

Crosstown Boulevard Natural Resources and Floodplains Technical Memorandum



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Summary of Findings

The Crosstown Boulevard study area is within a heavily urbanized portion of downtown Oklahoma City, Oklahoma. During field reviews of the study area on March 29, 2013, and again on January 15-16, 2014, no wetlands or waters of the U.S. were observed. In addition, no potential habitat for species protected under the Endangered Species Act was identified.

Based upon the analysis, construction activities associated with the Crosstown Boulevard would not effect any species protected by the Endangered Species Act given the heavily urbanized nature of the area. Additionally, no impacts on migratory bird species are expected as a result of the project.

Two small portions of the 100-year floodplain are located within the study area. One area of floodplain is located south of Sheridan Avenue between Pennsylvania Avenue and Blackwelder Avenue. The second area of 100-year floodplain is located on the southeast portion of the study area near the new I-40 Crosstown. Based upon the existing impervious nature of the area, the Crosstown Boulevard is not expected to encroach on any floodplains.

1.0 Introduction

Congress passed the National Environmental Policy Act of 1969 to ensure that federal agencies consider and minimize the impacts of projects to both the natural and human environments. The “natural environment” consists of features such as wetlands, streams, threatened and endangered species, and wildlife. The urbanized setting of the Crosstown Boulevard project does not automatically preclude addressing natural environmental features as part of the project documentation.

Natural resources within the study area were reviewed to identify potential habitat for species protected under Section 7(c) of the Endangered Species Act of 1973, as well as for large predatory bird species protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The review also included identification of potentially jurisdictional waters and potentially jurisdictional wetlands in compliance with Section 404 of the Clean Water Act. The purpose of this technical memorandum is to document the process used to identify natural resources within the study area and determine potential impacts to these resources based on the alternatives developed for the Crosstown Boulevard.

This Natural Resources and Floodplains Technical Memorandum was developed to support the analysis completed for the Environmental Assessment for the Crosstown Boulevard. The Environmental Assessment will include a summary of this technical memorandum, which will be included as an appendix to the document when it is developed.

2.0 Methodology

The study area in the immediate vicinity of the alternatives between Pennsylvania Avenue and Byers Avenue was visually examined to identify possible wetlands and waters of the U.S. on March 29, 2013, and again on January 15-16, 2014. The field review included walking and driving the entire alignments to search for possible wetland resources or habitats. As appropriate, data points were noted and information was collected. Representative photographs were also taken during the field reviews.

The U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) map was reviewed to determine the presence or absence of wetlands within the study area. The NWI database was developed for the purpose of aiding in the determination and classification of wetlands and deep water habitats from aerial imagery.

During the field reviews, the methods outlined in the 1987 *Corps of Engineers Wetlands Delineation Manual* (U.S. Army Corps of Engineers (USACE) 1987), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)* (USACE 2010) were used to identify and determine wetland locations within the study area.

In addition, per 33 Code of Federal Regulations (CFR) 328.3(e) guidance, the Ordinary High Water Mark was identified at locations where a water resource (i.e., non-wetland waters of the U.S.) was observed within the study area.

The Federal Emergency Management Agency (FEMA) National Flood Hazard Layer, published on August 14, 2013, was used to identify regulatory floodplains within the study area.

3.0 Results

The study area is located within the Lower North Canadian River watershed (HUC-11100302). The USACE-Tulsa District and the Oklahoma Department of Wildlife have regulatory authority over this area.

The study area covers an approximate area of 463 acres within the urbanized central business district of Oklahoma City. The primary land uses within the study area are comprised of commercial and industrial uses (Table 1).

Table 1. Land Use within the Study Area

Land Use	Area (Acres)	Percent of Total Area
Residential	71	15.3
Commercial/Mixed Use	189	40.8
Office Center	18	3.9
Institutional	25	5.4
Industrial	139	30.0
Parks and Open Space	21	4.5
Total	463	-

3.1 Wetlands and Waters of the US

3.1.1 Wetlands

The NWI map identifies the Oklahoma River as the only resource near the study area, but the Crosstown Boulevard would not effect this river (Figure 1) (USFWS 2014a). Field reviews for the project did not identify any wetland resources.

