

I-294/I-57 INTERCHANGE COOK COUNTY, ILLINOIS



ENVIRONMENTAL ASSESSMENT ADDENDUM

Proposed 147th Street Improvements - Kedzie Avenue to Western Avenue/Dixie Highway
I-57/I-294 Interchange - Minor Updates Based on New Environmental Studies

FEBRUARY 2009



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APPENDIX B: Correspondence

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Background and History

The Environmental Assessment (EA) for the I-294 at I-57 Interchange Project was approved by the Federal Highway Administration (FHWA) on August 20, 2008. The Illinois Department of Transportation (IDOT) and the Illinois Tollway have determined that this project shall be conducted jointly and that additional elements and logical termini on 147th Street (classified as a minor urban arterial) will be included as a part of the proposed project.

The purpose of this document is to describe additional work to be completed on 147th Street from Kedzie Avenue to Western Avenue/Dixie Highway and the impacts that will result, as well as impact and project updates along the I-294 at I-57 Interchange. The Environmental Assessment for the I-294 at I-57 project was approved for public comment on August 20, 2008 and the public comment period was held from August 25, 2008 to September 26, 2008.

Subsequently, the Illinois Department of Transportation in conjunction with the Illinois Tollway has continued to advance the engineering and environmental studies for this project including the I-294 at I-57 system interchange and four surrounding service interchanges (I-57 at 147th St. Interchange, I-57 at 159th St. interchange, I-294 at 147th St. Interchange, and I-294 at US 6 interchange). The additional effort is classified as follows:

- Additional geometric improvements along 147th Street (IL Route 83) from Kedzie Avenue to Western Avenue/Dixie Highway have been identified to accommodate an increase in travel demand and changes in travel patterns along this arterial as a result of the new ramp access to I-294 to and from the north as shown in the EA. The logical termini along 147th Street previously identified in the EA ended either side of the new I-294 ramps.
- The preliminary engineering for the I-294 at I-57 interchange has been advanced based on new design mapping not available at the time of the original Environmental Assessment. As part of the next phase of engineering design, the Illinois Tollway and IDOT are committed to continuing to look at ways to reduce proposed ROW where it is cost effective with the understanding that the roadway and ramp configurations, as proposed, will be implemented.
- IDOT updated environmental studies in the Fall 2008 for the I-294 at I-57 Interchange Study, and the new work proposed along 147th Street. These studies included wetland delineation, tree surveys, threatened and endangered species, botanical surveys and a Preliminary Environmental Site Assessment (PESA) for special waste issues.
- An avian census was conducted by the Illinois Natural History Survey in 2008 for the I-294 at I-57 Interchange project.

The intention of this addendum is to document previously unreported impacts associated with the additional improvements along 147th Street and note any changes to impacts previously reported in the I-294/I-57 EA as a result of the subsequent engineering and environmental studies since the September 10, 2008 Public Hearing.

New Project Improvements

The proposed work on 147th Street will consist of providing a uniform 4-lane cross section with a variable width median from Kedzie Avenue to west of the southbound I-57 ramps. Three eastbound lanes are proposed from the southbound I-57 ramps to Western Avenue/ Dixie Highway. The work will consist of pavement reconstruction to provide standard width through lanes and the addition of a bi-directional left turn lane from Kedzie Avenue to Cleveland Avenue. Other work will include intersection approach and left turn lane improvements to accommodate revised traffic patterns due to the new I-294 access points along 147th Street, traffic signal replacement and interconnection, drainage improvements and intersection improvements at Western Avenue/Dixie Highway. Additional right-of-way acquisition will be required to accommodate lane widening, turn lane additions and retention of sidewalks.

Environmental Assessment Addendum

The Environmental Assessment Addendum includes proposed improvements along 147th Street between Kedzie Avenue and Western Avenue/Dixie Highway and updates to the I-294/I-57 Interchange. The results of the analysis follow the section numbering of the Environmental Assessment document:

Signature Page: Interstate 294/Interstate 57 Interchange, Cook County, Illinois ENVIRONMENTAL ASSESSMENT

The last paragraph, sentences three, four, and five should be removed and replaced as follows:

Major components of the proposed improvements include a new interchange between I-294 and I-57, a half-diamond interchange at I-294 and 147th Street and improvements to 147th Street between Kedzie Avenue and Western Avenue/Dixie Highway. There are 43 residential relocations and 3 business relocations and approximately 34.0 acres of new right-of-way that will be required. The proposed improvements impact approximately 4.293 acres of wetlands and 19.3 acres of floodplains.

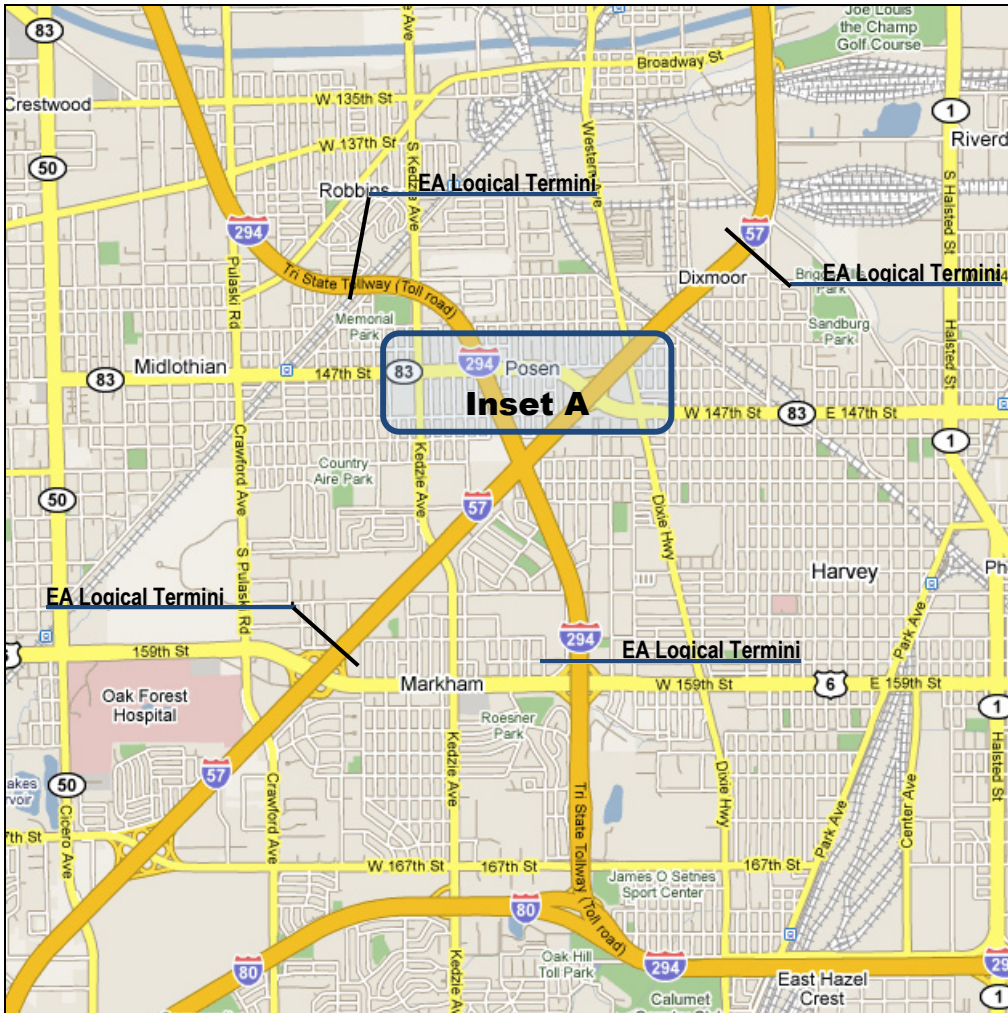
1.0 PURPOSE AND NEED

Page 1-1, 1.0 PURPOSE AND NEED, Section 1.1 Introduction

The third paragraph, last sentence should be deleted and replaced as follows:

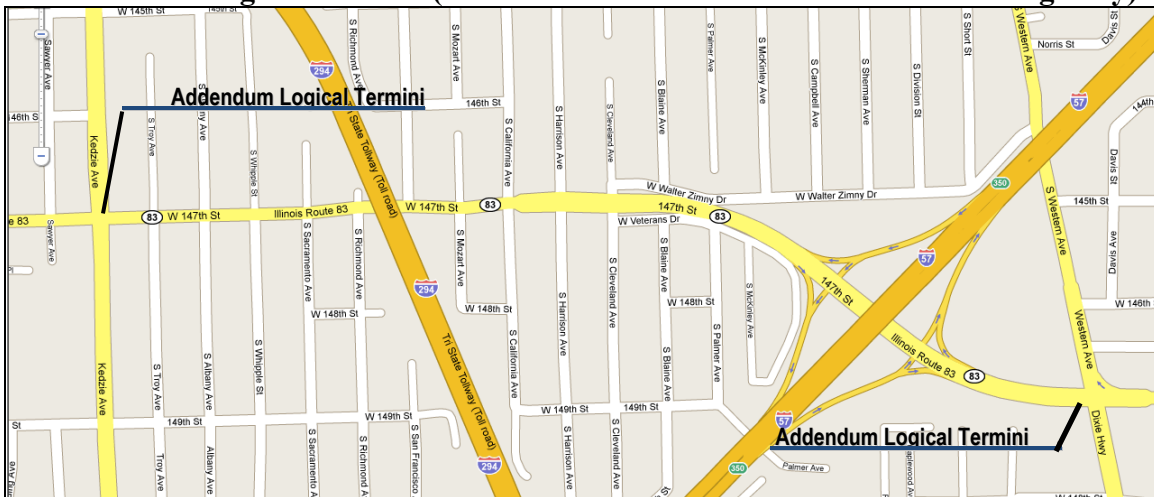
Two additional logical termini points for the proposed 147th Street improvements are the intersection of 147th Street and Kedzie Avenue on the west and the intersection of 147th Street and Western Avenue/Dixie Highway on the east. See revised Figure 1-2.

Figure 1-2: I-294 at I-57 Interchange Logical Termini



Logical termini for the I-294/I-57 Interchange Project identified in the Environmental Assessment (Aug 20, 2008) extended along Interstate 57 from 159th Street to the Canadian National Railroad. Along Interstate 294, the logical termini extended from north of the 159th Street Interchange to the Metra Rock Island Railroad. It did not include 147th Street outside of the immediate interchange area. Refer to the Figure 1-2 in the Environmental Assessment.

**Figure 1-2A: Inset A
147th Street Logical Termini (Kedzie Avenue to Western Avenue/Dixie Highway)**



Page 1-4, Section 1.1 Introduction

The second paragraph, last sentence should be removed and replaced as follows:

The Illinois Tollway Board has approved a systemwide Congestion Relief Capital Program entitled Tomorrow's Transportation Today that includes a funding commitment of up to \$500 million for engineering, property acquisition, mitigation and construction of the I-57 at I-294 Interchange Project.

2.0 ALTERNATIVES

Page 2-9, 2.0 ALTERNATIVES, Section 2.3.2 Preferred Alternative

The following new section is added: **2.3.2.1.6 Improvements along 147th Street**

Page 2-9, 2.0 Alternatives, Section 2.3.2.1.6 Improvements along 147th Street

The following paragraph should be added to this section:

The 147th Street roadway will be widened to a consistent section consisting of two 12-foot wide inside through lanes and two 14-foot wide outside through lanes to accommodate bicycles with barrier type curb and gutter on the outside and with a 12-foot wide bi-directional turn lane from Kedzie Avenue to Cleveland Avenue, except for additional widening and barrier median through the interchange with I-294. From Cleveland Avenue to Western Avenue/Dixie Highway, three 12-foot wide inside through lanes (two eastbound and one westbound) and two 14-foot wide outside through lanes are proposed. Improvements to the 147th Street corridor include the installation and interconnection of traffic signals at the cross road intersections with Kedzie, New SB I-294 Ramp terminal, Harrison, Cleveland, NB and SB I-57 Ramp terminals and Western Avenue/Dixie Highway. Cross road intersection improvements are also proposed at the 147th Street intersections with Kedzie Avenue and Western Avenue/Dixie Highway. Reference Exhibit D.

Page 2-9, Section 2.3.2.2 Cost for the Preferred Alternative

The first sentence should be revised as follows:

The estimated total cost for the Preferred Alternative including both 147th Street proposed improvements and the I-294/I-57 Preferred Build Alternative is \$535 million in 2008 dollars. The cost includes design and construction. It does not include right-of-way acquisition.

3.0 AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES

The following technical documents, investigations, letters, meeting minutes, and memoranda are provided in Appendix B:

- Cultural Resource Clearance from IDOT Central Office BD&E Environment Section dated August 26, 2008

- Illinois Tollway Meeting Minutes with The Nature Conservancy (TNC) and NEIU regarding Wetland Mitigation for the I-294/I-57 Interchange dated October 24, 2008
- Letter to Illinois Tollway related to Dropseed Prairie jurisdiction right-of-way dated November 6, 2008
- Technical Report, Botanical Survey and Assessment of I-57/I-294 Interchange Study Corridor, Cook County, by INHS, November 30, 2008
- Wetland Assessment and Delineation, by INHS, December 19, 2008
- Technical Report, Franklin's Ground Squirrel Survey at the Proposed I-294 and I-57 Interchange, Summer 2008 by INHS December 19, 2008
- Biological Resource Review dated January 6, 2009
- Biological Resources Review Concurrence from IDNR, January 12, 2009
- Memorandum, Avian Census of the I-294/I-57 Interchange Project Area, by INHS January 12, 2009
- Special Waste Waiver Concurrence dated January 20, 2009
- Preliminary Environmental Site Assessment (PESA, by Illinois State Geological Survey), December 3, 2008
- IDNR wetland concurrence memo dated January 23, 2009

Data results of the Tree Survey performed in October and November 2008, by Huff and Huff, Inc., are summarized in Section 3.5.6 Trees Environmental Consequences, Preferred Alternative.

Page 3-10, 3.1 Social and Economic Conditions, Section 3.1.1.12 Pedestrian/Bicycle/Transit Facilities, Bicycle Facilities,

The second sentence should be revised as follows:

147th Street (IL Route 83) from Kedzie Avenue to I-57 is noted as 'cautionary' and 147th Street from I-57 to Western Avenue/Dixie Highway and 159th Street (US Route 6) are noted as 'not recommended for bicycling'.

Page 3-12, Section 3.1.2 ROW Acquisition and Relocations,

The fourth paragraph, first sentence, should be revised as follows:

A total of 43 residential buildings and 3 businesses will be relocated as part of this project.

Page 3-13, Section 3.1.2 ROW Acquisition and Relocations

The fifth paragraph, first sentence should be revised as follows:

In addition, 8 residences will lose their garages.

Page 3-13, Section 3.1.2 ROW Acquisition and Relocations

The following paragraph should be added to the end of this section:

In addition to the properties that will be relocated, approximately 25 commercial properties with frontage on 147th Street, Dixie Highway and Western Avenue will have at least part of their properties located within 50 feet of proposed ROW and property acquisition of approximately 1.92 acres will be required. In most cases, the property takes consist of strip property acquisition to accommodate intersection turning lanes and/or sidewalks.

Page 3-14, Section 3.2 Farmland

No changes.

Page 3-15, Section 3.3 Air Quality, Section 3.3.2 Air Quality Environmental Consequences, Preferred Alternative

Microscale Analysis - A Pre-Screen carbon monoxide (CO) analysis was completed for the proposed project. The results from this proposed roadway improvement indicated that a COSIM air quality analysis is not required, as the results for the worst-case receptor are below the 8-hour average National Ambient Air Quality Standard for CO of 9.0 ppm that is necessary to protect the public health and welfare.

Conformity - This project is included in the FY 2007-2012 Transportation Improvement Program (TIP) endorsed by the Policy Committee of the Chicago Metropolitan Agency for Planning (CMAP), the Metropolitan Planning Organization (MPO) for the region in which the project is located. Projects in the TIP are considered to be consistent with the 2030 regional transportation plan endorsed by CMAP.

On October 9, 2008, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) determined that the 2030 regional transportation plan conforms to the State Implementation Plan (SIP) and the transportation-related requirements of the 1990 Clean Air Act Amendments. On November 18, 2008, the FHWA and the FTA determined that the TIP also conforms to the SIP and the Clean Air Act Amendments. These findings were in accordance with 40 CFR Part 93; "Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded or Approved under Title 23 USC of the Federal Transit Act."

The projects' design concept and scope are consistent with the project information used for the TIP conformity analysis. Therefore, this project conforms to the existing State Implementation Plan and the transportation-related requirements of the 1990 Clean Air Act Amendments. The TIP number assigned for the project area is 07-09-0012.

Page 3-21, Section 3.4 Traffic Noise

No changes.

Page 3-26, Section 3.5 Natural Resources, Section 3.5.2 Vegetation and Wildlife Environmental Consequences, Preferred Alternative

Approximately 34 acres of additional ROW are required to construct the proposed project. There will be a loss of approximately 34 acres of urban wildlife habitat.

Page 3-28, Table 3-12.

Table 3-12 should be updated as follows:

Table 3-12: State Endangered Species Potentially within the Study Area*

Species	State Status	Federal Status	Characteristics
Black-Crowned Night Heron (<i>Nycticorax nycticorax</i>)	Endangered	None	<ul style="list-style-type: none"> • 23 to 26 inches long • Breeds across the US • Winters in southern US • Wetland, marsh, streams, lakes, swamps and agricultural field habitat
Mountain Blue-Eyed Grass (<i>Sisyrinchium montanum</i>)	Endangered	None	<ul style="list-style-type: none"> • Perennial herb • Mesic prairie, sand dune flats, and sedge meadow habitat • Flowers mid-May to mid-June

* Listed species identified by EcoCAT review and not included in the EA.

Page 3-30, Section 3.5.3 Threatened and Endangered Species Affected Environment

The following should be added at the end of this section:

On September 12, 2008, the Illinois Department of Natural Resources (IDNR) requested the project area be surveyed for populations of the alkali bulrush and the mountain blue-eyed grass.

A Botanical Survey and Assessment of the Interstate-57/Interstate-294 Interchange Study Corridor, Cook County, Illinois (INHS Technical Report 2008(42)), was issued on November 30, 2008. The project limits were surveyed with the exception of two nature preserves and the areas immediately adjacent and parallel to Interstate 294 due to the on-going construction activity. The purpose of the survey was to search for threatened and endangered species with special emphasis on the prairie bush clover (*Lespedeza leptostuchaya*) and the eastern prairie fringed orchid (*Plantanthera leucophaea*) and determine if any high quality natural plant communities were present. Two endangered plant species were identified including the alkali bulrush and the mountain blue-eyed grass, and were found in the survey corridor. The INHS survey did not include an

evaluation of potential Black-Crowned Night Heron habitat and did not identify any prairie bush clover or eastern prairie fringed orchid.

Alkali Bulrush - Four populations of alkali bulrush were identified growing in the moist to wet roadside ditch areas covering an estimated 323 square feet with approximately 1,140 individuals. A possible fifth population was observed; however, the area was mowed and only bases of the plant were visible, preventing positive identification. Approximately 200 individuals were within this fifth area. The populations of alkali bulrush were located as follows:

- Population #1 - Along the south side of I-57 immediately east of I-294
- Population #2 - Along the north side of I-57, adjacent to the B&O (CSX) Railroad
- Populations #3 and #4 – Along the north side of I-57, north of 147th Street/IL 83
- Population #5 – Along the southbound entrance ramp to I-57 from 147th Street

Mountain Blue-Eyed Grass – Two populations of mountain blue-eyed grass were observed in the project area, including populations in the Dropseed Prairie (mesic prairie remnant) and a second population just north of the Dropseed Prairie (degraded mesic prairie). The populations identified were approximately 150 feet from the edge of pavement and are likely to be impacted.

Natural Communities - Two natural community types were identified in the project corridor, including mesic prairie and wet-mesic prairie. All mesic and wet-mesic prairies, with the exception of the Dropseed Prairie, were highly degraded, small and possessed very little of their original structure and composition. Several species indicative of natural communities occurred in these areas, causing them to be identified as remnant areas. Five separate areas were identified as degraded prairie remnants and are generally located as follows:

- East quadrant of I-57 and Kedzie Avenue
- Northbound side of I-57 between Kedzie Avenue and I-294
- South quadrant of I-294 and I-57 near the ROW line
- North quadrant of I-294 and I-57, adjacent to southbound I-57
- West quadrant of I-57 and the Grand Trunk Western (CN) Railroad

The Biological Resources Review (BRR) memorandum indicates that these areas should be avoided, minimized, or mitigated, in that order.

Franklin's Ground Squirrel – The report entitled *Franklin's Ground Squirrel Survey at the Proposed I-88 and Eola Road Interchange and the Proposed I-294 and I-57 Interchange, Summer 2008* (INHS Technical Report 2008 (53)) was issued December 19, 2008. Franklin's ground squirrels were translocated to the Gensburg-Markham Prairie Nature Preserve in 1983 and 1985. Since 1987, the

area has been trapped twice and no Franklin's ground squirrels were captured in either attempt. Suitable habitat includes tall dense vegetation for cover and the soils must be deep enough to keep the burrow insulated and well drained. Trapping by the INHS in 2008 was not conducted in the I-294 and I-57 interchange project corridor as no suitable habitat was found. The BRR concludes that there is no adverse effect by the project on the Franklin's ground squirrel.

Avian Census – An avian census at the proposed I-294/I-57 interchange area (INHS Memorandum 2009) was issued January 12, 2009. The census was conducted in 2008 during periods that characterize the major annual changes in the diversity of bird populations: spring migration, breeding, and fall migration. A total of 94 bird species representing 34 families of birds were observed in eleven census areas representing all habitat areas in the study area. Two Cook County Forest Preserve areas occur within one (1) mile of the project center line and support a good diversity of bird species, especially during spring and fall migration. The sandhill crane, an Illinois listed species (threatened), was observed flying over the project area during the fall 2008. In the past, Henslow's sparrow, an Illinois listed species (threatened) has nested in the area. No instances of Henslow's sparrow were observed during the avian census. Both the sandhill crane and Henslow's sparrow are proposed for delisting by the Illinois Endangered Species Protection Board. Additionally, the black-crowned night heron, also identified as state-endangered, was not observed.

Page 3-30, Section 3.5.4 Threatened and Endangered Species Environmental Consequences, Preferred Alternative,

The second paragraph, second sentence should be revised as follows:

The words "and concurred on January 12, 2009" should be added after "March 31, 2008".

The following paragraphs should be inserted at the end of the section:

The EcoCAT response from IDNR received September 2, 2008 identified the same Illinois Natural Area Inventory (INAI) sites and Nature Preserves as the EA in the project corridor. Two additional INAI sites were listed in the EcoCAT response, including the Riverdale Marsh INAI Site and the Tollgate Prairie INAI site. Both these INAI sites are outside the project limits.

The IDNR coordination letter to IDOT dated September 12, 2008 requested additional coordination be conducted with the Illinois Nature Preserves Commission to determine the status of the dedication of the Markham-West Prairie as a Nature Preserve and to assure that all resource concerns have been addressed. The Illinois Tollway will continue to coordinate with the Illinois Nature Preserves Commission throughout the design and construction phases of this project. At this time, all natural resource concerns have been addressed.

Page 3-31, Section 3.5.5 Trees Affected Environment

The following paragraphs should be added to the end of this section:

Trees within the projects limits of the I-57 at I-294 Interchange project were re-surveyed in October and November of 2008. Trees were re-evaluated and identified within the proposed ROW within the project limits. As this is a joint project between the Illinois Department of Transportation (IDOT) and the Illinois Tollway, both the IDOT Departmental Policy (D&E-18) and the Illinois Tollway Criteria for Removal and Replacement of Trees were used.

All trees with a diameter of six (6) inches or more at a point four and a half (4.5) feet above the highest ground level at the base of the tree, i.e. diameter at breast height (DBH) as well as all landscaped trees, were identified and measured. Trees located in densely forested areas at the intersection of I-294 and I-57 were inventoried using the transect method. All of the trees with a DBH of six inches or greater within the randomly selected 50-foot by 50-foot (2,500 square foot) area were counted, identified, and evaluated for each transect. The total number of trees in the area represented by each transect was estimated based on an extrapolation from the sub-sample data. The transects/sub-sample method was conducted in the east, west, and south areas of the I-294 and I-57 intersection. For the west and south intersection areas, three (3) transects/sub-samples were taken at random locations and for the east intersection area, two (2) transects/sub-samples were taken at random locations. Trees were individually counted in the area north of the intersection.

Page 3-31, Section 3.5.6 Trees Environmental Consequences, No-Action Alternative

The No-Action Alternative does not directly impact trees within the study area.

Page 3-31, Section 3.5.6 Trees Environmental Consequences, Preferred Alternative

The following paragraphs should be inserted at the end of the section:

Trees within the projects limits of the Interstate 57 (I-57) at Interstate 294 (I-294/Tri-State Tollway) Interchange project were re-surveyed in October and November of 2008. A total of 3,589 individual (transect inventory omitted) trees were identified within the project limits. A total of 6,821 trees were estimated using the sub-sample method, for an overall estimated total of 10,410 trees within the project limits.

Based on the proposed roadway improvements, which includes detention areas within the open areas of the I-294 and I-57 intersection, all trees are anticipated to be impacted. Of the 10,410 impacted trees, approximately 6,821 (66 percent) are within the east, west, and southern quadrants of the proposed I-294/I-57 interchange and approximately 3,589 trees (34 percent) are along I-57 or I-294.

A summary of proposed impacts to trees by number and size is presented in Table 3-13A (individually counted trees) and in Table 3-13B (transect/sub-sample counted trees). As shown in Table 3-13A approximately 17 percent of the

impacted trees are Eastern cottonwood (*Populus deltoides*) and Siberian elm (*Ulmus pumila*), 11 percent are box elder (*Acer negundo*), 10 percent are dead, and 10 percent are green ash (*Fraxinus pennsylvanica subintegerrima*).

As shown in Table 3-13B, approximately 29 percent of the impacted trees are eastern cottonwood, 15 percent are white mulberry (*Morus alba*), 14 percent are dead, and 12 percent are green ash.

Based on the total number of impacted trees, Table 3-13C summarizes the impacted trees for the project.

TABLE 3-13A - Impacts to Individually Surveyed Trees

Species	Number of Impacted Trees	Percent Individually Surveyed Impacted Trees	Tree Size (inches dbh)		
			6-12.5	13-29.5	30+
Eastern Cottonwood	619	17	314	293	12
Siberian Elm	594	17	443	147	4
Box Elder	388	11	325	63	0
Dead	349	10	301	46	2
Green Ash	341	10	324	17	0
Ash sp.	280	8	261	19	0
White Mulberry	177	5	151	23	3
Silver Maple	125	3	76	43	6
American Elm	115	3	98	16	1
Slippery Elm	73	2	58	13	2
Common Buckthorn	72	2	69	2	1
Black Walnut	54	2	51	3	0
Black Cherry	50	1	42	8	0
Honey Locust	46	1	37	9	0
Elm sp.	44	1	38	5	1
Hackberry	42	1	30	12	0
Haw sp.	28	<1	27	1	0
Crabapple	25	<1	25	0	0
White Poplar	19	<1	14	5	0
Peach-leaved Willow	18	<1	10	8	0
Russian Olive	17	<1	15	2	0
Basswood	14	<1	11	3	0
White Ash	11	<1	10	1	0
Autumn Olive	9	<1	9	0	0
Norway Maple	9	<1	9	0	0
Spruce sp.	9	<1	9	0	0
Black Locust	4	<1	4	0	0
Blue Spruce	4	<1	4	0	0
Cherry sp.	4	<1	4	0	0
Cockspur Hawthorn	4	<1	4	0	0
Fir sp.	4	<1	4	0	0
Sugar Maple	4	<1	3	1	0
Weeping Willow	4	<1	1	1	2

TABLE 3-13A (Continued) - Impacts to Individually Surveyed Trees

Species	Number of Impacted Trees	Percent Individually Surveyed Impacted Trees	Tree Size (inches dbh)		
			6-12	13-29	30+
Apple sp.	3	<1	3	0	0
Crack Willow	3	<1	2	1	0
Pear sp.	3	<1	2	1	0
Red Haw	3	<1	3	0	0
Red Maple	3	<1	3	0	0
Tree-of-Heaven	3	<1	1	2	0
Bradford Pear	2	<1	2	0	0
Green Spruce	2	<1	1	1	0
Maple sp.	2	<1	2	0	0
Red Cedar	2	<1	2	0	0
Unknown (samaras present)	2	<1	2	0	0
Black Willow	1	<1	0	0	1
Common Catalpa	1	<1	1	0	0
Ohio Buckeye	1	<1	1	0	0
Pine sp.	1	<1	1	0	0
Red Oak	1	<1	1	0	0
Redbud	1	<1	1	0	0
Silver Poplar	1	<1	1	0	0
Total	3,589	100	2,808	746	35

TABLE 3-13B - Impacts to Transect/Sub-sample Surveyed Trees

Species	Number of Impacted Trees	Percent Transect/Sub-sample Surveyed Impacted Trees	Tree Size (inches dbh)		
			6-12	13-29	30+
Eastern Cottonwood	1965	29	231	1734	0
White Mulberry	1041	15	694	347	0
Dead	925	14	694	231	0
Green Ash	809	12	578	231	0
American Elm	463	7	347	116	0
Ash sp	462	7	231	231	0
Box Elder	462	7	231	231	0
Common Buckthorn	231	3	231	0	0
Siberian Elm	231	3	0	231	0
Black Cherry	116	2	116	0	0
Silver Maple	116	2	116	0	0
Total	6,821	100	3,469	3,352	0

TABLE 3-13C – Summary of Impacted Trees

Sampling Method	Number of Impacted Trees	Percent of Inventoried Trees	Tree Size (inches dbh)		
			6-12	13-29	30+
Individual Tree Count	3,589	34	2,808	746	35
Transect/sub-sample Count	6,821	66	3,469	3,352	0
Total	10,410	100	6,277	4,098	35

Page 3-37, Section 3.6 Water Resources and Water Quality

No changes.

Page 3-43, Wetlands, Section 3.7.1 Wetlands Affected Environment

The following should be added to the end of this section:

Wetland delineations were performed in October and November of 2008 by the Illinois Natural History Survey (INHS) in accordance with the *Corps of Engineers Wetlands Delineation Manual*, January 1987. Based on the wetland delineations, 15 on-site wetland determinations were performed. Seven of the sites investigated were determined to be wetlands. Approximately 5.842 total wetland acres existed within the study area in 2008.

Within the project area there are numerous creeks and vegetated ditches. None of these sites were identified as wetland areas. Figure 3-10 located at the end of Chapter 3.0, *Affected Environment and Environmental Consequences*, presents the existing wetlands within the study area and Table 3-14A summarizes the characteristics of these wetlands based on updated delineations.

Wetland site number 5 was identified by the INHS as being not isolated, and therefore is considered a jurisdictional wetland. All other wetlands were determined by INHS to be isolated. Table 3-14A provides the Coefficient of Conservatism (C-value), which is a subjective indicator of how likely a plant may be found on an undisturbed site in a natural plant community. A species with a low C-value is common and is likely to tolerate disturbed conditions; a species with a high C-value is relatively rare and is likely to require specific, undisturbed habitats.

The Floristic Quality Index (FQI) for each wetland is also provided in Table 3-14A. The FQI is a function of the C-value, and provides a measure of the floristic integrity or level of disturbance of a site. FQI values below 5 suggests a highly disturbed site, below 10 suggests low natural quality site, and above 20 suggests that the site has evidence of native character and may be considered an environmental asset.

For additional information on wetlands, see the *Wetland Report for I-57 @ I-294 in Cook County, Illinois*, October and November, 2008 prepared by the INHS. Additionally, the *Wetland Technical Report, I-294/I-57 Interchange* October 27, 2003, was prepared for the original EA.

Table 3-14A: Summary of Wetlands within the Study Area

Wetland Site No. ¹	NWI Classification ²	Wetland Type	Jurisdictional Status	Predominant Vegetation	C-Value	FQI	Existing (2008) Area (Acres)
#5	N/A	Marsh	Jurisdictional	Reed canary grass Narrow-leaf cattail	1.8	4.5	0.025
#6	N/A	Wet Prairie/Native Grassland	Non-jurisdictional	Swamp Marigold Blue Joint Grass Prairie Switchgrass Common Ironweed	3	18.2	1.114
#11	PFO1A	Wet Lowland Forest	Non-jurisdictional	Silver Maple Green Ash Eastern Cottonwood American Elm	2.1	6.3	0.410
#12	PEMC	Wet Shrubland	Non-jurisdictional	Common Buckthorn Reed Canary Grass	3.3	8.2	0.229
#13	PEMC	Wet Meadow	Non-jurisdictional	Reed canary Grass	2	3.5	0.097
#14	N/A	Wet Meadow	Non-jurisdictional	Reed Canary Grass	2.1	8.5	3.034
#15	N/A	Wet Lowland Forest	Non-jurisdictional	Silver Maple American Elm Common Buckthorn Late Boneset Reed Canary Grass	2.4	8.8	0.933
TOTAL WETLAND AREA:							5.842

1. Wetland determinations performed by the Illinois Natural History Survey in October and November, 2008. Site numbers 1-4, and 7-10 were determined not to be wetlands.
2. PFO1A – Palustrine, forested, broad-leaved deciduous, temporarily flooded
PEMC – Palustrine, emergent, seasonally flooded
N/A – Not available

No-Action Alternative

The No-Action Alternative does not directly impact any wetlands within the study area.

Page 3-47, Section 3.7.2 Wetlands Environmental Consequences, Preferred Alternative

The following should be added to the end of the paragraph:

Wetland site numbers 5, 6 and 11 will not be impacted as part of the proposed improvements. Wetland sites 12, 13, 14, and 15 are located within the interchange area of I-294 and I-57. Due to the location within the proposed interchange area, each of the wetlands will be impacted.

The following table is an update to Table 3-15:

Table 3-15A: Summary of Wetland Impacts

Wetland Site No.	FQI	Total Wetland Area (Acres)	Wetland Impacts Permanent (Acres)	Percent of Wetland Area Impacted	Functions Lost
#5	4.5	0.025	0.0	0	None
#6	18.2	1.114	0.0	0	None
#11	6.3	0.410	0.00	0	Sediment and nutrient trapping, flood storage, stormwater retention, wildlife habitat
#12	8.2	0.229	0.229	100	Sediment and nutrient trapping, flood storage, stormwater retention, wildlife habitat
#13	3.5	0.097	0.097	100	Sediment and nutrient trapping, flood storage, stormwater retention, wildlife habitat
#14	8.5	3.034	3.034	100	Sediment and nutrient trapping, flood storage, stormwater retention, wildlife habitat
#15	8.8	0.933	0.933	100	Sediment and nutrient trapping, flood storage, stormwater retention, wildlife habitat
Total		5.842	4.293		

Page 3-49, Section 3.8 Floodplain and Floodways

No changes.

Page 3-50, 3.9 Historic and Archaeological Resources, Section 3.9.2 Historic and Archaeological Environmental Consequences

The following should be added to the last sentence in the last paragraph:

Cultural Resource Clearance was provided by IDOT Central Office BD&E Environment Section on August 26, 2008.

Page 3-51, Section 3.10 Special Lands

No changes.

Page 3-54, 3.11 Special Waste, Section 3.11.1 Special Waste Affected Environment

The following should be inserted at the end of this section:

The Illinois State Geological Survey (ISGS) conducted a *Preliminary Environmental Site Assessment* (PESA, November 20, 2008, ISGS Report No.

1773). The PESA included a review of environmental databases and site reconnaissance.

Based on the PESA, the project has been determined to have a HIGH risk for the occurrence of regulated substances or natural hazards. A HIGH risk is based on the presence of potentially hazardous compounds, either as detected by ISGS testing or as documented by the Illinois Environmental Protection Agency. Further investigation is required to determine the nature, source and extent of the problem.

Land acquisition will need to be evaluated at all identified site locations. Additionally, grading, excavation, and relocation stipulations will need to be determined based on the work anticipated at each of these locations. Soil found to be contaminated and affected by the project will be managed and disposed of in accordance with applicable federal and state laws and regulations and in a manner that will protect human health and the environment. The quantities to be disposed of are not expected to have a significant effect on landfill capacity.

No Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) sites are within the project limits. One active CERCLIS site (PESA No. 1773-I) was identified at 148th Place and Dixie Highway in the PESA. This site is outside the project limits.

Fifteen Resource Conservation and Recovery Act (RCRA)/generator sites were identified within the project limits. Seven of these sites were also identified as other sites including one aboveground storage tank (AST) site, two underground storage tank (UST) sites, two leaking underground storage tank (LUST)/former UST sites, one LUST/UST site, and one former UST site. Contamination was detected at ten of the 15 RCRA sites.

Non-CERCLIS Sites

A PESA for special waste sites was conducted for the project area. The assessment concluded that the build alternative could involve non-CERCLIS sites potentially affected by regulated substances. Further, it was determined that not all the sites could be avoided. Thirty-eight non-CERCLIS/RCRA sites were identified. Eighteen of these sites were identified with volatile organic compounds (VOC's) significantly above background and have depth stipulations assessed. Six additional sites were identified in the PESA that were determined to be outside the project limits (PESA Nos. 1773-A, 1773-E, 1773-F, and three sites without PESA Nos.).

The USEPA listing of potential, suspected, and known hazardous waste or hazardous substance sites in Illinois (i.e. the CERCLIS list) has been reviewed. The proposed undertaking will not require right-of-way from a site included in the CERCLIS listing as of November 17, 2008.

Table 3.11A: RCRA and Non-CERLCIS Sites Identified in the PESA

Site Type	ISGS Site Number*	Testing Conducted**
Pipeline	1773-35	No Detections
Dump	1773-B	None
Municipal	1773-C	None
Commercial	1773-D	None
	1773-25	No Detections
	1773-32	No Detections
	1773-K	None
AST	1773-11	No Detections
AST/Drum	1773-G	None
AST/generator	1773-36	VOCs Detected
Possible USTs	1773-2	VOCs Detected
	1773-3	VOCs Detected
	1773-13	VOCs Detected
	1773-26	VOCs Detected
	1773-28	No Detections
	1773-29	No Detections
	1773-30	No Detections
	1773-31	No Detections
UST	1773-6	VOCs Detected
	1773-14	VOCs Detected
UST/AST	1773-H	None
UST/RCRA	1773-5	VOCs Detected
LUST/former UST/RCRA	1773-1	VOCs Detected
	1773-18	VOCs Detected
LUST/former UST	1773-4	VOCs Detected
	1773-8	No Detections
	1773-9	VOCs Detected
LUST/possible UST	1773-12	VOCs Detected
LUST/UST	1773-7	No Detections
	1773-33	VOCs Detected
LUST/UST/RCRA	1773-27	VOCs Detected
SRP	1773-10	Metals Detected
Former UST/ RCRA/generator	1773-16	No Detections
	1773-24	No Detections
RCRA/generator	1773-15	No Detections
	1773-17	VOCs Detected
	1773-19	No Detections
	1773-20	VOCs Detected
	1773-21	No Detections
	1773-22	No Detections
1773-J	None	
Former RCRA/UST/generator	1773-23	No Detections
Spill	1773-37	No Detections
	1773-L	None

***Bolded** site numbers indicate locations with VOCs or metals significantly above background levels detected in soil gas or headspace soils samples where depth stipulations have been specified.

** VOC's detected significantly above background

The PESA for sites potentially impacted with regulated substances concluded that the build alternative will involve sites potentially impacted with regulated substances. Further investigation (Preliminary Site Investigation (PSI)) will be conducted to determine the nature and extent of the involvement. Based on the proposed improvements to accommodate this project, right-of-way acquisition or standard road construction (i.e. curb and gutter, sidewalk, driveways, pavement and/or utility work) is anticipated from the following ISGS numbered sites where depth stipulations have been established. These sites are identified in the PESA.

The general depth of excavation is approximately five (5) feet within the proposed ROW area. The depth extends to approximately 15 feet deep in areas of storm sewer or watermain improvements. The PESA Response form has been submitted and a special waste waiver was granted January 20, 2009.

Page 3-57, Section 3.12 Aesthetics

No changes.

Page 3-57, Section 3.13 Construction Impacts

No changes.

Page 3-58, Section 3.14 Indirect (Secondary) Impacts, 3.14.1 Indirect Environmental Consequences, Water Quality

Add the following sentence to the end of the paragraph:

Regional water quality will be improved by the de-coupling of storm drains in 147th Street from the combined sewer systems in the area, aiding in decreasing the amount of regional combined sewer overflows to area waterways.

Page 3-60, Section 3.15 Cumulative Impacts

No changes.

Page 3-61, Section 3.16 Permits

Add the following to the end of the section:

The installation of separate storm sewers and the de-coupling of existing storm drains from the existing combined sewer system will require a permit from the Metropolitan Water Reclamation District of Greater Cook County.

Page 3-61, Section 3.17 Summary of Impacts

No changes.

4.0 MITIGATION MEASURES

Page 4-1, Section 4.1 Right of Way Acquisition and Relocations

No changes.

Page 4-1, Section 4.2 Traffic Noise

No changes.

Page 4-1, Section 4.3 Natural Resources

Threatened and endangered species have been identified in the project corridor, including alkali bulrush and mountain blue-eyed grass. Alkali bulrush has been observed along Interstate 57 in four (possibly five) areas north of Interstate 294. The populations have been observed within the roadside drainage ditches and will likely be impacted by construction of the preferred alternative. Alkali bulrush has been proposed for delisting by the Illinois Endangered Species Protection Board, which, if approved, may be complete during the latter half of 2009. If alkali bulrush is delisted prior to construction, no mitigation will be necessary. Mountain blue-eyed grass has been observed in the Dropseed Prairie and just north of the Dropseed Prairie. These two areas are along Interstate 57 south of Interstate 294. Right-of-way acquisition along Interstate 57 is anticipated. The plants are approximately 150 feet from the edge of pavement and are likely to be impacted.

Alkali bulrush has been encountered in several areas within the Tollway system. A *Systemwide Programmatic Mitigation and Conservation Plan and Regulatory Review Process* memorandum has been prepared and approved by IDNR in January 2008. The mitigation and conservation plan provides mitigation strategies that can potentially be used to mitigate the potential impacts to this species, if mitigation is necessary. Mitigation options include seed collection or translocation of individual plants.

The mitigation and conservation plan does not include the mountain blue-eyed grass species. Coordination with IDNR will be required for the translocation of this species, if impacts are to occur.

Five prairie remnant areas were identified in the Botanical Survey and Assessment. If any of the areas are impacted by the project, impacts to the prairies should be avoided, minimized, and mitigated, in that order. The prairie area in the Markham-West Prairie area is already known and impacts to that site are being mitigated.

Page 4-1, Section 4.3.1. Trees

Mitigation of the approximately 10,410 trees that are estimated to be removed will be conducted in accordance with *IDOT Departmental Policies (D&E – 18)* by IDOT and the *ISHTA Criteria for Removal and Replacement of Trees* by ISHTA. The actual number of replacement trees may be adjusted during the final design based on the actual number of trees impacted. The potential exists within the project area to work with local natural resource agencies and groups to identify areas where replacement trees can be planted.

Based on the IDOT policy, the number of replacement trees is dependent on if balled and burlapped trees (1:1 replacement ratio) are used or seedlings (3:1 replacement ratio). Therefore, mitigation under the IDOT policy would require 10,410 balled and burlapped tree plantings or 31,230 seedling plantings.

The ISTHA policy mitigates trees based on the size of the tree being replaced with 6 to 12 inch trees being replaced at 1:1, 13 to 29 inch trees at 2:1 and 30 inch and greater being replaced at 3:1. Therefore, mitigation under the ISTHA policy would require 14,578 tree plantings.

Page 4-2, Section 4.4 Water Resources and Water Quality

No changes.

