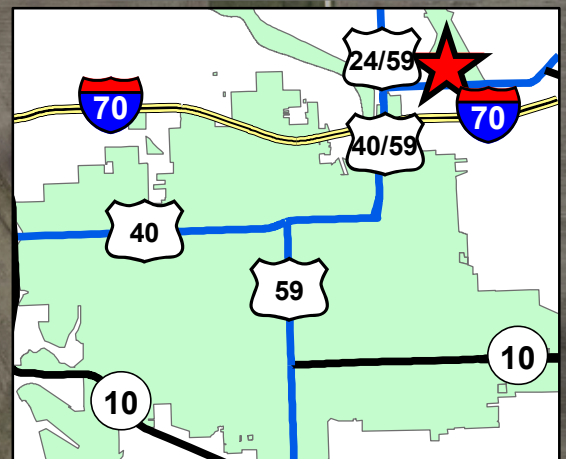


# Kansas Airport Improvement Program (Pilot Program)



## City of Lawrence



## Lawrence Municipal Airport City of Lawrence, KS



# Kansas Airport Improvement Program Application Form

Date \_\_\_\_\_

## Pilot Program ONLY

FY 2011.....☒ July 1, 2010-June 30, 2011 (Applications due July 16, 2010)

Applicant/Sponsor: City of Lawrence

Airport Identifier: LWC

Project Category: ☐ Preservation ☒ Modernization ☐ Facilities & Equipment  
☐ Planning

Project Description: Installation of gravity sewer line on airport property for  
the development of aviation related industries/businesses.

Total Project Costs \$ 592,762.00

We understand that if the project is approved, the Kansas Department of Transportation will participate in the cost of construction and construction engineering at a rate of 90 percent for sponsors with a population less than 3,000, 75 percent for sponsors with a population less than 10,000 or 50 percent for sponsors with a population of 10,000 or greater, not to exceed \$500,000 of state funds (\$1,000,000 for new primary runways; \$750,000 for full-depth reconstruction of existing primary runway), planning grants may be available at a rate of 95 percent for any community. The Sponsor will be responsible for letting the contract for bids and supervising construction. Construction engineering is eligible for KDOT funding.

Sponsor's Contact Person Charles F. Soules, P.E. Title Director of Public Works

Address 6th E. 6th Street, Lawrence, KS 66044

Phone (785) 832-3124 Fax (785) 832-3398 e-mail csoules@ci.lawrence.ks.us

Sponsor's Signature \_\_\_\_\_ Title \_\_\_\_\_

Additional information attached ~ Yes

**Project History.** Dating back to its dedication in October 1929, the Lawrence Municipal Airport (LWC) is one of the oldest, continuously operating airports in Kansas, and serves Northeast Kansas as a general aviation facility for the business and recreational user. LWC averages more than 120 daily flight operations of single-engine, twin-engine and business jets, including more than 1,000 helicopter operations annually.

With a 5,700 feet runway and CAT I instrument Landing System, LWC is an outstanding all-weather airport for the recreational or business flyer. Lawrence has experienced steady growth the past decade with increased usage at the Airport from business aircraft, including jet operations, and recreational pilots, including flight instruction.

**Project Background.** The airport is located north of US Route 24/40 about one-half mile east of 3<sup>rd</sup> Street. It is a valuable asset to the City, currently accommodating over 32,000 operations annually and generating over \$13 million dollars in local revenue for the economy. The airport is approximately 500 acres, has two runways, a terminal, 36 t-hangars, and several small on-site aviation services and hangars used by local businesses and individuals. The airport is located about a mile north of the City limit.

While the airport provides a valuable service to the community, it is currently underutilized due in part to inadequate City infrastructure. In 2009 the City invested \$700,000 to extend a 12" water main to the airport to provide sufficient water for fire protection and future development. Airport facilities have no sewer services, using septic instead. County regulations prohibit more than one septic and lateral field every three acres. This requires land that could otherwise be used for development to remain as open space for septic.

There is an immediate need for additional sewer facilities at the airport. At least one septic system is failing, and some recent firm inquiries have required greater service capacity. Also, a number of business inquiries have occurred over the last year for locations at the airport that suggest that the airport has more demand for business space than can be accommodated by existing water and sewer service.

**Project Status.** Forty-five acres have been identified as developable at the airport. An airport study completed in 2009 by Burns & McDonald estimated a build-out scenario of 850 employees generating between 100,000 - 200,000 gallons of wastewater per day.

