INLAND WETLANDS COMMISSION Telephone (203) 563-0180 Fax (203) 563-0284



TOWN HALL 238 Danbury Road Wilton, Connecticut 06897

# APPLICATION FOR A SIGNIFICANT REGULATED ACTIVITY

For Office Use Only:	
	WET#
Filing Fee \$	Wilton Land Record Map#
Date of Submission	Volume # Page #
Date of Acceptance	Assessor's Map # Lot#
APPLICANT IN	FORMATION:
Applicant	Agent (if applicable)
Address	Address
Telephone	Telephone
Email	Email
PROJECT INF	ORMATION:
Property Address	Site Acreage
Acres of altered Wetlands On-Site	Cu. Yds. of Material Excavated
Linear Feet of Watercourse	Cu. Yds. of Material to be Deposited
Linear Feet of Open Water	Acres of altered upland buffer
Sq. Ft. of proposed and/or altered impervious coverage	Sq. Ft. of disturbed land in regulated area
APPLICATION RI	EQUIREMENTS:
Is The Site Within a Public Water Supply Watershed Boundary? NOYES*	Is The Site Within 500 Feet of a Town Boundary? NO YES*

<sup>\*</sup> If the answer is yes, then the applicant is responsible for notifying the appropriate water authority and/or adjoining community's Wetlands Department. Instructions for notification are available at the office of the commission.

Page 2 Application for a Significant Regulated Activity

Project Description and Purpose: Construction of an 18'x36' inground gunite swimming pool, masonry patio, masonry steps, masonry walk, masonry retaining wall, pool equipment pad, outdoor fireplace, gravel driveway expansion, related grading and stormwater management system, wetland mitigation plantings

In addition, the submission via	e applicant shall provide eleven (11) collated copies of the following information as well as an electronic a email to								
✓ A.	Written consent from the owner authorizing the agent to act on his/her behalf								
<b>⊌</b> B.	A Location Map at a scale of 1" = 800'								
€.	A Site Plan showing existing and proposed features at a scale not to exceed 1" = 40' accurate to the level of a A-2 property and T-2 topographic surveys								
D.	Sketch Plans depicting the alternatives considered								
E.	Engineering Reports and Analysis and additional drawing to fully describe the proposed project								
€ F.	Sedimentation and Erosion Control Plan, including the Construction Sequence								
G.	Names and addresses of adjoining property owners								
₩ Н.	A narrative describing, in detail								
	a. the proposed activity b. the alternatives considered c. impacts d. proposed mitigation measures								
i.	Soils Report prepared by a Certified Soil Scientist and Wetlands Map prepared by a Registered Land Surveyor								
V J.	A Biological Evaluation prepared by a biologist or other qualified professional								
<b>€</b> K	Description of the chemical and physical characteristics of fill material to be used in the Regulated Area								
✓ · L.	Description and maps detailing the watershed of the Regulated Area								
✓ M.	Envelopes addressed to adjacent neighbors, the applicant, and/or agent, with <u>certified</u> postage and no return address								
**Application sided.	materials shall be collated and copies of documents more than two pages in length shall be double								
See Section 7 applications re	of the Wetlands and Watercourses Regulations of the Town of Wilton for a more detailed description of equirements.								
The Applicant or his/her agent certifies that he is familiar with the information provided in this application and is aware of the penalties for obtaining a permit through deception, inaccurate or misleading information.									
Commissioner	s application, permission is hereby given to necessary and proper inspections of the subject property by the s and designated agents of the Commission or consultants to the Commission, at reasonable times, both before all decision has been repidered.								
Applicant's Sig	mature: Date: 12/18/23								
	ure (if applicable); Half L Halftux Date: 12/18/23								

### Tracy Chalifoux LLC

#### Landscape Architect

Date: December 1, 2023

To: Town of Wilton Inland Wetlands Commission

From: Kristin and Drew Cammarata

Re: Letter of Consent

232 Silver Spring Road Wilton, CT 06897

We, Kristin and Drew Cammarata, hereby authorize Tracy Chalifoux LLC, to act as our agent for preparation of an Inland Wetlands Application for a Significant Regulated Activity for the above-referenced property.

We are aware of the proposed site improvements, and consent to the activities set forth within the application.

Tayliyas

Kristin Cammarata

Date

12/1/23

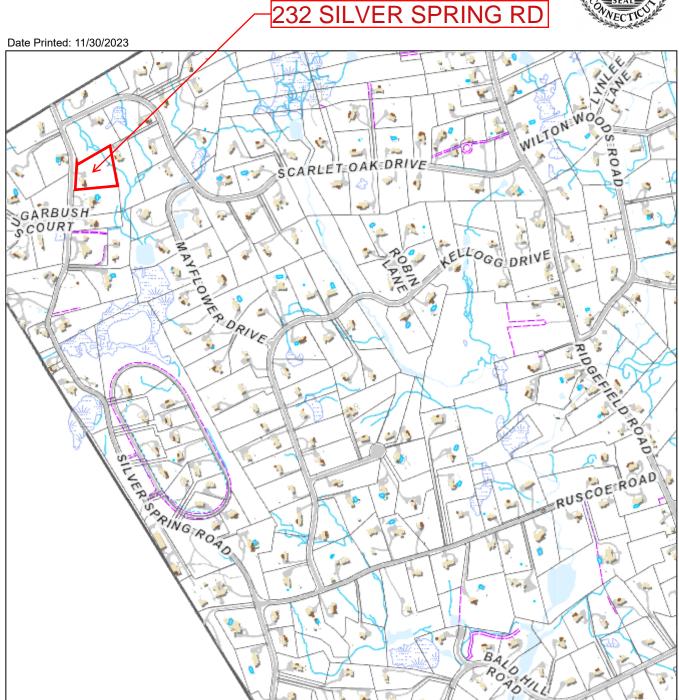
Drew Cammarata

Date

# **Town of Wilton**

Geographic Information System (GIS)



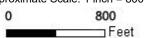


#### **MAP DISCLAIMER - NOTICE OF LIABILITY**

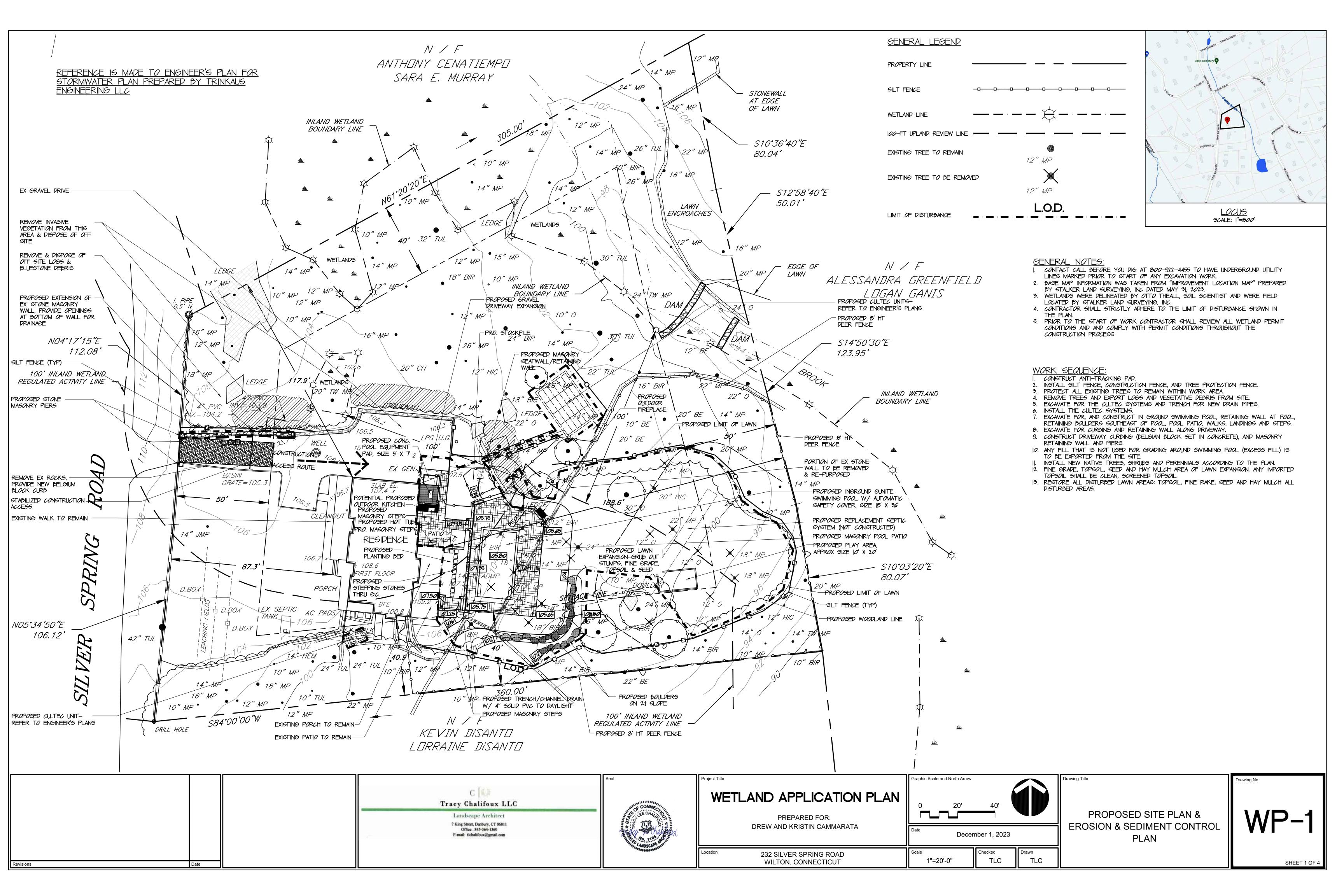
This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Wilton and its mapping contractors assume no legal responsibility for the information contained herein.

