Department of Transportation's National Infrastructure Investments under the Consolidated Appropriations Act, 2014

#### **TIGER VI Discretionary Grant Program**

Project Name: Highway 265 Widening and Relocation Randall Wobbe Lane to Highway 264

Project Location: Springdale and Bethel Heights, Arkansas Washington and Benton Counties Unites States Congressional District 3

Location Type: Urban

Total Funds Requested:	<u>\$18,500,000</u>
Total State/Local Funds:	<u>\$4,600,000</u>
Total Project Cost:	<u>\$23,100,000</u>



**Project Contact:** 

Lorie H. Tudor, P.E. Assistant Chief Engineer - Planning Arkansas State Highway and Transportation Department P.O. Box 2261 Little Rock, AR 72203 Phone: 501-569-2241 Email: <u>lorie.tudor@ahtd.ar.gov</u>

April 2014

Department of Transportation's National Infrastructure Investments under the Consolidated Appropriations Act, 2014

TIGER VI Discretionary Grant Program

## Highway 265 Widening and Relocation <u>Randall Wobbe Lane to Highway 264</u>

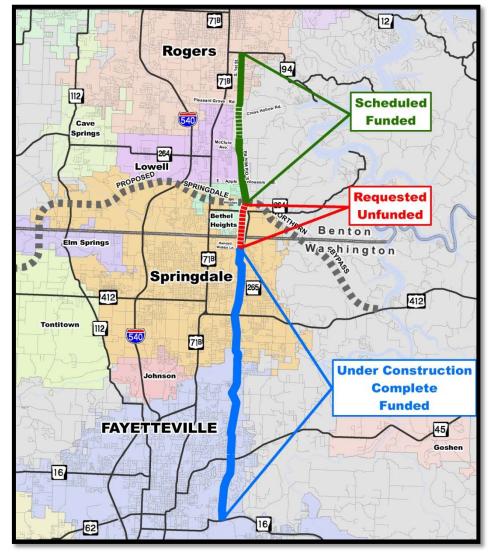
# **Table of Contents** Fayetteville......4 Springdale ......4 Cultural ......5 Selection Criteria

# Project

## **Project Description**

The Arkansas State Highway and Transportation Department (AHTD) is requesting TIGER funds to widen and relocate 2.03 miles of Highway 265 from Randall Wobbe Lane in Springdale to Highway 264 in Bethel Heights. This project is the missing link to an otherwise fully funded eastern northsouth corridor linking Fayetteville to Rogers.

AHTD is requesting \$18.5 million for this final project. The Northwest Arkansas Regional Planning Commission has dedicated \$750,000, and the balance will be



paid for with Arkansas State Highway and Transportation funds.

The Highway 265 Corridor is a culmination of extensive planning and environmental studies that began in 2009. The criteria used for designating this corridor included cost effectiveness, the overall impacts, and public input. The purpose of the project is to improve north-south connectivity and enhance mobility for travelers in the Northwest Arkansas metro area. It will provide a regional connection between Fayetteville, Springdale, Bethel Heights, Lowell, Bentonville and Rogers. This corridor will alleviate traffic congestion on existing north-south routes, especially Highway 71B.

Substantial economic and population growth has occurred in the region during the past 15 years. This growth is expected to continue over the next 20 years. Improvements to Highway 265 will assist in providing the infrastructure needed to serve this expansion, thus contributing to the economic health of the area. The economic benefits from the project would include gains in overall efficiency, enhanced movement of goods and people, and increased access to the main industrial area in eastern Springdale.

#### **Communities Served**

The Highway 265 Corridor serves the Fayetteville, Springdale, and Rogers Metropolitan Statistical Area (MSA), which is referred to as Northwest Arkansas. The United States Census Bureau defines this MSA as a four-county area including three Arkansas counties and one in Missouri. The MSA is anchored by the Arkansas cities of Fayetteville, Springdale, Rogers, and Bentonville — the state's third, fourth, eighth, and eleventh largest cities, respectively. The total MSA population in the United States Census 2010 was 465,776 people. The United States Census estimated the population of the MSA to be 482,200 in 2012. From 1990–2000 the Fayetteville-Springdale-Rogers MSA was the sixth fastest growing area in the nation. In April 2014, the United States Census Bureau released a report that stated Northwest Arkansas is growing by at least 23 people each day, and the area is expected to reach a half-million by 2014.

