



FY2022 RAISE Grant Application

7 BRIDGES in Salina, Kansas

*A Rural Community Collaborating to Increase Safety, Livability,
Sustainability and Connections.*



Cover Page

Project Information:

Project Name	7 Bridges in Salina, Kansas
Project Applicant	City of Salina, Kansas
Rural or Urban Project Location	Rural
Planning Project or Capital Project	Capital
Prior RAISE Application	No

Project Costs:

RAISE Request Amount	\$24,994,690
Future federal funding (excluding RAISE)	\$0
Non-federal funding	\$11,675,000
Future Eligible Project Cost (Sum of previous three rows)	\$36,669,690
Match %	31.84%

Additional Project Information:

State(s) in which project is located	Kansas
Closest City to Project	Salina, Kansas
Eligible applicant	Yes
Population of applicant city/project area	46,998
Census tract(s) in which Project is located	Kansas - Saline Co. - Tract 1, Tract 9 (partial)
Any part of the Project located in an Area of Persistent Poverty or Historically Disadvantaged Community	Yes, Partial (Tract 9)
Funds can be obligated by September 30, 2026	Yes
Project can be completed by September 30, 2031	Yes

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1.0 Project Description

Rivers divide. Bridges connect. With this project, the City of Salina will show how both bridges and a river can **connect** a community and create a sense of belonging. This project will transform the urban core of Salina into a gathering point for the **community**, a destination in the middle of Kansas, and create **sustainable** and **safe** routes inclusive of all modes, abilities, and people. A river will be reborn and the diverse **habitat restored**. A community will **collaborate** and **partner** to make the Project a reality and dramatically improve the **quality of life** in Salina, Kansas. See **Figure 1** below for a map of all proposed improvements associated with the **7 Bridges in Salina, Kansas Project**.



Figure 1: 7 Bridges in Salina, Kansas Project Elements Map

The Project will feature the construction of seven bridges across the restored Old Smoky Hill River channel that winds through downtown Salina. The bridges will replace aging and undersized culvert structures that are hydraulically deficient and can cause flooding in the City. The bridges are vital to Salina's movement of people and goods and will connect the many neighborhoods (three Areas of Persistent Poverty (APP), two Historically Disadvantaged Communities (HDC)) surrounding the City center to new recreational opportunities that will make Salina a highly desirable place to live and work. In addition, the City will implement

several innovative safety treatments at high pedestrian volume and crash locations, replace a retaining wall that threatens the City's water treatment plant, and place a multi-modal hub with E.V. chargers and transit access at the City's main event center.

In addition to the construction of seven bridges, the Old Smoky Hill River channel and trail restoration efforts will complement the bridges and enhance their utilization for transportation and community connectivity. Many years ago, the existing channel was cut off from the main river channel and has become blocked with silt and debris. The current trail system has gaps and is not compliant with today's design standards. With the new bridges, the Old Smoky Hill River can be restored to a flowing channel creating new aquatic habitat and recreational opportunities for residents. Utilizing the seven bridges being constructed to also connect the trail system, the City will have a multi-purpose, contiguous, accessible, and safe trail that allows walkers, runners, rollers, and bikers to enjoy the restored river channel area and connect with each other.

As you will read in the application, the City of Salina has a rich history with the Old Smoky Hill River and a vested interest in restoring the river along with the roads and bridges that cross it. More importantly, the community in Salina has a tremendous desire to see this project become a reality. Grass-roots organizations like Friends of the River have worked with the City and designers over many years to gather community input and push the Project through preliminary design and process environmental documentation. The conceptual planning is done, 30% design plans are complete, and local funding is in place from the City and community partners. The City is ready to begin the Project immediately and the community is 100% behind the Project and desperately want the concept to become a reality. A RAISE grant will allow Salina to embark on a journey that will transform the community, the residents, the economy, and make Salina the premiere destination in Kansas where people want to live, work and visit.

1.1 Project Goals

The **7 Bridges in Salina, Kansas Project** team has created a design concept derived from decades of work from City staff, private sector, not-for-profit groups, and thousands of public survey responses. The voters are passionate about the Project and have approved a sales tax to fund project components, but the total need outstrips local funding capability. When constructed, the Project will:

- Provide bridges at Lakewood Park, Elm Street, Ash Street, Iron Avenue, The Midway, YMCA Drive, and S Ohio Street that cross over the Old Smoky Hill River
- Rejuvenate the riverfront, allowing economic redevelopment to thrive
- Replace antiquated structures and utilities
- Provide safe pedestrian undercrossing on the major arterials
- Restore flowing water to the channel
- Restore the natural ecosystem.
- Mitigate the algae and odors currently diminishing the river
- Create a community focal point that drives the revitalization of the adjacent neighborhoods
- Create a tourism draw
- Create a shared use path promoting multi-modal travel
- Create a safe route for school children
- Create a safe route to the City's Aquatic Park and Pool for after school programs

Project goals were attained through a detailed analysis and design of locations where people can connect to the river from the surrounding areas, build a cohesive aesthetic theme, ensure trail connections and the placement of trailheads, identify existing and future park and recreational uses, locate public art, treatment of stormwater, aesthetic bridge enhancements, as well as other details.

A citizen steering committee was assembled to participate in a series of meetings and design charrettes, allowing the design team to fine-tune the Project vision. The steering committee assisted in developing a conceptual plan that comprises alternatives presented in the 2017 Refined Master Plan (see Appendix F) and sizes the Project to reflect both current and future needs. Feedback from the City residents and steering committee were the primary influences that drove the decision-making process and allowed for the creation of a preferred design concept. Public meetings were also held to gather additional feedback and validate the steering committee's vision.



Urban Boardwalk

Non-Motorized Boating

Wilderness Trail

1.2 Key Design Considerations

Since City staff completed the 2010 Master Plan, several changes have been made within Salina; most notably, the recent surge of redevelopment energy within Downtown Salina. With several significant tourism-oriented entities planned for Downtown Salina, Santa Fe Avenue is positioned to become the focal point of community redevelopment. The Salina Fieldhouse, Homewood Suites, The Alley Family Entertainment Center, The Garage Car Museum, and multiple restaurants are all venues that will attract visitors from outside of Salina that are looking to spend their entertainment dollars within the community.

The rejuvenated Downtown Salina area is located just two blocks away from the river amenity. Bridges on Iron Avenue, Ash Street, and Elm Street directly connect Downtown Salina to the Old Smoky Hill River and have the opportunity to connect the two projects together in a cohesive manner. Similar elements and features will be located at these bridges to emphasize the physical connection to downtown, building off the success of the downtown streetscape project. Moving people back and forth between the river and downtown will add to the success of the Project.

Due to the hydraulically undersized bridge crossings, some of which have been completely filled with sediment, the Old Smoky Hill River channel does not flow naturally. Consequently, this has become a detriment to the community, an impediment to stormwater flow, a flooding risk, and a suppression of land values and quality of life – all leading to blighted sections in the heart of the community.



Figure 2: The undersized culverts, accumulated sediments, and lack of flow have led to blighted conditions along the Old Smoky Hill River channel.

The existing river corridor has steep sides and effectively severs the community. When developing walkways, bridges, and bike routes, the goal is to remove these physical barriers and connect the community with a beautiful natural resource.

1.3 Locally Led Solutions

The mission of the public engagement process was to implement solutions the public could use within the Project and instill enthusiasm. After the devastating flood of 1951, the City of Salina took action to remedy the flooding problem in the community. In 1961 the Smoky Hill River was diverted by the U.S. Army Corps of Engineers (USACE) to the east side of town, and the once beautiful river channel became a silted-in riverbed with almost no flow. Since then, the community has sought a way to restore its waterway while leaving the floodgates and dike intact. Local memories of the area's vitality before the levee was constructed remain vibrant. The public was involved with preliminary stakeholder analysis, project branding, public messaging, and direct outreach tools, including online surveys, comment cards at public meetings, and press releases to spread the word. The existing Smoky Hill River Renewal Master Plan webpage (www.salina-ks.gov/riverrenewal) was used as a host for links for the public to access. These links provided dates for open houses, information on the steering committee, and links to surveys and survey results. Each meeting supplied more tools to engage the public, like large boards that welcomed people to the Project, a wall map of the master plan, handouts with specific project information, and presentations at the public meeting that walked through options and ideas moving forward. These public engagement tools and processes welcomed the public and allowed them to share their thoughts and opinions on decisions that would impact their lives.



Figure 3: Public Engagement Process

1.4 Steering Committee Led Design

A Steering Committee was formed to provide direction on key design issues relating to the master planning process. The general public could apply for a position on the Committee through an application process. This process garnered 26 committee members representing a broad range of community organizations and interests within Salina, including area businesses, local non-profit organizations, service club organizations, underserved communities, and citizens interested in the utilization of roadways, parks, trails, and recreational facilities. The age range of the steering committee members ranged from high school students to retired individuals, showing the broad interest that this project garnered throughout the community.



The selected steering committee members' commitment was attending 14 steering committee meetings spanning a timeframe from July 2017 to November 2018. These steering committee members acted as project advisors and ambassadors throughout the community and were chosen to help shape and form the Project's result. They provided a "checks and balances" system to ensure that the proposed plan conformed to the community's desires and the Project budget. Combined with the thousands of public survey responses and multiple public meetings, the Project was fine-tuned to serve the community's wants and interests as noted in **Figure 4**.

