

WELCOME



OKLAHOMA
Transportation

Virtual Open House

SH-100 in Adair County, OK
April 16th – May 3rd, 2021

Welcome to the Oklahoma Department of Transportation's virtual Open House for the State Highway 100 improvement project located in Adair County.

As part of our efforts to keep the public informed about transportation improvements, we developed this slide presentation. Normally, we would host an in-person Open House, but due to ongoing concerns about COVID-19, we opted to host a virtual Open House to protect public safety.

Please take a moment to review this presentation, and feel free to contact us with questions, concerns, and comments. If you would like to view the project in more detail, please visit the Interactive Map on the virtual Open House webpage.

PROJECT HISTORY

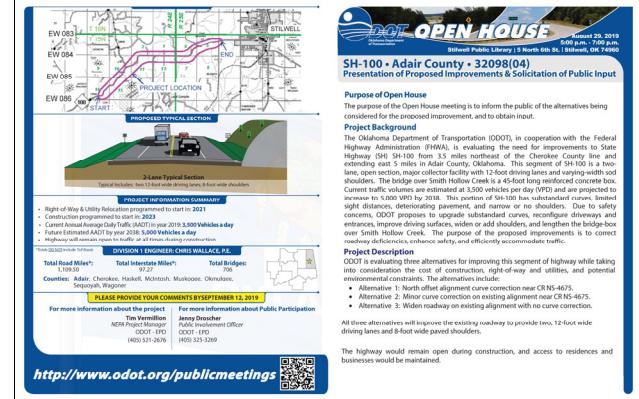
SH-100 ALIGNMENT STUDY

• Background:

- There is an elevated collision rate, including multiple severe crashes.
- SH-100 needs to be upgraded to meet current highway design safety criteria.

• Alignment Study:

- In August 2019, ODOT sponsored an alignment study to evaluate potential highway improvements.
- Initial engineering designs were developed for 3 alignment alternatives.
- Construction costs, right-of-way & utility impacts, and environmental constraints were all included in the evaluation process.
- The alignment study was finalized in January 2020.



SH-100 needs to be upgraded to meet current design criteria. There is an elevated collision rate, including multiple severe crashes.

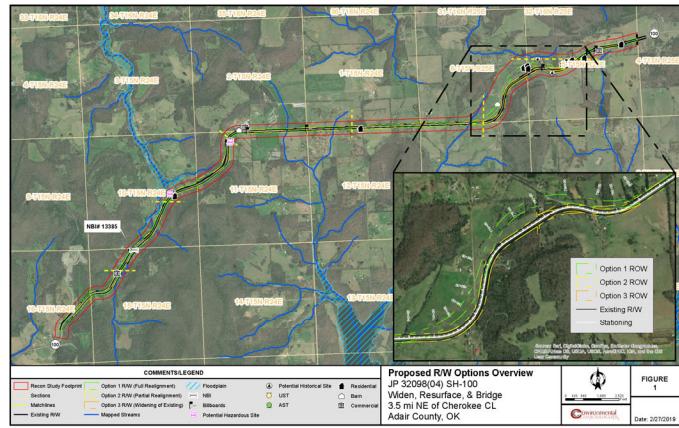
In 2019, ODOT sponsored a study to evaluate possible alignments for the necessary improvements. Initial engineering designs were developed for three alternatives. Factors such as constructability, economic costs, right-of-way and utility impacts, and environmental constraints were all considered. The engineering report was completed in January 2020.

PROJECT HISTORY

SH-100 ALTERNATIVE ALIGNMENTS CONSIDERED

- **The Three Proposed Alternatives Evaluated Included:**

- Alternative 1 involved improving the existing roadway with a north-offset alignment curve correction near County Road (CR) NS-4675.
- Alternative 2 involved improving the existing roadway with a minor curve correction on existing alignment near CR NS-4675.
- Alternative 3 involved widening the existing roadway with no curve corrections.
- Each alternative was proposed to provide two, 12-foot-wide driving lanes and 8-foot-wide paved shoulders with a 65-mph design speed.



Three alternatives were considered.

- Alternative 1 involved improving the existing roadway with a north-offset alignment and curve correction near County Road NS-4675.
- Alternative 2 involved improving the existing roadway with a minor curve correction on the existing alignment near CR NS-4675.
- Alternative 3 involved widening the existing roadway with no curve corrections.
- Each alternative was proposed to provide two 12-foot-wide driving lanes and 8-foot-wide shoulders with a 65-mph design speed.

PROJECT HISTORY

PUBLIC INVOLVEMENT

• Public Open House Meeting:

- An SH-100 Open House was held in Stilwell on August 29, 2019.
- Presentation boards were set up and personnel from ODOT and the engineering design team were available to answer questions and take comments from the public, and a station was set up to allow guests to participate in an online survey through MetroQuest.
- A handout which described details of the project were available to everyone, and an 8-foot roll out map of the project was available for review and markup.
- Attendees were encouraged to write their specific questions or concerns related to the project.
- More information on the 2019 Open House can be found in the archive section of the ODOT Public Meetings webpage:

<https://oklahoma.gov/odot/programs-and-projects/public-meetings-and-hearings/20190829.html>



Highway 100 improvement meeting set for August 29th

By Darrell Neals
The [Oklahoma Department of Transportation](#) will host an open house meeting on the need for improvements to State Highway 100 on Thursday, August 29 from 5 to 7 p.m. at the Stilwell Public Library, located at 5 North Sixth Street in Stilwell. The purpose of the meeting is to inform the public of the alternatives being considered for the proposed improvement, and to obtain input.