City or County	1990	2000	2010	2035*			
Cities							
Fayetteville	42,099	58,047	76,899	112,931			
Springdale	29,941	45,798	73,125	119,617			
Bethel Heights	281	714	2,372	4,986			
Bella Vista	9,083	15,452	26,461	40,000			
Lowell	1,224	5,013	7,327	14,956			
Rogers	24,692	38,829	58,895	95,054			
Bentonville	11,257	19,730	38,284	65,356			
Counties							
Washington County	113,409	157,715	203,060	315,135			
Benton County	97,499	153,406	221,344	376,139			

#### City and County populations U.S. Census Bureau

\*Based on the NWARPC 2035 MTP Totals

### Fayetteville

Fayetteville is located in Washington County, and home to the University of Arkansas. As of the 2010 census, the city had a total population of 76,899. The city is the third most populous in

Arkansas and serves as the county seat of Washington County. It's also known for Dickson Street, perhaps the most prominent entertainment district in the state of Arkansas, which itself contains the Walton Arts Center. Blocks from Dickson Street is the Fayetteville Historic Square, which hosts the nation's number one ranked Fayetteville's Farmer's Market. Fayetteville was also ranked 8th on Forbes Magazine's Top 10 Best Places in America for Business and Careers in 2007.



### Springdale



Springdale is located in Arkansas' Washington, and Benton Counties. According to 2010 Census Bureau, the population of the city is 73,123. Springdale is currently Arkansas's fourth-largest city, behind Little Rock, Fort Smith, and Fayetteville. Springdale's metropolitan area ranks as one of the nation's most affordable areas to live with a cost of living well below the national average. The 2013 year-end report ranked this region as the 31st most affordable metro in the United States of the nation's 308 largest urban areas. Springdale is the location of the

headquarters of Tyson Foods Inc., the largest meat producing company in the world, and has been dubbed the "Chicken Capital of the World" by several publications. In 2008, the Wichita Wranglers of AA minor league baseball's Texas League moved to Springdale and play in Arvest Ballpark as the Northwest Arkansas Naturals.

#### Rogers

Rogers is located in Benton County. As of the 2010 census, the city is the eighth most populous in the state, with a total population of 58,895. Rogers is famous as the location of the first Wal-Mart. In June 2007, BusinessWeek Magazine ranked Rogers as 18th in the 25 best affordable suburbs in the South. In 2010, CNN money magazine ranked Rogers as 10th Best Place to Live in US.



#### Bentonville

Bentonville is located in Benton County. At the 2010 census, the population was 38,284, up from 20,308 in 2000 ranking it as the state's 10th largest city. Bentonville is the county seat of Benton County. It is home to the headquarters of Wal-Mart Stores, the largest retailer in the world. Bentonville is also the home of the Crystal Bridges Museum of American Art.

#### Cultural



The Crystal Bridges Museum of American Art in Bentonville was opened in November 2011. The museum funded by Wal-Mart founder Sam Walton's daughter, Alice Walton, and designed by world-renowned architect Moshe Safdie, is home to some of America's finest works of art and has immediately become one of the nation's premier art museums.

The Walton Arts Center is Arkansas' largest performing arts center. It is located in Fayetteville near the campus of the University

of Arkansas and serves as a cultural center for the Northwest Arkansas area. The building was opened in 1992 in large part because of funds donated by the Sam Walton family. The center is host to many musicals, plays, and other artistic and educational events throughout the year. The Walton Arts Center is also home to the Symphony of Northwest Arkansas, currently under the direction of Paul Haas.



economic success. Many people seeking opportunities for employment come from Northeast Arkansas, South-Central Arkansas, and North Central Arkansas, to work in this booming area. The state's population grew 13.7 percent between 1990 and 2000, but the two-county metropolitan statistical area accounted for one-third of that growth. Benton and Washington counties grew 47 percent between 1990 and 2000.

