Join a conservation group; many have local chapters. Or volunteer at a local nature center, zoo, or wildlife refuge.

**Protect** - Protect native plants by avoiding non-native invasives, like dame's rocket, in your yard and garden. Remove non-natives, like buckthorn and honeysuckle, that invade your landscaping.

\* The Mead's Milkweed Recovery Plan and additional species information can be found at <http://midwest.fws.gov/endangered>.



States in which the eastern (highlighted in black) and western prairie fringed orchids (highlighted in gray) are found.

## Prairie Fringed Orchids

The eastern and western prairie fringed orchids are *threatened species*. Threatened species are animals and plants that are likely to become endangered in the foreseeable future. *Endangered species* are animals and plants that are in danger of becoming extinct. Identifying, protecting, and restoring endangered and threatened species is the primary objective of the U.S. Fish and Wildlife Service's endangered species program.



Eastern prairie fringed orchid

### What are Prairie Fringed Orchids?

**Scientific Names** - *Platanthera leucophaea* (eastern prairie fringed orchid); *Platanthera praeclara* (western prairie fringed orchid)

**Appearance** - Both orchids produce flower stalks up to 47 inches tall. Each stalk has up to 40 white flowers about an inch long. The western prairie fringed orchid's flowers are somewhat larger than those of the closely related eastern prairie fringed orchid.

**Range** - The eastern prairie fringed orchid occurs mostly east of the Mississippi River in fewer than 60 sites in Illinois, Iowa, Maine, Michigan, Ohio, Virginia, Wisconsin, and in Ontario. The western prairie fringed orchid is restricted to west of the Mississippi River and is known from about 75 sites in Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Oklahoma, and in Manitoba.

**Habitat** - Both orchids occur most often in mesic to wet unplowed tallgrass prairies and meadows but have been found in old fields and roadside ditches. The eastern prairie fringed orchid also occurs in bogs, fens, and sedge meadows.

**Reproduction** - The nocturnally fragrant flowers of these perennial orchids attract hawkmoths that feed on nectar and transfer pollen from flower to flower and plant to plant. Seed germination and proper plant growth depend on a symbiotic relationship between the plants' reduced root systems and a soil-inhabiting fungus for proper water uptake and nutrition.

## Why are the Prairie Fringed Orchids Threatened?

**Habitat Loss or Degradation** - The greatest threat to the prairie fringed orchids is habitat loss, mostly through conversion to cropland. Competition with introduced alien plants, filling of wetlands, intensive hay mowing, fire suppression, and overgrazing also threatens these species.

**Collection** - These orchids have been collected because of their rarity and beauty.

**Pesticides and Other Pollutants** - The prairie fringed orchids depend on hawkmoths for pollination. Any threat to these insects, such as the use of insecticides, is a threat to the prairie fringed orchids.

## What Is Being Done to Prevent Extinction of the Prairie Fringed Orchids?

**Listing** - The prairie fringed orchids were added to the U.S. List of Endangered and Threatened Wildlife and Plants on September 28, 1989.

**Recovery Plan** - The U.S. Fish and Wildlife Service prepared recovery plans that identify and prioritize actions needed to help the orchids survive.

**Research** - Researchers are studying the prairie fringed orchids to find the best ways to manage for the orchids and their habitat.

**Habitat Protection** - Where possible, the orchids' habitat is being protected and habitat is improved with a variety of management techniques. In Illinois, seed was dispersed on some public lands that had good habitat but no orchids. Subsequently, orchids bloomed on at least one of those sites. Private landowners, government agencies, and conservation organizations are helping conserve these species.

**Public Education** - Public education programs have been developed to raise awareness of the orchids' plight.

## What Can I Do to Help Prevent the Extinction of Species?

**Learn** - Learn more about the prairie fringed orchid and other threatened and endangered species. Understand how the destruction of habitat leads to loss of endangered and threatened plants and animals and our nation's biological diversity. Tell others about what you have learned.

**Join and Volunteer** - Join a conservation group; many have local chapters. Volunteer at a local nature center, zoo, or national wildlife refuge.

**Plant Natives** - Use native plants in landscaping and gardening and avoid the use of invasive plants that have been imported from other countries, such as purple loosestrife, dame's rocket, and Japanese and bush honeysuckles.

**Plant a Prairie** - If you have enough land, use seed from a local source to plant a native prairie.

**Minimize** - Minimize or eliminate your use of insecticides and herbicides for lawn and garden care. Investigate alternative methods of pest control such as integrated pest management.





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Midwest Ecological Services

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## Fact Sheet

### Pallid Sturgeon (*Scaphirhynchus albus*)

**Status:** Endangered (55 Federal Register 36641) on September 6, 1990.

**Description:** Pallid sturgeons have a unique dinosaur-like appearance. They have a flattened snout, long slender tail and are armored with lengthwise rows of bony plates instead of scales. Their mouth is toothless and positioned under the snout for sucking small fishes and invertebrates from the river bottom. Pallid sturgeons can weigh up to 80 pounds and reach lengths of 6 feet, whereas the closely related shovelnose sturgeon rarely weighs more than 8 pounds. The back and sides of pallid sturgeons are grayish-white versus the brown color of the shovelnose sturgeons.

**Current Range and Status:** Today, pallid sturgeons are scarce in the upper Missouri River above Ft. Peck Reservoir; scarce in the Missouri and lower Yellowstone Rivers between Ft. Peck Dam and Lake Sakakawea; very scarce in the other Missouri River reservoir reaches; scarce in the Missouri River downstream of Gavins Point Dam; scarce but slightly more common in the Mississippi and Atchafalaya Rivers; absent from other tributaries.

**Habitat:** Pallid sturgeons evolved and adapted to living close to the bottom of large, silty rivers with natural a hydrograph. Their preferred habitat has a diversity of depths and velocities formed by braided channels, sand bars, sand flats and gravel bars.

**Life History and Reproductive Biology:** Sexual maturity for males is estimated to be 7-9 years, with 2-3 year intervals between spawning. Females are not expected to not reach sexual maturity until 7-15 years, with up to 10-year intervals between spawning. Pallid sturgeons are long lived, with individuals perhaps reaching 50 years of age.

**Reasons for Decline:** All of the 3,350 miles of riverine habitat within the pallid sturgeon's range have been adversely affected by man. Approximately 28% has been impounded, which has created unsuitable lake-like habitat; 51% has been channelized into deep, uniform channels; the remaining 21% is downstream of dams which have altered the river's hydrograph, temperature and turbidity. Commercial fishing and environmental contaminants may have also played a role in the pallid sturgeon's decline.



*Photo by South Dakota Game, Fish and Parks; Sam Stukel*

**Recovery Activities:** In 1997, through the combined effort of two Fishery Assistance offices, two National Fish Hatcheries, one Ecological Services office, and two State game and fish departments (North Dakota and Montana), two female and three male pallid sturgeons were spawned. Spawning pallid sturgeons from the upper Missouri River had been attempted since 1988, but to no avail. Currently, approximately 5,000 young pallid sturgeons are being reared at Gavins Point NFH. In August, 1998, the Fish and Wildlife Service and state game and fish departments from North Dakota and Montana will stock up to 1,500 of these fish in two areas; at sites near the Missouri and



Yellowstone River confluence, and in the Missouri River upstream of Ft. Peck Reservoir in Montana. This release will be the first under a multi-agency 6-year plan to augment doomed adult populations. Since pallid sturgeons do not reach maturity and spawn for several years, we must stock now so that we have adults in the wild as habitats are restored. Without artificial propagation in hatcheries and subsequent population augmentation, this population will likely be extirpated. The juvenile pallid sturgeon we stock under this plan will be the founder population for recovery.

*Created March 1998*

[Back to Fishes page](#)

[Midwest Endangered Species Home](#)

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### **In the Midwest**

[USFWS Midwest Home](#)

[Midwest Ecological Services Home](#)

[Contact Us](#)

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### **What We Do**

[Midwest Endangered Species](#)

[Candidate Conservation](#)

[Listing](#)

[Recovery](#)

[Section 7 Consultation](#)

[Permits](#)

[Habitat Conservation Plans](#)

[Grants](#)

[Endangered Species Act](#)

[Glossary](#)

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### **Listed Plants and Animals**

[Featured Species](#)

[All Midwest Listed Species](#)

[State and County Lists](#)

[Species of Concern](#)

[Extinct Species](#)

<

[Fact Sheets](#)

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## Explosive and Flammable Hazards (CEST and EA)

General requirements	Legislation	Regulation
HUD-assisted projects must meet Acceptable Separation Distance (ASD) requirements to protect them from explosive and flammable hazards.	N/A	24 CFR Part 51 Subpart C
<b>Reference</b>		
<a href="https://www.hudexchange.info/environmental-review/explosive-and-flammable-facilities">https://www.hudexchange.info/environmental-review/explosive-and-flammable-facilities</a>		

1. Is the proposed HUD-assisted project itself the development of a hazardous facility (a facility that mainly stores, handles or processes flammable or combustible chemicals such as bulk fuel storage facilities and refineries)?

No

→ Continue to Question 2.

2. Does this project include any of the following activities: development, construction, rehabilitation that will increase residential densities, or conversion?

Yes

→ Continue to Question 3.

3. Within 1 mile of the project site, are there any current *or planned* stationary aboveground storage containers that are covered by 24 CFR 51C? Containers that are NOT covered under the regulation include:

- Containers 100 gallons or less in capacity, containing common liquid industrial fuels OR
- Containers of liquified petroleum gas (LPG) or propane with a water volume capacity of 1,000 gallons or less that meet the requirements of the 2017 or later version of National Fire Protection Association (NFPA) Code 58.

If all containers within the search area fit the above criteria, answer “no.” For any other type of aboveground storage container within the search area that holds one of the flammable or explosive materials listed in Appendix I of 24 CFR part 51 subpart C, answer “yes.”

Yes

→ Continue to Question 4.

4. Visit HUD’s website to identify the appropriate tank or tanks to assess and to calculate the required separation distance using the [electronic assessment tool](#). To document this step in the analysis, please attach the following supporting documents to this screen:

- Map identifying the tank selected for assessment, and showing the distance from the tank to the proposed HUD-assisted project site; and
- Electronic assessment tool calculation of the required separation distance.

**Based on the analysis, is the proposed HUD-assisted project site located at or beyond the required separation distance from all covered tanks?**

Yes

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

**Worksheet Summary**

**Compliance Determination**

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

There is one current facility with stationary aboveground storage containers within 1 mile of the project site. The ASTs are two 12,000-gallon gasoline and diesel fuel tanks located 4,013' to the south at the 1901 Wakarusa Drive West 40 Fuel Station. The ASTs are diked with a square foot area of 1600sqft. The ASD for Thermal Radiation for People is 188.29' and the ASD for Thermal Radiation for Buildings is 32.99'.

The Separation Distances from the project is acceptable.

There are no planned stationary aboveground storage containers of concern within 1 mile of the project site.

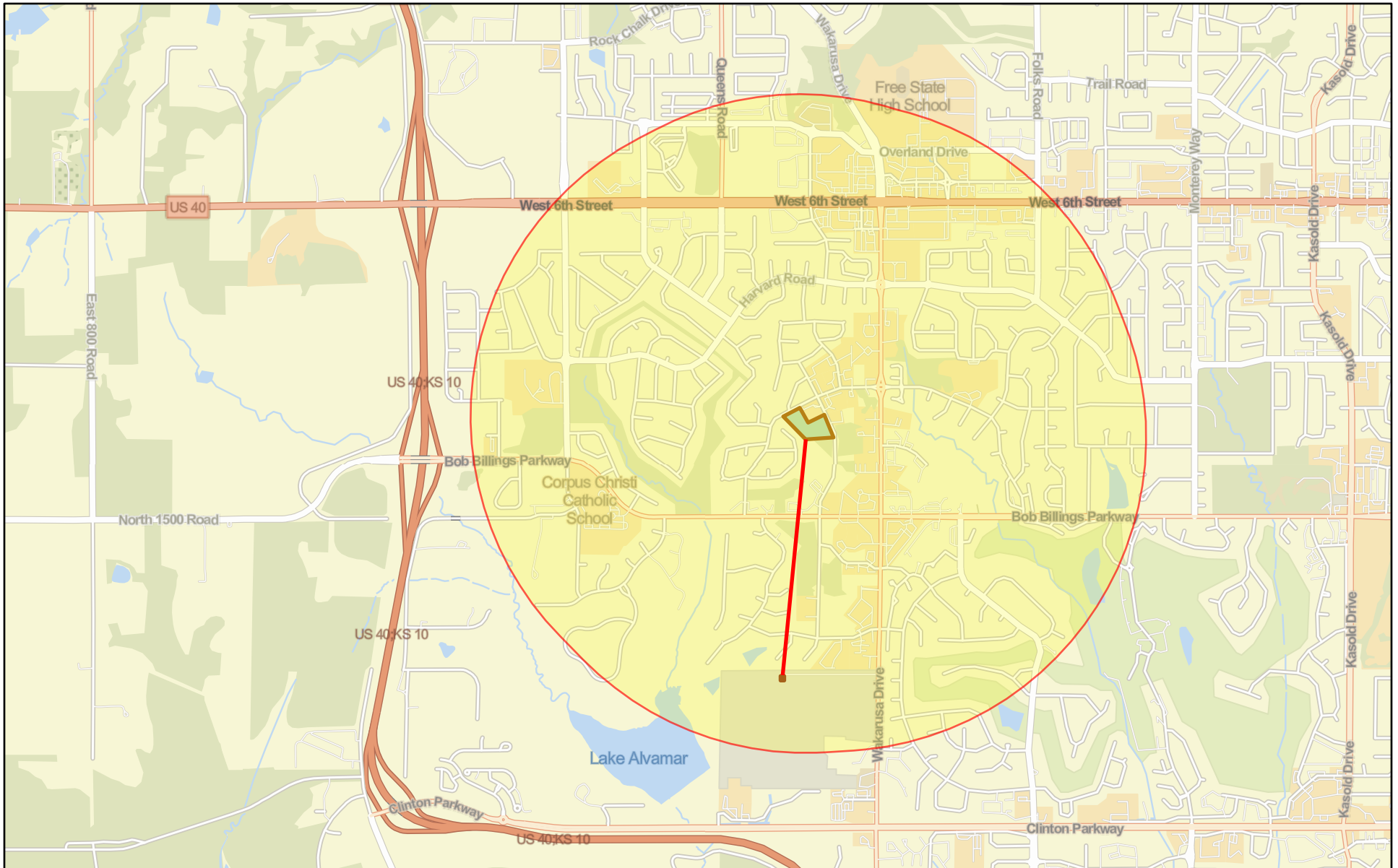
See attached Explosive and Flammable Facilities Worksheet packet.

**Are formal compliance steps or mitigation required?**





Yes

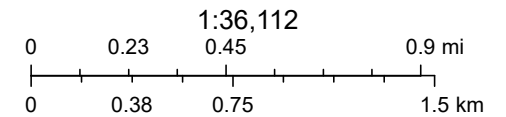
No

# 1311 Research Park Dr/5015 Legends Dr 4,013 feet to Wakarusa Drive West 40 Fuel Station



June 20, 2024

-  4,013 feet to 1901 Wakarusa Dr
-  Project Buffer
-  1901 Wakarusa Dr West 40 Fuel Station
-  1311 Research Park Dr/5015 Legends Dr



Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri, EPA OEI

## Acceptable Separation Distance (ASD) Electronic Assessment Tool

The Environmental Planning Division (EPD) has developed an electronic-based assessment tool that calculates the Acceptable Separation Distance (ASD) from stationary hazards. The ASD is the distance from above ground stationary containerized hazards of an explosive or fire prone nature, to where a HUD assisted project can be located. The ASD is consistent with the Department's standards of blast overpressure (0.5 psi-buildings) and thermal radiation (450 BTU/ft<sup>2</sup> - hr - people and 10,000 BTU/ft<sup>2</sup> - hr - buildings). Calculation of the ASD is the first step to assess site suitability for proposed HUD-assisted projects near stationary hazards. Additional guidance on ASDs is available in the Department's guidebook "Siting of HUD- Assisted Projects Near Hazardous Facilities" and the regulation 24 CFR Part 51, Subpart C, Siting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature.

**Note:** Tool tips, containing field specific information, have been added in this tool and may be accessed by hovering over the ASD result fields with the mouse.

### Acceptable Separation Distance Assessment Tool

Is the container above ground?	Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
Is the container under pressure?	Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
Does the container hold a cryogenic liquified gas?	Yes: <input type="checkbox"/> No: <input type="checkbox"/>
Is the container diked?	Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
What is the volume (gal) of the container?	<input type="text"/>
What is the Diked Area Length (ft)?	<input type="text" value="40"/>
What is the Diked Area Width (ft)?	<input type="text" value="40"/>
<input type="button" value="Calculate Acceptable Separation Distance"/>	
Diked Area (sqft)	<input type="text" value="1600"/>
ASD for Blast Over Pressure (ASDROP)	<input type="text"/>



ASD for Blast Over Pressure (ASDBOP)	
ASD for Thermal Radiation for People (ASDPPU)	
ASD for Thermal Radiation for Buildings (ASDBPU)	
ASD for Thermal Radiation for People (ASDPNPD)	188.29
ASD for Thermal Radiation for Buildings (ASDBNPD)	32.99

**For mitigation options, please click on the following link:** [Mitigation Options \(/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/\)](/resource/3846/acceptable-separation-distance-asd-hazard-mitigation-options/)

## Providing Feedback & Corrections

After using the ASD Assessment Tool following the directions in this User Guide, users are encouraged to provide feedback on how the ASD Assessment Tool may be improved. Users are also encouraged to send comments or corrections for the improvement of the tool.

Please send comments or other input using the **Contact Us** (<https://www.hudexchange.info/contact-us/>) form.

## Related Information

- [ASD User Guide \(/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/\)](/resource/3839/acceptable-separation-distance-asd-assessment-tool-user-guide/)
- [ASD Flow Chart \(/resource/3840/acceptable-separation-distance-asd-flowchart/\)](/resource/3840/acceptable-separation-distance-asd-flowchart/)

## Farmlands Protection (CEST and EA)

General requirements	Legislation	Regulation
The Farmland Protection Policy Act (FPPA) discourages federal activities that would convert farmland to nonagricultural purposes.	Farmland Protection Policy Act of 1981 (7 U.S.C. 4201 et seq.)	<a href="#">7 CFR Part 658</a>
<b>Reference</b>		
<a href="https://www.hudexchange.info/environmental-review/farmlands-protection">https://www.hudexchange.info/environmental-review/farmlands-protection</a>		

### 1. Does your project include any activities, including new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use?

No

#### Explain how you determined that agricultural land would not be converted:

According to 7 CFR Part 658.2(a), Farmland does not include land already in or committed to urban development. Farmland already in urban development includes lands identified as “urbanized area” (UA) on the Census Bureau Map. According to the attached Census Bureau map showing land identified as “urbanized area” (UA), the project site is located in an urbanized area, and based on the project description, the project does not include new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use. The project is in compliance with the Farmland Policy Act. See attached Farmlands Protection Worksheet packet.

→ Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documentation supporting your determination.

### Worksheet Summary

#### Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

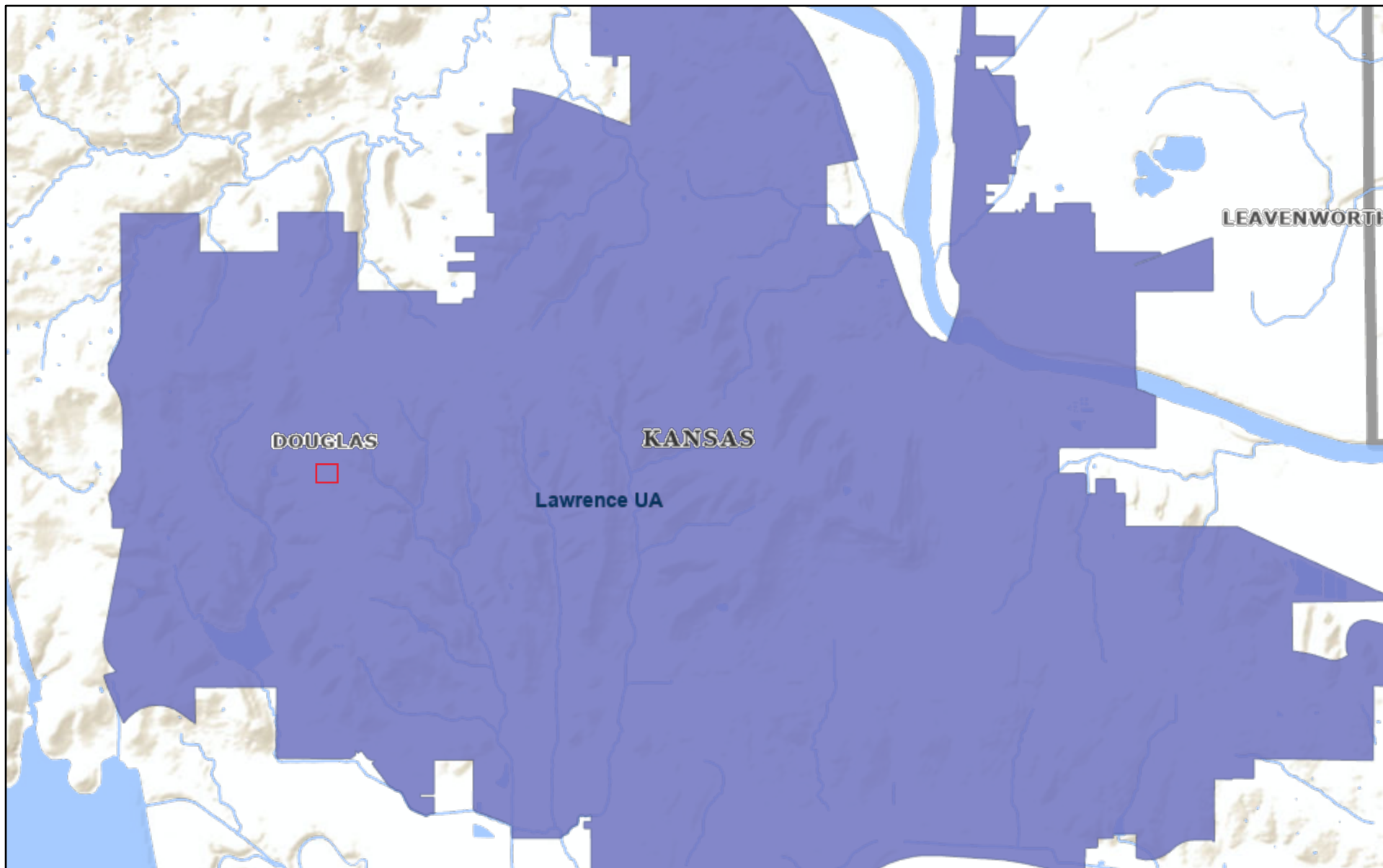
According to 7 CFR Part 658.2(a), Farmland does not include land already in or committed to urban development. Farmland already in urban development includes lands identified as “urbanized area” (UA) on the Census Bureau Map. According to the attached Census Bureau map showing land identified as “urbanized area” (UA), the project site is located in an urbanized area, and based on the project description, the project does not include new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use. The project is in compliance with the Farmland Policy Act. See attached Farmlands Protection Worksheet packet.

#### Are formal compliance steps or mitigation required?

Yes



No

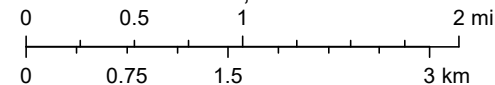
# TIGERweb Census Bureau Map showing land identified as “urbanized area” (UA)



June 18, 2024

1:72,224

Counties	2020 Urban Areas		Counties		Project Site
States	2020 Urban Areas		States		



Source: U.S. Census Bureau, Sources: Esri, USGS, NOAA

## Floodplain Management (CEST and EA)

General Requirements	Legislation	Regulation
Executive Order 11988, Floodplain Management, requires Federal activities to avoid impacts to floodplains and to avoid direct and indirect support of floodplain development to the extent practicable.	Executive Order 11988	24 CFR 55
<b>Reference</b>		
<a href="https://www.hudexchange.info/environmental-review/floodplain-management">https://www.hudexchange.info/environmental-review/floodplain-management</a>		

**1. Does [24 CFR 55.12\(c\)](#) exempt this project from compliance with HUD's floodplain management regulations in Part 55?**

No → *Continue to Question 2.*

**2. Provide a FEMA/FIRM or ABFE map showing the site.**

The Federal Emergency Management Agency (FEMA) designates floodplains. The FEMA Map Service Center provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs) or Advisory Base Flood Elevations (ABFEs). For projects in areas not mapped by FEMA, use the best available information to determine floodplain information. Include documentation, including a discussion of why this is the best available information for the site.

**Does your project occur in a floodplain?**

No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

### Worksheet Summary

#### **Compliance Determination**

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

This project does not occur in a floodplain. The project is in compliance with Executive Order 11988. See attached Floodplain Management Worksheet Packet and FEMA/FIRMette map 20045C0158D (eff. 8/5/2010).

**Are formal compliance steps or mitigation required?**

Yes

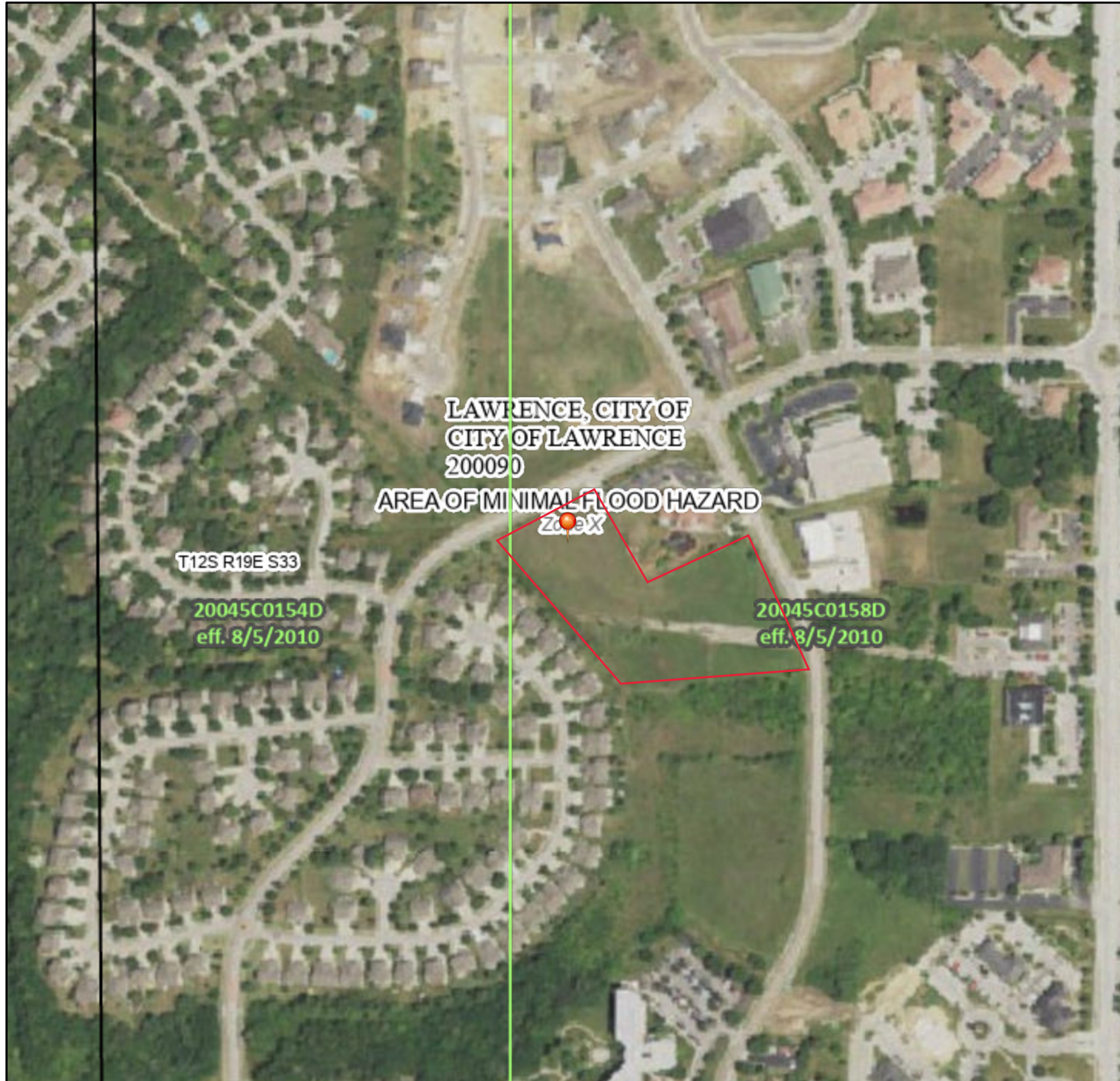
No



# National Flood Hazard Layer FIRMMette



95°19'2"W 38°57'56"N



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, A99	With BFE or Depth Zone AE, AO, AH, VE, AR	Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X	Future Conditions 1% Annual Chance Flood Hazard Zone X	Area with Reduced Flood Risk due to Levee. See Notes. Zone X	Area with Flood Risk due to Levee Zone D

OTHER AREAS	NO SCREEN Area of Minimal Flood Hazard Zone X	Effective LOMRs	Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer	Levee, Dike, or Floodwall

OTHER FEATURES	Cross Sections with 1% Annual Chance Water Surface Elevation	Coastal Transect	Base Flood Elevation Line (BFE)	Limit of Study	Jurisdiction Boundary	Coastal Transect Baseline	Profile Baseline	Hydrographic Feature

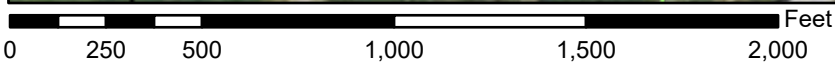
MAP PANELS	Digital Data Available	No Digital Data Available	Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/18/2024 at 4:26 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



1:6,000

95°18'24"W 38°57'28"N

Basemap Imagery Source: USGS National Map 2023





# City of Lawrence

PLANNING & DEVELOPMENT SERVICES

1 Riverfront Plaza, Suite 110  
P.O. Box 708  
Lawrence, KS 66044

[www.lawrenceks.org/pds](http://www.lawrenceks.org/pds)

Phone 785-832-7700  
Tdd 785-832-3205  
Fax 785-832-3110

Patrick Zollner  
State Historic Preservation Office  
6425 SW Sixth Avenue  
Topeka, KS 66615-1099

July 5, 2024

**Subject: Lawrence-Douglas County Housing Authority – Legends Housing Project (24-07-045)**

Dear Mr. Zollner,

Pursuant to 36 CFR 800 requirements of the National Historic Preservation Act, we are submitting the following project for your review. The Lawrence-Douglas County Housing Authority is proposing to use Federal HUD MTW Grant money to fund this project.

The Lawrence-Douglas County Housing Authority intends to use HUD funds to purchase vacant land for the future development of affordable housing on adjoining parcels at 5015 Legends Drive (30 affordable units) and 1311 Research Park Drive (36 affordable units).

The project is located in an area that was annexed into the City of Lawrence in 1988-1989. The area was platted beginning in 1989. The project site is vacant as is the property to the south. Commercial structures exist to the north and east and were constructed from 1997-2022. Residential structures that were constructed from 2003-2010 exist to the west of the project site. The structures adjacent to the project are not currently eligible for individual listing or as a contributing structures to a historic district in the National Register of Historic Places, the Register of Historic Kansas Places, or the Lawrence Register of Historic Places. There are no visible historic site elements in the project location that are eligible for individual listing or as a contributing object to a historic district. The proposed project will have no adverse effect on any property listed or eligible for listing in the National Register of Historic Places, the Register of Historic Kansas Places, or the Lawrence Register of Historic Places.

We anticipate that your review might take approximately two weeks. If you need more information please call me at (785) 832-3113 or email [cdolar@lawrenceks.org](mailto:cdolar@lawrenceks.org).

We have also submitted this project to the Lawrence/Douglas County Planning Department for review. The Historic Resources Administrator has reviewed the project and writes that she sees no adverse effect on any property listed or eligible for listing in the National Register of Historic Places, the Register of Historic Kansas Places, or the Lawrence Register of Historic Places.

