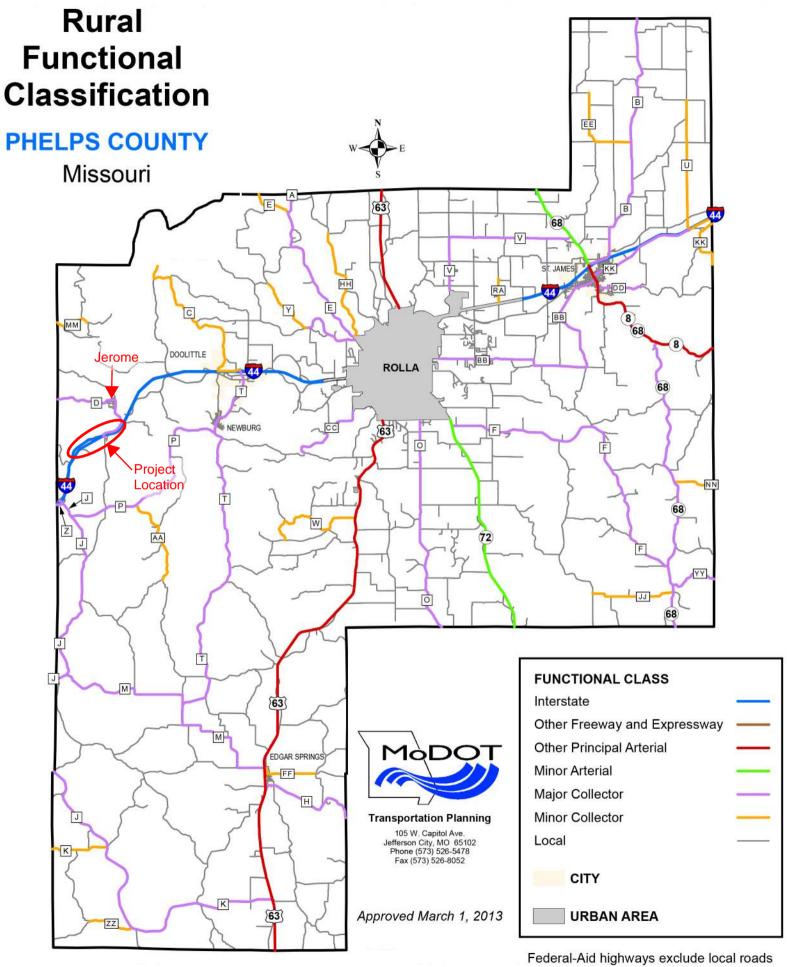
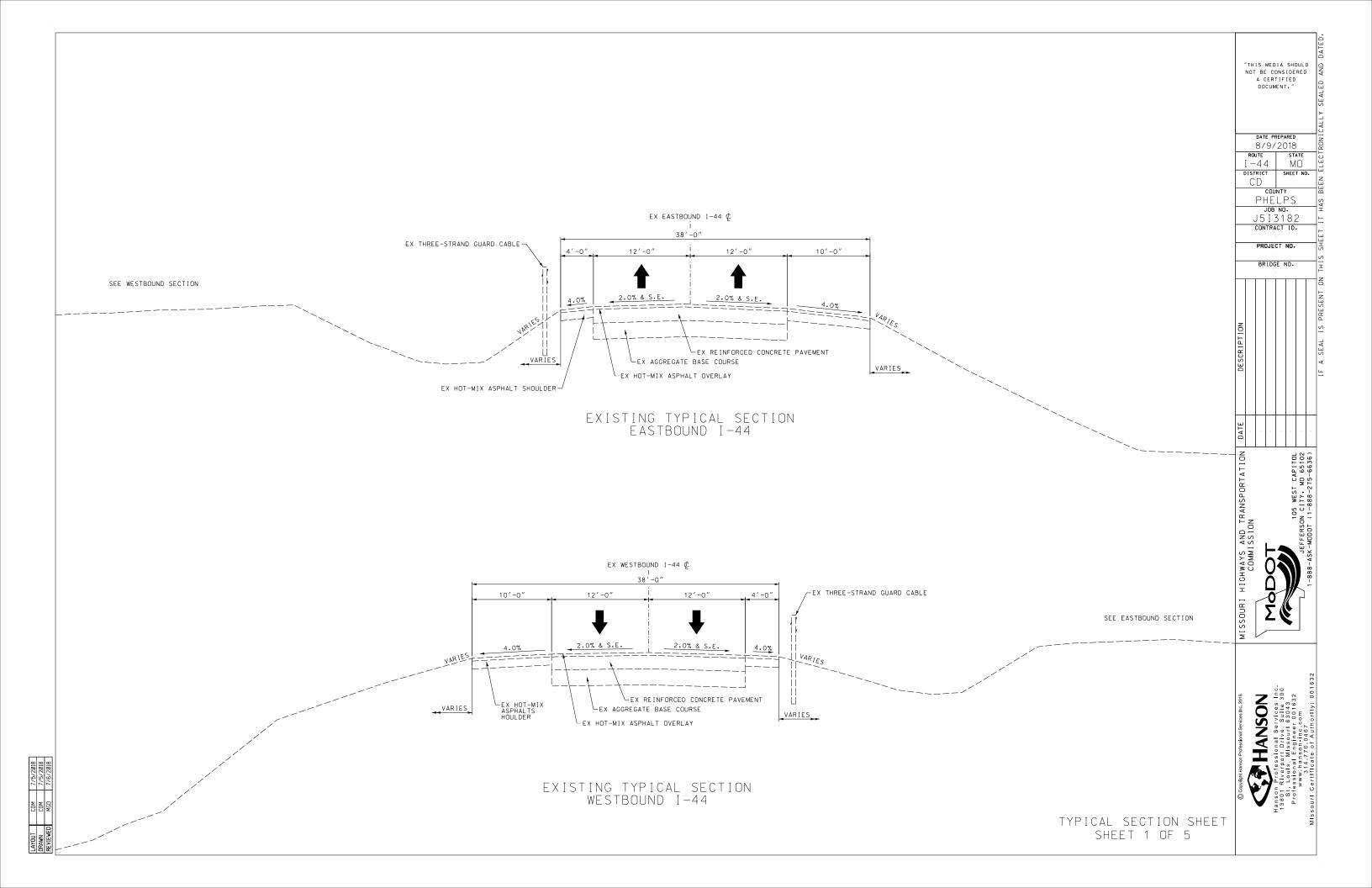
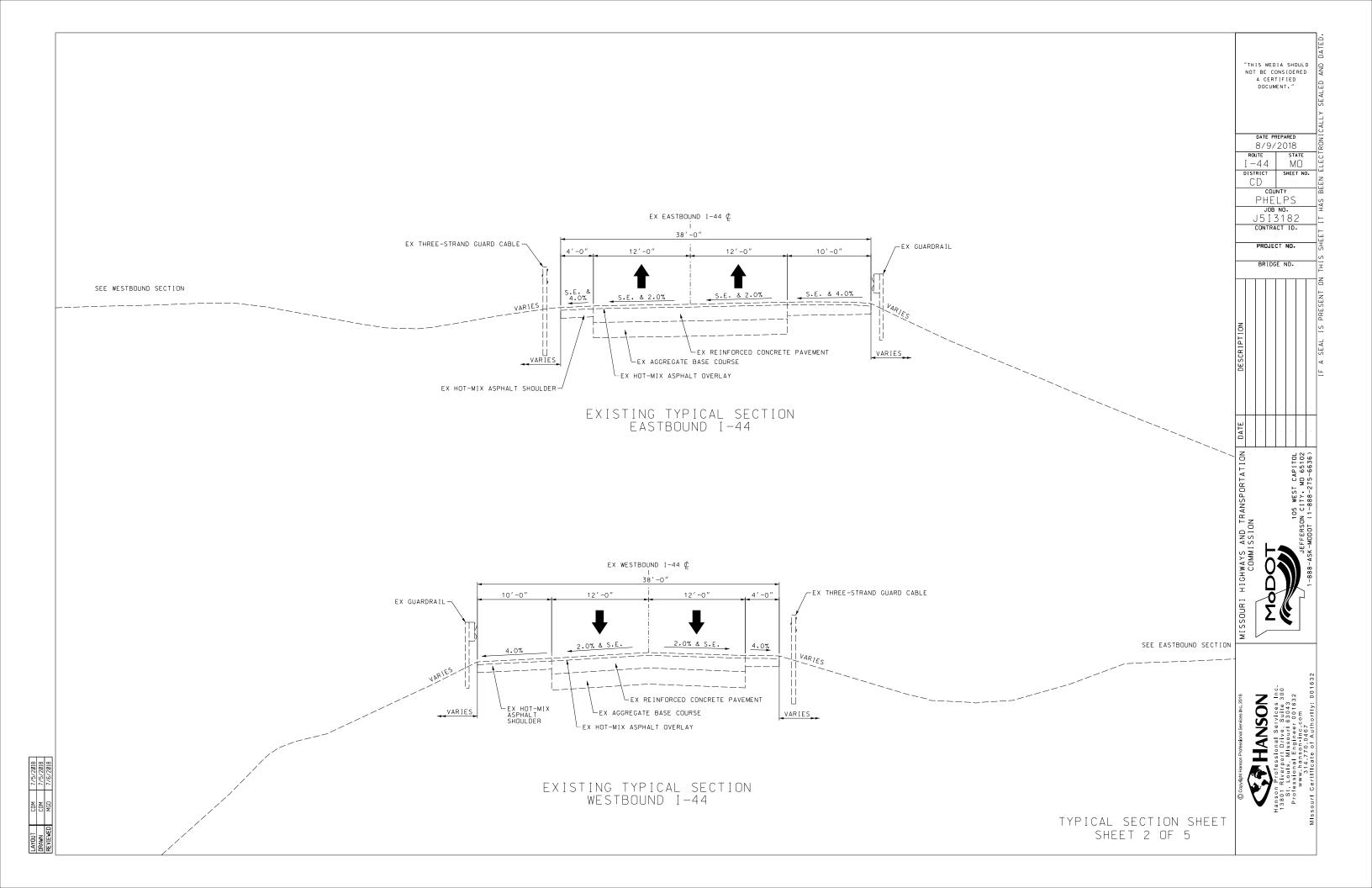
Appendix A Location Map

