

# Narrative Application Form – Service Development Program 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 Service Development Program should be listed and described in Section H of this form. Questions about the HSIPR program or this application should be directed to the Federal Railroad Administration (FRA) at [HSIPR@dot.gov](mailto:HSIPR@dot.gov).

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

### A. Point of Contact and Applicant Information

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

<b>(1) Name the submitting agency:</b> Pennsylvania Department of Transportation		<b>Provide the submitting agency Authorized Representative name and title:</b> Robert Sharp, Division Chief Rural and Intercity Transportation		
<b>Address 1:</b> 400 North Street	<b>City:</b> Harrisburg	<b>State:</b> PA	<b>Zip Code:</b> 17120-0064	<b>Authorized Representative telephone:</b> (717)783-9461 ext.
<b>Address 2:</b> 6 <sup>th</sup> Floor				<b>Authorized Representative email:</b> rosharp@state.pa.us
<b>Provide the submitting agency Point of Contact (POC) name and title (if different from Authorized Representative):</b> ,		<b>Submitting agency POC telephone:</b> ( ) - ext. <b>Submitting agency POC email:</b>		
<b>(2) List out the name(s) of additional State(s) applying (if applicable):</b>				

## B. Eligibility Information

Complete the following section to satisfy requirements for application eligibility.

**(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
- Amtrak
- Group of States
- Amtrak in cooperation with a State or 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](http://GrantSolutions.gov) and list the supporting documentation under “Additional Information” in Section H.2 of this application.

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

**(2) Indicate the status of eligibility documentation including the date of issue and how documentation can be verified by FRA.**

Verify any completed Environmental Assessment (EA) or Final Environmental Impact Statement (EIS) document that demonstrates satisfaction of “Service NEPA” for the proposed Service Development Program by indicating if documents are submitted through [GrantSolutions.gov](http://GrantSolutions.gov) or referenced through an active public URL. Refer to the Service Development Program Application Package Instructions and Section 5.2 of the NOFA for more information. Project-level NEPA documents for component projects within the Service Development Program may also be included.

A NEPA decision document (Finding of No Significant Impact, Record of Decision, or Categorical Exclusion concurrence) is not required at the time of application, but must be 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. Any document not available online should be submitted with the application package and listed in Section H.2 of this application. If more rows are required, please provide the same information for additional documentation in a separate supporting document and list it in Section H.2 of this application.

### Service Development Planning

Documentation	Date of Issue (mm/yyyy)	Describe How Documentation Can Be Verified (choose one)	
		Submitted in GrantSolutions	Web Link
<input checked="" type="checkbox"/> Service Development Plan	10/2009	<input checked="" type="checkbox"/>	

### Service NEPA Documents

Documentation	Date of Issue (mm/yyyy)	Describe How Documentation Can Be Verified (choose one)	
		Submitted in GrantSolutions	Web Link
<input checked="" type="checkbox"/> Categorical Exclusion Documentation (worksheet)	4/2011	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Environmental Assessment (EA)	10/2009	<input checked="" type="checkbox"/>	
<input type="checkbox"/> Final Environmental Impact Statement (EIS)	/	<input type="checkbox"/>	

FRA Decision Documents for Service Development Programs			
Documentation	Date of Issue (mm/yyyy)	Describe How Documentation Can Be Verified (choose one)	
		Submitted in GrantSolutions	Web Link
<input type="checkbox"/> Finding of No Significant Impact (FONSI)	/	<input type="checkbox"/>	
<input type="checkbox"/> Record of Decision (ROD)	/	<input type="checkbox"/>	

Project NEPA Documents			
Documentation (select from the list of choices)	Date of Issue (mm/yyyy)	Describe How Documentation Can Be Verified (choose one)	
		Submitted in GrantSolutions	Web Link
Categorical Exclusion Documentation (worksheet)	4/2011	<input checked="" type="checkbox"/>	
Categorical Exclusion Documentation (worksheet)	4/2011	<input checked="" type="checkbox"/>	
Categorical Exclusion Documentation (worksheet)	4/2011	<input checked="" type="checkbox"/>	
Categorical Exclusion Documentation (worksheet)	4/2011	<input checked="" type="checkbox"/>	
Categorical Exclusion Documentation (worksheet)	4/2011	<input checked="" type="checkbox"/>	
	/	<input type="checkbox"/>	
	/	<input type="checkbox"/>	
	/	<input type="checkbox"/>	
	/	<input type="checkbox"/>	
	/	<input type="checkbox"/>	

**(3) Indicate the operational independence of the proposed Service Development Program.**<sup>1</sup> Refer to Sections 3.5.2 and 3.4.4 of the NOFA for more information about operational independence and applications related to previously-selected projects.

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

Briefly clarify the response:

The Keystone Corridor East High Speed Phase II Program is operationally independent and is critical to the future growth of the Keystone Corridor. The components of the projects, five key intercity interlockings and three station projects are needed to improve the operating speed, increase ridership, decrease travel time, and improve the state of good repair condition on the Corridor.

In addition to the overall program being operationally independent, each component of the Keystone Corridor East High Speed Phase II Program is operationally independent; however the program reaches full benefits when all components are completed as a comprehensive program. This program serves as Phase II of an overall plan designed to provide the biggest impact on the Corridor. Later phases will continue to improve the Corridor to become one of the premier high speed intercity passenger rail corridors in the United States.

<sup>1</sup> A Service Development Program is considered to have operational independence if, upon being implemented, 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. Additionally, a Service Development Program may demonstrate operational independence by resulting in tangible and measurable progress in implementing new or substantially improved high-speed or intercity passenger rail service.



## C. Corridor Service Overview

Respond to the following questions to help put this application into the context of the long-term vision and related work for the HSIPR corridor service.

