ENVIRONMENTAL ASSESSMENT

CHEROKEE NATION

Bartlesville 14.993-acre Gaming and Fee-to-Trust Project

Washington County, OK | June 2024

Lead Agency:

Bureau of Indian Affairs
Eastern Oklahoma Regional Office
3100 W. Peak Blvd
Muskogee, OK 74401

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LIST OF ACRONYMS

A

ABB	American Burying Beetle
ADT	Average Daily Traffic
amsl	Above Mean Sea Level
APA	American Psychiatric Association
APN	Assessor's Parcel Number
AQD	Air Quality Division
ARPA	Archaeological Resources Protection Act
ASTM	American Society for Testing and Materials

B

BA	Biological Assessment
BACT	Best Available Control Technology
BIA	Bureau of Indian Affairs
BMPs	Best Management Practices
B.P.	Before Present

C

°C	Degrees in Celsius
CAA	Clean Air Act
CAPs	Criteria Air Pollutants
CARB	California Air Resources Board
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CGP	Construction General Permit
cm	Centimeters
CNB	Cherokee Nation Businesses
CNEMS	Cherokee Nation Emergency Medical Services
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CPSC	Consumer Product Safety Commission
CREC	Controlled Recognized Environmental Condition
CWA	Clean Water Act

D

dB	Decibel
dBA	A-Weighted Decibel
DEQ	Department of Environmental Quality
DOH	Department of Health
DOT	Department of Transportation
DPM	Diesel Particulate Matter

E

EA	Environmental Assessment
EB	Eastbound
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EMFAC	Emission Factor
EO	Executive Order
ESA	Environmental Site Assessment

F

°F	Degrees in Fahrenheit
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FPPA	Farmland Protection Policy Act
FR	Federal Register
FTA	Federal Transit Administration

G

GHG	Greenhouse Gas
GIS	Geographic Information System
GLO	General Land Office
gpd	Gallons Per Day

H

HAP	Hazardous Air Pollutants
HCM	Highway Capacity Manual
HREC	Historical Recognized Environmental Condition
HVAC	Heating, Ventilation, and Air Conditioning

I

IBC	International Building Code
IFC	International Fire Code
IGRA	Indian Gaming Regulatory Act
IPaC	Information for Planning and Consultation
IRA	Indian Reorganization Act
ITE	Institute of Transportation Engineers
IWG	Interagency Working Group

K

KDPA	Kansas Digital Petroleum Atlas
km	Kilometers
kW	Kilowatt

L

Leq	Average Sound Level
LOS	Level of Service

M

MBTA	Migratory Bird Treaty Act
mph	Miles Per Hour
MT	Metric Tons

N

N/A	Not Applicable
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO_x	Nitrogen Oxides
NO_2	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSR	New Source Review
NWI	National Wetland Inventory

O

OAS	Oklahoma Archaeological Survey
ODOT	Oklahoma Department of Transportation
ODWC	Oklahoma Department of Wildlife Conservation
OGS	Oklahoma Geological Survey
ORVR	Onboard Refueling Vapor Recovery
OWRB	Oklahoma Water Resources Board

P

Pb	Lead
PM	Particulate Matter
PM_{10}	Particulate Matter less than 10 Micrometers in Diameter (inhalable particulate matter)
$PM_{2.5}$	Particulate Matter Less Than 2.5 Micrometers in Diameter
ppb	Parts Per Billion
PPV	Peak Particle Velocity
PSD	Prevention of Significant Deterioration
PUD	Planned Unit Development

R

RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
rms	Root Mean Square

S

SC-GHG	Social Cost of Greenhouse Gas Emissions
sf	Square Feet
SIP	State Implementation Plan
SO	Secretarial Order
SO_x	Sulfur Oxide Gasses
SO_2	Sulfur Dioxide
STP	Shovel Test Pits
SWPPP	Stormwater Pollution Prevention Plan

T

THPO	Tribal Historic Preservation Office
TIA	Traffic Impact Analysis
TMDL	Total Maximum Daily Loads
tpy	Tons Per Year

U

U.S.	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank

V

VdB	Vibration Decibels
VOC	Volatile Organic Compounds
VPD	Vehicles Per Day
VPH	Vehicles Per Hour

W

WB	Westbound

Section 1 | Introduction

1.1 SUMMARY OF THE PROPOSED ACTION AND ENVIRONMENTAL REVIEW PROCESS

This Environmental Assessment (EA) has been prepared pursuant to the National Environmental Policy Act (NEPA) to assess the environmental impacts of the acquisition by the U.S. Bureau of Indian Affairs (BIA) of 14.993 acres located in unincorporated Washington County, Oklahoma (Project Site) into federal trust status for the Cherokee Nation (Nation) for gaming purposes (Proposed Action). Once placed in trust, the Nation proposes to develop the Project Site with a casino, hotel, and gas station/convenience store (Proposed Project).

The statutory authority for acquiring this land into federal trust status on behalf of the Nation is provided in the Indian Reorganization Act of 1934 (IRA; 25 USC § 5108 and 5110), with regulations codified at 25 Code of Federal Regulations (CFR) Part 151. Pursuant to 25 CFR Part 151, the Assistant Secretary of Indian Affairs, who has delegated authority from the Secretary of the Interior (Secretary), is charged with reviewing and approving Tribal applications to place land into federal trust status. The Nation is seeking to acquire on-reservation land in trust for gaming purposes; thus, compliance with Section 20 of the Indian Gaming Regulatory Act (IGRA; 25 USC § 2719[a]) is being considered along with the Part 151 fee-to-trust application.

This EA has been completed in accordance with requirements set forth in NEPA (42 USC § 4321 et seq.); the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR § 1500 et seq.); and the BIA NEPA Handbook (59 Indian Affairs Manual 3-H). The BIA will utilize this EA to assist in determining whether the Proposed Action would result in adverse impacts to the environment. The EA will be released for public comment. Comments will be considered by the BIA and either a Finding of No Significant Impact will be prepared or additional environmental analysis will be conducted in the form of an Environmental Impact Statement (EIS). After the NEPA process is complete, the BIA may issue a determination on the Proposed Action.

1.2 BACKGROUND

The Nation is a sovereign Tribal government and federally recognized Tribe that exercises Tribal jurisdiction over a 7,000 square-mile Reservation in northeastern Oklahoma. The Project Site is within this area and is surrounded by the Nation's Reservation. According to oral tradition, the Cherokee people have resided in their traditional homelands since time immemorial. Cherokee contact with Europeans occurred in 1540 during the explorations of Hernando DeSoto. Soon to follow, as European interests increasingly affected Cherokee livelihoods, the Cherokee forged treaties with the British, the first in 1725. In these treaties, the Cherokee Nation signed as a sovereign entity (Cherokee Nation, 2020). A series of other treaties soon reduced Cherokee land, concentrating a great majority of the Cherokee people in the states of Georgia and Tennessee.

In 1838, the U.S. military rounded up and forcibly removed over 16,000 Cherokee people from their homes, farms, and plantations in Georgia, Alabama, Tennessee, and North Carolina to 11 removal camps to await the journey to new homelands east of the Mississippi River. This journey is now known as "the Trail of Tears". The new homelands were treatied to Cherokee Nation for the taking of all lands of the Nation east of the Mississippi River by the United States of America. The new homelands were within what was then known as Arkansas Territory, and included: 4,093,147.27 acres in what is now northern Arkansas; 810,867.78 acres in what is now southeastern Kansas; 8,259,809.23 acres in what became known as the Cherokee Strip and is now present-day Oklahoma west of Washington County, and; 4,447,715.59 acres in what is presently in northeast Oklahoma and now known as the Cherokee Nation Reservation. The destination of the multiple land and water routes of the Trail of Tears was land in what is now northeastern Oklahoma, with routes ending in present-day Cherokee, Adair, Muskogee or Sequoyah Counties. The first detachment departed the removal camps in August 1838. The last detachment arrived in Indian Country in March 1839.

As European influences and interests grew, bands of Cherokee people united into a strong national political state, adopting a written constitution, and providing political, social, and economic leadership to its citizens. The Nation adopted a constitution on September 6, 1839; 68 years before Oklahoma's statehood. Congress passed the Cherokee Nation's Allotment Act in 1902 and five years later, the state of Oklahoma was admitted into the Union, which included the Nation's Reservation within its limits. The attempt to merge the Nation into Oklahoma was known as the Enabling Act, which was subsequently reversed by the Five Civilized Tribes Act that was passed the same year. The Five Civilized Tribes Act thereby extended power of Tribes and Tribal governments by continuing Tribal jurisdiction and sovereignty indefinitely. The Supreme Court reaffirmed this position in McGirt v. Oklahoma of 2020. In 1970, congress passed the Principal Chiefs Act, which provided for the popular election of the Principal Chiefs of the Cherokee, Chickasaw, Choctaw, Creek, and Seminole Nations. The 1839 Constitution was replaced by the 1976 Constitution, which was then replaced by the Nation's current Constitution in 2003. In 2021, the Oklahoma Court of Criminal Appeals ruled that the Nation's Reservation had never been disestablished and remains intact to this day.

Today, the Nation is the largest Tribe in the United States with more than 450,000 citizens worldwide. More than 141,000 citizens reside on the Nation's Reservation in northeastern Oklahoma. Services provided include health and human services, education, employment, housing, economic and infrastructure development, environmental protection, and more. Cherokee Nation Entertainment, a subsidiary of the Nation, operates 10 casinos across northeastern Oklahoma. Cherokee Nation Businesses (CNB) is the tribally-owned holding company of the Nation. Business ventures include gaming under Cherokee Nation Entertainment with casinos in the state of Oklahoma as well as outside the state, manufacturing facilities, construction, and federal government contracts. Combined, the Nation and CNB employ over 11,000 people and work within 45 companies.

1.3 PURPOSE OF THE PROPOSED ACTION

The federal Proposed Action is the acquisition of the Project Site into trust for the Nation for gaming purposes pursuant to the Secretary's authority under the Indian Reorganization Act, 25 USC § 5108. The purpose of the Proposed Action is to facilitate tribal self-sufficiency, self-determination, and economic development, thus satisfying both the Department of the Interior's (Department's) land acquisition policy as articulated in the Department's trust land regulations (25 CFR Part 151) and the

principal goal of IGRA as articulated in 25 USC § 2701. The need for the Department to act on the Nation's application is governed by the Department's regulations at 25 CFR Part 151.

1.4 LOCATION AND SETTING

The Project Site consists of 14.993 acres of vacant land (Assessor's Parcel Number [APN] 740049757) and is currently owned by the Nation in fee. The Project Site is within the bounds of the Nation's Reservation and is adjacent to U.S. Highway 75 (US-75) within unincorporated Washington County, Oklahoma, and is surrounded by the City of Bartlesville (**Figures 1.4-1** and **1.4-2**). **Figure 1.4-3** presents an aerial photograph of the Project Site and the immediate vicinity. Surrounding land uses include commercial, residential, and open space. The Project Site is located within Section 28 of Township 26 North, Range 13 East within the Indian Base and Meridian, and is within the Bartlesville South United States Geological Survey (USGS) 7.5' quadrangle map.

1.5 TERMINOLOGY

Terms used throughout this EA include the following:

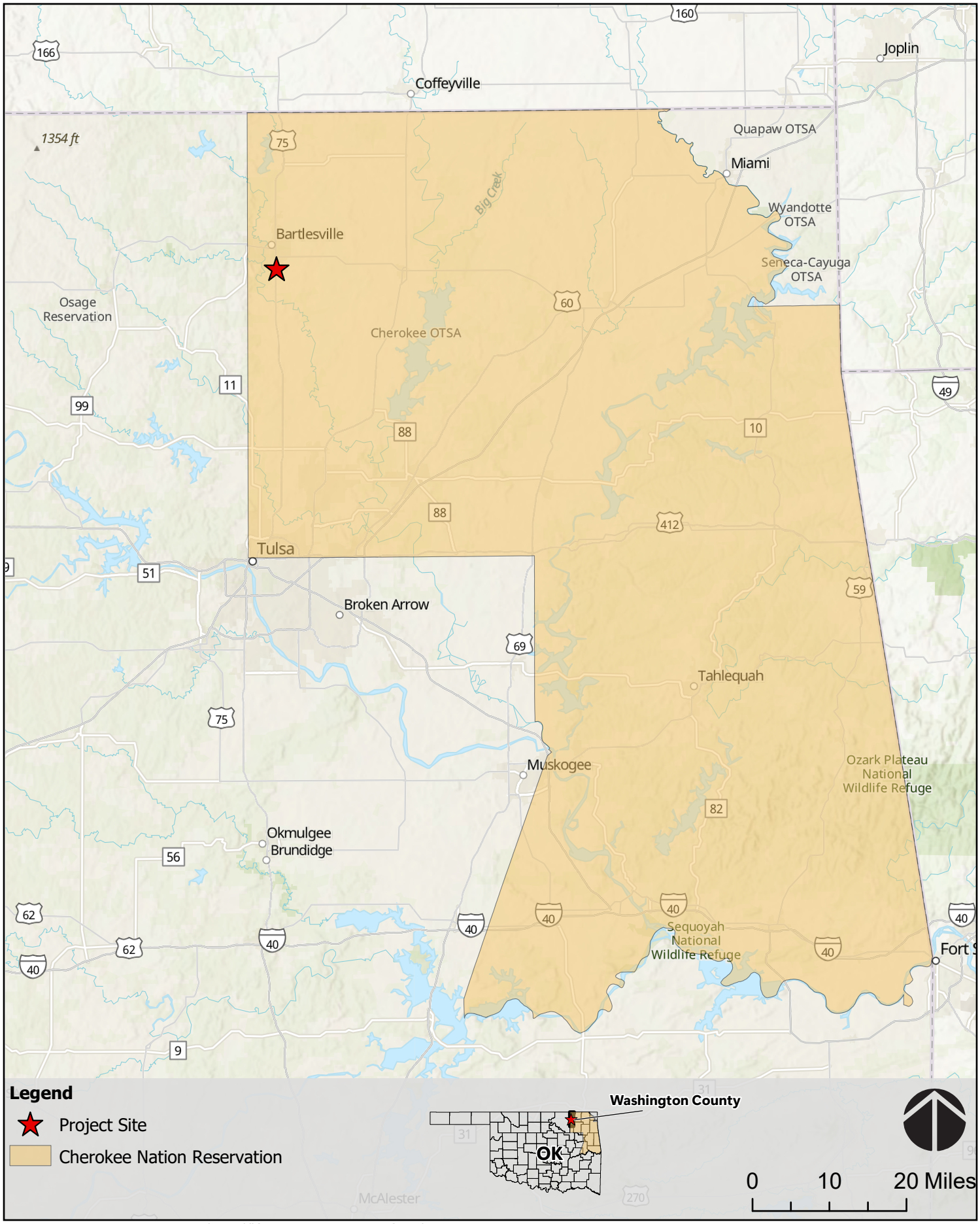
Project Site: The 14.993-acre property in Washington County, Oklahoma (**Figure 1.4-3**).
Proposed Action: The requested federal action to acquire the Project Site into federal trust for gaming purposes.
Alternative A: Acquisition of the Project Site into federal trust and subsequent development of casino, hotel, and gas station/convenience store (refer to the detailed description in **Section 2.1**).
Alternative B: Acquisition of the Project Site into federal trust and subsequent development of a casino (refer to the detailed description in **Section 2.2**).
Alternative C: No acquisition of the Project Site into federal trust and no proposed development (refer to **Section 2.3**).

1.6 POTENTIAL PERMITS AND APPROVALS

The alternatives discussed in **Section 2** may require the permits and approvals listed in **Table 1.7-1.**

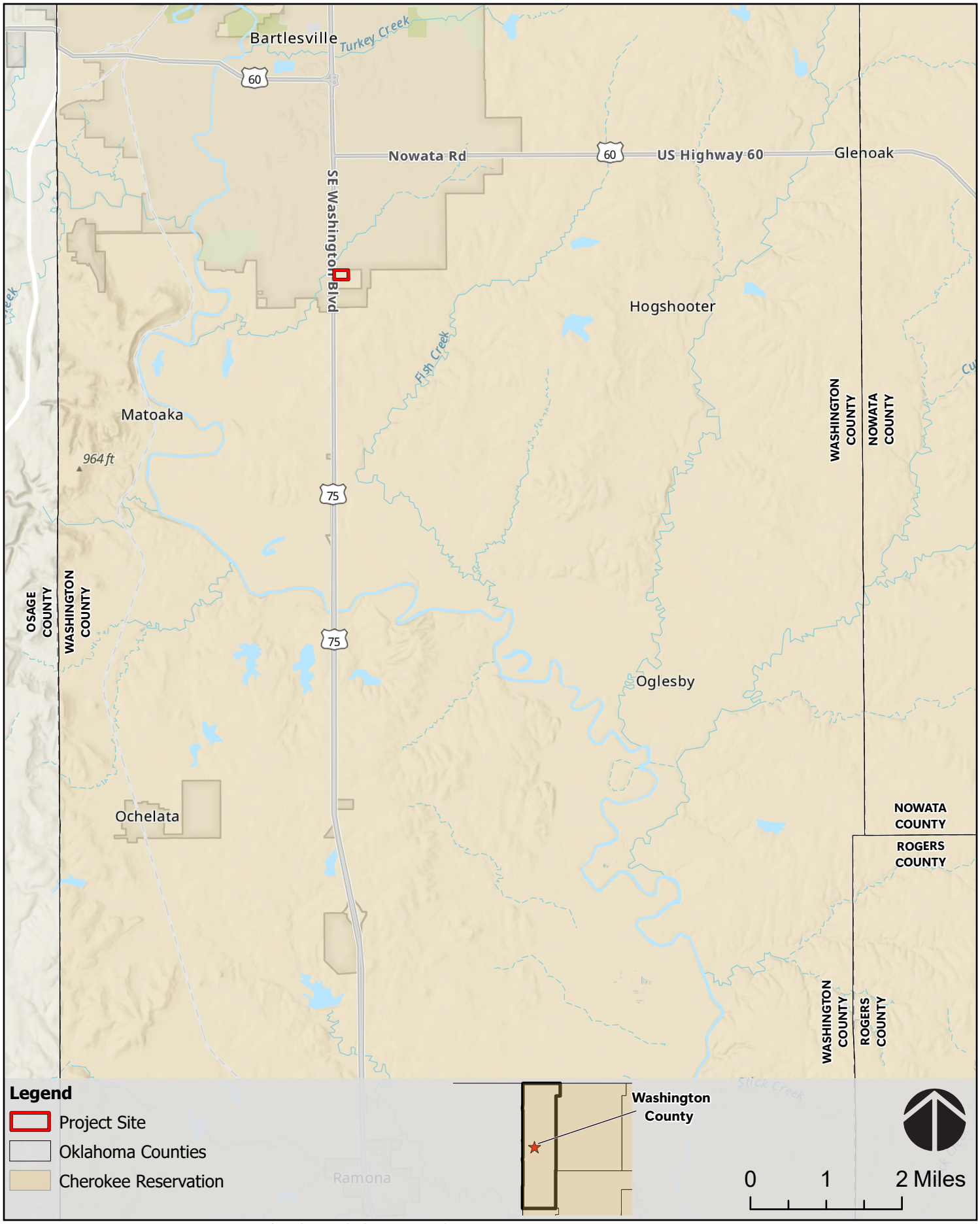
Table 1.7-1: Potential Permits and Approvals

Agency	Permit or Approval	Alternatives
Secretary of the Interior	▪ Transfer of the Project Site into federal trust for gaming purposes.	A, B
U.S. Environmental Protection Agency (USEPA)	▪ Verification of coverage under the National Pollutant Discharge Elimination System General Permit for Stormwater Discharges Associated with Construction Activity as required by the Clean Water Act. ▪ Regulation of underground storage tanks (UST) under the UST program in Indian Country	A, B
U.S. Fish and Wildlife Service	▪ Informal consultation under Section 7 of the federal Endangered Species Act (FESA) regarding potential effects to federally listed species.	A, B
Oklahoma Department of Transportation (ODOT)	▪ Approval of access road improvements, off-site traffic improvements, stormwater drainage tie-ins, and issuance of encroachment permits, if necessary.	A, B
Tribal Historic Preservation Office (THPO)	▪ Oversight by the Cherokee Nation THPO if historic properties may be impacted.	A, B
City of Bartlesville	▪ Approval of off-site water/wastewater connections and traffic improvements.	A, B



Esri, CGIAR, USGS, Missouri DNR, Texas Parks & Wildlife, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS

FIGURE 1.4-1
REGIONAL LOCATION



Esri, NASA, NGA, USGS, FEMA, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, USDA, USFWS

FIGURE 1.4-2
SITE AND VICINITY

Maxar, Microsoft, Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau,

FIGURE 1.4-3
AERIAL OVERVIEW

Section 2 | Alternatives

This section describes the project alternatives analyzed in this EA. A reasonable range of alternatives has been selected based on consideration of the purpose of the Proposed Action as well as opportunities for potentially reducing environmental effects. Alternatives include Alternative A (Proposed Project), Alternative B (Reduced Intensity), and Alternative C (No Action). Consistent with CEQ regulations, **Section 2.4** summarizes and compares potential environmental consequences, benefits, and/or detriments of alternatives. **Section 2.5** discusses alternatives that were considered but not analyzed in this EA.

2.1 ALTERNATIVE A: PROPOSED PROJECT

Alternative A consists of the following components: 1) Transfer of the Project Site into federal trust status for the benefit of the Nation for gaming purposes; and 2) The subsequent development of the Project Site by the Nation with a casino, hotel, gas station/convenience store, and associated infrastructure.

2.1.1 Proposed Land Uses

Under Alternative A, proposed development on the Project Site includes a 54,391 square foot (sf) casino, hotel of up to 40 rooms, gas station/convenience store, and supporting infrastructure. A conceptual site plan, floor plan, and renderings are provided in **Figures 2.1-1, 2.1-2, and 2.1-3**. Detailed components of the development are listed in **Table 2.1-1.** The casino, hotel, and gas station/convenience store would be open for up to 24 hours a day, 7 days a week. Alternative A is estimated to employ approximately 300 staff.

The hotel would be four stories with an approximate height of 40 to 50 feet above ground level. The gas station/convenience store would include approximately 4,000 sf of retail/commercial space, including approximately 20 gaming devices, within a single-story structure. The gas station would include an approximately 2,000 square-foot protective canopy with four gas pumps yielding eight fueling stations for ethanol, gasoline, and diesel fuels. Approximately two to four underground storage tanks (USTs) for fuel would be installed and would include leak detection and secondary containment to prevent co-mingling with water resources in compliance with provisions of 40 CFR Part 280. The USTs would be registered with the U.S. Environmental Protection Agency (USEPA) for regulation under the UST Program in Indian Country.

2.1.2 Construction and Clearing

Construction activities would begin after the Project Site is accepted into federal trust for the Nation. Construction is estimated to commence in 2025 and would continue for a period of approximately 18 months. The proposed facilities would be constructed in compliance with the Cherokee Nation Tribal Code and would be generally consistent with the International Building Code (IBC), including electrical, mechanical, plumbing, fire protection, and seismic standards. An indoor fire suppression system would be installed.

Legend

Project Site

1. MAIN ENTRY
2. SERVICE ENTRY
3. C-STORE ENTRY
4. PORTE COCHERE
5. CASINO
6. HOTEL
7. HOTEL LOBBY
8. HOTEL PATIO
9. LOADING DOCK
10. C-STORE
11. FUEL PUMPS
12. SURFACE PARKING
13. RAISED GARDEN FEATURE
14. DETENTION POND
15. PROPERTY LINE

0 100 200 Feet

FIGURE 2.1-1

ALTERNATIVE A SITE PLAN

Legend

Project Site

1. MAIN ENTRY
2. SERVICE ENTRY
3. C-STORE ENTRY
4. PORTE COCHERE
5. GAMING FLOOR
6. PLAYER'S REWARD
7. RETAIL
8. PUBLIC RESTROOMS
9. SPORTS BOOK
10. EDGE BAR
11. QUICK SERVICE RESTAURANT
12. KITCHEN
13. BANQUET SPACE
14. CAGE
15. BOH/STORAGE/EMPLOYEE SERVICES/ADMINISTRATIVE
16. EMPLOYEE ENTRANCE
17. LOADING DOCK
18. HOTEL LOBBY
19. HOTEL GUESTROOMS
20. HOTEL ELEVATORS/HOUSEKEEPING
21. HOTEL PATIO
22. RAISED GARDEN FEATURE
23. C-STORE ENTRANCE
24. C-STORE
25. OFFICE/ STORAGE
26. FUEL PUMPS
27. SURFACE PARKING
28. DETENTION POND
29. PROPERTY LINE

0 100 200 400 Feet

FIGURE 2.1-2

ALTERNATIVE A FLOOR PLAN

FIGURE 2.1-3

ALTERNATIVE A RENDERING

Table 2.1-1: Alternative A Components

Area	Number of Units	Square Footage
Casino		
Gaming Floor	500 Gaming Devices/5 tables	16,000
Sports Book	34 Positions	816
Retail, Food, and Beverage	130 Seats	7,770
Bars and Lounges	-	1,176
Meeting and Conference Space	150 Seats	1,725
Porte Cochere		3,600
Support and Circulation	-	23,304
Total	-	**54,391**
Hotel		
Guest Rooms	40 Rooms	19,406
Lobby	-	1,317
Support and Circulation	-	9,179
Total	-	**29,902**
Gas Station/Convenience Store		
Convenience Store	20 Gaming Devices	4,000
Fueling Stations	8 Stations	-
Total	-	**4,000**
Surface Parking		
Parking Spaces	703 Spaces	-

The Project Site consists largely of undeveloped forested land (**Figure 1.4-3**). Alternative A would require land clearing activities and tree removal within the Project Site. The trees are smaller and younger in growth (less than 50 years). Some trees may be retained in the proposed parking and landscaping areas and along the perimeters of the Project Site. Clearing activities would result in leftover vegetation and wood debris (such as stumps). Trees and debris would be chipped on-site and utilized in development where feasible and as dictated by the quality of chips.

Grading and Drainage

Construction would involve grading, earthwork, and paving. Following construction, impervious areas would total approximately 12.75 acres. Currently, rainfall on the Project Site either infiltrates the ground, evaporates, or flows to lower elevations in the western portion of the Project Site, where it follows the natural topography off-site and flows into low-lying areas or the adjacent ODOT stormwater drainage system. Stormwater on the Project Site would be collected in proposed detention ponds to prevent flooding and treat stormwater prior to being discharged off-site into the existing stormwater drainage system that occurs along US-75/Southeast Washington Blvd (**Figure 2.1-1**). Trenching and excavation would occur to create stormwater detention and associated drainage infrastructure to provide volume control, treatment, and rate control (**Figure 2.1-1**) (**Appendix A**).

The stormwater collection and treatment system would be designed to accommodate a 24-hour 100-year flood event with off-site runoff rates modeled to be equal to or less than existing rates (**Appendix A**). The fueling stations would be covered and would have internal drains (i.e., trench drains) to collect spills or minor amounts of precipitation. The liquids collected by the internal drain system within the covered fueling station area would be conveyed to an oil/water separator and would then outfall to the sewer system, and thus would not be routed to the ODOT drainage system or discharged off-site.

2.1.3 Water Supply

Water for Alternative A would be supplied to the Project Site by connection to the City of Bartlesville's municipal water supply infrastructure. Existing City water pipelines are located along the western and southern boundaries of the Project Site. Alternative A is anticipated to have an average water demand of 13,044 gallons per day (gpd). Water supply to meet fire demands of Alternative A would be supplemented through an on-site water tank and fire pump.

2.1.4 Wastewater Treatment and Disposal

Wastewater generated by Alternative A would be accommodated by connection to the City of Bartlesville's municipal wastewater collection and treatment system. Existing sewer pipelines are located just north of the Project Site along US-75/Southeast Washington Blvd. Alternative A is anticipated to have an average wastewater generation rate of 13,044 gpd.

2.1.5 Roadway Access

The proposed facilities would be accessible via three proposed access driveways along US-75:

- Driveway 1: Customer and service access to the gas station/convenience store
- Driveway 2: Guest access to the hotel and casino
- Driveway 3: Service access for the hotel and casino

2.1.6 Electricity and Propane

The Public Service Company of Oklahoma currently provides electricity in the vicinity of the Project Site. Overhead power lines occur on the western side of the Project Site along US-75/Southeast Washington Blvd. Oklahoma Natural Gas is the local provider of natural gas, however, the nearest natural gas line to the Project Site is approximately three miles to the northeast. It is the Nation's intent to utilize electric appliances, boilers, and heating systems within the proposed casino, hotel, and gas station/convenience store to the extent feasible. However, propane gas may be utilized in food service cooktops.

2.1.7 Law Enforcement, Fire Protection, and Emergency Medical

Law Enforcement

The Cherokee Nation Marshal Service is a certified law enforcement agency with jurisdiction throughout the Cherokee Nation Reservation. The Marshal Service has a cross-deputization agreement with a network of 50 agencies at the municipal, county, state, and federal levels (Cherokee Nation, 2021).

The Marshal Service employs over 32 deputy marshals and provides a diverse range of specialized teams dedicated to the prevention of crime (Cherokee Nation, 2024a). The Marshal Service provides an array of special emphasis units including:

- D.A.R.E.
- Dive Team
- Marshal Swift Water Rescue
- Domestic Violence Presentations
- Methamphetamine Presentations
- Narcotics Unit
- Gang Awareness
- Vehicle Accident Investigation
- Special Operations Team

Once taken into trust, the Marshal Service would be the primary law enforcement agency to the Project Site. Cherokee Nation Marshals are required to receive training at the Federal Training Center. The Federal Training Center is responsible for designing, developing, coordinating, and administering advanced and specialized training programs for the BIA, United States Border Patrol, Transportation Security Administration, and other partnering organizations.

The Project Site would be under the jurisdiction of the Nation's judicial system. The Nation's judicial system consists of legislative, executive, and judicial branches, with executive power vested in the Principal Chief, legislative power vested in the Tribal Council, and judicial power vested in the Tribal Supreme Court. The Principal Chief, Deputy Chief, and Tribal Council are elected to four-year terms by the registered tribal voters over the age of 18. The legislative branch consists of a 17-member Tribal Council that is elected by popular vote to four-year terms. The Project Site is within Council District D12.

Fire Protection

Fire protection services to the Project Site are currently provided by the Washington County Fire Department. The Nation's cross-deputization agreement includes the state Fire Marshal and Washington County Fire Department, which would be involved in providing fire protection services to the Project Site once in trust. Additionally, the Cherokee Nation Wildfire Prevention Program serves to address and mitigate wildfire on the Nation's Reservation through implementation of wildfire prevention plans and associated planning. The prevention program monitors fire danger, fire occurrence, and cause trends (Cherokee Nation, 2024b). Once taken into trust, the Wildfire Prevention Program would apply to the Project Site.

Emergency Medical

The Cherokee Nation Emergency Medical Services (CNEMS) is a state-licensed paramedic-level ambulance service owned and operated by the Nation that provides emergency medical services to portions of the Reservation within Cherokee, southern Delaware, northern Sequoyah, and western Adair counties. CNEMS consists of three major components: ambulance services, communications, and training. The ambulance service operates 24 hours a day, 7 days a week. Currently, CNEMS does not serve Reservation areas within Washington County, including the Project Site.

Bartlesville Ambulance currently provides emergency medical services to the City of Bartlesville and Washington County, including the Project Site, and this would continue once the Project Site is acquired into trust (Bartlesville Ambulance, 2024). Bartlesville Ambulance is a fee-based service that each patient would pay applicable service fees to.

2.1.8 Protective Measures and Best Management Practices

Protective measures and best management practices (BMPs), including regulatory requirements and voluntary measures that would be implemented by the Nation, have been incorporated into the design of Alternative A. Where applicable, these measures would be incorporated into design or construction contracts to eliminate or substantially reduce environmental consequences from Alternative A. These measures are presented below in **Table 2.1-2**.

Table 2.1-2: Alternative A Protective Measures and Best Management Practices

Resource Area	Protective Measures and Best Management Practices
Land Resources	▪ Erosion control measures shall be implemented during construction as discussed further under the Water Resources BMPs. ▪ Standard engineering practices, Cherokee Nation Tribal Code, and IBC standards shall be used, including adherence to geotechnical standards ensuring soil suitability for structures.
Water Resources	▪ To reduce water usage, low-flow toilets, faucets, and other water-using appliances shall be installed to the extent feasible. ▪ Water consumption shall be reduced through drought resistant landscaping and the incorporation of “Save Water” signs near water faucets throughout the development. ▪ Coverage under the National Pollutant Discharge Elimination System (NPDES) General Construction Permit shall be obtained from the USEPA for construction site runoff during the construction phase in compliance with the Clean Water Act (CWA). ▪ A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared, implemented, and maintained throughout the construction phase of the development, consistent with General Construction Permit requirements. The SWPPP shall include, but shall not be limited to, the following BMPs to minimize stormwater effects to water quality during construction: o Grading activities shall be limited to the immediate area required for construction. o Temporary erosion control measures (such as silt fences, fiber rolls, staked straw bales, temporary re-vegetation, rock bag dams, erosion control blankets, and sediment traps) shall be employed as needed for disturbed areas. o Construction activities shall be scheduled to minimize land disturbance during peak runoff periods to the extent feasible. o Disturbed areas shall be paved, re-vegetated, and/or stabilized following construction activities. o A spill prevention and countermeasure plan shall be developed that identifies proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used on-site. o Petroleum products shall be stored, handled, used, and disposed of properly in accordance with provisions of the CWA (33 USC § 1251 to 1387). o Construction materials shall be stored, covered, and isolated to prevent runoff loss and contamination of surface and groundwater. o Fuel and vehicle maintenance areas shall be limited to the impact area. o To minimize dust generation during construction, soil shall be wetted down with water prior to ground disturbance as needed.

	○ Generated waste shall be properly disposed of in accordance with the Cherokee Nation Solid Waste Program and Cherokee Nation Solid Waste Code. ▪ The gas station shall be designed and constructed in accordance with all federal regulations governing gasoline operations. Specific design, construction and operation practices shall include the following to prevent spills, overfills, and corrosion: ○ The gas station shall be equipped with catchment basins of sufficient size to contain small spills. At a minimum, the basin shall be large enough to contain what may spill when the delivery hose is uncoupled from the fill pipe. Any spilled fuel shall be removed and disposed of immediately. ○ Gas station attendants and delivery personnel shall follow industry standard filling practices such as American Institute recommended Practice 1007, Loading and Unloading of MC306/Department of Transportation (DOT) 406 Cargo Motor vehicles. Filling practices shall include provisions that ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank before the transfer is made; and that the transfer operation is monitored constantly to prevent overfilling and spilling. ○ Underground fuel storage tanks would be registered with the USEPA for regulation under the UST Program in Indian Country, which requires compliance with the provisions of 40 CFR Part 280, including Part 280.20 Performance Standards for new USTs, which includes corrosion-resistant and double-walled tanks and piping, spill and overflow prevention equipment, and use of leak detection equipment to prevent potential leaks into groundwater. ○ In accordance with 40 CFR Part 280, gasoline storage tanks shall be periodically inspected to ensure that the tank is structurally sound and free of corrosion or holes, and that overfill, spill prevention and release detection equipment is functioning properly. Frequency of inspections shall be consistent with federal requirements.
Biological Resources	▪ The use of artificial lighting shall be limited and shall consist of LED bulbs to the extent feasible. In situations where night construction work is necessary, direct light shall be shielded downward and limited to the work area to the extent feasible to prevent light from projecting upwards, thus minimizing the potential to attract insects, including American burying beetle (ABB). ▪ Workers operating in the project area during construction shall be educated about ABB habitat and their responsibility to avoid and minimize impacts to ABB. Workers shall be provided with a color picture of the ABB and signs shall be posted at project-related access points with reminders to follow special restrictions in the area. ▪ Workers shall report any ABB sightings to the project manager and food waste or dead animals shall be removed from the Project Site each day.
Air Quality	The following dust suppression measures shall be implemented during construction to control the production of fugitive dust and prevent wind erosion of bare and stockpiled soils: ▪ Exposed soil shall be sprayed with water or other suppressant twice a day or as needed to suppress dust. ▪ Dust emissions during transport of fill material or soil shall be minimized by wetting loads, ensuring adequate freeboard (space from the top of the material to the top of the truck bed) on trucks, cleaning the interior of cargo compartments on emptied haul trucks before leaving a site, and/or covering loads. ▪ Spills of transported fill material on public roads shall be promptly cleaned. ▪ Traffic speeds on the Project Site shall be restricted to 15 miles per hour to reduce soil disturbance. ▪ Gravel or similar stone substrate shall be provided to remove soil that shall otherwise be carried off-site by vehicles to decrease deposition of soil on area roadways.

