

ODOT Occupied Crossing Mitigation Project



Project Title	➤ ODOT Occupied Crossing Mitigation Project
Applicant	➤ Oklahoma Department of Transportation
Federal Funding Requested Under this NOFO	➤ \$25.45 Million
Proposed Non-Federal Match	➤ \$6.36 Million
Other Sources of Federal funding, if applicable	➤ N/A
Total Project Cost	➤ \$31.81 Million
Was a Federal Grant Application Previously Submitted for this Project?	➤ N/A
City(-ies), State(s) Where the Project is Located	➤ Davis, Oklahoma
Congressional District(s) Where the Project is Located	➤ Oklahoma's 4th Congressional District
Urbanized Area in which project is located, if applicable	➤ N/A
Is this project identified in:	➤ 2021 Oklahoma State Rail Plan
Is the Project Located in a Rural Area or on Tribal Land?	➤ Yes — Rural
Is the project eligible for a funding set-aside in Section B.1?	➤ Yes — Rural
If the Project is located in a Rural Area or Tribal Land, is the Project Located in a county with 20 or fewer residents per square mile, according to the most recent decennial census?	➤ N/A
USDOT Crossing Numbers	➤ <ul style="list-style-type: none"> • 020742X • 020741R • 020740J • 020739P • 020735M
Project located on real property owned by someone other than the applicant?	➤ Yes — BNSF

1. Cover Page

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2. Project Summary

The Oklahoma Department of Transportation (ODOT) and the City of Davis, Oklahoma (City) request FRA grant funding for the ODOT Occupied Crossing Mitigation (OCM) Project to improve safety along the Burlington Northern Santa Fe (BNSF) railroad line in Davis, OK. The project improvements consist of closing at-grade crossing locations at Atlanta Avenue and Hanover Road and removing siding track from Benton Avenue and Main Street (SH 7). Additional siding and industry operations will be relocated south of Hanover Road by providing slightly less than 2 miles of new siding to reduce the impact of loading trains that currently occupy multiple crossings in the city. The project will also consider safety improvements at Benton Avenue, Main Street, and Haliburton Road at-grade crossings to support safe and reliable movements of goods, people, and services.

Altogether, the project will reconnect the community, allowing for efficient access for emergency services, local business opportunities, and traveler safety while enjoying parks, recreation, and significant historical markers around the area.

3. Project Funding

The following table provides a general budget summary for construction of the ODOT OCM Project. The requested RCE grant amount is \$25.45 million or roughly 80 percent of the project costs (see Table 1). The remaining 20 percent of the project will be funded by local funds and private sector contributions.

Table 1: ODOT OCM Project Funding

Project Construction Phase	Estimated Cost or Contribution
ODOT OCM Project	\$31.81 million
Funding Source and Contribution	
ODOT	\$3.36 million
*Private Sector	\$3.0 million
Non-Federal Subtotal	\$6.36 million
RCE Federal Grant	\$25.45 million
TOTAL	\$31.81 million

*Note: BNSF will also make a payment in the amount of \$200,000 to Murray County to assist with their roadway improvements associated with closing the Hanover Road railroad crossing.

4. Applicant Eligibility

ODOT, a State agency, is the project sponsor. A State is an eligible recipient under 49 U.S.C. § 22909(c).

The ODOT OCM Project will remove and relocate siding track south outside the City while also closing two at-grade railroad crossings and providing safety improvements at three at-grade crossing locations. These project improvements constitute an eligible project under 49 U.S.C. § 22909(d).

5. Detailed Project Description

5.1 PROJECT BACKGROUND AND CONTEXT

The City of Davis has long dealt with the issue of blocked railroad crossings and the associated safety problems. The railroad tracks run directly through the middle of the city and support both BNSF freight trains and Amtrak's Heartland Flyer passenger service, creating delays and congestion for motorists and pedestrians throughout the city whenever a train blocks a railroad crossing (**Figure 1**). On December 6, 2019, for example, a BNSF freight train blocked all three railroad crossings within the city limits for more than 3 hours. Blocked railroad crossings are a persistent problem that negatively affects quality of life, economic vitality, and safety for city residents.

Figure 1: Main Street Crossing Blocked with Cars Queuing



Although blocked railroad crossings are a problem for all roadway users, they are particularly troubling for emergency responders within the city. Emergency responders (emergency medical services, fire, and police) need to reach their destinations as quickly as possible; often, that path is impeded for first responders in Davis. The City's Police Department and Fire Department are located east of the railroad tracks that bisect the community. As a result, emergency service vehicles in Davis can take almost 37 minutes to reach sites 2.5 blocks away because of a blocked

crossing forcing them onto alternative routes. In one instance, it took the Davis Police Department about 20 minutes to respond to a person who was threatening suicide, even though the person was less than 3 blocks from the local police station, since all three railroad crossings in the town were blocked by a stopped BNSF freight train. An ambulance racing to a heart attack victim or an automobile accident may be delayed only a few minutes by a passing train, but even a few minutes can mean the difference between life and death in an emergency. A fire engine forced to take another route because of a stopped train may arrive at a fire too late to prevent considerable damage or even deaths or injuries. Delayed police response can reduce the chance to apprehend a criminal or prevent a more serious crime.

Persistent blocked crossings have also caused residents to take more risks, increasing the chances of collisions with trains and jeopardizing the safety of both the motorist and those on the trains. In 2017, a motorist was killed at a blocked railroad crossing in the city as she drove around lowered crossing gates and was struck by a northbound Heartland Flyer train. In 2014, a freight train struck a tractor-trailer, killing the driver at the same railroad crossing in Davis. A city resident told the police department that she drove around cones at a coned-off crossing because the Main Street crossing was blocked by an Amtrak train. The Federal Railroad Administration (FRA) has explained that blocked crossings are a rail safety issue based on analyses of similar situations across the nation. The FRA has cited pedestrians crawling under or through trains, emergency vehicles being delayed, and drivers driving around closed gates or racing to beat trains to avoid lengthy delays. All of these are concerns in Davis.

5.2 LEGAL PROCEEDINGS

The issue of freight trains blocking traffic at railroad crossings has been a constant concern within some Oklahoma communities. To directly address this concern, the State of Oklahoma passed the Blocked Crossing Statute (66 O.S. §190) in 2019, putting a 10-minute limit on trains blocking streets and highways (there are some limited exceptions)

Oklahoma then fined BNSF three times within 2 months of the law taking effect. First, a BNSF train blocked a crossing for 38 minutes in Davis, while another train passed onto the main line. Two more fines were issued in the City of Edmond when BNSF trains blocked crossings for 37 and 80 minutes, respectively, again waiting for other trains to pass. BNSF sued the cities of Edmond and Davis, saying Federal law prevented the state from regulating train operations. Through the *Interstate Commerce Commission Termination Act* of 1995, Congress gave the sole power to regulate railroad operations to the Surface Transportation Board.

Oklahoma countered that its Blocked Crossing Statute was a matter of public safety, under the *Federal Railroad Safety Act* of 1970. A Federal judge sided with the train operator in November 2020. In June 2022, the U.S. Supreme Court rejected Oklahoma's effort to revive a state law setting strict time limits on trains blocking city crossings.