**(1) Provide a brief narrative explaining how this Service Development Program relates to the long-term vision of the HSIPR corridor.** If the narrative includes acronyms, the first frequency should be spelled out.

The Keystone Corridor East High Speed Phase II program consists of eight critical projects that work together to reach the goal of reducing total trip time by 20 minutes, increasing the maximum operating speed to 125 mph, and increasing the average operating speed to upwards of 74 mph.

The Keystone Corridor was originally built by the Pennsylvania Railroad as a freight rail operation. It represented the pinnacle of rail transportation infrastructure in the early 1900s. Unfortunately, many components have been left behind in a bygone era and are far past their designed useful life. Over the last 50 years, the Keystone Corridor has changed to primarily a passenger rail service. It is owned and operated by The National Passenger Railroad Corporation (Amtrak), a federally controlled corporation. Amtrak's ownership makes the Keystone Corridor a critical federal asset that is in need of long-term investment. The outdated components cost significantly more to maintain than modern counterparts, and are a primary limiting factor in travel time, speed, and reliability. To meet the goal of the Keystone Corridor to provide critical mobility to Pennsylvanians in a fast, efficient, convenient, and reliable way, Keystone Corridor East High Speed Phase II is necessary.

In the 1970s and 1980s, the Keystone Corridor entered into a state of disrepair due to maintenance deferral and lack of Amtrak (owner) investment. The Commonwealth of Pennsylvania began providing operating subsidy for the line in the late 1980s to preserve service. In the late 1990s, the Commonwealth in partnership with Amtrak developed a Corridor Improvement program. Phase I of this Keystone Corridor Investment Program was completed in 2006 with continuous welded rail and restoration of electrified service. With these improvements service speeds reached 110 mph, becoming the second intercity passenger rail service in the United States to meet the federal definition for high speed rail. The Commonwealth also increased its subsidy to the line at that time and service was increased by 20%. Since the completion of the project in 2006, ridership on the Keystone Service has increased by more than 45%.

In 2010, the Pennsylvania Department of Transportation (PennDOT) undertook a comprehensive, inclusive, and publicly driven planning process to develop the Pennsylvania Intercity Passenger and Freight Rail Plan. At the conclusion of the process, several priority corridors were identified for investment and public support, most notable of which was the Keystone Corridor. The Plan identified several objectives for the Passenger Rail network in general, and the Keystone Corridor specifically:

- Achieve 125+ mph.
- Develop a sealed corridor.
- Reduce travel time to 1 hour 15 minutes on express trains.

With the help of FRA funding, the Keystone Corridor will be a publicly sealed corridor by the summer of 2013. The purpose of the Keystone Corridor East High Speed Phase II service development program is to accomplish the two remaining stated objectives for the corridor. Upon project completion, travel time will be reduced to 1 hour and 15 minutes on express trains (from 1 hour and 35 minutes) and to 1 hour 25 minutes on regular trains (reduced from 1 hour 45 minutes), train speeds will be increased to 125 mph, and the Keystone Corridor will have taken a large step in returning to a state of good repair.

PennDOT is focusing on investing in two key areas:

- 1) State of good repair/travel time savings, and
- 2) Station Rehabilitation.

PennDOT has committed to invest in the stations along the Keystone Corridor to bring them into compliance with the Americans with Disabilities Act (ADA) with State and Federal Transit Administration funding. The Phase I improvements completed in 2006 were also made with State and FTA funding. PennDOT is requesting that the FRA provide funding assistance to accomplish the Phase II state-of-good repair and travel time savings improvements. FRA provided comments on the Service Development Program (Track 2) submitted in October 2009 citing substantial commuter benefits without adequate and appropriate cost sharing. PennDOT believes that the FRA did not consider the investments currently being made through commuter-only funding sources in Stations that are owned by

Amtrak (a federally held corporation)

The service development program outlined in this application contains eight discreet components. They are:

- Zoo to Wynnefield Interlocking
- State Interlocking
- Paoli Interlocking
- Potts Interlocking
- Thorn Interlocking
- Middletown Station Reconstruction\*
- Mount Joy Station Reconstruction\*
- Coatesville Station Reconstruction\*

Each component of the service development program is critical to promoting the service goals of the Keystone Corridor. The projects are listed in priority order, with the exception of the three station reconstruction projects identified with an asterisk(\*). The Commonwealth of Pennsylvania, through PennDOT, has secured funding for the three station reconstruction projects and is committed to completing them without any FRA funding assistance. They are crucial to the success of the corridor program, and are listed in this application and supporting materials as part of the program to acknowledge the interdependence of the projects.

Attached to this application is the Keystone Corridor Service Development Plan (SDP), completed in fall of 2009. The SDP outlines all necessary projects required to return the Keystone Corridor to a state-of-good repair and reach the overall goal of the Keystone Corridor. Phase II has been selected as the most impactful projects for high speed intercity passenger rail transportation that can be initiated immediately upon grant award.

**(2) List other HSIPR projects or activities related to this Service Development Program application.** This includes any pending, selected, or awarded planning, PE/NEPA, FD/Construction, Service Development Programs or projects, and other FRA funded programs. The purpose of this list is to identify overlapping or complementary applications, projects, or programs. Click on the gray boxes to select from the list of choices for FRA Solicitation and Status. If the Solicitation is not included in the prepopulated list, select “Other” and type the name in the adjacent gray box within that field.