	▪ Dirt, gravel, and debris piles shall be covered as needed to reduce dust and wind-blown debris. The following measures shall be implemented to reduce emissions of criteria air pollutants (CAPs), greenhouse gases (GHG), and diesel particulate matter (DPM) from construction: ▪ Criteria pollutants and GHG emissions shall be controlled from the facility by requiring diesel-powered equipment to be properly maintained and minimizing idling time to five minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required. Since these emissions would be generated primarily by construction equipment, machinery engines shall be kept in good mechanical condition to minimize exhaust emissions. ▪ The use of low VOC (50 grams per liter or less) paint shall be used to the extent practicable. ▪ Environmentally preferable materials, including recycled materials, shall be used to the extent readily available and economically practicable for construction of facilities. Emissions of CAPs and GHGs shall be reduced during operation through the following actions: ▪ The Cherokee Nation Low or No Emissions Program will apply, which includes emission reduction measures such as providing the transportation fleet with zero emissions electric buses that operate on established rural routes. ▪ Clean fuel vehicles shall be used in the vehicle fleet where practicable. ▪ Preferential parking shall be provided for employee vanpools, carpools, and/or other rideshare vehicles. ▪ Preferential parking for plug-in electric vehicles shall be provided, along with the installation of corresponding electric vehicle charging stations. ▪ Shuttle service to and from population centers shall be provided as feasible. ▪ Electric boilers and appliances shall be used in lieu of natural gas or propane units to the greatest extent practicable. ▪ CAPs, GHG, and DPM emissions shall be controlled during operation by requiring diesel-powered vehicles and equipment to be properly maintained and by minimizing idling time to five minutes at loading docks when loading/unloading food, merchandise, etc. or when diesel-powered vehicles or equipment are not in use, unless per engine manufacturer's specifications or for safety reasons. ▪ Energy efficient lighting and appliances shall be utilized to the extent feasible. ▪ Recycling bins shall be installed for glass, cans, and paper products and shall be placed strategically outside to encourage recycling. ▪ The use of non-polystyrene take-out containers shall be promoted and food waste composting programs shall be encouraged at restaurants that serve more than 100 meals/day. ▪ Adequate ingress and egress at entrances shall be provided to minimize vehicle idling and traffic congestion.
Public Services and Utilities	BMPs to be implemented during construction include: ▪ Building plans and specifications shall contain fire suppression systems. ▪ Construction equipment shall contain spark arrestors, as provided by the manufacturer. ▪ Staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. ▪ The Utility Notification Center shall be contacted to notify utility service providers of excavation at the Project Site. In response, utility service providers shall mark or stake the horizontal path of underground utilities, provide information about the utilities, and/or give clearance to dig. ▪ The Project Site shall be cleaned daily of trash and debris to the extent practicable.

	BMPs to be implemented during operation include: ▪ The Cherokee Nation Wildfire Prevention Program shall address and monitor fire danger, fire occurrence, and cause trends related to the Project Site. ▪ Background checks shall be conducted for gaming employees to ensure employees meet licensure requirements established by IGRA and the Nation's Gaming Ordinance. ▪ Parking areas shall be well lit and monitored by parking staff and/or security guards. ▪ Facilities shall have "No Loitering" signs in place. ▪ Security guards patrolling the facilities shall carry two-way radios to request and respond to back up or emergency calls. ▪ Security cameras and security personnel shall provide surveillance of the Project Site to both lessen and apprehend criminal activity. ▪ International Fire Code (IFC) requirements shall be voluntarily complied with for commercial structures, including requirements for water storage, sprinkler systems, and fire extinguishers. ▪ Generated waste shall be properly disposed of in accordance with the Cherokee Nation Solid Waste Program and Cherokee Nation Solid Waste Code.
Hazardous Materials	▪ Fuel storage tanks would comply with the provisions of 40 CFR Part 280, including Part 280.20 Performance Standards for new USTs. USTs would include leak prevention measures in accordance with 40 CFR Part 280, including Part 280.20 Performance Standards for new USTs, which includes corrosion-resistant and double-walled tanks and piping, spill and overflow prevention equipment, and use of leak detection equipment to prevent potential leaks. Personnel shall follow BMPs for filling and servicing construction equipment and vehicles. BMPs that are designed to reduce the potential for incidents/spills involving hazardous materials during construction include the following: ▪ Fuel, oil, and hydraulic fluids shall be transferred directly from a service truck to construction equipment to reduce the potential for accidental release. ▪ Catch-pans shall be placed under equipment to catch potential spills during servicing. ▪ Refueling shall be conducted only with approved pumps, hoses, and nozzles. ▪ Disconnected hoses shall be placed in containers to collect residual fuel from the hose. ▪ Vehicle engines shall be shut down during refueling. ▪ No smoking, open flames, or welding shall be allowed in refueling or service areas. ▪ Refueling shall be performed away from bodies of water to prevent contamination of water in the event of a leak or spill. ▪ Service trucks shall be provided with fire extinguishers and spill containment equipment, such as absorbents. ▪ Should a spill contaminate soil, the soil shall be put into containers and disposed of in accordance with local, state, and federal regulations. ▪ All containers used to store hazardous materials shall be inspected at least once per week for signs of leaking or failure. ▪ In the event that contaminated soil and/or groundwater is encountered during construction related earthmoving activities, all work shall be halted until a professional hazardous materials specialist or other qualified individual assesses the extent of contamination. If contamination is determined to be hazardous, the Nation shall consult with the USEPA to determine the appropriate course of action, including development of a Sampling and Remediation Plan if necessary. Contaminated soils that are determined to be hazardous shall be disposed of in accordance with federal regulations. ▪ Generated waste shall be properly disposed of in accordance with the Cherokee Nation Solid Waste Program and Cherokee Nation Solid Waste Code.

Noise	BMPs to be implemented during construction for noise include: ▪ Construction activities shall be limited to the hours between 7 am and 6 pm to the extent feasible. ▪ Construction vehicles and equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and acoustical shields or shrouds in accordance with manufacturers' specifications. ▪ Construction equipment and machinery shall only be operated by trained and qualified personnel. ▪ Maintenance of construction equipment and machinery, including noise reducing components such as mufflers, silencers, covers, guards, vibration isolators, etc., shall be performed regularly to reduce excess noise. ▪ Haul trucks shall be operated in accordance with posted speed limits. ▪ Construction equipment and machinery that produce lower noise levels shall be utilized to the extent feasible. BMPs to be implemented during operation include: ▪ Heating, ventilation, and air conditioning (HVAC) equipment shall be shielded to reduce noise.
Visual Resources	▪ Exterior lighting shall be arranged so illumination is directed away from adjacent properties and rights of way and shall not interfere with traffic. ▪ Outdoor lighting shall be shielded and downcast to the extent feasible. ▪ Electronic LED signage shall be operated in accordance with the following BMPs as recommended by DarkSky International (DarkSky International, 2024): o During the nighttime hours, luminance levels of electronic signage shall not exceed 160 cd/m^2. o Electronic LED signage shall be oriented away from residential areas. o Messages appearing on electronic signage should minimize distraction to vehicle operators and pedestrians by setting a minimum message duration, and a maximum transition time between messages. o Luminance levels shall gradually dim between daytime and nighttime modes (from sunset to one hour after sunset) to provide the proper contrast ratio with the ambient illumination level, and similarly before sunrise.

2.2 ALTERNATIVE B: REDUCED INTENSITY

Alternative B is similar to Alternative A, however no hotel or gas station/convenience store would be developed on the Project Site. Alternative B consists of the following components: 1) Transfer of the Project Site into federal trust status for the benefit of the Nation for gaming purposes; and 2) The subsequent development of the Project Site by the Nation with a casino and associated infrastructure. A conceptual site plan, floor plan, and renderings are provided in **Figures 2.2-1, 2.2-2,** and **2.2-3**. Components of Alternative B are listed in **Table 2.2-1.** Construction activities are estimated to begin in 2025 and would continue for a period of approximately 12 months.

2.3 ALTERNATIVE C: NO ACTION

Under Alternative C, the Project Site would not be placed in federal trust for the benefit of the Nation. No construction or economic development activities would occur on the Project Site under the No Action alternative.

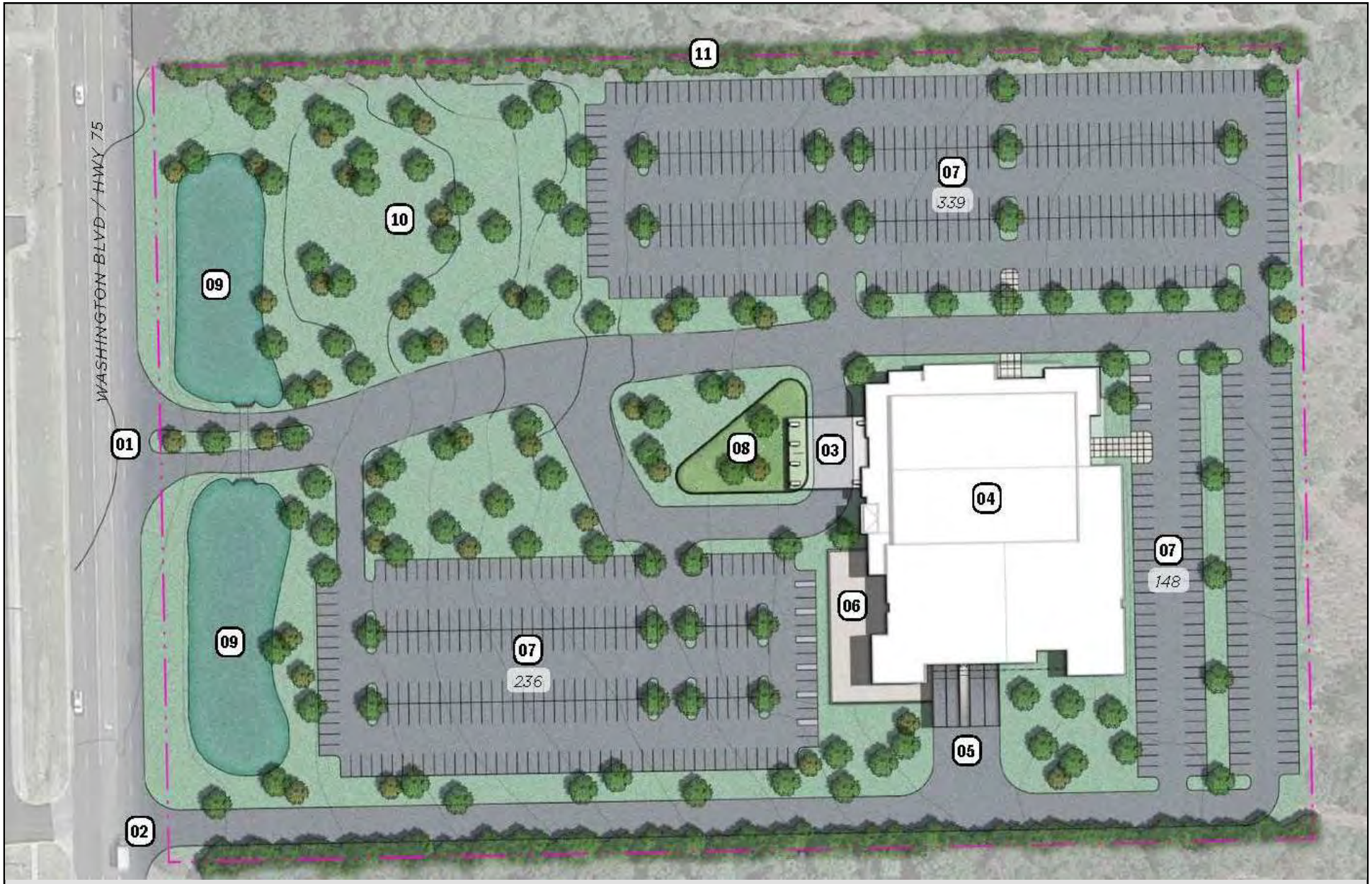


FIGURE 2.2-1

ALTERNATIVE B SITE PLAN

Legend

Project Site

1. MAIN ENTRY
2. SERVICE ENTRY
3. PORTE COCHERE
4. GAMING FLOOR
5. PLAYER'S REWARD
6. RETAIL
7. PUBLIC RESTROOMS
8. SPORTS BOOK
9. EDGE BAR
10. QUICK SERVICE RESTAURANT
11. KITCHEN
12. BANQUET SPACE
13. CAGE
14. BOH/STORAGE/EMPLOYEE SERVICES/ADMINISTRATIVE
15. EMPLOYEE ENTRANCE
16. LOADING DOCK
17. CASINO PATIO
18. RAISED GARDEN FEATURE
19. SURFACE PARKING
20. DETENTION POND
21. LANDSCAPE AREA
22. PROPERTY LINE

0 100 200 400 Feet

FIGURE 2.2-2

ALTERNATIVE B FLOOR PLAN

FIGURE 2.2-3

ALTERNATIVE B RENDERING

Table 2.2-1: Alternative B Components

Area	Number of Units	Square Footage
Casino		
Gaming Floor	500 Devices/5 tables	16,000
Sports Book	34 Positions	816
Retail, Food, and Beverage	130 Seats	7,770
Bars and Lounges	-	1,176
Meeting and Conference Space	150 Seats	1,725
Porte Cochere		3,600
Support and Circulation	-	23,304
Total	-	**54,391**
Surface Parking		
Parking Spaces	703 Spaces	-

2.1 COMPARISON OF ALTERNATIVES

2.1.1 Alternative A: Proposed Project

Among the project alternatives considered, Alternative A would best meet the Nation's objectives and would provide the greatest socioeconomic benefit to the Nation. Environmental impacts resulting from Alternative A would be similar to Alternative B given that both alternatives would have a similar development area. As Alternative A would attract more patrons, Alternative A would generate more traffic and higher demands for utilities and public services in comparison to Alternative B. Among the project alternatives, Alternative A would best meet the stated purpose and need to facilitate tribal self-sufficiency and self-determination as it would provide the greatest economic and workforce opportunities.

2.1.2 Alternative B: Reduced Intensity

Alternative B would result in similar effects to the environment as Alternative A. As Alternative B does not include a hotel or gas station/convenience store, it would generate less traffic, air quality and greenhouse gas emissions, noise, and demand for utilities and public services in comparison to Alternative A. Additionally, elimination of the gas station under Alternative B would avoid the potential for toxic air contaminant emissions and other potential standard risks associated with petroleum fuel use and storage. However, this alternative would provide the Nation with fewer economic benefits than Alternative A.

2.1.3 Alternative C: No Action

Under Alternative C, the Project Site would remain in its existing condition and would not be taken into trust. No environmental effects would occur. Under Alternative C, the Nation would not achieve the economic benefits that would be accomplished with development of Alternatives A or B. This alternative would not meet the stated purpose of facilitating economic development, tribal self-sufficiency, and self-determination.

2.2 ALTERNATIVES ELIMINATED FROM CONSIDERATION

The intent of the analysis of alternatives in the EA is to present to decision-makers and the public a reasonable range of alternatives that are both feasible and sufficiently different from each other. The alternatives discussed herein were considered and rejected from further consideration because they were either determined to be infeasible, would not offer environmental advantages over the project alternatives considered (Alternatives A and B), or would not fulfill the stated purpose of the Proposed Action.

The Project Site is already owned by the Nation in fee. The Project Site was selected by the Nation as it falls within the Nation's Reservation boundaries, was available to the Nation for purchase, is safe and developable, and has adequate site access and utilities. Consideration of an alternative site would require the Nation to purchase additional land thus placing an undue financial burden on the Nation. Therefore, alternative locations are not evaluated within the EA.

A commercial/retail development alternative was considered, however, due to the prevalence of existing retail establishments in the area and potential future competition, it is uncertain that commercial development on the Project Site would be financially viable and able to meet the purpose and need of the Proposed Action. Therefore, this alternative was eliminated from further consideration.

Section 3 | Affected Environment and Environmental Consequences

3.1 INTRODUCTION

This section describes the existing environment of the area affected by the project alternatives as well as the potential environmental consequences of each project alternative. The following environmental issue areas are described: Land Resources, Water Resources, Air Quality, Biological Resources, Cultural Resources, Socioeconomic Conditions and Environmental Justice, Transportation and Circulation, Land Use, Public Services and Utilities, Noise, Hazards and Hazardous Materials, and Visual Resources. Additional details on the regulatory setting summarized below are included within **Appendix B**. Cumulative and indirect and growth-inducing effects are identified in **Sections 3.14** and **3.15**, respectively. Measures to mitigate adverse impacts identified in this section are presented in **Section 4**. Note that, consistent with 40 CFR § 1508.1(i), the term "effects" is used synonymously with the term "impacts."

3.2 LAND RESOURCES

3.2.1 Regulatory Setting

The land resources regulatory setting is summarized in **Table 3.2-1** and additional information on the regulatory setting can be found in **Appendix B.**

Table 3.2-1: Regulatory Policies and Plans Related to Land Resources

Regulation	Description
Federal	
Clean Water Act	▪ Prohibits sediment and erosion discharge into navigable waters of the United States and establishes water quality goals.

3.2.2 Environmental Setting

Geological Setting

The geological setting of Washington County includes a mixture of Quaternary and Pennsylvanian sediments and sedimentary rock (Oklahoma Geological Survey [OGS], 2008). Washington County falls primarily within the Claremore Cuesta Plains geomorphic province, where terrain is generally flat and the climate is generally mild. The coldest monthly average low is 24 degrees Fahrenheit in January and the warmest monthly average high is 93 degrees Fahrenheit in July and August (U.S. Climate Data, 2024). There are 12 major geological provinces within the state of Oklahoma (OGS, n.d.). Washington County, including the Project Site, falls within the Cherokee Platform geologic province.

The Cherokee Platform geologic province covers an area of approximately 26,500 square miles and is known for its petroleum resources (Kansas Digital Petroleum Atlas [KDPA], 2001). No known unique geological resources occur within the Project Site. As discussed in the cultural resources study (**Appendix C**), areas of limestone bedrock were encountered during shovel testing, with a depth to bedrock as shallow as 15-20 cm.

Topography

Within the Project Site, the topography is relatively flat in the western portion with a gentle to moderate upward slope from west to east of approximately 700 to 760 feet above mean sea level (amsl). A Preliminary Drainage Report prepared for the Project Site identified slopes of approximately 6 to 7.17 percent (**Appendix A**). A site visit was conducted in January 2024 as described further in **Section 3.5**. Steep slopes, erosion, sinkholes, or other topographical features of note were not observed. The westernmost portion of the Project Site has previously been graded and is currently utilized for roadside marketing and for vehicle access for site maintenance. Other small portions of the Project Site have been graded during waste removal to allow vehicle access to cleanup areas.

Seismic Hazards

The USGS defines a fault as “active” if it has moved one or more times in the last 10,000 years. The USGS maintains mapping of active and historic quaternary faults throughout the United States. There are no known quaternary faults, active or otherwise, within 100 miles of the Project Site (USGS, 2024a). OGS has released preliminary mapping (2016) of known and/or suspected historical faults within the state (OGS, 2015). While this mapping is acknowledged by the OGS as preliminary with potential errors, there are no faults identified by OGS within Washington County.

Soils

Soils present on the Project Site include the following (**Appendix D)**:

- Shidler stony silty clay loam, 1 to 20 percent slopes (77.4 percent of Project Site): This soil is not prime farmland and is not prone to flooding or ponding. This is not a hydric soil and has a depth to water table of more than 80 inches.
- Dennis Silt Loam, 3 to 5 percent slopes (18.3 percent of Project Site): This soil is not known to have ponding or flooding and is not considered a hydric soil. This soil is considered prime farmland and is somewhat poorly drained.
- Summit Silty Clay Loam, 1 to 3 percent slopes (3.0 percent of Project Site): This soil is considered prime farmland. This soil is not hydric and is not prone to flooding or ponding.
- Pits, gravel and quarry (1.3 percent of Project Site): This soil is not prime farmland and is not assigned a hydric or runoff rating.

Liquefaction and Landslides

Liquefaction is generally only a concern in areas with strong seismic shaking where soils are prone to liquefaction. Landslides can occur on certain soils where slopes are steep, seismic risks are high, and/or rainfall is intense. Landslides and liquefaction are uncommon in the vicinity of the Project Site, and no landslides or liquefaction have been documented within over 50 miles of the Project Site (USGS, 2024b).

Mineral Resources

There are no mineral resources mapped by the USGS present on the Project Site, and there are no known mining operations that have occurred on the Project Site. The nearest known mineral resource extraction sites mapped by the USGS are limestone, gravel, and sand pits located within half a mile of the Project Site (USGS, 2024c). One of these gravel pits is an unknown limestone pit that occurred to the immediate north of the Project Site and extracted crushed or broken stone. This site was not considered significant by USGS and is no longer operational (USGS, 1983). The pit designation discussed above is likely due to similar soils found within nearby sand and gravel/rock extraction, indicating that the Project Site could be used for crushed or broken stone, including limestone extraction. In addition, five plugged oil wells occur on the Project Site from previous oil extraction (Cherokee Nation, 2024d).

3.2.3 Impacts

Significance Criteria

Impacts to land resources would be significant if the alternative changes topography so that it is noticeable to the casual observer or causes an adverse effect, such as landslides. Seismic conditions would be adversely affected if the alternative substantially increases the occurrence of seismic events or increases the risks from seismic events. Impacts to soils would be significant if the alternative significantly increases soil erosion. Mineral resources would be significantly affected if the alternative reduces the regional availability of commercial mineral resources.

Alternative A: Proposed Project

Topography

Alternative A would result in changes to the existing site topography. As discussed above, the Project Site slopes upward from west to east, with a slope of approximately 6-7.17 percent. Grading to level the site and create detention basins would likely result in an export of soil. The slope of the Project Site is not currently noticeable from public viewsheds, such as US-75, due to the gentle slope and trees that obstruct views. Grading activities, if improperly conducted, could lead to adverse effects to topography such as unstable slopes. Mitigation is included in **Section 4** that would require preparation of a Grading and Drainage Plan by a licensed engineer to ensure that manmade risks to land resources associated to changes in topography would not occur. With implementation of mitigation in **Section 4**, impacts would be less than significant.

Seismic Hazards

The Project Site is not located on or within 100 miles of a quaternary fault zone, active or otherwise (USGS, 2024a) and no faults have been identified in Washington County by OGS (OGS, 2015). Thus, there are no risks from seismic hazards associated with the Project Site. Therefore, there would be no impact associated with seismic conditions.

Soils

Alternative A includes vegetation clearing, as well as grading, excavation, and paving. As discussed in **Section 3.3** and in **Table 2.1-2**, Alternative A would require preparation of a SWPPP and implementation of the SWPPP throughout construction. BMPs within the SWPPP would include soil and erosion management practices. Additionally, as discussed in **Table 2.1-2**, Alternative A would adhere to Cherokee Nation Tribal Code and IBC and geotechnical standards that would ensure proper design of structures.

A Preliminary Drainage Report has been prepared for the project and drainage is discussed further in **Section 3.3** (**Appendix A**). As part of this report, a stormwater collection and treatment strategy is included that considers the hydrologic soil group rating and time of concentration of stormwater to ensure that stormwater collection during operation would be done in such a way as to prevent erosion or impaired runoff. Operation of Alternative A would not involve actions that would result in ongoing impacts to soils. Therefore, there would be a less-than-significant impact.

As discussed above, shallow limestone bedrock was observed within the Project Site (**Appendix C**). Limestone bedrock has the potential to result in a phenomenon known as karst, where dissolution of soluble rocks, such as limestone, occurs within groundwater and can result in sinkholes. Limestone extraction adjacent to the Project Site was evaluated by USGS and was determined not to be significant (USGS, 1983). Therefore, sufficient limestone bedrock to result in karst conditions is not anticipated.

There are no known sinkholes near the Project Site and sinkholes were not observed during surveys described in **Appendix C** and **Appendix E**. Development has occurred in the vicinity of the Project Site, indicating that sinkhole risk does not pose a development constraint around the Project Site. As discussed in **Table 2.1-2**, development would follow standard engineering practices, Cherokee Nation Tribal Code, and IBC building standards to ensure site suitability for structures. Therefore, impacts would be less than significant.

Liquefaction and Landslides

Construction of Alternative A would result in minor changes to the topography of the Project Site. As discussed above, there are no known landslides that have occurred in the vicinity of the Project Site and no known liquefaction risks. It is anticipated that the site would be mostly flat without significant landslide risk as shown on the site plan (**Figure 2.1-1**). Mitigation is included in **Section 4** that would require preparation of a Grading and Drainage Plan by a licensed engineer to ensure that grading considers landslide risks associated with the leveling of topography. With implementation of mitigation in **Section 4**, impacts would be less than significant.

Mineral Resources

There are no mapped mineral resources by the USGS within the Project Site (USGS, 2024c). The Natural Resources Conservation Service (NRCS) Soils Report suggests a small portion of the northeast corner of the Project Site may be underlain by gravel resources (NRCS, 2024). Gravel is not a sensitive or limited resource, and gravel extraction pits occur in the vicinity of the Project Site (USGS, 2024c). Based on **Appendix C** and data available on the historical gravel pit adjacent to the Project Site, limestone would be a component of gravels found within the Project Site should gravels be extracted.

As the adjacent extractions of gravel with a limestone component were determined not to be significant by the USGS, it is not expected that the Project Site itself would contain significant limestone resources (USGS, 1983). Alternative A does not propose ongoing gravel extraction or other mining activities that would deplete any such resources. Additionally, five plugged oil wells occur on the Project Site from previous oil extraction (Cherokee Nation, 2024d). The wells are plugged and non-operational. As such, impacts would be less than significant.

Alternative B: Reduced Intensity

Alternative B would occur within the same development area as Alternative A and would utilize the same construction methods but at a reduced scale. Therefore, the potential for Alternative B to impact land resources would be similar and slightly less than that of Alternative A. As with Alternative A, Alternative B would not significantly impact mineral resources or result in risks associated with seismic conditions as there are no significant active faults near the Project Site or significant known mineral resources within the Project Site.

As with Alternative A, Alternative B would follow Cherokee Nation Tribal Code, IBC, and geotechnical standards to ensure soil suitability for project design as described in BMPs identified in **Table 2.1-2**. Mitigation is included in **Section 4** that would require preparation of a Grading and Drainage Plan by a licensed engineer. This would ensure that Alternative B would not result in changes to the topography of the Project Site such that environmental risks associated with steep slopes or unsuitable changes in topography would occur. As also discussed above, BMPs identified in **Table 2.1-2** and mitigation identified in **Section 4** would ensure that soils would be properly stabilized throughout construction such that significant soil loss would not occur. There would be a less-than-significant impact.

Alternative C: No Action

Under Alternative C, the Project Site would not be taken into trust and no development would occur. Therefore, Alternative C would have no effect on land resources.

3.3 WATER RESOURCES

3.3.1 Regulatory Setting

The water resources regulatory setting is summarized in **Table 3.3-1**, and additional information on the regulatory setting can be found in **Appendix B.**

Table 3.3-1: Federal and State Water Resources Regulations

Regulation	Description
Federal	
Executive Order (EO) 11988	▪ Requires federal agencies to evaluate the potential effects of any actions they may take in a floodplain; floodplain is defined as an area that has a 1 percent or greater chance of flooding in any given year. ▪ Requires agencies proposing an action in a floodplain to consider alternatives to avoid adverse effects. If the only practicable alternative action requires siting in a floodplain, EO 11988 requires the agency to minimize potential harm to or within the floodplain.

Clean Water Act	▪ Establishes national water quality goals. ▪ Regulates point and non-point sources of pollution through the National Pollution Discharge Elimination System (NPDES). ▪ Requires an NPDES permit be obtained to discharge pollutants into Waters of the U.S. ▪ Requires states to establish water quality standards for waters in their jurisdiction and to prepare a list of surface waters where beneficial uses are impaired by pollutants.
Safe Drinking Water Act	▪ The USEPA sets National Primary Drinking Water Regulations to protect public health (primary standards) that apply to public water systems and also defines National Secondary Drinking Water Regulations (secondary standards) for contaminants that cause cosmetic and aesthetic effects, but not health effects.
Federal Emergency Management Agency (FEMA)	▪ Responsible for the preparation of Flood Insurance Rate Maps (FIRM) for the National Flood Insurance Program.
State	
Oklahoma Comprehensive Water Plan	▪ Forecasts water demands and potential gaps in water supplies. ▪ Divides the state into 13 planning areas, each with its own plan document.
Oklahoma State Statute	▪ Title 27A of the state statutes houses state statutes related to the environment and natural resources. Specifically, this title creates numerous government departments and sets forth authorizations for specific programs or designation of authority. ▪ Title 82 specifically addresses water and water rights.
Tribal	
Cherokee Nation Tribal Code	▪ Contains policies associated with protecting potable water, water quality, and waters of the Nation.

3.3.2 Environmental Setting

Surface Water

The Project Site falls within the Rich Creek-Caney River Watershed (110701060702) (USEPA, 2024). Section 303(d) of the CWA requires states to identify impaired off-reservation water bodies, rank these impaired bodies based on severity of contamination and uses for the waters, and develop water quality management strategies, usually in the form of Total Maximum Daily Loads (TMDLs) for the contaminant(s) of concern. Within the Rich Creek-Caney River Watershed, there is one waterbody listed as impaired: the Caney River.

According to the waterbody report prepared for the Caney River, this waterbody is impaired due to the presence of enterococcus bacteria and turbidity (USEPA, 2022). According to the Oklahoma Water Resources Board (OWRB) Oklahoma Comprehensive Water Plan, the Project Site is located in the Middle Arkansas Planning Region (OWRB, 2024). A review of the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) showed no known surface waters within the Project Site. A survey of the Project Site, discussed further in **Section 3.5**, confirmed an absence of surface waters within the Project Site. Additionally, the Cherokee Nation Clean Water Program covers areas within the Reservation surrounding the Project Site. The Clean Water Program has completed baseline assessments for beneficial use determinations for nine streams (Barren Fork, Caney, Flint, Little Lee, Fourteen Mile, Sallisaw, Saline, Spring, and Spavinaw Creek) since its inception in 2002 (Cherokee Nation, 2024c).

Drainage and Flooding

The majority of the Project Site is not located within a designated FEMA 100-year floodplain; however, the northwest corner of the Project Site partially overlaps with the flood zone associated with Rice Creek. Approximately 0.45 acres of the Project Site is within the 500-year floodplain and 0.17 acres of the Project Site is within the 100-year floodplain (Zone AE) (FEMA, 2008; **Figure 3.3-1**). Currently, rainfall on the Project Site either infiltrates into the ground, evaporates, or flows to lower elevations in the western portion of the Project Site, where it follows the natural topography off-site and flows into low-lying areas or the adjacent ODOT stormwater drainage system.

Groundwater

The OWRB maintains groundwater data throughout the state, including groundwater level data gathered through monitoring wells. The nearest OWRB monitoring well in relation to the Project Site is located 25 miles west and has measured a depth to groundwater ranging from 28.8 feet to 43.4 feet (OWRB, 2023). The USGS also maintains records of monitoring wells, three of which are within several miles of the Project Site and show groundwater levels ranging from 5 to 30 feet (USGS, 2004; USGS, 2009a; USGS, 2009b). There are no groundwater wells on the Project Site, and the Project Site is not underlain by a delineated aquifer (OWRB, 2012; OSU, 2011). Water supply to the Project Site would be supplied by the City's municipal system, which sources its water from Hudson Lake and Hulah Lake (City of Bartlesville 2023a, 2023b).

3.3.3 Impacts

Significance Criteria

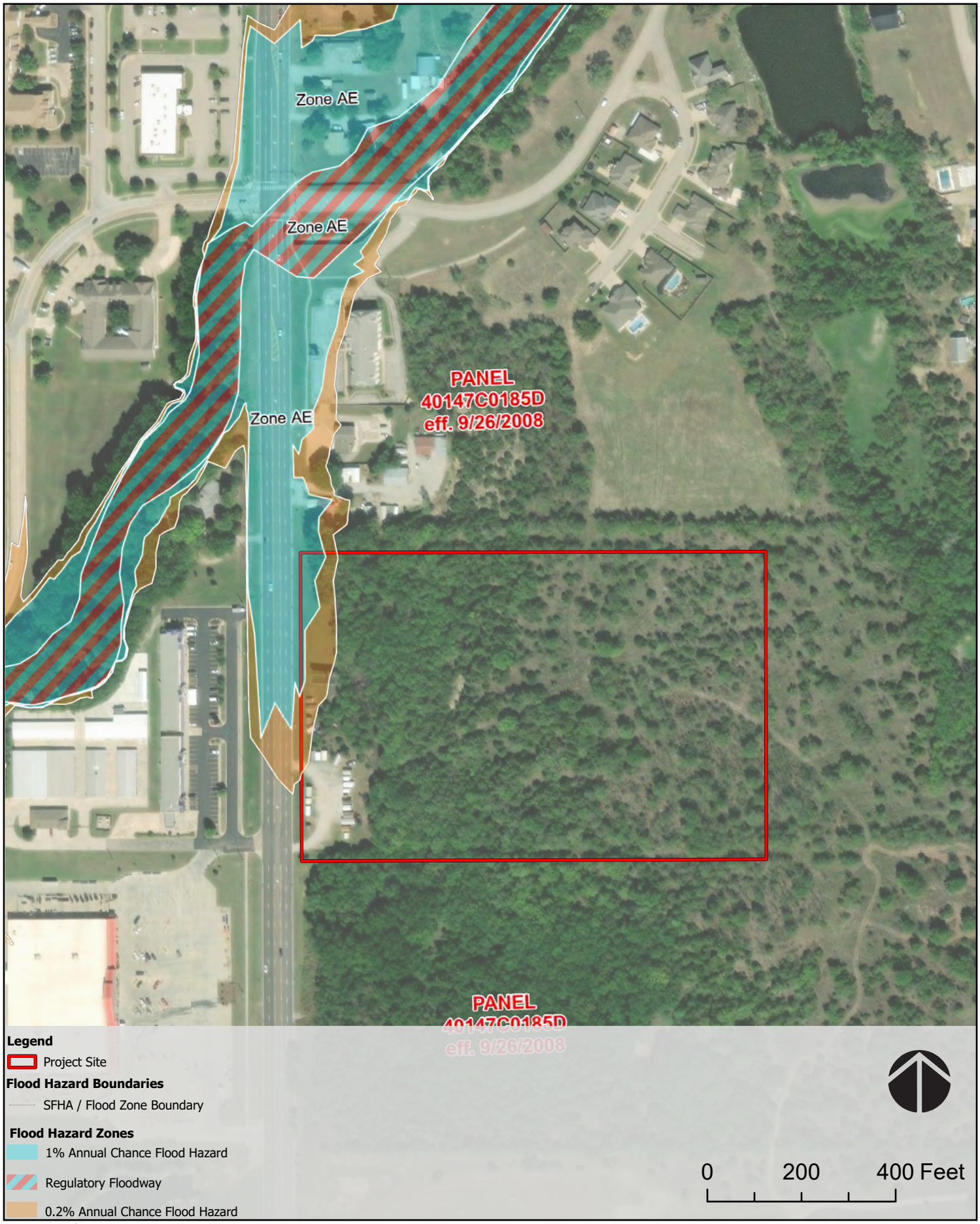
Impacts to water resources would be significant if runoff from the Project Site were to cause local flooding or introduce additional contaminants to runoff that leaves the Project Site. Groundwater impacts would be significant if development were to adversely affect local water supply either by reducing the availability of potable water or increasing the demand for domestic water to the point where the existing water supply system would need to be expanded. Water quality would be significantly affected if project alternatives caused the exceedance of water quality standards of receiving water bodies or groundwater.

Alternative A: Proposed Project

Surface Water

There are no surface water resources on or adjacent to the Project Site. Therefore, direct impacts to surface waters would not occur. Off-site surface waters could be indirectly impacted during construction if hazardous materials or impaired runoff were allowed to exit the site. Discharges of pollutants, including grease, oil, fuel, and sediments to surface waters from construction activities, or accidental release of chemicals are a potentially significant impact.

The Cherokee Nation Clean Water Program would apply to the Project Site once in trust. Additionally, Alternative A would involve construction activities in excess of one acre and therefore would be required to apply for coverage under the NPDES General Construction Permit. The provisions of this permit include preparation of a SWPPP that would be developed prior to any ground disturbance.



