

Appendix D

Agency Correspondence

The attached letters were received during the course of the Second Tier environmental decision-making process.

Included in this Appendix is an example Native American coordination letter and response. The coordination letter was sent by FHWA to the following nine indigenous tribes:

- Iowa Tribe of Kansas and Nebraska
- Sac and Fox of the Mississippi in Iowa
- Sac and Fox Nation of Oklahoma
- Sac and Fox Nation of Missouri in Kansas and Nebraska
- Peoria Tribe of Indians of Oklahoma
- Otoe-Missouria Tribe of Oklahoma
- Osage Nation of Oklahoma
- Omaha Tribe of Nebraska
- Iowa Tribe of Oklahoma

**Cooperating Agency Agreement
Between
Federal Highway Administration (FHWA), the Lead Federal Agency
and
Environmental Protection Agency (EPA), a Cooperating Agency**

Introduction

The Missouri Division of the Federal Highway Administration requested that EPA become a Cooperating Agency for Interstate 70 Improvements in Missouri (Second Tier Studies). This agreement outlines the responsibilities agreed to by the above two agencies with respect the preparation of Environmental Studies for this project. This agreement will be effective upon the date of signature, and will be terminated upon completion of studies as documented by signed Records of Decision (ROD), Findings of No Significant Impact (FONSI) or upon the written request (for cause) of either signatory agency.

FHWA Responsibilities

1. FHWA will expeditiously forward to EPA, draft documents prepared for the project to enable EPA to carry out it's responsibilities under this agreement.
2. FHWA will consult with EPA, but will retain sole responsibility for determination of preferred alternative(s), and which mitigation measures will be included in the project.
3. FHWA will promptly inform EPA of any project design or schedule changes that affect responsibilities of this agreement.
4. FHWA will include a copy of this agreement in all public documents (DEIS, FEIS) relating to this project.

EPA Responsibilities

1. The EPA Region 7 NEPA team will provide single point-of-contact between FHWA, and EPA program offices (e.g., Wetlands, Drinking Water). EPA project reference number: 02-0070. The primary contact person at EPA is Joseph Cothorn, (913) 551-7148.
2. EPA will participate in Cooperating Agency Coordinating meetings and joint field reviews to the degree that staffing and scheduling allows. Regulatory, jurisdictional or programmatic comments (e.g., Clean Water Act Section 404, Clean Air Act Section 309) will be issued to FHWA, in writing, from the appropriate EPA program office.
3. EPA will participate in a cooperative merged NEPA/404 process for the two SIUs that will be

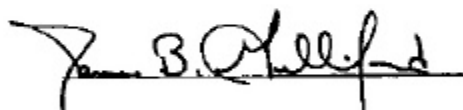
processed with environmental impact statements. This process includes concurrence points in: purpose and need; alternatives carried forward; joint NEPA/Section 404 public hearing; selected alternative; mitigation; and record of decision.

4. EPA will work pro-actively towards timely completion of a cooperating agency process for the five SIUs that will be processed with environmental assessments and a categorical exclusion. This process will include a regular and continuous dialogue among the agencies.

5. EPA acknowledges and accepts the following partnering objectives for this project:

- Recognize and respect the organizational goals, missions, and statutory authorities of other partnering agencies.
- Work together toward this goal in a timely and objective manner while preserving the integrity of each agency's mission.
- Maintain open communication to informally resolve issues to the greatest extent possible and at the appropriate level.
- Recognize and incorporate public outreach and input as essential parts of the decision making process.

The undersigned agree to the provisions of this MOA;



James Gulliford
Regional Administrator
U.S. EPA Region 7



Allen Masuda, Division Administrator
Federal Highway Administration

12-18-02



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

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

208 Adams Street
Jefferson City, Missouri 65101
(573) 636-7104
Fax (573) 636-9263
Missouri.FHWA@fhwa.dot.gov

Allen Masuda, Division Administrator



February 27, 2003

Sac & Fox Tribe of the Mississippi in Iowa
349 Meskwaki Road
Tama, IA 52339-9629

Subject: I-70 Second Tier Studies
MoDOT Job No. J411341
Invitation for Consultation

Dear Sir:

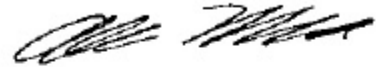
The Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA) are beginning the second tier environmental studies for reconstruction of 200 miles of I-70 from the eastern limits of Kansas City to the western limits of St. Charles. The first tier environmental impact 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,



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

MEMORANDUM OF UNDERSTANDING
Missouri Interstate 70

WHEREAS, the Federal Highway Administration (FHWA) and the Missouri Department of Transportation (MoDOT) have completed the Interstate 70 First Tier Environmental Impact Statement (EIS), and are now preparing the Second Tier environmental studies for seven sections of independent utility on I-70, with the ultimate goal of widening the existing interstate across much of Missouri; and

WHEREAS, the FHWA and MoDOT have begun consultation with the Missouri Department of Natural Resources State Historic Preservation Office (MOSHPO), as required by Section 106 of the National Historic Preservation Act and 36 CFR 800, the implementing regulations of the Advisory Council on Historic Preservation (ACHP); and

WHEREAS, the interstate was completed in August, 1965, and so is not yet 50 years of age, and determining its eligibility for the National Register of Historic Places presents a challenge in terms of assessment of integrity, as the interstate has continued to evolve over time through reconstruction, maintenance and improvements; and

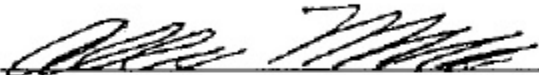
WHEREAS, the National Register eligibility of the national interstate system is currently being studied by a national task force including representatives of the National Conference of State Historic Preservation Officers, the Federal Highway Administration, the Advisory Council on Historic Preservation and other interested parties;

NOW THEREFORE, the FHWA, MoDOT and the MOSHPO agree to the following:

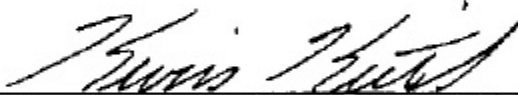
1. A formal assessment of the eligibility of the section of Interstate 70 addressed in the First Tier EIS and in the Second Tier environmental documents will be prepared by the Federal Highway Administration at such time that the interstate has reached 50 years of age, or the national task force has reached an opinion regarding eligibility of the interstate system.

2. In the interim, the FHWA and MoDOT will proceed in good faith to gather documentation on the history and development of this important interstate highway (Interstate 70) in Missouri.
3. Should Interstate 70 or any part thereof be determined eligible at a later date, the FHWA and MoDOT shall enter into consultation with the MOSHPO and the ACHP pursuant to 36 CFR 800.

Federal Highway Administration

By:  Date: 3-18-03

Missouri Department of Transportation

By:  Date: 3/14/03

Missouri Department of Natural Resources

By:  Date: 4/9/03



Missouri I-70 Corridor Interagency Cooperative Agreement Agricultural Lands

The Federal Highway Administration - Missouri Division (FHWA), the United States Department of Agriculture - Natural Resources Conservation Service - Columbia Office (NRCS), the Farm Service Agency - Columbia Office (FSA), and the Missouri Department of Transportation - Headquarters Office (MoDOT), (the "Agencies") are committed to facilitate the working relationship and the coordination process as it relates to: Wetland Reserve Program (WRP) Lands; Conservation Reserve Program (CRP) Lands; and, Prime and Unique Farmlands. This cooperative process directly relates to the processing of environmental documentation for the seven sections of independent utility (SIUs) which comprise the 200 mile I-70 Corridor in Missouri. The seven SIUs will be processed with two environmental impact statements, four environmental assessments, and one categorical exclusion.

The common goal of the agencies involved in this agreement is:

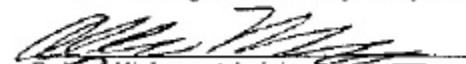
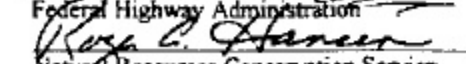
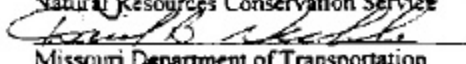

- To identify, as early as practicable, in the project development process, WRP, CRP, and Prime and Unique Farmlands that may be impacted by proposed project alternatives.
- To share pertinent WRP, CRP, and Prime and Unique Farmland, and proposed project alternative location information (mapping etc.).
- To work cooperatively in processing WRP and/or CRP easement modifications, when applicable.
- To continue to use the following individuals as points of contact among the agencies.

NRCS - Harold Deckerd
FHWA - Peggy Casey
FSA - Gerald Hrdina
MoDOT - Kevin McHugh
MoDOT - Gayle Unruh
GEC - Dan Van Petten

The role of the General Engineering Consultant (GEC) contact is to coordinate the day-to-day project development activities between the NRCS and the seven Section Engineering Consultants (SECs). Contact with MoDOT will be for Department policy and guidance interpretation.

The undersigned agencies are committed to cooperate and to efficiently and effectively participate in the identified environmental studies and will abide by the following principles:

- Recognize and respect the organizational goals, mission, and statutory authorities of other cooperative agencies.
- Work together toward this goal in a timely and objective manner while preserving the integrity of each agency's mission.
- Maintain open communication to informally resolve issues to the greatest extent possible and at the appropriate level.
- Recognize and incorporate public outreach and input as essential parts of the decision making process.


Federal Highway Administration

Natural Resources Conservation Service

Missouri Department of Transportation

Farm Service Agency

2/19/04
Date
10/27/03
Date
02-19-04
Date
11/6/03
Date

IMPROVE

Missouri I-70 Corridor Interagency Partnering Agreement

The Federal Highway Administration – Missouri Division (FHWA), the United States Army Corps of Engineers – Jefferson City Branch (USACE), and the Missouri Department of Transportation, (MoDOT) (the “Agencies”) are committed to facilitate the working relationship between their agencies in processing the environmental documentation for the seven sections of independent utility (SIUs) which comprise the 200 mile I-70 Corridor in Missouri.

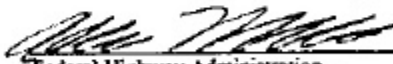
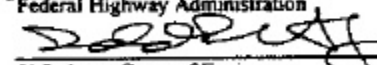

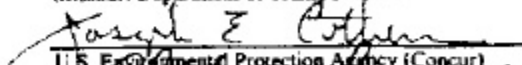
The seven SIUs will be processed with two environmental impact statements, four environmental assessments, and one categorical exclusion. The SIUs locations are depicted on Attachment 1 of this agreement. Also, a proposed environmental documentation project schedule is included as Attachment 2 of this agreement.

The common goal of the agencies involved in this agreement is:

- The timely completion of a cooperative merged NEPA/404 process for the two SIUs that will be processed with environmental impact statements. This process includes concurrence points in: purpose and need; alternatives carried forward; joint NEPA/Section 404 public hearing; selected alternative; mitigation; and record of decision.
- The timely completion of a cooperating agency process for the five SIUs that will be processed with environmental assessments and a categorical exclusion. This process will include a regular and continuous dialogue among the agencies.

The undersigned agencies are committed to work in partnership and to efficiently and effectively participate in the identified NEPA/404 studies and will abide by the following principles:

- Recognize and respect the organizational goals, missions, and statutory authorities of other partnering agencies.
- Work together toward this goal in a timely and objective manner while preserving the integrity of each agency's mission.
- Maintain open communication to informally resolve issues to the greatest extent possible and at the appropriate level.
- Recognize and incorporate public outreach and input as essential parts of the decision making process.


Federal Highway Administration2-4-03
Date
U.S. Army Corps of Engineers3-6-03
Date
Missouri Department of Transportation03-05-04
Date
U.S. Environmental Protection Agency (Concur)2/4/03
Date
U.S. Fish and Wildlife Service (Concur)2/5/04
Date

H34 (MWR-RD)

November 14, 2003

Mr. Don Neumann
Programs Engineer
Federal Highways Administration
209 Adams Street
Jefferson City, MO 65101

RE: I-70 SIU 6 / Mineola Hill SMG affects on Graham Cave NHL

Dear Mr. Neumann:

The National Park Service (NPS) wishes to express its concern about the potential effects of the referenced highway improvement project on significant cultural resources associated with Graham Cave National Historic Landmark. We have been alerted to the fact that the impacts of several conceptual corridors are being evaluated, some of which are in close proximity to the landmark and, accordingly, may have both direct and indirect adverse effects. It is our desire that planners give full weight to the acknowledged paramount national importance of Graham Cave throughout the project development process and during actual construction.

As you are no doubt aware, the National Historic Preservation Act of 1966, as amended, is very clear on agency responsibility when it comes to undertakings affecting national historical landmark (NHL) properties. Further, it also makes clear that protection of NHL properties is the most desired outcome of environmental review and planning. Section 110 (f) reads as follows:

Prior to the approval of any Federal undertaking which may directly and adversely affect any National Historic Landmark, the head of the responsible agency shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark, and shall afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking.

Graham Cave was one of 20 archeological properties granted landmark status with the second round of designations in January of 1961, making it one of the earliest NHLs in the entire country, let alone Missouri. Its importance derives, in part, from the fact that it was the first site to provide radiocarbon dates for an Archaic occupation in the time range (ca. 8,000 B.C.) previously thought typical of the earlier Paleoindian stage. It also

presented the first association of fluted projectile points with spear points of Archaic type. Thus, the site is highly significant for its role in establishing sequences of culture history and chronology for ancient peoples of North America.

The NHL property includes not only Graham Cave itself but also considerable land around the primary feature. This was done for two purposes: to protect associated cultural resources that might surround the cave entrance and to help maintain the natural landscape that provides a context within which this important site can best be appreciated by the public. This acknowledges the fact that the cave does not stand in isolation and that the setting is as important as the primary resource. Accordingly, our concern is not limited to the potential adverse effects of immediate ground disturbance and vibration that might be directly associated with construction activities but also the consequent effects that might follow project completion, such as undesirable visual and auditory intrusions on the scene.

The NPS has a continuing interest in working with the Federal Highway Administration to ensure that impacts to resources of concern to the NPS are adequately addressed. The continued protection of Graham Cave and its setting is essential for illustrating our nation's heritage to this and future generations. If we can be of any service during the planning process, please feel free to call upon us for technical assistance and counsel. Archeologist Vergil E. Noble, assigned to the NHL Program for the NPS's Midwest Region, would be happy to attend any future meetings related to the undertaking if scheduling permits. Dr. Noble can be reached by telephone at 402-437-5392, ext. 108, or via e-mail at vergil_noble@nps.gov. Written questions or comments may be directed to him at Midwest Archeological Center, National Park Service, Federal Building, Room 474, 100 Centennial Mall North, Lincoln, NE 68508.

These comments have been provided as early technical assistance and do not necessarily indicate the NPS's or the Department of the Interior's responses to future environmental documents prepared in association with the project.

We appreciate the opportunity to provide these comments.

Sincerely,

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Gary Vequist
Acting Regional Director

cc:
Mr. Kevin Keith, Chief Engineer, Missouri Department of Transportation, P.O. Box 270,
Jefferson City, MO 65102
Ms. Jane Beefem, Director's Office, Missouri Department of Natural Resources,
P.O. Box 176, Jefferson City, MO 65102

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



6465 Highway 168, Suite B, Palmyra, MO 63461-9604

April 6, 2004

Kyle M. Kroner
Wilbur Smith Associates
235 SW Noel
Lee's Summit, Missouri 64063

Mr. Kroner:

Attached is a Farmland Conversion Impact Rating (form AD-106) for the planned lane expansion along the I-70 corridor in Montgomery County, Missouri. After you complete the form, please return one copy for our records.

Please note that if the Total Points (Parts V & VI) in Part VII exceeds 160, alternative sites should be considered. Two alternatives are required if the score is between 0-220, and three alternatives are required if the score is over 220.

If you have any questions, please call me (573) 769-3512 ext. 133.

