Narrative Application Form – Service Development Program
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 H.2 of the Narrative Application Form Part I.

(1) Background. Briefly describe the events that led to the development of this Service Development Program and the issue the program 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 Service Development Program is located.

The 62-mile Amtrak-owned rail line between New Haven, Hartford and Springfield (NHHS) serves as a gateway connecting the communities of central Connecticut, southern Massachusetts and Vermont with the busy Northeast Corridor high-speed rail line. Once a robust rail corridor, service declined over decades and in the 1980s Amtrak removed one of the two NHHS tracks, limiting its ability to operate more than the six round-trip trains that operate today. Stations include New Haven, Wallingford, Meriden, Berlin, Hartford, Windsor, Windsor Locks and Springfield. Local freight trains also serve a variety of daily shippers on the line.

It has been a long-standing transportation and economic objective of Connecticut, Vermont and Massachusetts to significantly increase passenger rail service along the NHHS rail corridor and across New England as a means of providing an energy efficient, environmentally superior transportation alternative to the growing automobile congestion on the regional highway system, and to improve the quality of life, sustainability and economic vitality of the communities in this region. The three states, together with Amtrak, have developed a 2030 Vision Plan to dramatically transform passenger rail service in the region, with up to 25 daily round-trip trains connecting communities across New England and the Northeast. That Plan has served as a catalyst for the rebirth of passenger rail in the region and for local efforts to leverage passenger rail investments to spark new economic development around stations and communities served by passenger trains.

Increasing passenger rail service to the communities along the NHHS Rail Corridor and to Vermont and Massachusetts depends directly on restoring the capacity of the NHHS rail line to accommodate additional trains. In 2009-10, Connecticut submitted two grant applications under the High-Speed Intercity Passenger Rail (HSIPR) program to the Federal Railroad Administration (FRA) to fund the railroad infrastructure improvements along the NHHS rail corridor required to implement the 2030 Vision Plan. The improvements include the increase in top speed to 110 mph, restoration of the second track, installation of Amtrak’s Advanced Civil Speed Enforcement System (ACSES) positive train control system, drainage improvements, at-grade crossing improvements, and high-level platforms at Amtrak intercity passenger stations. These upgrades will allow a quadrupling of passenger train service north of New Haven, including expanded service to Massachusetts and Vermont, as well as new capacity for local freight service. In addition, the significant growth in ridership is expected to serve as a catalyst for new Transit-Oriented Development (TOD) around station areas, and provide important environmental benefits and energy savings. The project will generate over 11,660 construction-related jobs and support another 110 train operations personal each year.

Connecticut’s two 2009-10 HSIPR grant applications requested the following funding:

- $40 million (with a $20 million state match) to restore 10.2 miles of the second track between Meriden and Newington
- $220 million (with a $260 million state match) to upgrade the remainder of the rail line between New Haven and Springfield.
In 2010, FRA awarded to Connecticut the full amount requested ($40 million) to upgrade the line between Meriden and Newington. However, FRA was able to award only $120.9 million of the $220 million requested to upgrade the remainder of the NHHS Rail Corridor. While substantial, this funding is not sufficient to complete all the planned intercity improvements.

In order to provide projects that have independent utility and operational independence, the original NHHS Rail Project has now been split into three separate phases to match the available funding. These include the following:

- **Phase 1 (Meriden-Newington)**, using the $40 million in Federal funding already awarded and $20 million in state funding to upgrade the 10.2 miles between Meriden and Newington.
- **Phase 2 (New Haven-Hartford)**, using the $120.9 million in Federal funding already awarded and a state match of $141.9 million to upgrade the infrastructure and stations between New Haven and Hartford.
- **Phase 3 (Hartford-Springfield)** – this is the current application and requests $227 million in Federal funding to be matched with $97.3 million in state funds to complete the infrastructure improvements between Hartford and Springfield.

While each Phase is operationally independent, together they create a vastly improved rail passenger corridor providing the region new transportation options for the next century. The improvements are viewed by Amtrak and the three states as critical to meeting the goals of improving and sustaining regional economic viability and improving regional livability.