Almost all of the people who moved to those counties then were from California, Oklahoma, Missouri, Kansas, Texas and other parts of Arkansas. Estimates put the two-county population at roughly 373,055 by December 2004. Even during national economic turmoil, Northwest Arkansas has experienced 8.2 percent job growth. According to the Bureau of Labor Statistics, in February 2008 the Northwest Arkansas region as a whole had an unemployment rate of 4.1 percent. This unemployment rate gave Northwest Arkansas a rank of 41 out of 369 metropolitan areas in the United States. Per capita income in Northwest Arkansas is \$31,191, according to the most recent figures from the United States Census Bureau. This is approximately \$7,000 below the national average per capita income.

Springdale Technology Park is the next evolution in the region's ongoing effort to anticipate the demands of the coming decade's economic expansion in technology. The Park is the ideal solution for knowledge-based industry in search of the perfect venue for affordable and sustainable growth. A 34-acre development on Springdale's east side, the Springdale Technology Park is the region's premier site for successful knowledge-based companies in search of the perfect combination of affordability, ease of development, ready availability of all utilities, and central location in the northwest metro area. Home to NanoMech, the state's first nanomanufacturer, the Springdale Technology Park offers tremendous synergy for knowledge-based firms. Nowhere else in Northwest Arkansas can land devoted to the development of knowledge-based business be found as affordable. Owned by the Springdale Public Facilities Board, the Springdale Technology Park is uniquely positioned to meet the development needs of established technology-based, knowledge-driven companies.

Company Name	Product	Employment
Tyson Foods, Inc.	Protein Processing	4,300
George's, Inc.	Poultry Processing	2,500
Springdale Schools	Education	2,235
Cargill, Inc.	Poultry Processing	1,200
Northwest Medical	Healthcare	900
A.E.R.T.	Recycled Materials	500
Harps Food Stores	Grocery Retail	495
Kawneer	Aluminum Extrusion	465
Multi-Craft Contractors	Fabrication, Machining	400
APEX Tool Group	Small Hand Tools	290
Brunner & Lay	Carbide Drilling Tools	250
JV Manufacturing	Cardboard Compactors	220
Dayco Products	Auto Tensioning Devices	200
Ball Corporation	Metal Cans	180
Newly Weds Foods	Batter Coatings	175
Pratt & Whitney, PSD	Jet Engine Repair	170

## Major Employers

#### Upgrades to Highway 265

Beginning at State Highway 16 in southern Fayetteville, the first three miles of Highway 265 has been widened to four and five lanes. The next 5.4 miles is currently under construction for widening at a cost of \$27.5 million. The cities of Fayetteville and Springdale have partnered with the Arkansas State Highway and Transportation Department and provided \$8.6 million of this cost.

The next 2.6 miles, from Highway 412 north, has been four-lanes for over 20 years. From Highway 264 north to Rogers, \$25 million is included in Arkansas' 2013-2016 Statewide Transportation Improvement Program (STIP) to extend and build a wider roadway. Ultimately, the route will utilize First Street in Rogers to connect with Highway 94.

This TIGER Grant application is to improve the two mile missing link from Randall Wobbe Lane in Springdale to Highway 264 at Bethel Heights. Highway 265 at this location is currently two miles of two-lane with no shoulders. The project will include widening, some new location, curbs and gutters, and bike lanes. Most of this project lies within Bethel Heights, a small community that lacks the financial capacity to contribute additional funding. A portion of the costs for this project will be paid for through Northwest Arkansas Regional Planning Commission (NWARPC) and funds from the Arkansas State Highway Transportation Department.

The criteria used for designating the new alignment of this area of Highway 265 included cost effectiveness, the overall impacts, and public input. The purpose of the proposed project is to improve north-south connectivity and enhance mobility for travelers in the Northwest Arkansas metro area. Data gathered for the Arkansas State Highway and Transportation Environmental Assessment supports the need for the project given both existing conditions and those projected for 2028.