Sincerely,

Gary M. Noel
Area Resource Soil Scientist

Attachment

cc: Tammy Teeter DC, NRCS, Montgomery City, MO

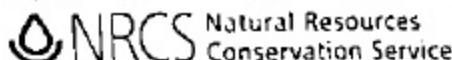
FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS

PART I (To be completed by Federal Agency)		1. Date of Land Evaluation Request: 3/10/04		Sheet 1 of 1	
2. Name of Applicant: Improve I-70 SIU 6 - Montgomery Co.		3. Federal Agency Involved: Federal Highway Administration (Missouri Dept. of Trans.)			
4. Name of Project: Environmental Assessment		5. County and State: Montgomery, Missouri			
PART II (To be completed by NRCS)		1. Date Request Received by NRCS: 3-24-04		2. Person Completing Form: Gary Noel	
3. Does the corridor contain prime, unique statewide or local important farmland? (If using the FPPA does not apply - Do not complete additional parts of this form.)		YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated: 0 Average Farm Size: 282	
5. Major Cropland: Corn + Soybeans		6. Farmable Land in Government Jurisdiction: Acres: 480,043 % 76.6		7. Amount of Farmland As Designated in FPPA: Acres: 480,043 % 76.6	
8. Name of Land Evaluation System Used: LESA		9. Name of Local Site Assessment System: N/A		10. Date Land Evaluation Returned by NRCS: 4-6-04	
PART III (To be completed by Federal Agency)		Alternative Corridor For Segment			
		Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly		20			
B. Total Acres To Be Converted Indirectly, Or To Receive Services					
C. Total Acres in Corridor		20	0	0	0
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland		16.0			
B. Total Acres Statewide And Local Important Farmland		4.0			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted		0.00%			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value		38.5%			
PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)		72.0			
PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))		Maximum Points			
1. Area in Nonurban Use	15	15			
2. Potential in Nonurban Use	10	10			
3. Percent Of Corridor Being Farmed	20	20			
4. Protection Provided By State And Local Government	20	0			
5. Size Of Present Farm Unit Compared To Average	10	10			
6. Creation Of Nonfarmable Farmland	25	0			
7. Availability Of Farm Support Services	5	5			
8. On-Farm Investments	20	10			
9. Effects Of Conversion On Farm Support Services	25	0			
10. Compatibility With Existing Agricultural Use	10	0			
TOTAL CORRIDOR ASSESSMENT POINTS		160	70	0	0
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part VI)		100	72		
Total Corridor Assessment (From Part VI above or a local site assessment)		160	70	0	0
TOTAL POINTS (Total of above 2 lines)		260	142	0	0
1. Corridor Selected: A	2. Total Acres of Farmlands to be Converted by Project: 20	3. Date Of Selection: April 28, 2004	4. Was A Local Site Assessment Used? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		
5. Reason For Selection:					

Signature of Person Completing this Part

DATE: 4/20/04

NOTE: Complete a form for each segment with more than one Alternate Corridor



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

Phone: 573 761-3105 Ext. 5

April 15, 2004

Mr. Kyle M. Kroner
Wilbur Smith Associates
235 SW Noel
Lee's Summit, MO 64063

Dear Mr. Kroner,

Attached is an AD-106 form with the soils portion completed for the STU6 project in Callaway County. Thank you for your assistance in furnishing the ArcView shapefiles. As we discussed over the phone, FPPA defines farmland without regard to vegetative cover, so my numbers will be different from what you originally furnished. Basically I took the shapefile showing proposed acquisition and clipped the Callaway soil data layer from it. There appear to be a few very small places where conversion has already occurred, but they are insignificant in my view to the overall evaluation. 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

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

ART I (To be completed by Federal Agency)		3. Date Of Land Evaluation Request: <u>3/10/04</u>		4. Sheet <u>1 of 1</u>	
1. Name of Project: <u>Improve I-70 SIV6</u>		5. Federal Agency Involved: <u>FHA, MoDOT</u>			
2. Proposed Land Use		6. County and State: <u>Callaway, MO</u>			
PART II (To be completed by NRCS)		1. Date Request Received By NRCS: <u>3/22/04</u>		2. Person Completing Form: <u>Keith Davis</u>	
3. Does the corridor contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply - do not complete additional parts of this form)		YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated: <u>247</u>	
5. Major Crops: <u>Corn (For index)</u>		6. Farmable Land In Government Jurisdiction: Acres <u>393,425%</u> <u>72.5</u>		7. Amount of Farmland As Defined in FPPA: Acres <u>392,605%</u> <u>72.4</u>	
8. Name of Land Evaluation System Used: <u>Callaway Co.</u>		9. Name of State or Local Site Assessment System: <u>none</u>		10. Date Land Evaluation Returned by NRCS: <u>4/15/04</u>	
PART III (To be completed by Federal Agency)					
A. Total Acres To Be Converted Directly		<u>750</u>			
B. Total Acres To Be Converted Indirectly		<u>—</u>			
C. Total Acres In Site		<u>750</u>			
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland		<u>394</u>			
B. Total Acres Statewide Important or Local Important Farmland		<u>308</u>			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted		<u>0.179</u>			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value		<u>60.6</u>			
PART V (To be completed by NRCS) Land Evaluation Criterion		<u>68</u>			
Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)					
PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (Criteria are explained in 7 CFR 658.5 a & c. For Non-Corridor project use form AD-1006)					
	Maximum Points	Corridor A	Corridor B	Corridor C	Corridor D
1. Area In Non-urban Use	(15)	<u>15</u>			
2. Perimeter In Non-urban Use	(10)	<u>10</u>			
3. Percent Of Corridor Being Farmed	(20)	<u>20</u>			
4. Protection Provided By State and Local Government	(20)	<u>0</u>			
5. Size Of Present Farm Unit Compared To Average	(10)	<u>10</u>			
6. Creation Of Non-farmable Farmland	(25)	<u>0</u>			
7. Availability Of Farm Support Services	(5)	<u>5</u>			
8. On-Farm Investments	(20)	<u>10</u>			
9. Effects Of Conversion On Farm Support Services	(25)	<u>0</u>			
10. Compatibility With Existing Agricultural Use	(10)	<u>0</u>			
TOTAL CORRIDOR ASSESSMENT POINTS	160	<u>70</u>			
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		<u>68</u>			
Total Corridor Assessment (From Part VI above or local site assessment)		<u>138</u>			
TOTAL POINTS (Total of above 2 lines)		<u>138</u>			
1. Corridor Selected: <u>A</u>	2. Total Acres of Farmlands to be Converted by Project: <u>750</u>	3. Date Of Selection: <u>4/28/04</u>	4. Was A Local Site Assessment Used? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		
5. Reason For Selection:					

Name of Federal agency representative completing this form: FHWA/MoDOT

NOTE: Complete one form for each segment with more than one Alternate Corridor

(See Instructions on reverse side)

Date: 4/28/04

Form NRCS-CP



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)

JOHN D. HOSKINS, Director

October 10, 2002

Mr. Craig T. Casper
Wilbur Smith Associates
235 SW Noel
Lee's Summit, MO 64063

Dear Mr. Casper:

Re: Interstate 70 Improvement Study, Environmental Assessment, Section of Independent Utility #6
from near Kingdom City, Callaway County to near Montgomery City, Montgomery County.

Thank you for your letter of September 4, 2002, inviting the Department to comment on potential impacts that might result from implementation of the above-referenced project.

A review of our records shows that public lands, sensitive species, or communities are known to exist within one mile either side of existing I-70. 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 within the study corridor.

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 that 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.

This SIU is one of the more forested sections adjacent to I-70 in Missouri. Therefore we feel it is especially appropriate to minimize the clearing of vegetation within this section to only what is absolutely necessary for the improvements. Further, we recommend planting native species of trees in the median to mitigate for fragmentation impacts and minimize reductions in forest cover that will take place as the overall I-70 corridor widens. These measures are important to many woodland inhabiting species, but they may be particularly appropriate measures to avoid and minimize potential loss of Indiana bat (*Myotis sodalis*) summer habitat. In addition, the use of native grasses and forbs in non-forested median areas would be easier to maintain annually, thereby saving maintenance costs and providing habitat for grassland species. MoDOT representatives have expressed their desire to partner with the Grow Native program and implement the establishment of native vegetation along highway rights-of-way. What better time to begin this effort than with this project that will open up a lot of new ground!

COMMISSION

STEPHEN C. BRADFORD
Cape Girardeau

ANITA B. GORMAN
Kansas City

CYNTHIA METCALFE
St. Louis

HOWARD L. WOOD
Bonne Terre

As indicated in the attached Heritage Report, there are six state-owned properties that occur within the two-mile wide study corridor. The four Missouri Department of Conservation area occur at the periphery of the study corridor and all indications from the First Tier Environmental Impact Statement are that these areas would not be affected by the proposed improvements to I-70. Conversely, Graham Cave State Park (GCSP), owned by the Missouri Department of Natural Resources, abuts the north side of existing I-70 right-of-way and would be affected by any widening of the existing right-of-way northward. Graham Cave Glades Natural Area also lies adjacent to existing I-70 right-of-way within GCSP and would be affected by widening northward. One other public land tract, McCredie Farm Lake, owned by the University of Missouri (MU), is located within the two-mile wide study corridor and could potentially be affected by I-70 improvements. Our agency constructed a public boat ramp on the 12-acre lake site and manages the fisheries resources within the lake via a Community Assistance Program (CAP) agreement with MU.

The SIU #6 crosses many small streams and headwater drainages, most of which are tributaries to the Loutre River and Auxvasse Creek. Crossings of all water features are of concern, but we are particularly apprehensive regarding potential impacts to the Loutre River and Auxvasse Creek where the I-70 corridor crosses them. The wide, flat Loutre River valley and its adjacent forested hillsides create one of the most scenic stream corridors within SIU #6. One species of Conservation Concern, the blacknose shiner (*Notropis heterolepis*), is known to occur in both drainages. As indicated on the enclosed Heritage Database report, this species is ranked S2; imperiled in the state because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state (6 to 20 occurrences or few remaining individuals). The blacknose shiner has been collected from many sections of Whetstone Creek, a tributary to Clark's Branch and the Loutre River, including the upper reaches of Whetstone Creek adjacent to I-70. The section of Whetstone Creek flowing through Whetstone Creek Conservation Area is a state designated natural area based on its aquatic community diversity and regional significance as an aquatic feature. Please note also that instream activities are restricted in Whetstone Creek during the fish spawning period of March 15 through June 15.

There are many cost-effective measures for avoiding and minimizing impacts to waters of the United States and their aquatic communities. These methods should be incorporated into MoDOT's project plans and be made conditions of all permit authorizations under which MoDOT contractors accomplish work. These measures, known as construction special provisions in MoDOT construction contracts, were developed through years of coordination between MoDOT and the Department of Natural Resources, the Department of Conservation, and the U.S. Fish and Wildlife Service. This responsibility is acknowledged by MoDOT in Division 100, Section 107, part 107.10, Missouri Standard Specifications for Highway Construction, and MoDOT's Pollution Prevention Plan approved as part of their General State Operating Permit for road construction projects, approved by the Missouri Department of Natural Resources on July 6, 1997.

Impacts to the aquatic environment should be minimal if the following general recommendations 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.

Mr. Craig T. Casper
Page 3 of 4
October 10, 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. Whenever possible, a wooded riparian corridor should be established at least 50 foot wide along both sides of streams third order and smaller and a 100 foot corridor on streams fourth order and larger.
4. Stream flows should not be interrupted. All temporary in channel fills that could impound water should be culverted.
5. Avoid work in the channel between March 15 and June 15 to the extent possible.
6. 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.

Our concerns do not center on the lack of developing appropriate best management practices, but rather the lack of implementing effective best management practices. Our concerns during construction of the proposed improvements to SIU #6 can be summarized as follows: (1) no siltation and erosion control measures will be in place during construction, (2) where measures are in place, there will not be enough siltation and erosion control barriers to effectively control erosion, (3) siltation and erosion control measures are not placed in a timely fashion, and (4) siltation and erosion control barriers are not properly maintained throughout the life of the project. The importance of properly designed, placed, and maintained siltation and erosion control measures in minimizing impacts to water quality cannot be stressed enough.

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
John George, Brian Canady, Gus Raeker, Doug Novinger, Shannon Cave, Cindy DiStefano



Wilbur Smith Associates
235 SW Noel
Lee's Summit, MO 64063

I-70 Improvement Study/SIU No. 6

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	Sec.	Subsection	Ownership
FLOERKEA PROSERPINACOIDES	FALSE MERMAID			SU	048N006W	28	NE4NE4	DNR
NOTROPIUS BUCHANANI	GHOST SHINER			S2	048N006W	34	NW4	PRIVATE
OPHIOGLOSSUM VULGATUM	ADDER'S-TONGUE			S3	048N006W	27	NW4NW4NE4	DNR
MICROSERIS CUSPIDATA	PRAIRIE DANDELION			S2	048N006W	32	NW4SW4NE4	PRIVATE
PERCOPSIS OMISCOMAYCUS	TROUT-PERCH			S1?	048N006W	34	W2	PRIVATE
ASPLENIUM MONTANUM	MOUNTAIN SPLEENWORT			SH	048N006W	26	AND SEC 27	PRIVATE
LYTHRUM SALICARIA	PURPLE LOOSESTRIFE			SE	048N006W	24	E2 AND SECS 13, 25	PRIVATE
MALVASTRUM HISPIDUM	YELLOW FALSE MALLOW			S3	048N006W	34		PRIVATE
PLANTAGO CORDATA	HEART-LEAVED PLANTAIN			S3S4	048N006W	35	NW4NE4	PRIVATE
SPIRANTHES OVALIS VAR EROSTELLATA	OVAL LADIES' TRESSES			S3	048N006W	27		DNR
MESIC BOTTOMLAND FOREST					048N006W	28	NE4	DNR
DRY SANDSTONE CLIFF					048N006W	27	N2S2NE4	DNR
NOTROPIUS HETEROLEPIS	BLACKNOSE SHINER			S2	048N008W	14	CS2S2	PRIVATE
HYPNUM IMPONENS	A MOSS			S?	048N006W	27	AND SEC 26	PRIVATE
DRY SANDSTONE FOREST					048N006W	27	N2	DNR
LYTHRUM SALICARIA	PURPLE LOOSESTRIFE			SE	048N005W	28	N2 AND SECS 20, 21, 22, 27, 29	PRIVATE

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 3CSR10-4.111 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.

MALVASTRUM HISPIDUM	YELLOW FALSE MALLOW	S3	048N006W	27	DNR
MARSUPELLA SPHACELATA	A LIVERWORT	S1	048N006W	26	PRIVATE
SANDSTONE GLADE			048N006W	27	DNR
				N2	
				S2 AND SEC	
MALVASTRUM HISPIDUM	YELLOW FALSE MALLOW	S3	048N006W	25	PRIVATE
SANDSTONE GLADE			048N006W	35	PRIVATE
				N2NW4 AND	
				SW4NE4	

Avoid instream activities in and runoff affecting:

Whetstone Creek from March 15 to June 15.

Restriction on instream activities are recommended for reaches that support seasonal concentrations of spawning, incubating or rearing fishes or mussels of management interest. This could include resident species (e.g., threatened, endangered, listed species of conservation concern, or other sensitive species such as rainbow trout, rock bass, smallmouth bass, suckers, etc.) or species that migrate into a reach seasonally to spawn (e.g., walleye, white bass, etc.).

Additional information for planning purposes:

Species of stream fishes spawn (lay and fertilize their eggs) during specific times of the year. Fish eggs are extremely vulnerable to localized habitat destruction and activities that cause excessive sediment loads which can smother fish eggs. High levels of chemical and organic pollutants can also negatively affect the proper development of fertilized fish eggs. Human activities that change the physical structure of rivers and streams, such as building impoundments or channelization (straightening streams), could negatively affect fish movement and distribution. All activities that alter, destabilize or destroy stream bottoms or banks should be avoided to prevent disrupting the spawning activities of stream fishes. In addition, avoid all activities that introduce chemical or organic pollutants to streams.

Indiana bats (Federally endangered, State endangered) 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 0.5 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 15 September 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 fence rows. Therefore, mature forest canopy should be enhanced and stream quality not degraded.

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.

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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 cc - Lizard populations, natural communities and geologic features are reviewed for sensitive biological resources and may also appear on this report.

Public land in the project area:

Danville Conservation Area – Baldwin Annex
Loutre Lick Access
Prairie Fork Conservation Area
Whetstone Creek Conservation Area
McCredie Farm Lake
Graham Cave State Park

Missouri Department of Conservation
Missouri Department of Conservation
Missouri Department of Conservation
Missouri Department of Conservation
University of Missouri (CAP Access)
Missouri Department of Natural Resources

Montgomery City Quadrangle
Montgomery City Quadrangle
Williamsburg Quadrangle
Williamsburg Quadrangle
Kingdom City Quadrangle
Montgomery City Quadrangle

Natural Areas:

Graham Cave Glades Natural Area – an 82-acre portion of Graham Cave State Park with sandstone and limestone glades, dry sandstone forest and ddr sandstone cliffs situated in the Missouri River Section of the Ozark Border Natural Division. Also included in the area is a small headwaters valley surrounded by cliffs and rocky hills formed in St. Peters sandstone.

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 3CSR10-4.111 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.

STATE OF MISSOURI Bob Holden, Governor • Stephen M. Mahood, Director
DEPARTMENT OF NATURAL RESOURCES

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

Integrity and excellence in all we do

c: Ken Bechtel, HNTB
SIU Consultants



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.

ACQUISITION

CAMPING

TRAILS

DAILY

TRAILS

ACQUISITION

PROJECTS, PLANS, & STUDIES

- ☐ DRIVING PLOW/RAID (LOWER DAV USE AREA)
- ☐ BATH TUB HOUSE (LOWER DAV USE AREA)
- ☐ PLAYGROUND EQUIPMENT (LOWER DAV USE AREA)
- ☐ FRESHWATER INTAKE AT CAVE
- ☐ POLE BARN AT SERVICE AREA
- ☐ NATURAL AESTHETIC RECOVERY
- ☐ WILD LIFE MANAGEMENT PLAN

ACQUISITION

DAY USE

LOWER AREA MOUNTAIN & PINE
SHELTER

AN INTERESTING CASE STUDY HAS BEEN DETECTED FOR THIS AREA. THE DESIGN AND LOCATION ARE APPROPRIATE BUT DUE TO THE SMALL AMOUNT OF USE THE PARK RECEIVES IT IS FELT THAT A CENTER IN THIS AREA SHOULD BE LOW PRIORITY.

[illegible]

THE PDS IS USED PRIMARILY FOR AN OVERNIGHT STOPPING POINT AS WELL AS TO A DESTINATION POINT. THE PDS IS QUITS BEING USED WHENEVER A PARTICLE IS DEVELOPED FOR TESTING. REFINING A CLAMPING MINIMAL, CLAMPING A REFINING ACTIVITY SHOULD BE MAINTAINED TO PROVIDE FOR EXACT USE OF THE PDS. BUT MAINTAINING THE PDS FOR EXACT ACTIVITY, AND BE EXPOSED TO THE PDS THROUGH A DEVELOPED TOOL SYSTEM.

