



van note - harvey

Division of Pennoni

WOODLAND MANAGEMENT REPORT

**Princeton Nurseries
Block 102, Lots 5 & 6
Block 106, Lot 1
Plainsboro Township, Middlesex County, New Jersey**

A handwritten signature in black ink, appearing to read 'Chad Gaulrapp', is positioned above a horizontal line.

Chad Gaulrapp

New Jersey Professional Engineer License #GE41350

WRNUL23001

September 27, 2024

Last Revised: April 18, 2025

**103 College Road East, Third Floor, Princeton, NJ 08540
(609) 987-2323 • Fax (609) 987-0005
www.vannoteharvey.com**

ENGINEERS • ENVIRONMENTAL CONSULTANTS • SURVEYORS

Engineering for a Better Environment

TABLE OF CONTENTS

	<u>PAGE</u>
1.0 INTRODUCTION.....	1
2.0 PROJECT DESCRIPTION.....	1
3.0 SITE DESCRIPTION	1
4.0 PROPOSED TREE REMOVAL	4
5.0 REFORESTATION	5

FIGURES

FIGURE 1	NEARMAP AERIAL IMAGE
FIGURE 2	LANDSCAPE PROJECT
FIGURE 3	LAND USE MAP

APPENDICIES

APPENDIX A	TREE REMOVAL PLAN PREPARED BY VAN NOTE-HARVEY DIVISION OF PENNONI
APPENDIX B	REFORESTATION PLAN, PREPARED BY MELILO BAUER CARMAN



1.0 INTRODUCTION

Van-note Harvey, a division of Pennoni, has prepared this Woodland Management Report for WRV Nurseries Plainsboro Owner, LLC (WRV – the Applicant), in accordance with the Code of the Township of Plainsboro, Section 85-30 (Municipal Code). It is intended to be used in conjunction with the Preliminary and Final Major Subdivision and Site Plan application submitted on behalf of WRV for a proposed mixed-use development located on Block 102, Lots 5 & 6 and Block 106, Lot 1 in Plainsboro Township, Middlesex County, New Jersey (the Site). WRV proposes to build a mixed-use development at the Site in accordance with the requirements of the PMUD – Planned Unit Development Zone (integrated mixed-use neighborhood development).

The site in Plainsboro is approximately 108.8 acres and is part of the former Princeton Nurseries site. The project also includes improvements for stormwater management within South Brunswick consisting of approximately 4.7 acres on lands which were also part of the former Princeton Nurseries.

The site is bounded to the north by the South Brunswick municipal boundary with dense tree cover; to the east by wooded areas and Harry's Brook stream; to the south by Seminary Drive and College Road West with frontage from Princeton Forrestal Village and Carnegie Assisted Living and Acute Care; and to the west by the Barclay Square residential development. The existing site is accessed from College Road and Seminary Drive. An additional access from Seminary Drive is proposed as part of this project.

2.0 PROJECT DESCRIPTION

WRV proposes the construction of 853 dwelling units, and a central mixed-use development consisting of two retail/multifamily buildings, a 125-key hotel, one retail/office building, one retail building, and one grocer, as well as other amenities and recreational components typical of modern residential communities at the Site. The residential dwelling units include a mix of single-family homes, luxury single family units, townhomes, carriage homes, flats, and terrace houses. A total of 200 age-restricted units and 96 affordable units are proposed. Additional improvements include new access into the Site from College Road West, pedestrian circulation paths, multi-level parking, two clubhouses, a stormwater management system, a sanitary sewer pump station, landscaping, and lighting. Please refer to the zoning summary provided in the plans for details. Areas on the Site outside of the development area will generally remain in their existing conditions.

3.0 SITE DESCRIPTION

The site is the location of the former Princeton Nurseries which includes various vegetative covers including former nursery stock, single row arborvitae windrows and native vegetation both within the nursery and along Harry's Brook to the east. The site also contains a paved roadway from Seminary Drive which transitions to a gravel road (known as Nursery Drive). This

road extends into South Brunswick. A stormwater conveyance system extends from the Seminary Drive intersection northerly along Nursery Drive to a previously constructed stormwater basin located within South Brunswick just north of the municipal boundary. The basin has an existing outfall to Heathcote Brook Tributary (aka Harry's Brook). A recent aerial image of the site is included as Figure 1 below.