## **Project Parties**

The primary party in this project is the Arkansas State Highway and Transportation Department. AHTD has partnered with the MPO for the region, the Northwest Arkansas Regional Planning Commission. NWARPC has included the improvement and extension of Highway 265 in their Metropolitan Transportation Plans since the early 1970's. Much of their planned work has been completed, and the present project will bring them closer to the competition of the goals for this area. They are committed to the success of this, and all projects, of regional significance in their area.

## Grant Funds and Sources/ Uses of Project Funds

NWARPC and the cities of Fayetteville and Springdale concur on the need to improve Highway 265 between Highway 16 in Fayetteville and Highway 265 in Springdale. The NWARPC has been designated by the governor as the MPO for this region. The NWARPC is responsible for the preparation of the Transportation Improvement Program (TIP) and the Metropolitan Transportation Plan. The TIP contains all short-term commitments for state and federal transportation funding in the metropolitan area. The TIP includes improvements for Highway 265 between Randall Wobbe Lane and Highway 264.

In addition to participating in the preparation of the TIP and Metropolitan Transportation Plan, the cities of Fayetteville and Springdale have worked with the AHTD to identify the need for improvements to Highway 265 and have determined that the improvements are a high priority. Each city council has approved a resolution that requests the improvements to Highway 265 and commits to sharing costs for portions of the improvements, as discussed above. AHTD is requesting \$18.5 million for this project. NWARPC has dedicated \$750,000 to begin right-of-way acquisition and the balance will be paid for through the Arkansas State Fuel Tax.

# **Selection Criteria**

### Primary Selection Criteria

#### Economic Competitiveness

Numerous factories and other businesses on the northeast side of Springdale employ large amounts of people and ship vast amounts of freight. According to 2012 Info USA data, approximately 5,000 people are employed in a four-square mile area served by this segment of Highway 265. Most of these jobs are in the manufacturing, industrial, and poultry processing sectors. This type of commerce requires immense amounts of freight in and out of the area. The current constraint of the two-lane Highway 265 facility from Randall Wobbe Road to Highway 264 will serve to impede the efficient movement of people and goods if not improved and realigned.

#### Quality of Life

Numerous residential communities have sprung up along Highway 265 as Northwest Arkansas has expanded. The ability of residents to reach their places of employment and schools safely would certainly be increased. In addition, the entire community- and those outside the community travelling in to enjoy all the region has to offer- would benefit by easy access to sporting events, cultural attractions, historical sites, or just to enjoy the scenery of the Ozarks.

Air quality would be improved in the higher traffic areas such as Interstate 540 and Highway 71B, as these are currently congested due to being the only north/south routes in the area.

## **Results of Benefit-Cost Analysis**

The Benefit Cost Analysis (BCA) (http://www.arkansashighways.com/TIGER/T6/t6.aspx) was performed in accordance with the ARRA guidance provided in the Federal Register. These benefits and costs were quantified in accordance with Notice of Funding Availability, 79 Fed. Reg. 11,854 (2014)

The purpose of the BCA is to systematically compare the benefits and costs of constructing a proposed new location route in Springdale for Highway 265 between Randall Wobbe Lane and Highway 264 in Washington and Benton Counties, Arkansas. The BCA compared the cost of constructing the new location route to the cost of not doing anything outside of routine maintenance. The analysis considers the construction phase followed by a 20-year project life beyond the proposed opening date (2014 through 2038) for purposes of the BCA.

The analysis considered typical roadway construction and maintenance costs in Arkansas. Table 1 summarizes the findings of the BCA analysis using both a 3 percent discount rate and a 7 percent discount rate. Road user benefits that were considered include the value of travel time savings provided by the improved facility, vehicle operating cost benefits, and the value to society of enhancing the safety within the improved highway network.

