

BASELINE DOCUMENTATION REPORT



Andrews II - Richmond Town Forest

Richmond, Vermont

VLT Project No. 131199
VHCB No. 2017-064-001

Prepared by:
Vermont Land Trust
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 Vermont Land Trust
Conserving Land for the People of Vermont

Vermont Land Trust ■ Conservation Stewardship

The Conservation Stewardship Program is staffed by a stewardship director, director of forest stewardship, paralegal, coordinator, stewardship foresters, and regional stewardship managers.

The responsibilities of the Conservation Stewardship Program include maintaining land related records, tracking changes in land ownership, monitoring conserved properties at least annually, photo-documenting land uses periodically, answering landowner questions, interpreting or approving permitted activities, and correcting violations through voluntary compliance or, if necessary, legal proceedings.

This Report Contains the Following Information:

- Introduction and description of the current uses of the property
- Summary of Grantors' and Grantees' rights
- References
- Signature pages
- Conserved property location map
- USGS topographic map
- Orthophoto map
- Conservation Easement map
- Photopoint map
- Photographic Documentation

ANDREWS II - RICHMOND TOWN FOREST PROPERTY Richmond, Vermont

Introduction

The purpose of the enclosed information is to describe the physical features and current land uses of the **Andrews II - Richmond Town Forest** on which the development rights, a perpetual conservation easement and restrictions, and a public access easement are being conveyed to the Vermont Land Trust, Inc. (VLT) and the Vermont Housing and Conservation Board (VHCB). The Grant conveying these rights is to be recorded in the Richmond Land Records.

This report is based, in part, on documentation visits by Adam Piper (Regional Stewardship Manager) for the Vermont Land Trust on July 6, 2017 and on February 2, 2018. Bob Heiser (VLT) and members of the Richmond Town Forest Steering Committee were also present on July 6, 2017. Tyler Miller (VLT) was present on February 2, 2018. Adam assembled the report and digital photographs; maps were prepared by Adam and VLT GIS staff.

Purposes of the Grant

The primary purposes of the conservation easement are to conserve productive forestland, wildlife habitats, biological diversity, natural communities, riparian buffers, wetlands, soil productivity, water quality, and native flora and fauna on the protected property; to preserve the ecological processes that sustain these natural resource values; as well as to preserve non-motorized, non-commercial recreational opportunities, open space values, and scenic resources associated with the protected property.

The purposes of the Grant will be advanced by conserving the property because it possesses the following attributes:

- It is a relatively natural and unfragmented forest block that advances the effort to conserve landscape connectivity and wildlife habitat corridors within large forested blocks in the Northern Appalachian ecoregion;
- It includes 404 acres of forest available for long-term sustainable management for the production of forest products;
- It contains the following natural communities that are uncommon in Vermont: Complexes of Dry Oak Forest, Dry Oak-Hickory-Hophornbeam Forest, Dry Red Oak-White Pine Forest, and Red Pine Forest;
- It can be used for numerous recreational, cultural and educational purposes by the public;
- It includes streams that, with wooded buffers and natural flow, provide an array of ecological benefits including maintaining water quality and providing corridors for species movement;
- It includes upland, wetland, and riparian habitat for wildlife;
- It includes two vernal pools, uncommon natural communities in Vermont, that provide critical breeding habitat for multiple amphibian species;

- It is within one of Vermont's largest blocks of unfragmented interior forest, with connections between this forest block and the extensive riparian features of the Winooski River corridor;
- It is in the vicinity of other conserved lands; and
- It includes a scenic vista from Interstate 89 and US Route 2.

Description and Current Use of the Property

The Andrews family is conserving ±428 acres in Richmond. This will be their second conservation project and a big step forward in the creation of a Town Forest in Richmond.

The Andrews family's "Gray Rocks Farm" in Vermont's Chittenden County is on the National Register of Historic Places and plays a critical role in defining Richmond's rural character and working landscape. In 2013 after an inter-generational transfer, the family conserved 187 acres of their farmland with the Vermont Land Trust as it was sold to a local, diversified farm family. The Andrews family is now selling the remaining 428 acres of forestland.

The Andrews II land has long been managed as a farm and as a productive woodland. The property is just over 95% forested, with two small meadows. The forestland is diverse, dominated by mixed-wood stands that incorporate hardwood and softwood species. The forestland is accessed on an improved logging road from US Route 2 approximately one mile east of the Richmond village. The property has a network of logging roads and trails, and there are fences maintained by a local farmer around the small meadows. There is also power-line infrastructure, maintained by the Vermont Electric Power Company, along its right of way across the property. There are no additional structures on the property.

This project will enable the Town of Richmond, Vermont to purchase the 428-acre Andrews forestland as a Richmond Town Forest (RTF). The land is well-suited for a town forest given its proximity to the village, extensive wildlife habitat, important natural features, inclusion in an immense and important block of contiguous forestland, significant recreational and educational opportunities, connectivity to existing trail networks, and contribution to Richmond's local economy and scenic, rural character.

Management Plans

The landowner is required to develop a comprehensive management plan including updates, revisions and amendments. The management plan will present a plan for the use and management of the property that is consistent with the easement's purposes, and the management plan will balance all the resource attributes and human use of the protected property. The landowner shall solicit public input from residents of Richmond and the general public. The management plan should be developed in a timely and responsive manner, and VLT shall be provided a copy of each management plan and a copy of each final adopted management plan.

