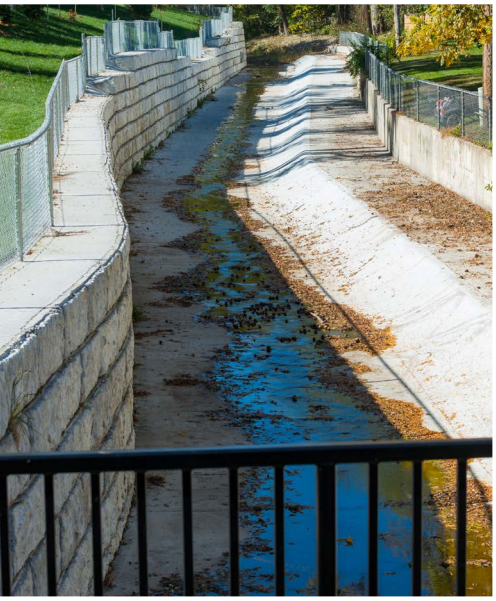
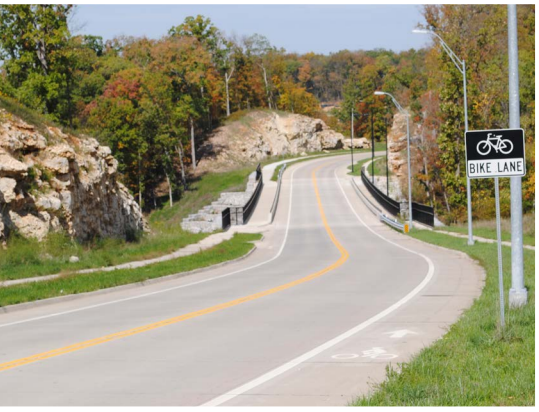
Affinis corp

Qualifications for Leavenworth County Sales Tax Projects





Leavenworth County, Kansas

April 24, 2015

Affinis corp

8900 Indian Creek Parkway, Suite 450
Overland Park, Kansas 66210
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Toll Free: 877-527-5468
Fax: 913-239-1111
www.affinis.us

April 24, 2015

Michael W. Spickelmier, PE
Public Works Director
County of Leavenworth
Department of Public Works
300 Walnut, Suite 007
Leavenworth, Kansas 66048-2815

RE: Consultant Qualification Packet Solicitation for Leavenworth County Sales Tax Projects

Mike,

Safe, well-maintained, and improved roads spur economic growth, revitalization, and new development. The foresight of county voters to support your infrastructure sales tax will be a strong catalyst for local and regional economies. **Affinis Corp, and specifically the design team I lead, relishes the opportunity to work with you and your city partners to fulfill the public's expectations and be good stewards of their investment.** Each project offers a meaningful, positive impact for the individual cities – Basehor, Leavenworth, and Lansing - and for Leavenworth County.

From my experience, I have found no one project is identical. Each project brings unique issues and challenges. The three projects in your request for qualifications are no different. Each brings the opportunity for unique solutions. In my opinion, **the cornerstone of project success is creating an atmosphere of partnering among key stakeholders.** Our collaborative approach includes working side-by-side with clients, property owners, utility agencies, and other stakeholders to gain an understanding of the real problems and possible solutions. For more than 10 years, we have developed a dynamic, flexible approach for our projects based on listening to stakeholders, learning from them, delivering solutions on time and within budget, and ultimately celebrating project success. Our approach is proven. It continually evolves with each project and experience.

As you review our qualifications, you will discover the Affinis design team has:

- Strong relationships with local partners, especially Basehor and Leavenworth
- The necessary capabilities and expertise to design 2-lane rural and 4-lane suburban roadways
- Capacity to begin immediately

Our objective is to **engineer ways to make life easier for you and for the public**. Using our collaborative approach, we can do just that; working together to find the best solution for the unique challenges of these projects.

I value our long-lasting relationships with the Cities of Basehor and Leavenworth. Similarly, I look forward to bringing the same level of service to you and the county.

For the team,

Kristen Leathers, PE
Project Manager

Previous Experience on Similar Projects

	Kansas Department of Transportation	Somerset (K-68 Improvements)	K-68 Improvements	Basehor, Kansas	Wolf Creek	155th Street & 158th Street Improvements	Leavenworth, Kansas	2010-2015 Pavement Management Program	Johnson County, Kansas	167th Street (Metcalf to Nall) & Nall Avenue (159th to 167th)	Overland Park, Kansas	159th Street Improvements - Metcalf Avenue to Nall Avenue	Olathe, Kansas	College Boulevard - Lone Elm Road to Woodland Avenue
2-lane rural roadway		X	X							X				
Multi-lane suburban roadway					X	X		X				X		
Traffic analysis		X	X		X	X						X		X
Intersection design		X	X		X	X				X		X		X
KDOT Administration(local/state/federal)		X	X		X	X						X		X
Local municipalities					X	X		X						
OTHER DESIGN FEATURES														
Survey		X	X		X	X		X		X		X		X
Highway/arterial/collector roadway		X	X		X	X		X		X		X		X
Utility coordination & relocation		X	X		X	X		X		X		X		X
Construction engineering/services					X	X		X				X		
Hydraulic/hydrologic analysis		X	X		X	X				X		X		X
RCB/culvert/structural design		X	X		X					X		X		X
ADA compliance					X	X		X				X		X
Pedestrian/bike access					X	X		X				X		X
Legal descriptions & tract maps		X	X		X	X				X		X		X
Public Involvement		X	X		X	X						X		X
PROJECT TEAM														
Kristen Leather - Project Manager					X	X		X				X		X
Ryan Fleming - Project Engineer		X	X		X	X				X		X		X
Mike McKenna - Traffic Engineer		X	X		X	X				X		X		X
Robert Ubben - Survey Manager		X	X		X	X		X		X		X		X
Ryan Stobaugh - Construction Services								X						
Cliff Speegle - Stormwater Engineer			X		X					X		X		X
Jason Davis - Structural Engineer		X	X		X					X		X		X

Wolf Creek Parkway - 155th Street & 158th Street Improvements

Basehor, Kansas

ACEC-KS Engineering Excellence Award

SIMILAR DESIGN FEATURES:

- Intersection geometrics
- Access management
- Hydraulic & hydrologic analysis
- Culvert design
- Utility relocation & coordination
- ADA compliance
- Traffic control & construction phasing
- Right-of-way acquisition
- Public involvement
- Permitting
- KDOT Administration

The city applied for and received KDOT Corridor Management funding to construct a 3-lane collector between 158th Street and 155th Street, north of US 24/40 Highway. The new collector functions as a reverse frontage road and as an extension of Wolf Creek Parkway east of 155th Street. The new roadway is 2,000 feet long and required the acquisition of new right-of-way. The improvements consist of two, 11-foot through lanes and an 11-foot center turn lane. The asphalt pavement is flanked on both sides by concrete curb and gutter and 5-foot wide concrete sidewalks. An enclosed storm drainage system was constructed and the runoff was conveyed to the existing channel on the north side of the project. In conjunction with the storm sewer design, we prepared the NPDES and Nationwide 404 permits for the project.

Affinis was already working with the City of Basehor on the Wolf Creek Parkway (158th Street to 155th Street) improvements when the city applied for and received KDOT Corridor Management funding to widen 155th Street and 158th Street from US 24/40 Highway to north of Wolf Creek Parkway. We were able to offer the city savings by designing the projects to bid as one package at the same time.

