

**U.S. Department of Transportation**

**TRANSPORTATION INVESTMENT GENERATING  
ECONOMIC RECOVERY - III**

**“TIGER III”**

**GRANT APPLICATION – Project Narrative**

**Project Name:** Sun Belt Regional Short Line Rail Project

**Project Type:** Rural Freight Rail Transportation Project

**Funds Requested:** \$21,261,079

**Contact:** Gil Wilson  
Rail Operations Specialist  
Rail Division  
Texas Department of Transportation  
125 E. 11th Street  
Austin, Texas 78701-2483  
phone: (512) 486-5103  
fax: (512) 416-2348  
Gil.Wilson@txdot.gov

**DUNS #:** 806782553

**EIN / TIN:** 74 6000170

**Website:** <http://www.txdot.gov/business/rail/tiger3.htm>



**Table of Contents**

I. Project Description .....1  
    Project Background.....1  
    Proposed Project Description.....2  
    Transportation Challenges Addressed.....4  
    Freight Volumes.....5  
    Consequences of Inaction.....5  
II. Project Parties..... 6  
III. Grant Funds and Sources/Uses of Funds .....6  
    Full Version.....6  
    Reduced Scope Option .....7  
IV. Selection Criteria .....8  
    4.a. Long-Term Outcomes .....8  
        4.a.i. State of Good Repair.....9  
        4.a.ii. Economic Competitiveness .....10  
        4.a.iii. Livability .....11  
        4.a.iv. Sustainability .....14  
        4.a.v. Safety.....16  
    4.b. Job Creation and Economic Stimulus .....18  
    4.c. Innovation .....22  
    4.d. Partnership .....22  
    4.e. Results of Benefits-Cost Analysis.....24  
V. Project Readiness and NEPA.....24  
VI. Federal Wage Rate Certification .....26  
VII. Pre-Application Changes .....26  
VIII. Appendices and Online Repository of Documents.....27

## **I. Project Description**

### **Project Background and Challenges**

A \$21,261,079 Transportation Investment Generating Economic Recovery (TIGER III) grant for the Sun Belt Regional Short Line Project (the “project”) will significantly improve the transportation infrastructure of an often neglected part of the Sun Belt region (specifically a rural portion of northeastern Texas, southwestern Arkansas, and southeastern Oklahoma) and will have positive public impacts on state of good repair, economic competitiveness, livability, sustainability, and safety. In addition, much needed short- and long-term economic stimulus will be created in this region within a short time period. The total project cost is \$28,348,106, which includes a 25 percent match by the private sector.

There are approximately 133 customers shipping a combined 58,742 carloads that are currently served by these short lines and each is anticipated to be able to increase its production output, creating additional long-term job opportunities. 85 of these companies are considered small businesses. The Sun Belt states in this proposal—Arkansas, Oklahoma, and Texas—will aggressively recruit new distribution centers and production facilities along the rail lines by marketing reliable connections to the national rail network, intermodal terminals, seaports, and airport cargo facilities. The project allows small and middle-sized companies—the companies that will fuel the economy’s rebound—to expand their employment base by accessing new job markets quickly.

In 1980, Congress passed the Staggers Act dramatically changing the rules and regulations governing large railroads. This also provided a mechanism for the large Class I railroads to divest branch lines where these railroads could not justify reinvestment in the track infrastructure. While some short lines have existed since the 1800s, the short line industry as we know it today was created as a result of the opportunities provided by the Staggers Act. Today, there are over 500 short line railroads operating 50,000 miles of track in forty-nine states, which is more than one-third of our nation’s network. And short lines that once existed in sparsely populated areas are now finding themselves located in some of the fastest growing regions of the country.

In spite of decades of underinvestment, short line railroads are still able to preserve and protect rail service for customers and communities that would otherwise have lost access to the national rail network. One primary reason is the nature of their lower overhead and streamlined cost structures. However, the struggle to overcome years of previous neglect is continuous. Although short lines reinvest in their property as much as they can, this often amounts to maintaining the status quo, not making the improvements necessary to upgrade the infrastructure to divert additional truck traffic to rail. As an example, the modern standard for railcar capacity is 286,000 (“286k”) pounds. Many short lines have infrastructure and bridge restrictions that will not permit this weight standard to be used. As a result, shippers are competitively disadvantaged and continue to move their goods by truck instead of rail. Public-private partnerships created through the administration of federal and state grants are one way to address the infrastructure needs of short line railroads.

This project has a benefit-cost ratio of at least 2 to 1. It is believed that the ratio is actually larger since several benefits could not be quantified. These benefits are reflected in the benefit-cost analysis Excel worksheet included in the online repository of supporting documents. In addition, there were some costs that have been identified, but also could not be quantified. With respect to long-term benefits, the short line rail improvements



will spur regional economic development and will promote a proven, environmentally-friendly mode of transportation. In the short-term, the project will create approximately 305,667 work-hours in nine counties, 69 percent of which are economically distressed areas (EDAs). In addition, there will be a significant number of higher paying jobs created through the multiplier effect, both from the materials sourced and from the reinvestment of wages in the EDAs. A significant percentage of wages earned will be reinvested into EDAs due to the short lines' commitment to encourage contractors to hire employees from local counties that are suffering from high unemployment rates as opposed to importing labor. This will ensure that the work-hours are completed by individuals residing in the distressed counties, many of whom are currently unemployed. This is one example of the multitude of competitive advantages that this project possesses.

### Proposed Project Description

The project consists of infrastructure improvements to the Dallas, Garland & Northeastern Railroad (DGNO), the Texas Northeastern Railroad (TNER), and the Kiamichi Railroad (KRR) (collectively referred to as “the short lines”); including upgrades to strategic side tracks and industrial leads to accommodate current and future traffic growth and allow for the use of heavier industry standard 286,000 pound railcars (“286K” railcars). The project eliminates rail joints, replaces cross-ties, adds new ballast, resurfaces over 171 miles of track, and replaces bridge components. Additional rail improvements will include upgrading rail in curves in key segments to 115-pound rail, the industry minimum needed to safely handle 286K railcars. The project also upgrades key interchanges that connect the short lines to Class I railroads. Additionally, this project will upgrade 57 passive public rural highway-rail grade crossings to meet current Federal standards and provide additional safety protections for highway users.

#### 1. Targeted projects on the DGNO/TNER (\$11.79 million – 127,631 man hours)

- The top customers that will benefit from this project include Lattimore Materials (several locations), Encore Wire and Manner Plastics.

The DGNO provides essential transportation options for the Dallas region, and over 40,000 carloads moved over the line in 2010. This equates to keeping a minimum of 160,000 truck trips off of the highway system every year. Major commodities handled include aggregates, scrap metal, lumber, paper, wheat, corn syrup, military equipment, frozen foods, plastic resins and chemicals. The DGNO also serves a number of industrial parks that have prime rail-served property available for future industry to locate, grow or expand in the region.

The DGNO is a complex terminal operation that serves over 100 customers. It began operations as a short line railroad in 1992 and is made up of a mixture of spur tracks and industrial leads. It operates 337 miles of rail line in Dallas and the surrounding area to the north, using a combination of owned and leased lines as well as trackage rights over other rail carriers. The DGNO interchanges with the Union Pacific Railroad (UP) at Dallas and Denison, Texas; with the Kansas City Southern Railroad (KCS) at Dallas and Greenville, Texas; and with the Burlington Northern Santa Fe (BNSF) at Irving and Sherman, Texas.

The TNER operates west from Bonham, Texas through Bells to Sherman, Texas, and east from New Boston, Texas to Texarkana, Texas. Over 10,700 carloads moved over the TNER tracks in 2010, meaning another 42,800 trucks were not moving over the highway. The TNER operates west from Bonham, Texas through Bells



to Sherman, Texas, and east from New Boston, Texas to Texarkana, Texas. The interchange points for the TNER are at Texarkana and Denison, Texas with the UP and at Sherman and Texarkana, Texas with BNSF.

Rehabilitation of the South Sherman Junction to McKinney Line:

1. Perform 30 miles of welding to eliminate rail joints
2. Upgrade 5 mainline switches with modern 112lb rail to conform to track standards
3. Replace 25,700 crossties, add new ballast and resurface 30 miles of track
4. Replace bridge components to strengthen them for 286K weight capability

This 30-mile line segment is strategically located just northeast of Dallas. The line is used primarily to deliver limestone to an aggregate receiving terminal at Melissa, Texas, owned by Lattimore Materials that was recently opened in 2005. The Melissa terminal received 7,880 carloads in 2010. This business was typically handled in 75-car unit trains. This facility currently has about 20 employees, but volume is expected to grow in the near future. Upgrading this line segment to accommodate 286K cars is imperative to accommodate new growth and provide new jobs.

In addition to the Lattimore terminal at Melissa, Texas, Encore Wire operates a copper production and distribution facility in McKinney, Texas. This facility receives over 350 annual carloads (1,400 truckload equivalents) of copper products that would otherwise move by truck. Other notable customers on this line—Manner Plastics, Foxworth Galbraith Lumber, and Stock Building Supply—combine to generate another 200 carloads (800 truckloads) of business. All of these customers have indicated that providing a 286K infrastructure will help them increase business and develop jobs.

Rehabilitation of the Sherman/Bells to Garland line segment:

1. Upgrade rail and four switches at UP/BNSF interchange tracks in Dennison, TX
2. Upgrade rail in high degree curve at Bells (formerly one leg of a WYE track, now the mainline)
3. Replace 91,800 crossties, add ballast and then resurface
4. Replace bridge components to strengthen them for 286K weight capability

This 98-mile line segment is also located northeast of Dallas, stretching from Garland, Texas to Sherman, Texas, via the City of Bells. The line from Sherman to Royse City is used primarily to deliver limestone to an aggregate receiving terminal at Royse City, Texas, which is also owned by Lattimore Materials and was opened in 2007. The Royse City terminal receives approximately 3,000 cars annually in 75-car unit trains. The facility has about 35 employees, and is also poised for strategic expansion as the economy recovers. Without rail service at this facility, an additional 16,000 loaded and 16,000 empty annual truck trips would travel on the regional highway system.

