



Mr. Mathew Thomas

James R. Childers, Architect, Inc.

Re: Cherokee Nation WW Hastings Replacement Hospital Addendum 1 Narrative

Dear Mr. Thomas,

Following is a list of revisions included in Addendum 1.

- C3-108 LREC relocation revised on the west end to occur within Owner's property.

 Cox fiber pull boxes added and the length of conduits shortened.

 Conduits added for power and data to future monument sign at Downing Street.

 Grass sod limits revised to show sod for detention pond and behind curbs.
- C3-109 LREC relocation revised on the west end to occur within Owner's property.
 Cox fiber pull boxes added and the length of conduits shortened.
 Grass sod limits revised to show sod for detention pond and behind curbs.
 Annotations on light poles corrected.
- C3-110 LREC relocation revised on the west end to occur within Owner's property.
 Cox fiber pull boxes added and the length of conduits shortened.
 Grass sod limits revised to show sod for detention pond and behind curbs.
 Annotations on light poles corrected.
- C3-111 Grass sod limits revised to show sod for detention pond and behind curbs. Annotations on light poles corrected.
- C3-112 Grass sod limits revised to show sod for detention pond and behind curbs. Annotations on light poles corrected.
- C3-109 Conduits added for power and data to future monument sign at Downing Street.
 Grass sod limits revised to show sod for detention pond and behind curbs.
 Annotations on light poles corrected.
- C9-201 Conduits added for power and data to future monument sign at Downing Street.
 Grass sod limits revised to show sod for detention pond and behind curbs.
 Annotations on detail callouts corrected.

Specification 32 9219 Seeding – Paragraph 3.5 Maintenance is revised to address separate requirements for inside and outside the fence.

Specification 32 9223 Sodding– Paragraph 3.5 Maintenance is revised to address separate requirements for inside and outside the fence.

Ву

Sincerely, PARKHILL

Corey Lipps, PE Senior Practice Leader



Date: 08-17-22

Project: WW Hastings replacement hospital. Bid Package 01 Add 01.

Subject: Change Control Narrative Add. 01

	REFERENCE IS MADE TO THE DRAWINGS AS NOTED									
ITEM	SHEET NUMBER	SHEET NAME	ROOM/CAM NUMBER	DESCRIPTION						
1.	TNS1.02	NETWORK SITE PLAN-NORTH PARKING & ACCESS	KEYNOTES	Changed keynote #5 to reflect 2" conduit rather than 1.25".						
2.	TNS1.02	NETWORK SITE PLAN-NORTH PARKING & ACCESS	KEYNOTES	Added Keynote #7 to legend.						
3.	TNS1.02	NETWORK SITE PLAN-NORTH PARKING & ACCESS	Sheet	Added conduit going North to sign on Downing street coming from the last light pole location.						

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AVAILABLE PROJECT INFORMATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: References other information relevant to the construction of this Project that is available project information.
- B. At the request of the Owner, the information identified below represents services that have been provided by others, not as an Architect's Consultant, regarding conditions that affect this Project that are beyond the responsibilities of the Architect and Architect's Consultants. Reference to such information herein is solely for the convenience of the Owner. Architect makes no representation, express or implied, as to the accuracy or validity of the information.
- C. Bidders are expected to examine the site and the information available from the Owner to determine for themselves the conditions to be encountered.
- D. If conditions other than those indicated in the information available from the Owner are encountered before or during construction, notify the Owner before work continues.

1.2 GEOTECHNICAL REPORT

- A. Owner's Geotechnical Consultant has made subsurface borings at the Project site, has performed investigations of the geotechnical conditions, and has prepared reports of the investigation:
 - 1. North Parking Lot: Palmerton & Parrish, Inc., Project Number 281188, dated July 12, 2022.
- B. Information was obtained for use in preparing the foundation design, but is indicative only of the soil conditions where the borings are taken.
- C. Copies follow this Section.

1.3 ENVIRONMENTAL STUDY AND ASSESSMENT REPORT

- A. <u>The Owner's Environmental Consultant has assessed the impact on the surrounding</u> environment, and has prepared a report that contains specific requirements of the Contractor.
- B. Copy of the document included after this Section for the convenience of the Owner.
- C. <u>The Owner retained the following company:</u>

Eagle Environmental Consulting
P. O. Box 335
Vinita, Oklahoma 74301
July 2022

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

Cherokee Nation Tahlequah Hospital Development Tahlequah, Cherokee County, Oklahoma



Prepared for:



Cherokee Nation 206 East Allen Road Tahlequah, OK 74464 CHILDERS ARCHITECT

and

Childers Architect 45 South 4th Street Fort Smith, AR 72901

Prepared by:



P.O. Box 335 Vinita, Oklahoma 74301 918-272-7656 P.O. Box 5446 Fort Smith, Arkansas 72913 918-244-9595

July 2022

Steven R. Votaw President

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1.0 INTRODUCTION

The Cherokee Nation (CN) proposes to construct a new hospital in Tahlequah, Cherokee County, Oklahoma. The proposed project would involve constructing a new 401,000 square foot, seven-story highrise hospital and a two-story 12,800 square foot freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and 0.5 mile of proposed waterline would also be constructed to service the new facility. The proposed action area encompasses approximately 13 acres. The disturbance area associated with the hospital and adjacent parking areas encompasses approximately 1.04 acres. The utility line corridors to be temporarily disturbed would be 1.32 miles within a 25-foot-wide corridor encompassing approximately 4 acres. The utility lines would be offset from the existing infrastructure lines within the previously disturbed corridors. The utility line corridors would transition along existing utility line corridor easements which have also been previously cleared and are maintained on a generally routine basis. Eagle Environmental Consulting, Inc. (EEC) has prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act of 1969 (NEPA) (42 United States Code [USC] §§ 4321-4347) and the President's Council on Environmental Quality (CEQ) NEPA Implementing Regulations (Title 40 of the Code of Federal Regulations [CFR] §§ 1500-1508) Guidance. This EA incorporates the environmental public interest review factors as outlined by NEPA and has been prepared for the CN. Appendix A contains the proposed action maps, exhibits, and graphics for reference. Figure 1 provides graphical depiction of the action area location. Figure 2 presents a Considered Action Alternative (CAA) design exhibit on aerial imagery. Figure 3 provides the Proposed Action Alternative (PAA) design plan exhibit on aerial imagery. Figure 4 contains representation of proposed hospital floorplans. Figure 5 depicts the PAA relative to the 100-year floodplain (maximum flood pool area). Visual reference of action area characteristics is provided through representative photographs also located in *Appendix A*.

1.1 Project Scoping

Project scoping letters requesting comments from the relevant county, state, and federal regulatory/resource agencies as well as Native American tribes having potential interest in the project area, relative to environmental and socioeconomic issues that should be considered as part of this assessment are provided in *Appendix B* along with any and all response letters. Only the Proposed Action and No Action Alternatives are evaluated and discussed herein. One other action alternative was identified by the project proponent which would meet the project purpose and need and is discussed in Section 2.1.1.

1.2 Project Purpose and Need

The project purpose is to improve medical care to tribal citizens by constructing a new, state-of-the-art facility that can accommodate increased numbers of patients and allow for better access to healthcare services. The project need is to construct a new hospital and attendant parking area. The energy plant and utility lines are needed to support the new hospital infrastructure.

2.0 ALTERNATIVES CONSIDERED

2.1 Proposed Action Alternative

The Proposed Action Alternative would involve constructing a new 401,000 square foot, seven-story high-rise hospital with an adjacent parking lot and a two-story 12,800 square foot freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. The hospital and parking area encompasses approximately 13 acres. The disturbance area associated with the hospital and adjacent parking areas encompasses approximately 1.04 acres. The utility line corridors to be temporarily disturbed would be 1.32

miles within a 25-foot-wide corridor encompassing approximately 4 acres. The utility lines would be offset from the existing infrastructure lines within the previously disturbed corridors. No trees are proposed to be removed during construction. All areas of soil disturbance will be restored to original contour, elevation, and grade. No trees are proposed to be removed as part of this project. The hospital and parking area has been previously disturbed. The utility line corridors would transition along existing utility line corridor easements which have also been previously cleared and are maintained on a generally routine basis.

2.1.1 Considered Action Alternative

The CAA was very similar in all design aspects to the PAA except that it included plans for a parking garage. Upon review of the CAA, the Cherokee Nation determined that this portion of the project was "within very close proximity to culturally sensitive resources" and recommended that this location be avoided. Therefore, this action alternative was not considered viable and evaluation thereof will not be carried forward in this EA.

2.2 No-Action Alternative

The National Environmental Policy Act (NEPA) and the (CEQ) provided regulations on the implementation of NEPA and require consideration and analysis of the No Action Alternative. The No-Action alternative would not meet the purpose or need for proposed lease expansion. None of the proposed public use facilities or features would be installed or developed. Although the No-Action would not satisfy the purpose or and need for the proposed action, this alternative is included in the assessment to provide a comparative and reference baseline relative to the potential effects of the proposed action. The No-Action is synonymous with no change to the existing environment.

3.0 AFFECTED ENVIRONMENT and ENVIRONMENTAL CONSEQUENCES

This section presents the general description of the existing conditions and resources within the proposed action area relevant to evaluated public interest review factors. Analysis of the potential environmental consequences under the NAA and PAA are also incorporated for evaluation purposes.

3.1 Existing Environment

Land use refers to the purpose and current usage activity a given parcel provides or supports whether undeveloped, residential, commercial, recreational, industrial, agricultural, or no obvious utilization. The following provides perspective on the natural features associated with the general project area and is used as a comparative basis to describe the current conditions/features of the action area.

Ecoregion

The surveyed area is located in the Ozark Highlands Dissected Springfield Plateau–Elk River Hills ecoregion. The area is comprised of narrow ridgetops and intervening, steep V-shaped valleys. Carbonate rocks, along with associated karst features, are characteristic. Springs abound in valleys and contribute cool water to perennial streams. Cherty limestone of the Mississippian Boone Formation is extensive, but older shales, limestone, and dolomite are also exposed in valley bottoms. The region is considered rugged and wooded and upland natural vegetation is oak–hickory and oak–hickory–pine forests and associated woodlands. Livestock and poultry farming, woodland grazing, logging, recreation, and quarrying are the main land uses.

Physiography

The PAA is located on approximately 13 acres of formerly disturbed/developed areas. Topography of the general area has been graded/modified and consists mainly of minor undulation with infrequently occurring

streams. Utility corridors transition through previously developed and residential areas.

Geology

The PAA is located in Cherokee County, which lies within the Dissected Springfield Plateau—Elk River Hills region of the Ozark Highlands. It is mantled by Quaternary cherty clay solution residuum and underlain by Mississippian-age limestone and interbedded chert. Rock outcrops are common in the region.

Vegetation

The natural vegetation of the region consists mostly of oak-hickory forest and some oak-hickory-pine forest. Mixed deciduous forest containing black oak, white oak, blackjack oak, winged elm, hickories, and mixed deciduous-shortleaf pine forest can be found on uplands. Species native to floodplains and low terraces include willow, maples, hickories, birch, American elm, and sycamore. The dominant vegetation of the PAA consists of Bermuda grass henbit, aster, plantain, and other forbs. The observed trees were scattered in a park like setting and consisted of post oak, black oak, black hickory, American elm, and eastern red cedar. Neither the mid-story or understory vegetation was essentially present. The portions of the assessment area not covered by impervious surfaces and described as a mowed and maintained park-like setting.

Land Cover and Land Use

Land use and land cover in this ecoregion consists mostly of woodland or forest. Primary land uses are livestock and poultry farming, woodland grazing, logging, recreation, and quarrying. Numerous high-quality streams occur. The project area is described a predominantly cleared/modified area associated with previously developed health care campus situated on CN property.

Action Area Land Use and Condition

The action area is situated on CN property adjacent to the W.W. Hastings Hospital and is designated for health care use. The project area is described a predominantly cleared/modified area associated with previously developed health care campus situated on CN property. Visual perspectives of the PAA are provided by photographs located at *Appendix A*.

Environmental Consequences

The PAA would result in minor impacts to the overall action area physiography/landscape resulting from clearing, grubbing and site preparation in advance of proposed hospital and utility line construction. All temporarily disturbed soils will be restored to pre-construction contour to the extent practicable and revegetated using native vegetation. Land use is not anticipated to change. No appreciable tangential impacts to these public interest review factors are anticipated aside from installation/development of the permanent health care facility features. Maintenance, herbicide application, and/or mowing is expected to continue. Since no other development tangential to the PAA are anticipated, no cumulative impact to aquatic resources, terrestrial habitats, topography, physiography, geological features, or soils are anticipated.

The NAA would result in no change in condition or use of CN property. None of the features/development contemplated under PAA would occur. The existing environment or physical features would remain unchanged or continue to develop naturally.

3.2 Social and Economic Conditions

The U.S. Census Bureau Website was used to identify the social and economic characteristics at the county level. *Table 1* summarizes the 2021 census estimates for socioeconomic information for Cherokee County,

Oklahoma.

Table 1. Cherokee County, Oklahoma Demographics	
Population	
Population estimates, July 1, 2021, (V2021)	47,627
Age	
Persons under 5 years, percent	5.6%
Persons under 18 years, percent	21.7%
Persons 65 years and over percent	17.0%
Race and Hispanic Origin	
White alone, percent	51.5%
Black or African American alone, percent	1.4%
American Indian and Alaska Native alone, percent	36.4%
Asian alone, percent	1.0%
Native Hawaiian and Other Pacific Islander alone, percent	0.1%
Two or More Races, percent	9.6%
Hispanic or Latino, percent	7.3%
White alone, not Hispanic or Latino, percent	47.1%
Housing	
Housing units, July 1, 2021, (V2021)	22,245
Owner-occupied housing unit rate, 2016-2020	67.3%
Median value of owner-occupied housing units, 2016-2020	\$126,400
Median gross rent, 2016-2020	\$679
Families & Living Arrangements	
Households, 2016-2020	17,364
Persons per household, 2016-2020	2.71
Education	
High school graduate or higher, percent of persons age 25 years+, 2016-2020	87.5%
Bachelor's degree or higher, percent of persons age 25 years+, 2016-2020	27.5%
Economy	
In civilian labor force, total, percent of population age 16 years+, 2016-2020	55.2%
Total accommodation and food services sales, 2017 (\$1,000)	58,797
Income & Poverty	
Median household income (in 2020 dollars), 2016-2020	\$43,378
Per capita income in past 12 months (in 2020 dollars), 2016-2020	\$22,617
Persons in poverty, percent	19.6%

Environmental Consequences

The PAA is associated with a previously developed health care campus situated on CN property and may have short- and/or long-term impacts on the socioeconomics of the surrounding areas. In the short term, the PAA may provide a temporary benefit to the contractor or contractors selected to construct the proposed hospital and utility line construction. The project proponent would expect to realize increased capacity for patient care. Workforce expansion in the Tahlequah area may also increase slightly associated with the need for additional hospital staff. Local businesses may experience increased sales opportunities tangential to installation, operation, and maintenance of the improved health care facility. Possible adverse impacts may include increased noise from the operation of construction equipment, though this is expected to be

temporary. Lighting installed outside the facility or in parking lot may also contribute to light pollution.

The NAA would result in no change to the current conditions of this review factor. The PAA would not be completed and socio-economic conditions would remain unchanged.

3.3 Environmental Justice

Executive Order (EO) 12898 "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations" (February 11, 1994) states that if possible, no federal actions should place any adverse environmental, economic, social, or health effects on minority or low-income groups. According to the poverty guidelines published by the US Department of Health and Human Services (HHS), the 2019 HHS poverty guidelines for a family of four with an annual household income of \$25,750 is considered to be the poverty level. An annual income of \$12,490 is considered to be the poverty level for an individual. The HHS Poverty Guidelines are published annually and reflect the poverty conditions for the previous year (Federal Register, 2019).

Environmental Consequences

The PAA would be located on previously disturbed CN hospital property and does not have any residential development. The PAA would not directly impact any homes; therefore, no minority group or low-income families would be disproportionately affected.

The NAA would not result in any disproportionate negative impacts on minority or low-income populations.

3.4 Protection of Children

Executive Order 13045 pertains to "Protection of Children for Environmental Health and Safety Risks", April 21, 1997. This mandate requires federal agencies to identify and assess environmental health and safety risks that may affect children. The project is located in a rural area on USACE property no homes present.

Environmental Consequences

The PAA will not affect the safety or health of children and will be in full compliance with Executive Order 13045.

The NAA would not result in changes to the existing conditions.

3.5 Natural Resources

Soils

The Natural Resources Conservation Service (NRCS) Web Soil Survey was used to identify soil units within the study area (NRCS 2021). Multiple soil units are present within the proposed project area including: Captina silt loam, 1 to 3 percent slopes; Clarksville very gravelly silt loam, 1 to 8 percent slopes; Clarksville very gravelly silt loam, 5 to 20 percent slopes, stony; Clarksville very gravelly silt loam, 20 to 50 percent slopes, stony; Tonti gravelly silt loam, 1 to 3 percent slopes; Britwater silt loam, 1 to 3 percent slopes; and Britwater gravelly silt loam, 3 to 8 percent slopes.

Environmental Consequences

The PAA would temporarily disturb approximately 4 acres of soil associated with clearing and grubbing of

vegetation as part of site preparations, site grading, and conversion to impervious surfaces relative to the hospital, parking area, and access roads. The area of temporary disturbance is estimated to be 1 acre associated with staging areas and/or operational area for sanitary and waterline installation. Both corridors will be restored upon project completion with no permanent impacts. All temporarily disturbed soils within the construction corridor will be restored to pre-construction contour to the extent practicable and revegetated using native vegetation. Herbicide application and/or mowing is expected to continue in restored herbaceous areas adjacent to the hospital and parking areas. The utility line corridors will likely not be mowed or maintained on a regular basis upon project completion. No prime farmland or sensitive soils were identified within the PAA.

The NAA would not cause impacts to the existing soils.

Farmland Soils

The Natural Resource (NRCS) administers the Farmland Protection Policy Act (FPPA 1981) to ensure that federal programs minimize unnecessary and irreversible conversion of farmland soils to nonagricultural uses. The response from the NCRS is provided in *Appendix B*.

Environmental Consequences

NRCS reviewed the subject project information and determined that the proposed project will not impact any easements, watersheds, or prime farmland soils as defined by the Farmland Protection Policy Act. Prime farmland is not present and no other easements relative to the Farm Protection Policy Act have been identified. Therefore, the FPPA does not apply.

The NAA would not impact any soils protected under the FPPA.

Wild and Scenic Rivers

The National Park Service Website was used to identify any wild and scenic rivers within or near the proposed action (National Park Service, 2012).

Environmental Consequences

No waterways classified as wild and scenic pursuant to the Federal Wild and Scenic Rivers Act Public Law 90-542 are located within the proposed action.

The NAA would not affect any wild or scenic rivers.

Vegetation

Executive Order 13112, signed by President Clinton on February 3, 1999, requires that a Council of Departments dealing with invasive species be created to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive could potentially cause or create. Invasive species are plants that grow and have a relatively higher probability of growing in areas of soil disturbance. The aggressive spread of these species can interfere with growth of native species. The PAA proposes development activities on the existing health care campus area. The overall acreage of the PAA would be approximately 13 acres.

Environmental Consequences

No invasive species were identified within the PAA during onsite field surveys. Removal of woody and herbaceous vegetation would result from the construction of the PAA; however, all temporarily disturbed vegetation within the utility line construction corridors will be restored to pre-construction contour to the

extent practicable and revegetated using native herbaceous vegetation. Corridor mowing or herbicide application may occur on an infrequent basis after project completion.

The NAA would allow vegetative species to persist in or flourish from their current to climax state. Therefore, no negative impacts are expected.

3.6 Water Resources

Surface Water

The Tahlequah USGS 7.5-minute topographic map indicated one ephemeral waterway was present within the PAA. This aquatic resource was confirmed during onsite surveys. One additional waterway and one detention pond were also identified within the PAA. The Waters of the United States (WOUS) delineation reports of survey provides the descriptions, characteristics, and photographs of the identified aquatic resources observed within the PAA and is provided at *Appendix C*.

Environmental Consequences

EEC conducted a Waters of the United States and wetland delineation survey associated with the proposed development project to identify and demarcate potentially jurisdictional waterways and/or wetlands within the project area. Two waterways and one detention pond were identified during the field survey. *Table 2* provides a summary of the feature type, linear footage, acreage, centroid location coordinates, and USACE jurisdictional status of identified sites.

Table 2. Identified Aquatic Resources						
Site Number	Feature Type	Feet	Acres	Latitude	Longitude	Jurisdictional?
FS-1	Detention Pond		0.43	35.9105	-94.9448	No
FS-2	Waterway	205		35.9108	-94.9531	Likely Yes
FS-3	Waterway	50		35.9132	-94.9569	Yes
Total		255	0.43			

No impacts are anticipated to surface water resources. The proposed project design plan was situated within the project area to avoid impacts to waters of the US. Due to the expected minor impact to potential sanitary line crossing of the two identified waterways (less than 1/10 acre each), compensatory mitigation would not be required as part of the received Nationwide Permit for Utility Lines (NWP 12, Appendix B).

The NAA would not affect any surface water resources.

Groundwater

The Oklahoma Water Resources Board website was used to broadly assess groundwater resources beneath the land within the PAA. The action area is underlain by the Roubidoux major aquifer and the Boone minor aquifer (USGS). The Boone and Roubidoux aquifers are located in northeastern Oklahoma and underlie about 3,100 square miles and 4,600 square miles, respectively, in Adair, Cherokee, Craig, Delaware, Le Flore, Mayes, McIntosh, Muskogee, Nowata, Ottawa, Rogers, Sequoyah, and Wagoner counties. The Roubidoux aquifer is considered a major aquifer by the Oklahoma Water Resources Board (having an average well yield of at least 50 gallons per minute) and supplies groundwater for public water uses, commerce, industry, and rural water districts. The Boone aquifer is considered a minor aquifer by the Oklahoma Water Resources Board (having an average well yield of less than 50 gallons per minute) and supplies groundwater for domestic purposes, with some agricultural, commercial, and public water uses.

Environmental Consequences

Based on the proposed construction, evaluation of groundwater resources, aquifer locations, and characteristics, the PAA would not affect groundwater resources.

No subsurface water resources would be affected resultant from the NAA.

Public Water Supplies

The Oklahoma Department of Environmental Quality's Data Viewer was used to broadly assess the presence of public water supplies wells, public water supply intakes, and wellhead protection areas that may be affected by the proposed action. No public water supplies within or near the action area were identified.

Environmental Consequences

No public water supply systems would be affected by the PAA.

The NAA would not affect public water supply systems. Therefore, there would be no negative impacts relative to this public interest review factor.

Sole Source Aquifers

The United States Environmental Protection Agency's website was used to identify the location of any sole source aquifers. No sole source aquifers are located within or near the PAA.

Environmental Consequences

No impacts to sole source aquifers would occur as a result of the PAA. The NAA would not affect this resource.

3.7 Floodplains

The protection of floodplains and floodways is required by Executive Order 11988 to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains to avoid direct or indirect support of floodplain development. Coordination with the Oklahoma Water Resources Board determined that Cherokee County participates in the National Flood Insurance Program (NFIP). The Federal Emergency Management Agency's (FEMA) website was used to determine whether any floodplains were located within the PAA.

Environmental Consequences

The PAA will not disturb or be situated in any portion of a mapped 100-year floodplain. All work associated with the PAA would conform to USACE and applicable federal, state, or local floodplain protection regulations as required. The PAA would not result in the displacement of flood water storage.

The NAA would not impact any mapped floodplain areas.

3.8 Wetlands

The United States Army Corps of Engineers (USACE) Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (USACE 2010) were referenced in concert to identify wetlands. The Waters of the US Delineation was performed within the action area. The report of survey detailing the onsite evaluation is provided in *Appendix C*.

Environmental Consequences

No wetland areas were identified during the field survey. The PAA will not impact any wetland areas.

There would be no impacts to wetlands under the NAA.

3.9 Fish and Wildlife

The action area includes both mature and sub-mature upland forested areas associated with ridges and hillsides. A biological assessment (BA) was prepared to identify and address the potential impacts to fish and wildlife as well as threatened and endangered species and is located at *Appendix D*.

Environmental Consequences

Direct effects within the action area would consist of temporary impacts associated with utility line installation associated with soil disturbance during trench excavation. Temporary impacts are anticipated adjacent to the trench corridor where excavated soils would be side-cast. Utility lines would be installed within the open trench and then backfilled. The disturbed corridor would be restored to pre-disturbance elevation, grade, and contour to the extent practical. The area of temporary disturbance would be 4 acres. The hospital and parking areas were previously disturbed and covered with impervious surfaces. No trees would be removed. Herbaceous vegetation would be re-established on disturbed soils upon project completion. Corridor mowing or herbicide application may occur on an infrequent basis after project completion. Water quality impacts will be avoided to the extent possible and terrestrial erosion/sedimentation control measures will be employed as required. Specific surveys for the federally listed T&E species were not conducted as part of this assessment. Private and governmental property or right of way maintenance, herbicide application, and/or mowing is expected to continue in restored herbaceous areas as well as along the completed trackage areas. Potential suitable habitat for the ABB was identified beyond the disturbance zones of the proposed action. The action area has been previously disturbed, potentially suitable habitat was not present, and the project area is wholly located outside the established designated ABB location lands; therefore, based on the location outside a conservation area and applicability of the 4(d) Rule determination key, no ABB surveys appear required. No suitable habitats for the remaining federally-listed species was identified within or adjacent to the assessment area. No speciesspecific presence/absence surveys have been performed relative to the project. Animal species and their respective uses are expected to be varied, opportunistic, and relative to the preferred or utilized habitats for each. Based on the observed habitat characteristics, the most predominant species expected to be present or utilize the proposed action would consist of small mammals and birds. The diversity of bird species varies between summer and winter migrants; however, no nests were observed. Predatory or omnivorous animals such as coyote, skunk, raccoon, and snakes are expected to utilize both terrestrial and aquatic areas primarily during foraging. The habitat quality relative to the action area is described as good to excellent. Permanent displacement and temporary disturbances to exhibiting habitats result from the PAA. Temporary impacts would be associated with infrastructure installation after which the disturbed areas would be restored. Mammalian, amphibian, reptilian, and avian use of the specific construction areas would be required to vacate said areas. Wildlife species would no longer be able to use permanently converted habitat areas but should be able to utilize the temporarily affected habitats upon site or corridor restoration. Wildlife use of areas associated with construction of permanent structures will be precluded. Activity within the PAA is expected to increase after completion. Human and vehicle presence may result in short term wildlife presence and/or patterns. The majority of the species traditionally present within the PAA prior to lease expansion are expected to remain adjacent to the proposed development areas. Ground nesting birds were not observed and are not expected in any consistent appreciable extent or numbers based on the vegetation types and habitat structure. Ground-dwelling rodents and their evidence were observed within the action area. Suitable forage and cover for both birds and small mammals are provided by seed producing

herbaceous vegetation. Herpetofauna are expected to continue utilization of the PAA; however, their patterns may be altered to avoid areas of increase human presence. The available habitats for these species would include herbaceous edges areas/borders and deadfall. The area immediately adjacent thereto provides the same habitat structure availability and should provide ample refuge for escaping species. Based on this assessment, the overall impacts to terrestrial species are expected to be minor and relatively short term. The majority of the terrestrial species should be able to flee the proposed work areas during construction. Based on the avoidance and minimization of habitat impacts to be employed as part of the proposed construction plan, limited and minor amounts structural habitats should be removed or displaced. Based on onsite survey observations, more than sufficient suitable and equally preferred habitat is available in very close proximity to the proposed development areas for terrestrial species to utilize for cover, nesting, denning, and/or foraging.

Under the No-Action Alternative, terrestrial and aquatic species would not be affected.

3.10 Threatened and Endangered Species

In accordance with the Endangered Species Act of 1973, Federally-listed threatened and endangered species were identified for the proposed action area. EEC conducted field surveys to evaluate the existing habitats and determine the potential for species presence. The prepared BA identifies the life cycle and habitat requirements for each species, discusses the anticipated impacts, and includes effect determinations (*Appendix D*).

Environmental Consequences

Direct effects within the action area would consist of temporary impacts associated with utility line installation associated with soil disturbance during trench excavation. Temporary impacts are anticipated adjacent to the trench corridor where excavated soils would be side-cast. Utility lines would be installed within the open trench and then backfilled. The disturbed corridors would be restored to pre-disturbance elevation, grade, and contour to the extent practical. The hospital and parking areas were previously disturbed and covered with impervious surfaces. No trees would be removed. Herbaceous vegetation would be re-established on disturbed soils upon project completion. Water quality impacts will be avoided to the extent possible and terrestrial erosion/sedimentation control measures will be employed as required. Specific surveys for the federally listed T&E species were not conducted as part of this assessment. The herbaceous habitats to be affected did not exhibit suitable habitat for any of the listed species. No caves are known to be located within or adjacent to the project area. Potential impacts to the ABB are possible; however, based on the location outside a conservation area and applicability of the 4(d) Rule determination key, no ABB surveys appear required. No suitable habitats for the remaining federally-listed species was identified within or adjacent to the assessment area. No species-specific presence/absence surveys have been performed relative to the project. No other development associated with the proposed project is expected. No uses or projects are anticipated that would be tangential to the proposed project. Provided no additional habitat disturbances are undertaken, the proposed project should have no indirect effects on the listed species other than described.

Northern long-eared bat - No Effect. No suitable roost trees are present within the action area. Limited foraging (forested areas) are present alongside but not within the utility corridors. Further, this species should or will have migrated to winter hibernacula during the fall/winter periods of proposed clearing and grubbing activities.

Gray bat - No Effect. No habitats for this species would be affected, and no known caves are present within action area. The project would also employ the USFWS protective measures and standard best management

practices would be employed during utility line installation near or at aquatic resources. BMP's include minimization of aquatic resource disturbance, avoid or minimize removal of riparian zone vegetation, and deploy erosion/sediment control measures adjacent to aquatic resources to minimize impacts to water quality.

Ozark big-eared bat - No Effect. No known caves harboring this species are present within or near the project area. Suitable foraging habitat for this species is not present.

American Burying Beetle - Potential suitable habitat for the ABB was identified beyond the disturbance zones of the proposed action. The action area has been previously disturbed, potentially suitable habitat was not present, and the project area is wholly located outside the established designated location lands. Therefore, the Section 4(d) rule appears to be applicable. The ABB Section 4(d) Rule determination key is located in Appendix A of the attached Biological Assessment.

Neosho Mucket, Rabbitsfoot Mussel, Piping Plover, Red Knot, and Monarch Butterfly – No Effect. Suitable habitat not present. No individuals observed.

Species occurrence records were requested from the ONHI regarding the federal, state, and/or species of concern within or near the project area. Occurrence records were received for the American Burying Beetle near but not within the action area. Presence of this species is possible. The Species Conclusion Table (*Table 3*) below provides the potential affect determination to each of the federally-listed species:

Table 3 - Species Conclusion Table						
Species	Habitat Evaluation	USFWS	ESA			
		Consultation	Determination			
Northern Long-eared Bat	Roost trees and foraging habitat not present within or adjacent to action area.	Not Required	No Effect			
Gray Bat	No caves present. Potentially suitable foraging habitat not present. Stormwater and water quality measures to minimize impacts will be employed during utility construction.	Not Required	No Effect			
Piping Plover	No suitable habitat observed. No individuals observed.	Not Required	No Effect			
Red Knot	No suitable habitat was observed. No individuals observed.	Not Required	No Effect			
Ozark Big-eared Bat	No suitable habitat present.	Not Required	No Effect			
Neosho Mucket	No suitable habitat. No presence records.	Not Required	No Effect			
Rabbitsfoot Mussel	No suitable habitat. No presence records.	Not Required	No Effect			
American Burying Beetle	Suitable habitat not present in action area. Surveys not required.	Not Required	No Effect			
Monarch Butterfly	Suitable foraging habitat not present. No host plant species observed. No individuals observed.	Not Required	No Effect			

The NAA would not affect any federally-listed threatened or endangered species.

Bald Eagle

Although the Bald Eagle (*Haliaeetus leucocephalus*) has been removed from the threatened and endangered species list, the eagle continues to be protected by the Bald and Golden Eagle Protection Act. Bald eagles are rather large raptorial birds measuring 3 feet in height with a 7-foot wingspan. The bald eagle prefers large trees or high cliffs along large waterways for perching and nesting purposes. Fish is the preferred diet of eagles, but they also eat small mammals, waterfowl, turtles and dead animals. Preferred foraging areas include quiet coastal areas, rivers, or lakeshores with large tall trees.

Environmental Consequences

No potential or suitable habitat was identified within the action area for the bald eagle. No bald eagles or nests were observed during the site visit. This project is not expected to impact the bald eagle.

The NAA would not affect the Bald Eagle.

Migratory Birds

Executive Order 13186 refers to the responsibility of federal agencies to protect migratory birds. Migratory bird species are protected under the Migratory Bird Treaty Act (MBTA) as amended. The MBTA prohibits the take of any migratory bird without authorization for the USFWS.

Environmental Consequences

Suitable nesting habitat is present within and/or adjacent to the utility line corridors. However, no bird nests were observed within the area planned for the proposed action. No active swallow nests were observed within the action area. Construction is encouraged to occur between August 15 and March 31 to avoid the nesting season to avoid potential impact to migratory birds. Suitable habitat for non-migratory ground nesting birds is also present and construction is encouraged to occur during the same time frame. Provided construction can be conducted within the non-nesting season, no adverse effects are anticipated to non-migratory birds.

The NAA would not affect migratory birds.

3.11 Cultural Resources

Section 106 of the National Historic Preservation Act of 1966, as amended, protects those properties that are listed or eligible for listing in the National Register of Historic Places (NRHP). The CN archeologist also reviewed the proposed action areas relative to potential impacts to cultural resources and determined no pre-disturbance cultural resource surveys would be required for the PAA.

Environmental Consequences

No cultural resource surveys were required by the State Archeologist. Known sensitive sites will be avoided. No resource impacts are anticipated. **Section 4.0** provides coordination protocols for inadvertent discoveries of such resources.

The NAA would not impact cultural resources. Natural processes including erosion would continue to affect the general area.

3.12 Tribal Consultation

Under 36CFR Part 800.3, Native American tribes were identified that could have concerns regarding the proposed action. EEC provided notice of the proposed project to Native American tribal nations having potential interest in the PAA. The tribal scoping and response letters are provided in *Appendix B*.

Environmental Consequences

Multiple tribal nations were provided scoping letters requesting their comments or concerns relative to the project area. One response letter was received from the Cherokee Nation whereby they reported that sensitive areas were located in close proximity to the originally proposed project (CAA). The CN modified the originally proposed project design to avoid the known resources. Once the project design was modified to omit the proposed parking garage facet, no resources should be affected by the PAA. Inadvertent discoveries of historically-important tribal resources may occur during construction. If any such resources are encountered during construction, the project proponent will cease construction activities and notify the CN, Oklahoma Archeological Survey, and tribal nations.

The NAA is not expected to result in adverse impacts to tribal resources.

3.13 Air Quality

The Clean Air Act (CAA) requires the USEPA to identify National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. Ambient air quality monitoring stations exist at various locations throughout Oklahoma. The NAAQS were established for ozone (O3), carbon monoxide (CO), nitrogen dioxide (NOx), sulfur dioxide (SOx), and particulate matter (PM10) and (PM 2.5). Areas that meet the national standards for the criteria air pollutants are in attainment. Areas that exceed the national standards are in nonattainment. Under the CAA, the EPA has classified air basins as being in attainment or nonattainment for each of the criteria pollutants and whether or not the standards have been achieved. Air quality in Oklahoma is measured and regulated by the Oklahoma Department of Environmental Quality, Air Quality Division (*Table 4*). Currently, Cherokee County, Oklahoma is in attainment in regard to the NAAQS with respect to the criteria pollutants CO, SO2, O3, NO2.5, PM10, and lead (Pb).

Table 4 - National Ambient Air Quality Standards							
Pollutant		Primary/Secondary	Averaging Time	Level			
Carbon Dio	xide	Primary	8-hour 1-hour	9 ppm 35 ppm			
Lead		Primary and Secondary	Rolling 3- month average	0.15μg/m ^{3 (1)}			
Nitrogen Di	oxide	Primary	1-hour	100 ppb			
		Primary and Secondary	Annual	53 ppb ⁽²⁾			
Ozone		Primary and Secondary	8-hour	0.075 ppm (3)			
Particulate	PM	Primary	Annual	$12 \mu g/m^3$			
Pollution	2.5	Secondary	Annual	$15 \mu g/m^3$			
		Primary and Secondary	24-hour	35 μg/m3			
	PM 10	Primary and Secondary	24-hour	150 μg/m ³			

Table 4 - National Ambient Air Quality Standards							
Pollutant	Pollutant Primary/Secondary		Level				
		Time					
Sulfur Dioxide	Primary	1-hour	0.075 ppb ⁽⁴⁾				
	Secondary	3-hour	0.5 ppm				

Environmental Consequences

The PAA is located in Cherokee County, which is classified as **in attainment** with regard to the NAAQS pollutants. Therefore, the construction of the PPA would have minimal to no effect on air quality.

Construction Related Emissions

The proposed project would generate local temporary short-term direct impacts on air quality during construction. Sources of dust will be generated from vehicular traffic and construction-related equipment (trucks, scrapers, and excavators). The emission levels of the anticipated construction equipment are expected to be minimal based on the relatively few numbers of construction equipment needed to accomplish the construction process. The following are recommendations to implement regarding the construction period of the project:

- Use ultra-low sulfur fuel (< 15 ppm) in all diesel engines.
- Use add-on controls such as catalysts and particulate traps where suitable.
- Minimize engine idling (e.g., 5-10 minutes/hour).
- Use equipment that runs on clean, alternative fuels as much as possible.
- Use updated construction equipment that was either manufactured after 1996 or retrofit to meet the 1996 emissions standards.
- Prohibit engine tampering and require continuing adherence to manufacturers' recommendations.
- Maintain engines in top running condition tuned to manufacturers' specifications.
- Phase project construction to minimize exposed surface areas.
- Reduce speeds to 10 and 15 mph in construction zones.
- Conduct unannounced site inspections to ensure compliance.
- Locate haul truck routes and staging areas away from sensitive population centers.

The project proponent or their selected contractors will implement dust control measures that will effectively eliminate and or minimize dust during construction activities. No long term or adverse impacts are anticipated.

Operational Related Emission

Criteria emission sources during operation of the proposed project will occur. Minor increases may result during times of increased traffic within the PAA; however, these periods are expected to be brief and intermittent enough to allow sufficient time for atmospheric assimilation. No adverse impacts area anticipated as a result of the PAA.

Under the NAA, no earth disturbing activities would occur and no emissions would result which would affect air quality, increase emissions, or climatological patterns.

3.14 Hazardous Materials

EEC performed a Hazardous Materials Assessment (HMA) within the proposed action area for recognized environmental conditions on March 16, 2022. The term recognized environmental conditions means the

presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to any release to the environment under conditions indicative of a release to the environment or under conditions that pose a material threat of a future release to the environment.

Environmental Consequences

No Recognized Environmental Conditions were reported or observed at the target property. The area is described as previously developed and consists of health facility buildings, parking areas, and roads. No issues were identified at the target property in the environmental database records/research that required further investigation. The Phase I Environmental Site Assessment report is provided at *Appendix E*.

The No-Action Alternative would not create or affect hazardous waste or materials.

3.15 Climate Change

Climate change is an important national and global concern. There is general agreement that the earth's climate is currently changing and anthropogenic (human-caused) greenhouse gas (GHG) emissions have been documented as contributing to this change. Carbon dioxide (CO2) makes up the largest anthropogenic component of these GHG emissions. However, there is no scientific methodology for attributing specific climatological changes to a particular project's emissions. The CEQ GHG emissions guidance requires action agencies to consider: (1) The potential effects of a proposed action on climate change as indicated by assessing GHG emissions (e.g., to include, where applicable, carbon sequestration); and (2) The effects of climate change on a proposed action and its environmental impacts.

This guidance recommends agencies quantify a proposed agency action's projected direct and indirect GHG emissions; use projected GHG emissions (to include, where applicable, carbon sequestration implications associated with the proposed agency action) as a proxy for assessing potential climate change effects; recommends agencies include a qualitative analysis and explain the basis for determining that quantification is not reasonably available because tools, methodologies, or data inputs are not reasonably available to support calculations for a quantitative analysis; discusses methods to appropriately analyze reasonably foreseeable direct, indirect, and cumulative GHG emissions and climate effects; considers reasonable alternatives for short- and long-term effects and benefits in the alternatives and mitigation analysis; advises agencies to use available information rather than undertaking new research, and provides examples of existing sources of scientific information; recommends using information developed during the NEPA review to consider alternatives that would make the actions and affected communities more resilient to the effects of a changing climate; outlines special considerations for agencies analyzing biogenic carbon dioxide sources and carbon stocks associated with land and resource management actions under NEPA; and using the agencies expertise and experience to consider an environmental effect and prepare an analysis based on the available information.

Environmental Consequences

Greenhouse gas emissions from construction of the PAA would be minor and similar to other small construction projects. Operation of the proposed PAA facilities are anticipated to result in a net decrease on greenhouse gas emissions, since the new facilities/structures would utilize the most modern, technologically advanced, and efficient systems. Therefore, no emissions significantly contributing to climate change would occur. Ecological changes in Oklahoma due to climate change are predicted to include warming temperatures and increased severity of both floods and drought over the next several decades. These changes are not expected to affect the need for, viability of, or environmental impacts of the PAA.

Under the NAA, no greenhouse gas emissions or impacts to or from climate change would occur.

3.16 Community Services

Community services are identified as providers of fire, police, and medical emergency services having jurisdiction within or surrounding the PAA property. Potential impacts could include disruption of service, site access prevention, and/or creating situations where traditional transportation routes or increased response times could occur – temporary or permanent. Impacts to said services could also result from the PAA by placing a greater burden on service providers directly attributed to response needs for which the providers are not currently staffed at sufficient levels to serve the PAA.

Environmental Consequences

The PAA is situated on previously developed and access-improved areas on CN property. No service disruptions, access restrictions, transportation route modifications to the PAA or surrounding community(ies) or changes which would alter emergency service response times beyond the PAA are expected to occur as a result of the PAA. Increased burden on law enforcement and/or fire services are not anticipated based on their current force sizes relative to the community demands and coverage. No adverse impacts to community services are expected to occur as a result of the PAA.

The NAA would not alter the currently-provided community services.

3.17 Transportation and Parking

The PAA would result in development of a new parking lot adjacent to the new health care facility. Impacts to existing transportation and parking facilities could result from the PAA through increased traffic volumes or service loads on the existing roadways and/or parking areas.

Environmental Consequences

The PAA is situated within an existing health care campus on CN property. Ample parking associated with the PAA has been incorporated into the overall facility design to accommodate expected transportation and parking needs. No public parking areas are located within or near the PAA. Increases in traffic on the local area streets may occur resulting from increased member use of the new facility, however traffic and vehicle noise levels are expected to be very minor and similar to those currently experienced from the larger overall medical campus. No negative impacts relative to these public interest review factors are expected to result from the PAA.

The NAA would not affect current transportation or parking patterns.

3.18 Utilities

Evaluation of this public interest review factor is traditionally associated with determining if any impacts would be expected to existing infrastructure as well as considering the potential impacts of the PAA that could occur as a result of establishing new utility infrastructure. Utilities required to support the PAA would include water, sewer, natural gas, electricity, and/or telecommunications services.

Environmental Consequences

Based on the engineering design, survey information, and adjacent residences/businesses requiring the same utilities, all services are currently available adjacent to the PAA. Connection to said utilities, other than the new sanitary and waterlines, to support the PAA would be available without additional construction activities to bring services to the PAA. Services are located adjacent to the PAA within the existing rights

of way and/or easements along the adjacent arterial streets. No existing system upgrades have been identified as necessary to support the PAA. No adverse impacts are expected to occur relative to this public interest review factor.

The NAA would not cause impacts on existing utility systems.

3.19 Potential for Generating Substantial Controversy

Controversy or opposition to a proposed action can typically include but not necessarily be limited to actions that may have; the potential to disrupt natural scenic vistas, sensitive areas, conflict with established zoning requirements, disturb local communities, result in decreased local business revenues, remove or change, historic public recreation opportunities, situate highway facilities in locations where not previously constructed, and/or result in the eminent domain 'take' of private property. The PAA is associated with a new medical facility to address the needs of the CN and tribal members. The PAA is located on previously developed CN property.

Environmental Consequences

Intermittent, limited, and short-term potential for noise level increases may be possible from facility construction but are not anticipated to result in adverse effects to other adjacent properties within and/or associated with a developed health care campus. The PAA would result in expansion of the existing medical facility on CN property. Private residences are located adjacent to or near the action area No concerns were expressed by the commenting agencies or tribal nations or have been identified by the CN or through preparation of this EA. Based on this rationale, the potential for substantial controversy is not expected.

The NAA would not result in substantial controversy.

3.20 Cumulative Effects

Cumulative impacts are defined as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions (CFR 40 § 1508.7). The cumulative impacts that result from an action may be undetectable but can add to other disturbances and eventually lead to a measurable environmental change. For any given resource, a cumulative impact would only potentially exist if the resource were also directly impacted by the proposed action.

3.21 Impact Summary

Only those resources or public interest review factors which have been identified as having potential adverse impacts and for which mitigation measures will be employed are described below. Public interest review factors evaluated which would not be potentially affected are not discussed. *Table 5* below identifies all public interest review factors considered as well as the anticipated impact relative thereto.

Soils

The PAA would modify the topographic setting of the action area through grading, site preparation, and conversion of existing soils to impervious surfaces. Implementation of the PAA should not result in cumulatively considerable adverse effects to soils. All temporarily disturbed soils will be restored upon completion to restore site coverage to reduce or prevent soil erosion or sedimentation. No adverse impacts were identified by NRCS.

Vegetation

Vegetation, primarily herbaceous, will be affected by the PAA. All disturbed soils will be restored upon site grading or facility completion to restore site coverage to reduce or prevent soil erosion or sedimentation.

Native herbaceous species will be used to revegetate disturbed areas not designated for impervious surfaces.

Biological Resources (Fish and Wildlife Resources and Threatened/Endangered Species)

The project area does not contain any unique or sensitive ecosystems or biological communities. Terrestrial species would be able to move to adjacent areas with unrestricted access. Some terrestrial habitat would be removed but the activities should not result in adverse cumulative effects to any aquatic or terrestrial species. Avoidance and minimization of habitat impacts were implemented during site design and facility orientation also served as mitigation measures. No further mitigation relative to fish and wildlife resources are proposed.

Cumulative Effects

Cumulative impacts are defined as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions (CFR 40 § 1508.7). The cumulative impacts that result from an action may be undetectable but can add to other disturbances and eventually lead to a measurable environmental change. For any given resource, a cumulative impact would only potentially exist if the resource were also directly impacted by the proposed action.

Table 5 – Impact Summary Matrix							
Public Interest Factor	Beneficial Impact	No Impact	Minimal Adverse Impact	Adverse Impact	Significant Adverse Impact	Mitigation/ Avoidance MeasuresProposed	
Land Use	•						
Social Environment	•						
Economic Environment	•						
Aesthetics			•			•	
Environmental Justice		•					
Protection of Children		•					
Soils			•			•	
Farmland		•					
Floodplains		•					
Wetlands		•					
Surface Water (Water Quality)		•					
Groundwater		•					
Vegetation			•			•	
Biological Resources			•			•	
Threatened/ Endangered Spp.		•					
Cultural Resources		•					

Air Quality		•		
Hazardous Material		•		
Geology		•		
Community Services	•			
Transportation & Parking		•		
Utilities		•		
Potential for Controversy		•		
Cumulative Impacts		•		

4.0 MANAGEMENT AND MITIGATION MEASURES

Mitigation is defined by CFR 1508.20 as:

- (a) Avoiding the impact altogether by not undertaking a certain action or parts of an action.
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (e) Compensating for the impact by replacing or providing substitute resources or environments. Mitigation measures to be implemented during construction of the PAA are summarized below.

Soils

All disturbed soils will be restored/repaired as close to the original condition as practicable and stabilized with vegetation and/or erosion control measures.

Water Quality

Mitigation measures will be implemented as part of the design and construction of the PAA to reduce impacts resulting from erosion or stormwater runoff. The project proponent will comply with all requirements of the Clean Water Act as required by the state Water Quality Certification (Section 401), the National Pollutant Discharge Elimination System (NPDES) as required by Section 402, and point source impacts to waters of the US through Section 404 of the Clean Water Act permit issuance and condition compliance.

Vegetation

Mitigation measures will be implemented to restore any affected environment to its original or natural state to the extent practicable. The identified BMP's will be employed during all project phases. Vegetation removal would be required to construct the proposed action. Replacement of the affected vegetation is proposed and would be accomplished through installation of native herbaceous species providing the most benefit for wildlife, habitat, and aesthetics. A suggested planting ratio of native grass species to forbs should be 70% grasses and 30% forbs. The planting (seeding) rate would be determined based on the selected species and required aerial coverage. Depending on the seasonal timing of seeding, planting area slope, and topography, a light straw mulching (or mulch blankets) may be utilized to increase germination rates and

restored/repaired soil stability. Additional compensatory mitigation measures are proposed to offset the expected temporary and/or permanent adverse impacts to fish, wildlife, and their habitat include:

- 1) Revegetation of exposed soil areas using native herbaceous species;
- 2) Placement of silt fences, if practicable.

During eroded area repair activities, Best Management Practices (BMPs) would be followed to ensure sediment control. The intent would be to prevent accelerated erosion to the extent practicable. The BMPs would be designed specific to the site and maintained during the operational/repair activities. The temporary control devices will be removed after vegetation is established.

Biological Resources

Implementation of the following mitigation measure would ensure that the proposed action would avoid or minimize potential adverse effects to migratory birds and other birds of prey protected under the Migratory Bird Treaty Act (MBTA):

If the project begins during the nesting season for birds of prey and migratory birds (between February 1 and October 1), a preconstruction bird survey for nesting sites will be conducted within the project site no more than 14 days prior to commencement with construction activities. The qualified biologist will document and submit the results of the preconstruction survey in a letter to the CN within 30 days following the survey. If no active nests or roosts are identified during the preconstruction survey, then no further mitigation is required. If any active nests are identified during the preconstruction survey within the project site, a buffer zone will be established around the nests. A qualified biologist will monitor nests weekly during construction to evaluate potential nesting disturbance by construction activities. The biologist will demarcate the buffer zone with construction tape or pin flags within 100 feet of the active nest and maintain the buffer zone until the end of the breeding season or until the young have fledged. Guidance from the CN will be requested if establishing a 100-foot buffer zone is impractical if the nestlings within the active nest appear disturbed. Tree removal activities are proposed to be conducted within the fall/winter/early spring time periods to avoid impacts to bat species and/or their habitats when said species are present.

Cultural Resources

In the event of an inadvertent discovery of archaeological resources shall be subject to Section 106 of the National Historic Preservation Act as amended (36 CFR 800), the Native American Graves Protection and Repatriation Act (NAGPRA)(25 USC 3001 et seq.), and the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-mm). Specifically, procedures for post review discoveries without prior planning pursuant to 36 CFR 800.13 shall be followed. The purpose of the following mitigation measures is to minimize the potential adverse effect of construction activities to previously unknown archaeological or paleontological resources in the case of inadvertent discovery:

- All work shall be halted until a professional archaeologist, or paleontologist if the find is of a paleontological nature, can assess the significance of the find.
- If any archaeological find is determined to be significant by the archaeologist, or paleontologist as appropriate, then representatives of the Tribe shall meet with the archaeologist, or paleontologist, to determine the appropriate course of action, including the development of a Treatment Plan, if necessary.
- All significant cultural or paleontological materials recovered shall be subject to scientific analysis, professional curation, and a report prepared by the professional archaeologist, or paleontologist, according to current professional standards.
- If human remains are discovered during ground-disturbing activities, pursuant to NAGPRA, the

Tribal Official and CN representative shall be contacted immediately. No further disturbance shall occur until the Tribal Official and agency representative have made the necessary findings as to the origin and disposition.

• If the remains are determined to be of Native American origin, the CN representative shall notify a Most Likely Descendant (MLD). The MLD is responsible for recommending the appropriate disposition of the remains and any grave goods.

Hazardous Materials

The project proponent will require all contractors or operators to report such accidental spills immediately upon notice of occurrence. The operator will be made responsible for cleanup and/or removal of such spillage as well as contaminated soils, as deemed necessary by the project proponent.

5.0 AGENCY AND TRIBAL COORDINATION

Appropriate federal, county, and state resource agencies and tribal nations were contacted to solicit views and provide input on the proposed project resources. Scoping letters requesting comments or pertinent information relative to the proposed project were sent to multiple regulatory and resource agencies as well as Native American tribes having potential interest in the proposed project. Scoping letters and received responses from agencies and tribes are included as representative responses in *Appendix B*.

6.0 APPLICABLE FEDERAL LAWS AND REGULATIONS

APPLICABLE FEDERAL ENVIRONMENT	ΓAL LAWS AND REGULATIONS
Archeological and Historical Preservation Act	1974, 16 U.S.C. 469, et seq
Clean Air Act, as amended	1990, 42 U.S.C. 7609, et seq
Clean Water Act, as amended	1977, U.S.C. 1251, et seq
Council on Environmental Quality	2020, 40 CFR Parts 1500-1508
Endangered Species Act, as amended	1973, 16 U.S.C. 1531, et seq
Federal Water Project Recreation Act, as amended	1965, 16 U.S.C. 460-1-12, et seq
Fish and Wildlife Coordination Act, as amended	1934, 16 U.S.C. 661, et seq
Land and Water Conservation Fund Act, as amended	1965, 16 U.S.C. 661, et seq
National Historic Preservation Act, as amended	1966, 16 U.S.C. 470a, et seq
National Environmental Policy Act, as amended	1969, 42 U.S.C. 4321, et seq
Native American Graves Protection & Repatriation Act	1990, 25 U.S.C. 3001-13, et seq
Rivers and Harbors Act	1899, 33 U.S.C. 401, <u>et seq</u>
Watershed Protection and Flood Prevention Act	1954, 16 U.S.C. 1001, et seq
Floodplain Management	1977, Executive Order 11988
Protection of Wetlands	1977, Executive Order 11990
Environmental Justice	1994, Executive Order 12898
Environmental Health and Safety Risks	1997, Executive Order 13045
Federal Facilities on Historic Properties	1996, Executive Order 13006
Accommodation of Native American Sacred Sites	1996, Executive Order 13007
Farmland Protection Policy Act	1981, 7 U.S.C. 4201, et seq
National Invasive Species Act	1966, 16 U.S.C. 4701, et seq (E.O 13112)
Aquatic Nuisance Species Prevention and Control Act	1990, 16 U.S.C. 4701, et seq
Water Resources Planning Act	1965
Recreational Fisheries	Executive Order 12962
Protection of Migratory Birds	Executive Order 13186
USACE Procedures for Implementing NEPA	33 CFR Part 230

7.0 LIST OF PREPARERS



Steven Votaw, President. Steve has 34 years of experience in biological and ecological studies. Mr. Votaw is the President of Eagle Environmental Consulting, Inc. (20+ years) and has been the Project Manager on various environmental impact statements, environmental site assessments, biological resource evaluations, wetland delineations, and threatened and endangered species surveys. Mr. Votaw was previously a Senior Regulatory Project Manager (10 years) with the U.S. Army Corps of Engineers and Fisheries Technician with the Oklahoma Department of Wildlife Conservation (2 years). Mr. Votaw received a Bachelor of Science degree in Fisheries Management and Wildlife Biology from Northeastern Oklahoma State University with post-graduate work in environmental science.

Jeff London, National Resource and Sr. GIS Analyst. Jeff has years of experience in the environmental field. Mr. London was previously a Lake and Project Manager for the U.S. Army Corps of Engineers (35 years). Mr. London was responsible for managing the O&M, recreation, and natural resource programs. He also served as an outdoor recreation planner and project manager for District- wide recreation, environmental and interagency support programs. Additionally, he uses Geographic Information System (GIS) and CAD technology to analyze and display environmental features in support of biological and ecological studies and NEPA documentation. Mr. London received a Bachelor of Science degree in forestry from Oklahoma State University with postgraduate work in GIS.

Sean Votaw, Field Biologist and GIS Specialist. Sean has 6 years of experience in biological and ecological surveys as well as wetland and waterway delineations and Phase I environmental site assessments. Mr. Votaw received a Bachelor of Science degree in Fish and Wildlife Biology from Northeastern Oklahoma State University.

Jessica Darnell, Technical Document Manager. Jessica has 7 years of experience composing and editing NEPA documents and technical scientific reports including biological and ecological assessments, Waters of the United States Delineations, and Phase I environmental site assessments. Ms. Darnell holds a bachelor's degree from the University of Central Oklahoma where she graduated with Summa Cum Laude honors.

8.0 REFERENCES

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U.S. National Park Service. 2022. Explore Designated Rivers Map. Access at: https://www.rivers.gov/oklahoma.php

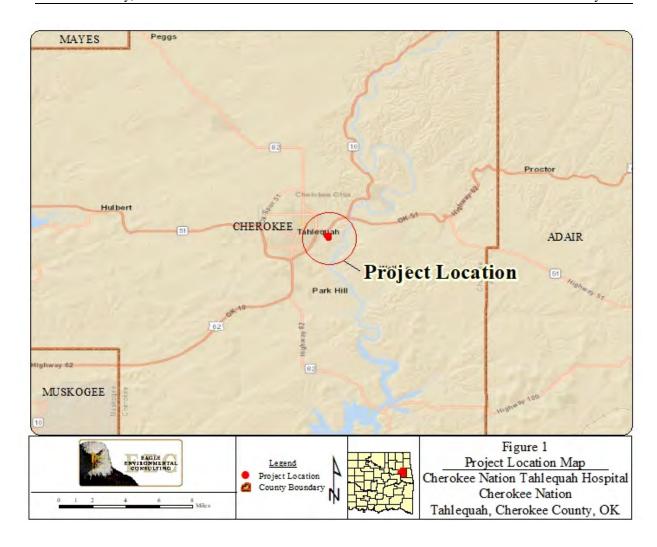
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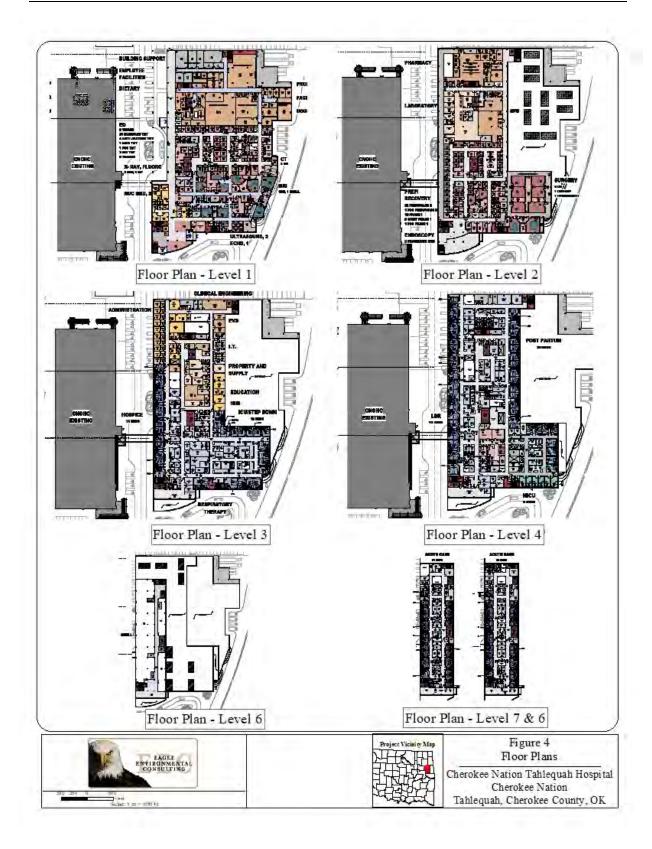
United States Department of the Interior, U.S. Fish and Wildlife Service. 2021. Official Species List: Federally-listed threatened and endangered species. IPAC.

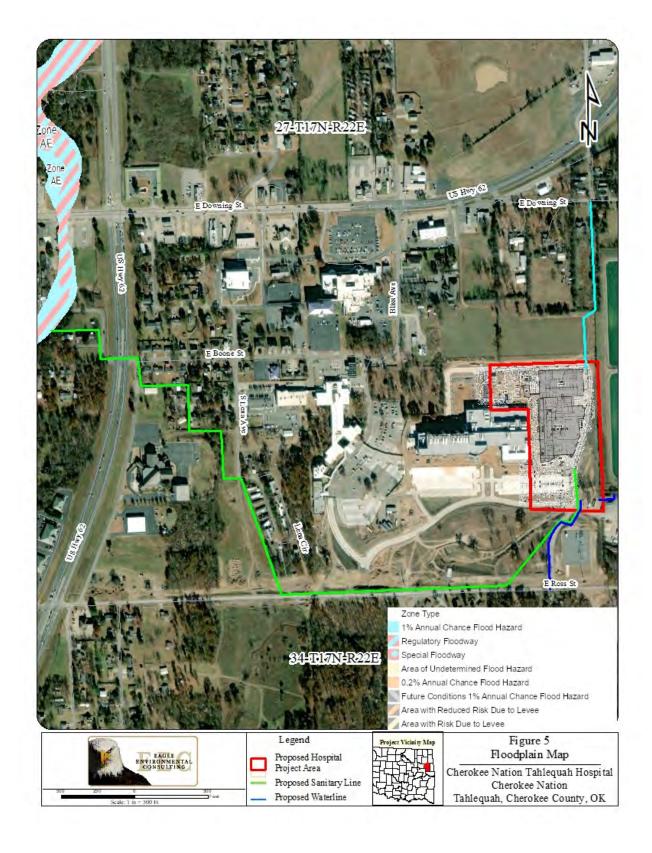
APPENDIX A	
PROPOSED ACTION MAPS AND REPRESENTATIVE PHOTOGRAPHS	
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National Flood Hazard Layer FIRMette

250

500

1,000

1,500



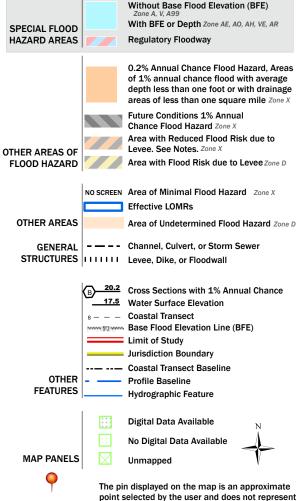


2.000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/16/2022 at 3:05 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

an authoritative property location.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



PL:1



PL: 2



PL: 3



PL: 4



PL: 5





Pl:7



PL: 8



PL: 9



PL: 10



PL: 11



PL: 12



PL: 13



PL: 13



PL: 14



PL: 15



PL: 16



PL: 17



PL: 18



PL: 19



PL: 20



PL: 20

APPENDIX B	
AGENCY AND TRIBAL COORDINATION	



Ms. Jonna Polk, Project Leader U.S. Fish and Wildlife Service 9014 E. 21st Street Tulsa, Oklahoma 74129

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Ms. Polk,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The federal action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Cherokee County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: OKProjectReview@fws.gov



Mr. Jay Alred Cherokee Floodplain Administrator 213 W. Delaware Ave., Rm 200 Tahlequah, OK 74464

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Mr. Alred,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The federal action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Cherokee County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: jjalred66@gmail.com

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Mr. Andrew Commer Chief of Regulatory Division, U.S. Army Corps of Engineers 2488 E. 81st Street Tulsa, OK 74137-4290

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Mr. Commer,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The federal action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Cherokee County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: ceswt-ro@usace.army.mil



Mr. Jon A. Roberts, Senior Manager Office of External Affairs, OK Dept. of Environmental Quality P.O. Box 1677 Oklahoma City, Oklahoma 73101

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Mr. Roberts,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The federal action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Cherokee County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: EnvReviews@deq.ok.gov



Mr. Todd D. Fagin Oklahoma Biology Survey 111 E. Chesapeake Street Norman, Oklahoma, 73019

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Mr. Fagin,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The federal action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Cherokee County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: tfagin@ou.edu



Ms. Julie Cunningham, Executive Director Oklahoma Water Resources Board 3800 North Classen Blvd Oklahoma City, Oklahoma 73118

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Ms. Cunningham,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The federal action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Cherokee County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: bill.cauthron@owrb.ok.gov



February $\overline{3,2022}$

Mr. Steve Glascow, State Resource Conservationist U.S. Natural Resources of Conservation Service 100 USDA, Suite 206 Stillwater, Oklahoma 77074

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Mr. Glascow,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The federal action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Cherokee County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: steven.glasgow@usda.gov



Mr. Brooks Tramell, Wetlands Program Coordinator Oklahoma Concervation Commission 2800 N Lincoln Blvd Oklahoma City, Oklahoma 73105

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Mr. Tramell,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The federal action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Cherokee County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: brooks.tramell@conservation.ok.gov; sarah.gilmer@conservation.ok.gov



Mr. David P. Brown, Associate Director Oklahoma Geological Survey 100 E. Boyd St., Suite N131 Norman, Oklahoma 73019

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Mr. Brown,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The federal action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Cherokee County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: jwalter@ou.edu



Director Jason Lewis U.S. Geological Survey Oklahoma Water Science Center 202 NW 66th Street Oklahoma City, Oklahoma 73116

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Mr. Lewis,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The federal action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Cherokee County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

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Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: jmlewis@usgs.gov



Mr. Robert Houston, Staff Director Office of Communities, Tribes and Environmental Assessment U.S. EPA Region 6, 1201 Elm Street, Suite 500, Mail Code: ORACN Dallas, TX 75270-2102

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Mr. Houston,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The federal action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Cherokee County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: Houston.Robert@epa.gov



Mr. J.D. Strong. Director Oklahoma Department of Wildlife Conservation P.O. Box 53465 Oklahoma City, Oklahoma 73152

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Director Strong,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The federal action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Cherokee County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: rhonda.hurst@odwc.ok.gov



Mr. Eddie Streater Bureau of Indian Affairs P.O. Box 8002 Muskogee, Oklahoma 74402

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Mr. Streeter,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The federal action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Cherokee County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: eddie.streater@bia.gov



Dr. Andrea Hunter Director & Tribal Historic Preservation Officer The Osage Nation 627 Grandview Avenue Pawhuska, Oklahoma 74056

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Dr. Hunter,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Washington County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: ahunter@osagenation-nsn.gov

Stung & Vitaw



Robin Williams Tribal Historic Preservation Officer Wichita and Affiliated Tribes P.O. Box 729 Anadarko, Oklahoma 73005

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Preservation Officer Williams,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Washington County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: THPO@wichitatribe.com

Stuy & Vataw



Ms. Tamara Francis Tribal Historic Presveration Officer Caddo Nation of Oklahoma P.O. Box 487 Binger, OK 73009

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Ms. Francis,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Washington County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw President

Via email: tffourkiller.cn@gmail.com

Stuy & Vitaw



Ms. Elizabeth Toombs Cherokee Nation Tribal Historic Preservation Office P.O. Box 948 Tahlequah, OK 74465

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Ms. Toombs,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Washington County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: elizabeth-toombs@cherokee.org



Mr. Ben Yahola TPHO, Alabama-Quassarte Tribal Town PO Box 187 Wetumka, OK 74883

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Mr. Yahola,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Washington County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: Ben. Yahola@alabama-quassarte.org



Mr. Bobby Komardley Chairman, Apache Tribe of Oklahoma PO Box 1330 Anadarko, OK 73005

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Mr. Komardley,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Washington County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: bkomardley@outlook.com



Mr. Max Bear THPO, Cheyenne and Arapaho Tribes, Oklahoma 700 Black Kettle Blvd. Concho, OK 73022

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Mr. Bear,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Washington County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: mbear@c-a-tribes.org



Ms. Corain Lowe-Zepeda THPO, Muscogee (Creek) Nation PO Box 580 Okmulgee, OK 74447

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Ms. Lowe-Zepeda,

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Washington County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: section 106@mcn-nsn.gov

Dear Mr. Votaw, Feb. 4, 2022

We have reviewed occurrence information on federal and state threatened, endangered or candidate species, as well as non-regulatory rare species and ecological systems of importance currently in the Oklahoma Natural Heritage Inventory database for the following location you provided:

Sec. 33-T17N-R22E, Cherokee County

We found 14 occurrence(s) of relevant species within the vicinity of the project location as described.

Species Name	Common Name	Federal Status
Nicrophorus americanus	American burying beetle	Threatened
County	TRS	Count
Cherokee	Sec. 9-T16N-R22E	1
Lampsilis rafinesqueana	Neosho Mucket	Endangered
County	TRS	Count
Cherokee	Sec. 1-T16N-R22E	1
Cherokee	Sec. 12-T17N-R22E	2
Cherokee	Sec. 24-T17N-R22E	1
Cherokee	Sec. 25-T17N-R22E	1
Cherokee	Sec. 26-T17N-R22E	1
Haliaeetus leucocephalus	Bald Eagle	Protected
County	TRS	Count
Cherokee	Sec. 1-T17N-R22E	1
Cherokee	Sec. 12-T17N-R22E	2
Cherokee	Sec. 35-T17N-R22E	4

Additionally, absence from our database does not preclude such species from occurring in the area.

If you have any questions about this response, please send me an email, or call us at the number given below.

Although not specific to your project, you may find the following links helpful.

ONHI, guide to ranking codes for endangered and threatened species: http://www.oknaturalheritage.ou.edu/content/biodiversity-info/ranking-guide/

Information regarding the Oklahoma Natural Areas Registry: https://okregistry.wordpress.com/

Todd Fagin Oklahoma Natural Heritage Inventory (405) 325-4700 tfagin@ou.edu J. KEVIN STITT

MATT PINNELL LIEUTENANT GOVERNOR



TREY LAM EXECUTIVE DIRECTOR

LISA KNAUF OWEN ASSISTANT DIRECTOR

February 4, 2022

Steve Votaw President Eagle Environmental Consulting, Inc. PO Box 335 Vinita, OK 74301

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Mr. Votaw:

Your request for a wetland determination for the referenced project, as described in your letter of February 3, 2022 has been reviewed using the Soil Survey of Cherokee County and the U.S. Fish and Wildlife Service National Wetland Inventory maps. Neither hydric soils nor wetlands are indicated, indicating that these areas most likely do not contain wetland ecosystems and that this proposed project should not significantly impact wetland resources in the area. If you believe this determination to be inaccurate, an on-site investigation may be needed. This investigation needs to be coordinated with the U.S. Army Corps of Engineers, Regulatory Branch, in Tulsa. Their address and phone number is:

U.S. Army Corps of Engineers Mr. Andy Commer Chief of Regulatory Branch 2488 E 81st St. Tulsa, OK 74137 918/669-7400

Based on our wetlands determination criteria there should be no significant impact on wetland resources in the area described. If you have any further questions or concerns, please contact me at 405/534-6997.

