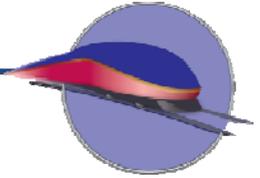


# Individual FD/Construction Project Application Form

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



Applicants interested in applying for funding of Final Design (FD)/Construction Projects under the FY10 Individual Project solicitation are required to submit this application form and other required documents as outlined in Section H of this application. List and describe any supporting documentation submitted in Section G. Applicants should reference the FY10 Individual Projects Notice of Funding Availability (NOFA) for more specific information about application requirements. If you have questions about the HSIPR Program or this application, please contact the Federal Railroad Administration (FRA) at [HSIPR@dot.gov](mailto:HSIPR@dot.gov).

Applicants must use this form by entering the required information in the gray narrative fields, check boxes, or drop-down menus. Submit this completed form, along with any supporting documentation, electronically by uploading them to [GrantSolutions.gov](http://GrantSolutions.gov) by 5:00 p.m. EDT on August 6, 2010.

### 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>Street Address:</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> rodney.massman@modot.mo.gov
<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> rodney.massman@modot.mo.gov		
<b>(2) List the name(s) of additional state(s) applying (if applicable):</b>  N/A				

## B. Eligibility Information

Complete the following section to demonstrate satisfaction of applicant eligibility requirements.

- (1) Select the appropriate box from the list below to identify applicant type.** Applicant type is defined 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 types below, additional documentation is required. Please select the appropriate box to establish applicant eligibility as described in Section 3.2 of the NOFA and list the supporting document 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 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. The appropriate planning document must be 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) Establish completion of Preliminary Engineering requirements.** List the documents that establish completion of Preliminary Engineering for the project covered by this application. See Section 4.2.5 and Appendix 2.3 of the NOFA. If more than five references, please provide the same information in a supporting document and list in Section G.2 of this application. Any supporting documents submitted should be listed in Section G.2 of this application.

Documentation	Date (mm/yyyy)	Describe How Documentation Can Be Verified (choose one)	
		Submitted in GrantSolutions	Web Link (if available)
Final NEPA Document (Categorical Exclusion (CE) Documentation)	07/2010	<input checked="" type="checkbox"/>	
Project Location Plan Sheet	07/2010	<input checked="" type="checkbox"/>	
Estimate	07/2010	<input checked="" type="checkbox"/>	
Project Location Sketch	07/2010	<input checked="" type="checkbox"/>	

**(4) Establish 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 or Finding of No Significant Impact) is not required for an application but must have been issued by FRA prior to award of a construction grant. Verified documents can be submitted as a supporting document or referenced through a public active URL. Any supporting documents should be listed in Section G.2 of this application. See Section 4.2.5 and Appendix 2.2 of the NOFA.

Documentation	Date (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)	07/2010	<input checked="" type="checkbox"/>	
<input type="checkbox"/> Final 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"/>	

## 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”).

MO-KC to STL Corridor-Hermann Universal Crossover

**(2) Indicate the anticipated funding level for the FD/Construction project below.** This information must match the SF-424 forms, and dollar figures must be rounded to the nearest whole dollar. When the non-Federal match percentage is calculated, it must meet or exceed 20 percent of the total project cost.

Federal Funding Request	Non-Federal Match Amount	Total FD/Construction Project Cost	Non-Federal Match Percentage of Total Project Cost
\$4,485,520	\$ 1,121,380	\$ 5,606,900	20 %

**(3) Indicate the activity(ies) for which you are applying.** Check all that apply.

Final Design     Construction

**(4) Indicate the anticipated duration, in months, for the FD/Construction project (e.g., 36).**

Number of Months: 24

**(5) List the name of the corridor where the project is located.**

Mo-KC to STL Corridor

**(6) 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 .shp file as supporting documentation. This document must be listed in Section G.2 of this application.

Description of Work: On UP 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, this project is located entirely within the state of Missouri. This will provide better access to the Hermann passenger station and will help facilitate sorting trains in and out of the Jefferson City yard, which is much further to the west.

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

Description of Work: On UP 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.