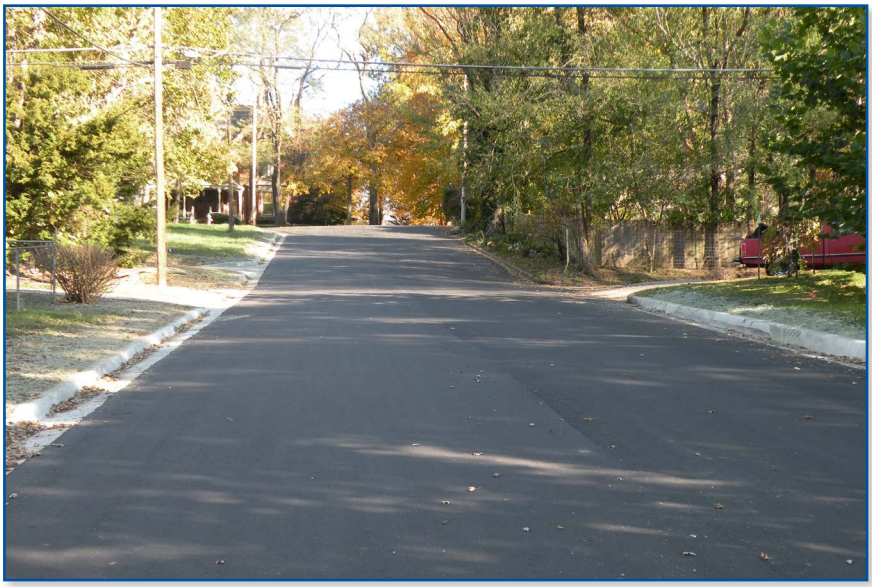
155th and 158th Streets are classified as collector/arterials with traffic signals at US 24/40 Highway. The improvements include left turn lanes at Wolf Creek Parkway and implementing access management strategies, including a raised median to improve vehicular and pedestrian safety. Sidewalk; curb and gutter; and enclosed storm sewer are also included in the improvements. On 155th Street, a raised median restricts left turns and provides a protected turn bay for vehicles. A driveway close to the Wolf Creek Parkway intersection was relocated to improve traffic movement and provide safer access to the property. A pedestrian crossing was constructed at the Wolf Creek Parkway/155th Street intersection.

REFERENCE
Mitch Pleak, PE
City Engineer
City of Basehor, Kansas
913-742-1370

CONSTRUCTION COST: $1.8 Million
COMPLETION DATE: 2013

2010-2015 Pavement Management Program

Leavenworth, Kansas



SIMILAR DESIGN FEATURES:

- Street reconstruction
- Pavement preservation & maintenance
- ADA compliance
- Traffic control & construction phasing
- Storm drainage
- Utility relocation & coordination
- Construction engineering

In 2010, the City of Leavenworth retained Affinis to lead their pavement management program. One of our responsibilities is to perform pavement ratings on 20 percent of the streets annually. Our team evaluates the deterioration and distresses of the streets. The field data is input into the city's pavement management software program and the pavement condition index (PCI) is generated for each street. Using the software, we develop a list of possible streets, along with the proposed maintenance method, for that year's program. Each street on the list is evaluated in the field to ensure the maintenance method is appropriate and to identify other improvements that might be necessary. After the streets are selected, we begin design and prepare the construction documents. Oftentimes, city crews will perform patching and crack sealing in preparation for the pavement maintenance. We collaborate with city staff to identify these activities and coordinate them with the program's construction schedule.

Our services include evaluation and implementation of software upgrades, database management, identifying long-term goals for the program, and investigating new pavement maintenance methods or products. We also assist the city's construction representatives with construction observation as needed.

Affinis performed the following construction observation activities:

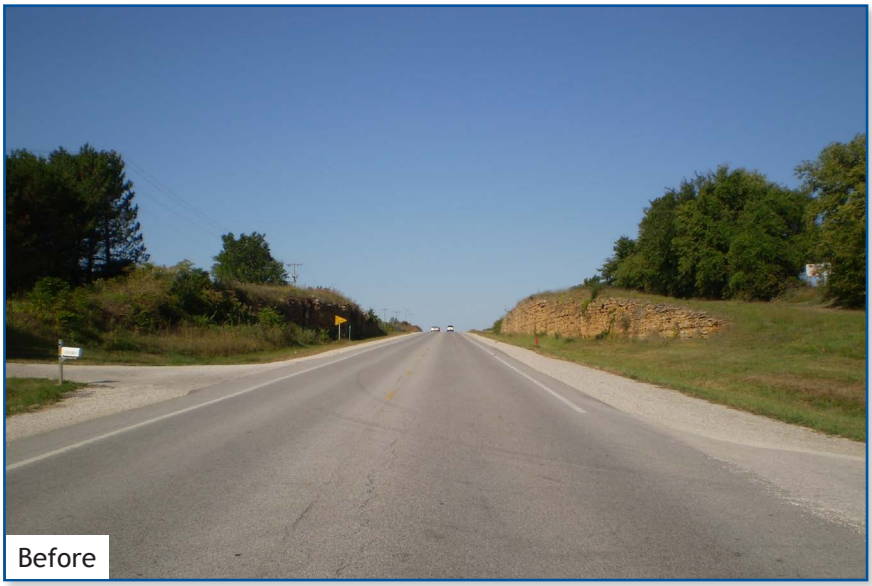
- Field book track quantities
- Pay estimates
- Concrete testing
- Project coordination & weekly meetings
- Asphalt paving observations
- Daily traffic control inspections

REFERENCE:
Michael McDonald, PE
Director of Public Works
City of Leavenworth, Kansas
913-682-9201

DESIGN FEE: $700,000 Annually
COMPLETION DATE: Ongoing

K-68 Improvements - Miami County, Kansas

Kansas Department of Transportation


Before

SIMILAR DESIGN FEATURES:

- Rural 2-lane highway
- 2-lane ditch section local roads
- Right-of-way acquisition
- Utility relocation & coordination
- Hydraulic & hydrologic analysis
- Utility coordination
- Intersection geometrics
- KDOT administration
- County agency coordination
- Access management
- Public involvement
- Permitting

Through the KDOT T-Works Program, the stretch of K-68 between US-69 and US-169 was selected to receive $10 million of funding for various improvements along the corridor. The long-term plan is to design and construct a 4-lane expressway along this 8-mile section of K-68. The available funding will fall well short of completing this goal.

Affinis was contracted by KDOT to complete a preliminary design of this section of K-68 for the future 4-lane expressway and to determine, through public involvement and engineering analysis, how to best spend the $10 million to improve K-68 for its current needs and those of the future expressway. The initial design includes intersection geometric improvements and adding turn lanes in high accident areas to make the corridor safer. The design process also included public involvement, which is valuable in determing the safety improvements needed along the corridor.

Our team has completed the discovery and right-of-way phases for the 4-lane expressway project and the $10 million T-WORKS improvement project and has begun the final design for the $10 million of improvements. The 4-lane expressway design included designing 8-miles of 4-lane expressway, 2-miles of 2-lane side roads, and 3-1/2 miles of 2-lane local access roads.

The T-WORKS improvements include constructing ¾ -mile of 4-lane expressway from US-69 west; adding turn lanes at four side roads to improve the safety of the intersections; relocating one mile of side roads to eliminate off-set intersections; and adding 2-miles of local access roads to eliminate direct access from 20 entrances onto K-68. The side roads and local access roads will be constructed as 2-lane ditch sections.

