Memorandum – Restoration Plan

To: **Kevin Noll, Provincial Officer, Ministry of the Environment, Conservation and Parks**

From: Izabela van Amelsvoort, and Sal Spitale, North-South Environmental Inc.

Date: December 18, 2024

cc: Nik Gazendam, Water's Edge EST
Aaron Borgdorff, Project Manager, Slotegraaf Construction Inc.

Re: **1699 Spragues Road, North Dumfries, ESA Violation (No. 1-677689198)**

Introduction

North South Environmental Inc. was retained by Slotegraff Construction Inc. (through subcontract to Water's Edge EST) to provide ecological consulting services to address a Notice of Violation under the provincial *Endangered Species Act* (ESA) received at 1699 Spragues Road, North Dumfires, Ontario (the subject property, **Figure 1**).

As described in the Notice of Violation (**Appendix 1**), an updated landscaping plan is required to remediate and protect impacted Species at Risk (species protected under the ESA) habitats. Species identified to occur on the subject property include the Jefferson Salamander / Unisexual Ambystoma, Eastern Meadowlark and Bobolink. The Notice of Violation states plan should:

- Provide a landscaping design which includes native plants that can provide shelter and moisture retention as well as habitat
- Avoid fragmentation that could isolate or disrupt the migration of Jefferson Salamander
- Avoid further removing any grasslands around the perimeter of the home, salvaging what is left for Eastern Meadowlark and Bobolink habitat
- Consider habitat creation or habitat enhancement actions, such as grassland creation and vernal pool restoration

This memorandum has been prepared to describe proposed mitigation, restoration and enhancement plans to satisfy the conditions of the Notice of Violation. The 'landscaping plans' (i.e., proposed areas for seeding / planting) are presented in attached figures.

To date, the subject property has been impacted by grading and vegetation clearing activity, and initial construction of residential and amenity structures (**Figure 2**). It is currently estimated that

construction of the residential structures will be completed early- to mid-summer 2025. Timing of proposed mitigation, restoration and enhancement activities is discussed in relevant sections below.

Grassland Breeding Bird Habitat

The subject property has been identified as breeding habitat for two grassland bird species, Eastern Meadowlark and Bobolink. The current / remaining meadow community on the subject property is comprised of approximately 60% cover by cool-season grasses and 40% cover by forbs (most common forb species include: goldenrods, asters, Common Milkweed and other common cultural meadow species).

Following the construction of residential and amenity structures, disturbed areas are proposed to be re-seeded to re-establish grassland habitat (described below). Additionally, ornamental landscape plantings are proposed adjacent to the residence and along the driveway (**Figure 3**). Species details are provided in **Appendix 2**). Species include both native species and non-native ornamental cultivars of trees, shrubs and plants; however, none are considered invasive in Ontario). Long term maintenance will include mowing of a 6-foot-wide area on either side of the driveway and surrounding the residential structures; the remaining / re-seeded meadow will be left in a free-to-grow state.

Grassland Breeding Bird Habitat Restoration

A grassland seed-mix comprised of native plant species suitable of supporting grassland bird breeding habitat is proposed for restoration of disturbed area occurring outside of the development footprint (an area of approximately 2.5 to 3 hectares). The seed-mix should be comprised of approximately 65% grasses and 35% herbaceous species. A local seed source is recommended to ensure plants are adapted to local growing conditions / are of native origin. Species should be adapted to dry meadow habitats. A cover crop species (e.g., Annual Ryegrass) should also be included in the seed mix to provide for quick establishment of vegetation on exposed soils.

Preferred suppliers may include St. Williams Nursery & Ecology Centre or Ontario NativeScapes. The rate of seeding should be consistent with recommendations provided by the seed supplier (typically 8-12 kg per hectare), and seeding should follow supplier-provided directions.

Seeding is recommended to be undertaken in late fall (2025) and must avoid the critical nesting and breeding window (May 1 – July 31).

Following the proposed restoration of disturbed areas, more than 8 ha of grassland breeding habitat will remain available for Eastern Meadowlark and Bobolink (**Figure 4**).

