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.

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 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.

<table>
<tr><td colspan="2">(1) Name the submitting agency:
Missouri Department of Transportation</td><td colspan="3">Provide the submitting agency Authorized Representative name and title: Rodney Massman, Administrator of Railroads</td></tr>
<tr><td>Address 1: P.O. Box 270</td><td>City: Jefferson City</td><td>State:
MO</td><td>Zip Code:
65102</td><td>Authorized Representative telephone:
(573) 751-7476

Authorized Representative email:
Rodney.massman@modot.mo.gov</td></tr>
<tr><td colspan="2">Provide the submitting agency Point of Contact (POC) name and title (if different from Authorized Representative):

Rodney Massman, Administrator of Railroads</td><td colspan="3">Submitting agency POC telephone: (573) 751-7476

Submitting agency POC email:

rodney.massman@modot.mo.gov</td></tr>
<tr><td colspan="5">(2) List out the name(s) of additional State(s) applying (if applicable):
N/A</td></tr>
</table>

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)
Estimate from UP	07/2010	☒	

(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)
NEPA Documentation			
☐ Categorical Exclusion Documentation (worksheet)	/	☐	
☒ Environmental Assessment—It is MODOT's expectation that an EA will be required on this project.	See attached	☐	
☐ Final Environmental Impact Statement	/	☐	
Project NEPA Determination			
☐ Categorical Exclusion	/	☐	
☐ Finding of No Significant Impact	/	☐	
☐ Record of Decision	/	☐	

(5) Select and describe the operational independence of the proposed FD/Construction project.[1] 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:

The project will provide greater train routing possibilities with the current structure in the Jefferson City yard. If the concurrent application for a new Jefferson City station is granted, the project will also rovide greater access and more fluid transfers from track to track on the station approach.

[1] 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.

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 – Jefferson City 3rd Mainline

(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.

- ☒ ARRA – Track 1
- ☐ ARRA – Track 2
- ☐ FY 2009 – Track 4
- ☐ FY 2009 Residual
- ☐ FY 2010 Service Development Program
- ☒ FY 2010 Individual Project – PE/NEPA
- ☒ FY 2010 Individual Project – FD/Construction
- ☐ 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: *30*

(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
$8,665,900.00	$2,166,500.00	$10,832,400.00	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[2]	Type of Funds	Dollar Amount	% of Total Project Cost	Describe Any Supporting Documentation to Help FRA Verify Funding Source
Union Pacific Railroad	Priv.	Cmtd.	Priv.	$ 2,166,500.00	20%	SOA
Sum of Non-Federal Funding Sources				$ 2,166,500.00	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.

Project is located at Jefferson City, (Cole County) Missouri, Jefferson City Sub MP 125 through MP 126.4 entirely within the state of Missouri in an area known as the Jefferson City yard on the Union Pacific's Jefferson City subdivision. It is also in close proximity to the Jefferson City Amtrak station, which resides at one end of the yard.

(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.

[2] 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 increase fluidity through Jefferson City by maintaining two main lines for bi-directional freight trains when Amtrak is stopped at the Jefferson City station. This will extend track number one by 1,400 feet and will essentially create a third main line, allowing Amtrak to easily access the Jefferson City station. This will also increase passenger comfort by not stopping the train before it arrives at the Jefferson City station in order to get the train on the correct unloading track. This will also allow Union Pacific more options to interchange trains when more than two freight trains are in the area.

Pursuant to MoDOT's stewardship goals and tangible result of being environmentally responsible, MoDOT Design's environmental staff, in coordination with Union Pacific Railroad, will review the project to determine the appropriate environmental classification/level of NEPA documentation. This project will have minimal social, economic or environmental impacts; however, due to potential impacts and the proximity of the project to the Missouri River, a Section 404 Clean Water Act individual permit will more than likely be required. In addition, the project will likely require an Environmental Assessment. Please refer to the following website for MoDOT's Engineering Policy Guide identifying the detailed steps for the PE/NEPA process

http://epg.modot.mo.gov/index.php?title=127.14_National_Environmental_Policy_Act_(NEPA)_Classification_and_Documents. An application for PE/NEPA work is being simultaneously filed with this construction application.

When completed, the project will be noted as having a positive impact on the passenger service's on-time performance. The Jefferson City yard is primarily the only major yard between Kansas City and St. Louis. It is a crew-change point for UP and causes difficulties in the area due to the stopping and starting freight trains, which are mostly long coal trains. The Jefferson City Amtrak station is also at the end of the yard's east side, which complicates getting the train to the station due to the coal trains not only in terms of congestion but also being on the correct track for the station. This project will also complement the additional application filed on the new Jefferson City Amtrak station as these improvements will help usher trains to and from the station in a more fluid and less problematic way.

