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**A Census of the Avifauna of the FAP 301 (RT 20) Project Area  
Jo Daviess County, Illinois  
Addenda 1 and 2**

by

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Technical Report 1996 (15)**

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25 July 1996



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## Introduction

The Illinois Department of Transportation has proposed the upgrading and possible relocation of U.S. Route 20 in northwestern Illinois. A report submitted in February 1995 covered the original corridor proposed by IDOT. Two addenda to that original alignment have been proposed by IDOT: Addendum 1 (Snipe Hollow addendum, Figure 1) and Addendum 2 (Figure 1). As requested by IDOT, the Illinois Natural History Survey conducted censuses of the avifauna within the two proposed addenda.

In this report we: 1. describe potential and observed utilization of the habitats within the FAP 301 addenda by bird species listed as Illinois and/or Federal endangered and threatened species, and 2. describe the bird communities that occur within these areas.

## Historical Records

We consulted three sources, the Illinois Natural Heritage database, the Illinois Fish and Wildlife Information Service, and the Illinois Breeding Bird Atlas, to establish historic use of the area by endangered and threatened avian species, and to identify endangered and threatened species likely to occur within the project area. The results of this search are presented in Table 1.

*We found records of 8 Illinois Endangered, federally Endangered, and Illinois Threatened species for Jo Daviess County over the past 20 years (1975-1994).*

We surveyed the corridor for the availability of breeding habitat for all of the species listed in Table 1. This was done by identifying potential breeding areas using aerial photographs and topographic maps, and then visiting all of the identified areas and making assessments of habitat quality. Our assessments are based on published breeding requirements for these species (Bohlen 1989; Herkert 1992).

Adequate or marginal breeding habitat exists within the corridor for two endangered or threatened species: Cooper's Hawk (*Accipiter cooperii*) Illinois endangered and Veery (*Catharus fuscescens*) Illinois threatened (Table 1). These species were given special attention during our censuses.

## Census Methods

We established 10 census points, seven in Addendum 1 (Figures 2-5) and three in addendum 2 (Figure 6), representing all habitat types found in the area. Legal descriptions of points are given in Tables 2 and 3. Brief descriptions of the habitat surrounding each point are provided in Tables 4 and 5.

The year was divided into four census seasons corresponding to major periods of the avian life cycle in the midwest (Table 6). Because of the migratory habits of birds, each of these seasons is expected to have a different and distinctive complement of resident species.

Each census point was visited twice in each season. During these visits we used modified point-counts to determine species composition and abundance (Blondel et al. 1981).

We also scored the magnitude of the concern for each species in each season. For the breeding and winter seasons we used indices developed by the *Partners in Flight*, a working group of North American avian ecologists (Thompson et al. 1992). Birds are scored on a scale from 1 (low concern) to 5 (extremely high concern) (Hunter et al. 1992). In constructing these indices the



following factors were considered: abundance, distribution, threats (e.g. habitat loss, demographic vulnerability, etc.) and population trend (Hunter et al. 1992).

The *Partners in Flight* group has yet to develop a similar index for birds during migration so we developed our own with the help of Dr. J. Herkert of the Illinois Endangered Species Protection Board and Dr. S. K. Robinson of the Center for Wildlife Ecology at the Illinois Natural History Survey. Both Drs. Herkert and Robinson participated in the initial *Partners in Flight* work. We used three parameters in formulating the migratory concern index: (1). population size in the midwest (using the *Partners in Flight* abundance ranking), (2). population trend over the past ten years (using the *Partners in Flight* population estimates), and (3). the degree of migratory habitat specificity (i.e. how restrictive are the habitat requirements of the species during migration) as ranked by S. K. Robinson and D. A. Enstrom.

We provide these concern indices as a tool to help assess the relative importance of the various habitat types within the corridor to the avian community. Typically, endangered and threatened species have concern scores of 3 or above. Clearly, endangered and threatened species are not the only ones that are subject to significant threats or which should be considered when assessing the value of a particular parcel of land. Areas which support many species of moderate concern may be very important to the local avifauna. We define a 'species of concern' as one that is either officially designated as endangered or threatened (by the State or Federal governments) or that has a concern index value  $\geq 3$  (Thompson et al. 1992; Robinson and Enstrom, unpublished data). Therefore, the number of species of concern present in a habitat provides a measure of the relative importance of that habitat to the avian community. We feel this measure is better than traditional measures of habitat quality (e.g. species richness or 'diversity') because it more accurately reflects the potential impact that the disturbance of a given parcel could have on the bird community of the surrounding area.

To date, the *Partners in Flight* group has focused its efforts on migratory species and, therefore, concern scores are not available for some species. Non-migrants, such as chickadees and some woodpeckers, or species that do not leave the United States during migration, such as some sparrows and most ducks, have yet to be scored.

### Addendum 1 Census Results

We recorded 81 species and 25 families during our surveys in the Addendum 1 study area (Table 7). We also recorded two Illinois endangered and one Illinois threatened species (Table 7).

#### *Breeding Season*

We recorded 146 individuals representing 15 families and 42 species during the breeding season survey. Census data for all points are presented in Table 8 along with values for species richness and indices of concern.

One Illinois endangered species, the **Henslow's Sparrow (*Ammodrammus henslowii*)** was recorded within the corridor during the breeding season censuses. On 17 June 1995 two adult males were observed near census point G1 (Figure 2) whose behavior was consistent with nesting activity. A follow-up visit on 19 June 1996 confirmed their presence for two consecutive breeding seasons at this site. No nests or young were observed.

Census point G6 (Figure 4) had the highest species richness values. The highest numbers for species of concern were recorded at census points G1 and G7 (Figures 2 and 5 respectively) reflecting the fact that many grassland bird species are in decline.

## Grassland Survey for Henslow's Sparrow

The Henslow's Sparrows (*Ammodrammus henslowii*) observed at census point G1 were the first breeding season records for that species in Jo Daviess County. A limited survey for that species was thus conducted on 19 June 1996 to determine if it was present at other sites with suitable habitat within the addendum 1 corridor. One additional site was located that had habitat conducive to attracting breeding Henslow Sparrows (G8; Figure 6). Henslow's Sparrows prefer grass fields of at least 50 acres with a tall-dense cover and a well developed thatch layer (Herkert, 1992). This non-native grassland contained at least four territorial males.

Site G8 also contained a large concentration of Bobolinks (*Dolichonyx oryzivorus*), an Illinois Watch-List species (species of special concern). "Special Concern" includes species which may be experiencing serious population declines and have been targeted for monitoring.

A return visit to the G1 site in 1996 (See Figure 2) also produced singing males confirming use of that field for two consecutive breeding seasons.

### *Fall Season*

We recorded 141 individuals representing 17 families and 33 species during our fall survey (Table 9). Census data for all points are presented in Table 9 along with indices of concern and species richness values.

One Illinois threatened species was observed during the fall migration. Three **Brown Creepers** (*Certhia americana*) were observed near census point G2 (Figure 3). These birds may well have been migrants.

Species richness was highest at census point G7 (Figure 5). Census point G2 (Figure 3) had the highest number of species of concern.

### *Winter Season*

We recorded 40 individuals representing 9 families and 14 species during our fall survey (Table 10). Census data for all points are presented in Table 10 along with indices of concern and species richness values.

One Illinois threatened species was observed during the winter census season. One **Brown Creeper** (*Certhia americana*) was observed near census point G5 (Figure 5). This species winters in a large variety of habitat types and its presence is not indicative of important habitat during this season.

Species richness and species of concern values were relatively low for all census points (see Table 10).

### *Spring Season*

We recorded 122 individuals representing 12 families and 27 species during our fall survey (Table 11). Census data, indices of concern and species richness values for all points are presented in Table 11.

No Illinois endangered or threatened bird species were recorded during the spring censuses in addendum 1. The highest species richness was found at census point G1 (Figure 2). Species of concern numbers were low (0-2) for all census points.

### **Addendum 2 Census Results**

We recorded 40 species and 14 families during our surveys in the addendum 2 study area (Table 12). We also recorded 1 Illinois threatened species (Table 12). All census points in this area are located in Tapley Woods Conservation Area. Census points are located on the east and west side of existing US Route 20.

#### ***Breeding Season***

We recorded 161 individuals representing 14 families and 40 species during the breeding season survey. Census data for all points are presented in Table 12 along with values for species richness and indices of concern.

No Illinois endangered or threatened bird species were recorded during the breeding season censuses in the addendum 2 study area. One Illinois endangered species, The **Cooper's Hawk** (*Accipiter cooperii*) and one Illinois threatened species, the **Veery** (*Catharus fuscescens*) were recorded in Tapley Woods during the 1993 breeding season (Robinson, 1995)

Census points T1 (Figure 7) had the highest species richness values. The highest numbers for species of concern were recorded at census points T1 and T2.