[ODOT](#) in cooperation with the [Federal Highway Administration](#) is evaluating the need for

improvements to SH-100 from 3.5 miles northeast of the Cherokee County line and extending east 5 miles in Adair County. This segment of SH-100 is a two-lane, open section, major collector facility with 12-foot wide driving lanes and no shoulders or center lines. The bridge over Smith Hollow Creek is a 45-foot long reinforced concrete box. Current traffic volumes are estimated at 3,500 vehicles per day (VPD) and are projected to increase to 5,000 VPD by 2038. This portion of SH-100 has substandard curves, limited sight distance, deteriorating pavement, and no shoulders. Due to safety concerns, ODOT proposes to upgrade the substandard curves, reconfigure driveways and entrances, improve driving surfaces, add shoulders and widen the bridge over Smith Hollow Creek. The purpose of the proposed improvements is to correct ~~existing~~ deficiencies, enhance safety, and efficiently accommodate traffic.

A public survey will become available for your participation after the open house.



An Open House informational meeting was held at the Stilwell Public Library on August 29, 2019 where the three alternatives were presented. ODOT staff and the engineering design team were present to answer questions and take comments from the public. Attendees were encouraged to submit written comments or participate in an online survey. Several comments were received from affected residents, the general public, and state and federal agencies.

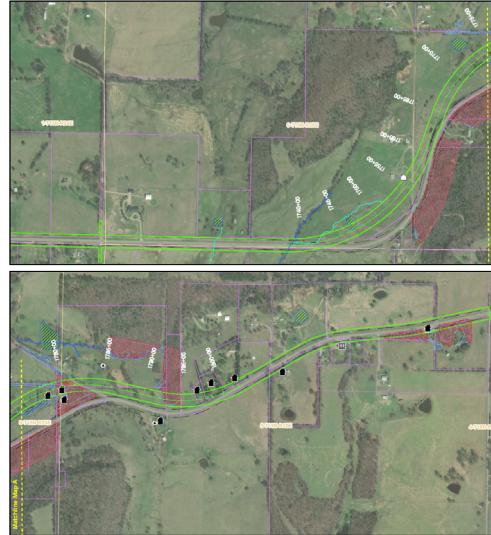
A summary report and the meeting materials presented at the Open House are available by accessing ODOT's public involvement webpage and searching the "archives." Or, copy and paste the link on the slide into your web browser.

PROJECT HISTORY

ALTERNATIVE SELECTION

• Alignment Selection Overview:

- Based on the completed alignment study, public participation, and state and federal agency input, ODOT selected a modified version of Alternative 1 as the preferred alignment.
 - Alternative 1 would correct the sharp curves, poor sight distances, deteriorating pavement, and the lack of shoulders.
 - Alternative 1 is the safest option, with relatively moderate environmental and community impacts, and has the lowest overall cost of construction.
- Alternatives 2 and 3 were rejected because they would not fully address safety concerns.
- The “no-build” option (i.e. leave SH-100 as is), was rejected because of the high collision rate and overall unsafe driving conditions.



Based on the completed alignment study, public participation, and state and federal agency input, ODOT selected a modified version of Alternative 1 as the preferred alignment. The preferred alignment design corrects the sharp curves, poor sight distances, deteriorating pavement, and the lack of shoulders. It is also the safest option, with relatively moderate environmental and community impacts, and has the lowest overall cost of construction.

Alternatives 2 and 3 were rejected because they would not fully address safety concerns.

In addition, the “no build” option, which would leave SH-100 as is, was rejected because unsafe driving conditions would remain.

EXISTING ROADWAY CONDITIONS

- **SH-100 Roadway:**

- Two 12-foot wide paved driving lanes
- Varying width sod shoulders
- Posted 65 mph speed limit
- Traffic volume:
 - 3,650 vehicles per day currently
 - 5,200 vehicles per day by 2040



- **SH-100 Bridge over Smith Hollow Creek:**

- 68-foot long reinforced concrete box (RCB) bridge



This segment of SH-100 is a two-lane, open section highway with 12-foot wide driving lanes with varying width shoulders. It has a posted speed limit of 65 MPH. The current traffic volume is 3,650 vehicles per day (vpd) and is projected to increase to 5,200 vpd by 2040.

There is one bridge within the project extent. It is a 68-foot long Reinforced Concrete Box bridge.

PURPOSE & NEED FOR THE PROJECT

IMPROVE DRIVER SAFETY, MOBILITY & CONNECTIVITY

- **PURPOSE: What Are We Trying to Do?**

- Enhance safety throughout the SH-100 corridor
- Accommodate local and regional travel demands along SH-100 corridor
- Upgrade SH-100 to meet current Federal Highway Administration & ODOT standards

- **NEED: What Are We Trying to Fix?**

- Safety design issues:
 - Lacking or narrow shoulders
 - Sharp curves & steep hills
 - Steep side slopes
 - Poorly aligned intersections
 - Limited sight distances
- Elevated collision history



The important questions associated with every transportation improvement project are:

1. What is ODOT trying to do? and
2. What is ODOT trying to fix?

The safety of this highway segment needs to be improved. SH-100 has substandard curves, steep side slopes, limited sight distances, deteriorating pavement, and narrow or no shoulders. The sharp curves and poorly aligned intersections, drives and entrances, all limit the line-of-sight. The lack of adequate shoulders and steep side slopes creates a potential driving hazard. ODOT needs to address or “fix” these issues in order to accommodate local and regional travel demand, update the roadway to meet federal standards, and more importantly, improve driver safety.

