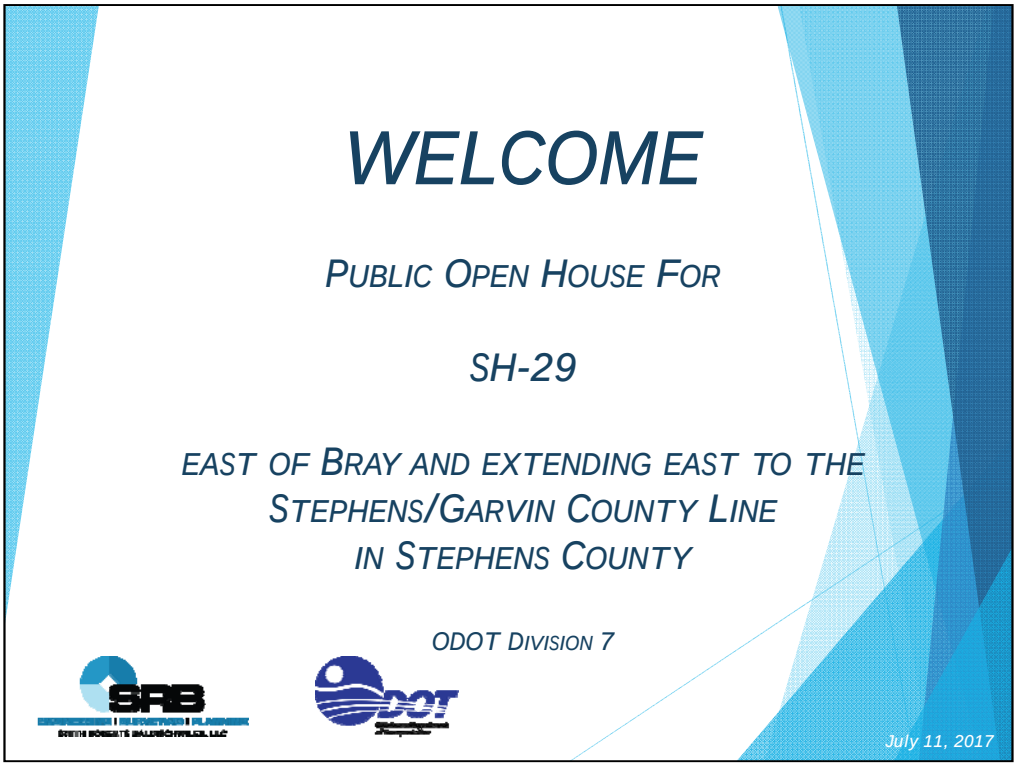
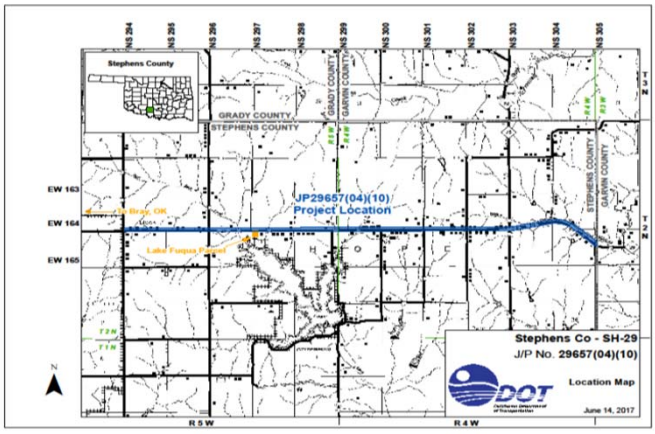


Welcome to the Open House for SH-29 in Stephens County between Bray and the Garvin County Line.

Purpose of This Open House

……is to Inform the Public of the Proposed Improvement to SH-29 Located East of Bray and Extending East to the Stephens/Garvin County Line in Stephens County.



The Purpose of this Open House is to Inform the Public of the Proposed Improvements to SH-29. The Project Begins near the NS-294 Section Line (Commonly called Morrison Road) and extends East approximately 11 - ½ miles to near the Stephens / Garvin County Line.

Purpose of the Project

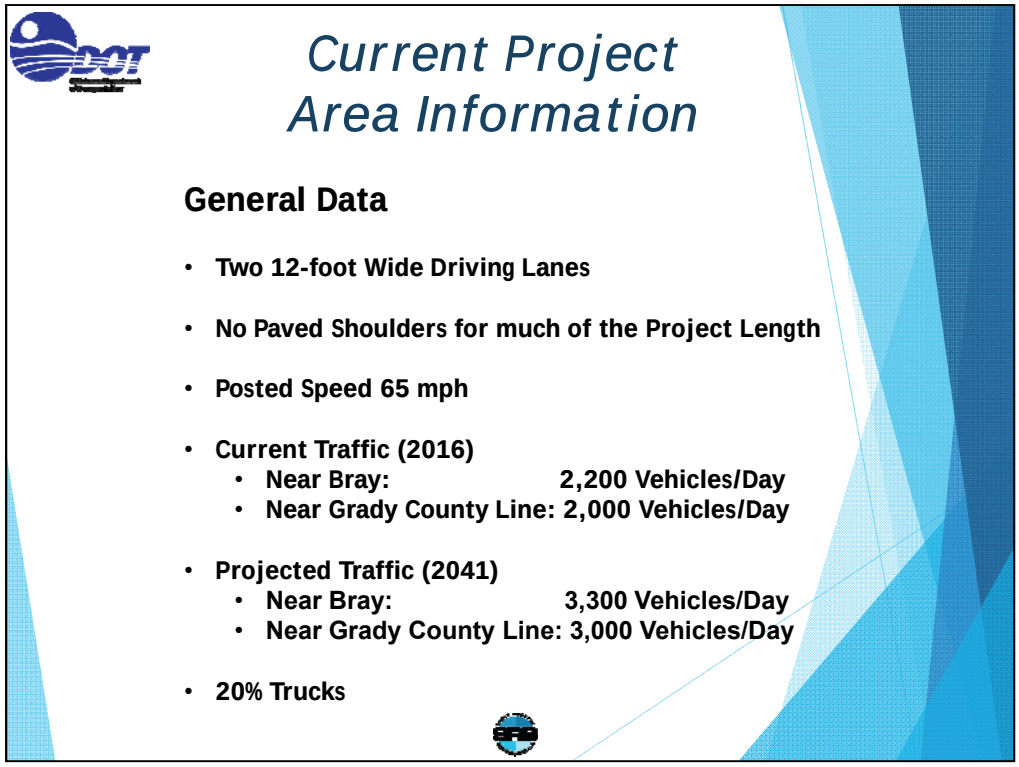
……to improve the Safety and Sight Distance on the roadway while considering cost effectiveness with the least amount of social and environmental impact.

The purpose of the Project is to improve the Safety and Site Distance along the Highway. As evident in the photo, this stretch of SH-29 is a School Bus Route and at many locations the hills are too steep for a driver to see a stopped school bus ahead.

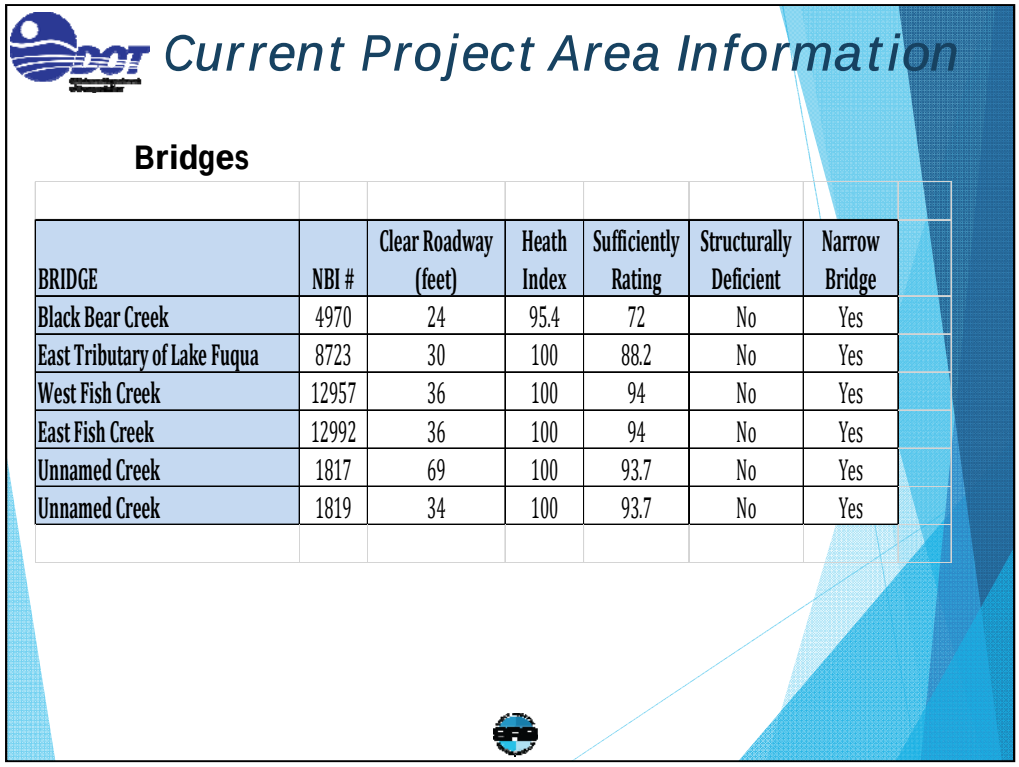
Purpose of the Project

……continuation of planned improvements along this roadway.

This project is a continuation of several planned improvements along this highway.



This portion of SH-29 has two 12-foot wide driving lanes and has no paved shoulders for much of its length. The posted speed limit is 65 mph. There are over 2000 vehicles that travel this stretch of the highway daily, with about 20% of these vehicles being trucks.



There are 6 bridges within the project extents. These bridges are over Black Bear Creek, a Tributary of Lake Fuqua, East and West Fish Creeks, and two unnamed tributaries.