#### ***Fall Season***

We recorded 71 individuals representing 8 families and 13 species during our fall survey (Table 13). Census data, indices of concern and species richness values for all points are presented in Table 13.

No Illinois endangered or threatened bird species were recorded in the addendum 2 study area during the fall season censuses.

Species richness was highest at census point T2 (Figure 7). Two species of special concern were recorded at census point T2.

#### ***Winter Season***

We recorded 6 individuals representing 3 families and 4 species during our winter season survey (Table 14). Census data for all points are presented in Table 14 along with indices of concern and species richness values.

Species richness and species of concern values were relatively low for all census points.

#### ***Spring Season***

We recorded 33 individuals representing 10 families and 13 species during our fall survey (Table 15). Census data, indices of concern and species richness values for all points are presented in Table 15.

One Illinois threatened species was observed during the spring migration. Two **Brown Creepers** (*Certhia americana*) were observed near census point T2 (Figure 7). These birds were likely migrants. No Brown Creepers were recorded in the area during the breeding season.

## Summary

### Addendum 1

Two Illinois endangered bird species, the **Cooper's Hawk** (*Accipiter cooperii*) and the **Henslow's Sparrow** (*Ammodramus henslowii*) were observed within the Addendum 1 corridor during the course of this study. The Cooper's Hawk was observed flying near census point G1 during the fall census season and was most likely a migrant.

The **Henslow's sparrows** were probably breeding at sites G1 and G8. These two non-native grasslands were the only sites in the study area with sufficient size and structure to attract breeding Henslow's Sparrows. This constitutes the first breeding season records of this species for Jo Daviess County.

One Illinois threatened species, the **Brown Creeper** (*Certhia americana*) was observed during the spring migration census period. This species uses a great variety of habitat types during migration and its presence during this period does not indicate the existence of breeding habitat.

### Addendum 2

One Illinois threatened species, the **Brown Creeper** (*Certhia americana*) was observed during the spring census period in the Addendum 2 study area. Again, this species uses a great variety of habitat types during migration and its presence during this period does not indicate the existence of important habitat.

In his recent survey of Tapley Woods Robinson (1995) found breeding **Cooper's Hawks** (*Accipiter cooperii*, Illinois endangered) and **Veerys** (*Catharus fuscescens*, Illinois threatened).

We are confident that the **Veery** did not breed in Tapley Woods in 1996. The Veery is vociferous during the late spring and early breeding season when on territory, and is therefore, easily detected. Tapley Woods is on the southern edge of the Veery's historic breeding range, and it is not uncommon for species to come and go in habitat fragments at the edge of their breeding range.

The **Cooper's Hawk** can be secretive during the breeding season. While we detected no Cooper's Hawks during our breeding season survey, Tapley Woods does provide excellent breeding habitat for the species and its presence cannot be ruled out.

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**Table 1. Endangered and Threatened bird species of Jo Daviess County, 1975 to present.**

Species	Status	Jo Daviess Co. Breeding Record	Status of Breeding Habitat Within Addendum 1	Status of Breeding Habitat Within Addendum 2
Great Egret	I-T	No	Absent	Absent
Upland Sandpiper	I-E	No	Absent	Absent
Osprey	I-E	No	Absent	Absent
Bald Eagle	I-E/F-E	Yes	Absent	Absent
Red-Shouldered Hawk	I-E	Yes	Absent	Poor/Absent
Cooper's Hawk	I-E	Yes	Poor	<b>Adequate</b>
Sharp-shinned Hawk	I-E	No	Poor	Poor
Short-eared Owl	I-E	No	Absent	Absent
Brown Creeper	I-T	Yes	Absent	Absent
Veery	I-T	Yes	Absent	<b>Adequate</b>
Loggerhead Shrike	I-T	No	Poor/Absent	Absent
Yellow-headed Blackbird	I-E	Yes	Absent	Absent

I-T = Illinois Threatened  
 I-E = Illinois Endangered  
 F-E = Federal Endangered

**Table 2. Census point locations, Addendum 1.** Legal location, for each of the census points used during the avian censuses conducted in the FAP 301 (US 20) project corridor.

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Census point	Legal Location
G1	Jo Daviess Co., Il, SW1/4, NW1/4, NE1/4, Sec. 3, T27N, R2E, 4th P.M ., Hanover, Il. (7.5' Series, 1975 Photorevised ed., USGS Topographic Quadrangle Map)
G2	Jo Daviess Co., Il, SE1/4, NW1/4, Sec. 36, T28N, R2E, 4th P.M ., Scales Mound East, Il. (7.5' Series, 1975 Photorevised ed., USGS Topographic Quadrangle Map)
G3	Jo Daviess Co., Il, NE1/4, NW1/4, SE1/4, Sec. 22, T28N, R2E, 4th P.M ., Scales Mound West, Il. (7.5' Series, 1975 Photo revised ed., USGS Topographic Quadrangle Map)
G4	Jo Daviess Co., Il, SW1/4, NW1/4, NW1/4, Sec.14, T28N, R2E, 4th P.M ., Scales Mound West, Il. (7.5' Series, 1975 Photo revised ed., USGS Topographic Quadrangle Map)
G5	Jo Daviess Co., Il, NE1/4, SE1/4, SE1/4, Sec.7, T28N, R2E, 4th P.M ., Scales Mound West, Il. (7.5' Series, 1975 Photo revised ed., USGS Topographic Quadrangle Map)
G6	Jo Daviess Co., Il, SE1/4, NE1/4, NW1/4, Sec.34, T28N, R2E, 4th P.M ., Scales Mound West, Il. (7.5' Series, 1975 Photorevised ed., USGS Topographic Quadrangle Map)
G7	Jo Daviess Co., Il, SW1/4, SE1/4, SE1/4, Sec.1 and NW1/4, NE1/4, NE1/4, Sec. 12, T28N, R2E, 4th P.M ., Scales Mound West, Il. (7.5' Series, 1975 Photo revised ed., USGS Topographic Quadrangle Map)

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**Table 3. Census point locations, Addendum 2.** Legal location, for each of the census points used during the avian censuses conducted in the FAP 301 (US 20) project corridor.

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<b>Census point</b>	<b>Legal Location</b>
T1	Jo Daviess Co., Il, NE1/4, SE1/4, SE1/4, Sec. 5, T27N, R2E, 4th P.M ., Hanover, Il. (7.5' Series, 1975 Photorevised ed., USGS Topographic Quadrangle Map)
T2	Jo Daviess Co., Il, NW1/4, NW1/4, NW1/4, Sec. 9, T27N, R2E, 4th P.M ., Hanover, Il. (7.5' Series, 1975 Photorevised ed., USGS Topographic Quadrangle Map)
T3	Jo Daviess Co., Il, NW1/4, NE1/4, NW1/4, Sec.9, T27N, R2E, 4th P.M ., Hanover, Il. (7.5' Series, 1975 Photorevised ed., USGS Topographic Quadrangle Map)

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**Table 4. Census point habitat descriptions, Addendum 1.**

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<b>Census Point</b>	<b>Habitat Description</b>
G1	Non-native grassland
G2	Grazed oak/hickory upland forest with open understory
G3	Upland forest on slope and with well developed herbaceous layer and understory
G4	Recently cut (20-30 years) upland forest with many deadfalls
G5	Mature upland forest with recently thinned understory
G6	Upland forest on slope with well developed heraceous and understory layers
G7	Conservation Reserve Program lands with non-native grasses

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**Table 5. Census point habitat descriptions, Addendum 2.**

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<b>Census Point</b>	<b>Habitat Description</b>
T1	Tapley Woods: Mature and well developed upland forest
T2	Tapley Woods: Mature and well developed upland forest
T3	Tapley Woods: Mature and well developed upland forest

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**Table 6. Census seasons.**

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<b>Season</b>	<b>Inclusive dates</b>
Winter	1 December to 28 February
Spring	1 March to 30 April
Breeding	1 May to 31 August
Fall	1 September to 30 November

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**Table 7. List of observed species Addendum 1.** Breeding, Fall, Winter and Spring season census periods. † = Illinois Endangered, †† = Illinois Threatened, \* = introduced species.

