

**Threatened and Endangered Species Survey Report for the
Federally Endangered Running Buffalo Clover
(*Trifolium stoloniferum*) for the Preferred Alternative of the
Portsmouth Bypass SCI-823-0.00/6.81 (PID 19415)
Scioto County, Ohio**

By

Len Mikles, Senior Ecologist, PWS

and

Jason M. Earley, Senior Environmental Specialist

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INTRODUCTION

ASC Group, Inc., under contract with HDR Engineering, Inc., performed a species survey for the federally endangered running buffalo clover (*Trifolium stoloniferum*) within an approximately 1,010-acre corridor located in Scioto County, Ohio (Appendix A: Figure 1; Sheets 1 and 2). The study area corridor is the proposed alignment for the Preferred Alternative for the Portsmouth Bypass Project SCI-823-0.00/6.81 (PID 19415). This report summarizes the results of the running buffalo clover survey. Photographs (1–25) of the study are presented in Appendix B.

Due to the time elapsed since the original species coordination, the United States Fish and Wildlife Service (USFWS) has requested an additional survey of the Preferred Alternative for the federally endangered running buffalo clover for continued species coordination for the proposed project. The original threatened and endangered species coordination did not include a running buffalo clover survey. In order to complete the USFWS survey request, ecologists from ASC proposed to conduct a directed meander survey for the Preferred Alternative.

METHODS

A directed meander survey for the running buffalo clover was conducted under the direction of Len Mikles, an USFWS approved botanist. Directed meander surveys were conducted on foot within the limits of the Preferred Alternative. In a directed meander survey, areas of that exhibit higher quality habitat are investigated more extensively than those areas of poorer quality. Suitable habitat for this survey includes mesic areas with partial to filtered sunlight, where there is a prolonged pattern of moderate, periodic disturbance including mowing, grazing, or trampling. Surveys for the running buffalo clover will be conducted in areas of suitable habitat based on the visual investigation and the professional opinion of an USFWS approved botanist. Areas that are generally considered higher quality habitat include mesic woodlands, savannahs, floodplains, stream banks, sandbars, grazed woodlots, mowed paths, ORV trails, and old logging roads that are located between the mid-slope and valleys along hillsides as the drier ridge tops are expected to have a lower probability of supporting this species. In addition, areas that are exposed to full sun, full shade, or severe disturbance do not provide suitable habitat and were not surveyed.

RESULTS

A team of ecologists from ASC conducted the running buffalo clover survey between May 11 and June 2, 2011. The field survey was conducted along the entire 1,010-acre project area (Figure 1; Sheets 1 and 2). ASC conducted the directed meander survey of the project area on foot. Progress of the meander survey path was recorded using sub-meter GPS and is plotted on Figure 2, Sheets 1–18. Twelve running buffalo clover survey plots were established within the Preferred Alternative (Figure 2; Sheets 1–18). Each of the identified sample plots were surveyed by ecologists for approximately 1 hour. At each of the investigated sample plots, ecologists identified and recorded all vegetation located within the potential running buffalo clover habitat. Completed species lists are included in Appendix C and a summary of each of the sample plots is provided in Table 1. No populations or individuals of the federally endangered running buffalo clover were identified during this survey.

Table 1. Plot Habitat Summary.

Plot ID	Habitat Type	Photograph(s)
1	Stream Side/Mesic Forest/Old Logging Road	1
2	Mesic Forest/Old Logging Road	2
3	Stream Side/Mesic Forest/Old Logging Road	5
4	Stream Side/Mesic Forest/Old Logging Road	7
5	Mowed Lawn/Stream Side	8
6	Old Logging Road/ATV Trail	12
7	Stream Side/Mesic Forest/Old Logging Road/ATV Trail Habitat	13
8	Old Logging Road/ATV Trail	15
9	Old Logging Road/ATV Trail	16
10	Old Logging Road/ATV Trail	19
11	Old Logging Road/ATV Trail	21, 22
12	Stream Side/Mesic Forest/Old Logging Road	24

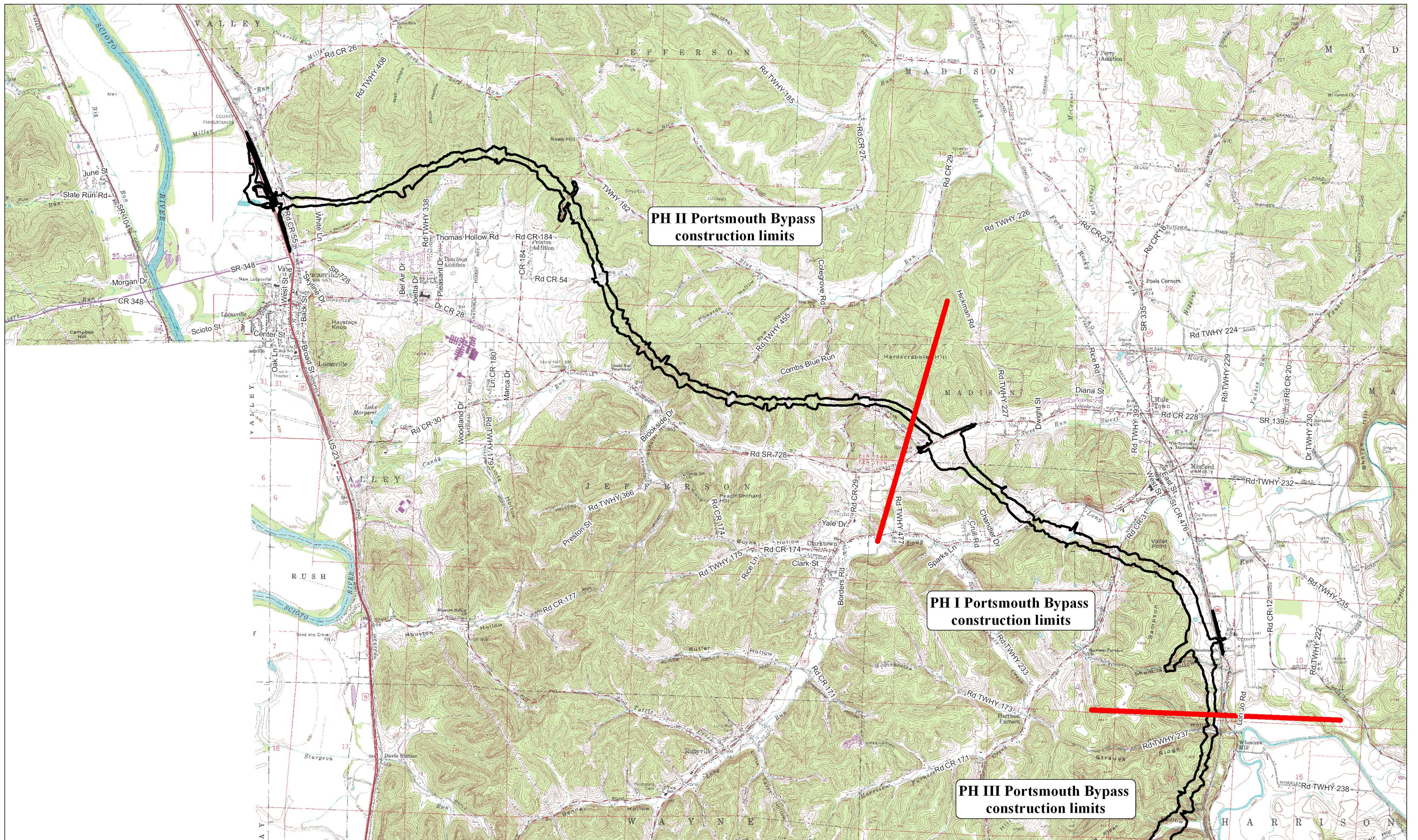
The 12 areas of potential running buffalo clover habitat within the Preferred Alternative consist of partially shaded wooded areas along streams, old logging roads, ATV trails, and periodically mowed lawn. The majority of the Preferred Alternative was not considered potential habitat for the running buffalo clover due to the topography of the area, dense undergrowth, and severe disturbance from logging and other activities. Furthermore, additional ecological surveys within portions of the study area conducted after the completion of the running buffalo clover survey found that many of the areas that appeared to provide suitable

habitat earlier in the season would no longer be suitable due to the presence of dense populations of Japanese stiltgrass or Nepalese browntop (*Microstegium vimineum*). When established, this invasive annual spreads to form dense patches, which can displace other vegetation. This species was found at 10 of the 12 sample sites.

CONCLUSION

The Preferred Alternative for the Portsmouth Bypass was surveyed for the federally endangered running buffalo clover. Twelve sample plots were established in areas of potential habitat for the species. No populations or individuals were found during the species survey. Although running buffalo clover was not found during the survey some potential habitat does exist within the surveyed area. However, the majority of the survey plots (10 of 12) contained populations of *Microstegium vimineum*, an invasive species, which may make these potential sites unsuitable for the running buffalo clover.

APPENDIX A: FIGURES



- Construction limits
- Phase breaks

Base: 1988 Lucasville, 1990 Minford, 1988 Stockdale, and 1991 Wakefield, Ohio, 1975 Portsmouth KY-OH, 1988 New Boston, and 1985 Wheelersburg, OH-KY USGS 7.5' series quadrangles

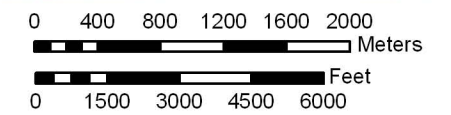


Figure 1. USGS 7.5' topographic map. (2 sheets)



**PH III Portsmouth Bypass
construction limits**



- Construction limits
- Phase breaks

Base: 1988 Lucasville, 1990 Minford, 1988 Stockdale, and 1991 Wakefield, Ohio, 1975 Portsmouth KY-OH, 1988 New Boston, and 1985 Wheelersburg, OH-KY USGS 7.5' series quadrangles

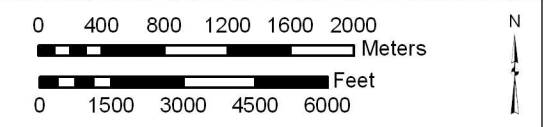


Figure 1. USGS 7.5' topographic map. (2 sheets)



- Construction limits
- - - Meander survey path
- Phase breaks
- Running Buffalo Clover sample plot
- ← Photograph location

Base: Aerial photograph 2009

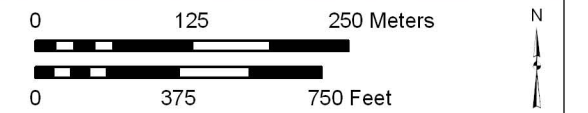
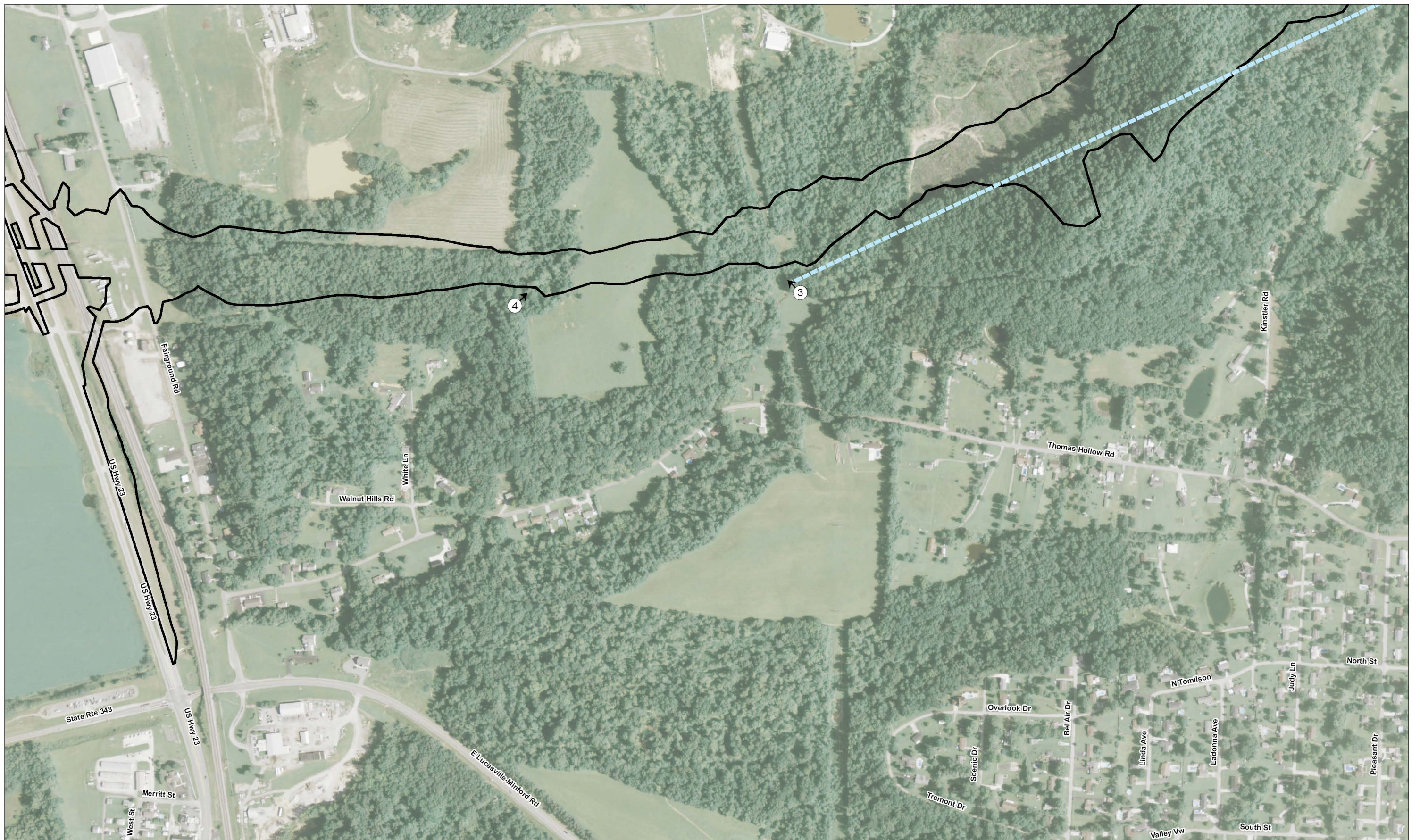


Figure 2. Survey results. (18 sheets)



- Construction limits
- Meander survey path
- Phase breaks
- Running Buffalo Clover sample plot
- Photograph location

Base: Aerial photograph 2009

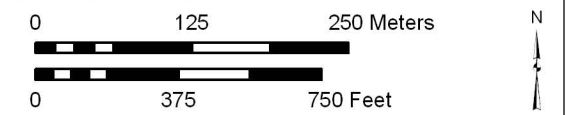
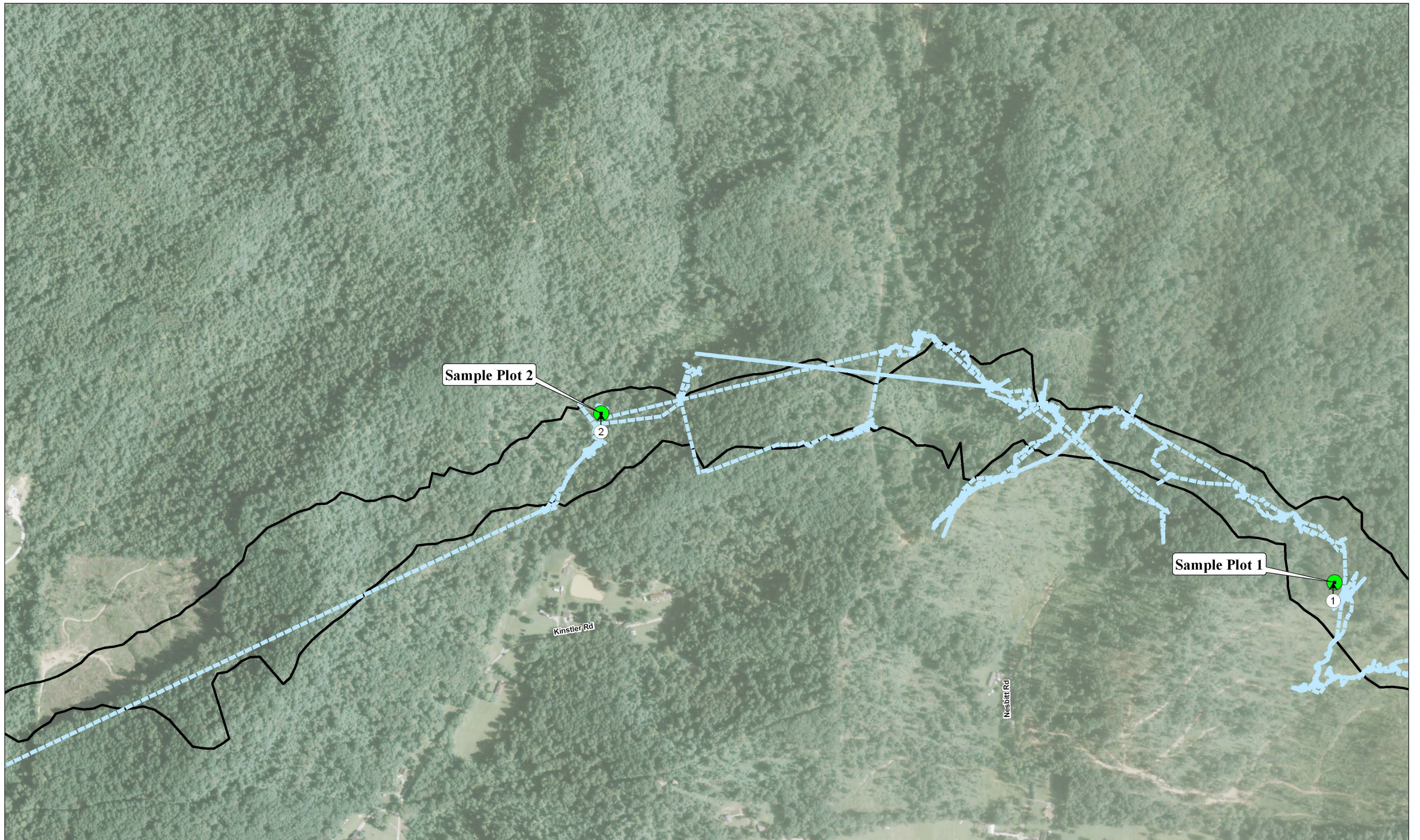