In 2009 the City received two proposals from firms wanting to locate at the airport. The DAR Corporation proposed to construct a \$3 million facility with a start-up staff of 20 employees with an average salary of \$85,000 (growth potential of 50 employees). The DAR Corporation are/is developing and providing research with KU for prototype aircraft.

The other firm that is currently looking to expand to Lawrence is Hawkeye Helicopter. They provide visual/aerial inspection of major gas and electric facilities. They proposed to build a million dollar hangar and employ 5-8 people initially with up to 12-15 over the next several years.

**Project Future.** Both firms require adequate public facilities and infrastructure. Potable water and water for fire protection is paramount for the success of any business. The City

installed a 12" water main to the airport in 2009 at a cost of \$700,000. Sanitary sewer is also a critical component for a business to locate a facility. Plans are currently being completed.

The City has undertaken the design of the sewer line. The estimated construction cost of the gravity line and wet well for the force main is \$592,762.00. The request for 50%, of \$296,381.00 will enable the city to proceed with this project.

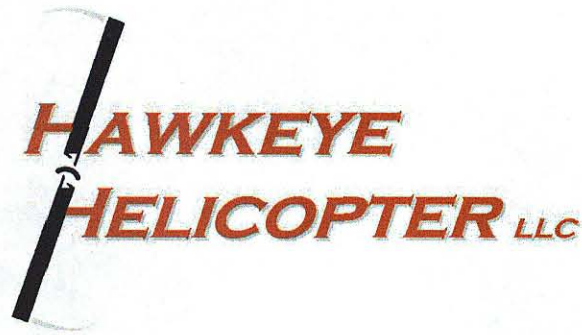
Finally, the City has also platted (attached) some of the property to be prepared for a quick response when the next business approaches the airport.

Proposed schedule:

July 16, 2010	Application submittal
September 1, 2010	Plans complete
October 1, 2010	Bid letting
October 15, 2010	Construction begins
December 2010 / January 2011	Weather permitting, construction will take 90 working days to complete

Attachments





## **BACKGROUND**

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Hawkeye Helicopter has been in business for 14 years. We own and operate a fleet of 14 aircraft including 3 helicopters, 10 single-engine Cessna's, and 1 Twin Cessna. We are currently serving 25 major contracts and employ 14 personnel.

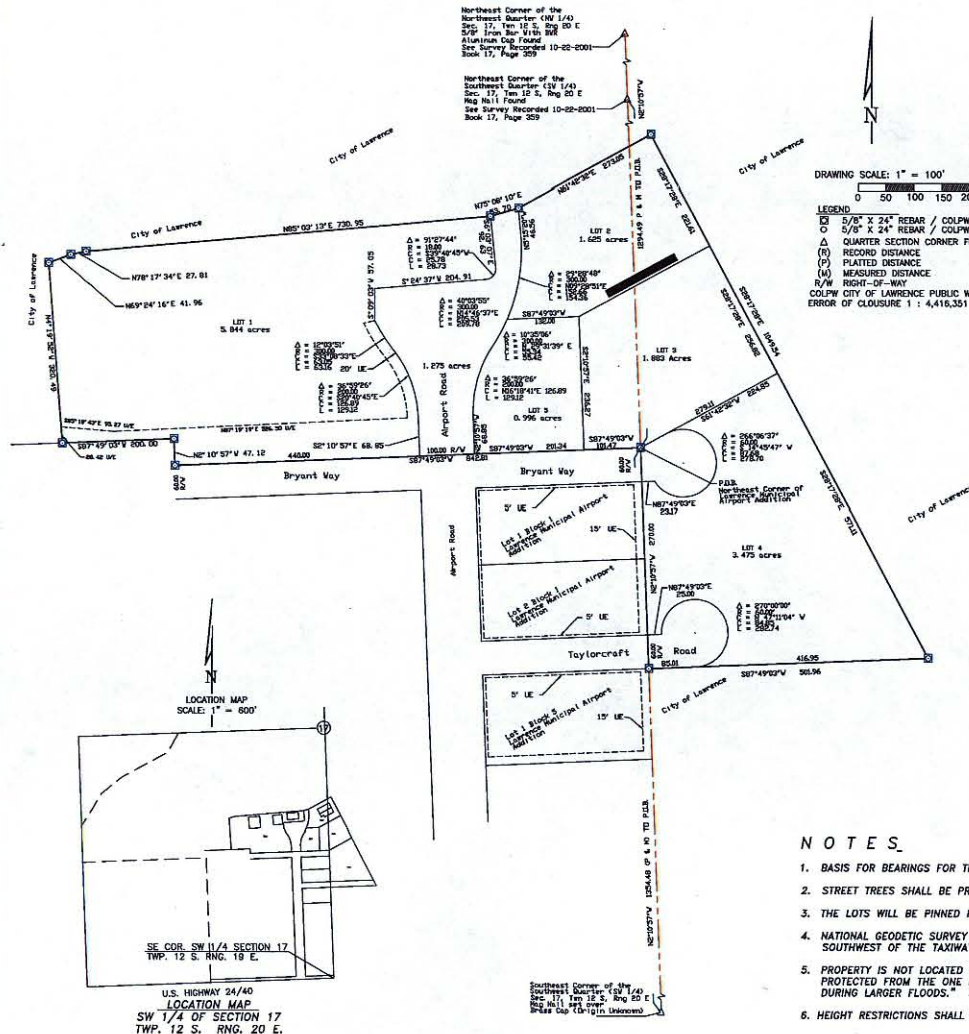
For the past several years, Hawkeye's base operations have taken place in numerous locations simultaneously. We operate a maintenance and storage hangar in Osage City, offices in Ottawa, and hangar rentals at Coffey County Airport. This logistical problem is beginning to hinder efficiency and future growth. Our goal is to establish a new Hawkeye Helicopter headquarters to envelop the full scope of our home base operations.

