

December 17, 2008

Joseph A. Kath
Illinois Department of Natural Resources
Office of Resource Conservation
One Natural Resources Way
Springfield, IL 62702

Subject: Manhattan to Streator Project, Enbridge Pipelines (Southern Lights) L.L.C.
Franklin's Ground Squirrel Conservation Plan and Application for Incidental Take

Dear Mr. Kath:

Enbridge Pipelines (Southern Lights) L.L.C. (Enbridge) is proposing to construct a light liquid petroleum (diluent) pipeline between storage facilities in Manhattan and an existing pipeline near Ransom, Illinois. In a letter dated December 1, 2008, you requested that Enbridge revise its Conservation Plan for the Franklin's ground squirrel (*Spermophilus franklinii*) (FGS) to better match the format described in Title 17, Chapter I, Part 1080.10 of the Illinois Administrative Code. Therefore, we have provided the attached Conservation Plan to better match the criteria provided in the Code.

The previously submitted Franklin's Ground Squirrel Survey Report shows the locations of burrows, in which FGS potentially dwell and additional results of the surveys completed during the summer of 2008. The survey report is referred to throughout the attached Conservation Plan. This modified Conservation Plan describes the methods that will be used to minimize the likelihood of impacts. In the unlikely event that individuals are harmed during construction and maintenance activities, Enbridge is requesting an Incidental Take Permit from the Illinois Department of Natural Resources.

If you have questions or require additional information about the project or our request, please call me at (715) 398-4568.

Sincerely,

Enbridge Energy Company, Inc.

James Snider, PE, CHMM
Senior Environmental Engineer

Enclosed: Conservation Plan for Franklin's Ground Squirrel

Cc: Bob Doherty, Natural Resource Group, LLC

CONSERVATION PLAN
Franklin's Ground Squirrel (*Spermophilus franklinii*)
Manhattan to Streator Pipeline Project
Enbridge Pipelines (Southern Lights) L.L.C.

December 17, 2008

The following description of the plan to minimize the potential for impacts to the Franklin's ground squirrel (*Spermophilus franklinii*, State-Threatened) (FGS) is outlined to match the Conservation Plan requirements under Title 17, Chapter I, Part 1080.10 Incidental Taking of Endangered or Threatened Species: Conservation Plan. This plan concerns the Manhattan to Streator Pipeline Project (Manhattan to Streator or Project) being proposed by Enbridge Pipelines (Southern Lights) L.L.C. (Enbridge). The entire pipeline is 45.5 miles between Manhattan and Ransom, Illinois, though this portion of the project occurs only in Will County. Construction for the project is scheduled to begin in June 2009 and the pipeline is anticipated to be operational by 2010.

The Illinois Department of Natural Resources (IDNR) reviewed the Project and determined that the Project was not likely to adversely affect state-listed species.¹ Enbridge had performed biological surveys in order to ensure the absence of FGS from within the Project corridor and found several burrows that potentially harbor this species. Consequently, Enbridge performed follow-up surveys and trapping to verify the species inhabiting the burrows and submitted this conservation plan to describe the plan to minimize potential impacts to the FGS in the area. The survey report was previously submitted to the IDNR.²

¹ IDNR. 2008. Letter from Pat Malone (IDNR) to Dan Tix (Natural Resource Group, LLC) dated June 2, 2008.

² Civil & Environmental Consultants, Inc. (CEC). Franklin's ground squirrel habitat assessment, live trapping, and potential burrow survey report. August 6, 2008.

1.01 Description of Impact

A. Location

The project is an approximately 45.5 mile pipeline located in La Salle, Grundy, and Will Counties. Potential impacts to state-listed threatened and endangered species are limited to the FGS. This species may have suitable habitat and populations between mileposts 39.2 and 45.5. This portion of the project occurs in Sections 1, 12-14, and 22-23, Township 33N, Range 10W; Section 6, T33N, R11W; and Sections 29 and 31, T34N, R11W, Will County. The exact location is shown in the Figure 1.

B. Biological Data

In Illinois, FGS prefer habitats with intermediate and tall grasses; they are not found in areas with short or mowed grasses. Cultivated land is rarely used by the diurnal squirrels, which are most often found in dense vegetation where there is limited mowing or grazing. The FGS often create burrows in elevated landscape features such as the elevated beds of railroad and road rights-of-way. Their burrows are fairly deep and well drained to be insulated from heat and cold and may have multiple entrance holes.³

One of the true hibernators, FGS sleep from about September to April with a body temperature just a few degrees over freezing. Right after coming out of hibernation, they breed and have a single yearly litter of 6-9 pups around early June.³ FGS eat insects, green plants, seeds, fruit, amphibians, bird eggs, young birds and mammals, and carrion. Their principal predators are the red-tailed hawk, red fox, badger, coyote, striped skunk, mink, and long-tailed weasel. Their home range is usually 1.5-3 acres. At adolescence, male juveniles disperse for an unknown distance. In the wild, life expectancy is 4-5 years for females and 1-2 years for males.³

Even during spring and summer, the squirrels spend a majority of time in the burrow (see attached report). As such, an important conservation practice will be to avoid the burrows, which have been identified during the field surveys.

The key habitats crossed by the construction corridor of the pipeline project include the Wauponsee Trail corridor (a former railroad), several small roads, and a ditch with a berm on the western side created from ditch spoils. The pipeline right-of-way crosses the trail corridor at approximate milepost 39.4 and runs adjacent to the trail from that point to the end of the project at milepost 45.5.

³ A.C. Ostroff and E. J. Finck. 2003. Mammalian species: *Spermophilus franklinii*. American Society of Mammalogists 724: pp. 1-5. July 30, 2003.

C. Activities that may impact Franklin's ground squirrels

The construction activities will occur in the corridor shown in Figure 1. This area above the trench will be graded to remove topsoil, which will be stored along the northwestern edge of the corridor, called the "spoil side". Then a trench will be excavated to a maximum depth of about 8 feet below the current grade. The trench will likely be less than about 16 feet wide; this soil will also be stored on the spoil side and kept separate from the topsoil. Then the pipes will be strung out along the southeastern edge of the trench ("working side"), welded together, and lowered into the trench. The pipe will then be covered with the subsoil to re-fill the trench and the topsoil will be added to return the site to the original grade. Heavy machinery will be present on the site for several weeks during this process. The site will be restored to original conditions and seeded with permanent seed mixes in areas that are not under cultivation. The cultivated areas will be replanted by the landowner unless otherwise requested.

D. Anticipated adverse effects on Franklin's ground squirrels

It is likely that some FGS along the project corridor will experience temporary disturbance from noise and other construction activity during the installation of the pipeline. The construction activities could result in death or injury to individuals that are within the construction corridor. This could include individuals in underground burrows in the line of the trenching activities or individuals that could be run over by heavy equipment. As part of this conservation plan, it is anticipated that a few FGS individuals will be relocated prior to construction. It is possible that one or more individuals could be injured or killed during construction if they cannot be trapped and relocated. The intent of this Conservation plan is to avoid all impacts to the extent practicable, and greatly minimize those impacts that cannot be avoided.

1.05 Steps for Avoidance, Minimization, and Mitigation

A. Plan to minimize potential impact area

Surveys have been performed to identify the locations and extent of the population of FGS in the area of this portion of the pipeline (see survey report). There are numerous burrows present along the Wauponsee Trail, just outside of the proposed construction corridor that will not be directly impacted during construction. These burrows are located on the spoil side of the construction corridor. The edge of the spoil side construction area extends 20 feet from the proposed pipeline location; the working side will be 75 feet wide (see Figure 1). There will be no digging on the spoil side of the corridor, so there is little chance of harming FGS in their burrows along the trail.

To minimize the area of construction that may potential affect FGS burrows:

- The construction work area will be at least ten feet from any of the surveyed burrows; the construction corridor will be narrowed as necessary to avoid burrows within ten feet of proposed work areas (except at milepost 42.7 as described in the Measures to minimize effects of construction section below). (See Figure 1).
- Barrier fencing will be placed along the edge of the construction work area on the trail side and along the edges of the work area at crossings and road borings in areas within 300 feet of a potential FGS burrow.