Page 4-3, Section 4.5 Wetlands

The Wetland Impact Evaluation form submitted to IDOT BD&E on January 20, 2009 was considered acceptable. The project shall be processed as a Standard Review Action in accordance with the IDOT Interagency Wetlands Action Plan. Mitigation is considered on-site since it shall be performed within one mile of the project area. Wetland Sites #12, #13, #14, and #15 shall be impacted totaling 4.353 acres. All of the impacted wetlands are isolated. Because impacts to the Wetlands #12 and #13 are less than 0.5 acres per wetland, they shall likely be mitigated at a ratio of 1.5:1.0 with mitigation acreages 0.344 and 0.146 acres respectively. Because the impacts to Wetland #14 and #15 totally destroy each wetland, they shall likely be mitigated at a ratio of 2.5:1, with mitigation acreages of 7.585 and 2.483 respectively. Total mitigation acreage may be up to 10.5565 acres. IDOT and Illinois Tollway have separate agreements with IDNR which determine the mitigation ratios for each impact. The minimum mitigation ratio that will be applied to isolated wetland impacts will be 1.5:1.0. The Illinois Tollway will be responsible for coordinating all final ratios with IDNR once the design is finalized and prior to the permitting process. Because this project is a Standard Review Action, it was coordinated with Mr. Patrick Malone of IDNR Office of Resource Review and Coordination. His concurrence is dated January 23, 2009. This project is now considered cleared for letting with respect to the wetlands. The Illinois Tollway will be responsible for wetland mitigation. It will occur in within the Indian Boundary Prairie Mitigation Site.

Page 4-3, Section 4.6 Floodplains/Floodways

No changes.

Page 4-3, Section 4.7 Special Lands

No changes.

Page 4-4, Section 4.8 Special Waste

The following should be added to the end of this section:

Soil testing has been conducted as part of the ISGS PESA review. Sites where contaminants have been detected are identified in Table 3.11A, above and in the PESA found in Appendix B. Due to the HIGH risk of encountering contaminated media within the project limits, additional testing is required to determine the extent of contamination in these areas and develop a special provision for the proposed project. These investigations will be conducted to determine the risks and liabilities. The project will not be implemented until the risks and liabilities of involvement are known and acceptable to IDOT and the Illinois Tollway. A

PESA response was submitted to the BDE on January 20, 2009 and a special waste waiver was granted on January 20, 2009 to allow the additional investigation to occur during Phase II of the project development.

Page 4-4, Section 4.9 Aesthetics

No changes.

Page 4-4, Section 4.10 Construction Impacts

No changes.

Page 4-5, Section 4.11 Summary of Mitigation Measures, Table 4-1

Table 4-1 should be revised as follows:

Resource	Impact	Mitigation
Relocations/ROW Impacts	43 residences and 3 businesses require relocation. Approximately 34 acres of land will be required for ROW.	<i>Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (1989)</i>
Trees	Approximately 10,410 impacted trees	14,578 replacement trees
Wetlands Jurisdictional	Approximately 0 acres	No mitigation
Non-Jurisdictional	Approximately 4.293 acres	Up to 10.556 acres on-site compensation

5.0 COMMENTS AND COORDINATION

Page 5-1, 5.1 Public Involvement

The following should be added to the end of this section:

A public hearing for the I-294/I-57 Interchange Environmental Assessment (EA) was held on Wednesday, September 10, 2008 from 4:00 p.m. until 7:00 p.m. at the Posen Village Hall in Posen, Illinois. The public hearing was conducted in an open house format. A total of 55 people signed-in at the public hearing. In attendance were representatives from the Illinois Tollway, Illinois Department of Transportation (IDOT), Federal Highway Administration, and the public.

Comment cards were distributed at the public hearing. September 26, 2008 was the close of the public comment period. A total of 18 comment cards were received during the public hearing and no comments were recorded with the court reporter. Six comments were supportive of the proposed improvements, four comments showed opposition to the proposed improvements, and the other

comments were requesting additional information or the comments that were not directly related to the proposed interchange.

In general the comments expressed concerns in the following categories:

- Potentially affected properties
- Proposed access changes
- Additional information

Each commenter was responded to by letter from the Illinois Tollway following the public hearing.

The FHWA received a letter from USEPA on September 22, 2009 providing comments on the I-294/I-57 Interchange Project's Draft Environmental Assessment. The Illinois Tollway coordinated directly with the USEPA to address these comments. At this time, all USEPA concerns have been addressed.

Additional public outreach presentations to provide updated project information were given to the South Suburban Mayors and Managers Association (SSMMA) Transportation Committee on October 7, 2008, the SSMMA general membership dinner on January 15, 2009, and the Southwest Conference of Mayors (SCM) on November 24, 2008. As part of the presentations, IDOT noted that a similar presentation would be given at the affected community's respective Board meetings and offered to present at any other interested community's Board meetings.

On January 26, 2009, a presentation was given to the City of Harvey City Council and on January 28, 2009, a presentation was given to the Village of Midlothian Village Board. Additional presentations scheduled include the Village of Dixmoor Village Board on February 9, 2009 and the Village of Posen Village Board on February 10, 2009. An additional general informational presentation is also scheduled for the US Steel Retirees Luncheon on February 10, 2009.

APPENDIX A: List of Acronyms and Abbreviations

No changes.

APPENDIX B: Correspondence

See additional material in separate section.

APPENDIX C: Noise Analysis Results Summary Table

No changes.

APPENDIX D: Exhibits.

New. See additional material in separate section.

Appendix B
Correspondence



Illinois Department of Transportation

Memorandum

To: Diane O'Keefe Attn: Pete Harmet
From: Eric Harm By: J. A. Walthall
Subject: Cultural Resource Clearance
Date: August 28, 2008

Cook County
FAI 57, I-57
Job No. P-91-186-08
Seq. #14550

Attached is a copy of the "Environmental Survey Request Form" submitted for the above project. It is the opinion of our professional staff that no Cultural Resource survey is required for this project. This determination follows the stipulations of the joint agreement for the Exclusion of Classes of "No Effect" from Illinois SHPO Coordination ratified by FHWA, the SHPO, and IDOT on July 17, 1995. The signed request form attached is your evidence of coordination.

A handwritten signature in black ink, appearing to read "J. A. Walthall".

Attachment

JAW:km

check

Attention: Central Office BD&E
Environment Section
Room 330

Environmental Survey Request

A. Project Information

Bio Cultural Wetlands Special Waste

Submittal Date: 07/14/2008 Sequence No: 14550
 District: 1 Requesting Agency: DOH Project No:
 Contract #: Job No.: P-91-186-08
 Counties: Cook
 Route: FAI 57 Marked: I-57
 Street: Section:
 Municipality(ies) See add'l info Project Length: km miles
 From To (At): @ I-294
 Quadrangle: Blue Island, Harvey Township-Range-Section: T36N, R13E, Sec. 12&13
 Anticipated Design Approval: 02/28/2009

B. Reason for Submittal: (Check all that apply)

Acquisition of additional ROW or easement ha/ acres
 In-Stream Work Stream Name: Dixie Creek, Belaire Creek, Unnamed Creek, I-57 Drainage and Park Creek
 Other: Wetland survey needed. See add'l info.

C. Project Description: New interchange I-57@I-294, new partial interchange 147th/IL 83@ I-294, improve new interchange I-57@ IL 83; new ramps, collector-distributor roads and bridges; 20 existing tructures replaced/rehab/widen; drainage; toll collection; signals, lighting.

Proposed Work: Highway Bridge Bike Trail Other

D. Tree Removal?: Yes Number?: 0 ha/ acres

Existing Bridge(s) Structure Number:	016-9858	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-9859	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-9860	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-9861	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-2126	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-1096	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-1097	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-1012	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-1051	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-0054	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-0055	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-0056	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-0057	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-0058	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-0059	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-9856	On Historic Bridge List:	No
Existing Bridge(s) Structure Number:	016-9857	On Historic Bridge List:	No

CULTURAL RESOURCES:
NO SURVEY OR FURTHER COORDINATION REQUIRED
[Signature] 8/26/08
SIGNED DATE

Historic District Involved? No Historic Buildings Involved? Don't Know
 Section 4(f) Lands Involved? Yes Section 6(f) Lands Involved? No
 Wetland delineation performed by: BDE End. Species Consultation performed by: BDE

E. Funding: Federal State TBP MFT Local Non-MFT
 404 Permit Required Anticipated Processing: EA

F. Contact Person: John Baczek **Local Contact Person:**
 Telephone #: (847) 705-4104 ext. Telephone #:
 Env. Contact: Sam Mead E-Mail:
 Telephone #: 8477054101 Title/Company:



ILLINOIS STATE TOLL HIGHWAY AUTHORITY

TO: Rocco Zuccherro, Deputy Chief of Engineering for Planning

DATE: 10-24-08

FROM: Angela La Porte, Environmental Planner

SUBJECT: Meeting Summary Regarding I-294/I-57 TNC and NEIU Coordination

On October 24, 2008 Bryan Wagner, Greg Busey and Angela La Porte from the Tollway along with Lailah Reich from Huff and Huff met with Karl Gnaedinger of TNC and Ron Panzer of NEIU. The purpose of the meeting was to discuss the Tollway's land acquisition status as part of the current south Tri-State mitigation efforts as well as to provide a project update as a result of the Tollway's recent program announcement to construct the I-294/I-57 Interchange.

South Tri-State

- Ron Panzer was concerned about the invasive species growing in the Tollway's vegetated ditches and asked if the Tollway would herbicide various locations to prevent invasive species from impacting the Gensburg-Markham Prairie.
- Ron Panzer is going to contact the Gospel of Love church to help the Tollway acquire the land targeted for mitigation. The Tollway is unable to reach a decision-maker at the Church.
- New parcels containing wetlands along 159th within the Village of Markham were discussed as replacement parcels to satisfy mitigation requirements.
- TNC will provide the Tollway with the PIN's for potential new parcels along 159th and the Tollway will send NEIU the appraisal for the Gospel of Love property.

I-294/I-57 Interchange Project

- Angela La Porte provided a project update highlighting that IDOT and the Tollway will be coordinating during the design and construction phase. Design is anticipated to be complete in the middle of 2010 and the Tollway intends to award the first construction contract by the end of 2010. TNC and NEIU will be informed of the construction schedule as design progresses.
- TNC would like a copy of the Environmental Assessment and the Finding of No Significant Impact once all documentation is complete.
- Angela La Porte stated that approximately 5 acres of wetland mitigation will be needed as part of the Interchange project and informed TNC and NEIU that the South Suburban Mayors and Managers received approximately \$2.4 million of Federal funding for the project.
- The \$2.4 million may cover the expenses of wetland mitigation if the South Suburban Mayors and Managers group would enter into a legal document with TNC. TNC and NEIU will draft a conceptual wetland mitigation proposal and it

send to the Tollway for consideration.

- This proposal may be incorporated into an environmental permit and may be used by the Tollway, IDOT or the South Suburban Mayors and Managers to satisfy mitigation components.
- If this proposal were to be presented to the South Suburban Mayors and Managers Group the Tollway would accompany TNC and NEIU and highlight the success of our current efforts.
- TNC and NEIU would like to review and comment on the final seeding plan for the interchange project to ensure the final seed mix does not threaten the quality of vegetation in the Indian Boundary Prairies Complex. Native grasses are not always embraced as some species pose less of a threat.
- A lengthy discussion took place regarding the formal land acquisition and compensation process for the interchange project. It was decided that after the plats and legals were prepared by IDOT, communication should begin immediately with TNC regarding the parcels that contain a Stein conservation easement. Parcels containing the Stein easement will likely be purchased from the City of Markham or current landowner but TNC expects compensation since these properties will no longer be used for conservation purposes. Both the Tollway and TNC acknowledged that this kind of coordination/compensation process is new to both agencies. Potential compensation, if required, may take the form of monetary compensation, wetland compensation or this may be an avenue to negotiate the desired smoke wall along the Tri-State. The Tollway will investigate the legal compensation requirements for this kind of scenario; informal discussions may take place in the meantime to continue to work cooperatively.

Sam Mead
CAB 2 CH2MHILL

Angela C. LaPorte
Environmental Planner
The Illinois Tollway
2700 Ogden Avenue
Downers Grove, IL 60515-1703

BUREAU OF PROGRAMMING
RECEIVED

NOV 14 2008

DISTRICT #1

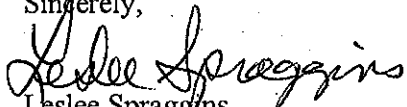
Re: I-294/I-57 Interchange
Dropseed Prairie Impacts
Our tracts – Beemsterboer and Cook County 1

Dear Ms LaPorte:

This letter is a response to the request in your letter of April 16, 2008 to Karl Gnaedinger regarding Dropseed Prairie. You requested confirmation from The Nature Conservancy that the dedication of certain tracts at Dropseed Prairie is subject to the pre-existing use of the I-57 right of way by the Illinois Tollway.

A copy of that dedication is attached. On behalf of The Nature Conservancy, I acknowledge that any portion of the land described in Exhibit A of the attached dedication that lies within the pre-existing right of way for I-57 is subject to such pre-existing rights.

Sincerely,


Leslee Spraggins
Illinois State Director

cc: Sam Mead

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7628/0029 93 001 Page 1 of 5
1999-09-10 10:10:59
Cook County Recorder 29.50



**DEDICATION OF DROPSEED PRAIRIE
AS AN ILLINOIS NATURE PRESERVE**

KNOW ALL PEOPLE BY THESE PRESENTS, that The Nature Conservancy, being the owner thereof, does hereby dedicate the following described real property as a nature preserve:

See ATTACHMENT A

The property hereinabove described is dedicated for the purposes, and shall be held, maintained, and used, as provided for Nature Preserves in the Illinois Natural Areas Preservation Act (525 ILCS 30). Said property is further dedicated for the purposes, and shall be held, maintained, and used, as provided for Nature Preserves in any amendment to said Act enacted hereafter, but no such amendment shall alter the exclusive commitment of said property to the preservation of natural conditions for the purposes specified in said Act as of the date of this dedication.

The property herein dedicated shall remain as one tract, whether under individual or multiple ownership, and it shall not at any time be divided or subdivided except with permission of the Illinois Nature Preserves Commission.

Prepared By: Carolyn T. Grosboll, Director
Please Return To: IL Nature Preserves Commission
524 South Second Street
Springfield, IL 62701-1787



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Dedication of Dropseed Prairie as an Illinois Nature Preserve
Page 2

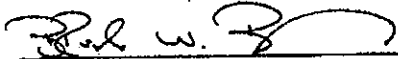
Nothing herein contained shall be construed as to permit public access to the property herein dedicated without permission of the owners. However, members and agents of the Illinois Nature Preserves Commission may, upon prior notice to the owners, inspect the dedicated property.

The property herein dedicated shall be subject to the Rules for Management of Illinois Nature Preserves as amended, and any approved master plan. The master plan for the nature preserve and any amendments to the master plan shall be approved by the owners and the Illinois Nature Preserves Commission

Dedication of Dropseed Prairie as an Illinois Nature Preserve
Page 3

In WITNESS WHEREOF, we have hereunto set our hands and seals this

25th day of June, 1999.



The Nature Conservancy
By: Bruce Boyd, Illinois State Director

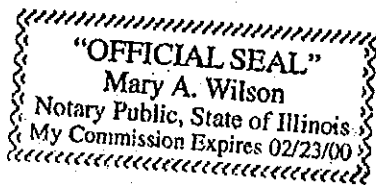
STATE OF ILLINOIS)
) SS.
COUNTY OF COOK)

I, the undersigned, a Notary Public, in and for said County, in the State aforesaid, DO HEREBY CERTIFY that Bruce Boyd, acting in his capacity as Illinois State Director of The Nature Conservancy, personally known to me as to be the same person whose name is subscribed to the foregoing Instrument, appeared before me this day in person and acknowledged that he signed, sealed and delivered the said Instrument as his free and voluntary act, for the uses and purposes therein set forth.

GIVEN under my hand and notarial seal this 25th day of June, 1999.



Notary Public



My Commission expires: 21 23 100

Dedication of Dropseed Prairie as an Illinois Nature Preserve
Page 4


APPROVED:



Chair, Illinois Nature Preserves
Commission

8/3/99
Date

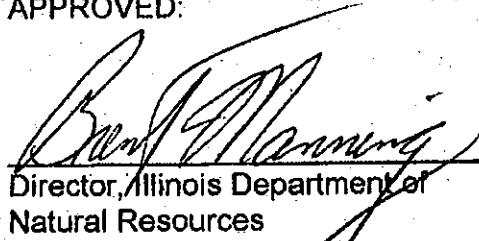
Attest:



Secretary, Illinois Nature Preserves
Commission

8/3/99
Date

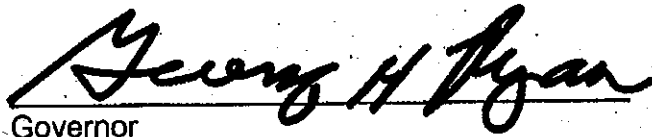
APPROVED:



Director, Illinois Department of
Natural Resources

12 Aug 99
Date

APPROVED:



Governor

8/23/99
Date

ATTACHMENT A
Dropseed Prairie Nature Preserve
Legal Description

Lots 1, 2, 3, 7, 8, and Lots 9 through 19 in Arthur T. McIntosh and Co.'s Markham Estates Unit #2, being a subdivision in the southeast fractional 1/4 south of the Indian Boundary Line Section 14, Township 36 North, Range 13 East of the third principal meridian according to the plat thereof recorded July 15, 1949 as Document 14592198, except that part of said Lots 1, 7, and 8 lying northwesterly of a line 175 feet southeasterly of and parallel with the Indian Boundary Line aforesaid in Cook County, Illinois.

PERMANENT INDEX NUMBERS:

BLOCK 1

28-14-404-004-0000 Lot 1 (except section aforementioned above)
28-14-404-005-0000 Lot 2
28-14-404-006-0000 Lot 3
28-14-404-010-0000 Lot 7 (except section aforementioned above)
28-14-404-011-0000 Lot 8 (except section aforementioned above)
28-14-404-039-0000 Lot 9 & Lot 10
28-14-404-014-0000 Lot 11
28-14-404-015-0000 Lot 12
28-14-404-016-0000 Lot 13
28-14-404-041-0000 Lot 14 & Lot 15
28-14-404-040-0000 Lot 16 & Lot 17 & Lot 18
28-14-404-022-0000 Lot 19



ILLINOIS NATURAL HISTORY SURVEY

T E C H N I C A L R E P O R T

Botanical Survey and Assessment of the
Interstate-57/Interstate-294 Interchange Study Corridor
Cook County, Illinois

Michael J. C. Murphy

Division of Biodiversity and Ecological Entomology
Biotic Surveys Section

To:

Illinois Department of Transportation
Bureau of Environment
2300 South Dirksen Parkway
Springfield, Illinois 62764

INHS Technical Report 2008(42)
30 November 2008

INTRODUCTION

A request was received on 2 October 2008 for botanical surveys to be conducted within the proposed I-57/I-294 interchange study area, located in Cook County, Illinois. Along Interstate-57, survey boundaries extended from the I-57/U.S. Route 6 interchange (southern boundary), north to 915 m (3000 ft.) beyond the I-57/Baltimore-Ohio Railroad intersection (Figure 1). Along I-294, survey boundaries extended from immediately north of the I-294/U.S. Route 6 interchange (southern boundary), north to South Claire Blvd. (Figure 1). Eastern and western extensions of the survey area occurred at the intersections of I-57/IL Route 83, I-57/I-294, and I-57/Kedzie Ave. (Figure 1). Much of this survey area overlapped with areas for which botanical surveys were requested by the Illinois State Toll Highway Authority (ISTHA). Survey requests from the ISTHA were submitted in December 2007, and for this reason, surveys pertaining to this overall study area began in May 2008. When survey work began in May, it was found that construction work for the I-294 lane expansions had already begun along the entire length of the I-294 portion of the survey corridor. For this reason, all portions of the survey corridor that were immediately adjacent and parallel to I-294, were removed from consideration for the overall study area, with the exception of habitats occurring within the proposed I-57/I-294 interchange area (Figure 1).

Three state nature preserves are located within the survey corridor, and include: 1) Dropseed Prairie, 2) Gensburg-Markham Prairie, and 3) Paintbrush Prairie (Figure 1). Due to the legal protective status of state nature preserves, surveys were not requested for these areas, and they were excluded from the survey area. Initial field maps however, which were thought to include boundaries of all state nature preserves within the area, did not have preserves identified, and this led to survey efforts being undertaken in Dropseed Prairie.

The entire area within the survey corridor occurs within the Chicago Lake Plain Section of the Northeastern Morainal Division (Schwegman 1973). This area is characterized by relatively level topography and poorly-drained soils that formed on lakebed sediments associated with the ancient glacial Lake Chicago, which was present between 14,000 and 4,500 years ago (Schwegman 1973, Wiggers 1997). At the time of settlement, dominant communities in this area included marsh and mesic to wet-mesic prairie (Schwegman 1973, Swink & Wilhelm 1994). Specific survey goals were to 1) search for threatened or endangered plant species in or immediately adjacent to the corridor - with special emphasis on the prairie bush clover, *Lespedeza leptostachya* Englem., and the eastern prairie fringed orchid, *Platanthera leucophaea* (Nutt.) Lindl., and 2) determine if any high-quality natural plant communities were present within the corridor.

METHODS

Botanical surveys were conducted between 20 May 2008 and 10 October 2008, with the search emphasis on threatened and endangered plant species and/or high-quality natural communities. Searches specifically focused on locating potential *Platanthera leucophaea* populations were conducted on three non-consecutive days between 28 June and 11 July. Cumulative species lists were compiled for all community types/plant associations encountered. Numerous plant specimens were collected and preserved for laboratory examination with GPS coordinates taken at all collection locations. Digital photographs were taken and/or voucher

specimens collected for threatened or endangered plant species that were encountered. Population parameters for threatened or endangered species were determined by one or more of the following methods: 1) determining total number of individuals (genets – genetically distinct individuals) for non-rhizomatous and non-stoloniferous species, 2) estimating total number of flowering/fruitleting stems (potential ramets – genetically identical individuals) for rhizomatous and stoloniferous species, and 3) estimating total population area occupied based on digitized aerial photographs. Collected specimens are deposited in the Illinois Natural History Survey Herbarium (ILLS), in Champaign, Illinois. Community classification and grades of natural quality follow White (1978). Grades of natural quality are as follows:

- Grade A: Relatively stable or undisturbed communities
- Grade B: Late successional or lightly disturbed communities
- Grade C: Mid-successional or moderately to heavily disturbed communities
- Grade D: Early successional or severely disturbed communities
- Grade E: Very early successional or very severely disturbed communities

If present, data from historic collections of threatened and endangered species were checked in the vPlants database (vPlants 2008), which includes collections from the Field Museum of Natural History (F), the Morton Arboretum (MOR), and the Chicago Botanic Garden (CHIC). Botanical nomenclature throughout the report follows Taft et al. (1997). If not specifically indicated, scientific names followed by an asterisk (*) denote vascular plants that are adventive to this region.

RESULTS AND DISCUSSION

Threatened and Endangered Plants

Two plant species listed as state endangered by the Illinois Endangered Species Protection Board were found in the survey corridor, and include: 1) *Scirpus paludosus* A. Nelson (alkali bulrush), and 2) *Sisyrinchium montanum* Green (mountain blue-eyed grass).

Four (possibly five) colonies of *Scirpus paludosus* were located within the corridor (Appendices 1-5; Figure 2) growing in moist to wet roadside ditch areas, occupying a total estimated area of 30 m² (323 ft.²), with an estimated total number of flowering/fruitleting stems of 1,140 (Map 1). The potential fifth colony will be discussed in the following section.

Two populations of *Sisyrinchium montanum* were also discovered in the survey corridor (Appendices 6 & 7; Figure 2). The first population was located within Dropseed Prairie Nature Preserve growing in a grade B mesic prairie remnant (Figure 2; Map 1). The second population was located just north of Dropseed Prairie (Figure 2; Map 1) growing in a degraded mesic prairie that ranged in quality from low grade C to D.

Details of population parameters for state listed species will be discussed in the following sections. Scientific and common names for all vascular plant species occurring within the survey corridor, as well as the habitats in which they occurred, are provided in Appendix 8.

***Scirpus paludosus* A. Nelson** (alkali bulrush) CYPERACEAE – State endangered.

The alkali bulrush (Figure 3 A&B) is a rhizomatous, colony-forming perennial sedge that inhabits various, often saline, wetland areas such as marshes, shores, and lake margins (Gleason and Cronquist 1991, Smith 2002), and can tolerate alkaline environments with a pH up to 9.0 (USDA, NRCS 2008). Additionally, this species can survive short periods of complete inundation and is reported to grow well when the water table is within 10 cm of the soil surface (USDA, NRCS 2008). *Scirpus paludosus* occurs throughout a wide geographic range, including North America, South America, Central America, and the Hawaiian Islands (Smith 2002). In North America, *S. paludosus* is distributed throughout much of Canada, and within the United States, is known to occur in Illinois, Michigan, all states west of the Mississippi River (except Arkansas and Louisiana), and several northeastern states (Smith 2002).

The alkali bulrush was apparently first discovered in the Chicago region in 1950 (INPN [1970s], vPlants 2008), occurring as an extensive colony in a roadside ditch in Cook County (Swink 1969), but was noted as being much reduced in size by the late 1970s (Swink and Wilhelm 1979). In 1981, a population was reported from a natural salt marsh in La Salle County, and was believed to be indigenous at this site (Sheviak 1981). The population occurring in La Salle County is the basis for listing the alkali bulrush as a state endangered species. By 1994, the alkali bulrush was reported from three counties within the Chicago region – Cook, Grundy, and Lake, and these populations were all noted as being adventive (Swink and Wilhelm 1994). To date, there are eight counties from which the alkali bulrush is documented in Illinois – Boone, Cook, Du Page, Grundy, Kane, La Salle, Lake, and McHenry (Swink and Wilhelm 1994, Herkert and Ebinger 2002, Murphy 2005, 2006, 2007), and all of these populations (except the La Salle County population) occurred in roadside ditches. Additionally, Swink and Wilhelm (1994) and Smith (2002) note that the accumulation of road-deicing salts in these roadside ditches contributes to the occurrence and spread of this taxon in these environments. Synonymous names for the alkali bulrush include *Bolboshoenus maritimus* (L.) Palla, *Bolboshoenus maritimus* (L.) Palla subsp. *paludosus* (A. Nelson) T. Koyama, *Scirpus maritimus* L. var. *paludosus* (A. Nelson) Kükenth., and *Scirpus pacificus* Britt. (Smith 2002, USDA, NRCS 2008).

Within the survey corridor, four colonies of *Scirpus paludosus* (Appendices 1-4) were found in and along roadside ditches (Figure 3 A&B), occupying a total estimated area of 30 m² (323 ft.²), with an estimated total number of flowering/fruitlet stems of 1,140 (Map 1). The potential fifth colony (Appendix 5) was located on the west side of the I-57/IL Rt. 83 on-ramp (Figure 2; Map 1). This area was mowed the entire growing season, and therefore, only the bases of the plants within this colony were visible – preventing positive identification of the plants occurring in this area. The estimated number of potential stems within this population was 200.

Plants frequently to occasionally associated with *S. paludosus* included: *Agropyron repens**, *Aster subulatus**, *Atriplex patula**, *Echinochloa crus-galli**, *Eupatorium serotinum*, *Euthamia graminifolia*, *Festuca arundinacea**, *Juncus dudleyi*, *J. torreyi*, *Leptochloa acuminata**, *Lycopus americanus*, *Lythrum salicaria**, *Phalaris arundinacea**, *Phragmites australis**, *Puccinellia distans**, *Solidago sempervirens**, *Spergularia media**, *Suaeda depressa**, and *Typha angustifolia** (see also Appendices 1-5).

***Sisyrinchium montanum* Greene** (mountain blue-eyed grass) IRIDACEAE – State endangered.

A member of the Iris family, mountain blue-eyed grass is a caespitose, perennial herb with dark bluish-violet petals and sepals (Cholewa & Henderson 2002). *Sisyrinchium montanum* ranges from northwest and northeast Canada, south to northern New Mexico in the western U.S., and the northern tips of Illinois, Indiana, Ohio, and New Jersey in the eastern U. S. (Swink & Wilhelm 1994, Cholewa & Henderson 2002, USDA, NRCS 2008), and inhabits a variety of habitats including moist prairies/meadows, mesic sand prairies, stream banks, and open woods (Mohlenbrock 1970, INPC [1970s], Swink & Wilhelm 1994, Cholewa & Henderson 2002). In all eastern and Midwestern states where this taxon reaches its southern range limit (i.e., Illinois, Indiana, Ohio, and New Jersey), it is listed as a state endangered species (Herkert & Ebinger 2002, USDA, NRCS 2008). Two varieties of *Sisyrinchium montanum* are recognized; *S. montanum* var. *montanum*, and *S. montanum* var. *crebrum* Fern., with var. *montanum* being the more common element throughout this taxon's range (Mohlenbrock 1970, Mohlenbrock 2002, Cholewa & Henderson 2002). Both varieties occur in Illinois and both are listed as state endangered. The variety occurring in the survey corridor is *S. montanum* var. *montanum*. Synonymy for *S. montanum* var. *crebrum* includes: *S. montanum* Greene subsp. *crebrum* (Fern.) Böcher; and synonymy for *S. montanum* var. *montanum* includes: *Sisyrinchium alpestre* E. P. Bicknell and *Sisyrinchium heterocarpum* E. P. Bicknell (Cholewa & Henderson 2002).

Within Illinois, the mountain blue-eyed grass inhabits mesic prairies (often sandy), sand dune flats, and sedge meadows (Mohlenbrock 1970, INPC [1970s], Sheviak 1981, Swink & Wilhelm 1994, ILLS 2008). Historically, *S. montanum* is known from Du Page, Cook and Lake counties (Herkert & Ebinger 2002). There are also two unverified reports from Kankakee and Winnebago counties (Bowles et al. 1991, Jones 1994). Interestingly, Cholewa & Henderson (2002) do not attribute this species to Illinois even though several of the earliest collections within the state date back to 1890, 1900, 1907, and 1908 (Mohlenbrock 1970, INPC [1970s], vPlants 2008). The majority of Illinois collections were made before 1955 (INPC [1970s], Herkert & Ebinger 2002, ILLS 2008, vPlants 2008).

Sisyrinchium montanum was listed as state endangered in 1981 when the first state listing of threatened and endangered species was published (Sheviak 1981), and this protective status has not changed since (Herkert 1991, Herkert & Ebinger 2002, IESPB 2005). At that time, no extant populations were known although suitable habitat still remained (Swink & Wilhelm 1979, Sheviak 1981). In the early to mid 1980s, several new populations for this taxon were discovered in Cook and Lake counties, Illinois (INPC [1970s], Bowles et al. 1991, Herkert 1991, Swink & Wilhelm 1994), up until which time, the last historic collection was 1974 (Bowles et al. 1991). Currently, it is uncertain how many mountain blue-eyed grass populations are extant within the state, but data from the Illinois Natural Heritage Database (IDNR 2008) details the observance of 11 populations within the past 12 years, occurring in Cook (8 populations), Du Page (one population), and Lake (2 populations) counties. However, the historic Cook County population (last observed in May of 2000), which occurred within the 2008 survey corridor, is no longer extant as the entire area has been converted to a gravel-surfaced junkyard (Figure 2). However, there are at least 2 other populations occurring in Cook County that are not contained in the Illinois Natural Heritage Database (IDNR 2008, Masi 2008).

Within Illinois, the genus *Sisyrinchium* is represented by 6 species (Mohlenbrock 2002). Species in this genus can be challenging to identify and several species are known for their

variation in flower color. Post field season laboratory analysis of *Sisyrinchium* collections revealed two species occurring within the study corridor – *S. albidum* Raf. (common blue-eyed grass) and *S. montanum*. In all areas where *S. montanum* was located, the two species occurred together. Red flags within red outlined areas (Figure 2) represent collection locations for *S. montanum* individuals during the 2008 growing season, and red outlined areas represent habitats where dozens of individual *Sisyrinchium* plants occurred. Color variation of flowers within these areas was highly variable and several specimens were collected in these areas in an attempt to determine if obvious color differences might correspond to different species being present. Because the identity of *S. montanum* was not known until specimens from this area were examined, further surveys would be needed during the flowering period from mid-May to mid-June (Swink & Wilhem 1994) for a precise population assessment.

Due to the rarity of *S. montanum* within the state, few Illinois botanists have experience with this taxon and its field characters. Based upon analyses from specimens collected during the 2008 growing season, it would appear that the sepals and petals of this taxon are always bright blue-purple, even upon drying. Pale-flowered specimens that were collected proved to be *S. albidum*. However, there may be rare occasions where individuals that would otherwise be blue/violet-flowered may exhibit white/pale-violet coloration. With the exception of nature preserves and areas where *S. montanum* was found, which will be discussed in the following sections, blue outlined areas or lines (Figure 2; Map 1) represent the only other areas in the corridor with a limited number of prairie species still persisting. These areas were highly degraded, patchy and were borderline prairie/successional old field. Most of these areas had a few pale-flowered *Sisyrinchium* individuals occurring within them. It is unlikely that any of these pale-flowered individuals would be *S. montanum*. However, if further surveys are conducted to finalize population assessments for *S. montanum*, in addition to the red highlighted areas, these areas would be briefly checked, as well.

***Sisyrinchium montanum* - Population #1**

This population of mountain blue-eyed grass (Appendix 6) occurred within Dropseed Prairie Nature Preserve (Figure 2; Map 1), which was dedicated as a state nature preserve in 1999. Many searches were conducted utilizing several resources and databases, and no recent or historical records of this taxon occurring at this site could be found. Dropseed Prairie is characterized by grade B and C mesic to wet-mesic prairie, and occurs on poorly drained Selma loam soils that formed in areas of glacial outwash and glacial lake sediment, and occasionally have sandy surface layers and subsoil (Mapes 1979, Fehrenbacher et al. 1984). The central and southern areas in the preserve are more mesic, while the northern approximate one-third trends more toward wet/wet-mesic. *Sisyrinchium montanum* was found in a mesic portion of the preserve.

Woody species encroachment is advanced on the northern, southern, and western boundaries of the preserve, and any encroachment occurring in the main prairie areas is being controlled by cutting. The primary shrub invading on the boundaries of the preserve, as well as limited patches on the interior, is *Rhamnus cathartica** (European buckthorn). Other species encroaching on the boundaries included: *Acer negundo*, *Fraxinus pennsylvanica* var. *subintigerrima*, *Morus alba**, *Populus deltoides*, *Rhamnus frangula**, *Rhus glabra*, *Ulmus americana*, and *Vitis riparia*.

The area where specimen #2613 (population #1) was collected, occurred on the western edge of the preserve along a mowed path. This area was immediately adjacent (east) to the overgrown fenceline where the Interstate-57 right-of-way ends and the southern boundary of Dropseed Prairie begins. Small pockets of this prairie also extend into small openings along this fenceline, but no *Sisyrinchium* individuals were seen in these areas. Associate species within this area included (relative frequencies of occurrence – 1 = rare, 2 = infrequent, 3 = occasional, 4 = frequent, 5 = very frequent - see also Appendix 8):

<i>Achillea millefolium</i> * - (3)	<i>Gaura biennis</i> - (1-2)	<i>Rhamnus cathartica</i> * - (3)
<i>Allium cernuum</i> - (3)	<i>Gentiana quinquefolia</i> - (3-4)	<i>Schizachyrium scoparium</i> - (3)
<i>Andropogon gerardii</i> - (3-4)	<i>Heuchera richardsonii</i> - (2)	<i>Silphium integrifolium</i> - (3)
<i>Anemone virginiana</i> - (2)	<i>Hypoxis hirsuta</i> - (3)	<i>Silphium laciniatum</i> - (3)
<i>Aster azureus</i> - (2)	<i>Liatris spicata</i> (3)	<i>Silphium terebinthinaceum</i> - (3)
<i>Carex meadii</i> - (3)	<i>Lithospermum canescens</i> - (4)	<i>Sisyrinchium albidum</i> - (3-4)
<i>Castilleja coccinea</i> - (4)	<i>Monarda fistulosa</i> - (3-4)	<i>Smilacina stellata</i> - (2)
<i>Claytonia virginica</i> - (3)	<i>Oxalis violacea</i> - (2)	<i>Solidago canadensis</i> - (4)
<i>Comandra umbellata</i> - (3-4)	<i>Panicum oligosanthos</i> v. <i>scrib.</i> - (2)	<i>Solidago rigida</i> - (3)
<i>Coreopsis tripteris</i> - (3)	<i>Panicum virgatum</i> - (3-4)	<i>Sorghastrum nutans</i> - (4)
<i>Daucus carota</i> * - (3)	<i>Pastinaca sativa</i> * - (2-3)	<i>Sporobolus heterolepis</i> - (3-4)
<i>Dodecatheon media</i> - (3)	<i>Phlox glaberrima</i> var. <i>interior</i> - (3)	<i>Valeriana edulis</i> v. <i>ciliata</i> - (1-2)
<i>Elymus canadensis</i> - (2)	<i>Phlox pilosa</i> - (3)	<i>Veronicastrum virginicum</i> - (2)
<i>Eryngium yuccifolium</i> - (2)	<i>Pycnanthemum virginianum</i> - (3)	<i>Zizia aurea</i> - (3)
<i>Fragaria virginiana</i> - (3)	<i>Ratibida pinnata</i> - (3-4)	

Sisyrinchium montanum - Population #2

This population of mountain blue-eyed grass (Appendix 7) occurred in a grade C to D, mesic prairie remnant just north of Dropseed Prairie (Figure 2; Map 1). The soil type in this remnant is a poorly drained, Hoopston fine sandy loam, which also formed on glacial outwash and glacial lake sediments (Mapes 1979, Fehrenbacher et al. 1984). This prairie remnant was much more degraded than the previously described area, and woody species encroachment was advanced on all boundaries as well as various areas throughout. Primary species encroaching here included: *Cornus racemosa*, *Rhamnus cathartica**, *Robinia pseudoacacia**, and *Rubus pensylvanicus*. Other occasionally to frequently encountered species encroaching in this area included: *Fraxinus pennsylvanica* var. *subintegerrima*, *Gleditsia triacanthos*, *Juglans nigra*, *Juniperus virginiana*, *Morus alba**, *Populus deltoides*, *Prunus serotina*, and *Ulmus pumila**. Mowed paths and vehicle tracks were present in limited areas, presumably, to access 2 or 3 billboard advertisement towers that were situated here, and various types of trash had been dumped in several scattered areas. The slightly higher quality areas within this remnant were small and patchy in distribution, and lacking in diversity.

Specimen #2621 (population #2) was collected on the western edge of this mesic prairie remnant, immediately adjacent to the overgrown fence-line where the Interstate-57 right-of-way ends. Several small, patchy prairie openings occurred within the heavily overgrown Interstate-57 right-of-way; however, *Sisyrinchium* plants were observed only along the immediate fence-line area that separated the interstate right-of way and the mesic prairie remnant. As with the previously discussed site, there were many individual *Sisyrinchium* clumps in this area, with

varying flower color, and it is probable that other *S. montanum* individuals occur in this area. Population parameters are unknown at this time.

Associate and nearby species of the mountain blue-eyed grass at this second site included (relative frequencies of occurrence – 1 = rare, 2 = infrequent, 3 = occasional, 4 = frequent, 5 = very frequent - see also Appendix 8):

<i>Achillea millefolium</i> * - (3-4)	<i>Eupatorium altissimum</i> - (3-4)	<i>Ratibida pinnata</i> - (3)
<i>Agrostis alba</i> * - (3)	<i>Euthamia graminifolia</i> - (3)	<i>Rhamnus cathartica</i> * - (4-5)
<i>Allium cernuum</i> - (3)	<i>Festuca arundinacea</i> * - (4)	<i>Rudbeckia hirta</i> - (3)
<i>Andropogon gerardii</i> - (3-4)	<i>Gentiana quinquefolia</i> - (1)	<i>Schizachyrium scoparium</i> - (3)
<i>Anemone virginiana</i> - (2)	<i>Liatris spicata</i> - (2-3)	<i>Silphium integrifolium</i> - (3)
<i>Aster ericoides</i> - (3)	<i>Leucanthemum vulgare</i> * - (3)	<i>Silphium laciniatum</i> - (2)
<i>Aster novae-angliae</i> - (2)	<i>Melilotus alba</i> * - (4)	<i>Silphium terebinthinaceum</i> - (2)
<i>Aster pilosus</i> - (3-4)	<i>Melilotus officinalis</i> * - (4)	<i>Sisyrinchium albidum</i> - (3)
<i>Carex blanda</i> - (3)	<i>Monarda fistulosa</i> - (3-4)	<i>Solanum carolinense</i> * - (3)
<i>Cirsium discolor</i> - (2)	<i>Panicum implicatum</i> - (3)	<i>Solidago canadensis</i> - (4-5)
<i>Coreopsis tripteris</i> - (2-3)	<i>Panicum virgatum</i> - (3-4)	<i>Solidago juncea</i> - (3)
<i>Cornus racemosa</i> - (4-5)	<i>Poa compressa</i> * (3)	<i>Solidago rigida</i> - (3)
<i>Dactylis glomerata</i> * - (3-4)	<i>Poa pratensis</i> * - (4)	<i>Sorghastrum nutans</i> - (3)
<i>Daucus carota</i> * - (4)	<i>Prunella vulgaris</i> - (3)	<i>Spartina pectinata</i> - (2)
<i>Eragrostis spectabilis</i> - (3)	<i>Pycnanthemum tenuifolium</i> - (2)	<i>Stachys palustris</i> - (2)

Natural and Cultural Community Descriptions

Two, often intergrading, natural community types occurred within the survey corridor, and include: 1) mesic prairie and 2) wet-mesic prairie. All mesic and wet-mesic prairies, with the exception of those occurring at Dropseed Prairie, were highly degraded. The remaining areas within the corridor were cultural communities, which included: developed land, pastureland, roadside areas, wet-mesic old-field, and successional woodland. These natural and cultural communities will be discussed in the following sections.

