Project Narrative

List of Appendices
Appendix A: Public-Private Partnership
Appendix B: Austin Powder - Additional Information
Appendix C: FRA Categorical Exclusion Document
<table>
<thead>
<tr>
<th><strong>Title:</strong></th>
<th>Red Diamond Safety Improvements Project</th>
</tr>
</thead>
</table>
| **Location:** | Hamden, Ohio to Red Diamond, Ohio  
Vinton County  
Ohio  
Ohio Congressional District 15 |
| **Applicant:** | Ohio Rail Development Commission (“ORDC”) |
| **Co-Applicant:** | Ohio South Central Railroad (“OSCR”) |
| **Project Summary:** | The Red Diamond Safety Improvements Project will raise the class of track on the rail line from Hamden, Ohio, to Red Diamond, Ohio, to FRA Class II. The project will significantly improve the track condition and reduce the risk of a catastrophic derailment of hazardous materials. The line is owned by the City of Jackson and operated by the OSCR and serves one customer, Austin Powder, a manufacturer of explosives and Vinton County’s largest private employer. The line is currently in FRA Excepted status, yet the only shipments Austin Powder receives are shipments of extremely explosive chemicals. While OSCR has operated the line safely and without catastrophic derailments in the past, the potential for a derailment still exists. In addition to the safety improvements, the rehabilitated rail infrastructure will benefit a major employer in rural Appalachian Ohio while also providing the railroad with operational benefits. |
Applicant Eligibility

The Ohio Rail Development Commission (“ORDC”) is a state agency created in 1994 by Ohio Revised Code Chapter 4981\(^1\) to develop, promote and support safe, adequate and efficient rail service throughout the state.

ORDC’s point of contact for this project shall be:

Megan McClory, Secretary-Treasurer
Ohio Rail Development Commission
1980 W. Broad Street
Mail Stop 3140
Columbus, Ohio 43223
614-644-0289
Megan.mcclory@dot.ohio.gov

\(^1\) See Ohio Revised Code, [http://codes.ohio.gov/orc/4981](http://codes.ohio.gov/orc/4981)
**Federal Funding Request**

The federal funding request for this application is $600,000. The project funding plan is as follows:

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRA Rail Safety Grant</td>
<td>$600,000</td>
<td>50%</td>
</tr>
<tr>
<td>ORDC Grant (State Funds)</td>
<td>$450,000</td>
<td>37.5%</td>
</tr>
<tr>
<td>OSCR Private Investment</td>
<td>$150,000</td>
<td>12.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1,200,000</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

A Public-Private Partnership between the ORDC and OSCR, detailing the funding commitments above, is attached to this application as Appendix A. No previous federal funding has been sought for this project.
**Detailed Project Description**

The project pursuant to this application is the rehabilitation, to FRA Class II standards, of the Hamden to Red Diamond section of the OSCR’s line.

**The Hamden to Red Diamond Segment**

The Hamden to Red Diamond segment is part of the 65.5-mile long Jackson Line that the City of Jackson acquired in the late 1980s and early 1990s. The 9.3-mile long Hamden to Red Diamond segment generally consists of heavy welded rail, however due to deteriorated tie conditions, the track condition is currently Excepted. All bridges are inspected annually and are in fit condition. Traffic to and from the Hamden to Red Diamond segment is interchanged with CSX at Richmond Dale. The track from Richmond Dale to Hamden will be in FRA Class II condition once a Public-Private Partnership project already under construction is completed in late 2016.

The City of Jackson has retained contract operators on the Jackson Line since acquired, and selected the OSCR in 2013 to be the new operator. OSCR began operations in January 2014 under a 25 year lease.

The following figures depict the project location in Ohio and Vinton County:

*Project Location: Ohio*
The Ohio South Central Railroad

The OSCR is a Class III freight railroad owned by the Indiana Eastern Railroad, LLC, (IERR) specializing in first and last mile customer service, as well as forward storage and logistics of both loaded and empty railcars. The OSCR was established in January, 2014 to operate the Jackson Line. The IERR operates other rail lines in Indiana and Ohio. The IERR and OSCR have made substantial capital investments in the rail properties they operate and actively promote both lines to serve the local manufacturing and agricultural markets.