KEYS TO SUCCESS

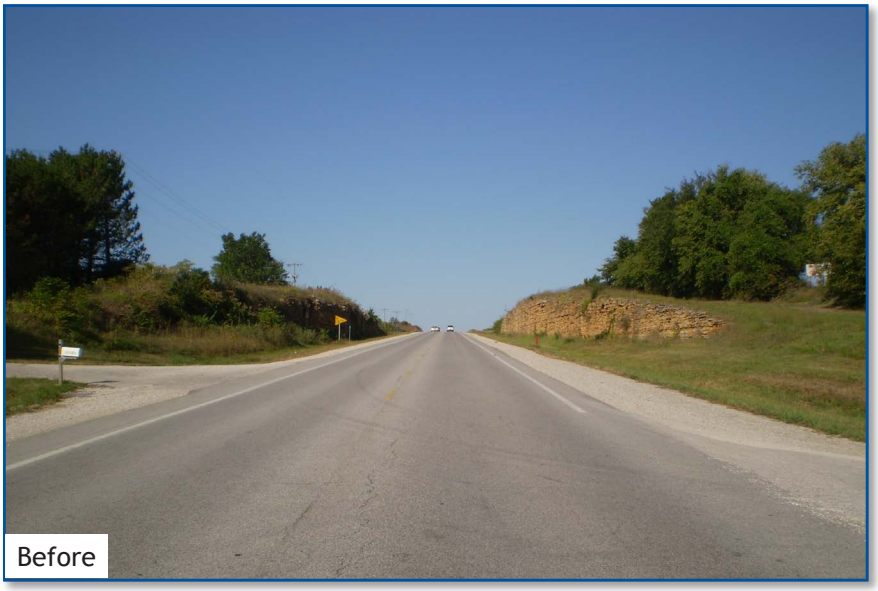
As part of the public involvement process, Affinis presented possible solutions and sought feedback from residents. Meetings were also held with representatives from the Cities of Louisburg and Paola and Miami County to gain a better understanding of potential development along the corridor. The information gathered through this process was used to prioritize and identify improvements for K-68. Engaging the public allowed us to communicate scope and schedule and ensure their expectation were realistic.

REFERENCE
Steve Rockers, PE
Road Design Leader
Kansas Department of Transportation
Bureau of Design, Road Section
785-296-1004

CONSTRUCTION COST: $10 Million
Estimated
COMPLETION DATE: 2018

Somerset (K-68 Improvements) - Miami County, Kansas

Kansas Department of Transportation


Before

SIMILAR DESIGN FEATURES:

- Rural 2-lane ditch section roadways
- Right-of-way acquisition
- Intersection geometrics
- Utility relocation & coordination
- H&H analysis
- RCB & culvert design
- KDOT administration
- Access management
- Permitting
- County agency coordination
- Public involvement

Through the KDOT T-Works Program, the stretch of K-68 between US-69 and US-169 was selected to receive $10 million of funding for various improvements along the corridor with construction beginning in 2018. The long-term plan is to design and construct a 4-lane expressway along this 8-mile section of K-68. Affinis was contracted by KDOT to complete the design and determine through public involvement and engineering analysis how to best spend the $10 million to improve K-68 for its current needs and those of the future.

During the public involvement process, it was determined the safety improvements to the K-68/Somerset Road intersection were needed as soon as possible. These were separated into another project, becoming the K-68/Somerset Road project plan which begins construction in 2016.

The improvements needed at the intersection include:

- Relocating a half-mile of Somerset Road to better align with the terrain and future development
- Adding left and right turn lanes on K-68 at the intersection to improve the safety of the intersection
- Adding a half-mile local access road to eliminate direct access onto K-68

KEYS TO SUCCESS

Gathering accurate field data, performing engineering analysis, and developing practical improvements are the primary goals of this project. During the design phase, accounting for access and traffic throughout construction will be critical in minimizing the impacts to the travelling public and adjacent property and business owners. Another vital element during design will be managing the coordination of the various utility companies to keep the project running smoothly.

REFERENCE
Steve Rockers, PE
Road Design Leader
Kansas Department of Transportation
Bureau of Design, Road Section
785-296-1004

CONSTRUCTION COST: $1.5 Million
Estimated
COMPLETION DATE: 2016

College Boulevard - Lone Elm Road to Woodland Avenue

Olathe, Kansas

Before

SIMILAR DESIGN FEATURES:

- Convert 2-lane open-ditch to 4-lane urban arterial
- KDOT administration
- Traffic control & construction phasing
- Intersection geometrics
- Utility relocation & coordination
- Public involvement
- Right-of-way acquisition
- Access management

The process of widening this one-mile stretch of College Boulevard to a 4-lane roadway began over 10 years ago with the construction of the westbound lanes. During that time, those lanes served as the roadway for both directions of traffic. However, increased traffic volumes and projected growth patterns along this corridor have now caused the City of Olathe to plan for the full build out of the entire roadway system. Affinis has been hired to complete the project and establish the 4-lane, median divided road. Other design features of the project will include revisions to the Olathe Northwest High School (ONWHS) entrances, storm sewer improvements, reinforced box culvert extensions and street lighting. Affinis provided all design surveys and will perform all property descriptions for right-of-way and easement acquisition prior to the land acquisition process.

KEYS TO SUCCESS

A major key to the success of this project will be the coordination efforts in front of ONWHS. The ONWHS main entrance is in close proximity to the College & Lone Elm intersection, and a median is currently planned to be constructed in front of it. With this entrance closed for left turning vehicles, traffic patterns will be altered and result in changes within the school's campus. Affinis has worked closely with other schools on similar projects and will use that expertise to coordinate with ONWHS.

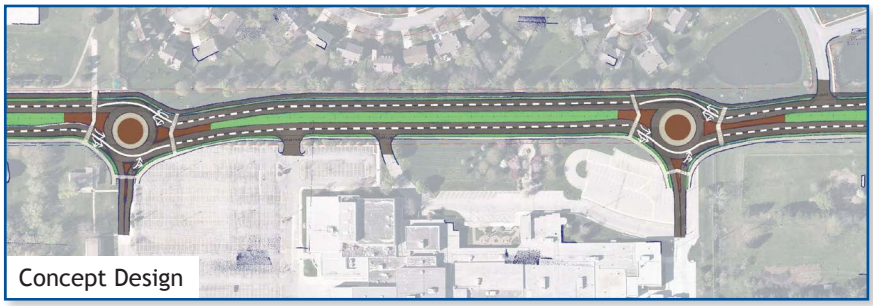
Other important features to the project are the houses that directly access College. Providing the homeowners with continuous access to their homes, while also minimizing construction in their front yards, will help in keeping them satisfied. Our designs will also attempt to avoid a large pond immediately south of College. A well-conceived construction phasing and traffic control plan is also critical for the rest of the corridor in order to maintain access during construction. A strong public participation program to keep both the schools and residents informed of the project and how construction phasing may affect their access will be vital to keeping the project running smoothly.