Figure 2. Survey results. (18 sheets)



- Construction limits
- - - Meander survey path
- Phase breaks
- Running Buffalo Clover sample plot
- ⬅️ Photograph location

Base: Aerial photograph 2009

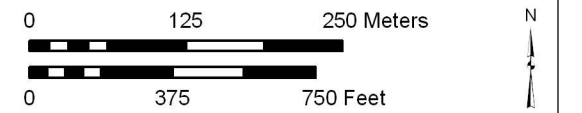
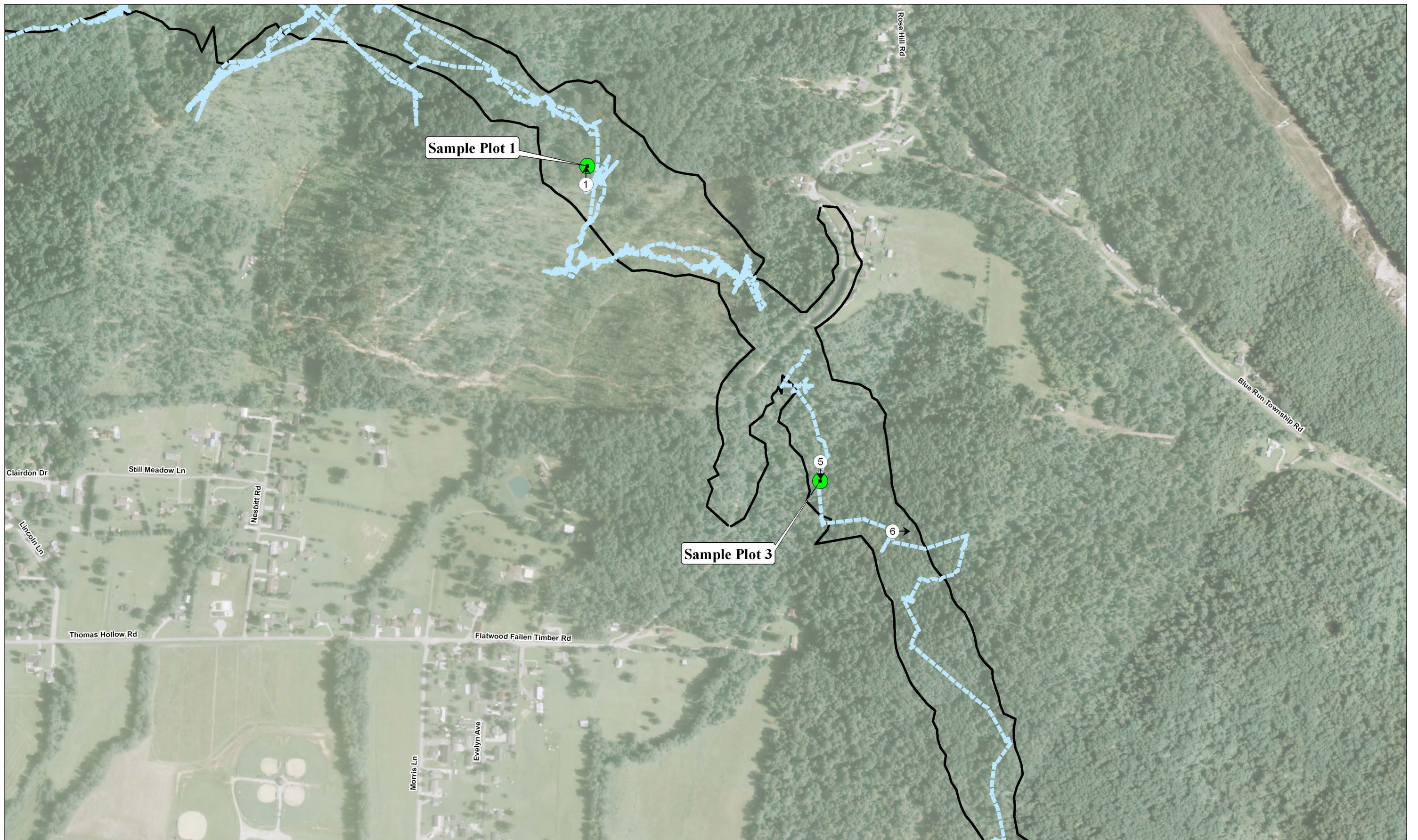


Figure 2. Survey results. (18 sheets)



- Construction limits
- Meander survey path
- Phase breaks
- Running Buffalo Clover sample plot
- ⊙ Photograph location

Base: Aerial photograph 2009

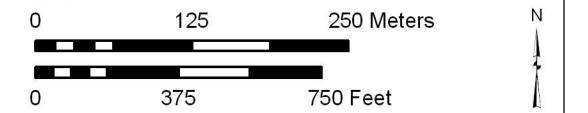


Figure 2. Survey results. (18 sheets)

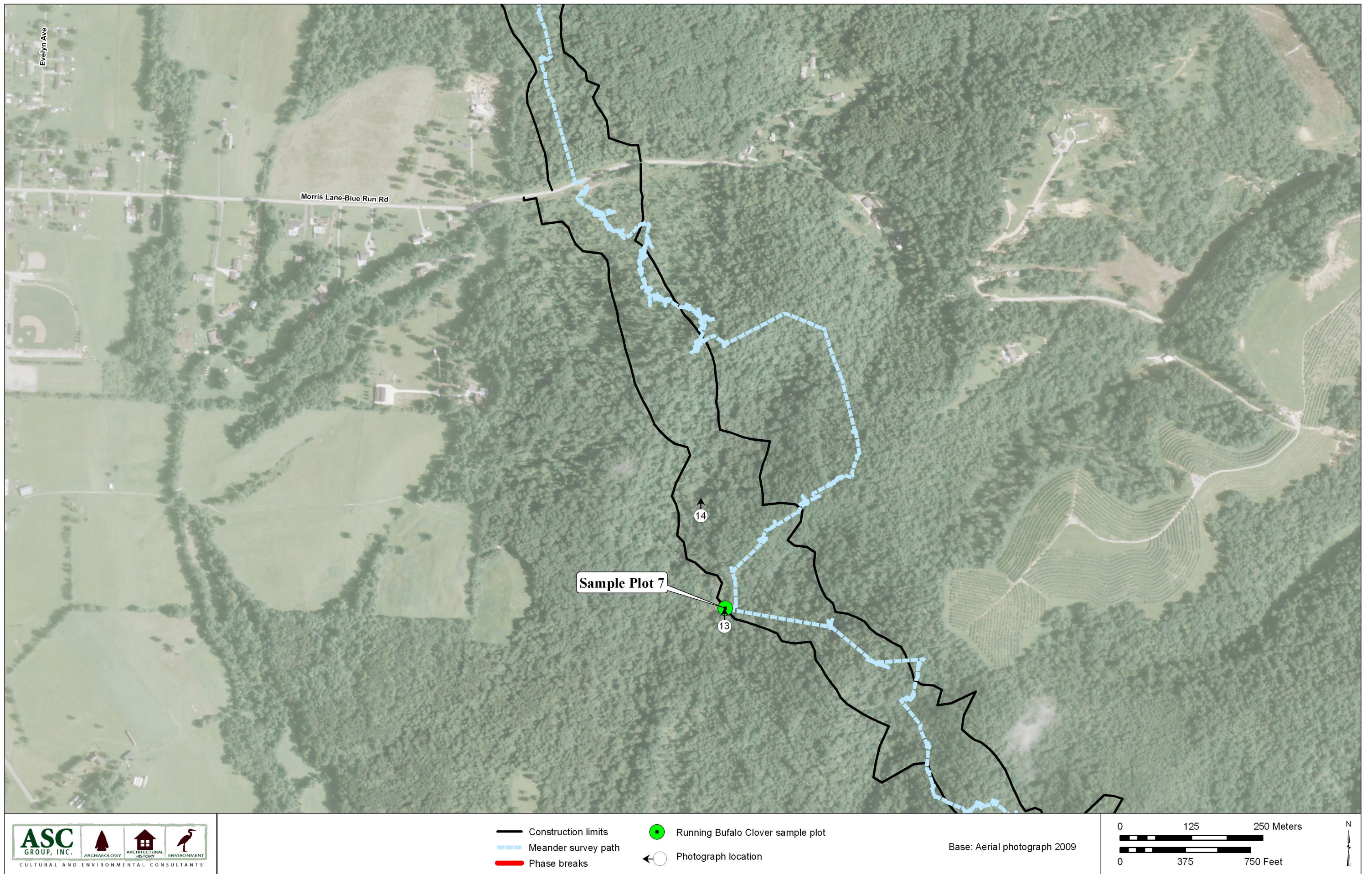
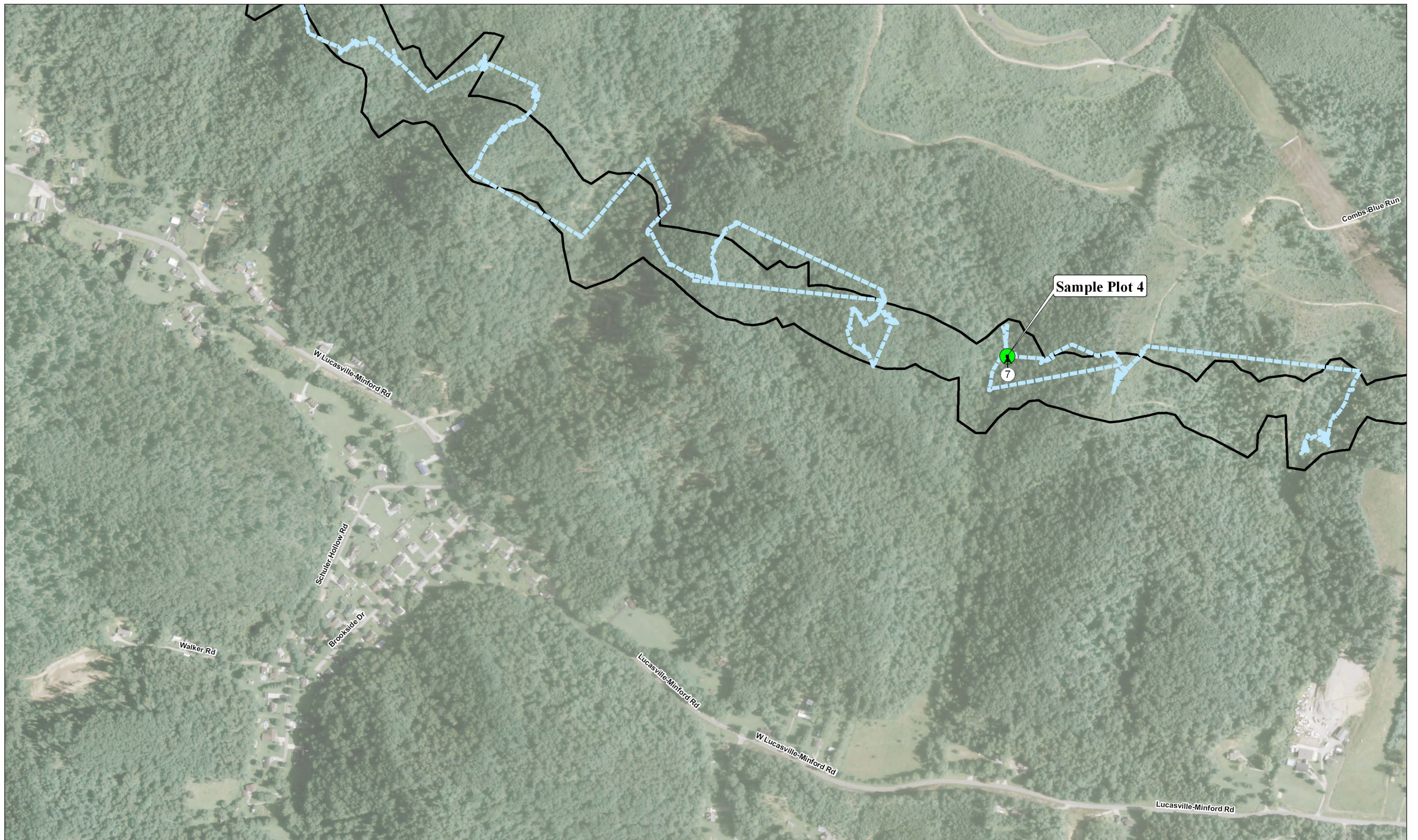


Figure 2. Survey results. (18 sheets)



- Construction limits
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- Running Buffalo Clover sample plot
- Photograph location

Base: Aerial photograph 2009

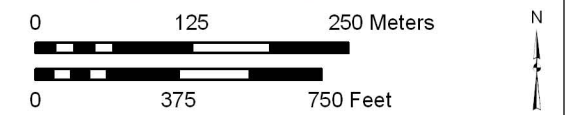
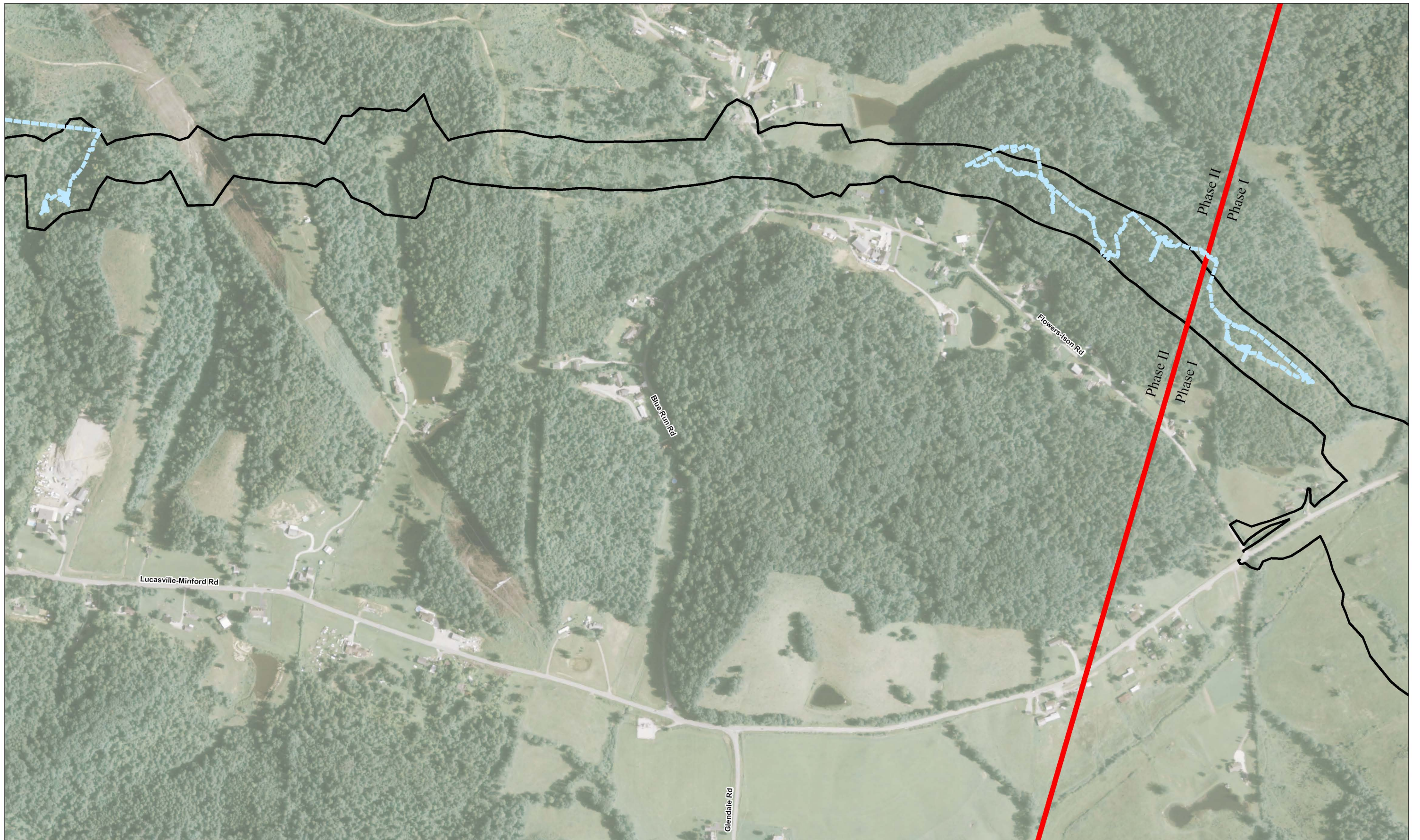


