



September 16, 2013

Ms. Robyn Niver, Biologist
U.S. Fish and Wildlife Service
3817 Luker Road
Cortland, New York 13045

Re: Indiana Bat Habitat Assessment and Proposed Conservation Measures for the
OCIDA White Pine Commerce Park and Sanitary Sewer Line in the Town of Clay,
Onondaga County, New York
TES File No. 2033B

Dear Robyn:

Terrestrial Environmental Specialists, Inc. (TES) performed an Indiana bat (*Myotis sodalis*) summer roost assessment on two areas in Onondaga County, New York. These assessments were conducted at the proposed White Pine Commerce Park site in the Town of Clay and on a proposed sanitary sewer line route also in the Town of Clay.

The proposed White Pine Commerce Park site is located north of NYS Route 31 and east of Caughdenoy Road (Figure 1). The proposed sanitary sewer line is located between the Oak Orchard Waste Water Treatment Plant and the White Pine Commerce Park site (Figure 2).

The Onondaga County Industrial Development Agency (OCIDA) White Pine Commerce Park site was reviewed on June 18, 2013, for potential roost trees. Seventeen (17) sample plots were examined at the site. The habitat assessment along the sewer line was performed on June 14, 2013. Sixteen (16) plots were examined along the sewer line. The data compiled from the assessment areas have been put into Tables 1 and 2 and are attached to this letter report. Figures and photographs are also attached at the end of this report.

Based on previous information that TES received from Mr. Carl Herzog, Biologist with the New York State Department of Environmental Conservation (NYSDEC), there are two known summer roost sites approximately 4.5 to 5.3 miles southwest of the proposed White Pine Commerce Park site and approximately 2.5 and 4 miles southwest of the proposed sanitary sewer line route.

The proposed White Pine Commerce Park site was dominated by green and white ash and red maple trees (Table 1). These trees were found to range from approximately 35 to 90 feet tall and had diameters at breast height (dbh) between 6.5 to 20.0 inches (Table 1). However, four sample plots (2, 3, 5, 15, and 16) within the site did include shagbark hickory and American elm with exfoliating bark (Table 1 and Figure 3).

TES mapped wooded land within the proposed White Pine Commerce Park site using recent aerial photography (Figure 3). The total acreage within the site is approximately 339 acres. Of this there is approximately 147 acres of wooded land within the site. The total wooded area to be cleared is only 22.5 acres (15.3%) of the wooded land within the site. This is a minor impact to forested lands on and in the vicinity of the project. However, in order to prevent any potential chance of a direct "take" of an Indiana bat at the site, OCIDA proposes to cut all wooded sections between October 31 to March 31 [to be consistent with United States Fish and Wildlife Service (USFWS) guidelines].

Overall, the dominant trees within the sanitary sewer line route included green ash and American elm. These trees were found to range from approximately 25 to 70 feet tall and had diameters at breast height (dbh) between 3.0 to 18.0 inches (Table 2). With the exclusion of two sample plots, no trees with exfoliating bark and/or crevices were found on either living or dead trees (Table 2). Sample plots 1 and 5 contained trees with either peeling bark or holes; however, these trees were located along the edge of the sewer line route (Table 2 and Figures 4-1 through 4-6).

TES mapped wooded land within the sanitary sewer line route using aerial photography (Figures 4-1 through 4-6). The total acreage within the proposed sanitary sewer route is 46.96 acres (Figure 6). Of this there is approximately 15.49 acres of wooded land within the proposed route (Figure 6). The total wooded area to be cleared is only 8.26% of the proposed sewer line route (Figure 6). This is a minor impact to forested lands on and in the vicinity of the sewer line project. However, in order to prevent any potential chance of a direct "take" of an Indiana bat at the proposed sanitary sewer route, OCIDA proposes to cut all wooded sections between October 31 to March 31 (to be consistent with USFWS guidelines). No disturbance to wetlands (including forested wetlands) will occur, since directional boring is being proposed in those areas.

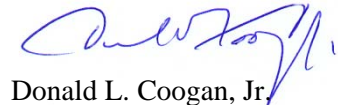
A substantial area of wooded land will remain on the White Pine Commerce Park site. Approximately 124.5 acres (+/- 84.7%) of wooded uplands and wetlands will remain, much of which is located north of an existing New York Power Authority transmission line corridor (Figure 5).

OCIDA proposes no use of chemicals (*e.g.* colorants, copper sulfate) in and around stormwater management ponds. OCIDA will also install orange fencing to mark the limits of clearing.

In closing, we do not believe that the development of the proposed White Pine Commerce Park and the sanitary sewer line is a significant impact to Indiana bat. OCIDA proposes to follow USFWS guidelines during and after construction. OCIDA has modified their plans to minimize impacts to wetland and wooded areas at the site to the maximum extent practicable, while still remaining a viable project.

I trust this information is suitable for your project review needs. If you have any questions, please feel free to contact me.

Sincerely,
TERRESTRIAL ENVIRONMENTAL SPECIALISTS, INC.



Donald L. Coogan, Jr.
Vice President

DLC/dmm
Enclosures

cc: Ms. Mary Beth Primo – OCIDA
Mr. Walter Kalina – CHA
Mr. John Klucsik Esq.

Table 1. Plot Data for the OCIDA White Pine Commerce Park Site

Plot No.	Figure No.	Photo No.	Cover Type	Dominant Tree Species	Height Averages (feet)	DBH Ranges (inches)	Comments
Plot 1	3	1	Deciduous Forest Upland	<i>Fraxinus americana</i> , <i>Prunus serotina</i>	60	<i>F. americana</i> 6.5-6.8 <i>P. serotina</i> 12.7-29.2	-
Plot 2	3	2	Scrub-Shrub Upland	<i>Fraxinus pennsylvanica</i> , <i>Ulmus americana</i> , <i>Carya ovata</i>	<i>F. pennsylvanica</i> 60 <i>U. americana</i> 70 <i>C. ovata</i> .70	<i>F. pennsylvanica</i> 12.5 <i>U. americana</i> 11.0 <i>C. ovata</i> .20.0	most trees were on the edge of the plot. <i>Ulmus americana</i> and <i>Carya ovata</i> had exfoliating bark.
Plot 3	3	3	Deciduous Forest Upland	<i>Carya ovata</i> , <i>Carya cordiformis</i> , <i>Fraxinus americana</i> , <i>Prunus serotina</i>	<i>C. ovata</i> 80 <i>C. cordiformis</i> 80 <i>F. americana</i> 65 <i>P. serotina</i> 65	<i>C. ovata</i> 5.0-25.5 <i>C. cordiformis</i> 8.1-24.8 <i>F. americana</i> 10.5 <i>P. serotina</i> 10.5	some <i>Carya ovata</i> have exfoliating bark
Plot 4	3	4	Deciduous Forest Upland	<i>Carya ovata</i> , <i>Carya cordiformis</i> , <i>Acer rubrum</i> . <i>Prunus serotina</i>	<i>C. ovata</i> 70 <i>C. cordiformis</i> 70 <i>A. rubrum</i> 80 <i>P. serotina</i> 80	<i>C. ovata</i> 9.3 <i>C. cordiformis</i> 7.5 <i>A. rubrum</i> 7.3-20.2 <i>P. serotina</i> 14.4	trees did not have exfoliating bark
Plot 5	3	5	Deciduous Forest Upland	<i>Carya ovata</i> , <i>Acer rubrum</i> .	60-90	<i>C. ovata</i> 5.0-12.7 <i>A. rubrum</i> 10.5	many trees with exfoliating bark over 12" dbh
Plot 6	3	6	Mixed Forest Upland	<i>Tsuga canadensis</i> , <i>Fagus grandifolia</i> , <i>Betula alleghaniensis</i>	<i>T. canadensis</i> 60 <i>F. grandifolia</i> 70 <i>B. alleghaniensis</i> 70	<i>T. canadensis</i> 12.5-13.7 <i>F. grandifolia</i> 12.3 <i>B. alleghaniensis</i> 9.9-14.2	-
Plot 7	3	7	Mixed Forest Upland	<i>Carya cordiformis</i> , <i>Liriodendron tulipifera</i> , <i>Acer saccharinum</i> , <i>Betula alleghaniensis</i> , <i>Fagus grandifolia</i> , <i>Tsuga canadensis</i>	<i>C. cordiformis</i> 80 <i>L. tulipifera</i> 80 <i>A. saccharinum</i> 60 <i>B. alleghaniensis</i> 50 <i>F. grandifolia</i> 40 <i>T. canadensis</i> 50	<i>C. cordiformis</i> 16.5 <i>L. tulipifera</i> 15.2 <i>A. saccharinum</i> 7.8 <i>B. alleghaniensis</i> 6.0 <i>F. grandifolia</i> 6.5 <i>T. canadensis</i> 8.5	-
Plot 8	3	8	Mixed Forest Upland	<i>Tsuga canadensis</i> , <i>Fagus grandifolia</i> , <i>Acer saccharinum</i>	<i>T. canadensis</i> 60 <i>F. grandifolia</i> 70 <i>A. saccharinum</i> 70	<i>T. canadensis</i> 10.3-13.1 <i>F. grandifolia</i> 7.5-10.7 <i>A. saccharinum</i> 4.6	-

