

# Narrative Application Form – Individual FD/Construction

## Part I



### High-Speed Intercity Passenger Rail (HSIPR) Program

Applicants interested in applying for funding under the March 2011 Notice of Funding Availability (NOFA) are required to submit the narrative application forms, parts I and II, and other required documents according to the checklist contained in Section 4.2 of the NOFA and the Application Package Instructions available on FRA’s website. All supporting documentation submitted for this FD/Construction project should be listed and described in Section G of this form. Questions about the HSIPR program or this application should be directed to the Federal Railroad Administration (FRA) at [HSIPR@dot.gov](mailto:HSIPR@dot.gov).

Applicants must enter the required information in the gray narrative fields, check boxes, or drop-down menus of this form. Submit this completed form, along with all supporting documentation, electronically by uploading them to [www.GrantSolutions.gov](http://www.GrantSolutions.gov) by 8:00 p.m. EDT on April 4, 2011.

## A. Point of Contact and Applicant Information

Applicant should ensure that the information provided in this section matches the information provided on the SF-424 forms.

<b>(1) Name the submitting agency:</b> Missouri Department of Transportation		<b>Provide the submitting agency Authorized Representative name and title:</b>  Rodney Massman, Administrator of Railroads		
<b>Address 1:</b> P.O. Box 270	<b>City:</b> Jefferson City	<b>State:</b> MO	<b>Zip Code:</b> 65102	<b>Authorized Representative telephone:</b>  (573) 751-7476  <b>Authorized Representative email:</b>  <a href="mailto:Rodney.massman@modot.mo.gov">Rodney.massman@modot.mo.gov</a>
<b>Provide the submitting agency Point of Contact (POC) name and title (if different from Authorized Representative):</b>  Rodney Massman, Administrator of Railroads		<b>Submitting agency POC telephone:</b> (573) 751-7476  <b>Submitting agency POC email:</b> <a href="mailto:Rodney.massman@modot.mo.gov">Rodney.massman@modot.mo.gov</a>		
<b>(2) List out the name(s) of additional State(s) applying (if applicable):</b>  N/A				

## B. Eligibility Information

Complete the following section to demonstrate satisfaction of an application’s eligibility requirements.

**(1) Select the appropriate box from the list below to identify applicant type.** Eligible applicants are listed in Section 3.1 of the NOFA.

- State
- Group of States
- Amtrak
- Amtrak in cooperation with one or more States

If selecting one of the applicant types below, additional documentation is required to establish applicant eligibility. Please select the appropriate box and submit supporting documentation to demonstrate applicant eligibility, as described in Section 3.2 of the NOFA, to GrantSolutions.gov and list the supporting documentation under “Additional Information” in Section G.2 of this application.

- Interstate Compact
- Public Agency established by one or more States

**(2) Indicate the planning processes used to identify the proposed FD/Construction project.** As defined in Section 3.5.1 of the NOFA, the process should analyze the investment needs and service objectives of the service that the individual project is intended to benefit. Refer to the FD/Construction Application Package Instructions for more information. The appropriate planning document must be submitted with the application package and listed in Section G.2 of this application.

- State Rail Plan
- Service Development Plan (SDP)
- Service Improvement Plan (SIP)
- Statewide Transportation Improvement Plan (STIP)
- Other, please list this document in Section G.2 with “Other Appropriate Planning Document” as the title
- This project is not included in a relevant and documented planning process

**(3) Verify the completion of Preliminary Engineering requirements.** List the documents that establish completion of Preliminary Engineering for the project covered by this application. Refer to the NOFA and FD/Construction Application Package Instructions for more information. Any document not available online should be submitted with the application package and listed in Section G.2 of this application. If more rows are required, please provide the same information for additional PE requirements in a separate supporting document and list it in Section G.2 of this application.

Documentation	Date of Issue (mm/yyyy)	Describe How Documentation Can Be Verified (choose one)	
		Submitted in GrantSolutions	Web Link (if available)
Design and Estimate from UP, attached	3/2011	<input checked="" type="checkbox"/>	

**(4) Verify the completion of NEPA documentation.** Indicate the date the document was issued and how the document can be verified by FRA. A NEPA decision document (Record of Decision, Finding of No Significant Impact, or FRA Categorical Exclusion concurrence) is not required for an application but must have been issued by FRA prior to award of a construction grant. Applications that are accompanied by a final NEPA determination will be looked upon favorably during the application review and selection process. Verified documents can be submitted as a supporting document or referenced through an active public URL. Any document not available online should be submitted with the application package and listed in Section G.2 of this application. Refer to the NOFA and FD/Construction Application Package Instructions for more information.

Documentation	Date of Issue (mm/yyyy)	Describe How Documentation Can Be Verified (choose one)	
		Submitted in GrantSolutions	Web Link (if available)
<b>NEPA Documentation</b>			
<input checked="" type="checkbox"/> Categorical Exclusion Documentation (worksheet)	PE-NEPA application was granted on project by FRA in previous round	<input checked="" type="checkbox"/>	
<input type="checkbox"/> Environmental Assessment	/	<input type="checkbox"/>	
<input type="checkbox"/> Final Environmental Impact Statement	/	<input type="checkbox"/>	
<b>Project NEPA Determination</b>			
<input type="checkbox"/> Categorical Exclusion	/	<input type="checkbox"/>	
<input type="checkbox"/> Finding of No Significant Impact	/	<input type="checkbox"/>	
<input type="checkbox"/> Record of Decision	/	<input type="checkbox"/>	

**(5) Select and describe the operational independence of the proposed FD/Construction project.**<sup>1</sup> Refer to Sections 3.4.4 and 3.5.2 of the NOFA for more information about operational independence and applications related to previously-selected projects.

- This project is operationally independent.
- This project is operationally independent when considered in conjunction with previously selected or awarded HSIPR project(s) (identify previously selected or awarded projects below).
- This project is not operationally independent.

Briefly clarify the response:

This project is a complement to the recently awarded project of Osage River bridge, which is just to the west of where this project will be installed. The overall goal of installing this crossover is to make the bridge a seamless entry into the Hermann and Jefferson City

<sup>1</sup> A project is considered to have operational independence if, upon implementation, it will have tangible and measurable benefits, either independently of other investments or cumulatively with projects selected to receive awards under previous HSIPR program solicitations.

area. The crossover will accomplish this by properly routing the traffic so that it is on the proper track when it comes into the station, when freight trains approach in either direction or when the station is occupied by an existing Amtrak train. This crossover will finally eliminate the bottleneck to Jefferson City by removing the only section in about 20 miles in either direction and because of the single track only at the Osage River. However, it will be most useful only if this crossover is installed in order to get the traffic correctly on the right track. The Union Pacific has also agreed to work with MoDOT on the expeditious handling and agrees on the need to quickly move this crossover into production. This project will also complement the other crossovers that are being applied for on this same subdivision at Webster and at Bonnots Mill. Having a new system of crossovers ensures that trains are properly sorted helps avoid problems when there are track out-of-service issues, and avoids problems of trains being on the wrong track when they arrive at each station.

