

SIU 5 Agency Coordination Letters



MISSOURI DEPARTMENT OF CONSERVATION

Headquarters

2901 West Truman Boulevard, P.O. Box 180, Jefferson City, Missouri 65102-0180

Telephone: 573/751-4115 ▲ Missouri Relay Center: 1-800-735-2966 (TDD)

JERRY M. CONLEY, Director

June 3, 2002

RECEIVED

JUN 06 2002

Ms. Connie J. Heitz
Zambrana Engineering, Inc.
2324 Marconi Avenue
St. Louis, Missouri 63110

ZAMBRANA ENGINEERING INC.

Dear Ms. Heitz:

Re: I-70 Second Tier EIS, SIU #5

Thank you for your letter of April 15, 2002, regarding species of conservation concern within the proposed project area.

A review of our records shows that public lands, sensitive species or communities are known to exist on or near the above-referenced site. Details are provided in the enclosed Heritage Database report which reflects information we currently have in our database. Please be advised this is **not a site clearance letter**. Rather, this letter 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 our Heritage Database into project plans is an important step that can help reduce unnecessary impacts to Missouri's sensitive natural resources. However, the Heritage Database is only one reference which should be used to evaluate potential adverse 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 species of conservation concern are appropriately identified and addressed.

Impacts to the aquatic environment should be minimal if the following best management practices for maintaining water quality are followed during project design and construction.

1. Channel modification or stream relocation should not occur unless conditions of the State Channel Modification Guidelines are met.

COMMISSION

STEPHEN C. BRADFORD
Cape Girardeau

ANITA B. GORMAN
Kansas City

CYNTHIA METCALFE
St. Louis

HOWARD L. WOOD
Bonne Terre

Ms. Connie J. Heitz
Page Two
June 3, 2002

2. Grade and seed disturbed areas as soon as possible to minimize erosion. Missouri Department of Conservation seeding and planting recommendations can be provided to enhance site conditions.
3. Disturbance to streambanks and riparian areas should be avoided. Stream flows should not be interrupted. All temporary inchannel fills that could impound water should be culverted.
4. Avoid work in the channel between March 15 and June 15 to the extent possible.
5. Take all necessary precautions to prevent petroleum products from entering the stream.

In addition, we recommend implementation of the following guidelines to reduce impacts to Missouri's fisheries resource if culvert placement is associated with this project.

1. Culverts should be sized and placed to maintain at least six inches (6") of water during average annual discharges.
2. Culverts should be sized and placed so as not to create water velocities in excess of two feet (2') per second during average annual discharge.
3. A drop between the downstream end of the culverts and the downstream water surface should not occur at any time.

Thank you for the opportunity to review and comment.

Sincerely,



GENE GARDNER
POLICY COORDINATOR

GG:dcl

Enclosure

c: Charles Scott, U.S. Fish and Wildlife Service



ZAMBRANA ENGINEERING, INC
MISSOURI DEPARTMENT OF TRANSPORTATION
INTERSTATE 70 IMPROVEMENT STUDY
SECTION OF INDEPENDENT UTILITY #5
MoDOT JOB NO. J411341E

The following species and/or natural communities are known to occur on or in the vicinity of the project site:

Scientific Name	Common Name	Federal Status	State Status	State Rank	Township/Range	Section
TRIFOLIUM STOLONIFERUM	RUNNING BUFFALO CLOVER	E	E	S1	047N010W	15
LYTHRUM SALICARIA	PURPLE LOOSESTRIFE			SE	048N011W	29
FRAGARIA VESCA VAR AMERICANA	WOODLAND STRAWBERRY			S1	047N011W	34
CAREX CONOIDEA	FIELD SEDGE			S1	048N010W	12
CAREX TRIANGULARIS	TRIANGULAR SEDGE			S1	048N010W	12
CAREX TRICHOCARPA	HAIRY-FRUITED SEDGE			S1	048N010W	12
ELEOCHARIS WOLFII	WOLF'S SPIKE RUSH			S2	048N010W	12
SPIRANTHES LACERA VAR GRACILIS	SLENDER LADIES' TRESSES			S3	048N010W	12
BROMUS NOTTOWAYANUS	A BROME			S2S3	047N011W	35
BROMUS NOTTOWAYANUS	A BROME			S2S3	047N011W	35
BROMUS LATIGLUMIS	A BROME			S2S3	047N011W	34
ORYZOPSIS RACEMOSA	BLACK-SEEDED MOUNTAIN RICE			S1	047N011W	35
OPHIOGLOSSUM VULGATUM	ADDER'S-TONGUE			S3	047N011W	17
SPEYERIA IDALIA	REGAL FRITILLARY			S3	048N010W	12
PYGANODON GRANDIS CORPULENTA	GIANT FLOATER			S3S4	049N011W	10
RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG			S3	048N011W	23
RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG			S3	048N010W	12
RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG			S3	047N010W	27
RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG			S3	048N011W	03

FEDERAL STATUS - The federal status is derived from the provisions of the federal Endangered Species Act, which is administered by the U.S. Fish and Wildlife Service. The Endangered Species Act provides federal protection for plants and animals listed as Endangered or Threatened. E = Endangered, T = Threatened, C = Candidate, PE = Proposed Endangered for Federal listing.

STATE STATUS (E) - The state status is determined by the Department of Conservation under constitutional authority. Rule 3CSR10-4.11 Endangered Species of the Wildlife Code of Missouri and certain state statutes apply to state Endangered species.

STATE RANK - A numeric rank of relative endangerment based primarily on the number of occurrences of the species within the state of Missouri. S1 = Critically imperiled in the state, S2 = Imperiled in the state, S3 = Rare and uncommon in the state.

Eastern collared lizard populations, natural communities and geologic features are recognized as sensitive biological resources and may also appear on this report.

ZAMBRANA ENGINEERING, INC

MISSOURI DEPARTMENT OF TRANSPORTATION
INTERSTATE 70 IMPROVEMENT STUDY
SECTION OF INDEPENDENT UTILITY #5
MoDOT JOB NO. J4I1341E



Scientific Name	Common Name	Federal Status	State Status	State Rank	Township/Range	Section
RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG			S3	047N010W	33
RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG			S3	047N010W	21
RANA AREOLATA CIRCULOSA	NORTHERN CRAWFISH FROG			S3	050N010W	33
AMMODRAMUS HENSLOWII	HENSLOW'S SPARROW			S2	048N010W	12
NOTROPIS HETEROLEPIS	BLACKNOSE SHINER			S2	048N009W	28
NOTROPIS HETEROLEPIS	BLACKNOSE SHINER			S2	049N009W	30
NOTROPIS TOPEKA	TOPEKA SHINER	E	E	S1	048N011W	20
PERCOPSIS OMISCOMAYCUS	TROUT-PERCH			S1?	049N009W	30
HARDPAN PRAIRIE					048N010W	12

Additional information for planning purposes:

Please note the following information regarding Indiana bats (Federally endangered, State endangered) which may occur in the project area. Indiana bats roost and raise young under the bark of trees in riparian forests and upland forests near perennial streams. Favored roosts are large diameter (>9" dbh; best are >21" dbh) dead oaks and hickories, and living shagbark hickory. Other tree species such as elm, cottonwood, ash, and maple, if they have exfoliating bark, also may be used as roosts. Indiana bats especially need snags standing in openings, at edges, or where tree canopy is sparse. Projects should avoid or minimize the removal of potential roost trees from riparian zones or from woodlots within 0.6 mile of perennial streams or permanent water. If removal of potential roost trees is unavoidable, it should be done when Indiana bats are not likely to be present, i.e., between 1 October and 1 April. During the course of development, if possible, leave snags standing. Indiana bats feed upon terrestrial and aquatic insects; they preferentially forage in and around the canopy of riparian and floodplain forest, but also along forest/field edges and fencerows. Therefore, mature forest canopy should be enhanced and stream quality not degraded.

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STATE STATUS (E) - The state status is determined by the Department of Conservation under constitutional authority. Rule 3CSR10-4.111 Endangered Species of the Wildlife Code of Missouri and certain state statutes apply to state Endangered species.

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Eastern collared lizard populations, natural communities and geologic features are recognized as sensitive biological resources and may also appear on this report.