	Project, Activity, or Service Development Program Name <sup>2</sup>	FRA Solicitation	Federal Funding Amount <sup>3</sup> (in thousands of dollars)	Status	GrantSolutions Number and/or Award Number	Does the project contain activities or scope also proposed in this application?
1	PA-Keystone Corridor - Zoo to Caln ILs	ARRA-Track 1b	\$ 6,300	Selected	HSR2010000147 / Award #	No
2	PA - Keystone Corridor - ABS/Central Control	ARRA-Track 1b	\$ 1,350	Selected	HSR2010000145 / Award #	No
3	PA - Keystone Corridor - Grade Crossings	ARRA-Track 1a	\$ 18,000	Selected	HSR2010000143 / Award #	No
4	PA - Keystone Corridor - Keystone West	FY09-Track 3	\$ 750	Obligated	/ FR-IPR-0061-11-01-00	No
5			\$		GS # / Award #	
6			\$		GS # / Award #	
7			\$		GS # / Award #	
8			\$		GS # / Award #	

<sup>2</sup> If an applicant is submitting an Individual Project application proposing the same or similar scope as a component project contained in this Service Development Program application, the Individual Project application should be listed.

<sup>3</sup> Depending on the status of the Project, Activity, or Program record the amount obligated, awarded, or requested.



9			\$		GS # / Award #	
10			\$		GS # / Award #	
11			\$		GS # / Award #	
12			\$		GS # / Award #	
13			\$		GS # / Award #	
14			\$		GS # / Award #	
15			\$		GS # / Award #	
16			\$		GS # / Award #	
17			\$		GS # / Award #	
18			\$		GS # / Award #	

## D. Executive Summary

Answer the following questions about the proposed program.

**(1) Provide a clear, concise, and descriptive project name.** The Service Development Program name must consist of the following elements, each separated by a hyphen: (1) the State abbreviation; (2) the route or corridor name; and (3) a Service Development Program descriptor that will concisely identify the program’s focus (e.g., HI-Fast Corridor-Main Stem). Please limit the response to 100 characters.

PA-Keystone Corridor-Keystone Corridor East High Speed Phase II

**(2) If an application containing the proposed scope was previously submitted for consideration and was not selected, indicate the solicitation under which that application was submitted.** Check all that apply.

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

**(3) Indicate the anticipated duration, in months, for the proposed Service Development Program.** Consider that American Recovery and Reinvestment Act funding must be obligated by September 30, 2017, while FY 2010 funding does not have a deadline.

Number of Months: 59

**(4) Specify the anticipated HSIPR funding information for the proposed Service Development Program.** 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 Program Cost	Non-Federal Match Percentage of Total
\$247,956,040	\$73,300,000	\$321,256,040	23 %

**(5) Indicate the source, amount, and percentage of non-Federal match for the proposed Service Development Program (if applicable).** The sum of figures below should equal the amount provided in Section D.4. 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 program cost represented by each non-Federal funding source. Provide supporting documentation that will allow FRA to verify each funding source. Any required verification documentation not available online should be submitted with the application package and listed in Section H.2 of this application.

Non-Federal Match Funding Sources	Type of Source	Status of Funding <sup>4</sup>	Type of Funds	Dollar Amount	% of Total Program Cost	Describe Any Supporting Documentation to Help FRA Verify Funding Source
FTA/State Funds	Existing	Committed	Cash	\$ 63,300,000	20 %	Lancaster MPO TIP and DVRPC MPO TIP
1516 Programs of Statewide Significance	Existing	Budgeted	Cash	\$ 10,000,000	3 %	PennDOT balance sheet
				\$	%	
				\$	%	
				\$	%	
<b>Sum of Non-Federal Funding Sources</b>				\$ 73,300,000	23 %	N/A

**(6) Indicate the name of the corridor where the proposed Service Development Program is located and identify the start and end points as well as major integral cities along the route.**

The Keystone Corridor is a federally designated High Speed Rail Corridor 354 miles in length extending from Philadelphia to Pittsburgh, Pennsylvania, with through service to New York City, NY and Chicago, IL. The Keystone Corridor is the principal intercity rail line for passengers in Pennsylvania, providing interconnectivity to the largest cities in the state, including: Philadelphia, Pittsburgh, Altoona, Paoli, Lancaster, Elizabethtown, and Harrisburg. Intercity passenger rail ridership in the Keystone Corridor has been growing and many factors suggest that demand for intercity rail in the Corridor will continue to grow, especially if: faster, more reliable, frequent service is provided.

Keystone Corridor East consists of a 105 route-mile federally (Amtrak) owned line between Pennsylvania's State Capital, Harrisburg, and the largest population center in the state, Philadelphia, PA. The Keystone Service operates in 46 separate municipalities in the counties of Dauphin, Lancaster, Chester, Montgomery, Delaware, and Philadelphia. The Keystone Service consists of twelve stations: Harrisburg, Middletown, Elizabethtown, Mount Joy, Lancaster, Parkesburg, Coatesville, Downingtown, Exton, Paoli, Ardmore, and Philadelphia's 30th Street Station. Express Stations are Harrisburg, Elizabethtown, Lancaster, Paoli, and 30th St Station. Please see attached corridor map for reference.

**(7) 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 H.2 of this application.

<sup>4</sup> The following categories and definitions are applied to funding sources:

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

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

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



The five interlocking projects are located along the Keystone Corridor at the mileposts listed below, a track chart is attached to the application for reference.

- **Zoo to Wynnefield Interlocking**  
MP 5.8 - MP 1.7
  
- **State Interlocking**  
MP 105.2 – MP 101.4
  
- **Paoli Interlocking**  
MP 20.4 - 19.1
  
- **Potts Interlocking**  
MP 28.4 – MP 27.3
  
- **Thorn Interlocking**  
MP 35.2 - MP 31.8

In addition, the three station projects are located within the municipal boundaries of Middletown, Mount Joy, and Coatesville. Environmental evaluations for each station project have been developed for the Federal Transit Administration (FTA) Region III and close coordination has occurred on each document. They are located specifically at the following locations:

- **Middletown Station**  
MP 95.2
  
- **Mount Joy Station**  
MP 80.1
  
- **Coatesville Station**  
MP 38.4

**(8) Provide an abstract outlining the proposed Service Development Program.** Briefly summarize the narrative provided in the Statement of Work in 4-6 sentences. Capture the major milestones, outcomes, and anticipated benefits that will result from implementing the Service Development Program. For any acronyms, spell out the first frequency with the acronym in parentheses. If this application is divided into phases or groupings of component projects<sup>5</sup>, provide a brief abstract of 4-6 sentences for each phase or group of component projects.