This process has provided valuable input and solutions and is an ongoing task in Salina. In order to implement these community-driven solutions, the City needs to close the funding gap with a RAISE grant so we can get to the "Step 6" in the public engagement process and celebrate a great project!

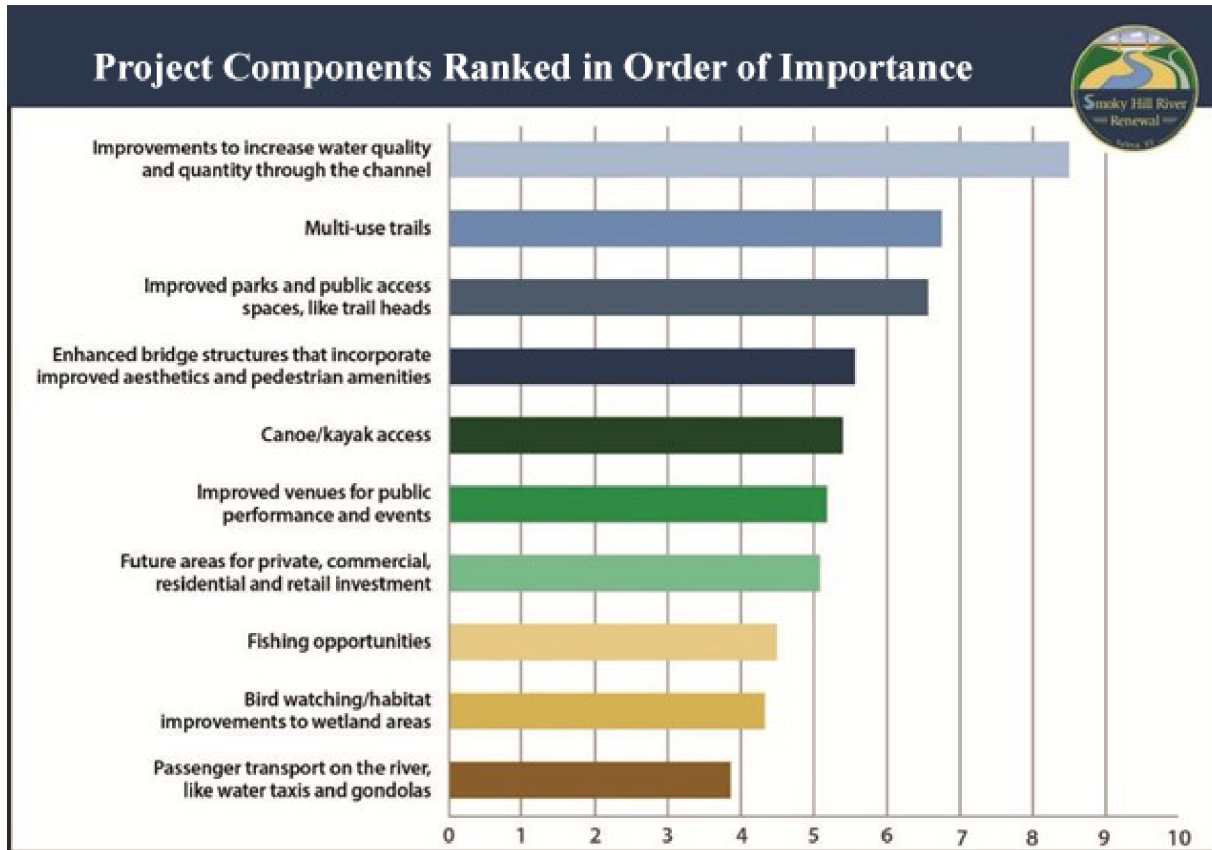


Figure 4: The community highlighted the need for multi-use trails, pedestrian friendly bridges, improved venues for public events and economic revitalization.

1.5 The Bridges

Along the approximately 7-mile long Old Smoky Hill River channel renewal area, a total of 12 vehicular crossings are encountered. There are seven critical culvert structures identified for replacement with bridge structures at the following locations: Lakewood Park, Elm Street, Ash Street, Iron Avenue, The Midway, YMCA Drive, and South Ohio Street. The new structures have been designed to minimize adjacent land disturbance and roadway removal while still meeting minimum horizontal and vertical clearances for pedestrians and bicyclists, boaters, and hydraulic conveyance as well as the anticipated roadway section.



The new bridges will also positively impact **aquatic habitat restoration**. Fish life is how the Corps of Engineers measures the success of a waterway environmentally. With the bridges moving from box culvert bridges to cement slab bridges, there will be an environmental lift to the riverway for the ecosystem to repair itself. Fish do not like swimming through dark cave-like

culverts, so eliminating these culverts creates an environmentally friendly riverway once again for fish life.

Bridge #1 - Lakewood Park

The **Lakewood Park Bridge** will be located between the river channel and Lakewood Park Lake to allow canoe and kayak access between both water features. The new bridge will be located at the abandoned culvert location that previously allowed water flow from the channel and into the lake. The proposed structure includes an 11-foot wide lane in each direction with an additional 2-foot shy distance to the roadway barriers. A 7-foot wide sidewalk and vertical barrier will be provided on the north side of the park road. In total, the structure will be 38 feet out-to-out in width. See Appendix H for illustration of typical sections of the existing roadway, proposed bridge, and proposed roadway approaches. The proposed pedestrian and bicycle facilities will be located at street grade and on the proposed bridge. The recreational waterway will underpass beneath the proposed structure to enter Lakewood Park Lake. The clear span requirements at this location were determined to be a minimum of 30 feet for recreational water navigation.



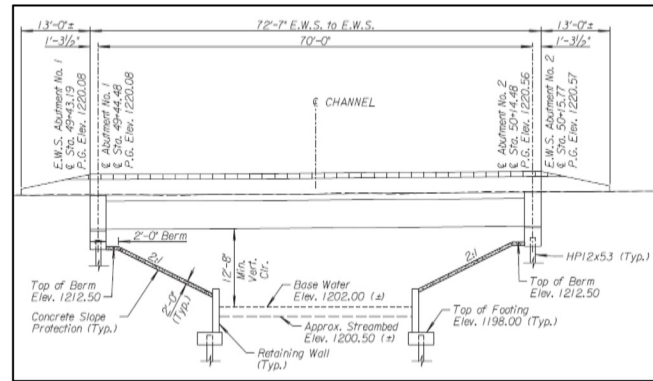
Bridge #2 – Elm Street

The **Elm Street Bridge** over the channel is downstream of the Western Star Mill Dam and vertical clearances are less restrictive. The existing 12-FT x 12-FT box culvert will be removed and replaced with a new bridge. Upon study, the effect of the road to channel skews and desire for a vertical abutment wall through which the recreational water users can navigate affected the structure type decision. The future roadway configuration will be reduced in width for traffic calming and safer pedestrian movements to a two-lane (16-foot lanes) section as shown in Appendix H. The on-street parallel parking will be maintained both east and west of the proposed improvements at the new bridge. The shared-use path will not pass under the proposed bridge. Thus the bridge span was set to provide a reasonable experience for the water users while also balancing the bridge size (and therefore cost). In addition, the adjacent intersection with Oakdale Drive and the commercial entrance to the west restrict the location and length of the proposed bridge opening.



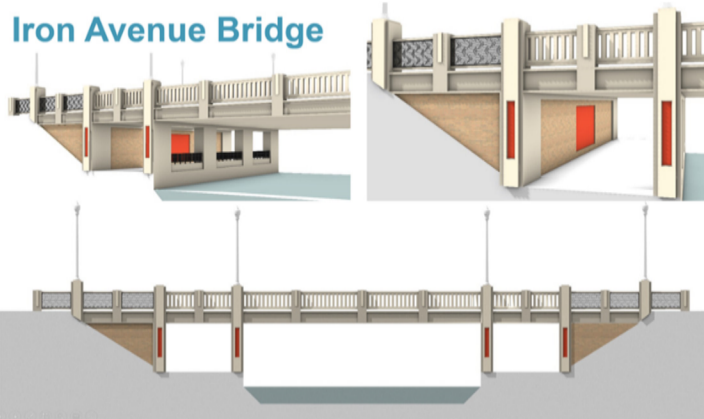
Bridge #3 - Ash Street

The **Ash Street Bridge** is located on the corner of Ash Avenue and Front Street on the north side of Salina. Elm Street bridge is also located in north Salina on Elm Avenue and North Oakdale Avenue. Both culvert bridges cannot run enough water during a severe rain event. This can flood at the Salina Community Theatre located near the Iron Avenue bridge. Going from culvert bridges to cement slab bridges will allow the river, once it is restored, to run water properly throughout the channel. A new bridge will allow the trail that will connect with the downtown and parks to go over these bridges creating safe travel for bicyclists, runners, and walkers. This connection for the neighborhoods located around these bridges is vitally important. The area is lower-income, and the new bridges will give access to a beautiful new green space with the river. Accessibility with the new trail for the neighborhood to use will encourage healthy habits and safe travel to move throughout the community by walking or biking.



