



- PROJECT LONG-TERM WETLAND MONITORING AND MAINTENANCE PLAN:**
- Wetland Monitoring & Maintenance Plan
 - The purpose of the Wetland Monitoring & Maintenance Plan is to ensure that development in the wetland buffer does not compromise the functional integrity of the wetland buffer, ponds or wetlands and resulting mitigation meets its stated goals as described in the Final Resolution adopted by the Town of North Castle "Town" Planning Board for Steve Vetrano (The Permittee).
 - Protocol for Commencement of Wetland Monitoring & Maintenance Plan
 - Permittee shall implement the mitigation plan (wetland plantings) approved by the Town Planning Board.
 - Following the installation of all wetland mitigation in accordance with the Final Resolution and plans adopted by the Planning Board, the Permittee shall submit two (2) copies of the following:
 - o Certification from a Qualified Environmental Consultant ("Consultant") approved by the Planning Board or its designee verifying the proper installation of all plants and materials in accordance with the approved Planning Board Resolution. The Consultant shall note any deficiencies in the installation of the plant materials or deviations from the approved resolution so that these can be corrected before final approval.
 - o A full plan prepared by a Licensed Engineer or Licensed Surveyor detailing the (1) location of plantings and (2) number of species of individual plants.
 - o The monitoring period shall begin with the review of all required submitted information/materials and final written approval by the Town's Wetland Consultant and continue for a period of 5 years.
 - Assurances
 - o All plantings and seed mixture applications in conjunction with the mitigation work shall be accomplished in accordance with the approved drawings and completed within the first growing season after site clean-up is complete and topsoil is re-spread on the disturbed areas to be revegetated.
 - o The Permittee shall ensure that all plants in conjunction with the wetland mitigation plan shall have a minimum 85% survival rate of installed plants, which must be met or exceeded at the end of the second growing season following the initial planting/seedling. If the 85% survival rate is not met at the end of the second growing season, the Permittee shall take all necessary measures to ensure the level of survival by the end of the next growing season, including replanting and re-grading with topsoil, if necessary. Continue the program for the full term of the 5 years after planting.
 - Monitoring Reports
 - o The purpose of the mitigation monitoring and maintenance reports shall be to: (1) evaluate the progress of the establishment of the mitigation areas, (2) assess compliance with plant survival and plant condition requirements, and (3) identify those aspects of the mitigation areas that may require remediation by the Permittee in order to achieve the mitigation objectives.
 - o Permittee shall submit the mitigation monitoring and maintenance reports prepared by a Licensed Landscape Architect (or an environmental professional approved by the Town of North Castle) annually no later than November 1st to the Town's Wetland Consultant for review.
 - o Information for said reports shall be collected a minimum of 7 times: once prior to construction; once immediately post-construction and annually for 5 years post-construction between the months of June 1st and September 1st.
 - o Minimum requirements for monitoring reports:
 - o Identification of the number of surviving approved plants and area coverage at the time of the observation. The report should detail the condition, vigor, size (dbh) of all planted material and compliance with the approved Planning Board Resolution.
 - o Color photographs from established stations approved by the Town's Wetland Consultant showing representative conditions in the mitigation areas taken annually during the designated periods defined above.
 - o An estimate of the vegetative cover in the mitigation areas, noting in particular areas which are bare or areas of vegetation and/or locations where erosion and sedimentation are occurring or where invasive plant species have become established. Aerial coverage of invasive plant species must be less than 15% of the total wetland mitigation area on the site.
 - o A qualitative analysis of the extent to which the mitigation has been successful. Said reports shall note areas of deficiencies and/or non-compliance and provide recommendations/measures to be taken to ensure continued success of the mitigation efforts and soil stabilization.
 - Completion of Monitoring Period
 - o Final Report submitted by the Permittee and certified by the Permittee's Consultant.
 - o The Town's Wetland Consultant will review the submitted material and perform an inspection of the site for conformance with the approved Planning Board Resolution and As-Built Plans. Upon review and inspection, the Town's Wetland Consultant shall submit written approval to the Planning Board.
 - o A Monitoring Data Form (in Report) will be filled out that includes the above information and the following information, if applicable:
 - o The vegetative cover shall be comprised of native species (not invasive species), whether planted or resulting from natural colonization. If vegetative cover is less than 85%, replanting shall occur with native species which have survived and show good vigor within the wetland buffer mitigation planting areas.
 - o Elimination of invasive plant species. Permittee shall demonstrate 100% removal of target species at initial treatment. Ongoing removal shall be demonstrated at each inspection period. Target species shall be tested, as necessary, to prevent re-establishment, including but not limited to, Japanese Barberry (Berberis thunbergii), Common Reed (Phragmites australis), Biternweed (Celastrus obtusiloba), Multiflora Rose (Rosa multiflora), Porcelain Berry (Ampelops brevipedunculata), Autumn Olive (Elaeagnus umbellata), Winged Euonymus (Euonymus alatus) and Garlic Mustard (Alliaria petiolata). It is incumbent on the Permittee to remove such invasive species during the appropriate season in which removal is optimal. Hand removal of any delisted, delisted or otherwise unhealthy plantings and replacement "in kind" as necessary to meet the 85% survival threshold.
 - o Pesticide and fertilizer use is restricted within the 100' wetland buffer from the edge of the wetland line, except for those products which are permitted by the NYSDEC.

