

**Hopewell Valley Community Stewardship Plan  
Friends of Hopewell Valley Open Space**

**Appendix 21.  
Stephens Preserve**

**Acreage:** 5.07

**Block and Lot:** B2, L8.01

**Ownership:** FoHVOS (100%)

**Year(s) Purchased:** 2005

**Location & Access:** Preserve is located on the east side of Hopewell-Wertsville Road. Preserve is accessed by foot just south of the redeveloped parcel. Parking is available on Minnietown Road or at Hillbilly Hall (by permission). **Nearest street address:** 197 Hopewell-Wertsville Road, Hopewell, NJ 08525 (actual Preserve address).

**Structures:** None

Additional property information is summarized in Appendix W. The following Preserve maps are provided at the end of this document:

- Map 1 2007 Aerial Photography
- Map 2 1930 Aerial Photography
- Map 3 Topography
- Map 4 Bedrock Geology
- Map 5 Soils
- Map 6 Land Cover Types (2007)
- Map 7 Protected Lands
- Map 8 Deer Management
- Map 9 Invasive Plant Cover (Relative Infestation Severity for all species)

**Website Description:**

**Stephens Preserve**, a forested tract in the Sourland Mountain region of Hopewell, protects wood turtle habitat, and is adjacent to the Audubon Featherbed Lane Important Bird Area. Here, red maples dominate the canopy while highbush blueberry bushes make up the shrub layer.

**BROAD PROPERTY DESCRIPTION**

The Stephen Preserve (See Map 1) is located north of Hopewell Borough in the Sourland Mountain region. The topography (See Map 3) is flat at 130 feet above sea level.

Based upon analysis of NJDEP's 2007 Land Use/Land Cover dataset, the preserve contains one broad plant community: Deciduous Forest (> 50% canopy) - Upland. The preserve is surrounded by primarily forest and also residential and commercial development to the immediate north. Land Use/Land Cover is summarized in Appendix X and illustrated in Map 6.

The preserve's forest harbors a mesic to moist plant community: red maple, pin oak, ash, American beech, black cherry, and swamp white oak in the canopy; black huckleberry, highbush blueberry, deerberry, ironwood, spicebush, *Rubus* sp., Virginia creeper, and round leaved greenbriar in the subcanopy and shrub layer; jewelweed, wood reed grass, rice cut grass, sedges, partridgeberry, bugleweed, Canada mayflower, and jack-in-the-pulpit. Invasive plants are concentrated around the redeveloped parcel to the north.

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The preserve has one type of bedrock geology--the Lockatong formation. See Map 4.

The preserve has 1 soil type (see Map 5) -- Chalfont silt loam, 2 to 6 percent slopes. The preserve's soils are described in Appendix Y.

**CONSERVATION VALUES**

Based on an analysis involving the ranking of ecological values and threats (See Community Stewardship Plan text), the Preserve has a weighted Ecological Value of >75%. See Appendix A for a description of ranking factors.

**Forest and Woodland Communities:** The Preserve is a part of the core forest of the Sourland Mountain region and the RHWHP Sourlands Central Forest Focal Area. It serves to maintain the region as forest. While the diabase ridge to the north features plant communities that prefer richer soils, the preserve's forest contains plants that prefer acidic soils, typically found in this area of the Sourlands. This ever-shifting "tapestry" of soils, hydrology and geology supports exponentially diverse plant and wildlife communities.

**Old forest:** None. See Map 2.

**Early Successional Communities:**

**Shrublands:** N/A

**Meadows/Grasslands:** N/A

**Waterbodies:** N/A

**Rare Species:**

**Rare Plants:** None documented on the Preserve, but Natural Heritage data shows winged monkeyflower (*Mimulus alatus*), as present in the area.

**Rare Animals:** The Landscape Project has identified the Preserve as ranked for species of State Endangered, Threatened, and Special Concern Species. The Preserve has suitable wood turtle habitat.

See Appendix L for a list of species.

**THREATS**

**Deer:** The understory and herb layers are severely browsed. Regeneration of the shrub and canopy layer are currently non-existent. Most individual plants in the understory layer are <4'.

**Invasive species:** In 2008 staff began walk-through surveys for emerging invasive species on all preserves. Mapping documented each species and its population size. No emerging species have been detected at the Preserve. See [www.njisst.org](http://www.njisst.org) for the current status of emerging invasive species at the Preserve.

In 2011 staff completed surveys for invasive plant species on all preserves (see Map 9). Mapping documented each species found and its population size (See Table 1 below). The four species with the highest infestation scores include: Japanese Stiltgrass, Japanese Barberry, Multiflora Rose, and Japanese Honeysuckle.

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**Other:** Tree cutting has occurred on the northern edge of the preserve.

**STRATEGIES and ACTIONS**

**Forest and Woodland Habitat Stewardship:** Annual surveys for and eradication of emerging invasive species is a high priority at this Preserve. No action is recommended for widespread invasive species. Reduced deer density will allow the native plant communities to recover and compete with all other widespread invasive species on a long-term basis.

