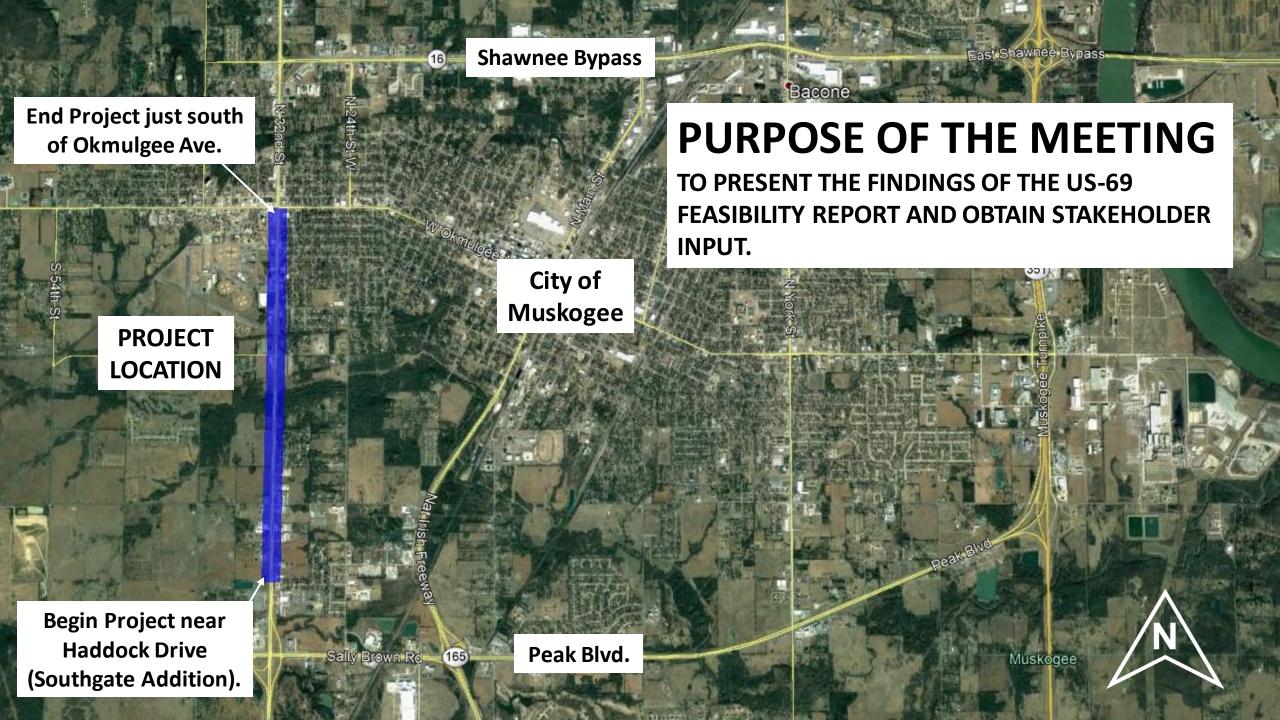
# US-69 thru City of Muskogee Feasibility Report

EC-1576 | Muskogee County | JP27108(04)





#### PURPOSE OF THE PROJECT

THE PURPOSE & NEED FOR THIS PROJECT IS TO PROVIDE OPERATIONAL IMPROVEMENTS INCLUDING:

- ➤ IMPROVEMENTS TO A PEDESTRIAN BRIDGE (ABANDONED RAILROAD OVERPASS)
- ➤ EXTENSION OF AN EXISTING
  RECTANGULAR CONCRETE BOX BRIDGE
  OVER COODY CREEK
- > RECONSTRUCTION OF PAVEMENT
- > OPTIMIZATION OF SIGNALIZED INTERSECTIONS





# **EXISTING ROADWAY**

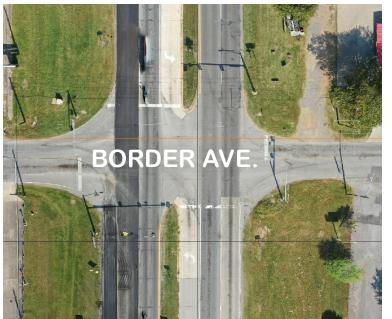


#### **INTERSECTIONS**

CURRENTLY THERE ARE FOUR SIGNALIZED INTERSECTIONS ON US-69 WITHIN THE PROJECT EXTENTS AT:

- ➤ OKMULGEE AVENUE
- > ARLINE AVENUE
- > BORDER AVENUE
- > HANCOCK STREET









# TRAFFIC VOLUMES

# CURRENT TRAFFIC CONDITIONS APPROX 25% ARE TRUCKS

	LOCATION							
	SOUTH OF PROJECT	BEGINNING OF PROJECT	END OF PROJECT	NORTH OF PROJECT				
YEAR	S. OF PEAK BLVD (SH-165)	NEAR HADDOCK DRIVE (SOUTHGATE ADDITION)	OKMULGEE AVENUE (US-62/SH-16)	DENISON STREET (NEAR BANK OF OK)				
	VEHICLES PER DAY	VEHICLES PER DAY	VEHICLES PER DAY	VEHICLES PER DAY				
2019	20,100	23,000	20,600	23,700				
2018	19,600	21,000	20,900	25,800				
2017	19,800	20,800	23,900	25,600				
2016	19,200	20,100	23,200	24,800				
2015	18,600	19,600	22,500	24,000				

DATA GATHERED FROM ODOTS ONLINE PUBLIC DATABASE.