The Keystone Corridor East High Speed Phase II service development program includes five interlocking projects that involve the replacement of outdated components including track structure, overhead catenary, and communications and signal system components. These projects facilitate high speed train movements and are a preliminary step to returning the Corridor to a state-of-good repair. In addition, three stations in Middletown, Mount Joy, and Coatesville will be completely reconstructed with full-length high-level platforms and other station amenities to provide full accessibility compliant with the Americans with Disabilities Act of 1990. Construction will be completed by October 2016, with full project close-out documents completed by March 2017. The Keystone Corridor East High Speed Phase II service development program will reduce travel time by at least 20 minutes, increase ridership, and increase maximum operating speed on the corridor to 125 mph.

<sup>5</sup> An application’s competitiveness may be improved by demonstrating how a proposed project could be divided into discrete phases, each with operational independence, based on geographic section, type of activity, discrete benefits and costs, or other appropriate criteria.

**(9) Indicate the type of expected capital investments included in the proposed Service Development Program.** Check all that apply.

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

**(10) Indicate the anticipated service outcomes for the proposed Service Development Program.** Check all that apply.

- |  |  |
|--|--|
| <input type="checkbox"/> Additional service frequencies                              | <input type="checkbox"/> New service on existing IPR route       |
| <input checked="" type="checkbox"/> Increased average speeds/shorter trip times      | <input type="checkbox"/> New service on new route                |
| <input checked="" type="checkbox"/> Increases in operational reliability             | <input type="checkbox"/> Reroute existing service                |
| <input checked="" type="checkbox"/> Increases in ridership                           | <input checked="" type="checkbox"/> Service quality improvements |
| <input checked="" type="checkbox"/> Improved on-time performance of passenger trains | <input type="checkbox"/> Other (please describe):                |

Briefly clarify the response(s) if needed:

**(11) Describe the rolling stock type (if applicable).** Describe the fleet of locomotives, cars, self-powered cars, and/or train sets that are intended to provide service upon completion of the Service Development Program. Note if the equipment is already owned or needs to be acquired.

Amtrak Keystone Service will remain unchanged as a result of this project. Current rolling stock consists of AEM 7 locomotives, Amfleet 2 coaches, and Metroliner cab cars. The typical configuration for the Keystone Corridor consists of 1 locomotive, 4 coaches, and 1 cab car.

**(12) Provide information about job creation through the life of the proposed Service Development Program.** Please consider construction, maintenance, and operations jobs.

Anticipated number of onsite and other direct jobs created (on a 2080 work-hour per year, full-time equivalent basis).	FD/ Construction Period	First full year of operation	Fifth full year of operation	Tenth full year of operation
	3491	250	250	250
Indicate the anticipated fiscal year.	N/A	2017	2023	2028

**(13) Divide the Service Development Program into discrete phases (groups of component projects) and identify each phase on a separate row of the table, if possible.<sup>6</sup>** Detail the service benefits to be realized after completion of each phase on the corresponding row. At the bottom of the table, provide the anticipated service benefits upon completion of the entire Service Development Program. Use as many rows as necessary; if the Service Development Program cannot be subdivided, summarize the information for the entire Service Development Program in the first row. Refer to Section 4.2.1 of the NOFA for additional information about phasing Service Development Programs.

<sup>6</sup> An application’s competitiveness may be improved by demonstrating how a proposed project could be divided into discrete phases, each with operational independence, based on geographic section, type of activity, discrete benefits and costs, or other appropriate criteria.

Phase	Title <sup>7</sup>	Frequencies <sup>8</sup>		Scheduled Trip Time (in minutes)		Average Speed (mph)		Top Speed (mph)		Reliability – Provide Either On-Time Performance Percentage or Delay Minutes	
		Current	Future	Current	Future	Current	Future	Current	Future	Current	Future
I.	Keystone Corridor East High Speed Phase II	14	14	105	85	60	74	110	125	87%	93%
II.											
III.											
IV.											
V.											
VI.											
VII.											
VIII.											
<b>Provide the Cumulative Service Outcome</b> <i>(Aggregate Benefits of all Phases)</i>		14	14	105	85	60	74	110	125	87%	93%

<sup>7</sup> Title should be a brief descriptive name for the phase.

<sup>8</sup> Frequency is measured in daily round-trip train operations. One daily round-trip operation should be counted as one frequency.



**(14) Provide information on the component projects within each phase of the proposed Service Development Program identified in Section D.14 above.** For each phase, please list all component projects in the sequence they will be completed. If this application is not phased, include all component projects within the Phase I table. The sum of Phase Total Costs should equal the Total Program Cost indicated in Section D.4. This section is unlocked – the applicant can add rows and adjust column widths as needed for additional projects and phases.