Table 1. (cont.)

Plot No.	Figure No.	Photo No.	Cover Type	Dominant Tree Species	Height Averages (feet)	DBH Ranges (inches)	Comments
Plot 9	3	9	Deciduous Forest Upland	<i>Liriodendron tulipifera</i> , <i>Acer rubrum</i> , <i>Fraxinus americana</i>	<i>L. tulipifera</i> 80 <i>A. rubrum</i> 65 <i>F. americana</i> 65	<i>L. tulipifera</i> 10.0-13.5 <i>A. rubrum</i> 6.0-11.4 <i>F. americana</i> 6.0	-
Plot 10	3	10	Deciduous Forest Upland	<i>Liriodendron tulipifera</i> , <i>Acer rubrum</i> , <i>Fraxinus americana</i>	<i>L. tulipifera</i> 70 <i>A. rubrum</i> 65 <i>F. americana</i> 65	<i>L. tulipifera</i> 8.5-10.7 <i>A. rubrum</i> 7.4-14.0 <i>F. americana</i> 9.5	-
Plot 11	3	11-12	Mixed Forest Upland	<i>Picea abies</i> , <i>Acer rubrum</i> , <i>Fraxinus americana</i>	70	<i>P. abies</i> 6.9-19.7 <i>A. rubrum</i> 8.0-20.0 <i>F. americana</i> 10.0	-
Plot 12	3	13	Scrub-Shrub Upland	<i>Fraxinus pennsylvanica</i>	35	10.0	-
Plot 13	3	14	Deciduous Forest Upland	<i>Fraxinus americana</i> , <i>Acer rubrum</i> , <i>Populus tremuloides</i> , <i>Ulmus americana</i>	<i>F. americana</i> 60 <i>A. rubrum</i> 60 <i>P. tremuloides</i> 70 <i>U. americana</i> 60	<i>F. americana</i> 7.3-9.7 <i>A. rubrum</i> 8.0-8.8 <i>P. tremuloides</i> 11.2-13.6 <i>U. americana</i> 5.0	-
Plot 14	3	15	Deciduous Forest Wetland	<i>Acer saccharinum</i> , <i>Tsuga canadensis</i> , <i>Carya cordiformis</i> , <i>Tilia americana</i>	<i>A. saccharinum</i> 75 <i>T. canadensis</i> 55 <i>C. cordiformis</i> 90 <i>T. americana</i> 75	<i>A. saccharinum</i> 10.0-16.7 <i>T. canadensis</i> 7.0-11.0 <i>C. cordiformis</i> 12.4-14.5 <i>T. americana</i> 10.2	-
Plot 15	3	16	Deciduous Forest Wetland	<i>Fraxinus pennsylvanica</i> , <i>Acer rubrum</i> , <i>Ulmus americana</i>	70-80	<i>F. pennsylvanica</i> 6.0-17.0 <i>A. rubrum</i> 13.0-16.0 <i>U. americana</i> 12.5	<i>Ulmus americana</i> dead with exfoliating bark within plot
Plot 16	3	17	Deciduous Forest Wetland	<i>Carya ovata</i> , <i>Acer rubrum</i> , <i>Fraxinus pennsylvanica</i> , <i>Ulmus americana</i>	<i>C. ovata</i> 80 <i>A. rubrum</i> 85 <i>F. pennsylvanica</i> 80 <i>U. americana</i> 65	<i>C. ovata</i> 6.0-14.0 <i>A. rubrum</i> 11.5-18.0 <i>F. pennsylvanica</i> 9.5 <i>U. americana</i> 5.0	<i>Carya ovata</i> found throughout plot with exfoliating bark
Plot 17	3	18	Deciduous Forest Wetland	<i>Acer rubrum</i> , <i>Fraxinus pennsylvanica</i>	<i>A. rubrum</i> 80 <i>F. pennsylvanica</i> 70	<i>A. rubrum</i> 4.5-20.0 <i>F. pennsylvanica</i> 9.0	-