In addition to the Lattimore terminal at Royse City, Fritz Industries in Greenville receives, processes, and distributes fracturing sand which is used by the oil & gas industry. Recent infrastructure improvements allow this shipper to receive between 600 and 1,000 carloads (2,400—4,000 truckloads) per year. Fritz Industries will benefit from the contemplated 286K improvements along with other customers on the line, such as Graham Packaging and SPR Packaging, who jointly rely on the railroad to move an additional 200 carloads (800 truckloads) annually.



## 2. Targeted projects on the Kiamichi Railroad (\$16.55 MM – 178,036 man hours)

- The top customers that will benefit from this project include Ash Grove Cement, Domtar Industries, International Paper, Martin Marietta Materials and Western Farmers Electric Coop.

The KRR operates 261 miles of track based out of Hugo, Oklahoma, and provides rail service for rural counties and important commercial customers in Arkansas, Oklahoma, and Texas. The KRR interchanges with the BNSF in Madill, Oklahoma; the UP in Durant, Oklahoma; the Texas, Oklahoma and Eastern Railroad in Valliant, Oklahoma; KCS in Ashdown, Arkansas; and the UP in Hope, Arkansas.

### Kiamichi mainline rehabilitation project

1. Replace all 90lb bolted rail in curves with 112lb or 115lb continuously welded rail (CWR)
2. Replace 90lb bolted rail with 112lb or 115lb CWR in two switching intensive tangent sections
3. Apply new rail anchors on all remaining 90lb bolted rail sections over a 50 mile segment
4. Extend and upgrade siding at Arkinda, AR for growth and operational efficiency
5. Rehabilitate the 1.5 mile lead which serves the Ash Grove Cement Facility
6. Replace crossties on the AGC lead, Arkinda Siding, and trackage between MP 702 and MP 752

The KRR's largest customer, Western Farmers Electric Cooperative (WFEC), provides electricity to approximately three quarters of the homes and businesses (geographically) in the state of Oklahoma. Located in Ft. Towson, OK, WFEC received 14,168 coal cars (the equivalent of 56,672 truck trips) over the Kiamichi in 2010. This 82 mile move from Madill, OK to Ft. Towson is the only portion of the KRR that is 286K rated. Growing business demands that the entire route into Arkansas be upgraded to 286K standards. Ash Grove Cement (AGC) recently completed a \$400 million expansion at their Foreman, Arkansas facility, which will increase their annual production capacity from 1.0 to 1.7 million tons. This facility serves terminals in Arkansas, Louisiana and Texas and must compete with other large producers who are already able to take advantage of 286K rates and equipment. In 2010, AGC moved 4,237 cars on the Kiamichi (16,948 truckload equivalents). AGC has also indicated that rail movements may increase by as much as 60% if these 286K upgrades are implemented.

The maps showing the project locations are available for review on the web site at:  
[www.txdot.gov/business/rail/tiger3.htm](http://www.txdot.gov/business/rail/tiger3.htm).

## Transportation Challenges Addressed

Railroads are extremely fuel efficient, which reduces the nation's dependence on foreign oil and shrinks its carbon footprint. A freight train, on average, can carry one ton of cargo 480 miles on a single gallon of fuel. According to 2010 fuel receipts, the short line railroads in this application consumed 1,546,084 gallons of diesel fuel. According to the American Association of Railroads (AAR), railroads are four times more fuel-efficient than trucks.<sup>1</sup> Therefore, trucks would haul the same freight using 6,184,336 gallons of fuel—a difference of

<sup>1</sup> See ASSOCIATION OF AMERICAN RAILROADS, ENERGY AND ENVIRONMENT, <http://aar.org/KeyIssues/Energy-Environment.aspx> (last visited Oct. 9, 2011).

4,638,252 gallons each year. Taking into account only the incremental growth that would occur over the next 20 years, the project provides a fuel savings of \$34.59 million using a seven percent discount value over 20 years.<sup>2</sup> Lower fuel costs will enable shippers to pass cost savings directly on to consumers and allows rail to continue to be a competitive mode of transportation. This analysis is conservative because it assumes there is no growth in fuel use between 2012 and 2031 even though the number of carloads will increase significantly if this project is completed. Over the next 20 years, these benefits translate into saving a minimum of 16.62 million gallons of fuel by moving additional freight by rail instead of truck.

### Freight Volumes

Upon completion of the project, the short line railroads will be able to move an additional 824,190 tons of freight using 4,965 railcars in the first year of improved operations. This equates to an estimated 19,860 additional trucks being kept off the national highway system in the first year, with additional impacts from subsequent increases in traffic.<sup>3</sup> The American Association of Railroads has calculated that one truck takes the space of approximately four automobiles on the roadway system. This means the number of trucks removed from the highway system is equivalent to an additional 158,880 cars being taken off the road. The immediate benefit is an increase in livability standards for Sun Belt region residents due to a reduction in congestion and improved air quality. States also benefit by saving and reinvesting highway maintenance funds. Each ton of freight moved by rail instead of truck reduces greenhouse gases by seventy-five percent.<sup>4</sup> This fact is particularly important since these short line railroads operate in a region of Texas identified by the Environmental Protection Agency (EPA) as being in non-attainment for National Ambient Air Quality Standards (NAAQS). The short lines currently operating in northeast Texas, a state suffering from non-attainment for 8-Hour Ozone,<sup>5</sup> are helping the region combat pollution. The other two states that are part of the project also will benefit from goods being moved by a more sustainable transportation mode.

### Consequences of Inaction

Given the current level of funds available each year, it is simply not possible for these short lines to address the deteriorating infrastructure problem in a timely fashion, despite a healthy reinvestment of revenues back into these railroads. The amount of available funds will not permit components to be replaced at a rate faster than they are wearing out. Without support from the TIGER III program the overall condition of the infrastructure on these railroads will not improve – and it may well continue to deteriorate, with service levels and safety suffering as a result. The likely outcome of that would be diversions of rail traffic to more circuitous routes,

---

<sup>2</sup> On a net present value basis, the short lines would consume an additional \$11.51 million in fuel while the trucks needed to move the same amount of freight would require \$46.1 million in fuel. The calculations are included in Appendix A.

<sup>3</sup> 4,965 railcars equal 19,860 trucks using a diversion factor of 1:4. However, since trucks would have to travel round-trip, the actual number of trucks removed from the highway is 39,720.

<sup>4</sup> See ASSOCIATION OF AMERICAN RAILROADS, FREIGHT RAILROADS HELP REDUCE GREENHOUSE GAS EMISSIONS, <http://www.aar.org/~media/aar/Background-Papers/Freight-RR-Help-Reduce-Emissions.ashx> (last visited Oct. 11, 2011).

<sup>5</sup> According to the U.S. Environmental Protection Agency, the Agency “uses six ‘criteria pollutants’ as indicators of air quality, and has established for each of them a maximum concentration above which adverse effects on human health may occur. . . . When an area does not meet the air quality standard for one of the criteria pollutants, it may be subject to the formal rule-making process which designates it as non-attainment.” U.S. ENVIRONMENTAL PROTECTION AGENCY, GREEN BOOK CRITERIA POLLUTANTS [http://www.epa.gov/airquality/aqmportal/pollutant\\_types.htm](http://www.epa.gov/airquality/aqmportal/pollutant_types.htm) (last visited Oct/ 11, 2011).



losses of rail traffic to truck as well as harm to the shippers themselves as their ability to conduct business suffers. We believe inaction will ultimately result in current shippers choosing to limit facility and capacity investments, and consequently hiring. In some cases current or potential shippers will choose to locate production elsewhere, potentially in other countries, if long term, reliable, efficient freight rail service cannot be guaranteed in the near term in the region. As the commodity flow data in Table 1 indicates, this would have a major impact both on the sun belt region and the nation.

Sun Belt Project					
Customer	Commodity	2010 Carloads	Origins	Destinations	Usage
WPEC	Coal	14,982	NE Wyoming	Ft. Towson, OK	Electricity Generation
Lattimore	Limestone	10,543	Stringtown, OK	Melissa/Royse City, TX	Residential, Commercial and Municipal Building Projects
Ash Grove Cement	Cement	2,924	Foreman, AR	Shreveport/Alexandria, LA, Memphis, TN, Little Rock, AR	Residential, Commercial and Municipal Building Projects
	Coal	699	Heavner, OK, Coffeyville, KS	Foreman, AR	Power generation for the facility
	Waste Fuels	280	Foreman, AR	Various U.S.	Residual fuels
	Gypsum	486	Oklahoma City, OK	Foreman, AR	Cement production
	Limestone	21	Hugo, OK	Foreman, AR	Plant construction
	Mill Cylinders	8	Various	Foreman, AR	Residual products

**Table 1: Commodity Flow Information for Top Three Sun Belt Project Shippers**  
(See detailed commodity flow map in the online repository of supporting documents)

The TIGER III funds would allow the infrastructure projects to be conducted in a greatly accelerated manner – plans call for all work to be conducted entirely during the 2012 and 2013 work seasons. Currently, the DGNO and KRR for the most part operate trains at 10mph. The Sun Belt Project would enable these railroads to operate at least 20 mph. That would result in more direct routings for hundreds of railcars as well as the elimination of thousands of trucks from regional roads each year, just to name two of the more significant projected benefits. It is clear that the stream of benefits accruing to the railroad, to the region as a whole and most importantly, to its local shippers, would be very significant.