Maxar, Microsoft, FEMA, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User

FIGURE 3.3-1
FEMA FLOOD ZONE

The SWPPP would include BMPs to reduce potential surface water contamination during storm events. BMPs would include, but not be limited to, those presented in **Table 2.1-2.** The BMPs within the SWPPP would minimize adverse impacts to the local and regional watershed from construction activities associated with Alternative A by reducing erosion, reducing the risk of soil contamination from construction materials, and by preventing movement of loose soil into waterways. In addition to these BMPs that would be part of the adopted SWPPP, dust suppression BMPs identified to protect air quality would further prevent fugitive dust or loose soil from dispersing off-site. As discussed in **Section 3.12**, the Nation would be required to follow standard BMPs listed in **Table 2.1-2** when handling or storing chemicals. With adherence to BMPs, NPDES permitting program, and implementation of the SWPPP, impacts to surface water quality from construction activities would be less than significant.

Operation of Alternative A would utilize surface water resources provided through a municipal connection with the City of Bartlesville to meet operational water demands. Alternative A would have a water demand of approximately 13,044 gpd (Cherokee Nation Entertainment, LLC, 2024). The Middle Arkansas Watershed Planning Report included a holistic evaluation of water supply within the Project Site watershed (OWRB, 2012). This report considered the various water sources, water users and demands, and future water sourcing and reliability throughout the watershed. An analysis was also provided of water supply options through the year 2060. The Project Site falls within "Basin 76" of the planning report, which includes a portion of the Vamoosa-Ada aquifer, and surface and groundwater resources associated with Hulah Lake, Copan Lake, Lake Hudson, and the Caney River. An assessment of this area determined that surface water and bedrock groundwater did not show water supply limitations when projected through the year 2060 (OWRB, 2012). This analysis also determined that water supply reliability options such as demand management, increasing reservoir storage, and increasing use of groundwater, would serve as effective means to offer continued water supply reliability. Therefore, even though Alternative A would represent an increase in surface water demands, there remains sufficient surface water to serve Alternative A. Lastly, BMPs listed in **Table 2.1-2** include measures to reduce water demand. There would be a less-than-significant impact.

Drainage and Flooding

Construction of Alternative A would result in a greater area of impervious surfaces than currently exists on the Project Site, potentially increasing stormwater runoff flow rates. Currently, there are no impervious surfaces on the Project Site. Following construction of Alternative A, impervious areas would total approximately 12.75 acres. A Preliminary Drainage Report was prepared for Alternative A that utilized hydrology software (Hydraflow 2004) and rainfall data to assess operational stormwater detention capacity needs (**Appendix A**). Based on the Preliminary Drainage Report, a detention capacity of 302,208 gallons (6.94 acre-feet) would be necessary to accommodate a 24-hour 100-year flood event. Additionally, 0.45 acres of the Project Site is within the 500-year floodplain, and 0.17 acres of the Project Site falls within the 100-year floodplain (Zone AE) (FEMA, 2008; **Figure 3.3-1**). Other nearby development falls within this floodplain, including portions of US-75/Southeast Washington Blvd, residences, and commercial development. No structures would be placed within the floodplain, however, a portion of the northern access drive and northern detention pond overlap with these areas. Therefore, mitigation in **Section 4** includes sizing of detention basins to offset any lost floodplain capacity. With implementation of mitigation, floodplain capacity would be maintained and post-construction runoff rates would not exceed pre-construction rates.

As discussed above, the increase in impervious surfaces would result in changes to drainage patterns on the Project Site. Stormwater on the Project Site would be collected in proposed detention ponds to prevent flooding and treat stormwater prior to being discharged off-site into the existing stormwater drainage system that occurs along US-75/Southeast Washington Blvd (**Figure 2.1-1**). Trenching and excavation would occur to create stormwater detention and associated drainage infrastructure to provide volume control, treatment, and rate control (**Figure 2.1-1**) (**Appendix A**). The stormwater collection and treatment system would be designed to accommodate a 24-hour 100-year flood event with off-site runoff rates modeled to be equal to or less than existing rates (Appendix A). The fueling stations would be covered and would have internal drains (i.e., trench drains) to collect any spills or minor amounts of precipitation. The liquids collected by the internal drain system within the covered fueling station area would be conveyed to an oil/water separator and would then outfall to the sewer system, and thus would not be routed to the ODOT drainage system or discharged off-site. There would be a less-than-significant impact.

Groundwater

Construction of Alternative A would not require use of groundwater, and operational water supply for Alternative A will be provided through the City of Bartlesville, which sources its water from surface waters. Therefore, groundwater levels in the vicinity of the Project Site would not be affected by the increase in water demand as a result of Alternative A. Groundwater quality could be impacted through improper handling of hazardous materials or through improper disposal of wastewater. As discussed above, the Cherokee Nation Clean Water Program would apply to the Project Site once in trust, and the Nation would be required to implement a SWPPP for construction activities. The SWPPP would contain BMPs regarding the proper storage and use of chemicals. Additionally, the proposed gas station would include USTs for fuel as well as fuel dispensers. Potential releases of petroleum products that could impact groundwater quality could occur during customer fueling, fuel deliveries, and improperly maintained/faulty equipment that could become susceptible to leaks, such as unprotected steel tanks and piping that could corrode. USTs would be registered with the USEPA for regulation under the UST Program in Indian Country and would comply with the provisions of 40 CFR Part 280, including Part 280.20 Performance Standards for new USTs (**Table 2-1.2**). This includes requirements for tank design, the installation and maintenance of leak detection and prevention systems, and spill and overfill controls to minimize the risk of release of petroleum into the environment. Compliance with the provisions of 40 CFR Part 280 would ensure that the impacts to groundwater quality from accidental release of petroleum products, fire, explosion, and vapor intrusion hazards would be minimized. Alternative A would not involve the use of acutely toxic substances and, with BMPs listed in **Table 2.1-2**, would not endanger groundwater quality. Wastewater would be collected and properly treated by the City of Bartlesville and would not pose a risk to groundwater quality. This would be a less-than-significant impact.

Alternative B: Reduced Intensity

Alternative B would occur within the same development area as Alternative A and would utilize the same construction methods but at a reduced scale. Therefore, Alternative B would have the same or lesser potential to impact water resources during construction. With adherence to BMPs for handling of hazardous materials, NPDES permitting program, and implementation of the Cherokee Nation Clean Water Program and SWPPP, impacts to surface water quality from construction activities would be less than significant.

Alternative B, as the reduced intensity alternative, would have a lesser water demand than that of Alternative A. As with Alternative A, Alternative B would utilize a municipal connection to the City of Bartlesville municipal water services, which sources water from surface water resources. As Alternative B would have a lower water demand than Alternative A, which would not significantly impact water supply, no significant impact to surface water resources would occur.

Finally, similar to Alternative A, Alternative B would place an access drive and part of a detention basin within the floodplain and would result in the same increase in impervious surfaces and stormwater discharge into the ODOT stormwater system that fronts the Project Site. Therefore, mitigation in **Section 4** related to drainage and flooding would apply to Alternative B and would reduce impacts to a less-than-significant level.

Alternative C: No Action

Under Alternative C, the Project Site would not be taken into trust and no development would occur on the Project Site. The site would remain in its current state. Because no new construction would occur, Alternative C would have no adverse effects related to water resources.

3.4 AIR QUALITY

3.4.1 Regulatory Setting

The air quality regulatory setting is summarized in **Table 3.4-1** and additional information on the regulatory setting can be found in **Appendix B**.

Table 3.4-1: Regulatory Policies and Plans Related to Air Quality

Regulation	Description
Federal	
Clean Air Act (CAA) of 1970	▪ The CAA created the National Ambient Air Quality Standards (NAAQS) for six Criteria Air Pollutants (CAPs): ozone, carbon monoxide, particulate matter, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb). ▪ States are required to have State Implementation Plans (SIP) for areas that are not achieving the NAAQS (nonattainment areas). ▪ The Federal General Conformity Rule requires demonstration that a proposed federal action will conform to the applicable SIP. ▪ Tribal minor new source review permits are required if emissions exceed certain standards.
NEPA Guidance on Consideration of Greenhouse Gas Emissions and Climate Change (2023)	▪ The Council on Environmental Quality (CEQ) issued interim guidance to assist agencies in analyzing greenhouse gas (GHG) and climate change effects under NEPA. ▪ Agencies should consider potential effects of a proposed action on climate change and the effects of climate change on a proposed action and its environmental impacts. ▪ Agencies should provide context for GHG emissions, including using best available social cost of GHG estimates. ▪ Agencies should mitigate GHG emissions associated with their proposed actions to the greatest extent possible, consistent with national, science-based GHG reduction policies established to avoid the worst impacts of climate change.

Secretarial Order (SO) 3399	▪ SO 3399 was issued to prioritize action on climate change throughout the Department and to restore transparency and integrity in the Department's decision-making processes. ▪ SO 3399 specifies that when considering the impact of GHG emissions from a proposed action, Bureaus/Offices should use appropriate tools, methodologies, and resources available to quantify GHG emissions and compare GHG quantities across alternatives.
State	
Oklahoma Clean Air Act	▪ Identifies the Oklahoma Department of Environmental Quality (DEQ) as the administrative agency. ▪ Establishes the permitting program for stationary sources in compliance with the Federal Clean Air Act. ▪ Establishes the authority of the DEQ to establish air quality rules and to implement and enforce federal emission standards for oil and gas wells.
Tribal	
Cherokee Nation Tribal Code	▪ Contains policies associated with protecting air quality and monitoring and reducing emissions.
Low or No Emissions Program	▪ Program focuses on connecting rural Cherokee citizens to jobs in urban locations via clean energy transit options.
Volkswagen Mitigation Plan	▪ Plan focuses on replacing specific classes of diesel-powered vehicles with zero emission electric-powered vehicles and supporting infrastructure.

3.4.2 Environmental Setting

Climate and Climate Change

The climate of Washington County is characterized by cold winters and hot summers. January is the coldest month with average temperatures of 35° F and low temperatures of 22° F. July is the warmest month with average temperatures of 81° F and daily maximum temperatures of 93° F. Washington County receives an average of about 40 inches of precipitation annually and annual snowfall is 5 inches (Oklahoma Climatological Survey, n.d.). The USEPA has reported that most of Oklahoma has not become warmer during the last 50 to 100 years, but soils have become drier, annual rainfall has increased and heavy downpours have become more common. Summers are expected to become hotter and drier with more severe droughts. Floods are also expected to become more severe (USEPA, 2016).

Attainment Status

The Project Site is currently within the jurisdictional area of the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality. The AQD regulates air pollutant emissions from stationary sources within Washington County. However, once the Project Site is taken into trust, air quality would be under the jurisdiction of the USEPA. To determine conformance with NAAQS, states are responsible for providing ambient air monitoring data to the USEPA. The USEPA then determines, using the violation criteria, if the results of the monitoring data indicate compliance with the NAAQS. The USEPA classifies areas in compliance with the NAAQS as being in "attainment". Areas that do not meet the NAAQS are classified as being in "nonattainment" by the USEPA. The entire state of Oklahoma meets the federal standards for all CAPs.

Sensitive Receptors

Sensitive receptors are generally defined as land uses that house or attract people who are susceptible to adverse effects from air pollution emissions and, as such, should be given special consideration when evaluating air quality impacts from projects. Sensitive receptors include facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent homes, parks and recreational facilities, and residential areas are examples of sensitive receptors.

Residential units occur just north of the Project Site as well as to the west behind existing commercial development. There is also a senior living facility approximately 560 feet to the northwest. The nearest sensitive receptor to the Project Site is a residential unit approximately 100 feet north of the nearest proposed development area.

3.4.3 Impacts

Significance Criteria

Development and operation of the project alternatives would emit CAPs, hazardous air pollutants (HAPs), and GHGs. This section presents the methodology used to assess the affected environment and to evaluate the potential air quality effects of the project alternatives. The Project Site is in a region classified as being in attainment for all CAPs. Under the federal CAA (and its regulations at 40 CFR Part 93), if a region is in attainment for all CAPs, then the region meets the NAAQS and there are no de minimis levels or thresholds for a project's emissions. Significant impacts on ambient air quality could result if either construction or operation would result in violations of the CAA provisions or if emissions would impede the ability of the state to meet NAAQs.

Methodology

Construction Analysis

Effects on air quality during construction were evaluated by estimating the quantity of each CAP emitted over the duration of the construction period. Particulate matter 10 microns in diameter (PM_{10}) and fine particulate matter 2.5 microns in diameter ($PM_{2.5}$) are the pollutants of concern resulting during earth-moving and fine grading activities. Volatile organic compounds (VOC), nitrogen oxides (NOx), sulfur dioxide (SO_2), carbon monoxide (CO), GHG, and diesel particulate matter (DPM) emissions would be emitted from heavy equipment due to the combustion of diesel fuel. Mobile source emissions would result from the use of on-road construction vehicles. Emissions from construction trucks and heavy equipment were calculated using the USEPA model Motor Vehicle Emission Simulator (MOVES4) and emission factors (EMFAC). A detailed list of proposed equipment and resulting emissions is included in **Appendix F**.

Operation Analysis

Emission factors in grams per vehicle mile traveled were estimated for patron vehicles and evaluated using the MOVES4 model. MOVES4 calculates emissions for light-duty vehicles, trucks, heavy-duty vehicles, and motorcycles. The model accounts for progressively more stringent tailpipe emission standards over the vehicle model years evaluated. MOVES4 model input data is site-specific. Output data is provided in **Appendix F.**

Emissions of PM_{10}, NO_X, SO_2, CO, VOCs, and carbon dioxide (CO_2) equivalents from vehicles traveling to, from, and within the Project Site were calculated for the project alternatives. Calculations were based on emission factors derived from MOVES4 and trip generation rates provided in the Traffic Impact Analysis (TIA) developed by Traffic Engineering Consultants (**Appendix G**). An average trip length of 15 miles was utilized based on the distance of the Project Site to nearest population centers.

Stationary-Source Emission

Electricity and natural gas or propane would be used as fuel for space heating, water heaters, and cooking equipment. Annual gas usage for the project alternatives is based on similar casino, hotel, commercial and recreational facilities. Emissions from natural gas combustion are calculated using emission factors from AP-42 (USEPA, 1995). A 1,200-kW diesel emergency generator would provide backup power in the event of an electrical outage. Emissions from the emergency generator were estimated using a USEPA calculator based on emission factors from AP-42 (USEPA, 1995).

Federal General Conformity

Conformity regulations apply to federal actions that would cause emissions of CAPs above certain levels to occur in locations designated as nonattainment or maintenance areas for the emitted pollutants. As discussed above, the Project Site is in an area classified as in attainment for all NAAQS; therefore, a federal general conformity analysis is not required.

Climate Change

This analysis considers whether project emissions have individual or cumulative effects on climate change. GHG emissions were calculated using emission factors from the MOVES4 model and AP-42, EPA's *Compilation of Air Pollutant Emissions Factors*.

Federal Class I Areas

The CAA designates international parks, national wilderness areas, and memorial parks larger than 5,000 acres and national parks larger than 6,000 acres as "Class I areas." If a development alternative emits greater than the prevention of significant deterioration (PSD) threshold of 250 tons per year (tpy) of any one CAP from stationary sources during construction or operation, a best available control technology (BACT) analysis would be conducted. The nearest Class I area is Upper Buffalo Wilderness Area in Arkansas, approximately 166 miles from the Project Site. As there are no Federal Class I areas within 100 km/62.1 miles of the Project Site, Class I areas need not be further addressed within this EA.

Tribal New Source Review

The USEPA has developed permits to simplify the new source review (NSR) CAA permitting process for certain small sources of air pollution commonly found on tribal land. For this analysis, stationary source project-related operational emissions have been quantified and compared to applicable thresholds. If the thresholds in **Table 3.4-2** are exceeded, an NSR permit would be required.

Table 3.4-2: Tribal Minor New Source Review Thresholds

Pollutant	Emissions Thresholds for Attainment Areas (tons per year)
Nitrogen Oxides	10
Volatile Organic Compounds	5
Particulate Matter	10
PM_{10}	5
$PM_{2.5}$	3
Carbon Monoxide	10
Sulfur Dioxide	10

Source: 40 CFR 49.153

Alternative A: Proposed Project

Construction Emissions

Construction of Alternative A would result in emissions of PM_{10}, $PM_{2.5}$, NO_X, sulfur oxides (SO_X), CO, VOCs, GHGs, and HAPs (primarily in the form of DPM) from construction equipment and grading. Construction is assumed to begin in 2025 and last for approximately 18 months. However, for this analysis all construction emissions are assumed to occur within one year. The construction emission totals for Alternative A are shown in **Table 3.4-3** (see **Appendix F** model output files).

Table 3.4-3: Construction Emissions of Criteria Pollutants – Alternative A (Tons per Year)

Emissions	NOx	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$
Total Emissions	**3.01**	**0.94**	**7.21**	**0.01**	**3.85**	**1.96**
De minimis Levels	N/A	N/A	N/A	N/A	N/A	N/A

Source: **Appendix F**

Notes: N/A = Not Applicable. *De minimis* levels are not applicable because the project area is in attainment.

The Project Site is in a region classified as being in attainment for all CAPs; therefore, in accordance with 40 CFR Part 93, construction would not cause an exceedance of NAAQS. However, construction of Alternative A would produce DPM and fugitive dust (PM_{10}) that may impact the sensitive receptors in the vicinity of the Project Site, the nearest of which is a residence located approximately 95 feet north of the nearest development area. Most of the construction would occur at greater distances, with the casino and hotel construction occurring approximately 700 feet from the closest residence.

BMPs identified in **Table 2.1-2** would reduce construction-related emissions of CAPs and reduce DPM emissions from construction equipment. Construction of Alternative A would not affect public health and safety and is compliant with applicable requirements imposed for the protection of the environment. Therefore, with implementation of the identified BMPs, construction of Alternative A would not result in significant adverse impacts associated with the regional air quality environment.

Operational Emissions

Buildout and operation of Alternative A would result in the generation of mobile emissions from patron, employee, and delivery vehicles, as well as stationary-source emissions from combustion of natural gas in stoves, heating units, back-up generator, and other equipment. Mobile-source emissions are based on new trips generated by Alternative A. Estimated mobile-source and stationary-source emissions from operation of Alternative A are provided in **Table 3.4-4**. The stationary emissions are presented as a point of reference. Detailed calculations of vehicle and area emissions are included in **Appendix F**.

Table 3.4-4: Operation Emissions of Criteria Pollutants – Alternative A (Tons per Year)

Source	NOx	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$
Stationary	0.31	0.02	0.22	0.00	0.02	0.02
Gas Station (gas vapor)	-	1.41	-	-	-	-
Mobile	17.19	3.70	139.17	0.09	2.32	1.83
De minimis Levels	N/A	N/A	N/A	N/A	N/A	N/A

Source: **Appendix F**
Notes: N/A = Not Applicable. *De minimis* levels are not applicable because the project area is in attainment.

The Project Site is in a region classified as being in attainment for all CAPs. Under the federal CAA (40 CFR Part 93), if a region is in attainment for all CAPs, then the region meets the NAAQS and there are no *de minimis* levels or thresholds for a project's emissions. As shown in **Table 3.4-4**, the actual estimated operational emissions from stationary sources would not exceed the minor NSR thresholds. While this EA estimates the actual emissions from stationary sources, including the emergency diesel generator, the Nation will consult with the USEPA to determine whether NSR permits may be needed based on regulatory procedures for hypothetical usage and associated emissions. Alternative A would not result in stationary source emissions of any one pollutant in excess of the federal Class I Areas major source threshold of 250 tons per year.

Operation of Alternative A would generate HAPs associated with gasoline vapors from the proposed gas station and DPM emissions from mobile and stationary sources. Gasoline fueling stations release HAPs including benzene, ethylbenzene, toluene, xylenes, and naphthalene from gasoline vapors. These vapors are emitted during the transfer of gasoline from tanker trucks to underground storage tanks, venting of underground storage tanks, and refueling vehicles (including spillage). VOC emissions from the proposed gas station were estimated at 1.4 tons per year using the USEPA's gasoline dispensing calculator (**Appendix F**). This calculator uses worst-case "potential to emit" assumptions that are based on a maximum operation scenario rather than a typical operation scenario, so actual emissions are expected to be less than this reported amount. The estimated VOC emissions would not exceed the minor NSR permit threshold of 5 tons per year (**Table 3.4-2**). VOC emissions are controlled by onboard refueling vapor recovery (ORVR) systems in vehicles and emission control systems for underground storage tanks and fuel dispensers.

Although there are no known federal or Oklahoma state policies related to distances between residential land uses and gas stations, the California Air Resources Board (CARB) has issued recommendations for siting sensitive land uses (such as residences) near pollution sources. CARB recommends that sensitive land uses should not be located within 50 feet of a typical gasoline dispensing facility (CARB, 2005). The proposed gas station would be located approximately 100 feet from the closest residence. While this buffer distance exceeds CARB's recommendations, there remains the potential for HAP emissions to impact sensitive receptors at adjacent residences. This is a potentially significant impact. Mitigation is provided in **Section 4** to reconfigure the site plan to increase the distance between the fuel pumps and underground storage tanks and the nearest off-site residential receptors. The minimum separation between the fueling areas and existing residences would therefore be 300 feet.

Operation of Alternative A would generate DPM emissions from mobile and stationary sources. Mobile sources include diesel-powered buses and trucks accessing the Project Site. Aside from the fueling station, stationary emissions would be limited to periodic testing and use of an emergency generator. The USEPA regulations for standby/emergency generators require Tier 2 diesel engines or higher. Tier 2 standards include limitations on DPM emissions, which necessitate emission control devices. In addition, the BMPs identified in **Table 2.1-2** include limiting truck and bus idling times on the Project Site. These measures would reduce potential impacts from DPM to a less-than-significant level.

BMPs provided in **Table 2.1-2** would minimize CAP and HAP emissions resulting from operation of Alternative A. With implementation of the BMPs and mitigation identified in **Section 4**, Alternative A would not result in significant adverse impacts associated with the regional air quality environment. Operation of Alternative A would not affect public health and safety and would be compliant with federal mandates for operational vehicle and area emissions.

Climate Change

Climate change has global impacts, such as more erratic weather patterns, more frequent droughts, and rising sea levels, as well as regional and local impacts. Climate change for Oklahoma has the potential to increase summer temperatures and droughts while also increasing the intensity of downpours and (USEPA, 2016). Development of Alternative A would result in an increase in GHG emissions from construction, mobile sources (trips generated), and stationary sources, and indirect sources related to energy production. GHG emissions were calculated using emission factors from MOVES4 and USEPA emission factors for GHG inventories. Mobile emissions are based on new trips associated with Alternative A. Estimates for Alternative A are included in **Table 3.4-5**. Operational GHG emissions in 2046 are estimated to be approximately 13,960 metric tons (MT) CO2e.

The social cost of GHG emissions (SC-GHG) was estimated using cost estimates provided by the Interagency Working Group (IWG) on Social Cost of Greenhouse Gases (IWG, 2021), consistent with CEQ Guidance on Consideration of Greenhouse Gas Emissions and Climate Change (2023). The SC-GHG is the monetary value of the net harm to society associated with adding an amount of that GHG to the atmosphere in a given year. In principle, it includes the value of all climate change impacts, including (but not limited to) changes in net agricultural productivity, human health effects, property damage from increased flood risk natural disasters, disruption of energy systems, risk of conflict, environmental migration, and the value of ecosystem services.

Table 3.4-5: Alternative A Project-Related Greenhouse Gas Emissions

Emission Source	Alternative A MT of CO2e/year
Construction (Total)	
Construction	942
Operation (Annual)	
Mobile	12,786
Stationary	209
Indirect Sources	
Electricity	754
Solid Waste	180
Water/Wastewater	31
Operation Total	13,960

Notes: CO2e = carbon dioxide equivalent; MT = metric tons
Source: **Appendix F**

Discount rates are used to account for the present value of future costs. Using a low discount rate increases the present value of future costs, whereas using a high discount rate decreases the present value of future costs. The IWG cost estimates are provided for 2.5, 3 and 5 percent discount rates. The cost estimate for CO_2 used in this analysis is based on the 3 percent discount rates provided by IWG (IWG, 2021). **Table 3.4-6** presents the social cost of the GHG emissions from construction, annual operations, and the lifetime of the project (lifetime costs include construction and 30 years of operation). As shown in **Table 3.4-5**, over 90 percent of the operational GHG emissions would come from indirect mobile emissions from vehicle trips. The federal government has enacted measures that would reduce GHG emissions from mobile sources. These include increasing fuel efficiency of vehicles and providing incentives for transitioning to electric vehicles. The Nation also has programs to replace vehicles and buses with low and zero emission models. As shown in **Table 3.4-6**, operational carbon dioxide emissions would fall from 19,664 MT at opening, to 13,960 MT in 2046. Project-related GHG emissions would be reduced through project design and BMPs listed in **Table 2.1-1**. Construction BMPs include minimization of idling and proper maintenance of construction equipment. Operational BMPs would reduce indirect GHG emissions from the provision of electrical vehicle charging infrastructure, use of energy and water efficient fixtures, and proper maintenance of equipment. With the implementation of BMPs, Alternative A would not result in a significant adverse cumulative impact associated with climate change.

The effect of climate change on Alternative A is also considered in this EA. Alternative A includes components that would reduce exposure to the ongoing impacts from climate change. On-site heating and air conditioning will lessen the effects of increasing temperatures and frequency of extreme heat days or weather conditions. The Project Site is not located near the sea and is not susceptible to sea level rise risks. The proposed buildings are not located within a flood zone and are not at risk of flooding impacts.

Table 3.4-6: Social Cost of GHG Emissions from Alternative A

GHG/Cost per Metric Ton		Tons	Cost
Construction (2025-2026) CO_2	$57	942	$53,694
Operation (2026) CO_2	$57	19,664	$1,120,848
Operation (2046) CO_2	$80	13,960	$1,116,800
Lifetime CO_2		419,742	$33,557,694

Notes: Social Cost of GHG emissions based on 3 percent discount rate from IWG, 2021. 2026 and 2046 costs based on linear interpolated values. Lifetime GHG emissions include construction emissions and 30 years of 2046 operational emissions. GHG emissions quantities are from **Appendix F**.

Alternative B: Reduced Intensity

Construction Related Emissions

Construction of Alternative B would result in emissions of PM_{10}, $PM_{2.5}$, NO_X, SO_X, CO, VOCs, GHGs, and HAPs (primarily in the form of DPM) from the use of construction equipment, and grading activities. The construction emission totals for Alternative B are shown in **Table 3.4-7** (see **Appendix F** model output files).

Table 3.4-7: Construction Emissions of Criteria Pollutants – Alternative B (Tons per Year)

Emissions	NOx	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$
Total Emissions	**2.83**	**0.72**	**7.05**	**0.01**	**2.85**	**1.46**
De minimis Levels	N/A	N/A	N/A	N/A	N/A	N/A

Source: **Appendix F**

Notes: N/A = Not Applicable. *De minimis* levels are not applicable because the project area is in attainment.

As described under Alternative A, because the Project Site is in a region classified as being in attainment for all CAPs, construction would not cause an exceedance of NAAQS. However, construction of Alternative B would produce DPM and fugitive dust (PM_{10}) that may impact the sensitive receptors in the vicinity of the Project Site, the nearest of which is a residence located approximately 140 feet north of the nearest development area. Most of the construction would occur at greater distances, with the casino construction occurring approximately 700 feet from the closest residence.

BMPs identified in **Table 2.1-2** would reduce construction-related emissions of CAPs and reduce DPM emissions from construction equipment. Construction of Alternative B would not affect public health and safety and is compliant with applicable requirements imposed for the protection of the environment. Therefore, with implementation of the identified BMPs, construction of Alternative B would not result in significant adverse impacts associated with the regional air quality environment.

Operational Emissions

Buildout and operation of Alternative B would result in a similar generation of mobile emissions as described under Alternative A. However, due to the reduced development, Alternative B would generate less traffic and the associated emissions would be less than under Alternative A.

In addition, Alternative B does not include a gas station and as a result would avoid the associated VOC emissions from gasoline vapors. Mobile-source emissions are based on new trips generated by Alternative B. Estimated mobile-source and stationary-source emissions from operation of Alternative B are provided in **Table 3.4-8**. The stationary emissions are presented as a point of reference. Detailed calculations of vehicle and area emissions are included in **Appendix F**.

Table 3.4-8: Operation Emissions of Criteria Pollutants – Alternative B (Tons per Year)

Sources	NOx	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$
Stationary	0.31	0.02	0.17	0.00	0.02	0.02
Mobile	13.60	2.92	110.08	0.07	1.83	0.50
De minimis Levels	N/A	N/A	N/A	N/A	N/A	N/A

Source: **Appendix F**

Notes: N/A = Not Applicable. *De minimis* levels are not applicable because the project area is in attainment.

As with Alternative A, because the Project Site is in a region classified as being in attainment for all CAPs, operation would not cause an exceedance of NAAQS. As shown in **Table 3.4-8**, the actual estimated operational emissions from stationary sources would not exceed the minor NSR thresholds. Alternative B would not result in stationary source emissions of any one pollutant in excess of the federal Class I Areas major source threshold of 250 tons per year. BMPs provided in **Table 2.1-2** would minimize CAP emissions resulting from operation of Alternative B. With implementation of BMPs, Alternative B would not result in significant adverse impacts associated with the regional air quality environment. Operation of Alternative B would not affect public health and safety and would be compliant with federal mandates for operational vehicle and area emissions.

Climate Change

Development of Alternative B would result in an increase in GHG emissions from construction, mobile sources (trips generated), and stationary sources, and indirect sources related to energy production. GHG emissions were calculated using emission factors from MOVES4 and USEPA emission factors for GHG inventories. Mobile emissions are based on new trips of Alternative B. Estimates for Alternative B are included in **Table 3.4-9**. Operational GHG emissions in 2046 are estimated to be approximately 10,966 MT CO2e.

The SC-GHG was estimated using cost estimates provided by the Interagency Working Group on Social Cost of Greenhouse Gases (IWG, 2021), consistent with CEQ Guidance on Consideration of Greenhouse Gas Emissions and Climate Change (2023). **Table 3.4-10** presents the social cost of the GHG emissions from construction, annual operations, and the lifetime of the project (lifetime costs include construction and 30 years of operation). As shown in **Table 3.4-9**, over 90 percent of the operational GHG emissions would come from indirect mobile emissions from vehicle trips. The federal government has enacted measures that would reduce GHG emissions from mobile sources. These include increasing fuel efficiency of vehicles and providing incentives for transitioning to electric vehicles.

Table 3.4-9: Alternative B Project-Related Greenhouse Gas Emissions

Emission Source	Alternative B MT of CO2e/year
Construction (Total)	
Construction	913
Operation (Annual)	
Mobile	10,113
Stationary	145
Indirect Sources	
Electricity	533
Solid Waste	156
Water/Wastewater	19
Operation Total	**10,966**

Notes: CO2e = carbon dioxide equivalent; MT = metric tons
Source: **Appendix F**

The Nation also has programs to replace vehicles and buses with low and zero emission models. As shown in **Table 3.4-10**, operational carbon dioxide emissions would fall from 15,478 MT at opening, to 10,966 MT in 2046. The Nation will reduce project-related GHG emissions through project design and BMPs listed in **Table 2.1-1**. Construction BMPs include minimization of equipment idling, and proper maintenance of construction equipment. Operational BMPs would reduce indirect GHG emissions from the provision of electrical vehicle charging infrastructure, use of energy and water efficient fixtures, and proper maintenance of equipment. With the implementation of BMPs, Alternative B would not result in a significant adverse cumulative impact associated with climate change.

Table 3.4-10: Social Cost of GHG Emissions from Alternative B

GHG/Cost per metric ton		Tons	Cost
Construction (2025-2026) CO_2	$57	913	$52,041
Operation (2026) CO_2	$57	15,478	$882,246
Operation (2046) CO_2	$80	10,966	$877,280
Lifetime CO_2		329,893	$26,370,441

Notes: Social Cost of GHG emissions based on 3 percent discount rate from IWG, 2021. 2026 and 2046 costs based on linear interpolated values. Lifetime GHG emissions include construction emissions and 30 years of 2046 operational emissions. GHG emissions quantities are from **Appendix F**.

The effect of climate change on Alternative B is also considered in this EA. Alternative B includes components that would reduce exposure to the ongoing impacts from climate change. On-site heating and air conditioning will lessen the effects of increasing temperatures and frequency of extreme heat days or weather conditions. The Project Site is not located near the sea and is not susceptible to sea level rise risks. The proposed buildings are not located within a flood zone and are not at risk of flooding impacts.

Alternative C: No Action

Under Alternative C, the Project Site would not be taken into trust and no development would occur on the Project Site. Therefore, Alternative C would have no effect on air quality or climate change.

3.5 BIOLOGICAL RESOURCES

3.5.1 Regulatory Setting

The regulatory setting for biological resources is summarized in **Table 3.5-1**, and additional information on the regulatory setting can be found in **Appendix B**.

Table 3.5-1: Regulatory Policies and Plans Related to Biological Resources

Regulation	Description
Federal	
Federal Endangered Species Act (FESA)	▪ Protects federally listed wildlife and their habitat from take. ▪ Requires consultation under Section 7 of the FESA for federal agencies if take of a listed species is necessary to complete an otherwise lawful activity. ▪ Considers habitat loss an impact to the species. ▪ Defines critical habitat as specific geographic areas within a listed species range that contain features considered essential for the conservation of the listed species.
Migratory Bird Treaty Act (MBTA)	▪ Protects migratory birds and requires project-related disturbances to be reduced or eliminated during the nesting season.
Bald and Golden Eagle Protection Act	▪ Prohibits take, possession, and commerce of bald and golden eagles and associated parts, feathers, nests, or eggs, with limited exceptions.
Clean Water Act (CWA) Sections 404 and 401	▪ Defines wetlands and waters of the United States subject to jurisdiction of the U.S. Army Corps of Engineers (USACE) and/or the state. ▪ Guides the permitting and mitigation of filling or dredging of waters of the U.S. under the authority of Section 404 of the CWA by the USACE or the U.S. Environmental Protection Agency (USEPA). ▪ Projects requiring a 404 permit under the CWA also require a Section 401 certification from the USEPA.
State	
Oklahoma Endangered and Threatened Species	▪ Oklahoma statute Title 29 (Game and Fish) §29-5-412 prohibits take of threatened or endangered species. ▪ The Oklahoma Department of Wildlife Conservation maintains a list of species that are considered by the state to be threatened or endangered, in addition to those that are protected under the Federal Endangered Species Act.

3.5.2 Environmental Setting

Methodology

A Biological Assessment (BA) was prepared for the Project Site and is included as **Appendix E**. The following information was utilized in this analysis and in determining the environmental setting of the Project Site:

- Aerial photography of the Project Site;
- USGS 7.5 degree-minute topographic quadrangles of the Project Site and vicinity;
- USFWS National Wetlands Inventory (NWI) mapper (Figure 6 of **Appendix E**);
- USFWS Information for Planning and Consultation (IPaC) species list (Attachment A of **Appendix E**);
- USFWS IPaC determination key for American burying beetle (Attachment A of **Appendix E**);
- Oklahoma Department of Wildlife Conservation (ODWC) list of state threatened and endangered species (ODWC, 2024a); and
- Consultation and coordination with the Cherokee Nation Environmental Programs.

As part of the BA, a biological resources survey was conducted on the Project Site on January 10, 2024. The purpose of the survey was to identify vegetative communities, document surface water resources, identify flora and fauna present on-site, and identify suitable habitat for protected species. Field and mapping methodologies are outlined in Section 2 of **Appendix E**.

Habitat requirements for state and federally listed species were assessed and compared to the type and quality of habitat observed on the Project Site during the biological resources survey. Several regionally occurring state and federally listed species were eliminated from consideration as the Project Site lacks suitable habitat or is located outside of the known elevation/geographic range of the species.

Habitat Types

The following terrestrial natural communities occur in the Project Site, as shown on **Figure 3.5-1** and are described in detail below:

- Ruderal/developed
- Cedar glade
- Mixed hardwood forest

Ruderal/Developed (1.2 acres)

These areas consist of disturbed or converted natural habitat that are now either in a ruderal state or fully developed. On the western edge of the Project Site, the vegetation communities are ruderal or urbanized. A strip along Southeast Washington Blvd was cleared and graveled to establish a commercial area (a retailer of storage sheds) as well as a municipal stormwater collection system. Vegetation in this area consists of non-native turf grasses and common weeds and ornamental species, such as Bermuda grass (*Cynodon dactylon*), Chinese privet (*Ligustrum sinense*), Japanese honeysuckle (*Lonicera japonica*), iris (*Iris sp*.), and Chinese bushclover (*Lespedeza cuneata*).

Cedar Glade (6.1 acres)

The eastern half of the Project Site is underlain by limestone bedrock, where soil development is poor. Vegetation is sparse and conditions are hotter and dryer than adjacent areas containing better soils and denser vegetation. Such habitats are called glades, and the vegetation community is drought adapted and interspersed with occasional trees. The dominant tree is eastern red cedar (*Juniperus virginiana*), but black locust (*Robinia pseudoacacia*) and honey locust (*Gleditsia triacanthos*) were also present.