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Bob Holden, Governor • Stephen M. Mahfood, Director

www.dnr.state.mo.us

December 26, 2002

Jerry Mugg, P.E.
HNTB Architects Engineers Planners
715 Kirk Drive
P.O. Box 419299
Kansas City, MO 64105

Dear Mr. Mugg:

This letter is to convey information assembled from several Department of Natural Resources programs to assist in development of the I-70 second tier NEPA analyses, and to update information submitted by the department during the I-70 first tier Environmental Impact Statement. Hopefully this information will assist the consultants and sub-consultants as the study progresses. Where possible, the information is divided by section of independent utility (SIU). The project's consultants will need to verify that all of the information is divided appropriately by SIU.

In working with the programs to assemble this information, it was pointed out to me by Division of State Parks staff that a new, wider bridge will likely be necessary whenever the interstate is reconstructed where the KATY Trail State Park crosses over Interstate 70. The KATY crosses I-70 between mile markers 99 and 101, or mile 194.2 of the KATY Trail. The department should be consulted prior to the design of a new bridge at this location to assure that it meets the required standards and that construction results in minimal impact to the existing trail. In the Mineola Hill area of I-70, impacts to Graham Cave State Park may be possible. The information available from the Division of State Parks regarding developments planned for the park is on the attached Graham Cave State Park Conceptual Development Plan, although most of the projects depicted have already been completed.

If you have any questions or need clarification on any of this information, please contact me via phone at 573-522-2401, or e-mail: nrbeetj@mail.dnr.state.mo.us. For mailed correspondence, the address is Department of Natural Resources, P.O. Box 176, Jefferson City, MO 65102. Thank you.

Sincerely,

DEPARTMENT OF NATURAL RESOURCES



Jane Beetem
Transportation Coordinator
Office of the Director

c: Ken Bechtel, HNTB
SIU Consultants

Integrity and excellence in all we do

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ZAMBRANA ENGINEERING INC.



INTERSTATE 70 CORRIDOR - KANSAS CITY TO ST. LOUIS, MISSOURI
HAZARDOUS WASTE PROGRAM INFORMATION - ATTACHMENT # 1
DECEMBER 16, 2002

Various sections of the department's Hazardous Waste Program (Superfund, Tanks, Budget & Planning, Permits and Voluntary Cleanup Program) have checked databases for information on possible contaminated sites in the I-70 project area. These findings are listed below by SIU number.

It should be noted that properties listed on the Registry, maintained by the Superfund Section, are subject to certain change of use and ownership provisions. The Tanks Section reviewed the project area maps and determined that there are tank sites of concern within the project area. Some of these are known remediation sites where a spill or leak has occurred. Other unregistered sites may exist along the corridor. The Tanks Section maintains a database of active underground storage tanks and release sites. Tanks requires notification of release, abatement and corrective action at tank release sites. As the proposed corridor becomes more defined and the project is closer to construction, project planners should contact staff from the Tanks Section for an up-to-date list of registered tank sites.

The Budget & Planning Section maintains a database of registered Missouri hazardous waste generators. Missouri hazardous waste generators are required to report all hazardous waste they generate. However, as the project progresses, project planners should continue to contact the Hazardous Waste Program for updates. In addition the following general information is provided as it may assist in interpreting information on the list, which is applicable to all SIU's:

MOR, MOD, and MOP Environmental Protection Agency (EPA) ID numbers are permanent numbers. MOG EPA ID numbers are old waste oil ID numbers. MOP EPA ID numbers are temporary ID numbers. Temporary ID numbers are valid for one initial 30-day period with the possibility of an extension of one additional 30-day period.

Conditionally Exempt Small Quantity Generators generate or accumulate less than 220 lbs. (100 kg) of hazardous waste per month or any one time. Small Quantity Generators generate or accumulate between 220 lbs. (100 kg) and 2200 lbs. (1000 kg) of hazardous waste per month or any one time. Large Quantity Generators generate or accumulate more than 2200 lbs. (1000 kg) per month or any one time.

Sites that are currently "Inactive" are sites that at one time registered with Missouri to dispose of hazardous waste. Sites that are listed as "Inactive Non-Reporter" have failed to complete the Generator's Hazardous Waste Summary Report form in past years and have had their status administratively inactivated.

Information in the database is based on information from the generators. With the exception of Inactive Non-Reporters, a generator's status is based on the information provided by the generator when they initially registered with us or when they filed a subsequent Notification of Regulated Waste Activity form. In addition, the generator may have sent a letter requesting to inactivate the identification number or change their status to Conditionally Exempt Small Quantity.

In all sections of the second tier I-70 study, project planners will need to determine whether any of the registered Missouri hazardous waste generator facilities are located within the actual areas of concern. It is the recommendation of the Hazardous Waste Program that additional

investigation be undertaken of any sites or facilities identified within the area of concern. The planners should review the department's files and the EPA Region VII's files as part of their investigation for additional information on facilities or sites named.

It should not be assumed that there are no other facilities or sites in the area. Unreported facilities or contaminated sites may exist in this vicinity.

Further research may be pursued through the EPA's tracking record, CERCLIS, which lists all sites suspected of having had a release of a hazardous substance. To request information regarding the EPA's CERCLIS record, Ms. Karen Flournoy of the U.S. EPA Region VII should be contacted at (913) 551-7003.

As the project progresses, the planners may wish to review the Hazardous Waste Program's paper files regarding complaints, spills, and closed investigations. They are available by appointment through our file manager, Rhonda Loveall, who may be reached at (573) 751-3176.

In general, any waste or debris produced or encountered during construction should be properly characterized, managed and disposed of during the construction process. In the event that hazardous waste is encountered, construction activities should be stopped, and the Hazardous Waste Program should be notified.

SIU # 1

The Superfund Section found 41 facilities in its database in the vicinity of SIU # 1. Please refer to the attached list for names and addresses. Of these sites, the following are listed on the Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites in Missouri: Amoco Oil, Armco, Prier Brass Manufacturing Company, Riverfront Landfill, Conservation Chemical Company, Lake City Army Ammunition, Independence FMGP #1, and HCI Chemtech on Stillwell Street.

An updated list of facilities identified by the Budget & Planning Section as being in the vicinity of SIU # 1 is attached.

The Permits Section and Voluntary Cleanup Program found no facilities of concern in the Boonville to Odessa section.

SIU # 3

One facility was identified by the Superfund Section as being in the vicinity of SIU # 3. Information on that site, Boonville FMGP, is attached.

An updated list of facilities identified by the Budget & Planning Section as being in the vicinity of SIU # 3 is attached.

The Permits Section and Voluntary Cleanup Program found no facilities of concern in the vicinity of SIU # 3.

SIU # 4

Five facilities were found by the Superfund Section in the vicinity of SIU # 4 and SIU # 5. (The search on these two sections overlapped because it was difficult to determine the exact cut-off at Route Z south of the existing I-70.) Please refer to the attached list for names and addresses. Of these sites, the University of Missouri, South Farm is listed on the Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites in Missouri.

An updated list of facilities identified by the Budget & Planning Section as being in the vicinity of SIU # 4 is attached.

The Permits Section identified the following two Treatment, Storage and Disposal sites in the vicinity: Safety-Kleen, Columbia, 2400 Big Bear Court, Columbia 65202 (located slightly north of 70 and west of 63) and University of Missouri, Columbia.

The Voluntary Cleanup Program found no facilities of concern in SIU # 4.

SIU # 5

Five facilities were found by the Superfund Section in the vicinity of SIU # 4 and SIU # 5. (The search on these two sections overlapped because it was difficult to determine the exact cut-off at Route Z south of the existing I-70.) Please refer to the attached list for names and addresses. Of these sites, the University of Missouri, South Farm is listed on the Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites in Missouri.

An updated list of facilities identified by the Budget & Planning Section as being in the vicinity of SIU # 5 is attached.

The Permits Section and the Voluntary Cleanup Program found no facilities of concern in the vicinity of SIU # 5.

SIU # 6

Two sites were found by the Superfund Section in the vicinity of SIU # 6. Please refer to the attached list for information.

An updated list of facilities identified by the Budget & Planning Section as being in the vicinity of SIU # 6 is attached.

The Permits Section and the Voluntary Cleanup Program found no facilities of concern in the vicinity of SIU # 6.