GENERAL NOTES

CONSUMER TO APPEAL PROVISION 4015+200

MISSOURI
DEPARTMENT OF NATURAL RESOURCES
DIVISION of PARKS and RECREATION
GRAHAM CAVE STATE PARK
CONCEPTUAL DEVELOPMENT PLAN

Superfund

Site Name	Address	City	Zip	County	CERCLIS
Big Spring Quarry	Big Spring Quarry Road	Big Spring	63363	Montgomery	
Montgomery City Former USDA Grain Bins	Montgomery County Fairgrounds, Rt. 19	Montgomery City		Montgomery	MON000703847

HAZ WASTE GENERATORS RT 54 TO RT 19

EPA ID	MO ID	STATUS	FACILITY	ADDRESS	CITY	ST	ZIP	LATITUDE	LONGITUDE
MOD985799626	020027	Conditionally Exempt - Inactive	MIKE'S AUTOCRAFTS, INC.	HIGHWAY 19 NORTH	MONTGOMERY CITY	MO	63361	38.9882	-91.51476
MOR000003392	030777	Exempt Small Quantity	MONTGOMERY SALVAGE	HC RT BOX 22	MONTGOMERY CITY	MO	63361	39.00931	-91.51503
MOR000042945	036900	Exempt Small Quantity	IBP, INC	1001 HARNESS DR	MONTGOMERY CITY	MO	63361	38.9635	-91.48913
MOD985801745	020232	Inactive	PACE CONSTRUCTION COMPANY/DANVILLE PLANT	DANVILLE EXIT OFF I-70	MONTGOMERY CITY	MO	63361	39.00931	-91.51503
MOD985802396	020678	Inactive	AMOCO FOOD SHOP	707 A STURGEON	MONTGOMERY CITY	MO	63361	39.00931	-91.51503
MOD029921335	004485	Inactive	ELMORE FORD, INC.	906 S. STURGEON	MONTGOMERY CITY	MO	63361	38.96818	-91.49557

EPA ID	MO ID	STATUS	FACILITY	ADDRESS	CITY	ST	ZIP	LATITUDE	LONGITUDE
MOD131588964	004553	Inactive	DECORA - MONTGOMERY CITY	680 S STURGEON	MONTGOMERY CITY	MO	63361	38.96943	-91.49768
MOR000017483	033474	Inactive	CASEYS GENERAL STORE NO 1267	600 S STURGEON	MONTGOMERY	MO	63361	38.97192	-91.50008
MOP000001092	015070	Inactive	PURINA MILLS	950 N. WALKER	MONTGOMERY CITY	MO	63361	38.9833	-91.51322
MOP000029033	035260	Inactive	MONTGOMERY COUNTY R II SCHOOL	418 N HWY 19	MONTGOMERY CITY	MO	63361	39.00931	-91.51503
MOD114212616	000378	Inactive Non-Reporter	MIKE'S AUTO CRAFTS	402 S ALLEN	MONTGOMERY CITY	MO	63361	38.97879	-91.50717
MOD980849483	013224	Small Quantity	CARGILL INC.	1/2 BLOCK W OF WALKER & HWY 19	MONTGOMERY CITY	MO	63361	38.97637	-91.50769
MOD985797927	014841	Small Quantity	EXPRESS CLEANERS	112 NORTH STURGEON	MONTGOMERY CITY	MO	63361	38.97765	-91.50488

"Easting"	"Northing"	"Id"	"Latitude"	"Longitude"	"Elevm"	"Quad"	"County"	"Twp"	"Rng"	"Sec"	"Quarter"	"Propname"
365275	4330550	950034	390656	943330	259	Kansas City	JACKSON	50N	33W	33	SWNE	Flanagan Brothers Quarry
364675	4330400	950037	390651	943355	232	Kansas City	JACKSON	50N	33W	33	C W2	Hill Quarry
363425	4330475	950047	390653	943447	235	Kansas City	JACKSON	50N	33W	32	C	Lyle Rock Company Mine
363325	4326925	950048	390457	943449	259	Kansas City	JACKSON	49N	33W	8	SWSWNWSE	Lyle Quarry #1
363300	4327000	950049	390500	943450	274	Kansas City	JACKSON	49N	33W	8	SESESW	Lyle Quarry #2
364825	4325975	950053	390427	943345	290	Kansas City	JACKSON	49N	33W	16	SESEENENW	McTermin & Halpin Mine #
368875	4326100	950055	390434	943057	268	Kansas City	JACKSON	49N	33W	12	SW	Owens Mine
369550	4326475	950057	390446	943029	247	Kansas City	JACKSON	49N	33W	12	SW	Reardon Mine
364825	4326420	950059	390442	943346	270	Kansas City	JACKSON	49N	33W	9	SESESW	Snell Quarry
365400	4324875	950061	390352	943321	287	Kansas City	JACKSON	49N	33W	16	NWSESESE	Sullivan Mine
367950	4323700	950072	390315	943134	274	Kansas City	JACKSON	49N	33W	23		
382800	4321475	950074	390211	942115	235	Blue Springs	JACKSON	49N	31W	29	SENE	
364875	4331125	950080	390714	943347	226	Kansas City	JACKSON	50N	33W	28	SW	
363775	4330600	950081	390657	943432	235	Kansas City	JACKSON	50N	33W	32	SWNE	
393275	4319625	950115	390116	941358	265	Oak Grove	JACKSON	49N	30W	33	NENW	
381300	4323925	950122	390330	942219	250	Blue Springs	JACKSON	49N	31W	18	S2SE	
386000	4322950	950123	390300	941903	268	Blue Springs	JACKSON	49N	31W	22	NE	
387750	4322175	950124	390236	941749	250	Blue Springs	JACKSON	49N	31W	23	SESWNESE	
379800	4321800	950128	390220	942320	256	Independence	JACKSON	49N	32W	25	S2NENE	
377575	4321100	950129	390156	942452	277	Independence	JACKSON	49N	32W	26	SWNWSE	
368800	4327925	950130	390533	943101	287	Kansas City	JACKSON	49N	33W	1	SWSW	
362400	4328250	950131	390540	943528	277	Kansas City	JACKSON	49N	33W	6	SESE	
364350	4327375	950134	390513	943406	259	Kansas City	JACKSON	49N	33W	9	SWNW	
367425	4326375	950135	390442	943158	287	Kansas City	JACKSON	49N	33W	11	SWSW	
369025	4327325	950136	390514	943052	250	Kansas City	JACKSON	49N	33W	12	SWSWNW	
369275	4325900	950137	390427	943040	241	Kansas City	JACKSON	49N	33W	13	C N2NW	
365100	4326225	950138	390436	943334	283	Kansas City	JACKSON	49N	33W	16	NENWNE	
370125	4324200	950141	390333	943004	238	Kansas City	JACKSON	49N	33W	24	SWNENE	
369400	4322825	950143	390245	943442	235	Kansas City	JACKSON	49N	33W	25	N2NENENW	
365075	4330375	950171	390650	943338	262	Kansas City	JACKSON	50N	33W	33	C	
368450	4324950	950177	390356	943114	259	Kansas City	JACKSON	49N	33W	14	SWSWNESE	
370550	4322525	950178	390239	942945	250	Independence	JACKSON	49N	32W	30	NWNW	
416434	4319107	1070063	390108	935755	299	Odessa North	LAFAYETT	49N	28W	26	C E2E2W2SE	
416718	4318734	1070064	390056	935743	308	Odessa North	LAFAYETT	49N	28W	26	SESE	
417383	4317864	1070066	390028	935715	302	Odessa North	LAFAYETT	49N	28W	36	S2SENW	
451425	4314700	1070027	385855	933339	232	Concordia	LAFAYETT	48N	24W	4		
446450	4314925	1070028	385901	933706	244	Concordia	LAFAYETT	48N	25W	1	C	
627150	4306850	1390004	385412	913201	244	Montgomery Ci	MONTGO	48N	6W	25	C	McClain Lime Quarry
639880	4304450	1390005	385247	912315	274	New Florence	MONTGO	48N	4W	32	NESW	Missouri Minerals Processi

Table 1

"Typeopt"	"Status"	"Commodity"	"Owner"	"Operator"
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Coal		
Surface	Past Producer	Sand & Gravel		
Surface	Past Producer	Sand & Gravel		
Surface	Past Producer	Sand & Gravel		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb;	LYLE ROCK CO Quarry & BR	
Surface	Past Producer			
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Undergrou	Past Producer	Coal	H FRANKF	
Surface	Producer	Limestone cb	MCCLAIN LIME Quarry	MCCLAIN LIME Quarry
Proc Plant	Producer	Clay	MISSOURI MINERALS PRO	MISSOURI MINERALS PROC

"Eastling"	"Northing"	"Id"	"Latitude"	"Longitude"	"Elevm"	"Quad"	"County"	"Twp"	"Rng"	"Sec"	"Quarter"	"Propname"
627155	4306863	1390013	385412	913201	244	Montgomery Ci	MONTGO	48N	6W	25 C		McClain Lime Quarry Plant
631718	4304872	1390015	385305	912853	210	New Florence	MONTGO	48N	5W	33		
630595	4307325	1390023	385425	912938	250	New Florence	MONTGO	48N	5W	20 SE		Kelsie Bank
630840	4305730	1390024	385333	912929	250	New Florence	MONTGO	48N	5W	29 SESE		J H Zweitel Pit
631740	4306445	1390026	385356	912851	259	New Florence	MONTGO	48N	5W	28		
641810	4303390	1390029	385211	912155	220	Jonesburg	MONTGO	47N	4W	4 W2NE		Flint Pit
630895	4305465	1390030	385325	912927	250	New Florence	MONTGO	48N	5W	32 NENE		E H Higgins Pit
640000	4302600	1390034	385147	912311	256	Pinnacle Lake	MONTGO	47N	4W	5 SWSE		Capstix Pit, Lewelling Pit
633356	4306410	1390037	385354	912744	253	New Florence	MONTGO	48N	5W	27		
644840	4301050	1390038	385054	911952	268	Jonesburg	MONTGO	47N	4W	11 SE		Ammann Pits
641900	4303010	1390075	385159	912152	256	Jonesburg	MONTGO	47N	4W	4 NENWSE		Weeks Pit
638825	4303000	1390076	385200	912400	250	Pinnacle Lake	MONTGO	47N	4W	6 NWNESE		
640420	4301970	1390085	385126	912254	250	Pinnacle Lake	MONTGO	47N	4W	8 W2NENE		
640160	4302030	1390086	385128	912305	244	Pinnacle Lake	MONTGO	47N	4W	8 NWNWNE		
640050	4301940	1390087	385125	912309	238	Pinnacle Lake	MONTGO	47N	4W	8 SWNWNE		
637167	4303490	1390094	385217	912508	244	Pinnacle Lake	MONTGO	47N	5W	1 SWNENE		
636940	4303250	1390095	385210	912518	244	Pinnacle Lake	MONTGO	47N	5W	1 E2SWNE		
638760	4302990	1390101	385200	912402	250	Pinnacle Lake	MONTGO	47N	4W	6 NWNESE		
641430	4302990	1390136	385159	912211	256	Pinnacle Lake	MONTGO	47N	5W	4 NWNESW		
621510	4304360	1390219	385254	913557	195	Montgomery Ci	MONTGO	48N	6W	33 SWSW		
621355	4305335	1390220	385325	913603	219	Montgomery Ci	MONTGO	48N	6W	33 SWNW		
620075	4304940	1390221	385313	913656	238	Montgomery Ci	MONTGO	48N	6W	32 NENWSW		
620910	4305365	1390222	385327	913621	204	Montgomery Ci	MONTGO	48N	6W	32 C NE		
627185	4308470	1390223	385504	913159	241	Montgomery Ci	MONTGO	48N	6W	24 NWSWNE		
624425	4308765	1390224	385515	913353	232	Montgomery Ci	MONTGO	48N	6W	22 NENE		
631330	4304825	1390229	385304	912909	223	Pinnacle Lake	MONTGO	48N	5W	33 W2		
634945	4306380	1390230	385352	912638	268	New Florence	MONTGO	48N	5W	26 NESW		
634730	4307120	1390231	385416	912646	268	New Florence	MONTGO	48N	5W	26 NENW		
623935	4305565	1390269	385332	913416	189	Montgomery Ci	MONTGO	48N	6W	34 NWNE		
554350	4315000	190003	385903	922221	229	Columbia	BOONE	49N	13W	1		Boone Quarry
556000	4314275	190004	385839	922113	206	Columbia	BOONE	48N	13W	2 E2NW		City Quarry
560950	4311425	190005	385706	921748	204	Columbia	BOONE	48N	13W	8		Columbia Brick & Tile Com
541496	4311406	190006	385709	923116	244	Rocheport	BOONE	48N	14W	17		Columbia Dredge
561000	4311640	190009	385712	921746	235	Columbia	BOONE	48N	12W	8 NESW		Columbia Brick & Tile Com
554375	4314825	190011	385857	922220	229	Columbia	BOONE	49N	13W	34 SESW		Boone Quarry Plant
556000	4314275	190012	385839	922113	206	Columbia	BOONE	48N	13W	2 E2NW		City Quarry Plant
556143	4313780	190016	385823	922105	229	Columbia	BOONE	48N	13W	2		Garrett City Quarry
558154	4313838	190029	385825	921943	207	Columbia	BOONE	48N	13W	1 SWSWNWSE		Nichols Brothers Limestone
555895	4314000	190031	385830	922117	220	Columbia	BOONE	48N	13W	2 SENW		Richardson Limestone Qu

"Easting"	"Northing"	"Id"	"Latitude"	"Longitude"	"Elevm"	"Quad"	"County"	"Twp"	"Rng"	"Sec"	"Quarter"	"Propname"
560639	4310986	190038	385651	921801	204	Columbia	BOONE	48N	12W	17	NWNW	
561882	4312332	190039	385735	921709	229	Columbia	BOONE	48N	12W	8	E2NE	
561862	4311746	190040	385716	921710	235	Columbia	BOONE	48N	12W	8	NESE	
574081	4312572	190043	385739	920842	244	Millersburg	BOONE	48N	11W	10	W2NW	
564652	4310656	190053	385640	921514	229	Columbia	BOONE	48N	12W	15	W2NE	
563122	4312604	190056	385743	921617	232	Columbia	BOONE	48N	12W	9	W2NENWNE	
562866	4314132	190057	385833	921627	223	Columbia	BOONE	48N	12W	4	E2SEENENW	
563102	4314368	190058	385840	921618	223	Columbia	BOONE	48N	12W	4	C N2N2NWNE	
564030	4313652	190059	385817	921539	250	Columbia	BOONE	48N	12W	3	C S2SESWNW	
564026	4312918	190060	385753	921540	229	Columbia	BOONE	48N	11W	16	3 S2S2SESWS	
572626	4310263	190061	385625	920943	256	Millersburg	BOONE	48N	11W	16		
555540	4314940	190116	385901	922132	207	Columbia	BOONE	49N	13W	35	NWSWSW	
540125	4314800	190121	385859	923212	198	Rocheport	BOONE	48N	14W	6	SWSWSENE	
557706	4311976	190124	385724	922002	223	Columbia	BOONE	48N	13W	12	C	
559712	4313586	190128	385816	921839	226	Columbia	BOONE	48N	12W	6		
564010	4312592	190144	385743	921540	229	Columbia	BOONE	48N	12W	10	SEENWNW	W J Poff's Mine
562472	4311566	190145	385623	910732	220	Columbia	BOONE	48N	12W	9	SW	Wm Bailey Shaft
574081	4312067	270028	385723	920842	244	Millersburg	CALLAWA	48N	11W	10	N2	Cross-Mitchell Mine
574081	4312567	270040	385739	920842	244	Millersburg	CALLAWA	48N	11W	3	E2	Krutell & Thacker Mine; Cr
576016	4313502	270041	385809	920721	253	Millersburg NE	CALLAWA	48N	11W	2	C	Krutell & Thacker Mine
575857	4312074	270101	385722	920728	259	Millersburg NE	CALLAWA	48N	11W	11	C N2	
595546	4312804	270110	385739	915350	250	Kingdom City	CALLAWA	48N	9W	2	C	
596721	4312310	270144	385723	915302	244	Kingdom City	CALLAWA	48N	9W	12	NWNW	Cox Pit
597265	4312652	270149	385733	915239	244	Kingdom City	CALLAWA	48N	9W	1	C S2S2	Harrison Pits #5A & 5B
597995	4312280	270151	385721	915209	232	Calwood	CALLAWA	48N	9W	12	NE	John P Harrison Pit
604300	4308500	270156	385516	914749	232	Calwood	CALLAWA	48N	8W	22	W2NE	New McClain Quarry
574258	4310254	270168	385624	920835	256	Millersburg	CALLAWA	48N	11W	15		
575866	4310272	270169	385624	920729	271	Millersburg	CALLAWA	48N	11W	14		
589248	4310142	270172	385615	915813	252	Kingdom City	CALLAWA	48N	9W	18		
612894	4309354	270173	385540	914151	244	Williamsburg	CALLAWA	48N	7W	16	SESE	
591949	4311048	270198	385644	915620	250	Kingdom City	CALLAWA	48N	9W	9	S2SWSW	
574087	4312572	270201	385739	920842	244	Millersburg	CALLAWA	48N	11W	10	NW	
613162	4307958	270204	385454	914141	256	Williamsburg	CALLAWA	48N	7W	22	NWSW	
616484	4309054	270205	385528	913923	250	Williamsburg	CALLAWA	48N	7W	24	NWNWNW	
617656	4306992	270206	385421	913835	244	Williamsburg	CALLAWA	48N	7W	25	N2NWSENE	
595524	4312806	270207	385739	915351	250	Kingdom City	CALLAWA	48N	9W	2	SW	
600910	4309500	270259	385550	915009	207	Calwood	CALLAWA	48N	8W	17	SWSE	
579773	4310630	270260	385634	920446	274	Millersburg NE	CALLAWA	48N	10W	18	NE	
578934	4309784	270261	385607	920521	278	Millersburg NE	CALLAWA	48N	10W	18	SW	