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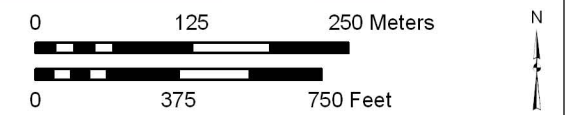
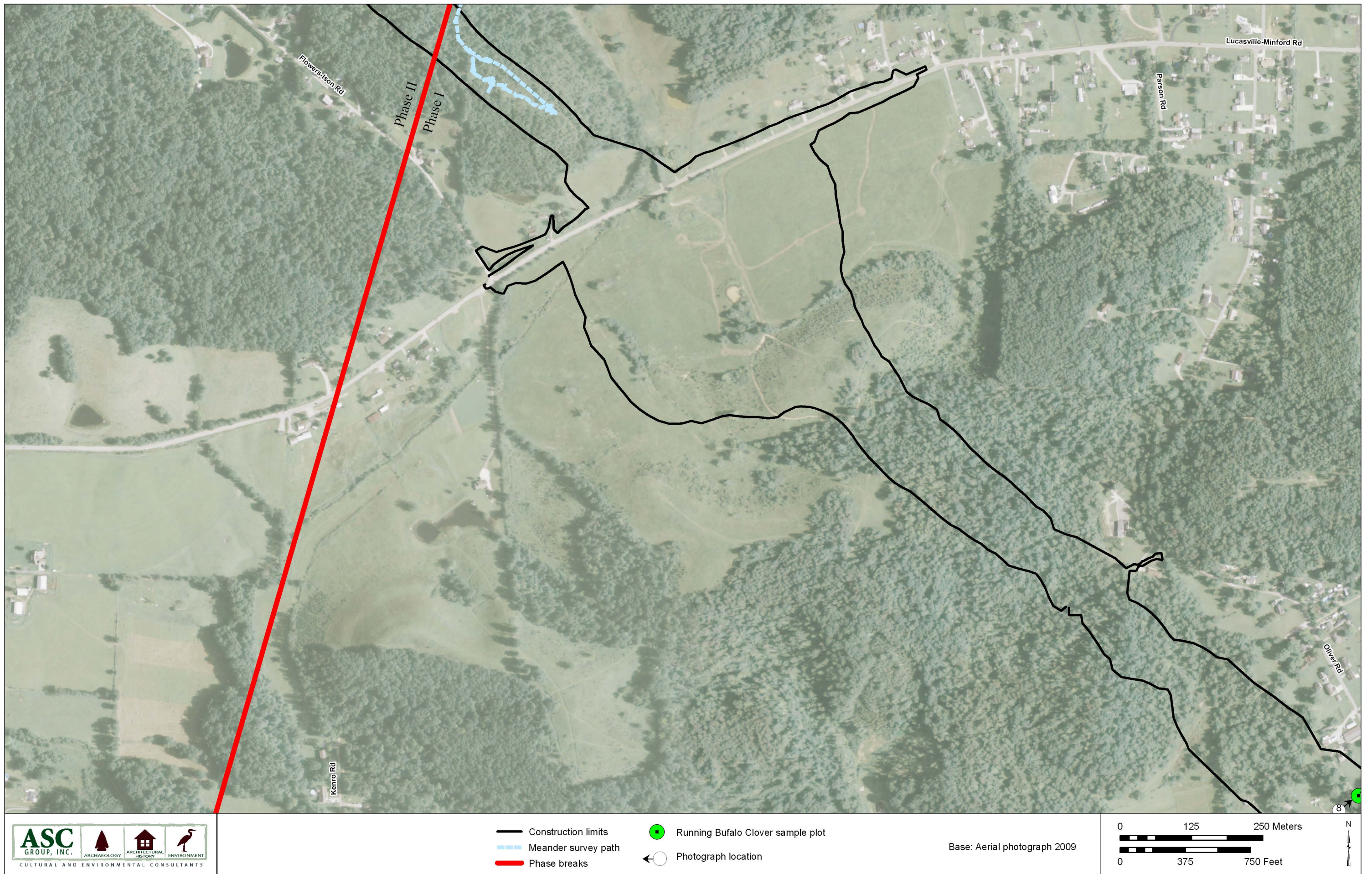


Figure 2. Survey results. (18 sheets)

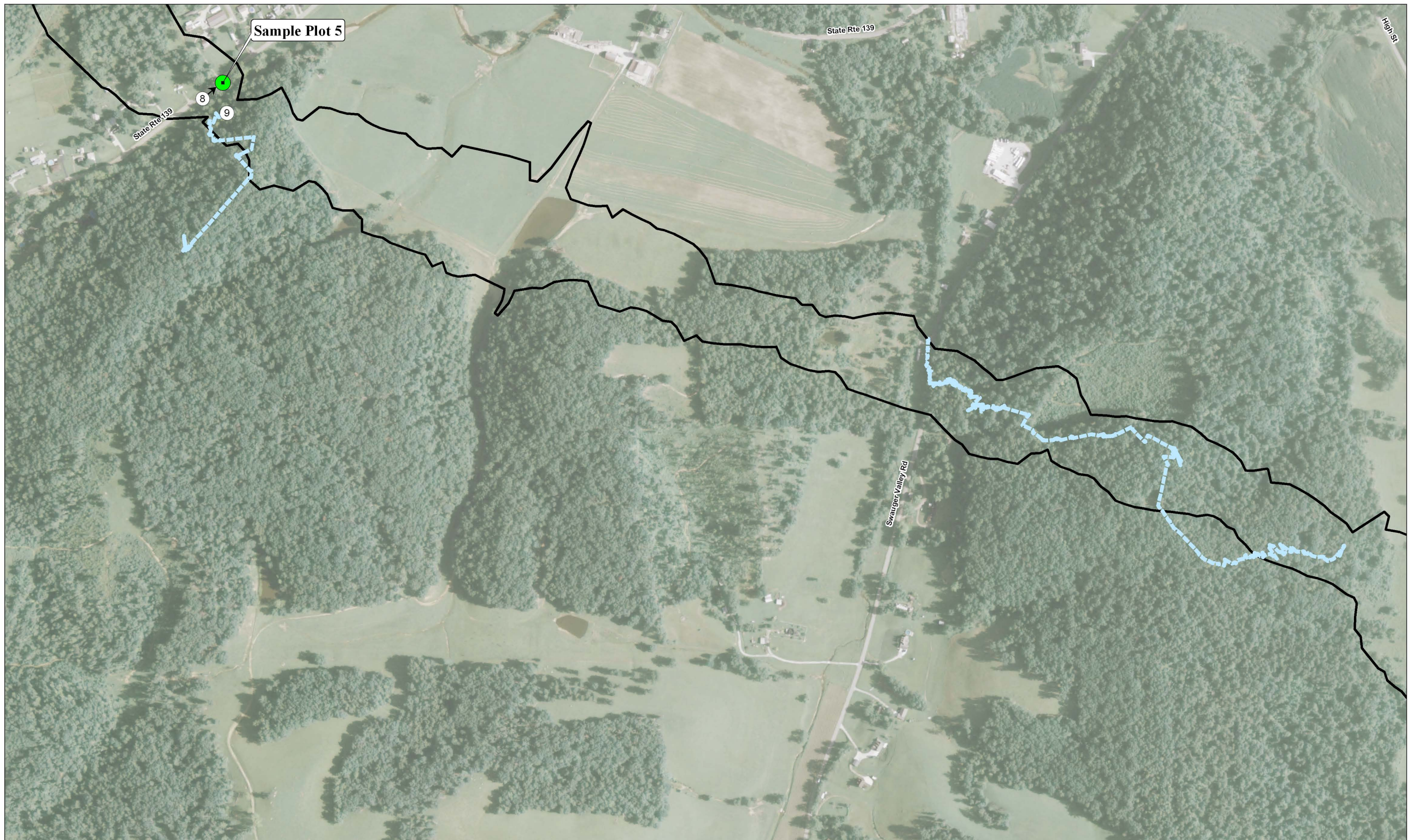


- Construction limits
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- Phase breaks
- Running Buffalo Clover sample plot
- ⬅️ Photograph location

Base: Aerial photograph 2009



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Base: Aerial photograph 2009

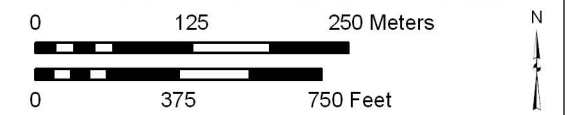
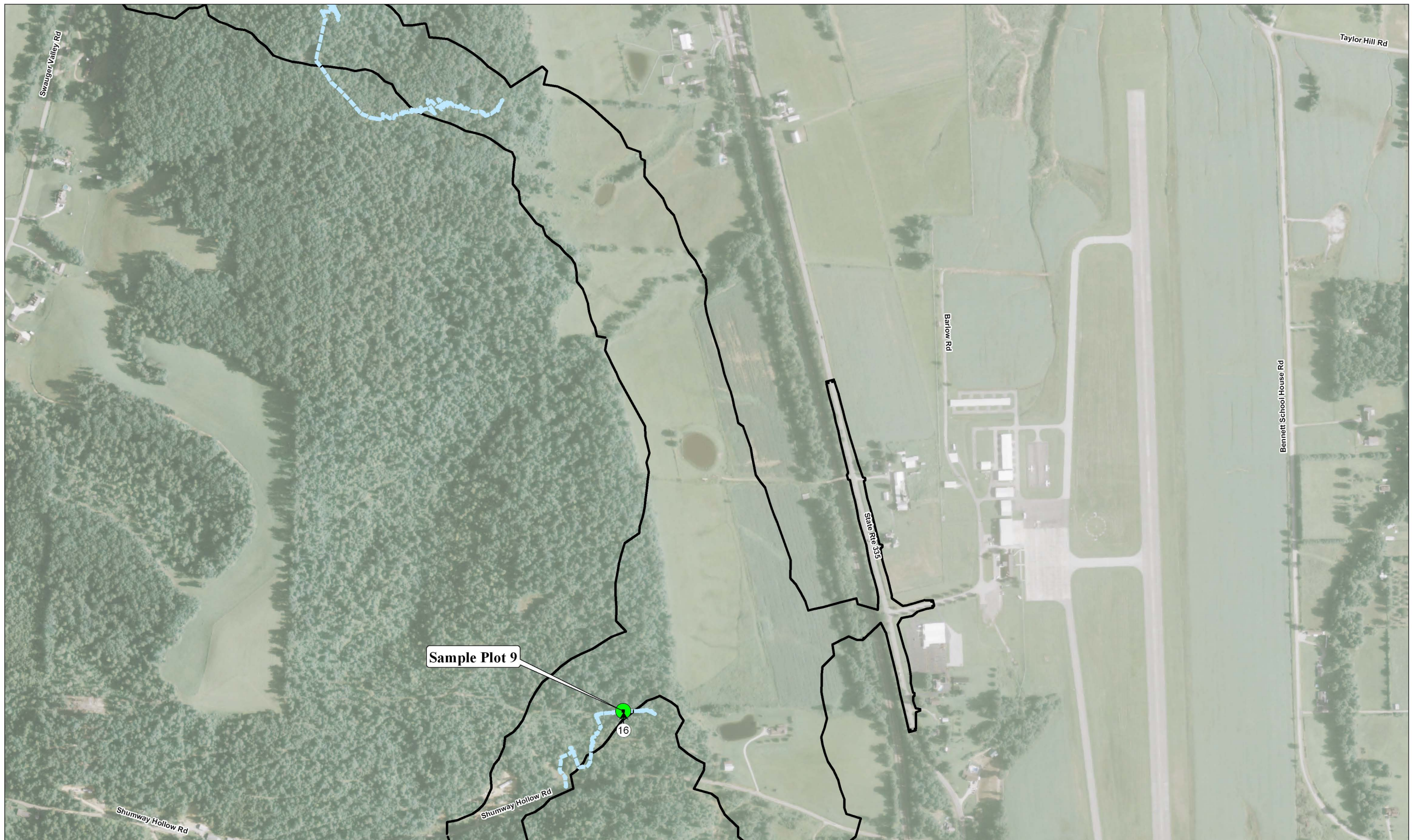


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Base: Aerial photograph 2009

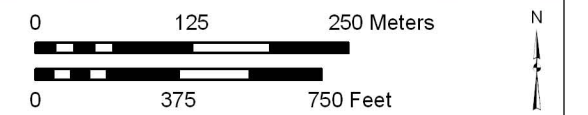
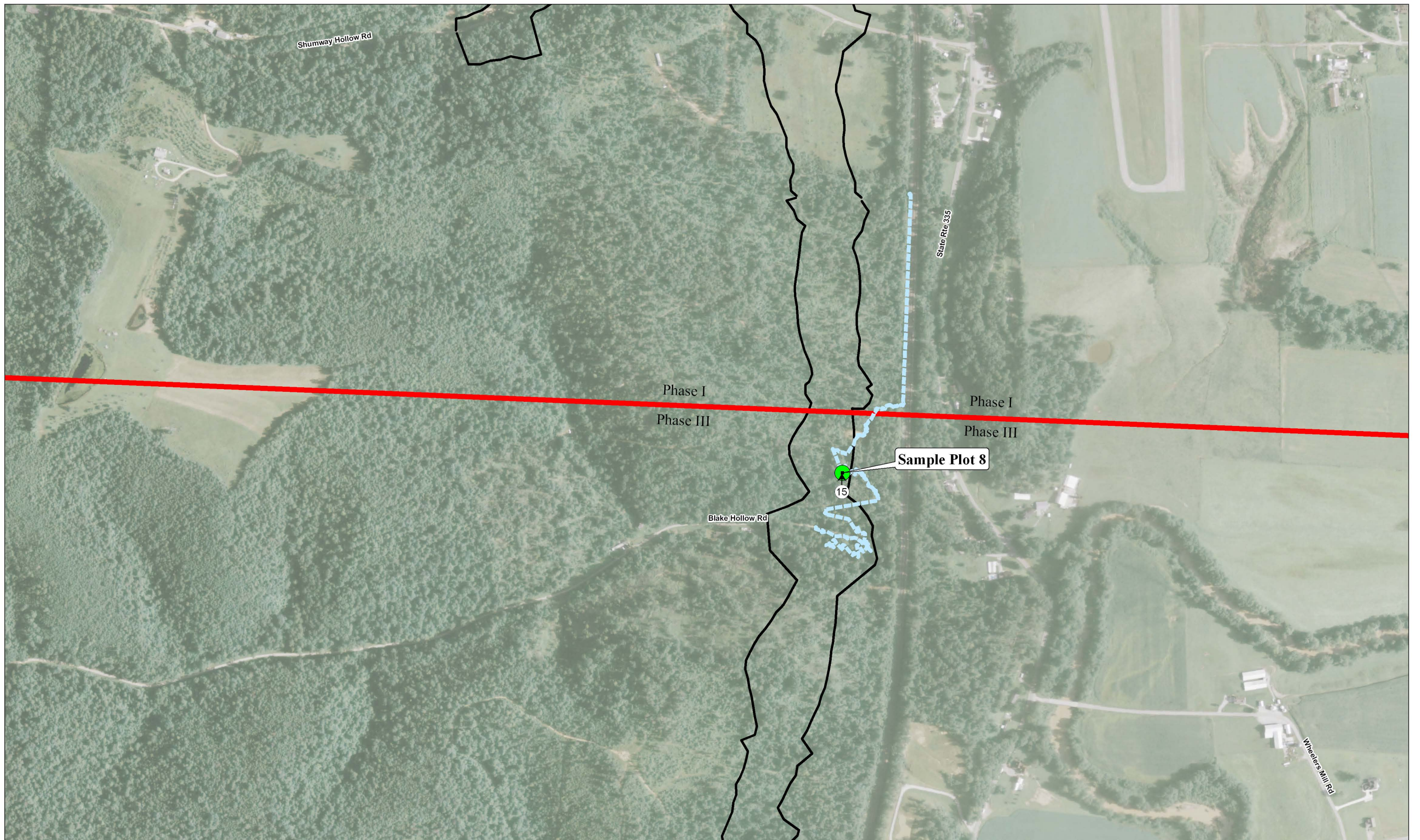


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- Construction limits
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Base: Aerial photograph 2009