Table 2. Plot Data for the OCIDA Sewer Line Right-of-Way

Plot No.	Figure No.	Photo No.	Cover Type	Dominant Tree Species	Height Averages (feet)	DBH Ranges (inches)	Comments
Plot 1	4-1	19	Deciduous Forest Upland	<i>Fraxinus pennsylvanica</i> , <i>Ulmus americana</i>	40-50	6.6-14.5	most trees were on the edge of the plot. One <i>Ulmus americana</i> was dead with peeling bark at the top
Plot 2	4-1	20	Deciduous Forest Upland	<i>Fraxinus pennsylvanica</i> , <i>Acer negundo</i>	40-50	<i>F. pennsylvanica</i> 4.4-5.1 <i>A. negundo</i> 8.0-12.4	-
Plot 3	4-1	21	Deciduous Forest Upland	<i>Fraxinus pennsylvanica</i> , <i>Ulmus americana</i>	60-70	<i>F. pennsylvanica</i> 6.5-11.6 <i>U. americana</i> 3.5	-
Plot 4	4-1	22	Deciduous Forest Upland	<i>Fraxinus pennsylvanica</i> , <i>Acer rubrum</i> , <i>Salix</i> sp., <i>Robinia pseudoacacia</i>	<i>F. pennsylvanica</i> 50 <i>A. rubrum</i> 80 <i>Salix</i> sp. 50 <i>R. pseudoacacia</i> 50	<i>F. pennsylvanica</i> 10.0-14.0 <i>A. rubrum</i> 16.0 <i>Salix</i> sp. 13.2-13.5 <i>R. pseudoacacia</i> 14.0	-
Plot 5	4-2	23	Deciduous Forest Upland	<i>Acer rubrum</i> , <i>Fraxinus pennsylvanica</i> , <i>Acer negundo</i> , <i>Prunus serotina</i> , <i>Ulmus americana</i>	<i>A. rubrum</i> 66 <i>F. pennsylvanica</i> 66 <i>A. negundo</i> 30 <i>P. serotina</i> 30 <i>U. americana</i> 30	<i>A. rubrum</i> 10.0-20.5 <i>F. pennsylvanica</i> 12.0-18.0 <i>A. negundo</i> 7.2-10.1 <i>P. serotina</i> 4.0 <i>U. americana</i> 6.8	a dead tree with holes in the top found outside of the sewer line right-of-way
Plot 6	4-2	24	Deciduous Forest Upland	<i>Fraxinus pennsylvanica</i> , <i>Ulmus americana</i>	70	<i>F. pennsylvanica</i> 7.4-13.0 <i>U. americana</i> 3.0	-
Plot 7	4-2	25	Deciduous Forest Upland	<i>Fraxinus pennsylvanica</i> , <i>Ulmus americana</i>	25	<i>F. pennsylvanica</i> 3.0-4.0 <i>U. americana</i> 3.5	-
Plot 8	4-2	26	Deciduous Forest Upland	<i>Fraxinus pennsylvanica</i> , <i>Populus deltoides</i>	<i>F. pennsylvanica</i> 25 <i>P. deltoides</i> 80	<i>F. pennsylvanica</i> 3.0-4.0 <i>P. deltoides</i> 23.0	-
Plot 9	4-3	27	Deciduous Forest Upland	<i>Quercus rubra</i> , <i>Acer saccharinum</i> , <i>Fraxinus americana</i> , <i>Prunus serotina</i> , <i>Populus deltoides</i>	<i>Q. rubra</i> 70 <i>A. saccharinum</i> 55 <i>F. americana</i> 70 <i>P. serotina</i> 70 <i>P. deltoides</i> 70	<i>Q. rubra</i> 12.5 <i>A. saccharinum</i> 5.7-7.1 <i>F. americana</i> 7.5 <i>P. serotina</i> 7.7 <i>P. deltoides</i> 22.0	

Table 2. (cont.)

Plot No.	Figure No.	Photo No.	Cover Type	Dominant Tree Species	Height Averages (feet)	DBH Ranges (inches)	Comments
Plot 10	4-3	28	Deciduous Forest Upland	<i>Quercus rubra</i> , <i>Acer saccharinum</i> , <i>Liriodendron tulipifera</i> , <i>Betula alleghaniensis</i> , <i>Tsuga canadensis</i>	<i>Q. rubra</i> 80 <i>A. saccharinum</i> 65 <i>L. tulipifera</i> 80 <i>B. alleghaniensis</i> 30 <i>T. canadensis</i> 65	<i>Q. rubra</i> 57.7 <i>A. saccharinum</i> 15.7 <i>L. tulipifera</i> 8.7-12.6 <i>B. alleghaniensis</i> 4.0 <i>T. canadensis</i> 16.3	-
Plot 11	4-3	29	Deciduous Forest Upland	<i>Populus tremuloides</i> , <i>Ulmus americana</i>	70	<i>P. tremuloides</i> 9.0-18.0 <i>U. americana</i> 4.0	-
Plot 12	4-5	30	Deciduous Forest Upland	<i>Populus tremuloides</i> , <i>Ulmus americana</i> , <i>Fraxinus pennsylvanica</i>	<i>P. tremuloides</i> 25 <i>U. americana</i> 30 <i>F. pennsylvanica</i> 25	<i>P. tremuloides</i> 8.3 <i>U. americana</i> 3.5-12.0 <i>F. pennsylvanica</i> 5.2-6.3	-
Plot 13	4-5	31	Deciduous Forest Upland	<i>Acer saccharinum</i> , <i>Populus tremuloides</i> , <i>Betula alleghaniensis</i> , <i>Fraxinus americana</i>	<i>A. saccharinum</i> 50 <i>P. tremuloides</i> 75 <i>B. alleghaniensis</i> 50 <i>F. americana</i> 75	<i>A. saccharinum</i> 6.7 <i>P. tremuloides</i> 10.9-15.0 <i>B. alleghaniensis</i> 5.5-7.5 <i>F. americana</i> 4.6	-
Plot 14	4-5	32	Deciduous Forest Upland	<i>Fraxinus pennsylvanica</i> , <i>Acer rubrum</i> , <i>Populus tremuloides</i>	<i>F. pennsylvanica</i> 65 <i>A. rubrum</i> 75 <i>P. tremuloides</i> 75	<i>F. pennsylvanica</i> 3.6-5.7 <i>A. rubrum</i> 3.2-8.5 <i>P. tremuloides</i> 14.0	-
Plot 15	4-6	33	Deciduous Forest Upland	<i>Fraxinus americana</i>	<i>F. americana</i> 25	<i>F. americana</i> 3.9-4.8	-
Plot 16	4-6	34	Mixed Forest Upland	<i>Acer saccharinum</i> , <i>Betula alleghaniensis</i> , <i>Tsuga canadensis</i>	<i>A. saccharinum</i> 75 <i>B. alleghaniensis</i> 60 <i>T. canadensis</i> 60	<i>A. saccharinum</i> 3.5-17.0 <i>B. alleghaniensis</i> 2.5 <i>T. canadensis</i> 10.7-13.9	-

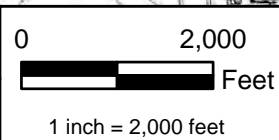
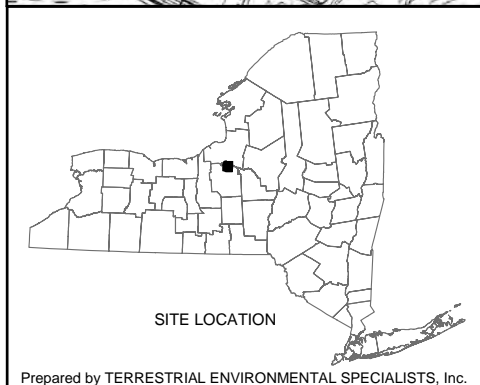
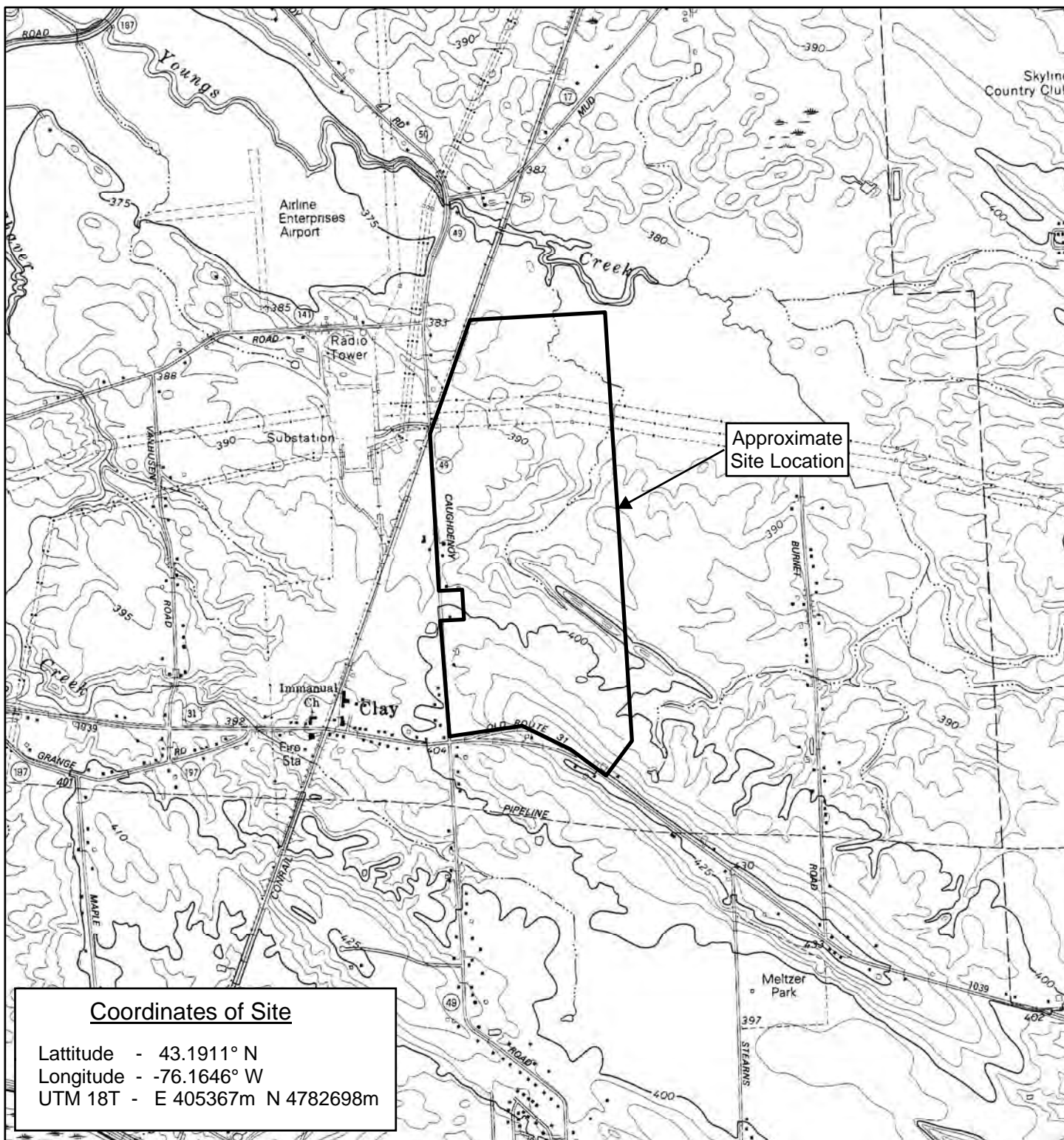