Jefferson Salamander Habitat

Jefferson Salamander habitat present on the subject property includes the woodland and associated vernal pools / wetland. The woodland is continuous to the adjacent Regional Forest, Sudden Tract (known to support salamander populations) (**Figure 5**).

Immediately adjacent to the residential development, the woodland community is an upland hardwood forest dominated by Sugar Maple, with oak and hickory associates. The understory is sparce, and topographic depressions were observed which could support vernal pooling during spring conditions.

Nearest to the residential development, within a hedgerow extending from the woodland, an approximately 0.05 ha area likely supports spring vernal pooling and could provide suitable breeding habitat for Jefferson Salamander (Wetland A on **Figure 5**). Wetland A occurs within a low-lying area with steep slopes on all sides. During field investigation undertaken in October, the soil was noted to be saturated. Downed woody debris and emergent grasses provide some potential salamander egg attachment sites. Dominant vegetation was identified as a mix of grasses (74%) and sedges (24%), with few herbaceous species (2%). The surrounding sloped area included mature oak trees and a mix of shrubs.

Two additional wetlands occur in the southeastern extent of the subject property (Wetlands B and C on **Figure 5**); however, these are considered to be sub-optimal / unlikely to support salamander breeding due to the high density of emergent aquatic / wetland vegetation. Wetland B is a small (approximately 0.06 ha) marsh dominated by Cattails with a large patch of Reed Canary Grass. In October, shallow standing water was observed. Abundant duckweed and moss on the ground suggest higher water levels in the spring / summer months.

Wetland C is part of a much larger wetland complex which extends into Sudden Tract (Bannister Wrigley Sudden Tract Wetland Complex). Immediately adjacent to the woodland edge, the wetland was observed to be dominated by Cattail with some small areas of open water. Other dominant emergent vegetation includes sedges. Based on the water depth observed at the time of surveys (October), this community likely has standing water all year. Dominant floating vegetation is duckweed. The community is surrounded by Red-osier Dogwood on the meadow side, and Eastern White Pine on the forest side. Evidence of beavers (chewed bark) was observed.

Photos of wetland habitat are provided in the Photo Appendix (**Appendix 3**).

Potential Impacts and Proposed Mitigation Measures

Although the residential development does not directly impact Jefferson Salamander habitat (no direct loss of habitat including breeding, foraging or migrating habitat), the following mitigation measures are proposed to address indirect impacts associated with the development.

Construction-Related Indirect Impacts

Soil runoff resulting from earth works may enter the woodland and areas of vernal pooling. Although current stockpile areas are temporarily vegetated, it is recommended that erosion and sediment fencing be installed prior to any future soil disturbances, particularly along woodland boundaries.

Post-Construction (Occupancy) Indirect Impacts

The residential development includes a pool at the south side of the house. Pool water will be drained to an existing low area within the manicured area (just south of the pool) where it will have a chance to infiltrate before entering any groundwater; no pool water will be discharged directly to the adjacent woodland or associated natural features.

Indirect impact associated with the residential development may include impacts from noise and light. As the development occurs within 30 metres of the woodland, it is recommended that buffer plantings (native trees and shrubs) be included within a 5-m buffer along the woodland edge, where it occurs adjacent to the development (an approximate length along the woodland edge of 112 m, **Figure 5**).

Proposed Woodland Buffer Plantings

Native trees and shrubs are proposed within a 5-m buffer along the woodland edge, where it occurs adjacent to the development (an approximate length along the woodland edge of 112 m, comprising a 560 m^2 planting area). Species, sizes, and quantities are provided in **Table 1**. Selected species include those which occur in the immediately adjacent woodland, or within similar upland forest portions of the greater Sudden Tract. Larger tree stock has been suggested to limit mortality due to deer browse. Similarly, generally thorny or less palatable shrub species have been proposed.

Trees should be spaced two (2) metres apart therefore requiring approximately 114 trees. Shrubs should be spaced one (1) metre apart from other shrubs or trees therefore requiring approximately 342 shrubs. Planting should be undertaken in spring or fall (2025).

Coconut fibre mulching should be placed between planted woody vegetation to supress competing meadow species (e.g., goldenrods).