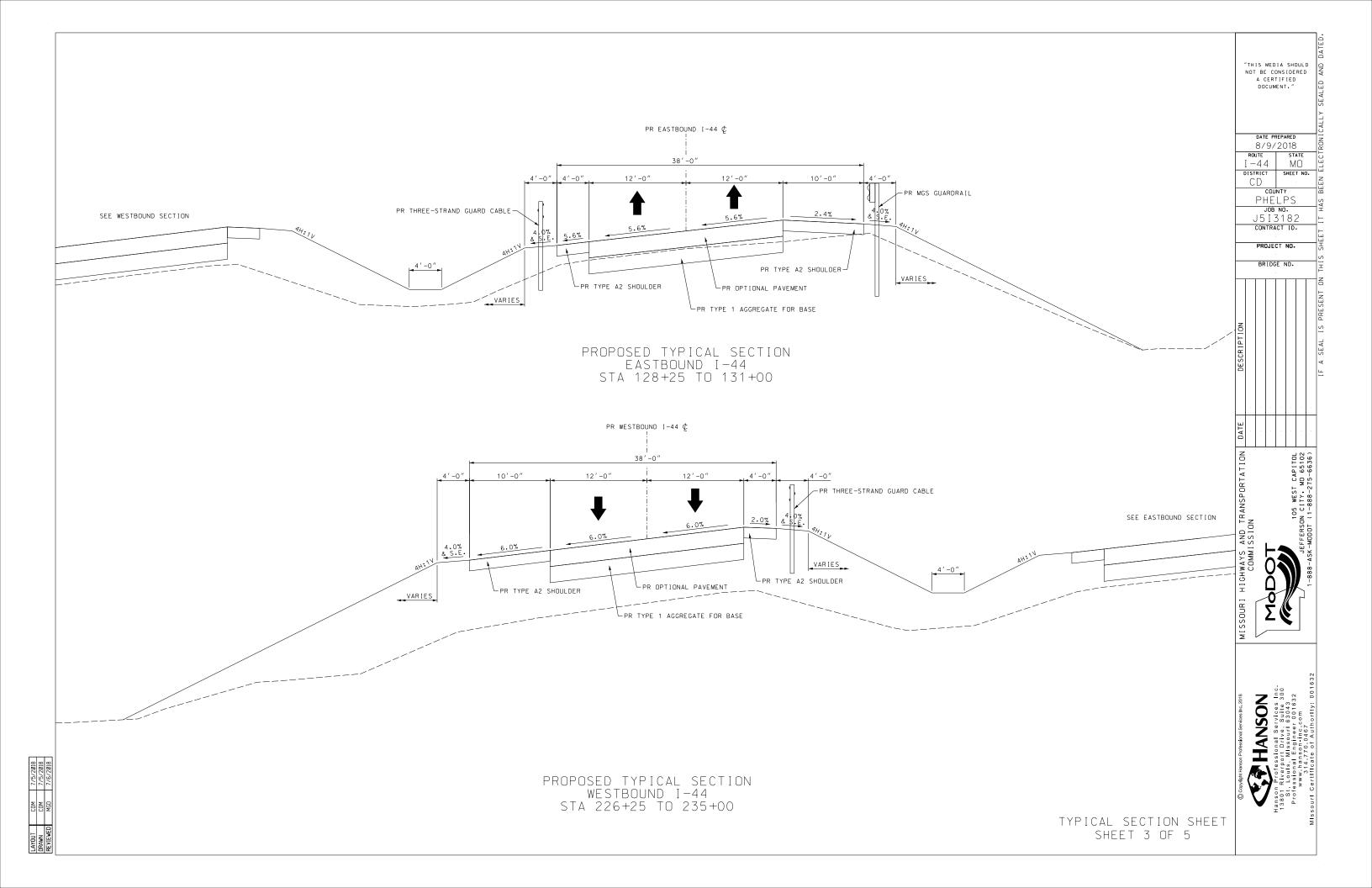


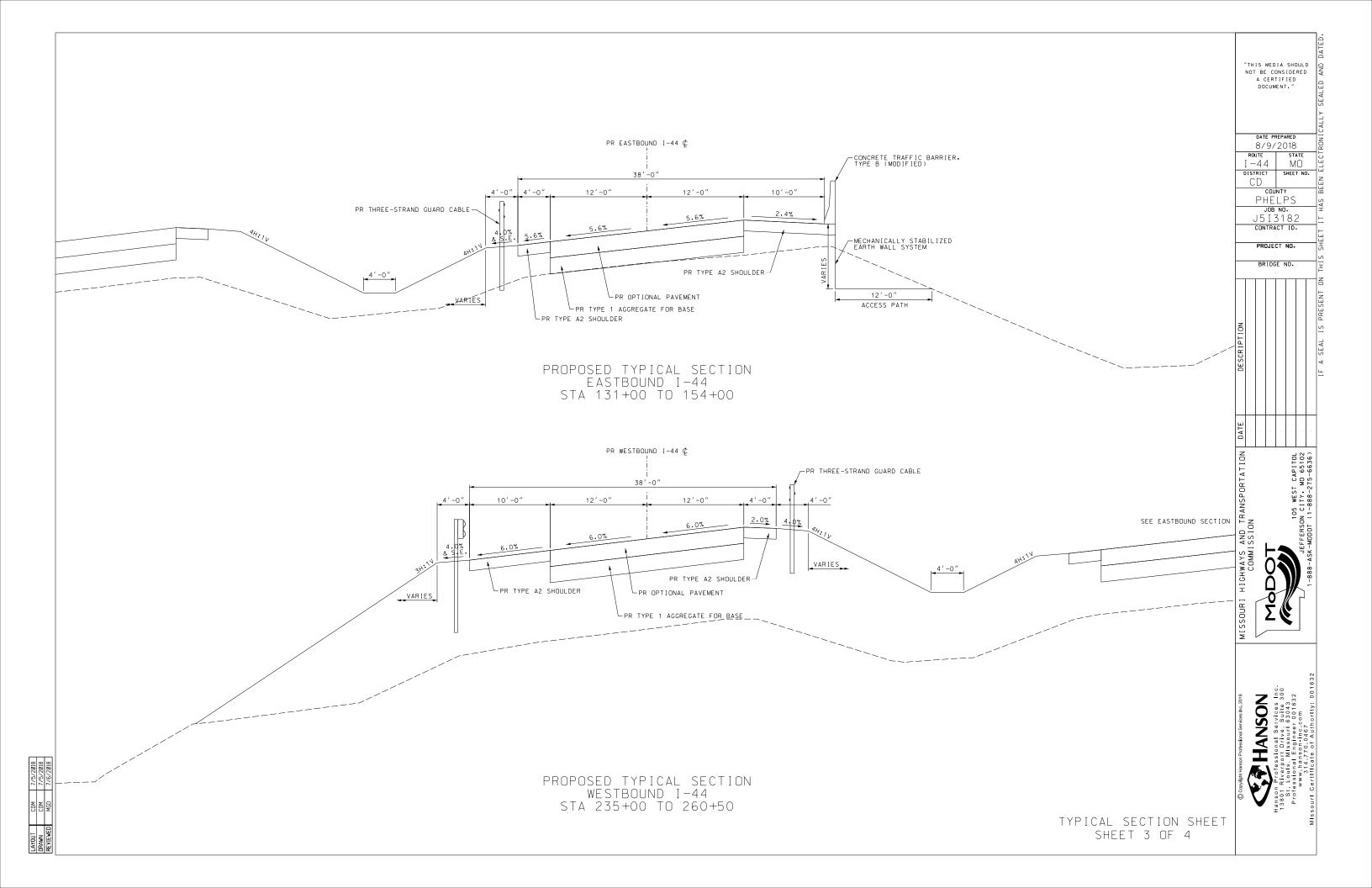
and rural minor collectors.