Current Project Area Information

Black Bear Creek

East Fish Creek

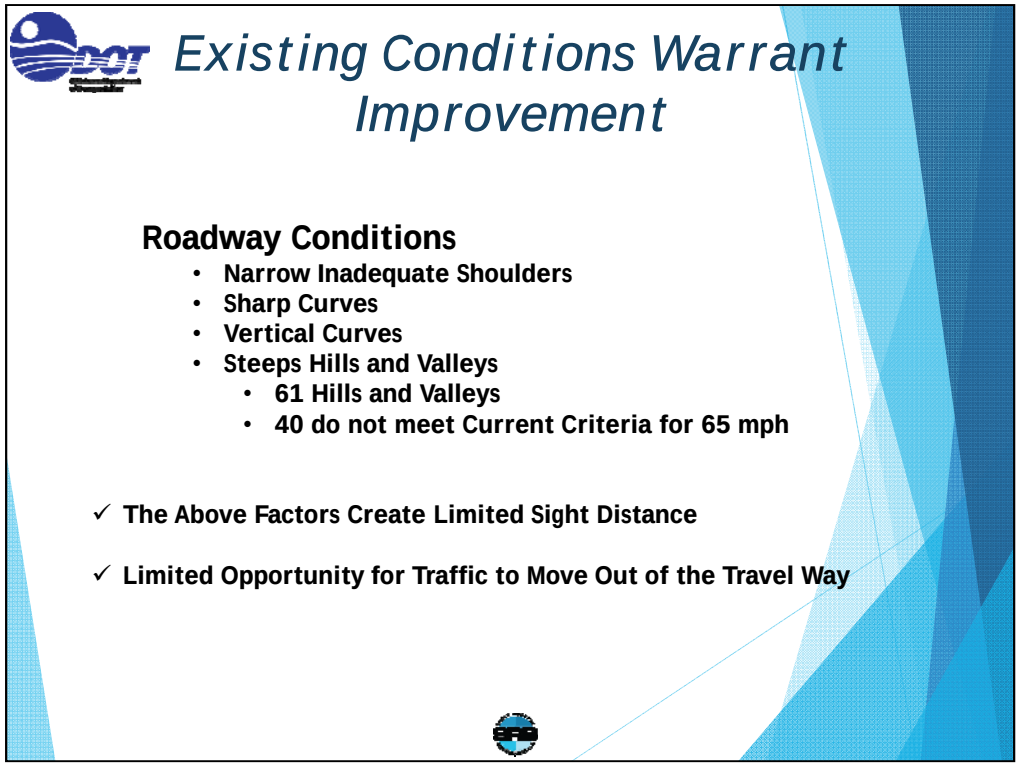
West Fish Creek

Although these bridges are in relatively good condition, they are all too narrow.

Current Project Area Information

Black Bear Creek Bridge

This bridge at Black Bear Creek has no shoulders and is only 24-foot wide. Meeting a truck when travelling over this bridge presents a dangerous proposition for many drivers. Providing a safer width to these bridges is a part of this project.



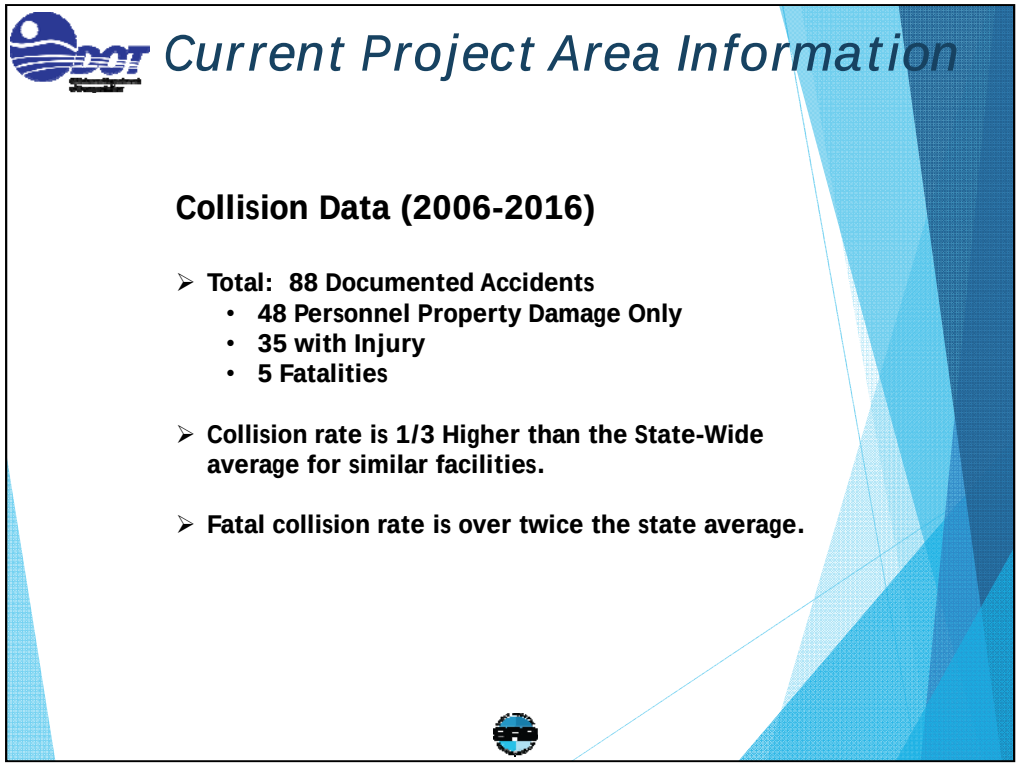
Not only are the bridges too narrow, but the roadway is also, as this stretch of SH-29 has inadequate Paved Shoulders. Also, there are a many sharp hills and valleys. Of the 61 Hills and Valleys along this segment, 40 of them do not meet the current criteria for 65 mph. All of these factors, create Limited Sight Distance for drivers and limits their opportunity to move out of the travel way.

Current Project Area Information

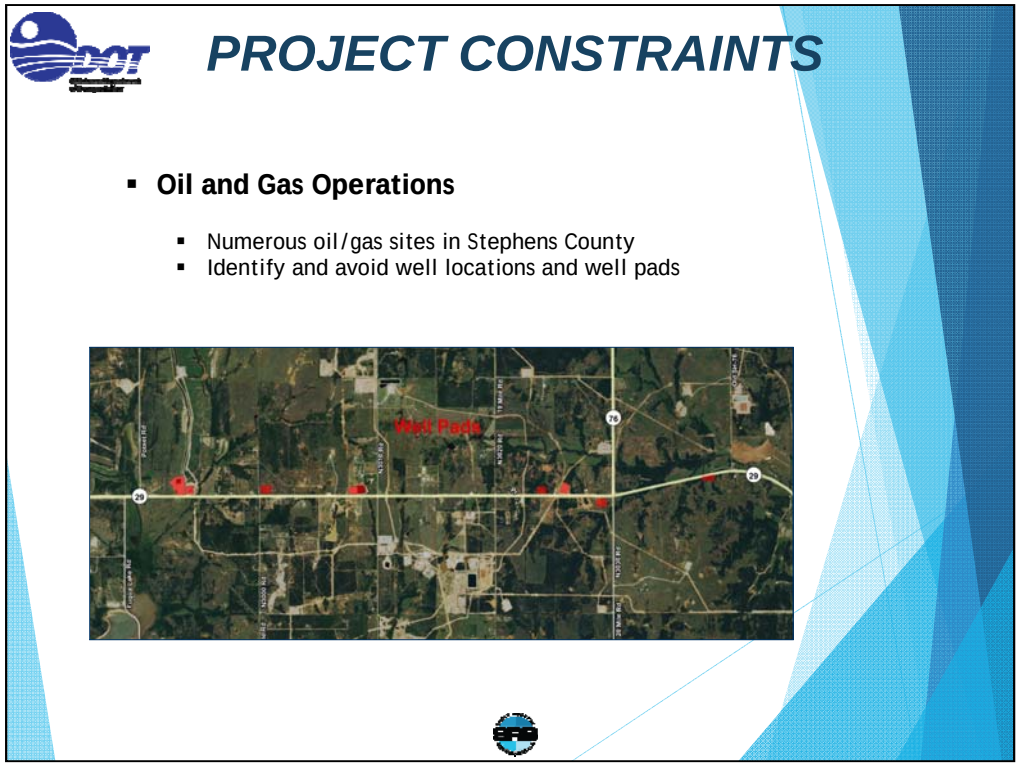
Intersection with SH-76 North / NS - 303 (20 Mile Road)

- **Safety concerns for turning movements**
  - **especially truck traffic**

Many collisions have occurred at the intersection with SH-76 that extends to the North and 20 Mile Road that extends to the South. It is very difficult for a truck to slow down for this intersection when travelling East, down the hill. When a truck turns onto SH-29 and travels West, up the hill, it takes a long distance to get up to speed. The safety concerns associated with this intersection will be addressed with this project.



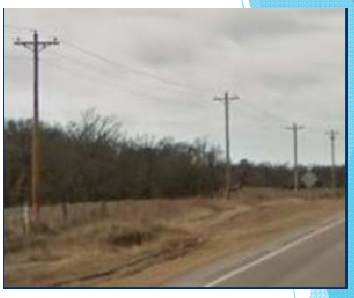
There have been 88 collisions recorded from 2006 to 2016. During this time period, the collision rate is 1/3 higher than the State-Wide average for similar facilities. More alarming is that fatalities associated with these collisions are over twice the State-Wide average. Most of these collisions can be attributed to the narrow travel way, high traffic volumes with a large percentage of trucks all travelling at high speeds, and sharp hills and valleys that do not adequately allow the driver to see what is on the road ahead.