Sincerely,

Brooks Tramell Wetlands Program Coordinator

Brooke R Framell

Water Quality Division

cc: Wetlands file

 From:
 steve@eagle-env.com

 To:
 laura.palmer@bia.gov

 Cc:
 steve@eagle-env.com

Subject: FW: Proposed Tahlequah Hospital

Date: Friday, February 4, 2022 10:35:31 AM

Attachments: Scoping Letter Exhibit - 2-3-22.jpg

Tahlequah Hospitall - Agency Scoping Letter - BIA.pdf

image002.png

Ms. Palmer.

Eagle Environmental will be preparing and environmental assessment on behalf of the Cherokee Nation for the captioned project. We have been advised BIA will be the lead federal agency and therefore reviewing our forthcoming document. I am forwarding our scoping letter to you in Mr. Callison's absence. Please let me know if you have any questions or would like to discuss. Thank you.

Steven R. Votaw President



P.O. Box 335 Vinita, OK 74301 P18-272-7656 http://www.eagle-env.com

From: steve@eagle-env.com <steve@eagle-env.com>

Sent: Friday, February 4, 2022 10:21 AM

To: 'eddie.streater@bia.gov' <eddie.streater@bia.gov>; Callison, Eric R <Eric.Callison@bia.gov>

Subject: Proposed Tahlequah Hospital

Hello.

Please find the attached scoping letter and exhibit for your review and comment. We are contacting you as part of our agency coordination effort relative to the proposed project area. We look forward to your response. Thank you.

Steven R. Votaw President



P.O. Box 335

Vinita, OK 74301

918-272-7656

http://www.eagle-env.com

From: Glasgow, Steven - NRCS, Stillwater, OK

To: <u>steve@eagle-env.com</u>

Subject: RE: [External Email]Proposed Tahlequah Hospital

Date: Monday, February 7, 2022 8:07:45 AM

Attachments: image005.png

Per your request, we have reviewed the subject project information and determined that the proposed project will not impact any easements, watersheds or prime farmland soils as defined by the Farmland Protection Policy Act.

Steve Glasgow

State Resource Conservationist

100 USDA, Suite 206 | Stillwater, Ok. 74074 | O: 405.742.1235 | C: 405.612.7800

NRCS Natural Resources Conservation Service

Helping People Help the Land...

From: steve@eagle-env.com <steve@eagle-env.com>

Sent: Friday, February 4, 2022 10:23 AM

To: Glasgow, Steven - NRCS, Stillwater, OK <steven.glasgow@usda.gov>

Subject: [External Email]Proposed Tahlequah Hospital

[External Email]

If this message comes from an unexpected sender or references a vague/unexpected topic; Use caution before clicking links or opening attachments.

Please send any concerns or suspicious messages to: Spam.Abuse@usda.gov

Hello,

Please find the attached scoping letter and exhibit for your review and comment. We are contacting you as part of our tribal coordination effort relative to the proposed project area. We look forward to your response. Thank you.

Steven R. Votaw President



P.O. Box 335 Vinita, OK 74301 P18-272-7656 http://www.eagle-env.com

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February 15, 2022

Kary L. Stackelbeck, Ph.D., State Archaeologist Oklahoma Archeological Survey 111 E. Chesapeake Norman, OK 73019

RE: Cherokee Nation Tahlequah Hospital, Cherokee County, OK

Dear Dr. Stackelbeck:

Eagle Environmental Consulting, Inc. proposes to perform the necessary surveys and data collection effort leading to the completion of an Environmental Assessment (EA) addressing the potential environmental impacts to tribally-owned and private properties adjacent to and near the W.W. Hastings Hospital in Tahlequah, OK. The federal action agency will be the U.S. Bureau of Indian Affairs (BIA). The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Cherokee County, OK. The proposed action area and feature locations are depicted on the attached exhibit.

To assist in the early identification of potential environmental impacts, we request your comments regarding your areas of expertise. We would appreciate your comments by March 4, 2022. Replies should be addressed to Steve Votaw, Eagle Environmental Consulting, Inc, P.O. Box 335, Vinita, OK 74301 or by e-mail at steve@eagle-env.com. Thank you for your cooperation and prompt response.

Sincerely,

EAGLE ENVIRONMENTAL CONSULTING, INC.

Steven R. Votaw

President

Via email: dgreen@ou.edu

tuy & Vitaw

From: <u>Jon Roberts</u> on behalf of <u>DEQ EnvReviews</u>

To: steve@eagle-env.com
Subject: Environmental Impact Reviews
Date: Friday, February 18, 2022 9:48:35 AM

Attachments: image001.png

Dear Mr. Votaw:

In response to your requests, we have completed a general environmental impact review for the projects listed below.

Projects

- 1. Letter dated February 3, 2022 Cherokee Nation Tahlequah Hospital, Tahlequah, Cherokee County, OK [35.91141, -94.94533]
- 2. Letter dated February 3, 2022 Chickasaw WWTP Expansion, Bartlesville, Washington County, OK [36.75807, -95.96041]

Adverse Environmental Impacts Under DEQ Jurisdiction

None anticipated.

Additional Regulatory Considerations

- A. For Project #1, since the property is on Trust land, EPA has jurisdictional authority regarding stormwater permitting. Please visit the EPA website at https://www.epa.gov/npdes/submitting-notice-intent-noi-notice-termination-not-or-low-erosivity-waiver-lew-under/ for any stormwater permitting questions.
- B. For Project #2, please note that prior to beginning any construction activity disturbing more than one acre, you must submit an NOI and obtain authorization under OKR10, construction stormwater. If you need assistance, please contact DEQ's Stormwater Unit at (405) 702-6100.
- C. For Project #2, please note that water and wastewater infrastructure projects that will require a construction permit from DEQ's Water Quality Division include the following:
 - Construction of new water and wastewater treatment facilities;
 - Modifications and upgrades to existing facilities;
 - Construction of new water distribution and wastewater collection lines;
 - Relocation of existing water distribution and wastewater collection lines.

Projects that do not require a construction permit include:

- Replacement of existing equipment with same type and size equipment;
- Replacement of existing water and wastewater lines with the same size line in the same location.

Please contact DEQ's Water Quality Division (Construction Permitting Section) if you have specific questions about these projects or need further clarification. Rocky Chen is the Manager of this section and can be reached at (405) 702-8140 or rocky.chen@deq.ok.gov.

Note: This is a summary of the most common regulatory requirements that may be applicable to these projects. Other regulatory requirements may apply.

Additional recommendations to consider may be found at https://go.usa.gov/xFE4c.

For future projects, please include GPS coordinates in decimal degrees (DD.DDDDD) and continue including street addresses, section/township/range, or other location information.

Please submit future requests to https://go.usa.gov/xFf7g or EnvReviews@deq.ok.gov by attaching a single pdf file containing your request and any attachments.

Thank you for the opportunity to provide our comments. If you have any questions or need clarification, please contact me.

Regards,

Jon Roberts | Env. Programs Manager III

Office of Continuous Improvement | Department of Environmental Quality p. 405-702-7111

Oklahoma.gov | deq.ok.gov



Cherokee County 911

914 S College Ave Ste 911 Tahlequah, Ok 74464 www.cherokeecounty-911.com



Phone: 918-458-6513 Fax: 918-458-5735 Emergency: 911

CHEROKEE COUNTY 911 ADDRESS NOTIFICATION FORM

Valid 911 Address is listed below

3/2/2022 CHEROKEE NATION W.W HASTINGS HOSPITAL 19780 E ROSS ST TAHLEQUAH, OK 74464

You must take a copy of this verification to the POST OFFICE in order to receive mail.

Cherokee County 911 and the U.S. Postal Service require that all residential and commercial structures within Cherokee County, Oklahoma must have a locatable address assigned to the structure. Your cooperation in using the address assigned to you will ensure efficient mail service and emergency service response (Law Enforcement, Fire Department, and Emergency Medical Service).

You will need to notify the following of your 911 Address:

Telephone Company ♦ County Assessor ♦ Voter Registration ♦ Financial Institution ♦ Security Company ♦ Friends and Family ♦ Utility Company ♦ etc.

How to use your address properly:

- It is *extremely* important that you post the house numbers at the end of your driveway using a minimum of three (3) inch reflective numbers that can be seen from all directions. This will ensure that emergency service (Law Enforcement, Fire Department, and Emergency Medical Service) units will find you easily.
- For mail delivery, post your house numbers on your mail box using a minimum of three (3) inch reflective numbers on both sides of the mail box.
- Post Office Box Holders should continue to use their PO BOX numbers for all their correspondence as they have been doing, but should display their house numbers as described above. They should also notify the telephone company of their address.

If you have any questions concerning your address, please contact the 911 Office at (918) 458-6513 or visit our website at www.cherokeecounty-911.com.

Alicia Felts 911 Coordinator

This is NOT a verification of Residence



CHEROKEE NATION®

P.O. Box 948 • Tahlequah, OK 74465-0949 918-453-5000 • www.cherokee.org Chuck Hoskin Jr.
Principal Chief
GF FOF \$AS
0-EOGA

Bryan Warner
Deputy Principal Chief
\$ZAFVA
WFA DLGA 0-EOGA

March 3, 2022

Andrea Taylor Cherokee Nation Environmental Programs P.O. Box 948 Tahlequah, OK 74465-0948 Steven R. Votaw Eagle Environmental Consulting P.O. Box 335 Vinita, OK 74301

Re: Cherokee Nation Tahlequah Hospital

Ms. Andrea Taylor and Mr. Steven R. Votaw:

The Cherokee Nation (Nation) is in receipt of your correspondence about the proposed **Cherokee Nation Tahlequah Hospital**, and appreciates the opportunity to provide comment upon this project. Please allow this letter to serve as the Nation's interest in acting as a consulting party to this proposed project.

The Nation maintains databases and records of cultural, historic, and pre-historic resources in this area. Our Historic Preservation Office (Office) reviewed this project, cross referenced the project's legal description against our information, and found instances where this project intersects or adjoins land held by the Nation in S34, T17N, R22E. According to previous related reports and our review, there are no significant resources located within the "CN Hospital Project" or waterline areas. Thus, this Office does not object to this portion of the proposed project proceeding. For this aforementioned portion of the project, the Nation requests that the Cherokee Nation Environmental Programs (CNEP) halt all project activities immediately and re-contact our Office for further consultation if items of cultural significance are discovered during the course of this portion of the project.

Additionally, this Office reviewed the "Alternative Parking Garage Location" and found instances where this portion of the project is within very close proximity to culturally sensitive resources located in the SE/4 NW/4, S34, T17N, R22E. Thus, this Office recommends that this alternative location is avoided for this proposed project. If CNEP selects this alternative parking garage location, this Office respectfully requests that CNEP re-contact this Office for additional consultation.

Additionally, the Nation requests that CNEP conduct appropriate inquiries with other pertinent Historic Preservation Offices regarding historic and prehistoric resources not included in the Nation's databases or records.

Cherokee Nation Tahlequah Hospital March 3, 2022 Page 2 of 2

If you require additional information or have any questions, please contact me at your convenience. Thank you for your time and attention to this matter.

Wado,

Elizabeth Toombs, Tribal Historic Preservation Officer Cherokee Nation Tribal Historic Preservation Office elizabeth-toombs@cherokee.org

918.453.5389



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Principal Chief
GP FOP SAS
0-EOGA

Bryan Warner Deputy Principal Chief SZAPVA WFA DL&A 0・EのGA

March 9, 2022

Lynda Ozan, Deputy SHPO Oklahoma Historical Society State Historical Preservation Office Oklahoma History Center 800 Nazih Zuhdi Oklahoma City, OK 73105

Dear Ms. Ozan:

In accordance with Section 106 of the National Historic Preservation Act, the Cherokee Nation respectfully requests your opinion on the possible impacts/effects of the following project:

Cherokee Nation Tahlequah Hospital

The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. A second alternative location for a parking garage may also be incorporated which would be situated on 1 acre of an existing asphalt parking lot adjacent to the existing W.W. Hastings Hospital. The overall project area encompasses approximately 13 acres. The project is located in Section 34, Township 17 North, Range 22 East, Cherokee County.

A site map is attached. The project described above will be completed with funding provided by the US Department of Health and Human Services, Office Indian Health Services. A scoping letter was sent to Oklahoma Archeological Survey (OAS) stating that Cherokee Nation was coordinating with U.S. Bureau of Indian Affairs (BIA), BIA is not the lead agency on this project. If you have any questions or require further information, please contact my office at (918) 453-5365. Thank you

Sincerely,

Andrea Taylor, Manager

Cherokee Nation Environmental Programs



March 22, 2022

Eagle Environmental Consulting, Inc. Attn: Steven Votaw President PO Box 335 Vinita, OK 74301

Re: OAS FY22-0995 BIA Cherokee Nation Construction of New Tahlequah Hospital.

Legal Description: N ½ Section 34, T17N, R22E, Cherokee County, Oklahoma.

Dear Mr. Votaw:

The Community Assistance Program staff of the Oklahoma Archeological Survey has reviewed the above referenced project to identify areas that may potentially contain prehistoric or historic archeological materials (historic properties). Our records indicate that portions of your project area have been previously surveyed and that one significant cultural resource (Ross Cemetery – 34CK349) is located adjacent to and north of the proposed alternative parking garage location. If the alternative parking garage location will be constructed, additional consultation will be necessary prior to any proposed ground disturbing activities to address concerns over potential impacts to marked and potentially unmarked graves associated with the cemetery.

An additional field inspection is not considered necessary for the proposed Cherokee Nation Hospital footprint and sanitary and waterlines. However, should construction activities in these portions of the Area of Potential Effects (APE) expose buried archeological materials such as chipped stone, tools, pottery, bone, historic crockery, glass, metal items or building materials, this agency should be contacted immediately at (405)325-7211.

This environmental review and evaluation is done in cooperation with the State Historic Preservation Office, Oklahoma Historical Society. The responsible federal agency or their official delegate must also have a letter from that office to document consultation pursuant to Section 106 of the National Historic Preservation Act.

In addition to our review comments, under 36CFR Part 800.3 you are reminded of your responsibility to consult with the appropriate Native American tribe/groups to identify any concerns they may have pertaining to this undertaking and potential impacts to properties of traditional and/or ceremonial value.

Sincerely,

Kary L. Stackelbeck, Ph.D.

Kary Stackelbeck

State Archaeologist

: dkg/kls cc: SHPO



Oklahoma Historical Society

Founded May 27, 1893

State Historic Preservation Office

Oklahoma History Center • 800 Nazih Zuhdi Drive • Oklahoma City, OK 73105-7917 (405) 521-6249 • Fax (405) 522-0816 • www.okhistory.org/shpo/shpom.htm

March 25, 2022

Ms. Andrea Taylor, Manager Cherokee Nation Environmental Programs P.O. Box 948 Tahlequah, OK 74465

RE: File #1117-22; Cherokee Nation IHS Project for the Cherokee Nation Tahlequah Hospital

Dear Ms. Taylor:

We have received and reviewed the documentation submitted on the referenced project in Cherokee County. Additionally, we have examined the information contained in the Oklahoma Landmarks Inventory (OLI) files and other materials on historic resources available in our office. We find that there are no known historic properties affected within the referenced project's area of potential effect.

In addition to our review, you must contact the Oklahoma Archeological Survey (OAS), 111 E. Chesapeake, #102, Norman OK 73019-5111 (#405/325-7211, FAX #405/325-7604), to obtain a determination about the presence of prehistoric resources that may be eligible for the National Register of Historic Places. Should the OAS conclude that there are no prehistoric archaeological sites or other types of "historic properties," as defined in 36 CFR Part 800.16(1), which are eligible for inclusion in the National Register of Historic Places within the project area and that such sites are unlikely to occur, we concur with that opinion.

The OAS may conclude that an on-site investigation of all or part of the project impact area is necessary to determine the presence of archaeological resources. In the event that such an investigation reveals the presence of prehistoric archaeological sites, we will defer to the judgment of the OAS concerning whether or not any of the resources should be considered "historic properties" under the Section 106 review process. If sites dating from the historic period are identified during the survey or are encountered during implementation of the project, additional assessments by the State Historic Preservation Office will be necessary.

Should further correspondence pertaining to this project be necessary, please reference the above underlined file number. If you have any questions, please contact Kristina Wyckoff, Historical Archaeologist, at 405/521-6381. Thank you.

Sincerely,

Lynda Ozan

Deputy State Historic Preservation Officer

LO:pm



United Keetoowah Band Of Cherokee Indians in Oklahoma Office of Historic Preservation

Office of Historic Preservation
P.O. Box 746 • Tahlequah, OK 74465
18300 W Keetoowah Circle • Tahlequah, OK 74464
Phone: (918) 871-2825 • Fax: (918) 414-4038
www.ukb-nsn.gov | ukbthpo@ukb-nsn.gov



04/08/22

RE: Section 106 Consultation - Cherokee Nation Tahlequah Hospital

To Whom It May Concern:

Thank you for consulting with the United Keetoowah Band of Cherokee Indians in Oklahoma (UKB). This response is regarding the request from your office for a review of the project listed above. We have reviewed the information provided in your letter of April 8th, 2022. We find after review of the information we concur with your "findings of no significant impact".

There remains the possibility that unrecorded cultural resources, including archaeological artifact or human remains, may be encountered during construction, demolition, or earthmoving activities of this project. Should this occur, we require that you contact our office immediately so we may offer appropriate comments under 36 CFR 800.13.

As the project moves forward we request the following conditions be followed: Condition 1: Inadvertent Discoveries - In the event that human remains, burials, funerary items, sacred objects, or objects of cultural patrimony are found during project implementation, the proponent or his/her authorized agent shall cease work immediately within 200 ft of the find. They shall take steps to protect the find from further damage or disruption. They shall contact the NAGPRA Coordinator, Julie Brison at (918) 871.2852 or by email jbrison@ukb-nsn.gov to report the find. The NAGPRA Coordinator shall contact the appropriate law enforcement authority if human remains are found. No further work shall be allowed on the project until the NAGPRA Coordinator has approved a plan for managing or preserving the remains or items.

Condition 2: Post Review Discoveries - In the event that pre-contact artifacts (i.e., arrowheads, spear points, mortars, pestles, other ground stone tools, knives, scrapers, pottery or flakes from the manufacture of tools, fire pits, culturally modified trees, etc.) or historic period artifacts or features (i.e., fragments of old plates or ceramic vessels, weathered glass, dumps of old cans, cabins, root cellars, etc.) are found during project implementation, the proponent or his/her authorized agent shall cease work immediately within 200 ft of the find. They then shall contact the Section 106 Coordinator Acee Watt to report the find. No further work shall be allowed on the project until the Section 106 has approved a work plan for managing or preserving the artifacts or features.



United Keetoowah Band Of Cherokee Indians in Oklahoma Office of Historic Preservation

E PRESER

P.O. Box 746 • Tahlequah, OK 74465 18300 W Keetoowah Circle • Tahlequah, OK 74464 Phone: (918) 871-2825 • Fax: (918) 414-4038 www.ukb-nsn.gov | ukbthpo@ukb-nsn.gov

Condition 3: Activities that have the potential to disturb cultural resources outside the areas specified in the accompanying document(s) are not approved and will not proceed until cultural resources review of potential adverse effects in the new area has been completed.

Please note that these comments are based on information available to us at the time of the project review. We reserve the right to revise our comments as information becomes available. If you have any questions or concerns, please contact our Section 106 Coordinator, Acee Watt at (918) 871.2852 or by email awatt@ukb-nsn.gov or UKB THPO Whitney Warrior (918) 871.2838 wwarrior@ukb-nsn.gov

Best Regards,

Acee Wall

Acee Watt
Section 106 Coordinator
Office of Historic Preservation
United Keetoowah Band of Cherokee
918.871.2825 | 918.414.4038
awatt@ukb-nsn.gov





Chuck Hoskin Jr.
Principal Chief
GP FOF \$A\$
0-EOGA

Bryan Warner
Deputy Principal Chief
\$ZAFVA
WFA DLSA 0-EOGA

April 8, 2022

Acee Watt
Section 106 Coordinator
Office of Historic Preservation
United Keetoowah Band of Cherokee
P.O. Box 746
Tahlequah, OK 74465

Dear Mr. Watt:

In accordance with Section 106 of the National Historic Preservation Act (NHPA) the Cherokee Nation respectfully requests your review and comment regarding the project below.

Cherokee Nation Tahlequah Hospital

The proposed project would involve constructing a new 401,000 square feet, seven-story high-rise hospital, two new surface parking areas, and a two-story 12,800 square feet freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. One alternative location for a parking garage was proposed adjacent to the existing W.W. Hastings Hospital but has since been removed from the project design. The overall project area encompasses approximately 31 acres. The project is located in **Section 34**, **Township 17 North**, **Range 22 East**.

This proposed project will be completed with funds provided by the American Rescue Plan Act (ARPA) & Department of Health and Human Services (DHHS).

Pursuant to the 36 C.F.R. 800 regulations implementing compliance with Section 106 of the NHPA, we are providing general project area maps and information so that your Tribe has an opportunity to bring to our attention any interests and concerns about the potential for impacts to properties of cultural and religious significance.

By this letter, the Cherokee Nation is providing notification and seeking comments regarding these properties. This Office will assume concurrence with the proposed project if no response is received within thirty days of this letter's receipt pursuant to 36 C.F.R. Part 800.4(d)(1)(i).

If you have any questions or require further information, please contact my office at (918) 453-5365. Thank you.

Sincerely,

Andrea Taylor, Manager

rdrea Chylor

Cherokee Nation Environmental Programs



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Chuck Hoskin Jr.

Principal Chief
GP FOF \$A\$

0-EOGA

Bryan Warner Deputy Principal Chief SZみFVみ WFハ DLon 0・EのGみ

April 8, 2022

President Terri Parton Wichita and Affiliated Tribes P.O. Box 729 Anadarko, OK 73005

RE: Cherokee Nation Tahlequah Hospital

Dear President Parton:

Please reference the initial scoping letter provided by Eagle Environmental Consulting dated February 3, 2022 regarding the captioned project. Since receipt of the aforementioned letter, the Cherokee Nation and our architect/engineer have designed new open parking facilities outside the originally presented and reviewed area of potential affect (APE) to avoid the culturally sensitive feature in close proximity to the originally proposed alternative parking garage facility. This letter is intended to provide you the proposed engineering design plan and location for the new parking areas and request your subsequent review of the expanded APE as part of the Section 106 coordination process. Please let me know if you need additional information, have any questions, or would like to discuss.

Thank you.

Sincerely,

Andrea Taylor, Manager Cherokee Nation

Environmental Programs

Attachment: Parking Area Design Plan Exhibit

APPENDIX C
WETLANDS AND WATERWAY DELINEATION REPORT OF SURVEY

WATERS OF THE US DELINEATION

Cherokee Nation Tahlequah Hospital Development Tahlequah, Cherokee County, Oklahoma

Prepared for:



Cherokee Nation 206 East Allen Road Tahlequah, OK 74464

and

CHILDERS ARCHITECT

Childers Architect 45 South 4th Street Fort Smith, AR 72901

Prepared by:



P.O. Box 335 Vinita, Oklahoma 74301 918-272-7656 9 North 9th Street Greenwood, Arkansas 72913 918-244-9595

May 2022

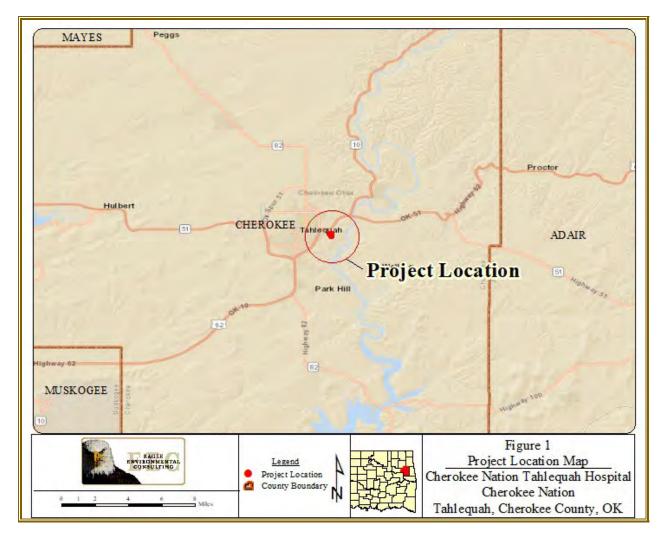
Steven R. Votaw President

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1.0 Introduction

Eagle Environmental Consulting, Inc. (EEC) conducted a Waters of the United States and wetland delineation survey associated with the proposed Cherokee Nation Tahlequah Hospital development project to identify and demarcate potentially jurisdictional waterways and/or wetlands within the project area. The project area is located in Section 27, Township 17 North, Range 22 East on the southwest corner of East Downing street and US Highway 62 Tahlequah, Oklahoma. The field survey was performed to collect and record physical characteristics of aquatic areas potentially considered jurisdictional by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act. Each aquatic resource was identified and/or investigated according to the diagnostic field indicators used to confirm presence and determine the preliminary jurisdictional status. The project area location map is provided at *Figure 1*.



2.0 General Survey Area Description

The surveyed area is located in the Springfield Plateau ecoregion (39b) of Oklahoma. The **Springfield Plateau** is underlain by cherty limestone of the Mississippian Boone Formation; dissection, relief, and forest density are less than in neighboring Ecoregions 38 and 39b. Karst features, such as sinkholes and caves, are common. Cool, perennial, spring-fed streams occur. Prior to the 19th century, uplands were dominated by oak–hickory forest; savannas and tall grass prairies also occurred and were maintained by fire. Today, much of the forest, and nearly all of the prairie, has been replaced by agriculture or expanding

residential areas. Poultry and livestock farming are the main land uses. Application of poultry litter to agricultural fields and cattle farming have impaired downstream water quality. Streams in the Springfield Plateau (39a) have lower gradients, contain more clay, and are less clogged with gravel from bank erosion than in the Dissected Springfield Plateau–Elk River Hills (39b). The survey area included the previously developed hospital site and new utility corridors extending from the health care campus. Utility corridors transition through previously developed and residential areas.

3.0 Wetland and Waterway Delineation Methodology

The USACE Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains & Piedmont Region (USACE 2010) were referenced in concert to identify wetlands. Wetland areas, if observed, would be identified using the routine on-site (level 2) method, as described in Section D of the 1987 USACE Wetlands Delineation Manual. The identification of wetlands consists of a three-parameter approach that involves determining the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. Where differences in the two documents occur, the Regional Supplement takes precedence over the 1987 Corps Manual.

Hydrophytic plant communities are determined after species identification based on the wetland status indicators of the dominant plant species present within the sample plot. In accordance with the USACE delineation manual, plant species that have a wetland indicator status of facultative (FAC), facultative wetland (FACW), or obligate (OBL) represent hydrophytic vegetation. Wetland hydrology implies a hydrologic regime involving periodic inundation or saturation within the upper portions of the soil profile (for sufficient duration) during the growing season. Onsite indicators used as evidence of wetland hydrology include inundation, saturation, sediment deposition, drift lines, water marks, and scouring. Hydric soils are determined based on criteria established by the Soil Conservation Service (USDA, 2000) and described in the regional supplement. Indicators of hydric soils predominantly include soil color and redoximorphic (redox) concentrations (reddish mottles). Soil matrix and mottle color, when appropriate, are identified according to Munsell Soil Color Charts (Kollormorgen, 2000). In most circumstances, all three parameters must be present for the area to be a wetland. Data sampling points are established in representative areas within the wetland areas and in the adjacent uplands. Vegetation, soils, and hydrology characteristics are recorded on data forms for each sampling point and boundaries are established based on the results of the individual sample plots, after further refining as necessary.

Potentially jurisdictional waters of the United States, other than wetlands, were also to be defined if observed. These areas include creek channels, rivers, ponds, and/or lakes. These characteristics include, but are not limited to, a line impressed on a bank, defined bed and bank, shelving, ordinary high water mark, changes in soil characteristics, destruction of terrestrial vegetation, and presence of debris (33 CFR Part 328). Waterways are identified and located according to size, flow patterns, watershed characteristics, presence of an ordinary high water mark, and drainage basin.

4.0 Survey Findings

Waters of the United States

The onsite survey was conducted to identify and locate those areas exhibiting the required wetland parameters and onsite characteristics for waters of the United States, if observed. Data were collected for each investigated area to characterize and describe the observed indicators. The descriptions for the identified area(s) are provided below according to Field Site (FS) number. No wetlands, 2 waterways, and 1 detention pond was identified during the field survey was determined to meet the criteria was also observed. Photographs of the investigated area is provided at **Appendix A**. The waters of the US location map is provided on *Figures 2 & 3*.

Field Site Descriptions

FS-1 is a 0.43-acre detention pond is a small detention pond that is dominated by Bermuda grass, clover, and crab grass. FS-1 should not be considered jurisdictional by the USACE.

FS-2 is a 205-foot small ephemeral waterway that transitions adjacent to a residential housing edition. The feature flows along the utility corridor from north to south within the 2 to 5 foot-wide and 1 to 2 foot deep moderately incised channel with a less than 1 foot deep ordinary high water mark. The non-natural channel appears to have been previously channelized. FS-2 may be considered jurisdictional by the USACE.

FS-3 is a 50-foot stretch of an unnamed tributary to Tahlequah Creek. Channel dimensions were approximately 5 to 6 feet deep and 10 to 12 feet wide and exhibited an ordinary high water mark between 1 and 2 feet from the channel floor. The waterway transitions through a relatively young-aged riparian zone. FS-3 would be considered jurisdictional by the USACE.





5.0 Conclusion

The subject wetland and waterway delineation was performed to identify the presence of jurisdictional waterways and/or wetlands within the proposed project area. No wetlands, 2 waterways, and 1 detention pond was identified, recorded, and delineated during the field survey. The following table provides a summary of the feature type, linear footage, acreage and the centroid location coordinates for each aquatic feature:

Identified Aquatic Features							
Site Number	Feature Type	Feet	Acres	Latitude	Longitude		
FS-1	Detention Pond		0.43	35.9105	-94.9448		
FS-2	Waterway	205		35.9108	-94.9531		
FS-3	Waterway	50		35.9132	-94.9569		
	Total	255	0.43				

6.0 References

- Oklahoma Color Digital Ortho-Quadrangle Maps. 2022.
- Title 33. Code of Federal Regulations. Part 328. Definitions of Waters of the United States.
- U.S. Army Corps of Engineers. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1, Environmental Laboratory, Vicksburg, MS.
- U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mtns & Piedmont Region.
- U.S. Department of Agriculture. 2012. Field Indicators of Hydric Soils of the United States. Soil Conservation Service.
- United States Department of Agriculture, Soil Conservation Service. 1981. Land Resource Regions and Major Land Resource Areas of the United States. Agriculture Handbook 296.
- United States Geological Survey. 7.5-minute topographic map.
- Woods, A.J., Omernik, J.M., Butler, D.R., Ford, J.G., Henley, J.E., Hoagland, B.W., Arndt, D.S., and Moran, B.C., 2005, Ecoregions of Oklahoma (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,250,000).

Appendix A

Representative Site Photographs

FS 1:













































APPENDIX D BIOLOGICAL ASSESSMENT

BIOLOGICAL ASSESSMENT

Cherokee Nation Tahlequah Hospital Development Tahlequah, Cherokee County, Oklahoma

Prepared for:



Cherokee Nation 206 East Allen Road Tahlequah, OK 74464

and

CHILDERS

ARCHITECT

45 South 4th Street Fort Smith, AR 72901

Prepared by:



P.O. Box 335 Vinita, Oklahoma 74301 918-272-7656 9 North 9th Street Ft. Smith, Arkansas 72901 918-244-9595

June 2022

Steven R. Votaw President

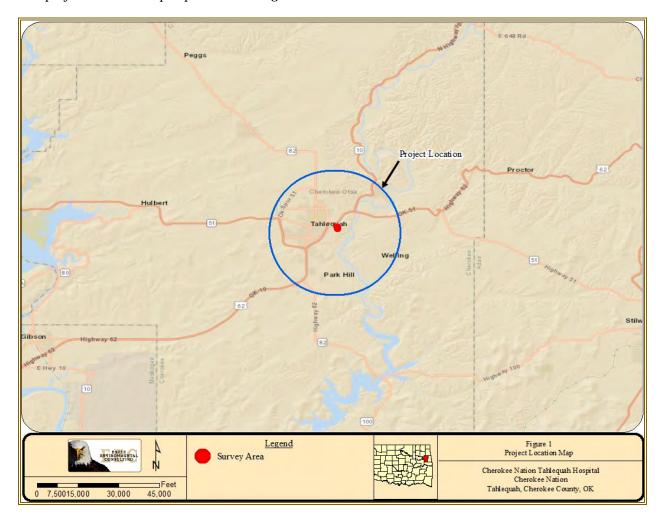
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1.0 PROJECT OVERVIEW

1.1 Federal Nexus

A Biological Assessment (BA) was prepared to address the potential effects of the proposed new Cherokee Nation Tahlequah Hospital, parking area, and utility lines construction project in Tahlequah, Oklahoma on the federally-listed threatened or endangered (T&E) species present in or known to migrate through Cherokee County, OK. Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended, requires that, through consultation with the U.S. Fish and Wildlife Service (USFWS), federal actions do not jeopardize the continued existence of any threatened, endangered, or proposed species or result in the destruction or adverse modification of critical habitat. The proposed action would occur on lands owned or have utility line easement by the Cherokee Nation. The Cherokee Nation, as a sovereign nation, is considered the federal action agency. This BA evaluates the potential effects of the proposed project on species that are federally listed under the ESA. This BA was prepared to evaluate the potential impacts to federally-listed species which may be present within or utilize the existing habitats adjacent to the proposed construction corridor. Some wildlife species afforded by protection under the Fish and Wildlife Coordination Act, Migratory Bird Treaty Act, and others are also addressed herein. The project location map is provided on *Figure 1*.



1.2 Project Description

The proposed project would involve constructing a new 401,000 square foot, seven-story high-rise hospital, a seven-story parking garage with 1,000 spaces, and a two-story 12,800 square foot freestanding central energy plant. Approximately 1 mile of proposed sanitary sewer line and approximately 0.5 mile of proposed waterline would also be constructed to service the new facility. The hospital and parking area encompasses approximately 13 acres. The disturbance area associated with the hospital and adjacent parking areas encompasses approximately 1.04 acres. The utility line corridors to be temporarily disturbed would be 1.32 miles within a 25-foot-wide corridor encompassing approximately 4 acres. The utility lines would be offset from the existing infrastructure lines within the previously disturbed corridors. No trees are proposed to be removed during construction. All areas of soil disturbance will be restored to original contour, elevation, and grade. No trees are proposed to be removed as part of this project. The hospital and parking area has been previously disturbed. The utility line corridors would transition along existing utility line corridor easements which have also been previously cleared and are maintained on a generally routine basis.

1.3 Project Area Setting

Project Location

The project area is located in Section 34, Township 17 North, Range 22 East in Tahlequah, Cherokee Oklahoma. The assessment area is described as previously disturbed at the hospital and parking areas as well as the utility line corridors. All areas have been previously cleared and graded.

Ecoregion

The surveyed area is located in the Ozark Highlands Dissected Springfield Plateau–Elk River Hills ecoregion. The area is comprised of narrow ridgetops and intervening, steep V-shaped valleys. Carbonate rocks, along with associated karst features, are characteristic. Springs abound in valleys and contribute cool water to perennial streams. Cherty limestone of the Mississippian Boone Formation is extensive, but older shales, limestone, and dolomite are also exposed in valley bottoms. The region is considered rugged and wooded and upland natural vegetation is oak–hickory and oak–hickory–pine forests and associated woodlands. Livestock and poultry farming, woodland grazing, logging, recreation, and quarrying are the main land uses.

2.0 FEDERALLY LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

The official list of threatened and endangered species potentially present within or adjacent to the action area was generated for the proposed project by the United States Fish and Wildlife Service's online Information, Planning, and Conservation (IPAC) decision support system (USFWS, 2022). The federally-listed species and associated habitat requirements identified that may be affected by the proposed project include the Gray Bat, Northern Long-eared Bat, Ozark Big-eared bat, Piping Plover, Red Knot, Neosho Mucket, Rabbits-foot mussel, American Burying Beetle, and Monarch Butterfly as shown in Table 2. The official species list and action area map obtained from the USFWS are provided in Appendix A. The Oklahoma Natural Heritage Inventory (ONHI) was contacted to acquire known occurrence records of listed and/or sensitive species within the project area. While occurrences of the American burying beetle were reported with the standard search radii, no species occurrences were identified within the action area by ONHI database records. Correspondence is provided in Appendix A. Identification of the dominant vegetative species was performed through transect and random sampling within the dominant and homogenous vegetation areas. The major habitat within the action area was documented and described to determine if the habitat requirements exist for the respective threatened or endangered species as having the potential to be present in or migrate through the project area.

Table 2 - Federally Listed T&E Species

Table 2 - Federally Listed T&E Species							
Species/Critical Habitat	Listing Status	Habitat Requirements	Status within Action Area				
Northern Long-eared Bat (Myotis septentrionalis)	Threatened	During summer, northern long-eared bats (NLEB) roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees. Males and non-reproductive females may also roost in cooler places, like caves and mines. This bat seems opportunistic in selecting roosts, using tree species based on suitability to retain bark or provide cavities or crevices. It has also been found, rarely, roosting in barns and sheds. NLEB hibernate in caves and mines. Typically use large caves or mines with large passages/entrances, constant temperatures, and high humidity with no air currents. Specific areas where they hibernate have very high humidity. Occupy small cracks/crevices in caves.	Potential foraging and roost habitat not present within or adjacent to action area. No trees would be removed. No presence records provided by OK Natural Heritage Inventory (ONHI)				
Gray Bat (Myotis grisescens)	Endangered	Foraging habitat primarily associated with aquatic resources. Cave obligate species. Limestone caves or rock slope faces. Forages on aquatic and terrestrial insects near streams and rivers.	No known caves would be affected. Disturbances to foraging areas would not occur. Habitat impacts associated with construction proposed during winter time frame associated with two creek crossings adjacent to residential areas.				
Ozark Big-eared Bat (Corynorhinus townsendii ingens)	Endangered	Known to roost in caves, sandstone cracks, and talus. Cave obligate species relegated to NE OK, NW AR, and SW MO. Forages on insects atop mature canopy areas. Species possibly considered a lepidoptera specialist foraging primary on moths.	No potentially suitable habitat present. No known caves within or near action area.				
Piping Plover (Charadruis melodus)	Threatened	Migratory stopover habitat includes sparsely vegetated sandy or gravelly shorelines and islands associated with the major river systems. Species does not nest in OK.	No suitable habitat present.				
Red Knot (Calidris canutus rufa)	Threatened	Coastal areas, mudflats on lakes or reservoirs, and may use sandbars along the major river systems for forage and resting areas. Species does not nest in OK.	No suitable habitat present.				
American Burying Beetle (Nicrophorus americanus)	Threatened	Breeding habitat: undisturbed, mature oak-hickory forests with substantial litter layers and deep, loose soils over grasslands or bottomland forests. Feeding habitat: undisturbed grasslands, grazed pasture, riparian zones, and oak-hickory forest, as well as a variety of various soil types.	Suitable habitat potentially present along utility line corridors which have been previously disturbed. Action area not located within priority conservation area.				
Monarch Butterfly (Danaus plexippus)	Candidate	Healthy and abundant milkweed is needed for oviposition and larval consumption. Sufficient quality and quantity of nectar from flowers is needed for adult feeding throughout the breeding and migration seasons. Eastern US individuals overwinter in Mexico.	No suitable habitat observed within the area. Hospital and parking area construction. Utility lines mowed/maintained. No milkweed plants observed.				
Neosho Mucket (Lampsilis rafinesqueana)	Endangered	Associated with shallow riffles and runs comprising gravel substrate and moderate to swift currents. The species is most often found in areas with swift current but can utilize slower current areas in some waterway. A few known records for this species are located in the Illinois River.	No suitable habitat was observed either onsite or within close proximity.				
Rabbits-foot Mussel (Quadrula cylindrica cylindrica)	Threatened	Inhabits small to medium sized streams and some larger rivers. Usually occurs in shallow water areas along the bank and adjacent run and shoals with reduced water velocity. Substrates generally include gravel and sand.	No suitable habitat was observed either onsite or within close proximity.				

USFWS, 2022

3.0 ENVIRONMENTAL BASELINE

3.1 Ecological Processes and Conditions

Soils

The Natural Resources Conservation Service (NRCS) Web Soil Survey was used to identify soil units within the study area (NRCS 2021). Multiple soil units are present within the proposed project area including; Captina silt loam, 1 to 3 percent slopes; Clarksville very gravelly silt loam, 1 to 8 percent slopes; Clarksville very gravelly silt loam, 5 to 20 percent slopes, stony; Clarksville very gravelly silt loam, 20 to 50 percent slopes, stony; Tonti gravelly silt loam, 1 to 3 percent slopes; Britwater silt loam, 1 to 3 percent slopes; and Britwater gravelly silt loam, 3 to 8 percent slopes

Climate

The climate is characterized as humid and mesothermal. The average annual precipitation is over 45 inches. The mean temperature is 61 degrees. The average nighttime low is between 12 and 24 degrees in January and the average daytime high temperatures range between 87 and 94 degrees in July.

Vegetation

The dominant vegetation consisted of Bermuda grass henbit, aster, plantain, and other forbs. The observed trees were scattered in a park like setting and consisted of post oak, black oak, black hickory, American elm, and eastern red cedar. No understory was present.

3.2 Species Habitat Within the Action Area

The survey area was canvassed to identify and describe the habitat for the listed T&E species that could be present within the proposed action area. The federally listed species and their habitat requirements are provided below.

Northern Long-eared Bat

The northern long-eared bat (NLEB) is a medium-sized bat about 3 to 3.7 inches in length but with a wingspan of 9 to 10 inches. As its name suggests, this bat is distinguished by its long ears, particularly as compared to other bats in its genus, Myotis, which are actually bats noted for their small ears (Myotis means mouse-eared). The northern long-eared bat is found across much of the eastern and north central United States and all Canadian provinces from the Atlantic coast west to the southern Northwest Territories and eastern British Columbia. The species' range includes 37 states. White-nose syndrome, a fungal disease known to affect bats, is currently the predominant threat to this bat and is currently found in at least 25 of 37 states where the northern long-eared bat occurs.

Grav Bat

The gray bat is a small bat with grayish-brown fur and a slightly wooly appearance. Its body is approximately five inches in length and its wingspan is 11 to 13 inches. Gray bats feed on a variety of small, night-flying insects. Gray bats live in colonies within limestone caves in the Ozark region and occupy caves throughout the year. However, different caves are occupied during the summer and winter months. When foraging for their insect food, gray bats hunt over forested habitats, waterways, and wetlands.

Ozark Big-eared Bat

The Ozark big-eared bat is an obligate cave species associated with limestone karst features found in forested portions of the Ozark Highlands. Most of this bat population occurs in Adair, Cherokee, and Delaware counties in Oklahoma, and in Arkansas, and historically in southwest Missouri. These bats feed

primarily on lepidopterans (moths) above the tree canopy and in gaps and clearings within the forest, usually associated with oak and oak-hickory forest types.

Piping Plover

The piping plover is a small, stocky, sandy-colored bird resembling a sandpiper. The habitat requirements for the piping plover include sandy shorelines on lakes and sandbars along the major river systems for forage and resting areas. The piping plover is migratory in Oklahoma in the spring and fall. They do not generally nest in Oklahoma. Plovers often gather in groups on undisturbed beaches prior to their southward migration. By mid-September, both adult and young plovers will have departed for their wintering areas (USFWS, 2011).

Red Knot

The Red Knot is a rather large sandpiper that breeds in far northern Canada on tundra from May to June. Fall migrations typically begin in late July through mid-August where the species may travel as far as the coasts of South America. Migratory habitat requirements for the red knot include coastal areas, mudflats on lakes or reservoirs, and may use sandbars along the major river systems for forage and resting areas. This species is considered migratory in or through Oklahoma in the spring and fall.

American Burying Beetle

The American Burying Beetle (ABB) is a large beetle with a shiny black appearance with four orange-red spots on the wing covers (elytra). A large red spot on the pronotum of the beetle is indicative of the species. The habitat requirements for this beetle are not fully known; however, the ABB is considered a habitat generalist and is known to occupy a diverse range of habitats. Habitats associated with the ABB include open grasslands, forests, as well as transitional areas. Suitable habitat exists within the action area. The action area is not located within or near any priority conservation area. Suitable habitat was observed adjacent to the action area but not within.

Monarch Butterfly

Monarchs are typically medium to large-sized butterflies with predominantly orange and black coloration with white patches or dots along their wing margins. Adults do form pair bonds and usually mate more than once. One adult female will typically produce 300 to 1,100 eggs on milkweed plants which are the only food during their caterpillar phase. Healthy and abundant milkweed is needed for oviposition and larval consumption. Sufficient quality and quantity of nectar from flowers is needed for adult feeding throughout the breeding and migration seasons. For those individuals who make the historical migration from the Eastern US populations typically overwinter in Mexico. Western US populations traditionally winter along the California and Baja coastline. Suitable habitat observed within the northern portion of project corridor relative to flowering plants associated with nectar production for foraging adults. No milkweed plants observed.

Neosho Mucket

The Neosho Mucket mussel prefers shallow riffles and runs with gravel substrate and moderate swift currents and substrate that allows for burrowing as suitable habitat. The historical distribution for the Neosho Mucket Mussel was reported for the Illinois River, the Neosho River, the Verdigris River, and the Spring River and its tributaries in Oklahoma. It is one of the predominant mussels in a short stretch of the Spring River but most of the specimens found in the other rivers appear well-worn and old. The younger shells are often marked with greenish rays and chevrons. The female Neosho Mucket waves a lure that imitates a small fish to attract its host fish. Only black bass (largemouth, smallmouth and spotted) serve as the host for Neosho Mucket larvae, called glochidia, which the female releases in late spring. Sufficient numbers of bass may be lacking in the lower Neosho, Fall and Verdigris rivers. In the early 1990's, surveys indicated that living muckets were found in a stretch of the Illinois River from the

Oklahoma Arkansas state line downstream to the headwaters of Lake Tenkiller in Cherokee County but were not found within or downstream of the lake. More recent surveys suggest that the Neosho Mucket Mussell has been extirpated from the Caney, Verdigris, Neosho, and Spring Rivers in Oklahoma. As of 2010, the Neosho Mucket has been extirpated from approximately 62% of its river miles of its historical range. Currently, only the Spring River supports a viable population of the species (USFWS, 2010).

Rabbitsfoot Mussel

The rabbitsfoot is a freshwater clam with an elongate shell approximately 4-6 inches in length. Its color can vary from dark brown to light green. Multiple knobs are often evident on the shell of the rabbitsfoot. Rabbitsfoot mussels tend to select areas with sandy or gravel bottoms, often in side-channels with slower flow near the shore. The rabbitsfoot was historically found in the Verdigris, Neosho, Spring, Illinois, Blue and Little Rivers in Oklahoma. Populations currently remain in the Verdigris, Illinois, and Little rivers. While the rabbitsfoot still exist in the Spring and Neosho rivers, they are considered very rare or extirpated in the Oklahoma portion. Due to modification of the Verdigris River from construction of Oologah Reservoir and the McClellan-Kerr Navigation System, rabbitsfoot populations in that river have become reduced and isolated due to inundation of formerly-occupied habitat. Rabbitsfoot mussels prefer shallow areas with sand and gravel along the bank and next to shoals, which provide a refuge in fast-moving rivers. They are found in 13 states from Pennsylvania to Oklahoma. Rabbitsfoot rely on approximately a dozen species of shiners for its larva (glochidia) host.

Bald Eagle and Migratory Birds

The Bald Eagle (*Haliaeetus leucocephalus*) is a raptor protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Activities that would disturb eagles are prohibited under the Bald and Golden Eagle Protection Act. "Disturb" means to agitate an eagle to the degree that causes or is likely to (1) cause injury, (2) interfere with breeding, feeding or sheltering behavior, or (3) nest abandonment. The bald eagle prefers large trees or high cliffs along large waterways for perching and nesting purposes. Fish is the preferred diet of eagles, but they also eat small mammals, waterfowl, turtles and dead animals. Preferred foraging areas include quiet coastal areas, rivers or lakeshores with large tall trees. Methods used to identify suitable habitat included investigations of waterbodies potentially used for foraging, large nesting or perching trees adjacent to such water features and other areas which Bald Eagles are known to use. Suitable habitat was identified within the project area, primarily associated with the adjacent reservoir. However, no Bald Eagles or nests were observed during project corridor surveys. The project is not expected to impact the Bald Eagle. Migratory bird species are protected under the Migratory Bird Treaty Act (MBTA) as amended. The MBTA prohibits the take of any migratory bird without authorization for the USFWS.

Eagle Environmental Consulting conducted the primary field surveys on March 15 and April 4, 2022. The action area habitats were evaluated using pedestrian transects to identify the different types of vegetative communities. Twenty (20) habitat assessment sample sites (HASS) were utilized to identify and describe the dominant habitats within the action area to determine if any of the federally-listed T&E species or their habitat were present. The descriptions for each are provided below. Soil characteristics were also investigated for confirmation of accurate mapping. Photographs of the project area are provided at *Appendix B*. Habitat assessment sample site locations are shown below on *Figure 2*.

Habitat Assessment Sample Site Descriptions

HASS 1 and 2 were associated with an existing parking lot.

HASS 3 is situated in the basin of a detention pond. The dominant vegetation includes Bermuda, clover, wild onion, henbit, crab grass. No suitable or preferred habitat was observed.

HASS 4 was associated with a mowed and maintained Bermuda grass border adjacent to the entrance road and parking lot. The dominant vegetation includes Bermuda and post oak trees. The area did not exhibit suitable habitat.

HASS 5 was located near the southeast property corner and was dominated by rose, blackberry, green brier, Bermuda, Johnson grass, and serecia lespedeza. Potentially suitable ABB habitat may be present on the adjacent property but not within the action area.

HASS 6 is situated amongst a mowed and maintained lawn of Bermuda and henbit. A man-made stormwater drainage bisects the assessment site but does not provide habitat for the listed species.

HASS 7 is situated on a large parking lot.

HASS 8 is situated at the intersection of Ross Street and the hospital entrance road. The dominant vegetation was comprised of Bermuda grass. No suitable habitat was observed.

HASS 9 is situated in an open field that is dominated by Bermuda grass and clover. Scattered post oak trees and eastern red cedar were observed in the general area which is described as similar to a park. A narrow, man-made waterway transitions across the park-type area but did not exhibit an intact riparian zone. No suitable habitat for the listed species was present.

HASS 10 is situated under a power line and the dominant vegetation includes clover and Bermuda grass. The area was not indicative of any preferred or suitable habitat required by the listed species.

HASS 11 is located at the southern hospital property perimeter adjacent to Ross Street and along buried and overhead utility lines. The dominant vegetation consisted of mowed and maintained Bermuda grass. Suitable T&E species habitat was not observed.

HASS 12 was associated with the terrestrial habitat along a facility entrance road from Ross Street. The overall area exhibited a gentle slope hillside area dominated by Bermuda grass and adjacent to an overhead power line corridor. Trees were present with the larger general area which would not be disturbed. No suitable habitat was observed.

HASS 13 is situated in a small valley used as a fill material storage area. The disturbed area was dominated by Bermuda grass. No suitable habitat was observed.

HASS 14 is situated between Lena Avenue and overhead/buried utility line corridor. Bermuda grass, wild garlic, Callary pear, and henbit were identified as the dominant plant species. No effective or undisturbed habitats were identified or would be affected within the proposed utility line corridor.

HASS 15 is situated in an open field next to an elevated parking lot that is stabilized by rubble and rip rap. A small man-made drainage ditch transitions along the utility corridor. The dominant vegetation includes barnyard grass, wild garlic, and Bermuda grass. While an ephemeral drainage was present within the utility corridor, no suitable T&E species habitat was observed or would be affected.

HASS 16 is situated at the edge of the beginning of residential properties. The dominant vegetation includes Bermuda, clover, and henbit.

HASS 17 is located in and transitions through residential property. No habitat present.

HASS 18 is located in a developed area with the dominant vegetation including henbit, Bermuda, and black oak. The area is mowed/maintained and did not exhibit suitable habitat.

HASS 19 is located in a mowed and maintained lot that is dominated by Bermuda grass and henbit. The park like setting did not exhibit suitable habitat for the listed species. Mature oak trees are present in the general area but would be affected or removed.

HASS 20 is located on the previously cleared utility line corridor adjacent to an undisturbed forest block dominated by black oak, sugarberry, coral berry, and green brier. A small stream transitions west of and beyond the proposed utility line installation corridor. Neither the trees or waterway would be affected. Suitable ABB habitat may be present in the adjacent areas.

4.0 ANALYSIS OF EFFECTS

4.1 Direct Effects

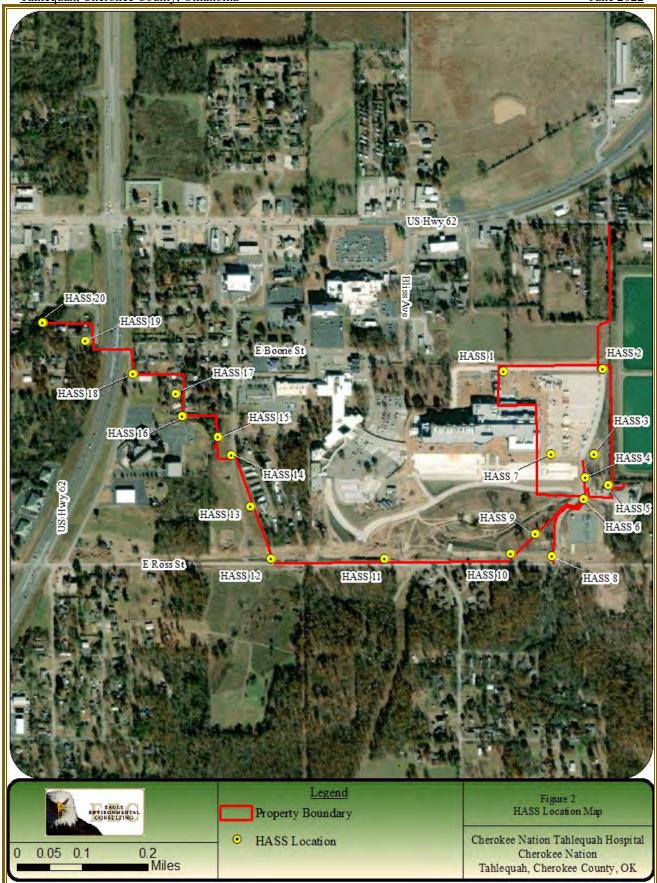
Direct effects within the action area would consist of temporary impacts associated with utility line installation associated with soil disturbance during trench excavation. Temporary impacts are anticipated adjacent to the trench corridor where excavated soils would be side-cast. Utility lines would be installed within the open trench and then backfilled. The disturbed corridor would be restored to pre-disturbance elevation, grade, and contour to the extent practical. The area of temporary disturbance would be 4 acres. The hospital and parking areas were previously disturbed and covered with impervious surfaces. No trees would be removed. Herbaceous vegetation would be re-established on disturbed soils upon project completion. Corridor mowing or herbicide application may occur on an infrequent basis after project completion. Water quality impacts will be avoided to the extent possible and terrestrial erosion/sedimentation control measures will be employed as required. Specific surveys for the federally listed T&E species were not conducted as part of this assessment.

4.2 Indirect Effects

No other development associated with proposed project is expected. Increased public use of the expanded lease area is expected. Increased public use and construction of the proposed features may temporarily affect wildlife use and/or patterns within the action area. However, most indigenous and/or migratory species present or utilizing the action area are expected to adapt to those areas of modified landscape over time. No uses or projects are anticipated that would be tangential to the proposed. Provided no additional habitat disturbances are undertaken, the proposed project should have no indirect effects on the listed species other than described.

4.3 Interrelated and Interdependent Actions and Activities

This biological assessment addressed the potential impacts to regulated species associated with the proposed project. No immediate interrelated or interdependent actions are expected or planned as the result of the proposed project.



5.0 CONCLUSION

Threatened and Endangered Species Determination of Effect Rationale

Species occurrence records were requested from the ONHI. Occurrence records were recorded for the American Burying Beetle, Neosho Mucket, and Bald Eagle within their standard search radii but none were reported within or near the action area. The Species Conclusion Table (*Table 2*) below provides the potential effect determination to each of the federally-listed species:

Northern long-eared bat - No Effect. Suitable roost trees and foraging habitat are not present within or adjacent to the action area. The project would also employ the USFWS protective measures and standard best management practices would be employed during construction activities. This species should or will have migrated to winter hibernacula during the fall/winter periods of proposed utility line clearing and grubbing activities.

Gray bat - No Effect. No habitats for this species would be affected and no known caves are present within or near the action area. The project would also employ the USFWS protective measures and standard best management practices would be employed.

Ozark big-eared bat - No Effect. No known caves harboring this species are present within or near the project area. Suitable foraging habitat for this species is not present. No known caves are present within or near the action area.

American Burying Beetle - Potential suitable habitat for the ABB was identified beyond the disturbance zones of the proposed action. The action area has been previously disturbed, potentially suitable habitat was not present, and the project area is wholly located outside the established designated location lands.

Neosho Mucket, *Rabbitsfoot Mussel*, *Piping Plover*, *Red Knot*, *Monarch Butterfly* – No Effect. Suitable habitat not present. No individuals observed.

Table 2 - Species Conclusion Table				
Species/Critical Habitat	ecies/Critical Habitat Evaluation		ESA Determination	
Neosho Mucket	No Suitable Habitat Present. No presence records.	Not Required	No Effect	
Rabbitsfoot Mussel	No Suitable Habitat Present. No presence records.	Not Required	No Effect	
Northern Long-eared Bat	Roost trees and foraging habitat not present within or adjacent to action area.	Not Required	No Effect	
Gray Bat	No Caves Present. Potentially Suitable foraging habitat not present. Stormwater and water quality measures to minimize impacts will be employed during utility construction.	Not Required	No Effect	
Ozark Big-eared Bat	No Caves Present. No foraging habitat present No known caves within or near action area.	Not Required	No Effect	
Piping Plover	Piping Plover Suitable habitat not present. No individuals observed.		No Effect	
Red Knot Suitable habitat not present. No individuals observed.		Not Required	No Effect	

Table 2 - Species Conclusion Table				
Species/Critical Habitat	Habitat Evaluation	USFWS Consultation	ESA Determination	
American Burying Beetle	Suitable habitat not present in action area. Surveys not required.	Not Required	No Effect	
Monarch Butterfly	Suitable forage habitat not present. No host plant species observed. No individuals observed.	Not Required	No Effect	

Bald Eagle

No potential or suitable habitat was identified within the action area for the bald eagle. This species is generally associated larger ponds, creeks, and rivers. No bald eagles or nests were observed during the site visit. This project is not expected to impact the bald eagle.

Migratory Birds

Suitable nesting habitat is present within and/or adjacent to the utility line corridors. However, no bird nests were observed within the area planned for the proposed action. No active swallow nests were observed within the action area. Construction is encouraged to occur between August 15 and March 31 to avoid the nesting season to avoid potential impact to migratory birds. Suitable habitat for non-migratory ground nesting birds is also present and construction is encouraged to occur during the same time frame. Provided construction can be conducted within the non-nesting season, no adverse effects are anticipated to non-migratory birds.

6.0 REFERENCES

Natural Resources Conservation Service. 2022. Web Soil Survey.

Oklahoma Climatological Survey. 2021.

Oklahoma Natural Heritage Inventory. 2022. Species Occurrence Records.

United States Fish and Wildlife Service. 2022. Information, Planning, and Conservation (IPAC) decision support system.

United States Fish and Wildlife Service. 2022. ABB Section 4(d) Rule Determination Key.

United States Fish and Wildlife Service. 2022. NLEB Section 4(d) Rule Streamlined Consultation Form.

United States Fish and Wildlife Service. 2020. Monarch Butterfly Species Status Assessment.

Woods, A.J., J.M. Omernik, D.R. Butler, J.G. Ford, J.E. Henley, B.W. Hoagland, D.S. Arndt, and B.C. Moran. 2005. Ecoregions of Iowa and Missouri (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (scale 1:1,250,000).

APPENDIX A OFFICIAL SPECIES LIST (IPAC) & ONHI OCCURENCE RECORDS



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Oklahoma Ecological Services Field Office 9014 East 21st Street Tulsa, OK 74129-1428 Phone: (918) 581-7458 Fax: (918) 581-7467

In Reply Refer To: June 02, 2022

Project Code: 2022-0049521

Project Name: Cherokee Nation Tahlequah Hospital

Subject: List of threatened and endangered species that may occur in your proposed project

location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Oklahoma Ecological Services Field Office 9014 East 21st Street Tulsa, OK 74129-1428 (918) 581-7458

Project Summary

Project Code: 2022-0049521

Event Code: None

Project Name: Cherokee Nation Tahlequah Hospital

Project Type: Water Supply Pipeline - New Constr - Below Ground

Project Description: Construct New Hospital and parking area along with installation of utility

lines.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@35.9108379,-94.9459697715561,14z



Counties: Cherokee County, Oklahoma

Endangered Species Act Species

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Gray Bat <i>Myotis grisescens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6329	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened
Ozark Big-eared Bat <i>Corynorhinus</i> (= <i>Plecotus</i>) townsendii ingens No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7245	Endangered

Birds

NAME	STATUS
Piping Plover <i>Charadrius melodus</i>	Threatened
Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except	
those areas where listed as endangered.	
There is final critical habitat for this species. The location of the critical habitat is not available.	

Threatened

Red Knot Calidris canutus rufa

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.

Species profile: https://ecos.fws.gov/ecp/species/1864

Species profile: https://ecos.fws.gov/ecp/species/6039

Clams

NAME STATUS

Neosho Mucket Lampsilis rafinesqueana

Endangered

There is **final** critical habitat for this species. The location of the critical habitat is not available.

Species profile: https://ecos.fws.gov/ecp/species/3788

Rabbitsfoot Quadrula cylindrica cylindrica

Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.

Species profile: https://ecos.fws.gov/ecp/species/5165

Insects

NAME STATUS

American Burying Beetle *Nicrophorus americanus*

Threatened

Population: Wherever found, except where listed as an experimental population

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/66

Monarch Butterfly Danaus plexippus

Candidate

No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the <u>National Wildlife Refuge</u> system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

06/02/2022

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described <u>below</u>.

- 1. The Migratory Birds Treaty Act of 1918.
- 2. The Bald and Golden Eagle Protection Act of 1940.
- 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

BREEDING

NAME	SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Black-billed Cuckoo <i>Coccyzus erythropthalmus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10

NAME	BREEDING SEASON
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Kentucky Warbler <i>Oporornis formosus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12

Dear Mr. Votaw, Feb. 4, 2022

We have reviewed occurrence information on federal and state threatened, endangered or candidate species, as well as non-regulatory rare species and ecological systems of importance currently in the Oklahoma Natural Heritage Inventory database for the following location you provided:

Sec. 33-T17N-R22E, Cherokee County

We found 14 occurrence(s) of relevant species within the vicinity of the project location as described.

Species Name	Common Name	Federal Status
Nicrophorus americanus	American burying beetle	Threatened
County	TRS	Count
Cherokee	Sec. 9-T16N-R22E	1
Lampsilis rafinesqueana	Neosho Mucket	Endangered
County	TRS	Count
Cherokee	Sec. 1-T16N-R22E	1
Cherokee	Sec. 12-T17N-R22E	2
Cherokee	Sec. 24-T17N-R22E	1
Cherokee	Sec. 25-T17N-R22E	1
Cherokee	Sec. 26-T17N-R22E	1
Haliaeetus leucocephalus	Bald Eagle	Protected
County	TRS	Count
Cherokee	Sec. 1-T17N-R22E	1
Cherokee	Sec. 12-T17N-R22E	2
Cherokee	Sec. 35-T17N-R22E	4

Additionally, absence from our database does not preclude such species from occurring in the area.

If you have any questions about this response, please send me an email, or call us at the number given below.

Although not specific to your project, you may find the following links helpful.

ONHI, guide to ranking codes for endangered and threatened species: http://www.oknaturalheritage.ou.edu/content/biodiversity-info/ranking-guide/

Information regarding the Oklahoma Natural Areas Registry: https://okregistry.wordpress.com/

Todd Fagin Oklahoma Natural Heritage Inventory (405) 325-4700 tfagin@ou.edu

APPENDIX B

HABITAT ASSESSMENT AREA PHOTOS



HASS-1



HASS-2



HASS-3



HASS-4



HASS-5



HASS-6



HASS-7



HASS-8



HASS-9



HASS-10



HASS-11



HASS-12



HASS-13



HASS-13



HASS-14



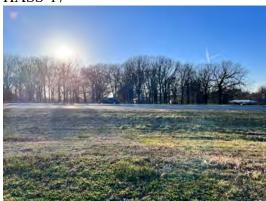
HASS-15



HASS-16



HASS-17



HASS-18



HASS-19



HASS-20



HASS-20

APP	ENDIX E
PHASE I ENVIRONME	ENTAL SITE ASSESSMENT







Cherokee Nation Tahlequah Hospital, Parking Areas &Utility Lines Tahlequah, Cherokee CO, Oklahoma

Prepared for:

Cherokee Nation 206 East Allen Road Tahlequah, OK 74464

and

Childers Architect 45 South 4th Street Fort Smith, AR 72901

Prepared by:



P.O. Box 335 Vinita, Oklahoma 74301

9 North 9th Street Fort Smith, Arkansas 72901

June 2022

Steven R. Votaw President

tung R. Valan

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Cherokee Nation Tahlequah Hospital Tahlequah, Cherokee County, Oklahoma

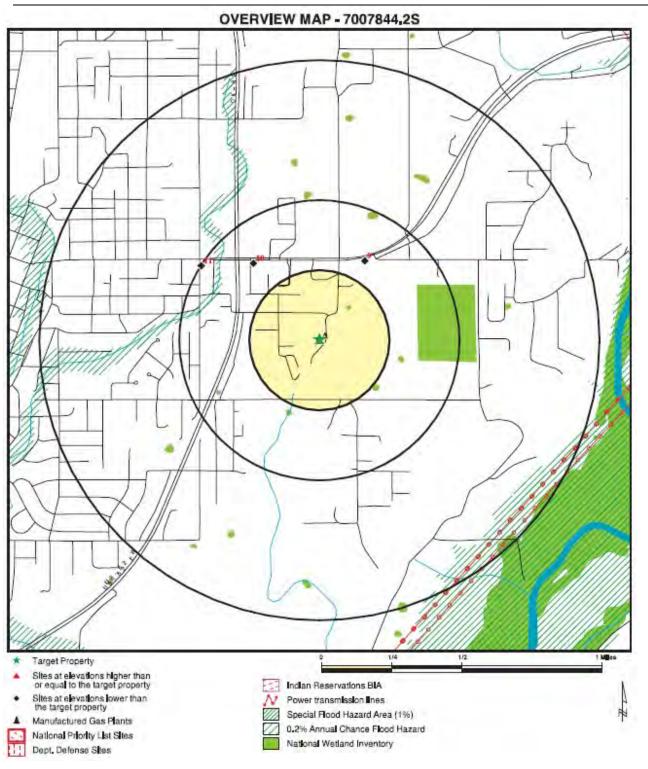
EXECUTIVE SUMMARY

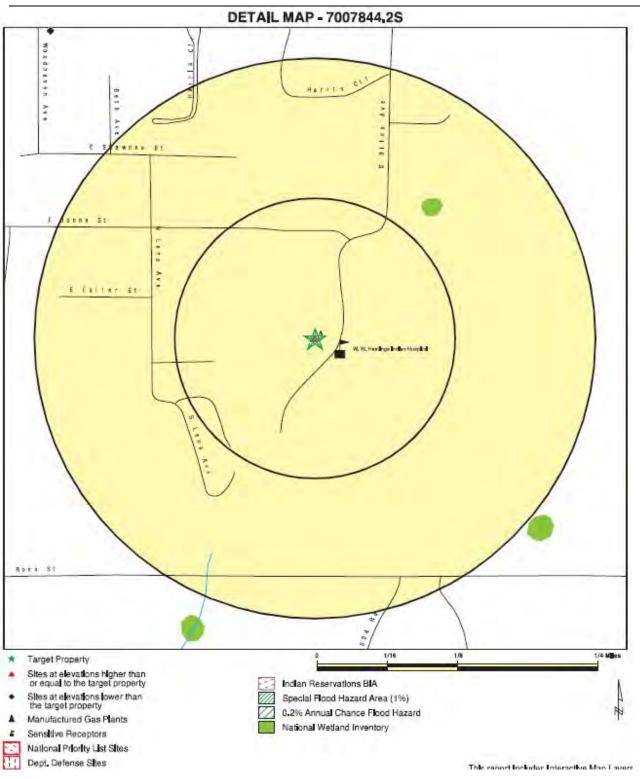
- On June 6, 2022 Environmental Data Resources provided the current environmental regulatory database information in accordance with ASTM 1527-21 search distances.
- On March 16, 2022, a field survey was conducted by Sean Votaw of Eagle Environmental Consulting (EEC).
- No Recognized Environmental Conditions (REC's), Controlled Recognized Environmental Conditions (CRECs), or Historical Recognized Environmental Conditions (HRECs) associated with the Subject Property and/or surrounding properties were identified, observed, or reported as present on or adjacent to the subject property which may pose a potential liability.
- The results of environmental records search identified within the federal/state databases are provided below:

Target Property Address: 100 SOUTH BLISS AVE TAHLEQUAH, OK 74464

Click on Map ID to see full detail.

