Narrative Application Form – Individual PE/NEPA 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 need for the proposed PE/NEPA project and the underlying 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 underlying project and the proposed PE/NEPA activities are located.

In 1989, the Texas legislature created the Texas High-Speed Rail Authority (THSRA) as a separate state agency to determine whether high-speed rail in Texas was feasible. THSRA awarded a 50-year franchise to a consortium of businesses in 1991. Although the franchise agreement was rescinded in 1994 due to funding issues, the initiative demonstrated the potential for high-speed rail by showing that the demand existed for high-speed train service between Texas' largest cities.

The motivation and need that prompted the state to pursue high-speed in the 1980s and 1990s still exists. Dallas-Fort Worth and Houston are not only the largest metropolitan areas in Texas, but they are also the 4th and 6th largest in the country. Amtrak does not provide direct intercity passenger rail service between the areas of Dallas-Fort Worth and Houston. The goal of the Dallas-Fort Worth to Houston Core Express Passenger Rail project is to provide high-speed passenger rail services between these two large metropolitan areas within the state of Texas.

In November 2010, the Texas Transportation Commission approved the Texas Rail Plan that included initiatives for the Dallas-Fort Worth to Houston HSIPR project. Multiple route alternatives have been identified and conceptual engineering performed for the Dallas-Fort Worth to Houston corridor. The route alternatives include an existing rail corridor owned by UPRR, an existing BNSF corridor, and a new green field route. The analysis of the route alternatives has consisted of determining route miles; route location relative to population areas; estimated costs; and capacity of the existing freight lines and participation from the owning railroad. Conceptual engineering efforts also included an analysis of the existing infrastructure to estimate the investment needed to implement high speed rail service (e.g., improvements such as curve reductions, signal upgrades, grade separations, etc.).Preliminary planning and conceptual level engineering efforts performed by BNSF revealed that there are no fatal flaws for the implementation of high speed intercity passenger service on the BNSF Dallas to Houston route through Teague. Ongoing conceptual engineering on the UPRR route and the new green field route have not identified any fatal flaws to date.

Federal funding will be used to complete necessary NEPA documentation and preliminary engineering for a new core express high-speed passenger rail service along a corridor between Dallas-Fort Worth and Houston.

(2) Scope of Activities. Clearly describe the scope of the proposed PE/NEPA activities and identify the general objective and key deliverables.

(2a) General Objective. Provide a general description of the PE/NEPA work to be accomplished through this grant, including PE/NEPA activities, the underlying project study area, 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 proposed PE/NEPA activities and underlying project.

The activities to be funded under the HSIPR program and related deliverables include developing a NEPA document and conducting preliminary engineering for the core express passenger rail project from Dallas-Fort Worth to Houston.

- NEPA Documentation – Develop a NEPA document that will evaluate route alternatives, termini of the alternatives, and level of service at the project level; determine the potential social, economic and environmental effects of the proposed route alternatives; and develop appropriate mitigation measures that can be used to offset effects of the project.
- Preliminary Engineering – The preliminary engineering builds on the conceptual engineering in order to evaluate alternatives, identify a specific design alternative for project implementation, and demonstrate that project's feasibility.

The general location of the project is within the state of Texas between the metroplex of Dallas-Fort Worth and Houston parallel to the I-45 corridor and along two existing freight rail corridors. At this time there is not direct passenger rail service between these two locations. However, they are connected indirectly with Amtrak's Sunset Limited route, a three day a week service, and the Texas Eagle route which runs daily.

Entities involved in the project's planning process include freight railroads (BNSF Railway, Union Pacific Railroad, and Houston Belt & Terminal Railway), National Railroad Passenger Corporation (Amtrak), FRA, TxDOT, and other regional and local stakeholders such as Houston METRO, Dallas Area Rapid Transit (DART), Trinity Railway Express (TRE), the Gulf Coast Rail District (GCRD), North Central Texas Council of Governments (NCTCOG), and the Houston – Galveston Area Council (H-GAC).