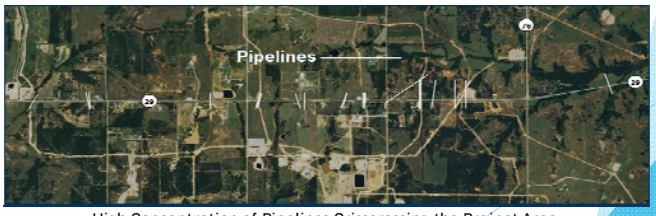
In order to make improvements to this highway corridor, there are many constraints to consider when making project decisions. Along this highway, Oil and Gas Operations have left drilling pads and well heads along the side of the highway. These Oil and Gas sites have to be identified and avoided if possible.

PROJECT CONSTRAINTS

- **Residential and Commercial Properties**
  - Identify, minimize and avoid
- **Numerous Utilities**
  - Along Both Sides of SH-29
  - Crossing SH-29
  - Energy Pipelines
  - Telephone and Fiber Optics
  - Natural Gas Lines
  - Overhead Electric
  - Rural Water Lines
  - Cell Tower



Overhead Electric and Communication Lines



High Concentration of Pipelines Crisscrossing the Project Area

There are many Residential and Commercial Properties on both sides of the highway. These should also be identified and avoided whenever possible. If avoidance is not possible, the impacts to these properties should be minimized.

Another type of constraint are the Utilities that are in the area. Running parallel, along both sides of SH-29, there are numerous Utilities. Utilities like Overhead Electric and Communication Lines are visible and easily identifiable. However, there are multiple utilities that are buried – like energy pipe lines, natural gas lines, rural water lines and fiber optics. Although relocating conflicting utilities would like to be avoided, since they are located along both sides of the highway the best case scenario is to minimize their relocation. There is also a cell tower on the north side that should be avoided.

PROJECT CONSTRAINTS

- **Other Interests**
  - Doyle Volunteer Fire Department
  - Pearl Assembly of God Church
  - Doyle Community Church
  - The United Foster Plant Injection Well Site

Pearl Assembly of God Church

Doyle Volunteer Fire Department

The United Foster Plant Injection Well Site

There are other points of interest that should be avoided, if possible. For instance, there are two churches and the Doyle Volunteer Fire Department located on the North Side of SH-29 and the United Foster Plant Injection Well Site is located on the South.

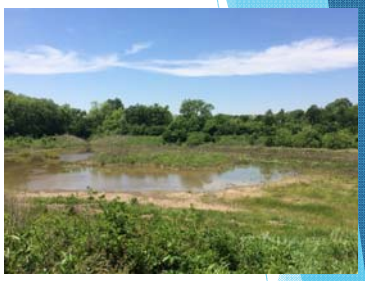
PROJECT CONSTRAINTS

- Lake Fuqua
  - Protected Section 4(f) Resource
  - FHWA may not approve an action that uses public park and recreation land, or historic properties, when there is a *feasible* and *prudent* alternative.
  - To reject an avoidance alternative, one must demonstrate that it can't be constructed as a matter of sound engineering practice (not feasible) and that it does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property (not prudent).

Another project constraint is the Lake Fuqua Property since it is a protected Section 4(f) Resource. The Federal Highway Administration may not approve the use of highway funds for this project, if property associated with public parks and recreational areas is adversely impacted – unless there is not another feasible and prudent alternative.

PROJECT CONSTRAINTS

- **Potentially Jurisdictional Wetlands**
  - Identified numerous wetlands, streams and drainages that are under the jurisdiction of the U.S. Army Corps of Engineers
    - require permitting
    - possible mitigation



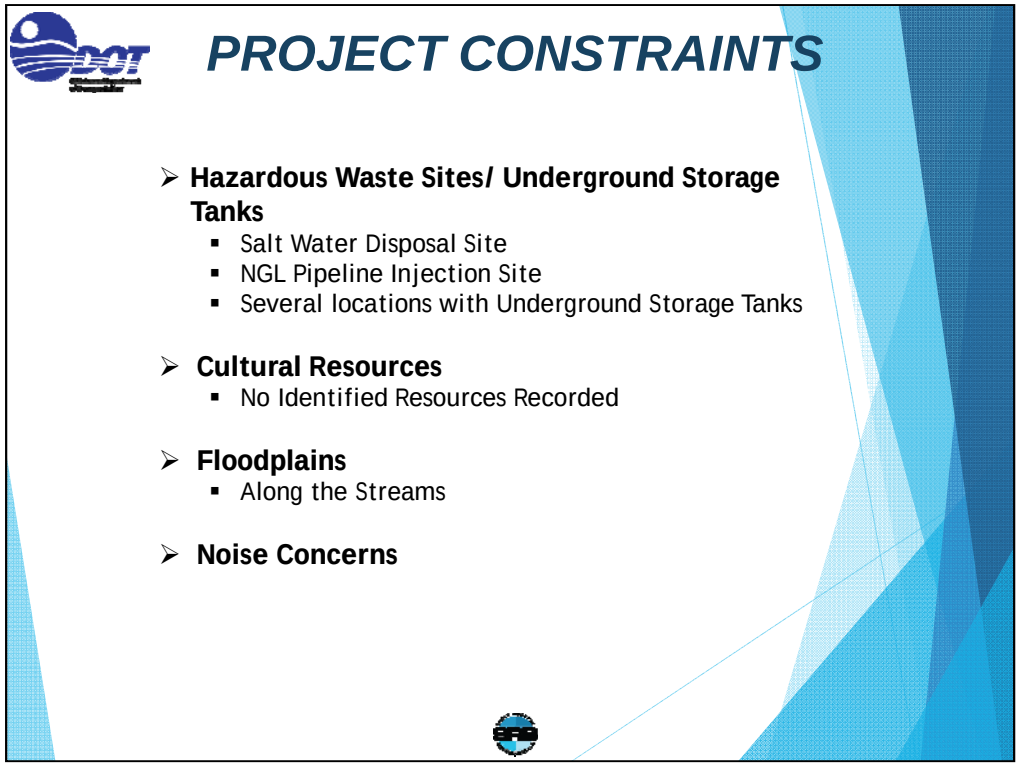
- **Pond, Dam and NRCS Structure**
  - Identified 1.45 acre pond with earthen dam (north)
  - Wildcat Creek Watershed (north)
    - Includes NRCS structure

There are Potentially Jurisdictional Wetlands along portions of the highway. Also, there are numerous streams and drainages that are under the jurisdiction of the US Army Corp of Engineers. Disturbance of these assets would require special permitting a would likely involve mitigation. So, avoidance and minimization of impacts is most prudent. A 1.45 acre pond with an earthen dam has been identified on the north side of the highway. Also on the north side of SH-29 and located just to the east of the SH-76 Intersection is the Wildcat Creek Watershed that parallels the highway.

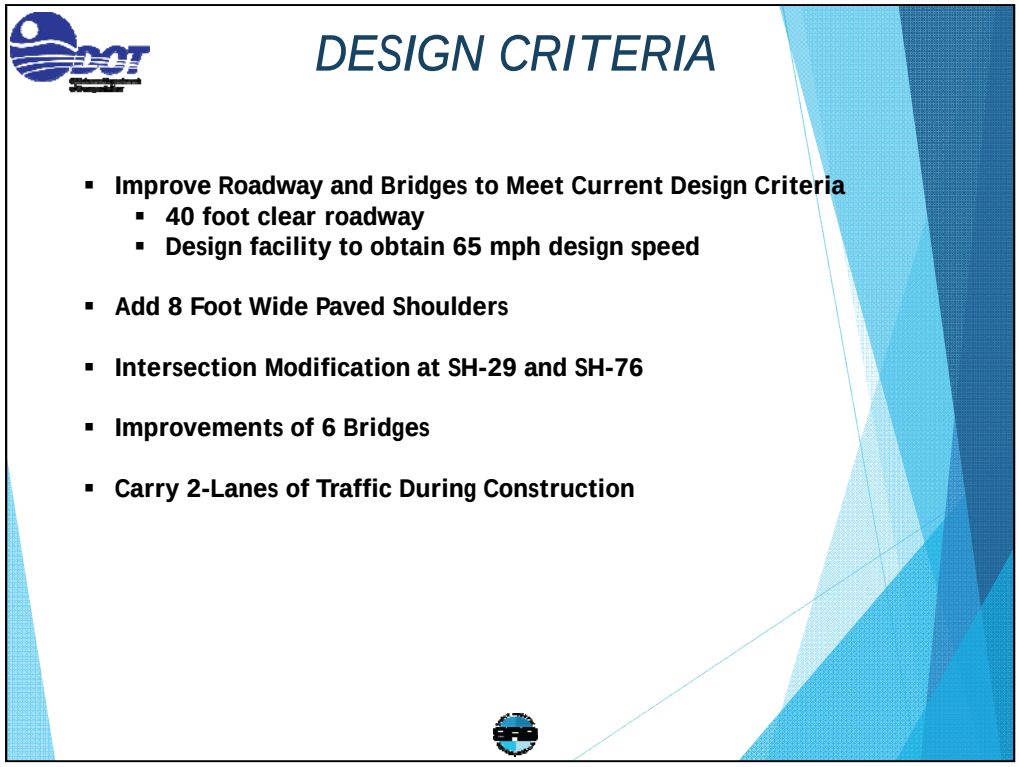
PROJECT CONSTRAINTS

- **Threatened & Endangered Species for Stephens County**
  - Least Tern
  - Piping Plover
  - Red Knot
  - Whooping Crane