<i>Family / Species</i>	<i>Family / Species</i>	<i>Family / Species</i>
<b><i>Ardeidae</i></b> Great Blue Heron	<b><i>Troglodytidae</i></b> Sedge Wren House Wren	<b><i>Emberizidae(Emberizinae)</i></b> Rufous-sided Towhee Americna Tree Sparrow
<b><i>Anatidae</i></b> Blue-winged Teal	<b><i>Mucicapidae (Sylviinae)</i></b> Golden-crowned Kinglet Ruby-crowned Kinglet	Chipping Sparrow Field Sparrow Swamp Sparrow
<b><i>Accipitridae</i></b> Cooper's Hawk † Red-tailed Hawk American Kestrel	<b><i>Mucicapidae (Turdinae)</i></b> Eastern Bluebird Wood Thrush Hermit Thrush American Robin	Savannah Sparrow Grasshopper Sparrow Henslow's Sparrow † Song Sparrow White-crowned Sparrow White-throated Sparrow Dark-eyed Junco
<b><i>Phasianidae</i></b> Ring-necked Pheasant * Wild Turkey	<b><i>Mimidae</i></b> Gray Catbird Brown Thrasher	<b><i>Emberizidae (Icterinae)</i></b> Bobolink Red-winged Blackbird Common Grackle Eastern Meadowlark Western Meadowlark Brown-headed Cowbird Northern Oriole
<b><i>Charadriidae</i></b> Killdeer	<b><i>Bombycillidae</i></b> Cedar Waxwing	<b><i>Fringillidae</i></b> House Finch American Goldfinch
<b><i>Columbidae</i></b> Mourning Dove	<b><i>Sturnidae</i></b> European Starling *	
<b><i>Cuculidae</i></b> Yellow-billed Cuckoo Black-billed Cuckoo	<b><i>Vireonidae</i></b> Yellow-throated Vireo Bell's Vireo Red-eyed Vireo	
<b><i>Strigidae</i></b> Eastern Screech Owl	<b><i>Emberizidae (Parulinae)</i></b> Tennessee Warbler Black and White Warbler Black-throated Green Warbler Common Yellowthroat Chestnut-sided Warbler Cape May Warbler Magnolia Warbler Kentucky Warbler Wilson's Warbler Ovenbird American Redstart	
<b><i>Alcedinidae</i></b> Belted Kingfisher	<b><i>Emberizidae( Thraupinae)</i></b> Scarlet Tanager	
<b><i>Picidae</i></b> Red-bellied Woodpecker Red-headed Woodpecker Downy Woodpecker Pileated Woodpecker Northern Flicker	<b><i>Emberizidae (Cardinalinae)</i></b> Northern Cardinal Rose-breasted Grosbeak Indigo Bunting Dickcissel	
<b><i>Tyrannidae</i></b> Eastern Wood-Pewee Eastern Kingbird Great Crested Flycatcher		
<b><i>Hirundinidae</i></b> Tree Swallow Barn Swallow		
<b><i>Corvidae</i></b> Blue Jay American Crow		
<b><i>Paridae</i></b> Black-capped Chickadee Tufted Titmouse		
<b><i>Sittidae</i></b> White-breasted Nuthatch		
<b><i>Certhiidae</i></b> Brown Creeper		

**Table 8. Breeding Census Data, Addendum 1.** Standardized common names of bird species are used (A.O.U. Check-list of North American Birds, 1982). The values represent the highest count of the two censuses conducted at each census point. Counts for each species at each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al, 1992). † = Illinois Endangered.

Family / Species	Census Point							Total	C
	G1	G2	G3	G4	G5	G6	G7		
<b>Phasianidae</b>									
Wild Turkey	0	0	0	0	0	1	0	1	-
<b>Columbidae</b>									
Mourning Dove	2	0	0	0	1	1	1	5	1
<b>Cuculidae</b>									
Yellow-billed Cuckoo	0	0	0	0	0	0	1	1	3
Black-billed Cuckoo	0	0	0	0	1	0	0	1	3
<b>Picidae</b>									
Red-bellied Woodpecker	1	0	1	0	1	0	0	3	-
Downy Woodpecker	0	0	1	1	1	1	0	4	-
<b>Tyrannidae</b>									
Eastern Wood Pewee	0	0	1	2	1	1	0	5	2
Great Crested Flycatcher	0	0	0	0	0	1	0	1	3
<b>Corvidae</b>									
Blue Jay	0	4	1	2	2	2	0	11	-
American Crow	0	1	0	0	0	1	0	2	-
<b>Paridae</b>									
Black-capped Chickadee	0	0	3	0	0	0	0	3	-
Eastern Tufted Titmouse	0	0	0	0	0	1	0	1	-
<b>Sittidae</b>									
White-breasted Nuthatch	0	0	0	0	0	1	0	1	-
<b>Troglodytidae</b>									
House Wren	0	0	0	0	1	1	0	2	1
<b>Mucicapidae (Turdinae)</b>									
Eastern Bluebird	0	0	0	0	0	0	1	1	1.5
Wood Thrush	0	0	0	1	0	0	0	1	4
American Robin	1	1		2		1		5	1
<b>Mimidae</b>									
Gray Catbird	0	0	0	0	0	1	0	1	-
Brown Thrasher	0	0	0	0	0	1	2	3	3
<b>Bombycillidae</b>									
Cedar Waxwing	0	0	0	0	0	0	1	1	2
<b>Vireonidae</b>									
Yellow-throated Vireo	0	0	1	0	1	0	0	2	3
Red-eyed Vireo	0	1	2	0	0	0	0	3	2
<b>Emberizidae (Parulinae)</b>									
Kentucky Warbler	0	0	1	0	0	0	0	1	3
Common Yellow-throat	0	0	0	0	0	0	2	2	2
<b>Emberizidae (Traupinae)</b>									
Scarlet Tanager	0	2	1	0	1	1	0	5	3

Table 8. Breeding Census Data, Addendum 1 (continued).

Family / Species	Census Point							Total	C
	G1	G2	G3	G4	G5	G6	G7		
<i>Emberizidae (Cardinalinae)</i>									
Northern Cardinal	0	1	0	1	1	1	0	4	-
Rose-breasted Grosbeak	0	0	0	1	0	0	0	1	3
Indigo Bunting	0	1	2	1	2	2	0	8	2
Dickcissel	1	0	0	0	0	0	0	1	4
<i>Emberizidae (Emberizinae)</i>									
Rufous-sided Towhee	0	0	0	0	0	3	0	3	3
Grasshopper Sparrow	3	0	0	0	0	0	0	3	4
Henslow's Sparrow †	2	0	0	0	0	0	0	2	IE
Song Sparrow	0	1	0	0	1	0	3	5	3
Field Sparrow	2	0	0	0	0	1	1	4	-
Chipping Sparrow	2	1	0	0	0	1	0	4	2
<i>Emberizidae (Icterinae)</i>									
Red-winged Blackbird	11	2	0	0	0	0	10	23	2
Eastern Meadowlark	1	0	0	0	0	0	1	2	3
Bobolink	2	0	0	0	0	0	1	3	4
Brown-headed Cowbird	0	1	1	1	1	1	1	6	1
Northern Oriole	0	1	0	0	0	0	0	1	3
<i>Fringillidae</i>									
House Finch	0	0	0	0	1	0	0	1	-
American Goldfinch	0	1	1	3	3	0	1	9	2
<b>Total Individuals</b>									
	<b>28</b>	<b>18</b>	<b>16</b>	<b>15</b>	<b>19</b>	<b>24</b>	<b>26</b>	<b>146</b>	
<b>Species Richness</b>									
	<b>11</b>	<b>12</b>	<b>12</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>13</b>	<b>42</b>	
<b># of Species of Concern</b>									
	<b>5</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>16</b>	

**Table 9. Fall Census Data, Addendum 1.** Standardized common names of bird species are used (A.O.U. Check-list of North American Birds, 1982). The values represent sum of the counts for the point censuses. Counts for each species at each point are presented, as well as the total count for each species. "C" is a measure of the level of concern for each species (Thompson et al, 1992). †† = Illinois Threatened.