PROPOSED IMPROVEMENTS

- **SH-100 Roadway:**

- Symmetrical widening on existing alignment
- Create roadway with:
 - Two 11-foot-wide paved driving lanes
 - 6-foot wide paved shoulders
- Curve correction
 - Addressing sharp curves between County Road NS-4670 & NS-4690
 - New roadway segment constructed on west & north alignment

- **Bridge over Smith Hollow Creek:**

- Reconstruct guardrail.

TYPICAL CROSS SECTION



2-Lane Typical Roadway Section

Typical includes: two 11-foot-wide driving lanes; 6-foot-wide shoulders



For most of the project length, the highway will be symmetrically widened to create two 11-foot-wide driving lanes with 6-foot wide paved shoulders.

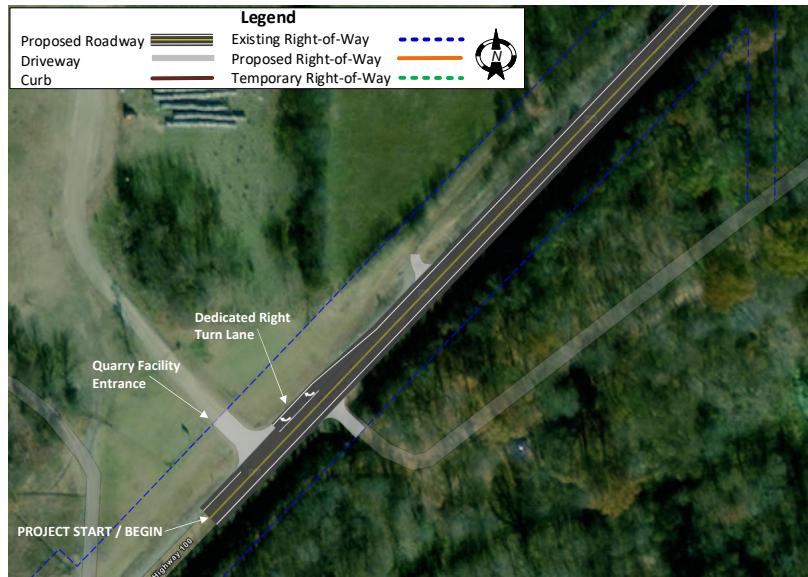
The sharp curves between County Roads NS-4670 and NS-4690 will be corrected by constructing a new segment on an off-set west and north alignment.

The guardrail on the bridge box over Smith Hollow creek will be reconstructed.

PROPOSED IMPROVEMENTS

SPECIFIC PROJECT IMPROVEMENTS

- Begin project ~3 miles north & east of the Cherokee Countyline
- Create two 11-foot-wide driving lanes with 6-foot-wide shoulders
- Construct dedicated right-turn lane into Benton County Stone quarry facility
- Highway improvements extends east ~6 miles towards Stilwell, OK



The following slides present the proposed improvements for important locations along the project length. The colors and lines presented on the slide depict the proposed work, or what the highway would look like once completed.

This slide shows the improvements at the beginning of the project. A dedicated right-turn lane will provide safe access to the stone quarry facility.

Access to all homes and businesses will be maintained during and after construction.

PROPOSED IMPROVEMENTS

SPECIFIC PROJECT IMPROVEMENTS

- The intersection at CR D0834 will be realigned.
- The two existing SH-100 access points/intersections will be removed.
- One perpendicular intersection will be created on new alignment.
- The existing county road pavement will be removed

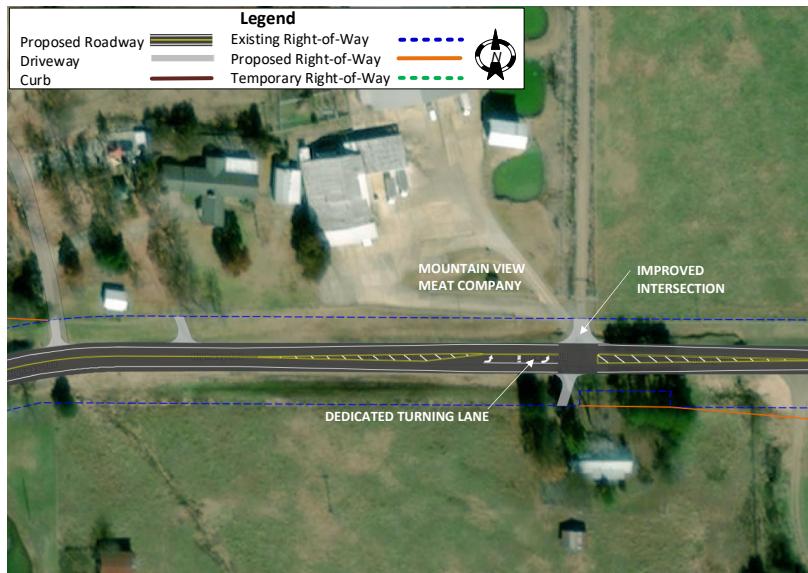


This slide shows the proposed improvements to the County Road D-0834 intersection. Currently there are two intersections with SH-100. These intersections will be closed, and the pavement removed. One new perpendicular intersection will be created. The new intersection will greatly improve the line-of-sight and will improve safety for vehicles entering and exiting SH-100.

