

LOCATION MAP
NOT TO SCALE



Buffer to be restored, grass, vines and invasive species to be removed, and area re-planted

Wetland to be restored, vines and non-native species to be removed

Buffer to be restored, vines and non-native species to be removed

Buffer to be restored, grass removed and area re-planted

Buffer to be expanded, grass removed and area re-planted

Buffer to be restored, vines, non-native species, concrete and asphalt to be removed

Buffer to be restored, grass removed and area re-planted

Proposed removal of shallow sediments and re-seeding with wetland seed mix

Proposed forebay to capture incoming sediments before they reach the watercourse and pond

PROPOSED DECK (TYP.)

PROPOSED PATIO (TYP.)

PROPOSED SPLIT RAIL FENCE (TYP.)

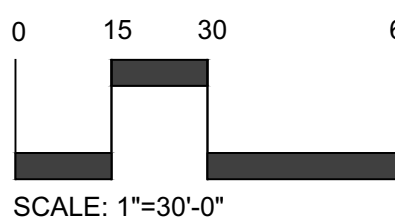
PROPOSED BUILDING #1
F.F. ELEVATION = 315.0
PARKING ELEVATION = 305.0

PROPOSED BUILDING #2
F.F. ELEVATION = 317.2
PARKING ELEVATION = 307.2

PROPOSED MAIN ENTRANCE/EXIT
PROPOSED SIGN LOCATION

- Limits of existing watercourse
- Limits of existing town regulated wetland
- Limits of permanent buffer disturbance
- Limits of wetland restoration area
- Limits of buffer restoration and enhancement

- PROPERTY LINE / RIGHT OF WAY
- PROPOSED CURB
- EDGE OF WETLAND
- 100' WETLAND BUFFER



SAFE DIG
Before You Dig, Drill or Blast!

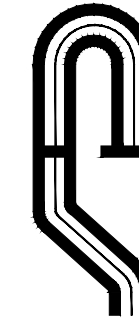
Plant Species Choices for Mitigation Area				
Map Symbol	Quantity	Scientific Name	Common Name	Size
Trees				
Aru	11	Acer rubrum	Red maple	5' - 6'
Ns	6	Nyssa sylvatica	Black tupelo	5' - 6'
Qp	7	Quercus palustris	Pin oak	5' - 6'
Po	4	Platanus occidentalis	Sycamore	5' - 6'
Shrubs				
AC	21	Amelanchier canadensis	Shadblow	3' - 4'
CSe	21	Cornus sericea	Redosier dogwood	3' - 4'
Iv	36	Ilex verticillata	Winterberry holly	3' - 4'
SD	12	Salix discolor	Pussy willow	3' - 4'
ASa	12	Alnus serrulata	Speckled alder	4' - 5'
VC	33	Vaccinium corymbosum	Highbush blueberry	4' - 5'
VD	31	Viburnum dentatum	Arrowwood	4' - 5'



Buffer mitigation plan prepared by
Steve Marino, PWS, of Tim Miller Associates, Inc.
Revision date: January 21, 2016

NOTE:
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PROJECT # 15-18

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Engineer:
Joseph C. Rima, P.E.
NYS Lic. No. 64431

Revisions:	No.	Date	Comments
	1	1/9/15	Town Comments
	2	12/7/15	Town Comments
	3	12/7/15	Town Comments

SCALE: 1" = 30'
DRAWN BY: TK
DATE: 9/25/15

**WETLAND
BUFFER
MITIGATION**

SITE PLAN
PREPARED FOR
PARTH KNOLLS LLC.
87 HAWKES AVENUE
Westchester County, NY

Sheet
M-101

Wetland Buffer Mitigation Narrative and Specification
Parth Knolls
Hawkes Avenue, Town of Ossining, NY
January 21, 2016

Project Description

The applicant proposes the development of 53 rental units in conformance with the existing zoning. Some of the activities that are necessary for this development will occur within the 100 foot regulated setback to wetlands and 50 foot setback to watercourses. No filling or other disturbance to wetlands or watercourses is proposed. Existing site wetlands are associated with two watercourses that enter the site.