MAP	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	W.W. HASTINGS HOSPIT	100 S BLISS	INDIAN UST, ECHO		TP
A2	WW HASTINGS HOSPITAL	100 S BLISS	UST		TP
A3	WW HASTINGS HOSP	100 S BLISS	RCRA NonGen / NLR, FINDS		TP
A4	CHEROKEE NATION OSU	100 BLISS AVENUE	ECHO		TP
A5	CHEROKEE NATION OSU	100 BLISS AVENUE	FINDS		TP
A6	W.W. HASTINGS HOSPIT	100 S. BLISS AVE	US BROWNFIELDS		TP
A7		100 S. BLISS AVENUE	ERNS		TP
A8		100 SOUTH BLISS AVE	ERNS		TP
9	E-Z MART #4366	1600 E DOWNING ST	LUST, UST, HIST UST	Lower	1723, 0.326, NNE
10	BIG B FOOD & DELI #2	1100 E. DOWNING	LUST, UST, HIST UST	Lower	1910, 0.362, NW
11	MARY'S LIQUOR MART	902 E DOWNING ST	LUST, UST, HIST UST	Lower	2633, 0.499, WNW





1.0 INTRODUCTION

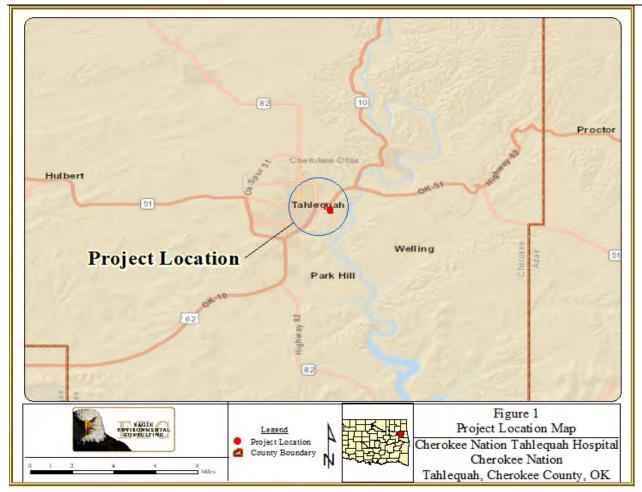
1.1 Purpose

The purpose of the Phase I Environmental Site Assessment (ESA) was to identify any recognized environmental conditions (REC's) present on or adjacent to the subject property which may pose a potential liability. Additionally, this Phase I ESA was conducted to identify Controlled Recognized Environmental Conditions (CRECs) and Historical Recognized Environmental Conditions (HRECs) associated with the Subject Property and/or surrounding properties. Per new standards. The term recognized environmental conditions (REC) means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to any release to the environment under conditions indicative of a release to the environment or under conditions that pose a material threat of a future release to the environment. The term is not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not considered recognized environmental conditions. The intent of the assessment was to satisfy one of the requirements necessary to qualify for the innocent landowner defense against liability under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) constituting all appropriate inquiry.

1.2 Terms and Conditions

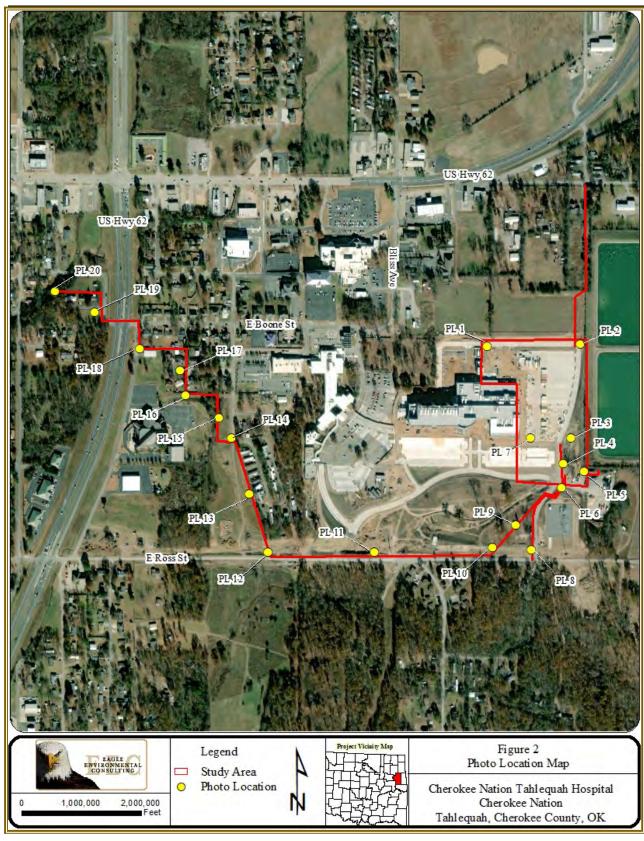
Eagle Environmental Consulting, (EEC) performed a Phase I ESA on approximately 20 acres of land primarily associated with the Cherokee Nation hospital and parking area as well as the proposed water and wastewater utility line corridors. The general assessment area consisted of previously developed health care facilities, attendant parking area, roads, and residential development in Tahlequah, Cherokee County, Oklahoma. The property is located in Section 27, Township 17 North, Range 22 East. **Figure 1** shows the general assessment areas. **Figure 2** depicts the target properties and recorded photograph locations.

The ASTM Standard Practice E 1527-21, entitled, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, was used as guidance to conduct the Phase 1 ESA for the property and adjacent areas to identify areas of environmental concern. The use of ASTM E 1527-21 is in compliance with the Environmental Protection Agency (EPA) All Appropriate Inquiries Final Rule. The Phase I ESA was conducted and a report prepared for the sole use by the Client. EEC will keep confidential and not disclose to any person or entity, without prior written consent of the Client, any data or information generated in conjunction with the performance of the Phase I ESA. Provisions of confidentiality shall not apply to data or information obtained from the public domain or acquired from third parties not under obligation to the Client for confidentiality.



1.3 Limitations and Exceptions

This Phase I ESA is not a comprehensive property characterization and should not be construed as such. The findings and opinions conveyed via this Phase I ESA are based on information obtained from a variety of sources identified herein, which EEC believes to be reliable. However, EEC has no control over regulatory databases, agency information releases, testing and analysis services, interviewed personnel response, or third party generated information, and therefore, disclaims any responsibility for errors and omissions arising therefrom. The conclusions set forth in this report are limited by the data presented in this report and the limited investigation performed by EEC under the Phase I ESA. Since the development of this Phase I ESA did not involve the sampling of soil, rock, groundwater, surface water, or air; it is, therefore, not possible to confirm the presence or absence of toxic or hazardous substances, waste or materials in the environments associated with the property. The photographs and maps included within this Phase I ESA are presented for the purpose of assisting the reader in visualizing the property. The findings of this report are valid as of the date of the investigation. However, changes in the conditions of the property can occur with the passage of time, whether due to natural processes or anthropogenic activities on this or adjacent properties. In addition, changes in applicable appropriate standards may occur resulting from legislation, broadening of knowledge, or other reasons.



EEC assumes no responsibility to monitor any changes at the property or to advise if there are any changes as to what constitute hazardous materials substances or petroleum products. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside of EEC control. EEC does not claim responsibility for any incorrect information that may have been supplied by agencies, organizations or individuals that may be included in the findings of this report. EEC cannot be held liable due to remote and rugged property setting, complete visibility of all portions of said property could not be observed and any REC's that may not be visible.

This Phase 1 ESA does not address the other environmental concerns that do not fall within the ASTM's definition of recognized environmental conditions. Examples of other environmental concerns that do not fall under ASTM recognized environmental conditions include:

- Asbestos-containing materials (ACM) in structures on the property.
- Lead-based paint on structures on the property.
- Regulatory restrictions related to wetlands, aquifer recharge zones, endangered species habitats, or other environmentally sensitive settings.
- Health and Safety.
- Cultural and historic resources.

1.4 Assessment Methods

The Phase I ESA consisted of the following components:

- Records Review Review of records that are a matter of public record regarding facilities associated
 with the Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response,
 Compensation and Liability Act (CERCLA), the EPA Emergency Response Notification System
 (ERNS), Toxic Release Inventory System (TRIS), underground storage tanks (USTs), leaking
 underground storage tanks (LUSTs) and permitted solid waste disposal and processing facilities.
- **Site Reconnaissance** Property visit to document the present surface conditions, physical characteristics and general appearance of the property and to examine all outdoor areas of the subject property looking for evidence of environmental impact, degradation and potential environmental hazards.
- Interviews Interviews with present owners, past owners, and occupants of a property, in addition to state and/or local government officials is required by this standard practice to obtain information indicating recognized environmental conditions in connection with the property.
- **Assessment Report** The preparation of a Phase I ESA report that documented observations and information collected about the property and to present findings and recommendations. This study did not include a subsurface investigation.

2.0 GENERAL SITE SETTING

2.1 Current Use of the Property

The property under assessment includes approximately 20 acres of land that has been previously developed by healthcare facilities, parking areas, and utility line infrastructure installation. The majority of the assessment area is developed and/or has been previously disturbed. Representative photographs of the property are provided in **Appendix A**.

2.2 Past Use of the Property

Historical aerial imagery and limited familiarity of the target properties were utilized to discern previous land usage. Past property use includes undeveloped lands presumably used for livestock grazing, healthcare facility construction, parking area development, and utility line installation.

2.2.1 Historical Aerial Photography and Topographic Maps

Aerial photography was reviewed and provided by Environmental Data Resources (EDR) for dates provided below. Historical photographs and topographic maps are provided in **Appendix B**.

Photo Year	Land Use	Comments/Remarks/Changes
1938	Undeveloped	The target property appears to have been undeveloped and part of rural agriculture operation.
1971	Developed	Between 1938 and 1971 it appears that parts of the assessment area have been developed into residential areas.
1973	Developed	There was no obvious change to the target property between 1971-1973.
1980	Developed	It appears that sanitary lagoons east of the target property were constructed between 1973-1980.
1995	Developed	Between 1980-1995, it appears that some residential development has taken place, as well as, some commercial buildings constructed.
2006	Developed	Residential additions developed between 1995-2006.
2010	Developed	There was no change to the target property between 2006-2010.
2013	Developed	There was no change to the target property between 2010-2013.
2017	Developed	Construction activities appear to have occurred on the target property between 2013-2017.

2.2.2 City Directories

A city directory search was not acquired for the target property from EDR due to understood current land ownership of the assessment area.

2.2.3 Sanborn Maps

The Sanborn library collection was searched for fire insurance map coverage. The property was not found within the holdings of the Sanborn Library collection. Sanborn documentation is provided in **Appendix C**.

2.3 Current Uses of the Adjoining Property

The target property is bordered on the north by a small tract of undeveloped land, as well as, residential areas and businesses. To the east, the target property is bordered by what appears to be a waste water treatment lagoon. The upper west adjoining property is a cemetery and a parking area for the Cherokee Nation Outpatient Health Clinic (CNOHC). The west adjoining property - the Cherokee Nation Outpatient Health Center. The south adjoining property is woodlands and residential areas.

2.4 Past Uses of the Adjoining Property and Surrounding Areas

Aerial photography was obtained from EDR and provided in Appendix B.

Photo Year	Land Use	Comments/Remarks/Changes
1938 - 2017	Undeveloped/ Developed	The surrounding properties in all cardinal directions exhibit tribal, residential and/or commercial construction between 1938-2017 with the majority of growth between 1973-2006.

2.5 General Description of Structures

The Cherokee Nation Hospital and appurtenant features observed within the target property appear to consist of new (or very recent) construction. Residential structures adjacent to the assessment areas appear to vary in age potentially dating between the 1970's to early 2000's. No structures were observed within the utility line corridors.

2.6 Roads

Access to the target property is provided from Bliss Avenue along the western property perimeter and from Ross Street along the southern property boundary, both of which are asphalt paved. Existing road infrastructure

is present at and adjacent to the hospital property/parking areas. Access roads thereto are also present and consisted of asphalt residential streets. Roads or streets in proximity to the utility line corridors were comprised of asphalt and gravel.

2.7	Potable Water Supply
X	Potable water supply provided by the city of Tahlequah.
	Potable water supply provided by private water well.
	Potable water supply is not provided with this property.
2.8	Sewage Disposal System
x	The sewage disposal is connected to a city of Tahlequah municipal sanitary system.
	Sewage disposal is connected to a septic system with a lateral field.
	No sewage disposal system is associated with the evaluated property.
3.0	USER PROVIDED INFORMATION

3.1 Title Records

The user of the Phase 1 ESA is the Cherokee Nation. No other title records were obtained.

3.2 Environmental Liens or Activity and Use Limitations

Based on the search of state and federal environmental database records conducted by EDR, no liens or use limitations were identified associated with the property (See Appendix E).

3.3 Specialized Knowledge

The current user provided no information. However, the Cherokee Nation employs certified and approved health and safety protocols and measures relative to storage and use of potentially hazardous materials consistent with safe use, handling, and storage.

3.4 Commonly Known or Reasonably Ascertainable Information

The user or owner evaluates, documents and retains ascertainable information as part of their health and safety management program and protocols.

3.5 User Provided Response to Questionnaire

The All-Appropriate Inquiries user questionnaire was requested but not received from the user.

4.0 RECORDS REVIEW

4.1 Standard Environmental Record Sources

On June 7, 2022, Environmental Data Resources, Inc. (EDR) conducted a search of state and federal environmental database records. The searches met the specific requirements of ASTM Standard Practice for Environmental Site Assessments. The target property was not listed in any of the databases searched by EDR. The information obtained from the EDR database search is found in **Appendix E**.

4.1.1 Federal CERCLIS/ SEMS List

The Superfund Enterprise Management System (SEMS) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly known as CERCLIS, renamed to SEMS by the EPA in 2015. The Superfund program was created to protect citizens from the dangers posed by abandoned or uncontrolled hazardous waste sites. In 1980, Congress established the Superfund program by passing the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Information System (CERCLIS) which provides the Federal government the authority to respond to hazardous substance emergencies, and to develop long-term solutions for the nation's most serious hazardous waste problems. The CERCLIS database contains information on hazardous waste sites, potentially hazardous waste sites and remedial activities conducted across the nation.

X	No SEMS sites were identified within ½ mile of the property.		
	SEMS site(s) were identified within ½ mile of target property.		
4.1.2	National Priorities List (NPL)		
The National Priorities List identifies "Superfund" sites that have had documented contamination. The CERCLIS database includes sites that are on the NPL or being considered for the NPL.			
X	No NPL sites were identified within ½ mile of the property.		
	NPL sites were identified within ½ mile of the property.		
4.1.3	Delisted NPL Sites		
	listed National Priorities List identifies "Superfund" sites with documented contamination that have tisfactorily resolved, cleaned, removed, and/or closed according to specified state/federal regulatory ments		
X	No Delisted NPL sites were identified within ½ mile of the property.		
	Delisted NPL sites were identified within ½ mile of the property.		
4.1.4	CERCLIS No Further Remedial Action Planned Site		
	ally hazardous waste sites that have been assessed and require no further remedial action planned P) have been removed from CERCLIS.		
X	No CERCLIS NFRAP sites were identified within ½ mile of the property.		

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT
CERCLIS NFRAP sites were identified within ½ mile of the property. See Section 4.1.1 for details.
4.1.5 Resource Conservation and Recovery Act (RCRA) CORRACTS Facilities
Facilities that store, treat, or dispose of hazardous waste are responsible for investigating and cleaning their facilities. The EPA refers to this clean-up requirement as corrective action. The USEPA Corrective Action Report (CORRACTS) identifies hazardous waste handlers with RCRA corrective action activity.
No RCRA CORRACTS Facilities were identified within ½ mile of the property.
RCRA CORRACTS Facilities were identified within ½ mile of the property.
4.1.6 RCRA Non-CORRACTS Treatment, Storage, and Disposal Facilities
This database includes selective information on sites which transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act. TSD's are facilities that treat, store, or dispose of hazardous waste.
X No RCRA Non-CORRACTS Facilities were identified within ½ mile of the property.
RCRA Non-CORRACTS Facilities were identified within ½ mile of the property.
4.1.7 RCRA Generators List
RCRAInfo is the Environmental Protection Agency's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.
No RCRA Generators were identified within ½ mile of the property.
RCRA Non-Generators were identified within the target property associated with the existing facility. No violations or non-compliance issues were identified or reported.
4.1.8 Federal, State, and Tribal Institutional Controls/Engineering Control Registries
Institutional controls are legal or administrative measures that limit human exposure to hazardous waste or hazardous constituents. Examples include use control areas, easements, zoning restrictions, and deed notices. They are intended to bolster the integrity of remedies and minimize the potential exposure to contamination by limiting land or resource use. Institutional controls are typically used any time contaminants are left in place at cleanup levels that are based on restricted site uses. In addition, institutional controls may be required during implementation of a remedy that will eventually achieve unrestricted site use cleanup levels but will take a long time, for example, for sites undergoing long term groundwater remediation and sites where a monitored natural attenuation remedy is approved. Institutional controls are generally used in conjunction with, rather than in lieu of, engineering measures, such as waste treatment or containment.
X No sites with institutional or engineering controls were identified on the property.

	PHASE 1 ENVIRONMENTAL SITE ASSESSMENT
	Sites with institutional or engineering controls were identified on the property.
4.1.9	Emergency Response Notification System (ERNS) List
informa States a contact	S. EPA Emergency Response Notification System (ERNS) is a computer database containing ation on release notifications of oil and hazardous substances that have occurred throughout the United and have been reported to the National Response Center (NRC). The NRC is the sole federal point of for reporting oil and chemical spills. Releases are recorded when they are initially reported to the government by any party.
	No known reported releases of oil or hazardous substances were identified for this property.
X	Two (2) reported releases of oil or hazardous substances were identified for this property. Diesel fuel releases were reported by a private entity. Approximately 260 gallons of fuel were released during filling operation. Fire department was contacted, spill cleaned, and impact site was cleaned. No further action was required.
4.1.10	State and Tribal Equivalent NPL and CERCLIS
X	No state or Tribal NPL equivalent sites were identified within 1 mile of the property and no CERCLIS equivalent sites were identified within $\frac{1}{2}$ mile of the property.
	State or Tribal NPL equivalent sites were identified within 1 mile of the property.
4.1.11	Tribal Landfills or Solid Waste Disposal Sites
X	No Tribal permitted solid waste disposal or processing facilities were located on or within a $\frac{1}{2}$ mile radius of the property.
	Tribal permitted solid waste disposal or processing facilities were located on or within a $\frac{1}{2}$ mile radius of the property.
4.1.12	State Landfill or Solid Waste Disposal Sites
х	No State landfill or solid waste disposal or processing facilities were located on or within a $\frac{1}{2}$ mile radius of the property.
	State landfill or solid waste disposal or processing facilities were located on or within a ½ mile radius of the property.

4.1.13 State and Tribal Registered Underground Storage Tanks (UST)

The Oklahoma Department of Environmental Quality (ODEQ) enforces state and federal regulations and administers certain assistance programs applicable to the storage, quality, and delivery of refined petroleum products (i.e., gasoline and other fuels) and records information on the release of petroleum products. EDR was used to identify the location of any underground (UST), aboveground (AST) or leaking underground storage tanks (LUST). Tanks were identified or recorded at the target property. No monitoring wells were identified.

Owner Name	Facility ID	Capacity (gal)	Contents	Installed	Closed	Identified Issues	Current Status
WW Hastings Hospital	1157118	6000	Diesel	Unknown	11/15/2012	None	Permanently Removed

Hospital Removed	WW Hasting	1157118	8000	Antifreeze	Unknown	11/15/2012	None	Permanently
	Hospital							Removed

Date of Regulatory Agency Inquiry:	June 7, 2022	Source:	EDR	Agency:	ODEQ
------------------------------------	--------------	---------	-----	---------	------

4.1.14 State and Tribal Leaking Underground Storage Tanks (LUST)

The EDR database was searched to identify the location of any leaking underground storage tanks within the standard search radii.

X	No LUST's were located on or within the subject property. Three LUST records were reported by EDR along U.S. Highway 62 north of the target property. All sites are situated at lower elevation.
	LUST's were located on or within the subject property.
	LUST's were located within 1/8 mile of the target property.

4.1.15 State and Tribal Voluntary Cleanup (VCP) Sites

The voluntary cleanup program provides an opportunity for private parties and government entities to clean up properties that may be contaminated. Sites within the program can range in size and contain single or multiple sources of contamination.

X	No VCP sites were identified within a $\frac{1}{2}$ mile of the subject property.
	VCP sites were identified within a ½ mile of the subject property.

4.1.16 State and Tribal Brownfields Sites

Brownfields are defined by Oklahoma law as abandoned, idle or underused industrial or commercial facilities or other real property at which expansion or redevelopment of the real property is complicated by environmental contamination caused by regulated substances. Documentation provided by EDR is located in **Appendix E**.

X	Brownfields sites were identified within adjacent to the subject property. Four parcels were reported in
	the vicinity of the target property associated with the existing W.W. Hastings Hospital. No issues or
	concerns were reported or identified

No Brownfields sites were identified within a ½ mile of the subject property.

4.2 Physical Setting Sources

4.2.1 Topographic/Hydrologic/Geologic/Hydrogeologic Conditions

The property is located on the Tahlequah, OK 7.5-minute USGS topographic map. Elevation at the property is approximately 895 ft. Surface water runoff flows generally west. The property is underlain by Paleozoic era, Mississippian system, Osagean and Kinderhookian series rock. The soil compositions are made of Clarksville stony silt loam (somewhat excessively drained), Tonti gravelly silt loam (moderately well drained), Clarksville very gravelly silt loam (somewhat excessively drained), Captina silt loam (moderately well drained), Britwater gravelly silt loam (well drained), and Britwater silt loam (well drained).

5.0 SITE RECONNAISSANCE

5.1 Property Observations

On March 16th, 2022, Sean Votaw of EEC performed the site reconnaissance survey at the target property. The hospital and parking areas were described as a mostly developed area that transitions through mowed and maintained areas. No oil or gas wells were observed. There were a few small areas of solid material dumping were observed along the sanitary system utility line corridor but did not evidence and RECs. The property to the north and northwest is developed as part of a housing development and a church. Bordering the south was undeveloped forest land and a few private residences. To the east the area is used a sanitary water treatment plant. No RECS were observed.

5.1.1	Hazardous Substances and Petroleum Products in Connection with Identified Uses
X	No petroleum products or hazardous substances were observed at the subject property.
	Petroleum products or hazardous substances were observed at the subject property.
5.1.2	Other Storage Tanks
X	No other storage tanks were observed at the subject property.
	Other storage tanks were observed at the subject property.
5.1.3	Odors
X	No odors or vapors were identified at the target property.
	Odors or vapors were identified at the subject property adjacent to the used oil drums.
5.1.4	Pools of Liquid
X	No pools of liquid or hazardous or petroleum substances were observed at the target property.
	Pools of liquid or hazardous or petroleum substances were observed at the target property.
5.1.5	Drums
Х	No drums were identified within the target property.
	Drums were identified within the subject property. Investigation showed them to be empty.
5.1.6	Hazardous Substance and Petroleum Products Containers
X	No hazardous substances or containers were observed at the target property.

	PHASE I ENVIRONMENTAL SITE ASSESSMENT
	Hazardous substances or containers were observed at the target property.
5.1.7	Unidentified Substance Containers
X	No unidentified substance containers were observed at the target property.
	Unidentified substance containers were observed at the target property.
5.1.8	PCB's
to the T	orinated Biphenyls (PCBs) were used as a dielectric fluid in transformers, capacitors, and ballasts prior oxic Substance Control Act of 1976. The EPA banned further manufacture of equipment containing in 1979.
	No transformers, capacitors, ballasts were observed at the subject property.
Х	Transformers were observed at the adjacent property but no leakage was observed. No PCB materials reported to be used in transformers or at the target property.
5.2	Interior Observations
5.2.1	Heating/Cooling
X	There is no obvious energy source at the target property.
	Heating and cooling equipment was not identified at the target property.
5.2.2	Stains or Corrosion
X	No obvious areas of staining and/or corrosion were observed at the target property.
	Minor rust staining was observed.
5.2.3	Drains and Sumps
X	No drains, sumps, or storm drains were observed at the target property.
	Drains, sumps, or storm drains were observed at the target property.
5.3	Exterior Observations
5.3.1	Pits, Ponds, or Lagoons
X	No pits or lagoons were observed at the target property. However, wastewater treatment lagoons were observed adjacent to and east of the target property. No issues were identified.
X	Pits, ponds, or lagoons were observed adjacent to the subject property.
5.3.2	Stained Soil or Pavement
x	No stained soils or pavement was observed at the subject property.
DILLOT	TO

	Stained soils or pavement was observed at the subject property.
5.3.3	Stressed Vegetation
X	No stressed vegetation was observed at the subject property.
	Stressed vegetation was observed at the subject property.
5.3.4	Solid Waste
	No trash and/or refuse receptacles were observed at the subject property.
X	Solid waste receptacles were observed on the northern portion of the property.
5.3.5	Wastewater
X	No wastewater was observed at the subject property.
	Wastewater was observed at the property.
5.3.6	Wells
The Ol	lahoma Water Resources Board groundwater wells standards and protection interactive mapping was don February 21, 2021. No water well locations were identified at the property on interactive mapping. Idahoma Corporation Commission Website Data Miner was used to search for oil and gas locations at perty. No wells were observed that related to the property. No oil and gas wells were observed at the y. The EDR radius report did not report any water wells or oil and gas wells at the property. Water wells were identified at the property associated with the UST detection system. Water wells were identified. No water wells were identified at the property. Multiple water wells were reported within the search radii.
X	No oil and gas wells were identified within the subject property.
	Oil and gas wells were identified.
	Septic System 992, the Oklahoma Department of Environmental Quality (ODEQ) has been the reservoir for recordsing to septic systems that was transferred from the Department of Health. No septic systems were identified within the subject property. A septic system was identified by the owner.

5.3.8 Asbestos Containing Material

No structures were observed on the property. No demolition activities are proposed.

5.3.9 Lead Based Paint

Lead is a soft, bluish metallic element that has been used in a wide variety of products. According to EPA, paint manufacturers frequently used lead as a primary ingredient in many oil-based interior and exterior house paints through the 1940s and gradually decreased its use in the 1950s and 1960s as latex paints became more widespread. The federal Department of Housing and Urban Development (HUD) estimated that 75 % of the houses built in the United States before 1978 contain some lead-based paint. Lead from paint, chips, and dust can pose health hazards if not properly managed. The Consumer Product Safety Commission (CPSC) prohibited use of lead in paint for residential use in 1978 in concentrations greater than 0.06 percent lead by weight. It should be noted that the use of LBP in commercial and industrial buildings and has not been prohibited. Painted surfaces at the property may contain lead-based paint.

6.0 INTERVIEWS

6.1. Current Owner

No specific interviews were conducted with the owner. The Cherokee Nation environmental department provided a previously prepared Phase I ESA for the adjacent property to the north. No issues or concerns were identified from the Phase I ESA completed for the adjacent property and none were identified or expressed by the Cherokee Nation relative to the subject property. EEC contacted Capt. Enlow with City of Tahlequah Fire Department by phone. One electrical outlet fire call was recently completed at the W.W. Hastings Hospital. No hazardous material response calls were reported for the subject property. Two diesel spills were responded to which occurred at the Hastings Hospital approximately 7 plus years ago. The spills were cleaned with no further action required. No other issues or responses were reported at or near the subject property.

6.2 Past Owner

The former owner was not able to be located.

6.3 State and Local Agency Coordination

Oklahoma Department of Environmental Quality

The ODEQ rely on their current databased records which are acquired by and provided through the EDR database search results. The state agencies no longer provide substantive response information regarding routine inquiries. Email inquiries typically redirect search efforts to online databases. Said databases are accessed by EDR and provided through the database search results. In the event substantive issues have been reported at a given property, those records are provided to EDR and then researched as needed and required by EEC. No such information was reported.

7.0 DATA GAP AND DATA FAILURE

A data gap is defined as a lack or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information and that the data gap impacts the environmental professional to identify recognized environmental conditions. Data gaps were encountered in association with the assessment of the property. It was not possible to confirm land use within the property for

each 5-year interval of time back to 1938. Based on the aerial photograph review, the target property appeared to be undeveloped prior to 1938 with no obvious land development. It can be inferred that the land was used for agricultural purposes.

Data failure is a failure to achieve the historical research objectives in Section 8 of the standard practice that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap. Data failure was not encountered during this assessment.

8.0 FINDINGS

Described below are the findings obtained by the Phase 1 ESA: There were no REC's, CREC's, or HREC's identified within or adjacent to the target property. No issues were identified in the environmental database records/research that required further investigation.

9.0 OPINION

Based on the property site visit, EDR database records, review of past aerial photography of the property, it is the opinion of the environmental professional that the target property has been previously developed by outpatient health facility buildings, parking areas, and roads. The utility line corridors are undeveloped but have been disturbed. No REC's, CREC's, or data gaps were reported or observed at the target property.

10.0 CONCLUSIONS

We have performed a *Phase I Environmental Site Assessment* in conformance with the scope and limitations of ASTM Practice E1527-21 of Phase I ESA of the target property located at 19600 E. Ross Street, Tahlequah, OK in the Southeast Quarter of Section 34, Township 17 North, Range 22 East. The purpose of the Phase 1 ESA was to identify any recognized environmental conditions. The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to release to the environment under conditions indicative of a release to the environment or under conditions that pose a material threat of a future release to the environment. No REC's, CREC's or data gaps were reported or observed at the target property.

11.0 REFERENCES

ASTM International. 2013. Standard Practice for Environmental Site Assessments: Phase 1 Site Assessment Process, E 1527-21. 59 pages.

Cherokee Nation. 2022. Phase I ESA. Tahlequah Hospital Foundation, Inc.

Environmental Data Records, Inc. (EDR). 2022. The EDR Radius Map Report.

Environmental Data Records, Inc. (EDR). 2022. EDR Aerial Photo Decade Package.

Environmental Data Records, Inc. (EDR). 2022. Certified Sanborn Map Report.

12.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

We declare that, to the best of our professional knowledge and belief, we meet the definition of environmental professional as defined in 312.10 of 40 CFR 312 and we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. Qualifications of the environmental professionals are provided in **Appendix F**.

Stun R. Vitaw

June 26, 2022

Steven R. Votaw

President

June 22, 2022

Sean Votaw

Environmental Professional Certified ASTM Assessor

Appendix A

Representative Photos



PL:1



PL: 2



PL: 3



PL: 4



PL: 5



PL: 6



Pl:7



PL: 8



PL: 9



PL: 10



PL: 11



PL: 12



PL: 13



PL: 13



PL: 14



PL: 15



PL: 16





PL: 18



PL: 19



PL: 20

PL: 20

Appendix B

Historical Photography

Cherokee Nation Tahlequah Hospital

100 South Bliss Ave Tahlequah, OK 74464

Inquiry Number: 7007844.5

June 07, 2022

The EDR Aerial Photo Decade Package



EDR Aerial Photo Decade Package

06/07/22

Site Name: Client Name:

Cherokee Nation Tahlequah Ho Eagle Env. Consulting Inc.

100 South Bliss AveP.O. Box 335Tahlequah, OK 74464Vinita, OK 74301

EDR Inquiry # 7007844.5 Contact: Sean T Votaw



Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

<u>Year</u>	<u>Scale</u>	<u>Details</u>	Source
2017	1"=500'	Flight Year: 2017	USDA/NAIP
2013	1"=500'	Flight Year: 2013	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1995	1"=500'	Acquisition Date: March 23, 1995	USGS/DOQQ
1980	1"=500'	Flight Date: March 18, 1980	USDA
1973	1"=500'	Flight Date: February 20, 1973	USGS
1971	1"=500'	Flight Date: February 15, 1971	USGS
1938	1"=500'	Flight Date: September 18, 1938	USDA

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

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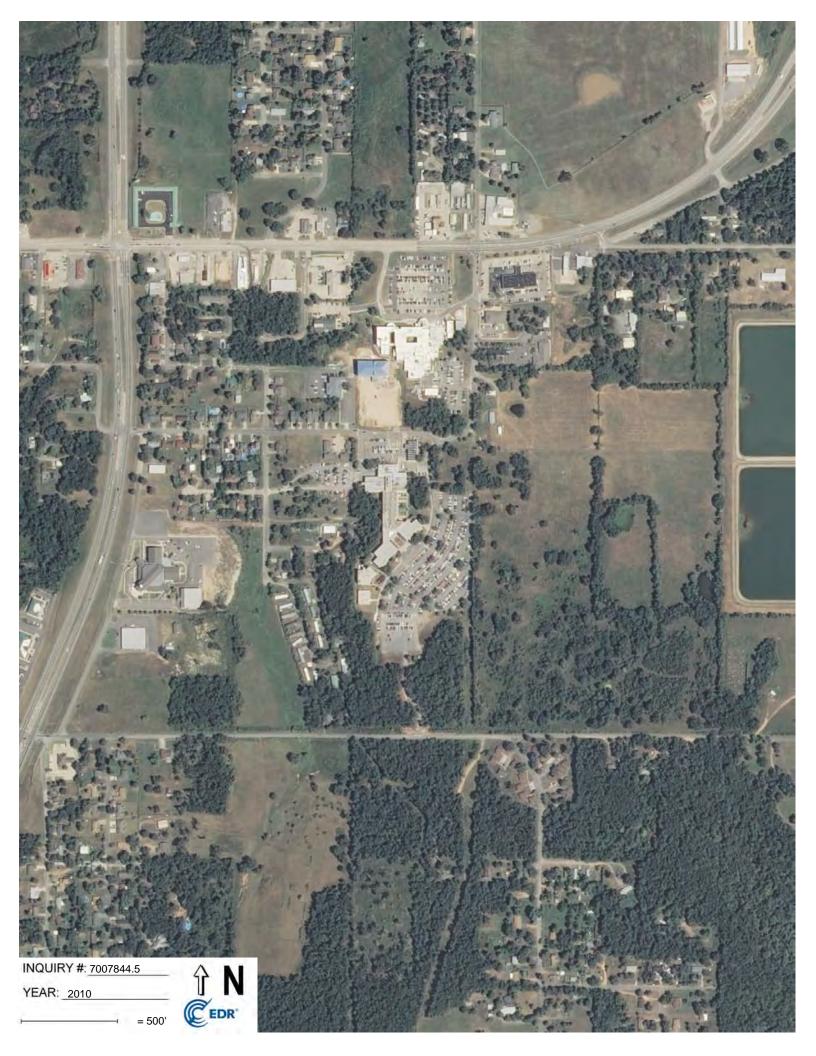
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Appendix C

Sanborn Map(s)

Cherokee Nation Tahlequah Hospital 100 South Bliss Ave Tahlequah, OK 74464

Inquiry Number: 7007844.3

June 06, 2022

Certified Sanborn® Map Report



Certified Sanborn® Map Report

06/06/22

Site Name: Client Name:

Cherokee Nation Tahlequah Ho Eagle Env. Consulting Inc. 100 South Bliss Ave P.O. Box 335
Tahlequah, OK 74464 Vinita, OK 74301

EDR Inquiry # 7007844.3 Contact: Sean T Votaw



The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Eagle Env. Consulting Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 7E83-4F3A-8F04

PO# NA

Project CN Hastings Tahlequah Hospital

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.



Sanborn® Library search results

Certification #: 7E83-4F3A-8F04

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

✓ Library of Congress

University Publications of America

EDR Private Collection

The Sanborn Library LLC Since 1866™

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Appendix D

User Inquiry Questionnaire

	Appendix E
ED	OR Database Records/Agency Coordination/Documentation

Cherokee Nation Tahlequah Hospital

100 South Bliss Ave Tahlequah, OK 74464

Inquiry Number: 7007844.2s

June 06, 2022

The EDR Radius Map™ Report with GeoCheck®



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527-21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

100 SOUTH BLISS AVE TAHLEQUAH, OK 74464

COORDINATES

Latitude (North): 35.9111800 - 35⁵ 54' 40.24" Longitude (West): 94.9501680 - 94⁵ 57' 0.60"

Universal Tranverse Mercator: Zone 15 UTM X (Meters): 324024.2 UTM Y (Meters): 3975653.8

Elevation: 895 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 14238152 TAHLEQUAH, OK

Version Date: 2019

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20150809 Source: USDA

MAPPED SITES SUMMARY

Target Property Address: 100 SOUTH BLISS AVE TAHLEQUAH, OK 74464

Click on Map ID to see full detail.

MAP				RELATIVE	DIST (ft. & mi.)
ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	ELEVATION	<u>DIRECTION</u> '
A1	W.W. HASTINGS HOSPIT	100 S BLISS	INDIAN UST, ECHO		TP
A2	WW HASTINGS HOSPITAL	100 S BLISS	UST		TP
A3	WW HASTINGS HOSP	100 S BLISS	RCRA NonGen / NLR, FINDS		TP
A4	CHEROKEE NATION OSU	100 BLISS AVENUE	ECHO		TP
A5	CHEROKEE NATION OSU	100 BLISS AVENUE	FINDS		TP
A6	W.W. HASTINGS HOSPIT	100 S. BLISS AVE	US BROWNFIELDS		TP
A7		100 S. BLISS AVENUE	ERNS		TP
A8		100 SOUTH BLISS AVE	ERNS		TP
9	E-Z MART #4366	1600 E DOWNING ST	LUST, UST, HIST UST	Lower	1723, 0.326, NNE
10	BIG B FOOD & DELI #2	1100 E. DOWNING	LUST, UST, HIST UST	Lower	1910, 0.362, NW
11	MARY'S LIQUOR MART	902 E DOWNING ST	LUST, UST, HIST UST	Lower	2633, 0.499, WNW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
W.W. HASTINGS HOSPIT 100 S BLISS TAHLEQUAH, OK 74464	INDIAN UST Database: INDIAN UST R6, Date of Government Version: 10 Facility ID: 0317OK	N/A 0/12/2021
	ECHO Registry ID: 110004743859	
WW HASTINGS HOSPITAL 100 S BLISS TAHLEQUAH, OK 74464	UST Facility Id: 1157118 TankStatus: POU	N/A
WW HASTINGS HOSP 100 S BLISS	RCRA NonGen / NLR EPA ID:: OK5750311537	OK5750311537
TAHLEQUAH, OK 74464	FINDS Registry ID:: 110004743859	
CHEROKEE NATION OSU 100 BLISS AVENUE TAHLEQUAH, OK 74464	ECHO Registry ID: 110070530675	N/A
CHEROKEE NATION OSU 100 BLISS AVENUE TAHLEQUAH, OK 74464	FINDS Registry ID:: 110070530675	N/A
W.W. HASTINGS HOSPIT 100 S. BLISS AVE TAHLEQUAH, OK 74464	US BROWNFIELDS ACRES property ID: 149901 Cleanup Completion Date: -	N/A
100 S. BLISS AVENUE 100 S. BLISS AVENUE TAHLEQUAH, OK 74464	ERNS NRC Report #: 1035105 Incident Date Time: 2013-01-01 00:30:00	N/A
100 SOUTH BLISS AVE 100 SOUTH BLISS AVE TAHLEQUAH, OK	ERNS NRC Report #: 1052039 Incident Date Time: 2013-06-27 20:00:00	N/A

EXECUTIVE SUMMARY

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Supe	erfund) sites
NPL	National Priority List Proposed National Priority List Sites
NPL LIENS	Federal Superfund Liens
Lists of Federal Delisted N	IPL sites
Delisted NPL	National Priority List Deletions
Lists of Federal sites subj	ect to CERCLA removals and CERCLA orders
	Federal Facility Site Information listing Superfund Enterprise Management System
Lists of Federal CERCLA	sites with NFRAP
SEMS-ARCHIVE	Superfund Enterprise Management System Archive
Lists of Federal RCRA fac	ilities undergoing Corrective Action
CORRACTS	Corrective Action Report
Lists of Federal RCRA TSI	D facilities
RCRA-TSDF	RCRA - Treatment, Storage and Disposal
Lists of Federal RCRA ger	nerators
RCRA-SQG	RCRA - Large Quantity Generators RCRA - Small Quantity Generators RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)
Federal institutional contr	ols / engineering controls registries
US ENG CONTROLS	Land Use Control Information System Land Use Controls Sites List
Lists of state- and tribal ha	azardous waste facilities
SHWS	The Land Report

Lists of state and tribal land	dfills and solid waste disposal facilities
SWF/LF	Permitted Solid Waste Disposal & Processing Facilities
Lists of state and tribal lead	king storage tanks
LASTINDIAN LUST	Leaking Aboveground Storage Tanks List Leaking Underground Storage Tanks on Indian Land
Lists of state and tribal reg	istered storage tanks
	Underground Storage Tank ListingAboveground Storage Tanks
State and tribal institutiona	l control / engineering control registries
INST CONTROL	Institutional Control Sites
Lists of state and tribal vol	untary cleanup sites
INDIAN VCP	Voluntary Cleanup Priority Listing Voluntary Cleanup Site Inventory
Lists of state and tribal bro	wnfield sites
BROWNFIELDS	_ Brownfield Sites
ADDITIONAL ENVIRONMENTA	L RECORDS
Local Lists of Landfill / Sol	id Waste Disposal Sites
DEBRIS REGION 9ODI	Report on the Status of Open Dumps on Indian Lands Torres Martinez Reservation Illegal Dump Site Locations
Local Lists of Hazardous w	raste / Contaminated Sites
	Delisted National Clandestine Laboratory Register National Clandestine Laboratory Register
Local Lists of Registered S	torage Tanks
HIST UST	Underground Storage Tank List, List II Version
Local Land Records	
LIENS 2	_ CERCLA Lien Information
Records of Emergency Rel	ease Reports
-	Hazardous Materials Information Reporting System

OK COMPLAINT..... Oklahoma Complaint System Database

Other Ascertainable Records

SCRD DRYCLEANERS...... State Coalition for Remediation of Drycleaners Listing

US FIN ASSUR..... Financial Assurance Information

EPA WATCH LIST..... EPA WATCH LIST

2020 COR ACTION...... 2020 Corrective Action Program List

TSCA...... Toxic Substances Control Act

TRIS...... Toxic Chemical Release Inventory System

RAATS...... RCRA Administrative Action Tracking System

ICIS...... Integrated Compliance Information System

Act)/TSCA (Toxic Substances Control Act)

COAL ASH EPA...... Coal Combustion Residues Surface Impoundments List

PCB TRANSFORMER...... PCB Transformer Registration Database

RADINFO...... Radiation Information Database

HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing

DOT OPS...... Incident and Accident Data

CONSENT..... Superfund (CERCLA) Consent Decrees

INDIAN RESERV..... Indian Reservations

FUSRAP..... Formerly Utilized Sites Remedial Action Program

UMTRA..... Uranium Mill Tailings Sites

LEAD SMELTERS..... Lead Smelter Sites

US AIRS..... Aerometric Information Retrieval System Facility Subsystem

US MINES...... Mines Master Index File

ABANDONED MINES..... Abandoned Mines

UXO...... Unexploded Ordnance Sites

DOCKET HWC...... Hazardous Waste Compliance Docket Listing

FUELS PROGRAM..... EPA Fuels Program Registered Listing

AIRS..... Permitted AIRS Facility Listing

ASBESTOS..... Asbestos Notification

DRYCLEANERS.......PFAS Contamination Site Location Listing

DRYCLEANERS..... Drycleaner Facility Listing

Financial Assurance Information Listing

TIER 2..... Tier 2 Data Listing

UIC...... Underground Injection Wells Database Listing

MINES MRDS..... Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP...... EDR Proprietary Manufactured Gas Plants EDR Hist Auto...... EDR Exclusive Historical Auto Stations

EDR Hist Cleaner..... EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS	Recovered Government Archive State Hazardous Waste Facilities List
RGA LF	Recovered Government Archive Solid Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in **bold italics** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Lists of state and tribal leaking storage tanks

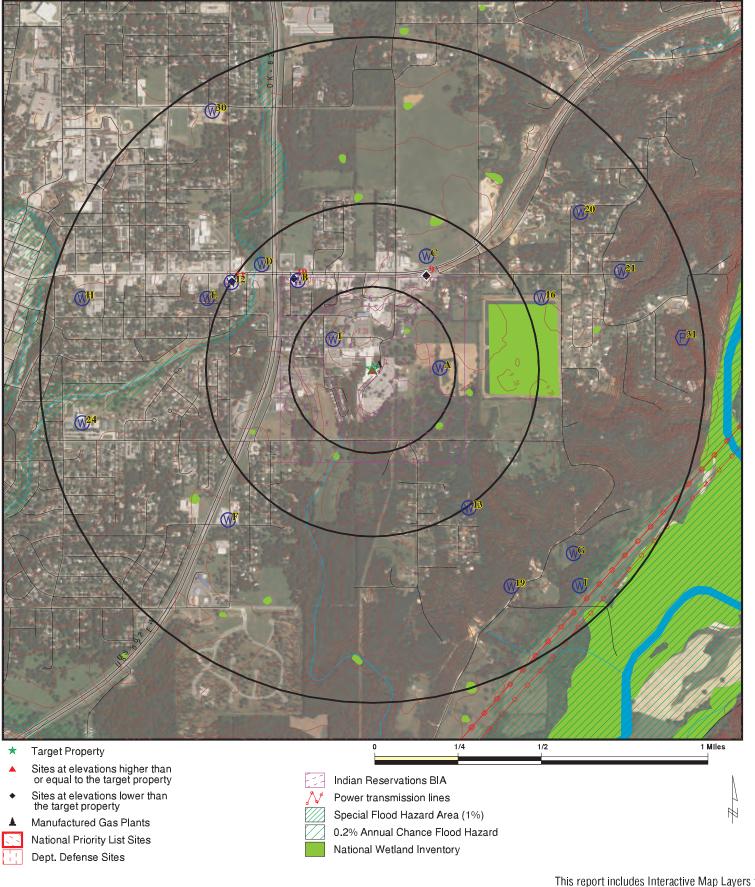
LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Oklahoma Corporation Commission's Leaking UST list.

A review of the LUST list, as provided by EDR, and dated 12/02/2021 has revealed that there are 3 LUST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
E-Z MART #4366 STATUS: Closed Facility Id: 1109406 Close Date: 08/03/2005 Close Date: 07/22/2003	1600 E DOWNING ST	NNE 1/4 - 1/2 (0.326 mi.)	9	24
BIG B FOOD & DELI #2 STATUS: Closed Facility Id: 1110244 Close Date: 01/08/2021	1100 E. DOWNING	NW 1/4 - 1/2 (0.362 mi.)	10	26
MARY'S LIQUOR MART STATUS: Closed Facility Id: 1109523 Close Date: 02/26/2004	902 E DOWNING ST	WNW 1/4 - 1/2 (0.499 mi.)	11	28

There were no unmapped sites in this report.

OVERVIEW MAP - 7007844.2S



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:

ADDRESS:

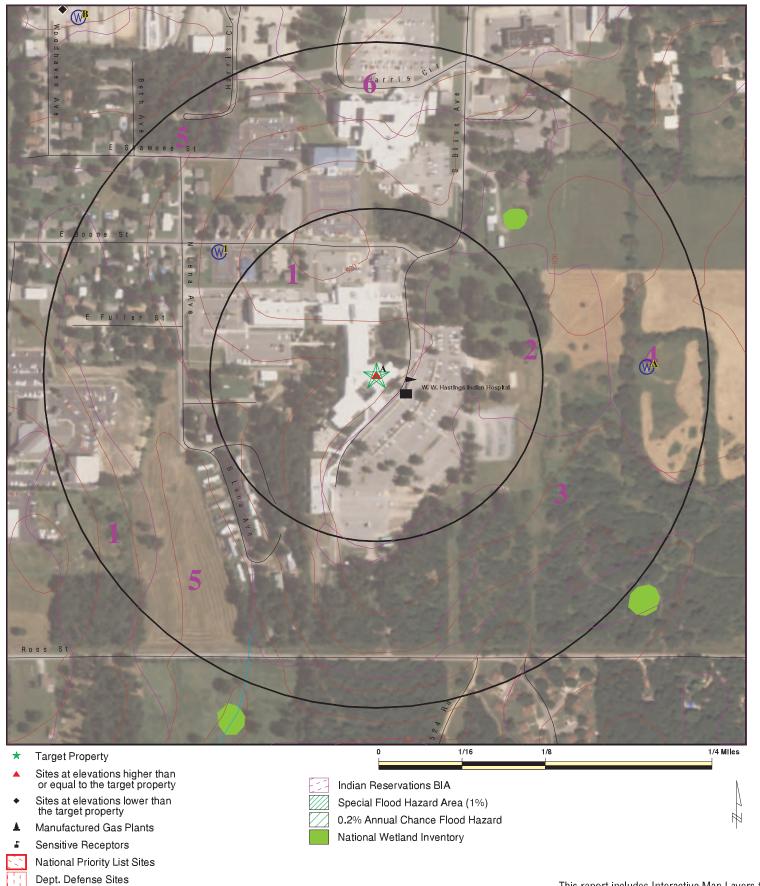
Cherokee Nation Tahlequah Hospital 100 South Bliss Ave Tahlequah OK 74464 35.91118 / 94.950168 LAT/LONG:

Eagle Env. Consulting Inc. Sean T Votaw 7007844.2s CLIENT: CONTACT:

INQUIRY#:

DATE: June 06, 2022 8:22 pm

DETAIL MAP - 7007844.2S



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Cherokee Nation Tahlequah Hospital

ADDRESS:

100 South Bliss Ave Tahlequah OK 74464 35.91118 / 94.950168 LAT/LONG:

CLIENT: CONTACT: Eagle Env. Consulting Inc.

Sean T Votaw 7007844.2s INQUIRY#:

DATE:

June 06, 2022 8:22 pm Copyright © 2022 EDR, Inc. © 2015 TomTom Rel. 2015.

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	Total Plotted
STANDARD ENVIRONMENT	TAL RECORDS							
Lists of Federal NPL (Su	perfund) site	s						
NPL Proposed NPL NPL LIENS	1.000 1.000 1.000		0 0 0	0 0 0	0 0 0	0 0 0	NR NR NR	0 0 0
Lists of Federal Delisted	NPL sites							
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites su CERCLA removals and (rs						
FEDERAL FACILITY SEMS	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
Lists of Federal CERCLA	A sites with N	FRAP						
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA fa undergoing Corrective A								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA T	SD facilities							
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA g	enerators							
RCRA-LQG RCRA-SQG RCRA-VSQG	0.250 0.250 0.250		0 0 0	0 0 0	NR NR NR	NR NR NR	NR NR NR	0 0 0
Federal institutional con engineering controls reg								
LUCIS US ENG CONTROLS US INST CONTROLS	0.500 0.500 0.500		0 0 0	0 0 0	0 0 0	NR NR NR	NR NR NR	0 0 0
Federal ERNS list								
ERNS	TP	2	NR	NR	NR	NR	NR	2
Lists of state- and tribal hazardous waste facilities								
SHWS	1.000		0	0	0	0	NR	0
Lists of state and tribal l and solid waste disposa								
SWF/LF	0.500		0	0	0	NR	NR	0
Lists of state and tribal	leaking storag	ge tanks						
LAST	0.500		0	0	0	NR	NR	0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LUST INDIAN LUST	0.500 0.500		0 0	0 0	3 0	NR NR	NR NR	3 0
Lists of state and tribal	registered sto	rage tanks						
FEMA UST UST AST INDIAN UST	0.250 0.250 0.250 0.250	1 1	0 0 0 0	0 0 0 0	NR NR NR NR	NR NR NR NR	NR NR NR NR	0 1 0 1
State and tribal institution control / engineering co		ıs						
INST CONTROL	0.500		0	0	0	NR	NR	0
Lists of state and tribal	voluntary clea	anup sites						
INDIAN VCP VCP	0.500 0.500		0 0	0 0	0 0	NR NR	NR NR	0 0
Lists of state and tribal	brownfield sit	tes						
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENT	NTAL RECORD	<u>s</u>						
Local Brownfield lists								
US BROWNFIELDS	0.500	1	0	0	0	NR	NR	1
Local Lists of Landfill / S Waste Disposal Sites	Solid							
SWRCY INDIAN ODI DEBRIS REGION 9 ODI IHS OPEN DUMPS	0.500 0.500 0.500 0.500 0.500		0 0 0 0	0 0 0 0	0 0 0 0	NR NR NR NR NR	NR NR NR NR NR	0 0 0 0
Local Lists of Hazardou Contaminated Sites	s waste /							
US HIST CDL US CDL	TP TP		NR NR	NR NR	NR NR	NR NR	NR NR	0 0
Local Lists of Registere	d Storage Tar	ıks						
HIST UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency	Release Repo	rts						
HMIRS OK COMPLAINT	TP TP		NR NR	NR NR	NR NR	NR NR	NR NR	0 0
Other Ascertainable Red	cords							
RCRA NonGen / NLR	0.250	1	0	0	NR	NR	NR	1

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUDS DOD SCRD DRYCLEANERS US FIN ASSUR EPA WATCH LIST 2020 COR ACTION TSCA TRIS SSTS ROD RMP RAATS PRP PADS ICIS FTTS MLTS COAL ASH DOE COAL ASH EPA PCB TRANSFORMER RADINFO HIST FTTS DOT OPS CONSENT INDIAN RESERV FUSRAP UMTRA LEAD SMELTERS US AIRS US MINES ABANDONED MINES FINDS UXO ECHO DOCKET HWC FUELS PROGRAM AIRS ASBESTOS DRYCLEANERS FINANCE TIER 2 UIC MINES MRDS	1.000 1.000 0.500 TP TP 0.250 TP TP 1.000 TP TP TP TP TP TP 1.000 1.000 1.000 0.500 TP TP TP 1.000 1.000 1.000 0.550 TP TP TP TP TP TP TP TP TP TP TP TP TP	2 2	000 RR O RR R O R RR RR RR O R RR RR O O O O O RR O O RO O RR O RR RR	000 RR O RR R O R R R R R R R R R R R R	000 RR RR R O R RR RR R O R RR RR O O O O	0 0 R R R R R R O R R R R R R R R R R R	RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR	
EDR Frequeive People	AL RECORDS							
EDR Exclusive Records EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERN	MENT ARCHIV	<u>ES</u>						
Exclusive Recovered Gov	t. Archives							
RGA HWS	TP		NR	NR	NR	NR	NR	0
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals		10	0	0	3	0	0	13

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

Α1 W.W. HASTINGS HOSPITAL **INDIAN UST** 1016457374 **Target** 100 S BLISS **ECHO** N/A

TAHLEQUAH, OK 74464 **Property**

Site 1 of 8 in cluster A

Actual: 895 ft.

Indian UST: Region: Facility ID: 0317OK

Tribe: Cherokee Nation

Name: WW HASTINGS HOSPITAL Name 2: WW Hastings Hospital Address: 100 S. BLISS City,State,Zip: TAHLEQUAH, OK

Tank Name: Tank 1 Federally Regulated Tank: True

Tank Status Description: Permanently Out of Use

Date Of Tank Status Change: Not reported Diesel Substance Desc:

1984-06-01 00:00:00 Date Installed as of 05/21:

Telephone Number as of 05/21:

Tank 1 Compartment Compartment Name:

Overfill Installed: True Spill Installed: True

ECHO:

Envid: 1016457374 Registry ID: 110004743859

DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110004743859

Name: W.W. HASTINGS HOSPITAL

Address: 100 S BLISS

TAHLEQUAH, OK 74464 City,State,Zip:

WW HASTINGS HOSPITAL **A2 Target 100 S BLISS Property** TAHLEQUAH, OK 74464

Site 2 of 8 in cluster A

Actual: UST:

895 ft. Facility ID: 1157118

Contact Name: Indian Health Services - Okc Area Contact Address: FIVE CORPORATE PLAZA3625 NW 56TH

Contact Telephone: 4059513857

Contact City, St, Zip: Oklahoma City, OK 73112 35.9124 / -94.9499 Lat/Long:

Tank ID:

Tank Status: Permanently Out Of Use

Total Capacity: 6000 Substance: Diesel Date Installed: Not reported Tank Type: UST Closed Date: 11/15/2012

Decode of Tank Status: Permanently out of use Tank Removed From Ground Closure Status:

Tank Construction: Single Walled

Fiberglass Reinforced Plastic Tank Material:

Pipe Construction: Single-Walled UST

U004198412

N/A

Direction Distance

Elevation Site Database(s) **EPA ID Number**

WW HASTINGS HOSPITAL (Continued)

U004198412

OK5750311537

FINDS

EDR ID Number

Pipe Material: **Fiberglass**

Tank ID:

Permanently Out Of Use Tank Status:

Total Capacity: 8000 Substance: Antifreeze Not reported Date Installed: Tank Type: UST Closed Date: 11/15/2012

Decode of Tank Status: Permanently out of use Closure Status: Tank Removed From Ground

Single Walled Tank Construction:

Tank Material: Fiberglass Reinforced Plastic

Pipe Construction: Single-Walled Pipe Material: Fiberglass

WW HASTINGS HOSP A3 RCRA NonGen / NLR 1000239956

Target 100 S BLISS TAHLEQUAH, OK 74464 **Property**

Site 3 of 8 in cluster A

Actual: RCRA NonGen / NLR: 895 ft.

19950925 Date Form Received by Agency:

WW HASTINGS HOSP Handler Name:

Handler Address: 100 S BLISS Handler City, State, Zip: TAHLEQUAH, OK 74464

EPA ID: OK5750311537 Contact Name: JERRY HAMMONS Contact Address: 100 S BLISS

Contact City, State, Zip: TAHLEQUAH, OK 74464

Contact Telephone: 918-458-3137 Contact Fax: Not reported Contact Email: Not reported Contact Title: Not reported 06

EPA Region:

Land Type: Not reported

Federal Waste Generator Description: Not a generator, verified

Non-Notifier: Not reported Biennial Report Cycle: Not reported Accessibility: Not reported Active Site Indicator: Not reported State District Owner: Not reported State District: Not reported Mailing Address: S BLISS

Mailing City, State, Zip: TAHLEQUAH, OK 74464 Owner Name: INDIAN HEALTH SVC

Owner Type: Federal

Operator Name: NAME UNKNOWN

Operator Type: Federal Short-Term Generator Activity: No Importer Activity: No Mixed Waste Generator: No Transporter Activity: No Transfer Facility Activity: No Recycler Activity with Storage: No Small Quantity On-Site Burner Exemption: No Smelting Melting and Refining Furnace Exemption: No **Underground Injection Control:** No

Direction Distance Elevation

nce EDR ID Number ttion Site Database(s) EPA ID Number

WW HASTINGS HOSP (Continued)

1000239956

Off-Site Waste Receipt:

Universal Waste Indicator:

Universal Waste Destination Facility:

No
Federal Universal Waste:

No

Active Site Fed-Reg Treatment Storage and Disposal Facility:
Active Site Converter Treatment storage and Disposal Facility:
Active Site State-Reg Treatment Storage and Disposal Facility:
Not reported
Not reported

Active Site State-Reg Handler:

Federal Facility Indicator: The site is federally-owned, The site is federally-operated

Hazardous Secondary Material Indicator: NN

Sub-Part K Indicator: Not reported Commercial TSD Indicator: No

Treatment Storage and Disposal Type:

2018 GPRA Permit Baseline:

Not reported

Not on the Baseline

2018 GPRA Renewals Baseline:

Permit Renewals Workload Universe:

Permit Workload Universe:

Permit Progress Universe:

Post-Closure Workload Universe:

Closure Workload Universe:

Not reported

Not reported

Not reported

Not reported

Not reported

202 GPRA Corrective Action Baseline:

Corrective Action Workload Universe:

No
Subject to Corrective Action Universe:

No
Non-TSDFs Where RCRA CA has Been Imposed Universe:

TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:

TSDFs Only Subject to CA under Discretionary Auth Universe:

No

Corrective Action Priority Ranking: No NCAPS ranking

Environmental Control Indicator:

Institutional Control Indicator:

Human Exposure Controls Indicator:

Groundwater Controls Indicator:

N/A

N/A

Operating TSDF Universe:

Full Enforcement Universe:

Not reported
Not reported

Significant Non-Complier Universe: No
Unaddressed Significant Non-Complier Universe: No
Addressed Significant Non-Complier Universe: No
Significant Non-Complier With a Compliance Schedule Universe: No

Financial Assurance Required:
Handler Date of Last Change:
Recognized Trader-Importer:
No
Recognized Trader-Exporter:
No
Importer of Spent Lead Acid Batteries:
No
Exporter of Spent Lead Acid Batteries:
No

Recycler Activity Without Storage: Not reported Manifest Broker: Not reported

Sub-Part P Indicator: No

Handler - Owner Operator:

Owner/Operator Indicator: Operator

Owner/Operator Name: NAME UNKNOWN

Legal Status: Federal
Date Became Current: Not reported
Date Ended Current: Not reported
Owner/Operator Address: UNKNOWN

Owner/Operator City,State,Zip: UNKNOWN, OK 00000-0000

Owner/Operator Telephone: 000-000-0000

Distance Elevation

Site Database(s) EPA ID Number

WW HASTINGS HOSP (Continued)

1000239956

EDR ID Number

Owner/Operator Telephone Ext:

Owner/Operator Fax:

Owner/Operator Email:

Not reported

Not reported

Owner/Operator Indicator: Owner

Owner/Operator Name: INDIAN HEALTH SVC

Legal Status:FederalDate Became Current:Not reportedDate Ended Current:Not reportedOwner/Operator Address:UNKNOWN

Owner/Operator City,State,Zip: UNKNOWN, OK 00000-0000

Owner/Operator Telephone: 000-000-0000
Owner/Operator Telephone Ext: Not reported
Owner/Operator Fax: Not reported
Owner/Operator Email: Not reported

Historic Generators:

Receive Date: 19950925

Handler Name: WW HASTINGS HOSP

Federal Waste Generator Description: Not a generator, verified

State District Owner: Not reported

Large Quantity Handler of Universal Waste:

Recognized Trader Importer:

No
Recognized Trader Exporter:

No
Spent Lead Acid Battery Importer:

No
Spent Lead Acid Battery Exporter:

No
Current Record:

Yes

Non Storage Recycler Activity: Not reported Electronic Manifest Broker: Not reported

List of NAICS Codes and Descriptions:

NAICS Codes: No NAICS Codes Found

Facility Has Received Notices of Violations:

Violations: No Violations Found

Evaluation Action Summary:

Evaluations: No Evaluations Found

FINDS:

Registry ID: 110004743859

Click Here:

Environmental Interest/Information System:

US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES)

is an federal online database for Brownfields Grantees to

electronically submit data directly to EPA.

Cherokee Nation Facility Registry System (CNFRS) is a data flow system that validates existing FRS data and exchanges data about open tribal

dump sites in the Cherokee Nation.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport,

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

WW HASTINGS HOSP (Continued)

1000239956

and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and

corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access

additional FINDS: detail in the EDR Site Report.

CHEROKEE NATION OSU HEALTH SCIENCE CENTER Α4 **100 BLISS AVENUE**

ECHO 1024930554

N/A

Target Property TAHLEQUAH, OK 74464

Site 4 of 8 in cluster A

ECHO: Actual: 895 ft.

1024930554 Envid: Registry ID: 110070530675

DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110070530675 CHEROKEE NATION OSU HEALTH SCIENCE CENTER Name:

Address: 100 BLISS AVENUE TAHLEQUAH, OK 74464 City, State, Zip:

CHEROKEE NATION OSU HEALTH SCIENCE CENTER Α5

FINDS 1025457530

N/A

100 BLISS AVENUE Target Property TAHLEQUAH, OK 74464

Site 5 of 8 in cluster A

Actual: FINDS:

895 ft. Registry ID: 110070530675

Click Here:

Environmental Interest/Information System:

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the

discharge does not adversely affect water quality.

Click this hyperlink while viewing on your computer to access

additional FINDS: detail in the EDR Site Report.

W.W. HASTINGS HOSPITAL **US BROWNFIELDS** 1018273391 A6

100 S. BLISS AVE **Target Property** TAHLEQUAH, OK 74464

Site 6 of 8 in cluster A

US BROWNFIELDS: Actual:

895 ft.

W.W. HASTINGS HOSPITAL Name:

100 S. BLISS AVE Address: City,State,Zip: TAHLEQUAH, OK 74464

Inter-Tribal Environmental Council - Cherokee Nation Recipient Name:

Grant Type: Section 128(a) State/Tribal N/A

Direction

Elevation Site Database(s) EPA ID Number

W.W. HASTINGS HOSPITAL (Continued)

1018273391

EDR ID Number

Property Number:

 Parcel size:
 27.33

 Latitude:
 35.9117859

 Longitude:
 -94.9504065

HCM Label: Map Scale: Point of Reference: -

Highlights: Former Use: The Subject Property consists of four tracts of land with

acreages of 13.84, 3.466, 1.535, and 8.49 for a total of 27.331 acres. The subject property has a physical address of 100 S. Bliss Avenue, Tahlequah, OK 74464 and is located approximately 0.25 miles from both Oklahoma State Highway 82 (west of subject property) and Oklahoma State Highway 62 (north of subject property). The 13.84 tract of land is occupied by a 129,301 square foot hospital building, a 12,517 square foot Annex building, a 4,320 square foot Physical Therapy building, and a Maintenance building that is 5,200 square feet. There are large paved parking lots surrounding the buildings and concrete sidewalks throughout the area connecting the buildings.

A helicopter pad is located on the north side of the property.

Undeveloped areas are covered by native grasses and trees. This area is zoned Commercial. The ground surface at the site slopes west south west. The property is currently owned by the Indian Health Service, but after RECs are cleaned up the property will be transfered to the Cherokee Nation. The Cherokee Nation currently, in conjuunction with

Indian Health Service is running the hospital.

Datum: North American Datum of 1983

Acres Property ID: 149901
IC Data Access: -

Assessment Funding Entity: US EPA - State & Tribal Section 128(a) Funding

Cleanup Funding Entity: Grant Type: -

Accomplishment Type: Phase I Environmental Assessment

Accomplishment Count:

Cooperative Agreement Number: 00F29501
Start Date: 11/29/2010
Ownership Entity: Government
Completion Date: 6/8/2011

Current Owner: Indian Health Service

Did Owner Change: -

Cleanup Required: Y
Video Available: N
Photo Available: Y
Institutional Controls Required: U
IC Category Proprietary Controls: IC Cat. Info. Devices: -

Distance Elevation

Site Database(s) EPA ID Number

W.W. HASTINGS HOSPITAL (Continued)

1018273391

EDR ID Number

IC Cat. Gov. Controls: IC Cat. Enforcement Permit Tools: IC in place date: IC in place: Ν State/tribal program date: State/tribal program ID: State/tribal NFA date: Air cleaned: Asbestos found: Asbestos cleaned: Controled substance found: Controled substance cleaned: Drinking water affected: Drinking water cleaned: Groundwater affected: Groundwater cleaned: Lead contaminant found: Lead cleaned up: No media affected: Unknown media affected: Other cleaned up: Other metals found: Other metals cleaned: Other contaminants found: Other contams found description: Radon PAHs found: PAHs cleaned up: PCBs found: PCBs cleaned up: Petro products found: Petro products cleaned: Sediments found: Sediments cleaned: Soil affected: Soil cleaned up: Surface water cleaned: VOCs found: VOCs cleaned: Cleanup other description: Num. of cleanup and re-dev. jobs: Past use greenspace acreage: Past use residential acreage: Surface Water: Past use commercial acreage: Past use industrial acreage: Future use greenspace acreage: Future use residential acreage: Future use commercial acreage: Future use industrial acreage: Superfund Fed. landowner flag: Arsenic cleaned up: Cadmium cleaned up: Chromium cleaned up: Copper cleaned up: Iron cleaned up: mercury cleaned up:

Nickel Cleaned Up:

Distance Elevation Site

Databa Databa

EDR ID Number Database(s) EPA ID Number

W.W. HASTINGS HOSPITAL (Continued)

1018273391

No clean up: Pesticides cleaned up: Selenium cleaned up: SVOCs cleaned up: Unknown clean up: Arsenic contaminant found: Cadmium contaminant found: Chromium contaminant found: Copper contaminant found: Iron contaminant found: Mercury contaminant found: Nickel contaminant found: No contaminant found: Pesticides contaminant found: Selenium contaminant found: SVOCs contaminant found: Unknown contaminant found: Future Use: Multistory Media affected Bluiding Material: Media affected indoor air: Building material media cleaned up: Indoor air media cleaned up: Unknown media cleaned up:

Past Use: Multistory Property Description:

The Subject Property consists of four tracts of land with acreages of 13.84, 3.466, 1.535, and 8.49 for a total of 27.331 acres. The subject property has a physical address of 100 S. Bliss Avenue, Tahleguah, OK 74464 and is located approximately 0.25 miles from both Oklahoma State Highway 82 (west of subject property) and Oklahoma State Highway 62 (north of subject property). The 13.84 tract of land is occupied by a 129,301 square foot hospital building, a 12,517 square foot Annex building, a 4,320 square foot Physical Therapy building, and a Maintenance building that is 5,200 square feet. There are large paved parking lots surrounding the buildings and concrete sidewalks throughout the area connecting the buildings. A helicopter pad is located on the north side of the property. Undeveloped areas are covered by native grasses and trees. This area is zoned Commercial. The ground surface at the site slopes west south west. The property is currently owned by the Indian Health Service, but after RECs are cleaned up the property will be transfered to the Cherokee Nation. The Cherokee Nation currently, in conjuunction with Indian Health Service is running the hospital.

Below Poverty Number: 115 Below Poverty Percent: 18.17 Meidan Income: 1327 Meidan Income Number: 195 Meidan Income Percent: 30.81 Vacant Housing Number: 29 Vacant Housing Percent: 11.55 **Unemployed Number:** 24 **Unemployed Percent:** 3.79

Direction Distance

Elevation Site Database(s) EPA ID Number

A7 ERNS 2013035105
Target 100 S. BLISS AVENUE N/A

Target 100 S. BLISS AVENUE Property TAHLEQUAH, OK 74464

Site 7 of 8 in cluster A

Actual: 895 ft.

Incident Commons:
NRC Report #: 1035105

Description of Incident: CALLER STATED DUE TO A FAULTY SWITCH THERE WAS A SPILL OF DIESEL FROM

AN ABOVE GROUND DIESEL STORAGE TANK.