Figure 1: Aerial Image of the Project Site (Nearmap, June 28, 2024)

As shown in the Nearmap aerial image above, the existing project area is roughly half wooded and half cropland and pastureland. The Site was previously utilized for nursery production. The eastern half of the site is densely wooded and consists of approximately 25 acres of woods. The western half of the site is more sparsely wooded and consists of approximately 4.5 acres of woods. All of the wooded areas include a scrub/shrub understory.



Photo 1: Taken at the northernmost location of the densely wooded area at the Plainsboro/ South Brunswick Municipal Boundary. The photo was taken within the sanitary sewer easement looking east. This path will be utilized for a proposed pedestrian connection from Plainsboro across Harry's Brook, into South Brunswick to avoid unnecessary tree removal.



Photo 2: Taken at the northwest corner of the property looking toward the more sparsely wooded areas at the Plainsboro/South Brunswick Municipal Boundary. The photo was taken looking east.



Photo 3: Taken from Seminary Drive looking toward the northeast at the existing fields and arborvitae windrows.

4.0 PROPOSED TREE REMOVAL

The wooded areas on site are broken into two areas. The approximately 25 acres of woods on the eastern side of Nursery Road are generally densely wooded including some windrows through wooded areas. The 4.5 acres of trees to the west of Nursery Road are more sparsely wooded. A 100-foot by 100-foot sample area in each wooded area type was analyzed within woods where individual tree survey was performed. The survey identified all trees over 6" DBH by the DBH, species and location. Within those sample areas, the following trees were identified:

Step 1: Trees in Sample Study Area		
Category	Tree Removed (DBH)	Sample Quantity
1	6"-12.99"	57
2	13"-22.99"	3
3	23"-32.99"	0
4	>33"	0

Table 1: Measured trees within Sample Area 1

Step 1: Trees in Sample Study Area		
Category	Tree Removed (DBH)	Sample Quantity
1	6"-12.99"	37
2	13"-22.99"	2
3	23"-32.99"	0
4	>33"	0

Table 2: Measured trees within Sample Area 2

Since no category 3 trees were located within the Sample Areas, but were found in other parts of the surveyed woods, a further adjustment was included to supplement the adjusted tree removal:

Step 4: Category 3 Tree Adjustment		
Since Category 3 trees were not in the Sample Area but were found in other parts of the site, an adjustment is needed.		
Category 3 Trees in Dense Area	13	
Surveyed Dense Tree Area	166,370	sq ft
Total Dense Tree Area	960,000	sq ft
Multiplier	$960,000/166,370 = 5.77$	
Category 3 Adjusted Tree Count	$13 \times 5.77 = 75.01 = 76$	

Table 3: Adjustment for Category 3 Trees within the Dense tree area

Step 4: Category 3 Tree Adjustment		
Since Category 3 trees were not in the Sample Area but were found in other parts of the site, an adjustment is needed		
Category 3 Trees in Sparse Area	1	
Surveyed Sparse Tree Area	33,000	sq ft
Total Sparse Tree Area	220,000	sq ft
Multiplier	$220,000/33,000 = 6.67$	
Category 3 Adjusted Tree Count	$1 \times 6.67 = 6.67 = 7$	

Table 4: Adjustment for Category 3 Trees within the Sparse Tree Area

No category four trees were located within the surveyed tree areas. The total estimated adjusted tree removal counts are as follows:

Step 5: Adjusted Tree Count Estimation		
Category	Tree Removed (DBH)	Est. Total Quantity
1	6"-12.99"	5472
2	13"-22.99"	288
3	23"-32.99"	76
4	>33"	0
TOTAL		5836

Table 5: Total Adjusted Estimated Tree Removal Count within the Dense Tree Area.