## C. FD/Construction Project Summary

Identify the title, location, and other information of the proposed project by completing this section.

**(1) Provide a clear, concise, and descriptive project name.** Use identifiers such as State abbreviations, major cities, infrastructure, and tasks of the individual project (e.g., “DC-Capital City to Dry Lake Track Improvements”). Please limit the response to 100 characters.

MO-KC to STL Corridor – Hermann Crossover

**(2) If the applicant submitted an application for this project, or a project within the scope, that was not selected, indicate the solicitation under which that application was submitted.** Check all that apply.

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> ARRA – Track 1 | <input type="checkbox"/> FY 2010 Service Development Program          |
| <input type="checkbox"/> ARRA – Track 2            | <input type="checkbox"/> FY 2010 Individual Project – PE/NEPA         |
| <input type="checkbox"/> FY 2009 – Track 4         | <input type="checkbox"/> FY 2010 Individual Project – FD/Construction |
| <input type="checkbox"/> FY 2009 Residual          | <input type="checkbox"/> N/A  |

**(3) Indicate the activity(ies) proposed in this application.** Check all that apply.

- Final Design     Construction

**(4) Indicate the anticipated duration, in months, for the proposed FD/Construction project.** Consider that American Recovery and Reinvestment Act funding must be obligated by September 30, 2017.

Number of Months: 24

**(5) Specify the anticipated HSIPR funding level for the proposed FD/Construction project.** This information must match the SF-424 documents, and dollar figures must be rounded to the nearest whole dollar. All applicants are encouraged to contribute non-Federal matching funds. FRA will consider matching funds in evaluating the merit of the application. See Section 3.3 of the NOFA for further information regarding cost sharing.

HSIPR Federal Funding Request	Non-Federal Match Amount	Total Project Cost	Non-Federal Match Percentage of Total
\$3,970,643.00	\$992,660.00	\$4,963,303.00	20 %

**(6) Indicate the source, amount, and percentage of non-Federal matching funds for the proposed FD/Construction project.** The sum of the figures below should equal the amount provided in Section C.5. Click on the gray boxes to select the appropriate response from the lists provided in type of source, status of funding, and type of funds. Dollar figures must be rounded to the nearest whole dollar. Also, list the percentage of the total project cost represented by each non-Federal funding source. Provide supporting documentation that will allow FRA to verify each funding source, any documentation not available online should be submitted with the application package and listed in Section G.2 of this application.

Non-Federal Match Funding Sources	Type of Source	Status of Funding <sup>2</sup>	Type of Funds	Dollar Amount	% of Total Project Cost	Describe Any Supporting Documentation to Help FRA Verify Funding Source
Union Pacific Railroad	private	Comtd.	private	\$ 992,660.00	20 %	Service Outcomes Agreement
<b>Sum of Non-Federal Funding Sources</b>				\$ 992,660.00	20%	N/A

**(7) Indicate whether the proposed activities in this application are also included as a component project or phase in a Service Development Program application submitted concurrently.**

- Yes, all of the activities in this application have also been submitted as a component project or phase of a Service Development Program application.
- Yes, some of the activities within this application have also been submitted as a component project or phase of a Service Development Program application.
- No, this application and its proposed activities have not been submitted as a component project or phase of a Service Development Program application.

**(8) Indicate the name of the corridor where the project is located and identify the start and end points as well as major integral cities along the route.**

Kansas City to St. Louis Union Pacific Corridor (begin at Milepost 6.9 on KC Terminal, continues over UP for 283 miles and ends at Milepost 0.0 at St. Louis Terminal). Major cities are Kansas City, Sedalia, Jefferson City, Kirkwood and St. Louis. This is a federally designated high-speed rail corridor.

**(9) Describe the project location, using municipal names, mileposts, control points, or other identifiable features such as longitude and latitude coordinates.** If available, please provide a project GIS shapefile (.shp) as supporting documentation. This document must be listed in Section G.2 of this application.

On UP Jefferson City Subdivision double track area, MP 81.8, Hermann, Missouri, Gasconade County, Missouri, entirely within the state of Missouri. Install a no. 20 universal PO crossover at 15 foot track centers due to rock cuts to eliminate an existing 18.2-mile gap between current crossovers.

**(10) Provide an abstract outlining the proposed FD/Construction project.** Briefly summarize the project narrative provided in the Statement of Work in 4-6 sentences. Capture the major milestones, outcomes, and anticipated benefits that will result from the completion of the individual project.

<sup>2</sup> The following categories and definitions are applied to funding sources:

**Committed:** Committed sources are programmed capital funds that have all the necessary approvals (e.g., statutory authority) to be used to fund the proposed project without any additional action. These capital funds have been formally programmed in the State Rail Plan and/or any related local, regional, or state capital investment program or appropriation guidance. Examples include dedicated or approved tax revenues, state capital grants that have been approved by all required legislative bodies, cash reserves that have been dedicated to the proposed project, and additional debt capacity that requires no further approvals and has been dedicated by the sponsoring agency to the proposed project.

**Budgeted:** This category is for funds that have been budgeted and/or programmed for use on the proposed project but remain uncommitted (i.e., the funds have not yet received statutory approval). Examples include debt financing in an agency-adopted capital investment program that has yet to be committed in the near future. Funds will be classified as budgeted when available funding cannot be committed until the grant is executed or due to the local practices outside of the project sponsors' control (e.g., the project development schedule extends beyond the State Rail Program period).

**Planned:** This category is for funds that are identified and have a reasonable chance of being committed, but are neither committed nor budgeted. Examples include proposed sources that require a scheduled referendum, requests for state/local capital grants, and proposed debt financing that has not yet been adopted in the agency's capital investment program.

This project will improve on-time performance along the entire Union Pacific corridor in Missouri between St. Louis and Kansas City and will enhance the future provision of 90- to 110-mph service. This project will construct a universal crossover near Hermann and will allow trains to cross from track to track in either direction. Because this is in an area where there is no crossover for 18 miles, the project will allow better access to the Hermann passenger station and enhance passenger comfort because the train will not have to stop outside of the city prior to arrival. The project will also facilitate maintenance access, which currently does not exist, in an area between the two existing crossovers.

Description of Work: On Jefferson City Subdivision, MP 81.8 near Hermann, (Gasconade County) Missouri, install No. 20 universal PO crossover at 15-foot track centers due to rock cuts to eliminate an existing 18.2-mile gap between current crossovers.

This project will most greatly impact the current bottlenecks in the area; however, it will have an even greater impact on the route's future. Sorting the trains through the area will allow the UP to route trains over second tracks as problems occur. It also gives options early in the process when dispatchers are faced with difficulties in routing faster Amtrak trains around or behind freight trains so that problems are identified quickly and routed correctly.