**Early Successional Habitat Stewardship:** N/A

**Deer Management:** The preserve has not been enrolled in the DMP. The 450' safety zone disallows hunting across the entire preserve. However, the 150' safety zone for bow hunting allows for hunting in the majority of the preserve and hunters will be sought for the 2012/2013 seasons. See Map 8 for delineations of the 150' and 450' safety zones and hunting status.

**Rare Species Management:** Survey for presence of rare species. Maintain forest habitat for rare species. Because winged monkeyflower typically occurs along quiet riparian corridors, the species is unlikely to be found at the preserve.

**Neighboring Lands:** See Map 7 for adjacent protected lands.

**Waterbodies Management:** N/A

**Undesirable Activities Management:** Contact neighbors about issues.

**Scientific Research Assessment:** The preserve is available for scientific research.

**Recreational Opportunities Assessment:** This property is not suitable for self-contained trail because it is too small. Parking area is limited as well. However, this trail has potential to act as part of a regional trail system (Trail extension through Ruggieri, Preston, etc.).

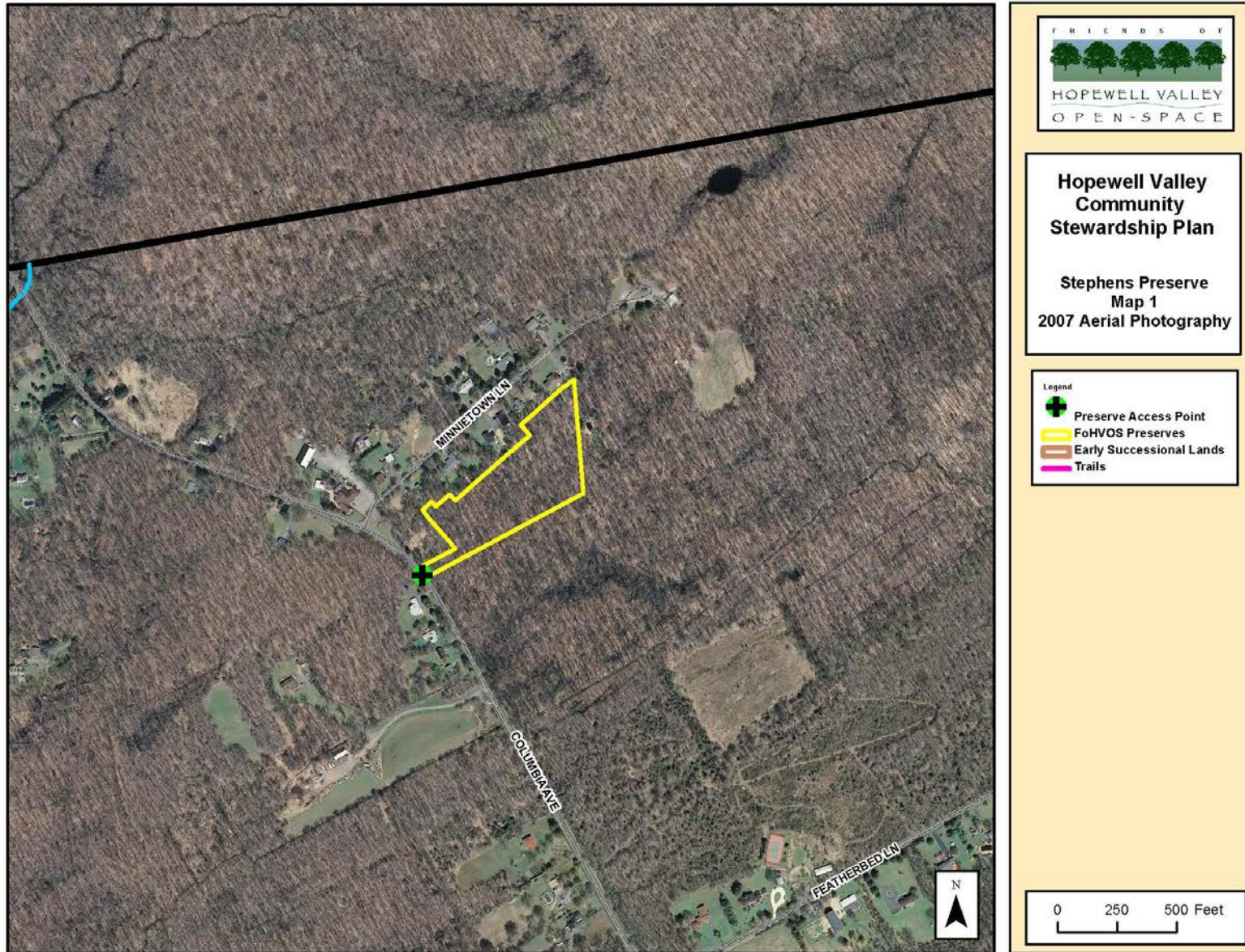
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**Table 1. Invasive Plants – Species Abundance and Treatment Recommendations**