REFERENCE
Jeff LeMire, PE
Project Manager
City of Olathe
913-971-9004

DESIGN FEE: $510,000
COMPLETION DATE: Spring 2016

159th Street Improvements - Metcalf Avenue to Nall Avenue

Overland Park, Kansas


Concept Design


Concept Design

SIMILAR DESIGN FEATURES:

- Convert 2-lane open ditch to 4-lane, urban arterial
- Intersection geometrics
- Typical section alternatives
- Traffic control & construction phasing
- Intersection control alternatives
- Right-of-way acquisition
- County agency coordination
- Hydraulic & hydrology analysis
- RCB & culvert design
- ADA compliance
- Utility relocation & coordination
- KDOT administration
- Public involvement
- Access management
- Construction engineering

This project began for Affinis as a preliminary engineering study (PES) of the 159th Street corridor between Metcalf and Nall. The corridor is home to two schools; residential neighborhoods; impending retail developments on one end; and residents of unincorporated Johnson County. The purpose of the study was to evaluate what type of roadway section will best serve the range of stakeholders.

The study determined that the 1-mile thoroughfare project would need to be widened from the existing 2-or 3-lane, open-ditch road to a 4-lane, median-divided thoroughfare. Additionally, because of the ongoing traffic congestion in front of Blue Valley High School (BVHS), multi-lane roundabouts were proposed at both the western and eastern entrances to the school. In addition to the street and storm sewer improvements that are currently being designed, the project also includes a traffic signal installation at Nall Avenue, street lighting, and permanent BMPs to improve storm water runoff quality from the project. Affinis provided all design surveys and will perform all property descriptions for right-of-way and easement acquisition prior to the land acquisition process.

KEYS TO SUCCESS

The study's goal of balancing the city's resources in determining the "right size" roadway that would also provide safety and capacity for future years were the initial measures of success for this project. As design continues, coordination with BVHS and the various utility companies has been critical to the project's success.

This corridor is characterized by residential development within Johnson County. With houses that front 159th Street, a flexible approach that adapts to these residents and their property intentions is crucial. A well-conceived construction phasing and traffic control plan is also critical to maintaining access during construction while minimizing impacts to the Blue Valley Schools along the corridor. A strong public participation program to keep both the schools and residents informed of the project and how construction phasing may affect their access will be vital to keeping the project running smoothly.

REFERENCE:
Eric Keenan, PE
Senior Civil Engineer
City of Overland Park, Kansas
913-895-6028

CONSTRUCTION COST: $9 Million
Estimated
COMPLETION DATE: 2016

167th Street (Metcalf to Nall) & Nall Avenue (159th to 167th)

Johnson County, Kansas


Before

SIMILAR DESIGN FEATURES:

- Rural 2-lane roadway
- Hydraulic & hydrologic analysis
- RCB & culvert design
- Traffic control & construction phasing


Before

The planned improvements along 167th Street from Metcalf Avenue to Nall Avenue and along Nall Avenue from 159th Street to 167th Street will bring added safety to a corridor where it is very much needed. The addition of shoulders adjacent to the already narrow existing roadway will be a significant upgrade to this corridor and will give drivers a stronger sense of safety that a minor driving error or "bump in the road" would not result in them running into the adjacent trees or steep ditches. Additionally, the roadway profile is being adjusted and new, twin reinforced box culvert (RCB) structures are being built to alleviate flooding near a bridge along 167th Street. Affinis provided the design surveys, as well as all the roadway and stormwater designs for the project.

KEYS TO SUCCESS

Providing a corridor that brings added safety, while also minimizing the extent of the construction within the front yards of those residents immediately adjacent to the project will go a long way towards keeping this project running smoothly. Maintaining access for traffic throughout the construction process is important to minimizing the impact to the travelling public and adjacent property owners.

Due to changing priorities within Johnson County, this project is slated to be fully designed and then, put on hold until approximately 2020. It is important the completed designs for the project are such that when the project starts back up for the bidding and construction phases, limited design work will be necessary at that time.

REFERENCE:
Geoffrey Vohs
Engineer
Johnson County, Kansas Public Works
913-715-8312

DESIGN FEE: $220,512
COMPLETION DATE: TBD

Ability to Perform Within Desired Time Frame:

CURRENT WORKLOAD AND ABILITY TO BEGIN IMMEDIATELY

Our team has ample capacity and is immediately available to provide survey, design, and construction engineering services to you. The chart below shows our team member's capacity for new projects.

Team Member	Role	% Available
Kristen Leathers, PE	Project Manager	60%
Ryan Fleming, PE	Project Engineer	40%
Mike McKenna, PE, PTOE	Traffic Engineer	50%
Cliff Speegle, PE	Stormwater Engineer	45%
Jason Davis, PE	Structural Engineer	50%
Robert Ubben, PLS	Survey Manager	50%
Ryan Stobaugh, EI	Construction Services	50%

REALISTIC ESTIMATE OF TIMELINE FOR DESIGN AND SURVEY

Our in-house survey team is efficient and thorough with over 70 years of combined experience. On average, we complete one mile of field survey in three weeks. Our survey manager and party chief visit each project site to determine the time needed for office and field work. To expedite design on time-sensitive projects, the survey team will complete the design base map in smaller segments and add to it as they gather more information. This lets the design team start before surveying is complete.

The design schedule is dependent on a variety of things – such as state or federal funding requirements, length and complexity of the project, right-of-way and easement acquisitions, permitting and utility relocations. In general, projects similar to the three discussed in this request take 18 to 24 months. Projects with KDOT funding or following the LPA process require 6-week review times, pushing schedules to the 24-month timeframe. When necessary, we can use additional available resources to expedite schedules. Before committing to a set timeline, we want to work with you to identify potential 'schedule busters' and critical path goals to establish a realistic schedule. A schedule is only good if it can be met. Being forthright and transparent, we will maintain honest communication regarding what is feasible.

"The City of Leawood needed the signal design at 133rd and Roe fast tracked. Affinis delivered quality plans in six weeks and provided excellent communication throughout the process."

David Ley, PE, City Engineer, City of Leawood, Kansas

Project Team:

Kristen Leathers, PE, Assoc. DBIA - Project Manager

Education: Bachelor of Science Civil Engineering University of Missouri - Rolla
Years with Affinis: 25 Years of Experience: 25

- Basehor, Kansas –155th Street and 158th Street, US24/40 Highway north to Wolf Creek Parkway
- Basehor, Kansas – Wolf Creek Parkway Improvements, 158th Street to 155th Street
- Leavenworth, Kansas – 2010-2015 Leavenworth Pavement Management Program
- Overland Park, Kansas - 159th Street Improvements, Metcalf Avenue to Nall Avenue
- Overland Park, Kansas – SMAC - 92nd Place and Switzer Road Storm Sewer Improvements
- Overland Park, Kansas – 2011 & 2012 CDBG Neighborhood Street Reconstruction Program
- Olathe, Kansas – College Boulevard

Ryan Fleming, PE - Project Engineer

Education: Bachelor of Science Civil Engineering University of Arkansas
Years with Affinis: 11 Years of Experience: 20

- Basehor, Kansas – Wolf Creek Parkway, 158th Street to 155th Street
- Kansas Department of Transportation - K-68 Improvements, Miami County, Kansas
- Johnson County, Kansas – 167th Street to Metcalf Avenue to Nall and Nall Avenue from 159th Street to 167th Street
- Overland Park, Kansas - 159th Street Improvements, Metcalf Avenue to Nall Avenue
- Olathe, Kansas – College Boulevard Improvements, Lone Elm Road to Woodland Avenue

Mike McKenna, PE, PTOE - Traffic Engineer

Education: Bachelor of Science Civil Engineering University of Colorado
Master of Science
Years with Affinis: 5 Years of Experience: 25