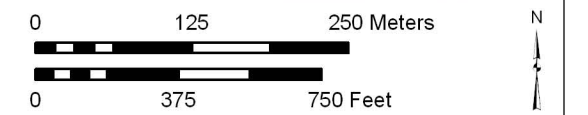
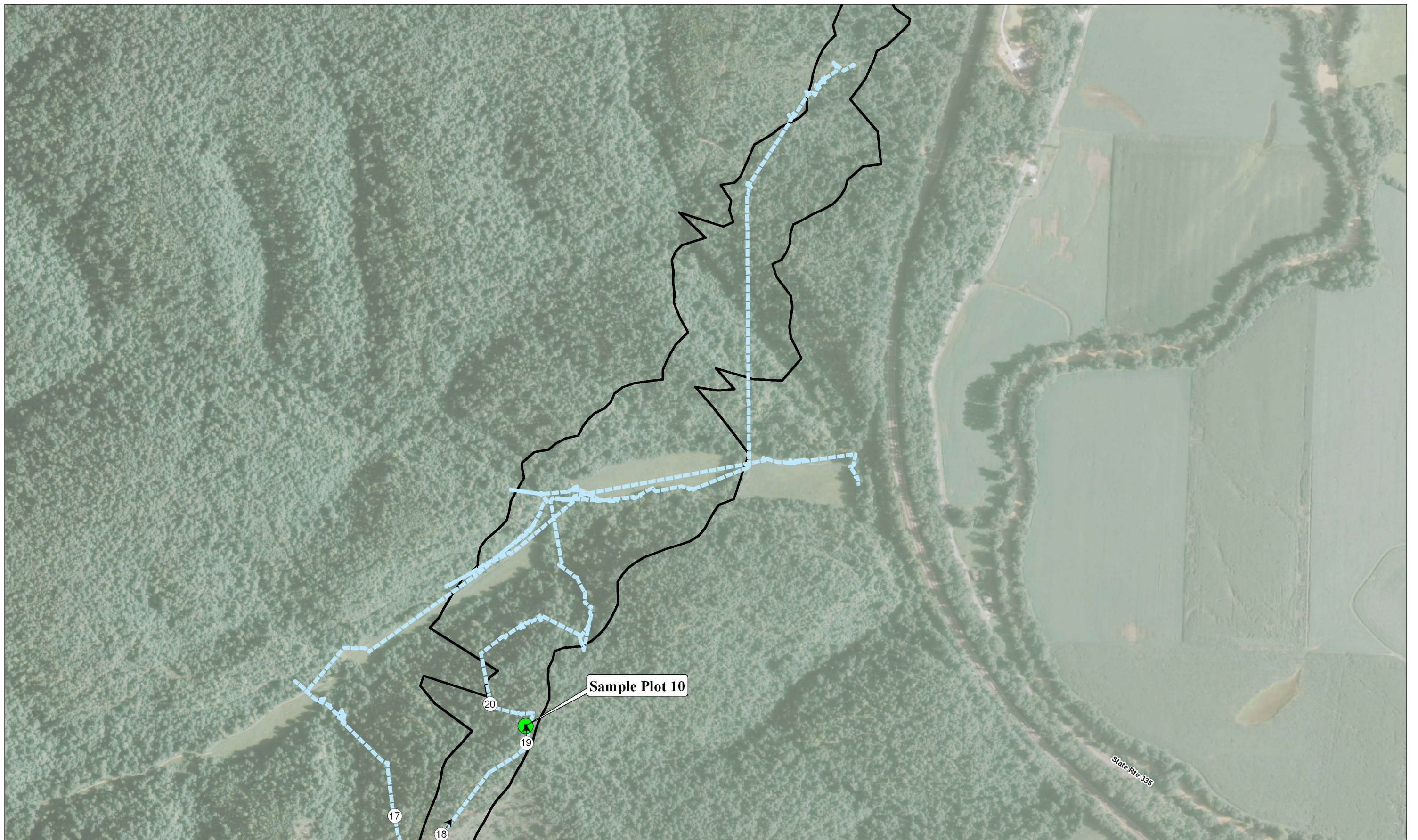


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Base: Aerial photograph 2009

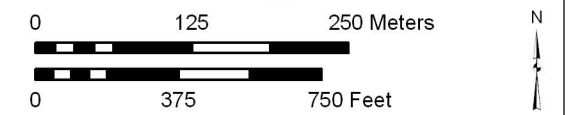
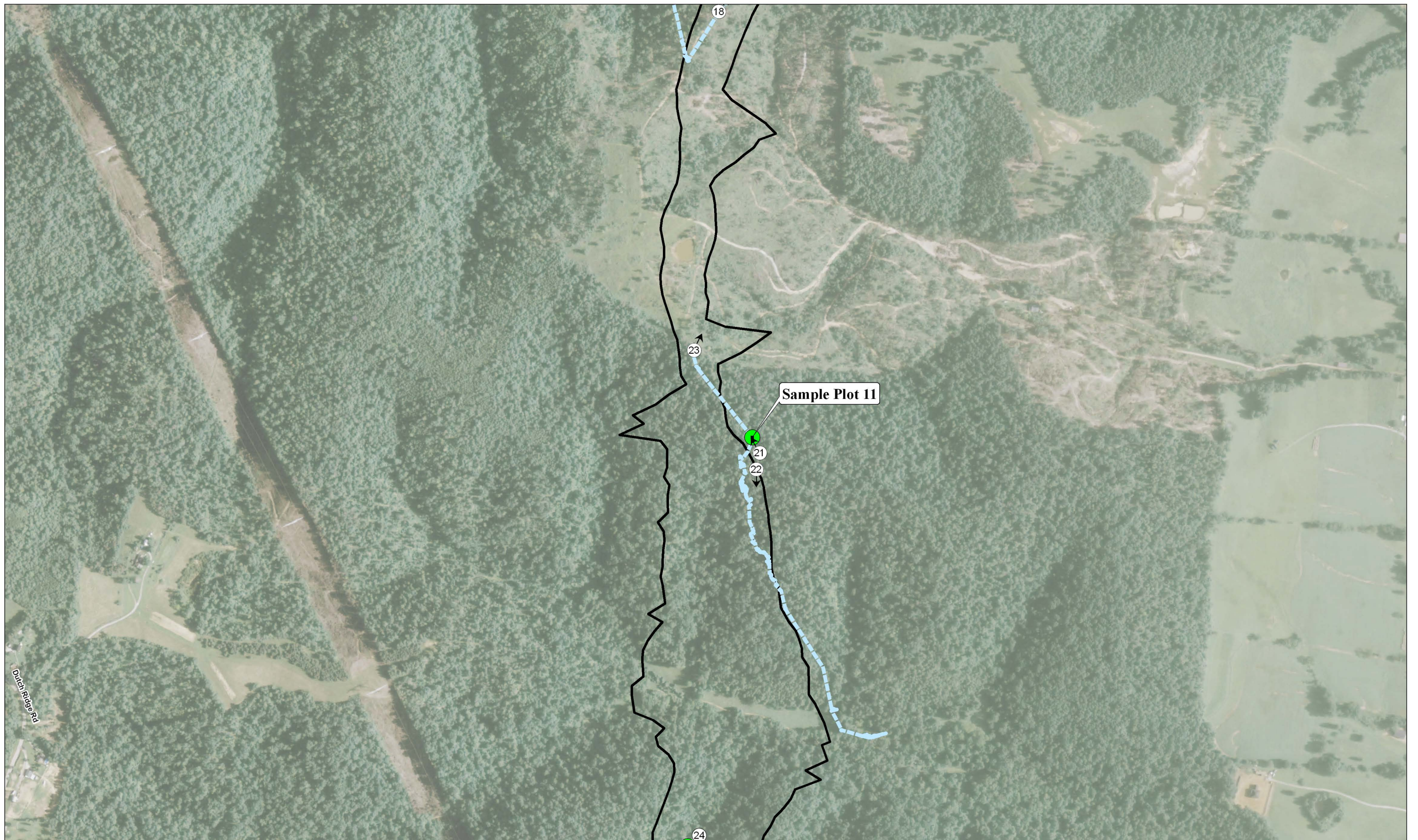


Figure 2. Survey results. (18 sheets)



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- Running Buffalo Clover sample plot
- ←○ Photograph location

Base: Aerial photograph 2009

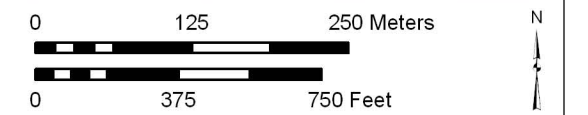
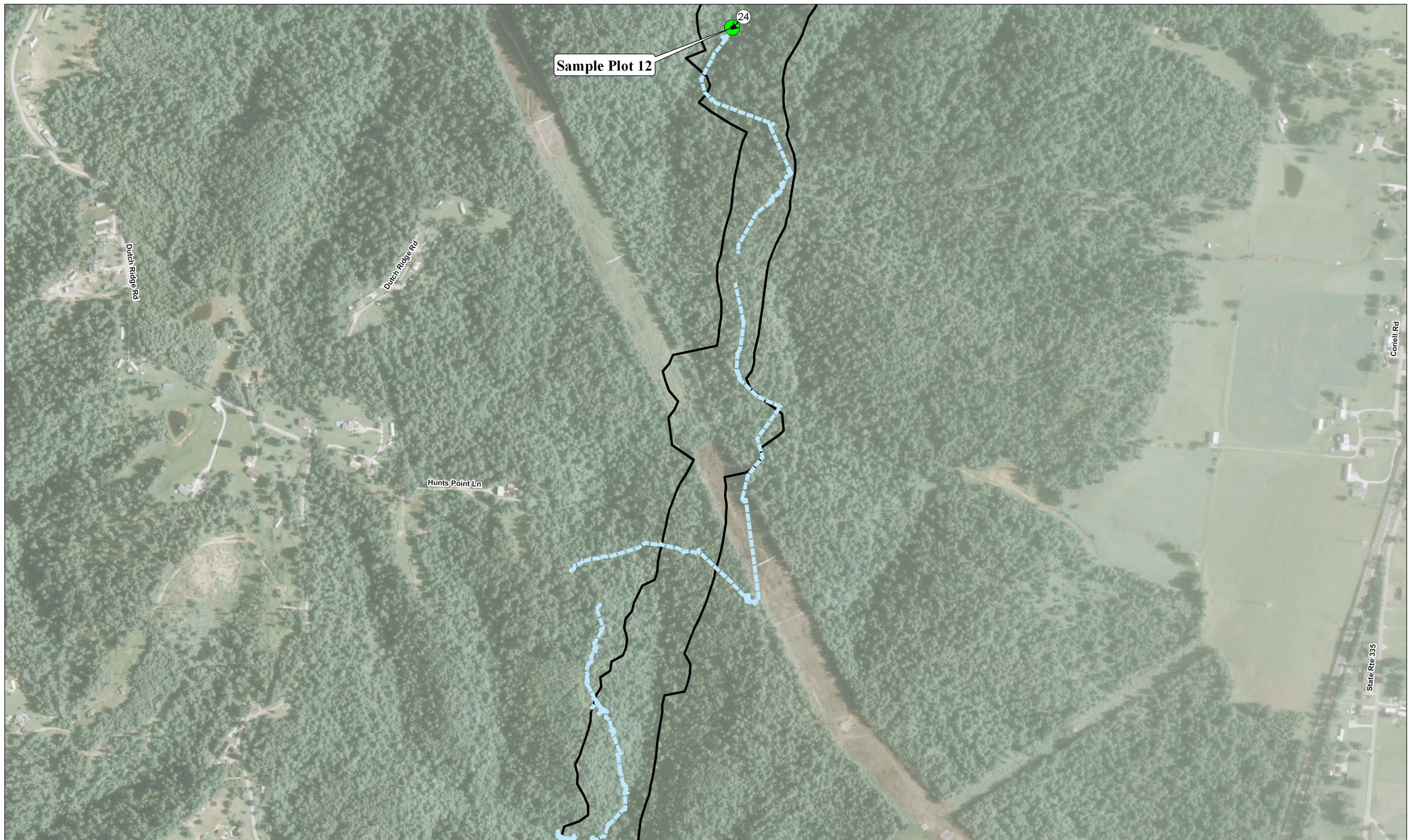


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Base: Aerial photograph 2009

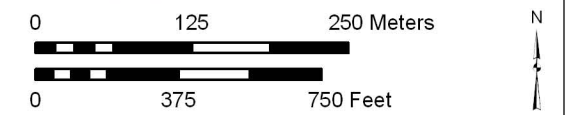
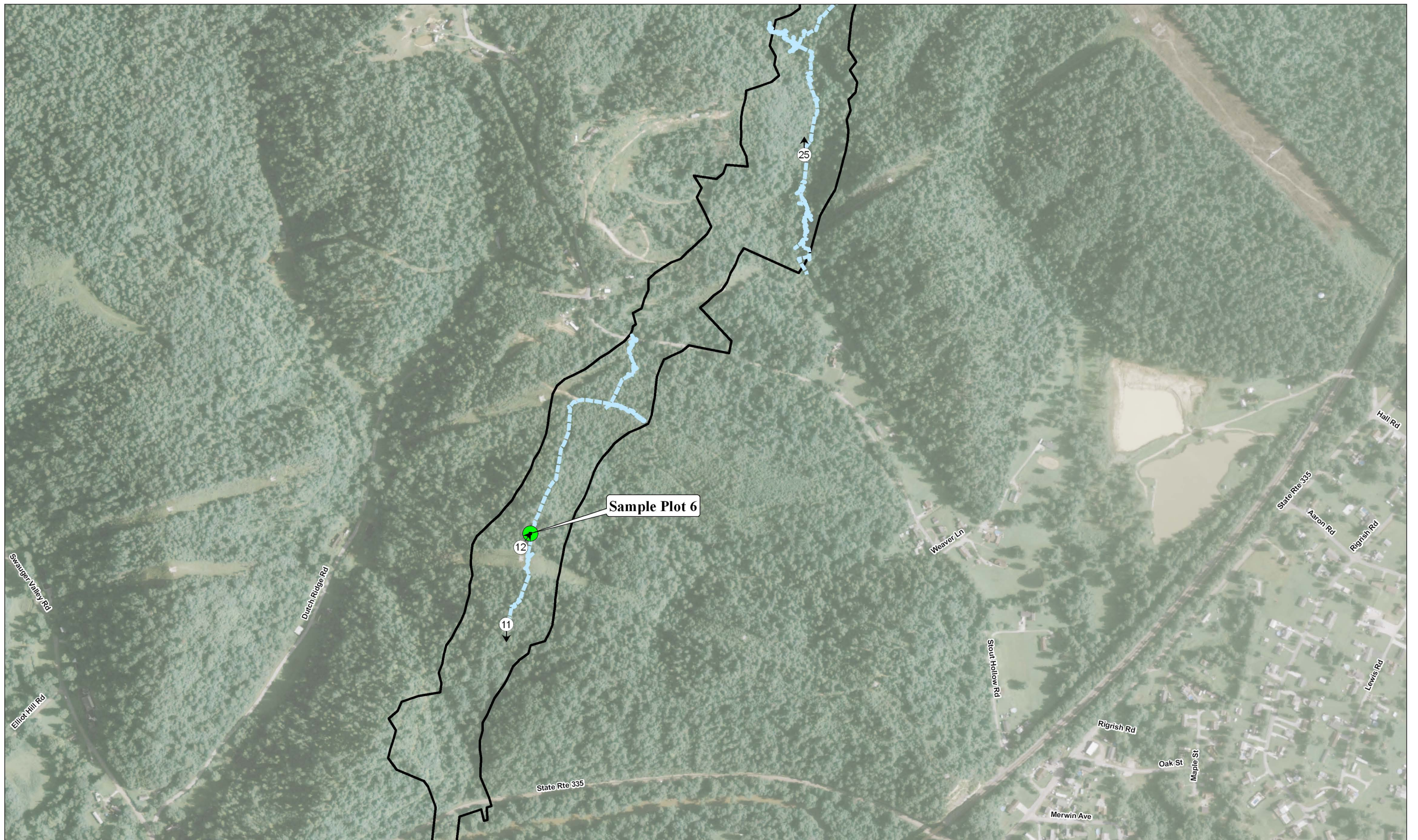


Figure 2. Survey results. (18 sheets)



- Construction limits
- - - Meander survey path
- Phase breaks
- Running Buffalo Clover sample plot
- ⬅ Photograph location

Base: Aerial photograph 2009

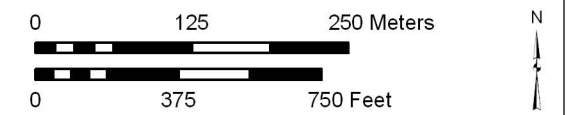


Figure 2. Survey results. (18 sheets)



- Construction limits
- Meander survey path
- Phase breaks
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- Photograph location

Base: Aerial photograph 2009

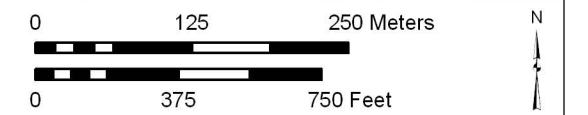


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- Phase breaks
- Running Buffalo Clover sample plot
- ⬅ Photograph location

Base: Aerial photograph 2009

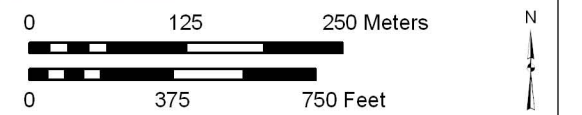


Figure 2. Survey results. (18 sheets)



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Base: Aerial photograph 2009

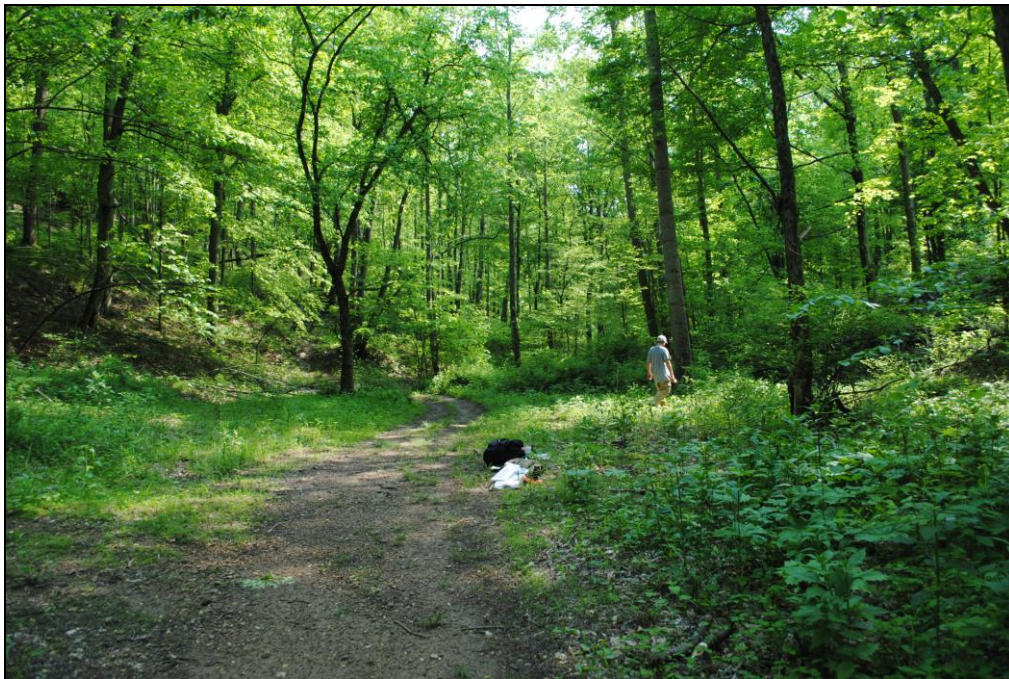


Figure 2. Survey results. (18 sheets)

APPENDIX B: PHOTOGRAPHS



Photograph 1. View of RBC Sample Plot 1, facing north. The area is an old logging road adjacent to a small stream.