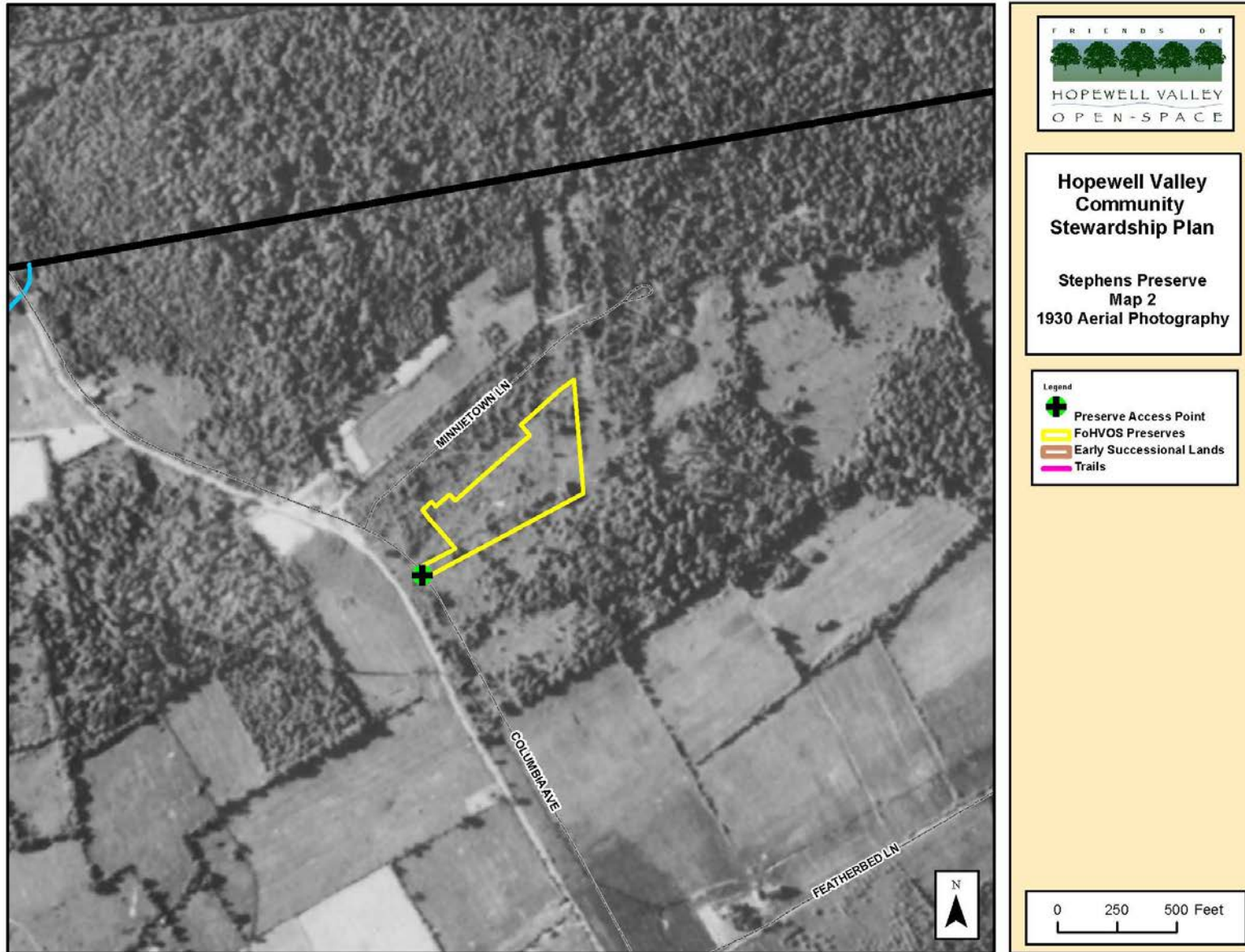
Scientific Name	Common Name	Infestation Index Score <sup>1</sup>	Total Acres Present	Percent of Preserve Area Present	Treatment Recommendation	LOE Estimate (Hours)	Acreage by Percent Ground Cover Categories						
							Category 0: 0%	Category: Trace	Category 1: 1-10%	Category 2: 10-25%	Category 3: 25-50%	Category 4: 50-75%	Category 5: 75-100%
<i>Acer palmatum</i>	Japanese Maple	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Acer platanoides</i>	Norway Maple	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.00	0.0	0.00	0.0
<i>Ailanthus altissima</i>	Tree-of-Heaven	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Alliaria petiolata</i>	Garlic Mustard	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Artemisia vulgaris</i>	Common Mugwort	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Arthraxon hispidus</i>	Small Carpgrass	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Berberis thunbergii</i>	Japanese Barberry	6.8	5.1	100.0	None		0.00	0.0	4.2	0.0	0.8	0.0	0.0
<i>Cardamine impatiens</i>	Narrow-leaved Bittercress	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Catalpa bignonioides</i>	Northern Catalpa	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Celastrus orbiculatus</i>	Asiatic Bittersweet	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.00	0.0	0.0
<i>Centurea sp.</i>	Knapsweed sp.	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Cirsium arvense</i>	Canada Thistle	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Dipsacus sylvestris</i>	Teasel	0.0	0.0	0.0	N/A		5.07	0.0	0.00	0.0	0.0	0.0	0.0
<i>Eleagnus umbellata</i>	Autumn Olive	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Euonymus alata</i>	Winged Burning Bush	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.00
<i>Iris pseudoacris</i>	Yellow Iris	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Lespedeza cuneata</i>	Chinese Bushclover	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Ligustrum obtusifolium</i>	Border Privet	0.0	0.0	0.0	N/A		5.07	0.0	0.00	0.0	0.0	0.0	0.0
<i>Lonicera japonica</i>	Japanese Honeysuckle	4.6	5.1	100.0	None		0.00	0.6	4.2	0.2	0.0	0.0	0.0
<i>Lonicera maackii</i>	Amur Honeysuckle	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Lonicera morrowii</i>	Morrow's Honeysuckle	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.00	0.0	0.0
<i>Lysimachia nummularia</i>	Moneywort	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Lythrum salicaria</i>	Purple Loosestrife	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Malus toringo</i>	Toringo Crabapple	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Microstegium vimineum</i>	Japanese Stiltgrass	25.4	5.1	100.0	None		0.00	0.0	0.0	0.0	0.0	0.0	5.1
N/A	Non-native, cool season grass	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Phalaris arundinacea</i>	Reed Canary Grass	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Phragmites australis</i>	Common Reed	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Polygonum cuspidatum</i>	Japanese Knotweed	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Polygonum perfoliatum</i>	Mile-a-Minute	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Pyrus calleryana</i>	Callery Pear	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Ranunculus ficaria</i>	Lesser Celandine	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Robinia pseudoacacia</i>	Black Locust	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Rosa multiflora</i>	Multiflora Rose	6.8	5.1	100.0	None		0.00	0.0	4.2	0.0	0.8	0.0	0.0
<i>Rubus phoenicolasius</i>	Wineberry	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Securigera varia</i>	Crown vetch	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Viburnum dilatatum</i>	Linden Viburnum	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Viburnum sieboldii</i>	Siebold's Viburnum	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<i>Wisteria floribunda</i>	Japanese Wisteria	0.0	0.0	0.0	N/A		5.07	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total LOE</b>						<b>0</b>							