This area was identified in the University of Missouri’s 2006 capacity study as one of the large bottlenecks on the current Amtrak route. This area, between Hermann and Jefferson City, was a point of the higher delays along the route – about 13.5 percent (the third highest area) of the total delays. 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 or second track 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 sorting 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 problems are identified quickly and routed correctly.

**(8) Indicate the source, amount, and percentage of non-Federal matching funds for the FD/Construction project.** The sum of the figures below should equal the amount provided in Section C.2. Click on the prepopulated fields to select the appropriate responses 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. Identify supporting documentation that will allow FRA to verify the funding source and list it in Section G.2 of this application.

Non-Federal Funding Sources	New or Existing Source?	Status of Funding <sup>1</sup>	Type of Funds	Dollar Amount	% of Total Project Cost	Describe Any Supporting Documentation to Help FRA Verify Funding Source
Union Pacific Railroad	New	Committed	Cash	\$ 1,121,380	20 %	See attached MOU.
<b>Sum of Non-Federal Funding Sources</b>				\$ 1,121,380	20%	N/A

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

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

<sup>1</sup> Reference Notes: 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 (e.g., 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).

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

- |   |  |
|---|--|
| <input type="checkbox"/> Final Design activities are complete.                    | <input type="checkbox"/> Construction activities are complete.                               |
| <input checked="" type="checkbox"/> Final Design activities are in progress.      | <input type="checkbox"/> Construction activities are in progress.                            |
| <input type="checkbox"/> No Final Design activities are in progress or completed. | <input checked="" type="checkbox"/> No Construction activities are in progress or completed. |

Describe any activities that are under way or completed in the table below. If more space is necessary, please provide the same information 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)
Categorical Exclusion Worksheet	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	07/2010
Project Location Sketch	Gives topographic map and aerial view of project location.	<input checked="" type="checkbox"/>	07/2010	07/2010

## D. Project Success Factors Overview

Answer the following questions about the individual project that is the subject of this FD/Construction application.

**(1) Indicate the expected service outcomes of the 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 checked="" type="checkbox"/> Increased average speeds/shorter trip times | <input type="checkbox"/> Other (please describe)                                       |

Briefly clarify your response(s) if needed:

This improvement will affect overall performance along the entire route and contribute to a better on-time performance and eventually better trip times. This will also ease access into the Hermann station.

**(2) Quantify the applicable service outcomes of the FD/Construction project.** Provide the current conditions and anticipated service outcomes. Future state information is necessary only for relevant service benefits.

	Frequencies <sup>2</sup>	Scheduled Trip Time (in minutes)	Average Speed (mph)	Top Speed (mph)	Reliability – Provide Either On-Time Performance Percentage or Delay Minutes
Current	4	540	49	79	80%
Future	4	540	55	79	85%

**(3) Select and describe the operational independence of the FD/Construction project.**<sup>3</sup>

- This project is operationally independent.     This project is not operationally independent.

Briefly clarify your response:

This project will increase on-time performance and ridership by maximizing train sort ability in and around the Hermann station, and in and out of the Jefferson City yard. This project will improve on-time performance even if no other projects are built.

**(4) Provide Right-of-Way ownership information in the FD/Construction project area.** Where railroads currently share ownership, identify the primary owner. If Amtrak is the Type of Railroad, the Right-of-Way Owner field does not need to be completed. Click on the prepopulated fields to select the appropriate response from the lists of railroad types and status of agreements. If more than five owners please provide the same information 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 Agreements to Implement
Class 1 Freight	Union Pacific Railroad	283	424	Preliminary Executed Agreement/MOU

<sup>2</sup> Frequency is measured in daily one-way train operations. One daily round-trip operation should be counted as two daily one-way train operations.

<sup>3</sup> A project is considered to have operational independence if, upon being implemented, it will provide tangible and measurable benefits, even if no additional investments in the same service are made.

**(5) 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 prepopulated field to select the appropriate response from the status of agreement list.

Name of Rail Service Operator	Status of Agreement
Amtrak	Final executed agreement on project scope/outcomes

**(6) Identify the types of services affected by the FD/Construction project and provide information about the existing rail services within the project boundaries (e.g., freight, commuter, and intercity passenger).** Click on the prepopulated fields to select the appropriate response from the list of types of service.