Table 1. Proposed Woodland Buffer Plantings

Species	Stock / Quantity
Trees	**200 + cm height**
Sugar Maple	58
Red Oak	15
Shagbark Hickory	9
Bitternut Hickory	9
Black Cherry	15

Species	Stock / Quantity
White Pine	8
Total Trees	**114**
Shrubs	**2 Gallon Pot**
Choke Cherry	90
Purple-flowering Raspberry	36
Blackberry	90
Prickly Gooseberry	90
Staghorn Sumac	36
Total Shrubs	**342**

Proposed Habitat Enhancement

There is an opportunity to enhance existing Jefferson Salamander habitat on the subject property. The following enhancement if proposed in / adjacent to Wetland A, the vernal pooling area which occurs closes to the residential development and which is most likely to currently support salamander breeding compared to other wetlands on the subject property. Enhancement activities (**Figure 5**) include:

- Woodland connection plantings to improve vernal pool connection (Wetland A) to the larger woodland
- Hand-planting of shrubs within the area of vernal pooling to provide egg mass attachment sites

Plantings to Enhance Woodland Connection

Native trees and shrubs are proposed within a 597 m^2 planting area adjacent to Wetland A to enhance its connection to the adjacent woodland. These plantings may also act to provide additional shading of the vernal pool area and reduce growth of emergent herbaceous vegetation, thereby improving salamander breeding habitat. Species, sizes, and quantities are provided in **Table 2**. Selected species include those which occur in the immediately adjacent woodland, or within similar upland forest portions of the greater Sudden Tract (similar to those species proposed for woodland buffer / edge management above). Larger tree stock has been suggested to limit mortality due to deer browse. Similarly, generally thorny or less palatable shrub species have been proposed.

Trees should be species two (2) metres apart from other trees therefore requiring approximately 121 trees. Shrubs should be spaces one (1) metre apart from other shrubs or trees therefore requiring approximately 365 shrubs. Planting should be undertaken in spring or fall (2025).

Coconut fibre mulching should be placed between planted woody vegetation to supress competing meadow species (e.g., goldenrods).

Table 2. Proposed Enhancement Plantings (Salamander Movement Habitat)

Species	Stock / Quantity
Trees	**200 + cm height**
Sugar Maple	65
Red Oak	15
Shagbark Hickory	9
Bitternut Hickory	9
Black Cherry	15
White Pine	8
Total Trees	**121**
Shrubs	**2 Gallon Pot**
Choke Cherry	105
Purple-flowering Raspberry	45
Blackberry	105
Prickly Gooseberry	100
Staghorn Sumac	40
Total Shrubs	**365**

Wetland Shrub Plantings

Hand-planting of a small number of shrubs within Wetland A is recommended to provide potential salamander egg mass attachment sites and enhance available breeding habitat. Planting should be undertaken outside of the salamander breeding window (March – July), preferably in the fall (2025). Table 3 describes recommended species, sizes and quantities.

Table 3. Proposed Wetland Shrub Plantings (Salamander Breeding Habitat)

Species	Stock / Quantity
Wetland Shrubs	**1-2 Gallon Pot**
Red-osier Dogwood	12
Wild Black Currant	10
Total Shrubs	**22**

Summary of Recommendations

As described, this memorandum has been prepared to describe proposed mitigation, restoration and enhancement plans to satisfy the conditions of the Notice of Violation.

The following is recommended to restore impacted Eastern Meadowlark and Bobolink breeding habitat:

- Re-seeding of grassland breeding bird habitat in remaining disturbed areas of the subject property

The following is recommended to mitigate potential negative impacts of the development on Jefferson Salamander:

- Installation of erosion and sediment fencing prior to any future soil disturbances, particularly along woodland boundaries
- Pool water drainage will enter an existing low area within the manicured area; no direct discharge to adjacent woodland or associated natural features.
- Woodland buffer plantings (native trees and shrubs) within a 5-m buffer along the woodland edge adjacent to the residential development

The following is recommended to enhance existing habitat for Jefferson Salamander:

- Woodland connection plantings to improve vernal pool connection (Wetland A) to the larger woodland
- Hand-planting of shrubs within the area of vernal pooling to provide egg mass attachment sites