Sincerely,

Caitlyn Dolar  
Housing Initiatives Project Specialist  
Planning & Development Services

Attachments: project map

Cc: Lynne Zollner, Planning

## PROJECT DOCUMENTS

---

**Date**

2024-07-12T18:45:01Z

**Subject**

24-07-045 - Lawrence-Douglas County Housing Authority Legends Housing Project

**Body**

24-07-045 - Lawrence-Douglas County Housing Authority Legends Housing Project

Caitlyn Dolar

We have reviewed the information received July 5, 2024 regarding the above-referenced project in accordance with 36 CFR Part 800. In reviews of this nature, the State Historic Preservation Office (SHPO) determines whether a federally funded, licensed, or permitted project will adversely affect properties that are listed or determined eligible for listing in the National Register of Historic Places. The SHPO has determined that the proposed project will not adversely affect any National Register-listed or National Register-eligible properties. This concludes the SHPO's role in this review.

Thank you for giving us the opportunity to comment on this proposal. Please refer to the Kansas State Review & Compliance number (KSR&C#) listed above on any future correspondence. Please submit any comments or questions regarding this review to me at 785-272-8681, ext. 227 or [robert.elder@ks.gov](mailto:robert.elder@ks.gov)

On behalf of:

Katrina Ringler

Deputy State Historic Preservation Officer

Kansas Historical Society

Finished



# City of Lawrence

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1 Riverfront Plaza, Suite 320  
P.O. Box 708  
Lawrence, KS 66044

[www.lawrenceks.org/pds](http://www.lawrenceks.org/pds)

Phone 785-832-7700  
Tdd 785-832-3205  
Fax 785-832-3110

July 25, 2024

Absentee-Shawnee Tribe of Indians of Oklahoma  
Devon Frazier, THPO  
John Johnson, Governor  
2025 S Gordon Cooper Dr  
Shawnee, OK 74801

Re: LDCHA Legends Housing (purchase of vacant land for affordable housing development)  
5015 Legends Drive & 1311 Research Park Drive  
Lawrence, Kansas 66049  
HUD Moving to Work (MTW) funding

Dear Absentee-Shawnee Tribe of Indians of Oklahoma:

The Lawrence-Douglas County Housing Authority is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, the City of Lawrence has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

The City of Lawrence will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

To meet project timeframes, if you would like to be a consulting party on this project, can you please let us know of your interest within 30 days? If you have any initial concerns with impacts of the project on religious or cultural properties, can you please note them in your response? You can respond via email to [dwalters@lawrenceks.org](mailto:dwalters@lawrenceks.org). If you could also let us know if you do not wish to consult, we would appreciate it.



Enclosed is a map that shows the project area and, if applicable, any additional areas of potential indirect effects. The Lawrence-Douglas County Housing Authority will be using federal HUD Moving to Work (MTW) funds to purchase the vacant land for the following project:

The Lawrence-Douglas County Housing Authority intends to use HUD Moving to Work funds to purchase vacant adjoining parcels at 1311 Research Park Drive and 5015 Legends Drive in Lawrence, Kansas for the future development of affordable housing. The preliminary plan for 5015 Legends Drive is to build six 4-plexes and one 6-plex designated for seniors for a total of 30 units. On 1311 Research Park Drive, the preliminary plan is to build two duplexes and four 8-plexes for a total of 36 units

More information on the Section 106 review process is available at <http://www.onecpd.info/environmental-review/historic-preservation/>.

HUD's process for tribal consultation under Section 106 is described in a Notice available at <https://www.onecpd.info/resource/2448/notice-cpd-12-006-tribal-consultation-under-24-cfr-part-58>.

Thank you very much. We value your assistance and look forward to consulting further if there are historic properties of religious and cultural significance to your tribe that may be affected by this project.

Sincerely,

*Danelle Walters*

Danelle Walters  
Planning & Development Services Assistant Director – Housing Initiatives  
Planning & Development Services  
785-832-3108 fax 785-832-3110  
Email: [dwalters@lawrenceks.org](mailto:dwalters@lawrenceks.org)

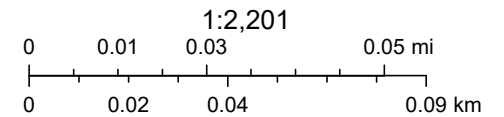


# 1311 Research Park Dr/5015 Legends Dr site map



6/20/2024, 4:39:53 PM

- Address Points
- ▭ Parcels



Douglas County, Kansas, City of Lawrence, Kansas and Douglas County GIS Division

Web AppBuilder for ArcGIS  
City of Lawrence Kansas



# City of Lawrence

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Phone 785-832-7700  
Tdd 785-832-3205  
Fax 785-832-3110

July 25, 2024

Cheyenne and Arapaho Tribes, Oklahoma  
Max Bear, THPO  
Reggie Wassana, Governor  
700 Black Kettle Blvd  
Concho, OK 73022

Re: LDCHA Legends Housing (purchase of vacant land for affordable housing development)  
5015 Legends Drive & 1311 Research Park Drive  
Lawrence, Kansas 66049  
HUD Moving to Work (MTW) funding

Dear Cheyenne and Arapaho Tribes, Oklahoma:

The Lawrence-Douglas County Housing Authority is considering funding the project listed above with federal funds from the U.S. Department of Housing and Urban Development (HUD). Under HUD regulation 24 CFR 58.4, the City of Lawrence has assumed HUD's environmental review responsibilities for the project, including tribal consultation related to historic properties. Historic properties include archeological sites, burial grounds, sacred landscapes or features, ceremonial areas, traditional cultural places and landscapes, plant and animal communities, and buildings and structures with significant tribal association.

The City of Lawrence will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

To meet project timeframes, if you would like to be a consulting party on this project, can you please let us know of your interest within 30 days? If you have any initial concerns with impacts of the project on religious or cultural properties, can you please note them in your response? You can respond via email to [dwalters@lawrenceks.org](mailto:dwalters@lawrenceks.org). If you could also let us know if you do not wish to consult, we would appreciate it.

Enclosed is a map that shows the project area and, if applicable, any additional areas of potential indirect effects. The Lawrence-Douglas County Housing Authority will be using federal HUD Moving to Work (MTW) funds to purchase the vacant land for the following project:

The Lawrence-Douglas County Housing Authority intends to use HUD Moving to Work funds to purchase vacant adjoining parcels at 1311 Research Park Drive and 5015 Legends Drive in Lawrence, Kansas for the future development of affordable housing. The preliminary plan for 5015 Legends Drive is to build six 4-plexes and one 6-plex designated for seniors for a total of 30 units. On 1311 Research Park Drive, the preliminary plan is to build two duplexes and four 8-plexes for a total of 36 units

More information on the Section 106 review process is available at <http://www.onecpd.info/environmental-review/historic-preservation/>.

HUD's process for tribal consultation under Section 106 is described in a Notice available at <https://www.onecpd.info/resource/2448/notice-cpd-12-006-tribal-consultation-under-24-cfr-part-58>.

Thank you very much. We value your assistance and look forward to consulting further if there are historic properties of religious and cultural significance to your tribe that may be affected by this project.

Sincerely,

*Danelle Walters*

Danelle Walters  
Planning & Development Services Assistant Director – Housing Initiatives  
Planning & Development Services  
785-832-3108 fax 785-832-3110  
Email: [dwalters@lawrenceks.org](mailto:dwalters@lawrenceks.org)

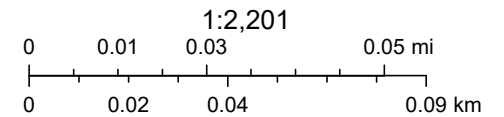


# 1311 Research Park Dr/5015 Legends Dr site map



6/20/2024, 4:39:53 PM

- Address Points
- ▭ Parcels



Douglas County, Kansas, City of Lawrence, Kansas and Douglas County GIS Division

Web AppBuilder for ArcGIS  
City of Lawrence Kansas



# City of Lawrence

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Phone 785-832-7700  
Tdd 785-832-3205  
Fax 785-832-3110

July 25, 2024

Delaware Nation, Oklahoma  
Deborah Dotson, President  
Katelyn Lucas, THPO  
PO Box 825  
Anadarko, OK 73005

Re: LDCHA Legends Housing (purchase of vacant land for affordable housing development)  
5015 Legends Drive & 1311 Research Park Drive  
Lawrence, Kansas 66049  
HUD Moving to Work (MTW) funding

Dear Delaware Nation, Oklahoma:

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The City of Lawrence will conduct a review of this project to comply with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR Part 800. We would like to invite you to be a consulting party in this review to help identify historic properties in the project area that may have religious and cultural significance to your tribe, and if such properties exist, to help assess how the project might affect them. If the project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

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Enclosed is a map that shows the project area and, if applicable, any additional areas of potential indirect effects. The Lawrence-Douglas County Housing Authority will be using federal HUD Moving to Work (MTW) funds to purchase the vacant land for the following project:

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Thank you very much. We value your assistance and look forward to consulting further if there are historic properties of religious and cultural significance to your tribe that may be affected by this project.

Sincerely,

*Danelle Walters*

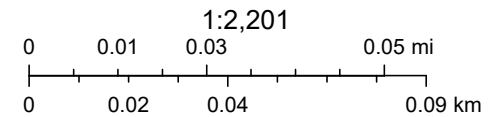
Danelle Walters  
Planning & Development Services Assistant Director – Housing Initiatives  
Planning & Development Services  
785-832-3108 fax 785-832-3110  
Email: [dwalters@lawrenceks.org](mailto:dwalters@lawrenceks.org)

# 1311 Research Park Dr/5015 Legends Dr site map



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- Address Points
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Douglas County, Kansas, City of Lawrence, Kansas and Douglas County GIS Division

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# City of Lawrence

PLANNING & DEVELOPMENT SERVICES

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Phone 785-832-7700  
Tdd 785-832-3205  
Fax 785-832-3110

July 25, 2024

Delaware Tribe of Indians  
Susan Bachor, THPO  
Larry Heady, THPO  
Brad Killscrow, Chief  
5100 Tuxedo Blvd  
Bartlesville, OK 74006-2838

Re: LDCHA Legends Housing (purchase of vacant land for affordable housing development)  
5015 Legends Drive & 1311 Research Park Drive  
Lawrence, Kansas 66049  
HUD Moving to Work (MTW) funding

Dear Delaware Tribe of Indians:

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Sincerely,

*Danelle Walters*

Danelle Walters  
Planning & Development Services Assistant Director – Housing Initiatives  
Planning & Development Services  
785-832-3108 fax 785-832-3110  
Email: [dwalters@lawrenceks.org](mailto:dwalters@lawrenceks.org)

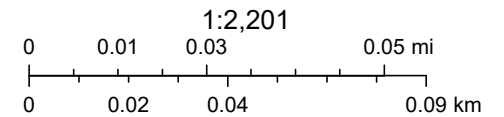


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Phone 785-832-7700  
Tdd 785-832-3205  
Fax 785-832-3110

July 25, 2024

Eastern Shawnee Tribe of Oklahoma  
Lora Nuckolls, THPO/Director of Culture Preservation Programs/NAGPRA  
Glenna Wallace, Chief  
70500 E 128 Rd  
Wyandotte, OK 74370

Re: LDCHA Legends Housing (purchase of vacant land for affordable housing development)  
5015 Legends Drive & 1311 Research Park Drive  
Lawrence, Kansas 66049  
HUD Moving to Work (MTW) funding

Dear Eastern Shawnee Tribe of Oklahoma:

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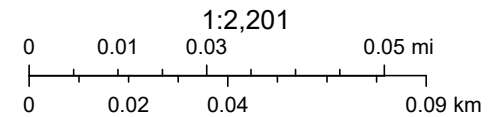
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July 25, 2024

Little Traverse Bay Bands of Odawa Indians, Michigan  
Regina Gasco-Bentley, Chairperson  
Melissa Wiatrolik, THPO  
7500 Odawa Circle  
Harbor Springs, MI 49740

Re: LDCHA Legends Housing (purchase of vacant land for affordable housing development)  
5015 Legends Drive & 1311 Research Park Drive  
Lawrence, Kansas 66049  
HUD Moving to Work (MTW) funding

Dear Little Traverse Bay Bands of Odawa Indians, Michigan:

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*Danelle Walters*

Danelle Walters  
Planning & Development Services Assistant Director – Housing Initiatives  
Planning & Development Services  
785-832-3108 fax 785-832-3110  
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Phone 785-832-7700  
Tdd 785-832-3205  
Fax 785-832-3110

July 25, 2024

Osage Nation  
Andrea A. Hunter, Director/THPO  
627 Grandview Ave  
Pawhuska, OK 74056

Re: LDCHA Legends Housing (purchase of vacant land for affordable housing development)  
5015 Legends Drive & 1311 Research Park Drive  
Lawrence, Kansas 66049  
HUD Moving to Work (MTW) funding

Dear Osage Nation:

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785-832-3108 fax 785-832-3110  
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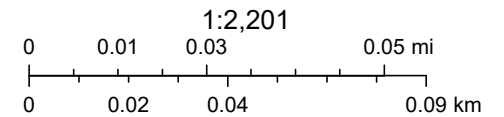


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Tdd 785-832-3205  
Fax 785-832-3110

July 25, 2024

Prairie Band Potawatomi Nation  
Joseph Rupnick, Chairperson  
Raphael Wahwassuck, THPO  
16281 Q Road  
Mayetta, KS 66509

Re: LDCHA Legends Housing (purchase of vacant land for affordable housing development)  
5015 Legends Drive & 1311 Research Park Drive  
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HUD Moving to Work (MTW) funding

Dear Prairie Band Potawatomi Nation:

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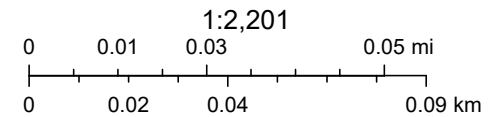
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Phone 785-832-7700  
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Fax 785-832-3110

July 25, 2024

Seneca-Cayuga Nation  
Charles Diebold, Chief  
William Tarrant, THPO  
PO Box 453220  
Grove, OK 74345

Re: LDCHA Legends Housing (purchase of vacant land for affordable housing development)  
5015 Legends Drive & 1311 Research Park Drive  
Lawrence, Kansas 66049  
HUD Moving to Work (MTW) funding

Dear Seneca-Cayuga Nation:

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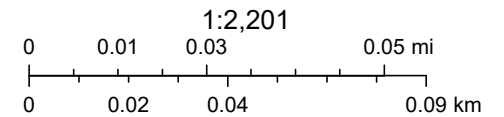


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July 25, 2024

Wichita and Affiliated Tribes (Wichita, Keechi, Waco & Tawakonie), Oklahoma  
Gary McAdams, THPO  
Terri Parton, President  
PO Box 729  
Anadarko, OK 73005

Re: LDCHA Legends Housing (purchase of vacant land for affordable housing development)  
5015 Legends Drive & 1311 Research Park Drive  
Lawrence, Kansas 66049  
HUD Moving to Work (MTW) funding

Dear Wichita and Affiliated Tribes (Wichita, Keechi, Waco & Tawakonie), Oklahoma:

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Enclosed is a map that shows the project area and, if applicable, any additional areas of potential indirect effects. The Lawrence-Douglas County Housing Authority will be using federal HUD Moving to Work (MTW) funds to purchase the vacant land for the following project:

The Lawrence-Douglas County Housing Authority intends to use HUD Moving to Work funds to purchase vacant adjoining parcels at 1311 Research Park Drive and 5015 Legends Drive in Lawrence, Kansas for the future development of affordable housing. The preliminary plan for 5015 Legends Drive is to build six 4-plexes and one 6-plex designated for seniors for a total of 30 units. On 1311 Research Park Drive, the preliminary plan is to build two duplexes and four 8-plexes for a total of 36 units

More information on the Section 106 review process is available at <http://www.onecpd.info/environmental-review/historic-preservation/>.

HUD's process for tribal consultation under Section 106 is described in a Notice available at <https://www.onecpd.info/resource/2448/notice-cpd-12-006-tribal-consultation-under-24-cfr-part-58>.

Thank you very much. We value your assistance and look forward to consulting further if there are historic properties of religious and cultural significance to your tribe that may be affected by this project.

Sincerely,

*Danelle Walters*

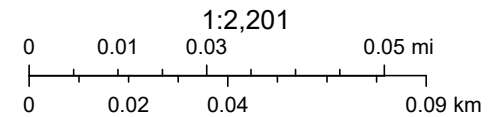
Danelle Walters  
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# 1311 Research Park Dr/5015 Legends Dr site map



6/20/2024, 4:39:53 PM

- Address Points
- ▭ Parcels



Douglas County, Kansas, City of Lawrence, Kansas and Douglas County GIS Division

Web AppBuilder for ArcGIS  
City of Lawrence Kansas



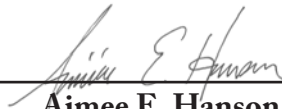
**Intensive Archeological Survey of 5.26 acres at  
5015 Legends Drive and  
1311 Research Park Drive,  
Lawrence, Douglas County, Kansas**



**GOODWIN**  
& ASSOCIATES

*Draft Report  
July 2024*

**Intensive Archeological Survey of 5.26 acres at  
5015 Legends Drive and 1311 Research Park Drive,  
Lawrence, Douglas County, Kansas**



---

**Aimee E. Hanson, M.A.  
Principal Investigator**

**Draft Technical Report**

**By**

**Aimee E. Hanson, M.A., Shannon R. Ryan, Ph.D., and Alan R. Potter, M.A.**

**R. Christopher Goodwin & Associates, Inc.  
850 E 13th St., Suite C  
Lawrence, Kansas 66044**

**July 2024**

**For**

**Lawrence-Douglas County Housing Authority  
1600 Haskell Avenue  
Lawrence, KS 66044**



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# ABSTRACT

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In July 2024, Goodwin & Associates, Inc. (Goodwin) completed an intensive archeological survey of 5.26 acres at 5015 Legends Drive and 1311 Research Park Drive, Lawrence, Douglas County, Kansas on behalf of the Lawrence-Douglas County Housing Authority. The organization is proposing to construct new, low-income housing at this location using funding from Housing and Urban Development tax credits. Survey methods included pedestrian inspection and excavation of shovel tests across the 5.26-acre area. Goodwin identified one historical archeological site, 14DO262, the Lawrence Dragway Complex, in the Project Area. The Law-

rence Dragway Complex site consists of the remains of a dragway and quarter-midget track as well as a sparse historical artifact scatter. The Lawrence Dragway Complex was in use as an automotive racing location from 1958 through 1986. Site 14DO262 does not satisfy the National Register criteria for evaluation (36 CFR 60.4 [a-d]), and Goodwin recommends it not eligible for listing in the National Register of Historic Places. No further work is recommended at 14DO262. Goodwin recommends a finding of “no historic properties present” for the Project at 5015 Legends Drive and 1311 Research Park Drive.

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# CHAPTER 1

## INTRODUCTION

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This report documents Goodwin & Associates, Inc. (Goodwin) intensive archeological survey of 5.26 acres at 5015 Legends Drive and 1311 Research Park Drive on behalf of the Lawrence-Douglas County Housing Authority (Figure 1). The Lawrence-Douglas County Housing Authority is proposing to construct new housing on these two parcels with funding from Housing and Urban Development Low-Income Housing Tax Credits (Project). Goodwin completed the cultural resources inventory on July 11, 2024. One historical archaeological site, the Lawrence Dragway Complex (14DO262) was identified.

### Project Description

This Project consists of the purchase of vacant land for future development of affordable housing. The parcels selected for purchase adjoin each other at 1311 Research Park Drive and 5015 Legends Drive in Lawrence, Kansas. The preliminary plan is to build six 4-plexes and one 6-plex designated for seniors on 5015 Legends Drive, for a total of 30 units. On 1311 Research Park Drive, the preliminary plan is to build two duplexes and four 8-plexes for a total of 36 units. These units are being planned due to a significant shortage of affordable housing in Lawrence, Kansas. Lawrence-Douglas County Housing Authority anticipates construction of this project in 4-5 years and will seek Housing and Urban Development Low-Income Housing Tax Credits to fund construction of the units.

### Regulatory Oversight and the Area of Potential Effects

Because the Project is a federal undertaking, it is subject to review under Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (54 U.S.C. – § 300101 et seq.),

and its implementing regulations, 36 CFR Part 800. Section 106 of the NHPA requires Federal agencies to take into consideration the effects of their licensed, permitted, or funded projects on historic properties listed in, or eligible for listing in, the National Register of Historic Places (NRHP). The objective of the current investigation was to identify any significant historic properties that may be present in the Project area in accordance with 36 CFR Part 800. The 5.26-acre area of potential effects (APE) for the current investigation consists of parcels R10774 (PIN 068-33-0-30-01-002.02-0) at 5015 Legends Drive and R10797 (PIN 068-33-0-30-01-012.04-0) at 1311 Research Park Drive near the intersection of Legends Drive and Research Park Drive in Lawrence, Douglas County, Kansas (Figure 1). The Project's legal location is the SW  $\frac{1}{4}$  of the NE  $\frac{1}{4}$  of the SW  $\frac{1}{4}$  and the SE  $\frac{1}{4}$  of the NW  $\frac{1}{4}$  of the SW  $\frac{1}{4}$  of Section 33, Township 12S, Range 19E.

### Project Personnel

Goodwin's Lawrence, Kansas office performed all work for the cultural resources survey. Goodwin began field work on July 10, 2024 and completed field investigations on July 11, 2024. Robert W. Conard, BA, served as Crew Lead on this Project; and Adam C. Kniffen, BA, Matthew J. Bee, BA, and Aimee E. Hanson, MSc, staffed this effort. Alan R. Potter, MA completed the Phase I background research and compiled all maps used in this report. Ms. Hanson, Shannon R. Ryan, PhD, and Mr. Potter contributed to this report.

### Report Organization

This report is organized according to standards outlined in the Kansas State Historic Preservation Office (SHPO) guidelines for cultural resources survey reports (Kansas Historical Soci-

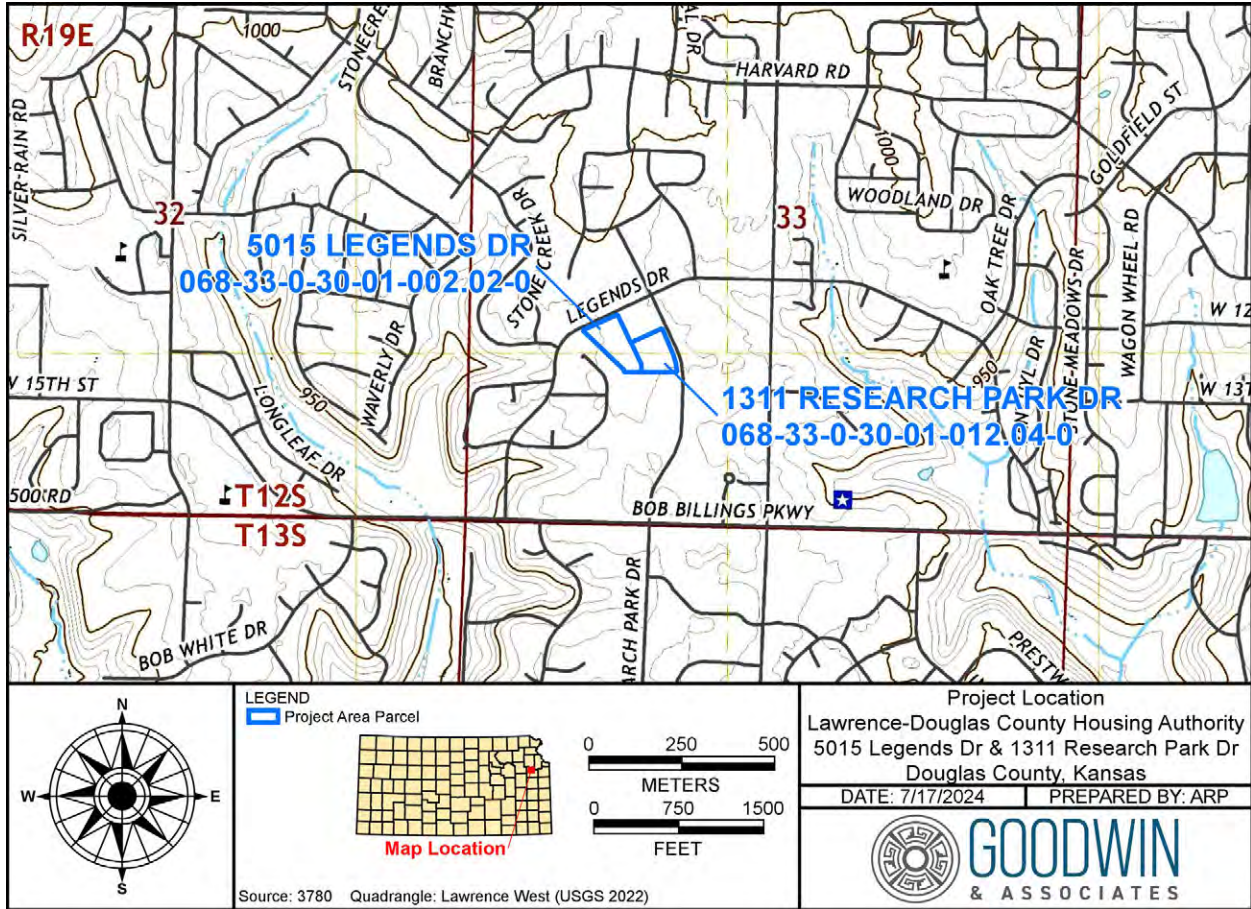


Figure 1. Location of the Project APE depicted at 1:24,000 scale (USGS 2022).

ety [KSHS] 2023a). It summarizes the environmental setting and cultural history of the Project area, the results of the Phase I background re-

search, and describes the research design, survey methods, and survey results.

---

## CHAPTER 2

# ENVIRONMENTAL AND CULTURAL SETTING

---



### Environment

The Project is located in the Osage Cuestas sub-province of the Central Lowlands physiographic province (Fenneman 1931). Long, low rolling hills and wide, shallow valleys define the Osage Cuestas, which formed through the differential erosion of Pennsylvanian-aged shale and limestone bedrock (Mandel 2006:12). The bedrock geology of eastern Kansas contains alternating layers of limestone and shale with occasional layers of sandstone (Shortridge and Shortridge 2001:6). The Pennsylvanian bedrock geology of Douglas County formed when the whole region was covered by a shallow sea of fluctuating depth. Originally the bedrock was horizontal; however, subsequent tectonic events in southern Missouri pushed igneous materials toward the surface causing the overlying rock to form a dome shape (Shortridge and Shortridge 2001:6). Remnants of this dome shape are visible at the surface in the form of north-northeast to south-southwest escarpments or cuestas that have steep eastern slopes formed by differential erosion of rock layers and gentle west facing slopes. Oread Limestone dominates the surface geology of the Lawrence area. The most dramatic example is Mount Oread, which is underlain by the Oread Limestone, upon which the University of Kansas (KU) was built (Shortridge and Shortridge 2001:7).

The Project area is located on an interfluvium between two north-to-south flowing drainages. Both of the drainages are unnamed tributaries of Yankee Tank Creek, itself a tributary of the Wakarusa River. Both streams have been modified by development construction. The unnamed tributary to the west of the Project and Yankee Tank Creek feed Lake Alvamar, formerly called Yankee Tank Lake, which is located about 0.9 miles south-southwest of the Project.

This area is in the Osage Cuestas portion of the Central Irregular Plains ecoregion (Chap-

man et al. 2001). The native vegetation of Douglas County is a diverse mosaic of tallgrass prairie, bluestem-grama mixed grass prairie, oak-hickory forest, and savannah and freshwater marsh vegetation along the Kansas River (Chapman et al. 2001; K uchler 1974). The potential natural vegetation of the Project area is mix of upland prairie and oak-hickory forest. The mixed prairie is dominated by big bluestem (*Andropogon gerardi*) and blue grama (*Bouteloua gracilis*) (K uchler 1974). The oak-hickory forest consists of white oak (*Quercus alba*), red oak (*Q. borealis*), bitter-nut hickory (*Carya cordiformis*), and shagbark hickory (*C. ovata*) (Mandel 2006). Land usage in the Osage Cuestas ecoregion includes cropland, woodland, and grassland (Chapman et al. 2001).

The modern climate of Lawrence, Kansas, is continental, characterized by large summer and winter temperature variations. Average high January and July temperatures at nearby Clinton Lake are 38° F (3.3 °C) and 88° F (31.1 °C), respectively (National Centers for Environmental Information [NCEI] 2024). Douglas County lies within the moist subhumid climatic zone where precipitation exceeds evapotranspiration (Thornthwaite 1948). Average annual rainfall is 37.74 inches (95.9 cm), and average annual snowfall is 10.4 inches (26.4 cm; NCEI 2024).

Soils in the Osage Cuestas ecoregion form from weathered limestone and shale, and are classified as silty clay loams (Chapman et al. 2001). The Project area soils are mapped as Martin silty clay loam (NRCS 2023). Martin soils are deep and very deep and moderately well drained. They form in colluvium and/or residuum on uplands. They have a typical profile consisting of Ap-BA-Bt1-Bt2-Bt3-C horizonation where the A horizon is approximately 23 centimeters (cm) thick (NRCS 2024).



## Cultural History

### Precontact Period

Table 1 presents the archaeological cultures identified for each general precontact period and broadly describes the characteristics that define the archaeological cultures associated with each period. Because no remains associated with these periods were identified in the current investigation, and no previously recorded precontact sites were identified in the vicinity of the Project during background research, an in-depth review is not included here.

The earliest evidence of human occupation in Kansas dates to the end of the Pleistocene, ca. 11,500 years ago (ya), and is associated with evidence of extinct megafauna and distinctive lanceolate spear points. The Paleoarchaic period spans the interval from 11,500-2,000 ya, and was characterized by economies reliant on the hunting and gathering of wild plant and animal resources (Blackmar and Hofman 2006).

The appearance of ceramic technology and agricultural cultivation in the archaeological record of Kansas mark the beginning of the Early Ceramic period (AD 1-1000). During this period, people became increasingly sedentary and evidence of pottery use became widespread. The bow and arrow replaced the spear thrower during this period. Early Ceramic period cultural com-

plexes identified in western Missouri and eastern Kansas include Kansas City Hopewell, Greenwood, Grasshopper Falls, and Cuesta (Hoard and Banks 2006; Logan 2006).

During the Middle Ceramic period (AD 1000-1500), people of this area generally lived in small farmsteads or villages and grew the staple crops of corn and beans. By the end of this period, a dual economy of corn agriculture and bison hunting developed on the Great Plains. The Pomona variant and Steed-Kisker phase are archaeological cultures identified in eastern Kansas and western Missouri during this period (Roper 2006; O'Brien and Wood 1998).

During the Late Ceramic (AD 1500-1800) period, the Kansas River valley was occupied by the Kansa and Osage tribes, and visited by a number of European explorers and traders. Many eastern Native American tribes were relocated to reservations in western Missouri and eastern Kansas during this period. Traditionally, Kansas prehistory ends at about AD 1541 with the Spanish explorer Coronado's historic journey to visit the ancestral Wichita villages in central Kansas. In practice, historical records are sparse for the region until about AD 1825, and archaeological investigations contribute significant information about the Early Historic period in Kansas.

**Table 1. The chronological sequence of cultures identified in the Osage Cuestas physiographic province, adapted from Hoard and Banks (2006:4).**

Cultural Period	Date	Cultures, Phases, and Complexes	Subsistence Patterns
Historic	AD 1900	Americans, including Indian Nations, and immigrants of many cultures	Farming, ranching, mineral & petroleum exploitation, light industry
	AD 1870	Shawnee, Sac & Fox of Mississippi, Ottawa, Peoria & Kaskaskia, Wea & Piankeshaw, Chippewa, Pottawatomie	Equestrian Bison Hunting, Reservations, Maize-based Horticulture
Late Ceramic	AD 1800	Osage, Kansa, Wichita	Hunting, Gathering, Maize Horticulture
	AD 1700		
		Neosho Focus	
Middle Ceramic	AD 1500	Great Bend Aspect	Hunting, Gathering, Maize Horticulture
		Pomona Variant	
Early Ceramic	AD 1000	Grasshopper Falls, Greenwood, & Cuesta Phases	Hunting, Gathering, Cultivation and Domestication of Native Plants
	AD 1		
Paleoarchaic	500 BC	Nebo Hill & El Dorado Phases	Hunting, Gathering; Incipient Cultivation of Native Plants
		Munkers Creek Phase	
	3000 BC		Hunting, Gathering
	5000 BC	Stigenwalt Complex	
	7500 BC	Dalton, Cody Complex, Allen, Frederick	
10,000 BC	Clovis, Folsom, Plainview		



### Historic Native American Tribes

During the Early Historic period (ca. 1541-1825), the Kanza and Osage peoples, among others, utilized the Project vicinity as hunting territory. The Kanza lived along the Kansas River valley and hunted both north and south of the valley. The Osage lived in western Missouri and used areas in present-day eastern Kansas as their hunting grounds. The westward expansion of Euro-Americans resulted in the forced resettlement of Native groups. Local tribes were compelled to cede ancestral lands in return for reservations elsewhere and members of several eastern tribes were relocated to Kansas Territory (Unrau 1991:51-55, 66). In 1825, the Osage signed a treaty that relinquished much of their land in present-day Kansas, including the Project area, to the United States (Royce 1899:708-709).

