KANSAS CITY

RIVERFRONT RAIL CROSSING ELIMINATION STUDY

I. COVER PAGE

Title: Kansas City Riverfront Rail Crossing Elimination Study

Applicant: Port KC

Federal Funding Requested: $2,000,000

Proposed Non-Federal Match In-Kind: $500,000

Does some or all of the proposed Non-Federal Match for the total project cost consist of preliminary engineering costs incurred before project selection? No

Other Sources of Federal funding, if applicable: Not Applicable

Total Project Cost: $2,500,000

Was a Federal Grant Application Previously Submitted for this Project? No

City(-ies), State(s) Where the Project is Located: Kansas City, Missouri

Congressional District(s) Where the Project is Located: Missouri's Fifth District

This project is not yet identified in the freight investment plan of Missouri, the Missouri State rail plan, or the Missouri state highway-rail grade crossing plan.

Is the Project Located in a Rural Area or on Tribal Land? No

Is the project eligible for a funding set-aside in Section B.1? No

U.S. DOT Crossing Number(s):

- **Union Pacific Crossing:** 429451T
- **Kansas City Southern Crossing:** 329736D
- **BNSF Crossing:** 329649A

Is the Project located on real property owned by someone other than the applicant? The project area has a combination of public and private ownership including the applicant, PortKC, the City of Kansas City, Union Pacific, Kansas City Southern, and BNSF Railroads.

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II. PROJECT SUMMARY

The Port Authority of Kansas City's (Port KC) efforts to reimagine and redevelop the Kansas City Riverfront are creating a vibrant, walkable neighborhood connecting the city to its river heritage. Days before this application is submitted, the KC Current, Kansas City's National Women's Soccer League team will break ground on the world's first purpose-built women's soccer stadium on the banks of the Missouri River.

This project will study the elimination of **three** at-grade rail crossings over **four** mainline tracks by way of at least one grade separated crossing structure at the entrance to the Riverfront at Lydia Avenue adjacent to the new stadium. The at-grade rail lines owned and operated by 1 Union Pacific (double track), 2 Kansas City Southern, and 3 KC Southern/BNSF along with dozens of properties and large utilities pose a challenge to grade separation.

The rail crossings provide no pedestrian, cycle or ADA accommodations and a pose significant safety issue that will continue to worsen as traffic increases as the Riverfront continues to build out. The anticipated outcomes of the project will be to have a practical, feasible, publicly and politically supported plan to provide a safe and separated entrance to the city's Riverfront.

II. PROJECT FUNDING

The Riverfront Rail Crossing Elimination Study is estimated to cost $2.5 million. The study is comprised of two main parts:

A. A complete NEPA evaluation of the proposed project-including at-grade crossing elimination options and one rail line relocation (KC Southern/BNSF): **$1.275 million**

B. Pre-construction activities that include 30% engineering for submittal to the affected railroads.: **$1.225 million**

	Task No.	Task Name/Project Component	Cost	% Total Cost
	Task 1:	Detailed Project Work Plan, Budget & Schedule	$20,000	.8%
A. NEPA	Task 2:	Location Studies	$950,000	38%
A. NEPA	Task 3:	Environmental Planning	$75,000	3%
A. NEPA	Task 4:	Traffic Studies	$80,000	3.2%
A. NEPA	Task 5:	Social & Economic Studies	$25,000	1%
A. NEPA	Task 6:	Community Involvement Program	$75,000	3%
A. NEPA	Task 7:	NEPA Document Preparation	$50,000	2%
B. PRE-CONSTRUCTION	Task 8:	Topographic Survey	$150,000	6%
B. PRE-CONSTRUCTION	Task 9:	30% Design Plan Submittal to Railroads & Municipality	$750,000	30%
B. PRE-CONSTRUCTION	Task 10:	Project Schedule Development	$20,000	.8%
B. PRE-CONSTRUCTION	Task 11:	Project Opinion of Cost	$25,000	1%
B. PRE-CONSTRUCTION	Task 12:	Utility Relocation Plan	$25,000	1%
B. PRE-CONSTRUCTION	Task 13:	Property Acquisition Plan	$25,000	1%
B. PRE-CONSTRUCTION	Task 14:	Project Management & Coordination	$230,000	9.2%
	TOTAL:		**$2,500,000**	**100%**

IV. APPLICANT ELIGIBILITY

The Port Authority of Kansas City, Missouri (Port KC), is an eligible entity and serves as the public port body corporate and politic created pursuant to Missouri Law Sections 68.010 to 68.075, RSMo, and formed by the City Council of Kansas City, Missouri, by Ordinance Number 47523 adopted on February 11, 1977.

Bicyclists ride along the Missouri River in Kansas City's Berkley Riverfront Park.

Summer brings sand volleyball leagues to the Riverfront. The Lydia Ave. crossing is just beyond the courts.

The Union, a new apartment complex on the Riverfront, is the first of several apartment complexes under development.

BarK is a favorite of Kansas City residents. This dog park and bar calls the Riverfront home.

V. DETAILED PROJECT DESCRIPTION

Background:

Rivers, rails, and roads: This is how Kansas City started. Founded at the confluence of the Kansas and Missouri Rivers, Kansas City grew as a river town. Fed by paddle boats bringing goods and people, Kansas City was the last stop before the wagon trains headed to the great open West.

The wagon trains gave way to trains of a different sort along the riverfront. The great railroads made Kansas City an economic powerhouse connected by slivers of steel to the rest of the world. Once a hub of cattle and livestock, Kansas City is now the second largest freight hub in the country. The majority of goods coming by rail from the west going east and east going west come across Kansas City's railroad tracks. Kansas City's railroad tracks are busy, and traffic continues to increase.

The Safety Problem:

Port KC's efforts to reimagine and redevelop the Berkley Riverfront have created a vibrant, walkable neighborhood connecting Kansas City to its river heritage. The 17-acre park is located on the south bank of the Missouri River between the Kit Bond Bridge and Heart of America Bridge. Once a landfill for construction debris and the former site of a sand and gravel company, the Riverfront is now a lively green connection between Kansas City and its most significant natural asset, the Missouri River.

The riverfront hosts numerous cultural events and activities and offers amenities such as the 15-mile Riverfront Heritage Trail, sand volleyball courts, and 4.7 acres of wetlands restoration. The site is adjacent to approximately 85 acres of developable land controlled by Port KC with sweeping views of the downtown Kansas City

RIVERFRONT VISITORS:
2012: 75,000
2022: 200,000
2026: 600,000

skyline and the Missouri River. This booming neighborhood will soon be connected to the River Market neighborhood, downtown Kansas City, Midtown, and the University of Missouri Kansas City (UMKC) by a Riverfront extension of the KC Streetcar that is expected to be complete in 2025.

However, access to the Berkley Riverfront is limited by a number of barriers. Chief among these barriers are several rail lines owned and operated by three different railroads – BNSF, Union Pacific, and Kansas City Southern – that isolate the Riverfront neighborhood from the rest of Kansas City. There is only one street crossing these rail lines into the Riverfront, Lydia Avenue.

New prosperity, new land uses, and exciting new possibilities make the at-grade rail lines a hazard for the thousands of people and vehicles who now stream to the riverfront to enjoy the new spaces.

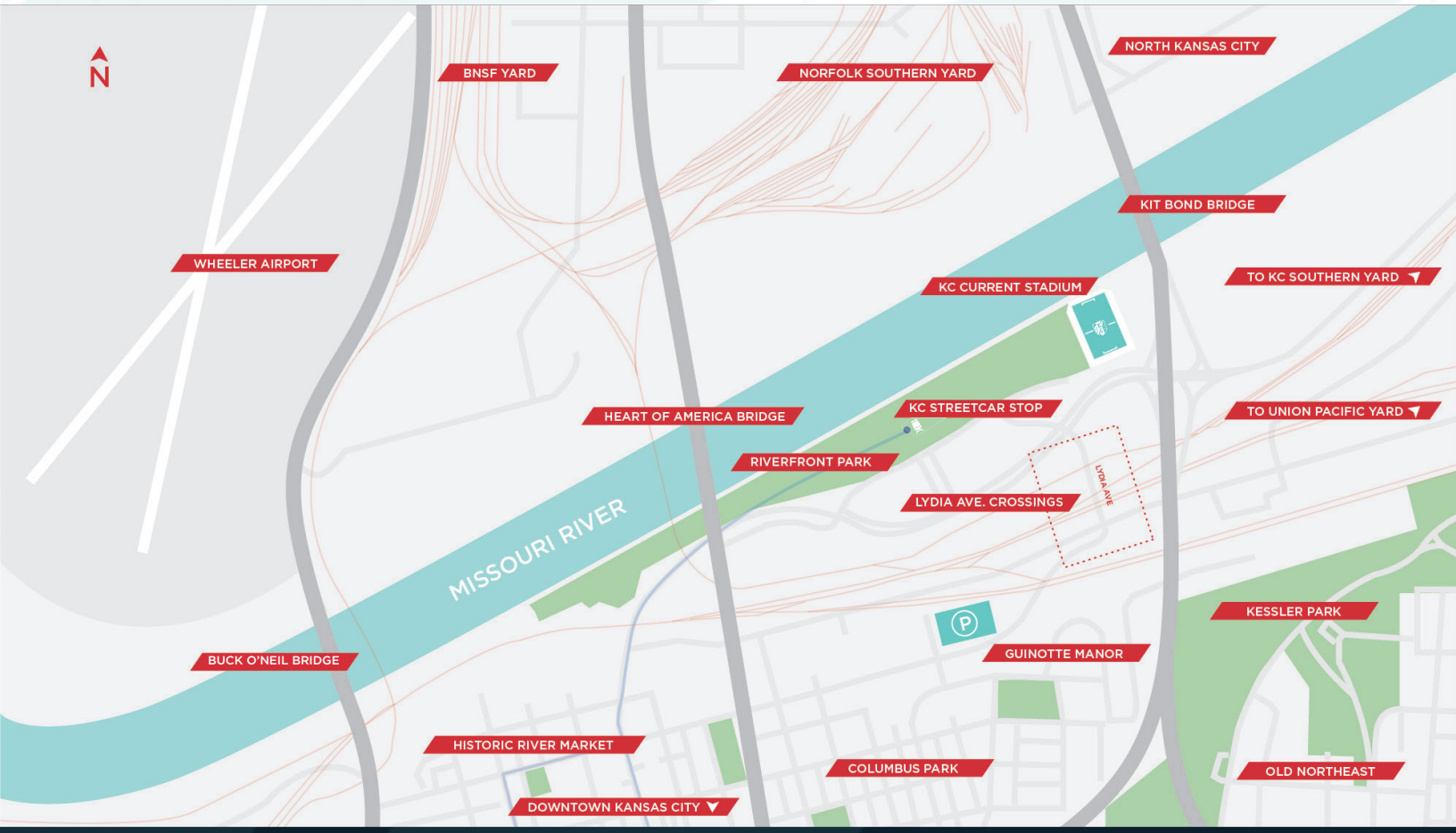
When Port KC began the redevelopment of the city's Riverfront, the area saw 75,000 visitors a year. A decade later, the area boasted more than 200,000 visitors today. Port KC estimates total visits to exceed 600,000 in the near future due in large part to an exciting new stadium project. As this application is submitted, Kansas City will

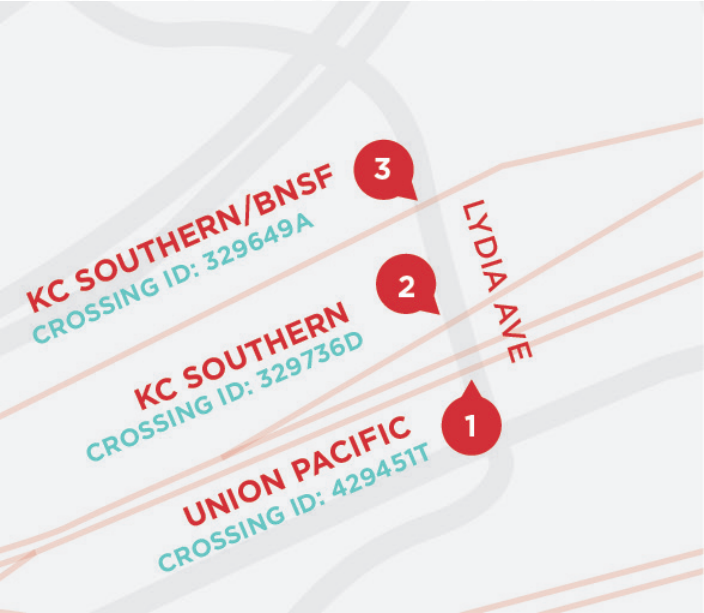
break ground on a new National Women's Soccer League stadium yards aways from these at-grade crossings. The new stadium for the Kansas City Current is the first of its kind to be built specifically for women's soccer in the world. The stadium will seat upwards of 11,000 people and may serve as a practice facility for the World Cup, which Kansas City will host in 2026. Beyond soccer, the stadium plans to host events, likely weekly, drawing crowds from across the region.

This new stadium will have limited on-site parking; this is intentional to preserve green space and promote active transportation modes in the area. Lots to the south and east of the tracks, a little over a half mile away, are being considered for off-site parking. **The only way, at present, to get from the proposed off-site lots to the stadium or from Guinotte Manor, a Housing Authority of Kansas City development with 219 townhomes for low income families, to Riverfront amenities and opportunities is to walk along Lydia Avenue, which has no pedestrian or bicycle facilities, and crosses four rail lines at grade. In the last two years, there have been two pedestrian injuries and a fatality at this location.**

Over 500 residents live in the Guinotte Manor community, including a large number of children. Household incomes are extremely low, with an annual average of approximately $13,000, or about 15% of Area Median Income (AMI).