PROPOSED IMPROVEMENTS

SPECIFIC PROJECT IMPROVEMENTS

- The entrance to the Mountain View Meat Company plant will be improved.
- A dedicated left-turn lane will be added to allow for trucks and vehicles to make safer turns into the facility.

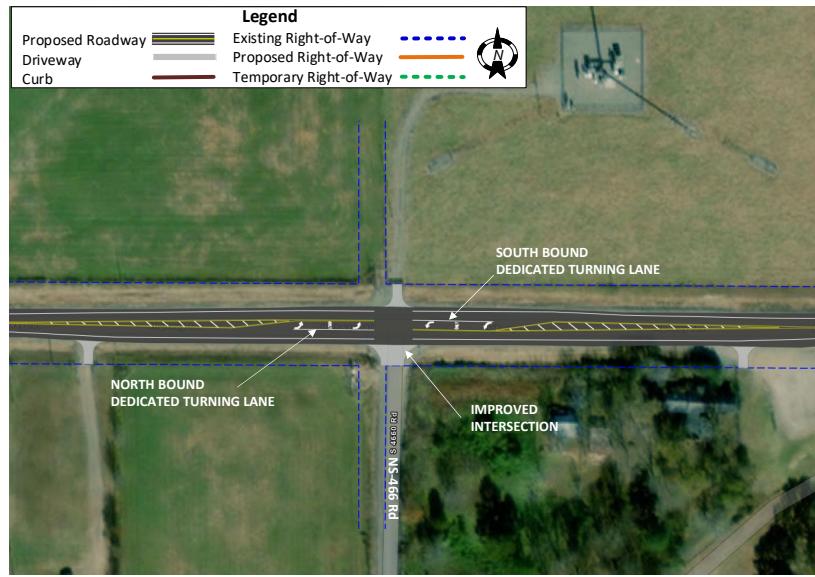


This slide shows the proposed improvements at the Mountain View Meat Company entrance. The intersection will be improved and a left-turn lane will be added to provide better and safer access for truck and vehicle traffic entering the facility.

PROPOSED IMPROVEMENTS

SPECIFIC PROJECT IMPROVEMENTS

- The County Road NS-466/ SH-100 intersection will be improved to allow for more efficient and safer traffic flow.

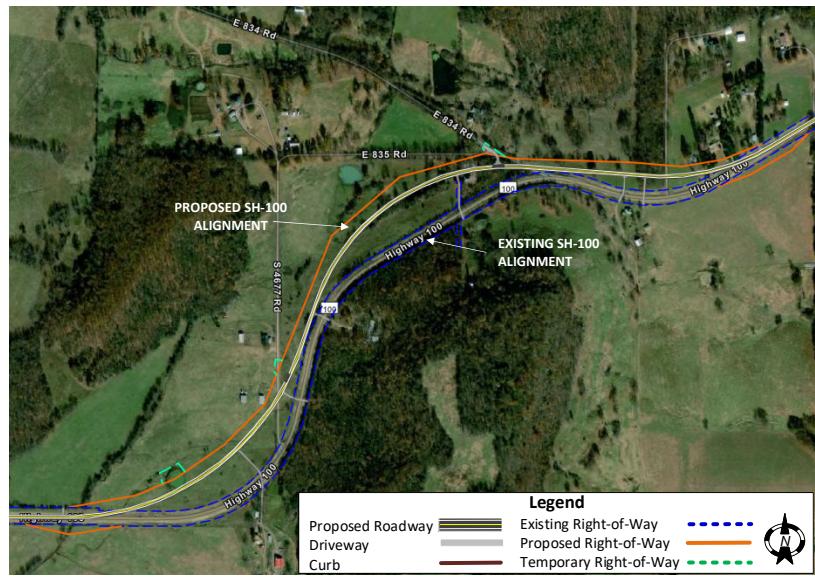


This slide shows the proposed improvements at the County Road NS-466 intersection. The intersection will be improved to allow for more efficient and safer traffic flow.

PROPOSED IMPROVEMENTS

SPECIFIC PROJECT IMPROVEMENTS

- The existing sharp curves between County Roads NS-467 and NS-469 will be corrected to improve safety.
- The highway will be shifted to the west and north on new offset alignment.
- Refer to the following slides for more detail.

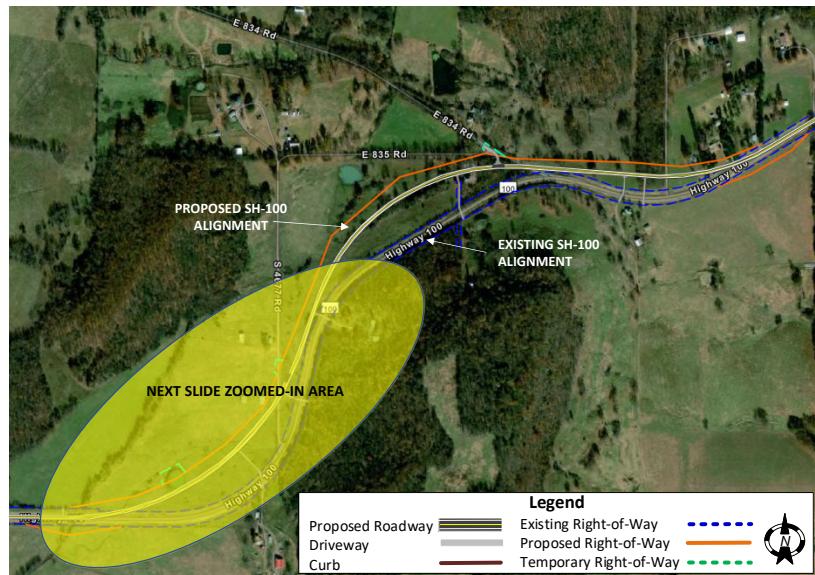


This slide shows the proposed improvements to the sharp curves located between County Roads NS-467 and NS-469. These curves have poor lines-of-sight and will be corrected to improve safety. The highway will be shifted to the west and north. The following slides provide more detail.