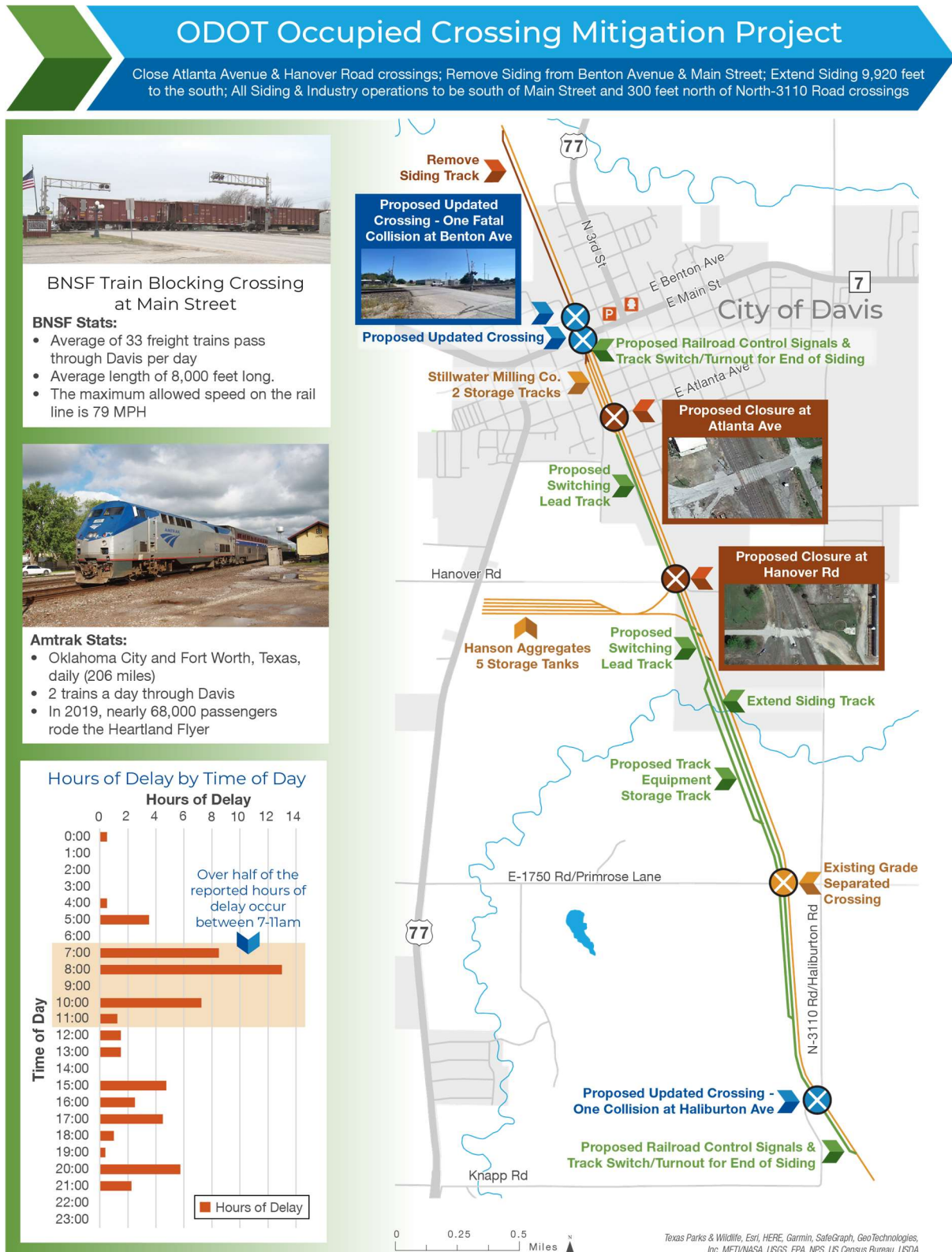
5.3 PROJECT SCOPE

The ODOT OCM Project will include the construction of approximately 9,920 feet of track siding to the south and remove 4,170 feet of existing siding from Benton Avenue

and Main Street. All siding and industry operations will be south of Main Street and about 300 feet north of the Haliburton Road / County Road N-3310 railroad crossings. The project will also see the closure of two at-grade railroad crossings along the BNSF railroad line at Atlanta Avenue and Hanover Road. The five railroad crossings included in the project scope are located at Benton Avenue (020742X), Main Street (020741R), Atlanta Avenue (020740J), Hanover Road (020739P), and Haliburton Road/County Road N-3310 (020735M).

Figure 2 presents the main project scope elements, as well as the key benefits of the project.

Figure 2: Project Scope and Benefits



Hours of Delay by Time of Day

Time of Day	Hours of Delay
0:00	0.2
1:00	0.2
2:00	0.2
3:00	0.2
4:00	0.2
5:00	0.5
6:00	0.5
7:00	10.0
8:00	12.0
9:00	10.0
10:00	8.0
11:00	2.0
12:00	1.0
13:00	1.0
14:00	0.5
15:00	4.0
16:00	3.0
17:00	4.0
18:00	1.0
19:00	0.5
20:00	5.0
21:00	2.0
22:00	1.0
23:00	0.5

Hours of Delay

Over half of the reported hours of delay occur between 7-11am

0 0.25 0.5 Miles

Texas Parks & Wildlife, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

Figure 3 through Figure 12 depict the crossings from both street level and aerial views.

Figure 3: Benton Avenue Crossing (020742X)



Figure 4: Benton Avenue Crossing (Aerial)

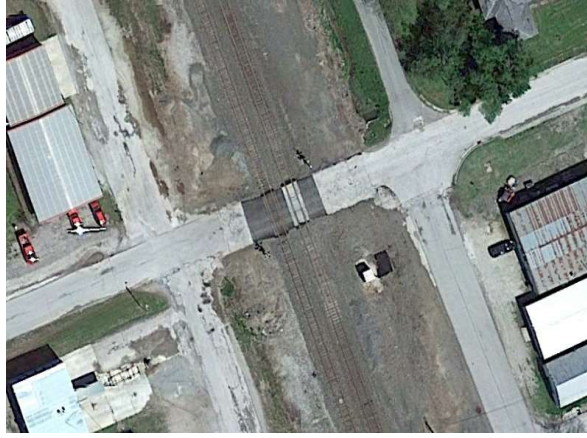


Figure 5: Main Street Crossing (020741R)



Figure 6: Main Street Crossing (Aerial)



Figure 7: Atlanta Avenue Crossing (020740J)



Figure 8: Atlanta Avenue Aerial Crossing (Aerial)

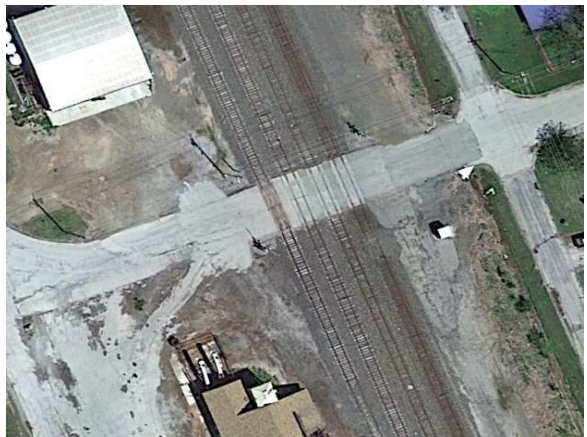


Figure 9: Hanover Road Crossing (020739P)



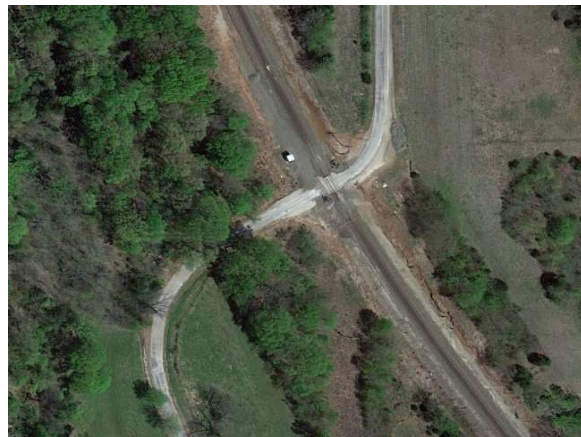
Figure 10: Hanover Road Crossing (Aerial)



Figure 11: Haliburton Road / County Road N-3310 Crossing (020735M)



Figure 12: Haliburton Road / County Road N-3310 Crossing (Aerial)



5.4 BNSF FREIGHT SERVICE

BNSF operates and maintains the railroad line in Davis as part of its Red Rock Subdivision. According to data provided by BNSF, an average of 33 freight trains pass through the city each day. The length of the trains remains consistent at about 8,000 feet long. The maximum allowed speed on the rail line is 79 miles per hour.

BNSF's freight trains are frequently the cause of traffic delays at the railroad crossings within the city (**Figure 13**). These railroad crossing blockages and traffic delays are caused by the railway operations, since the local industries of Stillwater Milling Company and Hanson Aggregates have limited capacity on site for freight cars. Railroad access is critical to both industries, which rely on bulk materials and commodities that are not particularly time sensitive.