The Shawnee people were gradually moved westward through a series of treaties with the United States (Obermeyer 2009; Shortridge and Shortridge 2001:9). In 1825, the Shawnee signed the Treaty of St. Louis, which created a reservation for them that extended 30 mi. (48 km) south from the Kansas River and 120 mi. (193 km) west from the Missouri state line, including the Project area. This reservation was nearly 1.6 million acres, and Shawnee people began immigrating to this area in 1826 (KSHS 2023b).

In 1854, the Shawnee ceded their 1825 reservation and they were allotted lands to be selected within the portion of the 1825 reserve lying within 30 mi (48 km) of the Missouri state line, which excludes the Project area (the Diminished Shawnee Reservation (KSHS 2023b; Unrau 1991:72). After Kansas entered the Union in 1861, many Native American tribes throughout the state were removed to Indian Territory in present-day Oklahoma. By 1871, many of the Shawnee from Douglas County had relocated to Oklahoma and had been incorporated into the Cherokee Nation (Smith 2024, National Parks Service 2022).

### Euro-Americans

European land claims in North America shifted throughout the seventeenth and eighteenth centuries. The French initially claimed present-day Kansas, but ceded it to the Spanish in

1762. The Spanish returned the land to the French shortly before the United States bought it as part of the Louisiana Purchase (1803; Socolofsky and Self 1988:10). Prior to 1854, the Euro-American presence in Kansas was largely limited to traders, Indian missionaries, and military posts. After the Kansas-Nebraska Act (1854) passed and Kansas Territory was created, Euro-American settlement began in earnest, with large numbers of Euro-American farmers migrating to claim the millions of acres of land that had been made available to them (Davis and Spencer 2009:3-5). In January 1861, Kansas became a state.

The Homestead Act was passed in 1862. It offered a quarter section (160 acres) of surveyed government land to those who paid a small filing fee, occupied and improved the land for five years, and filed for a patent (Potter and Schamel 1997). On January 1, 1863, the act took effect and continued until its expiration in 1976 (Potter and Schamel 1997). The Homestead Act encouraged farmers to settle in Kansas and elsewhere. The settlement of arable land was encouraged to meet the increased demand for agricultural products during the Civil War (Davis and Spencer 2009:7-8). By 1870, Kansas had become a hub for agricultural activities and the ever-expanding railroad network, hosting a population of 360,000 and 1,234 miles of railroad, both of which contributed to the state becoming one of the most productive agricultural zones in the United States (Davis and Spencer 2009:10-11).

### *Douglas County and the City of Lawrence*

Euro-American settlers had begun staking claims in the Lawrence area before it was officially opened for settlement, and Lawrence was founded within months of the organization of Kansas Territory (Shortridge and Shortridge 2001:9; Dary 1992; Woodlawn Parent Teachers Association 1961). The City of Lawrence was established in the northeastern corner of an area ceded by Shawnees to members of the New England Emigrant Aid Company (originally the Massachusetts Emigrant Aid Company). The New England Emigrant Aid Company was founded to prevent the Kansas Territory from entering the Union as a slave state, and so the company raised money and recruited settlers to move to Kansas

to support its antislavery agenda (KSHS 2017). In June 1854, the New England Emigrant Aid Company sent two scouts, Charles Branscomb and Dr. Charles Robinson, to identify a good location for a townsite. By the beginning of August 1854, the first group of New England Emigrant Aid Company recruits had arrived in Kansas Territory (Cordley 1895). The City of Lawrence was named for Amos Lawrence, a strong supporter of the New England Emigrant Aid Company (Shortridge and Shortridge 2001:10).

*Development of West Lawrence*

West Lawrence, including the Project, was originally platted as part of Douglas County outside the city limits of Lawrence. Both the Project and the surrounding land consisted primarily of undeveloped agricultural land until the late twen-

tieth century. The City of Lawrence's population grew by 40% in the 1960s and since that decade, much of Lawrence's physical expansion has been to the west (City of Lawrence 2007; Luder 2022). Suburban development west of Lawrence was spurred in the late 1960s with the construction of the Alvamar golf course and associated residential subdivisions (Luder 2022). The Project area was annexed by the City of Lawrence in the 1980s (City of Lawrence 2007). This area has been heavily developed since 1991 with a combination of commercial office parks and residential suburban developments. The Lawrence Dragstrip Complex was originally known to be just off "Drag Strip Road." Subsequently that road was renamed Wakarusa Road, a major north-south West Lawrence thoroughfare.

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# CHAPTER 3

## PHASE I BACKGROUND RESEARCH

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Goodwin completed Phase I background research within a Study Area defined by a one-mile buffer added to the outer limits of the Project APE (KSHS 2023a). The Study Area, APE, and the results of the background research are depicted in detail on a 1:24,000-scale topographic map in Figure 2. Background research was completed to identify previously recorded historic properties and other historical cultural properties in the Study Area. Historic properties are defined as those sites, buildings, structures, objects, and districts listed in, or eligible for, the NRHP, or designated as National Historic Landmarks, or National Historic Trails (NHTs). This chapter identifies the previous cultural resources investigations and previously recorded cultural resources in the Study Area. It also describes the history of the Project Area as depicted on historical maps and aerial imagery.

### Phase I Methods

In July 2024, Goodwin completed file searches of the Study Area using the KSHS Archeological Inventory (2024a), Kansas Historic Resources Inventory (KHRI; KSHS 2024b), and the NRHP/Register of Historic Kansas Places database (KSHS 2024c) to identify historic properties listed in or eligible for the NRHP. Researchers also consulted the National Historic Trails Map (National Park Service [NPS] 2024) to identify any National Historic Trails (NHTs) designated in the Study Area. Goodwin reviewed data digitized from historic General Land Office (GLO) survey maps, georeferenced historical plat maps, USGS quadrangle maps, and aerial imagery to identify any political boundaries, cemeteries, or linear transportation features, including historic railroads, named roads, and trails, in the Study Area as well as any potential historic resources in the direct APE. Table 2 lists the historical maps

and aerial images consulted during the background research for this Project.

### Phase I Results

Goodwin identified four previous cultural resources surveys and two NHTs in the Study Area. No archaeological sites or KHRI properties have been recorded in the Study Area (KSHS 2024a, 2024b). The nearest recorded site is 14DO259, an historic stone well, located 1.7 kilometers (1.05 miles) southwest of the Project (KSHS 2024a). Mid-nineteenth century GLO maps depict two buildings, a field, and the California Road in the Study Area. No cultural resources have been previously recorded in the Project's APE; however, historical map and aerial image research led to the identification of the historical Lawrence Dragway Complex (14DO262).

### Previous Archaeological Investigations

Four cultural resources investigations have been undertaken in the Study Area, these survey areas are all located near the periphery of the one-mile buffer (Table 3; Figure 2). The surveys were completed for the Kansas Department of Transportation, NRCS, the Federal Communications Commission, and an archaeological inventory of areas to be developed in Douglas County. No archaeological sites were identified in the Study Area as a result of these investigations.

### National Historic Trails

A shared portion of the California and Oregon NHTs crosses the northern section of the Study Area (Figure 2). This route also is depicted on the GLO maps of this area as the California Road. The Oregon Trail was active between 1813 and 1869, and stretched approximately 2,170 to link the Missouri River and Oregon City, Oregon. It is estimated that between 300,000 to 400,000

**Table 2. List of historic map and aerial image resources consulted during Phase I investigations.**

Pulication Year	Author	Media Type	Title	Scale
1857	General Land Office (GLO)	Plat Map	Original Survey Plats and Field Notes	1:31,680
1857	Stuck, J. Cooper	Plat Map	Map of Douglas County, Kansas Territory	1:84,480
1858	GLO	Plat Map	Original Survey Plats and Field Notes	1:31,680
1860	GLO	Plat Map	Original Survey Plats and Field Notes	1:31,680
1873	F. W. Beers & Co.	Plat Map	Atlas of Douglas Co., Kansas	1:31,680
1885	U.S. Geological Survey (USGS)	Topographic Map	Lawrence, Kansas	1:125,000
1887	Edwards, John P.	Plat Map	Edward's Map of Douglas County, Kansas	1:31,680
1902	Geo. A. Ogle & Co.	Plat Map	Standard Atlas of Douglas County, Kansas	1:31,680
1909	Armstrong, A. W., and D. B. M. Souda	Plat Map	Plat Work and Complete Survey of Douglas County, Kansas	1:42,240
1921	Geo. A. Ogle & Co.	Plat Map	Standard Atlas of Douglas County, Kansas	1:31,680
1948	USGS	Aerial Photography	1EB0000150170	1:17,000
1950	Army Map Service (AMS)	Aerial Photography	A000700242235	1:70,000
1950	USGS	Topographic Map	Lawrence West, Kansas	1:24,000
1951	USGS	Topographic Map	Lawrence West, Kansas	1:24,000
1967a	USGS	Aerial Photography	1VBUI00010038	1:24,000
1967b	USGS	Topographic Map	Lawrence West, Kansas	1:24,000
1970	USGS	Aerial Photography	1VCMD00010106	1:24,000
1977	USGS	Aerial Photography	1VEKL00010027	1:37,000
1978	USGS	Topographic Map	Lawrence West, Kansas	1:24,000
1981	National High Altitude Photography (NHAP)	Aerial Photography	NC1NHAP810257054	1:58,000
1982	NHAP	Aerial Photography	NC1NHAP820009001	1:58,000
1985	NHAP	Aerial Photography	NC1NHAP020031007	1:58,000
1991	USGS	Aerial Photography	Lawrence West, Kansas, NE quadrant	1:6,000
2002	USGS	Aerial Photography	Lawrence West, Kansas, NE quadrant	1:6,000

**Table 3. List of archaeological surveys and associated reports conducted in the Study Area.**

Survey ID	Author	Date	Report Title	Conducted By	Conducted For
1927	Ritterbush, Lauren W. and India S. Hesse	1996	<i>Douglas County (Kansas) Archaeological Survey, 1995-1996</i>	Museum of Anthropology, KU, Lawrence.	Douglas County Archaeological Survey
2595	Weston, Timothy	1999	<i>Archeological Survey of a Road Improvement Project Along West 6th Street (U.S. Highway 40) in Lawrence, Douglas County, Kansas</i>	Archeology Office, KSHS	Kansas Department of Transportation (KDOT) Project 40-23 K-6880-01
3594	Dycus, Don L.	2005	<i>Phase II Intensive Archeological Survey of the Nextel Proposed Wakarusa-Family Practice Wireless Antenna Site, Douglas County, Kansas</i>	Don L. Dycus	Trileaf Corporation and the Federal Communications Commission
4494	Tomasic, John	2009	<i>Archeological Survey of the Wakarusa Watershed (Yankee Tank) Project, an NRCS Project in Douglas County, Kansas.</i>	Archeology Office, KSHS	NRCS, Salina, Kansas



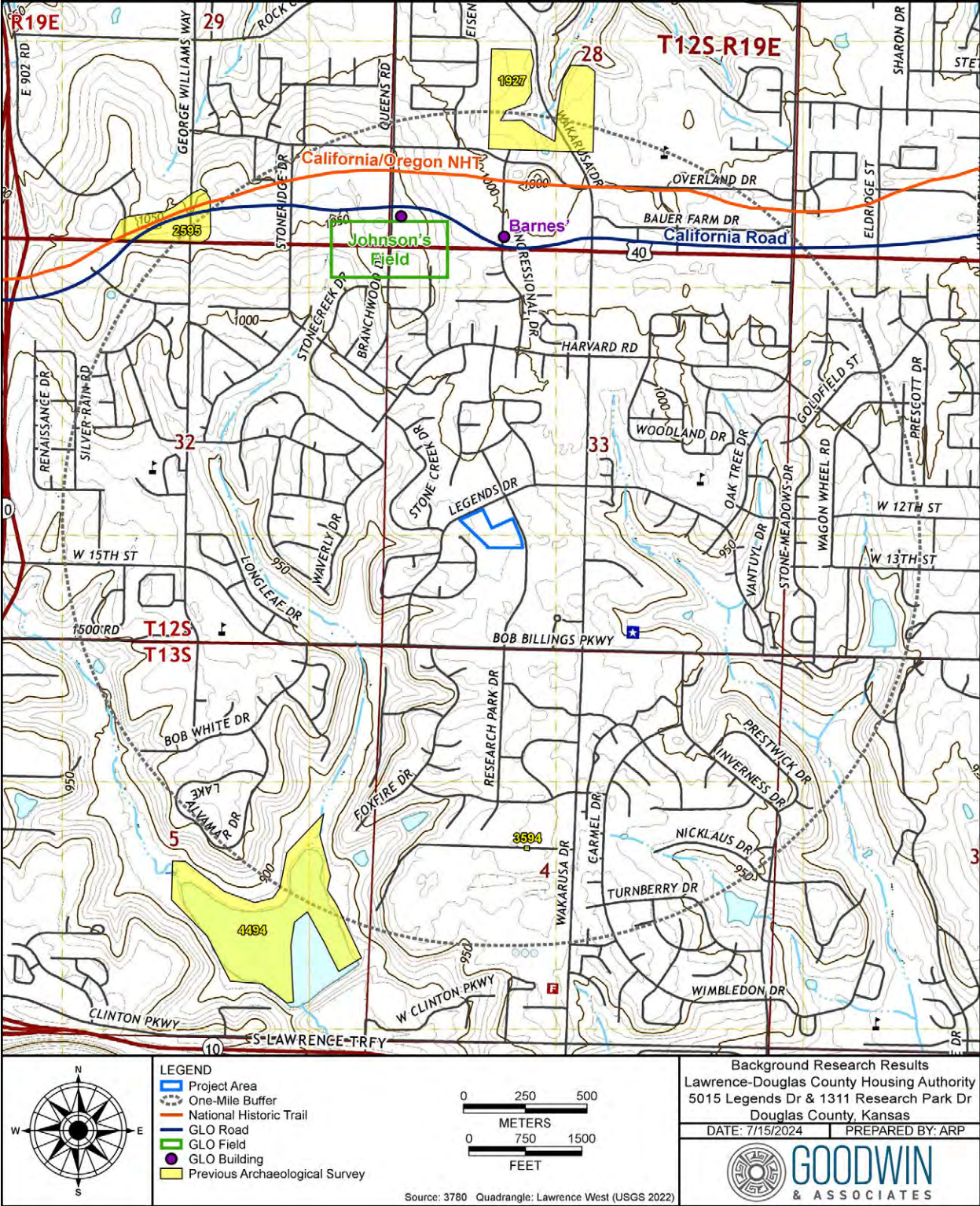


Figure 2. Mapped results of the Phase I background research for the Project APE and its Study Area.



people traversed the trail (NPS 2024). The California Trail was in use between 1841 and 1869, and was the primary route of transportation for over 250,000 migrants travelling to the state of California leading up to a during the California Gold Rush (NPS 2020). The California Trail followed a westward trajectory from the Missouri River through the plains of northeastern Kansas and central Nebraska but, unlike other trails in use during the period, had several possible starting points and various potential destinations depending on the route taken (California Trail Interpretative Center 2018). Both trails were significant to the expansion of Euro-American settlement west of the Missouri River. The Oregon Trail was designated a National Historic Trail in 1978, and the California Trail in 1992 (American Trails 2024). Although it is in the Study Area, the segment of the California and Oregon NHTs is not in the direct APE and will not be affected by the Project.

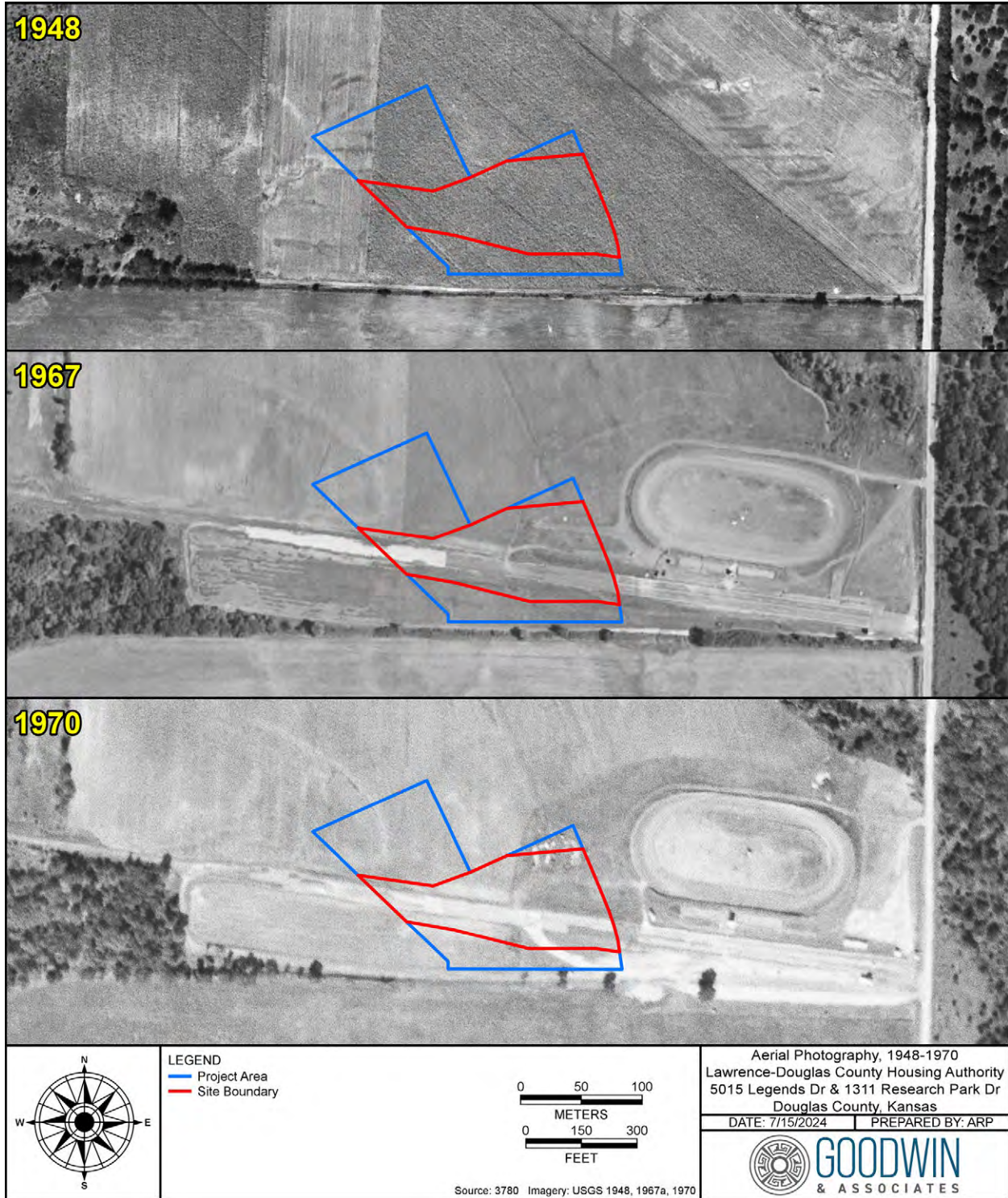
#### Historical Map and Aerial Images Review

Two buildings, a field, and the California Road are depicted in the northern portion of the Study Area on 1857-1860 GLO survey maps (Figure 2). The area around these potential resources has been developed, and the likelihood that these resources have been destroyed is high.

Prior to the mid-1950s, the entirety of the Project area was used as a cultivated agricultural field (Figure 3). This use persisted in the north-

ern portion of the Project area while the southern portion saw development in the form of the Lawrence Dragway Complex between 1958 and 1987. Racetracks at the Lawrence Dragway Complex are visible on aerial imagery from 1967 through present. In 1967, the dragstrip is visible as a narrow, linear feature running generally east-west (Figure 3). A separate racing complex constructed just north of the drag strip and northeast of the Project area – the oval-shaped Lawrence Speedway – also appears on aerial imagery at this time, though is largely demolished by 1977 (Figure 4). The Lawrence Dragway and Speedway Oval are depicted on the USGS 1967 and 1978 photorevised topographic maps (USGS 1967b, 1978). The Dragway is labeled as a “Drag Strip.” The Speedway Oval is depicted but not labeled. In addition, a series of four buildings are depicted between the Dragway and Speedway Oval.

Douglas County zoning regulations were adopted in 1966, but the Dragway received a special exemption to those regulations (Lawrence Journal-World [LJWorld] 13 September 1985:3). The Project area was annexed into the City of Lawrence in the 1980s (City of Lawrence 2007). This corresponds with the end of the use of this area for racing. By 2002, development was well underway in the vicinity of the Lawrence Dragway Complex. The Dragway had been bisected by the construction of Research Park Drive, at which time the area surrounding the drag strip was covered by a grassy field.



**Figure 3.** The Project APE and the Lawrence Dragway Complex (14DO262) site boundary depicted on historical aerial imagery from 1948, 1967, and 1970 (USGS 1948, 1967a, 1970). The Dragway was first constructed in 1958.



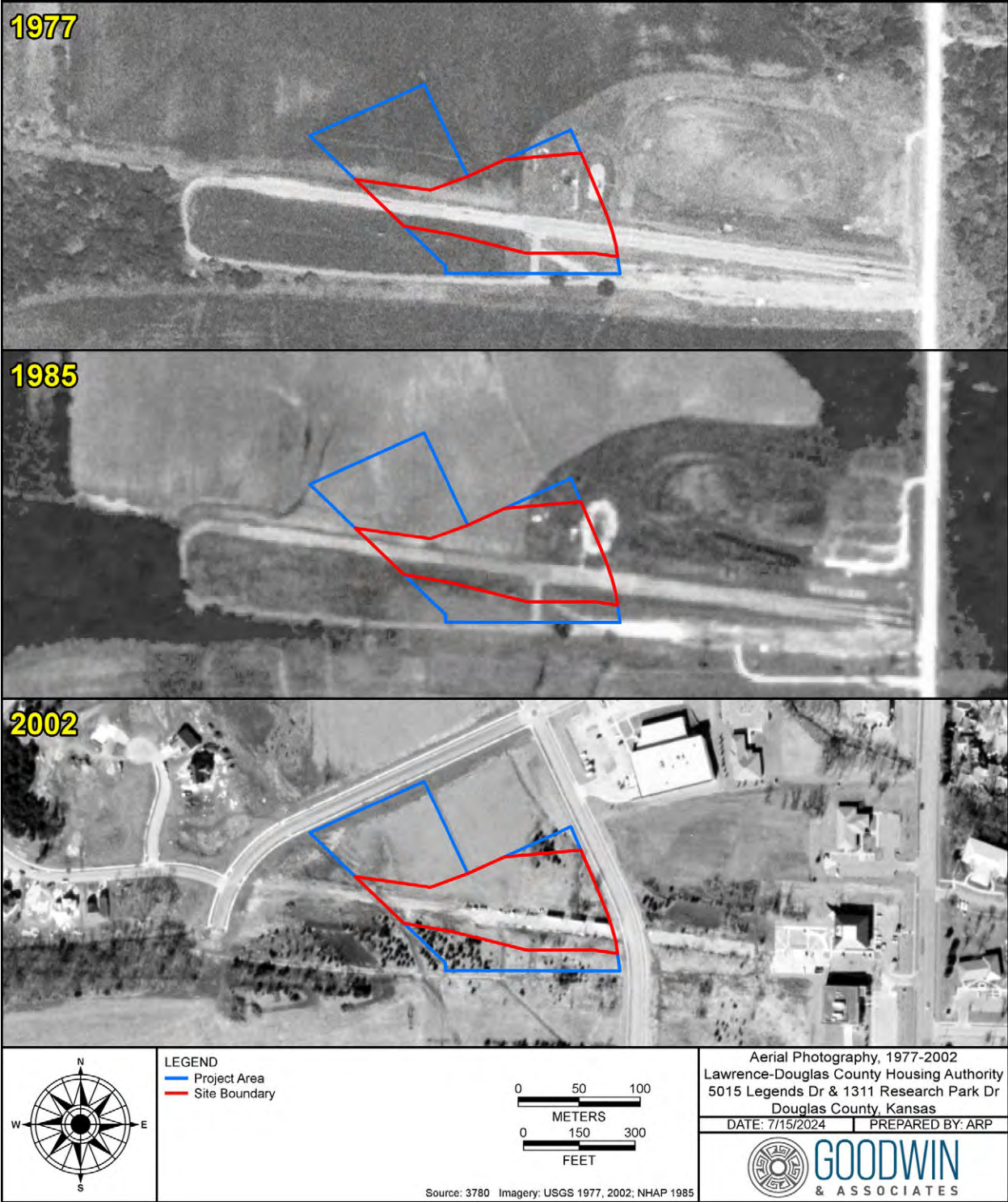


Figure 4. The Project APE and the Lawrence Dragway Complex (14DO262) site boundary depicted on aerial imagery from 1977, 1985, and 2002 (NHAP 1985; USGS 1977, 2002). The Dragway was active until 1987.

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# CHAPTER 4

## PHASE II INTENSIVE

### ARCHEOLOGICAL SURVEY

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#### **R**esearch Design

The Lawrence-Douglas County Housing Authority contracted Goodwin to complete a Phase II archeological survey of two parcels located at 5015 Legends Drive and 1311 Research Park Drive, totaling 5.26 acres. Both parcels were subject to intensive survey methods, with the goal of identifying any significant historic properties that may be present in the Project area in accordance with 36 CFR Part 800.

The Project area was inspected to identify cultural properties (e.g., prehistoric and historical archaeological sites, isolated finds, extant buildings, structures, objects and districts) that may be adversely affected by construction of the proposed Project. Identification was followed by the precise geospatial delineation of each cultural resource using a Juniper Systems Geode GNS3 running Uinta Software. Recordation was conducted in accordance with the Kansas SHPO documentation standards for archaeological sites. Recordation included photography and the collection of information needed to assess the research potential and integrity of each newly identified or unassessed cultural property. Assessments were conducted in accordance with the National Register criteria for evaluation (36 CFR 60.4[a-d]) to provide defensible recommendations of eligibility for listing in the NRHP. In this report, Goodwin provides management recommendations for the single cultural property identified. These recommendations are intended to assist in determining any effects the Project will have to listed, eligible, and potentially eligible historic properties.

Goodwin's cultural resources investigation for the Project consisted of pre-field reviews of cartographic, archival, historical, and archaeological data relevant to the areas under investigation; pedestrian inspection and delineation shovel tests; and the precise spatial recordation and NRHP eligibility assessment of all cultural resources

identified. In addition, Goodwin crew members spoke with Mr. Dailen Downing (1412 Marilee Dr, Lawrence KS 66049) on July 11, 2024. Mr. Downing, a former owner, provided information about the Lawrence Dragway Complex and the parcels after the Complex closed.

All work associated with this investigation was performed in accordance with the procedures outlined in the NHPA of 1966, as amended; the Archeological and Historic Preservation Act of 1974; the Archaeological Resources Protection Act of 1979, as amended; and Title 36 of the Code of Federal Regulations, Parts 60-66 and 800, as appropriate.

#### Evaluating Cultural Resources

The evaluation of cultural resources for listing in the NRHP requires documentation of the resource and application of criteria to assess its significance within a defined historic context (NPS 1995). Classes of properties that may be eligible for listing in the NRHP include buildings, structures, objects, sites, and districts. To be eligible for listing, properties must be considered both significant within a historic context and retain sufficient integrity to convey that significance to qualify for the NRHP. Generally, they also must be at least fifty years old. The National Register criteria for evaluation define significance as:

- an association with events that have made a significant contribution to the broad patterns of our history (Criterion A); or
- an association with the lives of persons significant in our past (Criterion B); or
- the embodiment of the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values (Criterion C); or

- having yielded, or are likely to yield, information important in prehistory or history (Criterion D) (36CFR 60.4 [a-d]).

If a property meets one of these four qualities of significance, then its integrity must be considered. Integrity includes integrity of location, design, setting, materials, workmanship, feeling, or association. For properties assessed under Criterion D, integrity signifies the availability of data that address research questions related to a historic context. To determine the integrity of archaeological sites, effort was made to define the vertical and horizontal extent of the site and to assess its depositional integrity. If a property possesses significance applying the National Register criteria for evaluation (36 CFR 60.4[a-d]) and integrity, it is recommended eligible for listing in the NRHP.

### Survey Methods

Phase II archaeological investigations of the Project area consisted of pedestrian survey and shovel testing in conformity to the requirements outlined by the Kansas SHPO (KSHS 2023a). Transects for pedestrian survey were spaced in 15 m intervals across the APE from north to south. Due to low gsv, shovel tests were excavated throughout the site at staggered 15 m intervals. Shovel tests measured approximately 35 cm in diameter and were excavated in arbitrary 10 cm levels to a minimum depth of 50 centimeters below surface (cmbs), or at least 10 cm into sterile subsoil. Excluding known utility rights-of-way, 76 pre-plotted shovel tests were planned. Sediment from each shovel test was screened through ¼-inch (0.625 cm) hardware mesh by level. Shovel test data such as soil color and texture, stratigraphic sequences, the presence or absence of cultural materials, and artifact descriptions were recorded on standardized forms, with strata and artifact depths recorded in cmbs. The locations of each shovel test were recorded using a global positioning system (GPS) of submeter accuracy.

### Archaeological Site Recordation and Delineation

The archaeological site identified during this survey was examined to ascertain its nature, size,

depth, integrity, age, and affiliation. Subsurface testing also was used to assess stratigraphic placement, artifact density, and the research potential of the site. In addition, information was gathered to assist in assessment of whether or not the site is eligible for listing in the NRHP. Archaeological recordation included a combination of the following: (1) establishment of a temporary site datum; (2) intensive surface reconnaissance of the site area within the Project area; and, (3) shovel tests excavated at 15-m (49.2-ft.) intervals to define the vertical and horizontal extent of archaeological deposits.

The site boundary was drawn to encompass the horizontal distribution of surface features, surface artifacts, and positive shovel test within the Project area. All archaeological deposits encountered during field work were mapped using a GPS unit of sub-meter accuracy. The site was documented using a Kansas archaeological site form. Artifacts encountered were recorded in the field; no artifact collection occurred.

### Survey Area Description

The area subject to archaeological investigation covers 5.26 acres of flat, grassy fields surrounded on all sides by developed properties. Figures 5 and 6 provide examples of the average ground surface visibility (gsv) conditions in the survey area, which were approximately 5%. The central portion of the Lawrence Dragway Complex (14DO262) crosses the southern portion of the Project (Figures 3 and 4). It was the only cultural resource identified in this survey. The entirety of the Project Area is mapped in the Martin soil series. The thickness of the A horizon in the Martin series generally extends to only 23 cmbs, shallower than the depth of average shovel testing, therefore deep testing was determined unnecessary to test for cultural materials at the site.

Goodwin archaeologists completed pedestrian survey and excavated pre-plotted shovel tests across the Project (Figure 7). A total of nine of the planned tests were not excavated. Eight of these tests were in 14DO262 and are described in that section, the other unexcavated shovel test (Transect 7, Shovel Test 1) was near a previously unknown marked utility.





Figure 5. Overview of the northern portion of the survey area; view is to the south. Photo by Shannon R. Ryan, 7/4/24.



Figure 6. Overview of the southern portion survey area; view is to the west. Photo by Robert W. Co-nard, 7/11/24.