SIU # 7

Fourteen sites in the vicinity of SIU # 7 were identified by the Superfund Section. Please refer to the attached list for names and addresses. Of these sites, the following are listed on the Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites in Missouri: St. Charles FMGP #1 and Zykan Landfill.

The Permits Section identified the following four Treatment, Storage and Disposal sites in the vicinity:

1. Bob's Home Service (Zykan) is near Wright City. It is adjacent to JZ Disposal, which was also listed in the First Tier Study.
2. MEMC Electronics Material Inc., 501 Pearl Dr. St. Peters, MO 63366
3. PM Resources, 13001 St. Charles Rock Rd., Bridgeton, MO 63044
4. GM, Wentzville.

The Voluntary Cleanup Program found one facility of concern in SIU # 7: Whisk Products, 600 West Main, Wentzville, 63385. The property carries a restrictive covenant filed for contamination remaining underneath the building.

INTERSTATE 70 CORRIDOR - KANSAS CITY TO ST. LOUIS, MISSOURI
WATER RESOURCES PROGRAM INFORMATION - ATTACHMENT # 2
DECEMBER 16, 2002

General Comments:

Removal of the existing pavement throughout the corridor during construction will generate a large volume of solid waste, and recycling possibilities could be considered to the maximum extent possible in the second tier studies.

One determination of the first tier I-70 study was that the median on the reconstructed facility will be significantly wider. The I-70 median could eventually consist of approximately 2500 acres (200 miles long by 100 feet wide), that would under current practices need routine mowing during the growing season. A reduction in maintenance costs and pollution from the fossil fuels used in mowing could be achieved by using either 1) a ground cover or variety of plants that would require less maintenance than grass but still be safe if a vehicle enters the median, and which might filter stormwater runoff better than grass, or 2) growing hay in the median - either for sale to farmers or grown under contract with farmers.

A pollutant of particular note at rest stops, but not always considered, is that of pet waste. Fecal coliform from pet waste can be a significant pollutant to receiving waters, negatively impacting whole body contact recreation and drinking water. This problem should be considered during project planning. A suggestion would be to have pet-only areas, where stormwater runoff could be properly controlled. One innovative solution for stormwater runoff from rest stops (both from paved areas and pet-only areas) would be a treatment wetland, used in conjunction with lagoons.

SIU #1 (Hwy 470-Odessa)

The beginning part of this section is moderately urbanized. Special attention needs to be paid when crossing the Little Blue and the East Fork of the Little Blue Rivers so that floodwaters are not backed up in these areas, which could inundate people's houses and businesses.

Near mile 29, it appears the highway may get moved more into the floodplain of a tributary to Sni-a-bar Creek on the north side of the highway.

The following information is based on analyses of the National Wetlands Inventory. There appear to be a lot of wetlands on a tributary to Little Blue River near the interchange with I-470. At the East Fork of the Little Blue, it appears there are more wetlands on the north side of the highway. At Sni-a-bar Creek, it appears there are more wetlands on the south side. At the East Fork of Sni-a-bar Creek, there appears to be more on the north side.

There are four streams near the highway in SIU #1 listed on the draft 2002 303(d) (impaired waters) list for the state of Missouri: Little Blue River, E. Fork of the Little Blue River, and the main branch and the East Fork of Sni-a-bar Creek. They are all listed for Livestock and Wildlife Watering (LWW), and Protection of Warm Water Aquatic Life and

Human Health-Fish Consumption (AQL). The Little Blue River and Sni-a-bar Creeks are also listed as impaired for Boating and Canoeing (BTG).

The Little Blue River was added to the draft 2002 303(d) list for mercury; the East Fork of the Little Blue River and the West Fork of the Sni-a-bar remain on the draft 2002 list both for volatile suspended solids, and the latter for biochemical oxygen demand as well.

SIU #3 (Hwy 5-Rocheport)

There are 2 classified waterways that runoff from this section of the highway feeds into: the Petite Saline and Missouri River. They are both listed on the draft 2002 303(d) list for Livestock and Wildlife Watering (LWW), and Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL). In addition, the Petite Saline is listed for Boating and Canoeing (BTG) and Whole Body Contact Recreation (WBC); the Missouri River is also listed for Irrigation (IRR), Boating and Canoeing (BTG), Drinking Water Supply (DWS), and Industrial (IND). Special consideration should be paid to the Petite Saline because it is considered a Biocriteria stream. The Missouri River is on the 2002 303(d) (impaired waters) list for the state of Missouri due to habitat loss.

The floodplain of the Missouri River warrants special attention because of its extensive wetland complex. It is recommended that the floodplain be completely spanned to minimize the likelihood of bridge closure in the event of a catastrophic flood similar to 1993; the bridge approach should also be at least 2 feet above the highest flood of record (1993).

SIU #4

This section includes the proposed Columbia by-pass, which should be studied carefully. As the maps provided in the first tier are not clear where the bypass routes would traverse, the comments are somewhat difficult to direct.

There are two creeks on the draft 2002 303(d) (impaired waters) list for the state of Missouri: Hinkson (unspecified), and Rocky Fork (nonvolatile suspended solids).

There are 7 classified streams that runoff from this section of the highway feeds into: Bear Creek, Callahan Creek, Hominy Branch, Hinkson, Perche, Rocky Fork, and Sugar Branch. All are listed for Livestock and Wildlife Watering (LWW), and Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL). In addition, Hinkson and Perche Creeks are listed for Boating and Canoeing (BTG).

It appears that the Near North (NN) option would impact less farmland, fewer wetlands and stream crossings, and a similar amount of urban development as the Far North (FN) option does. NN would also induce less sprawl since it would be closer to urban development.

There are numerous instances where FN crosses two creeks, but NN crosses them after they have joined. These include Callahan and Midway Branch, Perche and Slacks Branch, and Hinkson and Nelson Creeks. Thus, it appears NN would require fewer bridges and necessitate crossing fewer floodplains. NN impacts less wetlands acreage than FN on both Callahan and Perche Creeks. FN hits some wetlands on Rocky Fork

that NN could miss entirely. It looks like they impact a similar amount of wetlands on Hinkson Creek, and NN hits a few on Hominy that FN misses completely. The intersection of FN with the existing I-70 might occur right at Little Cedar Creek which would magnify its impact on the wetlands there, whereas NN would not affect the creek at all (note: Little Cedar Creek is in SIU #5).

SIU #5

There are two creeks in this section on the draft 2002 303(d) (impaired waters) list for the state of Missouri: Stinson (for biochemical oxygen demand, and volatile suspended solids) and Cedar (for pH).

There are four classified streams that runoff from this section of the highway feeds into: Little Cedar, Cedar, Richland, and Stinson. All are listed for Livestock and Wildlife Watering (LWW), and Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL). In addition, Cedar Creek is listed for Boating and Canoeing (BTG).

The Far North option of the Columbia bypass could meet the current I-70 right of way at Little Cedar Creek, thereby exacerbating impacts to its floodplain and wetlands.

SIU #6

Of special importance is the Loutre River, which is considered a biocriteria water resource, and Whetstone Creek, which is an outstanding state resource water and flows into Whetstone Creek Conservation Area.

There are 5 categorized waterways: Maddox Creek, Auxvasse River, Whetstone Creek, Prairie Branch, and the Loutre River. All are listed for Livestock and Wildlife Watering (LWW), and Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL). In addition, the Auxvasse is listed for Boating and Canoeing (BTG).

It is good that MoDOT is planning on widening to the north at the Auxvasse because it appears to have approximately 3 times as many wetlands on the south side than on the north side of the highway, according to the NWI. The Loutre similarly has more on the south side, although it appears to have more floodplain on the north side. MoDOT wants to widen to the north at Whetstone Creek, which could have a greater impact on the creek and downstream Conservation Area.

SIU #7

According to the 1993 Wetland Watershed Identification Committee, there are two watersheds (Cuivre River, # 07110008 and Peruque/Dardenne Creeks, # 07110009) which contain Priority Wetlands for Non-point Source Pollution Protection, parts of which are in the project area.

There are 3 classified waterways that the highway might impact, depending on which bypass is chosen: Indian Camp, McCoy, and Peruque Creeks. All are listed for Livestock and Wildlife Watering (LWW), and Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL).

Peruque and Indian Camp Creek are both on the 2002 303(d) (impaired waters) list for the state of Missouri for nonvolatile suspended solids, with the latter also on for NH_3 .