The new passenger rail service on the NHHS rail corridor will consist of three complementary operations: Amtrak trains shuttling between NHHS stations; Amtrak trains to/from Vermont, Massachusetts and the Northeast Corridor that operate over and serve the NHHS corridor; and a new Connecticut-operated regional service shuttling between NHHS stations to supplement the Amtrak service. Amtrak trains will generate 70 percent of the passenger miles over the NHHS rail corridor. The new regional trains will eventually stop at new stations to be constructed by Connecticut along the NHHS. These new stations will not be funded through the HSIPR program.

The Connecticut state funding match for all three project phases will total $259 million of the $647 million total project cost. This equates to a 40-percent state match. In addition, Connecticut is providing the train equipment to operate the new NHHS regional service and its New Haven maintenance and yard facilities to service both Amtrak and regional trains at no cost to the project. This level of state support is unmatched by other states applying for HSIPR program funding.

Significant public outreach has taken place over nearly a decade to plan for this program. This has included outreach associated with a draft project-level Environmental Assessment (EA) undertaken for a prior analysis of new commuter rail service along the NHHS Rail Corridor, as well as broad regional outreach associated with a draft Environmental Review undertaken in support of Connecticut’s FY 2010 HSIPR application. A new Service/Project EA is currently underway, with the FRA as the lead agency and the FRA as a cooperating agency, focusing specifically on the environmental impacts along the NHHS Rail Corridor resulting from implementation of the 2030 Vision Plan. The new EA will be completed by the end of 2011.

It should be noted that FRA has awarded $52 million in ARRA Track 1A funding to Vermont to make track, roadbed and bridge improvements along the current route of the Amtrak Vermonter Service. The Commonwealth of Massachusetts has been awarded $70 million in Track 2 ARRA funding to make improvements to the “Knowledge Corridor” rail line along the Connecticut River between Springfield and Vermont. The full benefit of these improvements can only be realized if improvements — including those in Phase 3 of the project — are made to the NHHS rail corridor, over which trains must operate to access Vermont and Massachusetts.

(2) **Scope of Activities.** Clearly describe the scope of the proposed Service Development Program and identify the general objective and key deliverables.

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

- Service(s) that would benefit from the Service Development Program, the stations that would be served, and the State(s) where the service operates;
- Anticipated service design of the corridor or route with specific attention to any important changes that the Service Development Program would bring to the fleet plan, schedules, classes of service, fare policies, service quality standards, train and station amenities, etc.; and

- Other rail services, such as commuter rail and freight rail that will make use of, benefit from, or otherwise be affected by, the Service Development Program.

General Description of the NHHS Corridor & the Rail Project

The 2030 Vision Plan developed jointly by Amtrak, Connecticut, Vermont and Massachusetts calls for the operation of up to 50 daily passenger trains and increased local freight service along the NHHS rail corridor to support new regional rail services in all three states. This includes:

- Additional Amtrak service between Springfield and New Haven.
- A new Connecticut regional service to supplement Amtrak service on the NHHS rail corridor.
- Additional Amtrak service north of Springfield along the Knowledge and Vermonter Corridors to St. Albans and Montreal and along the Inland Route between Springfield and Boston.

Implementation of the 2030 Vision Plan requires a substantial upgrade of the infrastructure and stations along the NHHS rail corridor. These improvements have been separated into three separate project phases to match available funding sources. The specific scope of work planned for each of the three project phases are detailed below under section 2b of this Form. Phase 1 (Meriden-Newington) and Phase 2 (New Haven-Hartford) already have been funded under FRA’s HSIPR Program. Only Phase 3 (Hartford-Springfield) remains to be funded.