Natural Communities

Mesic to wet-mesic prairie:

With the exception of the previously discussed areas where populations of the mountain blue-eyed grass were found, all other mesic to wet-mesic prairies had very limited and sporadic distributions within the corridor (see blue highlighted areas - Figure 2; Map 1). Two of these prairie habitats occurred within the vertical angles of the I-57/I-294 proposed interchange area. The term “natural community” is being used loosely in the description of these areas, as they were severely degraded (grade D), quite small, and possessed very little of their original structure and composition. However, several species indicative of natural communities occurred in these areas, thus causing them to stand out relative to the cultural communities that comprised the vast majority of land area within the survey corridor. All of these areas were bordered by, and/or intergraded with (often imperceptibly), wet-mesic old-fields and successional wooded areas (see above discussions on cultural communities). Additionally, these degraded prairie remnants were dominated by species adventive to the region and/or native ruderal species; these included:

(mesic to wet-mesic prairie continued)

<i>Agrostis alba</i> *	<i>Festuca arundinacea</i> *	<i>Poa pratensis</i> *
<i>Bromis inermis</i> *	<i>Melilotus alba</i> *	<i>Solidago canadensis</i>
<i>Dactylis glomerata</i> *	<i>Melilotus officinalis</i> *	
<i>Daucus carota</i> *	<i>Poa compressa</i> *	

Other species occurring in these degraded remnants are provided in the following list. Species that have CC values of 4 or higher (Appendix 8), and are indicators of remnant native communities, are denoted in bold type. Additionally, no one area had all of the native species listed below occurring in it. Additional species are as follows (relative frequencies of occurrence – 1 = rare, 2 = infrequent, 3 = occasional, 4 = frequent, 5 = very frequent - see also Appendix 8):

<i>Achillea millefolium</i> * - 4	<i>Comandra umbellata</i> - 1	<i>Panicum virgatum</i> - 3
<i>Agrimonia gryposepala</i> - 1	<i>Conyza canadensis</i> - 2	<i>Pastinaca sativa</i> * - 3
<i>Allium cernuum</i> - 2	<i>Coreopsis tripteris</i> - 2	<i>Plantago lanceolata</i> * - 2
<i>Ambrosia artemisiifolia</i> - 4	<i>Dianthus armeria</i> * - 2	<i>Potentilla simplex</i> - 3
<i>Andropogon gerardii</i> - 3	<i>Dipsacus laciniatus</i> * - 2	<i>Prunella vulgaris</i> v. <i>elong.</i> - 4
<i>Anemone virginiana</i> - 1-2	<i>Equisetum arvense</i> - 2-3	<i>Pycnanthemum virginianum</i> - 1
<i>Apios americana</i> - 2	<i>Eragrostis spectabilis</i> - 2	<i>Ratibida pinnata</i> - 3-4
<i>Asclepias sullivantii</i> - 1	<i>Erigeron strigosus</i> - 2-3	<i>Rudbeckia hirta</i> - 3
<i>Asclepias syriaca</i> - 3	<i>Eupatorium altissimum</i> - 3-4	<i>Schizachyrium scoparium</i> - 2
<i>Asclepias verticillata</i> - 3	<i>Euphorbia corollata</i> - 2	<i>Scirpus pendulus</i> - 1-2
<i>Aster drummondii</i> - 1-2	<i>Euthamia graminifolia</i> - 3	<i>Silphium integrifolium</i> - 2-3
<i>Aster ericoides</i> 2-3	<i>Fragaria virginiana</i> - 3-4	<i>Sisyrinchium albidum</i> - 3
<i>Aster novae-angliae</i> - 2	<i>Gaura biennis</i> - 2	<i>Smilacina stellata</i> - 1
<i>Aster pilosus</i> - 4	<i>Hypericum perforatum</i> * - 3	<i>Solidago juncea</i> - 3
<i>Aster praealtus</i> - 2	<i>Juncus dudleyi</i> - 2	<i>Solidago nemoralis</i> - 2-3
<i>Carex blanda</i> - 3	<i>Juncus torreyi</i> - 1-2	<i>Solidago rigida</i> - 2-3
<i>Carex buxbaumii</i> - 1	<i>Lycopus americanus</i> - 2	<i>Sorghastrum nutans</i> - 2-3
<i>Carex lanuginosa</i> - 1-2	<i>Monarda fistulosa</i> - 3	<i>Spartina pectinata</i> - 1-2
<i>Carex stricta</i> - 1-2	<i>Oenothera biennis</i> - 2-3	<i>Tridens flavus</i> - 2-3
<i>Cirsium arvense</i> * - 2-3	<i>Oxalis dillenii</i> - 3	<i>Vernonia fasciculata</i> - 2
<i>Cirsium vulgare</i> * - 3	<i>Panicum implicatum</i> - 3	<i>Vernonia missurica</i> - 2

Cultural Communities

Nearly all of the land area within the survey corridor, with the exception of the previously discussed prairie remnants, was represented by cultural communities - areas that have been modified or impacted by anthropogenic activities and no longer support the plant communities that occurred here at the time of settlement. These cultural communities included: developed land (subdivisions, lawns, scrap-yards/junk-yards, business/industrial sites, abandoned and overgrown industrial sites, etc.), pastureland, roadside areas (shoulders and ditches), wet-mesic old-fields, and successional wooded areas (including fenceline areas). All of these areas were dominated by exotic species and/or native ruderal species, and are discussed below.

Pastureland:

Pastureland areas were infrequent in the southern end of the survey corridor and were dominated by European grasses. These areas were utilized by horses being kept in several stables within this area.

Roadside areas:

All roadside areas were extremely degraded and were dominated by plants adventive (*) to the region. Rarely, a few prairie species occurred along road shoulders, but were surrounded by a matrix of adventive and/or native ruderal species - prairie species included: *Andropogon gerardii*, *Aster ericoides*, *Cicuta maculata*, *Liatris spicata*, *Panicum virgatum*, *Ratibida pinnata*, *Silphium laciniatum*, and *Solidago rigida*. Plants occasionally to frequently occurring in roadside areas (~ = wet areas; + = dry/drier areas) included (see also Appendix 8):

+ <i>Achillea millefolium</i> *	+ <i>Dyssodia papposa</i> *	~ <i>Phalaris arundinacea</i> *
~ + <i>Agropyron repens</i> *	~ <i>Echinochloa crus-galli</i> *	~ <i>Phragmites australis</i> *
~ <i>Agrostis alba</i> *	~ <i>Equisetum arvense</i>	+ <i>Plantago lanceolata</i> *
~ <i>Agrostis alba</i> v. <i>palustris</i>	+ <i>Erigeron annuus</i>	~ + <i>Plantago rugelii</i>
+ <i>Ambrosia artemisiifolia</i>	+ <i>Eupatorium altissimum</i>	+ <i>Poa pratensis</i> *
+ <i>Anagallis arvensis</i> *	~ + <i>Festuca arundinacea</i> *	~ <i>Puccinellia distans</i> *
~ <i>Apocynum sibiricum</i>	~ <i>Helianthus grosseserratus</i>	~ <i>Rumex crispus</i> *
+ <i>Artemisia vulgaris</i> *	~ <i>Hordeum jubatum</i> *	~ <i>Scirpus paludosus</i>
+ <i>Asclepias syriaca</i>	~ <i>Juncus torreyi</i>	~ <i>Scirpus tabernaemontanii</i>
+ <i>Asclepias verticillata</i>	+ <i>Kochia scoparia</i> *	~ <i>Solanum dulcamara</i> *
+ <i>Aster pilosus</i>	~ <i>Leptochloa fascicularis</i> *	~ + <i>Solidago canadensis</i>
~ <i>Aster subulatus</i> *	~ <i>Lycopus americanus</i>	~ <i>Solidago sempervirens</i> *
~ <i>Atriplex patula</i> *	~ <i>Lythrum alatum</i>	~ + <i>Sonchus arvensis</i> *
+ <i>Bromis inermis</i> *	~ <i>Lythrum salicaria</i> *	~ + <i>Spergularia media</i> *
~ + <i>Calystegia sepium</i>	+ <i>Medicago lupulina</i> *	~ + <i>Suaeda depressa</i> *
+ <i>Cichorium intybus</i> *	+ <i>Melilotus alba</i> *	~ + <i>Taraxacum officinale</i> *
+ <i>Daucus carota</i> *	+ <i>Melilotus officinalis</i> *	+ <i>Trifolium pratense</i> *
~ + <i>Dipsacus laciniatus</i> *	+ <i>Pastinaca sativa</i> *	~ <i>Typha angustifolia</i> *

Wet-mesic old-fields:

Wet-mesic old-field areas were infrequent in the corridor and occurred in scattered locations within the vertical angles (areas A, B, & D - Figure 2; Map 1) of the intersection of I-57 and I-294. These areas were dominated by *Phalaris arundinacea** (reed canary grass) and often were adjacent to, and intergraded with, successional wooded areas and to a lesser extent, highly degraded mesic to wet-mesic prairies. Diversity in these areas was very low, and encroaching woody species included: *Acer saccharinum*, *Cornus obliqua*, *C. racemosa*, *Fraxinus pennsylvanica* var. *subintegerrima*, *Lonicera X bella*, *Rhamnus cathartica**, *R. frangula**, *Rosa multiflora**, *Rubus occidentalis*, *R. pensylvanicus*, *Salix interior*, and *Vitis riparia*. Other species occurring in these areas are as follows (relative frequencies of occurrence – 1 = rare, 2 = infrequent, 3 = occasional, 4 = frequent, 5 = very frequent - see also Appendix 8):

(wet-mesic old-field continued)

<i>Agrostis alba</i> * - 2-3	<i>Eleocharis obtusa</i> - 2	<i>Plantago rugelii</i> - 3
<i>Alisma plantago-aquat.</i> v. <i>par.</i> - 1	<i>Erechtites hieracifolia</i> - 2	<i>Polygonum pensylvanicum</i> - 2-3
<i>Ambrosia trifida</i> - 2	<i>Eupatorium serotinum</i> - 2-3	<i>Polygonum punctatum</i> - 2
<i>Apocynum sibiricum</i> - 2	<i>Festuca arundinacea</i> * - 3	<i>Potentilla norvegica</i> - 1-2
<i>Asclepias incarnata</i> - 1-2	<i>Geum laciniatum</i> - 1-2	<i>Prunella vulgaris</i> v. <i>elongata</i> - 2
<i>Barbarea vulgaris</i> * - 2	<i>Juncus dudleyi</i> - 2	<i>Scirpus pendulus</i> - 2
<i>Bidens aristosa</i> - 1	<i>Juncus tenuis</i> - 1-2	<i>Solanum dulcamara</i> * - 2
<i>Bidens frondosa</i> - 2	<i>Juncus torreyi</i> - 1-2	<i>Solidago canadensis</i> - 3
<i>Calystegia sepium</i> - 2	<i>Lycopus americanus</i> - 2	<i>Solidago gigantea</i> - 2
<i>Cirsium arvense</i> * - 3-4	<i>Lythrum alatum</i> - 2	<i>Typha angustifolia</i> * - 2
<i>Cuscuta gronovii</i> - 1-2	<i>Mimulus ringens</i> - 2	<i>Verbena hastata</i> - 2
<i>Echinochloa crus-galli</i> * - 2-3	<i>Penthorum sedoides</i> - 1-2	<i>Xanthium strumarium</i> - 2

Successional wooded areas:

Successional wooded areas were frequent throughout the corridor and include overgrown areas that were historically (before settlement) prairie, but in the decades following settlement were converted to agriculture and/or pastureland. More recently, these areas have undergone extensive woody species encroachment and now bear no semblance to their presettlement condition, with the exception of a few scattered openings where a limited number of prairie species still persist. Typically, the most dominant woody species in these areas was *Rhamnus cathartica** (European buckthorn). Additionally, these areas were characterized by one or more of the following conditions: 1) moderate to dense growth of trees, shrubs and/or woody vines, 2) an extensive lack of diversity - often with abundant bare ground/leaf litter, and 3) dominant vegetation consisting of exotic species and/or native ruderal species. Further descriptions of these areas are as follows (relative frequencies of occurrence – 1 = rare, 2 = infrequent, 3 = occasional, 4 = frequent, 5 = very frequent - see also Appendix 8):

Overstory (when present)

<i>Acer negundo</i> - 3-4	<i>Juglans nigra</i> - 2	<i>Ulmus americana</i> - 2
<i>Acer saccharinum</i> - 3-4	<i>Morus alba</i> * - 2-3	<i>Ulmus pumila</i> * - 3
<i>Fraxinus pennsylvanica</i> v. <i>sub.</i> - 3-4	<i>Populus deltoides</i> - 4	
<i>Gleditsia triacanthos</i> - 2-3	<i>Prunus serotina</i> - 2-3	

Understory, or small, young growth

<i>Acer negundo</i> - 4-5	<i>Gleditsia triacanthos</i> - 2-3	<i>Prunus serotina</i> - 4
<i>Acer saccharinum</i> - 3-4	<i>Juglans nigra</i> - 3	<i>Rhamnus cathartica</i> * - 5
<i>Ailanthis altissima</i> * - 2	<i>Juniperus virginiana</i> - 2	<i>Robinia pseudo-acacia</i> * - 3
<i>Catalpa speciosa</i> * - 2	<i>Malus sieboldii</i> * - 2-3	<i>Salix alba</i> 'tristis'* - 1
<i>Celtis occidentalis</i> - 2-3	<i>Morus alba</i> * - 4	<i>Salix amygdaloides</i> - 1-2
<i>Crataegus mollis</i> - 2	<i>Populus deltoides</i> - 2	<i>Ulmus americana</i> - 4-5
<i>Fraxinus pennsylvanica</i> v. <i>sub.</i> - 4	<i>Populus grandidentata</i> - 1	<i>Ulmus pumila</i> * - 3-4

(successional wooded areas continued)**Shrubs and Woody Vines**

<i>Celastrus orbiculatus</i> * - 2	<i>Lonicera maackii</i> * - 4	<i>Rubus pensylvanicus</i> - 3
<i>Cornus obliqua</i> - 3	<i>Lonicera tartarica</i> * - 3	<i>Salix exigua</i> - 3
<i>Cornus racemosa</i> - 4-5	<i>Parthenocissus quinquefolia</i> - 5	<i>Sambucus canadensis</i> - 3
<i>Crataegus crus-galli</i> - 2	<i>Rhamnus cathartica</i> * - 5	<i>Solanum dulcamara</i> * - 2-3
<i>Eleagnus angustifolia</i> * - 2	<i>Rhamnus frangula</i> * - 3-4	<i>Toxicodendron radicans</i> - 4
<i>Eleagnus umbellata</i> * - 3	<i>Rhus glabra</i> - 2-3	<i>Viburnum opulus</i> * - 2-3
<i>Euonymus alatus</i> * - 2	<i>Rosa carolina</i> - 1-2	<i>Viburnum recognitum</i> * - 1-2
<i>Euonymus fortunei</i> * - 2-3	<i>Rosa multiflora</i> * - 4	<i>Vitis riparia</i> - 5
<i>Ligustrum vulgare</i> * - 2	<i>Rosa setigera</i> - 2	
<i>Lonicera x bella</i> * - 4	<i>Rubus occidentalis</i> - 3	

Ground Flora

<i>Acalypha rhomboidea</i> - 3-4	<i>Duchesnea indica</i> * - 2	<i>Phytolacca americana</i> - 3-4
<i>Alliaria petiolata</i> * - 4-5	<i>Elymus virginicus</i> - 3-4	<i>Plantago rugelii</i> - 4-5
<i>Allium canadense</i> - 3	<i>Erechtites hieracifolia</i> - 3	<i>Poa compressa</i> * 3-4
<i>Ambrosia trifida</i> - 3	<i>Erigeron philadelphicus</i> - 3	<i>Poa pratensis</i> * - 4
<i>Arctium minus</i> * - 4	<i>Eupatorium rugosum</i> - 4	<i>Polygonum cespitosum</i> v. <i>long.</i> * - 4
<i>Aster drummondii</i> - 2	<i>Festuca arundinacea</i> * - 4-5	<i>Prunella vulgaris</i> v. <i>elongata</i> - 4
<i>Aster lateriflorus</i> - 3-4	<i>Galium aparine</i> - 4	<i>Sanicula gregaria</i> - 4-5
<i>Aster simplex</i> - 3	<i>Galium triflorum</i> - 3-4	<i>Solidago canadensis</i> - 4-5
<i>Barbarea vulgaris</i> * - 3	<i>Geum canadense</i> - 4-5	<i>Solidago gigantea</i> - 3-4
<i>Bidens frondosa</i> - 3	<i>Glechoma hederacea</i> * - 5	<i>Taraxacum officinale</i> * - 4
<i>Carex blanda</i> - 3-4	<i>Hackelia virginiana</i> - 4	<i>Teucrium canadense</i> v. <i>virg.</i> - 2-3
<i>Circaea lutetiana</i> v. <i>canadensis</i> - 4	<i>Juncus tenuis</i> - 3-4	<i>Thalictrum revolutum</i> - 2-3
<i>Cirsium arvense</i> * - 3-4	<i>Muhlenbergia schreberi</i> - 3	<i>Verbena urticifolia</i> - 3
<i>Cryptotaenia canadensis</i> - 3	<i>Nepeta cataria</i> * - 3	<i>Viola pratincola</i> - 4-5
<i>Dactylis glomerata</i> * - 3-4	<i>Oxalis stricta</i> - 4	<i>Viola sororia</i> - 3-4
<i>Daucus carota</i> * - 4	<i>Phalaris arundinacea</i> * - 3-4	

Habitats in the Proposed I-57 & I-294 Interchange Area (Areas - A, B, C, & D)**Area A**

The western angle of the I-57/I-294 intersection (Area A - Figure 2; Map 1) was highly degraded and entirely comprised of cultural communities, which included pastureland (southern portion), successional wooded areas (central portion), and wet-mesic old-field (northern portion). This area was highly lacking in diversity and dominated by exotic species, and to a lesser extent, native ruderal species. Appendix 8 provides a complete list of species that occurred in Area A, and descriptions of these cultural communities are discussed in the above sections.

Area B

The northern angle of the I-57/I-294 intersection (Area B - Figure 2; Map 1) was also highly degraded. This area was a mosaic of mainly successional wooded areas and wet-mesic old-field, interspersed and intergrading with a very small amount of highly degraded (grade D) mesic to wet-mesic prairie (see blue highlighted area in Figure 2; Map 1). Several rarely to infrequently occurring prairie species still persisting here, included: *Andropogon gerardii*, *Asclepias sullivantii*, *Aster ericoides*, *A. novae-angliae*, *Carex lanuginosa*, *Comandra umbellata*, *Liatris spicata*, *Monarda fistulosa*, *Panicum virgatum*, *Pycnanthemum virginianum*, *Ratibida pinnata*, *Schizachyrium scoparium*, *Silphium integrifolium*, *Sisyrinchium albidum*, *Smilacina stellata*, and *Solidago rigida*. Otherwise, dominant species in this small remnant included: *Agrostis alba**, *Bromus inermis**, *Daucus carota**, *Eupatorium altissimum*, *Poa compressa**, *P. pratensis**, and *Solidago canadensis* (see Appendix 8 for a list of all species occurring within Area B).

Area C

The eastern angle of the I-57/I-294 intersection (Area C - Figure 2; Map 1) was entirely a successional wooded area, and almost completely dominated by *Rhamnus cathartica** (European buckthorn). A list of the very few plant species occurring here is provided in Appendix 8.

Area D

The southern angle of the I-57/I-294 intersection (Area D - Figure 2; Map 1) was also highly degraded and dominated by a mosaic of successional wooded areas and wet-mesic old-field. One small area (blue outlined area - Figure 2; Map 1) represented a highly degraded (grade D), mesic to wet-mesic prairie remnant that intergraded on all boundaries with wet-mesic old-field and successional wooded areas. This area still possessed several prairie species that were rare to infrequent and patchy in distribution, including: *Andropogon gerardii*, *Carex bauxbaumii*, *C. stricta*, *Euthamia graminifolia*, *Galium obtusum*, *Liatris spicata*, *Monarda fistulosa*, *Panicum virgatum*, *Pycnanthemum virginianum*, *Sisyrinchium albidum*, *Sorghastrum nutans*, *Spartina pectinata*, and *Vernonia missurica* (see also Appendix 8), but overall, the area was dominated by a matrix of exotic species, including: *Achillea millefolium*, *Agrostis alba*, *Cirsium arvense*, *C. vulgare*, *Dactylis gomerata*, *Daucus carota*, *Festuca arundinacea*, *Melilotus alba*, *M. officinalis*, *Nepeta cataria*, *Poa compressa*, *P. pratensis*; and the native, ruderal species *Solidago canadensis* (see Appendix 8 for a complete list of species occurring in Area D).

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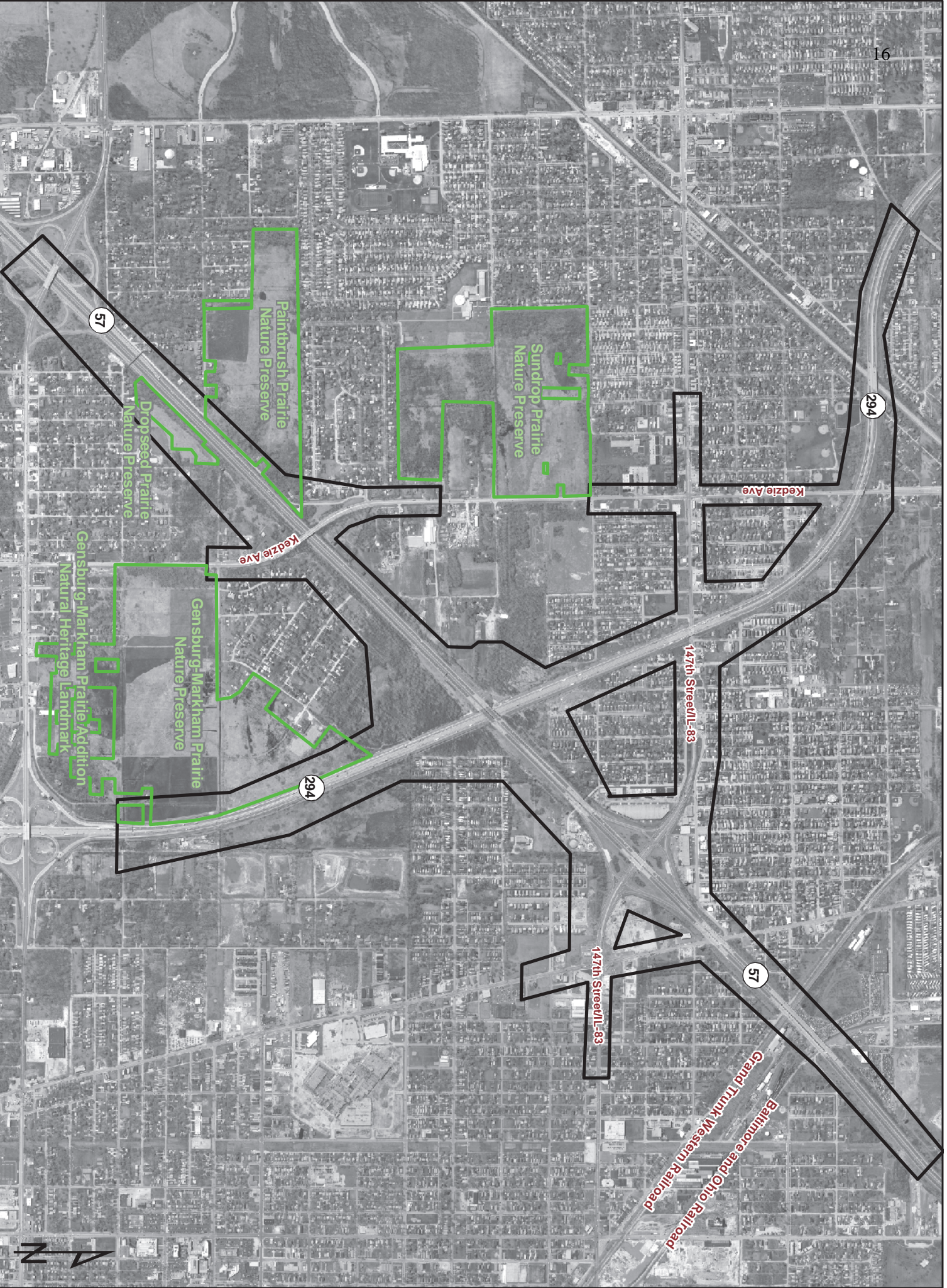


Figure 1. Aerial photograph showing botanical survey boundaries for the Illinois Department of Transportation I-57/I-294 Interchange study area, Cook County, Illinois.

0 500 1,000 2,000 3,000 4,000 Feet
 INHS
 Jarvis 11/10/08

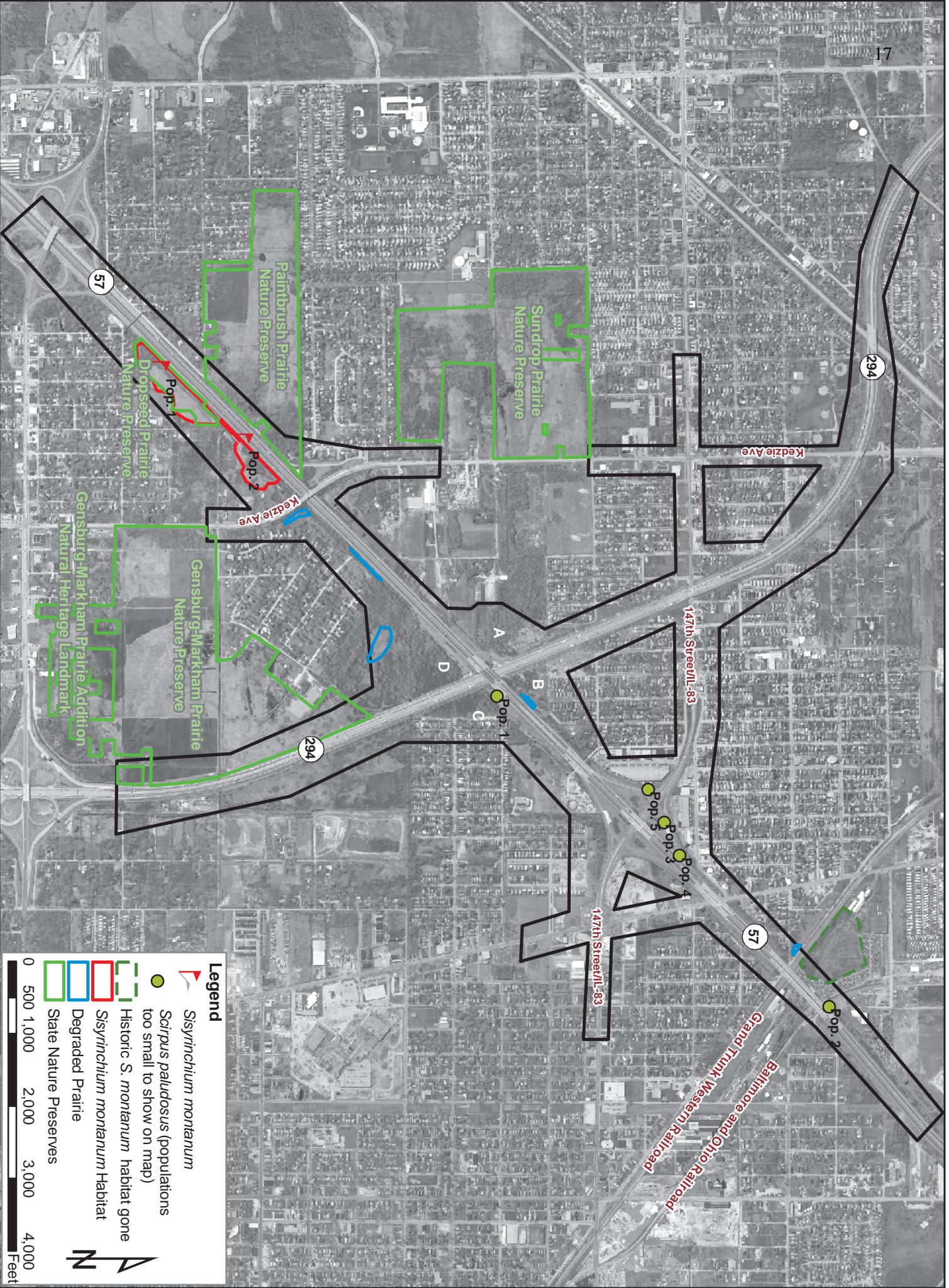


Figure 2. Aerial photograph showing botanical survey boundaries and locations of state endangered plant species in the Illinois Department of Transportation I-57/I-294 interchange study area, Cook County, Illinois.

Legend







-  *Sisyrinchium montanum*
-  *Scirpus paludosus* (populations too small to show on map)
-  Historic *S. montanum* habitat gone
-  *Sisyrinchium montanum* Habitat
-  Degraded Prairie
-  State Nature Preserves



Figure 3. A - Photograph of *Scirpus paludosus* (population #1) along Interstate-57, growing in a moist roadside ditch, immediately northeast of I-294 and southeast of I-57, Cook Co., Illinois (each of the three white arrows points to one inflorescence). B - Close-up photograph of a fruiting stem of *Scirpus paludosus* within this population.



A.

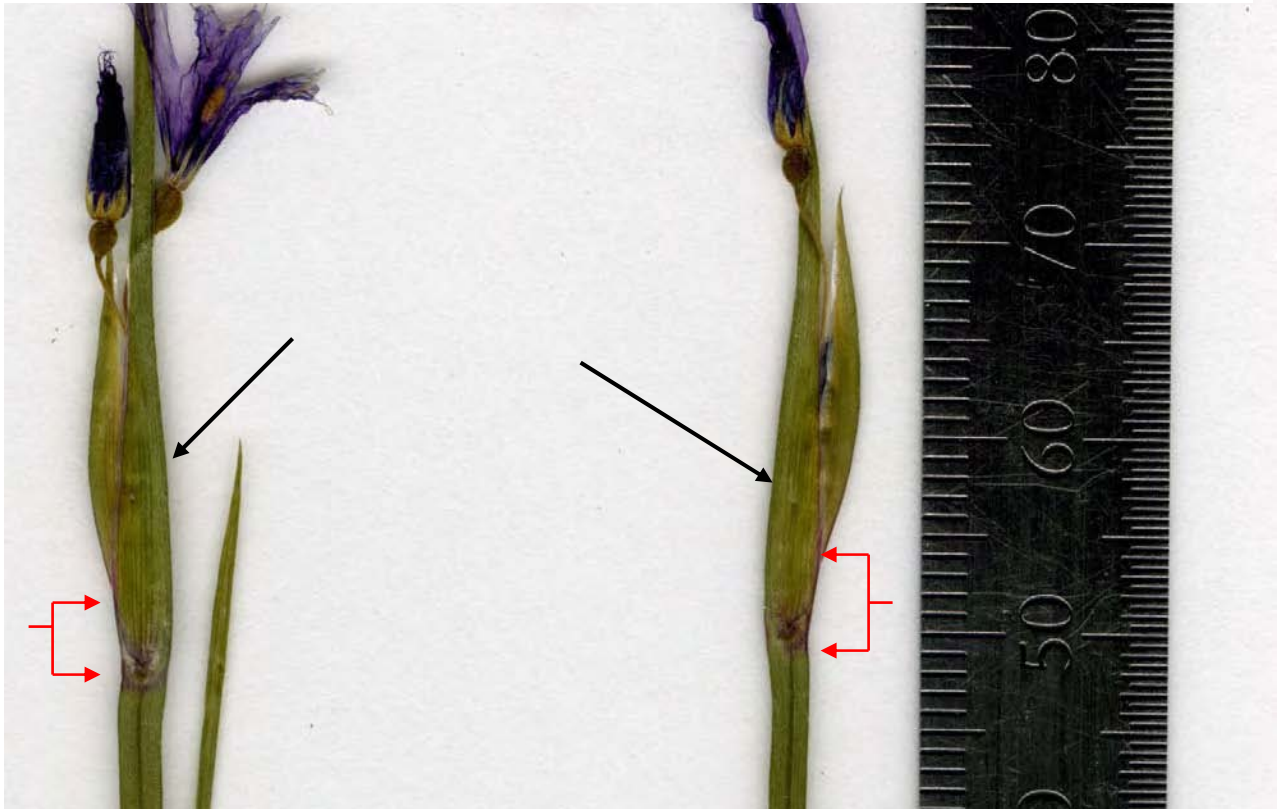


B.

Figure 4. Photograph of *Sisyrinchium montanum* voucher specimen (Murphy # 2621) collected from the second population discovered along the I-57/I-294 survey corridor, in Cook Co., Illinois. This population was discovered in a degraded mesic prairie along Interstate-57, just north of Dropseed Prairie Nature Preserve.



Figure 5. Close-up photograph of *Sisyrinchium montanum* voucher specimen (Murphy # 2621), collected from the second mountain blue-eyed grass population discovered along the I-57/I-294 survey corridor, Cook Co., Illinois. Photograph shows the fused lower margins (red arrows) of the outer-most bracts (black arrows) - a diagnostic character of this taxon.



Appendix 1. Threatened and endangered species Element Occurrence Record for *Scirpus paludosus*, Cook County, Illinois.

<p>Taxon: <i>Scirpus paludosus</i> A. Nelson</p> <p>Project Area: IDOT & ISTHA Interstate-57/Interstate-294 interchange & lane expansion; IDOT Job No.: p-91-186-08</p> <p>Date: 12 August 2008</p>	<p>Status: State Endangered</p> <p>County: Cook</p>
<p>Distance from Edge of Pavement: Approximately 20.4 m (80 ft.)</p>	<p>Population Size: About 50 fruiting culms</p>
<p>Reproductive State: Fruiting</p>	
<p>Latitude: 41.61871° N Longitude: -087.68614° W (WGS84/NAD83)</p>	
<p>Voucher: Yes (<i>Murphy #3195</i> - ILLS)</p>	<p>Photograph: Yes</p>

Community Description:

Natural Community: Cultural - Developed land (moist/wet roadside ditch)

Associate Species: *Bidens frondosa*, *Euthamia graminifolia*, *Festuca arundinacea**, *Helianthus grosseserratus*, *Juncus dudleyi*, *J. torreyi*, *Lycopus americanus*, *Lythrum alatum*, *Phalaris arundinacea**, *Rhamnus frangula**, and *Solidago sempervirens**.

Comments: (Population #1) - Occurring along northbound lanes of I-57 at the intersection of I-57 & I-294 (southeast of I-57 and northeast of I-294).

Appendix 2. Threatened and endangered species Element Occurrence Record for *Scirpus paludosus*, Cook County, Illinois.

<p>Taxon: <i>Scirpus paludosus</i> A. Nelson</p> <p>Project Area: IDOT & ISTHA Interstate-57/Interstate-294 interchange & lane expansion; IDOT Job. No.: p-91-186-08</p> <p>Date: 12 August 2008</p>	<p>Status: State Endangered</p> <p>County: Cook</p>
<p>Distance from Edge of Pavement: N/A - underneath I-57 railroad overpass</p>	<p>Population Size: About 700 fruiting culms</p>
<p>Reproductive State: Fruiting</p>	
<p>Latitude: 41.63139° N Longitude: -087.67059° W (WGS84/NAD83)</p>	
<p>Voucher: No</p>	<p>Photograph: No</p>

Community Description:

Natural Community: Cultural - Developed land (moist/wet roadside ditch)

Associate Species: *Kochia scoparia**, *Lythrum salicaria**, *Phragmites australis**, *Puccinellia distans**, *Scirpus tabernaemontani*, *Solidago sempervirens**, and *Typha angustifolia**.

Comments: (Population #2) - Occurring underneath I-57 railroad overpass.

Appendix 3. Threatened and endangered species Element Occurrence Record for *Scirpus paludosus*, Cook County, Illinois.

<p>Taxon: <i>Scirpus paludosus</i> A. Nelson</p> <p>Project Area: IDOT & ISTHA Interstate-57/Interstate-294 interchange & lane expansion; IDOT Job. No.: p-91-186-08</p> <p>Date: 12 August 2008</p>	<p>Status: State Endangered</p> <p>County: Cook</p>
<p>Distance from Edge of Pavement: Approximately 4 to 6 m</p>	<p>Population Size: About 40 fruiting culms</p>
<p>Reproductive State: Fruiting</p>	
<p>Latitude: 41.62508° N Longitude: -087.67984° W (WGS84/NAD83)</p>	
<p>Voucher: No</p>	<p>Photograph: No</p>

Community Description:

Natural Community: Cultural - Developed land (moist/wet roadside ditch)

Associate Species: *Agropyron repens**, *Aster subulatus**, *Atriplex patula**, *Echinochloa crus-galli**, *Festuca arundinacea**, *Leptochloa fascicularis**, *Solidago sempervirens**, and *Spergularia media**.

Comments: (Population #3) - Occurring west of I-57, along westbound I-57/147th St. exit ramp (east side of exit ramp).

Appendix 4. Threatened and endangered species Element Occurrence Record for *Scirpus paludosus*, Cook County, Illinois.

<p>Taxon: <i>Scirpus paludosus</i> A. Nelson</p> <p>Project Area: IDOT & ISTHA Interstate-57/Interstate-294 interchange & lane expansion; IDOT Job. No.: p-91-186-08</p> <p>Date: 12 August 2008</p>	<p>Status: State Endangered</p> <p>County: Cook</p>
<p>Distance from Edge of Pavement: Approximately 4 to 6 m</p>	<p>Population Size: About 350 fruiting culms</p>
<p>Reproductive State: Fruiting</p>	
<p>Latitude: 41.62568° N Longitude: -087.67819° W (WGS84/NAD83)</p>	
<p>Voucher: No</p>	<p>Photograph: No</p>

Community Description:

Natural Community: Cultural - Developed land (moist/wet roadside ditch)

Associate Species: *Agropyron repens**, *Aster subulatus**, *Atriplex patula**, *Echinochloa crus-galli**, *Festuca arundinacea**, *Leptochloa fascicularis**, *Solidago sempervirens**, and *Spergularia media**.

Comments: (Population #4) - Occurring west of I-57, along westbound I-57/147th St. exit ramp (east side of exit ramp).

Appendix 5. Threatened and endangered species Element Occurrence Record for *Scirpus paludosus*, Cook County, Illinois.

<p>Taxon: <i>Scirpus paludosus</i> A. Nelson</p> <p>Project Area: IDOT & ISTHA Interstate-57/Interstate-294 interchange & lane expansion; IDOT Job. No.: p-91-186-08</p> <p>Date: 12 August 2008</p>	<p>Status: State Endangered</p> <p>County: Cook</p>
<p>Distance from Edge of Pavement: Approximately 4 to 6 m</p>	<p>Population Size: About 200 culm bases</p>
<p>Reproductive State: Sterile (mowed)</p>	
<p>Latitude: 41.62447° N Longitude: -087.68150° W (WGS84/NAD83)</p>	
<p>Voucher: No</p>	<p>Photograph: No</p>

Community Description:

Natural Community: Cultural - Developed land (moist/wet roadside ditch)

Associate Species: *Agrostis alba* var. *palustris*, *Festuca arundinacea**, and *Scirpus tabernaemontani*.

Comments: (potential population #5 - area was mowed throughout growing season and positive identification of plants could not be made; stem bases appeared as those of *Scirpus paludosus*) - Occurring west of I-57, along westbound I-57/147th St. on ramp (east side of on ramp).

Appendix 6. Threatened and endangered species Element Occurrence Record for *Sisyrinchium montanum* , Cook County, Illinois.

Taxon: <i>Sisyrinchium montanum</i> Greene	Status: State Endangered
Project Area: IDOT & ISTHA Interstate-57/Interstate-294 interchange & lane expansion; IDOT Job No.: p-91-186-08	County: Cook
Date: 20 May 2008	
Distance from Edge of Pavement: Approximately 45.8-53.4 m (150-175 ft.)	Population Size: Uncertain

Reproductive State: Flowering

Latitude: 41.60583° N

Longitude: -087.70243° W

(WGS84/NAD83)

Voucher: Yes (*Murphy #2613* - ILLS)

Photograph: No

Community Description:

Natural Community: High quality mesic to wet-mesic prairie (Dropseed Prairie Nature Preserve)

Associate Species: *Achillea millefolium**, *Allium cernuum*, *Andropogon gerardii*, *Anemone virginiana*, *Aster azureus*, *Carex meadii*, *Castilleja coccinea*, *Claytonia virginica*, *Comandra umbellata*, *Coreopsis tripteris*, *Daucus carota**, *Dodecatheon media*, *Elymus canadensis*, *Eryngium yuccifolium*, *Fragaria virginiana*, *Guara biennis*, *Gentiana quiquefolia*, *Heuchera richardsonii*, *Hypoxis hirsuta*, *Liatris spicata*, *Lithospermum canescens*, *Monarda fistulosa*, *Oxalis violacea*, *Panicum oligosanthos* var. *scribnerianum*, *P. virgatum*, *Pastinaca sativa**, *Phlox glaberrima* var. *interior*, *P. pilosa*, *Pycnanthemum virginianum*, *Ratibida pinnata*, *Rhamnus cathartica**, *Silphium integrifolium*, *S. laciniatum*, *S. terebinthinaceum*, *Sisyrinchium albidum*, *Smilacina stellata*, *Solidago canadensis*, *S. rigida*, *Sorghastrum nutans*, *Schizachyrium scoparium*, *Sporobolus heterolepis*, *Valeriana ciliata*, *Veronicastrum virginicum*, and *Zizia aurea*.

Comments: (Population #1) - Occurring within the boundaries of Dropseed Prairie Nature Preserve.

Woody species encroachment is occurring on the northern, southern, and western boundaries of the preserve.

The main species invading is *Rhamnus cathartica**; other woody species include: *Acer negundo*, *Fraxinus pennsylvanica* var. *subintigerrima*, *Morus alba**, *Populus deltoides*, *Rhamnus frangula**, *Rhus glabra*, and *Vitis riparia*.

Appendix 7. Threatened and endangered species Element Occurrence Record for *Sisyrinchium montanum* , Cook County, Illinois.

Taxon: <i>Sisyrinchium montanum</i> Greene	Status: State Endangered
Project Area: IDOT & ISTHA Interstate-57/Interstate-294 interchange & lane expansion; IDOT Job. No.; p-91-186-08	County: Cook
Date: 21 May 2008	
Distance from Edge of Pavement: Approximately 45.8 m (150 ft.)	Population Size: Uncertain
Reproductive State: Flowering	
Latitude: 41.60897° N	
Longitude: -087.69880° W (WGS84/NAD83)	
Voucher: Yes (<i>Murphy #2621</i> - ILLS)	Photograph: No

Community Description:

Natural Community: Degraded mesic prairie undergoing extensive woody spp. encroachment.

Associate Species: *Achillea millefolium**, *Agrostis alba*, *Allium cernuum*, *Andropogon gerardii*, *Anemone virginiana*, *Aster ericoides*, *A. novae-angliae*, *A. pilosus*, *Carex blanda*, *Cirsium discolor*, *Coreopsis tripteris*, *Cornus racemosa*, *Dactylis glomerata**, *Daucus carota**, *Eragrostis spectabilis*, *Eupatorium altissimum*, *Euthamia graminifolia*, *Festuca arundinacea**, *Gentiana quinquefolia*, *Leucanthemum vulgare**, *Liatris spicata*, *Melilotus alba**, *M. officinalis**, *Monarda fistulosa*, *Panicum implicatum*, *P. virgatum*, *Poa pratensis**, *Prunella vulgaris*, *Pycnanthemum tenuifolium*, *Ratibida pinnata*, *Rhamnus cathartica**, *Rudbeckia hirta*, *Silphium integrifolium*, *S. laciniatum*, *S. terebinthinaceum*, *Sisyrinchium albidum*, *Solanum carolinense**, *Solidago canadensis*, *S. juncea*, *S. rigida*, *Sorghastrum nutans*, and *Schizachyrium scoparium*.

Comments: (Population #2) - Occurring on I-57 (northbound side) along fenceline where interstate right-of-way abuts adjacent areas under private ownership. Woody species encroachment is advanced on all sides of this remnant, and is occurring in middle sections, as well. Primary species encroaching are: *Cornus racemosa*, *Rhamnus cathartica**, *Robinia pseudoacacia**, and *Rubus pensylvanicus* .

Appendix 8. Cumulative list of vascular plant species encountered in the I-57/I-294 interchange study corridor, Cook County, Illinois.

Community abbreviations are as follows: **S1MWM** = *Sisyrinchium montanum* population #1 high quality mesic/wet-mesic prairie (Dropseed Prairie); **S2MWM** = *Sisyrinchium montanum* population #2 degraded mesic/wet-mesic prairie; **HDMWM** = highly degraded mesic/wet-mesic prairie throughout the corridor; **DR** = dry roadsides; **WR** = wet roadsides; **WMOF** = wet-mesic old-field; **SCWOOD** = successional wooded areas. **Areas A, B, C, & D**, correspond to vertical angle areas at the intersection of I-57 & I-294 (see Figure 2). Additional abbreviations are as follows: **C** = coefficient of conservatism; **W** = numeric wetness values associated with wetland categories (see end of appendix 8); **Wetness** = wetland classification category (see end of appendix 8); **Origin** = native (Nt) or Adventive (Ad) to the region; **Physiog.** = physiognomy (combination of structural attributes, life history and taxonomic classification). Single letter prefixes accompanying Forb, Grass, Sedge, or Vine classifications are as follows: A = annual, H= herbaceous, P = perennial, W = woody. Taxa with scientific names in all capital letters are adventive to the region.