Overall, this project will improve on-time performance along the entire Union Pacific corridor in Missouri between St. Louis and Kansas City and will enhance the future provision of 90- to 110-mph service.

**(11) Indicate the type of expected capital investments included in the proposed FD/Construction project.** Check all that apply.

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Communication, signaling, and control | <input type="checkbox"/> Rolling stock refurbishments                                |
| <input type="checkbox"/> Electric traction                                | <input type="checkbox"/> Station(s)  |
| <input type="checkbox"/> Grade crossing improvements                      | <input type="checkbox"/> Structures (bridges, tunnels, etc.)                         |
| <input type="checkbox"/> Major interlocking                               | <input type="checkbox"/> Support facilities (yards, shops, administrative buildings) |
| <input type="checkbox"/> Positive Train Control                           | <input checked="" type="checkbox"/> Track rehabilitation and construction            |
| <input type="checkbox"/> Rolling stock acquisition                        | <input type="checkbox"/> Other (please describe)                                     |

**(12) Indicate the anticipated service outcomes of the proposed FD/Construction project.** Check all that apply.

- |  |  |
|--|--|
| <input type="checkbox"/> Additional service frequencies              | <input checked="" type="checkbox"/> Improved operational reliability on existing route |
| <input checked="" type="checkbox"/> Service quality improvements     | <input checked="" type="checkbox"/> Improved on-time performance on existing route     |
| <input type="checkbox"/> Increased average speeds/shorter trip times | <input type="checkbox"/> Other (please describe)                                       |

Briefly clarify the response(s) if needed:

n/a

**(13) Provide the following information about job creation through the life of the proposed FD/Construction project.** Please consider construction, maintenance, and operations jobs.

Anticipated number of <u>annual</u> onsite and other direct jobs created (on a 2080 work-hour per year, full-time equivalent basis).	FD/ Construction Period	First full Year of Operations	Fifth full Year of Operations
	23	.5	.5
Indicate the anticipated fiscal year.	N/A		

**(14) Quantify the applicable service outcomes of the proposed FD/Construction project.** Provide the current conditions and anticipated service outcomes. Future state information is required only for the service outcomes identified in Section C.11.

	Frequencies <sup>3</sup>	Scheduled Trip Time (round-trips, in minutes)	Average Speed (mph)	Top Speed (mph)	Reliability – Provide Either On-Time Performance Percentage or Delay Minutes
<b>Current</b>	4	540	49	79	80%
<b>Future</b>	4	540	55	79	80%

**(15) Indicate if any FD or Construction activities that are part of this proposed project are underway or completed.** Check all that apply.

- Final Design activities are complete.
  Construction activities are complete.
- Final Design activities are in progress.
  Construction activities are in progress.
- No Final Design activities are in progress or completed.
  No Construction activities are in progress or completed.

Describe any activities that are underway or completed in the table below. If more space is necessary, please provide the same information for additional activities underway or completed in a supporting document and list in Section G.2 of this application.

Activity	Description	Completed? (If yes, check box)	Start Date (mm/yyyy)	Actual or Anticipated Completion Date (mm/yyyy)
Final NEPA Document (Categorical Exclusion (CE))	Evaluation of environmental impacts.	<input checked="" type="checkbox"/>	07/2010	07/2010
Project Location Plan Sheet	Specifies the proposed location of the universal crossover.	<input checked="" type="checkbox"/>	07/2010	07/2010
Estimate	Gives split out of costs for project.	<input checked="" type="checkbox"/>	07/2010	03/2011
Project Location Sketch	Gives topographic map and aerial view of project location.	<input checked="" type="checkbox"/>	07/2010	07/2010

<sup>3</sup> Frequency is measured in daily round-trip train operations. One daily round-trip operation should be counted as one frequency.

## D. Infrastructure Owner(s) and Operator(s)

Address the section below with information regarding railroad infrastructure owners and operators of the proposed FD/Construction Project. Applicants that own and/or control the infrastructure to be improved by the project or have a service outcomes agreement in place with the infrastructure owning railroad for the proposed project, or an executed agreement that could be amended with the infrastructure owning railroad for a project(s) located on the same corridor as the proposed project, will be looked upon favorably during the application review and selection process.

**(1) Provide information regarding Right-of-Way Owner(s).** Where railroads currently share ownership, identify the primary owner. Click on the gray boxes to select the appropriate response from the lists of railroad type, right-of-way owner and status of agreement. If the Right-of-Way Owner is not included on the prepopulated list, select “Other” and type the name in the adjacent text box within that field. Should the application have more than five owners, please provide the same information for additional owners in a separate supporting document and list it in Section G.2 of this application.

Type of Railroad	Right-of-Way Owner	Route-Miles	Track-Miles	Status of Agreement to Implement
Class 1 Freight	Union Pacific Railroad	283	424	Service Outcomes Agreement

**(2) Name the Intercity Passenger Rail Operator and provide the status of agreement.** If applicable, provide the status of the agreement with the partner that will operate the planned passenger rail service (e.g., Amtrak). Click on the gray box to select the appropriate response from the status of agreement list. Should the proposed service have more than three operators, please provide the same information for additional operators in a separate supporting document and list it in Section G.2 of this application.

Name of Rail Service Operator	Status of Agreement
Amtrak	Yearly signed operating agreement

**(3) Provide information about the existing rail services within the project boundaries (e.g., freight, commuter, and intercity passenger).** Click on the gray boxes to select the appropriate response from the list of types of service. If the Name of Operator is not included in the prepopulated list, select “Other” and type the name in the adjacent text box within that field.

Type of Service	Name of Operator	Top Existing Speeds Within Project Boundaries (mph)		Number of Route-Miles Within Project Boundaries (miles)	Average Number of Daily One-Way Train Operations <sup>4</sup> within Project Boundaries
		Passenger	Freight		
Freight	Union Pacific Railroad	75	60	1	37
Intercity Passenger	Amtrak	75	60	1	4

<sup>4</sup> One daily round-trip operation should be counted as two daily one-way train operations.

**(4) Estimate the share of benefits that will be realized by non-intercity passenger rail services and select the approximate cost share to be paid by the beneficiary.**<sup>5</sup> Click on the gray boxes to select the appropriate response from the lists of type of beneficiary, expected share of benefits, and approximate cost share. If more than three types of non-intercity passenger rail are beneficiaries, please provide additional information in a separate supporting document, and list it in Section G.2 of this application.

Type of Non-Intercity Passenger Rail	Expected Share of Benefits	Approximate Cost Share
Freight Railroad	20%	20%

<sup>5</sup> Benefits include service improvements such as increased speed or on-time performance, improved reliability, and other service quality improvements.

## E. Additional Response to Evaluation Criteria

Respond to each of the following evaluation criteria in the gray text boxes provided to demonstrate how the proposed FD/Construction project will achieve these benefits.