LEGEND

- PROPERTY LINE
- - - EXISTING CONTOURS
- WETLAND LINE AS PER WESTCHESTER GIS MAPPING
- 100 FOOT WETLAND BUFFER LINE AS PER WESTCHESTER GIS
- PROPOSED AREA OF DISTURBANCE IN WETLANDS BUFFER
- EXISTING WALKWAY/STRUCTURES TO BE REMOVED
- X EXISTING TREES TO BE REMOVED
- PROPOSED WALKWAYS, PATIOS AND WALLS
- EXISTING POOL TO BE REBUILT
- APPROXIMATE EDGE OF EXISTING PLANT BED
- PERENNIAL PLANTINGS
- PROPOSED TREES
- PROPOSED SHRUBS

REFERENCE NOTES

- 1 - 1,135 SF of disturbance within the buffer area.
- 2 - 2,300 SF of proposed mitigation planting.

Approved by the Town of New Castle Planning Board Resolution Dated 03 / 08 / 2021.

Dated _____

Christopher Carthy, Chairman
Town of North Castle Planning Board

Engineering Plans reviewed for conformance to resolution:
Dated _____

Joseph Cermele, PE
Kellard Sessions Consulting P.C. Consulting Town Engineers

JRJ Inc.
140 Grace Church St. Apt. GG
Port Chester, NY 10573
T: 914.690.9587
Landscape Design and Construction

Surveyor:
Base information taken from survey dated September 10, 2020 by:
Link Land Surveyors P.C.
21 Clark Place, Suite 1B
Mahopac, NY 10541
(845) 821-0013

Architect:
DeMasi Architects P.C.
105 Smith Ave.
Mount Kisco, NY 10549
(914) 666-3888

Landscape Architect:
Juliana Alzate, RLA
JRJ Inc.
140 Grace Church St. Apt. GG
Port Chester, NY 10573
(914) 218-0065

APPROXIMATE LOCATION OF WATERLINE AND BUFFER LINE TAKE FROM NORTH CASTLE CAI AXIS GIS

Signature Block for Planning Board Endorsement

REGISTRED LANDSCAPE ARCHITECT
JULIANA ALZATE
022666
STATE OF NEW YORK

No.	Date	Revision Information
1	12/28/20	ISSUED FOR CONSERVATION BOARD SUBMISSION
2	01/25/21	ISSUED FOR CONSERVATION BOARD SUBMISSION WITH WETLAND AND BUFFER LINE REVISIONS
3	02/08/21	ISSUED FOR PLANNING BOARD SUBMISSION
4	02/22/21	ISSUED FOR PLANNING BOARD SUBMISSION WITH APPROVAL BY CONSERVATION BOARD
5	03/18/21	ISSUED FOR PLANNING BOARD APPROVAL
6	04/01/21	REVISION - INCLUSION OF MITIGATION PLANTING MAINTENANCE NOTES
7	05/10/21	REVISION - REVISED MITIGATION PLANTING BASED ON NEW SEPTIC SYSTEM DESIGN