Type of Incident: STORAGE TANK
Incident Cause: EQUIPMENT FAILURE
Incident Date Time: 2013-01-01 00:30:00
Incident DTG: OCCURRED

Incident DTG: OCCURRED Incident Location: Not reported

Loaction Address: 100 S. BLISS AVENUE

Location Street 1: Not reported
Location Street 2: Not reported
Location Nearest City: TAHLEQUAH

Location State: OK

CHEROKEE Location County: Location Zip: 74464 Distance From City: Not reported Distance Units: Not reported Direction From City: Not reported Lat Deg: Not reported Lat Min: Not reported Lat Sec: Not reported Lat Quad: Not reported Long Deg: Not reported Long Min: Not reported Long Sec: Not reported Long Quad: Not reported Location Section: Not reported Location Township: Not reported Location range: Not reported

Potential Range: N

Incidents:

NRC Report #: 1035105 Aircraft Type: Not reported Aircraft Model: Not reported Aircraft ID: Not reported Aircraft Fuel Capacity: Not reported Aircraft Fuel Capacity Units: Not reported Aircraft Fuel on Board: Not reported Aircraft Fuel on Board Units: Not reported Aircraft Spot Number: Not reported Aircraft Hanger: Not reported Aircraft Runway Number: Not reported Road Mile Marker: Not reported Building ID: Not reported Type of Fixed Object: Not reported

Power Generating Facility: U

Generating Capacity:

Type of Fuel:

Not reported

Not reported

Not reported

Not reported

NPDES Compliance: U

Pipeline Type: Not reported

DOT Regulated: U

EDR ID Number

Distance

Elevation Site Database(s) EPA ID Number

(Continued) 2013035105

Pipeline Above Ground: ABOVE Exposed Underwater: N Pipeline Covered: U

Railroad Hotline: Not reported

Grade Crossing: U

Location Subdivision:

Railroad Milepost:

Type Vehicle Involved:

Crossing Device Type:

Not reported

Not reported

Not reported

Device Operational: U

DOT Crossing Number: Not reported

Brake Failure: U

Description of Tank: 300 GALLON ABOVE GROUND STORAGE TANK

Tank Above Ground: ABOVE Transportable Container: N Tank Regulated: U

Tank Regulated By: Not reported Tank ID: Not reported

Capacity of Tank: 300

GALLON(S) Capacity of Tank Units: Actual Amount: Not reported **Actual Amount Units:** Not reported Platform Rig Name: Not reported Platform Letter: Not reported Location Area ID: Not reported Not reported Location Block ID: OCSG Number: Not reported OCSP Number: Not reported State Lease Number: Not reported Pier Dock Number: Not reported Berth Slip Number: Not reported Continuous Release Type: Not reported Initial Continuous Release No: Not reported Continuous Release Permit: Not reported

Allision: U

Type of Structure: Not reported Structure Name: Not reported

Structure Operational: U
Airbag Deployed: U

Date Tiem Normal Service: Not reported Service Disruption Time: Not reported Service Disruption Units: Not reported Transit Bus Flag: Not reported CR Begin Date: Not reported CR End Date: Not reported CR Change Date: Not reported FBI Contact: Not reported FBI Contact Date Time: Not reported Sub Part C Testing Req: XXXConductor Testing: Not reported **Engineer Testing:** Not reported Trainman Testing: Not reported Yard Foreman Testing: Not reported **RCL Operator Testing:** Not reported Brakeman Testing: Not reported Not reported Train Dispatcher Testing: Signalman Testing: Not reported

EDR ID Number

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

(Continued) 2013035105

Other Employee Testing: Not reported Unknown Testing: Not reported Passenger Handling: Not reported Passenger Route: XXX Passenger Delay: XXX

Incident Details:

1035105 NRC Report #: Fire Involved: Ν Fire Extinguished: U Any Evacuations: Ν

Number Evacuated: Not reported Who Evacuated: Not reported Radius of Evacuation: Not reported Any Injuries: Ν

Number Injured: Not reported Number Hospitalized: Not reported

Any Fatalities:

Number Fatalities: Not reported

Any Damages: Ν

Damage Amount: Not reported

Air Corridor Closed:

Air Corridor Desc: Not reported Not reported Air Closure Time:

Waterway Closed:

Waterway Desc: Not reported Waterway Closure Time: Not reported

Road Closed:

Road Desc: Not reported Not reported Road Closure Time: Closure Direction: Not reported

Major Artery: Ν Track Closed: Ν

Track Desc: Not reported Track Closure Time: Not reported NONE Media Interest: Medium Desc: LAND

Additional Medium Info: ONTO THE GROUND

Not reported Body of Water: Tributary of: Not reported

Release Secured:

Estimated Duration of Release: Not reported Release rate: Not reported

THE FIRE DEPARTMENT WAS CALLED AND A CLEAN UP CONTRACTOR WAS HIRED. Desc Remedial Action:

> THE CLEAN UP HAS BEEN DONE AND A SOIL SAMPLE HAS BEEN TAKEN. CALLER STATED THEY ARE AWAITING THE RESULTS OF THE SOIL SAMPLES AS ADDITIONAL

STEPS MAY BE REQUIRED.

State Agency on Scene: FIRE DEPT State Agency Report Number: Not reported Other Agency Notified: Not reported Weather Conditions: Not reported Air Temperature: Not reported Wind Speed: Not reported Wind Direction: Not reported

Water Supply Contaminated:

Sheen Size: Not reported Sheen Color: Not reported

Direction Distance Elevation

n Site Database(s) EPA ID Number

(Continued) 2013035105

Direction of Sheen Travel: Not reported Not reported Sheen Odor Description: Wave Condition: Not reported Current Speed: Not reported **Current Direction:** Not reported Water Temperature: Not reported Track Close Dir: Not reported Empl Fatality: Not reported Pass Fatality: Not reported Community Impact: Not reported Wind Speed Unit: Not reported Employee Injuries: Not reported Passenger Injuries: Not reported Occupant Fatality: Not reported **Current Speed Unit:** Not reported Road Closure Units: Not reported Track CLosure Units: Not reported Sheen Size Units: Not reported Additional Info: Not reported State Agency Notified: FIRE DEPT Federal Agency Notified: Not reported nearest River Mile Marker: Not reported Sheen Size Length: Not reported Sheen Size Length Units: Not reported Sheen Size Width: Not reported Sheen Size Width Units: Not reported Offshore: **Duration Unit:** Not reported Release Rate Unit: Not reported Release Rate Rate: Not reported Passengers Transferred: NO

Calls:

 NRC Report #:
 1035105

 Site ID:
 20131035105

 Date Time Received:
 2013-01-08 12:59:34

 Date Time Complete:
 2013-01-08 13:08:22

Call Type: INC

Responsible Company: WW HASTINGS HOSPITAL Responsible Org Type: PRIVATE ENTERPRISE

Responsible City: TAHLEQUAH

Responsible State: OK
Responsible Zip: 74464
On Behalf: Not reported
Source: TELEPHONE

Material Involved:

NRC Report #: 1035105
Chris Code: ODS
Case Number: 000000-00-0
UN Number: Not reported
Amount of Material: 260

Unit of Measure: GALLON(S)
Name of Material: OIL: DIESEL

If Reached Water: NO

Amount in Water: Not reported

EDR ID Number

Direction Distance

A8

Elevation Site Database(s) EPA ID Number

(Continued) 2013035105

Unit of Measure Reach Water: Not reported

ERNS 2013052039

Target 100 SOUTH BLISS AVE Property TAHLEQUAH, OK

Site 8 of 8 in cluster A

 Actual:
 Incident Commons:

 895 ft.
 NRC Report #:
 1052039

Description of Incident: CALLER IS REPORTING THAT THERE WAS AN ABOVE GROUND TANK FOR DIESEL

THAT OVERFLOWED FROM AN UNKNOWN REASON ONTO THE GROUND, STREET AND THE

DRAIN SYSTEM ON PROPERTY.

Type of Incident: STORAGE TANK
Incident Cause: UNKNOWN
Incident Date Time: 2013-06-27 20:00:00
Incident DTG: OCCURRED
Incident Location: Not reported

Loaction Address: 100 SOUTH BLISS AVE

Location Street 1: Not reported
Location Street 2: Not reported
Location Nearest City: TAHLEQUAH

Location State: OK

Location County: CHEROKEE Not reported Location Zip: Distance From City: Not reported Distance Units: Not reported Direction From City: Not reported Not reported Lat Deg: Lat Min: Not reported Lat Sec: Not reported Not reported Lat Quad: Not reported Long Deg: Long Min: Not reported Long Sec: Not reported Long Quad: Not reported Location Section: Not reported Location Township: Not reported Location range: Not reported Potential Range:

Incidents:

NRC Report #: 1052039 Aircraft Type: Not reported Aircraft Model: Not reported Aircraft ID: Not reported Aircraft Fuel Capacity: Not reported Aircraft Fuel Capacity Units: Not reported Aircraft Fuel on Board: Not reported Aircraft Fuel on Board Units: Not reported Aircraft Spot Number: Not reported Aircraft Hanger: Not reported Aircraft Runway Number: Not reported Road Mile Marker: Not reported Building ID: Not reported Type of Fixed Object: Not reported

Power Generating Facility: U

EDR ID Number

N/A

MAP FINDINGS Map ID Direction

Distance Elevation

Site Database(s) **EPA ID Number**

(Continued) 2013052039

Generating Capacity: Not reported Type of Fuel: Not reported NPDES: Not reported

NPDES Compliance:

Pipeline Type: Not reported

DOT Regulated: U **ABOVE** Pipeline Above Ground: Exposed Underwater: Ν Pipeline Covered:

Railroad Hotline: Not reported

Grade Crossing:

Not reported Location Subdivision: Railroad Milepost: Not reported Type Vehicle Involved: Not reported Crossing Device Type: Not reported

Device Operational:

DOT Crossing Number: Not reported

Brake Failure:

Description of Tank: Not reported **ABOVE** Tank Above Ground: Transportable Container: U Tank Regulated: U

Tank Regulated By: Not reported Tank ID: Not reported Capacity of Tank: Not reported Not reported Capacity of Tank Units: **Actual Amount:** Not reported **Actual Amount Units:** Not reported Platform Rig Name: Not reported Not reported Platform Letter: Location Area ID: Not reported Location Block ID: Not reported OCSG Number: Not reported OCSP Number: Not reported Not reported State Lease Number: Not reported Pier Dock Number: Not reported Berth Slip Number: Continuous Release Type: Not reported Initial Continuous Release No: Not reported Continuous Release Permit: Not reported

Allision: U

Type of Structure: Not reported Structure Name: Not reported

Structure Operational: U Airbag Deployed: U

Date Tiem Normal Service: Not reported Service Disruption Time: Not reported Service Disruption Units: Not reported Transit Bus Flag: Not reported CR Begin Date: Not reported CR End Date: Not reported CR Change Date: Not reported FBI Contact: Not reported FBI Contact Date Time: Not reported

XXXSub Part C Testing Req:

Not reported Conductor Testina: **Engineer Testing:** Not reported

EDR ID Number

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

(Continued) 2013052039

Trainman Testing: Not reported Not reported Yard Foreman Testing: RCL Operator Testing: Not reported Brakeman Testing: Not reported Train Dispatcher Testing: Not reported Signalman Testing: Not reported Other Employee Testing: Not reported Unknown Testing: Not reported Passenger Handling: Not reported Passenger Route: XXXXXXPassenger Delay:

Incident Details:

1052039 NRC Report #: Fire Involved: Ν Fire Extinguished: U Any Evacuations: Ν

Number Evacuated: Not reported Who Evacuated: Not reported Radius of Evacuation: Not reported

Any Injuries:

Number Injured: Not reported Number Hospitalized: Not reported

Any Fatalities:

Number Fatalities: Not reported

Any Damages:

Damage Amount: Not reported

Air Corridor Closed:

Air Corridor Desc: Not reported Not reported Air Closure Time:

Waterway Closed:

Waterway Desc: Not reported Waterway Closure Time: Not reported

Road Closed: Ν

Road Desc: Not reported Road Closure Time: Not reported Closure Direction: Not reported Major Artery: Ν

Track Closed: Ν

Track Desc: Not reported Track Closure Time: Not reported NONE

Media Interest: Medium Desc: WATER

STORM WATER DRAIN SYSTEM ON PROPERTY Additional Medium Info: Body of Water: STORM WATER DRAIN SYSTEM ON PROPERTY

Tributary of: Not reported

Release Secured:

Estimated Duration of Release: Not reported Not reported Release rate:

HAZMAT CONTRACTOR WAS ON SCENE FOR CLEAN UP. ABSORBANTS USED. THEY Desc Remedial Action:

WILL RETURN TO FINISH CLEAN UP TODAY.

State Agency on Scene: FD

State Agency Report Number: Not reported Other Agency Notified: Not reported Weather Conditions: Not reported Air Temperature: Not reported Wind Speed: Not reported

Direction Distance Elevation

Site Database(s) EPA ID Number

(Continued) 2013052039

Wind Direction: Not reported

Water Supply Contaminated: \, \, \, \

Sheen Size: Not reported Sheen Color: Not reported Direction of Sheen Travel: Not reported Sheen Odor Description: Not reported Not reported Wave Condition: Current Speed: Not reported Current Direction: Not reported Water Temperature: Not reported Track Close Dir: Not reported Empl Fatality: Not reported Pass Fatality: Not reported Community Impact: Not reported Wind Speed Unit: Not reported Employee Injuries: Not reported Passenger Injuries: Not reported Occupant Fatality: Not reported **Current Speed Unit:** Not reported Road Closure Units: Not reported Track CLosure Units: Not reported Sheen Size Units: Not reported

State Agency Notified: FD, INDIAN HEALTH SERVICE

Not reported

Federal Agency Notified:

nearest River Mile Marker:
Sheen Size Length:
Sheen Size Length Units:
Sheen Size Width:
Not reported

Offshore: N

Duration Unit:

Release Rate Unit:

Release Rate Rate:

Not reported

Not reported

Not reported

Passengers Transferred: NO

Calls:

Additional Info:

 NRC Report #:
 1052039

 Site ID:
 20131052039

 Date Time Received:
 2013-06-28 10:02:06

 Date Time Complete:
 2013-06-28 10:07:32

Call Type: INC

Responsible Company: WW HASTINGS HOSPITAL Responsible Org Type: PRIVATE ENTERPRISE

Responsible City: TAHLEQUAH

Responsible State: OK

Responsible Zip: Not reported
On Behalf: Not reported
Source: TELEPHONE

Material Involved:

NRC Report #: 1052039
Chris Code: ODS
Case Number: 000000-00-0
UN Number: Not reported

Amount of Material: 700

EDR ID Number

Direction Distance

Elevation Site Database(s) **EPA ID Number**

(Continued) 2013052039

Unit of Measure: GALLON(S) Name of Material: OIL: DIESEL If Reached Water: YES

Amount in Water:

UNKNOWN AMOUNT Unit of Measure Reach Water:

E-Z MART #4366 LUST U001224281 1600 E DOWNING ST **NNE** UST N/A

E-Z MART #4366

1600 E DOWNING ST

TAHLEQUAH, OK 74464

1/4-1/2 0.326 mi.

1723 ft.

Relative: LUST: Lower Name:

Address: Actual: City, State, Zip: 878 ft.

TAHLEQUAH, OK 74464

Facility ID: 1109406 Case Number: 064-2737

Case Type: Confirmed Release

Tank Type: UST Release Date: 03/21/2003 Close Date: 08/03/2005 35.9152 / -94.9471 Lat/Long:

Status: Closed

Name: E-Z MART #4366 Address: 1600 E DOWNING ST City,State,Zip: TAHLEQUAH, OK 74464

Facility ID: 1109406 Case Number: SOR-2737 Case Type: Suspicion of Release

Tank Type: Not reported Release Date: 03/31/2003 Close Date: 07/22/2003 Lat/Long: 35.9152 / -94.9471

Status: Closed

UST:

Facility ID: 1109406

Contact Name: GPM Southeast, LLC Contact Address: 8565 Magellan Parkway

Contact Telephone: 8047301568

Contact City, St, Zip: Richmond, VA 23227 Lat/Long: 35.9152 / -94.9471

Tank ID:

Tank Status: Permanently Out Of Use

Total Capacity: 9994 Substance: Gasoline 01/01/1974 Date Installed: Tank Type: UST Closed Date: 07/15/2005

Decode of Tank Status: Permanently out of use Closure Status: Tank Removed From Ground

Tank Construction: Single Walled

Tank Material: Steel **EDR ID Number**

HIST UST

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

E-Z MART #4366 (Continued)

U001224281

Pipe Construction: Single-Walled

Steel Pipe Material:

Tank ID:

Permanently Out Of Use Tank Status:

Total Capacity: 6045 Substance: Gasoline 01/01/1974 Date Installed: Tank Type: UST Closed Date: 07/15/2005

Decode of Tank Status: Permanently out of use Tank Removed From Ground Closure Status:

Tank Construction: Single Walled Tank Material: Steel Single-Walled Pipe Construction:

Pipe Material: Steel

Tank ID:

Tank Status: Currently In Use

12000 **Total Capacity:** Substance: E-10 06/13/2005 Date Installed: Tank Type: UST Closed Date: Not reported Decode of Tank Status: Currently in use Closure Status: Not reported Tank Construction: **Double Walled** Tank Material: Steel With Fiberglass Pipe Construction: Double-Walled Flexible Plastic Pipe Material:

Tank ID:

Tank Status: Currently In Use

Total Capacity: 12000 Diesel, E-10 Substance: Date Installed: 06/13/2005 Tank Type: UST Closed Date: Not reported Decode of Tank Status: Currently in use Closure Status: Not reported Tank Construction: **Double Walled** Tank Material: Steel With Fiberglass Pipe Construction: Double-Walled Pipe Material: Flexible Plastic

HIST UST:

1109406 Facility ID:

Owner Name: E-Z Mart Stores, Inc. P.O. Box 1426 Owner Address: Owner City, St, Zip: Texarkana, TX 75504

Tank ID:

Tank Status: Currently in Use Installed Date: 1/1/1974 0:00:00

6045 Tank Capacity: Product: Gasoline

Facility ID: 1109406

Owner Name: E-Z Mart Stores, Inc.

Direction Distance

Distance Elevation Site EDR ID Number

EDR ID Number

EPA ID Number

E-Z MART #4366 (Continued)

U001224281

HIST UST

Owner Address: P.O. Box 1426 Owner City,St,Zip: Texarkana, TX 75504

Tank ID: 1

TAHLEQUAH, OK 74464

Tank Status: Currently in Use Installed Date: 1/1/1974 0:00:00

Tank Capacity: 9994 Product: Gasoline

10 BIG B FOOD & DELI #2 LUST U001224288
NW 1100 E. DOWNING UST N/A

1/4-1/2 0.362 mi. 1910 ft.

Relative: LUST:

 Lower
 Name:
 BIG B FOOD & DELI #2

 Actual:
 Address:
 1100 E. DOWNING

 843 ft.
 City,State,Zip:
 TAHLEQUAH, OK 74464

Facility ID: 1110244 Case Number: SOR-4511

Case Type: Suspicion of Release

Tank Type: UST
Release Date: 06/01/2020
Close Date: 01/08/2021
Lat/Long: 35.9150 / -94.9544

Status: Closed

UST:

Facility ID: 1110244

Contact Name: LaHoma, Mark, and Terry Bigby dba Bigby Companies

Contact Address: 429 S Muskogee Ave Contact Telephone: 9184561782

Contact City, St, Zip: Tahlequah, OK 74464 Lat/Long: 35.915 / -94.9544

Tank ID:

Tank Status: Permanently Out Of Use

Total Capacity: 6000
Substance: Diesel
Date Installed: 01/01/1983
Tank Type: UST
Closed Date: 05/18/2020

Decode of Tank Status: Permanently out of use Closure Status: Tank Removed From Ground

Tank Construction: Single Walled
Tank Material: Steel
Pipe Construction: Single-Walled
Pipe Material: Steel

Pipe Material: Stee

Tank ID: 2

Tank Status: Permanently Out Of Use

Total Capacity: 10000
Substance: Gasoline 100%
Date Installed: 01/01/1983
Tank Type: UST
Closed Date: 05/18/2020

Decode of Tank Status: Permanently out of use

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

BIG B FOOD & DELI #2 (Continued)

U001224288

Closure Status: Tank Removed From Ground

Single Walled Tank Construction:

Steel Tank Material:

Pipe Construction: Single-Walled

Pipe Material: Steel

Tank ID:

Permanently Out Of Use Tank Status:

Total Capacity: 10000 Substance: E-10 01/01/1983 Date Installed: Tank Type: UST 05/18/2020 Closed Date:

Decode of Tank Status: Permanently out of use Closure Status: Tank Removed From Ground

Tank Construction: Single Walled

Tank Material: Steel

Single-Walled Pipe Construction:

Pipe Material: Steel

HIST UST:

Facility ID: 1110244 Gilbert S. Bigby Owner Name: Owner Address: 429 S. Muskogee Owner City, St, Zip: Tahlequah, OK 74464

Tank ID:

Tank Status: Currently in Use Installed Date: 1/1/1986 0:00:00

Tank Capacity: 6000 Product: Diesel

Facility ID: 1110244 Owner Name: Gilbert S. Bigby Owner Address: 429 S. Muskogee Owner City, St, Zip: Tahlequah, OK 74464

Tank ID:

Tank Status: Currently in Use Installed Date: 1/1/1986 0:00:00

Tank Capacity: 10000 Product: Gasoline

Facility ID: 1110244 Owner Name: Gilbert S. Bigby Owner Address: 429 S. Muskogee Tahlequah, OK 74464 Owner City, St, Zip:

Tank ID: Tank Status:

Currently in Use Installed Date: 1/1/1986 0:00:00 10000

Tank Capacity: Product: Gasoline

Direction Distance

EDR ID Number Elevation Site Database(s) **EPA ID Number**

11 **MARY'S LIQUOR MART** LUST U001224286 WNW 902 E DOWNING ST UST N/A **HIST UST**

MARY'S LIQUOR MART

1/4-1/2 0.499 mi. 2633 ft.

Relative: LUST: Lower Name:

TAHLEQUAH, OK 74464

902 E DOWNING ST Address: Actual: City,State,Zip: TAHLEQUAH, OK 74464 837 ft.

Facility ID: 1109523 Case Number: 064-2453

Case Type: Confirmed Release

Tank Type: **UST** Release Date: 01/23/2001 **Close Date:** 02/26/2004 35.9151 / -94.9575 Lat/Long:

Status: Closed

UST:

Facility ID: 1109523 Dirk Van Veen Contact Name: 902 E. Downing St. Contact Address: Contact Telephone: 9184564631

Tahlequah, OK 74464 Contact City, St, Zip: 35.9151 / -94.9575 Lat/Long:

Tank ID:

Tank Status: Permanently Out Of Use

Total Capacity: 8000 Substance: Gasoline 04/04/1971 Date Installed: Tank Type: UST Closed Date: 11/26/2014

Permanently out of use Decode of Tank Status: Closure Status: Tank Removed From Ground

Tank Construction: Single Walled Tank Material: Steel Pipe Construction: Single-Walled

Pipe Material: Steel

Tank ID:

Tank Status: Permanently Out Of Use

Total Capacity: 6000 Substance: Gasoline 07/01/1974 Date Installed: Tank Type: UST Closed Date: 11/26/2014

Decode of Tank Status: Permanently out of use Tank Removed From Ground Closure Status:

Single Walled Tank Construction: Tank Material: Steel Pipe Construction: Single-Walled Pipe Material: Steel

HIST UST:

Facility ID: 1109523

Owner Name: M & B INVESTMENTS

Owner Address: PO BOX 180 Map ID MAP FINDINGS Direction

Distance
Elevation Site Database(s)

MARY'S LIQUOR MART (Continued) U001224286

Owner City, St, Zip: Tahlequah, OK 74465

Tank ID:

Tank Status: Currently In Use Installed Date: 4/4/1971 0:00:00

Tank Capacity: 8000 Product: Gasoline

Facility ID: 1109523

Owner Name: M & B INVESTMENTS

Owner Address: PO BOX 180

Owner City, St, Zip: Tahlequah, OK 74465

Tank ID: 2

Tank Status: Currently In Use Installed Date: 7/1/1974 0:00:00

Tank Capacity: 6000 Product: Gasoline **EDR ID Number**

EPA ID Number

Count: 0 records. ORPHAN SUMMARY

City EDR ID Site Name Site Address Zip Database(s)

NO SITES FOUND

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/27/2022 Source: EPA
Date Data Arrived at EDR: 05/05/2022 Telephone: N/A

Date Made Active in Reports: 05/31/2022 Last EDR Contact: 06/01/2022

Number of Days to Update: 26 Next Scheduled EDR Contact: 07/11/2022
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources

EPA's Environmental Photographic Interpretation Center (EPIC)

Telephone: 202-564-7333

EPA Region 1 EPA Region 6

Telephone 617-918-1143 Telephone: 214-655-6659

EPA Region 3 EPA Region 7

Telephone 215-814-5418 Telephone: 913-551-7247

EPA Region 4 EPA Region 8

Telephone 404-562-8033 Telephone: 303-312-6774

EPA Region 5 EPA Region 9

Telephone 312-886-6686 Telephone: 415-947-4246

EPA Region 10

Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/27/2022 Source: EPA
Date Data Arrived at EDR: 05/05/2022 Telephone: N/A

Next Scheduled EDR Contact: 07/11/2022 Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/1991 Date Data Arrived at EDR: 02/02/1994 Date Made Active in Reports: 03/30/1994

Number of Days to Update: 56

Source: EPA

Telephone: 202-564-4267 Last EDR Contact: 08/15/2011

Next Scheduled EDR Contact: 11/28/2011 Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/27/2022 Date Data Arrived at EDR: 05/05/2022 Date Made Active in Reports: 05/31/2022

Number of Days to Update: 26

Source: EPA Telephone: N/A

Last EDR Contact: 06/01/2022

Next Scheduled EDR Contact: 07/11/2022 Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/25/2021 Date Data Arrived at EDR: 06/24/2021 Date Made Active in Reports: 09/20/2021

Number of Days to Update: 88

Source: Environmental Protection Agency Telephone: 703-603-8704

Last EDR Contact: 04/01/2022

Next Scheduled EDR Contact: 07/11/2022 Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/27/2022 Date Data Arrived at EDR: 05/05/2022 Date Made Active in Reports: 05/31/2022

Number of Days to Update: 26

Source: EPA

Telephone: 800-424-9346 Last EDR Contact: 06/01/2022

Next Scheduled EDR Contact: 07/25/2022 Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/27/2022 Date Data Arrived at EDR: 05/05/2022 Date Made Active in Reports: 05/31/2022

Number of Days to Update: 26

Source: EPA

Telephone: 800-424-9346 Last EDR Contact: 06/01/2022

Next Scheduled EDR Contact: 07/25/2022 Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 02/28/2022 Date Data Arrived at EDR: 03/02/2022 Date Made Active in Reports: 03/17/2022

Number of Days to Update: 15

Source: EPA

Telephone: 800-424-9346 Last EDR Contact: 04/06/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/28/2022 Date Data Arrived at EDR: 03/02/2022 Date Made Active in Reports: 03/17/2022

Number of Days to Update: 15

Source: Environmental Protection Agency

Telephone: 214-665-6444 Last EDR Contact: 04/06/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/28/2022 Date Data Arrived at EDR: 03/02/2022 Date Made Active in Reports: 03/17/2022

Number of Days to Update: 15

Source: Environmental Protection Agency Telephone: 214-665-6444

Last EDR Contact: 04/06/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 02/28/2022 Date Data Arrived at EDR: 03/02/2022 Date Made Active in Reports: 03/17/2022

Number of Days to Update: 15

Source: Environmental Protection Agency

Telephone: 214-665-6444 Last EDR Contact: 04/06/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation
and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database
includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste
as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate
less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 02/28/2022 Date Data Arrived at EDR: 03/02/2022 Date Made Active in Reports: 03/17/2022

Number of Days to Update: 15

Source: Environmental Protection Agency

Telephone: 214-665-6444 Last EDR Contact: 04/06/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 02/08/2022 Date Data Arrived at EDR: 02/11/2022 Date Made Active in Reports: 05/10/2022

Number of Days to Update: 88

Source: Department of the Navy Telephone: 843-820-7326 Last EDR Contact: 05/05/2022

Next Scheduled EDR Contact: 08/22/2022 Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/21/2022 Date Data Arrived at EDR: 02/23/2022 Date Made Active in Reports: 05/24/2022

Number of Days to Update: 90

Source: Environmental Protection Agency

Telephone: 703-603-0695 Last EDR Contact: 05/24/2022

Next Scheduled EDR Contact: 09/05/2022 Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/21/2022 Date Data Arrived at EDR: 02/23/2022 Date Made Active in Reports: 05/24/2022

Number of Days to Update: 90

Source: Environmental Protection Agency

Telephone: 703-603-0695 Last EDR Contact: 05/04/2022

Next Scheduled EDR Contact: 09/05/2022

Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous

substances.

Date of Government Version: 12/31/2021 Date Data Arrived at EDR: 03/01/2022 Date Made Active in Reports: 03/10/2022

Number of Days to Update: 9

Source: National Response Center, United States Coast Guard

Telephone: 202-267-2180 Last EDR Contact: 03/22/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

SHWS: Voluntary Cleanup & Superfund Site Status Report
Land restoration projects carried out in several DEQ programs.

Date of Government Version: 09/16/2020 Date Data Arrived at EDR: 11/10/2021 Date Made Active in Reports: 02/01/2022

Number of Days to Update: 83

Source: Department of Environmental Quality

Telephone: 405-702-5100 Last EDR Contact: 05/11/2022

Next Scheduled EDR Contact: 08/22/2022 Data Release Frequency: No Update Planned

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF: Permitted Solid Waste Disposal & Processing Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/16/2021 Date Data Arrived at EDR: 12/17/2021 Date Made Active in Reports: 03/10/2022

Number of Days to Update: 83

Source: Department of Environmental Quality

Telephone: 405-702-5184 Last EDR Contact: 03/22/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Annually

Lists of state and tribal leaking storage tanks

LAST: Leaking Aboveground Storage Tanks List Leaking aboveground storage tank site locations.

> Date of Government Version: 12/02/2021 Date Data Arrived at EDR: 12/17/2021 Date Made Active in Reports: 03/10/2022

Number of Days to Update: 83

Source: Oklahoma Corporation Commission

Telephone: 405-522-4640 Last EDR Contact: 03/22/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Varies

LUST: Leaking Underground Storage Tank List

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 12/02/2021 Date Data Arrived at EDR: 12/17/2021 Date Made Active in Reports: 03/10/2022

Number of Days to Update: 83

Source: Oklahoma Corporation Commission

Telephone: 405-521-3107 Last EDR Contact: 03/22/2022

Next Scheduled EDR Contact: 07/04/2022

Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/12/2021 Date Data Arrived at EDR: 11/15/2021 Date Made Active in Reports: 02/08/2022

Number of Days to Update: 85

Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/12/2021 Date Data Arrived at EDR: 11/15/2021 Date Made Active in Reports: 02/08/2022

Number of Days to Update: 85

Source: EPA Region 8 Telephone: 303-312-6271 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/12/2021 Date Data Arrived at EDR: 11/15/2021 Date Made Active in Reports: 02/08/2022

Number of Days to Update: 85

Source: Environmental Protection Agency

Telephone: 415-972-3372 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/12/2021 Date Data Arrived at EDR: 11/15/2021 Date Made Active in Reports: 02/08/2022

Number of Days to Update: 85

Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/12/2021 Date Data Arrived at EDR: 11/15/2021 Date Made Active in Reports: 02/08/2022

Number of Days to Update: 85

Source: EPA, Region 5 Telephone: 312-886-7439 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/12/2021 Date Data Arrived at EDR: 11/15/2021 Date Made Active in Reports: 02/08/2022

Number of Days to Update: 85

Source: EPA Region 6 Telephone: 214-665-6597 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/28/2021 Date Data Arrived at EDR: 06/11/2021 Date Made Active in Reports: 09/07/2021

Number of Days to Update: 88

Source: EPA Region 1 Telephone: 617-918-1313 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 05/28/2021 Date Data Arrived at EDR: 06/22/2021 Date Made Active in Reports: 09/20/2021

Number of Days to Update: 90

Source: EPA Region 4 Telephone: 404-562-8677 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Varies

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 10/14/2021 Date Data Arrived at EDR: 11/05/2021 Date Made Active in Reports: 02/01/2022

Number of Days to Update: 88

Source: FEMA

Telephone: 202-646-5797 Last EDR Contact: 04/04/2022

Next Scheduled EDR Contact: 07/18/2022 Data Release Frequency: Varies

UST: Underground Storage Tank Listing

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 12/02/2021 Date Data Arrived at EDR: 12/17/2021 Date Made Active in Reports: 03/10/2022

Number of Days to Update: 83

Source: Oklahoma Corporation Commission

Telephone: 405-521-3107 Last EDR Contact: 03/22/2022

Next Scheduled EDR Contact: 07/04/2022

Data Release Frequency: Varies

AST: Aboveground Storage Tanks

Registered Aboveground Storage Tanks.

Date of Government Version: 12/02/2021 Date Data Arrived at EDR: 12/17/2021 Date Made Active in Reports: 03/10/2022

Number of Days to Update: 83

Source: Oklahoma Corporation Commission

Telephone: 405-521-3107 Last EDR Contact: 03/22/2022

Next Scheduled EDR Contact: 07/04/2022

Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/14/2021 Date Data Arrived at EDR: 11/15/2021 Date Made Active in Reports: 02/08/2022

Number of Days to Update: 85

Source: EPA, Region 1 Telephone: 617-918-1313 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/12/2021 Date Data Arrived at EDR: 11/15/2021 Date Made Active in Reports: 02/08/2022

Number of Days to Update: 85

Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022

Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/12/2021 Date Data Arrived at EDR: 11/15/2021 Date Made Active in Reports: 02/08/2022

Number of Days to Update: 85

Source: EPA Region 8 Telephone: 303-312-6137 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/12/2021 Date Data Arrived at EDR: 11/15/2021 Date Made Active in Reports: 02/08/2022

Number of Days to Update: 85

Source: EPA Region 9 Telephone: 415-972-3368 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/28/2021 Date Data Arrived at EDR: 06/22/2021 Date Made Active in Reports: 09/20/2021

Number of Days to Update: 90

Source: EPA Region 4 Telephone: 404-562-9424 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/12/2021 Date Data Arrived at EDR: 11/15/2021 Date Made Active in Reports: 02/08/2022

Number of Days to Update: 85

Source: EPA Region 6 Telephone: 214-665-7591 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022

Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/06/2021 Date Data Arrived at EDR: 06/11/2021 Date Made Active in Reports: 09/07/2021

Number of Days to Update: 88

Source: EPA Region 5 Telephone: 312-886-6136 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/12/2021 Date Data Arrived at EDR: 11/15/2021 Date Made Active in Reports: 02/08/2022

Number of Days to Update: 85

Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/01/2022

Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Institutional Control Sites Sites with institutional controls in place.

Date of Government Version: 01/25/2022 Date Data Arrived at EDR: 02/09/2022 Date Made Active in Reports: 05/09/2022

Number of Days to Update: 89

Source: Department of Environmental Quality

Telephone: 405-702-5100 Last EDR Contact: 05/11/2022

Next Scheduled EDR Contact: 08/22/2022 Data Release Frequency: Quarterly

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015 Date Data Arrived at EDR: 09/29/2015 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 142

Source: EPA, Region 1 Telephone: 617-918-1102 Last EDR Contact: 03/16/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008 Date Data Arrived at EDR: 04/22/2008 Date Made Active in Reports: 05/19/2008

Number of Days to Update: 27

Source: EPA, Region 7 Telephone: 913-551-7365 Last EDR Contact: 07/08/2021

Next Scheduled EDR Contact: 07/20/2009

Data Release Frequency: Varies

VCP: Voluntary Cleanup Site Inventory

Investigations and cleanups by groups or individuals participating in the Voluntary Cleanup Program (VCP).

Date of Government Version: 01/25/2022 Date Data Arrived at EDR: 02/09/2022 Date Made Active in Reports: 05/09/2022

Number of Days to Update: 89

Source: Department of Environmental Quality

Telephone: 405-702-5100 Last EDR Contact: 05/11/2022

Next Scheduled EDR Contact: 08/22/2022 Data Release Frequency: Quarterly

Lists of state and tribal brownfield sites

BROWNFIELDS: Brownfield Sites

Brownfields are defined by Oklahoma law as abandoned, idled or under used industrial or commercial facilities or other real property at which expansion or redevelopment of the real property is complicated by environmental contamination caused by regulated substances. This program provides a means for private parties and government entities to voluntarily investigate and if warranted, clean up properties that may be contaminated with hazardous wastes. The formal Brownfields Program provides specific state liability relief and protects the property from federal Superfund actions.

Date of Government Version: 09/07/2012 Date Data Arrived at EDR: 09/07/2012 Date Made Active in Reports: 10/10/2012

Number of Days to Update: 33

Source: Department of Environmental Quality

Telephone: 405-702-5100 Last EDR Contact: 05/06/2022

Next Scheduled EDR Contact: 08/22/2022 Data Release Frequency: No Update Planned

BROWNFIELDS 2: Brownfields Public Record Listing

The Brownfields program provides a means for private parties and government entities to voluntarily investigate and if warranted, clean up properties that may be contaminated with hazardous wastes. The formal Brownfields Program provides specific state liability relief and protects the property from federal Superfund actions.

Date of Government Version: 01/25/2022 Date Data Arrived at EDR: 02/11/2022 Date Made Active in Reports: 05/09/2022

Number of Days to Update: 87

Source: Department of Environmental Quality

Telephone: 405-702-5100 Last EDR Contact: 05/09/2022

Next Scheduled EDR Contact: 08/22/2022 Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 02/23/2022 Date Data Arrived at EDR: 03/10/2022 Date Made Active in Reports: 03/10/2022

Number of Days to Update: 0

Source: Environmental Protection Agency

Telephone: 202-566-2777 Last EDR Contact: 03/15/2022

Next Scheduled EDR Contact: 06/27/2022 Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: Recycling Facilities

A listing of recycling facility locations.

Date of Government Version: 07/10/2019 Date Data Arrived at EDR: 07/17/2019 Date Made Active in Reports: 08/29/2019

Number of Days to Update: 43

Source: Department of Environmental Quality

Telephone: 405-702-5100 Last EDR Contact: 04/14/2022

Next Scheduled EDR Contact: 07/25/2022 Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998 Date Data Arrived at EDR: 12/03/2007 Date Made Active in Reports: 01/24/2008

Number of Days to Update: 52

Source: Environmental Protection Agency

Telephone: 703-308-8245 Last EDR Contact: 04/21/2022

Next Scheduled EDR Contact: 08/08/2022 Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985 Date Data Arrived at EDR: 08/09/2004 Date Made Active in Reports: 09/17/2004

Number of Days to Update: 39

Source: Environmental Protection Agency

Telephone: 800-424-9346 Last EDR Contact: 06/09/2004 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009 Date Data Arrived at EDR: 05/07/2009 Date Made Active in Reports: 09/21/2009

Number of Days to Update: 137

Source: EPA, Region 9 Telephone: 415-947-4219 Last EDR Contact: 04/14/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014 Date Data Arrived at EDR: 08/06/2014 Date Made Active in Reports: 01/29/2015

Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service

Telephone: 301-443-1452 Last EDR Contact: 04/28/2022

Next Scheduled EDR Contact: 08/08/2022 Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 02/22/2022 Date Data Arrived at EDR: 02/23/2022 Date Made Active in Reports: 05/10/2022

Number of Days to Update: 76

Source: Drug Enforcement Administration

Telephone: 202-307-1000 Last EDR Contact: 05/24/2022

Next Scheduled EDR Contact: 09/05/2022 Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/22/2022 Date Data Arrived at EDR: 02/23/2022 Date Made Active in Reports: 05/10/2022

Number of Days to Update: 76

Source: Drug Enforcement Administration

Telephone: 202-307-1000 Last EDR Contact: 05/24/2022

Next Scheduled EDR Contact: 09/05/2022 Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

HIST UST: Underground Storage Tank List, List II Version

This underground storage tank listing includes tank information through March 2003. This listing is no longer updated by the Oklahoma Corporation Commission.

Date of Government Version: 03/21/2003 Date Data Arrived at EDR: 04/28/2003 Date Made Active in Reports: 05/27/2003

Number of Days to Update: 29

Source: Oklahoma Corporation Commission

Telephone: 405-521-3107 Last EDR Contact: 01/19/2009

Next Scheduled EDR Contact: 04/19/2009 Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 04/27/2022 Date Data Arrived at EDR: 05/05/2022 Date Made Active in Reports: 05/31/2022

Number of Days to Update: 26

Source: Environmental Protection Agency

Telephone: 202-564-6023 Last EDR Contact: 06/01/2022

Next Scheduled EDR Contact: 07/11/2022 Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/15/2021 Date Data Arrived at EDR: 12/16/2021 Date Made Active in Reports: 03/10/2022

Number of Days to Update: 84

Source: U.S. Department of Transportation

Telephone: 202-366-4555 Last EDR Contact: 03/21/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Quarterly

OK COMPLAINT: Oklahoma Complaint System Database

Environmental complaints reported to the Oklahoma Corporation Commission.

Date of Government Version: 06/30/2021 Date Data Arrived at EDR: 07/28/2021 Date Made Active in Reports: 10/28/2021

Number of Days to Update: 92

Source: Oklahoma Conservation Commission

Telephone: 405-521-4828 Last EDR Contact: 05/06/2022

Next Scheduled EDR Contact: 08/22/2022 Data Release Frequency: Annually

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 02/28/2022 Date Data Arrived at EDR: 03/02/2022 Date Made Active in Reports: 03/17/2022

Number of Days to Update: 15

Source: Environmental Protection Agency

Telephone: 214-665-6444 Last EDR Contact: 04/06/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/01/2021 Date Data Arrived at EDR: 02/15/2022 Date Made Active in Reports: 05/10/2022

Number of Days to Update: 84

Source: U.S. Army Corps of Engineers

Telephone: 202-528-4285 Last EDR Contact: 05/17/2022

Next Scheduled EDR Contact: 08/29/2022 Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021 Date Data Arrived at EDR: 07/13/2021 Date Made Active in Reports: 03/09/2022

Number of Days to Update: 239

Source: USGS Telephone: 888-27

Telephone: 888-275-8747 Last EDR Contact: 04/12/2022

Next Scheduled EDR Contact: 07/25/2022

Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018 Date Data Arrived at EDR: 04/11/2018 Date Made Active in Reports: 11/06/2019

Number of Days to Update: 574

Source: U.S. Geological Survey Telephone: 888-275-8747 Last EDR Contact: 04/05/2022

Next Scheduled EDR Contact: 07/18/2022

Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017 Date Data Arrived at EDR: 02/03/2017 Date Made Active in Reports: 04/07/2017

Number of Days to Update: 63

Source: Environmental Protection Agency

Telephone: 615-532-8599 Last EDR Contact: 05/06/2022

Next Scheduled EDR Contact: 08/22/2022 Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/13/2021 Date Data Arrived at EDR: 12/17/2021 Date Made Active in Reports: 03/17/2022

Number of Days to Update: 90

Source: Environmental Protection Agency

Telephone: 202-566-1917 Last EDR Contact: 03/21/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013 Date Data Arrived at EDR: 03/21/2014 Date Made Active in Reports: 06/17/2014

Number of Days to Update: 88

Source: Environmental Protection Agency

Telephone: 617-520-3000 Last EDR Contact: 04/28/2022

Next Scheduled EDR Contact: 08/15/2022 Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017 Date Data Arrived at EDR: 05/08/2018 Date Made Active in Reports: 07/20/2018

Number of Days to Update: 73

Source: Environmental Protection Agency

Telephone: 703-308-4044 Last EDR Contact: 05/06/2022

Next Scheduled EDR Contact: 08/15/2022

Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016 Date Data Arrived at EDR: 06/17/2020 Date Made Active in Reports: 09/10/2020

Number of Days to Update: 85

Source: EPA

Telephone: 202-260-5521 Last EDR Contact: 03/18/2022

Next Scheduled EDR Contact: 06/27/2022 Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018 Date Data Arrived at EDR: 08/14/2020 Date Made Active in Reports: 11/04/2020

Number of Days to Update: 82

Source: EPA

Telephone: 202-566-0250 Last EDR Contact: 05/20/2022

Next Scheduled EDR Contact: 08/29/2022 Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 01/19/2022 Date Data Arrived at EDR: 01/19/2022 Date Made Active in Reports: 04/11/2022

Number of Days to Update: 82

Source: EPA

Telephone: 202-564-4203 Last EDR Contact: 04/20/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/27/2022 Date Data Arrived at EDR: 05/05/2022 Date Made Active in Reports: 05/31/2022

Number of Days to Update: 26

Source: EPA

Telephone: 703-416-0223 Last EDR Contact: 06/01/2022

Next Scheduled EDR Contact: 09/12/2022 Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/27/2022 Date Data Arrived at EDR: 05/04/2022 Date Made Active in Reports: 05/10/2022

Number of Days to Update: 6

Source: Environmental Protection Agency

Telephone: 202-564-8600 Last EDR Contact: 04/18/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995 Date Data Arrived at EDR: 07/03/1995 Date Made Active in Reports: 08/07/1995

Number of Days to Update: 35

Source: EPA

Telephone: 202-564-4104 Last EDR Contact: 06/02/2008

Next Scheduled EDR Contact: 09/01/2008 Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 01/25/2022 Date Data Arrived at EDR: 02/03/2022 Date Made Active in Reports: 02/25/2022

Number of Days to Update: 22

Source: EPA

Telephone: 202-564-6023 Last EDR Contact: 06/01/2022

Next Scheduled EDR Contact: 08/15/2022 Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/20/2022 Date Data Arrived at EDR: 01/20/2022 Date Made Active in Reports: 03/25/2022

Number of Days to Update: 64

Source: EPA

Telephone: 202-566-0500 Last EDR Contact: 04/08/2022

Next Scheduled EDR Contact: 07/18/2022 Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016 Date Data Arrived at EDR: 11/23/2016 Date Made Active in Reports: 02/10/2017

Number of Days to Update: 79

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 03/31/2022

Next Scheduled EDR Contact: 07/18/2022 Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009

Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances

Telephone: 202-566-1667 Last EDR Contact: 08/18/2017

Next Scheduled EDR Contact: 12/04/2017 Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009

Number of Days to Update: 25

Source: EPA

Telephone: 202-566-1667 Last EDR Contact: 08/18/2017

Next Scheduled EDR Contact: 12/04/2017 Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/29/2021 Date Data Arrived at EDR: 08/24/2021 Date Made Active in Reports: 11/19/2021

Number of Days to Update: 87

Source: Nuclear Regulatory Commission

Telephone: 301-415-7169 Last EDR Contact: 04/18/2022

Next Scheduled EDR Contact: 08/01/2022 Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2020 Date Data Arrived at EDR: 11/30/2021 Date Made Active in Reports: 02/22/2022

Number of Days to Update: 84

Source: Department of Energy Telephone: 202-586-8719 Last EDR Contact: 06/02/2022

Next Scheduled EDR Contact: 09/12/2022 Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017 Date Data Arrived at EDR: 03/05/2019 Date Made Active in Reports: 11/11/2019

Number of Days to Update: 251

Source: Environmental Protection Agency

Telephone: N/A

Last EDR Contact: 05/25/2022

Next Scheduled EDR Contact: 09/12/2022 Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019 Date Data Arrived at EDR: 11/06/2019 Date Made Active in Reports: 02/10/2020

Number of Days to Update: 96

Source: Environmental Protection Agency

Telephone: 202-566-0517 Last EDR Contact: 05/06/2022

Next Scheduled EDR Contact: 08/15/2022 Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019 Date Data Arrived at EDR: 07/01/2019 Date Made Active in Reports: 09/23/2019

Number of Days to Update: 84

Source: Environmental Protection Agency

Telephone: 202-343-9775 Last EDR Contact: 03/28/2022

Next Scheduled EDR Contact: 07/11/2022 Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 03/01/2007 Date Made Active in Reports: 04/10/2007

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 12/17/2007

Next Scheduled EDR Contact: 03/17/2008

Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 03/01/2007 Date Made Active in Reports: 04/10/2007

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 12/17/2008

Next Scheduled EDR Contact: 03/17/2008 Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020 Date Data Arrived at EDR: 01/28/2020 Date Made Active in Reports: 04/17/2020

Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety

Telephone: 202-366-4595 Last EDR Contact: 04/26/2022

Next Scheduled EDR Contact: 08/08/2022 Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2021 Date Data Arrived at EDR: 01/14/2022 Date Made Active in Reports: 03/25/2022

Number of Days to Update: 70

Source: Department of Justice, Consent Decree Library

Telephone: Varies

Last EDR Contact: 04/04/2022

Next Scheduled EDR Contact: 07/18/2022 Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2019 Date Data Arrived at EDR: 03/02/2022 Date Made Active in Reports: 03/25/2022

Number of Days to Update: 23

Source: EPA/NTIS Telephone: 800-424-9346 Last EDR Contact: 03/02/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater

than 640 acres.

Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 07/14/2015 Date Made Active in Reports: 01/10/2017

Number of Days to Update: 546

Source: USGS

Telephone: 202-208-3710 Last EDR Contact: 04/05/2022

Next Scheduled EDR Contact: 07/18/2022 Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 07/26/2021 Date Data Arrived at EDR: 07/27/2021 Date Made Active in Reports: 10/22/2021

Number of Days to Update: 87

Source: Department of Energy Telephone: 202-586-3559 Last EDR Contact: 04/28/2022

Next Scheduled EDR Contact: 08/15/2022 Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019 Date Data Arrived at EDR: 11/15/2019 Date Made Active in Reports: 01/28/2020

Number of Days to Update: 74

Source: Department of Energy Telephone: 505-845-0011 Last EDR Contact: 05/16/2022

Next Scheduled EDR Contact: 08/29/2022

Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 04/27/2022 Date Data Arrived at EDR: 05/05/2022 Date Made Active in Reports: 05/31/2022

Number of Days to Update: 26

Source: Environmental Protection Agency

Telephone: 703-603-8787 Last EDR Contact: 09/01/2022

Next Scheduled EDR Contact: 07/11/2022

Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001 Date Data Arrived at EDR: 10/27/2010 Date Made Active in Reports: 12/02/2010

Number of Days to Update: 36

Source: American Journal of Public Health

Telephone: 703-305-6451 Last EDR Contact: 12/02/2009 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016 Date Data Arrived at EDR: 10/26/2016 Date Made Active in Reports: 02/03/2017

Number of Days to Update: 100

US AIRS MINOR: Air Facility System Data A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017

Number of Days to Update: 100

Source: EPA

Telephone: 202-564-2496 Last EDR Contact: 09/26/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Annually

Source: EPA

Telephone: 202-564-2496 Last EDR Contact: 09/26/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 03/21/2022 Date Data Arrived at EDR: 03/22/2022 Date Made Active in Reports: 03/25/2022

Number of Days to Update: 3

Source: DOL, Mine Safety & Health Admi

Telephone: 202-693-9424 Last EDR Contact: 05/26/2022

Next Scheduled EDR Contact: 09/12/2022 Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/01/2022 Date Data Arrived at EDR: 02/23/2022 Date Made Active in Reports: 05/24/2022

Number of Days to Update: 90

Source: Department of Labor, Mine Safety and Health Administration

Telephone: 303-231-5959 Last EDR Contact: 05/25/2022

Next Scheduled EDR Contact: 09/05/2022 Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020 Date Data Arrived at EDR: 05/27/2020 Date Made Active in Reports: 08/13/2020

Number of Days to Update: 78

Source: USGS

Telephone: 703-648-7709 Last EDR Contact: 05/27/2022

Next Scheduled EDR Contact: 09/05/2022 Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011 Date Data Arrived at EDR: 06/08/2011 Date Made Active in Reports: 09/13/2011

Number of Days to Update: 97

Source: USGS

Telephone: 703-648-7709 Last EDR Contact: 05/27/2022

Next Scheduled EDR Contact: 09/05/2022

Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/14/2021 Date Data Arrived at EDR: 12/15/2021 Date Made Active in Reports: 03/10/2022

Number of Days to Update: 85

Source: Department of Interior Telephone: 202-208-2609 Last EDR Contact: 06/02/2022

Next Scheduled EDR Contact: 09/19/2022 Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 05/13/2022 Date Data Arrived at EDR: 05/18/2022 Date Made Active in Reports: 05/31/2022

Number of Days to Update: 13

Source: EPA Telephone: (214) 665-2200 Last EDR Contact: 05/18/2022

Next Scheduled EDR Contact: 09/12/2022 Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2020 Date Data Arrived at EDR: 01/11/2022 Date Made Active in Reports: 02/14/2022

Number of Days to Update: 34

Source: Department of Defense Telephone: 703-704-1564 Last EDR Contact: 04/12/2022

Next Scheduled EDR Contact: 07/25/2022 Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/01/2022 Date Data Arrived at EDR: 01/04/2022 Date Made Active in Reports: 01/10/2022

Number of Days to Update: 6

Source: Environmental Protection Agency

Telephone: 202-564-2280 Last EDR Contact: 04/05/2022

Next Scheduled EDR Contact: 07/18/2022 Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021 Date Data Arrived at EDR: 05/21/2021 Date Made Active in Reports: 08/11/2021

Number of Days to Update: 82

Source: Environmental Protection Agency

Telephone: 202-564-0527 Last EDR Contact: 05/19/2022

Next Scheduled EDR Contact: 09/05/2022 Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/17/2022 Date Data Arrived at EDR: 02/17/2022 Date Made Active in Reports: 05/10/2022

Number of Days to Update: 82

Source: EPA

Telephone: 800-385-6164 Last EDR Contact: 05/17/2022

Next Scheduled EDR Contact: 08/29/2022 Data Release Frequency: Quarterly

AIRS: Permitted AIRS Facility Listing

A listing of permitted AIRS facility locations.

Date of Government Version: 12/15/2021 Date Data Arrived at EDR: 12/15/2021 Date Made Active in Reports: 03/10/2022

Number of Days to Update: 85

Source: Department of Environmental Quality

Telephone: 405-702-4100 Last EDR Contact: 03/18/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Quarterly

ASBESTOS: Asbestos Notification Asbestos project site locations

> Date of Government Version: 12/29/2021 Date Data Arrived at EDR: 12/29/2021 Date Made Active in Reports: 03/21/2022

Number of Days to Update: 82

Source: Department of Labor Telephone: 405-521-6467 Last EDR Contact: 03/18/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Varies

PFAS: PFAS Contamination Site Location Listing

A listing of sites where PFAS contaminants has been detected to date.

Date of Government Version: 06/23/2021 Date Data Arrived at EDR: 06/23/2021 Date Made Active in Reports: 12/14/2021

Number of Days to Update: 174

Source: Department of Environment Quality

Telephone: 405-702-5100 Last EDR Contact: 03/28/2022

Next Scheduled EDR Contact: 07/11/2022 Data Release Frequency: Varies

DRYCLEANERS: Drycleaner Facilities
A listing of drycleaner facility locations.

Date of Government Version: 12/15/2021 Date Data Arrived at EDR: 12/15/2021 Date Made Active in Reports: 03/10/2022

Number of Days to Update: 85

Source: Department of Environmental Quality

Telephone: 405-702-9100 Last EDR Contact: 03/18/2022

Next Scheduled EDR Contact: 07/04/2022 Data Release Frequency: Quarterly

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information.

Date of Government Version: 07/25/2014 Date Data Arrived at EDR: 11/06/2014 Date Made Active in Reports: 01/13/2015

Number of Days to Update: 68

Source: Department of Environmental Quality

Telephone: 405-702-5105 Last EDR Contact: 05/11/2022

Next Scheduled EDR Contact: 08/22/2022 Data Release Frequency: No Update Planned

Financial Assurance 2: Financial Assurance Information Listing

Financial Assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 12/10/2013 Date Data Arrived at EDR: 12/12/2013 Date Made Active in Reports: 01/24/2014

Number of Days to Update: 43

Source: Department of Environmental Quality

Telephone: 405-702-5100 Last EDR Contact: 05/11/2022

Next Scheduled EDR Contact: 08/22/2022 Data Release Frequency: No Update Planned

TIER 2: Tier 2 Data Listing

A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report.

Date of Government Version: 12/31/2020 Date Data Arrived at EDR: 06/07/2021 Date Made Active in Reports: 08/31/2021

Number of Days to Update: 85

Source: Department of Environmental Quality

Telephone: 405-702-1000 Last EDR Contact: 03/10/2022

Next Scheduled EDR Contact: 06/20/2022 Data Release Frequency: Annually

UIC: Underground Injection Wells Database Listing

Class I injection wells. CLASS I wells are used to inject liquid hazardous and non-hazardous wastes beneath the lower most Underground Sources of Drinking Water (USDW).

Date of Government Version: 12/15/2021 Date Data Arrived at EDR: 01/12/2022 Date Made Active in Reports: 04/01/2022

Number of Days to Update: 79

Source: Department of Environmental Quality

Telephone: 405-702-5188 Last EDR Contact: 04/13/2022

Next Scheduled EDR Contact: 07/25/2022

Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 02/05/2015 Date Made Active in Reports: 03/06/2015

Number of Days to Update: 29

Source: EPA

Telephone: 202-564-2497 Last EDR Contact: 03/31/2022

Next Scheduled EDR Contact: 07/18/2022

Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011 Date Data Arrived at EDR: 08/05/2011 Date Made Active in Reports: 09/29/2011

Number of Days to Update: 55

Source: EPA, Office of Water Telephone: 202-564-2496 Last EDR Contact: 03/31/2022

Next Scheduled EDR Contact: 07/18/2022 Data Release Frequency: Semi-Annually

PCS INACTIVE: Listing of Inactive PCS Permits

An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014 Date Data Arrived at EDR: 01/06/2015 Date Made Active in Reports: 05/06/2015

Number of Days to Update: 120

Source: EPA

Telephone: 202-564-2496 Last EDR Contact: 03/31/2022

Next Scheduled EDR Contact: 07/18/2022 Data Release Frequency: Semi-Annually

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 04/06/2018 Date Data Arrived at EDR: 10/21/2019 Date Made Active in Reports: 10/24/2019

Number of Days to Update: 3

Source: USGS

Telephone: 703-648-6533 Last EDR Contact: 05/27/2022

Next Scheduled EDR Contact: 09/05/2022 Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A

Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A

Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A

Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Oklahoma.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Environmental Quality

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Quality in Oklahoma.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/20/2014
Number of Days to Update: 203

Source: Department of Environmental Quality

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Oklahoma Corporation Commission in Oklahoma.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/27/2013
Number of Days to Update: 179

Telephone: N/A Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

Source: Oklahoma Corporation Commission

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/03/2021 Date Data Arrived at EDR: 02/11/2022 Date Made Active in Reports: 05/06/2022

Number of Days to Update: 84

Source: Department of Energy & Environmental Protection

Telephone: 860-424-3375 Last EDR Contact: 05/09/2022

Next Scheduled EDR Contact: 08/22/2022 Data Release Frequency: No Update Planned

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019 Date Data Arrived at EDR: 10/29/2021 Date Made Active in Reports: 01/19/2022

Number of Days to Update: 82

Source: Department of Environmental Conservation

Telephone: 518-402-8651 Last EDR Contact: 04/28/2022

Next Scheduled EDR Contact: 08/08/2022 Data Release Frequency: Quarterly

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018 Date Data Arrived at EDR: 06/19/2019 Date Made Active in Reports: 09/03/2019

Number of Days to Update: 76

Source: Department of Natural Resources

Telephone: N/A

Last EDR Contact: 06/03/2022

Next Scheduled EDR Contact: 09/19/2022 Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services,

a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary

and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Day Care Centers Source: Department of Human Services

Telephone: 405-521-3561

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

Current USGS 7.5 Minute Topographic Map Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK®-PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

CHEROKEE NATION TAHLEQUAH HOSPITAL 100 SOUTH BLISS AVE TAHLEQUAH, OK 74464

TARGET PROPERTY COORDINATES

Latitude (North): 35.91118 - 35⁵ 54' 40.25" Longitude (West): 94.950168 - 94⁵ 57' 0.60"

Universal Tranverse Mercator: Zone 15 UTM X (Meters): 324024.2 UTM Y (Meters): 3975653.8

Elevation: 895 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map: 14238152 TAHLEQUAH, OK

Version Date: 2019

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

- 1. Groundwater flow direction, and
- 2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

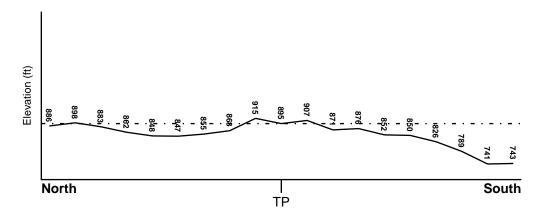
TOPOGRAPHIC INFORMATION

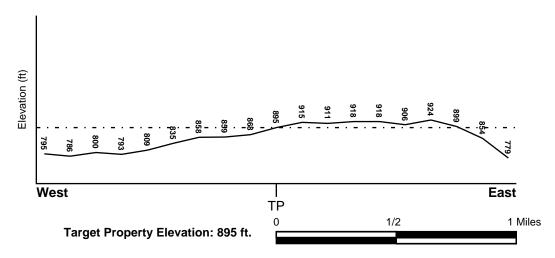
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General West

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property FEMA Source Type

40021C0265D FEMA FIRM Flood data

Additional Panels in search area: FEMA Source Type

40021C0275D FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property Data Coverage

NOT AVAILABLE YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

 MAP ID
 FROM TP
 GROUNDWATER FLOW

 Not Reported
 GROUNDWATER FLOW

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

GEOLOGIC AGE IDENTIFICATION

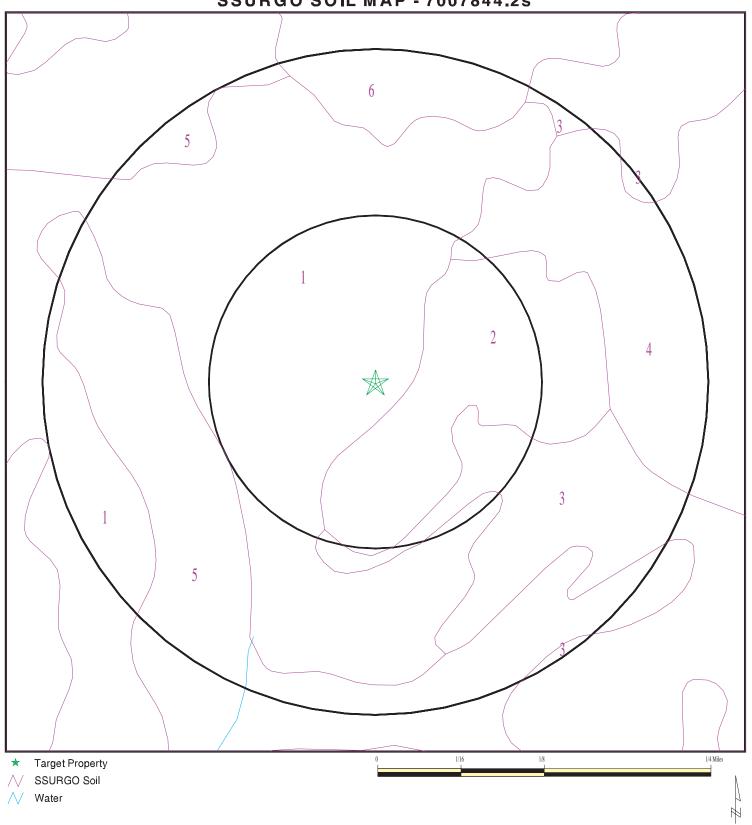
Era: Paleozoic Category: Stratified Sequence

System: Mississippian

Series: Osagean and Kinderhookian Series
Code: M1 (decoded above as Era, System & Series)

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 7007844.2s



SITE NAME: Cherokee Nation Tahlequah Hospital ADDRESS: 100 South Bliss Ave Tahlequah OK 74464 AT/LONG: 35.91118 / 94.950168

CLIENT: Eagle Env. Consulting Inc.
CONTACT: Sean T Votaw
INQUIRY#: 7007844.2s
DATE: June 06, 2022 8:23 pm

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Clarksville

Soil Surface Texture: stony silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep,

moderately well and well drained soils with moderately coarse

textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary			Classification		Saturated hydraulic	
	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		Soil Reaction (pH)
1	0 inches	9 inches	stony silt loam	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 5.5 Min: 3.6
2	9 inches	40 inches	very gravelly silty clay loam	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 5.5 Min: 3.6
3	40 inches	59 inches	very gravelly silty clay	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 5.5 Min: 3.6

Soil Map ID: 2

Soil Component Name: Tonti

Soil Surface Texture: gravelly silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward

movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	
1	0 inches	9 inches	gravelly silt	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 5 Min: 3.5
2	9 inches	22 inches	gravelly silty clay loam	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 5 Min: 3.5
3	22 inches	29 inches	very gravelly silty clay loam	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 5 Min: 3.5
4	29 inches	65 inches	very gravelly silty clay	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 5 Min: 3.5

Soil Map ID: 3

Soil Component Name: Clarksville

Soil Surface Texture: very gravelly silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep,

moderately well and well drained soils with moderately coarse

textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Houndary (Classification			Saturated hydraulic			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		Soil Reaction (pH)
1	0 inches	9 inches	very gravelly silt loam	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 5.5 Min: 3.6

Soil Layer Information							
Boundary				Classification		Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		Ooii itcaciioii
2	9 inches	40 inches	very gravelly silty clay loam	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 5.5 Min: 3.6
3	40 inches	59 inches	very gravelly silty clay	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 5.5 Min: 3.6

Soil Map ID: 4

Soil Component Name: Captina Soil Surface Texture: silt loam

Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures. Hydrologic Group:

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 46 inches

Soil Layer Information								
	Boundary			Classification		Saturated hydraulic		
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Soil Reaction (pH)	
1	0 inches	7 inches	silt loam	Not reported	Not reported	Max: 1.4114 Min: 0.4233	Max: 6 Min: 3.6	
2	7 inches	22 inches	silty clay loam	Not reported	Not reported	Max: 1.4114 Min: 0.4233	Max: 6 Min: 3.6	
3	22 inches	37 inches	silty clay loam	Not reported	Not reported	Max: 1.4114 Min: 0.4233	Max: 6 Min: 3.6	
4	37 inches	61 inches	gravelly silty clay loam	Not reported	Not reported	Max: 1.4114 Min: 0.4233	Max: 6 Min: 3.6	

Soil Map ID: 5

Soil Component Name: Britwater

Soil Surface Texture: gravelly silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep,

moderately well and well drained soils with moderately coarse

textures.

> 0 inches

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Depth to Watertable Min:

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Soil Layer Information Saturated **Boundary** Classification hydraulic conductivity Layer Upper Lower Soil Texture Class **AASHTO Group Unified Soil Soil Reaction** micro m/sec (pH) 1 0 inches 18 inches gravelly silt Not reported Not reported Max: 14.114 Max: 6 Min: loam Min: 4.233 4.5 2 gravelly silty 18 inches 31 inches Not reported Not reported Max: 14.114 Max: 6 Min: Min: 4.233 clay loam 4.5 3 31 inches 62 inches very gravelly Not reported Not reported Max: 14.114 Max: 6 Min: silty clay loam Min: 4.233 4.5

Soil Map ID: 6

Soil Component Name: Britwater
Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep,

moderately well and well drained soils with moderately coarse

textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic	
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	conductivity micro m/sec	Oon Reaction
1	0 inches	18 inches	silt loam	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 6 Min: 4.5
2	18 inches	31 inches	gravelly silty clay loam	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 6 Min: 4.5
3	31 inches	62 inches	very gravelly silty clay loam	Not reported	Not reported	Max: 14.114 Min: 4.233	Max: 6 Min: 4.5

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE SEARCH DISTANCE (miles)

Federal USGS 1.000

Federal FRDS PWS Nearest PWS within 1 mile

State Database 1.000

FEDERAL USGS WELL INFORMATION

MAP ID WELL ID FROM TP

19 USGS40000974300 1/2 - 1 Mile SSE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

 MAP ID
 WELL ID
 FROM TP

 31
 OK1021701
 1/2 - 1 Mile East

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID WELL ID EROM TP

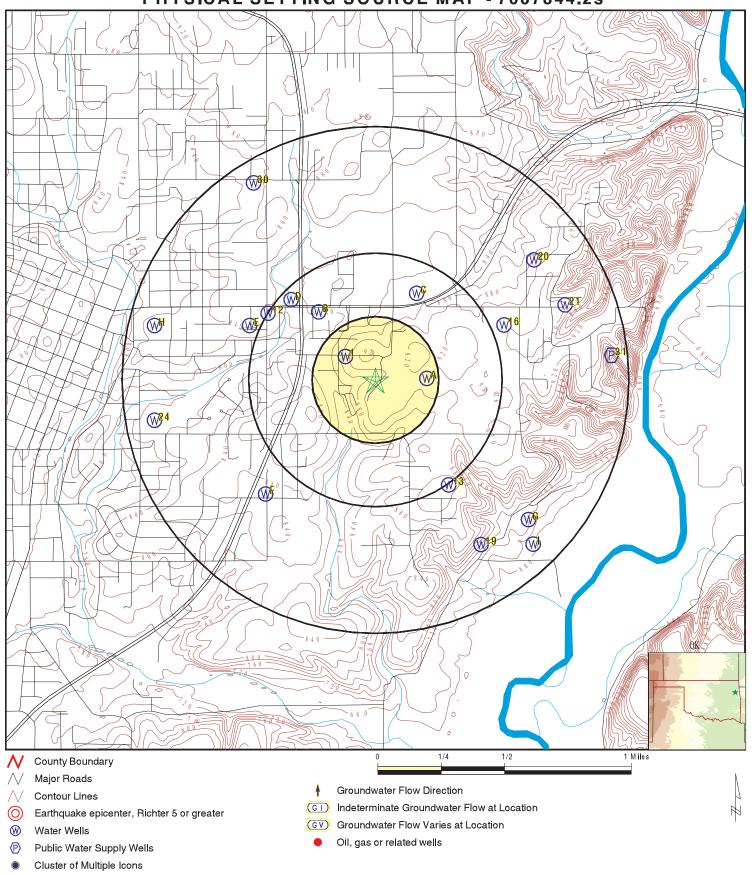
1 OK7000000034202 I/8 - 1/4 Mile NW

GEOCHECK[®] - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

		LOCATION
MAP ID	WELL ID	FROM TP
	OK7000000143012	1/8 - 1/4 Mile East
A3	OK700000149353	1/8 - 1/4 Mile East
A4	OK700000149480	1/8 - 1/4 Mile East
B5	OK700000186189	1/4 - 1/2 Mile NW
B6	OK7000000192283	1/4 - 1/2 Mile NW
C7	OK700000172480	1/4 - 1/2 Mile NNE
C8	OK7000000172481	1/4 - 1/2 Mile NNE
C9	OK700000172482	1/4 - 1/2 Mile NNE
D10	OK700000189010	1/4 - 1/2 Mile NW
D11	OK700000190600	1/4 - 1/2 Mile NW
12	OK700000136408	1/4 - 1/2 Mile WNW
13	OK700000106954	1/2 - 1 Mile SE
E14	OK7000000121760	1/2 - 1 Mile WNW
E15	OK700000165425	1/2 - 1 Mile WNW
16	OK700000017955	1/2 - 1 Mile ENE
F17	OK7000000186829	1/2 - 1 Mile SW
F18	OK7000000203588	1/2 - 1 Mile SW
20	OK700000014079	1/2 - 1 Mile NE
21	OK700000066209	1/2 - 1 Mile ENE
G22	OK7000000034203	1/2 - 1 Mile SE
G23	OK7000000103151	1/2 - 1 Mile SE
24	OK7000000028372	1/2 - 1 Mile West
H25	OK7000000121756	1/2 - 1 Mile WNW
H26	OK700000121757	1/2 - 1 Mile WNW
H27	OK700000166662	1/2 - 1 Mile WNW
128	OK700000170919	1/2 - 1 Mile SE
129	OK700000170920	1/2 - 1 Mile SE
30	OK700000083876	1/2 - 1 Mile NNW

PHYSICAL SETTING SOURCE MAP - 7007844.2s



SITE NAME: Cherokee Nation Tahlequah Hospital

ADDRESS:

100 South Bliss Ave Tahlequah OK 74464 35.91118 / 94.950168 LAT/LONG:

Eagle Env. Consulting Inc.