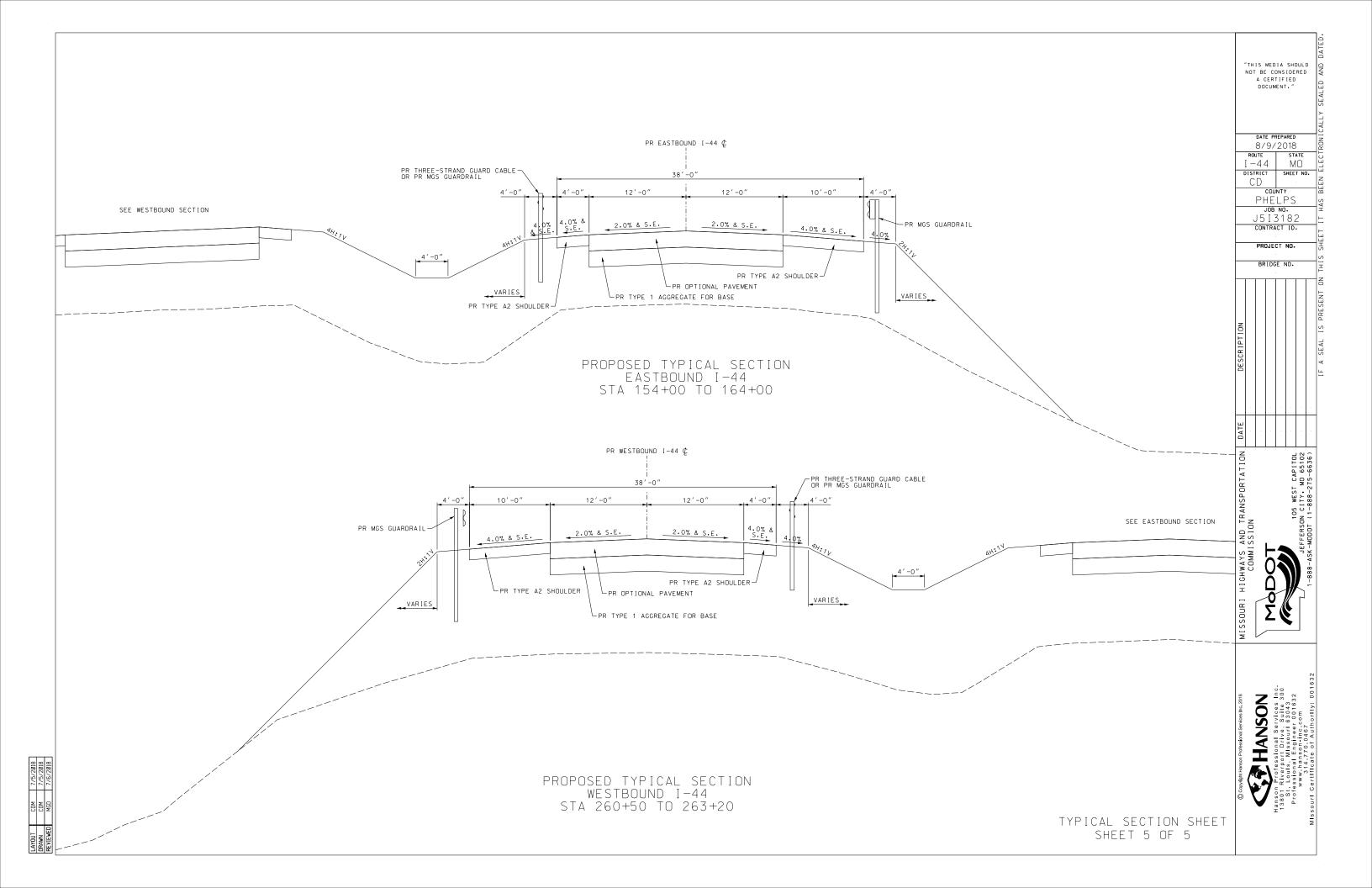
Appendix B Typical Sections



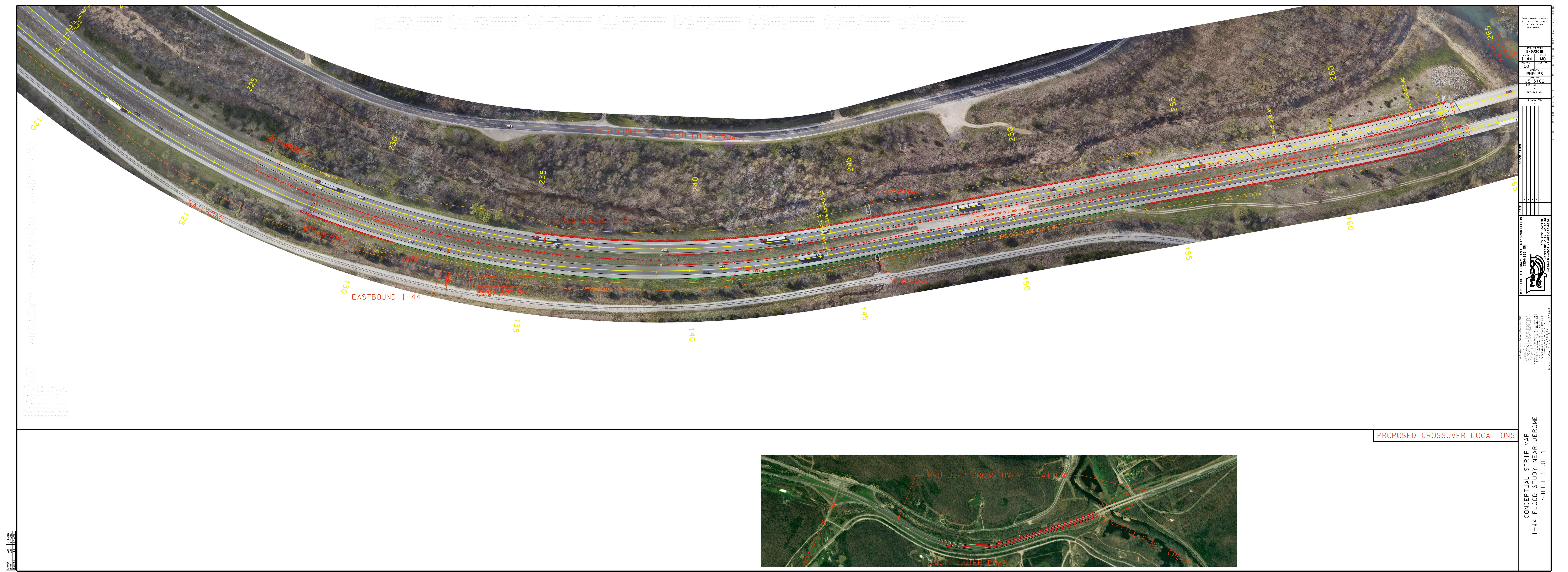




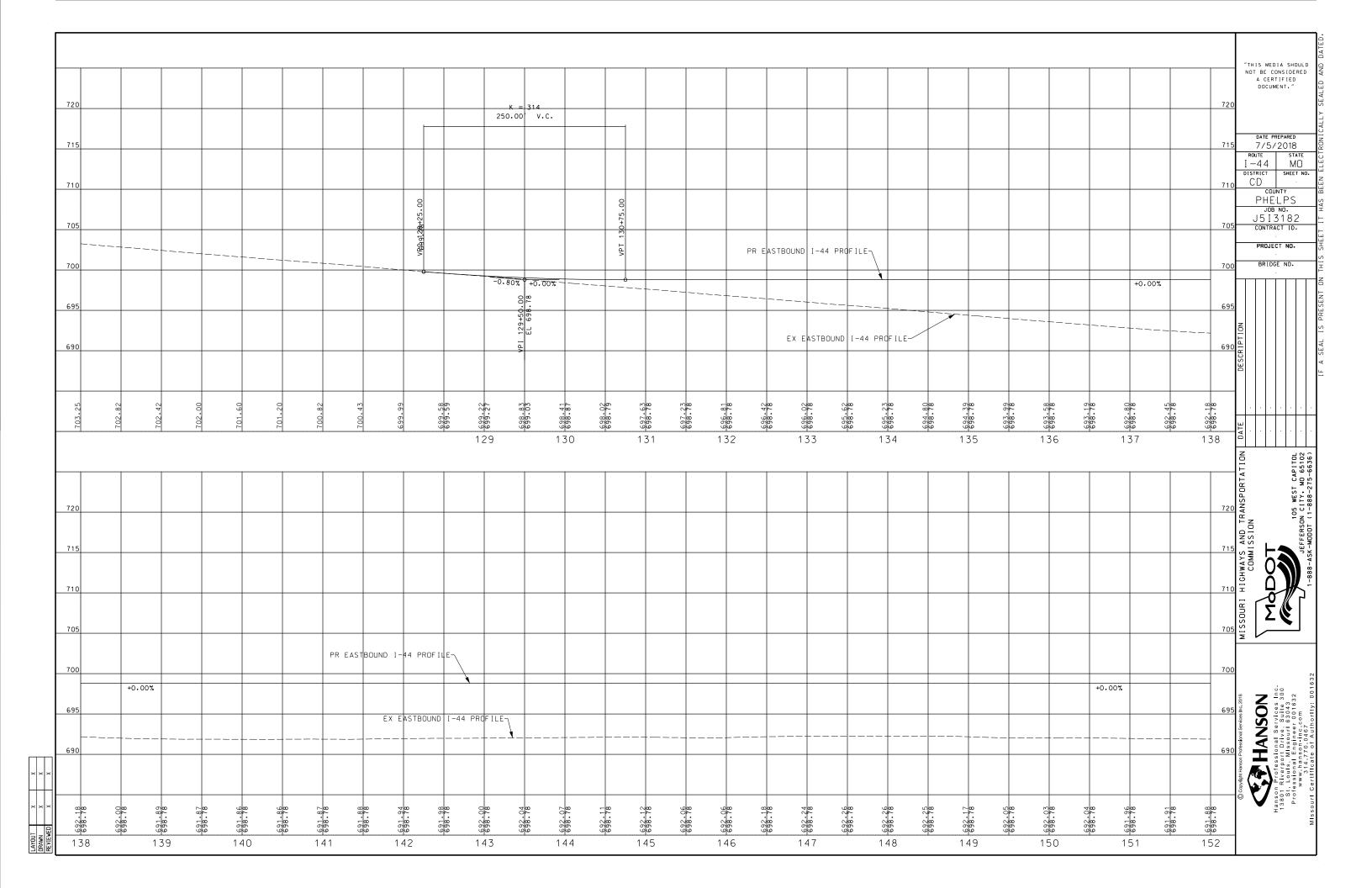


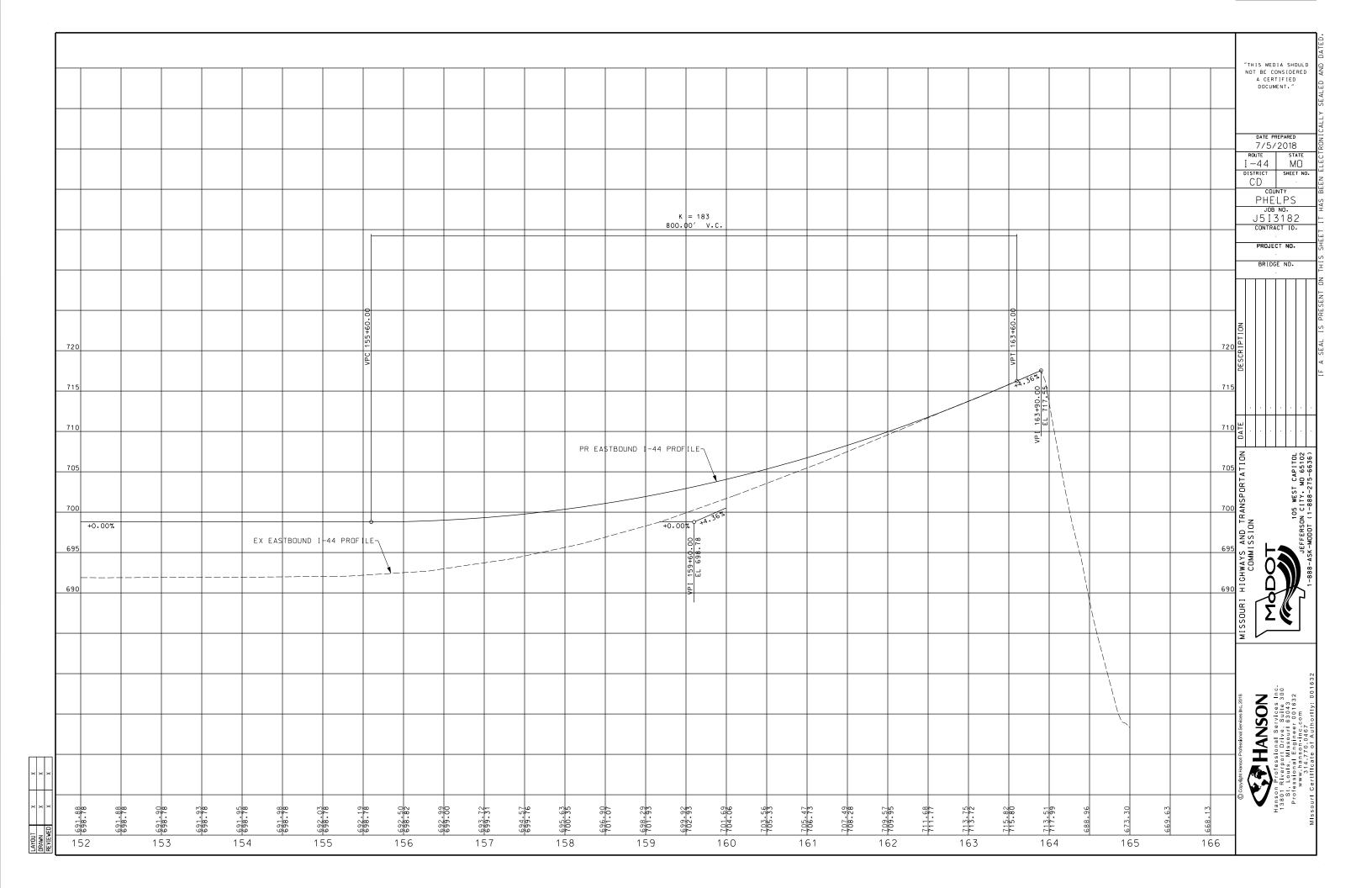


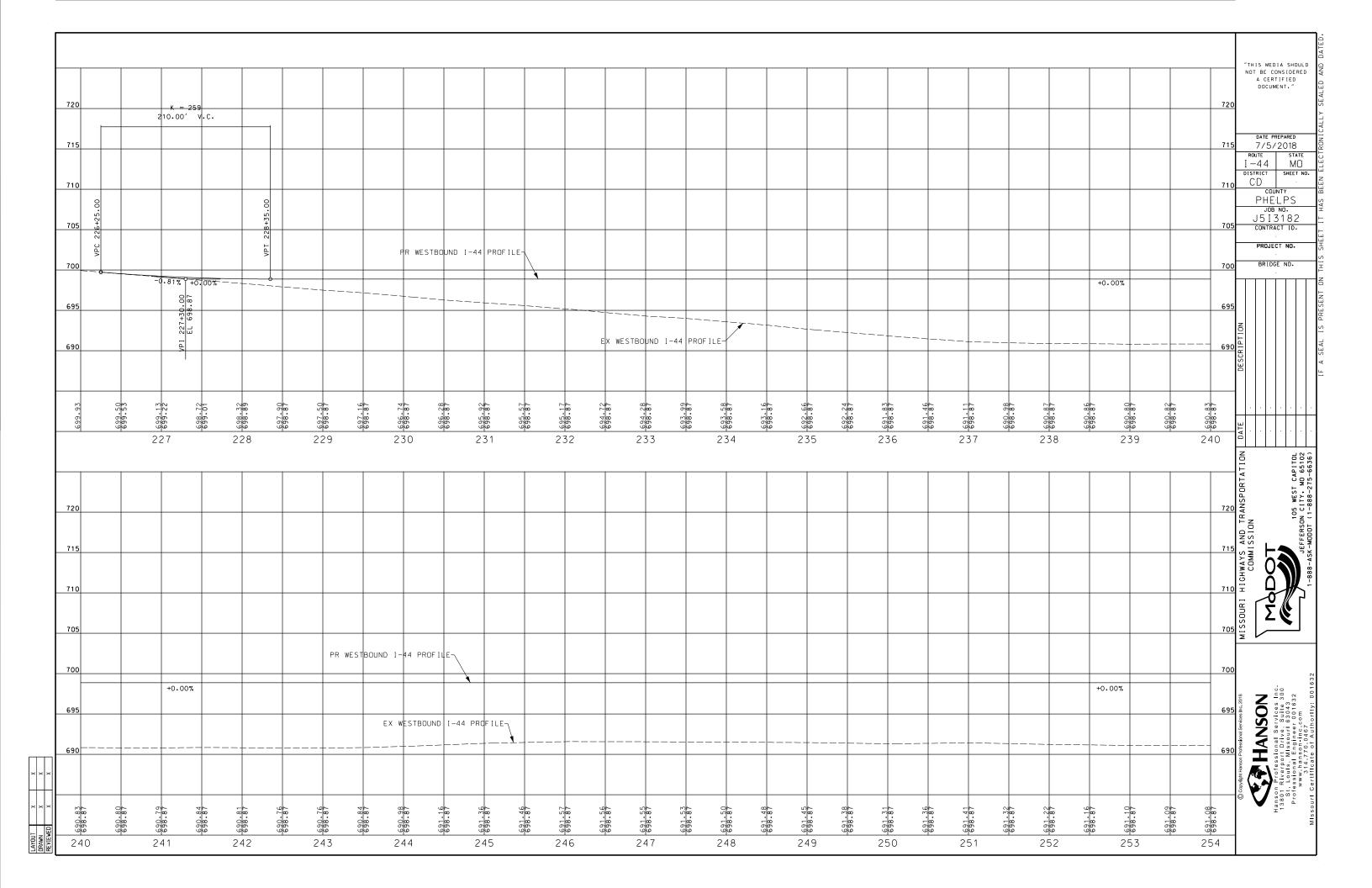
Appendix C Plan and Profile Exhibits

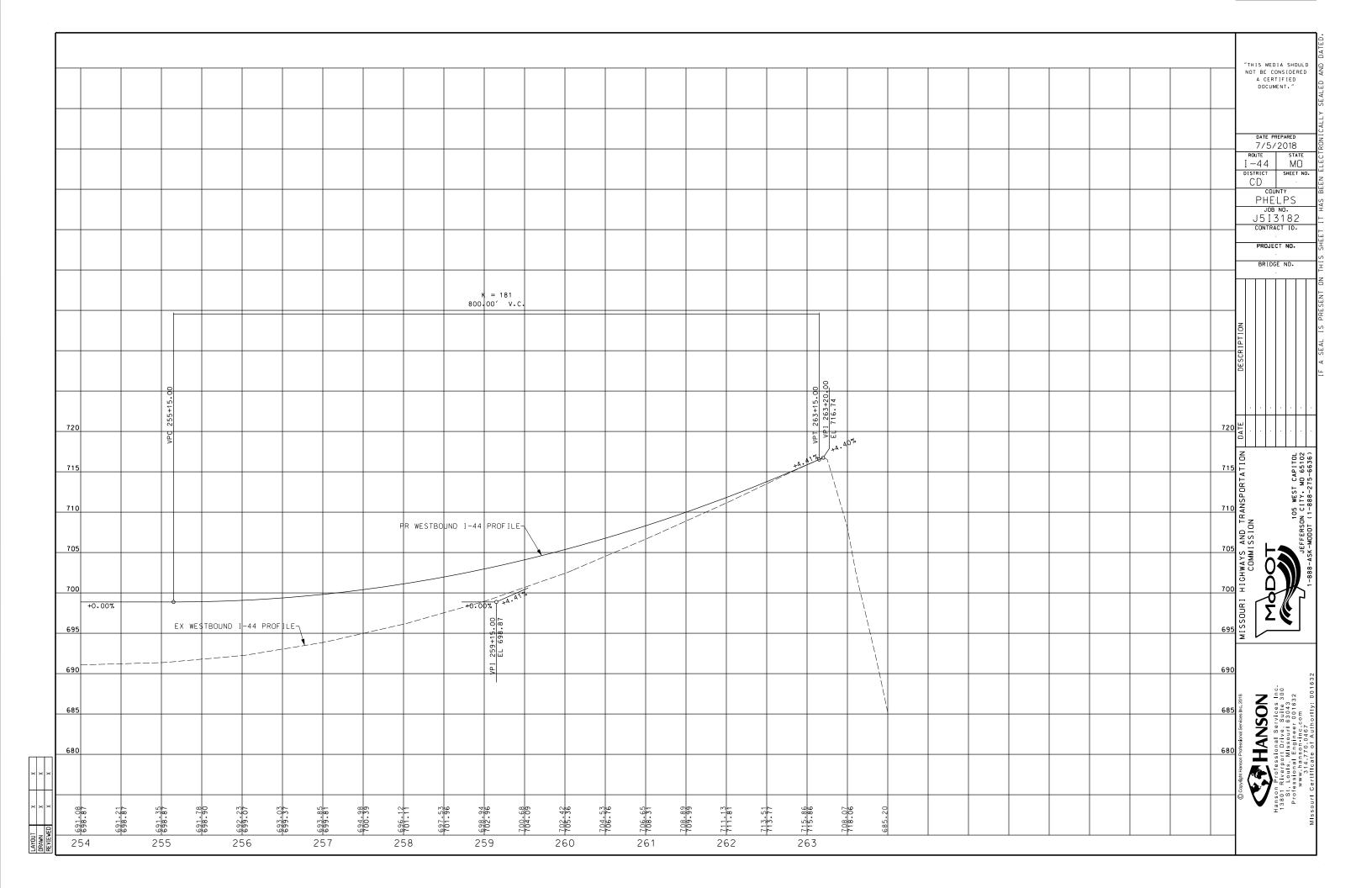


I> bing









Appendix D Conceptual Cost Estimate

 PRICING REPORT
 Date: 08/09/2018

 Time: 01:17:12

Project: I-44 FLOOD REDUCTION ANALYSIS Project ID: J5/3182 F

Location: PHELPS COUNTY Bid Date: // State: MO

County: **PHELPS** Route: **I-44**

District: Central

Project Settings Primary County: PHELPS Urban/Rural: **RURAL ROUTE** Addl Counties: Project Type: District: Central Work Type: Longitude: 91° 00' 00" Traffic: Latitude: 37° 00' 00" Estimator: MC Constr Eng: Log Mile: Beg: 172.6 0.00 % End: 174 Priced Date: 11 Station: Beg: Create Date: 07/12/2018 Fed Projec No: J5I3182 F End: Project Length: 1.4000 miles Mobe Percent: 6.00 % Survey %: 1.00 %

Pro	ject Categories		
1	Roadway	8,140,647.40	71.1%
50	CONSTRUCTION STAGING	1,151,908.00	10.1%
51	BOX CULVERT EXTENSIONS	79,000.00	0.7%
70	Bridge or Retaining Wall	2,086,000.00	18.2%
TO	TALS:	11,457,555.40	100.0%

Major Categories		
MISC.	2,479,403.60	21.6%
GRADE/DRAIN	1,606,174.00	14.0%
BRIDGE	1,791,500.00	15.6%
PAVEMENT/BASE	5,580,477.80	48.7%
TOTALS:	11,457,555.40	100.0%

STIP Information		
Construction Cost	11,457,555.40	100.0%
PE	0.00	0.0%
CE	0.00	0.0%
R/W	0.00	0.0%
R/W Incidentals	0.00	0.0%
Utilities	0.00	0.0%
Incentive	0.00	0.0%
TOTAL:	11,457,555.40	100.0%

Missouri Dot PAGE: 1 of 4 BidTabs Professional - PLUS

Project: I-44 FLOOD REDUCTION ANALYSIS Location: PHELPS COUNTY Project ID: **J5I3182 F**Bid Date: / / State: MO Route: I-44

County: **PHELPS** District: Central

Sect	Pay Item	Description	Quantity Unit	Bid Price	Extension Alt
1	2022010	removal of improvements	1.000 l.s. (1.0)	305,000.00	305,000.00
1	2035500	embankment in place	82,000.000 c.y. (1.0)	12.30	1,008,600.00
1	2036000	compacting embankment	82,000.000 c.y. (1.0)	2.20	180,400.00
1	2063000	class 3 excavation	13,640.000 c.y. (1.0)	22.85	311,674.00
1	2063100	class 3 excavation in rock	1,000.000 c.y. (1.0)	100.00	100,000.00
1	3030600	furnishing rock base material	19,360.000 s.y. (1.0)	8.00	154,880.00
1	3030610A	placing rock base	19,360.000 s.y. (1.0)	5.00	96,800.00
1	3040506	type 5 aggregate for base (6 in. thick)	11,236.000 s.y. (1.0)	8.55	96,067.80
1	4010150	type a2 shoulder	11,236.000 s.y. (0.1)	42.50	477,530.00
1	4030427	"17 inches, asphaltic concrete pavement sp125clp"	19,360.000 s.y. (0.1)	220.00	4,259,200.00
1	6061060	mgs guardrail	4,313.000 l.f. (1.0)	20.30	87,553.90
1	6061069	mgs bridge approach transition section (regular/no curb)	6.000 each (1.0)	2,749.00	16,494.00
1	6061080	mgs end anchor	1.000 each (1.0)	958.00	958.00
1	6063014	type a crashworthy end terminal (mash)	3.000 each (1.0)	2,512.00	7,536.00
1	6064100	median guard cable 3 - strand	5,650.000 l.f. (1.0)	12.00	67,800.00
1	6064110	"anchor assembly, guard cable 3-strand"	10.000 each (1.0)	3,000.00	30,000.00
1	6181000	mobilization	1.000 l.s. (1.0)	642,479.74	642,479.74
1	6191000	pavement edge treatment	15,000.000 l.f. (1.0)	5.65	84,750.00
1	6205902A	"6 in. white high build waterborne pavement marking paint, type I beads"	16,300.000 l.f. (1.0)	0.25	4,075.00
1	6274000	contractor furnished surveying and staking	1.000 l.s. (1.0)	107,079.96	107,079.96
1	8052000A	seeding - warm season mixtures	9.000 acre (0.1)	3,359.00	30,231.00
1	8061005	rock ditch check	600.000 l.f. (1.0)	11.15	6,690.00
1	8061017	temporary seeding and mulching	9.000 acre (0.1)	2,072.00	18,648.00
1	8061019	silt fence	11,000.000 l.f. (1.0)	4.20	46,200.00
	RC	DADWAY SUBTOTALS			8,140,647.40 71.1%
50	5021112	concrete pavement (12 inch non-reinforced)	4,000.000 s.y. (0.1)	124.00	496,000.00