#### COLLISION DATA

#### FEBRUARY 1, 2014 THRU DECEMBER 31, 2019

#### Three fatalities in the study period were found:

- Pedestrian collision near Inman Street, 4-13-2014
- Right angle collision (front to side) with vehicle crossing median near Arline Avenue, 5-7-2016
- Head-on collision (front to front) near Haddock Drive, 11-17-2019

Collisions from Border Ave. to Okmulgee Ave. (CS 56, MP 14.61 to CS 18, MP 0.00)								
Location	Collisions	Possible Injury	Non- Incapacitating Injury	Suspected Serious Injury	Fatality			
Denver	18	4	1	-	-			
Elgin	4	1	1	-	-			
Estelle	9	1	-	1	-			
Okmulgee	54	4	4	-	-			
Arline	36	5	4	-	1			
Border	30	6	2	-	-			
US-69	50	5	4	2	-			

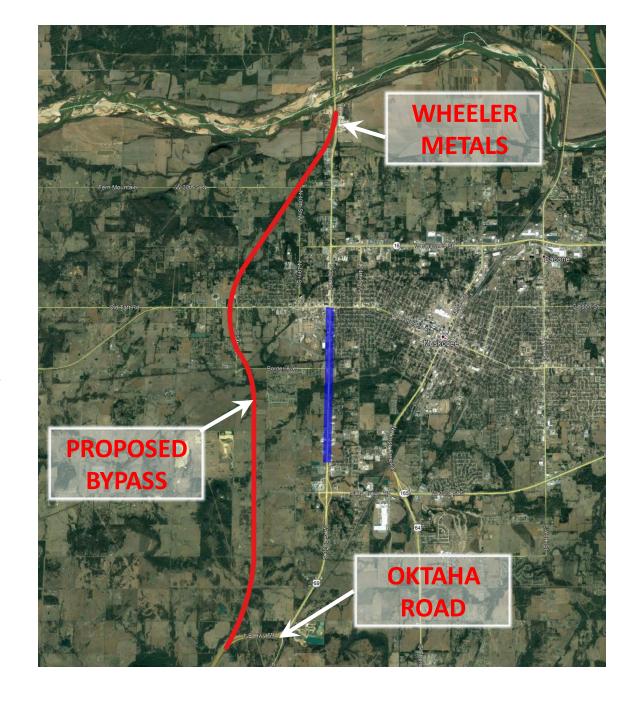
<sup>\*</sup> This data is dependent on various local and state agency incident reports and descriptions.

# PROJECT BACKGROUND

- ➤ 2014 HOLLOWAY, UPDIKE & BELLEN, INC. (HUB) WAS TASKED WITH DESIGNING UPGRADES TO THE CORRIDOR INCLUDING WIDENING PORTIONS TO 6 LANES, REPLACING THE RAILROAD PEDESTRIAN BRIDGE AND UPDATING TRAFFIC SIGNALS TO MATCH ASPECTS ALONG US-69 FROM OKMULGEE AVE. NORTH TO SHAWNEE BYPASS, WHICH WAS COMPLETED IN 2006.
- ➤ 2017 HUB WAS DIRECTED TO CEASE DESIGN WORK AS THE OKLAHOMA DEPARTMENT OF TRANSPORTATION (ODOT) DECIDED TO EXPLORE REALIGNMENT OF US-69 TO LOOP AROUND THE WEST SIDE OF MUSKOGEE. THIS REALIGNMENT CAME WITH OPPOSITION FROM THE CITY OF MUSKOGEE, AS WELL AS NUMEROUS RESIDENTS AND PROPERTY OWNERS ALONG THE EXISITNG CORRIDOR.
- ➤ 2020 ODOT HAS REFOCUSED ATTENTION ON UPDATING THE EXISTING CORRIDOR AND TASKED HUB TO RESUME DESIGN WORK.

## BYPASS INVESTIGATION

- ➤ THE PROPOSED BYPASS WOULD BEGIN SOUTH OF MUSKOGEE AND TIE BACK INTO US-69 JUST SOUTH OF THE ARKANSAS RIVER CROSSING.
- THERE WOULD BE LIMITED ACCESS ALONG THE NEW CORRIDOR WITH INTERCHANGES AT THE TIE-IN POINTS, OKMULGEE AVE.(US-62) AND POTENTIALLY PEAK BLVD (SH-165).

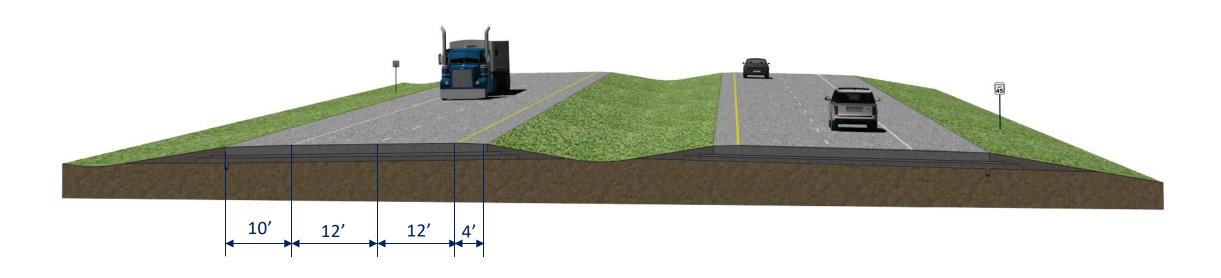


# DESIGN OPTIONS BEING CONSIDERED

- HUB WAS TASKED WITH EVALUATING THE FEASIBILITY OF THREE DESIGN OPTIONS
- OPTION 1: CONSTRUCTION OF 6-LANE CURB & GUTTER WITH RAISED MEDIAN.
- OPTION 2: CONSTRUCTION OF 7-LANE CURB & GUTTER WITH CONTINUOUS TWO-WAY LEFT TURN LANE.
- OPTION 3: RECONSTRUCT THE EXISTING 4-LANE CURB & GUTTER WITH RAISED MEDIAN.
- ALL OPTIONS WOULD MAINTAIN THE EXISTING ARRANGEMENT FROM THE BEGINNING OF PROJECT TO BORDER AVENUE CONSISTING OF AN OPEN SECTION DIVIDED 4-LANE ROADWAY