Mitigation Proposal

The applicant is proposing a three-tier approach to mitigating the encroachments into federal wetlands.

Buffer Enhancement. The existing buffer has been historically disturbed for activities associated with the former residential/office use. Existing concrete paths, non-native edges and maintained lawn areas, dominate the buffer on the east side of the western watercourse, and on the north side of watercourse/pond at the south end of the site. It is proposed to remove existing concrete and asphalt, remove non-native shrubs and other vegetation, and cease the mowing of lawns within these areas.

Buffer Restoration. A total of 28 new trees and 166 new shrubs will be planted within the buffer areas to enhance and restore the buffer to a more natural condition. The plant list includes all native species commonly found in wetland and transitional areas in the Hudson Valley. As noted above, regular mowing will cease and seed mixes suitable for buffer and transitional areas will be applied, with one annual mowing occur in the fall to occur in these areas.

Wetland Restoration. The small fringing wetlands associated wit the watercourses are dominated by invasive plant species, including porcelainberry, oriental bittersweet, multiflora rose and others. It is proposed to actively remove these species by hand in those areas where the plants are most dominant. Wetland seed mix especially selected for riparian corridors will then be used in these areas.

Along the watercourse at the southern end of the site, sediment that has accumulated over the years after passing under the Hawkes Avenue culvert will be removed by machine and used as fill elsewhere on site. The newly exposed substrate will be hayed and seeded with wetland seed mix and planted with shrubs as shown on the accompanying plans.

Forebay Creation. In order to prevent future sediment deposition in the watercourse and wetland, a new "forebay" feature will be excavated in the buffer just downstream of the Hawkes Avenue culvert, in a location that is currently maintained as lawn. This shallow depressional areas is expected to allow sediment entering the system to settle out in a location that is more easily accessed and maintained.

Use of Porous Pavement and Creation of Nature Trails. In some portions of the buffer that are currently maintained as lawn, future disturbance needed to create the necessary number of parking spaces is unavoidable. In these areas the parking spaces will be made up of porous pavement in order to continue the groundwater recharge and filtering function of the buffer areas.

Nature trails are proposed from the proposed playground and pool areas to a wooden foot bridge across the restored stream channel to provide access to the natural areas on the western side of the stream. Wooden benches will be placed along the trail for rest or observation.

Planting Details

Plant choices for the wetland buffer were made according to existing site conditions and locally common species. All planting will proceed by hand. Materials will be brought to the site in good condition (see below) and then placed in central drop locations. The materials will then be hand-carried to their planting locations and in turn, planted by hand. Only rounded, shallow planting shovels will be used in this effort.

Criteria for selecting plant material will include (1) the plant's ability to withstand the expected light and saturation conditions; (2) its demonstrated survival on this site and other nearby sites; (3) the plant must be native and non-invasive; and (4) whether the plant material is available at nurseries in the same region as the site. The location of the trees and shrubs are coordinated with the proposed Landscape Plan (Sheet L-1) and the existing tree survey.

Planting will be done in spring or early summer (between April 1 and July 1). Shrubs may also be planted in the late summer to early fall (September 1 to October 30). In all cases, a hole will be dug twice as deep as the root ball. The only shovels allowed are rounded, shallow spades. The hole will then be backfilled with a thin layer (two to four inches) of rich, organic topsoil, the plant placed inside, the hole backfilled to the top and then gently tamped down.

Container-grown plant material delivered to the job site will be inspected to assure moist soil/root masses. Any dry and light weight plants will not be accepted. If not planted immediately the container will be stored out of the sun and wind and kept moist (i.e., a means of watering will be provided and watering will occur daily). When removed from the containers, the plants will be the size of the specified container. If in leaf, the plants will appear healthy with no spots, leaf damage, discoloration, insects or fungus. If not in leaf, the buds will be firm and free of damage, discoloration, insects or fungus. Containers will be a minimum of quart size for shrubs and gallon size for trees. Plants not having an abundance of well developed terminal buds on the leaders and branches will be rejected. The stems and branches of all plants will be turgid and the cambium healthy or the plants rejected. Seeding within wetland areas should not be completed when there is more than two inches of standing water, or in areas that are likely to be flooded. Seeds should be broadcast by hand or knapsack seeder using the proper seeding rate (3.5 pounds per acre), and carefully proportioning seed for the entire area. Cover with a light layer of straw mulch following seeding.