CLIENT: CONTACT: CONTACT: Sean T Votaw INQUIRY #: 7007844.2s

DATE: June 06, 2022 8:23 pm

GEOCHECK®-PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance

Elevation EDR ID Number Database

NW

1/8 - 1/4 Mile

OK WELLS OK700000034202

OK WELLS

OK WELLS

OK7000000143012

OK700000149353

OK700000149480

Lower

Well ID: 34423 Well Type: Groundwater Well Not Reported Well Owner: DARRELL COFFMAN Permit #:

Domestic Elevation: Water Use: Total Well Depth: 175 Date to First Water:

Approximate Yield: 0 Construction Date: 09-APR-96 Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=34423

East 1/8 - 1/4 Mile Higher

> Well ID: 161544 Well Type: Geotechnical Boring Permit #: Not Reported Well Owner: WWW Hastings Hospital

Elevation: Water Use: Soil Evaluation 0

Total Well Depth: 40 Date to First Water:

Approximate Yield: 0 Construction Date: 23-JUN-14 Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=161544

East 1/8 - 1/4 Mile Higher

> Well Type: Well ID: 161545 Geotechnical Boring Well Owner: Permit #: Not Reported WWW Hastings Hospital

Water Use: Elevation: 0 Soil Evaluation Total Well Depth: 120 Date to First Water:

Approximate Yield: 0 Construction Date: 23-JUN-14 Basin Code: Aquifer Code: Not Reported Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=161545

OK WELLS East 1/8 - 1/4 Mile

Higher

Well ID: 161546 Well Type: Geotechnical Boring Permit #: Not Reported Well Owner: WWW Hastings Hospital

Elevation: 0 Water Use: Soil Evaluation

Total Well Depth: 40 Date to First Water: 0

0 Construction Date: Approximate Yield: 23-JUN-14 Aquifer Code: Basin Code: Not Reported Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=161546

GEOCHECK®-PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance

Elevation Database EDR ID Number

B5 NW

OK WELLS OK7000000186189

1/4 - 1/2 Mile Lower

Well ID:201607Well Type:Monitoring WellPermit #:Not ReportedWell Owner:Terry D. BigbyElevation:0Water Use:Site Assessment

Total Well Depth: 15.5 Date to First Water: 0

Approximate Yield: 0 Construction Date: 29-JUL-20
Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=201607

NW 1/4 - 1/2 Mile Lower

Well ID: 202942 Well Type: Monitoring Well
Permit #: Not Reported Well Owner: Terry D. Bigby

Elevation: 0 Water Use: Site Assessment

Total Well Depth: 0 Date to First Water: 0
Approximate Yield: 0 Construction Date: Not Reported

Approximate Yield: U Construction Date: Not Reported

Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=202942

07

NNE 1/4 - 1/2 Mile Lower

Lower

Well ID:94928Well Type:Monitoring WellPermit #:Not ReportedWell Owner:EZ MartElevation:0Water Use:Water Quality

Total Well Depth: 0 Date to First Water: 0
Approximate Yield: 0 Construction Date: 23-JUN-05
Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=94928

C8
NNE
OK WELLS
OK7000000172481
1/4 - 1/2 Mile

Well ID:94929Well Type:Monitoring WellPermit #:Not ReportedWell Owner:EZ MartElevation:0Water Use:Water Quality

Total Well Depth: 0 Date to First Water: 0

Approximate Yield: 0 Construction Date: 23-JUN-05
Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=94929

OK WELLS

OK WELLS

OK700000192283

OK700000172480

Map ID Direction Distance

Elevation EDR ID Number Database

NNE

1/4 - 1/2 Mile

Lower

Well ID: 94931 Well Type: Monitoring Well Not Reported Well Owner: EZ Mart Permit #: Water Quality Elevation: Water Use: Total Well Depth: 0 Date to First Water:

Approximate Yield: 0 Construction Date: 23-JUN-05 Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=94931

D10 NW 1/4 - 1/2 Mile Lower

> Well ID: 168478 Well Type: Monitoring Well

Not Reported Permit #: Well Owner: Caseys Marketing Company

Elevation: Water Use: Site Assessment 0

Total Well Depth: 0 Date to First Water:

Approximate Yield: 0 Construction Date: Not Reported Aquifer Code: Not Reported Not Reported Basin Code:

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=168478

D11 ŃW 1/4 - 1/2 Mile Lower

> 166357 Well ID: Well Type: Monitoring Well

Well Owner: Permit #: Not Reported Caseys Marketing Company

Site Assessment Elevation: 0 Water Use:

Total Well Depth: 20 Date to First Water: 0

Approximate Yield: 0 18-MAR-15 Construction Date: Aquifer Code: Basin Code: Not Reported Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=166357

OK700000136408

WNW **OK WELLS** 1/4 - 1/2 Mile Lower

Geotechnical Boring Well ID: 165412 Well Type: Permit #: Not Reported Well Owner: Marys Liquor Store Elevation: Water Use: Soil Evaluation 0

Total Well Depth: 11.5 Date to First Water: 0

Construction Date: Approximate Yield: 0 28-JAN-15 Aquifer Code: Basin Code: Not Reported Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=165412 **OK WELLS**

OK WELLS

OK WELLS

OK7000000172482

OK700000189010

OK700000190600

Map ID Direction Distance

Elevation Database EDR ID Number

13 SE

1/2 - 1 Mile Higher OK WELLS OK7000000106954

Well ID: 148604 Well Type: Groundwater Well Permit #: Not Reported Well Owner: Robert Walker Domestic Elevation: Water Use: Total Well Depth: 340 Date to First Water: 130 Approximate Yield: 2.5 Construction Date: 17-JAN-13 Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=148604

E14
WNW OK WELLS OK7000000121760
1/2 - 1 Mile

Lower

Well ID: 73816 Well Type: Geotechnical Boring

Permit #: Not Reported Well Owner: City of Tahlequah c/o Gary Dot

Elevation: 0 Water Use: Soil Evaluation

Total Well Depth: 20 Date to First Water: 0

Approximate Yield: 0 Construction Date: 20-AUG-02 Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=73816

E15 WNW OK WELLS OK7000000165425

1/2 - 1 Mile Lower

Well ID: 73813 Well Type: Monitoring Well

Permit #: Not Reported Well Owner: City of Tahlequah c/o Gary Dot

Elevation: 0 Water Use: Water Quality

Total Well Depth: 34 Date to First Water: 0

Approximate Yield: 0 Construction Date: 20-AUG-02
Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=73813

16
ENE OK WELLS OK700000017955
1/2 - 1 Mile

Higher

Well ID: 23228 Well Type: Groundwater Well Permit #: Not Reported Well Owner: Tony Halum Elevation: Water Use: Domestic 0 Total Well Depth: 150 Date to First Water: 0

Approximate Yield: 0 Construction Date: 04-OCT-83
Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=23228

Map ID Direction Distance

EDR ID Number Elevation Database

F17 SW

OK WELLS OK700000186829

OK7000000203588

OK WELLS

1/2 - 1 Mile Lower

> Well ID: 191262 Well Type: Monitoring Well

EPP-AVP Acquisition, LLC Not Reported Well Owner: Permit #:

Site Assessment Elevation: Water Use:

Total Well Depth: 0 Date to First Water:

Approximate Yield: 0 Construction Date: Not Reported Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=191262

F18

SW 1/2 - 1 Mile

Lower

Well ID: Well Type: Monitoring Well EPP-AVP Acquisition, LLC Permit #: Not Reported Well Owner:

Elevation: Water Use: Site Assessment 0

Total Well Depth: 16 Date to First Water:

Approximate Yield: 0 Construction Date: 09-FEB-18 Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=185527

185527

FED USGS USGS40000974300

SSE 1/2 - 1 Mile

Lower

Organization ID: USGS-OK USGS Oklahoma Water Science Center Organization Name:

Monitor Location: 17N-22E-34 DDD 1 Type: Well Description: Not Reported HUC: 11110103 Drainage Area: Not Reported **Drainage Area Units:** Not Reported Contrib Drainage Area: Not Reported Contrib Drainage Area Unts: Not Reported Not Reported Aquifer: Formation Type: **Boone Formation**

Aquifer Type: Construction Date: Not Reported 1962 Well Depth: 88 Well Depth Units: ft Well Hole Depth: 88 Well Hole Depth Units: ft

Ground water levels, Number of Measurements: Level reading date: 1962 1 Not Reported

Feet below surface: Feet to sea level:

Not Reported Note:

OK700000014079 **OK WELLS**

1/2 - 1 Mile Lower

> Well ID: 16706 Well Type: Groundwater Well Permit #: Not Reported Well Owner: Peggy Philpott Water Use: Elevation: Domestic

Total Well Depth: 395 Date to First Water: 115

Approximate Yield: 2 Construction Date: 15-DEC-82
Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=16706

21 ENE OK WELLS OK700000066209

1/2 - 1 Mile Higher

Well ID: 99143 Well Type: Groundwater Well

Permit #:Not ReportedWell Owner:Bob LeeElevation:0Water Use:DomesticTotal Well Depth:440Date to First Water:0

Approximate Yield: 7 Construction Date: 31-JAN-06
Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=99143

G22 SE OK WELLS OK700000034203

1/2 - 1 Mile Lower

> Well ID: 34424 Well Type: Groundwater Well Well Owner: JEFF HALL Permit #: Not Reported Elevation: 0 Water Use: **Domestic** Total Well Depth: 275 Date to First Water: 240 Approximate Yield: Construction Date: 22-MAR-96 1.5

Aquifer Code: Not Reported Basin Code: Not Reported URL: Not Reported http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=34424

G23

SE 1/2 - 1 Mile Lower

Well ID:203307Well Type:Groundwater WellPermit #:Not ReportedWell Owner:William Ward & Jenny Hall

Elevation: 0 Water Use: Domestic Total Well Depth: 300 Date to First Water: 120 Approximate Yield: 4.5 Construction Date: 12-AUG-20 Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=203307

24
West OK WELLS OK700000028372
1/2 - 1 Mile

Lower

Well ID: 24668 Well Type: Groundwater Well Well Owner: Permit #: Not Reported **Bob Robertson** Elevation: 0 Water Use: **Domestic** Total Well Depth: 100 Date to First Water: 0

Approximate Yield: 0 Construction Date: 18-JUN-84
Aquifer Code: Not Reported Basin Code: Not Reported

OK WELLS

OK700000103151

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=24668

H25
WNW OK WELLS OK7000000121756

1/2 - 1 Mile Lower

Well ID: 73803 Well Type: Geotechnical Boring

Permit #: Not Reported Well Owner: City of Tehlequah c/o Gary Dot

Elevation:0Water Use:Soil EvaluationTotal Well Depth:20Date to First Water:0Approximate Yield:0Construction Date:05-SEP-02Aquifer Code:Not ReportedBasin Code:Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=73803

H26
WNW OK WELLS OK7000000121757
1/2 - 1 Mile

Lower

Well ID: 73804 Well Type: Geotechnical Boring

Permit #: Not Reported Well Owner: City of Tahlequah c/o Gary Do

Elevation: 0 Water Use: Soil Evaluation

Total Well Depth: 17 Date to First Water: 0

Approximate Yield: 0 Construction Date: 05-SEP-02
Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=73804

H27 WNW OK WELLS OK700000166662

1/2 - 1 Mile Lower

Well ID: 75779 Well Type: Monitoring Well

Permit #: Not Reported Well Owner: NBR
Elevation: 0 Water Use: Water Quality

Total Well Depth: 15.5 Date to First Water: 0

Approximate Yield: 0 Construction Date: 09-DEC-02 Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=75779

I28 SE OK WELLS OK700000170919

1/2 - 1 Mile Lower

Well ID: 89118 Well Type: Monitoring Well

Permit #: Not Reported Well Owner: EZ Mart, Inc. #548 c/o Jones

Elevation: 0 Water Use: Site Assessment

Total Well Depth: 8 Date to First Water: 0

Approximate Yield: 0 Construction Date: 04-AUG-04 Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=89118

Map ID Direction Distance

Elevation Database EDR ID Number

I29 SE

1/2 - 1 Mile Lower

OK700000170920

OK7000000083876

OK WELLS

OK WELLS

Well ID: 89119 Well Type: Monitoring Well

Permit #: Not Reported Well Owner: EZ Mart, Inc. #548 c/o Jones

Elevation: 0 Water Use: Site Assessment

Total Well Depth: 10 Date to First Water: 0

Approximate Yield: 0 Construction Date: 04-AUG-04
Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=89119

RN

NNW 1/2 - 1 Mile Lower

Well ID:148267Well Type:Groundwater WellPermit #:Not ReportedWell Owner:Rita BergmanElevation:0Water Use:Agriculture (non irr)

Total Well Depth: 150 Date to First Water: 0

Approximate Yield: 10 Construction Date: 21-DEC-12
Aquifer Code: Not Reported Basin Code: Not Reported

URL: http://www.owrb.ok.gov/wd/reporting/printreport.php?siteid=148267

31 East FRDS PWS OK1021701

1/2 - 1 Mile Lower

Epa region: 06 State: OK

Pwsid: OK1021701 Pwsname: TAHLEQUAH PWA

Cityserved: Not Reported Stateserved: OK Zipserved: Not Reported Fipscounty: 40021 Status: Retpopsrvd: 14458 Active 3000 Psource longname: Surface_water Pwssvcconn: **CWS** Pwstype: Owner: Local Govt

Contact: TAHLEQUAH PWA Contactorgname: TAHLEQUAH PWA
Contactphone: 918-456-2564 Contactaddress1: KELLY ROSS, CHAI

Contactphone: 918-456-2564 Contactaddress1: KELLY ROSS, CHAIRMAN Contactaddress2: TAHLEQUAH

Contactstate: OK Contactzip: 74464

Pwsactivitycode: A

Pwsid: OK1021701 Facid: 11070

Facname: TAHLEQUAH WTP (ILLIONOIS RIVER)

Factype: Treatment_plant Facactivitycode: A

Trtobjective: other Trtprocess: fluoridation

Factypecode: TP

Pwsid: OK1021701 Facid: 11070

Facname: TAHLEQUAH WTP (ILLIONOIS RIVER)

Factype: Treatment_plant Facactivitycode: A

Trtobjective: disinfection Trtprocess: gaseous chlorination, post

Factypecode: TP

Pwsid: OK1021701 Facid: 11070

Facname: TAHLEQUAH WTP (ILLIONOIS RIVER)

Factype: Treatment_plant Facactivitycode: A

Trtobjective: particulate removal Trtprocess: coagulation

Factypecode: TF

Pwsid: OK1021701 Facid: 11070

Facname: TAHLEQUAH WTP (ILLIONOIS RIVER)

Factype: Treatment_plant Facactivitycode: A

Trtobjective: particulate removal Trtprocess: sedimentation

Factypecode: TF

Pwsid: OK1021701 Facid: 11070

Facname: TAHLEQUAH WTP (ILLIONOIS RIVER)

Factype: Treatment_plant Facactivitycode: A

Trtobjective: particulate removal Trtprocess: filtration, rapid sand

Factypecode: TI

Pwsid: OK1021701 Facid: 11070

Facname: TAHLEQUAH WTP (ILLIONOIS RIVER)

Factype: Treatment_plant Facactivitycode: A

Trtobjective: disinfection Trtprocess: gaseous chlorination, pre

Factypecode: TP

Pwsid: OK1021701 Facid: 26413

Facname: TAHLEQUAH WTP (LAKE TENKILLER)

Factype: Treatment_plant Facactivitycode: A
Trtobjective: particulate removal Trtprocess: filtered

Factypecode: TF

Pwsid: OK1021701 Facid: 26413

Facname: TAHLEQUAH WTP (LAKE TENKILLER)

Factype: Treatment_plant Facactivitycode: A

Trtobjective: disinfection Trtprocess: gaseous chlorination, post

Factypecode: TP

PWS ID: OK1021701 PWS name: TAHLEQUAH PWA Address: PO BOX 29 Care of: Not Reported

City: TAHLEQUAH State: OK

Zip: 74465 Owner: TAHLEQUAH PWA

Source code: Surface water Population: 9300

OK1021701 PWS ID: PWS type: Not Reported PWS address: PWS name: Not Reported Not Reported PWS city: Not Reported PWS state: Not Reported PWS zip: Not Reported PWS name: TAHLEQUAH PWA

PWS type code: C

Contact: TAHLEQUAH PWA Contact address: STANLEY DAY, General Manager

Retail population served:

Contact address: PO BOX 29 Contact city: TAHLEQUAH

Contact state: OK Contact zip: 74465

Contact telephone: 918-456-2123

PWS ID: OK1021701 Activity status: Active Date system activated: Not Reported Date system deactivated: Not Reported Retail population: 00009300 System name: TAHLEQUAH PWA System address: Not Reported System address: PO BOX 29

System address: Not Reported System address: PO BOX 2
System city: TAHLEQUAH System state: OK

System city: TAHLE System zip: 74465

Population served: 5,001 - 10,000 Persons Treatment: Treated

Latitude: 355445 Longitude: 0945600

14458

0945600 Latitude: 355445 Longitude:

State: OK Latitude degrees: 35 45.0000 Latitude minutes: 54 Latitude seconds: Longitude degrees: 94 Longitude minutes: 56

Longitude seconds: 0.0000

Violation id: 327110 Orig code: S OK Violation Year: 2009 State:

Coliform (TCR) Contamination code: 3100 Contamination Name: MCL, Monthly (TCR) Violation code: 22 Violation name:

TCR Rule code: 110 Rule name:

Violation measur: Not Reported Unit of measure: Not Reported Not Reported 09/01/2009 State mcl: Cmp bdt:

09/30/2009 Cmp edt:

PWS currently has or had major violation(s) or enforcement:Yes

9400320 Violation ID: Violation source ID: Not Reported PWS telephone: Not Reported Contaminant: Not Reported

Violation type: Treatment Technique (SWTR)

Violation start date: 110193 Violation end date: 113093 Violation period (months): 001 Violation awareness date: 122093 Major violator: Not Reported Maximum contaminant level: Not Reported Number of required samples: Not Reported Number of samples taken: Not Reported Analysis method: Not Reported Analysis result: Not Reported

PWS currently has or had major violation(s) or enforcement:Yes

Violation ID: 9400776 Violation source ID: Not Reported PWS telephone: Not Reported Contaminant: Not Reported

Violation type: Treatment Technique (SWTR)

Violation end date: 022894 Violation start date: 020194 Violation awareness date: Not Reported Violation period (months): 001 Major violator: Not Reported Maximum contaminant level: Not Reported

Number of required samples: Not Reported Number of samples taken: Not Reported Analysis method: Not Reported Analysis result: Not Reported

Violation ID: 327110 Orig Code:

Enforcemnt FY: 2009 **Enforcement Action:** 09/30/2009 **Enforcement Detail:** St Compliance achieved **Enforcement Category:** Resolving

327110 Violation ID: Orig Code:

12/14/2009 Enforcemnt FY: 2010 **Enforcement Action:**

Enforcement Detail: St Public Notif requested **Enforcement Category:** Informal

Violation ID: 327110 Orig Code:

Enforcemnt FY: 2010 **Enforcement Action:** 01/13/2010

Enforcement Detail: St Public Notif received **Enforcement Category:** Informal

Violation ID: 327110 Orig Code:

Enforcemnt FY: 2010 **Enforcement Action:** 12/14/2009

Enforcement Detail: St Violation/Reminder Notice **Enforcement Category:** Informal

TAHLEQUAH PWA PWS name: Population served: 14458 327108 PWS type code: С Violation ID:

Contaminant: 2456 Violation type:

Compliance start date: 10/1/2008 0:00:00 Compliance end date: 12/31/2008 0:00:00 Enforcement date: No Enf Action as of Enforcement action: 7/8/2009 0:00:00

Violation measurement: Not Reported

PWS name: TAHLEQUAH PWA

PWS type code:

Contaminant: CARBON, TOTAL-ORGANIC

Compliance start date: 1/1/2008 0:00:00
Enforcement date: No Enf Action as of Violation measurement: Not Reported

Population served: 14458 Violation ID: 327109 Violation type: 27

Compliance end date: 3/31/2008 0:00:00 Enforcement action: 7/8/2009 0:00:00

AREA RADON INFORMATION

State Database: OK Radon

Radon Test Results

Zipcode	Num Tests	# > 4 pCi/L	Maximum	Average
				
74464	29	8	110.9	7.596

Federal EPA Radon Zone for CHEROKEE County: 2

Note: Zone 1 indoor average level > 4 pCi/L.

: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.

: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 74464

Number of sites tested: 12

Area Average Activity % <4 pCi/L % 4-20 pCi/L % >20 pCi/L 4.500 pCi/L Living Area - 1st Floor 67% 33% 0% Living Area - 2nd Floor Not Reported Not Reported Not Reported Not Reported Not Reported Basement Not Reported Not Reported Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Reported Well Locations in Oklahoma

Source: Oklahoma Water Resources Board

Telephone: 405-530-8800

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Listing

Source: Oklahoma Corporation Commission

Telephone: 405-521-3636

Oil and gas well locations in the state.

Oil and Gas Well Listing

Source: Osage Nation Environmental and Natural Resources

Telephone: 918-287-5333 Oil and gas well locations.

RADON

State Database: OK Radon

Source: Department of Environmental Quality

Telephone: 405-702-5100 Radon Information

Area Radon Information Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency

(USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at

private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor

radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared

in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

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Appendix F

Qualifications



Education

1992 Post Graduate Studies in Environmental Science Program

Oklahoma State University, Stillwater, OK

B.S. 1988 Fisheries Management and Wildlife Biology

Northeastern State University, Tahlequah, OK

Professional Experience

1999 – Present President Eagle Environmental Consulting, Inc.

1991-1999 Senior Regulatory Project Manager, Regulatory Branch U.S. Army Corps of Engineers

1989 – 1991 Park Ranger, Buckhorn Lake, Kentucky U.S. Army Corps of Engineers

1987-1989 Fisheries Technician Oklahoma Department of Wildlife Conservation

1999 to Present:

Founder and President of Eagle Environmental Consulting, Inc. (EEC), Mr. Votaw is responsible for coordinating the daily business operations, project management, field surveys, report development, and quality assurance. Some of the primary focus operations of EEC include biological and ecological services including environmental impact assessments, National Environmental Policy Act (NEPA) document preparation, endangered species surveys, biological assessment, fish and wildlife habitat assessments, wetland delineations, Phase I Environmental Assessments, regulatory permitting, compliance, compensatory wetland and waterway mitigation design & development, traffic noise studies and sound barrier design. Mr. Votaw has served as project manager and/or lead scientist on a myriad of diverse projects within the states of Oklahoma, Texas, Arkansas, Kansas, Louisiana, and Missouri.



Previous Employment:

1989 to 1999:

Senior Project Manager in the Regulatory Branch of the Tulsa District Corps of Engineers. Mr. Votaw's responsibilities included Section 404 of the Clean Water Act permit evaluations, compliance, enforcement and surveillance, mitigation, and delineations. Critical components of his permit evaluation responsibilities included application and assessment of the Section 404(b)(1) guidelines for each Standard Permit issued. Each project required an in depth and attentive Alternatives Analysis in order to determine the least environmentally damaging practicable alternative. Public presentations, meetings, and coordination was an integral part of his duties as well as maintaining near constant coordination and cooperation with State and Federal resource and regulatory agencies.

1989-1991:

Park Ranger, Buckhorn Lake, Kentucky with the U.S. Army Corps of Engineers. Primary responsibilities included natural resource management, visitor assistance, patrol, project coordination, assessment management, boundary establishment surveys, timber management point of contact, coal mine liaison, and special projects manager.

1987 to 1989:

Fisheries Technician with the Oklahoma Department of Wildlife Conservation. Primary responsibilities included data collection and evaluation, completing standardized fisheries sampling techniques, preparing fisheries management reports for lakes, ponds, and streams. Public coordination and involvement was an integral part of overall position requirements.

Training and Certifications (course length 40 hours unless otherwise noted)

USFWS Endangered species survey and consultation methodology workshop (8 hours)

NEPA and the Transportation Decision Process

Environmental Laws and Regulations

Environmental Impact Assessment of Projects

Regulatory I - U.S. Army Corps of Engineers Regulatory Program Introduction Course

Regulatory II - USACE Regulatory Program Secondary Course

Regulatory Program IV - Wetland Delineation

Hydric Soils Determination (Advanced Course)

Conflict Management Skills to Resolve Highway/Wetland Issues

Contract Administration

Leadership Education and Development

Archaeology for Managers

Handling Difficult People (8 hours)

Learning Styles (8 hours)



Traffic Noise Modeling (TNM 1.0)

Professional Affiliations and Appointments

Society of Wetland Scientists

National Regulatory Conference Task Force

Lead Author & Assessment Team Leader for USACE HGM Lacustrine Fringe National Wetland Guidebook Development

Review Panel Member for Riparian Area Management Handbook

Regional Farm Pond Management Coordinator - OK Department Wildlife Conservation

National and Oklahoma Chapter - American Fisheries Society

National and Oklahoma Chapter - The Nature Conservancy

Professional Certification and Nominations

Wetland Delineation Instructor

National Regulator of the Year - 1994, 1996

Southwestern Division Regulator of the Year - 1995, 1997

Publications

Votaw, Steven R., "Federal Permits for Wetlands and other Environmental Concerns." *Proceedings of Industrial Minerals Symposium.* Oklahoma Geological Survey, August 1993.

Votaw, Steven R., et. al., "A Regional Guidebook for Application of Hydrogeomorphic Assessments to Lacustrine Fringe Wetlands." 2000.

Scientific Reports

Numerous Wetland Delineation, Threatened & Endangered Species, Wildlife Habitat Management Reports of Survey and Plans. 1999 to present.

Designed and developed multiple wetland and waterway compensatory mitigation plans using creation, restoration, enhancement, & preservation.

Standardized Sampling Procedures Fisheries Management Report for Chelsea City Lake. OK Dept. of Wildlife Cons. 1989.

Standardized Sampling Procedures Fisheries Management Report for Bixhoma Lake. OK Dept. of Wildlife Cons. 1989.

Upland Bird Management Plan for the Diamond Bar D Ranch. 1996.

Fish and Wildlife Management Plan for the Rock Creek Ranch. 1996.

Wildlife Management Plan for the West Ranch. 1995.

Wildlife Management Plan for the Sitterly Ranch. 1993.



SUMMARY OF 30 YEARS OF PROFESSIONAL EXPERIENCE

- National Environmental Policy Act (NEPA) Documentation
- Categorical Exclusion (CE) Documentation
- Environmental Assessment (EA) Documentation
- Environmental Impact Statement (EIS) Documentation
- Environmental Information Documentation (Oklahoma)
- Federal and State Agency Coordination
- Native American Tribal Coordination
- Phase 1 Environmental Site Assessments
- Traffic Noise Assessments
- Section 404 Permitting
- Public Involvement
- Biological Assessments
- American Burying Beetle Surveys
- Waters of the United States Delineations
- Compensatory Mitigation Plan Development & Design

NEPA Documentation

Frankoma Road Sanitary Sewer Extension, City of Sapulpa, Creek County, OK

Environmental Information Documentation

Reviewing Agency: Oklahoma Water Resources Board

Principal Investigator and Primary Author

The project involved the proposed installation of approximately 1,000 feet of a new 18-inch diameter gravity-flow main line, a new lift station and installation of a new 6-inch diameter force main line approximately 1.7 miles in length to connect to the existing City of Sapulpa sanitary sewer collection system.

Extreme Recreational Vehicle Resort, Eufaula, McIntosh County, OK

2018

2018

Environmental Assessment Update

Reviewing Agency: U.S. Army Corps of Engineers

Principal Investigator and Primary Author

The proposed project required a real estate lease instrument documentation to assess the environmental impacts of the project. In response to this change in use on USACE land, a Supplemental Environmental Assessment was prepared to provide additional information for USACE review and subsequent approval of the RV Resort. Responsible for preparation of environmental assessment and supporting technical reports.

Bridgeview Resort and Marina Improvements

Environmental Assessment

Reviewing Agency: U.S Army Corps of Engineers

2017-2018



Principal Investigator and Primary Author

The proposed project would involve development of multiple features within the requested 139-acre lease expansion area adjacent to their existing lease area on Lake Texoma. The EA has been prepared in the preferred format for the U.S. Army Corps of Engineers review. The proposed project area is situated on USACE property and includes both terrestrial and aquatic areas on Lake Texoma, near Aylesworth, Marshall County, Oklahoma. Responsible for preparation of environmental assessment and supporting technical reports.

7th Street Bridge Replacement Project, Excelsior Road to EW 280 Road, Craig County, OK 2017 **Categorical Exclusion**

Reviewing Agency: Cherokee Nation/Oklahoma Turnpike Authority

Principal Investigator and Primary Author

The Federal Highway Administration Office of Tribal Transportation in cooperation with the Oklahoma Turnpike Authority and the Cherokee Nation proposes the replacement of the 7th Street Bridge that crosses I-44 (Will Rogers Turnpike) in Craig County, Oklahoma. Responsible for categorical exclusion documentation and supporting technical reports.

Proposed Delaware Tribe of Indians Casino, Leavenworth, Kansas

2016-2017

Delaware Tribe of Indians

Reviewing Agency: Bureau of Indian Affairs Principal Investigator and Primary Author

The proposed project was prepared on behalf of the Delaware Tribe of Indians to facilitate the Bureau of Indian Affairs review of potential environmental impact assessment associated with a proposed casino for the Tribe. Once approved, the property will be converted from Fee to Trust status. Responsible for preparation of environmental assessment and supporting technical reports.

Chimney Rock Reservoir Improvements Phase 2, Mayes County, OK **Categorical Exclusion**

2016

Reviewing Agency: Cherokee Nation/FHWA Central Federal Lands Highway Division

Principal Investigator and Primary Author

The Federal Highway Administration in cooperation with the Cherokee Nation, proposes to reconstruct and improve an approximate 4-mile long section of Chimney Rock Reservoir Road near Salina in Mayes County, OK. The project is funded, in part, by Title 23 funds through the Tribal Transportation Program (TTP). TTP funds are provided to the Cherokee Nation in accordance with the Tribal Transportation Program Agreement between the Cherokee Nation and the United States Department of Transportation. Responsible for categorical exclusion documentation and supporting technical reports.

Port of Muskogee Rail Expansion, Muskogee County, OK **Environmental Assessment**

2016

Reviewing Agency: Port of Muskogee/U.S. DOT



Principal Investigator and Primary Author

The purpose of the proposed project is to modernize the existing rail connection to the Port of Muskogee at Milepost 500.02 of the Union Pacific Railroad Company's Cherokee Subdivision No. 2 and to provide additional capacity for manifest and unit train service by extending the Port of Muskogee Railcar Marshaling Yard for review by the U.S. Department of Transportation Federal Railroad Administration. Responsible for preparation of environmental assessment and supporting technical reports.

White Oak Road (NS4340) Improvements, Craig County, OK

2015

Environmental Assessment

Reviewing Agency: Cherokee Nation/FHWA Central Federal Lands Highway Division Principal Investigator and Primary Author

The Federal Highway Administration, in cooperation with the Cherokee Nation, proposed to reconstruct and improve NS 4340 in Craig County, OK. The project is funded, in part, by Title 23 funds through the Tribal Transportation Program (TTP). TTP funds are provided to the Cherokee Nation in accordance with the Tribal Transportation Program Agreement between the Cherokee Nation and the United States Department of Transportation. Responsible for categorical exclusion documentation and supporting technical reports.

Cutoff Dredging and Spoil Pond Construction, Johnston's Port 33, Rogers County, OK

2014

Environmental Assessment

Reviewing Agency: U.S. Army Corps of Engineers

Principal Investigator and Co-Author

For review and approval by the U.S. Army Corps of Engineers, the purpose of the proposed action was to access areas along the McClellan-Kerr Arkansas River Navigation System for additional barge fleeting space for Johnston's Port 33. Responsible for environmental assessment preparation.

North 193^{rd} East Avenue Improvements, Rogers County, Oklahoma

2013

Categorical Exclusion

Reviewing Agency: Oklahoma Department of Transportation

Principal Investigator and Primary Author

Categorical exclusion prepared for the North 193rd East Avenue Improvements. The proposed improvement project is approximately 2.13 miles in length and extends from State Highway 266 (Port Road) north to East 76th Street North. North 193rd East Avenue contains two 12-foot wide travel lanes, one in each direction with no shoulders. The purpose and need for this proposed project along this section of North 193rd East Avenue is to improve safety to a heavily travelled local roadway through a residential area that has no shoulders. Responsible for categorical exclusion documentation and supporting technical reports.

Bauman Abandoned Mine Land Project, Rogers County, OK

2012

Environmental Assessment

Reviewing Agency: Oklahoma Conservation Commission



Principal Investigator and Primary Author

This environmental assessment was prepared for the Oklahoma Conservation Commission concerning reclamation of abandoned mine land. The proposed action would consist of filling the water filled pits and drainage ditch with mine spoil from the project area to the original contour and then be re-vegetated to prevent erosion. Responsible for preparation of environmental assessment and supporting technical reports.

Northeastern State 166/160 Abandoned Mine Lands Project, Wagoner County, OK

2011

Environmental Assessment

Reviewing Agency: Oklahoma Conservation Commission

Principal Investigator and Primary Author

This environmental assessment was prepared for the Oklahoma Conservation Commission concerning reclamation of abandoned mine land. The proposed action includes the reclamation of abandoned mine land located to the immediate north of the Northeastern State University and west of the Creek Turnpike in Broken Arrow, Wagoner County, Oklahoma. Responsible for preparation of environmental assessment and supporting technical reports.

Proposed Natural Gas Pipeline Project, Marshall and Bryan Counties, OK

2011

Environmental Assessment

Reviewing Agency: U.S. Army Corps of Engineers

Principal Investigator and Co-Author

An environmental assessment was prepared to identify and address any potential impacts associated with a proposed 2.9-mile 8-inch diameter steel pipeline on United States Army Corps of Engineers controlled land near Lake Texoma in Oklahoma. Responsible for preparation of environmental assessment and supporting technical reports.

Pawnee Nation 4th Street Improvements, Pawnee, OK2010Pawnee Nation, 9th Street Improvements, Pawnee, OK2010Campus Improvements and Cemetery Improvements2010

Categorical Exclusions

Reviewing Agency: FHWA Central Federal Lands Highway Division

Primary Investigator and Author

The Pawnee Nation, in corporation with the Federal Highway Administration Central Federal Lands Highway Division, proposed to improve 4th Street 9th Street, in additional to, campus and cemetery roadway improvements. Responsible for categorical exclusion documentation, supporting technical reports and coordination with Central Federal Lands Highway Division.



Aylesworth 2D Seismic Survey, Marshall County, OK

2010

Environmental Assessment

Reviewing Agency: U.S. Army Corps of Engineers

Principal Investigator and Primary Author

Chesapeake Energy Corporation proposed to conduct a two dimensional (2D) seismic survey on United States Army Corps of Engineers Land at Lake Texoma in Marshall County, Oklahoma. Five seismic lines and access routes to access these lines on COE property were assessed.

Additional NEPA document preparation includes:

- Osage Nation Fee to Trust Application EA to BIA, Bartlesville, OK
- Osage Nation Fee to Trust Application EA to BIA, Pawhuska, OK
- Delaware Tribe Fee to Trust Application EA to BIA, Leavenworth, KS
- Kialegee Tribal Town Fee to Trust Application EA to BIA, Broken Arrow, OK
- Port of Muskogee Rail Spur Project, EA in Muskogee, OK
- Chimney Rock Road Improvement Project CE, Mayes County, OK
- White Oak Road Improvement Project CE, Craig County, OK
- U.S. Highway 60 Improvement Project, Bartlesville, OK, to Vinita, OK
- U.S. 75 Improvement Project, Weleetka, OK, to North Canadian River Bridge
- S.H. 10 Improvement Project, Miami, OK
- 86th Street North Improvement Project, Owasso, OK
- Covell Road and MacArthur Blvd Improvements, Oklahoma City, OK
- Mustang Road Widening, City of Yukon, OK
- Southeast 15th St. Improvements, Midwest City, OK
- South Western Avenue Improvements, Cleveland County
- I-235/Harrison Avenue Interchange Improvements, Oklahoma City
- 193rd East Avenue Improvements, Rogers County, OK
- 4th Street Improvements, Pawnee County, OK
- 9th Street Improvements, Pawnee County, OK
- Pawnee Nation Campus Improvements, Pawnee County, OK
- Bridge 72 Over Wickcliffe Creek Replacement, Mayes County, OK
- NS 4340 Road Improvements, Craig County, OK
- Aylesworth 2D Seismic Survey, Marshall County, OK
- Baumann Abandoned Mine Lands Project, Rogers County, OK
- Boomerang #1H Well Site, Grayson County, TX
- Brianna #1-3 Well Site, Caddo County, OK
- HooDoo #14 and #17 Well Site, Osage County, OK
- North Kaw Lake 8-1 Well Site, Kay County, OK
- Maxim 34-1 and USA 4-1 Well Site, Osage County, OK
- Northeastern State 166/160, Broken Arrow, Wagoner County, OK
- Jetta J&M 1H and Cannon 1H Pipeline Connections, Grayson County, TX
- Natural Gas Pipeline Project, Marshall and Bryan Counties, TX



- Southland 1H Well, Grayson County, TX
- Clinton 4-3H Well Site, Washita County, OK

Phase 1 Environmental Assessments

Coordinated and/or prepared multiple site assessments on over 1,000 acres of property in Oklahoma, Kansas, and Arkansas.

Traffic Noise Assessments

Prepared or coordinated assessments for projects throughout Oklahoma. Responsibilities included obtaining ambient noise readings, creation of noise models and report preparation. Noise models were prepared and approved for the following projects:

- Eastern Oklahoma County Turnpike Interchange at I-40, OK, 17 miles
- John Kilpatrick Turnpike and Interstate 40 Interchange Improvements, OK
- U.S. 69 Interchange Construction at Kinkead Road, McAlester, OK, 1 mile
- N. Western Avenue Widening, Oklahoma County, OK, 1.4 miles
- West 81st Street South Improvements, Creek County, OK 1.25 miles
- U.S. 270 over Caston Creek, Leflore County, OK 1 mile.
- S.H. 10 Improvement Project, Miami, OK, 4 miles
- 86th Street North Improvement Project, Owasso, OK, 4 miles
- Covell Road and MacArthur Blvd Improvements, Oklahoma City, OK, 1 mile
- Mustang Road Widening, City of Yukon, OK, 1 mile
- Southeast 15th St. Improvements, Midwest City, OK, 1.25 miles
- South Western Avenue Improvements, Cleveland County, 3 miles
- I-235/Harrison Avenue Interchange Improvements, Oklahoma City
- 193rd East Avenue Improvements, Rogers County, OK, 1.2 miles.
- NW 10th Street, Oklahoma City, OK
- North Western Avenue, Oklahoma County, OK
- 96th Street and 129th East Avenue, Owasso, OK
- West 81st Street, Sapulpa, OK
- State Highway 51 Improvement Project, Wagner to Tahlequah, OK,
- Gilcrease Northwest Expressway Extension Project, Tulsa, Osage County, 4.5 miles.
- 86th Street North Improvement Project, Owasso, Tulsa County, 4 miles.
- State Highway 10 Improvement Project, Miami, Ottawa County, 4 miles.
- U.S. Highway 70 Bridge Viaduct Project, Durant, Bryan County, 1 mile.
- NW 150th Street Improvements, Oklahoma County, 1 mile.
- I-40 Improvement Project, 1-240 to Choctaw Road, Oklahoma County, 2 miles.
- South Western Avenue, SW 134th to SW 179th Street, Cleveland County, 3 miles.



Wetland Mitigation/Reforestation Plans

- 10.5-acre wetland and waterway mitigation design plan, Coweta, OK
- 10 acre wetland, waterway, & pond mitigation design plan, Owasso, OK
- 5.5 acre wetland mitigation area, Durant, OK
- 12 & 5 acre wetland mitigation area plans, Broken Arrow, OK
- 5 acre wetland mitigation area plan, Muskogee, OK
- 25 acre bottomland hardwood wetland, Verdigris, OK
- 18-acre wetland mitigation plan. Tulsa County, OK.
- 10-acre wetland mitigation plan. Cleveland County, OK.
- 3-acre bottomland hardwood reforestation plan. McClain County, OK.
- Wetland Mitigation Bank in Oklahoma (80 acres). Tulsa County, OK.
- 5-acre wetland & waterway compensatory mitigation plan using 3 wetland areas and a 1,500 linear foot creek channel, Broken Arrow, OK.
- Designed, developed, and provided construction oversight of a 2 acre wetland and a 1,900 linear foot creek channel mitigation project, Washington County, OK.
- Developed a conceptual wetland mitigation plan for a 200+acre turnpike extension project in southeastern OK.
- Developed and designed a wetland and waterway mitigation plan for a school sports facility expansion project, Owasso, OK.
- Developed a 2-acre wetland mitigation plan got a golf course expansion project.
- Development of a mitigation area modification plan to address a creek channel relocation project.
- Developed EPA and USACE enforcement related mitigation plans to restore and return affected waters of the United States to former condition, function, and capacity.

Wetland and Waterway Delineation Studies

- Comprehensive Wetland delineations conducted on approximately 80 acres of previously disturbed lands involving over 100 trackhoe trenches and 150 sample sites.
- 156-acre commercial/residential development, Coweta, OK
- Wetland delineations on a 1,000-acre industrial park and Report of Survey for submittal to the Corps of Engineers. The largest wetland impact and mitigation project in the Tulsa District.
- Wetland Delineations and Section 404 Permit Acquisition for a proposed Limestone Quarry and Industrial Park Development on 46th Street North (Port Road) in Rogers County, OK. The project also required the development of a 200-acre wetland mitigation design plan to offset a proposed 90-acre impact project. The Mitigation Area is located in the southwest corner of 46th Street North and 193rd East Avenue near the Port of Catoosa entrance.
- Wetland delineations, Section 404 of the Clean Water Act permit acquisition and developments of a compensatory mitigation plan for the proposed O'Brien Park Improvement Project at 66th Street North and Lewis Avenue, Tulsa County, Oklahoma.
- Wetland Delineation and GPS Survey for a 165-acre power generation plant development, Warner, OK.
- Multiple residential development projects in Oklahoma City, Norman, Tulsa, and Broken Arrow, OK, ranging in size from 10 to 300 acres.



- River floodplain commercial development project, Norman, OK on 275 acres.
- Hospital construction project, Owasso, OK. 320 acres.
- Public school development project, Owasso, OK 20 acres.
- 86th and 96th Street Widening Projects, Owasso, OK 1 mile sections each.
- State Highway 10 Wetland Finding, Miami, OK 6.5 miles.
- U.S. Highway 70 Wetland Finding, Durant, OK 2.5 miles.
- Gilcrease Expressway Construction Project, Tulsa, OK 8 miles.
- Multiple road/bridge/highway improvement projects across the State of OK for ODOT.
- Municipal Airport Runway Extension Projects in Bartlesville, OK & Rogers, AR.
- EPA enforcement case in disturbed wetlands on 800-acre parcel of land in Tyler, TX.
- Multiple utility line alignments for Florida Power & Light, Forney, TX.
- 10-mile transmission line in Okmulgee County, OK.
- 11-mile highway project in McAlester, OK.
- 13-acre commercial development project, Tulsa, OK.
- Wetland & Waterway Surveys for the U.S. Highway 60 Improvement Project between Bartlesville and Pawhuska, Oklahoma.
- Wetland and Waterway delineations for the 47-mile Muskogee Turnpike extension, Southeast Oklahoma.
- Delineated wetlands along a 36.6-mile gas pipeline corridor and prepared the Report of Survey for submission to FERC.

Section 404 Permits

- Facilitated hundreds of 404 permit acquisitions in Ft. Worth, Little Rock, Kansas City, and Tulsa Districts acting as the agent for the project proponents.
- Coweta Crossing Commercial Development, Coweta, OK
- Owasso Sports Park Detention, Owasso, OK
- North Tulsa Sports Complex in Tulsa County, OK. The proposed project consisted of 26 soccer fields and associated parking areas.
- Wal-Mart Mechanical Distribution Center in Ochelata, OK. Permitting required the design of a 1-acre wetland & 2,000 linear-foot reestablished creek channel mitigation plan,
- Agent responsible for acquiring all 404 permits regarding the Creek East Turnpike Extension Project for the Oklahoma Transportation Authority.
- Facilitated the Section 404 permit acquisition for the East Extension of the Creek Turnpike in Broken Arrow and Catoosa, OK.
- Agent responsible to the City of Bixby for preparing a joint 404 permit application for the Haikey Creek Local Flood Protection and Haikey Creek Diversion Channel Improvement Projects.

Threatened and Endangered Species Assessments

- Performed hundreds of biological assessments, Determinations of Effect, and Consultation with the USFWS including:
 - Multiple residential development projects
 - o Multiple commercial developments



- o Rock quarries
- o 11 mile transmission line, Taney County, MO
- o 9 mile transmission line, Cherokee County, OK
- o 15 mile transmission line, Pawnee & Lincoln Counties, OK
- o 5 mile transmission line, Payne County, OK
- o 4 mile transmission line, Payne County, OK
- o 6 mile transmission line, Payne County, OK
- o 8 mile transmission line, Osage County, OK
- o 12 mile transmission line, Dallas & Webster County, MO
- o 16 mile transmission line, Benton County, MO
- o 2 mile transmission line, Barry County, MO
- o Chimney Rock Road Improvement Project, Mayes County, OK
- o White Oak Road Project, Craig County, OK
- o CR 4410 Improvement Project, Craig County, OK
- o 6 Gaming Facility Projects in Osage County, OK
- o Hundreds of Oil and Gas Development Projects, OK & TX

• Acoustic Bat Surveys:

- o 11-mile Transmission Line, Taney Co., MO
- O Utility Line Installation Project, Broken Arrow, OK
- o Residential Development Project, Broken Arrow, OK
- o County Rd NS 4410 Improvement Project, Craig County, OK
- o Communication Tower, Carroll Co., AR
- o 5-mile Transmission Line, Cherokee Co., OK
- o Rail Spur & Siding Expansion, Muskogee, OK
- Stevedoring Slip Development, Wagoner County, OK
- o 9-mile Transmission Line, Cherokee County, OK
- o Transmission Line, Pittsburg County, OK

• Performed hundreds of ABB surveys in OK, TX, KS, AR including:

- o Ft. Smith Airport
- Hartford Mine Project
- o City of Owasso Garnett Road
- Sports Park Detention Facility, Owasso, OK
- o Multiple Communication Towers in OK
- o Multiple Roadway projects, OK
- o Multiple Transportation Corridors, OK
- o Transmission line corridors, OK
- o Numerous Oil and Gas Development Projects, OK, AR, KS, TX
- o Multiple Tribal Development Projects, OK
- ABB presence/absence survey and bait away effort for an 11 mile pipeline replacement project through Logan and Franklin Counties, AR.
- State Highway 10 Improvement Project, Miami, OK (6 mile section)
- U.S. Highway 60 Improvement Project, Pawhuska to Vinita, OK 60+ miles



- Arkansas River Corridor Study Flora and Fauna Inventory, Tulsa Co., OK 42 miles
- Performed American Burying Beetle Presence/Absence surveys in Southeastern OK and Northern TX associated with a 150-mile long natural gas pipeline.
- Provided endangered species surveys for an 8-mile water and transmission line corridor, Forney,
 TX
- American Burying Beetle Surveys associated with proposed utility projects for the Cities of Bartlesville, Boswell, Calera, Claremore, Durant, Sand Springs, and Tulsa.
- Interior Least Tern Presence surveys, Canadian River, Haskell Co., OK.
- Habitat Identification Surveys for the Interior Least Tern, Bald Eagle, and American Burying Beetle in 3 counties in Southeastern OK.
- American Burying Beetle Presence/Absence surveys, Keystone Lake. Grand Lake, Eufaula Lake, and Hugo Lake.
 - Endangered Species Surveys for the 47-mile Muskogee Turnpike Extension Project, Southeast Oklahoma.
 - ABB Surveys for multiple highway and county roadway/bridge improvement projects in Oklahoma.

GPS/GIS Mapping

- EEC utilizes GPS information and GIS to develop, prepare and display all types of mapping, resource, and asset location information.
- EEC has prepared thousands of maps and exhibits for project related information and resource display and presentation purposes.
- GPS and GIS data acquisition and presentation is utilized for every EEC project.
- Performed GPS trail positioning and location effort along with GIS presentation of a 9.1mile primitive trail development along the Arkansas and Grand Rivers in Northeastern Oklahoma.
- Provided GIS information graphical synthesis for the Three Forks Inland Harbor project adjacent to the Arkansas River, Muskogee, OK.
- T&E Habitat Assessments and Sensitive Habitat Area delineations and mapping.
- Arkansas River Corridor Study Baseline Inventory Project sample site locations



Sean T. Votaw

P.O. Box 335 Vinita, OK 74301 (918)244-9595 sean@eagle-env.com

Experience

FIELD BIOLOGIST EAGLE ENVIRONMENTAL CONSULTING VINITA, OKLAHOMA - 2010- PRESENT

- Performed endangered species surveys, habitat evaluations, and biological assessments
- Performed waters of the US field surveys and wetland delineations
- Conducted Phase I Environmental Site Assessments
- Conducted Wetland mitigation area monitoring
- Conducted Reforestation area monitoring surveys
- Performed Bat surveys (acoustic and mist netting)
- Soil surveys
- · Plant identification
- Landscaping/ tree removal
- Operation and maintenance of equipment, vehicles, and heavy machinery
- · Wildlife habitat inventory and assessment
- Operated GPS data collection technology for multiple survey types
- Data analysis using for spreadsheet data and mapping information

 Orienteering by map and GPS equipment to navigate, find, and conduct surveys in remote areas

RANCH MANAGEMENT PHEASANT HILL RANCH; 2008-PRESENT

- · Conducted land and resource management
- · Operation of Farm equipment and machinery
- Performed fence building/repair
- Performed livestock operations & herd management
- · Assisted with hay production/harvest
- Pecan harvesting operations
- · Performed equipment maintenance
- · Conducted landscaping activities

Education

- Northeastern State University; Biology (fish & wildlife management) 2016-2019
- Arkansas Baptist College; Associate of Arts Degree - 2015-2016
- University of Arkansas at Little Rock; Undergraduate - 2014-2015



Sean T. Votaw

P.O. Box 335 Vinita, OK 74301 (918)244-9595 sean@eagle-env.com

Awards, Selections, Certificates:

ASTM 1527-13 Phase I Environmental Site Assessment Training

Scholarship – Oklahoma Chapter of the Wildlife Society

Chancellor's Scholarship Program University of Arkansas Little Rock

Division I NCAA Baseball U. Arkansas Little Rock and Pine Bluff

Arkansas Baptist College Baseball Scholarship

SECTION 00 72 00

GENERAL CONDITIONS

- A. The General Conditions of this Contract are the American Institute of Architects Document A201, "General Conditions of the Contract for Construction", 2017 Edition, hereinafter referred to as the "General Conditions." Cherokee Nation Standard Construction Terms and Conditions.
- B. A copy of the Document follows this page and shall apply to each and every Section of the Work as though written in full therein.

END OF SECTION

Exhibit A to Construction Management Agreement

STANDARD CONSTRUCTION TERMS AND CONDITIONS

Contract # 201440

Cherokee Nation 17675 South Muskogee Avenue Tahlequah, Oklahoma 74464 Telephone: (918) 453-5000

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CHEROKEE NATION STANDARD CONSTRUCTION TERMS AND CONDITIONS

The following are Cherokee Nation's Standard Construction Terms and Conditions, which shall be incorporated by reference in any agreement, contract, letter of intent, or understanding of any kind or nature whatsoever (hereinafter referred to as "Contract") between Cherokee Nation, Architect, Construction Manager, and any contractor, subcontractor, supplier, design professional, consultant or any other person or persons who perform services or provide materials in connection with any Work performed in furtherance of the completion of the Project (hereinafter referred to as "Contractor").

- 1. <u>Contract Documents</u>. The Contract Documents shall consist of the Contract, including these Cherokee Nation's Standard Construction Terms and Conditions which are incorporated therein; any general, supplementary or other conditions adopted by Cherokee Nation and agreed to by Contractor; the Drawings and Specifications for the Work; addenda issued prior to execution of the Contract; and agreed modifications issued after execution of the Contract.
- 2. <u>The Work.</u> The "Work" shall include all necessary construction services of any kind or nature in connection with the construction for Cherokee Nation of New Cherokee Nation Hospital (the "Project"), in accordance with the Contract Documents. (The location of the Project is also referred to as the "Job Site.")
- 3. The Project. The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by Cherokee Nation or by Contractor.
- 4. The Drawings. The Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, general including plans, elevations, sections, details, schedules and diagrams.
- 5. <u>The Specifications</u>. The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.
- 6. <u>The Project Manual</u>. The Project Manual is the volume usually assembled for the Work which may include the bidding requirements, sample forms, Cherokee Nation Standard Construction Terms and Conditions, the Contract, and Specifications.
- 7. Execution, Correlation and Intent.
 - A. Representation by Contractor. Execution of the Contract by Contractor is a representation that Contractor has visited the Job Site, become familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.
 - **B.** <u>Intent of the Contract Documents</u>. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by

Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; provided, however, performance by Contractor shall only be required to the extent consistent with the Contract Documents.

- C. <u>Organization of Specifications.</u> Organization of the Specifications into divisions, sections, and articles and arrangement of Drawings shall not control Contractor in dividing the Work among its contractors or subcontractors or in establishing the extent of Work to be performed by any trade.
- **D.** <u>Terminology</u>. Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

8. Project Representatives.

- A. <u>Cherokee Nation's Representative</u> for purposes of the Project shall be the Sr. Construction Administrator ("Owner's Representative"). The designation of the Sr. Construction Administrator as Owner's Representative shall not serve to assign any of Cherokee Nation's right title or interest in the Projects as Owner to the Sr. Construction Administrator.
- B. <u>Construction Manager's Representatives</u> for the purposes of the Project and administration of this agreement shall be Kenny Foreman and Ryan Haynie.

9. Shop Drawings, Product Data, and Samples.

- A. <u>Shop Drawings</u>. Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by Contractor or its subcontractor, subsubcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.
- **B.** Product Data. Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by Contractor to illustrate materials or equipment for some portion of the Work.
- C. <u>Samples.</u> Samples are physical examples which illustrate materials, equipment, or workmanship and establish standards by which the Work will be judged.
- **D.** Review by Contractor. Contractor shall review, approve and submit to the Architect and Construction Manager Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of Cherokee Nation or of separate contractors.
- E. <u>Approval by the Architect</u>. Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples, or similar submittals until the respective submittal has been approved by the Architect

- and Owner's Representative. Such Work shall be in accordance with approved submittals.
- **F.** Representation by Contractor. By approving and submitting Shop Drawings, Product Data, Samples, and similar submittals, Contractor represents that it has determined and verified materials, field measurements, and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
- G. <u>Deviations</u>. Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's and Owner's Representative's approval of Shop Drawings, Product Data, Samples, or similar submittals unless Contractor has specifically informed the Architect and Owner's Representative in writing of such deviation at the time of submittal and the Architect and Owner's Representative have given written approval to the specific deviation. Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals by the Architect's and Owner's Representative's approval thereof.
- H. <u>Specific Attention</u>. Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect or Owner's Representative on previous submittals.
- 10. <u>Use of Job Site</u>. Contractor shall confine operations at the Job Site to areas permitted by law, ordinances, permits, and the Contract Documents and shall not unreasonably encumber the Job Site with materials or equipment.

11. Review of Contract Documents and Field Conditions by Contractor:

Examination of the Job Site. Contractor is expected to carefully examine the Job Site of the proposed Work, the Plans, Specifications, and Contract forms. Contractor shall satisfy itself as to the character, quality, and quantities of Work to be performed, materials to be furnished, and as to the requirements of the proposed Contract. The submission of a bid and the execution of a Contract between Cherokee Nation and any contractor, subcontractor, supplier, design professional, consultant, or any other person or persons who perform services or provide materials in connection with any Work performed in furtherance of the completion of the Project shall be prima facie evidence that such Contractor has made such examination and is satisfied as to the conditions to be encountered in performing the Work and as to the requirements of the proposed Contract, Plans, and Specifications. Boring logs and other records of subsurface investigations and tests are available for inspection by Contractor. It is understood and agreed that such subsurface information, whether included in the Plans, Specifications, or otherwise made available to Contractor, was obtained and is intended for Cherokee Nation's design and estimating purposes only. Such information has been made available for the convenience of all contractors. It is further understood and agreed that each contractor is solely responsible for all assumptions, deductions, or conclusions which it may make or obtain from its examination of the boring logs and other records of subsurface investigations and tests that are furnished by Cherokee Nation. If any ambiguity is alleged to exist in the Plans or Specifications, Contractor is required to offer the more expensive option.

B. <u>Verification of Field Conditions</u>. Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to Contractor with the Contract Documents before commencing activities. Errors, inconsistencies, or omissions discovered shall be reported at once to Owner's Representative.

12. Supervision and Construction Procedures.

- A. <u>Supervision of the Work.</u> Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. Contractor shall be responsible for control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless Contract Documents give other specific instructions concerning these matters.
- **Responsibility of the Contractor.** Contractor shall be responsible to Cherokee Nation for acts and omissions of Contractor's employees, contractors, subcontractors, and their agents and employees, and other persons performing portions of the Work under a contract or subcontract with Contractor.
- C. <u>Performance of the Work</u>. Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect or by tests, inspections, or approvals required or performed by persons other than Contractor.
- **D.** <u>Inspections of the Work.</u> Contractor shall be responsible for inspection of portions of Work already performed on the Project to determine that such portions are in proper condition to receive subsequent Work.

13. <u>Labor and Materials</u>.

- A. Payment. Unless otherwise provided in the Contract or the Contract Documents, Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.
- **B.** Enforcement of Discipline. Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Contract. Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

C. <u>Sufficient Labor, Materials, and Other Supplies</u>. Contractor shall diligently prosecute the Work, providing sufficient labor, materials, and other supplies at all times to assure performance of the Work in an orderly and expedient fashion and to ensure the Work is essentially complete by the date and time for Substantial Completion as defined in the Contract.

14. Permits, Fees and Notices.

- A. Permits and Licenses. Contractor shall secure or cause to be secured through its subcontractors all permits and licenses and shall pay all fees necessary for the lawful and proper performance of the Work. Contractor shall determine the amount of building permit fees, development impact fees, gas, sewer and/or water tap fees, and all other fees for water, sewer, and electric, including connection fees and deposits required for the Work. Contractor shall complete all required applications and obtain related permits on Cherokee Nation's behalf. The cost thereof shall be the sole responsibility of Contractor. Cherokee Nation will reimburse Contractor for this cost with no mark-up or pay directly at Cherokee Nation's option if time allows.
- B. <u>Compliance With Laws</u>. Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, codes, and lawful orders of public authorities bearing on performance of the Work, including, without limitation, the Tribal Employment Rights Office of the Cherokee Nation ("TERO").
- C. Responsibility of Contractor. If the Contractor performs Work knowing it to be contrary to laws, statutes, ordinances, building codes (including, without limitation, the applicable National Fire Protection Association Codes and the applicable local fire codes and ordinances), and rules and regulations, Contractor shall assume full responsibility for such Work and shall bear the attributable costs required to remedy such non-compliance.

15. Schedule, Pre-Construction Meeting, and Superintendent.

A. Schedule. Cherokee Nation and Contractor agree that a firm construction schedule is critical to project completion. Within the final GMP Amendment, Contractor shall deliver to Owner's Representative and the Architect its Critical Path Method (CPM) construction schedule ("Schedule") for the Work in a form approved by Cherokee Nation. For purposes hereof, a CPM Schedule is defined as a planning, scheduling, and control technique where a construction project is completely planned and scheduled and an arrow diagram drawn to show the interconnected individual tasks involved in constructing the Project, which permits determination of the relative significance of each event, and establishes the optimum sequence and duration of operations. The Schedule shall identify all milestones (including Contractor-imposed milestones) and the activities related thereto. The Schedule shall not exceed the time limits set forth under the Contract Documents. The Schedule shall be revised at appropriate intervals as required by the conditions of the Work, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work. Owner's

Representative and the Architect shall review and approve the Schedule and thereafter may request that Contractor make further changes and modifications. Contractor shall perform the Work or cause the Work to be performed in accordance with the most recent Schedule submitted to and approved in writing by Cherokee Nation and Contractor. The Schedule shall be incorporated into the Contract as if fully set out therein. Contractor shall become obligated to complete or cause to be completed the various portions of the Work in accordance with starting and completion dates stated therein. During the performance of the Work, Contractor shall maintain at the Job Site a progress schedule showing the degree of completion of each segment of the Work. Contractor shall provide Owner's Representative with weekly progress reports as required by Cherokee Nation sufficient to allow Cherokee Nation to request revisions to the Schedule to ensure that the Project Work is completed by the time for Substantial Completion. Contractor shall promptly respond to schedule change requests within the time specified. The Schedule shall include the timing of any materials or work to be supplied by Cherokee Nation or Architect.

- **B.** Preliminary Meeting. Contractor, upon award of the Contract and before construction commences, shall schedule a meeting with Owner's Representative and the Architect. Contractor shall instruct all special contractors and subcontractors whose work is considered significant to the completion of the Project by Contractor or Cherokee Nation to attend this meeting. Contractor shall bring to this meeting the Schedule prepared pursuant to Paragraph 15(A) hereof, a complete list of subcontractors for all phases of the Work, including those not previously submitted on the Bid Form, and a completed Schedule of Values. The location of this meeting shall be Owner's Representative's office for the Project.
- C. Superintendent. Prior to commencement of the Work, Contractor shall designate a competent superintendent ("Superintendent") and will inform Cherokee Nation in writing of the Superintendent's name, qualifications, experience and address. Contractor shall also provide Cherokee Nation with the names, qualifications, experience and addresses of all persons who will assist the Superintendent. The Superintendent or his designated assistant will be present at the Job Site at all times during which Work is actually in progress and will have complete authority to represent and act for Contractor, The Superintendent shall supervise and direct the Work and shall not physically participate in the actual performance, assemblage or installation of the Work. All directions given to the Superintendent by Owner's Representative shall be as binding on Contractor as if they were given directly to Contractor. If Contractor's Superintendent or any of his assistants are or become unacceptable to Cherokee Nation then the Superintendent or the unacceptable assistants shall be promptly replaced upon request by Cherokee Nation. The Superintendent, as approved by Cherokee Nation, shall be appointed until completion of the Work and shall not be removed from the Project without the written consent of Cherokee Nation.

16. <u>Time of the Essence</u>. Time is of the essence. Contractor and the Architect shall coordinate their Work as may be directed by Cherokee Nation according to the accepted Schedule.

17. Furnishing and Ownership of Documents.

- A. <u>Copies of Drawings and Specifications</u>. Contractor will be furnished a sufficient number of reproducible construction Drawings and Specifications, either separately or in the form of a Project Manual. Contractor shall be responsible for distribution of documents to its subcontractors and suppliers involved with the Work in a timely manner to maintain the progress of the Work in accordance with the accepted Schedule.
- **B.** Property of Cherokee Nation. Drawings and specifications furnished by Cherokee Nation are the property of Cherokee Nation and shall not be used by Contractor on other work.
- C. <u>Forms</u>. Cherokee Nation will furnish, in electronic media, one set of forms as identified in the Contract Documents for parties with whom it has directly contracted. Contractor will not modify Cherokee Nation forms, but rather will input the relevant information onto the forms and thereafter use them for their intended purpose on the Project. Said forms are Cherokee Nation's property and shall not be used by Contractor on other work.
- D. Requirements Provided by Cherokee Nation. Cherokee Nation will furnish Contractor with complete information with respect to the requirements of the Project, including all necessary Contract Documents. To the extent available to Cherokee Nation or as required by law, Cherokee Nation will furnish to Contractor or cause to be furnished to Contractor the following items, at Cherokee Nation's expense:
 - (1) laboratory and environmental tests, inspections, and reports required by law:
 - (2) a sufficient quantity of Contract Documents;
 - (3) surveys describing physical characteristics, legal limitations, and utility locations for the site of the Project, and a written legal description of the Job Site; and
 - (4) (notwithstanding property held in Trust by the Federal Government) geotechnical reports and tests including, but not limited to, test borings, test pits, determination of soil bearing values, percolation tests with reports and reports on other subsurface conditions, and appropriate professional recommendations. It is understood and agreed that such reports, whether included in the Plans, Specifications, or otherwise made available to the Contractor, were obtained and are intended for Cherokee Nation's design and estimating purposes only. Such information has been made available

for the convenience of all contractors. It is further understood and agreed that each contractor is solely responsible for all assumptions, deductions, or conclusions which it may make or obtain from its examination of the reports and other records of subsurface investigations and tests that are furnished by Cherokee Nation.

18. Invoicing and Payment.

- A. Payment. Contractor's cost-to-date of labor and materials incorporated into the Work shall be paid monthly as the Work progresses less retainage of ten percent (10%). All such payments shall be made within a reasonable timeframe following Cherokee Nation's receipt of invoice. Retainage shall be withheld without interest and paid upon Substantial Completion. At Substantial Completion, the Owner may withhold from the Retainage payment a sum to allow for 200% of the amount, if any, determined in good faith by the Owner as reasonably necessary to cover costs to complete the punchlist or any incomplete Work. With approval from both the Construction Manager and the Cherokee Nation, all Retainage may be released to early completion subcontractors that have completed 100% of their work in an acceptable manner.
- submit for Cherokee Nation's approval a Schedule of Values allocating the various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as Cherokee Nation may require. This Schedule of Values shall be used as a basis for Contractor's application for payment as a method of showing progress on the Project; however, Cherokee Nation acknowledges that the amounts reflected on the Schedule of Values for specific items is not a representation or agreement by the Contractor as to the maximum cost of any one item.
- C. Payment Applications. Contractor shall invoice Cherokee Nation monthly in duplicate for Work completed and for materials stored on the site through at least the 25th day of the immediately preceding month on Cherokee Nation's Contractor Progress Payment Request form. Each application for payment shall be due on or before the 1st day of each month. Each application shall be based on ninety percent (90%) of the labor and materials incorporated into the Work and of materials suitably stored at the site thereof up to at least the 25th day of the immediately preceding month, less the aggregates of previous payments, and shall be accompanied by a form of an executed Progress Payment Release-Unconditional. Such Payment Application shall be submitted to the Architect for review within five (5) days following receipt of the Payment Application. Architect shall then have ten (10) days to review and provide written recommendation for approval of payment to Cherokee Nation.
- D. <u>Unconditional Progress Payment Releases</u>. Contractor's initial application for payment shall consist solely of the Progress Payment Request. Subsequent

applications shall be accompanied by properly executed Unconditional Progress Payment Release forms executed by all its subcontractors, material suppliers, and potential lienors. All Unconditional Progress Payment Releases for this Project shall be consistent in form and wording and shall be in the form agreed to by Cherokee Nation and Contractor.

- E. <u>Payment Including Change Order</u>. If a progress payment is to include payment for a Change Order, as that term is defined herein, a copy of the cover sheet of the fully executed Change Order shall accompany the Progress Payment Request.
- F. <u>Contractor's Affidavit</u>. When and if requested by Cherokee Nation, Contractor shall furnish, as a prerequisite to any progress payment and Final Payment, a Contractor's Affidavit reciting that all outstanding bills of labor, materials, or services then due, up to the date of the current application for payment, have been paid. The Contractor's Affidavit shall be consistent in form and wording as agreed to by Cherokee Nation and Contractor.
- G. Payment to Third Parties. Cherokee Nation reserves the right, without obligation, to withhold, reduce or recover payment if Contractor fails to pay any third party for labor, materials, or other costs incurred by Contractor in performance of the Work as and when due. Additionally, Cherokee Nation shall have the right, but no obligation, to make joint checks or withhold and or to require satisfactory lien releases for all suppliers and subcontractors of Contractor.
- H. Payment for Materials Stored On Site and Off Site. Payment, subject to retention for materials and equipment suitably stored and intended for incorporation in the Work, will be made by Cherokee Nation, subject to the following conditions:
 - (1) Contractor shall furnish to Owner's Representative satisfactory evidence that such materials have been properly received, inventoried, and stored at the Job Site or Off Site in accordance with applicable manufacturer's recommendations and special requirements of Cherokee Nation, to include that all such materials stored Off Site are clearly designated and marked for use in connection with the Project;
 - (2) Payment shall be conditioned upon submission by Contractor of bills of sale or such other documentation as will evidence the transfer to title to such materials or equipment to Cherokee Nation upon payment;
 - (3) Risk of loss of any materials stored on or adjacent to the Job Site shall remain the obligation of Contractor until such time as title has passed to Cherokee Nation. Notwithstanding anything contained in this provision, the primary source of recovery for any loss shall be the Builders Risk insurance; and

- (4) Payment will not be made for materials stored offsite unless authorized in writing by Cherokee Nation, and in no event shall Cherokee Nation be asked or required to pay, either directly or indirectly, the expense of such Off Site storage.
- I. Certificate for Payment. Cherokee Nation will, within a reasonable timeframe after the receipt of Contractor's Progress Payment Request, make payment or notify Contractor of Cherokee Nation reason for withholding the Request, or portions of the Request. Receipt by Cherokee Nation is defined to be delivery in person to Cherokee Nation's Sr. Construction Administrator at Cherokee Nation Planning & Development Offices located within the Cherokee Nation Tribal Complex, Tahlequah, OK 74464. Payment is defined to be by Cherokee Nation's mailing by first-class U.S. Mail a check for the amount of the Request for payment, subject to retention and adjustment as provided in the Contract Documents. If the pay date occurs on a Saturday, Sunday or holiday, Cherokee Nation will make payment on the next business day. Contractor's Progress Payment Requests are to be dated the 25th of the month as defined in other provisions of the Contract Documents.
- J. <u>Decisions to Withhold Payment</u>. Cherokee Nation may decline to make payment because of subsequently discovered evidence or subsequent observations, may nullify the whole or any part of any Progress Payment Request previously received and/or withhold payment to such extent as may be necessary to protect Cherokee Nation for loss because of:
 - (1) defective Work not remedied;
 - (2) third party claims filed or reasonable evidence indicating the probable filing of such claims;
 - (3) failure of Contractor to make payments properly to suppliers or subcontractors or for labor, materials or equipment;
 - reasonable evidence that the Work cannot be completed for the unpaid balance of the subcontract amount;
 - (5) damage to Cherokee Nation or another contractor or property of another;
 - reasonable evidence that the Work will not be completed within the time permitted for completion of the Project;
 - (7) failure to carry out the Work in accordance with the Contract Documents; or
 - (8) materially inaccurate or incomplete information provided with the Request or Certificate of Payment.

K. Final Payment.

- (1) Contractor shall submit application for Final Payment. Final Payment and retention shall not become due until Contractor submits to Cherokee Nation (i) a Contractor's Affidavit acceptable to Cherokee Nation that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which Cherokee Nation or its property or its sureties might in any way be responsible, have been paid or otherwise satisfied, (ii) consent of surety, if any, to Final Payment, (iii) when applicable, accurate record drawings for Contractor's Work, and (iv) if required by Cherokee Nation, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of lien arising out the Contract, to the extent and in such form as may be designated by Cherokee Nation.
- (2) If any of Contractor's subcontractors or suppliers refuses to furnish a release or waiver required by Cherokee Nation, Contractor may furnish a bond satisfactory to Cherokee Nation to indemnify it against any such lien. If any lien remains unsatisfied after all payments are made, Contractor shall refund to Cherokee Nation all monies that the latter may be compelled to pay in discharging such lien.
- (3) Final Payment shall constitute a waiver of Claims by Cherokee Nation except those arising from: (i) liens, claims, or security interest encumbrances arising out of the Contract; (ii) failure of the Work to comply with the requirements of the Contract Documents; or (iii) terms of warranties required by the Contract Documents.
- (4) Acceptance of Final Payment by Contractor shall constitute waiver of any known claims, except those previously made in writing and identified as unsettled at the time of final Application for Payment. Final Payment (including retention) will be due no later than sixty (60) days after completion of the Work in accordance with the Contract Documents. Final Payment shall include payment of any conditional items to which Contractor may be entitled hereunder, including amounts earned by completion of the Project.
- (5) Any billings received later than sixty (60) days after Final Completion will not be processed. Failure to cause billings to be received by Cherokee Nation within sixty (60) days of Final Completion is agreed to be conclusive proof of a failure to mitigate damages and shall be a complete defense to the recovery of any damages associated with said billings and said defense shall apply to any theory of recovery, whether legal or equitable, in contract or tort, and including fraud, breach of contract, promissory estoppel or quantum meruit. Payment to a Contractor shall not operate as approval or acceptance of Work done or materials furnished under the Contract

Documents. In the event that any of those items identified on the Punch List remain undone or uncorrected within forty-five (45) days of Substantial Completion, Cherokee Nation may, after written notice, cause any of the items to be completed or corrected and back charge the Contractor for the actual cost incurred by Cherokee Nation.