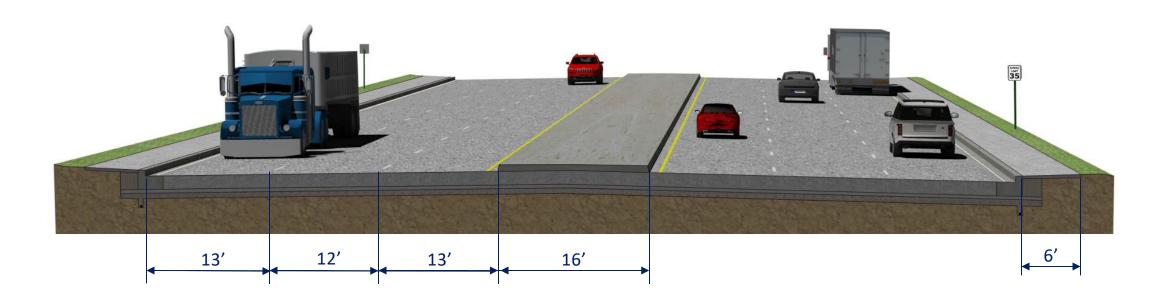
#### TYPICAL OPEN ROADWAY SECTION

FROM HADDOCK DRIVE (SOUTHGATE ADDITION) NORTH TO BORDER AVENUE THE ROADWAY WILL BE RECONSTRUCTED IN ITS CURRENT CONFIGURATION. THE ROADWAY WILL FEATURE 2-12' DRIVING LANES, 4' INSIDE SHOULDERS AND 10' OUTSIDE SHOULDERS FOR NORTHBOUND AND SOUTHBOUND DIRECTIONS.



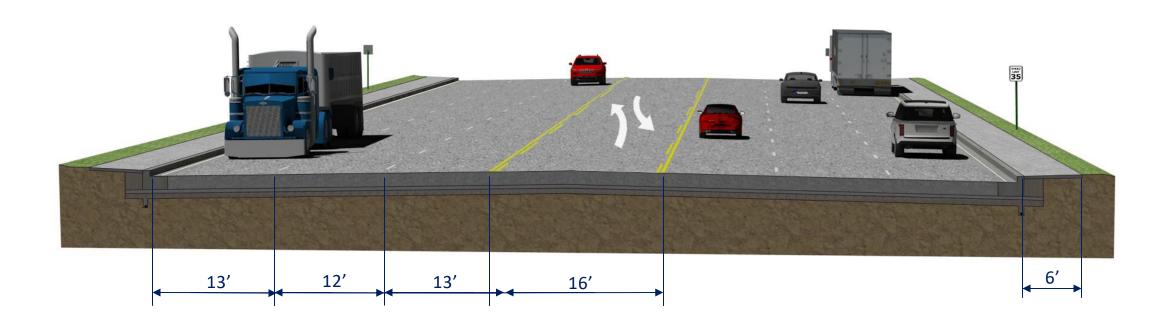
#### OPTION 1: 6-LANE WITH RAISED MEDIAN

- COMPLETE RECONSTRUCTION OF OPEN SECTION DIVIDED 4-LANE ROADWAY FROM BOP TO BORDER AVE. AND CONSTRUCTION OF 6-LANE CURB & GUTTER WITH RAISED CONCRETE MEDIAN FROM BORDER AVE. TO EOP.
- THE CONSTRUCTION, RIGHT-OF-WAY, AND UTILITY COST ESTIMATE FOR THIS ALTERNATIVE IS \$35,926,000.



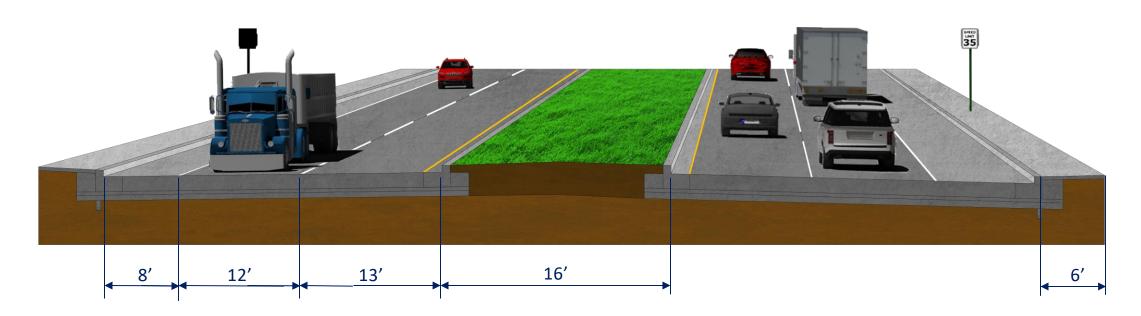
# OPTION 2: 7-LANE W/ CONTINUOUS TWLTL

- COMPLETE RECONSTRUCTION OF OPEN SECTION DIVIDED 4-LANE ROADWAY FROM BOP TO BORDER AVE. AND CONSTRUCTION OF 7-LANE CURB & GUTTER WITH CONTINUOUS CENTER TURN LANE FROM BORDER AVE. TO EOP.
- THE CONSTRUCTION, RIGHT-OF-WAY, AND UTILITY COST ESTIMATE FOR THIS ALTERNATIVE IS \$35,607,000.



#### OPTION 3: 4-LANE WITH RAISED MEDIAN

- COMPLETE RECONSTRUCTION OF OPEN SECTION DIVIDED 4-LANE ROADWAY FROM BOP TO BORDER AVE. AND RECONSTRUCTION OF EXISITING 4-LANE CURB & GUTTER WITH RAISED MEDIAN FROM BORDER AVE. TO EOP.
- THE CONSTRUCTION, RIGHT-OF-WAY, AND UTILITY COST ESTIMATE FOR THIS ALTERNATIVE IS \$27,277,000.



ALTERNATIVE COST COMPARISON							
	OPTION 1		OPTION 2		OPTION 3		
		(6-Lane)	(7-Lane)			(4-Lane)	
ROADWAY	\$	22,850,000	\$	22,350,000	\$	19,400,000	
BRIDGE A	\$	385,000	\$	385,000	\$	385,000	
BRIDGE B	\$	880,000	\$	880,000	\$	880,000	
CONST. TRAFFIC CONTROL	\$	750,000	\$	750,000	\$	750,000	
SIGNING & STRIPING	\$	150,000	\$	155,000	\$	150,000	
TRAFFIC SIGNALS	\$	1,450,000	\$	1,450,000	\$	1,450,000	
TRAFFIC LIGHTING	\$	600,000	\$	600,000	\$	600,000	
STAKING	\$	220,000	\$	220,000	\$	220,000	
MOBILIZATION	\$	1,000,000	\$	1,000,000	\$	1,000,000	
COSTRUCTION TOTAL	\$	28,285,000	\$	27,790,000	\$	24,835,000	
RIGHT-OF-WAY	\$	5,642,000	\$	5,818,000	\$	443,000	
UTILITIES	\$	1,999,000	\$	1,999,000	\$	1,999,000	