"Typeopr"	"Status"	"Commodity"	"Owner"	"Operator"
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Clay - refractory		CONLEY BRICK CO
Surface	Past Producer	Coal		
Surface	Past Producer	Coal		P H MURRAY'S FARM
Surface	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Coal		
Undergrou	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Clay - refractory		A P GREEN REFRACTORIES CO
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		

Table1

"Easting"	"Northing"	"Id"	"Latitude"	"Longitude"	"Elevm"	"Quad"	"County"	"Twp"	"Rng"	"Sec"	"Quarter"	"Propname"
592420	4312466	270266	385729	915600	256	Kingdom City	CALLAWA	48N	9W	9	NENENW	
512666	4307516	530023	385506	925114	238	Pierce Grove S	COOPER	47N	18W	8		Mourney Mine
500850	4309325	530047	385605	925925	216	Pierce Grove N	COOPER	48N	19W	15	NWSEENW	
512589	4310567	530049	385645	925117	186	Billingsville	COOPER	48N	18W	11	NE	
501050	4310050	530050	385629	925916	213	Pierce Grove N	COOPER	48N	19W	10	C S2	
533125	4310125	530051	385629	923704	226	Rochepot	COOPER	48N	16W	12	E2W2NWNE	
507200	4311025	530053	385700	925501	198	Pierce Grove N	COOPER	48N	18W	5	C S2SESW	
537950	4309700	530057	385614	923344	204	Rochepot	COOPER	48N	15W	9	C N2NWSWN	
501800	4307925	530064	385520	925845	183	Pierce Grove N	COOPER	48N	19W	14	SWSWSW	O'Fallon Quarry
696440	4297360	1830003	384806	904414	153	O'Fallon	ST CHARL	47N	2E	25		Sand Plant
717196	4293212	1830007	384546	903001	122	St. Charles	ST CHARL	46N	5E			St. Charles Quarry & Mill
717000	4292000	1830009	384520	903006	152	St. Charles	ST CHARL	46N	5E	25	NE	O'Fallon Quarry Plant
696440	4297360	1830013	384818	904416	168	O'Fallon	ST CHARL	47N	2E	7	S2	St. Charles Quarry Plant
717000	4292000	1830014	384507	903011	137	Kampville	ST CHARL	46N	5E	6	NW	H D Elder Property
716700	4294475	1830017	384627	903020	175	Kampville	ST CHARL	46N	5E			
677600	4296200	1830031	384755	905718	216	Foristell	ST CHARL	47N	1E	30	SESW	
677250	4296400	1830032	384801	905732	216	Foristell	ST CHARL	47N	1E	30	NWNESSWSW	
683600	4295650	1830033	384732	905310	183	Foristell	ST CHARL	47N	1E	35	N2SWSW	
685475	4295700	1830042	384733	905152	174	Wentzville	ST CHARL	47N	1E	36	NW	
709025	4297375	1830048	384808	903535	145	Kampville	ST CHARL	47N	4E	29	SWSESWNE	
705450	4297650	1830049	384820	903803	134	O'Fallon	ST CHARL	47N	3E	25	N2	
691050	4295150	1830050	384711	904802	152	Wentzville	ST CHARL	47N	2E	33	NENESWSWS	
689675	4295375	1830051	384719	904858	152	Wentzville	ST CHARL	47N	2E	32	SE	
692900	4297450	1830052	384824	904643	177	Wentzville	ST CHARL	47N	2E	27	NE	
694250	4298350	1830053	384852	904546	152	Wentzville	ST CHARL	47N	2E	23	SWNWSE	
684650	4295650	1830054	384732	905226	164	Wentzville	ST CHARL	47N	1E	35	NE	
679775	4296325	1830055	384902	931359	183	Foristell	ST CHARL	47N	1E	29	SENESESWS	
684650	4296450	1830056	384758	905225	192	Wentzville	ST CHARL	47N	1E	26	SE	
720650	4291000	1890040	384636	912420	305	St. Charles	ST LOUIS	46N	4E	6		Fred Weber North Quarry
478450	4312150	1950018	385736	931455	201	Longwood	SALINE	48N	21W	8	C NW	Scott Quarry
489528	4310718	1950029	385650	930715	198	Nelson	SALINE	48N	20W	15		
482800	4313768	1950054	385829	931155	204	Longwood	SALINE	48N	21W	3	W2E2NENE	
482450	4312975	1950055	385803	931209	213	Longwood	SALINE	48N	21W	3	E2SENWSE	
482675	4313175	1950056	385809	931200	210	Longwood	SALINE	48N	21W	3	NENWNESE	
479575	4313275	1950057	385812	931409	201	Longwood	SALINE	48N	21W	5	SWNENESE	
489527	4309794	1950059	385620	930715	186	Nelson	SALINE	48N	20W	9	S2SW	
663650	4296040	2190018	384759	910656	241	Wright City	WARREN	47N	2W	27	SESESWSESE	Bockhorst Pit
675310	4296930	2190030	384820	905852	207	Foristell	WARREN	47N	1W	26	SESENE	Fred Bolleger Pit
666020	4296380	2190046	384809	910517	253	Wright City	WARREN	47N	2W	25	SW	Linneback Pit

"Typeopr"	"Status"	"Commodity"	"Owner"	"Operator"
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Coal - bitumino		
Surface	Past Producer	Limestone cb		TOBIN CONST CO
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		TOBIN CONST CO; MENEFEES CONST
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Sand & Gravel		
Surface	Producer	Limestone cb		FRED WEBER INC - MATERIAL DIV
Proc Plant	Producer	Sand & Gravel	ST CHARLES Quarry CO	ST CHARLES Quarry CO
Surface	Producer	Limestone cb	ST CHARLES Quarry CO	ST CHARLES Quarry CO
Proc Plant	Producer	Limestone cb	FRED WEBER INC	FRED WEBER INC - MATERIAL DIV
Proc Plant	Producer	Limestone cb	ST CHARLES Quarry CO	ST CHARLES Quarry CO
Surface	Past Producer	Coal		
Surface	Past Producer	Clay		
Surface	Past Producer	Clay		
Surface	Past Producer	Clay		GENERAL REFRACTORIES
Surface	Past Producer	Sand & Gravel		R MERTENS
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		ST CHARLES Quarry CO
Surface	Past Producer	Limestone cb		FRYMOUTH
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		H L HOWELL
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Producer	Limestone cb	FRED WEBER INC - MATER	FRED WEBER INC - MATERIAL DIV
Surface	Past Producer	Limestone cb		MENEFEES CONST CO
Surface	Past Producer	Barium		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Clay		MENEFEES CONST CO
Surface	Past Producer	Clay		
Surface	Past Producer	Clay		

Table 1

"Eastings"	"Northings"	"Id"	"Latitude"	"Longitude"	"Elevm"	"Quad"	"County"	"Twp"	"Rng"	"Sec"	"Quarter"	"Propname"
660245	4300430	2190053	385024	910913	250	Warrenton	WARREN	47N	2W	31	SWSW	Mohrhaus Pit
663255	4296210	2190079	384805	910712	235	Wright City	WARREN	47N	2W	27	SWSE	William Thurman Pit
646090	4300630	2190106	385039	911900	247	Jonesburg	WARREN	47N	4W	13	SENENWNW	
660240	4300430	2190306	385024	910914	232	Warrenton	WARREN	47N	2W	17	NWSENE	
738600	4284000	5100012	384028	901527	149	Clayton	ST LOUIS	45N	7E	5	E2NWNENW	Bambrick-Bates Constructi
743025	4283019	5100014	383951	901225	146	Granite City	ST LOUIS	45N	7E	2	NESENWSW	Bambrick-Bates Constructi
743807	4280932	5100016	383843	901155	146	Granite City	ST LOUIS	45N	7E	11	SWSESWSE	Bowdini's Quarry
743403	4281524	5100017	383903	901211	152	Granite City	ST LOUIS	45N	7E	11	SWNENESW	Carlin's Quarry
739696	4283862	5100020	384022	901441	144	Granite City	ST LOUIS	45N	7E	4	SWNENENWN	Cavanaugh Quarry; Union
743578	4281436	5100035	383900	901204	149	Granite City	ST LOUIS	45N	7E	11	NWSWNWSE	Gorman Brothers Quarry
739440	4283572	5100040	384013	901452	152	Granite City	ST LOUIS	45N	7E	4	N2SWSWNW	Heman Construction Com
739300	4283825	5100042	384021	901458	152	Granite City	ST LOUIS	45N	7E	5	SWSWNENE	Hill O'Mera Construction C
743807	4280932	5100046	383843	901155	146	Granite City	ST LOUIS	45N	7E	11	SWSESWSE	Hogan's Quarry
745095	4280992	5100056	383844	901102	130	Granite City	ST LOUIS	45N	7E	12	S2SESESW	Labame Street Quarry
739520	4283592	5100068	384013	901449	152	Granite City	ST LOUIS	45N	7E	4	N2SESWNW	Mound City Construction C
742606	4283504	5100074	384008	901242	152	Granite City	ST LOUIS	45N	7E	3	E2SENESENE	Perkinson Brothers Quarry
743403	4283772	5100075	384015	901208	134	Granite City	ST LOUIS	45N	7E	2	NESESENE	Perkinson Brothers Quarry
743339	4283206	5100076	383957	901212	143	Granite City	ST LOUIS	45N	7E	2	SENWNENES	Perkinson Brothers Quarry
743576	4281486	5100079	383901	901204	149	Granite City	ST LOUIS	45N	7E	11	S2SWNWNWS	Sheehan's Quarry
739925	4284039	5100082	384027	901432	140	Granite City	ST LOUIS	46N	7E	33	N2SESWSES	Stifel Quarry #2
743623	4282943	5100087	383948	901200	144	Granite City	ST LOUIS	45N	7E	2	SESWNWSE	Weber's Quarry
742968	4285302	5100101	384105	901224	125	Granite City	ST LOUIS	46N	7E	35	NW	
739935	4283230	5100103	384001	901432	158	Granite City	ST LOUIS	45N	7E	4	E2SWSENW	
556000	4314275	190147	385839	922112	206	Columbia	BOONE	49N	13W	35	SW	City Quarries
538890	4313650	190157	385822	923303	226	Rocheport	BOONE	48N	15W	12	E2	
558002	4313932	190174	385827	921949	198	Columbia	BOONE	48N	13W	1	NWNESWNE	Nichols Brothers
560887	4310732	190181	385643	921750	220	Columbia	BOONE	48N	12W	17	NENW	
560636	4310766	190184	385644	921801	213	Columbia	BOONE	48N	12W	17	NWNWSENW	
560650	4311766	190186	385716	921800	238	Columbia	BOONE	48N	12W	8	NWSW	
560756	4311440	190194	385706	921755	201	Columbia	BOONE	48N	12W	8	NESWSW	Edwards Clay Pit
562289	4313522	190187	385813	921651	229	Columbia	BOONE	48N	12W	4	SENENWNWS	
563041	4313964	190188	385827	921620	229	Columbia	BOONE	48N	12W	4	NENWSWNE	
563193	4313374	190189	385808	921614	241	Columbia	BOONE	48N	12W	4	NWNESENE	
564020	4312910	190190	385752	921539	229	Columbia	BOONE	48N	12W	3	C SESWSW	
564613	4312878	190191	385751	921515	241	Columbia	BOONE	48N	12W	3	C N2SWSWSE	
564042	4313180	190192	385801	921538	232	Columbia	BOONE	48N	12W	3	SESENWSW	
564419	4312986	190193	385755	921523	235	Columbia	BOONE	48N	12W	3	SWSENESES	
596873	4311364	270311	385651	915255	251	Kingdom City	CALLAWA	48N	9W	12	SW	Harrison Pit
600811	4309628	270419	385553	915013	0	Calwood	CALLAWA	48N	8W	17		Barnhart #9 Auxvasse Cre

"Typeopr"	"Status"	"Commodity"	"Owner"	"Operator"
Surface	Past Producer	Clay		
Surface	Past Producer	Clay		
Surface	Past Producer	Clay - refractory		
Surface	Past Producer	Limestone cb		SPRICK BROS
Surface	Past Producer	Limestone cb;		BAMBRICK-BATES CONST CO; ST LO
Surface	Past Producer	Limestone cb	BAMBRICK	BAMBRICK-BATES CONST CO
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb	T CAVANAUGH	T CAVANAUGH
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb	A & J HEMAN	HEMAN CONST CO
Surface	Past Producer	Limestone cb	J O'MERA; J HILL	HILL O'MERA CONST CO
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		MOUND CITY CONST CO
Surface	Past Producer	Limestone cb	PERKINSON BROS	PERKINSON BROS
Surface	Past Producer	Limestone cb	PERKINSON BROS	PERKINSON BROS
Surface	Past Producer	Limestone cb	PERKINSON BROS	PERKINSON BROS
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb	P STIFEL	P STIFEL
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone cb		
Surface	Past Producer	Limestone		RAID Quarries - DIV MEDUSA AGGRE
Surface	Past Producer	Limestone		
Surface	Past Producer	Limestone		
Surface	Past Producer	Clay		
Surface	Past Producer	Clay		
Surface	Past Producer	Shale		
Surface	Past Producer	Clay; Shale		
Undergrou	Past Producer	Coal		
Undergrou	Past Producer	Coal		
Undergrou	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Coal		
Surface	Past Producer	Clay		
Surface	Producer	Sand & Gravel		LEONARD BARNHART SAND & GRAV

"Easting"	"Northing"	"Id"	"Latitude"	"Longitude"	"Elevm"	"Quad"	"County"	"Twp"	"Rng"	"Sec"	"Quarter"	"Propname"
363160	4330400	950186	390650	943457	213	Kansas City	JACKSON	50N	33W	32	NWNESW	Missouri River Dredge #1
363160	4330400	950187	390650	943457	213	Kansas City	JACKSON	50N	33W	32	NWNESW	Missouri River Dredge #2
363160	4330400	950188	390650	943457	213	Kansas City	JACKSON	50N	33W	32	NWNESW	Hub Materials Sand & Gra
364175	4330300	950208	390647	943415	232	Kansas City	JACKSON	50N	33W	32	NENESE	
364675	4326350	950224	390439	943351	274	Kansas City	JACKSON	49N	33W	16	C NENW	
369700	4325850	950226	390426	943022	212	Kansas City	JACKSON	49N	33W	13	N2N2	
370025	4326400	950227	390444	943009	227	Kansas City	JACKSON	49N	33W	12	NENESWSE	
364975	4327125	950228	390504	943339	274	Kansas City	JACKSON	49N	33W	9	C	
371325	4326200	950230	390438	942915	244	Independence	JACKSON	49N	32W	7	C SE	
385650	4322275	950231	390238	941916	250	Blue Springs	JACKSON	49N	31W	22	NWSE	
386000	4321950	950232	390227	941902	253	Blue Springs	JACKSON	49N	31W	22	W2SESE	
392850	4318575	950233	390041	941415	259	Oak Grove	JACKSON	49N	30W	33	N2SWSW	
633415	4308040	1390286	385446	912740	252	New Florence	MONTGO	48N	5W	22		Powell
631950	4304750	1390309	385300	912843	252	New Florence	MONTGO	48N	5W	33	C N2NWSE	
632300	4304930	1390314	385306	912828	253	New Florence	MONTGO	48N	5W	33	NESWSENE	
632420	4304950	1390315	385307	912823	256	New Florence	MONTGO	48N	5W	33	NWSESENE	
632220	4305000	1390316	385308	912832	253	New Florence	MONTGO	48N	5W	33	C W2W2SENE	
631250	4305070	1390317	385311	912912	252	New Florence	MONTGO	48N	5W	33	SENESEWNE	
631500	4305250	1390318	385317	912901	253	New Florence	MONTGO	48N	5W	33	C E2W2E2NE	
632370	4305075	1390319	385311	912825	250	New Florence	MONTGO	48N	5W	33	SWNESENE	
630020	4305750	1390320	385334	913002	244	New Florence	MONTGO	48N	5W	28	SWSWSWSW	
631100	4305770	1390321	385334	912918	245	New Florence	MONTGO	48N	5W	28	NESWSWSW	
631270	4305930	1390322	385339	912910	250	New Florence	MONTGO	48N	5W	28	SENESEWSW	
630930	4306170	1390323	385347	912924	250	New Florence	MONTGO	48N	5W	28	C W2SWNWS	
632270	4305750	1390324	385333	912829	250	New Florence	MONTGO	48N	5W	28	NWSWSESE	
632170	4305930	1390325	385339	912833	245	New Florence	MONTGO	48N	5W	28	C W2NWSESE	
632370	4306000	1390326	385341	912825	244	New Florence	MONTGO	48N	5W	28	NENWSESE	
632500	4306350	1390327	385352	912819	253	New Florence	MONTGO	48N	5W	28	E2NENESE	
632270	4306350	1390328	385352	912829	259	New Florence	MONTGO	48N	5W	27	C W2W2	
633000	4306000	1390329	385340	912759	244	New Florence	MONTGO	48N	5W	27	NWNWSESW	
633420	4306100	1390330	385343	912741	244	New Florence	MONTGO	48N	5W	27	NESENESEW	
633750	4306300	1390331	385350	912727	256	New Florence	MONTGO	48N	5W	27	E2NWSE	
634000	4304400	1390278	385248	912718	253	New Florence	MONTGO	48N	5W	34	NESE	Davidson Pit
632800	4305060	1390280	385310	912808	238	New Florence	MONTGO	48N	5W	34	N2SWNW	Cardnell Pit

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT
WATER POLLUTION CONTROL PROGRAM

General Operating Permit

In compliance with the Missouri Clean Water Law, Chapter 644 R.S. Mo., as amended, hereinafter, the Law, and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended:

Permit No. MO-R100007

Owner: MODOT
Address: PO Box 270
Jefferson City, MO 65102

Continuing Authority: Same
Same

Facility Name: MODOT, Road Construction Projects
Facility Address: Statewide.