Figure 1. NYS DOT Topographic Map

Site Location

Brewerton Quadrangle

1989

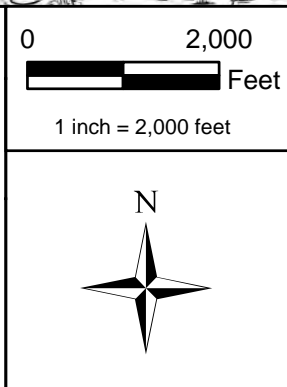
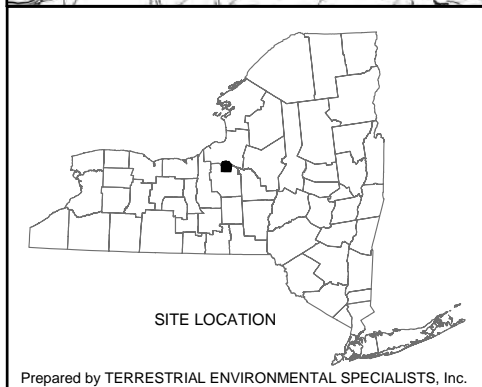
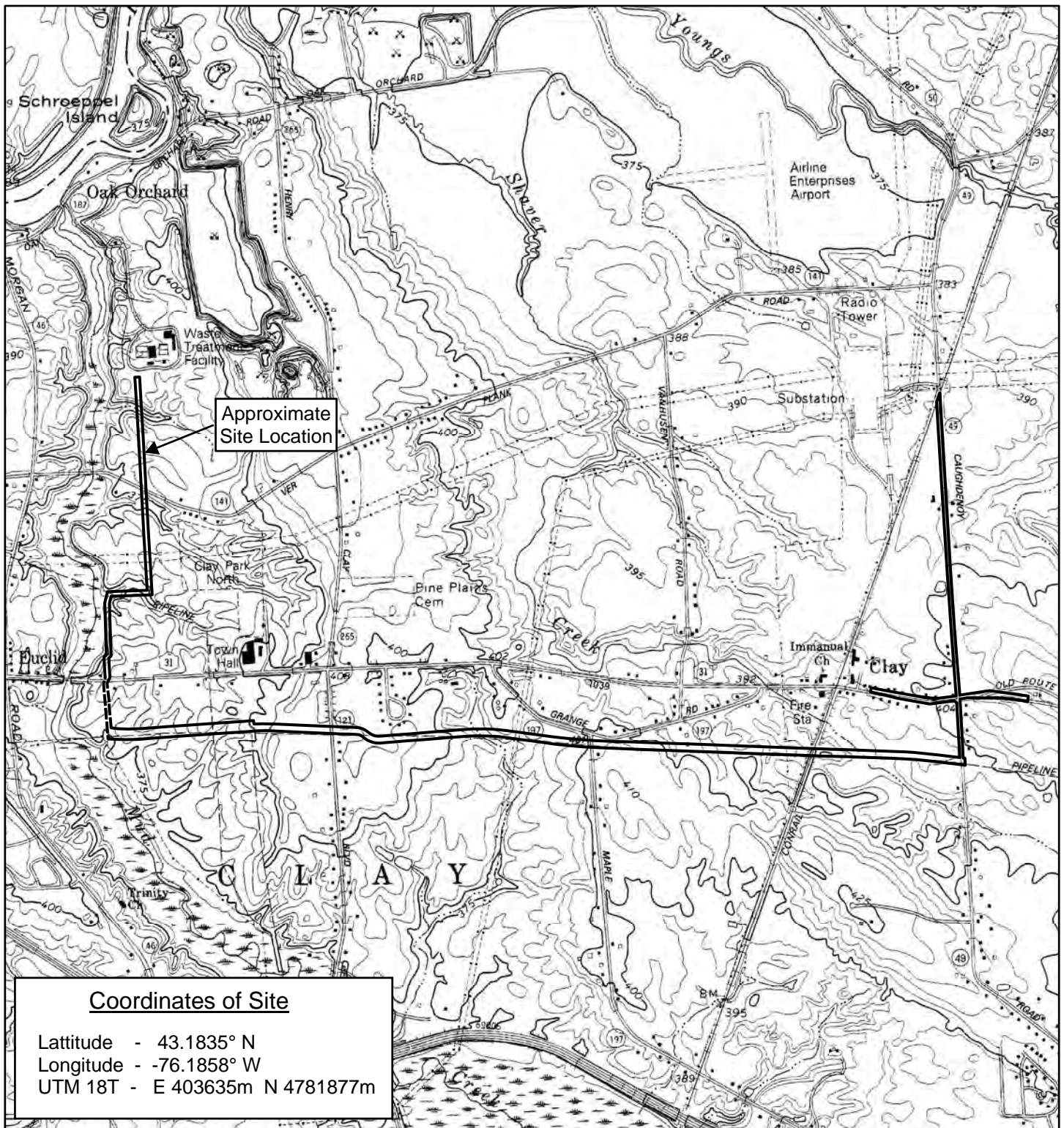