List of Figures and Appendices

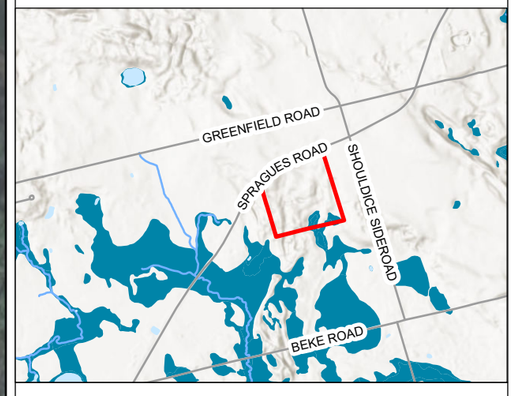
Figure 1 – Subject Property
Figure 2 – Proposed Development / Grading
Figure 3 – Ornamental Landscape Plan
Figure 4 – Remaining Grassland Breeding Bird
Figure 5 – Existing Salamander Habitat and Proposed Areas of Mitigation / Enhancement

Appendix 1 – Notice of Violation
Appendix 2 – Landscaping Planting Plans
Appendix 3 – Photo Appendix

Figure 1 | 1699 Sprague Road
Subject Property

Legend

Subject Property



Project Number	Date:	N
24-1458	2024-12-03	

north-south ENVIRONMENTAL

Figure 2 | 1699 Spragues Road
Proposed Development/Grading Plan

Legend

- Subject Property
- Proposed Site Plan
- Proposed Grading
- Proposed Hardscaping
- Dripline
- Septic System