As the Riverfront continues to develop and the new stadium opens, the dangerous conflict between people, vehicles, and trains along Lydia Avenue will only increase. The safety concerns are real and become more urgent as time passes.





The three at-grade crossings at Lydia Avenue have each had a recorded safety incident in the last two years involving pedestrians.

This set of crossings at Lydia Avenue is the only at-grade rail crossing in Jackson County to have more than one recorded incident. It represents 8% of the total pedestrian incidents in the County since 2010 according to the FRA's Trespass and Suicide Dashboard.

The Union Pacific crossing 1 was the site of a fatality on September 24, 2020.

In 2021, both the KC Southern 2 and the rail operated by BNSF 3 have had a recorded incident of pedestrian injury crossing between rail cars.

The Lydia Ave. crossings, according to FRA data, are the most dangerous to pedestrians in Jackson County - the county with the highest number of pedestrian incidents at rail crossings in the state of Missouri.

Proposal to Study Grade Separation:

This grant application is to study solutions to a serious safety issue where the four at-grade rail crossings of Lydia Avenue divide a booming riverfront with greenspace, jobs and a streetcar stop from adjacent neighborhoods.

The project has three primary objectives:

The study will assess and document environmental clearances required for the project, which is expected to include roadway and bridge realignment, rail realignment to bring the four sets of tracks closer together to accommodate the grade separation, construction of new ped/bike facilities, and relocation of high-voltage power lines and other utilities.

The study will develop and assess potential access and alignment alternatives to provide grade separation at the existing crossings owned by Union Pacific (UP), Burlington Northern Santa Fe (BNSF), and Kansas City Southern (KCS; 2 tracks). This assessment will especially focus on access and safety for pedestrians, cyclists, and transit users, and will look for opportunities to eliminate additional at-grade crossings in the area. The effort will include a substantial public engagement component to incorporate community needs and priorities, especially for nearby underserved neighborhoods, and to build support for the preferred solution.

This study will develop 30 percent plans for a preferred alternative, including rail realignment, grade separation at Lydia, pedestrian/bicycle facilities, utility relocation, and adjacent roadway improvements to support changing traffic patterns.

Improving the Mobility of People and Goods:

Lydia Avenue is elevated, crossing over three rail lines as it approaches the Riverfront from the Columbus Park neighborhood on the south. However, it transitions to a surface street before the at-grade crossings that are the subject of this application. There is currently no sidewalk or bicycle facility on Lydia Ave. The roadway is used by freight haulers on their way to I-35. Often semi-trucks reach the at-grade crossing to find one or more trains parked across the roadway as they wait for clearance to proceed to rail yards. Delays are often so long the trucks back up to find other routes around.

Security and police personnel have witnessed people jumping through trains parked across the roadway—a particularly dangerous practice that grade-separated crossings could prevent.

Truck traffic from I-35 crosses the at-grade crossings at Lydia Ave. (Images from Google Maps)

A Union Pacific freight train parked across the tracks at Lydia Ave waiting to enter the yard to the East.

Reduces Emissions, Protects the Environment, and Provides Community Benefit:

Safer, more convenient connections will support increased use of the streetcar and other nearby transit routes instead of vehicle trips, leading to reduced emissions and better air quality from reduced Vehicle Miles Traveled (VMT).

Providing grade separated crossings at the railroad tracks could allow for the implementation of a Quiet Zone that would reduce train horns, providing quieter neighborhoods. Noise pollution is recognized by the EPA and other environmental agencies worldwide as a form of air pollution that can have negative impacts on human health. Furthermore, eliminating the grade crossings will reduce the number of large trucks and automobiles idling at the grade crossings.

Port KC, in its role overseeing the development of land adjacent to the Berkley Riverfront Park, has applied for Low Income Housing Tax Credits to support the development of more affordable housing in the Riverfront. Recent feedback from the Missouri Housing Development Corporation has expressed concern about the proximity of the railroad tracks to potential sites for new housing. Port KC believes that exploring opportunities to create safer, separated crossings, improve connections to adjacent neighborhoods, and relocate one of the nearby rail lines will assist in addressing these concerns and allow Port KC and its partners to be more successful in securing tax credits for the development of affordable housing.

Improves Access to Emergency Services:

Lydia Avenue will be the closest connection to the city street grid for emergency vehicles to serve the new stadium. In its current at-grade configuration, Lydia is not a viable route for emergency vehicles who may get stuck behind a crossing train. Separating the grades would improve response times to the stadium and to housing along the riverfront by opening another access point for emergency vehicles to use.

Currently 754 housing units are on the riverfront beyond this at-grade crossing. 2,938 more units are underway or planned. All would be better served by emergency services if Lydia Avenue was grade separated.

Improves Access to Communities:

Access to those with different mobility needs:
This study will ensure that active transportation is safely separated from the heavy rail lines. A key component of this study is making fully accessible connections between Columbus Park and the Riverfront. On the only existing connection, Lydia Avenue, there is no sidewalk or even a shoulder. This access point is not safe for pedestrians or bicyclists and is not ADA-compliant for people using wheelchairs or other mobility aids.

Access to a booming riverfront:
Removing these barriers is even more important now, as the Riverfront prepares to welcome its newest and most exciting amenity – the home stadium for the Kansas City Current. In addition, the Riverfront Streetcar extension is underway to connect the Riverfront to the River Market neighborhood to the west. New housing projects are also underway and will increase demand for improved connections and multi-modal transportation choices.

Access to greenspace:
Directly adjacent to the Riverfront Park, but separated by railroad tracks, is Guinotte Manor, a 219-unit public affordable housing development of family townhomes administered by the Housing Authority of Kansas City. This housing, along with workforce housing in the Columbus Park neighborhood, has historically welcomed Kansas City's newest immigrants.

Separating the railroad tracks from the vehicle and pedestrian connection to the Riverfront will greatly enhance access to communities on both sides. In particular it will more directly connect the families of Guinotte Manor with a premier city park and riverfront amenities and job opportunities.

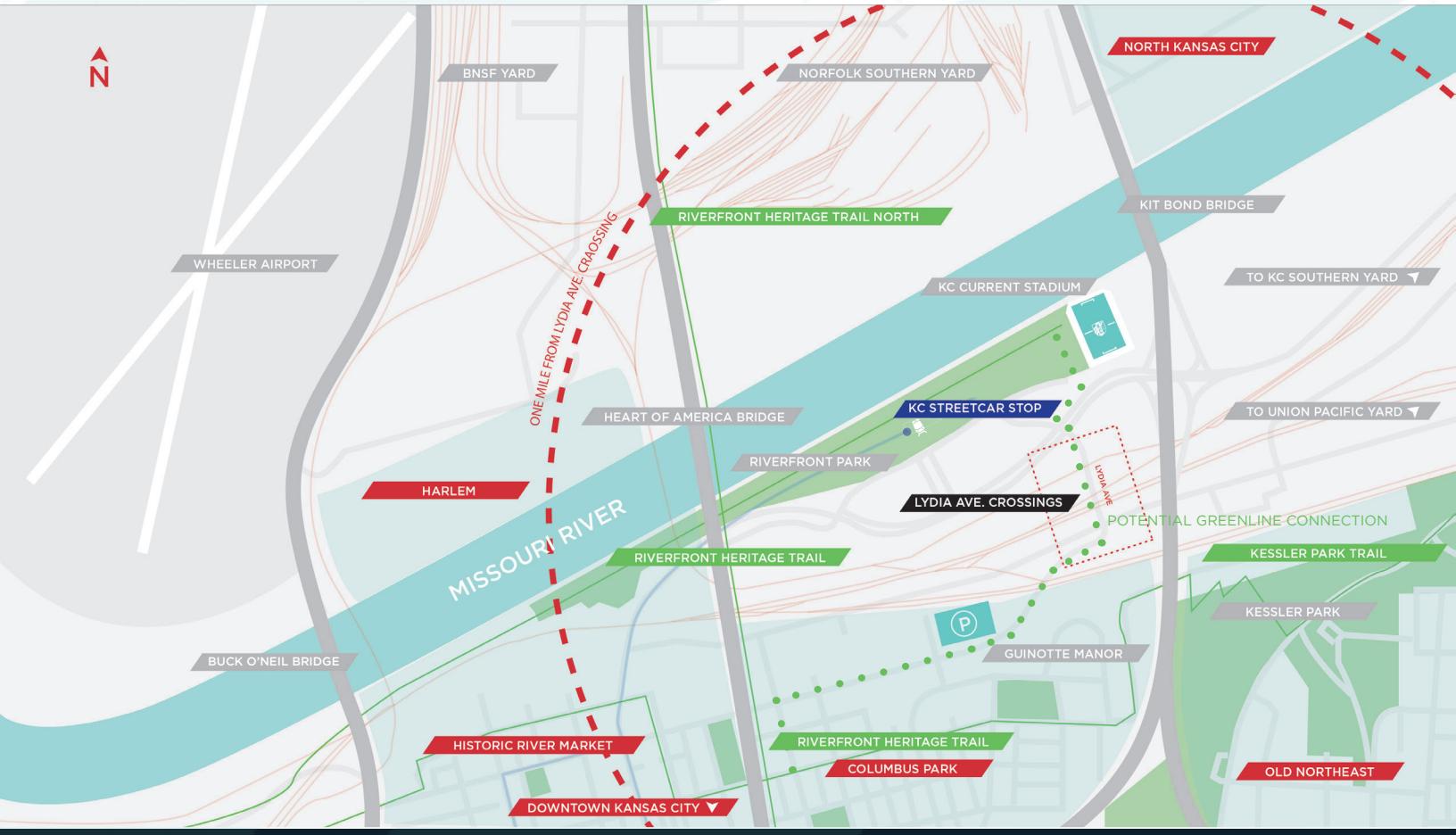
Columbus Park residents in Guinotte Manor are less than half a mile from the riverfront as the crow flies. But to walk to Berkley Riverfront Park, they must travel a mile, which includes walking along a truck route in a heavily wooded area with no sidewalks or substantial shoulders, a bridge on a reverse horizontal curve with no pedestrian facilities, and three at-grade train crossings, over which trains are often parked. Residents who wish to avoid these conditions and take a route with sidewalks and grade-separated crossings must walk 2.6 miles, one way. There are no opportunities for pedestrians to cross the tracks to the east of Lydia.

Townhomes at Guinotte Manor are operated by the Housing Authority of Kansas City.

Access to surrounding neighborhoods:
The study will focus on safely connecting adjacent neighborhoods to the city's Riverfront. Beyond Columbus Park, over a half dozen neighborhoods are within a mile of the proposed grade separation. Connections to these neighborhoods are important to create a more robust transportation network that connects to nearby transit routes and employment centers.

Access to walking and biking trails:
Improved connections will also fill a gap in the Greenline between the Riverfront Heritage Trail and Kessler Park Trail. The Greenline is an initiative spearheaded by the Downtown Council to build a high-quality trail network around the greater downtown area that provides unique amenities and attractions. In the study area for this project, there is a gap in the northeast corner of the Greenline. Filling the gap would help further develop the Greenline as an amenity connecting downtown neighborhoods.

Major Kansas City neighborhoods including North Kansas City, Harlem, Historic River Market, Downtown, Columbus Park, and the Old Northeast are all within less than one mile of the Lydia Ave. at-grade crossings. The Riverfront Heritage Bike and Pedestrian Trail network and the Kessler Park Trail are also within a mile of the crossing. The new KC Streetcar Riverfront station is a quarter-mile from the at-grade crossings at Lydia Ave.



KC Streetcar Riverfront Station

Access to the rest of the city via KC Streetcar: Running from River Market on the north end to Crown Center on the south, the RideKC Streetcar connects riders to all of the downtown neighborhoods with 16 platform stops and two miles of track. And upon completion, the Riverfront extension project will connect Berkley Riverfront to the River Market stop along with a 0.7-mile, bike/pedestrian bridge.

The Riverfront will become the new North terminus of the expanded 6-mile system by 2025. Now under construction, the Streetcar will extend an additional 3.6 miles south to the Plaza and the University of Missouri Kansas City (UMKC) campus. The Riverfront will soon offer unprecedented transit access through Kansas City's most heavily populated urban core.

The Streetcar extension is expected to spur more development in Berkley Riverfront, bringing additional visitors and residents. This will further increase the need for additional access points for all modes. In addition, a safer crossing for Columbus Park residents will provide them easier access to the Streetcar and then other points in the city.

The KC Streetcar will be extended to the Riverfront and feature a new bike/pedestrian path.

Rendering of the new KC Streetcar Riverfront Station. The extension received a federal BUILD grant award.

Provides Economic Benefit:

The privately funded soccer-specific stadium at Berkley Riverfront Park will be the first soccer stadium purpose-built for an NWSL team. As part of a 50-year lease agreement with Port KC, the stadium will be built on a 7.08-acre site on the east end of the park.

The new stadium will open in June of 2024. The new stadium is expected to produce $60 million in total revenues annually and support 1,450 full and part-time jobs with $50 million in annual wages. Construction of the stadium over the next two years is expected to employ 1,150 with $85 million in construction related wages.

The larger Riverfront is a planned 85-acre site with an eventual build out of up to five million square feet of residential and retail space. Desired outcomes of this project include improving connections to opportunities such as jobs at the new stadium, retail, and residential spaces for residents in the surrounding neighborhoods and providing more developable space for affordable housing

Better connections to nearby jobs as well as better connections to public transportation options such as the streetcar extension will improve economic opportunities and lower transportation costs for residents of the area.