Bridge #4 – Iron Avenue

The **Iron Avenue Bridge** is located near the 4th Street and Iron Avenue intersection. The existing culvert bridge is not designed to current standards, backs up water, and collects trash. This bridge is the east entry to downtown and is the busiest west-east street in the area. The new bridge will go from a three-lane bridge with parking to a two-lane bridge to slow down the vehicles entering the downtown. This will create a safer environment for pedestrian traffic that has grown since renovations in the downtown area. The bridge will be located next to the new 4th Street Plaza and Pedestrian Boardwalk that will create a destination space in the downtown for the community and visitors to enjoy the new riverway. The new bridge will connect the trail under the bridge, creating a safe passageway for pedestrians. Features on both sides of the riverway, a boardwalk and plaza on the south side, and five small waterfalls on the north side of the bridge will now be easily enjoyed with the access of a trail underneath the bridge. This bridge will have metalwork with an homage to the beautiful examples of art deco design found throughout the downtown area.

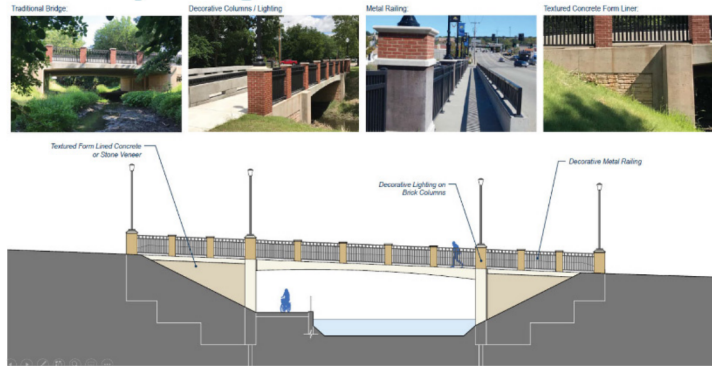


Bridge #5 – The Midway

The Midway Bridge is located on The Midway roadway, which intersects with Ohio Street. As Ohio Street is the busiest street in Salina, it is the road that visitors use to turn onto The Midway to enter Salina's most concentrated areas for tourism. Accessed by using The Midway, Tony's Event Center is a 6,500-seat arena with an 18,000 square foot convention space that hosts

conventions, sports, entertainment, and horse and farm shows. Next to Tony's Event Center is the Saline County Expo Center that stages numerous animal shows, including the Equifest of Kansas, Kansas's Premier All-Breed Horse Fair & Exposition. A new state-of-the-art public tennis center is also under construction directly across The Midway Bridge and a master garden will be developed close to the bridge. Traveling a short distance west on The Midway, the road will end at Oakdale Avenue, connecting with Oakdale Park. Oakdale Park is the premier park in Salina, and this park is the location of the most significant tourism events in Salina. The Smoky Hill River Festival is an arts festival with fine arts, crafts, music, food vendors, and children's areas. Over the weekend, over 60,000 people will attend the Festival, with approximately 35% living outside Saline County. Kustom Kemps Leadsled Car Show also hosts one of the largest car shows in the U.S. with over 2,000 entries.

Midway Bridge



Bridge #6 – YMCA Drive

The **YMCA Drive Bridge** currently has a small culvert bridge that cannot host a trail in it or allow boats floating through it. It is a barrier to bicyclists, walkers, and runners who want to avoid adjacent roadways. There is an undersized sidewalk on the west side of the bridge. As the YMCA has the community's largest daycare and after-school program, there is not a wide enough sidewalk to take the children safely to the Kenwood Cove Aquatic Park across the street from the bridge. Summer camps at the YMCA serve as a much-needed safe and fun place for children of working parents in the summer. The sidewalk on the new bridge will be wide enough for camp kids to go to Oakdale Park safely and the trail built around the YMCA will host pedestrians and bicyclists and be an excellent place for children to experience nature.



Bridge #7 – S. Ohio Street

Ohio Street runs North and South, and as Salina is much longer than it is wide, this street is the busiest thoroughfare. The **S. Ohio Street Bridge** is located close to the busiest intersection in town, Crawford Avenue and Ohio Street. The culvert is filled with silt and will be replaced with a new bridge-sized structure so water can flow again.



As the street is four lanes wide with a turning lane, a pedestrian box is necessary to build underneath the road to connect a trail that butts up to the street and bus stop on the east side. The pedestrian box will connect this trail with the new trail on the west side of Ohio Street. This pedestrian box is critically important for connecting the perimeter trail system into the heart of the community, providing bicyclists, runners, bus riders, and walkers with greater connectivity. This new trail by the river will also offer a different type of green trail, providing shady paths along the newly restored waterway.

1.6 Multi-Use Trails and Lighting

A primary goal of the Project is to develop a contiguous multi-use and accessible trail system for the entire length of the existing Old Smoky Hill River channel that will connect the numerous parks, community gathering points, and attractions in Salina. The trail system will increase the livability of the community, promote walking, rolling, and biking for recreation and as a mode of travel, and provide the ability for all citizens of Salina, no matter their economic background, to be connected to each other.

Multi-Use Trails

There are roughly 3.4 miles of existing trails along the 6.8 miles of the Old Smoky Hill River channel and 3.4 miles of new trails will be constructed with this project. The Project will fill in the gaps where trails do not exist and upgrade portions of existing trails with sub-standard features to make them more accessible. Trails widths will range from 10 FT to 12 FT. Surface types will be concrete primarily and crushed limestone will be used in natural trail sections. Grades and pedestrian ramps will meet ADA design guidelines. The City anticipates the greater trail operations and maintenance costs that come with more miles of trails and will include those costs in their annual budget as trail sections are completed.



Pedestrian Bridges and Underpasses

Three new pedestrian-exclusive bridges spanning the Old Smoky Hill River channel are proposed with the Project. They will join the six existing pedestrian bridges along with the seven new roadway bridges to provide convenient and accessible connections from all neighborhoods in Salina. The pedestrian bridges are the backbone of the continuous trailway and will be designed to ADA standards for accessibility and to provide the utmost safety to users.

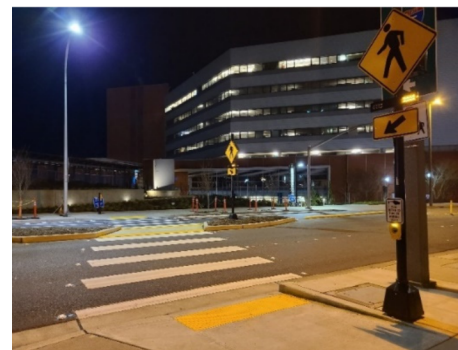


To increase the safety of pedestrians at the busiest intersections in Salina, pedestrian underpasses will be constructed in conjunction with the bridges at Ash Street, Iron Avenue, The Midway, and S. Ohio Street. A much needed pedestrian underpass will be constructed at the intersection of N. Ohio Street and Elm Street. This location is not only one of the busiest intersections in Salina, but also the primary access to Lakewood Middle School for the neighborhood immediately to the west. There is a pedestrian bridge that crosses the river channel

here that students utilize to go to and from their homes. Parents who are dropping off/picking up utilize the adjacent Riverside Drive as a staging area. This pedestrian passage will have a dual use – it will increase the safety of trail users and school children and, if necessary, it has the ability to act as hydraulic conveyance to prevent flooding during high water events.

Trail Lighting and Pedestrian Crossing Lighting

According to the statistics contained within the National Roadway Safety Strategy published in January 2022, VRU or Vulnerable Road User (those that walk, roll or ride) fatalities have increased by 45% since 2010. The fatality rate of VRU at night is estimated to be three times higher than during daylight conditions. Lighting of trails and pedestrian crossings is necessary to reduce these fatalities, frequently caused by poor visibility. Pedestrian crossing lighting is proposed as part of the Project at four high-volume pedestrian crossings. The lighting to be designed will be pedestrian specific and have a low height to illuminate the full height of the user versus just the top of their heads. That lighting will be combined with improved crosswalk markings, signage and rectangular rapid flashing beacons to further enhance pedestrian safety.





Trail lighting is to be incorporated throughout the continuous trail system. Trail lighting is not only aesthetically pleasing, but it offers a high level of security to trail users at night. It acts as a deterrent to criminal activity and encourages trail usage beyond dusk to dawn time frames. The lighting to be incorporated with the Project will be LED to reduce power consumption and shielded to minimize light pollution and spill over to neighborhood housing.

1.7 4th Street Plaza and Boardwalk

The 4th Street Plaza and Boardwalk will be a shared use complete street concept that will fulfill a critical need for flexible event space within the downtown landscape. The street will be curb-less and closed for special events. The street space will integrate into the adjacent public use plaza space with splash pads, gazebos, a grand stair case, pedestrian trails, and shared use trails. The site is a convenient walking location from the Salina indoor sports arena which hosts indoor volleyball and soccer tournaments drawing thousands from the region and The Garage classic car museum. The community evaluated different plaza space concepts and this location has the most interest for local use and supporting out of town guests. It will focus on pedestrian safety, tourism support, efficiency of space and will connect with the downtown complete street improvements the City has previously invested in.