0 25 50 75 100 130 150 Meters

Project Number	Date:	N
24-1458	2024-12-03	

north-south ENVIRONMENTAL

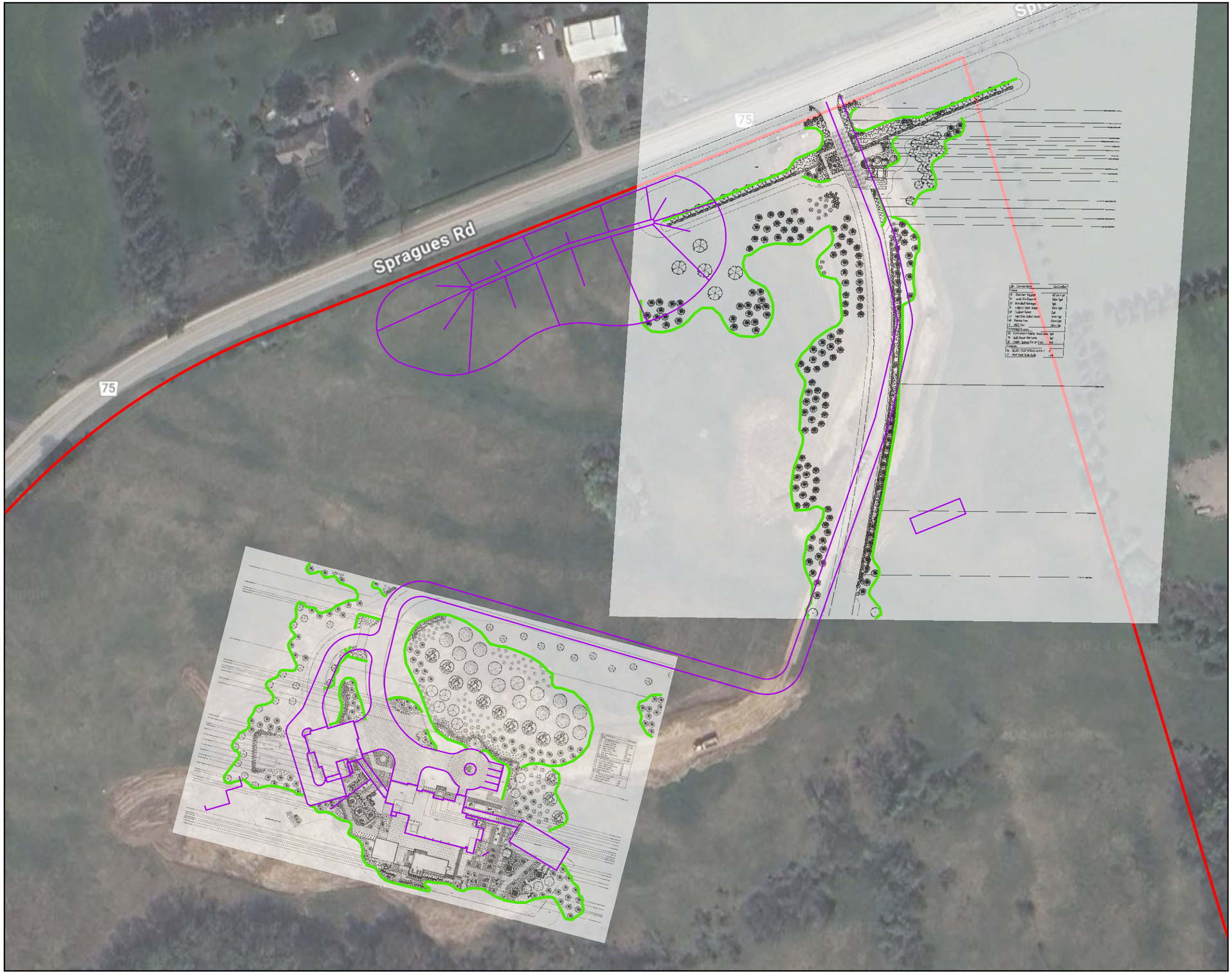


Figure 3 | 1699 Sprague Road
Ornamental Landscape Plan

Legend

- Subject Property
- Approximate Planting Line
- Proposed Site Plan

Note: Landscape Plan is based off of static pdf maps and therefore is approximately referenced to the landscape, and not a verified location of proposed planting.