Type of Service	Name of Operator	Top Existing Speeds Within Project Boundaries		Number of Route-Miles Within Project Boundaries	Average Number of Daily One-Way Train Operations <sup>4</sup> Within Project Boundaries	Notes
		Passenger	Freight			
Freight	Union Pacific Railroad	75	60	1	38	This number is expected to increase with the improvement in the economy as the average number of trains in this area in 2007 was approximately 56
Intercity Pa	Amtrak	75	60	1	4	There are two morning trains and two evening trains in each direction. This location is within a few miles of the Hermann station which requires the Amtrak train to be on Track #1 coming into the station so extra sortability of trains is helpful.

**(7) Estimate the share of benefits that will be realized by nonintercity passenger rail services (e.g., commuter, freight) and select the approximate cost share to be paid by the beneficiary.<sup>5</sup>** Click on the prepopulated fields to select the appropriate response from the lists of type of beneficiary, anticipated share of benefits, and approximate cost share. If more than five types of nonintercity 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 Nonintercity Passenger Rail	Expected Share of Benefits	Approximate Cost Share
Freight	Less than 50%	0-24%

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

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

## E. Additional Response to Evaluation Criteria

Provide a separate response to each of the following categories of potential benefits to identify the ways in which the proposed FD/Construction project will achieve these benefits.

### (1a) Transportation Benefits

Describe the ways in which the proposed FD/Construction project will address the potential of successfully executing these transportation benefits in a cost-effective manner:

- Supporting the development of intercity high-speed rail service;
- Generating improvements to existing high-speed and intercity passenger rail service, as reflected by estimated increases in ridership (as measured in passenger-miles), increases in operational reliability (as measured in reductions in delays), 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, including integration with existing intercity passenger rail services, allowance for and support of future network expansion, and promotion of technical interoperability and standardization (including standardizing operations, equipment, and signaling);
- Encouragement of intermodal connectivity and integration through provision of direct, efficient transfers among intercity transportation and local transit networks at train stations, including connections at airports, bus terminals, subway stations, ferry ports, and other modes of transportation;
- Enhancing intercity travel options;
- 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 in the project's financing, including, but not limited to, consideration of donated property interests or services; financial contributions by freight and commuter rail carriers commensurate with the benefit expected to their operations; and financial commitments from host railroads, non-Federal governmental entities, nongovernmental entities, and others;
- 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 transportation benefits. Although the *Missouri River Runner* Amtrak service has four trains per day that connect to large metro areas, this line is largely a freight line (50 trains per day average from 2005-2008). There is no commuter rail service on the line. Amtrak's *Missouri River Runner* services increased passenger numbers 10 percent in FY 2009 and again by nearly the same percentage in 2010.

This is a busy freight corridor and one of Union Pacific's major coal and intermodal corridors that ranges from 30-56 freight trains per day. This universal crossover will be used extensively by freight trains and will greatly help sort out trains heading in or out of the St. Louis area and the Jefferson City yard. This area is outside the St. Louis metro area but will help immensely to sort trains not only at the Hermann station but in and out of the large yard near Grand Avenue in St. Louis, which also contains the newly built Gateway Transportation Center and its MetroLink connections.

This is an important project to the Hermann area – an historic tourist area for wineries, and bed and breakfasts and extremely suitable for one day trips on the train. These destinations and activities include customer expectations of timeliness in terms of arrival and departure. This crossover would help facilitate the arrival and departure times on those trains. The Hermann area has a thriving tourist industry, and the development of reliable and efficient train times would help develop the passenger departures and arrivals along the route.

Although double track, the area is in great need of further access 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. Crossovers also allow the use of both tracks by trains of all sorts that may not have been originally possible to switch, thereby reducing wear and tear on only one track.

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 positive train control 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 other crossovers (the Webster crossover project previously applied for and granted in 2009-2010 and the Bonnots Mill crossover applied for in this same round of applications). The additional operational benefits will enhance the use of the double track configurations in that area when they are implemented, and will provide a major boost to sort ability in and out of St. Louis and the Jefferson City yard and Hermann Amtrak station. UP is showing its commitment to the project by its voluntary contribution of 20 percent and its use of future dispatching techniques to allow for better and easier dispatching of Amtrak trains in the area.