Legal Description: Various throughout the state, Statewide County

Receiving Stream: Various throughout the state
First Classified Stream: Various throughout the state

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein.

FACILITY DESCRIPTION ALL Outfalls, SIC 1629

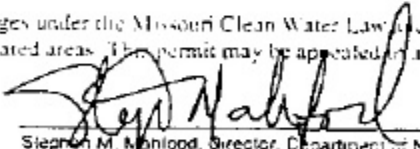
Construction or land disturbance activity (e.g., clearing, grubbing, excavating, grading, and other activity that results in the destruction of the root zone) that are performed by or under contract to a city, county, or other governmental jurisdiction that has a storm water control program for land disturbance activities that has been approved by the Missouri Department of Natural Resources.

This permit authorizes only wastewater, including storm waters, discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System, it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.031.6 of the Law.

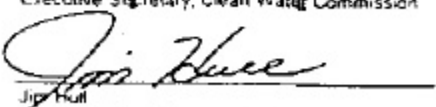
April 19, 2002
Effective date

April 11, 2003
Issue date

PS


Stephen M. Mahood, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

April 18, 2007
Expiration date
MO 780-1481 (7-94)


Jim Hull
Director of Staff, Clean Water Commission

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Bob Holden, Governor • Stephen M. Mahood, Director

www.dnr.state.mo.us

September 4, 2003

Kathryn Harvey
Missouri Department of Transportation
P. O. Box 270
Jefferson City, MO 65102

Dear Sir or Madam:

The Department of Natural Resources' Division of State Parks has been participating in discussions regarding the expansion of I-70 in the Mineola Hill area. We have offered comments and suggestions to help with the evaluation of possible impacts to Graham Cave State Park and nearby historic and archeological resources. Priority issues in this discussion include noise levels, possible loss of park facilities, resulting damage and/or loss of highly significant archeological resources, possible loss of a portion of a designated Missouri Natural Area, and the impairment or loss of a park stream and riparian zone.

Discussions by the I-70 Mineola Hill Subcommittee have focused solely on an expansion of the existing interstate to six lanes through this area. Several alternatives have been proposed and are being evaluated through an Environmental Assessment, with a draft of this document scheduled to be completed this December.

It came to our attention at the July 29, 2003 subcommittee meeting that while the Environmental Assessment is evaluating impacts of the various options involving a six lane expansion, the Loutre River bridge on the west end of the Mineola Hill area will be built to accommodate eight lanes of traffic, plus shoulders. Should this bridge be built with eight lanes, it will virtually assure that any future highway expansion to eight lanes will take place adjacent to the park rather than on the far north alignment. We feel that it would be difficult in the future for your agency to justify relocating the interstate to the far north alternative should this expansion to eight lanes be needed, and statements by MoDOT staff during the July 29th meeting confirmed this belief.

We are concerned that the Environmental Assessment currently underway is only evaluating impacts from options involving a six lane expansion. The impact of eight lanes would involve substantially more negative impacts to the park than six lanes would, as eight lanes would undoubtedly intrude far enough into the park to impact archeological resources, the state natural



Integrity and excellence in everything we do



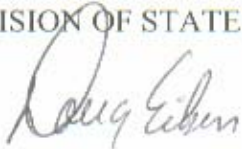
Missouri Department of Transportation
September 4, 2003
Page 2

area, the stream and park facilities that the six-lane compromises would likely miss. Therefore we request that the Environmental Assessment evaluate the Mineola Hill section with sufficient width to accommodate eight lanes in the future, the same as the rest of the rural I-70 corridor, and consider the impact of this additional width on the park and other significant resources.

We appreciate your consideration of this matter. If you have any questions, you can reach me at (573) 751-9392 or P.O. Box 176, Jefferson City, Missouri 65102.

Sincerely,

DIVISION OF STATE PARKS



Douglas K. Eiken
Director

DKE/kma

c: Mr. Allen Masuda, Division Administrator, Federal Highway Administration
Ms. Jane Beetem, Planner, Director's Office



Bob Holden, Governor • Stephen M. Mahfood, Director
DEPARTMENT OF NATURAL RESOURCES

www.dnr.state.mo.us

October 31, 2003

Ms. Kathy Harvey
I-70 Second Tier Study Project Manager
Missouri Department of Transportation
P.O. Box 270
Jefferson City, MO 65102

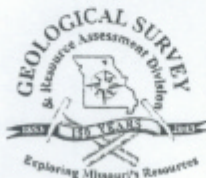
Re: I-70 Second Tier Study, SIU 6

Dear Ms. Harvey: *Kathy:*

On September 4, 2003, Mr. Doug Eiken, Director of the department's Division of State Parks, sent a letter to the Missouri Department of Transportation regarding the department's concerns about impacts to Graham Cave State Park due to the widening of Interstate 70 currently being evaluated. Hopefully by now the letter has found its way to your desk - I apologize for the letter not being addressed directly to you as project manager.

The department has not received a response to this letter. My understanding is that the Draft Environmental Assessment (DEA) for SIU 6 is scheduled for publication in December, 2003. I would like to be provided a preliminary draft of this DEA at this time. It would relieve me to know that the document addresses the additional impacts of an eventual eight lanes, rather than six lanes. At a recent public meeting in Mineola, Park Superintendent Debra Ray asked about the additional (eighth) westbound traffic lane, and was informed that the shoulder could serve in this capacity. The DEA needs to clearly describe and address how a potential future expansion to eight lanes would be accomplished without additional right-of-way being required from the park.

Although I-70 in the Mineola Hill area has been depicted in numerous illustrations, I do not have one that clearly illustrates the full impact of widening I-70 in the park. The most detailed drawing I have was presented at the July on-site meeting, but this does not contemplate the eventual construction of eight lanes, does not indicate the full



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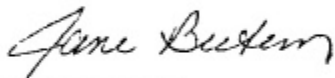
Page 2
Ms. Kathy Harvey
October 31, 2003

extent of the construction zone, nor does it indicate the park's eastern boundary, so the full impact on the park is unclear. If a more current drawing has been prepared for the DEA that illustrates these issues, I would like to receive a copy of this drawing as well.

Thank you for your consideration of these concerns, as I want to be assured that the DEA, once published, will fully assess and disclose the potential impacts of an eventual eight lane interstate through this sensitive area.

Sincerely,

DEPARTMENT OF NATURAL RESOURCES



Jane Beetem
Transportation Coordinator

/jb

Enclosure: DNR letter to MoDOT, dated September 4, 2003

C: Ms. Peggy Casey, Environmental Projects Engineer, Federal Highway
Administration
Mr. Doug Eiken, Director, DNR Division of State Parks
Mr. Tom Lange, DNR Senior Policy Coordinator
Ms. Debra Ray, Superintendent, Graham Cave State Park

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Bob Holden, Governor • Stephen M. Mahford, Director

www.dnr.state.mo.us

February 3, 2004

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. J41341J, I-70, SIU 6, Route 54/I-70 Interchange at Kingdom City to Route 19/I-70 Interchange near Montgomery City/New Florence, Callaway and Montgomery 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. 89-666, 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. Based on the information provided, we concur that AR 6CY0010.1, 6CY0031.1, 6MT0223, 6MT0024, and 6MT0314.1 are eligible for listing in the National Register of Historic Places. In addition, we concur that the remaining properties in this report, including the bridges, Graham Flock, and the Loutre River Valley are not eligible for listing in the National Register of Historic Places. With regard to I-40, although it is a historic road and parts of it are significant, we concur with the recommendation made in the report that I-40 is not eligible for the National Register of Historic Places.

Once an alignment is selected and submitted to our office we can comment on the effects this project will have on any eligible properties. In addition, please be aware that we have not received the archaeological survey of this area. As soon as we receive the preferred alignment and the archaeological survey we can complete our review of SIU 6.

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

Mark A. Miles

Mark A. Miles
 Director and Deputy State
 Historic Preservation Officer

MAM:ad

c: Don Neumann
 Kathy Harvey
 Bob Reeder
 Jane Bennett



Integrity and excellence in everything we do



Missouri
Department
of Transportation



Henry Hungerbeeler, Director

105 West Capitol Avenue
P.O. Box 270
Jefferson City, MO 65102
(573) 751-2551
Fax (573) 751-6555
www.mdot.org

November 20, 2003

Ms. Jane Beetem
Transportation Coordinator
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102-0176

Re: I-70 Second Tier Environmental Studies, SIU#6 EA

Dear Ms. ^{Jane}Beetem:

Thank you for your October 31, 2003 letter expressing your continuing concerns over the typical section being used to determine impacts caused by widening I-70 in the Mineola Hill area. I apologize for not responding to the previous letter, it was an oversight on my part.

I want to assure you that all impacts are being quantified based on an I-70 typical section that would construct six lanes initially and would provide the room for an expansion to eight lanes sometime in the future. All impacts to the environment, both natural and social will be quantified that way. However, since the initial construction will only be six lanes, the construction costs do not include the future cost to go to an eight-lane section. The right of way cost provides for the expansion room, but not the cost of pavement and grading. Exhibits used in the document will only show six lanes, however, the text will make it very clear that the section provides for future expansion and that impacts to the environment are based on that expanded section. That expansion may be handled differently for the different options, but how and where the expansion occurs will be easily understood to the reader. Any impacts to the natural or man-made environment, as a result of any reasonable anticipated future actions (adding the seventh and eighth lanes for example) will be completely covered in this EA.

There will be another meeting of the Mineola Subcommittee December 18, 2003 to go over the final results of the engineering analysis through Mineola Hill and to go over the evaluation of all of the alternatives, including the relocation. This will happen in advance of the preliminary draft EA being prepared and distributed so that the subcommittee has an opportunity to weigh in on the decision making process with all the data available. Immediately following that meeting, the preliminary draft EA will be finalized. The review process set up is as follows. The first version of the preliminary draft EA will be sent to the GEC only for review and comment. Once revised based on GEC comments, the preliminary draft will be circulated for review and comment to MoDOT, the FHWA and the SMG. Following revisions based on comments received from those

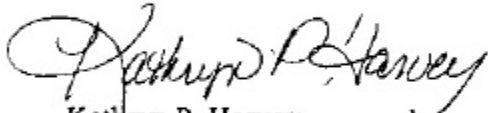
Ms. Beeter
November 20, 2003
Page 2 of 2

parties, the document will be revised and submitted for signature to MoDOT and to the FHWA and ultimately circulated as an approved Draft EA. SIU#6 is behind schedule at this point. At the subcommittee meeting you will be given a revised schedule so that you can anticipate when the preliminary draft will be available for review.

At this time there are no exhibits showing any more detailed information than what you described that you already have. However, at the subcommittee meeting in December handouts will be available for you to take that will have the latest information on them.

I hope this letter addresses your concerns, or that at least you feel confident that your concerns will be addressed in December. Please give me a call if you have any questions.

Sincerely,



Kathryn P. Harvey
Technical Support Engineer

sr

cc: Mr. Steve Wells – wsa (with copy of letter)
Ms. Peggy Casey – fhwa
Ms. Debra Ray – Graham Cave State Park
Mr. Doug Eiken- DNR
Mr. Tom Lange- DNR



MISSOURI NATURAL AREAS COMMITTEE

June 19, 2003

P.O. Box 180 • Jefferson City • Missouri 65102

Kathy Harvey, Project Manager
Missouri Department of Transportation
105 W. Capitol Avenue
P.O. Box 270
Jefferson City, MO 65102

Dear Ms. Harvey:

The Missouri Natural Areas Committee (MONAC) was established as an interagency committee in 1977 to provide strength and direction to the effort to preserve the best examples of the biological communities and geological sites of our state. The Missouri Department of Natural Resources and Department of Conservation share responsibility for the administration of the program. Both agencies specify that the natural areas which they designate represent the highest and best use of these tracts, and neither agency will authorize any use or diversion which is incompatible with the objectives of natural areas preservation unless there is a critical need for which there is no alternative.

In 1991 the National Park Service and the U.S. Forest Service joined MONAC to broaden the representation on the committee and to recognize significant areas on these federal lands for inclusion into the system. And just last month the U.S. Fish & Wildlife Service was added to the committee as a participating member. The Nature Conservancy serves in an advisory capacity.

To date, 180 areas (almost 60,000 acres) have been designated as Missouri Natural Areas. The designation process includes the drafting of a nomination and then review and approval by MONAC. The program has been a model for interagency cooperative efforts to serve public interests and has broad public support.

As chairperson of the Missouri Natural Areas Committee (MONAC), and on behalf of the members of the committee, I wanted to thank you for including in your assessments for the I-70 corridor specific mention of Tucker Prairie, owned by the University of Missouri, as a state designated Natural Area. This area was formally designated in 1998 as the last remaining tract of the Grand Prairie, which historically covered parts of 10 counties. It is also recognized as a National Natural Landmark and was the first field research station established west of the Mississippi River utilizing funds from the National Science Foundation.

Another Natural Area, however, that was not specifically mentioned in the draft EIS is Graham Cave Glades Natural Area at Graham Cave State Park. Designated in 1989, this 82-acre portion of the park is recognized for its outstanding biological values. It includes an area that is particularly rich in species diversity due to the juxtaposition of various geologic strata. The south boundary of the area follows the creek just below the current I-70 corridor. It is likely that an expansion of the existing corridor to the north would impact the natural area. Attached is a map of the boundaries of the Natural Area. The Missouri Natural Areas Committee is concerned that the natural area was not mentioned in the Tier One assessment and request that it specifically be located as a feature within Graham Cave State Park. As referenced above Natural Areas are designated as areas having statewide significance for biological and/or geological values. Missouri state

MISSOURI DEPARTMENT OF NATURAL RESOURCES

MISSOURI DEPARTMENT OF CONSERVATION

Ms. Kathy Harvey
Page two
June 19, 2003

parks would not necessarily contain the same value unless determined through the natural area nomination process.

The Missouri Natural Areas Committee is pleased to have an opportunity to comment on the I-70 expansion. Recognizing the biological and social values represented by Missouri Natural Areas, we ask that the values of natural areas to be factored into planning decisions.

Sincerely,



Deborah Schnack, Chair
Missouri Natural Areas Committee

- c. Rick Thom, Vice Chair, Missouri Natural Areas Committee
Ronnie Raum, Forest Service Supervisor, Mark Twain National Forest
Noel Poe, Superintendent, Ozark National Scenic Riverways
Robyn Thorson, Regional Director, U.S. Fish and Wildlife Service

Graham Cave Glades Natural Area (hatched)
Graham Cave State Park





OUTREACH & EXTENSION
UNIVERSITY OF MISSOURI
LINCOLN UNIVERSITY

"KNOWLEDGE IN ACTION"

MONTGOMERY COUNTY

211 E. Third Street, Courthouse, Montgomery City, MO 63361
Phone: 573-564-3733 • Fax: 573-564-6145
montgomeryco@missouri.edu

Craig Casper
Wilbur Smith Associates
235 SW Noel
Lee's Summit, Mo. 64063

October 1, 2002

Dear Craig,

Your letter took a while to get to my desk. The address was incorrect.

I reviewed your request and have enclosed copies of the appropriate soils maps for the section of I-70 depicted in your letter. The predominant upland soils are Mexico-Hatton-Keswick-Armstrong. Permeability of these soils is slow to very slow. The clay pan creates a perched water table at a depth of 1 to 2.5 feet during most winter and spring months. Footings and foundations require special attention to concrete reinforcement and backfill with sand and gravel. Shrink-swell characteristics pose a risk of structural damage.

The cropland is occupied by corn, soybeans, wheat, and grain sorghum. A few acres of sunflowers, peas, and millet are also grown. There are pastures and hay fields on these soils as well. Fields along creeks and small streams are in trees and pasture.

I hope you find this helpful.

Sincerely,

Gary D. Hoette CPAg
Agronomy/Natural Resources



MISSOURI DEPARTMENT OF CONSERVATION

TOM WESTHOFF

PRIVATE LAND CONSERVATIONIST

September 23, 2002

1013 SOUTH STURGEON
MONTGOMERY CITY MO 63361

Office: (573) 564-3715 ext 3
FAX: (573) 564-3967
Cellular: (573) 220-3183
westhi@mail.conservations.state.mo.us

Mr. Craig Casper
Wilbur Smith Associates
235 SW Noel
Lee's Summit, Mo. 64063

Mr. Casper:

I have three projects going within the I-70 study area #6. Following are the names, location, and what the projects are:

John Baldetti – T48N R5W Sec 20 – 10 acre prairie reconstruction
Craig Cundiff – T48N R8W Sec 1 – 10 acre prairie reconstruction
Lou Overby – T47N R5W Sec 8 – 2 acre savanna restoration

I also have numerous other projects on riparian buffer strips which are to be planted to trees but those are not included as they are Natural Resources Conservation Service programs and I just do the tree plan for them. If you need those from me I can get those for you. I also work with many landowners who have CRP acres with warm season grass. Those are not included either but I also have those available if you need them.