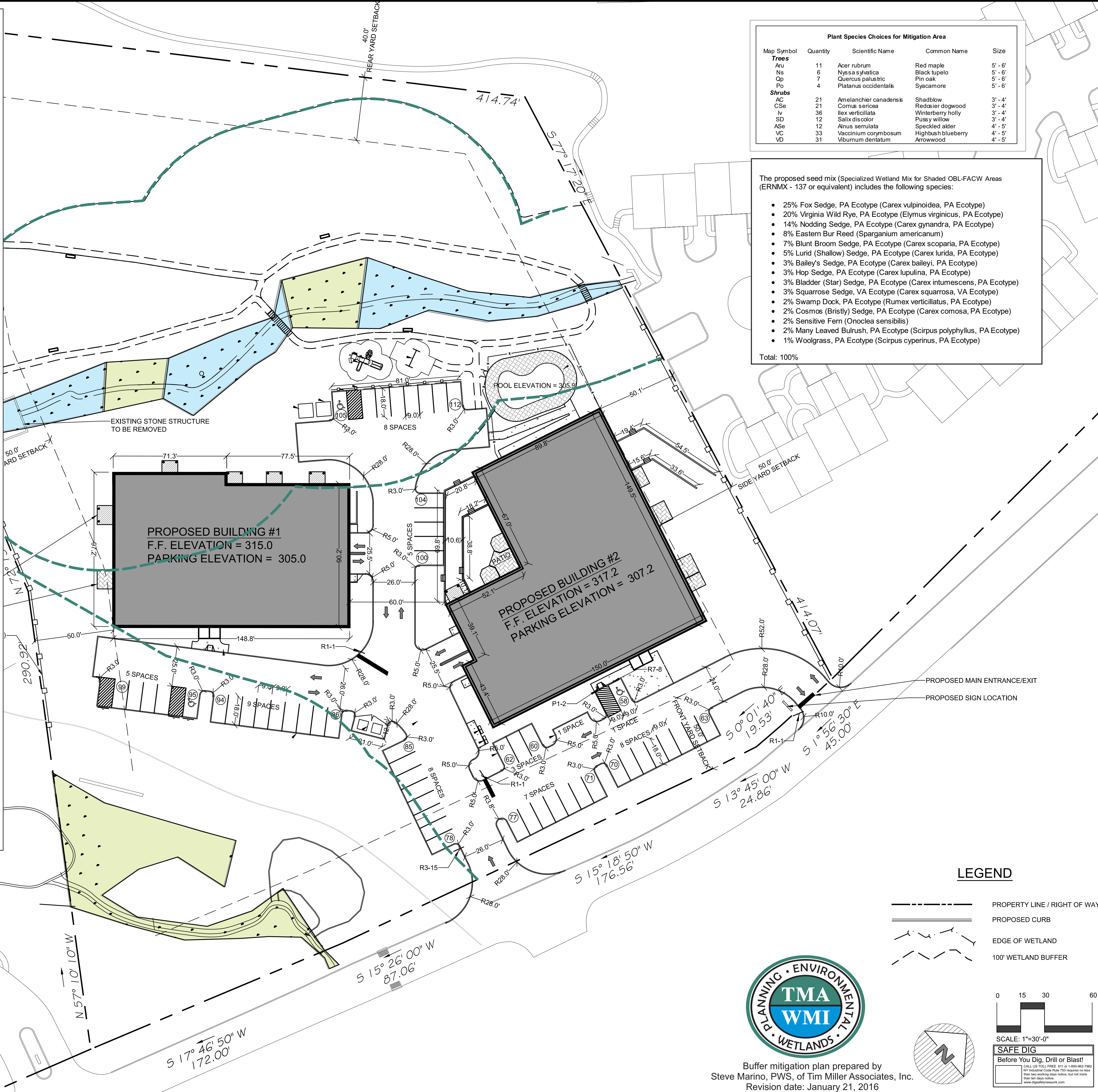
Monitoring and Maintenance

At least one pre-construction meeting will occur between the chosen grading and/or planting contractor/subcontractor and the site environmental systems planner prior to beginning construction on site. The construction monitor will have experience in wetland construction and a Bachelor of Science degree in Natural and/or Physical Resources.