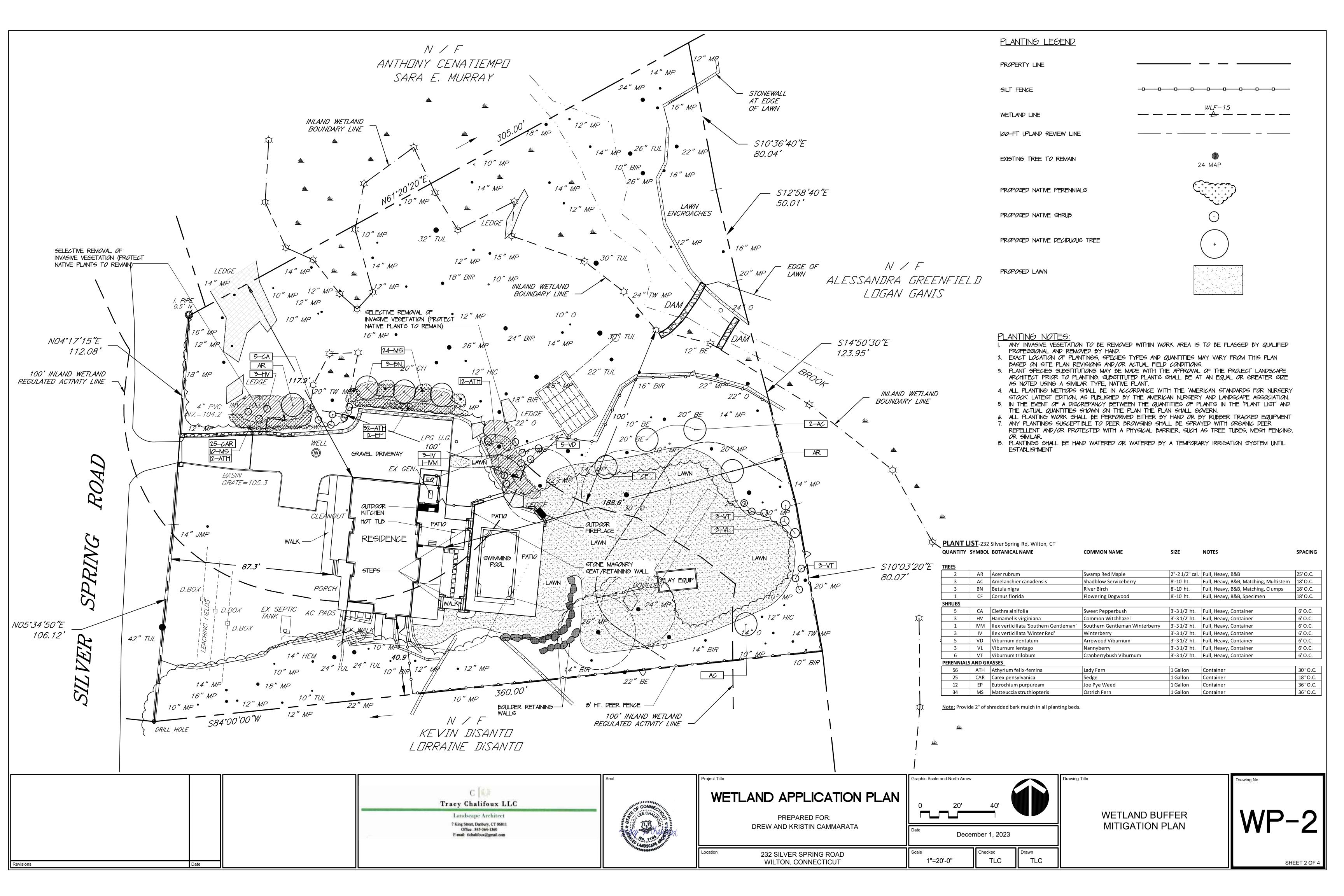
Zoning Effective: July 28, 2017 Planimetrics Updated: 2014

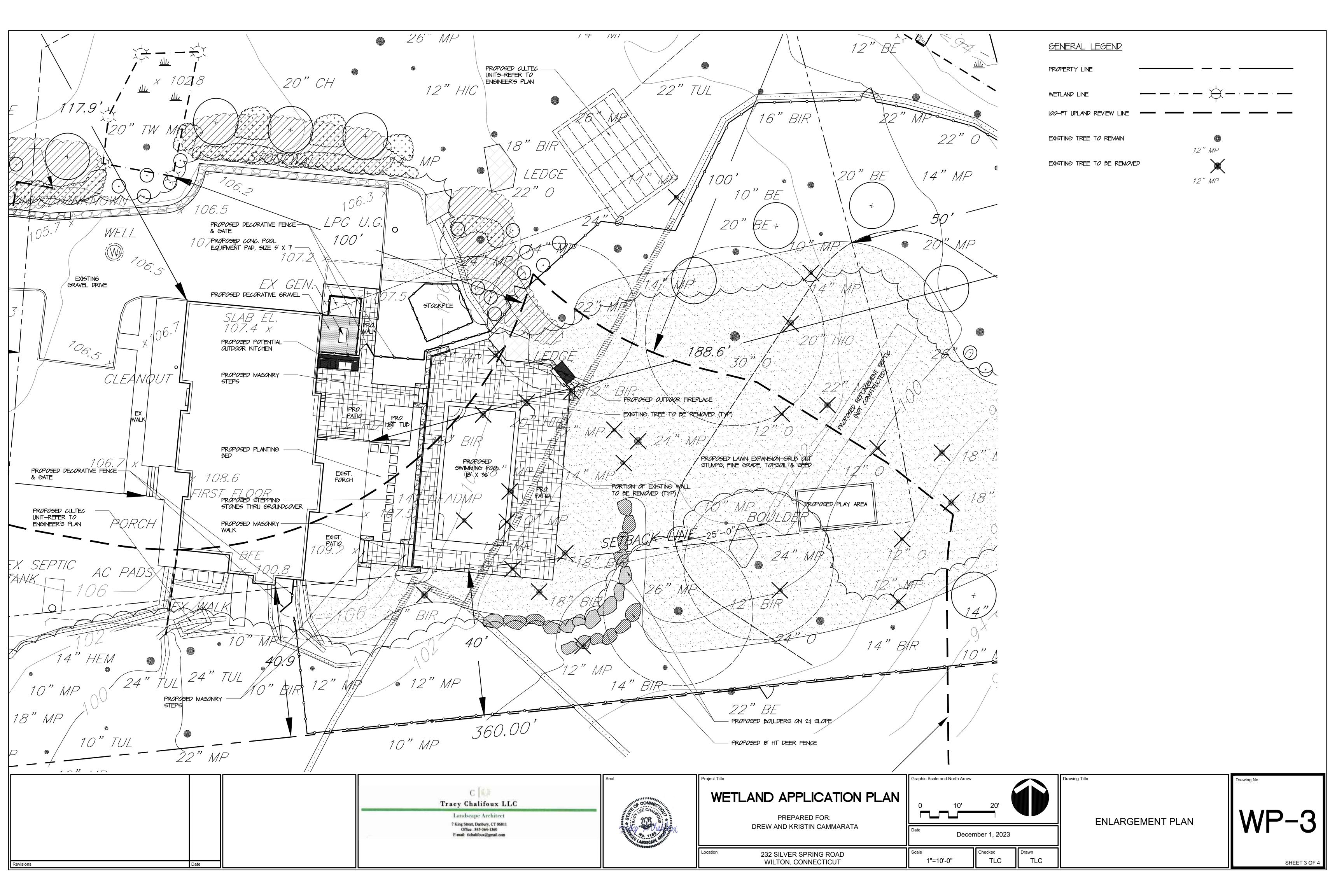
Approximate Scale: 1 inch = 800 feet

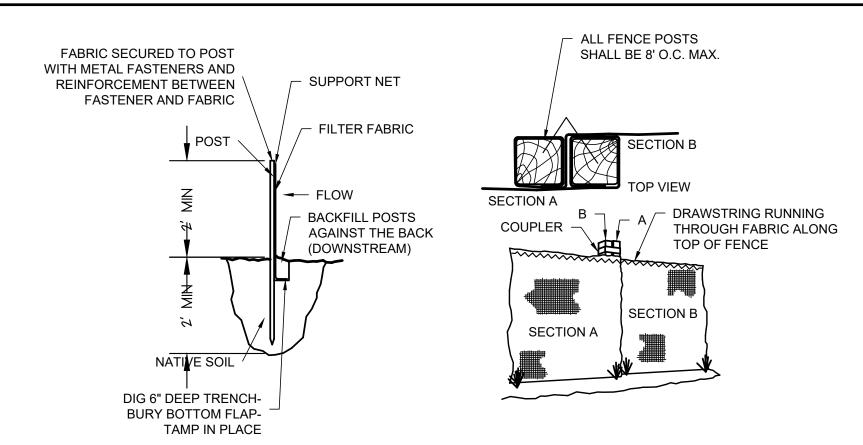












TOE-IN METHOD

JOINING SECTIONS OF FENCING

INSTALLATION NOTES:

WP-4 SCALE: N.T.S.

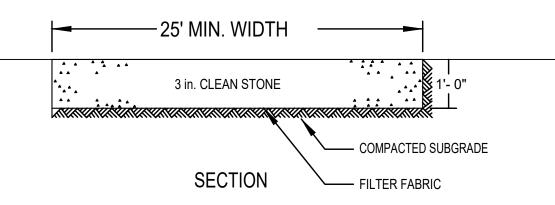
ALL INSTALLATION AS PER ASTM STANDARDS
 EXCAVATE A 6 INCH TRENCH ALONG THE LOWER PERIMETER OF THE SITE
 UNROLL A SECTION AT A TIME AND POSITION WALL OF THE TRENCH (NET SIDE

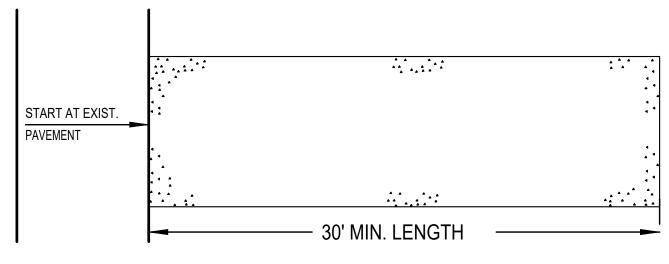
AWAY FROM DIRECTION OF FLOW)
4. DRIVE THE POST INTO THE GROUND UNTIL THE NETTING IS APPROXIMATELY 2 INCHES FROM THE TRENCH BOTTOM

5. LAY THE TOE-IN FLAP OF FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH, BACKFILL THE TRENCH AND TAMP THE SOIL. STEEPER SLOPES REQUIRE AN INTERCEPT TRENCH

6. JOIN SECTIONS AS SHOWN ABOVE

# FABRIC SILTATION FENCE DETAIL





PLAN

# INSTALLATION NOTES

1. STONE SIZE - USE 3" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.

2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.

3. THICKNESS - NOT LESS THAN SIX (6) INCHES.

4. WIDTH - 25 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCUR.

5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.

6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.

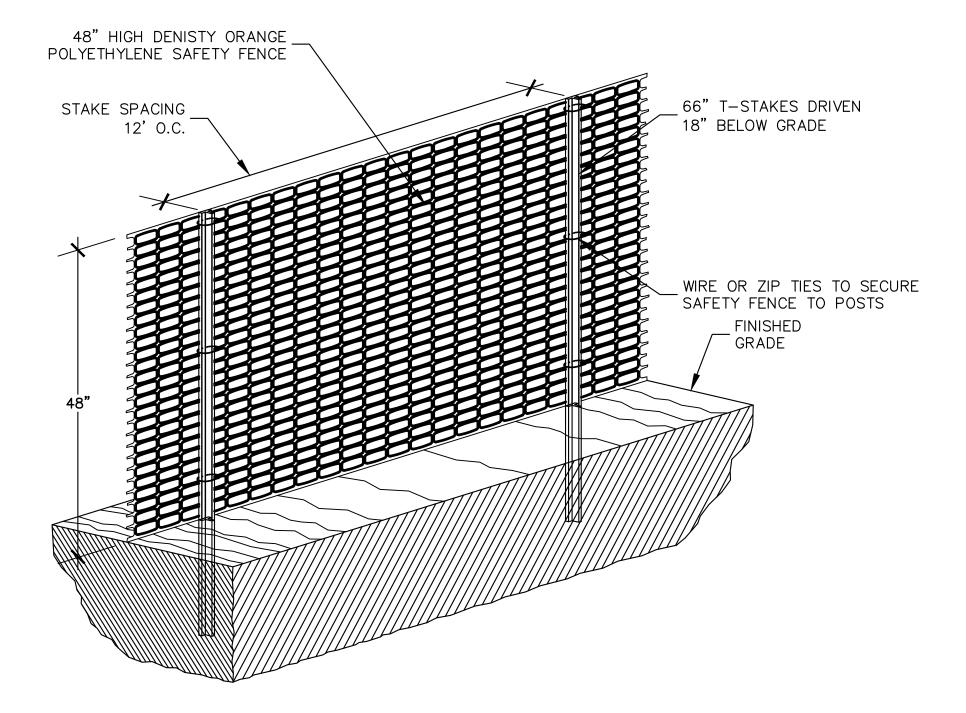
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY.