PHASE I.		<i>Keystone Corridor East High Speed Phase II</i>
Component Project Name	Short Project Description	Project Cost
1	<p><b>Zoo to Wynnefield Interlocking</b></p> <p>Replace outdated components, including track structure, overhead catenary, and communications and signal system components:</p> <ul style="list-style-type: none"> <li>• Construct 36<sup>th</sup> Street Connection Track 4 to New Track 4 (Existing 2 Thru Freight)</li> <li>• Install New 38<sup>th</sup> Street Interlocking</li> <li>• Reconfigure JO Interlocking</li> <li>• Construct Track 4 – 38<sup>th</sup> Street INRL to Stiles INRL</li> <li>• Reconfigure Paxon and Jeff Interlockings for connection</li> <li>• Remove Track 4 Valley Bridge and associated track</li> <li>• Install New Wynnefield Interlocking</li> <li>• Retire Overbrook Interlocking</li> </ul> <p>Replacing and upgrading components will facilitate high speed intercity train movements and return the section to a state-of-good repair. Each project is interdependent and must be completed as a unit to realize benefits. Estimated time savings is at least 10 minutes.</p>	\$ 112,154,276
2	<p><b>State Interlockings</b></p> <p>Replace outdated components, including track structure, overhead catenary, and communications and signal system components to facilitate high speed train movements and return to a state-of-good repair. Upgrading State Interlocking will remove slow orders currently in place and save a minimum of 5 minutes in travel time.</p>	\$ 56,603,466
3	<p><b>Paoli Interlocking</b></p> <p>Replace outdated components, including track structure, overhead catenary, and communications and signal system components to facilitate high speed train movements and return to a state-of-good repair. Components of Paoli interlocking will be removed from the immediate station area to increase Amtrak operational capacity.</p>	\$ 44,142,960
4	<p><b>Potts Interlocking</b></p> <p>The new Potts interlocking will include modern components, including track structure, overhead catenary, and communications and signal system components to facilitate high speed intercity train movements and also increase the operational capacity of Amtrak trains serving the Exton Station.</p>	\$ 32,957,250
5	<p><b>Thorn (Downs) Interlocking</b></p> <p>Replace outdated track structure and associated overhead catenary and communications and signal systems to facilitate high speed intercity train movements and return track 2 to service. Completing the project will allow for operational flexibility for Amtrak trains as</p>	\$ 12,098,088

		well as facilitate track outages for other projects in this service development program.	
6	Middletown Station*	The Middletown Station will be relocated approximately one-mile to the west to facilitate complete station reconstruction, including 500ft full-length high-level platforms with associated vertical circulation (elevators) and new parking and intermodal connections. All improvements will be entirely compliant with the Americans with Disabilities Act of 1990 (ADA). Funding for this project has been identified and committed and no FRA funding assistance is requested.	\$32,000,000
7	Mount Joy Station*	The Mount Joy Station will be reconstructed with new 500ft full-length high-level platforms, ADA compliant vertical circulation (elevators), and parking improvements. Funding for this project has been identified and committed and no FRA funding assistance is requested.	\$ 12,000,000
8	Coatesville Station*	The Coatesville Station will be reconstructed with new 500ft full-length high-level platforms, ADA compliant vertical circulation (elevators), and new parking lots. Funding for this project has been identified and committed and no FRA funding assistance is requested.	\$19,300,000
<b>Phase I. Total Cost</b>			<b>\$ 321,256,040</b>

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

Address the sections below with information regarding railroad infrastructure owners and operators of the proposed Service Development Program. 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 in the prepopulated list, select “Other” and type the name in the adjacent text box within that field. Should this application have more than five owners, please provide the same information for additional owners in a separate supporting document and list it in Section H.2 of this application.

Type of Railroad	Railroad Right-of-Way Owner	Route-Miles	Track-Miles	Status of Agreements to Implement Projects
Amtrak	Amtrak	105	250	Preliminary Executed Agreement/MOU

**(2) Name the Intercity Passenger Rail Operator and provide the status of the agreement.** If applicable, provide the status of agreement with the entity that will operate the planned passenger rail service (e.g., Amtrak). Click on the gray box to select the appropriate response from the list of choices for Status of Agreement. 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 H.2 of this application.

Name of Operating Partner	Status of Agreement
Amtrak	Preliminary executed agreement/MOU

**(3) Provide information about the existing rail services within the proposed Service Development Program area (i.e., freight, commuter, and intercity passenger).** Click on the gray box to select the appropriate response from the list of type of service and name of operator. 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 Speed Within Project Boundaries (mph)		Number of Route-Miles Within Project Boundaries (miles)	Average Number of Daily One-Way Train Operations <sup>9</sup>
		Passenger	Freight		
Intercity Passenger	Amtrak	110		105	14
Commuter	Other: SEPTA	70		35	86
Freight	NS		50		

<sup>9</sup> One daily round-trip operation should be counted as two daily one-way train operations.




**(4) Estimate the share of benefits that will be realized by non-intercity rail services and select the approximate cost share provided by the beneficiary.**<sup>10</sup> Click on the gray boxes to select the appropriate response from the lists of type of beneficiary, expected share of benefits and approximate cost share. If more than three types of non-intercity passenger rail are beneficiaries, please provide additional information in a separate supporting document, and list it in Section H.2 of this application.

Type of Non-Intercity Passenger Rail	Expected Share of Benefits	Approximate Cost Share
Commuter	Less than 50%	76-100%

<sup>10</sup> Benefits include service improvements such as increased speed or on-time performance, improved reliability, and other service quality improvements.

## F. Response to Evaluation Criteria

Respond to each of the following evaluation criteria in the gray text boxes provided to demonstrate how the proposed Service Development Program will achieve each criterion.

### (1) Project Readiness

Describe the feasibility of the proposed Service Development Program 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 Service Development Programs 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.

Keystone Corridor East High Speed Phase II is ready to be immediately implemented upon grant award. Under previous funding opportunities, the FRA awarded Pennsylvania funding to progress project elements through Preliminary Engineering. Contracts are in place and work will begin within the next several months. In addition, Pennsylvania is currently funding a complete engineering grade LiDAR (light detection and ranging) survey of the entire Keystone Corridor. The surveying information obtained from this effort will be used for all current and future corridor projects funded by the FRA, Amtrak, and PennDOT.