## **II. Project Parties**

The Applicant for the federal funds is the Texas Department of Transportation (TxDOT) in conjunction with the Oklahoma Department of Transportation (ODOT) and Arkansas State Highway and Transportation Department (ASHTD) as co-applicants. The railroads in this application are all owned by RailAmerica, Incorporated. RailAmerica, Inc. has committed to provide the portion of non-federal match identified in section 3. This Project has earned the support of a number of regional public and private stakeholders; those who have documented their support are identified in section 4.d Partnership.

## **III. Grant Funds and Sources/Uses of Project Funds**

### **Full Version**

The \$28,348,106 Sun Belt short line project would be funded by a \$21,261,079 Transportation Investment Generating Economic Recovery (TIGER III) grant and \$7,087,027 in matching funds from RailAmerica, Inc., the parent company of the short line railroads. The TIGER III grant would fund 75% of project costs and RailAmerica's matching funds would provide 25% of the project costs. The project includes rail rehabilitation and improvements on three short line railroads (DGNO, KRR, TNER) in three states, making this a project with



multi-state support and impacts. The total project estimate is shown below in Table 2. Detailed estimates for each short line are included in the supporting documentation available on the web.

#### Sun Belt Project Spending Totals by State:

- Arkansas: \$4,236,423
- Oklahoma: \$12,316,333
- Texas: \$11,795,351

**Table 2: Project Quantities and Estimate – Full Version**

Item	Unit	Quantity	Unit Cost	Total
Remove Joints, Crop Rail, Weld Joints	Each	350	\$532.08	\$186,228.00
Ballast - DGNO	Ton	24,300	\$24.00	\$646,375.00
Surface Track/Ballast – KRR	Mile	50	\$21,233	\$1,061,649.00
Surface Track DGNO	Mile	121	\$4,918.01	\$595,079.00
Turnout Replacement – McKinney/Sherman	Each	4	\$85,148.25	\$340,593.00
Turnout Replacement – Sherman/Garland	Each	5	\$84,180.60	\$420,903.00
Tie Removal & Replacement - McKinney	Each	25,700	\$74.44	\$1,913,089.00
Tie Removal & Replacement - Sherman	Each	91,800	\$70.58	\$6,479,010.00
Tie Removal & Replacement - KRR	Each	33,800	\$70.11	\$ 2,369,666.00
Rail Relay DGNO-Dennison	Track Foot	17,800	\$42.81	\$762,075.00
Extend & Rehabilitate Arkinda Siding	Linear Foot	4,500	\$229.33	\$1,032,002.00
Relay Acro Lead Track	Linear Foot	24,288	\$62.06	\$1,507,308.00
Relay Curve Rail	Linear Foot	162,500	\$62.70	\$9,363,011.00
Reconstruct 57 Grade Crossings	Track Foot	1,240	\$624.69	\$774,619.00
Bridge Repairs & Upgrades	Lot	24	-	\$896,500.00
<b>Total</b>				<b>\$28,348,106.00</b>

#### Reduced Scope Option

USDOT has indicated that, as with TIGER II, partial awards are highly likely with TIGER III due to the increasingly limited resources of the program and significant demand for funding. The NOFA advises applicants to identify lower cost options that demonstrate independent utility, and to provide an associated benefit-cost analysis to assist USDOT in determining viability and value of awards below the full amount requested. Accordingly the detailed sources and uses of funds for a “Reduced Scope Option” project scenario are illustrated below.

The total cost for the reduced scope option is \$22,776,618. TIGER grant funds requested are \$17,082,463 under this scenario, accounting for 75% of Project value matched with the 25% balance in committed matching funds



of \$5,694,155 from RailAmerica, Inc. The DGNO project did not change but the reduced scope option represents a reduction of 9.9 track miles of rail relay installation on the Kiamichi Railroad project. A detailed cost estimate and project map is included in the online supporting documents.

**Table 3: Project Quantities and Estimate – Reduced Scope Option**

Item	Unit	Quantity	Unit Cost	Total
Remove Joints, Crop Rail, Weld Joints	Each	350	\$532.08	\$186,228.00
Ballast - DGNO	Ton	24,300	\$24.00	\$646,375.00
Surface Track/Ballast – KRR	Mile	50	\$21,233	\$1,061,649.00
Surface Track DGNO	Mile	121	\$4,918.01	\$595,079.00
Turnout Replacement – McKinney/Sherman	Each	4	\$85,148.25	\$340,593.00
Turnout Replacement – Sherman/Garland	Each	5	\$84,180.60	\$420,903.00
Tie Removal & Replacement - McKinney	Each	25,700	\$74.44	\$1,913,089.00
Tie Removal & Replacement - Sherman	Each	91,800	\$70.58	\$6,479,010.00
Tie Removal & Replacement – KRR	Each	29,590	\$70.11	\$ 2,074,505.00
Rail Relay DGNO-Dennison	Track Foot	17,800	\$42.81	\$762,075.00
Extend & Rehabilitate Arkinda Siding	Linear Foot	4,012	\$229.33	\$920,158.00
Relay Acro Lead Track	Linear Foot	20,243	\$62.06	\$1,256,304.00
Relay Curve Rail	Linear Foot	74,527	\$62.70	\$4,672,892.00
Reconstruct 57 Grade Crossings	Track Foot	882	\$624.69	\$551,257.00
Bridge Repairs & Upgrades	Lot	24	-	\$896,500.00
<b>Total</b>				<b>\$22,776,618.00</b>

#### **IV. Selection Criteria**

To assess the viability of the Project for a TIGER III Discretionary Grant, a cost-benefit analysis on the rehabilitation project was completed. The cost-benefit analysis assesses the benefits to society of the project to improve the rail line relative to the costs of the project.

##### **4.a Long-Term Outcomes**

Our analysis indicates that this project will provide significant long-term benefits to the local shippers, region, and the nation as described in detail below. The Project will provide upgraded infrastructure in the northern Texas, southwestern Arkansas, and southeastern Oklahoma region. The upgrades are expected to last approximately 30 years, though the NPV calculations are done using 20 years as per the TIGER III guidance. The DGNO, KRR, and TNER have committed to keep the infrastructure in a state of good repair during the life

of the asset and the ongoing maintenance is included in the overall benefit-cost analysis for this project.

For the assessment, the benefits of the project from the rail line improvements are measured relative to a “base” case of the maintenance of the rail line under existing operational conditions. The benefits that have been assessed from the cost benefit analysis result from the improvement in the relative attractiveness of the rehabilitated railway as compared to shipping by truck. As such, under the project improvements, more freight is shipped by rail as freight is diverted from highway transport.

The most noteworthy beneficiaries of this project are the local and regional shippers. 2010 carload totals by customer for each railroad are listed below. Improvements brought about by this project will allow for increased capacity for current shippers and new business opportunities for other businesses in the region. These benefits are further elaborated in the following sections and enumerated in the benefit-cost analysis spreadsheets online.

#### DGNO Top Ten Customers in 2010

Customer	Carloads
LATTIMORE MATERIALS	10,543
KCS	8,573
RED RIVER ARMY DEPOT	3,348
LONE STAR RAILCAR STORAGE	2,537
TEXAS TANK CAR WORKS	2,242
COCA COLA	2,165
LIBERTY METALS	1,992
ADM/FARMLAND	1,514
OWENS CORNING	1,466
DALLAS LIQUID TERMINALS	1,192
<b>TOTAL</b>	<b>35,572</b>

#### KRRR Top Ten Customers in 2010

Customer	Carloads
WESTERN FARMERS ELEC.	14,168
INTERNATIONAL PAPER	6,619
ASH GROVE CEMENT	4,234
DOMTAR INDUSTIES	2,660
HOLCIM US	2,097
MARTIN MARIETTA	1,988
CAMPBELL SOUP	1,043
SPECIALTY MINERALS	923
TYSON FOODS	920
SEABOARD RAILCAR REPAIR	781
<b>TOTAL</b>	<b>35,403</b>

\*\*See the detailed customer maps in the online repository of supporting documents.

#### 4.a.i State of Good Repair

The short lines were purchased from previous operators just prior to abandonment or after of decades of underinvestment and low traffic volumes. The short line railroads are able to preserve and protect rail service for customers and communities that would otherwise have lost access to the national rail network, primarily because of their lower overhead and streamlined cost structures. However, the struggle to overcome years of deferred maintenance by the prior owners is continuous. Limited revenues from operations result in infrastructure reinvestment that often amount to maintaining the status quo, not making the improvements necessary to increase capacity, traffic, or divert additional truck freight to rail. Many short lines have infrastructure and bridge restrictions that will not permit the movement of 286K pound cars, the modern standard for railcar capacity. As a result, shippers are competitively disadvantaged and continue to move their goods by truck instead of rail.

Today, there are 63 slow orders on the short line railroads. This means that there are 63 specific areas along the

track where trains must run slower than usual (5 mph or less) due to current subpar track conditions. Furthermore, the majority of the track on the DGNO is “excepted,” which means it can only operate at 10 mph. This project would enable the railroads to operate at least 20 mph to better serve the customers and to grow business and create jobs. This project will improve freight mobility by eliminating 28-35 (eighteen to twenty-five percent) of the slow orders, increasing train velocity, improving safety, and reducing at-grade road crossing wait times for vehicles.

The collection of infrastructure projects being proposed would reduce the lifecycle costs, allowing for funds to be focused on maintaining track conditions instead of temporarily fixing the infrastructure for short-term benefits. The short lines would spend \$4 million annually to keep the infrastructure in its current condition with incremental improvements being made over time. However, this upfront capital investment would reduce annual maintenance expenses to \$2.94 million. On a NPV basis, the upfront investment yields an \$10.4 million benefit (\$42.38 million in maintenance costs averted and \$30.39 million in maintenance costs needed to keep the project in a state of good repair) providing both significant short-term and long-term benefits.