Step 5: Adjusted Tree Count Estimation		
Category	Tree Removed (DBH)	Est. Total Quantity
1	6"-12.99"	814
2	13"-22.99"	44
3	23"-32.99"	7
4	>33"	0
TOTAL		865

Table 6: Total Adjusted Estimated Tree Removal Count within the Sparse Tree Area.

There are an estimated 7,051 trees which a DBH of 6" and greater that will be removed for the portion of the site within Plainsboro Township from the two wooded areas as part of the proposed project. The Tree Removal Plan where these calculations can be found is included as Appendix A of this report.

Based on a review of NJ-GeoWeb, no Rank 3 or 5 Species exist on the Site or in the immediate vicinity. The Site and surrounding area are mapped as Bald Eagle Nest (Rank 4). In the proposed conditions, the existing wetlands to the east associated with Harry's Brook will be protected and maintained.

Although the total tree removal count is high, the site is the former location of Princeton Nurseries which contains a vast cover of former nurseries stock which was not sold. The Princeton Nurseries Proposed Mixed Use Development Plan dated June 4, 2024, provides a comprehensive layout of the different uses on the site in question. This plan, which we understand has been accepted by the Township, requires a significant area of clearing and disturbance to achieve the overall balance of uses planned in collaboration with the Township. Woodlands within the environmentally sensitive areas associated with Harry's Brook will not be disturbed, and certain tree stands along the site perimeter, and the two main arborvitae windrows at the southwest quadrant of the site will be maintained to the limits shown on the Tree Removal Plan.

5.0 REFORESTATION

A Reforestation Plan has been prepared by Melillo Bauer Carman to document the proposed tree replacement design. This design is based on the area of "Mature Woodland" to be removed within the site as defined in Plainsboro Ordinance 85-30 and is not based in the number of trees over 6" DHB being removed. The Tree Removal Plan depicts the areas interpreted as mature woodland which does not include all areas of the site with tree cover. The area of mature woodland proposed for removal is 9.73 acres.