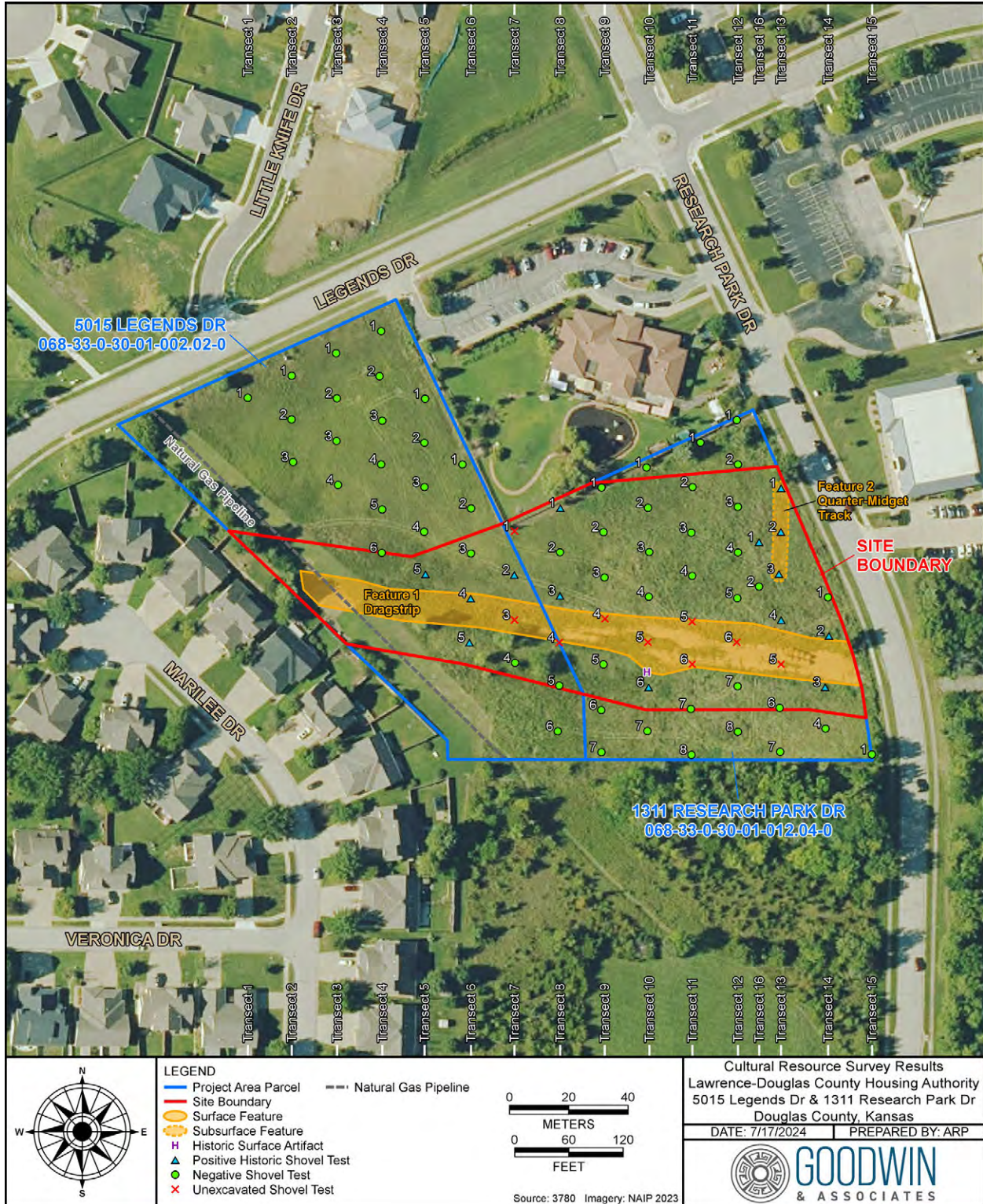


Figure 7. Plan map of the Lawrence Dragway Complex (14D0262), including shovel test locations and results and the locations and extents of features 1 and 2.

A typical shovel test in the northern portion of the Project is Transect 4, Shovel Test 3 (Table 4). This test had very dark brown (10YR 2/2) silty clay loam to 35 cmbs. The upper 9 cm exhibited evidence of plowzone disturbance. From 35 to 47 cmbs, the excavator described a brown (10YR 4/3) clay loam. This profile is consistent with the Martin soil series, which is mapped at this location (NRCS 2024). A discussion of typical shovel tests excavated in the site area is located in the following section (See Survey Results – Feature 1).

### **Survey Results**

**Site Number:** 14DO262

**Site Name:** Lawrence Dragway Complex

**Property Type:** Historical Archaeological Site

**Dates of Site Visits:** July 10-11, 2024

**Site Area:** 2.67 acres

**NRHP Recommendation:** Not eligible

Goodwin archaeologists identified a portion of the Lawrence Dragway Complex (14DO262) in the Project area. As delineated in the Project area, the site consists of a historical artifact scatter and two archaeological features that are the remains of automotive racetracks (Figure 7). Goodwin did not delineate this site outside the Project, but did observe that it extends outside the Project area. The Lawrence Dragway Complex was used as a recreational/sport locale between the late-1950s and mid-1980s (Figures 3 and 4; Lawhorn 2013; Michaelis 2022; Peterson 1977). It included a dragway, a speedway oval, and a quarter-midget track as well as associated infrastructure, stands, and buildings (Figure 8). In 2024, the portion of this site in the Project area consisted of a flat, overgrown grassy lot in the midst of developed properties (Figure 9).

### **Lawrence Dragway Complex History**

The Lawrence Dragway is the oldest purpose-built drag racing strip in Kansas (Bashore 2016). Drag racing originated in the 1950s as a grassroots activity which grew out of multiple compounding socioeconomic forces of post-war American culture. To meet the needs of the American military during the war, both soldiers and civilians worked in vast numbers manufacturing and maintaining automotive machinery; as a result, thousands of Americans entered the

post-war era with at least a basic understanding of mechanics, allowing them to personally customize and improve their automobiles. Additionally, the post-war economic boom of American industry created an economy in which purchasing an automobile was more attainable than ever before. The result of these influences was the hot-rod, or modified dragster – a standard car stripped down and replaced with custom parts designed to attain maximum speeds. Prior to the 1960s, the majority of drag races in Kansas and across the country were located on army airfields built during World War II, many of which were completely or partially abandoned in the 1950s. The paved runways of the airfields provided sufficient space to repurpose into ad hoc drag strips (Bashore 2016). While the local hot-rod clubs might return to specific airstrips or runways for a time, these were not permanent locations, and often were temporarily abandoned by drag racers after attracting attention from local law enforcement. As drag racing became more organized in the late 1950s, specially-designed, permanent drag racing tracks began to be built in the Midwest. The Lawrence Dragway was constructed during this early stage of the formal organization of drag racing.

The Lawrence Dragway dates from 1958, and was constructed by William (Bill) Price and the Lawrence High School Crusaders Club, an auto mechanics extracurricular group. At the time of construction, the drag strip was located two and a half miles outside the Lawrence City limits in Douglas County. It measured 1/8th of a mile in length – half of the 1/4-mile strip established as standard by the National Hot Rod Association, founded in 1951 (Admin 2015). The strip was built at a cost of \$10,500, which the Crusaders Club hoped to make back in entry fees paid by competitors. The Lawrence Dragway opened for its first races on June 8, 1958, with the first competition at the track taking place on June 22nd, attended by an estimated 1,000 spectators. Following the success of the first season of competitions, several improvements to the Lawrence Dragway were made in 1959 including the expansion of the dirt shutdown area and the installation of lighting to allow for night-time races. Races were held on Saturday nights throughout the summer, with events for forty-one class-



**Table 4. Descriptive information for each of the positive shovel tests as well as shovel tests that were not excavated because they were on Feature 1 with asphalt at the surface.**

Transect	Shovel Test	Result	UTM North	UTM East	Depth (cmbs)	Description	Feature
5	5	Historic	4315010	299715	40	0-10 cmbs: 2 asphalt; 10-20 cmbs: 1 asphalt, 1 flat aqua glass	1
6	4	Historic	4315002	299730	44	0-10 cmbs: 70 asphalt, 34 road gravel; 10-20 cmbs: 7 asphalt, 3 road gravel	1
6	5	Historic	4314987	299730	42	0-10 cmbs: 3 concrete, 6 asphalt, 17 road gravel; 10-20 cmbs: 4 asphalt, 37 road gravel; 20-30 cmbs: 1 composite metal wire and plastic tube, 27 road gravel, 1 burned earth	1
7	2	Historic	4315010	299745	30	0-10 cmbs: 300-350 road gravel	1
7	3	Not Excavated: Historic at Surface	4314995	299745	-	Asphalt at surface	1
8	1	Historic	4315033	299761	40	0-10 cmbs: 3 concrete	-
8	3	Historic	4315003	299760	40	10-20 cmbs: 1 asphalt	1
8	4	Not Excavated: Historic at Surface	4314987	299760	-	Asphalt at surface	1
9	4	Not Excavated: Historic at Surface	4314995	299776	-	Asphalt at surface	1
10	5	Not Excavated: Historic at Surface	4314988	299790	-	Asphalt at surface	1
10	6	Historic	4314972	299790	40	0-10 cmbs: 40 road gravel, 6 limestone, 1 concrete; 10-20 cmbs: 18 road gravel, 8 limestone	1
11	5	Not Excavated: Historic at Surface	4314994	299805	-	Asphalt at surface	1
11	6	Not Excavated: Historic at Surface	4314980	299805	-	Asphalt at surface	1
12	6	Not Excavated: Historic at Surface	4314988	299820	-	Asphalt at surface	1
13	1	Historic	4315039	299835	9	0-10 cmbs: 7 asphalt and buried intact asphalt at 9 cmbs	2
13	2	Historic	4315025	299835	25	Buried intact asphalt at 25 cmbs	2
13	3	Historic	4315010	299834	14	0-10 cmbs: 3 asphalt; buried intact asphalt at 14 cmbs	2
13	4	Historic	4314995	299835	38	0-10 cmbs: 10 asphalt, 2 road gravel; 10-20 cmbs: 2 asphalt, 1 composite brick and mortar, 1 concrete; 20-30 cmbs: 20-30 asphalt, 7 road gravel, 1 colorless lightbulb glass, 1 wire nail	1
13	5	Not Excavated: Historic at Surface	4314980	299835	-	Asphalt at surface	1
14	2	Historic	4314990	299851	50	0-10 cmbs: asphalt; 10-20 cmbs: 11 asphalt; 20-30 cmbs: 4 PVC pipe fragments and 6 asphalt; 30-40 cmbs: 4 amber glass shards, 2 concrete, 3 unidentified metal	1
14	3	Historic	4314972	299850	50	10-20 cmbs: 24 asphalt; 20-30 cmbs: 15 asphalt, 1 amber glass shard, 1 metal pull-tab; 30-40 cmbs: 3 asphalt	1
16	1	Historic	4315021	299828	35	0-10 cmbs: 2 asphalt, 1 road gravel	2

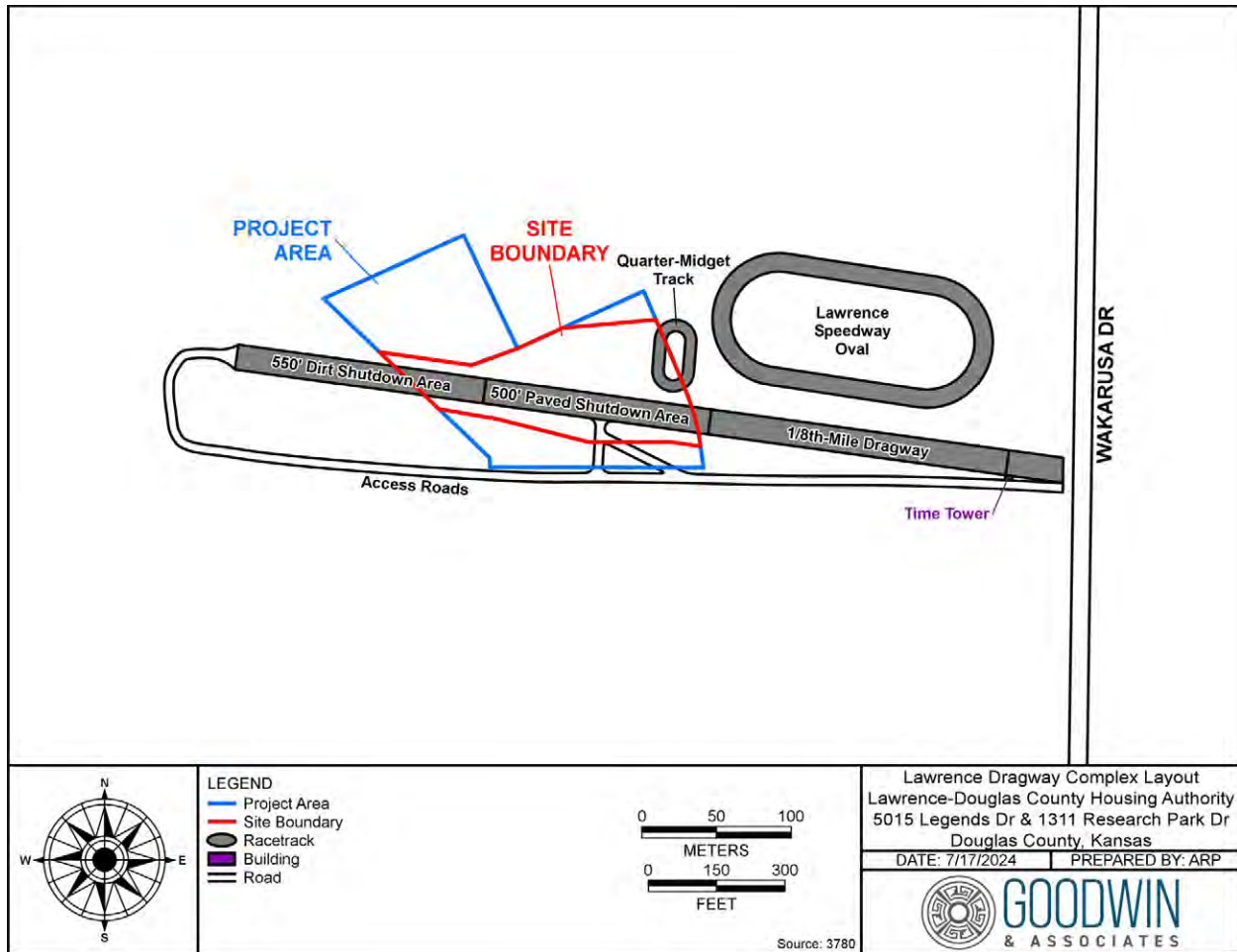


Figure 8. Lawrence Dragway Complex layout map created from historical aerial imagery. The configuration of the dragway is based on how it appears in the 1967 aerial image. By 1977, the entire shutdown area appears to have been paved. Note that this figure depicts the largest extents of the Complex, not all parts of which were in use at the same time.





**Figure 9.** Overview of the Lawrence Dragway in an overgrown lot; view is to the east. Photo by Robert W. Conard, 7/11/24.

es of vehicles (Bashore 2016, Michaelis 2022). The following year, the Dragway hosted the first annual American Hot Rod Association (AHRA) Eighth-mile Drag Championship, with separate races for various classes of cars categorized as “stock cars, gas coup sedans, street roadsters, altered coupe sedans, roadsters, gas dragsters, hot roadsters, modified roadsters, competition coupe sedans, fuel dragsters, sports cars, four bangers, and fuel coupe sedans” (Michaelis 2022). Two hundred entrants from across the United States competed in the AHRA Nationals, and bleachers were constructed at the raceway to accommodate 2,000 fans who attended the events. Around this time the north-south gravel road bordering the Dragway on the east came to be known as “Drag Strip Road” (Michaelis 2022).

Between 1960 and 1986 the track continued to successfully host weekly races, with larger events regularly drawing competitors from Colorado, Kansas, Missouri, Nebraska, Oklahoma and Texas (Lawhorn 2013; Michaelis 2022). Improvements to the track were made continu-

ally throughout the 1960s and 1970s, and other racing events were frequently introduced. In 1966, the Dragway was given special exception when zoning regulations were adopted for Douglas County, allowing it to continue operation (LJ-World 13 September 1985:3). The Dragway was visited by Art Arfons in 1967, who at the time held the world speed record for land and water vehicles (LJWorld 7 April 1967:13). Arfons reportedly set the wooden fence behind the starting line of the Lawrence Dragstrip on fire while racing his “Green Monster” car, powered by a J-2 jet aircraft engine, attempting to break the eighth-mile world speed record (Bashore 2016, LJWorld 7 April 1967:13). Motorcycle races were introduced to the drag strip in 1969 (Bashore 2016). The track was repaved in 1971, at which time larger pits and steel guardrails on both sides of the strip also were installed. A newspaper article discussing the improvements identified the Lawrence Dragway as the oldest operating drag strip in Kansas at the time of writing (LJ-World 3 April 1971:11).

A “speedway oval” known as the Lawrence Speedway consisting of a banked oval-shaped dirt track was constructed north of the Dragway starting line. It opened for its first event in April of 1967. The track was used for sprint car, motorcycle, and jalopy/modified sportsman car races (Dailen Downing, personal communication, July 11, 2024; LJWorld 20 April 1969:23). The track operated until 1973, and was demolished by 1977. A “quarter-midget” racetrack was built directly west of the Speedway in 1973. This quarter-midget track was a 1/20th mile banked oval track paved in asphalt (LJWorld 21 July 1973:9; Peterson 1977). Quarter-midget racing is a motorsport for children aged 5 to 15 in which children race one-quarter scale stock cars around a miniature track (Quarter Midgets of America 2024). Figure 9 maps the largest extents of the drag strip and shutdown areas, Lawrence Speedway, and the Quarter-Midget track, though it should be noted that not all features on this figure were present or in operation concurrently.

By the end of the 1970s, the Lawrence Dragway complex consisted of an asphalt track with a shutdown area, an open wood construction time tower positioned on the south side of the track, a spectator area on the north side, and a wooden fence behind the starting line. Another wooden fence had been constructed on the north side of the track in the late 1960s, separating it from the oval tracks north of the drag strip. Because the drag strip was not sanctioned by the AHRA, several regulation safety features including track barriers were not installed on the site. Personal accounts of racers and spectators record that a typical race evening at the track began with the opening of the gates in the late afternoon, picnicking and barbecuing on site by spectators, and racing beginning after sunset (Hastert 2014).

The Lawrence Dragway was permanently closed in 1987, following the annexation of the area surrounding the drag strip by the City of Lawrence (Michaelis 2022). The majority of the land adjacent to the track was purchased by the Alvarado Real Estate Company, who converted the area to residential developments on the east and office parks on the west. “Drag Strip Road” was renamed Wakarusa Drive. Research Park Drive was built through the drag strip in 2002.

### Current Investigation

A team of four Goodwin archaeologists conducted pedestrian survey and shovel testing at 14DO262. Eight of the pre-plotted shovel tests were situated on an asphalt racetrack that was designated Feature 1 (Figure 7). As this racetrack was visible on the surface, those tests were not excavated. Archaeologists also identified a single brick on the surface of the site. Goodwin crew excavated 14 shovel tests that were positive for cultural materials. Three of these tests (Transect 13, Shovel Tests 1-3) contained an in situ asphalt racetrack (Feature 2).

### *Feature 1*

Feature 1 is a historic asphalt drag strip that extends approximately 623 feet (189.9 m) across the Project. Archaeologists also observed this feature continuing east of Research Park Drive outside of the Project area; in total, approximately 1,000 feet (304.8 m) of the drag strip is extant (Figure 10). The best-preserved portions of the drag strip are 48.2 feet wide (14.6 m; Figure 11). In the surveyed area, the asphalt that makes up this feature is broken and patchy (Figure 12).

Eight of the pre-plotted shovel tests were located directly on intact portions of the drag strip with extant surface asphalt paving (Table 4). Nine shovel tests to the immediate north and south of Feature 1 also were positive for associated cultural materials. Asphalt fragments and road gravel dominated the artifacts identified in these tests. Other artifacts associated with operation of the Dragway were present either in small quantities, including automotive wiring, and amber glass bottle fragments and can pull tabs associated with beverage consumption at the site.

The shovel test profiles observed in shovel tests were similar to those in the northern portion of the Project; however, they commonly also exhibited evidence of disturbance related to the site’s construction, maintenance, and abandonment. Transect 10, Shovel Test 6 consisted of a stratum of very dark brown (10YR 2/2) silty clay loam mottled with 20% very dark grayish brown (10YR 3/2) silty clay loam from 0-30 cmbs. From 30-40 cmbs, there was a dark grayish brown (10YR 4/2) silty clay. This test yielded





Figure 10. Overview of the eastern portion of the Lawrence Dragway. Note, this segment of the Dragway was not in the Project area. View is to the west. Photo by Shannon R. Ryan, 7/4/24.



Figure 11. Overview of the Lawrence Dragway from Research Park Drive; view is to the west from Research Park Drive. Photo by Robert W. Conard, 7/11/24.





**Figure 12.** Overview of the Lawrence Dragway; view is to the east from the western edge of the Project Area. Photo by Robert W. Conard, 7/11/24.

fragments of concrete, limestone, and road gravel from 0-20 cmbs (Table 4).

### *Feature 2*

Feature 2, in the northeastern portion of 14DO262, is the western portion of a historic asphalt quarter-midget track (Figures 7 and 8). This subsurface feature was identified as intact asphalt in three shovel tests (Transect 13, Shovel Tests 1-3) at depths of 9-25 cmbs (Figure 13; Table 4). Although the portion of Feature 2 in these shovel tests appears to be intact, like Feature 1, this race-track has been bisected by Research Park Drive and disturbed by the construction of a building east of the road.

Historic maps and aerial imagery indicate that this feature is part of the Quarter-Midget Track, built just north of the dragstrip and opened in 1973 (Figure 4; LJWorld 21 July 1973:9). This track consisted of a banked asphalt oval that was 1/20 of a mile long and generally oriented north-south. Quarter-midget racing is a motorsport for children aged 5 to 16 in which children race one-

quarter scale stock cars around a miniature track (Quarter Midgets of America 2024).

After Transect 13, Shovel Tests 1-3 yielded evidence of an asphalt track, two additional shovel tests were excavated (Transect 16, Shovel Tests 1-2) just west of the feature to test an area that appeared to have viewing stands or a structure. One of those tests was negative for cultural material. The other, Transect 16, Shovel Test 1, contained asphalt and road gravel, but no intact feature remains (Table 4).

### *Artifact Assemblage*

Archaeologists observed one surface artifact, a complete red brick. The other artifacts observed were identified in 14 positive shovel tests. Three of these tests revealed the intact asphalt of Feature 2. An additional six shovel tests yielded only asphalt, road gravel, limestone, and concrete fragments all thought to be associated with the race-tracks and associated pathways (Table 4). The remaining five positive shovel tests were all located just north and south of Feature 1 and includ-





**Figure 13.** Photograph of Transect 13, Shovel Test 3 with intact asphalt at 14 centimeters below surface. This is one of three shovel tests with intact asphalt identified as Feature 2, part of the Quarter-Midget Track.

ed fragments of asphalt, concrete, and road gravel as well as composite, glass, metal, and manufactured/synthetic items. The glass material class included one shard of flat aqua glass, one colorless shard of light bulb glass, and five shards of amber bottle glass. Metal artifacts included a wire nail, a pull-tab, and three unidentified metal fragments. Pull-tabs of this type with a hole in the “handle” were manufactured between 1965 and 1975. Finally, the manufactured/synthetic items consisted of a small PVC pipe. The composite items included a fragment of brick and mortar and metal wires with plastic insulation. The wires appeared

to be in situ as they were identified in Transect 13, Shovel Test 4 and extended the same direction as Feature 1 (Figure 7).

Overall, the artifact assemblage is relatively sparse and consists primarily of materials used in the construction of the racetracks and their associated facilities. Some materials, including glass bottle shards and the pull tab, were likely left behind by spectators. The artifact assemblage is consistent with a mid to late twentieth century origin consistent with the Lawrence Dragway Complex.



### **Discussion and NRHP Recommendation**

The Lawrence Dragway Complex was a mid to late twentieth century automotive racing complex that included an 1/8th mile dragway and a 1/20th mile speedway track, both of which were paved in asphalt. Archival research indicates that the drag strip was in use between 1958 and 1987. The miniature speedway was built in 1973 for children's Quarter-Midget racing, and appears to have operated until the mid-1980s when the Complex closed. Portions of both the drag strip (Feature 1) and the miniature speedway (Feature 2) were identified during this survey. Aside from these features, nearly all of the identified artifacts are portions of these racetracks and associated infrastructure. A sparse artifact scatter that may be attributed to the materials spectators left behind also was identified.

The Lawrence drag strip was the first purpose-built, permanent drag strip constructed in the state, and its establishment and usage predates the widespread formalization of the sport of drag racing. During its operation, the Dragway attracted competitors from across eastern Kansas. Other drag strips from this period often were used only for a year or two, but the Lawrence Complex was used for a variety of races on the dragway, speedway, and quarter-midget track for nearly 30 years.

The Lawrence Dragway Complex (14DO262) is an historical archaeological site associated with a mid-to-late twentieth century recreation and sport in northeast Kansas historic context (Criterion A). While the Dragway was visited by persons important to the history of automotive sports, the site has no significant association with any of these individuals (Criterion B). As the site is lacking the majority of built features original to the dragway and has been fragmented by the construction of Research Park Drive and other development, the Lawrence Dragway does not embody the distinctive characteristics of a significant mid to late twentieth century racing site (Criterion C). Finally, the site is unlikely to yield information important to history (Criterion D).

Goodwin evaluated the integrity of the Lawrence Dragway Complex to determine its ability to convey its significance (NPS 1995). Due to the

space requirements and racing noise, the Complex was purposely constructed in a rural setting outside the Lawrence city limits. In 2024, the site is surrounded by commercial and residential development and associated infrastructure, which negatively affects its qualities of location, design, and setting. Although the site has not moved, its relationship with its original environs is important to understanding why it was built and thrived at this location. This is conveyed when looking at historical imagery, but not at physical remains. The physical remains cannot convey the original design elements of spatial organization and scale. The quality of setting consists of the character of the place, which has dramatically changed since the Complex closed in the mid-1980s.

All buildings and aboveground structures associated with this site have been removed and the existing features are incomplete and deteriorated, which affects the sites qualities of materials and workmanship. When the Complex was active, it included a time tower, overhead lighting, grandstands, guardrails, and fences. All of these elements have been removed and the physical remains of features 1 and 2 have been bisected by Research Park Drive and disturbed by other development and vegetation. In addition, a housing development has encroached on the west end of Feature 1 and a building has been constructed in the vicinity of Feature 2. The removal of the aboveground elements and development in the vicinity have compromised the site's ability to convey the qualities of feeling and association. Within the Project area, the site contains only a portion of the racetracks and they do not retain the physical features necessary to convey its significance (NPS 1995).

The Lawrence Dragway Complex (14DO262) within the Project was evaluated applying the National Register criteria for evaluation (36 CFR 60.4[a-d]). The site is significant under Criterion A for its association with mid to late twentieth century recreation and sport in northeast Kansas. However, the portion of 14DO262 in the Project area does not retain the qualities of integrity necessary to convey its significance. Goodwin recommends the portion of 14DO262 in our Project area not eligible for listing in the NRHP.

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## CHAPTER 5

# MANAGEMENT SUMMARY

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In July 2024, Goodwin completed an archaeological investigation of R10774 (PIN 068-33-0-30-01-002.02-0) at 5015 Legends Drive and R10797 (PIN 068-33-0-30-01-012.04-0) at 1311 Research Park Drive in Lawrence, Douglas County, Kansas. The Lawrence-Douglas County Housing Authority has selected these parcels as the Project area to construct proposed affordable housing. Goodwin completed pedestrian survey and excavated shovel tests at staggered 15-m intervals throughout the Project area and identified one historical archaeological site, 14DO262. Site 14DO262, the Lawrence Dragway Complex, consists of a sparse scatter of historical artifacts not related to the construction of the racetracks, the remains of the Lawrence Dragway, and the buried remnants of an associated Quarter-Midget racing track.

Goodwin assessed the part of 14DO262, the Lawrence Dragway Complex, in the Project area

applying the National Register Criteria for Evaluation (36 CFR 60.4[ad]) and recommends it not eligible for listing in the NRHP. The Lawrence Dragway lacks those qualities of integrity and significance defined by the National Register criteria for evaluation (36 CFR 60.4 [a-d]). The portion of the Lawrence Dragway Complex Goodwin recorded is in the proposed Project's direct APE and will be impacted by the project. However, as 14DO262 is not a historic property, no further archaeological investigation is recommended.

Goodwin recommends a determination of "no historic properties affected" for the Project at R10774 (PIN 068-33-0-30-01-002.02-0) at 5015 Legends Drive and R10797 (PIN 068-33-0-30-01-012.04-0) at 1311 Research Park Drive in Lawrence. No further cultural investigations are recommended for the Project at this time.

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## 14DO262 — Kansas Archeological Site Inventory

**Site number:** 14DO262 **Site name:** Lawrence Dragway Complex  
**County:** Douglas **Site type:** Recreation/Sports Racetracks  
**Original or revision:** Original **UBS number:** Not assigned  
**Component:** Single  
**General Time Period(s):** **Specific time period(s):**  
Historic European/American/Afro-American: Unknown

**Cultural affiliation:** Mid to Late Twentieth Century American

**Site description:** Goodwin & Associates, Inc. (Goodwin) archaeologists identified a portion of the Lawrence Dragway Complex on July 11, 2024 as part of an archaeological investigation of two parcels in West Lawrence near the intersection of Legends Drive and Research Park Drive (Figures 1 and 2). The Lawrence Dragway Complex consists of several automotive racing tracks and associated features that were present in this area between the late-1950s and mid-1980s (Figures 3-5; Lawhorn 2013; Michaelis 2022; Peterson 1977). In 2024, the portion of this site in Goodwin's survey area consisted of a flat, overgrown grassy lot in the midst of developed properties (Figure 6). Goodwin archaeologists completed pedestrian survey and excavated pre-plotted staggered 15 m interval shovel tests across the area (n = 76), excluding utility rights-of-way. Average ground surface visibility in the survey area was 5%. The only cultural resource identified was the Lawrence Dragway Complex. The central portion of this Complex extends across the southern portion of the Project Area (Figure 5).

Eight of the pre-plotted shovel tests were situated on an asphalt racetrack designated Feature 1. These tests were not excavated. Goodwin excavated 14 shovel tests that were positive for cultural materials. Three of these tests (Transect 13, Shovel Tests 1-3) contained an in situ asphalt racetrack (Feature 2).

Feature 1 is a historic asphalt drag strip that extends approximately 623 feet (189.9 m) across the 2024 Project Area. Archaeologists also observed this feature continuing east of Research Park Drive outside of the Project Area; in total, approximately 1,000 feet (304.8 m) of the drag strip is extant (Figure 7). The best-preserved portions of the drag strip are 48.2 feet wide (14.6 m; Figure 8). In the surveyed area, the asphalt that makes up this feature is broken and patchy (Figure 9).

Feature 2, in the northeastern portion of the site, is the western portion of a historic asphalt quarter-midget track (Figures 2 and 5). This subsurface feature was identified as intact asphalt in three shovel tests (Transect 13, Shovel Tests 1-3) at depths of 9-25 centimeters below surface (Figure 10). The Quarter-Midget Track at this location consisted of a banked asphalt oval that was 1/20 of a mile long and generally oriented north-south (Figure 4 and 5). The Quarter-Midget Track at the Lawrence Dragway Complex opened in 1973 just north of the dragstrip (Lawrence Daily Journal-World 21 July 1973:9). Quarter-midget racing is a motorsport for children aged 5 to 15 in which children race one-quarter scale stock cars around a miniature track (Quarter Midgets of America 2024).

**Artifacts observed but not collected:** Archaeologists observed one surface artifact, a complete red brick. The other artifacts observed were identified in 14 positive shovel tests. Three of these tests revealed the intact asphalt of Feature 2. An additional six shovel tests yielded only asphalt, road gravel, limestone, and concrete fragments all thought to be associated with the racetracks and associated pathways. The remaining five shovel tests were all located just north and south of Feature 1 and included fragments of asphalt, concrete, and road gravel as well as composite, glass, metal, and manufactured/synthetic items. The glass material class included one shard of flat aqua glass, one colorless shard of light bulb glass, and five shards of amber bottle glass. Metal artifacts included a wire nail, a pull-tab, and three unidentified metal fragments. Finally, the manufactured/synthetic items consisted of a plastic tube. The composite items included a fragment of brick and mortar and metal wires with plastic insulation.

**Artifacts collected:** None.

**Location of artifacts:** None listed

**Present condition:** Brush  
City/Town Occupied  
Cultivated  
Grassland  
Woods

**Disturbance to site:** The site has been significantly disturbed by development activities in the last three decades. This includes the construction of Research Park Drive through the site as well as housing at the west end and commercial buildings on the east end of the potential site area.

**Site has been tested:** Yes **Site has been excavated:** No **NRHP status:** Site has been evaluated.  
Evaluated on 18-Jul-2024.  
Site is not eligible.  
Site is not listed.