There are three options for a bypass in this section of the highway: Near North (NN), Far North (FN) and South (S). Both FN and NN could hit a few wetlands on Big Creek, but NN has more possibilities to miss them. Same with Hickory Lick. NN is more likely to hit some on Indian Camp Creek than FN, but the latter is more likely to have greater impacts on it because it parallels it longer, and it is more in its floodplain. The north options will have no impact on Lake St. Louis, but the South could impact it significantly. The South option looks like it would not cross as many wetlands, but since it parallels Peruque Creek (which feeds into Lake St. Louis), it has more opportunity to have sediment run off into the creek during construction.

INTERSTATE 70 CORRIDOR - KANSAS CITY TO ST. LOUIS, MISSOURI
GEOLOGICAL SURVEY AND RESOURCE ASSESSMENT DIVISION INFORMATION
ATTACHMENT # 3
DECEMBER 16, 2002

The geology throughout the corridor is diverse, ranging from Pennsylvanian shales, sandstones and carbonates to Mississippian carbonates down to Ordovician carbonates. This leads to variable substrates which may affect construction. Each contractor is encouraged to review the most up-to-date geologic mapping available at the departments Geological Survey and Resource Assessment Division (GSRAD). Throughout the corridor, it should be noted that limestone is susceptible to karst development, and that shale is often an unstable substrate.

The route traverses Pennsylvanian strata from the westernmost termination to approximately 3 miles west of Sweet Springs. The route intermittently intercepts Kansas City Group from near Blue Springs west. This unit contains considerable limestone and shale, with some sandstone, underclay, and minor coal. In this group, the limestone beds are notable for their thickness. The route is intermittently in Pleasanton Group from several miles east of Odessa to the westward termination. This unit is primarily shale and sandstone, with minor coal and underclay. From Blue Springs to Concordia, much of the route intersects Marmaton Group. This unit is comprised of shale, limestone, clay, and coal beds. From near the intersection with Highway 13 to about 3 miles west, the route intersects an outlier of Pleasanton Group. From the Highway 13 intersection east to near Sweet Springs, the route mostly intersects Cherokee Group, primarily Cabaniss Subgroup. This unit consists of sandstone, siltstone, shale, underclay, limestone, and coal beds. A small portion of the route intersects the Krebs Subgroup, dominantly sandstone, siltstone and shale, with some limestone, clay and coal.

From just west of Sweet Springs until just west of Columbia, the route primarily crosses Mississippian Osagean strata. In this region, the Osagean is comprised of the Pierson, Burlington, and Keokuk formations. These are all primarily carbonate units, and are all highly susceptible to the development of karst structures. Sections of the route also intersect Mississippian Kinderhookian strata. These units are primarily carbonate rocks, and are susceptible to karst development. A section of the route may intersect Pennsylvanian Cherokee Group, Cabaniss Subgroup from near Lamine to approximately 4 miles east of the intersection with Highway 87. From just west of Columbia to around 6 miles east of the intersection with Highway 54, the unit again intersects Pennsylvanian Cherokee Group, Cabaniss Subgroup, and Marmaton Group.

The segment from 6 miles west of the Highway 54 intersection to several miles west of High Hill is, in terms of bedrock geology, the most variable section on the route. Bedrock varies from Pennsylvanian Cabaniss Subgroup and Mississippian Osagean and Kinderhookian to Devonian and Ordovician. The Devonian strata includes shales and limestones, that can have related karst features and cause an unstable substrate. The Ordovician units intersected include the St. Peter Sandstone and the Jefferson City Formation. The majority of the Ordovician intercepted is carbonate, and susceptible to karst development. From several miles west of High Hill east to the Missouri River, the route is in Mississippian carbonate rocks of the Osagean and Meramecian series. This region is one that is highly susceptible to karst development.

Structures

The presence of geologic structures is important, as these can affect substrate stability and the potential for karst. Contractors are encouraged to check for known geologic structures. This information is available at GSRAD. Some regions may have limited geologic mapping, which may result in a limited number of recorded structures. Additional geologic structures may be present, and the consultants should consider this possibility in future project planning efforts.

Mining Activity

The potential exists for abandoned coal mines where the route intersects Pennsylvanian-age rocks. This includes the portion from the western termination to 3 miles west of Sweet Springs, and the section east of Columbia. The considerable volume of carbonate rocks intersected by the route suggests strong potential for the presence of operating and abandoned quarries.

Attached is an Access table with information on known mines and quarries in the corridor. These are sites situated 1.5 miles or less from the current highway. If further information is needed on these sites, contractors should contact GSRAD.

Karst

There is potential for karst throughout the area, wherever carbonate rocks are present. The consultants are encouraged to check GSRAD data for known springs, caves, etc. Information from these databases is available by specific request.

Seismicity

The potential for seismic activity in the corridor will have to be addressed, especially by the segments located near St. Louis, and where bridges built in floodplains are under consideration.

Superfund

Site Name	Address	City	Zip	County	CERCLIS
University of Mo - Sinclair Farm & Animal Science	Sinclair Farm & University of MO	Columbia	65211	Boone	
Columbia Coal Gas	Vicinity of Orr and Ash Streets	Columbia	65201	Boone	MOD985808088
University of Missouri - South Farm	Rolling Hills Road	Columbia	65201	Boone	MOD980631568
Columbia Parking Lot	1514 Business Loop 70 East	Columbia	65205	Boone	
Hendren Salvage Yard	705 Proctor Dr.	Columbia	65202	Boone	

HAZ WASTE GENERATORS RT Z TO RT 54

EPA ID	MO ID	STATUS	FACILITY	ADDRESS	CITY	ST	ZIP	LATITUDE	LONGITUDE
MOR000002071	029757	Conditionally Exempt - Inactive	HHD 175TH MP BN FULTON ARMORY	1501 WESTMINSTER AVE.	FULTON	MO	65251	38.8616	-91.95401
MOR000014159	033095	Conditionally Exempt - Inactive	CREMER THERAPUETIC CENTER	689 HWY O	FULTON	MO	65251	38.84519	-91.93849
MOD054125323	004170	Exempt Small Quantity	PRODUCTION PRODUCTS MFG & SALES	820 STATE ST.	FULTON	MO	65251	38.83956	-91.94702
MOD985818285	021772	Exempt Small Quantity	PETROLUBE	I-70 & HWY 54	KINGDOM CITY	MO	65263	38.94004	-91.93717
MOR000014167	033096	Exempt Small Quantity	FULTON R & D CENTER	STATE RT O	FULTON	MO	65251	38.84417	-91.92401
MOD985801687	020260	Inactive	KINGDOM AUTO BODY	105 WEST SECOND STREET	FULTON	MO	65251	38.84489	-91.9499
MOD041891631	011694	Inactive	COURTESY CLEANERS	532 COURT ST.	FULTON	MO	65251	38.84778	-91.94761

<i>EPA ID</i>	<i>MO ID</i>	<i>STATUS</i>	<i>FACILITY</i>	<i>ADDRESS</i>	<i>CITY</i>	<i>ST</i>	<i>ZIP</i>	<i>LATITUDE</i>	<i>LONGITUDE</i>
MOG000003028	003028	Inactive	S.W. BELL TELEPHONE	NONE	FULTON	MO	65251	38.83956	-91.94702
MOG000001668	001668	Inactive	CALLAWAY MEMORIAL HOSPITAL	828 JEFFERSON ST.	FULTON	MO	65251	38.85256	-91.94952
MOG000004406	004406	Inactive	TWITCHELL'S AUTO SERVICE	1205 OLD JEFF CITY RD.	FULTON	MO	65251	38.83956	-91.94702
MOD985819689	022020	Inactive	FULTON SUN, THE	115 E. FIFTH ST.	FULTON	MO	65254	38.847	-91.94582
MOD115848665	010838	Inactive	PRECISION BODY SHOP C/O RONALD TOWNE	203 E. SECOND ST.	FULTON	MO	65251	38.84455	-91.94574
MOD981724263	010798	Inactive	DIRECT TRANSIT, INC.	HWY. 54 & OLD JEFF CITY	FULTON	MO	65251	38.83956	-91.94702
MOD980632749	001454	Inactive	DANIEL INTERNATIONAL CORPORATION	P.O. BOX 108	FULTON	MO	65251	38.83956	-91.94702
MOD981499106	004491	Inactive	TODD CORPORATION	INDUSTRIAL PARK	FULTON	MO	65251	38.83956	-91.94702