Exhibits

Landscape Project



6/11/2024, 4:39:57 PM

Override 1

County Boundaries

SBH - Piedmont Plains - Landscape Project

Rank 1 - Habitat specific requirements

Rank 2 - Special Concern

Rank 4 - State Endangered

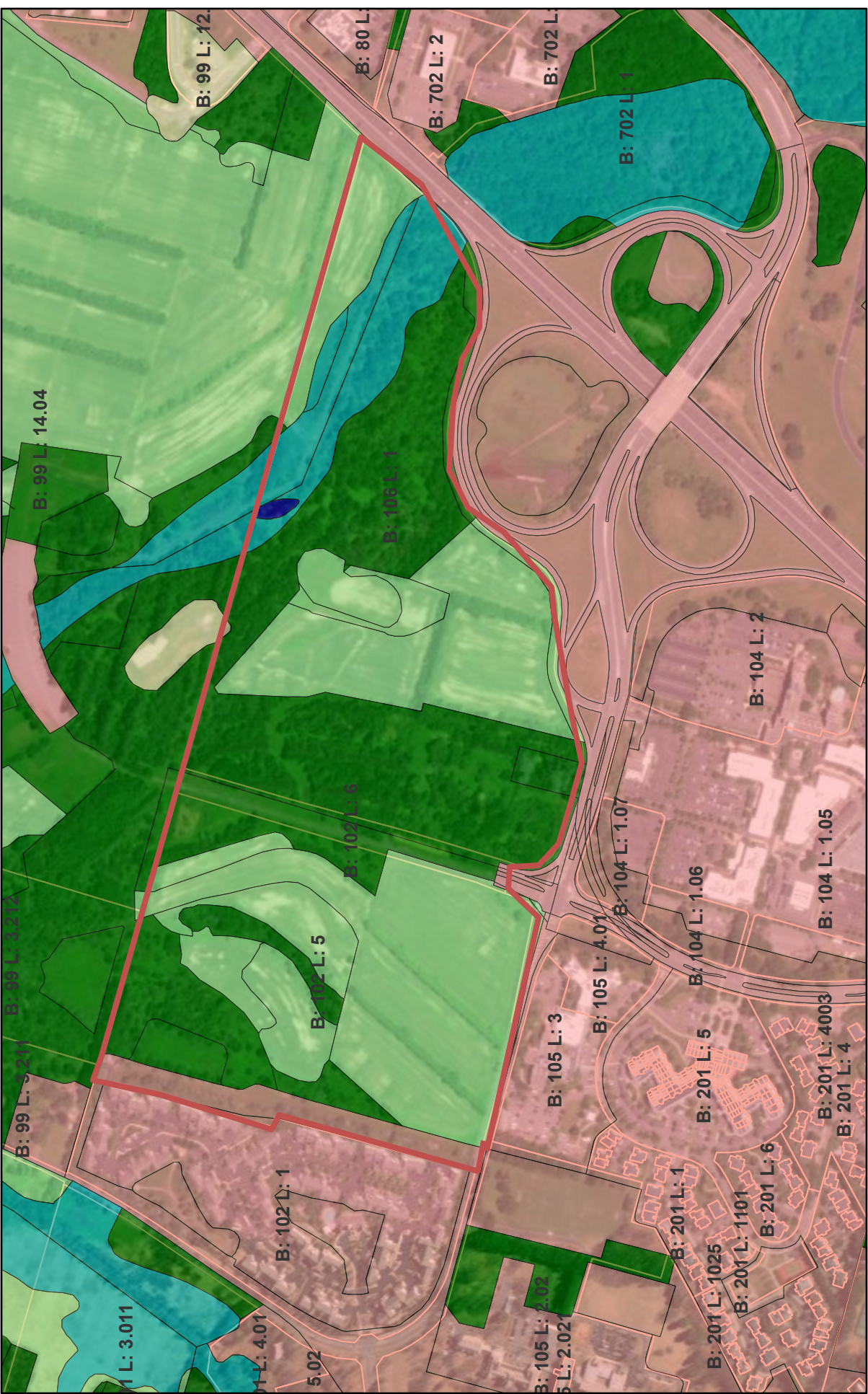
Maxar

1:9,028

0 0.05 0.1 0.2 mi

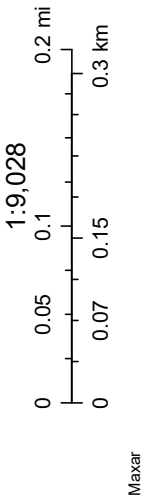
0 0.07 0.15 0.3 km

Land Use

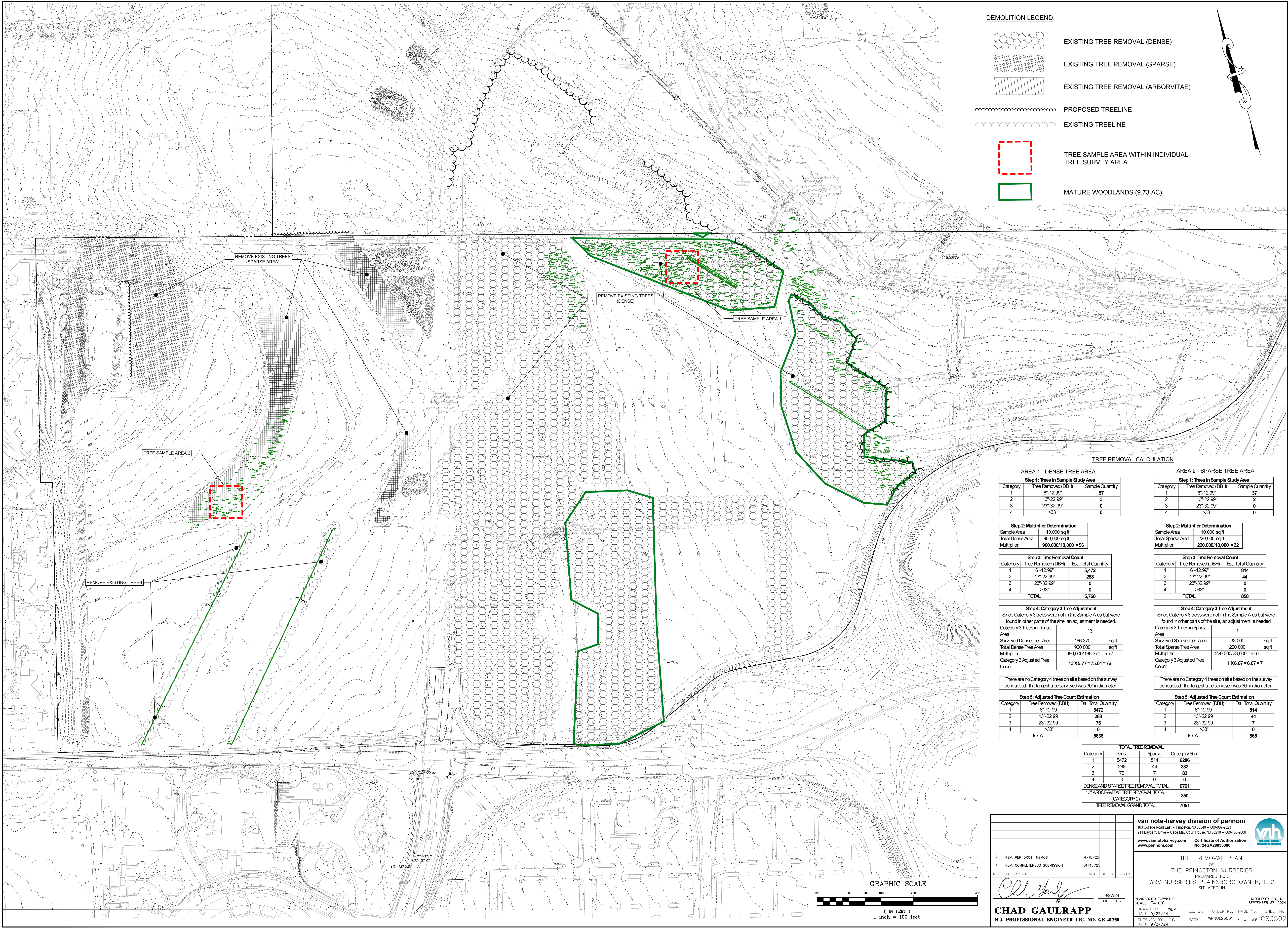


6/19/2024, 5:38:15 PM

- Override 1