Stillwater Milling Company has two storage tracks onsite with a 2,000-foot capacity, while Hanson Aggregates has five storage tracks onsite with a capacity of 12,024 feet. The loading and unloading of the freight trains at these businesses has spillover

effects for the entire City, as trains block traffic. Additionally, BNSF freight trains block traffic within the City due to Amtrak's Heartland Flyer train, which uses the same track and has the highest priority on freight lines. There are limited siding tracks within the vicinity of Davis; when the Heartland Flyer is nearby, BNSF trains are required by law to let the passenger train pass before continuing.

Figure 13: BNSF Freight Train Blocking Main Street Crossing (020741R)



5.5 AMTRAK'S HEARTLAND FLYER SERVICE

Amtrak operates the Heartland Flyer (**Figure 1**) on BNSF-owned tracks between Oklahoma City and Fort Worth daily, with intermediate stops in Oklahoma at Norman, Purcell, Pauls Valley, and Ardmore. The southbound train departs Oklahoma City at 8:25 AM, and the northbound train departs Fort Worth in the evening, arriving at Oklahoma City at 9:39 PM. While the Heartland Flyer service is operated by Amtrak, the service remains jointly funded by the states of Oklahoma and Texas.

In 2019, nearly 68,000 passengers used the Heartland Flyer service with an average trip of 175 miles. Davis is one of two new stations under consideration for the Heartland Flyer route with the other being Krump, Texas. No definitive schedule is available for these additions. Future plans call for the train's northern terminus to be extended from Oklahoma City to Newton, Kansas, with additional frequency along the original route.

Figure 14. Amtrak’s Heartland Flyer Train Traveling Through Davis



5.6 PROJECT PARTIES

A strong and diverse group of stakeholders has partnered to facilitate construction of the proposed ODOT OCM project. A coalition consisting of members from the city, Murray County, ODOT, and BNSF has formed to accelerate the funding and construction of the project. In addition, strong political support for the project includes U.S. Congressman Tom Cole, U.S. Senator James Lankford, and U.S. Senator Jim Inhofe, who have expressed their support and recognize the need for this critical transportation improvement. BNSF has also voiced support for the project as it improves the safety and efficiency of their freight train operations. Letters of Support can be found in Appendix A.

6. Project Location

6.1 GEOSPATIAL DATA

The project is located within the city and just outside the city limits in Murray County. The five railroad crossings affected by this project are located on the BNSF rail line between railroad mileposts 475.380 and 478.129, as shown in **Table 2**. Three of the five railroad crossings affected by this project are located within the city, while the crossings at Hanover Road (020739P) and Haliburton Road/County Road N-3310 (020735M) are located in unincorporated Murray County.

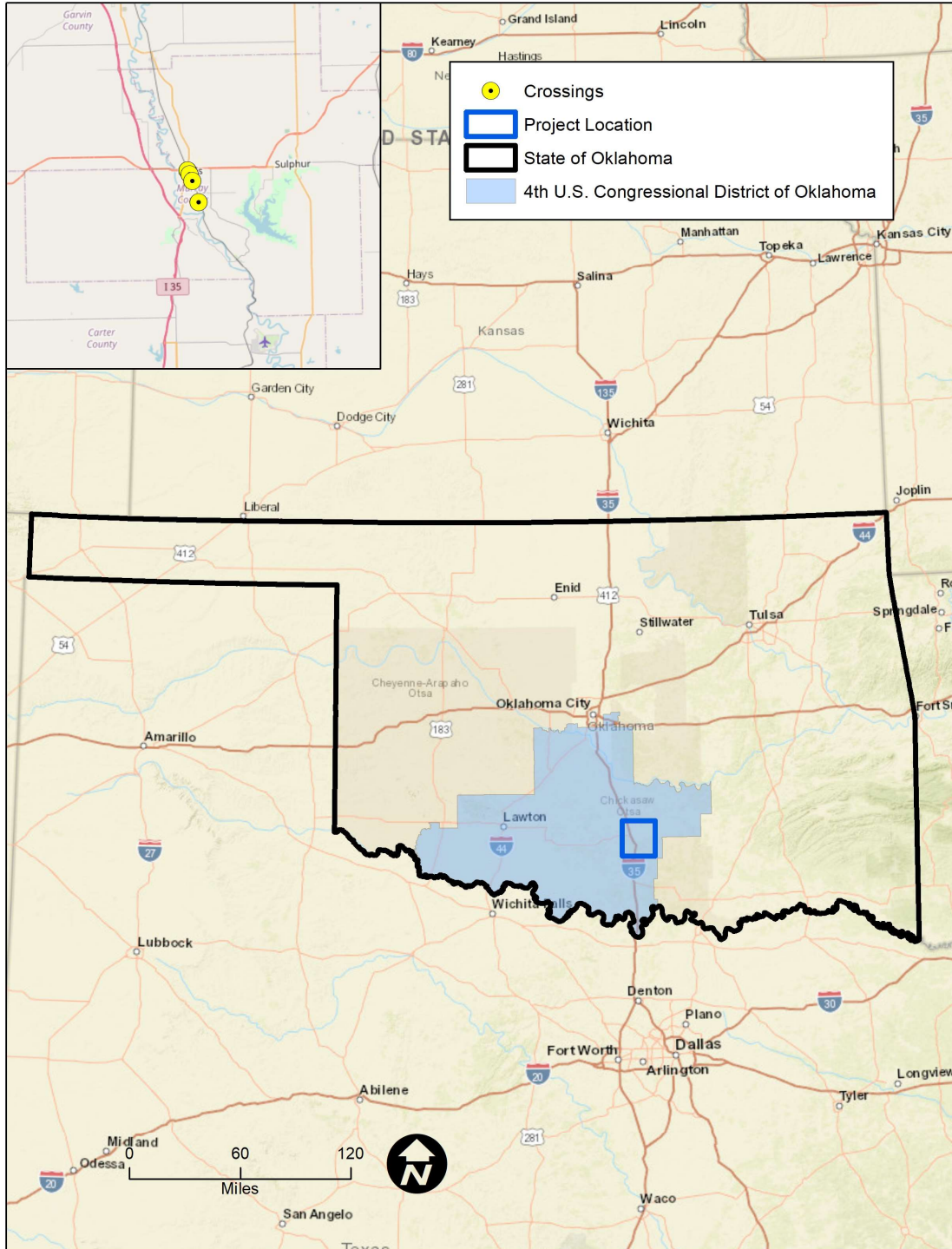
Table 2: Affected Railroad Crossings

DOT Crossing Inventory Number	Railroad Milepost	Street Name	Crossing Position	Latitude	Longitude
020742X	478.129	Benton Avenue	At Grade	34.50462980	-97.1226630
020741R	478.060	Main Street	At Grade	34.50366130	-97.12222180
020740J	477.775	Atlanta Avenue	At Grade	34.49975940	-97.12037650
020739P	477.242	Hanover Road	At Grade	34.4919270	-97.116509
020735M	475.380	Haliburton Road / County Road N-3310	At Grade	34.4670270	-97.1083549

6.2 CONGRESSIONAL DISTRICT(S)

The project is located within Oklahoma's 4th Congressional District (Figure 13).

Figure 13: ODOT OCM Project Location Map



6.3 COMMUNITY PROFILE

The City of Davis is located in Garvin and Murray counties in rural, south-central Oklahoma (Figure 13). As with many communities that grew up around the railroad in Oklahoma, Davis owes its existence to the Atchison, Topeka and Santa Fe Railway. Today, the railroad maintains its local presence, as tracks run right through the middle of the city (Figure), effectively bisecting it. The city is also home to the oldest state park and the tallest waterfall in Oklahoma, Turner Falls (Figure). Davis is located at the intersection of US-77 and SH-7. U.S. Interstate (I) 35 is 2 miles west of Davis and provides access to Oklahoma City (76 miles north) and Dallas (134 miles south).