Family / Species	Census Point							Total	C
	G1	G2	G3	G4	G5	G6	G7		
<b>Falconidae</b>									
American Kestrel	0	0	0	0	0	0	1	1	1
<b>Phasianidae</b>									
Wild Turkey	0	0	0	0	1	0	0	1	-
<b>Columbidae</b>									
Mourning Dove	1	0	0	0	0	0	0	1	1
<b>Cuculidae</b>									
Yellow-billed Cuckoo	0	1	0	0	0	0	0	1	4
<b>Strigidae</b>									
Eastern Screech Owl	0	0	0	0	0	0	1	1	-
<b>Picidae</b>									
Red-bellied Woodpecker	0	1	0	0	0	0	0	1	-
Downy Woodpecker	0	1	0	2	0	2	0	5	-
Northern Flicker	1	0	1	0	1	2	0	5	3
Pileated Woodpecker	0	0	0	0	1	0	0	1	-
<b>Tyrannidae</b>									
Eastern Wood Pewee	0	1	1	0	0	0	0	2	3
Great-crested Flycatcher	0	0	0	1	0	0	0	1	3
<b>Corvidae</b>									
Blue Jay	3	3	3	2	2	3	2	18	-
American Crow	4	0	0	0	0	0	1	5	-
<b>Paridae</b>									
Black-capped Chickadee	0	0	0	0	1	2	2	5	-
Eastern Tufted Titmouse	0	0	0	0	0	1		1	-
<b>Sittidae</b>									
White-breasted Nuthatch	0	0	0	0	1	2	0	3	-
<b>Certhiidae</b>									
Brown Creeper ††	0	3	0	0	0	0	0	3	IT
<b>Troglodytidae</b>									
House Wren	0	0	0	0	0	0	2	2	1.5
<b>Mucicoidae</b>									
Golden-crowned Kinglet	0	3	0	0	0	0	0	3	3
Ruby-crowned Kinglet	0	0	1	0	0	0	0	1	-
<b>Mucicapidae (Turdinae)</b>									
Wood Thrush	0	0	0	1	0	0	0	1	2.5
American Robin	15	1	1	3	5	0	8	33	1
<b>Mimidae</b>									
Gray Catbird	2	0	0	0	0	1	1	4	2.5
Brown Thrasher	0	0	0	0	0	0	1	1	-
<b>Bombycillidae</b>									
Cedar Waxwing	0	0	0	4	2	0	0	6	3
<b>Emberizidae (Parulinae)</b>									
Ovenbird	0	0	0	1	1	0	0	2	2.5

Table 9. Fall census data, Addendum 1 (continued).

Genus/species	G1	G2	G3	G4	G5	G6	G7	Total	C
<i>Emberizidae (Cardinalinae)</i>									
Northern Cardinal	0	1	0	1	1	1	3	7	-
<i>Emberizidae (Emberizinae)</i>									
Rufous-sided Towhee	0	1	0	0	0	1	0	2	2
Song Sparrow	0	0	0	0	0	0	4	4	1
Field Sparrow	0	0	0	0	0	0	1	1	-
Dark-eyed Junco	0	0	8	1	1	0	1	11	-
White-throated Sparrow	0	0	0	0	1	1	0	2	-
<i>Fringillidae</i>									
American Goldfinch	2	0	0	2	0	1	1	6	2.5
<b>Total Individuals</b>	<b>28</b>	<b>16</b>	<b>15</b>	<b>18</b>	<b>18</b>	<b>17</b>	<b>29</b>	<b>141</b>	
<b>Species Richness</b>	<b>7</b>	<b>10</b>	<b>6</b>	<b>9</b>	<b>11</b>	<b>11</b>	<b>14</b>	<b>33</b>	
<b># of Species of Concern</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>7</b>	



**Table 10. Winter Census Data, Addendum 1.** Standardized common names of bird species are used (A.O.U. Check-list of North American Birds, 1982). The values represent sum of the counts for the point censuses. Counts for each species at each point are presented, as well as the total count for each species. "C" is a measure of the level of concern for each species (Thompson et al, 1992).  
 †† = Illinois Threatened.

	Census Point								
Family / Species	G1	G2	G3	G4	G5	G6	G7	Total	C
<b>Accipiteridae</b>									
Red-tailed Hawk	0	0	0	0	0	0	1	1	1
<b>Picidae</b>									
Red-bellied Woodpecker	0	0	0	0	0	1	0	1	-
Downy Woodpecker	0	0	1	0	2	0	0	3	-
Northern Flicker	0	0	0	0	0	1	0	1	1
Pileated Woodpecker	0	0	0	0	1	0	0	1	-
<b>Corvidae</b>									
Blue Jay	0	1	0	0	0	4	0	5	-
American Crow	3	2	2	0	1	1	5	14	-
<b>Paridae</b>									
Eastern Tufted Titmouse	0	0	0	0	2	1	0	3	-
Black-capped Chickadee	0	0	0	0	0	1	0	1	-
<b>Sittidae</b>									
White-breasted Nuthatch	0	0	1	0	0	1	0	2	-
<b>Certhiidae</b>									
Brown Creeper ††	0	0	0	0	1	0	0	1	IT
<b>Mimidae</b>									
Brown Thrasher	0	0	0	0	1	0	0	1	-
<b>Emberizidae (Emberizinae)</b>									
American Tree Sparrow	0	0	0	0	0	0	2	2	-
<b>Fringillidae</b>									
American Goldfinch	1	0	0	0	0	0	2	3	1
<b>Total Individuals</b>									
	4	3	4	0	8	10	11	40	
<b>Species Richness</b>									
	2	2	3	0	6	7	4	14	
<b># of Species of Concern</b>									
	0	0	0	0	1	0	0	1	

**Table 11. Spring Census Data, Addendum 1.** Standardized common names of bird species are used (A.O.U. Check-list of North American Birds, 1982). The values represent sum of the counts for the point censuses. Counts for each species at each point are presented, as well as the total count for each species. "C" is a measure of the level of concern for each species (Thompson et al, 1992). \*= Introduced.

Family / Species	Census Point							Total	C
	G1	G2	G3	G4	G5	G6	G7		
<b>Accipiteridae</b>									
Red-tailed Hawk	0	0	0	0	0	0	2	2	1.5
<b>Phasianidae</b>									
Ring-necked Pheasant *	0	0	0	0	0	0	1	1	-
Wild Turkey	1	1	0	0	0	0	0	2	-
<b>Charadriidae</b>									
Killdeer	0	0	0	0	0	0	1	1	1
<b>Columbidae</b>									
Mourning Dove	1	0	0	1	0	0	1	3	1
<b>Picidae</b>									
Red-bellied Woodpecker	0	2	1	0	1	3	0	7	-
Downy Woodpecker	0	0	0	2	1	0	0	3	-
Northern Flicker	1	1	0	0	2	2	0	6	3
Pileated Woodpecker	0	0	0	1	0	0	0	1	-
<b>Corvidae</b>									
Blue Jay	2	5	1	2	1	5	2	18	-
American Crow	1	3	1	0	1	0	2	8	-
<b>Paridae</b>									
Eastern Tufted Titmouse	0	1	0	0	0	0	0	1	-
Black-capped Chickadee	1	2	0	3	3	3	0	12	-
<b>Sittidae</b>									
White-breasted Nuthatch	0	0	2	0	0	1	0	3	-
<b>Mucicapidae (Sylviinae)</b>									
Ruby-crowned Kinglet	0	1	0	0	0	0	0	1	-
Golden-crowned Kinglet	0	0	0	0	0	1	0	1	3
<b>Mucicapidae (Turdinae)</b>									
American Robin	1	1	0	1	2	1	1	7	1
<b>Mimidae</b>									
Brown Thrasher	0	0	0	0	0	0	1	1	-
<b>Emberizidae (Cardinalinae)</b>									
Northern Cardinal	2	2	0	0	0	1	0	5	-
<b>Emberizidae (Emberizinae)</b>									
Song Sparrow	2	1	0	0	0	1	4	8	1
Field Sparrow	0	0	0	0	0	2	0	2	-
White-crowned Sparrow	1	0	0	0	0	0	0	1	-
<b>Emberizidae (Icterinae)</b>									
Eastern Meadowlark	2	0	0	1	0	0	2	5	1
Western Meadowlark	2	0	0	0	0	0	0	2	1
Red-winged Blackbird	0	0	0	0	0	0	10	10	3
Brown-headed Cowbird	0	2	2	0	2	3	1	10	1
<b>Fringillidae</b>									
American Goldfinch	1	0	0	0	0	0	0	1	2.5
<b>Total Individuals</b>									
	18	22	7	11	13	23	28	122	
<b>Species Richness</b>									
	13	12	5	7	8	11	12	27	
<b># of Species of Concern</b>									
	1	1	0	0	0	2	1	3	

**Table 12. List of observed species Addendum 2.** Breeding, Fall, Winter and Spring season census periods. † = Illinois Endangered, †† = Illinois Threatened, \* = introduced species.