	1				_	
TOTAL	\$	35,926,000	\$	35,607,000	<b>\$</b>	27,277,000
	•	, ,	•	, ,	•	, ,

# LEVEL OF SERVICE COMPARISON

- LEVEL OF SERVICE(LOS) IS A TERM USED TO QUALITATIVELY DESCRIBE THE OPERATING CONDITIONS OF A ROADWAY BASED ON FACTORS SUCH AS SPEED, TRAVEL TIME, MANEUVERABILITY, DELAY AND SAFETY. THE LEVEL OF SERVICE A FACILITY IS DESIGNATED WITH A LETTER, A TO F, WITH A REPRESENTING THE BEST OPERATING CONDITIONS AND F THE WORST.
- > SINCE THE INITIAL ANALYSIS, THE 7-LANE OPTION WAS INTRODUCED AND THE ENTRANCE TO THE HATBOX COMPLEX VIA ESTELLE STREET WAS ABANDONED. BECAUSE OF THIS, ODOT TRAFFIC DIVISION WAS TASKED WITH UPDATING ANALYSIS COMPARING THE THREE OPTIONS.
- ➤ DESIGN TRAFFIC FOR THE CORRIDOR FOR YEARS 2018 AND 2050 WERE PROVIDED BY ODOT'S STRATEGIC ASSET AND PERFORMANCE MANAGEMENT DIVISION FROM 2018. THESE YEARS AND VOLUMES ARE THE BASIS OF ODOT'S OPERATIONAL ANALYSIS.
- ➤ KEY DATA AND RESULTS GLEANED FROM THE ANALYSIS ARE ILLUSTRATED IN TABLES 6, 7, 8
  AND 9. TABLES 6 AND 7 SHOW ARTERIAL LEVEL OF SERVICE INFORMATION WHILE TABLES 8
  AND 9 INCLUDE INTERSECTION LEVEL OF SERVICE INFORMATION. NOTE THAT THE 6-LANE
  AND 7-LANE OPTIONS ARE REPORTED AS THE SAME COLUMN IN THE TABLES.
- FROM AN OPERATIONS/ANALYTICAL PERSPECTIVE THERE IS LITTLE DIFFERENCE BETWEEN THESE OPTIONS.
- ➤ THE V/C RATIO IN TABLES 8 AND 9 IS DERIVED BY THE VOLUME OF TRAFFIC DIVIDED BY THE CAPACITY OF THE ROADWAY. V/C RATIOS BELOW 0.95 ARE IDEAL, BUT V/C ≤1.05 DURING OUT YEAR PEAK IS LIKELY ACCEPTABLE SINCE DESIGN TRAFFIC NUMBERS USUALLY REPRESENT WORST-CASE CONDITIONS.

#### ARTERIAL LEVEL OF SERVICE

Several signals were identified with malfunctioning or broken loops. They are being repaired now(10-14-2020).

Table 6. 2018 Arterial Level of Service / Arterial Speed (mph) / Travel Time (min' sec)

Direction	Period	Repaired Signals	4-Lane Divided Option	6- and 7-Lane Options
NB	AM Peak	B / 28 / 09' 27	B / 29 / 09' 06	B / 29 / 09' 00
SB	AM Peak	B / 30 / 08' 33	B / 30 / 08' 24	B / 31 / 08' 13
NB	PM Peak	C / 27 / 09' 41	C / 27 / 09' 31	C / 28 / 09' 25
SB	PM Peak	C / 28 / 09' 05	B / 29 / 08' 48	B / 29 / 08' 42

Table 7. 2050 Arterial Level of Service / Arterial Speed (mph) / Travel Time (min' sec)

Direction	Period	<b>Maintained Signals</b>	4-Lane Divided Option	6- and 7-Lane Options
NB	AM Peak	E / 13 / 20' 02	E / 14 / 18' 48	E / 16 / 16′ 31
SB	AM Peak	E / 15 / 17' 10	E / 16 / 16' 11	E / 19 / 13'20
NB	PM Peak	F / 11 / 22' 53	F / 12 / 21' 47	E / 14 / 19' 17
SB	PM Peak	F / 10 / 25' 00	F / 11 / 22' 51	E / 15 / 16' 58

# INTERSECTION LEVEL OF SERVICE

Table 8. 2018 Intersection LOS - Maximum v/c Ratio for All Options

Intersection	2018 AM Repaired	2018 PM Repaired	2018 AM 4-Lane	2018 PM 4-Lane	2018 AM 6-/7-Lane	2018 PM 6-/7-Lane
US-69 & Fern Mountain/Harris	D-0.88	D-0.94	D-0.88	D-0.94	D - 0.88	D - 0.94
US-69 & Shawnee	D - 0.98	E - 1.05	D - 0.98	E - 1.05	D-0.98	D - 1.05
US-69 & Military/ Tahlequah	B - 0.74	B - 0.79	B - 0.74	B - 0.79	B - 0.74	B-0.79
US-69 & Broadway	C - 0.97	C-0.94	C - 0.97	C - 0.94	C-0.98	C - 0.94
US-69 & Okmulgee	D-0.96	D - 1.04	D-0.96	D - 1.04	C-0.91	D - 0.95
US-69 & Arline	B - 0.77	C - 0.99	B - 0.77	C-0.98	B-0.63	C-0.74
US-69 & Border	C-0.89	C-0.91	B - 0.77	C-0.78	B-0.74	B-0.61
US-69 & Hancock	C-0.79	C - 0.85	B - 0.74	C-0.80	B - 0.55	B - 0.73