C	Scientific Name	W	Wetness	Origin	Physiog.	Common Name	S1MWM	S2MWM	HDMWM	DR	WR	WMOF	SCWOOD	Area A	Area B	Area C	Area D	
0	<i>Acalypha rhomboidea</i>	3	FACU	Nt	A-Forb	THREE-SEEDED MERCURY							X	X			X	X
1	<i>Acer negundo</i>	-2	FACW-	Nt	Tree	BOXELDER		X		X	X	X	X	X	X	X	X	X
1	<i>Acer saccharinum</i>	-3	FACW	Nt	Tree	SILVER MAPLE						X	X	X	X	X	X	X
0	<i>ACHILLEA MILLEFOLIUM</i>	3	FACU	Ad	P-Forb	COMMON MILFOIL	X	X	X	X					X		X	
3	<i>Agrimonia gryposepala</i>	2	FACU+	Nt	P-Forb	TALL AGRIMONY			X				X				X	
0	<i>AGROPYRON REPENS</i>	3	FACU	Ad	P-Grass	QUACK GRASS				X	X						X	
0	<i>AGROSTIS ALBA</i>	-3	FACW	Ad	P-Grass	RED TOP		X	X		X	X	X	X	X		X	
8	<i>Agrostis alba v. palustris</i>	-3	FACW	Nt	P-Grass	CREEPING BENT GRASS					X							
0	<i>AILANTHUS ALTISSIMA</i>	5	UPL	Ad	Tree	TREE-OF-HEAVEN							X				X	
2	<i>Alisma plantago-aquatica v. parviflorum</i>	-5	OBL	Nt	P-Forb	COMMON WATER PLANTAIN						X		X				
0	<i>ALLIARIA PETIOLATA</i>	0	FAC	Ad	B-Forb	GARLIC MUSTARD							X	X		X	X	
2	<i>Allium canadense</i>	3	FACU	Nt	P-Forb	WILD GARLIC							X	X			X	
7	<i>Allium cernuum</i>	5	UPL	Nt	P-Forb	NODDING WILD ONION	X	X	X									
0	<i>Ambrosia artemisiifolia</i>	3	FACU	Nt	A-Forb	COMMON RAGWEED		X	X	X	X	X	X	X	X		X	
0	<i>Ambrosia trifida</i>	-1	FAC+	Nt	A-Forb	GIANT RAGWEED		X	X	X	X		X	X	X		X	
0	<i>ANAGALLIS ARVENSIS</i>	5	UPL	Ad	A-Forb	POOR MAN'S WEATHERGLASS				X	X							
5	<i>Andropogon gerardii</i>	1	FAC-	Nt	P-Grass	BIG BLUESTEM	X	X	X	X					X		X	
4	<i>Anemone virginiana</i>	5	UPL	Nt	P-Forb	TALL ANEMONE	X	X	X				X					
4	<i>Antennaria neglecta</i>	5	UPL	Nt	P-Forb	CAT'S FOOT	X											
4	<i>Antennaria plantaginifolia</i>	5	UPL	Nt	P-Forb	PUSSY TOES	X											
3	<i>Apios americana</i>	-3	FACW	Nt	H-Vine	GROUND NUT			X		X			X				
2	<i>Apocynum sibiricum</i>	-1	FAC+	Nt	P-Forb	INDIAN HEMP	X	X	X	X	X		X	X			X	
0	<i>ARCTIUM MINUS</i>	5	UPL	Ad	B-Forb	COMMON BURDOCK		X					X	X		X	X	
0	<i>ARTEMISIA VULGARIS</i>	5	UPL	Ad	P-Forb	MUGWORT				X								
4	<i>Asclepias incarnata</i>	-5	OBL	Nt	P-Forb	SWAMP MILKWEED	X	X	X		X		X					
7	<i>Asclepias sullivantii</i>	5	UPL	Nt	P-Forb	PRAIRIE MILKWEED			X						X			
0	<i>Asclepias syriaca</i>	5	UPL	Nt	P-Forb	COMMON MILKWEED		X	X	X			X	X			X	
1	<i>Asclepias verticillata</i>	5	UPL	Nt	P-Forb	HORSETAIL MILKWEED		X	X	X							X	
0	<i>ASPARAGUS OFFICINALIS</i>	3	FACU	Ad	P-Forb	GARDEN ASPARAGUS		X					X				X	
7	<i>Aster azureus</i>	5	UPL	Nt	P-Forb	SKY-BLUE ASTER	X											
3	<i>Aster drummondii</i>	3	FACU	Nt	P-Forb	DRUMMOND'S ASTER			X				X					
4	<i>Aster ericoides</i>	4	FACU-	Nt	P-Forb	HEATH ASTER	X	X	X	X					X			
2	<i>Aster lateriflorus</i>	-2	FACW-	Nt	P-Forb	SIDE-FLOWERING ASTER					X		X	X		X	X	
4	<i>Aster novae-angliae</i>	-3	FACW	Nt	P-Forb	NEW ENGLAND ASTER	X	X	X	X					X			
0	<i>Aster pilosus</i>	4	FACU-	Nt	P-Forb	HAIRY ASTER	X	X	X	X					X		X	
4	<i>Aster praealtus</i>	-5	OBL	Nt	P-Forb	WILLOW ASTER	X	X		X	X		X					
3	<i>Aster simplex</i>	-5	OBL	Nt	P-Forb	PANICLED ASTER				X	X		X	X				
0	<i>ASTER SUBULATUS</i>	-5	OBL	Ad	A-Forb	EXPRESSWAY ASTER				X								
0	<i>ATRIPLEX PATULA</i>	2	FACU+	Ad	A-Forb	FAT-HEN SALTBUSH					X							
0	<i>BARBAREA VULGARIS</i>	0	FAC	Ad	B-Forb	WINTER CRESS			X		X		X	X			X	
1	<i>Bidens aristosa</i>	-3	FACW	Nt	A-Forb	SWAMP MARIGOLD	X	X			X							
1	<i>Bidens frondosa</i>	-3	FACW	Nt	A-Forb	COMMON BEGGAR'S TICKS	X	X		X	X		X	X		X	X	
0	<i>BROMUS INERMIS</i>	5	UPL	Ad	P-Grass	HUNGARIAN BROME		X	X	X			X	X			X	

Appendix 8 continued

C	Scientific Name	W	Wetness	Origin	Physiog.	Common Name	S1MWM	S2MWM	HDMWM	DR	WR	WMOF	SCWOOD	Area A	Area B	Area C	Area D
1	Calystegia sepium	0	FAC	Nt	P-Forb	AMERICAN BINDWEED		X	X	X	X	X			X		
0	CANNABIS SATIVA	0	FAC	Ad	A-Forb	HASHISH							X				X
2	Carex blanda	0	FAC	Nt	P-Sedge	COMMON WOOD SEDGE		X	X				X	X	X	X	X
9	Carex buxbaumii	-5	OBL	Nt	P-Sedge	DARK-SCALED SEDGE	X	X									X
4	Carex lanuginosa	-5	OBL	Nt	P-Sedge	WOOLY SEDGE	X	X						X			
6	Carex meadii	4	FACU-	Nt	P-Sedge	MEAD'S STIFF SEDGE	X										
5	Carex stricta	-5	OBL	Nt	P-Sedge	COMMON TUSsock SEDGE			X								X
3	Carex vulpinoidea	-5	OBL	Nt	P-Sedge	BROWN FOX SEDGE					X			X			X
8	Castilleja coccinea	0	FAC	Nt	A-Forb	INDIAN PAINTBRUSH	X										
0	Catalpa speciosa	3	FACU	Nt	Tree	CIGAR TREE							X				X
0	CELASTRUS ORBICULATUS	5	UPL	Ad	W-Vine	ORIENTAL BITTERSWEET							X				
3	Celtis occidentalis	1	FAC-	Nt	Tree	HACKBERRY		X					X				
0	CHENOPODIUM ALBUM	1	FAC-	Ad	A-Forb	LAMB'S QUARTERS				X			X				
0	CICHORIUM INTYBUS	5	UPL	Ad	P-Forb	CHICKORY			X	X							
4	Cicuta maculata	-5	OBL	Nt	B-Forb	WATER HEMLOCK					X		X				X
2	Circaea lutetiana v. canadensis	3	FACU	Nt	P-Forb	ENCHANTER'S NIGHTSHADE							X	X		X	X
0	CIRSIIUM VERNSE	3	FACU	Ad	P-Forb	FIELD THISTLE	X	X		X	X	X	X	X			X
3	Cirsium discolor	5	UPL	Nt	B-Forb	PASTURE THISTLE	X										
0	CIRSIIUM VULGARE	4	FACU-	Ad	B-Forb	BULL THISTLE	X	X		X	X		X	X			X
1	Claytonia virginica	3	FACU	Nt	P-Forb	SPRING BEAUTY	X	X					X				
6	Comandra umbellata	3	FACU	Nt	P-Forb	BASTARD TOAD-FLAX	X	X						X			
0	Conyza canadensis	1	FAC-	Nt	A-Forb	HORSEWEED		X	X	X			X				X
4	Coreopsis tripteris	0	FAC	Nt	P-Forb	TALL COREOPSIS	X	X	X								
4	Cornus obliqua	-5	OBL	Nt	Shrub	PALE DOGWOOD		X	X		X	X	X	X			
2	Cornus racemosa	-2	FACW-	Nt	Shrub	GRAY DOGWOOD		X	X	X	X		X	X	X	X	X
2	Crataegus crus-galli	0	FAC	Nt	Tree	COCK-SPUR HAWTHORN					X		X				
2	Crataegus mollis	-2	FACW-	Nt	Tree	DOWNY HAWTHORN							X	X			
1	Cryptotaenia canadensis	0	FAC	Nt	P-Forb	HONEWORT					X		X	X			X
2	Cuscuta gronovii	-3	FACW	Nt	A-Forb	COMMON DODDER						X					X
0	DACTYLIS GLOMERATA	3	FACU	Ad	P-Grass	ORCHARD GRASS		X	X	X			X	X			X
0	DAUCUS CAROTA	4	FACU-	Ad	B-Forb	QUEEN ANNE'S LACE	X	X	X	X	X			X			X
0	DIANTHUS ARMERIA	5	UPL	Ad	A-Forb	DEPTFORD PINK			X								X
0	DIPSACUS LACINIATUS	5	UPL	Ad	B-Forb	CUT-LEAVED TEASEL				X	X		X	X			
6	Dodecatheon meadia	3	FACU	Nt	P-Forb	SHOOTING STAR	X							X	X		
0	DUCHESNEA INDICA	4	FACU-	Ad	P-Forb	INDIAN STRAWBERRY							X	X			
0	DYSSODIA PAPPOSA	5	UPL	Ad	A-Forb	FETID MARIGOLD				X							
0	ECHINOCHLOA CRUSGALLI	-3	FACW	Ad	A-Grass	BARNYARD GRASS					X	X	X	X			
0	ELAEAGNUS ANGUSTIFOLIA	4	FACU-	Ad	Shrub	RUSSIAN OLIVE							X				
0	ELAEAGNUS UMBELLATA	5	UPL	Ad	Shrub	AUTUMN OLIVE				X			X				X
2	Eleocharis obtusa	-5	OBL	Nt	A-Sedge	BLUNT SPIKE RUSH						X	X				
4	Elymus canadensis	1	FAC-	Nt	P-Grass	CANADA WILD RYE	X	X									X
4	Elymus virginicus	-2	FACW-	Nt	P-Grass	VIRGINIA WILD RYE							X	X			X
0	EPIPACTIS HELLEBORINE	5	UPL	Ad	P-Forb	HELLEBORINE ORCHID							X				X
0	Equisetum arvense	0	FAC	Nt	Fern	COMMON HORSETAIL	X	X	X		X	X		X			X
3	Eragrostis spectabilis	5	UPL	Nt	P-Grass	PURPLE LOVE GRASS		X	X								
2	Erechtites hieracifolia	3	FACU	Nt	A-Forb	FIREWEED	X	X	X		X		X	X	X	X	X
1	Erigeron annuus	1	FAC-	Nt	B-Forb	ANNUAL FLEABANE		X	X	X			X	X	X		X
3	Erigeron philadelphicus	-3	FACW	Nt	P-Forb	MARSH FLEABANE	X						X	X	X		X
2	Erigeron strigosus	1	FAC-	Nt	P-Forb	DAISY FLEABANE		X	X					X			
7	Eryngium yuccifolium	-1	FAC+	Nt	P-Forb	RATTLESNAKE MASTER	X										
0	EUONYMUS ALATUS	5	UPL	Ad	Shrub	WINGED EUONYMUS							X			X	
0	EUONYMUS FORTUNEI	5	UPL	Ad	Shrub	WINTERCREEPER							X				

Appendix 8 continued

C	Scientific Name	W	Wetness	Origin	Physiog.	Common Name	S1MWM	S2MWM	HDMWM	DR	WR	WMOF	SCWOOD	Area A	Area B	Area C	Area D
2	Eupatorium altissimum	3	FACU	Nt	P-Forb	TALL BONESET	X	X	X	X					X		X
2	Eupatorium rugosum	3	FACU	Nt	P-Forb	WHITE SNAKEROOT		X					X	X			X
1	Eupatorium serotinum	-1	FAC+	Nt	P-Forb	LATE BONESET	X	X	X		X	X	X	X	X	X	X
3	Euphorbia corollata	5	UPL	Nt	P-Forb	FLOWERING SPURGE	X		X								
0	EUPHORBIA ESULA	5	UPL	Ad	P-Forb	LEAFY SPURGE					X						
3	Euthamia graminifolia	-2	FACW-	Nt	P-Forb	GRASS-LVD. GOLDENROD	X	X	X		X				X		X
0	FESTUCA ARUNDINACEA	2	FACU+	Ad	P-Grass	TALL FESCUE		X	X	X	X	X	X	X			X
0	FESTUCA RUBRA	1	FAC-	Ad	P-Grass	RED FESCUE					X						
2	Fragaria virginiana	1	FAC-	Nt	P-Forb	WILD STRAWBERRY	X	X	X				X	X			X
2	Fraxinus pennsylvanica v. subintegerrima	-3	FACW	Nt	Tree	GREEN ASH		X		X	X	X	X	X	X	X	X
0	GALINSOGA QUADRIRADIATA	5	UPL	Ad	A-Forb	PERUVIAN DAISY						X	X				
0	Galium aparine	3	FACU	Nt	A-Forb	ANNUAL BEDSTRAW		X		X	X		X	X			X
5	Galium obtusum	-4	FACW+	Nt	P-Forb	WILD MADDER						X					X
4	Galium triflorum	2	FACU+	Nt	P-Forb	SWEET-SCENTED BEDSTRAW							X	X			X
2	Gaura biennis	4	FACU-	Nt	B-Forb	BIENNIAL GAURA	X	X	X						X		
7	Gentianella quinquefolia v. occidentalis	0	FAC	Nt	A-Forb	STIFF GENTIAN	X	X									
2	Geum canadense	0	FAC	Nt	P-Forb	WHITE AVENS							X	X	X	X	X
2	Geum laciniatum	-3	FACW	Nt	P-Forb	ROUGH AVENS						X			X		
0	GLECHOMA HEDERACEA	3	FACU	Ad	P-Forb	GROUND IVY						X	X	X		X	X
2	Gleditsia triacanthos	0	FAC	Nt	Tree	HONEY LOCUST		X					X	X			X
4	Glyceria striata	-5	OBL	Nt	P-Grass	FOWL MANNA GRASS							X	X		X	X
1	Hackelia virginiana	1	FAC-	Nt	P-Forb	STICKSEED							X	X		X	X
3	Helenium autumnale	-4	FACW+	Nt	P-Forb	SNEEZEWEED	X										
0	HELIANTHUS ANNUUS	1	FAC-	Ad	A-Forb	COMMON SUNFLOWER				X							
2	Helianthus grosseserratus	-2	FACW-	Nt	P-Forb	SAWTOOTH SUNFLOWER			X		X				X		
0	HEMEROCALLIS FULVA	5	UPL	Ad	P-Forb	ORANGE DAY LILY							X				
7	Heuchera richardsonii v. grayana	1	FAC-	Nt	P-Forb	PRAIRIE ALUMROOT	X										
0	HORDEUM JUBATUM	-1	FAC+	Ad	P-Grass	SQUIRREL-TAIL GRASS					X						
0	HYPERICUM PERFORATUM	5	UPL	Ad	P-Forb	COMMON ST. JOHN'S WORT		X	X	X							X
6	Hypoxis hirsuta	0	FAC	Nt	P-Forb	YELLOW STAR GRASS	X										X
2	Impatiens capensis	-3	FACW	Nt	A-Forb	SPOTTED TOUCH-ME-NOT					X	X	X	X			X
5	Iris shrevei	-5	OBL	Nt	P-Forb	SOUTHERN BLUE FLAG						X					X
4	Juglans nigra	3	FACU	Nt	Tree	BLACK WALNUT		X					X	X			
4	Juncus dudleyi	0	FAC	Nt	P-Forb	DUDLEY'S RUSH		X	X		X	X	X	X			X
0	Juncus tenuis	0	FAC	Nt	P-Forb	PATH RUSH				X		X	X	X			X
3	Juncus torreyi	-3	FACW	Nt	P-Forb	TORREY'S RUSH				X	X	X			X		
1	Juniperus virginiana	3	FACU	Nt	Tree	EASTERN RED CEDAR		X					X	X			
0	KOCHIA SCOPARIA	4	FACU-	Ad	A-Forb	SUMMER CYPRESS					X						
0	LAMIUM PURPUREUM	5	UPL	Ad	A-Forb	PURPLE DEAD NETTLE						X					X
4	Leersia virginica	-3	FACW	Nt	P-Grass	WHITE GRASS							X	X			
0	Leptochloa fascicularis	-5	OBL	Nt	A-Grass	BEARDED SPRANGLE TOP						X					
0	LEUCANTHEMUM VULGARE	5	UPL	Ad	P-Forb	OX-EYE DAISY		X	X	X							X
7	Liatris spicata	0	FAC	Nt	P-Forb	MARSH BLAZING STAR	X	X	X	X					X		X
0	LIGUSTRUM VULGARE	5	UPL	Ad	Shrub	COMMON PRIVET							X				
5	Lindernia dubia	-5	OBL	Nt	A-Forb	FALSE PIMPERNEL						X	X				
6	Lithospermum canescens	5	UPL	Nt	P-Forb	HOARY PUCCOON	X	X									
0	LONICERA MAACKII	5	UPL	Ad	Shrub	AMUR HONEYSUCKLE		X	X	X	X	X	X	X			X
0	LONICERA TATARICA	3	FACU	Ad	Shrub	TARTARIAN HONEYSUCKLE		X	X	X	X	X	X	X			X
0	LONICERA X BELLA	3	FACU	Ad	Shrub	SHOWY FLY HONEYSUCKLE		X	X	X	X	X	X	X			X
0	LOTUS CORNICULATUS	1	FAC-	Ad	P-Forb	BIRDSFOOT TREFOIL					X						
3	Lycopus americanus	-5	OBL	Nt	P-Forb	WATER HOREHOUND	X	X	X	X	X		X	X	X	X	X

Appendix 8 continued

C	Scientific Name	W	Wetness	Origin	Physiog.	Common Name	S1MWM	S2MWM	HDMWM	DR	WR	WMOF	SCWOOD	Area A	Area B	Area C	Area D
5	<i>Lythrum alatum</i>	-5	OBL	Nt	P-Forb	WINGED LOOSESTRIFE	X				X	X					
0	LYTHRUM SALICARIA	-5	OBL	Ad	P-Forb	PURPLE LOOSESTRIFE					X						
0	MALUS SIEBOLDII	5	UPL	Ad	Tree	JAPANESE CRAB			X				X	X		X	
0	MEDICAGO LUPULINA	1	FAC-	Ad	A-Forb	BLACK MEDICK		X		X							X
0	MELILOTUS ALBA	3	FACU	Ad	B-Forb	WHITE SWEET CLOVER	X	X	X	X				X		X	
0	MELILOTUS OFFICINALIS	3	FACU	Ad	B-Forb	YELLOW SWEET CLOVER	X	X	X	X				X		X	
5	<i>Mimulus ringens</i>	-5	OBL	Nt	P-Forb	MONKEY FLOWER						X	X				
7	<i>Moehringia lateriflora</i>	3	FACU	Nt	P-Forb	BLUNT-LEAF SANDWORT	X										
4	<i>Monarda fistulosa</i>	3	FACU	Nt	P-Forb	WILD BERGAMOT	X	X	X						X		X
0	MORUS ALBA	0	FAC	Ad	Tree	WHITE MULBERRY		X		X	X	X	X	X	X	X	X
0	<i>Muhlenbergia schreberi</i>	0	FAC	Nt	P-Grass	NIMBLEWILL							X				
0	NEPETA CATARIA	1	FAC-	Ad	P-Forb	CATNIP						X	X				X
1	<i>Oenothera biennis</i>	3	FACU	Nt	B-Forb	EVENING PRIMROSE		X	X	X	X			X			
0	<i>Oxalis dillenii</i>	3	FACU	Nt	P-Forb	COMMON WOOD SORREL	X	X	X	X				X		X	
0	<i>Oxalis stricta</i>	3	FACU	Nt	P-Forb	TALL WOOD SORREL							X	X		X	X
5	<i>Oxalis violacea</i>	5	UPL	Nt	P-Forb	VIOLET WOOD SORREL	X										
0	<i>Panicum capillare</i>	0	FAC	Nt	A-Grass	OLD WITCH GRASS					X						
2	<i>Panicum implicatum</i>	0	FAC	Nt	P-Grass	OLD FIELD PANIC GRASS		X	X						X		X
3	<i>Panicum oligosanthes v. scribnerianum</i>	3	FACU	Nt	P-Grass	SCRIBNER'S PANIC GRASS	X	X									
4	<i>Panicum virgatum</i>	-1	FAC+	Nt	P-Grass	PRAIRIE SWITCH GRASS	X	X	X	X				X		X	
2	<i>Parietaria pensylvanica</i>	3	FACU	Nt	A-Forb	PENNSYLVANIA PELLITORY											X
2	<i>Parthenocissus quinquefolia</i>	1	FAC-	Nt	W-Vine	VIRGINIA CREEPER	X	X	X	X	X		X	X	X	X	
0	PASTINACA SATIVA	5	UPL	Ad	B-Forb	WILD PARSNIP	X	X	X	X				X		X	
7	<i>Pedicularis canadensis</i>	2	FACU+	Nt	P-Forb	WOOD BETONY	X										
2	<i>Penthorum sedoides</i>	-5	OBL	Nt	P-Forb	DITCH STONECROP						X	X				
0	PHALARIS ARUNDINACEA	-4	FACW+	Ad	P-Grass	REED CANARY GRASS					X	X	X	X	X	X	X
0	PHLEUM PRATENSE	3	FACU	Ad	P-Grass	TIMOTHY		X	X	X							X
6	<i>Phlox glaberrima sp. interior</i>	-3	FACW	Nt	P-Forb	SMOOTH PHLOX	X										
7	<i>Phlox pilosa</i>	1	FAC-	Nt	P-Forb	SAND PRAIRIE PHLOX	X										
1	<i>Phragmites australis</i>	-4	FACW+	Nt	P-Grass	COMMON REED					X						
2	<i>Physalis heterophylla</i>	5	UPL	Nt	P-Forb	CLAMMY GROUND CHERRY							X				X
3	<i>Physalis virginiana</i>	5	UPL	Nt	P-Forb	GROUND CHERRY							X				
6	<i>Physostegia virginiana</i>	-3	FACW	Nt	P-Forb	OBEDIENT PLANT	X	X									
1	<i>Phytolacca americana</i>	1	FAC-	Nt	P-Forb	POKEWEED		X					X	X		X	X
0	PINUS PUNGENS	5	UPL	Ad	Tree	PRICKLY PINE							X				
0	PLANTAGO LANCEOLATA	0	FAC	Ad	P-Forb	ENGLISH PLANTAIN		X	X	X			X	X	X	X	X
0	<i>Plantago rugelii</i>	0	FAC	Nt	A-Forb	RED-STALKED PLANTAIN			X	X	X	X	X	X	X	X	X
0	POA COMPRESSA	2	FACU+	Ad	P-Grass	CANADIAN BLUE GRASS	X	X	X	X			X	X	X	X	
0	POA PRATENSIS	1	FAC-	Ad	P-Grass	KENTUCKY BLUE GRASS	X	X	X	X	X		X	X	X	X	
4	<i>Polygonatum commutatum</i>	3	FACU	Nt	P-Forb	GREAT SOLOMON SEAL							X				X
3	<i>Polygonum amphibium</i>	-5	OBL	Nt	P-Forb	WATER KNOTWEED	X										
0	<i>P. CESPITOSUM v. LONGISETUM</i>	5	UPL	Ad	A-Forb	CREEPING SMARTWEED					X		X	X			
1	<i>Polygonum pensylvanicum</i>	-4	FACW+	Nt	A-Forb	PINKWEED	X				X	X		X			
0	POLYGONUM PERSICARIA	-3	FACW	Ad	A-Forb	LADY'S THUMB									X		
3	<i>Polygonum punctatum</i>	-5	OBL	Nt	A-Forb	SMARTWEED	X				X	X	X				
2	<i>Populus deltoides</i>	-1	FAC+	Nt	Tree	EASTERN COTTONWOOD		X	X	X	X	X	X	X	X	X	X
4	<i>Populus grandidentata</i>	3	FACU	Nt	Tree	BIG-TOOTH ASPEN			X			X					X
0	<i>Potentilla norvegica</i>	0	FAC	Nt	A-Forb	ROUGH CINQUEFOIL	X	X			X		X		X	X	
3	<i>Potentilla simplex</i>	4	FACU-	Nt	P-Forb	COMMON CINQUEFOIL	X	X	X				X	X	X	X	
1	<i>Prunella vulgaris v. elongata</i>	0	FAC	Nt	P-Forb	SELF-HEAL	X	X	X	X	X		X	X	X	X	X
1	<i>Prunus serotina</i>	3	FACU	Nt	Tree	WILD BLACK CHERRY		X	X				X	X	X	X	X

Appendix 8 continued

C	Scientific Name	W	Wetness	Origin	Physiog.	Common Name	S1MWM	S2MWM	HDMWM	DR	WR	WMOF	SCWOOD	Area A	Area B	Area C	Area D
0	PUCCINELLIA DISTANS	-5	OBL	Ad	P-Grass	ALKALI GRASS					X						
4	Pycnanthemum tenuifolium	0	FAC	Nt	P-Forb	SLENDER MOUNTAIN MINT	X	X									
5	Pycnanthemum virginianum	-4	FACW+	Nt	P-Forb	COMMON MOUNTAIN MINT	X								X		X
1	Ranunculus abortivus	-2	FACW-	Nt	A-Forb	LITTLE-LEAF BUTTERCUP							X				
4	Ranunculus septentrionalis	-4	FACW+	Nt	P-Forb	SWAMP BUTTERCUP							X				
4	Ratibida pinnata	5	UPL	Nt	P-Forb	YELLOW CONEFLOWER	X	X	X	X					X		X
0	RHAMNUS CATHARTICA	3	FACU	Ad	Shrub	COMMON BUCKTHORN	X	X	X	X	X	X	X	X	X	X	X
0	RHAMNUS FRANGULA	-1	FAC+	Ad	Shrub	GLOSSY BUCKTHORN	X	X	X		X	X	X	X	X	X	X
1	Rhus glabra	5	UPL	Nt	Shrub	SMOOTH SUMAC	X						X				
1	Robinia pseudo-acacia	4	FACU-	Nt	Tree	BLACK LOCUST		X					X				
4	Rosa carolina	4	FACU-	Nt	Shrub	PASTURE ROSE							X				
0	ROSA MULTIFLORA	3	FACU	Ad	Shrub	JAPANESE ROSE		X	X			X	X	X	X	X	X
5	Rosa setigera	2	FACU+	Nt	Shrub	ILLINOIS ROSE					X		X				X
2	Rubus occidentalis	3	FACU	Nt	Shrub	BLACK RASPBERRY							X				X
2	Rubus pensylvanicus	1	FAC-	Nt	Shrub	YANKEE BLACKBERRY		X	X				X	X			X
2	Rudbeckia hirta	3	FACU	Nt	P-Forb	BLACK-EYED SUSAN	X	X	X						X		X
3	Rudbeckia triloba	1	FAC-	Nt	A-Forb	BROWN-EYED SUSAN							X				X
0	RUMEX CRISPUS	-1	FAC+	Ad	P-Forb	CURLY DOCK			X		X	X		X			X
0	SALIX ALBA 'TRISTIS'	3	FACU	Ad	Tree	WEeping WILLOW						X					X
4	Salix amygdaloides	-3	FACW	Nt	Tree	PEACH-LEAVED WILLOW							X				
1	Salix exigua	-5	OBL	Nt	Shrub	SANDBAR WILLOW	X		X		X		X	X			X
2	Sambucus canadensis	4	FACU-	Nt	Shrub	COMMON ELDER							X	X			X
2	Sanicula gregaria	-1	FAC+	Nt	P-Forb	BLACK SNAKEROOT							X	X			
5	Schizachyrium scoparium	4	FACU-	Nt	P-Grass	LITTLE BLUESTEM	X	X	X						X		
3	Scirpus americanus	-5	OBL	Nt	P-Sedge	CHAIRMAKER'S RUSH					X						
3	Scirpus fluviatilis	-5	OBL	Nt	P-Sedge	RIVER BULRUSH					X						
4	Scirpus paludosus	-5	OBL	Nt	P-Sedge	ALKALI BULRUSH					X						
3	Scirpus pendulus	-5	OBL	Nt	P-Sedge	RED BULRUSH			X		X		X	X			
4	Scirpus tabernaemontanii	-5	OBL	Nt	P-Sedge	GREAT BULRUSH					X						
0	SETARIA FABERI	2	FACU+	Ad	A-Grass	GIANT FOXTAIL				X							
5	Silphium integrifolium	5	UPL	Nt	P-Forb	ROsin WEED	X	X	X	X				X			
5	Silphium laciniatum	4	FACU-	Nt	P-Forb	COMPASS PLANT	X	X		X							
4	Silphium terebinthinaceum	1	FAC-	Nt	P-Forb	PRAIRIE DOCK	X	X									
0	SISYMBRIUM OFFICINALE	5	UPL	Ad	A-Forb	HEDGE MUSTARD						X					X
4	Sisyrinchium albidum	3	FACU	Nt	P-Forb	COMMON BLUE-EYED GRASS	X	X	X					X			X
9	Sisyrinchium montanum	-1	FAC+	Nt	P-Forb	MOUNTAIN BLUE-EYED GRASS	X	X									
5	Smilacina stellata	1	FAC-	Nt	P-Forb	STARRY FALSE SOLOMON SEAL	X		X					X			
4	Smilacina racemosa	3	FACU	Nt	P-Forb	FEATHERY FALSE SOLOMON SEAL											X
0	Solanum carolinense	4	FACU-	Nt	A-Forb	HORSE NETTLE		X	X	X							X
0	SOLANUM DULCAMARA	0	FAC	Ad	W-Vine	BITTERSWEET NIGHTSHADE					X	X	X	X	X	X	X
0	Solanum ptycanthum	4	FACU-	Nt	A-Forb	BLACK NIGHTSHADE											X
1	Solidago canadensis	3	FACU	Nt	P-Forb	CANADA GOLDENROD	X	X	X	X	X		X	X	X	X	X
3	Solidago gigantea	-3	FACW	Nt	P-Forb	LATE GOLDENROD		X	X		X	X		X			X
4	Solidago juncea	5	UPL	Nt	P-Forb	EARLY GOLDENROD		X	X					X			X
3	Solidago nemoralis	5	UPL	Nt	P-Forb	OLD FIELD GOLDENROD			X					X			
4	Solidago rigida	4	FACU-	Nt	P-Forb	RIGID GOLDENROD	X	X	X	X				X			
0	SOLIDAGO SEMPERVIRENS	-2	FACW-	Ad	P-Forb	SEASIDE GOLDENROD					X			X			
0	SONCHUS ARVENSIS	1	FAC-	Ad	P-Forb	FIELD SOW THISTLE				X	X	X					
4	Sorghastrum nutans	2	FACU+	Nt	P-Grass	INDIAN GRASS	X	X	X								X
4	Spartina pectinata	-4	FACW+	Nt	P-Grass	PRAIRIE CORD GRASS	X	X	X								X
0	SPERGULARIA MEDIA	3	FACU	Ad	A-Forb	SALT SPURREY				X	X						

Appendix 8 continued

C	Scientific Name	W	Wetness	Origin	Physiog.	Common Name	S1MWM	S2MWM	HDMWM	DR	WR	WMOF	SCWOOD	Area A	Area B	Area C	Area D
3	<i>Sporobolus asper</i>	5	UPL	Nt	P-Grass	ROUGH DROPSEED	X	X	X	X							
5	<i>Stachys palustris</i>	-5	OBL	Nt	P-Forb	WOUNDWORT		X	X				X				X
0	<i>SUAEDA DEPRESSA</i>	-3	FACW	Ad	A-Forb	SEA BLITE					X						
0	<i>TARAXACUM OFFICINALE</i>	3	FACU	Ad	P-Forb	COMMON DANDELION		X	X	X	X		X	X	X		X
3	<i>Teucrium canadense v. virginicum</i>	-2	FACW-	Nt	P-Forb	AMERICAN GERMANDER							X				X
5	<i>Thalictrum revolutum</i>	0	FAC	Nt	P-Forb	WAXY MEADOW RUE							X				X
0	<i>THLASPI ARVENSE</i>	5	UPL	Ad	A-Forb	FIELD PENNY CRESS						X					X
1	<i>Toxicodendron radicans</i>	3	FACU	Nt	W-Vine	POISON IVY		X	X	X	X		X	X			X
3	<i>Tradescantia ohiensis</i>	2	FACU+	Nt	P-Forb	COMMON SPIDERWORT		X									
1	<i>TRIDENS FLAVUS</i>	5	UPL	Nt	P-Grass	COMMON PURPLETOP			X	X					X		
0	<i>TRIFOLIUM PRATENSE</i>	2	FACU+	Ad	P-Forb	RED CLOVER		X	X	X			X	X			X
0	<i>TRIFOLIUM REPENS</i>	2	FACU+	Ad	P-Forb	WHITE CLOVER		X	X	X			X				X
0	<i>TYPHA ANGUSTIFOLIA</i>	-5	OBL	Ad	P-Forb	NARROW-LEAVED CATTAIL					X	X		X			
1	<i>Typha latifolia</i>	-5	OBL	Nt	P-Forb	BROAD-LEAVED CATTAIL					X						
5	<i>Ulmus americana</i>	-2	FACW-	Nt	Tree	AMERICAN ELM		X	X			X	X	X	X	X	X
0	<i>ULMUS PUMILA</i>	5	UPL	Ad	Tree	SIBERIAN ELM		X					X	X		X	X
3	<i>Ulmus rubra</i>	0	FAC	Nt	Tree	SLIPPERY ELM							X	X			
10	<i>Valeriana edulis v. ciliata</i>	-5	OBL	Nt	P-Forb	COMMON VALERIAN	X										
0	<i>VERBASCUM THAPSUS</i>	5	UPL	Ad	B-Forb	WOOLLY MULLEIN							X				X
3	<i>Verbena hastata</i>	-4	FACW+	Nt	P-Forb	BLUE VERVAIN	X	X	X					X	X		
3	<i>Verbena urticifolia</i>	-1	FAC+	Nt	P-Forb	WHITE VERVIAN		X			X		X	X			X
5	<i>Vernonia fasciculata</i>	-3	FACW	Nt	P-Forb	COMMON IRONWEED	X		X					X			
5	<i>Vernonia missurica</i>	-1	FAC+	Nt	P-Forb	MISSOURI IRONWEED			X								X
6	<i>Veronicastrum virginicum</i>	0	FAC	Nt	P-Forb	CULVER'S ROOT	X										
0	<i>VIBURNUM OPULUS</i>	0	FAC	Ad	Shrub	HIGH-BUSH CRANBERRY							X				X
0	<i>VIBURNUM RECOGNITUM</i>	-2	FACW-	Nt	Shrub	SMOOTH ARROWWOOD							X				
4	<i>Viola missouriensis</i>	-3	FACW	Nt	P-Forb	MISSOURI VIOLET							X	X			
1	<i>Viola pratincola</i>	0	FAC	Nt	P-Forb	COMMON BLUE VIOLET							X	X		X	X
3	<i>Viola sororia</i>	1	FAC-	Nt	P-Forb	WOOLLY BLUE VIOLET	X	X	X				X	X			
2	<i>Vitis riparia</i>	-2	FACW-	Nt	W-Vine	RIVERBANK GRAPE	X	X	X	X	X	X	X	X	X	X	X
0	<i>Xanthium strumarium</i>	0	FAC	Nt	A-Forb	COCKLEBUR						X	X				
6	<i>Zizia aurea</i>	-1	FAC+	Nt	P-Forb	GOLDEN ALEXANDERS	X										X

Wetland classification categories follow Reed (1988) for Region 3. Further details are from Taft et al. (1997). Plants are placed within one of five wetland indicator categories: Obligate Wetland (OBL), Facultative Wetland (FACW), Facultative (FAC), Facultative Upland (FACU), and Upland (UPL). Within any of these five categories, a "+" indicates that a particular taxon has a greater tendency to occur in wetlands while a "-" indicates a lesser tendency.

Following this, indicator status categories, in descending order of probability of occurrence in wetland habitat to upland habitat, would be:

-5 Obligate Wetland	(OBL)
-4 Facultative Wetland +	(FACW+)
-3 Facultative Wetland	(FACW)
-2 Facultative Wetland -	(FACW-)
-1 Facultative +	(FAC+)
0 Facultative	(FAC)
+1 Facultative -	(FAC-)
+2 Facultative Upland +	(FACU+)
+3 Facultative Upland	(FACU)
+4 Facultative Upland -	(FACU-)
+5 Upland	(UPL)

T R A N S M I T T A L F O R M

To: Bureau of Design and Environment
Attn: Susan Dees
From: Illinois Natural History Survey
Re: Wetland Determinations

Route and Location

Mark: I-57
Location: at I-294
Route: FAI 57
County: Cook
Job Number: P-91-186-08 (Seq. No.: 14550)

Survey Conducted By: Jesse Kurylo, Brian Wilm, Valerie Sivicek, Dave Ketzner
Illinois Natural History Survey
Division of Ecology and Conservation Science
1816 South Oak Street
Champaign, IL 61820
(217) 244-0692 (Kurylo)

Date Conducted: 27 and 28 October and 3 November 2008

Project Summary:

All potential wetlands within the project area were examined by evaluating features of vegetation, soils, topography, and hydrology. Fifteen routine on-site wetland determinations were completed and seven sites satisfied the wetland criteria. The attached wetland report includes an explanation of methods and references used in completing these determinations. Results are summarized in the site summary and are described in more detail on the accompanying form. Site location and size, a brief functional assessment statement, and a brief statement describing the vegetation quality are also included for all sites in the summary. The sites are marked on the enclosed printouts of digital orthoquads.

Signed: _____
Dr. Allen E. Plocher
INHS/IDOT Project Coordinator

Date: _____

Signed: _____
Dr. Edward J. Heske
INHS/IDOT Project Principal Investigator

Date: _____

Wetland Report for I-57 @ I-294 in Cook County, Illinois

Project Description:

This is a wetland survey conducted for the proposed interchange construction project between I-57 and I-294 in Cook County. The following sources were examined while surveying the project area to determine wetland locations and boundaries: United States Geological Survey topographic map and National Wetland Inventory (NWI) map (Blue Island 7.5 minute quadrangle); *Soil Survey of DuPage and Part of Cook Counties, Illinois* (Mapes 1979); *Field Indicators of Hydric Soils in the United States* (United States Department of Agriculture 2006); aerial photographs; *National List of Plant Species That Occur In Wetlands: Illinois* (Reed 1988); the 1987 *Corps of Engineers Wetlands Delineation Manual* (Environmental Lab 1987); and on-site vegetation, soils, topographic and hydrologic indicators.

All potential wetlands within the project corridor were examined. Fifteen routine on-site wetland determinations were performed. Sites 5, 6, and 11 - 15 satisfied the wetland criteria. Results of these determinations are summarized below and are described in more detail on the accompanying forms. The boundaries of wetlands were recorded using a global positioning system. The locations of the determination sites were overlaid on digital orthoquads using Arcview 3.2. Printouts of the digital orthoquads are included with this report and the GIS data has been uploaded to the extranet.

Included with the assessment of a site is its Floristic Quality Index (Taft *et al.* 1997). Although the Index is not a substitute for quantitative vegetation analysis in assessing plant communities, it provides a measure of the floristic integrity or level of disturbance of a site. Each native plant species is assigned a rating between 0 and 10 (the Coefficient of Conservatism) that is a subjective indicator of how likely a plant may be found on an undisturbed site in a natural plant community. A plant species that has a low Coefficient of Conservatism (C) is likely to tolerate disturbed conditions; a species with a high C is likely to require specific, undisturbed habitats. Species not identified to species level are not rated and are not included in the calculations.

The Floristic Quality Index (FQI) is calculated as follows: $FQI = R/\sqrt{N}$, where R represents the sum of the numerical ratings (C) for all species recorded for a site, and N represents the number of native plant species on the site. The mean C value (also known as mean rated quality) was also calculated for each site. This value is calculated as follows: $mCv = R/N$. The C value for each species is shown in the species list for the site. Species not native to Illinois (indicated by * in the species list for each site) are not included in calculations. An Index score below 10 suggests a site of low natural quality; below five, a highly disturbed site. A FQI value of 20 or more ($mCv > 3.0$) suggests that a site has evidence of native character and may be considered an environmental asset. Sites with FQI values of 35 or more ($mCv > 3.5$) are considered to be of natural area quality.

Site 1: This pond is located 23 m (75 ft) northwest of Brennan Highway and 198 m (650 ft) northeast of 155th St. This site is within Paintbrush Prairie Nature Preserve. Dominant

hydrophytic vegetation does not occur, but hydric soils and wetland hydrology are present; thus, this site does not meet the three criteria of a wetland. The NWI coded this site as a POWF (semipermanently flooded, open water, palustrine wetland). This site provides aquatic habitat and surface water storage. There appears to be a beaver lodge on the site. The FQI is 8.9 and the mean-rated quality is 2.6. These values are indicative of low natural quality.

Site 2: This lowland forest is located 8 m (25 ft) west of site 1. This site is within Paintbrush Prairie Nature Preserve. Dominant hydrophytic vegetation was present, but hydric soils and wetland hydrology are not present; thus, this site is not a wetland. The NWI coded this site as a PFO1C (seasonally flooded, broad-leaved deciduous, forested, palustrine wetland). This site provides wildlife habitat and open space as part of a nature preserve. The FQI is 8.7 and the mean-rated quality is 1.9. These values are indicative of low natural quality.

Site 3: This lowland forest is located 30 m (100 ft) west of Brennan Highway and 76 m (250 ft) south of Magnolia Drive. This site is within Paintbrush Prairie Nature Preserve. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are not present; thus, this site is not a wetland. The NWI coded this site as a PFO1C (seasonally flooded, broad-leaved deciduous, forested, palustrine wetland). This site provides low quality wildlife habitat. The FQI is 6.4 and the mean-rated quality is 1.8. These values are indicative of low natural quality.

Site 4: This lowland forest is located 8 m (25 ft) east of Brennan Highway and 168 m (550 ft) south of Country Aire Drive. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are not present; thus, this site not a wetland. The NWI coded this site as a PFO1C (seasonally flooded, broad-leaved deciduous, forested, palustrine wetland). This site provides very low quality habitat and green space. The FQI is 1.4 and the mean-rated quality is 1. These values are indicative of very poor natural quality.

Site 5: This marsh is located along and within the roadside ditch for I-57 northbound, 297 m (975 ft) north of W. 159th St/US 6. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present; thus, this site meets the three criteria of a wetland. The NWI did not code this site as a wetland. This site functions as part of the roadside ditch, providing additional flood and surface water storage and low quality wildlife habitat. The FQI is 4.5 and the mean-rated quality is 1.8. These values are indicative of low natural quality. This marsh comprises approximately 0.010 ha (0.025 acre) completely within the project corridor. This wetland is not isolated.

Site 6: This wet prairie/native grassland is located within the northwest corner of Dropseed Prairie Nature Preserve. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present; thus, this site meets the three criteria of a wetland. The NWI did not code this site as a wetland. This site provides open space, quality wildlife habitat, and surface water storage. The FQI is 18.2 and the mean-rated quality is 3.0. These values are indicative of fair natural quality. This wet prairie/native grassland comprises approximately 0.451 ha (1.114 acre) completely within the project corridor. This wetland is isolated.