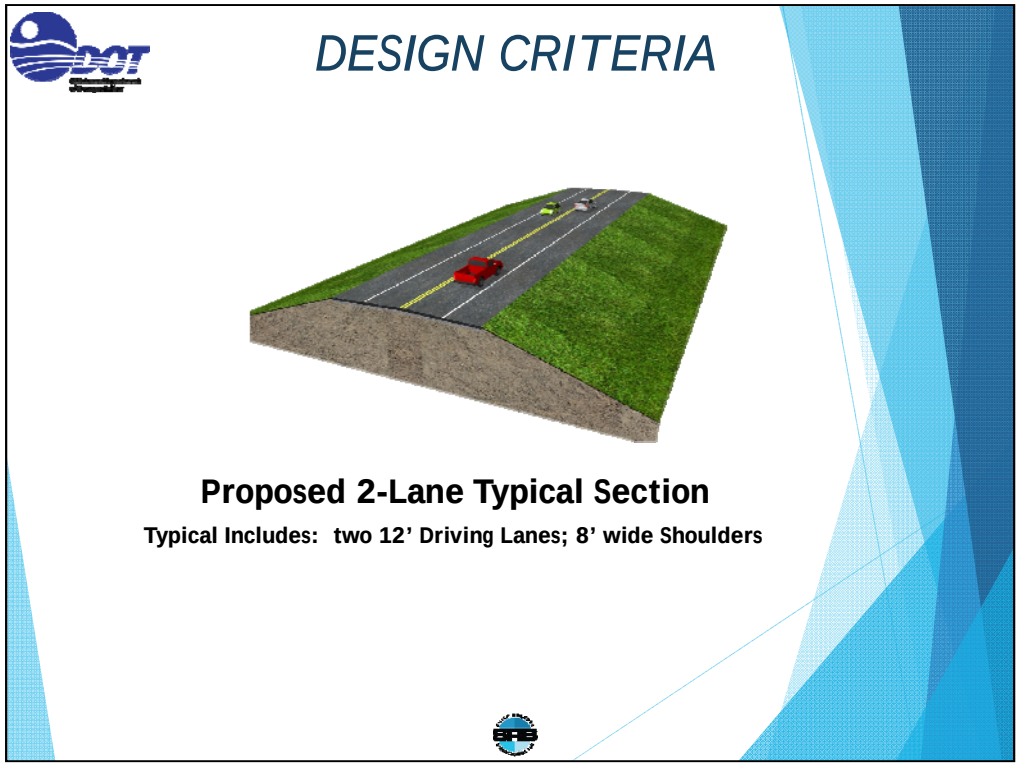
There are several Threatened and Endangered Species listed for Stephens County. The Least Tern, Piping Plover, Red Knot and the Whooping Crane top the list.



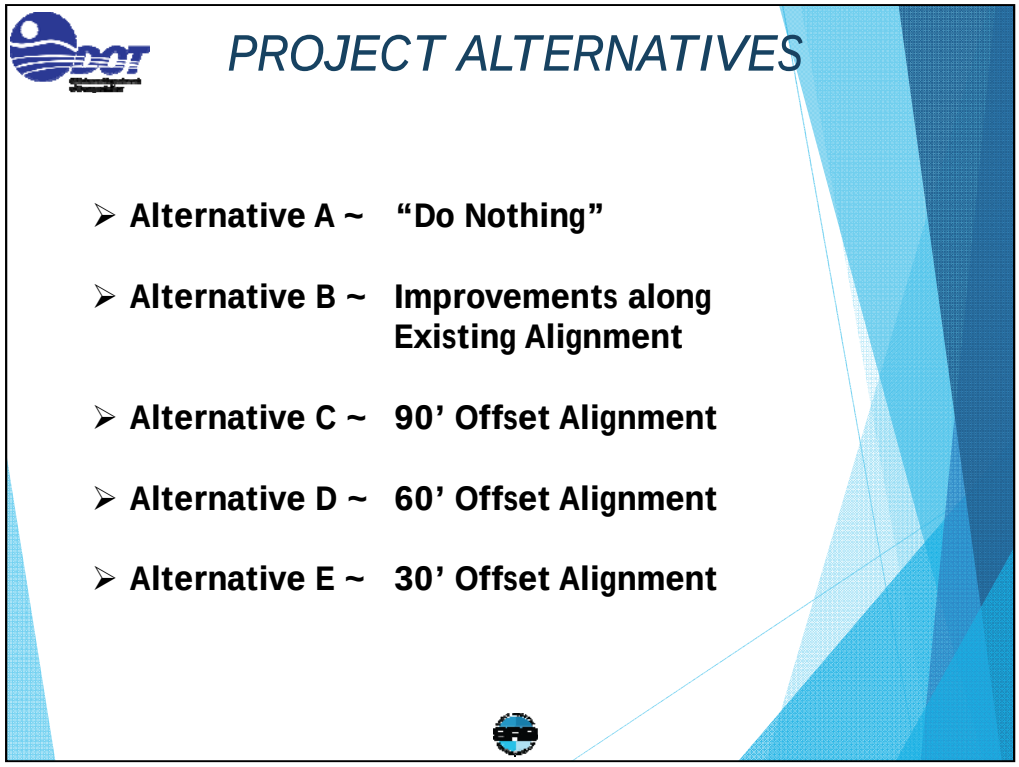
Other items to be avoided, if possible, are Salt Water Disposal and NGL Pipeline Injection Sites. There have been a few potential sites with Underground Storage Tanks that have been identified. Although there have been no identified Cultural Resources recorded for this area, this is an important factor to consider. As mentioned before, disturbance to flood plains need to be considered, but another area of consideration is traffic induced noise.



Proposed improvements to the Roadway and Bridges are to meet Current Design Criteria; resulting in a 40-foot wide pavement consisting of 12-foot lanes and 8-foot shoulders. The curves, hills and valleys associated with the project will be designed for a vehicular speed of 65 mph. The slopes along the side of the highway will be flattened and modifications at the SH-29 and SH-76 Intersection will be made as additional safety improvements. During Construction, 1 Lane of Traffic in Each Direction will remain open.

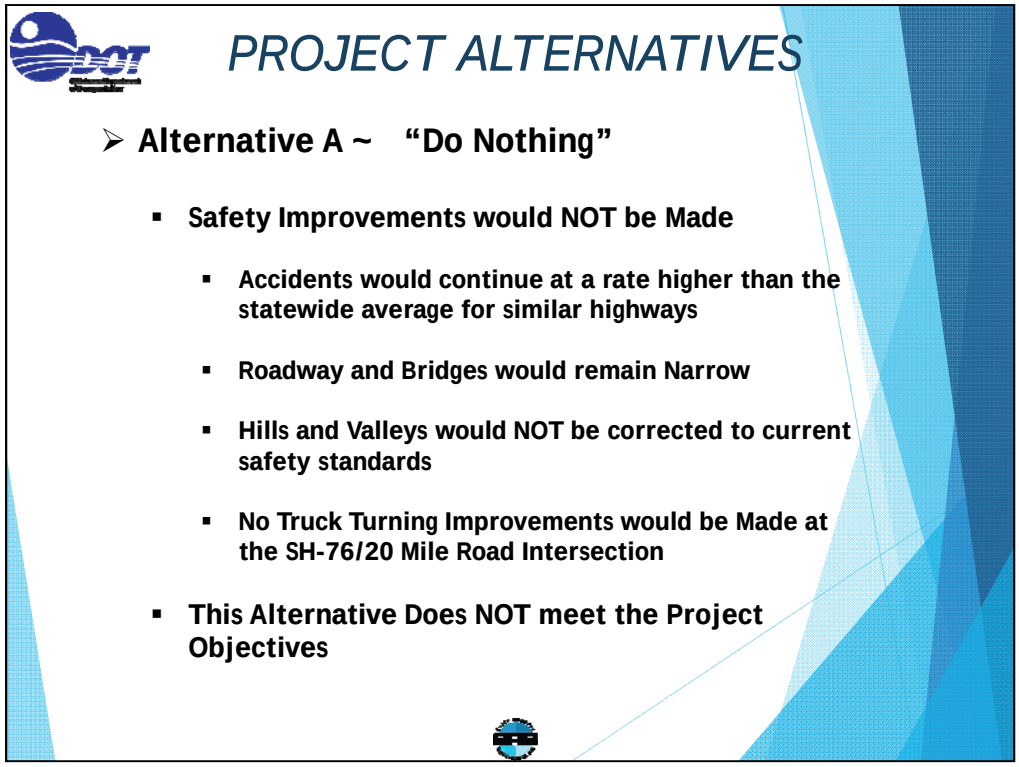


This pictorial shows how the new facility will look when construction is complete.



To best accomplish the project purpose of improving Safety and Sight Distance on the Roadway while considering cost effectiveness with the least amount of social and environmental impact, several alternatives were studied.

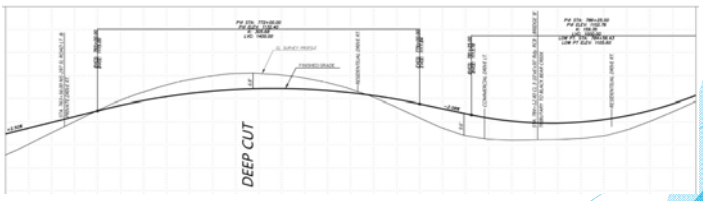
- **Alternate A is to simply, do nothing.**
- **Alternate B is to make the improvements while staying on the existing alignment.**
- **Alternates C, D and E are to construct the new roadway off to the side of the existing highway. Three different offset distances were studied – a 90-foot offset, a 60-foot offset and a 30' offset.**



Alternative A (or the "Do Nothing" Alternative) simply means that no improvements would be made at all. Accidents would continue to occur at rates higher than the statewide average for similar highway facilities. The Roadway and Bridges would remain narrow. Hills and Valleys would not be corrected to meet current design criteria and the SH-76 Intersection would not be improved. In a nutshell, this alternative does not meet the very purpose of the project.