This project takes advantage of the area's existing track by adding new tracks and switches that achieve the functionality of an entire new length of track without a costly investment that in most cases would require a long length of new track to achieve the same results.

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

- ☐ Communication, signaling, and control
- ☐ Electric traction
- ☐ Grade crossing improvements
- ☒ Major interlocking
- ☐ Positive Train Control
- ☐ Rolling stock acquisition
- ☐ Rolling stock refurbishments
- ☐ Station(s)
- ☐ Structures (bridges, tunnels, etc.)
- ☐ Support facilities (yards, shops, administrative buildings)
- ☒ Track rehabilitation and construction
- ☐ Other (please describe)

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

- ☐ Additional service frequencies
- ☒ Service quality improvements
- ☐ Increased average speeds/shorter trip times
- ☒ Improved operational reliability on existing route
- ☒ Improved on-time performance on existing route
- ☐ 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 annual 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
	35	**1**	**1**
Indicate the anticipated fiscal year.	N/A	FY13	FY18

(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[3]	**Scheduled Trip Time** (round-trips, 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	80%

[3] Frequency is measured in daily round-trip train operations. One daily round-trip operation should be counted as one frequency.

(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*)
PE/NEPA compliance	Preliminary evaluation of environmental impacts.	☐	*06/2011*	*07/2012*
Cost Estimate	Updated costs of project costs.	☒	*03/2011*	*07/2011*

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 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[4] within Project Boundaries
		Passenger	Freight		
Freight	Union Pacific Railroad	65	55	1	50
Intercity Passenger	Amtrak	65	55	1	4

[4] 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.[5] 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	20%	20%

[5] 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.

Pursuant to MoDOT's stewardship goals and tangible result of being environmentally responsible, MoDOT Design's environmental staff, in coordination with Union Pacific Railroad, will review the project to determine the appropriate environmental classification/level of NEPA documentation. This project will have minimal social, economic or environmental impacts; however, due to potential impacts and the proximity of the project to the Missouri River, a Section 404 Clean Water Act individual permit will more than likely be required. In addition, the project will likely require an Environmental Assessment. Please refer to the following website for MoDOT's Engineering Policy Guide identifying the detailed steps for the PE/NEPA process
:http://epg.modot.mo.gov/index.php?title=127.14_National_Environmental_Policy_Act_(NEPA)_Classification_and_Documents. An

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.

When completed, the project will be noted as having a positive impact on the passenger service's on-time performance. The Jefferson City yard is primarily the only major yard between Kansas City and St. Louis. It is a crew-change point for UP and causes difficulties in the area due to the stopping and starting freight trains, which are mostly long coal trains. The Jefferson City Amtrak station is also at the end of the yard's east side, which complicates getting the train to the station due to the coal trains not only in terms of congestion but also being on the correct track for the station.

This project takes advantage of the area's existing track by adding new tracks and switches that achieve the functionality of an entire new length of track without a costly investment that in most cases would require a long length of new track to achieve the same results.

(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 corridor is already a designated high-speed rail corridor (see attached U.S. map).

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 increase fluidity through Jefferson City by maintaining two main lines for bi-directional freight trains when Amtrak is stopped at the Jefferson City station. This will extend track number one by 1,400 feet and will essentially create a third main line, allowing Amtrak to easily access the Jefferson City station. This will also increase passenger comfort by not stopping the train before it arrives at the Jefferson City station in order to get the train on the correct unloading track. This will also allow Union Pacific more options to interchange trains when more than two freight trains are in the area.Many passengers now complain when the train is stopped in the yard because of freight train traffic, and they are able to see the station but cannot access it until the freight trains move.

This project will provide benefits in getting passengers to the Jefferson City station in a timely and effective manner. Passenger numbers increased on the line 10 percent from fiscal year 2008 to 2009, and by nearly the same percentage in 2010 and again in2011. It will also help sort the trains in the Jefferson City yard. These trains must now contend with each other in attempting to effectively get the Amtrak train to the station and the area's coal trains through the yard.

One of the major safety issues addressed will be to ensure the Jefferson City passengers can now always board the train on track 1, which is closest to the station. After the St. Louis and Kansas City stations, Jefferson City is a major point for detraining and boarding, and is an extended stop. The Jefferson City location is often noted on the Amtrak delay reports regarding passenger-boarding delays as one of the most often cited reasons for delays due to passengers. This project will lessen the delays by getting the train more quickly to the station and on the correct track – both changes that improve the overall Amtrak on-time performance.