#### 4.a.ii Economic Competitiveness

Several public benefits associated with shipping by rail have been identified and quantified over a twenty year period. These effects are measured for both the base case and alternate cases and the net effect (or benefits) monetized. These benefits include:

**Benefit #1 - The reduction of transportation or shipping costs to shippers:** this benefit captures the cost savings experienced by shippers as they ship by rail instead of truck. A given amount of cargo is typically more expensive to ship by truck than by rail as rail is four times more fuel efficient. The increased rail capacity stemming from the project allows cargo to be diverted from truck to rail freight, and thus shipped at a lower cost. In some cases, short line rail service provides shippers with connections to multiple Class I railroads, allowing them to receive the most competitive price.

**Benefit #2 – Livability cost saving from truck noise reduction:** the reduction and elimination of truck noise by diverting more freight to rail is a significant livability benefit of this project. This is calculated at \$0.11 per VMT.

**Benefit #3 - The highway congestion relief benefits:** as freight is diverted from truck to rail, truck travel will decrease in the region, *ceteris paribus*. A truck takes up more physical space on the road than a car and typically operates at lower speeds depending on grades, tonnage, operating characteristics, and speed limits. Reducing the amount of truck travel will lead to a decrease in highway congestion and an increase in time savings for the regional population. This is calculated at \$.0327 per truck mile.

**Benefit #4 - The highway maintenance cost savings:** heavy trucks put a great deal of physical wear and tear on roads, and the roads must be maintained at the taxpayer’s expense. Diverting freight from truck to rail and reducing the amount of truck travel will lead to lower highway maintenance costs. This cost reduction benefit is quantified by taking the difference between the highway maintenance costs avoided if freight is diverted from truck to rail (about \$.056 per truck mile).



**Benefit #5 - Safety benefits:** highway accidents should diminish as freight is diverted from trucks to railcars, rail accidents should decrease in turn. This benefit category captures the change in safety costs including the value of lives and injuries saved by eliminating trucks from the highway (1.79 fatalities and 29.1 injuries for every 100 million truck miles [FMCSA data]), and direct economic costs associated with crashes caused by trucks.

**Benefit #6 - Emission savings:** this benefit category captures the emissions quantities that result from the diversion of truck freight to rail, including NOx and CO2.

Other benefits may also accrue to the project improvements such as travel time benefits to drivers as more trucks are removed from highways, and the costs associated with building additional highway capacity for the trucks that would be eliminated by this project, but have not been quantified due to limitations of data.

The benefits streams and project related costs are monetized over a twenty year period the Net Present Value of these streams derived using real discount rates of 7 percent (and 3 percent as an alternative). Table 4 provides a summary of the benefits in total and by benefit category. Total benefits are estimated to be \$86 Million with the main project benefits being transportation cost savings for shippers, safety benefits and highway maintenance cost savings.

Benefit Category	Benefit #	PV Over 20 Years	
		7%	3%
Transportation cost saving from diverting trucks to rail	1	\$46,051,961	\$69,253,270
Livability cost saving from truck noise reduction	2	\$11,817,616	\$17,081,803
Congestion cost saving from diverting trucks to rail	3	\$3,513,055	\$5,077,954
Maintenance cost saving from diverting trucks to rail	4	\$6,016,241	\$8,696,190
Safety saving from diverting trucks to rail	5	\$12,243,645	\$17,697,608
Emission saving from diverting trucks to rail	6	\$6,384,645	\$9,281,207
<b>Total</b>		<b>\$86,027,163</b>	<b>\$127,088,032</b>

**Table 4: Summary of Project Benefits**

While the benefit cost analysis results are quite positive, it is recognized that these estimates are point estimates and do not reflect the statistical uncertainty underlying the assumptions. To test the strength of the benefit cost analysis results, sensitivity analysis is conducted on some of the key assumptions driving the monetization of public benefits. For each of these assumptions, the percent change in the input value required to yield an NPV of zero as opposed to the base estimate of \$46.7 M is estimated. As indicated in Table 5, these input assumptions would have to change drastically to yield a break even NPV. For example, the estimate of carloads diverted to rail would have to be reduced by 35 percent for the NPV to be zero. Similarly, transportation cost savings from rail would have to decrease by 87 percent for a break even NPV.

Variable	Base Value	Value Required for NPV = 0	% Change Required
Percentage reduction in diverted carloads	0%	35%	-35%



Transportation cost savings from rail relative to truck	15%	2%	-87%
Trucks per rail Car	4.00	2.4	-40%

**Table 5: Sensitivity Analysis of Key Model Variables**

#### 4.a.iii Livability

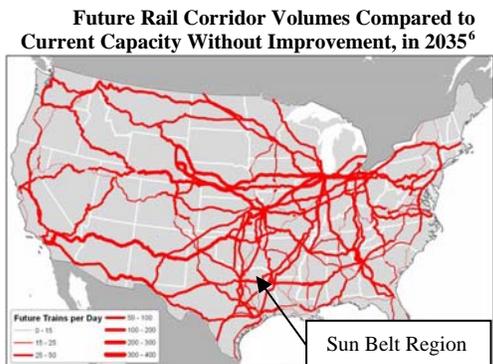
This project produces livability benefits through the elimination of congestion, the additional movement of HAZMAT via rail, and noise reduction in communities.

**Congestion:** Increasing railroad capacity is a highly effective way to enhance the livability of communities. Each railcar is equivalent to removing approximately four trucks off the highway system. When you account for a roundtrip made by the truck, it is equivalent to removing eight trucks off the highway system. And for certain commodities, such as coal, aggregate, and sand, five one-way trucks are eliminated from the highway. This application assumes all railcars are equivalent to four trucks and that each truck would make a roundtrip.

Today, the short lines eliminate the need for nearly 732,856 one-way trucks that would otherwise be on the road. Additionally, this project would remove 2.67 million roundtrip trucks from the local highway system. This reduction in truck traffic has a significant impact on congestion in the rural Sun Belt region.

To provide specific examples, limestone is crucial to the success of commercial and residential construction projects that will occur in and around Collin County—one of the fastest growing counties in the United States. The City of McKinney, Texas (near Dallas), was the nation’s fastest growing city between 2000 and 2007, with a population that doubled according to the U.S. Census Bureau. This growth has created a corresponding increase in traffic congestion in the greater Dallas area. Rail use is an effective way to mitigate highway congestion and provide a cost effective means reducing congestion. For example, if rail were not available at one of the aggregate terminals served by this project, 39,800 annual truck trips of heavy limestone would have traveled over Texas highways from their Oklahoma origination. Another 39,800 empty return trips would also have been made over the highway system.

In 2010, Ash Grove Cement (AGC) moved 4,234 railcars on the Kiamichi (33,872 truckload equivalents). AGC has indicated that rail movements will increase by 70 percent if 286K upgrades are made. This translates into an additional 23,710 trucks being taken off the regional highway system. On another route, AGC has informed the short lines that it could move an additional 2,000 carloads if the rail line were to have 286K infrastructure and that the average length of its rail hauls would increase from 48 to 76 miles. This would mean an additional 16,000 trucks would be removed from the highway system. Another shipper, Martin Marietta, would move over 1,500 carloads of traffic annually from Hugo, Oklahoma to Paris, Texas if 286K upgrades are made. It is a short distance of 28 miles, but it would remove another 12,000 trucks from the local highway system.



<sup>6</sup> See 2007 NATIONAL FREIGHT CAPACITY STUDY FOR AMERICAN ASSOCIATION OF RAILROADS, [http://aar.org/~media/aar/Files/natl\\_freight\\_capacity\\_study.ashx](http://aar.org/~media/aar/Files/natl_freight_capacity_study.ashx) (last visited Oct. 17, 2011).

Looking only at the incremental growth that would occur if this project were completed, additional capacity for 4 automobiles would be created annually from diverting truck traffic to rail. The benefit of not having to build additional capacity to accommodate these automobiles is unknown and therefore is not quantified in this application. However, according to the American Road & Transportation Builders Association (ARTBA), the cost to construct a new 2-lane undivided road in rural areas is at least \$2 million per mile.<sup>7</sup> Therefore, the cost to build highway capacity for these additional vehicles would be significant.

Highway congestion in the United States costs \$87 billion in wasted travel time (4.2 billion total hours or nearly a full week for every traveler) and results in 2.8 billion gallons of wasted fuel per year. Using conservative numbers, it is estimated that if the project is completed, 2.67 million trucks will be removed from the highway system over the next 20 years. By project year four, these short lines will be able to transport approximately 2.96 million tons of additional cargo by rail. This means that over the next twenty years, 55.38 million tons of additional cargo could be taken off the highway system. This equates to 4.4 billion truck ton-miles being shifted to rail. According to the 1997 Federal Highway Administration Cost Allocation Study, the congestion savings per truck mile eliminated from the road system is \$.0327. Therefore, the congestion savings for this project has a NPV of \$3.5 million over 20 years using a seven percent discount rate.<sup>8</sup>

**HAZMAT:** Records show that nearly 8,000 carloads of hazardous material (“HAZMAT”) were transported on the short lines in 2010. According to the U.S. Department of Transportation, “rail transportation of hazardous materials in the United States is recognized to be the safest method of moving large quantities of chemicals over long distances.”<sup>9</sup> Since rail is 16 times safer than trucks, and approximately 99.997 percent of all rail-shipped HAZMAT is delivered safely, it is in the public interest to keep HAZMAT on the rail lines.<sup>10</sup> The short lines plan to continue to capture additional HAZMAT (such as anhydrous ammonia, carbon dioxide, chlorine, phosphorous trichloride, polyethylene, and sodium hydroxide) which will make the rural road system safer. The benefit of keeping HAZMAT off the road system has not been quantified. However, the benefit of having HAZMAT on railroads traveling through rural areas of the country as opposed to the highway system provides a significant homeland security benefit.