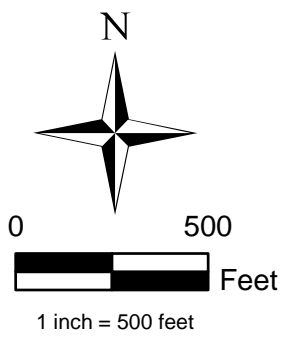
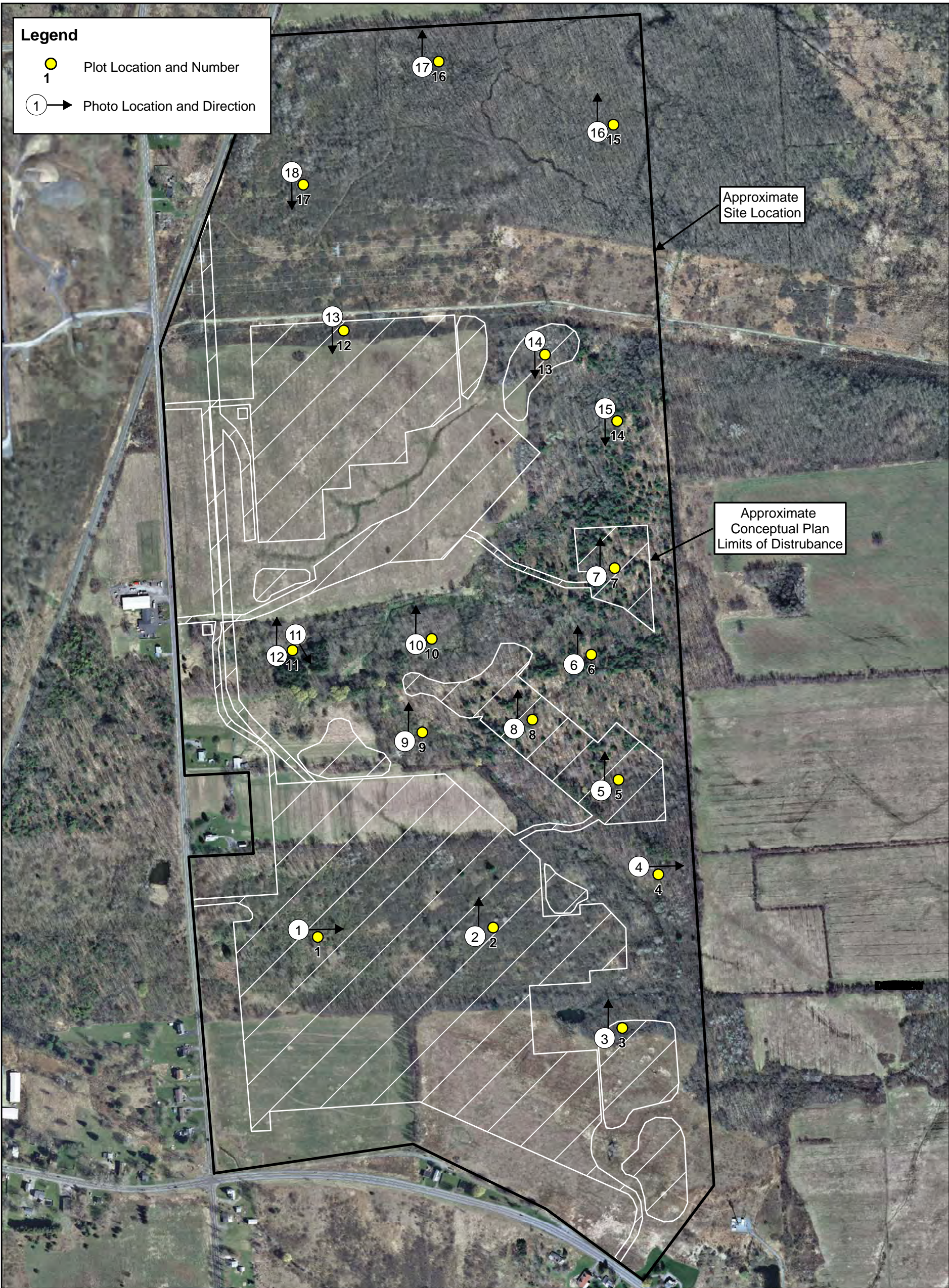
Figure 2. NYS DOT Topographic Map

Site Location

Brewerton Quadrangle

1989

TES File: IDA-2033B\2033B-Pipeline-Fig2.mxd\8-27-2013



Aerial Photograph obtained
from NYS GIS Clearinghouse
2012

Figure Prepared by
Terrestrial Environmental
Specialists, Inc.

Figure 3.
OCIDA White Pine Commerce Park
Indiana Bat Habitat Assessment

Aerial Photograph
of Site with Plot and
Photograph Locations



Aerial Photograph Obtained
from NYS GIS Clearinghouse
2009

Figure Prepared by
Terrestrial Environmental
Specialists, Inc.

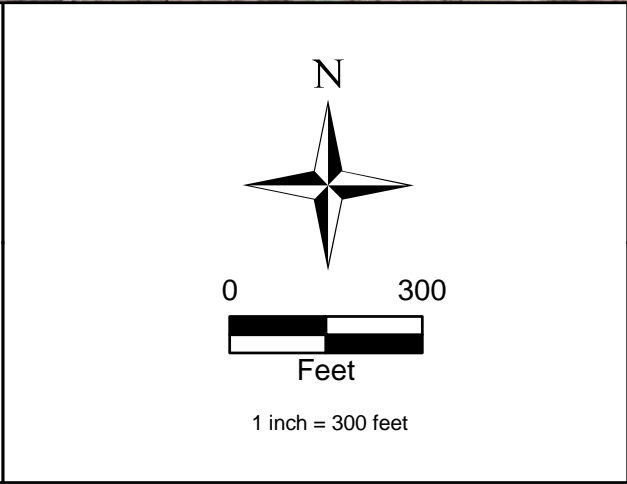


Figure 4-1.

**OCIDA Sanitary Sewer Line
Indiana Bat Habitat Assessment**

**Aerial Photograph
of Site with Plot and
Photograph Locations**

Sheet 1 of 6

TES File: IDA-2033B\2033B-Pipeline-Aerial1of6.mxd\8-27-2013



Legend

● Plot Location and Number
5

⓪➔ Photo Location and Direction
23

N

0 300

Feet

1 inch = 300 feet

Aerial Photograph Obtained
from NYS GIS Clearinghouse
2009

Figure Prepared by
Terrestrial Environmental
Specialists, Inc.

Figure 4-2.

**OCIDA Sanitary Sewer Line
Indiana Bat Habitat Assessment**

**Aerial Photograph
of Site with Plot and
Photograph Locations**

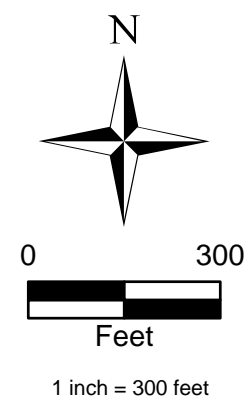
Sheet 2 of 6



Legend

● 9 Plot Location and Number

②7→ Photo Location and Direction



Aerial Photograph Obtained
from NYS GIS Clearinghouse
2009

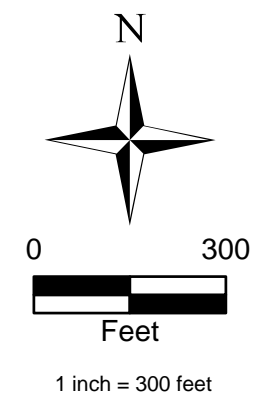
Figure Prepared by
Terrestrial Environmental
Specialists, Inc.

Figure 4-3.

