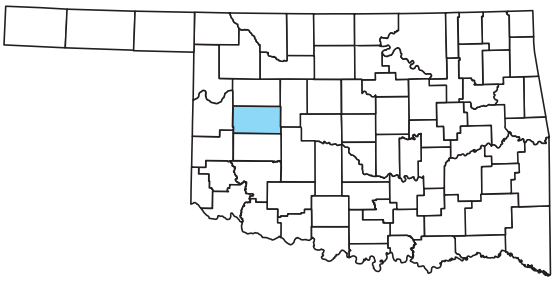
2012 TRANSPORTATION INVESTMENT
GENERATING ECONOMIC RECOVERY (TIGER)
DISCRETIONARY GRANT APPLICATION

OKLAHOMA

Westhom Spur State-Owned Rail Improvement Project

Westhom, Custer County, Oklahoma



March 19, 2012

Name of Applicant: Oklahoma Department of Transportation
Address: 200 NE 21st Street, Oklahoma City, OK 73105

Primary Point of Contact
Name: Secretary Gary Ridley
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PROJECT TYPE:
Freight Rail

CFDA # 20.933
National Infrastructure Investments

LOCATION:
Custer County, Oklahoma

Oklahoma Congressional District 3
(U.S. Rep. Frank Lucas)

AREA: Rural

MATCH:
$540,000 (10%)

REQUESTED AMOUNT:
$4,857,280 (90% of total project)

TOTAL PROJECT COST:
$5,397,280

DUNS NUMBER:
824700074

CENTRAL CONTRACT REGISTRATION NUMBER:
339V2

PROJECT WEB ADDRESS:
http://www.okladot.state.ok.us/tiger/tiger-2012_westhom/index.htm

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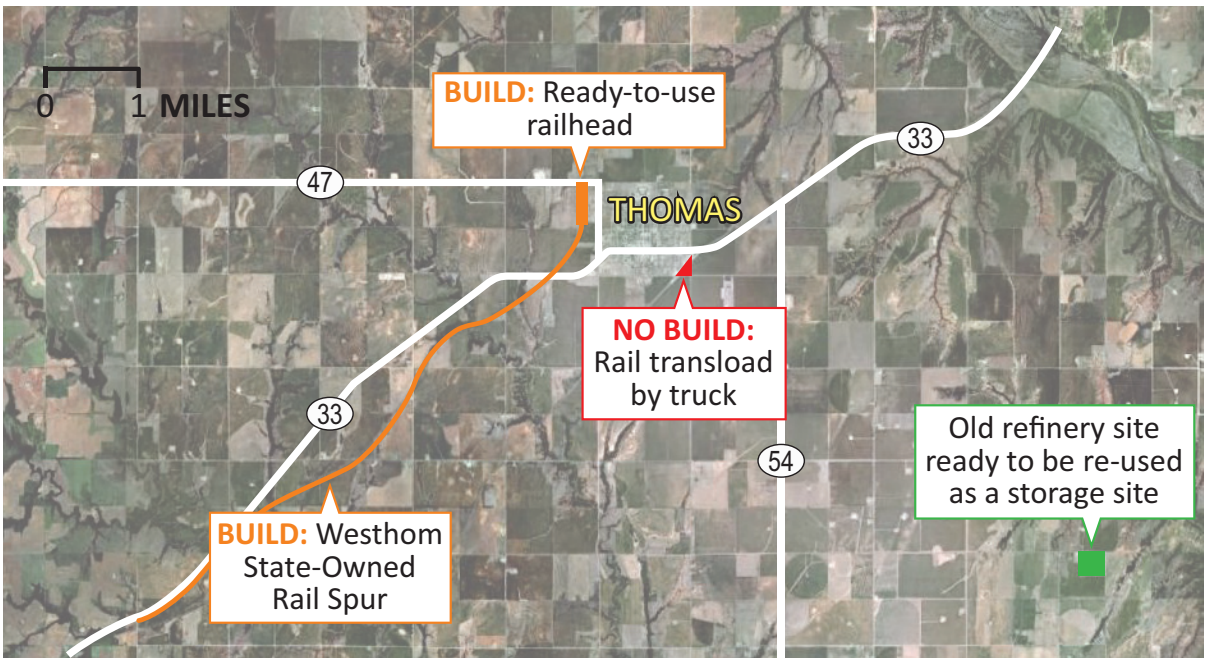
Overview for Application Reference Purposes



EXECUTIVE SUMMARY

As oil and gas production efforts continue to expand in western Oklahoma due to new energy sector technology, and as pipeline constraints continue, the State and its business leaders have been working on options to expedite safe and environmentally sound market delivery of energy products in the face of escalating gasoline prices. In conjunction with the company that operates a portion of the State of Oklahoma-owned freight rail system (Farmrail or FMRC) and one of Oklahoma's largest energy companies (Chesapeake), the State seeks to continue expansion of the "Rolling Pipeline" freight rail development currently underway in western Oklahoma[1]. The State seeks funding for the **Westhom Spur State-Owned Rail Improvement Project** as an important expansion of this rail network.

The project centers on Thomas, Oklahoma in Custer County, a community literally founded and built by the rail industry and currently within one of the country's most active energy fields. The town, platted by the Oklahoma Railway Townsite Company in 1902, served as a rail-based commercial center and for decades was a stop for both the St. Louis-San Francisco Railway as well as the Atchison, Topeka and Santa Fe Railway. This project will reactivate segments of existing but out of use infrastructure, and reinvigorate a town of 1,200 that has been losing population over recent decades.

Chesapeake, Farmrail, and the State of Oklahoma are working together to set up an oil gathering and rail delivery operation that would capture the *northern* portion of the Anadarko Basin, thus working in conjunction with a similar operation in Sayre, Oklahoma that is currently servicing the *southern* portion of the basin. As predicted by the United States Geological Survey (USGS) (see bibliography) and as is being realized by Chesapeake Energy, large reserves are materializing out of the Anadarko Basin due to the application of new technology. As issues surrounding pipeline capacity continue, the Rolling Pipeline Delivery System offers an efficient, safe, environmentally sound and cost-effective means of moving oil out of western Oklahoma to refineries across the nation.

This project centers on reusing and reopening dormant infrastructure, thus greatly enhancing project readiness and cost management. Chesapeake Energy is repurposing an existing pipeline and refinery site, while the State is working with Farmrail to reopen an inactive rail line (the state-owned Westhom Spur) as part of the Chesapeake Energy project and expansion of the "Rolling Pipeline" network. In short, approximately 80% of the necessary infrastructure and almost 100% of the right-of-way is already in place, owned by the State of Oklahoma and Chesapeake.

As efforts continue to expand rail operations in western Oklahoma, this project benefits from the fact that surrounding infrastructure improvements will result in the ability of the freight to flow both north and south, and thus offers maximum efficiency and beneficial pricing to get to any location in the United States via two Class I rail carriers, BNSF Railway and Union Pacific.

"Chesapeake Energy views this project as critical in stimulating the region's economic activity while also improving environmentally superior and safer modes of oil transportation in one of the most active drilling areas in the nation."

—Rhett Stall, Chesapeake Midstream Development LLC

Should this project be brought online, it will lead to the elimination of at least 13,000 regional heavy truck trips annually, and as usage expands it will eliminate long-haul heavy truck trips from various points in the state to the Cushing[2] pipeline terminal. As the product begins moving by rail, overall transportation costs will be lowered and unit pricing will be improved, thus resulting in benefits to the local economy, the regional economy, and the nation. The benefit cost ratio of this project is 7.68 to 1.0, using a seven percent discount rate (see page 13).

Project Overview
Expand "Rolling Pipeline Network" to expand oil shipping by rail by reopening state-owned Westhom Rail Spur near Thomas, OK

Amount Requested (90%)
$4,857,280

Project Match (10%)
$540,000

Support Website
http://www.okladot.state.ok.us/tiger/tiger-2012_westhom/index.htm

1 See Oklahoma State-Owned "Rolling Pipeline" Development Project – Sayre, Oklahoma http://www.okladot.state.ok.us/tiger/tiger_2011_sayre/index.htm

2 Cushing, Oklahoma is a major trading hub for crude oil and a famous price settlement point for West Texas Intermediate on the New York Mercantile Exchange. The Shell pipeline terminal consists of storage tanks and pipelines that can move as much as 1.5 million barrels a day. Thus Cushing is sometimes named the "Pipeline Crossroads" of the World. http://digital.library.okstate.edu/encyclopedia/entries/C/CU007.html

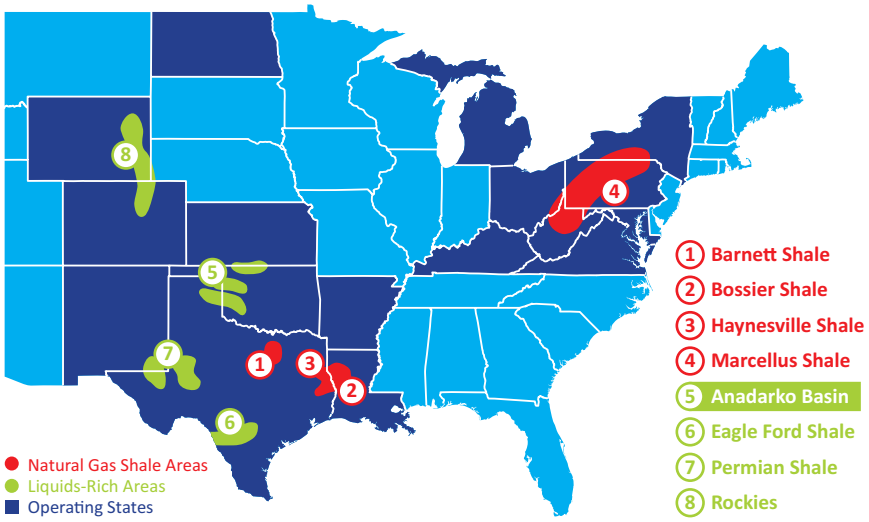
I. PROJECT DESCRIPTION

By working with infrastructure that is out-of-service, but re-servicable, the State of Oklahoma, Farmrail Corporation, and Chesapeake Midstream have been collaborating on a plan to expedite the movement of crude oil out of the Anadarko Basin in western Oklahoma to refineries located on the Gulf Coast and in other states. This area is currently one of the most productive oil and gas fields in America, **and due to gluts within the existing pipeline network, new methods of crude oil delivery are in high demand across the United States (Exhibit 1).**