## **WHY LAWRENCE**

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Lawrence provides a geographic location central to our high-demand clients, namely KCP&L , Westar and NPPD. The response from local government has been outstanding and with the exception of sanitary sewer the current services and airport facilities available at the airport are sufficient for our needs. Hawkeye feels that LWC will provide the resources (including sewer) necessary for future growth that will be beneficial to all parties involved.

# A FINAL PLAT OF LAWRENCE MUNICIPAL AIRPORT ADDITION NO. 2 A SUBDIVISION IN THE CITY OF LAWRENCE, DOUGLAS COUNTY, KANSAS



## DESCRIPTION

COMMENCING AT THE NORTHEAST CORNER OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 17, TOWNSHIP 12 SOUTH, RANGE 20 EAST OF THE SIXTH PRINCIPAL MERIDIAN; THENCE SOUTH 02°10'57" EAST ON THE EAST LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SAID SECTION 17, A DISTANCE OF 1284.49 FEET FOR THE POINT OF BEGINNING SAID POINT BEING THE NORTHEAST CORNER OF LAWRENCE MUNICIPAL AIRPORT ADDITION; THENCE SOUTH 87°49'03" WEST, A DISTANCE OF 842.81 FEET; THENCE NORTH 02°10'57" WEST, A DISTANCE OF 47.12 FEET; THENCE SOUTH 87°49'03" WEST, A DISTANCE OF 200.00 FEET; THENCE NORTH 04°19'52" WEST, A DISTANCE OF 320.49 FEET; THENCE NORTH 69°24'16" EAST, A DISTANCE OF 41.96 FEET; THENCE NORTH 78°17'34" EAST, A DISTANCE OF 27.81 FEET; THENCE NORTH 85°03'13" EAST, A DISTANCE OF 730.95 FEET; THENCE NORTH 75°00'10" EAST, A DISTANCE OF 53.70 FEET; THENCE NORTH 61°42'52" EAST, A DISTANCE OF 273.05 FEET; THENCE SOUTH 28°17'28" EAST, A DISTANCE OF 1048.54 FEET; THENCE SOUTH 87°49'03" WEST, A DISTANCE OF 501.98 FEET; THENCE NORTH 02°10'57" WEST, A DISTANCE OF 380.00 FEET TO THE POINT OF BEGINNING CONTAINING 15.70 ACRES MORE OR LESS ALL IN THE CITY OF LAWRENCE, DOUGLAS COUNTY, KANSAS SUBJECT TO RIGHTS OF WAY, EASEMENTS AND RESTRICTIONS OF RECORD.

## SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THE PLATTED AREA SHOWN HEREON IS THE TRUE AND ACCURATE RESULT OF A FIELD SURVEY PERFORMED UNDER MY DIRECT SUPERVISION IN NOVEMBER, 2009, AND THAT THE PLAT IS A CLOSED TRAVERSE. THIS SURVEY CONFORMS TO THE KANSAS MINIMUM STANDARDS FOR BOUNDARY SURVEYS.