Before any active timber harvesting, sugaring, or other forestry activities may take place, the

landowner must submit a forest management plan (FMP) to VLT for review and approval. The forest management plan must be updated every ten years, and any amended or updated plan must be submitted to VLT for approval before commencing any activities prescribed in the plan. Amendments are required for any proposed change in the treatments prescribed in the approved plan, but no amendment is needed for changes in timing of treatments unless the change in timing is greater than five years. For more information on requirements for the management plans, refer to Section I. B & C of the easement.

Public Access

The Andrews forestland has impressive existing and potential recreational resources. A combination of woods roads and a woodland trail around the lower meadow offer spectacular views to Camels Hump, Vermont's signature peak, for very little effort. A formal loop trail around this meadow would help serve the community's desire to include "something for everyone" as it considers recreation on the Town Forest. There is ample opportunity to expand an existing network of more far-reaching roads and trails that connect to neighboring trail systems. A VAST (Vermont Association of Snow Travelers) trail crosses the property, allowing for groomed winter travel for those on snowmobiles, cross-country skis, or snowshoes. There is an existing connection to the Vermont Youth Conservation Corps (VYCC) trail network to the east.

The Richmond Trails Committee is enthusiastic about the opportunities to design additional trails on the property, and to create new connections, for hiking, mountain biking, and cross-country skiing. Trails on the RTF would be integral to an increasingly linked, town-wide trail network. The Trails Committee has been working with a landowner to the northwest of the property to establish a connecting trail over their Forest Legacy conserved land, linking the Town Forest to existing trails to the Richmond village.

The property will be available to the general public for all types of non-commercial, non-motorized, non-mechanized, dispersed recreational and educational purposes (including bird-watching, boating, cross-country skiing, fishing, hiking, hunting, snowshoeing, swimming, trapping, walking and wildlife observation) and educational activities consistent with the easement's purposes. Any proposed new trails or other uses will be accounted for in the new comprehensive management plan for the property. The landowner may limit or restrict public access to the protected property to assure compliance with the easement, to protect natural habitats, or to protect the public health or safety (including, but not limited to, the right to permit, regulate or prohibit fishing, hunting and trapping). For more information about public access, refer to Section IV of the easement.

Natural Resources

The Andrews II property stretches over 428 acres of mostly south-facing hillside in Richmond, overlooking the Winooski River valley with views to Camels Hump, Mount Ellen, and beyond. Elevations range from just below 400' at the parking area by the property's original homestead along US Route 2, to about 1240' in the northern corner. Metamorphosed sedimentary bedrock, including schist, phyllite, and metawacke, underlies the entire property, as it does under much of the Green Mountains. The property's southerly aspect supports a complex of forested natural communities associated with relatively warm,

dry settings. Large parts of the property were mapped either on the ground or remotely by Arrowwood Environmental in 2013 as part of an ecological inventory of the town of Richmond, and VLT's field work has further refined our understanding of the natural communities.

Mesic Red Oak-Northern Hardwood Forest and Hemlock-Northern Hardwood Forest are the most widespread forest communities here. Red oak, eastern hemlock, American beech, and white pine are the most common species, with sugar maple, red maple and white ash also frequent. Where soils begin to thin out, as they do on convex knobs or gentle ridges and saddles in the upper elevations of the property, smaller patches of Dry Oak-Hickory-Hophornbeam Forest and Dry Red Oak-White Pine Forest occur. In these areas, red oak and white pine dominate, with hophornbeam and serviceberry in the midstory, and an understory that is in places a fairly sparse sedge 'lawn' and in others a more developed organic layer with deeper leaf litter and tree regeneration. Lowbush blueberry is common in the understory of both communities. Where more light can penetrate, whether from a naturally sparse canopy or as a result of human-cleared power lines or timber patch cuts (both of which occur adjacent to patches of these forest types), witch hazel and sweetfern can grow densely. These dry forests in some ways form transitional areas to even drier forest communities: patches of Dry Oak Forest and one small area of Dry Oak Woodland occupy the rockiest, steepest, most exposed adjacent areas. The most notable difference between these communities and those around them is the presence of white oak in the canopy, as well as understory plants characteristic of droughty, shallow-to-bedrock, acidic conditions: these include wintergreen, trailing arbutus, sheep laurel, bracken fern, lowbush blueberry, and American black huckleberry. Rock tripe and toadskin lichens, and polypody ferns, appear on exposed ledges and glacial erratics, and Cladonia lichen (sometimes known as reindeer lichen) occurs as well. One small concentration of red pine grows at the edge of a knoll covered by Dry Oak Forest, at the top of a precipitous east-facing dropoff. Shady stands of Hemlock Forest occupy the property's cooler, wetter slopes. In some spots, plants that can indicate slight mineral nutrient enrichment, including round-lobed hepatica and American basswood, occur, which suggests that the bedrock may have some areas that are locally calcium-rich. An inventory during the growing season would provide further insight.

Timber harvest has occurred with varying frequency and intensity throughout the property. While some areas of up to 4 acres have been recently cleared, other portions show little if any cutting in recent decades. For the most part, the areas of Dry Oak Forest and Dry Oak Woodland show minimal signs of cutting, while the matrix communities and likely some Dry Oak-Hickory-Hophornbeam Forest have had recent clearing. A large powerline is continuously kept clear and parts of it include dense stands of witch hazel and sweetfern. The population of American beech here may be in early stages of infestation by beech bark disease, or some trees may have resistance to this threat.

Several perennial streams arise on and meander through the property on their way to the Winooski River. One stream in the southeastern part has been repeatedly dammed by beavers, whose work has resulted in a small open wetland complex.

