Conservation Plan for the Eastern Narrowmouth Toad (*Gastrophryne carolinensis*)

- Description of the impact likely to result from the proposed taking of the species that would be covered by the authorization including:

1. ***Biological data on the Eastern Narrowmouth toad:*** The eastern narrowmouth toad is small and oval shaped with a pointed head and a fold of skin behind its eyes. It can range in color from reddish brown to olive to almost black. It is found mostly in damp areas, burrowing in leaf litter or under rocks and logs where the soil is moist. During the breeding season, in the spring and summer, the toads utilize permanent as well as ephemeral wetlands after rainfall. Their diet is predominantly ants and other small insects. According to the Illinois Natural Heritage Database as of January 2008, *G. carolinensis* is listed as threatened in Monroe County. It was recorded as being observed in Monroe County on July 25, 2007. The project area is a karst region characterized by numerous surface sinkholes, of which several are located within the proposed project area. Sinkholes provide habitat for the eastern narrowmouth toad, which may use these small areas year round either above or below ground. Threats to the species are believed to be due to loss of habitat through development.

2. ***Description of the activities that may result in taking*:** The proposed action requires the widening and resurfacing of 3,600 feet of Kaskaskia Road. Approximately 1.9 miles of Kaskaskia Road will be constructed on new alignment, in order to improve vehicular safety. The construction activities have the potential to impact *G. carolinensis* by partially or fully filling sinkholes. The sinkholes could be a critical habitat for the toad.

   The proposed project is not anticipated to significantly affect the *G. carolinensis* population. The proposed project is not likely to encourage development in the subject area, as the road currently exists and adjacent land use is mainly agricultural, with residential properties located along the road. The purpose of the proposed project is to improve safety. A safer roadway will result in fewer accidents, thereby reducing acute water quality impacts that may result from vehicular accident and which may affect many species, as well as the eastern narrowmouth toad.

3. ***Explanation of anticipated adverse effects on the species/quantification of take*:** It is impossible to predict the number of individuals that may be "taken" by this project. The project may impact the species by removing suitable habitat. Habitat modification or degradation may lead to the death of or injury to the listed species by impairing behavioral patterns such as breeding, feeding, or sheltering. While the project is expected to disturb some of the wetland habitat for the toad, numerous wetland areas exist in the project area and provide suitable habitat for the toad. Additionally, mitigation should provide some new habitat for the species.

   The removal of the adjacent land from agricultural production may benefit the environment and therefore G. carolinensis. By preserving the adjacent land and creating additional wetland habitat, the toad would be provided with suitable habitat. Moreover, if the land were preserved, residential development would not be expected to occur and additional nearby habitat would not be lost. Best management practices (BMPs) will be implemented which will control surface runoff. Cumulative impacts, such as future development within the project area, are not expected to increase due to the project, as the roadway currently exists.

- Measures to be taken to minimize and mitigate the impact on the species, and the funding that will be available to undertake these measures

- ***Plans to minimize the area affected by the proposed action, the estimated number of threatened individuals to be taken, and the amount of habitat to be affected:*** The number of individuals that may be taken cannot be estimated. Construction limits for the proposed project have been reduced to the smallest area possible, in an effort to minimize impacts to the sinkholes. According to current preliminary roadway plans, three sinkholes will be partially impacted in order to construct the relocated roadway and the side slopes. Rip rap will be placed on the side slopes. Approximately 0.20-acre will be filled on Site 8, approximately 0.18-acre will be filled on Site 9, and approximately 0.23-acre will be filled on Site 10. Vegetated buffer strips and grassed waterways will be created around the openings of adjacent sinkholes, and water will be filtered through vegetated swales before discharging into them.

  Construction in and adjacent to water bodies and wetlands has the potential to create both long-term and short-term effects on water quality. However, effective site planning and design, incorporating several BMPs, will result in minimal impacts to water quality, natural hydrologic characteristics, and sensitive landscape features.

  As mentioned in Item 4, above, adjacent land historically used for agriculture will be acquired and preserved. Additionally, the land will be planted in trees to further enhance the area and protect the existing sinkholes.

  1. **Plans for management of the area affected by the proposed action that will enable continued use of the area by the species:** The removal of adjacent land from agricultural production, the planting of trees and natural vegetation, and wetland mitigation will provide additional habitat for the toad.

  2. **Description of all measures to be implemented to minimize and mitigate the effects of the proposed action on the species:** The BMPs listed above will be implemented to minimize and mitigate effects of the proposed action on the species. Also, as stated above, the preservation of adjacent land, along with the proposed wetland mitigation, will provide additional habitat for the toad.