PROJECT ALTERNATIVES

- **Alternative B ~ Improvements along Existing Alignment**
  - **To bring the valleys and hills up to current criteria:**
    - **Valleys would be raised**
    - **Hills would be lowered**
    - **This would require a temporary detour for over 85% of the project length in order to allow traffic during construction.**

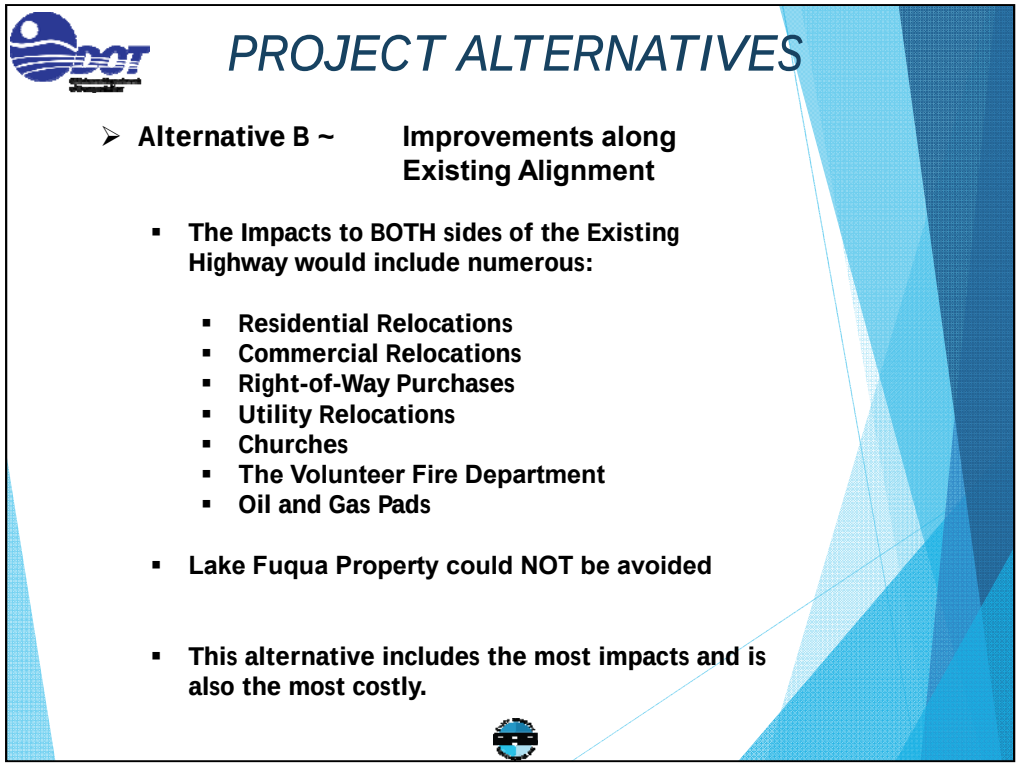


Alternate B is to make the safety improvements while constructing along the existing alignment. To bring the valleys and hills up to current safety standards, the valleys would be raised and the hills would be lowered. Due to drastic elevation differences between the existing roadway surface and improved roadway surface, a temporary detour along most of the project length would be required to keep two lanes of traffic open during construction.

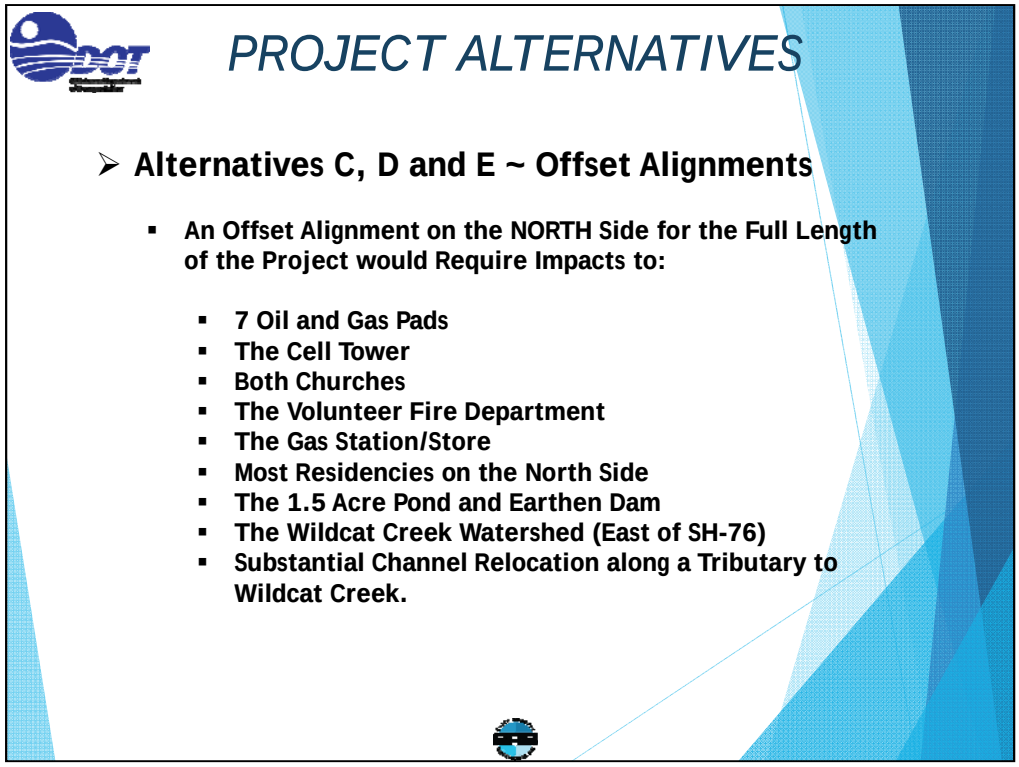
PROJECT ALTERNATIVES

- **Alternative B ~ Improvements along Existing Alignment**
  - **To add shoulders and flatten the side slopes would require major impacts to BOTH sides of the Existing Highway.**

As seen in this Arial Photograph, in order to correct the Hills and Valleys, to add shoulders and flatten the side slopes for this alternative, would require major impacts to BOTH sides of the existing highway.

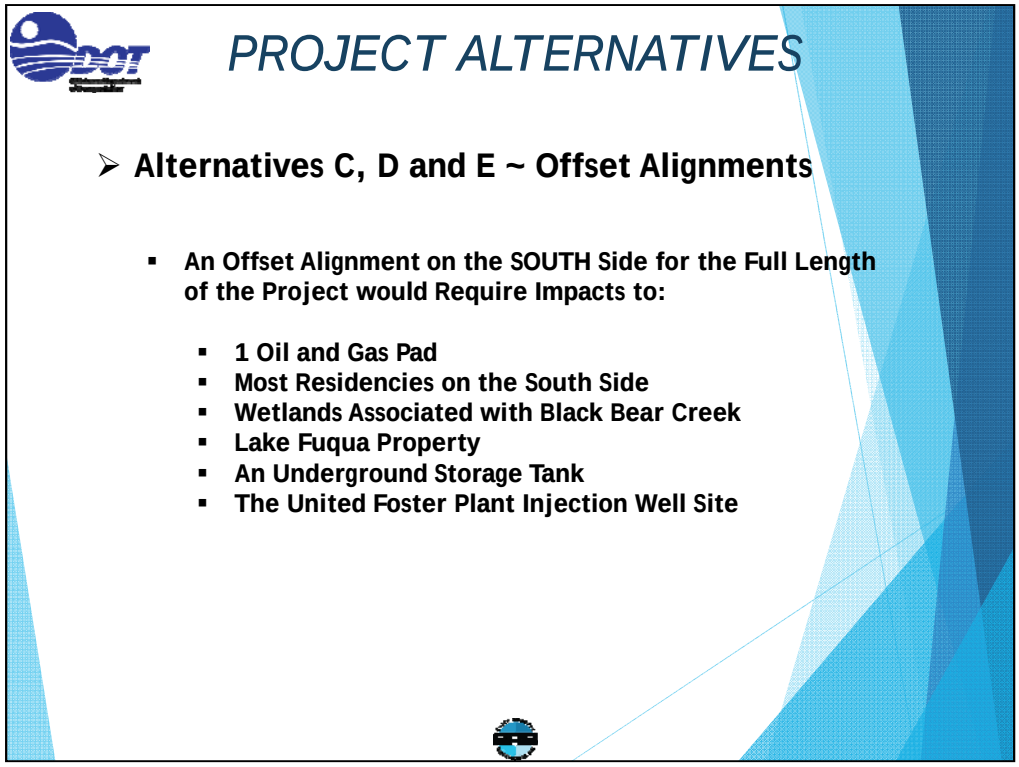


Alternative B would require numerous Residential and Commercial Relocations, Right-of-Way Purchases and Relocations of Conflicting Utilities on Both Sides of the Existing Highway. There would also be impacts to the churches, the fire station and multiple Oil and Gas Sites. By staying on the existing alignment, the Lake Fuqua Property could not be avoided in a feasible manner. This alternative includes the most impacts and is also the most costly of all the alternatives studied.

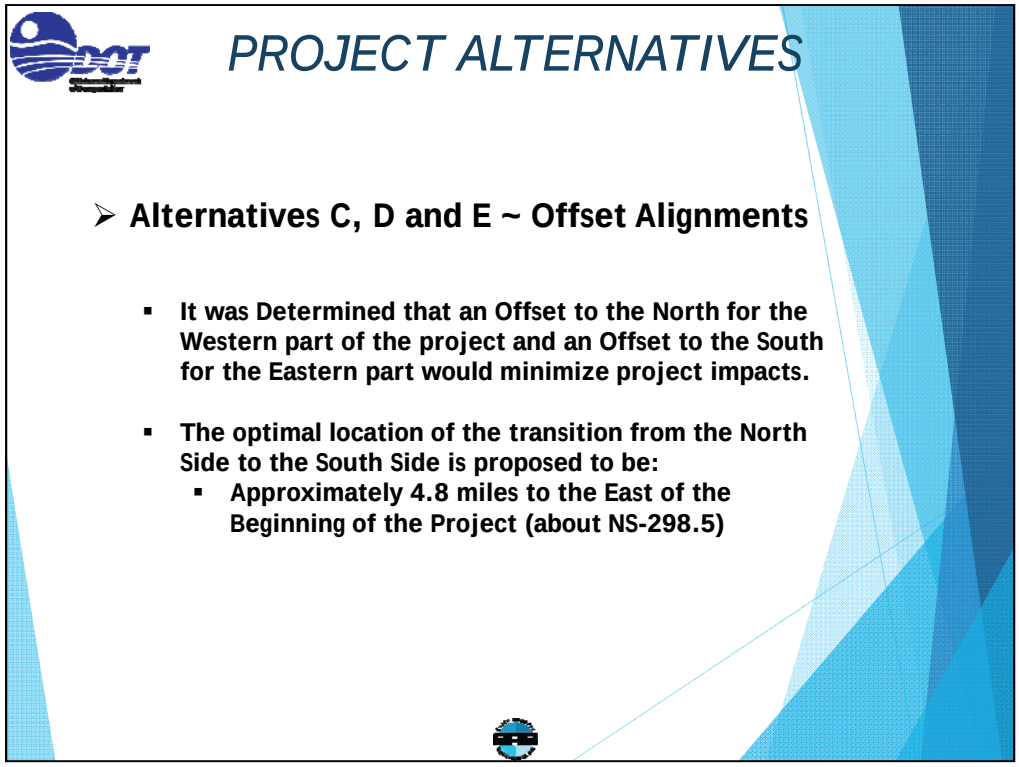


Three different alternatives involving constructing a new facility on an alignment offset to the side of the existing highway.