### **(1b) Other Public Benefits**

Demonstrate the potential of the proposed project to achieve other public benefits in a cost-effective manner:

- Environmental quality and energy efficiency and reduction in dependence on foreign oil, including 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;
- Promoting interconnected livable communities, including complementing local or state efforts to concentrate higher-density, mixed-use, development in areas proximate to multi-modal transportation options (including intercity passenger rail stations);
- Improving historic transportation facilities; and
- Creating jobs and stimulating the economy. Although this solicitation is not funded by the American Recovery and Reinvestment Act of 2009 (Public Law 111-5), these goals remain a top priority of this Administration. Therefore, Individual Project applications will be evaluated on the extent to which the project is expected to quickly create and preserve jobs and stimulate rapid increases in economic activity, particularly jobs and activity that benefit economically distressed areas, as defined by section 301 of the Public Works and Economic Development Act of 1965, as amended (42 U.S.C. 3161) (“Economically Distressed Areas”).

Allowing MoDOT to complete and finalize the PE/NEPA study for 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 capitol 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. Clearly 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 over \$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).

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 directly to the west of Greater St. Louis, Missouri. The total project investment is approximately \$5.6 million.

The following information from the Missouri Department of Economic Development's Missouri Economic Research and Information Center in August, 2009 addresses the economic recovery and reinvestment benefits.

***Statewide Impact of Hermann Universal Crossover Project as of 8/2009:***

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 as of 8/2009.)

As materials are made, bought and consumed for this project, a need for additional resources will occur, which will provide opportunities for U.S. manufacturing firms to increase their production of these items. The sources of supply for these items and the procurement contracts covering their acquisition and installation will include "Buy America" provisions and requirements, which will help support the U.S. industry as a whole.

**(2) Project Delivery Approach**

Consider the following factors to determine the risk associated with the proposed project's delivery within budget, on time, and as designed:

- The adequacy of any completed engineering work to assess and manage/mitigate the proposed project's engineering and constructability risks;
- The sufficiency of system safety and security planning; and
- The project's progress, at the time of application, towards compliance with environmental review requirements under NEPA and related statutes.

The applicant previously secured a grant from the Federal Railroad Administration, Intercity Passenger Rail Program, Grant No. 6048 of \$3,292,684, to construct a new siding at Shell Spur on the same Union Pacific-Amtrak corridor of this project. The award was made Sept. 30, 2008, and construction began May 29, 2009. Work was completed in December 2009. The award was matched to a \$5 million state appropriation. An MOU and a later multifaceted agreement were signed in 2009 with the Union Pacific Railroad to facilitate the project. A grant agreement was also signed with the FRA. Also three shovel-ready projects were awarded to MODOT in 2010 on the first round of applications, and these projects are in the pre-construction stage

Both application 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 as well 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.

There is no known funding risk if approved per the cost-sharing terms with Union Pacific per the MOU. The project can be completed in a two-year construction timeframe, so barring extreme unforeseen 'acts of God,' such as earthquakes, tornados, floods or fires, there are no schedule risks. Amtrak has shown no propensity to discontinue service as long as there is state financial support, which has been in place for more than 30 years. Many communities have invested substantial funds in their train stations and have a vested interest in ensuring the route's success, so there is no substantial risk of cities discontinuing support of their station stops.

If this application is approved, MoDOT will appreciate an expedited completion of the grant agreement, so the project can be quickly started. 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 in the 2009 HSIPR round of applications.

PE/NEPA for this project is moving along and will be completed relatively quickly upon grant award, and the projects can be moved to FD/Construction immediately thereafter. 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 – 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.