### (1) Project Readiness

Describe the feasibility of the proposed FD/Construction project to proceed promptly to award, including addressing:

- The applicant's progress, at the time of application, in reaching compliance with NEPA for the proposed project. Although a NEPA decision document (Record of Decision, Finding of No Significant Impact, Categorical Exclusion determination) is not required at the time of application, applications for Individual FD/Construction Projects that are accompanied by a final NEPA determination will be looked upon favorably during the application review and selection process;
- The applicant's progress, at the time of application, in reaching final service outcomes agreements (where necessary) with key project partners. Applicants that own and/or control the infrastructure to be improved by the project or have a service outcomes agreement in place with the infrastructure owning railroad for the proposed project, or an executed agreement that could be amended with the infrastructure owning railroad for a project(s) located on the same corridor as the proposed project, will be looked upon favorably during the application review and selection process; and
- The quality and completeness of the project's Statement of Work, including whether the Statement of Work provides a sufficient level of detail regarding scope, schedule, and budget to immediately advance the project to award.

This project will increase the usefulness and the public acceptance of rail passenger service by showing a concrete movement toward faster travel times and by decreasing the amount of time spent on the entire route. The public response to faster service should be overwhelming, and when this section of track is built for higher speeds, the remainder of the route will build support for higher speeds.

This project also offers some key safety benefits. In this area, there are many grade separations and few crossings. If the project goes forward, MoDOT, in its role as the rail safety agency for the state, will complete the necessary medians and lighting upgrades to the remaining crossings in order to ensure the contact between vehicles and the 90-mph trains is limited.

UP has worked collaboratively with MoDOT to advance the current projects and negotiations of the SOA in 2011, despite numerous difficulties on a national scale involving the obligations that Host railroads have in relation to rail passenger services that they host. MoDOT and UP both signed the SOA and final negotiations are pending with FRA and Amtrak. Now that this milestone has been accomplished, we're confident we can aggressively pursue the PE/NEPA projects and proceed to construction expeditiously. MoDOT will require minimal technical assistance similar to the FRA assistance requested during the successful implementation of the application for an intercity passenger rail grant in 2008 and the 2009 second round of applications.

Each of the projects has been estimated in terms of projected costs and are refinanced in one or both of the following: (1) the University of Missouri Engineering School's detailed capacity analysis of the line and its subsequent updates, and (2) the memorandum of understanding signed between MoDOT and Union Pacific and the subsequent Service Outcomes Agreement signed in March 2011 – a result of MoDOT's efforts to pursue projects for funding along the present UP corridor for its state-supported trains and in conjunction therewith to secure minimum levels of performance. Future SDP's will build on the work developed thus far by MWRRI of which Missouri has been a member for more than 15 years.

## (2a) Transportation Benefits

Describe the transportation benefits that will result from the proposed FD/Construction project and how they will be achieved in a cost-effective manner, including addressing:

- Generating improvements to existing high-speed and intercity passenger rail service, as reflected by estimated increases in ridership, increases in operational reliability, reductions in trip times, additional service frequencies to meet anticipated or existing demand, and other related factors;
- Generating cross-modal benefits, including anticipated favorable impacts on air or highway traffic congestion, capacity, or safety, and cost avoidance or deferral of planned investments in aviation and highway systems;
- Creating an integrated high-speed and intercity passenger rail network;
- Encouragement of intermodal connectivity and integration, including a focus on convenient connection to local transit and street networks, as well as coordination with local land use and station area development;
- Ensuring a state of good repair of key intercity passenger rail assets;
- Promoting standardized rolling stock, signaling, communications, and power equipment;
- Improved freight or commuter rail operations, in relation to proportional cost-sharing (including donated property) by those other benefiting rail users;
- Equitable financial participation from benefiting entities in the project's financing;
- Encouragement of the implementation of positive train control (PTC) technologies (with the understanding that 49 U.S.C. 20147 requires all Class I railroads and entities that provide regularly scheduled intercity or commuter rail passenger services to fully institute interoperable PTC systems by December 31, 2015); and
- Incorporating private investment in the financing of capital projects or service operations.

This project has many benefits as the corridor is already a designated high-speed rail corridor (see attached US map). The *Missouri River Runner* Amtrak service has four trains per day connecting to large metro areas. There is no commuter rail service. This is a busy freight corridor – one of Union Pacific's major coal and intermodal corridors that ranges from 30-56 freight trains per day. Passenger numbers were up by 10 percent from fiscal year 2008 to 2009, and by nearly the same number in fiscal year 2010. These trends are continuing into fiscal year 2011. This universal crossover will be used extensively by freight trains and will help sort trains heading in or out of the St. Louis area and the Jefferson City yard.

The area has an access need for maintenance and to switch trains from one track to another to anticipate and resolve problems. The new crossover should also decrease blocked crossings in the area as trains that formerly were stopped and blocking crossings while waiting to move to other tracks will now move to the other tracks and avoid stopping altogether.

This project will complement and complete the second Osage River bridge project and the Bonnots Mill crossover (applied for in 2009-2010 and currently in the pre-construction stage) by sorting train traffic correctly before it gets to the area of the bridge. This area was identified in the University of Missouri's 2006 capacity study as one of the large bottlenecks on the current Amtrak route. The area between Hermann and Jefferson City was one of the route's higher delay points at about 13 percent of total delays.

This project will be similar in benefits to the other two crossovers being developed for this section of the line near Webster Groves (first round of applications in 2009-2010) and Bonnots Mill (current application). As with the other crossovers, this crossover will provide an additional place to pass trains easily and allow freight trains to take the nearest siding instead of Amtrak. The overall benefits of greater on-time performance and reliability will be further served by this crossover, which results in a higher quality of service.

Safety is also an important consideration. This area was chosen for this project because there are few crossings. Since this project is in a rural setting, the two tracks would not be in a crossing. The project will also benefit the freight line. It will have an immediate impact in terms of being able to sort trains in and out of Jefferson City and Hermann. It will also benefit the sorting of both east- and west-bound Amtrak trains moving through this busy area.

Positive Train Control (PTC) refers to technology that will eventually be used on this line that is capable of preventing train-to-

train collisions, over-speed derailments and casualties or injuries to roadway workers. It is a process by which the train can detect speed reductions, and the train will automatically slow down or come to a complete stop if the engineer does not respond in a timely manner. The proposed upgrades listed in this grant application will allow for the upgrades of signalized circuitry on these projects and a smoother transition from the standardized signal systems to the new circuitry that is compatible with PTC equipment. Therefore, such upgrades will encourage the railroads to take a more immediate role in implementing PTC on the corridor, permitting freight and passenger trains to interact within a safer environment, especially in congested areas such as St. Louis.