This TIGER 2012 project focuses on the transportation infrastructure needed to expand what is termed a "Rolling Pipeline Network" that covers multiple plays within the Basin. ("Plays" and "Washes" are distinct production areas that fall in separate geographic locales spread out across the entire Basin). ODOT seeks funding to re-open a rail line that has been out of use for several years. As shown in **Exhibits 2 and 3**, the Westhom Rail Spur at Thomas feeds into **a rail system that can capture all of the Basin footprint in Oklahoma by forming two separate oil gathering and railhead operations**—one funded by a TIGER III award in Sayre, Oklahoma covers the southern portion, and this new proposal will cover the northern portion of the Anadarko Basin in Thomas, Oklahoma.

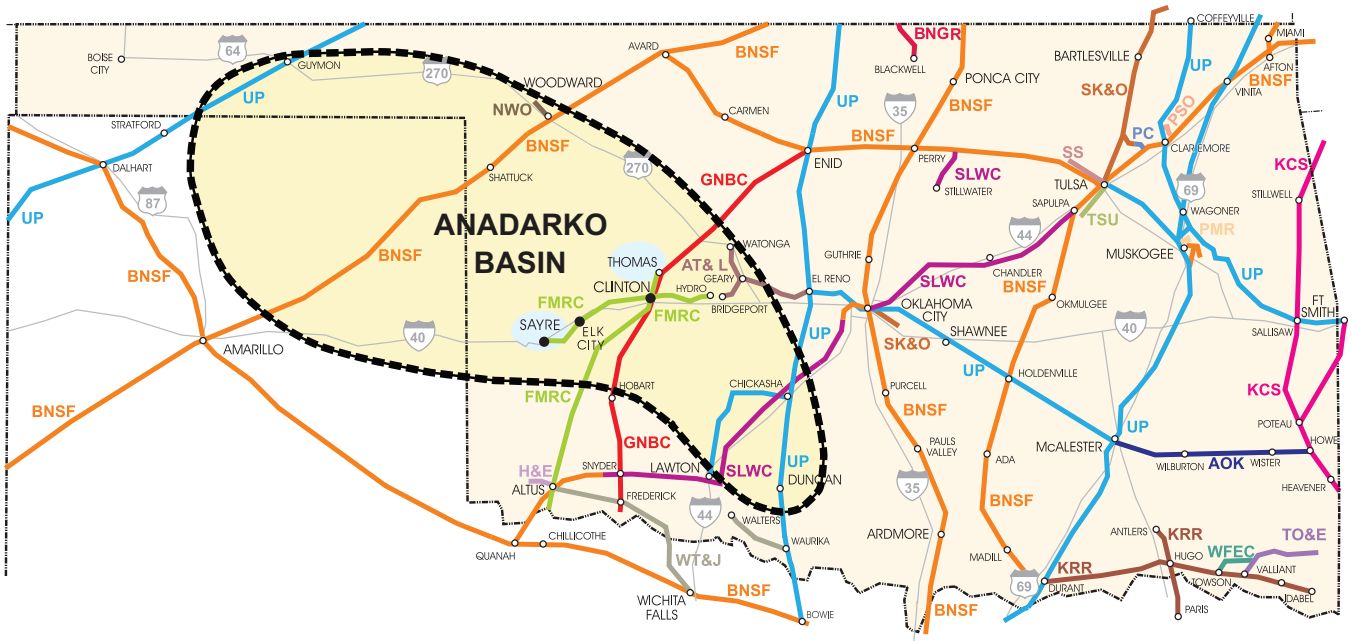
The State of Oklahoma owns the Westhom rail spur, which terminates with a large industrial ROW footprint that was once used for a grain elevator operation. In discussions with Farmrail Corporation, the rail operator that has the State's western rail lines under an operations agreement, and with Chesapeake Midstream, it became evident that expanding the "Rolling Pipeline" concept at this location made very good business sense.

Exhibit 1: Centers of Production by Use of Hydraulic Fracturing



Source: http://www.hydraulicfracturing.com/Pages/information.aspx

Exhibit 2: Oklahoma Rail System with the Anadarko Basin and Rolling Pipeline Project Highlighted

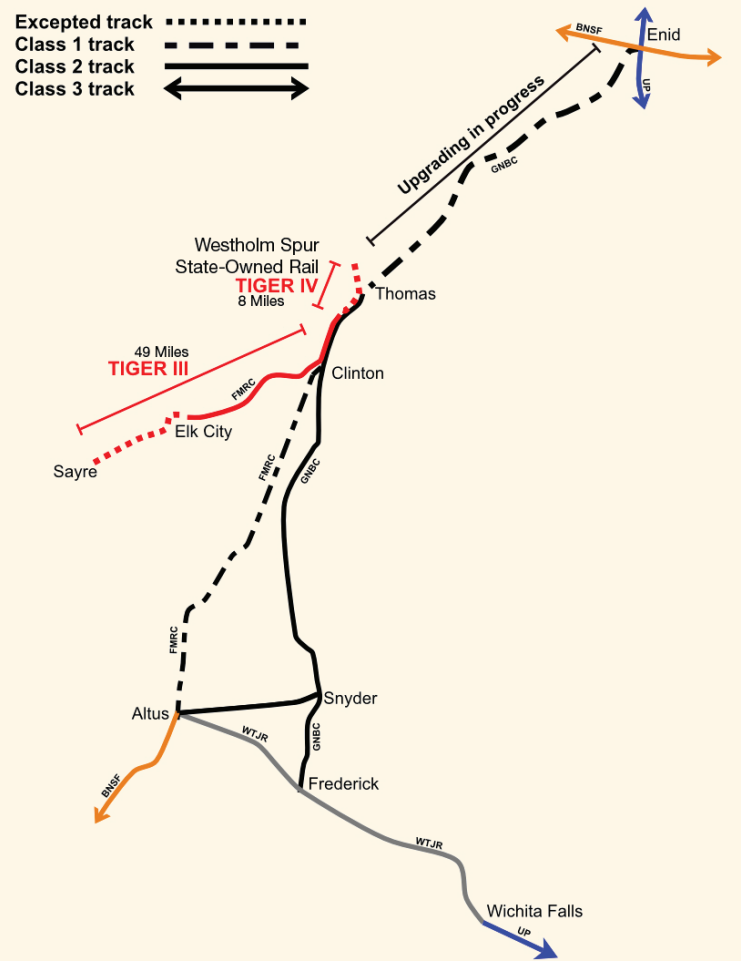


The concept would also **result in many benefits regarding environmental improvement, reduction of roadway deterioration, local economic activity and all without need of mobilizing very many new resources.**

The project described in this application only includes improvements to the rail delivery portion of the rolling pipeline expansion. However, there are other facilities that will be built through private investment that will bring enhance the cost savings and environmental benefits of the project. Chesapeake Energy has access to an out-of-service refinery which it is converting to a storage and transloading area (see **Overview Reference map** on page ii), and also owns a currently unused but re-serviceable pipeline connecting the refinery to an area on the northwest side of Thomas. If the Westhom project goes forward, Chesapeake will re-purpose this pipeline to carry crude oil from the old refinery storage site to the planned railhead in Thomas. This will reduce shipping costs for the crude oil, and will also reduce the need to truck the oil between the storage site and the nearest railhead – eliminating nearly 12,000 roundtrip truck trips from rural roads in Custer County every year.

The Westhom project and the private investments, are ready to go forward quickly. Between the Westhom Spur improvements and the Chesapeake pipeline and refinery work, almost 100 percent of the right-of-way, and roughly 80 percent of the hard build (structures) needed are currently in place. This re-use of existing, abandoned infrastructure will greatly reduce the costs and environmental impacts of expanding oil shipment capacity in western Oklahoma.