It is expected that few, if any, individuals would be taken during construction. The barrier fencing and avoidance of burrows should minimize the likelihood of impacts in most areas. At milepost 42.7, five known burrows occur within the construction corridor. The five burrow holes may represent two burrow systems. Franklins' ground squirrels are generally very secretive and may live alone in a burrow, so there may be only two individual FGS in these burrows, if any. During hibernation, several individuals may live together in the same burrow and the young typically will occupy a burrow with its mother until July, when they begin dispersing.⁴ Project construction is most likely to occur during the active period in August or during hibernation in October. If project construction occurs in August, the greatest number of individuals in the corridor would be two or three, and these would be trapped and relocated, as described below. If Project construction occurs in October, it is possible that up to ten individuals, five per burrow system, could be in the disturbed area and not be relocated.

C. Plans to manage the area after construction

After the construction is complete and the pipeline is in the ground, the area and the habitat quality will be restored to pre-construction conditions. There will be temporary poorly vegetated ground in areas now in natural vegetation, primarily at road crossings, but these will be reseeded and will return to original conditions in two to three years.

- Restoration in non-cultivated areas will be completed using native species or based on landowner recommendations where appropriate.
- Site restoration will return the entire area to its original contours and areas with natural vegetation will be seeded with native prairie grasses (See Table 1) and returned to original conditions. Erosion control methods will be implemented and monitored until successful establishment of newly planted vegetation.

⁴ A.C. Ostroff and E. J. Finck. 2003. Mammalian species: *Spermophilus franklinii*. American Society of Mammalogists 724: pp. 1-5. July 30, 2003.

TABLE 1- Franklin's Ground Squirrel Conservation Plan Seed Mix ¹		
Scientific Name	Common Name	Percent of Mix
Grasses		
<i>Andropogon gerardii</i>	Big bluestem	30
<i>Sorghastrum nutans</i>	Indian grass	25
<i>Panicum virgatum</i>	Switchgrass	5
<i>Elymus canadensis</i>	Canada wild-rye	25
<i>Schyzachyrium scoparium</i>	Little bluestem	15
Total native grass seed		15 lbs/acre
Oats, Barley, wheat, or other non-persistent annual cover crop		½ rate used for erosion control
¹ Seed mixes approximated. Actual seed mix will depend on availability of local suppliers		

Long-Term Maintenance and Management

Enbridge intends to implement the appropriate measures above for all non-emergency maintenance and repair work along the pipeline and for any future construction of associated structures and facilities. When the need for non-emergency maintenance and construction activities is identified, Enbridge will complete additional surveys in order to identify any newly constructed burrows and construction will proceed as follows:

- If no burrows occur within the area of activity, Enbridge will carry out its construction and maintenance using standard practices.
- If burrows are identified near, but not within the project area:
 - All personnel working in the vicinity of FGS habitat will receive a training session prior to activities regarding general information about FGS, mitigation measures, and regulations protecting the FGS.
 - The construction work area will be kept at least ten feet from any of the surveyed burrows; the construction corridor will be narrowed as necessary to avoid burrows within ten feet of proposed work areas, unless other provisions can be made to minimize the potential for impacts.
 - Barrier fencing will be placed along the edge of the construction work area on the trail side and along the edges of the work area at crossings and road borings in areas within 300 feet of a potential FGS burrow.
 - Restoration in non-cultivated areas will be completed using native species or based on landowner recommendations where appropriate.
 - Site restoration will return the site to its original contours and natural vegetation will be seeded with native prairie grass (Table 1) and returned to original conditions. Erosion control methods will be implemented and monitored until successful establishment of newly planted vegetation.
- If burrows are identified within the project area:
 - All personnel working in the vicinity of FGS habitat will receive training regarding general information about FGS, mitigation measures, and regulations protecting the FGS.
 - The construction zone will be minimized to disturb the smallest practicable area.
 - If possible, construction will be timed to facilitate trapping and relocation.

- Barrier fencing will be installed around the construction corridor to exclude FGS at least two weeks prior to construction activity. Traps will be placed within the fenced areas until construction begins. Any squirrels captured will be documented and relocated to nearby suitable and accessible habitat with a low density of FGS.
- The environmental inspector will monitor the area during construction and restoration.
- Barrier fencing will remain in place until final cleanup and restoration is complete so that no further machinery will impact the area.

B. Measures to minimize effects of construction

Along the Wauponsee Trail (from milepost 39.2 to 45.5), the following conservation practices will be implemented to minimize potential negative impacts to FGS:

- All personnel working in the vicinity of FGS habitat will receive a training session prior to activities regarding general information about FGS, mitigation measures, and regulations protecting the FGS.
- Barrier fencing will be placed along the edge of the construction work area on the trail side and along the edges of the work area at crossings and road borings in areas within 300 feet of a potential FGS burrow.
- If the route is moved for any reason, but still occurs in suitable habitat, surveys will be conducted as necessary and appropriate conservation measures will be implemented.

In addition, there is one location where burrows are found within the proposed construction right-of-way that could not be avoided by re-routing or altering the workspace. This area is located in the vegetated area near an unnamed tributary ditch to Prairie Creek (milepost 42.7). Impacts to the potential FGS burrows found within the project right-of-way will be minimized with the following practices:

- At the tributary ditch to Prairie Creek (milepost 42.7), there are five potential FGS burrows within the proposed construction corridor. In 2008, field trapping surveys confirmed the presence of FGS within the corridor at this location (see survey report):
 - Barrier fencing will be installed around the construction corridor to exclude FGS at least two weeks prior to construction activity. Traps will be placed within the fenced areas until construction begins. Any squirrels captured will be documented and relocated to nearby suitable and accessible habitat with a low density of FGS.
 - The environmental inspector will monitor the area during construction and restoration activities.
 - Barrier fencing will remain in place until final cleanup and restoration is complete so that no further machinery will impact the area.

Figure 1 shows the proposed layout of barrier fencing and the potential burrow.

G. Plans for monitoring these measures

The environmental inspector is responsible for ensuring that all tasks described above are completed prior to and during construction in this portion of the project. The inspector will be on-site during construction activities and will perform daily checks to ensure barrier fencing is in place and other tasks are followed appropriately. The environmental inspector will report any FGS found within the project corridor and any damaged barrier fencing to the Illinois Department of Natural Resources (IDNR).

In addition, a report of the trapping and relocation efforts prior to construction will be provided to the IDNR. The report will include similar information provided in the attached trapping survey as well as information on the relocation of the individuals moved.

H. Adaptive Management Plan

If new information is discovered prior to or during construction that may impact the effectiveness of this plan, the Enbridge Environmental staff (including Environmental Inspectors, and Construction Managers) will alter the plan appropriately. In doing so, Enbridge will report to the IDNR with a description of the changed circumstances or new information and propose modifications to the plan. Since this would likely occur during or immediately preceding construction, Enbridge will request a timely response from the IDNR in order to keep the project moving and reduce delays while work is being conducted in the vicinity of the FGS habitat.

I. Funding verification

Enbridge has fully incorporated the Conservation Plan into its construction plans and training programs for the project and has secured the funds necessary for its implementation as part of the overall project budget.

1.10 Potential Alternative Actions Considered

Enbridge considered two options other than the measures outlined in its Conservation Plan in order to minimize the potential for impacts.

One option considered was slight modification of the route. Possible reroutes considered include routes that move the pipeline further east and south of the current alignment along the Wauponsee trail. However, surveys indicated that potential FGS burrows occur along nearby road grades and elsewhere along the ditch. Therefore, regardless of the crossing point of these features there is potential for FGS and burrow systems and complete avoidance is not practical.