Figure 14: City of Davis Downtown



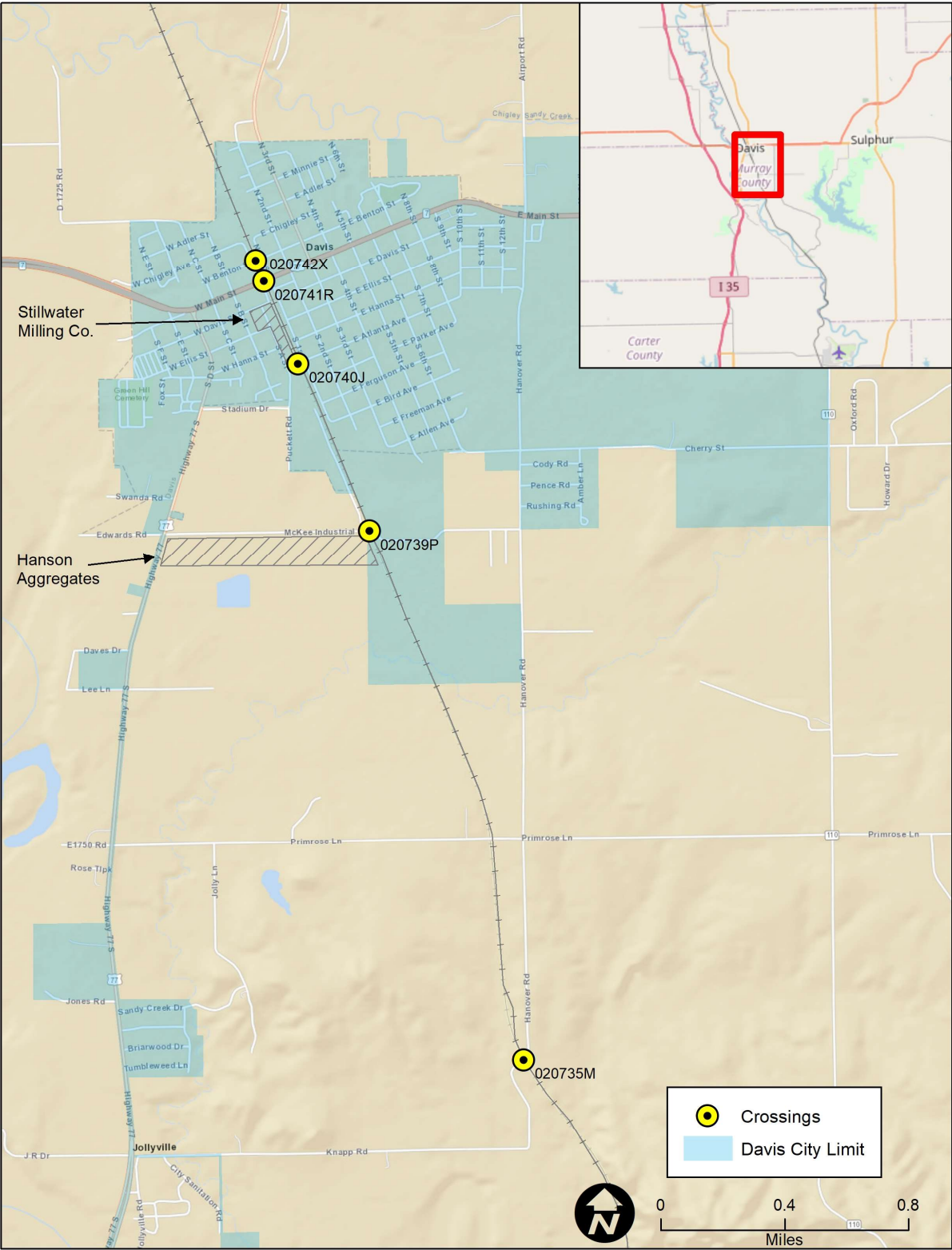
Figure 17. Turner Falls State Park



The population of Davis was 2,853 at the 2020 census. Households in Davis have a median annual income of \$45,536, which is less than the median annual income of \$64,994 across the entire United States. About one-quarter of City residents live below the poverty line. In 2020, the City's median property value was \$99,800, and the homeownership rate was 56 percent.

The economy of Davis employs 1,180 people. The largest industries in are Retail Trade (191 people), Accommodation & Food Services (122 people), and Health Care & Social Assistance (101 people), and the highest paying industries are Wholesale Trade (\$102,708), Transportation & Warehousing (\$100,977), and Transportation & Warehousing, & Utilities (\$100,703). Compared to other places, the City has an unusually high number of residents working in Transportation Occupations (2.59 times higher than expected), Material Moving Occupations (2.07 times), and Production Occupations (1.66 times).

Figure 18: ODOT OCM Project Vicinity Map



7. Grade Crossing Information

The data produced by the FRA's Web Accident Prediction System (WBAPS) are shown in **Table 3**. The Predicted Collisions column represents the accident prediction value and is the probability that a collision between a train and a vehicle will occur at the crossing in 1 year. The Average Annual Daily Traffic (AADT) column identifies the count for vehicles using the crossing.

There were two reported collisions for the five railroad crossings from 2017 to 2022.

Table 3: Crossing Crash History and Safety Information

ODOT Crossing Inventory Number	Railroad Milepost	Primary Railroad Operator	Street Name	Predicted Collisions	Number of Collisions (2017-2022)	AADT
020742X	478.129	BNSF	Benton Avenue	0.050181	1	400
020741R	478.060	BNSF	Main Street	0.037308	0	8,000
020740J	477.775	BNSF	Atlanta Avenue	0.016538	0	600
020739P	477.242	BNSF	Hanover Road	0.007471	0	30
020735M	475.380	BNSF	Haliburton Road / County Road N-3310	0.039962	1	50

8. Evaluation and Selection Criteria

8.1 EVALUATION CRITERIA

a. Improves Safety at Highway-Rail or Pathway-Rail Grade Crossing

The ODOT OCM Project is a locally significant capital project to preserve the reliability of the rail line and maintain safe transportation for motorists and emergency responders. There were two reported crashes across the five locations with one fatality occurring at Benton Avenue. The project proposes to eliminate at-grade crossings at Atlanta Avenue and Hanover Road to reduce vehicular-train exposure and improve safety equipment at the other three locations.

b. Proposes to Grade Separate, Eliminate, or Close One or More Highway-Rail or Pathway-Rail Grade Crossings

The ODOT OCM Project will close two at-grade railroad crossings along the BNSF railroad line at Atlanta Avenue and Hanover Road. These railroad crossing closures will be accompanied by the construction of approximately 9,920 feet of track siding to the south and the removal of 4,170 feet of existing siding from Benton Avenue and Main Street. All siding and industry operations will be south of Main Street and about 300 feet north of the Haliburton Road / County Road N-3310 railroad crossings.

c. Improves the Mobility of Both People and Goods

The project addresses the main challenges of the City's existing transportation network, such as traffic congestion and ensuring motorist and pedestrian safety without limiting the operational efficiency of BNSF freight trains. The roadway network within the City plays a significant role in the daily movement of people and goods. Due to the rural character of the area and the existing road network, accessibility is frequently reduced because of the blocked railroad crossings: this project addresses and improves the mobility of people and goods within the city.

The Murray County Sheriff's office call records indicate that there were more than 85 calls related to trains blocking railroad crossing in the City (over a span of approximately 18 months from May 2018 through January 2020). While the average delay was 45 minutes during a week at any of the four at-grade crossings (**Figure 15**), delays were concentrated during the morning peak hours of travel shown in **Figure** . Nearly half of the cumulative hours when trains are blocking the at-grade railroad crossings occur between 7:00 AM and 11:00 AM. It is important to note that the data is not exhaustive and does not capture every delay, only delays which were called and logged.