Photograph 2. View of RBC Sample Plot 2, facing north along an old logging road.



Photograph 3. View of a stream/utility corridor that has been clear-cut, facing northwest.



Photograph 4. View of a stream corridor that is being heavily grazed, facing northeast.



Photograph 5. View of RBC Sample Plot 3, facing south. The area is an old logging road.



Photograph 6. View of a typical logging road along a dry ridge top, facing east.



Photograph 7. View of RBC Sample Plot 4, facing north. The area is near an old logging road along a stream corridor.



Photograph 8. View of RBC Sample Plot 5, facing northeast. The area is a periodically mowed and partially shaded streamside habitat.



Photograph 9. View of southern monkshood(*Aconitum uncinatum*) within the project area.



Photograph 10. View of umbrella tree (*Magnolia tripetala*) just outside the project area.



Photograph 11. View of young second growth woods with a thicket undergrowth, facing south.



Photograph 12. View of RBC Sample Plot 6 along an old logging road/ATV trail on a ridge top, facing northeast. The area is poor potential habitat.



Photograph 13. View of RBC Sample Plot 7 along an old logging road/ATV trail, facing north. The area is poor potential habitat. The area may be too shaded.



Photograph 14. View of logged area, facing north.



Photograph 15. View of RBC Sample Plot 8 along an old logging road/ATV trail, facing north.
The area is poor potential habitat due to the presence of invasive species.



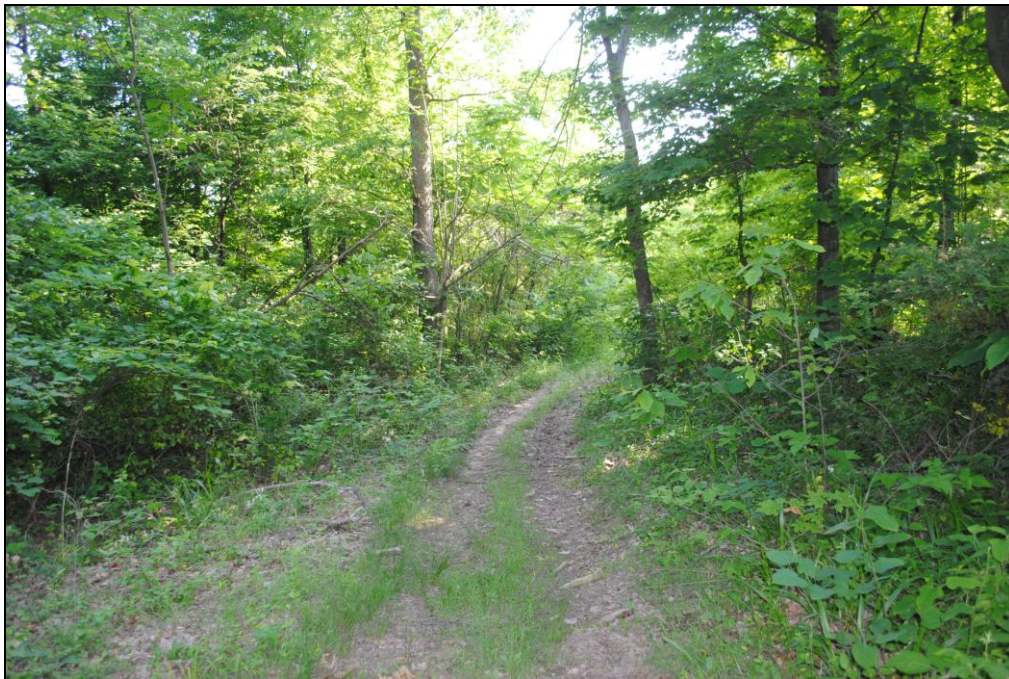
Photograph 16. View of RBC Sample Plot 9 along an old logging road/ATV trail, facing north. The area is poor potential habitat due to the presence of invasive species.



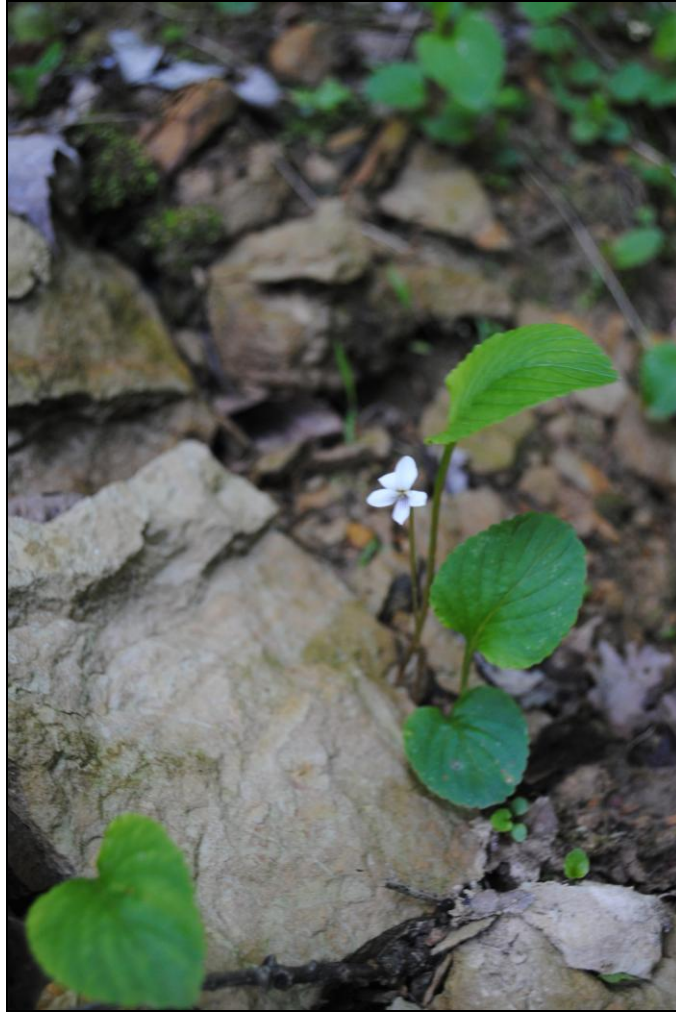
Photograph 17. View of the state endangered *Viola primulifolia* along an old logging road.



Photograph 18. View of clear-cut area, facing northeast.



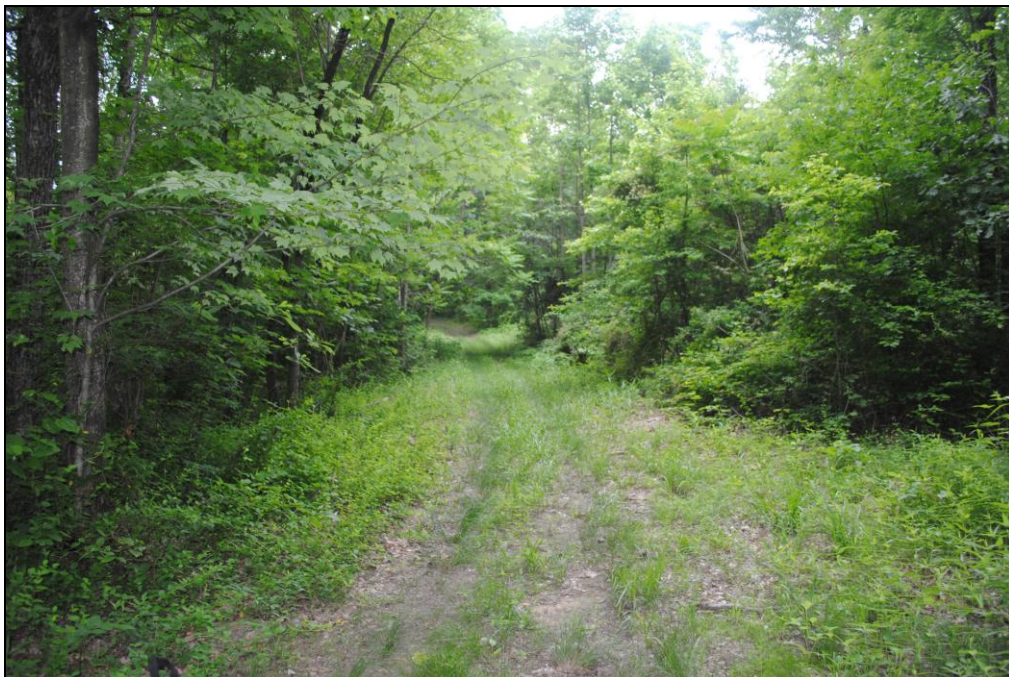
Photograph 19. View of an ATV trail that could serve as potential habitat for the running buffalo clover (RBC Sample Plot 10). View facing north.



Photograph 20. View of the state endangered *Viola primulifolia*, along an old logging road.



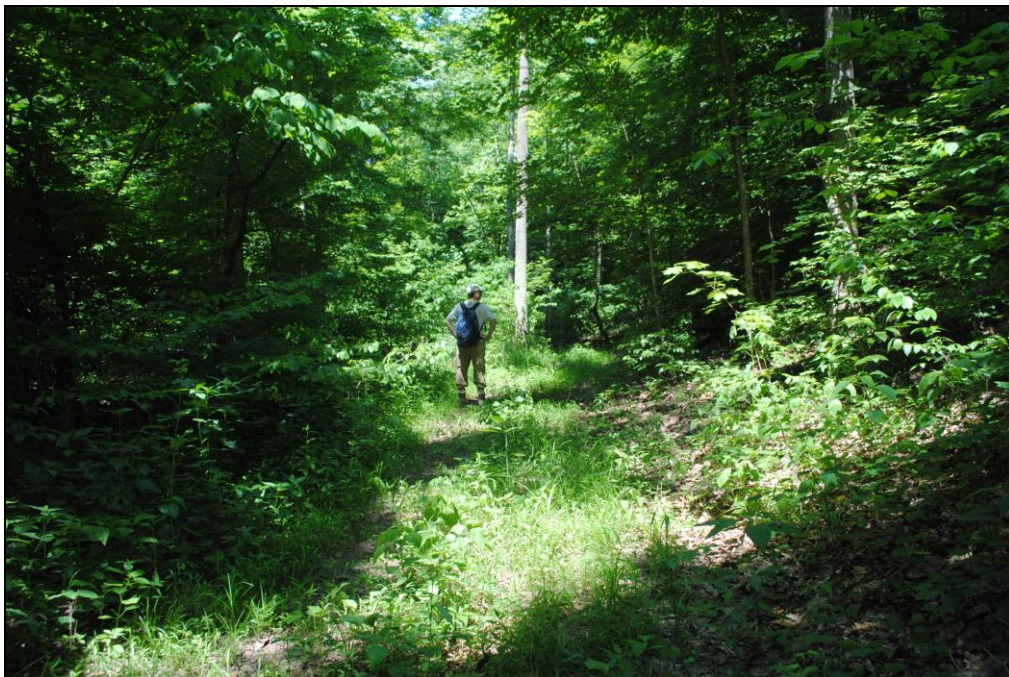
Photograph 21. View of RBC Sample Plot 11 along an ATV trail, facing northwest.



Photograph 22. View of RBC Sample Plot 11 along an ATV trail, facing south.



Photograph 23. View of clear-cut area, facing northeast.



Photograph 24. View of RBC Sample Plot 12 along an old ATV trail, facing southwest.



Photograph 25. View of stream valley with no potential RBC habitat, facing north.

**APPENDIX C: RUNNING BUFFALO CLOVER SAMPLE PLOT SPECIES
LISTS**

Site: RBC Plot 1 - Stream Side/Mesic Forest/Old-logging Road Habitat
 Locale: Portsmouth, Scioto County, Ohio
 By: Len Mikles, Jason Earley, and Richard Paul
 File: c:\FQA\studies\SCI-823\RBC Plot 1.inv

FLORISTIC QUALITY DATA		Native		Adventive			
30	NATIVE SPECIES	Tree	6	17.6%	Tree	0	0.0%
34	Total Species	Shrub	2	5.9%	Shrub	1	2.9%
4.3	NATIVE MEAN C	W-Vine	1	2.9%	W-Vine	1	2.9%
3.8	W/Adventives	H-Vine	1	2.9%	H-Vine	0	0.0%
23.4	NATIVE FQI	P-Forb	15	44.1%	P-Forb	0	0.0%
22.0	W/Adventives	B-Forb	0	0.0%	B-Forb	0	0.0%
1.8	NATIVE MEAN W	A-Forb	0	0.0%	A-Forb	1	2.9%
1.9	W/Adventives	P-Grass	1	2.9%	P-Grass	0	0.0%
AVG:	Fac. Upland (+)	A-Grass	0	0.0%	A-Grass	1	2.9%
		P-Sedge	3	8.8%	P-Sedge	0	0.0%
		A-Sedge	0	0.0%	A-Sedge	0	0.0%
		Fern	1	2.9%	Fern	0	0.0%

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACESAS	4 Acer saccharum s. saccharum	3 FACU	Nt Tree	SUGAR MAPLE
AMPBRB	5 Amphicarpaea bracteata v. bracteata	0 FAC	Nt H-Vine	HOG PEANUT
ARITRI	4 Arisaema triphyllum	-2 FACW-	Nt P-Forb	INDIAN TURNIP
ASITRI	6 Asimina triloba	0 FAC	Nt Tree	PAPAW
CARCON	4 Cardamine concatenata	4 FACU	Nt P-Forb	TOOTHWORT
CXDIGI	7 Carex digitalis	5 UPL	Nt P-Sedge	NARROW-LEAVED WOOD SEDGE
CXLXCO	5 Carex laxiculmis v. copulata	5 UPL	Nt P-Sedge	SPREADING SEDGE
CXVIRE	8 Carex virescens	3 FACU	Nt P-Sedge	SLENDER GREEN SEDGE
CIRLUC	2 Circaea lutetiana s. canadensis	3 FACU	Nt P-Forb	ENCHANTER'S NIGHTSHADE
CLAVIR	2 Claytonia virginica	3 FACU	Nt P-Forb	SPRING BEAUTY
COLCAN	8 Collinsonia canadensis	0 FAC	Nt P-Forb	CITRONELLA HORSE BALM
DICCLA	3 Dichanthelium clandestinum	-3 FACW	Nt P-Grass	DEER-TONGUE GRASS
FRAAME	4 Fraxinus americana	3 FACU	Nt Tree	WHITE ASH
GERMAC	4 Geranium maculatum	3 FACU	Nt P-Forb	WILD GERANIUM
IRICRI	7 Iris cristata	5 UPL	Nt P-Forb	DWARF CRESTED IRIS
JUGNIG	2 Juglans nigra	3 FACU	Nt Tree	BLACK WALNUT
JUNTEN	0 Juncus tenuis	0 FAC	Nt P-Forb	PATH RUSH
LAPCAN	2 Laportea canadensis	-3 FACW	Nt P-Forb	CANADA WOOD NETTLE
LINBEN	5 Lindera benzoin	-5 OBL	Nt Shrub	HAIRY SPICEBUSH
LIRTUL	4 Liriodendron tulipifera	2 FACU+	Nt Tree	TULIP POPLAR
LONJAP	0 LONICERA JAPONICA	3 FACU	Ad W-Vine	JAPANESE HONEYSUCKLE
MICVIM	0 MICROSTEGIUM VIMINEUM	0 FAC	Ad A-Grass	NEPALESE BROWNTOP
OXAGRA	8 Oxalis grandis	5 UPL	Nt P-Forb	GREAT YELLOW WOOD SORREL
OXAVIO	7 Oxalis violacea	5 UPL	Nt P-Forb	VIOLET WOOD SORREL
PARQUI	2 Parthenocissus quinquefolia	1 FAC-	Nt W-Vine	VIRGINIA CREEPER
PERCAE	0 PERSICARIA CAESPITOSA	5 UPL	Ad A-Forb	CREEPING SMARTWEED
POLREP	5 Polemonium reptans	0 FAC	Nt P-Forb	JACOB'S LADDER
POLACR	5 Polystichum acrostichoides	5 UPL	Nt Fern	CHRISTMAS FERN
POTSIM	2 Potentilla simplex	4 FACU-	Nt P-Forb	COMMON CINQUEFOIL
ROSMUL	0 ROSA MULTIFLORA	3 FACU	Ad Shrub	JAPANESE ROSE
RUBOCC	1 Rubus occidentalis	3 FACU	Nt Shrub	BLACK RASPBERRY
SANODO	2 Sanicula odorata	-1 FAC+	Nt P-Forb	CLUSTERED BLACK SNAKEROOT
ULMAME	3 Ulmus americana	-2 FACW-	Nt Tree	AMERICAN ELM
UVUGRA	7 Uvularia grandiflora	5 UPL	Nt P-Forb	LARGE-FLOWER BELLWORT