8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER

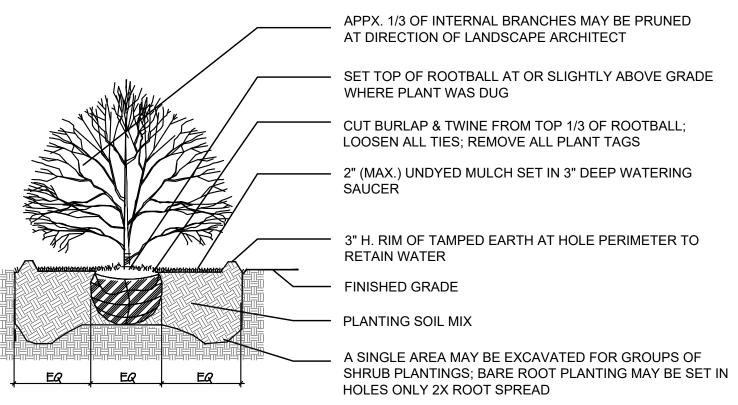
# 2 STABILIZED CONSTRUCTION ACCESS DETAIL

WP-4 SCALE: N.T.S.



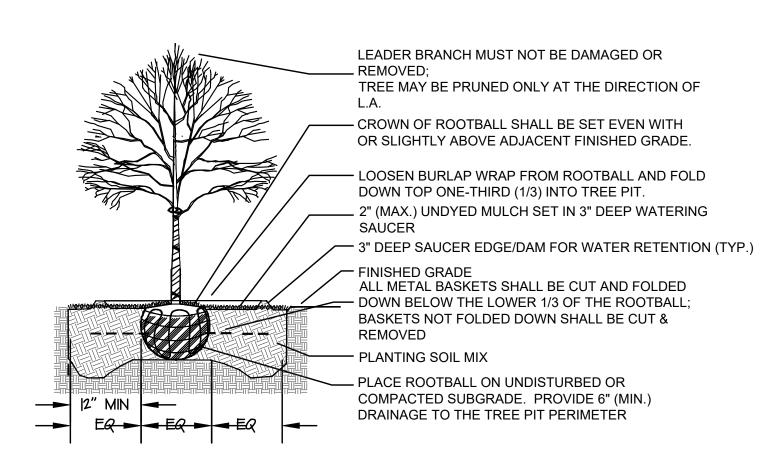
NOTE: WHEN USED AS TREE PROTECTION, INSTALL AT DRIP LINE OF TREE CANOPY WHERE FEASIBLE, OR A MINIMUM OF 10 FT FROM TREE



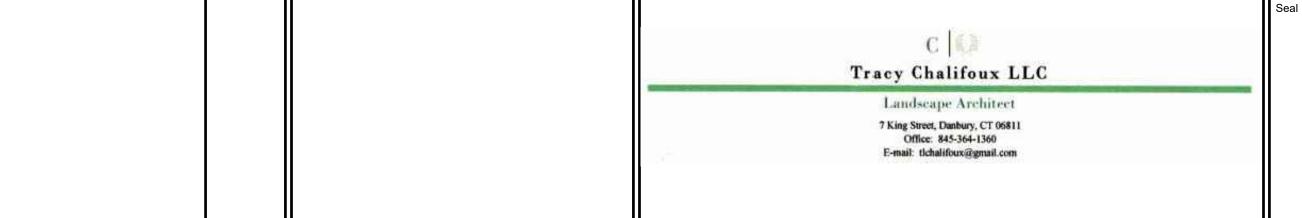


NOTE: FOR ALL CONTAINER GROWN PLANTS, REMOVE FROM CONTAINER JUST PRIOR TO PLANTING AND MAKE VERTICAL INCISIONS ALONG THE SURFACE OF THE ROOTBALL WITH A SHARP INSTRUMENT. CUT THROUGH CIRCULAR ROOTS AND GENTLY COMB OUT ROOTS.













PREPARED FOR: DREW AND KRISTIN CAMMARATA

232 SILVER SPRING ROAD
WILTON, CONNECTICUT

Graphic Scale and North Arrow

December 1, 2023

**AS SHOWN** 

Checked

SITE DETAILS

WP-4

SHEET 4 OF 4

Landscape Architect

#### **Project Narrative**

Prepared for: 232 Silver Spring Road Wilton, CT

December 18, 2023

#### Introduction

The 2.004 acre property is situated on the east side of Silver Spring Road. It contains a single-family residence, gravel driveway bordered by a stone masonry wall to the north, attached garage, walkways, rear porch and patio, lawn areas and planting beds. The property is served by a septic system, and by a well. The property is forested to the north and east. A seasonal wetland pocket is located immediately north of the existing driveway, and wooded wetlands are located to the north and northeast of the property. A watercourse runs through the northeast portion of the property.

#### **Background**

The homeowner seeks to construct a gunite in-ground swimming pool, pool patio, retaining wall, walk, steps, outdoor fireplace, hot tub, pool equipment pad, pool enclosure fence, and install a detention system and expand lawn within an approved B-100 area, within 100' of a wetland and/or watercourse. There is no disturbance proposed within the wetlands. Eight trees are to be removed from the wetland buffer. No trees are to be removed from the wetlands.

#### **Proposed Activities and Mitigation Measures**

#### Swimming Pool and Wetland Mitigation and Enhancement Plantings

The intention of the proposed activities is to increase the usability of the homeowner's property through the installation of an in-ground swimming pool, small patio, related amenities, and lawn expansion. The mitigation plantings will enhance the wetland buffer through introduction of a variety of native plantings. Prior to the installation of the new plantings, non-native invasive vegetation will be removed, creating more space and light, and reducing competition for the new native plantings. The new plantings will improve the ecology of the property on many levels. The proposed trees, shrubs and perennials will control erosion by reducing stormwater runoff, creating an opportunity for stormwater to be absorbed and filtered, protecting the quality of the existing wetlands and watercourse. The proposed plantings will also provide habitat, food and shelter for many types of fauna and avian species. A variety of native plant species are proposed which will serve to increase biodiversity through attracting additional birds, insects and mammals. The buffer area planting mitigation and enhancement includes nine trees, 26 native shrubs and 127 native perennials. Approximately .077 acres (3,345 sq ft) of buffer area is to be enhanced.

#### **Upland Improvements**

The proposed gunite in-ground swimming pool is 18' x 36' in size. The pool water treatment system will be cartridge-type, therefore backwashing is not necessary. A stone masonry patio is proposed on all sides of the pool, with walks connecting to the house and gravel driveway. The pool equipment pad is located at the northeast corner of the residence. Pool enclosure fence and deer fence is proposed. The proposed driveway expansion will be gravel, and no trees need to be removed to accommodate it. No changes are proposed to the existing residence. The only fill to be brought onto the property is the 3/4 inch gravel for the swimming pool base and driveway, and the gravel for the detention system. Any excess fill not used for grading immediately around the swimming pool area will be exported from the site.

#### **Impacts**

The proposed swimming pool, surrounding patio and related improvements are not expected to cause a negative impact to the wetlands as a robust array of buffer plantings are proposed to provide additional habitat and water quality remediation, therefore increasing buffer functions. Please refer to the Biological Narrative dated December 18, 2023 prepared by Steven Danzer PhD & Associates for further information.

#### **Alternatives Considered**

Other swimming pool layouts were studied within the rear yard, east of the residence. It was decided that a smaller than standard-sized pool (18' x 36') fit the site better than a larger sized standard pool (20' x 40') in terms minimizing development within the wetland buffer. A pool layout perpendicular to the rear wall of the existing residence was also studied, but it was determined that this layout resulted in more significant grading within the upland review area, therefore was abandoned in favor of the smaller, parallel-oriented pool. Paving (with asphalt or unit block) of the existing driveway was also explored.

#### **Sediment and Erosion Controls**

Contained on the site plans are sediment and erosion control measures that shall remain in place for the duration of the project. The project engineer may determine if additional measures are needed. A stabilized construction access route is indicated on the plan, just off the existing driveway, and shall be adhered to. All existing trees to remain shall be protected and no machinery movement or storage of materials or machinery shall occur within the critical root zone of the trees. Disturbance shall be kept to a minimum. As soon as construction is complete, any disturbed lawn areas shall be fine raked, seeded with lawn seed and hay mulched. After the site is fully stable with vegetation cover, the silt fence may be removed.

#### **Summary**

The proposed buffer planting improvements will significantly improve the ecology of the property through mitigating stormwater runoff, increasing biodiversity to support existing and attract new wildlife and pollinators, and creating food and shelter for the fauna. The proposed upland improvements will increase functionality of the property for the homeowner.



WETLAND BOUNDARIES , POND & LAKE MANAGEMENT , CONSTRUCTION FEASIBILITY CONSULTATIONS , ENVIRONMENTAL STUDIES

# Biological Narrative 232 Silver Spring Road, Wilton, CT

Date: December 18, 2023

By: Steven Danzer Ph.D.

- Soil Scientist Certified Nationally by the Soil Science Society of America (#353463).
   Registered with the Society of Soil Scientists of Southern New England.
- Senior Professional Wetland Scientist PWS #1321, Society of Wetland Scientists.
- Arborist CT DEEP License S-5639; ISA Certified NE-7409A.
- Ph.D. in Renewable Natural Resource Studies.

#### INTRODUCTION

Regulated activities are proposed at the property located at 232 Silver Spring Road, Wilton, Connecticut. The proposed activities include the construction of a pool, pool patio and masonry work, installation of pool equipment, stormwater detention system, expansion of lawn, and the removal of invasive species and installation of wetland buffer plantings, all as indicated by plans prepared by Tracy Chalifoux LLC, Landscape Architect.

Only a portion of these activities (a portion of the lawn, and the northeast corner of the pool area and the northern cultecs units/proposed stormwater galleries) are within the regulated area. Portions of the lawn are within a previously approved septic replacement area.

The purpose of this report is to document existing conditions and to assess impact to the wetland resources due to the proposed activities.

# **LANDSCAPE CONTEXT**

The 2.004 acre site is located on the east side of Silver Spring Road in Wilton, CT. Landuse within the adjoining neighborhood is residential, with similar sized lots which are also predominantly wooded. The site is located within the DEEP Basin 7302-03, within the Silvermine River Subregional Basin. The site itself drains into Scotts Brook, a tributary of the Silvermine River. The site does not drain into Scotts Reservoir, located approximately 0.4 miles to the west, but the watershed does eventually drain into Browns Reservoir located downstream.

#### **WETLAND RESOURCES**

Wetland resources on site include a seasonal wetland pocket (potential vernal pool) located adjacent to the driveway, and a wooded wetland and watercourse corridor located within the northeastern region of the property which drains southeasterly offsite between the rears of the residences of Silver Spring Road, Scarlet Oak Drive, and Mayflower Drive. Wooded wetlands are also located north and northeast of the property.

The wetlands throughout the site were delineated by Otto Theall during a field investigation conducted on February 19 and 25, 2013 and documented in a Soil Report dated February 25, 2013. Wetland soils were classified by Theall as within the Ridgebury, Leicester and Whitman soil mapping unit, a mapping unit that is characterized by being deep and poorly drained, and formed in glacial till Upland soils were classified as a mixture of Sutton fine sandy loam mapping unit, Canton and Charlton soil mapping unit, and Udorthents-Urban land complex mapping unit. Udorthents are soils altered by cutting and/or filling.

Dominant vegetation growing within the wetland/watecourse area observed during the field investigation by Steven Danzer PhD included Red maple, Skunk cabbage, Cinnamon fern, Highbush blueberry, Spice Bush, Sweet pepperbush, Multiflora rose (an invasive), Winged Euonymus (and invasive) and Asiatic bittersweet (an invasive). Dominant woody vegetation in the adjacent upland included Sugar maple, Red maple, Beech, and Hickory. The woody understory within the upland relatively sparse and open.