There is no commuter service on the line. However, freight trains will benefit as well by keeping them sorted correctly to stay on the appropriate tracks away from the station when Amtrak is in the area. Another benefit is to also keep freight trains moving when now they must stop in order to permit Amtrak or other freight trains to access the correct tracks. There are also environmental benefits in reducing idling time in the Jefferson City yard for the same reasons in that trains will no

longer stop and wait for track time on other tracks.

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 project improvement costs. This is a complementary project to the many other projects on the line and was also previously applied for during the 2009-2010 round of applications. The improvements that are beneficial to both freight and passenger as a result of this project is because of the presence of the Amtrak station and the yard in essentially the same configuration of track. Operational benefits are good for the yard configurations when implemented and will provide a major boost to sort ability in and out of the Jefferson City yard and Jefferson City 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 the area's Amtrak trains Its signing of the SOA also shows this great commitment. UP also supported the effort to apply for this project in the three previous applications, which shows its commitment and focus to this effort to make the Jefferson City yard and Amtrak approach track a fully functional and effortless endeavor.

(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.

The project's main goal is to remove a bottleneck from the *Missouri River Runner* Amtrak route as outlined in a previous University of Missouri study. This project takes advantage of the existing track by adding new tracks and switches to achieve the functionality of adding an entirely new track without a costly investment. When completed, it will have a positive impact on passenger service on-time performance and passenger experience as it will eliminate the need to stop eastbound trains two miles outside of the city, which occurs often and is frustrating for passengers. This project will also allow for Union Pacific to more easily sort trains as they enter the yard.

In addition, this project is expected to decrease overall wait times for both passenger and freight trains traveling on the UP line. By reducing wait times, the amount of fuel wasted by unnecessary engine idling will also decrease. Based on the reduction in idling, emission reductions for the criteria pollutants of NOx, CO and PM can be calculated. As a diesel engine also emits CO2, reducing idling will also cut CO2 emissions. However, at this time the U.S. Environmental Protection Agency has not released a guidance document on how to calculate CO2 emissions and reductions for diesel train engines.

Reducing the emissions of NOx, CO and PM will also result in environmental benefits to the surrounding area. Although the Jefferson City yard project is located in an attainment area for all three of these criteria pollutants, localized impact to all aspects of the environment including wildlife, nearby citizens, vegetation and crops will be reduced. Diesel exhaust is high in various types of PM, some of which are classified as hazardous air pollutants (considered to be hazardous to human health). The health impacts of fine particulates are well documented and include decreased lung function, aggravation of asthma, irregular heartbeat and premature mortality in those who suffer from cardiac and lung disease. NOx is a major constituent of diesel emissions and is one of the two pollutants that combine to form ozone, another criteria pollutant that has a well documented negative impact on the environment, specifically vegetative and human health.

Emission reduction calculations were performed for NOx, CO and PM to assess the environmental benefits of adding the third mainline to the Jefferson City yard. Using a modeled delay reduction for both Amtrak and Union Pacific trains, average fuel use per engine at idle, and USEPA emission factors relating pollutant mass emissions to each gallon of fuel consumed, emission reductions were estimated. Emissions of NOx are estimated to decrease 312.36 pounds per year after completion of the track project. CO emissions would decrease by 49.62 pounds per year. PM emissions would decrease by 10.86 pounds per year. These emissions estimates were only calculated for emission reductions in the Jefferson City yard. If trains are currently held on the lines due to congestion within the yard, and this information is recorded as line delays, these reductions in idling were not included in the fuel and emission reduction calculations.

Allowing MoDOT to complete this third mainline track will confirm that freight and passenger rail travel improves environmental quality, maintains bi-directional freight operations and reduces oil dependency. The project will have a positive affect on both 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.

There are other more expensive options to consider for solving this problem, such as a complete new mainline track through the area. However, the changes proposed through this project application are relatively small in terms of new track. This project takes advantage of the area's existing track by adding new tracks and switches that achieve the functionality of an entire new length of track without a costly investment.

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 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.)

The Jefferson City yard third mainline track project would increase fluidity through the yard by maintaining bi-directional freight operations with Amtrak operations. Project construction is located in the economically distressed area of central Missouri. The total project investment is $10.8 million, assuming the application for PE-NEPA is granted.