Uses Contracting Incentives to Employ Local Labor:

The Study will provide detailed planning and coordination to identify strategies for removal of barriers and to create high-quality connections between the Riverfront and its adjacent neighborhoods. Key elements of this plan will be conducted by local companies and will include:

- Engaging stakeholders to develop consensus on improvement strategies and recommendations;
- Developing location and conceptual plans for grade-separated crossings of railroad tracks; and
- Completing a NEPA environmental reviewin preparation for construction.

Port KC is also committed to equity in its planning and delivery of this project. Goals for disadvantaged businesses will be set in coordination with the city. The study and construction that follows will pay contractors excellent wage rates and focus on hiring Kansas City-based firms when possible.

The proposed rail crossing elimination contemplated as part of this study will help to connect the Riverfront and the new KC Current woman's professional soccer stadium safely to its parking facility and surrounding neighborhoods.

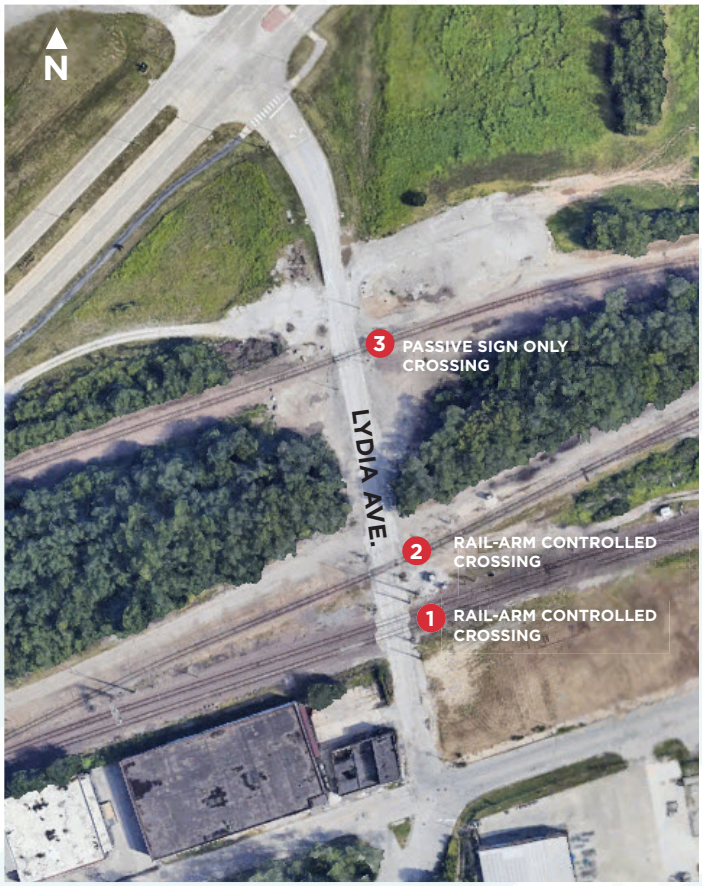
VI. PROJECT LOCATION

The study area is located in Kansas City, Missouri in Jackson County. Three at-grade crossings of four railroad tracks across Lydia Avenue that are the subject of this study are rail-arm controlled. Lydia Avenue is maintained by the City of Kansas City and connects to Berkley Riverfront Park and the Riverfront development area controlled by Port KC.

VII. GRADE CROSSING INFORMATION

FRA Grade Crossing Identification:

1. Union Pacific, Crossing ID: 429451T
2. KC Southern, Crossing ID: 329736D
3. KC Southern/BNSF, Crossing ID: 329649A



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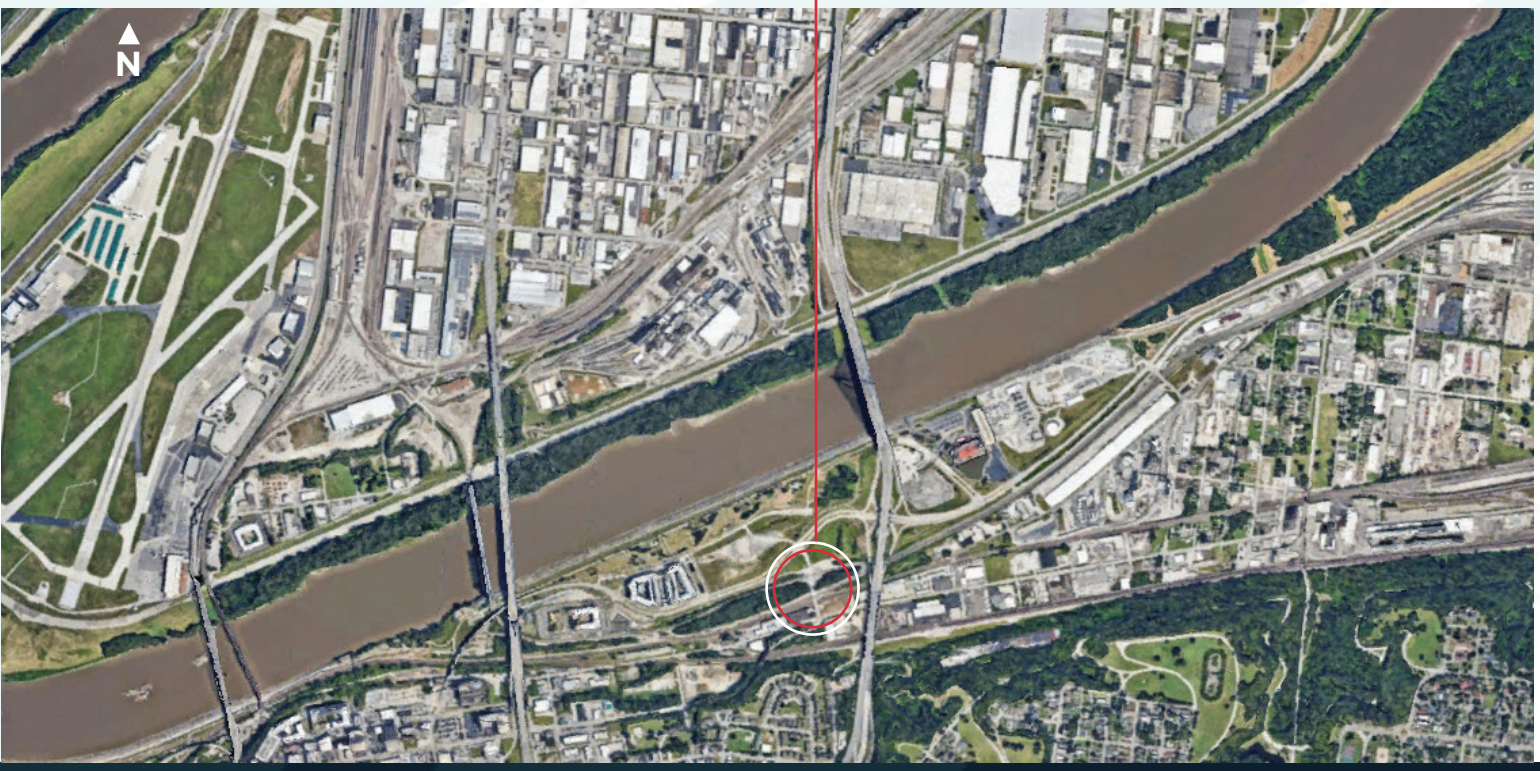



LYDIA AVE AT-GRADE CROSSINGS
DOWNTOWN KANSAS CITY, MO
COLUMBUS PARK NEIGHBORHOOD
BERKLEY RIVERFRONT PARK
FUTURE KC CURRENT STADIUM
FUTURE STADIUM PARKING
FUTURE STREETCAR STATION
1
2
3
I-35 KIT BOND BRIDGE OVER THE MISSOURI RIVER

VIII. EVALUATION AND SELECTION CRITERIA

(A) Safety

The grade separation contemplated in this study request is complex and its evaluation of safety benefits will be largely future-focused.

Connecting the neighborhoods adjacent to the Riverfront Park and amenities in a safe way will require moving a rail line to consolidate the railroads' footprint to make a grade separation viable as an alternative.

The roadway (Lydia Avenue) is elevated over additional tracks before coming to grade and intersecting with four main line tracks requiring three at-grade gated crossings. This study will examine alternatives to safely separate active modes and vehicles from the heavy rail. A key component of this study is making fully accessible connections between Columbus Park and the Riverfront. The only existing connection is on Lydia Street, where there is no sidewalk or even a shoulder. This access point is not safe for pedestrians or bicyclists and is not ADA-compliant for people using wheelchairs or other mobility aids.

The back-to-back nature of the at-grade crossings poses unique safety challenges in their existing configuration for vehicles. For pedestrians, cyclists, and those with disabilities existing crossings with no accommodations the are exceptionally dangerous.

Existing safety concerns will only amplify with the addition of the new stadium facility and other development planned and underway just beyond the at-grade crossings. Additionally, plans are also underway for off-site parking facilities in the industrial area adjacent to the Riverfront. Pedestrians walking to the stadium from the off-site parking will cross the at-grade rails on Lydia on their way to the stadium. Without a grade separation and associated pedestrian facilities, the most direct route to the stadium and streetcar stop on the Riverfront is dangerous.

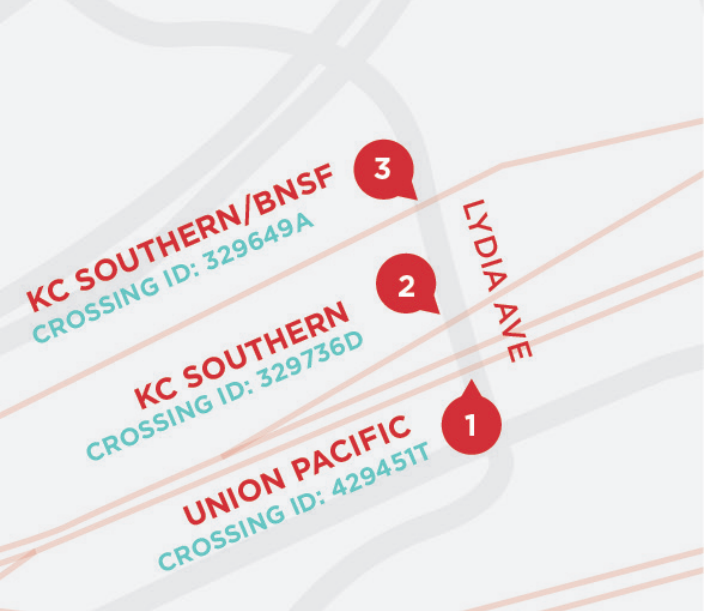
The study focuses on planning for multi-modal transportation improvements that will remove barriers and provide improved connections between Riverfront destinations to the north and neighborhoods to the south. An important part of the study is traffic studies for possible alternatives on both a daily basis and for special events in order to understand demands and route choices and the safety concerns associated with those choices.

The study will also provide recommendations for active transportation connections along Lydia to connect the Riverfront to the East Bottoms, Columbus Park, and Pendleton Heights. Connections to these neighborhoods are important to create a more robust and safe transportation network that connects to nearby transit routes and employment centers.

As freight trains course through the riverfront area, they travel at very low speeds, often stopping across Lydia Avenue as they wait to enter rail yards at either end of the study area. The tracks across Lydia Avenue are frequently occupied by trains. There are no accommodations for pedestrians, cyclists, or persons with disabilities to cross. The crossing is currently avoided by most users. As traffic of all kinds increases due to the developments on the riverfront, without separation, it is foreseeable that more people will try to cross

between train cars. Since 2020 there have been one fatality and two injuries at these at-grade crossings. Both injuries were due to pedestrians climbing through rail cars. These incidents correlate with increased visitor numbers (75,000 to 200,000 per year) and occupancy of the Union apartment development.

This set of crossings at Lydia Avenue is the only at-grade rail crossing in Jackson County to have more than one recorded incident.



FRA Safety incidents:

1. Union Pacific, Crossing ID: 429451T
   Fatality (2020)
   Vehicle-train collision, no injuries (1987)

2. KC Southern, Crossing ID: 329736D
   Pedestrian Injury (2021)
   Vehicle-train collision, no injuries (1990)

3. KC Southern/BNSF, Crossing ID: 329649A
   Pedestrian Injury (2021)
   Vehicle-train collision, no injuries (1980)

A traffic impact study is in development to assess the impact on weekday evening peak hour trips into and out of the Riverfront area resulting from stadium events and additional planned development. Initial results indicate that stadium events, hotel, new apartments, and retail are expected to generate 3,821 trips during the evening peak hour by 2029. In addition, the report notes that a public campaign to encourage walking and biking is expected to increase the mode share of people walking/biking to the stadium from 5% in 2024 to 10% in later years. The traffic impact study emphasizes just how substantially vehicle, pedestrian and bicycle volumes will be increasing in the Riverfront in the coming years.

Anticipated Riverfront Vehicle Trips

Development (year)	Entering	Exiting	Total
Existing conditions (2022)	690	576	1,266
Stadium trips (2024)	2,304	566	2,870
Hotel and apartments (2024)	139	107	246
Retail and apartments (2029)	375	330	705

(B) Equitable Economic Strength and Improving Core Assets

This application seeks funding to study alternatives and their potential environmental impact to prepare for the construction of a grade separated connection to the Riverfront at Lydia Avenue. While the study itself will certainly employ dozens to complete it, the potential construction project to separate the grades and maximize safe connections to the Riverfront will potentially employ hundreds of workers.

For the City of Kansas City, its residents, and the Port Authority, the Riverfront is a core asset. Its development provides housing, jobs, entertainment, cultural connections, and greenspace.