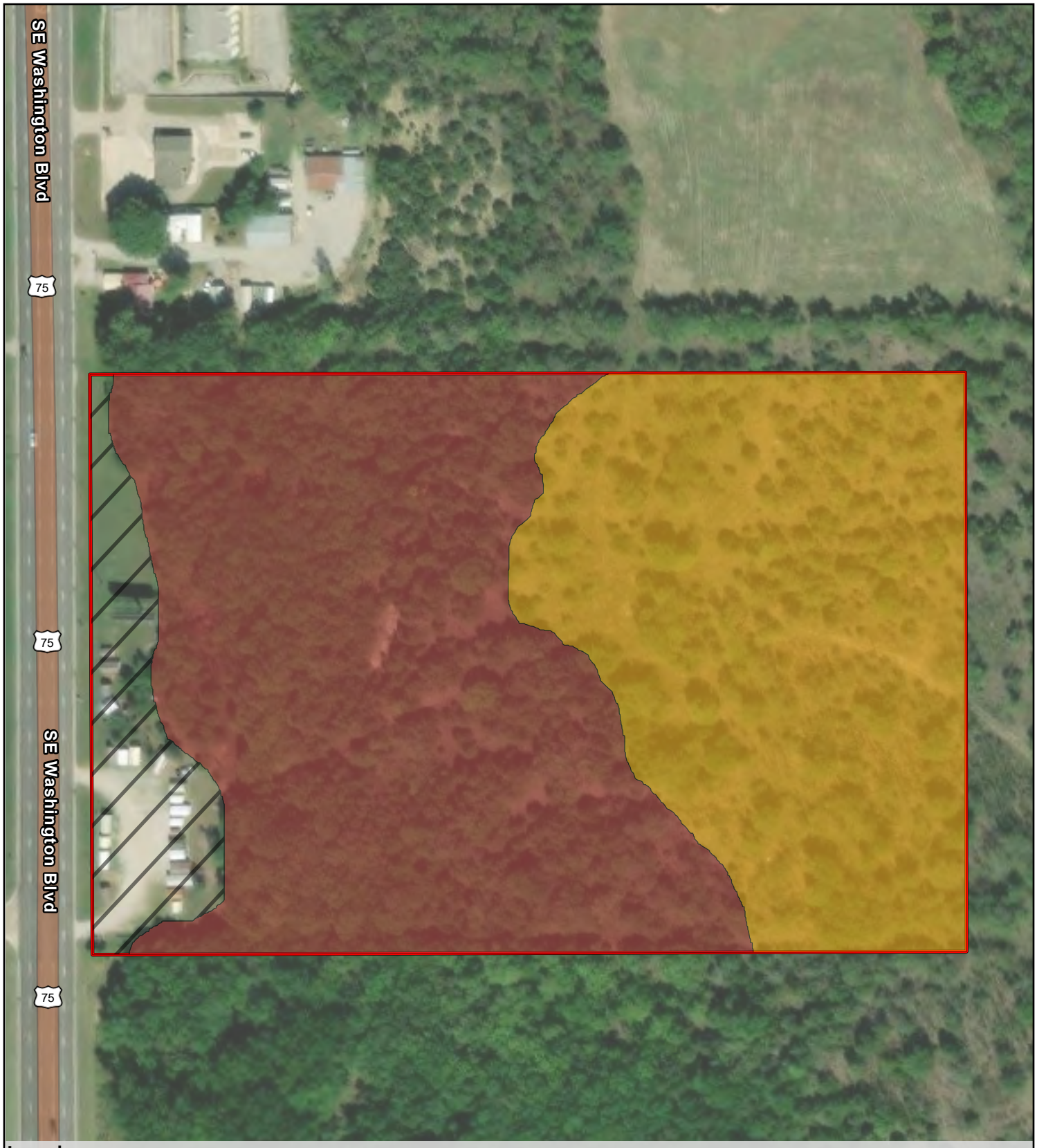


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FIGURE 3.5-1
HABITAT TYPES

Prairie broomweed (*Amphiachyris dracunculoides*) was abundant, and in rocky areas succulents such as prickly pear (*Opuntia*), Arkansas yucca (*Yucca arkansas*), and Missouri foxtail cactus (*Escobaria missouriensis*) were common. There were also remnants of prairie habitat in clearings in the Project Site, and native annual and perennial bunchgrasses can be seen, primarily switchgrasses (*Panicum virgatum* and *Panicum capillare*), big bluestem (*Andropogon gerardii*), and grama (*Bouteloua*). Some forbs were present, such as field thistle (*Cirsium discolor*) and horseweed (*Erigeron canadensis*), as well as non-native grasses such as Johnson grass (*Sorghum*).

Mixed Hardwood Forest (7.7 acres)

On the western half of the Project Site, mixed hardwood forest forms a dense canopy, except where clearings have been made for access roads. The deciduous overstory consists primarily of pin oak (*Quercus palustris*), red oak (*Quercus rubra*), and shagbark hickory (*Carya ovata*), with occasional common hackberry (*Celtis occidentalis*) and winged elm (*Ulmus alata*).

The understory consists of coralberry (*Symphoricarpos orbiculatus*), possumhaw holly (*Ilex decidua*), black cherry (*Prunus serotina*), eastern redbud (*Cercis canadensis*), and vines such as poison ivy (*Toxicodendron radicans*), greenbrier (*Smilax*), and groundcherry (*Calliphysalis*). The closed canopy and dense leaf litter precludes the establishment of most grasses, although wildflowers could emerge in spring.

Wetlands and Waters of the U.S.

A figure showing the NWI report for the Project Site is included as Figure 6 of **Appendix E**. As shown in this figure, NWI does not report any surface waters on the Project Site. The nearest surface water resources to the Project Site identified by NWI are isolated freshwater ponds and a riverine system associated with Rice Creek. Water resource mapping was also conducted during the survey. The survey confirmed that aquatic habitats are absent from the Project Site.

Critical Habitat

There is no designated critical habitat within or adjacent to the Project Site. The nearest designated critical habitat is over 20 miles southeast of the Project Site and is designated for rabbitsfoot (*Quadrula cylindrica cylindrica*) (**Appendix E**).

Federally-Listed Species

Based on the USFWS official species list generated for the Project Site and included as Attachment A of **Appendix E**, the following federally-listed species have the potential to occur in the region surrounding the Project Site:

- Tricolored bat (*Perimyotis subflavus*) – Proposed Endangered
- Piping plover (*Charadrius melodus*) – Threatened
- Rufa red knot (*Calidris canutus rufa*) – Threatened
- Alligator Snapping Turtle (*Macrochelys temminckii*) – Proposed Threatened
- Rabbitsfoot (*Quadrula cylindrica cylindrica*) – Threatened
- American Burying Beetle (*Nicrophorus americanus*) – Threatened
- Monarch Butterfly (*Danaus plexippus*) - Candidate

These species are discussed in detail within **Appendix E**. As discussed in Section 4.0 of **Appendix E**, piping plover, rufa red knot, alligator snapping turtle, rabbitsfoot, and monarch butterfly do not have the potential to occur on the Project Site as suitable habitat for these species is absent from the Project Site. Tricolored bat has the potential to roost within trees within the cedar glade and mixed hardwood habitat, though it is noted that tricolored bats preferentially roost in deciduous trees; therefore, the cedar glade would be considered sub-optimal habitat. Additionally, trees within the mixed hardwood forest are smaller and young. American burying beetle (ABB) has the potential to occur within the mixed hardwood forest within the Project Site. As discussed in Section 4.5.1 of **Appendix E**, the ruderal/developed and cedar glade habitats are unsuitable for ABB.

State-Listed Species

The ODWC maintains records of state threatened and endangered species and locational data. The following species are considered threatened or endangered by the state (ODWC, 2024a):

- Blackside darter (Percina maculate) – State Threatened
- Longnose darter (Percina nasuta) – State Endangered
- Oklahoma cave crayfish (Cambarus tartarus) – State Endangered

All of these species are freshwater inhabitants and therefore do not have potential to occur within the Project Site. Additionally, the Project Site is outside of the known range of these species (ODWC, 2024b; 2024c; 2024d).

Migratory and Nesting Birds/Raptors

The Project Site contains trees and other vegetation that provide suitable nesting habitat for nesting birds/raptors protected under the MBTA. Nesting habitat is sub-optimal due to ongoing disturbance on the Project Site. Adjacent land uses, including a major roadway and commercial development increase sensory disturbance within nesting habitat on the Project Site.

3.5.3 Impacts

Significance Criteria

Impacts on biological resources would be significant if construction or operation would:

- Have a substantial adverse effect on species with special status under the FESA;
- Have a substantial adverse effect on habitat necessary for the future survival of such species, including areas designated as critical habitat by the USFWS and areas designated as Essential Fish Habitat (EFH) by the National Marine Fisheries Service (NMFS);
- Result in a take of migratory bird species as defined by the MBTA;
- Result in take of bald or golden eagles as defined under the Bald and Golden Eagle Protection Act; and/or
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means.

Alternative A: Proposed Project

Habitat Impacts

Ruderal/developed habitat is not considered sensitive and is of little value to native plants and wildlife. Development of Alternative A would result in the conversion of 6.1 acres of cedar glade, and 7.7 acres of mixed hardwood forest to developed habitat. Mixed hardwood forest and cedar glade habitat do not have regionally limited distribution and are not afforded special protections. Additionally, these habitats were observed to be degraded in quality, with illegal trash dumping resulting in scattered refuse, vehicle paths through the understory, and ongoing disturbance due to dumping and cleanup activities. Trees within the mixed hardwood forest and cedar glade were observed to be smaller and of a younger age. Finally, the Project Site is surrounded by a semi-urbanized environment, with a car dealership to the immediate south, a commercial center to the immediate west, and US-75/Southeast Washington Blvd fronting the Project Site. Habitats on the Project Site are therefore generally fragmented from other open spaces. For these reasons, the mixed hardwood forest and cedar glade are not considered sensitive and habitat impacts from Alternative A would be less than significant.

Wetlands and Waters of the United States

There are no surface water resources present on or adjacent to the Project Site. Therefore, impacts to wetlands or waters would not occur.

Critical Habitat

Designated or proposed critical habitat does not occur within or adjacent to the Project Site. Therefore, there would be no impact to critical habitat.

Federally-Listed Species

The Project Site does not provide habitat for any federally-listed plants. Thus, Alternative A would have no effect on federally-listed plants. Although state-protected species are not generally afforded specific protections on trust land, the Project Site similarly lacks suitable habitat for state-protected species and therefore would not result in impacts to state-protected species.

This analysis considers federally-listed species with potential to occur within the Project Site based on habitat observed during the biological resources survey. As stated above, federally-protected wildlife species with the potential to occur within the Project Site are limited to tricolored bat within the mixed hardwood forest and cedar glade, and ABB within the mixed hardwood forest (**Appendix E**). The potential for tricolored bat to utilize the Project Site is low due to the degraded quality of the mixed hardwood forest and cedar glade.

The cedar glade specifically is considered sub-optimal as tricolored bat prefer roosts within deciduous trees (**Appendix E**); however, there is still potential for this species to roost within trees present on the Project Site. As a proposed endangered species, tricolored bat is not protected from take until the rule to list the species is finalized; however, federal agencies are required under Section 7(a)(4) of the FESA to confer with USFWS if their actions will jeopardize the continued existence of the species. Therefore, tricolored bat is included herein and in the BA included in **Appendix E**.

Mitigation in **Section 4** would require that the timing of tree removal occur outside of the tricolored bat active season when the species is hibernating and does not have potential to occur on the Project Site. If tree removal cannot be completed within the inactive season, mitigation in **Section 4** includes a pre-construction roosting bat survey and consultation with USFWS on an avoidance plan, which may include timing of tree removal outside of daily roosting times or multi-day removal of individual trees. With mitigation, impacts to tricolored bat would be less than significant.

ABB has the potential to occur within the mixed hardwood forest, therefore, Alternative A would result in the loss of 7.7 acres of potential ABB habitat. Project information was submitted to the USFWS through the USFWS IPaC system under the final 4(d) rule for potential effects to ABB resulting from federal-nexus projects. A verification letter was issued by the USFWS for Alternative A that determined Alternative A is consistent with the Programmatic Biological Opinion on Final 4(d) Rule for the American Burying Beetle and Activities Excepted from Take Prohibitions (50 CFR § 17.47(d), Federal Register Citation 85 FR 65241). The verification letter is included in Attachment A of **Appendix E**. Therefore, the Programmatic Biological Opinion satisfies and concludes Alternative A's responsibilities under FESA, Section 7(a)(2) with respect to ABB. Although no further action is required, this assessment recognizes that the USFWS Oklahoma Field Office has issued BMPs for minimizing impacts to ABB. Feasible BMPs are included in **Table 2.1-2** and would be implemented during development of Alternative A. Impacts to ABB would be less than significant.

State-Listed Species

State-listed species would not be afforded specific protections on the Project Site once taken into trust. However, as discussed above, state-listed species do not have the potential to occur within the Project Site as the Project Site lacks suitable habitat for these species and is outside of the species' ranges. Therefore, no impact to state-listed species would occur.

Nesting and Migratory Birds/Raptors

Nesting migratory birds/raptors have the potential to occur on and in the vicinity of the Project Site. The Project Site and adjacent areas do not contain suitable habitat to support bald or golden eagles. Improper lighting has the potential to disorient migratory birds or affect off-site habitat. However, as discussed in **Table 2.1-2**, Alternative A will be designed with downcast, shielded lighting and would not utilize flashing lights or similar lighting. The general nesting season occurs between February 15 and September 1. If active nests are present in these areas, commencement of construction activities associated with development of Alternative A could adversely affect these species. Mitigation included in **Section 4** would avoid impacts through a preconstruction nesting bird survey and establishment of a disturbance-free buffer around active nests, should active nests occur within 100 feet of disturbance. With implementation of the mitigation measures identified in **Section 4**, potential impacts to nesting migratory birds from construction activities would be less than significant.

Alternative B: Reduced Intensity

Similar to Alternative A, Alternative B would result in the complete conversion of mixed hardwood and cedar glade habitat within the Project Site. Construction activities and operational land uses would be substantially similar in nature to Alternative A, although at slightly reduced intensity. As there are no sensitive habitats, wetlands or waters, or critical habitat within the Project Site, no impacts to these resources would occur.

As with Alternative A, Alternative B could result in impacts to roosting tricolored bats and would result in the conversion of 7.7 acres of suitable ABB habitat. Alternative B also has the potential to impact nesting birds/raptors. As with Alternative A, identified mitigation measures and BMPs would result in less-than-significant impacts to biological resources.

Alternative C: No Action

Under Alternative C, the Project Site would not be taken into trust and no development would occur on the Project Site. The site would remain in its current state. Because no new construction would occur, Alternative C would have no adverse effects related to biological resources.

3.6 CULTURAL RESOURCES

3.6.1 Regulatory Setting

The cultural resources regulatory setting is summarized in **Table 3.6-1,** and additional information on the regulatory setting can be found in **Appendix B.**

Table 3.6-1: Regulatory Policies and Plans Related to Cultural Resources

Regulation	Description
Federal	
Section 106 of the National Historic Preservation Act (NHPA)	▪ Federal agencies must identify cultural resources that may be affected by actions involving federal lands, funds, or permitting actions. ▪ Significance of the resources must be evaluated for National Register of Historic Places (NRHP) eligibility. ▪ If an NRHP-eligible resource will be adversely affected, measures to avoid or reduce adverse effects must be taken.
Archaeological Resources Protection Act (ARPA)	▪ Archaeological resources and sites on public and Indian lands are protected resources.
Native American Graves Protection and Repatriation Act (NAGPRA)	▪ Includes provisions governing the repatriation of Native American remains and cultural items under the control of federal agencies and institutions that receive federal funding ("museums"), as well as the ownership or control of cultural items and human remains discovered on federal or tribal lands.
State	
Oklahoma Historical Society	▪ State Office of Historic Preservation is a compilation of state statutes and regulations that govern the identification, designation, and protection of the state of Oklahoma's significant historical resources.

3.6.2 Environmental Setting

This section summarizes the prehistory and history of the Oklahoma region of the Project Site as well as the methodology and findings of the Cultural Resources Study prepared for the Project Site (**Appendix C**).

Prehistory

Paleoindian

Although several locations in Oklahoma have been proposed as pre-Clovis occupation and activity sites (e.g., Burnham Site in Woods County [Wyckoff et al. 2003], the Cooperton Site in Kiowa County [Anderson 1975]), none have unequivocally pre-dated the Paleoindian period – a time during which the earliest human presence has been well documented. No Paleoindian sites are known to exist in Washington County and as a result, a discussion of this period is based on sites and assemblages known from the surrounding region. Evidence for Clovis occupation in Oklahoma is found primarily in surface finds of diagnostic fluted projectile points, although several locations with in-situ materials have been documented. Archaeological assemblages indicate that while large megafauna such as mammoth and bison were hunted or otherwise exploited, they were far from the only animal species procured for sustenance and materials.

The Folsom complex follows the Clovis in Oklahoma and has been dated to around 10,900-10,200 Before Present (B.P.). No Folsom sites or isolated projectile points have been found in or near Washington County, but isolated Folsom points have been documented in surface contexts along the Arkansas River near Tulsa (Taylor-Montoya and Bartlett 2014).

Later Paleoindian complexes also include the Dalton horizon, found at locations such as the Packard site (34MY66) on a terrace overlooking the Grand River in Mayes County, about 75 miles southeast of Bartlesville (Wyckoff 1985, 1989). The site contains a Dalton assemblage along with a Packard/Agate Basin component and early side-notched projectile points dating the site to about 9,400-9,800 B.P.

Archaic

Little is known about Early Archaic (8,500–6,000 B.P.) occurrences in eastern Oklahoma. Numerous surface collections from the region contain projectile points that resemble Early Archaic point types, including Big Sandy and Palmer (Wyckoff 1984). Early Archaic adaptations appear to have focused on hunting and the gathering of faunal resources although some ground stone implements suggest a degree of processing not previously seen in the archaeological record.

The Middle Archaic in eastern Oklahoma is somewhat better defined than the Early and appears to date to about 6,000–4,000 B.P. The development of midden at Middle Archaic locales suggests periods of extended occupation and/or frequent revisits to specific sites to a degree not seen before (Wyckoff 1984). Most Middle Archaic sites contain a diverse array of projectile points that generally conform to the Castroville, Frio, Williams, Yarbrough, Table Rock and Calf Creek types. Grinding stones and cup stones are commonly found in small ground stone assemblages. The majority of Archaic age sites in Washington County appear to date to the Late Archaic or perhaps a transitional Late Archaic/Early Woodland period (Vaughan 1975; Vehik and Pailes 1979).

Late Archaic manifestations in the area are included in the Lawrence phase and assemblages typically include corner-notched and expanding stemmed projectile points such as Morhiss, Marshall, Afton, Castroville, and Table Rock types. Grooved stones, gorgets, and a variety of ground stone implements such as mullers, basins, and paint stones have also been recovered from assemblages dating to this time.

Plains Woodland

The Woodland period in northeastern Oklahoma has been divided into *Delaware A*, *Cooper*, and *Delaware B* foci. Delaware A sites tend to have fewer ceramics than later occurrences and projectile points are comparable to Gary, Langtry, Marshall, Marcos, and Table Rock types. Pottery found in archaeological assemblages is relatively thick, grit or shell tempered, and can be plain-finished or cord-marked. The Cooper focus is interpreted by Vehik (1984) as a possible intrusion of Hopewellian populations into regions otherwise occupied by the Delaware A peoples.

Plains Village

Small arrow points, contracting stemmed dart points, hoes, boatstones, axes, grinding stones, bone beads, clay tempered pottery, and spatulate celts are commonly recovered from archaeological sites dating to this time. Later in the Caddo period (the Fulton aspect), bison bone tools, beveled knives, notched and unnotched arrow points are commonly encountered. Some sites at Copan Reservoir, approximately nine miles north could be associated with Caddoan peoples (Vaughan 1975:11) although others contest those assertions (Vehik and Pailes 1979). Regardless of the character of specific archaeological locations, Plains Village occupation around the Bartlesville area appears to have been sparse. Vehik and Pailes (1979), however, describe Plains Village sites in the Copan Reservoir area as temporary hunting camps and kill/processing sites.

History

Oklahoma

The historic era in eastern Oklahoma began with the first incursions of French traders in the early 18th century. Much of this early activity was along the Arkansas, Grand, and Verdigris rivers. Around the time Europeans were developing a sustained presence in the region, Native American groups were experiencing intertribal conflict and displacement. The Osage, Wichita, and Caddo were embroiled in a conflict over hunting lands in northeastern Oklahoma between 1700 and 1800 with the Caddo and Wichita eventually being pushed out of the area. The Wichita and Caddo moved south toward the Red River while the Osage settled along the Arkansas River and established a fur trade with the French (Taylor-Montoya and Bartlett 2014). Several trading posts were set up in northeastern Oklahoma after the Louisiana Purchase in 1803, with one of the first being established by Juan Pierre Chouteau in the Three Forks area in present-day Wagoner, Muskogee, and Cherokee counties.

Cherokee Nation

According to oral tradition, the Cherokee people have resided in their traditional homelands since time immemorial. They have hunted, fished, gathered, conducted ceremonies, and intimately connected with their traditional lands for untold generations, and as such, developed strong relationships with the places and resources that reside within that area. The traditional Cherokee homeland includes large swaths of the Appalachian Mountains.

Cherokee contact with Europeans occurred in 1540 during the explorations of Hernando DeSoto. Soon to follow, as European interests increasingly affected Cherokee livelihoods, the Cherokee forged treaties with the British, the first in 1725. In these treaties, the Cherokee Nation signed as a sovereign entity.

By the eighteenth century, the Cherokee numbered more than 10,000 and lived in over sixty villages, comprising the largest Indian Tribe on the southern frontier of the United States. A series of treaties reduced Cherokee lands even further, concentrating a great majority of them in the states of Georgia and Tennessee. These lands were not held for long, however, and in 1838 the U.S. military, at the behest of Congress, rounded up and forcibly removed thousands of Cherokee families from their homes in what became known as "the Trail of Tears" (1838–39). Estimates of over 16,000 Cherokees were forcibly removed and marched on a six to seven-month journey to “Indian Territory”, an area that is now the state of Oklahoma. As European influences and interests continued to grow, the semi-autonomous bands of Cherokees united into a strong national political state, creating their own native syllabary, adopting a written constitution, and providing political, social, and economic leadership for its citizens. This initiative and decision to model their system after the American tripartite government ultimately included the Cherokee into what became known as the "Five Civilized Tribes”, a term that also included the Choctaw, Chickasaw, Muscogee (Creek), and Seminole Nations. The Nation adopted a constitution on September 6, 1839, 68 years before Oklahoma’s statehood. Congress passed the Cherokee Nation’s Allotment Act in 1902 and five years later, the state of Oklahoma was admitted into the Union, which included the Cherokee Nation Reservation within its limits. The attempt to merge the Nation into Oklahoma was known as the Enabling Act, which was subsequently reversed by the Five Civilized Tribes Act that was passed the same year. The Five Civilized Tribes Act thereby extended power of both Tribes and Tribal government by continuing Tribal jurisdiction and sovereignty indefinitely. The Supreme Court reaffirmed this position in McGirt v. Oklahoma of 2020.

As a result of the Civil Rights movement in the 1960s, Congress passed the Principal Chief’s Act of 1970 which paved the way for certain tribes, including the Cherokee Nation, to take back popular control of their government and popularly elect tribal officials. Taking advantage of this a year later in 1971, the Cherokee Nation held their first election in 70 years, followed by the ratification of a new Constitution in 1975. The Cherokee Nation continues to govern as a sovereign nation today, overseeing the protection of its land and traditional resources as well as the revitalization of its language and traditional ceremonial practices (Cherokee Nation 2020).

Bartlesville/Washington County

Apart from the various inter-tribal and native-Euro American hostilities that characterized the early 19th century, the Civil War intensified old conflicts between and within Native American groups in Oklahoma. Although no notable Civil War engagements occurred in Washington County, the battle of Chusto-Talasah (Caving Banks) took place at the Horseshoe Bend of Bird Creek just north of present-day Tulsa on December 9, 1861. Colonel Douglas H. Cooper led an estimated 1,300 Confederate troops against a small force of Native American Union sympathizers led by Chief Opothleyahola. Opothleyahola’s men were driven off eventually and fled with their families to Kansas (Morris et al. 1986; Taylor-Montoya and Bartlett 2014).

Bartlesville was named for Jacob H. Bartles, the white son-in-law of Delaware Chief Charles Journeycake. Bartles moved from Wyandotte County, Kansas, to the Cherokee Nation, Indian Territory, in 1873. He opened a trading post and post office in 1874 and purchased a gristmill from Nelson F. Carr two years later. The Carr-Bartles Mill constituted Bartlesville's first industry and was located in present Johnstone Park, near the State Highway 123 bridge.

Bartles also built an adjacent two-story general store and residence and shortly thereafter added a boarding house and a blacksmith shop and livery stable. These enterprises formed the basis for a community that thrived for 25 years but never incorporated. The *Weekly Magnet*, the town's first newspaper, appeared in March 1895 and the town was finally incorporated in January 1897, with Dr. Thomas A. Stewart as mayor. However, Bartlesville was not officially surveyed until February 1902. Townsite lots were appraised and sold, with current occupants receiving preemption rights. Railroad service provided by the Missouri, Kansas and Texas Railway began in 1903, reflecting the growing importance of the town. Building on this trend, Bartlesville was selected as the Washington County seat in 1906 by which time a number of industries had already been established including the Great Western Glass Company, and numerous petroleum drilling and refining firms.

The presence of oil near Bartlesville was noticed as early as 1875 but the Nellie Johnstone Number One, Oklahoma's first commercial oil well, was not drilled at Bartlesville until April 1897. Surrounded by oil-field activity, Bartlesville was a booming town by the early years of the 20th century. More than sixty oil companies were based there in 1909, including the Barnsdall Oil Company and the Indian Territory Illuminating Oil Company. Such notable oilmen as Frank Phillips, L. E. Phillips, Waite Phillips, Harry F. Sinclair, and a young J. Paul Getty, whose father formed the Minnehoma Oil and Gas Company, called Bartlesville home. Numerous businesses, many not directly related to the oil fields, were established in Bartlesville throughout the 20th century and the town expanded east of the Caney River after 1950. As of 2020, the population was over 37,000 residents and the city hosts numerous cultural events such as the Oklahoma Mozart Festival, the Indian Summer Festival, the SunFest, and the Biplane Expo (Oklahoma Historical Society 2024).

Methodology

The Project Site was assessed by archaeologist Brian Ludwig, PhD, to identify cultural resources. The review included the identification of potential historic, cultural, and religious properties as well as the presence of any archaeological resources. Several databases were searched to identify historic properties, archaeological sites, and previous surveys within the Project Site before fieldwork.

Records and Literature Search

A comprehensive records search was conducted through the Oklahoma Archaeological Survey (OAS) to identify cultural resources previously documented within one mile of the Project Site. The OASIS search also included, but was not necessarily restricted to, a review of General Land Office (GLO) data, as well as information on site leads such as cemeteries that have not been formally documented, isolated archaeological finds, and other features outside the standard OAS resource categories. In addition, supporting research consisting of reviewing GLO plat maps and patent data was reviewed, as well as historic aerial photographs and USGS mapping.

Tribal Consultation

Additionally, in accordance with Section 106 of the NHPA, consultation with Native American Tribes that may have jurisdiction over potentially occurring cultural resources in the vicinity of the Project Site was conducted by the BIA through letters dated May 1, 2024. The letters requested the Tribes' concurrence with the BIA's determination of No Historic Properties Affected pursuant to 36 CFR Part 800.4(d)(1).

Pedestrian Survey

An intensive pedestrian survey of the Project Site was directed and conducted by a Secretary of the Interior-qualified archaeologist in January 2024 by walking pedestrian transects spaced no more than 30 meters apart. Due to prevalent field conditions in the eastern part of Oklahoma, shovel test pits (STPs) were excavated on a 30-meter grid as permitted by the terrain, disturbances, and/or the presence of surface and near-surface bedrock (Figure 4 of **Appendix C**). The soil colors (per Munsell soil color charts), type, and depths of encountered strata were recorded in the field. Representative digital photographs of the Project Site were taken. If cultural resources were found, a sub-meter accurate GPS unit would be utilized to verify the resource boundaries as appropriate (polygons for area sites, lines for linear sites, and points for isolated finds). Encountered cultural resources would have been documented on OAS site and isolated find forms.

Findings

The OAS records search concluded that no cultural resources have been recorded on or within one mile of the Project Site. The OAS also noted that four cultural resources investigations have been documented within the search area including one (OASIS study number FY21-1433) that included a portion of the Project Site. That study, conducted in 2021, involved a pavement rehabilitation project along US-75, and the survey area extended to approximately 50 ft east of the eastern margin of the highway. The remaining studies were conducted in 1989, 1996, and 2007. There were no prehistoric or historic period archaeological sites or cultural materials identified during the cultural resources investigation. The investigation did not identify structures or properties listed or eligible for listing in the National Register of Historic Places (**Appendix C**).

Additionally, consultation with Native American Tribes that may have jurisdiction over potentially occurring cultural resources in the vicinity of the Project Site was conducted by the BIA. A concurrence letter was received dated May 10, 2024 from the Cherokee Nation THPO (**Appendix C**). The Cherokee Nation THPO agreed with the finding of No Historic Properties Affected and request that the BIA contact the THPO office for further consultation if determined necessary.

3.6.3 Impacts

Significance Criteria

A significant effect would occur if the implementation of an alternative resulted in physical destruction, alteration, removal, or change in characteristics or reduction of integrity of historic features of a cultural resource.

Alternative A: Proposed Project

The OAS records search and tribal consultation did not identify previously documented cultural resources within or in the vicinity of the Project Site. Additional research did not identify the presence of any prehistoric or historic-era resources on or near the Project Site or presently unrecorded sites or sensitive landforms within the Project Site (**Appendix C**). A pedestrian reconnaissance survey and the excavation of shovel test pits within the Project Site did not identify any cultural resources.

In addition, geoarchaeological analysis determined that the sensitivity of the Project Site for buried deposits of cultural resources is low as the majority of the site is underlain with shallow bedrock (**Appendix C**). However, it is possible to inadvertently uncover unknown cultural resources during ground disturbing activities. Accordingly, mitigation measures are presented in **Section 4** for the treatment of unanticipated discoveries of cultural resources and human remains. With mitigation, impacts to unknown cultural resources and human remains would be less than significant.

Alternative B: Reduced Intensity

Impacts to cultural resources under Alternative B would be the same as those discussed above under Alternative A. Accordingly, mitigation measures are presented in **Section 4** for the treatment of unanticipated discoveries of cultural resources and human remains. With mitigation, impacts to unknown cultural resources and human remains would be less than significant.

Alternative C: No Action

Under Alternative C, the Project Site would not be taken into trust and no development would occur. The Project Site would remain in its current state. Because no new construction would occur, Alternative C would have no adverse effects related to cultural resources.

3.7 SOCIOECONOMIC CONDITIONS AND ENVIRONMENTAL JUSTICE

3.7.1 Regulatory

The socioeconomic regulatory setting is summarized in **Table 3.7-1** and additional information on the regulatory setting can be found in **Appendix B**.

Table 3.7-1: Regulatory Policies and Plans Related to Socioeconomics

Regulation	Description
Federal	
Executive Order 12898	▪ Disproportionately high impacts to minority or low-income populations should be considered. ▪ A minority population is defined as a census tract containing greater than 50% minorities, or a census tract with a meaningfully greater percentage of minorities than the surrounding tracts.[1] ▪ A low-income population is defined as a census tract with a median household income lower than the poverty threshold, which varies depending on the number of persons in a household.
Executive Order 14096	▪ Provides a broader definition of potentially disadvantaged communities. ▪ Explicitly expands definition of potentially disadvantaged communities to include persons with a Tribal affiliation and disabled persons. ▪ Requires federal agencies to fulfill environmental justice reporting requirements and prepare strategic plans. ▪ Describes additional reporting and notification requirements related to toxic spills.

1.Although not specified in EO 12898, for purposes of the social justice analysis, minority races include American Indian or Alaskan Native, Asian or Pacific Islander, Black (not of Hispanic origin), and Hispanic. Populations of two or more races and populations classified as "Other" were also considered to be minority races.

3.7.2 Environmental Setting

Population and Demographics

The demographics of the City, County, and state are presented in **Table 3.7-2**. In 2022, the City of Bartlesville had approximately 37,795 residents, Washington County had approximately 53,242 residents, and the state of Oklahoma had approximately 4,019,271 residents.

Table 3.7-2: Demographic Information

Census Data	Bartlesville	Washington County	Oklahoma
Demographics			
Population Estimate July 1, 2022	37,795	53,242	4,019,271
Median household income (2022 dollars) 2018-2022	$58,230	$59,426	$61,364
Persons in poverty	14.4%	14.0%	15.7%
Race and Ethnicity			
White alone	73.3%	76.4%	73.0%
Black or African American alone	3.6%	2.6%	7.9%
American Indian and Alaska Native alone	8.0%	11.5%	9.5%
Asian alone	2.5%	1.9%	2.6%
Native Hawaiian and Other Pacific Islander alone	0.0%	0.1%	0.3%
Two or more races	9.4%	7.5%	6.7%
Hispanic or Latino	6.9%	6.9%	12.1%
White alone	71.1%	70.8%	63.4%
Minority population[1]	28.9%	29.2%	36.6%
Employment			
Total Employment 2021	–	17,191	1,346,568
Unemployment Rate November 2023	N/A	3.3%	3.2%
Housing			
Housing units, 2022 (5-year estimate)	N/A	23,738	1,751,802
Vacant units, 2022 (5-year estimate)	N/A	3,334	229,091
Vacancy rate	N/A	14.0%	13.1%
Average Household Size	–	2.53	2.53

Source: U.S. Census Bureau, n.d.; U.S. Bureau of Labor Statistics, n.d.; U.S. Census Bureau, 2023a; U.S Bureau of Labor Statistics, 2023; U.S. Census Bureau, 2023b

[1]Calculated as 100% minus the White alone, not Hispanic or Latino percentage.

As shown in **Table 3.7-2**, the majority of the population are white alone with minority populations consisting of less than 30% of the population for the City of Bartlesville and Washington County, with the exception of the state of Oklahoma, which is approximately 36.6% minority.

Economy and Employment

The Project Site is located within unincorporated Washington County and is surrounded by the Cherokee Nation Reservation and City limits of Bartlesville.

According to the U.S. Census Bureau data (**Table 3.7-2**), the median household income between 2018 and 2022 was $58,230 (City), $59,426 (County), and $61,364 (state). As shown in **Table 3.7-2**, the average household size in both Washington County and Oklahoma was 2.53 in 2022. With regards to persons considered to be in poverty, approximately 15.7% of people in the state are in poverty. For the City of Bartlesville and Washington County, the percentages of persons in poverty are lower than the state at 14.4% and 14.0%, respectively. In November 2023, Washington County had an estimated unemployment rate of 3.3%, and the unemployment rate was 3.2% percent in Oklahoma (**Table 3.7-2**). The leading employment sectors for the County are administrative, sales and related, management, business, production, and construction (Statistical Atlas, 2024).

Property Taxes

According to the 2023 tax roll for Washington County, a total of $17,454 in property taxes was due for the Project Site during 2023 (Washington County Treasurer, 2024). In the 2022-2023 fiscal year budget, the County anticipated collecting a total of $4,255,113.28 in property taxes for the County (Board of County Commissioners of the County of Washington, 2022).

Housing

As of 2022, the estimated number of housing units in Washington County was 23,738, of which 3,334 (14.0%) were vacant (**Table 3.7-2**). In the same year, Oklahoma was estimated to have approximately 1,751,802 housing units, of which approximately 229,091 units (13.1%) were vacant (**Table 3.7-2**).

Tribal Demographics

The USEPA uses the U.S. Census Bureau's definition for a minority population per Environmental Justice 2020 Glossary," …population of people who are not single-race white and not Hispanic…" (USEPA, 2023). The Nation is considered a minority population by the U.S. Census Bureau and therefore by the USEPA. For additional information on the Nation, including current population size, please refer to **Section 1.2.**

Environmental Justice

To determine whether a proposed action is likely to have disproportionately high and adverse effects on a population, agencies must identify a geographic scale for which they will obtain demographic information. Census tracts are a small, relatively permanent statistical subdivision of a county delineated by a local committee of Census data users for the purpose of presenting data. Census tracts are designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions at the time of establishment. Therefore, statistics of Census tracts provide a more accurate representation of a community's racial and economic composition. Washington County census tract 602, which contains the Project Site, and surrounding census tracts 601, 7, and 12 were analyzed.