Industry Information

The Hamden to Red Diamond segment serves one customer, Austin Powder. Austin Powder manufactures industrial explosives, blasting agents, and accessories for the quarrying, mining, construction, and seismic exploration industries. The company distributes its products through its stores in the United States and Canada,
Austin Powder is based in Cleveland, Ohio, and has locations in McArthur, Ohio (Red Diamond); Camden, Arkansas; Brownsville, Texas (Austin Star Detonator); and Valle Hermosa, Mexico (Austin Star Detonator).  

Austin Powder uses rail to receive ammonium nitrate prill (mixed with fuel oil), which it uses in its production of explosives. In addition, Austin Powder is investing $60,000,000 in a Pentaerythritol Tetranitrate (“PETN”) plant on site at the McArthur location. PETN is a component of cast boosters and detonation cords, and requires nitric acid as an input for production. Austin Powder routinely receives approximately 200 rail cars of inbound materials a year3 and these railcars must traverse the Hamden to Red Diamond section of the OSCR.

Hazardous Material Transportation

The fuel oil/ammonium nitrate prill mixture is classified as a Class 1.5 hazardous material (explosive/blasting agent), and nitric acid is classified as Class 8 (corrosive).4 Thus, all of the materials that Austin Powder receives via inbound rail are hazardous. The significant safety risk this project addresses is that of a catastrophic derailment that leads to the combustion or release of these hazardous materials that are being transported to Austin Powder. While the OSCR has a strong safety record and no incidents are anticipated, the risk of a derailment on Excepted track is significantly higher than on Class II track. This project will reduce the risk of catastrophic derailment on the Hamden to Red Diamond segment by raising the condition of the line to FRA Class II.

Project Work

The project involves the installation of approximately 6,900 new ties and other related track materials and work to upgrade the existing track to FRA Class II condition. It is necessary to raise the class of track to FRA Class II as the rail is welded rail between Hamden and Red Diamond, and welded rail requires higher track standards in order to avoid significant sun kinks. The estimated quantities and costs for the project are as follows:

<table>
<thead>
<tr>
<th>Work Item</th>
<th>Estimated Quantity</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furnish &amp; install crossties</td>
<td>6,900</td>
<td>$745,511</td>
</tr>
<tr>
<td>Furnish &amp; install switch ties</td>
<td>156</td>
<td>$40,574</td>
</tr>
<tr>
<td>Furnish &amp; install switch stands</td>
<td>6</td>
<td>$7,869</td>
</tr>
<tr>
<td>Furnish &amp; install unit style anchors</td>
<td>27,600</td>
<td>$99,636</td>
</tr>
<tr>
<td>Furnish &amp; place ballast</td>
<td>3,000 tons</td>
<td>$86,730</td>
</tr>
<tr>
<td>Pick up &amp; dispose of ties</td>
<td>7,056</td>
<td>$66,432</td>
</tr>
<tr>
<td>Line, tamp &amp; regulate track</td>
<td>9.3 miles</td>
<td>$135,780</td>
</tr>
<tr>
<td>Mobilization</td>
<td>Lump Sum</td>
<td>$17,468</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$1,200,000</strong></td>
</tr>
</tbody>
</table>

The scope of the project is further described in the Statement of Work.

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2 Additional information about Austin Powder is attached as Appendix B.
3 Interviews with Austin Powder, May 26, 2016.
Project and Cost Eligibility

The project is eligible for the Rail Safety Infrastructure Grant program as it is a project that will “make safety improvements to railroad infrastructure” per Section 3 of the Notice of Funding Opportunity (“NOFO”), as all project funds will be dedicated to track rehabilitation. As stated above, the cost share is eligible as it does not exceed a 50% federal share, and is “track rehabilitation and repair” as stated in Section 3.3.2.1 of the NOFO.
**Evaluation Criteria**

**Technical Merit**

This application is responsive to all requirements outlined in the NOFO. The scope of work as outlined in this Narrative and the Statement of Work and the related costs are realistic and sufficient to raise the class of track from Hamden to Red Diamond to FRA Class II, which will improve safety by significantly reducing the risk of a catastrophic derailment of hazardous materials. The matching, non-federal funds are in place and committed in the attached Public-Private Partnership Agreement (Appendix A).

**Project Benefits**

**Current Safety Risk**

The 9.3 mile rail line from Hamden to Red Diamond is in FRA Excepted condition. The last significant tie program was over fifteen years ago. Due to the nature of the commodities carried on this line, a derailment could be catastrophic. Without this project, only remedial track improvements would be performed that would not optimize service to the customers.