The railroads that travel through the riverfront area are also core assets that themselves provide employment in Kansas City. A large portion of the region's economy is connected to the freight that travels through by rail.

Nearly 1 billion tons of freight travels through Kansas City annually, much of that on the rails that traverse the Riverfront. The city is the second busiest rail freight hub in the country, only 3% by volume behind Chicago.

The potential investment in this grade-separation project is a recognition of both the economic benefit of a vibrant Riverfront and the surrounding neighborhoods and the essential asset freight rail is to the region.

Hundreds of jobs will be created over the next decade at the Riverfront, including the new stadium and retail development at the Riverfront.

This project also invests in a connection to the new KC Streetcar stop in Berkley Riverfront Park. The streetcar is a core community asset and is the result of a partnership with the Federal Transit Administration that has assisted in its funding. The new station platform will provide free-to-ride access to the economic center of the city via the new streetcar station adjacent to this study area. Ensuring safe access to the KC Streetcar will increase connections to jobs across the city.

With the current at-grade configuration, there is little doubt the core community assets and investments on the Riverfront cannot be accessed in a safe and equitable way by all in the community. The ultimate investment in a grade separated solution at Lydia Avenue will leverage other federal, state, and local investments, magnifying and extending their economic impact.

(C) Equity and Barriers to Opportunity

The railroad tracks separating the Riverfront from adjacent neighborhoods have long been identified by Kansas City as a barrier. Removing the at-grade crossings along Lydia Avenue will remove this barrier not only for vehicles but also for the people who will be able to access the Riverfront by walking, biking, or accessing transit.

Supporting access to area jobs and attractions via multi-modal options such as bicycling and transit reduces overall parking demand and supports denser development of the area. While major investments are currently underway on the riverfront to enhance multi-modal and fixed-rail transit access, those improvements and the opportunity they represent are not accessible by foot, bike, or wheelchair directly from the adjacent neighborhood.

Areas that are more walkable/bikeable have higher rents for commercial space and higher property values. A 2019 Brookings Institute report found that walkable urban places command commercial rent premiums 75% higher than suburban locations. A 2019 report for the Robert Wood Johnson Foundation noted that a national study of 10,000 properties found that "retail properties with a Walk Score ranking of 80 were valued 54% higher than properties with a Walk Score of 20. This was accompanied by an increase in net operating income (NOI) of 42% for the more walkable properties."

Improved active transportation connections can also support the development of local businesses within the study area. A 2018 report from Victoria Walks in Australia found that walkability improvements can increase the number of people entering shops and local businesses by up to 40 percent. A 2012 study published in TR News found that shoppers arriving by bike spend 24 percent more per month than shoppers arriving by car.

Port KC has consistently applied for Low Income Housing Tax Credits to support the development of more affordable housing in the Riverfront. Recent feedback from the Missouri Housing Development Corporation has expressed concern about the proximity of the railroad tracks to potential sites for new housing. Port KC believes that exploring opportunities to create safer, separated crossings and improve connections to adjacent neighborhoods will assist in addressing these concerns and allow Port KC and its partners to be more successful in securing tax credits for the development of affordable housing. Providing grade separated crossings of the railroad tracks could allow for the implementation of a Quiet Zone that would reduce train horns, providing a quieter neighborhood for the enjoyment of all residents.

Better connectivity will also provide Housing Authority residents at Guinotte Manor and all area residents with better access to the amenities and attractions at the Riverfront as well as jobs at the casino, stadium, and future retail or office uses in the area. Guinotte Manor, an affordable housing community owned and operated by the Housing Authority, provides 219 units for low-income residents in Columbus Park. There are over 500 residents who live in the Guinotte Manor community, including a large number of children. Household incomes are extremely low, with an annual average of approximately $13,000, or about 15% of Area Median Income (AMI).

This project will build on Port KC's ongoing planning to create better active transportation connections to adjacent neighborhoods. In 2023, Port KC will complete a Berkley Riverfront Connectivity Study to evaluate how to create better active transportation connections to adjacent neighborhoods. This planning work will include an advisory committee made up of key stakeholders, including residents of Guinotte Manor and area businesses, a Walking Audit to identify desired routes for the community and identify railroad safety concerns, interactive mapping to gather online comments, and pop-up events along the riverfront to engage with visitors to the neighborhood.

(D) Climate Change and Sustainability

Removal of the at-grade crossings will remove a key barrier between nearby residents of Columbus Park and the new streetcar station under construction in the Riverfront. Safer, more convenient connections will support increased use of the streetcar and other nearby transit routes instead of vehicle trips, leading to reduced emissions and better air quality from reduced VMT.

Providing grade separated crossings of the railroad tracks could allow for the implementation of a Quiet Zone that would reduce train horns, providing quieter neighborhoods. Noise pollution is recognized by the EPA and other environmental agencies worldwide as a form of air pollution that can have negative impacts on human health.

The Riverfront Streetcar Extension and construction of the KC Current stadium will bring hundreds of thousands of new visitors to the Riverfront. With this increase in visitors comes a renewed focus on connectivity, access, and safety in the neighborhood. Better access for active transportation can leverage the streetcar investment and address first/last mile connections. Improved connectivity will support the vibrant, walkable, and green development of the Riverfront by enabling more people to visit the area without using a car.

Sustainable land use patterns require robust transportation choices that reduce auto-dependency. The study will promote sustainable land use patterns by creating better connections from adjacent neighborhoods to the Riverfront streetcar station. Better connectivity will increase the vibrancy of the public realm by filling it with more active people. Improved access to public transit also support aging in place by reducing the need for driving as residents age, allowing them to remain in their homes and creating life-long neighborhoods. Improved options for transportation choices also reduce transportation costs for area residents and improve air quality.

Improved connections to transit will support the development of additional affordable housing in these neighborhoods. When developers can de-couple parking from multi-family units, rents are lower. Less parking is required when developments are supported by transportation choices such as active transportation and nearby transit. Enhanced connections to transit also unlock the opportunity for more transit-oriented development by applying sound principles and policies.

Providing grade separated crossings of the railroad tracks could allow for the implementation of a Quiet Zone that would reduce train horns, providing a quieter neighborhood for the enjoyment of all residents.

A grade separate crossing would also eliminate idling trucks waiting for trains to move and clear the crossing at Lydia Avenue.

(E) Transformation of Our Nation's Transportation Infrastructure

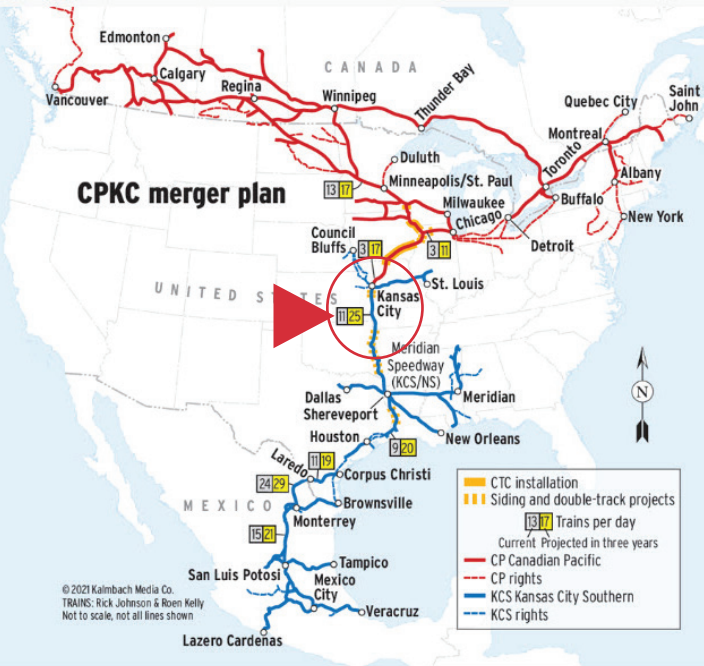
The three Class I train operators, Union Pacific, BNSF and KC Southern who operate the rail lines through the riverfront are part of a long history of freight rail in Kansas City. Like many communities across the country, rail lines that have spent decades coursing through mostly industrial areas now find themselves in increasing conflict with growth in surrounding housing and changes in use.

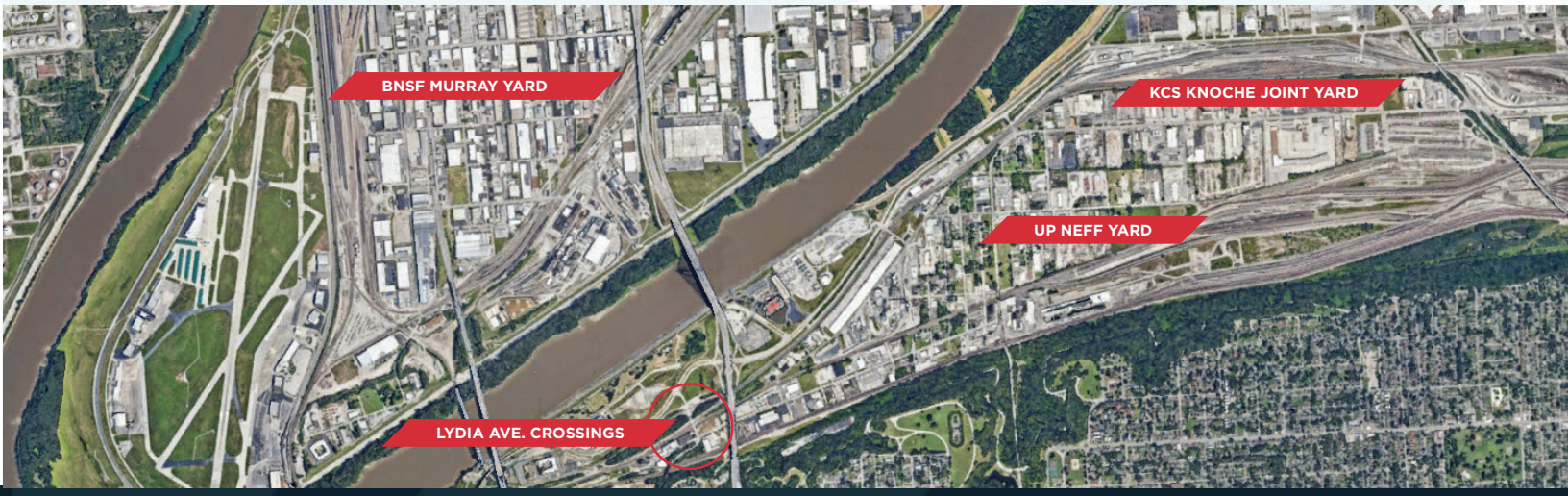
Currently, according to the FRA Crossing Inventory Form, 16 trains and switch engines pass trough the Lydia Ave. at-grade crossing daily. The vehicle traffic includes four school bus crossings each day.

According to KC Southern, if their merger with Canadian Pacific railroad is completed, traffic on KC Southern lines in Kansas City could double.

Within less than a 2-mile radius of the at-grade crossings of Lydia Avenue are the UP Neff Yard, the BNSF Murray Yard, and KCS Knoche Joint Agency Yard. All three yards are serviced by the at-grade rail lines subject to this study. An accident at the at-grade conflict points at Lydia Avenue could have a major impact on the thousands of tons of freight flowing through each of these major yards daily.

This rail crossing elimination project could drastically decrease the number of potential conflicts with pedestrians and automobiles as train traffic continues to increase due to CPKC merger and expected rail traffic growth.





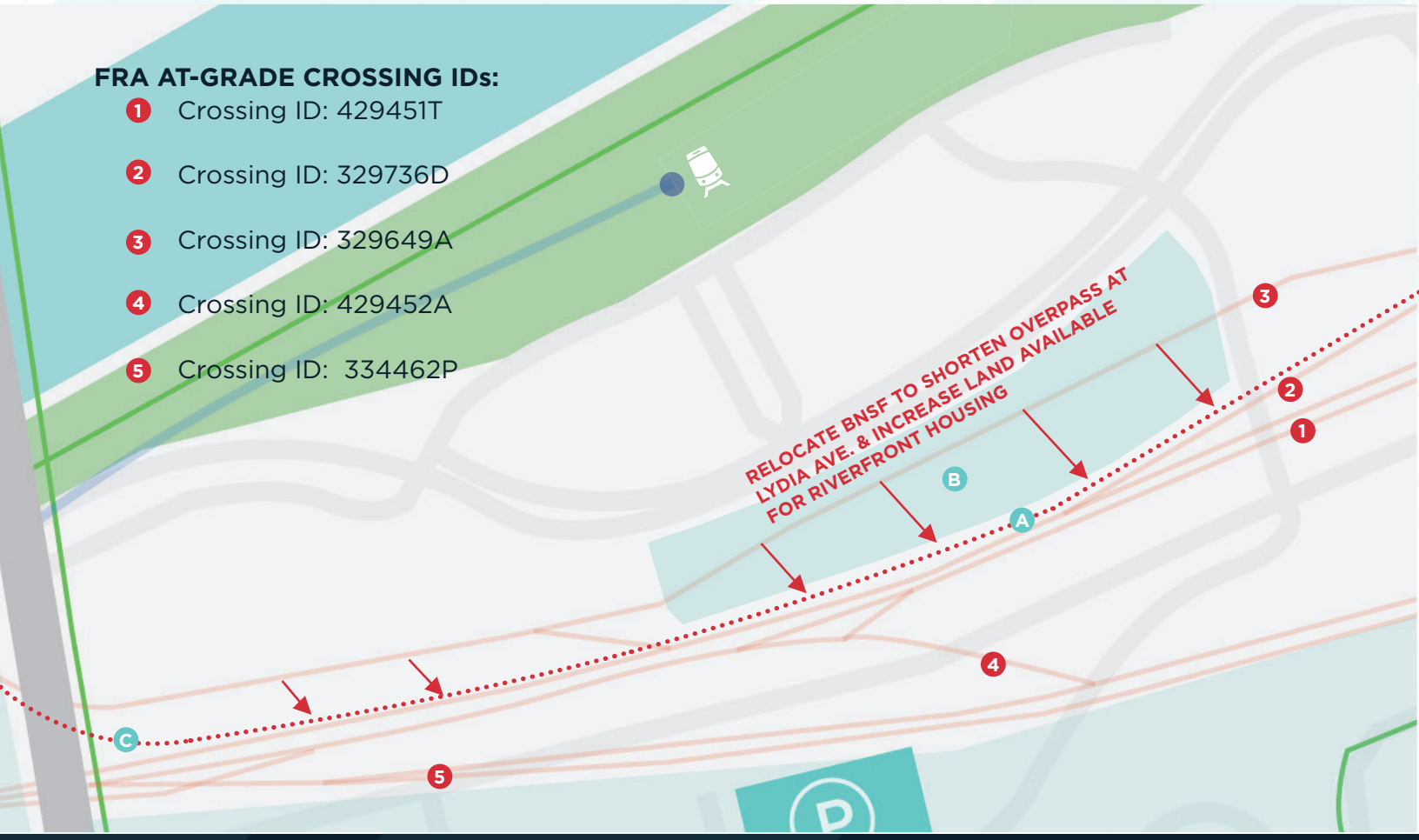
(F) Eliminating Crossings and Making Corridor-Wide Improvements

This project includes relocation of a BNSF mainline to be closer to the KC Southern and Union Pacific mainlines, consolidating the rail footprint into one area. This accomplishes three goals:

- **A** It shortens the distance a potential viaduct would have to span. at Lydia Ave.
- **B** It opens up additional property that could be developed by the Riverfront.
- **C** Another potential benefit is the softening of a tight BNSF curve on the west side of the realignment.