**Recommendations for further work:** No further work is recommended. For more information see:  
Hanson, Aimee E., Alan R. Potter, and Shannon R. Ryan. 2024. Intensive Archeological Survey of 5.26 acres at 5015 Legends Drive and 1311 Research Park Drive, Lawrence, Kansas. Goodwin & Associates, Inc. Report submitted to Lawrence-Douglas County Housing Authority, Lawrence, Kansas.

**Comments:** The Lawrence Dragway Complex is a mid to late twentieth century automotive racing complex that included an eighth-mile drag strip and a miniature speedway track, both of which were paved in asphalt. Archival research indicates that the drag strip was in use between 1958 and 1987. The miniature speedway was built in 1973 for children's Quarter-Midget racing, and appears to have operated until the mid-1980s when the Complex shut down. Portions of both the drag strip (Feature 1) and the miniature speedway (Feature 2) were identified in the survey. Aside from these features, nearly all of the artifacts identified are portions of these racetracks and race track infrastructure. Some artifacts may be attributed to the materials spectators left behind.  
The racing complex was evaluated applying the National Register criteria for evaluation (36 CFR 60.4[a-d]). Goodwin recommends the portion of the Lawrence Dragway Complex in our Project Area not eligible for listing in the NRHP.

**Historic maps, references, or informants:** Several historical aerial images and two USGS photorevised topographic maps depict the Lawrence Dragway Complex (Figures 3 and 4; USGS 1967b, 1978). Mr. Dailen Downing (1412 Marilee Dr, Lawrence KS 66049) provided information about the Lawrence Dragway Complex and the parcels after the Complex closed. Additional information was gathered from the Lawrence Dragway Facebook group (<https://www.facebook.com/groups/53833179629>) and the documentary Lawrence Dragway: Life in the Fast Lane (Hastert 2014).



**Site owner or tenant:** Mazda LLC  
4705 McCormick Street  
Lawrence , KS 66047

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**Topographic location:** Upland

**Drainage:** The project area is located in the vicinity of two streams, both of which are unnamed tributaries of Yankee Tank Creek, itself a tributary of the Wakarusa River.

**USGS map name:** Lawrence West

**USGS map date:** 2022

**Legal location:** 1. Section: SW, NE, SW of 33 Township: 12 S Range: 19 E  
2. Section: SE, NW, SW of 33 Township: 12 S Range: 19 E  
3. Section: None listed Township: Range:  
4. Section: None listed Township: Range:

UTM datum: NAD83 1. N 4314987 E 299688 2. N 4315025 E 299649 3. N 4315047 E 299834 4. N 4314962 E 299864

**Area:** 2.67 acres

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**Recorded by:** Lawrence Goodwin  
850 E. 13th St., Suite C  
Lawrence  
KS , 66044 785-856-0744  
lawrence@rcgoodwin.com

**Affiliation:** Archeological Contractor

**Agency/Company name:** R. C. Goodwin & Associates, Inc.

**Record Date:** 18-Jul-2024

*Last updated 22-Jul-2024*

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**Radiocarbon dates:** None listed.

**Bibliography:** None listed.

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## References, Maps, and Photographs for 14DO262, the Lawrence Dragway Complex, Site Form

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Maps and Photographs

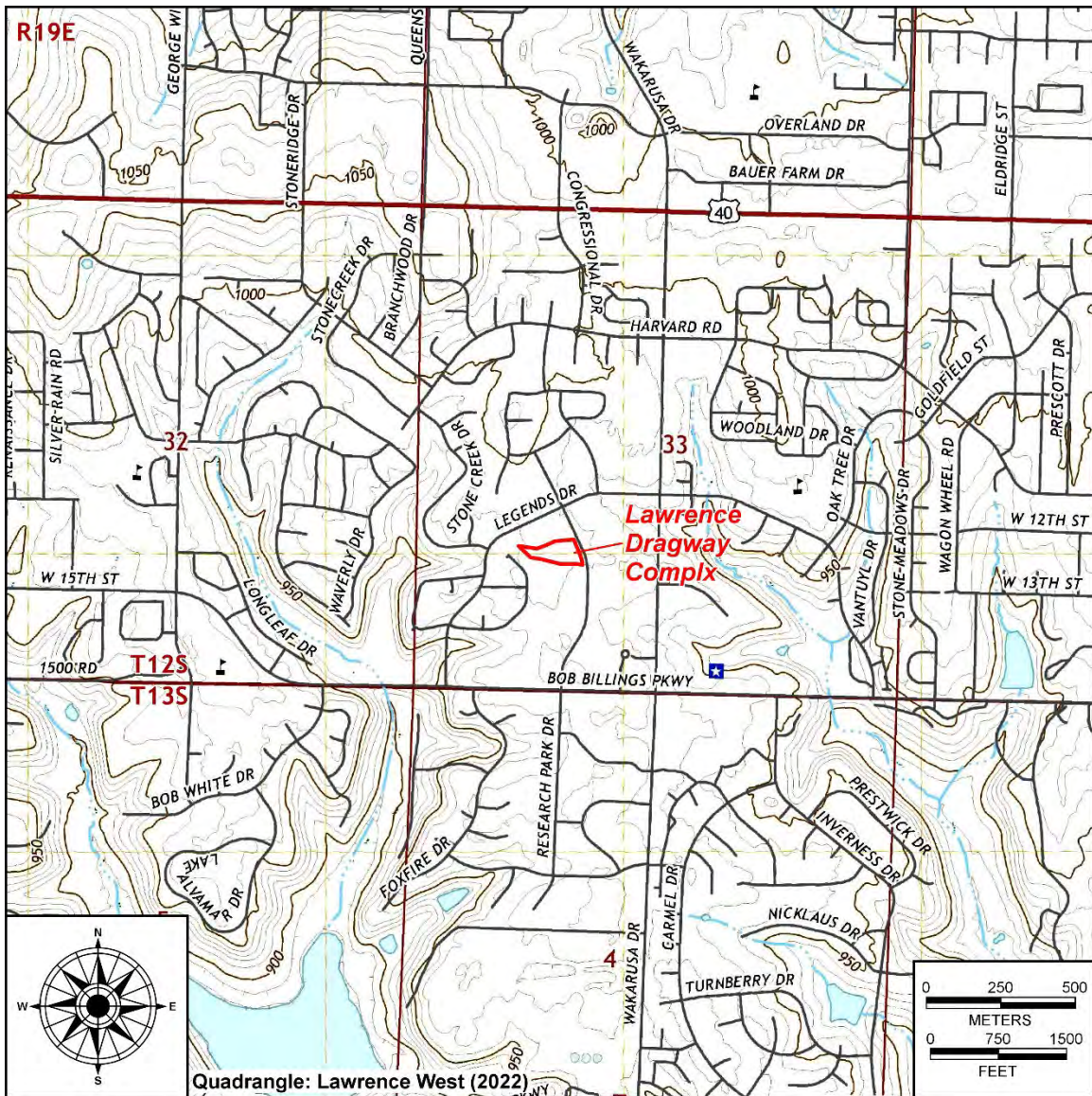


Figure 1. Topographic map depicting the location of 14DO262, the Lawrence Dragway Complex, on the Lawrence West (2022) USGS quadrangle.



References, Maps, and Photographs for 14DO262, the Lawrence Dragway Complex, Site Form

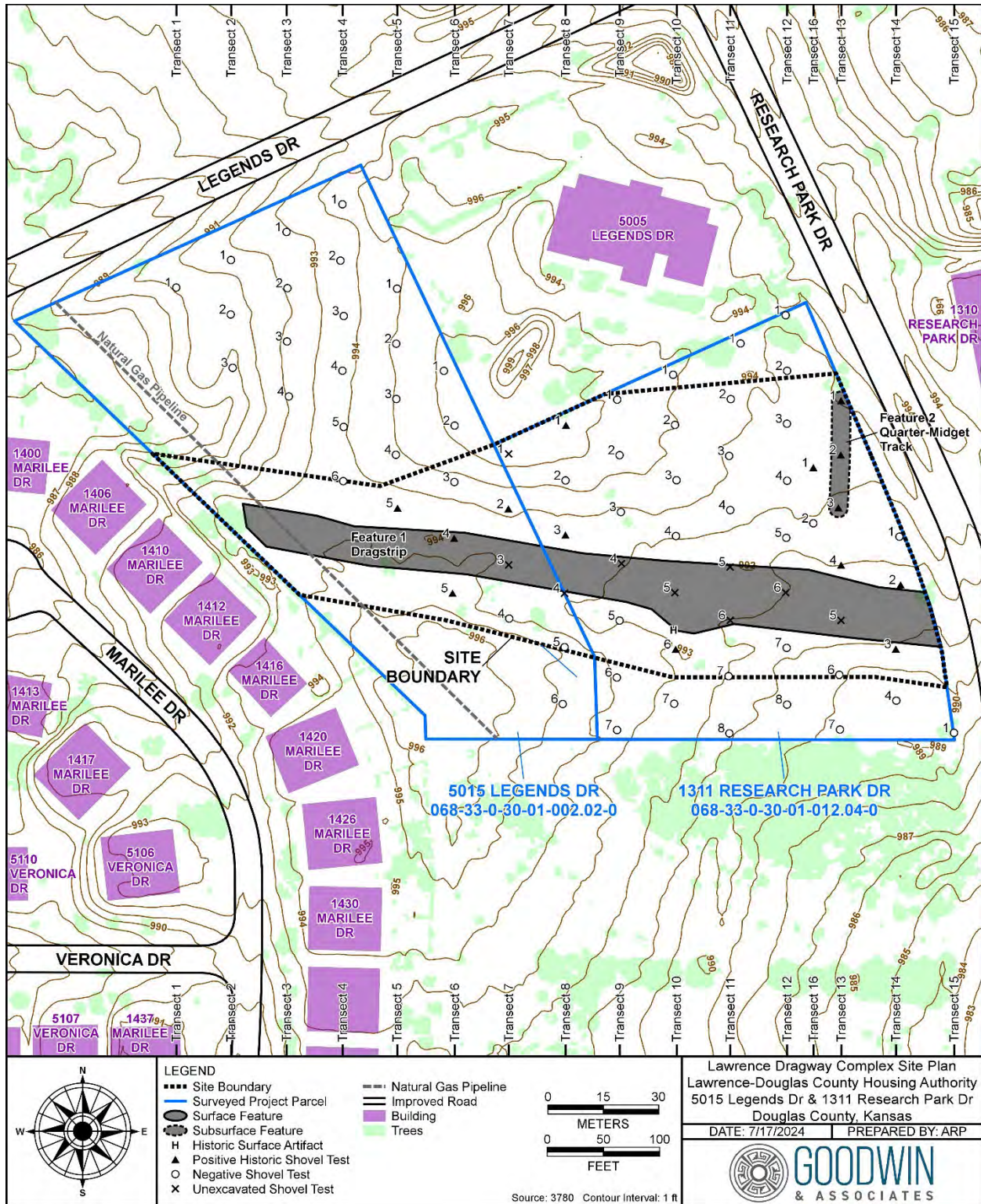


Figure 2. Lawrence Dragway Complex (14DO262) site plan.



References, Maps, and Photographs for 14DO262, the Lawrence Dragway Complex, Site Form

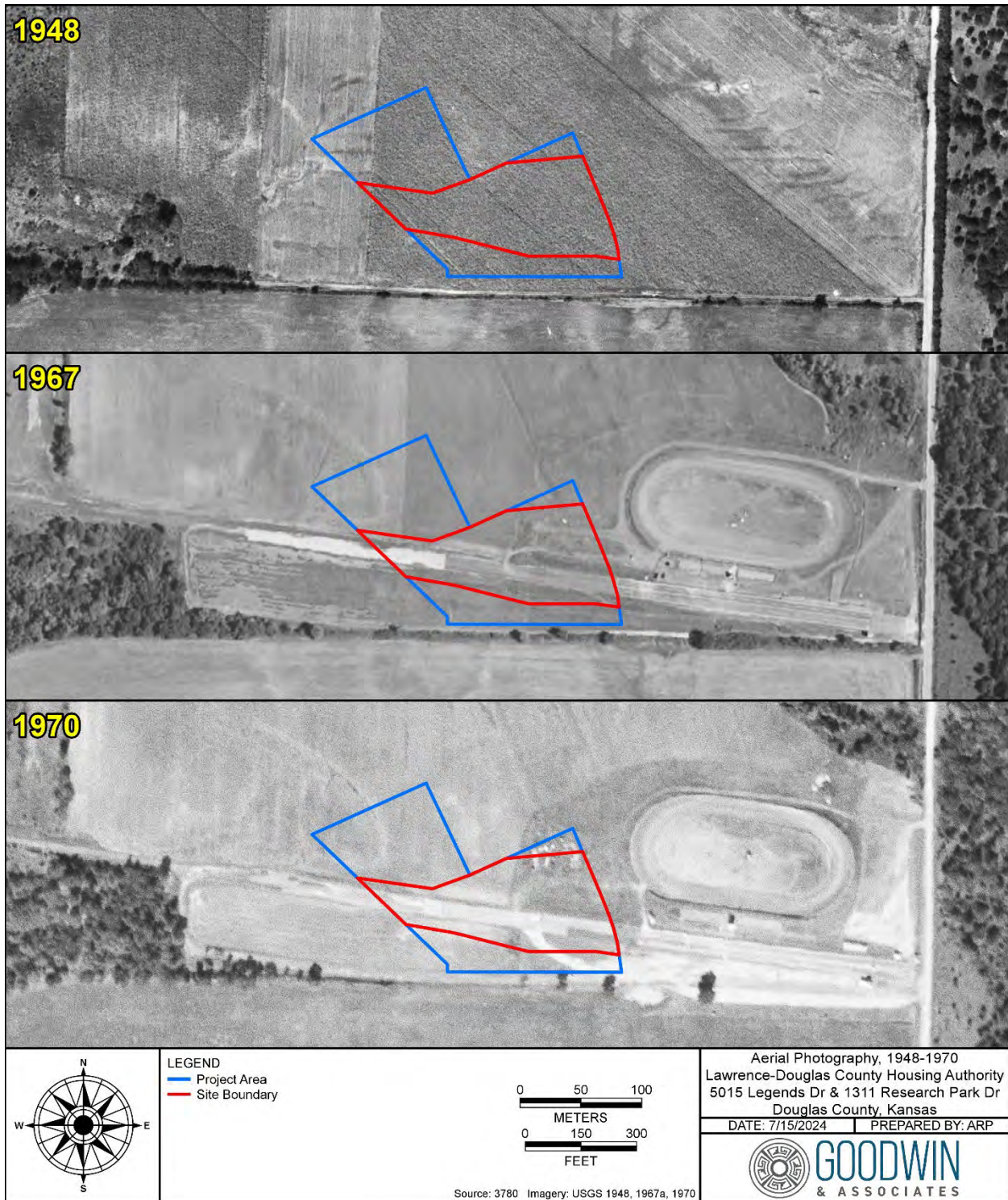


Figure 3. Historical aerial imagery of the Lawrence Dragway Complex (14DO262) between 1948 and 1970.



References, Maps, and Photographs for 14DO262, the Lawrence Dragway Complex, Site Form

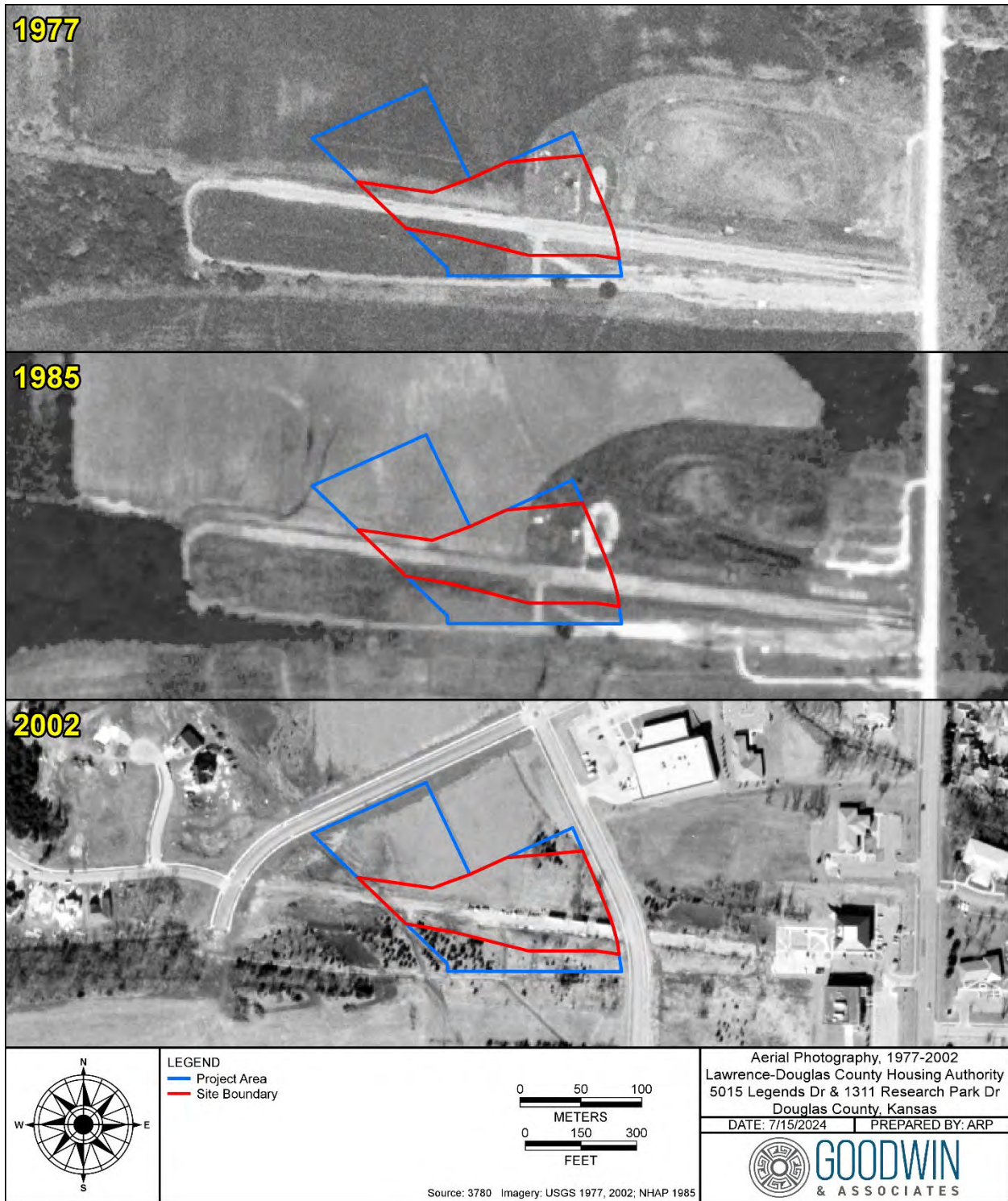


Figure 4. Aerial imagery of the Lawrence Dragway Complex (14DO262) between 1977 and 2002.

References, Maps, and Photographs for 14DO262, the Lawrence Dragway Complex, Site Form

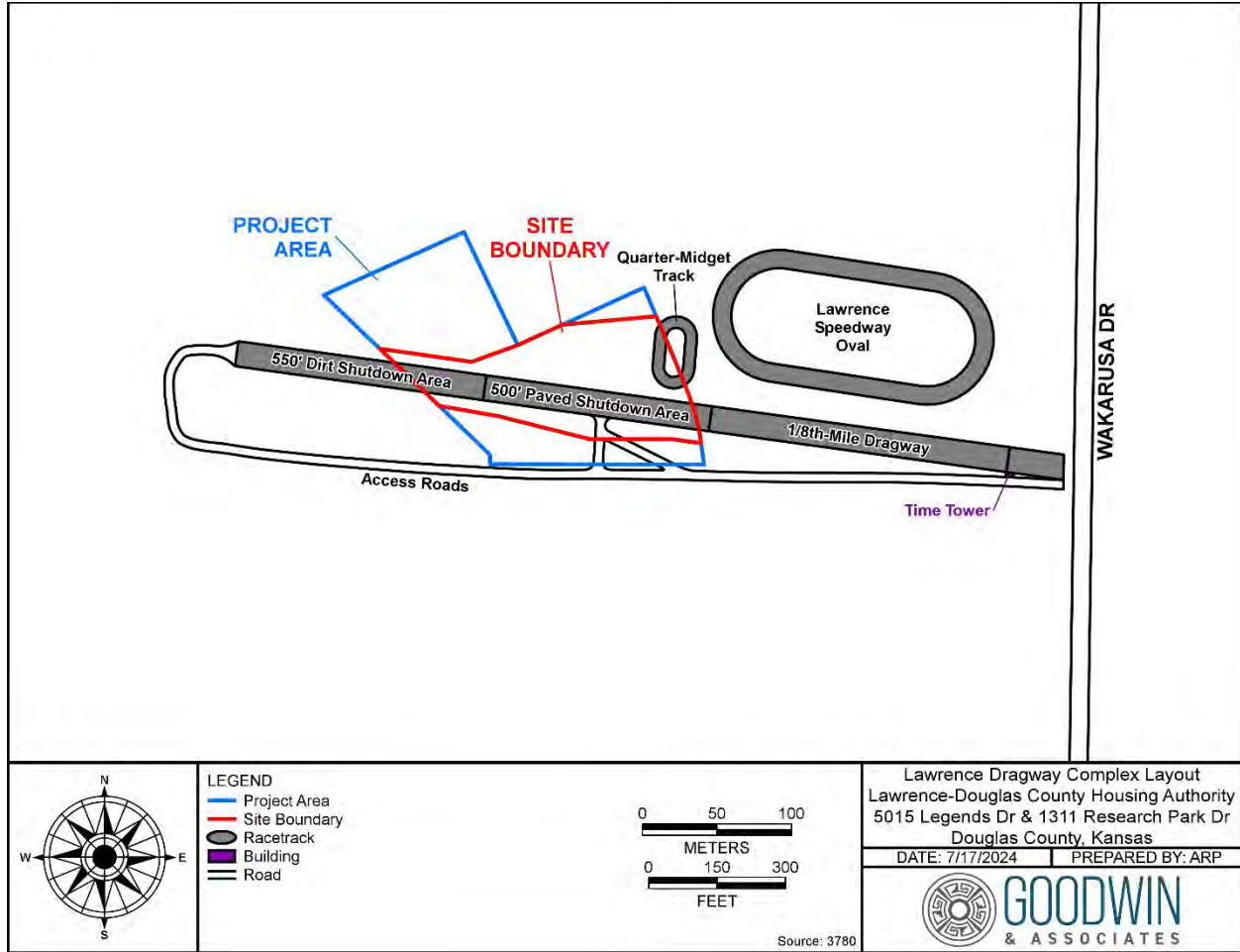


Figure 5. Lawrence Dragway Complex layout map created from historical aerial imagery. The configuration of the dragway is based on how it appears in the 1967 aerial image. By 1977, the entire shutdown area appears to have been paved.



**References, Maps, and Photographs for 14DO262, the Lawrence Dragway Complex, Site Form**



**Figure 6. Overview of the Lawrence Dragway (14DO262, Feature 1) in an overgrown lot; view is to the east.**



**Figure 7. Overview of the eastern portion of the Lawrence Dragway as it appeared in July 2024. Note, this segment of the Dragway was not in the area surveyed. View is to the west.**



**References, Maps, and Photographs for 14DO262, the Lawrence Dragway Complex, Site Form**



**Figure 8. Overview of the Lawrence Dragway (14DO262, Feature 1) from Research Park Drive; view is to the west from Research Park Drive.**



**Figure 9. Overview of the Lawrence Dragway (14DO262, Feature 1); view is to the east from the western edge of the Project Area.**





**Figure 10. Photograph of Transect 13, Shovel Test 3 with intact asphalt at 14 centimeters below surface. This is one of three shovel tests with asphalt identified as Feature 2, part of the quarter-midget track at 14DO262.**



## Noise (EA Level Reviews)

General requirements	Legislation	Regulation
HUD's noise regulations protect residential properties from excessive noise exposure. HUD encourages mitigation as appropriate.	Noise Control Act of 1972  General Services Administration Federal Management Circular 75-2: "Compatible Land Uses at Federal Airfields"	Title 24 CFR 51 Subpart B
References		
<a href="https://www.hudexchange.info/programs/environmental-review/noise-abatement-and-control">https://www.hudexchange.info/programs/environmental-review/noise-abatement-and-control</a>		

**1. What activities does your project involve? Check all that apply:**

- New construction for residential use

NOTE: HUD assistance to new construction projects is generally prohibited if they are located in an Unacceptable zone, and HUD discourages assistance for new construction projects in Normally Unacceptable zones. See 24 CFR 51.101(a)(3) for further details.

→ Continue to Question 2.

**2. Complete the Preliminary Screening to identify potential noise generators in the vicinity (1000' from a major road, 3000' from a railroad, or 15 miles from an airport).**

**Indicate the findings of the Preliminary Screening below:**

- Noise generators were found within the threshold distances.

→ Continue to Question 3.

**3. Complete the Noise Assessment Guidelines to quantify the noise exposure. Indicate the findings of the Noise Assessment below:**

- Acceptable: (65 decibels or less; the ceiling may be shifted to 70 decibels in circumstances described in §24 CFR 51.105(a))

Indicate noise level here:

→ Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide noise analysis, including noise level and data used to complete the analysis.

## **Worksheet Summary**

### **Compliance Determination**

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

A Noise Assessment was conducted. The noise level was Acceptable: 57 dB. See noise analysis.

The Lawrence Regional Airport (LWC) is located within 15 miles of the project site. The attached Lawrence Regional Airport Master Plan Noise Exposure Contour maps indicate that the 65 DNL noise contour does not extend off airport property and does not affect any noise-sensitive land uses. Using the attached FAA Airport Master Record for LWC and the attached HUD provided Small Airport Noise Worksheet, it was assumed the noise attributed to the airplanes would not extend beyond the boundaries of the airport. The Vinland Valley Aerodrome (K64) is located within 15 miles of the project site. Using the attached FAA Airport Master Record for K64 and the attached HUD provided Small Airport Noise Worksheet, it was assumed the noise attributed to the airplanes would not extend beyond the boundaries of the airport.

The project site is not within 3,000' of a railroad.

The project site is within 1000' of one major roadway. Wakarusa Drive is a 4-lane major arterial road. As described in the HUD Noise Guidebook, when the locations of dwellings have not yet been specified at the time of the noise assessment of a site is made, distances used in the noise assessment should be measured as 2 meters (6.5') less than the distance from the building setback line to the major sources of noise. The Noise Assessment Location (NAL) used for the distance to Wakarusa Drive is 792'.

City Streets 24-hour traffic counts obtained in May and June 2019 from KDOT indicate an average count of 16,035 vehicles on Wakarusa Drive. Individual breakdown of the number of autos, medium trucks, and heavy trucks were not available. Using the attached HUD provided Vehicle Class Distribution by Road Type for the State of Kansas, the noise calculation used 95.4% for autos, 1.4% for medium trucks, and 3.23% for heavy trucks. Using the attached HUD provided ADT Data Projection Worksheet for Noise, the AADT was projected out for 10 years and used in the attached HUD DNL Calculator.

The project is in compliance with HUD's Noise regulation.

### **Are formal compliance steps or mitigation required?**

Yes


No

## DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the [Day/Night Noise Level Calculator Electronic Assessment Tool Overview \(/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/\)](#).

### Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

<b>Site ID</b>	LDHCA 1311 Research Park Dr/5015 Legends Dr		
<b>Record Date</b>	06/24/2024		
<b>User's Name</b>	Brad Karr 		

<b>Road # 1 Name:</b>	Wakarusa Drive
-----------------------	----------------

<b>Road #1</b>	<b>Vehicle Type</b>	<b>Cars <input checked="" type="checkbox"/></b>	<b>Medium Trucks <input checked="" type="checkbox"/></b>	<b>Heavy Trucks <input checked="" type="checkbox"/></b>
Effective Distance		792	792	792
Distance to Stop Sign				
Average Speed		45	45	45
Average Daily Trips (ADT)		22465	330	754
Night Fraction of ADT		15	15	15
Road Gradient (%)				2
Vehicle DNL		52	43	55
<b>Calculate Road #1 DNL</b>		57	<b>Reset</b>	

<b>Add Road Source</b>	<b>Add Rail Source</b>
------------------------	------------------------

<b>Airport Noise Level</b>	0
----------------------------	---

<b>Loud Impulse Sounds?</b>	<input type="radio"/> Yes <input checked="" type="radio"/> No
-----------------------------	---

<b>Combined DNL for all Road and Rail sources</b>	57
---	----

<b>Combined DNL including Airport</b>	N/A
---------------------------------------	-----

<b>Site DNL with Loud Impulse Sound</b>	
---	--

<b>Calculate</b>	<b>Reset</b>
------------------	--------------

## Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative:** Cancel the project at this location

- **Other Reasonable Alternatives:** Choose an alternate site
- **Mitigation**
  - Contact your Field or Regional Environmental Officer (</programs/environmental-review/hud-environmental-staff-contacts/>)
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
  - Incorporate natural or man-made barriers. See *The Noise Guidebook* (</resource/313/hud-noise-guidebook/>)
  - Construct noise barrier. See the Barrier Performance Module (</programs/environmental-review/bpm-calculator/>)

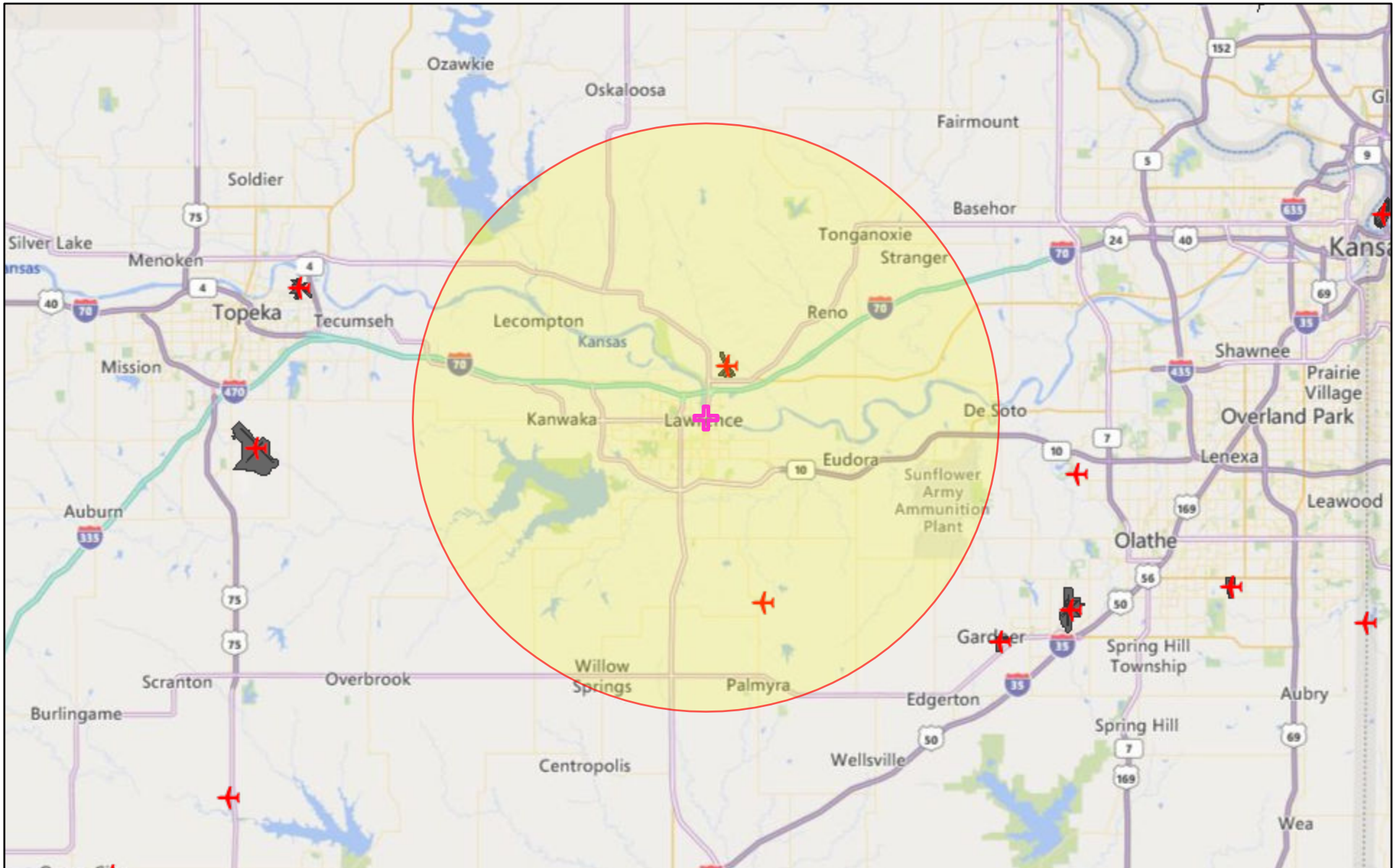
## Tools and Guidance

Day/Night Noise Level Assessment Tool User Guide (</resource/3822/day-night-noise-level-assessment-tool-user-guide/>)