The segment extends from the Village of Hamden northeast through rural Appalachian Ohio. It parallels State Route 93, an important connector in southeast Ohio linking Ironton, along the Ohio River, to Jackson, Wellston, McArthur, and Zanesville. The rail line runs directly alongside the highway for approximately 5.5 of its 9.3 miles, with less than 150 feet of separation in many places. State Route 93 has an average daily traffic count of 2,500 to 10,000, depending on the roadway segment considered. The line also crosses over US Route 50 (US 50), where US 50 sees an average daily traffic count of 2,500-5,000, and it intersects State Routes 160 and 324. A catastrophic incident on the rail line would be likely to have a significant impact on the region's roadway network, in addition to the impact to the rail infrastructure and surrounding community. The map on page 10 depicts roadway infrastructure and traffic counts in close proximity to the line.

**Expected Safety Benefit**

The upgrade of the Hamden to Red Diamond segment will significantly reduce the risk of a catastrophic derailment. The project will add 6,500 new ties across the 9.3-mile long line, or approximately 700 ties per mile. Upgrading the track to FRA Class II also returns the track to federal oversight, which better meets the original intent of the FRA Excepted track rule, as the Hamden to Red Diamond line does travel through the populated area of Hamden, Ohio.

**Relative Impact of the Safety Improvement**

Improving the safety of the Hamden to Red Diamond segment has a significant impact due to the potentially catastrophic outcomes of a derailment along the line.

- The fuel oil/ammonium nitrate prill mixture is classified as a Class 1.5 hazardous material, which consists of very insensitive substances having a mass explosion hazard. Guide 112 specifies an immediate isolation from a leak or spill of 500 meters (1/3 mile) in all directions, with evacuation of 800 meters (1/2 mile) to be considered in the case of a large spill. The primary risk to first responders and the public is that of an explosion that could throw fragments one mile or more.

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The nitric acid carried on the line is classified as Class 8 corrosive, and Guide 157 specifies an immediate isolation from a leak or spill of 50 meters (150 feet) in all directions. Potential hazards to first responders and the public include risk of injury, burns, or death due to inhalation, ingestion, or contact. Contact with water may generate significant heat and release corrosive gases. Improving the safety of the rail line by upgrading its condition will help to avoid these potentially disastrous outcomes to life and property.

Other Potential Benefits

The railroad will additionally accrue operational benefits when the track is raised to FRA Class II, as it will no longer be limited to the five railcar per train limitation imposed by the Code of Federal Regulations, Subpart A, Part 213.4(e). Austin Powder will also accrue some benefit, as the company will see enhanced, more reliable rail service. The project is in Vinton County, in Appalachian Ohio. Vinton County is currently experiencing an unemployment rate of 7.1%, 2.3% above the Ohio average and 2.4% above the US average. Austin Powder is the largest private employer in Vinton County, employing 250 (approximately 2% of the county’s population), and thus is an integral part of the community.

Ohio South Central Railroad Safety Record

The OSCR has a strong safety record, with 0 accidents from its inception in January of 2014 through March of 2016, according to the latest available FRA data.

Benefit Cost Analysis

A formal benefit-cost analysis was not undertaken for this project, as the risk is highly variable and modeling of such a risk is beyond the scope of this grant. However, similar incidents involving crude-by-rail, examined by BakerHostetler’s Energy group, show that minimum liabilities for a crude-by-rail incident begin at approximately $3,000,000. On the high end, liability for a derailment may reach in the hundreds of millions of dollars. The primary benefit of this project is to avoid this sort of significant derailment.

Selection Criteria

The proposed project successfully addresses many of the selection criteria that the FRA Administrator may apply to the project selection process.

Alignment with DOT Strategic Goals and Priorities

The project aligns with several DOT Strategic Goals and Priorities, including:

- Improving transportation safety, via the upgrade in the FRA Class of track from Excepted to Class II;
- Maintaining infrastructure in a state of good repair, via the installation of approximately 6,500 new ties;

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• Promoting economic competitiveness, via supporting safe and reliable materials transportation for the only American-owned company that competes in the explosives market;
• Advancing environmentally sustainable transportation policies, via the promotion of rail transportation;
• Furthering the Livability Principles of the Partnership for Sustainable Communities, including enhancing economic competitiveness, supporting existing communities, leveraging private funds, and valuing communities; and,
• Building ladders of opportunity to expand the middle class, by supporting safe and reliable transportation for the largest employer in Vinton County, Ohio.