The Riverfront Rail Crossing Elimination Study will examine the elimination of a minimum four rail lines that constitute three at-grade rail crossings at Lydia Avenue. Two additional at-grade crossings along 1st Street could be fenced off, consolidating access to the Riverfront at an elevated Lydia Avenue crossing. **All totaled, five at-grade crossings could be eliminated as part of this project.**

Due to the proximity to nationally significant rail yards (see page 21), the opportunity for corridor-wide improvements that will reduce wait times and increase safety is substantial.



Significant signal improvements will be needed throughout the realignment corridor, providing an opportunity for the railroads to improve what could be aged signal infrastructure in the area. Lastly, the project is likely to propose new cut-proof fencing on both sides of the combined railroad right of way to further deter pedestrian trespassing on railroad right of way. The project team will work closely with the railroads to identify other potential operational/design improvements that could be assessed during the study phase.

(G) Geographic Diversity

Kansas City is the largest city in Missouri by population and area. The 2020 census announced the city had a population of 508,090, making it the 36th most-populous city in the United States. The Kansas City region straddles the Missouri – Kansas state line and has a bi-state population of 2,392,035.

The City of Fountains and Heart of America is known for its championship sports teams the Royals, Chiefs, Sporting KC, and KC Current, as well as its barbecue and jazz. The city was founded in the 1830s as a port on the Missouri River only a mile from the proposed site of this study.

Kansas City's Mayor is Quentin Lucas. The study area is in Missouri's Fifth Congressional District represented by Emanuel Cleaver, II.

IX. SAFETY BENEFIT

The three at-grade crossings on Lydia Avenue being considered for grade separation as part of this project have a limited history of crashes. Since 1980, there has been a single non-injury motor vehicle crash at each of the three crossings. This is not unexpected since traffic volumes have been low on Lydia Avenue, and train speeds are slow through the area. (The maximum timetable speeds at the crossings range from 10 to 25 mph.)

However, several trespassing incidents have been reported in this area since 2020, including a fatality and two injuries. Two incidents describe the injured individuals crossing between or crawling under train equipment. These reports suggest that the safety issues at the Lydia Avenue crossings are less about people being surprised by a train or driving unsafely across the tracks, but instead about individuals attempting to cross while parked or slow-moving trains are present. This is likely due to the fact that there are no other crossing locations accessible to pedestrians in the area.

Both vehicular and pedestrian traffic are expected to increase substantially as development continues in the Riverfront area. Lydia Ave provides the most direct route for drivers and pedestrians coming from neighborhoods to the south, southeast, and east of the Riverfront area, including popular destinations such as J. Rieger & Co. Once the new soccer stadium opens in 2024, vehicles from these areas will be directed by routing apps across Lydia to access the on-site parking. If a train is present, which is often the case, traffic will have to find alternate routes in an area that does not support easy, convenient, or intuitive redirecting. Even if vehicle collisions with trains do not increase substantially,

crashes due to unfamiliar drivers looking for alternate routes in an area heavily constrained by topography and train tracks are expected to increase.

Supplemental event parking is being planned for a lot to the southwest of the stadium, on the south side of the tracks. For those who use this remote parking to access the stadium, Lydia currently provides the only available crossing. Peak pedestrian volumes may be several hundred, or even thousands, when events at the stadium begin and end. What are now isolated incidents of individuals crossing the tracks may become crowds crossing in the vehicle lanes (as there are currently no sidewalks or separated paths) even when trains are present. In this case, the slow-moving trains and stopped trains may prove to be more of a safety hazard than fast-moving trains, in that people may assess their risk to be low and choose to walk between or under train equipment.

The US DOT Crossing Inventory Forms for these three crossings indicate a total of 16 train crossings per day, including 6 total day through trains, 4 total night through trains, and 6 total switching trains. If KCS merges with Candian Pacific in the near future, train traffic through Kansas City is expected to increase on KCS tracks substantially. The increase in train traffic coupled with the expected increase in vehicular and pedestrian traffic suggests that what is currently a trespassing issue may quickly become a serious safety issue.

X. DOT STRATEGIC GOALS

The Riverfront Rail Crossing Elimination Study will do everything it can to be consistent with the DOT's strategic goals which are aligned with the City of Kansas City's Climate Protection and Resiliency Plan and Inclusive workforce goals.

As a partner of the City of Kansas City, Port KC is committed to the City Council's Climate Vision adopted on August 25, 2022: **To be a carbon-neutral, equity-focused and resilient Kansas City by 2040.** To that end, the Council has instructed that climate action be a key factor in all decisions-including at the Riverfront.

Better access of all people to green space and free regional transit options will contribute to reaching the city's climate goals.

Port KC is also committed to equity in its planning and delivery of this project. Goals for disadvantaged businesses will be set in coordination with the city. The study and construction that follows will pay contractors excellent wage rates and focus on hiring Kansas City-based firms when possible.

The end goal of this project will physically connect neighboring residents in disadvantaged communities with good paying jobs along a booming Riverfront. The stadium, stores, restaurants and housing will all require workers at all levels.

Finally, consistent with DOT goals, increases in safe, reliable rail traffic decreases carbon emissions. Thousands of Kansas Citians work for the railroads and the logistics hubs they serve. The city is the second largest rail hub in the nation. Improvements in rail service and safety improve the regional economy in very real ways.

XI. PROJECT IMPLEMENTATION AND MANAGEMENT

Port KC and KCMO are frequent partners on studies such as the Rail Crossing Elimination Study, including hundreds of millions in capital projects such as the Riverfront Streetcar Extension, which received an US DOT BUILD grant in 2020.

For the Riverfront Rail Crossing Elimination Study, we expect that the City will provide project management services, including contract oversight and control and ensure conformance to requirements for project progress reporting. Our team will provide progress reports and federal financial reports to the FRA on a quarterly basis, as required.

The study will be organized with a project management plan that will clearly define the responsibilities of each member of the project team. With support and concurrence from the project partners, including KCMO, MoDOT, and the three railroads, we will assemble a core group committed to a continual screening and evaluation process. Our management plan will hold the group accountable through decision milestones, and together we ensure that the study maintains the forward momentum necessary to reach 30% design plans and subsequently move forward to construction.

To maintain a focused pace on the NEPA-to-reality timeline, our team will work with the project partners to identify funding and land use development opportunities and assist with the project delivery method determination during the NEPA process.

It is critical to "keep the line moving" seamlessly within our project team and project partners, so that critical tasks are executed concurrently where practical, or in rapid succession where required by the NEPA process. The critical gap between the NEPA decision document and the start of construction must be closed to support rapid project delivery.

XII. ENVIRONMENTAL READINESS

The project team anticipates that a full Environmental Assessment (EA) will be required to commence construction on this project. A Categorical Exclusion will be reviewed and exhausted prior to embarking on an EA. For the purposes of this grant proposal the need for an EA is assumed. Completing and submitting a successful EA is the primary deliverable of the requested funds for this grade separation study.

The EA will be prepared in compliance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations (CFR) Parts 1500-1508); FHWA's Environmental Impact and Related Procedures regulations (23 CFR 771), FHWA's Technical Advisory (TA) 6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents; the guidance provided in Fixing America's Surface Transportation (P.L. No. 114-94) (FAST ACT), and other applicable Federal laws, regulations, and orders. A more detailed description of the process and requirements used by the Missouri Department of Transportation (MoDOT) for completion of the Study process may be found in the MoDOT Engineering Policy Guide (EPG, http://epg.modot.org/).

The study team will review the appropriate sections of the EPG as a means to supplement the information contained in the Statement of Work (Attachment 2) and provide additional guidance in the requirements and expectations of MoDOT for completion of the Study.

Thank you!

ATTACHMENT 2
ii. STATEMENT OF WORK

Port KC

Riverfront Rail Crossing Elimination Study

Rail Crossing Elimination Grant 2022

I. AUTHORITY

Authorization	Section 22305 of the Infrastructure Investment and Jobs Act (IIJA) (Pub. L. 117-58, November 15, 2021), codified at 49 U.S.C. 22909,
Funding Authority/Appropriation	This program was authorized in Section 22305 of the Bipartisan Infrastructure Law. 49 U.S.C. § 22909. Funding under the FY 2022 NOFO was made available by the Bipartisan Infrastructure Law, 2021 (Pub. L. No. 116-260, November 15, 2021)
Notice of Funding Opportunity	Notice of Funding Opportunity for the Railroad Crossing Elimination Program for Fiscal Year 2022, volume 87 FR 40335 07/06/2022

II. BACKGROUND

Port KC's efforts to reimagine and redevelop the Berkley Riverfront have created a vibrant, walkable neighborhood connecting Kansas City to its river heritage. The 17-acre park is located on the south bank of the Missouri River between the Kit Bond Bridge and Heart of America Bridge. Once a landfill for construction debris and the former site of a sand and gravel company, the Riverfront is now a lively green connection between Kansas City and its most significant natural asset, the Missouri River.

The riverfront hosts numerous cultural events and activities and offers amenities such as the 15-mile Riverfront Heritage Trail, sand volleyball courts, and 4.7 acres of wetlands restoration. The site is adjacent to approximately 85 acres of developable land controlled by Port KC with sweeping views of the downtown Kansas City skyline and the Missouri River. This booming neighborhood will soon be connected to the River Market neighborhood, downtown Kansas City, Midtown, and the University of

Missouri Kansas City (UMKC) by a Riverfront extension of the KC Streetcar that is expected to be complete in 2025.

However, access to the Berkley Riverfront is limited by a number of barriers. Chief among these barriers are several rail lines owned and operated by three different railroads – BNSF, Union Pacific, and Kansas City Southern – that isolate the Riverfront neighborhood from the rest of Kansas City. There is only one street crossing these rail lines into the Riverfront, Lydia Avenue.

When Port KC began the redevelopment of the city's Riverfront, the area boasted 75,000 visitors a year. A decade later, the area sees more than 200,000 visitors today. Port KC estimates total visits to exceed 600,000 in the years to come due in large part to an exciting new stadium project. As the Riverfront continues to develop and the new stadium opens, the dangerous conflict between people, vehicles, and trains along Lydia Avenue will only increase. The safety concerns are real and become more urgent as time passes.

This Agreement funds the Grantee to support the deployment of Riverfront Rail Crossing Elimination Study (Project). To the extent there is a conflict between Attachment 1 and this Attachment 2, Attachment 1 governs.

III. OBJECTIVE

The Port Authority of Kansas City's (Port KC) efforts to reimagine and redevelop the Kansas City Riverfront are creating a vibrant, walkable neighborhood connecting the city to its river heritage. Days before this application is submitted, the KC Current, Kansas City's National Women's Soccer League Team will break ground on the world's first purpose-build women's soccer stadium on the banks of the Missouri River.

This project will study the elimination of three at grade rail crossings over four mainline tracks by way of at least one grade separated crossing structure at the entrance to the Riverfront at Lydia Avenue adjacent to the new stadium. The at-grade rail lines owned and operated by
Union Pacific (double track), Kansas City Southern, and KC Southern/BNSF along with dozens of properties and large utilities pose a challenge to grade separation.

The rail crossings provide no pedestrian, cycle or ADA accommodations and a significant safety issue that will continue to worsen as traffic increases as the Riverfront continues to build out. The anticipated outcomes of the project will be to have a practical, feasible, publicly and politically supported plan to provide a safe and separated entrance to the city's Riverfront.

This project includes relocation of a BNSF mainline to be closer to the KC Southern and UP mainlines consolidating the rail footprint into one area. This accomplishes three goals:

- It shortens the distance a potential viaduct would have to span. at Lydia Ave.
- It opens up additional property that could be developed by the Riverfront.
- Another potential benefit is the softening of a tight BNSF curve on the west side of the realignment.