PROPOSED IMPROVEMENTS

SPECIFIC PROJECT IMPROVEMENTS

- Curve correction near County Road NS-4677
- Refer to the next slide for more detail.

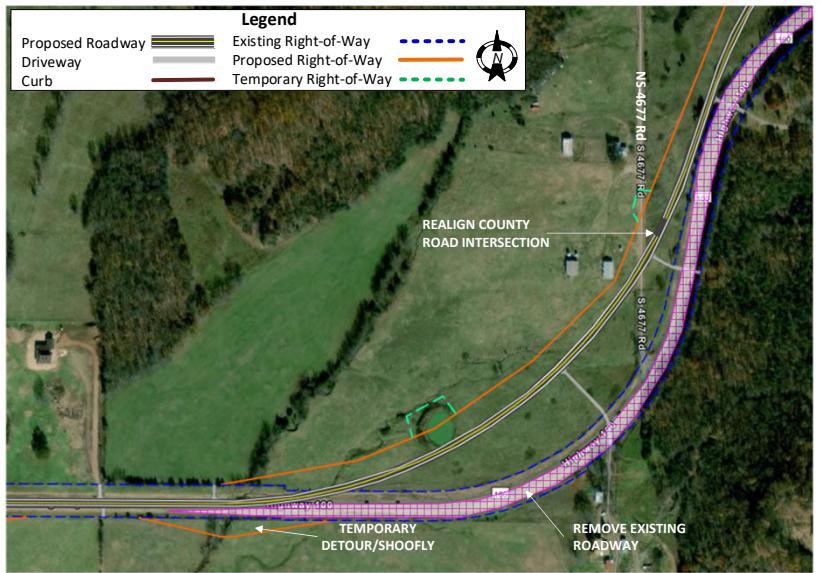


This slide shows the area of the curve correction near County Road NS-4677. Refer to the next slide for more detail.

PROPOSED IMPROVEMENTS

SPECIFIC PROJECT IMPROVEMENTS

- The SH-100 curve near County Road NS-4677 will be realigned to create a safer roadway.
- The NS-4677 intersection will be constructed in a different location & at perpendicular angle.
- The highway will be shifted to the west on offset alignment.
- The existing SH-100 roadway will be removed.
- Private drives and entrance will be reconnected.
- A temporary detour/shoofly will be used to keep the highway open during construction.

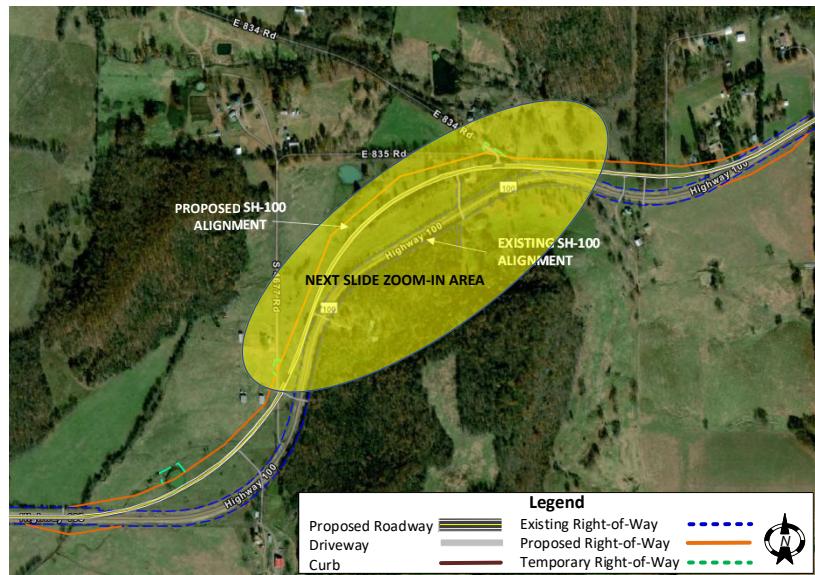


The highway will be shifted to the west near County Road NS-4677. The NS-4677 intersection will be constructed in a different location at a perpendicular angle. Private drives will be reconnected. The existing SH-100 roadway will be removed—as shown in the pink hatching. Temporary pavement will be used to keep the highway open during construction.

PROPOSED IMPROVEMENTS

SPECIFIC PROJECT IMPROVEMENTS

- Curve correction near County Road EW-0834 & EW-0835
- Refer to the next slide for more detail.