- Basehor, Kansas – Wolf Creek Parkway, 158th Street to 155th Street
- Kansas Department of Transportation - K-68 Improvements, Miami County, Kansas
- Kansas Department of Transportation - Somerset Improvements, Miami County, Kansas
- Kansas Department of Transportation - US-75 Access Management Plan
- Johnson County, Kansas – 167th Street to Metcalf Avenue to Nall and Nall Avenue from 159th Street to 167th Street
- Overland Park, Kansas - 159th Street Improvements, Metcalf Avenue to Nall Avenue

Robert Ubben, PLS - Survey Manager

Education: Associates in Land Surveying Longview Community College
Years with Affinis: 28 Years of Experience: 28

- Basehor, Kansas – Wolf Creek Parkway, 158th Street to 155th Street
- Basehor, Kansas –155th Street and 158th Street, US24/40 Highway north to Wolf Creek Parkway
- Basehor, Kansas – City Limits Description
- Basehor, Kansas – 153rd Street Right-of-Way Vacation
- Basehor, Kansas – ALTA Property Boundary Survey
- Leavenworth, Kansas - Leavenworth Pavement Management Program
- Leavenworth, Kansas – Community Center Floodwall
- Kansas Department of Transportation - K-68 Improvements, Miami County, Kansas
- Kansas Department of Transportation – Somerset Improvements, Miami County, Kansas
- Kansas Department of Transportation – On-Call Survey Services, Johnson County, Kansas
- Overland Park, Kansas – On-Call Survey Services
- Overland Park, Kansas - 159th Street Improvements, Metcalf Avenue to Nall Avenue
- Olathe, Kansas – College Boulevard, Lone Elm Road to Woodland Avenue

Cliff Speegle, PE, LEED® BD +C - Stormwater Engineer

Education: Bachelor of Science Civil Engineering Oklahoma State University
Years with Affinis: 8 Years of Experience: 11

- Basehor, Kansas – Wolf Creek Parkway Improvements, 158th Street to 155th Street
- Kansas Department of Transportation - K-68 Improvements, Miami County, Kansas
- Johnson County, Kansas – 167th Street to Metcalf Avenue to Nall and Nall Avenue from 159th Street to 167th Street
- Olathe, Kansas – College Boulevard Improvements, Lone Elm Road to Woodland Avenue
- Olathe, Kansas – On-Call Stormwater Engineering Services – Various Locations
- Overland Park, Kansas – SMAC - 92nd Place and Switzer Road Storm Sewer Improvements

Jason Davis, PE - Structural Engineer

Education: Bachelor of Science Civil Engineering South Dakota State University
Years with Affinis: 16 Years of Experience: 16

- Leavenworth, Kansas – Community Center Floodwall
- Kansas Department of Transportation - K-68 Improvements, Miami County, Kansas
- Kansas Department of Transportation – Somerset Improvements, Miami County, Kansas
- Johnson County, Kansas – 167th Street to Metcalf Avenue to Nall and Nall Avenue from 159th Street to 167th Street
- Overland Park, Kansas – 92nd Place and Switzer Road Storm Sewer Improvements
- Overland Park, Kansas - 159th Street Improvements, Metcalf to Nall

Ryan Stobaugh, EI - Construction Services

Education: Bachelor of Science Civil Engineering University of Missouri - Kansas City
Years with Affinis: 2 Years of Experience: 4

- Leavenworth, Kansas – 2013-2015 Leavenworth Pavement Management Program
- Leavenworth, Kansas – Construction Services for 2013-2015 Pavement Management Program
- Overland Park, Kansas – 92nd Place and Switzer Road Storm Sewer Improvements
- Merriam, Kansas – Shawnee Creek Drainage Improvements, Switzer Road to Knox Avenue
- Prairie Village, Kansas – 2013-2014 CARS Program
- Kansas City, Missouri - Charles B. Wheeler Downtown Airport - Relief Well System Rehabilitation
- Riverside-Quindaro Bend Levee District – MRLS L-385 Levee, Riverside, Missouri

Linda Rottinghaus, PE - Quality Assurance Manager (QAM)

Education: Bachelor of Science Civil Engineering University of Missouri - Kansas City
Years with Affinis: 21 Years of Experience: 29

- Kansas Department of Transportation - K-68 Improvements, Miami County, Kansas
- Kansas Department of Transportation – Somerset Improvements, Miami County, Kansas
- Kansas Department of Transportation – US-75 Access Management
- Kansas Department of Transportation – US-59 Access Management
- Pleasant Hill, Missouri – Business-7 Improvements
- Grandview, Missouri – Botts Road Improvements

Plan for survey:

Our firm specializes in public improvement projects. Nearly all of our projects have some component of survey, whether it is full topographic survey, legal descriptions, or property boundary survey.

- We know the survey is the basis of design, and that a reliable, accurate, and detailed survey is essential to a successful design project. Quality surveys lead to accurate design documents, and when design documents are strong, it saves money in the construction phase.
- Property research and legal descriptions are another vital component of a project. Our team has a reputation for being thorough and providing accurate descriptions.

The depth of our survey team also provides a reliable quality assurance program. With four registered land surveyors, we have the ability for a surveyor not directly involved with a project to review the deliverables. This independent review assures the documents are accurate and meet your expectations. We will use the following plan to approach your projects.

TOPOGRAPHIC SURVEYS

- ✓ Use North American Vertical Datum 1988 to establish vertical control.
- ✓ Use Kansas State Plane Coordinate System to establish horizontal control.
- ✓ Request field locates of utilities via Dig Rite system.
- ✓ Gather mapping from individual utilities.
- ✓ Prepare section corner ties and file with Leavenworth County and the Kansas State Historical Society.
- ✓ Gather property information.
- ✓ Perform detailed field survey.
- ✓ Prepare base map.
- ✓ Perform base map field check for completeness.
- ✓ Submit electronic drawing files, field notes, and data files.

BOUNDARY/PROPERTY SURVEYS

- ✓ Use North American Vertical Datum 1988 to establish vertical control.
- ✓ Use Kansas State Plane Coordinate System to establish horizontal control.
- ✓ Prepare section corner ties and file with Leavenworth County and the Kansas State Historical Society.
- ✓ Find property pins.
- ✓ Gather property and/or plat information, including title information.
- ✓ Prepare boundary documentation.
- ✓ Perform quality assurance review for completeness.
- ✓ Submit signed/sealed documents for use or filing.

HORIZONTAL AND VERTICAL CONTROL

- ✓ We have the proper GPS equipment to provide accurate horizontal measurements to sites and then provide redundant checks to other existing markers to verify our positions.
- ✓ We have the proper equipment to perform high accuracy vertical control networks to comply with Leavenworth County Survey requirements of published benchmarks.

OTHER SURVEY SERVICES WE PROVIDE DURING THE COURSE OF A PROJECT INCLUDE:

LEGAL DESCRIPTIONS AND TRACT MAPS

- ✓ Prepare legal description.
- ✓ Prepare tract map with color shading for different types of easements or right-of-ways.
- ✓ Prepare legal document/form.
- ✓ Quality assurance review for accuracy.
- ✓ Submit signed/sealed documents for acquisition.

CONSTRUCTION STAKING

- ✓ Stake centerline of right-of-way with PK nails and paint.
- ✓ Stake right-of-way and easement limits with lath and flagging.