A second alternative considered was to install the pipeline under the ditch and spoil pile at milepost 42.7 without trenching or surface disturbance using a horizontal directional drill (HDD) or other similar technique. This alternative requires additional space on either side of the ditch, which is limited by nearby suitable habitat at the road crossing just southwest of the ditch and the wetland north and east. In addition, using an HDD greatly increases the amount of time needed in the area. During this time the construction equipment must operate day and night while installing the pipe below the resources. Such a technique would be disruptive to the FGS and other state-listed species known to occur nearby in Midewin, such as the loggerhead shrike and upland sandpiper.

The proposed technique minimizes the time of construction, the amount of ground disturbance, and the length of the pipeline in this area. Therefore, the proposed Conservation Plan will result in the least likelihood of disrupting the movements of multiple state-listed species. With the proposed trapping and relocation plan, the potential for impacts to FGS is minimal.

1.11 Potential Impacts and Continued Species Viability

The Manhattan to Streator Project will have minimal direct impacts on FGS habitat and individuals. Construction areas will be restored to their original grade following construction and non-agricultural lands will be revegetated with native prairie grasses listed in Table 1. As such, the habitat conditions at the site following the project will be similar to those prior to construction. Any impacts that occur in accordance with the requested incidental take permit would be limited to an individual or small number of individuals that cannot be trapped and moved. Therefore, Enbridge believes that implementing its proposed Conservation Plan will not reduce the likelihood of the survival or recovery of the endangered species or threatened species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois.

Enbridge's conclusion is supported by the attached survey report. Field surveys indicate a total of 30 potential FGS burrows near the project corridor. It is unlikely that these are the only FGS burrows in this area and many of the burrows may not have FGS dwelling in them. The FGS population of the area likely extends east into better habitat within the Midewin tallgrass prairie and the burrows found near the project are probably near the population edge. Furthermore, considering the proposed actions described above, it is unlikely that FGS individuals will be injured during construction activities. The highest potential for injury is at milepost 42.7, where 5 burrows will occur within the construction workspace. After exclusion fencing is placed and individuals are trapped and removed, it is anticipated that not more than 2 or 3 individuals will still be within the workspace; these will likely be able to avoid construction equipment or they will be discovered by construction staff before they are injured.

An **Implementing Agreement** for the activities described above is included in Appendix A.

FIGURE 1 (9 PAGES) –
Franklin's Ground Squirrel Conservation Plan Map
with Public Land Survey Information

**APPENDIX A –
IMPLEMENTING AGREEMENT**

Implementing Agreement between Enbridge Pipelines (Southern Lights) L.L.C., and Illinois Department of Natural Resources

In order to ensure compliance with conditions described in the Incidental Take Permit for Franklin's ground squirrel on the Manhattan to Streator Project, Enbridge Pipelines (Southern Lights) L.L.C. (Enbridge) agrees to implement the measures described in the Conservation Plan. The following parties are responsible for ensuring proper implementation of the Plan:

1. Enbridge Environmental Staff responsibilities include:
 - Along Wauponsee Trail (milepost 39.2 to 45.5)**
 - a. Ensuring that maps are accurate and up-to-date showing the locations of potential Franklin's ground squirrel burrows and known locations of populations;
 - b. Coordinating Training for all construction personnel from a qualified biologist with knowledge of Franklin's ground squirrels and pipeline construction.
 - c. Coordinating additional surveys in the event that future reroutes occur in potential Franklin's ground squirrel habitat.
 - Tributary ditch to Prairie Creek (milepost 42.7)**
 - d. Coordinating live-trapping and relocation to suitable habitat prior to construction
2. Enbridge Construction Staff responsibilities include:
 - Along Wauponsee Trail (milepost 39.2 to 45.5)**
 - a. Installation of barrier fencing within 300 feet of potential FGS burrows.
 - b. Ensuring that all personnel on site will receive training prior to work in the area.
 - c. Removal of barrier fencing following site restoration.
 - Tributary ditch to Prairie Creek (milepost 42.7)**
 - d. Installation of barrier fencing prior to live-trapping.
 - e. Removal of barrier fencing following site restoration.
3. Environmental Inspector responsibilities include:
 - Along Wauponsee Trail (milepost 39.2 to 45.5)**
 - a. Ensuring that all tasks are completed as described in Conservation Plan
 - b. Reporting Franklin's ground squirrel sightings to the Illinois DNR.
 - c. A daily inspection of barrier fencing to ensure it is in place and functioning.
 - Tributary ditch to Prairie Creek (milepost 42.7)**
 - d. Ensuring that all tasks are completed as described in Conservation Plan
 - e. A daily inspection of the area for Franklin's ground squirrels.
 - f. A daily inspection of barrier fencing to ensure it is in place and functioning.
4. **Long-term maintenance work** - Enbridge Environmental and Facilities Coordinator responsibilities include:
 - a. Ensuring procedures in the Conservation Plan are implemented if maintenance or upgrades are performed on this pipeline or additional facilities;
 - b. Coordinating with the Environmental Staff, Construction Staff, and Environmental Inspectors working on maintenance or upgrades to these pipeline facilities

These responsibilities will be delegated to the appropriate parties, as described, by the **Enbridge Manhattan to Streator Environmental Project Manager**.

Signed _____ Date _____

CONSERVATION PLAN

Franklin's Ground Squirrel (*Spermophilus franklinii*)

Description of Impact

It is likely that some Franklin's ground squirrels (FGS) along the project corridor will experience temporary disturbance from noise and other construction activity. A few FGS individuals will need to be relocated prior to construction. It is also possible that one or more individuals could be injured or killed during construction if they cannot be trapped and relocated. The intent of this Conservation plan is to avoid all impacts to the extent practicable, and greatly minimize those impacts that cannot be avoided.

Steps for Avoidance, Minimization, and Mitigation

In Illinois, FGS prefer habitats with intermediate and tall grasses; they are not found in areas with short or mowed grasses. Cultivated land is rarely used by the diurnal squirrels, which are most often found in dense vegetation where there is limited mowing or grazing. In 1855, Robert Kennicott wrote that FGS dug burrows in river and ditch banks.¹ Now, the FGS often create burrows in elevated landscape features such as the elevated beds of railroad and road rights-of-way. Their burrows are fairly deep and well drained to be insulated from heat and cold and may have multiple entrance holes.

One of the true hibernators, FGS sleep from about September to April with a body temperature just a few degrees over freezing. Right after coming out of hibernation, they breed and have a single yearly litter of 6-9 pups around early June.² FGS eat insects, green plants, seeds, fruit, amphibians, bird eggs, young birds and mammals, and carrion. Their principal predators are the red-tailed hawk, red fox, badger, coyote, striped skunk, mink, and long-tailed weasel. Their home range is usually 1.5-3 acres. At adolescence, male juveniles disperse for an unknown distance. In the wild, life expectancy is 4-5 years for females and 1-2 years for males.¹

Even during spring and summer, the squirrels spend a majority of time in the burrow (see attached report). As such, an important conservation practice will be to avoid the burrows, which have been identified during the field surveys.

The key habitats crossed by the construction corridor of the pipeline project include the Wauponsee Trail corridor (a former railroad), several small roads, and a ditch with a berm on the western side created from ditch spoils. The pipeline right-of-way crosses the trail corridor at approximate milepost 39.4 and runs adjacent to the trail from that point to the end of the project at milepost 45.5. (Additional information on FGS biology and habitat at the site is provided in the attached Survey Report).

Pipeline and Facility Construction

There are numerous burrows present along the trail, just outside of the proposed construction corridor that will not be directly impacted during construction. These burrows are located on the "spoil side" of the construction corridor, so spoils from the pipeline trench are placed on this side and other construction activity, such as excavation and moving machinery, is minimal. The edge of the spoil side construction area extends 20 feet from the proposed pipeline route, the other side of the pipeline, the working side, will be 75 feet wide (see attached map of Potential FGS Burrow Locations). There will be no digging on the spoil side of the corridor, so there is little chance of harming FGS in their burrows along the trail.