Project: I-44 FLOOD REDUCTION ANALYSIS Location: PHELPS COUNTY Project ID: **J5I3182 F**Bid Date: / / State: MO Route: I-44

County: **PHELPS** District: Central

Sect	Pay Item	Description	Quantity Unit	Bid Price	Extension Alt
50	6161005	construction signs	432.000 s.f. (1.0)	7.50	3,240.00
50	6161008	advanced warning rail system	24.000 each (1.0)	64.00	1,536.00
50	6161009	flag assembly	8.000 each (1.0)	24.00	192.00
50	6161024	channelizer (trim line) with light	240.000 each (1.0)	22.50	5,400.00
50	6161040	flashing arrow panel	6.000 each (1.0)	900.00	5,400.00
50	6161098A	"changeable message sign without communication interface, contractor	6.000 each (1.0)	4,000.00	24,000.00
50	6162003	long-term rumble strips	288.000 l.f. (1.0)	25.00	7,200.00
50	6173600D	"temporary traffic barrier, contractor furnished / retained"	16,400.000 l.f. (1.0)	21.00	344,400.00
50	6175010A	relocating temporary traffic barrier	16,400.000 l.f. (1.0)	11.10	182,040.00
50	6205301B	"temporary removable marking tape 4 in., white"	66,000.000 l.f. (1.0)	1.25	82,500.00
	Co	DNSTRUCTION STAGING SUBTOTALS			1,151,908.00 10.1%
51	2063300	class 4 excavation	110.000 c.y. (1.0)	50.00	5,500.00
51	2163500	partial removal of culvert concrete	1.000 l.s. (1.0)	10,000.00	10,000.00
51					
	7034040	class b-1 concrete (culverts-bridge)	65.000 c.y. (0.1)	800.00	52,000.00
51	7034040 7061020	class b-1 concrete (culverts-bridge) reinforcing steel (culverts-bridge)	65.000 c.y. (0.1) 10,000.000 lbs (10.0)	800.00 1.15	52,000.00 11,500.00
	7061020	· · · · · · · · · · · · · · · · · · ·	· , ,		
	7061020	reinforcing steel (culverts-bridge)	· , ,		11,500.00 79,000.00
51	7061020 B 0	reinforcing steel (culverts-bridge) OX CULVERT EXTENSIONS SUBTOTALS	10,000.000 lbs (10.0)	1.15	11,500.00 79,000.00 0.7%
51 70	7061020 B0	reinforcing steel (culverts-bridge) DX CULVERT EXTENSIONS SUBTOTALS "concrete traffic barrier, type b (modified)"	10,000.000 lbs (10.0) 2,300.000 l.f. (1.0)	1.15	11,500.00 79,000.00 0.7% 368,000.00
51 70 70	7061020 B0 6172001 7110300	reinforcing steel (culverts-bridge) DX CULVERT EXTENSIONS SUBTOTALS "concrete traffic barrier, type b (modified)" concrete and masonry protection system	10,000.000 lbs (10.0) 2,300.000 l.f. (1.0) 1.000 l.s. (1.0)	1.15 160.00 40,000.00	11,500.00 79,000.00 0.7% 368,000.00 40,000.00

18.2%

PRICING REPORT Date: 08/09/2018 Time: 01:17:12

Project: I-44 FLOOD REDUCTION ANALYSIS

Project ID: **J5I3182 F**Bid Date: // Location: PHELPS COUNTY State: MO

County: PHELPS Route: I-44

District: Central

Sect Pay Item Description Quantity Unit Bid Price Extension Alt

> **TOTALS** 11,457,555.40 100.0%

Appendix E Accident Summaries

OFFSET	TRAVEL WAY ID	DESIGN ATION	TRAVEL WAY NAME	DIRECTI ON	BEGIN LOG	END LOG	BEGIN DISTRIC T	END DISTRICT	BEGIN COUNTY	END COUNTY	COUNTY BEGIN LOG	COUNTY END LOG	BEGIN DESCRIPT ION	END DESCRIP TION
	10	IS	44	W	116.405	120.555	4	4	PHELPS	PHELPS	24.416		RP IS44W TO SOR44 E	RT D E

TYPE	2013	2014	2015	2016	2017	TOTAL
FATAL	0	0	1	0	1	2
DISABLING INJURY	2	0	2	0	0	4
MINOR INJURY	1	0	5	5	4	15
PROPERTY DAMAGE ONLY	22	18	26	16	31	113
TOTAL	25	18	34	21	36	134
AADT	15582	16034	12814	13301	13647	

WESTBOUND I-44 CRASH SUMMARY

1 Year Statewide Rate

TYPE	2013	2014	2015	2016	2017	Rate Level
CRASH RATE	105.92	74.11	175.17	104.23	174.15	
STATE RATE-IS	88.14	87.86	100.37	98.11		ROUTE DESG
STATE RATE-FREEWAY	89.4	87.47	99.77	98.02	0	ROADWAY TYPE

TYPE	2013	2014	2015	2016	2017	TOTAL
ANIMAL DRAWN VEH OR RIDDEN ANIMAL	0	0	0	0	0	0
ANIMAL NOT DEER/DOG/FARM ANIMAL	0	0	0	0	0	0
ANIMAL OTHER THAN DEER	0	0	0	0	0	0
AVOIDING	0	0	0	0	1	1
BACKING	0	0	0	0	0	0
CHANGING LANE	0	0	1	3	0	4
CROSS MEDIAN	0	0	0	0	0	0
DEER	1	0	1	1	2	5
DOG	0	0	0	0	0	0
DUAL LEFTS COLLIDE	0	0	0	0	0	0
DUAL RIGHTS COLLIDE	0	0	0	0	0	0
FARM ANIMAL	0	0	0	0	0	0
FIXED OBJECT	0	0	1	0	1	2
HEAD ON	0	0	0	0	0	0
JACKKNIFE	0	2	0	0	0	2
LEFT TURN	0	0	1	0	0	1
LEFT TURN RIGHT ANGLE COLLISION	0	0	0	0	0	0
OTHER	1	4	4	1	4	14
OUT OF CONTROL	17	10	17	8	20	72
PARKING OR PARKED CAR	2	0	0	0	1	3
PASSING	3	1	6	4	4	18
PEDALCYCLE	0	0	0	0	0	0
PEDESTRIAN	0	0	0	0	0	0
REAR END	1	1	3	4	3	12
RIGHT ANGLE	0	0	0	0	0	0
RIGHT TURN	0	0	0	0	0	0
RIGHT TURN RIGHT ANGLE COLLISION	0	0	0	0	0	0
SIDESWIPE	0	0	0	0	0	0
TOWED UNIT DISCONNECTS	0	0	0	0	0	0
U - TURN	0	0	0	0	0	0
WRONG WAY ON DIVIDED HIGHWAY	0	0	0	0	0	0
TOTAL	25	18	34	21	36	134

This report contains information that is protected from disclosure by federal law, 23 USC Section 409 and the Missouri Open Records Law (Sunshine Act), Section 610.021 RSMo. Please review MoDOT's policy and procedure manual on the Sunshine Act before releasing any of the information contained herein.

OFFSET	TRAVEL WAY ID	DESIGN ATION	TRAVEL WAY NAME	DIRECTI ON	BEGIN LOG	END LOG	BEGIN DISTRIC T	END DISTRIC T	BEGIN COUNTY	END COUNTY	COUNTY BEGIN LOG	COUNTY END LOG	BEGIN DESCRIP TION	END DESCRIP TION
	9	IS	44	E	172.574	176.72	4	4	PHELPS	PHELPS	3.68	7.826	RT D E	mile(s) before RP SOR44 TO IS44E

TYPE	2013	2014	2015	2016	2017	TOTAL
FATAL	1	0	0	0	1	2
DISABLING INJURY	0	0	0	0	0	0
MINOR INJURY	2	1	10	3	4	20
PROPERTY DAMAGE ONLY	17	16	20	17	23	93
TOTAL	20	17	30	20	28	115
AADT	13893	14296	12986	13479	13829	

EASTBOUND I-44 CRASH SUMMARY

1 Year Statewide Rate

TYPE	2013	2014	2015	2016	2017	Rate Level
CRASH RATE	95.13	78.58	152.66	98.05	133.8	
STATE RATE-IS	88.14	87.86	100.37	98.11		ROUTE DESG
STATE RATE-FREEWAY	89.4	87.47	99.77	98.02	0	ROADWAY TYPE

ТҮРЕ	2013	2014	2015	2016	2017	TOTAL
ANIMAL DRAWN VEH OR RIDDEN ANIMAL	0	0	0	0	0	0
ANIMAL NOT DEER/DOG/FARM ANIMAL	1	0	0	0	0	1
ANIMAL OTHER THAN DEER	0	0	0	0	0	0
AVOIDING	1	0	0	0	0	1
BACKING	0	0	0	0	0	0
CHANGING LANE	2	1	0	1	0	4
CROSS MEDIAN	0	0	0	0	0	0
DEER	0	0	2	0	0	2
DOG	0	0	0	0	0	0
DUAL LEFTS COLLIDE	0	0	0	0	0	0
DUAL RIGHTS COLLIDE	0	0	0	0	0	0
FARM ANIMAL	0	0	0	0	0	0
FIXED OBJECT	0	0	0	1	0	1
HEAD ON	0	0	0	0	0	0
JACKKNIFE	0	0	1	0	0	1
LEFT TURN	0	0	0	0	0	0
LEFT TURN RIGHT ANGLE COLLISION	0	0	0	0	0	0
OTHER	2	2	5	2	2	13
OUT OF CONTROL	7	10	16	12	19	64
PARKING OR PARKED CAR	0	0	0	0	0	0
PASSING	7	4	2	4	3	20
PEDALCYCLE	0	0	0	0	0	0
PEDESTRIAN	0	0	0	0	0	0
REAR END	0	0	4	0	4	8
RIGHT ANGLE	0	0	0	0	0	0
RIGHT TURN	0	0	0	0	0	0
RIGHT TURN RIGHT ANGLE COLLISION	0	0	0	0	0	0
SIDESWIPE	0	0	0	0	0	0
TOWED UNIT DISCONNECTS	0	0	0	0	0	0
U - TURN	0	0	0	0	0	0
WRONG WAY ON DIVIDED HIGHWAY	0	0	0	0	0	0
TOTAL	20	17	30	20	28	115

This report contains information that is protected from disclosure by federal law, 23 USC Section 409 and the Missouri Open Records Law (Sunshine Act), Section 610.021 RSMo. Please review MoDOT's policy and procedure manual on the Sunshine Act before releasing any of the information contained herein.

Appendix F

Environmental Screening/Identification of Environmental Permits





Date: July 3, 2018

To: Matthew Dawson – Hanson Professional Services, Inc. (Hanson)

From: David Kocour, CEP, ENV SP - Hg Consult, Inc. (Hg)

Re: Environmental Screening/Identification of Environmental Permits

I-44 Flood Control Project Preferred Alternative

Near Jerome, Phelps County, Missouri

MoDOT Job No. J5I3182

In a technical memorandum dated January 29, 2018 to Hanson from Hg an environmental screening and preliminary identification of environmental permits was conducted for the I-44 Flood Control Project Study Area (Figure 1). Since that time Hanson has refined their design to produce a preferred alternative for the I-44 Flood Control Project that minimizes impacts (Figure 2). It should be noted that most of the preferred alternative is located within previously disturbed existing MoDOT right-of-way.

Environmental Resources

Based on information obtained in association with the Study Area Technical Memorandum and evaluation of the preferred alternative the following is a summary of the environmental impacts and potential environmental permitting requirements for the preferred alternative.

Aquatic/Water Resources

Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (40 CFR 230.3). Recognizing the variety of beneficial functions performed by wetlands, Federal Executive Order 11990 (Protection of Wetlands) and Missouri State Executive Order 96-03 mandate consideration of wetland impacts that may arise from state agency activities. Furthermore, these laws can mandate a policy of nonet-loss of wetland acreage and function. Section 404 of the Clean Water Act of 1977 authorizes the USACE to regulate the discharge of dredged or fill material in all waters of the United States, including jurisdictional wetlands.

Review of the USFWS online NWI maps revealed that there is 0.12 acres of one type of wetland located within the construction limits of the preferred alternative identified as Riverine Wetlands (see Figure 2). NWI mapped wetlands may or may not qualify as USACE jurisdictional wetlands when wetland determinations are performed following the methods of the 1987 Corps of Engineers Wetlands Delineation Manual and supplements. Wetlands may have developed in other low lying or wet areas not shown on the NWI maps.

The MDNR previously indicated that there are two springs within the project area without identifying there exact location. As such, if springs are present within the construction limits of the preferred alternative extra precaution should be taken to minimize disturbance of land in or around those features, and to avoid the introduction of pollutants to sensitive groundwater resources.





Water bodies are assigned specific designated uses according to State of Missouri Water Quality regulations. These waters are protected by numeric water quality criteria. The project area is located within the watersheds of the Gasconade River (WBID 1455), the Little Piney Creek (WBID 1521), Smith Hollow Creek (WBID 3565), and two unnamed tributaries (WBID 3960). The Gasconade River, Little Piney Creek, and Smith Hollow Creek are Class P waterbodies, which are defined as streams that maintain permanent flow even in drought periods. The unnamed tributaries are Class C waterbodies, which are defined as streams that may cease flow in dry periods but maintain permanent pools which support aquatic life. These streams are assigned the following designated uses in the Missouri Use Designation Dataset:

- WWH Protection and propagation of fish, shellfish and wildlife warm water habitat
- DWS- Drinking Water Supply
- HHP Human health protection
- IRR Irrigation
- LWP Livestock and wildlife protection
- SCR Secondary contact recreation
- WBC-B Whole body contact recreation Category B
- WBC-A Whole body contact recreation Category A
- CLH Cool Water Habitat

Water Body	WBID	Class	wwh	DWS	ННР	IRR	LWP	SCR	WBC-A	CLH	WBC-B
Gasconade River	1455	Р	х	Х	Х	х	х	х	Х	Х	х
L. Piney Creek	1521	Р	х		Х	Х	х	х	Х	Х	х
Smith Hollow Creek	3565	Р	х		х	х	х				х
	3960	С	Х		х	Х	Х	Х			х

The Gasconade River (WBID 1455) is also impaired by mercury and could potentially be impacted by this project.