Exhibit 3: Western Oklahoma's "Rolling Pipeline"

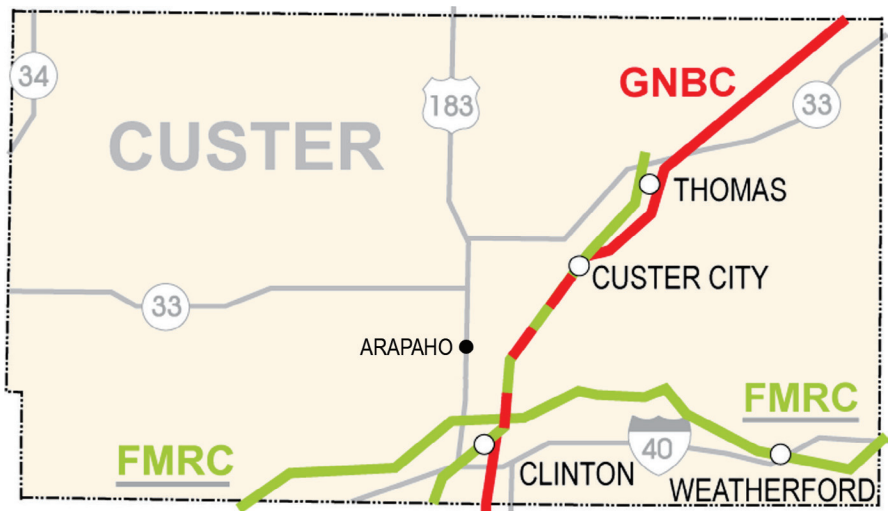


PROJECT PURPOSE

A solution to moving this vast production out of western Oklahoma in a cost effective and timely fashion is to establish strategic locations for transloading of locally gathered crude oil from truck to rail, thereby removing large volumes of a toxic commodity from the highway infrastructure and reducing emissions, congestion and roadway maintenance needs. This strategy also allows for continuous production without delays for new pipeline construction. One railroad tanker car can hold nearly 28,000 gallons of crude oil (compared to an average of 7,400 gallons for a tanker truck), and a typical train can move as many as 100 railcars at a time, up to 2.8 million gallons of crude oil in a single trip. The other benefit of moving the oil out of western Oklahoma by rail is that the oil can go directly to refineries without the need to use trucks on both ends of the product movement. Even where pipeline capacity is in place, pipeline delivery requires additional trucking activity to complete the full transfer from well to refinery. Grainbelt (GNBC), which operates rail throughout western Oklahoma as shown in **Exhibit 2**, has already established the rail system connections needed with adjoining rail lines for direct delivery of crude oil to refineries throughout the country.

While the Anadarko Basin production will likely drive future construction of pipelines, upgrading existing rail facilities can be permitted, designed

Exhibit 4: Thomas-Area Rail Network



and built in 6 to 12 months, with minimal environmental impact, and relatively inexpensively. Constructing a new pipeline is expensive, and typically involves lengthy environmental reviews requiring remediation during construction. The proposed rail line improvement project will be able to not only transport oil to refineries, but also transport inbound oilfield materials as well as outbound agricultural products and natural resources for decades to come.

Current Conditions

In conjunction with on-going and soon to begin rail improvements, this spur will allow for dedicated shipping of crude oil either north or south, and it can then connect to either BNSF or Union Pacific to maximize competitive pricing for delivery to the entire United States. (**Exhibit 3**).

The rail improvements listed in **Exhibit 5** will bring this spur up to a heavier industrial track weight (115 lb) and allow it to operate long-term with very little maintenance needs. The fact that this spur has no other customers also allows for the staging of unit-sized train deliveries (100-plus railcars), and the **excess ROW on the northwest side of Thomas (Exhibit 6) would allow for many expansion phases if the volumes materialize to demand such a need.**

Project Readiness

ODOT and Farmrail have included a schedule that shows the expeditious nature of the proposed project. And the associated pipeline work required of the rail customer, Chesapeake Midstream, is expected to follow a similar schedule due to the fact that the infrastructure and ROW they need is almost all currently in place. Since all necessary build activities are making use of existing footprints as well as original intent of all infrastructure, Categorical Exclusions are expected for both components of the development. Regarding ODOT's proposal, the State fully expects a CE as written in CFR 23, Subchapter H, Parts 771.117 (c)18 and (d)11.

Time for minor engineering has been built into the project schedule to allow for final design of rail loading

Exhibit 5: Project Cost Estimate: Westhom Spur State-Owned Rail Improvement Project

	Material		Labor		Total ($)
Improvements	**Unit ($)**	**Total ($)**	**Unit ($)**	**Total ($)**	
Install 2,400 feet of pass track	100	240,000	20	48,000	**288,000**
Relay 42,240 feet of main line track (1,620 tons)	1,300	2,106,000	20	844,800	**2,950,800**
Renew 10 ea crossings	10,000	100,000	10,000	100,000	**200,000**
Lay 16,000 tons of ballast	13	208,000	1	16,000	**244,000**
Surface 8 miles of track			2	84,480	**84,480**
Upgrade various bridges		600,000		400,000	**1,000,000**
Engineering				50,000	**50,000**
Install 10,000 ties	35	350,000	25	250,000	**600,000**
Total		**3,604,000**		**1,793,280**	**5,397,280**
Cost By Quarter (9 Months Total)					
1st Quarter (Oct 1): $494,000	**2nd Quarter (Jan 1):** $2,631,400		**3rd Quarter (Apr 1):** $2,271,880		

operation infrastructure, and as previously stated, ODOT expects Chesapeake to have a similar need regarding their final infrastructure arrangements for connection of the pipeline. However, no lengthy design period is expected as all parties involved have long and experienced track records with similar projects. And the construction and work activities are all standard processes.

No unusual engineering or materials are needed, and no issues regarding ownership exist. Therefore, this project is capable of rapid completion, and no technical issues are expected to prevent this.

Legislative and Planning Issues

No legislative issues exist, and the project is consistent with both ODOT'S *2035 Long-Range Transportation Plan* as well as ODOT'S soon-to-be-released *Oklahoma Statewide Freight and Passenger Rail Plan*. It is also supportive of the Oklahoma Governor's *Economic Task Force Report* which recommends pursuing ways to make greater use of the state's freight rail system. As this project results in reduced pressure on Oklahoma's aging roadways, and makes better use of its state-owned rail network, it presents an ideal opportunity for transportation growth that the Governor, Oklahoma's elected officials, and ODOT'S management can all stand behind.

II. PROJECT PARTIES

The grant recipient will be the State of Oklahoma. Additional project parties include Farmrail and Chesapeake Midstream who will work with Farmrail and ODOT to complete the full business enterprise by providing the customer infrastructure and delivery of commodity. Additionally, the City of Thomas is a strong supporter of this project.

ODOT has been working closely with the office of the Oklahoma Energy Secretary, Michael Ming, and the Assistant Secretary, Jay Albert, to pursue and realize this and other projects which benefit the state, region and country through progressive use of Oklahoma's resources and infrastructure.

Letters from all parties may be found by visiting the project website.

III. GRANT FUNDS AND SOURCES/USES OF PROJECT FUNDS

The total project cost is $5,397,280, but ODOT is only **requesting $4,857,280 (90%)** for this rural project. The (10%) difference of $540,000 will be provided by ODOT ($500,000) and Farmrail ($40,000).

IV. SELECTION CRITERIA

A. LONG-TERM OUTCOMES

i. State of Good Repair

Heavy trucks cause significant damage to roadways. One of the benefits of this project is that it would remove millions of miles of truck travel from local and regional roadways and state highways. This will result in significant reductions in pavement life cycle costs to County governments and ODOT.

Use of dormant infrastructure results in vast reductions in materials use and all associated product and life cycles for design and construction. Additionally, no new right of way will need to be acquired.

For the railroads in particular, this project is significant in that it will increase line densities by adding traffic to working railroads. This generates greater revenue and therefore frees up funding to improve other portions of the local and national rail network. The *new* maintenance generated by the new track mileage going back into service has been accounted for in the cost analyses, and proportionally, it is very small relative to the resulting project benefits.

ii. Economic Competitiveness

Thomas, Oklahoma is a very small community that struggles with population loss and the associated economic disruptions. This project stands to offer significant economic benefits when considering the size of the affected community. Its location adjacent to the rail facility and within a few miles of the oil storage location (repurposed refinery) will undoubtedly lead to various business benefits.

The reuse of ROW and infrastructure that is already in place greatly improves the business and project costs associated with the entire enterprise. It will also lead to increased "netback" (profit) as indicated by Chesapeake Midstream, and overall it will reduce shipping costs to other customers on the rail network by increasing line density which leads to reduced unit (per railcar) shipping costs. It will also free up capital for both the rail company and the energy producer by making it possible to run service more profitably.

On the national level, any opportunity to increase oil flow to American refineries and reduce shipping costs stands to benefit the escalating gasoline prices currently affecting the country.

Since job creation and economic stimulus remain a top priority of the Obama Administration, projects that are expected to quickly create and preserve jobs and stimulate rapid increases in economic activity, particularly jobs and activity that benefit economically distressed areas, are viewed favorably – the proposed

project has a quick turn-around and will take place in an officially-designated area of economic distress.

Why Invest in Rail Facilities at Thomas?

The Anadarko Basin covers a large area, and there are two other railroads that terminate near this relatively remote part of the country. Investment in Thomas as a prime center for oil shipment has two justifications. First, the Basin is large, and is projected to be producing 200,000 barrels per day by 2015. This equates to over 300 railcars of oil or 1,135 truckloads daily. Put in perspective, the region needs as many transportation options as possible.

Secondly, Thomas has room for development, unlike the rail facilities in Elk City and Sayre, which have no land near the railroads left available for development.

One of the reasons for the demand for Thomas rail service is not just the cheaper cost compared to trucking the oil to regional termini and refineries, but also the fact that there are limitations on the growth of truck and pipeline shipments.

Truck: There is a local and national labor shortage for long-distance truck drivers. As oil is produced at the rigs, trucks are needed to bring it to market – either to a rail head, or to pipeline intake locations which are located over miles to the east of Thomas. Currently, new drivers cannot be trained fast enough to meet demand, increasing truck shipment costs. Shipping one tanker truck of oil from an oil rig near Thomas to the pipeline and storage facilities in Cushing, and then back for more oil is half a day's labor for a truck driver. In comparison, a truck traveling from a rig to the storage facility southeast of Thomas might be able to make three or four round trips in a day, enabling each individual driver to bring much more oil to market each day.