Sincerely,

Tom Westhoff
Private Land Conservationist

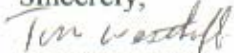
January 23, 2003

Mr. Craig Casper
Wilbur Smith Associates
235 SW Noel
Lee's Summit, Mo 64063

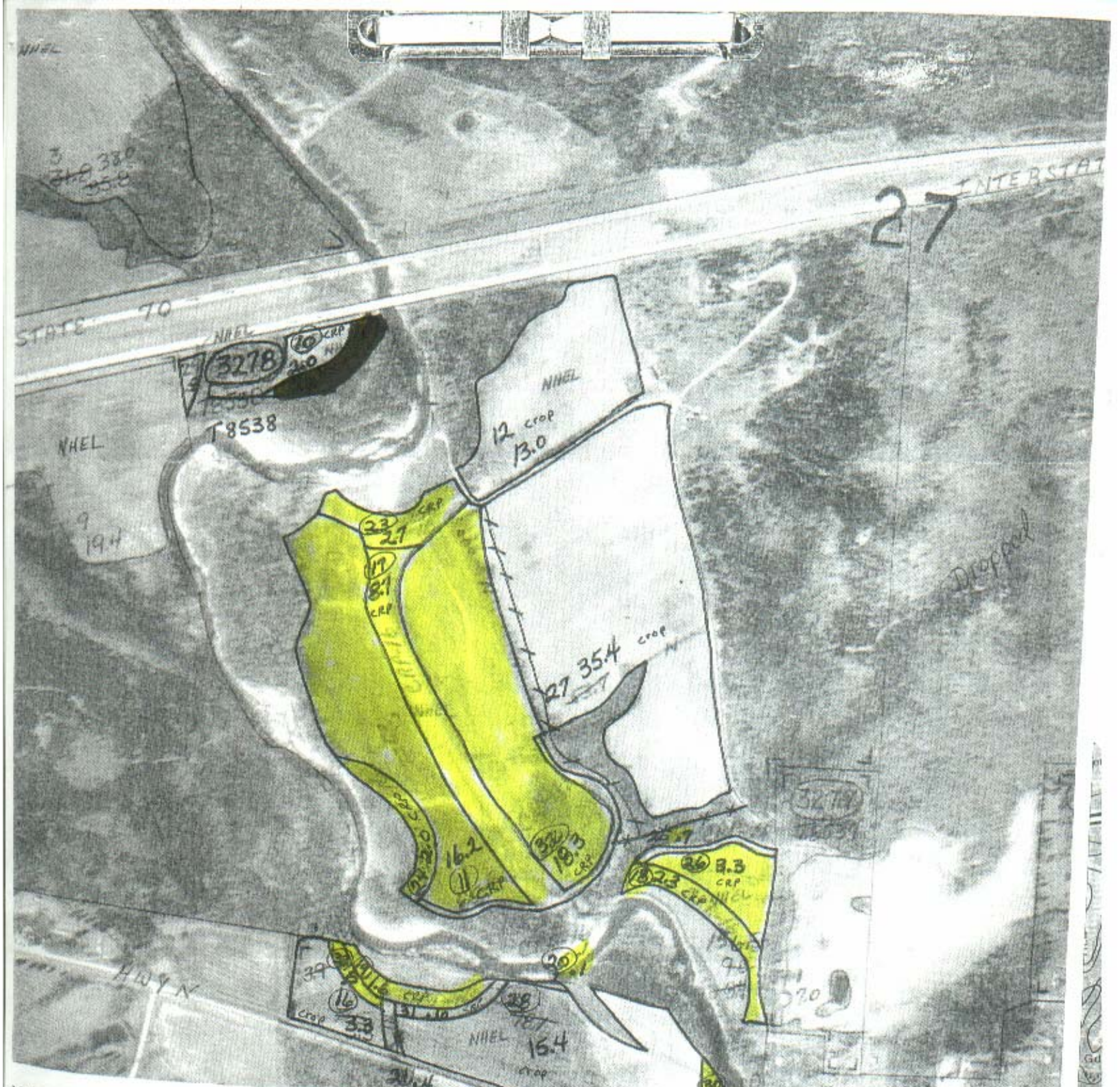
Mr. Casper:

Enclosed is a map of the continuous CRP project on Graham Cave Farms (Dennis Harris). The area marked in yellow is the 59.2 acres that will be planted to trees in the spring of 2003. The area is located on the Loutre River.

Sincerely,



Tom Westhoff
Private Land Conservationist



U.S. Department of Agriculture
Natural Resources Conservation Service

Conservation Plan Map

MO-CPA-1
7/95

Owner Graham Case Farm Operator
County Montgomery, MO Date 10-01
Approximate acres Approximate scale
Operating with Montgomery Co Soil Conservation District
Legal Description

Tract # 8538 CCRP Filter Strip = Field 28 + 22
Assisted by USDA Natural Resources Conservation Service CCRP - CP22 others

Map Symbols

<ul style="list-style-type: none"> — Roads --- Fenced Roads - Property Boundary * Existing Fence ~ Planned Fence CCRP - Terrace 	<ul style="list-style-type: none"> --- Unfenced Field Boundary ② Field Number H Farmstead △ Pond ● Pipe Riser — Tile Drain 	<ul style="list-style-type: none"> ● Well — Drainage Ditch --- Vegetative Waterway — Pipeline (label) ✓ Inclusion Tie ~ Diversion
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39.2 AC

34



**I-70 Mineola Hill Subcommittee
Meeting
Graham Cave State Park
10:00 a.m., July 29, 2002
Meeting Documentation**

Meeting Participants	<u>Representing (Firm or Agency)</u>
Mark Kross, Bob Brendel, Bill Stone	MoDOT
Jerry Mugg, Ken Bechtel, Jen Johnson, Eric Ploch	HNTB
Peggy Casey, Kevin Irving	FHWA
Jane Beetem, Debra Ray, Deb Schnack, Mike Currier, Larry Larson, Claire Blackwell, Dawn Fredrickson, Larry Grantham	MoDNR
Bob Smith	MDT
Naima Halim-Chestnut	EPA
John George	MDC
Stephen Wells, Mark Pierson, Kyle Kroner	Wilbur Smith Associates
Joe Harl	ARC
Cindy Peterson	OSA
Mary Sayers-Doeden	URS

Discussion:

Second Tier Overview

The I-70 First Tier Study looked at the overall plan for the corridor and during that process seven Sections of Independent Utility (SIUs) were identified. The Mineola Hill area is included within SIU #6. Wilbur Smith Associates are the Section Engineering Consultant (SEC) for SIU #6 and HNTB serves as the General Engineering Consultant (GEC) overseeing the work of each of the SECs.

Mineola Hill Subcommittee Role

Issues identified during the First Tier are related to Graham Cave State Park, the Graham Farmstead, "Slave" Rock and the Loutre River valley. The viewscape was identified as an important aspect of this area.

The product of the committee would be a plan for enhancing the area and would feed into the work being done for SIU #6. The level of detail involved is up to the subcommittee to decide.



**I-70 Mineola Hill Subcommittee
Meeting
Graham Cave State Park
10:00 a.m., July 29, 2002
Meeting Documentation**

Environmental Documentation (SIU #6)

Currently Wilbur Smith is looking at finding solutions that minimize the impacts to the areas resources. They have started the process of coming up with concepts for the area, as well as collecting data, looking at the First Tier assumptions and looking at the purpose and need.

It is anticipated that the public involvement process will begin within the next month and that the first public meeting for SIU #6 would be held at the end of October. A draft EA is scheduled to be prepared in June or July of 2003.

Wilbur Smith has identified several areas that they believe are areas of concern. The include:

- Graham Cave State Park
- Graham Farmstead
- "Slave" Rock
- 2 historic properties in Danville (schoolhouse and plantation)
- Loutre Lick access
- Danville Conservation Area
- A second cave and second glade area

Currently Wilbur Smith is developing the universe of alternatives for SIU #6. Some of the issues that will be important are the continuous frontage roads and the interchanges. Continuous frontage roads are seen as important to keep I-70 from being shut down when an incident takes place. Discussions that took place during the First Tier regarding feasibility dealt with improving I-70 on the existing alignment with the minimum impacts to the right-of-way. Acquisition of additional right-of-way may be needed. There are also overall safety and engineering issues that need to be addressed from MoDOT's perspective.

Looking at the typical section of improved I-70, the fit in the Mineola Hill area will be tight. If it is determined that continuous frontage roads area not desired then this leaves other options open. There is the option of splitting I-70 so that the eastbound lanes would remain south of the park and the westbound lanes would be built north of the park. There are some concerns on MoDOT's part about not owning the right-of-way between the eastbound and westbound lanes. There are also some options for a north alternative which would leave the existing alignment and go north of the park.

Mineola Hill Features and Issues

Several issues were identified by agency representatives in attendance at the meeting. One of these is the issue of drainage. MoDNR is concerned about any change that would make the problem with drainage worse than it is currently.

One of the options shown included a frontage road connection through the park. Currently DNR has tried to limit access to just one entrance for control purposes, which would be eliminated by the frontage road. Wilbur Smith mentioned that the typical section could be shrunk down and a barrier used so that all of the improvements, including the frontage roads would fit along the existing alignment.



**I-70 Mineola Hill Subcommittee
Meeting
Graham Cave State Park
10:00 a.m., July 29, 2002
Meeting Documentation**

Clair Blackwell expressed that there is the desire to avoid adding additional fill near the rock. Wilbur Smith will be looking to see what changing the grade, if necessary, would do to the rock. This will be done as the alternatives are defined further. It was also asked whether one lane could be designated for trucks only if the grade couldn't be accomplished. The answer from both Stephen Wells and Jerry Mugg was that this could be a recommendation if the impacts of that action would be too great.

DNR expressed their preference for a northern alternative, understanding that the concepts shown are not set in stone as far as their actual location. Wilbur Smith inquired into the issues that would be faced by moving the interstate north of the park. There are some Threatened and Endangered species issues and the closer to Wetstone Creek the more resources that would be encountered. There would also be floodplain issues to deal with but there are not any state natural areas that would be an issue.

Mark Kross asked whether moving the alignment north would eliminate a view of the resources and decrease interest. Debra Ray, Superintendent of Graham Cave State Park, responded that there is some drive-by traffic but that signage could be used to increase awareness. The thought was that it would be easier to deal with signage than destroying the resources in the area.

A question was asked about what would happen to the existing pavement if the improvements created a new alignment north of the park. The suggestion was made that the eastbound lanes could be maintained as part of the frontage road system and that this would allow for access to the rock from the park.

From the construction aspect of the improvement project, there is a need to maintain traffic. This will be more difficult along existing alignment because the area is so tight already. It may be easier if there is construction in a new alignment because the existing lanes could be maintained during construction.

Mark Kross asked about noise issues and asked whether a barrier of some kind would be desired? Stephen Wells pointed out that this is not always the best solution because the noise is then deflected elsewhere and it could make the situation worse. It would also likely require more right-of-way. The biggest concern from DNR's point of view was the noise at the campground which is currently located on the north side of the park. The feeling is that the campground could be moved if the noise became an issue. There is a Conceptual Development Plan for the park, which is due to be looked at again, and it includes some land acquisition which would need to be looked into further.

Debra Ray said that her major concern was that the park not be located in between the eastbound and westbound lanes. If the location of the new alignment was down in the valley this may help with the noise and it might be deflected further north. Also, if there were smoother grades that may help reduce the noise that is caused by braking trucks. It was reiterated that the location of the campground is more expendable than the cave.



**I-70 Mineola Hill Subcommittee
Meeting
Graham Cave State Park
10:00 a.m., July 29, 2002
Meeting Documentation**

One of the questions raised was whether there is the perception that the state should give up its own land before acquiring private land. The answer was that this is not necessarily the case.

Scenic easements are something that MoDNR and MDC are interested in preserving. This is something that should be considered whether or not the interstate stays along the current alignment.

There are issues related to the location of the rest area which is currently located in this area. The GEC is putting together a rest area plan for the I-70 corridor which will recommend the locations of new rest areas. It is likely that the rest area at Mineola Hill will be removed from that location. There will likely be three new rest area locations, one outside of Kansas City, one outside of St. Louis and one at Overton Bottoms.

The suggestion was made that a rest area could be located near the Mineola Hill area as the eastern gateway into the state, although it would be further from St. Louis and the spacing would not be as optimal. DNR stated that it would like to have the rest area moved and one reason for that is because of looters park at the rest area to dig at the rock shelters. Lagoons are also an issue at the rest areas which MoDOT would like to eliminate. DNR asked whether there would be RV dumping stations at the rest areas like other states have. There is a concern that if people can't find easy places for dumping that they will find ways to dump waste illegally.

Bob Smith from the Department of Tourism relayed the position that if the rest area remains in the area they would like to have it at the Route 19 interchange so that it is a gateway into several areas. If needed, the suggestion was made that the Danville interchange could be eliminated and access to the park be provided by frontage road for the five miles from the Route 19 interchange. The response was that it is difficult to get rid of an interchange.

Communications

The question was asked whether there are others that should be involved. The suggestion had been made that some locals might be included. The response was that this would be better after there was information to share based on the subcommittee's work.

Jane Beetem will serve as the contact for MoDNR. Ken Bechtel will be the contact for questions about the overall I-70 project and Stephen Wells will be the contact for questions about SIU #6.

Next Meeting

Reconvene sometime in October.

Further information will be provided regarding the floodplain, the rock and a point further east and the subcommittee can then talk about trade-offs. The range of alternatives will be more defined and include more detailed information on the possible impacts. Any northern alternatives will be explored in more detail to see what types of issues would need to be addressed.



**I-70 Mineola Hill Subcommittee
Meeting
Graham Cave State Park
10:00 a.m., July 29, 2002
Meeting Documentation**

<u>Action Items</u>	<u>Responsibility</u>	<u>Due Date</u>
Further define range of alternatives and impacts	Wilbur Smith	Next Meeting
Obtain more information on historical sites in Danville	Wilbur Smith	Next Meeting



MEETING DOCUMENTATION



235 SW Noel
Lee's Summit, MO 64063
Phone: (816) 554-8011
Fax: (816) 554-8072

DATE: December 18, 2002

SUBJECT: 2nd Meeting of the Mineola Hill Sub-committee of the I-70 Study Management Group

TIME: 10:00 to 12:00

LOCATION: Jefferson City

RE: ***CHECK APPROPRIATE JOB WITH "X"***

SIU No. 1 – J41134D

SIU No. 2 – J41134E

SIU No. 3 – J41134F

SIU No. 4 – J41134G

SIU No. 5 – J41134H

SIU No. 6 – J41134J X

SIU No. 7 – J41134K

Meeting Participants

Mineola Hill Sub-committee of the Study Management Group (see attached participant list)

Steve Wells

Mark Pierson

Representing (Firm or Agency)

WSA

WSA

Discussion:

Following are notes from the meeting:

- **Mineola Hill Road:** Bill Stone, MoDOT, noted that the Mineola bridge and road are scheduled for improvements, including raising the roadbed and improving the bridge.
- **Access issue:** Regarding far-north concepts, SEC will need to address access and changes in access to the park and to residences and commercial establishments.
- **SEC conclusions:** The sub-committee agreed with the SEC conclusion to eliminate:
 - ◆ Concept 1, Existing alignment with adjacent frontage
 - ◆ Concept 4, Split alignment with parallel frontage
 - ◆ Concept 5, Near north bypass
- **Rest Area Study:** The Mineola Hill rest area will likely be relocated from its existing locale, to a location outside the SIU6 area.
- **Median Study:** The Mineola area does not fit the profile of a “typical rural” section. A sub-committee participant noted that a Far-north concept could provide a more typical section that would accommodate high speed rail.
- **Bicycle/Pedestrian Enhancement:** Participants suggested that the SEC consider providing new bike and pedestrian facilities in the vicinity of Graham Cave State Park and connections to the Katy Trail.
- **Mineola Hill enhancement opportunities:** Mark Kross, MoDOT, suggested several enhancement opportunities for the area:
 - ◆ Scenic overlook of the Loutre River Valley

MEETING DOCUMENTATION

SIU#6
Mineola Hill Sub-committee
Meeting #2
December 17, 2002

- ◆ Improved signage to Graham Cave State Park
- ◆ Maintain similar access to the park
- ◆ Document and convey the archeological history of the Mineola Hill area
- **Other Mineola Hill enhancements:** There are possibilities to include the state park in the “Showcasing Missouri” tourism program.
- **Next Subcommittee Meeting:** The next Mineola Hill Sub-committee meeting will be scheduled to take place in April, 2003. Topics to discuss will include results from public outreach efforts and information regarding detailed engineering of the Mineola Hill NEPA alternatives, including the evaluation of a design exception for vertical grade through the Loutre River.
- **Coordination with Native American tribes:** Participants requested that the GEC provide native american tribes with information regarding the Mineola Hill concepts prior to the first SIU6 public meeting (February 2003).

Action Items

Responsibility

Due Date

Next Mineola Hill sub-committee meeting will be in April 2003

CC:

Authored by: Mark Pierson

File:



I-70 Mineola Hill Subcommittee

GOB, Room 315
9:00 a.m., April 29, 2003

Meeting Documentation

Meeting Participants	Representing (Firm or Agency)
Kathy Harvey, Mark Kross, Bob Brendel, Dave Hurt	MoDOT
Jerry Mugg, Ken Bechtel, Jen Johnson, Dan VanPetten, Chris Cline, Emily Deeker, Jim Van Wormer	HNTB
Peggy Casey, Kevin Irving, Kathy Facer, Rand Richardson	FHWA
Jane Beetem	MoDNR
Gene Gardner	MDC
Joe Harl	ARC
Steve Wells, Mark Pierson	Wilbur Smith Associates
Bill Whittaker	OSA

Discussion:

I-70 Program and Schedule Overview

A new document schedule was handed out to the attendees. The schedule shows the documents being completed by the end of 2004 where the previous schedule showed the documents being completed late in 2005. The sections are ahead of schedule at this point and this newest schedule reflects that progress.

