



Welcome to the second public meeting for the SH-82 project in Cherokee County.

Open House Format

- **This Presentation Gives A Brief Summary of the SH-82 Project**
- **The Boards Give More Detailed Information About:**
 - The Purpose and Need for the Project
 - Project Area Constraints
 - The Original 4-Lane Alternatives
 - The New 5-Lane Alternatives
 - Potential Relocations
 - Environmental Impacts
 - Summary of Impacts and Costs
- **There Are Two Sets of Boards – The Information is Identical**
- **Please Ask Questions and Give Us Your Input!**

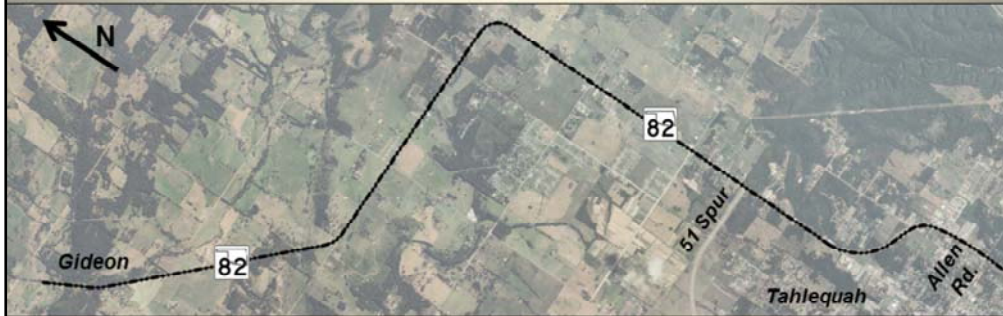


This presentation will give you a brief overview of the SH-82 project. More detailed information is available on the boards which are stationed around the room.

There are two groups of boards that contain identical information about the project area and alignment options. There are several staff members from ODOT and from ODOT's consultant Garver here at the meeting tonight. Please feel free to ask questions and give us your input.

Project Area

**SH-82 From the End of the 4-Lane Section near
Allen Road through the Town of Gideon
(Approximately 8 Miles)**



**Project Will Connect to the 14-Mile Creek Bridge Project Currently
Under Construction**



The SH-82 project area begins at the end of the current 4-lane section of SH-82 just north of Allen Road in Tahlequah. It extends to the north and west to the town of Gideon, a distance of approximately 8 miles.

This map will be used throughout the presentation. To orient you, Tahlequah is at the bottom right of the picture. North is oriented up and to the left. Gideon is located at the lower left of the picture.

The SH-82 project will connect to the 14-Mile Creek bridge project that is currently under construction north of Gideon.

Purpose of the Project



- **Reduce Accidents and Improve the Safety of the Roadway**

- The Accident Rate on This Section of SH-82 is More Than **TWICE** the State Average for Similar Roadways



The purpose of the SH-82 project is to reduce accidents and improve the safety of the roadway.

The accident rate on this section of SH-82 is more than twice the state average for similar roadways. The accident locations from the last 5 years are shown on the map. We will discuss the accident history on SH-82 in more detail a little later in the presentation.

Purpose of the Project



- **Complete the Multi-Lane Loop Around Tahlequah to Ease Traffic Congestion**
 - Traffic on SH-82 Will Become More Congested and Experience Significant Delay by 2045
 - Current Traffic: **8,140** Vehicles/Day (**10%** Trucks)
 - Projected Traffic (2045): **12,340** Vehicles/Day



Another purpose of the SH-82 project is to complete the multi-lane loop around Tahlequah to ease traffic congestion. This section of SH-82 is the only remaining 2-lane section of the loop, as you can see from the map.

As Tahlequah continues to grow, traffic volumes will continue to increase on SH-82. Traffic studies show that by 2045, if SH-82 remains a 2-lane roadway, drivers will experience significant congestion and delay.