Day/Night Noise Level Assessment Tool Flowcharts (</resource/3823/day-night-noise-level-assessment-tool-flowcharts/>)

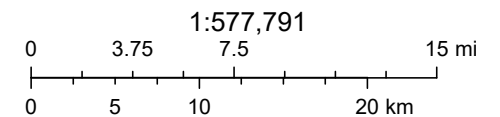


# Airports within 15 miles of Lawrence



December 2, 2021

-  Project Buffer
-  Airport Points
-  Lawrence
-  Airport Polygons



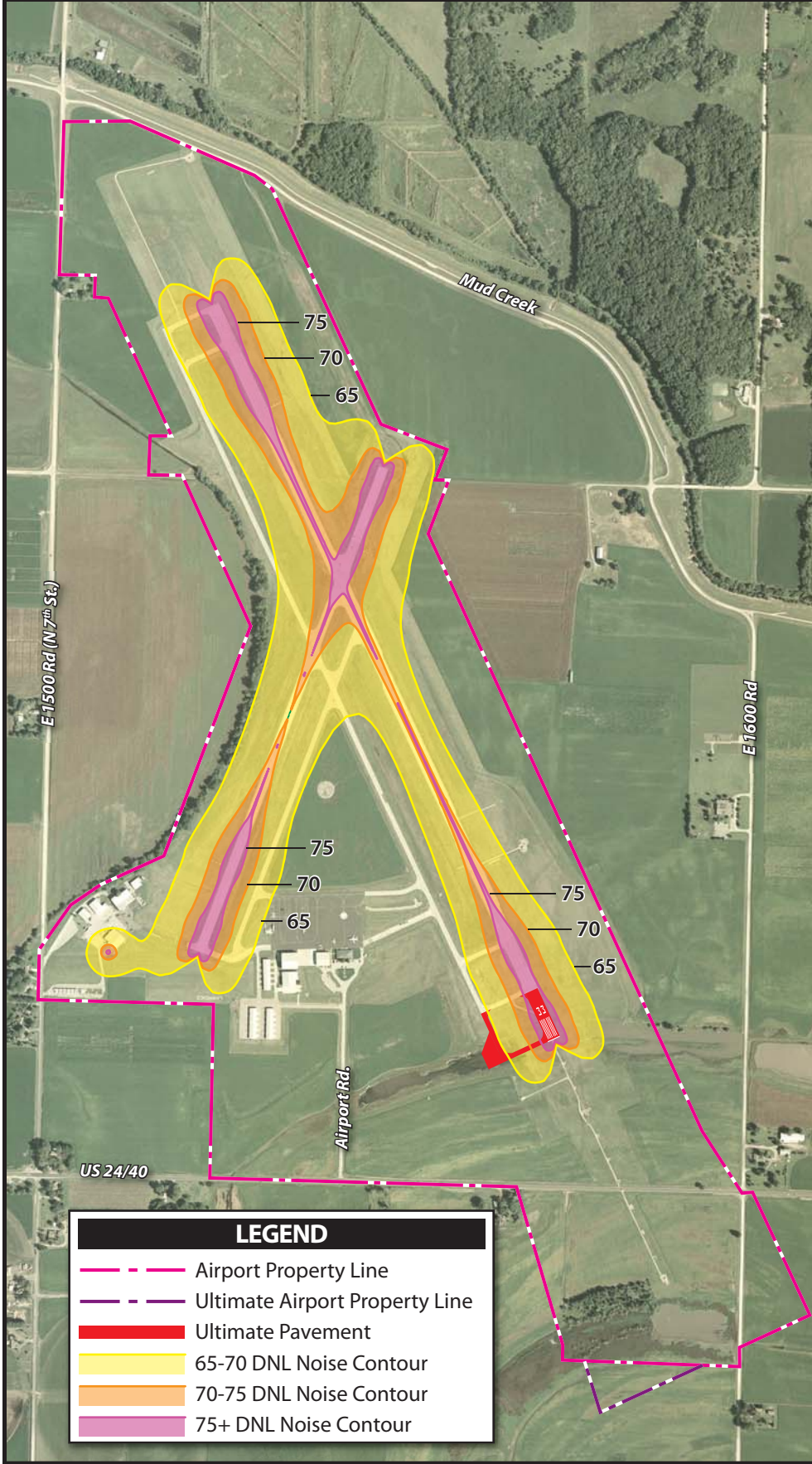
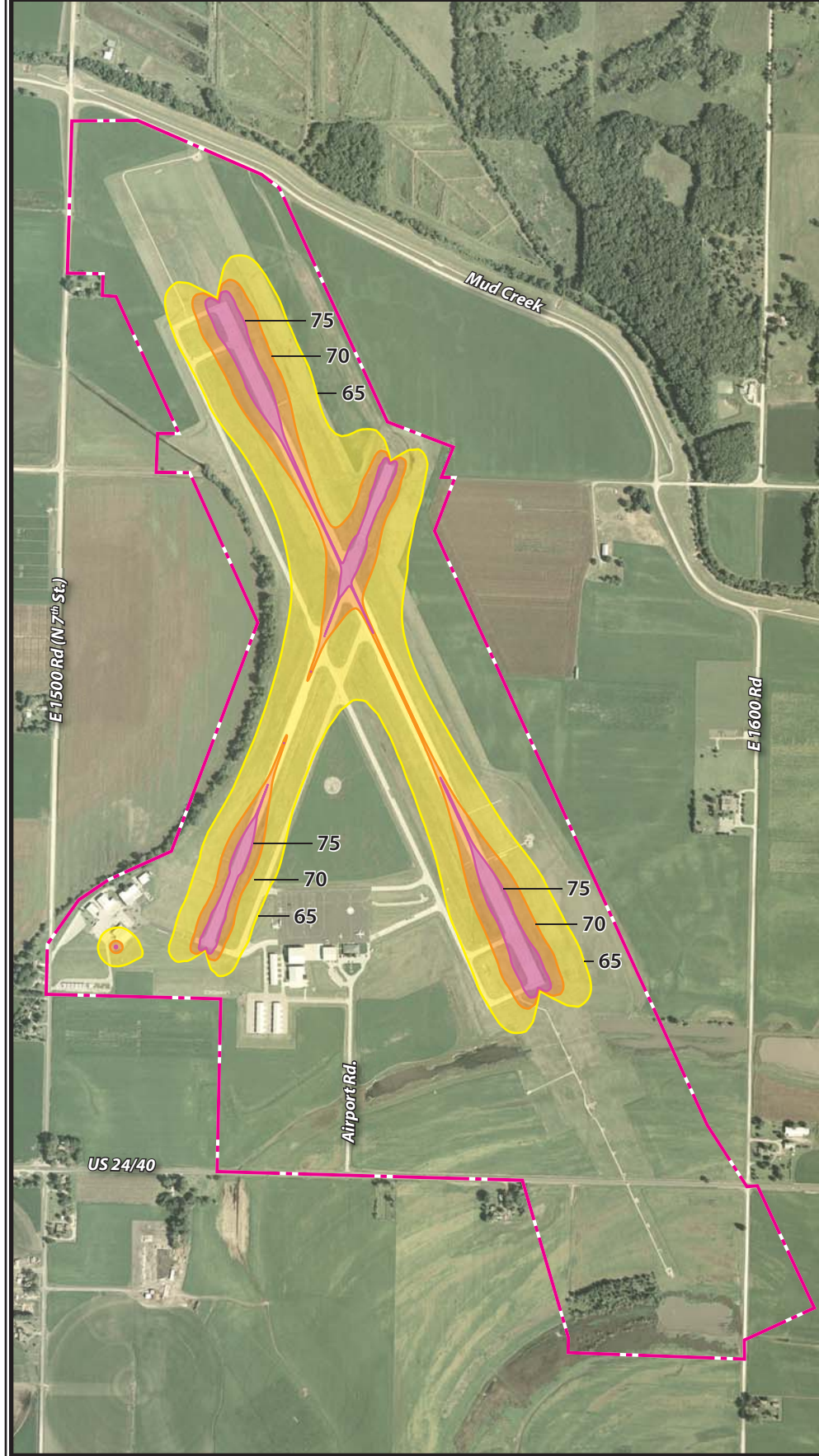
© 2021 Microsoft Corporation © 2021 TomTom, EPA OEI



### 2010 NOISE EXPOSURE CONTOURS

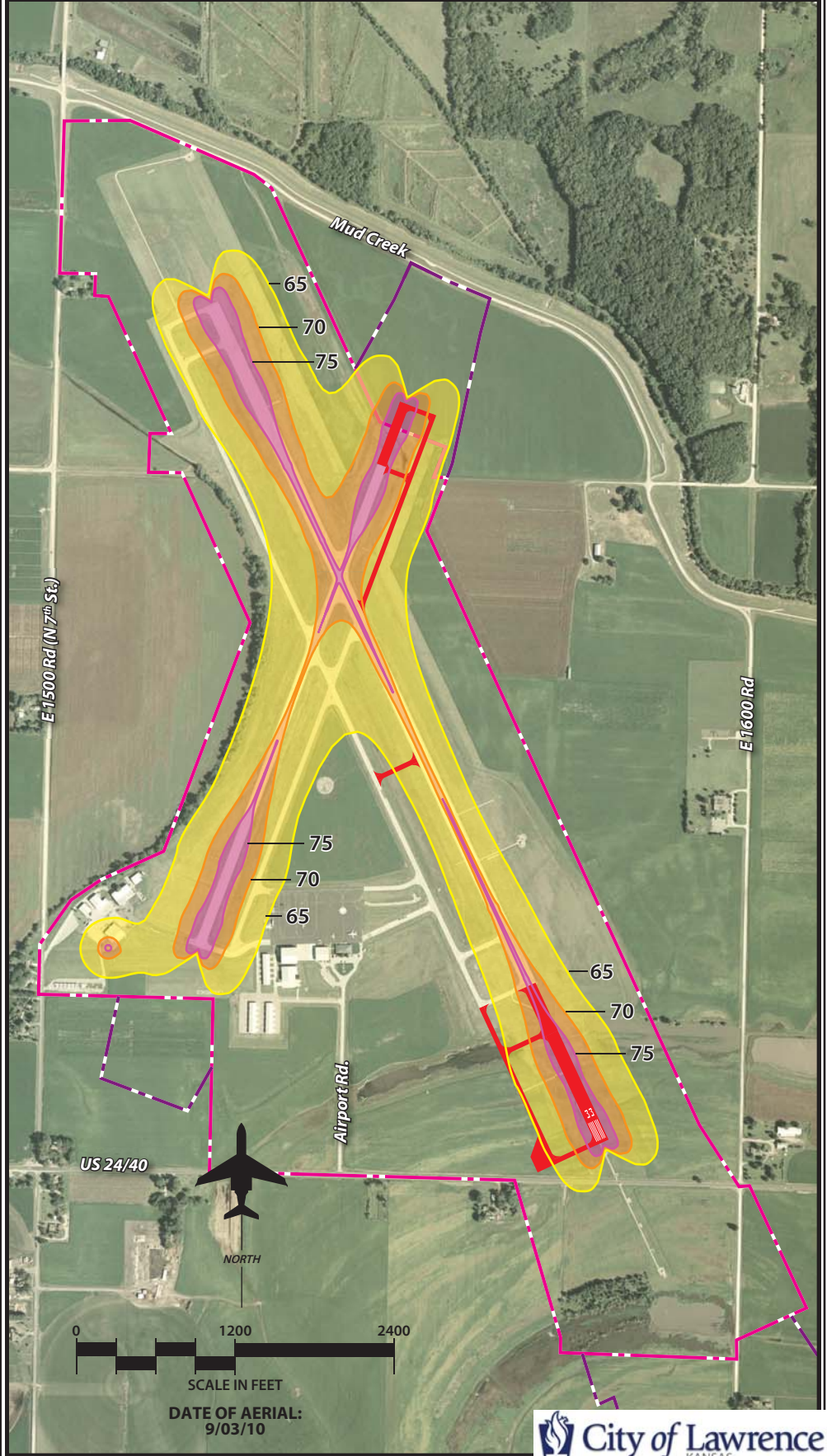
### 2015 NOISE EXPOSURE CONTOURS

### 2030 NOISE EXPOSURE CONTOURS



**LEGEND**

- Airport Property Line
- Ultimate Airport Property Line
- Ultimate Pavement
- 65-70 DNL Noise Contour
- 70-75 DNL Noise Contour
- 75+ DNL Noise Contour



NORTH

0 1200 2400

SCALE IN FEET

DATE OF AERIAL: 9/03/10

# Small Airport Noise Worksheet

Use this worksheet to identify information needed to evaluate a site's exposure to aircraft noise.

Name and Location of Project: \_\_\_\_\_

Name of Airport: \_\_\_\_\_

Person completing worksheet: \_\_\_\_\_

Date: \_\_\_\_\_

1. Determine if the proposed site/project is within 15 miles of a civil or military airport.

- No. Attach a scaled map identifying the location of the proposed project site and the location of any airports. *Further use of this worksheet is not required.*
- Yes. Attach a scaled map identifying the location of the proposed project site and the location of any airports. *Continue.*

2. Determine the number of operations at the airport by:

- Go to: <https://adip.faa.gov/agis/public/#/public>
- Find your airport using the Search function
- Open the report under "Print 5010"
- Complete section 3 below by using Operations data found in the report (see yellow arrow in the example below)

<b>U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION</b>	<b>AIRPORT MASTER RECORD</b>	PRINT DATE: 3/29/2018 AFD EFF 03/29/2018 FORM APPROVED OMB 2120-0015
> 1 ASSOC CITY: GREAT BEND > 2 AIRPORT NAME: GREAT BEND MUNI 3 CBD TO AIRPORT (NM): 04 W	4 STATE: KS 6 REGION/ADO: ACE/NONE	LOC ID: GBD 5 COUNTY: BARTON KS 7 SECT AERO CHT: WICHITA
FAA SITE NR: 06636.*A		

<b>GENERAL</b> 10 OWNERSHIP: PUBLIC > 11 OWNER: CITY OF GREAT BEND > 12 ADDRESS: CITY HALL, BOX 1168 GREAT BEND, KS 67530 > 13 PHONE NR: 620-793-4111 > 14 MANAGER: MR. MARTIN MILLER > 15 ADDRESS: CITY HALL, BOX 1168 GREAT BEND, KS 67530 > 16 PHONE NR: 620-793-4168 > 17 LANDING SCHEDULE: ALL 0630-1800 > 18 AIRPORT USE: PUBLIC 19 ARPT LAT: 38-20-39.3000N ESTIMATED 20 ARPT LONG: 098-51-33.1000W 21 ARPT ELEV: 1886.5 SURVEYED 22 ACREAGE: 1,887 > 23 RIGHT TRAFFIC: NO > 24 NON-COMM LANDING: NO 25 NPIAS/FED AGREEMENTS: NGPRY > 26 FAR 139 INDEX: III A S 06/1976	<b>SERVICES</b> > 70 FUEL: 100LL A > 71 AIRFRAME RPRS: MAJOR > 72 PWR PLANT RPRS: MAJOR > 73 BOTTLE OXYGEN: > 74 BULK OXYGEN: LOW 75 TSNT STORAGE: HGR, TIE 76 OTHER SERVICES: AGRI, INSTR  <b>FACILITIES</b> > 80 ARPT BCN: CG > 81 ARPT LGT SKED: SEE RMK BCN LGT SKED: SS-SR > 82 UNICOM: 122.800 > 83 WIND INDICATOR: YES-L 84 SEGMENTED CIRCLE: YES 85 CONTROL TWR: NO 86 FSS: WICHITA 87 FSS ON ARPT: NO 88 FSS PHONE NR: 89 TOLL FREE NR: 1-800-WX-BRIEF	<b>BASED AIRCRAFT</b> 90 SINGLE ENG: 37 91 MULTI ENG: 9 92 JET: 2 TOTAL: 48 93 HELICOPTERS: 0 94 GLIDERS: 95 MILITARY: 96 ULTRA-LIGHT:  <b>OPERATIONS</b> 100 AIR CARRIER: 0 102 AIR TAXI: 1,944 103 G A LOCAL: 8,760 104 G A ITRNRT: 4,512 105 MILITARY: 360 TOTAL: 15,576 OPERATIONS FOR 12 MONTHS ENDING: 10/31/2017
---	---	--

3. Determine if the annual number of operations for air carriers (#100), air taxis (#102), military (#105), and general aviation (#103 plus #104) exceeds the thresholds provided below.

- #100 Annual air carrier operations \_\_\_\_\_. Is this 9,000 or more? Yes \_\_\_ No \_\_\_
- #102 Annual air taxi operations \_\_\_\_\_. Is this 18,000 or more? Yes \_\_\_ No \_\_\_
- #105 Annual military operations \_\_\_\_\_. Is this 18,000 or more? Yes \_\_\_ No \_\_\_
- #103+#104 Annual general aviation operations \_\_\_\_\_. Is this 72,000 or more? Yes \_\_\_ No \_\_\_

4. If you answer "No" on each of the questions above, it is assumed the noise attributed to the airplanes will not extend beyond the boundaries of the airport. Maintain the documentation



in your Environmental Review Record (ERR). You are finished with the evaluation of airport noise for this airport.

If you have marked any question in #3 with “Yes,” continue to 5.

5. Contact the airport manager, (see blue arrow above) and ask them if the airport has noise contour maps. Are contour maps available?
- Yes. Locate your project on the noise contour map. If there are no roads or railroads that are being considered for noise, utilize the information from the contour map to determine if the site is acceptable. If roads or railroads are being considered, input the information obtained from the airport noise contours, along with the road and railroad information, into HUD online noise calculation tool at <http://www.hud.gov/offices/cpd/environment/dnlcalculator.cfm>.
  - No. Construct the approximate DNL contours by using the guidance on page 52 and 53 of the HUD [Noise Guidebook](#). You will need to obtain the following information from the airport:
    - (a) The number of nighttime jet operations (10pm to 7 am).
    - (b) The number of daytime jet operations (7 am to 10 pm).
    - (c) The flight paths of the major runways.
    - (d) Any available information about expected changes in airport traffic (e.g., will the number of operations increase or decrease in the next 10 to 15 years?).

Contact your HUD Environmental Officer if you need assistance.



> 1 ASSOC CITY: LAWRENCE 4 STATE: KS LOC ID: LWC FAA SITE NR: 06721.\*A  
> 2 AIRPORT NAME: LAWRENCE RGNL 5 COUNTY: DOUGLAS, KS  
3 CBD TO AIRPORT (NM): 3 N 6 REGION/ADO: ACE / 7 SECT AERO CHT: KANSAS CITY

<b>GENERAL</b>		<b>SERVICES</b>	<b>BASED AIRCRAFT</b>
10 OWNERSHIP: PUBLIC		> 70 FUEL: 100LL A	90 SINGLE ENG: 33
> 11 OWNER: CITY OF LAWRENCE		> 71 AIRFRAME RPRS: MAJOR	91 MULTI ENG: 4
> 12 ADDRESS: PO BOX 708		> 72 PWR PLANT RPRS: MAJOR	92 JET: 4
LAWRENCE, KS 66044		> 73 BOTTLE OXYGEN: HIGH	93 HELICOPTERS: 23
> 13 PHONE NR: 785-832-3467		> 74 BULK OXYGEN: HIGH	TOTAL: 64
> 14 MANAGER: SCOTT WAGNER		75 TSNT STORAGE: HGR TIE	94 GLIDERS: 0
> 15 ADDRESS: 6 EAST 6TH STREET		76 OTHER SERVICES: AMB,CHTR,INSTR, RNTL,SALES	95 MILITARY: 0
LAWRENCE, KS 66044			96 ULTRA-LIGHT: 0
> 16 PHONE NR: 785-832-3467			
> 17 ATTENDANCE SCHEDULE:			
<b>MONTHS</b>	<b>DAYS</b>	<b>HOURS</b>	
ALL	ALL	0800-2000	

18 AIRPORT USE: PUBLIC  
19 ARPT LAT: 39-0-40N ESTIMATED  
20 ARPT LONG: 95-12-59.3W  
21 ARPT ELEV: 833.3 SURVEYED  
22 ACREAGE: 486  
> 23 RIGHT TRAFFIC: NO  
> 24 NON-COMM LANDING: NO  
25 NPIAS/FED AGREEMENTS: YES / NGY  
> 26 FAR 139 INDEX: /

<b>FACILITIES</b>	<b>OPERATIONS</b>
> 80 ARPT BCN: WG	100 AIR CARRIER: 0
> 81 ARPT LGT SKED: SEE RMK	102 AIR TAXI: 1,400
BCN LGT SKED: SS-SR	103 G A LOCAL: 13,300
> 82 UNICOM: 123.000	104 G A ITNRNT: 12,500
> 83 WIND INDICATOR: YES-L	105 MILITARY: 208
84 SEGMENTED CIRCLE: YES	TOTAL: 27,408
85 CONTROL TWR: NO	
86 FSS: WICHITA	
87 FSS ON ARPT: NO	OPERATIONS FOR 12
88 FSS PHONE NR:	MONTHS ENDING 08/31/2021
89 TOLL FREE NR: 1-800-WX-BRIEF	

**RUNWAY DATA**

> 30 RUNWAY IDENT:	<b>01/19</b>	<b>15/33</b>
> 31 LENGTH:	3,901	5,700
> 32 WIDTH:	75	100
> 33 SURF TYPE-COND:	CONC-G	ASPH-E
> 34 SURF TREATMENT:	NONE	NONE
35 GROSS WT: S	12.5	40.0
36 (IN THSDS) D	15.6	60.0
37 2D		
38 2D/2DS		
> 39 PCN / PCR:	4/R/D/Y/U (PCN)	16/F/C/Y/U (PCN)

**LIGHTING/APCH AIDS**

> 40 EDGE INTENSITY:	MED	MED
> 42 RWY MARK TYPE-COND:	NPI- F / NPI- F	NPI- G / PIR- G
> 43 VGS:	P2L / P2L	P4L / P4R
44 THR CROSSING HGT:	40 / 40	45 / 52
45 VISUAL GLIDE ANGLE:	3.50 / 3.50	3.00 / 3.00
> 46 CNTRLN-TDZ:	- / -	- / -
> 47 RVR-RVV:	- / -	- / -
> 48 REIL:	Y / Y	Y /
> 49 APCH LIGHTS:	/	/ MALSR

**OBSTRUCTION DATA**

50 FAR 77 CATEGORY:	A(V) / A(V)	C / PIR
> 51 DISPLACED THR:	/	/
> 52 CTLG OBSTN:	/	/ TREES
> 53 OBSTN MARKED/LGTD:	/	/
> 54 HGT ABOVE RWY END:	/	/ 49
> 55 DIST FROM RWY END:	0 / 0	0 / 2,462
> 56 CNTRLN OFFSET:	/	/ 531L
57 OBSTN CLNC SLOPE:	20:1 / 20:1	34:1 / 46:1
58 CLOSE-IN OBSTN:	N / N	N / N

**DECLARED DISTANCES**

> 60 TAKE OFF RUN AVBL (TORA):	/	/
> 61 TAKE OFF DIST AVBL (TODA):	/	/
> 62 ACLT STOP DIST AVBL (ASDA):	/	/
> 63 LNDG DIST AVBL (LDA):	/	/

(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS:

A 016 AFT HRS APRT MGR CTC - 785-813-5765  
A 070 AFT HRS FUEL CTC - 785-865-6500.  
A 081 ACTVT MALSR RWY 33; REIL RWY 01, 15, & 19; PAPI RWY 01, 19, 15 & 33; MIRL RWY 01/19 & 15/33 - CTAF.

111 INSPECTOR: (S) 112 LAST INSP: 09/03/2021 113 LAST INFO RES:



# Small Airport Noise Worksheet

Use this worksheet to identify information needed to evaluate a site's exposure to aircraft noise.

Name and Location of Project: \_\_\_\_\_

Name of Airport: \_\_\_\_\_

Person completing worksheet: \_\_\_\_\_

Date: \_\_\_\_\_

1. Determine if the proposed site/project is within 15 miles of a civil or military airport.

- No. Attach a scaled map identifying the location of the proposed project site and the location of any airports. *Further use of this worksheet is not required.*
- Yes. Attach a scaled map identifying the location of the proposed project site and the location of any airports. *Continue.*

2. Determine the number of operations at the airport by:

- Go to: <https://adip.faa.gov/agis/public/#/public>
- Find your airport using the Search function
- Open the report under "Print 5010"
- Complete section 3 below by using Operations data found in the report (see yellow arrow in the example below)

<b>U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION</b>	<b>AIRPORT MASTER RECORD</b>	PRINT DATE: 3/29/2018 AFD EFF 03/29/2018 FORM APPROVED OMB 2120-0015
> 1 ASSOC CITY: GREAT BEND > 2 AIRPORT NAME: GREAT BEND MUNI 3 CBD TO AIRPORT (NM): 04 W	4 STATE: KS 6 REGION/ADO: ACE/NONE	LOC ID: GBD 5 COUNTY: BARTON KS 7 SECT AERO CHT: WICHITA
FAA SITE NR: 06636.*A		

<b>GENERAL</b> 10 OWNERSHIP: PUBLIC > 11 OWNER: CITY OF GREAT BEND > 12 ADDRESS: CITY HALL, BOX 1168 GREAT BEND, KS 67530 > 13 PHONE NR: 620-793-4111 > 14 MANAGER: MR. MARTIN MILLER > 15 ADDRESS: CITY HALL, BOX 1168 GREAT BEND, KS 67530 > 16 PHONE NR: 620-793-4168 > 17 LANDING SCHEDULE: ALL 0630-1800 > 18 AIRPORT USE: PUBLIC 19 ARPT LAT: 38-20-39.3000N ESTIMATED 20 ARPT LONG: 098-51-33.1000W 21 ARPT ELEV: 1886.5 SURVEYED 22 ACREAGE: 1,887 > 23 RIGHT TRAFFIC: NO > 24 NON-COMM LANDING: NO 25 NPIAS/FED AGREEMENTS: NGPRY > 26 FAR 139 INDEX: III A S 06/1976	<b>SERVICES</b> > 70 FUEL: 100LL A > 71 AIRFRAME RPRS: MAJOR > 72 PWR PLANT RPRS: MAJOR > 73 BOTTLE OXYGEN: > 74 BULK OXYGEN: LOW 75 TSNT STORAGE: HGR, TIE 76 OTHER SERVICES: AGRI, INSTR  <b>FACILITIES</b> > 80 ARPT BCN: CG > 81 ARPT LGT SKED: SEE RMK BCN LGT SKED: SS-SR > 82 UNICOM: 122.800 > 83 WIND INDICATOR: YES-L 84 SEGMENTED CIRCLE: YES 85 CONTROL TWR: NO 86 FSS: WICHITA 87 FSS ON ARPT: NO 88 FSS PHONE NR: 89 TOLL FREE NR: 1-800-WX-BRIEF	<b>BASED AIRCRAFT</b> 90 SINGLE ENG: 37 91 MULTI ENG: 9 92 JET: 2 TOTAL: 48 93 HELICOPTERS: 0 94 GLIDERS: 95 MILITARY: 96 ULTRA-LIGHT:  <b>OPERATIONS</b> 100 AIR CARRIER: 0 102 AIR TAXI: 1,944 103 G A LOCAL: 8,760 104 G A ITRNT: 4,512 105 MILITARY: 360 TOTAL: 15,576 OPERATIONS FOR 12 MONTHS ENDING: 10/31/2017
---	---	---

3. Determine if the annual number of operations for air carriers (#100), air taxis (#102), military (#105), and general aviation (#103 plus #104) exceeds the thresholds provided below.

- #100 Annual air carrier operations \_\_\_\_\_. Is this 9,000 or more? Yes \_\_\_ No \_\_\_
- #102 Annual air taxi operations \_\_\_\_\_. Is this 18,000 or more? Yes \_\_\_ No \_\_\_
- #105 Annual military operations \_\_\_\_\_. Is this 18,000 or more? Yes \_\_\_ No \_\_\_
- #103+#104 Annual general aviation operations \_\_\_\_\_. Is this 72,000 or more? Yes \_\_\_ No \_\_\_

4. If you answer "No" on each of the questions above, it is assumed the noise attributed to the airplanes will not extend beyond the boundaries of the airport. Maintain the documentation

in your Environmental Review Record (ERR). You are finished with the evaluation of airport noise for this airport.

If you have marked any question in #3 with “Yes,” continue to 5.

5. Contact the airport manager, (see blue arrow above) and ask them if the airport has noise contour maps. Are contour maps available?
- Yes. Locate your project on the noise contour map. If there are no roads or railroads that are being considered for noise, utilize the information from the contour map to determine if the site is acceptable. If roads or railroads are being considered, input the information obtained from the airport noise contours, along with the road and railroad information, into HUD online noise calculation tool at <http://www.hud.gov/offices/cpd/environment/dnlcalculator.cfm>.
  - No. Construct the approximate DNL contours by using the guidance on page 52 and 53 of the HUD [Noise Guidebook](#). You will need to obtain the following information from the airport:
    - (a) The number of nighttime jet operations (10pm to 7 am).
    - (b) The number of daytime jet operations (7 am to 10 pm).
    - (c) The flight paths of the major runways.
    - (d) Any available information about expected changes in airport traffic (e.g., will the number of operations increase or decrease in the next 10 to 15 years?).

Contact your HUD Environmental Officer if you need assistance.