¹ <http://chicagowildernessmag.org/issues/winter2002/franklins.html>

² <http://www.inhs.uiuc.edu/inhsreports/jan-feb99/franklin.html>

Along the Wauponsee Trail (from milepost 39.2 to 45.5), the following conservation practices will be implemented to limit potential negative impacts to FGS:

- All personnel working in the vicinity of FGS habitat will receive a training session prior to activities regarding general information about FGS, mitigation measures, and regulations protecting the FGS.
- The construction work area will be at least ten feet from any of the surveyed burrows; the construction corridor will be narrowed as necessary to avoid burrows within ten feet of proposed work areas (except at milepost 42.7 as described below).
- Barrier fencing will be placed along the edge of the construction work area on the trail side and along the edges of the work area at crossings and road borings in areas within 300 feet of a potential FGS burrow.
- If the route is moved for any reason, but still occurs in suitable habitat, surveys will be conducted as necessary and appropriate conservation measures will be implemented.
- Restoration in non-cultivated areas will be completed using native species or based on landowner recommendations where appropriate.
- Site restoration will return the entire area to its original contours and areas with natural vegetation will be seeded with native prairie grasses (See Table 1) and returned to original conditions. Erosion control methods will be implemented and monitored until successful establishment of newly planted vegetation.

TABLE 1- Franklin's Ground Squirrel Conservation Plan Seed Mix ¹		
Scientific Name	Common Name	Percent of Mix
Grasses		
<i>Andropogon gerardii</i>	Big bluestem	30
<i>Sorghastrum nutans</i>	Indian grass	25
<i>Panicum virgatum</i>	Switchgrass	5
<i>Elymus canadensis</i>	Canada wild-rye	25
<i>Schyzachyrium scoparium</i>	Little bluestem	15
Total native grass seed		15 lbs/acre
Oats, Barley, wheat, or other non-persistent annual cover crop		½ rate used for erosion control

¹ Seed mixes approximated. Actual seed mix will depend on availability of local suppliers

In addition, there are three locations where burrows are found within the proposed construction right-of-way: Jordan Creek (milepost 39.8), a fence row (milepost 40.4), and an unnamed tributary ditch to Prairie Creek (milepost 42.7). Impacts to the potential FGS burrows found within the project right-of-way will be minimized with the following practices:

- The construction right-of-way, which is typically 95-foot wide, will be narrowed to remain at least 10-feet from any of the potential FGS burrows except at the tributary ditch to Prairie Creek (milepost 42.7).
- At the tributary ditch to Prairie Creek (milepost 42.7), there are five potential FGS burrows within the proposed construction corridor. In 2008, field trapping surveys confirmed the presence of FGS within the corridor at this location (see attached report):
 - Barrier fencing will be installed around the construction corridor to exclude FGS at least two weeks prior to construction activity. Traps will be placed within the fenced areas until construction begins. Any squirrels captured will be

documented and relocated to nearby suitable and accessible habitat with a low density of FGS.

- The environmental inspector will monitor the area during construction and restoration activities.
- Barrier fencing will remain in place until final cleanup and restoration is complete so that no further machinery will impact the area.

Figures showing example layouts of burrow and barrier fencing locations are included in Appendix A.

Long-Term Maintenance and Management

Enbridge intends to implement the appropriate measures above for all non-emergency maintenance and repair work along the pipeline and for any future construction of associated structures and facilities. When the need for non-emergency maintenance and construction activities is identified, Enbridge will complete additional surveys in order to identify any newly constructed burrows then proceed as follows:

If no burrows occur within the area of activity, Enbridge will carry out its construction and maintenance using standard practices.

If burrows are identified near, but not within the project area:

- All personnel working in the vicinity of FGS habitat will receive a training session prior to activities regarding general information about FGS, mitigation measures, and regulations protecting the FGS.
- The construction work area will be kept at least ten feet from any of the surveyed burrows; the construction corridor will be narrowed as necessary to avoid burrows within ten feet of proposed work areas, unless other provisions can be made to minimize the potential for impacts.
- Barrier fencing will be placed along the edge of the construction work area on the trail side and along the edges of the work area at crossings and road borings in areas within 300 feet of a potential FGS burrow.
- Restoration in non-cultivated areas will be completed using native species or based on landowner recommendations where appropriate.
- Site restoration will return the site to its original contours and natural vegetation will be seeded with native prairie grass (Table 1) and returned to original conditions. Erosion control methods will be implemented and monitored until successful establishment of newly planted vegetation.

If burrows are identified within the project area:

- All personnel working in the vicinity of FGS habitat will receive training regarding general information about FGS, mitigation measures, and regulations protecting the FGS.
- The construction zone will be minimized to disturb the smallest practicable area.
- If possible, construction will be timed to facilitate trapping and relocation.
- Barrier fencing will be installed around the construction corridor to exclude FGS at least two weeks prior to construction activity. Traps will be placed within the fenced areas until construction begins. Any squirrels captured will be documented and relocated to nearby suitable and accessible habitat with a low density of FGS.

- The environmental inspector will monitor the area during construction and restoration.
- Barrier fencing will remain in place until final cleanup and restoration is complete so that no further machinery will impact the area.

Potential Alternative Actions Considered

Enbridge considered two options other than the measures outlined in its Conservation Plan in order to minimize the potential for impacts.

One option considered was changing the routing slightly. Possible reroutes considered included routes that moved the pipeline further east and south of the current alignment along the Wauponsee trail. However, surveys indicated that potential FGS burrows occur along nearby road grades and elsewhere along the ditch. Therefore, regardless of the crossing point of these features there is potential for FGS and burrow systems and complete avoidance is not possible.

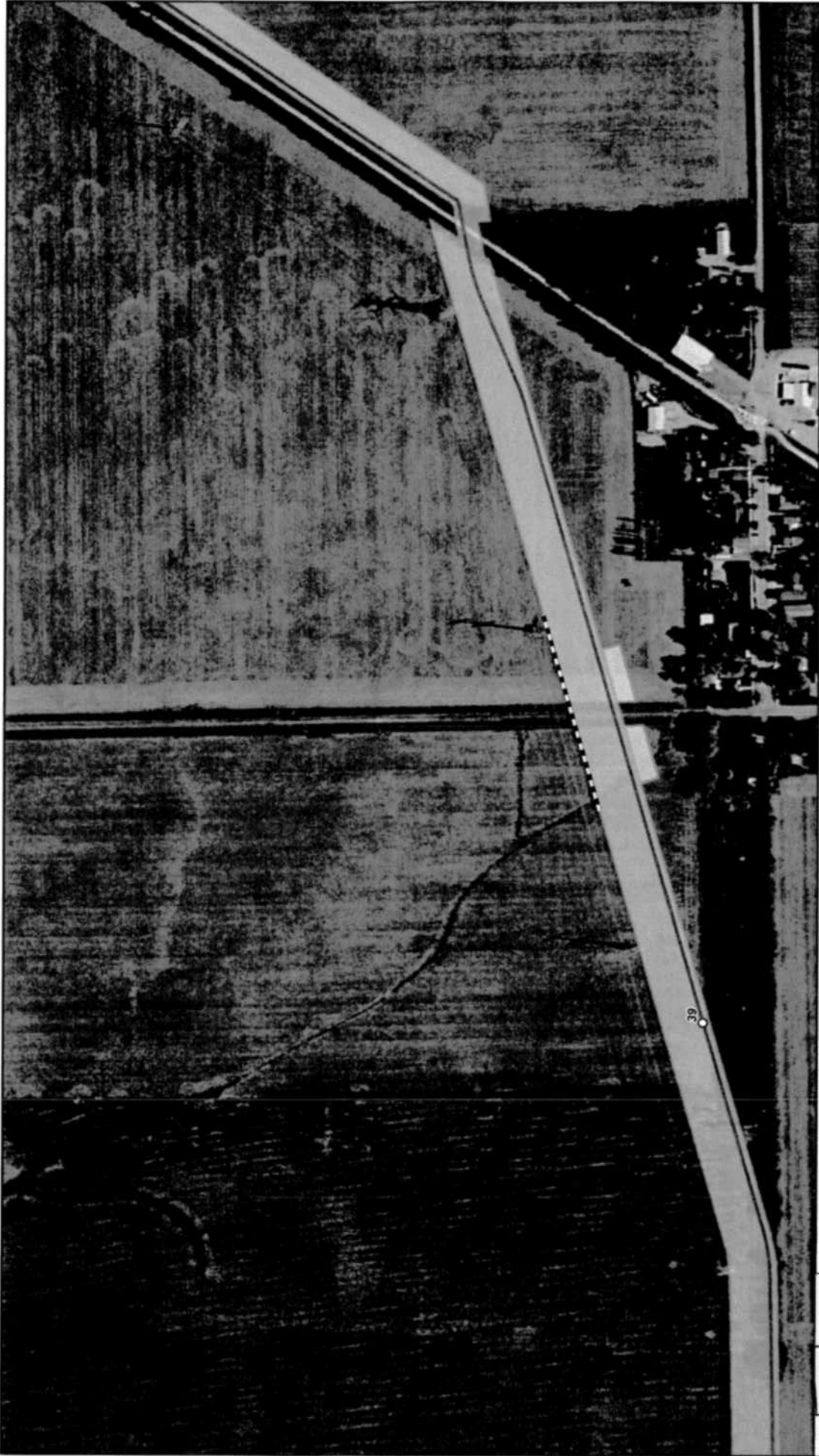
A second alternative considered was installing the pipeline under the ditch and spoil pile at milepost 42.7 without trenching or surface disturbance using a horizontal directional drill (HDD) or other similar technique. This alternative requires additional space on either side of the ditch, which is limited by nearby suitable habitat at the road crossing just southwest of the ditch and the wetland north and east. In addition, using an HDD greatly increases the amount of time needed in the area. During this time the construction equipment must operate day and night while installing the pipe below the resources. Such a technique would be disruptive to the FGS and other state-listed species known to occur nearby in Midewin, such as the loggerhead shrike and upland sandpiper.