19. Completion.

- Substantial Completion. Substantial Completion is defined as the stage in the progress of the Work when the Project or a designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the constructed facilities are suitable and capable of being operated for their intended use, and Contractor, if applicable, has received a final Certificate of Occupancy. If, however, the constructed facilities are not occupied or used for their intended use for reasons not due to the construction set forth in this Contract, Substantial Completion is still met. Cherokee Nation may occupy or use any completed or partially completed portion of the Work at any state acceptable to Cherokee Nation and allowed by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion has reached the Substantial Completion stage. Before Substantial Completion, among other things, construction signage, temporary fencing, office trailers, storage trailers and temporary utilities shall be removed. Contractor's traffic control measures shall be eliminated and removed, if safe to do so. Contractor's insurance obligations shall remain in force and effect until Final Completion; however, upon occupancy of the constructed facilities, the existence of the Builder's Risk Insurance shall be governed by the terms of the Builder's Risk policy.
- **Right to Occupy before Substantial Completion.** Cherokee Nation retains the right to occupy or to use any completed or partially completed portion of the Work at any stage acceptable to Cherokee Nation and Contractor and allowed by public authority having jurisdiction over the Work. Such partial occupancy or use may commence whether or not that portion is complete for Substantial Completion. Partial use or occupancy shall not constitute acceptance of the Work.
- C. <u>Inspections by Contractor and Punch List</u>. Upon the date for Substantial Completion as set forth in the Contract, Contractor shall prepare and submit to the Architect and Owner's Representative a punch list of items to be completed or corrected. Contractor shall then have thirty (30) days following the date for Substantial Completion to complete or correct the items on the punch list, unless such additional time is provided in writing by Owner's Representative to complete such items. Failure to include an item on the punch list does not relieve the Contractor of the obligation to perform the Work in accordance with the Contract Documents.
- **D.** <u>Inspections by Cherokee Nation and Punch List</u>. Within twenty (20) days following receipt of Contractor's punch list, the Architect, Owner's Representative

and designees will make an inspection of the Project to determine whether the Contractor's Work is substantially complete. If Cherokee Nation's inspection discloses any item, whether or not included on the Contractor's punch list, which is not in accordance with the requirements of the Contract Documents, Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item within thirty (30) days following notification by Owner's Representative. Within two (2) days thereafter, Contractor shall then submit a request for another inspection by the Architect, Owner's Representative and designees to determine Substantial Completion. Such subsequent inspection will be completed within five (5) days following such notification by Contractor. Contractor is not relieved from completing or correcting Work by Cherokee Nation's failure to inspect the Work within the time frame provided for herein.

- E. <u>Certificate of Substantial Completion</u>. When the Work or a designated portion thereof is substantially completed, the Architect will, within five (5) days thereafter, prepare a Certificate of Substantial Completion, which shall establish the date of Substantial Completion, the responsibilities of Cherokee Nation and Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance, and shall fix the time within which Contractor shall finish all items on the punch list accompanying the Certificate, which time shall not exceed ten (10) days without the written consent of Owner's Representative. Completion of the above punch list items shall not affect the date of Substantial Completion.
- F. Cherokee Nation's Receipt of Fixtures and Equipment. Contractor understands, and shall take into consideration, that sixty (60) days prior to the date for Substantial Completion, Cherokee Nation may begin receiving fixtures and equipment to be stored in the facilities, and that Cherokee Nation and Cherokee Nation's separate contractor(s) may be installing fixtures and Cherokee Nation's furnished equipment or other equipment immediately thereafter.
- G. <u>Exterior Closed and Locked</u>. At least sixty (60) days prior to Contractor's scheduled date for Substantial Completion, all exterior openings shall be closed in, if required, exterior doors provided with locks, and the entire building sufficiently secure to protect Cherokee Nation fixtures.
- H. <u>Final Completion</u>. Upon receipt of written notice from Contractor that the Work is ready for final inspection and acceptance and upon receipt of a final application for payment, the Architect, Owner's Representative and designees will promptly make such inspections and, when they find the Work acceptable under the Contract Documents and the Contract fully performed, they will issue a Certificate of Final Acceptance and thereafter will approve Final Payment.
- 20. Construction by Cherokee Nation or by Special Subcontractors.
 - A. Cherokee Nation's Right to Perform Construction and to Award Separate Contracts. Cherokee Nation reserves the right to perform construction related to

the Project and to award separate contracts in connection with other portions of the Project (hereinafter referred to as "Special Subcontractors"). Cherokee Nation shall provide for coordination of the activities of Cherokee Nation's own employees and of each of the Special Subcontractors with the Work of the Contractor. Contractor shall participate with each Special Subcontractor and Cherokee Nation in reviewing their respective construction schedules when directed to do so by Cherokee Nation. Contractor shall make any revisions to the Schedule and the Project budget after a joint review and mutual agreement between Cherokee Nation and Contractor.

B. Mutual Responsibility. Contractor shall afford Cherokee Nation or the Special Contractors the opportunity for introduction and storage of their materials and equipment and performance of their activities and shall coordinate Contractor's construction and operations with Cherokee Nation or the Special Subcontractors. If part of Contractor's Work depends upon construction by Cherokee Nation or the Special Subcontractors, Contractor shall, prior to proceeding with that portion of the Work, promptly report to Owner's Representative that such construction by Cherokee Nation or the Special Subcontractors is required in order to give Cherokee Nation adequate time to coordinate such construction. Costs caused by delays or by improperly timed activities shall be borne by the party responsible therefore.

21. Subcontractors and Suppliers.

Subcontractor Relations. By appropriate agreement, written where legally required for validity. Contractor shall require each of its contractors or subcontractors, to the extent of the Work to be performed by its contractors or subcontractors, to be bound to Contractor by terms of the Contract Documents and the Cherokee Nation Standard Construction Terms and Conditions, and to assume toward Contractor all the obligations and responsibilities which Contractor, by these Conditions, assumes toward Cherokee Nation. Each subcontract agreement shall preserve and protect the rights of Cherokee Nation under the Contract Documents with respect to the Work to be performed by the contractor or subcontractor so that subcontracting thereof will not prejudice such rights. Where appropriate, Contractor shall require each contractor or subcontractor to enter into similar agreements with sub-subcontractors. Contractor shall make available to each proposed contractor or subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the contractor or subcontractor will be bound, and, upon written request of the contractor or subcontractor identify to the contractor or subcontractor terms and conditions of the proposed subcontract agreement which may be at variance with the Contract Documents. Contractors or subcontractors shall similarly make copies of applicable portions of such documents available to their respective proposed subsubcontractors.

B. Award of Subcontracts and Other Contracts for Portions of the Work.

- (1) Unless otherwise stated in the Contract Documents or the bidding requirements, Contractor, as soon as practicable after award of the Contract, shall furnish in writing to Cherokee Nation the names of persons or entities proposed for each principal portion of the Work. Owner's Representative will promptly reply to Contractor in writing stating whether or not Cherokee Nation, after due investigation, has reasonable objection to any such proposed person or entity.
- (2) Contractor shall not contract with a proposed person or entity to which Cherokee Nation has made reasonable and timely objection.
- (3) If Cherokee Nation has reasonable objection to a person or entity proposed by Contractor, Contractor shall propose another to whom Cherokee Nation has no reasonable objection.
- Contractor's Subcontracts. Contractor shall not subcontract any part of the Work C. except as specifically provided in the Contract Documents or as Cherokee Nation, in its sole discretion, agrees to in writing. If applicable, Contractor will evaluate bids from subcontractors and suppliers and present tabulation of bids and qualifications. As a condition to commencing Work, Contractor shall submit, in writing, a list of all subcontractors and suppliers to be used in connection with the Work and shall within a reasonable time thereafter supply subcontractor's signed contracts and vendor purchase orders to Cherokee Nation and Owner's Representative per the Project Schedule. Contractor shall immediately notify Cherokee Nation and Owner's Representative, in writing, of any change in their subcontractors and suppliers. Contractor shall have each subcontractor and supplier complete the Progress Payment forms and attach them to its monthly Progress Payment Requests. Failure to comply with this provision will delay processing of monthly progress payments. For purposes of this Section, identified subcontractors and suppliers shall mean all subcontractors and those suppliers whose total price(s) exceeds five percent (5%) of the estimated Cost of the Work.
- **D.** <u>Certificates of Insurance</u>. Contractor shall maintain acceptable certificates of policies of insurance for all contractors and subcontractors and make available to Cherokee Nation upon request.
- **E.** Contingent Assignment of Subcontracts. Each subcontract agreement for a portion of the Work is assigned by Contractor to Cherokee Nation provided that:
 - (1) Assignment is effective only after termination of the Contract by Cherokee Nation for cause or for convenience and only for those subcontract agreements which Cherokee Nation accepts by notifying the contractor or subcontractor in writing; and

(2) Assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

22. Insurance.

- A. Contractor's Liability Insurance. Unless more specifically delineated in the Construction Management Agreement or Exhibits thereto, in which case the types and limits of required coverage shall be as set forth therein, Contractor shall carry or cause to be carried and maintained in force throughout the entire term of this Contractor's Agreement insurance coverage as described below with insurance companies acceptable to Cherokee Nation. The limits set forth below are minimum limits and will not be construed to limit Contractor's liability. All costs and deductible amounts will be the sole responsibility of Contractor.
 - (1) Worker's Compensation. To the extent such coverage is required by law, worker's compensation insurance complying with the laws of the state or states having jurisdiction over each employee, whether or not Contractor is required by such laws to maintain such insurance, and Employer's Liability insurance with limits of \$500,000 each accident, \$500,000 disease each employee, and \$500,000 disease policy limit.
 - (2) General Liability. Commercial or Comprehensive General Liability insurance on an occurrence form with a combined single limit of \$2,000,000 each occurrence, \$2,000,000 Personal and Advertising Liability, \$4,000,000 General Aggregate, \$4,000,000 Products and Completed Operations Aggregate, and Ten (10) years Completed Operations Coverage from Substantial Completion.
 - (3) Excess Liability. Excess Liability Insurance coverage shall be maintained with the following limits: \$50,000,000 Each Occurrence; \$50,000,000 General Aggregate; \$50,000,000 Products and Completed Operations Aggregate, and Ten (10) years Completed Operations Coverage from Substantial Completion.
 - (4) <u>Automobile Insurance</u>. Automobile liability insurance with a combined single limit of \$1,000,000 each occurrence for bodily injury and property damage to include coverage for all owned, non-owned, and hired vehicles.
 - (5) <u>Errors and Omissions</u>. Contractor's Pollution Liability / Professional Liability / Errors and Omissions Liability insurance shall be maintained on a claims-made basis with limits of not less than \$5,000,000 for each claim and an annual aggregate of not less than \$5,000,000.
- **B.** Waiver of Subrogation. In the above-described policies, Contractor agrees to waive and shall require its insurers to waive any rights of subrogation or recovery they may have against Cherokee Nation.

- C. <u>Additional Insured</u>. Under the Automobile and General Liability insurance policies, Cherokee Nation shall be named as additional insured as respects Contractor's operations and as respects any Services performed under this Agreement. Any costs associated with naming Cherokee Nation as additional insured is included in the contract cost.
- **D.** Primary and Non-Contributory: The Automobile and General Liability insurance policies will include the following "other insurance" amendment: "This insurance is primary insurance with respect to Cherokee Nation, and any other insurance maintained by Cherokee Nation is excess and not contributory with this insurance."
- E. <u>Non-renewal or Cancellation</u>. Non-renewal, modification, or cancellation of policies described above will be effective only after written notice is received by Cherokee Nation from the insurance company thirty (30) days in advance of any such non-renewal, modification, or cancellation.
- F. Evidence of Insurance. Prior to commencing the Services to be provided hereunder, Contractor will deliver to Cherokee Nation certificates of insurance on an ACORD 25 or 25S form evidencing the existence of the insurance coverage required above. In the event of a loss or claim arising out of or in connection with the Services to be provided under this Agreement, Contractor agrees, upon request of Cherokee Nation, to submit the original or a certified copy of its insurance policies for inspection by Cherokee Nation.
- G. Non-Liability for Contractor's Loss. Cherokee Nation will not insure nor be responsible for any loss or damage, regardless of cause, to property of any kind, including loss of use thereof, owned, leased or borrowed by the Contractor, or its employees, servants or agents.
- H. Builder's Risk. If requested by Cherokee Nation, Contractor shall provide or cause to be provided Builders Risk Insurance on an "all risk" or equivalent policy form and shall include without limitation, terrorism coverage, insurance against perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, glass breakage, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss as well as all increased Cost of the Work, (including General Conditions) resulting from any related delay or disruption of the Work. This Builder's Risk insurance shall cover portions of the work stored off the site and also portions of work in transit.
- I. Other Risks. If Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property

- insurance policy, Cherokee Nation shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor.
- J. <u>Insurance Company Ratings</u>. All insurance to be provided by Contractor shall be written by insurance companies acceptable to the Cherokee Nation and carrying an AM Best rating of A- X or better.
- Contractor's Bond. Contractor shall furnish Performance, Payment, and Maintenance 23. Bonds as follows: Payment and Performance Bonds shall be in a sum equal to the contract price. If the Performance Bond provides a one (1) year warranty, a separate Maintenance Bond is not required. If the warranty period specified in the contract is for longer than one (1) year, a Maintenance Bond equal to ten percent (10%) of the contract price is required. Bonds shall be duly executed by a responsible corporate surety authorized to issue such bonds in the state where the project is located and the surety must be approved by Cherokee Nation. If Contractor is providing default insurance, then Contractor will provide a bond for a sum equal to the work not covered under the default insurance. Cherokee Nation has the right to fully review the default insurance and to decide if the default insurance provided is acceptable. At Cherokee Nation's request, Contractor shall disclose its cost (stated both as a percentage of total Project cost, and an estimated total cost) for said bonds. The bonds shall name Cherokee Nation as obligee and shall be in the form or forms as agreed upon by Cherokee Nation and Contractor. The cost of the bonds shall be included in the contract amount.

24. Safety Regulations and Safety of Persons and Property.

- A. <u>Safety Plan</u>. Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract Documents.
- B. <u>Safety Representations</u>. Contractor, its agents, employees, suppliers, and subcontractors shall perform all Work in a safe and responsible manner and shall comply with all applicable safety laws and regulations promulgated by any Federal, State or Local government authority and regulations and all other safety rules and regulations related to such Work promulgated by any governmental agency in the jurisdiction the Work is located.
- Protective Equipment. During all Work performed hereunder, Contractor shall provide and enforce the use of suitable safety barriers and provide employees, agents, subcontractors, etc., with appropriate personal protective equipment where required (e.g., hard hat, hand, eye, foot and respiratory protection). Such personal protective equipment shall be worn by all persons during their presence in posted areas.
- D. <u>Right to Know</u>. Contractor's employees present at Cherokee Nation Job Site shall be provided copies of Material Safety Data Sheets used on site for all toxic substances to which Contractor's employees may be routinely exposed. Contractor

- shall provide Owner's Representative with Material Safety Data Sheets for any chemical substance used by Contractor on the Job Site.
- **E. <u>Drug Testing.</u>** Contractor, subcontractors, and supplier's employees may be subject to pre-employment and/or random drug testing.
- 25. <u>Cooperation with Other Contractors</u>. Contractor shall cooperate and coordinate its Work with other contractors employed by Cherokee Nation in order to insure that the Work of each shall be commenced and completed without delay.

26. Representations and Warranties.

- A. General Representations and Warranties. Contractor represents and warrants to Cherokee Nation that:
 - (1) all materials delivered hereunder are new and free from defects in material and workmanship;
 - (2) Contractor has good title to the material and has or shall convey such good title to Cherokee Nation;
 - (3) the material purchased or provided hereunder shall conform to the Contract Documents, including all applicable specifications, drawings, samples, or other descriptions provided by Cherokee Nation;
 - (4) the material purchased or provided hereunder will be suitable for the purposes intended under the Contract Documents;
 - (5) Contractor and its subcontractors have the requisite skill, experience, expertise, financial resources, and capability to perform properly and timely the Work as required by the Contract Documents;
 - (6) Contractor will provide and perform the Work in strict compliance with the Contract Documents, manufacturers' printed directions, and all applicable law; and
 - (7) Contractor and its subcontractors will perform the Work utilizing the skill and attention of experienced and competent contractors involved in the business of completing the Work and shall conduct the Work in a prudent, safe, and careful manner consistent with Cherokee Nation interests.
- **B.** Warranty Exclusions. Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage.

- Warranty Period. Such Representations and Warranties shall commence on the C. date of Substantial Completion and shall extend for a period one (1) year thereafter or such longer period as may be prescribed in the Contract Documents, or by law. Work not conforming to these standards will be considered defective. Any Work replaced or repaired pursuant to such warranty shall be further warranted for one (1) year after the completion of such repair or replacement. If any of the Work is defective in materials or workmanship, or is otherwise not in conformity with the requirements of the Contract Documents, Contractor shall promptly correct or replace such defect or nonconformity at Contractor's sole cost and expense and at a time or times convenient to Cherokee Nation and shall be liable for any damage to other work or property caused by such defects. After ten (10) days' written notice to Contractor of its intent to do so, Cherokee Nation may correct such defects and back charge Contractor for the actual cost of correcting the defect or nonconformity. Contractor's warranty shall include all labor, materials, shipping costs, and other associated costs regardless of the manufacturer's limited warranty, and shall be nonexclusive of other warranties or remedies available to Cherokee Nation.
- **D.** Named Products. Where products named in the specifications are accompanied by the term "or equal," or other language of similar effect, the products shall comply with those Contract Document provisions concerning substitutions for obtaining Cherokee Nation approval (or Change Order) to provide an unnamed product.
- E. Other Specified Products. Whenever any product is specified or shown by describing proprietary items, model numbers, catalog numbers, manufacturer trade names or similar reference, Contractor obligates himself to the use of the product and no substitutes or equals shall be allowed. Where two or more products are shown or specified, Contractor has the option of which to use.
- F. Warranty on Substantial Completion. The warranties stated in this Contract commence on the date of Substantial Completion and shall survive any inspection, delivery, acceptance, payment, expiration, or earlier termination of this Contract and such warranties shall run to Cherokee Nation and its successors and assigns. Neither written acceptance by Cherokee Nation nor payment to Contractor shall release Contractor from its responsibility or liability for defective Work or for failure to comply with the warranties set forth herein.
- G. Third Party Suppliers Warranty. Contractor shall obtain from third party suppliers and manufacturers the required extensive warranties and guarantees for equipment and materials and shall assign, and hereby assign the same to Cherokee Nation. Contractor shall cooperate with Cherokee Nation in the enforcement of such warranties and, if so requested by Cherokee Nation or Owner's Representative, assist in obtaining proper servicing, repair, or replacement from each manufacturer under the provisions of the warranties. Contractor shall furnish Cherokee Nation and Owner's Representative with a complete list of such third

party suppliers and manufacturers, together with a copy of complete warranties from such suppliers and manufacturers on or before Final Completion of the Work hereunder.

- Debarment, Suspension, Proposed Debarment, and Other Responsibility H. Matters. Contractor certifies to the best of its knowledge and belief that neither Contractor nor any of its principals are presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any federal, state, local, or tribal agency. Contractor also certifies to the best of its knowledge and belief that it has not, within a three-year-period preceding this Agreement, been convicted of, or had a civil judgment rendered against it for: commission of a fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, local, or tribal) contract or subcontract; violation of federal or state antitrust statutes relating to submission of offers or commissions or embezzlement, theft, forgery, bribery, falsifications or destruction of records, and/or making false statements; and is not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in this provision. Contractor certifies it has not within a three-year period preceding this Agreement, had one or more contracts terminated for default by a federal, state, local, or tribal agency.
- 27. <u>Liens.</u> Contractor shall have the affirmative duty to keep Cherokee Nation property free from mechanic and materialmen's liens of any person or entity supplying any portion or the Work and shall not permit any such lien to be filed or maintained in connection with the Work. Cherokee Nation may recoup, offset or retain out of payments due or to become due to Contractor an amount sufficient to fully protect Cherokee Nation from any such lien, claim of lien, or claim against bond. This clause shall be inserted in all of Contractor's purchase orders and subcontract agreements. Contractor further agrees to defend (including attorney fees), indemnify and hold harmless Cherokee Nation from any and all loss of use as a result of any lien filed upon the property of Cherokee Nation unless the lien is due to the failure of Cherokee Nation to pay a valid request for payment.
- 28. Inspection and Correction of Work. All Work shall be subject to inspection by Cherokee Nation, its Owner's Representative, and/or the Architect at all reasonable times and at all places. Any such inspections are for the sole benefit of Cherokee Nation and shall not relieve Contractor of the responsibility for providing quality control measures to assure that the Work strictly complies with the Contract Documents. No inspection by Cherokee Nation or its Representatives shall be construed as constituting or implying either a waiver or acceptance. Inspections shall not relieve Contractor of responsibility for damage to or loss of material prior to acceptance, nor in any way affect the continuing rights of Cherokee Nation after acceptance of the completed Work.

29. <u>Interference, Clean-up, Defective Work, Inspection of Facilities, and Cutting and Patching.</u>

- A. <u>Interference</u>. Cherokee Nation or Owner's Representative shall, at all times, have access to the Work. Contractor shall perform all Work without interference or interruption to Cherokee Nation and other persons completing other work at the Job Site, and Cherokee Nation and its representatives shall perform inspections and site visits without interference or interruption of others performing Work at the Job Site. Contractor shall fully cooperate and coordinate its Work with such other persons or entities. Contractor, before proceeding with the Work, will accurately check and verify all previous and surrounding work done by others, if any, and shall determine the correctness of the same.
- B. <u>Cleaning Up</u>. Contractor shall at all times avoid creating dust, fumes, vibration, contamination and excess noise. If dust, fumes, vibration, contamination, or excess noise are unavoidable, Contractor shall give prior written notice of such fact to Cherokee Nation and Owner's Representative, and Contractor shall proceed with such Work only upon Cherokee Nation written authorization. Contractor shall maintain the Job Site in a safe, clean condition free from accumulations of waste material or rubbish on a daily basis.
- Cherokee Nation's Right to Clean Up. If a dispute arises among Contractor, separate contractors and Cherokee Nation as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, Cherokee Nation may, after five (5) days' written notice, clean up and allocate the cost among those responsible.
- D. Correction of Defective Work. Contractor shall, without charge, replace any material or correct any workmanship which does not conform to the Work to be provided by the Contractor under the Contract Documents. Contractor shall promptly segregate and remove rejected material from the Job Site. Contractor shall bear all cost of damages to the property of Cherokee Nation or the property of any other contractor in the removal or replacement of defective or nonconforming Work; however, Contractor shall retain the right to seek the cost and related expenses from any subcontractor or suppliers providing defective or nonconforming work.
- E. Remedies for Failure to Cure Defective Work. If the material and/or workmanship are not in accordance with the Contract Documents and Contractor does not promptly replace rejected material or correct rejected workmanship, Cherokee Nation may, after five (5) days' written notice:
 - (1) by contract or otherwise, replace such material or correct such workmanship and back charge to Contractor the cost thereof together with any resulting damage;

- (2) terminate Contractor's right to proceed under Termination for Cause; or
- issue a written order to Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated.
- F. <u>Inspection Facilities and Cost</u>. Contractor shall promptly furnish, as part of the Work, all facilities, labor, and material reasonably needed for performing such safe and convenient inspection as may be required by the Contract Documents. All inspections by Cherokee Nation and its Representatives shall be performed to the extent feasible in such manner as to not unnecessarily delay the Work. Contractor shall pay any additional cost, including, but not limited to, additional fees of inspection when material or workmanship is not ready at the time specified by Contractor for inspection or when re-inspection is necessitated by prior rejection.
- G. <u>Cutting and Patching</u>. Contractor shall be responsible for cutting, fitting or patching required to complete the Work or make its parts fit together properly. Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Project by Cherokee Nation or Special Subcontractors by cutting, patching or otherwise altering such construction or by excavation.
- H. Non-waiver. The cost of testing all defects or non-complying Work shall be paid by Contractor if the Work is found to be defective or nonconforming. The inspection or the occupancy or acceptance of Work, shall not waive or impair Cherokee Nation right to reject or revoke its acceptance of nonconforming Work, or to avail itself of any other remedies.

30. Environmental Protection and Hazardous Materials.

- A. <u>NEPA.</u> If extraordinary or exceptional circumstances involving the National Environmental Policy Act (NEPA) and related environmental considerations are encountered in the project, or if there is any change in the project which could change the project environmental determination, the Contractor agrees to stop construction in affected areas and to notify the Cherokee Nation.
- B. Environmental Concerns. The work covered by this section consists of furnishing all labor, materials, and equipment, and performing all work required for the prevention of environmental pollution during, and as a result of, construction operations under this contract except for those measures set forth in other technical provisions of these specifications. For the purpose of these specifications, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance of human life; affect other species of importance to man; or degrade the utility of the environmental pollution requiring consideration of air, water, and land, and involves noise and solid wastemanagement, as well as other pollutants. This Section applies to work at all sites.

- C. Non-Compliance and Corrective Action. In order to prevent, and to provide for abatement and control of, any environmental pollution arising from construction activities of Contractor and sub-contractors in the performance of the Contract, they shall comply with all applicable Federal, State, Local, Tribal laws, and regulations concerning environmental pollution control and abatement. Cherokee Nation will notify Contractor of any observed or perceived non- compliance with the foregoing provisions. Contractor shall, after receipt of such notice, immediately take corrective action. Such notice when delivered to Contractor or its authorized representative at the Job Site shall be deemed sufficient for the purpose. If the Contractor fails or refuses to promptly take corrective action, Cherokee Nation may issue an order stopping all or part of the Work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time, for excess costs or damages by Contractor unless it is later determined that Contractor was in compliance. Compliance with the provisions of this Section by subcontractors will be the responsibility of Contractor.
- D. Protection of Land Resources. The resources within the scope of work under this Contract shall be preserved in their present condition or be restored to a condition after completion of construction that will appear to be natural and not detract from the appearance of the Project. Insofar as possible, Contractor shall confine construction activities to areas defined by the plans or specifications. At the onset of ditch grading, topsoil shall be saved for use in restoring the ditch areas. Waste and borrow areas shall be leveled or trimmed to regular lines and shaped to provide a neat appearance. In all instances the restored area shall be well drained, so as to prevent the accumulation of stagnant water. Except in areas shown on the plans or specified to be cleared, Contractor shall not deface, injure, or destroy trees or shrubs, nor remove or cut them without written authority from the Cherokee Nation. Any trees or other landscape features scarred or damaged by Contractor's equipment or operations, including those of its sub-contractors, shall be restored as nearly as possible to original condition at Contractor's expense. Contractor shall obliterate all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess or waste materials, or any other vestiges of construction, as directed by the Cherokee Nation, and disturbed areas shall be graded and filled as required with sufficient topsoil spread to provide minimum depth of four (4) inches of suitable soil for the growth of grass, and the entire area seeded.
- **Protection of Water Resources.** Contractor shall not pollute streams, lakes or reservoirs with fuel, oils, bitumens, calcium chloride, acids, construction wastes, or other environmentally harmful materials. It is the responsibility of Contractor to investigate and comply with all applicable Federal, State, County, Local and Tribe water laws concerning pollution of rivers and streams. Special measures shall be taken to prevent chemicals, fuels, oils, bituminous materials, waste washings, and cement from entering drainage ditches. Contractor shall at all times perform all

work and take such steps required to prevent any interference or disturbance to fish and wildlife. Fouling or polluting of water will not be permitted. Wash waters and wastes shall be processed, filtered, ponded, or otherwise treated pursuant to all applicable rules and regulations prior to their release into a river or other body of water.

- **F. <u>Burning.</u>** No material shall be burned at the project site unless otherwise specified in the contract or authorized by the NATION and any other appropriate regulatory body.
- G. <u>Dust and Debris</u>. Contractor will be required to maintain all work areas within the project boundaries free from dust or debris that would cause a hazard or nuisance to others. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs.
- Hazardous Materials Brought Onto or Produced On the Job Site. Except to the H. extent required by the Contract Documents, Contractor shall not introduce, use or otherwise cause the presence of Hazardous Materials of any kind at the location of the Project. Notwithstanding the foregoing, Contractor shall be responsible for any and all Hazardous Materials brought on to the Job Site or produced by Contractor at the Job Site. Here, "Hazardous Materials" means any substance which, by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, or otherwise harmful, may cause injury or death. Contractor shall comply with all laws, regulations and procedures regarding Hazardous Materials. Contractor shall immediately notify Cherokee Nation and Owner's Representative of any Hazardous Materials present at the Job Site. Contractor's employees present at the Job Site shall be provided with copies of Material Safety Data Sheets used on the Job Site for all Hazardous Materials that Contractor's employees may be exposed to. Contractor shall provide Cherokee Nation and Owner's Representative with Material Safety Data Sheets for any Hazardous Materials it uses on the Job Site. Contractor is responsible for the disposal of all Hazardous Materials it or its subcontractor(s) bring onto or produce at the Job Site. Contractor agrees that all such dispositions shall be made under the rules and regulations of the U.S. Environmental Protection Agency and any state or local agencies or entities performing similar functions. Contractor shall not dispose of any Hazardous Materials on the Job Site or on any of Cherokee Nation property.
- I. <u>Hazardous Materials Found on the Site</u>. In the event Contractor encounters material reasonable believed to be asbestos, polychlorinated biphenyl ("PCB") or any other Hazardous Material that has not been rendered harmless, Contractor shall immediately stop Work in the area affected and promptly report the condition to Cherokee Nation and Owner's Representative by telephone and in writing. Contractor shall use its best effort to continue Work in other areas of the Project so as to not delay completion of the Project. Cherokee Nation and its Representatives shall take such steps as may be reasonable to verify the present or absence of

Hazardous Material or substance and, in the event such material or substance is found to be present, to verify that it has been rendered harmless. Cherokee Nation shall employ such consultants and experts as may be deem appropriate to perform tests and render lawfully contain, remediate or deal with such materials.

- Taxes. All contract amounts include, and the Contractor shall be solely responsible for paying, all taxes, excises, duties and assessments arising out of the Contractor's performance of the Work in any manner levied, assessed or imposed by a government or agency having jurisdiction. Cherokee Nation represents that it enjoys tax-exempt status. As such, Contractor and any subcontractor agree, where appropriate and at the sole option of Cherokee Nation to permit Cherokee Nation to purchase goods and materials utilized in the performance of this Contract on a tax-exempt basis and pass those savings on to Cherokee Nation for the benefit of the Cherokee Nation.
- 32. <u>Compliance with Laws</u>. Contractor shall strictly observe, comply with, and give all notices required by, all local, municipal, state, tribal and federal laws, ordinances, rules, directives, orders, and regulations related to the Work, including, without limitation, the Cherokee Nation Employment Right Acts as administered by the Tribal Employment Rights Office ("TERO") of the Cherokee Nation. All work that is in addition to the Work specifically required by this Contract, but necessary to fully comply with such Laws, shall be deemed part of the Work. Contractor will keep and have available all necessary records and make all payments, reports, collections, and deductions, and otherwise do any and all things so as to comply fully with all such laws, including, but not limited to:
 - (a) the production, purchase and sale, furnishing and delivering, pricing and use or consumption of materials, supplies, and equipment;
 - (b) the hire, tenure, or conditions of employment of employees and their hours of work and rates and payment of their wages; and
 - (c) the keeping of records, making of reports, and the payment collection, and deduction of federal, state, and municipal taxes and contributions, all so as to fully relieve Cherokee Nation from and protect it against any and all responsibility or liability therefor or in regard thereto.

33. Changes in the Work; Change Orders.

- A. <u>Changes in the Work.</u> All changes in the Work must be in writing. Cherokee Nation may, at any time, by written Change Order or written Construction Change Directive, make changes in, additions to, and omissions from the Work. Contractor shall promptly proceed with the Work as so changed by the Change Order.
- B. <u>Change Order</u>. A Change Order is a written instrument prepared by Cherokee Nation or the Architect at Cherokee Nation's direction and signed by Cherokee Nation, the Architect and Contractor stating their agreement upon all of the following:

- (1) change in the Work;
- (2) the amount of the adjustment, if any, in the subcontract price; and
- (3) the extent of the adjustment, if any, in the time for Substantial Completion.
- C. <u>Construction Change Directives.</u> A Construction Change Directive is a written order prepared by the Architect or Cherokee Nation, directing a change in the Work prior to agreement and adjustment, if any, in the subcontract amount or time for Substantial Completion or both. Cherokee Nation may issue a signed Construction Change Directive without invalidating the Contract, order changes in the Work within the general scope of this Contract; the subcontract price and time for Substantial Completion being adjusted accordingly. A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.
- **D.** Adjustment to Contract Price. If the Construction Change Directive provides for an adjustment to the subcontract price, the adjustment shall be based on one of the following methods:
 - (1) mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
 - (2) unit prices stated in the Contract Documents or subsequently agreed upon; or
 - (3) cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee.
- **E.** <u>Information Required.</u> Upon Receipt of a Construction Change Directive, the following information shall be provided by Contractor for review by Cherokee Nation and the Architect upon receipt of a Construction Change Directive.
 - (1) The separate costs between building, site and equipment as noted on the Schedule of Values.
 - (2) Complete backup on all costs including but not limited to:
 - (a) Subcontractors or employee time records;
 - (b) Material invoices or purchase orders;
 - (c) Rental receipts for specialized equipment or tools;
 - (d) Time relationships to progress of work for delay of Project; and/or

- (e) Validity of quantity of work and requested price (i.e. cost per square foot, gallons of material, etc.).
- (3) Backup for reason or basis of Construction Change Directive.
 - (a) Not shown on documents;
 - (b) Requested by Cherokee Nation, Owner's Representative and/or the Architect;
 - (c) Local jurisdictional requirements; and/or
 - (d) Material or item is no longer made.
- (4) Initiation date and any limitations on time that will affect the amount of the Construction Change Directive. Complete package shall be submitted to Cherokee Nation with a copy to the Architect.
- F. Contractor to Proceed with the Work. Upon receipt of a Construction Change Directive, Contractor shall promptly proceed with the change in the Work involved and inform Cherokee Nation and the Architect in writing of Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the subcontract price or time for Substantial Completion.
- **Failure to Agree.** If Contractor does not respond promptly or disagrees with the method for adjustment in the subcontract price, the method and the adjustment shall be initially determined by Cherokee Nation, Owner's Representative, and/or the Architect on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the subcontract price, an allowance for overhead and profit in accordance with the schedule set forth below:
 - (1) costs of labor;
 - (2) costs of materials, supplies and equipment, including cost of transportation;
 - rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
 - (4) costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work;
 - (5) overhead and profit as used herein to include supervision, superintendence, wages of timekeepers, wages of watchmen and clerks, hand tools, incidentals, general office expense, and all other expenses not included in "cost" above; and

- (6) any other cost which would have been included as part of the Cost of the Work as set forth in the Construction Management Agreement between Cherokee Nation and Contractor as it pertains to this Project.
- H. <u>Contract Price Decrease</u>. The amount of credit to be allowed by Contractor to Cherokee Nation for a deletion or changed which results in a net decreased in the subcontract price shall be actual net cost as confirmed by Cherokee Nation. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.
- I. <u>Pending Final Determination of Total Cost.</u> Pending final determination of the total cost of a Construction Change Directive to Cherokee Nation, amounts not in dispute for such changes in the Work shall be included in applications for payment accompanied by a Changer Order indicating the parties' agreement with part or all of such costs.
- J. <u>Agreement between Contractor and Cherokee Nation</u>. When Cherokee Nation and Contractor agree as to the adjustments in the subcontract price and time for Substantial Completion, such agreement shall be effective immediately and shall be recorded by preparation and execution of an appropriate Change Order.
- K. Claim for Additional Costs or Time. In any instance in which Cherokee Nation has issued a Construction Change Directive, or in which Contractor for any reason believes he is entitled to additional cost or compensation, Contractor shall, within twenty-one (21) days after issuance of a Construction Change Directive, submit such claim for additional compensation in the form of a Proposal Request. If all information is not available within twenty-one (21) days after Contractor has incurred a substantial portion of the costs involved in the change, Contractor shall submit a Proposal Request outlining costs then available to the Contractor within such twenty-one (21) days. If information available to Contractor is not submitted within twenty-one (21), the claim shall be deemed to be waived by Contractor.
- 34. Term. This Contract shall commence on the date it is executed by both parties and shall continue in effect until the Work contemplated thereto has been performed and all payments received, unless sooner terminated, with or without cause, at Cherokee Nation's sole discretion. If Contractor has commenced performance of any Work before the execution of this Contract, this Contract shall be effective retroactively to the date the Work was first performed.
- 35. <u>Stop Work.</u> If Contractor fails to correct Work which is not in accordance with the requirements of the Contact Documents as required herein or fails to carry out Work in accordance with the Contract Documents, Cherokee Nation may issue a written order to Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of Cherokee Nation to stop the Work shall not give rise to a

- duty on the part of Cherokee Nation to exercise this right for the benefit of Contractor or any other person or entity, except to the extent required in this Contract.
- 36. Cherokee Nation's Right to Carry Out the Work. If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails to commence and continue correction of such default or neglect with diligence and promptness, Cherokee Nation may, after five (5) days' written notice, without prejudice to any other remedies it may have, either correct such deficiencies or terminate this Contract in whole or in part. In such case, Cherokee Nation may provide written notice to Contractor that it will deduct from payments then or thereafter due the Contractor the reasonable costs of correcting such deficiencies, including Cherokee Nation expenses and compensation for design professionals, as well as all additional services made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, Contractor shall pay the difference to Cherokee Nation within ten (10) days following written demand for such payment. Any such unpaid amounts due under this Section shall bear interest at the prime rate of interest as set by the Bank of Oklahoma plus two (2) percentage points until paid in full.
- Termination for Cause. If Contractor files for or is adjudged bankrupt, or makes a general 37. assignment for the benefit of its creditors, or should a receiver be appointed because of its insolvency, or should it fail to make reasonable prompt payment to its subcontractors or for materials or labor, or should it disregard laws, ordinances or other governmental regulations, or substantially violate any other provisions of this Agreement, or if Contractor neglects to proceed properly with the Work or fails to perform the Work, then Cherokee Nation after five (5) days' written notice to Contractor and Contractor's surety, in addition to any other remedy, may (i) make good the deficiencies and deduct the cost thereof from the payment then or thereafter due Contractor, or (ii) terminate this Contract and take possession of all materials, tools, and equipment and finish the Work by such means as may be required. If the unpaid balance of the amounts due to Contractor hereunder exceed the expense of finishing the Work (after completion and cost calculation), Cherokee Nation shall pay the Contractor the difference, but if such cost of the Work exceeds the unpaid balance, Contractor shall immediately pay Cherokee Nation the difference within ten (10) days following written demand for such payment. Any such unpaid amounts due under this Section shall bear interest at the prime rate of interest set by the Bank of Oklahoma plus two (2) percentage points per annum until paid. In the event of termination pursuant to this Section or Section 38, below, Contractor, at its cost, shall remove from the Job Site any material designated by Cherokee Nation to be removed therefrom. Any termination for cause by Cherokee Nation that is determined in accordance with the procedures set forth in Subparagraph 43(E) to be wrongful for any reason shall be deemed for all purposes to be a termination for convenience as provided herein.
- 38. <u>Suspension and Termination for Convenience</u>. Cherokee Nation may suspend or terminate the Work in whole or in part at any time for its convenience. Such suspension or termination shall be effective by written notice to Contractor stating the extent and effective time of such suspension or termination. Contractor shall continue to perform any part of

the Work not so suspended or terminated if the Work is terminated under this Section. Contractor shall be paid for the Work completed up to the effective date of termination and no more. Cherokee Nation and Contractor shall execute a Change Order regarding adjustments to the price of the subcontracts, scope of Work, and any other matters affected by such suspension or termination. Upon material breach of Cherokee Nation obligations hereunder, Contractor may suspend performance if Contractor provides fourteen (14) day's written notice to Cherokee Nation.

39. <u>Title.</u> Title to all Work completed or in the course of being provided, and title to all material and supplies provided under the Contract Documents, except tools, equipment, and vehicles owned by or rented to Contractor or its Subcontractors, shall pass to Cherokee Nation immediately after delivery to the Job Site or payment therefore by Cherokee Nation, whichever occurs first.

40. Uncovering and Correction of Work.

- A. <u>Uncovering of Work Contrary to Request</u>. If a portion of the Work is covered contrary to Cherokee Nation's request or to requirements specifically expressed in the Contract Documents, it must, if required in writing by Cherokee Nation, be uncovered for Cherokee Nation's observation and be replaced at Contractor's expense.
- B. Uncovering of Work Not Specifically Requested. If a portion of the Work has been covered which Cherokee Nation has not specifically requested to observe prior to its being covered, Cherokee Nation may request to see such Work and it shall be uncovered by Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be charged to Cherokee Nation. If such Work is not in accordance with the Contract Documents, Contractor shall pay such costs.
- C. Prompt Correction of Covered Work. Contractor shall promptly correct Work rejected by Cherokee Nation or the Architect or failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. Contractor shall bear costs of correcting such rejected Work, including additional testing and inspections and compensation for Cherokee Nation and the Architect's services and expenses made necessary thereby.
- D. Long Term Correction of Covered Work. If, within one (1) year after the date of Substantial Completion of the Work or designed portion thereof, or after the date for commencement of warranties or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, Contractor shall correct it promptly after receipt of written notice from Cherokee Nation to do so unless Cherokee Nation has previously given Contractor a written acceptance of such condition. This period of one (1) years shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time

between Substantial Completion and the actual performance of the Work. This obligation shall survive acceptance of the Work under the Contract and termination of the Contract. Cherokee Nation shall give such notice promptly after discovery of the condition.

- E. Removal of Work From the Job Site by Contractor. Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by Contractor nor accepted by Cherokee Nation.
- Correction of the Work by Cherokee Nation. If Contractor fails to correct F. nonconforming Work within a reasonable time, Cherokee Nation may correct such work at Contractor's expense. If Contractor does not proceed with correction of such nonconforming Work within a reasonable time fixed by written notice from Cherokee Nation, Cherokee Nation may remove it and store the salvable materials or equipment at Contractor's expense. If Contractor does not pay costs of such removal and storage within ten (10) days after written notice, Cherokee Nation may, upon ten (10) additional days after written notice, sell such materials and equipment at auction or at private sale and shall account for the proceeds thereof, after deducting costs and damages that should have been borne by Contractor, including compensation for the Architect's services and expenses made necessary thereby. If such proceeds of sale do not cover costs which Contractor should have borne, the Contract Fee shall be reduced by the deficiency. If payments then or thereafter due Contractor are not sufficient to cover such amount, Contractor shall pay the difference to Cherokee Nation.
- G. <u>Cost of Correcting the Work</u>. Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of Cherokee Nation or separate contractors caused by Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.
- H. No Established Limitation. Nothing contained in this Paragraph shall be construed to establish a period of limitation with respect to other obligations which Contractor might have under the Contract Documents. Establishment of the time period of one (1) year relates only to the specific obligation of Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be enforced, nor to the time within which proceedings may be commenced to establish Contractor's liability with respect to Contractor's obligations other than specifically to correct the Work.
- I. Acceptance of Nonconforming Work. If Cherokee Nation prefers to accept the Work that is not in accordance with the Contract Documents, Cherokee Nation may do so instead of requiring that the Work be corrected. In this instance, the subcontract price will be equitably reduced by the value of the nonconforming Work as compared to the value of the Work had it been performed in accordance

with the Contract Documents. Such adjustment shall be effected whether or not Final Payment has been made.

41. Tests and Inspections.

- A. Compliance With Laws. Tests, inspections, and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations, or orders of public authorities having jurisdiction shall be made at an appropriate time. Contractor shall make arrangements for all such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to Cherokee Nation, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. Contractor shall give Cherokee Nation advance and timely notice of the dates, times, and locations of tests and inspections so that Cherokee Nation may observe such procedures. Contractor and its sub-contractors shall, in addition to the above, comply with Cherokee Nation's job site procedures and regulations.
- B. Additional Testing. If the Architect, Owner's Representative, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included hereunder, Cherokee Nation will instruct Contractor to make arrangements for such additional testing, inspection, or approval by an entity acceptable to Cherokee Nation, and Contractor shall give advance and timely notice to Cherokee Nation, Owner's Representative, and the Architect of the dates, times, and locations of tests and inspections so that Cherokee Nation, Owner's Representative and the Architect may observe such procedures.
- C. <u>Testing Which Reveals Nonconforming Work</u>. If such procedures for testing, inspection or approval hereunder reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, Contractor shall bear all costs made necessary by such failure in accordance with the Cherokee Nation Standard Construction Terms and Conditions.
- **D.** Required Certificates. Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by Contractor and promptly delivered to Cherokee Nation.
- E. Prompt Testing. Tests or inspections conducted pursuant to the Contract Document shall be made promptly to avoid unreasonable delay in the Work.

42. Claims and Disputes.

A. <u>Claims</u>. A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between Cherokee Nation and Contractor arising out of or relating to the Contract. Claims must be made by written notice.

- Referral to the Architect. All Claims, excluding Claims for breach of warranty, В. but including those alleging an error or omission by the Architect, shall be referred initially to the Architect for action as provided below. A decision by the Architect, which decision shall be made in an expeditious and timely manner, shall be required as a condition precedent to initiating the dispute resolution procedure set forth in Paragraph 43 of a Claim between Contractor and Cherokee Nation as to all such matters arising prior to the date Final Payment is due, regardless of (a) whether such matters relate to execution and progress of the Work or (b) the extent to which the Work has been completed. The decision by the Architect in response to a Claim shall not be a condition precedent to initiating such dispute resolution in the event (a) the position of Architect is vacant, (b) the Architect has not received evidence or has failed to render a decision within agreed time limits, (c) the Architect has failed to take the required action within thirty (30) days after the Claim is made, (d) forty-five (45) days have passed after the Claim has been referred to the Architect, or (e) the Claim relates to a mechanic's and materialman's lien.
- C. <u>Timing of Making a Claim</u>. Claims by Contractor must be made within twenty-one (21) days after occurrence of the event giving rise to such Claim or within twenty-one (21) days after Contractor first recognizes the condition giving rise to the Claim, whichever is later. There shall be no limitation on when a Claim may be made by Cherokee Nation. Claims must be made by written notice. An additional Claim made after the initial Claim has been implemented by Change Order will not be considered unless submitted in a timely manner.
- D. <u>Diligent Performance of the Work Pending a Claim</u>. Pending final resolution of a Claim in accordance with Paragraph 43, unless otherwise agreed in writing, Contractor shall proceed diligently with performance of the Contract.
- E. <u>Claims for Additional Cost</u>. If Contractor wishes to make Claim for an increase in the Contract Sum, written notice as provided herein shall be given. Contractor's Claim shall include an estimate of the proposed increased cost.
- F. Claims for Additional Time. If Contractor wishes to make a Claim for increases in the time to complete the Work, written notice as provided herein shall be given. Contractor's Claim shall include an estimate of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary. If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time and could not have been reasonably anticipated, and that weather conditions had an adverse effect on the scheduled construction.
- G. Notice of a Claim. If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, of any of the other party's employees or agents, or of others for whose acts such party is legally liable, written notice of such injury or damage, whether or not insured, shall be given to

the other party. The notice shall provide sufficient detail to enable the other party to investigate the matter.

43. Resolution of Claims and Disputes.

- A. Review of Claims by the Architect. The Architect will review Claims and take one or more of the following preliminary actions within ten (10) days of receipt of a Claim: (i) request additional supporting data from the claimant, (ii) submit a schedule to the parties indicating when the Architect expects to take action, (iii) reject the Claim in whole or in part, stating reasons for rejection, (iv) recommend approval of the Claim by the other party, or (v) suggest a compromise.
- **B.** Documentation of the Resolution of a Claim. If a Claim has been resolved, the Architect will prepare or obtain appropriate documentation.
- C. <u>Additional Information for Unresolved Claims</u>. If a Claim has not been resolved, the party making the Claim shall, within ten (10) days after the Architect's preliminary response, take one or more of the following actions: (i) submit additional supporting data requested by the Architect, (ii) modify the initial Claim, or (iii) notify the Architect that the initial Claim stands.
- President Presid
- E. Governing Law, Jurisdiction and Waiver of Venue. The rights and obligations of the parties to this Contract shall be governed by and construed in accordance with the laws of the United States and, where applicable, the laws of the Cherokee Nation. Any Claim arising under this Contract that remains unresolved after referral to the Architect, as provided herein, shall be adjudicated in the Courts of the Cherokee Nation.

44. Indemnification.

A. <u>Indemnification-General</u>. Contractor shall defend (at Cherokee Nation's option), indemnify and hold harmless Cherokee Nation, its officers, employees, representatives and agents and the Chief and Tribal Council of the Cherokee Nation (collectively referred to as the "Cherokee Nation Group") from and against any claim, demand, cause of action, judgment, settlement, penalty, lien, fine, liability, damages, loss or expense, including all expenses of litigation, court costs and attorneys' fees and expenses incurred by the Cherokee Nation Group in any Claim, action or proceeding between the Cherokee Nation Group and Contractor or

between the Cherokee Nation Group and any third party arising directly or indirectly from or related in any way to the Work provided under this Contract, including injury to or death of persons (including but not limited to employees, representatives and agents of the Cherokee Nation Group, Contractor, any personnel directly or indirectly employed by Contractor and third parties) or damage to or loss of property (including but not limited to property of the Cherokee Nation Group, Contractor, any personnel directly or indirectly employed by Contractor and third parties), to the extent that claim is caused by the negligence or failure of Contractor to perform its duties under the Contract Documents. This indemnity, defense and hold harmless provision does not apply to any claim or liability to the extent the Cherokee Nation Group is found to have been solely negligent by the Courts of the Cherokee Nation.

- В. Indemnification-Taxes. Contractor accepts full and exclusive liability for the payment of any and all taxes and assessments which may now or hereafter be imposed by tribal, local, state, or federal governments, including without limitations, all applicable TERO fees, sales tax, use power, gross receipts, or other taxes levied with respect to materials furnished or work performed by Contractor, or payments made to the Contractor through issuance of a purchase order including but not limited to, building permits, Contractor's licenses, specialty permits required by law to be issued to Contractor, and/or transportation permits. Contractor, and its subcontractors shall, in addition to the above, comply with the Cherokee Nation's job site procedures and regulations. Further, Contractor agrees to defend, indemnify, and hold harmless Cherokee Nation Group for all taxes. contributions, penalties, fees and expenses (including but not limited to attorneys' fees and expenses) incurred by Cherokee Nation Group because of Contractor's failure to withhold federal and state income taxes, FICA taxes, or FETA taxes or any other such taxes or governmental charges, state or federal, including those taxes enumerated at Section 49(B) hereof, which Cherokee Nation Group may be required to pay on account of Contractor.
- C. <u>Participation by Cherokee Nation Group.</u> Any of Cherokee Nation Group hereto may, at their option and expense, participate in their/its own defense through separate counsel without relieving Contractor of any obligation hereunder.
- Patent Infringement. Contractor shall, and does hereby agree to, indemnify Cherokee Nation Group and to pay on demand, assume liability for, defend, protect, and hold the Cherokee Nation Group harmless from, against, and in respect of any and all Claims that the Work (or any process or apparatus supplied by Contractor as a part of the Work) or the use or operation of the Work infringes upon any patent, trade secret, copyright, or application therefor, or any other property right of a third party. If such a claim has been made or is likely to be made, Contractor, at its option and sole expense, may promptly procure the right for Cherokee Nation to continue using the Work in question or to modify or replace promptly the Work to Cherokee Nation satisfaction so that it becomes non-infringing. Contractor shall indemnify Cherokee Nation Group for all costs, damages, attorney fees and expenses that arise

or result from any such claim(s). The provisions of this paragraph shall survive the termination of this Contract and the completion of the Work.

- Waiver of Consequential Loss or Damage. The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes: 1) damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and 2) damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work. This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination.
- **Patents.** Contractor shall obtain, at its own expense, any license or other authorization for use of any copyright trademark, or patent that would be infringed by carrying out the Work or performing under the Contract Documents.

47. Work Product.

- A. New Work Created. All new or original Work created hereunder, and all Work obtained or acquired, shall be considered work for hire, and Cherokee Nation shall own all rights thereto, including, but not limited to, patents and applications therefore, copyrights, trademarks, trade names, mask works, and publication rights. Contractor shall assign all such intellectual property rights and other work product to Cherokee Nation or its designee. Documents and other written materials provided by Contractor pursuant to this Contract will forever remain Cherokee Nation or its designee's property.
- В. Drawings and Specifications. The drawings, specifications and other documents, including those in electronic form, prepared by Cherokee Nation and Cherokee Nation's Architect are and shall remain Cherokee Nation property through which the Work is to be executed by Contractor. Contractor may retain one record set. Neither Contractor nor any subcontractor, sub-subcontractor or material or equipment supplier shall own or claim a copyright in the drawings. Specifications and other documents prepared by Cherokee Nation or Cherokee Nation's Architect shall be deemed, unless otherwise indicated, to have been authored by Cherokee Nation, and Cherokee Nation will retain all common law, statutory and other reserved rights, in addition to the copyrights. All copies of the drawings and specifications, except the Contractor's record set, shall be returned or suitably accounted for to Cherokee Nation, on request, upon completion of the Work. The drawings, specifications, and other documents prepared by Cherokee Nation and Cherokee Nation's Architects or consultants, and copies thereof furnished to Contractor, are for use solely with respect to the Project. They are not to be used by Contractor or any subcontractor, sub-subcontractor or material or equipment supplier on other projects or for additions to this project outside the scope of the Work without the specific written consent of Cherokee Nation.

C. <u>As-Built Drawings</u>. Contractor is to create an "as-built" record set of drawings in accordance with the Contract Documents, noting especially those items of Work that are hidden from view. Cherokee Nation reserves the right to withhold final payment to Contractor if, in Cherokee Nation sole opinion, accurate "as-built" drawings have not been delivered to Cherokee Nation by Contractor upon completion of Contractor's Work.

48. Delay.

- A. Force Majeure. If Contractor is prevented from performing any of its obligations under these Contract Documents by reason of fire, flood, windstorm, earthquake, other acts of God, civil disturbance, riots, covid related delays, supply chain disruptions, order of any court or administrative body (not due to the fault of Contractor), or any other cause beyond the control of Contractor and without fault on the part of Contractor, the time allotted by the Contract Documents for performance of the obligations that are so prevented shall be extended one (1) day for each day of such delay. Contractor shall make no claim for extension of the time for Substantial Completion pursuant to this Section unless it shall notify Owner's Representative, in writing, of the existence of any delay excused herein within twenty-four (24) hours after the beginning of such period of delay and of the termination of such period of delay within twenty-four (24) hours after its termination.
- B. Normal Weather Conditions. Contractor has incorporated typical weather days as per the Tulsa International Airport FAA average rainfall schedule into the Project Schedule. If there are additional weather days greater than those provided for in the Schedule, Contractor may get the additional days above the average as an extension to the Substantial Completion date. No time for weather delays will be charged for days on which Contractor is capable of performing Work pursuant to the current Schedule for at least six (6) hours with a normal work force, and in the event that the normal work force is on a double shift, twelve (12) hours shall be used. There shall be no extension of time granted to Contractor for delay due to weather conditions unless agreed to by Cherokee Nation by written Change Order, which agreement shall not be unreasonably withheld.
- C. <u>Delay Caused by Cherokee Nation or Others</u>. Should Contractor's progress be interfered with or the completion of this Contract be prevented through failure of Cherokee Nation to provide required services, or for any reason attributable to Cherokee Nation, its Special Subcontractors, agents, or others acting for, on behalf, or at the direction of Cherokee Nation, then Contractor will be entitled to an extension of time, day-for-day, within which to complete the Work, as reflected by Change Order.
- **D.** <u>Time for Claim Submission</u>. All claims for extension of time shall be made in writing to Owner's Representative no more than twenty (20) days after the occurrence of the delay; otherwise they shall be waived. In the case of a continuing cause for delay, only one claim is necessary.

E. <u>Claims for Additional Costs</u>. Contractor shall be entitled to additional costs only insofar as such costs are a result of delays described in Section 42 and this Section. The reimbursable rates schedule stated in Exhibit C shall be utilized in calculating any adjustments.

49. <u>Independent Contractor</u>.

- A. <u>Independent Contractor</u>. Contractor hereby declares, acknowledges, and agrees that it is engaged in an independent business, and agrees to perform the Work as an independent contractor with full responsibility for the control and direction of its employees. Contractor, in its performance of this Contract, has and hereby retains the right to exercise full control and supervision over the accomplishment of the Work. Contractor shall not be, or be deemed for any purpose, an agent, employee, or servant for Cherokee Nation, and may not bind Cherokee Nation. This Contract is not intended to and shall not create a partnership of any kind or type. It is understood that Contractor is free to contract for similar services to be performed for others during the term of this Contract, subject to the conditions set forth herein.
- B. Payment of Taxes. Contractor shall be solely responsible for the payment of each of its employee's compensation and benefits, including, but not limited to, employment taxes, any similar taxes associated with employment, withholding of federal, state, or local taxes imposed on wages, deductions for social security, contributions for unemployment compensation funds, and all other regulations governing such matters. Contractor further warrants that it will comply with all other applicable, federal, state or local laws or regulations applicable to Contractor as an employer regarding compensation, hours of work, or other conditions of employment, including those applicable to minimum wage and overtime wages.
- C. Reporting Requirements. All amounts paid by Cherokee Nation to Contractor pursuant to this Contract will be reported as non-employee compensation by Cherokee Nation to the I.R.S. at the end of each calendar year. Contractor agrees to complete and execute the Form W-9, "Request for Taxpayer Identification Number and Certification," upon the execution of this Contract. Contractor represents that it is withholding federal and state income taxes, FICA, and FUTA taxes from the paychecks of all its employees who do work in furtherance of the Contract. Contractor further agrees to furnish Cherokee Nation upon request a certificate, or other evidence of proof of payment, or compliance with local, state, or federal laws covering contributions, taxes, and assessments imposed on wages and the employer.
- Waiver of Benefits. Contractor's personnel shall not be entitled to participate in or receive benefits under any Cherokee Nation programs maintained for its employees, including, without limitation, life, medical and disability benefits, pension, profit sharing or other retirement plans or other fringe benefits. Nor shall Contractor personnel be entitled to any direct or indirect compensation or remuneration of any kind from Cherokee Nation as a result of the performance of this Contract, except for Cherokee Nation's obligation to pay the charges to

- Contractor provided for herein, and Contractor shall be responsible for all compensation of such Contractor personnel and shall indemnify Cherokee Nation for any claim by any Contractor personnel for such rights or benefits.
- **Contractor's Personnel.** Contractor shall, upon Cherokee Nation or its Owner's Representative's request, furnish Cherokee Nation with the names and addresses of its employees assigned to the Work. Cherokee Nation, in its sole discretion, may require Contractor to remove such employees from the Job Site whereupon Contractor shall replace the person so removed with those of equal or higher standing regarding work experience and position.
- 51. <u>Improper Payments.</u> Contractor will not use any funds received under this Contract for illegal or otherwise improper purposes related to the Contract. Contractor will not pay any commissions, fees, or rebates to any employee of Cherokee Nation nor favor any employee of Cherokee Nation with gifts or entertainment of significant cost or value. If Cherokee Nation has reasonable cause to believe that the provisions of the preceding sentences have been violated, Cherokee Nation, its representatives, or auditors may audit the records of Contractor for the purpose of establishing compliance with such requirements. All costs of any such audit shall be the responsibility of Contractor.
- 52. Alcohol, Drug, and Tobacco Policy. Contractor's employees, while on Cherokee Nation's premises or engaged in Cherokee Nation's Work, shall refrain from unauthorized consumption or possession of alcoholic beverages, tobacco use, and the possession, sale, use, or distribution of unauthorized drugs. Any Contractor performing work for the Cherokee Nation agrees to publish a statement notifying all employees, subcontractors, and other workers that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the Contractor's workplace and specifying the actions that will be taken against violators of such prohibition. Contractor shall provide all persons engaged in performance of the Contract with a copy of said statement, and shall include a copy of said statement with any bid submitted hereunder, or shall be deemed to accept and agree to use the statement provided by Cherokee Nation. Notwithstanding any other provision of this Contract, violation of this provision by Contractor personnel will: (i) result in immediate removal of Contractor employees from the Cherokee Nation's premises, and (ii) constitute a material breach of this Contract. Contractor shall have the obligation to replace its employees with a suitable substitute or substitutes, within a reasonable time.
- 53. Audit. Contractor shall keep all books and records on a consistent basis and in accordance with generally accepted accounting principles (GAAP). These books and records shall readily disclose the basis for any charges or credits, ordinary or extraordinary, billed or due to Cherokee Nation under this Contract and shall be made available for examination, audit and reproduction by Cherokee Nation and its agents during the term of this Contract and for a period of two (2) years after the receipt by Contractor of Final Payment. When requested by Cherokee Nation, Contractor shall permit Cherokee Nation's personnel or its duly authorized agent or representative access during normal working hours to Contractor's personnel, property, and records necessary to conduct the Cherokee Nation's audit. In the

event that the audit rights set forth in this Section conflict with any other terms of this Contract, this Section shall control. Contractor further agrees to include this right to audit clause in all subcontracts for services and materials furnished under the terms of this Contract, if any, entitling Cherokee Nation to a right to inspect books and records to validate subcontractor charges. All costs of such audit(s) shall be the responsibility of the Contractor.

Publicity. Contractor acknowledges and agrees that it is prohibited from referencing, directly or indirectly, Cherokee Nation as a customer or client in any manner, including, but not limited to, in any online materials, speeches, solicitations, marketing materials, advertisements, articles, interviews, news releases or other releases to any publication, or by self-publication on social media or otherwise without the express written permission of Cherokee Nation for each separate instance of such publication, secured at least three (3) business days in advance of any such publication. Contractor's confidentiality obligations set forth in this section survive and continue after the termination or expiration of this Contract.

55. Confidential and Proprietary Information.

- Contractor will or may acquire valuable trade secrets, proprietary data, and sensitive confidential information, including but not limited to written information identified as "confidential" by a legend to that effect and verbal information identified by Cherokee Nation as "confidential" at the time of disclosure, with respect to Cherokee Nation (collectively, "Confidential Information"). The parties hereto agree that such trade secrets, proprietary data, and other Confidential Information include but are not limited to copyrights, inventions, models, processes, patents, and improvements thereon, Cherokee Nation's financial methods and practices, file or database materials, software listings or printouts, computer programs, credit and financial data of Cherokee Nation or subsidiary entities.
- **Return of Confidential Information.** Upon termination or expiration of this Contract for any reason, or upon request of Cherokee Nation, Contractor shall return, or certify as destroyed, written material and other media containing any Confidential Information, together with any copies thereof. Failure by Contractor to comply with this requirement shall be grounds for withholding any payment that may be due Contractor, except as needed for Contractor's business records for the Project.
- C. <u>Fiduciary Trust.</u> In addition, Contractor, on behalf of Cherokee Nation, may develop a personal acquaintance employees, advisors, consultants, vendors, and agents of Cherokee Nation, its subsidiary entities, and affiliates. As a consequence thereof, the parties hereto acknowledge that Contractor will occupy a position of trust and confidence with respect to Cherokee Nation's affairs, processes, plans, strategies, finances, and services.

- Protection of Proprietary and Confidential Information. Neither Contractor, nor its employees or consultants, during the term of this Contract or at any time thereafter, shall, without the express written consent of Cherokee Nation, directly or indirectly communicate or divulge, or use for its or their own benefit, other than as a contractor of Cherokee Nation and to further the Cherokee Nation's interests, or for the benefit of any other person, firm, association or corporation, any of Cherokee Nation's proprietary data or other Confidential Information, except that Contractor may disclose such matters to the extent that disclosure is required (i) in the course of said relationship, or (ii) to enable Contractor's personnel to render services hereunder.
- Assignment of Contract. Contractor shall not assign, delegate, or sublet this Contract or any part thereof, or any money due or any money to become due hereunder, without the prior written consent of Cherokee Nation in each instance. Subject to the foregoing, this Contract shall be binding upon and shall inure to the benefit of the parties and their respective successors and assigns. Unless specifically provided in this Contract, none of the provisions of this Contract shall be enforceable by or for the benefit of any person or entity except the parties hereto and their successors and permitted assigns. Cherokee Nation may assign this Contract. No assignment shall relieve Cherokee Nation from any of its obligations hereunder unless specifically agreed to in writing by Contractor.
- 57. Notices. All notices required or permitted to be given under this Contract shall be in writing and shall be given by personal delivery, verified facsimile transmission, receipted delivery services, or by registered or certified mail, first class postage prepaid, return receipt requested, and for Contractor and Cherokee Nation, shall be delivered or addressed as appears on the Contract Documents. Notice for all purposes under these Contract Documents, regardless of the form in which given, shall be deemed given when received by the addressee of such notice.
- **Litigation Costs; Attorneys' Fees.** The prevailing party in an action brought by either party to enforce the terms and conditions of the Contract shall be entitled to its reasonable costs of suit and expenses including reasonable attorneys' fees, including costs and attorney fees upon appeal.
- be used to interpret or construe the provisions of this Contract. If any provision of this Contract shall be held by a Court of the Cherokee Nation to be contrary to law, the remaining provisions of this Contract shall remain in full force and effect, and the parties agree to negotiate, in good faith, substitute enforceable provisions that most nearly effect the parties' intent in entering into the Contract.
- 60. <u>Incorporation by Reference; Survival.</u> The Contract Documents referred to herein are hereby incorporated by reference into this Contract. All terms and conditions of this Contract which, by their nature, extend beyond the terms hereof shall survive acceptance, Final Payment, expiration, or earlier termination of this Contract.

- Maiver. If, in one or more instances, either party fails to insist that the other party perform any of the terms of this Contract, such failure shall not be construed as a waiver by such party of any past, present, or future right granted under this Contract, and the obligations of both parties shall continue in full force and effect.
- **Notice of Claims.** Contractor shall promptly notify Cherokee Nation in writing of any claims, demands, causes of action, or suits threatened, initiated, or anticipated against Contractor or Cherokee Nation, and shall do all things required by Cherokee Nation to protect Cherokee Nation's interests.
- 63. Reference to Liens Shall Not be Construed to Create Right to a Lien. No reference to liens or lien claims contained herein shall be construed to create or acknowledge any lien or any rights on the part of Contractor or any subcontractor to file any sort of lien whatsoever against property of Cherokee Nation.
- 64. No Waiver of Sovereign Immunity. NO PROVISION OF THIS CONTRACT, THE CHEROKEE NATION'S STANDARD CONSTRUCTION TERMS AND CONDITIONS (INCLUDING, WITHOUT LIMITATION, THE PROVISIONS OF SUBPARAGRAPH 43(E)) OR THE CONTRACT DOCUMENTS SHALL CONSTITUTE, OR BE CONSTRUED TO BE, A WAIVER OF SOVEREIGN IMMUNITY BY CHEROKEE NATION.
- **Availability of Funds.** The NATION'S obligation for payment under this Agreement is contingent upon the availability of appropriated funds from which payment for services can be made. Funds are available for performance under this Agreement when appropriated or authorized by the Tribal Council of the Cherokee Nation. No legal liability on the part of the NATION for any payment may arise hereunder until funds are made available by the designated officer of the NATION for performance and until the CONTRACTOR receives notice of availability from the NATION'S designated officer, through the execution of a GMP and issuance of a purchase order.
- 66. Cherokee Nation Indian Preference Policy. Cherokee Nation shall, to the greatest extent feasible, give preference in the award of contracts to Indian organizations and Indianowned economic enterprises. All contracting is required to comply with procedures for selection of Contractors and sub-contractors as set forth in legislation pertaining to preference to Indians, Indian organizations, and Indian-owned economic enterprises in the awarding of contracts as detailed within 25 U.S.C. § 5307(b), as well as the Cherokee Nation Acquisition Management Policies and Procedures. Contractor shall include this clause in every subcontract in connection with the Project, and shall, at the direction of Cherokee Nation, take appropriate action pursuant to a finding by Cherokee Nation of a violation hereof by a contractor or subcontractor.
- 67. <u>Binding Agreement</u>. The terms and conditions herein stated may not be changed on behalf of a party except by a written agreement signed by both parties. This Contract shall be binding on the legal representatives, successors, heirs and assigns of the parties.

END OF CHEROKEE NATION'S STANDARD CONSTRUCTION TERMS AND CONDITIONS

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

1.2 USE CHARGES

- A. General: Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, occupants of Project, testing agencies, and authorities having jurisdiction.
 - 1. Cost or use charges for temporary facilities are not chargeable to Owner or Architect.
- B. Sewer Service: Arrange with utility company for sewer service for the project to be put in the Owner's name.
- C. Water Service: Arrange with utility company for water service for the project to be put in the Owner's name.
- D. Electric Power Service: Arrange with utility company for electrical power service for the project to be put in the Owner's name.

1.3 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Site Temporary Fence Plan: Show temporary fence location including access gates.
- C. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage.
 - 1. Describe delivery, handling, and storage provisions for materials subject to water absorption or water damage.
 - 2. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.
 - 3. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
- D. Dust- and HVAC-Control Plan at Renovation Work: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
 - 1. Locations of dust-control partitions at each phase of work.
 - 2. HVAC system isolation schematic drawing.
 - 3. Location of proposed air-filtration system discharge.
 - 4. Waste handling procedures.

- Other dust-control measures.
- E. Temporary Utility Reports: Make available on request, reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.
- F. Implementation and Termination Schedule: Make available on request a schedule indicating implementation and termination of each temporary utility.

1.4 QUALITY ASSURANCE

- A. Standards: Comply with ANSI A10.6 "Requirements for Demolition Operations", NECA's "Temporary Electrical Facilities," and NFPA 241 "Standard for Safeguarding Construction, Alteration, and Demolition Operations".
 - 1. Trade Jurisdictions: Assigned responsibilities for installation and operation of temporary utilities are not intended to interfere with trade regulations and union jurisdictions.
- B. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- C. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- D. Accessible Temporary Egress at Renovation Work: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.
- E. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to, the following:
 - 1. Building Code requirements.
 - 2. Health and safety regulations.
 - 3. Utility company regulations.
 - 4. Police, Fire Department and Rescue Squad rules.
 - 5. Environmental protection regulations.
 - 6. City ordinances and regulations.