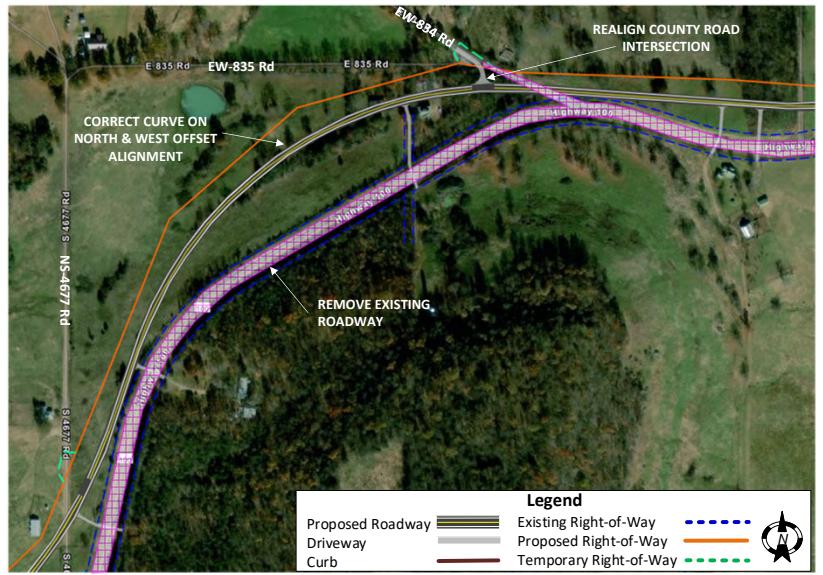


This slide shows the area of the curve correction near County Roads EW-0834 & EW-0835. Refer to the next slide for more detail.

PROPOSED IMPROVEMENTS

SPECIFIC PROJECT IMPROVEMENTS

- The SH-100 curve near County Roads EW-835 & EW-834 will be realigned to create a safer road.
- The highway will be shifted to the north & west on offset alignment.
- The existing SH-100 roadway will be removed.
- Private drives and entrance will be reconnected.

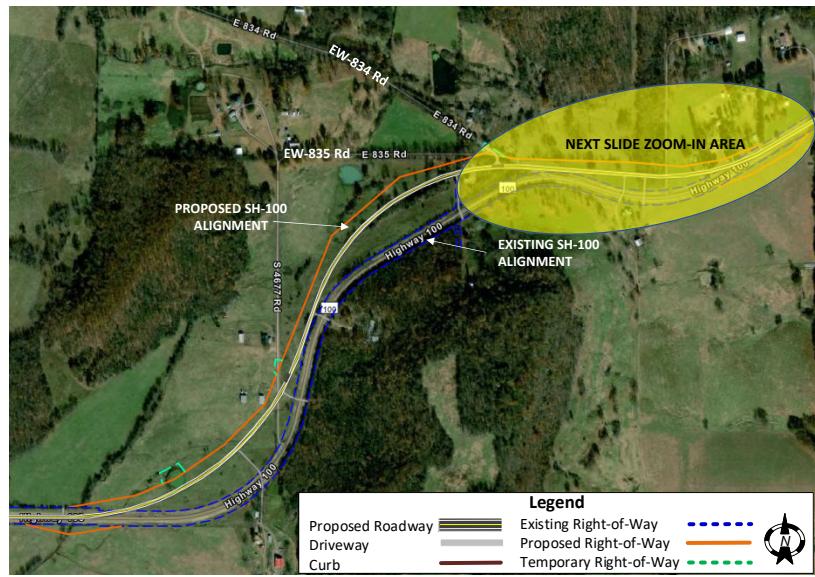


The highway will be shifted to the north and west at this location. The EW-834 intersection will be constructed in a different location at a perpendicular angle. Private drives will be reconnected. The existing SH-100 roadway will be removed—as shown in the pink hatch.

PROPOSED IMPROVEMENTS

SPECIFIC PROJECT IMPROVEMENTS

- Curve Correction east of County Road EW-834 intersection
- Refer to the next slide for more detail.

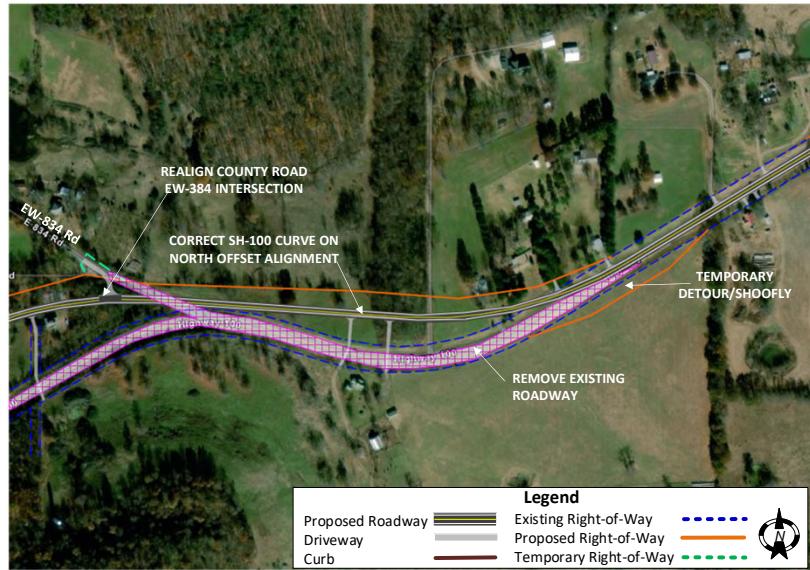


This slide shows the area of the curve correction east of EW-834. Refer to the next slide for more detail.