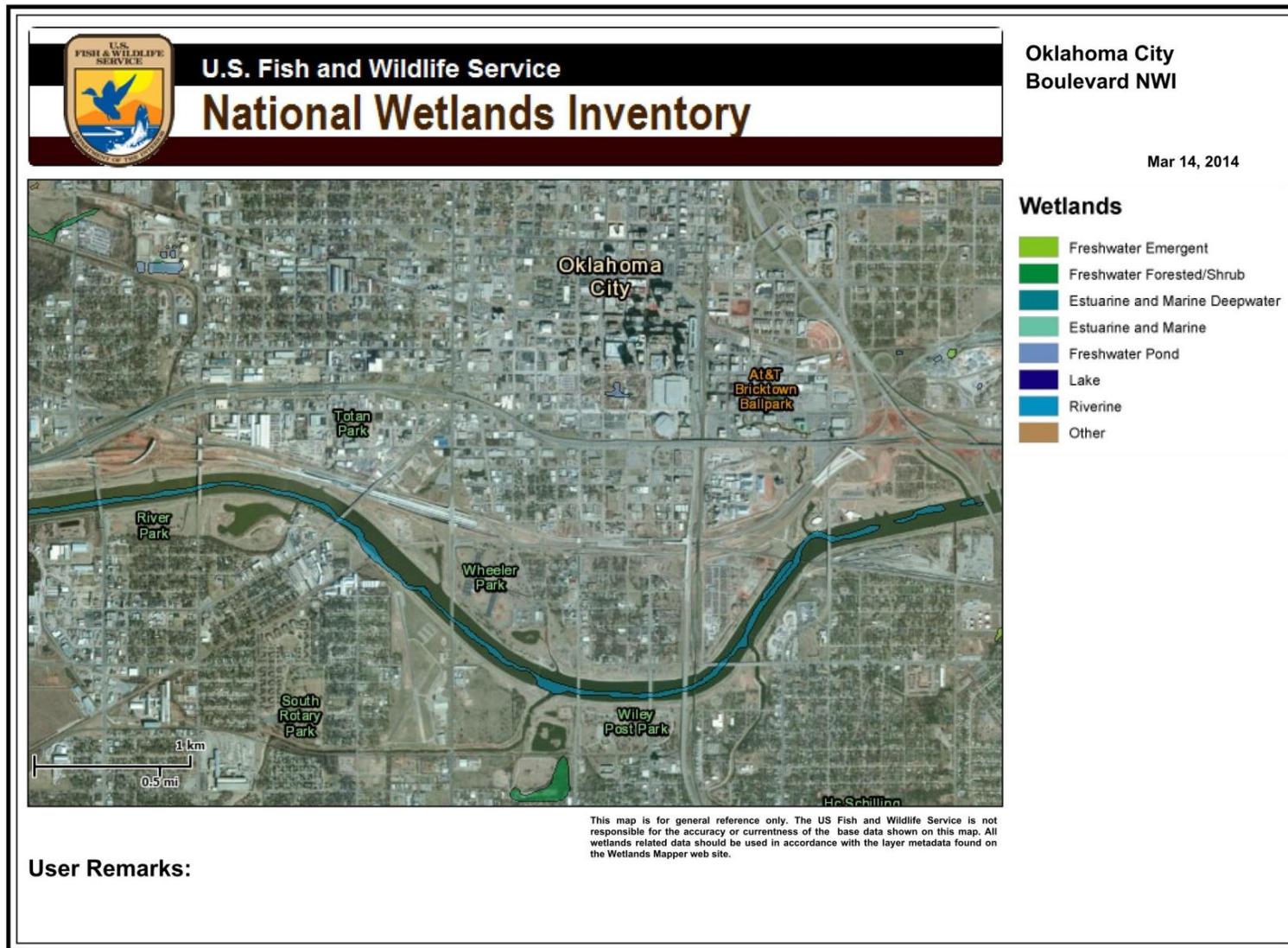
3.1.2 Oklahoma Scenic Rivers

The Oklahoma Scenic Rivers Commission (OSRC) works to preserve and protect the aesthetic, scenic, historic, archaeological, and scientific features of the Illinois River and its tributaries (Lee Creek, Little Lee Creek, Barren (Baron) Fork Creek, Flint Creek, and (Upper) Mountain Fork). According to the commission, none of these resources occurs within or near the study area (OSRC 2014).

3.1.3 Oklahoma 2010 303(d) Waters

According to the Oklahoma Department of Environmental Quality, no section 303(d) waters occur within or near the study area (Oklahoma Department of Environmental Quality 2014).