Threatened and/or Endangered Species

The Endangered Species Act (ESA) provides for the protection of threatened and endangered species, both plants and animals, and the habitats that are considered critical to the survival of these species (e.g., breeding, nesting, roosting, and foraging areas). The ESA additionally requires Federal Highway





Administration (FHWA) and MoDOT to consult with the USFWS regarding their projects and measures that can be implemented to minimize or eliminate project impacts to these species.

MoDOT projects must also address potential impacts to state listed species. The State of Missouri maintains endangered species legislation that protects these species. The state Endangered Species Act and the Missouri Wildlife Code protect state listed species. The Missouri Cave Resources Act protects caves from trespass, vandalism, contamination, and destruction. The MDC is the administrative, regulatory, and enforcement agency for state sensitive species.

Review of USFWS online IPaC information and a MDC online Natural Heritage Review Level Three Report revealed that there are no known critical habitats for federally threatened or endangered species at the project location. However, the following species could potentially be affected by activities at the project location:

Name	Status		
Mammals			
Gray Bat (Myotis grisescens)	Endangered		
Indiana Bat (Myotis sodalis)	Endangered		
Northern Long-eared Bat (Myotis septentrionalis)	Endangered		
Clams			
Pink Mucket (Lampsilis abrupta)	Endangered		
Scaleshell Mussel (Leptodea leptodon)	Endangered		
Spectaclecase (Cumberlandia monodonta)	Endangered		
Insects			
Hine's Emerald Dragonfly (Somatochlora hineana)	Endangered		

The project area is within the geographic range of Bald Eagles in Missouri. Bald Eagles (Haliaeetus leucocephalus) may nest near streams or water bodies in the project area. While no longer listed as endangered, eagles continue to be protected by the federal government under the Bald and Golden Eagle Protection Act.

The project area is near Sensitive Aquatic Species Waters associated with the Gasconade River, an important stream for freshwater mussel and amphibian populations. The nearby Gasconade River is also designated as one of 138 state designated Fish Spawning Stream Reaches.

Floodplains

Executive Order 11988, Floodplain Management, and subsequent federal floodplain management guidelines mandate evaluation of floodplain impacts. When available, flood hazard boundary maps





(National Flood Insurance Program) and flood insurance studies for the project are used to determine the limits of the base (one percent) floodplain and the extent of encroachment.

The FEMA and FHWA guidelines 23 CFR 650 have identified the base (100-year) flood as the flood having a one-percent probability of being equaled or exceeded in any given year. The base floodplain is the area of the 100-year flood hazard within a county or community. The regulatory floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 100-year flood discharge can be conveyed without increasing the base flood elevation more than a specified amount. FEMA has mandated that projects can cause no rise in the regulatory floodway, and a one-foot cumulative rise for all projects in the base (100-year) floodplain. For projects that involve the State of Missouri, the SEMA issues floodplain development permits. In the case of projects proposed within regulatory floodways, a "no-rise" certificate, if applicable, should be obtained prior to issuance of a permit.

Review of the FEMA online floodplain maps revealed that the majority of the project area includes 100-year floodplains associated with Little Piney Creek and Little Piney Creek Tributary 1 (Figure 1). No base flood elevations have been defined for these areas. The preferred alternative would impact 15.24 acres of the 100-year floodplain.

Cultural Resources

Under Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and the implementing regulations, 36 CFR 800 impacts on important aspects of our natural heritage must be considered. This act requires Federal agencies to "take into account" the "effect" that an undertaking would have on "historic properties." The NHPA mandates that agencies initiate the Section 106 process, identify historic properties, assess adverse effects, and resolve adverse effects. Section 106 encourages, but does not require, the preservation of historic properties. When adverse effects on historic properties are unavoidable, those adverse effects must be mitigated.

Review of the MDNR SHPO's online database listing for National Register of Historic Places (NRHP) did not reveal any NRHP sites within or adjacent to the project area. However, correspondence obtained from the MDNR SHPO's office indicates that they "have determined that there is a moderate to high potential for the presence of previously recorded archaeological sites 23PH161 and 23PH166 near and within the area of the proposed project. An archaeological survey, with deep testing as deemed appropriate, should be conducted". The exact location of these sites should be verified by a qualified archaeologist or MoDOT cultural resource staff. Most likely these sites are outside the construction limits of the preferred alternative and given the fact that the majority, if not all, the preferred alternative falls within previously disturbed MoDOT right of way the likelihood of encountering an archaeological find is low.

Geology

Review of USGS online geologic maps revealed that the entire project area is within an area known to have karst geology which can present engineering challenges or require special treatments/construction methods. Correspondence received from the MDNR indicates there are no recorded sinkholes within one mile of the project area. Two springs are located within the valley portion of the project. Although no sinkholes are mapped in the project area, the dolomite bedrock is known for cave and sinkhole development in this part of the state and the springs discharge from a karst conduit system. Therefore, a sinkhole collapse potential exists for the project area, including the area of the preferred alternative.





Environmental Resources Summary

No documented threatened and endangered species critical habitats, FEMA/SEMA buyout properties, hazardous materials sites, parks or public use areas, LWCF 6(f) properties or NRHP sites, sinkhole or cave locations, underground mines, or certified wells were identified within the construction limits of the preferred alternative.

However, 0.12 acres of NWI Riverine wetlands, 15.24 acres of 100-year floodplain, and karst geology were identified with the construction limits of the preferred alternative.

In addition there are protected waters, the potential for sensitive species habitat, two previously recorded archaeological sites, and two springs that were identified within the near proximity of the preferred alternative construction limits.

Environmental Permits/Commitments

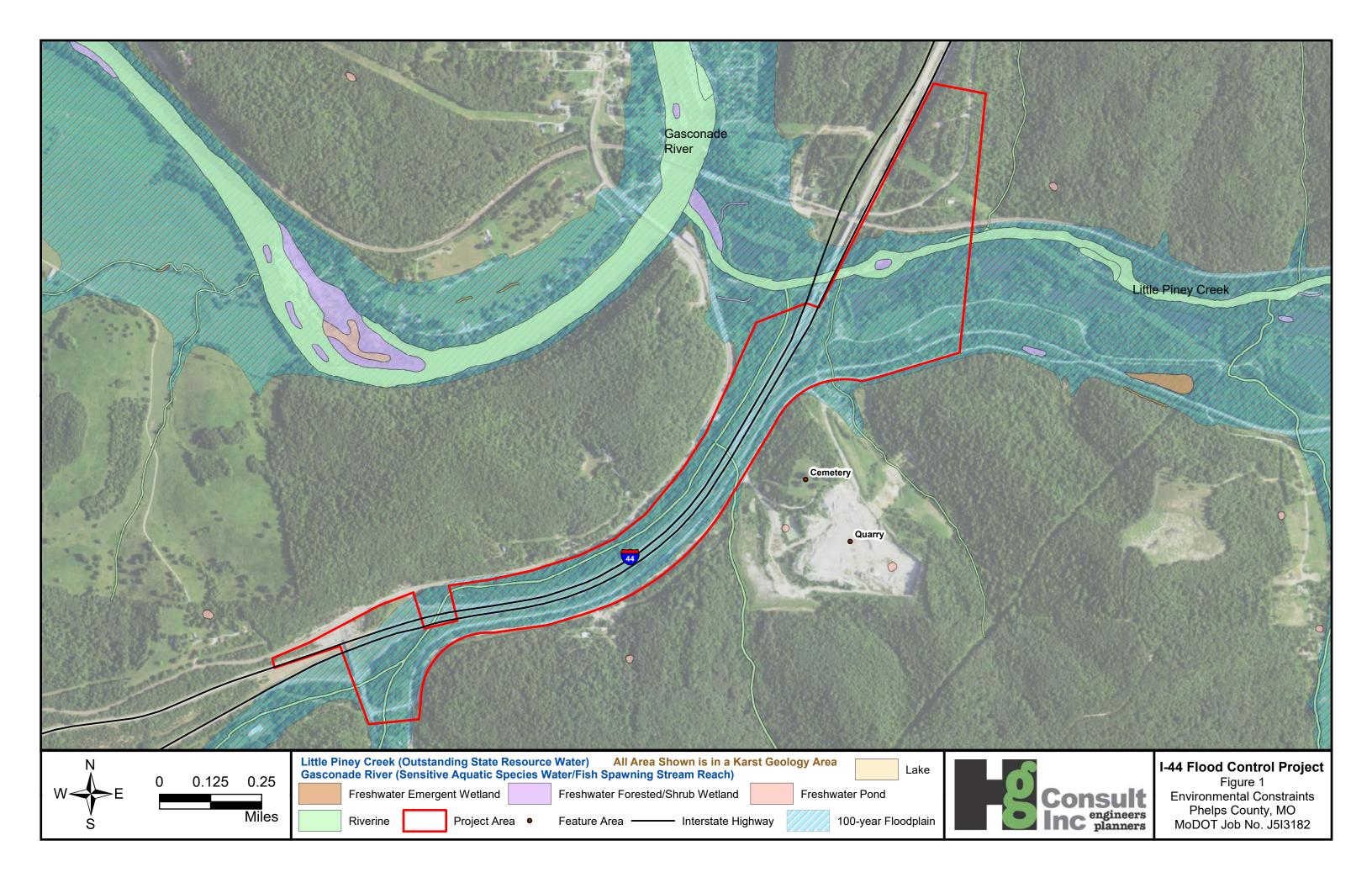
- 1. Prior to final design, MoDOT should conduct a biological survey of the preferred alternative construction limit area to determine the presence/absence/extent of impacted waters of the U.S. and endangered species habitat. Depending on the outcome of the survey an Individual or Nationwide 404 permit #14 Linear Projects may be obtained from the USACE including a Section 401 Water Quality Certification from MDNR for impacts to waters of the U.S. Based on the type and extent of wetlands identified from the NWI maps it would appear that a Nationwide 404 permit may suffice. In addition, mitigation measures or further consultation may be necessary with the USFWS to mitigate potential impacts to threatened or endangered species (see attached USACE, USFWS and MDC correspondence/information for further details).
- 2. Prior to final design MoDOT should conduct an archaeological survey, with potentially testing as deemed appropriate, prior to the initiation of project related construction activities (see attached MDNR SHPO correspondence).
- 3. Prior to construction MoDOT should obtain a Land Disturbance Permit from the MDNR (see attached MDNR correspondence for further details).
- 4. MoDOT should ensure that an engineering analysis is conducted during final design for the preferred alternative prior to submission of a floodplain development permit to SEMA or the county's local floodplain coordinator. The contractor shall obtain a floodplain development permit and, if there are impacts to the floodway an Engineering "no-rise" certification prior to construction. If the floodplains impacted are within State right-of-way, the floodplain development permit should be obtained from SEMA, but if floodplains impacted are outside of State right-of-way then the floodplain development permit should be obtained from the county's local floodplain coordinator (see attached SEMA correspondence).
- 5. MoDOT's Storm Water Pollution Prevention Plan (SWPPP) should be implemented prior to construction to prevent or minimize adverse impacts to streams, springs, wells, public drinking water supplies, water courses, lakes, ponds, or other impoundments within and adjacent to the project area. The project will comply with MoDOT's NPDES permitting requirements, including the implementation of permanent best management practices to reduce stormwater impacts to the watershed (see attached MDNR correspondence for further details).