Pipeline: Currently the nearest pipeline heads are located in Cushing and Stroud, both of which are over 100 miles east of Thomas. Cushing is a major pipeline and oil storage area, but recently has seen inventories rise to record levels due to a lack of pipeline capacity necessary to ship the oil to the Gulf Coast refineries (Source: Reuters, October 6, 2011). Stroud is close to Cushing, and unlike Cushing, is accessible by rail. Unfortunately for Anadarko oil producers, the pipeline head at Stroud has been reserved for oil coming by rail from the Bakken shale formation in North Dakota. No capacity is available at Stroud to accept Anadarko oil.

Pipeline is the cheapest way to move oil to refineries along the Gulf Coast in Texas and Louisiana. While there are preliminary plans for expanding pipeline capacity out of Stroud and Cushing, there will still be a need to get oil from the rigs to the pipeline head, and at Stroud, rail would be a cheaper and safer option than truck.

Further, it has been estimated that in order to cover construction costs, new or expanded pipelines would have to charge higher per-barrel prices than existing pipelines.

Currently, shipping Anadarko oil by truck from Custer County to Cushing, and then by pipeline to the Gulf Coast is about $7.50 a barrel. Costs for rail shipment from Custer County to the Gulf Coast is estimated at $5.83 per barrel, providing significant savings for shippers, assuming that rail capacity is available to handle demand.

Local/Regional Benefits

There are a number of benefits to the local and regional economy beyond the cost savings to oil shippers. These include three project benefits that are derived from a shift to rail that will remove an estimated 2.8 million truck miles per year from the state's highways:

- **Improved safety:** rail has a much lower accident rate than trucks for hazardous materials shipments, particularly when measured on a per ton-mile basis.
- **Reduced vehicle emissions:** rail is more fuel efficient and is less polluting than truck travel on a per ton-mile basis.
- **Reduced pavement damage:** heavy trucks such as those used to ship oil out of the Anadarko to pipeline heads in central Oklahoma are estimated to cause 25 to 36 cents of road damage for every mile traveled (source: Fraire, et al., 2011).

The expansion of capacity and the lowering of freight shipping costs will have spillover benefits throughout the economy, improving the competitiveness of local businesses and possibly attracting new businesses, helping to diversify the regional economy over the long term. The reduction in freight shipping costs comes not only by expanding lower-cost rail capacity, but also by lowering the upward pressure on local truck shipping costs. Oil from the Anadarko has increased truck shipping costs and created a high demand for truck drivers. The increase in truck costs is affecting nearly all businesses in this part of the state.

This project will also allow rail costs to stay low by enhancing completion between rail providers. By bringing this spur into service, shipments originating in Custer County will be able to reach two different Class I railroads. Being able to reach two competing Class I railroads means lower prices for local products to reach rail destinations across the continent (compared to areas which only have one access point to a Class I railroad).

Reducing Transportation-Related Brake on Growth

In addition, one of the main economic needs for the project is to facilitate the flow of oil out of the Anadarko so as not to have the limitations of the existing local transportation system acting as a brake on growth.

Right now, new oil wells are being drilled, maintained and monitored across the Anadarko. This has increased employment, driven new residential construction in some areas, and led to new commercial development – expanded grocery stores, new restaurants, etc. Towns and cities in southwestern Oklahoma that a few years ago were struggling to meet the basic needs of their citizens can now spend money on improving local infrastructure and services. This effect will continue and expand as long as there is a workable system for getting oil to refineries. Without the project, growth in Anadarko oil production may slow down or stop prematurely as producers find moving oil out of the area too expensive or logistically difficult compared to oil in other regions or outside the U.S.

The flow of oil expected to come out of the Anadarko is staggering – an estimated 200,000 barrels of oil per day (over 1,100 truckloads) is expected to be produced in western Oklahoma and the Texas panhandle by 2015. This level of traffic cannot be handled by existing rail, pipeline and highway facilities.

ODOT is currently using a FY2011 TIGER grant to increase rail capacity coming through Sayre in the southwestern part of the state, and hopes with this project to increase rail handling capacity in Custer County to handle a portion of the oil coming out of the more northern parts of the Anadarko (see **Exhibit 1**). This project as presented in this document will carry less than three percent of the volume expected to be coming out of the Anadarko in the next few years. This was a conservative scenario developed for the benefit-cost analysis. The spur could also be used to handle four or more times that amount of oil if demand warrants, providing an important route to meet future needs with minimal additional investment (compared to increasing pipeline or trucking capacity).

The job and income growth resulting directly and indirectly from the construction of the project is covered in more detail in the Job Creation section, but what must be understood is the economic impact of not building the project. Failure to expand rail capacity for oil flowing out of the eastern Anadarko basin in the next one or two years will significantly hamper opportunities for economic development and job/income growth throughout western Oklahoma.

National/Interstate Benefits

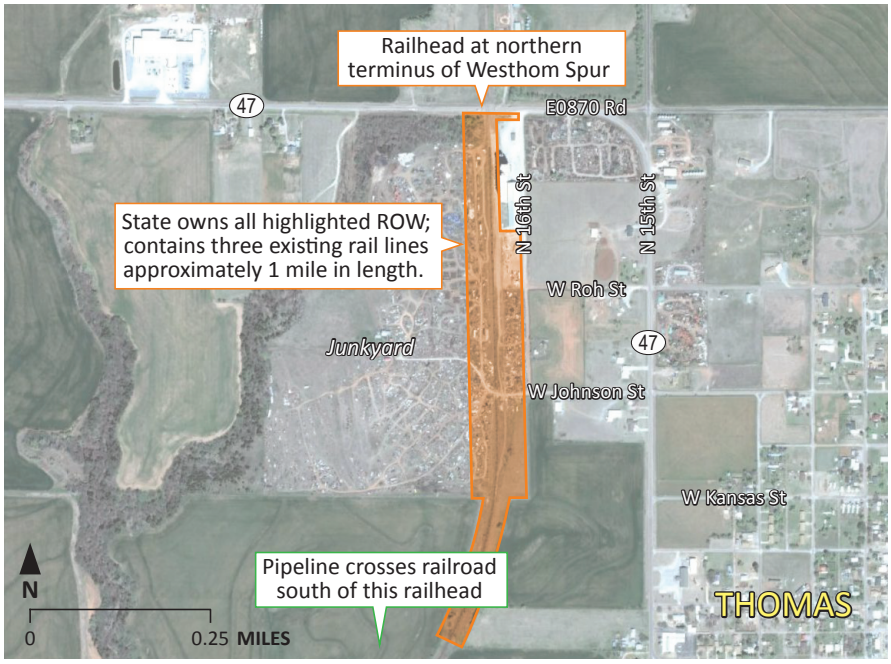
The project will have a number of national benefits similar to the local benefits.

- The project will allow for flexibility in the transportation system, which is currently running into difficulties throughout the Midwestern states related to shipping large volumes of crude oil to refineries located in coastal states. Oil pipelines only go to a limited number of locations. The pipelines out of Oklahoma, which are already straining their capacity, end at Gulf Coast refineries in Texas and Louisiana. With rail, the entire nation is open, and Anadarko oil can reach refineries in California or New Jersey if Gulf Coast refineries start to hit capacity restraints from new oil coming from Canada and the Dakotas, or simply in anticipation of a severe hurricane that may limit operations.
- Any project that shifts large volumes of freight traffic from truck to rail will help to provide some relief to the trucking labor shortage problem. The shortage is expected to get worse as new hours-of-service limitations go into effect, increasing truck shipping costs which have already been growing over the past few years as a result of fuel prices. It is currently difficult to find truck drivers nationwide, particularly for long-haul trips. By shifting 900 weekly truck trips (450 weekly long-haul truck trips between Thomas and Cushing, and 450 short-haul truck trips within Custer County) from truck to rail, the available long-haul truck labor can be reserved for trips that are not so easily shifted to other modes.
- The project will help to strengthen the national rail system by maximizing the utility of existing rail infrastructure. While incremental, any growth in rail shipments on existing tracks, whether owned by ODOT, BNSF, or another carrier, allows for the rail owner to reduce per-carload costs while increasing revenue. This cost savings can be shared with customers and/or used to expand maintenance or capital improvement programs. Either way, this project will strengthen this important and energy efficient transportation option that is vital to our nation's economy.

iii. Livability

Located in northeastern Custer County in western Oklahoma, Thomas is situated at the intersection of State Highways 33, 47, and 54. The town gets its name from William Thomas, who owned a general store and served as the first postmaster of a post office designated in 1894. The town, platted by the Oklahoma Railway Townsite Company in 1902, was part of Joseph W. Morris's homestead, which he had claimed during the Cheyenne-Arapaho Opening in 1892.

Exhibit 6: Existing State-owned railyard in Thomas, Oklahoma



In 1902, the Blackwell, Enid and Southwestern Railroad (later the St. Louis and San Francisco Railway) constructed a line through Thomas. Four years later, the Kansas City, Mexico and Orient Railway (later the Atchison, Topeka and Santa Fe Railway) also connected the town with outside markets. Outbound shipments included grain and livestock; inbound shipments brought oil, gas, and building materials. Early settlers included the Amish, the Dunkards – a religious denomination deriving from the Lutheran Church, and the United Brethren in Christ.

Thomas continued to grow as a support and trade center for the surrounding agricultural area. In the early years a canning factory processed the locally grown sweet potatoes. By the 1940s, town amenities included a four-acre city park, a hospital, and a public library. Two grain elevators and a cotton gin continued in operation. At 1907 statehood, population stood at 925. Population has grown modestly over the years with the 2010 census measuring 1,200 residents. Today, the town is a "bedroom" community with 90 percent of workers commuting to jobs in other towns. The two elementary schools and the Thomas-Fay-Custer unified junior and senior high schools provide education to people who prefer the small town lifestyle of this community.