Table 9. 2050 Intersection LOS - Maximum v/c Ratio for All Options

Intersection	2050 AM Maintained	2050 PM Maintained	2050 AM 4-Lane	2050 PM 4-Lane	2050 AM 6-/7-Lane	2050 PM 6-/7-Lane
US-69 & Fern Mountain/Harris	F - 1.37	F - 1.52	F - 1.37	F = 1.52	F - 1.37	F-1.52
US-69 & Shawnee	F = 1.37	F-1.56	F = 1.37	F = 1.56	F-1.37	F-1.56
US-69 & Military/ Tahlequah	B-0.98	D - 1.07	B - 0.98	D - 1.07	B-0.98	D - 1.07
US-69 & Broadway	F – 1.27	F = 1.31	F - 1.27	F = 1.31	F – 1.27	F = 1.31
US-69 & Okmulgee	F = 1.32	F = 1.50	F = 1.32	F = 1.50	F - 1.20	F = 1.33
US-69 & Arline	E - 1.31	F - 1.41	E - 1.31	F = 1.41	C-0.92	E-1.09
US-69 & Border	F – 1.37	F = 1.52	F = 1.32	F - 1.34	D - 0.97	C - 1.00
US-69 & Hancock	D = 1.23	F - 1.30	C - 1.04	D - 1.13	C-0.89	C-0.91

# **ACCESS REVIEW**

THE SECTION BETWEEN BORDER AVENUE AND OKMULGEE AVENUE CONTAINS 29 DRIVEWAYS ON THE WEST SIDE AND 31 DRIVEWAYS ON THE EAST SIDE, APPROXIMATELY 1 DRIVEWAY EVERY 70 FEET.



## **ACCESS REVIEW**

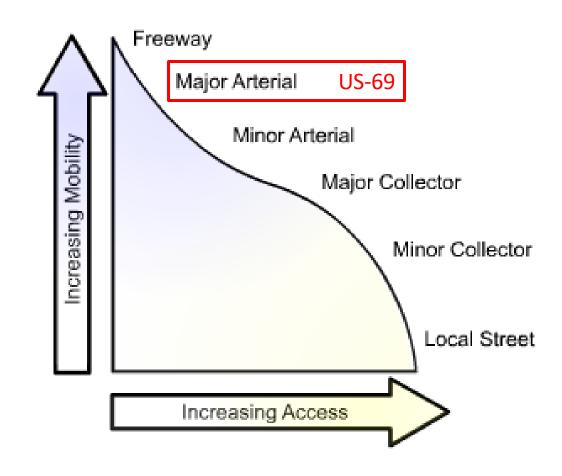
THE SECTION BETWEEN OKMULGEE AVENUE AND SHAWNEE CONTAINS 18 DRIVEWAYS ON THE WEST SIDE AND 10 DRIVEWAYS ON THE EAST SIDE, APPROXIMATELY 1 DRIVEWAY EVERY 189 FEET. SOME OF THESE DRIVEWAYS ARE RESTRICTED BY THE CENTER MEDIAN. THE DRIVEWAY DENSITY FOR THE SECTION WITH THE TWO-WAY LEFT TURN LANE IS 1 DRIVEWAY EVERY 175 FEET.



# FEDERAL HIGHWAY ADMINISTRATION (FHWA) ACCESS MANAGEMENT

#### ACCESS MANAGEMENT SHOULD ADDRESS:

- > FACILITY HIERARCHY
- > TRAFFIC SIGNAL SPACING
- > TURNING & AUXILIARY LANES
- > INTERSECTION/INTERCHANGE SPACING
- ➤ MEDIAN TREATMENTS/OPENINGS
- > STREET CONNECTIONS
- DRIVEWAY SPACING



# CORRIDOR SAFETY

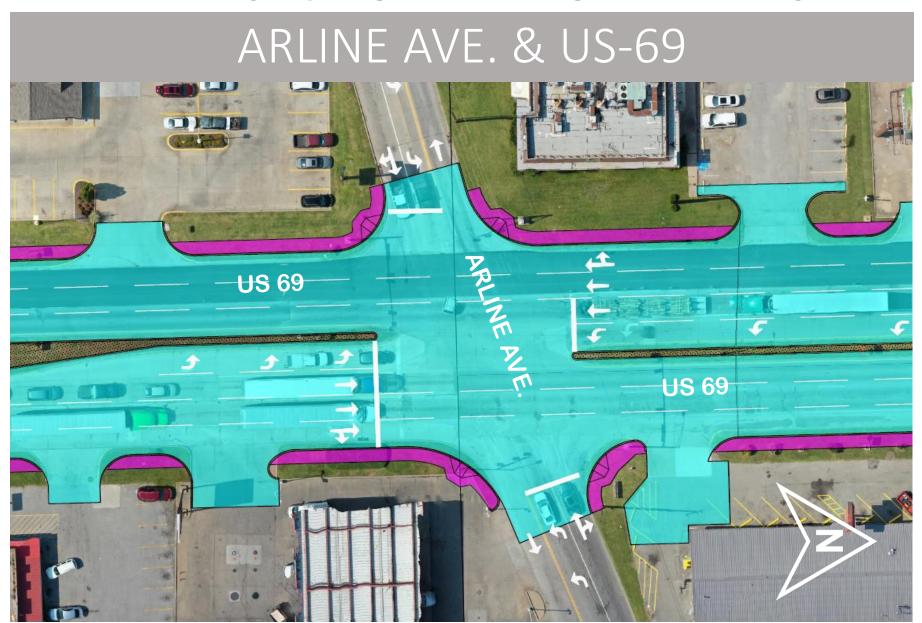
FACTS TO CONSIDER WHEN CHOOSING ALTERNATIVES REGARDING THE CORRIDOR FROM BORDER AVE. TO OKMULGEE AVE ARE AS FOLLOWS:

- > AS ACCESS DENSITY INCREASES CRASH RATES INCREASE.
- ➤ ROADWAYS WITH NON-TRAVERSABLE MEDIANS ARE SAFER THAN UNDIVIDED ROADWAYS OR THOSE WITH CONTINUOUS TWO-WAY LEFT-TURN LANES (TWLTL) PER NCHRP REPORT 420, 1999 (TRANSPORTATION RESEARCH BOARD NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM)
- ➤ HIGHWAY FACILITIES WITH NON-TRAVERSABLE MEDIANS HAD AN OVERALL ACCIDENT RATE OF 5.2 PER MILLION VEHICLES MILES TRAVELED (VMT) COMPARED WITH 7.3 PER MILLION VMT ON FACILITIES WITH TWLTLS. AVERAGE CRASH RATES ARE 30% LESS WITH MEDIAN.
- AS TRAFFIC VOLUMES RISE BEYOND 20,000 VEHICLES PER DAY, TWLTLS BEGIN TO DECREASE IN FUNCTIONALITY, RESULTING IN SAFETY PROBLEMS.