Monitoring and maintenance efforts for the mitigation plantings will take place over a three year period following construction. This will include bi-weekly visits for the first growing season, and then twice a year for the next two years, with additional inspections as required depending on conditions. The applicant's environmental monitor will conduct a survey of the site and site conditions will be noted and adjusted as necessary. An annual report will be provided to the Town of Ossining at the end of the growing season for each of the three years. These reports will include the following information:

1. All plant species, along with their estimated relative frequency and percent cover, shall be identified.
2. Vegetation cover maps, at a scale of one inch equals 30 or larger, shall be prepared for each growing season.
3. Photographs showing all representative areas of the mitigation site shall be taken at least once each year during the period between 1 June and 15 August.

Plantings will meet or exceed and 85 percent survival rate by the end of the second growing season. If this goal is not met, the site will be re-evaluated, and re-grading and/or replanting will be completed as necessary. Invasive species (i.e., oriental bittersweet, multiflora rose, etc.) will not constitute more than 10 percent of the vegetative community. If this goal is exceeded, measures will be taken to eradicate the invasive species.



Plant Species Choices for Mitigation Area				
Map Symbol	Quantity	Scientific Name	Common Name	Size
Trees				
Ar	11	Acer rubrum	Red maple	5' - 6'
Ns	6	Nyssa sylvatica	Black tupelo	5' - 6'
Op	7	Quercus palustris	Pin oak	5' - 6'
Ps	4	Platanus occidentalis	Sycamore	5' - 6'
Shrubs				
AC	21	Amelanchier canadensis	Shadblow	3' - 4'
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Iv	36	Ilex verticillata	Winterberry holly	3' - 4'
SD	12	Salix discolor	Russy willow	3' - 4'
ASE	12	Anus serrulata	Speckled alder	4' - 5'
VC	33	Vaccinium corymbosum	Highbush blueberry	4' - 5'
VD	31	Viburnum dentatum	Arrowwood	4' - 5'

The proposed seed mix (Specialized Wetland Mix for Shaded OBL-FACW Areas (ERNMX - 137 or equivalent) includes the following species:

- 25% Fox Sedge, PA Ecotype (Carex vulpinoidea, PA Ecotype)
- 20% Virginia Wild Rye, PA Ecotype (Elymus virginicus, PA Ecotype)
- 14% Nodding Sedge, PA Ecotype (Carex gynandra, PA Ecotype)
- 8% Eastern Bur Reed (Sparganium americanum)
- 7% Blunt Broom Sedge, PA Ecotype (Carex scoparia, PA Ecotype)
- 5% Lurid (Shallow) Sedge, PA Ecotype (Carex lurida, PA Ecotype)
- 3% Bailey's Sedge, PA Ecotype (Carex baileyi, PA Ecotype)
- 3% Hop Sedge, PA Ecotype (Carex lupulina, PA Ecotype)
- 3% Bladder (Star) Sedge, PA Ecotype (Carex intumescens, PA Ecotype)
- 3% Squarrose Sedge, VA Ecotype (Carex squarrosa, VA Ecotype)
- 2% Swamp Dock, PA Ecotype (Rumex verticillatus, PA Ecotype)
- 2% Cosmos (Bristly) Sedge, PA Ecotype (Carex comosa, PA Ecotype)
- 2% Sensitive Fern (Onoclea sensibilis)
- 2% Many Leaved Bulrush, PA Ecotype (Scirpus polyphyllus, PA Ecotype)
- 1% Woolgrass, PA Ecotype (Scirpus cyperinus, PA Ecotype)

Total: 100%

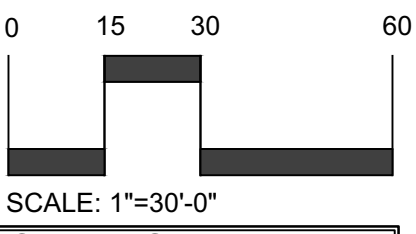
LEGEND

PROPERTY LINE / RIGHT OF WAY

PROPOSED CURB

EDGE OF WETLAND

100' WETLAND BUFFER



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Buffer mitigation plan prepared by
Steve Marino, PWS, of Tim Miller Associates, Inc.
Revision date: January 21, 2016

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SCALE:

1" = 30'

DRAWN BY:

TK

DATE:

9/25/15

BUFFER MITIGATION NOTES

SITE PLAN PREPARED FOR

PARTH KNOLLS LLC.