The existing functions and values of the wetland area were evaluated using the New England Army Corp Highway Methodology Descriptive Approach, as modified for application to local conditions. This methodology has been proven useful in similar projects intended for review by municipal wetland commissions, and was chosen as the most appropriate methodology for the assessment of the area due to the assessment's descriptive emphasis. The functions and values of the system are described below.

Wetland/watercourse functions and values performed by the watercourse and adjacent wetlands include a very modest level of *Floodflow Alteration* due to the hydric soils and the modest detention and storage capacity of the watercourse system, *Wildlife Habitat* 

due to its proximity to the contiguous wooded area to the east, Sediment/Toxicant/Pathogen Retention due to the wetland system's ability to detain and mitigate pollutants from neighboring residentially developed area, Nutrient Removal/Retention/Transformation due to its vegetation and its overall potential for sediment trapping, and Groundwater discharge/recharge. The wetland pocket area within the property itself may be vernal pool habitat though the adjacent upland habitat is limited on the southern side due to the existing driveway and residence. The greater wetland area located offsite would be reasonably expected to host amphibians.

# PROPOSED ACTIVITIES, ANALYSIS OF IMPACT

The proposed activities, located partially within the upland review area, include the construction of a pool, pool patio and masonry work, installation of pool equipment, stormwater detention system, expansion of lawn, and the removal of invasive species and installation of wetland buffer plantings.

Only a portion of the lawn expansion, the northeast corner of the pool area, and the northern cultecs units/proposed stormwater galleries) are within the upland review area. Portions of the lawn are to be located within a previously approved septic replacement area.

No work is proposed in the wetlands/watercourses.

The most sensitive wetland resource within proximity to the proposed work is the potential vernal pool located adjacent and north of the existing driveway. The only land disturbance near this resource will be the northwest corner of the pool area, which will be effectively separated from the wetland resources by the existing driveway and northeast corner of the residence. Likewise, the proposed stormwater galleries will be buffered from this resource by existing ledge out crops and contiguous wooded canopy. The installation of the gallery will require the removal of a single Maple tree.

The pool, patio, and pool equipment will be located mainly over upland area currently maintained as lawn (*Photos 1 and 2*) with several trees. A single Maple tree will be will be removed from the upland review area in this area.

The expansion of lawn is partially located within the regulated area (*Photos 3 and 4*) and will require selective removal of six trees. A portion of this area was previously approved for a B100A septic replacement which would require the removal of trees as well. The conversion of this area to lawn will result in the elimination of upland forest habitat, though there will still be partial woody canopy over this area since the removal is selective and not a clear cut. The woodland edge will be replanted with an assortment of trees, shrubs, perennials and grasses. Additional plantings and invasive species removal will occur in proximity to the driveway wetland area. Overall, the site will be replanted

with nine (9) trees, twenty-six (26) shrubs, and one hundred twenty-seven (127) perennials. All plantings will be native and were selected to provide a multilevel vegetative canopy to the site so as to restore or enhance ecological function to the area, and to buffer the living areas from the natural areas. The plantings will also control erosion by reducing stormwater runoff.

The project was reviewed to determine if there were any significant impacts to the wetland resources, pursuant to the criteria enumerated in the Inland Wetland and Watercourse Regulations for the Town of Wilton under Section 2.1(z)3 (Significant Regulated Activity).

Under the Regulations, the project will likely be a Significant Regulated Activity since it involves the movement of more than 100 CY of earth material. However, the activity will not substantially change the natural channel or inhibit the natural dynamics of any watercourse system, nor diminish the natural capacity of the system to support existing functions, or cause substantial turbidity, siltation, sedimentation or thermal pollution, nor cause a substantial change of flow, nor cause pollution, nor destroy unique wetlands, watercourses or regulated areas having demonstrable scientific or educational value.

As per the above definition, the project is not expected to cause significant impacts to the wetlands or watercourses for the following reasons:

- There will be no work in the wetlands or watercourse area.
- Erosion controls are proposed during the course of construction to prevent sediments from washing towards the wetlands.
- The edge of the altered upland will be enhanced through the removal of invasive vegetation and the planting of native vegetation.
- A stormwater detention system has been designed to mitigate any additional runoff.

With the above considerations in mind, it is my opinion that there will be no significant impacts to the wetlands due to the proposed activities. Nor will there be any significant or detrimental alteration to existing wetland functions or values.

### **SUMMARY**

The proposed activities include the construction of a pool, pool patio and masonry work, installation of pool equipment, stormwater detention system, expansion of lawn, and the removal of invasive species and installation of wetland buffer plantings.

It is my professional opinion that the proposed activities will not significantly impact, or negatively change, diminish, or otherwise detrimentally alter the ecological communities or the functions or values of any of the wetland areas located on or adjacent to the property.

Thank you for the opportunity to comment.

Respectfully submitted,

Signed,

Steven Danzer Ph.D.

Professional Wetland Scientist, Soil Scientist, Arborist,

Ph.D. in Renewable Natural Resource Studies



# Appendix A. 232 Silver Spring Road, Wilton - Photos



Photo 1. Pool location in existing lawn: Looking west. 12/14/23.



Photo 2. Pool location in existing lawn: Looking south. 12/14/23.



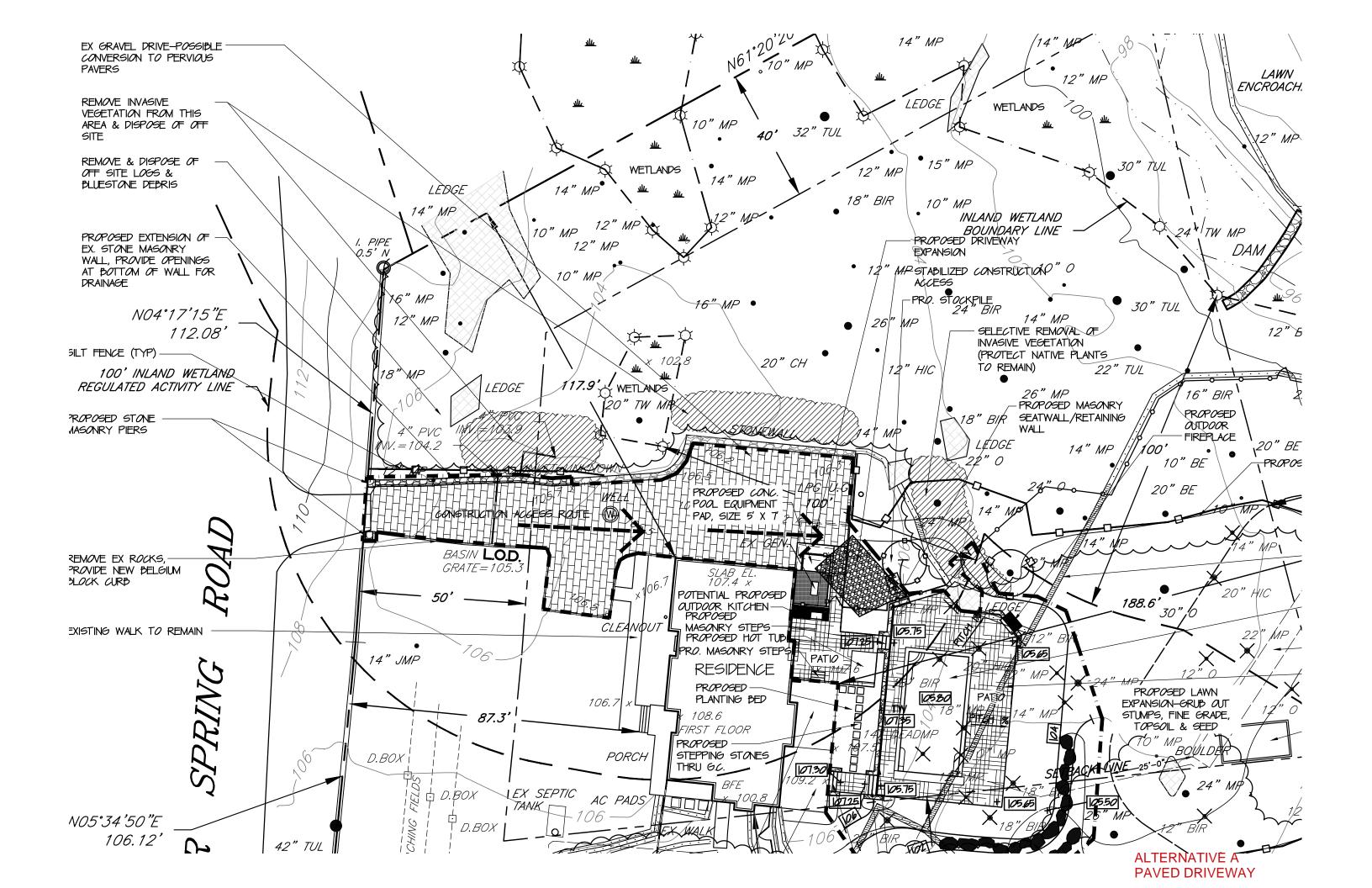
Photo 3. Lawn expansion area: Looking east (back to residence). 12/14/23.