Each of the project phases include design and installation/construction of the improvements necessary to provide the higher speed, capacity, reliability and safety enhancements to support the proposed 2030 Vision Plan. The full NHHS Rail Project includes:

- Restoration of the second track along the full 62-mile length of the NHHS Rail Corridor, along with additional passing sidings and 12 new interlockings to manage passenger and freight rail traffic along the line. Bridges and drainage will be upgraded and repaired as required along the route.
- Installation of new signalling and Amtrak’s ACSES, which will provide positive train control on the line.
- Upgrade of all 38 public at-grade crossings to accommodate double tracking and quad gates/median dividers.
- Addition of high-level platforms at all Amtrak stations, overhead pedestrian bridge access to the platforms, and other station enhancements. Four additional stations (located at North Haven, Newington, West Hartford and Enfield) will eventually be constructed in Connecticut and would be served by the Connecticut regional trains; these new stations will not be be funded from the HSIPR program. The new stations at Newington and West Hartford will also serve the planned New Britain-Hartford busway, enabling Connecticut’s NHHS regional trains to connect with the busway. In addition, a new bus shuttle will be established at the Windsor Locks station to connect with Bradley International Airport.

General Objectives

The NHHS Rail Project – including Phase 3 (Hartford-Springfield) for which this application has been submitted – has four primary objectives:

1. **Provide the Capacity to Implement the 2030 Vision Plan:** The NHHS Rail Project will rebuild the NHHS rail corridor to provide the capacity, trip time and safety improvements necessary to achieve the 2030 Vision Plan. This includes operation of up to 50 daily trains reliably serving the communities along the rail line and to points north and south, as well as meeting the growing needs of local freight rail shippers. These improvements will cost approximately $647 million. Plans call for launch of new passenger rail service by 2016. Trip times will be reduced through the increase in speeds up to 110 mph, new interlockings to optimize operations, and high-level platforms to reduce passenger boarding time. Safety will be enhanced through the installation of Amtrak’s ACSES positive train control system and the upgrade of at-grade crossings. As a result of these improvements, ridership is projected to grow to some 1.25 million trips per year by 2030.
The major project implementation milestones associated with this objective include the following:

- Completion of the Environmental Assessment
  - Administrative Draft: September 2011
  - Record of Decision: December 2011
- Completion of Preliminary Engineering – March 2012
- Approval of USACE and CTDEP Permits – December 2012
- Completion of Final Engineering – March 2013
- Initiate Construction – April 2013
- Install Track Using The Track Laying System – Fall 2014
- Availability of Connecticut Regional Train Equipment – Fall 2015
- Complete All Construction – Fall 2015
- Launch Service – by 2016

2. Create a Regional Intermodal Transportation Gateway: The NHHS Rail Project will provide the connectivity and intermodal connections to create an integrated regional network for travelers in New England and the Northeast. This includes:
   - Seamless connections at New Haven with Amtrak, Metro North and Shore Line East service west to New York and east to Boston of the Northeast Corridor
   - Seamless connections at Springfield with Amtrak service along the Inland Route east to Boston and eventually west towards New York
   - Direct bus shuttle service at the Windsor Locks station to Bradley International Airport
   - Seamless connection to/from the planned New Britain-Hartford busway at future train stations in Newington and West Hartford (to be served by the NHHS regional rail service)
   - Convenient local bus connections at all NHHS rail stations to neighboring communities and activity centers

3. Support Development of Livable & Sustainable Communities: Connecticut and the communities along the rail line are working hard to leverage the railroad infrastructure investments to support new TOD around station areas and to help protect the economic vitality of the communities through regional connectivity. Each of the communities with existing or planned trains stations along the NHHS rail corridor are actively engaged in new land use planning projects to revitalize and activate the areas around each existing or planned train station. While the NHHS Rail Project does not include funding for TOD development, the towns are using the rail project as a catalyst for local planning initiatives and to help provide the critical mass of activity necessary to sustain local development. This includes specific TOD programs in Wallingford, Meriden, Windsor Locks and Enfield. The availability of frequent train service connecting these communities to a broad regional market provides a strong and unique opportunity for each town to shape development in ways to augment existing businesses and to create new vibrant communities. Connecticut is working closely with the towns to enhance these efforts.