Figure 15: Cumulative Hours of Vehicle Delay

Cumulative Hours of Delay (Train Blockage)

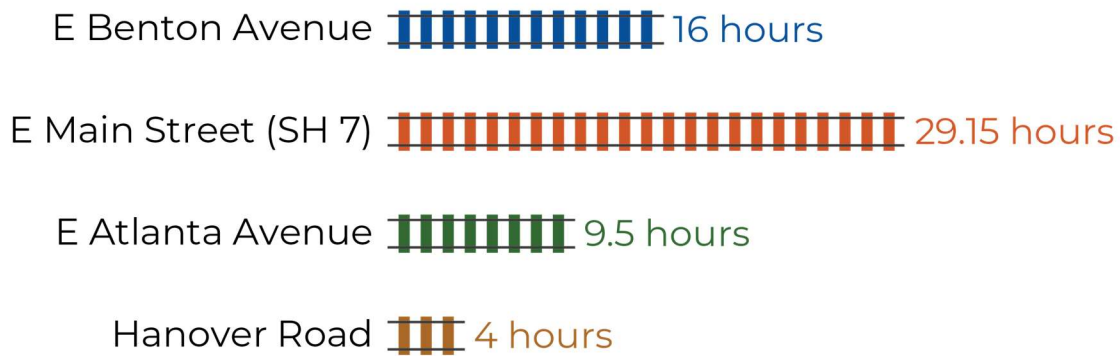
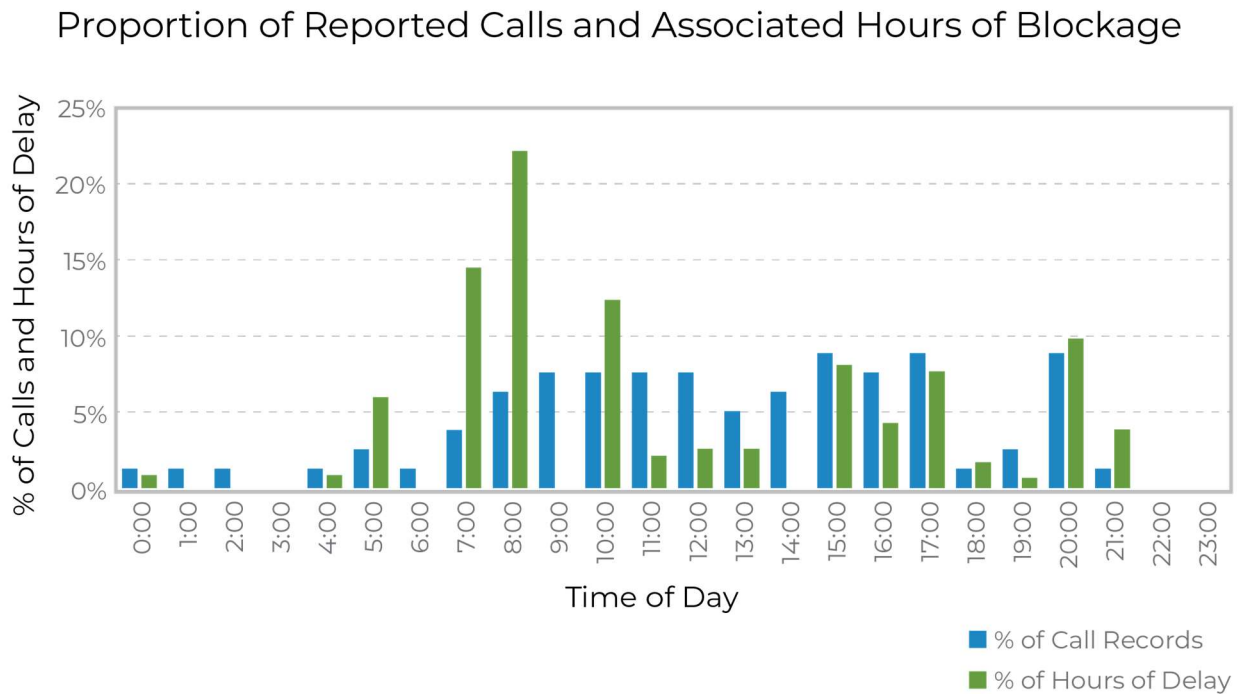


Figure 20: Vehicle Delay by Time of Day



d. Reduces Emissions, Protects the Environment, and Provides Community Benefit

The ODOT OCM Project significantly reduces transportation-related air pollution and greenhouse gas emissions by reducing vehicle miles traveled (VMT), commute time, and congestion, thereby reducing idling vehicle emissions. Idling reduces the fuel economy of vehicles, costs money, and creates pollution. If vehicles decide to bypass the blocked railroad crossings within Davis, they must take circuitous routes, which waste fuel and require more time. Pedestrians and bicyclists are also not allowed to cross the blocked railroad tracks. This project will allow pedestrians to travel on foot throughout the City, as routes to bypass the railroad crossings on foot are currently not practical.

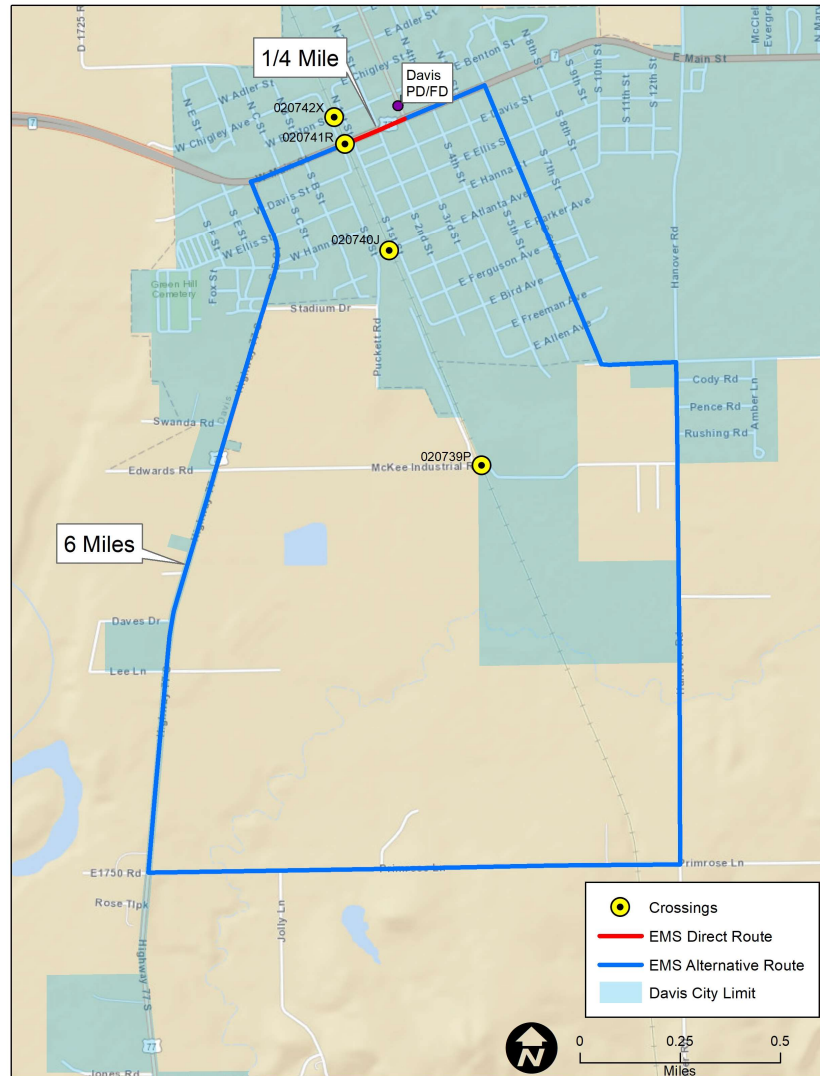
e. Improves Access to Emergency Services

The ODOT OCM Project improves access to emergency services and will reduce response times for Davis’s first responders, who will no longer have to wait for freight trains to clear the crossings. **Figure 2** depicts the alternate route Davis Police and Fire Department personnel must travel if all crossings are blocked and an emergency call is located on the other side of the crossing. Murray County EMS currently stations an ambulance, when available, on the west side of the crossings to prevent increased response time related to blocked crossings. However, if an ambulance is returning to the hospital in Sulphur (approximately 9 miles east of Davis), the Murray County EMS personnel will have to utilize the alternate route as depicted. As with many communities, the railroad tracks run through the middle of Davis. The City’s Police

Department and Fire Department are located east of the railroad tracks that bisect the community. As a result, emergency service vehicles in Davis can take almost 37 minutes to reach sites two-and-a-half blocks away because of a blocked crossing forcing them to use the alternative route (Figure 2).