Highlights of Previous Meeting

At the last meeting the list of alternatives to be explored further was narrowed to four. There are two that are on-existing with the difference being the existence of frontage roads. The other two are Far North concepts with the difference also being the treatment of frontage roads.

Public Involvement

There have been two public events in SIU 6. The first was on March 24th at the Graham Cave State Park. This was a drop-in center where individuals with a special interest in the area were invited to attend along with the rest of the public. About 60 people attended the center. There were several local landowners that attended and provided historical information about the area including archeological information that will be shared with the cultural resources team.

The second event was a public open house held in Kingdom city on April 2nd. Around 90 people attended the meeting. Kathy Harvey felt that the work upfront with the Kingdom City Highway Coalition paid off in support at the public meeting. Steve Wells reported that there were really no



I-70 Mineola Hill Subcommittee

**GOB, Room 315
9:00 a.m., April 29, 2003**

Meeting Documentation

controversies, most people were interested in what would happen to their property.

Since the last meeting the project newsletter has been mailed out along with a landowner letter and Right-of-Entry form. There is anticipated to be another Kingdom City Highway Coalition meeting in the next month or so. The next round of public meetings are anticipated to take place in the late summer or early fall.

Environmental Documentation (SIU #6)

Wilbur Smith has been working on determining the impacts for the on-existing alternatives. They examined the use of 3% grades in the Mineola area, both with and without frontage roads and a 5% grade, which is the current condition, both with and without frontage roads. The rock is being used as the fulcrum for the engineering. Based on the exhibits presented it is easy to see that obtaining the 3% grade with frontage roads on both sides offers the worst-case scenario in terms of impacts. This option would require extensive cut sections and require a retaining wall between the Graham Farmstead and the eastbound lanes. The 3% without frontage roads is an improvement but there are still impacts. Using the 5% grade with or without frontage would not require any cut and fill for the slopes. Wilbur Smith presented a typical section with Slave Rock in the median and the park and the farmstead to either side of the interstate. The exhibit did show that the interstate would be moving a little closer to the rock.

Bill Whittaker asked whether there had been any discussion of excavating the rock. Kathy and others stated that they had not heard anyone mention this. Steve Wells explained that the goal was to have no further impact to the rock.

Steve asked the agencies what their impression was regarding the grades. Peggy Casey said that she tended towards the 3% but realizes that with the impacts that becomes difficult. Kevin Irving pointed out that there are safety concerns related to the 5% grade. Peggy thought that reducing the grade from 5% could reduce the noise impacts. There are also issues of cost of construction.

There was a question about the extent of the impact to the farmstead. Steve said that they would not be getting into any structures but may need some land for right-of-way.

There were also some questions about the impacts to the park and the slope. There are aesthetic issues, as well as noise impacts to consider.

Steve presented the group with options related to maintenance of traffic and the frontage road issue. There were differences in the costs for structures and temporary paving as well as issues of the river crossing. There was some discussion of using old Highway 40 as part of the frontage system or only having frontage on one side of I-70. Steve pointed out that providing frontage along existing affects the ability to fix the grades because of the right-of-way needed.

Peggy felt that using Hwy. 40 would be a good frontage alternative rather than building along existing. Steve added that there is some public concern about the condition of Hwy 40 and comments have been made about the need to upgrade that facility if used for frontage.



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There was a question about the alternatives off-existing. Steve said that they did not think that there would be a problem getting a 3% grade and there would not be the need for cut and fill. Bill asked if the widening would mean that the cave could be seen from the interstate. The answer was, probably during the winter when there wasn't any foliage to act as a screen.

When discussing placing frontage on only one side the question was asked whether the park or the farmstead is more important. The answer was that it would depend on who you talked to. Steve felt that placing frontage on the south side of the interstate would not mean getting much closer to the structures and a retaining wall could be built. Bob Brendel said that his impression was that the owners of the farmstead were more concerned about damage caused during construction which has happened in the past.

It was pointed out that if there were no frontage roads along existing that maintaining four lanes of traffic during construction would be more difficult. The question was raised whether Hwy 40 could be used as a detour during construction in this portion of the corridor. Steve said the detour would be from Danville to Williamsburg which would be a large detour rather than a small one just through this particular area. This could also impact the resources along 40 if there were a steady flow of detour traffic along the highway for any length of time.

The group then discussed the next steps. Steve said that they will be looking at some more detailed cost estimates. Jerry asked whether the Far North was sufficient as an avoidance alternative or whether there needed to be an avoidance along existing. The avoidance could be the 5% grade which would stay within existing right-of-way. Kathy mentioned that even moving the rest areas out of this particular area would improve safety. She also said that she did not feel the need to look at frontage roads on both sides of the existing any further.

Wilbur Smith will continue to look at the critical section where the park, the rock and the farmstead are located to see what the best case scenario would be and that it may be a compromise between the 3% and 5% grades. Jane Beetem offered to get the park people together on site to show them what the impacts could look like. Jerry suggested that a field review could be conducted before the next meeting. Mark Kross suggested that Wilbur Smith take a closer look at using a retaining wall to minimize the impact to the park and made a point that this possibility cannot be dismissed purely because of costs. Steve felt that if they were not looking at a frontage road on the north side of the interstate then it may not be such an issue because they would stay within right-of-way. However, there can still be some secondary impacts even if they do not get into the park.

Wilbur Smith will look in more detail at the 3%, 5% and a compromise of the two. Jerry also suggested that Wilbur Smith look at holding the inside shoulder so that they don't get any closer to the rock. Joe Harl added that coming closer to the rock may change things like drainage and could cause damage to inscriptions or other cultural artifacts that are there.

Relevant Corridor-Wide Studies

A draft of the Corridor Enhancement Plan has been completed and will be presented to the Corridor



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Enhancement subcommittee for their review and comment.

The Rest Area Study needs to have documentation completed and reviewed and then will be submitted for agency review.

The Bicycle/Pedestrian Plan has been incorporated into the Corridor Enhancement Plan.

A Frontage Road Study is being put together for the entire corridor. The study will identify areas like Mineola Hill where exceptions to continuous frontage on-alignment may not be possible.

Next Meeting

The next meeting of this subcommittee is anticipated to take place in July 2003. A meeting date will be provided at a later time.

<u>Action Items</u>	<u>Responsibility</u>	<u>Due Date</u>
Provide cost estimates for options	Wilbur Smith	July 2003
Look further at the 3%, 5% and compromise grades for the area	Wilbur Smith	July 2003
Send out 11x17 exhibits and meeting summary	GEC	May 5, 2003
Coordinate a field review in the Graham Cave State Park to look at impacts	GEC/Wilbur Smith	May 2003



**I-70 Mineola Hill Subcommittee
Field Review
Graham Cave State Park
10:00 a.m., June 17, 2003**

**Meeting
Documentation**

Meeting Participants	<u>Representing (Firm or Agency)</u>
Kathy Harvey, Mark Kross, Bob Brendel, Dave Hurt	MoDOT
Ken Bechtel, Jen Johnson, Eric Ploch	HNTB
Jane Beetem, Deb Schnack, Dawn Frederickson, Ken McCarty, Larry Larson, Larry Grantham, Debra Ray	MoDNR
Naima Halim Chestnut, Linda Carmona	MDC
Kenny Pointer	USACE
Meredith McLaughlin, Sara Hixson	ARC
Steve Wells, Mark Pierson, Doug LaVoie, Brad Tate	Wilbur Smith Associates
Bill Whittaker	OSA

Discussion:

The group met at Graham Cave State Park and was able to see several areas that were flagged to show the construction limits of the possible alternatives. Those three are the 3% max grade profile with guardrail in the fill sections, 3% max grade profile without frontage road (no guardrail), and a composite profile without frontage road on the north side (with guardrail).

Steve Wells asked the group to consider the different alternatives and whether they felt any of the options were unreasonable. Debra Ray and Deb Schnack both felt that the 3% grade profile without frontage road and no guardrail would get into the park too much. Ken McCarty was concerned that the alternatives would get into the natural area that falls within the park to the east of the parking lot and pavilion.

The following is a list of some the other concerns that were mentioned:

- The impacts of construction, such as noise and vibration, particularly if blasting is used
- The importance of the cultural/historical sites at this location
- The visual impacts of moving the interstate closer to park facilities
- There are both 4(f) and 6(f) issues with the Park
- Drainage from the roadway is a problem currently and would increase with more pavement
- Considering the value of aesthetics
- Whether re-vegetation is planned and what that vegetation would be



**I-70 Mineola Hill Subcommittee
Field Review
Graham Cave State Park
10:00 a.m., June 17, 2003**

**Meeting
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It was explained that Wilbur Smith would continue to look at the Far North alternative as well as the specific impacts of the existing alternatives.

The group also had the opportunity to see the known sites of Running Buffalo Clover, a federally listed endangered species, within the park.

<u>Action Items</u>	<u>Responsibility</u>	<u>Due Date</u>



I-70 Mineola Hill Subcommittee

Jefferson City, Missouri
10:00 a.m., July 29, 2003

Meeting Documentation

Meeting Participants

Representing (Firm or Agency)

Kathy Harvey, Mark Kross, Bob Brendel,
Dave Hurt, Bob Reeder

MoDOT

Jerry Mugg, Ken Bechtel, Jen Johnson

HNTB

Jane Beetem, Dawn Frederickson, Larry
Grantham, Debra Ray

MoDNR

Peggy Casey, Kevin Irving, Mary Ann
Stegeman, Kevin Sullivan

FHWA

John George

MDC

Kenny Pointer

USACE

Joe Harl

ARC

Steve Wells

Wilbur Smith Associates

Bill Whittaker

OSA

Discussion:

The I-70 project is making progress on schedule. The SECs are in the process of finishing up with their North/South Screening documentation. There are going to be more public involvement activities coming up this fall. The cultural resources team is making progress throughout the corridor.

The previous meeting of the Mineola Hill Subcommittee took place at Graham Cave State Park. That meeting provided an opportunity for the resource agencies to see the impacts to the park. The focus was on the impacts from the existing alignment.

Steve Wells presented a hand-out which discusses the study process and alternatives for SIU 6. There are still some unresolved issues related to the existing as a reasonable alternative. The issues to be resolved are the vertical grade, maintenance of traffic and area of impact.

At the June 17th meeting the group discussed the impacts to the park based on 6:1 slopes and 2:1 slopes with guard rail. The group indicated that they did not believe the impact from the 6:1 slopes would be acceptable. The 2:1 slopes with guard rails reduces the area of impact to the park. There are still other concerns that remain related to drainage, noise and construction impacts. The recommendation is go with the 2:1 slopes with guard rails. Peggy Casey said that FHWA will need to



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evaluate the 6:1 versus 2:1 slopes with guardrails.

In the Mineola Hill area, alternatives on existing will include one with a 3% grade and a composite that will include a 5% grade from the bridge to the rock and then a 3% grade from the rock on east. FHWA will also want to evaluate this composite alternative. There are trade-offs in terms of direct impacts vs. noise impacts. For instance because of the remaining 5% grade you would still have the noise from braking trucks. Mark Kross asked about the possibility of a differential of grades between the eastbound and westbound lanes. The response was that this raises a number of engineering and constructability questions but could be looked into. Peggy was concerned that by comparing the existing and the 3% on the Far North that this would be setting up the existing to fail. Steve pointed out that there are still impacts associated with the Far North.

The impact of frontage roads has also been discussed. When looking at having frontage roads on both sides of the existing there would be an addition 45 feet of impact on the park. The recommendation has been made to look at a frontage road only on the south side and using Old 40 Highway. Mark recommended looking at the possibility of improving 40 and using this as a way to maintain at least part of the I-70 traffic. There was some concern about routing vehicles this far off the interstate. Steve felt that they had come up with some good options for maintaining traffic.

The reasonable alternatives that will be carried into the document are the 3/5% combination alternative on existing, the 3% on existing and the Far North alternative which has a 3% grade as well.

There was some discussion about the possible impacts on the Far North. It was recognized that there will likely be archaeological sites uncovered but it will be the caliber of the sites that will be important when comparing impacts with those of Graham Cave. Jerry said that he did not think there would be a Phase 1 survey until the preferred alternative had been identified. Peggy said that the idea would be to have a draft 4(f) to go with the draft EA. Bob Reeder mentioned that it would be possible to identify some of the high potential areas to keep from surveying the entire Far North alternative. The geomorphology report can be used to identify some of these areas. There has been a problem getting permission from the landowners in the area. Steve, Bob, Joe Harl and Bill Whittaker will continue to discuss the issue of how to make this information available.

Debra Ray mentioned that she had some specific concerns. The first is the noise impacts to the park. She feels that even if the grade is improved there will be 2 additional lanes of traffic which will be closer to the cave and the natural area. She is also concerned about the aesthetics of the project. When there is no foliage the interstate can already be easily seen from the park. She said that she appreciated the concern for going through virgin territory but if there is the possibility of expansion to eight lanes in the future then it would make sense to consider that. Kathy said that if MoDOT were to widen the existing alignment they would be committed to using that alignment for any future widening.

The group discussed each one of Debra's concerns in turn. Steve said that the noise assessment would be done in mid to late September. They will take readings at different locations for existing



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levels. The readings will then be modeled to show the effects of grade changes and the addition of two new lanes. Steve will talk with Debra about any particularly sensitive areas within the park where readings should be taken. If noise levels cross a certain threshold or increase by a certain increment then mitigation is required. One option to mitigate noise impacts is a noise wall. However, noise walls are generally constructed for people not for parks. This would also increase the cost and may not help.

Aesthetics are another area that can be addressed. Vegetation can be planted which could also help with noise however this is mostly perception. Mark added that 100 feet of dense vegetation would be needed to have an effect on the noise. The Corridor Enhancement Plan does lay out the aesthetic treatments for the corridor and highlights the Loutre River valley as one of the riparian corridors to be enhanced.

Currently the environmental studies for I-70 are only looking at expansion to 6 lanes, however, MoDOT would like to preserve the flexibility to be able to expand to 8 lanes in the future. If the existing alignment is chosen and there becomes a need for 8 lanes then there will definitely be impacts on the park. Peggy mentioned that part of the reason for the extra-wide median throughout the corridor is to be able to accommodate the extra lanes inside the median. That would not be possible at Mineola Hill due to the constraints related to Slave Rock. MoDOT is justifying that extra-wide median by explaining its usefulness in allowing for maintenance of traffic and the added benefit that this would allow for future expansion if it were needed. Kathy said that MoDOT is not planning for those extra 2 lanes at this time because they don't know if and when they would be needed. However, if the commitment were made now to invest in the existing alignment then any future expansion would also be likely to be located there.

Peggy mentioned that she thought this section will have a difficult 4(f). There was a question about whether it would be just part of the park that falls under 6(f) or if it is the whole park. Several people thought the whole park would fall under 6(f). Peggy added that this can be a long process. Ken Bechtel said that typically you can get a promissory letter from DOI and FHWA that will allow you to move forward. Steve said he would check into the issue further.

This group will meet again during the September SMG meeting to go over further details.

<u>Action Items</u>	<u>Responsibility</u>	<u>Due Date</u>
Provide more detailed information on impacts following field work.	WSA	September 2003



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Jefferson City, Missouri
10:00 a.m., December 18, 2003

Meeting Documentation

Meeting Participants

Kathy Harvey, Mark Kross, Bob Brendel,
Alan Leary, Bob Reeder, Toni Prawl

Jerry Mugg, Ken Bechtel, Jen Johnson,
Mark Grossenbacher

Jane Beetem, Larry Grantham, Deb
Schnack, Dawn Fredrickson

Peggy Casey, Kevin Irving

Vergil Noble

Kenny Pointer

Joe Harl

Steve Wells, Mark Pierson

Representing (Firm or Agency)

MoDOT

HNTB

MoDNR

FHWA

NPS

USACE

ARC

Wilbur Smith Associates

Discussion:

Status of I-70 Program

The overall program for I-70 is currently on schedule. At this time the GEC has received 2 preliminary documents for review. All of the documents are scheduled to be completed by Fall 2004.

Highlights of the Previous Meeting

The focus of the last meeting, back in September, was to look at the Far North alternative in more detail. At previous meetings the focus had been on existing.

Public Involvement

There were two public meetings in SIU 6 in October. One was in Mineola where about 60 or so people attended. The second was in Kingdom City where between 60 and 70 attended.

Mineola Hill

The focus of this meeting is to look at the two proposed alternatives in the Mineola Hill area, on Existing and the Far North. These two alternatives are a slight variation of what has been presented in the past at these meetings. Both alternatives avoid taking any right of way from any of the 4(f) properties. Currently these are looking at the direct impacts but not at the indirect impacts.

The Improve Existing Alternative would not include frontage roads adjacent to the facility. This alternative would also include the construction of substantial retaining walls that allow for avoidance



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of the 4(f) properties. Some design exceptions would be required for the grades.

The Far North alternative would include a frontage road adjacent to the westbound lanes and the southern frontage would utilize the existing I-70 roadbed. The standard typical section would be applied to this alternative.

The exhibits that Wilbur Smith distributed both prior to the meeting and at the meeting demonstrated that the footprint includes the possibility of adding a 7th and 8th lane in the future because of some confusion at previous meetings. However, in the document the exhibits will show only a six-lane facility but the costs will include right of way for eight lanes. This is because the document will show that only six lanes are needed through 2030 but MoDOT wants to plan ahead for when these additional lanes might be needed. Mark Kross wants to ensure that this information is reflected in the document. Steve Wells said that Chapter II would contain a discussion that says that the footprint accommodates 8 lanes and the impacts have been calculated for the right of way needed for this.