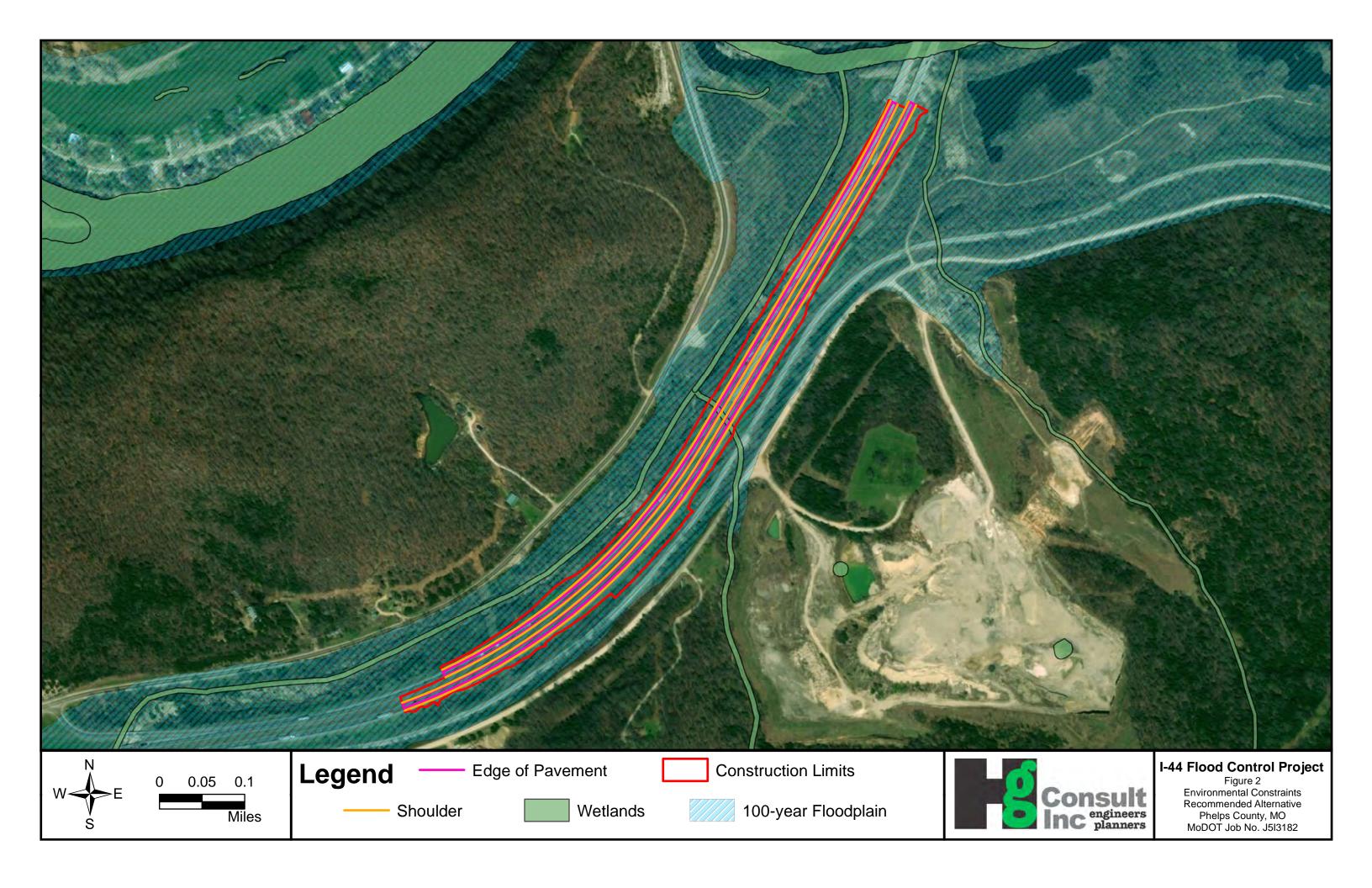
MEMO



- 6. MoDOT should ensure that any abandoned water wells be plugged prior to any land disturbance as these wells can act as conduits of pollutants to groundwater sources (see attached MDNR correspondence for further details).
- 7. Little Piney Creek is considered an Outstanding State Resource Water. Due to the nature of this project, and the designation of Outstanding State Resource Water, only flood control practices that do not adversely affect the stream should be considered. There shall be no lowered water quality in Outstanding State Resource Waters (see attached MDNR correspondence for further details).
- 8. Prior to final design, MoDOT should coordinate with the MDC about specific design options and proposed impacts to streams, riparian corridors, wetlands or other floodplain activities (see attached MDC correspondence for further details).
- 9. MoDOT should ensure that construction noise is addressed in construction plans and specifications for determining measures to minimize or eliminate temporary adverse construction noise impacts to the community.
- 10. If regulated solid or hazardous wastes are found during construction activities, the construction inspector shall direct the contractor to cease work at the suspect site. The construction inspector shall contact the appropriate environmental specialist to discuss options for remediation. The environmental specialist, the construction office, and the contractor shall develop a plan for sampling, remediation, and continuation of project construction. Independent consulting, analytical, and remediation services shall be contracted, if necessary. The MDNR and USEPA shall be contacted for coordination and approval of required activities.
- 11. MoDOT should dispose of all solid waste encountered including but not limited to domestic trash, furniture appliances, empty containers, tires, etc., in accordance with Missouri's solid waste disposal regulations (see attached MDNR correspondence for further details).
- 12. MoDOT will require that contractors control fugitive dust to keep it from leaving the project limits. Watering the ground or using dust-retarding chemicals and washing vehicles prior to leaving the construction site may be used to reduce the generation and transport of fugitive dust. All methods must comply with applicable Federal, state, and local laws and regulations.
- 13. If changes in the project footprint or scope occur that were not evaluated in this memo, MoDOT shall re-evaluate this document to ensure the determinations remain valid.

Attachments





November 28, 2017

Mr. David Kocour Hg Consult, Inc. 18963 West 117th Street Olathe, KS 66061

Re:

I-44 Flood Control Project, Jerome vicinity (FHWA) Phelps County, Missouri

Dear Mr. Kocour:

Thank you for submitting information on the above referenced project for our review pursuant to Section 106 of the National Historic Preservation Act (P.L. 89-665, as amended) and the Advisory Council on Historic Preservation's regulation 36 CFR part 800, which require identification and evaluation of cultural resources.

We have reviewed the information provided concerning the above referenced project. We have determined that there is a moderate to high potential for the presence of previously recorded archaeological sites 23PH161 and 23PH166 near and within the area of the proposed project. An archaeological survey, with deep testing as deemed appropriate, should be conducted. This survey should be completed prior to the initiation of project-related construction activities.

A list of independent archaeological contractors who can perform such services is available through the Department of Natural Resources at http://dnr.mo.gov/shpo/docs/archaeologyconsultants-2015.pdf
Please note that any 36 CFR Part 61 qualified archaeologist may perform an archaeological survey. If you choose a contractor not on the list, please be certain to include his or her curriculum vitae in the report. We would appreciate **one (1) hard copy and one (1) pdf copy** of the archaeological survey report when it is finished so we may complete the review and comment process.

If you have any questions, please write Heather Gibb at State Historic Preservation Office, P.O. Box 176, Jefferson City, Missouri 65102 or call Ms. Gibb at 573/751-4589. Please be sure to include the SHPO Log Number (**004-PH-18**) on all future correspondence or inquiries relating to this project.

Sincerely,

STATE HISTORIC PRESERVATION OFFICE

Toni M. Prawl, Ph.D. Director and Deputy State Historic Preservation Officer

TMP:jd

c Ms. Raegan Ball, FHWA Mr. Michael Meinkoth, MoDOT





DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS, KANSAS CITY DISTRICT TRUMAN REGULATORY SATELLITE OFFICE 15837 TRUMAN ROAD WARSAW, MISSOURI 65355

November 27, 2017

Truman Regulatory Satellite Office (NWK-2017-01996) (Phelps, MO)

Mr. David Kocour Hg Consult, Inc. 18963 West 117th Street Olathe, Kansas 66061

Dear Mr. Kocour:

This is in reply to your letter to the U.S. Army Corps of Engineers (Corps) for input regarding the environmental screening for the Missouri Department of Transportation I-44 Flood Control Project. It was received November 17, 2017. The study area includes portions of Sections 24, 25, and 26, Township 37 north, Range 10 west, in Phelps County, Missouri.

The Corps has jurisdiction over all waters of the United States. Discharges of dredged or fill material in waters of the United States, including wetlands, require prior authorization from the Corps under Section 404 of the Clean Water Act (Title 33 United States Code Section 1344). The implementing regulation for this Act is found at Title 33 Code of Federal Regulations Parts 320-332.

Should any future construction plans associated with project require the discharge of dredged or fill material in any waters of the United States, including wetlands, a Department of the Army (DA) permit may be required. However, if the proposed plans do not require the discharge of dredged or fill material in any waters of the United States, including wetlands, a DA permit will not be required. A copy of our brochure entitled "Activities Requiring Permits" is enclosed for your reference. Federal regulations require that a DA permit be issued by the Corps prior to the initiation of any construction on the portion of a proposed activity which is within the Corps' regulatory jurisdiction.

The study area includes a portion of Little Piney Creek, which is a waters of the United States. With consideration to potential construction timelines for work that requires a DA permit, this waterbody has seasonal restrictions (November 15 to February 15) within it in order to protect fish spawning areas

(http://www.nwk.usace.army.mil/Portals/29/docs/regulatory/nationwidepermits/2017/MORC2Sp awningList.pdf). Additionally, the Missouri Department of Natural Resources (MDNR) has designated Little Piney Creek as an Outstanding State Resource Waters as found in 10 CSR 20-7.031, Table E at https://sl.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-7a.pdf. Therefore, any proposed work requiring a DA permit would also require an individual Water Quality Certification from the MDNR, Water Protection Program. If you have any questions

concerning state water quality standards or certifications, please contact the MDNR, Water Protection Program, P.O. Box 176, Jefferson City, MO 65102-0176. You may also contact the office at 573-526-3589 or by email at wpsc401cert@dnr.mo.gov.

We are interested in your thoughts and opinions concerning your experience with the Kansas City District, Corps of Engineers Regulatory Program. Please feel free to complete our Customer Service Survey form on our website at:

http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. You may also call and request a paper copy of the survey which you may complete and return to us by mail or fax.

If you have any questions concerning this matter, please feel free to contact me at 816-389-3986 or by email at sean.m.beyke@usace.army.mil.

Sincerely,

Sean Beyke

Regulatory Specialist

Enclosure

Activities Requiring Permits

Contractors Builders Planners

Excavators Engineers Homeowners

Consultants Landowners Farmers

The Corps of Engineers is charged with the responsibility for protecting the public interest in waters of the United States. This is accomplished through a Department of the Army permit program. Under this program, most activities involving work in waters of the United States, including wetlands, require authorization from the Corps of Engineers. Individuals, companies, corporations, Federal and State agencies, and local governments planning construction activities in a stream, river, lake or wetland should contact the Kansas City District, U.S. Army Corps of Engineers, BEFORE ANY WORK IS BEGUN.

Why?

Because your proposed work may be subject to one or both of the following Federal Acts:

<u>Section 10 of the Rivers and Harbors Act of 1899</u> regulates any work or structure in, over, or under navigable waters of the United States. This includes such items as boat docks, boat ramps, powerlines, excavation, filling, etc.

<u>Section 404 of the Clean Water Act</u> regulates the discharge of dredged or fill material in all waters of the United States, including rivers, streams, lakes and wetlands. This includes work such as site development fills, causeways or road fills, dams and dikes, artificial islands, bank stabilization (riprap, seawalls and breakwaters) levees, landfills, fish attractors, mechanized clearing of wetlands, and certain types of excavation activities, etc.

Be Sure Before you Start Construction

Department of the Army permits must be obtained prior to starting any work within the Corps' jurisdiction. Persons planning any construction activities in or near any water body should write or call:

Corps of Engineers, Kansas City District Regulatory Branch 601 East 12th Street, Room 402 Kansas City, MO 64106 Telephone: 816-389-3990 FAX: 816-389-2032

http://www.nwk.usace.army.mil/Missions/RegulatoryBranch.aspx

A map of the Kansas City District, Regulatory Program Service Areas can be found at: http://www.nwk.usace.army.mil/Portals/29/docs/regulatory/2016-01-21 NWK Boundary Map.pdf





David Kocour <dkocour@hgcons.com>

Phelps County Project

1 message

McHugh, Karen < Karen. McHugh@sema.dps.mo.gov>
To: "dkocour@hgcons.com" < dkocour@hgcons.com>
Cc: "Walker, Ron" < Ron. Walker@sema.dps.mo.gov>

Fri, Nov 17, 2017 at 10:37 AM

David Kocour Hg Consultant, Inc. 18963 West 117th Street Olathe, Kansas 66061

Re: MoDOT Job No. J5I3182

Dear Mr. Kocour,

We very much appreciate your letter dated November 14, 2017 and the opportunity to provide comments regarding Missouri Department of Transportation (MoDOT) Job No. J5l3182, located in Phelps County, Missouri. Please accept this commentary in response to your notice to our office.

The Phelps County is a participant in the National Flood Insurance Program (NFIP). Any development associated with this project that is located within a Special Flood Hazard Area (SFHA), as identified by the Federal Emergency Management (FEMA), must meet the requirements of the county's local floodplain management ordinance. This may require obtaining a floodplain development permit for the proposed project. It must be obtained PRIOR to the commencement of any construction/development activity in the SFHA. Obtain this permit from the political entity with jurisdiction over the SFHA in which the proposed project is located. If the proposed project is state-owned, then the permit comes from this office (SEMA).

If the proposed development is also located within a regulatory floodway, an Engineering "No-Rise" Certificate and statement as to the effect of the proposed project regarding possible flooding is required before the development can be permitted. This analysis must be performed by a licensed Missouri Engineer, according to current FEMA guidelines and standards.

If the project requires additional permits from other regulatory agencies, it is MoDOT's responsibility to obtain those permits prior to the beginning of construction.

If you have any questions concerning this letter or the requirements of the minimum standards of the NFIP, please feel free to contact me at (573) 526-9129.

Sincerely,

Karen L. McHugh, CFM

Floodplain Management Section Manager State NFIP Coordinator



Missouri Department of Conservation

Missouri Department of Conservation's Mission is to protect and manage the forest, fish, and wildlife resources of the state and to facilitate and provide opportunities for all citizens to use, enjoy and learn about these resources.

Natural Heritage Review <u>Level Three Report: Species Listed Under the Federal Endangered</u> <u>Species Act</u>

There are records for species listed under the Federal Endangered Species Act, and possibly also records for species listed Endangered by the state, or Missouri Species and/or Natural Communities of Conservation Concern within or near the the defined Project Area. <u>Please contact</u> the U.S. Fish and Wildlife Service and the Missouri Department of Conservation for further coordination.

Foreword: Thank you for accessing the Missouri Natural Heritage Review Website developed by the Missouri Department of Conservation with assistance from the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, Missouri Department of Transportation and NatureServe. The purpose of this website is to provide information to federal, state and local agencies, organizations, municipalities, corporations and consultants regarding sensitive fish, wildlife, plants, natural communities and habitats to assist in planning, designing and permitting stages of projects.

PROJECT INFORMATION

Project Name and ID Number: I-44 Flood Control Project #3689

User Project Number: MoDOT Job No. J5l3182

Project Description: I-44 Flood Control Project near Jerome, Phelps County, MO

Project Type: In-stream / Riverine Activities and Projects, Levees and similar flood control structures (construction,

modification, maintenance)

Contact Person: Dave Kocour

Contact Information: dkocour@hgcons.com or 913.747.8239

Report Created: 12/14/2017 11:32:56 AM

Disclaimer: The NATURAL HERITAGE REVIEW REPORT produced by this website identifies if a species tracked by the Natural Heritage Program is known to occur within or near the area submitted for your project, and shares suggested recommendations on ways to avoid or minimize project impacts to sensitive species or special habitats. If an occurrence record is present, or the proposed project might affect federally listed species, the user must contact the Department of Conservation or U.S. Fish and Wildlife Service for more information. The Natural Heritage Program tracks occurrences of sensitive species and natural communities where the species or natural community has been found. Lack of an occurrence record does not mean that a sensitive plant, animal or natural community is not present on or near the project area. Depending on the project, current habitat conditions, and geographic location in the state, surveys may be necessary. Additionally, because land use conditions change and animals move, the existence of an occurrence record does not mean the species/habitat is still present. Therefore, Reports include information about records near but not necessarily on the project site.

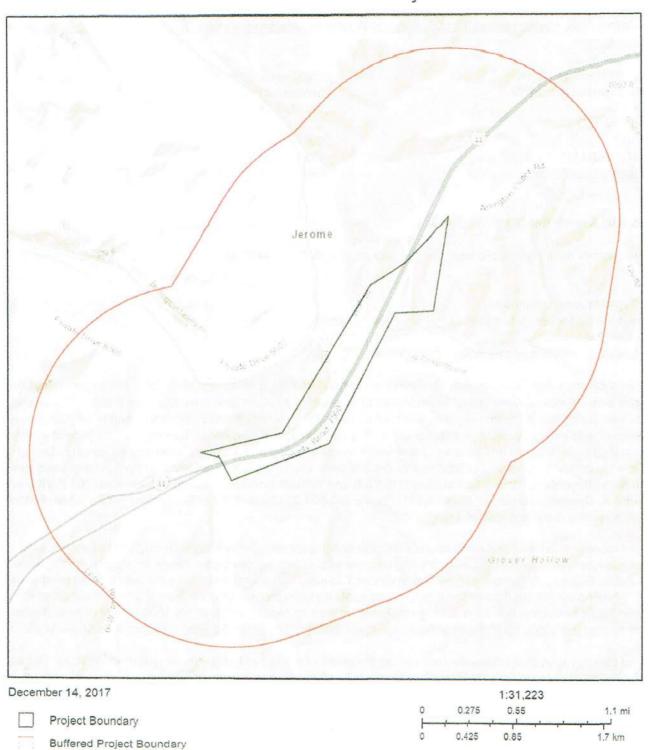
The Natural Heritage Report is not a site clearance letter for the project. It provides an indication of whether or not public lands and sensitive resources are known to be (or are likely to be) located close to the proposed project. Incorporating information from the Natural Heritage Program into project plans is an important step that can help reduce unnecessary impacts to Missouri's sensitive fish, forest and wildlife resources. However, the Natural Heritage Program is only one reference that should be used to evaluate potential adverse project impacts. Other types of information, such as wetland and soils maps and on-site inspections or surveys, should be considered. Reviewing current landscape and habitat information, and species' biological characteristics would additionally ensure that Missouri Species of Conservation Concern are appropriately identified and addressed in planning efforts.