<i>EPA ID</i>	<i>MO ID</i>	<i>STATUS</i>	<i>FACILITY</i>	<i>ADDRESS</i>	<i>CITY</i>	<i>ST</i>	<i>ZIP</i>	<i>LATITUDE</i>	<i>LONGITUDE</i>
MOR000017889	033522	Inactive	CASEYS GENERAL STORE NO 1725	1301 BUS NO 54	FULTON	MO	65251	38.83956	-91.94702
MOR000016410	033427	Inactive	CASEYS GENERAL STORE NO 1154	214 W 4TH	FULTON	MO	65251	38.84671	-91.95005
MOR000002295	029354	Inactive	DRI CON SYSTEMS INC	300 PEACOCK DR	FULTON	MO	65251	38.88337	-91.95045
MOR000037077	036347	Inactive	GRA-GAR INC	1910 N HWY 54	FULTON	MO	65251	38.85699	-91.9574
MO0000020321	018576	Inactive	NORTH CALLAWAY R-1 SCHOOL DISTRICT	HWY 54 N OF I-70 1 MI	KINGDOM CITY	MO	65262	38.95037	-91.95211
MOD164369258	010819	Inactive	BENSON'S AUTO BODY SERVICE	105 BLUFF	FULTON	MO	65251	38.84435	-91.94448
MOP000001356	028467	Inactive	MO DEPT OF TRANSPORTATION	522 MARKET ST.	FULTON	MO	65251	38.84762	-91.94682
MOG000004686	004686	Inactive	GILMORE MOTORS, INC.	1221 N. BLUFF	FULTON	MO	65251	38.85804	-91.94393

<i>EPA ID</i>	<i>MO ID</i>	<i>STATUS</i>	<i>FACILITY</i>	<i>ADDRESS</i>	<i>CITY</i>	<i>ST</i>	<i>ZIP</i>	<i>LATITUDE</i>	<i>LONGITUDE</i>
MOP000000968	007434	Inactive	JH WARE TRUCK TERMINAL % 1ST NAT'L BANK	HWY 54	FULTON	MO	65251	38.83956	-91.94702
MOP000000889	016195	Inactive	MO DEPT OF TRANSPORTATION	ROUTE F, 0.2-MI WEST OF RT. 54	FULTON	MO	65251	38.83956	-91.94702
MOP000021212	034193	Inactive	SOUTHSIDE 66	1004 S BUS HWY 54	FULTON	MO	65251	38.83956	-91.94702
MOP000019711	033971	Inactive	BREAK TIME NO 3033	706 BUS 54	FULTON	MO	65251	38.83956	-91.94702
MOP000030999	035527	Inactive	WESTERN OIL KINGDOM CITY	INTERSTATE 70 & HWY 54	KINGDOM CITY	MO	65262	38.95037	-91.95211
MOR000030718	035480	Inactive	WESTMINSTER COLLEGE	501 WESTMINSTER AVE	FULTON	MO	65251	38.83955	-91.95421
MOP000019521	033903	Inactive	MPC NO 97	510 S HWY 54	FULTON	MO	65251	38.83956	-91.94702
MOD007774987	002003	Inactive	CALLAWAY ELECTRICAL COOP.	911 S. HIGHWAY 541	FULTON	MO	65251	38.83956	-91.94702

<i>EPA ID</i>	<i>MO ID</i>	<i>STATUS</i>	<i>FACILITY</i>	<i>ADDRESS</i>	<i>CITY</i>	<i>ST</i>	<i>ZIP</i>	<i>LATITUDE</i>	<i>LONGITUDE</i>
MOP000011999	032828	Inactive	J.D. FRAME NO. 2	FOURTH ST & WESTMINSTER AVE	FULTON	MO	65251	38.83956	-91.94702
MOD079910485	010835	Inactive Non-Deliverable	PEZOLD'S AUTO BODY	514 MARKET	FULTON	MO	65251	38.84752	-91.94683
MOD985773365	013303	Inactive Non-Deliverable	WREN OLDS BUICK GMC, INC.	1303 BUSINESS 54 SOUTH	FULTON	MO	65251	38.83956	-91.94702
MOR000020008	033895	Inactive Non-Reporter	RAND MFG	5034 CNTY RD 306	FULTON	MO	65251	38.83956	-91.94702
MOD981724693	010817	Inactive Non-Reporter	A ONE KUSTOM AUTO BODY	3350 HILLTOP DR.	FULTON	MO	65251	38.89145	-91.94139
MOD985767607	010759	Inactive Non-Reporter	CROWN MOTORS OF FULTON	1915 N. BLUFF	FULTON	MO	65251	38.86758	-91.94473
MOR000036541	036094	Large Quantity	CIRCLE ENVIRONMENTAL	1676 SUNNYSIDE PLACE	FULTON	MO	65251	38.85699	-91.9574
MOD006309223	001012	Small Quantity	DANUSER MACHINE CO INC	500 E THIRD ST	FULTON	MO	65251	38.84507	-91.94034

<i>EPA ID</i>	<i>MO ID</i>	<i>STATUS</i>	<i>FACILITY</i>	<i>ADDRESS</i>	<i>CITY</i>	<i>ST</i>	<i>ZIP</i>	<i>LATITUDE</i>	<i>LONGITUDE</i>
MOT300010758	035347	Small Quantity	DANUSER MACHINE CO INC	1006 E WALNUT	FULTON	MO	65251	38.8561	-91.95054
MOR000033241	035615	Small Quantity	MISSOURI SCHOOL FOR THE DEAF	505 E 5TH ST	FULTON	MO	65251	38.84711	-91.94127
MOR000020149	033968	Small Quantity	OSAGE CONSTRUCTORS	3200 CNTY RD 257	FULTON	MO	65251	38.83956	-91.94702
MOD057752164	031479	Small Quantity	HARBISON WALKER REFRACTORIES CO	1301 WESTMINSTER AVE	FULTON	MO	65251	38.86798	-91.9447
MOD985771518	012520	Small Quantity	OVID BELL PRESS INC. (THE)	1201-05 BLUFF ST.	FULTON	MO	65251	38.85843	-91.94446
MOD071995450	005812	Small Quantity	FULTON STATE HOSPITAL	600 E. FIFTH ST.	FULTON	MO	65251	38.8462	-91.93819
MOD985820091	007547	Small Quantity	MERIAL LTD	6498 JADE RD	FULTON	MO	65251	38.83956	-91.94702
MOD981724370	010830	Small Quantity	SONNY'S AUTO BODY	313 W. FOURTH ST.	FULTON	MO	65251	38.84694	-91.95316

<i>EPA ID</i>	<i>MO ID</i>	<i>STATUS</i>	<i>FACILITY</i>	<i>ADDRESS</i>	<i>CITY</i>	<i>ST</i>	<i>ZIP</i>	<i>LATITUDE</i>	<i>LONGITUDE</i>
MOD985801398	001484	Small Quantity	A.P. GREEN IND.	111 W. EUNICE RD.	FULTON	MO	65251	38.88164	-91.9479
MOD985806470	020408	Small Quantity	PAUL'S AUTO BODY	650 GAYLORD DRIVE	FULTON	MO	65251	38.85039	-91.96976



Area Office, 1911 Boggs Creek Road, Jefferson City, Missouri 65101

Phone: 573 761-3105 Ext. 5

November 21, 2003

Mr. Michael Toolen
GIS Coordinator
Zambrana Engineering, Inc.
2324 Marconi Ave.
St Louis, MO 63110

Dear Mr. Toolen,

Attached are AD-1006 forms with the soils portions completed for SIU5 projects in Boone and Callaway Counties. I took the liberty of separating the project by county because our farmland evaluations are unique to each one. Thank you for your assistance in furnishing the ArcView shapefiles. It was a real time-saver. Please send me a copy of the completed forms when you finish your assessment. If you have any questions, please feel free to call me (573) 893-5188, x161.