PROPOSED IMPROVEMENTS

SPECIFIC PROJECT IMPROVEMENTS

- The curve near County Road EW-834 will be realigned to create a safer roadway.
- The highway to the north on offset alignment.
- The existing SH-100 roadway will be removed.
- Private drives and entrance will be reconnected.
- A temporary detour/shoofly will be used to keep the highway open during construction.



The highway will be shifted to the north just east of County Road EW-0834. Private drives will be reconnected. The existing SH-100 roadway will be removed. Temporary pavement will be used to keep the highway open during construction.

PROPOSED IMPROVEMENTS

SPECIFIC PROJECT IMPROVEMENTS

- End of project just west of CR NS-469



This slide shows the end of the project located just west of County Road NS-469.

ENVIRONMENTAL COMPLIANCE

DETAILED ENVIRONMENTAL STUDIES & ASSESSMENTS

- **ODOT Completed Studies & Assessments of:**
 - Threatened & Endangered Species
 - Waters & Wetlands Reviews
 - Cultural Resources Studies
 - Historic & Archaeological
 - Floodplains
 - Hazardous Materials Assessment
 - Traffic Noise Studies
- **Commitments to avoid and/or minimize impacts to the environment will be included in the project in accordance with NEPA.**



As part of ODOT's commitment to protecting the environment, detailed environmental studies and assessments are being completed along the proposed alignment. Ultimately, an environmental document will be generated that will include this information.

Studies and assessments of threatened and endangered species, waters and wetlands, cultural resources, floodplains, hazardous materials, and traffic noise were completed or are in the process of being completed. ODOT is currently consulting with the appropriate state and federal agencies and Tribes for approval.

As a result of these studies, additional commitments to avoid and/or minimize impacts to the environment will be added to the project design plans and environmental document.

The Federal Highway Administration must approve the environmental document before the project can proceed.

ENVIRONMENTAL COMPLIANCE

STUDIES & ASSESSMENTS RESULTS

- **Threatened, Endangered, & Listed Species**
 - There are several federally protected species within the general project area—including birds, bats, insects and mussels.
 - Measures to avoid or minimize impacts to protected species will be added to the project plans.
- **Waters & Wetlands**
 - Impacts to waters & wetlands will be coordinated with the US Army Corps of Engineers.
 - A Clean Water Act Section 404 permit will be obtained for the project impacts.



See the "Environmental Studies" section of the Virtual Open House website for more details.

There are federally protected species within the area. Species, such as birds, bats, fish, and a beetle use the habitat in the vicinity of the highway. Measures to avoid or minimize impacts to protected species will be added to the project plans. More detail on the environmental studies can be found on the "Environmental Studies" section of this website.

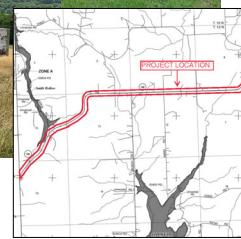
Drainage structure work could impact several streams which are regulated by the US Army Corps of Engineers. Impacts to waters and wetlands will be coordinated with the U.S. Army Corps of Engineers, and ODOT will obtain a Clean Water Act Section 404 permit for the project.

ENVIRONMENTAL COMPLIANCE

STUDIES & ASSESSMENTS RESULTS

• Cultural Resources

- ODOT is in the process of completing the field studies
- Effects to historic properties are unknown at this time
- There are anticipated to be significant archeological resources within the project study area
 - Environmental Mitigation Notes will be included in the project plans to avoid areas of concern



• Floodplain

- Portions of the project are located in special flood hazard areas (Zone A).
- Appropriate measures will be taken to avoid adverse flood impacts.

• Hazardous Waste Sites

- Oilfield & filling stations are associated with study area.
- Potential impacts are being evaluated by ODOT



OKLAHOMA
Transportation

See the "Environmental Studies" section of the Virtual Open House website for more details.

Cultural resources—including both historic resources and archaeological sites—are being evaluated. Field studies are currently underway. Avoidance, minimization and/or mitigation measures will be taken to address any adverse effects to these resources.

A small portion of the project is located within a floodplain. Appropriate measures will be taken to avoid adverse flood impacts caused by this project.

There are several sites within the project footprint with potentially hazardous materials. These include gas stations adjoining the project site. ODOT is currently assessing the potential impacts, but these sites are not considered to be high-risk. No adverse impacts are anticipated.



ENVIRONMENTAL COMPLIANCE

NOISE STUDY RESULTS

- Traffic Noise Study**
 - A traffic noise study was completed according to FHWA Regulations & ODOT Noise Policy.
 - Noise modeling was performed to predict sound levels for the existing condition year 2020 and the future condition design year 2040 based on roadway geometry, traffic volumes, terrain and receiver site locations.
 - 41 noise receivers were evaluated, including 40 residences, and 1 recreational facility.
- Noise Impacts Occur When:**
 - Exterior future noise levels are 66 decibels (dB) or above.
 - Exterior future noise levels are 15 dB or more above existing levels, even if future levels are below 66 dB.
- Traffic Noise Analysis Results**
 - Future sound levels in the project area are expected to range from 48.6 to 69.7 dB.
 - Seven (7) residential receivers are predicted to be above 66 dB by 2040.
 - No receivers are anticipated to experience a substantial noise increase by 2040, ranging from -7.0 to 7.2 dB.