<sup>1</sup> The Infestation Index Score combines the extent of acreage infested and the intensity of the infestation. It was derived by multiplying the cover class number by the number of acres within each cover class.

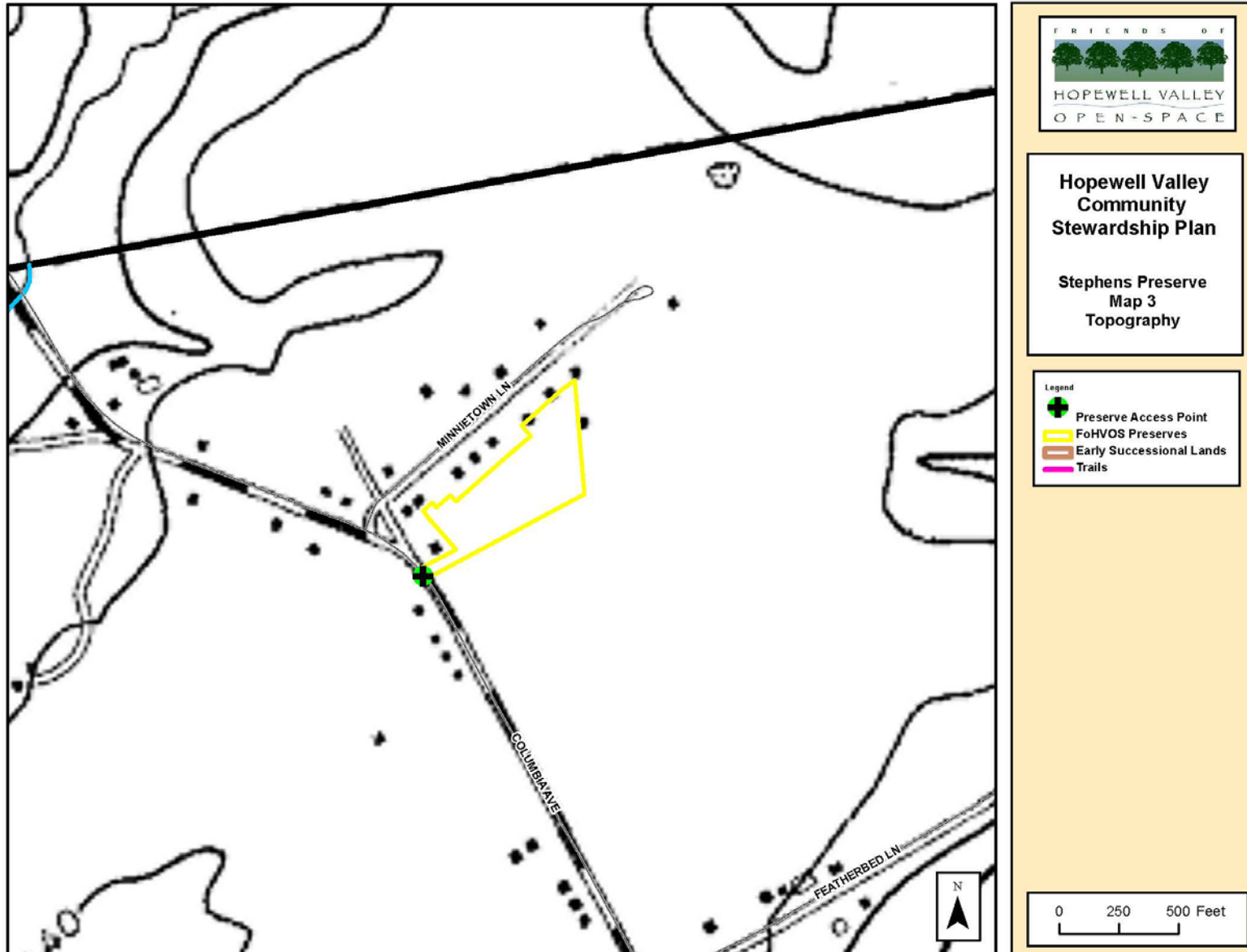
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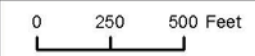