The proposed technique minimizes the time of construction, the amount of ground disturbance, and the length of the pipeline in this area. Therefore, the proposed Conservation Plan will result in the least likelihood of disrupting the movements of multiple state-listed species. With the proposed trapping and relocation plan, the potential for impacts to FGS is minimal.

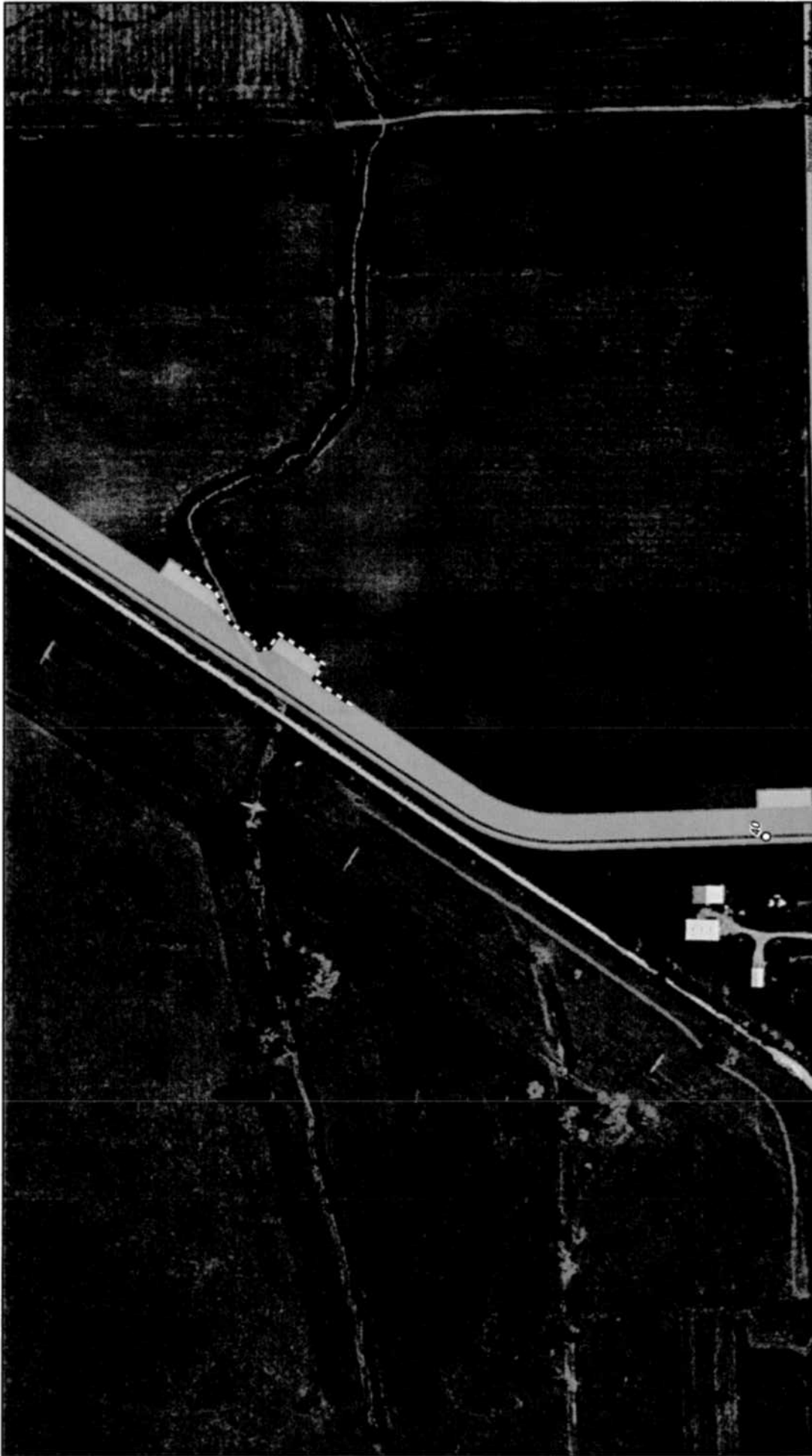
Summary of Potential Impacts and Continued Species Viability

The Manhattan to Streator Project will have minimal direct impacts on FGS habitat and individuals. Construction areas will be restored to their original grade following construction and non-agricultural lands will be revegetated with native prairie grasses listed in Table 1. As such, the habitat conditions at the site following the project will be similar to those prior to construction. Any impacts that occur in accordance with the requested incidental take permit would be limited to an individual or small number of individuals that cannot be trapped and moved. Therefore, Enbridge believes that implementing its proposed Conservation Plan will not reduce the likelihood of the survival or recovery of the endangered species or threatened species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois. An Implementing Agreement for the activities described above is included in Appendix B.

**APPENDIX A -
SITE LAYOUT MAPS FROM APPROXIMATE MILEPOST
39.0 TO 45.5**



	<p>Manhattan to Streater Project Franklin's Ground Squirrel Conservation Plan</p>	<p>1:3,000 DATE: 09/24/08 REVISED: 10/20/08 DRAWN BY: M.T. Teichert</p>
	<p>○ Mile Post — Rev P Route ● Potential Franklin's Ground Squirrel Burrow</p>	<p>— Barrier Fence - - - - - Temporary Workspace - - - - - Extra Temp Workspace</p>
<p>0 250 500 Feet</p>		<p>Sheet 1 of 9</p>