Two high-quality vernal pools occur on the property. One is tucked into a pocket amid ledgy outcrops beneath a hemlock canopy at about 1000' elevation. At about 5460 square feet in area, and at least 18" deep, it was teeming with incipient amphibian life at our late April visit. Approximately 85 wood frog egg masses, each containing hundreds of eggs, and 86 spotted salamander egg masses, each with up to 100 eggs, were counted here. Recent harvest has come very close to this pool. A second vernal pool occupies a small, sunny depression in hardwood forest at about 770' elevation in the property's southeastern portion, near the VAST trail. We noted about 45 wood frog egg masses and 44 spotted salamander egg masses here, along with several single eggs that may be from other salamander species. A single adult wood frog observed the inventory process. Both pools have coarse and fine woody material in and around them; this material provides important structure for egg-laying as well as terrestrial habitat.

Wildlife have a strong presence elsewhere on the property as well, and our winter visit included an abundance of tracks and sign. White-tailed deer are active throughout the property, with heavy browse in the seedling, sapling, and shrub layers, and beds in or near hemlock cover. Moose have stripped bark off of striped maples. Bobcat tracks traversed the ledgy dry oak area in the northern corner as well as the edge of the small beaver wetland. Coyote, fox, turkey, fisher, and weasel tracks were noted, as were abundant sapsucker holes in tree bark, and a dramatic snowy tableau including a small mammal's trail ending abruptly with the sweep of large feathery wings (potentially owl). Recent claw marks on American beech trees in at least two areas indicate the presence of black bears. One such mast area included at least two clawed trees near a small seepage wetland that may function as a vernal pool. The combination of mast tree species near a wetland that provides fresh water and green plants early and late in the season may be particularly attractive to bears and other wildlife.

The Vermont Conservation Design (2015), a landscape-level conservation prioritization from Vermont Land Trust and the Vermont Agency of Natural Resources, considers the entire property to be part of a 'Highest Priority Interior Forest Block' providing critical ecological function on a statewide level. In addition, the entire property is notable in its contribution to Vermont's physical landscape diversity. Adjacent to other large blocks of conserved land and with connections to the Winooski River valley and its floodplain, this property also plays an important role in landscape connectivity, offering a corridor for wildlife and other species to move. These designations complement the field observations described above.

The easement designates Riparian Buffer Zones, Ecological Protection Zones and Vernal Pool Ecological Protection Zones. For more information, refer to the conservation map and Sections V, VI and VII of the easement.

Inventory of Existing Structures

There are no structures located on the protected property.

Summary of Grantors'¹ Rights and Restrictions

Conservation rights and restrictions allow the protected property to be used for educational, forestry, non-motorized, non-commercial recreation, habitat conservation, natural area, and open space purposes. For the specific restricted and permitted uses included in the easement, refer to the Grant of Development Rights, Conservation Restrictions, and Public Access Easement (referred to as the easement throughout this document).

Summary of Grantees'² Rights

The Grantees' primary intent is to conserve and protect productive agricultural and forestry uses, and secondarily to encourage sustainable management of soil resources. Other goals in conserving this property include promoting non-commercial recreational opportunities and activities and other natural resource and scenic values of the protected property for present and future generations. Aside from holding the development rights on the protected property, the Grantees have the right to periodically monitor the property and enforce the Conservation Restrictions.

This is a summary of the Grantors' and Grantees' legal rights. For a complete description of these rights, refer to the Grant of Development Rights, Conservation Restrictions, and Public Access Easement.

References

- Grant of Development Rights, Conservation Restrictions, and Public Access Easement, Andrews II - Richmond Town Forest Property, 2018
- VHCB Application, Andrews II - Richmond Town Forest Property, 2017
- Forest Management Plan of Andrews II - Richmond Town Forest Property, Brendan Moore for Prentill & Carlisle, June 2011
- Ecological Report, Richmond Town Forest, Allaire Diamond, Conservation Ecologist for VLT, February 6, 2017

¹ Grantors are the landowners, **Amelia Andrews Wagner, Jennifer Andrews Gilligan, Catherine Andrews Couture and Abigail Andrews Allard**, their heirs, executors, administrators, successors, and assigns.

² Grantees refers to the **Vermont Land Trust, Inc.** and the **Vermont Housing and Conservation Board**, their successors and assigns.

We, **Amelia Andrews Wagner; Jennifer Andrews Gilligan, by Abigail Andrews Allard, her Attorney-In-Fact; Catherine Andrews Couture, by Abigail Andrews Allard, her Attorney-in-Fact; and Abigail Andrews Allard,** have signed this Baseline Documentation Report with the understanding and agreement that this Report will be used for, but its use will not be limited to, monitoring the property depicted and described in this Report for compliance with the Grant of Development Rights, Conservation Restrictions, and Public Access Easement, signed by us. We have read this Report and understand it. We agree that this Report, including the maps and photographs, accurately describes and depicts the physical features, relevant site conditions, and current structures and land uses on our property conserved by the Grant. We affirm that there are no activities ongoing on our property that are inconsistent with the Grant.