87 HAWKES AVENUE

Town of Ossining

Westchester County, NY

Sheet

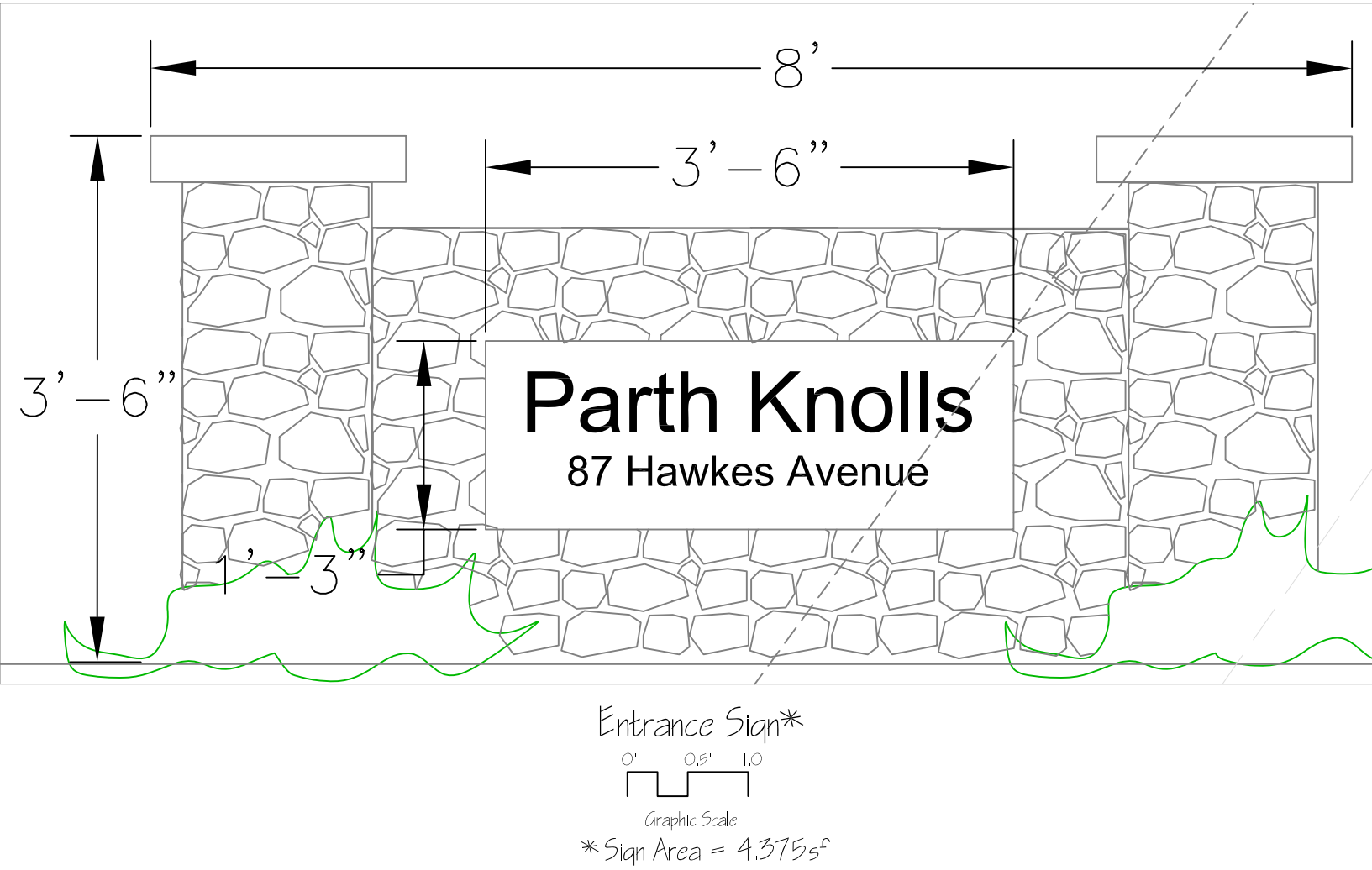
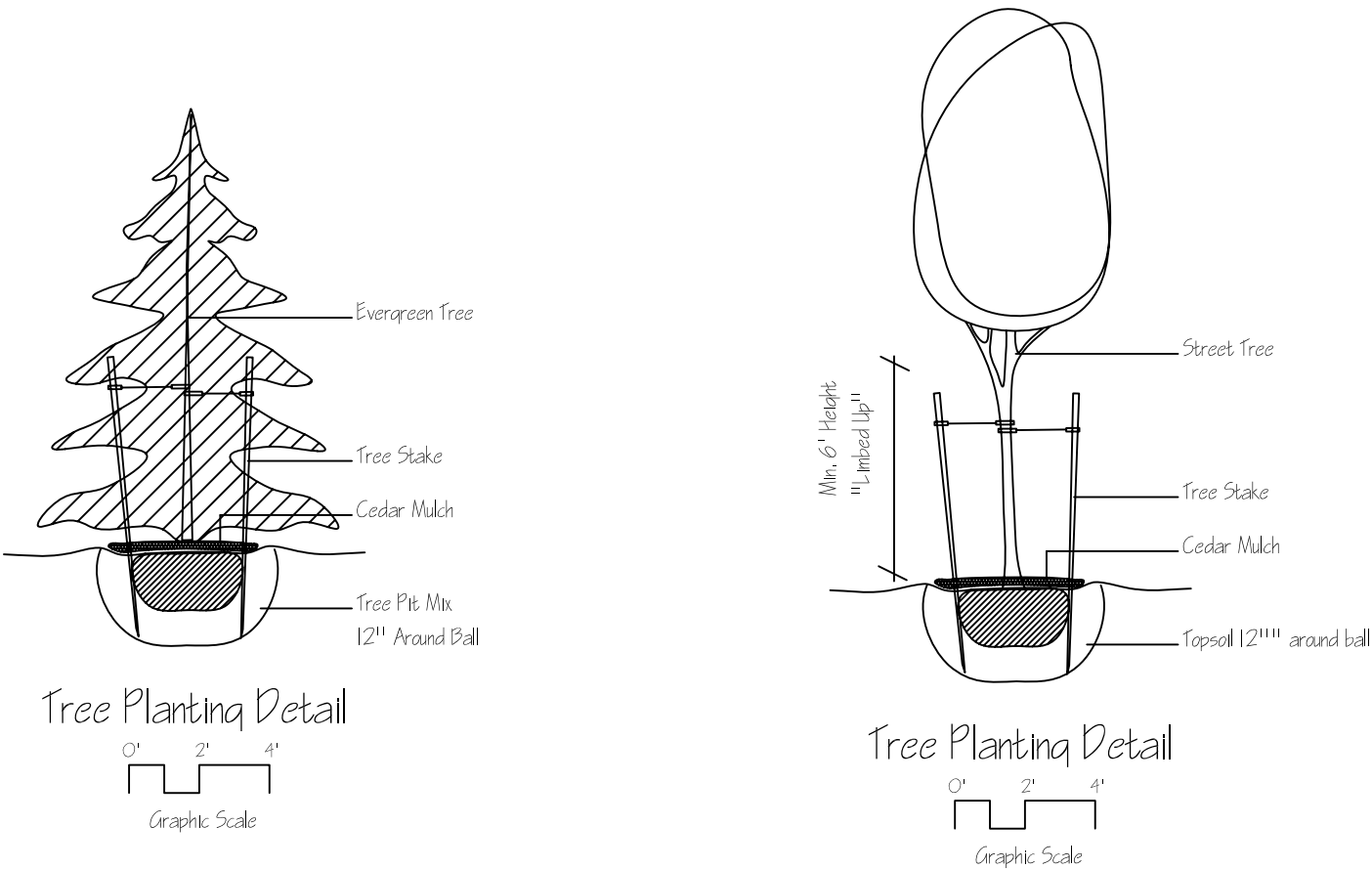
M-102