The Riverfront Rail Crossing Elimination Study will examine the elimination of at a minimum four rail lines that constitute three at-grade rail crossings at Lydia Avenue. Two additional at-grade crossings along 1st Street could be fenced off consolidating access to the Riverfront at an elevated Lydia Avenue crossing. All totaled, five at grade crossings could be eliminated as part of this project.

Due to the proximity to nationally significant rail yards (see page 21), the opportunity for corridor-wide improvements that will reduce wait times and increase safety is substantial.

IV. PROJECT LOCATION

The study area is located in Kansas City, Missouri in Jackson County. Three at-grade crossings of four railroad tracks across Lydia Avenue that are the subject of this study are crossing gate controlled. Lydia Avenue is maintained by the City of Kansas City and connects to Berkley Riverfront Park and the Riverfront development area controlled by
Port KC.

FRA Grade Crossing Identification:

Union Pacific, Crossing ID: 429451T
KC Southern, Crossing ID: 329736D
KC Southern/BNSF, Crossing ID: 329649A

The project is located globally at 39°06’57”N : 94°34’00”W

V. DESCRIPTION OF WORK

This grant application is to study solutions to a serious safety issue where the four at-grade rail crossings of Lydia Avenue divide a booming riverfront with greenspace, jobs and a streetcar stop from adjacent neighborhoods.

The project has three primary objectives:

The study will assess and document environmental clearances required for the project, which are expected to include roadway and bridge realignment, rail realignment to bring the four sets of tracks closer together to accommodate the grade crossing, construction of new ped/bike facilities, and moving high-voltage power lines and other utilities.

The study will develop and assess potential access and alignment alternatives to provide grade separation at the existing crossings owned by Union Pacific (UP), Burlington Northern Santa Fe (BNSF), and Kansas City Southern (KCS; 2 tracks). This assessment will especially focus on access and safety for pedestrians, cyclists and transit users, and will look for opportunities to eliminate additional grade crossings in the area. The effort will include a substantial public engagement component to incorporate community needs and priorities, especially for nearby underserved neighborhoods, and to build support for the preferred solution.

This study will develop 30 percent plans for a preferred alternative, including rail realignment, grade separation at Lydia, pedestrian/bicycle facilities, utility relocation, and adjacent roadway improvements to support changing traffic patterns.

Task 1: Detailed Project Work Plan, Budget, and Schedule

The Grantee will prepare a Detailed Project Work Plan, Budget, and Schedule for the following tasks, which may result in amendments to this Agreement. The Detailed Project Budget will be consistent with the Approved Project Budget but will provide a greater level of detail. The Detailed Project Work Plan will describe, in detail, the activities and steps necessary to complete the tasks outlined in this Statement of Work. The Detailed Project Work Plan will also include information about the project management approach (including team organization, team decision-making, roles and responsibilities and interaction with FRA), as well as address quality assurance and quality control procedures. In addition, the Detailed Project Work Plan will include the Project Schedule (with Grantee and agency review durations), a detailed Project Budget, [*and the environmental class of action*.] Similarly, agreements governing the construction, operation and maintenance of the Project should also be included. The Detailed Project Work Plan, Budget, and Schedule will be reviewed and approved by the FRA.

The Grantee acknowledges that work on subsequent tasks will not commence until the Detailed Project Work Plan, Budget, and Schedule has been completed, submitted to FRA, and the Grantee has received approval in writing from FRA, unless

such work is permitted by pre-award authority provided by FRA. The FRA will not reimburse the Grantee for costs incurred in contravention of this requirement.

Task 1 Deliverables:

- Detailed Project Work Plan, Budget, and Schedule
- Project Agreements (if applicable)

ALLOCATED BUDGET FOR TASK 1: $20,000

Task 2: Location Studies

A. Study Area and Study Alternatives

The study team will conduct an initial screening of three to five potential grade separation alternatives along with a detailed environmental analysis. This allows for the placement of alternatives that can shift a potential viaduct and interchange locations within the Lydia corridor as it approaches the Riverfront to accommodate engineering and environmental constraints and allow selection of a least environmentally damaging alternative while maximizing flexibility in engineering to support design-build implementation. Narrowing or enlarging of the study corridor may be needed as the study progresses to effectively assess associated impacts.

B. Definition of Purpose and Need

The study team will coordinate with FHWA, MoDOT, the Port KC Authority and Kansas City, Missouri (KCMO) to obtain concurrence on the study area, logical termini, and areas required for implementation of related or connected actions based upon the needs and purpose established in the study. All work shall conform to all applicable FHWA regulations and guidance, and any MoDOT policies, protocols and procedures (e.g., Noise Policy and Procedures).

Purpose and Need - The study team will develop a “project specific” Purpose and Need” derived from the needs and purpose established in the PEL. The purpose and need is considered a living document and can change during the course of the study. However, it should be deemed firm by the time of the selection of a Preferred Alternative and issuance of the final environmental document. For studies that require substantial time to complete, the Study team will be required to present the latest data available in support of the identified needs to support the making of informed decisions.

C. Alternatives Development

Design Standards - Determine design standards that are appropriate for the type of bridge and roadway facilities needed to carry the projected traffic volumes in the corridor based on the analysis conducted in the PEL. Design criteria may include number of lanes, design speed, level of access, typical cross sections, right-of-way width, horizontal and vertical curvature limits, drainage criteria, and selection of bridge types, widths, lengths, and vertical clearances.

Alternatives - Identify the grade separation and access improvements for inclusion in the Study. As the study process progresses, options within each geographic segment will be linked together to form complete alternatives that satisfy the logical termini established for the Study and can be considered to have independent utility as a stand-alone build alternative.

D. Alternatives Screening

Assemble Reasonable Alternatives – Upon completion of the screening process, the study team will determine which improvements should be linked together to form complete and stand-alone build alternatives that connect the identified logical termini and comprise a project of independent utility. Develop an appropriate matrix and graphics to illustrate the alternatives. Summarize the screening process in a memorandum.

Evaluate Alternatives – Determine which build alternatives should be carried forward for detailed evaluation in the EA. Compare all alternatives to how effectively they satisfy the Purpose and Need established under Task 1.2. Include in the EA a discussion of how each alternative satisfies or fails to satisfy the Purpose and Need.

Task 2 Deliverables:

- Alternatives Screening and Evaluation Memorandum

ALLOCATED BUDGET FOR TASK 1: $950,000

Task 3: Environmental Planning

A. Agency Scoping and Data Collection

Coordinate with MoDOT to identify participating and cooperating agencies to be engaged in the Study process.

Assist FHWA in contacting Federally recognized Tribes that may have an interest in the Study. Provide Scoping Packets for FHWA to distribute to invited Tribes.

Data Collection –Obtain plat maps and property ownership information from Jackson County. Specify agency (Federal or state) properties. Identify/verify major utility and transportation infrastructure (pipelines, overhead utility lines, flood control structures, other transportation corridors).

- Identify potential Section 4(f) properties and provide MoDOT with information for Section 4(f) determination by FHWA.
- Verify Section 6(f) properties with Section 6(f) county listings provided by MoDOT. Provide details on verified Section 6(f) property boundaries.
- Prepare environmental base maps at 1″=200 ft USGS and 1″= 200 ft aerial photo mosaic.
- Prepare environmental constraints map and narrative to be included in the environmental document.

B. Environmental Evaluation

- Conduct environmental analysis of all reasonable alternatives. Assume no more than two Build Alternatives will be carried forward for evaluation in the EA.
- Screen initial alternatives based on the purpose and need defined the project and an initial environmental evaluation to avoid or minimize environmental impacts, followed by detailed evaluation of environmental and engineering impacts of remaining reasonable alternatives.
- Develop matrix in conjunction with Task 1.5 for environmental and engineering screening and evaluation analysis.

C. Environmental Assessment

- Verify presence and approximate size of vegetated wetlands and other special aquatic sites shown on maps through a combination of desktop analysis and "windshield verification survey". This is to be accomplished without trespass on private property.
- Location of springs, caves, sinkholes, and other unique features based on desktop analysis.
- Identification of specific (threatened, endangered, and rare) wildlife habitats and terrestrial natural communities through a. combination of desktop analysis and windshield verification.
- Location of publicly owned recreation areas, wildlife refuges and management areas, campgrounds, historic sites, etc. through a combination of desktop analysis and windshield verification.
- Develop preliminary list of important community and social institutions and services such as schools, emergency services, hospitals, and shelters. Identify sensitive and protected populations as defined by Title VI, Environmental Justice, Limited English Proficiency (LEP), and ADA (Americans with Disabilities Act) through desktop analysis and limited field reconnaissance.

Waters of the U.S. and Wetland Information - Present in the draft environmental document screening information on stream, wetland, and hydric soils for all

reasonable alternatives. Field delineations may be conducted for the Preferred Alternative following issuance of the environmental decision.

Displacement and Relocation Impacts – Evaluate displacement and relocation impacts. Review relocation assistance programs administered by the state. Discuss comparable available housing and business locations within the metropolitan area. Further define impacts to affected communities and neighborhoods. Include discussion of potential relocations and the federally mandated relocation assistance process in materials available at public meetings.

Conduct Visual Assessment - Describe the character of the visual environment. Identify existing sensitive visual resources, if any, and indicate if project is in a visually sensitive urban or rural setting. Identify potential visual quality impacts, if any, by describing the relationship of the impacts to viewers from the roadway and of the roadway. Indicate the visual assessment methodology used, if any. Coordinate visual assessment with evaluation of indirect effects on NRHP-listed or eligible resources.

Noise Effects - The noise analysis will follow FHWA guidelines outlined in 23 CFR 772, NEPA of 1969, and currently adopted noise analysis procedures for the State of Missouri. The potential alternatives under consideration may result in a substantial horizontal and/or vertical alteration of the facility and would therefore be considered as a Type I Project.

Air Quality Assessment - A qualitative air quality assessment will be conducted to evaluate the air quality standards in the study area for the Existing Condition, No Action Build Condition, and the Build Condition and to compare the results with the National Ambient Air Quality Standards (NAQQS). An air quality memorandum will address the requirements of the Clean Air Act Amendments of 1990 (CAAA90) section 196(c) and the conformity requirements of the State Implementation Plan (SIP), which is the attainment of the NAAQS. Recent measures by the U.S. Environmental Protection Agency (EPA) to improve air quality and general national trends in the region will also be discussed.

Section 4(f) Impacts - The Study team will prepare the Section 4(f) Evaluation including an Alternatives Analysis, a Memorandum of Agreement (MOA), and the Information to Accompany the MOA along with supporting appendices for inclusion with the MOA for circulation to consulting parties. One MOA will be prepared for the project. Once approved the Study team will incorporate it into the environmental document.

Hazardous Materials Assessment - After the reasonable alternatives have been selected the study team shall identify all sites that impact the build alternatives. Also, the study team shall verify the potential presence or absence of unrecorded hazardous waste, hazardous material, or solid waste disposal sites through limited interviews and land record investigations.

Cultural Resources Documentation - The study team shall work with all agencies to identify and invite appropriate entities to participate as consulting parties in the

development and review of the MOA. The results of the architectural and archaeological investigations will be presented in a single report. MoDOT will lead Section 106 consultation on behalf of FHWA.

Floodplain Study - For each alternative encroaching on a designated or proposed regulatory floodway, and commensurate with the level of encroachment, document the consistency with the National Flood Insurance Program (NFIP) standards and the coordination with the Federal Emergency Management Agency (FEMA), State Emergency Management Agency (SEMA), the United States Army Corps of Engineers (including Section 408 as necessary), and local agencies.

Biotic Communities and Threatened and Endangered Species - Present in the document an overview of the natural (terrestrial and aquatic) communities present in the study area. Using GIS data and windshield review identify potential habitats for protected bat species. No field reconnaissance including bat habitat assessment of the bridge and surrounding habitats (compliant with the 2016 Range-wide Indiana Bat Summer Survey Guidelines (Indiana Bat Guidance) and the Final 4d Rule for the Northern Long-eared Bat (NLEB Guidance) issued in 2016).

Transportation System Effects - An evaluation of the existing transportation system and general changes and possible benefits resulting from proposed transportation improvements will be performed by the Study team involving the identification, characterization and mapping of existing and planned components of the system within the study area (Area of Influence).

Task 3 Deliverables:

- Water Resources Technical Memorandum (to include waters of the US, wetlands, floodplains, and water quality)
- Visual Assessment Memorandum
- Noise Analysis Technical Report
- Air Quality Technical Memorandum
- Draft and Final Section 4(f) Evaluation, including the Alternatives Analysis, MOA, and Information to Accompany the MOA
- Hazardous Materials Technical Report
- Draft and Final Cultural Resources Survey Report
- Biotic Communities Technical Memorandum

ALLOCATED BUDGET FOR TASK 3: $75,000

Task 4: Traffic Studies

A. Traffic Data

The study team will prepare traffic model networks for reasonable alternatives strategies, including the No-Build alternative, and run the simulations for year 2040 morning and evening peak hour periods. VISSIM output measures will be tabulated

and comparing No-Build and alternatives for the year 2040. As needed, changes in volumes and/or travel patterns within the study area for the alternatives will be ascertained from the year 2040 DTA/EMME alternative model runs.

B. Safety and Traffic Operations Analysis

Calculate construction year and design year Levels of Service by current Highway Capacity Manual methodologies for defined sections and for major intersections along the route for all reasonable alternatives, including the No-Build alternative. The Level of Service shall also be calculated for the residual traffic on the existing route for all reasonable alternatives along with mitigation measures, if needed. Define those Levels of Service for presentation in the environmental document.