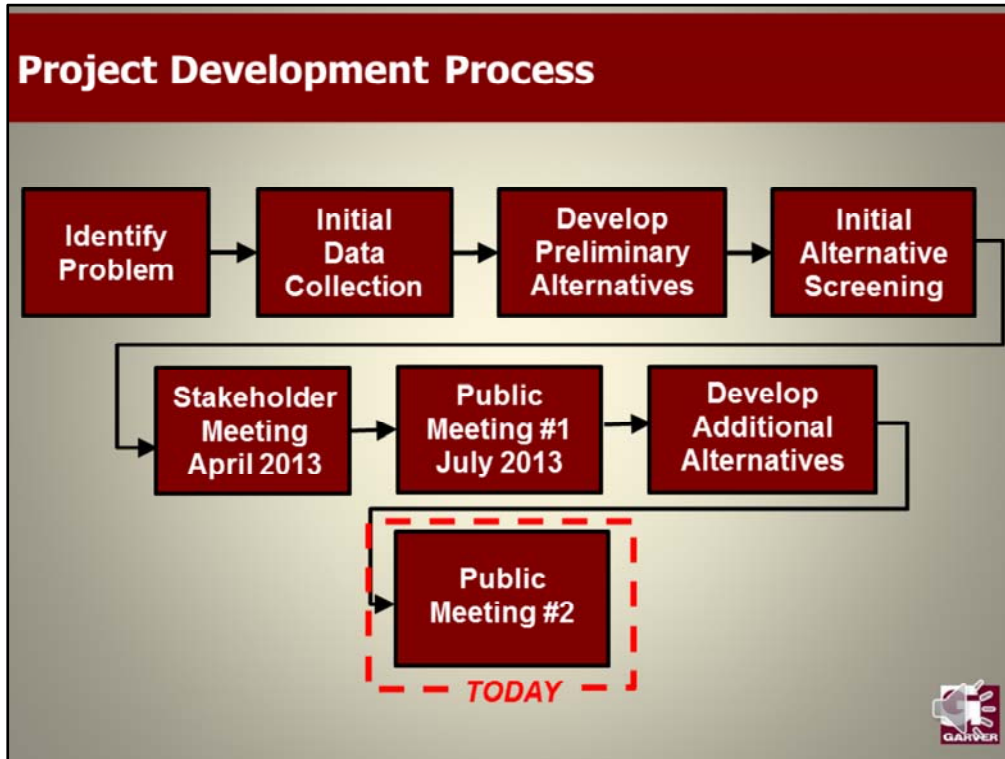
North and South Project Limits

- **Corridor is Split Into Two Projects**

- South Project – From Allen Rd. to W. 710 Rd.
- North Project – From W. 710 Rd. to Gideon, OK



For the purposes of the study, the corridor has been split into two projects. The South Project begins just north of Allen Road in Tahlequah and ends at the curve at W. 710 Road. The North Project begins at W. 710 Road and extends to the end of the project at Gideon.



This chart shows the steps that have occurred so far in the SH-82 project. We developed preliminary alternatives and presented them at a public meeting in July 2013. Because we have developed additional alternatives we are holding another public meeting today.

Existing Conditions Warrant Improvement

▪ Roadway Deficiencies

- Inadequate Sight Distance
 - Rolling Terrain – Vertical Alignment
 - Sharp Curves – Horizontal Alignment
 - Blind Intersections
- Narrow Shoulders



Existing SH-82 has several deficiencies. The rolling terrain and sharp curves along the highway lead to inadequate sight distance, which means it is difficult to see oncoming traffic or stopped traffic when going over hills or around curves. There are also several blind intersections, like the one shown at W. 710 Road, where it is difficult to see oncoming traffic when turning on to the roadway.

The existing highway also has narrow shoulders that don't meet today's standards. There are steep slopes which make it difficult to recover if you start to drive off the roadway. There is very little room to pull off the roadway in case of emergency.

Existing Deficiencies Lead To A High Accident Rate

- **Existing Accident Rate (2009-2014)**
 - Total 116 Documented Accidents From Previous 5 Years
 - 54 Personal Property Damage
 - 60 Injury (94 Persons)
 - 2 Fatal (3 Persons)
 - More Than TWICE the State Average for Similar Facilities
 - Designated Safety Corridor by Oklahoma Highway Patrol



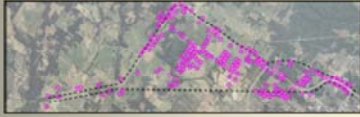
The poor sight distance and narrow shoulders on SH-82 contribute to a substantial accident history. Over the past 5 years there have been 116 documented accidents. These include 54 personal property damage, 60 injury accidents with 94 injuries, and 2 fatal accidents with 3 fatalities.

This is more than twice the state average for similar roadways. The Oklahoma Highway Patrol has designated this portion of SH-82 as a Safety Corridor, which means they have stepped up their patrols to try and reduce speeding.

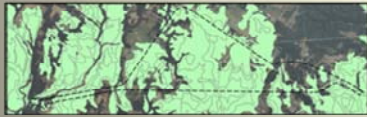
Project Area Constraints

- Challenging Terrain
- Extensive Utilities
- Existing Development
- Environmental Constraints

● Homes and Businesses



● Farmlands

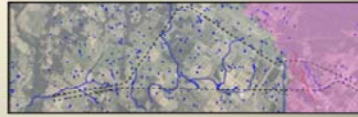


- Community Facilities
- Preliminary Noise Analysis
- Demographic Data

● Hazardous Materials



● Wetlands and Streams



- Cultural Resources
- Threatened and Endangered Species

See Boards for:
Environmental
Constraints



There are several constraints within the study area to keep in mind when developing alternatives. More detail on the environmental constraints are shown on the boards.



Now we will discuss the development of the four-lane alternatives. Please see the boards for more information on the design criteria and for detailed maps of the alignments.