Manhattan to Streator Project Franklin's Ground Squirrel Conservation Plan

Sheet 2 of 9
1:3,000 | DATE: 09/24/08 | REVISED: 10/20/08 | DRAWN BY: MLT/achart

Mile Post

Barrier Fence

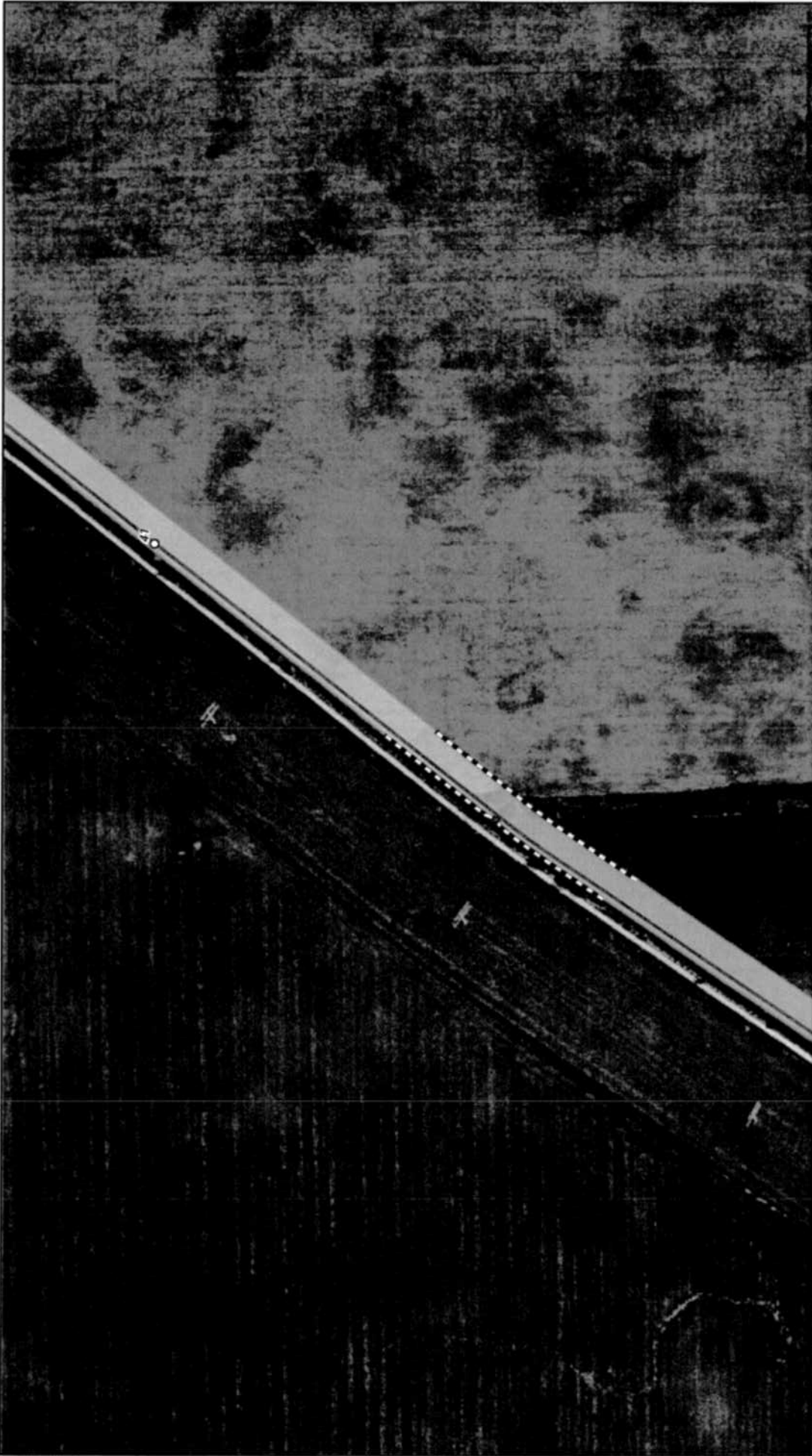
Rev P Route


Temporary Workspace

Potential Franklin's Ground Squirrel Burrow

Extra Temp Workspace

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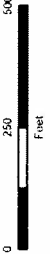









Cambridge
Engineering Group, Inc.

Manhattan to Streater Project
Franklin's Ground Squirrel Conservation Plan

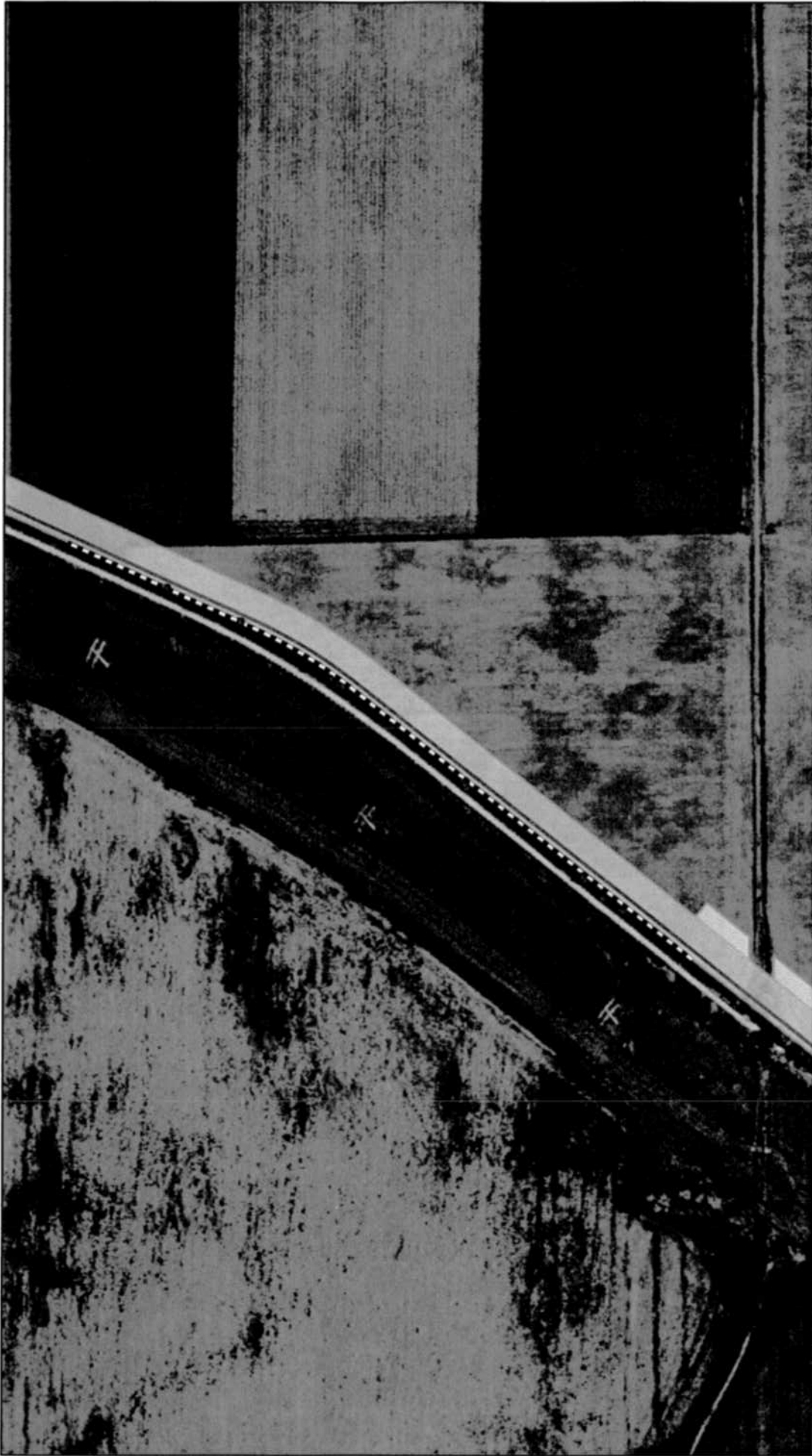
Sheet 3 of 9





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Will
Grundy
La Salle

○ Mile Post
— Rev P Route
● Potential Franklin's Ground Squirrel Burrow

Barrier Fence
Temporary Workspace
Extra Temp Workspace

0 250 500
Feet

North arrow



AMBRIDGE

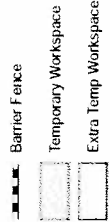
Manhattan to Streator Project
Franklin's Ground Squirrel Conservation Plan