  3. **Plans for monitoring the effects of measures implemented to mitigate and minimize the effects of the proposed action on the species:** Since the toad is listed as threatened, the Illinois Department of Natural Resources (IDNR) keeps a database with any occurrences of the toad in Monroe County. Keeping track of the number of occurrences or performing a survey for the toad periodically can aid in the monitoring process. The Monroe County Highway Department (MCHD) will not conduct any monitoring of their own, as this is done by state agencies, such as IDNR or the Illinois Natural History Survey (INHS).

  4. **Adaptive management practices that will be used to deal with changed or unforeseen circumstances that affect the effectiveness of measures instituted to minimize or mitigate the effects of the proposed action on the species:** Due to the nature of the project, MCHD does not anticipate any changed or unforeseen circumstances. The roadway widening, resurfacing, and partial realignment will be completed and no additional work will be necessary afterwards. However, annual monitoring of the adjacent wetland mitigation site will be conducted for a minimum of five years. It will be noted if any narrowmouth toads are observed during monitoring, and suitable habitat for the toad, if observed, will be recorded in the monitoring reports.

5. **Assurance of funding to support and implement all mitigation activities described in the conservation plan:** The MCHD will assure all funding necessary for the implementation of the mitigation activities.

- **Description of alternative actions considered that would not result in a take of the species, and the reasons that the alternatives were not selected. A 'No Action' alternative is also described:**

1. The No Action alternative is defined as no resurfacing, widening, or realigning the roadway. This alternative would not improve safety concerns or driving conditions. Therefore, this alternative was abandoned.

2. Another alternative consists of resurfacing the roadway without widening and realignment. However, this alternative would also fail to improve safety concerns and was therefore abandoned.

3. The alternative to widen and resurface the roadway was considered as well. This alternative would improve safety, due to providing a wider driving area; however, it would not address the existing horizontal alignment, which contains sharp curves. In addition to this alternative's inability to improve safety, the potential to impact the *G. carolinensis* would also occur with this alternative. Due to the inability of this alternative to improve safety, while still having the potential to harm the *G. carolinensis* indirectly, this alternative was abandoned.

4. The alternative to resurface, widen, and realign portions of the roadway was evaluated. This option will begin at LL Road and consist of widening and resurfacing the road for 2,000 feet to the south, and then realigning the following 2,500 feet to straighten the roadway. Widening and resurfacing would then be completed for an additional 1,600 feet, until just north of MM Road, where approximately 3,400 of realignment will occur. The total project length is approximately 1.9 miles. Nine wetlands were identified by INHS as being located within the project corridor. These wetlands all exist within sinkholes. Three wetlands/sinkholes will be partially impacted by the proposed project. Approximate total wetland impacts are 0.61-acre. This alternative was selected because it improves safety of the road more than any other alternative.

- **Information to indicate that the proposed taking will not reduce the likelihood of the survival of the species.** If the proposed project is constructed, it is unlikely the project will reduce the likelihood of the survival of *G. carolinensis*. There is other suitable habitat for the species in the immediate area; therefore, impacting 0.61-acre of potential *G. carolinensis* habitat is not likely to reduce the likelihood of the survival of the species.

- **The implemented agreement, which includes:**

1. Names and signatures of all participants in the execution of the conservation plan

Mr. Ronald Polka
Monroe County Highway Engineer
Monroe County Highway Department

District Eight Engineer
Illinois Department of Transportation

Rhutasel & Associates

SCI Engineering, Inc.

2. **The obligations and responsibilities of the participants with schedules and deadlines for completion of activities included in the plan**

   IDNR is responsible for the review of this Conservation Plan and for subsequent issuance of the Incidental Take Authorization, if so required. The MCHD is responsible for all biological clearance coordination and recommendations related to the project.

   At this time, this project is not currently included in the IDOT program. A currently programmed Surface Transportation-Rural funded project may be removed from the project and replaced with the subject project. Regardless of the funding proposed for this project, at this time there is no schedule or deadline for completion of activities included in this plan. However, the purchase of the adjacent property to be preserved and enhanced will occur prior to any construction activity. Tree planting will either occur before construction begins or concurrently. *Rhutasel & Associates is responsible for the creation of the engineering plans.*

3. **Certification that each participant in the execution of the conservation plan has the legal authority to carry out respective obligations**

   This project will be authorized by IDOT, which receives funding from the Illinois General Assembly and the Federal government in carrying out its programs.