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

Statewide Impact of Jefferson City Yard Third Mainline Project as of August 2009

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

0.02 : 1.00 in new net general revenues totaling $0.228 million,

0.46 : 1.00 in new personal income totaling $4.464 million,

0.61 : 1.00 in new value-added (GSP) totaling $5.927 million, and

1.02 : 1.00 in new economic activity (output) totaling $9.873 million.

On average each year, the project creates:

35 new jobs annually (23 direct/ 12 indirect) paying an average wage of $32,945 per job,

$ 0.08 million in new net general revenues annually,

$ 1.49 million in new personal income annually,

$ 1.98 million in new value-added to the economy annually, and

$ 3.29 million annually in new economic activity.

(See the attached MERIC report.)

As materials are made, bought and consumed for this project, a need for additional resources will occur that 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.

(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.

There is no known funding risk if approved per the cost-sharing terms with Union Pacific, the MOU and the SOA. The project can be completed in a one-year construction timeframe assuming an 18-month PE-NEPA/ final design schedule beforehand. Therefore, barring extreme unforseen 'acts of God,' such as earthquakes, tornadoes, 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 the first round of HSIPR applications in 2009.

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 November 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. In addition, the SOA was signed in March 2011.

Both the 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 were actually designed using part of the monies from the same Shell Spur grant. The third mainline construction is expected to be similar in scope and outcome to the Shell Spur siding. MoDOT has been extensively involved in all areas of the siding project including design, pre-bid process and daily updates with the contractor.

PE/NEPA for all projects will be completed relatively quickly upon grant award should the application be granted, and the projects can be moved to FD/Construction immediately upon completion. 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 and the SOA 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.

(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 numbers have made it a route with a thriving future. Although it is funded by the state's general revenue and even though Missouri has had an extremely tight budget the last few years, there is no reason to expect 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 application were essentially the same as are being used with some exceptions from the 2007 University of Missouri study. 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 Sedalia and Jefferson City needing improvements that when totalled equal 16.7 percent of all total delays on the line (the largest amount of delays), so the spirit and intent of the project is well within the study's guidelines. The study has garnered great attention and continues to do so, and as the study's projects 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 many trains parking and proceeding through the yard for miles in either direction, this will create an excellent service method for trains to use in order to quickly reach the Jefferson City station. It is estimated that a substantial portion of the freight trains now using the mainline that have to park will be diverted to the new mainline at the times the Amtrak trains are in the area.

The UP is commited by its MOU and SOA to the succcess of this project and 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 and move them onto the new mainline, thereby making the solution for all parties better and more comprehensive. UP is also showing its commitment in that last year's overall on-time performance was 92 percent. Not only is the UP committed to at least an 85 percent on-time performance (OTP) when this project and several other projects are completed in the immediate area of central and western Missouri per the MODOT-UP MOU of 2009, but 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. UP will provide the remaining 20 percent of the cost.

These amounts are commensurate with the overall benefits in that the Amtrak benefits will be immediately apparent when in place. The freight benefits will be realized over a number of years and along with future projects for Missouri KC to St. Louis service for passenger trains. 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. In the future, as the frequencies in freight train travel and Missouri passenger rail service increase, 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 third mainline in the Jefferson City yard will help with sorting trains correctly as they approach the Jefferson City Amtrak station and the Jefferson City yard. It will also help in moving crews around and out of the Union Pacific crew change point, which is just to the east of the Amtrak station. It will essentially create a third mainline that will bring freight trains through the city on a new track that will get them in and out of the city with ease even when Amtrak is stopping at the station.

(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
JC 3rd Mainline Aerial Photo	Jeff_City_Third_Main_Line_Aerial_Locate _07_26_10.pdf	Aerial photo of project location.
JC 3rd Mainline Estimate	Jeff_City_Third_Main_Estimate.pdf	Estimate of project costs.
JC Location Plan Sheet	Jeff_City_Third_Main_Line_Plan_Sheet.pdf	Plan sheet that identifies location of project.
JC Subdivision	Jeff_City_Subdivision_Capacity_07_21_10.pdf	Capacity of Jefferson City Subdivision
Introductory letter from MoDOT Director	1lntro 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	9MuIti - StateGovernorsM0USigned.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 shovel-ready project. There will be no donated land from the railroad in order to construct the project.

A University of Missouri study (attached) identified this project as a bottleneck in the system. When completed, the project is noted as having a positive impact on the passenger service's on-time performance. The Jefferson City yard is primarily the only major yard between Kansas City and St. Louis. It is a crew-change point for UP and causes difficulties in the area due to the stopping and starting trains, which are mostly long coal trains. The Jefferson City Amtrak station is also at the end of the yard's east side, which complicates getting the train to the station due to the coal trains.