Site: RBC Plot 2 - Mesic Forest/Old-logging Road Habitat
 Locale: Portsmouth, Scioto County, Ohio
 Date: May 11, 2011 1 hours
 By: Len Mikles, Jason Earley, and Richard Paul
 File: c:\FQA\studies\SCI-823\RBC Plot 2.inv

FLORISTIC QUALITY DATA		Native		Adventive			
39	NATIVE SPECIES	Tree	5	11.9%	Tree	0	0.0%
42	Total Species	Shrub	1	2.4%	Shrub	1	2.4%
3.8	NATIVE MEAN C	W-Vine	1	2.4%	W-Vine	0	0.0%
3.6	W/Adventives	H-Vine	1	2.4%	H-Vine	0	0.0%
24.0	NATIVE FQI	P-Forb	23	54.8%	P-Forb	0	0.0%
23.1	W/Adventives	B-Forb	0	0.0%	B-Forb	0	0.0%
0.7	NATIVE MEAN W	A-Forb	2	4.8%	A-Forb	1	2.4%
0.9	W/Adventives	P-Grass	2	4.8%	P-Grass	0	0.0%
AVG:	Faculative (-)	A-Grass	0	0.0%	A-Grass	1	2.4%
		P-Sedge	1	2.4%	P-Sedge	0	0.0%
		A-Sedge	0	0.0%	A-Sedge	0	0.0%
		Fern	3	7.1%	Fern	0	0.0%

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACESAS	4 Acer saccharum s. saccharum	3 FACU	Nt Tree	SUGAR MAPLE
AGEALT	2 Ageratina altissima	3 FACU	Nt P-Forb	WHITE SNAKEROOT
AGRGRY	2 Agrimonia gryposepala	2 FACU+	Nt P-Forb	TALL AGRIMONY
AMPBRB	5 Amphicarpaea bracteata v. bracteata	0 FAC	Nt H-Vine	HOG PEANUT
ARITRI	4 Arisaema triphyllum	-2 FACW-	Nt P-Forb	INDIAN TURNIP
CARCON	4 Cardamine concatenata	4 FACU	Nt P-Forb	TOOTHWORT
CXBLAN	1 Carex blanda	0 FAC	Nt P-Sedge	COMMON WOOD SEDGE
CIMRAC	9 Cimicifuga racemosa	0 FAC	Nt P-Forb	FALSE BUGBANE
CIRLUC	2 Circaea lutetiana s. canadensis	3 FACU	Nt P-Forb	ENCHANTER'S NIGHTSHADE
CLAVIR	2 Claytonia virginica	3 FACU	Nt P-Forb	SPRING BEAUTY
COLCAN	8 Collinsonia canadensis	0 FAC	Nt P-Forb	CITRONELLA HORSE BALM
DEPACR	8 Deparia acrostichoides	0 FAC	Nt Fern	SILVERY SPLEENWORT
DICCLA	3 Dichanthelium clandestinum	-3 FACW	Nt P-Grass	DEER-TONGUE GRASS
ERIPHI	3 Erigeron philadelphicus	-3 FACW	Nt P-Forb	MARSH FLEABANE
FAGGRA	8 Fagus grandifolia	3 FACU	Nt Tree	AMERICAN BEECH
FRAAME	4 Fraxinus americana	3 FACU	Nt Tree	WHITE ASH
GALCON	5 Galium concinnum	3 FACU	Nt P-Forb	SHINING BEDSTRAW
GERMAC	4 Geranium maculatum	3 FACU	Nt P-Forb	WILD GERANIUM
IMPCAP	2 Impatiens capensis	-3 FACW	Nt A-Forb	SPOTTED TOUCH-ME-NOT
JUNTEN	0 Juncus tenuis	0 FAC	Nt P-Forb	PATH RUSH
LAPCAN	2 Laportea canadensis	-3 FACW	Nt P-Forb	CANADA WOOD NETTLE
LINBEN	5 Lindera benzoin	-5 OBL	Nt Shrub	HAIRY SPICEBUSH
LIRTUL	4 Liriodendron tulipifera	2 FACU+	Nt Tree	TULIP POPLAR
MICVIM	0 MICROSTEGIUM VIMINEUM	0 FAC	Ad A-Grass	NEPALESE BROWNTOP
MONCLI	7 Monarda clinopodia	5 UPL	Nt P-Forb	BASIL BEE BALM
ONosen	4 Onoclea sensibilis	-3 FACW	Nt Fern	SENSITIVE FERN
PARQUI	2 Parthenocissus quinquefolia	1 FAC-	Nt W-Vine	VIRGINIA CREEPER
PERCAE	0 PERSICARIA CAESPITOSA	5 UPL	Ad A-Forb	CREeping SMARTWEED
PHLDIV	5 Phlox divaricata	3 FACU	Nt P-Forb	BLUE PHLOX
POASYL	5 Poa sylvestris	0 FAC	Nt P-Grass	WOODLAND BLUE GRASS
PODPEL	3 Podophyllum peltatum	3 FACU	Nt P-Forb	MAY APPLE
POLREP	5 Polemonium reptans	0 FAC	Nt P-Forb	JACOB'S LADDER
POLACR	5 Polystichum acrostichoides	5 UPL	Nt Fern	CHRISTMAS FERN
POTSIM	2 Potentilla simplex	4 FACU-	Nt P-Forb	COMMON CINQUEFOIL
RANABO	0 Ranunculus abortivus	-2 FACW-	Nt A-Forb	LITTLE-LEAF BUTTERCUP
RANHII	7 Ranunculus hispidus v. hispidus	0 FAC	Nt P-Forb	ROUGH BUTTERCUP
ROSMUL	0 ROSA MULTIFLORA	3 FACU	Ad Shrub	JAPANESE ROSE
SANODO	2 Sanicula odorata	-1 FAC+	Nt P-Forb	CLUSTERED BLACK SNAKEROOT
SYMCOR	5 Symphyotrichum cordifolium	5 UPL	Nt P-Forb	HEART-LEAVED ASTER
ULMAME	3 Ulmus americana	-2 FACW-	Nt Tree	AMERICAN ELM
VERALT	3 Verbesina alternifolia	-3 FACW	Nt P-Forb	WINGSTEM
VIOSOR	1 Viola sororia	1 FAC-	Nt P-Forb	WOOLLY BLUE VIOLET

Site: RBC Plot 3 - Mesic Forest/Stream Side/Old-logging Road Habitat
 Locale: Portsmouth, Scioto County, Ohio
 Date: May 11, 2011 1 hours
 By: Len Mikles, Jason Earley, and Richard Paul
 File: c:\FQA\studies\SCI-823\RBC Plot 3.inv

FLORISTIC QUALITY DATA		Native		Adventive	
28	NATIVE SPECIES	Tree	3	Tree	0
32	Total Species	Shrub	2	Shrub	1
3.9	NATIVE MEAN C	W-Vine	2	W-Vine	1
3.4	W/Adventives	H-Vine	1	H-Vine	0
20.4	NATIVE FQI	P-Forb	14	P-Forb	0
19.1	W/Adventives	B-Forb	0	B-Forb	0
1.6	NATIVE MEAN W	A-Forb	2	A-Forb	1
1.8	W/Adventives	P-Grass	1	P-Grass	0
AVG:	Fac. Upland (+)	A-Grass	0	A-Grass	1
		P-Sedge	1	P-Sedge	0
		A-Sedge	0	A-Sedge	0
		Fern	2	Fern	0

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACESAS	4 Acer saccharum s. saccharum	3 FACU	Nt Tree	SUGAR MAPLE
AGEALT	2 Ageratina altissima	3 FACU	Nt P-Forb	WHITE SNAKEROOT
AMPBRB	5 Amphicarpaea bracteata v. bracteata	0 FAC	Nt H-Vine	HOG PEANUT
BOTVIR	4 Botrychium virginianum	3 FACU	Nt Fern	RATTLESNAKE FERN
CARCON	4 Cardamine concatenata	4 FACU	Nt P-Forb	TOOTHWORT
CXBLAN	1 Carex blanda	0 FAC	Nt P-Sedge	COMMON WOOD SEDGE
CIRLUC	2 Circaea lutetiana s. canadensis	3 FACU	Nt P-Forb	ENCHANTER'S NIGHTSHADE
DELTRI	5 Delphinium tricornis	5 UPL	Nt P-Forb	DWARF LARKSPUR
ERIPHI	3 Erigeron philadelphicus	-3 FACW	Nt P-Forb	MARSH FLEABANE
FRAAME	4 Fraxinus americana	3 FACU	Nt Tree	WHITE ASH
GALCON	5 Galium concinnum	3 FACU	Nt P-Forb	SHINING BEDSTRAW
GERMAC	4 Geranium maculatum	3 FACU	Nt P-Forb	WILD GERANIUM
IMPCAP	2 Impatiens capensis	-3 FACW	Nt A-Forb	SPOTTED TOUCH-ME-NOT
IRICRI	7 Iris cristata	5 UPL	Nt P-Forb	DWARF CRESTED IRIS
LINBEN	5 Lindera benzoin	-5 OBL	Nt Shrub	HAIRY SPICEBUSH
LIRTUL	4 Liriodendron tulipifera	2 FACU+	Nt Tree	TULIP POPLAR
LONJAP	0 LONICERA JAPONICA	3 FACU	Ad W-Vine	JAPANESE HONEYSUCKLE
MAIRAC	4 Maianthemum racemosum	3 FACU	Nt P-Forb	FEATHERY FALSE SOLOMON SEAL
MICVIM	0 MICROSTEGIUM VIMINEUM	0 FAC	Ad A-Grass	NEPALESE BROWNTOP
PARQUI	2 Parthenocissus quinquefolia	1 FAC-	Nt W-Vine	VIRGINIA CREEPER
PERCAE	0 PERSICARIA CAESPITOSA	5 UPL	Ad A-Forb	CREEPING SMARTWEED
POASYL	5 Poa sylvestris	0 FAC	Nt P-Grass	WOODLAND BLUE GRASS
POLREY	5 Polemonium reptans	0 FAC	Nt P-Forb	JACOB'S LADDER
POLACR	5 Polystichum acrostichoides	5 UPL	Nt Fern	CHRISTMAS FERN
RANREC	5 Ranunculus recurvatus	-3 FACW	Nt A-Forb	HOOKEED BUTTERCUP
ROSMUL	0 ROSA MULTIFLORA	3 FACU	Ad Shrub	JAPANESE ROSE
SANODO	2 Sanicula odorata	-1 FAC+	Nt P-Forb	CLUSTERED BLACK SNAKEROOT
STATRI	5 Staphylea trifolia	0 FAC	Nt Shrub	BLADDERNUT
TOXRAR	1 Toxicodendron radicans s. radicans	3 FACU	Nt W-Vine	POISON IVY
UVUPER	7 Uvularia perfoliata	5 UPL	Nt P-Forb	PERFOLIATE BELLWORT
VIOPAA	5 Viola palmata	5 UPL	Nt P-Forb	CLEFT VIOLET
VIOSOR	1 Viola sororia	1 FAC-	Nt P-Forb	WOOLLY BLUE VIOLET

Site: RBC Plot 4 - Mesic Forest/Stream Side/Old-logging Road Habitat
 Locale: Portsmouth, Scioto County, Ohio
 By: Len Mikles, Jason Earley, and Richard Paul
 File: c:\FQA\studies\SCI-823\RBC Plot 4.inv

FLORISTIC QUALITY DATA		Native		Adventive	
24	NATIVE SPECIES	Tree	24 88.9%	Tree	3 11.1%
27	Total Species	Shrub	1 3.7%	Shrub	1 3.7%
3.8	NATIVE MEAN C	W-Vine	3 11.1%	W-Vine	1 3.7%
3.4	W/Adventives	H-Vine	0 0.0%	H-Vine	0 0.0%
18.8	NATIVE FQI	P-Forb	10 37.0%	P-Forb	0 0.0%
17.7	W/Adventives	B-Forb	0 0.0%	B-Forb	0 0.0%
2.0	NATIVE MEAN W	A-Forb	0 0.0%	A-Forb	0 0.0%
2.0	W/Adventives	P-Grass	0 0.0%	P-Grass	0 0.0%
AVG: Fac. Upland (+)		A-Grass	0 0.0%	A-Grass	1 3.7%
		P-Sedge	2 7.4%	P-Sedge	0 0.0%
		A-Sedge	0 0.0%	A-Sedge	0 0.0%
		Fern	2 7.4%	Fern	0 0.0%

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACESAS	4 Acer saccharum s. saccharum	3 FACU	Nt Tree	SUGAR MAPLE
AGEALT	2 Ageratina altissima	3 FACU	Nt P-Forb	WHITE SNAKEROOT
BOTVIR	4 Botrychium virginianum	3 FACU	Nt Fern	RATTLESNAKE FERN
CARCON	4 Cardamine concatenata	4 FACU	Nt P-Forb	TOOTHWORT
CXBLAN	1 Carex blanda	0 FAC	Nt P-Sedge	COMMON WOOD SEDGE
CXDIGI	7 Carex digitalis	5 UPL	Nt P-Sedge	NARROW-LEAVED WOOD SEDGE
FRAAME	4 Fraxinus americana	3 FACU	Nt Tree	WHITE ASH
GALSPE	7 Galearis spectabilis	5 UPL	Nt P-Forb	SHOWY ORCHIS
GALCIC	7 Galium circaezans v. circaezans	4 FACU-	Nt P-Forb	SMOOTH WILD LICORICE
LINBEN	5 Lindera benzoin	-5 OBL	Nt Shrub	HAIRY SPICEBUSH
LIRTUL	4 Liriodendron tulipifera	2 FACU+	Nt Tree	TULIP POPLAR
LONJAP	0 LONICERA JAPONICA	3 FACU	Ad W-Vine	JAPANESE HONEYSUCKLE
MICVIM	0 MICROSTEGIUM VIMINEUM	0 FAC	Ad A-Grass	NEPALESE BROWNTOP
PARQUI	2 Parthenocissus quinquefolia	1 FAC-	Nt W-Vine	VIRGINIA CREEPER
POLACR	5 Polystichum acrostichoides	5 UPL	Nt Fern	CHRISTMAS FERN
PREALB	5 Prenanthes alba	3 FACU	Nt P-Forb	LION'S FOOT
PRUSER	1 Prunus serotina	3 FACU	Nt Tree	WILD BLACK CHERRY
ROSMUL	0 ROSA MULTIFLORA	3 FACU	Ad Shrub	JAPANESE ROSE
SANODO	2 Sanicula odorata	-1 FAC+	Nt P-Forb	CLUSTERED BLACK SNAKEROOT
SASALB	1 Sassafras albidum	3 FACU	Nt Tree	SASSAFRAS
SMIROT	4 Smilax rotundifolia	0 FAC	Nt W-Vine	CAT BRIER
SOLCAE	7 Solidago caesia	3 FACU	Nt P-Forb	BLUESTEM GOLDENROD
THATHA	7 Thalictrum thalictroides	5 UPL	Nt P-Forb	RUE ANEMONE
TOXRAR	1 Toxicodendron radicans s. radicans	3 FACU	Nt W-Vine	POISON IVY
ULMAME	3 Ulmus americana	-2 FACW-	Nt Tree	AMERICAN ELM
VIOSOR	1 Viola sororia	1 FAC-	Nt P-Forb	WOOLLY BLUE VIOLET
VIOSTR	4 Viola striata	-3 FACW	Nt P-Forb	COMMON WHITE VIOLET

Site: RBC Plot 5 - Mowed Lawn/Stream Side Habitat
 Locale: Portsmouth, Scioto County, Ohio
 Date: May 18, 2011 1 hours
 By: Len Mikles, Jason Earley, and Richard Paul
 File: c:\FQA\studies\SCI-823\RBC Plot 5.inv