Lane Configuration

- **Four-Lane Divided Roadway From Allen Road to SH-51 Spur**
 - Limited Access to new SH-82 Roadway
 - Existing Roadway Will Provide Local Access
- **Two-Lane Undivided Roadway From SH-51 Spur North**
 - Properties Will Have Direct Access
 - A Four-Lane Roadway Will be Completed as Traffic Demands in the Future
 - ODOT Plans to Purchase the Needed Right-of-Way for Four Lanes Now



All of the four-lane alternatives will construct a four-lane divided roadway from Allen Road to the SH-51 Spur. This portion of the roadway will have limited access. That is, access to SH-82 will only be provided at intersections. The existing SH-82 roadway will continue to provide local access to homes and businesses.

Lane Configuration

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North of the SH-51 Spur, ODOT will construct a two-lane, undivided highway for the remainder of the project. Properties will have direct access to the highway like they do today.

Lane Configuration

- **Four-Lane Divided Roadway From Allen Road to SH-51 Spur**
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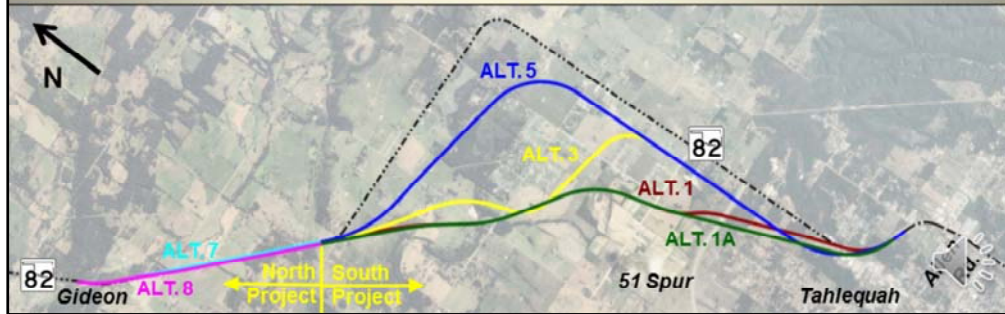


Eventually, as traffic warrants, the additional lanes will be constructed to complete the four-lane divided highway.

ODOT plans to purchase all of the needed right-of-way for the ultimate four-lane highway prior to any construction.

Four-Lane Divided Alternatives Development and Initial Screening

- **Developed 10 Initial Alternatives**
 - 8 Alternatives for South Project
 - 2 Alternatives for North Project
 - North & South Alternatives can be Combined
- **ODOT Evaluated the Initial Alternatives on Several Factors**
 - Impacts to Individual Properties
 - Impacts to Utilities
 - Impacts to Environmental Resources
 - Construction Costs
- **ODOT Refined and Reduced the Number of Alternatives**
 - **South Project (Alt. 1, 1A, 3 & 5)**
 - **North Project (Alt. 7 & 8)**



ODOT initially developed 10 alternatives – 8 for the South Project and 2 for the North Project. These were evaluated on several factors and were refined and reduced to the alternatives shown here.

Four-Lane Divided Alternatives Rendering



This graphic shows what the four-lane alternative might look like in the future.
Beginning with the existing condition...

Four-Lane Divided Alternatives Rendering



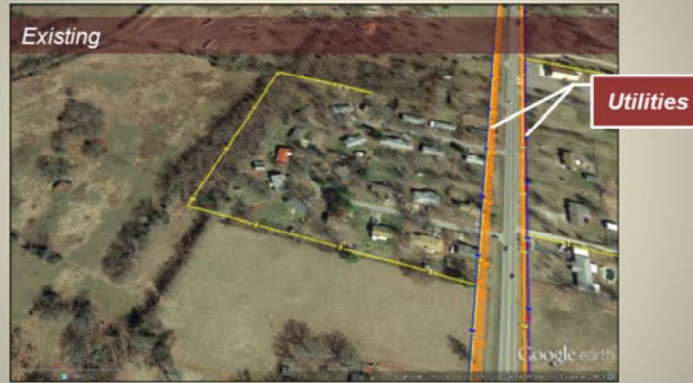
...the first step (north of the SH-51 Spur) would be to construct two lanes.

Four-Lane Divided Alternatives Rendering



Then, as traffic increases in the future, the additional two lanes would be constructed.

Four-Lane Divided Alternatives Rendering



This graphic shows a different view of the four-lane alternatives. Again, beginning with the existing condition...

Four-Lane Divided Alternatives Rendering



...this shows what the new four-lane highway would look like, showing the new lanes and the right-of-way needed to accommodate drainage.

First Public Meeting

- **ODOT Held a Public Meeting to Present the Alternatives on July 25, 2013**

- Over 170 People Attended the Meeting
- 43 Individuals and Agencies Submitted Written Comments
- Positive Feedback was Received for Alternatives 1 and 1A
- Some Individuals Requested That ODOT Look at Reconstructing Existing SH-82 as a Five-Lane Roadway



- **In Response to Public Feedback, ODOT is Presenting Additional Alternatives (Five-Lane) for the South Project Here Tonight**

- Alternatives 9-14



ODOT held a public meeting to present the four-lane alternatives on July 25, 2013. Positive feedback was received for Alternatives 1 and 1A. ODOT received several requests to look at reconstructing the existing SH-82 as a five-lane roadway.