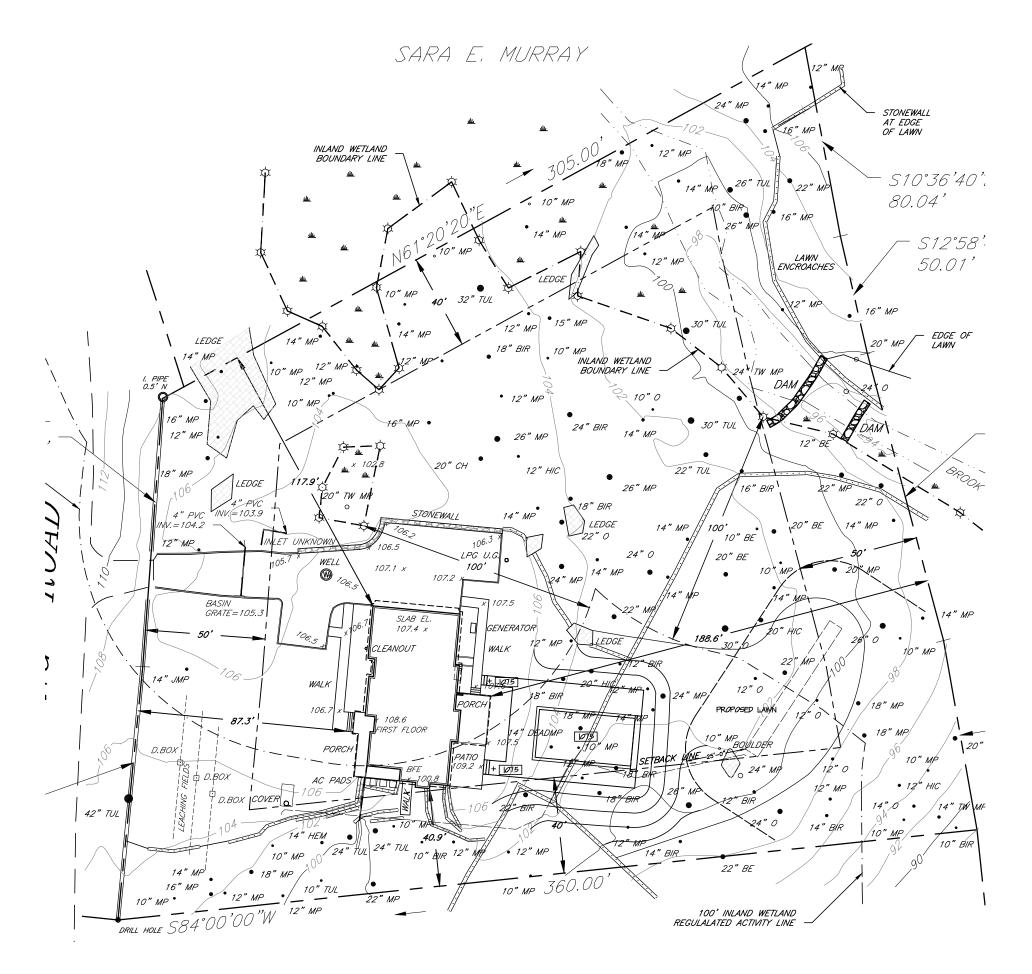


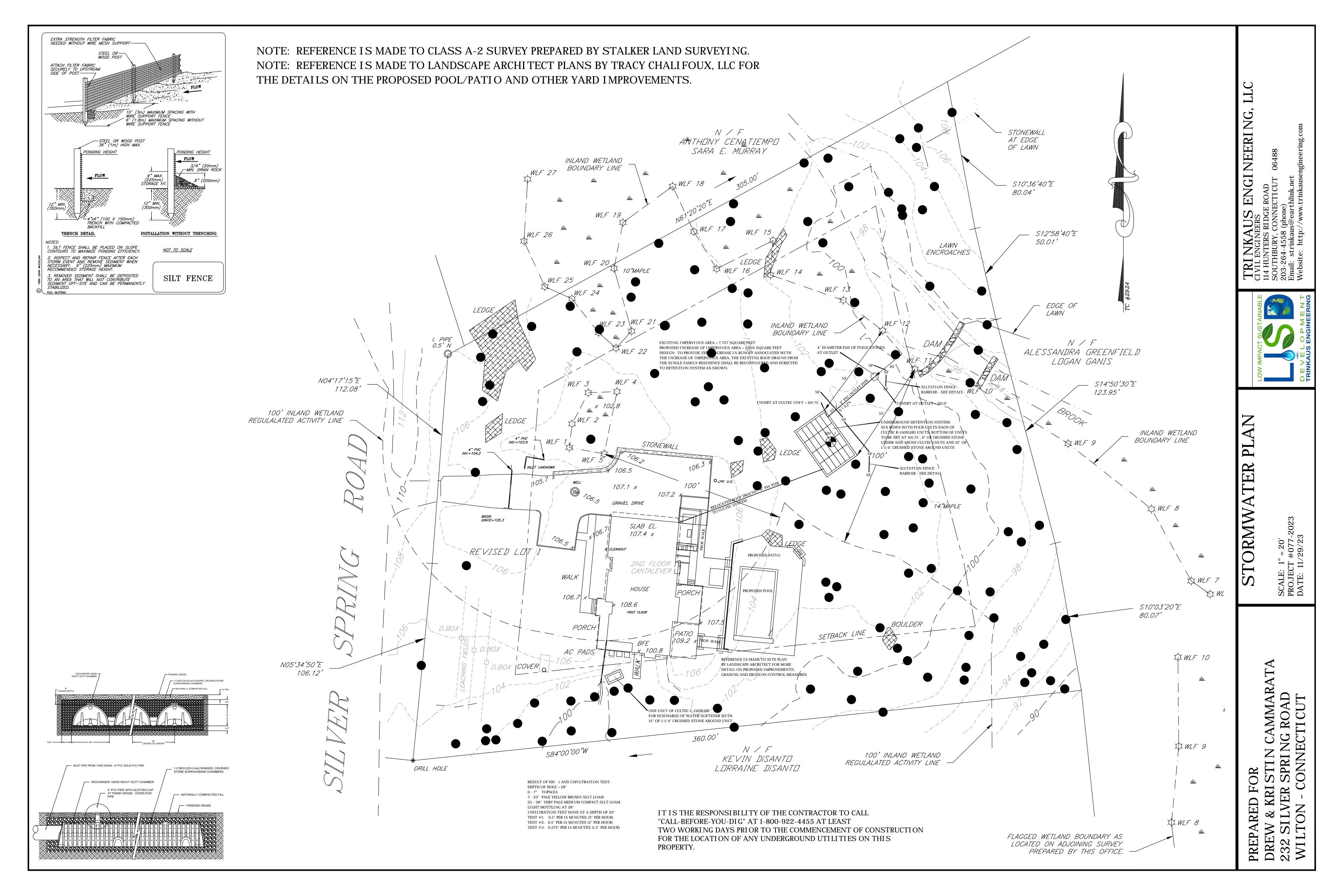
Photo 4. Lawn expansion area: Looking west towards residence. 12/14/23.



**Photo 5. Watercourse along northeastern property boundary region**: Looking downstream , southeasterly . **12/14/23.** 









#### Trinkaus Engineering, LLC

114 Hunters Ridge Road Southbury, Connecticut 06488 203-264-4558 203-264-4559 (fax)

E-mail: <a href="mailto:strinkaus@earthlink.net">strinkaus@earthlink.net</a> <a href="http://www.trinkausengineering.com">http://www.trinkausengineering.com</a>

November 29, 2023

Project: Cammarata – 232 Silver Spring Road – Wilton, Connecticut

# Project Description:

The site currently has an existing single-family residence, and driveway on 2.00 acres. It is proposed to install a pool and patio at the rear of the house which will increase the impervious area by 2,903 square feet.

The peak rates of runoff were generated using HydroCAD for the Water Quality Storm, 2-year, 10-year, and 25-year rainfall events using NOAA 14 data. The proposed increase of impervious area will increase the peak rate of runoff on the site, thus stormwater detention is required. An underground detention system, consisting of Cultec 150HD units will be installed to detain the runoff from the driveway/parking area to reduce peak rates of runoff below the current conditions. Hydrographs are provided below which demonstrate this.

**Table 1 – Summary of Peak Rate Changes** 

Storm Event	Current	Future	Detention	Link
WQ Storm	0.0 cfs	0.0 cfs	0.0/0.0 cfs	0.0 cfs
2-year Storm	2.3 cfs	2.5 cfs	0.2/0.1 cfs	2.3 cfs
10-year Storm	5.0 cfs	5.2 cfs	0.4/0.1 cfs	4.9 cfs
25-year Storm	7.4 cfs	7.7 cfs	0.5/0.2 cfs	7.3 cfs

#### **MS4 Information:**

Existing Pervious Surface Area = 79,567 square feet

Existing Impervious surface area directly connected to watercourse = 0 square feet

Existing Impervious surface area not connected to watercourse = 7,727 square feet

Proposed Pervious Surface Area = 76,664 square feet

Proposed Impervious surface area disconnected from watercourse = 0 square feet

Proposed Impervious surface area connected to watercourse = 0.0 square feet

Proposed Impervious surface area not connected to watercourse or municipal or state drainage system = 10,630 square feet

#### Water Quality Storm – pre-development:

Summary for Subcatchment 21S: Current Conditions

Runoff = 0.0 cfs @ 13.82 hrs, Volume= 0.005 af, Depth> 0.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr WQ Storm Rainfall=1.00"

	A	rea (sf)	CN	Adi De	scription					
-		62.785	73		Woods, Fair, HSG C					
		16.782	79		50-75% Grass cover, Fair, HSG C					
		7,727	98	Ur	Unconnected pavement, HSG C					
-		87,294	76	75 We	Weighted Average, UI Adjusted					
		79,567		91	.15% Pervio	us Area				
		7,727		8.8	5% Impervi	ous Area				
		7,727		10	0.00% Unco	nnected				
	Tc	Length	Slope	Velocit	y Capacity	Description				
_	(min)	(feet)	(ft/ft)	(ft/sec	) (cfs)					
	8.0	100	0.0300	0.2		Sheet Flow, sheet flow				
						Grass: Short n= 0.150 P2= 3.50"				
	1.5	130	0.0800	1.41		Shallow Concentrated Flow, scf				
						Woodland Kv= 5.0 fps				
	9.5	230	Total							

# Water Quality Storm - post-development

Summary for Subcatchment 26S: Future Conditions

Runoff = 0.0 cfs @ 12.55 hrs, Volume= 0.006 af, Depth> 0.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr WQ Storm Rainfall=1.00"

A	Area (sf)	CN	Adj De	Description					
	62,785	73	W	ods, Fair, H	ISG C				
	13,879	79	50	50-75% Grass cover, Fair, HSG C					
	10,630	98	Ur	connected p	pavement, HSG C				
	87,294	77	76 W	Veighted Average, UI Adjusted					
	76,664		87	.82% Pervio	us Area				
	10,630		12	.18% Imper	vious Area				
	10,630		10	0.00% Unco	onnected				
Tc	Length	Slope	Velocit	y Capacity	Description				
(min)	(feet)	(ft/ft)	(ft/sec	(cfs)					
8.0	100	0.0300	0.2	1	Sheet Flow, sheet flow				
					Grass: Short n= 0.150 P2= 3.50"				
1.5	130	0.0800	1.4	1	Shallow Concentrated Flow, scf				
					Woodland Kv= 5.0 fps				
9.5	230	Total							

#### 2-year - pre-development

Summary for Subcatchment 21S: Current Conditions

Runoff = 2.3 cfs @ 12.15 hrs, Volume= 0.197 af, Depth> 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 2-YR Rainfall=3.33"

	Area (sf)	CN	Adj Des	Description					
	62,785	73	Woo	Woods, Fair, HSG C					
	16,782	79	50-7	50-75% Grass cover, Fair, HSG C					
	7,727	98	Und	Unconnected pavement, HSG C					
	87,294	76	75 Wei	Weighted Average, UI Adjusted					
	79,567		91.1	5% Pervio	us Area				
	7,727		8.85	3% Impervio	ous Area				
	7,727		100	.00% Unco	nnected				
Tc	Length	Slope	Velocity	Capacity	Description				
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
8.0	100	0.0300	0.21		Sheet Flow, sheet flow				
					Grass: Short n= 0.150 P2= 3.50"				
1.5	130	0.0800	1.41		Shallow Concentrated Flow, scf				
					Woodland Kv= 5.0 fps				
9.5	230	Total							

#### 2-year – post-development

#### Summary for Subcatchment 26S: Future Conditions

Runoff = 2.5 cfs @ 12.15 hrs, Volume= 0.207 af, Depth> 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 2-YR Rainfall=3.33"

	rea (sf)	CN .	Adj Des	Description					
	62,785	73	Woo	Woods, Fair, HSG C					
	13,879	79	50-7	75% Grass	cover, Fair, HSG C				
	10,630	98	Unc	onnected p	pavement, HSG C				
	87,294	77	76 Wei	Weighted Average, UI Adjusted					
	76,664		87.8	32% Pervio	us Area				
	10,630		12.1	18% Imperv	vious Area				
	10,630		100	.00% Unco	nnected				
Tc	Length	Slope	Velocity	Capacity	Description				
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	·				
8.0	100	0.0300	0.21		Sheet Flow, sheet flow				
					Grass: Short n= 0.150 P2= 3.50"				
1.5	130	0.0800	1.41		Shallow Concentrated Flow, scf				
					Woodland Kv= 5.0 fps				
9.5	230	Total			·				

#### 10-year – pre-development

#### Summary for Subcatchment 21S: Current Conditions

Runoff = 5.0 cfs @ 12.14 hrs, Volume= 0.408 af, Depth> 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 10-YR Rainfall=5.00"