Site 7: This lowland forest is located 8 m (25 ft) east of Kedzie Ave and 23 m (75 ft) north of 145th Street. Approximately 75% of the NWI site is now part of a single family residential

neighborhood, data was collected from the remaining forest along Kedzie Ave. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are not present; thus, this site is not a wetland. The NWI coded this site as a PFO1C (seasonally flooded, broad-leaved deciduous, forested, palustrine wetland). This site provides low quality wildlife habitat and acts as a wooded buffer from the traffic on Kedzie Ave for the residential development just to the east of the forest. The FQI is 8.4 and the mean-rated quality is 2.6. These values are indicative of low natural quality.

Site 8: This lawn is located within Memorial Park 168 m (550 ft) west of Kedzie Ave and 183 m (600 ft) north of 145th Street. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are not present; thus, this site is not a wetland. Furthermore, no trace of a pond was located. The NWI coded this site as a POWHx (excavated, permanently flooded, open water, palustrine wetland). This site functions as part of multiuse recreational park.

Site 9: This lowland woods is located within Memorial Park 122 m (400 ft) west of Kedzie Ave and 183 m (600 ft) north of 145th Street. Dominant hydrophytic vegetation was present, but, hydric soils and wetland hydrology are not present; thus, this site does not meet the three criteria of a wetland. The NWI coded this site as a PEMC (seasonally flooded, emergent, palustrine wetland). This site functions as part of multiuse recreational park and may provide some low quality wildlife habitat. The FQI is 5.6 and the mean-rated quality is 1.6. These values are indicative of low natural quality.

Site 10: This lawn is located within Memorial Park adjacently south and west of Site 9. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are not present; thus, this site does not meet the three criteria of a wetland. Furthermore, no trace of the former wetland was located. The NWI coded this site as a PEMC (seasonally flooded, emergent, palustrine wetland). This site functions as part of multiuse recreational park.

Site 11: This wet lowland forest is located 67 m (220 ft) west of Kedzie Ave and 15 m (50 ft) southeast of the end of South Spaulding Avenue. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present; thus, this site meets the three criteria of a wetland. The NWI coded this site as a PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland). This site provides surface water storage and low quality wildlife habitat. The site also acts as a buffer between a residential community to the north and, the now expanded, I-294 to the south. The FQI is 6.3 and the mean-rated quality is 2.1. These values are indicative of low natural quality. This wet lowland forest comprises approximately 0.166 ha (0.410 acre) in the project corridor and has a total area of 0.193 ha (0.476 acre). This wetland is isolated.

Site 12: This wet shrubland is located 15 m (50 ft) northeast of I-294 and 70 m (230 ft) south of 150th Street. Dominant hydrophytic vegetation is not present, but hydric soils and wetland hydrology are present. FAC Neutral test indicates hydrophytic vegetation, therefore this site is a wetland. The NWI coded this site as a PEMC (seasonally flooded, emergent, palustrine wetland). This site provides low quality wildlife habitat and may provide limited surface water storage. The FQI is 8.2 and the mean-rated quality is 3.3. These values are indicative of low natural quality. This wet shrubland has a total area of approximately 0.093 ha (0.229 acre) completely within the project corridor. This wetland is isolated.

Site 13: This wet meadow is located adjacently south of site 12. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present; thus, this site meets the three criteria of a wetland. The NWI coded this site as a PEMC (seasonally flooded, emergent, palustrine wetland). This site provides low quality wildlife habitat and surface water storage. The FQI is 3.5 and the mean-rated quality is 2. These values are indicative of poor natural quality. This wet meadow has a total area of approximately 0.039 ha (0.097 acre) completely within the project corridor. This wetland is isolated.

Site 14: This wet meadow is located 15 m (50 ft) southwest of I-294 and 30 m (100 ft) south of 150th Street. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present; thus, this site meets the three criteria of a wetland. The NWI did not code this site as a wetland. This site provides low quality wildlife habitat, surface water storage, and open space for the residential neighborhood to the north. The FQI is 8.5 and the mean-rated quality is 2.1. These values are indicative of low natural quality. This wet meadow has a total area of approximately 1.228 ha (3.034 acre) completely within the project corridor. This wetland is isolated.

Site 15: This wet lowland forest is located adjacently south of site 14. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present; thus, this site meets the three criteria of a wetland. The NWI did not code this site as a wetland. This site provides low quality wildlife habitat, surface water storage, and open space for the residential neighborhood to the north. The FQI is 8.8 and the mean-rated quality is 2.4. These values are indicative of low natural quality. This wet lowland forest comprises approximately 0.378 ha (0.933 acre) completely within the project corridor. This wetland is isolated.

Watershed Data

This project is located in the Chicago rivers/canals basin and has a USGS hydrologic unit code of 07120003.

Within the project area there are numerous creeks and ditches. None are associated with any of the aforementioned sites. Most were steep sided, deeply entrenched (between 1.8 and 3 m (6 and 10 ft) down,) and wide (between 1.8 and 2.4 m (6 and 8 ft)) for their length within the project corridor. Associated vegetation varied, but was primarily comprised of weedy trees and shrubs. Water depth and flow, along with substrates also varied.

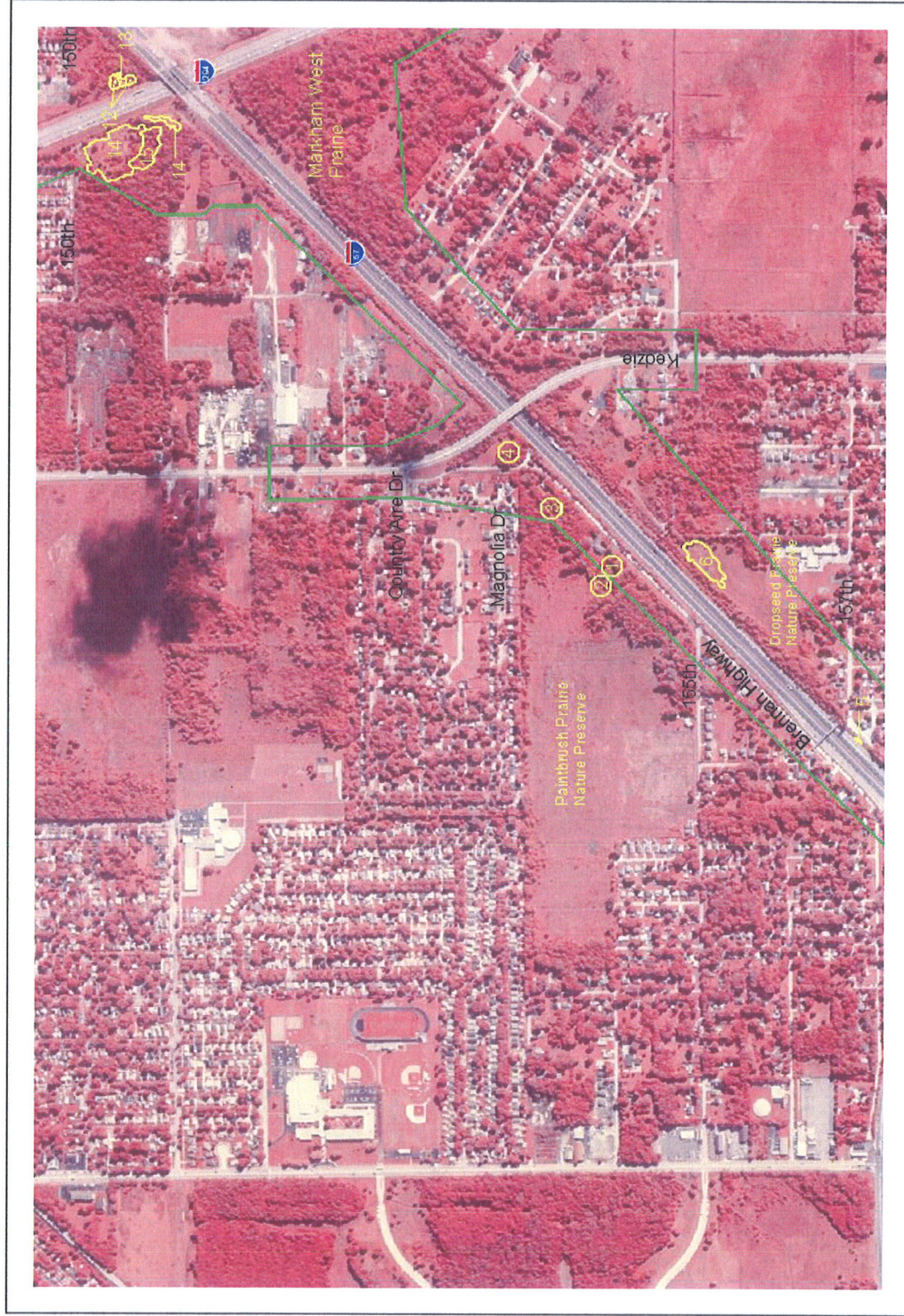
Along I-294, new, broad (1.2-1.8 m (4-6 ft), non-entrenched ditches appear to have been installed. Some areas along these ditches' lengths appear to have been widened (up to about 3.7 m (12.0 ft)).

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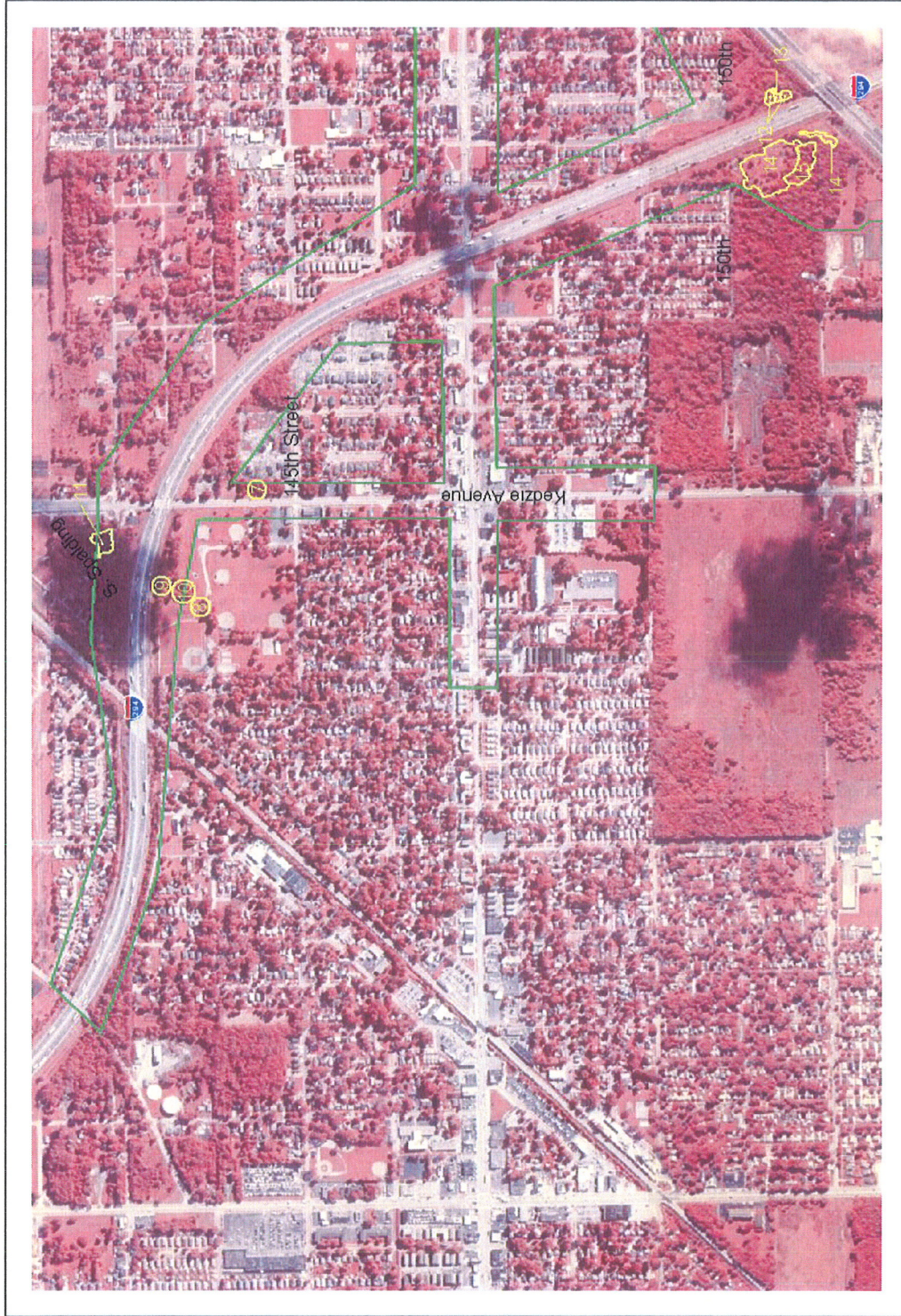
FAI 57 @ I-294 Cook County

Figure 1



FAI 57 @ I-294 Cook County

Figure 2





University of Illinois
Institute of Natural Resource Sustainability
William Shilts, Executive Director

ILLINOIS NATURAL HISTORY SURVEY
Brian D. Anderson Director
1816 South Oak Street
Champaign, IL 61820-6964
217-333-6830

**Franklin's Ground Squirrel Survey at the Proposed I-88 and Eola Road
Interchange and the Proposed I-294 and I-57 Interchange
Summer 2008**

Jean M. Mengelkoch and William C. Handel

Division of Ecology and Conservation Science
Section for Wildlife and Plant Ecology
and

Division of Biodiversity and Ecological Entomology
Section for Biotic Surveys & Monitoring

Prepared for: Illinois State Toll Highway Authority
Environmental Program
2700 Ogden Avenue
Downers Grove, Illinois 60515



ILLINOIS
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HISTORY
SURVEY

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Introduction

The Illinois Natural History Survey was contracted by the Illinois State Toll Highway Authority in 2008 to conduct threatened and endangered species surveys at the proposed interchange of I-88 and Eola Road in DuPage County and the proposed interchange of I-57 and I-294 in Cook County. Excluding bats, which were not included in the contract, the only listed mammal known to occur in DuPage or Cook counties is the Franklin's ground squirrel (*Spermophilus franklinii*). Franklin's ground squirrels were listed as threatened by the Illinois Endangered Species Protection Board in 2004. Therefore, surveys for *S. franklinii* were initiated at the proposed interchanges in the summer of 2008.

The core range of Franklin's ground squirrels is the Great Plains of the United States and Canada from Alberta and Saskatchewan to Kansas and Missouri; the edge of their range also extends east to include northern and central Illinois and northwestern Indiana (Ostroff and Finck 2003). This burrowing mammal is found in a wide range of habitats including tallgrass and mid-grass prairies, cemetery prairies, railroad rights-of-way, wetland borders, and old fields (Sowls 1948, Mumford and Whitaker 1982, Jones et al. 1983, Masulis and Wells 1988, Hoffmeister 1989, Sargeant et al. 1993, Kurta 1995). The primary requirement of the habitat is that the vegetation is tall and dense to provide cover (Choromanski and Sargeant 1982, Jones et al 1983, Martin 2003). Franklin's ground squirrels avoid areas that are frequently mowed, such as golf courses (Haberman and Fleharty 1972, Mumford and Whitaker 1982, Hoffmeister 1989). In addition to aboveground characteristics, the soil in the habitat must be deep enough to keep the burrows insulated and well drained to prevent flooding (Jones et al. 1983, Hoffmeister 1989, Martin 2003).

Records

The Field Museum of Natural History Database (FMNHD) has two collection records of *S. franklinii* in DuPage County; two specimens were collected in Hinsdale in 1940. The Illinois Natural Heritage Database (Illinois Department of Natural Resources) has one record of a Franklin's ground squirrel observed in 2006 at James "Pate" Philip State Park, which is located at the juncture of DuPage, Cook, and Kane counties. Necker and Hatfield (1941) reported one specimen of unidentified gender in DuPage County near Hinsdale.

In Cook County, FMNHD has 4 collection records of *S. franklinii*. One female, three males, and one individual of unknown gender have been collected; the female was collected in Burnham Prairie in 1991, one male was collected in Chicago Ridge in 1925, the other two males were collected in Chicago Heights in 1940 and 1941, and the individual of unknown gender was collected in Worth in 1913. The Los Angeles County Museum of Natural History has one collection record of a *S. franklinii* in Lemont, Cook County in 1934. The Museum of Southwestern Biology has a collection record of a female *S. franklinii* collected in Western Springs, Cook County in 1947. The Yale University Peabody Museum has one collection record of a *S. franklinii* in Chicago, Cook County; the collection year is unknown. The University of Michigan Museum of Zoology has one collection record of *S. franklinii* in West Northfield, Cook County; the collection year is unknown. According to Hoffmeister (1989), four specimens were collected in Cook County; two specimens were from West Northfield, one from Chicago, and one from Maple Lake.

Natural History of Franklin's Ground Squirrels

The range of Franklin's ground squirrels extends from northwestern Indiana, northern and central Illinois, and southern Wisconsin west to northern Kansas, Nebraska, North and South Dakota in the United States and Manitoba, Saskatchewan, and Alberta in Canada (Ostroff and Finck 2003). Within Illinois, the range of Franklin's ground squirrels includes the northern two-thirds of the state, north of Madison and Clark counties (Mohr 1943, Hoffmeister 1989, Lewis and Rongstad 1992).

The numbers of Franklin's ground squirrels are declining throughout much of their range in the eastern United States (Johnson and Choromanski-Norris 1992; Lewis and Rongstad 1992; Pergams and Nyberg 2001, 2003; Martin et al. 2003). Much of the decline is attributed to habitat loss from agricultural and urban development (Pergams and Nyberg 2003). As a result of its rarity in Illinois, the Illinois Endangered Species Protection Board listed Franklin's ground squirrels as state-threatened in 2004 (Title 17, Chapter 1, Subchapter c, Section 1010.30; amended at Ill. Reg. 12895 effective 1 September 2004).

Franklin's ground squirrels are often associated with mid- and tallgrass prairie (Jones et al. 1983, Hoffmeister 1989, Kurta 1995). However, they also use the juncture of woods and grassland, wetland and bog margins, forest openings, and brushy areas (Sowls 1948, Jones et al. 1983, Erlie and Tester 1984, Johnson and Choromanski-Norris 1992). Thus, their habitat includes dense grasses and forbs, shrubs, and small trees (Choromanski and Sargeant 1982, Jones et al. 1983, Martin 2003). They use sites in which the soil and vegetation have not been recently disturbed (Choromanski-Norris et al. 1989). In addition, heavily grazed or frequently mowed areas with short grass, such as golf courses, typically are not used (Wood 1910, Haberman and Fleharty 1972, Hoffmeister 1989). Within Illinois, Franklin's ground squirrels occur in infrequently mowed roadsides and old fields, railroad rights-of-way, cemetery prairies, brushy fields, fencerows, and ditchbanks (Jackson 1961, Mumford and Whitaker 1982, Masulis and Wells 1988, Hoffmeister 1989, Kurta 1995, Martin et al. 2003, Pergams and Nyberg 2003). A yearlong inhabitant of burrows, Franklin's ground squirrels are limited by suitable burrow habitat (Hoffmeister 1989, Ostroff and Finck 2003). The burrows must be in well drained soil deep enough to remain cool in summer and not freeze in winter (Jones et al. 1983, Hoffmeister 1989, Martin 2003, Pergams and Nyberg 2003). Thus, burrows are often located in embankments to facilitate drainage (Haberman and Fleharty 1972, Hoffmeister 1989). In addition, burrow entrances are frequently located near brush or rocks to obscure them from view (Masulis and Wells 1988, Martin 2003).

Adult Franklin's ground squirrels hibernate for an extended period of time and are only aboveground from mid-April to August (Hoffmeister 1989, Ostroff and Finck 2003); juveniles do not enter hibernation until September or October (Hoffmeister 1989, Ostroff and Finck 2003, Martin and Heske 2005). These diurnal squirrels vocalize with a sharp whistle (Whitaker and Hamilton 1998); however, they are not readily observed in the tall, dense vegetation.

Habitat and Sample Site Selection Criteria

The initial investigation of suitable habitat for Franklin's ground squirrels was conducted with a gazetteer, aerial photos and USDA soil maps of the project corridor. The gazetteer was used to locate ponds, rivers, and railroads within the corridor that could provide embankments for burrows. Aerial photos were used to identify habitat that appeared suitable for Franklin's ground squirrels, such as grasslands, old fields, and fencerows. These areas were then examined on soil maps to determine if the soils were suitable for these burrowing mammals. The soils must be well drained to prevent flooding the burrows and sufficiently deep to insulate the burrows in the summer and winter.

Following the initial investigation, an onsite survey was conducted. On 14 August 2008 Bill Handel and Jean Mengelkoch of INHS drove the two project corridors to ascertain the types of habitat present. The project corridor at I-88 and Eola Road was a mixture of developed areas and agricultural fields. The project corridor at I-57 and I-294 was urban, except for Gensburg-Markham Prairie Nature Preserve.

The purpose of the onsite investigation was threefold. First, it was determined if the site was actively mowed, in which case it was classified as suboptimal habitat for Franklin's ground squirrels; second, the habitat determination made during the initial investigation was verified; and third, herbaceous vegetation was assessed to ascertain if it was dense enough to support a population of Franklin's ground squirrels.

Site Description of I-294 and I-57 Project Corridor

The I-294 and I-57 interchange project corridor included parts of the Gensburg-Markham Prairie Nature Preserve (GMPNP). Twenty-eight Franklin's ground squirrels were translocated to GMPNP from Will and Cook counties between 1983 and 1985 (Panzer 1987). Since 1987 the site has been trapped for Franklin's twice, with the most recent attempt in 2001; no Franklin's were captured at the site in either attempt (Martin 2003). According to the Web Soil Survey, the soil at GMPNP is poorly or somewhat poorly drained, therefore the area does not provide suitable habitat for Franklin's ground squirrels (Soil Survey Staff – see lit cited).

Most of the I-294 and I-57 interchange project corridor consists of poorly drained soils, except for the interstate roadsides. The roadside soil is urban land-orthents, which is well drained (Soil Survey Staff). Thus, the only potentially suitable soil for Franklin's ground squirrels in this corridor was along the two interstates. During the summer of 2008, I-294 was being widened to accommodate more driving lanes, thus the roadsides were under construction. The roadside of I-57 was not suitable, as it was dominated by small to mid-size trees.

There was no suitable habitat for Franklin's ground squirrels in the I-294 and I-57 interchange project corridor. Trapping was not conducted at this site.

Site Description, Methods, and Results for I-88 and Eola Road Project Corridor

Based on soil conditions and vegetation structure, one site was identified as potentially suitable habitat for Franklin's ground squirrels at the I-88 and Eola Road proposed interchange (Figure 1).

The site was located north of Bilter Road and was adjacent to the project corridor boundary (east end of site; NAD 83; Zone 16; 396329mE, 4628958mN; Figure 1). During a telephone consultation between Jean Mengelkoch (INHS) and Angela LaPorte (ISTHA) on 18 August 2008, it was decided that the area would be surveyed for Franklin's ground squirrels even though it was outside the project corridor.

The site consisted of a large man-made, earthen berm (approximately 9m high, 6m wide on top, and about 350m long) that was in between a housing development and Bilter Road (Figure 2). West of the berm was a mowed area and a housing development. South and east of the berm were man-made ponds.

The vegetation at the site varied from moderately dense to dense. The community type of this site was planted prairie. The dominant vegetation at the site was Kentucky bluegrass (*Poa pratensis*), prairie coneflower *Ratibida pinnata* (drooping coneflower), white sweetclover (*Melilotus alba*), compass plant (*Silphium lacineatum*), smooth brome (*Bromus inermis*), stiff goldenrod (*Solidago rigida*), wild bergamot (*Monarda fistulosa*), and annual ragweed (*Ambrosia artemesifolia*). Several green ashes (*Fraxinus pennsylvanica*) were on the southern edge of the top of the berm.

The soil at the I-88 and Eola Road interchange corridor was a mixture of well-drained and poorly drained soils (Soil Survey Staff). The trap-site is listed as Wauconda silt loam (0-2% slope and

somewhat poorly drained) on the Web Soil Survey. However, after referencing the DuPage and Cook County Soil Survey (Mapes 1979), it was discovered that the Web Soil Survey used the old soil demarcations on a newer aerial photo. Thus, the berm and ponds that exist now were not demarcated properly in the Web Soil Survey. Since the berm was clearly man-made, it should be listed as orthents, which is well drained soil.

A single transect of 31 single-door collapsible Tomahawk traps (Tomahawk Live Trap Co., Tomahawk, WI), 48 X 16.5 X 16.5 cm in size, were set at 15 m intervals in a single transect along the southern edge of the berm (Figure 2).

Live traps were positioned in the field the evening before trapping began. They were covered with vegetation to provide shading. The traps were baited with popcorn and set in the morning by about 0800 h, examined at midday (about 1300 h), and examined and closed in early evening (about 1800 h). On the last day of the trapping period the traps were closed in late afternoon (about 1600 h). Trapping occurred for three consecutive days.

Live traps were set at the site from 26-28 August 2008. On 26 August the high temperature was 25°C and the low was 13°C. On August 27 the high temperature was 30°C and the low was 12°C. The sky was clear on both the 26th and the 27th. The high temperature on 28 August was 26°C and the low was 16°C; it was hazy all day with some intermittent light rain.

Trapping was conducted for a total of 90 trap days (one trap set for one day equals one trap day). No mammals were captured at the site.

Mammals

A list of mammals known to occur, or potentially occurring, within the I-88 and Eola Road interchange study corridor is found in Table 1. A total of 26 species of mammals are reported to occur within DuPage County.

A list of mammals known to occur, or potentially occurring, within the I-57 and I-294 interchange study corridor is found in Table 2. A total of 40 species of mammals are reported to occur within Cook County.

Summary

No mammals were caught in 90 trap days at the site adjacent to the I-88 and Eola Road interchange project corridor. No Franklin's ground squirrels were captured in the study corridor, however this does not prove that they were absent from the corridor.

No trapping was conducted at the I-294 and I-57 interchange project corridor, because the habitat did not appear to be suitable for Franklin's ground squirrel.

Acknowledgments

Mike Murphy of INHS contributed observations of mammals within the corridor. Janet Jarvis of INHS made the map of trapping sites.

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Table 1. Mammal species known to occur or potentially occurring within the I-88 and Eola Road interchange corridor (DuPage County, Illinois). X =documented in corridor. Sources for documentation within the counties: 1 = museum specimen, 2 = INHS capture, 3 = INHS observation, 4 = bats tested for rabies by Illinois Department of Public Health or Illinois Department of Agriculture, 5 = Necker and Hatfield 1941.

<u>Common Name</u>	<u>Scientific Name</u>	<u>DuPage County</u>
Didelphimorphia		
Virginia opossum	<i>Didelphis virginiana</i>	(1)
Soricomorpha		
masked shrew	<i>Sorex cinereus</i>	(1)
northern short-tailed shrew	<i>Blarina brevicauda</i>	(1)
Chiroptera		
little brown bat	<i>Myotis lucifugus</i>	(1,4)
northern bat	<i>Myotis septentrionalis</i>	(1,2,4)
silver-haired bat	<i>Lasionycterus noctivagans</i>	(1,4)
big brown bat	<i>Eptesicus fuscus</i>	(1,2,4)
red bat	<i>Lasiurus borealis</i>	(1,2,4)
hoary bat	<i>Lasiurus cinereus</i>	(1,4)
evening bat	<i>Nycticeius humeralis</i>	(4,5)
Lagomorpha		
eastern cottontail	<i>Sylvilagus floridanus</i>	(1)
Rodentia		
eastern chipmunk	<i>Tamias striatus</i>	(1)
woodchuck	<i>Marmota monax</i>	(1)
Franklin's ground squirrel (ST*)	<i>Spermophilus franklinii</i>	(5)
eastern gray squirrel	<i>Sciurus carolinensis</i>	X(1,3)
eastern fox squirrel	<i>Sciurus niger</i>	(1)
deer mouse	<i>Peromyscus maniculatus</i>	(1)
white-footed mouse	<i>Peromyscus leucopus</i>	(1)
meadow vole	<i>Microtus pennsylvanicus</i>	(1)
pine vole	<i>Microtus pinetorum</i>	(1)
Carnivora		
long-tailed weasel	<i>Mustela frenata</i>	(1)
American mink	<i>Neovison vison</i>	(1)
American badger	<i>Taxidea taxus</i>	(1)
striped skunk	<i>Mephitis mephitis</i>	(1)

Table 1 continued on next page.

Table 1 continued

<u>Common Name</u>	<u>Scientific Name</u>	<u>DuPage County</u>
Procyonidae raccoon	<i>Procyon lotor</i>	(3)
Artiodactyla white-tailed deer	<i>Odocoileus virginianus</i>	(1)

*ST represents state threatened

Table 2. Mammal species known to occur or potentially occurring at the I-57 and I-294 interchange (Cook County, Illinois). X = documented in corridor. Sources for documentation within the counties: 1 = museum specimen, 2 = INHS capture, 3 = INHS observation, 4 = bats tested for rabies by Illinois Department of Public Health or Illinois Department of Agriculture, 5 = Necker and Hatfield 1941.

<u>Common Name</u>	<u>Scientific Name</u>	<u>Cook County</u>
Didelphimorphia		
Virginia opossum	<i>Didelphis virginiana</i>	(1)
Soricomorpha		
masked shrew	<i>Sorex cinerus</i>	(1)
pygmy shrew	<i>Sorex hoyi</i>	(1)
northern short-tailed shrew	<i>Blarina brevicauda</i>	(1)
least shrew	<i>Cryptotis parva</i>	(1)
eastern mole	<i>Scalopus aquaticus</i>	(1)
Chiroptera		
little brown bat	<i>Myotis lucifugus</i>	(1,4)
Indiana bat	<i>Myotis sodalis</i>	(1)
northern bat	<i>Myotis septentrionalis</i>	(1,2,4)
silver-haired bat	<i>Lasionycterus noctivagans</i>	(1,4,4)
eastern pipistrelle	<i>Pipistrellus subflavus</i>	(1,2,4)
big brown bat	<i>Eptesicus fuscus</i>	(1,2,4)
red bat	<i>Lasiurus borealis</i>	(1,2,4)
hoary bat	<i>Lasiurus cinereus</i>	(1,2,4)
evening bat	<i>Nycticeius humeralis</i>	(1,4)
Lagomorpha		
eastern cottontail	<i>Sylvilagus floridanus</i>	(1)
Rodentia		
eastern chipmunk	<i>Tamias striatus</i>	(1)
woodchuck	<i>Marmota monax</i>	(1)
thirteen-lined ground squirrel	<i>Spermophilus tridecemlineatus</i>	(1)
Franklin's ground squirrel (ST*)	<i>Spermophilus franklinii</i>	(1)
eastern gray squirrel	<i>Sciurus carolinensis</i>	(1)
eastern fox squirrel	<i>Sciurus niger</i>	(1)
southern flying squirrel	<i>Glaucomys volans</i>	(1)
deer mouse	<i>Peromyscus maniculatus</i>	(1)
white-footed mouse	<i>Peromyscus leucopus</i>	(1)

Table 2 continued on next page.

Table 2 continued

<u>Common Name</u>	<u>Scientific Name</u>	<u>Cook County</u>
meadow vole	<i>Microtus pennsylvanicus</i>	(1)
prairie vole	<i>Microtus ochrogaster</i>	(1)
pine vole	<i>Microtus pinetorum</i>	(1)
muskrat	<i>Ondatra zibethicus</i>	(1)
black rat	<i>Rattus rattus</i>	(1)
Norway rat	<i>Rattus norvegicus</i>	(1)
house mouse	<i>Mus musculus</i>	(1)
Carnivora		
coyote	<i>Canis latrans</i>	(1)
raccoon	<i>Procyon lotor</i>	(1)
least weasel	<i>Mustela nivalis</i>	(1)
long-tailed weasel	<i>Mustela frenata</i>	(1)
American mink	<i>Neovison vison</i>	(1)
American badger	<i>Taxidea taxus</i>	(1)
striped skunk	<i>Mephitis mephitis</i>	(1)
Artiodactyla		
white-tailed deer	<i>Odocoileus virginianus</i>	X(1,3)

*ST represents state threatened

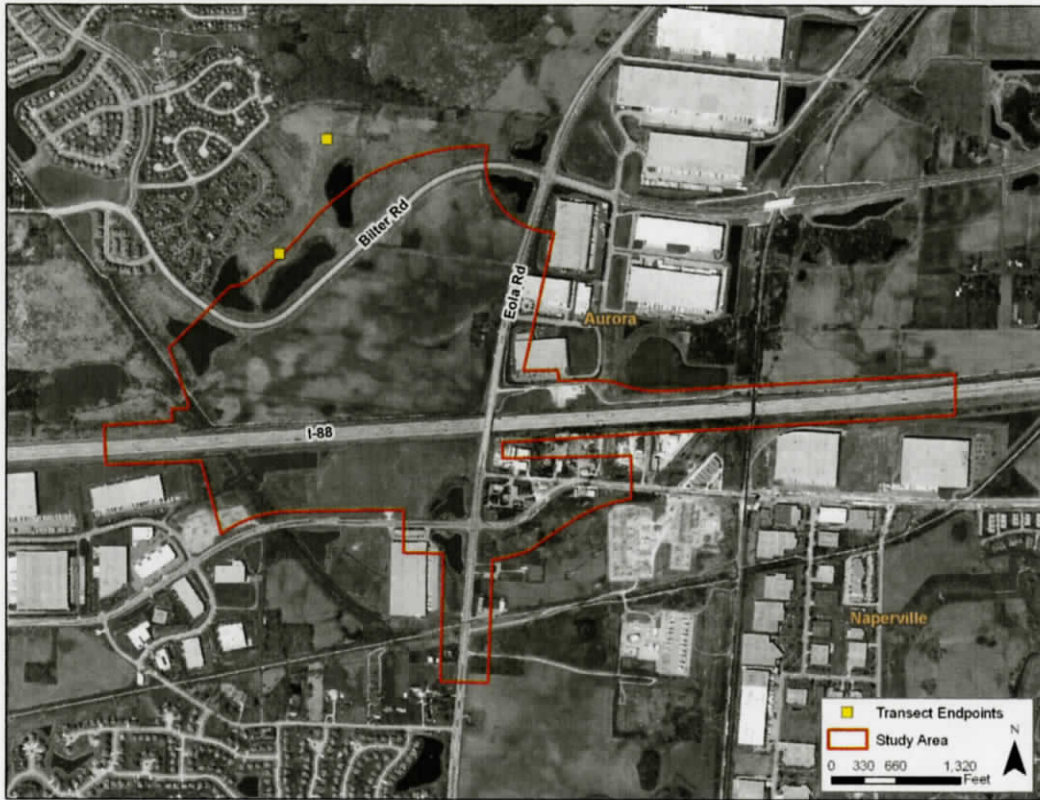


Figure 1. Location of Franklin's ground squirrel trapping site at the I-88 and Eola Road project corridor. The trap-line was positioned between the two yellow dots along the edge of the embankment.



Figure 2. Trapping location north of Bilter Road and west of Eola Road in DuPage County, Illinois.



Illinois Department of Transportation

Memorandum

To: Diane M. O'Keefe Attn: Peter E. Harmet
 From: Charles J. Ingersoll By: Thomas C. Brooks
 Subject: Biological Resources Review
 Date: January 6, 2009

Thomas C. Brooks

CONCUR

FAI 57 (I-57)
@ I-294

Job No. P-91-186-08 (Seq. 14550)
Midlothian, Posen, Robbins, Dixmoor, Harvey, Markham, University Park, Oak Forest
and Riverdale
Cook County

By Steve Hume
Division of Impact Analysis

IDOC
IDNR 1-12-09

Introduction

The proposed project involves construction of a new interchange I-57 @ I-294, new partial interchange 147th/IL 83 @ I-294, construction of a new interchange at I-57@ IL 83; new ramps, collector-distributor roads and bridges; 20 existing structures replaced/rehabbed/widened; drainage; toll collection; signals, and lighting. According to the Environmental Assessment, 32 acres of additional right of way will be required for the original project. An unknown acreage of additional right of way will be required for the additional project area.

The proposed project is being processed as an Environmental Assessment (EA), which was approved August 20, 2008 by the Federal Highway Administration (FHWA) after numerous inter-agency coordination efforts, field meetings, etc. Phase I and Phase II of the overall project are being shared by IDOT and the Illinois State Toll Highway Authority (ISTHA). This Biological Resources Review memo is being written to reflect additional project areas not yet included in the EA; this information will be added to the EA in the form of an EA addendum or similar. This memo includes environmental screening for the additional project area: proposed work along I-294 from the Metra-Rock Island Railroad westward to S. Claire Blvd., Kedzie Avenue, 147th St/IL 83, and Dixie Highway/Western Ave. This memo also updates biological and wetland survey information for the original plus additional project areas. Based on the information your office has provided regarding the scope of work, a discussion of relevant biological resources is provided.

Endangered and Threatened Species

The U.S. Fish and Wildlife Service (USFWS) Region 3 list of threatened or endangered species in Illinois (<http://midwest.fws.gov/index.html>) lists the Indiana bat (*Myotis sodalis*), Prairie bush clover (*Lespedeza leptostachya*) and Eastern prairie fringed orchid (*Platanthera leucophaea*) as occurring statewide and lists Mead's milkweed (*Asclepias meadii*), Leafy prairie clover (*Dalea foliosa*), Hine's emerald dragonfly (*Somatochlora hineana*) and Piping plover (*Charadrius melodus*) as occurring in Cook County. The

DEPARTMENT OF
NATURAL RESOURCES

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original project was coordinated with USFWS; their concurrence letter dated May 8, 2008 is attached.

The additional area was screened for the presence of suitable habitat for the above federally-listed species using information from the IDNR Natural Heritage Database, the INHS Botanical Survey and Assessment by Murphy (dated November 30, 2008) and the INHS Wetland Report by Kurylo (dated October 27, 2008). This office has concluded that there is no suitable habitat for any of the above federally-listed species and thus no effect on any of those species. The additional area is entirely within an urban setting and no native vegetation will be removed.

The Illinois Endangered Species Protection Board lists a number of species as occurring in Cook and adjacent counties. This office has concluded that there is no suitable habitat for any of these species in the project area, except as discussed below. The IDNR Natural Heritage Database has records of Dropseed Prairie INAI and Nature Preserve, Gensburg-Markham Prairie INAI and Nature Preserve, Gensburg-Markham Prairie Addition Natural Heritage Landmark, Markham Prairie – East INAI, Paintbrush Prairie INAI and Nature Preserve, Sundrop Prairie INAI and Nature Preserve, Riverdale Marsh INAI, Tollgate Prairie INAI, alkali bulrush (*Bolboschoenus maritimus*), black-crowned night heron (*Nycticorax nycticorax*), ear-leafed foxglove (*Tomanthera auriculata*), Eastern prairie fringed orchid (*Platanthera leucophaea*), eryngium stem borer moth (*Papaipema eryngii*), grass pink orchid (*Calopogon tuberosus*), Henslow's sparrow (*Ammodramus henslowii*), mountain blue-eyed grass (*Sisyrinchium montanum*), and narrow-leaved sundew (*Drosera intermedia*) within the project corridor (IDNR EcoCAT Response letter dated September 12, 2008). Consultation is closed for the original project, as there will be no impacts on most of the sensitive resources listed above; see attached letter from IDNR dated March 31, 2008. However, consultation was re-opened with the new proposed scope-of-work for the subject project. IDNR requested plant surveys for alkali bulrush and mountain blue-eyed grass; results are below. IDNR also requested that the boundaries for the Markham-West Prairie be determined in relation to the project as designed for the loop ramp (the southern angle of the I-57/I-294 intersection) since it is possible it is proposed to become a nature preserve. According to the EA, ISTHA will provide mitigation for impacts to the Markham-West Prairie; coordination is already ongoing with the various conservation entities that manage that site. IDNR will coordinate with the Illinois Nature Preserves Commission in order to assure all resource concerns are addressed.

Botanical Survey

The Illinois Natural History Survey conducted botanical surveys between May 20, 2008 and October 10, 2008 for the entire project area. Surveys were conducted during the bloom time (i.e., three non-consecutive days between June 28 and July 11) of the federally threatened and state endangered Eastern prairie fringed orchid (*Platanthera leucophaea*) and none were found. Two state listed species were found: state endangered *Scirpus paludosus* (alkali bulrush) and state endangered *Sisyrinchium montanum* (mountain blue-eyed grass.)

Four or possibly five colonies of alkali bulrush were found during botanical surveys in the project area (see Figure 2). Population 5 was mowed the entire growing season, thus preventing positive identification to species. Population 1 occurs in the eastern quadrant (Area C) of the proposed I-57/I-294 interchange approximately 80 feet from the edge of

pavement. Populations 3, 4, and 5 occur on the west side of I-57, along westbound I-57/147th Street exit ramp (east side of exit ramp) approximately 13.12 – 19.7 feet from the edge of pavement. Population 2 occurs under the I-57 Baltimore and Ohio Railroad overpass. Alkali bulrush has been proposed for delisting by the Illinois Endangered Species Protection Board, which, if approved, may be complete during the latter half of 2009. Various botanical surveys have showed this salt-tolerant species to be abundant along miles of roadways, growing in ditches fed by runoff containing de-icing salts.

The original population of mountain blue-eyed grass from the Natural Heritage Database is no longer extant, having been replaced by a junk yard. However, two populations of mountain blue-eyed grass were found in the survey corridor, occurring within and just north of Dropseed Prairie Nature Preserve within suitable habitat areas (see Figure 2.) Population 1 occurs within Dropseed Prairie Nature Preserve starting approximately 150 to 175 feet from edge of existing pavement. Population 2 occurs north of Dropseed Prairie Nature Preserve and begins approximately 150 feet from edge of pavement. Figure 2 shows the two populations of mountain blue-eyed grass via red flags, and the red outlined areas show habitats where mountain blue-eyed grass and another similar but non-listed species of blue-eyed grass co-occur. These habitat areas are likely larger than where most of the mountain blue-eyed grass actually occurs since the blue-eyed grasses were not able to be identified to species at the time of survey. The species blooms and can be identified in the field only in May. To get an accurate depiction of where the colony boundaries occur, a spring botanical survey would be necessary. According to an email from ISTHA dated December 30, 2008, it is unlikely that the mountain blue-eyed grass will be impacted, but it is unknown.

The botanical survey also revealed several small degraded prairie remnants, shown as blue areas on Figure 2. If any of these areas are impacted by the project, impacts to the prairie areas should be avoided, minimized, or mitigated, in that order. The prairie area in the Markham-West Prairie area is already known and impacts to that site are being mitigated.

Franklin's Ground Squirrel Survey

Between 1983 and 1985 twenty-eight Franklin's ground squirrels were translocated to Gensburg-Markham Prairie Nature Preserve. None were found during subsequent trapping efforts. A survey for suitable habitat for the state threatened Franklin's ground squirrel (*Spermophilus franklinii*) was conducted August 14, 2008 by the Illinois Natural History Survey. Suitable habitat consists of tall dense vegetation for cover, such as that found in tallgrass and mid-grass prairies, cemetery prairies, railroad rights-of-way, wetland borders, and old fields. In addition, the soils must be deep enough to keep the burrow insulated and well drained in order to prevent burrows from flooding. The habitat at the project corridor consists of urban areas, mowed areas, roadsides under construction, roadsides dominated by small or mid-sized trees, or areas of poorly drained soils. No suitable habitat was found; hence no trapping was done. There is therefore no adverse effect by the project on the Franklin's ground squirrel.

Wetlands

The Illinois Natural History Survey conducted wetland delineations in the original and additional project area on October 27 and 28 and November 3, 2008, in order to update the original wetland delineations and include the additional project area. The report and

aerial photographs showing wetland locations were received by this office December 4, 2008 and are attached. The report, aerials, and GPSed wetland boundaries are also in Sharepoint. Please note that the aerial photographs do not cover the entire project area but only the areas containing jurisdictional wetlands (personal communication with INHS's Jesse Kurylo dated December 4, 2008). Wetland delineations were conducted for the entire project area. Seven jurisdictional wetland sites were found: Wetland Sites 5, 6, 11, 12, 13, 14, and 15. None of these wetland sites occur within the new proposed work locations. Floristic quality indices ranged from 3.5 to 18.2. Mean C ranged from 1.8 to 3.3.