Figure 1. National Wetland Inventory Map of Study Area



3.1.4 Floodplains

The FEMA National Flood Hazard Layer, published August 14, 2013, identified two small portions of a regulated 100-year floodplain within the study area (Figure 2). One area of floodplain is located south of Sheridan Avenue between Pennsylvania Avenue and Blacwelder Avenue. The second area of 100-year floodplain is located on the southeast portion of the study area near the new I-40 Crosstown. Based upon the analysis completed for the Record of Decision and the currently impervious urbanized nature of the area, it is not expected that floodplain encroachments would occur from the project.

3.2 Federal and State Listed Species

The USFWS database for Information, Planning, and Conservation was used to identify potentially listed species that could occur within the study area.

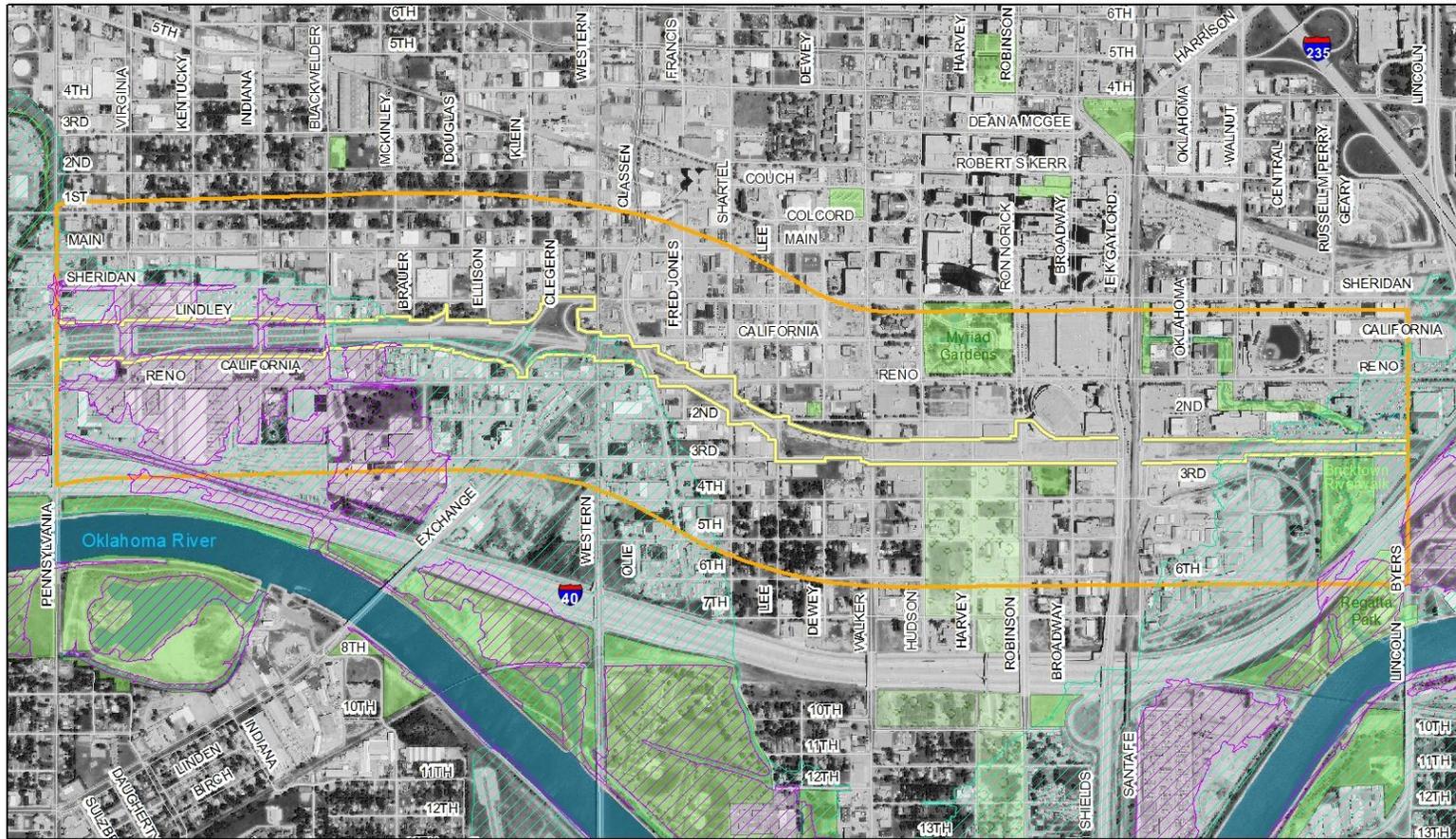
3.2.1 Federally Listed Threatened and Endangered Wildlife Species

The following are the federally listed species known to occur within Oklahoma County, Oklahoma:

- Gray bat (*Myotis grisescens*) (federally listed as endangered)
- Indiana bat (*Myotis sodalis*) (federally listed as endangered)
- Ozark big-eared bat (*Corynorhinus (= Plecotus) townsendii ingens*) (federally listed as endangered)
- Whooping crane (*Grus americana*) (federally listed as endangered)
- Piping plover (*Charadrius melodus*) (federally listed as threatened)
- Interior least tern (*Sterna antillarum*) (federally listed as endangered)
- Red-cockaded woodpecker (*Picoides borealis*) (federally listed as endangered)
- Black-capped vireo (*Vireo atricapillus*) (federally listed as endangered)
- Arkansas River shiner (*Notropis girardi*) (federally listed as threatened)
- Ozark cavefish (*Amblyopsis rosae*) (federally listed as threatened)
- Neosho madtom (*Noturus placidus*) (federally listed as threatened)
- Leopard darter (*Percina pantherina*) (federally listed as threatened)
- American burying beetle (*Nicrophorus americanus*) (federally listed as endangered)
- Ouachita rock pocketbook (*Arkansia wheeleri*) (federally listed as endangered)
- Winged mapleleaf (*Quadrula fragosa*) (federally listed as endangered)
- Scaleshell (*Leptodea leptodon*) (federally listed as endangered)

According to the USFWS critical habitat website, there is no defined critical habitat within or near the study area (USFWS 2014b).

Figure 2. Floodplain Map of Study Area



FEMA Flood Hazard Areas

	1% annual chance Base flood / 100 year		Study Area		Park / Open Space
	0.2% annual chance 500 year		Former I-40 Right-of-Way		Future Park
			Waterway		



3.2.2 State-listed Threatened and Endangered Wildlife Species

The following are state-listed species known to occur within Oklahoma County, Oklahoma:

- Long-nosed darter (*Percina nasuta*) (state-listed as endangered)
- Neosho mucket (*Lampsilis rafinesqueana*) (state-listed as endangered)
- Oklahoma cave crayfish (*Cambarus tartarus*) (state-listed as endangered)
- Black-sided darter (*Percina maculata*) (state-listed as threatened)

3.2.3 Field Survey Results

The study area in the immediate vicinity of the alternatives was visually examined to identify potential habitats for threatened or endangered species on March 29, 2013, and again on January 15-16, 2014. The field review included walking and driving the entire length of the alignments. Given the urbanized nature of the study area, no potential habitats for listed species were identified.

The study area is heavily urbanized and has undergone a wide variety of construction activities during the past 15 years. In addition, a majority of the area the alternatives between Pennsylvania Avenue and Byers Avenue has been part of the I-40 interstate system since the mid-1960s. Alternative D is located within the existing Oklahoma City street grid right-of-way.

As a result, the area currently consists of a vast amount of paved, heavily disturbed urbanized land. These types of habitats generally are unfavorable to most wildlife species. The construction activities associated with the Crosstown Boulevard would not effect federal- or state-listed threatened and endangered species.

3.2.4 Short-term Construction Effects

Because of the heavily urbanized nature of the study area, any construction activities likely would have minimal effect on any wildlife species. There is little to no desirable natural wildlife habitat within the study area.

4.0 Representative Photographs



The original Crosstown Expressway was an approximately 8,900-foot-long structure.



View near Western Avenue in 2013



Removal of the original Crosstown Expressway in 2013



Footprint of Alternatives A-D near Robinson

5.0 References

- 33 Code of Federal Regulations (CFR) 328.3, Title 33 - Navigation and Navigable Waters. Chapter II, Corps of Engineers, Department of the Army, Department of Defense, Part 328.
- Oklahoma Department of Environmental Quality. 2014. Accessed at: <http://gis.deq.ok.gov/flexviewer> on March 14, 2014.
- Oklahoma Scenic Rivers Commission. 2014. Accessed at: <http://www.oklahomascenicrivers.net> on March 14, 2014.
- U.S. Army Corps of Engineers (USACE). 1987. *Corps of Engineers Wetlands Delineation Manual*.
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- U.S. Federal Emergency Management Agency (FEMA). 2013. National Flood Hazard Layer. Published August 14, 2013.
- U.S. Fish and Wildlife Service (USFWS). 2014a. National Wetlands Inventory website accessed at: <http://www.fws.gov/wetlands> on March 14, 2014.
- U.S. Fish and Wildlife Service (USFWS). 2014b. Information, Planning, and Conservation website accessed at: <http://ecos.fws.gov/ipac> on March 14, 2014.