The re-installation and upgrade of the state-owned rail line would provide a much needed source of jobs for area residents who seek employment.[3] Improving the rail line and location of a storage/transfer point near the City of Thomas will allow a cost effective commute to work for employees. It also means that household and community resources can be used more efficiently, thus improving the rural community, its quality of life, and economic viability.

"I have a good job that happens to be sixty miles away. My wife teaches school in Thomas, and we really love the community – so believe it or not, the hundred plus round trip drive every day is worth it!"

—Resident of Thomas, OK

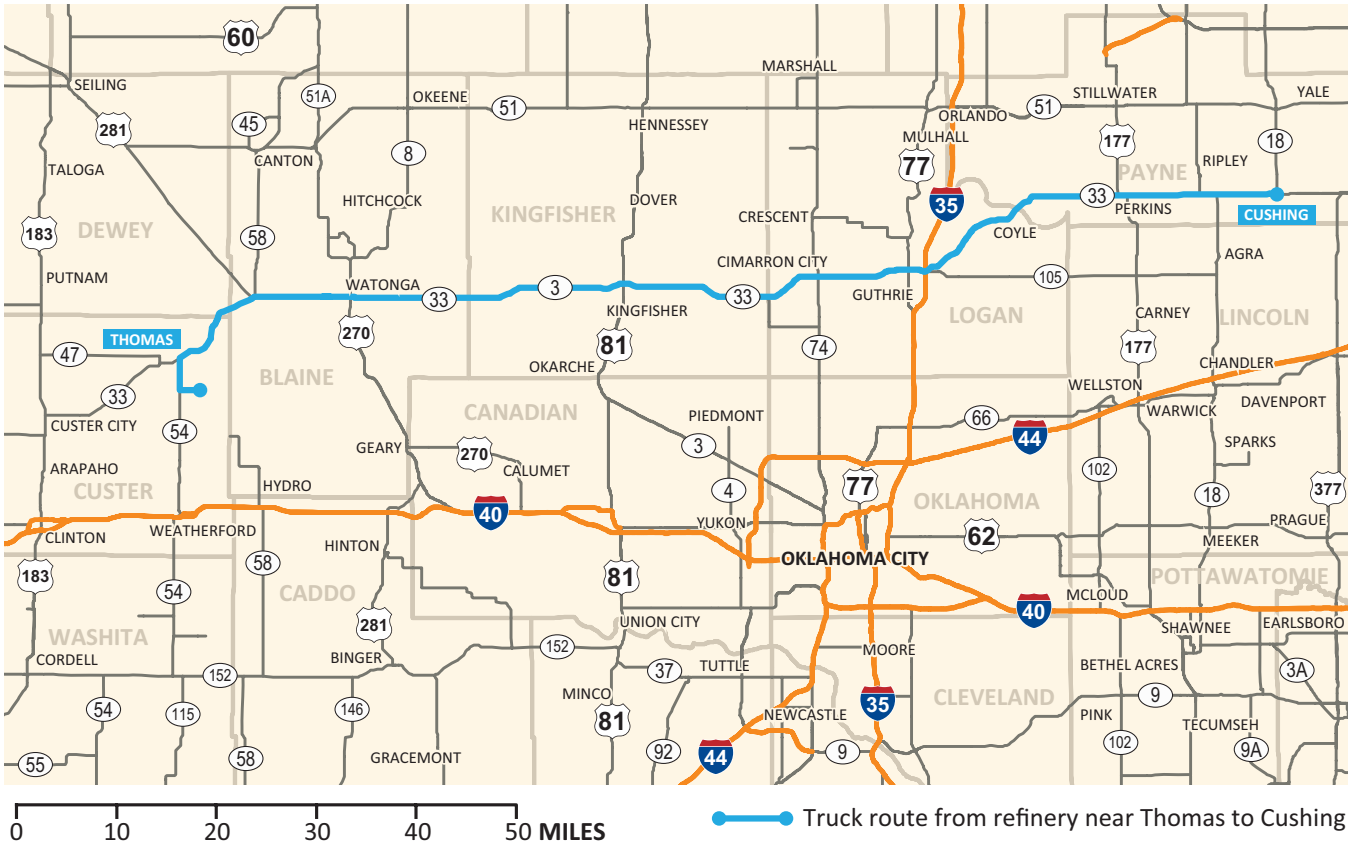
This project also preserves rural land and the character of the small town by considering the reuse of existing properties, relocating current train switching activity that is located near a residential area and a nursing home, and possibly cleaning up an unsightly junkyard west of town (**Exhibit 6**). This project clearly demonstrates that land use and economic development decisions made in concert with transportation investments can produce positive results in several areas.

Further, the No Build scenario developed for this project in discussions with the rail operator would likely result in additional rail activity taking place at a proposed Grainbelt railhead at the southeast corner of Thomas. (This yard would not be built if the project goes forward). A yard and transloading facility at this location would have negative impacts, including:

1. Operations to the proposed GNBC loading facility would create traffic interference at three road crossings.
2. Shuttle trucks from the storage site to Thomas would add 11,800 heavy hazmat truck trips annually to the surrounding roads.

3 http://www.swosu.edu/cebd/docs/western-ok-labor-force-study.pdf – This analysis of the Western Oklahoma Labor Force Study conducted among adult resident living in Beckham, Caddo, Custer, Dewey, Greer, Kiowa, and Washita Counties in Oklahoma, September 2007, concludes that in western Oklahoma, 16% of the adult population who are not currently working indicate that would like to do so and are willing to commute 20 miles or more to work. About one-third would be willing to work for $12/hour and two thirds would work for $20/hour.

Exhibit 7: Current truck route from refinery near Thomas to Cushing



In comparison, the Build scenario could eliminate nearly all trucking to the Westhom location.

iv. Sustainability

The transportation capacity made possible by moving crude oil by train is staggering when compared to truck hauls. Each individual railcar is capable of carrying nearly 28,000 gallons compared to an average of 7,400 gallons for a truck. When multiplied by the number of railcars possible in a single rail delivery (up to 100 railcars) the numbers are huge. A single train can transport as much oil as 376 trucks.

Using estimates of the truck miles saved annually with the project in place, the decrease in expected truck emissions net of the increase in rail emissions will be in the neighborhood of 480 tons annually, most of which is carbon dioxide (CO_2). This will make our air easier to breathe while reducing the impact of greenhouse gas emissions on climate.

v. Safety

In the absence of the proposed rail improvement, there are two sets of truck shipments that will be made to move the oil from the old refinery storage site to refineries in other states. The oil that will be shipped from the Grainbelt line will need to be trucked from the storage site to Thomas, generating nearly 12,000 round-trip truck trips annually on local roads. In addition, total railcar shipments on the existing Grainbelt rail line near Thomas would be limited by the small yard site. Much of the remaining oil coming to the storage site would therefore be trucked to the pipeline heads in Cushing, over 100 miles east of Thomas on SH 54 and SH 33 (**Exhibit 7**).

With implementation of the project, additional truck traffic would *not* occur, and instead oil would be transported by rail. This will impact not only the traffic volumes, but also highway safety.

SH 54

According to the ODOT traffic count database, current traffic volumes on the affected segment of US 54 are 2,200 vehicles per day. From 2007 to 2011, a total of eleven crashes occurred on this part of SH 54. Seven involved injury; four involved property damage. The five years of data show that one-quarter of the vehicles involved in crashes were heavy trucks, and 73 percent occur during daylight hours. The current percentage of heavy trucks on this two lane rural highway is estimated at 7 percent. If the project did *not* occur, 90 trucks would be added to the current number,

pushing the heavy truck percentage up to 11 percent.

It is reasonable to assume that the total number and cost of truck-related crashes would increase if the rail improvement project did *not* occur. Conversely, it can be assumed that the "build scenario" would moderate additional heavy truck traffic on this road – which is the main highway between Thomas and Weatherford, a community 12 miles to the south and home to hospitals, educational institutions and major employers for many of the Thomas residents – and the facility would be a safer and calmer highway.

Older adults (who make up 14 percent of the county population) and others will find their drive on this road to be less congested and less frustrating in the absence of additional heavy trucks on the facility.

SH 33

ODOT data indicate that daily traffic volumes on US 33, a four-lane minor arterial highway between Thomas and Cushing, are typically in the range of 4,500 to 6,100 vehicles, with the higher volumes near Cushing. At present, heavy truck traffic represents 19.7 percent of the total traffic. From 2007 to 2011, this one hundred mile plus stretch of roadway experienced a total of 973 collisions, including 17 fatalities. Five percent of the crashes involved heavy trucks, and 75 percent of the crashes were between 6 a.m. and 6 p.m. The collision rate is 139.5 per one hundred million vehicle miles and is 40 percent higher than the statewide average for similar highways. The injury collision rate (55) is 30 percent higher than comparable locations in the state.

Again, it is safe to assume that this already hazardous situation would be exacerbated if additional heavy trucks were the primary means of hauling crude oil to Cushing. It is also reasonable to deduce that the use of rail cars instead of trucks will reduce the likelihood of spiking crash rates on SH 33 to an even higher level.

B. JOB-CREATION AND NEAR-TERM ECONOMIC ACTIVITY

Influence on Economically Distressed Areas

Custer County ranks as an Economically Distressed Area (EDA) as defined by the Public Works and Economic Development Act of Distressed Act of 1965 (**Exhibit 8**).