According to the EA, ISTHA will mitigate wetland impacts on-site within the Indian Boundary Prairies. A Wetland Impact Evaluation (WIE) form is being requested at this time to document wetland impacts.

Streams

The project crosses Dixie Creek, Belaire Creek, an unnamed creek, I-57 Drainage and Park Creek, all discussed previously in the EA.

Tree Removal

Project construction will involve the removal of approximately 9,650 trees in the original project from the 2003 tree survey. An updated tree survey was conducted in 2008 that covered the entire project area. ISTHA will be mitigating trees for the project.

Coordination

By copy of this memorandum, IDNR is being notified of this project. Their mitigation recommendations and our recommendations for further coordination will be forwarded to your office upon receipt of a response.

Conclusion

Project development may proceed with no additional Biological Resources Review unless (a) the scope of work is changed or otherwise different from that described to us, (b) IDNR coordination response requires further coordination, or (c) otherwise notified by this office.

Attachments

cc: Steve Hamer (IDNR)

SED

MEMORANDUM

To: Angela LaPorte
Illinois Toll Highway Authority
2700 Ogden Ave.
Downer's Grove, IL 60515

From: Dr. David A. Enstrom, Ornithologist
Illinois Natural History Survey
1816 S. Oak Street, Room 235
Champaign IL 61820

Date: 12 January 2009

Subject: Avian Census of the I-294 / I-57 interchange project area.

The Illinois Toll Highway Authority requested a survey of the birds in the I-294/I-57 project area be conducted in 2008. We conducted avian surveys in the project area from May through October, 2008. Most of the study area is comprised of urban landscapes but the area includes several natural areas and parks (i.e. prairies, forest, wetlands, and shrublands). Point counts were conducted in representative natural habitats. Some of the census areas include habitat that falls within 150 ft of the project center line. All censuses were conducted within 1 mile of the project center line.

Methods

Censuses

Censuses were conducted in the project area during the spring migration, breeding, and fall migration seasons (Table 1). These periods characterize the major annual changes in the diversity of bird populations in Illinois. Eleven census points were established in representative bird habitat within the project area (Figures 1-3; Table 2) and modified point-counts (Smith et al. 1993, Hunter et al. 1992, Thompson et al. 1992) were used to determine the composition of bird communities in these areas. All individuals seen or heard within 165 ft (50 m) of each census point were recorded for 10-min during each visit. During spring and summer, all point censuses were conducted between one half hour before dawn (a half hour after the birds begin to sing) and 1100 h (when birds are entering the mid-day activity lull). Fall censuses were conducted

throughout the day. Timed counts provide measures of the structure of bird communities (e.g., number of individuals and number of species) within the various habitat types. Census areas were selected to represent all of the habitat types that occur in the study area.

Other Assessments

Species formally classified as endangered or threatened may not be the only ones that are subject to significant threats or which should be considered when assessing the value of a parcel of land. Many species of songbirds that occur in the Midwest (passing through or breeding) are Neotropical migrants (i.e. they spend most of the year in lower, subtropical or tropical, latitudes and breed in higher latitudes). These species are generally area-sensitive (i.e. there is some critical amount of habitat required for them to breed) and their preservation is a topic of concern for conservation groups and governmental entities. *Partners in Flight* (PF), <http://www.partnersinflight.org/>, a working group of North American avian ecologists (Thompson et al. 1992; Panjabi et al. 2005) has developed a list of species of concern for specific regions of the US. Species of concern for the upper Midwest, including Illinois, are indicated in Tables 3 and 4. *The American Bird Conservancy* and the *National Audubon Society* have built on the PF ranking approach, which is limited to land birds, to generate *The US Watch List for birds*. This list consists of 172 US bird species that the group calculates to be of greatest conservation concern, <http://www.abcbirds.org/abcprograms/science/watchlist/index.html>. Species with Watch List designation are also indicated in Tables 1 and 2. Finally, the IDNR has identified bird *Species in Greatest Need of Conservation for Illinois* (Illinois conservation priority species, ILCP) in *The Illinois Comprehensive Wildlife Action Plan*, <http://www.dnr.state.il.us/ORC/WildlifeResources/theplan/birds.asp>. These species are indicated in Tables 3 and 4.

Table 1. Seasons of Avian Life Cycles in Illinois.

<u>Season</u>	<u>Dates</u>
Spring migration	1 March to 30 April
Breeding	1 May to 31 August
Fall migration	1 September to 30 November

Table 2. Location and habitat descriptions of bird census.

Census area	Location: UTM and Area Description	Habitat Description
1	445720 E Kickapoo Meadows, FPD 4609316 N	Riparian forest
2	445622 E Kickapoo Meadows, FPD 4609544 N	Riparian forest/shrubland
3	445622 E Kickapoo Meadows, FPD 4609654 N	Non-native grassland and shrubland
4	440018 E Midlothian Meadows, FPD 4606903 N	Upland forest
5	439383 E Midlothian Meadows, FPD 4606432 N	Upland forest
6	439057 E Midlothian Meadows, FPD 4606163 N	Marsh
7	439326 E Midlothian Meadows, FPD 4606145 N	Non-native grassland
8	443224 E Markham Prairie East 4606966 N	Shrubland
9	442789 E Markham Prairie 4606455 N	Sedge meadow, native prairie
10	442356 E Markham Prairie 4606257 N	Native prairie
11	443354 E I-294 and 167 th Street 4604280	Non-native grass, shrubland

Census Results

A total of 94 species of birds belonging to 34 families were observed in the project area during the censuses in 2008 (Table 4). No listed species were encountered in the project area. Henslow's sparrows have been known to breed at Markham Prairie (Figure 3) however none were seen our censuses.

Spring

Spring censuses were conducted on May 7th and 13th of 2008. A total of 86 species of 22 families were recorded in the project area during the spring (Table 4). All species were detected within 1 mile of the project center line. Twenty-six species were recorded within 150 ft of the project center line (Table 4). No listed species were encountered. Eleven species designated as species of concern by the *Illinois Wildlife Action Plan*. Nine species designated as species of concern by *Partners in Flight*, and one species designated as watch-list species by *The American Bird Conservancy* and the *National Audubon Society* were encountered in the study area during the spring

(Table 4). Five of these species, field sparrow, brown thrasher and common flicker, Baltimore oriole and eastern kingbird, were found within 150 feet of the center line. All five species prefer open habitats.

Breeding Season

Breeding season censuses were conducted between June 12th and 13th and July 28th 2008. A total of 58 species of 17 families were recorded in the project area during the breeding season (Table 5). All species were detected within 1 mile of the project center line, and all but one of these species (the ring-billed gull) breed in the area. Thirty-one species were recorded within 150 ft of the project center line (Table 5). No listed species were encountered during the breeding season. Seven species designated as species of concern by the *Illinois Wildlife Action Plan*, eleven species designated as species of concern by *Partners in Flight*, and one species designated as watch-list species by *The American Bird Conservancy* and the *National Audubon Society* were encountered in the study area during the breeding season (Table 4). Four of these species, field sparrow, brown thrasher, common flicker and eastern kingbird, were found within 150 feet of the center line and breed there. All four species prefer open habitats.

Fall Migration

Fall censuses were conducted on September 3rd and October 1st 2008. A total of 53 species of 16 families were recorded in the project area during the fall (Table 6). All species were detected within 1 mile of the project center. Thirty species were recorded within 150 ft of the project center line (Table 5). Eight sandhill cranes (Illinois Threatened) were seen flying high over census area 7 on October 1st. Five species designated as species of concern by the *Illinois Wildlife Action Plan*, six species designated as species of concern by *Partners in Flight*, and one species designated as watch-list species by *The American Bird Conservancy* and the *National Audubon Society* were encountered in the study area during the fall (Table 6). Two of these species, field sparrow and common flicker, were found within 150 feet of the center line and breed there. Both species prefer open habitats.

SUMMARY

A total of 94 bird species representing 34 families of birds were observed during the avian census of the I-294/I-57 project area. Only one listed species, the sandhill crane (Illinois Threatened) was found in the area. The cranes were in a flock high over census area seven flying south.

Most of the area is highly developed. Two Cook County Forest Preserves areas occur within 1 mile of the project center line. These areas support a good diversity of bird species, especially during migration. In the past, henslow's sparrow (Illinois Threatened) has nested in the area. I did not find this species during my censuses.

Table 3. Bird species encountered during avian censuses of I-294 / I-57 interchange project area.

Family/species	Seen within 150 ft buffer	Habitat association	Migration / residency status	Breeding status (Cook Co)	Conservation designation
Anatidae					
Canada Goose	yes	W, R, L, G	NM	B	-
Wood Duck		W,R,L	NM	B	-
Mallard	yes	W,R,L,G	NM	B	-
Blue-winged Teal		W,R,L,G	NTM	B	-
Podicipedidae					
Pied-billed Grebe	No	W	NTM	B	ILCP
Ardeidae					
Great Blue Heron	yes	W,R,L	NM	B	-
Great Egret	no	W,R,L	NTM	B	ILCP
Green Heron	yes	W,R	NTM	B	-
Cathartidae					
Turkey Vulture	yes	FF,S,G	NM	B	-
Accipitridae					
Cooper's Hawk	no	F,U	NM	B	-
Red-tailed Hawk	yes	F,S	NM	B	-
American Kestrel	yes	S,G,U	NM	B	-
Gruidae					
Sandhill Crane	no	W,G	NM	B	IL Th, ILCP
Charadriidae					
Killdeer	yes	W,FF,G	NM	B	x
Scolopacidae					
Wilson's Snipe	no	W,G	NTM	B	x
Laridae					
Ring-billed Gull	yes	W,FF,U	NM	B	x
Columbidae					
Rock Pigeon	yes	FF,U	R	B	x
Mourning Dove	yes	FF,S,F,U	R	B	x
Cuculidae					
Yellow-billed Cuckoo	no	F-Int.	NTM	B	ILCP, PF
Caprimulgidae					
Common Nighthawk	no	G,U	NTM	B	x
Apodidae					
Chimney Swift	no	W,F,U	NTM	B	ILCP, PF
Trochilidae					
Ruby-throated Hummingbird	no	F	NTM	B	x

Table 3. continued

Family/species	Seen within 150 ft of center line	Habitat association	Migration / residency status	Breeding status (Cook Co)	Conservation designation
Picidae					
Red-headed Woodpecker	no	F	NM	B	ILCP, WL, PF
Red-bellied Woodpecker	yes	F,U	R	B	x
Downy Woodpecker	yes	S,G,F,U	R	B	x
Hairy Woodpecker	no	F	R	B	x
Northern Flicker	yes	S,G,F,U	NM	B	ILCP, PF
Tyrannidae					
Eastern Wood-Pewee	no	F	NTM	B	x
Willow Flycatcher	yes	S	NTM	B	ILCP, PF
Least Flycatcher	no	F	NTM	B	x
Eastern Phoebe	yes	S,G	NM	B	x
Great Crested Flycatcher	no	F	NTM	B	PF
Eastern Kingbird	yes	G	NTM	B	PF
Vireonidae					
White-eyed Vireo	yes	S,F	NM	B	x
Yellow-throated Vireo	no	F	NTM	B	x
Blue-headed Vireo	no	F	NM	B	x
Warbling Vireo	no	S	NTM	B	x
Philadelphia Vireo	no	F	NTM	B	x
Red-eyed Vireo	no	F	NTM	B	x
Corvidae					
Blue Jay	yes	S,G,F,U	NM	B	x
American Crow	yes	S,G,F,U	NM	B	x
Hirundinidae					
Barn Swallow	yes	W,R,S,G,U	R	B	x
Paridae					
Black-capped Chickadee	no	F,S	R	B	x
Sittidae					
White-breasted Nuthatch	no	F	R	B	x
Certhiidae					
Brown Creeper	no	R,F	NM	B	ILCP
Troglodytidae					
House Wren	yes	F,S,U	NTM	B	x
Regulidae					
Ruby-crowned Kinglet	no	F,S,U	NM	NB	x
Sylviidae					
Blue-gray Gnatcatcher	no	F	NTM	B	x
Turdidae					
Eastern Bluebird	no	S,G	R	B	x
Veery	no	F,S	NTM	B	x
Gray-cheeked Thrush	no	F,S	NTM	NB	x
Swainson's Thrush	no	F,S	NTM	NB	x

Table 3. continued

Family/species	Seen within 150 ft of center line	Habitat association	Migration / residency status	Breeding status (Cook Co)	Conservation designation
Turdidae					
Wood Thrush	no	F	NTM	B	ILCP, PF
American Robin	yes	FF,S,G,F,U	NM	B	x
Mimidae					
Gray Catbird	yes	S,F,U	NTM	B	x
Brown Thrasher	yes	S,F,U	NM	B	ILCP, PF
Sturnidae					
European Starling	yes	FF,S,G, F,U	NM	B	x
Parulidae					
Tennessee Warbler	no	S,F,U	NTM	NB	x
Nashville Warbler	no	S,F,U	NTM	NB	x
Northern Parula	no	R,F	NTM	B	x
Yellow Warbler	no	S,SV	NTM	B	x
Chestnut-sided Warbler	no	F,S	NTM	B	x
Magnolia Warbler	yes	S,F,U	NTM	NB	x
Cape May Warbler	no	S,F,U	NTM	NB	x
Black-throated Green Warbler	no				
Yellow-rumped Warbler	yes	S,F,U	NM	NB	x
Blackburnian Warbler	no	S,F,U	NTM	NB	x
Palm Warbler	no	S,G,F,U	NTM	B	x
Bay-breasted Warbler	no	S,F,U	NTM	NB	WL
Blackpoll Warbler	no	S,F,U	NTM	NB	x
Black-and-white Warbler	no	S,F	NTM	B	x
American Redstart	yes	R,S,F	NTM	B	x
Ovenbird	no	F	NTM	B	ILCP
Northern Waterthrush	no	W,R,S,F,U	NTM	NB	x
Common Yellowthroat	yes	W	NTM	B	x
Thraupidae					
Scarlet Tanager	no	F	NTM	B	x
Emberizidae					
Eastern Towhee	no	F,S	NM	B	x
Field Sparrow	yes	S,G	NM	B	ILCP, PF
Savannah Sparrow	no	FF,G	NM	B	ILCP
Song Sparrow	yes	F,S,U	NM	B	x
Swamp Sparrow	no	W,S,U	NM	B	x
White-throated Sparrow	no	F,S,U	NM	NB	x
White-crowned Sparrow	no	S,G,U	NM	NB	x
Cardinalidae					
Northern Cardinal	no	F,S,U	R	B	x
Rose-breasted Grosbeak	no	F	NTM	B	x
Indigo Bunting	yes	S,SV,F,U	NTM	B	x

Table 3. continued

Family/species	Seen within 150 ft of center line	Habitat association	Migration / residency status	Breeding status (Cook Co)	Conservation designation
Icteridae					
Red-winged Blackbird	yes	W,L,FF,S,G	NM	B	x
Eastern Meadowlark	no	G	NM	B	PF
Common Grackle	no	W,L,FF,S,G	NM	B	x
Brown-headed Cowbird	no	W,L,FF,S,G	NM	B	x
Baltimore Oriole	no	F,G	NTM	B	PF
Fringillidae					
House Finch	no	S,U	R	B	x
American Goldfinch	yes	FF,S,U	R	B	x
Passeridae					
House Sparrow	yes	FF,U	R	B	x

Migratory/Residency Status: M = North American migrant, NT = Neotropical migrant, N = non-migratory, R = resident. **Habitat association :** W = wetland, R = rivers and streams, L = lakes and ponds, FF = farm fields, S = shrub, G = grassland, SV = savanna, F = forest/woodlot, U = urban / suburban. **Conservation designations:** IL T = Illinois threatened, IL E = Illinois endangered, ILCP = *The Illinois Comprehensive Wildlife Action Plan* <http://www.dnr.state.il.us/ORC/WildlifeResources/theplan/birds.asp> conservation priority species, WL = *The American Bird Conservancy* <http://www.abcbirds.org/abcprograms/science/watchlist/index.html> Watch List species, PF = *The Partners in Flight* species of special concern <http://www.rmbo.org/pif/downloads/downloads.html>.

Table 4. Avian census results for spring 2008 census of the I-294/I-57 project area.

Family/Species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census areas											Total
				1	2	3	4	5	6	7	8	9	10	11	
Anatidae															
Canada Goose	NM/B	x	yes	0	0	0	0	0	12	0	0	0	0	2	14
Wood Duck	NM/B	x	no	0	2	0	0	0	4	0	0	0	0	0	6
Mallard	NM/B	x	yes	0	0	0	0	0	3	0	0	3	0	0	6
Blue-winged Teal	NTM/B	x		0	0	0	0	0	5	0	0	6	0	0	11
Ardeidae															
Great Blue Heron	NM/B	x	yes	0	0	0	0	0	2	0	0	0	0	0	2
Great Egret	NTM/B	ILCP	no	0	0	0	0	0	3	0	0	1	0	0	4
Cathartidae															
Turkey Vulture	NM/B	x	yes	0	0	3	0	0	2	1	2	0	3	1	12
Accipitridae															
Cooper's Hawk	NM/B	x	no	1	0	0	0	0	0	0	0	0	0	0	1
Red-tailed Hawk	NM/B	x	yes	0	0	1	0	0	0	1	2	0	1	2	7
American Kestrel	NM/B	x	yes	0	0	1	0	0	1	0	0	1	0	0	3
Charadriidae															
Killdeer	NM/B	x	yes	0	0	0	0	0	2	0	0	5	0	0	7
Scolopacidae															
Wilson's Snipe	NTM/B	x	no	0	0	0	0	0	0	0	0	1	0	0	1
Laridae															
Ring-billed Gull	NM/B	x	yes	0	0	0	0	0	3	0	0	0	0	3	6
Columbidae															
Rock Pigeon	R/B	x	yes	0	0	6	0	0	0	0	0	0	0	3	9
Mourning Dove	R/B	x	yes	3	2	2	0	2	0	0	4	0	0	0	13
Cuculidae															
Yellow-billed Cuckoo	NTM/B	ILCP, PF	no	0	1	0	0	1	0	0	0	0	0	0	2

Table 4. continued

Family/Species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census areas											Total	
				1	2	3	4	5	6	7	8	9	10	11		
Caprimulgidae																
Common Nighthawk	NTM/B	x	no	0	0	1	0	0	0	0	0	0	0	0	0	1
Apodidae																
Chimney Swift	NTM/B	ILCP, PF	no	0	0	0	0	0	6	4	0	0	0	0	0	10
Trochilidae																
Ruby-throated Hummingbird	NTM/B	x	no	0	0	0	0	0	1	0	1	0	0	0	0	2
Picidae																
Red-headed Woodpecker	NM/B	ILCP, WL, PF	no	0	0	0	0	3	0	0	0	0	0	0	0	3
Red-bellied Woodpecker	R/B	x	no	1	0	0	2	1	2	0	0	0	0	0	0	6
Downy Woodpecker	R/B	x	yes	0	2	0	0	2	0	1	0	2	0	1	8	
Northern Flicker	NM/B	ILCP, PF	yes	3	2	2	1	1	0	5	3	3	4	0	24	
Tyrannidae																
Eastern Wood-Pewee	NTM/B	x		0	1	0	1	2	0	0	0	0	0	0	0	4
Least Flycatcher	NTM/B	x		0	0	1	0	0	0	0	0	0	0	0	0	1
Eastern Phoebe	NM/B	x	yes	0	0	2	0	0	1	0	0	1	0	1	5	
Eastern Kingbird	NTM/B	PF	yes	0	0	0	0	0	0	3	1	0	2	0	6	
Vireonidae																
Yellow-throated Vireo	NTM/B	x	no	0	1	0	1	0	0	0	0	0	0	0	0	2
Blue-headed Vireo	NTM/NB	x	no	1	0	0	0	0	0	0	0	0	0	0	0	1
Philadelphia Vireo	NTM/NB	x	no	0	1	0	0	0	0	0	0	0	0	0	0	1
Red-eyed Vireo	NTM/B	x	no	1	1	0	2	1	0	0	0	0	0	0	5	
Corvidae																
Blue Jay	NM/B	x	yes	2	0	1	0	4	0	0	0	1	0	3	11	
American Crow	NM/B	x	yes	0	1	6	0	0	0	0	3	0	0	0	10	
Hirundinidae																
Tree Swallow	NM/B			0	0	0	0	0	11	6	0	0	0	0	17	
Barn Swallow	NTM/B	x	yes	0	0	3	0	0	0	3	0	5	11	0	22	

Table 4. continued

Family/Species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census areas											Total
				1	2	3	4	5	6	7	8	9	10	11	
Paridae															
Black-capped Chickadee	R/B	x	no	2	4	0	0	3	0	0	0	0	0	0	9
Sittidae															
White-breasted Nuthatch	R/B	x	yes	1	0	0	1	2	0	0	0	0	0	0	4
Certhiidae															
Brown Creeper	NM/B	ILCP	no	2	0	0	0	0	0	0	0	0	0	0	2
Troglodytidae															
House Wren	NTM/B	x	yes	2	0	0	2	1	0	0	0	0	0	0	5
Regulidae															
Ruby-crowned Kinglet	NM/NB	x	no	0	2	1	0	1	0	0	2	0	0	0	6
Turdidae															
Eastern Bluebird	R/B	x	no	0	0	2	0	0	5	2	0	3	0	0	12
Veery	NTM/B	x	no	0	0	0	1	0	0	0	0	0	0	0	1
Gray-cheeked Thrush	NTM/NB	x	no	1	0	0	0	0	0	0	0	0	0	0	1
Swainson's Thrush	NTM/NB	x	no	1	0	0	1	0	0	0	0	0	0	0	2
Wood Thrush	NTM/B	ILCP, PF	no	0	0	0	0	1	0	0	0	0	0	0	1
American Robin	NM/B	x	yes	3	4	1	3	5	0	0	6	0	0	4	26
Mimidae															
Gray Catbird	NTM/B	x		1	0	0	0	1	0	0	0	0	0	0	2
Brown Thrasher	NM/B	ILCP, PF	yes	0	0	3	0	0	1	0	2	1	0	2	9
Sturnidae															
European Starling	NM/B	x	yes	0	0	5	0	7	2	0	0	0	0	0	14
Parulidae															
Tennessee Warbler	NTM/NB	x	no	0	1	3	0	0	1	0	0	0	0	0	5
Nashville Warbler	NTM/NB	x	no	4	0	0	0	2	0	0	1	0	0	0	7
Northern Parula	NTM/B	x	no	0	2	0	1	0	0	0	0	0	0	0	3

Table 4. continued

Family/Species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census areas											Total
				1	2	3	4	5	6	7	8	9	10	11	
Parulidae (continued)															
Yellow Warbler	NTM/B	x	no	0	0	1	0	0	0	0	0	0	1	0	2
Chestnut-sided Warbler	NTM/B	x	no	1	0	0	1	0	0	0	0	0	0	1	3
Magnolia Warbler	NTM/NB	x	yes	2	1	0	1	3	0	0	1	0	0	8	
Cape May Warbler	NTM/NB	x	no	0	2	0	0	1	0	0	0	0	0	3	
Black-throated Green Warbler	NTM/NB		no	0	3	0	1	0	0	0	0	0	0	4	
Yellow-rumped Warbler	NM/NB	x	yes	4	3	3	2	3	2	0	2	0	0	21	
Blackburnian Warbler	NTM/NB	x	no	3	0	0	0	0	0	0	0	0	0	3	
Palm Warbler	NTM/B	x	no	5	3	0	0	0	7	11	6	5	3	42	
Bay-breasted Warbler	NTM/NB	WL	no	0	2	0	0	0	0	0	0	0	0	2	
Blackpoll Warbler	NTM/NB	x	no	0	2	0	0	0	0	0	0	0	0	2	
Black-and-white Warbler	NTM/B	x	no	0	1	0	0	0	0	0	0	0	0	1	
American Redstart	NTM/B	x	yes	2	1	0	1	0	0	0	0	0	0	4	
Ovenbird	NTM/B	ILCP	no	0	0	0	0	1	0	0	0	0	0	1	
Northern Waterthrush	NTM/NB	x	no	1	0	0	0	0	0	0	0	0	0	1	
Common Yellowthroat	NTM/B	x	yes	0	0	3	0	0	1	5	0	4	0	13	
Thraupidae															
Scarlet Tanager	NTM/B	x	no	0	0	0	0	1	0	0	0	0	0	1	
Emberizidae															
Eastern Towhee	NM/B	x	no	2	0	0	2	0	0	0	0	0	0	4	
Field Sparrow	NM/B	ILCP, PF	yes	0	0	0	0	0	0	3	0	0	3	6	
Savannah Sparrow	NM/B	ILCP	no	0	0	0	0	0	0	0	0	1	0	1	
Song Sparrow	NM/B	x	yes	0	0	3	0	0	2	4	0	2	0	13	
Swamp Sparrow	NM/B	x	no	0	0	1	0	0	0	0	1	0	0	2	
White-throated Sparrow	NM/NB	x	no	4	0	0	0	0	0	0	0	0	0	4	
White-crowned Sparrow	NM/NB	x	no	0	0	0	0	0	3	5	0	0	4	12	

Table 4. continued

Family/Species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census areas											Total
				1	2	3	4	5	6	7	8	9	10	11	
Cardinalidae															
Northern Cardinal	R/B	x	yes	2	1	2	0	2	0	0	0	0	0	3	10
Rose-breasted Grosbeak	NTM/B	x	no	1	0	0	0	1	0	0	0	0	0	2	
Indigo Bunting	NTM/B	x	yes	0	0	3	0	0	2	3	1	4	0	15	
Icteridae															
Red-winged Blackbird	NM/B	x	yes	0	0	15	0	0	0	5	6	5	2	33	
Eastern Meadowlark	NM/B	PF	no	0	0	3	0	0	2	1	0	3	0	9	
Common Grackle	NM/B	x	no	10	0	0	3	0	0	0	0	0	6	19	
Brown-headed Cowbird	NM/B	x	no	2	1	1	0	1	0	0	0	0	0	5	
Baltimore Oriole	NTM/B	PF	yes	0	1	0	0	2	0	0	0	0	0	3	
Fringillidae															
House Finch	R/B	x	no	0	0	0	0	0	0	0	2	0	1	3	
American Goldfinch	R/B	x	yes	0	0	9	0	0	0	4	3	6	4	29	
Passeridae															
House Sparrow	R/B	x	yes	0	0	6	0	0	2	0	0	0	7	15	
Number of individuals				69	50	97	31	60	94	74	57	72	49	61	714
Number of species				29	27	30	18	27	27	18	19	21	12	19	86

Migration status: R = resident, NM = North American Migrant, NTM = Neotropical Migrant. **Breeding status:** B = breeds in Cook County, NB = does not breed in Cook County. **Conservation designations:** IL T = Illinois threatened, IL E = Illinois endangered, ILCP = The Illinois Comprehensive Wildlife Action Plan <http://www.dnr.state.il.us/ORC/WildlifeResources/theplan/birds.asp> conservation priority species, WL = The American Bird Conservancy <http://www.abcbirds.org/abcprograms/science/watchlist/index.html> Watch List species, PF = The Partners in Flight species of special concern <http://www.rmbo.org/pif/downloads/downloads.html>.

Table 5. Avian census results for breeding season 2008 census of the I-294/I-57 project area.

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Anatidae															
Canada Goose	NM/B	x	yes	0	0	0	0	0	4	0	0	0	0	0	4
Mallard	NM/B	x	yes	0	0	1	0	0	5	0	0	1	0	0	7
Ardeidae															
Great Blue Heron	NM/B	x	yes	0	0	0	0	0	3	0	0	1	0	0	4
Green Heron	NM/B	x	no	1	0	0	0	0	1	0	0	0	0	0	2
Cathartidae															
Turkey Vulture	NM/B	x	yes	0	0	3	0	0	1	3	0	2	4	0	13
Accipitridae															
Cooper's Hawk	NM/B	x	no	0	1	0	0	1	0	0	0	0	0	0	2
Red-tailed Hawk	NM/B	x	yes	0	0	2	0	0	0	2	2	1	0	0	7
American Kestrel	NM/B	x	yes	0	0	0	0	0	0	0	1	0	1	0	2
Charadriidae															
Killdeer	NM/B	x	yes	0	0	2	0	0	0	0	3	0	4	0	9
Laridae															
Ring-billed Gull	NM/NB	x	yes	0	0	0	0	0	2	0	0	0	0	0	2
Columbidae															
Mourning Dove	R/B	x	yes	2	1	3	2	0	3	2	4	0	1	2	20
Apodidae															
Chimney Swift	NTM/B	ILCP, PF	no	0	0	3	0	0	0	0	0	0	0	0	3
Picidae															
Red-headed Woodpecker	NM/B	ILCP, WL, PF	no	0	0	0	0	3	0	0	0	0	0	0	3
Red-bellied Woodpecker	R/B	x	no	2	3	0	2	1	3	0	1	0	0	0	12
Downy Woodpecker	R/B	x	yes	1	1	2	1	1	0	1	1	2	0	1	11
Hairy Woodpecker	R/B	x	no	0	0	0	0	1	0	0	0	0	0	0	1
Northern Flicker	NM/B	ILCP, PF	yes	1	0	3	0	1	2	0	0	4	2	0	13

Table 5. continued

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Tyrannidae															
Eastern Wood-Pewee	NTM/B	x		2	1	0	2	1	0	0	0	0	0	0	6
Willow Flycatcher	NTM/B	ILCP, PF	no	0	0	2	0	0	0	0	0	0	0	0	2
Eastern Phoebe	NM/B	x	yes	0	0	1	0	0	1	2	0	1	0	1	6
Great Crested Flycatcher	NTM/B	PF	no	1	1	0	2	2	0	0	0	0	0	0	6
Eastern Kingbird	NTM/B	PF	yes	0	0	1	0	0	1	2	0	2	1	0	7
Vireonidae															
White-eyed Vireo	NTM/B	x	yes	0	0	1	0	0	1	0	2	1	0	0	5
Yellow-throated Vireo	NTM/B	x	no	1	0	0	1	0	0	0	0	0	0	0	2
Warbling Vireo	NTM/B	x	no	0	0	1	0	0	2	0	1	0	1	3	8
Red-eyed Vireo	NTM/B	x	no	1	3	0	2	3	0	0	0	0	0	0	9
Corvidae															
Blue Jay	NM/B	x	yes	4	3	0	2	1	3	0	1	0	3	0	17
American Crow	NM/B	x	yes	0	1	3	0	0	2	4	3	0	2	0	15
Hirundinidae															
Barn Swallow	NTM/B	x	yes	0	0	5	0	0	6	4	0	5	0	0	20
Paridae															
Black-capped Chickadee	R/B	x	no	1	3	0	0	2	0	0	0	0	0	0	6
Sittidae															
White-breasted Nuthatch	R/B	x	yes	1	0	0	1	2	0	0	2	0	0	0	6
Troglodytidae															
House Wren	NTM/B	x	yes	3	2	1	0	2	0	0	1	0	0	0	9
Sylviidae															
Blue-gray Gnatcatcher	NTM/B	x	no	1	0	0	0	1	0	0	0	0	0	0	2
Turdidae															
Eastern Bluebird	R/B	x	no	0	0	4	0	0	3	0	0	0	2	0	9
Wood Thrush	NTM/B	ILCP, PF	no	1	0	0	0	1	0	0	0	0	0	0	2
American Robin	NM/B	x	yes	2	3	2	3	2	5	2	2	0	1	4	26

Table 5. continued

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Mimidae															
Gray Catbird	NTM/B	x	no	0	2	0	1	0	0	0	0	0	0	0	3
Brown Thrasher	NM/B	ILCP, PF	yes	0	0	1	0	0	2	1	2	1	0	1	8
Sturnidae															
European Starling	NM/B	x	yes	0	2	1	2	0	9	0	6	0	0	0	20
Parulidae															
Yellow Warbler	NTM/B	x	no	0	0	0	0	0	0	0	2	0	0	2	4
Ovenbird	NTM/B	ILCP	no	0	0	0	0	1	0	0	0	0	0	0	1
Common Yellowthroat	NTM/B	x	yes	0	0	3	0	0	3	1	0	5	3	0	15
Thraupidae															
Scarlet Tanager	NTM/B	x	no	1	0	0	1	1	0	0	0	0	0	0	3
Emberizidae															
Eastern Towhee	NM/B	x	no	0	3	0	2	1	0	0	0	0	0	0	6
Field Sparrow	NM/B	ILCP, PF	yes	0	0	2	0	0	0	3	0	3	2	0	10
Savannah Sparrow	NM/B	ILCP	no	0	0	0	0	0	0	1	0	0	0	0	1
Song Sparrow	NM/B	x	yes	0	0	3	1	0	3	1	2	4	1	2	17
Cardinalidae															
Northern Cardinal	R/B	x	yes	1	2	0	3	1	2	0	3	0	0	4	16
Rose-breasted Grosbeak	NTM/B	x	no	2	1	0	1	1	0	0	0	0	0	0	5
Indigo Bunting	NTM/B	x	yes	0	0	2	0	0	3	1	1	2	3	1	13
ICTERIDAE															
Red-winged Blackbird	NM/B	x	yes	0	0	5	0	0	7	0	4	3	0	6	25
Eastern Meadowlark	NM/B	PF	no	0	0	3	0	0	0	4	0	6	4	0	17
Common Grackle	NM/B	x	no	0	4	0	4	0	3	0	0	0	2	9	22
Brown-headed Cowbird	NM/B	x	yes	1	0	0	3	1	5	0	2	0	5	0	17
Baltimore Oriole	NTM/B	PF	no	0	1	0	0	1	1	0	0	0	0	0	3

Table 5. continued

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Fringillidae															
House Finch	R/B	x	no	0	0	0	0	0	0	0	2	0	3	0	5
American Goldfinch	R/B	x	yes	0	0	6	0	0	3	5	3	7	1	3	28
Passeridae															
House Sparrow	R/B	x	yes	0	0	0	0	0	0	0	5	0	0	0	5
Number of individuals				31	40	69	40	37	95	46	64	60	56	50	588
Number of species				20	19	27	19	23	29	17	24	18	20	13	58

Migration status: R = resident, NM = North American Migrant, NTM = Neotropical Migrant. **Breeding status:** B = breeds in Cook County, NB = does not breed in Cook County. **Conservation designations:** IL T = Illinois threatened, IL E = Illinois endangered, ILCP = The Illinois Comprehensive Wildlife Action Plan <http://www.dnr.state.il.us/ORC/WildlifeResources/theplan/birds.asp> conservation priority species, WL = The American Bird Conservancy <http://www.abcbirds.org/abcprograms/science/watchlist/index.html> Watch List species, PF = The Partners in Flight species of special concern <http://www.rmbo.org/pif/downloads/downloads.html>.

Table 6. Avian census results for fall 2008 census of the I-294/I-57 project area.

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Anatidae															
Canada Goose	NM/B	x	yes	0	0	0	0	0	15	0	0	0	0	0	15
Mallard	NM/B	x	yes	0	0	0	0	0	11	0	0	0	0	0	11
Northern Shoveler	NM/B	x	no	0	0	0	0	0	4	0	0	0	0	0	4
Ardeidae															
Great Blue Heron	NM/B	x	yes	0	0	0	0	0	3	0	0	0	0	0	3
Cathartidae															
Turkey Vulture	NM/B	x	yes	0	0	6	0	0	3	0	0	2	1	2	14
Accipitridae															
Cooper's Hawk	NM/B	x	no	0	0	0	0	0	1	0	0	0	0	0	1
Red-tailed Hawk	NM/B	x	yes	0	0	2	0	0	0	0	2	0	1	0	5
American Kestrel	NM/B	x	yes	0	0	0	0	0	0	2	0	1	0	0	3
Gruidae															
Sandhill Crane	NM/B	IL T, ILCP	no	0	0	0	0	0	0	8	0	0	0	0	8
Charadriidae															
Killdeer	NM/B	x	yes	0	0	0	0	0	2	3	2	2	6	0	15
Laridae															
Ring-billed Gull	NM/NB	x	yes	0	0	0	0	0	3	0	0	0	0	5	8
Columbidae															
Mourning Dove	R/B	x	yes	3	5	7	0	3	0	0	3	0	2	3	26
Picidae															
Red-headed Woodpecker	NM/B	ILCP, WL, PF	no	0	0	0	0	4	0	0	0	0	0	0	4
Red-bellied Woodpecker	R/B	x	no	2	1	0	4	2	0	0	0	0	0	0	9
Downy Woodpecker	R/B	x	yes	2	0	2	1	1	2	0	2	0	0	1	11
Northern Flicker	NM/B	ILCP, PF	yes	0	3	5	0	3	1	5	0	3	0	0	20

Table 6. continued

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Tyrannidae															
Eastern Phoebe	NM/B	x	yes	1	0	0	0	1	0	2	0	0	2	1	7
Vireonidae															
Red-eyed Vireo	NTM/B	x	no	0	1	0	1	0	0	0	0	0	0	0	2
Corvidae															
Blue Jay	NM/B	x	yes	5	2	0	3	0	3	6	0	0	0	0	19
American Crow	NM/B	x	yes	0	3	5	0	0	0	0	6	0	4	0	18
Hirundinidae															
Barn Swallow	NTM/B	x	yes	0	0	0	0	0	2	0	0	0	4	0	6
Paridae															
Black-capped Chickadee	R/B	x	no	1	3	4	0	3	0	0	0	0	2	0	13
Sittidae															
White-breasted Nuthatch	R/B	x	yes	1	0	0	1	2	1	0	1	0	0	0	6
Troglodytidae															
House Wren	NTM/B	x	yes	2	1	0	0	0	2	0	0	0	0	0	5
Regulidae															
Ruby-crowned Kinglet	NTM/NB	x	no	0	0	1	0	0	0	0	1	0	0	0	2
Turdidae															
Eastern Bluebird	R/B	x	no	0	0	3	0	0	4	0	0	0	2	0	9
Swainson's Thrush	NTM/NB	x	no	0	2	0	1	2	0	0	0	0	0	0	5
Wood Thrush	NTM/B	ILCP, PF	no	1	0	0	0	0	0	0	0	0	0	0	1
American Robin		x	yes	3	7	2	6	0	2	0	4	2	3	0	29
Mimidae															
Gray Catbird	NTM/B	x	no	0	1	0	0	2	0	0	0	1	0	0	4
Sturnidae															
European Starling	NM/B	x	yes	0	0	0	0	7	0	0	0	15	0	0	22

Table 6. continued

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Parulidae															
Black-throated Green Warbler	NTM/NB	x	no	0	1	0	0	0	0	0	0	0	0	0	1
Yellow-rumped Warbler	NTM/NB	x	yes	3	0	0	2	1	2	0	0	0	5	0	13
Palm Warbler	NTM/NB	x	yes	0	0	3	0	0	1	4	3	2	1	0	14
Blackpoll Warbler	NTM/NB	x	no	0	1	0	0	0	0	0	0	0	0	0	1
American Redstart	NTM/B	x	yes	1	2	0	0	2	0	0	1	0	0	0	6
Common Yellowthroat	NTM/B	x	yes	0	0	1	0	0	2	0	1	0	0	0	4
Emberizidae															
Eastern Towhee	NM/B	x	no	1	2	0	1	0	0	0	0	0	0	0	4
Field Sparrow	NM/B	ILCP, PF	yes	0	0	0	0	0	0	3	0	2	0	0	5
Chipping Sparrow	NM/B	x	yes	0	0	0	0	0	2	1	0	0	2	0	5
Song Sparrow	NM/B	x	yes	0	0	4	0	0	2	2	2	1	0	0	11
White-throated Sparrow	NM/B	x	no	0	2	0	0	3	0	3	0	0	1	0	9
Cardinalidae															
Northern Cardinal	R/B	x	yes	3	4	0	3	2	0	0	0	0	1	0	13
Rose-breasted Grosbeak	NTM/B	x	no	0	0	0	1	0	0	0	0	0	0	0	1
Indigo Bunting	NTM/B	x	yes	0	0	3	0	2	0	2	0	0	3	0	10
Icteridae															
Red-winged Blackbird	NM/B	x	yes	0	0	6	0	0	1	0	5	0	6	0	18
Eastern Meadowlark	NM/B	PF	no	0	0	2	0	0	0	1	1	3	2	0	9
Common Grackle	NM/B	x	no	5	20	0	3	5	7	0	0	0	0	0	40
Brown-headed Cowbird	NM/B	x	yes	0	7	0	0	7	0	0	0	0	0	0	14
Baltimore Oriole	NTM/B	PF	no	1	0	0	0	0	0	0	0	0	0	0	1

Table 6. continued

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Fringillidae															
House Finch	R/B	x	no	0	0	2	0	0	0	0	3	0	0	0	5
American Goldfinch	R/B	x	yes	0	0	7	0	0	3	2	6	4	3	0	25
Passeridae															
House Sparrow	R/B	x	yes	0	0	0	0	0	0	0	7	0	0	6	13
Number of individuals				36	70	68	31	57	85	51	58	47	61	29	593
Number of species				16	19	18	11	18	24	14	17	12	19	6	53

Migration status: R = resident, NM = North American Migrant, NTM = Neotropical Migrant. **Breeding status:** B = breeds in Cook County, NB = does not breed in Cook County. **Conservation designations:** IL T = Illinois threatened, IL E = Illinois endangered, ILCP = The Illinois Comprehensive Wildlife Action Plan <http://www.dnr.state.il.us/ORC/WildlifeResources/theplan/birds.asp> conservation priority species, WL = The American Bird Conservancy <http://www.abcbirds.org/abcprograms/science/watchlist/index.html> Watch List species, PF = The Partners in Flight species of special concern <http://www.rmbo.org/pif/downloads/downloads.html>.



Figure 1. Census areas 1-3.



Figure 2. Census areas 4-7.

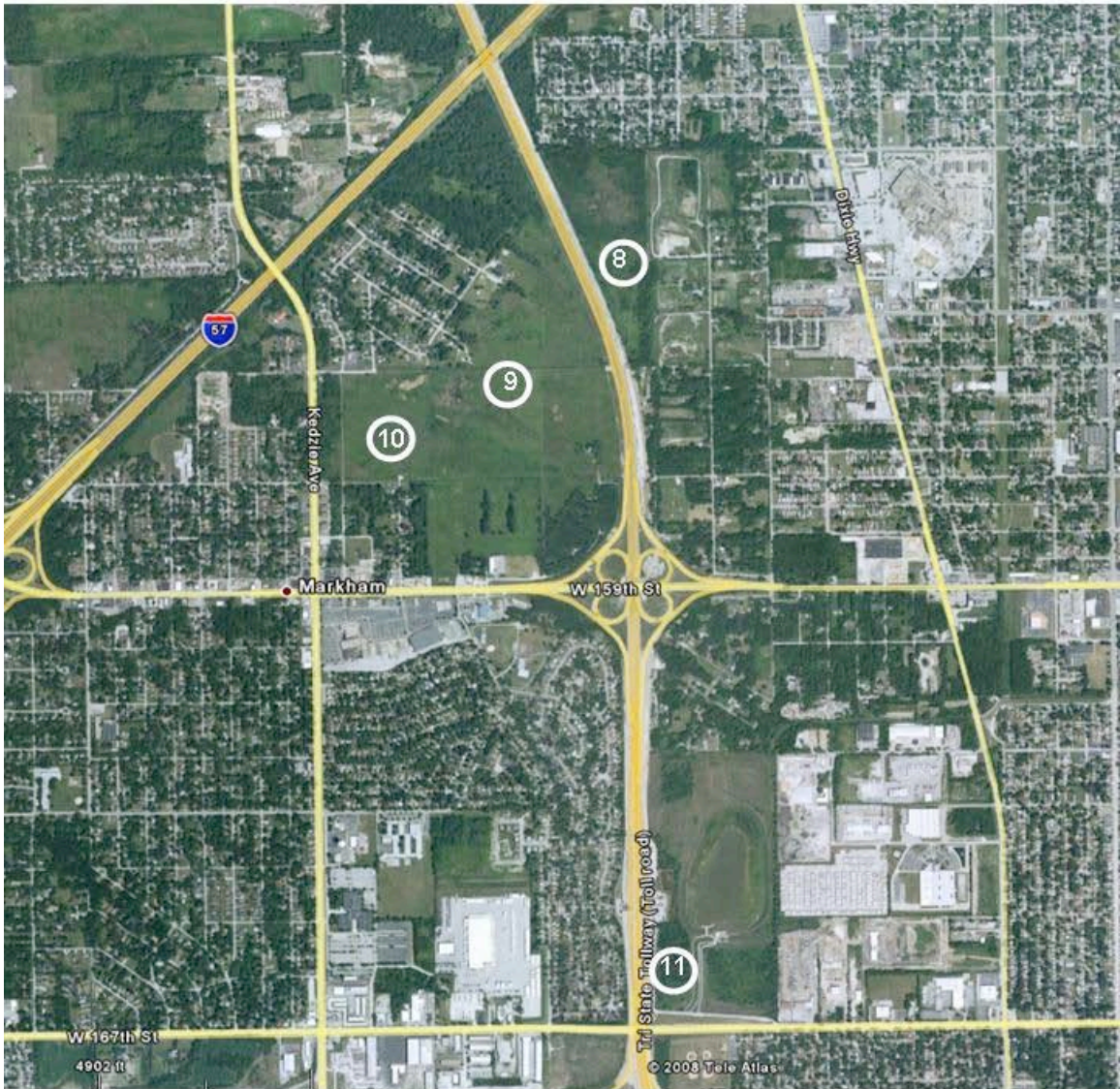


Figure 3. Census areas 8-11.