> 1 ASSOC CITY: BALDWIN CITY 4 STATE: KS LOC ID: K64 FAA SITE NR: 06484.11\*A  
> 2 AIRPORT NAME: VINLAND VALLEY AERODROME 5 COUNTY: DOUGLAS, KS  
3 CBD TO AIRPORT (NM): 3 N 6 REGION/ADO: ACE / 7 SECT AERO CHT: KANSAS CITY

<u>GENERAL</u>		<u>SERVICES</u>	<u>BASED AIRCRAFT</u>
10 OWNERSHIP: PRIVATE		> 70 FUEL: 100LL	90 SINGLE ENG: 22
> 11 OWNER: K64 LLC		> 71 AIRFRAME RPRS:	91 MULTI ENG: 0
> 12 ADDRESS: 696 E. 1700 RD.		> 72 PWR PLANT RPRS:	92 JET: 0
BALDWIN CITY, KS 66006		> 73 BOTTLE OXYGEN:	93 HELICOPTERS: 0
> 13 PHONE NR: 785-594-2741		> 74 BULK OXYGEN:	TOTAL: 22
> 14 MANAGER: DAVID MCFARLANE		75 TSNT STORAGE: TIE	94 GLIDERS: 0
> 15 ADDRESS: 696 E. 1700 RD		76 OTHER SERVICES: INSTR,RNTL	95 MILITARY: 0
BALDWIN CITY, KS 66006			96 ULTRA-LIGHT: 0
> 16 PHONE NR: 785-594-2741			
> 17 ATTENDANCE SCHEDULE:			
<b>MONTHS</b>	<b>DAYS</b>	<b>HOURS</b>	
ALL	FRIDAY	0730-1700	
ALL	MON-THURS	0730-1730	
18 AIRPORT USE: PUBLIC		<b>FACILITIES</b>	<b>OPERATIONS</b>
19 ARPT LAT: 38-50-10.07N ESTIMATED		> 80 ARPT BCN:	100 AIR CARRIER: 0
20 ARPT LONG: 95-10-55.33W		> 81 ARPT LGT SKED: SEE RMK	102 AIR TAXI: 0
21 ARPT ELEV: 890.0 ESTIMATED		BCN LGT SKED:	103 G A LOCAL: 5,000
22 ACREAGE: 23		> 82 UNICOM:	104 G A ITRNRT: 500
> 23 RIGHT TRAFFIC: NO		> 83 WIND INDICATOR: YES	105 MILITARY: 0
> 24 NON-COMM LANDING: NO		84 SEGMENTED CIRCLE: NONE	TOTAL: 5,500
25 NPIAS/FED AGREEMENTS:		85 CONTROL TWR: NO	
> 26 FAR 139 INDEX: /		86 FSS: WICHITA	
		87 FSS ON ARPT: NO	OPERATIONS FOR 12
		88 FSS PHONE NR:	MONTHS ENDING 08/31/2018
		89 TOLL FREE NR: 1-800-WX-BRIEF	

**RUNWAY DATA**  
> 30 RUNWAY IDENT: 16/34  
> 31 LENGTH: 3,030  
> 32 WIDTH: 80  
> 33 SURF TYPE-COND: TURF-G  
> 34 SURF TREATMENT: NONE  
35 GROSS WT: S  
36 (IN THSDS) D  
37 2D  
38 2D/2DS  
> 39 PCN / PCR:

**LIGHTING/APCH AIDS**  
> 40 EDGE INTENSITY: NSTD  
> 42 RWY MARK TYPE-COND: -/-  
> 43 VGSI: /  
44 THR CROSSING HGT: /  
45 VISUAL GLIDE ANGLE: /  
> 46 CNTRLN-TDZ: -/-  
> 47 RVR-RVV: -/-  
> 48 REIL: /  
> 49 APCH LIGHTS: /

**OBSTRUCTION DATA**  
50 FAR 77 CATEGORY: A(V) / A(V)  
> 51 DISPLACED THR: /  
> 52 CTLG OBSTN: TREE / TREE  
> 53 OBSTN MARKED/LGTD: /  
> 54 HGT ABOVE RWY END: 35 / 31  
> 55 DIST FROM RWY END: 427 / 608  
> 56 CNTRLN OFFSET: 81L / 176L  
57 OBSTN CLNC SLOPE: 12:1 / 19:1  
58 CLOSE-IN OBSTN: N / N

**DECLARED DISTANCES**  
> 60 TAKE OFF RUN AVBL (TORA): /  
> 61 TAKE OFF DIST AVBL (TODA): /  
> 62 ACLT STOP DIST AVBL (ASDA): /  
> 63 LNDG DIST AVBL (LDA): /

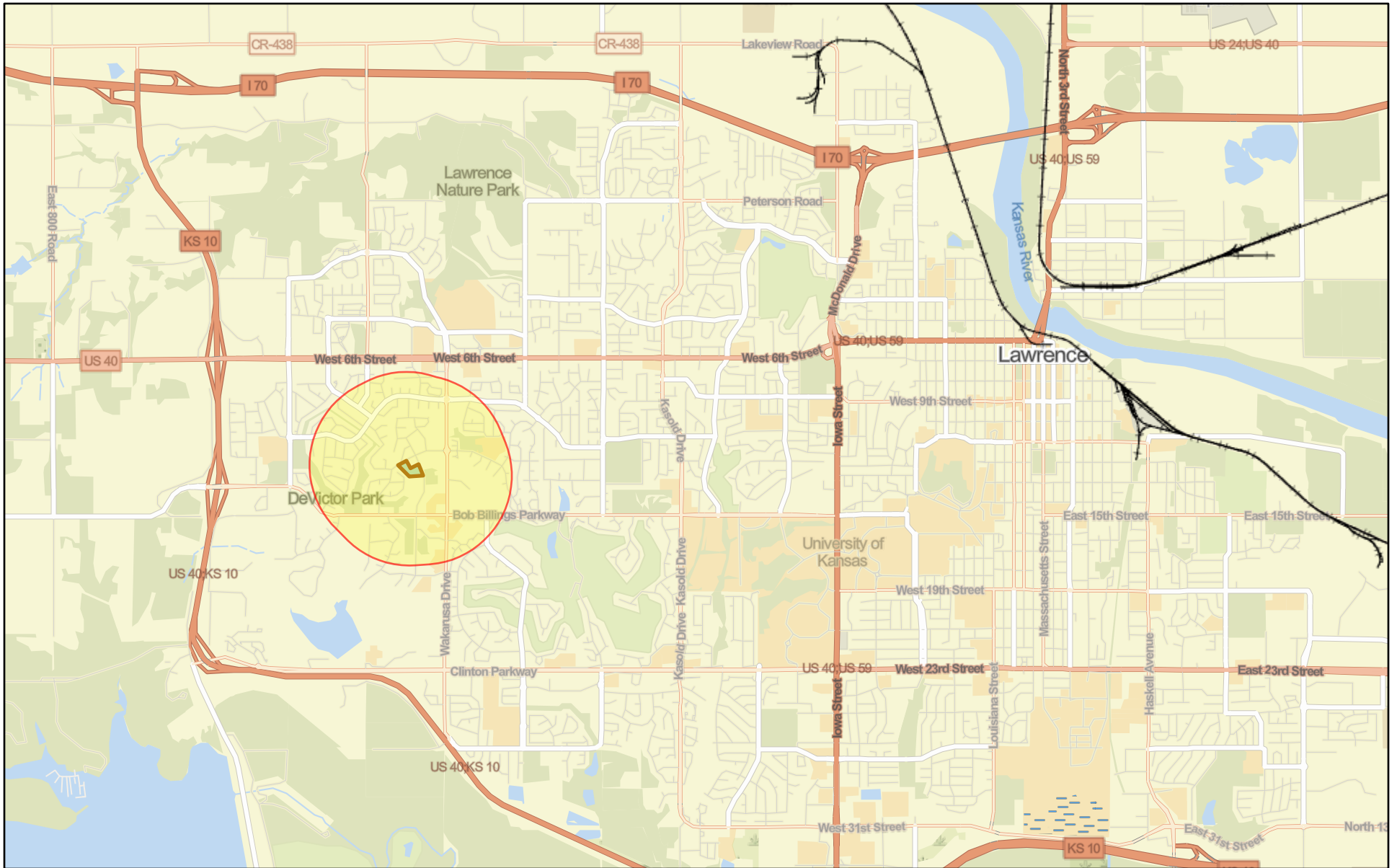
(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS:

A 016 EXT 222. ALT NR: 785-248-3833.  
A 040 RWY 16/34 NSTD LIRL.  
A 070 FUEL ONLY AVLB OP HRS OR W/PRIOR ARRANGEMENT  
A 081 DUSK-DAWN. ACTVT LIRL RY 16/34 - CTAF 3 CLICKS  
A 110-001 TALL TREES L SIDE AER 16.  
A 110-004 PATTERN ALTITUDE: FIXED WING AIRCRAFT: 1690 MSL.  
A 110-005 FOR CD CTC KANSAS CITY ARTCC AT 913-254-8508.

111 INSPECTOR: ( S ) 112 LAST INSP: 09/08/2021 113 LAST INFO RES:

# 1311 Research Park Dr/5015 Legends Dr 3000' buffer for railroad noise



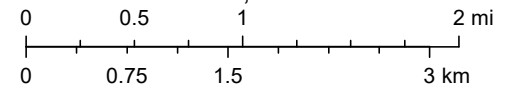
June 20, 2024

 Project Buffer

 Railroads

 1311 Research Park Dr/5015 Legends Dr

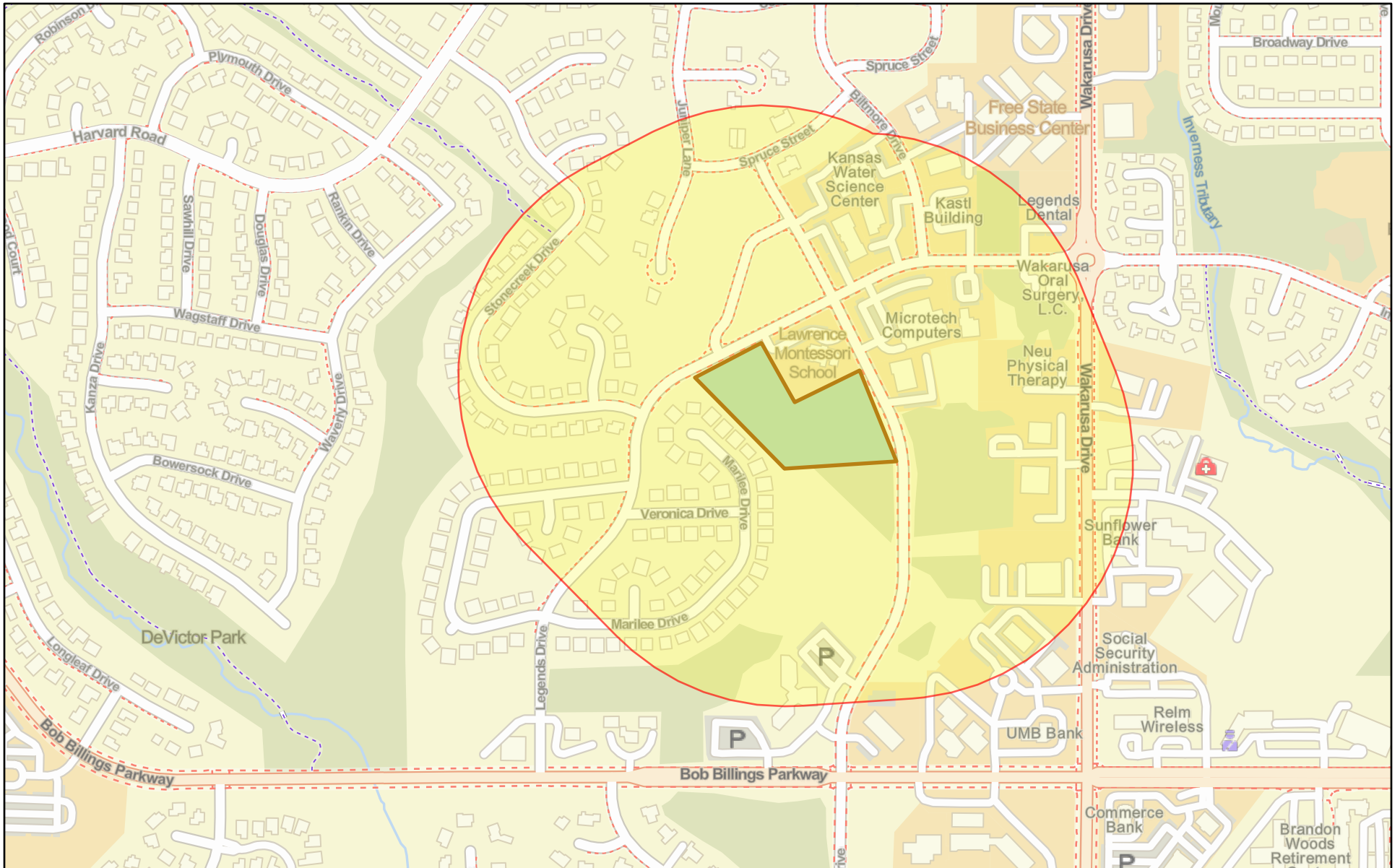
1:72,224



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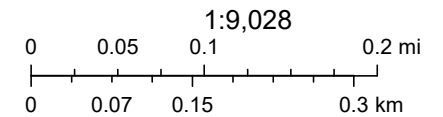
# 1311 Research Park Dr/5015 Legends Dr 1000' buffer for road noise



June 20, 2024

 Project Buffer

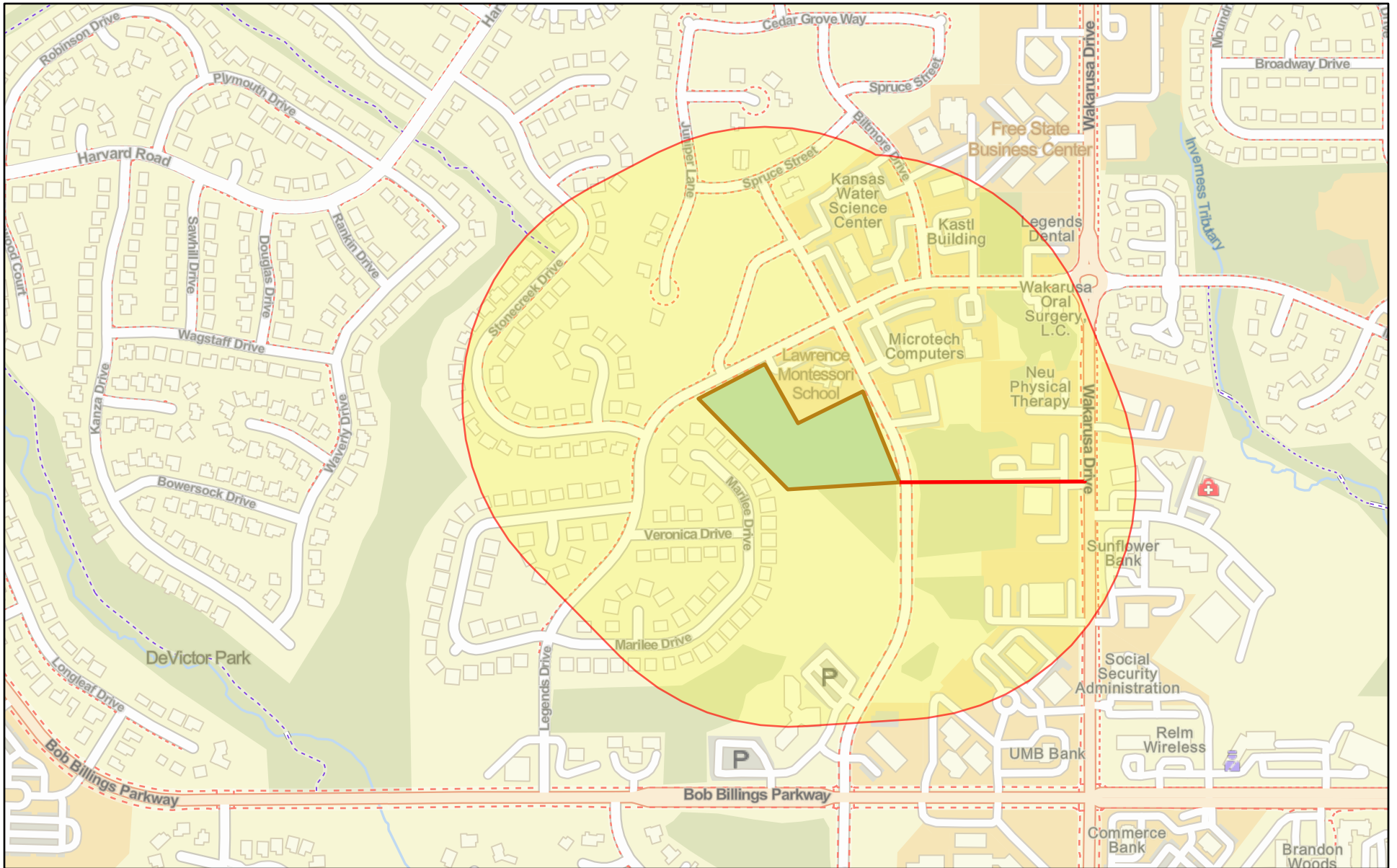
 1311 Research Park Dr/5015 Legends Dr



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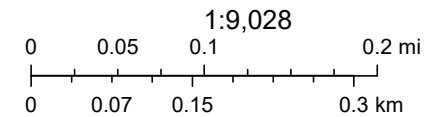


# 1311 Research Park Dr/5015 Legends Dr 792' to Wakarusa Drive

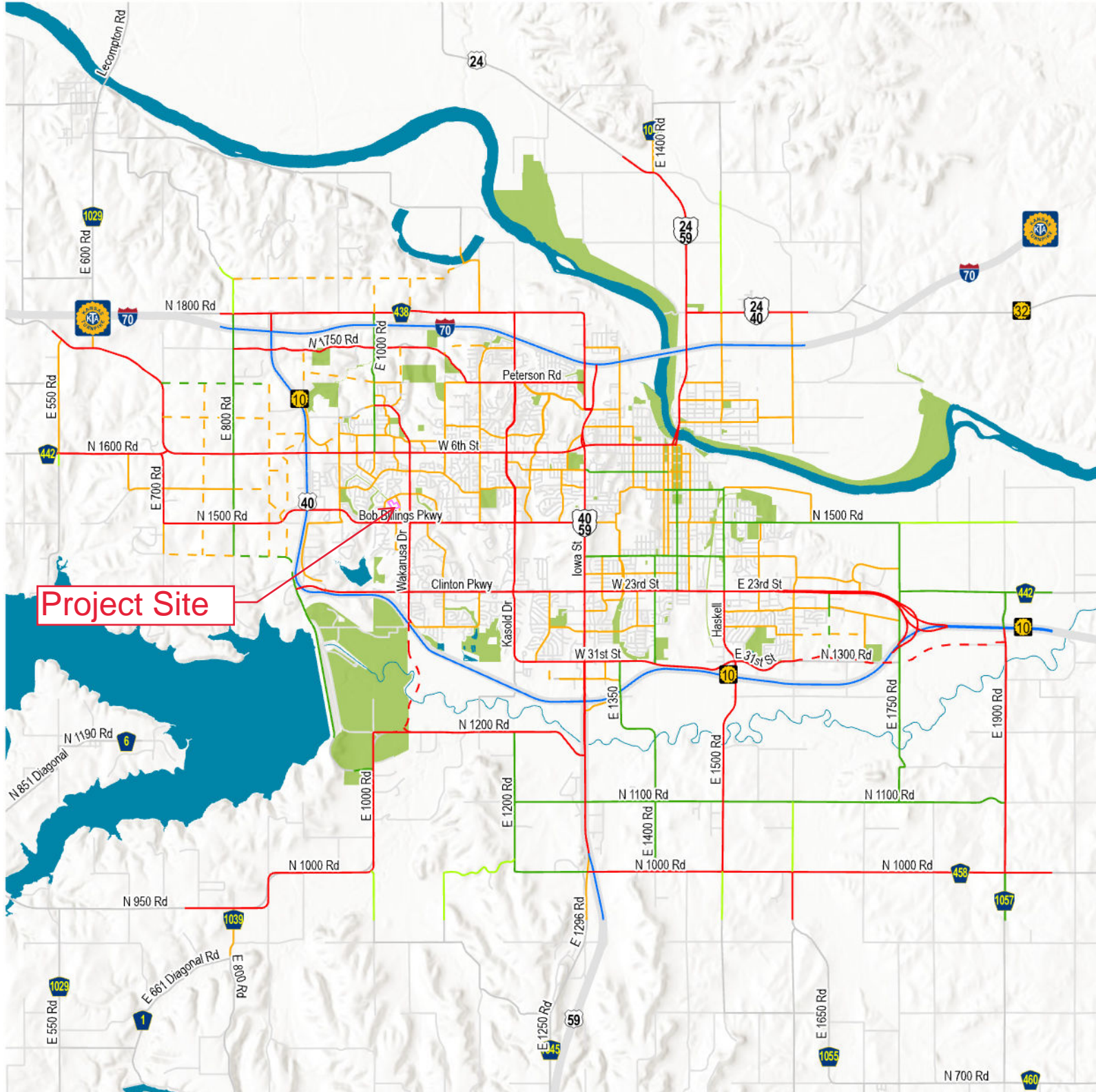


June 20, 2024

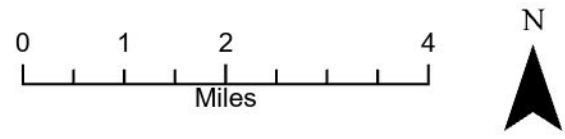
-  792' to principal arterial Wakarusa Drive
-  1311 Research Park Dr/5015 Legends Dr
-  Project Buffer



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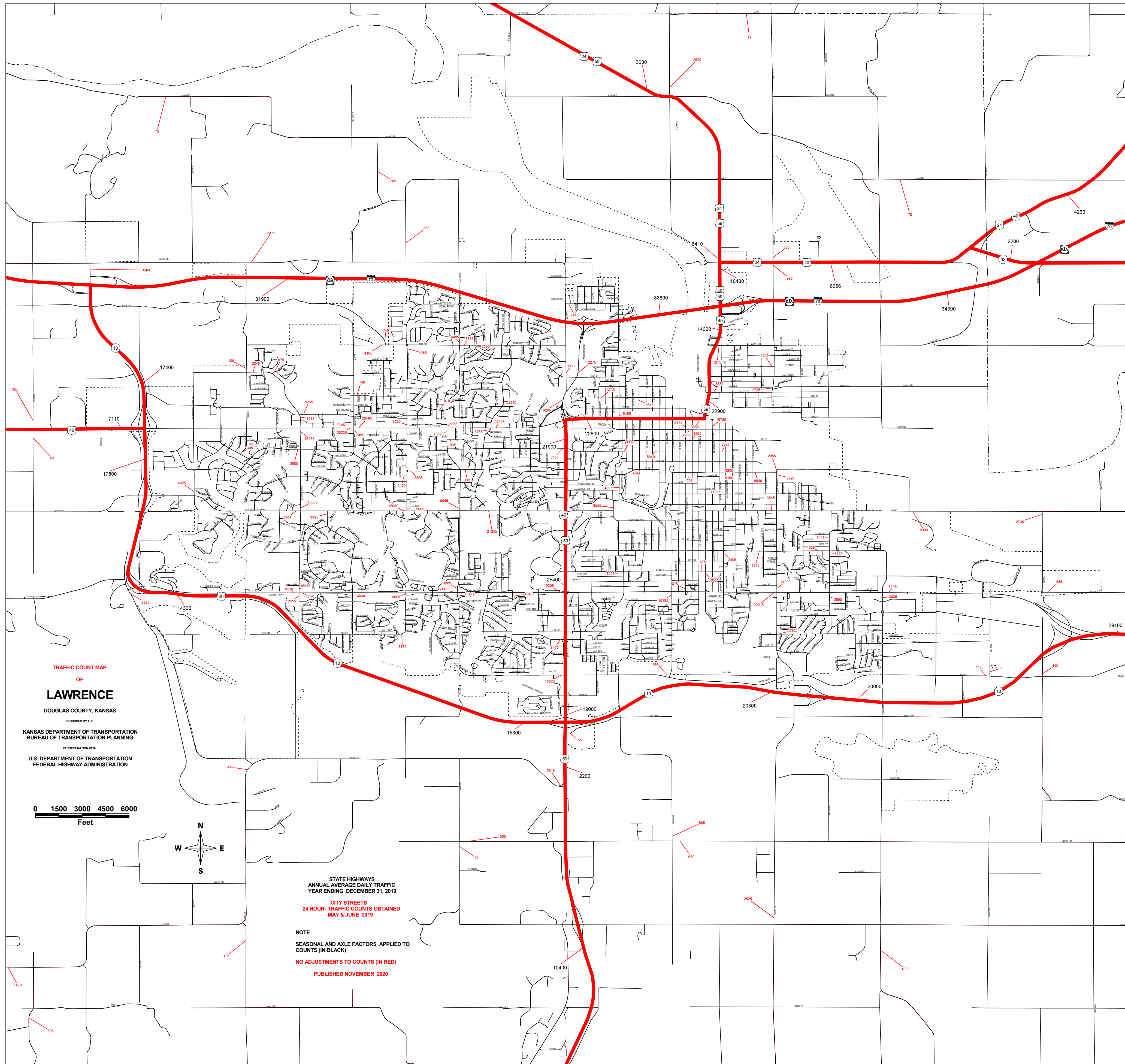
- Collector/Rural Major Collector
- Freeway
- Minor Arterial
- Principal Arterial
- Rural Minor Collector
- Future Collector
- Future Minor Arterial
- Future Principal Arterial
- Water Bodies
- City Parks
- Project Site



Date Exported: 12/27/2022  
 Source: Transportation 2050  
 Produced: Lawrence-Douglas County MPO

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**Vehicle Class Distribution by Road Type (Functional Classification)**

**State of Kansas**

Road Type ("Functional Classification")	FHWA Funct. Class.	AADT Range (*)		Auto (**)		Medium Truck (**)		Heavy Truck (**)	
		Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
		Interstate	1	35,000 - 129,000	12,000 - 34,000	90.4%	74.6%	1.8%	2.0%
Freeway & Expressways	2	13,000 - 55,000	4,000 - 18,500	94.9%	87.8%	0.9%	1.3%	4.3%	10.9%
Major Arterial	3	7,000 - 27,000	2,000 - 8,500	95.4%	82.3%	1.4%	1.3%	3.2%	16.2%
Minor Arterial	4	3,000 - 14,000	1,500 - 6,000	97.5%	86.1%	1.3%	1.3%	1.1%	12.5%
Major Collector	5	1,100 - 6,300	300 - 2,600	98.3%	89.9%	0.8%	1.6%	0.9%	8.6%
Minor Collector	6	1,100 - 6,300	150 - 1,110	n/a	81.2%	n/a	1.1%	n/a	17.8%
Local	7	80 - 700	15 - 400	n/a	84.7%	n/a	1.4%	n/a	13.9%

Sources:

\* "Highway Functional Classification Concepts, Criteria and Procedures," U.S. Dept of Transportation, Federal Highway Administration, 2013

\*\* "Vehicle Classification Overview & Summary: 2010-2102 Vehicle Classification By Functional Classification," Kansas Dept of Transportation, Bureau of Transportation Planning, 2010-2012, and where:

"Autos" = FHWA Vehicle Classifications #1, #2, #3

"Medium Truck" = FHWA Vehicle Classification #5

"Heavy Truck" = FHWA Vehicle Classifications #4, #6, #7, #8, #9, #10, #11, #12, #13

Percentages do not always sum to 100% due to rounding.

HUD Noise Calculation - Breakout of Average Daily Traffic (ADT) by Vehicle Type

Roadway Data Projection for: LDCHA Research Park/Legends Dr

Growth rate: **3.0%** (annualized growth rate projected for 10 yrs)

ADT 2019 **16,035** (most recent year for which ADT data is available)

2020 16,516

2021 17,012

2022 17,522

2023 18,048

2024 18,589

2025 19,147

1 2026 19,721

2 2027 20,313

3 2028 20,922

4 2029 21,550

5 2030 22,196

6 2031 22,862

7 2032 23,548

8 2033 24,254

9 2034 24,982

10 2035 25,731

= Occupancy

ADT Breakout

Autos	<b>95.4%</b>	<b>22,465</b>
Medium Trucks	<b>1.4%</b>	<b>330</b>
Heavy Trucks	<b>3.2%</b>	<b>754</b>
	<b>100.0%</b>	<b>23,548</b>

**Green-highlighted cells are where data is entered.**

**Yellow-highlighted cells are the results that must be entered into the HUD noise calculator.**

Include a printout of this page and attach it to the final noise calculation(s).



## Sole Source Aquifers (CEST and EA)

General requirements	Legislation	Regulation
The Safe Drinking Water Act of 1974 protects drinking water systems which are the sole or principal drinking water source for an area and which, if contaminated, would create a significant hazard to public health.	Safe Drinking Water Act of 1974 (42 U.S.C. 201, 300f et seq., and 21 U.S.C. 349)	40 CFR Part 149
Reference		
<a href="https://www.hudexchange.info/environmental-review/sole-source-aquifers">https://www.hudexchange.info/environmental-review/sole-source-aquifers</a>		

### 1. Does your project consist solely of acquisition, leasing, or rehabilitation of an existing building(s)?

- Yes → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*
- No → *Continue to Question 2.*

### 2. Is the project located on a sole source aquifer (SSA)<sup>1</sup>?

- No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination, such as a map of your project (or jurisdiction, if appropriate) in relation to the nearest SSA and its source area.*

## Worksheet Summary

### Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

The State of Kansas currently has no designated Sole Source Aquifers according to EPA, Region 7 Drinking Water/Ground Water Branch, and the EPA.gov webpage map for Sole Source Aquifers. The project is in compliance with Sole Source Aquifer requirements. Attached are maps indicating there are no Sole Source Aquifers located in the jurisdiction or state.

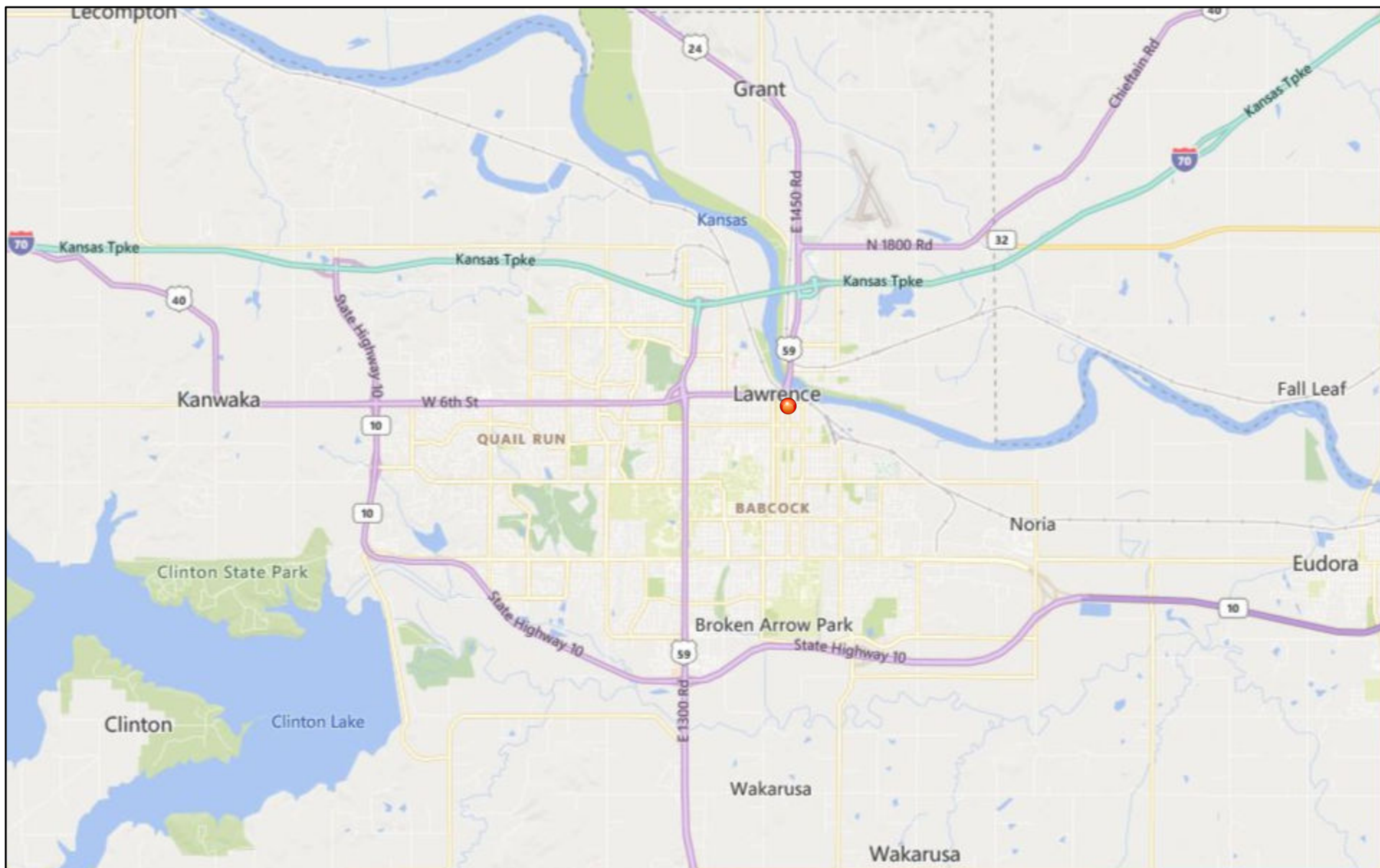
<sup>1</sup> A sole source aquifer is defined as an aquifer that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. This includes streamflow source areas, which are upstream areas of losing streams that flow into the recharge area.