GRANTORS



Amelia Andrews Wagner

Jennifer Gilligan, by Abigail Allard, her Attorney in Fact

Jennifer Andrews Gilligan by Abigail Andrews Allard, her Attorney-in-Fact

Catherine Couture, by Abigail Allard her Attorney in Fact

Catherine Andrews Couture by Abigail Andrews Allard, her Attorney-in-Fact

Abigail Andrews Allard

Abigail Andrews Allard

STATE OF VERMONT
CHITTENDEN COUNTY

At Essex Junction, Vermont, this 27th day of March, 2018, Amelia Andrews Wagner, personally appeared and acknowledged this instrument, by her sealed and subscribed, to be her free act and deed, before me,



Notary Public
My commission expires: 2/10/2019

STATE OF VERMONT
CHITTENDEN COUNTY

At Essex Junction, Vermont, this 27th day of March, 2018, Abigail Andrews Allard, personally appeared on behalf of herself and as attorney in fact for Catherine Andrews Couture and Jennifer Andrews Gilligan and she acknowledged this instrument, by her sealed and subscribed, to be her free act and deed and the free act and deed of Catherine Andrews Couture and Jennifer Andrews Gilligan, before me,



Notary Public
My Commission Expires: 2/10/19

I, **ADAM PIPER**, have signed and prepared this Baseline Documentation Report with the understanding and agreement that this Report will be used for, but its use will not be limited to, monitoring the property depicted and described in this Report for compliance with the Grant of Development Rights, Conservation Restrictions, and Public Access Easement, about to be executed. I affirm that I visited this property personally and that this Report including the maps and photographs accurately describes and depicts the physical features, relevant site conditions, and current structures and land uses on the property conserved by the Grant.

VERMONT LAND TRUST, INC.

By: 

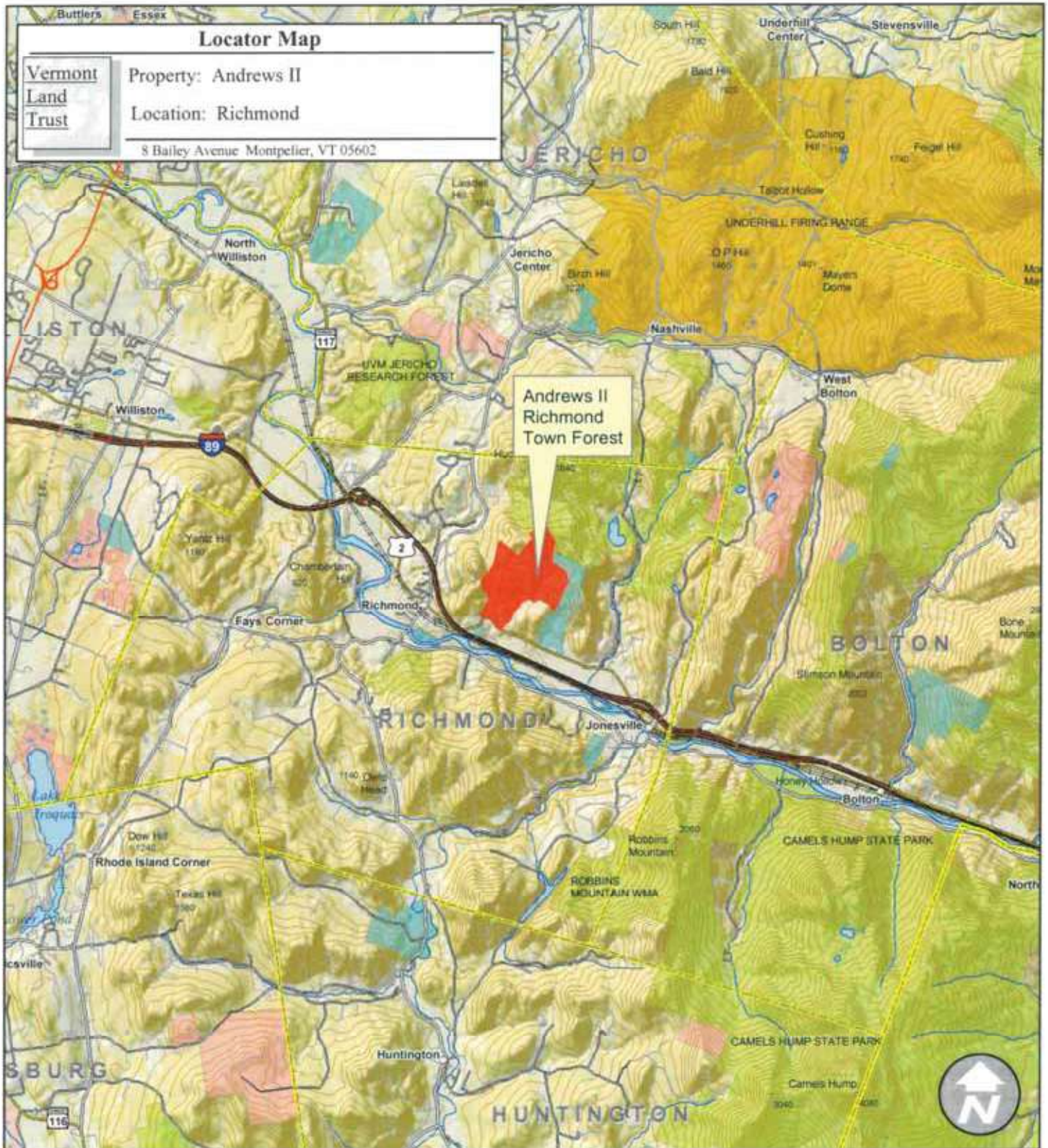
ADAM PIPER
BA, Environmental Science and Policy,
Concentration in Community Planning
University of Southern Maine
VLT training - 2007
BDR preparation since 2007

3/23/18
Date

STATE OF VERMONT
CHITTENDEN COUNTY, ss

At Richmond, this 23 day March, 2018, **ADAM PIPER**, duly authorized agent of the **VERMONT LAND TRUST, INC.**, personally appeared and he acknowledged this instrument, by his sealed and subscribed, to be her free act and deed and to be the free act and deed of the **VERMONT LAND TRUST, INC.**

Before me, 
Notary Public
My Commission Expires: 2/10/2019



Directions to the property from Richmond village: Follow VT Route 2 east (East Main St.) about a mile past the light in the center of town. The parking lot and entrance to the forestland is just before the farmhouse, on the left hand side.