In the fall of 2009, Pennsylvania completed an Environmental Assessment for the Keystone Corridor. A Finding of No Significant Impact (FONSI) has not been issued by FRA to date, but it is PennDOT's understanding that the FONSI has been withheld pending project funding. In addition, Pennsylvania has completed Categorical Exclusion Evaluations (CEE) for the five interlocking projects developed for the Keystone Corridor East High Speed Phase II, and they are attached to this application to satisfy NEPA requirements. Through in-depth evaluation of each site, it has been concluded that the proposed projects will not involve any significant negative environmental impacts to socio-economic, natural, or cultural resources. They will not induce significant alterations in land use or affect planned growth and will not significantly negatively impact air quality, noise levels, or travel patterns.

An operating agreement is currently in place between the Commonwealth of Pennsylvania, through PennDOT, and Amtrak to operate the Keystone Service between Harrisburg, PA and Philadelphia, PA. Amtrak and PennDOT have a long standing history of sharing operating costs for the Keystone Service, with Pennsylvania contributing 51% of operating deficits totaling more than \$80 million in operating assistance over the past 20 years. The service is successful, and the Commonwealth is committed to continue supporting the Corridor in the future. The Keystone Service, through the Commonwealth's support, operates within the budget and there are no deficits.

PennDOT and Amtrak have signed a Memorandum of Understanding (MOU) regarding the project scope and outcomes of Keystone Corridor East High Speed Phase II. The MOU contains information on maintenance, ownership, cost and schedule overruns, and other required provisions necessary for receipt of HSIPR funding.

In addition to the Scope of Work (SOW) developed as a separate document, supporting documentation is included that displays a complete understanding of project scope, cost, and constructability. Supporting documents include: A schedule for the project from preliminary engineering to construction identifying key milestones, submissions, and long-lead procurement items; a detailed cost estimate for each interlocking project including all associated costs; and phasing diagrams illustrating the components of each project and how it will be constructed. Through the SOW and the supporting schedule, detailed cost estimate, phasing diagrams, and previously completed work, PennDOT believes that it is clear the Keystone Corridor East High Speed Phase II is ready to be implemented and to begin vastly improving intercity passenger rail in Pennsylvania.

**(2a) Transportation Benefits**

Describe the transportation benefits that will result from the proposed Service Development Program and how they will be achieved in a cost efficient 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.

The Keystone Corridor East High Speed Phase II service development program will significantly improve intercity passenger rail in Pennsylvania, and ultimately serve as a model for using State partnerships to promote high speed passenger rail throughout the United States.

As stated previously, major interlockings on the Keystone Corridor were originally designed for freight rail use, and have far exceeded their designed useful life as most were installed in the early 1900s. Implementation of the Keystone Corridor East High Speed Phase II program will serve as a major step to returning the federally-owned asset, the Keystone Corridor, to a state of good repair.

In addition, the five interlocking projects identified above will reduce travel times between Harrisburg and Philadelphia by a minimum of 20 minutes. Travel times will be 1 hour and 15 minutes for express trains, more than 45 minutes shorter than by automobile. The maximum operating speed will be increased to 125 mph as a result of the program, making the Keystone Corridor second only to Amtrak's Acela Service in operating speed.

Construction of new and upgraded interlockings will improve the on-time-performance of the Keystone Service by facilitating high speed train movements to mitigate track outages due to construction, maintenance, and stalled or stopped trains. On-time performance was 87% for FY 2010 according to Amtrak statistics. The Keystone Corridor East High Speed Phase II will increase on-time performance, with a stated goal of achieving 93% annual average on-time performance for all trains. New and upgraded interlockings will also increase passenger operational capacities and provide greater dispatching flexibility. Increased capacities could lead to further service expansion should ridership demand it.

Ridership increases are anticipated due to the improved trip time and increased maximum operating speeds and average operating speed. In the first year after project implementation (2018), ridership is projected to increase from 1,183,821 in 2008 to 1,480,700, an increase of 25%. This ridership forecast includes both project related ridership increases and baseline increases. By 2023, the fifth year of project implementation, ridership will be at 1,637,900, an increase of 10.6% from 2018. Finally, in 2030 ridership is projected to be at 1,768,600, an 8.0% increase from 2023. It should be noted that ridership estimates do not include FY 2010 data, where Keystone Service ridership reached nearly 1.3 million. With the rise of gasoline costs and anticipated increased parking at all stations along the Keystone Corridor, the projections listed above are very likely lower than those that will actually be realized. Additional service metrics are available below, and methodologies and assumptions used in creating service metrics can be found in the Keystone Corridor East Service Development Plan.

By creating faster intercity passenger rail service with a time savings of 45 minutes over automobile travel, more travelers will be encouraged to use Amtrak. Rail travel has a significantly lower accident rate than other modes of transportation, and a de facto increase in safety results from the modal shift from automobiles to intercity passenger trains.

In addition to the five interlocking projects being completed through the HSIPR program, Keystone Corridor East High Speed Phase II also includes three station reconstructions that will be completed by PennDOT. Each station is part of a larger planning effort dubbed "Plan the Keystone" that focuses on station area planning using smart transportation principles and the belief that "ADA should never be an afterthought". The Middletown, Mount Joy, and Coatesville Station projects have all completed the planning phase and are ready to proceed into design and construction of 500 ft full-length high-level platforms with new parking, and other station amenities with full ADA accessibility. It is the belief of PennDOT that these station projects work together with increasing speeds and decreasing trip time to attract ridership that will surpass the estimates supplied above. Parking is another major limiting factor on the Keystone Corridor, discouraging ridership at the three stations that are part of this program.

The projects identified in this service development program are designed to benefit the Amtrak Keystone Service. All stations are served only by Amtrak and interlockings mainly serve Amtrak functions. Additional minimal benefits may be realized by the regional rail operator Southeastern Pennsylvania Transportation Authority (SEPTA), operating over 35 miles on the Keystone Corridor. SEPTA has proven to be a valuable funding partner in Keystone Corridor infrastructure, with over \$158 million in committed and expended funding and an additional \$62 million in planned expenditures in the FY 2006 - FY 2011 capital plan. These financial commitments nearly match the HSIPR funding requested.