<i>Family / Species</i>	<i>Family / Species</i>
<i>Phasianidae</i>	<i>Vireonidae</i>
Wild Turkey	Red-eyed Vireo
<i>Cuculidae</i>	<i>Emberizidae (Parulinae)</i>
Yellow-billed Cuckoo	Tennessee Warbler
<i>Picidae</i>	Common Yellowthroat
Red-bellied Woodpecker	Chestnut-sided Warbler
Downy Woodpecker	Kentucky Warbler
Pileated Woodpecker	Ovenbird
Northern Flicker	Blackpoll Warbler
<i>Tyrannidae</i>	Hooded Warbler
Eastern Wood-Pewee	Yellow Warbler
Eastern Phoebe	<i>Emberizidae(Thraupinae)</i>
Great Crested Flycatcher	Scarlet Tanager
<i>Corvidae</i>	<i>Emberizidae (Cardinalinae)</i>
Blue Jay	Northern Cardinal
American Crow	Rose-breasted Grosbeak
<i>Paridae</i>	Indigo Bunting
Black-capped Chickadee	<i>Emberizidae(Emberizinae)</i>
Tufted Titmouse	Rufous-sided Towhee
<i>Sittidae</i>	White-throated Sparrow
White-breasted Nuthatch	Dark-eyed Junco
<i>Certhiidae</i>	<i>Emberizidae (Icterinae)</i>
Brown Creeper	Red-winged Blackbird
<i>Mucicapidae (Sylviinae)</i>	Brown-headed Cowbird
Golden-crowned Kinglet	<i>Fringillidae</i>
Ruby-crowned Kinglet	American Goldfinch
<i>Mucicapidae (Turdinae)</i>	
Wood Thrush	
American Robin	
<i>Mimidae</i>	
Gray Catbird	
<i>Sturnidae</i>	
European Starling *	

**Table 13. Breeding Census Data, Addendum 2.** Standardized common names of bird species are used (A.O.U. Check-list of North American Birds, 1982). The values represent the highest count of the two censuses conducted at each census point. Counts for each species at each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al, 1992). † = Illinois Endangered, †† = Illinois Threatened, \* = introduced species.

Family / Species	Census Point			Total	C
	T1	T2	T3		
<i>Cuculidae</i>					
Yellow-billed Cuckoo	1	0	0	1	3
<i>Picidae</i>					
Red-bellied Woodpecker	2	1	1	4	-
Northern Flicker	1	1	0	2	1
Downy Woodpecker	0	1	0	1	-
<i>Tyrannidae</i>					
Eastern Wood Pewee	1	1	2	4	2
Great Crested Flycatcher	0	1	0	1	3
<i>Corvidae</i>					
Blue Jay	0	2	1	3	-
American Crow	1	1	1	3	-
<i>Paridae</i>					
Black-capped Chickadee	0	1	0	1	-
Eastern Tufted Titmouse	0	1	0	1	-
<i>Sittidae</i>					
White-breasted Nuthatch	1	1		2	-
<i>Mucicapidae (Turdinae)</i>					
Wood Thrush	2	1	1	4	4
American Robin	1	1	0	2	1
<i>Sturnidae</i>					
European Starling *	1	0	0	1	-
<i>Vireonidae</i>					
Red-eyed Vireo	1	1	2	4	2
<i>Emberizidae (Parulinae)</i>					
Kentucky Warbler	1	0	0	1	3
Common Yellow-throat	0	1	0	1	2
Chestnut-sided Warbler	0	1	0	1	2
Blackpoll Warbler	1	0	0	1	-
Hooded Warbler	0	1	0	1	3
Ovenbird	2	1	1	4	3
<i>Emberizidae (Traupinae)</i>					
Scarlet Tanager	0	0	1	1	3
<i>Emberizidae (Cardinalinae)</i>					
Northern Cardinal	1	0	0	1	-
<i>Emberizidae (Icterinae)</i>					
Brown-headed Cowbird	2	3	1	6	1
<b>Total Individuals</b>					
	<b>19</b>	<b>21</b>	<b>11</b>	<b>51</b>	
<b>Species Richness</b>					
	<b>15</b>	<b>18</b>	<b>9</b>	<b>24</b>	
<b># of Species of Concern</b>					
	<b>4</b>	<b>4</b>	<b>3</b>	<b>7</b>	

**Table 14. Fall Census Data Addendum 2.** Standardized common names of bird species are used (A.O.U. Check-list of North American Birds, 1982). The values represent sum of the counts for the point censuses. Counts for each species at each point are presented, as well as the total count for each species. "C" is a measure of the level of concern for each species (Thompson et al, 1992).

Family / Species	Census Point			Total	C
	T1	T2	T3		
<i>Picidae</i>					
Downy Woodpecker	0	1	1	2	-
Red-bellied Woodpecker	0	2	0	2	-
<i>Tyrannidae</i>					
Eastern Wood Pewee	0	1	0	1	3
<i>Corvidae</i>					
Blue Jay	2	3	3	8	-
<i>Paridae</i>					
Black-capped Chickadee	2	3	0	5	-
<i>Sittidae</i>					
White-breasted Nuthatch	1	2	1	4	-
<i>Mucicapidae (Sylvinae)</i>					
Golden-crowned Kinglet	0	2	0	2	3
<i>Mucicapidae (Turdinae)</i>					
American Robin	6	1	2	9	1
<i>Mimidae</i>					
Gray Catbird	0	1	0	1	2.5
<i>Emberizidae (Parulinae)</i>					
Ovenbird	0	1	0	1	2.5
Yellow-rumped Warbler	0	0	1	1	-
Warbler Flock	0	30	0	30	-
<i>Emberizidae (Emberizinae)</i>					
Rufous-sided Towhee	0	1	0	1	2
White-throated Sparrow	0	4	0	4	-
<b>Total Individuals</b>	<b>11</b>	<b>52</b>	<b>8</b>	<b>71</b>	
<b>Species Richness</b>	<b>4</b>	<b>12</b>	<b>5</b>	<b>13</b>	
<b># of Species of Concern</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	

**Table 15. Winter Census Data, Addendum 2.** Standardized common names of bird species are used (A.O.U. Check-list of North American Birds, 1982). The values represent sum of the counts for the point censuses. Counts for each species at each point are presented, as well as the total count for each species. "C" is a measure of the level of concern for each species (Thompson et al, 1992).

Census Point					
Family / Species	T1	T2	T3	Total	C
<i>Picidae</i>					
Downy Woodpecker	1	0	1	2	-
Pileated Woodpecker	0	1	0	1	-
<i>Paridae</i>					
Black-capped Chickadee	2	0	0	2	-
<i>Sittidae</i>					
White-breasted Nuthatch	1	0	0	1	-
<b>Total Individuals</b>	4	1	1	6	
<b>Species Richness</b>	3	1	1	4	
<b># of Species of Concern</b>	0	0	0	0	

**Table 16. Spring Census Data, Addendum 2.** Standardized common names of bird species are used (A.O.U. Check-list of North American Birds, 1982). The values represent sum of the counts for the point censuses. Counts for each species at each point are presented, as well as the total count for each species. "C" is a measure of the level of concern for each species (Thompson et al, 1992). †† = Illinois Threatened. \*= Introduced.

Family / Species	T1	T2	T3	Total	C
<i>Phasianidae</i>					
Wild Turkey	0	0	2	2	-
<i>Picidae</i>					
Red-bellied Woodpecker	0	1	1	2	-
Downy Woodpecker	1	1	0	2	-
<i>Tyrannidae</i>					
Eastern Phoebe	1	0	0	1	3
<i>Corvidae</i>					
Blue Jay	1	1		2	-
American Crow	2	1	2	5	-
<i>Paridae</i>					
Eastern Tufted Titmouse	0	0	1	1	-
Black-capped Chickadee	0	6	1	7	-
<i>Sittidae</i>					
White-breasted Nuthatch	0	1	1	2	-
<i>Certhiidae</i>					
Brown Creeper ††	0	2	0	2	IT
<i>Mucicaoidae (Turdinae)</i>					
American Robin	1	0	1	2	1
<i>Sturnidae</i>					
European Starling *	2	0	0	2	-
<i>Emberizidae (Icterinae)</i>					
Brown-headed Cowbird	1	2	0	3	1
<b>Total Individuals</b>	<b>8</b>	<b>15</b>	<b>9</b>	<b>33</b>	
<b>Species Richness</b>	<b>7</b>	<b>8</b>	<b>7</b>	<b>13</b>	
<b># of Species of Concern</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	