4. Support Job Growth & Improve the Environment: Implementation of the NHHS Rail Project is projected to generate important job growth for a region that has seen significant long-term job losses in the manufacturing and service sector. In addition, new reliable and convenient train service is projected to provide significant environmental benefits. The NHHS Rail project is projected to generate the following benefits:
   - Jobs: the $647 million program is projected to generate over 11,660 construction-related jobs and support another 110 train operations personnel each year. Phase 3 of the program, costing $324 million, will generate 6,480 new construction-related jobs.
   - Environmental Benefits:
     - 1.15 million trips diverted from automobiles to rail by 2030, resulting in a 92.65 million mile reduction in VMT with the attendant reduction in fuel and carbon emissions.
     - Reduced carbon emissions of 32,000 metric tons.
Specific Outcomes

Services Benefitting From the NHHS Rail Project: Implementation of the NHHS Rail Project will significantly benefit the communities and states in the region. This includes New Haven, Wallingford, Meriden, Berlin, Hartford, Windsor, Windsor Locks and Springfield, as well as North Haven, Newington, West Hartford and Enfield, where future new stations will be built using funding from other non-HSIPR program sources. In addition, communities along the Massachusetts and Vermont Knowledge and Vermonter Corridors, and along the Massachusetts Inland Route, will see additional service as the 2030 Vision Plan is implemented. These benefits are detailed below:

- Intercity Passenger Rail. The 2030 Vision Plan will permit a quadrupling of regional passenger rail service. This directly benefits Amtrak service to Connecticut, Vermont and Massachusetts on the NHHS rail corridor, the Knowledge Corridor, the Vermonter Corridor and the Inland Route. Much of this increased service is dependent on completion of Phase 3 of the NHHS Rail Project, which will provide needed capacity between Hartford and Springfield; without that capacity, additional service to Springfield is severely limited and no increase will take place to Vermont and Massachusetts. This is illustrated on the following table:

<table>
<thead>
<tr>
<th>Amtrak &amp; Regional Service Between/To</th>
<th>Service (Round Trips)</th>
<th>Phase 2 Hartford-Springfield</th>
<th>Phase 3 2030 Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Springfield – New Haven</td>
<td>4</td>
<td>4</td>
<td>14*</td>
</tr>
<tr>
<td>Hartford – New Haven</td>
<td>0</td>
<td>8</td>
<td>--</td>
</tr>
<tr>
<td>Springfield – Washington DC</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>St. Albans – Washington DC</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>White River Junction/ Bellows</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Falls/Greenfield to New Haven</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Boston-Springfield-Washington DC</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Boston – New Haven</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6</strong></td>
<td><strong>14</strong></td>
<td><strong>25</strong></td>
</tr>
</tbody>
</table>

* The 14 round-trip trains between Springfield and New Haven will consist of four Amtrak trains and 10 new Connecticut regional trains

- Massachusetts is advancing projects funded under the HSIPR Program to upgrade and increase service on both the Inland Route and the Knowledge Corridor. These trains must use the NHHS rail corridor to connect to points south of Springfield, including New Haven, New York and Washington.

- Vermont is advancing projects funded under the HSIPR Program to upgrade and increase service on the Knowledge Corridor and the Vermonter Corridor. This includes possible future extension of the Vermonter to Montreal. Vermonter trains originate in Washington DC and use the NHHS rail corridor.

- Connecticut-funded Metro North commuter rail service on the New Haven line to New York and Shore Line East service on the Northeast Corridor to New London will benefit from connections to NHHS trains. The 2030 Vision Plan was developed so that NHHS trains would conveniently match up with commuter rail service to and from New Haven, providing travelers convenient and reliable connections across the region.

- Bradley International Airport, which is owned and operated by Connecticut, will initiate a bus shuttle for direct connecting-service to Amtrak’s Windsor Locks train station. The station improvements for this new connection are included in the
funding requested in this Application for Phase 3 funding. The direct shuttle bus connection will make Bradley only the third Northeast Corridor train station (along with BWI and Newark) with a direct air/rail shuttle connection.

- The planned New Britain-Hartford busway will share new stations planned for the NHHS Rail Corridor at Newington and West Hartford. These stations will be served by regional trains included within the 2030 Vision Plan and provide travelers convenient connections to points north and south.