In addition to SEPTA, the Commonwealth of Pennsylvania has committed to providing consistent financial support of the Keystone Corridor over the past 20 years. Pennsylvania annually subsidizes 51% of the Keystone Service operating costs, totaling over \$80 million over the 20 year period. In 2006, PennDOT completed an infrastructure improvement program with partners AMTRAK and Norfolk Southern (NS). This program, totaling \$145.5+ million, returned the Keystone service to full electrification, increased maximum operating speed to 110 MPH, and resulted in a 45% increase in ridership in less than five years. Of the total \$145.5+ million program, funding partners contributed:

- PennDOT – \$72.5 million
- AMTRAK - \$72.5 million
- Norfolk Southern – \$2.5 million

Pennsylvania has also completed several additional station projects separate from the three listed above. These projects at Elizabethtown, 30th Street Station, Harrisburg Transportation Center, and the locally led Lancaster Train Station rehabilitation have all shown considerable support by providing capital funding and technical assistance to continue growing the Keystone Service. These projects, in addition to other state-supported efforts, equal a total state contribution of nearly \$245 million.

## **(2b) Other Public Benefits**

Describe the other public benefits that will result from the proposed Service Development Program 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 Keystone Corridor East High Speed Phase II will create an estimated 3,491 jobs through final design and

construction. As the Keystone Service is already operational, no additional jobs are anticipated to be created at the time of project completion for maintenance or operations. There are currently 250 employees that serve on the Keystone Corridor. However, should ridership demand additional frequencies as anticipated, employees will be needed to increase operational capacity.

Outside of the rail industry, the Keystone Corridor East Phase II service development program is expected to stimulate the Pennsylvania economy in several ways. By significantly reducing trip times, the effective commute radius of any central business district is expanded, increasing competition for jobs throughout Pennsylvania. In addition, the reconstruction of the train stations at Middletown, Mount Joy, and Coatesville will spur development in the station area, providing a boost to the downtowns and local economies of the three municipalities.

This project will encourage the development of high speed rail which has the ability to have profound positive effects on the environment. Improvements to passenger rail service encourage wider use of intercity passenger rail and divert auto trips and commuter air trips to rail service. Environmental benefits can result from a reduction in the number and share of trips that are made by automobiles and airplanes that are less efficient than passenger rail in terms of per capita emissions and energy use. Diverting trips from automobiles to passenger rail may also lead to reductions in congestion and delay on heavily traveled highway corridors resulting in a reduction of emissions and wasted fuel from slow-moving or idling vehicles. The decrease in energy use caused by the growing ridership of greater energy efficient trains ultimately leads to a reduction in dependence on foreign oil, a key goal of the current state and federal administrations.

Specific environmental benefits were analyzed using the projected Keystone Corridor East Ridership for 2018, 2023, and 2030 using PennDOT's PAQONE environmental modeling software. In 2018, the following reductions will be seen: VMT -28,673,302; VOC -4,439.84 kg/year; NOx -5,162.48 kg/year; CO -107,808.72 kg/year; PM2.5 -345.03 kg/year; SO2 -233.04 kg/year. In 2023, the following reductions will be seen: VMT -45,533,920; VOC -5,675.16 kg/year; NOx -5,931.49 kg/year; CO -157,728.00 kg/year; PM2.5 -547.25; SO2 -370.09 kg/year. Finally, in 2030 the following reductions were forecasted: VMT -59,551,260; VOC-7,189.68 kg/year; NOx -6,918.52; CO -202,617.19; PM2.5 -715.49; SO2 -484.02 kg/year.

All efforts will be made to be environmentally conscious during the construction process. Amtrak has established methodologies for identifying hazardous materials during the construction process and disposing of them in an earth-conscious way. As all development will occur in existing Amtrak ROW or on Amtrak owned property, no significant negative environmental impact is anticipated.

All Keystone trains are electrically operated and produce little to no emissions. Efforts will be made during this corridor program to improve portions of the electrical system to provide greater efficiency and decrease wasted energy. Green building designs, specifically in terms of LEED certified buildings, will be considered for station projects. Where appropriate and feasible, green technologies will be used throughout the corridor.

PennDOT is committed to promoting sustainable communities, particularly as outlined in the Partnership for Sustainable Communities. Keystone Corridor East High Speed Phase II address all 6 livability principles as follows:

1. Provide more transportation choices - Decreasing travel times and increasing maximum operating speeds to 125+ mph will encourage rail ridership. Decreasing travel times to significantly below automobile travel makes intercity passenger rail not only a viable option, but a preferred mode of travel within the Keystone Corridor East.
2. Promote equitable, affordable housing - Decreasing travel time effectively increases the commute radius for major metropolitan central business districts, increasing affordable housing options for countless Pennsylvanians while encouraging competitive job markets.
3. Enhance economic competitiveness - Increased economic competitiveness results when travel times are decreased, increasing the commute radius and linking key metropolitan areas by fast, efficient transportation that encourages economic interaction.
4. Support existing communities - The three station projects included are being reconstructed within the communities in which they currently reside. PennDOT is committed to developing strong downtowns that have intercity passenger rail as a central component to redevelopment efforts.
5. Coordinate policies and leverage investment - The Plan the Keystone program is focused on leveraging public infrastructure investment to encourage local economic development and encourage downtown vitality.
6. Value communities and neighborhoods - As mentioned above, PennDOT is committed to reconstructing stations

that remain in the downtown and become integrated assets to vital communities.

**(3) Project Delivery Approach**

Describe the risk associated with delivery of the proposed Service Development Program 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 Plan;
- 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.