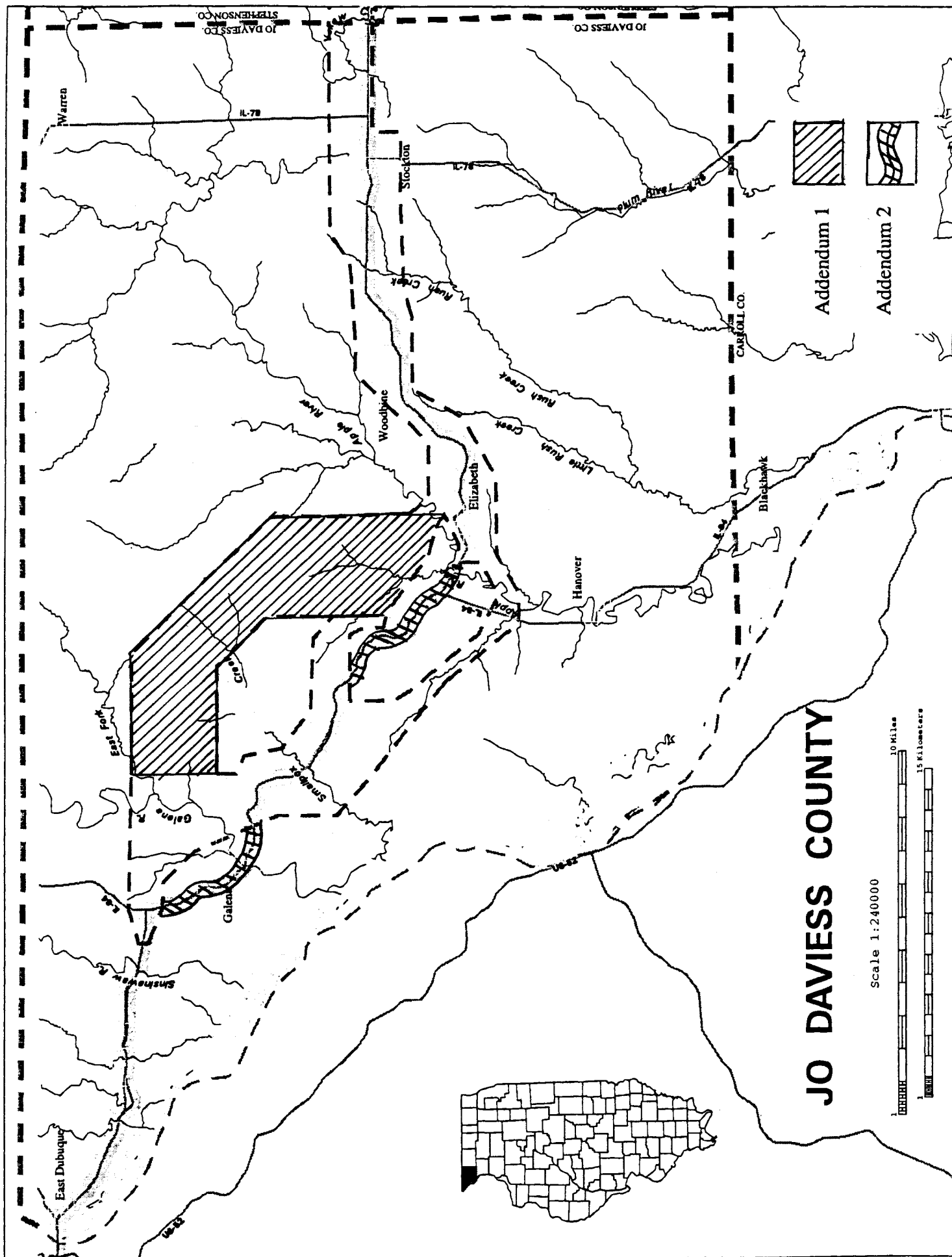


Figure 1. Approximate location of FAP 301 project area, Jo Daviess County, Illinois.



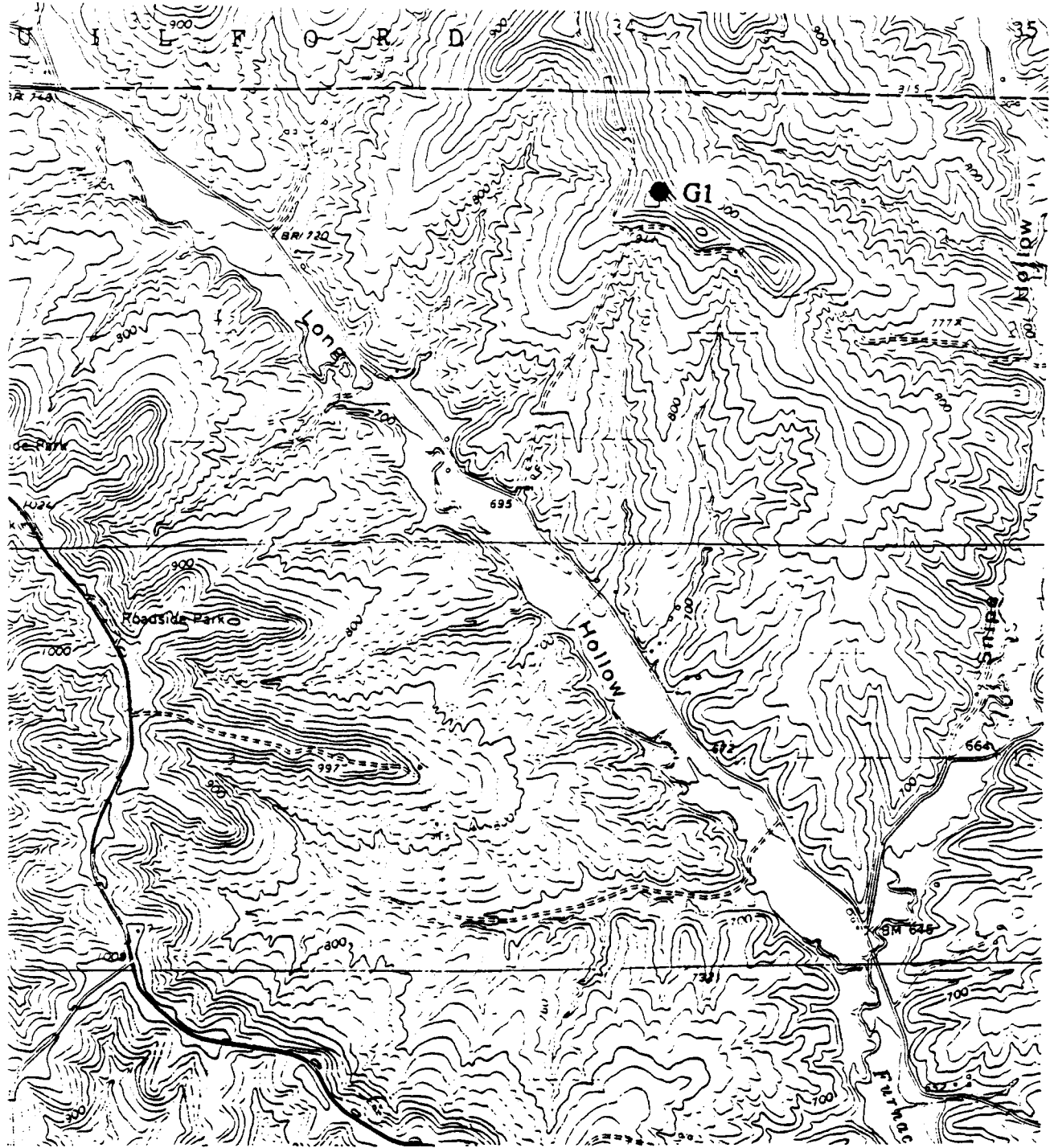


Figure 2. Location of Addendum 1 census point G1.