Minority Populations

As shown in **Table 3.7-3**, the minority population of each of the analyzed census tracts is below the 50% threshold (for detailed demographics, see **Appendix H**). Members of the Nation are considered a minority population for the purposes of this EA regardless of location. The Nation's Reservation surrounds the Project Site.

Table 3.7-3: Minority Population

Area	Total Population	Percent Minority
Oklahoma	4,019,271	37%
Washington County	53,242	29%
Bartlesville	37,795	29%
Census Tract		
602 (Project Site)	2,984	22%
601	4,674	23%
7	6,490	21%
12	2,490	13%

Source: **Appendix H**

Environmental Justice Screening Tools

The USEPA has several tools that can be used for users to access high-resolution environmental and demographic information for locations in the US and compare their selected locations to the rest of the state, USEPA region, or the nation. These tools can help identify areas with people of color and/or low-income populations, potential environmental quality issues, or a combination of environmental and demographic indicators that are greater than usual. The Environmental Justice Screening and Mapping Tool (version 2.2) and the Climate and Economic Justice Screening Tool (version 1.0) were used to identify disadvantaged communities and other demographics near the Project Site. Using USEPA's Environmental Justice Screening and Mapping Tool (EJScreen, version 2.2), the Project Site block-group was found within the 26th percentile for low income and in the 41st percentile for people of color demographics compared to the rest of the US, as shown in **Table 3.7-4**. Additional demographic data is shown in **Appendix H**.

Table 3.7-4: EJScreen Report; Project Site Block-group Compared to Oklahoma and USA

Variables	Value	State Average	State Percentile	U.S. Average	U.S. Percentile
People of Color	22%	35%	28	39%	41
Low Income	14%	37%	15	31%	26
Unemployment Rate	3%	5%	41	6%	43
Less than High School Education	8%	12%	39	12%	48
Particulate Matter (µg/m^3)	8.69	9.03	32	8.08	64
Ozone (ppb)	63.7	62.3	77	61.6	68
Air Toxics Cancer Risk[1] (lifetime risk per million)	20	25	1	25	5

Notes: ppb = parts per billion

Source: **Appendix H**

[1]Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the USEPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding.

EJScreen was used to identify if the Project Site was considered a disadvantaged community. The mapping tool ranks most of the burdens using percentiles. The percentiles show how much burden each tract experiences when compared to other tracts. A community is considered disadvantaged if it is in a census tract that is at or above the threshold for one or more environmental, climate, or other burdens and at or above the threshold for an associated economic burden.

If a tract is completely surrounded by disadvantaged communities and is at or above the 50th percentile for low income, it is considered disadvantaged. According to EJScreen, the Project Site is well below the thresholds for disadvantaged consideration in all aspects except for select health and environment areas: particulate matter, ozone, toxic releases to the air, superfund proximity, hazardous waste proximity, underground storage tanks, and RMP Facility proximity (**Appendix H**).

The Climate Economic Justice Screen Tool (version 1) identified the Census tract of the Project Site as partially disadvantaged due to being surrounded by Census tracts that are identified as disadvantaged, but it does not meet the adjusted low-income threshold. It is within the 48th percentile for adjusted low income, which is not above the 50th percentile required to be considered completely disadvantaged. Additionally, the census tracts surrounding the Project Site are also considered partially disadvantaged for similar reasons and are all in lower percentiles for adjusted low income (Council on Environmental Quality, 2024).

Gaming Market

There are five casinos within a 50-mile radius of the Project Site: The Osage Casino Hotel, Bartlesville (approximately 8.5 driving miles west), the Cherokee Casino Ramona (approximately 10 driving miles south), the Cherokee Will Rogers Downs Casino (approximately 50 driving miles southeast), Osage Casino Hotel, Pawhuska (approximately 30 driving miles east), and the Osage Casino Hotel, Tulsa (approximately 40 miles south).

3.7.3 Impacts

Significance Criteria

An impact associated with socioeconomic conditions and environmental justice would be considered significant if development were to disproportionately impact minority or low-income populations, negatively affect the economy or unemployment, overburden the local housing supply, or cause an increase in crime or pathological gambling.

Alternative A: Proposed Project

Economy and Unemployment

Alternative A would affect the regional economy in three ways. The first is the direct impact of the initial construction spending and annual operating revenues of the casino, hotel, and associated facilities. The second is the indirect impact of companies supplying the construction company and companies supplying annual casino operations. The third is the induced impact of the employees of the aforementioned companies receiving a paycheck and spending it in the regional economy.

This process of spending and re-spending is called the multiplier effect; this effect diminishes if employees, suppliers, and suppliers' employees spend their paycheck outside the region, and the effect is enhanced if the region has idle resources that can be used in Alternative A.

Construction impacts comprise the development costs and the multiplier applied to that cost. Construction and operation of Alternative A would generate substantial temporary and ongoing employment opportunities and wages that would be primarily filled by the available labor force in the City of Bartlesville, Cherokee Nation, and surrounding communities in Washington County. Based on similar size casino development projects, it is anticipated that construction of Alternative A is estimated to generate approximately 125 temporary positions. During operation of Alternative A, it is expected that approximately 300 employment opportunities would be created that will include entry-level, mid-level and management positions.

Fiscal Impacts

The Nation would not pay corporate income taxes on revenue generated for Alternative A, nor would the Nation continue to pay property taxes on tribal land after the first year of the property being accepted into trust. Tax revenues would be generated for federal, state, and local governments from activities including secondary economic activity generated by tribal gaming (i.e., the indirect and induced effects of the gaming facility). The taxes on secondary economic activity include corporate profits tax, income tax, sales tax, excise tax, property tax, and personal non-taxes, such as motor vehicle licensing fees, other fees, and fines.

Potential effects due to the loss of the state and federal tax revenues resulting from the operation as a sovereign nation on trust land are not expected to be significant as the site is only 15 acres and is surrounded already by the Nation's Reservation. The potential tax revenue losses due to the new development components are expected to be offset by increased local, state, and federal tax revenues resulting from construction and operation of Alternative A. New tax revenues on secondary economic activity would accrue to Oklahoma, Washington County, and the City of Bartlesville. While the Nation would no longer pay approximately $17,454 in property taxes for the Project Site once it goes into federal trust, this represents 0.4% of the $4,255,113.28 of property taxes the County levied in the fiscal year 2022-2023 and would be more than offset by the direct, indirect, and induced economic benefits described above. Moreover, the anticipated increase in employment opportunities throughout the City of Bartlesville and Washington County would result in employment and wages for persons previously unemployed, which would increase the ability of the population to become more self-sufficient and contribute to the alleviation of poverty among lower income households.

Given the projected unemployment rate and the dynamics of the local labor market, the region is anticipated to be able to easily accommodate the increased demand for labor during the operation of Alternative A. Overall, Alternative A would result in beneficial impacts to employment and the regional economy.

Substitution Effects

Potential substitution effects (the loss of customers at existing businesses to the new business) of a gaming facility are considered when estimating economic impacts.

The magnitude of the substitution effect can generally be expected to vary greatly by specific location and according to a number of variables. That is, how much of a new gaming facility's revenue comes at the expense of other business establishments in the area depends on how many and what type of other establishments are within the same market area, as well as other economic and psychological factors affecting the consumption decisions of local residents. Alternative A is anticipated to have a positive effect on most local businesses because the gaming customers visiting the Project Site are expected to patronize local businesses. The majority of hotel room stays at the Proposed Project would result from persons who would patronize the proposed casino. Consequently, these hotel stays would have little or no substitution or competitive effects on local hotels that are not associated with a gaming operation.

Alternative A would introduce a new gaming venue on the Project Site. There are five casinos within a 50-mile radius of the Project Site: The Osage Casino Hotel, Bartlesville (approximately 8.5 driving miles west), the Cherokee Casino Ramona (approximately 10 driving miles south), the Cherokee Will Rogers Downs Casino (approximately 50 driving miles southeast), Osage Casino Hotel, Pawhuska (approximately 30 driving miles east), and the Osage Casino Hotel, Tulsa (approximately 40 miles south). Two of these casinos are owned and operated by the Nation. It is anticipated that some substitution effects may occur to existing facilities, but that with operational management adjustments, potentially impacted Tribal gaming facilities would continue to operate and generate a certain level of profit that would accrue to the Tribal governments that own them. It should also be noted that substitution effects tend to dissipate over time in a growing economy. As upheld by the United States District Court for the Eastern District of California, "competition…is not sufficient, in and of itself, to conclude [there would be] a detrimental impact on" a Tribe (*Citizens for a Better Way, et al. v. United States Department of the Interior*, E.D. Cal., 2015). Therefore, substitution effects would be less than significant.

Housing

Due to the relatively small number of new employees (approximately 300), Alternative A would have a limited potential to impact regional housing stock. Based on current vacant housing stock in Washington County, which is approximately 3,323 units (**Table 3.7-2**), it is anticipated that more than enough vacant homes would be available to accommodate any potential increase in population due to impacts to the regional labor market under Alternative A. Additionally, employees are expected to already reside locally. Therefore, Alternative A is not expected to stimulate regional housing development. With regards to indirect and induced employment opportunities, these would be distributed among various businesses and industries in Washington County and the City of Bartlesville. Since these opportunities would be located at different locations throughout the area, it is expected that employees would be in the vicinity of these locations and would not require relocation. There would be a less-than-significant impact.

Pathological and Problem Gambling

According to the American Psychiatric Association (APA), a gambling disorder is characterized by a pattern of persistent and recurrent gambling activities. This pattern results in significant issues not only for the person involved but also for their families and the wider community.

Both adults and adolescents suffering from this disorder struggle to regulate their gambling habits, persisting with this detrimental behavior despite the substantial problems it causes (American Psychiatric Association, 2024). The APA has established nine behavior criteria with the diagnosis of a gambling disorder requiring at least four of these:

- Need to gamble with increasing amounts to achieve the desired excitement.
- Restless or irritable when trying to cut down or stop gambling.
- Repeated unsuccessful efforts to control, reduce, or stop gambling.
- Frequent thoughts about gambling.
- Often gambling when feeling distressed.
- After losing money gambling, often returning to get even.
- Lying to hide gambling activity.
- Risking or losing a close relationship, a job, or a school or job opportunity because of gambling.
- Relying on others to help with money problems caused by gambling (APA, 2024).

It is estimated that approximately 2-3% of the population in the U.S. meet the criteria for problem gambling with an additional 1% meeting the criteria for a gambling disorder (U.S. Department of Home Security, 2021). In Oklahoma, approximately 6.2% of the population are considered problematic gamblers while 24.1% are considered at risk for problem gambling (Oklahoma Association on Problem Gambling and Gaming, 2024).

While casinos or other forms of gambling provide the platform for individuals to engage in gambling, they are not the sole contributors to problem gambling. The issue arises from the individual's actions and choices rather than the gambling establishments themselves. The origins of a gambling issue can be attributed to an individual's incapacity to regulate their gambling activities. This susceptibility may be partially influenced by an inherent genetic predisposition towards addictive behaviors, their resilience in managing everyday stressors, and the societal and ethical perspectives on gambling instilled during their upbringing (Oklahoma Association on Problem Gambling and Gaming, 2024).

For the residents of Washington County and the City of Bartlesville, they are already exposed to different forms of gambling, such as the lottery, bingo and raffles, horse race betting, online gambling, and other tribal gaming (see **Section 3.7.2**). It is therefore not probable that Alternative A would substantially increase the prevalence of problem gamblers in the City of Bartlesville and subsequently increase costs for compulsive gambling treatment programs in the surrounding communities. This impact is considered less than significant.

Crime

There is a widespread notion that crime escalates when a community introduces legalized gambling, but this idea is more rooted in personal accounts rather than empirical evidence. Whenever large volumes of people are introduced to an area an increase in crime is generally anticipated, which is true of all large-scale developments. When considering the body of research on the correlation between casino gambling and crime rates, the rise in crime in communities with casinos is on par with that seen in any other large-scale development. For example, a study published in 2011 compared crime effects from different forms of tourism growth.

The study revealed that ski tourism resulted in a larger increase in crime than casino development (Park and Stokowski, 2011). In addition, Nichols and Tosun (2017) examined casinos and crime rates across the United States from 1994 to 2012. They found that on average there was an increase in crime in counties that opened Tribal casinos for the first two years and after there was a decreased crime rate from pre-casino levels. There was no long-term increase in crime resulting from casinos (Nichols and Tosun, 2017). Additionally, the Nation would provide law enforcement services to the Project Site once in trust. There would be a less-than-significant impact.

Environmental Justice for Minority and Low-Income Populations

As discussed above, there are no low-income or minority populations in the vicinity of the Project Site apart from the Nation. Furthermore, Alternative A would not displace any residential populations in the vicinity of the Project Site. Effects to minority populations would include positive impacts from the beneficial impacts to the local economy, such as the creation of temporary construction jobs and long-term employment positions at the gaming facility, hotel, and gas station, due to Alternative A. Furthermore, Alternative A would result in increased revenue for the Nation that would allow the continued provision of Tribal government services. This would be beneficial for the Nation. Therefore, Alternative A would not result in disproportionately high and adverse environmental effects to minority or low-income communities, including the Nation.

Alternative B: Reduced Intensity

Under Alternative B, the Project Site would only be developed with a gaming facility. Construction of Alternative B would provide socioeconomic effects to the City of Bartlesville and Washington County similar to those discussed under Alternative A, but at a slightly reduced scale. Impacts related to crime, problem gambling, and substation effects as a result of Alternative B are expected to be similar to or less than those discussed under Alternative A. Therefore, there would be a less-than-significant impact.

Alternative C: No Action

Under Alternative C, the Project Site would not be taken into trust and no development would occur. Because no new construction would occur, Alternative C would have no adverse or positive effects related to socioeconomic conditions.

3.8 TRANSPORTATION AND CIRCULATION

3.8.1 Regulatory Setting

The regulatory setting concerning transportation and traffic is summarized in **Table 3.8-1** and additional information on the regulatory setting can be found in **Appendix B**.

3.8.2 Environmental Setting

Study Intersections

A Traffic Impact Analysis (TIA) was conducted to assess potential traffic-related impacts of Alternative A. The TIA assessed the following study intersections (**Appendix G**).

Table 3.8-1: Regulatory Policies and Plans Related to Transportation and Circulation

Regulation	Description
Federal	
Department of Transportation (DOT)	▪ The mission of the DOT is to ensure a fast, safe, efficient, accessible and convenient transportation system that meets national interests and enhances quality of life. ▪ Organizations within the DOT include the Federal Highway Administration (FHWA), the Federal Aviation Administration, the National Highway Traffic Safety Administration, the Federal Transit Administration, the Federal Railroad Administration, and the Maritime Administration. ▪ The FHWA supports state and local governments in the design, construction, and maintenance of the Nation's highway system (Federal Aid Highway Program) and various federally and tribal owned lands (Federal Lands Highway Program). ▪ US-75 is a federal highway within the vicinity of the Project Site.
State	
Oklahoma Department of Transportation (ODOT)	▪ Responsible for the construction and maintenance of the state's transportation infrastructure.
Local	
Comprehensive Land Use Plan for the Bartlesville Metropolitan Area	▪ Part V presents standards and principles for the physical development of the community, including a Trafficway Plan for the metropolitan area.
Tribal	
Cherokee Nation Department of Transportation	▪ The DOT implements and supports cooperative road and bridge projects within the Reservation of the Cherokee Nation by coordinating at the county, state, and federal levels as well as community involvement.

The TIA assessed traffic conditions under the following scenarios:

- 2023 existing traffic (no project alternatives)
- 2026 and 2046 background traffic (no project alternatives)
- 2026 traffic with implementation of Alternative A
- 2046 traffic with implementation of Alternative A

Price Road/US-75

The Project Site is located adjacent to US-75 as shown in **Figure 1.4-3** and Figure 1 of **Appendix G**. US-75 is a five-lane state highway with a posted speed limit of 45 - 50 miles per hour (mph) in the vicinity of the Project Site and an average daily traffic (ADT) volume of 20,300 vehicles per day (vpd).

The intersection of Price Road and US-75 is signalized with exclusive left-turn lanes on all four approaches that operate with protected-plus-permitted signal phasing and exclusive right-turn lanes on all approaches except the westbound approach. The exclusive right-turn lanes are channelized with yield signs.

Camelot Drive/Southport Drive and US-75

The intersection of Camelot Drive/Southport Drive and US-75 is signalized with exclusive left-turn lanes on all four approaches that operate with protected-plus-permitted signal phasing, and an exclusive right turn lane only on the southbound approach which operates with permitted-plus-overlap phasing.

Atwoods Hardware Drive and US-75

The intersection of the shared Atwoods Hardware drive and US-75 is unsignalized with stop control on the eastbound single lane approach. The northbound and southbound approaches include a center turn lane for left-turn movements.

Rice Creek Road/W 2200 Road and US-75

The intersection of Rice Creek Road/W 2200 Road and US-75 is unsignalized with stop control on the eastbound and westbound single lane approaches. The northbound and southbound approaches include a center turn lane for left-turn movements.

Existing and Background Level of Service (LOS) Conditions

LOS Conditions for existing 2023 conditions are shown in **Table 3.8-2**. Analyses conducted for 2023 existing traffic conditions indicated that the study intersections operated at overall acceptable LOS "B" or better during peak hours. Critical approaches at the signalized intersections operated at LOS "C" or better during peak hours. Critical approaches at the unsignalized intersections operated at unacceptable LOS "F" during the typical weekday and Friday pm peak hour at the shared Atwoods Hardware drive and Rice Creek Road/W 2200 Road and during the Saturday pm peak hour at the shared Atwoods Hardware drive.

LOS conditions under 2023 existing conditions and 2026 future background traffic indicate that the study intersections currently operate and would be expected to continue operating at overall acceptable LOS during peak hours (**Appendix G**). Critical approaches at the unsignalized intersections currently operate and would be expected to continue operating at unacceptable LOS during the typical weekday and Friday pm peak hour at the shared Atwoods Hardware drive and Rice Creek Road/W 2200 Road and during the Saturday pm peak hour at the shared Atwoods Hardware drive.

3.8.3 Impacts

Significance Criteria

Impacts to the transportation system would be significant if an alternative increased traffic volumes to the point where traffic exceeds the design capacity of the roadway after implementation of feasible mitigation measures. LOS "E" or lower is considered to be unacceptable for the study intersections in accordance with industry standard design objective.

Table 3.8-2: LOS Conditions of Existing 2023 Traffic

Intersection	Type of Traffic Control	Approach	Am Peak Hour		Pm Peak Hour	
			Critical Approach LOS	Intersection LOS	Critical Approach LOS	Intersection LOS
Weekday						
Price Road and US-75	Signalized	WB	B	B	C	B
Camelot Drive/Southport Drive and US-75	Signalized	WB	B	B	C	B
Shared Atwoods Hardware drive and US-75	Unsig./E Stop	EB	C	C	**F**	A
Rice Creek Road/W 2200 Road and US-75	Unsig./E/W Stop	WB	D	D	**F**	A
Weekend						
Price Road and US-75	Signalized	WB	C	B	C	B
Camelot Drive/Southport Drive and US-75	Signalized	WB	C	B	C	B
Shared Atwoods Hardware drive and US-75	Unsig./E Stop	EB	**F**	A	**F**	A
Rice Creek Road/W 2200 Road and US-75	Unsig./E/W Stop	EB	**F**	A	D	A

Notes: WB = westbound; EB = eastbound
Bold: Unacceptable LOS Conditions

Methodology

Trip Generation

The TIA analyzed bi-directional traffic during the weekday am and pm peak traffic hours. Traffic counts were conducted to determine existing traffic volumes. An annual growth rate of four percent was used to determine projected traffic volumes in the anticipated opening year 2026 and cumulative year 2046 (20 years from the anticipated opening year) (**Appendix G**). The capacity analysis was conducted using Synchro 11, software package for analyzing, modeling, optimizing traffic signal timings and capacity analysis of signalized and unsignalized intersection in accordance with the methodology of the latest edition of the Highway Capacity Manual (HCM).

Trip generation relates land uses to the number of persons or vehicles entering or exiting the Project Site and the rates of inbound/outbound directional splits. Typically trip generation estimates for a project are based on the Trip Generation Report, published by the Institute of Transportation Engineers (ITE). The Hotel and Gasoline/Service Station land use categories were selected to determine the trip generation for Alternative A. Utilizing information from other sites located nationally, it was conservatively assumed that an internal capture reduction of 50% was applicable for the hotel trips (**Appendix G**).

The current ITE trip rates for the casino/video gaming land uses were based on study facilities up to 5,000 sf in size. Since the proposed casino is larger than 5,000 sf, trip generation rates for the casino component were calculated using other methods. Traffic volumes were previously collected for other casino developments located in Lawton, Bartlesville, Ponca City, Ramona, Thackerville, and Tahlequah, Oklahoma, ranging in size from 10,000 sf to 73,000 sf. Traffic data and volumes from these casinos were used to estimate trip generation for the project alternatives.

Projected LOS Conditions

The HCM considers a LOS "D" or better and a critical approach (approach with the lowest LOS) LOS "E" or better to be acceptable. Existing traffic volume data was collected adjacent to the proposed development in December 2023 while schools were in session. Weekday, Friday, and Saturday peak hour turning movement volumes were collected at the study intersections listed above (Figure 1 of **Appendix G**). Additionally, 24-hour turning movement volumes were collected at the intersection of US-75 and the shared Atwoods Hardware drive. Data was collected for the weekday am peak hour from 7:45 am to 8:45 am. Data for the weekday, Friday, and Saturday pm peak hours was collected from 4:15 pm to 5:15 pm.

Alternative A: Proposed Project

Construction Traffic

During construction of Alternative A, additional temporary trips would be generated on the weekdays with construction work occurring during daytime hours between 7 am and 7 pm. The worker arrival peak would generally be between 6 am and 7 am and the departure peak between 3:30 pm and 4:30 pm. These peak commute times partially coincide with local commute times. The increase in construction worker commute trips would be small compared to existing conditions, and additional trips would only occur during construction. Furthermore, truck trips would occur primarily outside of the peak commute hours for the surrounding roadway network. The temporary increase in truck and worker trips during mostly off-peak hours would constitute a minimal disruption of existing traffic and would not impact the capacity of the surrounding roadway network. Therefore, construction of Alternative A would have a less-than-significant impact on existing traffic in the surrounding area.

Operation Traffic

Based on information from other casinos in Oklahoma, trip rates were determined to be 105.66 vehicles per weekday, 3.52 vehicles per hour during the am peak hour, and 7.86 vehicles per hour during the pm peak hour per 1,000 sf of casino. The weekend trip rates were determined to be 115.77 vehicles per day per 1,000 sf of casino and 9.02 vehicles per hour per 1,000 sf of casino during Friday and Saturday peak hours.

Alternative A would generate approximately 7,283 trips to the Project Site on weekdays and 7,916 trips on weekends (**Tables 3.8-3 and 3.8-4**). The majority of trips generated would not occur during peak am/pm hours associated with the business rush hour. The Project Site is located adjacent to US-75 as shown in **Figure 1.4-3** and Figure 1 of **Appendix G**. Access to the Project Site would be provided by three proposed driveways off US-75 (**Figure 2.1-1**):

- Driveway 1: customer and service access to the gas station and convenience store
- Driveway 2: guest access to the hotel and casino (central to the site)
- Driveway 3: service access for the hotel and casino (adjacent to the Shared Atwoods Hardware drive and US-75 intersection)

Opening Day Conditions (2026)

LOS conditions under 2023 existing conditions and 2026 future background traffic without implementation of Alternative A indicate that the study intersections currently operate and would be expected to continue operating at overall acceptable LOS during peak hours (**Appendix G**). Results of LOS conditions with implementation of Alternative A are shown in **Tables 3.8-5** and **3.8-6**.

Table 3.8-3: Alternative A Trip Generation (Weekday)

ITP Land Use Type	Size	Vehicles per Day (VPD)	Directional Volume (VPH)	Average AM Peak Hour	Directional Volume (VPH)	Average PM Peak Hour
			In	Out	In	Out
Casino[1]	54,391 sf	5,747	111	80	209	219
Hotel	40 rooms	320	10	8	12	12
Gasoline/Service Center	8 fuel stations	1,376	41	41	56	55
Total Before Internal Reduction		7,443	162	129	277	286
Total After Internal Reduction[2]		7,283	131	99	239	249

Source: **Appendix G**

[1]The ITP Manual does not have a land use code for casinos.

[2]Reduction Percentages of 63% (am) and 57% (pm) were used, and an internal capture percentage of 50% was utilized, as recommended by the Trip Generation Manual (**Appendix G**).

VPH: Vehicles Per Hour

Table 3.8-4: Alternative A Trip Generation (Weekend)

ITP Land Use Type	Size	Vehicles per Day (VPD)	Average Friday Peak Hour Directional Volume (VPH)		Average Saturday Peak Hour Directional Volume (VPH)	
			In	Out	In	Out
Casino[1]	54,391 sf	6,297	255	236	255	236
Hotel	40 rooms	323	12	12	16	13
Gasoline/Service Center	8 fuel stations	1,457	56	56	51	51
Total Before Internal Reduction		8,077	323	304	322	300
Total After Internal Reduction[2]		7,916	285	266	289	268

Source: **Appendix G**

[1]The ITP Manual does not have a land use for casinos.

[2]Reduction Percentages of 63% (am) and 57% (pm) were used, and an internal capture percentage of 50% was utilized, as recommended by the Trip Generation Manual (**Appendix G**).

Table 3.8-5: Projected LOS Conditions (Weekday)

Intersection	Type of Traffic Control	Approach	Critical Approach LOS	Intersection LOS	Critical Approach LOS	Intersection LOS
			Am Peak Hour		Pm Peak Hour	
2026 Future Background Traffic (without Alternative A)						
Price Road and US-75	Signalized	WB	C	B	C	C
Camelot Drive/Southport Drive and US-75	Signalized	WB	C	B	C	B
Shared Atwoods Hardware drive and US-75	Unsig./E Stop	EB	D	A	**F**	A
Rice Creek Road/W 2200 Road and US-75	Unsig./E/W Stop	WB	**E**	A	**F**	A
2026 Total Traffic (Background plus Alternative A)						
Price Road and US-75	Signalized	WB	C	B	C	C
Camelot Drive/Southport Drive and US-75	Signalized	WB	C	B	C	B
Driveway 3/Shared Atwoods Hardware drive and US-75	Unsig./E/W Stop	EB	D	A	**F**	A
Rice Creek Road/W 2200 Road and US-75	Unsig./E/W Stop	WB	**F**	A	**F**	C
Driveway 1 and US-75	Unsig./W Stop	WB	C	A	C	A
Driveway 2 and US-75	Unsig./W Stop	WB	C	A	**F**	A
2046 Future Background Traffic (without Alternative A)						
Price Road and US-75	Signalized	WB	D	D	**F**	**F**
Camelot Drive/Southport Drive and US-75	Signalized	WB	C	B	D	C
Shared Atwoods Hardware drive and US-75	Unsig./E Stop	EB	**F**	A	**F**	**F**
Rice Creek Road/W 2200 Road and US-75	Unsig./E/W Stop	WB	**F**	**F**	**F**	**F**
2046 Total Traffic (Background plus Alternative A)						
Price Road and US-75	Signalized	WB	**E**	D	**F**	**F**
Camelot Drive/Southport Drive and US-75	Signalized	WB	C	B	D	C
Driveway 3/Shared Atwoods Hardware drive and US-75	Unsig./E/W Stop	EB	**F**	A	**F**	**F**
Rice Creek Road/W 2200 Road and US-75	Unsig./E/W Stop	WB	**F**	**F**	**F**	**F**
Driveway 1 and US-75	Unsig./W Stop	WB	D	A	**F**	A
Driveway 2 and US-75	Unsig./W Stop	WB	**E**	A	**F**	**E**

Source: **Appendix G**
Bold: Unacceptable LOS

Table 3.8-6: Projected LOS Conditions (Weekend)

Intersection	Type of Traffic Control	Approach	Critical Approach LOS		Intersection LOS	
			Am Peak Hour		Pm Peak Hour	
2026 Future Background Traffic (without Alternative A)						
Price Road and US-75	Signalized	WB	C	C	C	B
Camelot Drive/Southport Drive and US-75	Signalized	WB	C	B	C	B
Shared Atwoods Hardware drive and US-75	Unsig./E Stop	EB	**F**	B	**F**	A
Rice Creek Road/W 2200 Road and US-75	Unsig./E/W Stop	EB	**F**	A	**E**	A
2026 Total Traffic (Background plus Alternative A)						
Price Road and US-75	Signalized	WB	C	C	C	B
Camelot Drive/Southport Drive and US-75	Signalized	WB	C	B	C	B
Driveway 3/Shared Atwoods Hardware drive and US-75	Unsig./E/W Stop	EB	**F**	C	**F**	C
Rice Creek Road/W 2200 Road and US-75	Unsig./E/W Stop	WB	**F**	C	**F**	A
Driveway 1 and US-75	Unsig./W Stop	WB	C	A	C	A
Driveway 2 and US-75	Unsig./W Stop	WB	**F**	B	**F**	B
2046 Future Background Traffic (without Alternative A)						
Price Road and US-75	Signalized	WB	**F**	**F**	**F**	**E**
Camelot Drive/Southport Drive and US-75	Signalized	WB	D	C	D	B
Shared Atwoods Hardware drive and US-75	Unsig./E Stop	EB	**F**	**F**	**F**	**F**
Rice Creek Road/W 2200 Road and US-75	Unsig./E/W Stop	WB	**F**	**F**	**F**	**F**
2046 Total Traffic (Background plus Alternative A)						
Price Road and US-75	Signalized	WB	**F**	**F**	**F**	**E**
Camelot Drive/Southport Drive and US-75	Signalized	WB	**E**	C	**E**	B
Driveway 3/Shared Atwoods Hardware drive and US-75	Unsig./E/W Stop	EB	**F**	**F**	**F**	**F**
Rice Creek Road/W 2200 Road and US-75	Unsig./E/W Stop	WB	**F**	**F**	**F**	**F**
Driveway 1 and US-75	Unsig./W Stop	WB	**F**	A	**E**	A
Driveway 2 and US-75	Unsig./W Stop	WB	**F**	**F**	**F**	**E**

Source: **Appendix G**
Bold: Unacceptable LOS

With the addition of Alternative A, the study intersections would be expected to operate at similar overall acceptable LOS during peak hours. The critical approaches at proposed Driveways 2 and 3 are projected to operate at unacceptable LOS during the typical weekday, Friday, and Saturday pm peak hours. Mitigation measures are included in **Section 4** to address these impacts. With mitigation incorporated, the unacceptable LOS conditions at proposed Driveways 2 and 3 during the typical weekday, Friday, and Saturday pm peak hours would be improved (Tables 7 and 8 of **Appendix G**).

Future Cumulative Conditions (2046)

Under the 2046 future background traffic, the unsignalized study intersection of Rice Creek Road/W 2200 Road and US-75 and signalized study intersection of Price Road and US-75 is projected to worsen to unacceptable overall and critical approach LOS during at least one peak hour. While these effects would occur under background conditions without the addition of project-related traffic, implementation of Alternative A would contribute to these potentially significant cumulative effects. Therefore, mitigation measures are included in **Section 4** to address these impacts on a fair-share basis. With the addition of Alternative A under 2046 LOS conditions, critical approaches at proposed Driveways 1, 2, and 3 are projected to operate at unacceptable LOS during at least one peak hour. Mitigation measures are included in **Section 4** to address these impacts. With mitigation incorporated, the unacceptable LOS conditions of critical approaches at proposed Driveways 1, 2, and 3 during peak hours would be improved (Tables 7 and 8 of **Appendix G**). Operational traffic impacts would be a less-than-significant impact with mitigation.

Alternative B: Reduced Intensity

Alternative B would have similar impacts associated with transportation and circulation as Alternative A but would generate less traffic volumes overall during construction and operation as there would be no hotel or gas station/convenience store components (**Table 3.8-7**). Additionally, Alternative B would have one less access driveway than Alternative A. Alternative B would generate approximately 5,747 trips to the Project Site on weekdays and 6,297 trips on weekends. The majority of trips generated would not occur during peak am/pm hours associated with the business rush hour. Mitigation measures are included in **Section 4** to address potential traffic-related impacts of Alternative B. There would be a less-than-significant impact with mitigation.

Alternative C: No Action

Under Alternative C, the Project Site would not be taken into trust and no development would occur. The Project Site would remain in its current state and no traffic impacts would occur.

Table 3.8-7: Alternative B Trip Generation

Casino (54,391 sf)	Vehicles per Day (VPD)	Average AM Peak Hour Directional Volume (VPH)		Average PM Peak Hour Directional Volume (VPH)		Average Friday Peak Hour Directional Volume (VPH)		Average Saturday Peak Hour Directional Volume (VPH)	
		In	Out	In	Out	In	Out	In	Out
Weekday	5,747	111	80	209	219	-	-	-	-
Weekend	6,297	-	-	-	-	255	236	255	236

Source: **Appendix G**

[1]The ITP Manual does not have a land use code for casinos.

3.9 LAND USE

3.9.1 Regulatory Setting

The land use regulatory setting is summarized in **Table 3.9-1,** and additional information on the regulatory setting can be found in **Appendix B**.

Table 3.9-1: Regulatory Policies and Plans Related to Land Use

Regulation	Description
Federal	
Farmland Protection Policy Act	▪ Intended to minimize the impact that federal programs have on unnecessary and irreversible conversion of farmland to non-agricultural uses. ▪ Assures federal programs are administered in a manner that is compatible with state and local units of government, private programs, and policies to protect farmland.
Federal Aviation Regulation	▪ Provides requirements, standards, and processes for determining obstructions to air navigation.

3.9.2 Environmental Setting

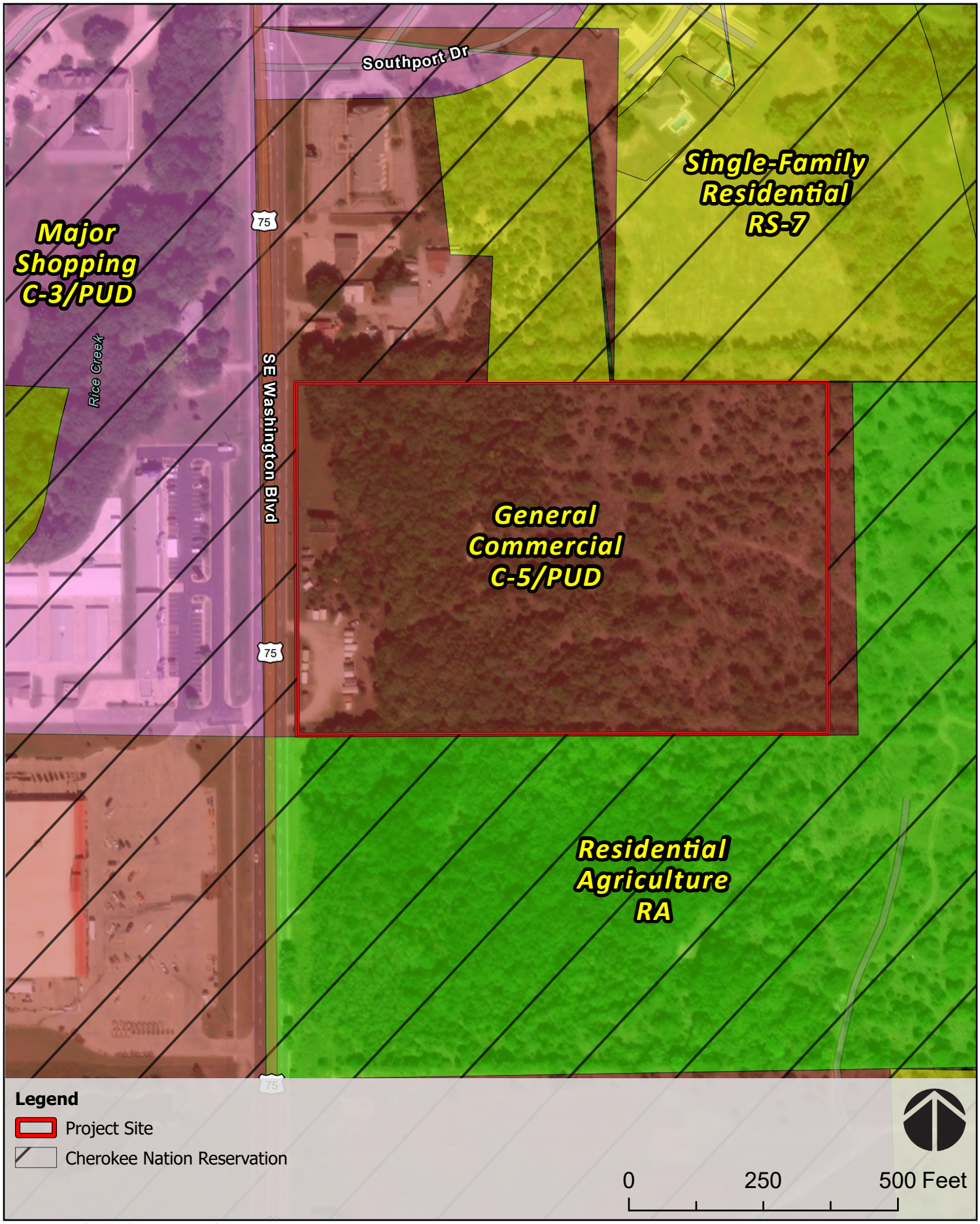
Existing Land Uses and Zoning

The Project Site is located within the Nation's Reservation, in unincorporated Washington County and is surrounded by land located within the City of Bartlesville. US-75 borders the Project Site to the west, with open space to the east and residences to the north and west. Currently, the Project Site is undeveloped. Although the Project Site is technically within unincorporated Washington County, it was previously zoned by the City of Bartlesville as C-5 (General Commercial)/PUD (Planned Unit Development) (**Figures 3.9-1**). C-5 zoning allows for miscellaneous commercial enterprises that include business, industrial, and agricultural businesses that are not required to be integrated within large shopping centers or the central business district. The principal land uses in a PUD are those that are permitted in the underlying zoning districts. PUD zoning allows for creative and flexible development designs, layouts, and types of structures to ensure compatibility with adjacent land uses and promote socially and economically desirable development. Land surrounding the Project Site is zoned by the City of Bartlesville as RS-7 (Single Family Residential), C-3/PUD (Major Shopping), C-5/PUD (General Commercial), and RA (Residential Agriculture).