In response to public feedback, ODOT developed several five-lane alternatives along the existing SH-82. These are numbered Alternatives 9 through 14.



We will now discuss the five-lane alternatives. Please see the boards for more detail on the design criteria and specific alignments.

Five-Lane with Center Turn Lane Alternatives Alternatives 9-11

Overview

- Offsets
 - Alt. 9 – 45 ft West
 - Alt. 10 – 45 ft East
 - Alt. 11 – 0 ft
- Designed for 55 mph
- Includes Curb & Gutter and Storm Sewer
- Individual Properties Have Direct Access

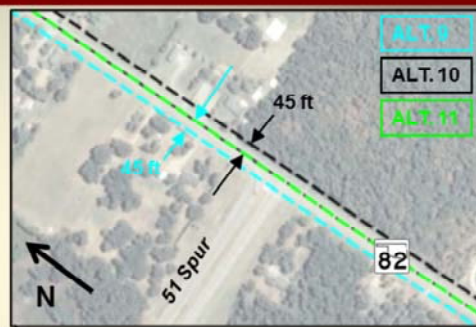


The first set of five-lane alternatives includes Alternatives 9, 10, and 11. These alternatives all have four driving lanes with a center turn lane, shoulders, curb and gutter, and storm sewer with inlets for drainage.

Five-Lane with Center Turn Lane Alternatives Alternatives 9-11

Overview

- Offsets
 - Alt. 9 – 45 ft West
 - Alt. 10 – 45 ft East
 - Alt. 11 – 0 ft
- Designed for 55 mph
- Includes Curb & Gutter and Storm Sewer
- Individual Properties Have Direct Access

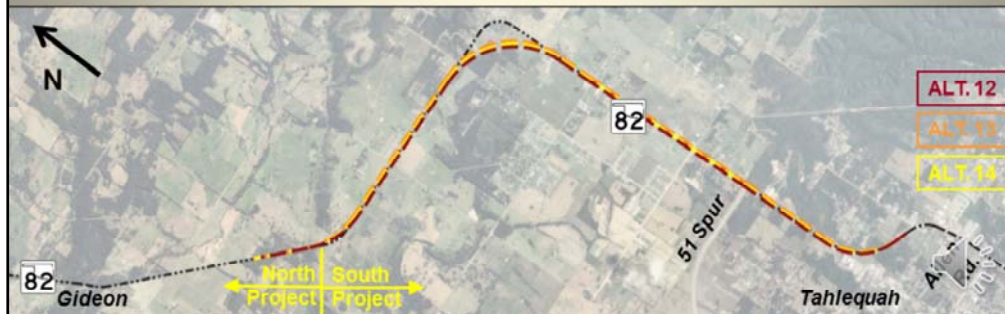


Alternative 9 is offset 45 feet west of the existing highway, Alternative 10 is offset 45 feet east, and Alternative 11 is centered on the existing highway. The offset was chosen to minimize impacts on the opposite side of the highway. The speed limit would be 55 mph. Individual properties would have direct access to SH-82.

Five-Lane with Center Turn Lane Alternatives Alternatives 12-14

Overview

- Offsets
 - Alt. 12 – 80 ft West
 - Alt. 13 – 80 ft East
 - Alt. 14 – 0 ft
- Designed for 65 mph
- Includes Open Shoulders and Ditches
- Individual Properties Have Direct Access

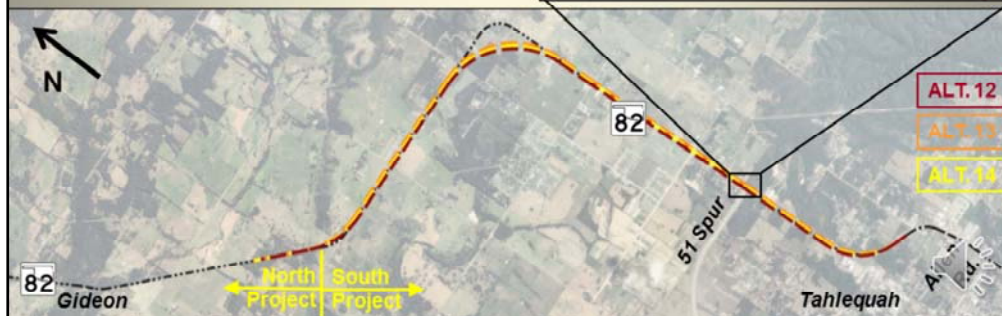
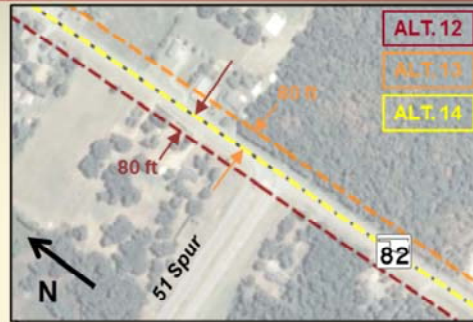


The second set of five-lane alternatives includes Alternatives 12, 13, and 14. These alternatives all have four driving lanes with a center turn lane and open shoulders with ditches.