1.5 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by Architect. Provide materials suitable for use intended.
- B. Materials and equipment may be new or used, but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.

- C. Chain-Link Fencing: Minimum 2 inch (50 mm), 0.148 inch (3.8 mm) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8 inch (60 mm) OD line posts and 2-7/8 inch (73 mm) OD corner and pull posts, with 1-5/8 inch (42 mm) OD top rails.
- D. Portable Chain-Link Fencing: Minimum 2 inch (50 mm), 0.148 inch (3.8 mm) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8 inch (60 mm) OD line posts and 2-7/8 inch (73 mm) OD corner and pull posts, with 1-5/8 inch (40 mm) OD top and bottom rails. Provide concrete or galvanized-steel bases for supporting posts.
- E. Wood Enclosure Fence: Plywood, 8 feet (2.4 m) high, framed with four 2 by 4 inch (50 by 100 mm) rails, with preservative-treated wood posts spaced not more than 8 feet (2.4 m) apart.
- F. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10 mil (0.25 mm) minimum thickness, with flame-spread rating of 15 or less per ASTM E 84 and passing NFPA 701 Test Method 2.
- G. Polyethylene Sheet: Reinforced, fire-resistive sheet, 6 mil (0.14 mm) minimum thickness, with Class A flame-spread rating per ASTM E 84 and passing NFPA 701 Test Method 2.
 - Basis of Design (Product Standard): Abatement Technologies, Inc.; SAFE-FLEX ICRA Awareness Barrier.
- H. Dust Containment Barrier for Doors: Reinforced, fire-resistive polyethylene sheet, 10 mil (0.25 mm) minimum thickness with Class B flame-spread rating per ASTM E 84 and designed to be used for securing temporary construction doors so as to minimize and mitigate particle control during construction.
 - Basis of Design (Product Standard): Abatement Technologies, Inc.; Aire Guardian Door Guard Reusable Barrier.
- I. Dust-Control Adhesive-Surface Walk-off Mats: Provide mats minimum 36 by 60 inches (900 by 1500 mm).
- J. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

2.2 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:
 - 1. Furniture required for Project-site.
 - 2. Conference room of sufficient size to accommodate. Provide electrical power service and 120-V ac duplex receptacles. Furnish room with conference table, chairs, and tack and marker boards.
 - 3. Drinking water and private toilet.
 - 4. Heating and cooling equipment necessary to maintain a uniform indoor.
 - 5. Lighting fixtures capable of maintaining average illumination at desk height.
- C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

1. Store combustible materials apart from building.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
 - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.
- B. Self-Contained Toilet Units: Single-occupant units of chemical, aerated recirculation, or combustion type; vented; fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- C. Drinking-Water Fixtures: Containerized, tap-dispenser, bottled-water drinking-water units, including paper cup supply.
- D. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 - 2. Heating Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.
- E. Air-Filtration Units for Renovation Work: Primary and secondary HEPA-filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. Locate temporary utilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify utilities as required.
- B. Provide each utility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until utilities are no longer needed or are replaced by authorized use of completed permanent utilities.
- C. Engage appropriate local utility company to install temporary service or connect to existing service. Where utility company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with utility company recommendations.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

- 2. Provide adequate capacity at each stage of construction. Before temporary utility is available, provide trucked-in services.
- 3. Obtain easements to bring temporary utilities to Project site where Owner's easements cannot be used for that purpose.
- D. Storm Sewers and Drainage: If sewers are available, provide temporary connections to remove effluent that can be discharged lawfully. If sewers are not available or cannot be used, provide drainage ditches, dry wells, stabilization ponds, and similar facilities. If neither sewers nor drainage facilities can be lawfully used for discharge of effluent, provide containers to remove and dispose of effluent off-site in a lawful manner.
 - 1. Filter out excessive soil, construction debris, chemicals, oils, and similar contaminants that might clog sewers or pollute waterways before discharge.
 - 2. Connect temporary sewers to municipal system as directed by sewer department officials.
 - 3. Maintain temporary sewers and drainage facilities in a clean, sanitary condition. After heavy use, restore normal conditions promptly.
 - 4. Provide temporary filter beds, settlement tanks, separators, and similar devices to purify effluent to levels acceptable to authorities having jurisdiction.
- E. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction. Sterilize temporary water piping before use in accordance with requirements of authorities having jurisdiction.
- F. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
 - 1. Existing Toilets in Occupied Facilities: Use of Owner's existing toilet facilities will not be permitted or allowed.
- G. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
- H. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
 - 1. Prior to commencing work, isolate the HVAC system in area where work is to be performed according to coordination drawings.
 - a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
 - b. Maintain negative air pressure within work area using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.
 - 2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
 - 3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

- I. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
 - 1. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.
- J. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
- K. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
- L. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Provide telephone line(s) for each field office.
- M. Electronic Communication Service: Provide internet access of not less than 15-Mbps download and 5-Mbps upload speed for use by Architect and Owner to access Project electronic documents and maintain electronic communications

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 - 1. Locate field offices, storage sheds, sanitary facilities, and other temporary construction and support facilities for easy access.
 - 2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate to support loads and to withstand exposure to traffic during construction period. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.
 - Provide dust-control that is nonpolluting and nontracking. Reapply as required to minimize dust.
- C. Traffic Controls: Provide temporary traffic controls at junction of temporary roads with public roads. Include warning signs for public traffic and "STOP" signs for entrance onto public roads. Comply with requirements of authorities having jurisdiction.
 - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- D. Parking: Coordinated parking with Owner's requirements.
- E. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
 - 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
 - 2. Before connection and operation of permanent drainage piping system, provide temporary drainage where roofing or similar construction is completed.

- 3. Remove snow and ice as required to minimize accumulations.
- F. Project Signs: Coordinated signs with Owner's requirements and requirements of authorities having jurisdiction.
- G. Waste Disposal Facilities: Comply with requirements specified in Division 01 Section "Construction Waste Management and Disposal."
- H. Comply with progress cleaning requirements in Division 01 Section "Execution."
- I. Existing Elevator Use in Occupied Facilities: Use of Owner's existing elevators will be permitted, provided elevators are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore elevators to condition existing before initial use, including replacing worn cables, guide shoes, and similar items of limited life.
 - 1. Do not load elevators beyond their rated weight capacity.
 - 2. Provide protective coverings, barriers, devices, signs, or other procedures to protect elevator car and entrance doors and frame. If, despite such protection, elevators become damaged, engage elevator Installer to restore damaged work so no evidence remains of correction work. Return items that cannot be refinished in field to the shop, make required repairs and refinish entire unit, or provide new units as required.
- J. Existing Stair Usage in Occupied Facilities: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.
 - 1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas so no evidence remains of correction work.
- K. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 - Comply with work restrictions specified in Division 01 Section "Summary."
- C. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
- D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.

- E. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- F. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.
- G. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
 - 1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
- H. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- I. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- J. Covered Walkway: Erect protective, covered walkway for passage of individuals through or adjacent to Project site. Coordinate with entrance gates, other facilities, and obstructions. Comply with regulations of authorities having jurisdiction and requirements indicated on Drawings.
- K. Temporary Enclosures: Provide temporary, weathertight, enclosures for protection of construction, in progress and completed, including, but not limited to, vertical and horizontal openings, from exposure, foul weather, other construction operations, and similar activities.
- L. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas from fumes and noise.
 - 1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant-treated plywood on construction operations side.
 - 2. Construct dustproof partitions with two layers of 6 mil (0.14 mm) polyethylene sheet on each side. Cover floor with two layers of 6 mil (0.14 mm) polyethylene sheet, extending sheets 18 inches (450 mm) up the sidewalls. Overlap and tape full length of joints. Cover floor with fire-retardant-treated plywood.
 - Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches (1200 mm) between doors. Maintain walk-off mats in vestibule, for dust control.
 - 3. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
 - 4. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
 - 5. Protect air-handling equipment.
 - 6. Provide walk-off mats at each entrance through temporary partition.
- M. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241 and authorities having jurisdiction; manage fire-prevention program.

3.5 MOISTURE CONTROL

- A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of discoloration that may appear during construction.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure, protect as follows:
 - 1. Protect porous materials from water damage.
 - 2. Protect stored and installed material from flowing or standing water.
 - 3. Keep porous and organic materials from coming into prolonged contact with concrete.
 - 4. Remove standing water from decks.
 - 5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture, protect as follows:
 - 1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 - 2. Keep interior spaces reasonably clean and protected from water damage.
 - 3. Periodically collect and remove waste containing cellulose or other organic matter.
 - 4. Discard or replace water-damaged material.
 - 5. Do not install material that is wet.
 - 6. Discard, replace, or clean stored or installed material that begins to show discoloration.
 - 7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
 - 1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
 - 2. Use permanent HVAC system to control humidity.
 - 3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits. Refer to technical specification sections for additional and more stringent criteria.

3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
 - 2. Maintain markers for underground lines. Protect from damage during excavation operations.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may

have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

- 1. Materials and facilities that constitute temporary facilities are property of Contractor.
- 2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
- At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION

SECTION 01 74 13

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.01 **DEFINITIONS**

- A. Alternative Daily Cover: Material other than earthen material placed on the surface of the active face of a municipal solid waste landfill at the end of each operating day to control vectors, fires, odors, blowing litter and scavenging. Generally, these materials must be processed so they do not allow gaps in the exposed landfill face.
- B. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- C. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- D. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- E. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- F. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- G. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.
- H. Trash: Any product or material unable to be recycled, salvaged, or reused.

1.02 PERFORMANCE REQUIREMENTS

A. General Requirements

 Develop waste management plan that results in end-of-Project rates for salvage/recycling of 75 percent by weight or volume of total demolition and construction waste generated by the Work.

1.03 SUBMITTALS

- A. Waste Management Plan: Submit one copy of plan within 10 calendar days after receipt of Notice of Award of Bid, or prior to any trash or waste removal, whichever occurs sooner. Include the following information:
 - 1. Project Name and Location
 - 2. Project Site Contact
 - 3. Establish waste diversion goals for the project by identifying materials (both structural and nonstructural) targeted for diversion.
 - 4. Specify whether materials will be separated or commingled and describe the diversion strategies planned for the project.

- 5. Describe where the material will be taken and how the recycling facility will process the material including expected diversion rates for each material stream. Include the names, addresses, and telephone numbers for the locations of the landfill and recycling facilities.
- 6. Identify the destination and means of transportation of materials to be recycled; i.e. whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler. Materials sent to a commingled recycling facility for processing must take the facility average recycling rate, per month, and must include alternative daily cover as landfill waste.
- 7. Include how soil, land clearing debris, hazardous materials, or other materials not contributing to diversion will be handled.
- 8. Include how alternative daily cover will be addressed.
- B. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit an electronic copy of report. Include separate reports for demolition and construction waste. Include the following information:
 - 1. Material category.
 - 2. Generation point of waste.
 - 3. Location of waste or recycling facility.
 - 4. Total quantity of waste in tons for at least five target categories.
 - 5. Quantity of waste salvaged, both estimated and actual in tons.
 - 6. Quantity of waste recycled, both estimated and actual in tons.
 - 7. Quantity of landfilled trash, both estimated and actual in tons.
 - 8. Total quantity of all waste generated (salvaged,recycled, and landfilled trash) in tons.
 - 9. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
- C. Waste Reduction Calculations: Before request for Substantial Completion, submit an electronic copy of calculated end-of-Project rates for salvage, recycling, and landfill trash disposal as a percentage of total waste generated by the Work.
- D. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- E. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- F. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- G. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- H. Qualification Data: For Waste Management Coordinator and refrigerant recovery technician.
- Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

PART 2 - NOT USED

PART 3 - EXECUTION

3.01 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. Manager: Designate an on-site person or person responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.
- B. Communication: Distribute copies of the Waste Management Plan to job site supervisor, each trade contractor, Owner, and Architect.
- C. Instruction: Provide on-site instruction of appropriate separation, handling and recycling, salvage, reuse and return methods to be used by all parties at the appropriate states of the project.

3.02 LEED DOCUMENTATION

A. Provide requested documentation to project's Sustainability Consultant for review and upload to LEED Online.

END OF SECTION 01 7419

SECTION 01 81 13

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section includes general requirements and procedures for compliance with certain prerequisites and credits needed for Project to obtain "LEED Version 4 for Building Design and Construction" (LEED v4 BD+C for Healthcare) Silver certification based on USGBC's LEED v4 and v4.1 BD+C requirements.
 - Some LEED prerequisites and credits needed to obtain LEED certification depend on product selections and may not be specifically identified as LEED requirements. Compliance with requirements needed to obtain LEED prerequisites and credits may be used as one criterion to evaluate substitution requests and comparable product requests.
 - 2. A copy of the LEED Project checklist is attached at the end of this Section for information only.
 - Some LEED prerequisites and credits needed to obtain the indicated LEED certification depend on aspects of Project that are not part of the Work of the Contract.
 - 3. Definitions included in the "LEED Version 4 for Building Design and Construction" (LEED v4 BD+C) Reference Guide and online amendments apply to this Section.

1.03 DEFINITIONS

- A. Bio-Based Materials: Commercial or industrial products (other than food or feed) that are composed in whole, or in significant part, of biological products, renewable agricultural materials (including plant, animal, and marine materials), or forestry materials. For the purposes of LEED, this excludes leather and other animal hides. Products must meet the Sustainable Agriculture Network's Sustainable Agriculture Standard. Bio-based raw materials must be tested using ASTM Testing Method D6866 and be legally harvested, as defined by the exporting and receiving country.
- B. Chain-of-Custody (COC): A procedure that tracks a product form the point of harvest or extraction to its end use, including all successive stage of processing, transformation, manufacturing, a distribution.
- C. Composite Wood and Agrifiber: Products made of wood particles and/or plant material pressed and bonded with adhesive or resins, including all particleboard, medium density fiberboard (MDF), hardwood veneer plywood, structural composite wood, millwork substrates, and wood door cores.
- D. Cradle to Cradle: For LEED purposes, product has a Material Health Certificate or is Cradle to Cradle Certified under standard version 3 or later with a Material Health achievement level at the Bronze level or higher.

- E. Declare: For LEED purposes, product has a Declare Label that is designated as Red List Free or Declared or LBC Compliant that demonstrates content inventory to 0.1% (1000 ppm).
- F. Environmental Product Declaration (EPD): A statement that the product meets the environmental requirements of ISO 14021-1999, ISO 14025-2006 and EN15804, or ISO 21930-2007.
 - 1. Product-Specific Declaration: A product with a publicly available, critically reviewed life-cycle assessment conforming to ISO 14044 that has at least a cradle to gate scope.
 - 2. Product-Specific Type III EPD Internally Reviewed: A product with an internally, critically reviewed life-cycle assessment in accordance with ISO 14071 and conforms to ISO 14025, and EN15804 or ISO 21930 and has at least a cradle to gate scope.
 - 3. Industry-Wide (Generic) Type III EPD: Products with third-party certification (Type III), including external verification, in which the manufacturer is explicitly recognized as a participant by the program operator. EPD must conform to ISO 14025, and EN 15804 or ISO 21930 and have at least a cradle to gate scope.
 - 4. Product-Specific Type III EPD: Products with a third-party certification, including external verification and external critical review, in which the manufacturer is explicated recognized as the participant by the program operator. EPD must conform to ISO 14025, and EN 15804 or ISO 21930 and have at least a cradle to gate scope.
- G. Extended Producer Responsibility (EPR): Measures undertaken by the maker of a product to accept its own and sometimes other manufacturers' products as postconsumer waste at the end of the products' useful life.
- H. Freestanding furniture and medical furnishings: examples include mattresses, foams, panel fabrics, cubicle curtains, window coverings, other textiles.
- I. Health Product Declaration (HPD): A published declaration with full disclosure of known hazards in compliance with the Health Product Declaration Open Standard.
- J. Indoor Air Quality (IAQ) Management Plan: Plan developed by the Contractor to provide a healthy indoor environment for workers and building occupants during construction. Plan must meet or exceed the recommendations of the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) "IAQ Guidelines for Occupied Buildings Under Construction."
- K. Inherently Nonemitting Sources: Product that contains no inherently emitting sources of VOCs (stone, ceramic, powder-coated metals, plated, or anodized metal, glass, concrete, clay brick, and unfinished or untreated solid wood) and has no integral organic-based surface coatings, binders, or sealants.
- L. Life Cycle Impact Reduction Action Plan: The manufacturer has produced a product-specific life-cycle assessment using EN 15804 or ISO 21930 for the product and has provided a publicly available action plan to mitigate or reduce life-cycle impacts. The action plan must be product-specific using the specified PCR functional unit, be critically reviewed, and must include the following information:
 - 1. Description of the life-cycle assessment conducted including the dataset, software, or platform used by manufacturer to complete the analysis.
 - 2. Identification of the largest life cycle impact areas identified in the analysis and a narrative description of the impact areas targeted for reduction in the action plan.
 - 3. Description of specific steps anticipated in implementation of the action plan. Include proposed changes in formulation or manufacturing processes that are planned as part of impact reduction strategy.
 - 4. Specific dates and a full timeline for completion of all the steps outlined in the action plan.

- M. Life-Cycle Impact Reductions in Embodied Carbon: Demonstration of environmental impact reductions for the specified functional unit based on a current third-party EPD or verified life-cycle assessment that conforms to the comparability requirements of ISO 14025 and ISO 21930. Impact reduction in the global warming potential (GWP) impact category (of 10% or 20%) and at least a 5% reduction in two additional impact categories must be demonstrated. A narrative describing how reductions in impacts were achieved must be included and the published comparisons must be third-party verified.
- N. Manufacturer Inventory: A publicly available inventory of all ingredients in a product identified by name and Chemical Abstract Service Registration Number (CASRN) and/or European Community Number (EC Number).
- O. Material Cost: The dollar value of materials being provided to the site, after Contractor mark-ups, including transportation costs, taxes, fees, and shop labor, but excluding field equipment and field labor/ installation costs.
- P. Materials Reuse: Reuse includes salvaged, refurbished, or reused products.
- Q. Multi-Attribute Optimization: Third party certified products that have a life cycle impact reduction action plan or demonstrate life cycle impact reductions in embodied carbon.
- R. Recycled Content: Defined in accordance with ISO 14021. Recycled content is the sum of postconsumer recycled content plus one-half the preconsumer recycled content, based on cost.
 - 1. "Postconsumer" material is defined as waste generated by households or commercial, industrial, and institutional facilities in their role as end users of a product that can no longer be used for its intended purpose.
 - 2. "Preconsumer" material is defined as matter diverted from the waste stream during the manufacturing process, determined as the percentage of material, by weight. Examples include planer shavings, sawdust, bagasse, walnut shells, culls, trimmed materials, overissue publications, and obsolete inventory. The designation excludes rework, regrind, or scrap materials capable of being reclaimed within the same process that generated them (ISO 14021). Formerly known as post-industrial content.
- S. Regional Materials: Materials that are extracted/harvested/recovered, manufactured, and purchased within 100 miles of the project site.
- T. Responsible Sourcing of Raw Materials: Products that meet at least one of the responsible extraction criteria, which include: extended producer responsibility; bio-based materials; FSC wood products; materials reuse; recycled content; and other USGBC approved programs.
- U. Salvaged or Reused Materials (in regards to Low-Emitting Materials): Products that are more than one (1) year old at the time of use.
- V. Volatile Organic Compounds (VOC) Emissions Test: Product has been tested according to California Department of Public Health (CDPH) Standard Method v1.2-2017 and complies with the VOC limits in Table 4-1 of the method. Additionally, the range of total VOCs (TVOCs) after 14 days (336 hours) was measured as specified in the CDPH Standard Method v1.2 and reported (TVOC ranges: 0.5 mg/m³ or less, between 0.5 and 5 mg/m³, or 5 mg/m³ or more). Laboratories that conduct the tests must be accredited under ISO/IEC 17025 for the test methods they use. Products used must be evaluated using the default private office scenario. Statement of product compliance must include the exposure scenario used, the amount of wet-applied product applied in mass per surface area (if applicable), the range of total VOCs, and follow guidelines in CDPH

Standard Method v1.2-2017, Section 8. Organizations that certify manufacturers' claims must be accredited under ISO Guide 17065.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Work of this project includes completed building and application for LEED certification. Work is not complete until Owner has accepted USGBC's final review of LEED certification.
 - 1. Provide documentation required by LEED and LEED review.
- B. Provide materials and procedures necessary to obtain LEED prerequisites and credits required in this Section.
- C. Respond to questions and requests for additional information from Architect and the USGBC regarding LEED credits until the USGBC has made its determination on the project's LEED certification application.

1.05 ACTION SUBMITTALS

- A. Sustainable design submittals are in addition to other submittals.
- B. Sustainable Design Documentation Submittals:
 - LEED v4 Product Information Form: Project submittals must be accompanied by a completed LEED v4 Product Information Form. Submittal packages must also include highlighted documentation supporting the sustainability claims made on the LEED v4 Product Information Form.
 - 2. MRp Construction and Demolition Waste Management Planning / MRc Construction and Demolition Waste Management: Comply with submittal requirements of Section 01 74 19 "Construction Waste Management and Disposal."
 - 3. MRc Building Product Disclosure and Optimization: Environmental Product Declarations, Option 1. Environmental Product Declaration (EPD).
 - a. EPDs complying with LEED requirements.
 - 4. MRc Building Product Disclosure and Optimization: Sourcing of Raw Materials, Responsible Sourcing of Raw Materials.
 - a. Extended Producer Responsibility: Product data and certification letter from product manufacturers, indicating participation in an extended producer responsibility program.
 - b. Bio-Based Materials: Product data and certification for bio-based materials, indicating that they comply with requirements.
 - c. Certified Wood: Product data and chain-of-custody certificates for products containing certified wood. Include vendor invoice indicating cost for each new wood product.
 - d. Materials Reuse: Receipts for salvaged and refurbished materials used for Project, indicating sources and costs.
 - e. Recycled Content: Product data and certification letter from product manufacturers, indicating percentages by weight of postconsumer and preconsumer recycled content for products having recycled content.

- f. Regionally Sourced Products: For products that are extracted/harvested/salvaged, manufactured, and were purchased within 100 miles of the project site only Letter from product manufacturer stating product's extraction/harvest/salvage location(s), and manufacturing location. Vendor invoice or receipts showing location of purchase.
- 5. MRc Building Product Disclosure and Optimization: Material Ingredients, Option 1. Material Ingredient Reporting.
 - a. Material ingredient reports for products that comply with LEED requirements for material ingredient reporting, including but not limited to the following:
 - 1) Manufacturer Inventory.
 - 2) Health Product Declaration.
 - 3) Cradle to Cradle Certification showing Material Health Level achievement.
 - 4) Declare Product Label.
 - 5) ANSI/BIFMA e3 Furniture Sustainability Standard compliance.
 - 6) Product Lens Certification.
 - 7) Facts NSF/ANSI 336: Sustainability Assessment for Commercial Furnishings Fabric certification.
- 6. EQc Low-Emitting Materials: Product data, indicating VOC content and emissions testing documents showing compliance with requirements for low-emitting materials, for the following materials utilized on the building interior (everything within the waterproofing membrane):
 - a. Paints and Coatings: Includes all interior paints and coatings applied on-site.
 - Adhesives and Sealants: Includes all interior adhesives and sealants applied onsite.
 - c. Flooring: Includes all types of hard and soft surface flooring (carpet, ceramic, vinyl, engineered, solid wood, laminates), wall base, underlayments, and other floor coverings.
 - d. Wall Panels: Includes all finish wall treatments (wall coverings, wall paneling, wall tile), surface wall structures such as gypsum or plaster, cubicle/curtain/partition walls, trim, doors, frames, windows, and window treatments. Removable/ interchangeable fabric panels, built-in cabinetry, and vertical structural elements are excluded.
 - e. Ceilings: Includes all ceiling panels, ceiling tile, surface ceiling structures such as gypsum or plaster, suspended ceiling systems (including canopies and clouds), and glazed skylights. Overhead structural elements (exposed, finished, or unfinished) are excluded.
 - f. Insulation: Includes all thermal and acoustic boards, batts, rolls, blankets, sound attenuation fire blankets, foamed-in place, loose-fill, blown, and spray insulation. Insulation for HVAC ducts and plumbing piping are excluded.
 - g. Furniture: Includes all stand-alone furniture items purchased for the project.
 - h. Composite Wood: Includes all particleboard, medium density fiberboard, hardwood veneer plywood, and structural composite wood not included in the flooring, ceiling, wall panels, or furniture material categories.
- 7. EQc Construction Indoor Air Quality Management Plan.
 - a. Product data for minimum MERV 8 temporary filtration media.
 - b. Product data for filtration media used during occupancy.
 - c. Construction Documentation: Six photographs at three different times during the construction period, along with a brief description of the SMACNA approach

employed, documenting implementation of the IAQ management measures, such as protection of ducts and on-site stored or installed absorptive materials.

1.06 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For LEED coordinator.
- B. Project Materials Cost Data: Provide statement indicating total cost and shop labor for Division 3-11, 12 and 32 materials used for Project. Costs exclude site labor, overhead, and profit.
- C. Sustainable Design Action Plans: Provide preliminary submittals within 90 days of date established for commencement of the Work indicating how the following requirements will be met:
 - 1. MRp Construction and Demolition Waste Management Planning.
 - Construction and Demolition Waste Management Plan, complying with Section 01 74 19 "Construction Waste Management and Disposal."
 - 2. MRc Building Product Disclosure and Optimization: Environmental Product Declarations, Option 1. Environmental Product Declaration (EPD).
 - a. List of proposed products with Environmental Product Declarations.
 - 3. MRc Building Product Disclosure and Optimization: Sourcing of Raw Materials, Responsible Sourcing of Raw Materials.
 - List of proposed products complying with requirements for responsible sourcing of raw materials.
 - 4. MRc Building Product Disclosure and Optimization: Material Ingredients, Option 1. Material Ingredient Reporting.
 - a. List of proposed products complying with requirements for material ingredient reporting.
 - 5. EQc Construction Indoor Air Quality Management Plan.
 - a. Construction Indoor Air Quality Management Plan.
- 1.07 **LEED Progress Reports:** Concurrent with each Application for Payment, submit reports comparing actual construction and purchasing activities with sustainable design action plans, including relevant photographic documentation.

1.08 QUALITY ASSURANCE

A. LEED Coordinator: Engage an experienced LEED-Accredited Professional to coordinate LEED requirements. LEED coordinator may also serve as waste management coordinator.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Provide products and procedures necessary to obtain LEED credits required in this Section. Although other Sections may specify some requirements that contribute to LEED credits, the Contractor shall determine additional materials and procedures necessary to obtain LEED credits indicated.
- B. WEp/c Indoor Water Use Reduction, Compliance Path 2.
 - 1. Minimum 40% aggregate water consumption reduction for toilets, urinals, lavatory faucets, kitchen faucets, and showerheads when compared to LEED baseline allowances (toilets 1.6 gpf, urinals 1.0 gpf, public lavatory faucet 0.5 gpm, *private lavatory faucet 2.2 gpm at 60 psi, kitchen faucet 2.2 gpm at 60 psi, showerhead 2.5 gpm at 80 psi).
 - a. *Private lavatory faucets are fixtures in residences, dormitories, hotel or motel guest rooms, nursing homes, and patient bathrooms in hospitals, most others are considered public lavatory faucets.
 - b. Toilets, urinals, private lavatory faucets, and showerheads must be WaterSense labeled, equivalent performance is not acceptable.
 - 2. Clothes washers (residential and commercial), residential dishwashers, and ice machines must be ENERGY STAR. Prerinse spray valves (commercial dish washing) must be 1.3 gpm (4.9 lpm) or less.
 - 3. No once-through cooling with potable water for any equipment or appliances that reject heat.
 - 4. Cooling towers and evaporative condensers must have: 1) Makeup water meters, 2) Conductivity controllers and overflow alarms, 3) Drift eliminators that reduce drift to maximum of 0.002% of recirculated water volume for counterflow towers and 0.005% of recirculated water flow for cross-flow towers.
 - 5. After meeting prerequisite requirement for 20% reduction due to efficient fixtures and appliances, alternative water sources (rainwater, greywater, etc.) may contribute to water use reduction calculations.
 - 6. Appliances must meet the requirements:
 - a. Dishwashers Undercounter, ≤1.6gal/rack; Stationary, single tank, door, ≤1.4 gal/rack; Single tank, conveyor, ≤1.0 gal/rack; Multiple tank, conveyor, ≤0.9 gal/rack; Flight machine ≤ 180 gal/hour
 - b. Food Steamer Batch, ≤ 6gal/hour/pan; Cook-to-order ≤ 10gal/hour/pan
 - c. Combination over Countertop or stand, ≤ 3.5 gal/hour/pan; Roll-in, ≤ 3.5 gal/hour/pan
 - 7. Standards for processes:
 - a. Discharge water temperature tempering Where local requirements limit discharge temperature of fluids into drainage system, use tempering device that runs water only when equipment discharges hot water OR Provide thermal recovery heat exchanger that cools drained discharge water below code-required maximum discharge temperatures while simultaneously preheating inlet makeup water OR If fluid is steam condensate, return it to boiler
 - b. Venturi-type flow-through vacuum generators or aspirators Use no device that generates vacuum by means of water flow through device into drain
- C. MRc Building Product Disclosure and Optimization: Environmental Product Declarations, Option 1. Environmental Product Declaration (EPD) v4.1.
 - 1. At least 20 different products from at least five (5) different manufacturers shall have Environmental Product Declarations that comply with LEED requirements.
 - 2. Product-Specific Declaration: Valued as one (1) whole product.

- 3. Product-Specific Type III EPD Internally Reviewed: Valued as one (1) whole product.
- 4. Industry-Wide (Generic) Type III EPD: Valued as one (1) whole product.
- 5. Product-Specific Type III EPD: Valued as 1.5 products.
- D. MRc Building Product Disclosure and Optimization: Sourcing of Raw Materials, Responsible Sourcing of Raw Materials v4.1.
 - 1. Use products sourced from at least 3 (or 5) different manufacturers that meet at least one of the sourcing and extraction criteria below for at least 20% (or 40%), by cost, of the total value of permanently installed building products in the project.
 - 2. Extended producer responsibility program: Valued at 50% of their cost.
 - 3. Bio-Based Materials tested using ASTM Test Method D6866 and Legally Harvested: Valued at 50% of their cost.
 - 4. Bio-Based Materials meeting the Sustainable Agriculture Network's Sustainable Agriculture Standard: Valued at 100% of their cost.
 - 5. Wood Products FSC Certified: Wood-based materials include, but are not limited to, the following materials when made from wood, engineered wood products, or wood-based panel products and are valued at 100% of their cost:
 - 1) Rough carpentry.
 - 2) Miscellaneous carpentry.
 - 3) Heavy timber construction.
 - 4) Wood decking.
 - 5) Metal-plate-connected wood trusses.
 - 6) Structural glued-laminated timber.
 - 7) Finish carpentry.
 - 8) Architectural woodwork.
 - 9) Wood paneling.
 - 10) Wood veneer wall covering.
 - 11) Wood flooring.
 - 12) Wood lockers.
 - 13) Wood cabinets.
 - 6. Materials Reuse: Valued at 200% of their cost.
 - 7. Recycled content: Valued at 100% of their cost.
 - 8. Regionally Sourced Products: Valued at 200% of their cost
- E. MRc Building Product Disclosure and Optimization: Material Ingredients, Option 1. Material Ingredient Reporting v4.1.
 - 1. Use at least 20 different permanently installed products from at least 5 different manufacturers that use any of the following programs to demonstrate the chemical inventory of the product to at least 0.1% (1000 ppm), which meet one of the following disclosure criteria:
 - a. Manufacturer Inventory.
 - b. Health Product Declarations (HPDs).
 - c. Cradle to Cradle (C2C) certifications.
 - d. Declare Product Labels.
 - e. ANSI/BIFMA e3 Furniture Sustainability Standard.
 - f. Product Lens Certification.
 - g. Facts NSF/ANSI 336: Sustainability Assessment for Commercial Furnishings Fabric Certification.
- F. MRp / MRc PBT Source Reduction-Mercury, prerequisite and credit, v4.1

- 1. Do not specify or install preheat, T-9, T-10, or T-12 fluorescents or mercury vapor high-intensity discharge (HID) lamps in the project. Do not specify probe-start metal halide HID lamps in any interior spaces. Specify and install illuminated exit signs that do not contain mercury and use less than 5 watts of electricity. Fluorescent and high-pressure sodium lamps must meet the criteria in Table 1.
- 2. Specify and install fluorescent lamps with both low mercury content (MR Prerequisite PBT Source Reduction—Mercury) and long lamp life, as listed in Table 1.

3. Table 1:

3. Table 1:				
Lamp	Maximum content	Lamp life (hrs)		
T-8 fluorescent, eight-foot	10 mg mercury	Standard output - 24,000 rated hours on instant start ballasts (3-hour starts) High output – 18,000 rated hours on instant start ballasts or program start ballasts (3-hour starts)		
T-8 fluorescent, four-foot	3.5 mg mercury	Both standard and high output - 30,000 rated hours on instant start ballasts, or 36,000 rated hours on program start ballasts (3 hour starts)		
T-8 fluorescent, two-foot and three-foot	3.5 mg mercury	24,000 rated hours on instant start ballasts or program start ballasts (3-hour starts)		
T-8 fluorescent, U-bent	6 mg mercury	18,000 rated hours on instant start ballasts, or 24,000 rated hours on program start ballasts (3-hour starts)		
T-5 fluorescent, linear	2.5 mg mercury	Both standard and high-output - 25,000 rated hours on program start ballasts		
T-5 fluorescent, circular	9 mg mercury	Both standard and high-output – 25,000 rated hours on program start ballasts		
Compact fluorescent, nonintegral ballast	3.5 mg mercury	12,000 rated hours		
Compact florescent, integral ballast, bare bulb	3.5 mg mercury, ENERGY STAR qualified	Bare bulb - 10,000 rated hours Covered models such as globes, reflectors, A-19s – 8,000 hours		
High-pressure sodium, up to 400 watts	10 mg mercury	Use noncycling type or replace with LED lamps or induction lamps		
High-pressure sodium, above 400 watts	32 mg mercury	Use noncycling type or replace with LED lamps or induction lamps		

- G. MRc PBT Source Reduction-Lead, Cadmium, and Copper: Specify substitutes for materials manufactured with lead and cadmium, as follows.
 - 1. Lead
 - a. For water intended for human consumption, specify and use solder and flux to connect plumbing pipe on site that meets the California AB1953 standard, which specifies that solder not contain more than 0.2% lead, and flux not more than a weighted average of 0.25% lead for wetted surfaces. The "lead free" label as defined by the Safe Drinking Water Act (SDWA)) does not provide adequate screening for the purposes of this credit because the SDWA defines "lead free" as solders and flux containing 0.2% lead or less.
 - b. For water intended for human consumption, specify and use pipes, pipe fittings, plumbing fittings, and faucets that meet the California law AB1953 of a weighted average lead content of the wetted surface area of not more than 0.25% lead.
 - c. Specify and use lead-free roofing and flashing.
 - d. Specify and use electrical wire and cable with lead content less than 300 parts per million.
 - e. Specify no use of interior or exterior paints containing lead.
 - f. For renovation projects, ensure the removal and appropriate disposal of disconnected wires with lead stabilizers, consistent with the 2002 National Electric Code requirements.
 - g. Lead used for radiation shielding and copper used for MRI shielding are exempt.
 - 2. Cadmium
 - a. Specify no use of interior or exterior paints containing intentionally added cadmium.
 - 3. Copper
 - a. For copper pipe applications, reduce or eliminate joint-related sources of copper corrosion:
 - b. use mechanically crimped copper joint systems; or
 - specify that all solder joints comply with ASTM B828 2002, and specify and use ASTM B813 2010 for flux.
- H. MRc Furniture and Medical Furnishings
 - 1. Use at least 30% (1 point) or 40% (2 points), by cost, of all freestanding furniture and medical furnishings that meet the criteria in one of the following three options.
 - a. Option 1. Minimal Chemical Content
 - 1) All components that constitute at least 5%, by weight, of a furniture or medical furnishing assembly, including textiles, finishes, and dyes, must contain less than 100 parts per million (ppm) of at least four of the five following chemical groups:
 - 2) urea formaldehyde;
 - 3) heavy metals, including mercury, cadmium, lead, and antimony;
 - 4) hexavalent chromium in plated finishes consistent with the European Union Directive on the Restriction of the Use of Certain Hazardous Substances (EU RoHS):
 - 5) stain and nonstick treatments derived from perfluorinated compounds (PFCs), including perfluorooctanoic acid (PFOA); and
 - 6) added antimicrobial treatments.
 - b. Option 2. Testing and Modeling of Chemical Content
 - All components of a furniture or medical furnishing assembly, including textiles, finishes, and dyes, must contain less than 100 parts per million (ppm) of at least two of the five chemicals or materials listed in Option 1. New furniture or medical furnishing assemblies must be in accordance with ANSI/BIFMA Standard Method M7.1–2011. Comply with ANSI/BIFMA e3-

2010 Furniture Sustainability Standard, Sections 7.6.1 and 7.6.2, using either the concentration modeling approach or the emissions factor approach. Model the test results using the open plan, private office, or seating scenario in ANSI/BIFMA M7.1, as appropriate. USGBC-approved equivalent testing methodologies and contaminant thresholds are also acceptable. Documentation submitted for furniture must indicate the modeling scenario used to determine compliance. Salvaged and reused furniture more than one year old at the time of use is considered compliant, provided it meets the requirements for any site-applied paints, coatings, adhesives, and sealants.

- c. Option 3: Building Product Disclosure and Optimization
 - Use products that meet at least one of the criteria below. Each product can receive credit for each criterion met. The scope of any environmental product declaration (EPD) must be at least cradle to gate.
 - 2) Life-cycle assessment and environmental product declarations.
 - a) Products with a publicly available, critically reviewed life-cycle assessment conforming to ISO 14044 that have at least a cradle to gate scope are valued as one whole product for the purposes of credit achievement calculation.
 - b) Product-specific Type III EPD -- Internally Reviewed. Products with an internally critically reviewed LCA in accordance with ISO 14071. Products with product-specific internal EPDs which conform to ISO 14025, and EN 15804 or ISO 21930 and have at least a cradle to gate scope are valued as one whole product for the purposes of credit achievement calculation.
 - c) Industry-wide Type III EPD -- Products with third-party certification (Type III), including external verification, in which the manufacturer is explicitly recognized as a participant by the program operator. Products with industry-wide EPDs, which conform to ISO 14025, and EN 15804 or ISO 21930 and have at least a cradle to gate scope are valued as one whole product for the purposes of credit achievement calculation.
 - 3) Environmental Product Declarations which conform to ISO 14025, 14040, 14044, and EN 15804 or ISO 21930 and have at least a cradle to gate scope.
 - a) Product-specific Type III EPD -- Products with third-party certification (Type III), including external verification and external critical review are valued as 1.5 products for the purposes of credit achievement calculation.
 - 4) Extended producer responsibility. Products purchased from a manufacturer (producer) that participates in an extended producer responsibility program or is directly responsible for extended producer responsibility. Products meeting extended producer responsibility criteria are valued at 50% of their cost for the purposes of credit achievement calculation.
 - 5) Bio-based materials. Bio-based products and materials other than wood must be tested using ASTM Test Method D6866 or equivalent method ISO 16620-2 or be certified to the USDA BioPreferred Voluntary Labeling Initiative that includes verification via ASTM 6866 testing. Exclude hide products, such as leather and other animal skin material.
 - Bio-based products that meet the criteria above: value at 50% of cost multiplied by the biobased content of the product for the purposes of credit achievement calculation.
 - b) Bio-based products that meet the Sustainable Agriculture Network's Sustainable Agriculture Standard in addition to the testing

- requirements above: value at 100% of cost multiplied by the biobased content of the product for the purposes of credit achievement calculation.
- 6) Wood products. Wood products must be certified by the Forest Stewardship Council or USGBC-approved equivalent. Products meeting wood products criteria are valued at 100% of their cost for the purposes of credit achievement calculation.
- 7) Materials reuse. Reuse includes salvaged, refurbished, or reused products. Products meeting materials reuse criteria are valued at 200% of their cost for the purposes of credit achievement calculation.
- 8) Recycled content. Products meeting recycled content criteria are valued at 100% of their cost for the purposes of credit achievement calculation.
 - a) Recycled content is the sum of postconsumer recycled content plus one-half the preconsumer recycled content, based on weight.
 - b) The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.
- 9) Products that meet the above criteria are valued according to source location (extraction, manufacture, and purchase point must be within the distances noted below): For credit achievement calculation, products sourced (extracted, manufactured, purchased) within 100 miles (160 km) of the project site are valued at 200% of their base contributing cost.

I. LOW-EMITTING MATERIALS v4.1

- 1. EQc Low-Emitting Materials: General Emissions Evaluation.
 - a. Products that require a general emissions evaluation must demonstrate they have been tested and determined compliant in accordance with California Department of Public Health, (CDHP), Standard Method v1.2-2017, using the applicable exposure scenario. Manufacturer's documentation demonstrating compliance must state the range of total VOCs (TVOC) after 14 days measured as specified in the CDPH Standard Method v1.2 as follows:
 - 1) 0.5mg/m3 or less,
 - 2) between 0.5 and 5.0 mg/m3 or,
 - 3) 0.50 mg/m3 or more.
- 2. EQc Low-Emitting Materials: Paints and Coatings.
 - a. For field applications that are inside the weatherproofing system, use paints and coatings that comply with the limits for VOC content when calculated according to the California Air Resources Board (CARB) 2007, Suggested Control Measure (SCM) for Architectural Coatings, or the South Coast Air Quality Management District (SCAQMD) Rule 1113, effective February 5, 2016.

Product Type:	Allowable VOC Content (g/L):
Bond Breaker	350
Clear wood finishes - Varnish	275
Clear wood finishes – Sanding Sealer	275
Clear wood finishes - Lacquer	275
Colorant – Architectural Coatings, excluding IM coatings	50
Colorant – Solvent Based IM	600
Colorant - Waterborne IM	50
Concrete – Curing compounds	100
Concrete – Curing compounds for roadways & bridges	350
Concrete surface retarder	50

Driveway Sealer	50
Dry-fog coatings	50
Faux finishing coatings - Clear topcoat	100
Faux finishing coatings – Decorative Coatings	350
Faux finishing coatings - Glazes	350
Faux finishing coatings - Japan	350
Faux finishing coatings – Trowel applied coatings	50
Fire-proof coatings	150
Flats	50
Floor coatings	50
Form release compounds	100
Graphic arts (sign) coatings	200
Industrial maintenance coatings	100
Industrial maintenance coatings – High temperature IM	420
coatings	420
Industrial maintenance coatings – Non-sacrificial anti-graffiti	100
coatings	
Industrial maintenance coatings – Zinc rich IM primers	100
Magnesite cement coatings	450
Mastic coatings	100
Metallic pigmented coatings	150
Multi-color coatings	250
Non-flat coatings	50
Pre-treatment wash primers	420
Primers, sealers and undercoaters	100
Reactive penetrating sealers	350
Recycled coatings	250
Roof coatings	50
Roof coatings, aluminum	100
Roof primers, bituminous	350
Rust preventative coatings	100
Stone consolidant	450
Sacrificial anti-graffiti coatings	50
Shellac- Clear	730
Shellac – Pigmented	550
Specialty primers	100
Stains	100
Stains, interior	250
Swimming pool coatings – repair	340
Swimming pool coatings – other	340
Traffic Coatings	100
Waterproofing sealers	100
Waterproofing concrete/masonry sealers	100
Wood preservatives	350
Low solids coatings	120

o. For field applications that are inside the weatherproofing system, 75%, by volume or surface area, of paints and coatings shall meet the VOC emissions evaluation AND 100% shall meet the VOC content evaluation."

3. EQc Low-Emitting Materials: Adhesives and Sealants

a. For field applications that are inside the weatherproofing system, use adhesives and sealants that comply with the limits for VOC content when calculated according to

South Coast Air Quality Management District (SCAQMD) Rule #1168, requirements in effect on October 6, 2017:

Architectural Applications:	Allowable VOC Content (g/L):
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesives	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Dry wall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single ply roof membrane adhesives	250
Specialty Applications:	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Computer diskette manufacturing	350
Contact adhesive	80
Special purpose contact adhesive	250
Tire tread adhesive	100
Adhesive primer for traffic marking tape	150
Structural wood member adhesive	140
Rubber vulcanization adhesive	850
Top and Trim adhesive	250
Substrate Specific Applications:	
Metal to metal substrate specific adhesives	30
Plastic foam substrate specific adhesives	50
Porous material (except wood) substrate specific adhesives	50
Wood substrate specific adhesives	30
Fiberglass substrate specific adhesives	80
Reinforced plastic composite substrate specific adhesive	250
Sealants:	
Architectural sealant - Clear, paintable, and immediately water-	250
resistant sealant	
Foam Insulation	250
Foam Sealant	250
Grout	65
Marine deck sealant	760
Roadway sealant	250
Non-Staining Plumbing Putty	150
Single-ply roof membrane sealant	450
Other roofing sealants	300
Other sealants	420

Sealant Primers:	
Architectural non-porous sealant primer	250
Architectural porous sealant primer	775
Modified bituminous sealant primer	500
Marine deck sealant primer	760
Other sealant primer	750

b. For field applications that are inside the weatherproofing system, 75% of adhesives and sealants, by volume or surface area, shall meet the VOC emissions evaluation AND 100% meet the VOC content evaluation.

4. EQc Low-Emitting Materials: Flooring.

- a. At least 90% of all flooring, by cost or surface area, meets the VOC emissions evaluation OR inherently non-emitting sources criteria, OR salvaged and reused materials criteria.
- 5. EQc Low-Emitting Materials: Wall Panels.
 - At least 75% of all wall panels, by cost or surface area, meet the VOC emissions evaluation, OR inherently nonemitting sources criteria, OR salvaged and reused materials criteria.
- 6. EQc Low-Emitting Materials: Ceilings.
 - a. At least 90% of all ceilings, by cost or surface area, meet the VOC emissions evaluation, OR inherently nonemitting sources criteria, OR salvaged and reused materials criteria.
- 7. EQc Low-Emitting Materials: Insulation.
 - a. At least 75% of all insulation, meets the VOC emissions evaluation.
- 8. EQc Low-Emitting Materials,: Composite Wood.
 - a. At least 75% of all composite wood, by cost or surface area, meets the Formaldehyde emissions evaluation OR salvaged and reused materials criteria.

PART 3 - EXECUTION

3.01 NONSMOKING BUILDING

A. EQp Environmental Tobacco Smoke Control: Smoking (including tobacco smoke, as well as the smoke produced from the combustion of cannabis and controlled substances and the emissions produced by electronic smoking devices) is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.

3.02 CONSTRUCTION WASTE MANAGEMENT

A. MRc Construction and Demolition Waste Management: Comply with Section 01 74 19 "Construction Waste Management and Disposal."

3.03 CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT v4.1

A. *Moisture*. Develop and implement a moisture control plan to protect stored on-site and installed absorptive materials from moisture damage. Immediately remove from site and properly dispose of any materials susceptible to microbial growth and replace with new, undamaged materials. Also include strategies for protecting the building from moisture intrusion and preventing occupants' exposure to mold spores.

- B. Particulates. Do not operate permanently installed air-handling equipment during construction unless filtration media with a minimum efficiency reporting value (MERV) of 8, as determined by ASHRAE 52.2–2017, with errata (or media with ISO_{coarse} 90% or higher, as defined by ISO 16890-2016, Particulate Air Filters for General Ventilation, Determination of the Filtration Performance), are installed at each return air grille and return or transfer duct inlet opening such that there is no bypass around the filtration media. Immediately before occupancy, replace all filtration media with the final design filtration media, installed in accordance with the manufacturer's recommendations.
- C. VOCs. Schedule construction procedures to minimize exposure of absorbent materials to VOC emissions. Complete painting and sealing before storing or installing "dry" materials, which may accumulate pollutants and release them over time. Store fuels, solvents, and other sources of VOCs separately from absorbent materials.
- D. Outdoor emissions. For renovation projects involving waterproofing, repairing asphalt roofing, sealing parking lots, or other outdoor activities that generate high VOC emissions, develop a plan to manage fumes and avoid infiltration to occupied spaces. Comply with the procedures established by NIOSH, Asphalt Fume Exposures during the Application of Hot Asphalt to Roofs (Publication 2003–112).
- E. *Tobacco.* Prohibit the use of tobacco products inside the building and within 25 feet (7.5 meters) of the building entrance during construction.
- F. Noise and vibration. Develop a plan based on the British Standard (BS 5228) to reduce noise emissions and vibrations from construction equipment and other nonroad engines by specifying low-noise emission design or the lowest decibel level available that meets performance requirements in the British Standard. Construction crews must wear ear protection in areas where sound levels exceed 85 dB for extended periods.
- G. Infection control. For renovations and additions adjacent to occupied facilities or phased occupancy in new construction, follow the FGI 2018 Guidelines for Design and Construction of Hospitals, Guidelines for Design and Construction of Outpatient Facilities, Guidelines for Design and Construction of Residential Health, Care, and Support Facilities and The Joint Commission Standards to establish an integrative infection control team comprising the owner, designer, and contractor to evaluate infection control risk and document the required precautions in a project-specific plan. Use the Guidelines for Environmental Infection Control in Health-Care Facilities, 2003, updated July 2019 to assess risk and to select mitigation procedures for construction activities.

3.04 IAQ ASSESSMENT v4.1

A. Flush-Out:

- 1. Install new filtration media prior to start of building flush.
- 2. After construction ends, prior to occupancy and with all interior finishes installed, perform a building flush-out by supplying a total volume of 14,000 cu. ft. of outdoor air per square foot of floor area while maintaining an internal temperature of at least 60 deg F and no higher than 80 deg F and a relative humidity no higher than 60%.
- 3. If occupancy is desired prior to flush-out completion, the space may be occupied following delivery of a minimum of 3,500 cu. ft. of outdoor air per square foot of floor area to the space while maintaining an internal temperature of at least 60 deg F and no higher than 80 deg F and relative humidity no higher than 60%. Once the space is occupied, it must be ventilated at a minimum rate of 0.30 cubic feet per minute (cfm) per square foot of outdoor air or the design minimum outdoor air rate, whichever is greater. During each day of the flush-out period, ventilation must begin a minimum of three hours prior to occupancy and

continue during occupancy. These conditions must be maintained until a total of 14,000 cu. ft./sq. ft. of outdoor air has been delivered to the space.

- B. Air-Quality Testing: Engage testing agency to perform the following:
 - 1. After construction ends and before occupancy, but under ventilation conditions typical for occupancy, conduct baseline IAQ testing in occupied spaces for the following contaminants, and as additionally detailed in the USGBC's "LEED Reference Guide for Building Design and Construction."
 - 2. LEED v4.1 EQc Indoor Air Quality Assessment, Option 2, Air Testing Path 1. Particulate Matter and Inorganic Gases: Test for the particulate matter (PM) and inorganic gases listed below, using the allowed testing method, and demonstrate that the contaminants do not exceed the concentration limits listed below.
 - a. Carbon Monoxide (CO): 9 ppm; no more than 2 ppm above outdoor levels as tested per ISO 4224, EPA Compendium Method IP-3, GB/T 18883-2002 for projects in China, or Direct calibrated electrochemical instrument with accuracy of +/- 3% ppm and resolution of 0.1 ppm.
 - b. PM 10: ISO 14644-1:2015, cleanroom class of 8 or lower, 50 mg/m³, or Healthcare only (20 mg/m³) as tested by Particulate monitoring device with accuracy greater than 5 mg/m³ or 20% of reading and resolution (5 min average data) +/- 5 mg/m³.
 - c. PM 2.5: 12 mg/m³ or 35 mg/m³ (for projects in known EPA nonattainment areas for PM2.5 or local equivalents) as tested by Particulate monitoring device with accuracy greater than 5 mg/m³ or 20% of reading and resolution (5 min average data) +/- 5 mg/m³.
 - d. Ozone: 0.07 ppm as tested by Monitoring devices with accuracy of 5 ppb or 20% of reading and resolution (5 min average data) +/- 5 ppb, ISO 13964, ASTM D5149-02, or EPA designated methods for Ozone.
 - 3. EQc Indoor Air Quality Assessment, Option 2, Air Testing Path 2. Volatile Organic Compounds: Perform a screening test for Total Volatile Organic Compounds (TVOC) using ISO 16000-6, EPA TO-17, or EPA TO-15 to collect and analyze the air sample. Calculate the TVOC value per EN 16516:2017, CDPH Standard Method v1.2 2017 Section 3.9.4, or alternative calculation method as long as full method description is included in test report. If the TVOC levels exceed 500 mg/m3, investigate for potential issues by comparing the individual VOC levels from the GC/MS results to associated cognizant authority health-based limits. Correct any identified issues and re-test if necessary. Additionally, test the individual volatile organic compounds listed below using an allowed test method, and demonstrate that the contaminants do not exceed the concentration limits listed below.
 - a. Formaldehyde 50-00-0: 20 mg/m³ (16 ppb) as tested by ISO 16000-3, 4; EPA TO-11a; EPA Comp. IP-6; or ASTM D5197-16.
 - b. Acetaldehyde 75-07-0: 140 mg/m³ as tested by ISO 16000-3, 4; EPA TO-11a; EPA Comp. IP-6; or ASTM D5197-16.
 - c. Benzene 71-43-2: 3 mg/m³ as tested by ISO 16000-6; EPA IP-1; EPA TO-17; EPA TO-15; ISO 16017-1, 2; or ASTM D6196-15.
 - d. Hexane (n-) 110-54-3: 7000 mg/m³ as tested by ISO 16000-6; EPA IP-1; EPA TO-17; EPA TO-15; ISO 16017-1, 2; or ASTM D6196-15.
 - e. Naphthalene 91-20-3: 9 mg/m³ as tested by ISO 16000-6; EPA IP-1; EPA TO-17; EPA TO-15; ISO 16017-1, 2; or ASTM D6196-15.
 - f. Phenol 108-95-2: 200 mg/m³ as tested by ISO 16000-6; EPA IP-1; EPA TO-17; EPA TO-15; ISO 16017-1, 2; or ASTM D6196-15.
 - g. Styrene 100-42-5: 900 mg/m³ as tested by ISO 16000-6; EPA IP-1; EPA TO-17; EPA TO-15; ISO 16017-1, 2; or ASTM D6196-15.
 - h. Tetrachloroethylene 127-18-4: 35 mg/m³ as tested by ISO 16000-6; EPA IP-1; EPA TO-17; EPA TO-15; ISO 16017-1, 2; or ASTM D6196-15.

- i. Toluene 108-88-3: 300 mg/m³ as tested by ISO 16000-6; EPA IP-1; EPA TO-17; EPA TO-15; ISO 16017-1, 2; or ASTM D6196-15.
- j. Vinyl Acetate 108-05-4: 200 mg/m³ as tested by ISO 16000-6; EPA IP-1; EPA TO-17; EPA TO-15; ISO 16017-1, 2; or ASTM D6196-15.
- k. Dichlorobenzene (1,4-) 106-46-7: 800 mg/m³ as tested by ISO 16000-6; EPA IP-1; EPA TO-17; EPA TO-15; ISO 16017-1, 2; or ASTM D6196-15.
- I. Xylenes-total 108-38-3, 95-47-6, and 106-42-3: 700 mg/m³ as tested by ISO 16000-6; EPA IP-1; EPA TO-17; EPA TO-15; ISO 16017-1, 2; or ASTM D6196-15.
- 4. Laboratories performing tests must be accredited under ISO/IEC 17025 for the test methods they use.
- 5. For each sampling point where the maximum concentration limits are exceeded, take corrective action until requirements have been met.
- 6. Air-sample testing shall be conducted as follows:
 - a. Building shall have all interior finishes installed, including, but not limited to, millwork, doors, paint, carpet, and acoustic tiles. Furnishings are required to be in place for the testing.
 - b. Number of sampling locations varies depending on the size of building and number of ventilation systems. At least one location per ventilation system (preferably worst-case zones), one location per building floor, and one location per space type should be tested. For offices, retail, schools, hospitality, and multifamily residential projects, test areas no larger than 5,000 sq. ft. For large open spaces, one sampling point per 50,000 sq. ft. (4654 sq. m) may be used. Determine whether the project has spaces that are identical. Project teams may sample identical spaces by testing one in seven. If the space fails the test, all seven must be tested. For large buildings with series of identical spaces (more than 21 spaces in a sample group), test a minimum of three spaces in the sample group.
 - c. Air samples shall be collected between 3 and 6 feet above the floor to represent the breathing zone of occupants.

END OF SECTION

SECTION 07 84 23

PENETRATION FIRESTOPPING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes penetration firestopping systems for openings and penetrations through smoke and fire-resistance-rated assemblies, and supplementary items necessary to complete their installation.

1.2 ACTION SUBMITTALS

- A. Product Data: Manufacturer's technical literature for each product and system indicated.
 - 1. Include manufacturer's specifications for materials, finishes, construction details, installation instructions, and recommendations for maintenance.
- B. Shop Drawings: Show details of fabrication and installation, including plans, elevations, sections, details of components and attachments to other work. Distinguish between shop and field-assembled work. Include firestopping design designation of testing and inspecting agency acceptable to authorities having jurisdiction that evidences compliance with requirements for each condition indicated.
 - 1. Submit documentation, including illustrations, from a qualified testing and inspecting agency that is applicable to each firestopping system configuration for construction and penetrating items.
 - Where Project conditions require modification of qualified testing and inspecting agency's tested system to suit a particular firestopping condition, an engineering judgment derived from similar qualified tested system designs or other tests will be submitted to local authorities having jurisdiction for their review and approval prior to installation. Engineering judgment documents must follow requirements set forth by the International Firestop Council.

1.3 INFORMATIONAL SUBMITTALS

- A. Manufacturer's Project Acceptance Document: Certification by the manufacturer that its product(s) are approved, acceptable, suitable for use in specific locations, for specific details, and for applications indicated, specified, or required, and that a warranty will be issued.
- B. Product Test Reports: Written reports based on evaluation of comprehensive tests performed by qualified testing agency indicating that each product complies with requirements.
- C. Field Quality Control Reports: Written report of testing and inspection required by "Field Quality Control".

D. Qualification Data:

1. For firms and persons specified in "Quality Assurance" to demonstrate their capabilities and experience. Include list of completed projects.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has completed firestopping systems similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- B. Installer Qualifications: A firm that has been approved by FM Global according to FM Global 4991, "Approval of Firestop Contractors," or been evaluated by UL and found to comply with its "Qualified Firestop Contractor Program Requirements."
- C. Source Limitations: Obtain penetration firestopping systems, for each kind of penetration and construction condition required, from a single manufacturer.
- D. Fire-Test-Response Characteristics: Provide firestopping systems that comply with the following requirements and those specified in "Performance Requirements" Article:
 - 1. Firestopping tests are performed by a qualified testing and inspecting agency performing testing and follow-up inspection services for firestopping systems acceptable to authorities having jurisdiction.
 - 2. Penetration firestopping systems: Provide materials that are identical to those tested per ASTM E 814 or UL 1479. Provide rated firestopping system products that bear classification marking of qualified testing and inspecting agency.
 - 3. FM Global: Provide classification markings on penetration firestopping corresponding to designations listed by the following:
 - a. FM Global in its "Building Materials Approval Guide."

1.5 PRE-INSTALLATION CONFERENCE

A. Pre-Installation Conference: Before Work begins, conduct conference at Project site.

1.6 PROJECT CONDITIONS

- A. Field Measurements: Where products and systems are indicated to fit walls and other construction, verify dimensions by field measurements before fabrication.
- B. Environmental Limitations: Do not install firestopping systems when ambient or substrate temperatures are outside limits permitted by firestopping system manufacturers or when substrates are wet due to rain, frost, condensation, or other causes.
- C. Ventilate firestopping systems per manufacturer's written instructions by natural means or, where this is inadequate, forced-air circulation.

1.7 COORDINATION

- A. Coordinate installation of products and systems with interfacing and adjoining construction to provide a successful installation without failure.
- B. Coordinate sizing of sleeves, openings, core-drilled holes, or cut openings to accommodate firestopping systems.
- C. Notify Owner's inspecting agency at least seven days in advance of firestopping system installations; confirm dates and times on days preceding each series of installations.

D. Do not cover up firestopping system installations that will become concealed behind other construction until Owner's inspecting agency and building inspector, if required by authorities having jurisdiction, have examined each installation.

PART 2 - PRODUCTS

2.1 FIRESTOPPING, GENERAL

- A. Acceptable Manufacturers: Manufacturer is "acceptable" if firestopping system has been tested and listed by UL or other testing and inspection agency acceptable to authorities having jurisdiction and manufacturer can evidence product compliance with requirements of the Contract Documents.
 - 1. FM Global: Manufacturer to provide firestopping products in compliance with FM Global requirements as indicated in "Quality Assurance" Article.
- B. Compatibility: Provide firestopping systems that are compatible with one another, with the substrates forming openings, and with the items, if any, penetrating firestopping systems, under conditions of service and application, as demonstrated by firestopping system manufacturer based on testing and field experience.
- C. Single Source Responsibility: Furnish each type of product from single manufacturer. Provide secondary materials only as recommended by manufacturer of primary materials and approved by the qualified testing and inspection agency for firestopping systems indicated.

2.2 PERFORMANCE REQUIREMENTS

- A. General: Provide firestopping systems that are produced and installed to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of assembly penetrated.
- B. F-Rated Systems: Provide penetration firestopping systems with F-ratings determined per ASTM E 814 or UL 1479, equaling or exceeding fire-resistance rating of constructions penetrated.
- C. T-Rated Systems: For the following conditions, provide penetration firestopping systems with T-ratings, as well as F-ratings, determined per ASTM E 814 or UL 1479, where systems protect penetrating items exposed to potential contact with adjacent materials in occupiable floor areas:
 - 1. Penetrations located outside wall cavities.
 - 2. Penetrations located outside fire-resistive shaft enclosures.
 - 3. Penetrations located in construction containing fire-protection-rated openings.
- D. For penetration firestopping systems exposed to view, provide products with flame-spread ratings of less than 25 and smoke-developed ratings of less than 450, as determined per ASTM E 84.

2.3 PENETRATION FIRESTOP SYSTEMS

- A. Description: Classified in Underwriters Laboratories (UL) Fire Resistance Directory, "Section XHEZ Penetration Firestop Systems", and/or "Section XHHW Fill Void or Cavity Materials" for specific project conditions.
- B. Application Considerations:

- 1. Firestops exposed to view and/or are scheduled to receive finishes shall be paintable or capable of receiving finish materials.
- 2. Firestops exposed to traffic, moisture, and physical damage shall be products that do not deteriorate when exposed to these conditions.
- 3. Firestops for water piping penetrations, of any type, shall be moisture-resistant products.
- 4. Firestops for floor penetrations with annular spaces exceeding 4 in (100 mm) or more in width and exposed to possible loading and traffic shall be products capable of supporting the floor loads involved either by installing floor plates or by other means.
- 5. Firestops for penetrations involving insulated piping shall be products that do not require removal of insulation.
- 6. Firestops for cable trays and future penetrations shall be reusable pillows or bags.
- C. Provide firestops within fire resistive walls and partitions containing flush mounted devices such as outlet boxes, electrical cabinets and mechanical cabinets mounted back to back and spaced less than 24 inches on center in accordance with UL Fire Resistance Directory "Wall Opening Protective Materials", Category CLIV.
- D. For those products requiring mixing before application, comply with penetration firestopping system manufacturer's written instructions for accurate proportioning of materials, water (if required), type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other items or procedures needed to produce products of uniform quality with optimum performance characteristics for application indicated.

PART 3 - EXECUTION

3.1 **EXAMINATION**

A. Acceptance of Surfaces and Conditions: Examine substrates to receive products and systems and associated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

3.2 PREPARATION

- A. General: Comply with manufacturer's instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective installation or would cause latent defects in Work.
 - 1. Remove foreign materials from surfaces of openings, joints and penetrating items that could interfere with adhesion of firestopping.
 - 2. Clean opening and joint substrates and penetrating items to produce clean, sound surfaces capable of developing optimum bond with firestopping. Remove loose particles remaining from cleaning operation.
 - 3. Remove laitance and form release agents from concrete.
- B. Priming: Prime substrates where recommended by firestopping manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.

C. Masking Tape: Use masking tape to prevent firestopping from contacting adjoining surfaces that will remain exposed upon completion of Work and that would otherwise be permanently stained or damaged by such contact or by cleaning methods used to remove smears from firestopping materials. Remove tape as soon as it is possible to do so without disturbing firestopping's seal with substrates.

3.3 INSTALLATION, GENERAL

- A. Installation Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:
 - 1. Respective manufacturer written installation instructions.
 - 2. Accepted submittals.
 - 3. Contract Documents.
- B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by isolating metals and other materials from direct contact with incompatible materials.

3.4 INSTALLATION OF PENETRATION FIRESTOPS

- A. Install forming/damming materials and other accessories of types required to support fill materials during their application and in the position needed to produce the cross-sectional shapes and depths required to achieve fire ratings of designated penetration firestop systems. After installing fill materials, remove combustible forming materials and other accessories not indicated as permanent components of firestop systems.
- B. Install fill materials for penetration firestop systems by proven techniques to produce the following results:
 - 1. Completely fill voids and cavities formed by openings, forming materials, accessories, and penetrating items.
 - 2. Apply materials so they contact and adhere to substrates formed by openings and penetrating items.
 - 3. For fill materials that will remain exposed after completing Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.

3.5 IDENTIFICATION

- A. Identify penetration firestopping with preprinted metal or plastic labels. Attach labels permanently to surfaces adjacent to and within 6 in (150 mm) of firestopping edge so labels will be visible to anyone seeking to remove penetrating items or firestopping. Use mechanical fasteners or self-adhering-type labels with adhesives capable of permanently bonding labels to surfaces on which labels are placed. Include the following information on labels:
 - 1. The words "Warning Penetration Firestopping Do Not Disturb. Notify Building Management of Any Damage."
 - 2. Contractor's name, address, and phone number.
 - 3. Tested System or Engineered Judgement Number.
 - 4. Date of installation.
 - 5. Manufacturer's name.
 - 6. Installer's name.

3.6 FIELD QUALITY CONTROL

- A. Where required, inspection of through-penetration firestopping shall be performed in accordance with ASTM E 2174 "Standard Practice for On-Site Inspection of Installed Fire Stops" or other recognized standard.
- B. Testing Agency: The Owner may employ and pay a qualified independent testing agency to perform field quality control. Materials and installation failing to meet specified requirements shall be replaced at Contractor's expense. Retesting of materials and installations failing to meet specified requirements shall be done at Contractor's expense.
 - 1. Inspections shall include the following verifications:
 - a. Verify that proper specified firestopping system products and materials are used.
 - b. Verify installer's credentials and certification.
 - c. Verify that each firestopping system is installed in accordance with product manufacturer's latest published requirements.
 - d. Verify that firestopping system materials and installation comply with appropriate rating authorities' requirements.
 - e. Verify that firestopping system is installed in specified and/or indicated locations in rated assemblies.
 - 2. Do not proceed to enclose firestopping system installations with other construction until reports of examinations are issued.
 - 3. Where deficiencies are found, repair or replace firestopping system materials and products to bring deficient installation into compliance with specified requirements.

3.7 CLEANING

- A. Clean off excess fill materials and sealants adjacent to openings and joints as work progresses by methods and with cleaning materials approved by manufacturers of firestopping system products and of products in which opening and joints occur.
- B. Protect firestopping system components during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated firestopping immediately and install new materials to produce firestopping complying with specified requirements.

END OF SECTION

SECTION 32 9219 SEEDING (NATIVE DRILL)

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Temporary cover, seeding and maintenance.
- B. Maintenance.

1.2 RELATED SECTIONS

- A. 01 81 13 Sustainable Design Requirements: Action and Informational Submittals
 - 1. This project is pursuing LEED Healthcare v4: Silver Certification.
 - 2. Refer to this section for additional, required LEED submittals not included in this specification section.

1.3 DEFINITIONS

A. Weeds: Includes but not limited to Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass.

1.4 MAINTENANCE DATA

A. Maintenance Data: Include maintenance instructions, cutting method and maximum grass height; types, application frequency, watering, and recommended coverage of herbicide and fertilizer.

1.5 QUALITY ASSURANCE

- A. General:
 - 1. Do not make substitutions for specified materials.
 - 2. Ship materials with certificates of inspection required by governing authorities.
- B. Analysis and Standards:
 - 1. Provide standard packaged products with manufacturer's certified analysis.
 - 2. For other materials provide analysis in accordance with methods established by the Association of Official Agricultural Chemists.

1.6 QUALIFICATIONS

- A. Seed Producer: Company specializing in seed production and harvesting with minimum five years of experience, and certified by the State of Oklahoma.
- B. Installer: Company approved by the seed producer.

1.7 REGULATORY REQUIREMENTS

- A. Comply with regulatory agencies for fertilizer and herbicide composition.
- B. Provide certificate of compliance from authority having jurisdiction indicating approval of herbicide mixture.

1.8 SUBMITTALS

- A. Seed: submit seed manufacturer's certified statement for each grass seed mixture required, stating botanical and common name, percentage by weight, and percentages of purity, germination, and weed seed for the each grass seed species.
 - 1. Submit to the Owner the empty bags which had the annual rye or native grass seed mix seed.
- B. Herbicide
- C. Temporary Irrigation System Method for non-automatic irrigation native grass seed areas.
- D. Agricultural Soils Test of On-site Topsoil with Recommendations

1.9 DELIVERY, STORAGE, AND HANDLING

 Seeds shall be delivered in a waterproof, sealed and unopened package as shipped by the seed manufacturer.

1.10 COORDINATION

A. Coordinate with installation of underground irrigation system piping.

1.11 JOB CONDITIONS

- Proceed with seeding operations after underground irrigation system or the temporary irrigation system has been approved.
- B. Work within seasonal limitations of grass specie.
- C. When detrimental conditions are encountered, notify the Owner's Representative.