Notes:

1. All base data by others. No representation or warranty is express or implied as to accuracy of same.
2. This Landscape Plan is for illustration of plant material purposes only. Please refer to Engineer or Surveyor drawings for all other site plan and site features information.
3. All environmental concerns subject to local, state and/ or federal jurisdiction must be reviewed and approved by appropriate agencies prior to construction.
4. Developer/ builder is responsible for maintaining a safe site during construction and until future owners take possession of the site, or portions thereof, at which time the new owners will take full responsibility for maintaining a safe site through proper maintenance, modification and/ or replacement of plant material as necessary.

Parth Knolls Plant List 12-2-15				
Abb.	Botanical Name	Common Name	Size	Quan.
Deciduous Trees				
AC	Aesculus camara	Red Horsechestnut	2-2.5" cal., 14-16' Ht.	4
AS	Acer saccharum	Sugar Maple	2-2.5" cal., 14-16' Ht.	5
LS	Liquidambar styraciflua	Sweetgum	2-2.5" cal., 14-16' Ht.	4
MS	Magnolia soulangiana	Saucer Magnolia	2-2.5" cal., 14-16' Ht.	2
PA	Platanus acerifolia	London Planetree	2-2.5" cal., 14-16' Ht.	3
QR	Quercus rubra	Red Oak	2-2.5" cal., 14-16' Ht.	13
Evergreen Trees				
IL	Ilex opaca	American Holly	8-10' Ht.	1
PG	Picea alauca	White Spruce	8-10' Ht.	5
PS	Pinus strobus	White Pine	10-12' Ht.	8
TP	Thuja plicata	Giant Arborvitae	8-10' Ht.	19
Minor Deciduous Trees				
Cla	Cornus florida alba	White Dogwood	7-8' Ht.	6
CPr	Cornus florida rubra	Pink Dogwood	7-8' Ht.	6
MS	Magnolia stellata	Star Magnolia	7-8' Ht.	3
OA	Opulndron arboresum	Sourwood	8-10' Ht.	4
PT	Prunus thunderslod	Thunderlod Plum	7-8' Ht.	5
PY	Prunus yedoensis	Yoshiki Cherry	7-8' Ht.	7
Hedges				
IL	Ilex alabina	Hiberny	2.5-3' Ht.	46
Notes				
1. All plants to be healthy, full and typical of the species, and shall meet the American Standards for Nursery Stock, latest edition. Mulch plant beds and the base of woody plants with 1.5-2" shredded cedar bark.				
All plants shall be planted in recognized spring and fall planting periods unless specific approval otherwise is given by the project Landscape Architect.				
2. All areas not covered with impervious surfaces to be planted with lawn grass in the following ratio by species: 90% Perennial Ryg, 25% Bluegrass and 25% Creeping Fescue. 95% coverage to be guaranteed.				
3. If quantities indicated on the plant list differ from those on the plan, the plan quantities shall be used.				
4. All plants to be warranted by the contractor to be healthy and in good physical condition for one year or two full growing seasons after planting. Contractor shall maintain the site in a safe condition at all times, and shall clear the site of debris on completion of work. Post construction the owner shall maintain the site in a safe condition.				
5. Soil for all lawn areas to be a minimum of 6" depth of loamy topsoil approved by the project Landscape Architect.				
For shrubs and trees site topsoil to be used in backfilling to the extents shown on the details.				



Stephen Lopez Landscape Architect	Tim Miller Associates, Inc. 10 North Street, Cold Spring, NY 10516 (845) 265-4400, Fax: 265-4418	Sheet L-1
	Landscape Plan for development of Parth Knolls, LLC 87 Hawkes Avenue Town of Ossining, Westchester County, NY Date: December 7, 2015, Rev. 1-12-16	