Drawing Title:
WETLAND MITIGATION PLAN

Project Address:
**Velardo Residence
164 E. Middle Patent Road
North Castle, NY 10506**

Drawn By: **JA**
Project #: **01-20**
Sheet Number:
LW-1

Scale: 1" = 20'-0" Issue Date: **May 10, 2021**

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140 Grace Church St. Apt. GG
 Port Chester, NY 10573
 T: 914.690.9587

May 10, 2021

Town of North Castle Planning Board
 17 Bedford Road
 Armonk, NY 10504

Re: 164 E. Middle Patent Rd.
 Bedford, NY 10506
 Section 95.02 Block 2 Lot 22

Dear North Castle Planning Office and Kellard Sessions Consulting:

As per the Plant List on LW-1 Wetlands Mitigation Plan for 164 E. Middle Patent Rd dated May 10, 2021 we hereby propose the following cost estimate for the plants to be installed within 12 months of the insuance of the Building Permit for the wetland mitigation/restoration plan.

PROPOSED MITIGATION PLANT LIST								
QTY	INITIALS	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	UNIT PRICE	UNIT PRICE MULTIPLIED BY 3	TOTAL PER PLANT
TREES								
4	AROG	Acer rubrum 'October Glory'	October Glory Red Maple	2.0-2.5 Inch Cal.	Shade Tree	\$ 250	\$ 750	\$ 3,000
2	ARRS	Acer rubrum 'Red Sunset'	Red Sunset Maple	2.0-2.5 Inch Cal.	Shade Tree	\$ 250	\$ 750	\$ 1,500
6	CFL	Cornus florida	Flowering Dogwood	2.0-2.5 Inch Cal.	Flowering Tree	\$ 250	\$ 750	\$ 4,500
SHRUBS								
15	CAL	Clethra alnifolia	Sweet Pepperbush	24-30 Inch	Flowering Shrub	\$ 37	\$ 111	\$ 1,665
9	CSCAR	Cornus sericea 'Cardinal'	Cardinal Red Osier Dogwood	3 Gallon	Flowering Shrub	\$ 27	\$ 81	\$ 729
10	MP	Myrica pensylvanica	Bayberry	3 Gallon	Flowering Shrub	\$ 27	\$ 81	\$ 810
14	VD	Viburnum dentatum	Arrowwood	3 Gallon	Flowering Shrub	\$ 27	\$ 81	\$ 1,134
PERENNIALS								
94	CPV	Carex pensylvanica	Pennsylvania Sedge	1 Gallon	Grass	\$ 9	\$ 27	\$ 2,538
47	FEOCI	Osmunda cinnamomea	Cinnamon Fern or Fiddlehead	1 Gallon	Fern	\$ 9	\$ 27	\$ 1,269

* UNIT PRICES ACCEPTED BY THE TOWN ARE TYPICALLY THE WHOLESALE COST OF THE INDIVIDUAL PLANT STOCK MULTIPLIED BY A FACTOR OF 3 TO ACCOUNT FOR THE MATERIAL COST, PLANTING AND GUARANTEE.

- Total cost for plant material \$ 17,145
- 10 % Contingency of total plant cost \$ 1,715
- 15 % of estimated total plant cost for maintenance and monitoring \$ 2,572

Total cost estimate for Mitigation Planting \$ 21,432

Please feel free to contact me at C: (914) 218-0065 E: juliana.alzate01@gmail.com if you have any questions or concerns.

Sincerely,

Juliana Alzate, RLA