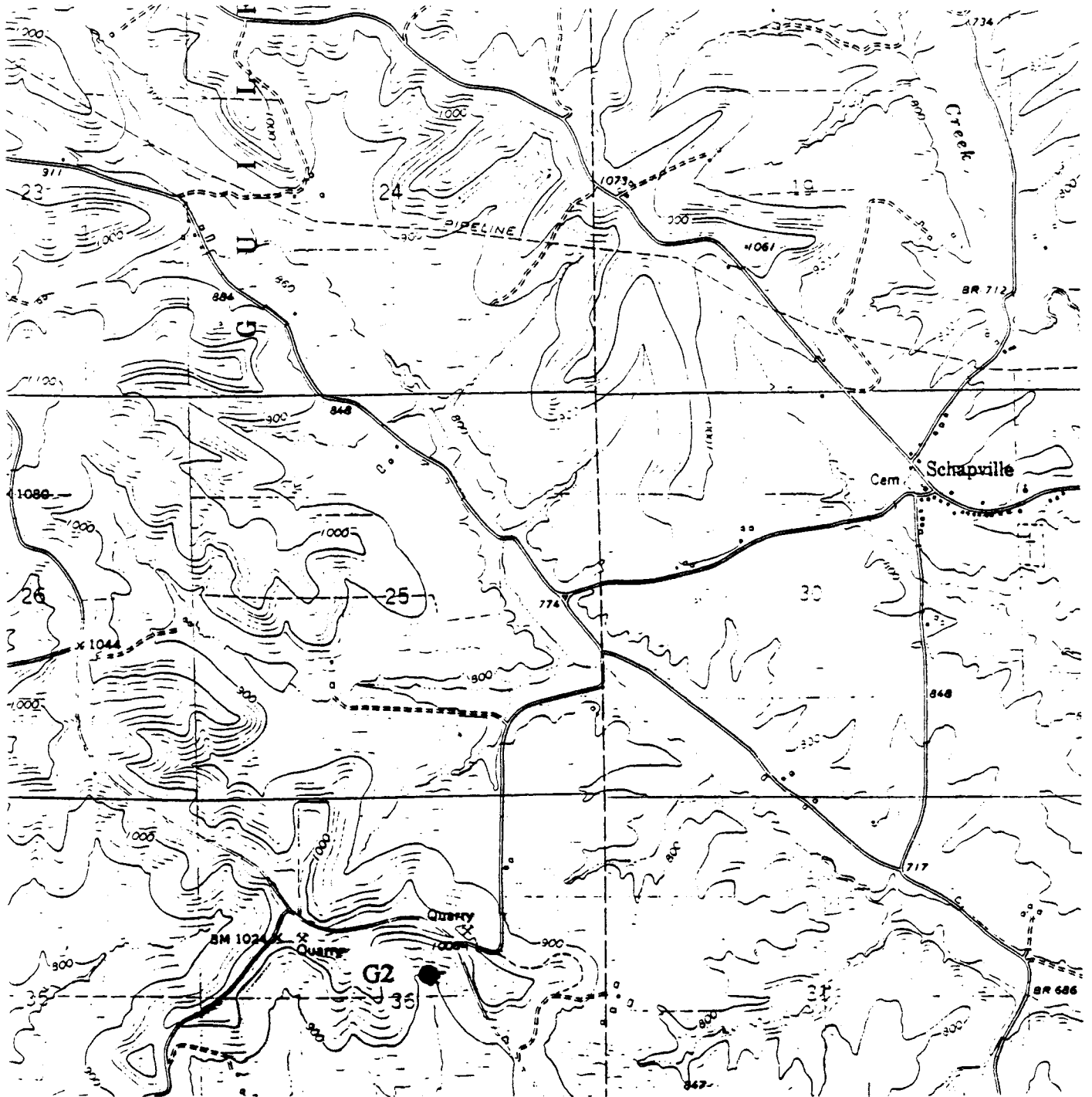


Figure 3. Location of census point G2.

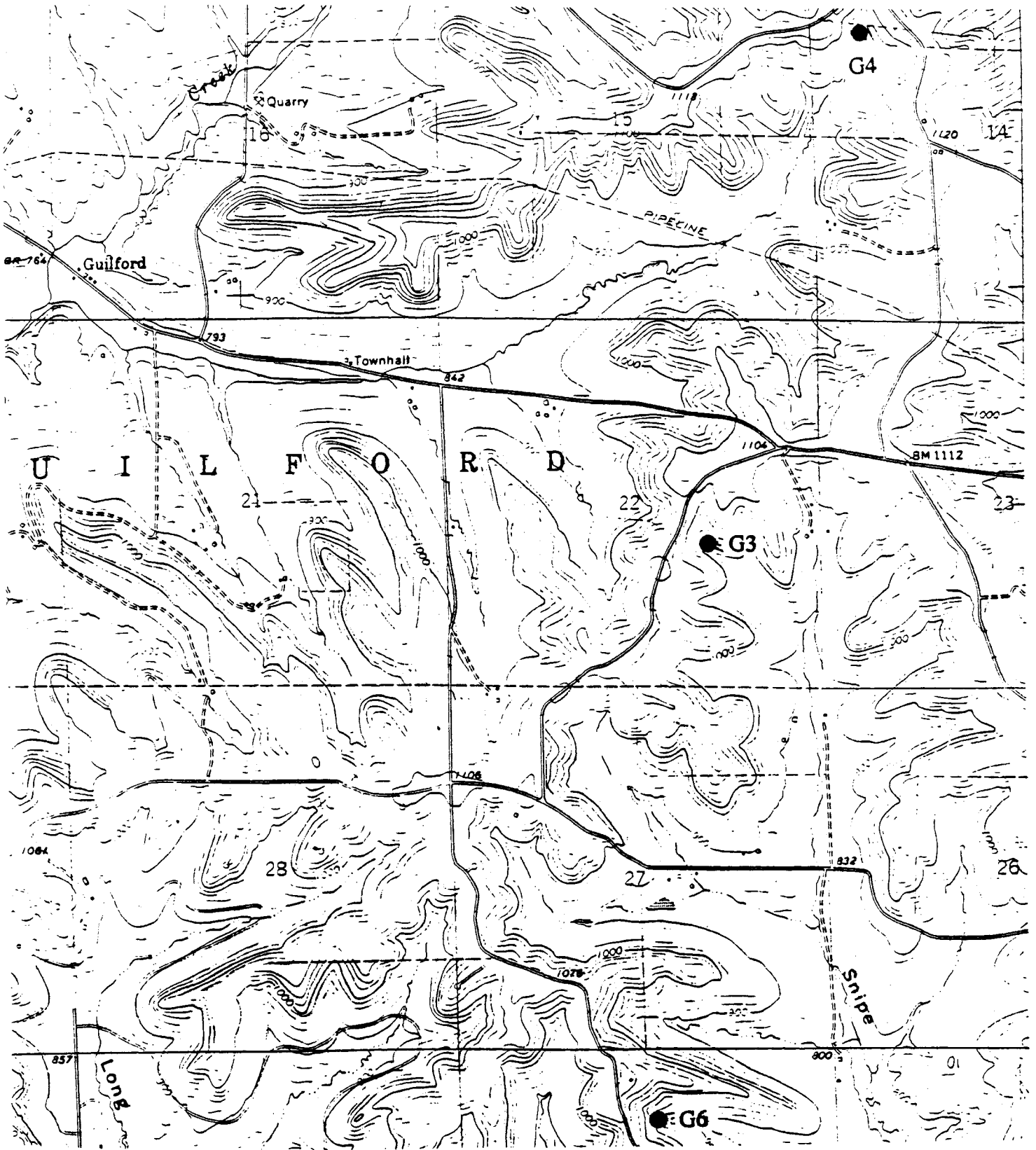


Figure 4. Location of Addendum 1 census points G3, G4 and G6.

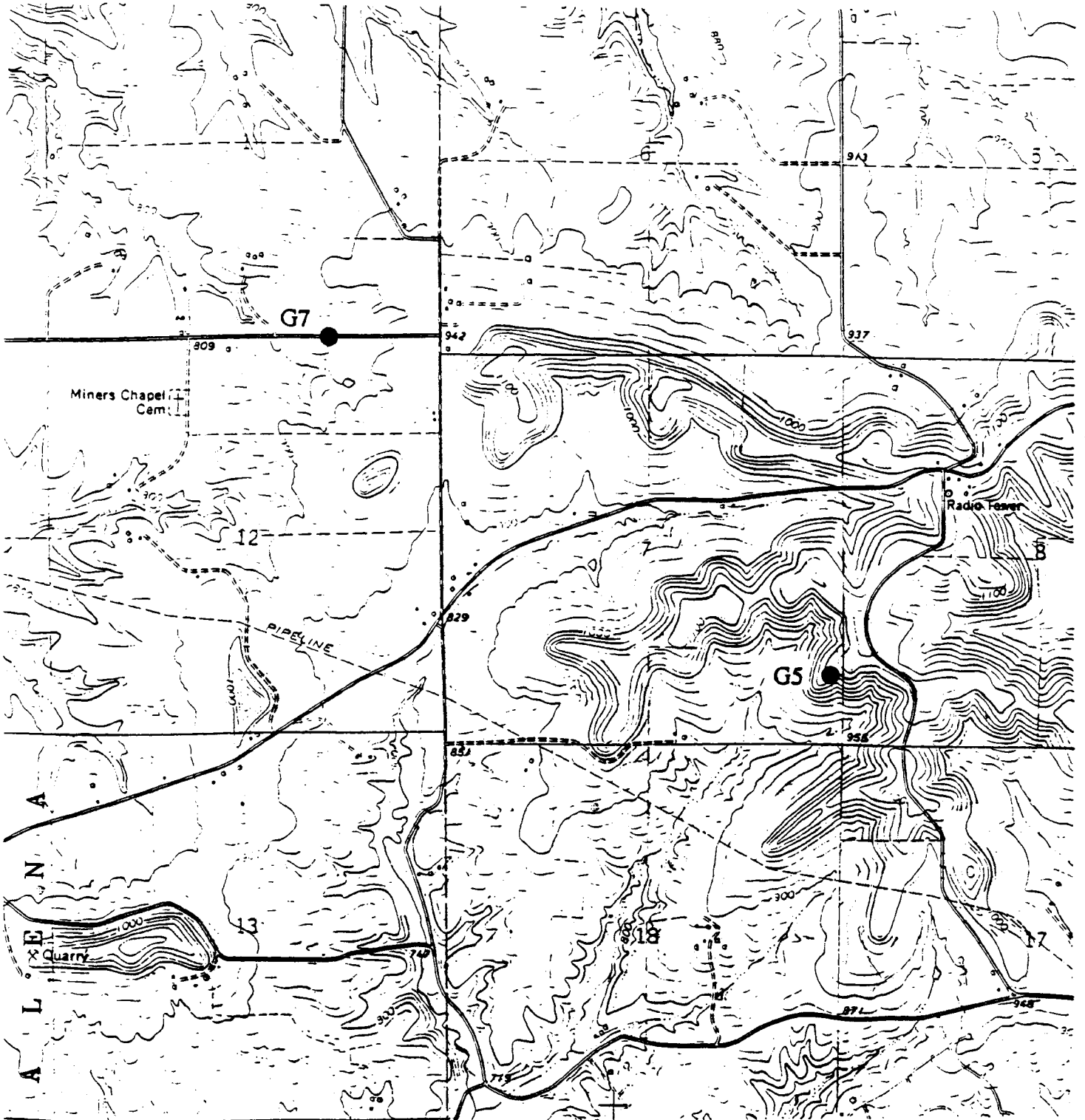


Figure 5. Location of Addendum 1 census points G5 and G7.