If an alignment was offset to the north for the full length of the project, it would require impacts to 7 Oil and Gas Sites, the Cell Tower, Both Churches, the Fire Station, a Gas Station, Most Residential Buildings on the North Side, The 1.5 Acre Pond and Earthen Dam, The Wildcat Creek Water Shed and a substantial relocation of a Tributary to Wild Cat Creek.



If an alignment offset to the South for the full length of the project would require impacts to 1 Oil and Gas Site, Most Residential Buildings on the South Side, Wetlands associated with Black Bear Creek, the Lake Fuqua Property, an Underground Storage Tank and the United Foster Plant Injection Well Site.



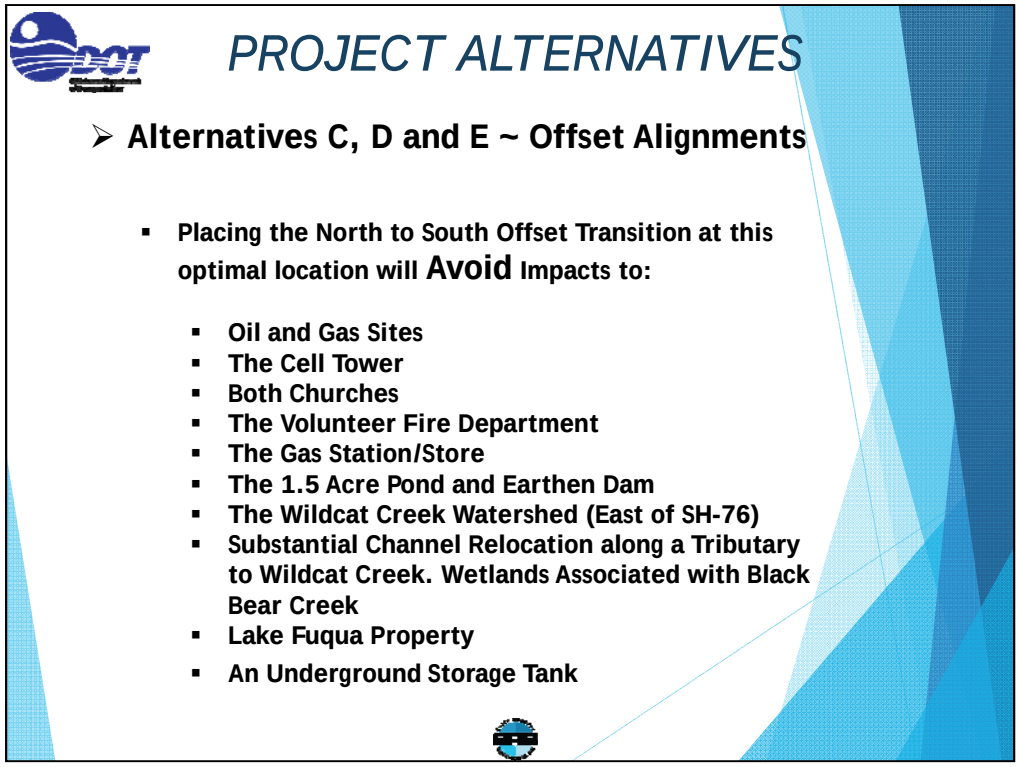
In order to minimize the impacts of an offset alignment, It was evaluated and determined that an Offset on the North Side for the Western part of the Project and an Offset to the South for the Eastern part would minimize project impacts. The Optimal Location of the Transition from the North Side to the South Side is proposed to be approximately 4.8 miles East from the beginning of the project.

PROJECT ALTERNATIVES

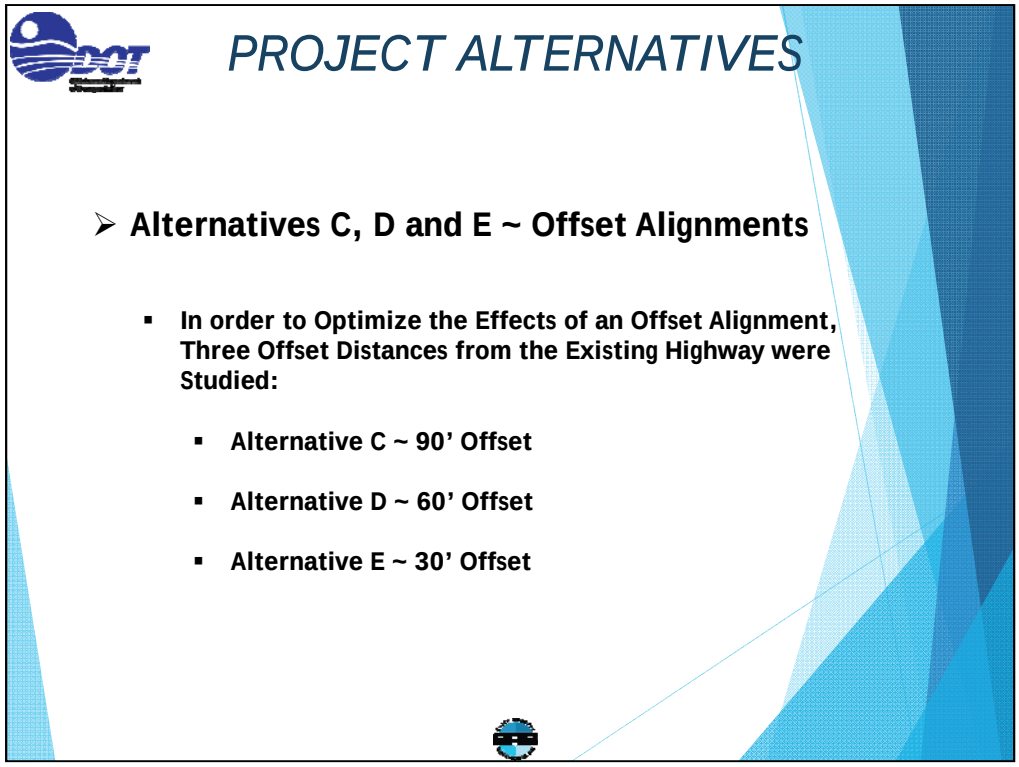
- **Alternatives C, D and E ~ Offset Alignments**

Optimal Location of the Transition from the North Offset to the South Offset

In this Arial Photograph, the optimal location of the North to South Transition is shown near the Quarter Section Line between NS-298 and NS-299



By Placing the North to South Offset Transition at the Optimal Location, most of the impacts associated with an offset all along one side will be avoided.



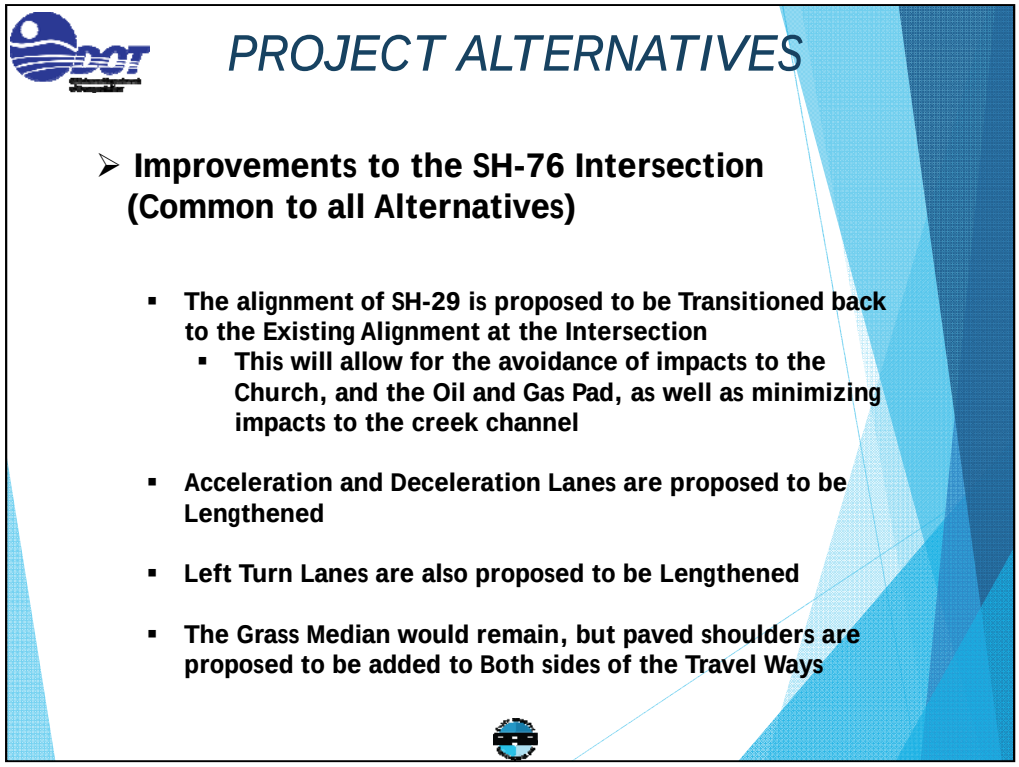
In order to Optimize the Effects of an Offset Alignment, three Offset Distances from the Existing Highway were Studied.