- County Boundaries
- Land Use 2020
- AGRICULTURE
- BARREN LAND
- FOREST
- URBAN
- WATER
- WETLANDS
- Parcels Data (Block and Lot)

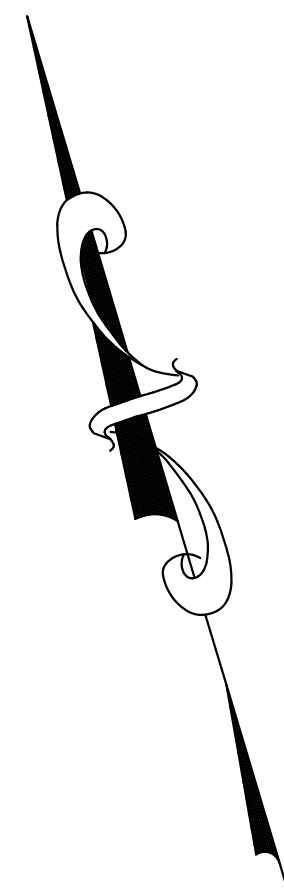


Appendix A



DEMOLITION LEGEND:

- EXISTING TREE REMOVAL (DENSE)
- EXISTING TREE REMOVAL (SPARSE)
- EXISTING TREE REMOVAL (ARBORVITAE)
- PROPOSED TREELINE
- EXISTING TREELINE
- TREE SAMPLE AREA WITHIN INDIVIDUAL TREE SURVEY AREA
- MATURE WOODLANDS (9.73 AC)