Five-Lane with Center Turn Lane Alternatives Alternatives 12-14

Overview

- Offsets
 - Alt. 12 – 80 ft West
 - Alt. 13 – 80 ft East
 - Alt. 14 – 0 ft
- Designed for 65 mph
- Includes Open Shoulders and Ditches
- Individual Properties Have Direct Access



Because of the wider footprint, Alternative 12 is offset 80 feet west of the existing highway, Alternative 13 is offset 80 feet east, and Alternative 14 is centered on the existing highway. The speed limit would be 65 mph. Individual properties would have direct access to SH-82.

Five-Lane with Center Turn Lane Alternatives Rendering



This graphic shows what the 5-lane alternatives might look like. Beginning with the existing condition, you can see the utilities located alongside the roadway as well as the homes in close proximity.

Five-Lane with Center Turn Lane Alternatives Rendering



The five-lane section shows the area needed for the roadway, drainage, and the relocated utilities. Both the curb and gutter...

Five-Lane with Center Turn Lane Alternatives Rendering



... and open shoulder options are shown.

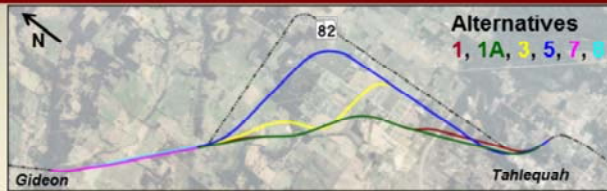


Now that we have presented the four-lane and five-lane alternatives, we will present a brief comparison.

Comparison of Alternatives

■ All of the Alternatives Were Evaluated on the Following Factors:

- Does the Alternative Meets the Purpose and Need for the Project?
 - Does it Complete the Multi Lane Loop Around Tahlequah?
 - Does it Improve Safety Along SH-82?
- What Are the Impacts?
 - Relocations
 - Environmental
 - Utilities
- What are the Costs?



All of the alternatives were evaluated on the following factors:

1. Does the alternative meet the purpose and need for the project? Does it complete the multi-lane loop around Tahlequah? Does it improve safety on SH-82?
2. What are the impacts, including relocations, environmental impacts, and utility impacts?
3. And Finally, what are the costs?

Comparison of Alternatives Multi-Lane Loop

- All Alternatives Complete the Multi-Lane Loop Around Tahlequah to Ease Traffic Congestion

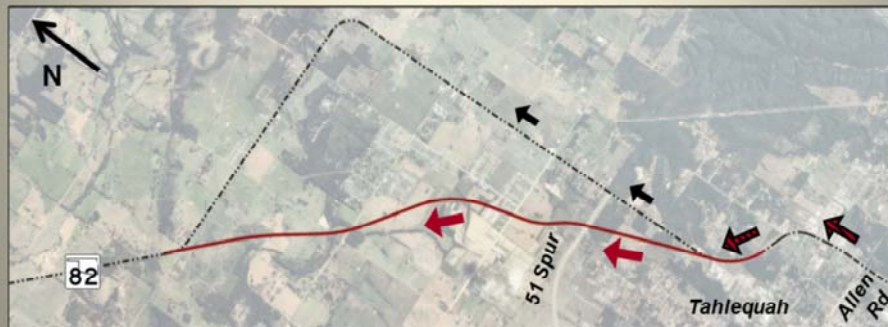


All of the alternatives will complete the multi-lane loop around Tahlequah. However, they do this in different ways.

Comparison of Alternatives Traffic Flow

▪ Traffic Flow

- Four-Lane – Traffic is Split Between the Proposed and Existing Roadways



LEGEND

← All Traffic ← Local Traffic ← Thru Traffic



The four-lane alternatives will split traffic between the new highway and the existing highway. Traffic making local trips will likely use the existing highway. Through traffic destined for locations beyond the immediate area will likely use the new highway. This means that there will be fewer conflicts between local and through traffic, which are often travelling at different speeds.

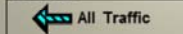
Comparison of Alternatives Traffic Flow

- **Traffic Flow**

- Five-Lane – All Traffic Remains in Existing Corridor



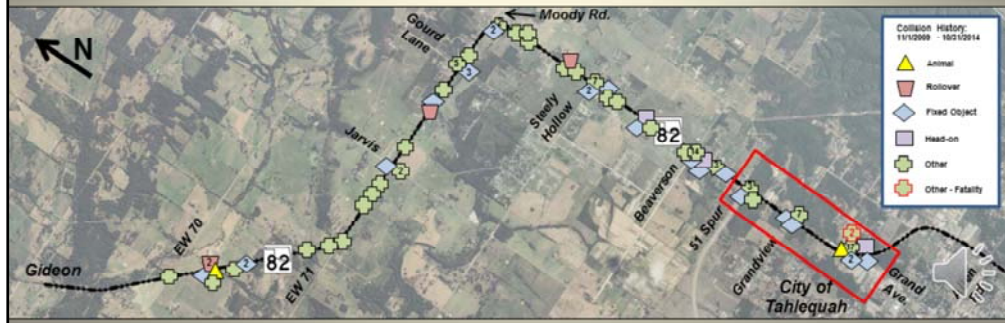
LEGEND



The five-lane alternatives will keep all traffic in the existing SH-82 corridor. This means that local and through traffic will be using the same roadway to access their destinations.