1.12 MAINTENANCE SERVICE

A. Maintain seeded areas immediately after applications until grass is well established and exhibits a vigorous growing condition and acceptance of all landscape work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Grass Seed:
 - Grass Seed: Provide fresh, clean, new-crop seed complying with tolerance for purity and germination established by Official Seed Analysts of North America. Provide seed of grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed, as specified.
 - 2. Native Short Mix:

Common Name	Botanical Name	Pounds Per Live Seed / Acre
Western Wheatgrass	Agropyron smithii	3.00
Sideoats Grama	Bouteloua curtipendula	6.00
Blue Grama	Bouteloua gracilis	3.00
Buffalograss	Buchloe cadtyloides	8.00
Partridge Pea	Cassi fasciculate	3.00
Green Spragletop	Lepochloa dubia	3.00
Love Grass	Eragrostis curvula	2.00

- 3. Warm Season Teff Grass (Eragrostis tef).
- 4. Cool Season Annual Ryegrass (Lolium multiflorium lam.).
- 5. After arrival on the job site, seed containers will be kept in a weather protected, cool and dry.
- B. Erosion Control Measures:
 - 1. Provide clean, seed-free, threshed straw of wheat.
 - 2. Or Approved Equal
- C. Topsoil: Refer to SECTION: Landscape Grading.
- D. Water: Provided by the Owner.
- E. Temporary Irrigation System: Water the annual ryegrass for temporary cover and the native grass areas for growth and permanent establishment.
- F. Soil Amendments:
 - 1. Provide as the soils test dictates the following:
 - a. Nitrogen: Furnish slow-release granular commercial product.
 - b. Lime: Furnish raw ground limestone containing not less than 95 percent carbonates, 98% passing a 20 mesh sieve and 50% passing a 100 mesh sieve.
 - c. Aluminum Sulfate
 - Bonemeal: Furnish commercial, raw, finely ground containing 4% nitrogen and 20% phosphoric acid.
 - e. Gypsum: furnish U.S. Grade Fine Gypsum.
 - f. Superphosphate: Soluble mixture of treated minerals; 20% available phosphoric acid.

G. Herbicide:

1. Plateau by BASF, approved by the seed manufacturer or approved equal.

PART 3 - EXECUTION

3.1 PLANTING SEASON

- A. Seed
 - 1. Cool Season Cover: Annual Ryegrass Fall Mid August to October and Spring February to April.
 - 2. Warm Season Cover: Teff Grass Summer May to August
 - 3. Native Grass Seed Mix Spring March 15 and May 15.

3.2 EXAMINATION

A. Verify that prepared on-site topsoil is ready to receive the work of this section including removal of hard pan areas, finish grading, etc.

3.3 PREPARATION OF SUBSTRATE

- A. Refer to SECTION: Landscape Grading
- B. Provide soil amendments and nutrients as per on site topsoil agricultural text.

3.4 APPLICATION

- A. Initial Application Seeding Rate:
 - 1. Warm Season Annual Teff Grass Seed Mix Rate: Eight (8) pounds per acre.
 - 2. Cool Season Annual Rye Grass Seed Mix Rate: Twenty (25) pounds per acre.
 - 3. Native Grass Seed Mix: Seed weight rate of seventeen (17) pound per acre (equal to eleven (11) Pure Live Seed (PLS) pounds per acre.

B. Drill Seeding:

1. All seed is to be drilled one-quarter (1/4) inch into the soil with a mechanical grass drill with depth bands and an agitator in the seed box. Rows shall be spaced not more than seven (7) inches apart. Drill half of required seed in one compass direction and then drill the remaining half in a direction ninety degrees (90°) to the first half.

C. Broadcast Seeding Small Areas

- Some portions of the project area is not accessible by the drill application. In these areas, uniformly
 apply seed at the same rate at cover with soil to a depth of one-quarter (1/4) inch to one-half (1/2)
 inch by hand raking the areas.
- 2. Broadcast seeding shall be accomplished using a hand-operated "cyclone-type" seeder or rotary broadcast equipment attached to construction or revegetation machinery. All machinery shall be equipped with metering devices. Broadcasting by hand shall be acceptable on small, isolated areas. Prior to hand broadcast seeding, divide the seed required into two portions. Apply the first half of the seed and then follow up by applying the second portion to ensure complete coverage by seed. When broadcast seeding, passes shall be made over each site to be seeded in a manner to ensure an even distribution of seed When using hoper type equipment, see shall be frequently mixed with the hopper to discourage seed settling and even planting distribution of the seed.

D. Cover Broadcast Seeding:

a. Following the drill seeding of all areas, the cover seed mix should be broadcast over areas as a temporary cover.

E. Provide Erosion Control Measures:

1. Apply straw mulch shall be applied immediately after seeding has been completed with a mechanical spreader at a rate not less than one and one-half (1-1/2) ton per acre and not more than two (2) tons per acre. Straw mulch shall then be anchored to the soil with a standard commercial crimper which shall crimp the mulch four (4) inches or more into the soil.

F. Watering:

Apply water with a fine spray immediately after each area has been mulched. Saturate to four (4)inches of the soil without erosion.

3.5 MAINTENANCE

A. The Contractor shall maintain the grass for a minimum of 90-days after installation or until completion and acceptance of all landscape work, whichever period is longer.

- B. Water to prevent grass and soil from drying out.
- C. Roll surface or topdress to remove irregularities.
- D. Control growth of weeds. The Contractor shall notify the Owner's Representative prior to herbicide spot application, favorable to the establishment of a Native Grass Short Mix. Apply herbicides in accordance with manufacturer's instructions. Remedy damage resulting from improper use of herbicides.
- E. Immediately seed areas which show deterioration or bare spots.
- F. Protect seeded areas with warning signs during maintenance period.
- A. Seeded Areas Outside Construction Fencing
 - Seeded areas outside of the temporary construction fence shall be maintained by Construction
 Manager for a minimum of 30-days after installation or until grass is established and accepted by
 Architect, whichever period is longer.
 - a. Water to prevent grass and soil from drying out.
 - b. Roll surface and top-dress with imported topsoil to remove irregularities.
 - c. Control growth of weeds. Construction Manager shall notify Architect prior to herbicide spot application, favorable to the establishment of a Native Grass Short Mix. Apply herbicides in accordance with manufacturer's instructions. Remedy damage resulting from improper use of herbicides.
 - d. <u>Immediately seed areas which show deterioration or bare spots.</u>

B. Seeded Areas Inside Construction Fencing

- Seeded areas inside of the temporary construction fence shall be maintained by Construction
 Manager until Final Acceptance of the entire project or until accepted by Architect.
 - a. Water to prevent grass and soil from drying out.
 - Roll surface and top-dress with imported topsoil to remove irregularities. Control growth of weeds. Construction Manager shall notify Architect prior to herbicide spot application, favorable to the establishment of a Native Grass Short Mix. Apply herbicides in accordance with manufacturer's instructions. Remedy damage resulting from improper use of herbicides.
 - c. Immediately seed areas which show deterioration or bare spots.

3.6 ACCEPTANCE OF AREAS

- A. When seeding is substantially completed, including maintenance, Owner's Representative shall, upon request, make an inspection to determine acceptability.
- B. Seeded areas will be acceptable, provided requirements, including maintenance, have been complied with, and healthy, uniform, close stand of specified grass is established, free of weeds, bare spots, open joints and surface irregularities.
- C. Where inspected work does not comply with requirements, replace defected work, and continue specified maintenance until re-inspected by the Owner's Representative and found to be acceptable.
- D. Once the work is accepted as complete, the Contractor will maintain the seeded areas until final acceptance of all landscape work for the project.

END OF SECTION

SECTION 32 9223 SODDING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Fertilizing.
- B. Sod installation.
- C. Maintenance

1.2 RELATED SECTIONS

- A. 01 81 13 Sustainable Design Requirements: Action and Informational Submittals
 - 1. This project is pursuing LEED Healthcare v4: Silver Certification.
 - 2. Refer to this section for additional, required LEED submittals not included in this specification section.

1.3 REFERENCES

A. ASPA (American Sod Producers Association) Guideline Specifications to Sodding.

1.4 SUBMITTALS

- A. Maintenance Data: Include maintenance instructions, cutting method and maximum grass height; types, application frequency, and recommended coverage of fertilizer.
- B. Certification: Submit sod certification for grass species and location of sod source.

1.5 DEFINITIONS

A. Weeds: Includes Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Grass Blackberry, Tansy Ragwort, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass.

1.6 QUALITY ASSURANCE

- A. Sod: Minimum age of 18 months, with root development that will support its own weight without tearing, when suspended vertically by holding the upper two corners.
- B. Sod Producer: Company specializing in sod production and harvesting with minimum five-years' experience and certified by the State of Oklahoma.
- C. Installer: Shall have over five-years of documented experience in the scope of work specified.

1.7 REGULATORY REQUIREMENTS

- A. Comply with regulatory agencies for fertilizer and herbicide composition.
- B. Provide certificate of compliance from authority having jurisdiction indicating approval of fertilizer mixture and herbicide mixture.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver sod on pallets. Protect exposed roots from dehydration.
- B. Do not deliver more sod than can be laid within 24 hours or sod will be rejected.

1.9 COORDINATION

A. Where underground sprinkler systems are required, coordinate with installation of underground sprinkler system piping, spray heads, valves and quick coupler valves.

1.10 JOB CONDITIONS

- A. Proceed with sodding operations after underground sprinkler system has been approved by the Landscape Architect.
- B. Work within seasonal limitations of the grass species.
- C. When detrimental conditions are encountered, notify the Landscape Architect.

1.11 MAINTENANCE SERVICE

A. Maintain sodded areas immediately after placement until final Acceptance of the project. The lawn shall be well established and exhibit a vigorous growing condition.

PART 2 - PRODUCT

2.1 MATERIALS

- A. Sod: ASPA Certified grade; "U-3" Bermuda Grass (or approved equal), a cultivated grass, Oklahoma grown, free of stones, burned or bare spots; containing no more than 10 weeds per 1,000 square feet.
- B. Imported Topsoil: Refer to SECTION ## ####.
- C. Fertilizer: Recommended for grass, with 50 percent of the elements derived from organic sources; controlled-release, granular or pellet form, uniform in composition, slow releasing, delivered in fully labeled sealed packages, and shall conform to applicable state or federal regulations, and a composition of the following: nitrogen 10 percent, phosphoric acid 20 percent, and soluble potash 10 percent.
- D. Water: During construction, the domestic water from the Project property will be provided to the Contractor by the Owner. The Contractor shall utilize the water in a conservative manner.
- E. Postemergent Herbicide: As manufactured by LESCO or GORDONS.

2.2 HARVESTING SOD

A. Machine cut sod and load on pallets in accordance with ASPA Guidelines. Big rolls are preferred.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine installation areas. Report unsatisfactory conditions in writing to Landscape Architect. Do not proceed until unsatisfactory conditions have been corrected.
- B. Verify that prepared topsoil is ready to receive the work of this section.
- C. Starting installation constitutes acceptance of condition or satisfactory for installation of sod by Contractor, who shall correct damage and defects or unsatisfactory work at no additional cost.

3.2 PREPARATION OF SUBSOIL

A. Comply with SECTION ## ####: Landscape Grading

3.3 FERTILIZING

- A. Apply fertilizer (10-20-10) at a rate of 2.5 lbs. per 1,000 square feet.
- B. Apply after smooth raking of topsoil and prior to installation of sod.
- C. Apply fertilizer no more than 48 hours before laying sod.
- D. Mix thoroughly into upper 2-inches of imported topsoil.
- E. Lightly water to aid the dissipation of fertilizer.

3.4 LAYING SOD

- A. Moisten prepared surface immediately prior to laying sod.
- B. Lay sod immediately (within 24 hours of harvesting) after delivery to site to prevent deterioration. Sod will be rejected if not installed within this time period.
- C. Place sod parallel with the adjacent street and building.
- D. Lay sod tight with no open joints visible, and no overlapping; stagger end joints 12-inches minimum. Do not stretch or overlap sod pieces.
- E. Lay smooth. Align with adjoining grass areas and flush with grade.
- F. Place top elevation of sod 1/2-inch below adjoining paving and curbs.
- G. Water sodded areas immediately after installation. Saturate sod to 4-inches of soil. Water by hand or by the irrigation system daily to prevent the root system from drying. Sod shall be kept moist. Dry sod will be rejected and replanted according to this specification.
- H. Once conditions are favorable, roll sodded areas to ensure a good bond between sod and soil and to remove minor depressions and irregularities. Roll sodded areas with a roller not exceeding 250 lbs.

3.5 MAINTENANCE

- A. Maintain the existing lawn and newly sodded grass areas between the street curb and the parking lot for a minimum of 30-days after installation or until Final Acceptance of the entire project, whichever period is longer. The grass shall be mowed a minimum of three times and maintained at a maximum height of 3 inches. Do not cut more than 1/3 of a grass blade at during one mowing.
- B. Neatly trim edges and hand clip where necessary.
- C. Water to prevent grass and soil from drying out.
- D. Roll surface and top-dress with imported topsoil to remove irregularities.
- E. Weed Control: Apply a weed control herbicide. Notify the Landscape Architect prior to herbicide application. Apply herbicides in accordance with manufacturer's instructions. Remedy damage resulting

from improper use of herbicides.

- F. Immediately sod areas which show deterioration or bare spots.
- G. Protect sodded areas with warning signs during maintenance period.
- A. Sod Outside Construction Fencing
 - Sod outside of the temporary construction fence shall be maintained by Construction Manager for a
 minimum of 30-days after installation or until grass is established and accepted by Architect,
 whichever period is longer.
 - a. The grass shall be mowed and maintained at a height of 3 inches. Do not cut more than 1/3 of a grass blade during one mowing. Neatly trim edges.
 - b. Water to prevent grass and soil from drying out.
 - c. Roll surface and top-dress with imported topsoil to remove irregularities.
 - d. Immediately sod areas which show deterioration or bare spots.

B. Sod Inside Construction Fencing

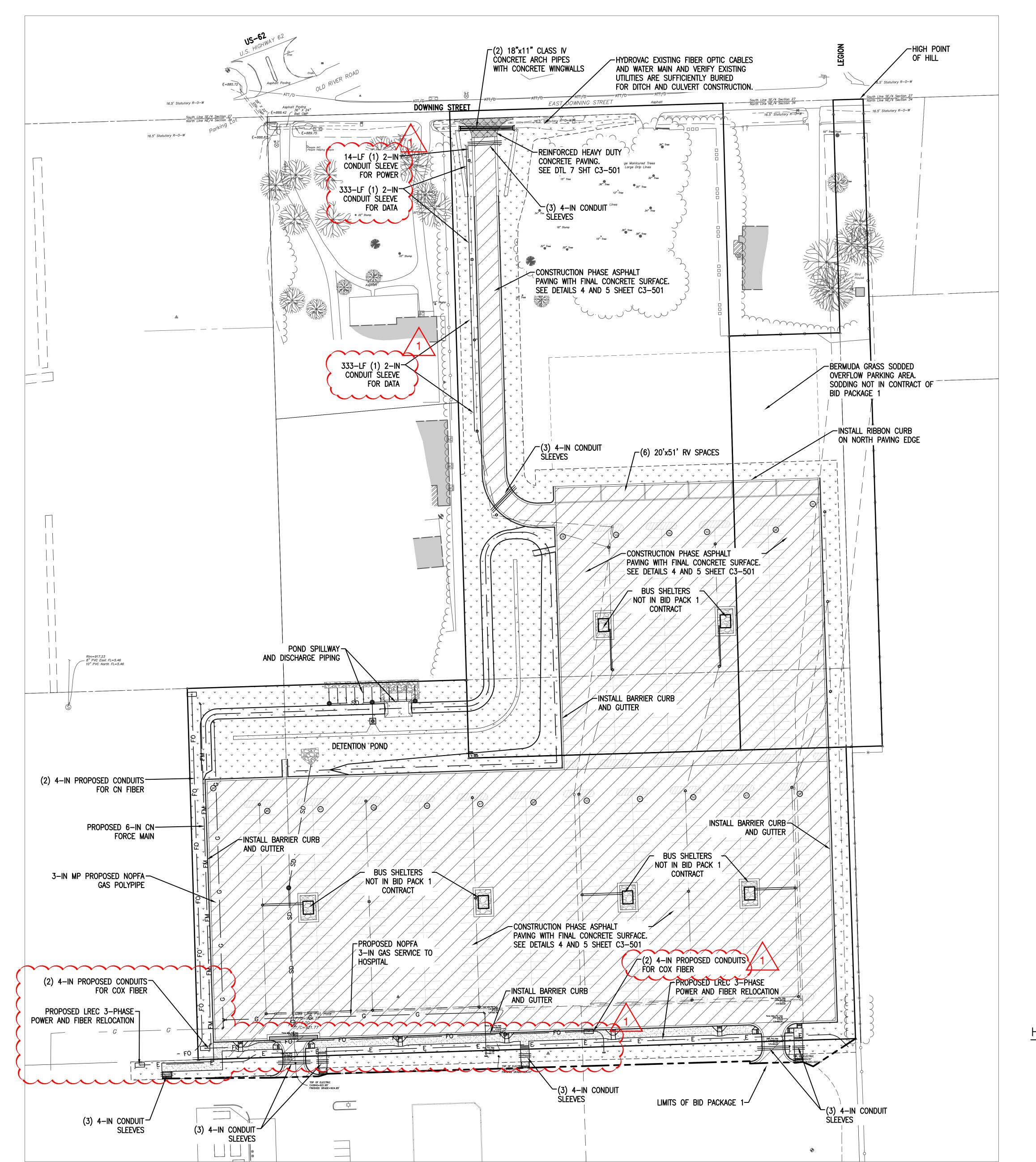
- Sod inside of the temporary construction fence shall be maintained by Construction Manager until Final Acceptance of the entire project or until accepted by Architect.
 - a. The grass shall be mowed and maintained at a height of 3 inches. Do not cut more than 1/3 of a grass blade during one mowing. Neatly trim edges.
 - b. Water a minimum of 30-days after installation or until grass is established to prevent grass and soil from drying out, whichever period is longer.
 - c. Roll surface and top-dress with imported topsoil to remove irregularities.
 - d. Immediately sod areas which show deterioration or bare spots.

3.6 ACCEPTANCE OF SODDED AREAS

- A. When sodding is substantially completed, including maintenance, the Landscape Architect will, upon request, make an inspection to determine acceptability.
- B. Sodded lawns will be acceptable, provided requirements, including maintenance, have been complied with, and healthy, uniform, close stand of specified grass is established, free of weeds, bare spots, open joints and surface irregularities.
- C. Where inspected work does not comply with requirements, replace defected work, and continue specified maintenance until reinspected by the Landscape Architect and found to be acceptable.
- D. Once the work is accepted as complete, the Contractor will maintain the sodded areas until Final Acceptance of the project.

END OF SECTION

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PARKING TOTALS

846 STANDARD SPACES

SCALE: 1" = 50'

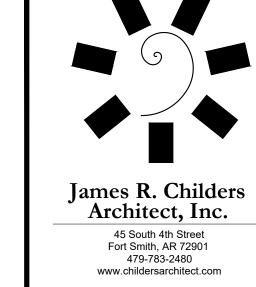
HARDSCAPE PATTERNS

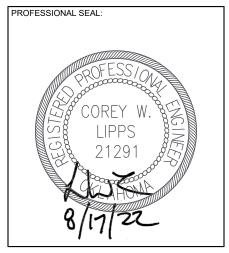
CONCRETE SIDEWALKS CONSTRUCTION PHASE ASPHALT PAVING WITH FINAL CONCRETE PAVING REINFORCED HEAVY DUTY CONCRETE PAVING SODDING / SEEDING / VEGETATIVE COVER

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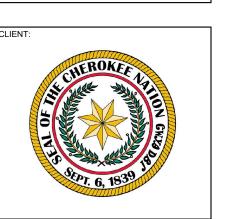
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KEY PLAN:		

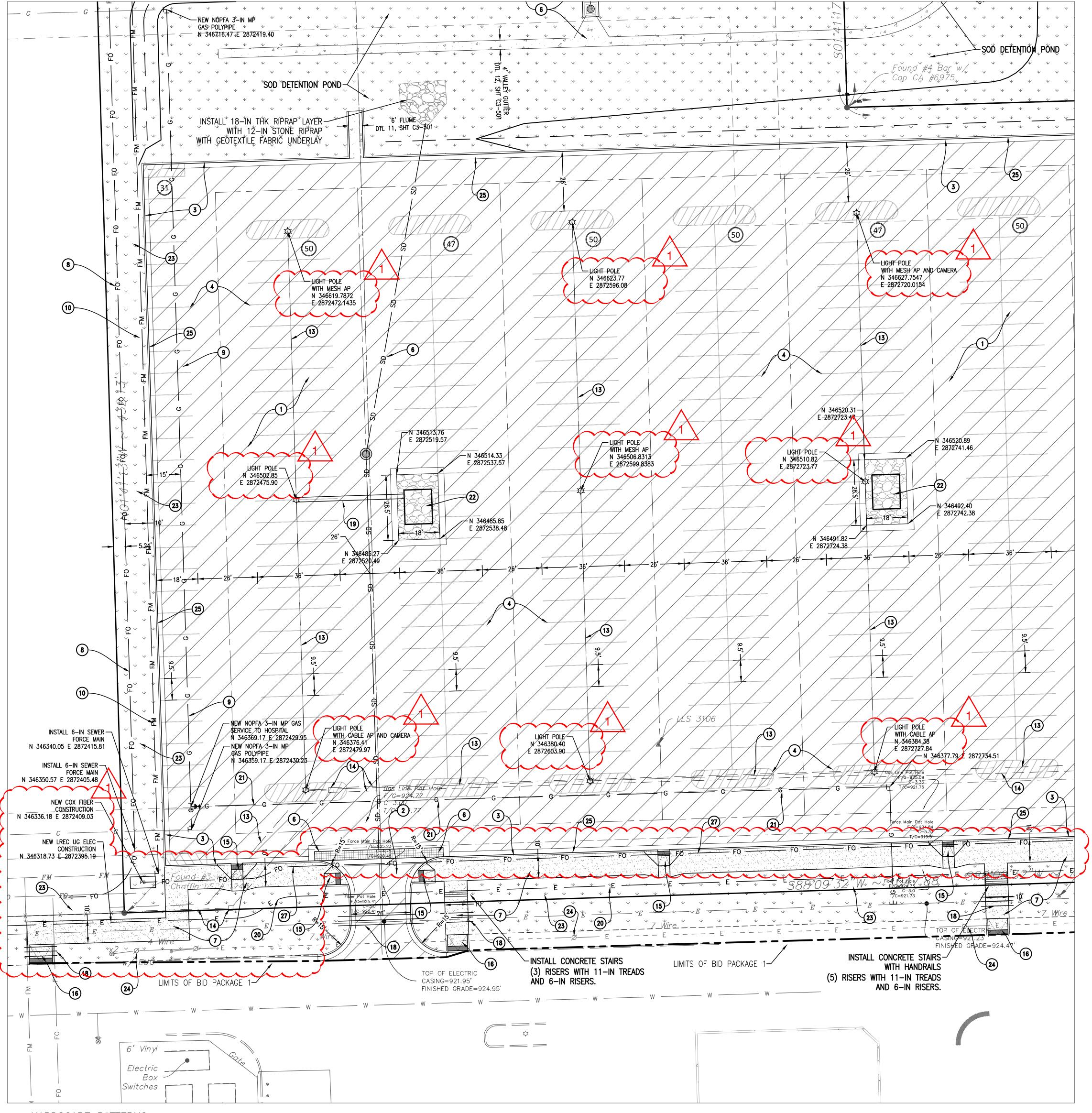
PROJECT PHASE: **BID PACKAGE 01**

(NORTH PARKING AND ACCESS)

		REVISIONS
#	DATE	DESCRIPTION
1	08-17-22	ADDENDUM 01

21-08.21 07-29-22

NP SITE PLAN OVERVIEW



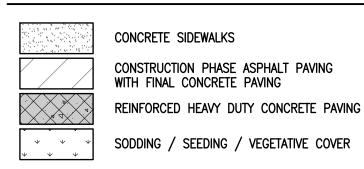
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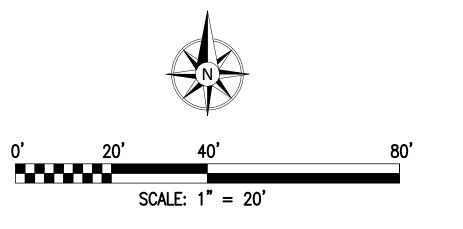




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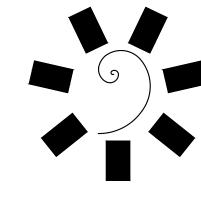
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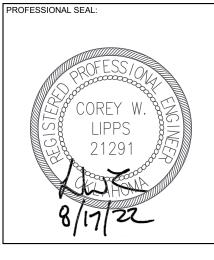




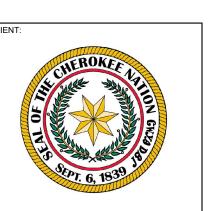


James R. Childers Architect, Inc.

45 South 4th Street Fort Smith, AR 72901 479-783-2480 www.childersarchitect.com







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CHEROKEE NATION
TINGS REPLACEMENT

P5
P3 P4
P1 P2

PROJECT PHASE:

BID PACKAGE 01

(NORTH PARKING AND ACCESS)

REVISIONS			
#	DATE	DESCRIPTION	
1	08-17-22	ADDENDUM 01	

21-08.21

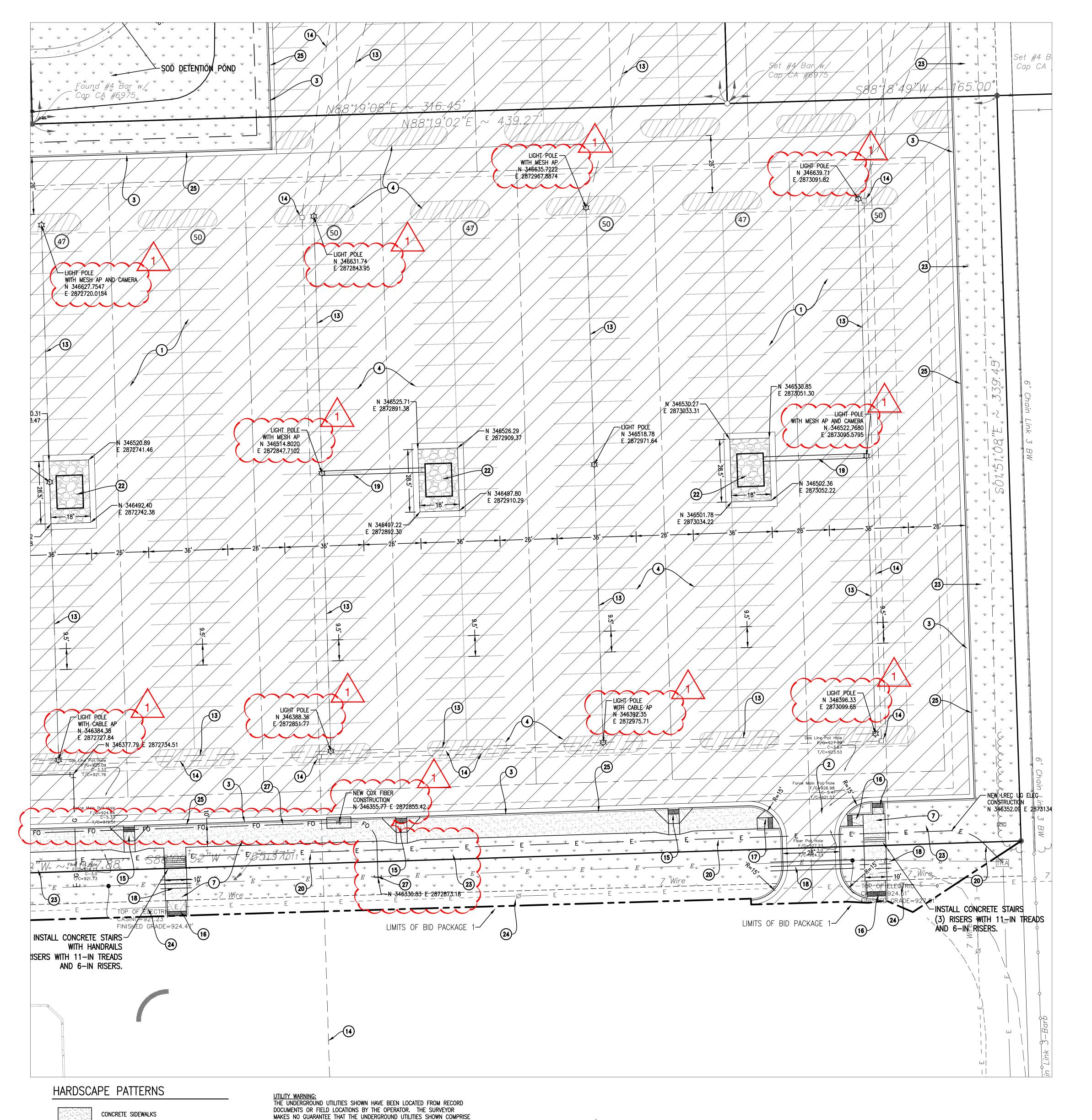
DATE: 07-29-22

SHEET NUMBER:

C3-109

TITLE:

NP1 SITE PLAN



SCALE: 1" = 20'

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CONSTRUCTION PHASE ASPHALT PAVING

REINFORCED HEAVY DUTY CONCRETE PAVING

SODDING / SEEDING / VEGETATIVE COVER

WITH FINAL CONCRETE PAVING

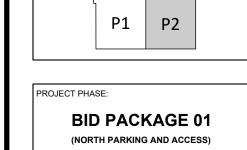
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		REVISIONS
#	DATE	DESCRIPTION
1	08-17-22	ADDENDUM 01

21-08.21

DATE: 07-29-22

SHEET NUMBER:

C3-110

EET TITLE:

NP2 SITE PLAN

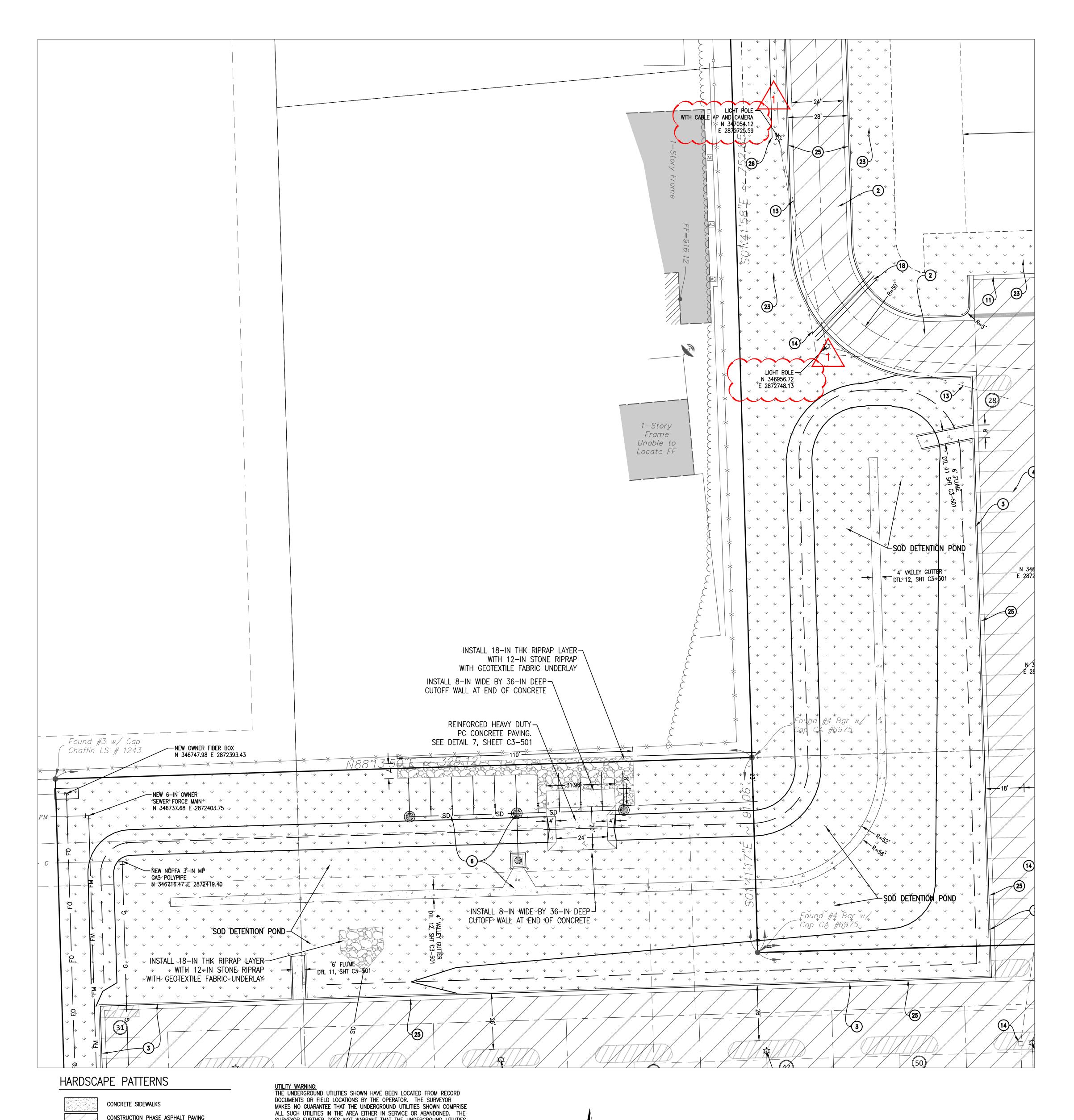




WITH FINAL CONCRETE PAVING

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SODDING / SEEDING / VEGETATIVE COVER



SCALE: 1" = 20'

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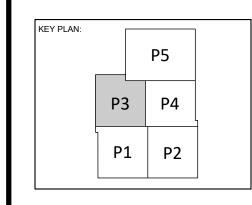
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BID PACKAGE 01

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21-08.21 07-29-22

C3-111

NP3 SITE PLAN

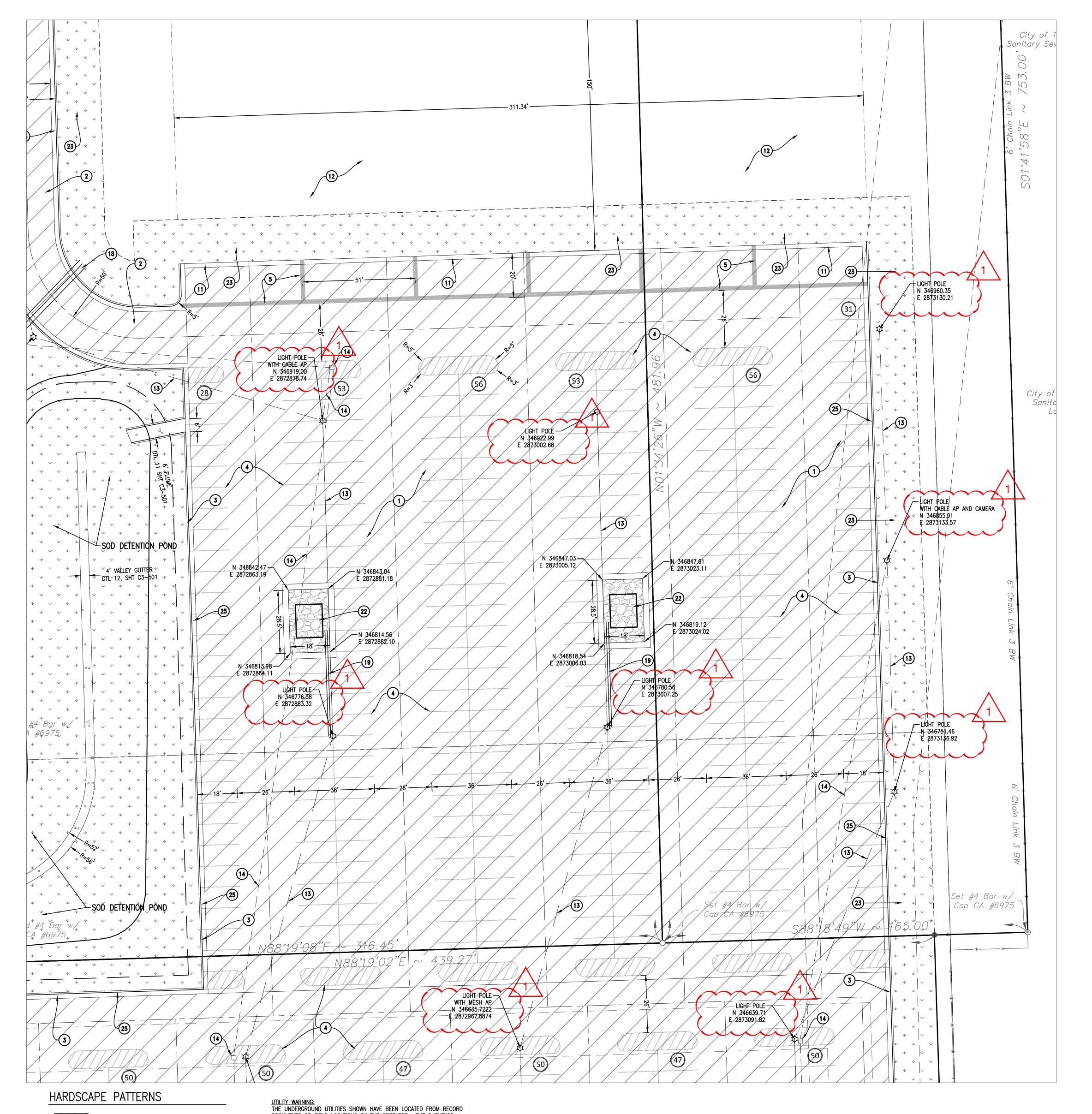
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WITH FINAL CONCRETE PAVING

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INSTALL ASPHALT PAVING WITH CONCRETE OVERLAY. SEE DTLS 3 AND 4 SHEET C3-501. ASPHALT PAVING SHALL BE INSTALLED AND USED DURING HOSPITAL CONSTRUCTION FOR CNOHC PARKING AND FOR CONTRACTOR'S TRAILERS, EQUIPMENT, AND MATERIALS STORAGE. PROVIDE PARKING SPACE STRIPING TO ASPHALT FOR CNOHC PARKING. INSTALL REINFORCE HEAVY DUTY CONCRETE PAVING. SEE DETAIL 7 SHEET C3-501. INSTALL 6-IN TALL BARRIER CURB WITH 24-IN GUTTER. SEE DTL 1 SHEET C3-501. INSTALL 4-IN WIDE WHITE TRAFFIC STRIPING FOR STANDARD PARKING SPACES AND AT END OF PARKING ROWS. INSTALL 2-FT WIDE WHITE TRAFFIC STRIPING FOR RECREATIONAL VEHICLE PARKING. REFER TO STORM DRAIN DRAWINGS FOR CONSTRUCTION. INSTALL CONCRETE SIDEWALK. RELOCATE CHEROKEE NATION FIBER OPTIC. INSTALL (2) 4-IN CONDUITS. BURY CONDUITS WITH A MINIMUM 3-FT COVER BELOW FINAL GRADE. EMBED CONDUIT WITH SAND OR ROCK SCREENINGS A MINIMUM 6-IN ON ALL SIDES. RELOCATE 3-IN NOPFA GAS MAIN PER NOPFA REQUIREMENTS. CM TO PERFORM TRENCHING, EMBEDMENT, AND BACKFILL. CM TO PROVIDE SAND OR ROCK SCREENINGS FOR PIPE EMBEDMENT AND BACKFILL. NOPFA TO PROVIDE MATERIALS AND INSTALLATION OF 3-IN GAS MAIN. RELOCATE 6-IN CHEROKEE NATION SEWER FORCE MAIN. REFER TO SEWER DRAWINGS FOR CONSTRUCTION. INSTALL RIBBON CURB ALONG NORTH EDGE OF RECREATIONAL VEHICLE PARKING. SODDED BERMUDA GRASS OVERFLOW PARKING AREA. SODDING OF OVERFLOW PARKING AREA NOT INCLUDED IN BID PACKAGE 1. INSTALL CONDUIT FOR UNDERGROUND ELECTRIC. REFER TO ELECTRICAL DRAWINGS. INSTALL CONDUIT AND PULLBOXES FOR UNDERGROUND COMMUNICATIONS. REFER TO LOW VOLTAGE DRAWINGS. INSTALL ADA COMPLIANT CURB TYPE A. REFER TO SHEET C3-501, INSTALL ADA COMPLIANT CURB TYPE B. REFER TO SHEET C3-501, DETAIL 8. INSTALL ADA COMPLIANT COMBINATION CURB TYPE A AND B. REFER TO SHEET C3-501, DETAILS 7 AND 8. INSTALL (3) 4-IN CONDUIT SLEEVES ACROSS DRIVE/SIDEWALK. EXTEND SLEEVE 5-FT BEYOND BACK OF CURB AND 2-FT BEYOND SIDEWALK. BURY CONDUITS 3-FT BELOW FINAL GRADE. EMBED AND BACKFILL CONDUITS WITH ODOT TYPE A AGGREGATE UNDER INSTALL (2) 4-IN CONDUIT SLEEVES FROM LIGHT POLE TO FUTURE BUS SHELTER. BURY CONDUITS 3-FT BELOW FINAL GRADE. LREC 3-PHASE POWER AND FIBER RELOCATION. COORDINATE WITH LREC. CM TO PERFORM TRENCHING, EMBEDMENT, AND BACKFILL. CM TO PROVIDE SAND OR ROCK SCREENINGS FOR PIPE EMBEDMENT AND BACKFILL. LREC TO PROVIDE MATERIALS AND INSTALLATION OF 3-PHASE POWER AND FIBER. INSTALL 3-IN NOPFA GAS MAIN PER NOPFA REQUIREMENTS. CM TO PERFORM TRENCHING, EMBEDMENT, AND BACKFILL. CM TO PROVIDE SAND OR ROCK SCREENINGS FOR PIPE EMBEDMENT AND BACKFILL. NOPFA TO PROVIDE MATERIALS AND INSTALLATION OF 3-IN GAS MAIN. PLUG END OF GAS PIPE FOR FUTURE EXTENSION TO THE HOSPITAL. FUTURE BUS SHELTER AREA. BUS SHELTERS NOT IN BID PACKAGE 1 CONTRACT. INSTALL 32-IN WIDE RIBBON CURB AROUND SHELTER AREA. BACKFILL AREA WITH ODOT TYPE A AGGREGATE BASE FROM SUBGRADE TO EDGE OF CURB AND COMPACT TO 95% SPD PER EARTHWORK SPECIFICATIONS. INSTALL SOD FROM THE LESSER OF 20-FT OR THE DISTANCE FROM THE CURB OR SIDEWALK TO THE PROPERTY LINE. CONSULTATION WITH OG&E IS NEEDED TO VERIFY IF THE EXCAVATION PROPOSED AROUND THE EXISTING POWER POLES IS ALLOWABLE. 25 SEE DIL 6, SHEET C3-502 FOR PHASED EDGE OF PAVING DETAIL INSTALL (1) 2-IN CONDUIT SLEEVE FOR UNDERGROUND COMMUNICATIONS. INSTALL (2) 4-IN CONDUITS FOR COX COMMUNICATIONS FIBER

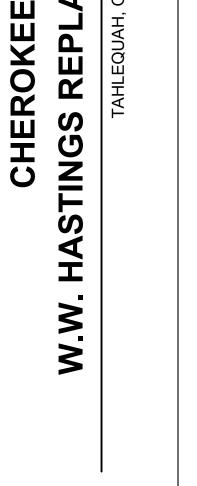
KEYNOTES

PROVIDE PARKING SPACE STRIPING FOR CNOHC PARKING SPACES ON THE CONSTRUCTION PHASE ASPHALT PAVEMENT. CNOHC PARKING SPACE AREA AND CONTRACTOR AREA TO BE LATER DEFINED.

A MINIMUM 6-IN ON ALL SIDES.

SERVICE. BURY CONDUITS WITH A MINIMUM 3-FT COVER BELOW FINAL GRADE. EMBED CONDUIT WITH SAND OR ROCK SCREENINGS





James R. Childers

Architect, Inc.

45 South 4th Street

Fort Smith, AR 72901 479-783-2480

www.childersarchitect.com

Oklahoma City, OK 73134 405-832-9900

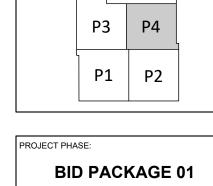
www.parkhill.com

Oklahoma CA #4935, Expires 6/30/2023

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NATION

PROFESSIONAL SEAL:



REVISIONS

DATE DESCRIPTION

1 08-17-22 ADDENDUM 01

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	1	08-17-22	ADDENDUM 01

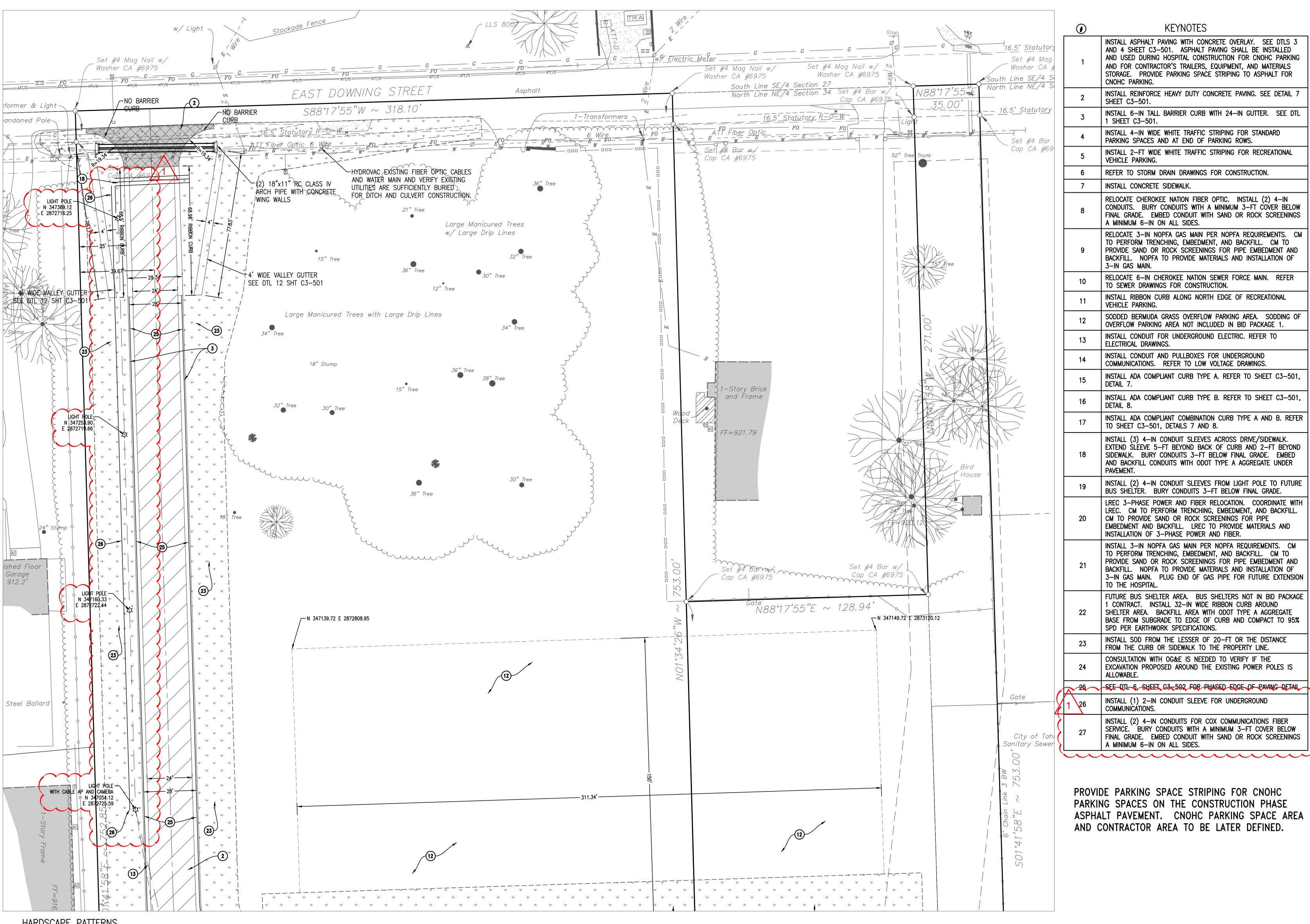
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C3-112

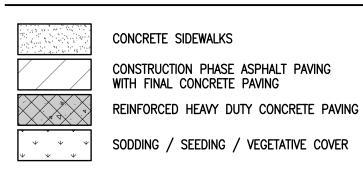
NP4 SITE PLAN



KEYNOTES INSTALL ASPHALT PAVING WITH CONCRETE OVERLAY. SEE DTLS 3 AND 4 SHEET C3-501. ASPHALT PAVING SHALL BE INSTALLED AND USED DURING HOSPITAL CONSTRUCTION FOR CNOHC PARKING AND FOR CONTRACTOR'S TRAILERS, EQUIPMENT, AND MATERIALS STORAGE. PROVIDE PARKING SPACE STRIPING TO ASPHALT FOR CNOHC PARKING. INSTALL REINFORCE HEAVY DUTY CONCRETE PAVING. SEE DETAIL 7 SHEET C3-501. INSTALL 6-IN TALL BARRIER CURB WITH 24-IN GUTTER. SEE DTL 1 SHEET C3-501. INSTALL 4-IN WIDE WHITE TRAFFIC STRIPING FOR STANDARD PARKING SPACES AND AT END OF PARKING ROWS. INSTALL 2-FT WIDE WHITE TRAFFIC STRIPING FOR RECREATIONAL VEHICLE PARKING. REFER TO STORM DRAIN DRAWINGS FOR CONSTRUCTION. INSTALL CONCRETE SIDEWALK. RELOCATE CHEROKEE NATION FIBER OPTIC. INSTALL (2) 4-IN CONDUITS. BURY CONDUITS WITH A MINIMUM 3-FT COVER BELOW FINAL GRADE. EMBED CONDUIT WITH SAND OR ROCK SCREENINGS A MINIMUM 6-IN ON ALL SIDES. RELOCATE 3-IN NOPFA GAS MAIN PER NOPFA REQUIREMENTS. CM TO PERFORM TRENCHING, EMBEDMENT, AND BACKFILL. CM TO PROVIDE SAND OR ROCK SCREENINGS FOR PIPE EMBEDMENT AND BACKFILL. NOPFA TO PROVIDE MATERIALS AND INSTALLATION OF 3-IN GAS MAIN. RELOCATE 6-IN CHEROKEE NATION SEWER FORCE MAIN. REFER TO SEWER DRAWINGS FOR CONSTRUCTION. INSTALL RIBBON CURB ALONG NORTH EDGE OF RECREATIONAL VEHICLE PARKING. SODDED BERMUDA GRASS OVERFLOW PARKING AREA. SODDING OF OVERFLOW PARKING AREA NOT INCLUDED IN BID PACKAGE 1. INSTALL CONDUIT FOR UNDERGROUND ELECTRIC. REFER TO ELECTRICAL DRAWINGS. INSTALL CONDUIT AND PULLBOXES FOR UNDERGROUND COMMUNICATIONS. REFER TO LOW VOLTAGE DRAWINGS. INSTALL ADA COMPLIANT CURB TYPE A. REFER TO SHEET C3-501, INSTALL ADA COMPLIANT CURB TYPE B. REFER TO SHEET C3-501, DETAIL 8. INSTALL ADA COMPLIANT COMBINATION CURB TYPE A AND B. REFER TO SHEET C3-501, DETAILS 7 AND 8. INSTALL (3) 4-IN CONDUIT SLEEVES ACROSS DRIVE/SIDEWALK. EXTEND SLEEVE 5-FT BEYOND BACK OF CURB AND 2-FT BEYOND SIDEWALK. BURY CONDUITS 3-FT BELOW FINAL GRADE. EMBED AND BACKFILL CONDUITS WITH ODOT TYPE A AGGREGATE UNDER INSTALL (2) 4-IN CONDUIT SLEEVES FROM LIGHT POLE TO FUTURE BUS SHELTER. BURY CONDUITS 3-FT BELOW FINAL GRADE. LREC 3-PHASE POWER AND FIBER RELOCATION. COORDINATE WITH LREC. CM TO PERFORM TRENCHING, EMBEDMENT, AND BACKFILL. CM TO PROVIDE SAND OR ROCK SCREENINGS FOR PIPE EMBEDMENT AND BACKFILL. LREC TO PROVIDE MATERIALS AND INSTALLATION OF 3-PHASE POWER AND FIBER. INSTALL 3-IN NOPFA GAS MAIN PER NOPFA REQUIREMENTS. CM TO PERFORM TRENCHING. EMBEDMENT. AND BACKFILL. CM TO PROVIDE SAND OR ROCK SCREENINGS FOR PIPE EMBEDMENT AND BACKFILL. NOPFA TO PROVIDE MATERIALS AND INSTALLATION OF 3-IN GAS MAIN. PLUG END OF GAS PIPE FOR FUTURE EXTENSION TO THE HOSPITAL. FUTURE BUS SHELTER AREA. BUS SHELTERS NOT IN BID PACKAGE 1 CONTRACT. INSTALL 32-IN WIDE RIBBON CURB AROUND SHELTER AREA. BACKFILL AREA WITH ODOT TYPE A AGGREGATE BASE FROM SUBGRADE TO EDGE OF CURB AND COMPACT TO 95% SPD PER EARTHWORK SPECIFICATIONS. INSTALL SOD FROM THE LESSER OF 20-FT OR THE DISTANCE

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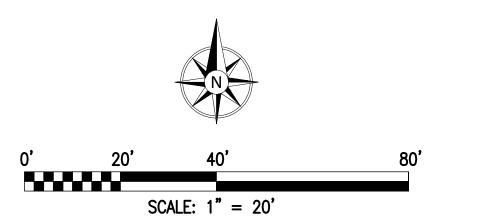
HARDSCAPE PATTERNS



<u>UTILITY WARNING:</u>
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD

BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.





FROM THE CURB OR SIDEWALK TO THE PROPERTY LINE.

CONSULTATION WITH OG&E IS NEEDED TO VERIFY IF THE

INSTALL (1) 2-IN CONDUIT SLEEVE FOR UNDERGROUND

ALLOWABLE.

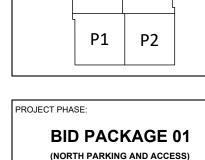
COMMUNICATIONS.

A MINIMUM 6-IN ON ALL SIDES.

EXCAVATION PROPOSED AROUND THE EXISTING POWER POLES IS

SEE DIL 6, SHEET C3-502 FOR PHASED EDGE OF PAVING DETAIL.

INSTALL (2) 4-IN CONDUITS FOR COX COMMUNICATIONS FIBER SERVICE. BURY CONDUITS WITH A MINIMUM 3-FT COVER BELOW FINAL GRADE. EMBED CONDUIT WITH SAND OR ROCK SCREENINGS



James R. Childers

Architect, Inc.

45 South 4th Street

Fort Smith, AR 72901

479-783-2480

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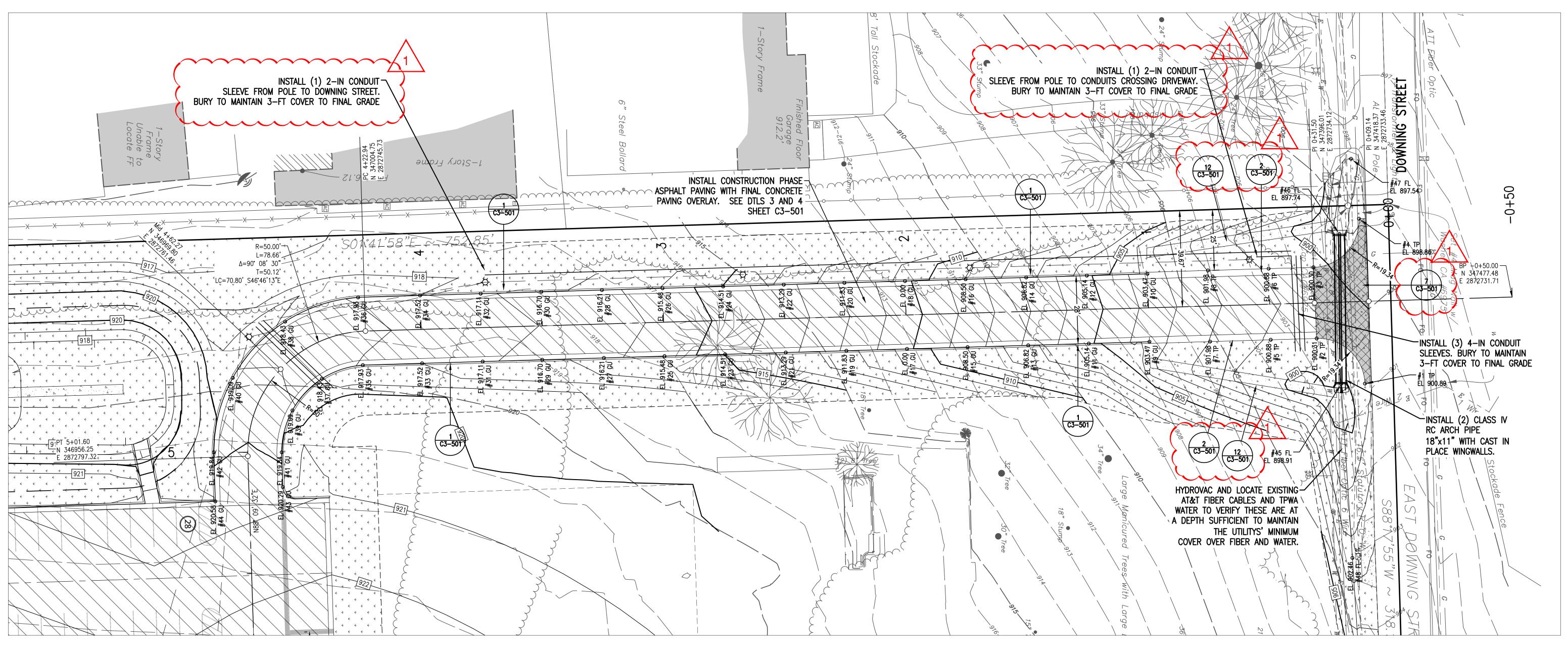
Oklahoma CA #4935, Expires 6/30/2023

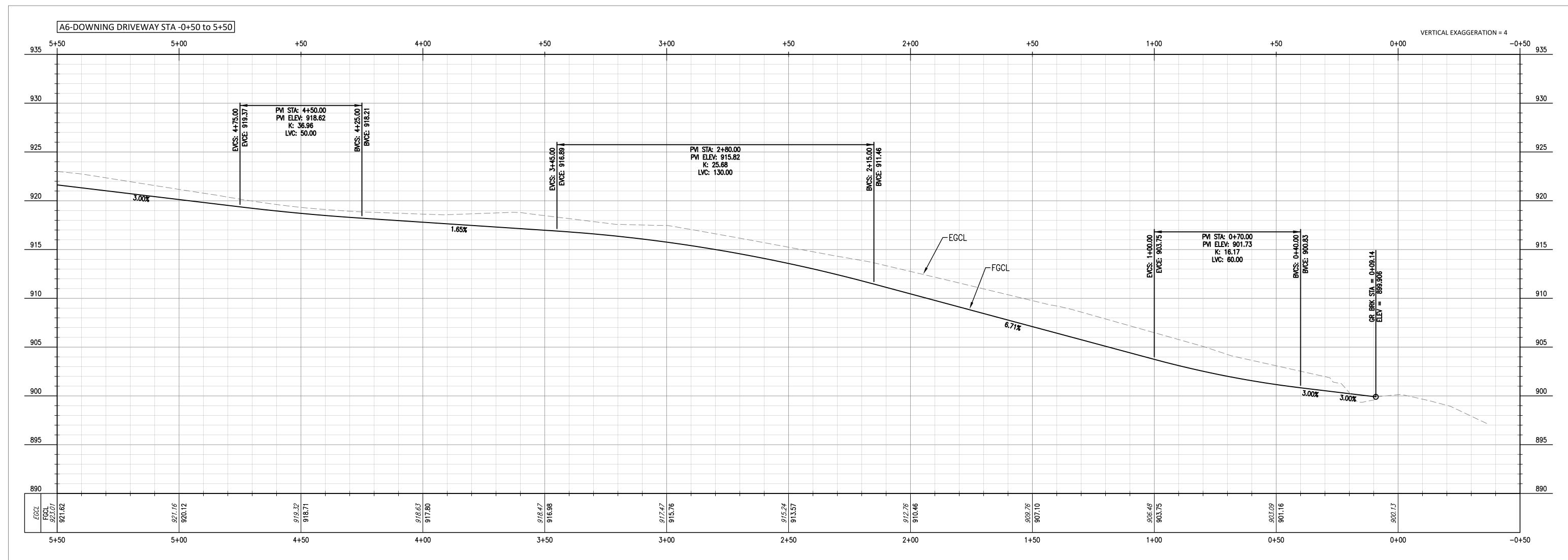
(NORTH PARKING AND ACCESS) REVISIONS DESCRIPTION 08-17-22 ADDENDUM 01

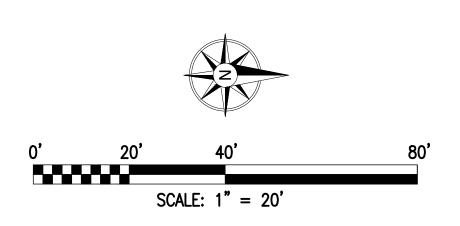
07-29-22 SHEET NUMBER: C3-113

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NP5 SITE PLAN



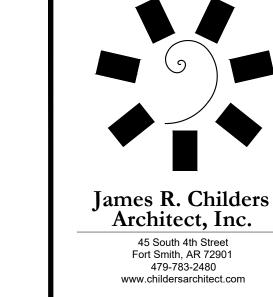


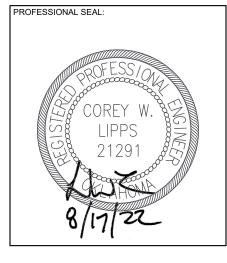


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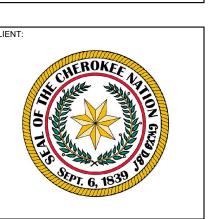
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PROJECT PHASE:	
BID PACKAGE 01	

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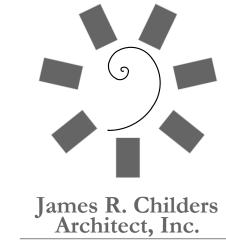
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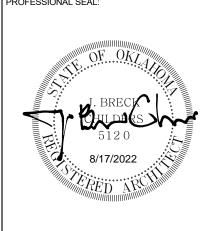
C9-201

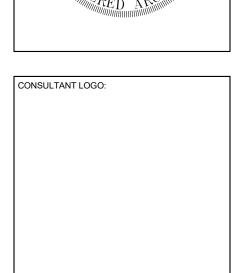
DOWNING DRIVEWAY
PLAN & PROFILE

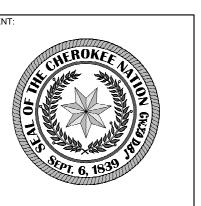
	INDEX OF DRAWINGS - VOLUME 01 - CIVIL
	29-202
	3 -07-
	JMBEF
	PACK
	SHEET NAME
	GENERAL VOL 01 COVER SHEET ■
	VOL 01 COVER SHEET G0.01 DRAWING INDEX CIVIL
3" = 1-	C0-102 GENERAL CIVIL NOTES - BP1 C1-103 EXISTING CONDITIONS
•	C1-104 EXISTING CONDITIONS C1-105 EXISTING CONDITIONS
_	C2-108 NP DEMOLITION OVERVIEW C2-109 NP 1 DEMOLITION PLAN
	C2-110 NP2 DEMOLITION PLAN C2-111 NP3 DEMOLITION PLAN
	C2-112 NP4 DEMOLITION PLAN C2-113 NP5 DEMOLITION PLAN
	C2-702 NP EROSION CONTROL PLAN C2-750 EROSION CONTROL DETAILS
	C3-108 NP SITE PLAN OVERVIEW C3-109 NP1 SITE PLAN
7	C3-110 NP2 SITE PLAN C3-111 NP3 SITE PLAN
	C3-112 NP4 STE PLAN C3-113 NP5 SITE PLAN
	C3-501 SITE DETAILS C3-502 SITE DETAILS
	C3-503 CONCRETE PAVING JOINT DETAILS C5-113 NP GRADING OVERVIEW
	C5-114 NP1 GRADING PLAN C5-115 NP2 GRADING PLAN
	C5-115 NP2 GRADING PLAN C5-116 NP3 GRADING PLAN C5-117 NP4 GRADING PLAN C5-118 NP5 GRADING PLAN C5-210 NP COORDINATES AND ELEVATIONS TABLE
	C5-118 NP5 GRADING PLAN C5-210 NP COORDINATES AND ELEVATIONS TABLE
	T C6-201 TNP STORM PLAN & PROFILE
ļ _o	C6-202 NP STORM PLAN & PROFILE C6-501 STORM DRAIN DETAILS C6-502 STORM DRAIN DETAILS
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٦	C8-201 FORCE MAIN PLAN & PROFILE
	C8-501 FORCE MAIN DETAILS C9-201 DOWNING DRIVEWAY PLAN AND PROFILE C9 501 DOWNING DRIVEWAY DETAILS
	C9-501 DOWNING DRIVEWAY DETAILS Grand total: 43
	INDEX OF DRAWINGS - VOLUME 07 - ELECTRICAL
_	620-63
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	SHEET NAME
	GENERAL VOL 07 COVER SHEET G0.01 DRAWING INDEX
	G0.01 DRAWING INDEX ELECTRICAL
	ENL-00 ELECTRICAL LEGEND
] ₆	ENL-01 ELECTRICAL SITE PLAN - NORTH LOT ENL.00 ELECTRICAL LEGEND ENL.01 ELECTRICAL SITE PLAN - NORTH LOT
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_ `	INDEX OF DRAWINGS - VOLUME 09 - LV/IT/SECURITY/DAS
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	70 - 10 P
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	PACK
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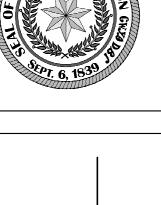


45 South 4th Street Fort Smith, AR 72901 479-783-2480 www.childersarchitect.com PROFESSIONAL SEAL:









CHEROKEE NATION REPLACEMENT HOSPITAL

PROJECT PHASE: **BID PACKAGE 01** (NORTH PARKING & ACCESS)

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DRAWING INDEX

SHEET NOTES - SITE PLAN

REFERENCE SHEET TG1.1 FOR ALL SYMBOLS AND PROJECT SPECIFIC NOTES.

CONDUITS INSTALLED FOR COMMUNICATIONS CABLING SHALL OBSERVE THE FOLLOWING PRACTICES:

A. USE OF SHARP OR NINETY DEGREE BENDS ARE NOT ALLOWED. CHANGE OF DIRECTION SHALL USE WIDE SWEEPING RADIUS BENDS.

ALLOWED. CHANGE OF DIRECTION SHALL USE WIDE SWEEPING RADIUS BENDS.

B) PULL BOXES SIZED TO ACCOMMODATE CABLE BEND RADIUS SHALL BE PLACED WHEN CONDUIT CHANGES

DIRECTION AS SHOWN ON DRAWINGS.

C) CABLE PULLING TENSION SHALL NOT EXCEED THE MANUFACTURER'S RECOMMENDATIONS – PULL METER SHALL BE USED TO MEASURE TENSION.

D) CONDUIT PATHWAY SHALL BE PROVIDED WITH A METALLIC TRACER WIRE WITHIN THE SAME TRENCH AS THE CONDUIT INSTALLED AT THE SAME LEVEL FOR FUTURE LOCATION PURPOSES. IN ADDITION, A WEATHER PROOF "FIBER OPTIC CABLE" MARKER TAPE SHALL BE INSTALLED AT 18" ABOVE THE CONDUIT TO NOTIFY ANYONE DIGGING IN THE EVENT AN ELECTRONIC LOCATE WAS NOT PERFORMED TO TRACE IN GROUND CONDUITS.

E) CONTRACTOR IS RESPONSIBLE FOR SEALING CONDUITS INSIDE BUILDINGS TO ENSURE NO BUILDING INGRESS OF WATER, INSECTS OR RODENTS.

F) CONDUITS SHOULD TURN NO MORE THAT AN ACCUMULATED 180 DEGREES BETWEEN TWO PULL BOXES. IF FIELD CONDITIONS REQUIRE MORE THAN AN ACCUMULATED 180 DEGREE TURN(S) BETWEEN TWO PULL BOXES THE CONTRACTOR IS REQUIRED TO ADD A THIRD PULL BOX BETWEEN THE TWO AFOREMENTIONED PULL BOXES IN A LOCATION THAT REDUCES THE TURNS BETWEEN ANY TWO OF THE PULL BOXES TO LESS THAN 180 DEGREES.

E) DIV. 26 TO PROVIDE COMMUNICATIONS PATHWAY TO MONUMENT SIGH. REFERENCE ELECTRICAL SHEETS FOR CONDUIT PLACEMENT,

KEYNOTE LEGEND (NOT AI L KEYNOTES MAY APPLY)

01. 24" X 24" X 36" ANSI, AASHTO H-20 TELECOMMUNICATIONS PULL BOX LOCATION. PULL BOX SHALL BE RATED FOR THE TERRAIN IT WILL BE INSTALLED IN. PULL BOXES INSTALLED IN PARKING LOTS OR DRIVEWAYS MUST BE RATED FOR SUCH AN ENVIRONMENT/LOAD. ALL PULL BOXES SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL. COORDINATE FINAL LOCATIONS WITH OWNER AND LANDSCAPE ARCHITECT. ACCEPTABLE MANUFACTURER IS MARTIN INDUSTRIES OR OTHER APPROVED EQUAL.

02. 4" CONDUIT WITH THREE CHAMBER MAXCELL INNERDUCT BETWEEN PULL BOX LOCATIONS.

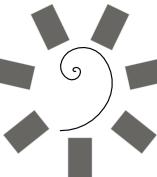
03. LIGHT POLE LOCATION WITH WAP AND/OR SURVEILLANCE CAMERA. REFERENCE ELECTRICAL SITE PLAN FOR EXACT LOCATION

04. FURNISH 1-1/4" CONDUIT FOR SURVEILLANCE AND/OR WIRELESS ACCESS POINT CABLING FROM PULL BOX TO LICE POLE.

WIRELESS ACCESS POINT CABLING FROM PULL BOX TO LIGH POLE.

06. 24" X 24" X 36" ANSI, TIER 5 TELECOMMUNICATIONS PULL BOX LOCATION. PULL BOX SHALL BE RATED FOR THE TERRA IT WILL BE INSTALLED IN. PULL BOXES INSTALLED IN PARKING LOTS OR DRIVEWAYS MUST BE RATED FOR SUCH AN ENVIRONMENT/LOAD. ALL PULL BOXES SHALL BE PROVIDED.

FURNISH ONE 2" CONDUIT TO SIGN ON DOWNING STREET COMMUNICATIONS PATHWAY. REFERENCE ELECTRICAL WINGS FOR SIGN LOCATION.

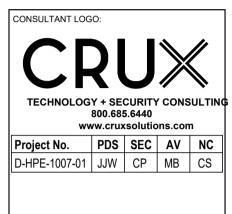


James R. Childers Architect, Inc.

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EPLACEMENT HOSPITAL
TAHLEQUAH, OKLAHOMA

Y PLAN:

CCT PHASE:

BID PACKAGE 01

(NORTH PARKING AND ACCESS)

DATE DESCRIPTION

1 08-17-22 ADDENDUM 01

07-29-2022
IEET NUMBER:

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NETWORK SITE PLAN -NORTH PARKING & ACCESS