TREE REMOVAL CALCULATION

AREA 1 - DENSE TREE AREA

Step 1: Trees in Sample Study Area		
Category	Tree Removed (DBH)	Sample Quantity
1	6"-12.99"	57
2	13"-22.99"	3
3	23"-32.99"	0
4	>33"	0

Step 2: Multiplier Determination		
Sample Area	10,000 sq ft	
Total Dense Area	960,000 sq ft	
Multiplier	960,000/10,000 = 96	

Step 3: Tree Removal Count		
Category	Tree Removed (DBH)	Est. Total Quantity
1	6"-12.99"	5,472
2	13"-22.99"	288
3	23"-32.99"	0
4	>33"	0
TOTAL		5,760

Step 4: Category 3 Tree Adjustment		
Since Category 3 trees were not in the Sample Area but were found in other parts of the site, an adjustment is needed.		
Category 3 Trees in Dense Area	13	
Surveyed Dense Tree Area	166,370 sq ft	
Total Dense Tree Area	960,000 sq ft	
Multiplier	960,000/166,370 = 5.77	
Category 3 Adjusted Tree Count	13 X 5.77 = 75.01 = 75	

There are no Category 4 trees on site based on the survey conducted. The largest tree surveyed was 30" in diameter.

Step 5: Adjusted Tree Count Estimation		
Category	Tree Removed (DBH)	Est. Total Quantity
1	6"-12.99"	5472
2	13"-22.99"	288
3	23"-32.99"	75
4	>33"	0
TOTAL		5835

AREA 2 - SPARSE TREE AREA

Step 1: Trees in Sample Study Area		
Category	Tree Removed (DBH)	Sample Quantity
1	6"-12.99"	37
2	13"-22.99"	2
3	23"-32.99"	0
4	>33"	0

Step 2: Multiplier Determination		
Sample Area	10,000 sq ft	
Total Sparse Area	220,000 sq ft	
Multiplier	220,000/10,000 = 22	

Step 3: Tree Removal Count		
Category	Tree Removed (DBH)	Est. Total Quantity
1	6"-12.99"	814
2	13"-22.99"	44
3	23"-32.99"	0
4	>33"	0
TOTAL		858

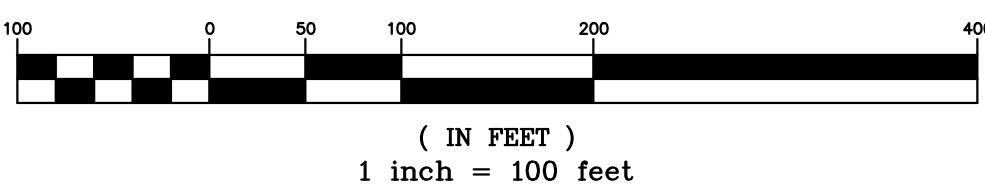
Step 4: Category 3 Tree Adjustment		
Since Category 3 trees were not in the Sample Area but were found in other parts of the site, an adjustment is needed.		
Category 3 Trees in Sparse Area	1	
Surveyed Sparse Tree Area	33,000 sq ft	
Total Sparse Tree Area	220,000 sq ft	
Multiplier	220,000/33,000 = 6.67	
Category 3 Adjusted Tree Count	1 X 6.67 = 6.67 = 7	

There are no Category 4 trees on site based on the survey conducted. The largest tree surveyed was 30" in diameter.