Project Delivery Performance

ORDC has successfully delivered previous FRA and DOT grants, including the Zanesville-Muskingum County Port Authority Rail Line Relocation Program Grant, the CSX National Gateway TIGER I Award, and over $70 million in American Recovery and Reinvestment Act (ARRA) rail projects. These projects were delivered on time, on budget, and for the full intended scope.

Region/Location

The project is located in an economically distressed area, specifically, Vinton County in Appalachian Ohio. Vinton County’s unemployment rate in April 2016 was 7.1%, significantly above the Ohio and national averages. Further indicators of the County’s economic condition are shown in the following table.11

<table>
<thead>
<tr>
<th>Vinton County</th>
<th>Ohio</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Median Household Income, 2010-2014</strong> (in 2014 dollars)</td>
<td>$37,984</td>
<td>$48,849</td>
</tr>
<tr>
<td><strong>Per capita income in past 12 months, 2010-2014</strong> (in 2014 dollars)</td>
<td>$18,198</td>
<td>$26,520</td>
</tr>
<tr>
<td><strong>Persons in poverty</strong></td>
<td>23.7%</td>
<td>15.8%</td>
</tr>
</tbody>
</table>

Innovation/Resource Development

The project promotes domestic manufacturing, by helping to ensure safe, reliable transportation of materials to Austin Powder.

Partnerships

The project is part of an ongoing partnership between the ORDC, as the applicant, state rail development entity, and source of the public matching funds; the OSCR, as the operating railroad and source of the private matching funds; and the City of Jackson, as the owner of the rail line. Other partners supporting the application include:

- Congressman Bill Johnson
- Austin Powder Company
- Ohio Department of Transportation
- Village of Hamden
- Jackson Area Chamber of Commerce
- Vinton County Commissioners
- Senator Rob Portman
- Jackson County Economic Development Partnership
- Ohio Valley Regional Development Commission
- Vinton County Chamber of Commerce
- Vinton County Development Department

11 United States Census Bureau, QuickFacts, [http://www.census.gov/quickfacts/table/INC110214/00,39,39163](http://www.census.gov/quickfacts/table/INC110214/00,39,39163) (last visited June 10, 2016)
Project Readiness

The project is ready to proceed upon award from FRA. ORDC has prepared a Categorical Exclusion document and contacted FRA to review the draft. The project is consistent with Ohio's State Rail Plan, as the project supports the adopted goals of Safety, Economic Development, Funding, and Efficient Railways. Matching funds have been committed and are evidenced by the Public-Private Partnership Agreement that is attached as Appendix A. Upon award, the ORDC will finalize the environmental document and work with the OSCR to prepare the bid package so that the project can be advanced to construction.
Project Implementation

ORDC and OSCR have executed a Public-Private Partnership (Appendix A) that outlines the project management arrangements. After contracting with FRA as the grant recipient, ORDC will subcontract with OSCR and pass through any additional requirements necessary for contractual compliance. ORDC has worked with the OSCR on numerous previous state- and federally-funded projects and enjoys a strong partnership with the railroad.

The possibility for change orders is low as the project consists of standard track rehabilitation with no significant engineering work. All change order requests will be evaluated by ORDC and, if deemed acceptable, will be forwarded to FRA for concurrence. ORDC plans to follow its standard procedures regarding risk management and plans to inspect the project on a bi-weekly basis during construction, in addition to having a pre-construction meeting and final inspection. ORDC has a significant record of compliance with project progress reporting from the TIGER I National Gateway project, and is very familiar with RADS and other federal progress reporting methods.
Environmental and Historic Preservation Impacts

The project’s limited scope of work is consistent with the classes of action enumerated in FRA’s Categorical Exclusion guidance. The project consists of track rehabilitation work on existing right-of-way. No major environmental or historic preservation impacts are anticipated—in fact, the project is likely to have net positive environmental benefits as the chance of a hazardous material derailment will be reduced. A Categorical Exclusion document is being prepared and is attached in draft form as Appendix C. Upon receiving a grant award for the project, ORDC will perform any necessary coordination with applicable resource agencies and seek approval from FRA on its draft environmental document.