**OCIDA Sanitary Sewer Line
Indiana Bat Habitat Assessment**

**Aerial Photograph
of Site with Plot and
Photograph Locations**

Sheet 3 of 6



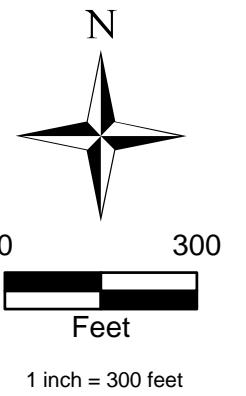
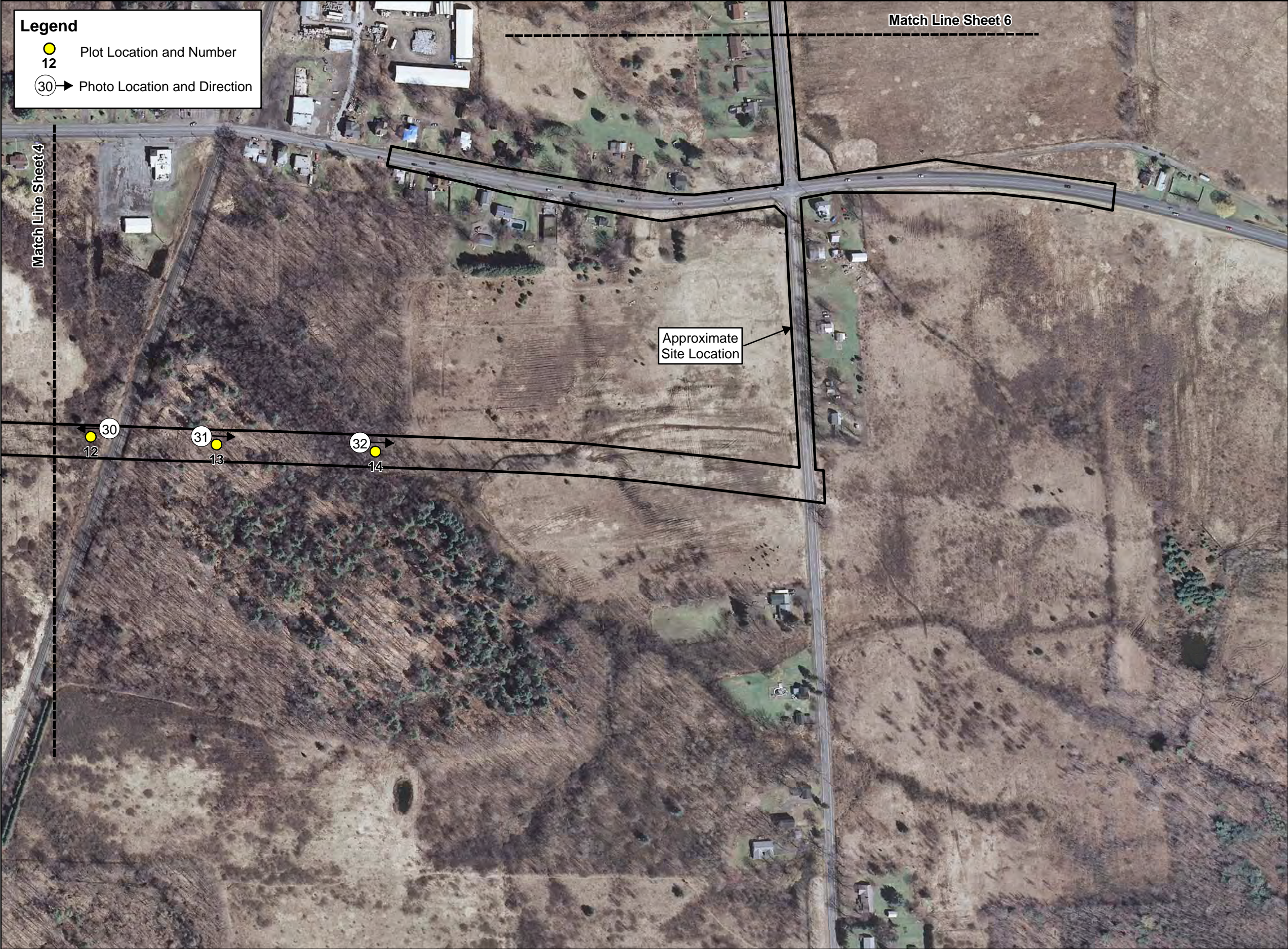
Aerial Photograph Obtained
from NYS GIS Clearinghouse
2009

Figure Prepared by
Terrestrial Environmental
Specialists, Inc.

Figure 4-4.
OCIDA Sanitary Sewer Line
Indiana Bat Habitat Assessment

Aerial Photograph
of Site with Plot and
Photograph Locations

Sheet 4 of 6



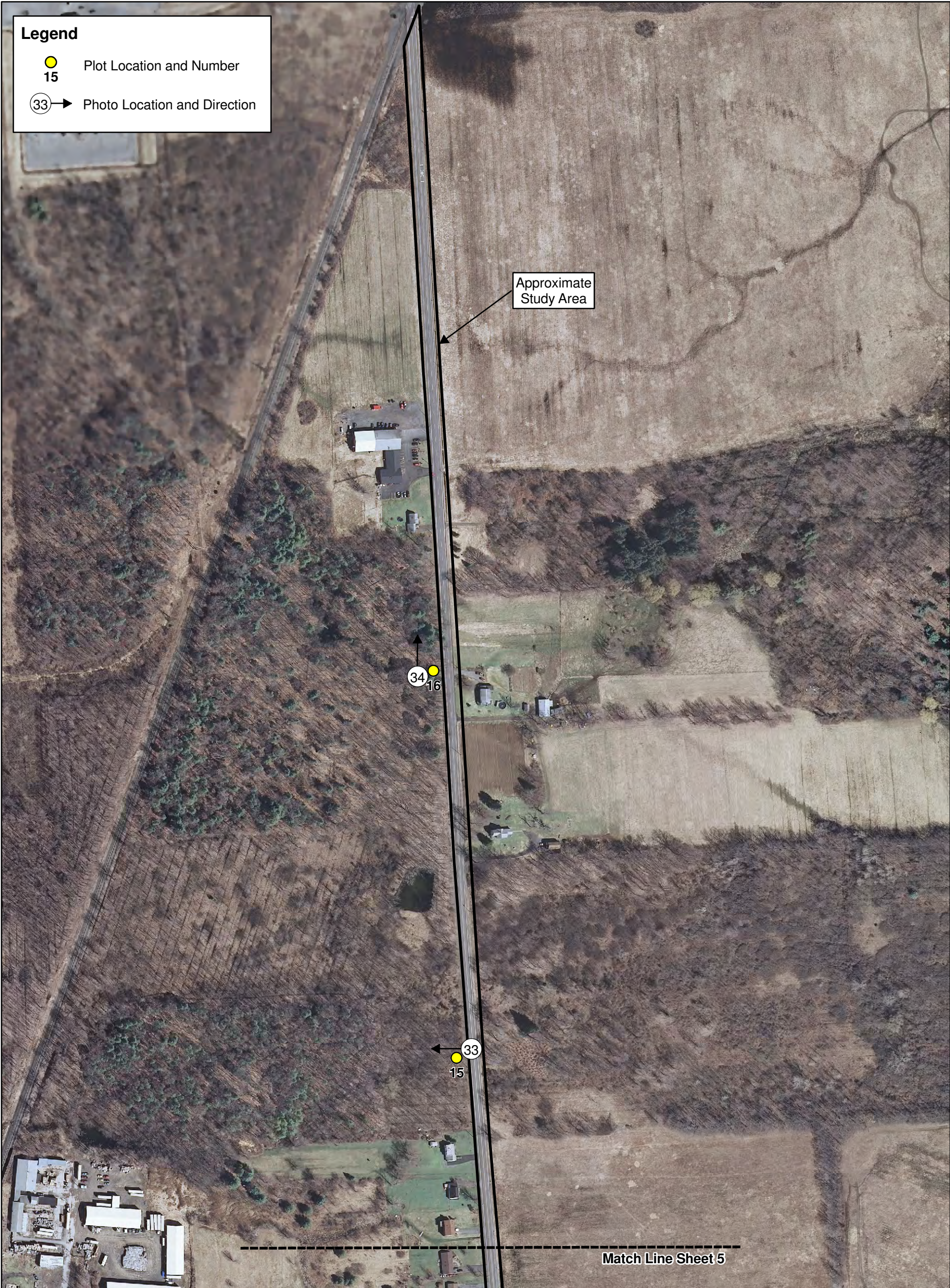
Aerial Photograph Obtained
from NYS GIS Clearinghouse
2009

Figure Prepared by
Terrestrial Environmental
Specialists, Inc.