Alternative C ~ a 90' Offset

Alternative D ~ a 60' Offset

Alternative E ~ a 30' Offset

All of these alternatives shifted the offset from the North Side to the South Side near the Optimal Location.



Improvements to the SH-29 and SH-76 Intersection are common amongst all the alternatives. Even with the Offset Alignments associated with Alternatives C, D & E, it is proposed to Transition SH-29 back to its present alignment near the Intersection. This will avoid impacts to the Church and the Oil and Gas Site, as well as, minimize the impacts to the Creek Channel that are all in close proximity with the intersection.

The Acceleration and Deceleration Lanes will be widened and extended in length. To the west, these auxiliary lanes will extend to the top of the hill to provide Trucks enough lane length to accelerate to highway speeds. The Left Turn Lanes will also be lengthened for safer operations.

The existing Grass Median will remain, but paved shoulders are to be added to both sides of the travel way.

PROJECT ALTERNATIVES

- **Improvements to the SH-76 Intersection (Common to all Alternatives)**

Proposed Typical Section

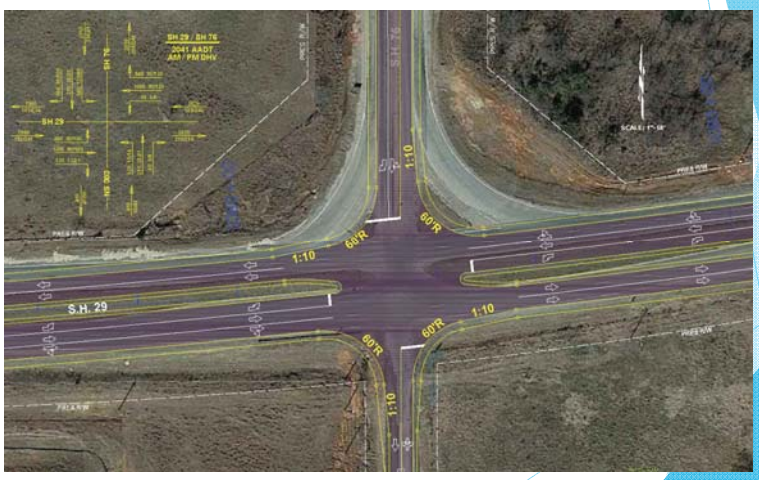
Each Direction of Travel Includes:

- **One 12' Driving Lane**
- **One 12' Acceleration / Deceleration Lane**
- **4' wide Inside Shoulders**
- **8' wide Outside Shoulders**
- **Left Turn Lanes added in the median at Intersection**

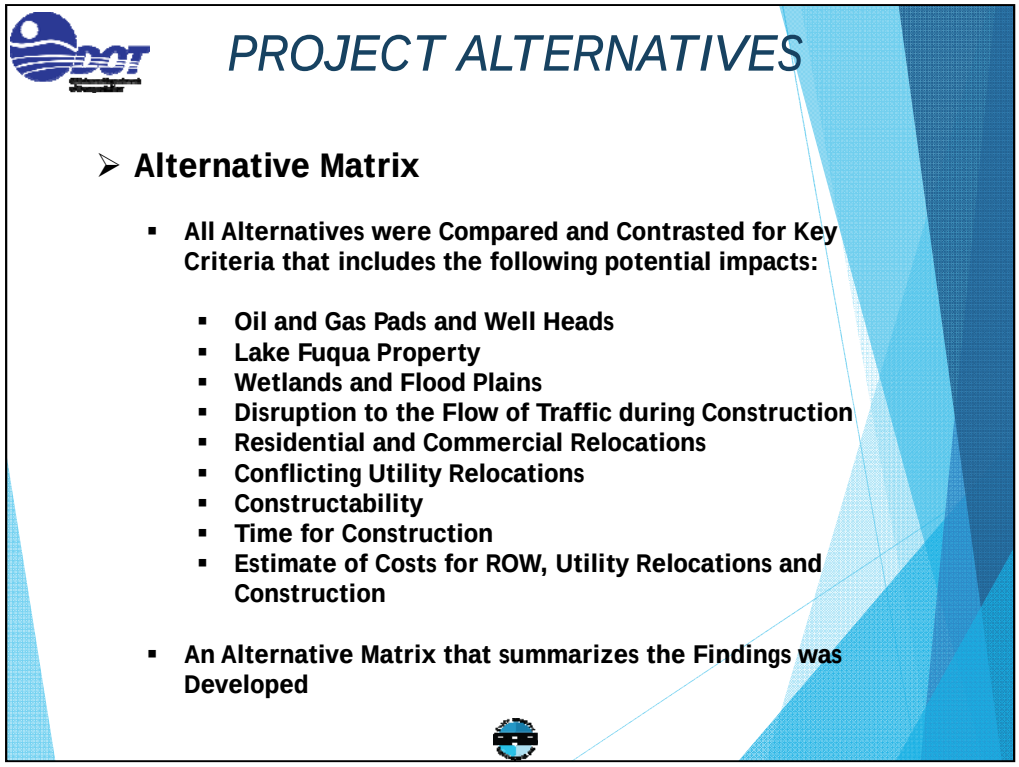
This graphic shows the proposed typical section near the SH-76 Intersection. The added outside lanes serve as the acceleration / deceleration lanes, leading up to and departing from the intersection. Left turn lanes will be added in the median for traffic movements from SH-29 to both the Northbound SH-76 and the Southbound NS-303 Section Line Road.

PROJECT ALTERNATIVES

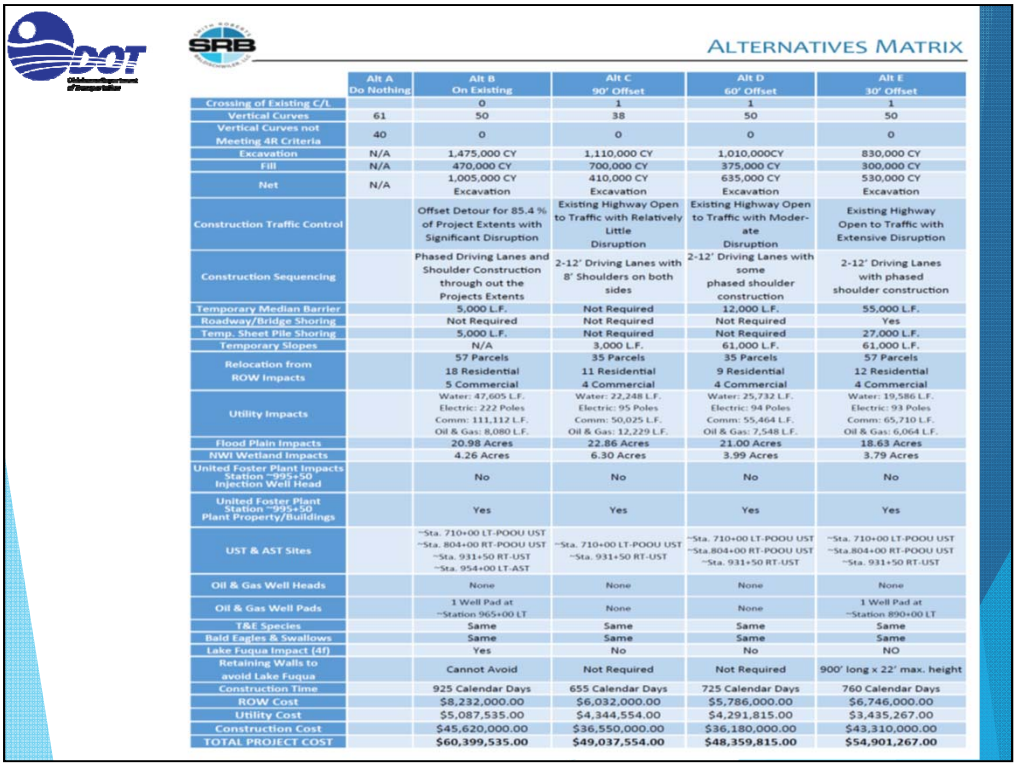
- **Improvements to the SH-76 Intersection (Common to all Alternatives)**



This pictorial shows how the new facility will look when construction is complete.



All alternatives were compared and contrasted with respect to several Key Criteria. Most of the Key Points have been discussed previously and are listed here for your convenience. Some additional evaluation items include how constructible an alternative is, as well as, an estimate of construction time and the approximate costs associated with the Acquisition of Required Additional Right-of-Way, the Relocation of Conflicting Utilities and Construction.