Figure 5: Shared Use Street Concept at 4th Street Plaza with River Channel Boardwalk

1.8 Turning Ideas into Reality

The Project involves 6.8 miles of river channels that are hydraulically connected. When the USACE built the flood-control levee in the 1950's, it eliminated the base flow, the channel filled with sediment, and existing bridges were replaced with undersized culverts. All of the new hydraulic structures on the channel must be built together to have the channel flow again and reconnect the community. These efforts involve seven roadway bridges, three pedestrian bridges, and a new culvert outlet at the levee. This approach will avoid creating interior urban flooding problems as flow is restored to the channel. While the full channel restoration is a central driving component is to unite the community, the hydraulically connected features also cause the Project to be unaffordable to the City. These major roadway and hydraulic structures must all be built, and once this vital infrastructure is complete, additional incremental enhancements can be added, which will allow the full value of the Project to be realized by the community.

2.0 Project Location

The **7 Bridges in Salina, Kansas Project** is located in the City of Salina, Kansas, in Saline County, located in north-central Kansas. It is strategically located at the junction of Interstate 70 and Interstate 135 and is a key hub for cross-country freight traffic moving east-west and north-south across the United States. Salina is home to several large industrial companies, including Cargill, Great Plains Manufacturing, Schwan's, Vortex, and Stryten Energy.



Figure 6: 7 Bridges in Salina, Kansas Project Area

2.1 Census Tracts

The Project is located in a designated **Rural Area** at coordinates **38°50'15" N and 97°35'40" W**. The Project is primarily located in **Census Tract 1** in Saline County, Kansas, with a minor portion of the work to be performed in **Census Tract 9**. The Project area is bordered by Census Tracts 2, 3, 5, and 9. As noted in **Figure 7** below, **Census Tracts 2, 3, and 5 are Areas of Persistent Poverty**, and **Census Tracts 5 and 9 are Historically Disadvantaged Communities**. In addition, **Census Tract 1**, where the Project is located, is a designated **Opportunity Zone**. With regard to **Choice Neighborhoods** designation, **Census Tract 1** is designated as 10 – 20% poverty, and **Census Tracts 3 and 5** are designated as 20 – 30% poverty. (See Appendix E for maps of Opportunity Zones and Choice Neighborhoods)

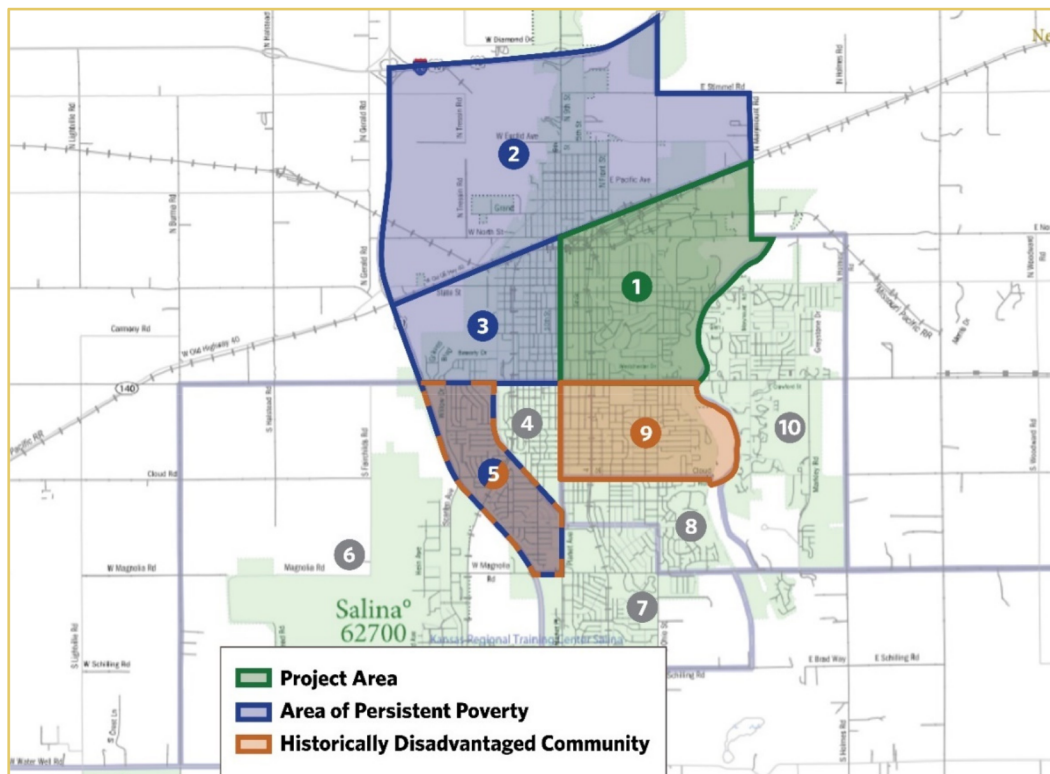


Figure 7: Census Tract Designations

2.2 Salina History

The City of Salina, Kansas, located in the middle of the United States, has been a place of transportation and trade for centuries. During the early 1700's, the land of Salina was part of the Kansa Native American territory used for hunting and trade. The Smoky Hill Trail along the Smoky Hill River next to Salina was initially a Native American trail for travel across the western part of the state to eastern Colorado. The French claimed the territory in the 1700's and French trappers used these trails and found the land rich in animal life.

The United States purchased Kansas with additional land during the Louisiana Purchase in 1803, which opened the territory to settlers. Salina was settled in 1858 by Scottish immigrants by the Smoky Hill River, where they used trees around the riverbank to build the first house/hotel and trading post. Shortly after, settlers built a ferry to bring miners across the river as they were following the Smoky Hill Trail to Denver during the gold rush from 1855 to 1870. Salina was

known as the place to restock supplies and find rest before they entered the most dangerous part of the trip west. Settlers looking for a new life also used Salina as a place to trade and buy supplies as they looked west for uninhabited land to establish more towns and farms.

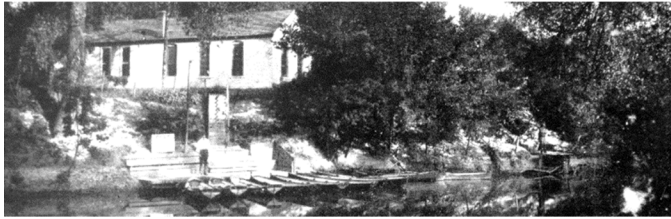


Figure 8: The Old Smoky Hill River channel supported boat rentals and water taxis before the flood control levee was built and the channel isolated.

After the Civil War, Salina grew quickly and became a center for flour mills as wheat had become the dominant crop in the late 1800's. With the addition of the Kansas Pacific Railway in 1867 for hauling flour, agriculture became the economic engine for Salina as it became an industrial center. The Schilling Air Force Base was also established during WWII in Salina.

Salina lost almost half of its population after the base closed in 1965, but the City converted the property into an industrial area that now houses Schwan's Global Supply, Vortex Valves, Kansas State Polytechnic, Vision 1, the Salina National Guard, the Salina Municipal Airport, and other businesses. In doing so, it has become the largest economic driver in Salina.

In 1951, the Smoky Hill River flooded and inundated the City of Salina. The best solution at the time was to build a flood-control levee and re-route the Smoky Hill River from a natural, meandering path through the City to a straightened channel that bypassed the City center. Although this mitigated the flood risk to the City, it essentially doomed the existing riverbed, destroyed aquatic and wildlife habitat, and allowed the channel to silt in due to lack of water flow. When existing bridges over the old channel were replaced due to age and condition, they were replaced with smaller culvert structures that were designed for the reduced water flow of what was now just a ditch for stormwater flow.

2.3 Salina Today

Salina has a total incorporated area of over 15 square miles. Over 44,000 vehicles pass through Salina on I-70 and I-135 daily, and it is a center for hospitality with over 2,000 beds at local hotels with a variety of restaurants. Salina is a hub for the regional economy in retail, medicine, and social activities, benefitting from a strong pull factor resulting in 30% or more of retail sales coming from visitors to the county.

In recent years, with shopping habits changing because of online shopping and big-box stores, Salina's downtown was slipping noticeably. There was also a perception that Salina did not have the modern amenities in which to live and work, which deterred young adults. The adage, 'a wonderful place to raise kids,' wasn't applicable anymore.

The same visionary spirit that responded to past challenges rose again. A group of dedicated leaders and investors came together in 2014, deciding to solve the downtown problem and the loss of the young adult population. The downtown has a new streetscape on Santa Fe Street and has seen over \$250 million of private investment in buildings and businesses. The downtown is beautiful and is becoming a thriving place for retail business.

The 7 Bridges in Salina, Kansas Project and complimentary Old Smoky Hill River channel restoration will create economic opportunities for the oldest part of the community. It will also be a quality-of-life project to appeal to younger workers and as a draw for visitors that will drive people to the downtown area.

3.0 Grant Funds, Sources and Uses of Project Funds

The **7 Bridges in Salina, Kansas Project** combines multiple elements into one holistic project designed to maximize the benefit to the City and create community connectivity. Below is a high-level breakdown of individual project costs in 2022 dollars. A more detailed budget is included in Appendix C. Engineering costs along with a contingency fee to cover anticipated inflation of materials and labor over the next several years is included to obtain the total project estimate of \$36,669,690. The City of Salina is contributing \$8,270,000 and the Friends of the River Foundation is contributing \$3,405,000 to match RAISE funding at 31.84%. The community believes in this project and wants to see it funded and constructed and is therefore making this very strong match commitment to Federal funding. Copies of commitment letters are in Appendix C. The local funds have no conditions associated with them.