**Noise Reduction:** The elimination of truck noise from the road system will also be a benefit to residents in the region. Using a FHWA study that has quantified the cost of noise for every truck-mile at \$0.11, an \$11.82 million NPV benefit exists by ensuring goods move by rail.<sup>11</sup> However, this cost is mitigated by the introduction of longer and/or more frequent trains. A recent measure of the cost per additional rail mile could not be located. One European study calculated that the impact of increased rail noise in rural areas was Euro

<sup>7</sup> See AMERICAN ROAD AND TRANSPORTATION BUILDERS ASSOCIATION, FAQs, <http://www.artba.org/about/faqstransportation--general-public/faqs/#20> (last visited Oct. 12, 2011).

<sup>8</sup> See U.S. DEP’T. OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, *supra* note 14.

<sup>9</sup> See U.S. DEP’T. OF TRANSPORTATION, FEDERAL RAILROAD ADMINISTRATION, HAZARDOUS MATERIALS TRANSPORTATION, <http://www.fra.dot.gov/us/content/137> (last visited Oct. 12, 2011).

<sup>10</sup> Bud Shuster, The Railroads’ Burden, Pittsburgh Tribune-Review, Feb. 2, 2007, [http://www.pittsburghlive.com/x/pittsburghtrib/news/specialreports/s\\_491336.html](http://www.pittsburghlive.com/x/pittsburghtrib/news/specialreports/s_491336.html) (last visited Oct. 12, 2011).

<sup>11</sup> See U.S. DEP’T. OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, *supra* note 14.



0.05 per locomotive-km which today would equal approximately \$0.041 per locomotive-mile.<sup>12</sup> This cost is probably low given recent currency fluctuations; however, the minimum cost of additional rail noise has, at minimum, a NPV of \$921,094.

There will be some additional impacts to livability given the increase in train traffic that would flow through the communities. The most significant impact would be increased grade crossing wait times. However, since traffic counts for many of the rural and private crossings are not easily obtainable and would have put a financial burden on the applicant, it is recognized as a cost that has not been quantified.

#### 4.a.iv. Sustainability

The project has significant environmental benefits resulting from moving freight by rail as opposed to truck. Railroads are approximately four times more fuel-efficient than trucks and are able to move one ton of freight 480 miles on one gallon of fuel. A single truck requires the same highway capacity as almost four automobiles. Additionally, the EPA estimates that for every ton-mile, a typical truck emits roughly three times more nitrogen oxides and particulates than a locomotive.

Based on a Transportation Research Board presentation using EPA Fleet Average Projections for 2010, trucks will produce approximately .63g/ton-mile of NOx and locomotives approximately .31g/ton-mile. Currently, federal government studies value the cost of NOx reduction to be approximately \$5,590 a ton per year. Using incremental growth that would result from the improved rail infrastructure, over a 20 year period, the reduction in NOx emissions could be valued up to \$5.26 million using a seven percent discount value.

The Sun Belt short line railroads travel through the following three counties that are currently in non-attainment for the pollutant listed below:

State	County	Pollutant
Texas	Collin	8 hour Ozone
Texas	Dallas	8 hour Ozone
Texas	Rockwall	8 hour Ozone

The DGNO has worked with the Texas Commission on Environmental Quality to procure five ultra-low emitting Generator Set (“genset”) diesel locomotives to help reduce emissions in the greater Dallas area. The DGNO is committed to reducing its carbon footprint through these new technologies and has budgeted for an additional five genset locomotives to be procured by the end of October 2011. Rehabilitating the rail lines would enable more freight to be moved more efficiently by these genset diesels.

<sup>12</sup> TRANSPORTATION COST AND BENEFIT ANALYSIS II – NOISE COSTS, VICTORIA TRANSPORT POLICY INSTITUTE, <http://tinyurl.com/636d58e> (last visited Oct. 12, 2011).



A DGNO ultra-low emitting genset diesel locomotive

**Emissions Reductions:** Most freight transportation is powered by diesel engines, which are major sources of emissions of nitrogen oxides (NO<sub>x</sub>), Sulfur Dioxide, and particulate matter (PM). NO<sub>x</sub> reacts with volatile organic compounds (VOC) to form ground-level ozone, commonly known as smog. Ground-level ozone can trigger a variety of health problems, including aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses like asthma, pneumonia, and bronchitis. Many scientific studies have linked breathing PM to a series of significant health problems including aggravated asthma, difficult breathing, chronic bronchitis, myocardial infarction (heart attacks) and premature death. Diesel exhaust is of specific concern because it is likely to be carcinogenic to humans by inhalation and may additionally cause non-cancer respiratory effects.<sup>13</sup>

Freight truck transportation is a major source of greenhouse gas (GHG) emissions, which contributes to global climate change. By far the most important greenhouse gas to monitor is carbon dioxide (CO<sub>2</sub>).<sup>14</sup> In 2003, truck freight accounted for more than three-quarters (77 percent) of freight-related GHG emissions, while rail freight accounted for only 8.7 percent, the balance being from marine and air transportation modes.<sup>15</sup> Several Class I Railroads have CO<sub>2</sub> Emissions Calculators included in their websites for rail versus truck comparisons. For the same freight shipment data above, using CSX Carbon Calculator<sup>16</sup> and a cost of \$33.00 per carbon ton as stated in the Federal Register Notice for TIGER III, the reduction in CO<sub>2</sub> emissions is valued at approximately \$1.12 million over the next 20 years using a seven percent discount value.

Emissions of Sulfur Dioxide and volatile organic compounds also will be reduced through this project. The benefit of reducing these greenhouse gases has not been quantified, but clearly exists.

**Petroleum Use Reductions/Fuel Savings:** It is important to provide some context to the benefits the short line railroads in this application provide already. In 2010, the short lines burned 1,546,084 gallons of fuel. If all of the freight on the targeted Sun Belt railroads were diverted to trucks, 6,184,336 gallons of fuel would be required—a difference of 4,638,252 gallons each year. This provides a transportation cost savings of \$15.85

<sup>13</sup> See U.S. DEP'T. OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, CHAPTER 2: NATIONAL FREIGHT TRANSPORTATION TRENDS AND EMISSIONS, [http://www.fhwa.dot.gov/environment/air\\_quality/publications/effects\\_of\\_freight\\_movement/chapter02.cfm](http://www.fhwa.dot.gov/environment/air_quality/publications/effects_of_freight_movement/chapter02.cfm) (last visited Oct. 12, 2011).

<sup>14</sup> See id.

<sup>15</sup> See U.S. DEP'T OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, *supra* note 23.

<sup>16</sup> CSX, TOOLS, <http://www.csx.com/index.cfm/customers/tools/carbon-calculator> (last visited Oct. 12, 2011).

million (using an average price of \$3.417/gallon for diesel fuel as of October 12, 2011).<sup>17</sup> Looking at only the incremental growth resulting from truck-to-rail diversions, and using Department of Energy estimates for the cost of diesel fuel each year for the next 20 years, the fuel savings is valued up to \$29.43 million using a seven percent discount value (\$16.62 million in fuel needed to move the cargo by rail versus \$46.05 million in fuel needed to move the cargo by truck).

A key goal of the Obama Administration is to reduce America's dependence on foreign oil, which will serve the purpose of increasing the country's energy security, while at the same time reducing the carbon footprint caused by transportation modes. The improvement of air quality in these regions is a direct result of this goal and the "green" nature of rail is a perfect complement to existing policies that address non-attainment regions. The investment to rehabilitate the short lines will directly affect the PM<sub>2.5</sub>, GHG, and Ozone levels in the rural regions in which the railroads operate. The proposed project is one small step towards energy independence and a cleaner environment.

#### 4.a.v Safety

The Project to be completed using TIGER III funds would generate significant safety benefits; through a decrease in highway accidents as well as by reducing the number of derailments.

**Highway Accident Reduction:** A recent 2008 Federal Motor Carrier Safety Administration (FMCSA) study stated that the number of large trucks involved in fatal crashes per 100 million vehicle miles traveled was 1.79.<sup>18</sup> Using an average that one rail car eliminates four trucks from the highway system and that a truck would travel to and from the destination (i.e. make a roundtrip), 212,806,888 truck-miles are eliminated from the highway system over 20 years if this project is completed. Using FMCSA data, the NPV for lives saved would be \$11.5 million. The same FMCSA study stated that in 2008 the number of large trucks involved in crashes that resulted in injuries per 100 million vehicle miles traveled was 29.1. To be conservative, this application assumes that all the injuries would be minor (i.e. Maximum Abbreviated Injury Scale Level 1). The NPV for the value of preventing injuries is \$375,156.<sup>19</sup> This is a conservative number since accidents involving large trucks would result in some injuries that were more than minor. The economic impact of these crashes is \$10,562 per accident, which also assumes that all the crashes are classified as a MAIS Level 1 accident.<sup>20</sup> The benefit of eliminating these crash impacts has a NPV of \$330,199 over a 20 year period.

---

<sup>17</sup> U.S. ENERGY INFORMATION ADMINISTRATION, GASOLINE AND DIESEL FUEL UPDATE, <http://www.eia.gov/oog/info/gdu/gasdiesel.asp> (last visited Oct. 12, 2011).

<sup>18</sup> See U.S. DEP'T. OF TRANSPORTATION FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION, 2008 LARGE TRUCK CRASH OVERVIEW, <http://www.fmcsa.dot.gov/facts-research/LTBCF2008/tbl1.htm> (last visited Oct 12, 2011).