ODOT completed a traffic noise study according to Federal Highway Administration and ODOT Noise Policy. The study utilized the FHWA Traffic Noise Model to predict future noise levels, factoring in 2040 traffic volumes, terrain and receptor site locations. Forty-one receptor locations were modeled, representing 40 homes, and a recreational facility.

Noise Impacts occur when future noise levels are at least 66 decibels; or when future noise levels are 15 decibels or more above existing levels. The predicted sound level in the corridor is expected to range from 48.6 to 69.7 decibels.

The proposed project will result in 7 residential noise impacts by 2040.



ENVIRONMENTAL COMPLIANCE

NOISE STUDY RESULTS

- **Noise Abatement Consideration**

- A barrier analyses was performed for two (2) of the impacted receivers. Although both barriers proved feasible in achieving a 7-dB reduction, they were determined to exceed the reasonableness cost per benefitted receptor allowed under the ODOT Noise Policy; therefore, mitigation is not reasonable.
- For the remaining five (5) impacted receptors, consideration of abatement is not feasible because of driveway connections. Without access control, the gap that would be required for driveway connections would make noise abatement measures ineffective; therefore, mitigation is not feasible.
- Mitigation in the form of a free-standing sound wall are not recommended as part of this project.



A barrier analyses was performed to examine abatement for 2 of the impacted receivers. Although both barriers proved feasible in achieving a 7 decibel reduction, they were determined to exceed the reasonableness of cost per benefitted receptor allowed under the ODOT Noise Policy. Therefore mitigation is not reasonable.

For the remaining 5 impacted receptors, consideration of abatement is not feasible because of driveway connections. Without access control, the gap that would be required for driveway connections would make noise abatement measures ineffective. Therefore, mitigation in the form of a freestanding sound wall is not recommended as part of this project.

RIGHT-OF-WAY IMPACTS

TO ACCOMMODATE HIGHWAY WIDENING, ADDITIONAL RIGHT-OF-WAY WILL BE REQUIRED

- **Right-of-Way Impacts**

- Several residential displacements are anticipated.
- A few commercial property relocations are anticipated.
- Additional frontage along SH-100 & side roads will be required from several parcels.
- New right-of-way will be required to the curve corrections on offset alignment.

- **Interact with ODOT**

- For more information on property rights and impacts:
 - View your property on the “Interactive Map”
 - Property owners affected by the project will be contacted by ODOT representatives.



See the “Right-of-Way” section of the Virtual Open House website for more details.

Often, transportation projects require additional property to construct safe and efficient highways. Adverse effects to property owners are weighed heavily by ODOT. The designers looked at several alternatives to minimize impacts, and balanced that with the primary purpose of improving highway safety. Any properties being impacted by the proposed right-of-way on this project may be eligible for compensation or relocation benefits. The eligibility of each property impacted will be determined through the right-of-way process. Property owners affected by the project will be contacted by ODOT representatives.

CONSTRUCTION

- Construction is anticipated to begin in Federal Fiscal Year 2024.
- The project will be constructed in phases.
- During some phases, traffic will be shifted to a offset-alignment detour or shoofly in order to maintain traffic flow.
- SH-100 will remain open throughout the entire project duration.
- Access will be maintained to all residences & businesses.

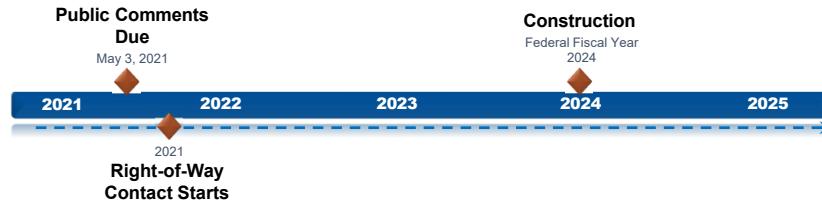


At this time, construction is anticipated to start in the Federal Fiscal Year 2024. The actual start date is dependent on several factors, including the availability of funds, but right now the project appears to be on schedule.

During construction, some segments will be constructed in phases. Traffic may be shifted to a shoofly detour in order to maintain traffic flow.

SH-100 will remain open throughout the entire construction process, and access to all residences and businesses will be maintained throughout construction.

NEXT STEPS/ PROJECT SCHEDULE



*Timeline represents the current anticipated schedule.



Next Step & Schedule:

This slide shows the next steps for the project. We ask that you submit your comments by **May 3, 2021** so that we may incorporate your feedback and finalize the design plans.

If your property is affected by the project, you can expect to hear from ODOT right-of-way agents in late **2021**.

Currently, construction of the project is anticipated to begin in 2024.

THANK YOU!

THANK YOU FOR PARTICIPATING IN ODOT'S VIRTUAL OPEN HOUSE

- **Please Visit Other Areas of the Website for More Information.**
 - **Interactive Map** - view the design on an aerial photograph, zoom in & out, find your property, etc.
 - **Right-of-Way Acquisition** - information for right-of-way acquisition & relocations
 - **Environmental Studies** - more information about the studies and environmental commitments
 - **Frequently Asked Questions** - for common questions and answers about the project
 - **Submit a Comment** - submit your comments or questions on this page or send by email or US mail

The best way to leave a comment or ask a question is to submit a written comment at the "Submit a Comment" page, or via email

environment@odot.org

For more information on this project call (405) 325-3269



Please go to www.odot.org/SH100ADAIR for more information.

Thank you for participating! Please visit the other areas of this website for more information. This concludes the presentation portion of the Virtual Open House.