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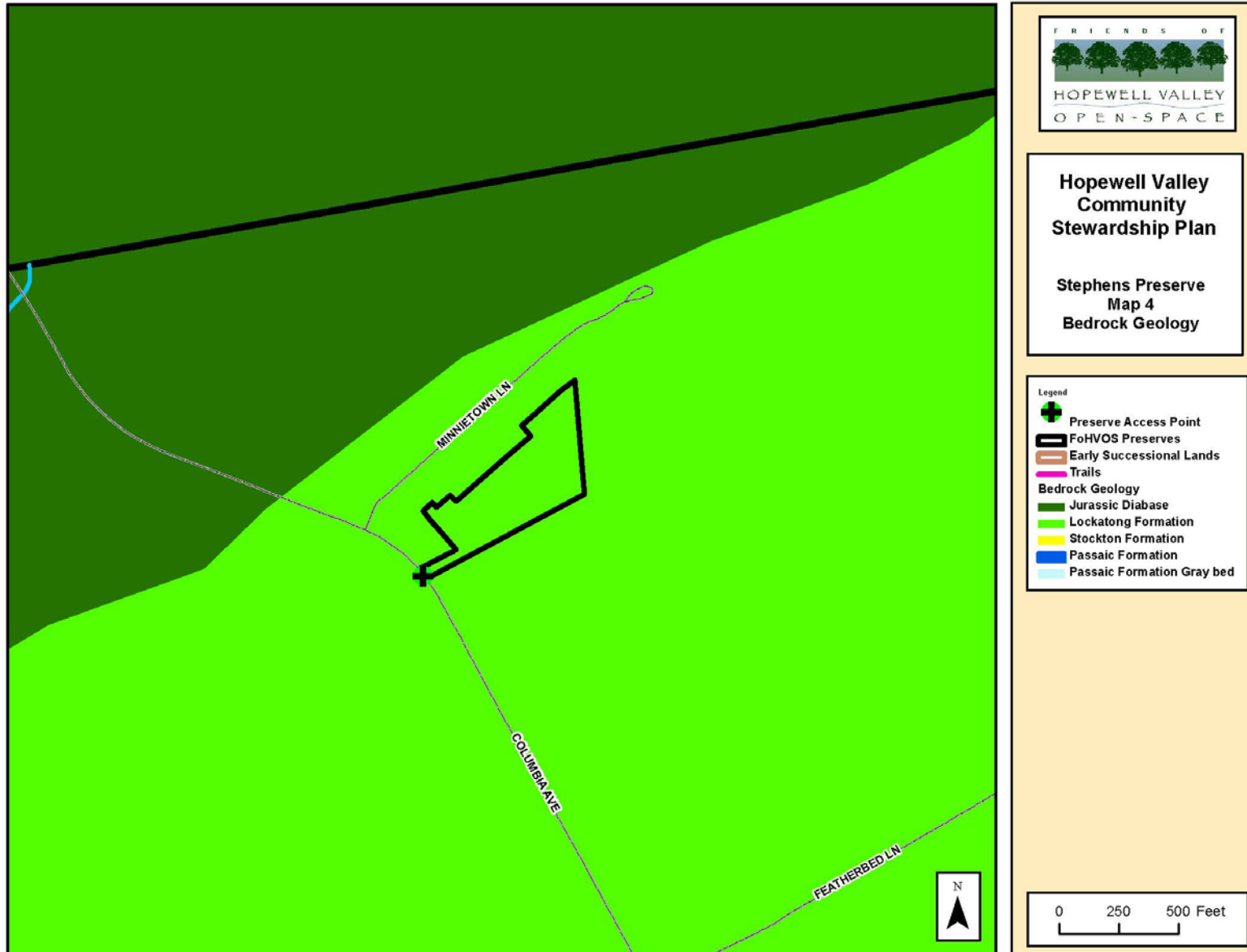
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Stephens Preserve  
Map 3  
Topography

- Legend
- Preserve Access Point
  - FoHVOS Preserves
  - Early Successional Lands
  - Trails