0 25 50 75 100 130 150 Meters

Project Number	Date:	N
24-1458	2024-12-03	

north-south ENVIRONMENTAL

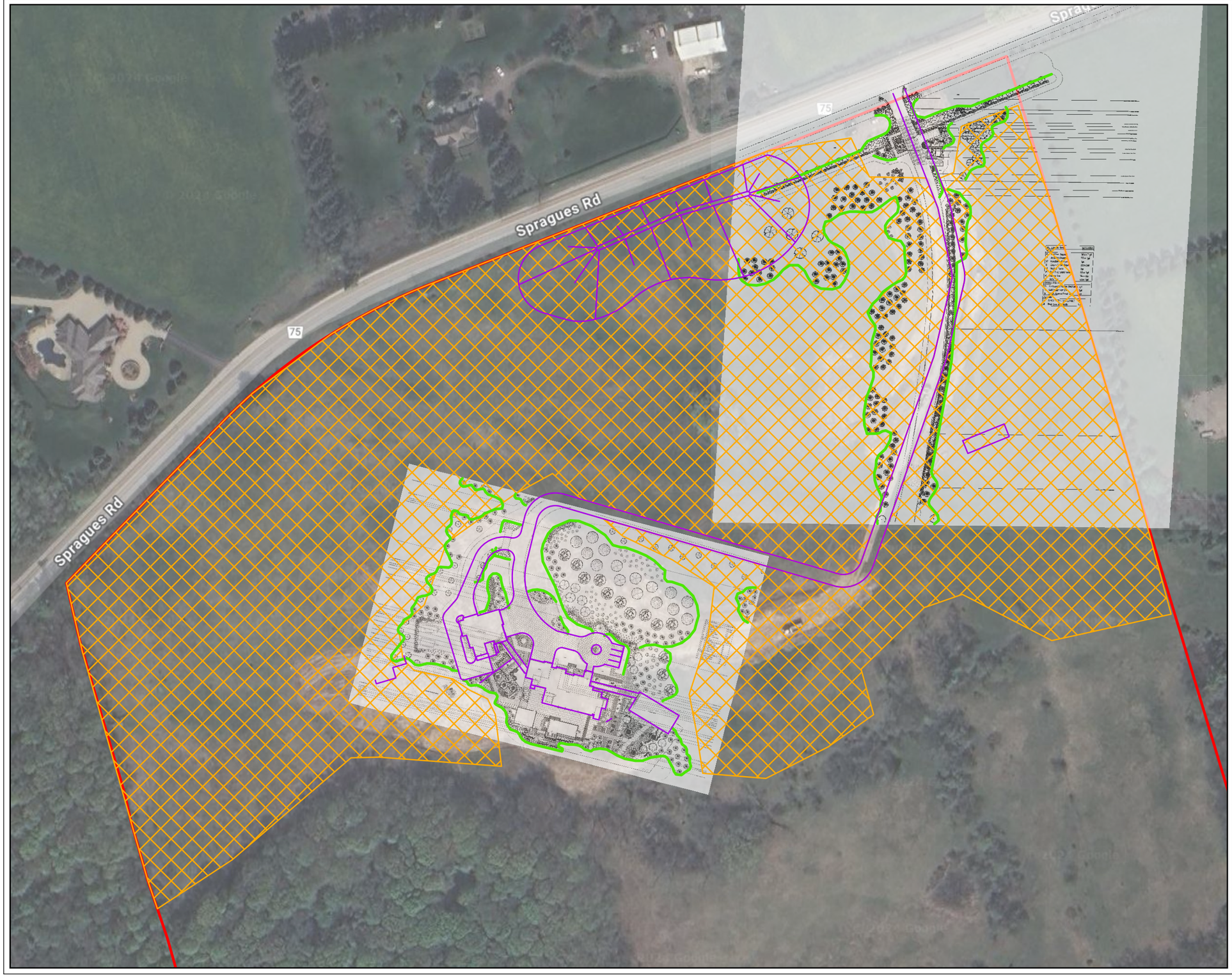


Figure 4 | 1699 Spragues Road
Remaining Grassland
Breeding Bird Habitat

Legend

- Subject Property
- Approximate Planting Line
- Proposed Site Plan
- Remaining Grassland Breeding Bird Habitat

Note: Landscape Plan is based off of static pdf maps and therefore is approximately referenced to the landscape, and not a verified location of proposed planting.

0 25 50 75 100 130 150 180 Meters

Project Number	Date:	N
24-1458	2024-12-12	

north-south ENVIRONMENTAL

Figure 5 | 1699 Spragues Road

Jefferson Salamander Habitat and Proposed Areas of Mitigation/Enhancement Planting

Legend

- Subject Property
- Proposed Site Plan
- Proposed Grading
- Proposed Hardscaping
- Septic System
- Wetlands
- Wooded Area (LIO, 2007)
- Woodland Buffer Planting
- Enhancement Planting
- Wetland Shrub Plantings

0 25 50 75 100 130 150 Meters

Project Number	Date:	N
24-1458	2024-12-04	

north-south ENVIRONMENTAL

Appendix 1. Notice of Violation

Notice of Violation

Number

1-677689198

Please note that this notice is a formal notification that the issuing Provincial Officer believes that you have violated provincial environmental law. This notice will remain on your ministry's file in respect to the inspection location(s) noted and is available to the public subject to the provisions of the *Freedom of Information and Protection of Privacy Act*.

Details of the violation(s) including the applicable section(s) of the legislation are included in this Notice along with the required compliance action item(s) and the required action completion date(s).

If any of the required action items are not implemented please be advised that the ministry may take additional compliance and/or enforcement action that may include the issuance of orders, the amendment, suspension or revocation of approvals, permits or registrations and/or referral to the ministry's Environmental Investigation and Enforcement Branch for a prosecution for an offence.

Name of Person or Company:	SLOTEGRAAF CONSTRUCTION INC.
Address:	1741 BISHOP ST N , CAMBRIDGE, ON, N1T 1N5
Telephone No.:	(519) 620-2299

System/Facility:	1699 Spragues Road
Location:	1699 SPRAGUES ROAD, NORTH DUMFRIES, ON, Residential property
Observation Date:	August 29, 2024

VIOLATION & COMPLIANCE ACTION ITEM(S):

Legislation	Violation Description
ESA | 10 | (1)	(1) No person shall damage or destroy the habitat of, (a) a species that is listed on the Species at Risk in Ontario List as an endangered or threatened species; or (b) a species that is listed on the Species at Risk in Ontario List as an extirpated species, if the species is prescribed by the regulations for the purpose of this clause.