Table 4. Avian census results for spring 2008 census of the I-294/I-57 project area.

Family/Species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census areas											Total
				1	2	3	4	5	6	7	8	9	10	11	
Anatidae															
Canada Goose	NM/B	x	yes	0	0	0	0	0	12	0	0	0	0	2	14
Wood Duck	NM/B	x	no	0	2	0	0	0	4	0	0	0	0	0	6
Mallard	NM/B	x	yes	0	0	0	0	0	3	0	0	3	0	0	6
Blue-winged Teal	NTM/B	x		0	0	0	0	0	5	0	0	6	0	0	11
Ardeidae															
Great Blue Heron	NM/B	x	yes	0	0	0	0	0	2	0	0	0	0	0	2
Great Egret	NTM/B	ILCP	no	0	0	0	0	0	3	0	0	1	0	0	4
Cathartidae															
Turkey Vulture	NM/B	x	yes	0	0	3	0	0	2	1	2	0	3	1	12
Accipitridae															
Cooper's Hawk	NM/B	x	no	1	0	0	0	0	0	0	0	0	0	0	1
Red-tailed Hawk	NM/B	x	yes	0	0	1	0	0	0	1	2	0	1	2	7
American Kestrel	NM/B	x	yes	0	0	1	0	0	1	0	0	1	0	0	3
Charadriidae															
Killdeer	NM/B	x	yes	0	0	0	0	0	2	0	0	5	0	0	7
Scolopacidae															
Wilson's Snipe	NTM/B	x	no	0	0	0	0	0	0	0	0	1	0	0	1
Laridae															
Ring-billed Gull	NM/B	x	yes	0	0	0	0	0	3	0	0	0	0	3	6
Columbidae															
Rock Pigeon	R/B	x	yes	0	0	6	0	0	0	0	0	0	0	3	9
Mourning Dove	R/B	x	yes	3	2	2	0	2	0	0	4	0	0	0	13
Cuculidae															
Yellow-billed Cuckoo	NTM/B	ILCP, PF	no	0	1	0	0	1	0	0	0	0	0	0	2

Table 4. continued

Family/Species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census areas											Total	
				1	2	3	4	5	6	7	8	9	10	11		
Caprimulgidae																
Common Nighthawk	NTM/B	x	no	0	0	1	0	0	0	0	0	0	0	0	0	1
Apodidae																
Chimney Swift	NTM/B	ILCP, PF	no	0	0	0	0	0	6	4	0	0	0	0	0	10
Trochilidae																
Ruby-throated Hummingbird	NTM/B	x	no	0	0	0	0	0	1	0	1	0	0	0	0	2
Picidae																
Red-headed Woodpecker	NM/B	ILCP, WL, PF	no	0	0	0	0	3	0	0	0	0	0	0	0	3
Red-bellied Woodpecker	R/B	x	no	1	0	0	2	1	2	0	0	0	0	0	0	6
Downy Woodpecker	R/B	x	yes	0	2	0	0	2	0	1	0	2	0	1	8	
Northern Flicker	NM/B	ILCP, PF	yes	3	2	2	1	1	0	5	3	3	4	0	24	
Tyrannidae																
Eastern Wood-Pewee	NTM/B	x		0	1	0	1	2	0	0	0	0	0	0	0	4
Least Flycatcher	NTM/B	x		0	0	1	0	0	0	0	0	0	0	0	0	1
Eastern Phoebe	NM/B	x	yes	0	0	2	0	0	1	0	0	1	0	1	5	
Eastern Kingbird	NTM/B	PF	yes	0	0	0	0	0	0	3	1	0	2	0	6	
Vireonidae																
Yellow-throated Vireo	NTM/B	x	no	0	1	0	1	0	0	0	0	0	0	0	0	2
Blue-headed Vireo	NTM/NB	x	no	1	0	0	0	0	0	0	0	0	0	0	0	1
Philadelphia Vireo	NTM/NB	x	no	0	1	0	0	0	0	0	0	0	0	0	0	1
Red-eyed Vireo	NTM/B	x	no	1	1	0	2	1	0	0	0	0	0	0	5	
Corvidae																
Blue Jay	NM/B	x	yes	2	0	1	0	4	0	0	0	1	0	3	11	
American Crow	NM/B	x	yes	0	1	6	0	0	0	0	3	0	0	0	10	
Hirundinidae																
Tree Swallow	NM/B			0	0	0	0	0	11	6	0	0	0	0	17	
Barn Swallow	NTM/B	x	yes	0	0	3	0	0	0	3	0	5	11	0	22	

Table 4. continued

Family/Species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census areas											Total
				1	2	3	4	5	6	7	8	9	10	11	
Paridae															
Black-capped Chickadee	R/B	x	no	2	4	0	0	3	0	0	0	0	0	0	9
Sittidae															
White-breasted Nuthatch	R/B	x	yes	1	0	0	1	2	0	0	0	0	0	0	4
Certhiidae															
Brown Creeper	NM/B	ILCP	no	2	0	0	0	0	0	0	0	0	0	0	2
Troglodytidae															
House Wren	NTM/B	x	yes	2	0	0	2	1	0	0	0	0	0	0	5
Regulidae															
Ruby-crowned Kinglet	NM/NB	x	no	0	2	1	0	1	0	0	2	0	0	0	6
Turdidae															
Eastern Bluebird	R/B	x	no	0	0	2	0	0	5	2	0	3	0	0	12
Veery	NTM/B	x	no	0	0	0	1	0	0	0	0	0	0	0	1
Gray-cheeked Thrush	NTM/NB	x	no	1	0	0	0	0	0	0	0	0	0	0	1
Swainson's Thrush	NTM/NB	x	no	1	0	0	1	0	0	0	0	0	0	0	2
Wood Thrush	NTM/B	ILCP, PF	no	0	0	0	0	1	0	0	0	0	0	0	1
American Robin	NM/B	x	yes	3	4	1	3	5	0	0	6	0	0	4	26
Mimidae															
Gray Catbird	NTM/B	x		1	0	0	0	1	0	0	0	0	0	0	2
Brown Thrasher	NM/B	ILCP, PF	yes	0	0	3	0	0	1	0	2	1	0	2	9
Sturnidae															
European Starling	NM/B	x	yes	0	0	5	0	7	2	0	0	0	0	0	14
Parulidae															
Tennessee Warbler	NTM/NB	x	no	0	1	3	0	0	1	0	0	0	0	0	5
Nashville Warbler	NTM/NB	x	no	4	0	0	0	2	0	0	1	0	0	0	7
Northern Parula	NTM/B	x	no	0	2	0	1	0	0	0	0	0	0	0	3

Table 4. continued

Family/Species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census areas											Total
				1	2	3	4	5	6	7	8	9	10	11	
Parulidae (continued)															
Yellow Warbler	NTM/B	x	no	0	0	1	0	0	0	0	0	0	1	0	2
Chestnut-sided Warbler	NTM/B	x	no	1	0	0	1	0	0	0	0	0	0	1	3
Magnolia Warbler	NTM/NB	x	yes	2	1	0	1	3	0	0	1	0	0	8	
Cape May Warbler	NTM/NB	x	no	0	2	0	0	1	0	0	0	0	0	3	
Black-throated Green Warbler	NTM/NB		no	0	3	0	1	0	0	0	0	0	0	4	
Yellow-rumped Warbler	NM/NB	x	yes	4	3	3	2	3	2	0	2	0	0	21	
Blackburnian Warbler	NTM/NB	x	no	3	0	0	0	0	0	0	0	0	0	3	
Palm Warbler	NTM/B	x	no	5	3	0	0	0	7	11	6	5	3	42	
Bay-breasted Warbler	NTM/NB	WL	no	0	2	0	0	0	0	0	0	0	0	2	
Blackpoll Warbler	NTM/NB	x	no	0	2	0	0	0	0	0	0	0	0	2	
Black-and-white Warbler	NTM/B	x	no	0	1	0	0	0	0	0	0	0	0	1	
American Redstart	NTM/B	x	yes	2	1	0	1	0	0	0	0	0	0	4	
Ovenbird	NTM/B	ILCP	no	0	0	0	0	1	0	0	0	0	0	1	
Northern Waterthrush	NTM/NB	x	no	1	0	0	0	0	0	0	0	0	0	1	
Common Yellowthroat	NTM/B	x	yes	0	0	3	0	0	1	5	0	4	0	13	
Thraupidae															
Scarlet Tanager	NTM/B	x	no	0	0	0	0	1	0	0	0	0	0	1	
Emberizidae															
Eastern Towhee	NM/B	x	no	2	0	0	2	0	0	0	0	0	0	4	
Field Sparrow	NM/B	ILCP, PF	yes	0	0	0	0	0	0	3	0	0	3	6	
Savannah Sparrow	NM/B	ILCP	no	0	0	0	0	0	0	0	0	1	0	1	
Song Sparrow	NM/B	x	yes	0	0	3	0	0	2	4	0	2	0	13	
Swamp Sparrow	NM/B	x	no	0	0	1	0	0	0	0	1	0	0	2	
White-throated Sparrow	NM/NB	x	no	4	0	0	0	0	0	0	0	0	0	4	
White-crowned Sparrow	NM/NB	x	no	0	0	0	0	0	3	5	0	0	4	12	

Table 4. continued

Family/Species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census areas											Total
				1	2	3	4	5	6	7	8	9	10	11	
Cardinalidae															
Northern Cardinal	R/B	x	yes	2	1	2	0	2	0	0	0	0	0	3	10
Rose-breasted Grosbeak	NTM/B	x	no	1	0	0	0	1	0	0	0	0	0	2	
Indigo Bunting	NTM/B	x	yes	0	0	3	0	0	2	3	1	4	0	15	
Icteridae															
Red-winged Blackbird	NM/B	x	yes	0	0	15	0	0	0	5	6	5	2	33	
Eastern Meadowlark	NM/B	PF	no	0	0	3	0	0	2	1	0	3	0	9	
Common Grackle	NM/B	x	no	10	0	0	3	0	0	0	0	0	6	19	
Brown-headed Cowbird	NM/B	x	no	2	1	1	0	1	0	0	0	0	0	5	
Baltimore Oriole	NTM/B	PF	yes	0	1	0	0	2	0	0	0	0	0	3	
Fringillidae															
House Finch	R/B	x	no	0	0	0	0	0	0	0	2	0	1	3	
American Goldfinch	R/B	x	yes	0	0	9	0	0	0	4	3	6	4	29	
Passeridae															
House Sparrow	R/B	x	yes	0	0	6	0	0	2	0	0	0	7	15	
Number of individuals				69	50	97	31	60	94	74	57	72	49	61	714
Number of species				29	27	30	18	27	27	18	19	21	12	19	86

Migration status: R = resident, NM = North American Migrant, NTM = Neotropical Migrant. **Breeding status:** B = breeds in Cook County, NB = does not breed in Cook County. **Conservation designations:** IL T = Illinois threatened, IL E = Illinois endangered, ILCP = The Illinois Comprehensive Wildlife Action Plan <http://www.dnr.state.il.us/ORC/WildlifeResources/theplan/birds.asp> conservation priority species, WL = The American Bird Conservancy <http://www.abcbirds.org/abcprograms/science/watchlist/index.html> Watch List species, PF = The Partners in Flight species of special concern <http://www.rmbo.org/pif/downloads/downloads.html>.

Table 5. Avian census results for breeding season 2008 census of the I-294/I-57 project area.

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Anatidae															
Canada Goose	NM/B	x	yes	0	0	0	0	0	4	0	0	0	0	0	4
Mallard	NM/B	x	yes	0	0	1	0	0	5	0	0	1	0	0	7
Ardeidae															
Great Blue Heron	NM/B	x	yes	0	0	0	0	0	3	0	0	1	0	0	4
Green Heron	NM/B	x	no	1	0	0	0	0	1	0	0	0	0	0	2
Cathartidae															
Turkey Vulture	NM/B	x	yes	0	0	3	0	0	1	3	0	2	4	0	13
Accipitridae															
Cooper's Hawk	NM/B	x	no	0	1	0	0	1	0	0	0	0	0	0	2
Red-tailed Hawk	NM/B	x	yes	0	0	2	0	0	0	2	2	1	0	0	7
American Kestrel	NM/B	x	yes	0	0	0	0	0	0	0	1	0	1	0	2
Charadriidae															
Killdeer	NM/B	x	yes	0	0	2	0	0	0	0	3	0	4	0	9
Laridae															
Ring-billed Gull	NM/NB	x	yes	0	0	0	0	0	2	0	0	0	0	0	2
Columbidae															
Mourning Dove	R/B	x	yes	2	1	3	2	0	3	2	4	0	1	2	20
Apodidae															
Chimney Swift	NTM/B	ILCP, PF	no	0	0	3	0	0	0	0	0	0	0	0	3
Picidae															
Red-headed Woodpecker	NM/B	ILCP, WL, PF	no	0	0	0	0	3	0	0	0	0	0	0	3
Red-bellied Woodpecker	R/B	x	no	2	3	0	2	1	3	0	1	0	0	0	12
Downy Woodpecker	R/B	x	yes	1	1	2	1	1	0	1	1	2	0	1	11
Hairy Woodpecker	R/B	x	no	0	0	0	0	1	0	0	0	0	0	0	1
Northern Flicker	NM/B	ILCP, PF	yes	1	0	3	0	1	2	0	0	4	2	0	13

Table 5. continued

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Tyrannidae															
Eastern Wood-Pewee	NTM/B	x		2	1	0	2	1	0	0	0	0	0	0	6
Willow Flycatcher	NTM/B	ILCP, PF	no	0	0	2	0	0	0	0	0	0	0	0	2
Eastern Phoebe	NM/B	x	yes	0	0	1	0	0	1	2	0	1	0	1	6
Great Crested Flycatcher	NTM/B	PF	no	1	1	0	2	2	0	0	0	0	0	0	6
Eastern Kingbird	NTM/B	PF	yes	0	0	1	0	0	1	2	0	2	1	0	7
Vireonidae															
White-eyed Vireo	NTM/B	x	yes	0	0	1	0	0	1	0	2	1	0	0	5
Yellow-throated Vireo	NTM/B	x	no	1	0	0	1	0	0	0	0	0	0	0	2
Warbling Vireo	NTM/B	x	no	0	0	1	0	0	2	0	1	0	1	3	8
Red-eyed Vireo	NTM/B	x	no	1	3	0	2	3	0	0	0	0	0	0	9
Corvidae															
Blue Jay	NM/B	x	yes	4	3	0	2	1	3	0	1	0	3	0	17
American Crow	NM/B	x	yes	0	1	3	0	0	2	4	3	0	2	0	15
Hirundinidae															
Barn Swallow	NTM/B	x	yes	0	0	5	0	0	6	4	0	5	0	0	20
Paridae															
Black-capped Chickadee	R/B	x	no	1	3	0	0	2	0	0	0	0	0	0	6
Sittidae															
White-breasted Nuthatch	R/B	x	yes	1	0	0	1	2	0	0	2	0	0	0	6
Troglodytidae															
House Wren	NTM/B	x	yes	3	2	1	0	2	0	0	1	0	0	0	9
Sylviidae															
Blue-gray Gnatcatcher	NTM/B	x	no	1	0	0	0	1	0	0	0	0	0	0	2
Turdidae															
Eastern Bluebird	R/B	x	no	0	0	4	0	0	3	0	0	0	2	0	9
Wood Thrush	NTM/B	ILCP, PF	no	1	0	0	0	1	0	0	0	0	0	0	2
American Robin	NM/B	x	yes	2	3	2	3	2	5	2	2	0	1	4	26

Table 5. continued

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Mimidae															
Gray Catbird	NTM/B	x	no	0	2	0	1	0	0	0	0	0	0	0	3
Brown Thrasher	NM/B	ILCP, PF	yes	0	0	1	0	0	2	1	2	1	0	1	8
Sturnidae															
European Starling	NM/B	x	yes	0	2	1	2	0	9	0	6	0	0	0	20
Parulidae															
Yellow Warbler	NTM/B	x	no	0	0	0	0	0	0	0	2	0	0	2	4
Ovenbird	NTM/B	ILCP	no	0	0	0	0	1	0	0	0	0	0	0	1
Common Yellowthroat	NTM/B	x	yes	0	0	3	0	0	3	1	0	5	3	0	15
Thraupidae															
Scarlet Tanager	NTM/B	x	no	1	0	0	1	1	0	0	0	0	0	0	3
Emberizidae															
Eastern Towhee	NM/B	x	no	0	3	0	2	1	0	0	0	0	0	0	6
Field Sparrow	NM/B	ILCP, PF	yes	0	0	2	0	0	0	3	0	3	2	0	10
Savannah Sparrow	NM/B	ILCP	no	0	0	0	0	0	0	1	0	0	0	0	1
Song Sparrow	NM/B	x	yes	0	0	3	1	0	3	1	2	4	1	2	17
Cardinalidae															
Northern Cardinal	R/B	x	yes	1	2	0	3	1	2	0	3	0	0	4	16
Rose-breasted Grosbeak	NTM/B	x	no	2	1	0	1	1	0	0	0	0	0	0	5
Indigo Bunting	NTM/B	x	yes	0	0	2	0	0	3	1	1	2	3	1	13
Icteridae															
Red-winged Blackbird	NM/B	x	yes	0	0	5	0	0	7	0	4	3	0	6	25
Eastern Meadowlark	NM/B	PF	no	0	0	3	0	0	0	4	0	6	4	0	17
Common Grackle	NM/B	x	no	0	4	0	4	0	3	0	0	0	2	9	22
Brown-headed Cowbird	NM/B	x	yes	1	0	0	3	1	5	0	2	0	5	0	17
Baltimore Oriole	NTM/B	PF	no	0	1	0	0	1	1	0	0	0	0	0	3

Table 5. continued

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Fringillidae															
House Finch	R/B	x	no	0	0	0	0	0	0	0	2	0	3	0	5
American Goldfinch	R/B	x	yes	0	0	6	0	0	3	5	3	7	1	3	28
Passeridae															
House Sparrow	R/B	x	yes	0	0	0	0	0	0	0	5	0	0	0	5
Number of individuals				31	40	69	40	37	95	46	64	60	56	50	588
Number of species				20	19	27	19	23	29	17	24	18	20	13	58

Migration status: R = resident, NM = North American Migrant, NTM = Neotropical Migrant. **Breeding status:** B = breeds in Cook County, NB = does not breed in Cook County. **Conservation designations:** IL T = Illinois threatened, IL E = Illinois endangered, ILCP = The Illinois Comprehensive Wildlife Action Plan <http://www.dnr.state.il.us/ORC/WildlifeResources/theplan/birds.asp> conservation priority species, WL = The American Bird Conservancy <http://www.abcbirds.org/abcprograms/science/watchlist/index.html> Watch List species, PF = The Partners in Flight species of special concern <http://www.rmbo.org/pif/downloads/downloads.html>.

Table 6. Avian census results for fall 2008 census of the I-294/I-57 project area.

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Anatidae															
Canada Goose	NM/B	x	yes	0	0	0	0	0	15	0	0	0	0	0	15
Mallard	NM/B	x	yes	0	0	0	0	0	11	0	0	0	0	0	11
Northern Shoveler	NM/B	x	no	0	0	0	0	0	4	0	0	0	0	0	4
Ardeidae															
Great Blue Heron	NM/B	x	yes	0	0	0	0	0	3	0	0	0	0	0	3
Cathartidae															
Turkey Vulture	NM/B	x	yes	0	0	6	0	0	3	0	0	2	1	2	14
Accipitridae															
Cooper's Hawk	NM/B	x	no	0	0	0	0	0	1	0	0	0	0	0	1
Red-tailed Hawk	NM/B	x	yes	0	0	2	0	0	0	0	2	0	1	0	5
American Kestrel	NM/B	x	yes	0	0	0	0	0	0	2	0	1	0	0	3
Gruidae															
Sandhill Crane	NM/B	IL T, ILCP	no	0	0	0	0	0	0	8	0	0	0	0	8
Charadriidae															
Killdeer	NM/B	x	yes	0	0	0	0	0	2	3	2	2	6	0	15
Laridae															
Ring-billed Gull	NM/NB	x	yes	0	0	0	0	0	3	0	0	0	0	5	8
Columbidae															
Mourning Dove	R/B	x	yes	3	5	7	0	3	0	0	3	0	2	3	26
Picidae															
Red-headed Woodpecker	NM/B	ILCP, WL, PF	no	0	0	0	0	4	0	0	0	0	0	0	4
Red-bellied Woodpecker	R/B	x	no	2	1	0	4	2	0	0	0	0	0	0	9
Downy Woodpecker	R/B	x	yes	2	0	2	1	1	2	0	2	0	0	1	11
Northern Flicker	NM/B	ILCP, PF	yes	0	3	5	0	3	1	5	0	3	0	0	20

Table 6. continued

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Tyrannidae															
Eastern Phoebe	NM/B	x	yes	1	0	0	0	1	0	2	0	0	2	1	7
Vireonidae															
Red-eyed Vireo	NTM/B	x	no	0	1	0	1	0	0	0	0	0	0	0	2
Corvidae															
Blue Jay	NM/B	x	yes	5	2	0	3	0	3	6	0	0	0	0	19
American Crow	NM/B	x	yes	0	3	5	0	0	0	0	6	0	4	0	18
Hirundinidae															
Barn Swallow	NTM/B	x	yes	0	0	0	0	0	2	0	0	0	4	0	6
Paridae															
Black-capped Chickadee	R/B	x	no	1	3	4	0	3	0	0	0	0	2	0	13
Sittidae															
White-breasted Nuthatch	R/B	x	yes	1	0	0	1	2	1	0	1	0	0	0	6
Troglodytidae															
House Wren	NTM/B	x	yes	2	1	0	0	0	2	0	0	0	0	0	5
Regulidae															
Ruby-crowned Kinglet	NTM/NB	x	no	0	0	1	0	0	0	0	1	0	0	0	2
Turdidae															
Eastern Bluebird	R/B	x	no	0	0	3	0	0	4	0	0	0	2	0	9
Swainson's Thrush	NTM/NB	x	no	0	2	0	1	2	0	0	0	0	0	0	5
Wood Thrush	NTM/B	ILCP, PF	no	1	0	0	0	0	0	0	0	0	0	0	1
American Robin		x	yes	3	7	2	6	0	2	0	4	2	3	0	29
Mimidae															
Gray Catbird	NTM/B	x	no	0	1	0	0	2	0	0	0	1	0	0	4
Sturnidae															
European Starling	NM/B	x	yes	0	0	0	0	7	0	0	0	15	0	0	22

Table 6. continued

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Parulidae															
Black-throated Green Warbler	NTM/NB	x	no	0	1	0	0	0	0	0	0	0	0	0	1
Yellow-rumped Warbler	NTM/NB	x	yes	3	0	0	2	1	2	0	0	0	5	0	13
Palm Warbler	NTM/NB	x	yes	0	0	3	0	0	1	4	3	2	1	0	14
Blackpoll Warbler	NTM/NB	x	no	0	1	0	0	0	0	0	0	0	0	0	1
American Redstart	NTM/B	x	yes	1	2	0	0	2	0	0	1	0	0	0	6
Common Yellowthroat	NTM/B	x	yes	0	0	1	0	0	2	0	1	0	0	0	4
Emberizidae															
Eastern Towhee	NM/B	x	no	1	2	0	1	0	0	0	0	0	0	0	4
Field Sparrow	NM/B	ILCP, PF	yes	0	0	0	0	0	0	3	0	2	0	0	5
Chipping Sparrow	NM/B	x	yes	0	0	0	0	0	2	1	0	0	2	0	5
Song Sparrow	NM/B	x	yes	0	0	4	0	0	2	2	2	1	0	0	11
White-throated Sparrow	NM/B	x	no	0	2	0	0	3	0	3	0	0	1	0	9
Cardinalidae															
Northern Cardinal	R/B	x	yes	3	4	0	3	2	0	0	0	0	1	0	13
Rose-breasted Grosbeak	NTM/B	x	no	0	0	0	1	0	0	0	0	0	0	0	1
Indigo Bunting	NTM/B	x	yes	0	0	3	0	2	0	2	0	0	3	0	10
Icteridae															
Red-winged Blackbird	NM/B	x	yes	0	0	6	0	0	1	0	5	0	6	0	18
Eastern Meadowlark	NM/B	PF	no	0	0	2	0	0	0	1	1	3	2	0	9
Common Grackle	NM/B	x	no	5	20	0	3	5	7	0	0	0	0	0	40
Brown-headed Cowbird	NM/B	x	yes	0	7	0	0	7	0	0	0	0	0	0	14
Baltimore Oriole	NTM/B	PF	no	1	0	0	0	0	0	0	0	0	0	0	1

Table 6. continued

Family/species	Migration and Breeding Status	Conservation Designation	Within 150 ft buffer	Census area											Total
				1	2	3	4	5	6	7	8	9	10	11	
Fringillidae															
House Finch	R/B	x	no	0	0	2	0	0	0	0	3	0	0	0	5
American Goldfinch	R/B	x	yes	0	0	7	0	0	3	2	6	4	3	0	25
Passeridae															
House Sparrow	R/B	x	yes	0	0	0	0	0	0	0	7	0	0	6	13
Number of individuals				36	70	68	31	57	85	51	58	47	61	29	593
Number of species				16	19	18	11	18	24	14	17	12	19	6	53

Migration status: R = resident, NM = North American Migrant, NTM = Neotropical Migrant. **Breeding status:** B = breeds in Cook County, NB = does not breed in Cook County. **Conservation designations:** IL T = Illinois threatened, IL E = Illinois endangered, ILCP = The Illinois Comprehensive Wildlife Action Plan <http://www.dnr.state.il.us/ORC/WildlifeResources/theplan/birds.asp> conservation priority species, WL = The American Bird Conservancy <http://www.abcbirds.org/abcprograms/science/watchlist/index.html> Watch List species, PF = The Partners in Flight species of special concern <http://www.rmbo.org/pif/downloads/downloads.html>.



Figure 1. Census areas 1-3.



Figure 2. Census areas 4-7.

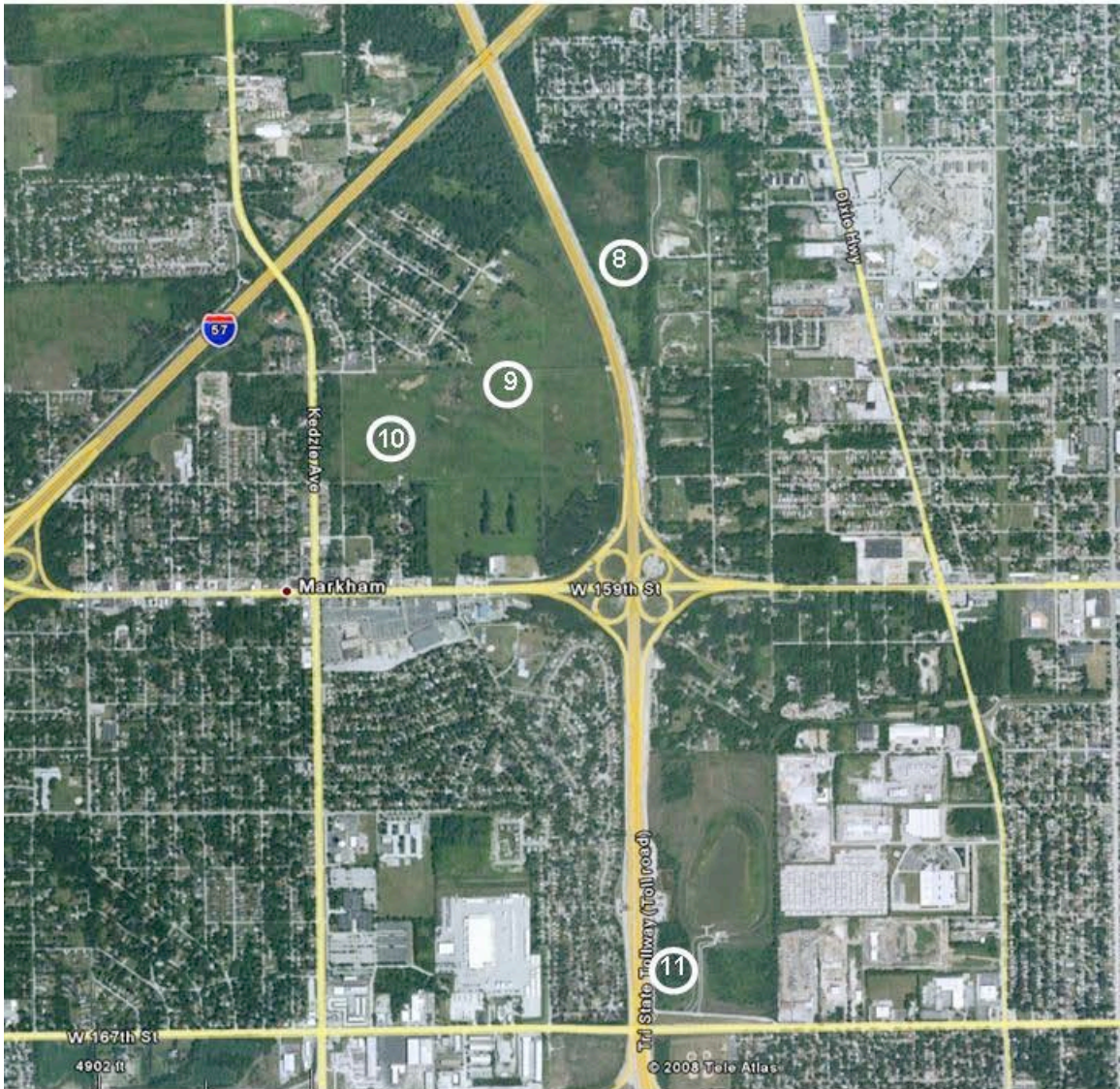


Figure 3. Census areas 8-11.



Illinois Department of Transportation

Memorandum

To: Barbara H. Stevens
From: Dianne O'Keefe By: Peter E. Harnet
Subject: Special Waste Waiver Request*
Date: January 20, 2009

FAI 57 (Interstate Route 57)
147th Street; Kedzie Avenue to Dixie Highway
P-91-186-08
Cook County
ISGS #1773 Sequence #14550

We are requesting approval to waive waiting for the results of further special waste investigations prior to design approval per BDE Manual Section 27-2.06, Item 4. According to the PESA Review Memo for ISGS #1773 dated December 3, 2008, the ISGS detected contamination at several sites. Proposed excavation for roadway construction consisting of pavement widening and reconstruction as well as storm sewer and signal installation will exceed the depth stipulations at one or more sites. This proposed improvement will occur on the existing alignment and does not include the purchase of any underground storage tanks. Right of way required from any contaminated parcel will not be acquired until the PSI, or subsequent studies are completed. The scheduled letting for this project is 06CY10. **Note: The PSI was requested on January 20, 2009. This waiver is being requested solely for Design Approval.**

Concur Barbara H. Stevens
Barbara H. Stevens
Chief of Environment
Bureau of Design and Environment

Date Jan. 20, 2009

Discuss _____

By:
Peter E. Harnet, P.E.
Bureau Chief of Programming

Note: The following applies if PESA date is six months old or more: Our district office has re-evaluated the project area for new releases (LUST and CERCLIS Sites), and new land uses of potential concern. We have not discovered new sites within the project area.

*Sam Mead
District 1*



Illinois Department of Transportation

Memorandum

To: Diane O'Keefe Attn: Pete Harmet
From: Barbara H. Stevens
Subject: PESA Review
Date: December 3, 2008 *Barbara H. Stevens*

Refer to: I-57 at I-294
Job No. P-91-186-08
New Interchange at I-57 @ I-294 & New Partial Interchange at 147th @ IL 83
Cook County Sequence # 14550
ISGS # 1773

Attached is a copy of the Preliminary Environmental Site Assessment conducted by the Illinois State Geological Survey (ISGS) for the subject project as described in your Special Waste Survey Request.

Volatile organic testing was done for this project and the attached (ISGS) report indicates possible detection of contamination at eighteen sites. The report has assessed a **high** risk for this project and recommends that further soil boring and sample analysis needs to be performed to determine the precise nature and extent of the contamination if excavation or additional right-of-way is required at these locations.

It is the opinion of this office, in consultation with the Chief Counsel's Office, that if right-of-way acquisition **includes a parcel with an underground storage tank(s) and Land Acquisition Procedures are followed** and if construction excavation and **utility relocation** do not exceed the maximum testing depth at each site and does not exceed the attached stipulations, then no additional preliminary testing for the project is necessary.

If the stipulations can be met, then the project will be in compliance with Departmental Hazardous Waste Policy LEN-13. If the stipulations cannot be met, then the statewide consultant should be requested to perform additional investigations. Please notify this office of any actions you may decide to take concerning these sites (i.e., avoidance, further investigation, etc.). The PESA Response form can be found on PMA.

*Vacant lot #1 (Site 1773-1) has a Highway Authority Agreement (HAA # 750) with IDOT. Also, an active **CERCLIS** site is listed at 148th Place and Dixie Highway (Site 1773-1) which is located 270 feet east of the project limits.*

Other findings and recommendations of the report should be carefully considered. If you have any questions regarding this report or the tasking of the statewide consultant, please contact Debbra Mehra at 217/785-6068 or Steven Gobelman at 217/785-4246.

Attachments

cc: Office of Chief Counsel – Rm. 311 Central Bureau of Land Acquisition
District Bureau of Land Acquisition District Utility Coordinator

Wetlands

Submittal Date:	07/14/2008	Sequence No:	14550	Project No:	
District:	1	Requesting Agency:	DOH	Job No.:	P-91-186-08
Contract #:		Counties:	Cook	Marked:	I-57
Route:	FAI 57	Street:		Section:	
Municipality(ies):	See add'l info	Project Length:		km	miles
FromTo (At):	@ I-294	Quadrangle:	Blue Island, Harvey	Township-Range-Section:	T36N, R13E, Sec. 12&13
Anticipated Design Approval:	02/28/2009	Cleared for Design Approval:	01/23/2009	Mitigation:	Yes
Cleared for Letting:	01/23/2009	Mitigation Completed:			

Initial Survey and WIE		Addendum No:							
Initiated	Due Date	Results Received	Wetland Present	District Notified	WIE Requested	WIE Received	Wetland Impacts	Resp to District	Coord Complete
10/02/2008	11/30/2008	12/04/2008	Yes	01/06/2009	Yes	01/20/2009	Yes	01/21/2009	No
Comments: Dst. wants wet del asap; 12/30/08: ISTHA responded to draft BRR; 1/23/09: hand delivered standard action letter to Malone; concur (SED)									
Clearances:		Cultural:	8/28/2008	Bio		SW	1/20/2009		

Processing

Individual Compensation Plan Required:

404 Individual Permit Required:

Mitigation Site: Within Project Limit
 Mitigation Basin: In-Basin
 Bank: No
 Accumulation: No

Owner: _____
 Name: _____
 Location: _____
 Size: _____
 Types: _____
 Quad: _____
 Basin: _____

Processing Comments: ISTHA mitigating on-site within Indian Boundary Prairies per EA (SED)

Wetland Impacts Evaluation

Submittal Date:	01/20/2009	Submitted By:	
Does the project have wetland impacts?	Yes <input type="checkbox"/>	Type:	Permanent <input type="checkbox"/>
Briefly describe the measures considered to avoid and minimize adverse impacts to the wetlands:	Side slopes will be constructed as steep as allowable to minimize impacts. Appropriate erosion control measures will be implemented to minimize impacts to adjacent wetlands that are unaffected.		
Summarize briefly why there are no practicable alternatives to the use of the wetland(s):	ROW area is needed for expansion of intersection in this area. Adjusting roadway geometry to avoid would require property acquisition and displacement of residents, businesses, etc.		
Wetland mitigation is being proposed:	<input type="checkbox"/> within the project limits (on-site)	<input type="checkbox"/> Reviewed	

Memo Date: 01/23/2009 Memo By: Susan Dees

Memo: The Wetland Impact Evaluation form was received 1/20/09 by this office and is acceptable. The project shall be processed as a Standard Review Action in accordance with the IDOT Interagency Wetlands Action Plan. Mitigation is considered on-site since it shall be performed within one mile of the project area. Wetland Sites #12, #13, #14, and #15 shall be impacted totalling 4.353 acres. All of the impacted wetlands are isolated. Because impacts to Wetlands #12 and #13 are less than 0.5 ac per wetland, they shall likely be mitigated at a ratio of 1.5:1.0 with mitigation acreages 0.344 and 0.146 acres respectively. Because impacts to Wetlands #14 and #15 totally destroy each wetland, they shall likely be mitigated at a ratio of 2.5:1.0, with mitigation acreages of 7.585 and 2.483 acres respectively. Total mitigation acreage may be up to 10.5565 acres. IDOT and ISTHA have separate agreements with IDNR which determine the mitigation ratios for each impact. The minimum mitigation ratio that will be applied to isolated wetland impacts will be 1.5:1.0. The highest ratio that will be applied to isolated wetland impacts, depending on wetland quality, will be 5.5:1.0. ISTHA will be responsible for coordinating all final ratios with IDNR once the design is finalized and prior to the permitting process. Because this project is a Standard Review Action, it shall be coordinated with Mr. Patrick Malone of IDNR Office or Resource Review and Coordination. Upon his concurrence, this project shall be considered cleared for letting with respect to wetlands. If there are questions, please contact me at 217/785-0150.

Memo Date: 01/20/2009 Memo By: V. Ruiz

Memo: ISTHA will be responsible for wetland mitigation. Mitigation will occur within The Indian Boundary Prairie Mitigation Site.

Wetland Impacts and Mitigation Required

Site No.	Type	T&E	Nature Preserve	Natural Area	Essential Habitat	Size (acres)	Acres of Impact	Ratio	Acres of Compensation	
12	Wet Shrub	No	No	No	No	0.229	.229	1.5	.344	
Basin	07120003	Quadrangle	Blue Island		FQI	8.2				
Describe the work:		Fill								
13	Wet Mead	No	No	No	No	0.097	.097	1.5	.146	
Basin	07120003	Quadrangle	Blue Island		FQI	3.5				
Describe the work:		Fill								
14	Wet Mead	No	No	No	No	3.034	3.034	2.5	7.585	
Basin	07120003	Quadrangle	Blue Island		FQI	8.5				
Describe the work:		Fill								
15	Forested	No	No	No	No	0.993	.993	2.5	2.483	
Basin	07120003	Quadrangle	Blue Island		FQI	8.8				
Describe the work:										
Total							4.353		10.557	

Mitigation Site Suitability Study:

Wetland Compensation Plan:

Preparer:

Preparer:

Conceptual					Final				
Plan Received	Agency	Report Sent and District Notified	Agency Response	District Notified	Plan Received	Agency	Report Sent and District Notified	Agency Response	District Notified
	IDNR					IDNR			
	USFWS					USFWS			
	COE					COE			

Monitoring

Monitoring Reports				
	Received	COE Notified	IDNR Notified	District Notified
Year 1				
Year 2				
Year 3				
Year 4				
Year 5				

Monitoring Agency:

Construction Begin Date:

Construction Complete Date:

Tasked Date:

Monitoring Begin Date:

Monitoring Complete Date:

Monitoring Comments:

Permit(s) Type: Corps Dist.: Permit Issued:

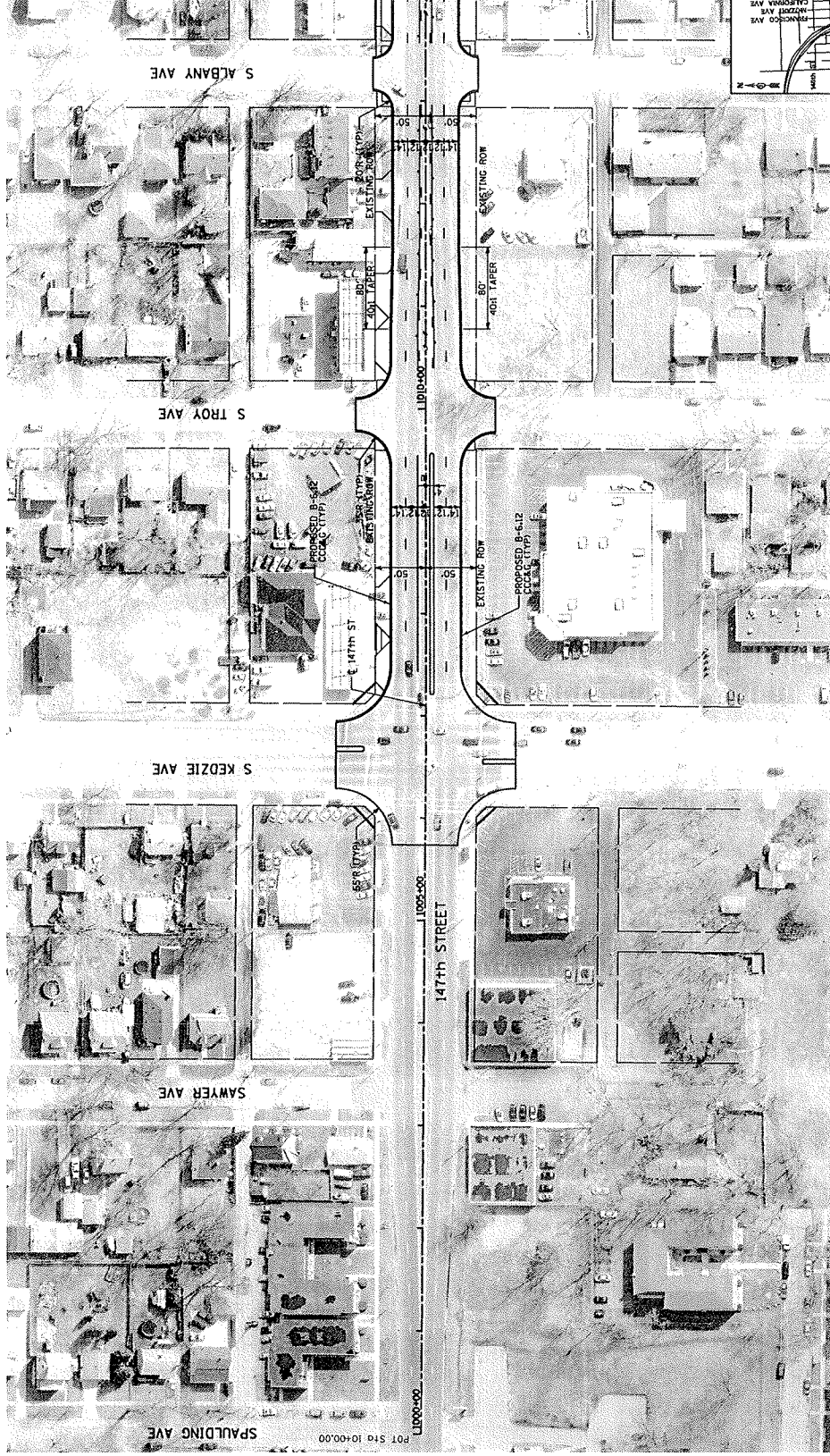
Special Conditions:

Permit Agreements/Commitments:

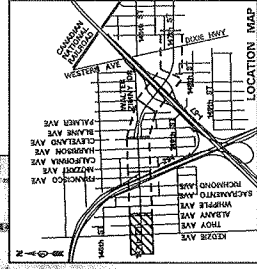
Project Phase

Project Phase Comments:

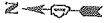
Appendix D
Exhibits



0 50 100
SCALE: 1" = 50'-0"



MATCHLINE STA. 1014+00 - NEXT SHEET



P:\025057-29\DRAWING\ASB\104000.DWG

NO.	DATE	REVISION
1	12/17/2008	REVISED
2	12/17/2008	REVISED
3	12/17/2008	REVISED
4	12/17/2008	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

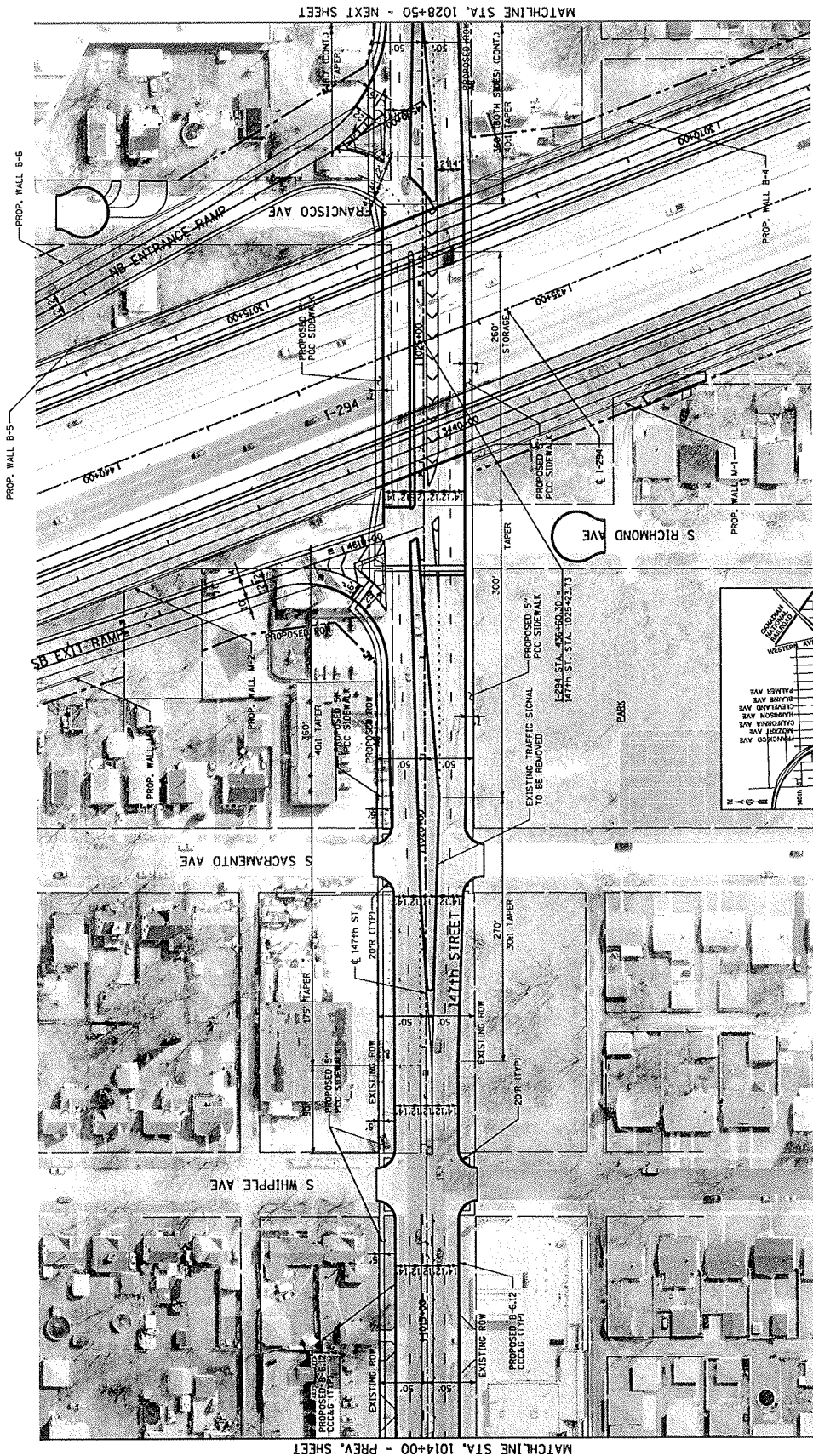
I-57 AT I-294 INTERCHANGE PROJECT
147TH STREET, KEDZIE AV. TO WESTERN A/DIXIE HWY.
SHEETS 1 OF 8 SHEETS

147TH STREET
SECTION
CONTRACT NO.
SHEET NO.