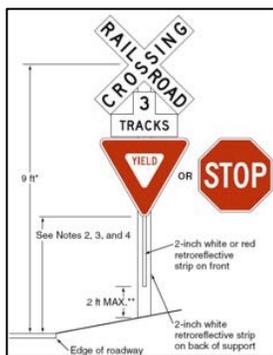
<sup>19</sup> The fraction of the Value of a Statistical Life used for a MAIS Level 1 accident is .0020. Memorandum from Tyler Duval, Assistant Secretary for Transportation Policy & D.J. Gribbin, General Counsel to Secretarial Officers/Modal Adm'rs (Aug. 2, 2005), <http://ostpxweb.dot.gov/policy/reports/080205.htm>.

<sup>20</sup> See U.S. DEP'T. OF TRANSPORTATION NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, THE ECONOMIC IMPACT OF MOTOR VEHICLE CRASHES 2000, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.131.9418&rep=rep1&type=pdf> (last visited Oct. 12, 2011).



The DGNO/TNER, and KRR railroads have 286 passive public rural highway-rail grade crossings. Eighty-eight grade crossing accidents have occurred since January 1, 2000. By law, motorists are supposed to interpret a grade crossing sign as a “yield” signal. Over the past two decades, the number of incidents at public highway-rail grade crossings has decreased by approximately 60 percent while the number of incidents at private crossings has decreased by approximately 26 percent. The Federal Railroad Administration continues to focus research funding on developing methods to continue to reduce the number of grade crossing accidents. Research has indicated that driver comprehension of highway-rail grade crossing signs is poor. Even though signs are clearly visible, the passive nature means drivers do not receive any additional information when approaching or crossing the tracks. As a result, avoidable accidents still occur.

These short lines have embraced the U.S. Department of Transportation’s recent Rural Safety Initiative and understand the importance of improving safety in areas of the country that have suffered from reduced funding during these challenging budget times.<sup>21</sup> The safety benefits of installing additional warning signs to 57 crossings is difficult to quantify, but given that many rail-car accidents result in fatalities, lives could be saved by this safety project. In 2008, 92 accidents took place at passive crossings nationwide, resulting in six fatalities and 17 injuries according to the most updated FRA data.<sup>22</sup> According to the U.S. Department of Transportation,



*rural roads carry less than half of America’s traffic yet they account for over half of the nation’s vehicular deaths*<sup>23</sup>. One way this project will help address this growing trend is to provide more commonly interpreted “yield” or “stop” signs in addition to the standard “railroad crossing” sign as directed by state Departments of Transportation.

This project will add and/or update passive rural highway-rail grade crossings to the current Federal standard pictured to the left. This will provide an immediate safety benefit in many rural areas throughout northeastern Texas, southeastern Oklahoma, and southwestern Arkansas. The estimated cost for these safety improvements at 57 passive public rural highway-rail grade crossings is \$85,500 (\$1,500 per crossing).

**Derailment Reduction:** The short lines’ infrastructure is in poor condition which directly affects safety. Marginal track and bridge conditions exist over the entire project area. Speeds are low and derailments are frequent. Although rail is one of the safest modes of transportation, there have been 80 derailments on the KRR since January 1, 2007.

In the summer of 2011, three derailments occurred within 45 days of one another due to poor tie condition causing over \$1.1 million in damage. Projected increases in business will only continue to cause velocity and capacity issues. These inherited conditions persist in spite of the fact that the KRR is already investing 20 percent of its **annual** freight revenue (approximately \$3M) back into the property. This equates to an average of \$11,500 per track mile per year on the KRR (compared with about \$8,000/mile/year that RailAmerica invests on other properties). There is a constant focus on reducing the number of incidents, but reductions are difficult

<sup>21</sup> See U.S. DEP’T. OF TRANSPORTATION, RURAL SAFETY INITIATIVE, <http://www.dot.gov/affairs/ruralsafety/ruralsafetyinitiativeplan.htm> (last visited Oct. 12, 2011).

<sup>22</sup> Cite

<sup>23</sup> See U.S. DEP’T. OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, PUBLIC ROADS, <http://www.fhwa.dot.gov/publications/publicroads/08july/alongroad.cfm> (last visited Oct. 12, 2011).

when operating on poor infrastructure. The rehabilitation projects proposed in this application will assist in ensuring that the track condition on the short line properties is improved to reduce the possibility of derailments.

There are 57 slow orders currently in effect on the KRR line. The DGNO/TNER has an additional 6 slow orders. Therefore, there are 63 specific areas along the track where trains must run at 5 mph or less due to current subpar track conditions. Furthermore, the majority of the track on the DGNO is “excepted,” which means it can only operate at 10 mph. This project would enable the railroads to operate at least 20 mph to better serve the customers and to grow business and create jobs. Projected increases in business will only continue to cause velocity and capacity issues. These inherited conditions persist in spite of the fact that the KRR alone is investing 20 percent of its annual freight revenue back into the property, equating to \$16.5 million since January 1, 2004.

On the KRR, all 90-lb bolted rail in curves will be replaced with 112-lb or 115-lb continuously welded rail (CWR). CWR will also be added in two switching intensive tangent sections and new rail anchors will be placed on all remaining 90-lb bolted rail sections over a 50-mile segment. On the DGNO, upgrades will be made to the rail in high degree curves at Bells (formerly one leg of a WYE track, now the mainline). These specific track improvements will greatly increase the safety of the short line railroads.

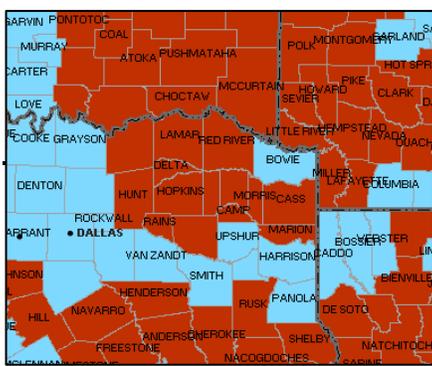
As mentioned previously, short line railroads have suffered from a lack of investment in infrastructure for decades. Rail ties and the track structures have deteriorated creating a maintenance backlog that has been difficult to address with low cash flows. By addressing the underlying track structure, trains will operate over dependable infrastructure.

Bridges and at-grade crossings have their own unique safety requirements. Bridges vary in design (such as concrete, steel or wood structures) and type (such as open deck, ballast deck, thru truss, thru girder, and draw bridges). The structural integrity of bridges is important not only for the safety of railroad employees, but also for the general public. While some bridges span water, many also span streets and highways. The ability of a bridge to safely support its rail loads requires regular upgrades in addition to routine maintenance.

Grade-crossings require high maintenance due to drainage problems and vehicular traffic, including heavy loaded trucks. The collection of water under crossties and the roadbed causes a pumping action of the crossing resulting in the possibility of derailments and vehicular accidents. Additionally, water draining from ditch lines adjacent to the tracks, local streets, and adjacent highways creates critical safety issues for railroad employees and the public.

A negative impact to safety will be the introduction of more railcar-miles due to this project. Over 20 years, an additional 53.2 million railcar-miles will be introduced to the region. The chance of grade-crossing accidents increases as additional and/or longer trains run on the short lines. The cost of this impact is unknown, but the increased chance of accidents that could result in injuries or fatalities is acknowledged.

#### 4.b Job Creation and Economic Stimulus



The impact of the project construction expenditures on the economy of the United States was estimated using two different approaches: (i) using



IMPLAN economic impact software using 2007 United States data; and (ii) based on the employment impact multiplier recommended by the Council of Economic Advisors (CEA), 1 job per \$92,000 of government expenditures, or 10.8 jobs per \$1 million of government expenditures. To be conservative, we have summarized the lower of the two estimates of job growth below – that recommended by the CEA.

The cumulative impact of the project amounts to 234.67 job-years, including 150.1 direct and indirect job-years and 84.5 induced job-years. During the construction period, the project will thus generate on average 117.3 jobs each year that would last the entire year (Table 6).

Economic Condition Both Income and Economic Criteria	
<span style="color: blue;">■</span>	Not Economically Distressed
<span style="color: red;">■</span>	Economically Distressed

Effect Type	Total Job-Years	Average Number of Jobs per Year*
Direct and Indirect	150.1	75.1
Induced	84.5	42.2
<b>Total</b>	<b>234.6</b>	<b>117.3</b>

**Table 6: Employment Impact of Project Expenditures Based on CEA Employment Multiplier, Number of Jobs-Years Created, Total, and Annual Average**

NOTE: (\*) Number of jobs lasting the entire year during the construction period

Out of the 133 customers that are currently served by these short lines, each is anticipated to be able to increase its production output, creating additional long-term job opportunities. The Sun Belt states in this proposal have committed to aggressively recruit new distribution centers and production facilities along the rail lines by marketing reliable connections to the national rail network, intermodal terminals, seaports, and airport cargo facilities. This allows the small and middle-sized companies in the Sun Belt region to expand their employment base quickly.

The short lines provide a great economic advantage to companies that need to move their goods in a cost-efficient manner. Railroads are more reliable than trucks on long distance routes and companies have set up distribution centers along rail corridors to lower inventory costs. Improving the rail infrastructure will allow the short lines to enhance their ability to attract and handle additional traffic. As a consequence, rail transportation will become more attractive to shippers because of improved velocity and more reliable service. Since the principal commodities moved by the short lines are bulk commodities, where rail has a clear economic advantage, improved rail infrastructure and service would divert current truck traffic.

The following snapshots of the railroads provide examples of how companies have been able to increase their competitiveness through the use of rail and are illustrative of the future growth that will result from this project being funded.