Due to the frequently blocked crossings, emergency responders in Davis have a significant challenge reaching the locations of emergencies in time to avert a crisis. Davis Police and Fire Departments are both north of Main Street (on 3rd Street east of the railroad crossings). If the crossings are blocked, the first responders will use Main Street, followed by 6th Street, Cherry Street, Hanover Avenue, and Primrose Lane to U.S. Highway 77. This alternative route turns a quarter-mile drive into a 6-mile one-way trip. For example, the Davis Police Department needed about 20 minutes to respond to a person who was threatening suicide, even though the person was less than 3 blocks from the local police station, since all three railroad crossings in town were blocked by a stopped a BNSF freight train.

Figure 21: Alternative Emergency Medical Services Route



f. Improves Access to Communities

The ODOT OCM Project will improve access throughout the City of Davis. As the city is bisected by the railroad tracks, access is frequently limited due to the three blocked railroad crossings at Benton Avenue, Main Street, and Atlanta Avenue. This project would remove the possibility of blocked crossings at Benton Avenue and Main Street, ensuring accessibility throughout the City of Davis. This improved accessibility will improve the everyday lives of residents currently living in Davis since they are required to undertake circuitous routes to bypass the blocked railroad crossings. The first responders of Davis, for example, have an alternative 6-mile route to bypass the blocked railroad crossings instead of a direct quarter-mile trip (Figure 21).

g. Provides Economic Benefit

The ODOT OCM Project is an economic generator for the City of Davis. The project will eliminate transportation and accessibility issues within Davis as well as allow for the expansion of the two largest companies within the city, Stillwater Milling Company and Hanson Aggregates. These companies are in industries that are dependent on rail, and any expansion would require that the present issue of limited capacity for loading and unloading as well as the existing siding track be addressed. The OCM Project also improves the operations and reliability of the BNSF railroad and their freight delivery service.

Located a few miles west of Davis, I-35 has local, state, national, and international significance as a key transportation corridor for passengers and goods, acting as one of Oklahoma's most critical links both socially and economically. Considerable growth in freight volumes along the I-35 corridor south of Davis in Texas is projected over the next 25 years as the population growth within the Texas Triangle—the urban megaregion consisting of the Dallas-Fort Worth, Houston, San Antonio, and Austin metropolitan areas—remains the fastest growing megaregion in the country. To meet this future freight demand, railroad companies and the FRA have shown strong support for projects that eliminate at-grade crossings. These aspects are directly in alignment with helping the United States compete in a global economy by facilitating efficient and reliable freight movement.

h. Uses Contracting Incentives to Employ Local Labor, to the Extent Permissible Under Federal Law

The possibility to employ local labor is minimum for railroad work due to railroad union labors. Where non-railroad work is accomplished, local contractors may be used.

TECHNICAL MERITS

a. Statement of Work tasks and subtasks outlined are appropriate

The ODOT OCM Project will include the construction of approximately 9,920 feet of track siding to the south and remove 4,170 feet of existing siding track from Benton Avenue and Main Street. All siding and industry operations will be south of Main Street and about 300 feet north of the Haliburton Road / County Road N-3310 railroad crossings. The project will also see the closure of two at-grade railroad crossings along the BNSF railroad line at Atlanta Avenue and Hanover Road. The five railroad crossings included in the project scope are located at Benton Avenue (020742X), Main Street (020741R), Atlanta Avenue (020740J), Hanover Road (020739P), and Haliburton Road/County Road N-3310 (020735M).

b. Demonstrates strong project readiness

As the project sponsor, ODOT has decades of experience with receipt and expenditure of federal transportation funds. ODOT also has a long history of delivering similar projects and this project aligns with ODOT's progress-to-date of addressing at-grade rail crossings. ODOT is committed to improving conditions and safety on Oklahoma bridges and roads.

ODOT manages a large portfolio of Federal funds that are programmed within the ODOT Eight-Year Construction Work Plan (CWP). Specific to competitive federal grant funding, ODOT has experience with multiple large infrastructure projects funded in part by the USDOT, such as INFRA, RAISE, BUILD, CHBP, and TIGER grant. ODOT has a successful history of partnering with other agencies including local governments and tribal nations to complete projects.

c. Technical Qualifications and Experience of Personnel

ODOT has qualified personnel to manage the OCM Project effectively, Jared Schwennesen, P.E. will serve as the project manager for this project. Mr. Schwennesen was named the Rail Division Manager for the ODOT in June. In 2009, Schwennesen began his tenure with ODOT as an Engineer in Training. Since then, he has held roles in Bridge Division, Traffic Division, Maintenance in ITS and Fiber Optics and Environmental Programs Division. His most recent position was serving as the assistant to the Director of Capital Programs.

In 2007, Schwennesen earned his Bachelor of Science in Civil Engineering from the University of Oklahoma. In 2008, He went on to earn his Master of Science in Civil Engineering from OU and joined ODOT soon after. Additionally, he gained his professional engineering license in 2012. Having worked as a manager and designer in a diverse group of ODOT divisions, Schwennesen is prepared to lead the Rail Division as it seeks to improve Oklahoma's passenger and freight rail systems.

In Schwennesen's time at the department, he contributed to special initiatives such as the update of ODOT's Strategic Plan, the rollout of OKroads.org, installation of electric vehicle charging stations, grant applications and bundling projects. He has also served as the Oklahoma Director of the Board for ITS Heartland.

d. Project is in the freight investment plan

The ODOT OCM Project is not specifically mentioned in the Oklahoma Statewide Freight and Passenger Rail Plan yet aligns with the goal to Maintain and develop a dynamic rail system that provides safe, efficient, and environmentally sound movement of goods. The project further aligns with the objective to provide a safe and secure rail system that employs advances in rail technology to protect both people and assets.

However, the project is mentioned in the Draft Oklahoma State Rail Plan, dated September 15, 2021. On April 21-21, 2021, ODOT and BNSF had their first community meetings with Thackerville, Dougherty, Davis, Noble, Norman, and Edmond on the BNSF Red Rock Subdivision.

The topics of discussion in those community meetings included the following topics:

1. Existing road crossings
 2. Locations of multiple tracks
 3. Grade crossing rationalization and consolidation alternatives
 4. Occupied crossing mitigation alternatives
 5. ODOT's federal crossing safety program
 6. Consideration for funding opportunities with federal grants
- e. Project will use innovative technologies, design or construction techniques or materials will reduce GHG emissions**

Currently, only proven solutions for safety and freight movement will be used for this project.

- f. Project has support from impacted Rail Carriers**

The Letter of Support from BNSF Railway can be seen in Appendix A.

- g. Project will improve the mobility modes of transportation, including entry and exit from freight facilities, pedestrians, bicycles, and public transportation**

The ODOT OCM Project will improve the mobility modes of transportation within Davis. The project will also improve sustainability through creating a more interconnected roadway network for the residents of Davis that can promote less driving for motorists, bicyclists, and pedestrian accessibility within the city. The roadway network within the city plays a significant role in the daily movement of people and goods throughout Davis and the main roads within the city are frequently blocked at the railroad crossings. These blocked railroad crossings effectively isolate the east side from the west of Davis unless bypassed with a circuitous route. With the construction of approximately 9,920 feet of track siding to the south and removal of 4,170 feet of existing siding track from Benton Avenue (020742X) and Main Street (020741R), these railroad crossings will no longer be blocked by the operational activities from the city's rail dependent industries.

8.2 SELECTION CRITERIA

A. SAFETY

The OCM Project is a locally significant capital project to preserve the reliability of the rail line and maintain safe transportation for motorists in Davis while simultaneously allowing for the main local industries to maintain and expand their operations. The data produced by the FRA and managed through the OK.RAIL software is shown in **Table** . No vehicle-train collisions occurred within the most recent 5 years. However, the higher traffic volume along Main Street increases the risk for an incident.

Safety benefits from the project include removing the vehicle-train interactions and the potential for future crashes given the higher traffic volume along SH 7. In addition, the project also promotes pedestrian and bicycle safety since frustrated individuals may be tempted to crawl between stopped railcars. Within the last decade, there have been two collisions within Davis that have resulted in fatalities. The adjacent crossing to the north at Benton Avenue experienced one crash that resulted in one fatality in 2017. **Table** shows the 10-year history of crashes that occurred at the subject crossings.