Figure 4-5.
**OCIDA Sanitary Sewer Line
Indiana Bat Habitat Assessment**

**Aerial Photograph
of Site with Plot and
Photograph Locations**

Sheet 5 of 6



Aerial Photograph Obtained
from NYS GIS Clearinghouse
2009

Figure Prepared by
Terrestrial Environmental
Specialists, Inc.

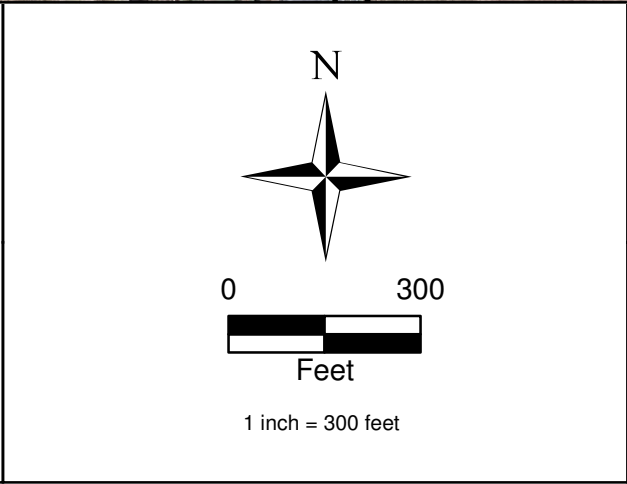


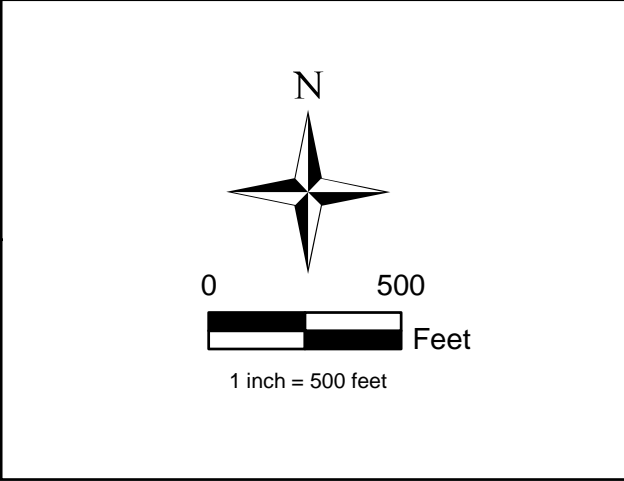
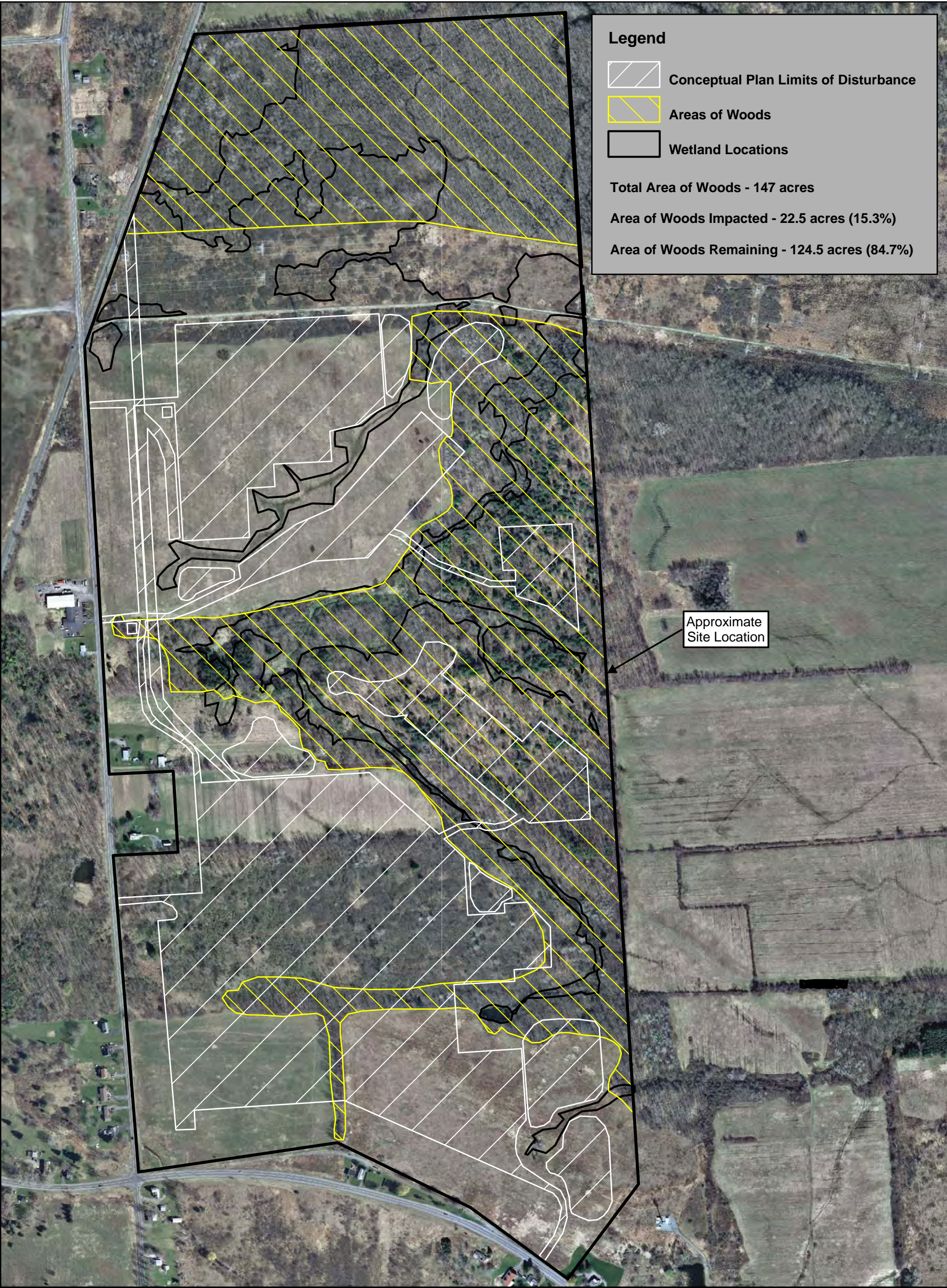
Figure 4-6.