According to the Washington County Interactive Land Parcel Map, the Project Site is zoned RC (Rural Commercial), as shown on **Figure 3.9-2** (Washington County, 2024). Land surrounding the Project Site was previously zoned by the County as RC, Urban Residential, Urban Commercial, and Washington Exempt (Washington, County, 2024).

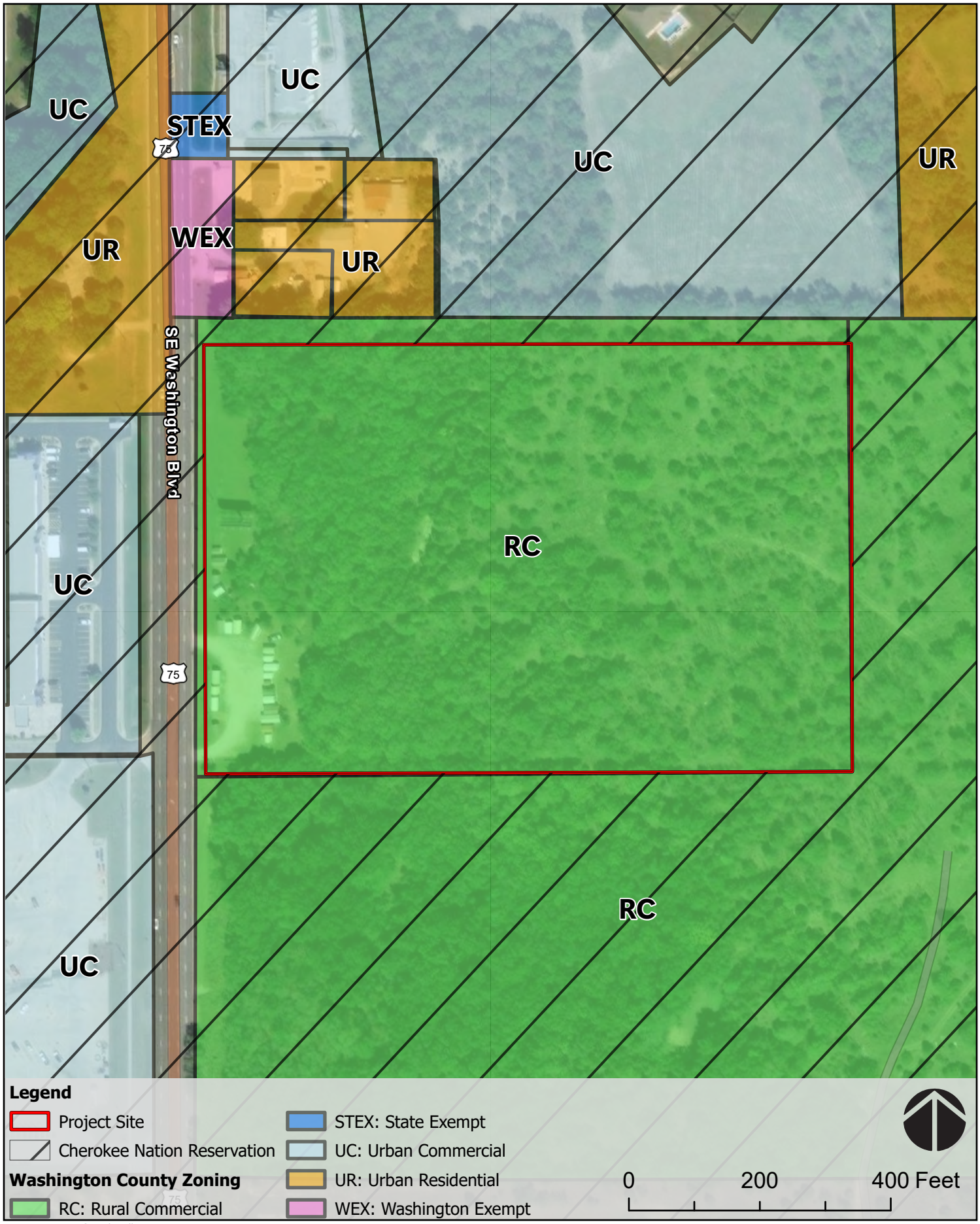
Airport Compatibility

Section 7.12 of the City of Bartlesville Zoning Regulations regulates the height of structures and land uses within the vicinity of the Bartlesville Municipal Airport (City of Bartlesville, 2015). The zoning regulations designate airport approach zones, transition zones, horizontal zones, and conical zones.



City Maps: City of Bartlesville, Maxar, Microsoft, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User

FIGURE 3.9-1
CITY OF BARTLESVILLE ZONING



City Maps: City of Bartlesville, Airbus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User

FIGURE 3.9-2
WASHINGTON COUNTY ZONING

Up until 2022, the Project Site was within Class E airspace of the Bartlesville Municipal Airport (AirNav, 2024). On November 28, 2022, the Federal Register Final Rule 14 CFR Part 71 was published by the Federal Aviation Administration (FAA) to remove Class E airspace from the Bartlesville Municipal Airport (Federal Register, 2023).

Agriculture

According to the 2017 Census of Agriculture, there are 899 farms in Washington County, which is an 11% increase since the 2012 census. These farms encompass 219,441 acres of land (U.S. Department of Agriculture [USDA], 2017). Principal crops include forage (land used for hay), soybeans, wheat, pecans, and oats. Soil types on the Project Site are discussed in **Section 3.2**. The Project Site contains approximately 2.6 acres of "prime farmland" soils as designated by the Natural Resources Conservation Service (NRCS) (NRCS, 2024b). The Project Site has not been historically farmed and is not currently used for agricultural purposes.

The purpose of the Farmland Protection Policy Act (FPPA) is to discourage federal activities that would convert farmland to nonagricultural uses. According to Section 523.10 of the FPPA, an area is not considered farmland if the land is identified by the U.S. Census Bureau as urban (NRCS, 2024c). Urban is defined as an area with over 10,000 residents. The Project Site is located within an urban area as shown on the Census Map (U.S. Census, 2020a). Washington County has over 50,000 residents and the City of Bartlesville has over 39,000 residents (U.S. Census, 2020b and 2020c). The Project Site is also zoned for commercial development purposes and not for agricultural uses. Therefore, the Project Site is not subject to the provisions of the FPPA.

3.9.3 Impacts

Significance Criteria

Land use impacts would be significant if project alternatives were to be incompatible with surrounding land uses or would inhibit the implementation of land use plans, policies, and controls related to the avoidance of environmental impacts for the project area. Significant land use impacts may also occur if the alternative converts Prime Farmland or Farmland of Statewide/Local/Unique Importance to other uses, as determined by the FPPA, or conflicts with designated airspace.

Alternative A: Proposed Project

Land Use Compatibility

Although the Project Site is technically within unincorporated Washington County, it was previously zoned by the City of Bartlesville as C-5 (General Commercial)/PUD (Planned Unit Development). Land surrounding the Project Site is zoned by the City as RS-7 (Single Family Residential), C-3/PUD (Major Shopping), C-5/PUD (General Commercial), and RA (Residential Agriculture). According to the Washington County Interactive Land Parcel Map, the Project Site is zoned RC (Rural Commercial). Land surrounding the Project Site is within the Nation's Reservation and was previously zoned by the County as RC, Urban Residential, Urban Commercial, and Washington Exempt (Washington, County, 2024). Once acquired into federal trust, the Project Site would no longer be subject to City or County zoning and land use regulations but would be under the civil regulatory jurisdiction of the Nation and the federal government.

However, development components of Alternative A would still be generally consistent with current and surrounding local commercial zoning and land use designations. Additionally, proposed development would not physically disrupt neighboring land uses, prohibit access to neighboring parcels, or otherwise significantly conflict with neighboring land uses. There would be a less-than-significant impact.

Airport Compatibility

Up until 2022, the Project Site was within Class E airspace of the Bartlesville Municipal Airport (AirNav, 2024). On November 28, 2022, the Federal Register Final Rule 14 CFR Part 71 was published by the FAA to remove Class E airspace from the Bartlesville Municipal Airport (Federal Register, 2023). Therefore, the Project Site is no longer within a designated airspace zone.

In accordance with FAA requirements, projects involving building heights over 200 feet above ground level are required to submit project information via the FAA Notice Criteria Tool (FAA, 2024). The Notice Criteria Tool determined that Alternative A would not exceed notice criteria as building heights would be less than 200 feet above ground level (**Appendix I**). The Notice Criteria Tool also confirmed that the Project Site was located outside Bartlesville Municipal Airport airspace. Additionally, BMPs in **Table 2.1-2** include downcast lighting and other lighting measures to ensure lighting of Alternative A would not significantly impact sensitive receptors. These measures would also ensure that airplanes would not be impacted by lighting. There would be a less-than-significant impact.

Agriculture

The NRCS characterizes 2.6 acres of soils on the Project Site as prime farmland. However, according to Section 523.10 of the FPPA, an area is not considered farmland if the land is identified as urban (with over 10,000 residents) by the U.S. Census Bureau (NRCS, 2024c). The Project Site is located within an urban area as shown on the Census Map (U.S. Census, 2020a), as Washington County has over 50,000 residents and the City of Bartlesville has over 39,000 residents (U.S. Census, 2020b and 2020c). The Project Site is also zoned for commercial development purposes and not agricultural uses. Therefore, the Project Site is not considered prime farmland and is not subject to provisions of the FPPA. The Project Site is not currently used for agriculture and has not been historically used for agriculture. Alternative A would not convert agricultural land or prime farmland into non-agricultural uses. There would be no impact.

Alternative B: Reduced Intensity

Land use compatibility and agricultural impacts related to development under Alternative B would be similar to those described for Alternative A but reduced due to the smaller size of the proposed facilities. Similar to Alternative A, BMPs are included in **Table 2.1-2** to reduce potential lighting impacts on the surrounding area, including on airplanes. There would be a less-than-significant impact.

Alternative C: No Action

Under Alternative C, the Project Site would not be taken into trust and would, therefore, remain as it is. No land use conflicts would occur.

3.10 PUBLIC SERVICES AND UTILITIES

3.10.1 Regulatory Setting

The public services regulatory setting is summarized in **Table 3.10-1** and additional information on the regulatory setting can be found in **Appendix B**.

Table 3.10-1: Regulatory Policies and Plans Related to Public Services and Utilities

Regulation	Description
Federal	
Safe Drinking Water Act	▪ Establishes protective drinking water standards for protection of public health.
Clean Water Act	▪ Establishes environmental discharge requirements for wastewater treatment.
State	
Oklahoma Public Utilities Division	▪ Administers and enforces federal laws, state statutes, agency rules and orders involving some service providers for electricity, gas, water, and telecommunications.
Tribal	
Cherokee Nation Tribal Code and Cherokee Nation Solid Waste Code	▪ Contains policies associated with law enforcement, fire protection, utilities, and solid waste management.

3.10.2 Environmental Setting

Water Supply

The City of Bartlesville provides municipal water service to residents and businesses. The City has allocated an excess of $40 million towards the Ted D. Lockin Water Plant and its associated distribution network with the objective of fulfilling the region's water requirements for the foreseeable future. The principal sources of water for the City of Bartlesville are Hudson Lake, which is under the City's ownership and situated to the north and west of the City, and Hulah Lake, which is under the jurisdiction of the USACE (City of Bartlesville, 2024a).

The Project Site currently has no on-site water facilities, but there are immediately adjacent water pipelines present. These consist of a 16-inch water main adjacent to the Project Site on the west, a 12-inch water main adjacent to the southern border, and an additional waterline to the north that has an unspecified dimension (City of Bartlesville, 2024c).

Wastewater Service

The City of Bartlesville provides sanitary sewer services to residents and businesses. The City's sewage treatment infrastructure is operated by Veolia Water (City of Bartlesville, 2024a). Veolia Water operates the Chickasaw Wastewater Plant, located approximately 3.8 miles northwest of the Project Site, and 20 lift stations.

The plant treated approximately 3.02 billion gallons of wastewater from July 2020 through June 2021, with the daily average flow being approximately 8.2 million gallons (City of Bartlesville, 2021). The Project Site currently has no wastewater facilities, but there is an 8-inch sanitary sewer line that ends approximately 340 feet to the north of the Project Site in addition to an 8-inch line on the western side of US-75, underneath an existing shopping center, approximately 260 feet west (City of Bartlesville, 2024c).

Solid Waste

The Cherokee Nation Solid Waste Program was developed in 1997 to address solid waste management on the Nation's Reservation. The City of Bartlesville provides waste disposal services to a diverse clientele that encompasses both residential and commercial sectors. Residential patrons receive a weekly service while commercial clients are entitled to a maximum of six collections per week. A public-private partnership exists between the City of Bartlesville and Replenysh, a California-based firm, for the provision of recycling services. The program is achieved through using the recycling center owned by the City (City of Bartlesville, 2024b). The nearest landfill to the Project Site is the Osage Landfill, approximately 4.3 miles west. This landfill accepts a diversity of solid wastes, including but not limited to normal household garbage, non-hazardous commercial waste, construction debris, concrete and asphalt, clean fill soil, non-hazardous industrial waste, wastewater treatment plant sludge, and contaminated soil (Waste Connections, 2024).

Electricity and Natural Gas

Electricity in the City of Bartlesville and within the vicinity of the Project Site is provided by Public Service Company of Oklahoma. In 2022, the company had approximately 572,734 customers across 232 different cities and towns and provided 19,762,904 megawatt-hours in sales (Public Service Company of Oklahoma, 2022). The company has over 24,000 miles of distribution lines and over 3,700 miles of transmission. Five pole-mounted transformers occur on the western side of the Project Site. Oklahoma Natural Gas is the provider of natural gas to the Project Site area. The nearest natural gas line to the Project Site is approximately three miles to the northeast.

Law Enforcement

The Cherokee Nation Marshal Service is a certified law enforcement agency with jurisdiction throughout the Cherokee Nation Reservation, which includes areas surrounding the Project Site. The Marshal Service has a cross-deputization agreement with a network of 50 agencies at the municipal, county, state, and federal levels (Cherokee Nation, 2021).

The Marshal Service employs over 32 deputy marshals and provides a diverse range of specialized teams dedicated to the prevention of crime (Cherokee Nation, 2024a). Law enforcement services to the City of Bartlesville surrounding the Project Site are provided by the Bartlesville Police Department. However, the Project Site is currently within the jurisdiction of Washington County, which is provided law enforcement services by the Washington County Sheriff's Office.

The Nation's judicial system consists of legislative, executive, and judicial branches, with executive power vested in the Principal Chief, legislative power vested in the Tribal Council, and judicial power vested in the Tribal Supreme Court.

The Principal Chief, Deputy Chief, and Tribal Council are elected to four-year terms by the registered tribal voters over the age of 18. The legislative branch consists of a 17-member Tribal Council that is elected by popular vote to four-year terms. The Project Site is within Council District D12.

Fire Protection

Fire protection and emergency services to the area surrounding the Project Site are provided by the Bartlesville Fire Department (Bartlesville Fire Department, 2024). Fire protection services to the Project Site are currently provided by the Washington County Fire Department, which is a volunteer fire department of 17 members that specializes in wildland fire suppression and also provides general fire protection and prevention (Washington County Emergency Management, 2024). The Nation's cross-deputization agreement includes the state Fire Marshal and Washington County Fire Department, which would be involved in providing fire protection services to the Project Site once in trust. Additionally, the Cherokee Nation Wildfire Prevention Program serves to address and mitigate wildfire on the Nation's Reservation through implementation of wildfire prevention plans and associated planning. The prevention program monitors fire danger, fire occurrence, and cause trends (Cherokee Nation, 2024b).

Emergency Medical

Bartlesville Ambulance is a fee-based service that provides emergency medical services to the City of Bartlesville and Washington County, including the Project Site (Bartlesville Ambulance, 2024). The Cherokee Nation Emergency Medical Services (CNEMS) is a state-licensed paramedic-level ambulance service owned and operated by the Nation that provides emergency medical services to portions of the Reservation within Cherokee, southern Delaware, northern Sequoyah, and western Adair counties. CNEMS consists of three major components: ambulance services, communications, and training. The ambulance service operates 24 hours a day, 7 days a week. Currently, CNEMS does not serve Reservation areas within Washington County.

Schools

The nearest school to the Project Site is Wayside Elementary School, approximately 1.1 miles northwest of the Project Site. To the north of the Project Site are other schools, including Wesleyan Christian School, Ranch Heights School, and Beacon Academy Oklahoma. These schools are within the Bartlesville Public Schools system. This system serves K-12, and during the 2021-2022 school year had approximately 6,078 students enrolled (Nation Center for Education Statistics, 2024).

Recreation

The City of Bartlesville has public parks and recreation facilities that include 17 parks and open space areas totaling more than 860 developed acres (City of Bartlesville, 2024d). The nearest park to the Project Site is Jo Allyn Lowe Park, approximately one mile to the northwest. This park is approximately 31.74-acres in size and includes amenities such as picnic tables, foot paths, a large fishing lake, and arboretum (City of Bartlesville, 2024e). The next nearest park is Civitan Park, approximately 2.1 miles northwest.

3.10.3 Impacts

Significance Criteria

A significant impact would occur if project-related demands on public services would cause an exceedance of system capacities that results in significant effects to the physical environment.

Alternative A: Proposed Project

Water Supply

Existing City of Bartlesville water infrastructure occurs in the vicinity of the Project Site and would be extended to the Project Site (further discussed in **Section 3.15**). The estimated average daily water demand of Alternative A is 13,044 gpd.

The City sources water from surface water resources, which have been assessed for reliability through the year 2060 (OWRB, 2012). Based on this assessment, sufficient water resources were projected to serve anticipated growth, and it was further determined that water management strategies such as increasing reservoir storage would serve as effective means to further expand water reliability. According to current water supply metrics for the City, water supply levels are currently at 91.1 percent with an average daily consumption of 4.53 million gpd (City of Bartlesville, 2024f). The increase in water demand is proportional to 0.1 percent of the current average daily demand.

Given the projected reliability of surface water availability and the small proportion of demands Alternative A would induce, Alternative A would not place an undue burden on public utilities such that insufficient capacity would arise. BMPs are listed in **Table 2.1-2** and include measures to reduce water demand. The Nation would sign-up for water service to the Project Site and would pay the appropriate water supply fees for operation of Alternative A. Before construction of the water service connections, the Nation will contact the state utility notification center (OKIE811) to notify utility service providers of excavation to avoid unintentional disruptions to existing utilities as specified in BMPs described in **Table 2.1-2**. Impacts would be less than significant.

Wastewater Service

City of Bartlesville wastewater infrastructure occurs in the vicinity of the Project Site and will be extended to the Project Site (further discussed in **Section 3.15**). The estimated wastewater generation from Alternative A is 13,044 gpd. The City currently experiences a wastewater flow rate of 6 million gpd with a design capacity of 7 million gpd (City of Bartlesville, 2024g). The increase in demand would be proportional to 0.1 percent of the existing capacity and 0.7 percent of the remaining capacity. Therefore, Alternative A would not overburden the existing system.

Additionally, the Nation would sign-up for wastewater service to the Project Site and would pay the appropriate sewer fees. Before construction of the connections, the Nation would contact the state utility notification center (OKIE811) to notify utility service providers of excavation to avoid unintentional disruptions to existing utilities as specified in BMPs described in **Table 2.1-2**. Impacts would be less than significant.

Solid Waste Service

Solid waste from construction may include paper, wood, glass, aluminum, and plastics from packing materials; waste lumber; insulation; empty non-hazardous chemical containers; concrete; metal, including steel from welding/cutting operations; and electrical wiring. These solid waste materials are typical of construction sites and would most likely be disposed at Osage Landfill. As described in **Section 3.10.2,** the Osage Landfill is permitted to accept a variety of waste, including those associated with construction, and therefore the solid waste could be deposited there for processing.

Solid waste generated from the construction of Alternative A would be temporary, and therefore would not impact Osage Landfill's long-term capacity to serve its current customers. Solid waste would be generated from Alternative A once operation begins, and BMPs included in **Table 2.1.2** include measures to encourage recycling and reduce solid waste. Additionally, once in trust, the Project Site would be within the Cherokee Nation Solid Waste Program and would comply with the Cherokee Nation Solid Waste Code. Therefore, construction and operation of Alternative A would result in a less-than-significant impact on solid waste services.

Electricity and Natural Gas

The Public Service Company of Oklahoma currently provides electricity in the vicinity of the Project Site. Five pole-mounted transformers occur on the western side of the Project Site. Since electricity would be the primary source of energy for Alternative A, electric service to the Project Site would be provided by existing facilities. The Nation would sign up for electricity service to the Project Site and would be the appropriate billing fees. The nearest natural gas line to the Project Site is approximately three miles to the northeast. It is the Nation's intent to utilize electric appliances, boilers, and heating systems within the proposed casino, hotel, and gas station/convenience store to the extent feasible. However, propane gas may be utilized in food service cooktops. There would be a less-than-significant impact.

Law Enforcement

Once taken into trust, the Marshal Service, which serves the Nation's Reservation, would be the primary law enforcement agency to serve the Project Site. The Marshal Service's main office is approximately 50 miles from the Project Site. Cherokee Nation Marshals are required to receive training at the Federal Training Center. The Federal Training Center is responsible for designing, developing, coordinating, and administering advanced and specialized training programs for the BIA, United States Border Patrol, Transportation Security Administration, and other partnering organizations. The Marshal Service employs over 32 deputy marshals and provides a diverse range of specialized teams dedicated to the prevention of crime (Cherokee Nation, 2024a). The Marshal Service would hire additional marshals as needed to accommodate law enforcement needs of Alternative A and has a cross-deputization agreement with a network of 50 agencies at the municipal, county, state, and federal levels that may be coordinated with for additional support, if necessary (Cherokee Nation, 2021). The Project Site would also be under the jurisdiction of the Nation's judicial system. Additionally, BMPs have been included in **Table 2.1-2** (Public Services and Utilities) that would generally increase security and safety under Alternative A, such as regular patrolling of parking lots by security guards, thereby reducing the need for the Marshal Service to respond to non-threatening calls. Impacts associated with law enforcement services would be less than significant.

Fire Protection

Fire protection services to the Project Site are currently provided by the Washington County Fire Department. The Nation's cross-deputization agreement includes the state Fire Marshal and Washington County Fire Department, which would provide fire protection services to the Project Site once in trust. The Project Site currently consists of forested land adjacent to a major highway. Once taken into trust, the Project Site would be paved and developed, which would reduce the amount of unmanaged fire fuel. Because emergency medical services would be provided by Bartlesville Ambulance (further discussed below), calls for fire protection services are not expected to significantly increase with implementation of Alternative A.

Additionally, the Cherokee Nation Wildfire Prevention Program serves to address and mitigate wildfire on the Nation's Reservation through implementation of wildfire prevention plans and associated planning (Cherokee Nation, 2024b). Once taken into trust, the Wildfire Prevention Program would apply to the Project Site.

Lastly, Alternative A would be constructed in compliance with the Cherokee Nation Tribal Code and would be generally consistent with the IBC. An indoor fire suppression system would be installed, water supply to meet fire demands would be supplemented through an on-site water tank and fire pump, and BMPs listed in **Table 2.1-2** would be implemented to ensure that Alternative A would not create substantial fire hazards.

Impacts associated with fire protection would be less than significant.

Emergency Medical

Bartlesville Ambulance currently provides emergency medical services to the City of Bartlesville and Washington County, including the Project Site, and this would continue once the Project Site is acquired into trust (Bartlesville Ambulance, 2024). Bartlesville Ambulance is a fee-based service that each patient would pay applicable service fees to as needed (Bartlesville Ambulance, 2024). There would be a less-than-significant impact.

Schools

Due to its distance from the closest school, Alternative A is not expected to adversely affect any schools since the nearest school is approximately one mile. Furthermore, new employees generated under Alternative A would not create a significant demand on schools in the area, as most of the new employees would already be living in the surrounding communities. There would be a less-than-significant impact.

Recreation

The Project Site is not currently used for any recreational purpose, and the nearest recreational facility is Jo Allyn Lowe Park. As employees are expected to already reside locally, it is expected that direct effects to local parks resulting from additional visitors would be minimal. Furthermore, patrons of Alternative A could visit attractions in the surrounding areas that could include parks and other recreational areas, but this is not expected to be significant enough to require the expansion of park or recreational facilities. There would be a less-than-significant impact.

Alternative B: Reduced Intensity

Alternative B would result in similar impacts to public services, solid waste, and utilities as discussed under Alternative A, but at a reduced scale due to the decreased development components. For water and wastewater services, Alternative B would require similar connections as those discussed under Alternative A. Similar to Alternative A, Alternative B would not induce growth in the area nor significantly increase the usage of public schools, parks, or other recreational facilities enough to require new facilities or expansion of existing ones. With the BMPs listed in **Table 2.1-2**, impacts would be less than significant.

Alternative C: No Action

Under Alternative C, the Project Site would not be taken into trust and no development would occur. The Project Site would remain in its current state and would not generate demand for additional public services or utilities.

3.11 NOISE

3.11.1 Regulatory Setting

The noise regulatory setting is summarized in **Table 3.11-1** and additional information on the regulatory setting can be found in **Appendix B**.

3.11.2 Environmental Setting

For the fundamentals of sounds, effects of noise on people, and characteristics of vibrations, please refer to **Appendix B**.

Table 3.11-1: Regulatory Policies and Plans Related to Noise

Regulation	Description
Federal	
Federal Highway Administration (FHWA) Noise Abatement Criteria	▪ Thresholds during construction for noise sensitive locations are 72 decibels (dBA) equivalent sound level (L_{eq}) or Baseline + 5 (whichever is louder) during the daytime (7am to 6pm). ▪ Thresholds during construction for commercial areas are 77 dBA L_{eq} or Baseline + 5 (whichever is louder) during the daytime. ▪ Thresholds during operation for park and residential areas are 67 dBA $L_{eq.}$ ▪ Thresholds during operation for developed areas are 72 dBA L_{eq}.
Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual	▪ Peak particle velocity (PPV) is the maximum instantaneous peak (inches per second) of the vibration signal. ▪ Vibration damage criteria for structures is 0.5 PPV and 0.1 PPV for annoyance.
Local	
Bartlesville Municipal Code	▪ Contains several provisions related to noise, such as in Sections 12-94 and 19-334.

Existing Noise Sources and Ambient Noise Levels

Existing noise generated in the vicinity of the Project Site predominately comes from traffic on adjacent roadways, primarily US-75/Southeast Washington Blvd that fronts the Project Site. The U.S. Department of Transportation develops national transportation noise maps using a 24-hour equivalent A-weighted sound level noise metric. The sound contours on these maps represent the approximate average noise energy due to transportation noise sources over a 24-hour period at the receptor locations where noise is computed. Because traffic on US-75 is the dominant source of noise in the vicinity of the Project Site, the Department of Transportation noise contour map for US-75 was utilized to estimate the ambient noise environment. According to the U.S. Department of Transportation national transportation noise map for US-75, ambient noise levels are approximately 55 - 60 dBA equivalent continuous sound pressure level (L_{eq}) over a 24-hour period (U.S. Department of Transportation, 2024). Other noise sources in the area include the limited commercial development to the south and west and residential development to the north.

Sensitive Receptors

Some land uses are considered more sensitive to noise than others due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Residences, motels, hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, and parks and other outdoor recreation areas generally are more sensitive to noise than commercial or industrial land uses. A sensitive receptor is defined as any living entity or aggregate of entities whose comfort, health, or well-being could be impaired or endangered by the existence of the criteria pollutant, whether it is emissions or noise, in the atmosphere. Residential units occur north of the Project Site and to the west behind existing commercial development. The nearest sensitive receptor to the Project Site is a residential unit that is approximately 100 feet north of the Project Site.

3.11.3 Impacts

Significance Criteria

The noise assessment is based on federal Noise Abatement Criteria (NAC) standards used by the FHWA and on FTA thresholds for perceptible vibration. Specifically, adverse noise and vibration impacts are identified at existing sensitive receptor locations if the following were to occur as a result of development:

- Project construction noise levels exceed the FHWA construction noise thresholds for noise-sensitive locations (see Table 4 of **Appendix B**).
- Project construction vibration levels exceed 65 vibration decibels (VdB) (FTA threshold of perception).
- The 23 CFR 772 NAC provides an operational noise threshold of 67 dBA, L_{eq} for traffic induced noise for residential land uses.

Construction Noise and Vibration

During the construction of Alternative A, noise from construction would increase noise levels in the immediate vicinity of the Project Site.

Activities involved in typical construction would generate maximum noise levels, as indicated in **Table 3.11-2**, of up to 85 dBA L_{max} at a distance of 50 feet.

Table 3.11-2: Construction Equipment Noise

Equipment Description	Maximum Noise Level at 50 feet [dBA]
Air compressor	80
Backhoe	80
Compactor	82
Concrete mixer	85
Concrete pump	82
Concrete vibrator	76
Crane, mobile	83
Dozer	85
Generator	82
Grader	85
Impact wrench	85
Loader	80
Paver	85
Pneumatic tool	85
Pump	77
Saw	76
Scarifier	83
Scraper	85
Shovel	82
Truck	84

Source: FTA, 2018

Given a noise attenuation factor of 6.0 dBA per doubling distance, the maximum noise levels from construction at the nearest existing noise-sensitive uses, located approximately 100 feet from proposed construction areas, are expected to be up to approximately 80 dBA L_{max}. According to FHWA construction noise thresholds (see **Appendix A**), construction noise impacts would be significant where daytime construction activities would generate noise levels exceeding 78 dBA or median baseline noise levels +5 dBA, whichever is louder.

Construction would be temporary and the noise levels associated with equipment would not be constant. However, because construction of Alternative A has the potential to exceed federal levels of increasing the baseline by 5 dBA or more, unmitigated construction noise could impact nearby sensitive receptors. Mitigation has been included in **Section 4** to reduce construction-related noise impacts and includes locating noise generating equipment and staging areas at maximum feasible distances from sensitive receptors and appointing a disturbance coordinator during construction to address noise complaints of nearby sensitive receptors. Implementation of this mitigation would ensure that noise impacts during construction would be reduced to the extent feasible.

BMPs included in **Table 2.1-2** would further reduce noise impacts by equipping mufflers on construction equipment, following manufacturer's guidelines to ensure equipment is properly used, and limiting construction hours to prevent sleep disturbance. Therefore, with incorporation of mitigation and BMPs, construction noise impacts to sensitive receptors would be less than significant.

Vibration levels of typical construction equipment at a distance of 25 feet from the equipment are shown in **Table 3.11-3**. The nearest sensitive receptor is approximately 100 feet north from where active construction would occur. At this distance, vibrations associated with construction equipment would be below the thresholds for structural damage (90 vibration velocity [VdB]), but they could be above the threshold for annoyance of humans, which is approximately 65 VdB (FTA, 2018).

Table 3.11-3: Vibration Source Levels for Construction Equipment

Equipment	Maximum Vibration Level at 25 feet [VdB (rms)]
Vibratory Roller	94
Large Bulldozers	87
Loaded Trucks	86
Jackhammer	79

Notes: rms = root mean square
Source: FTA, 2018

Construction activities would be temporary and slopes of the outer perimeter of the Project Site assist in providing a barrier between sensitive receptors and construction. BMPs included in **Table 2.1-2** as well as mitigation measures listed in **Section 4** to address potential noise impacts would also in turn would also reduce potential impacts to sensitive receptors associated with vibrations. Therefore, this impact would be less than significant with mitigation.

Operational Noise and Vibration

The proposed development under Alternative A is not anticipated to generate significant sources of noise. Typical sounds that would be heard from the proposed development include but are not limited to maintenance and landscaping activities, conversations between persons, and vehicular noise, such as car doors opening and closing and engines starting. None of the activities at the proposed development are expected to generate consistent, loud sources of noise that could cause a noticeable increase in the ambient noise environment. Increases in traffic can often be a significant source of noise, but as described in **Section 3.8.3**, Alternative A would not result in a significant daily increase in traffic on US-75. For a barely noticeable difference to be perceivable in the ambient noise environment (an approximate 3 dBA increase), traffic volumes on the surrounding roadways would need to double (**Appendix B**). Therefore, because the traffic increase would not cause a doubling in traffic volumes but a daily increase (approximately 7,283 trips to the Project Site on weekdays and 7,916 trips on weekends; **Appendix G**), there would be no perceivable difference compared to current noise levels. In addition, none of the activities at the proposed development would generate perceptible vibration, and therefore the limited vibration generated would not cause adverse effects. Overall, the operation of Alternative A would have a less than significant noise and vibration effect.

Alternative B: Reduced Intensity

Alternative B would result in similar construction and operational noise and vibrations impacts as Alternative A but at a reduced level due to the smaller development scale. Construction noise and vibration would be temporary in nature and would not have a significant impact with implementation of BMPs listed in **Table 2.1-2**.

The increase in traffic volumes and other on-site noise sources would be less than Alternative A during operation. Therefore, impacts would be less than significant. Accordingly, Alternative B would not result in significant adverse noise and vibration effects.

Alternative C: No Action

Under Alternative C, the Project Site would not be taken into trust and no development would occur. The site would remain in its current state and no construction or operational noise from mobile or stationary sources would occur. Because no new development would occur, Alternative C would have no adverse impacts related to noise.

3.12 HAZARDS AND HAZARDOUS MATERIALS

3.12.1 Regulatory Setting

The hazardous materials regulatory setting is summarized in **Table 3.12-1** and additional information on the regulatory setting can be found in **Appendix B.**

Table 3-12-1: Regulatory Policies and Plans Related to Hazardous Materials and Hazards

Regulation	Description
Federal	
Resource Conservation and Recovery Act (RCRA)	▪ Grants the USEPA the authority to manage hazardous waste throughout its life cycle, including storage, treatment, transportation, production, and disposal. ▪ Establishes a management framework for non-hazardous solid wastes. ▪ Authorizes the USEPA to respond to environmental problems related to underground hazardous substance storage tanks, including petroleum.
Food, Drug, and Cosmetic Act	▪ Enables the USEPA to determine the maximum pesticide residue amount on food. ▪ Maximum limits are based on findings that the maximum limit will be reasonably safe in terms of accumulated exposure to the pesticide residue. ▪ For pesticides without a set maximum residue limit, the USEPA has the authority to seize these commodities.
Federal Insecticide, Fungicide, and Rodenticide Act	▪ Mandates that pesticides sold or distributed be licensed with the USEPA. A pesticide cannot be licensed until it is proven that the pesticide will not generally cause unreasonable adverse effects on the environment if utilized in accordance with its specifications.
Hazard Communication Standard	▪ Ensures information about chemical and toxic substance hazards in the workplace and associated protective measures are disseminated to workers exposed to hazardous chemicals, including labels, safety data sheets, and proper handling training. ▪ Chemical manufacturers and importers that produce and import chemicals are required to assess their products for hazards; safety data sheets and labels must be created with information that outlines the dangers of the products.