Comparison of Alternatives Safety

- All Alternatives Will Improve Safety
- Predicted Collisions Model (2045)
(For Mile Section Between 51-Spur and Grand Ave.)
 - Five-Lane Includes More Potential Accident Locations
 - Five-Lane is Predicted to Have Double the Number of Accidents versus the Four-Lane



All of the alternatives will improve safety in that accidents are expected to decrease with any of the alternatives.

We analyzed the one-mile section of SH-82 between Grand Avenue and the SH-51 Spur, shown in the red box, and found that, because of the multiple driveways and having to cross five lanes, the five-lane alternatives are predicted to have double the number of accidents versus the four-lane alternatives.

Comparison of Alternatives Safety

■ US-62 Collision Data Comparison (2004-2014)

(South of Tahlequah)

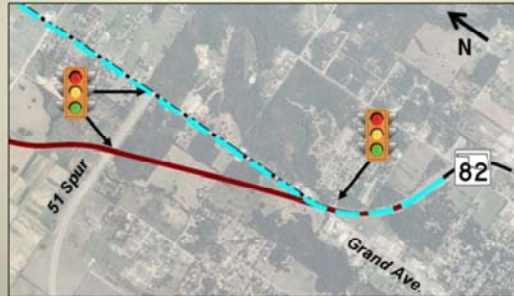
- Segments Analyzed Included Four-Lane Divided and Five-Lane
- Four-Lane Segment had ~30% Less Collisions



A similar trend can be seen on US-62 south of Tahlequah where there are four-lane and five-lane sections. Ten years worth of collision data were analyzed for two segments of US-62 that were similar to SH-82 in length, traffic volumes and driveway densities without traffic signals. The four-lane segment of US-62 had approximately 30% fewer accidents historically than the five-lane segment.

Comparison of Alternatives Safety

- **Intersection Signals Warranted in 2019**
 - Grand Ave.
 - 51-Spur
- **Will Be Included with Any of the Alternatives**



We also looked at the need for traffic signals for the new roadway. Traffic signals will be needed at Grand Avenue and at the SH-51 Spur by the anticipated opening year of 2019. Therefore, these signals would be included with any of the alternatives.

Comparison of Alternatives

Socioeconomic Impacts

- **Part of the Comparison Included a Socioeconomic Study to Examine the Impacts of a “Bypass” Alternative on Existing Businesses**
 - Some Types Such as Gas Stations, Convenience Stores, and Retail Stores are Considered more “Traffic Dependent”
 - Changes in Traffic Patterns Could Have Impacts on these Businesses



A Gas Station Would be Considered “Traffic Dependent”



A Day Care Would be Considered Less “Traffic Dependent”

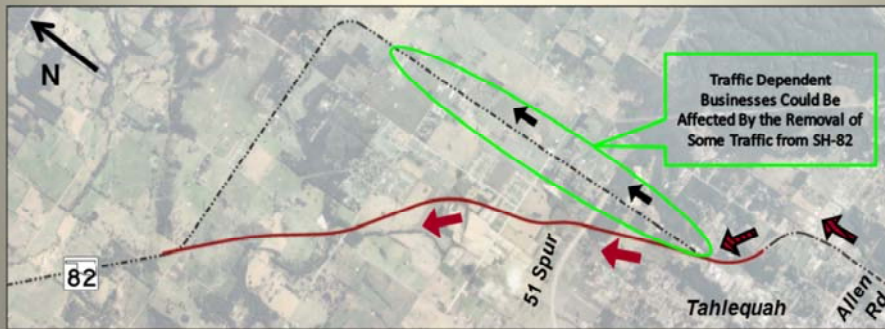


Another difference between the four-lane and five-lane alternatives is the socioeconomic impacts. We studied how the different alternatives would affect the businesses along existing SH-82. Some businesses, such as gas stations, convenience stores, and retail stores are considered more traffic dependent, because they rely on traffic driving by for their customers. Changes in traffic patterns could have impacts on these businesses.