C. Transit, Transportation System Management (TSM) and Transportation Demand Management (TDM) Alternatives

Explore the ability of less highway intensive strategies, in sufficient detail to permit planners to answer the question of whether such strategies could address the need for various transportation improvements. Define alternatives and incorporate these investigations into the alternative analyses for the preliminary and final environmental document.

Task 4 Deliverables:

- Traffic Study Report for incorporation into Environmental Document (NEPA)

ALLOCATED BUDGET FOR TASK 4: $80,000

<u>Task 5: Social and Economic Studies</u>

The following evaluations shall be performed where there are foreseeable social or relocation impacts. The socioeconomic analysis shall be completed in a step-wise manner in order to achieve the appropriate level of analysis. The initial analysis shall include the qualitative assessment of the project area as well as the descriptive data for the social and economic parameters outlined below:

- Determine impacts to industrial and community settings and characterize the impacted population.
- Examine changes in travel patterns and accessibility (e.g. vehicular, commuter, bicycle, or pedestrian) for each of the reasonable alternatives.
- Compare impact of reasonable alternatives on school districts, recreation areas, churches, businesses, police and fire protection, etc.

- Assess the impact of the alternatives on highway and traffic safety as well as on overall public safety.
- Present demographic data profiling the project area and the region using census data. Block group and tract level data is preferred.
- Determine whether any low income, minority, or unique social group would be disproportionately adversely impacted by the alternatives. Follow MoDOT and FHWA guidance on best practices for Title VI and Environmental Justice considerations.
- Prepare Community Impact Assessment Report

Right of Way Acquisition and Displacement Impacts - For each reasonable alternative estimate the number of businesses to be displaced, include business characteristics (e.g., minority, ethnic, disabled, elderly, income level, owner/tenant status, replacement and relocation costs, number and racial group of displaced employees). Also estimate the number of partial takes.

Economic Development Data - Utilizing the preferred alternative for bridge and roadway improvements, prepare additional refinements to the anticipated transportation infrastructure to identify impacted properties and related economic development activity and opportunities in the affected area. This effort will include assessing the interim condition resulting from this identified phase of constructed improvements and connections to the bridge and roadway infrastructure and will include consideration of the preferred long-term urban design, land use, and economic development condition for the adjacent North Loop area. This analysis, and its related/anticipated refinements, is intended to illustrate this initial preferred configuration of viaduct and roadway connections and associated constructed improvements will not preclude future additional land use, urban design, and economic development activity from being implemented in a manner consistent with the preferred long-term vision for this area.

Task 5 Deliverables:

- Community Impact Assessment Report

ALLOCATED BUDGET FOR TASK 5: $25,000

Task 6: Community Involvement Program

This community involvement plan will be developed and meet all requirements by the National Environmental Policy Act (NEPA), FHWA requirements and MoDOT, referencing MoDOT's Engineering Policy Guide Category 129 for specific current

MoDOT requirements. The purpose and scope of the other public involvement assignments will be defined by the MoDOT District Customer Relations Division, and the assignments will be carried out under the direction of the Customer Relations Division in coordination with KCMO.

The Study team will provide a description of the processes involved in each step of the public involvement portion.

The Team will conduct appropriate, thoughtful, and meaningful public engagement of interested parties near the study area as well as users from across the region. The engagement activities will be both “high-tech” and “high touch” meeting participants where they are and valuing their time.

The outreach for this project will be carefully coordinated with the engineering and environmental teams to ensure the public’s input is gathered in time to have maximum input on the larger process.

The public will be engaged to develop and approve Purpose and Need, evaluate alternatives based on those purposes and needs, and determine a preferred alternative for inclusion into the final NEPA document.

Task 6 Deliverables:

- Community Involvement Plan
- Documentation of Community Input for inclusion in the Environmental Document (NEPA)

ALLOCATED BUDGET FOR TASK 6: $75,000

Task 7: NEPA Document Preparation

The evaluation of alternatives in the environmental document should focus on how well the alternatives satisfy the "Purpose and Need" of the project and the amount of impact on the natural and human environment.

The preliminary and final environmental documents will make use of a “reader friendly format” to the extent acceptable by MoDOT and FHWA reviewers. Format of the documents will be agreed upon with MoDOT prior to any major work on the documents. The preferred alternative to be identified in the Draft environmental document and described in the anticipated Finding of No Significant Impact (FONSI) will include an explanation that in the event the project is implemented through a design-build process, alternate structure types and forms from those generally described in the document will be considered to the extent that the impacts are limited to those addressed and evaluated in the in the environmental document.

Task 7 Deliverables:

- Draft and final NEPA Document

ALLOCATED BUDGET FOR TASK 7: $50,000

Task 8: Topographic Survey

Survey services will include detailed topographic survey of the railroad and public street rights-of-way, using ground based conventional survey techniques. Topographic survey of the area will include approximately 105 acres using aerial LiDAR technology. LiDAR topographic survey will show planimetric and elevation contours at one-foot intervals. Topographic survey will show utilities from GIS data and maps provide by utility providers or best available information. The detailed topographic survey will show underground utilities as marked by Missouri One Call, visible evidence, and as-built utility plans if available, including inverts and pipe sizes. The survey will include locating piers and low structure elevation roadway bridges over railroads within the survey limits, and locating overhead utility lines crossing the areas of detailed ground-based surveys and showing the elevation of any structure within 15 feet of the top of rails. Survey will include establishing project site horizontal and vertical control.

Task 8 Deliverables:

- Topographic survey and digital terrain model

ALLOCATED BUDGET FOR TASK 8: $150,000

Task 9: 30% Design Submittals to Railroads and Municipalities

Rail coordination will continue after receiving comments from each line regarding the conceptual design submittals. Proposed changes to the design from other tasks will be incorporated, comments from the rail lines addressed, and design continued to a preliminary 30% stage for submittal to the rail lines as well as the controlling municipality. With design criteria created from the other tasks, the 30% plans will encapsulate the final layout of the track and roadway locations, as well as the type, size and location of bridge elements including abutments, piers, and superstructure.

Specific information may differ for each rail line or portion of the project, but in general the 30% submittal to the railroad will include:

- Responses to the Railroad comments on the concept submittal.
- 30% plans including updated Plan, Elevation and Typical Section. Also include

construction notes, Railroad profile grade diagram, structural design criteria, and construction methods.

- Project specifications/special provisions regarding Railroad coordination during construction.
- Drainage report
- Shoofly Design (if applicable)
- Construction phasing plans including procedures, temporary shoring layout, controlling dimensions and elevations.

For municipalities, the 30% bridge plans will be similar to the railroad package. However, additional information will be provided in roadway plans for the approaches to the grade separations. The plan and profile of approach roadways, layout of sidewalks, typical sections and station cross sections, and construction limits will be provided in the municipality plans. Critically, the construction limits will provide preliminary information about the additional right-of-way needed for the project.

Task 9 Deliverables:

- 30% Design Submittal for each railway line for each grade separation or realignment
- 30% Design Submittal to Municipality

ALLOCATED BUDGET FOR TASK 9: $750,000

Task 10: Project Schedule Development

The study will be organized with a project management plan and schedule that will clearly define the responsibilities of each member of the project team. With support and concurrence from the project partners, including KCMO, MoDOT, and the three railroads, we will assemble a core group committed to a continual screening and evaluation process. Our management plan and schedule will hold the group accountable through decision milestones, and together we ensure that the study maintains the forward momentum necessary to reach 30% design plans and subsequently move forward to construction.

To maintain a focused pace on the NEPA-to-reality timeline, our team will work with the project partners to identify funding and land use development opportunities and assist with the project delivery method determination during the NEPA process.

It is critical to "keep the line moving" seamlessly within our project team and project partners, so that critical tasks are executed concurrently where practical, or in rapid succession where required by the NEPA process. The critical gap between the NEPA decision document and the start of construction must be closed to support rapid project delivery.

Task 10 Deliverables:

- Detailed project schedule for entire project including future construction

ALLOCATED BUDGET FOR TASK 10: $20,000

Task 11: Project Opinion of Cost

After a preferred alternative is selected, the team will begin working on detailed estimates for constructing the project. The team will allocate appropriate contingency, but will make every effort to be accurate and actionable in its estimates. These cost estimates will prepare the project to move forward using alternative delivery practices.

Task 11 Deliverables:

- Detailed cost estimate for construction phase of the project

ALLOCATED BUDGET FOR TASK 11: $25,000

Task 12: Utility Relocation Plan

The study team will prepare plans identifying utilities in the project area and evaluating potential conflicts.

Task 12 Deliverables:

- Detailed utility relocation plan

ALLOCATED BUDGET FOR TASK 12: $25,000

Task 13: Property Acquisition Plan

The study team will evaluate property acquisition needs based on the 30% design and identify real property that must be acquired for the project.

Task 13 Deliverables:

- Inventory of property ownership and titles
- Detailed property acquisition plan

ALLOCATED BUDGET FOR TASK 13: $25,000

Task 14: Project Management and Coordination

The study team will assure that the diverse efforts of the Study team will be coordinated and comprehensive. Coordination among the diverse work groups, including environmental and cultural studies, engineering, public involvement and others, will be assured by the study team to ensure that the Study progresses expeditiously, and its conclusions are sound. The diverse parties in the Study will be advised of developments by the study team using the KCMO project manager as the conduit. Any field reconnaissance necessary to address concerns and reach decisions will be coordinated by the study team through the project manager. The study team's Study manager will document the progress of the Study and the decisions that are made for it. Such documentation is essential to assure that the Study according to required FRA, FHWA, MoDOT, and KCMO regulations and processes, and that they are making decisions that are well reasoned and sound, not arbitrary and capricious.

The project partners will develop a Project Management Plan to establish a high-performing working relationship. It will establish protocols and intervals for communication and will feature the project milestones and deliverables schedule to ensure everyone can plan ahead for required reviews and approvals. The PMP will provide a clear schedule based on the actual start date, coordination with project partners, and key milestones for successful delivery of conceptual design, and deadlines associated with the RCE grant.

Task 13 Deliverables:

- Project management plan
- Final Performance Report (the final deliverable listed in the “description of work” section of the SOW must be the Final Performance Report. This report must be submitted within 90 days of the end of the grant’s period of performance and should describe the cumulative activities of the project, including a complete description of the Grantee’s achievements with respect to the project objectives and milestones)

ALLOCATED BUDGET FOR TASK 13: $25,000

IV. PROJECT COORDINATION

The Grantee shall perform all tasks required for the Project through a coordinated process, which will involve affected railroad owners, operators, and funding partners, including:

- City of Kansas City
- BNSF Railroad
- Kansas City Southern Railroad
- Union Pacific Railroad
- US Corp of Engineers
- MoDOT
- Cushman Wakefield Developers
- KC Current Ownership/Stadium Developers
- Columbus Park Neighborhood
- River Market Neighborhood
- City of North Kansas City
- KC Housing Authority
- KC Streetcar Authority
- Downtown Neighborhood Association
- Kansas City Downtown Council
- FRA

V. PROJECT MANAGEMENT

The Grantee is responsible for facilitating the coordination of all activities necessary for implementation of the Project. Upon award of the Project, the Grantee will monitor and evaluate the Project's progress through regular meetings scheduled throughout the Project Performance Period. The Applicant/Grantee will:

- Participate in a project kickoff meeting with FRA
- Complete necessary steps to hire a qualified consultant/contractor to perform required Project work
- Hold regularly scheduled Project meetings with FRA
- Inspect and approve work as it is completed
- Review and approve invoices as appropriate for completed work

- Perform Project close-out audit to ensure contractual compliance and issue close-out report
- Submit to FRA all required Project deliverables and documentation on-time and according to schedule, including periodic receipts and invoices
- Comply with all FRA Project reporting requirements, including, but not limited to:
    a. Status of project by task breakdown and percent complete
    b. Changes and reason for changes in and updated versions of Detailed Project Work Plan, Budget, and Schedule
    c. Description of unanticipated problems and any resolution since the immediately preceding progress report
    d. Summary of work scheduled for the next progress period
- Read and understand the Terms and Conditions of this Agreement (Attachment 1)
- Notify FRA of changes to this Agreement that require written approval or modification to the Agreement

ATTACHMENT 3:
DELIVERABLES AND APPROVED PROJECT SCHEDULE

Port KC

Riverfront Rail Crossing Elimination Study

Rail Crossing Elimination Grant 2022

I. DELIVERABLES AND APPROVED PROJECT SCHEDULE

The deliverables associated with this Agreement are listed below. The Grantee must complete these deliverables to FRA's satisfaction to be authorized for funding reimbursement and for the Project to be considered complete.

Unless otherwise approved, requests for extensions of the Project Performance Period must be submitted not later than 90 days before the end of the Project Performance Period, consistent with Section 4(b) of Attachment 1.