Regulation	Description
Hazardous Substances Act	▪ Necessitates that hazardous household products have precautionary labeling to alert consumers of hazards, proper storage, and immediate first aid steps in case of an accident. ▪ Enables the Consumer Product Safety Commission (CPSC) to prohibit severely dangerous products and products with hazards that cannot be labeled accordingly to Hazardous Substances Act standards.
Toxic Substance Control Act	▪ Authorizes the USEPA with the authority to require record keeping, reporting, test requirements, and restrictions associated with certain chemical substances and/or mixtures. ▪ Addresses the production, importation, use, and disposal of certain chemicals (e.g., lead paint).
Emergency Planning and Community Right-to-Know Act	▪ Requires industry to report on the use, storage, and release of hazardous substances to federal, state, and local governments. ▪ Requires Indian Tribes and state and local governments to utilize this information to prepare their communities for potential risks.
National Fire Protection Association Codes and Standards	▪ Codes and Standards to minimize the possibility and effects of fire and other risks including, but not limited to: sprinkler systems, fire alarms, parking structures, emergency response, and wildland fire protection
CFR Part 280	▪ Sets technical standards and corrective action requirements for owners and operators of underground storage tanks (USTs).
Local	
Multi-Jurisdictional Multi-Hazard Mitigation Plan Update for Washington County.	▪ Identifies and assesses hazards that pose a threat to residents, businesses, and property. ▪ Evaluates mitigation measures to protect residents, businesses, and property. ▪ Addresses general and site-specific hazards such as severe winter storms, high winds, floods, and wildfires.
Tribal	
Cherokee Nation Tribal Code and Cherokee Nation Hazardous Waste Code	▪ Contains policies associated with protecting the environment and properly addressing hazardous materials issues.

3.12.2 Environmental Setting

A Phase I Environmental Site Assessment (ESA) was completed in February 2024 for the Project Site to determine if any Recognized Environmental Conditions (RECs) exist (Cherokee Nation, 2024d). The Phase I ESA was prepared per the American Society for Testing and Materials (ASTM) Standard Practice E 1527-21 and to support an innocent landowner defense under the Comprehensive Environmental Response, Compensation, and Liability Act. Under the ASTM Standard Practice E 1527-21, RECs are defined as the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products within a property into structures or the ground, groundwater, or surface water.

The Phase I ESA conducted historical research that included but was not limited to reviewing aerial photographs and topographical map, interviews, a site reconnaissance, and database review that included regulatory, state, and local databases entries up to a one-mile radius of the Project Site. In addition to RECs, the Phase I ESA assessed for Historical RECs (HRECs) and Controlled RECs (CRECS).

Under ASTM Standard Practice E 1527-21, HREC refers to an environmental condition, including a past release of any hazardous substance or petroleum product that has since been remediated, which in the past would have been considered a REC; and CREC refers to hazardous substance releases that have been partially addressed through remediation but where some contamination remains in place under certain risk-based restrictions or conditions.

The Project Site is undeveloped with the only notable structures consisting of portable sheds on the western edge. Solid waste debris related to historic oil well operations (of which all five historic oil wells on the Project Site have been plugged) were observed on the Project Site during site reconnaissance in 2023/2024 and consisted of tires, scrap metal, wood, metal, pvc pipes, and concrete rubble. The debris was cleaned up and properly disposed of from January 2, 2024 to January 5, 2024. The cleanup dumpsters were removed from the Project Site on January 15, 2024.

The Project Site does not appear on any regulatory agency lists, and none of the listed sites near the Project Site were considered able to affect the Project Site. The Phase I ESA concluded that no RECs, HRECs, or CRECs were connected with the Project Site.

3.12.3 Impacts

Significance Criteria

Impacts associated with hazardous materials include a release of hazardous materials and improper hazardous material management. A project would be considered to have significant hazardous material impacts if the site had existing hazardous materials on-site that would require remediation or mitigation prior to development of a project. Additionally, if a project results in the use, handling, or generation of a controlled hazardous material that the regulated amount would increase the potential risk of exposure that results in the reduction in the quality or loss of life, then the project would have a significant impact.

Alternative A: Proposed Project

There are no known hazardous materials contamination issues on or adjacent to the Project Site that could affect the planned uses of the Project Site (Cherokee Nation, 2024d). Therefore, implementation of Alternative A would not cause the environment or public to be affected by known hazardous materials. The potential exists for previously unidentified soil and/or groundwater contamination to be encountered during site preparation and construction activities at the Project Site. BMPs listed in **Table 2.1-2** have been developed to address this potential adverse condition. The most likely possible incidents involving hazardous materials would involve the incidental release of fuel, oil, and grease from construction equipment and during handling and transfer from one container to another. Typical construction management practices that have been included in **Table 2.1-2** would limit the incidence of such accidental releases.

In addition, the CWA requires that stormwater management BMPs be implemented during construction pursuant to a SWPPP. The SWPPP would further ensure that incidental hazardous materials releases would not migrate off-site during a storm event.

During operation of Alternative A, small quantities of cleaning materials, solvents, pesticides and paints would be stored and used. These materials are common to most commercial operations and do not pose any unusual or substantial impacts to public health and safety due to the relatively small quantities involved. Furthermore, such materials would be stored, handled, and disposed of according to federal and manufacturer's guidelines.

The gas station component of Alternative A would be equipped with USTs filled with petroleum products that would include gasoline and diesel fuel and fueling stations for distributing fuel. Releases of petroleum products could occur at the gas station in a number of ways. Potential releases could occur during refueling or unproperly maintained and/or faulty equipment that could become susceptible to leaks. Petroleum products released through spills, overfills, and leaks have the potential to contaminate stormwater runoff or enter the surrounding groundwater through direct spilling or leaking into the surrounding soil. However, the fuel storage tanks would comply with the provisions of 40 CFR Part 280, including Part 280.20 Performance Standards for new UST systems, which includes requirements for tank design, the installation and maintenance of leak detection and prevention systems, and spill and overfill controls to minimize the risk of release of petroleum into the environment. Leak prevention measures required under 40 CFR Part 280 include corrosion-resistant and double-walled tanks and piping, spill and overflow prevention equipment, and use of leak detection equipment.

The standards are therefore protective of both public health and the environment (including soil and groundwater) through the prevention of accidental release which could lead to soil and groundwater contamination. Additionally, potential hazardous waste issues would be addressed in accordance with the Cherokee Nation Tribal Code and Cherokee Nation Hazardous Waste Code. There would be a less-than-significant impact associated with hazardous materials.

Alternative B: Reduced Intensity

Alternative B would have similar hazardous material risks as Alternative A during construction and would incorporate similar BMPs to reduce these potential risks to less than significant. Operation of Alternative B would have similar hazardous material usage, handling, storage, and disposal as the casino component of Alternative A. Additionally, potential hazardous waste issues would be addressed in accordance with the Cherokee Nation Tribal Code and Cherokee Nation Hazardous Waste Code. There would be a less-than-significant impact associated with hazardous materials.

Alternative C: No Action

No development would occur under this alternative, and the Project Site would remain in its undeveloped state. No hazardous material impacts would occur under Alternative C.

3.13 VISUAL RESOURCES

3.13.1 Regulatory Setting

The visual resources regulatory setting is summarized in **Table 3.13-1** and in **Appendix B.**

Table 3.13-1: Regulatory Policies and Plans Related to Visual Resources

Regulation	Description
State	
Oklahoma Scenic Byways	▪ Roads within the state that have been designated as having regionally outstanding scenic, natural, recreational, cultural, historic, or archaeological significance.
Local	
Comprehensive Land Use Plan for the Bartlesville Metropolitan Area	▪ This plan provides a framework for land use decisions in the City. It indirectly includes policies and recommendations regarding aesthetics.

3.13.2 Environmental Setting

Views and Viewsheds

A viewshed is comprised of one or more viewing corridors or vistas from a specific location or viewpoint. Each vista provides a line-of-sight that can be characterized uniquely from among other vistas within the viewshed. The following constituent elements compose the visual experience within each vista:

- Clarity in line of sight: overall visibility of the object within the viewshed. This can be influenced by trees, buildings, topography, or other potential visual obstructions within the viewshed.
- Duration of visibility: amount of time the object is exposed to viewers within the viewshed.
- Proximity of the viewer: effects of foreshortening due to the distance of the viewer from the object will influence the dominance of the object in the perspective of the viewer within the viewshed.
- Number of viewers: number of viewers anticipated to experience the visual character of the object in a forward-oriented view. Densely populated residential districts or busy highways within the viewshed will present more viewers than in unpopulated areas.

Viewsheds and viewpoints are described by expressing the strength of the viewing experience, framed within the analytical criteria listed above. Viewing experiences are personal and subjective in nature, but if the above elements are used it allows for a more objective, baseline assessment of the visual environment and visual impacts. The following represent some visual qualities that may indicate the presence of a scenic resource:

- Massive rock formation,
- Tree with age or interesting features,

- Historical value plantings,
- Historic buildings,
- Feature with local, regional, or statewide importance, or
- Feature specifically identified in planning documents as having a special scenic value.

The Project Site is located along US-75 and is surrounded by the Tribe's Reservation and the City of Bartlesville, in unincorporated Washington County. The majority of the Project Site consists of mixed hardwood forest, cedar glade, and ruderal/developed habitat. In general, views of the Project Site to motorists from US-75 are primarily obstructed due to the established vegetation and trees, as well as sloping topography. No scenic byways, scenic resources, or areas of unique visual resources occur in the vicinity of the Project Site (Scenic America, 2024). Surrounding land uses include commercial, residential, and open space.

Sensitive receptors that experience views of the Project Site include residential homes located to the north, southeast, and west of the Project Site boundaries. The nearest residence is approximately 100 feet north of the Project Site. Residences are also obstructed due to established vegetation and topography. Only those residences in the northern portion of the Project Site may have a less obstructed view due to being located on the higher slope of the project area.

Light and Glare

The City of Bartlesville Zoning Regulations contain lighting requirements for exterior light sources, including shielded fixtures, heights of light poles and fixtures, and directing illumination away from adjacent properties. Currently, no permanent stationary sources of light are emitted from the Project Site. Sources of light in the immediate area include those from residential homes, commercial properties, and vehicles on US-75.

3.13.3 Impacts

Significance Criteria

Impacts related to visual resources would be considered significant if the project were to adversely affect a scenic vista or scenic resource, substantially degrade the existing visual character or quality of the site and its surroundings or create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Alternative A: Proposed Project

Views and Viewsheds

No scenic byways, scenic resources, or areas of unique visual resources occur in the vicinity of the Project Site (Scenic America, 2024). Therefore, views of such resources would not be impacted by development of Alternative A.

During construction of Alternative A, development of the currently vacant site would include a casino, hotel, gas station/convenience store, surface parking, and supporting facilities. Construction vehicles would be visible to adjacent residences and vehicles and businesses along US-75. These visual impacts would be temporary in nature and the equipment would not remain on the Project Site after construction.

During operation, the existing visual setting of the Project Site would change from vacant forested land to views of modern commercial development. Grading would occur and vegetation and trees would be removed. The most visible elements of the development would be the casino and hotel.

These would be visible to nearby residences and commercial properties located on the northwestern and western sides of the development area and along US-75. The newly constructed casino would be visible from US-75. The proposed development is visually consistent with surrounding development. Additionally, landscaping would occur on the Project Site to enhance the overall aesthetic of Alternative A. Therefore, Alternative A would not constitute a significant adverse effect associated with visual resources, and no scenic resources would be impacted.

Light and Glare

Alternative A would include exterior lighting in the parking lot and on buildings that would potentially be visible to adjacent residences. Exterior lighting of Alternative A would be consistent with lighting of other surrounding commercial development. A rendering is included as **Figure 2.1-3**. Electronic LED signage, similar to the Cherokee Casino Ramona, may be installed near the Project Site entrances to advertise the casino, hotel, and gas station/convenience store. Electronic LED signage can be harmful to the nighttime lighting environment because unlike light fixtures, LED signage emissions cannot be shielded, and the horizontal direction of the LED light may be emitted laterally into adjacent environments and upward into the night sky. BMPs are included in **Table 2.1-2** to reduce potential lighting impacts to sensitive receptors and the surrounding area, including from electronic LED signage, as recommended by DarkSky International (DarkSky International, 2024). These measures are consistent with City lighting requirements and also require that electronic signage be programmed and operated to avoid excessive lighting levels at night through use of timers that gradually dim signage lighting at sunset and brighten signage lighting at sunrise as necessary for visibility. BMPs further require the orientation of electronic signage away from residential areas and sensitive habitats. With implementation of BMPs, including use of shielded and downward directed lighting, and controlled operation of electronic LED signage lighting levels, there would be a less-than-significant impact.

Alternative B: Reduced Intensity

Visual impacts related to development under Alternative B would be similar to those described under Alternative A but reduced. BMPs are included in **Table 2.1-2** to reduce potential lighting impacts to sensitive receptors and the surrounding area. These measures are consistent with City lighting requirements. There would be a less-than-significant impact.

Alternative C: No Action

Under Alternative C, the Project Site would not be taken into trust and no development would occur. The site would remain in its current state. Because no new construction would occur, Alternative C would have no adverse effects related to visual resources.

3.14 CUMULATIVE IMPACTS

3.14.1 Cumulative Setting

This section assesses the potential for the project alternatives to contribute to "cumulative" environmental impacts within each environmental issue area category. Cumulative impacts are defined by the Council on Environmental Quality (CEQ) as the effects "on the environment which results from incremental effect of the action when added to other past, present and reasonably foreseeable future actions" (40 CFR § 1508.1[i][3]).

For the purposes of this analysis, the cumulative setting includes growth and development envisioned in the City of Bartlesville Comprehensive Land Use Plan for the Bartlesville Metropolitan Area (City of Bartlesville, 1999), U.S. Highway 75 Master Plan (City of Bartlesville, 2003), and zoning designation and land use trends in the vicinity of the Project Site. **Table 3.14-1** below identifies specific development projects within the City of Bartlesville. There are no known significant development projects within unincorporated Washington County in the vicinity of the Project Site.

The cumulative impact analysis within this EA considers development of the projects described above as well as buildout in the vicinity of the Project Site based on land use planning documents and zoning designations. This analysis also considers the 4.0 percent annual growth rate assumed in the future background traffic levels discussed in Section 3.8 and **Appendix G**. Cumulative impacts for each environmental issue area are discussed below.

3.14.2 Land Resources

Cumulative effects associated with land resources could occur as a result of future development in combination with the project alternatives, including the projects listed in **Table 3.14-1** and growth and development envisioned in local planning documents. Topographic changes, soil loss, mineral loss, or seismic risk may be cumulatively significant even if the developments alone would not result in significant alterations of the landscape or increase seismic risk.

There are no mineral resources within the Project Site, therefore, development would not incrementally impact mineral resources, and cumulative impacts to mineral resources would not occur. Similarly, there are no active seismic zones in the vicinity of the Project Site, therefore, cumulative impacts related to seismic risks and liquefaction would not occur. The project alternatives could result in improper changes to topography associated with grading activities. As discussed in **Section 3.2.3**, mitigation in **Section 4** would prevent these impacts from occurring through implementation of a Grading and Drainage Plan to be prepared by a licensed engineer. As potential impacts would be avoided through mitigation, development would not incrementally impact topography or landslides, and significant cumulative impacts would not occur.

Further, the project alternatives could result in localized soil loss associated with stormwater runoff. As it is likely the US-75 corridor in the vicinity of Bartlesville will continue to be built-out, localized cumulative soil loss could occur. BMPs listed in **Table 2.1-2**, which include implementation of a SWPPP in accordance with the Construction General Permit (CGP), would prevent soil loss throughout construction.

Table 3.14-1: Cumulatively Considered Projects

Project	Summary	Distance to Project Site	Status
Capital Improvement Projects	Various roadway improvements, public service building improvements, parks maintenance, and equipment purchasing	Various, within approximately 5 miles of the Project Site	Approved, in funding stages
City Projects	Improvements to existing city infrastructure, including sidewalks, a wastewater expansion, fiberoptics, and improvements to the Bartlesville Municipal Airport	Various, within approximately 5 miles of the Project Site	Various stages of planning
Osage Casino Bartlesville	Gaming floor, restaurant, hotel, and banquet space	6.2 miles	Recently opened
Commercial infill	Various small commercial infill projects including: ▪ Food and dining (Bricktown Brewery, Wendy's, McAlister Deli, H Tea O, Scooter's Coffee) ▪ Shoe Department Encore	Various, within approximately 5 miles of the Project Site	Approved, in various stages of pre-construction and construction
DR Horton Homes	73 single-family residences	2.0 miles	Partially constructed
Silver Lake Village	Re-zone from agriculture to single-family residential/ multi-family residential and general commercial of 115 acres on Adams Blvd east of Silver Lake Road	2.3 miles	Planning stages

Sources: City of Bartlesville 2022a, 2022b, 2022c, 2024h; 500 Nations, 2024; Bartlesville Radio, 2022

Additionally, a stormwater collection and treatment strategy has been designed to prevent erosion or impaired runoff (**Appendix A**). Other projects in the vicinity would be required to adhere to similar requirements and project-specific permitting requirements and BMPs to limit impacts to soils. It is anticipated that approved developments would follow appropriate permitting procedures. Therefore, impacts would either be avoided through mitigation, permitting, or BMPs, or would be minor and constrained to the Project Site. Thus, significant cumulative impacts would not occur.

3.14.3 Water Resources

Cumulative effects to water resources may occur as the result of the construction of the project alternatives and future development, including the projects listed in **Table 3.14-1** and growth and development envisioned in local planning documents. There are no surface waters on the Project Site, therefore, development would not directly incrementally impact surface water resources and cumulative impacts to surface waters would not occur. However, the project alternatives would source water via a municipal connection that utilizes surface water resources. As discussed in **Section 3.3.3**, the OWRB completed a watershed planning report for the Project Site watershed and projected water demand and supply through the year 2060 (OWRB, 2012). This report determined that surface water limitations were not anticipated and that additional water management actions would be suitable to further ensure water supply reliability.

Further, according to current water supply metrics for the City, water supply levels are currently at 91.1 percent with an average daily consumption of 4.53 million gpd (City of Bartlesville, 2024f). The increase in water demand is proportional to 0.1 percent of the current average daily demand.

Given the proportionately small increase in water demand and the projected surface water reliability, significant cumulative impacts to surface waters would not occur.

Drainage and flooding impacts would be limited to lost floodplain storage for development within the floodplain, and changes to drainage patters. Mitigation in **Section 4** would reduce potential flooding impacts and therefore avoid cumulative impacts. Additionally, the stormwater capture and treatment methodology in **Appendix A** would ensure that a 100-year 24-hour storm event would be properly treated such that drainage patterns and rates off-site would not be altered and impaired stormwater would not be discharged off-site. Further, a SWPPP would be required during construction and would contain BMPs to prevent discharge of impaired stormwater.

Projects that may be constructed in the vicinity of the Project Site are also required to comply with the Clean Water Act as it relates to stormwater and point-source discharges. Thus, significant cumulative impacts related to drainage and flooding would not occur. As discussed in **Section 3.3.3**, groundwater would not be used by the project alternatives and would not include activities that would endanger groundwater quality. Therefore, cumulative impacts to groundwater would not occur.

3.14.4 Air Quality

Cumulative development in the region of the Project Site includes land, roadway, and public infrastructure projects that have the potential to impact air resources. Because the state of Oklahoma is in attainment for all criteria pollutants established by the USEPA, no cumulatively considerably adverse effects to air quality are anticipated. **Section 3.4** addresses the potential air quality and GHG emission impacts of the project alternatives. As described in **Section 3.4**, the project alternatives would not affect public health and safety and are compliant with applicable requirements imposed for the protection of the environment. BMPs identified in **Table 2.1-2** would reduce emissions of CAP, DPM, and GHG emissions from construction and operation of the project alternatives. Operational BMPs would reduce GHG emissions from the provision of electrical vehicle charging infrastructure, use of energy and water efficient fixtures, and proper maintenance of equipment. With the implementation of BMPs, the project alternatives would not result in a significant adverse cumulative impact associated with air quality or climate change.

3.14.5 Biological Resources

Cumulative effects to biological resources may occur as the result of the construction of the project alternatives and future development, including the projects listed in **Table 3.14-1** and growth and development envisioned in local planning documents through the conversion of natural habitat into urban uses. The Project Site does not contain sensitive habitat, Critical Habitat, or wetlands or waters, therefore, the project alternatives would not result in cumulative impacts to these resources. The Project Site does provide sub-optimal active season roosting habitat for tricolored bats. With incorporation of mitigation in **Section 4**, impacts to individual tricolored bats would be avoided. Therefore, cumulative impacts to this species would be less than significant. ABB also has the potential to occur within the mixed hardwood forest.

As discussed in **Section 3.5**, Alternative A has already undergone review through USFWS and found to be compliant with the USFWS Programmatic Biological Opinion, which considered cumulative impacts to ABB. Although already conforming to the ABB Programmatic Biological Opinion, Alternative A includes additional BMPs to further reduce impacts to ABB. This would be a less than significant cumulative impact to ABB. Finally, the Project Site was determined to provide suitable habitat for nesting and migratory birds. Mitigation in **Section 4** includes a nesting bird survey that would avoid impacts to nesting birds. As impacts would be avoided, cumulative impacts to nesting birds would not occur. Other development projects in the region would be required to implement similar mitigation measures to protect sensitive biological resources. The project alternatives contribution to cumulative impacts to biological resources would be less than significant.

3.14.6 Cultural Resources

Cumulative effects to cultural resources may occur as the result of the construction of the project alternatives and future development, including the projects listed in **Table 3.14-1** and growth and development envisioned in local planning documents. Cumulative impacts to resources typically occur when sites that contain cultural features or artifacts are disturbed by development. As these resources are destroyed or displaced, important information is lost and connections to past events, people, and culture is diminished. There are no known cultural resources present within the Project Site.

Although the project alternatives have the potential to impact previously undiscovered cultural resources, mitigation measures in **Section 4** would ensure impacts would be less than significant. Any future development projects in the area would be required to follow federal, state, and local regulations, as applicable, regarding cultural resources and inadvertent discoveries of these resources, requiring mitigation or avoidance. Therefore, implementation of the project alternatives would not contribute to cumulatively considerable effects on cultural resources.

3.14.7 Socioeconomic Conditions

Cumulative impacts to socioeconomic conditions may occur from buildout of cumulative projects, for example, should buildout of cumulative projects result in insufficient housing supply or disproportionate impacts to environmental justice communities. Construction would result in 125 temporary construction jobs that would be expected to be filled locally and, as they would be temporary, would not generate ongoing socioeconomic benefits. Alternative A would result in approximately 300 permanent jobs. This would not appreciably affect socioeconomic conditions and would not induce growth such that housing or other population growth metrics would be impacted. Similarly, **Section 3.7.3** determined that fiscal losses of property taxes and such would be offset by economic increases such as tourism induced by the project alternatives. Finally, significant problem gambling and substitution effects would not be induced beyond existing conditions. Therefore, no significant cumulative socioeconomic effects would result.

3.14.8 Transportation and Circulation

A Traffic Impact Analysis (TIA) (**Appendix G**) assessed traffic conditions under the following cumulative scenarios:

- 2046 background traffic (no project alternatives)
- 2046 traffic with implementation of Alternative A

LOS results are shown in **Tables 3.8-5** and **3.8-6** in **Section 3.8**. An annual growth rate of four percent was used to determine projected traffic volumes in the cumulative year 2046 (20 years from the anticipated opening year). Under the 2046 future background traffic, unsignalized study intersection of Rice Creek Road/W 2200 Road and US-75 and the signalized study intersection of Price Road and US-75 are projected to worsen to unacceptable overall and critical approach LOS during at least one peak hour. While these effects would occur under background conditions without the addition of project-related traffic, implementation of Alternative A would contribute to these potentially significant cumulative effects.

With the addition of Alternative A under 2046 LOS conditions, critical approaches at proposed Driveways 1, 2, and 3 are projected to operate at unacceptable LOS during at least one peak hour. Mitigation measures are included in **Section 4** to address these impacts, including fair-share payments towards regional traffic improvements. Other development projects in the area would be expected to implement similar mitigation measures and fair-share payments towards regional traffic improvements. With mitigation, the project alternatives would not result in cumulatively considerable traffic impacts.

3.14.9 Land Use

Potential future development, including those projects identified in **Table 3.14-1** and growth and development envisioned in local planning documents, have the potential to result in cumulative land use effects associated with potential conflicts with existing land uses or conversion of agricultural land. If taken into federal trust, the Project Site would not be subject to state or local use jurisdiction. Development on the site would not disrupt neighboring land uses or airspace or prohibit access to neighboring parcels and would therefore not be in conflict with the existing land use zoning and designations, which already assumed a commercial buildout of the Project Site. As such, the project alternatives would not result in changes to local land use patterns. Other cumulative development projects would be subject to independent environmental review process that would consider compatibility and conflicts with existing and adjacent land uses. No cumulatively considerable adverse land use effects would occur.

3.14.10 Public Service and Utilities

Potential future development, including those projects identified in **Table 3.14-1** and growth and development envisioned in local planning documents, have the potential to result in cumulative impacts to public services and utilities. The infrastructure projects listed in **Table 3.14-1** would not contribute to increased demands for public services and utilities and are therefore not discussed further. The expansion of public services and associated facilities to serve future growth would be funded in part through development fees and property tax.

Water Supply

Water use from other planned development in the area in combination with the project alternatives could result in cumulative impacts if they were to trigger the need for new facilities or water supply sources. As discussed in **Section 3.3** and **3.10**, there is available capacity in the water supply system and ongoing projected water supply reliability through the year 2060. Implementation of the project alternatives would therefore have no cumulatively considerable adverse effect on the water supply.

Wastewater Service

The increase in demand generated by the project alternatives would be proportional to 0.1 percent of the existing capacity and 0.7 percent of the remaining capacity of the City system. Additionally, the City anticipates expanding its wastewater treatment capacity. Although there is currently sufficient capacity, the City has opted to expand capacity now due to the availability of federal funding and design requirements from the Oklahoma Department of Environmental Quality, such as implementing water re-use infrastructure (City of Bartlesville, 2024i).

Existing capacity is more than sufficient to serve the project alternatives, and future demands associated with cumulative development would be met by existing capacity and anticipated future capacity. Therefore, project alternatives would not have a cumulatively considerable adverse effect on wastewater service.

Solid Waste Service

Section 3.10.3 determined that Alternative A would result in a negligible increase in solid waste production. Alternative B would result in much less. Although there are no major, large-scale developments in the region in the foreseeable future, the local landfills and solid waste service could see an increase in additional services if commercial developments are constructed around the Project Site. However, it is not anticipated that capacity at the landfills and solid waste providers would be exceeded. Additionally, once in trust, the Project Site would be within the Cherokee Nation Solid Waste Program and would comply with the Cherokee Nation Solid Waste Code. No cumulatively considerable adverse effect to solid waste service would occur.

Electricity and Natural Gas

The project alternatives would not utilize natural gas and therefore would not exceed natural gas service provider capacity. Oklahoma Natural Gas is the provider of natural gas to the Project Site area. The Nation would sign up for electricity service to the Project Site and would pay the appropriate billing fees. Additionally, at this time, the project alternatives would rely on electricity and propane rather than natural gas. Similarly, other development projects would be responsible for paying fees to receive utility services. Implementation of the project alternatives would not result in cumulatively considerable effects to energy and natural gas providers.

Schools

Implementation of the project alternatives would not increase enrollment or otherwise adversely affect public or private schools. Therefore, the project alternatives would not contribute to cumulatively considerable adverse effects on schools.

Recreation

Development of Alternative A would not induce population growth or tourism to the region beyond existing levels. Therefore, the project alternatives would not result in increased usage of existing recreational facilities or demands for new recreational facilities. No cumulatively considerable adverse effect would occur.

Law Enforcement

Law enforcement services to the Project Site would be provided by the Nation. The Cherokee Nation Marshal Service is a certified law enforcement agency with jurisdiction throughout the Cherokee Nation Reservation. The Marshal Service is cross-deputized with 50 municipal, county, state, and federal agencies. No cumulative impacts to municipal law enforcement would occur.

Fire Protection and Emergency Medical Services

The Nation's cross-deputization agreement includes the state Fire Marshal and Washington County Fire Department, which would provide fire protection services to the Project Site once in trust. Once taken into trust, the Cherokee Nation Wildfire Prevention Program would apply to the Project Site. Additionally, project alternatives would be constructed in compliance with the Cherokee Nation Tribal Code and would be generally consistent with the IBC. An indoor fire suppression system would be installed, water supply to meet fire demands would be supplemented through an on-site water tank and fire pump, and BMPs listed in **Table 2.1-2** would be implemented to ensure that project alternatives would not create substantial fire hazards.

Because emergency medical services would be provided by Bartlesville Ambulance, calls for fire protection services are not expected to significantly increase with implementation of the project alternatives. No cumulative impacts to municipal fire protection and emergency medical services would occur.

3.14.11 Noise

Cumulative projects in the vicinity of the Project Site have the potential to increase noise and vibration levels in a way that could result in significant impacts when considered in combination with the project alternatives. Noise associated with the project alternatives would largely be attributable to construction. There are no known projects in the immediate vicinity of the Project Site that would result in a cumulative increase in noise during construction of the project alternatives. BMPs are included in **Table 2.1-2** and mitigation is included in **Section 4** to reduce potential impacts associated with noise and vibrations. Other development projects would be required to implement similar measures. Significant cumulative noise impacts would not occur.

3.14.12 Hazards and Hazardous Materials

There is the potential for impacts related to hazardous materials during construction of the project alternatives in combination with other projects. The project alternatives and other planned developments identified above that disturb one acre or more must comply with the requirements of the NPDES CGP. Adherence to the permit requirements and development of a site-specific SWPPP with BMPs would reduce the potential for hazardous materials releases into off-site waterways.

The project alternatives would implement BMPs in **Table 2.1-2** to reduce potential hazardous material risks during construction. Hazardous materials used during construction and operation would be used, stored, and handled according to federal regulations and manufacturer guidelines. Cumulatively considered developments do not include major hazardous materials users or generators and would similarly be required to adhere to appropriate and applicable regulations regarding the delivery, handling, and storage of hazardous materials, thereby reducing the risk to the public's health and welfare due to accidental exposure. Therefore, the project alternatives would not contribute to significant cumulative impacts associated with hazards and hazardous materials.

3.14.13 Visual Resources

Potential future development, including those projects identified in **Table 3.14-1** and growth and development envisioned in local planning documents, have the potential to change the visual landscape within the viewshed of the Project Site from the conversion of open land to urban uses, and the introduction of additional sources of light and glare. There are no scenic resources within or near the Project Site. Therefore, the project alternatives would not result in impacts to scenic resources. There are no known projects close enough to the Project Site to alter the scenic vista surrounding the Project Site in addition to the project alternatives. Therefore, significant cumulative impacts to visual resources would not occur.

3.15 INDIRECT AND GROWTH-INDUCING EFFECTS

Under NEPA, indirect and growth-inducing effects of a proposed project must be analyzed (40 CFR §1508.1(i)(2)). CEQ Regulations define indirect effects as effects that are caused by an action and are later in time or further removed in distance but are still reasonably foreseeable. Growth-inducing effects are defined as effects that foster economic or population growth, either directly or indirectly.

3.15.1 Indirect Effects

Implementation of Alternative A or B consist of the following components and would result in the same indirect impacts:

Access improvements: Access to the Project Site would be provided by three proposed driveways off US-75 (Southeast Washington Blvd). The proposed driveways would require work within the right-of-way of US-75/Southeast Washington Blvd. The access driveways are shown in **Figure 2.1-1.**

Water utility improvements: Municipal water connections are already available adjacent to the Project Site along Southeast Washington Blvd. Improvements needed to provide a municipal connection would require work within the right-of-way of Southeast Washington Blvd immediately adjacent to the Project Site. This would result in a short, linear area of ground disturbance between the existing water line adjacent to the Project Site and the boundary of the Project Site.

Wastewater utility improvements: Municipal wastewater pipes are not present immediately adjacent to the Project Site. The nearest pipe is along Southeast Washington Blvd and terminates approximately 250 feet north of the Project Site. Therefore, wastewater utility improvements would require approximately 250 linear feet of work within the right-of-way of Southeast Washington Blvd.

Electrical utility improvements: Electrical infrastructure is available overhead and alongside Southeast Washington Blvd. If electrical infrastructure improvements are needed, this would be limited to overhead work along Southeast Washington Blvd.

Traffic mitigation: In addition to access improvements identified above, traffic improvements identified as Transportation and Circulation Mitigation in **Section 4** include possible signalization of the Rice Creek Road and W 2200 Road/US-75 intersection and possible addition of turn lanes and approaches at the intersection of Price Road and US-75.

Land Resources

Off-site infrastructure improvements would require minimal ground disturbance that would not result in changes to topography or loss of soils. These actions do not occur in areas of seismic hazards, landslides, or other geological risks. Therefore, adverse impacts to land resources would not occur.

Water Resources

Off-site infrastructure improvements would not require the use of water, nor would these actions impact surface water resources. As discussed below under Hazards and Hazardous Materials, the use of chemicals during construction has the potential for accidental release and impairment of runoff. Therefore, BMPs related to the proper handling of chemicals during construction would apply to the off-site infrastructure improvements.

With proper handling of small quantities of hazardous materials, potential risks to the environment are minimal and no significant impact to water resources would occur.

Air Quality

As discussed above, access improvements would be completed concurrently with construction on the Project Site and would not induce additional vehicle trips beyond what was identified in **Section 3.8**. As the off-site access improvement areas are small and already graded, equipment time spent on the off-site portion of the access improvements would be temporary and negligible. Similarly, extensions of utilities are anticipated to be completed by the utility providers within a single month of work or less and would not require an appreciable amount of vehicle trips or equipment hours such that air quality would be significantly impacted. This would be a less-than-significant impact.

Biological Resources

Off-site infrastructure improvements would occur in areas that are already developed or ruderal. These areas have previously been converted from their natural state and do not contain sensitive habitats or habitats of value to plants or wildlife species. Therefore, off-site infrastructure improvements would not result in adverse effects to biological resources.

Cultural Resources

Areas that would be impacted by off-site infrastructure improvements are within previously developed/disturbed areas where the potential for encountering cultural resources is low. As with construction of the project alternatives, there is always the possibility, even if low, of encountering previously unknown resources.

Therefore, the mitigation in **Section 4** related to cultural resources would apply to off-site infrastructure improvements resulting in ground disturbance. With consideration of mitigation, impacts would be less than significant.

Socioeconomic Conditions

Utility and roadway improvements would not have the potential to result in impacts to socioeconomic conditions. Improvements would be sized to serve just the project alternatives. Construction of utility and roadway improvements would be transient and would not alter the local economy, population, or generate disproportionate impacts to environmental justice communities. There would be no impact.

Transportation and Circulation

Construction of the off-site infrastructure improvements would not generate significant traffic as these actions would require minimal personnel and would be temporary in nature. Ongoing use of the access driveways and any necessary utility improvements would not generate increased traffic. This would be a less-than-significant impact.

Land Use

Off-site infrastructure improvements would be limited to utility and traffic improvements within roadways and associated rights-of-way. These actions are consistent with land uses associated with public rights-of-way and would not result in land use conflicts.

Public Services and Utilities

Construction of the access improvements would not require the use of, expansion of, or displacement of public services or utilities. Similarly, the extension of additional utilities to the Project Site would not require support from public services and would not impact public services or utility providers. This is less than significant.

Noise

Construction activities related to off-site infrastructure improvements would result in temporary production of noise in an area subject to high levels of traffic noise and noise from nearby commercial development. The access drive improvements would occur concurrently with construction on the Project Site and therefore would not increase ambient noise levels beyond what was evaluated in **Section 3.11**. Extension of additional utilities is a common activity undertaken by utility providers and would take a limited amount of time and be completed during daytime hours along a major roadway. The routine, temporary nature of extending utilities to the Project Site and consideration of the existing ambient noise producers would not result in the exposure of sensitive receptors to unacceptable noise levels. This would constitute a less than significant effect.

Hazards and Hazardous Materials

Off-site infrastructure improvements would involve similar construction methods as construction of the project alternatives, but on a smaller scale.

Handling of common construction chemicals such as fuels may be necessary and would pose a limited risk to the environment, similar to the risks outlined in **Section 3.12**. Therefore, BMPs outlined in **Table 2.1-2** regarding proper handling of chemicals would extend to off-site infrastructure improvements. With proper handling of chemicals, risks to the environment are minimal, and significant adverse effects would not occur.

Visual Resources

Off-site infrastructure improvements would take place within developed/ruderal roads and road shoulders that do not have scenic views and are not within scenic byways. Work would include undergrounding of utilities or extension of existing overhead powerlines. These actions would not alter the visual character of the area and would not occur in areas of visual resources.

There would be no effect to visual resources.