FLORISTIC QUALITY DATA		Native		Adventive	
8	NATIVE SPECIES	Tree	2 11.8%	Tree	0 0.0%
17	Total Species	Shrub	0 0.0%	Shrub	1 5.9%
1.4	NATIVE MEAN C	W-Vine	1 5.9%	W-Vine	1 5.9%
0.6	W/Adventives	H-Vine	0 0.0%	H-Vine	0 0.0%
3.9	NATIVE FQI	P-Forb	3 17.6%	P-Forb	4 23.5%
2.7	W/Adventives	B-Forb	1 5.9%	B-Forb	0 0.0%
0.9	NATIVE MEAN W	A-Forb	1 5.9%	A-Forb	1 5.9%
1.5	W/Adventives	P-Grass	0 0.0%	P-Grass	1 5.9%
AVG:	Faculative (-)	A-Grass	0 0.0%	A-Grass	1 5.9%
		P-Sedge	0 0.0%	P-Sedge	0 0.0%
		A-Sedge	0 0.0%	A-Sedge	0 0.0%
		Fern	0 0.0%	Fern	0 0.0%

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
AMBARE	0 <i>Ambrosia artemisiifolia</i> v. <i>elator</i>	3	FACU Nt A-Forb	COMMON RAGWEED
ERIAN	0 <i>Erigeron annuus</i>	1	FAC- Nt B-Forb	ANNUAL FLEABANE
ERIPHI	3 <i>Erigeron philadelphicus</i>	-3	FACW Nt P-Forb	MARSH FLEABANE
GLEHED	0 <i>GLECHOMA HEDERACEA</i>	3	FACU Ad P-Forb	GROUND IVY
JUGNIG	2 <i>Juglans nigra</i>	3	FACU Nt Tree	BLACK WALNUT
LONJAP	0 <i>LONICERA JAPONICA</i>	3	FACU Ad W-Vine	JAPANESE HONEYSUCKLE
MICVIM	0 <i>MICROSTEGIUM VIMINEUM</i>	0	FAC Ad A-Grass	NEPALESE BROWNTOP
OXASTR	0 <i>Oxalis stricta</i>	3	FACU Nt P-Forb	TALL WOOD SORREL
PARQUI	2 <i>Parthenocissus quinquefolia</i>	1	FAC- Nt W-Vine	VIRGINIA CREEPER
PLAMAJ	0 <i>PLANTAGO MAJOR</i>	-1	FAC+ Ad P-Forb	COMMON PLANTAIN
POAPRA	0 <i>POA PRATENSIS</i>	1	FAC- Ad P-Grass	KENTUCKY BLUE GRASS
ROSMUL	0 <i>ROSA MULTIFLORA</i>	3	FACU Ad Shrub	JAPANESE ROSE
TAROFF	0 <i>TARAXACUM OFFICINALE</i>	3	FACU Ad P-Forb	COMMON DANDELION
TRIREF	0 <i>TRIFOLIUM REPENS</i>	2	FACU+ Ad P-Forb	WHITE CLOVER
ULMAME	3 <i>Ulmus americana</i>	-2	FACW- Nt Tree	AMERICAN ELM
VERARV	0 <i>VERONICA ARVENSIS</i>	5	UPL Ad A-Forb	CORN SPEEDWELL
VIOSOR	1 <i>Viola sororia</i>	1	FAC- Nt P-Forb	WOOLLY BLUE VIOLET

Site: RBC Plot 6 - Old-logging Road/ATV Trail Habitat
 Locale: Portsmouth, Scioto County, Ohio
 Date: May 18, 2011 1 hours
 By: Len Mikles, Jason Earley, and Richard Paul
 File: c:\FQA\studies\SCI-823\RBC Plot 6.inv

FLORISTIC QUALITY DATA		Native		Adventive	
3	NATIVE SPECIES	Tree	1 12.5%	Tree	0 0.0%
8	Total Species	Shrub	0 0.0%	Shrub	1 12.5%
2.0	NATIVE MEAN C	W-Vine	1 12.5%	W-Vine	1 12.5%
0.8	W/Adventives	H-Vine	0 0.0%	H-Vine	0 0.0%
3.5	NATIVE FQI	P-Forb	1 12.5%	P-Forb	2 25.0%
2.1	W/Adventives	B-Forb	0 0.0%	B-Forb	0 0.0%
1.3	NATIVE MEAN W	A-Forb	0 0.0%	A-Forb	0 0.0%
1.9	W/Adventives	P-Grass	0 0.0%	P-Grass	0 0.0%
AVG: Faculative (-)		A-Grass	0 0.0%	A-Grass	1 12.5%
		P-Sedge	0 0.0%	P-Sedge	0 0.0%
		A-Sedge	0 0.0%	A-Sedge	0 0.0%
		Fern	0 0.0%	Fern	0 0.0%

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACESAS	4 Acer saccharum s. saccharum	3 FACU	Nt Tree	SUGAR MAPLE
JUNTEN	0 Juncus tenuis	0 FAC	Nt P-Forb	PATH RUSH
LONJAP	0 LONICERA JAPONICA	3 FACU	Ad W-Vine	JAPANESE HONEYSUCKLE
MICVIM	0 MICROSTEGIUM VIMINEUM	0 FAC	Ad A-Grass	NEPALESE BROWNTOP
PARQUI	2 Parthenocissus quinquefolia	1 FAC-	Nt W-Vine	VIRGINIA CREEPER
ROSMUL	0 ROSA MULTIFLORA	3 FACU	Ad Shrub	JAPANESE ROSE
TAROFF	0 TARAXACUM OFFICINALE	3 FACU	Ad P-Forb	COMMON DANDELION
TRIREF	0 TRIFOLIUM REPENS	2 FACU+	Ad P-Forb	WHITE CLOVER

Site: RBC Plot 7 - Mesic Forest/Stream Side/Old-logging Road/ATV Trail Habitat
 Locale: Portsmouth, Scioto County, Ohio
 Date: May 19, 2011 1 hours
 By: Len Mikles, Jason Earley, and Richard Paul
 File: c:\FQA\studies\SCI-823\RBC Plot 7.inv

FLORISTIC QUALITY DATA		Native		Adventive			
24	NATIVE SPECIES	Tree	5	19.2%	Tree	0	0.0%
26	Total Species	Shrub	0	0.0%	Shrub	1	3.8%
5.0	NATIVE MEAN C	W-Vine	2	7.7%	W-Vine	1	3.8%
4.6	W/Adventives	H-Vine	0	0.0%	H-Vine	0	0.0%
24.3	NATIVE FQI	P-Forb	14	53.8%	P-Forb	0	0.0%
23.3	W/Adventives	B-Forb	0	0.0%	B-Forb	0	0.0%
2.5	NATIVE MEAN W	A-Forb	0	0.0%	A-Forb	0	0.0%
2.6	W/Adventives	P-Grass	0	0.0%	P-Grass	0	0.0%
AVG:	Fac. Upland	A-Grass	0	0.0%	A-Grass	0	0.0%
		P-Sedge	1	3.8%	P-Sedge	0	0.0%
		A-Sedge	0	0.0%	A-Sedge	0	0.0%
		Fern	2	7.7%	Fern	0	0.0%

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACESAS	4 Acer saccharum s. saccharum	3	FACU Nt Tree	SUGAR MAPLE
CXCOMM	8 Carex communis	5	UPL Nt P-Sedge	COMMON BEECH SEDGE
CARGLA	4 Carya glabra	3	FACU Nt Tree	PIGNOT HICKORY
COLCAN	8 Collinsonia canadensis	0	FAC Nt P-Forb	CITRONELLA HORSE BALM
FRAAME	4 Fraxinus americana	3	FACU Nt Tree	WHITE ASH
GALCIC	7 Galium circaezans v. circaezans	4	FACU- Nt P-Forb	SMOOTH WILD LICORICE
GERMAC	4 Geranium maculatum	3	FACU Nt P-Forb	WILD GERANIUM
HOUCAE	4 Houstonia caerulea	0	FAC Nt P-Forb	BLUETS
HOULON	7 Houstonia longifolia	5	UPL Nt P-Forb	LONG-LEAVED BLUETS
IRICRI	7 Iris cristata	5	UPL Nt P-Forb	DWARF CRESTED IRIS
LIRTUL	4 Liriodendron tulipifera	2	FACU+ Nt Tree	TULIP POPLAR
LONJAP	0 LONICERA JAPONICA	3	FACU Ad W-Vine	JAPANESE HONEYSUCKLE
OPHVUL	4 Ophioglossum vulgatum	-3	FACW Nt Fern	SOUTHERN ADDER'S TONGUE FERN
OXAGRA	8 Oxalis grandis	5	UPL Nt P-Forb	GREAT YELLOW WOOD SORREL
PARQUI	2 Parthenocissus quinquefolia	1	FAC- Nt W-Vine	VIRGINIA CREEPER
POLACR	5 Polystichum acrostichoides	5	UPL Nt Fern	CHRISTMAS FERN
POTSIM	2 Potentilla simplex	4	FACU- Nt P-Forb	COMMON CINQUEFOIL
PREALT	5 Prenanthes altissima	3	FACU Nt P-Forb	TALL WHITE LETTUCE
RANHIH	7 Ranunculus hispidus v. hispidus	0	FAC Nt P-Forb	ROUGH BUTTERCUP
ROSMUL	0 ROSA MULTIFLORA	3	FACU Ad Shrub	JAPANESE ROSE
SANODO	2 Sanicula odorata	-1	FAC+ Nt P-Forb	CLUSTERED BLACK SNAKEROOT
SOLCAE	7 Solidago caesia	3	FACU Nt P-Forb	BLUESTEM GOLDENROD
STEPUB	7 Stellaria pubera	5	UPL Nt P-Forb	GREAT CHICKWEED
TOXRAR	1 Toxicodendron radicans s. radicans	3	FACU Nt W-Vine	POISON IVY
ULMAME	3 Ulmus americana	-2	FACW- Nt Tree	AMERICAN ELM
VIOPAA	5 Viola palmata	5	UPL Nt P-Forb	CLEFT VIOLET

Site: RBC Plot 8 - Old-logging Road/ATV Trail Habitat
 Locale: Portsmouth, Scioto County, Ohio
 Date: May 19, 2011 1 hours
 By: Len Mikles, Jason Earley, and Richard Paul
 File: c:\FQA\studies\SCI-823\RBC Plot 8.inv

FLORISTIC QUALITY DATA		Native		Adventive	
11	NATIVE SPECIES	Tree	2 12.5%	Tree	0 0.0%
16	Total Species	Shrub	1 6.3%	Shrub	1 6.3%
2.6	NATIVE MEAN C	W-Vine	1 6.3%	W-Vine	1 6.3%
1.8	W/Adventives	H-Vine	0 0.0%	H-Vine	0 0.0%
8.7	NATIVE FQI	P-Forb	6 37.5%	P-Forb	1 6.3%
7.3	W/Adventives	B-Forb	0 0.0%	B-Forb	0 0.0%
1.6	NATIVE MEAN W	A-Forb	0 0.0%	A-Forb	1 6.3%
1.9	W/Adventives	P-Grass	1 6.3%	P-Grass	0 0.0%
AVG: Fac. Upland (+)		A-Grass	0 0.0%	A-Grass	1 6.3%
		P-Sedge	0 0.0%	P-Sedge	0 0.0%
		A-Sedge	0 0.0%	A-Sedge	0 0.0%
		Fern	0 0.0%	Fern	0 0.0%

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACERUR	5 Acer rubrum v. rubrum	0 FAC	Nt Tree	RED MAPLE
AGEALT	2 Ageratina altissima	3 FACU	Nt P-Forb	WHITE SNAKEROOT
ANDVIR	1 Andropogon virginicus	1 FAC-	Nt P-Grass	BROOM SEDGE
JUNTEN	0 Juncus tenuis	0 FAC	Nt P-Forb	PATH RUSH
LEUVUL	0 LEUCANTHEMUM VULGARE	5 UPL	Ad P-Forb	OX-EYE DAISY
LIRTUL	4 Liriodendron tulipifera	2 FACU+	Nt Tree	TULIP POPLAR
LONJAP	0 LONICERA JAPONICA	3 FACU	Ad W-Vine	JAPANESE HONEYSUCKLE
MEDLUP	0 MEDICAGO LUPULINA	1 FAC-	Ad A-Forb	BLACK MEDICK
MICVIM	0 MICROSTEGIUM VIMINEUM	0 FAC	Ad A-Grass	NEPALESE BROWNTOP
PARQUI	2 Parthenocissus quinquefolia	1 FAC-	Nt W-Vine	VIRGINIA CREEPER
POTSIM	2 Potentilla simplex	4 FACU-	Nt P-Forb	COMMON CINQUEFOIL
PREALT	5 Prenanthes altissima	3 FACU	Nt P-Forb	TALL WHITE LETTUCE
ROSMUL	0 ROSA MULTIFLORA	3 FACU	Ad Shrub	JAPANESE ROSE
RUBALL	2 Rubus allegheniensis	2 FACU+	Nt Shrub	COMMON BLACKBERRY
SOLJUN	3 Solidago juncea	5 UPL	Nt P-Forb	EARLY GOLDENROD
VERALT	3 Verbena alternifolia	-3 FACW	Nt P-Forb	WINGSTEM

Site: RBC Plot 9 - Old-logging Road/ATV Trail Habitat
 Locale: Portsmouth, Scioto County, Ohio
 Date: May 19, 2011 1 hours
 By: Len Mikles, Jason Earley, and Richard Paul
 File: c:\FQA\studies\SCI-823\RBC Plot 9.inv

FLORISTIC QUALITY DATA		Native		Adventive	
17	NATIVE SPECIES	Tree	3 13.6%	Tree	0 0.0%
22	Total Species	Shrub	0 0.0%	Shrub	1 4.5%
4.5	NATIVE MEAN C	W-Vine	1 4.5%	W-Vine	1 4.5%
3.5	W/Adventives	H-Vine	1 4.5%	H-Vine	0 0.0%
18.4	NATIVE FQI	P-Forb	10 45.5%	P-Forb	2 9.1%
16.2	W/Adventives	B-Forb	0 0.0%	B-Forb	0 0.0%
2.5	NATIVE MEAN W	A-Forb	0 0.0%	A-Forb	0 0.0%
2.3	W/Adventives	P-Grass	1 4.5%	P-Grass	0 0.0%
AVG:	Fac. Upland	A-Grass	0 0.0%	A-Grass	1 4.5%
		P-Sedge	0 0.0%	P-Sedge	0 0.0%
		A-Sedge	0 0.0%	A-Sedge	0 0.0%
		Fern	1 4.5%	Fern	0 0.0%

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACERUR	5 <i>Acer rubrum</i> v. <i>rubrum</i>	0 FAC	Nt Tree	RED MAPLE
DICBOS	4 <i>Dichanthelium boscii</i>	5 UPL	Nt P-Grass	BEARDED PANIC GRASS
DIOQUA	5 <i>Dioscorea quaternata</i>	3 FACU	Nt H-Vine	FOUR-LEAF WILD YAM
ERIPHI	3 <i>Erigeron philadelphicus</i>	-3 FACW	Nt P-Forb	MARSH FLEABANE
FAGGRA	8 <i>Fagus grandifolia</i>	3 FACU	Nt Tree	AMERICAN BEECH
GALCIC	7 <i>Galium circaezans</i> v. <i>circaezans</i>	4 FACU-	Nt P-Forb	SMOOTH WILD LICORICE
GLEHED	0 GLECHOMA HEDERACEA	3 FACU	Ad P-Forb	GROUND IVY
JUNTEN	0 <i>Juncus tenuis</i>	0 FAC	Nt P-Forb	PATH RUSH
LONJAP	0 LONICERA JAPONICA	3 FACU	Ad W-Vine	JAPANESE HONEYSUCKLE
LYSQUL	6 <i>Lysimachia quadrifolia</i>	5 UPL	Nt P-Forb	WHORLED LOOSESTRIFE
MICVIM	0 MICROSTEGIUM VIMINEUM	0 FAC	Ad A-Grass	NEPALESE BROWNTOP
OXAVIO	7 <i>Oxalis violacea</i>	5 UPL	Nt P-Forb	VIOLET WOOD SORREL
PARQUI	2 <i>Parthenocissus quinquefolia</i>	1 FAC-	Nt W-Vine	VIRGINIA CREEPER
PLAMAJ	0 PLANTAGO MAJOR	-1 FAC+	Ad P-Forb	COMMON PLANTAIN
POLACR	5 <i>Polystichum acrostichoides</i>	5 UPL	Nt Fern	CHRISTMAS FERN
PREALT	5 <i>Prenanthes altissima</i>	3 FACU	Nt P-Forb	TALL WHITE LETTUCE
ROSMUL	0 ROSA MULTIFLORA	3 FACU	Ad Shrub	JAPANESE ROSE
SALLYR	3 <i>Salvia lyrata</i>	-2 FACW-	Nt P-Forb	CANCER WEED
SASALB	1 <i>Sassafras albidum</i>	3 FACU	Nt Tree	SASSAFRAS
THATHA	7 <i>Thalictrum thalictroides</i>	5 UPL	Nt P-Forb	RUE ANEMONE
UVUGRA	7 <i>Uvularia grandiflora</i>	5 UPL	Nt P-Forb	LARGE-FLOWER BELLWORT
VIOSOR	1 <i>Viola sororia</i>	1 FAC-	Nt P-Forb	WOOLLY BLUE VIOLET