The success of our survey department is a direct result of our commitment to quality. With each service outlined above, we include a quality assurance review, whether it is a field check of a base map or an independent review of legal descriptions.

Thorough roadway design:

Roadway design is the cornerstone of Affinis. It's what we do day-in, day-out. While the technical capabilities of most engineering firms are similar, the differences can be found in their approach and execution. Our approach is based on our five core values.

- ✓ Balance – bringing solutions that are sound, cost-conscious, and accomplish your goals
- ✓ Collaboration – listening, learning, and sharing information
- ✓ Excellence – striving to create quality designs to meet your needs and fulfill your expectations
- ✓ Servant leadership – selflessly serving our co-workers, clients, and community
- ✓ Trustworthiness – being transparent and honest in our daily actions as we function as an extension of your staff

The execution comes in being true to these values in our daily practices. Through this, we build long-lasting relationships with our clients by listening, learning, and delivering services that not only fulfill needs, but meet expectations. Thorough design is the result of well-defined process. The following shows basic components of our design process.

Data Collection

- Design memo based on owner's specifications
- Schedule geotechnical investigations
- Field survey and property and title research
- Field check of survey basemap

Preliminary Design Phase

- Perform traffic and intersection analysis
- Develop horizontal/vertical alignments
- Define grading limits and easement layout
- Design storm drainage
- Begin permitting processes
- Internal QA/QC review
- Submit preliminary/field check plans and opinion of project construction cost (OPCC)
- Identify utility conflicts
- Field check with owner and other stakeholders
- Prepare and submit easement documents

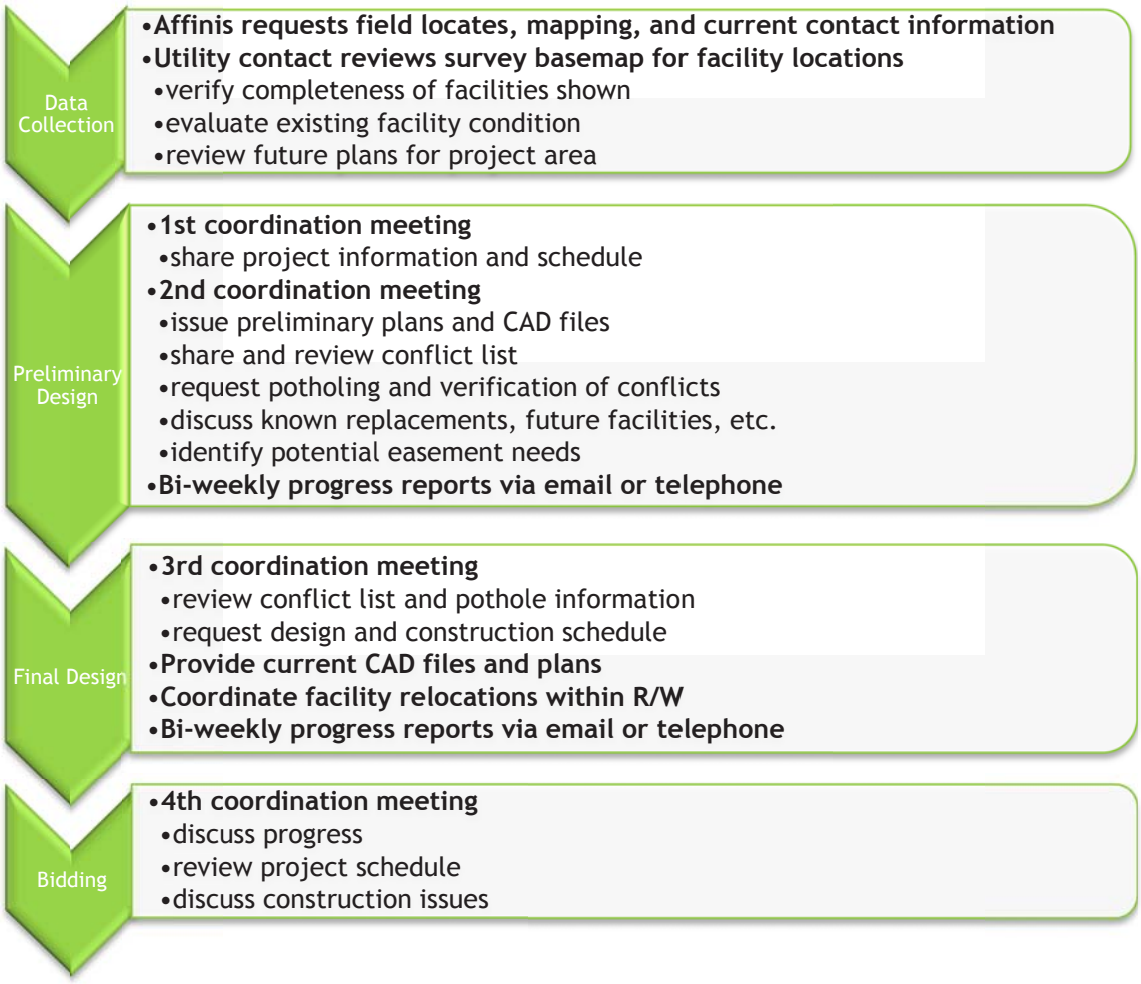
Final Design Phase

- Release utilities to finish design and schedule relocations
- Finalize outstanding design decisions
- Develop construction phasing & access plan
- Prepare project manual, including special conditions/provisions, technical specifications, utility update, and easement acquisition update
- Internal QA/QC review
- Submit final/office check plans, project manual, and OPCC

Another consideration throughout the design process will be public involvement. Public meetings and website updates are effective tools for sharing project information. We will work with you to outline a public involvement plan that makes sense for your projects. The objective of the public involvement plan is to engage the public, listen to stakeholders, and share information about the project. The end result will be well-informed stakeholders with realistic expectations that have been fulfilled.

Utility relocation experience

Utilities are often the most challenging component of the design process. We have found the best method is frequent communication using a variety of approaches. When we are laying out a project schedule, we include utility coordination tasks. It lays out a plan for information gathering, coordination meetings, decision points, and communication. This is a typical approach we apply to utility coordination and relocation on projects.



With this plan, we clearly outline the role the utilities play in your project's success and set the expectation of working as a team. We work hard to build respectful, collaborative relationships with the utility representatives. Through these efforts:

- Utility relocation design and schedules can be shared between each provider, capitalizing on opportunities to share trenches and schedule resources;
- Relocation work can be organized to complete critical path tasks first, clearing key areas of your project for construction of the roadway improvements;
- and progress can be included in the bidding and construction documents, allowing your contractor to present a realistic bid.

> **"Affinis worked collectively with all the utilities on their design to try to come up with a mutually agreeable and workable plan for all. This saved WaterOne time and trouble."**
>
> Mark Sunderson, PE, Project Engineer,
> Water District No. 1 of Johnson County

Construction Engineering & Administration:

With these projects, you are charged with responsibly managing taxpayer dollars. At Affinis, we believe this responsibility extends to us. Essentially, we are an extension of your staff working with the contractor to verify that what is constructed is of the quality and quantity the taxpayers deserve. For the majority of our design projects, we perform construction engineering services. Those services range from periodic consultation to full-time, on-site services. We have the capability to tailor them to best meet your needs. Our approach to projects with KDOT funding includes the following steps:

- Review the project plans and specifications to develop a strong understanding of the construction elements of the project.
- Conduct a pre-construction meeting to discuss project safety, schedule, Quality Assurance/ Quality Control (QA/QC), utility coordination, controlling items of work (critical path), and potential issues and challenges on the project.
- Distribute initial public involvement materials to the adjacent land owners.
- Collect and review required submittals.
- Provide full-time, on-site inspection following the guidelines provided in KDOT's Standard Specifications and Construction Manual.
- Provide as-needed construction materials testing, as required for the project.
- Conduct on-site, weekly progress meetings to discuss safety issues, current and future items of work, and the project schedule.
- Conduct a final walkthrough with the contractor, KDOT representatives, and other agencies involved in the project.
- Keep field books, as well as diligently enter diaries, materials testing information, and payment invoices into KDOT's Construction Management System (CMS).