Year	Co	nstruction Co	sts	Travel Time Benefit Vehicle Operation Cost Be		st Benefit	enefit Safety Benefit					
	Non-Disc.	Disc (3%)	Disc. (7%)	Non-Disc.	Disc (3%)	Disc. (7%)	Non-Disc.	Disc (3%)	Disc. (7%)	Non-Disc.	Disc (3%)	Disc. (7%)
2014	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2015	\$2,100,000	\$2,038,835	\$1,962,617	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2016	\$3,712,500	\$3,499,387	\$3,242,641	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2017	\$7,975,000	\$7,298,255	\$6,509,976	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2018	\$3,712,500	\$3,298,508	\$2,832,248	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2019	\$0	\$0	\$0	\$416,299	\$359,103	\$296,815	\$0	\$0	\$0	\$662,143	\$571,171	\$472,099
2020	\$0	\$0	\$0	\$423,246	\$354,462	\$282,027	\$0	\$0	\$0	\$673,194	\$563,789	\$448,578
2021	\$0	\$0	\$0	\$430,194	\$349,787	\$267,903	\$0	\$0	\$0	\$684,245	\$556,353	\$426,113
2022	\$0	\$0	\$0	\$437,142	\$345,084	\$254,421	\$0		\$0	\$695,295	\$548,872	\$404,668
2023	\$0	\$0	\$0	\$444,090	\$340,358	\$241,555	\$0	\$0	\$0	\$706,346	\$541,355	\$384,205
2024	\$0	\$0	\$0	\$451,037	\$335,614	\$229,284	\$0	\$0	\$0	\$717,397	\$533,810	\$364,688
2025	\$0	\$0	\$0	\$457,985	\$330,858	\$217,585	\$0	\$0	\$0	\$728,447	\$526,246	\$346,080
2026	\$0	\$0	\$0	\$464,933	\$326,094	\$206,436	\$0	\$0	\$0	\$739,498	\$518,669	\$328,346
2027	\$0	\$0	\$0	\$471,880	\$321,328	\$195,814	\$0	\$0	\$0	\$750,548	\$511,087	\$311,451
2028	\$0	\$0	\$0	\$478,828	\$316,562	\$185,698	\$0	\$0	\$0	\$761,599	\$503,507	\$295,361
2029	\$0	\$0	\$0	\$485,776	\$311,801	\$176,068	\$0	\$0	\$0	\$772,650	\$495,934	\$280,044
2030	\$0	\$0	\$0	\$492,724	\$307,049	\$166,902	\$0	\$0	\$0	\$783,700	\$488,376	\$265,466
2031	\$0	\$0	\$0	\$499,671	\$302,309	\$158,183	\$0	\$0	\$0	\$794,751	\$480,837	\$251,598
2032	\$0	\$0	\$0	\$506,619	\$297,585	\$149,890	\$0	\$0	\$0	\$805,802	\$473,324	\$238,408
2033	\$0	\$0	\$0	\$513,567	\$292,880	\$142,005	\$0	\$0	\$0	\$816,852	\$465,840	\$225,866
2034	\$0	\$0	\$0	\$520,514	\$288,196	\$134,511	\$0		\$0	\$827,903	\$458,390	\$213,946
2035	\$0	\$0	\$0	\$527,462	\$283,537	\$127,389	\$0	\$0	\$0	\$838,954	\$450,979	\$202,618
2036	\$0	\$0	\$0	\$534,410	\$278,904	\$120,623	\$0	\$0	\$0	\$850,004	\$443,611	\$191,857
2037	\$0	\$0	\$0	\$541,357	\$274,301	\$114,198	\$0	\$0	\$0	\$861,055	\$436,289	\$181,637
2038	\$0	\$0	\$0	\$548,305	\$269,730	\$108,097	\$0	\$0	\$0	\$872,106	\$429,018	\$171,933
TOTAL	\$17,500,000	\$16,134,985	\$14,547,482	\$9,646,039	\$6,285,543	\$3,775,404	\$0	\$0	\$0	\$15,342,489	\$9,997,459	\$6,004,962
							No Disc.	3% Disc.	7% Disc.			
						Costs	\$17,500,000	\$16,134,985	\$14,547,482			
						Benefits	\$24,988,528	\$16,283,001	\$9,780,367			
						B/C Ratio	1.43	1.01	0.67			

#### Table 1: Benefit Cost Analysis Results

Many benefits of this project do not easily lend themselves to simple quantification. The economic benefits of connecting cities in the second largest metropolitan area of Arkansas are significant. Providing a safe and efficient transportation network for the region cannot be easily quantified beyond the impacts of construction activities and travel time savings. Providing an improved transportation network in the region does make an impact in terms of improving the per capita income for the middle class which is a goal of the TIGER Discretionary Grant program.