Site: RBC Plot 10 - Old-logging Road/ATV Trail Habitat
 Locale: Portsmouth, Scioto County, Ohio
 Date: June 1, 2011 1 hours
 By: Len Mikles, Jason Earley, and Richard Paul
 File: c:\FQA\studies\SCI-823\RBC Plot 10.inv

FLORISTIC QUALITY DATA		Native		Adventive	
23	NATIVE SPECIES	Tree	4 13.8%	Tree	1 3.4%
29	Total Species	Shrub	1 3.4%	Shrub	1 3.4%
3.2	NATIVE MEAN C	W-Vine	3 10.3%	W-Vine	1 3.4%
2.5	W/Adventives	H-Vine	0 0.0%	H-Vine	0 0.0%
15.2	NATIVE FQI	P-Forb	8 27.6%	P-Forb	2 6.9%
13.6	W/Adventives	B-Forb	0 0.0%	B-Forb	0 0.0%
1.3	NATIVE MEAN W	A-Forb	2 6.9%	A-Forb	1 3.4%
1.9	W/Adventives	P-Grass	5 17.2%	P-Grass	0 0.0%
AVG:	Faculative (-)	A-Grass	0 0.0%	A-Grass	0 0.0%
		P-Sedge	0 0.0%	P-Sedge	0 0.0%
		A-Sedge	0 0.0%	A-Sedge	0 0.0%
		Fern	0 0.0%	Fern	0 0.0%

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACERUR	5 <i>Acer rubrum</i> v. <i>rubrum</i>	0	FAC Nt Tree	RED MAPLE
ACESAS	4 <i>Acer saccharum</i> s. <i>saccharum</i>	3	FACU Nt Tree	SUGAR MAPLE
ALLCAN	1 <i>Allium canadense</i>	3	FACU Nt P-Forb	WILD GARLIC
AMBARE	0 <i>Ambrosia artemisiifolia</i> v. <i>elatior</i>	3	FACU Nt A-Forb	COMMON RAGWEED
CAMRAD	1 <i>Campsis radicans</i>	0	FAC Nt W-Vine	TRUMPET CREEPER
CARGLA	4 <i>Carya glabra</i>	3	FACU Nt Tree	PIGNET HICKORY
DANSPI	3 <i>Danthonia spicata</i>	5	UPL Nt P-Grass	POVERTY OAT GRASS
DIAAME	5 <i>Diarrhena americana</i>	-3	FACW Nt P-Grass	AMERICAN BEAK GRASS
DICCLA	3 <i>Dichanthelium clandestinum</i>	-3	FACW Nt P-Grass	DEER-TONGUE GRASS
GILSTI	6 <i>Gillenia stipulata</i>	5	UPL Nt P-Forb	INDIAN PHYSIC
GLYSTR	4 <i>Glyceria striata</i>	-5	OBL Nt P-Grass	FOWL MANNA GRASS
HOUCAE	4 <i>Houstonia caerulea</i>	0	FAC Nt P-Forb	BLUETS
JUNTEN	0 <i>Juncus tenuis</i>	0	FAC Nt P-Forb	PATH RUSH
LEEVIR	4 <i>Leersia virginica</i>	-3	FACW Nt P-Grass	WHITE GRASS
LONJAP	0 <i>Lonicera japonica</i>	3	FACU Ad W-Vine	JAPANESE HONEYSUCKLE
OXAGRA	8 <i>Oxalis grandis</i>	5	UPL Nt P-Forb	GREAT YELLOW WOOD SORREL
OXASTR	0 <i>Oxalis stricta</i>	3	FACU Nt P-Forb	TALL WOOD SORREL
PARQUI	2 <i>Parthenocissus quinquefolia</i>	1	FAC- Nt W-Vine	VIRGINIA CREEPER
PAUTOM	0 <i>PAULOWNIA TOMENTOSA</i>	5	UPL Ad Tree	PRINCESS TREE
POTSIM	2 <i>Potentilla simplex</i>	4	FACU- Nt P-Forb	COMMON CINQUEFOIL
QUERUB	4 <i>Quercus rubra</i>	3	FACU Nt Tree	NORTHERN RED OAK
ROSMUL	0 <i>ROSA MULTIFLORA</i>	3	FACU Ad Shrub	JAPANESE ROSE
RUBALL	2 <i>Rubus allegheniensis</i>	2	FACU+ Nt Shrub	COMMON BLACKBERRY
SMIROT	4 <i>Smilax rotundifolia</i>	0	FAC Nt W-Vine	CAT BRIER
TRICAM	0 <i>TRIFOLIUM CAMPESTRE</i>	5	UPL Ad A-Forb	LOW HOP CLOVER
TRIREP	0 <i>TRIFOLIUM REPENS</i>	2	FACU+ Ad P-Forb	WHITE CLOVER
TRDPER	2 <i>Triodanis perfoliata</i>	0	FAC Nt A-Forb	VENUS'S LOOKING GLASS
VERNOF	0 <i>VERONICA OFFICINALIS</i>	5	UPL Ad P-Forb	COMMON SPEEDWELL
VIOPAA	5 <i>Viola palmata</i>	5	UPL Nt P-Forb	CLEFT VIOLET

Site: RBC Plot 11 - Old-logging Road/ATV Trail Habitat
 Locale: Portsmouth, Scioto County, Ohio
 Date: June 1, 2011 1 hours
 By: Len Mikles, Jason Earley, and Richard Paul
 File: c:\FQA\studies\SCI-823\RBC Plot 11.inv

FLORISTIC QUALITY DATA		Native		Adventive			
25	NATIVE SPECIES	Tree	5	16.1%	Tree	1	3.2%
31	Total Species	Shrub	3	9.7%	Shrub	1	3.2%
3.1	NATIVE MEAN C	W-Vine	2	6.5%	W-Vine	1	3.2%
2.5	W/Adventives	H-Vine	1	3.2%	H-Vine	0	0.0%
15.4	NATIVE FQI	P-Forb	10	32.3%	P-Forb	0	0.0%
13.8	W/Adventives	B-Forb	0	0.0%	B-Forb	0	0.0%
2.4	NATIVE MEAN W	A-Forb	3	9.7%	A-Forb	1	3.2%
2.5	W/Adventives	P-Grass	1	3.2%	P-Grass	1	3.2%
AVG:	Fac. Upland (+)	A-Grass	0	0.0%	A-Grass	1	3.2%
		P-Sedge	0	0.0%	P-Sedge	0	0.0%
		A-Sedge	0	0.0%	A-Sedge	0	0.0%
		Fern	0	0.0%	Fern	0	0.0%

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACERUR	5 <i>Acer rubrum</i> v. <i>rubrum</i>	0 FAC	Nt Tree	RED MAPLE
ACESAS	4 <i>Acer saccharum</i> s. <i>saccharum</i>	3 FACU	Nt Tree	SUGAR MAPLE
AGRGRY	2 <i>Agrimonia gryposepala</i>	2 FACU+	Nt P-Forb	TALL AGRIMONY
AILALT	0 <i>AILANTHUS ALTISSIMA</i>	5 UPL	Ad Tree	TREE-OF-HEAVEN
AMBARE	0 <i>Ambrosia artemisiifolia</i> v. <i>elatior</i>	3 FACU	Nt A-Forb	COMMON RAGWEED
AMPBRB	5 <i>Amphicarpaea bracteata</i> v. <i>bracteata</i>	0 FAC	Nt H-Vine	HOG PEANUT
BRAERE	6 <i>Brachyelytrum erectum</i>	5 UPL	Nt P-Grass	LONG-AWNED WOOD GRASS
CARGLA	4 <i>Carya glabra</i>	3 FACU	Nt Tree	PIGNOT HICKORY
CIRLUC	2 <i>Circaea lutetiana</i> s. <i>canadensis</i>	3 FACU	Nt P-Forb	ENCHANTER'S NIGHTSHADE
DACGLO	0 <i>DACTYLIS GLOMERATA</i>	3 FACU	Ad P-Grass	ORCHARD GRASS
HELDIV	5 <i>Helianthus divaricatus</i>	5 UPL	Nt P-Forb	WOODLAND SUNFLOWER
HOUCAE	4 <i>Houstonia caerulea</i>	0 FAC	Nt P-Forb	BLUETS
HYPHYM	4 <i>Hypericum hypericoides</i> s. <i>multicaule</i>	3 FACU	Nt Shrub	ST. ANDREW'S CROSS
JUNTEN	0 <i>Juncus tenuis</i>	0 FAC	Nt P-Forb	PATH RUSH
LIRTUL	4 <i>Liriodendron tulipifera</i>	2 FACU+	Nt Tree	TULIP POPLAR
LONJAP	0 <i>LONICERA JAPONICA</i>	3 FACU	Ad W-Vine	JAPANESE HONEYSUCKLE
LYSQUL	6 <i>Lysimachia quadrifolia</i>	5 UPL	Nt P-Forb	WHORLED LOOSESTRIFE
MICVIM	0 <i>MICROSTEGIUM VIMINEUM</i>	0 FAC	Ad A-Grass	NEPALESE BROWNTOP
NYSSYS	5 <i>Nyssa sylvatica</i>	5 UPL	Nt Tree	BLACK GUM
OXASTR	0 <i>Oxalis stricta</i>	3 FACU	Nt P-Forb	TALL WOOD SORREL
PARQUI	2 <i>Parthenocissus quinquefolia</i>	1 FAC-	Nt W-Vine	VIRGINIA CREEPER
PERCAE	0 <i>PERSICARIA CAESPITOSA</i>	5 UPL	Ad A-Forb	CREEPING SMARTWEED
PLARUG	0 <i>Plantago rugelii</i>	0 FAC	Nt A-Forb	RED-STALKED PLANTAIN
PODPEL	3 <i>Podophyllum peltatum</i>	3 FACU	Nt P-Forb	MAY APPLE
POTSIM	2 <i>Potentilla simplex</i>	4 FACU-	Nt P-Forb	COMMON CINQUEFOIL
ROSMUL	0 <i>ROSA MULTIFLORA</i>	3 FACU	Ad Shrub	JAPANESE ROSE
RUBALL	2 <i>Rubus allegheniensis</i>	2 FACU+	Nt Shrub	COMMON BLACKBERRY
RUBOCC	1 <i>Rubus occidentalis</i>	3 FACU	Nt Shrub	BLACK RASPBERRY
SMIROT	4 <i>Smilax rotundifolia</i>	0 FAC	Nt W-Vine	CAT BRIER
TRDPER	2 <i>Triodanis perfoliata</i>	0 FAC	Nt A-Forb	VENUS'S LOOKING GLASS
VIOPAA	5 <i>Viola palmata</i>	5 UPL	Nt P-Forb	CLEFT VIOLET

Site: RBC Plot 12 - Mesic Forest/Stream Side/Old-logging Road Habitat
 Locale: Portsmouth, Scioto County, Ohio
 Date: June 1, 2011 1 hours
 By: Len Mikles, Jason Earley, and Richard Paul
 File: c:\FQA\studies\SCI-823\RBC Plot 12.inv

FLORISTIC QUALITY DATA		Native		Adventive			
40	NATIVE SPECIES	Tree	4	90.9%	Tree	4	9.1%
44	Total Species	Shrub	3	6.8%	Shrub	1	2.3%
4.2	NATIVE MEAN C	W-Vine	1	2.3%	W-Vine	0	0.0%
3.8	W/Adventives	H-Vine	1	2.3%	H-Vine	0	0.0%
26.2	NATIVE FQI	P-Forb	18	40.9%	P-Forb	1	2.3%
25.0	W/Adventives	B-Forb	1	2.3%	B-Forb	0	0.0%
1.1	NATIVE MEAN W	A-Forb	2	4.5%	A-Forb	0	0.0%
1.2	W/Adventives	P-Grass	4	9.1%	P-Grass	0	0.0%
AVG:	Faculative (-)	A-Grass	0	0.0%	A-Grass	1	2.3%
		P-Sedge	3	6.8%	P-Sedge	0	0.0%
		A-Sedge	0	0.0%	A-Sedge	0	0.0%
		Fern	3	6.8%	Fern	0	0.0%

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACESAS	4 Acer saccharum s. saccharum	3	FACU Nt Tree	SUGAR MAPLE
ADIPED	7 Adiantum pedatum	1	FAC- Nt Fern	MAIDENHAIR FERN
AGEALT	2 Ageratina altissima	3	FACU Nt P-Forb	WHITE SNAKEROOT
AILALT	0 AILANTHUS ALTISSIMA	5	UPL Ad Tree	TREE-OF-HEAVEN
ALLCAN	1 Allium canadense	3	FACU Nt P-Forb	WILD GARLIC
AMPBRB	5 Amphicarpaea bracteata v. bracteata	0	FAC Nt H-Vine	HOG PEANUT
ARITRI	4 Arisaema triphyllum	-2	FACW- Nt P-Forb	INDIAN TURNIP
BOTVIR	4 Botrychium virginianum	3	FACU Nt Fern	RATTLESNAKE FERN
BRAERE	6 Brachyelytrum erectum	5	UPL Nt P-Grass	LONG-AWNED WOOD GRASS
CXBLAN	1 Carex blanda	0	FAC Nt P-Sedge	COMMON WOOD SEDGE
CXLXCO	5 Carex laxiculmis v. copulata	5	UPL Nt P-Sedge	SPREADING SEDGE
COLCAN	8 Collinsonia canadensis	0	FAC Nt P-Forb	CITRONELLA HORSE BALM
DEPACR	8 Deparia acrostichoides	0	FAC Nt Fern	SILVERY SPLEENWORT
FESSUB	4 Festuca subverticillata	2	FACU+ Nt P-Grass	NODDING FESCUE
GALCON	5 Galium concinnum	3	FACU Nt P-Forb	SHINING BEDSTRAW
GERMAC	4 Geranium maculatum	3	FACU Nt P-Forb	WILD GERANIUM
GEUVER	1 Geum vernum	1	FAC- Nt P-Forb	SPRING AVENS
GLYSTR	4 Glyceria striata	-5	OBL Nt P-Grass	FOWL MANNA GRASS
HYDARB	7 Hydrangea arborescens	4	FACU- Nt Shrub	WILD HYDRANGEA
HYDCAE	8 Hydrophyllum canadense	-2	FACW- Nt P-Forb	CANADA WATERLEAF
IMPCAP	2 Impatiens capensis	-3	FACW Nt A-Forb	SPOTTED TOUCH-ME-NOT
IRICRI	7 Iris cristata	5	UPL Nt P-Forb	DWARF CRESTED IRIS
LINBEN	5 Linderia benzoin	-5	OBL Nt Shrub	HAIRY SPICEBUSH
LIRTUL	4 Liriodendron tulipifera	2	FACU+ Nt Tree	TULIP POPLAR
MICVIM	0 MICROSTEGIUM VIMINEUM	0	FAC Ad A-Grass	NEPALESE BROWNTOP
NYSSYS	5 Nyssa sylvatica	5	UPL Nt Tree	BLACK GUM
OSMCLI	3 Osmorhiza claytonii	4	FACU- Nt P-Forb	HAIRY SWEET CICELY
PARQUI	2 Parthenocissus quinquefolia	1	FAC- Nt W-Vine	VIRGINIA CREEPER
PILPUM	2 Pilea pumila	-3	FACW Nt A-Forb	CANADA CLEARWEED
POASYL	5 Poa sylvestris	0	FAC Nt P-Grass	WOODLAND BLUE GRASS
PODPEL	3 Podophyllum peltatum	3	FACU Nt P-Forb	MAY APPLE
POLREP	5 Polemonium reptans	0	FAC Nt P-Forb	JACOB'S LADDER
PREALT	5 Prenanthes altissima	3	FACU Nt P-Forb	TALL WHITE LETTUCE
ROSMUL	0 ROSA MULTIFLORA	3	FACU Ad Shrub	JAPANESE ROSE
RUBOCC	1 Rubus occidentalis	3	FACU Nt Shrub	BLACK RASPBERRY
SANCAC	2 Sanicula canadensis	2	FACU+ Nt B-Forb	CANADIAN BLACK SNAKEROOT
SCIHAT	3 Scirpus hattorianus	-5	OBL Nt P-Sedge	EARLY DARK-GREEN BULRUSH
SOLFLE	6 Solidago flexicaulis	3	FACU Nt P-Forb	BROAD-LEAVED GOLDENROD
TOVVIR	3 Tovara virginiana	0	FAC Nt P-Forb	VIRGINIA KNOTWEED
TRIPRA	0 TRIFOLIUM PRATENSE	2	FACU+ Ad P-Forb	RED CLOVER
TRIGRA	8 Trillium grandiflorum	5	UPL Nt P-Forb	LARGE WHITE TRILLIUM
ULMAME	3 Ulmus americana	-2	FACW- Nt Tree	AMERICAN ELM
VERALT	3 Verbesina alternifolia	-3	FACW Nt P-Forb	WINGSTEM
VIOSOR	1 Viola sororia	1	FAC- Nt P-Forb	WOOLLY BLUE VIOLET