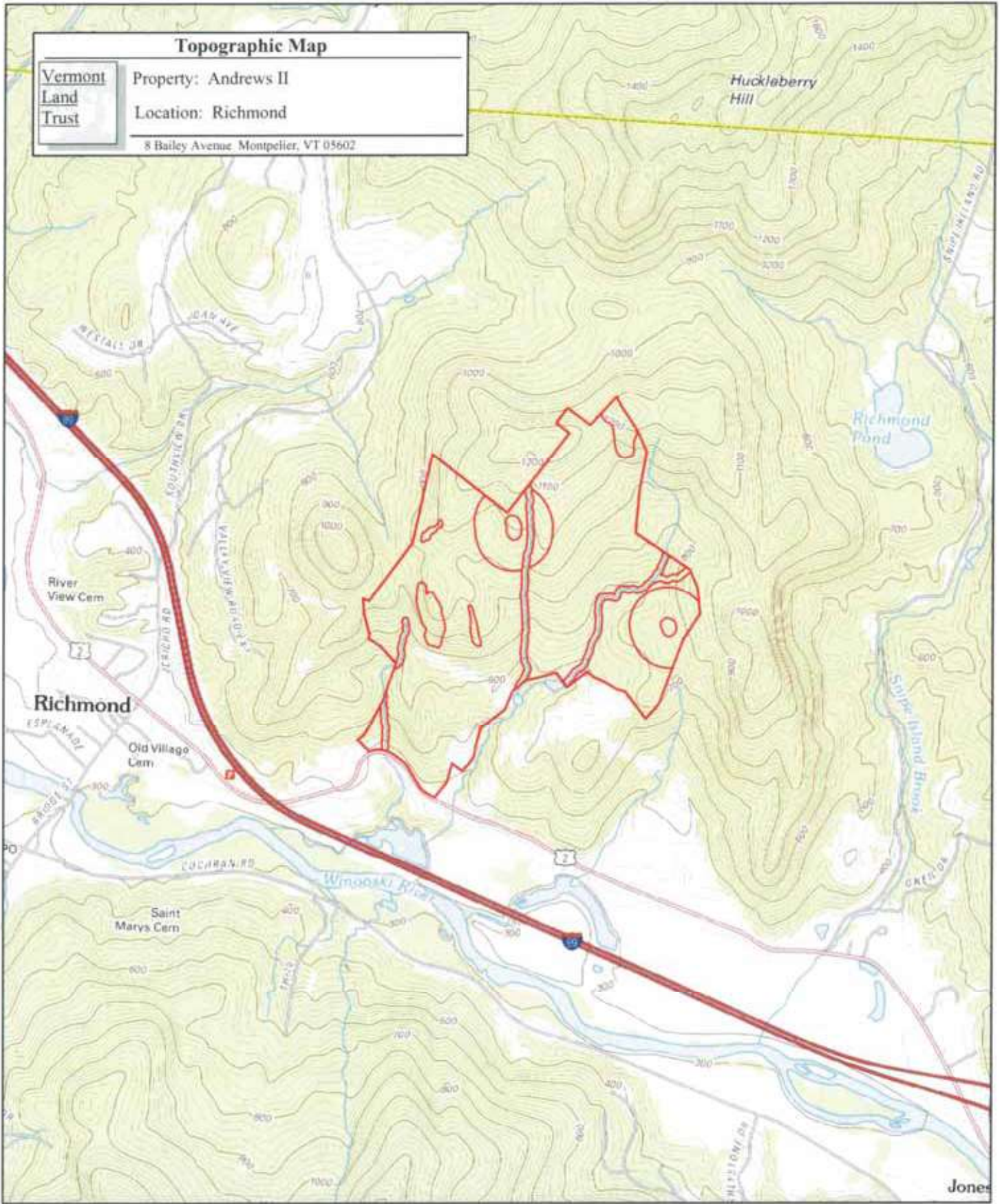
Topographic Map

Vermont
Land
Trust

Property: Andrews II

Location: Richmond

8 Bailey Avenue Montpelier, VT 05602



USGS 7.5 Minute Quadrangles:
Richmond, 1983

 Subject Property

Scale: 1:24,000



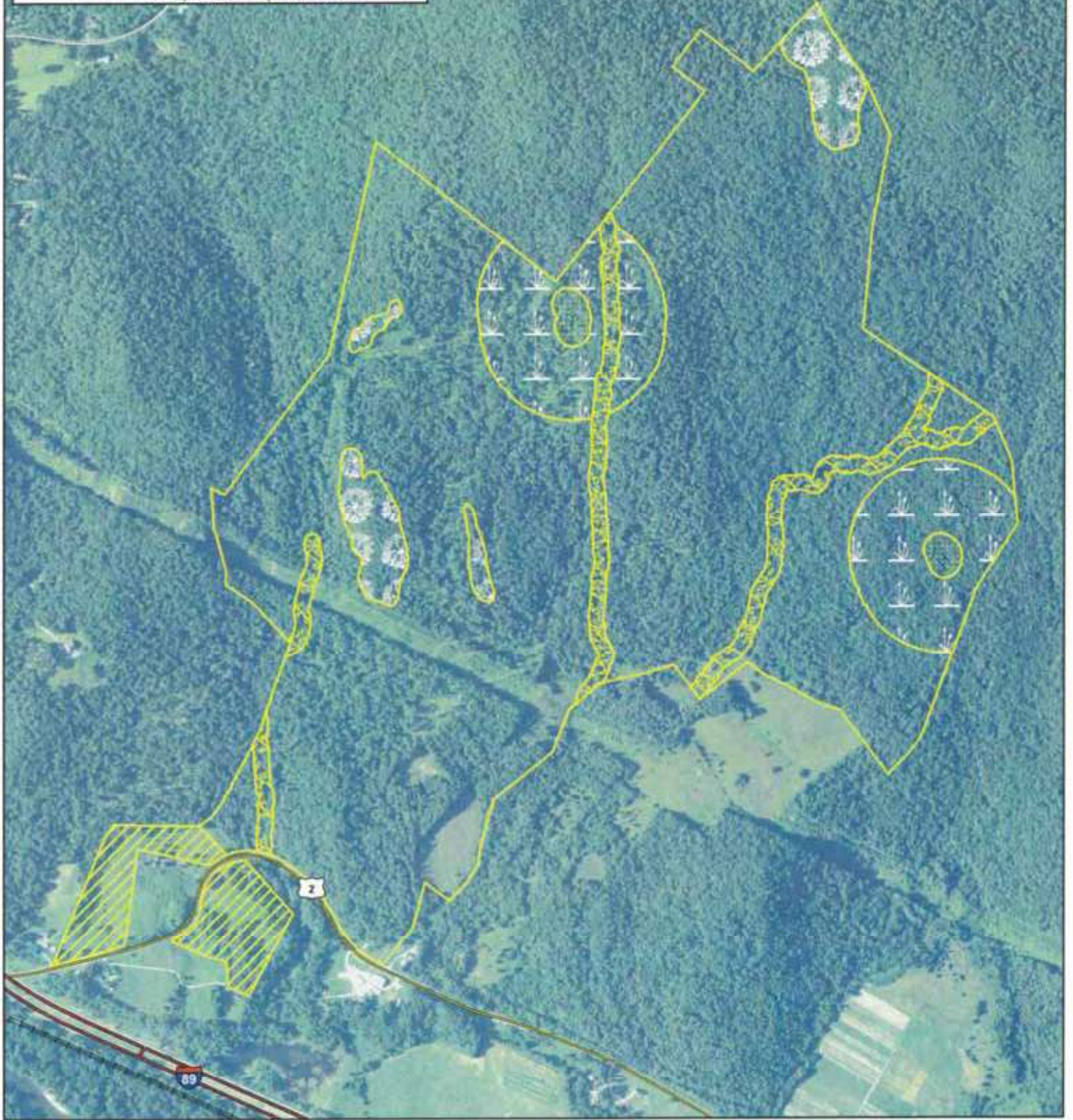
Orthophoto Map







Vermont
Land
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Property: Andrews II

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8 Bailey Avenue Montpelier, VT 05602



- | | |
|--|--|
|  Protected Property |  RBZ |
|  Excluded |  Dry Oak EPZ |
|  EPZ Primary Zone |  EPZ Secondary Zone |