**OCIDA Sanitary Sewer Line
Indiana Bat Habitat Assessment**

**Aerial Photograph
of Site with Plot and
Photograph Locations**

Sheet 6 of 6

TES File: IDA-2033B\2033B-Pipeline-Aerial6of6.mxd\8-27-2013



Aerial Photograph obtained from NYS GIS Clearinghouse 2012

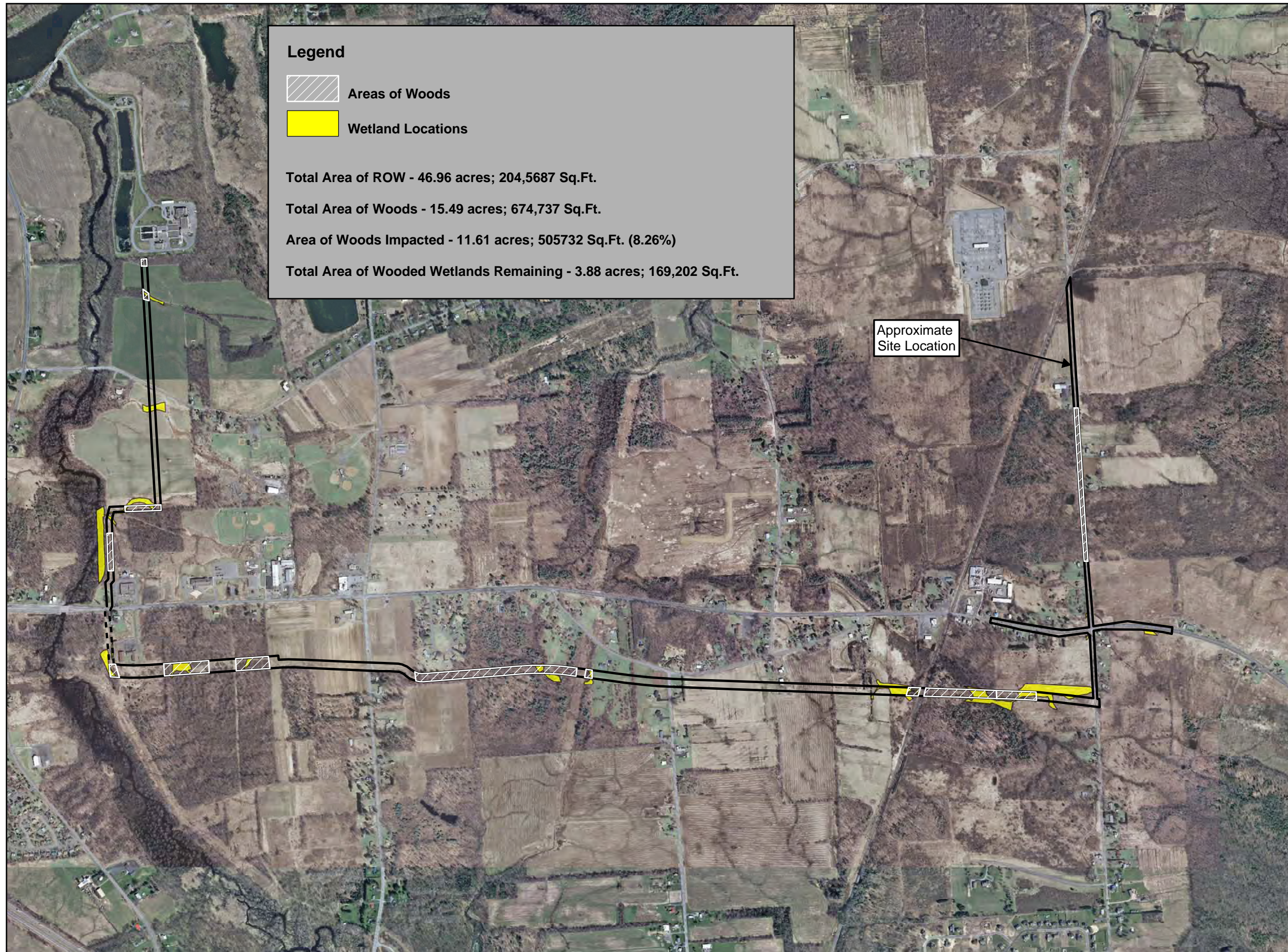
Figure Prepared by Terrestrial Environmental Specialists, Inc.

Figure 5.

OCIDA White Pine Commerce Park

Aerial Photograph of Site with Conceptual Plan Limits of Disturbance, Areas of Woods, and Wetland Locations

TES File: IDA-2033B\2033B-Aerial-Site-LOD-Forested.mxd\8-27-2013



Aerial Photograph Obtained from NYS GIS Clearinghouse 2012

Figure Prepared by Terrestrial Environmental Specialists, Inc.

Figure 6.

OCIDA Sanitary Sewer Line

Aerial Photograph of Site with Areas of Woods and Wetland Locations

TES File: IDA-2033B\2033B-Pipeline-Woods.mxd\8-27-2013



Photo 1.



Photo 2.

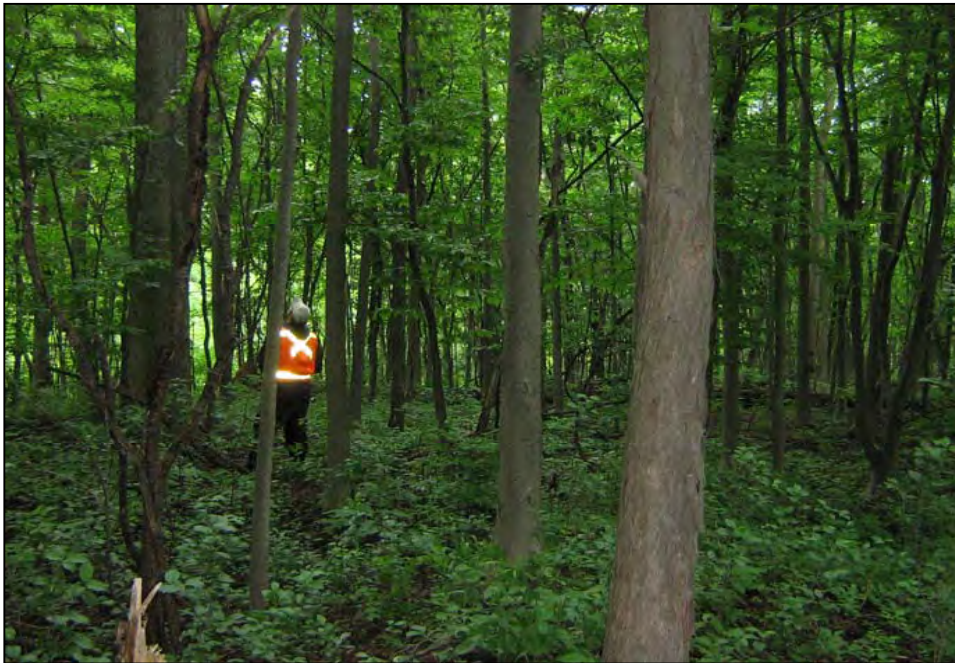


Photo 3.



Photo 4.



Photo 5.



Photo 6.



Photo 7.



Photo 8.



Photo 9.



Photo 10.



Photo 11.



Photo 12.



Photo 13.



Photo 14.



Photo 15.



Photo 16.



Photo 17.



Photo 18.



Photo 19.



Photo 20.



Photo 21.



Photo 22.



Photo 23.



Photo 24.



Photo 25.



Photo 26.



Photo 27.



Photo 28.



Photo 29.



Photo 30.



Photo 31.



Photo 32.



Photo 33.



Photo 34.