Completion of the preliminary engineering and NEPA documentation will result in the identification of a preferred alternative; the identification of the environmental effects of the preferred alternative and the mitigation measures required to offset the effects of the project; and an estimated probable cost of the project. This will allow the project to move into final design, with the ultimate goal of construction of a core express high speed rail facility between the two largest metropolitan areas of Texas.

TxDOT has the authority to enter into comprehensive development agreements (CDA) or public private partnerships for rail projects. TxDOT intends to pursue a long term Public Private Partnership for operation of the Houston to Dallas High Speed Rail project, which will require a standard of operating service in excess of 90% reliability.

(2b) Description of Work. Provide a detailed description of the work to be accomplished through this grant by task 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.

PE/NEPA

The purpose of the NEPA document and the preliminary engineering is to further evaluate the potential alternative routes discussed in the Project Planning Documentation for this application and their potential impacts on the human and natural environment from Dallas-Fort Worth to Houston in order to determine a preferred route that meets the required service levels. It is TxDOT's intent to complete these documents in preparation for submittal of a future Final Design and Construction application(s) contemplating a public-private partnership. The NEPA process will include an extensive public outreach effort, which will include identification of stakeholders, one-on-one meetings with affected railroads and property owners, and public meetings along the corridor. The NEPA documentation will establish the purpose and need for the passenger service and evaluate potential social, economic and environmental impacts of various alternative routes for core express high-speed rail service. The analysis of impacts will follow FRA guidelines and regulations and include project level evaluations of each of the alternatives to air quality, water quality, noise and vibration, solid waste disposal, ecological systems, wetlands, threatened and endangered species, flood hazards and floodplain management, coastal zone management, use of energy resources, use of natural resources, aesthetic and design quality impacts, impacts on other modes of transportation, barriers to the elderly and handicapped, land use, impacts on the socioeconomic environment, environmental justice, public health, public safety, recreational opportunities, historical and cultural resources, use of 4(f) protected properties, and construction period impacts. Preliminary engineering will

build on the previously-completed conceptual design and includes schematic level plans, estimate, and schedule to further refine the conceptual design and to detail construction phasing, track geometry, at-grade roadway-rail crossings, maintenance and yard facilities, and potential upgrades to existing Amtrak stations in Houston and/or Dallas, the termini points of this project as shown in Route Alternatives Map listed in Section G.2, to accommodate additional core express service operations and their respective relationship with local commuter and transit operations such as TRE and DART in Dallas, and METRO in Houston. This further capacity and optimum connectivity analysis will be made a part of the NEPA alternatives evaluation process.

Project Coordination

The Grantee shall perform all tasks required for the project through a coordinated process, including, as appropriate, all railroad owners, operators, and funding partners within the project area. Under the cooperative agreement, FRA will participate in the project, as described in this statement of work. Below are stakeholders for the Dallas-Fort Worth to Houston HSIPR project:

- FRA
- TxDOT
- Union Pacific Railroad
- BNSF Railway
- National Railroad Passenger Corporation (Amtrak)
- Houston METRO
- Gulf Coast Rail District (GCRD)
- Trinity Railway Express (TRE)
- Dallas Area Rapid Transit (DART)
- North Central Texas Council of Governments (NCTCOG)
- Houston-Galveston Area Council (HGAC)

TxDOT is authorized to enter into a Comprehensive Development Agreement (CDA) for rail projects. Although this authority expires August 31, 2011, the Texas Legislature, which is currently in session, is considering the potential to extend that authority for 2 years. TxDOT is also investigating opportunities to pursue a long term Public-Private Partnership for operation of the Dallas-Fort Worth to Houston Core Express High-Speed Rail project. The US-Japan HSR Corporation is a potential candidate for this P3, having recently announced its interest, via discussions with the region's business leaders, in building a HSR route between Houston and Dallas. The company is a subsidiary of JR Central, the operator of the highest passenger volume HSR in the world.