Table 1: 7 Bridges in Salina, KS (Old Smoky Hill River Channel) Project Estimate

Item	2022 Dollars
Bridge #1 – Lakewood Park Bridge	\$851,452
Bridge #2 – Elm Street Bridge	\$1,603,715
Bridge #3 – Ash Street Bridge	\$1,607,413
Bridge #4 – Iron Avenue Bridge	\$2,559,354
Bridge #5 – The Midway Bridge	\$1,581,773
Bridge #6 – YMCA Bridge	\$1,577,579
Bridge #7 – S Ohio St Pedestrian Undercrossing and Hydraulic Culvert	\$1,687,286
Multi-purpose Bike and Pedestrian Trails	\$5,012,134
Lighting – Pedestrian Crossings and Trails	\$1,146,289
N Ohio Street Pedestrian Underpass	\$474,827
Pedestrian Crossing Safety Features	\$285,212
Multi-Modal Hub (at The Midway)	\$192,355
Retaining Wall at Water Treatment Plant	\$1,088,930
Old Smoky Hill River Channel Maintenance Facility and Boat Ramps	\$1,721,446
4 th Street Plaza, Complete Streets, and Boardwalk	\$4,871,862
Levee Outlet for Flood Mitigation and Aquatic Connectivity	\$901,107
Project Subtotal (2022 Dollars)	\$27,162,733
Engineering (15%)	\$4,074,410
Construction Contingency (20%)	\$5,432,547
TOTAL	\$36,669,690

Table 2: Project Funding Sources

Funding Source Description	Non-Federal Funds		Federal Funds		% of Total Cost
	State	Local	RAISE Grant	Other	
City of Salina		\$8,270,000			22.55%
Friends of the River Foundation		\$3,405,000			9.29%
RAISE Grant			\$24,994,690		68.16%
Other Federal				\$0	0.00%
TOTALS	\$0	\$11,675,000	\$24,994,690	\$0	
% of Total	0.0%	31.84%	68.16%	0.0%	100.00%

Table 3: Project Funding Cost Share

Federal vs. Non-Federal	Total	% of Total Cost
Total Federal Share	\$24,994,690	68.16%
Total Non-Federal Share	\$11,675,000	31.84%
TOTAL	\$36,669,690	100.00%

4.0 Merit Criteria

4.1 Safety

Tragically, over the past five years (2017-2021), the City has experienced various major incidents involving vehicles and pedestrians within the Project limits. One crash, in particular, involving a pedestrian that occurred in the heart of the Project area just west of the intersection of Kenwood Park Drive and Oakdale Drive (northwest of Tony's Event Center) resulted in a fatality. Of the 599 crashes from 2017 to 2021 within the Project limits, 457 resulted in property damage, 140 injuries, and two fatalities.

Unfortunate incidents like this triggered the City to take reactionary measures to decrease the number of crashes, especially those involving pedestrians. As a part of the Project, the City has decided to include the following safety elements to emphasize pedestrian activity within the Project area:

- Pedestrian Crossings complete with push-button actuated Rectangular-Rapid Flashing Beacons (RRFB) and pavement markings at:
 - E Elm Street & N Ohio Street
 - N Ohio Street & The Midway
 - E Prescott Road & S 2nd Street
 - S Kenwood Park Dr & YMCA Drive

The City took a proactive approach to protect drivers and pedestrians from potential conflicts to prevent further incidents. Staff identified areas of potential conflicts with railroads, failing infrastructure, and pedestrian visibility and decided to include the following elements in the Project:

Table 4: Crashes 2017-2021

Year	PDO	Injury	Fatality
2017	90	29	0
2018	98	27	1
2019	92	21	0
2020	70	25	1
2021	107	38	0
TOTAL	457	140	2

- Rail crossing enhancement along S 4th Street, including ADA-compliant pedestrian crossings at the Walnut Street, Mulberry Street, and South Street intersections.
- Complete street-type enhancements along S 4th Street will provide separate vehicular, bike, and pedestrian accommodations.
- Reconstruction of the crumbling retaining wall along S 4th Street from E South Street to Center Street to create resiliency and to prevent the complete collapse of this roadway segment and major damage to the City's Water Treatment Plant.
- Provide lighting at specific locations within the Project area to enhance driver's visibility of pedestrians and to protect against crime, especially for vulnerable residents:
 - Bill Burke Park to S Ohio Street
 - YMCA to Oakdale Avenue
 - Oakdale Avenue and Iron Avenue
 - Iron Avenue to Ash Street
 - Ash Street to N Ohio Street
 - N Ohio Street to Levee Outlet
- Implementation of these reactive and proactive safety improvements by the City is expected to improve the overall well-being of future residents who will utilize the elements of the Project.
- Construct barriers on the new bridges between the roadway and walkways.
- Pedestrian underpasses at the busiest roadway crossings in the Project area:
 - S Ohio Street and E Crawford Street
 - E Iron Avenue and 4th Street
 - E Ash Street and N Front Street
 - N Ohio Street and E Elm Street



4.2 Environmental Sustainability

Since the construction of the Federal flood control levee, overall aquatic habitat in the Old Smoky Hill River channel has declined significantly from increasing sedimentation and decreasing flow. The City is the sponsor of a Section 1135 Aquatic Habitat Restoration feasibility study with the U.S. Army Corps of Engineers. Aquatic habitat restoration in the old channel consists of opportunities for improving flow, stream habitat features, developing aquatic habitat connectivity and backwater areas, and supporting wetlands habitat. Restoration of habitats collectively enhances and increases ecosystem value, leading to an increase in fish and wildlife species and populations while also providing ancillary benefits to recreational uses and aesthetics within the area protected from flooding.

During the feasibility planning process, several aquatic and terrestrial habitat restoration objectives were proposed and assessed to include: (1) restoring optimal base flow conditions with the available water right, dredging sediment removal in the old channel; and (2) the creation

of wetland ecosystem habitat function and features located adjacent to the old channel. A range of six aquatic habitat restoration measures and alternatives were developed and evaluated for habitat benefits using the Qualitative Habitat Evaluation Index model in close coordination with the USACE. The model helped predict an alternative that provides the most habitat benefit for the least cost per unit of habitat.

The USACE is currently preparing a draft integrated Feasibility Study Report with NEPA Environmental Assessment/FONSI evaluation. Chapter 1 documents the Project's Background, Purpose and Need, Project Description, Problems and Opportunities, Goals and Objectives, Planning Constraints, Models Used, Assumptions, Risks, Prior Reports, and Technical References. This has been completed and reviewed. Chapter 2 – Existing Conditions has been completed and reviewed along with technical supporting appendices. Chapter 3 – Formulation and Evaluation of Alternatives Plans has been completed and reviewed. USACE Kansas City is currently preparing for a review meeting with USACE Division on the Recommended Plan Alternative. Habitat modeling and benefits-cost analysis have been completed. The NEPA FONSI and Environmental Consequences analysis has been started on a limited basis, and we anticipate no significant impacts. The wetlands at Lakewood Lake will be improved, negating off-site mitigation needs, and a flood easement on the vacant ground will be acquired to conform to Federal Flood Risk Management Standards. Agency coordination has been initiated with USFWS, KDWPT, and the Kansas SHPO. A public meeting will be held in late summer 2022. Overall, the study is approximately 65% complete, and USACE should have the EA/FONSI signed in late 2022/early 2023.

4.3 Quality of Life

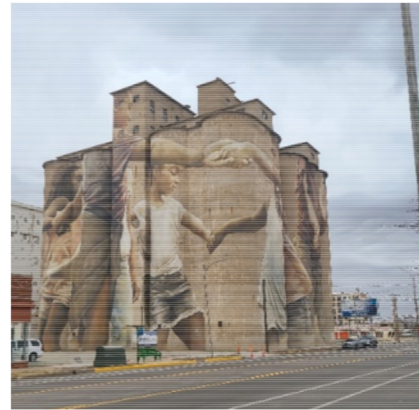
In addition to positive environmental impacts, key elements of the Project increase the well-being of all residents of Salina. The Project increases equity and accessibility for travelers, facilitates greater public and private investments, reduces the dependence on automobiles, and enhances the community's uniqueness.

Section 4.4 describes the user personas of current residents who travel to the Project area. Travelers originating from APP and HDC census tracts account for 41% of trips currently traveling to the Project area. Project accommodations include providing critical connections to existing trail systems where residents can walk safely without obstructions to and from the Project area. Multiple parking amenities, ride-sharing drop-off areas, and trailheads are also strategically located along the renewed river channel for accessibility for all residents, including those originating from APP and HDC census tracts.



Infrastructure around the renewed river increases property values and creates areas primed for private redevelopment. The new infrastructure will also significantly reduce mobility barriers and benefit points of interest, like the 4th Street Plaza, Tony's Event Center, Oakdale Park, and Bill Burke Athletic Complex. In particular, the City expects the 4th Street Plaza will provide critical infrastructure to promote the revitalization of the surrounding tracts that are currently remnants of old vacant industrial buildings. The new mobility hub, located deliberately next to Tony's Event Center, will integrate well with ride-sharing and micro-transit, offering travelers different mobility options and ultimately reducing dependence on personal automobiles.