U.S. Fish and Wildlife Service – Endangered Species Act (ESA) Coordination: Lack of a Natural Heritage Program occurrence record for federally listed species in your project area does not mean the species is not present, as the area may never have been surveyed. Presence of a Natural Heritage Program occurrence record does not mean the project will result in negative impacts. The information within this report is not intended to replace Endangered Species Act consultation with the U.S. Fish and Wildlife Service (USFWS) for listed species. Direct contact with the USFWS may be necessary to complete consultation and it is required for actions with a federal connection, such as federal funding or a federal permit; direct contact is also required if ESA concurrence is necessary. Visit the USFWS Information for Planning and Conservation (IPaC) website at https://ecos.fws.gov/ipac/ for further information. This site was developed to help streamline the USFWS environmental review process and is a first step in ESA coordination. The Columbia Missouri Ecological Field Services Office may be reached at 573-234-2132, or by mail at 101 Park Deville Drive, Suite A, Columbia, MO 65203.

Transportation Projects: If the project involves the use of Federal Highway Administration transportation funds, these recommendations may not fulfill all contract requirements. Please contact the Missouri Department of Transportation at 573-526-4778 or www.modot.mo.gov/ehp/index.htm for additional information on recommendations.

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I-44 Flood Control Project



Sources: Esri, HERE DeLorme Intermap, increment P Corp., GESCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI. Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Species or Communities of Conservation Concern within the Area:

There are records for species listed under the Federal Endangered Species Act, and possibly also records for species listed Endangered by the state, or Missouri Species and/or Natural Communities of Conservation Concern within or near the the defined Project Area. Please contact the U.S. Fish and Wildlife Service and the Missouri Department of Conservation for further coordination.

MDC Natural Heritage Review Resource Science Division P.O. Box 180 Jefferson City, MO 65102-0180

Phone: 573-522-4115 ext. 3182 NaturalHeritageReview@mdc.mo.gov U.S. Fish and Wildlife Service Ecological Service 101 Park Deville Drive Suite A Columbia, MO 65203-0007

Phone: 573-234-2132

Other Special Search Results:

The project occurs on or near public land, Jerome Access, MARK TWAIN NF, please contact MDC, USFS.

Project Type Recommendations:

Recommendations for Best Management Practices are under development.

Project Location and/or Species Recommendations:

Endangered Species Act Coordination - Indiana bats (Myotis sodalis, federal- and state-listed endangered) and Northern long-eared bats (Myotis septentrionalis, federal-listed threatened) may occur near the project area. Both of these species of bats hibernate during winter months in caves and mines. During the summer months, they roost and raise young under the bark of trees in wooded areas, often riparian forests and upland forests near perennial streams. During project activities, avoid degrading stream quality and where possible leave snags standing and preserve mature forest canopy. Do not enter caves known to harbor Indiana bats or Northern long-eared bats, especially from September to April. If any trees need to be removed for your project, please contact the U.S. Fish and Wildlife Service (Ecological Services, 101 Park Deville Drive, Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132 ext. 100 for Ecological Services) for further coordination under the Endangered Species Act.

The project location submitted and evaluated is within the geographic range of nesting Bald Eagles in Missouri. Bald Eagles (Haliaeetus leucocephalus) may nest near streams or water bodies in the project area. Nests are large and fairly easy to identify. Adults begin nesting activity in late December and January and young birds leave the nest in late spring to early summer. While no longer listed as endangered, eagles continue to be protected by the federal government under the Bald and Golden Eagle Protection Act. Work managers should be alert for nesting areas within 1500 meters of project activities, and follow federal guidelines at: http://www.fws.gov/midwest/MidwestBird/EaglePermits/index.html if eagle nests are seen.

The project location submitted and evaluated is within the range of the Gray Myotis (i.e., Gray Bat) in Missouri. Depending on habitat conditions of your project's location, Gray Myotis (*Myotis grisescens*, federal and state-listed endangered) could occur within the project area, as they forage over streams, rivers, lakes, and reservoirs. Avoid entry or disturbance of any cave inhabited by Gray Myotis and when possible retain forest vegetation along the stream and from the cave opening to the stream. See http://mdc.mo.gov/104 for best management recommendations.

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The project site submitted and evaluated is on or near Sensitive Aquatic Species Waters Gasconade River, an important stream for freshwater mussel and amphibian populations. These streams were so designated because they have highly diverse mussel communities and mussel and amphibian species identified as Species of Conservation Concern. These streams are important to maintaining, restoring, or avoiding future listing of Species of Conservation Concern. Impacts to these aquatic species and habitats can be reduced by avoiding or minimizing activities that disturb the stream substrate, including rock placement, dredging, trenching, and wetted gravel bar disturbance; and avoid introducing heavy sediment loads, chemical or organic pollutants. These streams also are included as a Missouri Nationwide Permit Regional Condition (Number 7) that must be considered if working under if working under a Clean Water Act Section 404 Permit issued by the U.S. Army Corps of Engineers (http://www.nwk.usace.army.mil/Missions/RegulatoryBranch/NationWidePermit...). A list of all streams designated under this Condition is available at http://www.nwk.usace.army.mil/Portals/29/docs/regulatory/nationwidepermi...).

The project site submitted and evaluated is on or near Fish Spawning Stream Reaches Gasconade River, one of 138 state-designated fish spawning stream segments. These stream reaches were so designated because they have highly diverse fish communities, fish Species of Conservation Concern present, and because they are important to maintaining, restoring, or avoiding future listing of Species of Conservation Concern. These stream reaches also are included as a Missouri Nationwide Permit Regional Condition (Number 2) that must be considered if working under a Clean Water Act Section 404 Permit issued by the U.S. Army Corps of Engineers (http://www.nwk.usace.army.mil/Missions/RegulatoryBranch/NationWidePermit...). A list of all stream reaches is available at http://www.nwk.usace.army.mil/Portals/29/docs/regulatory/nationwidepermit.... Activities that alter or destabilize stream bottoms or banks should be avoided during the important fish spawning period for that stream, in order to not disrupt fish spawning (i.e., laying and fertilizing fish eggs.) The sensitive spawning period for this stream is March 15th to June 15th. At all times, avoid habitat destruction or introducing heavy sediment loads, chemical or organic pollutants.

Invasive exotic species are a significant issue for fish, wildlife and agriculture in Missouri. Seeds, eggs, and larvae may be moved to new sites on boats or construction equipment. Please inspect and clean equipment thoroughly before moving between project sites. See http://mdc.mo.gov//9633 for more information.

- · Remove any mud, soil, trash, plants or animals from equipment before leaving any water body or work area.
- Drain water from boats and machinery that have operated in water, checking motor cavities, live-well, bilge and transom wells, tracks, buckets, and any other water reservoirs.
- When possible, wash and rinse equipment thoroughly with hard spray or HOT water (?140° F, typically available at do-it-yourself car wash sites), and dry in the hot sun before using again.

Streams and Wetlands – Clean Water Act Permits: Streams and wetlands in the project area should be protected from activities that degrade habitat conditions. For example, soil erosion, water pollution, placement of fill, dredging, in-stream activities, and riparian corridor removal, can modify or diminish aquatic habitats. Streams and wetlands may be protected under the Clean Water Act and require a permit for any activities that result in fill or other modifications to the site. Conditions provided within the U.S. Army Corps of Engineers (USACE) Clean Water Act Section 404 permit (http://www.nwk.usace.army.mil/Missions/RegulatoryBranch.aspx) and the Missouri Department of Natural Resources (DNR) issued Clean Water Act Section 401 Water Quality Certification (http://dnr.mo.gov/env/wpp/401/index.html), if required, should help minimize impacts to the aquatic organisms and aquatic habitat within the area. Depending on your project type, additional permits may be required by the Missouri Department of Natural Resources, such as permits for stormwater, wastewater treatment facilities, and confined animal feeding operations. Visit http://dnr.mo.gov/env/wpp/permits/index.html for more information on DNR permits. Visit both the USACE and DNR for more information on Clean Water Act permitting.

For further coordination with the Missouri Department of Conservation and the U.S. Fish and Wildlife Services, please see the contact information below.

MDC Natural Heritage Review Resource Science Division P.O. Box 180 Jefferson City, MO 65102-0180

Phone: 573-522-4115 ext. 3182

NaturalHeritageReview@mdc.mo.gov

U.S. Fish and Wildlife Service Ecological Service 101 Park Deville Drive Suite A Columbia, MO 65203-0007

Phone: 573-234-2132

Miscellaneous Information

FEDERAL Concerns are species/habitats protected under the Federal Endangered Species Act and that have been known near enough to the project site to warrant consideration. For these, project managers must contact the U.S. Fish and Wildlife Service Ecological Services (101 Park Deville Drive Suite A, Columbia, Missouri 65203-0007; Phone 573-234-2132; Fax 573-234-2181) for consultation.

STATE Concerns are species/habitats known to exist near enough to the project site to warrant concern and that are protected under the Wildlife Code of Missouri (RSMo 3 CSR 1 0). "State Endangered Status" is determined by the Missouri Conservation Commission under constitutional authority, with requirements expressed in the Missouri Wildlife Code, rule 3CSR 1 0-4.111. Species tracked by the Natural Heritage Program have a "State Rank" which is a numeric rank of relative rarity. Species tracked by this program and all native Missouri wildlife are protected under rule 3CSR 10-4.110 General Provisions of the Wildlife Code.

Additional information on Missouri's sensitive species may be found at http://mdc.mo.gov/discover-nature/field-quide/endangered-species. Detailed information about the animals and some plants mentioned may be accessed at http://mdc4.mdc.mo.gov/applications/mofwis/mofwis_search1.aspx. If you would like printed copies of best management practices cited as internet URLs, please contact the Missouri Department of Conservation.

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IPaC Information for Planning and Consultation u.s. Fish & Wildlife Service

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as trust resources) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional sitespecific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional .ion, information applicable to the trust resources addressed in that section.

Location

Phelps County, Missouri



Local office

Missouri Ecological Services Field Office

(573) 234-2132

(573) 234-2181

101 Park Deville Drive Suite A Columbia, MO 65203-0057

Page 2 of 7

IPaC: Explore Location

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act requires Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Draw the project location and click CONTINUE.
- 2. Click DEFINE PROJECT.
- 3. Log in (if directed to do so).
- 4. Provide a name and description for your project.
- 5. Click REQUEST SPECIES LIST.

Listed species

- ¹ are managed by the <u>Ecological Services Program</u> of the U.S. Fish and Wildlife Service.
- 1. Species listed under the <u>Endangered Species Act</u> are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the <u>listing status page</u> for more information.

The following species are potentially affected by activities in this location:

Mammals

NAME STATUS

Gray Bat Myotis grisescens

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/6329

Endangered

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Indiana Bat Myotis sodalis

Endangered

There is final critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/5949

Northern Long-eared Bat Myotis septentrionalis

Threatened

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/9045

Clams

NAME STATUS

Pink Mucket (pearlymussel) Lampsilis abrupta Endangered

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/7829

Scaleshell Mussel Leptodea leptodon

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/5881

Spectaclecase (mussel) Cumberlandia monodonta

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/7867

Endangered

Endangered

Insects

NAME STATUS

Hine's Emerald Dragonfly Somatochlora hineana

Endangered

There is final critical habitat for this species. Your location is outside the critical habitat.

https://ecos.fws.gov/ecp/species/7877

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

1 and the Bald and Golden Eagle Protection Act2.

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service

- 2. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured. Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and 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)

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds
 http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds
 http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

MIGRATORY BIRD INFORMATION IS NOT AVAILABLE AT THIS TIME

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Such measures are particularly important when birds are most likely to occur in the project area. To see when birds are most likely to occur in your project area, view the Probability of Presence Summary. Special attention should be made to look for nests and avoid nest destruction during the breeding season. The best information about when birds are breeding can be found in <u>Birds of North America (BNA) Online</u> under the "Breeding Phenology" section of each species profile. Note that accessing this information may require a <u>subscription</u>. <u>Additional measures</u> and/or <u>permits</u> may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern (BCC)</u> that might be affected by activities in your project location. These birds are of priority concern because it has been determined that without additional conservation actions, they are likely to become candidates for listing under the <u>Endangered Species Act</u> (<u>ESA</u>).

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network</u> (AKN). The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u>. The AKN list represents all birds reported to be occurring at some level throughout the year in the counties in which your project lies. That list is then narrowed to only the Birds of Conservation Concern for your project area.

Again, the Migratory Bird Resource list only includes species of particular priority concern, and is not representative of all birds that may occur in your project area. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To get a list of all birds potentially present in your project area, please visit the <u>E-bird Explore Data Tool</u>.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u>.

Probability of presence data is continuously being updated as new and better information becomes available.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird entry on your migratory bird species list indicates a breeding season, it is probable the bird breeds in your project's counties at some point within the time-frame specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

<u>Avoidance and minimization measures</u> should be implemented to reduce impacts to birds on your list, and all other birds that may occur in your project area. Nationwide Standard Conservation Measures can be applied for any project, regardless of project type or location.

If measures exist that are specific to your activity or to any of the species on your list that are confirmed to exist at your project area, these should also be considered for implementation in addition to the Nationwide Standard Conservation Measures. Implementation of avoidance and minimization measures is particularly important for BCC birds of rangewide concern.

If your project has the potential to disturb or kill eagles, you will need to <u>obtain a permit</u> to avoid violating the BGEPA should such impacts occur.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the <u>Northeast Ocean Data Portal</u>. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the <u>NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.</u>

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Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam Loring</u>.

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to <u>NWI wetlands</u> and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of Engineers</u> District.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

PFO1A

FRESHWATER POND

PUBGh

RIVERINE

R3UBH

A full description for each wetland code can be found at the National Wetlands Inventory website: https://ecos.fws.gov/ipac/wetlands/decoder

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

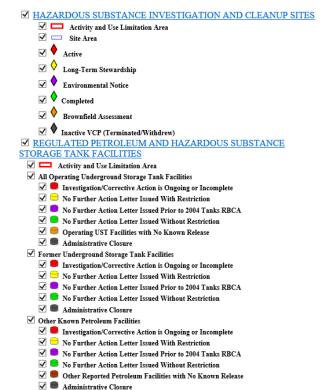
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



2014 IMAGERY



JAN 0 5 2018

Mr. David Kocour Hg Consult, Inc. 18963 W 117th Street Olathe, KS 66061

Dear Mr. Kocour:

The Missouri Department of Natural Resources appreciates the opportunity to review the materials for the proposed I-44 Flood Control Project. The Department offers the following comments for consideration.