The BCA was calculated using the following key factors for evaluation:

- o Construction Costs
- Forecasted Traffic
- Travel Speeds and Congestion
- o Historic Crash Data
- o Vehicle Miles Traveled (VMT)
- Vehicle-Hours Traveled (VHT)
- o Traffic Distribution by Vehicle Type
- o Value of Time

The construction cost estimate for the proposed new location route is \$15 million. Construction costs were spread across 2016, 2017 and 2018. The analysis also assumes 14 percent right-of-way costs and 10 percent preliminary and construction engineering costs. These costs reflect basic construction costs that would be incurred if the project were built using traditional construction methods and schedules. Assumed costs by year are shown in Attachment 4.

The BCA value of time analysis quantifies the road user impacts that the new location route would have in terms of travel time savings by first determining the amount of travel time saved and then assigning a dollar value for this time. Speeds were estimated under no-build and build conditions, and these speeds (in conjunction with volumes and distances) were used to estimate daily VHT. Under the build condition, ten percent of vehicles were assumed to use the existing route for local access. Linear interpolation was used to estimate VHT in years between those where traffic projections were available. Time values were calculated in Attachment 1 and assigned to the travel time saving, as shown in Attachment 5.

The impacts of the vehicle operating costs account for the actual cost to operate the vehicle, aside from the travel time costs. Operating costs per mile are calculated in Attachment 1. Volumes and roadway lengths were again used to estimate VMT, and linear interpolation was used between years when traffic projections were available. Due to the new location route and the old route being roughly the same length, the vehicle operating cost ultimately did not change. This process is documented in Attachments 3 and 6.

The value of safety improvements considers cost savings that can be attributed to the diversion of traffic to a facility with a lower crash rate. The statistical cost of a fatal and non-fatal crash was determined using TIGER guidance. The statewide average crash rates for a two-lane undivided urban highway with no access control was assumed for the existing route, and the statewide average crash rates for a four-lane divided urban highway with partial access control

was assumed for the new route. From this information, a crash cost per mile was calculated for traffic on the old and new route. This process is documented in Attachments 3 and 7.

When examined in the context of both the Washington and Benton County roadway networks, the proposed new location route exhibits a net positive economic impact of 1.70.

# **Project Readiness**

Despite the large amount of culturally and historically significant structures and sites in the area of Northwest Arkansas, a Phase I Cultural Resources Survey and evaluation revealed no historic properties within the proposed area that was available for investigation. Approximately 10 percent (approximately 1,200 linear feet of the proposed alignment) of the site was unavailable for survey due to denial of access by the owner, therefore a Programmatic Agreement has been prepared.

Representatives of the Five Tribes were presented with a report from the State Historic Preservation Officer (SHPO) containing the results of the area survey in August 2012. Thus far, only the Osage have responded that sites that might be of cultural or religious significance to their tribe may be present within the project area.

Upon their approval of the Environmental Assessment, a Finding of No Significant Impact (FONSI) was issued by the Federal Highway Administration on October 24, 2012. The FONSI states that there is sufficient evidence and analysis to determine that an environmental impact statement is not required, and that the Preferred Location will have no significant impact on the human environment and issued FONSI pursuant to 23 CFR 88.121(a).

Task	Completion Date
Design Surveys	Complete
Roadway Design	December-15
Environmental	Complete
Right of Way	June-15
Utilities	June-16
Project Obligation	June-16

#### **Project Readiness**

#### **Project Schedule**

Task	Completion Date
Award to Contract	June-16
Mobilization of Project	July-16
Project Substantially Complete	August-18
Open to Traffic	August-18