WALTER P. WARD P.L.S. #606

## DEDICATION

BE IT KNOWN TO ALL MEN BY THESE PRESENTS THAT I THE UNDERSIGNED OWNER OF THE ABOVE DESCRIBED TRACT OF LAND, HAVE HAD CAUSE FOR THE SAME TO BE SURVEYED AND PLATTED UNDER THE NAME OF A FINAL PLAT OF LAWRENCE MUNICIPAL AIRPORT ADDITION NO. 2, A SUBDIVISION IN THE CITY OF LAWRENCE, DOUGLAS COUNTY, KANSAS. THE EASEMENTS ARE DEDICATED TO THE PUBLIC FOR UTILITY AND DRAINAGE PURPOSES.

DAVID L. CORLISS, CITY MANAGER CITY OF LAWRENCE

## ACKNOWLEDGEMENT

STATE OF KANSAS  
COUNTY OF DOUGLAS

BE IT REMEMBERED, THAT ON THIS DAY OF , 2010, BEFORE ME THE UNDERSIGNED, A NOTARY PUBLIC, IN AND FOR SAID COUNTY AND STATE, CAME DAVID L. CORLISS, CITY OF LAWRENCE, KANSAS, WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHO EXECUTED THE FOREGOING INSTRUMENT OF WRITING AND DULY ACKNOWLEDGE THE EXECUTION OF THE SAME.

IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND AND AFFIXED MY SEAL ON THE DAY AND YEAR LAST WRITTEN ABOVE.

NOTARY PUBLIC

MY COMMISSION EXPIRES

## ENDORSEMENTS

RIGHTS-OF-WAY AND EASEMENTS  
ACCEPTED BY  
CITY COMMISSION  
LAWRENCE, KANSAS

APPROVED BY  
LAWRENCE DOUGLAS COUNTY  
PLANNING COMMISSION  
DOUGLAS COUNTY, KANSAS

MAYOR DATE

CHAIRMAN DATE

CITY CLERK DATE

## FILING RECORD

STATE OF KANSAS  
COUNTY OF DOUGLAS

REVIEWED IN COMPLIANCE  
WITH K.S.A. 58-2005.

MICHAEL D. KELLY, P.L.S. #889  
DOUGLAS COUNTY SURVEYOR

THIS IS TO CERTIFY THAT THIS INSTRUMENT WAS FILED FOR RECORD IN THE OFFICE OF THE DOUGLAS COUNTY REGISTER OF DEEDS ON THIS DAY OF , 2010, AND IS DULY RECORDED.