3.15.2 Growth-Inducing Effects

As discussed in **Section 3.7**, neither project alternative would result in significant inducement of growth. Similarly, both project alternatives would build out infrastructure specifically for the alternative and would not increase roadway capacity, utility infrastructure, or other development barriers beyond what is necessary for the alternative. As the project alternatives would not induce growth and would not remove barriers to growth, no significant adverse growth-inducing effects would occur.

Section 4 | Mitigation Measures

Mitigation consists of the following (40 CFR § 1508.1(y)):

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing or providing substitute resources or environments.

Mitigation measures to be implemented during construction and operation of the alternatives are summarized in **Table 4.1-1** below. Mitigation is enforceable because it is (1) inherent to the project design; and/or (2) or required by federal or tribal regulations.

Table 4.1-1: Mitigation Measures

Resource Area	Proposed Mitigation	Alternative
Land and Water Resources	**Grading and Drainage Plan** A licensed engineer shall prepare a Grading and Drainage Plan for the development and shall include, at a minimum, the following: ▪ Fill within the 100-year and 500-year floodplain shall be avoided to the extent feasible. ▪ A topographic survey shall be completed to confirm drainage calculations for the sizing of outfall pipes and stormwater detention pond(s). ▪ If grading occurs within the 100-year or 500-year floodplain, the area within the floodplain shall either be: 1) Balanced to avoid off-site flooding impacts, or 2) Designed to route stormwater to on-site detention/retention areas sized to handle flood events.	A, B
Air Quality	**Site Plan Setback** ▪ The site plan for Alternative A shall be reconfigured to increase the distance between the fuel pumps and underground storage tanks and the nearest off-site residential receptors (existing residences). ▪ The minimum separation between the fueling areas and existing residences shall be 300 feet.	A
Biological Resources	**Tricolored Bat** ▪ Timing of tree removal shall occur outside the active season (April 1 through October 31) of roosting bats as possible. **OR** ▪ Should tree removal occur during the active season (April 1 through October 31), emergence surveys shall be conducted by a qualified biologist consistent with Appendix E: Phase 4 Emergence Surveys of the USFWS Range-Wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines (USFWS, 2023).	A, B

Resource Area	Proposed Mitigation	Alternative
	▪ As tricolored bat can be difficult to detect in emergence surveys, USFWS shall be consulted prior to emergence surveys to approve the surveying biologist as well as the survey methodology and timing. ▪ If no bats are observed, data sheets shall be submitted to USFWS and no further action is necessary. ▪ If one or more bats are observed, it shall be assumed that the bat is a listed bat. In this case, an avoidance plan shall be developed with USFWS that identifies avoidance methods such as timing of disturbance with periods of bat activity in order to confirm bats are absent from trees prior to impacts, or implementation of a multi-day tree removal process in order to ensure trees are removed slowly enough to prevent injury or mortality to roosting bats. **Nesting Migratory Birds/Raptors** ▪ If construction activities (either site preparation or barn conversion) commence during the general nesting season (February 15 to September 1), a preconstruction nest survey shall be conducted by a qualified biologist on and within 100 feet of proposed construction within 7 days of initiating ground disturbance. If active nests are identified, the qualified biologist shall determine a suitable avoidance buffer based on the needs of the species observed. ▪ Avoidance measures include establishment of a buffer zone using construction fencing or similar, or the postponement of construction until after the nesting season, or until after a qualified biologist has determined the nest is no longer active. Avoidance buffers may vary in size depending on habitat characteristics, project-related activities, and disturbance levels. ▪ Should work activity cease for 14 days or more during the nesting season, surveys shall be repeated to ensure birds and have not established nests during inactivity.	
Cultural Resources	**Inadvertent Discoveries of Cultural Resources** ▪ In the event that cultural resources are inadvertently discovered during project-related ground disturbance, ground disturbance shall be halted within 50 feet of the find and the BIA and Cherokee Nation Tribal Historic Preservation Officer (THPO) and/or a qualified archaeologist (i.e., an archaeologist that meets the qualifications at 36 CFR Part 61) shall be retained to assess its potential significance. ▪ Construction activities may continue in other areas but may not resume in the area of the find until the significance of the find is assessed and it is appropriately treated. ▪ If the find is determined by the BIA/THPO/qualified archaeologist to not be significant, no additional cultural resources investigations are necessary and work may resume in the area of the find. ▪ If the find is determined significant, additional cultural resources investigations such as data recovery excavation may be warranted and would be determined in consultation with the BIA and THPO/qualified archaeologist, as well as potentially affiliated Tribal organizations and any other relevant regulatory agencies or interested parties, as appropriate. **Inadvertent Discoveries of Human Remains** ▪ Consistent with the Native American Graves Protection and Repatriation Act (NAGPRA) requirements, if human remains or objects of cultural patrimony are discovered during project-related ground-disturbing activities, ground disturbance in the vicinity of the find shall be halted and the location shall be secured (43 CFR § 10.4(c)). ▪ The BIA and Cherokee Nation THPO shall be immediately notified of the discovery and the Washington County Sheriff/Coroner shall be immediately informed of the find in accordance with the Oklahoma Statues (Title 21, Sec.21-1168.4) and (43 CFR § 10.5(a) (1)). ▪ If the remains are determined to be Native American in origin, the BIA shall consult with the THPO and/or appropriate Tribe to discuss the recovery and treatment of the remains (43 CFR § 10.5).	A, B

Resource Area	Proposed Mitigation	Alternative
	▪ A written plan of action shall be prepared that addresses the custody of the remains and the planned disposition (43 CFR § 10.5(b)). ▪ The disposition of the human remains, funerary objects, sacred objects, or objects of cultural patrimony shall be carried out in accordance with procedures set forth in 43 CFR § 10.6.	
Transportation and Circulation	**Proposed Driveways 1, 2, and 3** ▪ The westbound approach of proposed Driveways 1, 2, and 3 shall be constructed with separate left and right turn lanes to reduce vehicular delay for right turning vehicles exiting the Project Site. **Main Access Driveway and US-75** ▪ If feasible, the site plan shall be reconfigured in such a way that the main access drive (proposed Driveway 2) shall be located opposite the shared Atwoods Hardware Drive/US-75 intersection (proposed Driveway 3), and a traffic signal shall be installed. ▪ If the site plan cannot be reconfigured to align the main access drive (proposed Driveway 2) with the shared Atwoods Hardware drive/proposed Driveway 3/US-75 intersection, proposed Driveway 2/US-75 intersection as it is currently proposed shall be signalized. ▪ If proposed Driveway 2 is signalized, the intersection of US-75 and the shared Atwoods Hardware drive shall not be signalized due to the close spacing to proposed Driveway 2. **Rice Creek Road/W 2200 Road and US-75** ▪ This intersection would only be expected to qualify for signalization under the 2046 total traffic scenario. It is recommended that the City of Bartlesville and ODOT monitor this intersection in the future as background traffic volumes increase due to continued growth in the area to determine the timing for improvements. ▪ The Nation shall contribute a fair share payment towards the signalization of this intersection at the time that it is planned and installed by the jurisdictional agencies. **Price Road and US-75** ▪ Under future cumulative 2046 conditions, the intersection of Price Road and US-75 intersection would be expected to operate at unacceptable LOS. The unacceptable operating conditions would not be expected to occur for decades and would be as a result of background traffic growth and not wholly attributable to the proposed development. It is recommended that the City of Bartlesville and ODOT monitor this intersection in the future as background traffic volumes increase due to continued growth in the area to determine the timing for improvements. ▪ To achieve acceptable LOS at this intersection under 2046 conditions, it is recommended that a second left-turn lane be installed on three approaches (eastbound, westbound, and northbound). ▪ It is recommended the northbound and southbound approaches be widened to include a third through lane in each direction with a shared right-turn lane and removal of the dedicated right turn lanes. ▪ The Nation shall contribute a fair share payment towards these improvements at the time that they are planned and constructed by the jurisdictional agencies.	A, B
Noise	**Disturbance Coordinator** ▪ The Nation shall monitor construction noise and vibration and will designate a disturbance coordinator (such as an employee of the general contractor or the project manager for the Nation), post the coordinator's contact telephone number conspicuously around the Project Site, and provide the number to nearby sensitive receptors.	A, B

Resource Area	Proposed Mitigation	Alternative
	▪ The disturbance coordinator shall receive public complaints, be responsible for determining the cause of the complaints, and implement any feasible measures to alleviate the problem. **Equipment Location** ▪ Loud stationary construction equipment shall be located as far away from residential receptor areas as feasible. ▪ To the extent feasible, existing barrier features (structures) shall be used to block sound transmission between noise sources and noise sensitive land uses.	

Section 5 | Consultation and Coordination

This section lists agencies and organizations consulted during preparation of this EA as shown in the table below. Additional sources consulted are listed in **Section 6**.

Agencies, Organizations, and Individuals Consulted	Summary of Consultation and Coordination
Federal	
Federal Aviation Administration (FAA)	The Notice Criteria Tool was utilized to determine whether building heights of development would exceed notice criteria (**Section 3.9**). The FAA Notice Criteria Tool determined that the project alternatives would not exceed formal noticing criteria heights (FAA, 2024; **Appendix I**).
U.S. Fish & Wildlife Service (USFWS)	The USFWS was consulted to obtain a list of federally listed special-status species with the potential to occur in the vicinity of the Project Site (**Section 3.5** and Attachment A of **Appendix E**). A Biological Assessment (BA) was prepared based on the results of the USFWS list and is included as **Appendix E**. The BIA may initiate informal consultation with USFWS regarding the potential for the project alternatives to impact federally listed species in accordance with the federal Endangered Species Act (FESA). Additionally, the USFWS National Wetlands Inventory was consulted to identify potential wetlands and waters in the vicinity of the Project Site (Figure 6 of **Appendix E**). The USFWS National Wetlands Inventory did not identify surface waters within the Project Site.
U.S. Environmental Protection Agency (USEPA)	The USEPA watershed mapper was reviewed to determine the watershed applicable to the Project Site (**Section 3.3**). Waterbody assessment reports within the Project Site watershed were reviewed (cited as USEPA, 2022 and 2024 in **Section 3.3**). This data identified the Caney River as an impaired waterbody. The USEPA website was reviewed for information regarding NAAQS attainment status (**Section 3.4**). Additionally, the USEPA's model Motor Vehicle Emission Simulator Version 4 (MOVES4) was used to calculate emissions and is included as **Appendix F**. The USEPA EJScreen tool was used to generate an EJScreen Community Report, which has been included as **Appendix H**. Based on **Appendix H**, no minority population were identified in the vicinity of the Project Site (**Section 3.7**). The USEPA NSR permit criteria was reviewed to determine whether stationary source project-related operational emissions exceeded permit thresholds (**Table 3.4-2**). Based on the Air Quality modeling provided in **Appendix F** and **Section 3.4**, NSR thresholds would not be exceeded.
U.S. Geological Survey (USGS)	The USGS website was reviewed for information concerning hydrological information (**Section 3.3**). Specifically, depth to groundwater of USGS monitoring wells near the Project Site was reviewed (cited as USGS 2004, 2009a, and 2009b in **Section 3.3**). These wells were determined to show groundwater levels ranging from 5 to 30 feet.

	The USGS mappers of mineral resources, seismic activity, and landslide events were also reviewed related to geological hazards and presence of minerals (USGS, 2024a, b, and c cited in **Section 3.2**). These mappers identified no mineral resources, active faults, or known landslide events near the Project Site.
U.S. Census Bureau	The website was reviewed for information concerning demographical data (S**ection 3.7**).
U.S. Department of Health and Human Services	The U.S. Department of Health and Human Services (DOH) website was reviewed for information concerning federal poverty guidelines to determining poverty (**Section 3.7**).
U.S. Department of Agriculture Natural Resources Conservation Service (NRCS)	The NRCS was consulted for data concerning farmland and soil characteristics information (**Section 3.2**, **Section 3.9**). The NRCS Soil Report is cited as NRCS, 2024 and is included as **Appendix D**.
U.S. Bureau of Labor Statistics	The U.S. Bureau of Labor Statistics website was reviewed to obtain labor statistics.
FEMA	Floodplain maps and data to determine whether development would occur within a 100- or 500-year floodplain (See **Figure 3.3-1** in **Section 3.3**).
State	
Oklahoma Department of Transportation (ODOT)	The ODOT website was reviewed for information regarding transportation and circulation (**Section 3.8**; **Appendix G**).
Oklahoma Department of Wildlife Conservation (ODWC)	The ODWC list of state threatened and endangered species was consulted. The Project Site lacks suitable habitat to support these species and is outside the known ranges (ODWC, 2024a, b, c and d; **Appendix E**).
Oklahoma Archaeological Survey (OAS)	To identify cultural resources previously documented within the Project Site along with relevant past studies, a comprehensive records search was conducted through the Oklahoma Archaeological Survey (OAS). The OAS records search (Attachment A of **Appendix C**) revealed that no cultural resources have been recorded within one mile of the Project Site.
Oklahoma Water Resources Board	The OWRB website was reviewed to gather data on hydrologic information of the Project Site and vicinity (**Section 3.3**). Data on OWRB monitoring wells was reviewed (cited as OWRB, 2023). The Oklahoma Comprehensive Water Plan and Middle Arkansas Watershed Planning Report were also reviewed to gather data on surface and groundwater and water reliability projections (cited as OWRB, 2012 and 2023 in **Section 3.3**). Depth to groundwater was determined to be relatively shallow, and water supply concerns were not identified.
Local	
City of Bartlesville	City zoning and land use designations were reviewed to determine land uses of the Project Site and vicinity (**Section 3.9**). It was determined that the County defers to the City for zoning of the Project Site and that the site is zoned by the City of Bartlesville as C-5 (General Commercial)/PUD (Planned Unit Development). Land surrounding the Project Site is zoned by the City of Bartlesville as RS-7 (Single Family Residential), C-3/PUD (Major Shopping), C-5/PUD (General Commercial), and RA (Residential Agriculture). Background research was also completed on the City's website to gather information on utilities and public services providers. This includes information on water and wastewater services, solid waste collectors, and local parks (**Section 3.10**). City planning and development records were also reviewed in order to form the cumulative setting described in **Section 3.14**.

Washington County	The County's tax roles were reviewed to determine County tax revenues (cited as Washington County Treasurer, 2024 and Board of County Commissioners of the County of Washington, 2022 in **Section 3.7**). County zoning and land use designations were reviewed to determine land uses of the Project Site (**Section 3.9**). It was determined that the County defers to the City for zoning of the Project Site and that the site is zoned by the City of Bartlesville as C-5 (General Commercial)/PUD (Planned Unit Development).
Washington County Sherrif	The Washington County Sherrif's website was reviewed for information on law enforcement services within Washington County (**Section 3.10**). Additionally, information on the cross-deputization agreement with the Nation was reviewed (cited as Cherokee Nation, 2021 in **Section 3.10**).
Washington County Fire Department	The Washington County Fire Department's website was reviewed for information on fire protection and emergency medical enforcement services within Washington County (**Section 3.10**). Additionally, information on the cross-deputization agreement with the Nation was reviewed as it relates to the state Fire Marshal (cited as Cherokee Nation, 2021 in **Section 3.10**).
Tribal	
Cherokee Nation	The Nation was consulted for project details and hazardous materials issues (Cherokee Nation, 2024d). The Nation also provided information on the Cherokee Nation Marshal Service and the Cherokee Nation Wildfire Prevention Program (**Section 3.10**). The Nation's THPO, Elizabeth Toombs, was consulted regarding the methodology of the cultural resources survey and the cultural resources report was provided for review. Additionally, consultation with Native American Tribes that may have jurisdiction over potentially occurring cultural resources in the vicinity of the Project Site was conducted by the BIA. A concurrence letter was received dated May 10, 2024 from the Cherokee Nation THPO. The Nation's environmental staff were consulted regarding the methodology of the biological resources survey and the BA was provided for review.
Cherokee Nation Entertainment, LLC	Mark Watowich, Cherokee Nation Entertainment, LLC Vice-President of Facilities and Construction, provided information on existing facilities, project details, employment, and water/wastewater.
Apache Tribe of Oklahoma, Cheyenne and Arapaho Tribes, Delaware Tribe of Indians, Osage Nation, Wichita and Affiliated Tribes (Wichita, Keechi, Waco & Tawakonie) Oklahoma, United Keetoowah Band of Cherokee Indians in Oklahoma	Consultation with Native American Tribes that may have jurisdiction over potentially occurring cultural resources in the vicinity of the Project Site was conducted by the BIA.

Section 6 | References

500 Nations, 2024. New Osage Casino Bartlesville Updates 2024. Available online at: https://www.500nations.com/casinos/ok-osage-casino-bartlesville.asp. Accessed January 2024

AirNav, 2024. Bartlesville Municipal Airport. Map. Available online at: https://vfrmap.com/?type=vfrc&lat=36.763&lon=-96.011&zoom=10&api_key=763xxE1MJHyhr48DlAP2qQ. Accessed January 2024.

American Psychiatric Association, 2024. What is Gambling Disorder. Available online at: https://www.psychiatry.org/patients-families/gambling-disorder/what-is-gambling-disorder. Accessed January 2024.

Anderson, Adrian 1975. The Cooperton Mammoth. An Early Man Bone Quarry. *Great Plains Journal 14*:130-173.

Bartlesville Ambulance, 2024. About Bartlesville Ambulance, 2024. Available online at: https://www.bartlesvilleambulance.com/about-bartlesville-ambulance. Accessed January 2024.

Bartlesville Fire Department, 2024. Fire Department. Available online at: https://www.cityofbartlesville.org/public-safety/fire-department/. Accessed January 2024.

Bartlesville Police Department, 2020. Annual report 2020, Bartlesville Police Department. Available online at: https://www.cityofbartlesville.org/wp-content/uploads/2021/04/2020-Annual-Report-Police-Department.pdf. Accessed January 2024.

Bartlesville Radio, 2022. City Releases Update on Developments in Bartlesville. Available online at: https://m.bartlesvilleradio.com/pages/news/330682022/city-releases-update-on-developments-in-bartlesville. Accessed January 2024.

Board of County Commissioners of the County of Washington, 2022. Washington County 2022-2023 Adopted Budget and Financial Statement of the Fiscal Year 2021-2022. June 30, 2024. Available online at: https://www.sai.ok.gov/Search%20Reports/database/Washington%20County%20FY23.pdf. Accessed January 2024.

California Air Resources Board (CARB), 2005. Air Quality and Land Use Handbook: A Community Health Perspective. Available online at: https://www.aqmd.gov/docs/default-source/ceqa/handbook/california-air-resources-board-air-quality-and-land-use-handbook-a-community-health-perspective.pdf. Accessed February 2024.

Cherokee Nation, 2021. Deputation Agreement County Addendum - Addition of County to Deputation Agreement for Law Enforcement between the Cherokee Nation and Washington County. Filed by Oklahoma Secretary of State on April 1, 2021.

Cherokee Nation, 2024a. Marshal Service. Available online at: www.cherokee.org/all-services/marshal-service/okee Nation Website. Accessed January 2024.

Cherokee Nation, 2024b. Wildfire Prevention Program. Available online at: https://www.wcema-ok.gov/wcfd. Accessed February 2024.

Cherokee Nation, 2024c. Secretary of Natural Resources Office - Clean Water Program. Available online at: https://www.cherokee.org/our-government/secretary-of-natural-resources-office/environmental-programs/clean-water-program/. Accessed March 2024.

Cherokee Nation, 2024d. Phase I Environmental Site Assessment Report. Bartlesville 14.993 Acres 3000 SE Washington Boulevard Bartlesville, OK 74006. Prepared for Cherokee Nation Real Estate Services. Prepared by Cherokee Nation Environmental Programs. February 2, 2024.

Cherokee Nation Entertainment, LLC., 2024. Personal communication with Mark Watowich, Vice-President of Facilities and Construction.

City of Bartlesville, 1999. Comprehensive Land Use Plan for the Bartlesville Metropolitan Area. Available online at: https://www.cityofbartlesville.org/wp-content/uploads/2019/10/Comprehensive-Land-Use-Plan.pdf. Accessed January 2024.

City of Bartlesville, 2003. US Highway 75 Masterplan. Available online at: https://www.cityofbartlesville.org/wp-content/uploads/2015/06/US75-Master-Plan.pdf. Accessed January 2024.

City of Bartlesville, 2015. Zoning Regulations. Available online at: https://www.cityofbartlesville.org/wp-content/uploads/2015/06/Zoning-Regulations-as-Amended-1-5-2015-Final.pdf. Accessed January 2024.

City of Bartlesville, 2021. City Council Receives Wastewater Treatment Plant Report. Available online at: https://www.cityofbartlesville.org/city-council-receives-waste-water-treatment-plant-report/. Accessed January 2024.

City of Bartlesville, 2022a. Capital Improvement Projects 2020 G.O. Bond Election. Available online at: https://www.cityofbartlesville.org/wp-content/uploads/2022/07/2020-GO-BOND_implementation-schedule_4-22-22_FINAL-1.pdf. Accessed January 2024.

City of Bartlesville, 2022b. Capital Improvement Projects 2020 CIP Election. Available online at: https://www.cityofbartlesville.org/wp-content/uploads/2022/07/2020-CIP_implementation-schedule_6-8-21_FINAL_FY-22-23-UPDATE.pdf. Accessed January 2024.

City of Bartlesville, 2022c, Council Approves Contracts for City Projects. Available online at: https://www.cityofbartlesville.org/council-approves-contracts-city-projects/. Accessed January 2024.

City of Bartlesville, 2023a. City Services: Water. Available online at: https://www.cityofbartlesville.org/city-services/water/. Accessed January 2024.

City of Bartlesville, 2023b. Consumer Confidence Report – 2023 Covering Calendar Year 2022. Available online at: https://www.cityofbartlesville.org/wp-content/uploads/2023/08/2022-CCR-Bartlesville_updated.pdf. Accessed January 2024.

City of Bartlesville, 2024a. Utility Services. Available online at: https://www.cityofbartlesville.org/city-services/utilities/ity of Bartlesville. Accessed January 2024.

City of Bartlesville, 2024b. Solid Waste/Sanitation Collection. Available online at: https://www.cityofbartlesville.org/city-services/refuse-recycling/. Accessed January 2024.

City of Bartlesville, 2024c. Geographic Information Systems (GIS) City Maps Website. Available online at: https://www.cityofbartlesville.org/community-development/gis-mapping/. Accessed January 2024.

City of Bartlesville, 2024d. Parks & Recreation. Available online at: https://cityofbartlesville.org/community-development/parks-recreation/. Accessed January 2024.

City of Bartlesville, 2024e. Jo Allyn Lowe Park. Available online at: https://www.cityofbartlesville.org/community-development/parks-recreation/jo-allyn-lowe-park-2/. Accessed January 2024.

City of Bartlesville, 2024f. Water Supply Update. Available online at: https://www.cityofbartlesville.org/important-water-information/. Accessed February 2024.

City of Bartlesville, 2024g. Utilities and Communication. Available online at: https://bdaok.org/communityProfile/utilities-communication. Accessed February 2024.

City of Bartlesville, 2024h. Silver Lake Village Development on tap for Planning Commission. Available online at: https://www.cityofbartlesville.org/silver-lake-village-development-on-tap-for-city-planning-commission/. Accessed January 2024.

City of Bartlesville, 2024i. Wastewater Plant Expansion Moves Forward. Available online at: https://www.cityofbartlesville.org/wastewater-plant-expansion-moves-forward/. Accessed February 2024.

Council on Environmental Quality, 2024. Climate and Economic Justic Screening Tool, Version 1.0, Explore the Map. Available online at: https://screeningtool.geoplatform.gov/en/#11.11/36.6513/-95.9889. Accessed January 2024.

DarkSky International, 2024. Electronic billboards, electronic message centers. Available online at: https://darksky.org/resources/guides-and-how-tos/electronic-billboards/#:~:text=In%20some%20cases%2C%20the%20light,orientation%20behaviors%20in%20nocturnal%20wildlife. Accessed June 2024.

Federal Aviation Administration (FAA), 2024. Notice Criteria Tool. Available online at: https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp. Accessed February 2024.

Federal Emergency Management Agency (FEMA), 2008. FEMA's National Flood Hazard Layer FIRM 40147C0185D Effective 9/26/2008. Available online at: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd&extent=-95.99979102661187,36.73815263355069,-95.95824897338812,36.75534640334136. Accessed January 2024.

Federal Register, 2023. 14 CFR Part 71. Department of Transportation Federal Aviation Administration. Amendment and Revocation of Class E Airspace. Available online at: https://www.govinfo.gov/content/pkg/FR-2022-11-28/pdf/2022-25818.pdf. Accessed February 2024.

Federal Transit Administration (FTA), 2018. Transit Noise and Vibration Impact Assessment Manual. September 2018. Available online at: https://www.transit.dot.gov/research-innovation/transit-noise-and-vibration-impact-assessment-manual-report-0123. Accessed January 2024.

Interagency Working Group on Social Cost of Greenhouse Gases (IWG), United States Government (IWG), 2021. Technical support Document: Social Cost of Carbon, Methane, and Nitrous Oxide, Interim Estimates under Executive Order 13990. February 2021.

Kansas Digital Petroleum Atlas (KDPA), 2001. Cherokee Platform Province. Available online at: https://www.kgs.ku.edu/DPA/NMC/Prov/cherokee.html. Accessed January 2024.

Morris, John W., Charles R. Goins, and Edwin C. McReynolds 1986. *Historical Atlas of Oklahoma*, 3rd edition. University of Oklahoma Press, Norman.

Nation Center for Education Statistics, 2024. Search for Public School Districts. Available online at: https://nces.ed.gov/datatools/. Accessed January 2024.

Natural Resources Conservation Service (NRCS), 2024. Web Soil Survey. Available online at: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed January 2024.

NRCS, 2024b. United States Department of Agriculture. Natural Resources Conservation Service. Soil Data Access (SDA) Prime and other Important Farmlands. Available online at: https://efotg.sc.egov.usda.gov/references/public/LA/Prime_and_other_Important_Farmland.html. Accessed January 2024.

NRCS, 2024c. Farmland Protection Policy Act Manual. Available online at: https://www.nrcs.usda.gov/sites/default/files/2022-08/FPPA_Manual_Final_2013_0.pdf. Accessed February 2024.

Nichols and Tosun, 2017. The impact of legalized casino gambling on crime. Regional Science and Urban Economics, vol. 66. Published September 2017.

Oklahoma Association on Problem Gambling and Gaming, 2024. Oklahoma Gambling Statistics. Available online at: https://www.oapgg.org/gambling/learn-more/oklahoma-gambling-statistics/. Accessed January 2024.

Oklahoma Climatological Survey, No Date. Washington County Climate Summary. Available online at: https://climate.ok.gov/county_climate/Products/County_Climatologies/county_climate_washington.pdf. Accessed January 2024.

Oklahoma Department of Wildlife Conservation (ODWC), 2024a. Threatened and Endangered Species. Available online at: https://www.wildlifedepartment.com/wildlife/threatened-and-endangered?page=0. Access

ODWC, 2024b. Blackside Darter. Available online at: https://www.wildlifedepartment.com/wildlife/field-guide/fish/blackside-darter. Accessed January 2024.

ODWC, 2024c. Longnose Darter. Available online at: https://www.wildlifedepartment.com/wildlife/field-guide/fish/longnose-darter. Accessed January 2024.

ODWC, 2024d. Oklahoma Cave Crayfish. Available online at: https://www.wildlifedepartment.com/wildlife/field-guide/invertebrates/oklahoma-cave-crayfish. Accessed January 2024.

Oklahoma Geological Survey (OGS), 2008. Geologic History of Oklahoma. Available online at: http://www.ogs.ou.edu/pubsscanned/EP9_2-8geol.pdf. Accessed January 2024.

OGS, n.d. Oklahoma Geologic Provinces. Available online at: https://www.ou.edu/ogs/maps. Accessed January 2024.

Oklahoma Historical Society, 2004. Available online at: https://www.okhistory.org/publications/enc/entry?entry=BA026. Accessed Jan. 18, 2024

Oklahoma State University (OSU), 2011. Major Groundwater Basins (Oklahoma). Available online at: https://dc.library.okstate.edu/digital/collection/OKMaps/id/3349/. Accessed January 2024.

Oklahoma Water Resources Board (OWRB), 2012. Middle Arkansas Watershed Planning Report. Available online at: https://oklahoma.gov/content/dam/ok/en/owrb/documents/water-planning/ocwp/middle-arkansas-planning-region-report.pdf. Accessed January 2024.

OWRB, 2023. Depth to Water. Groundwater Station 99288. Available online at: https://data-owrb.aquaticinformatics.net/Data/Map/Parameter/Depth%20to%20Water. Accessed January 2024.

OWRB, 2024. Water Planning Regions. Available online at: https://oklahoma.gov/content/dam/ok/en/owrb/images/water-planning/planning-regions.png. Accessed January 2024.

Park and Stokowski, 2011. Casino Gaming and Crime: Comparisons among Gaming Counties and Other Tourism Places. Journal of Travel Research. Published May 2011.

Public Service Company of Oklahoma, 2022. PSO Facts. December 31, 2022. Available online at: https://www.psoklahoma.com/lib/docs/company/about/PSO_2023_Fact_Sheet.pdf. Accessed January 2024.

Scenic America, 2024. Scenic Byways in Oklahoma. Available online at: https://www.scenic.org/wp-content/uploads/2023/02/OK-Official-One-Pager_2023_2.pdf. Accessed January 2024.

Statistical Atlas, 2024. Occupations in Washington County, Oklahoma. Available online at: https://statisticalatlas.com/county/Oklahoma/Washington-County/Occupations. Accessed January 2024.

Taylor-Montoya, J., and R. Bartlett 2014. Archaeological Investigations at 34WN27: Prehistoric Occupation and Lithic Technology at a Burned Rock Midden Site in Washington County, Oklahoma. Report prepared by the Oklahoma Department of Transportation, Oklahoma City, OK

U.S. Bureau of Labor Statistics, 2023. BLS Data Viewer, Washington County. Available online at: https://beta.bls.gov/dataViewer/view/timeseries/LAUCN401470000000003;jsessionid=593AED5B9F4DDA70B7820C640875F7CE. Accessed January 2024.

U.S. Bureau of Labor Statistics, 2024. n.d. Oklahoma. Available online at: https://www.bls.gov/regions/southwest/oklahoma.htm#eag. Accessed January 2024.

U.S. Census Bureau 2020a. Census Urban Areas Map. Available online at: https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural.html. Accessed February 2024.

U.S. Census Bureau 2020b. Census Urban Areas Fact Sheet. Census List by County. Available online at: https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural.html. Accessed February 2024.

U.S. Census Bureau 2020c. Census Urban Areas Fact Sheet. Census List by State. Available online at: https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural.html. Accessed February 2024.

U.S. Census Bureau, 2023a. Table B25136, Structural Type by Occupancy, 2022 ACS 5-Year Estimate. Available online at: https://data.census.gov/table/ACSDT5Y2022.B25136?q=B25136&g=040XX00US40_050XX00US40147. Accessed January 2024.

U.S. Census Bureau, 2023b. Table S1101, households and Families. Available online at: https://data.census.gov/table/ACSST5Y2022.S1101?q=average%20household%20size&g=040XX00US40_050XX00US40147&tid=ACSST1Y2022.S1101. Accessed January 2024.

U.S. Census Bureau, 2024. n.d. QuickFacts, Bartlesville city, Oklahoma; Washington County, Oklahoma; Oklahoma; United States. Available online at: https://www.census.gov/quickfacts/fact/table/US/POP010210. Accessed January 2024.

U.S. Climate Data, 2024. Climate Bartlesville – Oklahoma. Available online at: https://www.usclimatedata.com/climate/bartlesville/oklahoma/united-states/usok0036. Accessed January 2024.

U.S. Department of Agriculture (USDA), 2017. 2017 Census of Agriculture. Washington County, Oklahoma. Available online at: https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/Oklahoma/cp40147.pdf. Accessed January 2024.

USDA, 2024. United States Department of Agriculture. Web Soil Survey. Available online at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed January 2024.

U.S. Department of Home Security, 2021. March is Problem Gambling Awareness Month. March 4, 2021. Available online at: https://www.dhs.gov/employee-resources/blog/2021/03/04/problem-gambling-awareness. Access January 2021.

U.S. Department of Transportation, 2024. National Transportation Noise Map. Available online at: https://data.bts.gov/stories/s/National-Transportation-Noise-Map/ri89-bhxh/?print=true. Accessed February 2024.

U.S. Environmental Protection Agency (USEPA), 1995. AP-42: Compilation of Air Emissions Factors. Available online at: https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors. Accessed February 2024.

USEPA, 2016. What Climate Change Means for Oklahoma, EPA 430-F-16-038, Available online at: https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-ok.pdf. Accessed January 2024.

USEPA, 2022. Waterbody Report for Caney River Assessment Unit ID OK121400010010_10. Available online at: https://mywaterway.epa.gov/waterbody-report/OKDEQ/OK121400010010_10/2022. Accessed January 2024.

USEPA, 2023. EJ 2020 Glossary. Available online at: https://www.epa.gov/environmentaljustice/ej-2020-glossary. Accessed January 2024.

USEPA, 2024. How's My Waterway? Rich Creek-Caney River. Available online at: https://mywaterway.epa.gov/community/110701060702/overview. Accessed January 2024.

U.S. Fish and Wildlife Service (USFWS), 2023. Range-Wide Indiana Bat & Northern Long-Eared Bat Survey Guidelines. Available online at: https://www.fws.gov/sites/default/files/documents/USFWS_Range-wide_IBat_%26_NLEB_Survey_Guidelines_2023.05.10_0.pdf. Accessed February 2024.

U.S. Geological Survey (USGS), 1983. Unknown Limestone Pit, Deposit ID 10200616. Available online at: https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10200616. Accessed February 2024.

USGS, 2004. Monitoring well OK002 363739095543301 25N-13E-22 CDD 1. Available online at: https://nwis.waterdata.usgs.gov/usa/nwis/gwlevels/?site_no=363739095543301&agency_cd=OK002. Accessed January 2024.

USGS, 2009a. Monitoring well USGS 363819095523901 25N-13E-23 DAA 1. Available online at: https://nwis.waterdata.usgs.gov/usa/nwis/gwlevels/?site_no=363819095523901. Accessed January 2024.

USGS, 2009b. Monitoring well USGS 364919095523101 27N-13E-13 CBB 1. Available online at: https://nwis.waterdata.usgs.gov/usa/nwis/gwlevels/?site_no=364919095523101. Accessed January 2024.

USGS, 2024a. U.S. Quaternary Faults. Available online at: https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf. Accessed January 2024.

USGS, 2024b. U.S. Landslide Inventory. Available online at: https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=ae120962f459434b8c904b456c82669d. Accessed January 2024.

USGS, 2024c. Mineral Resources. Available online at: https://mrdata.usgs.gov/mrds/map-us.html#home. Accessed January 2024.

Vaughan, Sheila 1975. Archaeological Investigations for the Copan Reservoir Northeastern Oklahoma and Southeastern Kansas. *Oklahoma River Basin Survey, Archaeological Site Report No. 29*.

Vehik, Susan C. and Richard A. Pailes 1979. Excavations in the Copan Reservoir of Northeastern Oklahoma and Southeastern Kansas. *Archaeological Research and Management Center, Research Series No. 4*. 65.

Washington County, 2024. County Assessor Public Access. Washington County Land Parcel Information. Interactive Land Parcel Map. Available online at: https://www.mapview-online.com/Washington/ Accessed January 2024.

Washington County Emergency Management, 2024. Washington County Fire Department. Available online at: https://www.wcema-ok.gov/wcfd. Accessed February 2024.

Washington County Treasurer, 2024. Tax Role Inquiry. Available online at: https://oktaxrolls.com/searchTaxRoll/Washington. Accessed February 2024.

Waste Connections, 2024. Osage Landfill Waste Disposal, Diversion and Recycling. Available online at: https://www.wasteconnections.com/osage-landfill/. Accessed January 2024.

Wyckoff, Don G. 1984. The Foragers: Eastern Oklahoma. In *Prehistory of Oklahoma*, edited by Robert E. Bell, pp.119-145. Academic Press, Orlando.

Wyckoff, Don G. 1985. The Packard Complex: Early Archaic, Pre-Dalton Occupations on the Prairie-Woodlands Border. *Southeastern Archeology 4*:1-26.

Wyckoff, Don G. 1989. Accelerator Dates and Chronology at the Packard Site, Oklahoma. *Current Research in the Pleistocene 6*:24-25.

Wyckoff, Don G., James L. Theler and Brian J. Carter (editors) 2003. The Burnham Site in Northwestern Oklahoma: Glimpses Beyond Clovis? Sam Noble Oklahoma Museum of Natural History, Oklahoma Anthropological Society, Memoir 9.

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