*Dallas, Garland & Northeastern Railroad (DGNO)*



The DGNO is used primarily to deliver limestone from Stringtown, Oklahoma, to an aggregate receiving terminal in Melissa, Texas (owned by Lattimore Materials). This facility currently has about 20 employees, but volume is expected to grow in the near future. Upgrading this line segment to accommodate 286K railcars is imperative to accommodate future growth and provide opportunities for new jobs. An over-the-road freight movement would be approximately 100 miles long. This is important because, as mentioned above, the benefits in this application are conservative in that it assumes the average railcar only travels on the DGNO/TNER for 37 miles and therefore the diverted truck movement is only 37 miles instead of the more likely 100 miles.

In addition to the Lattimore aggregate terminal at Melissa, Texas, Encore Wire operates a copper production and distribution facility in McKinney, Texas. This facility receives over 350 annual rail carloads (2,800 truckload equivalents<sup>24</sup>) of copper products that would otherwise move by truck. Other notable customers on the line include Manner Plastics, Foxworth Galbraith Lumber and Stock Building Supply. These customers combine to generate another 200 carloads (approximately 1,600 truckloads) of business. These customers have stated that they will increase their business and expand their employee base if the rail infrastructure can accommodate 286K railcars.

The line from Sherman, Texas, to Royse City, Texas, is used primarily to deliver limestone to an aggregate receiving terminal in Royse City opened in 2007 by Lattimore Materials. The Royse City terminal receives approximately 4,000 cars annually in 75-car unit trains from Stringtown, Oklahoma. An over-the-road freight movement would be approximately 125 miles long. The facility has approximately 30 employees and is poised for strategic expansion as the economy recovers. The limestone exists, is scheduled to be mined, and will need to be delivered in an efficient manner. Rail would provide greater economic benefits than trucks. In addition, the rural region will see benefits in the form of lower transportation costs. This will allow the aggregate mines to market its goods to a wider region of the country since shipping aggregate by truck significantly limits a company's market penetration.

Fritz Industries in Greenville, Texas, receives, processes, and distributes fracturing sand used by the oil and gas industry. Recent infrastructure improvements allowed this shipper to receive between 600 and 1,000 carloads (4,800-8,000 truckloads eliminated from the highway system) per year. Fritz Industries will benefit from the 286K railcar improvements as well as other customers such as Graham Packaging and SPR Packaging, which jointly rely on the railroad to move 200 carloads (equivalent to 1,600 truckloads) annually.

#### *Texas Northeastern Railroad (TNER)*

The TNER effectively acts as a market extension to the UP and the BNSF for local customers. The TNER serves The Red River Army Depot at Defense, Texas, located just west of Texarkana, Texas. Major commodities handled on the TNER include coal, military equipment, wheat, and polyethylene. Rail has significant pricing advantages over trucks when moving these bulk commodities.

#### *Kiamichi Railroad (KRR)*

The KRR's 33 on-line customers collectively employ more than 3,000 full-time employees and have a total payroll approaching \$300 million. The KRR's largest customer, Western Farmers Electric Cooperative

<sup>24</sup> 350 railcars equals 1,400 trucks. The trucks would move in both directions so 2,800 trucks are eliminated from the highway system.

(WFEC), provides electricity to approximately three-fourths of the homes and businesses (geographically) in the state of Oklahoma, including Altus Air Force Base. Located in Ft. Towson, Oklahoma, WFEC received 14,168 coal cars over the Kiamichi in 2010. This 82-mile move from Madill, Oklahoma to Ft. Towson, Oklahoma is the only portion of the KRR that has 286K rail infrastructure. The ability to accommodate future growth demands that the entire route east into Arkansas be upgraded to 286K standards. This will provide customers cost-effective access to markets in the east and further benefit the entire region.

Ash Grove Cement recently completed a \$400 million expansion at their Foreman, Arkansas, facility which will increase its annual production capacity by 70 percent (from 1.0 million to 1.7 million tons). This facility serves terminals in Arkansas, Louisiana, and Texas and must compete with other large producers who are already able to take advantage of 286K rates, equipment, and infrastructure. The ability to provide additional rail capacity to Ash Grove Cement will ensure that AGC can remain competitive with the rest of the marketplace and that committed growth does not move by truck.

Daisy Farms is currently constructing a dairy facility that will become operational in 2012. This facility will house 10,000 dairy cows that will be producing milk for the production of Daisy Brand® sour cream and cottage cheese. In order to competitively haul grain and feed to Daisy, as well as to other feed and grain dealers like Tyson Foods and Pilgrim's Pride, the Kiamichi must have 286K infrastructure. Dairy Farms has stated it could move up to 520 carloads each year instead of relying solely on trucks if this project were completed. Therefore, this customer could eliminate 4,160 future truckloads from the highway system if these improvements are made.

Campbell Soup, Domtar Paper, International Paper, Kimberly Clark, Sara Lee and Weyerhaeuser are other nationally known companies served by the KRR that will be indirect beneficiaries of the track upgrades.

There are approximately 133 businesses served by all three short line railroads. As the maps in the supporting documents illustrate, the short lines connect to Class I railroads giving these companies and their products access to domestic and international markets through seaports and airports. As mentioned earlier, more than 60% of these companies are small businesses so access to cost-efficient transportation is a key to their future success. Additionally, as evidenced by the support letters from existing shippers, businesses utilizing these short lines will be able to capitalize on significant growth opportunities immediately.

The counties that this project traverses have a combined population of 3,621,806. All of these citizens and the businesses for which they work will benefit from the short lines providing opportunities for additional market penetration. By lowering transportation costs for shippers, U.S. goods will be more competitive in the marketplace and less expensive for consumers.

**Job Creation:** Enhancing the workforce base in the rural parts of the Sun Belt region is vital to regional economic competitiveness. The RailAmerica recruitment and training program will target this population sector to provide high wage jobs in Economically Distressed Areas within the region. For those with existing employment, the rail construction and maintenance jobs will provide greater wages and therefore be a net benefit for the region.

In total, 305,667 work-hours are required to complete the infrastructure improvements. The short lines are



committed to doing their part to stimulate the economy; therefore, the short lines will strongly encourage contractors to hire unemployed persons from the regions in which the short line operates. The short lines will also work with local government agencies and community based organizations to identify, recruit, and train workers. In addition, each new employee will be certified in railroad safety practices, as required by the Federal Railroad Administration. These certifications will allow workers to compete for jobs throughout the rail industry after this project is complete.

All materials, such as rail, ties and ballast, will be purchased from U.S. manufacturers to create additional jobs. The median hourly wage of rail transportation workers in 2008 was \$21.12, compared with \$13.14 for all transportation occupations. An unquantifiable number of jobs will be created in the railroad equipment industry since new equipment will need to be purchased to complete these infrastructure projects. In addition to creating jobs, studies have shown that every \$1 invested in transportation infrastructure generates an additional \$3 in total economic activity. By providing opportunities to locate new companies along the rail corridor, communities will be given the opportunity to increase their tax base. This project will save money for highway users by reducing fuel wasted from idling by funding projects that will improve traffic flow at highway-rail crossings (due to the increase in train velocity).

The three states that are part of this application are grateful for the short lines commitment to stimulate the local economies. The following community based organizations have been consulted with and are in support of this project:

- Denison Development Alliance
- Kiamichi Economic Development District of Oklahoma
- Workforce Oklahoma

The DGNO/TNER/KRR run through the counties listed below. The unemployment rate in June 2011 for each county is listed below as well.

Arkansas:	Hempstead (9.2%) and Little River (7.6%)
Oklahoma:	Bryan (5.1%), Choctaw (7.0%), McCurtain (9.7%), and Pushmataha (7.6%)
Texas:	Collin (8.0%), Dallas (9.2%), Fannin (10.7%), Grayson (9.3%), Hunt (9.8%), Lamar (10.6%), Rockwall (7.9%)

As of June 2011, all of the counties listed above (with the exception of Dallas, Rockwall, Grayson and Collin) are classified as Economically Distressed Areas by the Federal Highway Administration.<sup>25</sup>

#### 4.c Innovation

The short lines have also been an innovator in environmental stewardship by actively pursuing projects to reduce pollutants from diesel emissions. It is a railroad member of the EPA's "Smartway" business partner program. Membership in Smartway can only be achieved through the creation, implementation and validation of fuel and emission reduction programs through the use of available technology and better operating practices. The short lines have also been an active partner in several Federal and state grant programs designed to promote

<sup>25</sup> See U.S. DEP'T. OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION, *supra* note 3, [http://hepgis.fhwa.dot.gov/hepgis\\_v2/GeneralInfo/Map.aspx](http://hepgis.fhwa.dot.gov/hepgis_v2/GeneralInfo/Map.aspx) (last visited Oct. 12, 2011).

fuel conservation and emission reduction. The short lines have a goal of equipping their entire locomotive fleet with either Automatic Equipment Start/Stop (AESS) technology in warm weather climates or Auxiliary Power Units (APU's) in cold climates. Both technologies serve to shutdown engines so that they do not idle unnecessarily when not in use. Additionally, as noted, the company has procured new ultra-low emitting genset locomotives in Texas, California and Ohio. Aided by the Carl Moyer program in California, a sister railroad to these short lines recently converted to an "all green" locomotive fleet. The public, community and shipping stakeholders were highly appreciative of the accomplishment. The short lines in this application will continue to pursue the acquisition of additional gensets in Texas in partnership with the Texas Commission on Environmental Quality.

#### **4.d Partnership**

This project meets the goals of producing benefits that have an impact on a region of the United States (i.e. northeastern Texas, southeastern Oklahoma, and southwestern Arkansas). Additionally, the short lines have agreed to provide a 25 percent match for the project.

The short lines have also committed to providing the funds necessary to maintain the improvements in a state of good repair. Support letters from elected officials, shippers, and other entities are available for review on the web site. The short lines have engaged all the major stakeholders while developing this proposal. This includes organizations in the three states that will assist in identifying and recruiting unemployed residents and veterans in the Sun Belt region. This will help ensure the grant's benefits are targeted to the EDAs.