Step 5: Adjusted Tree Count Estimation		
Category	Tree Removed (DBH)	Est. Total Quantity
1	6"-12.99"	814
2	13"-22.99"	44
3	23"-32.99"	7
4	>33"	0
TOTAL		865

TOTAL TREE REMOVAL		
Category	Dense	Sparse
1	5472	814
2	288	44
3	75	7
4	0	0
DENSE AND SPARSE TREE REMOVAL TOTAL	6701	
13" ARBORVITAE TREE REMOVAL TOTAL (CATEGORY 2)	350	
TREE REMOVAL GRAND TOTAL	7051	

GRAPHIC SCALE



van note-harvey division of pennoni

103 College Road East • Princeton, NJ 08540 • 609-987-2323

211 Bayberry Drive • Cape May Court House, NJ 08210 • 609-465-2600

www.vannoteharvey.com

Certificate of Authorization No. 24GA28033300

2	REV. PER DRAFT MEMOS	4/18/25		
1	REV. COMPLETENESS SUBMISSION	2/16/25		
REV.	DESCRIPTION	DATE	DFI BY	CKD BY
		9/27/24		
	DATE OF SIGN.	9/27/24		

CHAD GAULRAPP

N.J. PROFESSIONAL ENGINEER LIC. NO. GE 41350

TREE REMOVAL PLAN

OF

THE PRINCETON NURSERIES

PREPARED FOR

WRV NURSERIES PLAINSBORO OWNER, LLC

SITUATED IN

PLAINSBORO TOWNSHIP

SCALE: 1" = 100'

DATE: 9/27/24

NDV

CHECKED BY: CG

DATE: 9/27/24

FIELD BK

ORDER No.

PAGE No.

SHEET No.