The most recent Census data indicates that the County median household income is $39,849 (lower than the state average), and only 80 percent of the national average. The poverty rate is 19.0 percent in Custer County, as compared to 16.1 percent in Oklahoma, and 13.9 percent in the Midwest Region of the United States.

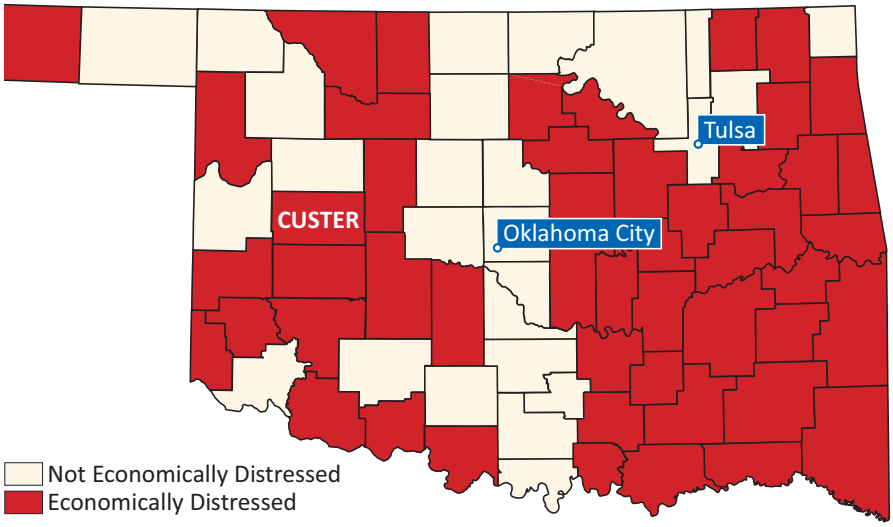
Racial makeup of the county is slightly less diverse than the state as a whole. On the other hand, the percent of persons of Hispanic origin is 13.9 percent in Custer County, as compared to 8.9 percent in the State. Over three-quarters of the population is white, with German and Irish ancestry being most commonly listed in the decennial census.

Calculation of Construction-Induced Economic Impacts for the Westhom Spur State-Owned Rail Improvement Project

The Westhom Spur Rail Improvement project is expected to create near-term economic benefits for the Custer County area and the state of Oklahoma. In addition, given the specialized nature of railroad construction, economic impacts will likely be experienced in other states as well. The economic benefits from the project would be driven by an increase in construction spending in the region. These project expenditures would generate a short term increase in demand for construction-related labor and materials, as well as other services.

To quantify the near-term economic benefits of this project, an analysis was conducted utilizing an input-output modeling framework based on multipliers from MIG Inc., the developers of IMPLAN. Only the impacts of the expenditures made to construct the rail improvements (**Exhibit 9**) are included in this analysis. Any increase in earnings, output and

Exhibit 8: Economically Distressed Areas, Oklahoma



jobs spurred by the associated pipeline improvements and new transloading facilities are not included in this analysis.

The multipliers estimate two types of impacts:

- **Direct/Indirect Impacts:** Direct impacts represent new spending, hiring, and production by civil engineering construction companies to accommodate the demand for resources needed to complete the project. Indirect impacts result from the quantity of inter-industry purchases necessary to support the increase in production from the construction industry experiencing new demand for its goods and services. All industries that produce goods and services consumed by the construction industry will also increase production and, if necessary, hire new workers to meet the additional demand.
- **Induced Impacts:** Induced impacts stem from the re-spending of wages earned by workers benefitting from the direct and indirect activity. For example, if an increase in demand leads to new employment and earnings in the construction industry, workers in this industry will spend some proportion of their increased earnings at local retail shops, restaurants and other places of commerce, which would further stimulate economic activity.

The results of the short term economic impact analysis are shown in **Exhibit 10**. Note that employment impacts are expressed in "job years." A job year refers to one individual being employed for one year. For example, 100 job years may translate into 50 jobs supported for two years or 100 jobs supported for one year.

Assuming the grant is awarded, the Westhom Spur Rail Improvement project is expected to generate economic benefits for the region

Exhibit 9: Capital Costs of the Project by Quarter (2012 $)

2012	2013	
Q4	Q1	Q2
494,000	2,631,400	2,271,880

Exhibit 10: Summary of Near-term Economic Impacts Resulting From the Project

Direct and Indirect Impacts	
Average Annual Employment	42
Earnings (2011 $)	$4,145,867
Output (2011 $)	$9,863,339
Induced Impacts	
Average Annual Employment	26
Earnings (2011 $)	$2,574,570
Output (2011 $)	$6,125,100
Total Impacts	
Average Annual Employment	**68**
Earnings (2011 $)	**$6,720,437**
Output (2011 $)	**$15,988,439**

Exhibit 11: Annual Employment per Year During Construction

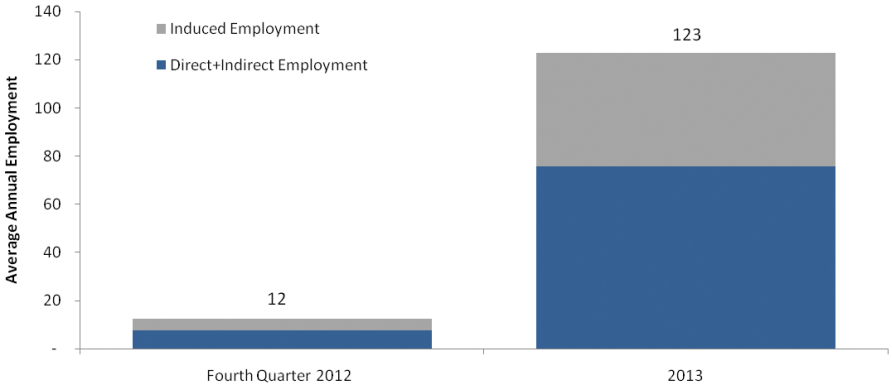
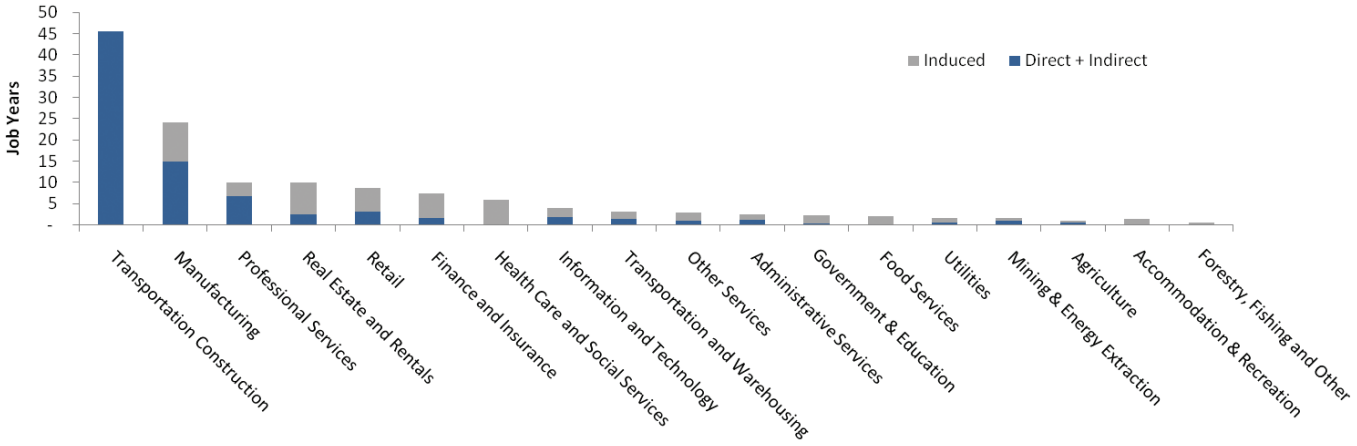


Exhibit 12: Direct and Indirect Jobs by Quarter

2012	2013	
Q4	Q1	Q2
8	41	35

Exhibit 13: Breakdown of Job Creation by Industry and Type of Impact



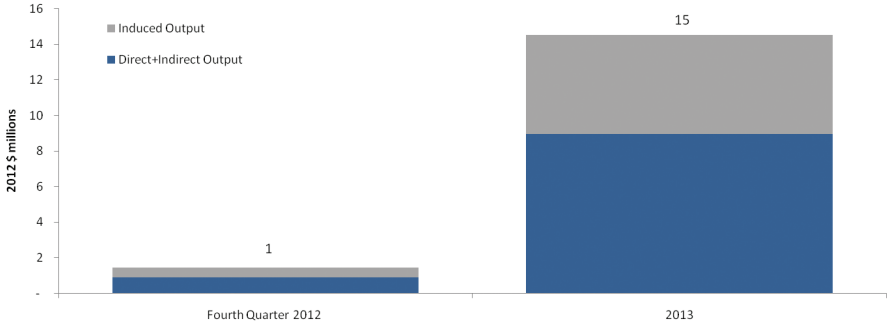
beginning this year. An estimated average of 68 jobs will be created annually by the project, including an average of 42 direct jobs per year. **Exhibit 11** shows the profile of average annual employment generated by the project's expenditures. Note that because award announcements will not be made until Summer 2012, only the latter half of that year is counted in these exhibits.

In total, the project is projected to create 135 job years of employment, including 83 direct/indirect job years. **Exhibit 12** shows the number of persons directly and indirectly employed by the project by quarter.

Exhibit 13 shows the breakdown of jobs created by industry and type of impact. As expected, the civil engineering construction industry is projected to receive the largest increase in jobs from the project (46 job years), almost all of which are direct jobs created. The other industries that will see the largest number of jobs created include manufacturing (24 job years) professional services (10 job years) and real estate and rentals (10 job years).