The City values art and recreation, a true oasis on the plains. The Salina Arts and Humanities organization promotes various art projects throughout the City to maintain its mission to allow residents and outsiders to generate conversations around ideas and issues relevant to personal and community development using contemporary art. The renewed river Project will provide a blank canvas for artists to further the City's mission. In addition, the Project will include kayaking/canoe accommodations and new trail systems for biking and hiking for recreation, both of which are unique in this region of Kansas.



4.4 Improves Mobility and Community Connectivity

Salina's current transportation infrastructure allows residents to move freely from a mobility standpoint. The ability to travel freely is partially due to the relatively small population of the City but also because of the priority of City staff to maintain safe and reliable transportation infrastructure for all residents regardless of economic status, age, race/ethnicity, or mobility choice. At present, the Project area contains a variety of recreational, economic, and educational points of interest.

The City conducted a traveler persona analysis to determine the characteristics of average users traveling to the Project area, particularly those who originate in Areas of Persistent Poverty and Historically Disadvantaged Communities. The analysis helped determine user trends and provided insights on what accommodations to include in the Project to enhance community mobility and connectivity. A summary of those results indicates that 39.5% and 33.3% of users travel to the Project area to access recreational/social points of interest during a typical Thursday and Saturday. An average of **41% of those travelers originated from APP and HDC census tracts**. Further information regarding user demographics is in Appendix G.

The Project strategically places trailheads, bridges, pedestrian infrastructure, amenity parking, a mobility hub, and vehicular drop-off zones near roadways connecting these APP and HDC.

Shared use paths and pedestrian facilities included in the Project will connect to existing pedestrian infrastructure in the surrounding area. The proposed and reconstructed bridges and culverts at S. Ohio Street, YMCA, The Midway, Iron Avenue, Ash Street, Elm Street, Lakewood Park, Levee Outlet, and N. Ohio Street will accommodate non-vehicular transportation, enhancing multi-modal connections to surrounding census tracts. In addition, the Project provides new pedestrian crosswalks complete with push-button actuated rectangular rapid flashing beacons to improve safety in the Project area. These new connections will strengthen infrastructure for residents who walk to the Project area from the adjacent tracts, accounting for roughly **16% of trips**. As described in **Section 4.8**, the Project will also include a mobility hub just northeast of Tony's Event Center, enhancing pedestrian, bike, ride-sharing, and electric vehicle charging facilities.



Most travelers to the Project location utilize private vehicles (~70% of trips) and a small number of travelers use transportation network companies (~2% of trips). The City plans to place amenity parking nearby the Areas of Persistent Poverty and Historically Disadvantaged Communities. These parking facilities will provide accommodations for residents with disabilities, meeting Americans with Disabilities Act requirements, including sidewalk ramps and parking spaces.

Designers have strategically placed each parking area near APP and HDC census tracts so that each lot is **only an average of 1.25 miles away**. The lots will also have designated drop-off areas for ride-sharing and transit. The City has provided more information regarding the proximity of amenity parking locations to APP and HDC census tracts in Appendix G.

A number of transit routes also provide transportation to the Project area from APP and HDC tracts provided by the City's bus service, CityGo. The City has equipped every bus along these routes to transport residents with disabilities. The City also plans to provide more transit stops and routes to accommodate the anticipated influx of transit riders once the City completes the Project.

Table 5 and **Figure 9** displays the current transit routes CityGo offers that provide service to the Project area and the APP and HDC tracts that can utilize those routes. More detail regarding the existing transit routes is provided in Appendix G.

Current Community Mobility Trends

41%

of travelers currently traveling to the project area originate from APP and HDC census tracts

16%

of these trips are completed by modes other than using personal vehicles (walking, biking, ride-sharing)

Table 5: Existing Transit Routes

Current Transit Route	Service To/From
Red	Census Tract 9
Yellow	Census Tract 5/9
Blue	Census Tract 9
Green	Census Tract 2
Purple	Census Tract 3/5

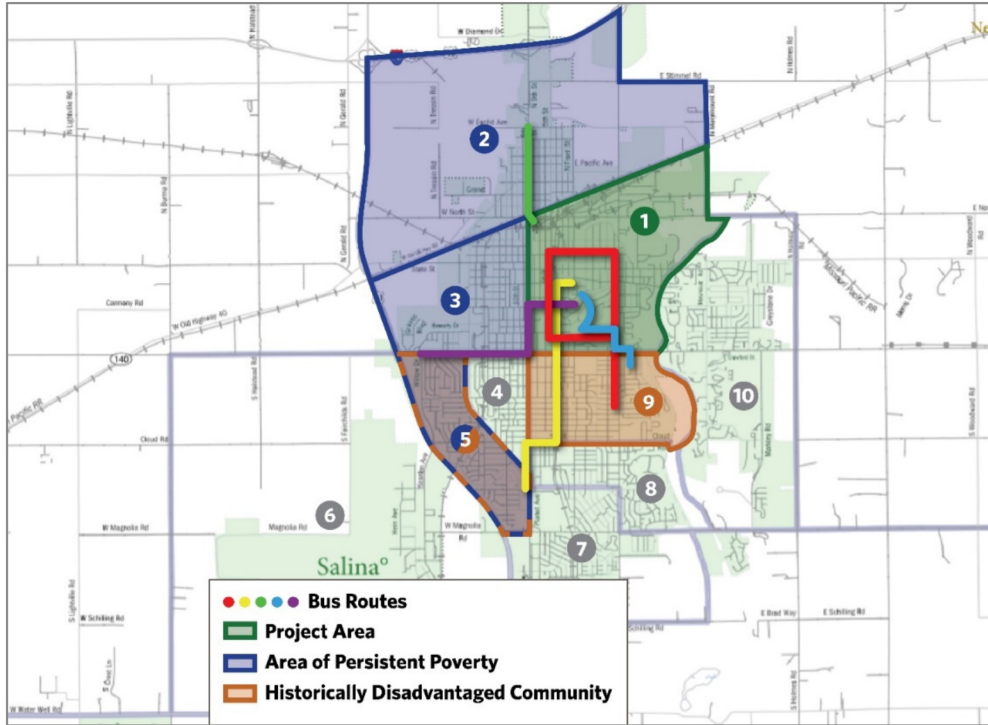


Figure 9: Bus Route Connectivity from APP and HDC Tracts to Project Area

4.5 Economic Competitiveness and Opportunity

The **7 Bridges in Salina, Kansas Project** will provide several opportunities for the City of Salina and the region of central Kansas to benefit economically and provide growth opportunities to the City as well as opportunities to community members in terms of jobs and businesses.

With an estimated cost of over \$36 million for engineering, materials, labor and equipment to construct the Project, it is calculated that over 178 direct and 316 indirect jobs (many union-based) will be created through this work (see calculations in Appendix A). Steel workers, laborers, carpenters, masons, electricians, and heavy equipment operators will all be needed to make this project a reality. Apprenticeships will be vital to maintaining a skilled work force in these trades and the City works through the local high school to encourage the trades as a career.

The completed Project is going to make Salina a destination spot in Kansas. It will be a destination spot for tourism but also a destination spot for current residents and residents to be. It will attract people to Salina and make it a more desirable place to live and work and raise a family. Increased tourism will impact local shops and restaurants in the area and create new opportunities for disadvantaged business owners to open stores and thrive. The Project acting as a community gathering point will increase foot traffic in downtown Salina to support existing and new businesses. The new bridges will create a connection between the Areas of Persistent Poverty and Historically Disadvantaged Communities that are directly west and south of the Project area. This will create connections for residents of those communities to access jobs, healthcare, and recreational opportunities they did not have previously.



The recent streetscaping of Santa Fe Street in Salina is a good example of how community revitalization can support existing businesses, attract new ones, and make a neighborhood thrive and be a desirable place to live and work.

Bridges create connections, not only for the community, but also for businesses. The Project will allow greater cross-city connectivity for the delivery of goods and services and movement of inner-city freight.

With greater connectivity and system reliability, potential workers can come from a larger area and have multiple modes to access jobs. Attracting that workforce to Salina is critical to the long-term success of the City's heavy industry employers like Kubota and Cargill. The Project will improve the livability of Salina and make it more attractive to workers and their families.

4.6 State of Good Repair

Infrastructure Modernization and

Operational Resilience: Within the Project limits, the City plans to revitalize several critical components of the river channel. The first includes a new flood control system at the inlet and outlet of the Old Smoky Hill River from the main channel of the Smoky Hill River; new bridges at Lakewood Park, Elm Street, Ash Street, Iron Avenue, The Midway, YMCA Drive, and S. Ohio Street; complete river channel restoration; and the repair of the retaining wall along 4th Street from E. South Street to Center Street. The flood control system will allow the City to control the water inflows from the Smoky Hill River to mitigate the possibility of flooding within the area of the renewed river. Current bridges along the river channel are undersized for hydraulics. The Project aims to address this issue by installing new bridge structures. Silt and trash are currently built-up along the canal. Restoration of the river channel and installation of trash screens will reduce debris build-up and provide stormwater/floodwater storage.