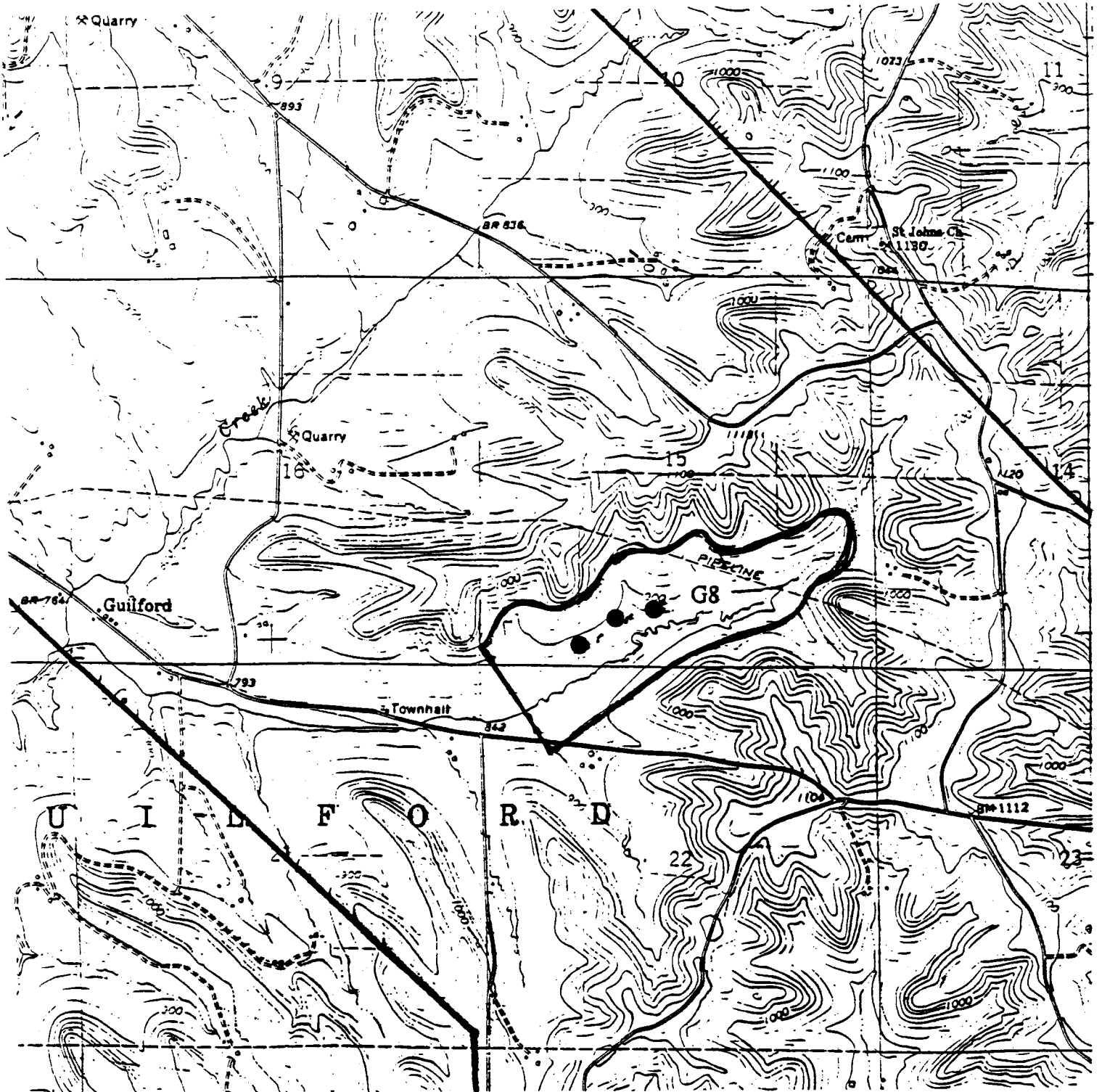


Figure 6. Location of Henslow Sparrow grassland G8, Addendum 1.

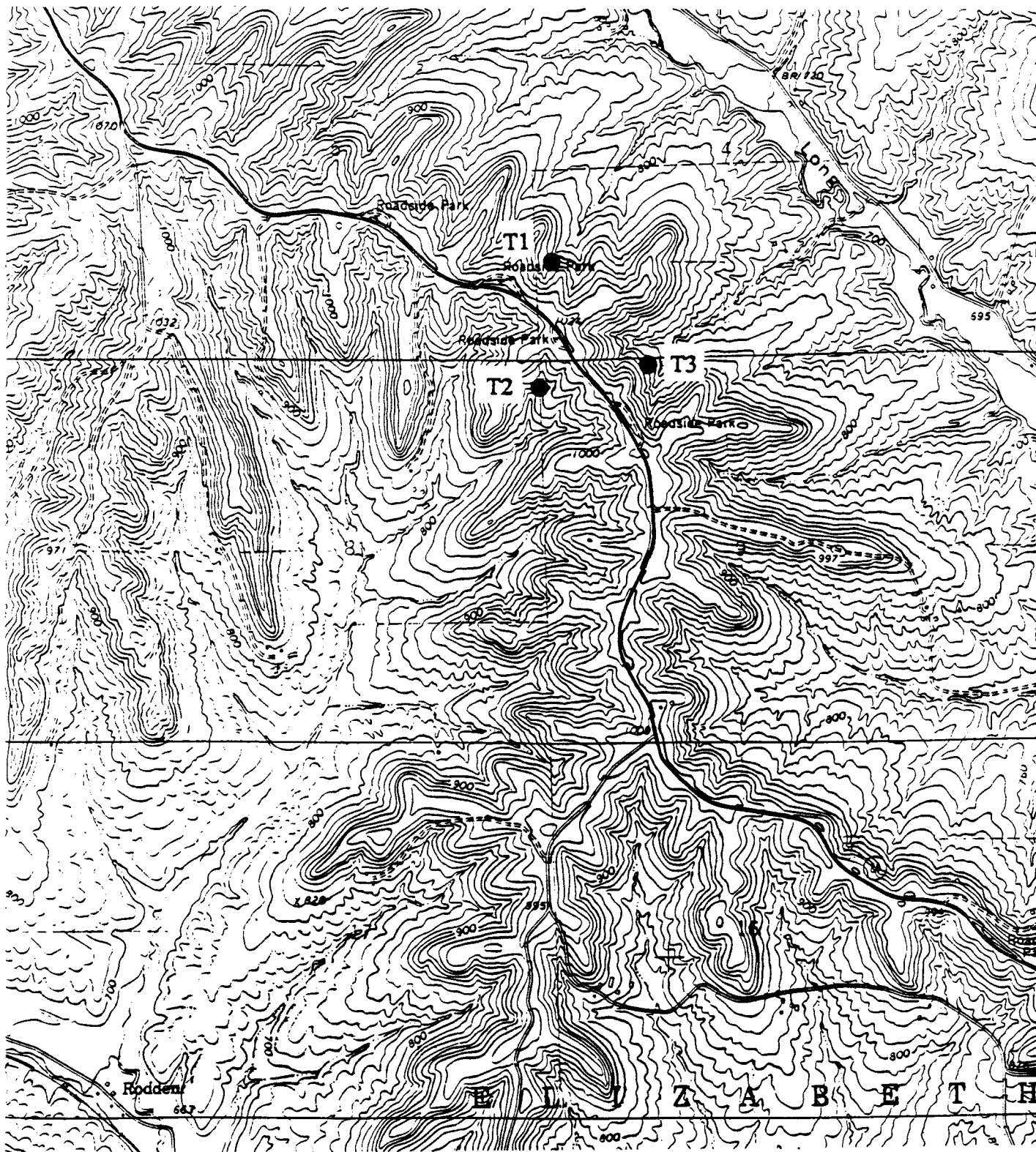


Figure 7. Location of Addendum 2 census points T1, T2 and T3.