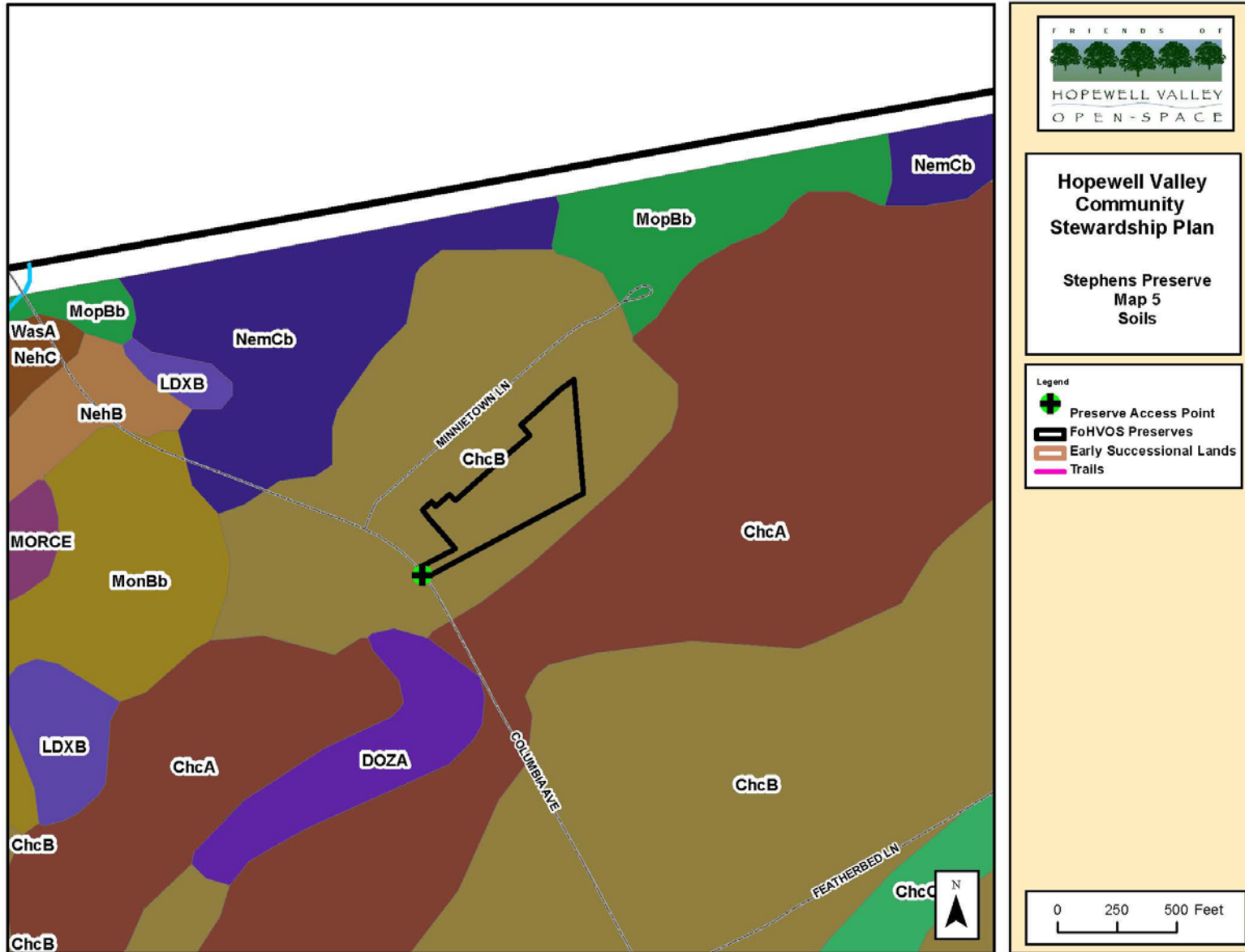


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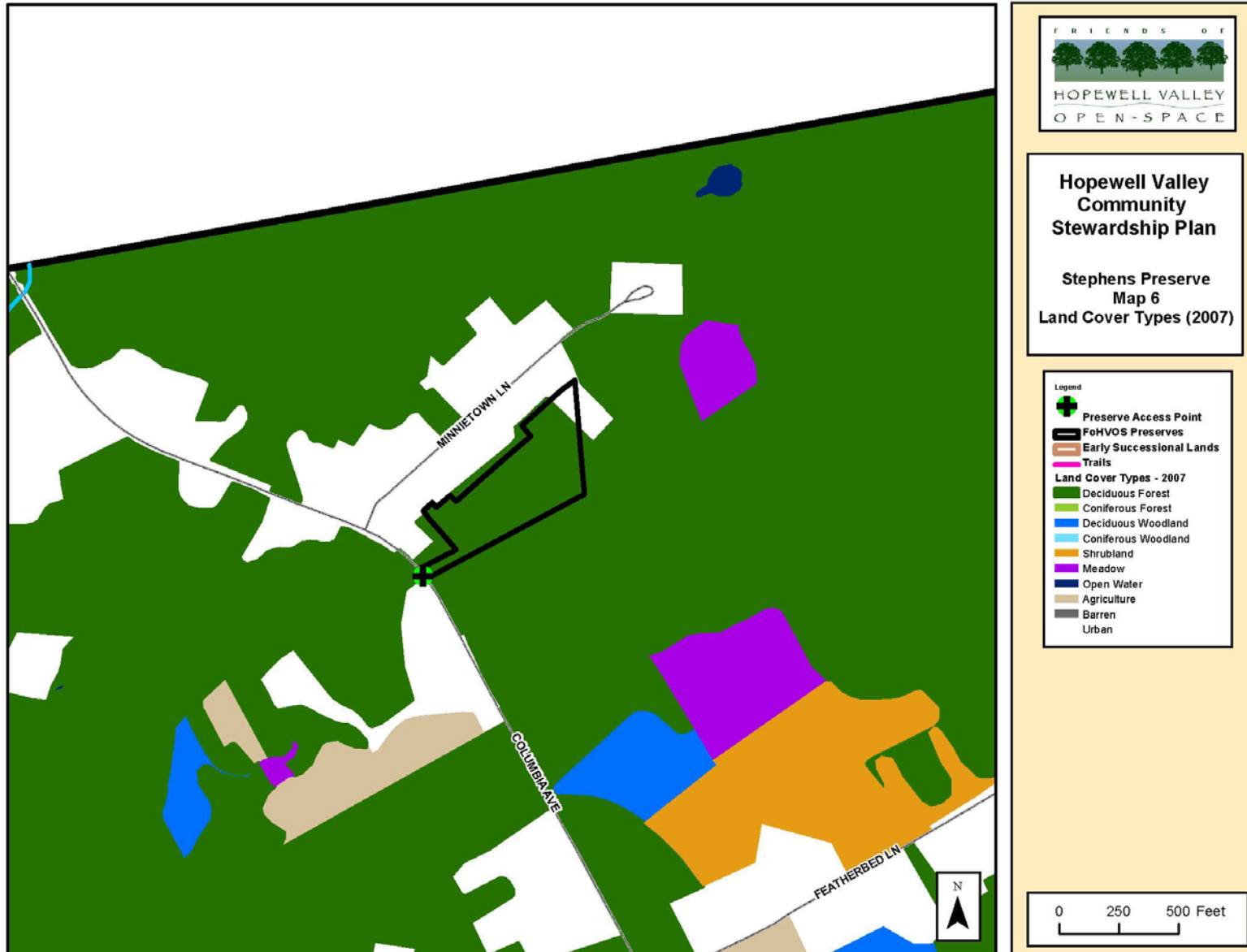