### (3) Sustainability of Benefits

Address the likelihood of realizing the proposed project's benefits:

- The quality of financial planning documentation that demonstrates 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 for the benefiting intercity passenger rail service(s);
- The quality and adequacy of project identification and planning;
- The reasonableness of estimates for user and non-user benefits for the project;
- The comprehensiveness and sufficiency, at the time of application, of agreements with key partners (including the railroad operating the intercity passenger rail service and infrastructure-owning railroads) that will be involved in the operation of the benefiting intercity passenger rail service, including the commitment of any affected host-rail carrier to ensure the realization

of the anticipated benefits, preferably through a commitment by the affected host-rail carrier(s) to an enforceable on-time performance of passenger trains of 80 percent or greater;

- The favorability of the comparison between the level of anticipated benefits and the amount of Federal funding requested; and
- The applicant's contribution of a cost share greater than the required minimum of 20 percent.

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 like every other state, 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 were essentially the same as are being used with some exceptions from the University of Missouri study in 2007. All of these projects present a comprehensive and complete overview of the entire line and the needs at all places along the line. This project is in a small area that was 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 equal 13.5 percent of all delays on the line, so the spirit and intent of the project is well within the study's guidelines. The study itself has garnered great attention and continues to do so, and as the projects in the study are funded, it creates even greater support and continuing emphasis on all projects in the study being 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, this 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 by its contribution of 20 percent. 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 onto 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, but they are committed immediately to an 80 percent OTP once 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 service last year was 92%.

These amounts are commensurate with the overall benefits in that the Amtrak benefits will be immediately apparent once in place, and 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

Provide a detailed response for how the FD/Construction project will be carried out in the text fields and tables provided. The tables in this section are unlocked; applicants can add rows, as necessary, for additional tasks. If you reference a supporting document, it must be listed in Section G.2.

- (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 rational 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's 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.

- (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 allow sorting 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:

- 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 specific elements of the project to be completed to FD, or constructed in accordance with the FD that was either provided to FRA during the application process or completed as a part of this grant. In the table provided, list the deliverables, both interim and final, which 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 (e.g., 36). For total project duration, reference Section C.4.

	Task	Task Duration
1	FD/ Engineering	12
2	Construction	12
	Total project duration	24

**(4) Project Cost Estimate/Budget.** Provide a high-level cost summary of FD/Construction work in this section, using Appendix 3 of the NOFA and the HSIPR Individual Project Budget and Schedule form 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 in Section C of this application. 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 this application, the lesser amount will be considered as the Federal funding request. Round to the nearest whole dollar when estimating costs.

*The total estimated FD/Construction project cost 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 FD/Construction project shall be borne by the Grantee.*

FD/Construction Project Overall Cost Summary			
#	Task	Cost in FY11 Dollars	
1	FD/Engineering	\$ 831,000	
2	Construction	\$ 4,775,900	
	Total FD/Construction project cost	\$ 5,606,900	
Federal/Non-Federal Funding			
		Cost in FY11 Dollars	Percentage of Total Activities Cost
	Federal funding request	\$ 4,485,520	80 %
	Non-Federal match amount	\$ 1,121,380	20 %
	Total FD/Construction project cost	\$ 5,606,900	100 %

## 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 you are addressing (e.g., Section E, Question 3).** 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 using a logical naming convention or that an active link is provided with your application.