UP is contributing 20 percent of the costs for the project improvements. This is a complementary project to the Osage River bridge project previously granted in 2009-2010 and to the Bonnots Mill crossover project. The additional operational benefits will enhance the use of the Amtrak station in Hermann (slated to begin a new construction and parking lot renovation in 2011) and how the future double track configurations in that area are implemented. It will also provide a major boost to sortability in and out of St. Louis, the Jefferson City yard and Amtrak station.

## (2b) Other Public Benefits

Describe the other public benefits that will result from the proposed FD/Construction project and how they will be achieved in a cost-effective manner, including addressing:

- The extent to which the project is expected to create and preserve jobs and stimulate increases in economic activity;
- Promoting environmental quality, energy efficiency, and reduction in dependence on oil, including the use of renewable energy sources, energy savings from traffic diversions from other modes, employment of green building and manufacturing methods, reductions in key emissions types, and the purchase and use of environmentally sensitive, fuel-efficient, and cost-effective passenger rail equipment; and
- Promoting coordination between the planning and investment in transportation, housing, economic development, and other infrastructure decisions along the corridor, as identified in the six livability principles developed by DOT with the Department of Housing and Urban Development and the Environmental Protection Agency as part of the Partnership for Sustainable Communities, which are listed fully at <http://www.dot.gov/affairs/2009/dot8009.htm>.

Allowing MoDOT to complete the Hermann universal crossover will confirm that freight and passenger rail travel improves the environment, provides energy-efficient transportation, increases passenger/freight rail fluidity and reduces oil dependency. The project positively affects passenger and freight rail travel by strengthening the Missouri corridor, increasing on-time performance and providing growth opportunities for additional freight and passenger trains, while offering many environmental benefits to the state.

- Each ton-mile of freight moved by rail reduces greenhouse gas emissions by 2/3, compared to truck transportation.
- Freight trains are almost four times more fuel-efficient than trucks and have less impact on greenhouse gas emissions.
- Rail travel generates less carbon dioxide and consumes less energy per passenger mile than cars or planes.
- Amtrak has committed to a 6 percent reduction in carbon dioxide emissions by volunteering to meet reduction targets.

One of the project's goals is to improve dependability and speed of Amtrak service between St. Louis and Kansas City. This service connects 10 diverse communities including Missouri's two largest major metropolitan areas, the state capital and several popular historic towns. Improving the service will synergistically support the existing transportation systems providing intermodal access to an abundance of work- and tourist-related locations within these 10 communities. The Gateway Transportation Center in downtown St. Louis combines access from Amtrak to the

local transit systems (light rail and bus), taxis and intercity buses.

In Hermann, Sedalia and Jefferson City, passengers can access the Katy Trail State Park, which is Missouri's most popular hiking/biking facility and the nation's longest rails-to-trails conversion. Amtrak and Missouri partnered to provide specific accommodation for bicycles on board the trains in response to passengers desiring to take bikes along for trail rides. Also in Sedalia, the OATS transit system shares the building with the Amtrak station.

In Warrensburg, home of the University of Central Missouri, the local bus system includes the Amtrak station along with 14 other regular stops. In Kansas City, the Amtrak station is located at Union Station, which is a local bus transfer facility offering access to the metropolitan area.

In addition to these locations with interconnect ability to other transportation facilities, six of the Amtrak stations provide direct access to historic downtown business areas with stores, restaurants, wineries and lodging within walking distance. The expected improvements to Amtrak service will foster positive enhancement to livable communities.

The *Missouri High-Speed Intercity Rail Plan's* goal is to reduce delay time for both passenger and freight trains by adding additional rail sidings and enhancing existing rail infrastructure. The project would span the distance between Kansas City and St. Louis. The first phase involved three corridor improvement projects with a combined investment of \$36 million. Additional projects in this round of applications complete phase two with a combined investment of \$36 million. The total investment estimated for the Missouri plan as of today is estimated at \$247 million, with more investments to come. (See attached MODOT/UP/Amtrak proposed funding improvements and graph as of August 2010).

As stated throughout this application, the Bonnots Mill universal crossover project would complement the second rail bridge over the Osage River (granted in 2009-2010) and would increase passenger/freight rail fluidity and maintenance flexibility. The following information from the Missouri Department of Economic Development's Missouri Economic Research and Information Center (MERIC) addresses the economic recovery and reinvestment benefits as of August 2009.

**(1) Economic Recovery Benefits.**

Estimate the benefit that the PE/NEPA Project and the planned investment for which you are conducting PE/NEPA will make towards economic recovery and reinvestment, including information on the following:

- How both the PE/NEPA Project and the planned investment will result in the creation and preservation of jobs (including number of onsite and other direct jobs (on a 2080 work-hour per year, full-time equivalent basis). Include a timeline for the anticipated job creation; specifying which jobs would be created for the PE/NEPA studies and an estimate for the planned investment (consider the construction period and operating period).
- How the project represents an investment that will generate long-term economic benefits (including the timeline for achieving economic benefits) and describe, if applicable, how the project was identified as a solution to a wider economic challenge.
- If applicable, how the project will help to avoid reductions in State-provided essential services.

The *High-Speed Intercity Rail Plan's* goal is to reduce delay time for both passenger and freight trains by adding additional rail sidings and enhancing existing rail infrastructure. The project would span the distance between Kansas City and St. Louis. The first phase involves three corridor improvement projects with a combined investment of \$36 million. Additional projects along the corridor would complete phase two with a combined investment of \$115 million. The total investment for the Missouri plan is estimated at \$151 million.

The Hermann universal crossover project would close an 18.2-mile gap on a double mainline track with no

crossovers and would increase passenger/freight rail fluidity and maintenance flexibility. Project construction is located in the economically distressed area of Greater St. Louis, Missouri. The total project investment is \$5.2 million.

The following information from the Missouri Department of Economic Development's Missouri Economic Research and Information Center address the economic recovery and reinvestment benefits.

### **Statewide Impact of Hermann Universal Crossover Project**

During the next three years, each dollar of project investment returns (benefit-cost ratio):

0.03 : 1.00 in new net general revenues totaling \$0.149 million,

0.53 : 1.00 in new personal income totaling \$2.735 million,

0.76 : 1.00 in new value-added (GSP) totaling \$3.946 million, and

1.30: 1.00 in new economic activity (output) totaling \$6.754 million.

On average each year, the project creates:

23 new jobs annually (16 direct/ 7 indirect) paying an average wage of \$32,827 per job,

\$ 0.05 million in new net general revenues annually,

\$ 0.91 million in new personal income annually,

\$ 1.32 million in new value-added to the economy annually, and

\$ 2.25 million annually in new economic activity

(See attached MERIC report).

### **(3) Project Delivery Approach**

Describe the risk associated with the delivery of the proposed FD/Construction project within budget, on time, and as designed, including addressing:

- The timeliness of project completion and the realization of the project's benefits;
- The applicant's financial, legal, and technical capacity to implement the project;
- The applicant's experience in administering similar grants and projects;
- The soundness and thoroughness of the cost methodologies, assumptions, and estimates;
- The thoroughness and quality of the project management documentation;
- The timing and amount of the project's future noncommitted investments;
- The adequacy of any completed engineering work to assess and manage/mitigate the proposed project's engineering and constructability risks; and
- The sufficiency of system safety and security planning.