	Α	rea (sf)	CN .	Adj Des	Description					
		62,785	73	Woo	Woods, Fair, HSG C					
		16,782	79	50-	50-75% Grass cover, Fair, HSG C					
		7,727	98	Und	onnected p	pavement, HSG C				
		87,294	76	75 Wei	Weighted Average, UI Adjusted					
		79,567		91.1	5% Pervio	us Area				
		7,727		8.8	5% Impervi	ous Area				
		7,727		100	.00% Unco	nnected				
	Tc	Length	Slope	Velocity	. ,	Description				
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
	8.0	100	0.0300	0.21		Sheet Flow, sheet flow				
						Grass: Short n= 0.150 P2= 3.50"				
	1.5	130	0.0800	1.41		Shallow Concentrated Flow, scf				
_						Woodland Kv= 5.0 fps				
	9.5	230	Total							

#### 10-year – post-development

#### Summary for Subcatchment 26S: Future Conditions

 $Runoff \hspace{0.5cm} = \hspace{0.5cm} 5.2 \text{ cfs } @ \hspace{0.2cm} 12.14 \hspace{0.1cm} \text{hrs, Volume} = \hspace{0.5cm} 0.423 \hspace{0.1cm} \text{af, Depth> } 2.53"$ 

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 10-YR Rainfall=5.00"

	rea (sf)	CN	Adj Des	Description					
	62,785	73	Woo	Woods, Fair, HSG C					
	13,879	79	50-7	50-75% Grass cover, Fair, HSG C					
	10,630	98	Unc	onnected p	pavement, HSG C				
	87,294	77	76 Wei	Weighted Average, UI Adjusted					
	76,664		87.8	2% Pervio	us Area				
	10,630		12.1	8% Imperv	vious Area				
	10,630		100	.00% Unco	nnected				
Tc	Length	Slope	Velocity	Capacity	Description				
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
8.0	100	0.0300	0.21		Sheet Flow, sheet flow				
					Grass: Short n= 0.150 P2= 3.50"				
1.5	130	0.0800	1.41		Shallow Concentrated Flow, scf				
					Woodland Kv= 5.0 fps				
9.5	230	Total							

# ${\bf 25\text{-}year-pre\text{-}development}$

#### Summary for Subcatchment 21S: Current Conditions

Runoff = 7.4 cfs @ 12.14 hrs, Volume= 0.604 af, Depth> 3.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 25-YR Rainfall=6.40"

	Area (s	f)	CN	Adi D	escription					
	62.78		73		Woods, Fair, HSG C					
	16.78		79		50-75% Grass cover, Fair, HSG C					
	7.72		98		Unconnected pavement, HSG C					
	87.29		76		Weighted Average, UI Adjusted					
	79.56		70		.15% Pervio	· ,				
	7.72			-	35% Impervi					
	7,72				0.00% Unco					
	1,12	. /		10	0.00 % 01100	milected				
	Tc Leng	ıth	Slope	Veloci	y Capacity	Description				
(m	·		(ft/ft)	(ft/se		2000.19.10.1				
	, , ,	20	0.0300	0.2	, (,	Sheet Flow, sheet flow				
•		-	0.0000	0.2	•	Grass: Short n= 0.150 P2= 3.50"				
1	.5 13	30	0.0800	1.4	1	Shallow Concentrated Flow, scf				
	.0 10		0.0000		•	Woodland Kv= 5.0 fps				
	0.5 23	30	Total							

## 25-year - post-development

#### Summary for Subcatchment 26S: Future Conditions

Runoff = 7.7 cfs @ 12.14 hrs, Volume= 0.622 af, Depth> 3.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 25-YR Rainfall=6.40"

	F	rea (sf)	CN	Adj De	Description					
		62,785	73	Wo	ods, Fair, H	ISG C				
		13,879	79	50	-75% Grass	cover, Fair, HSG C				
		10,630	98	Un	Unconnected pavement, HSG C					
		87,294	77	76 We	Veighted Average, UI Adjusted					
		76,664		87	.82% Pervio	us Area				
		10,630		12	.18% Imper	vious Area				
		10,630		10	0.00% Unco	onnected				
	Tc	Length	Slope			Description				
_	(min)	(feet)	(ft/ft)	(ft/sec	) (cfs)					
	8.0	100	0.0300	0.2		Sheet Flow, sheet flow				
						Grass: Short n=0.150 P2=3.50"				
	1.5	130	0.0800	1.41		Shallow Concentrated Flow, scf				
						Woodland Kv= 5.0 fps				
	0.5	230	Total							

#### **Roof Drains to Detention System: WQ Storm**

#### Summary for Pond 20P: Cultec System #1

Inflow Area = 0.074 ac,100.00% Impervious, Inflow Depth > 0.79" for WQ Storm event 0.1 cfs @ 12.09 hrs, Volume= 0.0 cfs @ 11.90 hrs, Volume= 0.0 cfs @ 11.90 hrs, Volume= Inflow 0.005 af 0.005 af, Atten= 75%, Lag= 0.0 min Outflow

0.005 af Discarded = Primary 0.0 cfs @ 0.00 hrs, Volume= 0.000 af

Routed to Link 24L : (new Link)

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Peak Elev= 101.39' @ 12.47 hrs Surf.Area= 919 sf Storage= 51 cf

Plug-Flow detention time= 21.8 min calculated for 0.005 af (100% of inflow) Center-of-Mass det. time= 20.7 min (808.1 - 787.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	101.25'	669 cf	21.00'W x 43.75'L x 2.54'H Field A
			2,335 cf Overall - 664 cf Embedded = 1,672 cf x 40.0% Voids
#2A	101.75'	664 cf	Cultec R-150XLHD x 24 Inside #1
			Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf
			Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap
			Row Length Adjustment= +0.75' x 2.65 sf x 6 rows
		1,332 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices	
#1	Discarded	101.25'	0.750 in/hr Exfiltration over Surface area	
#2	Primary	101.75'	2.0" Horiz. Orifice/Grate X2 rows C= 0.600 Limited to weir flow at low heads	

Discarded OutRow Max=0.0 cfs @ 11.90 hrs HW=101.28' (Free Discharge) 1=Exfiltration (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=101.25' (Free Discharge) 1—2=Orifice/Grate ( Controls 0.0 cfs)

#### 2-year storm

#### Summary for Pond 20P: Cultec System #1

Inflow Area = 0.074 ac,100.00% Impervious, Inflow Depth > 3.10" for 2-YR event

Inflow = 0.2 cfs @ 12.09 hrs, Volume= 0.019 af

Outflow 0.1 cfs @ 12.37 hrs, Volume= 0.019 af, Atten= 67%, Lag= 17.3 min Discarded =

0.0 cfs @ 11.05 hrs, Volume= 0.1 cfs @ 12.37 hrs, Volume= 0.016 af Primary = 0.003 af

Routed to Link 24L : (new Link)

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Peak Elev= 101.83' @ 12.37 hrs Surf.Area= 919 sf Storage= 246 cf

Plug-Flow detention time= 75.8 min calculated for 0.019 af (100% of inflow)

Center-of-Mass det. time= 74.6 min ( 829.8 - 755.1 )

Volume	Invert	Avail.Storage	Storage Description
#1A	101.25'	669 cf	21.00'W x 43.75'L x 2.54'H Field A
			2,335 cf Overall - 664 cf Embedded = 1,672 cf x 40.0% Voids
#2A	101.75'	664 cf	Cultec R-150XLHD x 24 Inside #1
			Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf
			Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap
			Row Length Adjustment= +0.75' x 2.65 sf x 6 rows
		4 222 -4	Total Amilable Ctarana

1,332 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	101.25'	0.750 in/hr Exfiltration over Surface area
#2	Primary	101.75'	2.0" Horiz. Orifice/Grate X 2 rows C= 0.600
			I imited to weir flow at low heads

Discarded OutFlow Max=0.0 cfs @ 11.05 hrs HW=101.28' (Free Discharge) 1=Exfiltration (Exfiltration Controls 0.0 cfs)

#### 10-year storm

#### Summary for Pond 20P: Cultec System #1

Inflow Area =	0.074 ac,10	0.00% Impervious, Inflow	Depth > 4.76" for 10-YR event				
Inflow =	0.4 cfs @	12.09 hrs, Volume=	0.029 af				
Outflow =	0.1 cfs @	12.35 hrs, Volume=	0.029 af, Atten= 65%, Lag= 16.0 min				
Discarded =	0.0 cfs @	9.90 hrs, Volume=	0.020 af				
Primary =	0.1 cfs @	12.35 hrs, Volume=	0.010 af				
Routed to Link 24L: (new Link)							

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 102.01' @ 12.35 hrs Surf.Area= 919 sf Storage= 373 cf

Plug-Flow detention time= 70.4 min calculated for 0.029 af (100% of inflow) Center-of-Mass det. time=  $69.4\,min$  ( 816.9 - 747.6 )

Volume	Invert	Avail.Storage	Storage Description
#1A	101.25'	669 cf	21.00'W x 43.75'L x 2.54'H Field A
			2,335 cf Overall - 664 cf Embedded = 1,672 cf x 40.0% Voids
#2A	101.75'	664 cf	Cultec R-150XLHD x24 Inside #1
			Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf
			Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap
			Row Length Adjustment= +0.75' x 2.65 sf x 6 rows

1,332 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	101.25'	0.750 in/hr Exfiltration over Surface area
#2	Primary	101.75'	2.0" Horiz. Orifice/Grate X2 rows C= 0.600
			Limited to weir flow at low heads

Discarded OutRow Max=0.0 cfs @ 9.90 hrs HW=101.28' (Free Discharge) 1=Exfiltration (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.1 cfs @ 12.35 hrs HW=102.01' (Free Discharge) \$\frac{1}{2}\$=Orifice/Grate (Orifice Controls 0.1 cfs @ 2.46 fps)

#### 25-year storm

#### Summary for Pond 20P: Cultec System #1

Inflow Area	=	0.074 ac,10	0.00% Imperviou	ıs, Inflow De	pth > 6.1	6" for 25-YR event	
Inflow	=	0.5 cfs @	12.09 hrs, Volu	.me=	0.038 af		
Outflow	=	0.2 cfs @	12.36 hrs, Volu	.me=	0.038 af,	Atten= 66%, Lag= 16.7 m	in
Discarded	=	0.0 cfs @	9.05 hrs, Volu	.me=	0.022 af	_	
Primary	=	0.1 cfs @	12.36 hrs, Volu	.me=	0.016 af		
Routed	to Link 2	11 · (new Lin	k)				

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Peak Elev= 102.18' @ 12.36 hrs Surf.Area= 919 sf Storage= 491 cf

Plug-Flow detention time= 69.5 min calculated for 0.038 af (100% of inflow) Center-of-Mass det. time= 68.5 min ( 812.3 - 743.8 )

Volume	Invert	Avail.Storage	Storage Description
#1A	101.25'	669 cf	21.00'W x 43.75'L x 2.54'H Field A
			2,335 cf Overall - 664 cf Embedded = 1,672 cf x40.0% Voids
#2A	101.75'	664 cf	Cultec R-150XLHD x 24 Inside #1
			Effective Size= 29.8"W x 18.0"H => 2.65 sf x 10.25'L = 27.2 cf
			Overall Size= 33.0"W x 18.5"H x 11.00'L with 0.75' Overlap
			Row Length Adjustment= +0.75' x 2.65 sf x 6 rows

1,332 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	101.25'	0.750 in/hr Exfiltration over Surface area
#2	Primary	101.75'	2.0" Horiz. Orifice/Grate X2 rows C= 0.600
			Limited to weir flow at low heads

Discarded OutFlow Max=0.0 cfs @ 9.05 hrs HW=101.28' (Free Discharge) 1=Exfiltration (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.1 cfs @ 12.36 hrs HW=102.17' (Free Discharge) 
\$\tilde{\top} = 2=Orifice/Grate (Orifice Controls 0.1 cfs @ 3.14 fps)\$