Project Management

The Dallas-Fort Worth to Houston Core Express High-Speed Passenger Rail project will be managed by TxDOT personnel utilizing a procured consultant team with expertise in high-speed intercity passenger rail services. TxDOT will manage the program implementation and provide oversight to accomplish the goals of the program. Initiation of the program will not require agreements with any other key partners in the planning effort; those partners will be involved in the stakeholder groups.

(2c) Deliverables. Describe the work products of the project 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. This should include a first deliverable 1 – Detailed PE/NEPA Workplan and Schedule.

	Deliverable	Task
1	NEPA Document With Environmental Findings	NEPA Documentation
2	Schematic Level Plans	Preliminary Engineering
3	Probable Cost Estimate	Preliminary Engineering
4	Project Schedule	Preliminary Engineering

The major tasks with descriptions and deliverables are listed below:

NEPA Documentation

The NEPA document for the proposed new core express high-speed passenger service between Dallas-Fort Worth and Houston will be prepared for the FRA by the Texas Department of Transportation in partnership with stakeholders and communities expected to be served by the passenger rail service. The NEPA document will help TxDOT and FRA make decisions concerning the preferred alternative routes, the location of the termini and the level of service. The appropriate level of environmental documentation (Categorical Exclusion, Environmental Assessment, or Environmental Impact Statement) will be determined through coordination with FRA once preliminary right-of-way requirements have been established and will conform to FRA policies set forth in 64 FR 28545 (May 26, 1999). The tasks associated with the NEPA process would vary depending on the level of NEPA documentation required, but would generally consist of the following activities:

1. Scoping of the NEPA Document

a) Prepare the Draft Purpose and Need Statement

b) Prepare Public Involvement Plan

2. Document Preparation and Public Involvement

a) Conduct public outreach and agency coordination on alternatives identified in Section 5 – Project Planning Documentation, as submitted with this application

b) Prepare description of existing environment for each resource area

c) Conduct impact analysis for each resource area

d) Prepare preliminary Draft NEPA document

e) TxDOT and FRA review of the preliminary Draft NEPA document

f) Make determination of preferred alternative

g) Conduct public outreach and agency coordination on preferred alternative

h) Finalize the Draft NEPA Document

i) Conduct Public Hearing for the project

j) Prepare Final NEPA document

k) TxDOT and FRA review of the Final NEPA document

3. FRA Concurrence of Document

a) Collect and evaluate any comments on the Final NEPA Document

b) Identify mitigation requirements

c) Document FRA decision

Deliverables

The deliverables for this phase of the work will be a NEPA document with appendices and supporting documentation.

Preliminary Engineering

The preliminary engineering builds on the previous documentation to further develop the feasible alternatives for environmental evaluation. This also involves the refinement of the cost estimate and schedule for the project and the reduction of uncertainties and risk through further refinement of financial, operations, and public benefits . Tasks to complete the preliminary engineering for each feasible alternative will include:

1. Project Description – The physical condition and location of the railroad in the project area will be assessed, including bridges (rail and roadway); track, buildings (stations and maintenance facilities, etc), signal systems and interlocked detectors, switches, and derails; utility systems that may impact design and associated agreements; electrification systems, if

any; crossing system and traffic volume data; a safety and security management plan; and movement of commercial high and wide loads. In addition, development of construction staging/phasing and a workflow diagram in Work Breakdown Structure (WBS) format for tasks to implement the identified design will also be required for this task.