Item No.	Compliance Action Item(s):	Complete By:
1	1) Retain the services of Qualified Person(s) (QP) to develop a landscaping plan to remediate and protect the Jefferson Salamander/Unisexual Ambystoma and Eastern Meadowlark and Bobolink habitats. Provide notification to the MECP of the company to be retained prior to the design of the landscaping plan. 2) At a minimum, the landscaping plan shall include the following as per the direction of MECP's Species At Risk technical support staff: - Design the landscaping in a way that includes native plants that can provide shelter and moisture retention as well as habitat. - Avoid fragmentation that could isolate or disrupt the migration of Jefferson Salamander/Unisexual Ambystoma. - Avoid further removing any grasslands around the perimeter of the home, salvaging what is left for Eastern Meadowlark and Bobolink habitat. - Consider habitat creation or habitat enhancement actions, such as grassland creation and vernal pool restoration. 3) Implement and complete the plan	November 29, 2024

Provincial Officer:	Kevin Noll
Ministry Office:	Guelph District Office
Telephone No:	(226) 820-0790
Fax No:	(519) 826-4286
Address:	1 STONE RD W 4TH FLR, GUELPH, ON, N1G 4Y2
Badge No:	1491
Signature:	
Date:	Sep 23, 2024

Inquiries regarding this Notice should be directed to the issuing Provincial Officer or the Manager of the ministry office as shown on the Notice.

The statutes listed above, and corresponding regulations are available on the Ontario statutes and regulations website at https://www.ontario.ca/laws

Appendix 2. Landscaping Plan (Including Species List)

Qty	Common Name	Size/Condition
Trees		
27	Serviceberry	Clump 150cm WB
1	White Fir	250cm WB
25	Autumn Fantasy Maple	60mm WB
3	Autumn Brilliance Serviceberry	Treeform 45mm WB
28	Autumn Brilliance Serviceberry	Clump 150cm 7gal
1	Bloodgood Japanese Maple	175cm BBC
6	Paper Birch	Clump 45mm WB
23	Jacquemontii Birch	Clump 250cm 15gal
25	Eastern Redbud	Clump 175cm 15gal
3	Seven-Son Flower	Clump 250cm WB
10	Balsam Poplar	50mm WB
7	Redspire Ornamental Pear	45mm WB
79	Vanderwolf's Pyramid Pine	250cm BBC
10	Big-Toothed Aspen	250cm 15gal
55	White Spruce	225cm WB
58	Fat Albert Colorado Blue Spruce	250cm WB
20	Blue Colorado Spruce	250cm WB
1	Poodle Scotch Pine	125cm 10gal
7	Trembling Aspen	50mm WB
9	White Oak	45mm WB
Shrubs		
70	Coral Beauty Cotoneaster	50cm 3gal
133	Arctic Fire Dogwood	50cm 3gal
62	Incredball Hydrangea	3gal
22	Phantom Hydrangea	50cm 3gal
28	Oakleaf Hydrangea	3gal
20	Calgary Carpet Juniper	30cm 3gal
17	Tiger Eyes Cutleaf Sumac	50cm 3gal
16	Tiger Eyes Cutleaf Sumac	60cm 3gal
138	Hick's Yew	50cm 3gal
Ornamental Grasses		
181	Big Blue Stem	1gal
934	Bowles Golden Sedge	1gal
69	Blood Brothers Switch Grass	1gal
326	Indian Grass	1gal
243	Indian Steel Grass	1gal
439	Blaze Little Bluestem	1gal
39	Standing Ovation Little Bluestem	1gal
Perennials		
~~34~~	~~BLACK EYED STELLA DAYLILY~~	~~0~~
40	Hidcote english lavender	1 gal
45	Ostrich Fern	1gal
207	Black-Eyed Susan	1gal

HOUSE BEHIND THE HILLS
1699 SPRAGUES RD, CAMBRIDGE ON

client:		
scale: 1" = 32'	date: DECEMBER 2024	revision: SOUTH PLANTING PLAN
drawn by: JH	checked by:	drawing #:

Appendix 3. Photo Appendix

Photo 1. Existing Grassland Breeding Bird Habitat

Photo 2. Adjacent Woodland / Salamander Woodland Habitat

Photo 3. Wetland A

Photo 4. Wetland B

Photo 5. Wetland C