The short lines have also partnered with economic development agencies to help site new facilities alongside its rail lines. By partnering with these types of agencies, the short lines may be able to help keep additional trucks off the highway. In order for companies to build their distribution facilities near short lines they need assurances that the rail line will be upgraded in order to move 286K railcars, the current industry standard.

Letters of support for the project have been received from numerous businesses and other entities and are available for review on the web site at: [www.txdot.gov/business/rail/tiger3.htm](http://www.txdot.gov/business/rail/tiger3.htm).

**Grant Request Supporters** (Note: Some support letters have been sent directly to U.S. DOT)



<p><b><u>Members of Congress</u></b>            Senator James Inhofe            Congressman Dan Boren            Congressman Ralph Hall</p> <p><b><u>State Elected Officials</u></b>            State Senator Jerry Ellis (OK-5)            State Senator Steve Harrelson (AR-21)            State Representative Dan Flynn (TX-2)            State Representative Ken Paxton (TX-70)            State Representative R.C. Pruett (OK-19)            Drue Bynum, Grayson County, TX Judge            Wallace Martin, Hempstead County, AR Judge            Clayton Castleman, Little River County, AR Judge</p> <p><b><u>State Agencies</u></b>            Arkansas State Highway and Transportation Department            Oklahoma Department of Commerce            Oklahoma Department of Transportation            Texas Department of Transportation</p> <p><b><u>Counties</u></b>            Hempstead County, Arkansas            Little River County, Arkansas            Choctaw County, Oklahoma            Idabel, Oklahoma Industrial Development Authority            Grayson County, Texas            Collin County, Texas            Hunt County, Texas</p>	<p><b><u>Cities</u></b>            City of Foreman, Arkansas            City of Hugo, Oklahoma            City of Sherman, Texas</p> <p><b><u>Workforce Development Agencies</u></b>            Kiamichi Economic Development District of Oklahoma            Denison Development Alliance</p> <p><b><u>Shippers</u></b>            Ash Grove Cement Company            Durant Metal Shredding, LLC            Lattimore Materials Company            Texas Star Warehouse &amp; Distribution            We Pack Logistics            Western Farmers Electric Cooperative</p> <p><b><u>Others</u></b>            National Railroad Construction &amp; Maintenance Association            Oklahoma Rail Association</p>
--	---

#### 4.e Results of Benefit-Cost Analysis

A comprehensive benefits analysis was performed covering the 20-year period following the projected completion of project construction. The operational and commercial aspects of the railway were examined in detail in order to identify the internal and external benefits that are expected to result from the Project. The stream of Project benefits expected in each future year was then monetized and discounted to present-day valuations at the rate of 7% as specified in the NOFA. The analysis supporting the benefits calculation has been summarized in this application and detailed documents have been provided in the accompanying exhibits.

The benefits exceed the total value of project cost and results in a Net Present Value for the project of \$46.7M. The total project benefits are greater than the project costs with a benefit cost ratio is 2.19. The project economic indicators are more much favorable using the 3 percent discount rate as shown in Table 5 with an NPV of \$80.3M and a Benefit Cost ratio in excess of 2.7.

<b>Economic Indicators</b>	<b>7%</b>	<b>3%</b>
<b>Total Costs</b>	\$39,339,560	\$46,761,222
<b>Total Benefits</b>	\$86,027,163	\$127,088,032
<b>NPV</b>	\$46,687,602	\$80,326,810
<b>ROI</b>	118%	172%
<b>B/C</b>	2.19	2.72



**Table 7: Summary of Project Economic Indicators**

In addition, for the cost benefit analysis quantification, the \$28.3 million total project cost has been spread equally between 2012 and 2013. Under the 7% discount rate, the project yields a benefit to cost ratio of 2.19 to 1 and a 118% return on investment (ROI).

Cost Categories	Current \$
Funds Requested	\$21,261,079
Total Cost	\$28,348,106
Year 2012 Cost	\$14,174,053
Year 2013 Cost	\$14,174,053

**Table 8: Summary of Project Costs**

The logic and the assumptions behind these benefit calculations are available in the Benefit-Cost Analysis online.

## **V. Project Readiness and NEPA**

**Project Schedule:** Each of the individual projects will be started within 60 days of an agreement being signed between the U.S. Department of Transportation and the respective state Departments of Transportation. A detailed project timeline is shown in the Gantt chart attached as Appendix H. All work will be performed within the existing right-of-way; therefore, no permits are needed. The 60 days will be spent procuring materials and hiring labor in the specific regions as outlined above. Each project will be completed 12 months after the appropriate project agreements are executed.

**Environmental Approvals:** No coordination with federal agencies has occurred since the Surface Transportation Board does not require an environmental review for the rehabilitation of existing track; while the Federal Railroad Administration and Federal Highway Administration do not perform environmental review of an existing track unless they are involved in funding the project. TxDOT believes that the completion and submission of an FRA environmental checklist will result in a finding of no significant impact and a Categorical Exclusion (CatEx) will be granted. Draft FRA CatEx checklists have been completed and are posted on the web site at [www.txdot.gov/business/rail/tiger3.htm](http://www.txdot.gov/business/rail/tiger3.htm). TxDOT staff will work with Grant Managers in the appropriate federal agency to get the NEPA clearances, Project Summary, Statement of Work, and Assurances and Certifications completed along with any other required information or documentation. Assuming the TIGER grant is approved, the project would be completed within 12 months after the appropriate project agreements are executed.

**Legislative Approvals:** No additional legislative approvals or authority is necessary for project implementation in Arkansas, Oklahoma, or Texas.

**State and Local Planning:** The projects are in predominantly rural areas which do not require the approval of a Metropolitan Planning Organization. The projects can be added to the Statewide Transportation Improvement Program during quarterly updates or through an out-of-cycle revision if funding is approved.



**Technical Feasibility:** The short lines have worked with each of the three states and have discussed the proposed project in depth. The project is limited to work on existing railroad right-of-way, and the scope of work proposed is typical railroad rehabilitation or improvement work. There are multiple contractors throughout the U.S. who are capable of completing the construction as planned on time and within budget.

**Financial Feasibility:** The short lines have developed a detailed cost estimate for the project and have vetted it with an engineering firm and a railroad construction company to ensure that the cost estimates are realistic. In addition, the short lines have committed funds from existing cash flows to maintain the infrastructure improvements for the life of the materials installed. The states of Arkansas, Oklahoma, and Texas continue to support investments in rail infrastructure and other intermodal projects, which will ensure that the short lines continue to have better connections to other modes of transportation over time. The matching funds committed by the short lines are identified and can be expended immediately.

---

## **VI. Federal Wage Rate Certification**

The federal wage rate certification is attached.

## **VII. Pre-Application Changes**

The information provided in the pre-application for the Project remains the same. The key elaboration is that the Applicant is offering a reduced scope option. As described in Section 3 this “Reduced Scope Option” eliminates \$5,571,488 in investment in 9.9 miles of rail relay installation on the Kiamichi Railroad. Our analysis indicated that, while this component is a valuable investment, it is the piece that could be removed to offer the most significant reduction in cost to TIGER III while still maintaining a compelling benefits case overall.

Recognizing there is a premium for projects that are “shovel-ready,” this project is an ideal candidate. No additional permits are needed and all environmental work has been completed. Construction will begin as soon as personnel are hired and trained. Further, materials will be sourced solely from U.S. companies.

This project will change the face of this rural region of America by creating a significant number of long-term jobs. The return on investment for the federal government will include lower greenhouse gas emissions, less dependence on foreign oil, a rail infrastructure in the Sun Belt region that will be an economic engine for growth, improved intermodal connections for businesses, and jobs that will provide an increase in economic confidence throughout the region. These positive results are critical to the Sun Belt region, which has been hit hard by job losses, increased pollution, and a staggering economy.

This project is an ideal candidate for funding through the TIGER III program. It leverages non-federal funds and brings together three states to complete a regional project, a main criteria for the TIGER III program. It creates jobs (e.g., 305,667 new work-hours are created), promotes economic recovery (e.g., gives many small businesses access to new markets and the ability to grow their operations), invests in transportation infrastructure that provides long-term benefits to an entire region (e.g., provides dependable intermodal connections by bringing deteriorated rail lines up to a state of good repair), and provides opportunities for those hardest hit by the economic downturn (e.g., the commitment to hire people from EDAs ensures that these funds are targeted to those that need it most).

Additionally, the three states and RailAmerica are committed to satisfying all transparency and accountability objectives mandated by the Obama Administration.



### **VIII. Appendices and Online Repository of Documents**

Please visit: [www.txdot.gov/business/rail/tiger3.htm](http://www.txdot.gov/business/rail/tiger3.htm).

The following appendices are a part of this application:

Benefit-Cost Analysis Spreadsheet: Full Version - DGNO	A
Benefit-Cost Analysis Spreadsheet: Full Version - KRR	A.1
Benefit-Cost Analysis Spreadsheet: Reduced Scope Version	B
Letters of Support	C
Maps (Identifying Economically Distressed and Rural Areas, Project Locations, Geospatial Data, and Intermodal Connections)	D
Detailed Project Cost Breakdown – KRR Full Project	E
Detailed Project Cost Breakdown – DGNO Greenville-Garland-Sherman	E.1
Detailed Project Cost Breakdown – DGNO McKinney	E.2
Detailed Project Cost Breakdown – KRR Reduced Scope Version	E.3
Detailed Project Schedule	F
Detailed Project Schedule – Reduced Scope Version	F.1
Carload numbers	G
Federal Wage Rate Certification	H
Commitment Letter for Private Sector Match	I
Categorical Exclusion Worksheet	J
Photos of Current Infrastructure in Need of Improvement	K