WRNUL23001

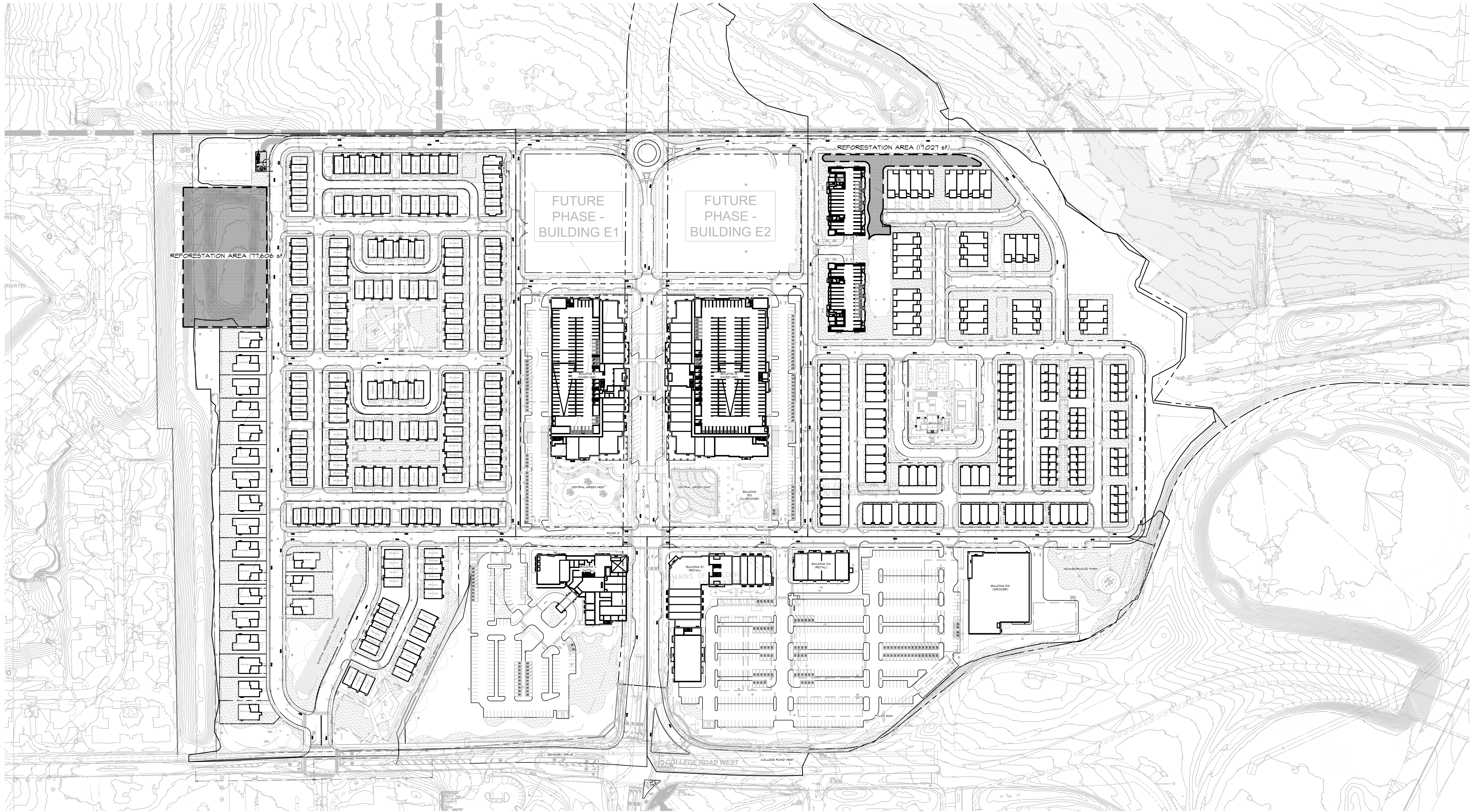
7 OF 99

CS0502

MIDDLESEX CO., N.J.

SEPTEMBER 27, 2024

Appendix B



REFORESTATION REQUIREMENTS
9.73 ACRES OF MATURE WOODLAND REMOVED (423,839 SF)
TREES REQUIRED FOR REFORESTATION:
1 TREE/ 400 SF (20' X 20' GRID) = 1,060 TREES
REFORESTATION AREA REQUIRED:
1,060 TREES PLANTED AT AN AVERAGE OF 10'-0" ON CENTER (100 SF/TREE) =
106,000 SF = **2.43 ACRES OF REFORESTED AREA REQUIRED**

REFORESTATION AREA PROVIDED ON SITE:

REFORESTATION AREA	94,633 sf
MIX OF NATIVE SHADE TREES	(2.17 ACRES)
EVERGREEN TREES AND ORNAMENTAL TREES PLANTED IN NATURAL GROVES AND SPACED FIVE FEET TO 15 FEET ON CENTER.	
GROUND PLANE SHALL BE SEEDED WITH 'SHOWY NORTHEAST NATIVE WILDFLOWER & GRASS MIX' AS MFG BY ERNST SEED (SEE DETAIL 9/L-13 FOR ADDITIONAL INFORMATION)	
TOTAL TREES PROVIDED:	984
10% @ 2'-2'-1/2" CAL, 8.8.8	99
20% @ 1'-3/4"-2" CAL, 8.8.8	196
30% @ 1'-1/4"-1'-1/2" CAL, BARE ROOT	295
40% @ 6'-8" HEIGHT WHIPS, BARE ROOT	394

REFORESTATION AREA TO BE PROVIDED OFF SITE: 0.26 ACRES

RESTORATION PALETTE

SHADE TREE
Acer rubrum / Red Maple
Aesculus hippocastanum / Horsechestnut
Betula nigra / River Birch
Corydo ovata / Shagbark Hickory
Fagus grandifolia / American Beech
Gleditsia triacanthos inermis / Thornless Honey Locust
Liquidambar styraciflua / American Sweet Gum
Liriodendron tulipifera / Tulip Poplar
Nyssa sylvatica / Black Gum
Quercus palustris / Pin Oak
Quercus rubra / Red Oak
33% OF TOTAL

EVERGREEN TREE
Ilex opaca / American Holly
Juniperus virginiana / Eastern Red Cedar
Picea abies / Norway Spruce
Pinus strobus / White Pine
33% OF TOTAL

ORNAMENTAL TREE
Amelanchier x grandiflora / Serviceberry
Betula nigra / River Birch
Cercis canadensis / Eastern Redbud
Cornus florida / Flowering Dogwood
Magnolia virginiana / Sweetbay Magnolia
33% OF TOTAL