Comparison of Alternatives

Socioeconomic Impacts

- **The Four-Lane Alternatives Would Draw Traffic Off of Existing SH-82 and Could Result in Decreased Sales**
 - Traffic and Sales Could Decrease As Much as 45% for a Small Number of Businesses
 - Effects Would be Greater Towards the North End of the Study Area as the New SH-82 Diverges from the Existing SH-82
 - Fewer Businesses are Present Towards the North
 - The Four-Lane Alternatives Could Bring in New Businesses to the Area



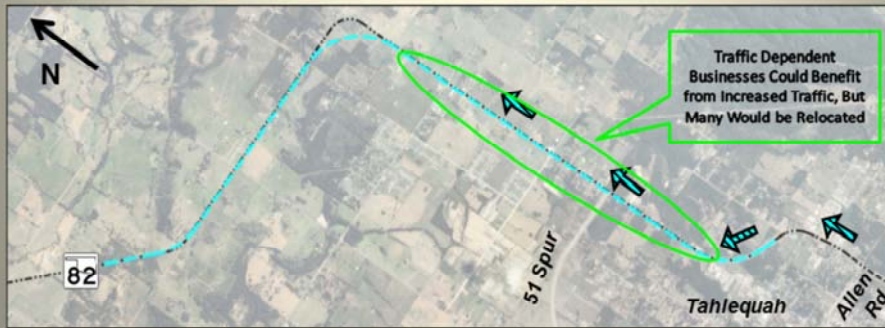
The four lane alternatives would reduce the traffic on the existing SH-82 and could reduce sales for businesses along the highway, perhaps as much as 45%. The drop in sales would likely be greater towards the north end of SH-82; however, there are fewer businesses in this area.

The new SH-82 highway could potentially draw new businesses to the area as well.

Comparison of Alternatives

Socioeconomic Impacts

- **The Five-Lane Alternative Would Increase Traffic on Existing SH-82 and Could Result in Increased Sales**
 - Traffic and Sales Could Increase Up to 5%
 - Up to 30% of the Existing Businesses Would be Relocated by the Five-Lane Alternatives
 - Businesses Could Conceivably Relocate on the New SH-82 Highway




The Five-Lane alternatives would increase traffic on SH-82 and could result in a slight increase in sales, perhaps up to 5%. However, up to 30% of the existing businesses along SH-82 would be relocated by the five-lane alternatives. These businesses could relocate along the new highway.

Alternatives Summary


SOUTH PROJECT																	
FOUR - LANE DIVIDED ALTERNATIVES																	
Alternate #	ALTERNATIVE COST (Millions)					RELOCATIONS				ENVIRONMENTAL IMPACTS							
	CONSTRUCTION COST - (FOUR LANE DIVIDED & INITIAL TWO LANE) (1)	CONSTRUCTION COST - (FUTURE FOUR LANE) (1)	RIGHT-OF-WAY COST	UTILITY COST (000)	TOTAL COST	RESIDENTIAL RELOCATIONS	COMMERCIAL RELOCATIONS	COMMUNITY FACILITIES	NOISE IMPACTS	FARMLAND IMPACT SCORE	WETLANDS (ACRE)	STREAMS (WITHIN R/W) (FT)	HAZARDOUS MATERIALS	PUBLIC MEETING #1	PUBLIC MEETING #2		
1	\$33.8	\$13.4	\$3.8	\$0.5	\$51.5	3	1	2	1	147	2.59	4195	1	+	?		
1A	\$30.6	\$13.7	\$3.0	\$0.4	\$47.7	5	4	0	0	147	3.24	4026	3	+	?		
3	\$28.8	\$11.8	\$4.0	\$1.0	\$45.6	8	4	0	0	146	3.01	3311	4	-	?		
5	\$31.0	\$13.6	\$4.2	\$1.2	\$50.0	10	4	0	1	144	4.61	3008	4	-	?		
FIVE - LANE WITH CENTER TURN LANE ALTERNATIVES (CURB & GUTTER AND STORM SEWER)																	
9	\$35.9	N/A	\$5.6	\$1.4	\$42.9	18	0	2	2	149	0.85	3288	5	N/A	?		
10	\$37.5	N/A	\$7.7	\$1.8	\$47.0	28	5	2	1	147	0.37	3609	5	N/A	?		
11	\$35.3	N/A	\$6.8	\$1.7	\$43.8	22	2	3	1	148	0.69	3800	8	N/A	?		
FIVE - LANE WITH CENTER TURN LANE ALTERNATIVES (OPEN SHOULDERS & DITCHES)																	
12	\$33.9	N/A	\$8.3	\$1.3	\$43.5	27	1	3	1	148	1.84	3908	6	N/A	?		
13	\$35.7	N/A	\$10.4	\$1.5	\$47.6	41	5	2	2	146	0.69	4349	5	N/A	?		
14	\$34.5	N/A	\$10.1	\$3.0	\$47.6	29	5	4	0	146	1.35	4336	9	N/A	?		

(1) - SEE "PROPOSED DESIGN CRITERIA" DISPLAY BOARD


LEGEND



INCREASED BAR LENGTH INDICATES MORE IMPACTS

 = Positive Feedback Received

See Boards and Handout for:
Project Summary Matrix



For most items, the five-lane alternatives have more impacts than the four-lane alternatives. Costs are roughly equivalent. The project matrix boards provide more detail on the impacts and costs of each alternative. Please visit with our staff for more explanation and to answer any questions.