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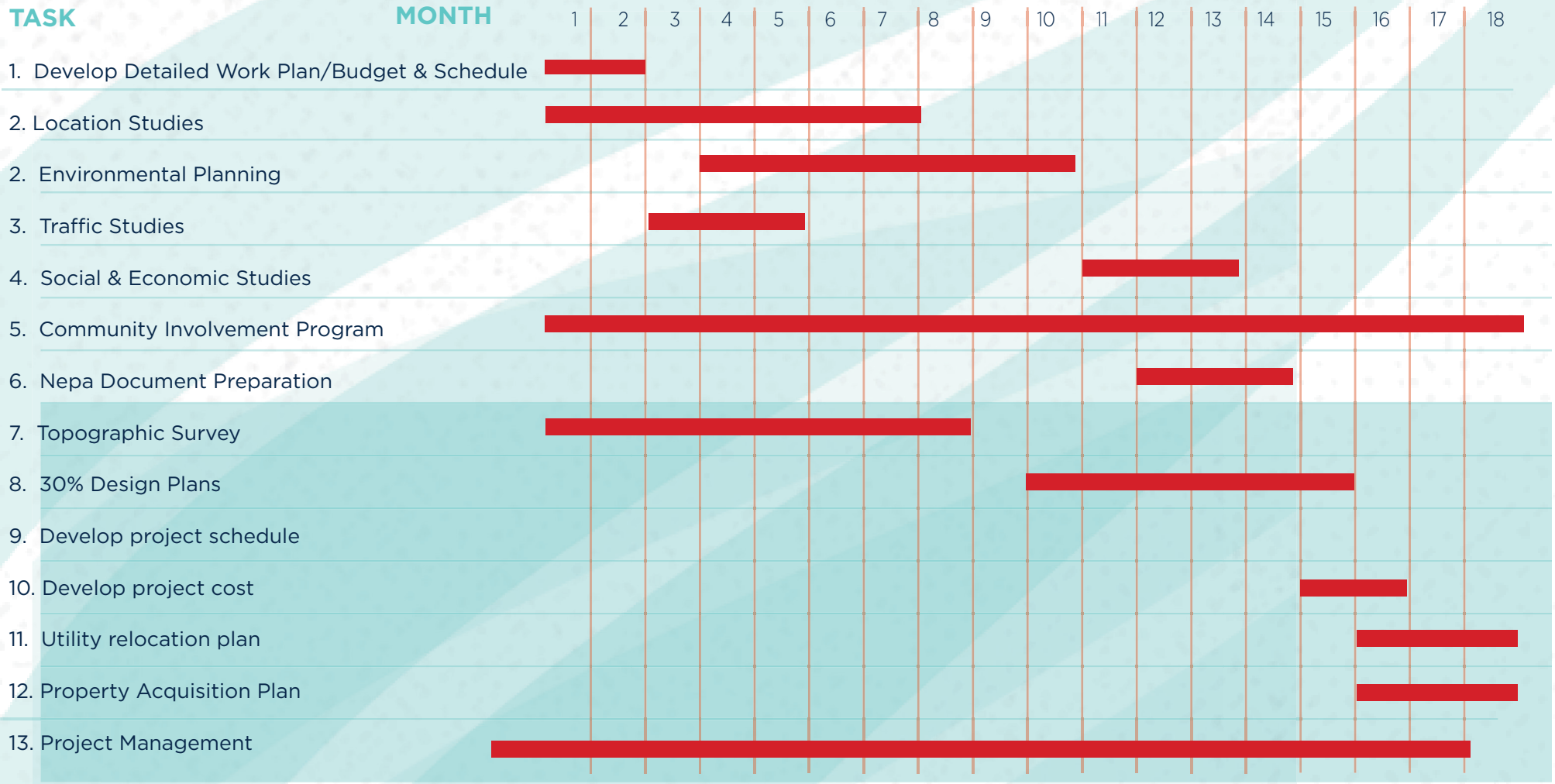
Task #	Deliverable Name	Due Date
1	• Detailed Project Work Plan, Budget, and Schedule • Project Agreements (if applicable)	March 2023 June 2023
2	• Alternatives Screening and Evaluation Memorandum	January 2024
3	• Water Resources Technical Memorandum (to include waters of the US, wetlands, floodplains, and water quality) • Visual Assessment Memorandum • Noise Analysis Technical Report • Air Quality Technical Memorandum • Draft and Final Section 4(f) Evaluation, including the Alternatives Analysis, MOA, and Information to Accompany the MOA • Hazardous Materials Technical Report • Draft and Final Cultural Resources Survey Report • Biotic Communities Technical Memorandum	September 2023-April 2024
4	• Traffic Study Report for incorporation into Environmental Document (NEPA)	September 2023
5	• Community Impact Assessment Report	May 2024
6	• Community Involvement Plan • Documentation of Community Input for inclusion in the Environmental Document (NEPA)	August 2023 April 2024
7	• Draft and final NEPA Document	August 2024

8	• Topographic survey and digital terrain model	January 2024
9	• 30% Design Submittal for each railway line for each grade separation or realignment • 30% Design Submittal to Municipality	August 2024 August 2024
10	• Detailed project schedule for entire project including future construction	September 2024
11	• Detailed cost estimate for construction phase of the project	November 2024
12	• Detailed utility relocation plan	November 2024
13	• Inventory of property ownership and titles • Detailed property acquisition plan	November 2024
14	• Project management plan • Final Performance Report (the final deliverable listed in the "description of work" section of the SOW must be the Final Performance Report. This report must be submitted within 90 days of the end of the grant's period of performance and should describe the cumulative activities of the project, including a complete description of the Grantee's achievements with respect to the project objectives and milestones)	May 2023 December 2024

Approved Project Schedule

Task #	Task Name	Due Date
1	Detailed Project Work Plan, Budget, and Schedule	March 2023
2	Location Studies	January 2024
3	Environmental Planning	April 2024
4	Traffic Studies	September 2023
5	Social & Economic Studies	May 2024
6	Community Involvement Program	November 2024
7	NEPA Document Preparation	August 2024
8	Topographic Survey	January 2024
9	30% Design Plan Submittal to Railroads & Municipality	August 2024
10	Project Schedule Development	September 2024
11	Project Opinion of Costs	November 2024
12	Utility Relocation Plan	November 2024
13	Property Acquisition Plan	November 2024
14	Project Management & Coordination	December 2024
	Completion	**December 2024**

PROJECT SCHEDULE



ATTACHMENT 4:
APPROVED PROJECT BUDGET

Port KC

Riverfront Rail Crossing Elimination Study

Rail Crossing Elimination Grant 2022

I. APPROVED PROJECT BUDGET

The total estimated cost of the Project is $2,500,000, for which the FRA grant will contribute up to 80% of the total Project cost, not to exceed $2,000,000. The Grantee's Non-Federal Contribution is comprised of cash contributions only in the amount of $500,000. Any additional expense required beyond that provided in this Agreement to complete the Project will be borne by the Grantee.

Project Budget by Task

Task #	Task Name	Federal (FRA) Contribution	Non-Federal Contribution	Total Cost
1	Detailed Project Work Plan, Budget, and Schedule	$16,000	$4,000	$20,000
2	Location Studies	$760,000	$190,000	$950,000
3	Environmental Planning	$60,000	$15,000	$75,000
4	Traffic Studies	$64,000	$16,000	$80,000
5	Social & Economic Studies	$20,000	$5,000	$25,000
6	Community Involvement Program	$60,000	$15,000	$75,000
7	NEPA Document Preparation	$40,000	$10,000	$50,000
8	Topographic Survey	$120,000	$30,000	$150,000
9	30% Design Plan Submittal to Railroads & Municipality	$600,000	$150,000	$750,000
10	Project Schedule Development	$16,000	$4,000	$20,000
11	Project Opinion of Costs	$20,000	$5,000	$25,000
12	Utility Relocation Plan	$20,000	$5,000	$25,000
13	Property Acquisition Plan	$20,000	$5,000	$25,000
14	Project Management & Coordination	$184,000	$46,000	$230,000
	Total	$2,000,000	$500,000	$2,500,000

Revisions to the Approved Project Budget shall be made in compliance with Attachment 1 of this Agreement. The Grantee will document expenditures by task, and by Federal and Non-Federal Contributions, when seeking reimbursement from FRA.

Project Budget by Source

Funding Source	Project Contribution Amount	Percentage of Total Project Cost
Federal Contribution (Amount of FRA Grant)	$2,000,000	80%
Non-Federal Contribution	$500,000	20%
Total Project Cost	**$2,500,000**	**100%**

ATTACHMENT 5:
PERFORMANCE MEASUREMENTS

Port KC

Riverfront Rail Crossing Elimination Study

Rail Crossing Elimination Grant 2022

I. PERFORMANCE MEASUREMENTS

The table below contains the performance measures that this Project is expected to achieve. These performance measures will enable FRA to assess Grantee's progress in achieving strategic goals and objectives. The Grantee will report on these performance measures per the frequency and duration specified in the table.

Upon Project completion, Grantee will submit reports comparing the Actual Project Performance of the new and or improved asset(s) against the Pre-Project (Baseline) Performance and Expected Post-Project Performance as described in Table 1 below. Grantee need not include any analysis in addition to the described data; however, Grantee is welcome to provide information explaining the reported data. Grantee will submit the performance measures report to the Regional Manager in accordance with Table 1 below.

Upon execution of the Memorandum of Understanding (MOU) between Port KC and the Federal Railroad Administration (FRA), FRA will assign responsibilities for the National Environmental Policy Act of 1969 (NEPA) and environmental review, consultation, and other related activities with respect to transportation projects to Port KC.

Port KC is committed to conducting self-assessments of progress on its two-fold work to complete the grant:

A. A complete NEPA evaluation of the proposed project-including at-grade crossing elimination options and one rail line relocation (KC Southern/BNSF).

B. Pre-construction activities that include 30% engineering for submittal to the affected railroads.

Table 1: Performance Measurement Table

Performance Measure	Description of Measure	Measurement	Reporting
Quarterly project Self-assessment	• Ensure Port KC is in compliance with the MOU requirements • Ensure Port KC and MoDOT/FRA programs/procedures are being followed • Identify areas of concern early • Identify best practices that may be useful to others • Develop and implement methods to address any deficiencies	**Pre-Project (Baseline) Performance as of June 2023** *[No performance values available at start of project.]*	**Contents:** Documentation quarterly of progress, concerns, best practices and any remedies required. **Frequency: Quarterly**
		Expected Post-Project Performance: *NEPA document will comply with both the letter and spirit of the law. The public will be meaningfully engaged, and all proper documentation will be completed and submitted to the proper federal reviewing agencies.*	**Duration:** For the length of the project.

Performance Measure	Description of Measure	Measurement	Reporting
Bi-Monthly reports to the Community Advisory Group	*Project will have regular check ins to assess progress and performance with a locally convened Community Advisory Group.*	**Pre-Project (Baseline) Performance as of First Meeting August 2023** *[No performance values available at start of project.]*	**Contents:** Minutes of Community Advisory Group meetings **Frequency:** Bi-Monthly
		Expected Post-Project Performance: *A well utilized and engaged Community Advisory Group with active participation and meaningful impact on the project.*	**Duration:** For the duration of the project

Performance Measure	Description of Measure	Measurement	Reporting
Engineering/Design to limit cost, scope, and remain on schedule.	• *Engineering of the proposed alternatives and eventual preferred alternative will use sound engineering principles, extensive quality control, and be demonstrably responsive to the concerns and suggestions of all interested parties.* • *Engineering of the project will be translated into public-friendly documents that assist in expanding the understanding of the project, the constraints involved, and the goals that will be accomplished.* • *The final preferred alternative will meet the project's stated Purpose & Need and provide appropriate 30% design for railroad and municipality review on schedule.*	Pre-Project (Baseline) Performance as of *[Insert Date]*: *[No performance values available at start of project.]*	Contents: Assessment matrix presented to the public that quantifiably assesses the performance of each alternative in relation to the project's Purpose and Need.
			Frequency: Engineering will be reviewed and assess by the public at least twice during the NEPA process. Once to review preliminary alternative options and determine a preferred alternative and then to assess the performance of the preferred alternative.
		Expected Post-Project Performance: *A preferred alternative that meets the project's Purpose and Need.*	Duration: Assessed by the project team throughout the project.

Performance Measure	Description of Measure	Measurement	Reporting
Engineering/Design Quality Control (Q6) Process. *These procedures were developed from guidelines published by the Professional Engineers in Private Practice (PEPP) section of the National Society of Professional Engineers have been endorsed by the American Institute of Architects and the American Council of Engineering Companies.*	*The engineering portion of the project will utilize the "Q6" performance measure matrix. Each step of the process is peer reviewed for quality:* • *Q1: Preliminary Plan review* • *Q2: Engineering calculations review* • *Q3: Final design review* • *Q4: Final contract document and specifications review* • *Q5: Final biddability review* • *Q6: Final constructability review*	Pre-Project (Baseline) Performance as of *[Insert Date]*: *[No performance values available at start of project.]*	Contents: Documentation of each step of the Q6 review and associated assessment through peer review. Frequency: Engineering will be reviewed and assess using the Q6 Process throughout the project.
		Expected Post-Project Performance: *The 30% engineered preferred alternative will complete all 6 levels of review successfully*	Duration: Assessed by the project team throughout the project.

iii. ENVIRONMENTAL COMPLIANCE DOCUMENTATION

Port KC

Riverfront Rail Crossing Elimination Study

Rail Crossing Elimination Grant 2022

The project team anticipates that a full Environmental Assessment (EA) will be required to commence construction on this project. A Categorical Exclusion will be reviewed and exhausted prior to embarking on an EA. For the purposes of this grant proposal the need for an EA is assumed. Completing and submitting a successful EA is the primary deliverable of the requested funds for this grade separation study.

The EA will be prepared in compliance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations (CFR) Parts 1500-1508); FHWA's Environmental Impact and Related Procedures regulations (23 CFR 771), FHWA's Technical Advisory (TA) 6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents; the guidance provided in Fixing America's Surface Transportation (P.L. No. 114-94) (FAST ACT), and other applicable Federal laws, regulations, and orders. A more detailed description of the process and requirements used by the Missouri Department of Transportation (MoDOT) for completion of the Study process may be found in the MoDOT Engineering Policy Guide (EPG, http://epg.modot.org/).

The study team will review the appropriate sections of the EPG as a means to supplement the information contained in the Statement of Work (APPENDIX A) and provide additional guidance in the requirements and expectations of MoDOT for completion of the Study.