# Future By-pass: WQ Storm

#### Summary for Subcatchment 28S: Future By-pass

Runoff = 0.0 cfs @ 13.82 hrs, Volume= 0.005 af, Depth> 0.03" Routed to Link 24L : (new Link)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr WQ Storm Rainfall=1.00"

/	Area (sf)	CN .	Adj De	Description					
	62,785	73	Wo	Woods, Fair, HSG C					
	13,879	79	50-	75% Grass	cover, Fair, HSG C				
	7,413	98	Un	connected p	pavement, HSG C				
	84,077	76	75 We	Weighted Average, UI Adjusted					
	76,664		91.	18% Pervio	us Area				
	7,413		8.8	2% Impervi	ous Area				
	7,413		10	0.00% Unco	nnected				
Tc	Length	Slope	Velocity	/ Capacity	Description				
(min)	(feet)	(ft/ft)	(ft/sec	(cfs)					
8.0	100	0.0300	0.21		Sheet Flow, sheet flow				
					Grass: Short n= 0.150 P2= 3.50"				
1.5	130	0.0800	1.41		Shallow Concentrated Flow, scf				
					Woodland Kv= 5.0 fps				
9.5	230	Total							

### 2-year storm

#### Summary for Subcatchment 28S: Future By-pass

Runoff = 2.3 cfs @ 12.15 hrs, Volume= 0.190 af, Depth> 1.18" Routed to Link 24L : (new Link)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 2-YR Rainfall=3.33"

A	rea (sf)	CN .	Adj Des	Description					
	62,785	73	Woo	Woods, Fair, HSG C					
	13,879	79	50-7	75% Grass	cover, Fair, HSG C				
	7,413	98	Und	Unconnected pavement, HSG C					
	84,077	76	75 Wei	ghted Avera	age, UI Adjusted				
	76,664		91.1	8% Pervio	us Area				
	7,413		8.82	2% Impervi	ous Area				
	7,413		100	.00% Unco	nnected				
Tc	Length	Slope	Velocity	Capacity	Description				
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
8.0	100	0.0300	0.21		Sheet Flow, sheet flow				
					Grass: Short n= 0.150 P2= 3.50"				
1.5	130	0.0800	1.41		Shallow Concentrated Flow, scf				
					Woodland Kv= 5.0 fps				
9.5	230	Total							

#### 10-year storm

#### Summary for Subcatchment 28S: Future By-pass

Runoff = 4.8 cfs @ 12.14 hrs, Volume= 0.393 af, Depth> 2.45" Routed to Link 24L : (new Link)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs Type III 24-hr 10-YR Rainfall=5.00"

	rea (sf)	CN .	Adj Des	Description					
	62,785	73	Woo	Woods, Fair, HSG C					
	13,879	79	50-7	'5% Grass	cover, Fair, HSG C				
	7,413	98	Unc	onnected p	pavement, HSG C				
	84,077	76	75 Wei	Weighted Average, UI Adjusted					
	76,664		91.1	8% Pervio	us Area				
	7,413		8.82	% Impervio	ous Area				
	7,413		100	.00% Unco	nnected				
Tc	Length	Slope	Velocity	Capacity	Description				
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
8.0	100	0.0300	0.21		Sheet Flow, sheet flow				
					Grass: Short n= 0.150 P2= 3.50"				
1.5	130	0.0800	1.41		Shallow Concentrated Flow, scf				
					Woodland Kv= 5.0 fps				
9.5	230	Total							

#### 25-year storm

#### Summary for Subcatchment 28S: Future By-pass

7.2 cfs @ 12.14 hrs, Volume= Runoff 0.582 af, Depth> 3.62" Routed to Link 24L: (new Link)

 $Runoff\,by\,SCS\,TR-20\,method,\,UH=SCS,\,Weighted-CN,\,Time\,Span=\,0.00-24.00\,hrs,\,dt=\,0.05\,hrs$ Type III 24-hr 25-YR Rainfall=6.40"

A	Area (sf)	CN .	Adi Des	cription				
	62,785	73	Woo	ods, Fair, H	ISG C			
	13,879	79	50-7	75% Grass	cover, Fair, HSG C			
	7,413	98	Und	Unconnected pavement, HSG C				
	84,077	76	75 Wei	Weighted Average, UI Adjusted				
	76,664		91.1	91.18% Pervious Area				
	7,413		8.82% Impervious Area					
	7,413	100.00% Unconnected						
Τ.	Lamette	01	M-116.	0	December (form			
	Length	Slope	Velocity		Description			
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)				
8.0	100	0.0300	0.21		Sheet Flow, sheet flow			
					Grass: Short n= 0.150 P2= 3.50"			
1.5	130	0.0800	1.41		Shallow Concentrated Flow, scf			
					Woodland Kv= 5.0 fps			
9.5	230	Total						

## Link **WQ Storm**

#### Summary for Link 24L: (new Link)

2.004 ac, 12.18% Impervious, Inflow Depth > 0.03" for WQ Storm event 0.0 cfs @ 13.82 hrs, Volume= 0.005 af 0.0 cfs @ 13.82 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min Inflow Area = Inflow

Primary = 0.005 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

#### 2-year storm

#### Summary for Link 24L: (new Link)

Inflow Area = 2.004 ac, 12.18% Impervious, Inflow Depth > 1.16" for 2-YR event

0.193 af

2.3 cfs @ 12.15 hrs, Volume= 2.3 cfs @ 12.15 hrs, Volume= Primary = 0.193 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

#### 10-year storm

#### Summary for Link 24L: (new Link)

Inflow Area = 2.004 ac, 12.18% Impervious, Inflow Depth >  $\,$  2.41" for 10-YR event Inflow = Primary = 4.9 cfs @ 12.14 hrs, Volume= 4.9 cfs @ 12.14 hrs, Volume= 0.403 af 0.403 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

#### 25-year storm

#### Summary for Link 24L: (new Link)

 2.004 ac, 12.18% Impervious, Inflow Depth > 3.58" for 25-YR event

 7.3 cfs @ 12.14 hrs, Volume= 0.598 af

 7.3 cfs @ 12.14 hrs, Volume= 0.598 af, Atten=0%, Lag=0.0

 Inflow Area =

Inflow

Primary = 0.598 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

# Watershed Map:

The watershed area is simply the boundaries of the existing lot.

# **Conclusion:**

With the proposed detention system, zero increase in the peak rate of runoff for rainfall events up to and including the 25-year storm are met.

Please contact me if you have any questions concerning this information.

Very Truly Yours, Trinkaus Engineering, LLC



Steven D. Trinkaus, PE

#### Landscape Architect

December 1, 2023

**RE:** Description of the chemical and physical characteristics of fill material to be used in the Regulated Area at 232 Silver Spring Road, Wilton, CT

<u>Detention System</u>: washed, crushed stone (traprock) surrounding chambers, 3 inches of clean fill and/or native fine sandy loam on top of the system

<u>Gunite Swimming Pool</u>: Shell to be gunite construction with washed, crushed stone beneath. Surrounding backfill to be native fine sandy loam from pool and drainage system excavation.

# SOIL & WETLAND SCIENCE, LLC

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SOIL INVESTIGATION REPORT
232 SILVER SPRING ROAD
WILTON, CONNECTICUT
FEBRUARY 25, 2013

I conducted an on-site investigation of the soils on the property that is located at 232 Silver Spring Road in Wilton, Connecticut on February 19 and 25, 2013. The examination for inland wetland soils was conducted in the field by inspection of approximately 70 soil samples taken with spade and auger.

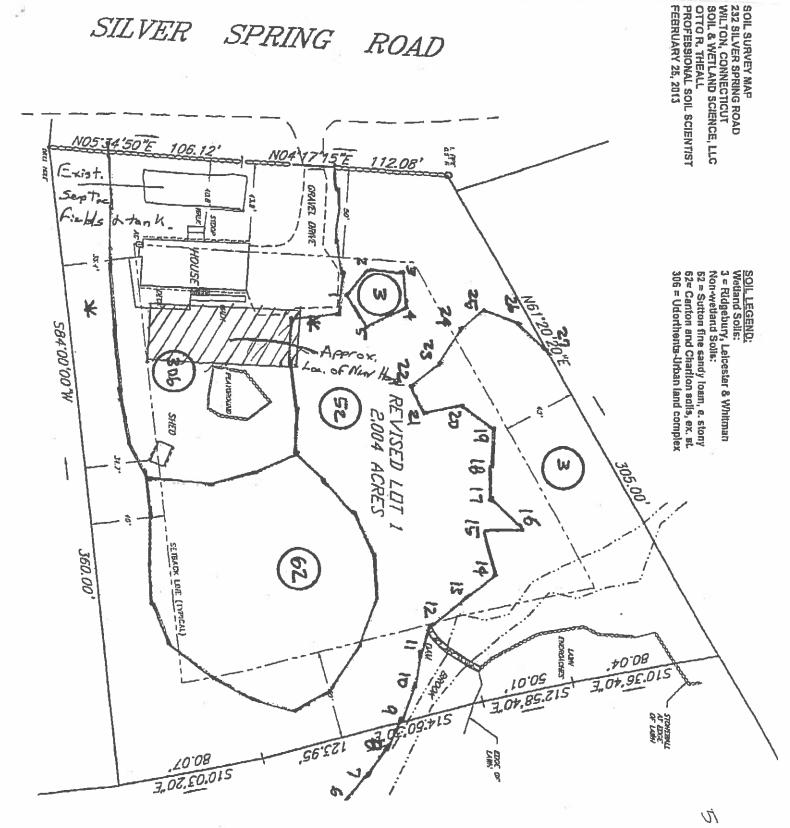
The wetland boundaries were marked in the field with orange flags numbered 1 through 5, and 6 through 27. The wetland soils consist of Ridgebury, Leicester and Whitman soils, extremely stony (3). The wetland in the northeast corner of the site contains a watercourse. The non-wetland soils consist of Sutton fine sandy loam, extremely stony (52), Canton and Charlton soils, extremely stony (62) and Udorthents-Urban land complex (306). The soil map units contain inclusions of other soil types. The results of this investigation are subject to change until they are accepted by the local wetlands agency.

Respectfully submitted:

Otto R. Theall

Professional Soil Scientist

#### SILVER SPRING ROAD

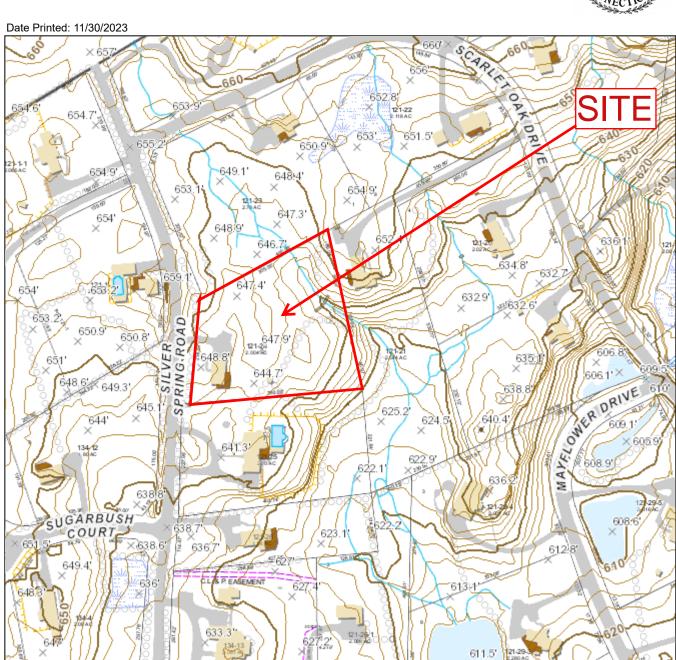


BERROW

# **Town of Wilton**

Geographic Information System (GIS)





# WATERSHED MAP-232 SILVER SPRING RD

#### **MAP DISCLAIMER - NOTICE OF LIABILITY**

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Wilton and its mapping contractors assume no legal responsibility for the information contained herein.