# INTERSECTION IMPROVEMENTS

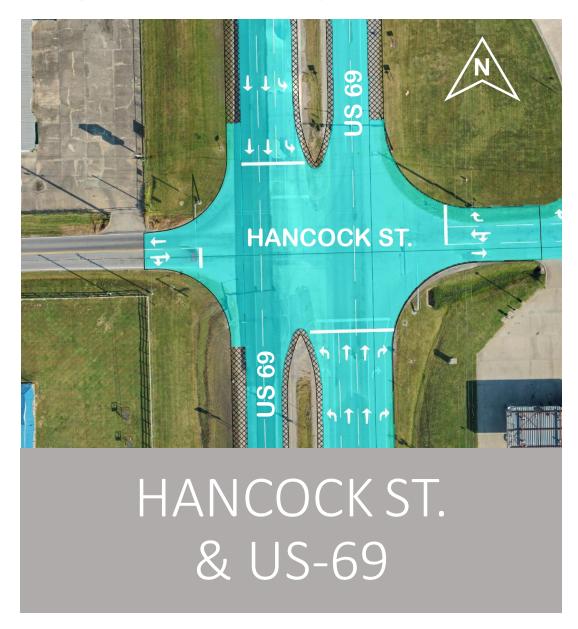


# INTERSECTION IMPROVEMENTS



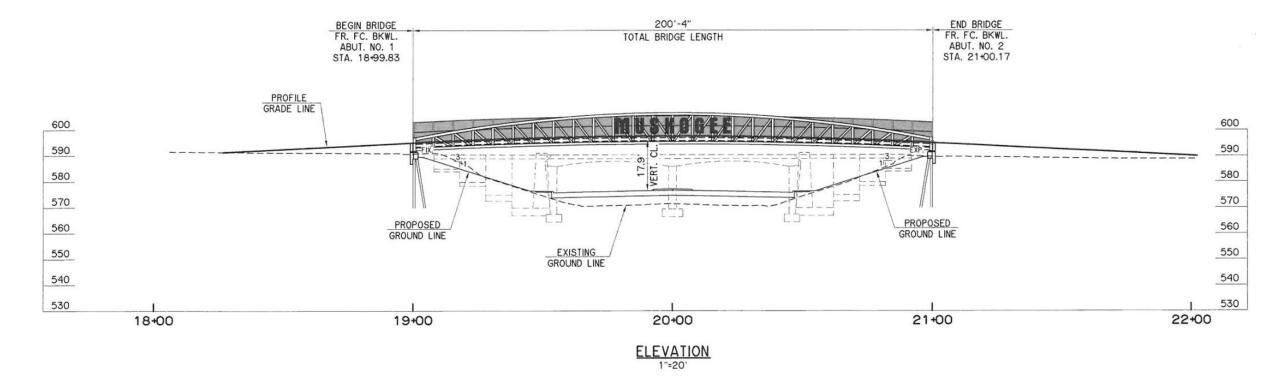
# INTERSECTION IMPROVEMENTS





#### CENTENNIAL TRAIL OVERPASS BRIDGE

- "MUSKOGEE" SIGNAGE TO BE APPROVED BY CITY OF MUSKOGEE AND COMPLEMENT OTHER SIGNAGE THROUGHOUT CITY
- ➤ US-69 GRADE BEING RAISED APPROXIMATELY 5'.
- > SECTION 4(F) NEEDS TO BE COMPLETED, TIMELINE TBD