- Local bus services will benefit from new ridership and service at revitalized rail stations along the NHHS Rail Corridor.

**Rail Service Characteristics & Enhancements.** Completion of the NHHS Rail Project will forever change the nature of rail service in New England by providing some of the best passenger rail service in the nation. Specific changes and benefits include the following:

- The number of trains serving the NHHS will jump from six to as many as 25 daily round-trip trains. All trains will serve New Haven, Hartford and Springfield, while most trains will serve the other Amtrak stations along the corridor. Future new stations at North Haven, Newington, West Hartford and Enfield will be served by the new Connecticut regional trains only. No HSIPR funding will be used to construct these stations.

- Passengers boarding at stations on the NHHS rail corridor will be able to travel to Boston via the Inland Route rather than having to connect to Northeast Corridor trains at New Haven. In addition, there will be new service to the communities served by the Vermonter, which is being relocated to the Connecticut River line, and potentially to Montreal.

- Train speeds will increase from a maximum of 79 mph to 110 mph.

- Travel time from Springfield or Hartford to New York will shrink by 10-30 minutes (with the greatest savings for skip-stop trains), resulting from improvements on the NHHS rail corridor and improvements anticipated by Amtrak in travel time between New Haven and New York.

- High-level platforms and new overhead pedestrian bridge access will greatly enhance the boarding experience, as well as reduce station dwell time for all passengers, including those with disabilities.

- Station amenities will be improved, including additional parking and interior enhancements. Separately, towns are working to leverage the rail investments to build new mixed-use development around the stations and to activate the station areas with new commercial and community uses.

- Amtrak and Connecticut have agreed in principle to a fare policy that would be “train-blind” for travel within the NHHS rail corridor. In this way, travelers could board either an Amtrak or a Connecticut regional train at an NHHS station and pay the same fare to another NHHS station.

- A free bus shuttle connecting the Amtrak Windsor Locks station and Bradley International Airport will make the NHHS rail corridor only the third station on the Northeast Corridor with a direct air/rail shuttle connection.

- The planned Britain-Hartford busway will share future Connecticut-funded train stations at Newington and West Hartford.

- Connecticut intends to use existing train equipment for new NHHS regional trains in order to avoid any delay in the launch of new NHHS rail service; it plans to procure a new fleet of NHHS equipment in the future, providing for energy efficiency, environmental and passenger comfort benefits.

**Other Rail Service Benefits.** The NHHS Rail Project will benefit freight rail services operating on the rail line, as well as commuter rail services at New Haven. Freight rail service to NHHS shippers is projected to grow at 1.75% annually. The service is important to the local economies of communities along the rail line. The NHHS 2030 Vision Plan accommodates the reliable growth in local freight service along the line.

The NHHS 2030 Vision Plan was developed to provide convenient connections at New Haven to and from commuter trains operating to New York and to New London. This connectivity will provide travelers with significant options for discretionary, business and commuter travel along the Northeast Corridor. Amtrak and Connecticut, as partners on the NHHS Rail Project and managers of the connecting commuter rail services on the Northeast Corridor, are in the unique position to optimize the scheduling of both NHHS and commuter trains to provide seamless and reliable connections.

(2b) **Description of Work.** Provide a detailed description of the work to be accomplished through this grant by phase, component project, or major task (e.g., FD and Construction) including the geographical and physical boundaries of the program. Address the work in a logical sequence that would lead to the anticipated outcomes and the end state of the activities.
• Include a description of the activities and the measurable outcomes of each phase or group of activities
• Substantive activities of the Service Development Program (e.g., specific capital investments proposed);
• The location(s) of the Service Development Program’s component projects, including name of rail line(s), State(s), and relevant jurisdiction(s) (include a map in supporting documentation);
• Any use of new or innovative technologies; and
• Any use of railroad assets or rights-of-way, and potential use of public lands and property.