4. **Assurance of compliance with federal, State and local regulations pertinent to the proposed action and to the execution of the plan**

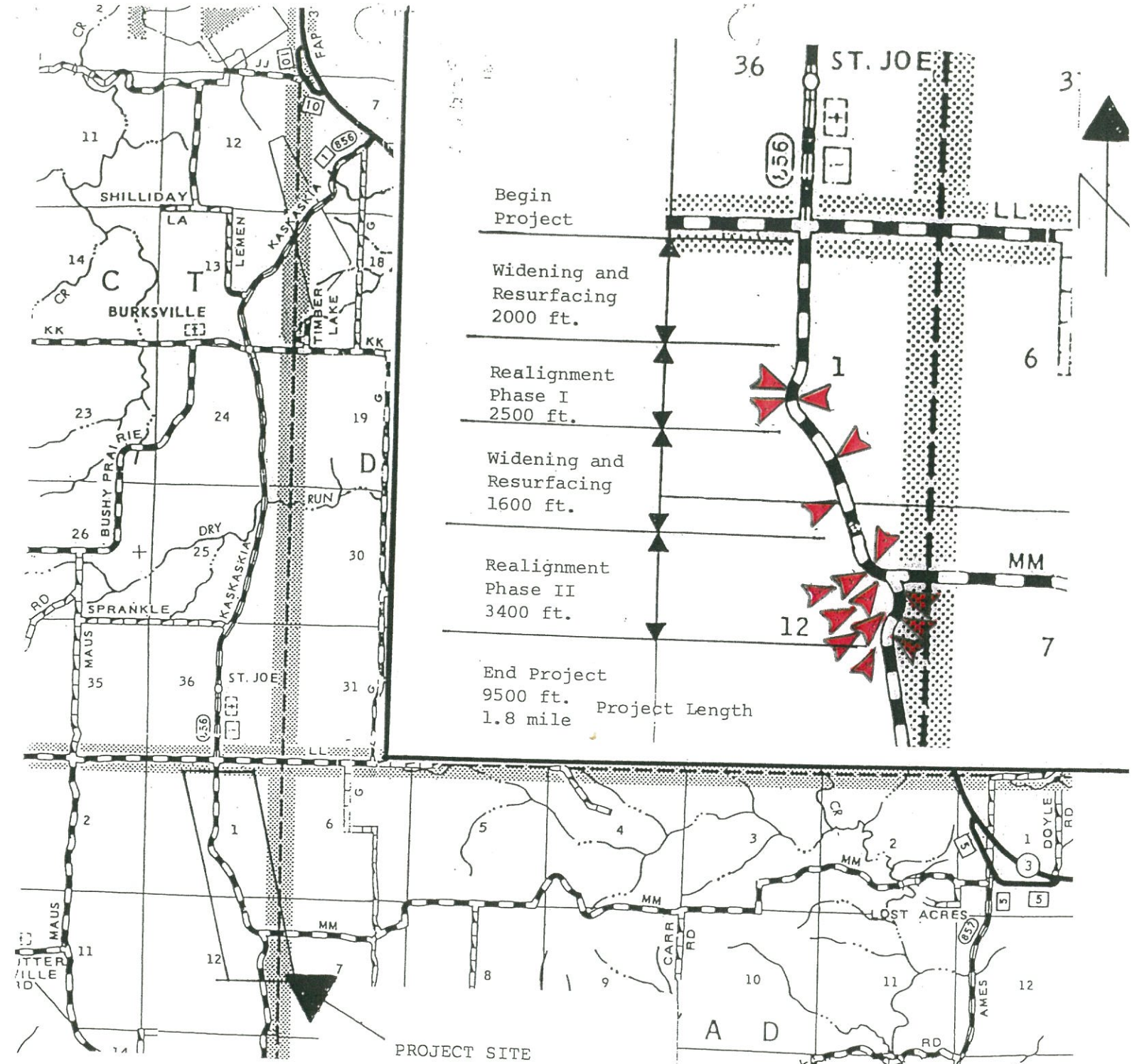
   The MCHD, as directed by IDOT, exclusively abide by the National Environmental Policy Act and all associated state and federal environmental laws in carrying out the mission of performing the most environmentally sensitive methods of planning and engineering.

5. **Copies of any federal authorizations for taking already issued to the applicant.**

   No authorizations have yet been issued.