# CENTENNIAL TRAIL OVERPASS BRIDGE AESTHETICS



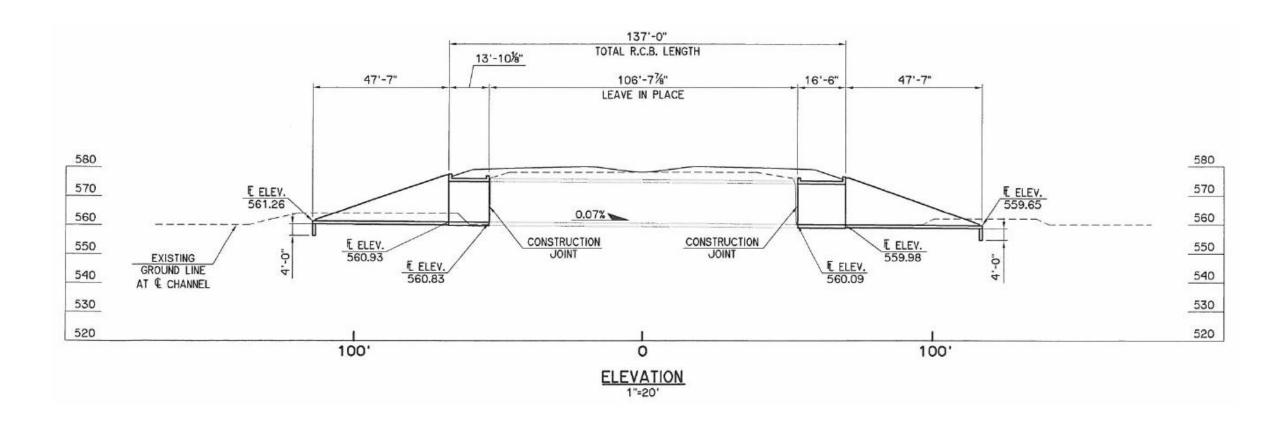
Keystone® Pedestrian Truss





#### COODY CREEK BRIDGE EXTENSION

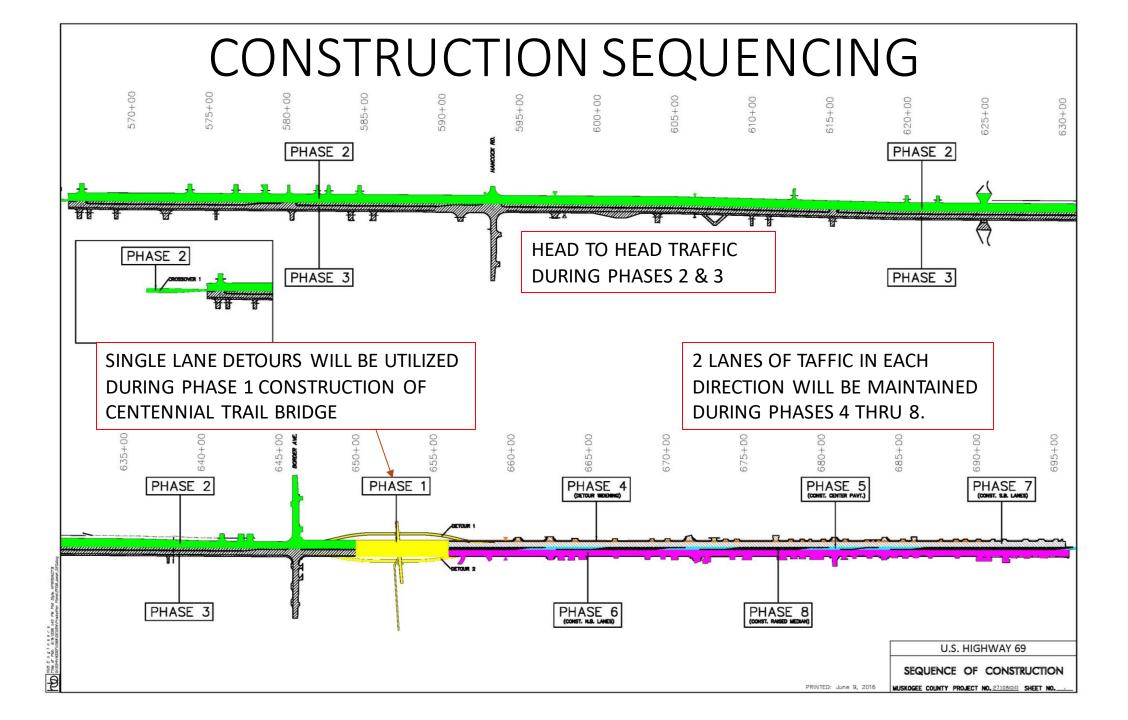
- > THE EXISTING STRUCTURE IS SOUND AND DOES NOT REQUIRE REPLACEMENT.
- > THE SECTION OF ROADWAY IN THE VICINITY OF COODY HAS A NARROW MEDIAN THAT WILL BE WIDENED.
- > THE VERTICAL GRADE WILL BE RAISED SLIGHTLY TO MAINTAIN MINIMUM COVER OVER THE BRIDGE.
- > THIS WILL REQUIRE THE BRIDGE TO BE EXTENDED 13.8' LEFT AND 16.5' RIGHT.





CONSTRUCTION SEQUENCING

- A SMART WORKZONE WITH MESSAGE BOARDS WILL BE UTILIZED DURING CONSTRUCTION.
- THE ROADWAY PROJECT WILL CONSIST OF VARIOUS CONSTRUCTION PHASES.
- RESIDENTIAL & BUSINESS ACCESS DURING CONSTRUCTION WILL BE MAINTAINED BY SEQUENCING DRIVEWAY RECONSTRUCTION TO MINIMIZE DISTURBANCE.



# **Environmental Studies Were Completed in 2015 and Will Be Updated For:**

- Cultural Resources (Historic and Archaeological)
- Waters and Wetlands
- > Threatened and Endangered Species
- > Hazardous Materials Assessment
- > Traffic Noise
- > Floodplains Assessment
- Commitments to avoid and/or minimize impacts to the environment will be included in the project in accordance with the National Environmental Policy Act (NEPA).



#### Cultural Resources (Section 106) completed in 2015 Resulted In:

- No effect on Historic Properties.
- The existing pedestrian bridge (built in 1952) was documented and was found to be sufficiently altered and not eligible for inclusion in the National Register of Historic Places.
- No previously recorded archaeological sites or Determination of Eligibility (DOE) sites.
- The study and report was provided to the State Historic Preservation Office and the State Archaeologist.
  - Both agencies agreed with the results that there is no effect on cultural resources.
- The following Tribes were consulted: Caddo Nation, Cherokee Nation, Kialegee Tribal Town, Muscogee Nation, Osage Nation, Thlopthlocco Tribal Town, United Keetoowah Band of Cherokees and Wichita & Affiliated Tribes.

These findings will be confirmed in the study update.



#### **Threatened and Endangered Species Study - 2015**

- Threatened and Endangered Species completed in 2015 found:
  - ➤ Impacts to the American Burying Beetle
  - ➤ Impacts to the Northern Long-eared Bat
- Migratory Birds









#### **Waters and Wetlands**

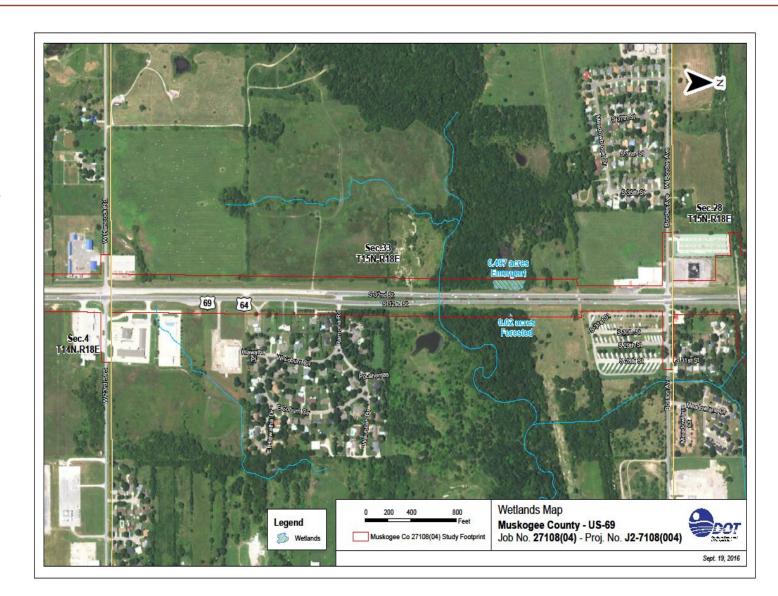
- ➤ Impacts to Waters and Wetlands will be coordinated with the US Army Corps of Engineers.
- ➤ The appropriate Clean Water Act Section 404 permit will be obtained for the project.
- Wetlands are located at Coody Creek and its Tributaries

#### **Hazardous Materials**

> No further action.