**Are formal compliance steps or mitigation required?**



Yes

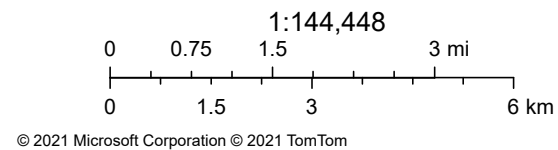
No

# Sole Source Aquifers - Lawrence, KS

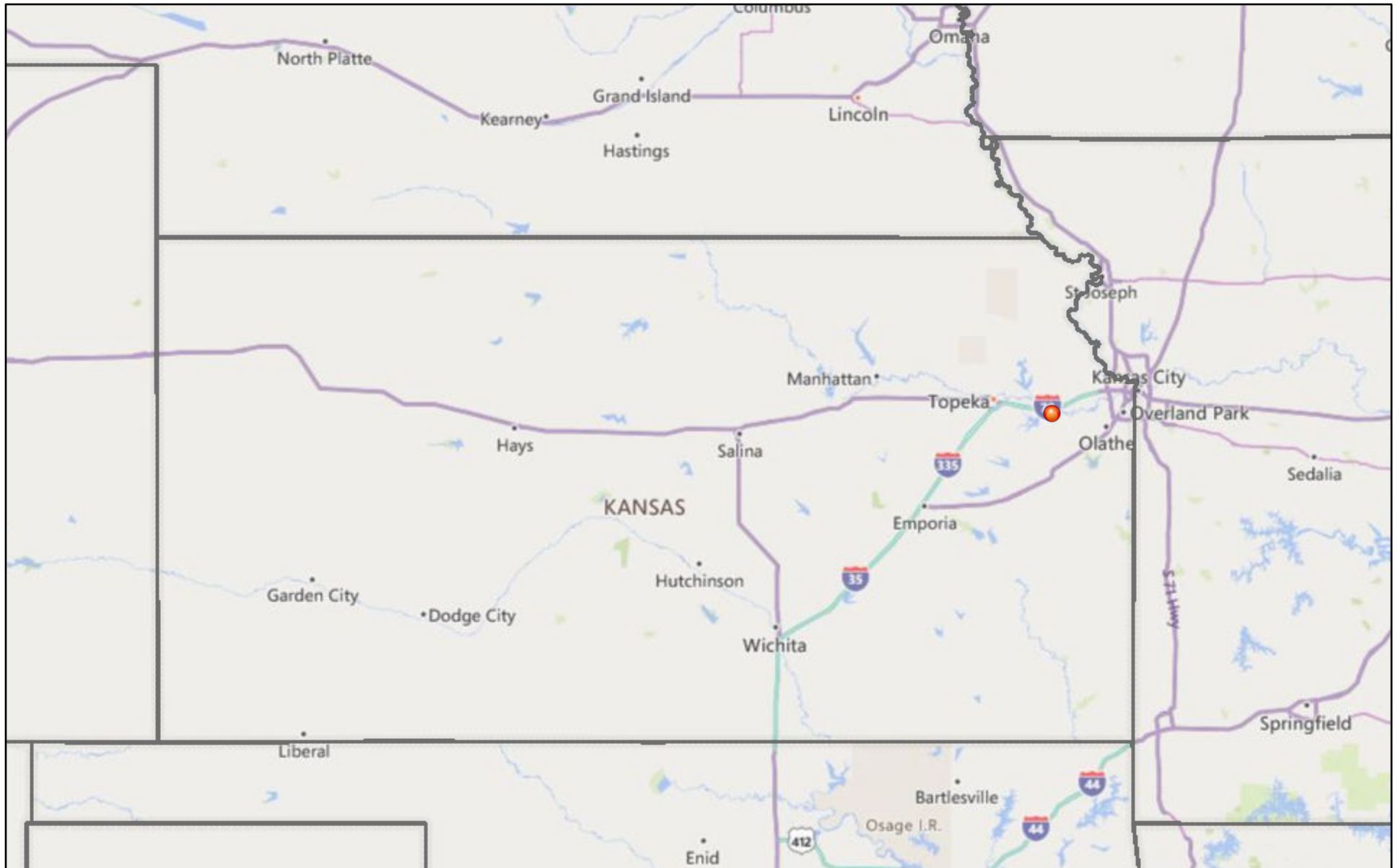


April 8, 2021

-  Lawrence, KS
-  Sole Source Aquifers

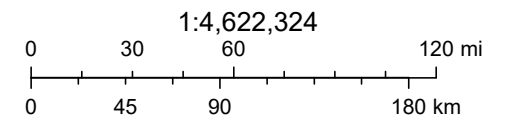


# Sole Source Aquifers - Kansas



April 8, 2021

- Lawrence, KS
- Sole Source Aquifers
- States




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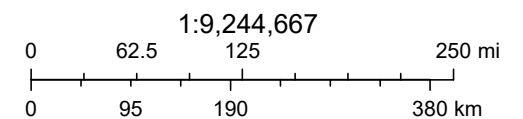


# Sole Source Aquifers - Kansas



4/8/2021, 3:22:28 PM

 Sole\_Source\_Aquifers



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand),



## Wetlands (CEST and EA)

General requirements	Legislation	Regulation
Executive Order 11990 discourages that direct or indirect support of new construction impacting wetlands wherever there is a practicable alternative. The Fish and Wildlife Service's National Wetlands Inventory can be used as a primary screening tool, but observed or known wetlands not indicated on NWI maps must also be processed. Off-site impacts that result in draining, impounding, or destroying wetlands must also be processed.	Executive Order 11990	24 CFR 55.20 can be used for general guidance regarding the 8 Step Process.
<b>References</b>		
<a href="https://www.hudexchange.info/environmental-review/wetlands-protection">https://www.hudexchange.info/environmental-review/wetlands-protection</a>		

**1. Does this project involve new construction as defined in Executive Order 11990, expansion of a building's footprint, or ground disturbance?**

The term "new construction" shall include draining, dredging, channelizing, filling, diking, impounding, and related activities and any structures or facilities begun or authorized after the effective date of the Order.

Yes → *Continue to Question 2.*

**2. Will the new construction or other ground disturbance impact an on- or off-site wetland?**

The term "wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds. Wetlands under E.O. 11990 include isolated and non-jurisdictional wetlands.

No, a wetland will not be impacted in terms of E.O. 11990's definition of new construction.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map or any other relevant documentation to explain your determination.*

## **Worksheet Summary**

### **Compliance Determination**

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

The National Wetlands Inventory (NWI) Wetlands Mapper was used to review any on- or off-site wetlands near the project site.

The project will not impact on- or off-site wetlands. The project is in compliance with Executive Order 11990. See attached Wetlands Protection Worksheet packet.

### **Are formal compliance steps or mitigation required?**

Yes

No



June 20, 2024

**Wetlands**

- |   |                                |   |                                   |   |       |
|---|--------------------------------|---|-----------------------------------|---|-------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland       |  | Lake  |
|  | Estuarine and Marine Wetland   |  | Freshwater Forested/Shrub Wetland |  | Other |
|  | Freshwater Pond                |  | Riverine                          |   |       |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.





U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands\_team@fws.gov

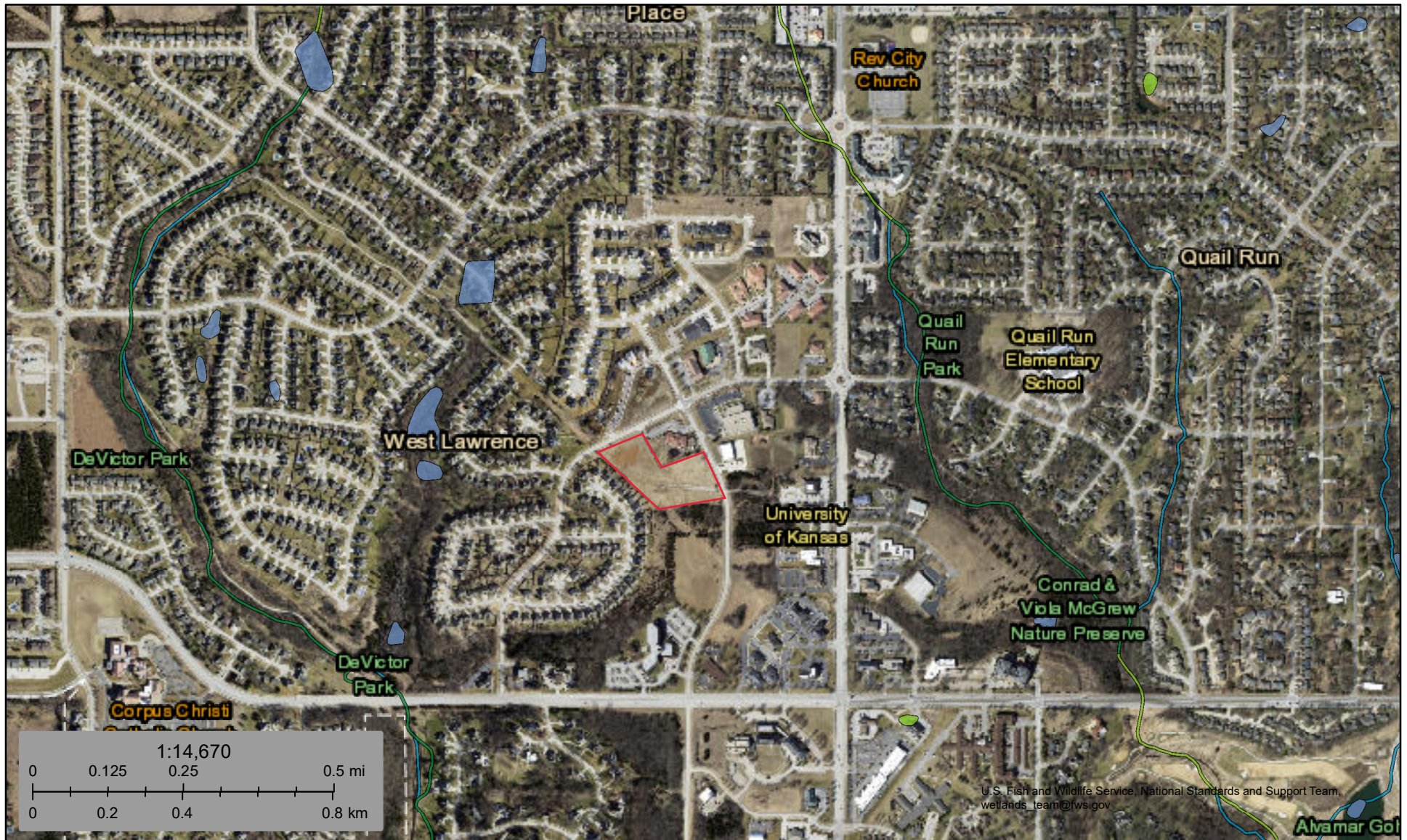
June 20, 2024

**Wetlands**

- Estuarine and Marine Deepwater
- Freshwater Forested/Shrub Wetland
- Lake
- Estuarine and Marine Wetland
- Freshwater Pond
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.





June 20, 2024

**Wetlands**

- Estuarine and Marine Deepwater
- Freshwater Forested/Shrub Wetland
- Lake
- Estuarine and Marine Wetland
- Freshwater Pond
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



## Wild and Scenic Rivers (CEST and EA)

General requirements	Legislation	Regulation
The Wild and Scenic Rivers Act provides federal protection for certain free-flowing, wild, scenic and recreational rivers designated as components or potential components of the National Wild and Scenic Rivers System (NWSRS) from the effects of construction or development.	The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287), particularly section 7(b) and (c) (16 U.S.C. 1278(b) and (c))	36 CFR Part 297
<b>References</b>		
<a href="https://www.hudexchange.info/environmental-review/wild-and-scenic-rivers">https://www.hudexchange.info/environmental-review/wild-and-scenic-rivers</a>		

**1. Is your project within proximity of a NWSRS river as defined below?**

**Wild & Scenic Rivers:** These rivers or river segments have been designated by Congress or by states (with the concurrence of the Secretary of the Interior) as wild, scenic, or recreational

Study Rivers: These rivers or river segments are being studied as a potential component of the Wild & Scenic River system.

Nationwide Rivers Inventory (NRI): The National Park Service has compiled and maintains the NRI, a register of river segments that potentially qualify as national wild, scenic, or recreational river areas

No

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination, such as a map identifying the project site and its surrounding area or a list of rivers in your region in the Screen Summary at the conclusion of this screen.*

## **Worksheet Summary**

### **Compliance Determination**

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

There are no Wild and Scenic Rivers designated in the state of Kansas. (Source: National Wild and Scenic Rivers System website); per the same site, there are no active or pending river studies in Kansas.

Per the National Rivers Inventory system, there is one river in Douglas County on the list: The Kansas River NRI River Segment. The Outstandingly Remarkable Values of this river segment are listed as: Cultural, Fish, Recreational, Scenic, and Wildlife.

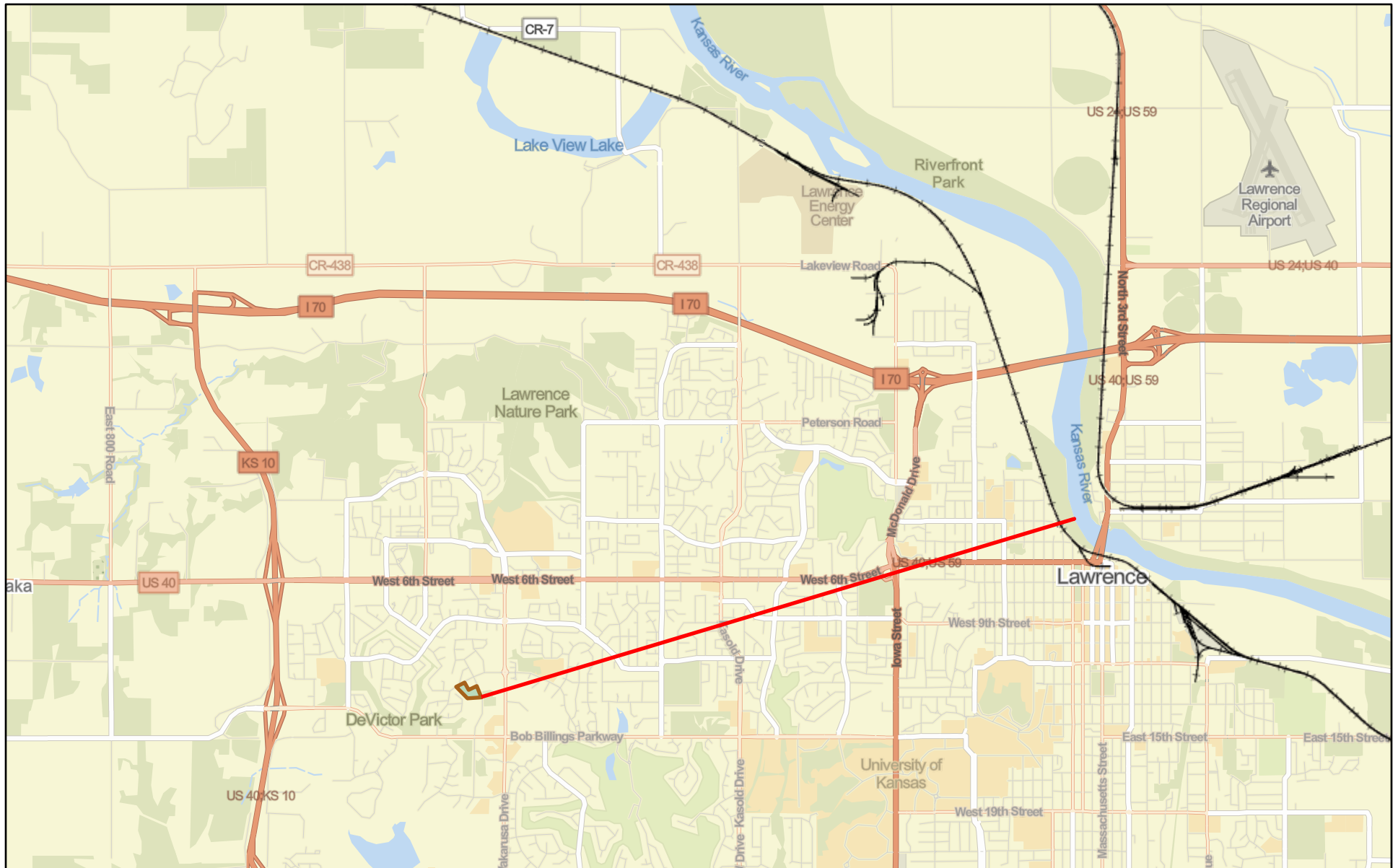
Per HUD's Wild and Scenic Rivers website: "Boundaries for protected rivers generally extend one-quarter mile from either bank in the lower 48 states and one-half mile on rivers outside national parks in Alaska in order to protect river-related values."

The project site is not located in a .25-mile proximity of the Kansas River NRI River Segment, therefore no adverse effects will occur. The project is not a water resources project that could affect the free-flowing condition of the river. The project is in compliance with the Wild and Scenic Rivers Act. See attached Wild and Scenic Rivers Worksheet packet.

### **Are formal compliance steps or mitigation required?**

- Yes  
 No

# 1311 Research Park Dr/5015 Legends Dr 3.97 miles to the Kansas River



June 20, 2024

— 3.97 miles to the Kansas River NRI River Segment

1311 Research Park Dr/5015 Legends Dr

Railroads

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### KANSAS

Kansas has approximately 133,956 miles of river, but no designated wild & scenic rivers.



Choose A State   
Choose A River

*Nourished by the fertile soils of the region, rivers of the Midwest explode with life, from great avian migrations to ancient fishes.*

[+ View larger map](#)

Kansas does not have any designated rivers.



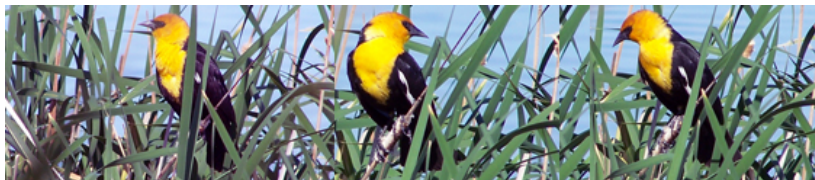




## WILD & SCENIC RIVER STUDIES

### Wild & Scenic River Studies

There are two study provisions in the Act — Section 5(a), through which Congress directs the study of select rivers, and Section 5(d)(1), which directs federal agencies to identify potential additions to the National Wild and Scenic Rivers System (National System) through federal agency plans. A brief explanation is provided in the following respective sections.



Choose A State ▼ Go

Choose A River ▼ Go

*While progress should never come to a halt,  
there are many places it should never come to  
at all. — Paul Newman*

### Current Active Studies

Currently, there are three rivers or river systems under "authorized" study—two under Section 5(a) of the Wild & Scenic Rivers Act and one under Section 2(a)(ii). This does not include those that might be under assessment as part of normal agency land-planning processes.

#### Rivers Currently Under Study

- **Cave, Lake, No Name and Panther Creeks, Oregon** (Public Law 113-291, December 19, 2014) – Under study by the National Park Service.
- **Housatonic River, Connecticut** (Governor Malloy Request for Section 2(a)(ii) Designation, November 16, 2016) – Under study by the National Park Service.
- **York River, Maine**. (Public Law 113-291, December 19, 2014) – Under study by the National Park Service.

### Section 2(a)(ii) Studies

Under Section 2(a)(ii) of the Act, a governor (or governors for a river in multiple states) of a state can request that a river be designated, provided certain conditions are met (refer to the [Council White Paper on Section 2\(a\)\(ii\)](#) for specifics). The NPS then conducts a study to determine if certain conditions are met. Here are some of the studies conducted under Section 2(a)(ii). Again, if you don't see a study listed, we do not have a copy.

#### Section 2(a)(ii) Studies Available for Download

## Section 5(d)(1), Agency-Identified Studies

In recent years, hundreds of rivers have been identified for study through Section 5(d)(1) of the Act. This provision directs federal agencies to identify potential addition to the National System through their respective resource and management plans. Its application has resulted in numerous individual river designations, statewide legislation (e.g., Omnibus Oregon Wild and Scenic Rivers Act, P.L. 100-557; Michigan Scenic Rivers Act, P.L. 102-249) and multi-state legislation (e.g., Omnibus Public Land Management Act of 2009, P.L. 111-11). Here are examples of agency-identified studies and transmittal documents (if available).

[Section 5\(d\)\(1\) Studies Available for Download](#)

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## Congressionally Authorized Study Reports

We have collected a few of the study reports prepared at the direction of Congress (see next section, "Section 5(a), Congressionally Authorized Studies," for the complete list of congressionally authorized studies). If you do not see a report here, we do not have it, and you will have to contact the study agency at the local level for a copy.

[Congressionally Authorized Study Reports Available for Download](#)

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## Section 5(a), Congressionally Authorized Studies

Through Section 5(a), Congress authorizes the study of select rivers and directs one of the four federal river-administering agencies to conduct the study, as outlined in Sections 4(a) and 5(c) of the Wild & Scenic Rivers Act. The enabling legislation of 1968, P.L. 90-542, authorized 27 rivers for study as potential components of the National System. Amendments to the law have increased the number of studies authorized by Congress to 144.

These studies have led to 48 designations by either Congress or the Secretary of the Interior. One study led to the establishment of a National Recreation Area.

The number of rivers included in the National System differs from the number of rivers authorized for study by Congress for the following reasons:

- Not all rivers studied are found eligible or suitable for designation—many study rivers will not be included in the National System.
- Some rivers are designated by Congress or the Secretary of the Interior without a pre-authorization or 5(a) study (e.g., Niobrara River).
- Some rivers are designated as a result of recommendation in federal agency plans (e.g., 49 rivers designated in Oregon in 1988).

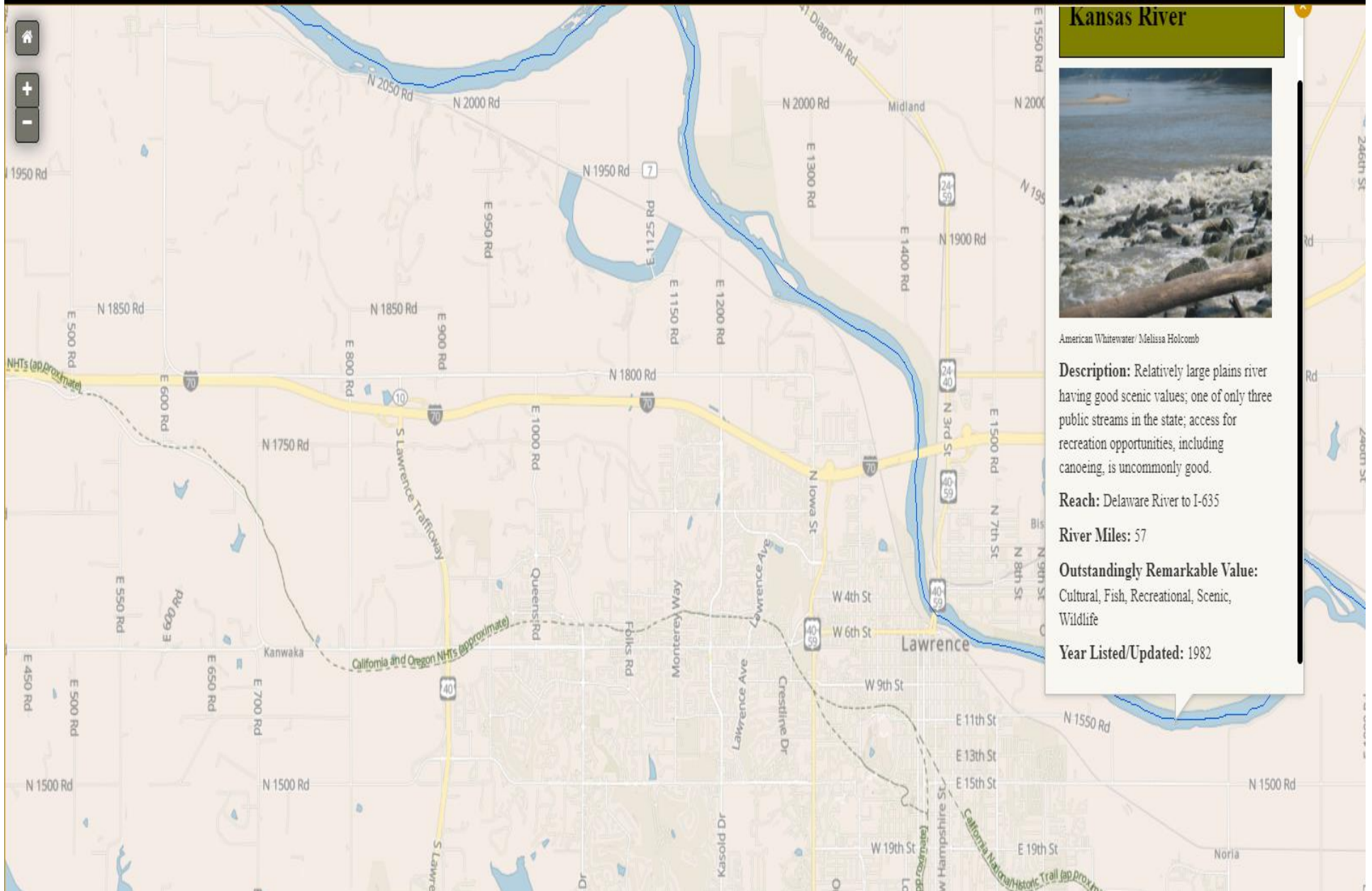
The 144 rivers below have been authorized for study. The agency leading the study is indicated as National Park Service (NPS), Bureau of Outdoor Recreation (BOR), Heritage Conservation and Recreation Service (HCRS), Bureau of Land Management (BLM), or U.S. Forest Service (USFS). Within the Department of the Interior, the study function was transferred from the HCRS (formerly the BOR) to the NPS by Secretarial Order Number 3017, January 25, 1978. All studies indicated as BOR or HCRS were completed by these agencies before the program was transferred to the NPS. The BLM was delegated responsibility for conducting studies on Public Lands on October 11, 1988. The USFS (Department of Agriculture) has always conducted studies on National Forest System Lands and as directed by Congress.

For each study river, the number in parentheses is the approximate number of miles to be studied. If river segments were designated, the total designated mileage appears in the text.

[Section 5\(a\), Congressionally Authorized Studies](#)

# Nationwide Rivers Inventory

This is a listing of more than 3,200 free-flowing river segments in the U.S. that are believed to possess one or more "outstandingly remarkable" values.



# Rivers

## Kansas

River	County	Reach	Length (miles)	Description	Potential Classification	ORVs	Watershed (HUC Code 8)
Kansas River	Wyandotte, Johnson, Leavenworth, Douglas, Jefferson	Delaware River to I- 635	57	Relatively large plains river having good scenic values; one of only three public streams in the state; access for recreation opportunities, including canoeing, is uncommonly good.		Cultural, Fish, Recreational, Scenic, Wildlife	Kansas 1982



## Wild and Scenic Rivers

### Introduction

The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287) provides federal protection for certain free-flowing, wild, scenic, and recreational rivers designated as components or potential components of the National Wild and Scenic Rivers System (NWSRS). The National Wild and Scenic Rivers System (NWSRS) was created by Congress in 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq., as amended) to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The Act is notable for safeguarding the special character of these rivers, while also recognizing the potential for their appropriate use and development. It encourages river management that crosses political boundaries and promotes public participation in developing goals for river protection.

Each river or river segment in the National Wild and Scenic Rivers System is administered with the goal of protecting and enhancing the values that caused it to be eligible for inclusion in the system. Designated rivers need not include the entire river and may include tributaries.

Four primary federal agencies are charged with protection and managing our wild and scenic rivers: the National Park Service, Bureau of Land Management, U.S. Forest Service and U.S. Fish and Wildlife Service. Each river segment is administered by generally one of these federal agencies and/or a state agency and, in some cases, a tribe or in coordination with local government. **Boundaries for protected rivers generally extend one-quarter mile from either bank in the lower 48 states and one-half mile on rivers outside national parks in Alaska in order to protect river-related values.**

HUD-assisted activities are subject to the requirements of the Wild and Scenic Rivers Act (16 U.S.C. 1271 et seq.). The environmental review must evaluate the potential to impact any listed Wild and Scenic River when the assisted project is within proximity to a listed natural resource (24 CFR 58.5(f) ([https://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title24/24cfr58\\_main\\_02.tpl](https://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title24/24cfr58_main_02.tpl)) or 24 CFR 50.4(f) (<https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=1948aa60e0ceb1e3b501f985b9315c79&r=PART&n=24y1.1.1.1.29>)).

### HUD Guidance

#### Is your project within proximity of a NWSRS river as defined below?

**Wild and Scenic Rivers.** (<http://www.rivers.gov/map.php>) These rivers or river segments have been designated by Congress or by states (with the concurrence of the Secretary of the Interior) as wild, scenic or recreational.

**Study Rivers.** (<http://www.rivers.gov/study.php>) These rivers or river segments are being studied as a potential component of the Wild & Scenic River system.

**Nationwide Rivers Inventory (NRI).** (<http://www.nps.gov/ncrc/programs/rtca/nri/>) The National Park Service has compiled and maintains the NRI, a register of river segments that potentially qualify as national wild, scenic or recreational river areas.

**If so, is your project a water resources project?** A water resources project is a federally assisted project that could affect the free-flowing condition of a wild and scenic river. Examples include dams, water diversion projects, bridges, roadway construction or reconstruction, boat ramps, and activities that require a Section 404 permit from the Army Corps of Engineers.

#### If so, could the project do any of the following?

- Have a direct and adverse effect within wild and scenic river boundaries

- Invade the area or unreasonably diminish the river outside wild and scenic river boundaries
- Have an adverse effect on the natural, cultural, and/or recreational values of an NRI segment

Consultation with the appropriate federal, state, local, and/or tribal Managing Agency is required, pursuant to Section 7 of the Act, to determine if the proposed project may have an adverse effect on a wild and scenic river or a study river and, if so, to determine the appropriate avoidance or mitigation measures. The Managing Agency for a particular river segment generally is the National Park Service, the Bureau of Land Management, U.S. Forest Service, or U.S. Fish and Wildlife Service; for some river segments, a state agency, tribe, or a local government may also be a Managing Agency. For rivers listed in the NRI, the National Park Service (NPS) is the point of contact. Under Section 5 of the Act, the NPS can provide recommendations that the Responsible Entity must take into account in protecting the listed river segment.

## Compliance and Documentation

The environmental review record should contain **one** of the following:

- Evidence the proposed action is not within proximity to a designated Wild, Scenic, or Recreational River
- Documentation that contact was made with the Federal (or state) agency that has administrative responsibility for management of the river and that the proposed action will not affect river designation or is not inconsistent with the management and land use plan for the designated river area

**View Wild and Scenic Rivers - Worksheet** (</resources/documents/Wild-and-Scenic-Rivers-Worksheet.docx>).

**View Wild and Scenic Rivers - Partner Worksheet** (</resources/documents/Wild-Scenic-Rivers-Partner-Worksheet.docx>).

## Related Resources

**Wild and Scenic Rivers Act: Section 7** (<https://www.rivers.gov/documents/section-7.pdf>)

A technical report that includes appendices on how to document evaluation of impacts in the environmental review.

**Protecting Our Natural Resources Webinar** (</trainings/courses/protecting-our-natural-resources-complying-with-the-wild-and-scenic-rivers-act-farmland-protection-policy-act-and-endangered-species-act-webinar/>)

This webinar, held September 5, 2012, provides an overview of three laws concerning the protection of natural resources: the Wild and Scenic Rivers Act, Farmland Protection Policy Act, and Endangered Species Act. This webinar outlines the compliance steps in a way that has been tailored towards HUD projects for all three laws.



## Statute

16 U.S.C. 1271 et seq. (<http://www.gpo.gov/fdsys/search/pagedetails.action?collectionCode=USCODE&searchPath=Title+16%2FCHAPTER+28&granuleId=USCODE-2012-title16-chap28-sec1271&packageId=USCODE-2012-title16&oldPath=Title+16%2FChapter+28%2FSec.+1271&fromPageDetails=true&collapse=true&ycord=3300>)

## Resources

WISER: Wild and Scenic Rivers Online Module (<https://www.hudexchange.info/trainings/wiser/>)

## National Wild and Scenic Rivers System Lists

National Wild and Scenic Rivers System Website (<http://www.rivers.gov/rivers/>)

Designated Rivers (<http://www.rivers.gov/map.php>)

Nationwide Rivers Inventory (NRI) (<http://www.nps.gov/ncrc/programs/rtca/nri/>)

[View Additional Resources](#)

## Federal Related Laws and Authorities

[Air Quality \(/environmental-review/air-quality\)](#)

[Airport Hazards \(/environmental-review/airport-hazards\)](#)

[Coastal Barrier Resources \(/environmental-review/coastal-barrier-resources\)](#)

[Coastal Zone Management \(/environmental-review/coastal-zone-management\)](#)

[Environmental Justice \(/environmental-review/environmental-justice\)](#)

[Endangered Species \(/environmental-review/endangered-species\)](#)

[Explosive and Flammable Facilities \(/environmental-review/explosive-and-flammable-facilities\)](#)

[Farmlands Protection \(/environmental-review/farmlands-protection\)](#)

[Flood Insurance \(/environmental-review/flood-insurance\)](#)

[Floodplain Management \(/environmental-review/floodplain-management\)](#)

[Historic Preservation \(/environmental-review/historic-preservation\)](#)

[Noise Abatement and Control \(/environmental-review/noise-abatement-and-control\)](#)

[Site Contamination \(/environmental-review/site-contamination\)](#)

[Sole Source Aquifers \(/environmental-review/sole-source-aquifers\)](#)

[Wetlands Protection \(/environmental-review/wetlands-protection\)](#)

[Wild and Scenic Rivers \(/environmental-review/wild-and-scenic-rivers\)](#)