Keith Davis
Area Resource Soil Scientist

Cc: Mr. Bob Hagedorn, District Conservationist, Columbia

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NOV 25 2003

ZAMBRANA ENGINEERING INC.

mm

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Bob Holden, Governor • Stephen M. Mahfood, Director

www.dnr.state.mo.us

October 17, 2003

Ms. Diane Heckemeyer
State Design Engineer
Missouri Department of Transportation
P.O. Box 270
Jefferson City, Missouri 65102

RE: Project No.: 020-BO-03, Job No. J41341H, I-70, SIU 5, Route Z to U.S. 54, Boone and Callaway Counties, Missouri (FHWA)

Dear Ms. Heckemeyer:

Thank you for submitting information about 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.

After reviewing the report we find the report to be adequate. We concur that 5CY0079, the Shryock Farm, is eligible for listing in the National Register of Historic Places. We also concur that, due to revisions in project plans, the Shryock Farm is out side of the area of potential effect. We also concur that the remaining properties in this report, including the bridges, are not eligible for listing in the National Register of Historic Places. In addition, it is our opinion that there will be **no historic architectural properties affected** by project activities in SIU 5. Please be aware that we have not received the archaeological survey of this area. As soon as we receive the archaeological survey we can complete our review of SIU 5 and provide comments regarding archaeology.

Please be advised that, if the project area is increased, cultural materials are encountered during construction or adjacent areas that may contain significant cultural resources may be adversely impacted, appropriate information must be provided to this office for further review and comment.

If you have any questions please write Missouri Department of Natural Resources, State Historic Preservation Office, Attn: Review and Compliance, P.O. Box 176, Jefferson City, Missouri 65102, or call Alison Dubbert at (573) 751-7958. Please be sure to include the **SHPO Project Number (020-BO-03)** on all future correspondence relating to this project. If the information is provided via telephone call, please follow up in writing for our files.

Sincerely,

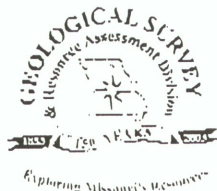
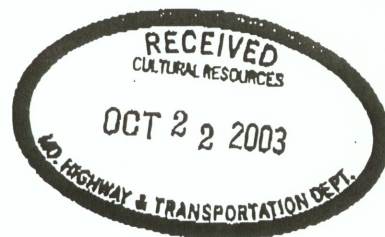
STATE HISTORIC PRESERVATION OFFICE

Cathy Sala for

Mark A. Miles
Director and Deputy State
Historic Preservation Officer

MAM:ad

c: Don Neumann
Kathy Harvey
Bob Reeder
Jane Beeterm



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TOTAL P 02



Comments and Coordination

A. Public Involvement

Opportunities were provided for public involvement in the Section of Independent Utility (SIU) 5 corridor during the study. Development in the corridor is rural, and there are no incorporated or unincorporated communities located in the area. For this reason, public outreach efforts were combined with public involvement activities in the adjacent SIUs – SIU 4 and SIU 6. A public involvement plan was prepared at the beginning of the SIU 5 Second Tier Study with the following stated goal:

To obtain informed consent in SIU 5 on the reconstruction and widening of I-70. To demonstrate that MoDOT is committed to involving the public on all aspects of the project, even from those sections with Categorical Exclusions.

Information was provided to property owners in the corridor via periodic newsletters, media outreach and the Improve I-70 website. Names and addresses of property owners were obtained through the Boone and Callaway County property tax records and from sign-in sheets at public meetings for SIU 4 and SIU 6. Members of the SIU 5 project team participated in SIU 6 public meetings held in Kingdom City in April and October of 2003. Informational boards showing the SIU 5 alignment and environmental constraints were also shown at the SIU 4 public meetings in Columbia in April and November of 2003. Two public comment forms were received, and several members of the public contacted the Public Involvement Consultant through the project toll free telephone number to ask questions or request information. The following summarizes the public comments received.

- Support for providing a continuous frontage road on the south side of I-70 by going through Tucker Prairie.
- Support for design and construction of I-70 improvements across the state.
- Requests to be included on the mailing list for newsletters and other materials.
- Questions regarding location of parcels identified on Right of Entry request forms sent to landowners.

B. Agency Coordination

Resource agency coordination has been ongoing throughout the SIU 5 Second Tier Study. Coordination letters were sent to each of the environmental resource agencies requesting specific information and input concerning the project. Local government agencies were also contacted to obtain specific information regarding properties in the corridor. Letters received from environmental resources agencies are located in the following pages.

A Study Management Group comprised of upper level resource agency staff was assembled and organized for the Improve I-70 program for the purpose of coordination and information sharing. Findings of the SIU 5 study were presented to the SMG on two different occasions, August 22, 2002 and May 20, 2003.

With regard to Native American consultation, the Federal Highway Administration has contacted nine indigenous tribes that would have an interest in the I-70 corridor. One response was received, and it was from the Sac and Fox NAGPRA Confederacy. Copies of this correspondence are also included in the following pages.

C. Agency Comment

The following agencies were notified of the opportunity to comment on the SIU 5 Categorical Exclusion Document dated March 9, 2004.

- Missouri Department of Natural Resources
- Missouri Department of Conservation
- Missouri State Emergency Management Agency
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- U.S. Coast Guard
- Natural Resources Conservation Service
- Federal Emergency Management Agency
- Federal Transit Agency

Only the Missouri Department of Natural Resources provided comment on the document. A copy of their letter, with delineated comments, is included in this section. Responses are provided following the letter.



April 5, 2004

Mr. Ken Bechtel
Environmental Manager
HNTB Corporation
715 Kirk Drive
Kansas City, Missouri 64105

Re: Interstate 70, Categorical Exclusion for Section of Independent Utility 5,
Boone and Callaway Counties

Dear Mr. Bechtel:

Thank you for allowing the Missouri Department of Natural Resources the opportunity to review the Categorical Exclusion (CE) for Interstate 70 SIU 5 in Boone and Callaway Counties.

The department's programs had very few comments regarding the proposed project. The State Historic Preservation Office (SHPO) commented that they have not received nor reviewed the report referenced in the CE, titled "Phase I Archaeological Investigations for Interstate 70 Improvements, SIU 5, T48N-R9-11W, Boone and Callaway Counties, Missouri, Cultural Resources Volume 12." According to the CE, this report documented 15 archaeological sites, including four sites that require further evaluation of their potential for National Register eligibility.

The Division of State Parks (DSP) determined that the proposed project would not impact any lands under jurisdiction of DSP, or any lands that had received Land and Water Conservation Funds. Due to this finding, and the fact that Tucker Prairie is not expected to be impacted, DSP had no comments to provide on this document.

1

Regarding hazardous waste issues, the CE has identified a number of current and former petroleum storage facilities at Interchange Highways J/DD, and states that appropriate action to address these issues will be taken. However, there may be a previously unidentified petroleum tank site along Highway FF near Kingdom City that recently came to the Department's attention. Since Highway FF is on the north side of Interstate 70 and the improvements will be on the north side, MoDOT may need to deal with the site prior to construction. Additional information will be available as investigation of this site proceeds.

Chapter III, page 17 of the CE mentions wetlands that have been "isolated" and are therefore described as non-jurisdictional. MoDOT planners should note that no guidance defining

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Page 2

"isolation" has ever been produced, and that the sole authority for determining jurisdiction of wetlands rests with the Corps of Engineers. The western terminus of this project extends into the watershed of Hinkson Creek via the headwaters of the North Fork of Grindstone Creek and Grindstone Creek. While the project is not expected to have direct impacts on these streams, please note that Hinkson Creek is currently on the 303(d) list of impaired waters due to pollutants from an unknown source. Therefore any manipulation of the watershed in this area should be done with the utmost care and scrutiny.

- 2 MoDOT will not need to apply for a site specific permit for projects in this section of the I-70 corridor under current regulations. However, MoDOT is required to meet the conditions of its general land disturbance permit issued by the department, which include the development of a Storm Water Pollution Prevention Plan (SWPPP). The department recently determined that runoff from projects within the Hinkson Creek watershed must meet a standard of 1.0 milliliters/liter/hour of settleable solids to be protective of water quality. A portion of the I-70 SIU 5 study area is within the Hinkson Creek watershed, and Hinkson Creek is included on the 303(d) list due to pollutants from an unknown source. MoDOT will need to achieve a higher level of stormwater control in the Hinkson Creek watershed than normally required by their existing land disturbance permit, in order to protect sensitive local water resources. As long as MoDOT's SWPPP protects water quality in the Hinkson Creek watershed, MoDOT's general statewide permit for land disturbance activities will apply, and MoDOT will not need to apply for a separate permit.