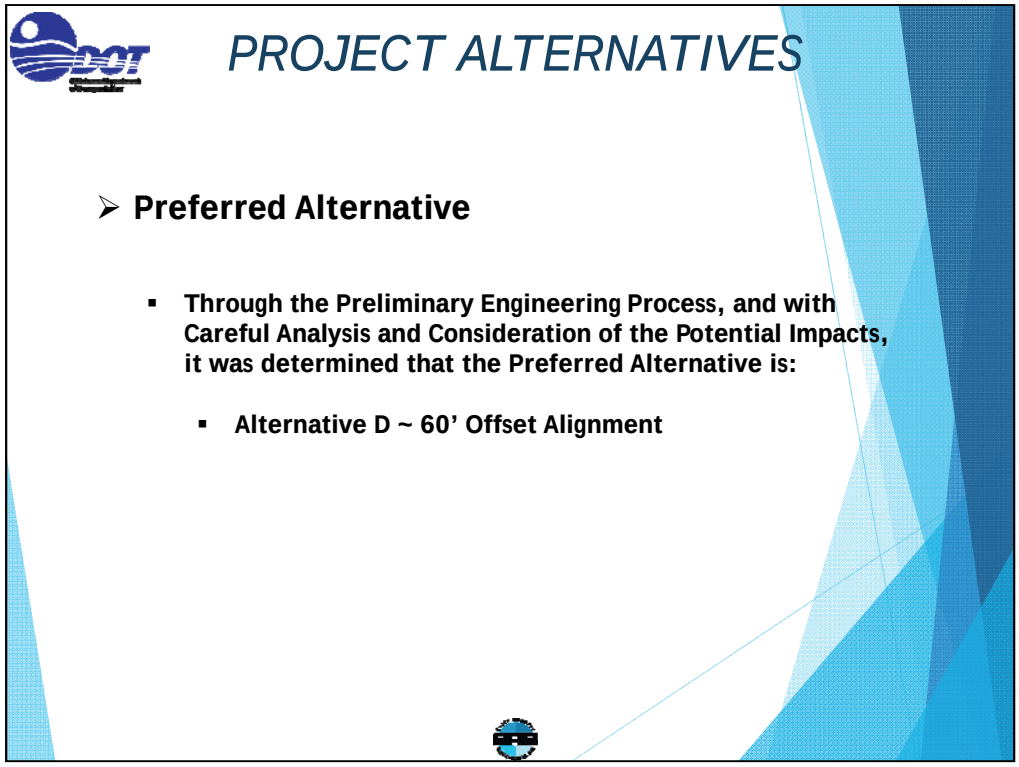
ALTERNATIVES MATRIX

	Alt A Do Nothing	Alt B On Existing	Alt C 90' Offset	Alt D 60' Offset	Alt E 30' Offset
Crossing of Existing C/L		0	1	1	1
Vertical Curves	61	50	38	50	50
Vertical Curves not Meeting 4R Criteria	40	0	0	0	0
Excavation	N/A	1,475,000 CY	1,110,000 CY	1,010,000CY	830,000 CY
Fill	N/A	470,000 CY	700,000 CY	375,000 CY	300,000 CY
Net	N/A	1,005,000 CY Excavation	410,000 CY Excavation	635,000 CY Excavation	530,000 CY Excavation
Construction Traffic Control		Offset Detour for 85.4 % of Project Extents with Significant Disruption	Existing Highway Open to Traffic with Relatively Little Disruption	Existing Highway Open to Traffic with Moderate Disruption	Existing Highway Open to Traffic with Extensive Disruption
Construction Sequencing		Phased Driving Lanes and Shoulder Construction through out the Projects Extents	2-12' Driving Lanes with 8' Shoulders on both sides	2-12' Driving Lanes with some phased shoulder construction	2-12' Driving Lanes with phased shoulder construction
Temporary Median Barrier		5,000 L.F.	Not Required	12,000 L.F.	55,000 L.F.
Roadway/Bridge Shoring		Not Required	Not Required	Not Required	Yes
Temp. Sheet Pile Shoring		5,000 L.F.	Not Required	Not Required	27,000 L.F.
Temporary Slopes		N/A	3,000 L.F.	61,000 L.F.	61,000 L.F.
Relocation from ROW Impacts		57 Parcels 18 Residential 5 Commercial	35 Parcels 11 Residential 4 Commercial	35 Parcels 9 Residential 4 Commercial	57 Parcels 12 Residential 4 Commercial
Utility Impacts		Water: 47,605 L.F. Electric: 222 Poles Comm: 111,112 L.F. Oil & Gas: 8,080 L.F.	Water: 22,248 L.F. Electric: 95 Poles Comm: 50,025 L.F. Oil & Gas: 12,229 L.F.	Water: 25,732 L.F. Electric: 94 Poles Comm: 55,464 L.F. Oil & Gas: 7,548 L.F.	Water: 19,586 L.F. Electric: 93 Poles Comm: 65,710 L.F. Oil & Gas: 6,064 L.F.
Flood Plain Impacts		20.98 Acres	22.86 Acres	21.00 Acres	18.63 Acres
NWI Wetland Impacts		4.26 Acres	6.30 Acres	3.99 Acres	3.79 Acres
United Foster Plant Impacts Station ~995+50 Injection Well Head		No	No	No	No
United Foster Plant Station ~995+50 Plant Property/Buildings		Yes	Yes	Yes	Yes
UST & AST Sites		~Sta. 710+00 LT-POOU UST ~Sta. 804+00 RT-POOU UST ~Sta. 931+50 RT-UST ~Sta. 954+00 LT-AST	~Sta. 710+00 LT-POOU UST ~Sta. 931+50 RT-UST	~Sta. 710+00 LT-POOU UST ~Sta.804+00 RT-POOU UST ~Sta. 931+50 RT-UST	~Sta. 710+00 LT-POOU UST ~Sta.804+00 RT-POOU UST ~Sta. 931+50 RT-UST
Oil & Gas Well Heads		None	None	None	None
Oil & Gas Well Pads		1 Well Pad at ~Station 965+00 LT	None	None	1 Well Pad at ~Station 890+00 LT
T&E Species		Same	Same	Same	Same
Bald Eagles & Swallows		Same	Same	Same	Same
Lake Fuqua Impact (4f)		Yes	No	No	NO
Retaining Walls to avoid Lake Fuqua		Cannot Avoid	Not Required	Not Required	900' long x 22' max. height
Construction Time		925 Calendar Days	655 Calendar Days	725 Calendar Days	760 Calendar Days
ROW Cost		$8,232,000.00	$6,032,000.00	$5,786,000.00	$6,746,000.00
Utility Cost		$5,087,535.00	$4,344,554.00	$4,291,815.00	$3,435,267.00
Construction Cost		$45,620,000.00	$36,550,000.00	$36,180,000.00	$43,310,000.00
TOTAL PROJECT COST		**$60,399,535.00**	**$49,037,554.00**	**$48,359,815.00**	**$54,901,267.00**

This is the Alternatives Matrix summarizing the Impacts Associated with Each Alternative.

- **In almost every category, Alternatives C, D and E out performed Alternative B with fewer impacts and significantly less cost. This essentially favors any Offset Alternative over reconstructing the highway on its existing alignment.**
- **Although Alternative E (the 30' Offset) would be constructed slightly to the side of the existing highway, it would still impact both sides of the roadway for most of the project length. This increases the number of Residential and Utility Relocations on both sides, is more difficult to construct while keeping traffic open, requires a 900-foot long retaining wall in order to avoid the Lake Fuqua Property, raises the time for construction. Which significantly raises the cost over Alternatives C and D.**
- **When comparing Alternatives C and D, both have some advantages and disadvantages over the other.**
    - **Due to the additional offset distance, Alternative C would be easier to construct with relatively little disruption to the traveling public and has a shorter construction time.**

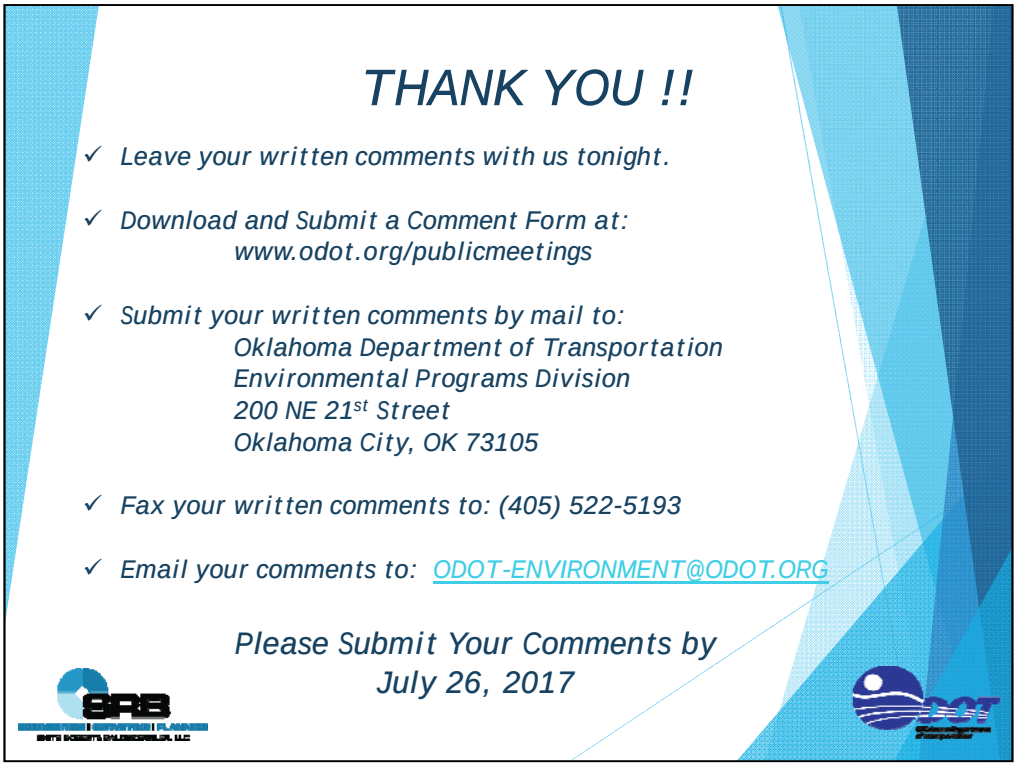
- **On the other hand, because Alternative D has a smaller offset distance there would be slightly fewer impacts to Residential Buildings, the amount of Right-of-Way Purchases, and the amount of Disturbance to Flood Plains and Wetlands. The overall project cost for Alternative D is slightly less than that of Alternative C.**



Through the Preliminary Engineering Process, and with Careful Analysis and Consideration of the Potential Impacts, it was determined that the Preferred Alternative is:

- **Alternative D ~ 60' Offset Alignment**

Following this Open House the project team will review and analyze all the public comments received throughout this process. Next, we will incorporate these comments into the design, as well as, the documentation necessary to meet the National Environmental Policy Act.



Thank you for attending this open house, ODOT staff and project consultants are available to answer any questions you may have. Please take a moment to visit each of the stations and consider leaving your written comments before you leave today. There are several methods for you to provide comments about this project. Please note, all comments are due by July 26, 2017. Thank you for coming this evening.