Scope of Work

The NHHS Rail Project consists of six major components: increase in speeds to 110 mph; restoration of the second track removed by Amtrak in the 1980s; upgrade of the structures and drainage along the line; installation of Amtrak’s ACSES positive train control system; upgrade of at-grade crossings along the line to include quad-gates and/or median dividers; and upgrade of stations to provide high-level platforms for level boarding and other improvements. Although the Project has been separated into three phases to match funding availability, Amtrak and Connecticut intend if at all possible to implement the construction work for all three phases at one time as a single construction project. This will maximize the efficiency of the construction process, reduce costs and reduce impacts on the existing service. The schedule calls for use of the Track Laying System (TLS) in the fall of 2014 to install the new track. Bridge, drainage, utility relocation and signal cabling work will be completed prior to use of the TLS; station platform work will advance independent of the TLS. A layover/storage facility will be located near the Springfield station to accommodate the projected number of trains for the new Amtrak and Connecticut rail service.

This program is unique in that Amtrak owns the right-of-way, will be responsible for the construction work, and will operate the new service on the line. Amtrak has designated a full-time project manager for the work, with the state and Amtrak meeting regularly to plan and organize for the project. Connecticut is responsible for the design of all improvements, management of the design and construction process, and construction of station improvements off the Amtrak right-of-way. Importantly, no new right-of-way is required for the track-related infrastructure improvements; some property may be required at stations for parking and other enhancements.

Specific Project Components

The following table details the work planned for each of the project phases, as depicted on the New Haven-Springfield Operational Schematic final configuration (rev. 5), included with the application. This application is to fund the Phase 3 (Hartford-Springfield) improvements.

<table>
<thead>
<tr>
<th>New Haven-Hartford-Springfield Rail Project</th>
<th>Scope of Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Component</td>
<td>Phase 1</td>
</tr>
<tr>
<td></td>
<td>Meriden-Newington</td>
</tr>
<tr>
<td></td>
<td>MP 21.1-31.3</td>
</tr>
<tr>
<td>Restoration of the second track (miles)</td>
<td>10.2</td>
</tr>
<tr>
<td>Track Rehabilitation</td>
<td>n/a</td>
</tr>
<tr>
<td>Freight Sidings</td>
<td>1.1</td>
</tr>
<tr>
<td>Interlockings</td>
<td></td>
</tr>
<tr>
<td>No. 20 remote powered interlocks for passenger rail; No. 15 for freight</td>
<td>2</td>
</tr>
<tr>
<td>Communications/Signals/ACSES (miles)</td>
<td></td>
</tr>
<tr>
<td>Cabling and signals for new track; ACSES; CETC modifications; utility connections</td>
<td>10.2</td>
</tr>
<tr>
<td>At-Grade Crossing Improvements (quad gates or median dividers; traffic pre-</td>
<td></td>
</tr>
<tr>
<td>Emotions where required; road improvements</td>
<td>n/a</td>
</tr>
<tr>
<td>Structures/Drainage Upgrades to approximately 180 Structures</td>
<td>✓</td>
</tr>
<tr>
<td>Stations</td>
<td>n/a</td>
</tr>
<tr>
<td>Layover Facility</td>
<td>Storage tracks; utilities; 480-volt stand-by; employee welfare; water, fuel and sand facilities</td>
</tr>
<tr>
<td>Professional Services</td>
<td>Design, project management, insurance, permits, flagging testing, start-up</td>
</tr>
</tbody>
</table>

Each of the project phases provide operational independence by adding the infrastructure necessary to expand service, reduce trip time and enhance reliability within their geographic length. When combined, the improvements transform the NHHS rail line into a gateway for passenger rail service to Connecticut, Massachusetts and Vermont.

(2c) Deliverables. Describe the work products of the program 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 phases and/or component projects. The table below should match the information provided in Sections D.14 of the Narrative Application Form Part I.