Scale: 1:10,580



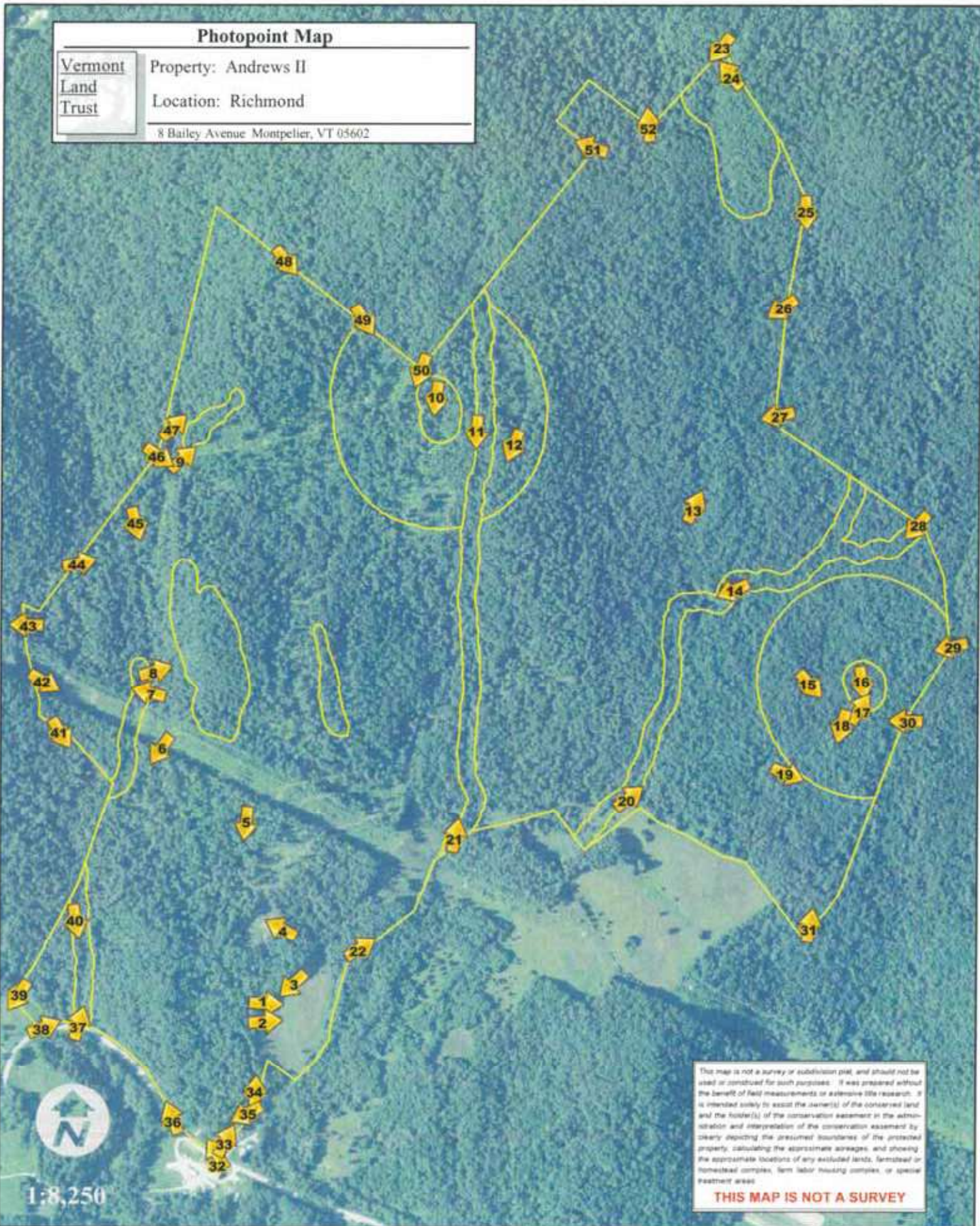
Photopoint Map

Vermont
Land
Trust

Property: Andrews II

Location: Richmond

8 Bailey Avenue Montpelier, VT 05602



This map is not a survey or subdivision plat, and should not be used or construed for such purposes. It was prepared without the benefit of field measurements or extensive title research. It is intended solely to assist the owner(s) of the conserved land and the holder(s) of the conservation easement in the administration and interpretation of the conservation easement by clearly depicting the presumed boundaries of the protected property, calculating the approximate acreages, and showing the approximate locations of any excluded lands, farmstead or homestead complex, farm labor housing complex, or special treatment areas.

THIS MAP IS NOT A SURVEY



44°24'12", -72°58'25", 110.0m, 93"
02/02/2018



44°24'12", -72°58'25", 113.0m, 85"
02/02/2018

Photo 1 Subject: Water source.

Photo 2 Subject: Pasture.



44°24'13", -72°58'22", 125.0m, 227"
02/02/2018



44°24'16", -72°58'23", 149.0m, 296"
02/02/2018

Photo 3 Subject: Pasture.

Photo 4 Subject: Log landing.



44°24'23", -72°58'26", 157.0m, 187"
02/02/2018



44°24'27", -72°58'33", 176.0m, 215"
02/02/2018

Photo 5 Subject: Property access.

Photo 6 Subject: Property access.



44°24'31" -72°58'34" 197.0m 284°
02/02/2018



44°24'31" -72°58'34" 203.0m 73°
02/02/2018

Photo 7 Subject: Property access through RBZ

Photo 8 Subject: Steep incline with Dry Oak EPZ.



44°24'43" -72°58'32" 232.0m 48°
02/02/2018



44°24'47" -72°58'11" 273.0m 188°
02/02/2018

Photo 9 Subject: Property access and Dry Oak EPZ.

Photo 10 Subject: EPZ Primary Zone.



44°24'45" -72°58'8" 291.0m 183°
02/02/2018



44°24'45" -72°58'5" 292.0m 202°
02/02/2018

Photo 11 Subject: RBZ inside an EPZ Secondary Zone.

Photo 12 Subject: EPZ Secondary Zone.



Photo 13 Subject: Woodlands.

Photo 14 Subject: RBZ.



Photo 15 Subject: Old car inside EPZ Secondary Zone.

Photo 16 Subject: EPZ Primary Zone.



Photo 17 Subject: Remnant water source of old camp, nonfunctional.

Photo 18 Subject: Debris in EPZ Secondary Zone.



44°24'26" -72°57'43" 192.0m, 112"
02/02/2018

Photo 19 Subject: Old Car.



44°24'24" -72°57'56" 157.0m, 52"
02/02/2018

Photo 20 Subject: RBZ.



44°24'22" -72°58'10" 150.0m, 11"
02/02/2018

Photo 21 Subject: RBZ



44°24'15" -72°58'17" 138.0m, 57"
02/02/2018

Photo 22 Subject: Property access, boundary on the right.



Jun 30, 2017

Photo 23 Subject: View from property corner.



Jun 30, 2017

Photo 24 Subject: Property corner.



Photo 25 Subject: Property corner.



Photo 26 Subject: Property marker.



Photo 27 Subject: Property corner.









Photo 28 Subject: Property corner.



Photo 29 Subject: Property marker.



Photo 30 Subject: Property access.

 <p style="text-align: right;">Jun 30, 2017</p>	 <p style="text-align: right;">Jun 30, 2017</p>
<p>Photo 31 Subject: View from property corner area.</p>	<p>Photo 32 Subject: Frontage on US Route 2. Informal parking on right.</p>
 <p style="text-align: right;">Jun 30, 2017</p>	 <p style="text-align: right;">Jun 30, 2017</p>
<p>Photo 33 Subject: Property line. Informal parking on left.</p>	<p>Photo 34 Subject: Property access.</p>
 <p style="text-align: right;">Jun 30, 2017</p>	 <p style="text-align: right;">Jun 30, 2017</p>
<p>Photo 35 Subject: View along property access.</p>	<p>Photo 36 Subject: Frontage on US Route 2.</p>



Jun 30, 2017



Jun 30, 2017

Photo 37 Subject: RBZ.

Photo 38 Subject: Frontage on US Route 2.