## REGISTER OF DEEDS

## NOTES

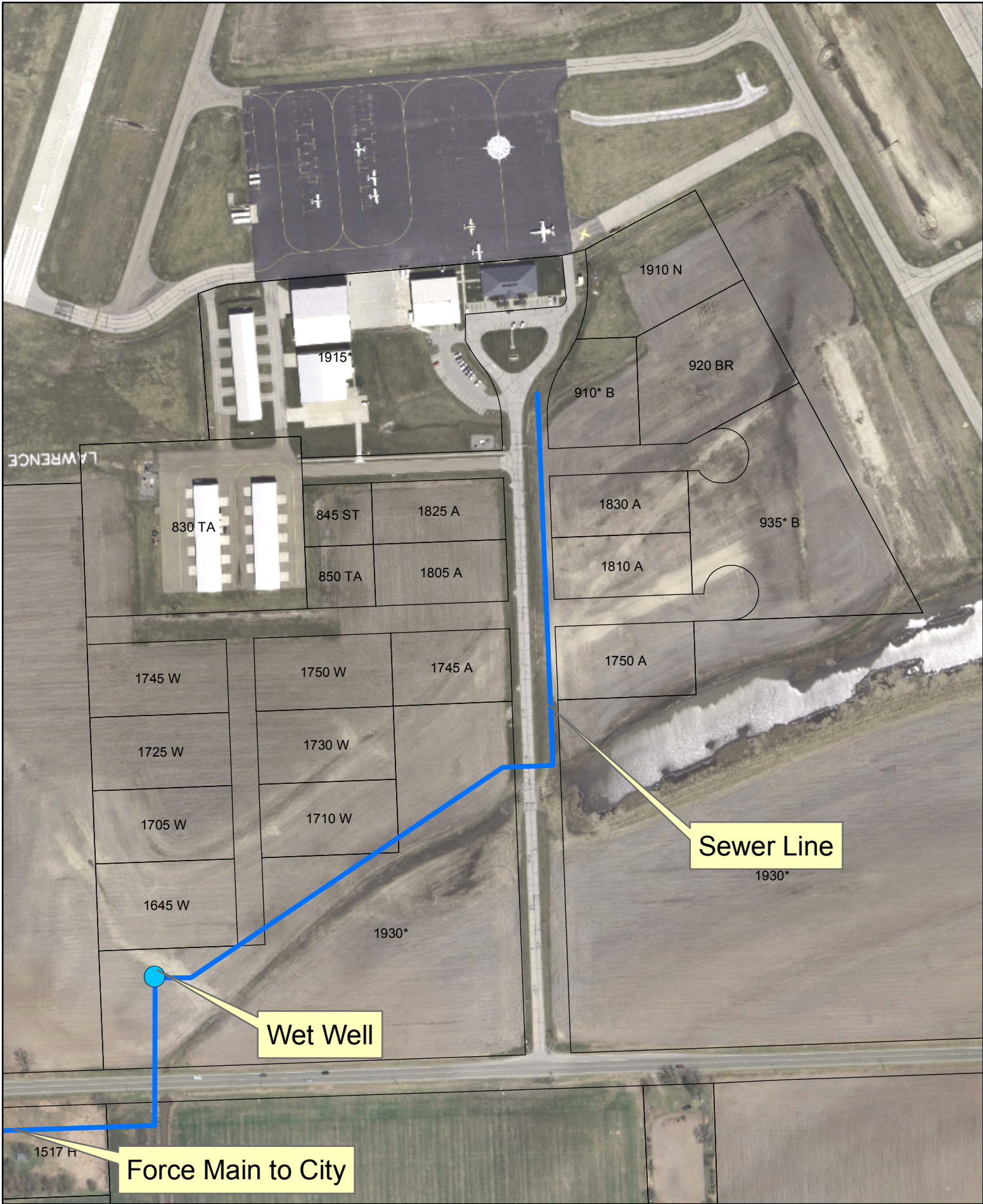
1. BASIS FOR BEARINGS FOR THIS PLAT IS STATE PLANE COORDINATES - KANSAS NORTH ZONE.
2. STREET TREES SHALL BE PROVIDED IN ACCORDANCE WITH THE MASTER STREET TREE PLAN FILED WITH THE REGISTER OF DEEDS. BOOK , PAGE .
3. THE LOTS WILL BE PINNED PRIOR TO RECORDATION OF THE FINAL PLAT AT THE REGISTER OF DEEDS OFFICE (PER SECTION 21-302.2).
4. NATIONAL GEODETIC SURVEY VERTICAL BENCHMARK IS A DISK MARKED "LOYD" SET IN CONCRETE; THE DISK IS 84.5 FEET SOUTHEAST OF A TAXIWAY, 50.0 FEET SOUTHWEST OF THE TAXIWAY RUNNING PARALLEL WITH RUNWAY 15/33. ELEVATION = 828.75 FT.
5. PROPERTY IS NOT LOCATED WITHIN FLOODPLAIN ZONE X PER FEMA MAP # 2004SC0030C EFFECTIVE DATE: NOVEMBER 7, 2001. PER FEMA MAP, "THIS AREA IS PROTECTED FROM THE ONE PERCENT ANNUAL CHANCE (100-YEAR) FLOOD BY LEVEE, DIKE, OR OTHER STRUCTURES SUBJECT TO POSSIBLE FAILURE OR OVERTOPPING DURING LARGER FLOODS." SINCE PROPERTY IS PROTECTED FROM THE 100-YEAR STORM, NO MEBD'S WILL BE DESIGNATED.
6. HEIGHT RESTRICTIONS SHALL BE LIMITED BY ARTICLE 3 OF THE LAND DEVELOPMENT CODE AS APPLICABLE TO THE AIRPORT OVERLAY ZONING.

DATE OF PREPARATION: FEBRUARY 2, 2010

WALTER P. WARD  
P.L.S. #606  
DOUGLAS COUNTY SURVEYOR  
785-442-8103



# Sewer Main Improvement





# DAR Corporation

Location Proposal for  
*Lawrence Municipal Airport*  
July 1, 2009

City of Lawrence



**DAR Corporation**

**ADVANCED AIRCRAFT ANALYSIS 3.2**

**Aeronautical Engineering**

- Conceptual Design
- Preliminary Design
- Detailed Design
- Computational Fluid Dynamics (CFD)
- Finite Element Analysis (FEA)
- Computer Aided Design (CAD)