6. **For projects that will result in the taking of endangered or threatened species of plants, copies of expressed written permission of the landowner.**

   Eastern narrowmouth toad (*Gastrophryne carolinensis*)



ACCIDENT TYPE

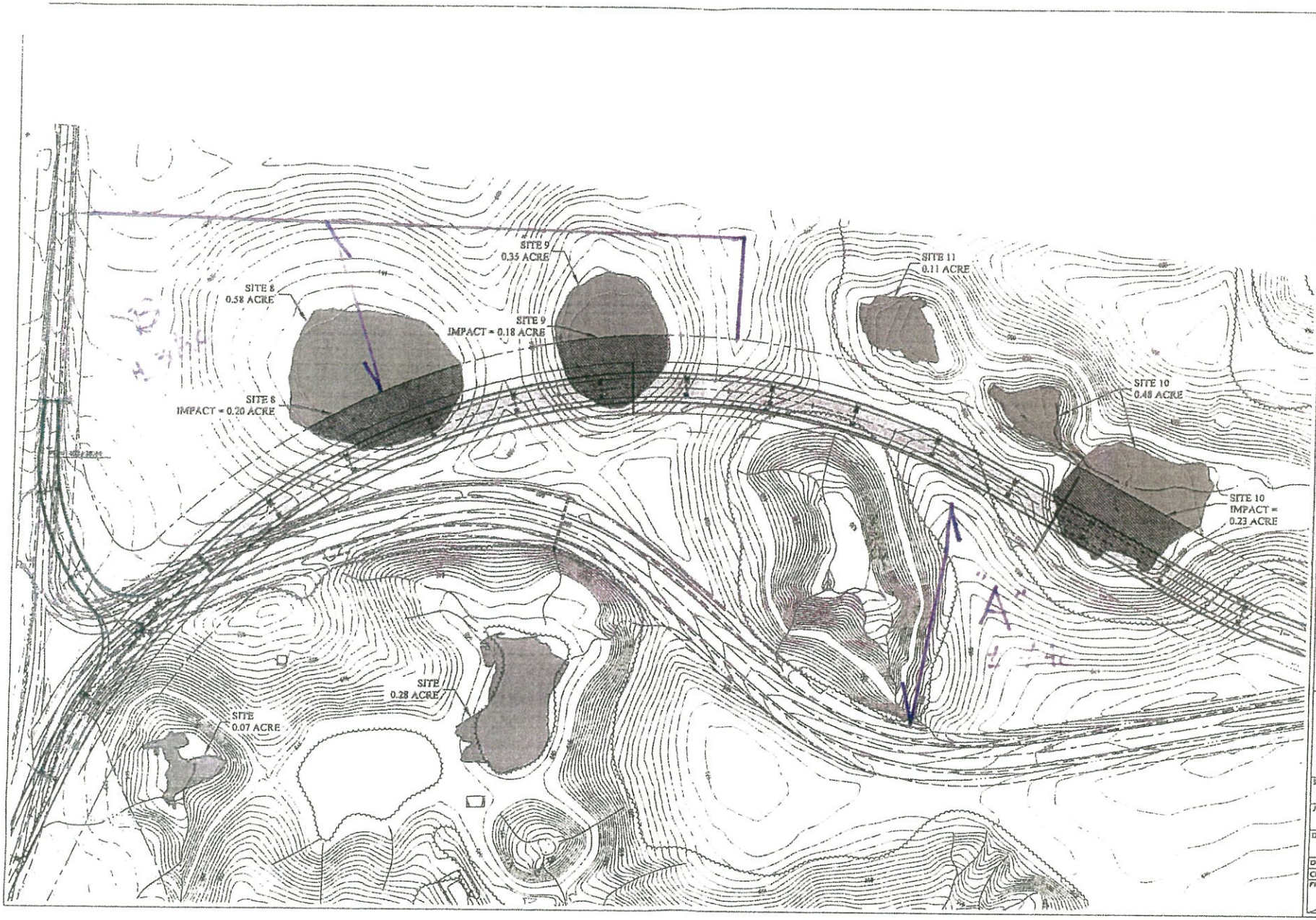
2 CAR	RUNOFF	INTERSECTION
5	9	2

TOTAL 16 ACCIDENTS

Monroe County Highway Department
Location Map

Kaskaskia Road Improvement
Section 04-00069-01-FP
LL Road to MM Road

Accident Locations
July 1, 1997 - June 30, 2007



General Notes/Legend

BASED ON UNDATED PLAN PROVIDED ELECTRONICALLY ON 04/07/2007 FROM KIMLEY-HORN AND ASSOCIATES, INC. DIMENSIONS AND LOCATIONS ARE APPROXIMATE. ACTUAL MAY VARY. DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT FOR WHICH IT WAS ORIGINATED.

PROJECT NAME

KASKASKIA ROAD - LL ROAD SOUTH
COUNTY, ILLINOIS

WETLAND DELINEATION AND
PRELIMINARY SITE PLAN

N E S W

SCALE	1" = 100'
JOB NUMBER	2006-3063.30
DATE	07/2007
DRAWN BY	LAP
CHECKED BY	JAF
FIGURE	3
SHEET	6