Table 4: 10-Year (2012-2021) Crash History at Railroad Crossings

Grade Crossing ID	Highway Name	Date	Time	Total Crashes	Total Killed	Total Injured
020742X	Benton Avenue	10/24/2014	12:05:00 AM	1	1	0
020742X	Benton Avenue	4/21/2017	7:47:00 PM	1	1	0
020741R	Main Street	N/A	N/A	0	0	0
020740J	Atlanta Avenue	N/A	N/A	0	0	0
020739P	Hanover Road	N/A	N/A	0	0	0
020735M	Haliburton	10/25/2014	8:04:00 PM	1	0	0
020735M	Haliburton Road / County Road N-3310	12/15/2016	6:59:00 PM	1	0	0
020735M	Haliburton Road / County Road N-3310	1/11/2020	3:39:00 AM	1	0	0
Total				5	2	0

B. EQUITABLE ECONOMIC STRENGTH AND IMPROVING CORE ASSETS

The ODOT OCM Project will be an economic generator for the City of Davis. The project will eliminate transportation and accessibility issues within Davis while also substantially increasing the operational efficiencies of the BNSF Railroad and for the rail intensive industries it serves in Davis. By relocating 4,170 feet of existing siding track from Benton Avenue (020742X) and Main Street (020741R) and relocating approximately 9,920 feet of track siding to the south, BNSF will improve the reliability

of the BNSF railroad and their freight delivery service without affecting transportation accessibility in the community. The two largest companies within the city, Stillwater Milling Company and Hanson Aggregates, will also benefit from this project as they are both rail-dependent industries with limited supply capacity on-site. The project will alleviate capacity restrictions for loading and unloading freight cars and allow for their future business expansion.

C. EQUITY AND BARRIERS TO OPPORTUNITY

Davis falls within Census Tract 40099790700 within Murray County, Oklahoma. According to the U.S. DOT definition for highly disadvantaged communities using existing, publicly available data sets, Davis is a Transportation Disadvantaged Community, Health Disadvantaged, and Resilience Disadvantaged.

- Transportation Access disadvantage identifies communities and places that spend more, and longer, to get where they need to go.
- Health disadvantage identifies communities based on variables associated with adverse health outcomes, disability, as well as environmental exposures.
- Resilience disadvantage identifies communities vulnerable to hazards caused by climate change according to the Federal Emergency Management Agency National Risk Index.

The OCM Project addresses the disadvantage of transportation access by improving the local roadway network and lowering vehicle miles driven as well as improving pedestrian and bicycle access within the city. The project also addresses the health disadvantages and resilience disadvantages by improving the response time for first responders to emergencies for the residents of Davis, allowing residents access to better medical care.

D. CLIMATE CHANGE AND SUSTAINABILITY

The OCM Project promotes sustainability through creating a more interconnected roadway network for Davis residents that can reduce driving for motorists and improve pedestrian accessibility within the City, thereby reducing car dependence. The roadway network within the City plays a significant role in the daily movement of people and goods throughout the City. Due to the railroad bisecting the City, the residents of Davis are effectively isolated when a BNSF freight train is blocking the crossings, unless they opt to drive an additional 6 miles via Primrose Lane to the south. This project significantly reduces transportation-related air pollution and greenhouse gas emissions by reducing VMT, commute time, and reducing congestion and, therefore, idle emissions at the railroad crossings in the City. The increased accessibility for motorists and pedestrians will conserve energy since there will be shorter distances to travel instead of a 6-mile trip bypassing the blocked railroad crossings. This accessibility benefit will reduce fuel consumption and improve air quality for Davis.

E. TRANSFORMATION OF OUR NATION'S TRANSPORTATION INFRASTRUCTURE

Davis is located within the I-35 transportation corridor, one of the most important trade corridors in the country. This central location within the U.S. results in the state being a bridge for freight moving across the country. Since the passage of North

American Free Trade Agreement (NAFTA) in 1994, the I-35 transportation corridor is vital in connecting ports on the Gulf Coast and markets in Mexico with the central U.S. become an increasingly important thoroughfare for trade among the United States, Mexico, and Canada. Railroads transport a significant amount of rail freight traffic, approximately 85% in 2017, through the state that has neither an origin nor a destination within Oklahoma with Texas being the largest trading partner. Considerable growth in freight volumes along the I-35 corridor south of Davis in Texas is projected over the next 25 years as the population growth within the Texas Triangle—the urban megaregion consisting of the Dallas-Fort Worth, Houston, San Antonio, and Austin metropolitan areas—remains the fastest growing megaregion in the country. The Texas Triangle megaregion had an economic output of \$1.5 trillion in 2021 and a population of just over 20 million people.

While the level of international trade represents significant economic opportunity, highways alone cannot meet the freight demands of the future in the I-35 Corridor. This growth offers economic opportunity, but it also brings additional challenges related to the impact on highway infrastructure, roadway maintenance, traffic congestion, traffic safety and air quality. Additionally, many sections of the existing highway are currently operating at less than desirable levels of service, and anticipated population growth within the corridor is expected to exacerbate the situation. Addressing the operational bottlenecks in the freight railway network, such as projects to address safety of rail-highway at-grade crossings, are imperative to ensure efficient and reliable freight rail network for the I-35 Corridor.

F. ELIMINATING CROSSINGS AND MAKING CORRIDOR-WIDE IMPROVEMENTS

The ODOT OCM Project will result in the elimination of two at-grade railroad crossings along the BNSF railroad line at Atlanta Avenue (020740J) and Hanover Road (020739P). In addition to the close of the two at-grade railroad crossings, the project will increase the operational efficiencies of the BNSF Railroad and for the rail intensive industries they service in Davis by relocating approximately 9,920 feet of track siding to the south and removing 4,170 feet of existing siding from Benton Avenue (020742X) and Main Street (020741R). This project also benefits Amtrak, the highest priority user of the rail line as the additional siding track will help alleviate any congestion issues for the Heartland Flyer, which travels through Davis.

G. GEOGRAPHIC DIVERSITY

The ODOT OCM Project is in a Rural Area as defined by the USDOT.

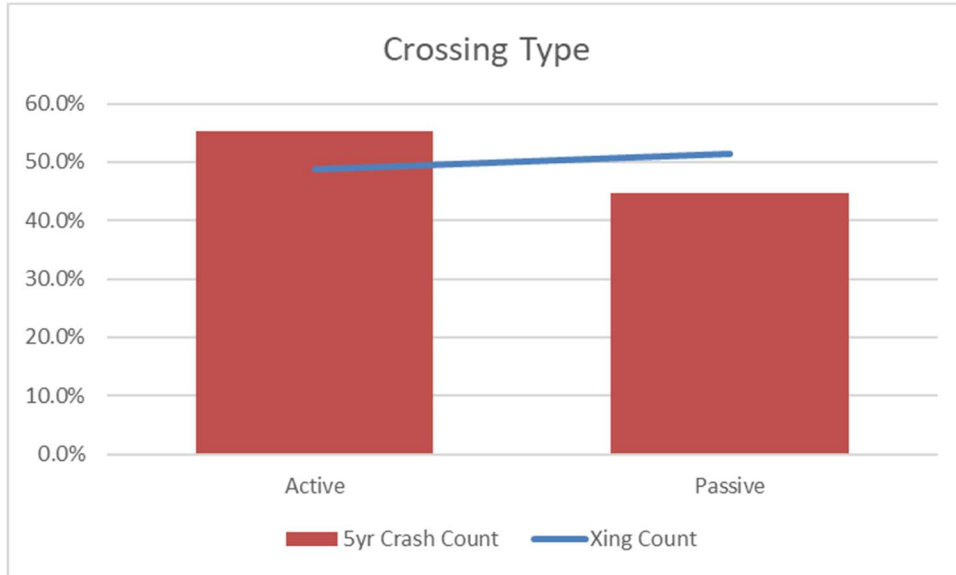
9. Safety Benefit

As the FRA notes, “The safest grade crossing is one that doesn’t exist.” The ODOT OCM Project is a locally significant capital project to improve safety and mobility for first responders and residents in the city, while simultaneously preserving the reliability of the railroad line operations for local and regional industries.