**Prototyping**

- Metal & Composite Manufacturing

**Testing**

- Wind Tunnel & Water Tunnel
- Loads Testing
- Flight Testing

**Wind Energy**

- Design, Manufacturing & Testing

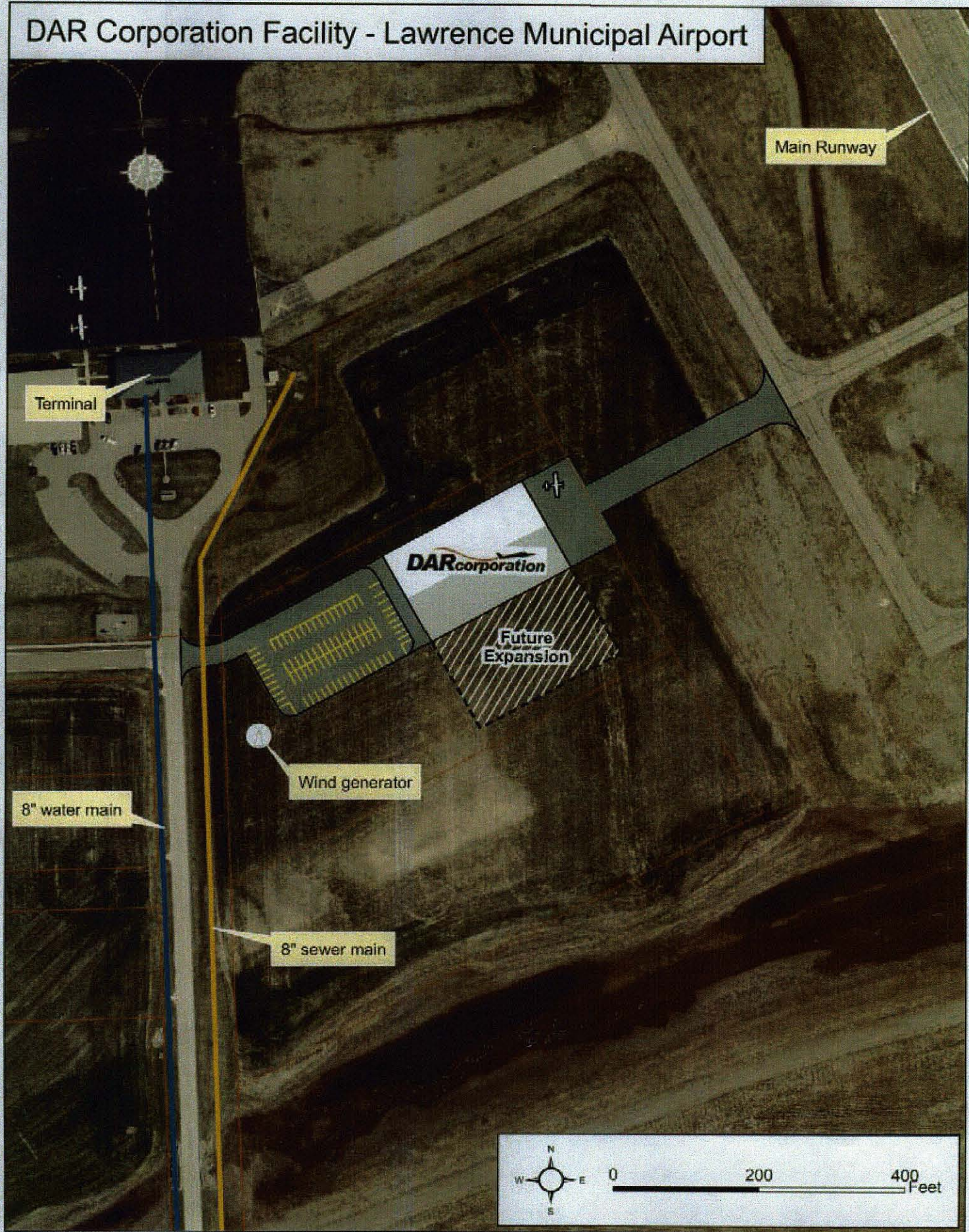
**Software**

- Advanced Aircraft Analysis
- AeroPack CAD

**Aeronautical Engineering Books**



# DAR Corporation Facility - Lawrence Municipal Airport



Main Runway

Terminal

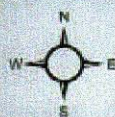
DARcorporation

Future  
Expansion

Wind generator

8" water main

8" sewer main



0 200 400 Feet