Alternatives Summary

NORTH PROJECT															
FOUR-LANE DIVIDED ALTERNATIVES															
Alternate #	ALTERNATIVE COST (Millions)				RELOCATIONS				ENVIRONMENTAL IMPACTS						
	CONSTRUCTION COST - (FOUR LANE DIVIDED & INITIAL TWO LANE) (1)	CONSTRUCTION COST - (FUTURE FOUR LANE) (1)	RIGHT-OF-WAY COST	UTILITY COST (0000)	TOTAL COST	RESIDENTIAL RELOCATIONS	COMMERCIAL RELOCATIONS	COMMUNITY FACILITIES	NOISE IMPACTS	FARMLAND IMPACT SCORE	WETLANDS (ACRE)	STREAMS (WITHIN R/W) (FT)	HAZARDOUS MATERIALS	PUBLIC MEETING #1	PUBLIC MEETING #2
Z	\$9.56	\$7.18	\$0.70	\$0.037	\$17.5	1	0	0	0	145	0.13	2180	0	-	7
8	\$9.39	\$8.86	\$0.80	\$0.032	\$19.1	1	0	0	0	142	0.59	2012	0	-	7

(1) - SEE "PROPOSED DESIGN CRITERIA" DISPLAY BOARD

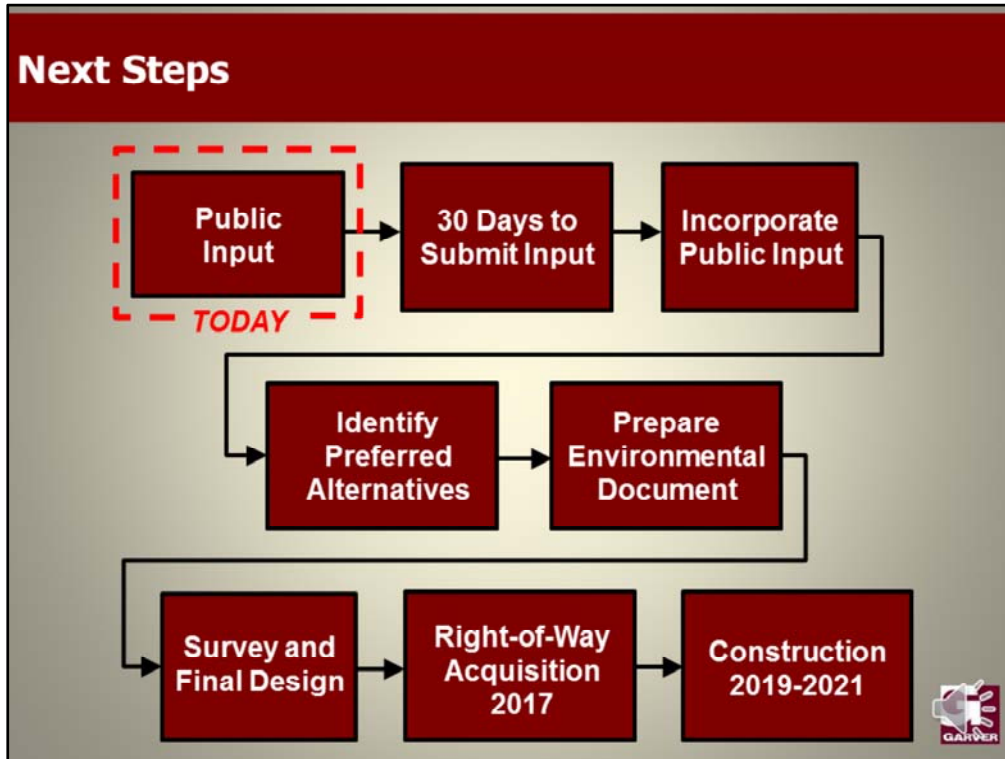
LEGEND

INCREASED BAR LENGTH INDICATES MORE IMPACTS

= Positive Feedback Received

See Boards and Handout for:
Project Summary Matrix

The costs and impacts of Alternatives 7 and 8 for the north project are very similar. Again, please visit the boards for more information.



After our meeting today, you will have 30 days to submit your comments. We will incorporate those comments and use them to help identify the preferred alternatives. Then we will prepare the detailed environmental studies and at that time there will be additional opportunity for public input. After environmental approval, the project will move into final design, right-of-way acquisition, and construction, which is currently programmed for 2019-2021.

Thank You!

Please Submit Your Comments by:
February 26, 2015

- ✓ Leave Your Comment Form Here Tonight
- ✓ Mail the Comment Form Back to ODOT:
Environmental Programs Division
200 NE 21st Street
Oklahoma City, OK 73105
- ✓ Email Your Comments to: ENVIRONMENT@ODOT.ORG
- ✓ Information is available at
<http://www.okladot.state.ok.us/meetings/other.php>



Thank you for coming tonight. Please fill out your comment form and submit it to ODOT by February 26. We appreciate your input and participation tonight.