Reducing the risk of severe vehicle-train crashes is one of the greatest benefits to closing both the Atlanta Avenue and Hanover Road rail crossings. Considering the 3,363 public at-grade rail crossings in Oklahoma, over 55 percent of crashes occur at locations with active crossing devices. **Figure** shows crashes are overrepresented

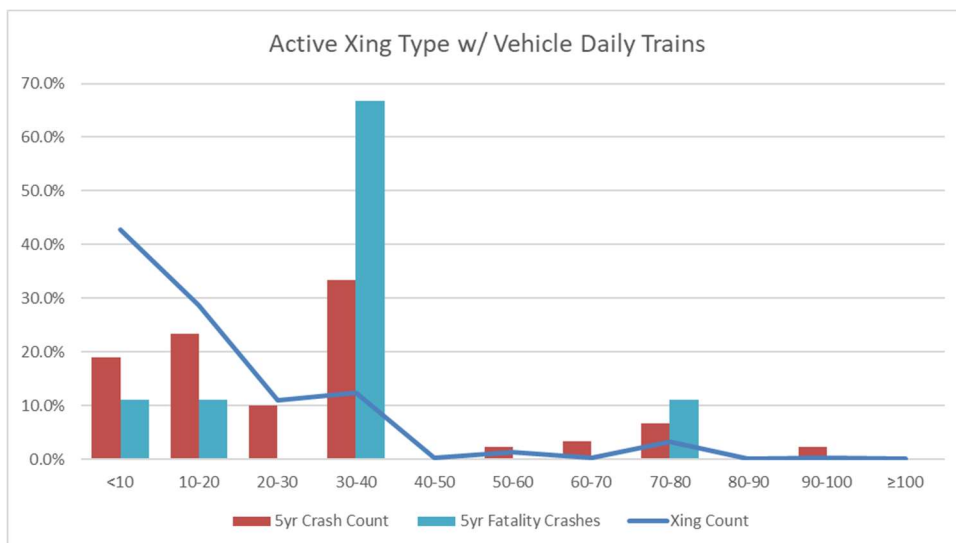
because only 50 percent of crossings have active control types throughout the state. While there are not any reported crashes in recent history at these two Davis crossings, closing both will reduce the risk of any future incidents.

Figure 22: Active vs. Passive Crossing Type Crash Distribution



Another way to quantify the benefit to the proposed closures is by targeting crossings that see 30 to 40 trains per day. **Figure** shows a grouping of at-grade crossings with active crossing equipment with the daily number of trains. In the past 5 years, over 33 percent of the total crashes (and more than 66 percent of the fatal crashes) occurred at just 12 percent of the active crossings where the number of trains observed is between 30 and 40.

Figure 23: Active Crossing Type with Vehicle Daily Trains



This type of proactive assessment to improve safety plays a crucial role in the project and supports the closure of the Atlanta Avenue and Hanover Avenue crossings.

10. Project Implementation and Management

Rail safety is a critical component of ODOT's mission. ODOT, which oversees rail safety within the state, invested more than \$100 million in railroad crossing improvements during the past five years. About 300 railroad crossings like this one will be improved with safety devices thanks to a \$100 million initiative by ODOT. ODOT has successfully worked in partnership with the railroad companies and federal government, including the federally mandated Oklahoma Highway-Rail Grade Crossing State Action Plan (SAP), to make continued safety improvements with its 3,450 public at-grade crossings. A Letter of Support for the ODOT OCM Project from Oklahoma Secretary of Transportation Tim J. Gatz can be found in Appendix A.

ODOT can complete all pre-construction activities outlined in this narrative by the first half of 2023.

11. Environmental Readiness

ODOT and the BNSF have a history of completing environmental reviews for grant efforts. While this project does not have any environmental work done at this time, ODOT will coordinate with FRA to complete the environmental studies so FRA can conduct consultations with the appropriate environmental agencies. ODOT understands that FRA is the federal nexus and ODOT has not been granted any consultative authority for FRA funded projects. ODOT will begin the NEPA process upon award of the grant.

Appendix A: Letters of Support



French Thompson
General Director
Public Infrastructure & Investments

BNSF Railway Company
P. O. Box 961502
Fort Worth, TX 76161-0052

2600 Lou Menk Drive
Fort Worth, Texas 76131-2830
(817) 352-6316

French.Thompson@BNSF.com

October 11, 2022

Amit Bose, Administrator
Federal Railroad Administration
1200 New Jersey Ave, SE
Washington, DC 20590

Subject: BNSF Letter of Support – Davis, OK Railroad Siding Relocation

Dear Administrator Bose,

BNSF Railway supports efforts by the Oklahoma Department of Transportation (ODOT) to secure federal discretionary funding under the 2022 Railroad Crossing Elimination (RCE) grant for the Davis, OK Railroad Siding Relocation Project. If awarded, the project will eliminate the existing siding track and construct nearly 2 miles of new siding track south of the existing location. BNSF would be willing to contribute \$3M in private matching funds toward the total project cost of \$31.8M, with a request of \$25,447,960 from RCE.

BNSF values our working relationship with the ODOT and is prepared to work with all involved public agencies on further development of this project, subject to satisfactory review of funding requirements, final engineering, and entering into definitive agreements as may be required by BNSF or other project stakeholders.

BNSF appreciates your thorough review of this application and looks forward to continuing its relationship with the ODOT through this important project.

Sincerely,

A handwritten signature in black ink, appearing to read "French Thompson", with a stylized flourish at the end.

French Thompson
General Director – Public Infrastructure & Investments



October 10, 2022

The Honorable Pete Buttigieg
U.S. Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, D.C. 20590


RE: Railroad Crossing Elimination Program – ODOT Occupied Crossing Mitigation Project in Davis, OK

Dear Secretary Buttigieg,

On behalf of the Oklahoma Department of Transportation (ODOT), I am pleased to present this application for Railroad Crossing Elimination (RCE) Program grant funds. We take pride in our mission “to provide a safe, economical and effective transportation network for the people, commerce and communities of Oklahoma” and this application has been developed in this spirit.

ODOT is committing \$3,361,990 in non-federal funds of future eligible project costs as local match for the Occupied Crossing Mitigation Project in Davis, OK, should it be selected for award of RCE grant funds. Thank you very much for your consideration and please feel free to call on us should you have questions or if we can provide additional information.

Sincerely,



Tim J. Gatz
Secretary of Transportation

City of Davis



RESOLUTION #617

A RESOLUTION AUTHORIZING THE APPLICATION FOR THE RAILROAD CROSSING ELIMINATION DISCRETIONARY GRANT PROGRAM, THROUGH THE U.S. DEPARTMENT OF TRANSPORTATION.

WHEREAS, the City/Town of Davis in a joint effort with Oklahoma Department of Transportation, seeks funding from the U.S. Department of Transportation Federal Railroad Administration through the Railroad Crossing Elimination discretionary grant program to fund the proposed track work to improve the flow and safety of the existing railroad tracks and road crossings.

WHEREAS, the purpose of the grant program is to fund highway-rail or pathway-rail grade crossing improvement projects that focus on improving safety and mobility of people and goods (49 U.S.C.22909).

WHEREAS, the project improvements require the City of Davis to permanently close, abandon and remove 160-ft section of Atlanta Avenue – DOT No. 020740J at railroad milepost 477.776 on BNSF's right of way from 75' west of and to a point 85' east of the centerline of the eastern-most track. The Resolution to be contingent upon the Railroad Crossing Elimination Discretionary Grant being approved.

WHEREAS, the City of Davis does not have jurisdiction on the ownership or maintenance of McKee Industrial Rd up to BOTH of BNSF's right of way lines.

THEREFORE, BE IT RESOLVED, Brian Davis, Mayor and Susan Suther, City Clerk/Treasurer are authorized to sign all related documentation necessary to file for and process a grant through U. S. Department of Transportation Federal Railroad Administration on behalf of the City of Davis.

This Resolution is approved in open meeting of the City/Town of Davis, Oklahoma, on the 7 day of October, 2022.

Attest:

Susan Suther, City Clerk/Treasurer

CITY OF DAVIS

Brian Davis, Mayor

APPROVED as to form and content this 7 day of October, 2022.

Mark Melton, City Attorney