These findings will be confirmed in the study updates.





#### Noise Study will be updated

- ➤ Land use is described as developed land consisting of small businesses, motels, an RV Park with some residential lots, two (2) places-of-worship, a non-motorized foot/bicycle trail and single-family residential dwellings.
- ➤ Those considered as noise sensitive receivers include the hospital, residential dwellings, the places-of-worship, the RV Park, and the trail.



#### Section 4(F) will be completed for the Pedestrian Bridge

- ➤ The pedestrian bridge is part of the City owned Centennial Trail Path that is 7.3 miles long and extends into a city park Love Hatbox Sports Complex.
- ➤ Due to the proposed impact to this recreational trail, Section 4(f) regulations of the U.S. Department of Transportation Act of 1966 apply to the project.
- ➤ Section 4(f) affords protection to publicly-owned recreation areas including city, state, and national parks, wildlife refuges and management areas, and historic sites.
- ➤ ODOT has coordinated with the City of Muskogee regarding the planned improvements and the City is supportive of these improvements.
  - ➤ Initial letter to City May of 2015
  - ➤ Response from City July of 2015



#### Section 4(F) will be completed for the Pedestrian Bridge

- It has been confirmed that no Land and Water Conservation Funds were used for the bridge.
- ➤ In order to complete Section 4(f)
  - > 30-day public notice
  - ➤ Written concurrence from City
- ➤ The Centennial Trail is being constructed as a shared use path (bicycles and pedestrians) and will meet all Americans with Disabilities Act (ADA) pedestrian requirements.
- In order to construct the new structure, the trail will need to be closed during construction for approximately three months. Incentives will be offered to the contractor to reduce that time.



# US-69 ALTERNATIVES MATRIX

	No Build	Option 1	Option 2	Option 3
		(6-Lane)	(7-Lane)	(4-Lane)
New Right of Way Required (Acres)	0	0.927 (Permanent)	0.927 (Permanent)	0.926 (Permanent)
New Right of Way Required (Acres)		4.73 (Temp, Perm, & PUE*)	4.73 (Temp, Perm, & PUE)	3.06 (Temp, Perm, & PUE)
Historic Properties	None	None	None	None
Archaeological Sites	None	None	None	None
Cemeteries	None	None	None	None
UST Sites within Proposed ROW	Nama	1 UST Site, POOU	1 UST Site, POOU	2 LUCT Sites Classed
LUST Sites 100ft of Proposed ROW	None	2 LUST Sites, Closed	2 LUST Sites, Closed	2 LUST Sites, Closed
Oil and Gas Wells	None	None	None	None
2024	_	277.5 (Perm R/W)	277.5 (Perm R/W)	277.5 (Perm R/W)
303d Impaired Streams (Linear Ft)**	0	498.2 (Temp & Perm R/W)	498.2 (Temp & Perm R/W)	498.2 (Temp & Perm R/W)
D-tti  \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	_	0.559 (Perm R/W)	0.559 (Perm R/W)	0.559 (Perm R/W)
Potential Wetlands (Acres)	0	0.78 (Temp & Perm R/W)	0.78 (Temp & Perm R/W)	0.78 (Temp & Perm R/W)
Division Character (Lineau 54)	0	381.7 (Perm R/W)	381.7 (Perm R/W)	381.7 (Perm R/W)
Blue Line Streams (Linear Ft)		602.4 (Temp & Perm R/W)	602.4 (Temp & Perm R/W)	602.4 (Temp & Perm R/W)
Threatened & Endangered Species	Same	Same	Same	Same
Critical Habitat	None	None	None	None
Migratory Birds	Same	Same	Same	Same
51 11: (2	_	2.0 (Perm R/W)	2.0 (Perm R/W)	2.0 (Perm R/W)
Floodplains (Acres)	0	3.05 (Temp & Perm R/W)	3.05 (Temp & Perm R/W)	3.05 (Temp & Perm R/W)
Tribal Property	None	None	None	None
Section 4(f) Centennial Trail (Linear ft)	0	795.2	795.2	795.2
Section 4(F) Public Parks / Refuges	None	None	None	None
Noise	No Change	Same	Same	Same
Residential/Building Impacts	None	1 Impact but can be avoided w/design exception	1 Impact but can be avoided w/design exception	1 Impact but can be avoided w/design exception
Level of Service	No Change	Best, increased capacity w/ reduced delays	Increased capacity with higher crash rates	Poor, no change
Non-Traversable Median	Yes	Yes	No	Yes
No Median (TWLTL)	No	No	Yes	No
Total Costs (Millions)	\$0	\$35.926	\$35.607	\$27.277

 $\textit{Sources:} \ \mathsf{Oklahoma} \ \mathsf{Corporation} \ \mathsf{Commission}, \ \mathsf{EPA,ODEQ,USGS,USFWS}, \ \mathsf{FEMA}, \ \mathsf{Reconnaissance} \ \mathsf{Report, and} \ \mathsf{HUB} \ \mathsf{survey}.$ 

<sup>\*</sup>Permanent Utility Easement (PUE)

<sup>\*\*</sup>Waterbody: Coody Creek. Cause of impairment: Enterococcus Bacteria; Escherichia Coli (E. Coli).



- COMPLETE STAKEHOLDER MEETING
- ➤ VIRTUAL PUBLIC MEETING (DECEMBER 2020)
- SELECT PREFERRED ALTERNATIVE
- ➤ SUBMIT RIGHT-OF-WAY PLANS (JUNE 2021)
- ➤ COMPLETE ENVIRONMENTAL (TBD)
- RIGHT-OF-WAY ACQUISITION
- UTILITY RELOCATION
- ➤ SUBMIT FINAL PLANS, SPECS & ESTIMATES (MARCH 2023)