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Sheet 4 of 9





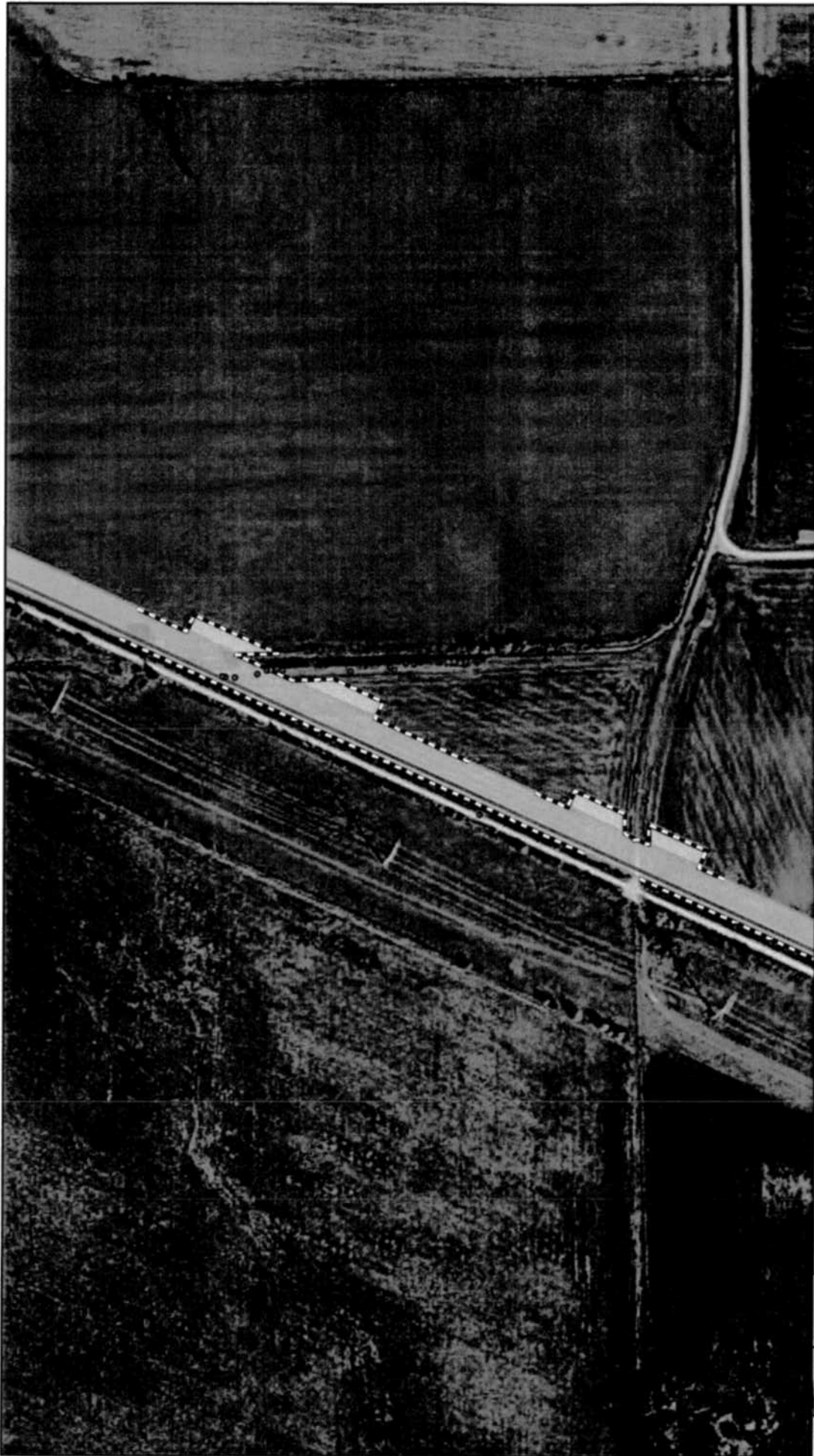




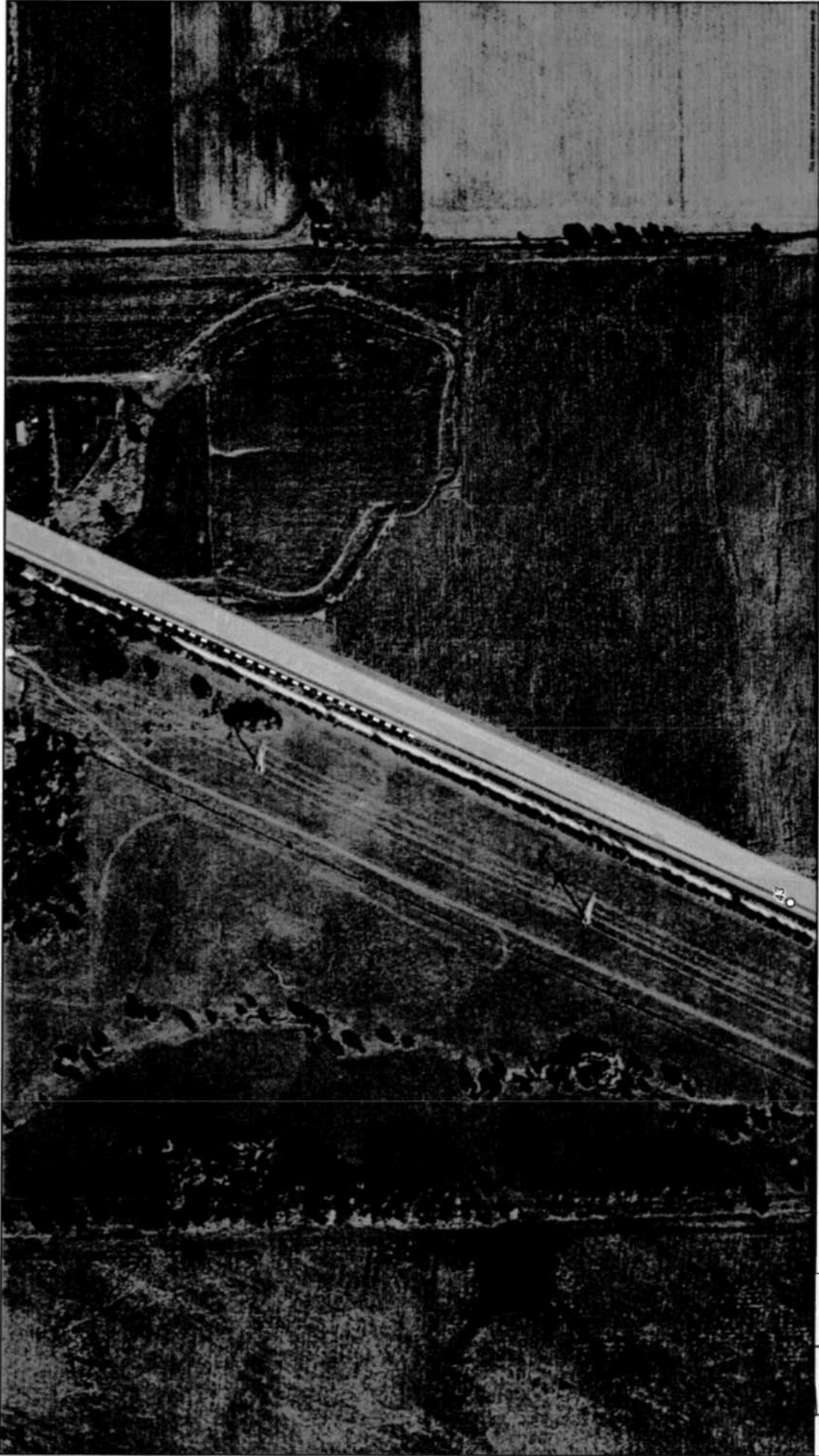
Manhattan to Streator Project
Franklin's Ground Squirrel Conservation Plan