Asset Management: City Staff will maintain the Project elements as part of Salina's public works program and understands the budget implications that the increase in physical assets represents. The City will also enlist volunteer groups and community activists who have already shown a willingness to pitch in to make this project feasible.

Retaining Wall Reconstruction at Water Treatment Plant: The retaining wall between the Old Smoky Hill River channel and the City's Water Treatment Plant is failing. The wood tie retaining wall along S. 4th Street from E. South Street to Center Street was built almost a century ago. It has been repaired and shored up multiple times, but these were only temporary fixes. Exterior concrete and steel beam columns placed as a temporary repair are currently supporting the original retaining wall. The retaining wall itself supports the 4th Street roadway and the

railroad tracks that provide access to the Salina Water Treatment Plant for delivery of chemicals. The Project includes the reconstruction of the retaining wall to prevent it from falling into the river channel and causing extensive damage to the water treatment plant, the roadway, and the railroad tracks. If the retaining wall fails, about 450 feet of track and roadway are at risk. In addition to physical infrastructure risk, there is an environmental risk. The wall failure would deposit debris and soil into the channel which is a clean water act violation and could cause fish kills. The EPA fines could be \$10,000 per day plus State fines for the aquatic life impacts (value of fish killed). The estimated cost if we do nothing is \$1,350,000, which includes a new retaining wall, new roadway, railroad track rehabilitation, and repairs to building at the water treatment plant.



4.7 Partnership and Collaboration

The Salina Community has come together over this Project and the very strong level of local support is evidenced by the over 50 Letters of Support included in Appendix B. Those supporting the Project include hospitals, financial institutions, heavy manufacturing facilities, schools, universities, community organizations, churches, and numerous private companies and non-profits. A full list of the Project supporters in the community is included in Appendix B. In addition to community support, the Project has also been endorsed by **U.S. Senator Jerry Moran, U.S. Senator Roger Marshall, and U.S. Representative Tracey Mann** of Kansas.



The Friends of the River (FOTR) Foundation is a local non-profit organization dedicated to preserving the Smoky Hill River and its many amenities. As part of their commitment to the Project, FOTR is contributing \$3,405,000 in funding. The Friends of the River Foundation strives to restore the natural channel of the Smoky Hill River to its role as an integral part of the aesthetic, recreational and economic life of Salina.

Community outreach and specific outreach to the Historically Disadvantaged Communities and Areas of Persistent Poverty within Salina and outreach to residents of Salina where English is a second language have taken place throughout the development of the Project. Starting in 2017, community collaboration on the design and features of the Project has led to consensus for moving the Project forward. Between June of 2017 and November of 2018, four public meetings were held where design charrettes were presented and the community voted on concepts and

provided feedback via surveys. This tremendous community outreach resulted in a design strongly favored by the community. Documentation of these outreach efforts are in the Public Involvement Report located in Appendix F.

The right-of-way acquisition process by the City has already begun and is isolated around the channel and trail locations for the purpose of grading. The City plans to complete this process by mid-2023. This cost is a previous activity and is not included in the grant application budget.

4.8 Innovation

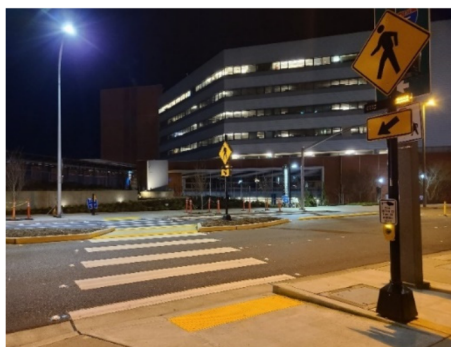
It is anticipated that a traditional PS&E delivery process will be utilized on the Project. However, the innovations in the funding and technology aspects of the Project present unique opportunities to take advantage of unprecedented community-based financial support and advances in systems and infrastructure that will sustain the Project well into the future.

Community Financial Partnership: The **City of Salina** will be the lead agency and has committed City funds to finance the Project in the amount of **\$8,270,000**. This is a tremendous commitment for a City the size of Salina, but it is testament to the strong support the Project has from the residents of Salina.



The Salina-based non-profit, Friends of the River Foundation, is supporting the Project financially and with in-kind services. Throughout the planning process for the Project, Friends of the River (FOTR) has provided monetary support to the City of Salina for the community-based planning and collaboration efforts to date. In addition, FOTR has supplemented City personnel at community meetings, public awareness events, and has produced promotional material in support of the Project. That same grass-roots support that has brought the Project to the position it is at today will continue with additional financial support and ongoing project support services. **Friends of the River Foundation has committed to providing local project funding in the amount of \$3,405,000.** This very large commitment from a local, community-based non-profit is a powerful indication of the support the Project receives from Salina's citizens and how much they want it to succeed.

Technology innovations that improve safety and promote sustainability will be a featured component of the Project. The City of Salina has long been an innovation leader in Kansas and the technology sector companies that call Salina home attest to that leadership. Technology innovations on the Project include:



Pedestrian Safety Technology: Rectangular Rapid Flashing Beacons or RRFBs are pedestrian-actuated visual enhancements used in combination with a pedestrian, school, or trail crossing warning sign to improve safety at uncontrolled, marked crosswalks. The device includes two rectangular-shaped yellow indications, each with an LED-array-based light source, that flash with high frequency when activated. RRFBs are also an Every Day Counts (EDC) initiative technology from Round 4 of the EDC program. RRFBs, along with enhanced pavement markings

and lighting at pedestrian crossings adjacent to the Old Smoky Hill River Trail, will be implemented with the Project to improve safety.

Broadband Infrastructure/Dig-Once Policy: In cooperation with the current fiber-optic broadband providers in Salina and new providers, the City will install a conduit bank to accommodate any broadband providers who wish to utilize the City right-of-way in the vicinity of and crossing the bridges being constructed as part of the Project. The City will install multiple conduits to accommodate current and projected future needs utilizing a "dig-once" policy to minimize future construction in the area for utility installations. Fiber optic splice vaults will be installed at the ends of bridges, and a conduit bank will be constructed in conjunction with bridge construction in a manner that will not impact bridge aesthetics.



Automated Flow Gates: As part of a complementary project on the Smoky Hill River, an automated flow monitoring system will be used to adjust the water flow into the Old Smoky Hill River channel from the Smoky Hill River to ensure water levels and flow are maintained in the main river channel to maintain aquatic and wildlife habitat and that too much water is not diverted. This has importance during storms as the Old Smoky Hill River channel is an outlet for stormwater and acts as a retention facility to prevent flooding in the City.



E.V. Charging Stations/Rural E.V. Charging Stations: In rural parts of Kansas, where over 25% of the state's population lives and where over 90% of the road miles are located, E.V.s are an attractive alternative to conventional vehicles. Rural residents drive more than their urban counterparts, spend more on vehicle fuel and maintenance, require farm-to-market capability, and often have fewer alternatives to driving to meet their transportation needs. Over the long run, E.V.s will help residents of rural areas

reduce those costs and minimize the environmental impact of transportation in their communities. As part of the Project, the City plans to install Level 2 E.V. charging equipment to reduce charging anxiety and encourage greater E.V. adoption in Salina and the surrounding rural area. This is the first step in the City's E.V. charging program and will locate the chargers at the proposed Mobility Hub within the Project limits.

Mobility Hub: The City of Salina plans to incorporate a "Mobility Hub" at the Tony's Pizza Event Center located near the new Midway Bridge in the center of the Project area. Users can access carpools, transit services, ride-hailing services, car sharing, scooters, bike-sharing, and E.V. charging. Residents using the Old Smoky Hill River Trail and other bike/pedestrian corridors will have access to the Hub, offering the greatest flexibility for any mode. Serving as a community anchor, a Mobility Hub is a welcoming environment that enables travelers of all backgrounds to access multiple transportation options and supportive amenities. Mobility Hubs offer a safe, equitable, comfortable, convenient, and accessible space to seamlessly transfer across different travel modes.



5.0 Project Readiness

The Project is at the 30% design stage and ready to proceed to final design and construction. Minor right-of-way and easement acquisition process for trail and channel locations and slope grading is already underway by others. (That is a previously incurred expense and is not included in this RAISE project application.) That process will be complete in mid-2023. The NEPA process has been started and is expected to be complete within 12 months. Additional clearances planned are noted in the table below.

5.1 Environmental Risk

The Project will require reviews, approvals, permits and clearances by other agencies, including the following:

Table 6: Project Clearances

Clearance	Administering Agency	Timeframe	Status
Section 404 Permit	U.S. Army Corps of Engineers/EPA	2-3 mos	Planned
Section 401 Permit	Kansas Dept. of Health & Environment	2-3 mos	Planned
Section 408 Permit	U.S. Army Corps of Engineers	4 mos	Planned
Section 7 Clearance	U.S. Fish and Wildlife Service / MDC	1 mo	Planned
Section 106 Clearance	State Historic Preservation Office / Tribal Entities	1 mo	Planned
Floodplain Development	City of Salina	1-2 mos	Planned
Levee and Floodplain Fills	Salina Levee District and City of Salina	2-6 mos	Planned
NEPA	Federal Highway Administration/USACE	12 mos	In Process

The NEPA FONSI and Environmental Consequences analysis has been started on a limited basis, and we anticipate no significant impacts. The wetlands at Lakewood Lake will be improved, negating off-site mitigation needs, and a flood easement on the vacant ground will be acquired to conform to Federal Flood Risk Management Standards. Agency coordination has been initiated with USFWS, Kansas Department of Wildlife and Parks, and the Kansas SHPO. A

public meeting will be held in late summer 2022. Overall, the study is approximately 65% complete, and USACE should have the EA/FONSI signed in late 2022/early 2023.