The applicant has already secured many different grants from FRA in the rail area, including different types of construction, PE-NEPA and the state rail plan. All of the applications and the current grant oversight are efforts on behalf of many areas of expertise in the Missouri Department of Transportation. These areas include, but are not

limited to, environmental, design, controller's office, transportation planning, governmental relations and multimodal operations. The key stakeholder/project driver in MoDOT is the railroad section. Each of these units also interfaces with Union Pacific and the actual contractor in order to solve problems and expedite solutions.

The project is somewhat similar to the Shell Spur project and the Knob Noster siding extension, which was designed using part of the monies from the same Shell Spur grant. The Universal Crossover construction is expected to be similar to the Shell Spur siding. MoDOT was extensively involved in all areas of the siding project including design, pre-bid process and daily updates with the contractor. MoDOT has overseen these grants with efficiency and will handle this one in the same manner.

The overall project is one that is both appealing in the sense that both freight and passenger will benefit, and also in the sense that this project will benefit other projects currently in the works, such as the Osage River bridge and the Bonnots Mill crossover. The synergy and the cost savings that will be gained from doing three projects like this that are so intertwined cannot be underestimated.

Union Pacific has been interested and supportive of this project from the start and is anxious to ensure that its security systems, track layout, signal design and operations are improved and benefit from this system as well as the Amtrak trains that use the line as soon as possible.

#### (4) Sustainability of Benefits

Identify the likelihood of realizing the proposed FD/Construction project's benefits, including addressing:

- The applicant's financial contribution to the project;
- The quality of a financial planning documentation that analyzes the financial viability of the HSIPR service that will benefit from the project;
- The availability of any required operating financial support, preferably from dedicated funding sources;
- The quality and adequacy of project identification and planning; and
- The reasonableness of estimates for user and non-user benefits for the project.

The HSIPR project that will benefit from this planning is the *Missouri River Runner* Amtrak service, which has been in existence for 31 years and continues to thrive. Recent increases in on-time performance and in passenger increases in numbers have made it a route with a great future. Although it is funded by general revenue from the state and even though Missouri has had an extremely tight budget the last few years, there is no reason to expect that the service will not continue, especially as other projects to improve on-time service come on line and further support its funding.

The list of projects identified for this project are essentially the same as are being used, with some exceptions, from the 2007 University of Missouri study. All of the projects present a comprehensive and complete overview of the entire line and the needs along the line. This project is in a small area specifically identified in the 2007 study as the area between Hermann and Jefferson City (a control point for UP), and the Jefferson city station as being an area of needed improvements, which when totalled together equal 13.5 percent of all total delays on the line, so the spirit and intent of the project is well within the study's guidelines. The study itself has received great attention and continues to do so, and as the projects in the study are funded, it creates even

greater support and continuing emphasis for all projects in the study to be funded.

Estimates for users vary, but in light of the fact that this is an area with no other crossovers for many miles in either direction, the project will create an excellent service method for trains to use in order to quickly reach the stations at Jefferson City and Hermann. It is estimated that a substantial portion of the freight trains now using the mainline will be diverted to the second track at the times the Amtrak trains are in the area. The UP is committed by its MOU to the success of this project and by its contribution of 20 percent. The UP is also committed based on its signing of the SOA. MODOT maintains that this project will not only improve Amtrak on-time performance but also remove freight trains from the mainline Amtrak is using and move them to the correct track, thereby making the solution for all parties better and more comprehensive. Not only is the UP committed to at least an 85 percent on-time performance when this project and several other projects are completed in the various locations all along the track per the MODOT-UP MOU of 2009, it is committed immediately to an 80 percent OTP when the three shovel-ready projects previously applied for and granted in 2010 are complete. The amounts requested are 80 percent federal HSIPR funds, and the UP will provide the remaining 20 percent of the cost. The overall OTP for the route in fiscal year 2010 was 92 percent.

These amounts are commensurate with the overall benefits. The Amtrak benefits will be immediately apparent when in place. The freight benefits will, over a number of years, and along with future projects for Missouri KC to St. Louis service for passenger trains, show how the additional capacity provided helps remove freight trains from former bottlenecks and puts them on a track to success with fewer problems in arriving at stations on-time. As the frequencies in freight train travel and the Missouri passenger rail service may be expected to increase in the future, the types of access and infrastructure improvements sought, such as the existing project, will be clearly the type of projects with the most delivery at the least cost.

## F. Statement of Work

The Statement of Work (SOW) is a required document. This must be submitted using the Narrative Application Form Part II. Statement of Work available on FRA's website to provide the required information. The quality and completeness of this document will be measured as a Project Readiness evaluation criterion, as outlined in Section 5.2.1 of the NOFA.

Please provide the SOW as a separate document and list it in Section G.2 of this application.

The SOW is a description of the work that will be completed under the grant agreement and must address the background, scope, and schedule, and include a high-level budget of the proposed project.

- (1) The SOW is required for a complete application package.
- (2) The SOW should contain sufficient detail so that both FRA and the applicant can:
  - a. Understand the expected outcomes of the work to be performed by the applicant, and
  - b. Track applicant progress toward completing key project tasks and deliverables during the period of performance.
- (3) The SOW should clearly describe project objectives, but allow for a reasonable amount of flexibility regarding how the objectives will be accomplished. It is important to describe the overall approach to and expectations for project/activity completion.
- (4) If the SOW describes work for phases and/or groups of component projects, the larger program should be explained in the background section of the SOW. The remainder of the SOW should be limited to describing the activities that directly contribute to the combined FRA and applicant effort which is funded under the grant agreement.

## G. Optional Supporting Information

Provide a response to the following questions, as necessary, for the proposed FD/Construction project.

**(1) Please provide any additional information, comments, or clarifications, and indicate the section and question number that being addressed (e.g., Section E.2).** Completing this question is optional.

The Hermann crossover is a much-needed crossover in a busy two-track area where there is no current crossover for 14 miles. It will also complement the Union Pacific’s work completed in November 2008 to double-track the Gasconade Bridge, which is approximately 10 miles west, so that trains are sorted properly in and out of the bridge.

**(2) Please provide a document title, filename, and description for all optional supporting documents.** Ensure that these documents are uploaded to GrantSolutions.gov with the narrative application form and use a logical naming convention.