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 increase fluidity through Jefferson City by maintaining two main lines for bi-directional freight trains when Amtrak is stopped at the Jefferson City station. This will extend track number one by 1,400 feet and will essentially create a third main line, allowing Amtrak to easily access the Jefferson City passenger station. This will also increase passenger comfort by not stopping the train before it arrives at the Jefferson City station in order to get the train on the correct unloading track. This will also allow Union Pacific more options to interchange trains when more than two freight trains are in the area.

(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.

MoDOT will coordinate with Union Pacific Railroad to obtain all necessary information for completing a thorough environmental evaluation of the project location. This will be accomplished by the grant of the simultaneous application for PE-NEPA for the same project. The project study area is the Jefferson City yard extending from the Jefferson City Amtrak station on the east side through the yard to the west.

Based upon MoDOT's and the railroad's initial review of the project's environmental impacts, this project will have minimal social, economic or environmental impacts; however, due to potential impacts and the proximity of the project to the Missouri River, a Section 404 Clean Water Act individual permit will more than likely be required. In addition, the project will likely require an Environmental Assessment. Union Pacific Railroad has completed PE/NEPA requirements satisfactorily on several other projects in coordination with MoDOT, so the fact that PE-NEPA must be completed before the construction application is granted is not an impediment to the project being finalized.

When completed, the project is noted as having a positive impact on the passenger service's on-time performance. The Jefferson City yard is primarily the only major yard between Kansas City and St. Louis. It is a crew-change point for UP and causes difficulties in the area due to the stopping and starting trains, which are mostly long coal trains. The Jefferson City Amtrak station is also at the end of the yard's east side, which complicates getting the train to the station due to the coal trains.

The project will greatly benefit Amtrak in getting trains to the station. It will eliminate the need to stop eastbound trains approximately 2 miles west of Jefferson City, which is now commonplace and frustrating for passengers. If the coal trains are sorted on the proper tracks, there will be no interference with Amtrak trains. There will also be environmental benefits as a result of decreasing the trains' idling times while waiting for a second or third track to become available.

This project takes advantage of the area's existing track by adding new tracks and switches that achieve the functionality of an entire new length of track without a costly investment. Union Pacific Railroad has already provided an estimate of costs for project construction, and it is attached.

(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: This project is located at Jefferson City, (Cole County) Missouri, Jefferson City Subdivision, MP 125 through MP 126.4. This will extend track number one by 1,400 feet and will essentially create a third main line, allowing Amtrak to easily access the Jefferson City station.

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.

Completing the remainder of the environmental work (if the simultaneous application is granted) is the next step. MoDOT plans to achieve environmental compliance with FRA's permission through procedures similar to the following. In conducting the Environmental Assessment, the following steps will or have already occurred.

- Identify project's purpose and need, and alternates being considered
- Early consultation, coordination with agencies with jurisdiction by law or with special expertise to specific resources
- Draft document development
- Hold public hearing, if necessary
- Agency and internal review of draft document
- Identification of preferred alternatives, if necessary
- Final document development
- Public, agency and internal review of final document
- Letter to federal agency to accompany FONSI that states any changes to preferred alternate
- Develop Finding of No Significant Impact (FONSI)
- Federal approval with a signed FONSI

The expectation is that this required environmental work would be completed quickly in time for the project to move forward to construction as soon as possible.

MoDOT, in coordination with Union Pacific Railroad, (when PE-NEPA is complete) 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 one year to complete construction, 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	Track Drawing Plan Sheets, PE-NEPA and estimate	Engineering
2	Stakeholder Construction Agreement, Tri-Party Service Outcomes Agreement, Grant Agreement with FRA	Agreements for obligation of funds
3	Field survey report and plans and profiles	Engineering
4	Utility identification and location	Engineering

(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/ PE-NEPA	June 2011	**to**	November 2012
2	Construction	December 2012	**to**	December 2013
	Total project duration	*30 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	Engineering	$ 930,000
2	Construction	$ 9,902,400
	Total FD/Construction project cost	$10,832,400
Federal/Non-Federal Funding		
		Cost in FY11 Dollars / Percentage of Total Activities Cost
	Federal funding request	$ 8,665,900 / 80 %
	Non-Federal match amount	$ 2,166,500 / 20 %
	Total FD/Construction project cost	$ 10,832,400 / 100 %