The following deliverables will be provided for each of the project phases, including Phase 3 (Hartford-Springfield), as each advance to completion:

1. Service Development Plan – provided to FRA with the FY2010 HSIPR program application; update included with this new application
2. Project Management Plan – provided to FRA with the FY2010 HSIPR program application; update included with this new application
3. System Safety Plan – provided to FRA with the FY2010 HSIPR program application; update included with this new application
4. Financial Plan – provided to FRA with the FY2010 HSIPR program application; update included with this new application
5. Service Outcomes Agreement

   a. Administrative Draft
   b. Environmental Assessment
   c. Record of Decision
7. Preliminary Engineering Plans (by Project Phase)
   a. Track
   b. Structures
   c. Drainage
   d. Signal/Communications/ACSES
   e. Utilities
   f. Station Platforms and connecting overhead bridges
   g. Station Parking
   h. Layover/storage facilities

8. Permits (Amtrak will submit the permit applications)

9. Final Design/Engineering Plans (by project Phase)
   a. Track
   b. Structures
   c. Drainage
   d. Signal/Communications/ACSES
   e. Utilities
   f. Station Platforms and connecting overhead bridges
   g. Station Parking
   h. Layover/storage facilities

10. Schedule & Budget (for the project and by project Phase)
    a. Project & Phase Baseline
    b. Updates at key milestones (completion of PE; completion of FD)
    c. Final construction schedule & budget
    d. Service launch schedule

11. Engineering/Planning Analyses
    a. Hartford Viaduct
    b. Connecticut River Bridge (Windsor Locks)

(3) Project Schedule. In the table below, estimate the approximate schedule for completing each phase. If there is only one phase, estimate the duration for each component task. For total project duration, reference Section D.3 of the Narrative Application Form Part I.

<table>
<thead>
<tr>
<th>Phase or Component Project</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Start Month</td>
</tr>
<tr>
<td>Environmental Assessment</td>
<td>2/2011 to 12/2011</td>
</tr>
<tr>
<td>Phase 3 Preliminary Engineering</td>
<td>2/2011 to 3/2012</td>
</tr>
<tr>
<td>Phase 3 Final Design</td>
<td>3/2012 to 3/2013</td>
</tr>
<tr>
<td>Pre-TLS Construction Activities</td>
<td>4/2013 to 8/2014</td>
</tr>
<tr>
<td>TLS Track Installation</td>
<td>9/2014 to 11/2014</td>
</tr>
<tr>
<td>Post-TLS Construction Activities</td>
<td>12/2014 to 9/2015</td>
</tr>
<tr>
<td>Launch New NHHS Service</td>
<td>2016</td>
</tr>
<tr>
<td></td>
<td>Total Duration</td>
</tr>
</tbody>
</table>
(4) **Project Cost Estimate/Budget.** Provide a high-level cost summary for the phases, if applicable, of Service Development Program work in this section, using the Service Development Application Package Instructions, Narrative Application Form Part I, and the HSIPR Service Development Program Budget and Schedule form as references. The figures in this section of the Statement of Work should match exactly with the funding amounts requested in the SF-424 form, the HSIPR Service Development Program Budget and Schedule form, and in Section D of the Service Development Program Narrative Application Form. If there is any discrepancy between the Federal funding amounts requested in this section, the SF-424 form, the HSIPR Service Development Program Budget and Schedule form, or Section D 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 for the proposed Service Development Program 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 Service Development Program project shall be borne by the Grantee.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Cost in FY11 Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1 Meriden-Newington ($60 million) – Funded</td>
<td>$ 00,000</td>
</tr>
<tr>
<td>Phase 2 New Haven-Hartford ($263 million) – Funded</td>
<td>$ 00,000</td>
</tr>
<tr>
<td>Phase 3 Hartford-Springfield – Current Application</td>
<td>$ 324,255</td>
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<tr>
<td><strong>Total program cost</strong></td>
<td><strong>$ 324,255</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Federal/Non-Federal Funding</th>
<th>Cost in FY11 Dollars</th>
<th>Percentage of Total Program Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSIPR Federal funding request</td>
<td>$ 226,978</td>
<td>70 %</td>
</tr>
<tr>
<td>Non-Federal match amount</td>
<td>$ 97,276</td>
<td>30 %</td>
</tr>
<tr>
<td><strong>Total program cost</strong></td>
<td><strong>$ 324,255</strong></td>
<td>100 %</td>
</tr>
</tbody>
</table>