TYPOL INTERNATIONAL
DESIGNED BY: MICHAEL J. RYAN
DRAWN BY: MICHAEL J. RYAN
CHECKED BY: MICHAEL J. RYAN
DATE: 12/17/2008

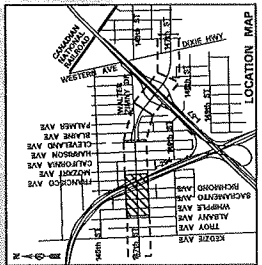
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PLAN 02/01/2008 11:59 AM



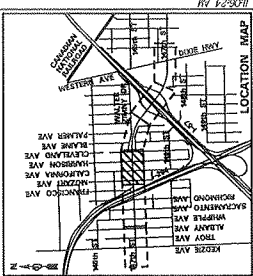
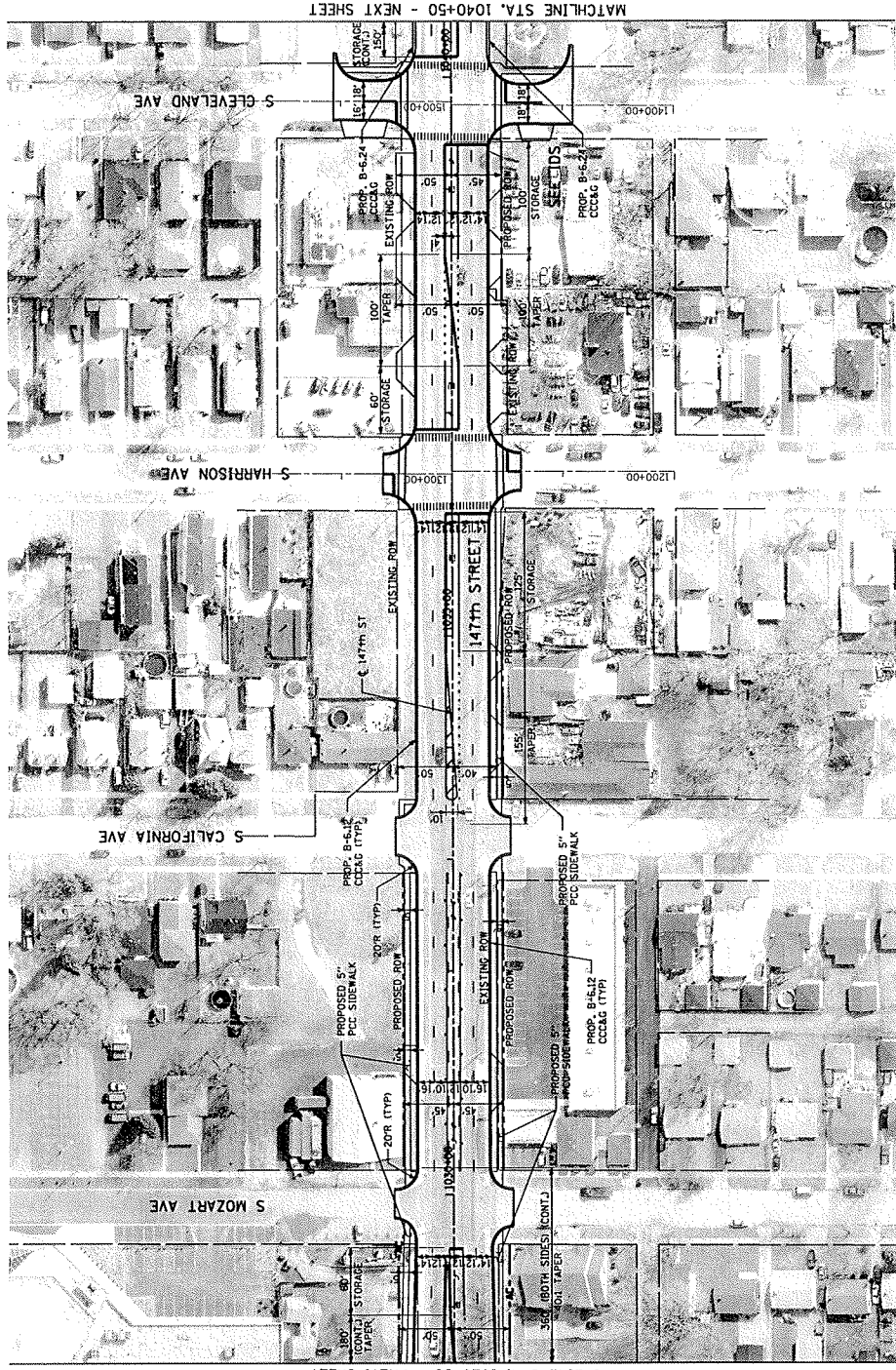
MATCHLINE STA. 1014+00 - PREV. SHEET

MATCHLINE STA. 1028+50 - NEXT SHEET



TYLIN INTERNATIONAL USER NAME: HUSON PLOT SCALE: HUSON PLOT DATE: 12/23/2008		DESIGNED - CHECKED - DATE - 12/23/2008		REVISIONS REVISION REVISION REVISION	
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		I-57 AT I-294 INTERCHANGE PROJECT 147TH STREET, KEDZIE AV. TO WESTERN AV/DIXIE HWY. SCALE 1" = 50' SHEET NO. 2 OF 6 SHEETS STA. TO STA.			
COUNTY COOK	SECTION C-1	LOCAL SHEET NO. 2	CONTRACT NO. I-57-08-001	ILLINOIS FED. AID PROJECT NO.	ILLINOIS FED. AID PROJECT NO.

PLAN 02/01/2008 11:59 AM



SECTION	CONTRACT NO.
ST.	CONTRACT NO.
SCALE: 1" = 50'-0"	SCALE: 1" = 50'-0"

I-57 AT I-294 INTERCHANGE PROJECT
 147TH STREET: REDGE AV. TO WESTERN AV/DIHE HWY.
 TO STA. 1040+50
 SHEET NO. 3 OF 8 SHEETS

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DESIGNED -	REVISION -
DRAWN -	REVISION -
CHECKED -	REVISION -
DATE - 12/12/2008	REVISION -

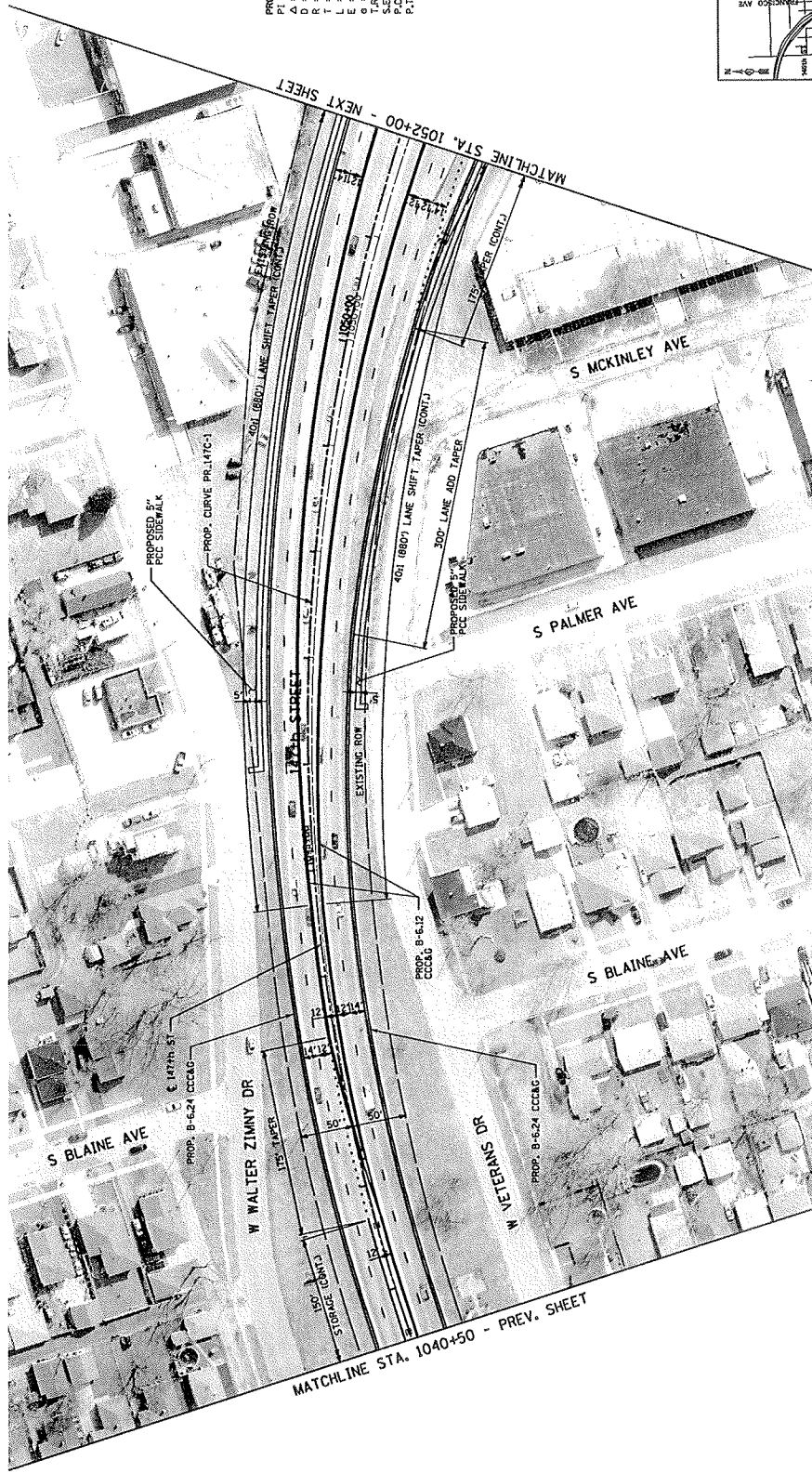
TYL INTERNATIONAL
 USED NAME - REDGE
 PLOT SCALE - 1"=50'-0"
 PLOT DATE - 12/22/2008
 DATE - 12/22/2008
 PLOT DATE - 12/22/2008



PROP. CURVE PR.147C-1
 P.T. STA. = 1047+59.51
 Δ = 41° 25' 52" (RT)
 D = 3' 13" 42"
 T = 611.27'
 L = 1,283.35'
 E = 122.69'
 O = N/A
 S.E. RUN = N/A
 P.C. STA. = 1040+88.25
 P.T. STA. = 1053+71.59



SECTION	COUNTY	LOCAL SHEET NO.
SECTION	COUNTY	SHEET NO.
SECTION	COUNTY	CONTRACT NO.
SECTION	COUNTY	ILLINOIS FED. AID PROJECT



SCALE: 1" = 50'-0"

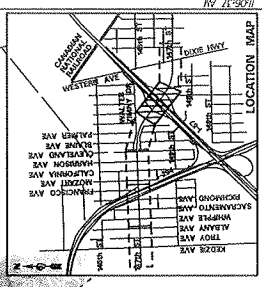
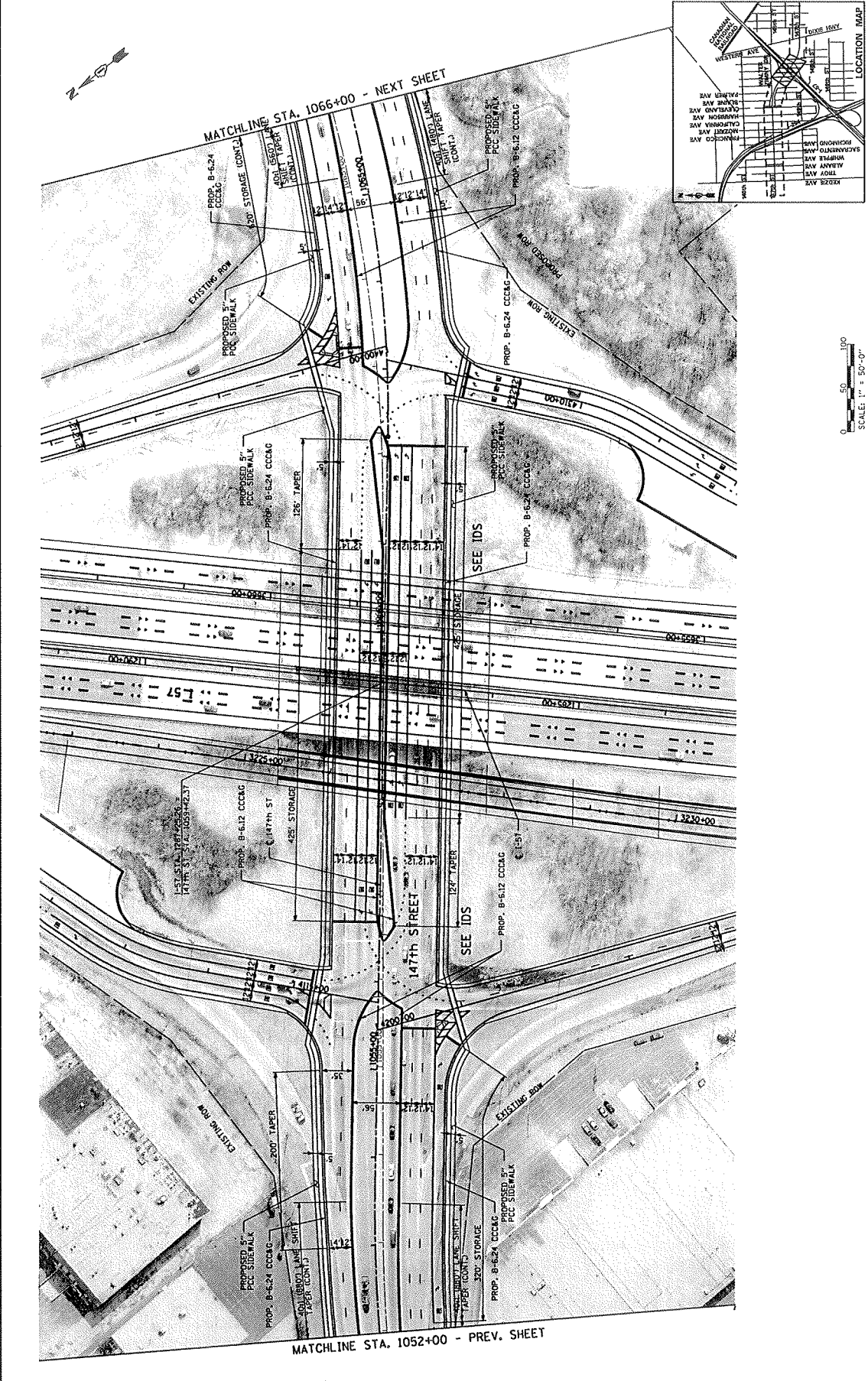
I-57 AT I-294 INTERCHANGE PROJECT
 147TH STREET, KEDZIE AV. TO WESTERN AV/OXIDE HWY.
 SCALE: 1" = 50' SHEET NO. 4 OF 6 SHEETS STA. TO STA.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DESIGNED	REVISION
CHECKED	REVISION
DATE	REVISION

TYL IN INTERNATIONAL
 12/21/2008

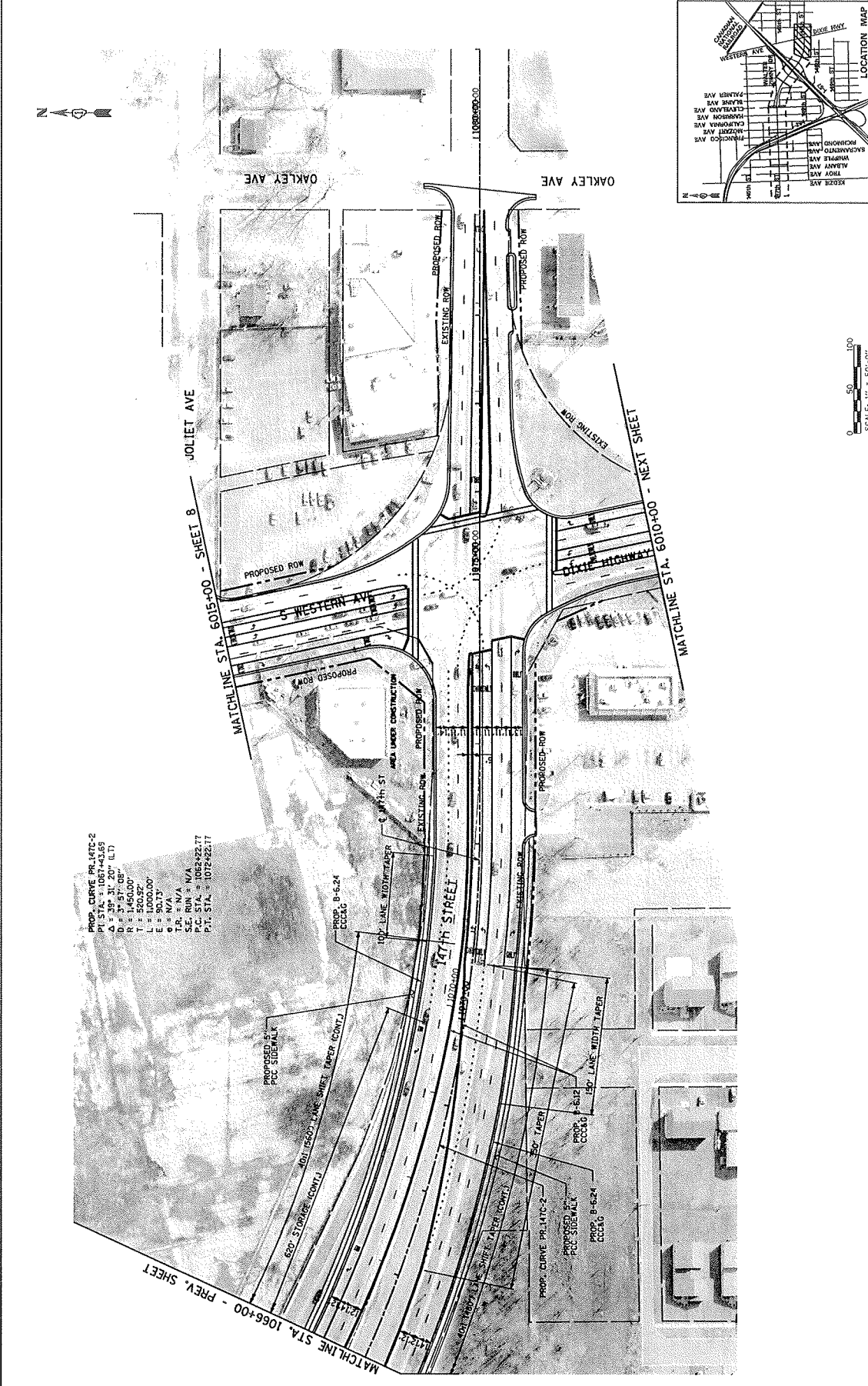
PLAN 10625057-29-INT-AMBIREA-MIDWEST-294-EA-MIDWEST-294



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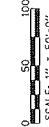
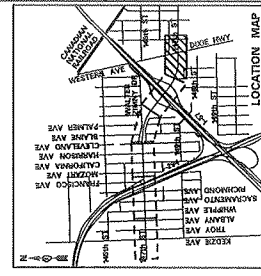
SECTION	CONTRACT NO.	TOTAL SHEETS
57	147TH STREET, REDDIE AV. TO WESTERN AV/OXIDE Rwy.	5
SCALE: 1" = 50'		
SHEET NO. 5 OF 6 SHEETS STA. TO STA.		
STATE OF ILLINOIS		
DEPARTMENT OF TRANSPORTATION		
DESIGNED	REVISION	
DRAWN	REVISION	
CHECKED	REVISION	
DATE		
12/31/2008		

TYL INTERNATIONAL
 10625057-29-INT-AMBIREA-MIDWEST-294-EA-MIDWEST-294

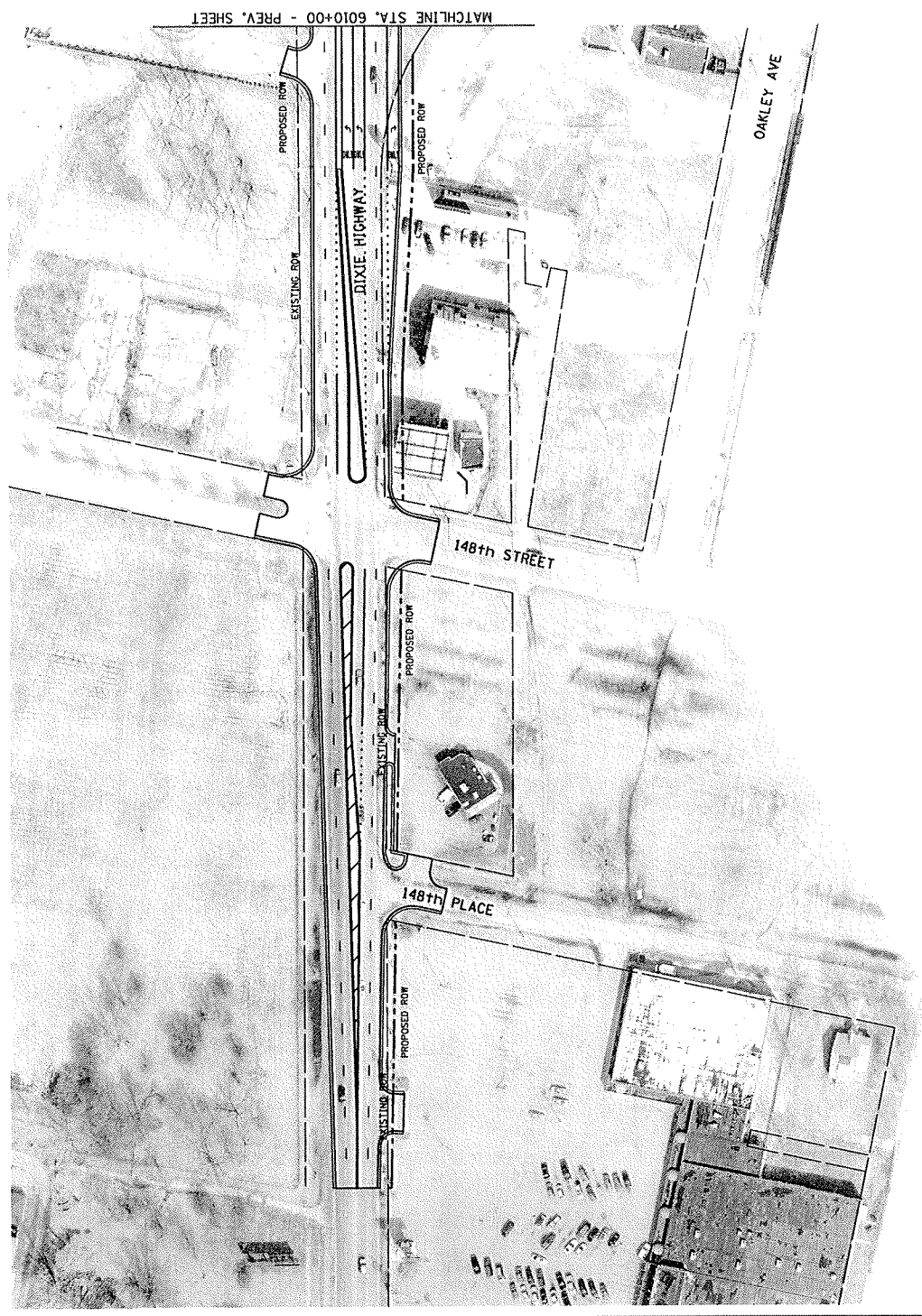


PROP. CURVE PRL147C-2
 P.I. STA. = 1067+43.69
 P.C. STA. = 1067+00.00
 D = 27° 57' 00"
 R = 1450.00'
 T = 200.92'
 L = 1000.00'
 G = N/A
 T.R. = N/A
 S.E. RUN = N/A
 P.C. STA. = 1067+21.77
 P.T. STA. = 1067+21.77

PROP. CURVE PRL147C-2
 P.I. STA. = 1067+43.69
 P.C. STA. = 1067+00.00
 D = 27° 57' 00"
 R = 1450.00'
 T = 200.92'
 L = 1000.00'
 G = N/A
 T.R. = N/A
 S.E. RUN = N/A
 P.C. STA. = 1067+21.77
 P.T. STA. = 1067+21.77

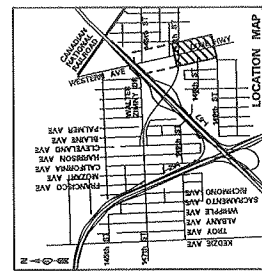


ORDER NO. = 100000 PLOT SCALE = 1/8"=1'-0" PLOT DATE = 1/17/2008	DESIGNED -	REVISION -	SHEET NO. 6 OF 8 SHEET NO. 6 OF 8 SHEETS I STA. TO STA.
	CHECKED -	REVISION -	
DATE = 12/21/2008	DATE =	DATE =	DATE =
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION			
I-290 INTERCHANGE PROJECT 147TH STREET, KEDZIE AV. TO WESTERN AV/DIOME HWY.			
COUNTY: COOK SECTION: 17 TOTAL SHEET NO.: 8 CONTRACT NO.:			



MATCHLINE STA. 6010+00 - PREV. SHEET

SCALE: 1" = 50'-0"



DATE	5/1	TOTAL SHEETS	7
SECTION	51	COUNTY SHEETS NO.	1
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	CONTRACT NO.	

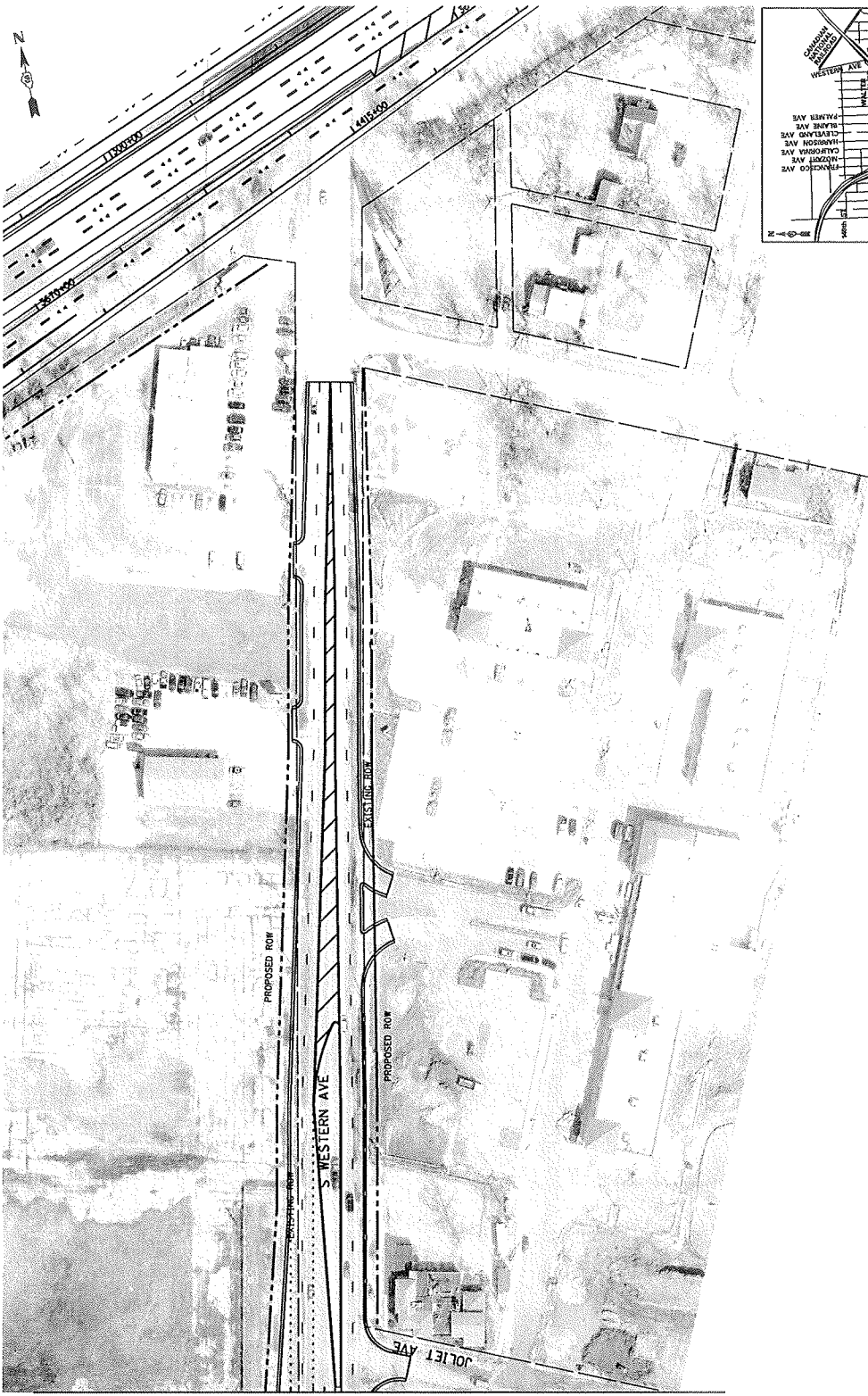
I-57 AT I-294 INTERCHANGE PROJECT
 147TH STREET, KEDDIE AV. TO WESTERN AV/DIXIE HWY.
 SCALE: SHEET NO. 1 OF 6 SHEETS STA. TO STA.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

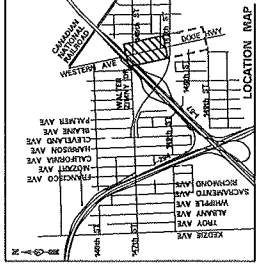
REVISION	DATE

DESIGNED	DATE
DRAWN	DATE
CHECKED	DATE
DATE	12/17/2008

TYL INTERNATIONAL
 1540 N. WILSON AVE. DEPT. 154
 CHICAGO, IL 60642



MATCHLINE STA. 6015+00 - SHEET 6



SCALE: 1" = 50'-0"

USER NAME: 140209 PLOT SCALE: 1/8"=1'-0" PLOT DATE: 1/28/2009	DESIGNED - DRAWN -	REVISIONS - REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	I-57 AT I-294 INTERCHANGE PROJECT 147TH STREET, KEDZIE AV TO WESTERN AV/DIKE HWY. TO STA.	COUNTY: ILLINOIS SHEET NO. 6 OF 8 SHEETS STA.	SECTION: I-57 CONTRACT NO.	TOTAL SHEETS: 8 SHEET NO. 6
	CHECKED - DATE: 12/31/2008	REVISIONS - REVISIONS -					

TYL INTERNATIONAL

PH020507 291NEKRISNEA ADRNDU57291.EA.DWG

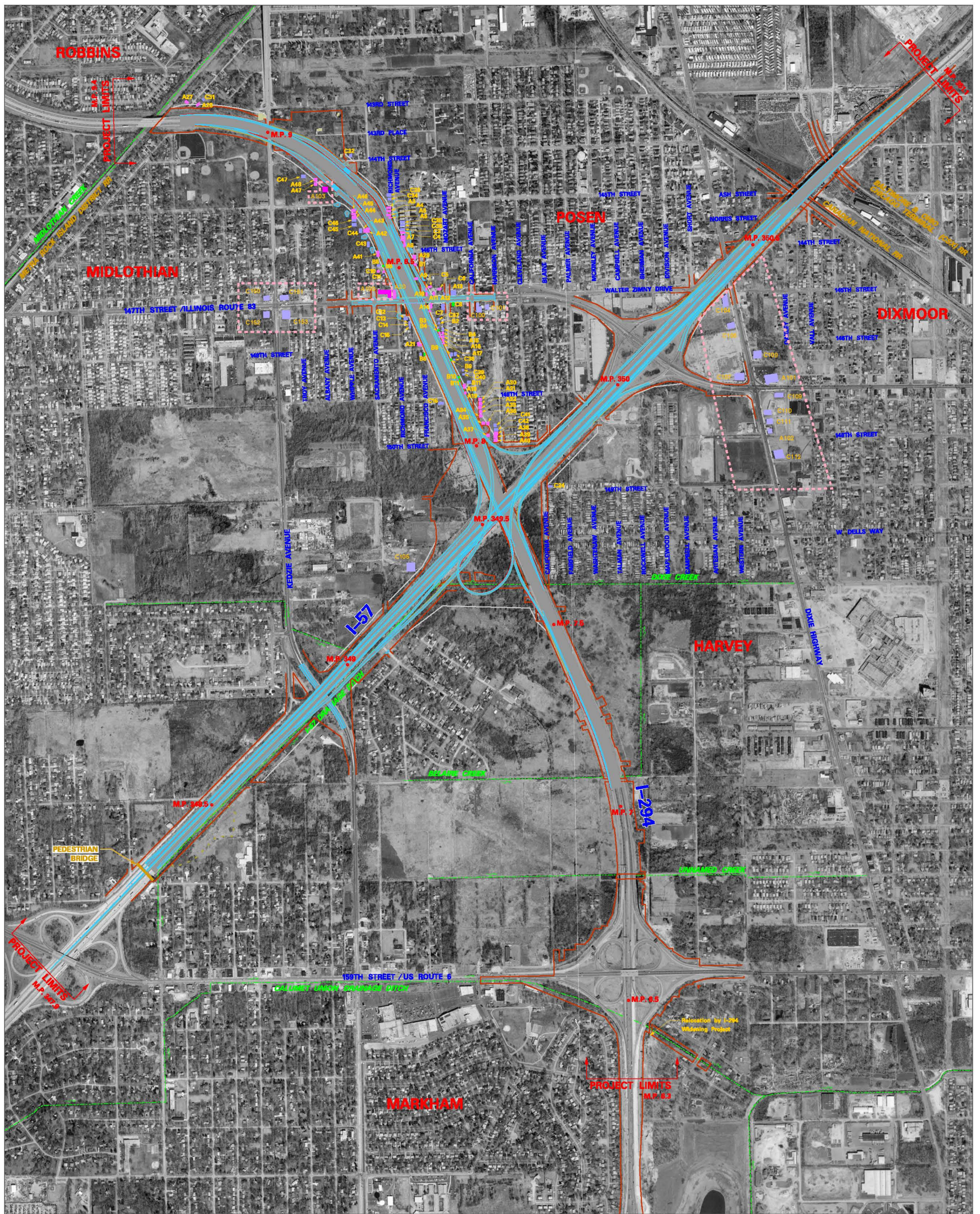


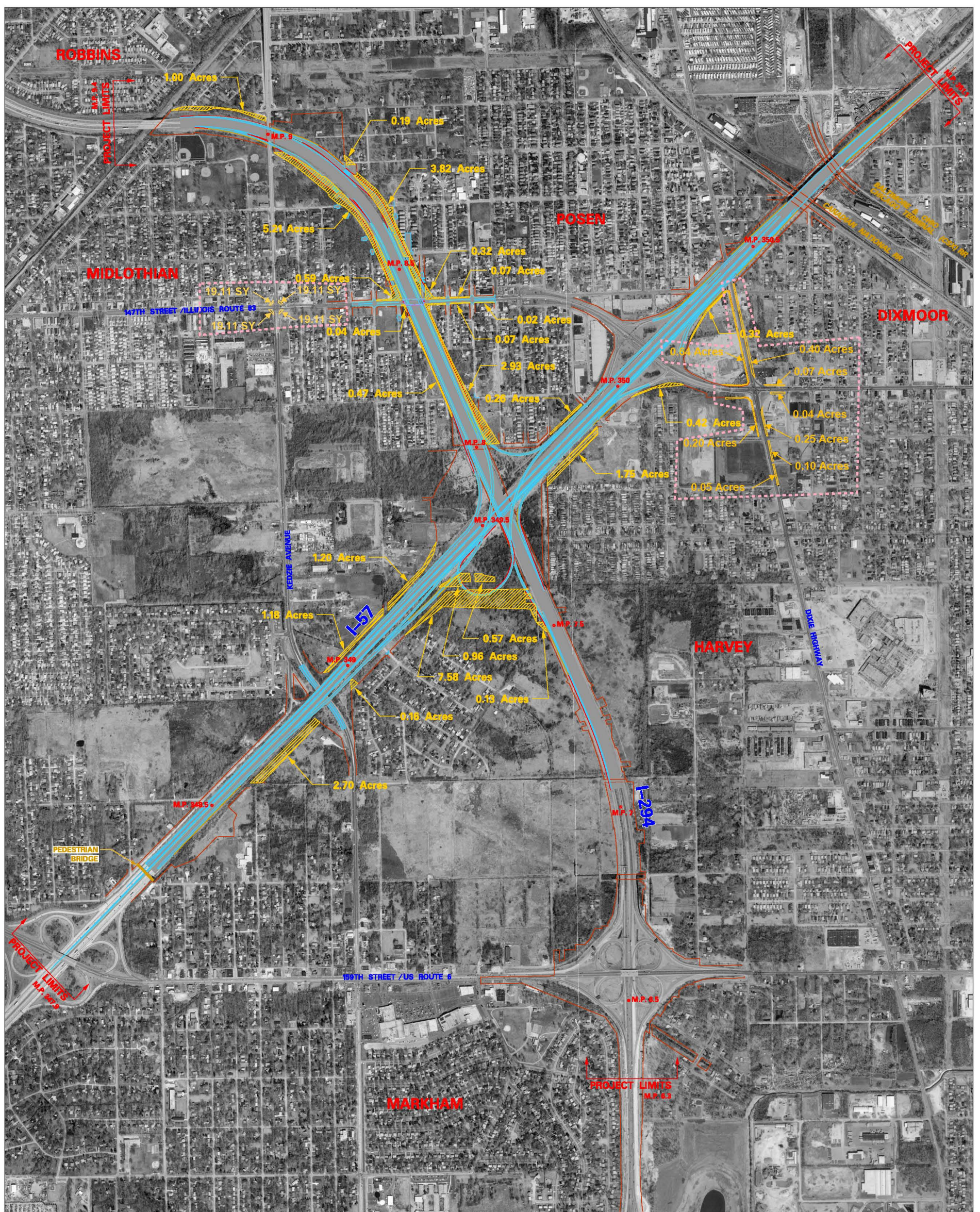
FIGURE 3-4
I-294-57 INTERCHANGE PROJECT
POTENTIALLY IMPACTED PROPERTIES

LEGEND	
	PROPOSED ROW
	EXISTING ROW *
	PROPOSED EDGE OF PAVEMENT
	PROPOSED EDGE OF SHOULDER
	STREAM
	PROPERTY TO BE RELOCATED
	GARAGE TO BE RELOCATED
	PROPERTY WITHIN 50 FEET OF PROPOSED ROW
	EA Addendum January 2009

SCALE: 1" = 750'

* EXISTING ROW ALONG I-294 REPRESENTS THE I-294 WIDENING PROJECT PROPOSED ROW





SCALE: 1" = 750'

LEGEND

- PROPOSED ROW
- EXISTING ROW *
- PROPOSED EDGE OF PAVEMENT
- PROPOSED EDGE OF SHOULDER
- ROW ACQUISITION
- EA Addendum December 2008

* EXISTING ROW ALONG I-294 REPRESENTS THE I-294 WIDENING PROJECT PROPOSED ROW

FIGURE 3-3
I-294-57 INTERCHANGE PROJECT
PROPOSED ROW ACQUISITION