> **"Affinis has attacked [submittal reviews] with a degree of thoroughness unlike I have seen before from any consultant in any discipline on any project. It's like a dog with a bone… no disrespect intended. It is the right thing to do to ensure your client gets what they asked/paid for."**
>
> Scott Crain, PE, Director of Design and Construction
> Blue Valley Unified School District

KDOT CERTIFIED INSPECTORS

Inspector Name	KDOT Cert. No.	Basic Inspection (BI)	Concrete Paving Inspection (CPI)	Asphalt Paving Inspection (API)	Structures Inspection (STR)	ACI Concrete Field Testing Tech (CF)	ACI Concrete Strength Testing Tech (CST)	Environmental Manager Training (EMT)	Environmental Inspector Training (EIT)	Nuclear Gauge (NUC)
Stobaugh, Ryan	3941	4/2/18	4/5/18	4/4/18	4/3/18		2/27/17	5/21/15	5/21/15	
Roush, Anthony	2514	3/8/18	3/8/18	3/8/18	4/12/18	2/20/20	2/20/20			
Herrick, William	2491	1/17/19	1/17/19	1/17/19	1/17/19	11/20/19		3/30/17	3/30/17	2/12/19

Once the project is complete our team will prepare the project close out paperwork as required by KDOT's standard specifications and turn in all final documentation to KDOT in a timely manner.

Regardless of our involvement during construction, we pride ourselves on being responsive. We know questions about the design or plans are inevitable. We answer phone calls. We get the answers you need. The old adage – time is money – is never more true than in construction. **Our responsiveness saves the contractor time, saving you money.**

> **"When I call Affinis with a question, I know I'll get an answer. They understand the time-sensitive nature of construction and are quick to respond. In the field or in the office, they help me resolve issues and keep our projects moving."**
>
> Carl Sanders, City of Merriam, CIP Inspector

References

City of Basehor, Kansas

- Mitch Pleak, City Engineer
  913-724-1370 | mpleak@cityofbasehor.org

City of Leavenworth, Kansas

- Mike McDonald, Director of Public Works
  913-648-0375 | mmcdonald@firstcity.org

Kansas Department of Transportation

- Steve Rockers, Road Design Leader
  785-368-8295 | srockers@ksdot.org
- Connie Eakes, Senior Traffic Technician
  785-296-0356 | conniee@ksdot.org
- Bill Haverkamp, GSP/Survey Coordinator
  785-296-5100 | billh@ksdot.org

Johnson County, Kansas

- Geoff Vohs, Engineer
  913-715-8312 | Geoffrey.Vohs@jocogov.org
- Sean Cahalan, Deputy County Surveyor
  913-782-2640 | Sean.Cahalan@jocogov.org

City of Olathe, Kansas

- Therese Mersmann, Capital Projects & Development Manager
  913-971-9032 | tmersmann@olatheks.org

City of Overland Park, Kansas

- Dan Miller, City Engineer
  913-895-6032 | daniel.miller@opkansas.org

"Affinis was proactive in managing our project. The level of expertise and quality of service was outstanding. As a result we completed a successful project on time and under budget. The plans were accurate leading to an under-run of the $1.7 million bid price by 4 percent."

Brian Clennan, PE, Director of Engineering, City of Hutchinson, Kansas

Project that best fits our capabilities and why:

Although we have the capabilities, availability, and desire to perform the engineering services for any or all of the three projects you listed, we have ranked the projects from first choice on down based on your request. We rank the projects in the following order;

1. 147th Street from Fairmount Road to Parallel Road
2. Eisenhower Road from 155th Street to Tonganoxie Road
3. McIntyre Road between K-7 and K-5

We bring strong local relationships, familiarity with owner standards and specifications, and in depth knowledge regarding two of your projects - 147th Street and Eisenhower.

147th Street from Fairmount Road to Parallel Road - Basehor

WHY AFFINIS FOR THIS PROJECT?

- ✓ We have well-established, trusted relationships with the City of Basehor staff.
- ✓ We know the project area.
- ✓ We have successfully completed similar projects in Basehor, on-time, under budget.
- ✓ We have the capabilities needed to perform the services required – survey, design, and construction engineering.
- ✓ We have multiple, current projects with KDOT administration and funding.

Our relationship with the City of Basehor began in 2011 when we were selected for the Wolf Creek Parkway Improvements between 158th Street and 155th Street. Since then, we have performed two other roadway design projects and a variety of surveying tasks. With each project or task, we continue to develop a long-lasting relationship and better understand the goals and expectations of the City of Basehor.

Our involvement with 147th Street corridor began in 2013. Using Kansas Department of Transportation's (KDOT's) US 24/40 Highway Corridor study, the City of Basehor wanted to establish a preliminary alignment for 147th Street between US 24/40 Highway and Parallel Road. Basehor Industrial Park is located on the northeast corner of 147th Street and Parallel Road. Extending 147th Street south to US 24/40 would provide north/south access to the City of Basehor's Industrial Park and promote economic development.

Available real estate for development.

Two of the City of Basehor's premier developments, Falcon Lakes and Basehor City Center, access 147th Street. The majority of the property along 147th Street is open farmland and prime for development. With the paving of 147th Street, the City of Basehor is concerned the corridor will be peppered with small acreage, single-family lots and individual driveways. Managing access from the adjacent properties is critical to the City of Basehor. Ultimately, the City of Basehor wants 147th Street to be a primary arterial and designed to arterial standards, including access management considerations.

The City of Basehor also recognizes the area's commitment to improving east/west connections from K-7. A significant investment was made to improve Donahoo Road at and east of K-7. With this project, there will be intersection improvements at 147th Street and Donahoo Road. This could provide an opportunity to explore completing the Donahoo Road connection from 147th Street to K-7. **To better illustrate our understanding and familiarity with this project, take a look at the exhibit on the next page.**

> **"Affinis exceeded my expectations by becoming a seamless extension of my staff. They were able to jump right in, learn how we like to work and offer their expertise to make our vision a reality."**
>
> Mitch Pleak, PE, City Engineer, City of Basehor, Kansas