It is also important to consider the quality of the jobs that would be created by the project, which can be measured by the average level of compensation. The average job

Exhibit 14: Breakdown of Statewide Economic Output Generated by Contract (in millions of 2011 $)



generated by this project would receive compensation around $49,770 per year (in 2012 $), which is above the 2010 average US per capita income of $27,334 (2010 $), and well above the county's 2010 per capita income of $22,003 (2010 $). This indicates that the project will help stimulate the regional economy.

The amount of short-term economic activity generated by the project is shown in **Exhibit 14**. In total, the project would generate $16 million in real economic output (measured in 2012 dollars), with $1 million generated in the last quarter of 2012 and $15 million in 2013.

C. INNOVATION

By focusing on the repurposing of dormant but useful infrastructure, this project is seeking to solve problems by use of the "recycling" concept rather than the typical "tear down" or "new build" philosophy.

D. PARTNERSHIPS AND DISCIPLINARY INTEGRATION

The State, private enterprise, and multimodal planning make this project a model for replication and study. Actively working to solve limitations on Oklahoma's, and the nation's, infrastructure while also promoting free enterprise serves as an ideal model to be emulated and applied whenever it is feasible. Much has been made lately of the concept of "public private partnership," and even when not a formal arrangement bound by legal contracts, this concept can be used as a planning activity to generate outside the box solutions to complex situations where resources are limited.

E. RESULTS OF BENEFIT-COST ANALYSIS

A formal benefit-cost analysis (BCA) was conducted for this project using best practices for BCA in transportation planning, and reflecting all current TIGER grant application guidelines. It is important to note that a formal BCA is not a comprehensive measure of a project's total economic impact, as many benefits cannot be readily quantified or occur under conditions of uncertainty.

However, to the maximum extent possible given available data, the formal BCA prepared in connection with this TIGER grant application reflects quantifiable economic benefits.

The project covers four of the five primary long-term impact areas identified in the TIGER grant application guidelines:

- **State of Good Repair:** The project funds will be spent on rehabilitating eight miles of a state-owned rail spur in Custer County. The track is currently in poor condition ("excepted track"), which greatly restricts the speed and carrying capacity of this stretch of railroad. As an example, only five carloads of hazardous cargo, such as crude oil, are permitted per train on excepted track, and speeds are much slower, restricting rail carrying capacity to five percent or less of capacity with the project in place. In addition to improving rail track, the project is expected to result in the removal of 1.4 million miles of heavy truck travel from Oklahoma highways each year, which should greatly reduce maintenance costs for state and local transportation agencies.
- **Economic Competitiveness:** This project will have an impact on local, regional and national economic competitiveness by reducing shipping costs for oil shippers, allowing them to improve their logistics practices while reducing our nation's dependence on foreign oil sources. The BCA only calculates the cost savings for moving oil on the Westhom Spur, but the rail line could be used for other types of freight. Further, the fact that this project will provide local shippers with access to two Class I railroads will keep prices competitive for all shippers.
- **Environmental Sustainability:** The project will annually shift a conservatively-estimated 2 million barrels of oil from truck to rail. Rail is much more fuel efficient than truck travel, and produces anywhere from 30 percent to as little as 8 percent of the emissions of trucks per ton-mile carried.
- **Safety:** By shifting freight movements of crude oil, a hazardous material, from truck to rail, this project will reduce the number of vehicle accidents and spills. Trucks transporting hazardous materials have nearly 16 times more hazmat releases than railroads[4]. Further, despite the increase in rail freight tons carried, improvements to track safety and crossing protection are expected to reduce rail accidents compared to the accident potential expected if the project is not built. For every one train trip made (assuming 100 railcars/train), 376 truck trips are avoided.

Exhibit 15: Benefit Cost Analysis Summary (in Thousands of 2011 $)

Category	Present Value at 7%
Costs	
Construction Cost	$5,076.50
Rail Maintenance Cost Savings	$572.80
Total Costs	**$5,649.31**
Evaluated Benefits	
Reduced Cost of Oil Shipments	$34,565.11
Reduced Damage to Roadway	$4,191.54
Emissions Savings*	$576.34
Net Safety Benefits	$4,071.05
Total Evaluated Benefits	**$43,404.05**
Net Present Value	**$37,754.74**
BENEFIT/COST RATIO	**7.68**
Public Benefits (Total Benefits minus Shipper Benefits)*	**$8,838.94**
Net Present Value of Public Benefits	**$3,189.63**
PUBLIC BENEFIT/COST RATIO	**1.56**

** The social cost of carbon was broken out and assessed at a 3% discount rate as per current TIGER guidance.*

Given the caveats, the computed benefit-cost ratio for the Farmrail project is 7.68 to 1.0 using a seven percent discount rate. The BCA compares the capital construction costs to the quantifiable benefits of the project for 25 years following construction. After 25 years, the railroad will need to again be

4 http://nationalatlas.gov/articles/transportation/a_freightrr.html

rehabilitated, so no residual project value was assumed past 2037.

The quantified project benefits are:

1. Reduced cost of oil shipments
2. Reduced pavement damage to highways
3. Emissions reductions
4. Safety benefits (reduced crashes)

Discount Rates

Federal TIGER guidance recommends that applicants discount future benefits and costs to 2012 present values using a real discount rate of seven percent to represent the opportunity cost of money in the private sector. TIGER guidance also allows for present value analysis using a three percent discount rate when the funds currently dedicated to the project would be other public expenditures. This is largely the case for this project, which is 9.5 percent privately funded.

The project benefits are presented in **Exhibit 15** using the more conservative seven percent discount rate to demonstrate that the project's long term benefits clearly outweigh the project's costs.

Cost Benefit Results

Exhibit 15 summarizes the cost and the quantifiable benefits of the project in terms of Present Value. Detailed analysis of costs and benefits, including data sources and methodology descriptions, are available on the project website in the BCA Technical Memo. As shown in the table, the present value of the project's capital and maintenance costs is valued at $5.6 million. The benefits have an estimated present value of $43.4 million over the 25-year period, yielding the 7.68 BCA ratio.

While the BCA assesses the project for the 25 years during which the repair/rehabilitation work is expected to yield benefits, the project's assessed benefits are projected to cover the total project costs by the end of 2015, after only 2.5 years of operation.

Benefit Calculation Assumptions

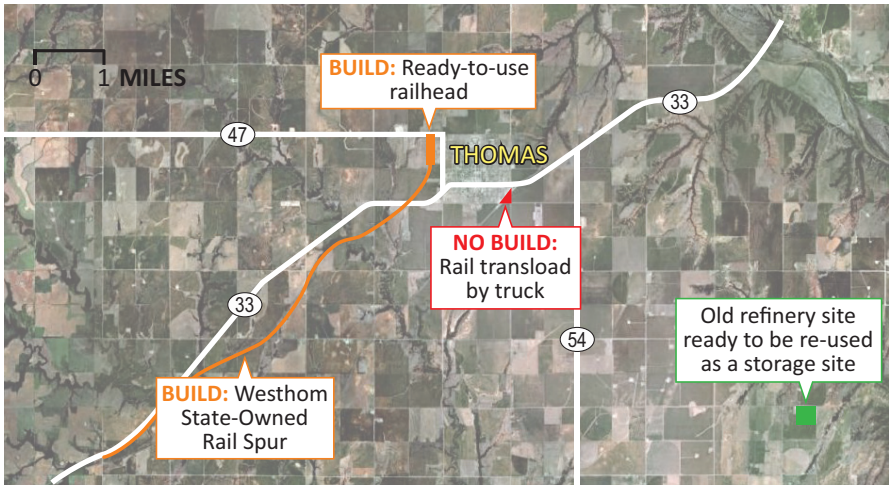
This Benefit Cost Analysis is based on the difference between an assumed **Build** scenario and an assumed **No Build** scenario (elements of which are shown in **Exhibit 17**), both of which have been developed to be conservative.

- The Build includes the capital cost of rehabilitating the eight-mile Westhom Spur, and incorporates an annual maintenance cost of $47,670 per year. Traffic on the rail line is assumed to be one train movement per week in each direction, carrying 120 rail cars. An additional feature of the Build is the rehabilitation of an existing pipeline which would carry oil from a storage site at an old refinery southeast of Thomas directly to the new rail line without the use of trucks. A transloading

Exhibit 16: Annual Crude Oil Shipment Assumptions, Build vs. No Build

Movement	No Build	Build
Total Barrels assumed to be coming from refinery storage site	4,138,754	4,138,754
Barrels to be shipped on Improved Westhom Spur	N/A	4,138,754
Barrels to be shipped on Improved Grainbelt	2,069,377	N/A
Barrels to be shipped via truck to Cushing and then via pipeline	2,069,377	0
Yearly railcar trips	3,120 (Grainbelt)	6,240 (Westhom Spur)
Yearly truck trips (round trip) from the refinery storage site to the Thomas railhead	11,746	0
Yearly truck trips (round trip) from the refinery storage site to Cushing	11,746	0

Exhibit 17: Elements of the Build and No Build scenarios near Thomas



facility would be constructed on the northwest side of Thomas.