Document Title	Filename	Description and Purpose
Categorical Exclusion Worksheet	CE Hermann.doc	Describes environmental concerns.
2011 Amtrak Support Letter	2011_Amtrak_Support_Ltr.pdf	Provides support from Amtrak for project.
2011 UP Support Letter	2011_UP_Support_Ltr.pdf	Provides support from Union Pacific for project.
2011 Project Map	2011_HSIPR_Project_Map.pdf	Identifies Location of projects for 2011 application.
Project Location Plan Sheet	Hermann_UXO_Crossover.pdf	Identifies location of improvements.
Estimate	Hermann_Universal_Estimate.pdf	Identifies costs of project.
Project Location Sketch	Locate_Hermann.pdf	Identifes location of project.
SHPO Clearance MoDOT Letter	Hermann SHPO Clearance.pdf	Request for SHPO clearance from MoDOT.
SHPO e-mail response	Bonnits and Hermann SHPO_Electronic Response.pdf	Electronic response from State Historic Preservation Office.
Introductory letter from MoDOT Director	1Intro LETTER signed by KKeith.pdf	Cover letter for the HSIPR projects signed by MoDOT Interim Director
Overview of 2011 Projects	2Project Overview.pdf	Overview of Projects
HSIPR Projects Division of Costs	3HSIPR RAIL PROJECTS DIVISION OF COSTS Mar29 2011.docx	HSIPR Projects Division of Costs
Project Map and Partner Signature Map	4 2J011_HSIPR_Project_Map.pdf	Detailed project map and same map with signatures of support
Project Map and Partner Signature Map	SProject Map and Partner Signature Map.pdf	Detailed project map and same map with signatures of support
MOU between 4 states for joint application	6 State Equipment MOU.pdf	Demonstrates support of project by all parties.
Support Letter from UP for 2011 Applications	7 2011_UP_Support_Ltr.pdf	Provides support of projects for application

MoDOT/UP/Amtrak SOA	8Preliminary Executed SOA with UP.pdf	Identifies Service Outcomes for completion of projects
Multi State Governors MOU	9Multi - StateGovernorsMOUSigned.pdf	Demonstrates commitment to High Speed Rail
Map of High Speed Rail	10US Federally Designated High Speed Rail Corridor Map.pdf	Identifies High Speed Rail Corridors
Letters of Reduced	11Complete Letters of Support-reduced.pdf	Letters of Support
Rail Capacity Analysis I & II	12Rail Capacity Analysis ReportsI and II.pdf	Rail Capacity Analysis Reports I and II
2009, 2010 and 2011 Economic Studies	13Economic Studies by MERIC.pdf	HSIPR Statewide and Lonterm Impacts Study prepared by MERIC
Mo Passenger Rail Schedule	14MO Passenger Rail Schedule.pdf	Missouri Passenger Rail Schedule
Mo Intercity Bus Stops	15Intercity Bus Stops.pdf	Missouri Intercity Bus Stops
Statewide Transportation Improvement Plan	16MHTC Auth on Corridor Improvement Projects STIP 2011-2015.pdf	Projects identified in Statewide Transportation Improvement Plan
Amtrak Operating Agreement	17Amtrak Operating Agreement.pdf	Amtrak Operating Agreement
Amtrak-MoDOT MOU	18Amtrak-MoDOT MOU.pdf	Amtrak-MoDOT MOU
Kansas City Terminal Memorandum of Understanding	19Kansas_City_Terminal_MOU.pdf	Commitment to application by MoDOT and KCT
Terminal Railroad Association of St. Louis Memorandum of Understanding	20STLTerminal-MoDOT MOU.pdf	Commitment to application by MoDOT and TRRA
Terminal Railroad Association of St. Louis Memorandum of Understanding	21TRRA MOU N. Market and Merchants.pdf	Commitment to application by MoDOT and TRRA
UP Memorandum of Understanding	22UP-MODOT MOU signed copy.pdf	Commitment to application by MoDOT and UP

UP Track Layout	23UP Track Layout.pdf	UP Track Layout
1996 Agreement	24-1996 agreement between MODOT and UP to preserve 3 more slots.pdf	1996 Agreement between MoDOT and UP to preserve 3 more slots
Amtrak Support Letter for Merchants and N Market	25 Amtrak Support for Merchants and N. Market	Amtrak Support Letter
Shell Spur Agreement	26Shell SpurAgreement.pdf	Shell Spur Agreement

# Narrative Application Form Individual FD/Construction

## Part II Statement of Work



### High-Speed Intercity Passenger Rail (HSIPR) Program

## Statement of Work

The quality and completeness of this document will be measured as a Project Readiness evaluation criterion, as outlined in Section 5.2.1 of the NOFA. The applicant must provide a sufficient level of detail regarding scope, schedule, and budget that demonstrates the project is ready to immediately advance to award. Tables have been provided as illustrative examples for capturing data however, applicants can delete or adjust the tables as necessary. This form must be listed in Section G.2 of the Narrative Application Form Part I.

- (1) **Background.** Briefly describe the events that led to the development of this FD/Construction project and the issue the project will address. Also describe the transparent, inclusive planning process used to analyze the investment needs and service objectives of the full corridor on which the individual FD/Construction project is located.

This proposed project is located on the Union Pacific Railroad in Missouri along the *Missouri River Runner* route, which is the Amtrak state-supported service. There are 10 Amtrak stations along the route that include St. Louis, Kirkwood, Washington, Hermann, Jefferson City, Sedalia, Warrensburg, Lee's Summit, Independence and Kansas City. There is no commuter rail service on this line. The only freight use is by Union Pacific freight trains, which will also benefit from the project. It is anticipated that there will be no donated land from the railroad in order to construct the project.

A University of Missouri study (attached) identified this project area as a bottleneck in the system. When completed, the project will be noted as having a positive impact on the passenger service's on-time performance.

Both Amtrak and freight will use the universal crossover. The crossover will help sort trains in the busy Jefferson City subdivision, which is double track. It is proposed to complement the other projects to give trains further options on the west side of Hermann. It will also help get passengers in and out of the Hermann station, allow solutions for sorting trains and avoiding problems (with minimal interference from freight trains) and get trains on the correct track to stop at the station. Due to the delays in this area, the area between Jefferson City and Hermann was identified as a route bottleneck by a University of Missouri 2006 study, the third highest on the route.

- (2) **Scope of Activities.** Clearly describe the scope of the proposed FD/Construction project and identify the general objective and key deliverables.

The project for a new universal crossover at Hermann will be divided into two major tasks: final design and construction. These tasks will be further divided into subtasks, described in detail below. The project will be designed and constructed in accordance with AREMA recommended practices and UP standards.

#### **Task 1: Final Design**

MoDOT will perform or cause to be performed Final Design (100 percent design) of the universal crossover in accordance with the preliminary engineering documentation approved by FRA. During Final Design, the construction

sequencing of the major construction elements will be identified. Final Design documents are to be approved and signed by all stakeholders (MoDOT, UP, Amtrak and FRA) prior to FRA's approval and reimbursement of final design work. The final design deliverables will consist of the following.