Because this project may have indirect impacts within an environmentally sensitive area, project planners should also consider the following factors as the project is developed. The increase in impermeable area caused by widening of the roadway and interchanges will affect the hydrology of the area. This effect will be to diminish the groundwater recharge in the area, in turn diminishing the base stream flow. The most severe effects will be realized in times of drought, when groundwater discharge is the only input into stream systems. Accordingly, there will be an increase in the peak stream flow, due to: increases in impermeable surface; reduction of channel length by culvert pipes; reduction of interception of precipitation through continuous mowing/maintenance of grass along right-of-ways; increases in velocity due to reduced roughness within culvert pipes/riprap areas; and shunting of runoff directly into streams through engineered ditches.

- 3 It is the department's experience that alterations to stream flow due to use of culverts can have simple or cumulative effects to upstream and downstream areas. If a stream system realizes increased peak flows for the reasons stated above, nearby in-stream structures may begin to fail. For instance, downstream road crossings/culverts that were designed to handle historic peak flows may now not have enough hydraulic capacity, and begin to cause localized flooding to roads and/or residences. Increased velocities may incise channels upstream of the highway crossing, sending headcuts upstream which may cause bank instability from the resultant steeper side slopes. This may jeopardize any structures or roads near upstream banks. Increased velocity and power from peak flows will increase erosive forces on the outside banks of meanders. This may cause these banks to erode faster, changing the course of the stream system. Any of these actions could result in damage to nearby or connecting roadways, or to private property. Recent heavy rains in this area resulted in just such damage, described in the attached article published March 30, 2004.

Bridges are preferable to culverts because they minimize impacts to aquatic resources. Bridges reduce the amount of stream channelization, are less likely to become clogged with debris, and

Page 3

allow for natural substrate and vegetation to remain in place. In general, culverts should be designed so that they do not change the low-flow characteristics of the streams. Culvert designs that allow the original substrate to remain intact are preferable (e.g., using arches instead of boxes). Efforts should be made to use bio-engineered structures when constructing stream crossings, such as incorporating native plant material into bank stabilization areas. This way, the connectedness of the continuous riparian corridor is maintained, and water quality is improved through shading, interception of run-off, etc. Grade controls may be necessary to control any headcuts/channel incision that may occur from this project.

The use of retaining walls, geotextile-reinforced soil, and other soil stabilizing techniques that would minimize impacts to wetlands and/or streams by reducing the length of the side-slopes is recommended.

4 The Air Pollution Control Program noted that this section is located in a rural air quality attainment area. As there are no controlled intersections located in SIU 5, the possibility of excessive traffic queuing appears to be remote. Also, due to the rural character of the area, violations of the National Ambient Air Quality Standards are also expected to be a remote possibility. While the Air Quality Analysis Agreement executed in March 1988 by FHWA, MDNR, and MoDOT is included in the CE, transportation conformity is now governed by the Clean Air Amendments of 1990. If there were to be any air quality analysis agreement required for this section of I-70, it would require updated thresholds and would need to establish a clear course of action for failure to meet those thresholds to make it of value in controlling air pollution.

5 The department continues to believe that compliance with the National Environmental Policy Act (NEPA) through the use of a Categorical Exclusion (CE) for a project on this scale is inappropriate. Widening an interstate highway, with its accompanying interchanges, stream crossings and cumulative and secondary land-use impacts would seem to warrant a higher level of public review than other typical CE projects, such as those listed in 23 CFR 771.117(c).

We ask that these comments be included as part of the Final CE, in order to better formalize the comment process. If you have any questions or need clarification, please contact me, phone number 573-522-2401. My address for correspondence is Department of Natural Resources, P.O. Box 176, Jefferson City, MO 65102.

Sincerely,

DEPARTMENT OF NATURAL RESOURCES



Jane Beeterm
Transportation Coordinator

/j/b

c: Jen Johnson, HNTB Corporation

Awash in gravel and mud - Columbia Missourian

Page 1 of 3

Tuesday, April 6, 2004

MISSOURIAN

Columbia, Missouri

Awash in gravel and mud

Weekend storms leach the surface from several Boone County roads and damage a local business

By **SARA SEMELKA and ANNA SHARP**

March 30, 2004

Floodwater from the record-breaking weekend downpour has receded and left what could be up to \$500,000 in damage to Boone County roads.

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Meanwhile, the Missouri Athletic Center in the Hinkson Creek floodplain is also dealing with hundreds of thousands of dollars' worth of damage from the storm.

At the Boone County Public Works Department, Director David Mink said the high cost of repairs to rural roads probably qualifies the county to receive money from the Federal Emergency Management Agency. Though the application could take up to two months, Mink said repairs have begun.

"Crews are doing what they can to address the problems at each of the damaged areas," Mink said. "We do not have to wait until all the costs are added up to begin repair work. We will track our costs, and then hopefully we will be reimbursed by FEMA."

Initially, money for the repair work will come from the county's 2004 budget for rock. If more money is needed, it will be taken from emergency funds upon approval of the Boone County Commission, Mink said.

A total of nearly 4 inches of rain fell across much of Boone County on Friday, setting a record for a one-day March rainfall.

"Most of the damage is loss of rock on the roads," Mink said. "A lot of the places that were damaged have a lot of erosion, where the water washed away the rock."

Crews spread new rock on those roads then use a motor grader to smooth it out. The county owns nine motor graders; each is assigned to a specific district.

"It will take several weeks for the motor graders to repair all of the damaged areas," Mink said.



[see full size image] Runners and bicyclists pass through a flooded tunnel Monday on the MKT Trail under Stadium Boulevard. Although most of the flooding caused by heavy rainfall over the weekend has subsided, many lower sections of the trail remain wet. (JULIE MORRIS/Missourian)



Awash in gravel and mud - Columbia Missourian

Page 2 of 3

Though the most significant damage to roads was erosion of surface rock, a few sites were damaged when erosion allowed underground pipes to wash downstream.

"Carr Road is an example of a large section of pipe that has been washed away," Mink said. "Carr Road will be the biggest project and take the longest to repair."

Also on Monday, city workers began assessing damage to trails. While no city trail is closed, all were affected by the weekend storms, Park Services Division Manager Mike Griggs said.

"This is the worst we've had in a while," he said. "This type of rain, where there is intense rainfall in a short period of time, is far worse than a steady downpour that lasts for several days because then the creeks slowly rise and slowly recede. This rain had much more force, and there was much more erosion."

Erosion was the most widespread of three types of damage to city trails. "The floods just washed the rock off the top of the trail," Griggs said.

"The second type of damage occurred when the waters receded," Griggs said. "They took sediment with them and deposited it in areas where we don't want it, like parking lots."

Minor water damage also might have affected signs or washed away mulch from newly planted trees. Once all the damage is evaluated, park officials will prioritize repairs.

"The MKT, Bear and Hinkson Trails are linear trails," Griggs said. "Those will be repaired first because people use them to get to work and classes, and they use them for exercise. They are the highest-use trails."

Loop trails within neighborhoods and parks will be repaired next.

At the Missouri Athletic Center near Forum Boulevard, workers are still dealing with the aftermath of the storm. Co-director Jessica Schultz said the health club is looking at damage estimated in "the hundreds of thousands of dollars."

The center, which is owned by Wilson's Total Fitness, had to close because of flooding. Schultz said they hope to have the second floor, which houses the "Females in Training" program, reopened on Wednesday and the pool and aerobics area by the end of the week.

"Fortunately we do have insurance," Schultz said. "We're looking on the bright side of things ... We want to keep things moving, and we hope to make it an even better club."

The center's soccer fields remain open, and club members are allowed to work out at Wilson's Total Fitness while repairs are being made.

Indoor soccer fields at the Missouri Athletic Center on Forum Boulevard are still wet Monday from flooding caused by rain over the weekend. Fans and pumps were used to dry out the MAC, and the fields were used for soccer practice in the afternoon.