- The No Build scenario assumes that a transloading facility would be built alongside the Grainbelt line which passes through the southeast corner of Thomas. Because this rail line is currently in use, a new yard would need to be built to allow for storage of railcars at the transloading facility as they wait to be filled. The proposed location of this truck-to-rail transloading facility in Thomas has a limited footprint which would limit car lengths for trains, and it is estimated that this scenario could only handle 60 carloads per week (12 railcars per day to be added to trains already traveling along this line). Trucks would be required to move the oil from the refinery storage site to the Grainbelt railhead.
- With the No Build rail capacity only able to handle half of the 120 railcar-loads of oil anticipated with the Build, the No Build further assumes that the remaining 60 carloads of oil that are being shipped out of the refinery site would be transported by truck to Cushing Oklahoma, where it would be sent by pipeline to refineries along the Gulf Coast.
- Associated private construction – As noted above, the Build includes the rehabilitation of an existing pipeline which would carry oil from the storage site directly to the new rail line without the use of trucks. A pipeline-to-rail transloading facility would be constructed on the northwest side of Thomas. In the No Build, yard facilities including a truck-to-rail oil transloading facility would be constructed. The capital and maintenance costs for this privately-funded associated construction was not included in the BCA for two reasons – first, the lack of available cost data, and second, the fact that these costs would likely be offsetting in the Build vs. No Build. The omission of these costs is a conservative assumption, as it is more likely that the Build, which re-uses an existing pipeline and does not require a yard (railcars can be stored directly on this otherwise unused spur), would have lower "associated private construction" costs than the No Build.

The benefits described in detail below were all derived from comparing the cost and impacts of moving the 120 weekly railcar-loads of oil (4.1 million barrels per year) by rail from the Westhom Spur (the Build), to the costs and impacts of moving it by rail, truck and pipeline as indicated above for the No Build (**Exhibit 16**).

Reduced Cost of Oil Shipments

The costs charged for shipping oil via rail are cheaper than the costs charged to ship by truck. This is not surprising given the cost-efficiency of rail in moving products that are heavy, and that are not particularly time-sensitive. Crude oil can be particularly expensive to ship by truck, as it is carried in oil tanker trucks which need to be driven back empty, leading to high costs, as a trucker's day can consist of no more than two 220-mile round trips to carry about 7,400 gallons of oil. As noted elsewhere, a single train can carry 376 times this volume, and only requires three operators.

It has been estimated that the cost of moving oil by the rehabilitated Custer County pipeline, and then by rail to the Gulf Coast refineries where Anadarko oil is typically sent for refining, is under $6 per barrel. In comparison, shipping it by truck and then by rail via Grainbelt would cost $6.33 per barrel, and shipping the oil that can't move by rail to Cushing Oklahoma by truck, and then by pipeline to the Gulf Coast, would cost over $7 per barrel.

The total annual cost savings for shippers was calculated at $4.1 million beginning in 2014. Present value for the savings over the entire 2013–2037 period is $34.6 million.

Reduced Pavement Damage to Highways

Between Thomas and the pipeline heads in Cushing is a 110-mile trip, largely along SH 33. Between the refinery and the Grainbelt railhead at Thomas is 9.5 miles on rural roads. The Build is estimated to reduce truck travel in Oklahoma by 1.4 million loaded (one-way) miles per year (1.3 million between Cushing and Custer County, and 0.1 million locally between the refinery site and the railhead in Thomas.

According to Fraire, et al., it is estimated that trucks cause 25.9 cents of damage per mile to principal arterials (such as OK 33), and 35.9 cents for every mile traveled on local roads like those between Thomas and the refinery site.

Annual benefits are thus $375,000 annually, yielding a present value over the life of the project of $4.2 million.

Emissions Reductions

The truck miles removed from the roads would remove a substantial volume of pollutants from the air as well, an estimated 3,600 metric tons of CO, CO_2, NO_x, SO_x, volatile organic chemicals and particulate matter (PM_{10}) each year. Over the 25-year life of the project, total truck pollutant reductions are an estimated 88,100 tons.

Project emissions impacts also have to account for increased rail emissions (it is assumed that the pipeline portion of these trips have negligible emissions). While rail produces a fraction of the emissions per ton-mile as truck travel, the trip from Oklahoma to the Gulf Coast refineries is around 680 miles.

The additional rail travel (Build vs. No Build) is estimated at 2.2 million

railcar miles annually, generating an estimated 3,100 tons of pollutants annually.

The net emissions reduction (reduced truck emissions minus increased rail emissions) is thus in the range of 500 tons per year. Using TIGER guidance to evaluate emissions reductions, the present value of the net emissions reductions over the life of the project is $576,000.

Safety Benefits

As with emissions, safety benefits were evaluated separately for rail and truck travel. The reduced truck miles traveled will have a direct impact on reducing highway crashes. Using state crash data from 2010, along with accident cost values provided in the TIGER guidance, the cost of crashes per million miles traveled is $129,638 in 2011 dollars.

Using the total truck VMT removed from the roadway, the present value of the truck related safety benefits over the 2013-2037 analysis period is $4.1 million.

True accident costs might be much higher, as these trucks are filled with hazardous crude oil. This cost effect was not estimated for the BCA, except to the extent it is included in the insurance component of the No Build truck shipping costs.

An attempt was made to calculate increased rail accidents expected from the substantial growth in rail freight expected to result from the project. Currently, the accident rate for rail lines managed by Farmrail and Grainbelt (the proposed operator of the Westhom spur) in this part of Oklahoma is very low – one accident in the past ten years. In addition, the project as proposed in the BCA is projected to add one train trip per week to current traffic levels. The No Build, depending on how Grainbelt chooses to ship the 60 railcar loads each week, would add at least one train trip weekly, and would likely add more. It was thus assumed that there would be no increase in rail accident costs resulting from the project.

Other Non-Quantifiable Costs and Benefits

There are a number of other project benefits as well as costs that could not be reasonably quantified for the benefit-cost analysis. Among these are:

- **Benefits to other rail shippers:** While the benefits of expanded rail capacity (which is cheaper than truck transport) for crude oil shippers is accounted for in the BCA, the impact of this cost reduction for potential future shippers is not counted. These future users could include agricultural or manufacturing concerns that currently use truck transport, or who now only have access to the national rail network via one Class I rail line (and are thus at the mercy of that company's cost decisions). With the Westhom Spur Rail Improvement project, these shippers would have access to two Class I railroads, and would thus be assured of more competitive pricing. Other potential future users would be additional oil shipments above the assumed 120 cars per week. As noted elsewhere, this part of the Anadarko is expected to be producing over 300 railcars of oil per day by 2015, so it is not inconceivable that the Westhom Spur could transport a larger share of the region's production than is assumed by this analysis.
- **Benefits to truck shipping:** As described in an earlier section, there is a labor shortage affecting truck transport in western Oklahoma due to the high demand for moving crude oil, as well as drilling equipment, to and from the Anadarko. This increased demand has driven up trucking costs for all businesses and farms in the region. While this project would have a relatively small impact (reducing demand by 25 to 30 drivers), it would help to reduce the upward pressure on truck transport to some extent by shifting trips to rail.
- Because Westhom is an unused spur, the track length can be used to store and build long trains without having to build siding tracks or yard facilities. The Proposed No Build Grainbelt yard would be operating in a limited footprint between local roads, and would cause greater impacts to local traffic. This site is located near a nursing home, and also near a more densely-populated part of Thomas.
- As noted above, the project is critical in making it possible to fully exploit the region's resources and maximize economic development potential for the region. The dampening effect of limiting rail traffic, while the truck driver labor shortage and the limitations on pipeline capacity make non-rail transportation more difficult and more expensive, could greatly reduce the potential number of jobs and other benefits that would be possible if the project was in place. These benefits are not just the jobs of those drilling and monitoring the wells, but jobs at restaurants and grocery stores that will serve these new employees, the teachers that educate their children, the builders who construct their homes, etc.

Public Benefits

While much of the value of this project will accrue to businesses involved in the oil extraction industry, it should be stressed that the purely public benefits of this project exceed the project costs on their own. As shown at the bottom of **Exhibit 15**, the net present value of the benefits of reduced pavement damage, reduced emissions, and avoided accidents and chemical

spills exceed the project costs by over $3 million.

Taken together, the Present Value of these three benefit categories on their own provide a benefit cost ratio of 1.56 to 1.0 at a seven percent discount rate. Using a three percent discount rate, which is closer to the public sector time value of money, the discount rate is even higher – at 2.16 to 1.0.

V. PROJECT READINESS AND NEPA

As discussed above, this project does not require additional environmental analysis, design, or permitting/ approval. As shown in **Exhibit 18**, it offers a very quick completion schedule, nine months from ground-breaking to full build.

Exhibit 18: Project Schedule: Westhom Spur State-Owned Rail Improvement Project

	4th Qtr, 2012	1st Qtr, 2013	2nd Qtr, 2013
	Oct 1 – Dec 31	Jan 1 – Mar 31	Apr 1 – Jun 30
Engineering			
Install 2,400 feet of pass track			
Install 10,000 ties			
Relay 42,240 feet of main line track (1,620 tons)			
Renew 10 ea crossings			
Lay 16,000 tons of ballast			
Upgrade various bridges			
Surface 8 miles of track			

VI. FEDERAL WAGE RATE CERTIFICATION

As required in the Notice of Funding Availability for the Department of Transportation 's National Infrastructure Investments (TIGER FY 2012) Under the Full Year Continuing Appropriations, 2012, as printed in the Federal Register, Vol. 77, No. 20, Tuesday, January 21, 2012. The Oklahoma Department of Transportation states and assures that it will comply with the requirements of Subchapter IV of Chapter 31 of Title 40 United State Code, the federal wage requirements.

Oklahoma Secretary of Transportation

3-9-12

Date

VII. MATERIAL CHANGES FROM PRE-APPLICATION

Following further review of project scope and requirements, ODOT has revised the total project amount to $5,397,280, a reduction from the $7,000,000 listed on the pre-application. The Department has also revised the project match from $2,300,000 to $540,000.

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