Zoning Effective: July 28, 2017

Planimetrics Updated: 2014

Approximate Scale: 1 inch = 200 feet

0 200

Feet



# WILTON CONNECTICUT SUBREGIONAL BASINS AND SURFACE WATER FLOW DIRECTIONS

# Explanation

Town Boundary



Subregional Watershed Boundary



Subrg. Basin ID# - as designated by CTDEP



Watercourse Open Water



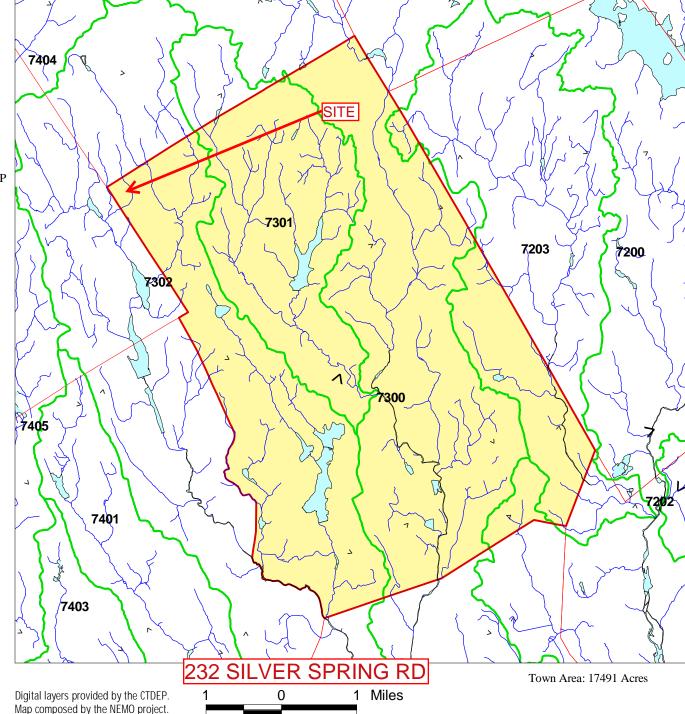
**Basin Outlet** 

Basin Outle

< Surface Water Flow Direction

The table provides statistics for each subregional basin. Shown are the areas of the basin within the town, the percentage for that area, and the percent of the town covered by each basin.

Sbas_no	AcresInTw	Percofb	Percoftwr
7200	318.81	1.0	1.8
7203	1777.93	23.3	10.2
7300	6609.70	31.7	37.8
7301	4046.03	86.1	23.1
7302	4738.78	32.9	27.1

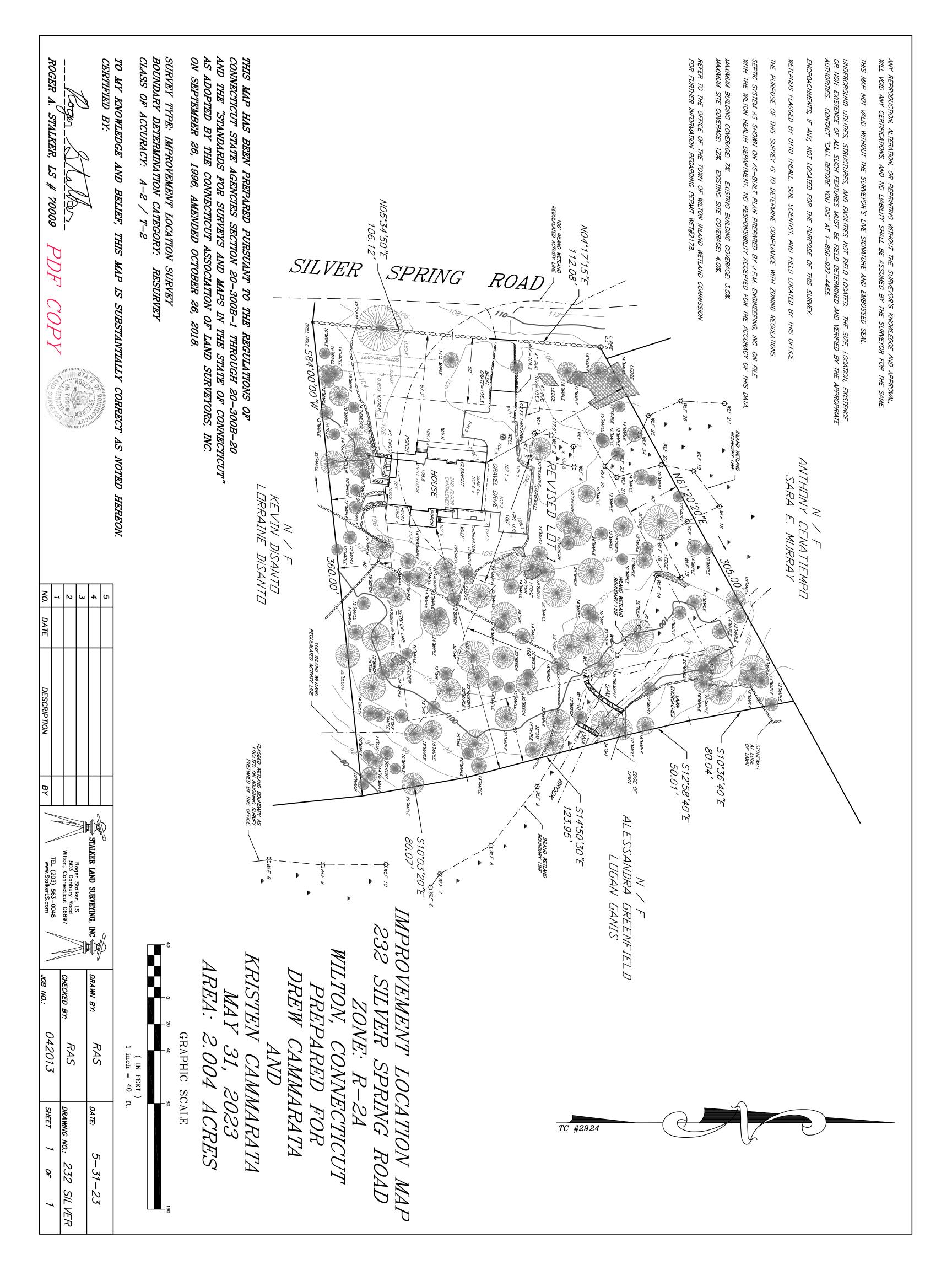


The University of Connecticut, CES: November 02, 1999





For educational purposes only.



# Adjoining Property Owners to 232 Silver Spring Rd, Wilton, CT

Joseph L. Hoermann III Alessandra Greenfield

239 Silver Spring Rd 39 Scarlet Oak Drive

Wilton, CT 06897 Wilton, CT 06897

Anthony Cenatiempo Kevin Disanto Revocable Trust

7 Scarlet Oak Drive 222 Silver Spring Rd

Wilton, CT 06897 Wilton, CT 06897

John J. Suchy III & Elizabeth Suchy

6 Sugarbush Court

Wilton, CT 06897



to get the latest status. Standard Message

January 5, 2024

Sent by Certified Mail

Tracy L. Chalifoux Tracy Chalifoux LLC, applicant's agent 7 King Street Danbury, CT 06811

First Taxing District Water Department 12 New Canaan Avenue Norwalk, CT 06851

Dear Sir or Madam,

A wetland application for improvements within the upland review area including the construction of an 18'x36' inground gunite swimming pool, stone masonry patio, stone masonry walk, masonry retaining wall, masonry steps, outdoor fireplace, hot tub, concrete pool equipment pad, minor expansion of an existing gravel driveway, detention system, pool fence and gates, cleanup of invasive vegetation and installation of native mitigation plantings for the property located at 232 Silver Spring Road, Wilton, CT 06897 (applicants: Drew and Kristin Cammarata residence) has been submitted to the Town of Wilton Inland Wetlands Commission. This letter serves as a written notice to the First Taxing District Water Department of the application as required per Section 8-31 of the Connecticut General Statues.

Sincerely,

Tracy L. Chalifoux

Thany I Chalifoux

Principal Landscape Architect/Agent



# Watershed or Aquifer Area Project Notification Form-232 Silver Spring Rd, Wilton, CT 06897

1 message

Tracy Chalifoux <tlchalifoux@gmail.com>

Fri, Jan 5, 2024 at 10:03 AM

To: dph.swpmail@ct.gov

Bcc: Tracy Chalifoux <tlchalifoux@gmail.com>

To Whom it May Concern,

Attached please find the Watershed or Aquifer Area Project Notification Form for the property at 232 Silver Spring Rd, Wilton, CT

Thank you.

--

Sincerely,

Tracy L. Chalifoux, R.L.A.
Principal Landscape Architect
Tracy Chalifoux LLC
7 King Street
Danbury, CT 06811

mobile: 845-364-1360

tlchalifoux@gmail.com

WatershedorAquiferAreaProjectNotificationFormpdf.pdf 158K

#### Watershed or Aquifer Area Project Notification Form

#### **REQUIREMENT:**

Within seven days of filing, all applicants before a municipal Zoning Commission, Planning and Zoning Commission, Zoning Board of Appeals or Inland Wetlands Commission for any project located within a public water supply aquifer or watershed area are reguired by Public Act No. 06-53 of the CT General Statutes to notify The Commissioner of Public Health and the project area Water Company of the proposed project by providing the following information.

To determine if your project falls within a public water supply aquifer or watershed area visit the appropriate town hall and look at their *Public Drinking Water Source Protection Areas* map. If your project falls completely within or contain any part of a public water supply aquifer or watershed you are required to complete the following information.

Note: You will need information obtained from the *Public Drinking Water Source Protection Areas* map located in the appropriate town hall to complete this form.

Step 1: Have you already notified the CT Department of Public Health (CTDPH) of this project?
No, Go to Step 2
Yes, I have notified DPH under a different project name - Complete steps 4-6
Yes, same name different year - Notification Year Complete steps 4-6
Step 2:
Name of public water supply aquifer your project lies within:
2. Name of the public water supply watershed your project lies within:
3. Public Water Supply Identification number (PWSID) for the water utility:
Step 3: For 1-5 Check all that apply
1. My project is proposing:
Industrial use; Commercial use; Agricultural use; Residential use;
Recreational use; Transportation improvements; Institutional (school, hospital, nursing home, etc.);
Quarry/Mining; Zone Change, Please Describe:
Other, Please describe:
2. The total acreage of my project is:
Less than or equal to 5 acres  Greater than 5 acres
3. My project site contains, abuts or is within 50 feet of a:
Wetland; Stream; River; Pond or Lake

4. Existing use of my project site is:
☐ Grassland/meadow; ☐ Forested; ☐ Agricultural; ☐ Transportation; ☐ Institutional (school, hospital,
nursing home, etc.); Residential; Commercial; Recreational; Quarry/Mining
Other Please Describe:
5. My project will utilize:
septic system; existing public sewer; new public sewer; agricultural waste facility;
existing private well; new private well; existing public water supply;
new public water supply, if new have you applied for a certificate of public convenience and necessity from DPH? Yes No
6. My project will contain this percentage of built up area (buildings, parking, road/driveway, pool): Less than or equal to 20% Greater than 20% to 50% Greater than 50%
Step: 4 Applicants Contact Information:
Name:
E-mail address:
Telephone:
Fax number:
Step 5: Please provide the following if available:
Project name:
Project site address:
Town:
Project site nearest intersection:

# E-mail completed form to dph.swpmail@ct.gov