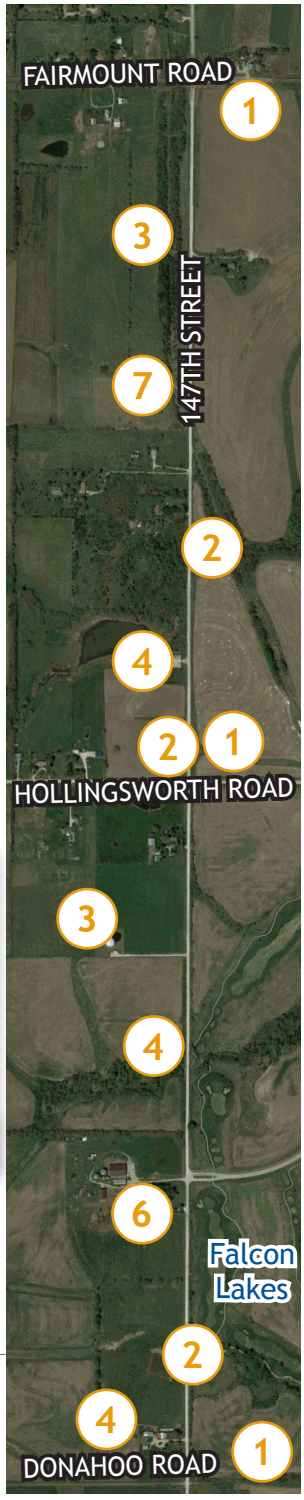
147th Street from Fairmount Road to Parallel Road - Basehor

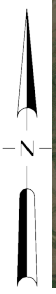
DESIGN CONSIDERATIONS:

1. Traffic analysis and intersection design will evaluate turning movements, turning radii, sight distance, and intersection control.
2. Culvert crossings will be evaluated for capacity, condition, and weight limit. When replacement is not required, the existing culverts will be extended for the wider roadway.
3. Consolidated Rural Water district has a main in a dedicated easement adjacent to the west right-of-way. Relocation will likely be a cost to the project.
4. Southern Star's natural gas pipeline runs along the corridor with regulators at Donahoo Road and another facility just north of Hollingsworth Road.
5. Westar electric facilities line the corridor. Poles will have to be relocated to the proposed right-of-way. Gas and telecommunications are also in the corridor.
6. Driveways and field entrances will be a consideration during design to maintain access during and after construction.
7. The county's preliminary plans for geometric improvements on 147th Street between Donahoo Road and Fairmount Road have established right-of-way takings, horizontal and vertical alignments, grading and culvert crossings.
8. The development plan for Basehor City Center extends east from the school to the west side of 147th Street.

1 Steep approach grades and poor sight distance will be improved.

2 Evaluate existing culvert crossings.





"As a testament to how well Affinis's engineering plans work - Miles just completed [Wolf Creek Parkway] ten months ahead of schedule due in part to the accuracy of the plans provided for the project."

Steve Miles, President, Miles Excavating

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Eisenhower Road from 155th Street to Tonganoxie - Leavenworth

WHY AFFINIS FOR THIS PROJECT?

- ✓ We have well-established, trusted relationships with Leavenworth.
- ✓ We know the project area.
- ✓ We have the capabilities needed to perform the services required – survey, design, and construction engineering.
- ✓ We have multiple, current projects with KDOT administration and funding.

Our project team has worked in Leavenworth since 2010. During that time, we have learned the ins and outs of their organization and have a clear understanding of their goals. Spending tax payer funds wisely and bringing the best value to the community is critical to success. Our team will carry this same philosophy through the design of this project.

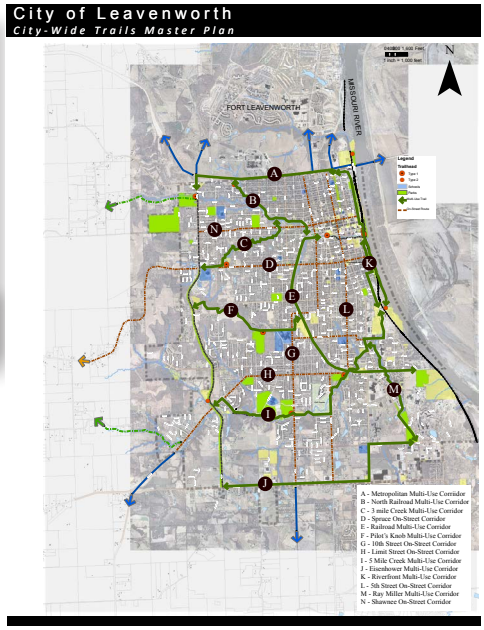
In 1998, the city had a corridor study performed on Eisenhower Road between DeSoto Road and Tonganoxie Road. The study assessed expanding the 2-lane roadway to a 4-lane roadway. One option considered an urban/suburban arterial typical section with 100-foot right-of-way, curb and gutter, a 5-foot sidewalk on one side, 10-foot trail on the other side, enclosed storm sewer, and street lighting. The second option considered a rural arterial section with 120-foot right-of-way, 6-foot paved shoulder, a 10-foot trail on one side, roadside ditches, and street lighting. Opinions of probable costs were also included in the study. The cost at that time was estimated between $6 and $7.3 million. In keeping with the study and future widening of the corridor, the right-of-way has been acquired and overhead utilities have relocated.

Recently, the city modified the pavement markings, signing, and traffic signal on Eisenhower Road at DeSoto/Shrine Park in response to user complaints. The changes improved traffic flow for westbound left turns to DeSoto Road and eastbound left turns to Shrine Park Road. This is a good indication that traffic volumes are increasing and the corridor is ready for improvements to the west. The Branches residential development just west of 20th Street is another indicator that Eisenhower Road is ripe for residential growth.

As traffic patterns change, reconfiguration of left turn lanes helps to ease congestion at DeSoto Road.

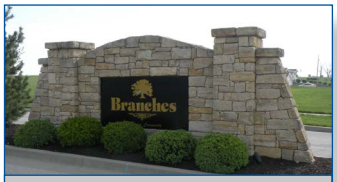
The new sidewalk west of 20th Street provides a pedestrian connection along the corridor. The study proposed a 10-foot trail which is also reflected in the City-Wide Trails Master Plan. Eisenhower is a primary east/west connection for vehicles across the city and county. The trail will provide the same connectivity for pedestrian and bicyclists. **The exhibit on the next page shows additional information and considerations along the corridor.**

Looking west toward K-5/Tonganoxie Road.



Eisenhower Road from 155th Street to Tonganoxie - Leavenworth

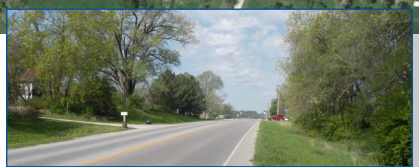
Evaluate intersection control.



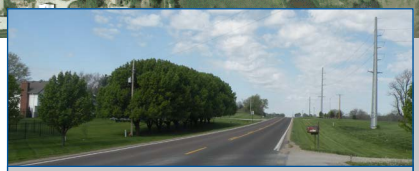
Maintain access to Branches subdivision and other residents.

DESIGN CONSIDERATIONS:

1. Access for Branches subdivision and residents with driveways on Eisenhower Road will be critical during construction.
2. Electric transmission and distribution poles lining either side of the corridor should be clear from the proposed improvements.
3. Culvert crossings will be evaluated for capacity and condition. When replacement is not required, the existing culvert will be extended for the wider roadway.
4. The water main is on the north side of Eisenhower. Natural gas pipelines and mains, and telecommunications facilities are also in the corridor.
5. The existing sidewalk and city's Trail Master plan are consistent with the proposed 10-foot trail on one side of Eisenhower Road.
6. Traffic analysis at Tonganoxie Road will determine if a traffic signal is warranted for the intersection.
7. Sight distance at intersections will be reviewed. Modifications to the vertical alignment can improve visibility at crests.



Intersection design will check sight distance.



Utility poles and fences are already set to 100-foot right-of-way.







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