Comments? Contact us or sound off on our message boards

[back to the top](#)

**Responses to Missouri Department of Natural Resources Comments on SIU 5
Categorical Exclusion Document****Comment 1**

Response: Comment noted. MoDOT will consult with DNR during the design phase to consider the most recent information on potential sites in project area. Further investigation of all potential sites to determine the extent of contamination and estimated clean-up requirements and costs will be conducted prior to right of way acquisition.

Comment 2

Response: MoDOT will follow the guidelines of the existing SWPPP to ensure water quality is maintained in the Hinkson Creek watershed during construction.

Comment 3

Response: Comment noted. MoDOT design will incorporate existing standards for structures and use of bio-engineered features to minimize impacts to streams and riparian corridors.

Comment 4

Response: Comment Noted.

Comment 5

Response: Comment noted.

Native American Coordination Letters were sent to the following tribes:

(A sample letter is attached.)

Iowa Tribe of Kansas and Nebraska

Sac & Fox Tribe of the Mississippi in Iowa

Sac & Fox Nation of Oklahoma

Sac & Fox Nation of Missouri in Kansas and Nebraska

Peoria Tribe of Indians of Oklahoma

Otoe-Missouri Tribe of Oklahoma

Osage Nation of Oklahoma

Omaha Tribe of Nebraska

Iowa Tribe of Oklahoma

SAC AND FOX NAGPRA CONFEDERACY



"MESKWAKI"

Sac and Fox of the
Mississippi in Iowa
349 Meskwaki Rd
Tama, IA 52339-9629
641-484-4678
Fax: 641-484-5424
Contact:
Johnathan L. Buffalo



Sac and Fox Nation
of Missouri
in Kansas and Nebraska
305 N Main
Reserve, KS 66434
785-742-7471
Fax: 785-742-2979
Contact: Deanne Bahr



Sac and Fox Nation of
Oklahoma
Rt. 2 Box 246
Stroud, OK 74079
918-968-2353
Fax: 918-968-2353
Contact: Sandra Massey



May 1, 2003

Bob Reeder
PO Box 270
Jefferson City, MO 65102

Dear Mr. Reeder:

Thank you for your letter, which is in compliance with Section 106 of the National Historic Preservation Act, and Section 110.

Please be advised that the Sac and Fox inhabited this area extensively. Therefore, we will need to be notified immediately should any funerary objects or human remains be unearthed. The main contact group of the Sac and Fox in issues that result in inadvertent finds of human remains or funerary objects pertaining to:

Section 4 thru Section 7, Independent Utility, MoDot Job NO. J411341, Missouri,

will be Deanne Bahr, NAGPRA Coordinator for the Sac and Fox Nation of Missouri. If you have any questions, please call me.

Sincerely,

Deanne Bahr
Sac and Fox Nation of Missouri
NAGPRA Contact Representative



U.S. Department
of Transportation
**Federal Highway
Administration**
Missouri Division

FHWA VISION:
"To Create the Best Transportation
System in the World."

209 Adams Street
Jefferson City, Missouri 65101
(573) 636-7104
Fax (573) 636-9283
Missouri.FHWA@fhwa.dot.gov

Allen Masuda, Division Administrator



February 27, 2003

Iowa Tribe of Kansas and Nebraska
2340 - 330th Street
White Cloud, KS 66094

Subject: I-70 Second Tier Studies
MoDOT Job No. J4I1341
Invitation for Consultation

Dear Sir:

The Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA) are beginning the second tier environmental studies for reconstruction of 200 miles of I-70 from the eastern limits of Kansas City to the western limits of St. Charles. The first tier environmental impact statement (EIS) for this study overall was concluded and approved in December 2001.

The second tier environmental studies for the 200-mile long corridor will be broken into seven different segments or Sections of Independent Utility (SIU). Enclosed is a map showing the locations of the seven SIUs, their lengths, the types of environmental document that will be prepared for each segment, and the consultant responsible for preparing each SIU's environmental document. The kind of environmental documentation being prepared for a section will be based on the nature of improvements being considered for that particular section. Categorical exclusions (CEs) will be done for those sections (SIUs 1, 2, 3, and 5) where only widening the existing facility is being considered. An Environmental Assessment (EA) will be done for SIU 6 that will consist mostly of widening the existing facility with one segment of possible new alignment. EISs will be conducted for SIUs 4 and 7 where more extensive new alignments will be considered. Regardless of the kind of environmental document being prepared, an archaeological survey will be conducted for all new right of way and all archaeological sites that may be impacted by the proposed improvements will be evaluated, avoided where feasible, or mitigated if necessary.

On behalf of the FHWA, I invite your tribe to participate in these second tier environmental studies. Please respond with your desired type of interest for specific section studies. If you have any questions or need additional information, please contact Peggy Casey

at (573) 638-2620, peggy.casey@fhwa.dot.gov, or Bob Reeder at (573) 751-0473, reeder1@mail.modot.state.mo.us. Additional information concerning this project is available at www.ImproveI70.org.

Sincerely yours,

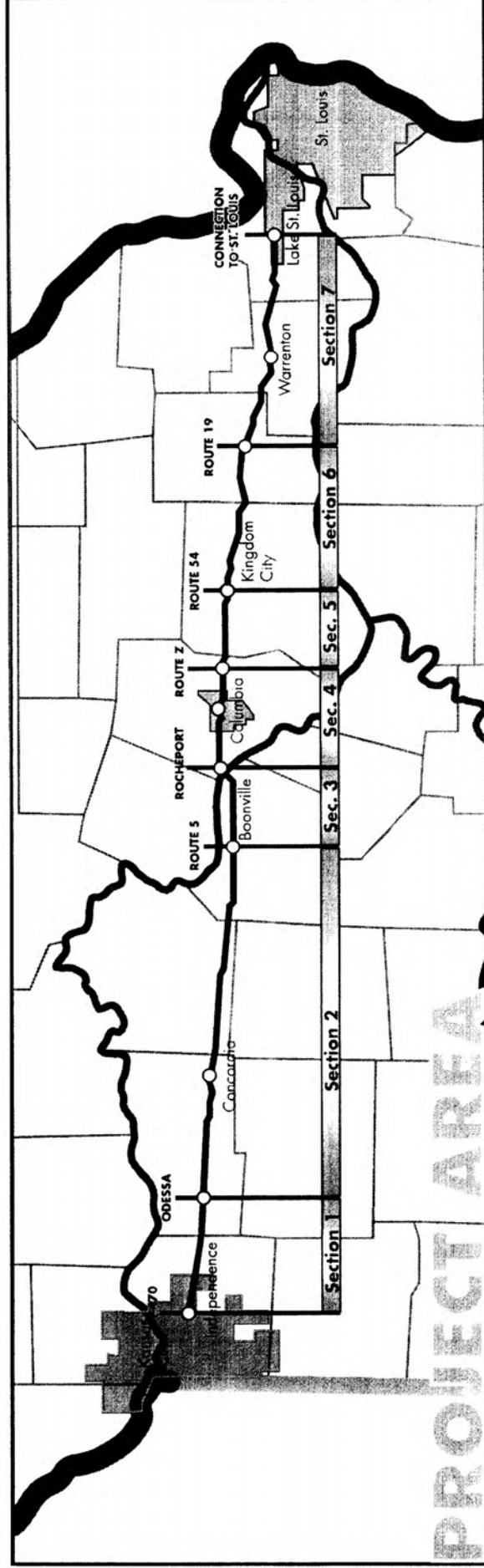
A handwritten signature in black ink, appearing to read 'Allen Masuda', with a stylized, cursive script.

Allen Masuda, P.E.
Division Administrator

Enclosure

cc: MoDOT/Cultural Resources/Bob Reeder
MoDOT/Design/Environmental Studies/Kathy Harvey
HNTB, 715 Kirk Dr., Kansas City MO 64105/Ken Bechtel

Sections of Independent Utility



SIU No.	SIU Length (Miles)	Location	Type of Document	SEC
1	35	I-470 (Kansas City) to Odesa	EA	URS
2	64	Odesa to Route 5	EA	SAIC
3	14	Route 5 (Boonville) to Rocheport	EA	Harding ESE
4	18	Rocheport to Columbia (Route Z)	EIS	CH2M Hill
5	15	Columbia to US 54	CE	Zambrana
6	27	US 54 (Kingdom City) to Route 19	EA	WSA
7	35	Route 19 (w/interchange to St. Louis)	EIS	Jacobs Civil