Project Location

The Environmental Assessment study area is located south of Jerome in Phelps County, Missouri, between the I-44 mile markers of 172.6 and 174.0. The area surrounding this stretch of highway is the primary focus of this project. The following geographic descriptions apply to the approximate location of the study area.

Geographic Coordinates:

590025 E, 4196467 N

Public Land Survey System:

S18 T37 R09W

S13 T37 R10W

S24 T37 R10W

S19 T37 R09W

S25 T37 R10W

S23 T37 R10W

S26 T37 R10W

8-Digit Hydrologic Unit Code:

Lower Gasconade (10290203)

Ecological Drainage Unit:

Ozark/Gasconade

Geology Survey

The project area is underlain by Quaternary-age alluvium in the valleys and Ordovician-age Gasconade Dolomite bedrock in the hills. According to well logs, the alluvium may be up to 65 feet deep.



There are no recorded sinkholes within one mile of the project area. Two springs are located within the valley portion of the project area and Piney Creek, which lies in the project area, is classified as gaining. Although no sinkholes are mapped in the project area, the dolomite bedrock is known for cave and sinkhole development in this part of the state and the springs discharge from a karst conduit system. Therefore, a sinkhole collapse potential exists for the project area.

The northwest-southeast aligned inactive Franks Fault is mapped within the project area. Based on seismic damage evaluation databases, the project area does not lie in an area that has collapse potential since there are no recorded caves or mines beneath the project area. However, due to the steep slopes there is landslide potential in the hills and due to the saturated alluvium, there is a liquefaction potential in the valley in the case of a significant earthquake.

The project area does not lie within a former mining district. A surface sand and gravel operation lies within the Piney Creek valley and a surface rock quarry lies just south of the project area. Therefore, collapse due to for mining activities in the area is unlikely.

Water Protection

Geospatial Data

Geospatial data published by the Department addressing designated uses, sensitive waters, geology, and other watershed information included in this review are available on the Missouri Spatial Data Information Service website at http://msdis.missouri.edu/. Additional geospatial resources available from the Department can be found at http://dnr.mo.gov/gis/.

Watershed Conditions

Karst Topography - Springs, Sinkholes, and Caves:

According to available data, there are two known springs within the proposed project area. The Newburg Quadrangle, which surrounds the proposed project area, has 26 known caves. Springs, sinkholes, and caves are features on the landscape associated with karst topography that can act as direct conduits of surface water and pollutants to groundwater. As such, extra precaution should be taken to minimize disturbance of land in or around these features, and to avoid the introduction of pollutants to sensitive groundwater resources.

Certified Wells:

There are 37 known wells northwest of the proposed project area, of which, 3 are reconstruction wells, 6 are abandoned wells, and 28 are water wells. Wells can also act as conduits of pollutants to groundwater resources. Abandoned wells should be plugged prior to any land disturbance, and care should be taken to utilize appropriate Best Management Practices to protect any currently operating wells. For more information on locating and plugging wells, please visit the Department's Wellhead Protection Section webpage below or contact the Department's Geological Survey Program directly at 800-361-4827. https://dnr.mo.gov/geology/geosry/wellhd/

Public Drinking Water:

Pulaski County Public Water Service Districts Number 2 and 3 are located directly west of the proposed project area. All work associated with this project should take into consideration the protection of both surface and groundwater public drinking water supplies, implementing

appropriate Best Management Practices as necessary. In the event that public drinking water sources or infrastructure, such as reservoirs, water supply wells, surface water supply intakes, or treatment systems, have the potential to be impacted by suspended solids or other pollutants as a result of this project, the owners or operators of the affected drinking water system should be notified prior to the onset of work. For additional information regarding source water protection, please contact Mr. Ken Tomlin of the Department's Public Drinking Water Branch at 573-526-0269.

Public Land:

The United States Fish and Wildlife Service Mark Twain National Wildlife Refuge is located directly south and east of the proposed project area. Additionally, The Missouri Department of Conservation Jerome Access is located north of the proposed project area. Care should be taken to avoid or minimize impact from land disturbance activities near these areas.

Conservation Opportunity Areas (COAs):

There are three known Conservation Opportunity Areas near the proposed project area. Middle Gasconade Aquatic Opportunity area is located directly west of the proposed project area. Kaintuk Breaks and Western Star Flatwoods Terrestrial Opportunity areas are located just south of the proposed project area. Both terrestrial and aquatic COAs are identified by the Missouri Department of Conservation and its conservation partners as priority areas that support and conserve viable populations of wildlife and the ecological systems on which they depend. Designated COAs are located statewide and may consist of a combination of public and private resources. Please contact the Missouri Department of Conservation at 573-751-4115 for more information.

Natural Areas:

There are two known designated Natural Areas near the proposed project area. Clifty Creek Natural Area is located north of the proposed project area, and Western Star Flatwoods Natural Area is located south of the proposed project area. Missouri Natural Areas are designated by the interagency Missouri Natural Areas Committee with the goal to protect and manage sites that represent the character, diversity and ecological processes of the state's native landscapes. Designated Natural Areas are located statewide and may consist of a combination of public and private resources. Please contact the Missouri Department of Conservation at 573-751-4115, or the Department of Natural Resources at 800-361-4827 for more information.

Designated Uses

Water Bodies with Specific Designated Uses:

Water bodies are assigned specific designated uses according to State of Missouri Water Quality regulations at 10 CSR 20-7.031(2). These waters are protected by numeric water quality criteria outlined in 10 CSR 20-7.031(5) and Table A, as well as general water quality criteria outlined at 10 CSR 20-7.031(4).

The project area is located within the watersheds of the Gasconade River (WBID 1455), the Little Piney Creek (WBID 1521), Smith Hollow Creek (WBID 3565), and two unnamed tributaries (WBID 3960). Gasconade River, Little Piney Creek, and Smith Hollow Creek are

Class P waterbodies, which are defined as streams that maintain permanent flow even in drought periods. The unnamed tributaries are Class C waterbodies, which are defined as streams that may cease flow in dry periods but maintain permanent pools which support aquatic life. These streams are assigned the following specific designated uses in the Missouri Use Designation Dataset and at 10 CSR 20-7.031 Table H:

- WWH Protection and propagation of fish, shellfish and wildlife warm water habitat
- DWS Drinking Water Supply
- HHP Human health protection
- IRR Irrigation
- LWP Livestock and wildlife protection
- SCR Secondary contact recreation
- WBC-B Whole body contact recreation-Category B
- WBC-A -Whole body contact recreation—Category A
- CLH Cool Water Habitat

Water Body	WBID	Class	WWH	DWS	HHP	IRR	LWP	SCR	WBC-A	CLH	WBC-B
Gasconade River	1455	P	X	X	X	X	X	X	X	X	X
L. Piney Creek	1521	P	X		X	X	X	X	X	X	X
Smith Hollow Creek	3565	P	X		X	X	X		21 1		X
	3960	С	X		X	X	X	X			X

Water Bodies without Specific Designated Uses:

Water bodies that are not assigned specific designated uses are protected at all times by general water quality criteria outlined at 10 CSR 20-7.031(4), and are subject to the acute toxicity criteria of Tables A and B, as well as whole effluent toxicity conditions. The project area is located within the vicinity of two unnamed tributaries to the Gasconade River that are not assigned specific designated uses.

According to the National Wetlands Inventory https://www.fws.gov/wetlands/, there is the likelihood of freshwater wetlands and ponds within the riparian corridors of the Gasconade River (WBID 1455), Little Piney Creek (WBID 1521) and Smith Hollow Creek (WBID 3565) near the proposed project area. As such, the potential exists for wetlands, ponds, and the aforementioned tributaries and headwater streams to be impacted, depending on their proximity to land disturbance activities. In all cases, care should be taken to avoid such impacts through alternatives analysis before compensatory mitigation is considered. If wetlands, ponds, headwaters, or tributaries are not directly impacted but are near any land disturbance, care should

be taken to protect water quality. While these water bodies are not assigned specific designated uses, they are protected by Missouri's general water quality criteria.

Sensitive Waters

Table E, Outstanding State Resource Waters:

Little Piney Creek (WBID 1521) is an Outstanding State Resource Water. Due to the nature of this project, and the designation of Outstanding State Resource Water, only flood control practices that do not adversely affect the stream can be considered. There shall be no lowered water quality in Outstanding State Resource Waters, as designated in 10 CSR 20-7.031 Table E.

303(d) Impaired and 305(b) Threatened Waters:

The Gasconade River (WBID1455) is impaired by mercury. Waters assessed by the Department as threatened or impaired could potentially be impacted by this project. Project personnel should ensure that any activities related to the project do not cause an increase in the pollutants impairing these waters nor re-suspend any pollutants that might be bound to sediment. Additional information can be found at http://dnr.mo.gov/env/wpp/waterquality/303d/303d.htm, or by contacting the Department's Water Protection Program at 573-526-1446.

Permitting Obligations

Clean Water Act Sections 401 and 404:

Any project that has the potential to result in the discharge of fill or dredged material into a jurisdictional water of the United States may require Clean Water Act Section 404 Permit Authorization from the U.S. Army Corps of Engineers (USACE), and Section 401 Water Quality Certification from the Department of Natural Resources. The 401 Certification is a certification by the state that the project will not violate water quality standards. More information about the Section 404 Permit Program, including Clean Water Act jurisdiction, is available at https://www.epa.gov/cwa-404/section-404-permit-program. More information about state 401 Water Quality Certification can be found at https://dnr.mo.gov/env/wpp/401/.

If discharge into water has occurred, or will occur, the Missouri Department of Transportation (MODOT), the Federal Highway Administration (FHWA), or its contractors should immediately contact the USACE Kansas City District at 660-438-6697, and the Department's Operating Permits Section at 573-522-4502 for more information. MODOT, the FHWA, or its contractors may wish to consult with the Department and the USACE prior to project initiation to ensure alternative plans are in place should such a discharge occur.

Mitigation

An alternatives analysis would need to be submitted prior to any impacts to jurisdictional waters as part of the avoidance and minimization measures that precede mitigating unavoidable impacts. Mitigation for wetlands should be in conformance with the *State of Missouri Aquatic Resources Mitigation Guidelines* while mitigation for streams should be in conformance with the *Missouri Stream Mitigation Method*.

https://dnr.mo.gov/env/wpp/401/docs/mitigation_guidelines.pdf http://www.mvm.usace.army.mil/Portals/51/docs/regulatory/May_2013_Missouri_Stream_Mitigation_Method.pdf. Any mitigation plans must be in conformance with the Compensatory Mitigation for Losses of Aquatic Resources, https://www.epa.gov/cwa-404/compensatory-mitigation. This rule establishes a hierarchy for mitigation, with the purchase of credits from a mitigation bank at the top of that hierarchy. The rule also emphasizes in-kind and in-watershed mitigation; to go outside the watershed may result in a higher credit purchase calculation. The applicant should receive mitigation plan approval from the Department prior to certification.

Land Disturbance

Acquisition of a Section 401 Certification should not be interpreted to mean that the requirements for other permits are replaced or superseded, including Clean Water Act Section 402 National Pollutant Discharge Elimination System Permits. Work disturbing an area of one acre or more requires issuance of a land disturbance permit prior to any earth work. Disturbance to valuable resource waters, including springs, sinkholes and losing streams, could require additional conditions or a site-specific permit.

Information and application for online land disturbance permits are located at http://www.dnr.mo.gov/env/wpp/epermit/help.htm. Questions regarding permit requirements may be directed to the Department's Southeast Regional Office at 573-840-9750.

Best Management Practices

In all cases, Best Management Practices should be utilized during project activities to limit the amount of sediment and other pollutants entering waters of the state, and to protect the water's chemical, physical, and biological characteristics. These practices include, but are not limited to, conducting work during low flow conditions whenever possible, keeping heavy equipment out of the water, and taking all necessary precautions to avoid the release of fuel or other waste products to streams and other waters. In addition, the Department encourages the preservation of existing riparian or buffer areas around each water resource to limit the amount of sediments or other pollutants entering the water. Any stream banks, riparian corridors, lake shores, or wetlands denuded of vegetation should be stabilized and re-vegetated as soon as is practicable.

Solid Waste

In case the construction work involves any excavation, the Department's technical bulletin "Managing Solid Waste Encountered during Excavation Activities" has been developed to assist project planners. It provides general disposal requirements for of any unexpected buried waste. The bulletin can be found on the department's web site at http://dnr.mo.gov/pubs/pub2192.htm.

The Department's technical bulletin "Management of Scrap Tires" can also be helpful if any scrap tires are encountered. It provides guidance and disposal information for scrap tires. The bulletin can be found on the Department's web site at http://dnr.mo.gov/pubs/pub2056.htm.

Historic Preservation

The Department has reviewed this project under Section 106 of the National Historic Preservation Act of 1966 (as amended) and has determined that there is a moderate to high potential for the presence of previously recorded archaeological sites 23PH161 and 23PH166

Mr. David Kocour Page 7

near and within the area of the proposed project. For additional information, please see the letter sent by the State Historic Preservation Officer dated November 28, 2017.

We appreciate the opportunity to provide comments for the proposed I-44 Flood Control Project. If you have any questions or need clarification, please contact Mr. Rob Hunt with the Department of Natural Resources, P.O. Box 176, Jefferson City, MO 65102 or by phone at 573-522-2656. Thank you.

Sincerely,

Dru Buntin

Deputy Director

DB/rhm



David Kocour < dkocour@hgcons.com>

Re: 1-44 MODOT project# J5l3182

1 message

Stuart Miller <Stuart.Miller@mdc.mo.gov>
To: "dkocour@hgcons.com" <dkocour@hgcons.com>
Co: AJ Pratt <Anthony.Pratt@mdc.mo.gov>

Wed, Jan 17, 2018 at 2:41 PM

David Kocour

HG Consult Inc.

18963 W. 117th St.

Olathe KS, 66061

Re: 1-44 MODOT project# J5I3182

Phelps County

Dear Mr. Kocour

Thank you for the opportunity to comment on this project.

Local MDC biologists are familiar with this project and the location. When considering options please minimize impacts to the stream and the wetland mitigation site. Please advise/email AJ Pratt, our Regional Fisheries Supervisor about specific design options and proposed impacts to streams, riparian corridors, wetlands or other floodplain activities.

Stuart Miller

Missouri Department of Conservation

573-751-4115 ext. 3378