2. Project Cost Estimate – The construction cost estimates will be prepared in both the WBS and the HSIPR Standard Cost Category format and will include a detailed description of the methodology and assumptions used in developing the estimates, including values and sources of unit costs for labor, materials, and equipment; overhead costs; contingencies; credit value of salvaged materials; and cost escalation factors.
3. Project Schedule – The schedule will be organized in WBS format and will include phases of development for the implementation of the project. The schedule should illustrate the duration for each activity as well as the earliest date the task can commence and dependencies between tasks.
4. Design Documentation – Preliminary engineering drawings will be prepared for horizontal and vertical geometry, public at-grade roadway-rail crossings, passenger stations and appurtenances, maintenance facilities and yards, and other applicable drawings.
5. Design and Procurement Compliance – Compliance for all procurement will be demonstrated for FRA and American Railway Engineering and Maintenance-of-Way Association (AREMA) requirements through documentation and proposed plans. This includes items for project design, rolling stock, and railroad signaling/control systems.
6. Refinement of Planning Documentation – The completeness of the preliminary engineering will be demonstrated through revised versions of planning documentation, including descriptions of how project decisions and refinements are made within the preliminary engineering as well as the changes in results.

Deliverables

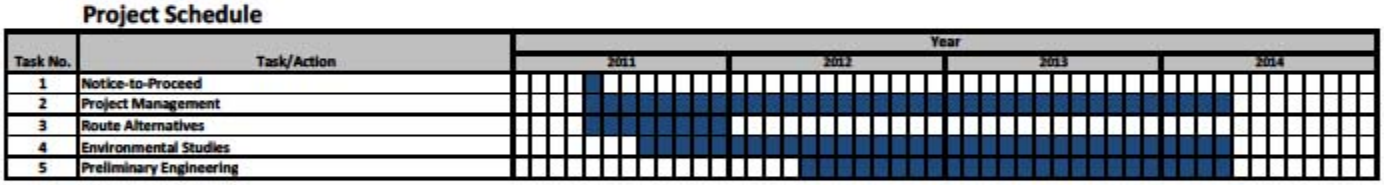
The deliverable will be schematic level plans and updated documentation for the feasible route alternatives meeting the need and purpose of the project and will contain the following information:

1. Workflow Diagram – The diagram will be in WBS format detailing, organizing, and presenting the elements of the project through the subsequent phases of development.
2. Physical Assessment – The assessment will evaluate condition and location of the railroad in the project area, including track, bridges, buildings, signal systems, utilities, at-grade crossings and their systems, and a safety and security management plan.
3. Plans – The preliminary engineering plans will include track geometry, preliminary design of at-grade crossings, stations, maintenance and yard facilities, and other required drawings.
4. Estimate – The estimate will provide a detailed description of the methodology and assumptions of the various components of the project including those identified with preliminary engineering plans and ancillary facility requirements to support core express high-speed passenger service, with contingencies no greater than 20%.
5. Train Schedules – The assessment will develop and evaluate train schedules based on initial start-up operations and at a 20 year outlook.
6. Schedule – Using WBS format, the schedule will detail each activity with its duration as well as critical path and dependencies.

(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	Route Alternatives	May 2011	to	Dec 2011
2	Environmental Documentation	Aug 2011	to	June 2014
3	Preliminary Engineering	May 2012	to	June 2014
	Total project duration	*36 Months*		

Project Schedule



(4) Project Cost Estimate/Budget. Provide a high-level cost summary of PE/NEPA activity in this section, using the PE/NEPA Application Package Instructions 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 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, 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 proposed PE/NEPA activities 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 PE/NEPA activities shall be borne by the Grantee.

PE/NEPA Project Overall Cost Summary		
#	**Task**	**Cost in FY11 Dollars**
1	NEPA Documentation	$ 9,531,250
2	Preliminary Engineering	$ 8,520,000
	Total PE/NEPA project cost	$ 18,051,250

Federal/Non-Federal Funding			
		Cost in FY11 Dollars	**Percentage of Total Activities Cost**
	Federal funding request	$ 18,051,250	100 %
	Non-Federal match amount	$ 00,000	00 %
	Total PE/NEPA project cost	$ 18,051,250	100 %