Document Title	Filename	Description and Purpose
Categorical Exclusion Worksheet	CE Hermann.doc	Describes environmental concerns.
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	Identifies 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 Interim Director	1Intro LETTER signed by KKeith.pdf	Cover letter for the HSIPR projects signed by MoDOT Interim Director
Project Overview	2Project Overview.pdf	Introduction to HSIPR projects for 2010
HSIPR Projects Division of Costs	3HSIPR RAIL PROJECTS DIVISION OF COSTS July 2010.pdf	HSIPR Projects Division of Costs
Project Map and Partner Signature Map	4Project Map and Partner Signature Map.pdf	Detailed project map and same map with signatures of support
Governor’s MOU	5Multi-StateGovernorsMOUSigned.pdf	Signed copy of Multi-State Governors’ MOU
States for Passenger Rail High Speed Rail Corridors	6US Federally Designated High Speed Rail Corridor Map.pdf	US Federally Designated High Speed Rail Corridor Map
Letters of Support	7Complete Letters of Support-reduced.pdf	Letters of Support
Rail Capacity Analysis I & II	8Rail Capacity Analysis Reports I and II.pdf	Rail Capacity Analysis Reports I and II
2009 MERIC Analysis Report	9MERIC HSIPR Statewide and Longterm Impacts 2009.pdf	HSIPR Statewide and Longterm Impacts 2009 study prepared by MERIC
2010 MERIC Analysis Report	10MERIC HSIPR Economic Impacts of Terminal RR.pdf	HSIPR Economic Impacts of Terminal RR study prepared by MERIC
MO Passenger Rail Schedule	11MO Passenger Rail Schedule.pdf	Missouri Passenger Rail Schedule
MO Intercity Bus Stops	12Intercity Bus Stops.pdf	Missouri Intercity Bus Stops
STIP 2011-2015 and East West Gateway Support Letter	13STIP 2011-2015 plus East West Gateway Support Letter.pdf	HSIPR Projects on MoDOT’s 2011-2015 STIP to include support letter from East West Gateway
Amtrak-MoDOT MOU	14Amtrak-MoDOT MOU.pdf	Amtrak-MoDOT MOU
Amtrak Operating Agreement	15Amtrak Operating Agreement.pdf	Amtrak Operating Agreement
UP-MoDOT MOU	16UP-MODOT MOU signed copy.pdf	UP-MoDOT MOU
Terminal-MoDOT MOU	17Terminal-MoDOT MOU.pdf	Terminal-MoDOT MOU

'96 Agreement	18-1996 agreement between MODOT and UP to preserve 3 more slots.pdf	1996 agreement between MODOT and UP to preserve 3 more slots
UP Track Layout	19UP Track Layout.pdf	UP Track Layout
Shell Spur Agreement	20Shell Spur Agreement.pdf	Shell Spur Agreement

## H. Checklist of Application Materials

Use this section to determine the thoroughness of your FD/Construction application prior to submission.

Documents	Format
<b>1. Application Form</b>	
<input checked="" type="checkbox"/> HSIPR Individual Project Application Form – FD/Construction	Form
<b>2. Budget and Schedule Form</b>	
<input checked="" type="checkbox"/> HSIPR Individual Project Budget and Schedule Form	Form
<b>3. OMB Standard Forms</b>	
<input checked="" type="checkbox"/> SF 424: Application for Federal Assistance	Form
<input checked="" type="checkbox"/> SF 424A: Budget Information-Non Construction	Form *
<input checked="" type="checkbox"/> SF 424B: Assurances-Non Construction	Form *
<input checked="" type="checkbox"/> SF 424C: Budget Information-Construction	Form **
<input checked="" type="checkbox"/> SF 424D: Assurances-Construction	Form **
<b>4. FRA Assurances Document</b>	
<input checked="" type="checkbox"/> FRA Assurances Document (See Section 4.2.4 of the NOFA)	Form
<b>5. Project Development Supporting Documentation</b>	
<input checked="" type="checkbox"/> Project Planning Documentation (See Section 4.2.5 of the NOFA)	No Specified Format
<input checked="" type="checkbox"/> Preliminary Engineering (PE) Documentation (See Section 4.2.5 of the NOFA)	No Specified Format
<input checked="" type="checkbox"/> NEPA Documentation (See Section 4.2.5 of the NOFA)	No Specified Format
<b>6. Project Delivery Supporting Documentation</b>	
<input checked="" type="checkbox"/> Project Management Documentation (See Section 4.2.6 of the NOFA)	No Specified Format
<input checked="" type="checkbox"/> Financial Planning Documentation (See Section 4.2.6 of the NOFA)	No Specified Format
<input checked="" type="checkbox"/> System Safety Plan (See Section 4.2.6 of the NOFA)	No Specified Format
<input checked="" type="checkbox"/> Railroad and Project Sponsor Agreements (See Section 4.2.6 of the NOFA)	No Specified Format
<b>7. Optional Supporting Documentation</b>	
<input checked="" type="checkbox"/> Other Relevant and Available Documentation (See Section 4.2.7 of the NOFA)	n/a

\* These documents are required for FD/Construction projects that include investments that are not construction activities.

\*\* These documents are not required for FD/Construction applications that only include investments that are not construction activities.

**PRA Public Protection Statement:** Public reporting burden for this information collection is estimated to average 32 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for this information collection is **2130-0583**.