1. Scaled plans of the track layout
2. Signal design plans
3. Engineering specifications and notes
4. An updated itemized cost estimate of work
5. Updated project schedule

The final design deliverables listed above will be submitted to FRA for review and comment. When FRA's comments have been resolved, FRA will provide its written approval of the final design deliverables.

### **Task 2: Construction**

MoDOT will complete or cause to be completed all tasks associated with construction of an additional #20 Universal Crossover between main tracks #1 and #2. Task 2 includes the bidding and awarding a competitive contract for the all tasks associated with construction. The majority of the tasks may be contracted to outside bidders, while UP may perform tasks such as signal system adjustments. Construction will include grading, track, signal, utility work, drainage and fencing work as prescribed in the detailed scope and in accordance with approved final design deliverables submitted under Task 1. Task 2 also includes any inspection and testing of the project as required by MoDOT and / or FRA.

**(2a) General Objective.** Provide a general description of the work to be accomplished through this grant, including project work effort, project location, and other parties involved. Describe the end-state of the project, how it will address the need identified in Background (above), and the outcomes that will be achieved as a result of the project.

The Hermann crossover is a much-needed crossover in a busy two-track area where there is no current crossover for 14 miles. It will also complement the Union Pacific's work completed in November 2008 to double-track the Gasconade River bridge, which is approximately 10 miles west, so trains are sorted properly in and out of the new Gasconade bridge area.

As with the other crossovers, this crossover will provide an additional place to pass trains easily and allow freight trains to take the nearest siding instead of Amtrak. The project will have an immediate impact in terms of being able to sort trains in and out of Jefferson City and Hermann, and will also allow sorting of both east- and west-bound Amtrak trains moving through this busy area. This project will most greatly impact the current bottlenecks in the area; however, it will have an even greater impact on the route's future. Sorting the trains through the area will allow the UP to route trains over second tracks as problems occur. It also gives options early in the process when dispatchers are faced with difficulties in routing faster Amtrak trains around or behind freight trains so that problems are identified quickly and routed correctly.

**(2b) Description of Work.** Provide a detailed description of the work to be accomplished through this grant by task (e.g., FD and Construction) including a description of the geographical and physical boundaries of the project. Address the work in a logical sequence that would lead to the anticipated outcomes and the end state of the activities.

Description of Work: On Jefferson City Subdivision, MP 81.8 near Hermann, (Gasconade County) Missouri, install No. 20 universal PO crossover at 15' track centers (due to rock cuts) to eliminate an existing 18.2-mile gap between current crossovers.

MoDOT will perform all tasks required for the project through a coordinated process with the railroad owner (Union Pacific Railroad), the operator (Amtrak) and the FRA. Natalie Roark is the MoDOT High-Speed Rail Project Manager responsible for facilitating the coordination of all activities between Terminal Railroad, MoDOT and the FRA for implementation of the high-speed rail projects through completion of construction. This also includes facilitating the completion of all stakeholder agreements and the final FRA grant agreement. Huy Pham is the Union Pacific contact responsible for facilitating the completion of the construction and grant agreements and all activities between Union Pacific Railroad, MoDOT and the FRA through completion of the project. The Amtrak point of contact is Michael Franke, Assistant Vice President of State and Commuter Partnerships.

This project required a categorical exclusion. The CE worksheet is attached. MoDOT's process for completing a CE included a literary research, contacting agencies and field reconnaissance. The railroad provided the project's construction cost estimate, and it is also attached. Since this project is exclusively on UP right of way and most likely does not require property acquisition, the environmental issues should be relatively straightforward and minimal. The *Missouri River Runner* is the service currently on the line.

UP, in coordination with MoDOT, will perform final design (100 percent design) of the track and signal improvements. Final Engineering Drawings will be furnished to the FRA after the final design check is complete. In addition, route and aspect charts depicting the proposed signal configuration for the project and adjacent blocks will also be provided.

Union Pacific Railroad will perform all necessary track and signal work. Items of Work include the following.

- Property, Utilities and Permitting
- Site Preparation, Construction and Roadbed
- Drainage, Structure/Bridges
- Track Work
- Track Engineering/Geotechnical/Supervision
- Signal Work

The project will take approximately two years to complete, beginning as soon as the grant agreement is executed.

Upon award of the project, MoDOT will monitor and evaluate the project's progress through the administration of regular progress meetings scheduled throughout the project duration. Topics of discussion may include: review of construction activities, field observations, identification of problems incurred and decisions/fixes for those problems, identification of potential future problems that could impede progress and proposed corrective measures to regain projected schedule, review of project schedule and progress, and review of billing invoices. There will be continued communication by all parties involved.

**(2c) Deliverables.** Describe the work products of the project to be completed to FD, or constructed in accordance with the FD that were provided to FRA during the application process or will be completed as a part of this grant. In the table provided, list the deliverables, both interim and final, that are the outcomes of the project tasks.

	Deliverable	Task
1	Project drawings and estimate	Preliminary Engineering
2	Categorical Exclusion Worksheet	NEPA Evaluation
3	Track Drawing Plan Sheets	Final Design
4	Stakeholder Construction Agreement, Tri-Party Service Outcomes Agreement, Grant Agreement with FRA	Agreements for obligation of funds

**(3) Project Schedule.** In the table below, estimate the approximate duration for completing each task in months. For total project duration, reference Section C.4 in the Narrative Application Form Part I.

	Task	Duration		
		Start Month	to	End Month
1	FD/ Engineering	June 2011	to	May 2012
2	Construction	June 2012	to	May 2013
	Total project duration	24 months		

**(4) Project Cost Estimate/Budget.** Provide a high-level cost summary of FD/Construction work in this section, using the FD/Construction Application Package Instructions, the HSIPR Individual Project Budget and Schedule form, and the Narrative Application Form Part I as references. The figures in this section of the Statement of Work should match exactly with the funding amounts requested in the SF-424 form, the HSIPR Individual Project Budget and Schedule form, and Section C of the Narrative Application Form Part I. If there is any discrepancy between the Federal funding amounts requested in this section, the SF-424 form, the HSIPR Individual Project Budget and Schedule form, or Section C of the Narrative Application Form Part I, the lesser amount will be considered as the Federal funding request. Round to the nearest whole dollar when estimating costs.

*The total estimated cost of the proposed FD/Construction project is provided below, for which the FRA grant will contribute no more than the Federal funding request amount indicated. Any additional expense required beyond that provided in this grant to complete the proposed FD/Construction project shall be borne by the Grantee.*

FD/Construction Project Overall Cost Summary			
#	Task	Cost in FY11 Dollars	
1	FD/Engineering	\$ 712,500	
2	Construction	\$ 4,251,800	
	Total FD/Construction project cost	\$ 4,963,300	
Federal/Non-Federal Funding			
		Cost in FY11 Dollars	Percentage of Total Activities Cost
	Federal funding request	\$ 3,970,700	80 %
	Non-Federal match amount	\$ 992,600	20 %
	Total FD/Construction project cost	\$ 4,963,300	100 %