When frontage roads were originally looked at, they were included for both sides of the existing facility. The frontage to the north side was eliminated early on because of the impacts to the park so only the frontage to the south remained. Since that time a maintenance of traffic plan has been developed that will allow for MoDOT to keep four lanes of traffic open without the frontage road. This will allow for an alternative that stays out of the Graham Farmstead. Existing old 40 would be used as the primary frontage.

On the Far North Alternative there would be frontage to the north of the mainline but on the south, the existing I-70 roadbed would be used for frontage. If a southern frontage road were built parallel to the mainline on the Far North there would be major impacts because of the topography. Using the existing roadbed would also save on cost. Jane Beetem asked what the reason was for not using old 40 as the southern frontage just like it would be used if the preferred were on existing. The answer was that the condition of existing I-70 is much better. Deb Schnack raised the concern that then noise would be on both sides of the park. Steve added that there would be much less traffic, particularly trucks so the noise would be less than it would be now. A lot of the noise is also associated with the use of the rest area which would be closed.

In the Mineola Hill area the design criteria for grades can't be met without major impacts. The Improve Existing Alternative would carry a five percent grade from the bridge to the rock and three percent from the rock on. Carrying the three percent grade all the way would require a 60 foot cut which has a number of implications in terms of costs and maintenance of traffic. This would also require that the bridge be raised 20 feet. FHWA is still somewhat hesitant about the design exception. Peggy Casey suggested that the information needs to be presented to Allen Masuda and Ed Cordero. In response to a question, Steve said that the bridge could be lengthened rather than raised. There would be fill in either case but raising the bridge would just require that much more fill. Kenny Pointer said that the Corps would have concerns about fill in the floodplain. Kathy suggested that maybe the Corps should be involved in the meeting with FHWA. Steve said they would go through the form and fill in the information as they would if they were applying for the



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design exception. Kathy will get the form to Steve.

Side slopes of 2:1 are being proposed for the Improve Existing Alternative which would require the construction of guardrails. Kathy asked if this would require a design exception or whether using guardrail with a 2:1 slope was part of the standards. FHWA's concern is safety and the amount of truck traffic. Kevin Irving suggested it may be possible to put up some type of stronger barrier.

Jane added that DNR is concerned about fuel spills if a truck goes through the guardrail and fuel leaks into the stream, it could affect the water quality. Kathy asked if this area had a higher incidence of this sort of thing happening. Jane said that they have data that shows where the spills have taken place and areas of higher incidence but she couldn't remember for sure which areas those were. Kathy pointed out that this would also be a concern on the Far North because it would go through virgin territory and cross a number of streams. Steve mentioned that there are some ways to mitigate for safety issues, such as building a 4th eastbound lane for a climbing lane to accommodate for the speed differential. Jane thought that there are probably more accidents on the westbound lanes because of trouble breaking come down the hill. It was suggested that closing the rest area would help quite a bit with this because it would eliminate oncoming traffic at that spot. Kathy suggested that WSA look at traffic data related to accidents at the rest area which would need to be done for a design exception anyway.

There was a question about what made 6:1 slopes desirable. Kevin said that there is less turnover and that vehicles are more likely to be able to recover.

There was some discussion about the fact that there would be fairly long sections of three percent grades on both the existing and far north. This grade can cause a 15 mile per hour differential between heavy trucks and other vehicles. A climbing lane would help with this issue.

Concerns have been expressed both about Graham Cave and from the owners of the farmstead that vibration from blasting will cause damage. A geotech firm was hired to go out and do some preliminary analysis in the field. Steve passed out the report from Vibratex. The conclusion of the report is that they do not foresee blasting will have an impact on any of the resources but they do suggest following certain practices during construction to ensure this. These practices can be included in the document as mitigation but this issue does not appear as though it will preclude the alternative on existing. DNR would like to have their geologists take a look at the report. The group was asked to take a look at the report and provide any comments or recommendations on the report. Steve also pointed out that blasting would not need to occur until about 1,000 feet east of the rock.

Dr. Noble of the National Park Service, talked about how the concern generally seems to have been with the park but within the park is a National Historic Landmark which was one of the first in the country to be designated. These sites are not only historic but are of cultural significance. The question was asked about what could be done if an alternative is chosen and then it turns out that blasting can't be done without damage. Field measurements of seismic activity can be taken prior to choosing the alternative. However, blasting tests can't be done on the right of way prior to



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construction. Commitments in regards to blasting can be taken into the final document. As the blasting gets closer to the site it will be known if damage will be caused because the vibration will be measured. Kathy pointed out that MoDOT has done blasting next to some pretty sensitive receptors including a hospital and there have not been any problems that she knows of. Bob Reeder said that if there is a risk, the alternative should be precluded. There are the same concerns on the Far North as there are on existing.

If it is determined after an alternative is chosen that blasting can't be done without damage, one option is to do the work without blasting although there would be additional costs. Peggy pointed out that even if there is a decision document, that doesn't preclude going back and reexamining the decisions that were made.

The preliminary phase of the noise study has been completed. Noise readings have been taken at various locations in the Mineola Hill area, including in the Park and at the Farmstead. Noise levels in the park are on the threshold of being significant. In 20 to 30 years those noise levels will exceed that threshold. There is an existing problem, additional impacts are fairly negligible (a difference of 3 decibels is about where the human ear can detect a difference) and it will be worse in the future. It comes down to a policy question on whether to recommend an alternative that fixes an existing problem even when it is not causing additional problems. There will be additional noise impacts on the Far North but it is not anticipated that it will make any difference in the park.

Jane Beetem asked about the type of rumble strips being used. She has seen some literature that some types are noisier than others. This may also be the case with pavement types. These decisions are usually based on safety considerations rather than the noise. Kathy didn't see anything wrong with putting a commitment in the document to look at some of these considerations when it comes time for construction. At that time, new technology may be available to address some of these issues.

Wilbur Smith has evaluated the two alternatives. The Far North is estimated to cost an additional \$40 million. The Far North avoids direct impacts to the 4(f) resources but it goes through virgin territory. The length of the Far North is slightly shorter than existing. The Improve Existing alternative has the potential for indirect impacts to the 4(f) resources. There are some safety implications associated with design exceptions that would be needed on existing. There are more landowners being affected if the existing alignment is chosen. This is because the tracts are larger on the Far North than on they are along existing I-70.

Kathy pointed out that one factor that should probably be added to the evaluation of the alternatives is compatibility with future land use. There should be a difference between the Far North where there is not a road currently and that on the existing.

Wilbur Smith was asked to provide a written summary of the comments received from the public at the Mineola public meeting. The public located along the Far North feel like they don't have much of a say because of the major resources along the existing. Many of the comments related to a property owners concerned about impacts to a particular piece of property.



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Mark asked what the reaction of the agencies is to the two alternatives. DNR representatives said that they have not had an internal discussion to determine which would be their preference. Comments will be provided on the document.

There was a question about the potential of indirect impacts. The group has discussed how the area along existing is scenic and should be preserved. The area has been preserved because the landowners along existing have chosen not to put up billboards or other impediments to the scenery. The landowners on the Far North may not feel the need to preserve the corridor. Scenic easements and other options are being looked into. Kathy mentioned that she did not think that MoDOT could condemn for scenic easements. Jane asked if MoDOT could make a commitment that volunteer scenic easements would be solicited. Kathy thought as long as they were volunteer that there wouldn't be a problem. It may be easier to solicit these easements on the existing.

There was a suggestion that maybe Wilbur Smith needs to go out and talk to people about why the existing corridor has been left the way it has. This would be a more proactive way of including the information in the document. Mineola Hill was one of the areas identified in the First Tier as scenic along the corridor. The question was then asked whether this information should also be gathered on the Far North. Kathy did not think so although Mark thought that maybe FHWA would want the information for both alternatives. This information would be discussed in the Visual Quality/Impacts section of the document. The thinking is that land on the Far North has mostly been purchased to make money on hunting and other such activities and that the property owners there may be more inclined to allow billboards.

Mark asked what the group thought about an alternative that would remove Slave Rock and put it somewhere where the public could access it. Larry Grantham said the park would not take something of that nature because it does not accept other historic objects and because the value is in its context. If the Rock were removed the widening could be done within the median which could mean fewer impacts on the park and the farmstead. Larry said that the story behind the rock remaining in its current location is that Mrs. Darnell (who donated the land for the park and was an original Graham family member) went to the Director's office each day to save the Rock. Toni Prawl said that this was no longer the attitude of the Graham family. They have asked how they can help MoDOT get rid of the Rock and in turn have fewer impacts on the farmstead.

Toni, Mark and MoDOT Historian Tom Gubbels spoke with Angela Desilva on December 12th about what she feels is the history of the rock. She recognizes that her views are not supported by the local community or the African-American community. She was told a story of slaves being sold on a rock when she was a child and she has only recently come to believe that this is that rock. MoDOT Cultural Resources staff has located research deeds for the property and there is no mention of a history with the Rock. The criteria has been applied for treating the rock as a recreation space or roadside park but the criteria is not met. The Rock also does not fit the criteria for Traditional Cultural Place. This does not mean that there would not be environmental justice issues in impacting the Rock. Toni's recommendation is to send the Architectural resources report on to the SHPO to get their determination on the status of the Rock. She has spoken to the Harris' about any



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documentation that the family may have and they have not produced anything substantiating the story about slaves being sold there. Larry said that Mrs. Darnell repeatedly said that she had a bill of sale showing slaves being sold at the Rock but it was never produced. Jane Beetem mentioned an article that appeared in the *St. Louis Post-Dispatch* discussing the possibility of impacting the Rock and DNR's phones lit up with calls from the public.

It was suggested that moving the Rock if it is not historic would not serve any purpose. It is likely the Rock would have to be unburied. The question was raised about how far would the agencies go to protect something that isn't determined historic when it creates a situation where there are impacts to other 4(f) resources.

Peggy said that FHWA might be more inclined to support the Improve Existing Alternative if the rock was removed. She thought that maybe it was necessary to take some heat to look at the possibility. If the Rock weren't there, the bridge may not have to be raised as much to meet the grades.

Toni will send the final cultural resources report as soon as possible and amend as necessary later when there is a preferred. Toni will talk with Angela again and tell her the status of the investigation on documentation about the Rock and that it is being recommended as not eligible.

Steve suggested that if the existing is taken into the document as the preferred that if it turns out later that the Rock will be taken, changes can be made before the final because the impacts would then be less. Peggy said that she sees it affecting whether the existing alternative as it stands now would be acceptable. Maybe it is acceptable but it might be better if the Rock was not there. From the Park standpoint, the preference is to have I-70 as far from the park as possible and the rock definitely affects this Improve Existing Alternative.

The action plan is to get the cultural resources report into the SHPO to get a determination which may solve the problem and set up a meeting with FHWA to talk about design exceptions and the existing alternative. Bob Brendel suggested if the discussion gets to the point of seriously talking about moving the rock, that a meeting with the Black Caucus be scheduled.

DNR added that they would rather not have the existing I-70 roadbed used as the southern frontage road for the Far North alternative. They are very concerned about the noise issue. It was also suggested that it might then be possible to reconnect the park, the rock and the farmstead. Kathy mentioned that this might not be the case depending on how the land was acquired. There are some legal issues to be resolved there.

This group will reconvene when there is a preliminary draft document to review but there are a number of action items, particularly related to the Rock that need to be resolved.



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<u>Action Items</u>	<u>Responsibility</u>	<u>Due Date</u>
Set up FHWA and Corps meeting to discuss design exceptions and Loutre River Flooplain impacts	K. Harvey	Jan. 2004
Review Loutre Valley crash data for information on crashes due to grade/speed differential and rest area speed differential/weaving	WSA	Jan. 2004
Have geology personnel review Vibratex report and provide any comments to the study team	Agencies	Jan. 2004
Compile public comments from last meeting in Mineola	WSA	Jan. 2004
Submit cultural resources report and seek SHPO determination regarding the status of Slave Rock	T. Prawl	Dec. 2003



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<u>Meeting Participants</u>	<u>Representing (Firm or Agency)</u>
Kathy Harvey, Mark Kross, Bob Brendel, Bill Stone, Larry Kopfer	MoDOT
Jerry Mugg, Ken Bechtel, Jen Johnson	HNTB
Debra Ray, Larry Grantham, Deb Schnack, Dawn Fredrickson	MoDNR
Peggy Casey, Mary Ridgeway, Mary Ann Stegeman, Rand Richardson, Phil Jones	FHWA
Joe Harl	ARC
Steve Wells	Wilbur Smith Associates

Discussion:

Highlights of Previous Meeting

In the EA, the alternatives being carried forward include one on existing and a northern alternative. The alternative on existing will stay out of Graham Cave State Park and the Graham Farmstead. Since the last subcommittee meeting, there have been discussions with MoDOT and FHWA. A technical memo was prepared to lay out each of the concepts that were looked at in the process of getting to the Preferred.

On-Existing Alignment Issues

Vertical grade has been an issue on the existing alignment. The design will keep the grade the same at the rock as it is today. There will be a fill section to the bridge and a cut section to Danville. The fill section will be at a four percent grade and the cut section will be at a three percent grade. The four percent grade from the rock to the river meets FHWA standards and there wouldn't be too many impacts. A retaining wall will be used to keep impacts out of the park and the farmstead. Larry Grantham pointed out that the park should not be considered to be a single resource since it includes the park itself, the natural area and the national historic landmark.

The alternative on existing alignment avoids both the park and the farmstead, which is a cultural resource. The project will not add fill to the rock even though this has been determined not to be a cultural resource.

The Mineola Hill section of I-70 has experienced high accident rates. In looking at how the vertical grade would affect these numbers, it was determined that the difference between the grades was only 1 or 2 accidents a year. Steve Wells said that they feel that removal of the rest areas and the lower grades will play a larger role in reducing the number of accidents than having a three percent



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grade from the bridge to the rock.

A fourth lane is also being proposed for eastbound I-70, to be used as a climbing lane. This will help improve safety as trucks climb the grade in this area. The additional lane would also assist with constructability as temporary pavement won't be needed.

Debra Ray asked whether all of the construction, including equipment would stay within the right of way. The goal is to keep everything within the existing right of way.

Preferred Alternative

Steve passed out an evaluation matrix which highlighted the areas where there was the most difference between the two alternatives. With the Far North, there are 32 extra lane miles which would add to one of the largest systems already in existence. The construction costs would be nearly \$80 million more than widening the existing. Farmland and wooded forest impacts would be much higher on the Far North. Impacts to water resources, stream crossings, floodplains and wetlands would also be higher for the Far North. The document will be written with the Existing as the recommended Preferred Alternative.

Noise issues have been a concern with this group from the beginning. Steve explained that a 3 to 5 decibel change is needed to be perceptible to the human ear. Of all of the locations where readings were taken, 1.4 decibels was the biggest difference between the No-Build and the Build. At the last meeting a report on the impacts of blasting was presented to the group. The report recommended certain construction techniques but did not anticipate that blasting would damage any of the resources.

Section 4(f) Impacts

Because there are no direct impacts, there was a discussion with FHWA on the possibility of a constructive use 4(f). Because there is an existing corridor and the existing problems are not being made worse there would not be a constructive use 4(f). Peggy said that the project would have to prevent the resource from being used for its intended use and that is not the case here.

The evaluation matrix shows that there are two archeological sites that would be impacted with each alternative. This number includes only those sites within the Mineola Hill area. The two sites on the Far North are on the banks at the river crossing. The two sites on the Existing are west of the river. A Phase 2 investigation is not being recommended.

Discussion

It was pointed out that in the cut section east of the rock, some outcroppings will be created that could help with noise, especially in the glade area.

Debra Ray asked that DNR be included in any discussions if plantings are going to be used along the roadside in this area. Because of the guard rail, retaining walls and 2:1 slope plantings in this area will probably be limited due to MoDOT standards regarding the location of plantings. Kathy wanted to make the point that if for some reason the agencies didn't feel that strongly about MoDOT getting



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into the park that there would be more opportunity to mitigate for this through enhancements. Debra said they are necessarily interested in plantings outside of possibly some native wildflowers. Kathy didn't see why there couldn't be a commitment in the document saying that the agencies could be involved in discussions when it comes to any enhancements or plantings in this area.

When asked about the reaction to going with the Existing as the Preferred Alternative, the response was that at least from the local perspective DNR was not real excited about this but they realized that this is a difficult area and they are interested in softening the blow as much as possible. Larry Grantham said he would prefer the Far North because of the noise at the cave. Deb Schnack noted that it would be difficult for DNR to defend taking all of the additional resources on the Far North and still have frontage on the south. Dawn Frederickson added that this would allow the park to expand to the north if so desired.

The question was asked whether old U.S. 40 could be used as frontage instead of I-70. Kathy said that the Far North alternative would bisect a number of properties and access would still need to be provided to those properties. She added that MoDOT is aware that the road through Mineola will need to be upgraded to be used as frontage, so MoDOT wouldn't tear out I-70 and then spend money on the other road.

There will be an opportunity for public input on the Draft EA and based on those comments the Preferred could change.

Mark Kross pointed out that based on past history, this is the most sensitive MoDOT has been about trying to work with the agencies to come to an agreeable resolution. Larry added that to him the history of the rock is about Mrs. Darnell's interaction with the highway department so he is glad the Preferred is not taking the rock.

Schedule

The Draft EA is expected to be submitted to the GEC during the first week in May. The public hearing will probably fall sometime in July.