5.2 Project Schedule

See Appendix C for a detailed project schedule.

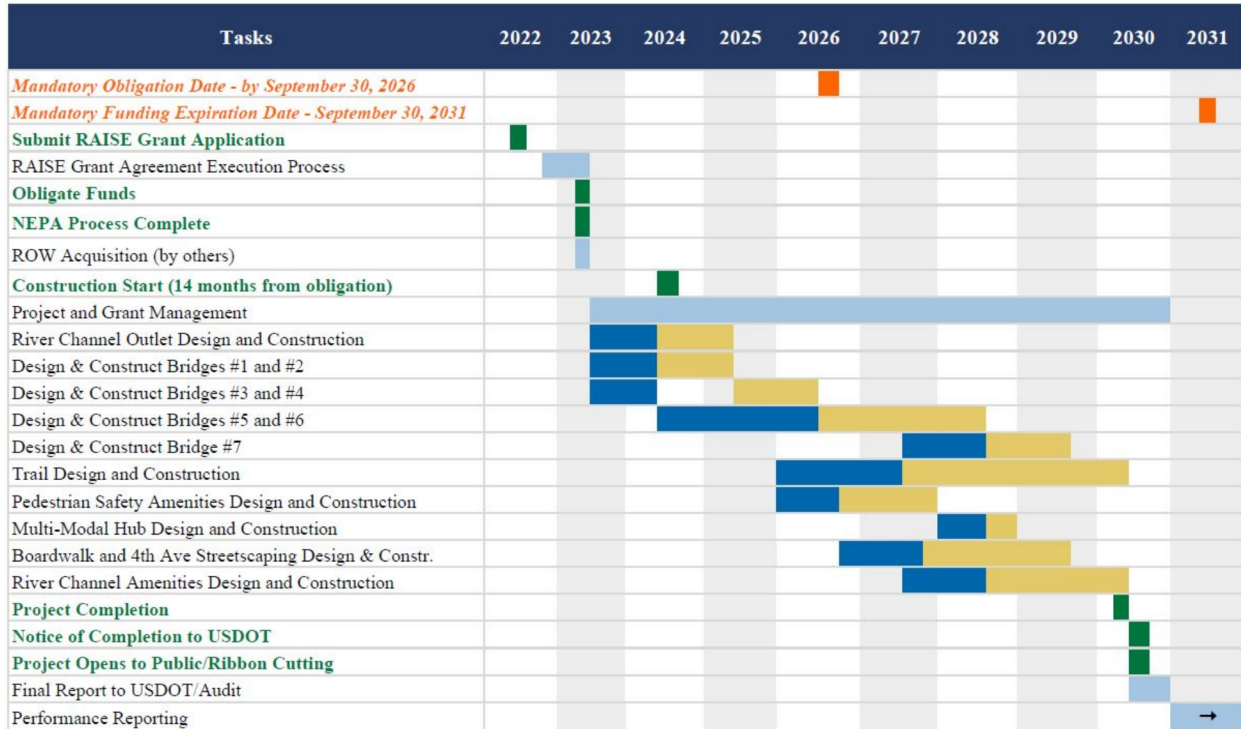


Figure 10: Project Schedule



5.3 Required Approvals

Statewide Transportation Improvement Program (STIP) Inclusion: The Project is not included in the Kansas Department of Transportation’s STIP as it does not impact state routes directly.

US Army Corps of Engineers: A key element of the Project is to restore aquatic and terrestrial habitat functions and features in and adjacent to the old channel of the Smoky Hill River running through Salina, Kansas. In partnership with the USACE KC-District, the City is completing an Ecosystem Restoration Feasibility Study. A copy of the study is included in Appendix D. This will be incorporated into NEPA approvals.

Union Pacific Railroad owns the railroad spur along 4th Street. A permit will be applied for with Union Pacific for the work described. The City reports a very good working relationship with Union Pacific on past projects and permit processing has not caused delays.

Additional approvals noted in **Table 6** above.

5.4 Assessment of Project Risks and Mitigation Strategies

Table 7: Project Risks and Mitigation Strategies

Risk Category	Risk	Risk Potential	Mitigation Strategy
Regulatory Approvals	NEPA approval delayed by more than 12 months	LOW	An Agency Coordination Plan will be developed which will establish an approach for coordinating agency participation, including the federal lead agency, cooperating agencies, participating agencies, and other interested federal and non-federal agencies that may have an interest and/or jurisdiction in the Project. These agencies will be engaged in NEPA activities and throughout the decision-making process.
Public Involvement	Limited public acceptance of project plan	LOW	Public meetings and information sessions will continue to be conducted throughout the design and construction process to keep the public informed about the Project and associated impacts and collect feedback. To date, the public involvement process conducted has yielded overwhelmingly favorable opinions about the Project concept.
Schedule Impacts	COVID-19 related risks and recurrence of mandatory stay at home orders and quarantine requirements.	LOW	Cases are diminishing, but new variants may arise. Mitigation is to develop COVID-19 project-specific protocols / procedures to limit disruption due to COVID-related project interruptions (communications, meetings, co-location requirements in RFP/contract, project continuity planning / strategies)
Schedule Impacts	Design and construction activities not completed per the proposed schedule due to labor, materials, or equipment shortages.	MEDIUM	A conservative schedule has been adopted to complete the activities for which the RAISE grant is being requested. The design and construction activities are staggered to place less load on designers, builders, and suppliers at any one time period, and lessen the risk due to regulatory approval delays or pandemic associated delays.
Costs	Project costs for materials and labor escalate beyond normal inflation factors.	MEDIUM	This risk has been mitigated within the Project budget by the addition of a 20% contingency factor to cover strong inflationary pressure on materials and labor costs.
Construction	Flooding occurs during construction, causing extra costs and delays.	LOW	As this is a gated channel upstream and downstream, flow from the main river channel can be reduced to allow for construction activities to take place during high water events.

6.0 Benefit-Cost Analysis

The cost-effectiveness and net benefits of the Project were estimated through a complete Benefit-Cost Analysis (BCA) as per USDOT's Benefit-Cost Analysis Guidance for Discretionary Grant Programs (March 2022, Revised) and the requirements set forth in the RAISE NOFO. The BCA quantifies and monetizes, as thoroughly as possible, the benefits generated by improvements made in alignment with the merit criteria of the RAISE program and compares them against the Project's costs. The analysis shows that the Project generates readily monetized benefits that exceed the capital costs and is thus a net-benefit to society.

6.1 Results of the Benefit-Cost Analysis

Table 8 summarizes the monetization of the main benefits resulting from the proposed improvements in Salina, Kansas. The detailed analysis associated with the values in the Table can be found in Appendix A.

Table 8: Benefits by Category, 2020 Dollars

Benefit	7% Discount Rate (3% for CO2)
Crash Reduction	\$19.2 million
Improved Journey Quality	\$2.7 million
Emission Reduction	\$3.4 thousand
Residual Value	\$1.5 million
Total Benefits	\$23.4 million

A 26-year analysis period was used in the estimation of the Project's benefits and costs, which includes eight years of project development (including design, permitting, and construction) from 2023 to 2030 and 20 years of operations. Annual benefits and costs are estimated through 2048. Partial benefits begin accruing in 2029 with the completion of the final bridge, with 2031 the first full year of benefits. The residual value of the bridges is assessed in the final year of the analysis.

The Project's most significant benefits are safety and improved journey quality. As noted previously, this area has experienced a pedestrian fatality and several serious pedestrian-involved crashes in the past five years. The presence of high-quality pedestrian and bicycle facilities as well as the installation of the pedestrian signals and other safety improvements planned as part of the Project are expected to reduce the probability of future tragedies such as this. Additionally, the installation of high-quality, well-lit and maintained pedestrian facilities along the channel provide safe, enjoyable routes for commuters and recreationists alike.

Considering all monetized benefits and costs, the Project's internal rate of return is estimated at 7.6 percent. With a 7 percent discount rate (3 percent for Carbon Dioxide emissions), the Project would result in a **monetized net present value of \$1.3 million and a benefit-cost ratio of 1.1**, as demonstrated in **Table 9**. The Project will also generate qualitative benefits, which have been discussed throughout this narrative, that are not easily quantified or monetized. Among others, these benefits include access to a mobility hub and sustainable transportation solutions, increased economic development opportunities and availability of park and amenity space.

Table 9: Results of Benefit-Cost Analysis, 2020 Dollars

Project Evaluation Metric	7% Discount Rate (3% for CO2)
Total Discounted Benefits	\$23.4 million
Total Discounted Costs	\$22.1 million
Net Present Value	\$1.3 million
Benefit-Cost Ratio	1.1
Internal Rate of Return	7.6%
Discounted Payback Period	27 years