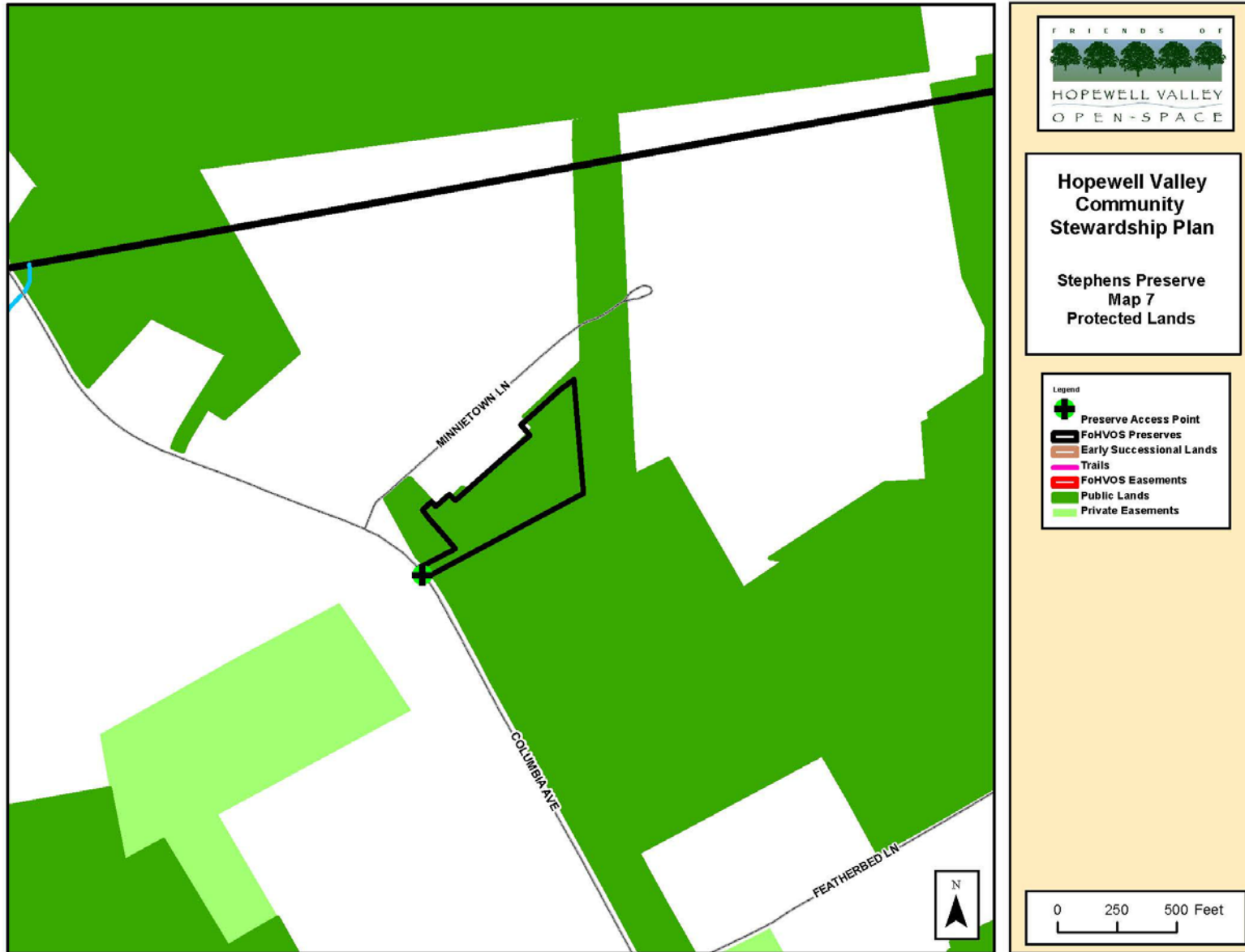
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