Jun 30, 2017



Jun 30, 2017

Photo 39 Subject: Incredible view.

Photo 40 Subject: RBZ.



Jun 30, 2017



Jun 30, 2017

Photo 41 Subject: Property boundary on the left.

Photo 42 Subject: Power line ROW.



Jun 30, 2017

Photo 43 Subject: "A" on a tree. Andrews?



Jun 30, 2017

Photo 44 Subject: Property access.



Jun 30, 2017

Photo 45 Subject: Property access.



Jun 30, 2017

Photo 46 Subject: Property corner.



Jun 30, 2017

Photo 47 Subject: Property access.



Jun 30, 2017

Photo 48 Subject: Property line.



Photo 49 Subject: Property line and Secondary EPZ.

Photo 50 Subject: Property corner and Primary EPZ



Photo 51 Subject: Property corner and engaged citizen.

Photo 52 Subject: Property corner.

ECOLOGICAL REPORT: *Andrews II, Richmond*

Allaire Diamond, Conservation Ecologist; Bob Heiser, Project Director. Clarice Cutler accompanied on April visit.

Visit Date: January 31, 2017, April 26, 2017

Report Date: February 6, 2017 UPDATED May 4, 2017

Technology Used: ESRI Collector on Galaxy Note 3

Data: 'NatComm' geodatabase: \\PORO\Landinfo\GIS\Base\Resource\ConsBioInfo

FEATURES OF ECOLOGICAL SIGNIFICANCE

The Andrews II property stretches over 428 acres of mostly south-facing hillside in Richmond, overlooking the Winooski River valley with views to Camels Hump, Mount Ellen, and beyond. Elevations range from just below 400' at the parking area by the property's original homestead along US Route 2, to about 1240' in the northern corner. Metamorphosed sedimentary bedrock, including schist, phyllite, and metawacke, underlies the entire property, as it does much of the Green Mountains. The property's southerly aspect supports a complex of forested natural communities associated with relatively warm, dry settings. Large parts of the property were mapped either on the ground or remotely by Arrowwood Environmental in 2013 as part of an ecological inventory of the town of Richmond, and our field work has further refined our understanding of the natural communities.

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wetter slopes. In some spots, plants that can indicate slight mineral nutrient enrichment, including round-lobed hepatica and American basswood, occur, which suggests that the bedrock may have some areas that are locally calcium-rich. An inventory during the growing season would provide further insight.

Timber harvest has occurred with varying frequency and intensity throughout the property. While some areas of up to 4 acres have been recently cleared, other portions show little if any cutting in recent decades. For the most part, the areas of Dry Oak Forest and Dry Oak Woodland show minimal signs of cutting, while the matrix communities and likely some Dry Oak-Hickory-Hophornbeam Forest have had recent clearing. A large powerline is continuously kept clear and parts of it include dense stands of witch hazel and sweetfern. The population of American beech here may be in early stages of infestation by beech bark disease, or some trees may have resistance to this threat.

Several perennial streams arise on and meander through the property on their way to the Winooski River. One stream in the southeastern part has been repeatedly dammed by beavers, whose work has resulted in a small open wetland complex.

Two high-quality vernal pools occur on the property. One is tucked into a pocket amid ledgy outcrops beneath a hemlock canopy at about 1000' elevation. At about 5460 square feet in area, and at least 18" deep, it was teeming with incipient amphibian life at our late April visit. Approximately 85 wood frog egg masses, each containing hundreds of eggs, and 86 spotted salamander egg masses, each with up to 100 eggs, were counted here. Recent harvest has come very close to this pool. A second vernal pool occupies a small, sunny depression in hardwood forest at about 770' elevation in the property's southeastern portion, near the VAST trail. We noted about 45 wood frog egg masses and 44 spotted salamander egg masses here, along with several single eggs that may be from other salamander species. A single adult wood frog observed the inventory process. Both pools have coarse and fine woody material in and around them; this material provides important structure for egg-laying as well as terrestrial habitat.

Wildlife have a strong presence elsewhere on the property as well, and our winter visit included an abundance of tracks and sign. White-tailed deer are active throughout the property, with heavy browse in the seedling, sapling, and shrub layers, and beds in or near hemlock cover. Moose have stripped bark off of striped maples. Bobcat tracks traversed the ledgy dry oak area in the northern corner as well as the edge of the small beaver wetland. Coyote, fox, turkey, fisher, and weasel tracks were noted, as were abundant sapsucker holes in tree bark, and a dramatic snowy tableau including a small mammal's trail ending abruptly with the sweep of large feathery wings (potentially owl). Recent claw marks on American beech trees in at least two areas indicate the presence of black bears. One such mast area included at least two clawed trees near a small seepage wetland that may function as a vernal pool. The combination of mast tree species near a wetland that provides fresh water and green plants early and late in the season may be particularly attractive to bears and other wildlife.

The Vermont Conservation Design (2015), a landscape-level conservation prioritization from Vermont Land Trust and the Vermont Agency of Natural Resources, considers the entire property to be part of a 'Highest Priority Interior Forest Block' providing critical ecological function on a statewide level. In addition, the entire property is notable in its contribution to Vermont's physical landscape diversity. Adjacent to other large blocks of conserved land and with connections to the Winooski River valley and its floodplain, this property also plays an important role in landscape

connectivity, offering a corridor for wildlife and other species to move. These designations complement the field observations described above.



Owl (or other bird of prey) hunting success: tiny mouse or other small mammal prints approach from the top center, ending in a sweep of wings (see feather marks around 4:30 and body marks in the center of the photo) where the bird snatched its prey out of the snow.

MAP.