Keystone Corridor East High Speed Phase II component projects were specifically selected by Amtrak and PennDOT to provide the most beneficial impact while remaining time and cost feasible. Significant advance work has been completed to develop a detailed schedule, detailed cost estimates, and coordinated phasing plans to bring confidence to Amtrak, PennDOT, and the FRA that the projects selected are appropriate and capable of being implemented on-time and within budget. These documents are attached to the application for reference.

The Commonwealth of Pennsylvania has a 20 year history of working closely with Amtrak to undertake significant rail improvement projects for the benefit of the Keystone Corridor. The largest project undertaken was a joint venture by Amtrak and the Commonwealth from April 2002 to October 2006 with a total cost of \$145.5 million. Some projects in the improvement program consisted of: installation of concrete ties and continuous welded rails in a significant portion of the corridor, buildings and bridge improvements, communications and signals upgrades, and electric traction upgrades.

Amtrak Engineering and the Commonwealth of Pennsylvania through PennDOT will follow proven Project Management Principles in development of all phases of project implementation, from preliminary engineering and NEPA documentation through final design and construction and project close-out. Keystone Corridor East High Speed Phase II improvements would be completed in a very timely manner.

The Amtrak Engineering Department has been managing large programs since 1976. These include the initial Northeast Corridor Improvement Program, and more recently the North End Electrification Program. The combined PennDOT and Amtrak Engineering departments are responsible for keeping infrastructure in a state of good repair; this includes design, maintenance, construction and inspection of Amtrak’s physical infrastructure, including track, signals, electric traction, tunnels, and bridges on Amtrak owned right of way and stations and facilities along the right of way. The Commonwealth, in conjunction with Amtrak, will provide project management, as the project will include the services of outside consultants directly reporting to the Commonwealth/Amtrak. Managed consulting services include design, engineering, construction, quality control, and safety.

Amtrak Engineering and PennDOT partners will follow proven Project Management Principles. The State has the lead over projects and assumes project risk. Amtrak is the intended partner, subject to agreements. Preliminary Engineering, NEPA documentation, and Final design will be completed by in-house PennDOT and Amtrak staff and/or professional design consultants under the direction of PennDOT/Amtrak. Many projects will be constructed with Amtrak construction teams, particularly C&S, T&E, and Track projects. For those projects that need not be constructed by Amtrak, construction bid documents will be advertised using PennDOT’s Engineering and Construction Management System (ECMS). PennDOT will contract with the lowest responsible bidder. Amtrak will participate with design reviews and force account activities, such as catenary pole relocation and flagging/watchmen services. Local officials and the general public will be informed on construction progress through standard communications and information posted on PennDOT’s website.

The Pennsylvania Department of Transportation has a healthy financial status with no outstanding debt. Attached is a

copy of PennDOT's balance sheet, showing available and projected funds for the current fiscal year.

In addition to PennDOT's healthy financial status, legislative authority has been give to PennDOT through Act 44 to "... Provide financial assistance for an efficient and coordinated intercity common carrier surface transportation program, consisting of both intercity passenger rail service and intercity bus service transportation, with the intent of sustaining strong intercity connections..." (15 Pa. C.S.Section1516 Part C)

#### **(4) Sustainability of Benefits**

Identify the likelihood of realizing the proposed Service Development Program's benefits, including addressing:

- The applicant's financial contribution to the project;
- The quality of a Financial Plan that analyzes the financial viability of the proposed rail service;
- The quality and reasonableness of revenue, operating, and maintenance cost forecasts;
- The availability of any required operating financial support, preferably from dedicated funding sources;
- The quality and adequacy of project identification and planning;
- The reasonableness of estimates for user and non-user benefits for the project; and
- The reasonableness of the operating service plan.

PennDOT is committed to providing \$73,300,000 in funding to the corridor program, consisting of \$63,300,000 already committed to the three station projects through FTA and State funds and an additional \$10,000,000 in 1516 Programs of Statewide Significance, Given the total program cost of \$321,256,040. Pennsylvania's match represents 23% of the total project cost. This funding is secured and in no way considered "at risk".

Attached to the application is a current copy of PennDOT's balance sheet showing that there is no outstanding debt, and money available to cover the required match. In addition, a Memorandum of Understanding (MOU) between PennDOT and Amtrak is in place. The MOU discusses project and schedule overruns and how costs will be shared.

No specific financial analysis has been conducted for the Keystone Corridor East High Speed Phase I service development program as service is existing and a current operating agreement is in place that illustrates the sustainability of the corridor. For the capital financial planning portion, a detailed cost estimate was developed for the purpose of the service development program. A summary page is attached for reference, and the detailed cost estimates are available upon request. Pennsylvania committed significant resources to obtain a cost and schedule confidence that is likely unmatched in the U.S.

The Keystone Corridor East High Speed Phase II does not introduce any new intercity passenger rail service, but significantly improves existing service. PennDOT has subsidized 51% of the Keystone Service's operating cost over the past 20 years, totaling more than \$80 million, and is committed to continuing to do so. PennDOT subsidizes operating costs through section 1516 "programs of statewide significance" and will continue to do so. As referenced above, PennDOT is authorized to "...provide financial assistance for an efficient and coordinated intercity common carrier surface transportation program, consisting of both intercity passenger rail service and intercity bus service transportation, with the intent of sustaining strong intercity connections..." (15 Pa. C.S.Section1516 Part C)

Amtrak, SEPTA, and private rail industry leaders were consulted to estimate rider benefits for the Keystone Corridor East High Speed Phase II service development program. Ridership was estimated in 2009 based on Amtrak's ridership model. It is anticipated that these estimates are conservative and the actual numbers will outpace estimates. It is assured that the minimum of 20 minutes time savings will be realized upon project completion.

## G. 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 H.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 for the proposed Service Development Program.

- (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.