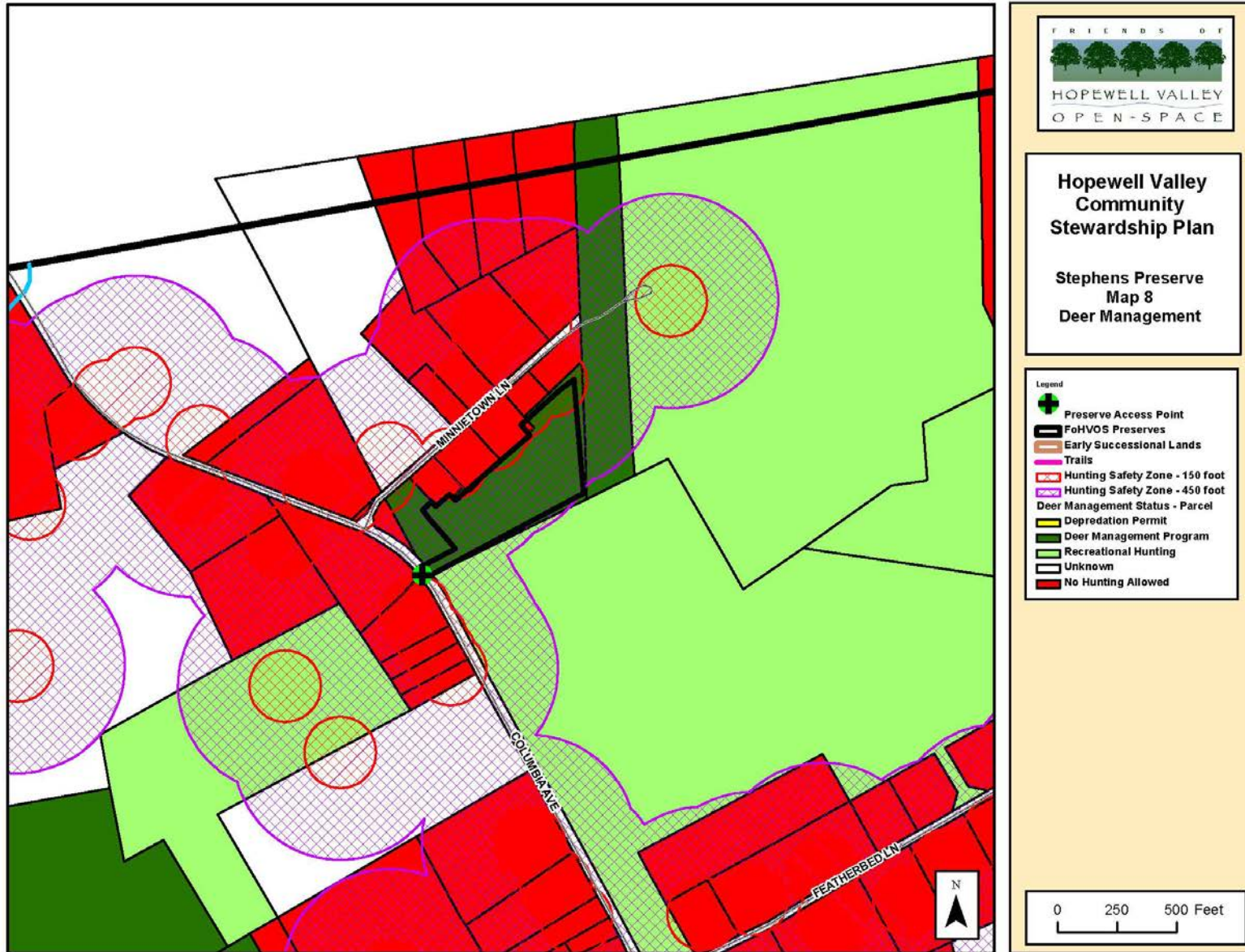
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