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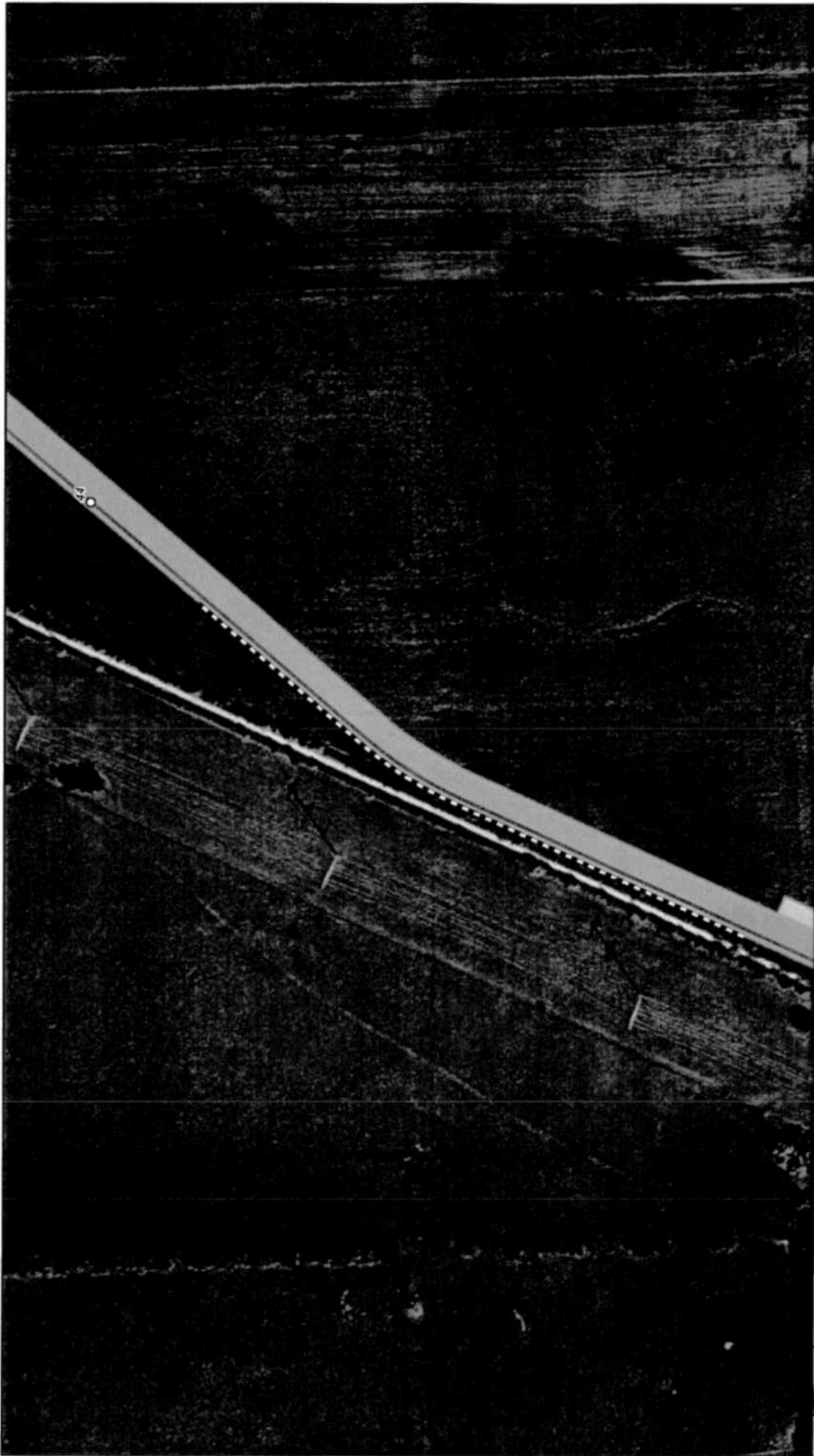
Sheet 5 of 9



	<p>Manhattan to Streater Project Franklin's Ground Squirrel Conservation Plan</p>		<p>1:3,000 DATE: 09/24/08 REVISED: 10/20/08 DRAWN BY: M. Teichert</p>	<p>Sheet 6 of 9</p>
		<p>Barrier Fence Temporary Workspace Extra Temp Workspace</p>	<p>Mile Post Rev P Route Potential Franklin's Ground Squirrel Burrow</p>	<p>Will Grundy La Salle Kankakee</p>



	<ul style="list-style-type: none">○ Mile Post— Rev P Route● Potential Franklin's Ground Squirrel Burrow	<ul style="list-style-type: none">Barrier FenceTemporary WorkspaceExtra Temp Workspace			<p>Manhattan to Streater Project Franklin's Ground Squirrel Conservation Plan</p> <p>1:3,000 DATE: 09/24/08 REVISED: 10/20/08 DRAWN BY: ML Teichert</p> <p>Sheet 7 of 9</p>
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N



0 250 500
Feet

- Mile Post
- Rev P Route
- Potential Franklin's Ground Squirrel Burrow

- Will
- Grundy
- La Salle
- Kankakee

- Barrier Fence
- Temporary Workspace
- Extra Temp Workspace

Manhattan to Streator Project
Franklin's Ground Squirrel Conservation Plan





This information is for informational purposes only.

Manhattan to Streator Project
Franklin's Ground Squirrel Conservation Plan

0 250 500
Feet

Barrier Fence
Temporary Workspace
Extra Temp Workspace

Mile Post
Rev P Route
Potential Franklin's Ground Squirrel Burrow

Will
Grundy
La Salle
Kankakee

1:3,000 | DATE: 09/24/08 | REVISED: 10/20/08 | DRAWN BY: MLT/eschert | Sheet 9 of 9

**APPENDIX B –
IMPLEMENTING AGREEMENT**

Implementing Agreement between Enbridge Energy, LP, and Illinois Department of Natural Resources

In order to ensure compliance with conditions described in the Incidental Take Permit for Franklin's ground squirrel on the Manhattan to Streator Project, Enbridge Energy, Limited Partnership (Enbridge) agrees to implement the measures described in the Conservation Plan. The following parties are responsible for ensuring proper implementation of the Plan:

1. Enbridge Environmental Staff responsibilities include:
 - Along Wauponsee Trail (milepost 39.2 to 45.5)**
 - a. Ensuring that maps are accurate and up-to-date showing the locations of potential Franklin's ground squirrel burrows and known locations of populations;
 - b. Coordinating Training for all construction personnel from a qualified biologist with knowledge of Franklin's ground squirrels and pipeline construction.
 - c. Coordinating additional surveys in the event that future reroutes occur in potential Franklin's ground squirrel habitat.
 - Tributary ditch to Prairie Creek (milepost 42.7)**
 - d. Coordinating live-trapping and relocation to suitable habitat prior to construction
2. Enbridge Construction Staff responsibilities include:
 - Along Wauponsee Trail (milepost 39.2 to 45.5)**
 - a. Installation of barrier fencing within 300 feet of potential FGS burrows.
 - b. Ensuring that all personnel on site will receive training prior to work in the area.
 - c. Removal of barrier fencing following site restoration.
 - Tributary ditch to Prairie Creek (milepost 42.7)**
 - d. Installation of barrier fencing prior to live-trapping.
 - e. Removal of barrier fencing following site restoration.
3. Environmental Inspector responsibilities include:
 - Along Wauponsee Trail (milepost 39.2 to 45.5)**
 - a. Ensuring that all tasks are completed as described in Conservation Plan
 - b. Reporting Franklin's ground squirrel sightings to the Illinois DNR.
 - c. A daily inspection of barrier fencing to ensure it is in place and functioning.
 - Tributary ditch to Prairie Creek (milepost 42.7)**
 - d. Ensuring that all tasks are completed as described in Conservation Plan
 - e. A daily inspection of the area for Franklin's ground squirrels.
 - f. A daily inspection of barrier fencing to ensure it is in place and functioning.
4. **Long-term maintenance work** - Enbridge Environmental and Facilities Coordinator responsibilities include:
 - a. Ensuring procedures in the Conservation Plan are implemented if maintenance or upgrades are performed on this pipeline or additional facilities;
 - b. Coordinating with the Environmental Staff, Construction Staff, and Environmental Inspectors working on maintenance or upgrades to these pipeline facilities

These responsibilities will be delegated to the appropriate parties, as described, by the Enbridge Manhattan to Streator Environmental Project Manager.

Signed _____ Date _____

Position _____